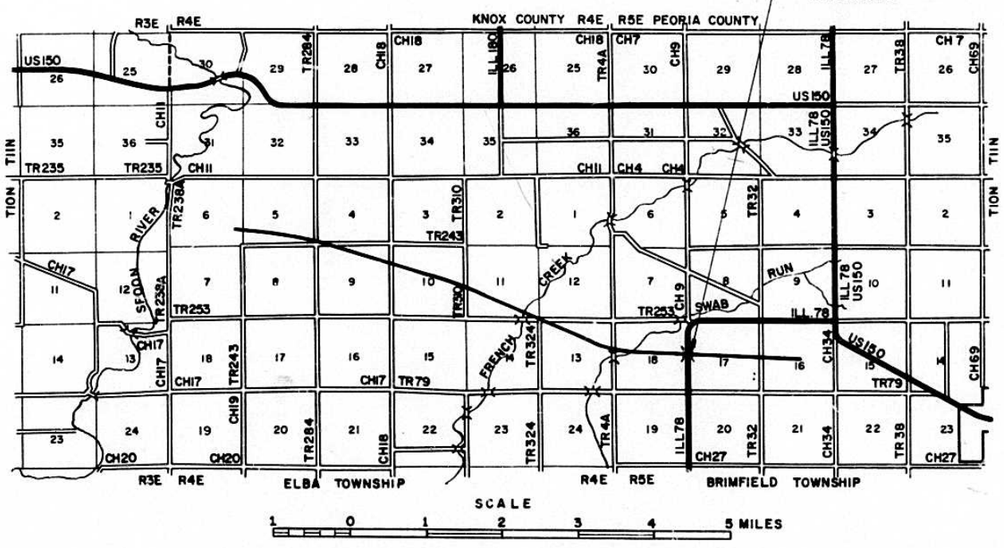
FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 30HB-1	PEORIA	47	1
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT I-74-3(22)67		

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SCALES			
	PLAN	1 INCH	100 FT.
	PROFILE, HOR.	1 INCH	100 FT.
	PROFILE, VERT.	1 INCH	10 FT.
	CROSS-SECT., HOR.	1 INCH	10 FT.
	CROSS-SECT, VERT.	1 INCH	5 FT.

F.A.I. ROUTE 74 SECTION 72-30HB-1
PROJECT I-74-3(22) 67
PEORIA COUNTY
C-94-011-65

STRUCTURE 72-30HB-1
STA. 808+00.02
(F.A.I.-74) INCLUDES A 4-SPAN WF-BEAM GRADE SEPARATION CARRYING ILL-78 OVER F.A.I.-74 ON CONC. BENT ABUTMENTS AND R.C. PIERS ON TIMBER PILES (1 SPAN @ 41'-6" 2 SPANS @ 70'-5" AND 1 SPAN 41'-0") AND THE RECONSTRUCTION OF 0.453 MILES OF APPROACH ROADWAY ADJACENT TO THE STRUCTURE



P-94-007-63

LENGTH OF IMPROVEMENT 2,618.00 FT. = 0.496 MILE
LENGTH OF PROJECT I-74-3(22) 67 = 0.00 FT. = 0.00 MILE

SUBMITTED _____ DIST. DESIGN ENGR.
EXAMINED _____ DIST. CONST. ENGR.
EXAMINED Dec. 8 1966 R. E. Bridwell DIST. MAINT. ENGR.
EXAMINED 12/8/66 V. J. Barr DIST. TRAFFIC ENGR.
Entire section inspected and approved as to policy.
DATE 12-8-66 J. H. Harland DISTRICT ENGR.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
SUBMITTED 12-8-66 1966 J. H. Harland DISTRICT ENGINEER
EXAMINED 12-15 1966 A. W. VanArsdale ENGINEER OF ROAD PLANS AND CONTRACTS
PASSED 12-15 1966 M. E. Baumann ENGINEER OF DESIGN
APPROVED 12-15 1966 CHIEF HIGHWAY ENGINEER
APPROVED 12-15 1966 Francis S. Gray DIRECTOR

THESE PLANS PREPARED BY
BARSTOW & MULLIGAN
CONSULTING ENGINEERS
LAFAYETTE, INDIANA
R. D. Mulligan

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED _____ DIVISION ENGINEER _____ DATE

INDEX TO PLAN SHEETS ON SHEET NO. 3
SUMMARY OF QUANTITIES SHEET ON SHEET NO. 3

CONTRACT NO. 24911

COUNTY: PEORIA SECTION 72-30 HB-1 F.A.I. ROUTE 74

F.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 30HB-1	PEORIA	47	2
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

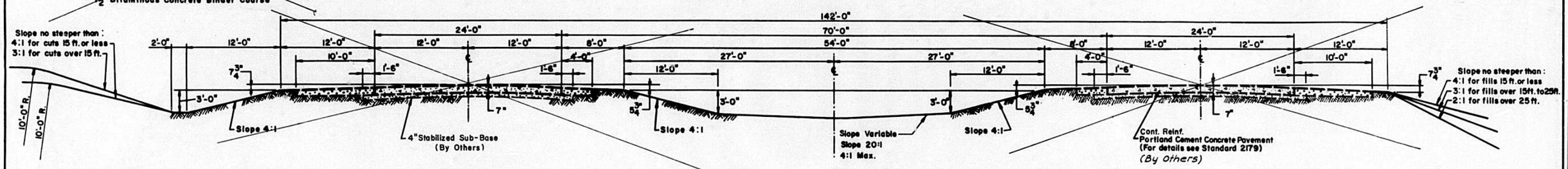
ROADWAY FOR DUAL 24 FT. P.C.C. PAVEMENT WITH 70 FT. DEPRESSED MEDIAN

(SEE STD 2235 & STD 2237)

GENERAL NOTES :

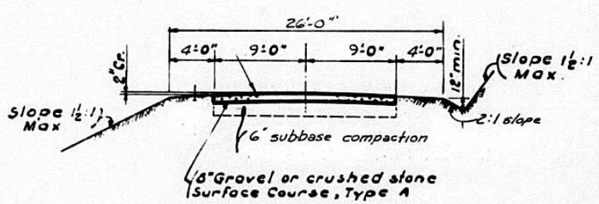
Superelevated pavement shall be rotated around the centerline of the pavement.
Profile Grade along ℄ of pavement
Shoulders and side slopes shall be rounded 12 inches in each direction from the tangent intersection of these surfaces.

* 3" Bituminous Surfaces: (By Others)
1½" Bituminous Concrete Surface Course, Subclass I-11
1½" Bituminous Concrete Binder Course

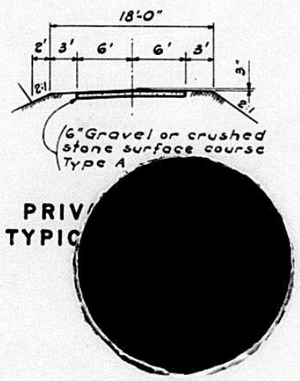


TYPICAL SECTION - NORMAL

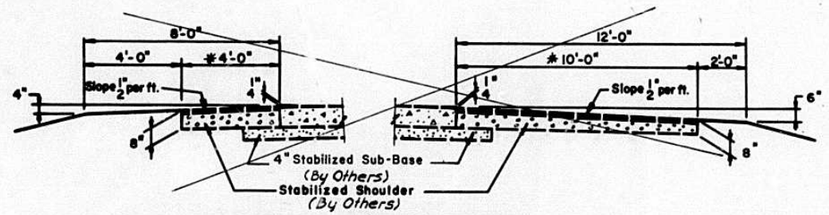
For Limits of Earthwork see Cross Sections



DETOUR ROAD TYPICAL SECTION

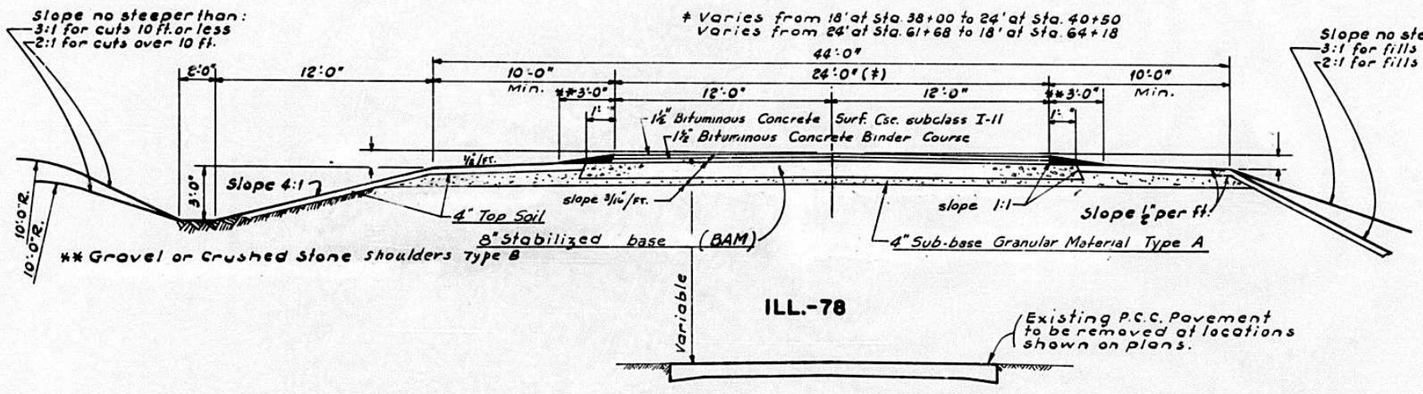


PRIV
TYPIC



DETAIL OF SHOULDERS FOR CROWNED MAIN LINE PAVEMENT

STRUCTURAL DESIGN TRAFFIC : Year 1977; P.C. = 1031
S.U = 275; M.U. 69
CLASS II ROADS AND STREETS
MINIMUM SOIL SUPPORT: CBR = 3.0 (Sta. 38+00 to 64+18)
CBR = — (Sta. — to —)
PER CENT OF S.D.T. IN DESIGN LANE : Up = 50%; Us = 50%
Um = 50%
T.F. = 0.3436; Dt = 3.52 (Sta. ____ to ____)
Dt = ____ (Sta. ____ to ____)
PAVEMENT STRUCTURE MATERIALS :
SURFACE COURSE TYPE: 3" I-11 ; d_1 = .4
BASE COURSE TYPE: 8" Stab. Base Csc. (BAM) d_2 = .23
SUBBASE TYPE: 4" Gran. Matl. Type A ; d_3 .12



ILL.-78

F.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 30HB-1	PEORIA	47	2
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

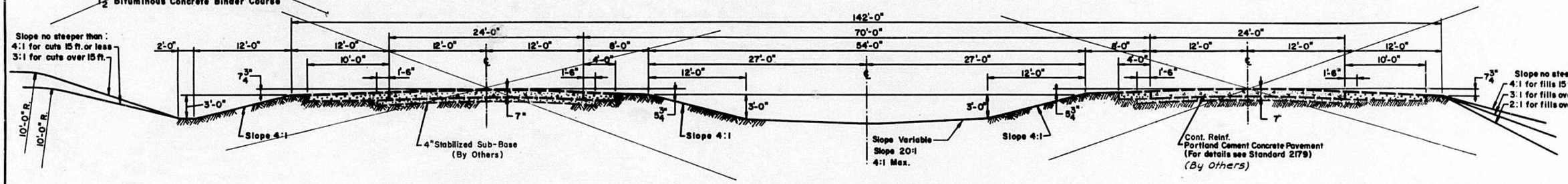
GENERAL NOTES :

Superelevated pavement shall be rotated around the centerline of the pavement.
Profile Grade along ℄ of pavement
Shoulders and side slopes shall be rounded 12 inches in each direction from the tangent intersection of these surfaces.

3" Bituminous Surfaces: (By Others)
1½" Bituminous Concrete Surface Course, Subclass I-11
1½" Bituminous Concrete Binder Course

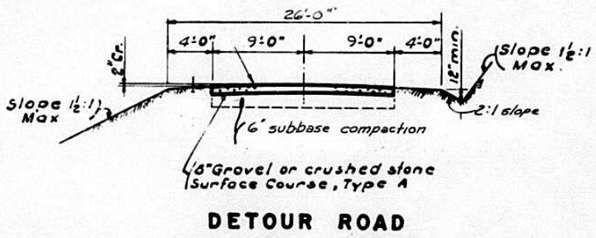
ROADWAY FOR DUAL 24 FT. P.C.C. PAVEMENT WITH 70 FT. DEPRESSED MEDIAN

(SEE STD 2235 & STD 2237)

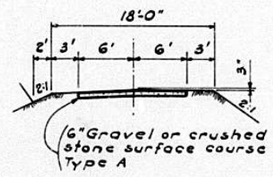


TYPICAL SECTION - NORMAL

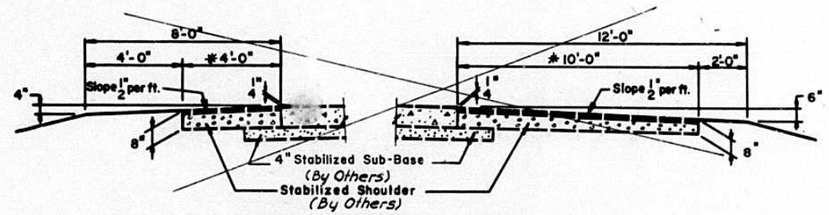
For Limits of Earthwork see Cross Sections



DETOUR ROAD TYPICAL SECTION

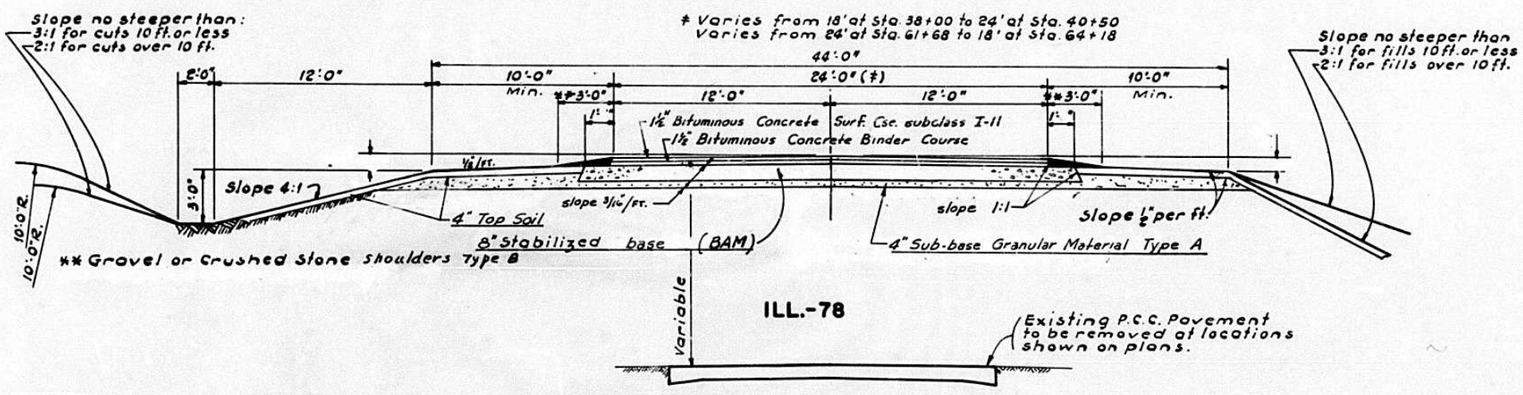


PRIVATE DRIVE TYPICAL SECTION



DETAIL OF SHOULDERS FOR CROWNED MAIN LINE PAVEMENT

STRUCTURAL DESIGN TRAFFIC : Year 1977; P.C.= 1031
S.U = 275; M.U. 69
CLASS II ROADS AND STREETS
MINIMUM SOIL SUPPORT: CBR = 3.0 (Sta. 38+00 to 64+18)
CBR = — (Sta. — to —)
PER CENT OF S.D.T. IN DESIGN LANE : Up = 50 %; Us = 50 %
Um = 50 %
T.F. = 0.3436 ; Dt = 3.52 (Sta. _____ to _____)
Dt = _____ (Sta. _____ to _____)
PAVEMENT STRUCTURE MATERIALS :
SURFACE COURSE TYPE: 3" I-11 ; d_1 = .4
BASE COURSE TYPE: 8" Stab. Base Csc. (BAM), d_2 = .23
SUBBASE TYPE: 4" Gran. Matl. Type A ; d_3 .12



ILL.-78

INDEX

SHEET NO.	BRIDGE	TITLE
1		COVER SHEET
2		TYPICAL SECTIONS
3		SUMMARY OF QUANTITIES, AND INDEX OF SHEETS
4		PLAN AND PROFILE ILL. 78 IMPROVEMENT STA. 38+00 TO 64+18
5-7		PLAN AND PROFILE FAI 74 STA. 750+00 TO 840+00
8	1	GENERAL PLAN AND ELEVATION
9	2	SUPERSTRUCTURE
10	3	STRUCTURAL STEEL
11	4	SCREED ELEVATIONS
12, 12A	5	ALUMINUM HANDRAIL AND PARAPET
13	6	ABUTMENTS
14	7	PIERS 1 AND 3
15	8	PIER 2
16	9	BORINGS
17	10	PILE DETAILS
18, 18A & 18B		DETAILS, OF PAVED DITCH, SODDED DITCH & END POST DETAIL
19, 19A & 19B.		DETAILS OF MAILBOX TURNOUT, ENTRANCE DETAIL, & TOPSOIL PLACEMENT
20-27		CROSS SECTIONS ILL. 78, STA 36+00 TO 65+00
28-32		CROSS SECTIONS FAI 74, STA 768+50 TO 810+00
33		STANDARD 1686-3 SYMBOLS AND ABBREVIATIONS
34		STANDARD 1744-1 RIGHT OF WAY MARKERS
35		STANDARD 1976 REINFORCED CONCRETE HEADWALLS FOR 15"-18"-24"-30"-36" DIA PIPE CULVERTS AT RIGHT ANGLES WITH ROADWAY.
36		STANDARD 2103 REINFORCED CONCRETE HEADWALLS FOR MULTIPLE PIPE CULVERTS 42"-48"-54"-60" DIA. 2 AND 3 PIPE AT RIGHT ANGLE WITH ROADWAY
37		STANDARD 2113-1 DETAIL NAME PLATES
38		STANDARD 2114 FLAGMAN TRAFFIC CONTROL SIGN
39		STANDARD 2135 PERMANENT SURVEY MARKERS
40		STANDARD 2153-4 SIGN FOR INTERSTATE SYSTEMS PROJECT (FEDERAL & STATE)
41		STANDARD 2169-2 WOVEN WIRE FENCE
42		STANDARD 2171 MAILBOX TURNOUT
43		STANDARD 2208-2 BARRICADES
44		STANDARD 2209-1 TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND REPAIRS
45		STANDARD 2230 STEEL PLATE BEAM GUARD RAIL
46		STANDARD 2231 TYPICAL APPLICATION OF STEEL PLATE BEAM GUARD RAIL.
47		STANDARD 2235 TYPICAL SECTION FAI RTE. 74
47A		STANDARD 2237 SHOULDER DETAILS.

QUANTITIES NOT SHOWN ELSEWHERE ON PLANS

GRAVEL OR CRUSHED STONE SURFACE COURSE TYPE A			COMPLETE SEEDING	2.5	ACRES
MAILBOX TURNOUT 4"	4	TONS	TEMPORARY SEEDING	2.5	ACRES
PRIVATE ENTRANCE (RELOCATED) 6"	292	TONS	FERTILIZER NUTRIENTS	0.4	TON
DETOUR ROAD 8"	2663	TONS	STRAW FOR ASPHALT-COATED MULCH	10.0	TONS
TOTAL	2959	TONS	EMULSIFIED ASPAHLT	1000.0	GALS
			TOP SOIL	2216.0	CU YDS
GRAVEL OR CRUSHED STONE 2" FOR MAINTENANCE OF DETOUR ROAD	677	TONS	HEDGE REMOVAL	1.0	UNIT
			TREE REMOVAL (6" TO 15" DIA) RT STA 805+00-810+00	144.0	IN DIA
MATERIAL TO BE SALVAGED (50%)	1332	TONS 919 CU YDS	TREE REMOVAL (OVER 15") RT STA 805+00-810+00	549.0	IN DIA
SALVAGED AGGREGATE (SHLDRS TY B)	215	TONS 149 CU YDS	SUB-BASE GRANULAR MATERIAL TYPE A STA 38+00 - 64+18 (LESS OMISSION - 2990')	3,233	TON
STOCKPILING SALVAGED AGGREGATE	1117	TONS 770 CU YDS			
CALCIUM CHLORIDE APPLIED	21	TONS			

		*GRAVEL OR CR STONE SHLDRS		STABILIZED BASE COURSE (BAM) 8"		BITUMINOUS CONCRETE BINDER COURSE 1 1/2"		SURFACE COURSE 1 1/2"	
STA TO STA	LENGTH (FT)	LENGTH 3' WIDE (STA)	TONS	WIDTH (FT)	SQ YDS	SQ YDS	TONS	SQ YDS	TONS
38+00-40+50	250	2.5	22.5	VAR 20-26	639	594	50	587	50
40+50-48+85.75	835.75	8.4	75.5	26	2414	2263	190	2240	188
48+85.75-51+13.75	BRIDGE OMISSION								
51+13.75-61+68	1054.25	10.5	94.5	26	3046	2855	240	2826	238
61+68-64+18 ENT RT 61+00	250	2.5	22.5	VAR 26-20	639	594	50	587	50
TOTALS			215.0		6378		530		530

* 9 TON/STA (BOTH SIDES)

TO BE CONSTRUCTED FROM SALVAGED AGGREGATE 148 CU YDS

SUMMARY OF QUANTITIES

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	30HB-1	PEORIA	47	3
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	STRUCTURES	ROADWAY
				FAI 74 - SEC.30HB-1 49+86.25 TO 51+13.25	ILL. 78 & DETOUR 38+00 TO 64+18
	CONSTRUCTION TYPE CODE			X731	6203
010001	TREE REMOVAL (6 TO 15 INCH DIAMETER)	IN DIA	144		144
010002	TREE REMOVAL (OVER 15 INCH DIAMETER)	IN DIA	549		549
010006	HEDGE REMOVAL	UNIT	1		1
011001	EARTH EXCAVATION	CU YD	70,256		70,256
024001	SUB-BASE GRANULAR MATERIAL, TYPE A	TON	3,233		3,233
027001	TOP SOIL	CU YD	2,216	93	2,123
029029	STABILIZED BASE COURSE 8"	SQ YD	6,738		6,738
036001	GRAVEL OR CRUSHED STONE SURFACE COURSE TYPE A	TON	2,959		2,959
044006	BITUMINOUS CONCRETE BINDER COURSE	TON	530		530
046007	BITUMINOUS CONCRETE SURFACE COURSE SUB-CLASS 1-11	TON	530		530
050001	CLASS A EXCAVATION FOR STRUCTURES	CU YD	209	209	
052003	CLASS X CONCRETE	CU YD	473.1	473.1	
052016	CLASS X CONRETE (HEADWALLS)	CU YD	14.8		14.8
052021	PROTECTIVE COAT	SQ YD	1,024	1,024	
054001	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	227,000	227,000	
058034	PIPE CULVERTS TYPE 2A, 36"	LIN FT	100		100
058199	PIPE CULVERTS TYPE 1, 15"	LIN FT	46		46
058570	PIPE CULVERTS TYPE 1, 18" (TEMPORARY)	LIN FT	40		40
058593	PIPE CULVERTS TYPE 1, 12" (TEMPORARY)	LIN FT	72		72
158053	PIPE CULVERTS TYPE 5A, RCCP 54"	LIN FT	252		252
058985	PIPE CULVERTS TYPE 2A, RCCP 24"	LIN FT	52		52
059001	REINFORCEMENT BARS	POUND	81,040	80,300	740
060005	FURNISHING CREOSOTED PILES, 20.1' TO 38'	LIN FT	1,550	1,550	
060007	TEST PILE, TIMBER	EACH	1	1	
060008	DRIVING TIMBER PILES	LIN FT	1,550	1,550	
060042	METAL SHOES	EACH	62	62	
060043	DRIVING CONCRETE PILES	LIN FT	805	805	
060044	FURNISHING CONCRETE PILES	LIN FT	805	805	
060047	TEST PILE CONCRETE	EACH	1	1	
061001	NAME PLATES	EACH	2	2	
062001	STONE RIPRAP	SQ YD	6	6	
082001	PAVEMENT REMOVAL	SQ YD	1,386		1,386
083002	SLOPE WALL 4 INCH	SQ YD	410	410	
091003	PAVED DITCH 4 FEET	LIN FT	50		50
091004	PAVED DITCH 5 FEET	LIN FT	90		90
094001	STEEL PLATE BEAM GUARD RAIL	LIN FT	2,950		2,950
101002	GRAVEL OR CRUSHED STONE	TON	677		677
101006	SALVAGED AGGREGATE	CU YD	149		149
101007	* STOCK-PILED SALVAGED AGGREGATE	CU YD	770		770
102001	CALCIUM CHLORIDE APPLIED	TON	21		21
104001	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	22		22
110001	TEMPORARY SEEDING	ACRE	2.5		2.5
110004	COMPLETE SEEDING	ACRE	2.5		2.5
110005	FERTILIZER NUTRIENTS	TON	0.4		0.4
111002	STRAW FOR ASPHALT COATED MULCH	TON	10		10
111003	EMULSIFIED ASPHALT	GAL	1000		1000
112001	SODDING	SQ YD	1112		1112
Z00004	ALUMINUM HANDRAIL	LIN FT	449	449	
Z00350	PERMANENT SURVEY MARKERS, TYPE I	EACH	4	4	
Z01023	BRIDGE SEAT SEALANT	LUMP SUM	/	/	
Z01028	* WOVEN WIRE FENCE	LIN FT	7,067	7,067	
Z01398	ENGINEERS FIELD OFFICE TYPE A	EACH	1	1	
Z00450	REMOVING BUILDING NO. 1	EACH	1		1

* TEMPORARY FENCE 75 LIN. FT, NO FEDERAL PARTICIPATION

* STOCK-PILED SALVAGED AGGREGATE NO FEDERAL PARTICIPATION

HIGHWAY CLASSIFICATION ILL. 78 IMPROVEMENT SEC. 72-30HB-1		
200M	70 MPH	1986
MAXIMUM GRADE		35%
LENGTH OF MAXIMUM GRADE		618 FT
MINIMUM STOPPING SIGHT DISTANCE		611 FT
MINIMUM HORIZONTAL RADIUS		0

NOTE:

TWO (2) SIGNS CONFORMING TO STANDARD 2153-4 SHALL BE ERECTED AT THE LOCATIONS SHOWN ON SHEET NO. 4

WHENEVER IN THESE PLANS REFERENCE IS MADE TO THE "STANDARD SPECIFICATIONS" IT IS UNDERSTOOD TO INCLUDE THE "SUPPLEMENTAL SPECIFICATIONS" EFFECTIVE JANUARY 3, 1966.

1-9-67 ~ Rev Quan. Tree Rem (over 15" Dia)

F.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 35HB-1	PEORIA	47	4
STA. 35+00 ILL. 78 TO STA. 65+00 ILL. 78				
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				

LEGEND

- ACCESS CONTROL LINE — AC
- PERMANENT SURVEY MARKERS
- PAVED DITCH
- SOD DITCH
- WOVEN WIRE FENCE
- RIGHT OF WAY MARKERS
- RIGHT OF WAY MARKERS (by Others)

SEC. 17
T. 10 N. R. 5 E. 4 P.M.

SEC. 18
T. 10 N. R. 5 E. 4 P.M.

RALPH K. & MAUDE CARTER

GEORGE H. SHISSLER

GEORGE H. & MARY K. SHISSLER

RALPH K. & MAUDE CARTER

Sta. 149+12 Detour Road
Pipe Culvert Type 1, 12"
(Temporary)
2 @ 36' = 72 LIN. FEET
No Headwalls

Pipe Culvert Type 2A, 36" 100 L.F.
R.C. Headwalls, by Others 2 Reqd.
Sta. 50+85

Sod Ditch 100 S.Y.
Lt. Sta. 48+70 to Sta. 49+18

Stone Riprap 6 S.Y.

RECONSTRUCTION BEGINS
Sta. 38+00

Paved Ditch (5') 90 L.F.
Lt. Sta. 47+90 to Sta. 48+70

48+87.07
177' Lt. T.E.

Pipe Culvert, Type 2A RCCP 24" 52 L.F.
R.C. Headwalls, Std. 1976 (D24-2) 2 Reqd.
Class X Concrete (Headwalls) 20 C.Y.
Reinforcement Bars 70 Lbs.
Sta. 61+90
(Restore 150 L.F. of fence after Detour Removal
(Cost included in Detour Earthwork)

51+17.77
177' Lt. T.E.

Sod Ditch 510 S.Y.
Lt. Sta. 56+90 to Sta. 62+00

RECONSTRUCTION ENDS
STA. 64+18

Sta. 161+90 Detour Rd.
Pipe Culvert Type 1
(Temporary)
18" - 40 L.F.
No Headwalls

P.I. 70' Lt. Sta. 64+00 200' R

65+00
100' Lt. T.E.

37+00
100' Lt. T.E.

P.I. 70' Lt. Sta. 38+00, 200' R

38+00
12 Lt.

P.I. 140' Lt. Sta. 50+00 300' R.

BUILDING REMOVAL 9'x28' - 1 EACH

℄ 695.0

℄ 693.9

Sign Location Std. 2153-4

P.I. Sta. 36+75 200' R.

38+00
12 Rt.

Rt. Sta. 38+50
Pipe Culvert, Type 1, 15", 18 L.F.

Paved Ditch (4') 50 L.F.
Rt. Sta. 47+90 to Sta. 48+40

48+20
77.4 Rt.

Sta. 50+00 ILL. 78 =
Sta. 808+00.02 FAI 74

Pipe Culvert, Type 5A R.C.C.P. 54" 2 @ 126' = 252 L.F.
R.C. Headwalls, Std. 2103 (D54-2) 2 Reqd.
Class X Concrete (Headwalls) 12.8 C.Y. Yds.
Reinforcement Bars 670 Lbs
Sta. 48+55

Channel Agreement

2'x2' Existing Culvert to be removed

Pavement Removal
Sta. 38+00 to Sta. 40+25 - 450 S.Y.
Sta. 48+45 to Sta. 51+20 - 550 S.Y.
Sta. 62+25 to Sta. 64+18 - 386 S.Y.
TOTAL : 1386 S.Y.

Pavement Breaking - No Pay Item
Sta. 40+25 to Sta. 40+75
Sta. 61+50 to Sta. 62+25

10' Bottom Ditch 2:1 side
Slopes see cross sections for profile.

Channel Agreement

Sod Ditch (By Others)

Sod Ditch 120 S.Y.
Rt. Sta. 54+90 to Sta. 56+10

Sod Ditch 382 S.Y.
Rt. Sta. 57+90 to Sta. 62+00

PRIVATE DRIVE

Mailbox Turnout Std. 2171

2'x2' Exist. Culvert to be removed

Rt. Sta. 61+00
Pipe Culvert, Type 1, 15", 28 L.F.

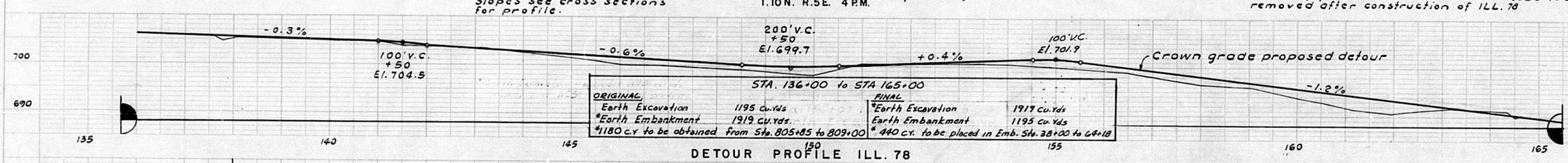
P.I. Sta. 65+25 200' R.

Sign Location Std. 2153-4

STEEL PLATE BEAM GUARD RAIL
Lt. Sta. 42+47 to Sta. 48+72 = 625 Lin. Ft.
Rt. Sta. 42+47 to Sta. 48+72 = 625 Lin. Ft.
Lt. Sta. 51+25 to Sta. 59+75 = 850 Lin. Ft.
Rt. Sta. 51+25 to Sta. 59+75 = 850 Lin. Ft.
TOTAL = 2950 Lin. Ft.

Right of Way Markers 6 Each
Construction Identification sign 2 Each
Permanent Survey Markers, Type I 4 Each
} this sheet

Note:
All pipe culverts under Detour Road to be removed after construction of ILL. 78

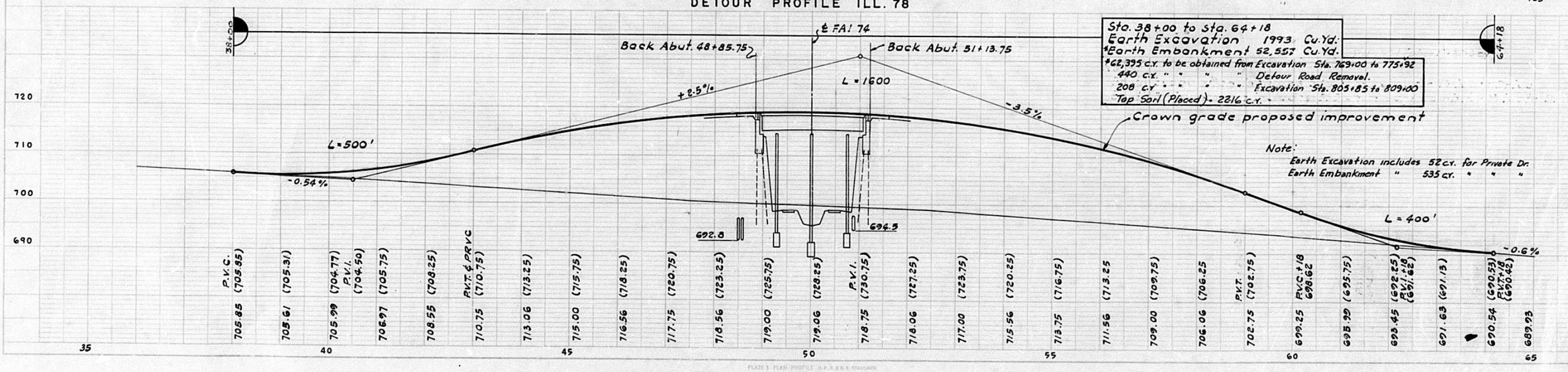


STA. 136+00 to STA 165+00

ORIGINAL		FINAL	
Earth Excavation	1195 Cu.Yds	*Earth Excavation	1919 Cu.Yds
*Earth Embankment	1919 Cu.Yds.	Earth Embankment	1195 Cu.Yds

*1180 c.y to be obtained from Sta. 805+85 to 809+00
* 440 c.y. to be placed in Emb. Sta. 38+00 to 64+18

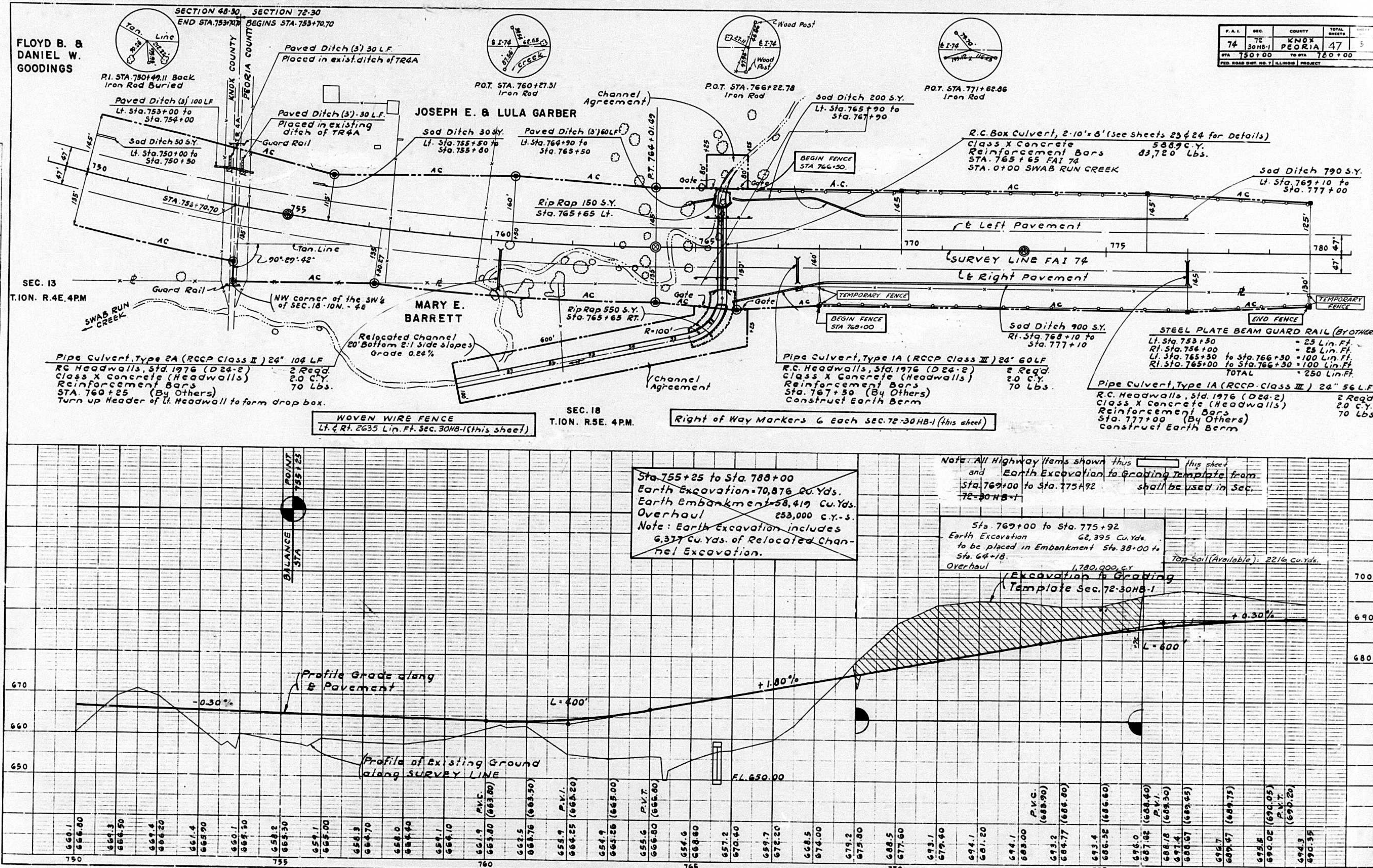
DETOUR PROFILE ILL. 78



Sta. 38+00 to Sta. 64+18
Earth Excavation 1993 Cu.Yd.
*Earth Embankment 52,557 Cu.Yd.
*62,395 c.y. to be obtained from Excavation Sta. 769+00 to 775+92
440 c.y. " " " " Detour Road Removal.
208 c.y. " " " " Excavation Sta. 805+85 to 809+00
Top Soil (Placed) - 2216 c.y.

Note:
Earth Excavation includes 52 c.y. for Private Dr.
Earth Embankment " 535 c.y. " " "

PLATE 3 PLAN PROFILE O.P.R. 8 X 9 STANDARD
KEUFFEL & ESSER CO., NEW YORK
K & E Co. No. 348-10



SECTION 48-30 END STA.753+70.70
SECTION 72-30 BEGINS STA.753+70.70
FLOYD B. & DANIEL W. GOODINGS
Tan. Line
P.I. STA.750+49.11 Back Iron Rod Buried
KNOX COUNTY
PEORIA COUNTY
Paved Ditch (3') 30 L.F. Placed in exist. ditch of TR4A
Paved Ditch (3') 100 LF Lt. Sta.753+00 to Sta.754+00
Paved Ditch (3')-30 L.F. Placed in existing ditch of TR4A
Sod Ditch 50 S.Y. Lt. Sta.750+00 to Sta.750+50
Guard Rail
AC
STA.753+70.70
Tan. Line
90°-29'-42"
SEC. 13
T.10N. R.4E. 4P.M.
Guard Rail
SWAB RUN CREEK
NW corner of the SW¼ of SEC.18-10N.-4E
MARY E. BARRETT
JOSEPH E. & LULA GARBER
P.O.T. STA.760+27.31 Iron Rod
Creek
Sod Ditch 30 S.Y. Lt. Sta.755+50 to Sta.755+80
Paved Ditch (3') 60 LF Lt. Sta.764+90 to Sta.765+50
Channel Agreement
P.T. 764+01.49
Rip Rap 150 S.Y. Sta.765+65 Lt.
Rip Rap 550 S.Y. Sta.765+65 RT.
Gate
R=100'
600'
Relocated Channel 20' Bottom 2:1 Side slopes Grade 0.24%
Channel Agreement
P.O.T. STA.766+22.78 Iron Rod
Wood Post
Sod Ditch 200 S.Y. Lt. Sta.765+90 to Sta.767+90
BEGIN FENCE STA 766+50.
BEGIN FENCE STA 768+00
TEMPORARY FENCE
P.O.T. STA.771+62.86 Iron Rod
R.C. Box Culvert, 2-10'×8' (See sheets 23 & 24 for Details)
Class X Concrete 588.9 C.Y.
Reinforcement Bars 83,720 Lbs.
STA.765+65 FAI 74
STA.0+00 SWAB RUN CREEK
Sod Ditch 790 S.Y. Lt. Sta.769+10 to Sta.777+00
℄ Left Pavement
℄ SURVEY LINE FAI 74
℄ Right Pavement
Sod Ditch 900 S.Y. Rt. Sta.768+10 to Sta.777+10
END FENCE
TEMPORARY FENCE
STEEL PLATE BEAM GUARD RAIL (BY OTHERS)
Lt. Sta.753+50 = 25 Lin.Ft.
Rt. Sta.754+00 = 25 Lin.Ft.
Lt. Sta.765+30 to Sta.766+30 = 100 Lin.Ft.
Rt. Sta.765+00 to Sta.766+30 = 100 Lin.Ft.
TOTAL = 250 Lin.Ft.
Pipe Culvert, Type 2A (RCCP Class II) 24" 104 LF
RC Headwalls, Std.1976 (D24-2) 2 Reqd.
Class X Concrete (Headwalls) 2.0 C.Y.
Reinforcement Bars 70 Lbs.
STA.760+25 (By Others)
Turn up Header of Lt. Headwall to form drop box.
Pipe Culvert, Type 1A (RCCP Class III) 24" 60 LF
R.C. Headwalls, Std.1976 (D24-2) 2 Reqd.
Class X Concrete (Headwalls) 2.0 C.Y.
Reinforcement Bars 70 Lbs.
Sta.767+50 (By Others)
Construct Earth Berm
Pipe Culvert, Type 1A (RCCP-Class III) 24" 56 L.F.
R.C. Headwalls, Std.1976 (D24-2) 2 Reqd.
Class X Concrete (Headwalls) 2.0 C.Y.
Reinforcement Bars 70 Lbs.
Sta.777+00 (By Others)
Construct Earth Berm
WOVEN WIRE FENCE Lt. & Rt. 2635 Lin.Ft. Sec.30HB-1 (this sheet)
SEC. 18 T.10N. R.5E. 4P.M.
Right of Way Markers 6 Each SEC.72-30HB-1 (this sheet)
F.A.I. 74 | SEC. 72 30HB-1 | COUNTY KNOX PEORIA | TOTAL SHEETS 47 | SHEET NO. 5
STA 750+00 TO STA 780+00
FED. ROAD DIST. NO. 7 | ILLINOIS | PROJECT
PLAN
PROFILE
BALANCE POINT STA 755+25
Sta.755+25 to Sta.788+00
Earth Excavation = 70,876 Cu.Yds.
Earth Embankment = 58,419 Cu.Yds.
Overhaul 253,000 C.Y.-S.
Note: Earth Excavation includes 6,377 Cu.Yds. of Relocated Channel Excavation.
Note: All Highway Items shown thus this sheet and Earth Excavation to Grading Template from Sta.769+00 to Sta.775+92 shall be used in Sec. 72-30HB-1
Sta.769+00 to Sta.775+92
Earth Excavation 62,395 Cu.Yds.
to be placed in Embankment Sta.38+00 to Sta.64+18.
Overhaul 1,780,000 C.Y.
Top Soil (Available): 2216 Cu.Yds.
Excavation to Grading Template Sec.72-30HB-1
Profile Grade along ℄ Pavement
Profile of Existing Ground along SURVEY LINE
-0.30%
L=400'
+1.80%
+0.30%
L=600'
F.L.650.00
P.V.C. (663.80)
P.V.I. (663.20)
P.V.T. (666.80)
P.V.C. (683.90)
P.V.I. (689.30)
P.V.T. (690.20)
650
660
670
680
690
700
750
755
760
765
770
775
780
PLATE 1-PLAN-PROFILE
(2)

F.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 30HB-1	PEORIA	47	6
STA 780+00	TO STA 810+00			
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

PLAN — SURVEYED: EEV; DRAWN: EEV; TRACED: MAK; CHECKED: EEV; DATE: 8/7

PROFILE — SURVEYED: EEV; DRAWN: EEV; TRACED: MAK; CHECKED: EEV; DATE: 8/7

GEORGE H. SHISSLER

P.O.T. STA. 781+02.40 Iron Rod.

Pipe Culvert, Type 1A (RCCP Class III) 2-36" 300 LF
RC Headwalls, Std. 2102 (D36-2) — 2 Req'd.
Class X Concrete (Headwalls) — 5.0 C.Y.
Reinforcement Bars — 230 Lbs.
Sta. 797+00
Construct Berm over culvert (By Others)

Sod Ditch 110 S.Y.
Lt. Sta. 796+00 to Sta. 797+10 (By Others)

Pipe Culvert, Type 2A (RCCP Class II) 3-42" 468 LF.
RC Headwalls, Std. 2103 (D42-2) — 2 Req'd.
Class X Concrete (Headwalls) — 11.4 C.Y.
Reinforcement Bars — 640 Lbs.
Sta. 806+00
Construct Berm over Culvert (By Others)

Pipe Culvert, Type 2A, 36"
Sta. ILL. 78-50+85 See Sheet No. 4)

Pipe Culvert, Type 5A (RCCP Class IV) 2-54"
Sta. ILL. 78-48+55 (See Sheet No. 4)

P.O.T. STA. 807+81.35 Iron Rod

Channel Agreement

Sod Ditch (6) See Sheet No. 4

Remove exist. 2-2' Culvert & Headwalls

ILL. 78 STA. 806+00.00 SECTION LINE

T.E.

89°-47'-29"

90°-19'-25"

AC

780 785 790 795 800 805 810

125' 125' 110' 110' 110' 110' 120'

47' 47' 47' 47'

130' 130'

℄ Left Pavement

SURVEY LINE FAI 74

℄ Right Pavement

STA. 781+04.30

Sod Ditch 110 S.Y.
Rt. Sta. 786+90 to Sta. 788+00 (By Others)

Rip Rap 60 S.Y. (By Others)

Sod Ditch 220 S.Y.
Rt. Sta. 796+00 to Sta. 798+50 (By Others)

SEC. 18 T.10N. R.5E 4PM

RALPH K. & MAUDE CARTER

Begin Fence Sec. 72-30HB-1

Sod Ditch 200 S.Y.
Rt. Sta. 800+00 to Sta. 802+00 (By Others)

Outlet Ditch
10' bottom 3:1 side slopes
Grade 0.25%

Channel agreement

End Fence Sec. 72-30HB-1
NE Corner of the SE¼ of SEC. 18-10N-5E
No stone found

SEC. 17 T.10N. R.5E. 4P.M.

Sod Ditch 133 S.Y.
Rt. Sta. 806+07 to Sta. 807+40 (By Others)

Pipe Culvert, Type 1A (RCCP Class III) 24" 56 L.F.
R.C. Headwalls, Std. 1976 (D24-2) — 2 Req'd.
Class X Concrete (Headwalls) — 2.0 C.Y.
Reinforcement Bars — 70 Lbs.
Sta. 787+00
Construct Earth Berm (By Others)

WOVEN WIRE FENCE
LT. & RT. 3320 Lin.Ft. (this sheet)
(Sec. 72-30 HB-1)

Pipe Culvert, Type 2A (RCCP Class II) 24" 62 L.F.
RC Headwalls, Std. 1976 (D24-2) — 2 Req'd.
Class X Concrete (Headwalls) — 2.0 C.Y.
Reinforcement Bars — 70 Lbs.
Sta. 797+25 (By Others)

RIGHT OF WAY MARKERS 8 EACH (this sheet)
(Sec 72-30HB-1)

Pipe Culvert, Type 2A (RCCP Class II) 24" 68 L.F.
RC Headwalls, Std. 1976 (D24-2) — 2 Req'd.
Class X Concrete (Headwalls) — 2.0 C.Y.
Reinforcement Bars — 70 Lbs.
Sta. 806+50 (By Others)

Sta. 788+00 to Sta. 800+75 (By Others)
Earth Excavation = 11,720 Cu.Yds.
Earth Embankment = 10,191 Cu.Yds.

Sta. 800+75 to Sta. 809+10 (By Others)
Earth Excavation = 2929 Cu.Yds.
Earth Embankment = 2547 Cu.Yds.

BALANCE POINT STA. 788+00

BALANCE POINT STA. 800+75

BALANCE POINT STA. 809+10

Sta. 805+85 to Sta. 809+00
*Earth Excavation = 2754 Cu.Yds.
Earth Embankment = 1104 Cu.Yds.
Earth Excavation includes 900 Cu.Yds of Ditch Excavation
* 1180 c.y. to be placed in Detour Road construction
208 c.y. " " " " Embankment 38+00-64+18

Profile of existing ground along Survey Line

Profile Grade along ℄ Pavement

+0.30 %

F.L. 689.80

10' Bottom Ditch

F.L. 691.70

This area shall be excavated and graded by the Bridge Contractor

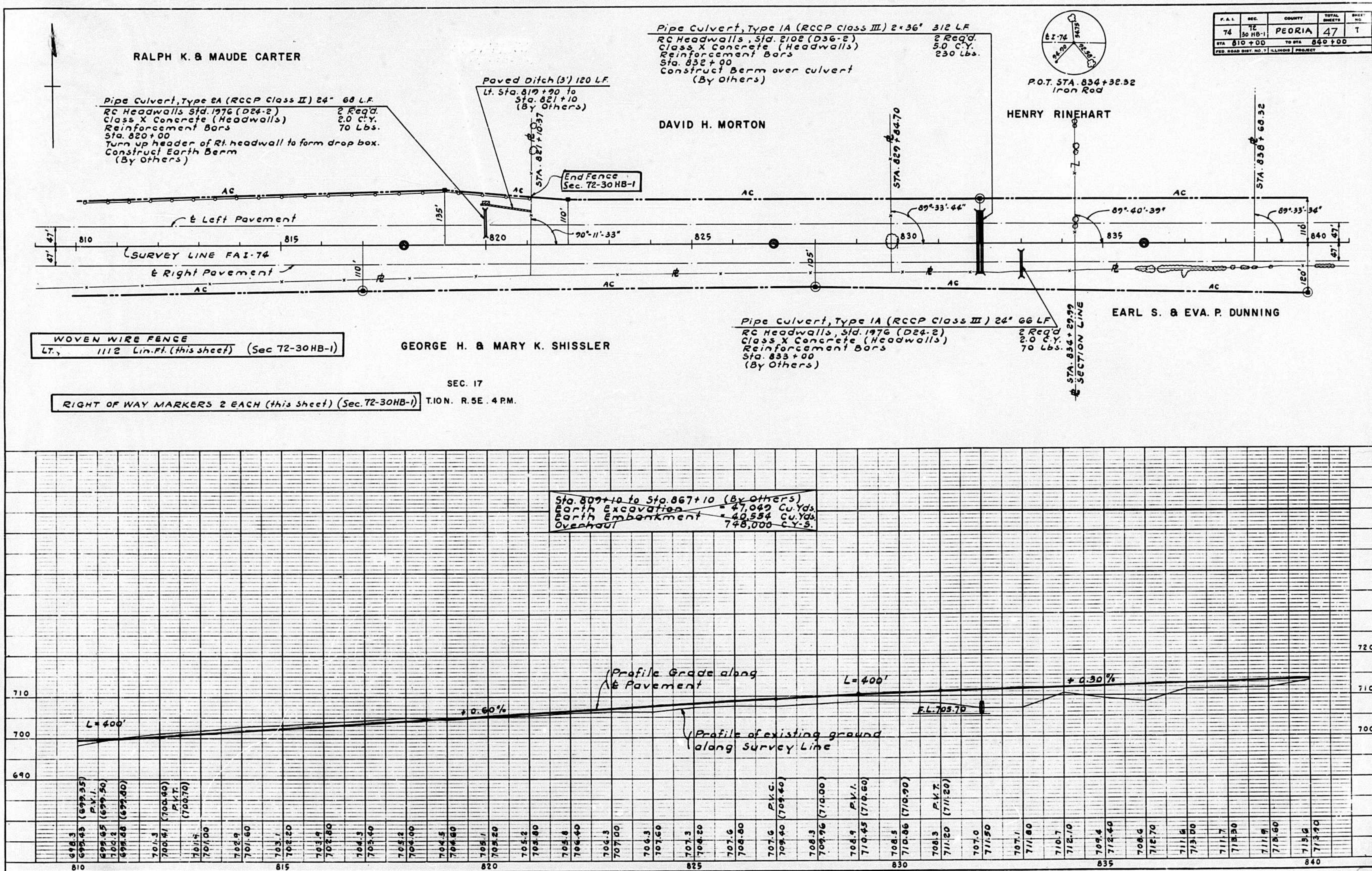
ILL 78

700 690 680 710

694.3 690.35 | 693.8 690.65 | 694.5 690.75 | 695.3 691.25 | 696.3 691.55 | 693.8 691.65 | 695.3 692.15 | 694.0 692.45 | 695.3 692.75 | 695.0 693.05 | 695.5 693.35 | 695.3 693.65 | 694.1 693.95 | 692.9 694.25 | 693.3 694.55 | 693.1 694.85 | 692.7 695.15 | 689.6 695.45 | 690.3 695.75 | 691.4 696.05 | 692.1 696.35 | 693.5 696.65 | 694.6 696.95 | 695.3 697.25 | 697.3 697.55 | 697.7 697.85 | 695.6 698.15 | 694.6 698.45 | 699.9 698.75 | P.I.C. (698.90) | 697.6 699.06 (699.05) | 698.3 699.43 (699.55)

780 785 790 795 800 805 810

PLATE 1 - PLAN-PROFILE O.P.R. & R.E. STANDARD
REUFFEL & ESSER CO., NEW YORK
K & E Co. No. 348-1C

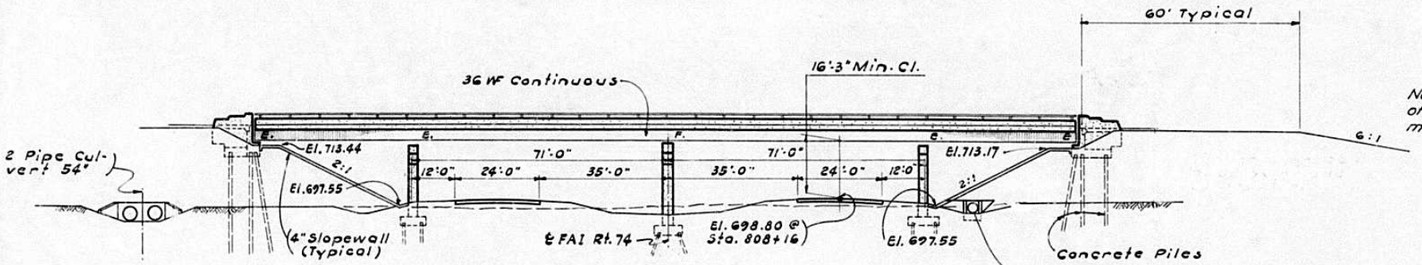

F.A.I. 74
SEC. 72 30 HB-1
COUNTY PEORIA
TOTAL SHEETS 47
SHEET NO. 7
STA 810+00 TO STA 840+00
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT
RALPH K. & MAUDE CARTER
Pipe Culvert, Type 2A (RCCP Class II) 24" 68 L.F.
RC Headwalls Std. 1976 (D24-2) 2 Req'd.
Class X Concrete (Headwalls) 2.0 C.Y.
Reinforcement Bars 70 Lbs.
Sta. 820+00
Turn up header of Rt. headwall to form drop box.
Construct Earth Berm
(By Others)
Paved Ditch (3') 120 L.F.
Lt. Sta. 819+90 to Sta. 821+10 (By Others)
Pipe Culvert, Type 1A (RCCP Class III) 2×36" 312 L.F.
RC Headwalls, Std. 2102 (D36-2) 2 Req'd.
Class X Concrete (Headwalls) 5.0 C.Y.
Reinforcement Bars 230 Lbs.
Sta. 832+00
Construct Berm over culvert
(By Others)
P.O.T. STA. 834+32.32
Iron Rod
DAVID H. MORTON
HENRY RINEHART
STA. 821+10.37
End Fence Sec. 72-30 HB-1
STA. 829+84.70
STA. 838+68.32
AC
135'
110'
105'
120'
47'
90°-11'-33"
89°-33'-44"
89°-40'-39"
89°-33'-34"
810
815
820
825
830
835
840
Left Pavement
SURVEY LINE FAI-74
Right Pavement
Pipe Culvert, Type 1A (RCCP Class III) 24" 66 LF
RC Headwalls, Std. 1976 (D24-2) 2 Req'd
Class X Concrete (Headwalls) 2.0 C.Y.
Reinforcement Bars 70 Lbs.
Sta. 833+00
(By Others)
STA. 834+29.99 SECTION LINE
EARL S. & EVA. P. DUNNING
WOVEN WIRE FENCE
LT., 1112 Lin. Ft. (this sheet) (Sec 72-30 HB-1)
GEORGE H. & MARY K. SHISSLER
SEC. 17
RIGHT OF WAY MARKERS 2 EACH (this sheet) (Sec. 72-30HB-1)
T.10N. R.5E. 4 P.M.
PLAN
PROFILE
Sta. 809+10 to Sta. 867+10 (By Others)
Earth Excavation = 47,049 Cu. Yds.
Earth Embankment = 40,554 Cu. Yds.
Overhaul 748,000 C.Y.-S.
Profile Grade along Pavement
Profile of existing ground along Survey Line
L=400'
+0.60%
+0.30%
F.L. 705.70
690
700
710
720
P.V.I. (699.35)
(699.50)
(699.80)
(700.40)
P.V.T. (700.70)
P.V.C. (709.40)
(710.00)
P.V.I. (710.60)
(710.90)
P.V.T. (711.20)
698.3 699.43
699.65 700.2
699.88
701.3 700.41
701.4 701.00
702.9 701.60
703.1 702.20
703.9 702.80
704.3 703.40
705.2 704.00
704.5 704.60
705.1 705.20
705.2 705.80
705.8 706.40
706.3 707.00
706.3 707.60
707.3 708.20
707.6 708.80
707.6 709.40
708.3 709.96
708.9 710.45
708.5 710.86
708.3 711.20
707.0 711.50
707.1 711.80
710.7 712.10
709.4 712.40
708.6 712.70
711.6 713.00
711.7 713.30
711.9 713.60
713.6 713.90
PLATE 1 - PLAN PROFILE O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK
K & E Co No 348-1C
(2)

B.M.
Burt U.S.G.S. B.M. 0.2 mi. South of intersection of Ill. 78 & T.R. 253, 37' East of ℄ of road, set in concrete post.
El. 707.342

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

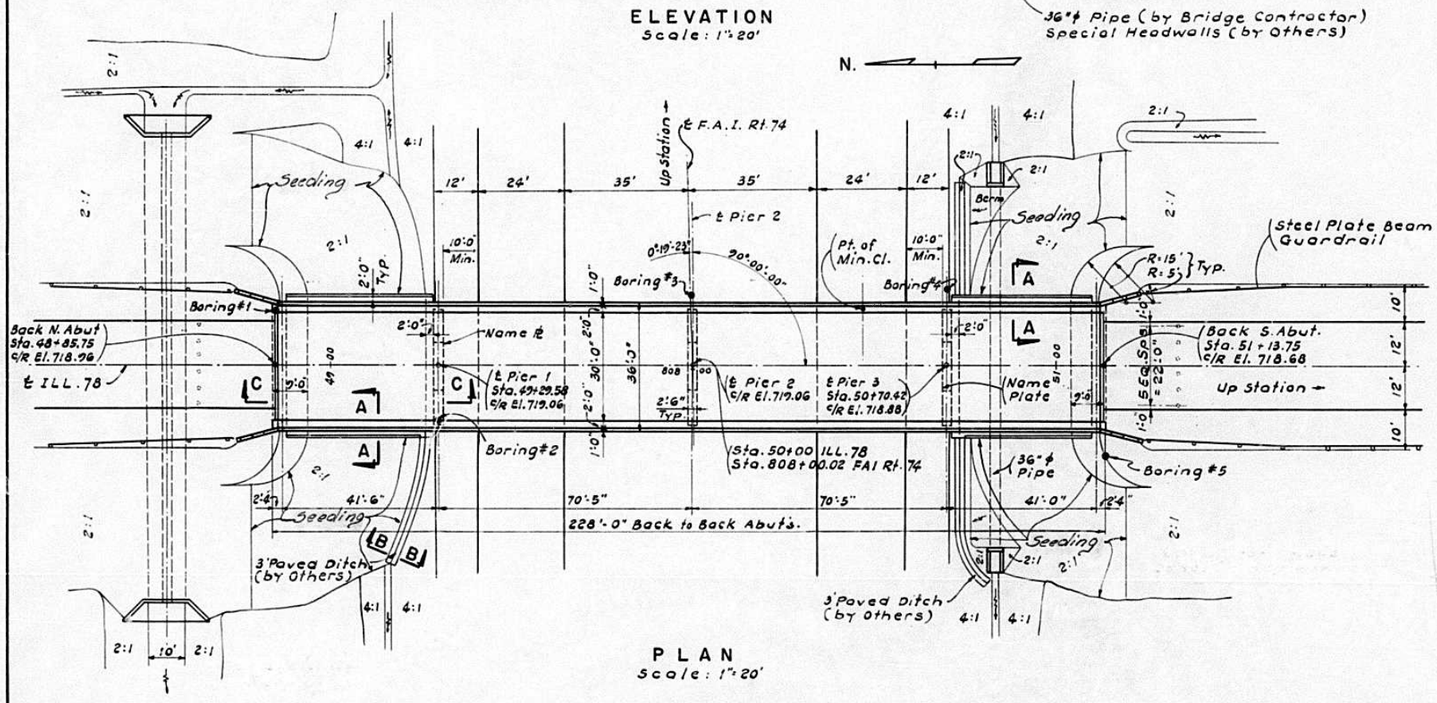
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 74	72 30HB-1	PEORIA	47	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	I 74-3 (22) 67	

SHEET NO. 1
10 SHEETS

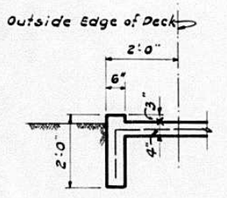


ELEVATION
Scale: 1"=20'

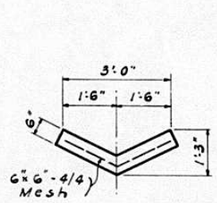
Note: "Excavation for portions of structures in the embankments shall not be classified."



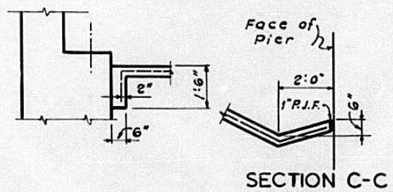
PLAN
Scale: 1"=20'



SECTION A-A



SECTION B-B



SECTION C-C

DESIGNED	L.K.
CHECKED	J.H.
DRAWN	K.G.
CHECKED	L.K.

EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

GENERAL NOTES

The concrete slab shall be finished in accordance with Article 51.19 of the Standard Specifications.
Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 Sq.Ft.
All reinforcement bars shall be lapped 20 diameters unless otherwise shown.
Coarse aggregate to be used in parapet and end posts shall be free of chert, flint, limonite, lignite and soft sandstone.
Rivets 3/4" ϕ, Open Holes 13/16" ϕ unless otherwise noted.
Anchor bolts shall be set before riveting diaphragms over supports.
The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint; the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.
Expansion guards are included in the quantity of Structural Steel
Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two Field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of the Standard Specifications.

The Contractor shall drive one concrete test pile in a permanent location at South abutment and one timber test pile in a permanent location of Pier 1 as directed by the Engineer before ordering the remainder of piles.
Concrete piles at abutments shall be driven in holes precored through the embankment in accordance with Article 60.9 (c) of the Standard Specifications.

PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE DECK.

DESIGN STRESSES
fc = 1400 psi Super & Sub.
vc = 75 psi Footings
fs = 20000 psi Reinf.
fs = 20000 psi Struct.(A-36)
n = 10

Loading HS20-44, Allowable LL = 4/1000

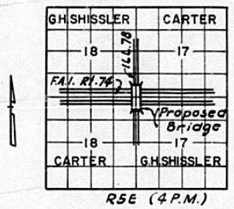
FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF 1/4 OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

HIGHWAY CLASSIFICATION

FAI ROUTE 74
971-T-70-1986

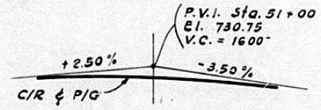
ILL. ROUTE 78
200-M-70-1986

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Carl E. T. Thurman Jr.
Engineer of Bridge & Traffic Structures

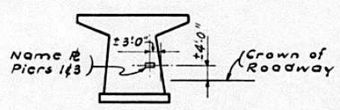


R5E (4 P.M.)

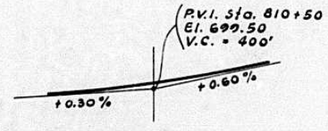
LOCATION PLAN



V.C. DATA - ILL. 78



PIER TYPE (P-2)



V.C. DATA - FAI RT. 74

STATION 808+00.02
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. 72-30HB-1
FA. PROJ. I 74-3(22)
LOADING HS 20

NAME PLATE LETTERING
Locate on Piers 1 & 3
See Std. 2113-1

BILL OF MATERIAL - Bridge only

ITEM	UNIT	SUB.	SUPER.	TOTAL
Class A Excavation for Structures	Cu.Yds.	209		209
Class X Concrete	Cu.Yds.	224.8	248.3	473.1
Structural Steel (F. & E.)	Pound		227,000	227,000
Aluminum Handrail (F. & E.)	Lin.Ft.		449	449
Reinforcement Bars	Pound	24,740	55,560	80,300
Creosoted Piles 20.1' to 38' (Furnished	Lin.Ft.	1,550		1,550
Driving Timber Piles	Lin.Ft.	1,550		1,550
Test Pile (Timber)	Each	1		1
Concrete Piles (Furnished)	Lin.Ft.	805		805
Driving Concrete Piles	Lin.Ft.	805		805
Test Pile (Concrete)	Each	1		1
Nome Plates	Each	2		2
Slope Wall	Sq.Yd.	410		410
Protective Coat	Sq.Yd.		1024	1024
* Bridge Seat Sealant	L.Sum	1		1
Metal Shoes	Each	62		62

*Applied at Abutments

It shall be the responsibility of the contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

GENERAL PLAN & ELEVATION
PROJ.-I-74-3 (22) 67
ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30 HB-1
PEORIA COUNTY
STA. 50+00 ILL. 78
STA. 808+00.02 FAI RT. 74

Rev. Reinf. from 75,760# to 80,300# 11-4-66 N.R.F.
Superstructure Reinf. from 51,020 to 55,560 #

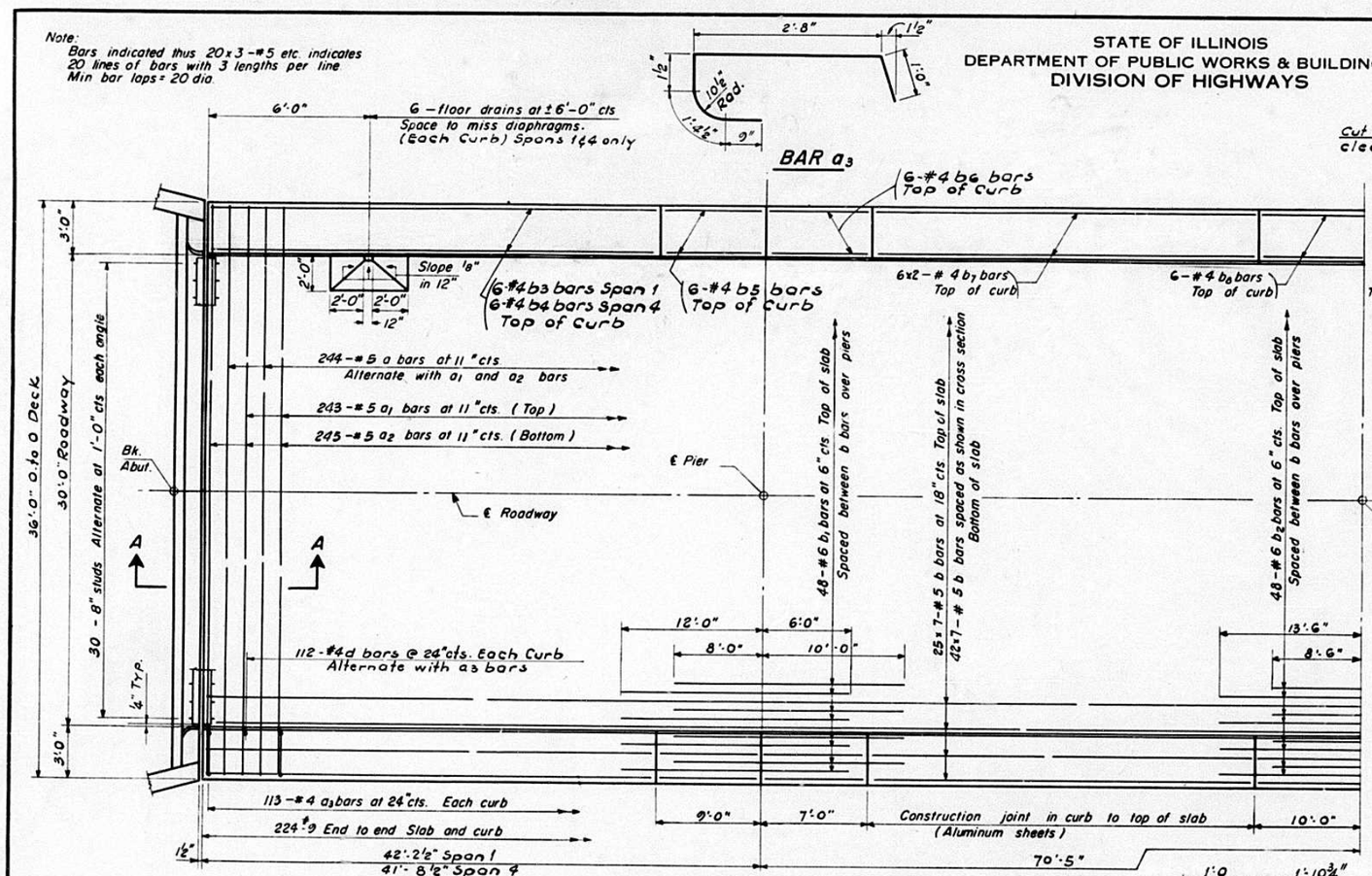
Revised 12-22-66

Note:
Bars indicated thus 20 x 3 -#5 etc. indicates 20 lines of bars with 3 lengths per line
Min bar laps = 20 dia.

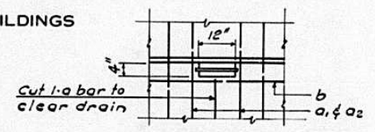
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 74	72 30HB-1	PEORIA	47	9
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

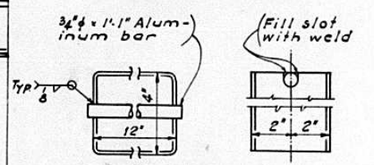
SHEET NO. 2
SHEETS



HALF PLAN



TYP. DETAIL AT DRAIN



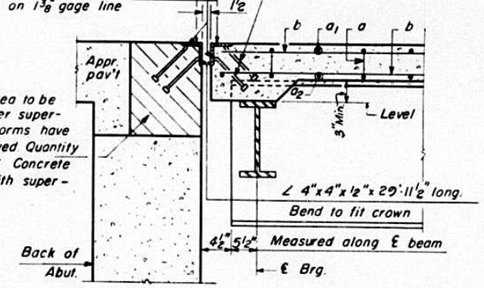
4" x 12" Floor Drain 3/16" Aluminum sheets welded. ASTM: B209 Alloy 6061-T6. ¾"ϕ Aluminum Bar ASTM: B211 Alloy 6061-T6

FLOOR DRAINS

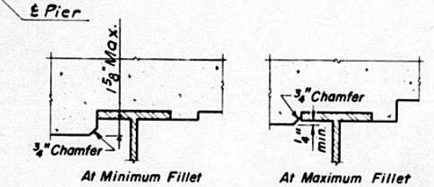
7/16"ϕ holes at 12" cts. for ⅜" bolts set on 2½" gage line All bolts shall be burned, sawed or clipped off flush with back of angles after forms are removed.

¾"ϕ x 8" CR 1020 STL granular or solid flux filled headed studs, automatically end welded. (Alternate at 1'-0" cts.)

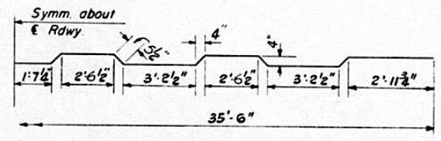
7/16"ϕ vent holes at 12" cts set on 1⅜" gage line



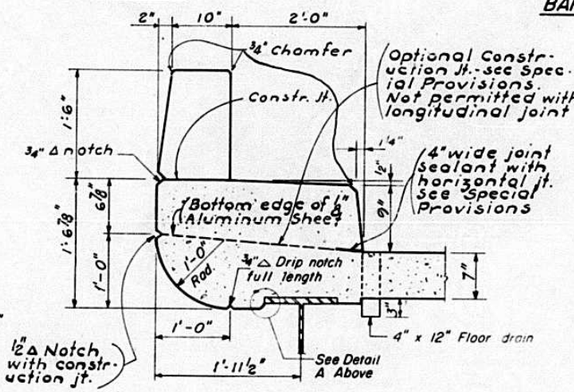
SECTION A-A



DETAIL A



BAR a



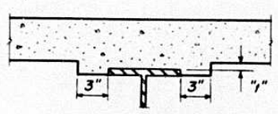
CURB DETAIL

Cost of aluminum sheets and drains shall be incidental to Class X Concrete.

BILL OF MATERIAL

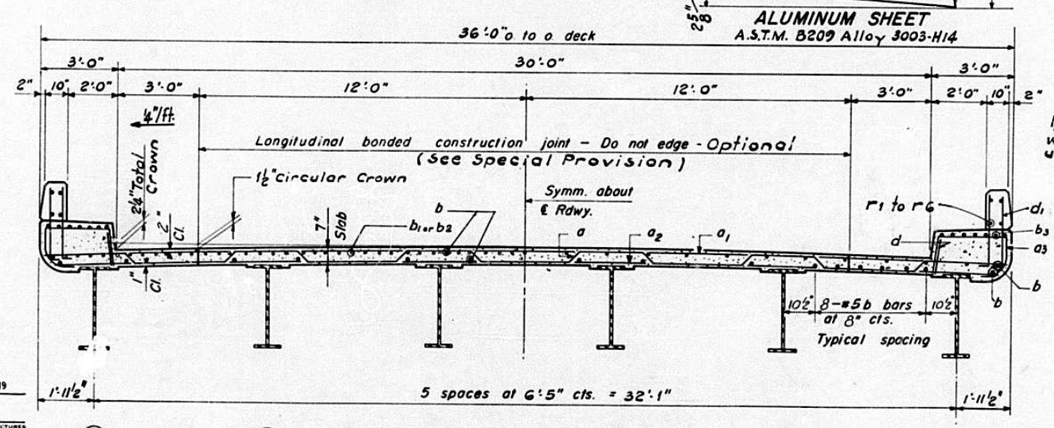
Bar	No.	Size	Length	Shape
a	244	#5	36'-9"	
a1	243	#5	35'-6"	
a2	245	#5	36'-6"	
a3	226	#4	5'-11"	
b	469	#5	33'-0"	
b1	96	#6	18'-0"	
b2	48	#6	22'-0"	
b3	12	#4	32'-11"	
b4	12	#4	32'-5"	
b5	24	#4	8'-9"	
b6	24	#4	6'-9"	
b7	48	#4	27'-0"	
b8	24	#4	9'-9"	
d	224	#4	1'-0"	
Reinforcement Bars			Lbs.	50,330
* Structural Steel			Lbs.	227,000
+ Class X Concrete			Cu Yds.	248.3

* Includes 8,970 lbs for bearing assemblies and 1,670 lbs. for expansion devices
+ Includes 22.9 Cu. Yds. in parapets.



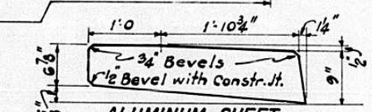
STANDARD FILLET DETAIL

To determine "f". After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 4. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 4 minus slab thickness, equals the fillet heights "f" above top of beams.

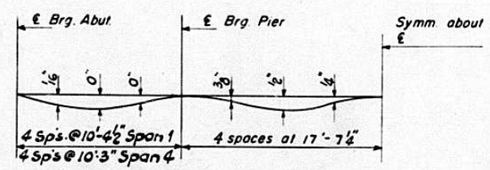


NEAR PIERS NEAR MIDSPAN

CROSS SECTION



ALUMINUM SHEET
A.S.T.M. B209 Alloy 3003-H14



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 4.

DESIGNED	MDR
CHECKED	LK
DRAWN	TAB
CHECKED	JH

19
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

I-6-0 7-2-62 Rev. 11-9-62 Rev. 11-1-63 5-1-64

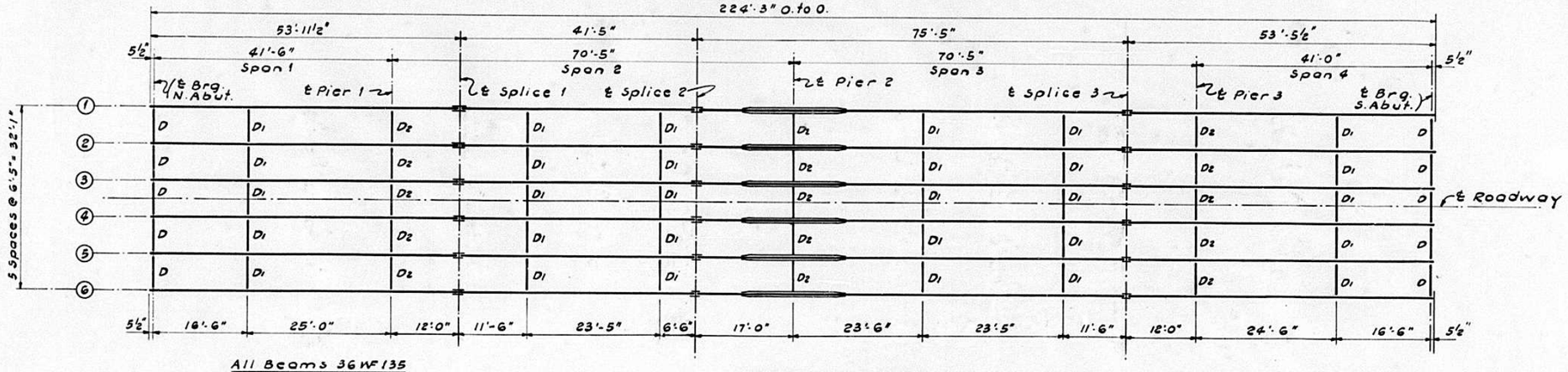
Rev. Top of slab reinf. cl. from 1½" to 2". Reinf. from 45,790# to 50,330# 11-4-66 N.R.F.

SUPERSTRUCTURE
ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30HB-1
PEORIA COUNTY
STA. 808+00.02

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

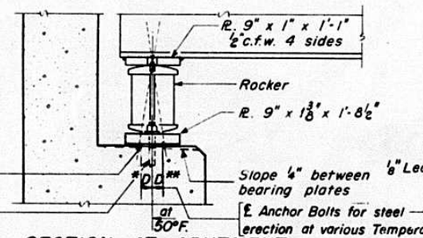
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I-74	72-30HB-1	PEORIA	47	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
10 SHEETS

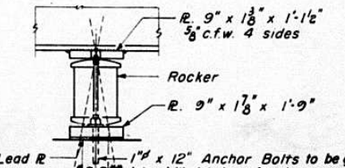


All Beams 36WF135

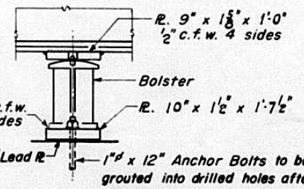
FRAMING PLAN



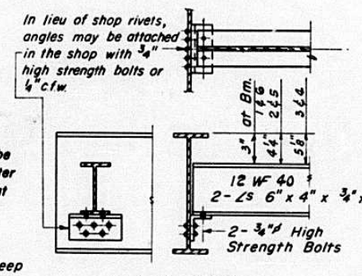
SECTION AT ABUTMENT



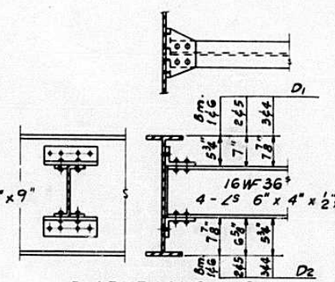
PIER 1&3



PIER 2



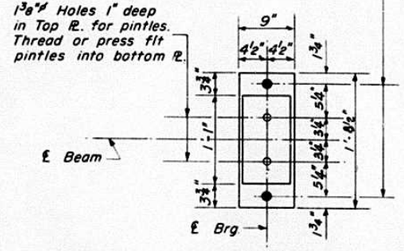
DIAPHRAGM D
10-Required



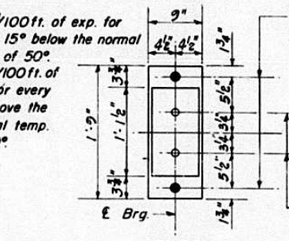
DIAPHRAGMS D1 & D2
30-Required D1
15-Required D2

TABLE OF MOMENTS AND REACTIONS INTERIOR BEAMS					
		D.L.	L.L.	IMPACT	TOTAL
MOMENTS	45ps.1&4	77	235	71	383
	Piers 1&3	289	260	67	616
	55ps. 2&3	199	352	90	641
	Pier 2	452	313	81	846
REACTIONS	Abuts.	12.3	31.2	9.4	52.9
	Piers 1&3	56.2	41.0	11.4	108.6
	Pier 2	69.5	45.0	11.5	126.0

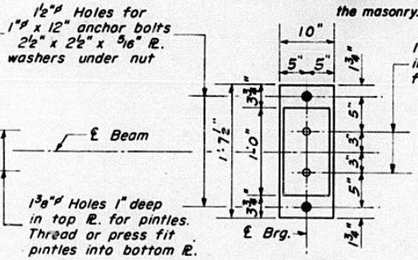
ELEVATION - TOP OF WF			
	BEAMS 1&6	BEAMS 2&5	BEAMS 3&4
℄ Brg. N. Abut.	718.20	718.30	718.37
℄ Brg. Pier 1	718.24	718.34	718.42
℄ Splice 1	718.26	718.36	718.44
℄ Splice 2	718.27	718.36	718.44
℄ Brg. Pier 2	718.23	718.33	718.41
℄ Splice 3	718.11	718.21	718.29
℄ Brg. Pier 3	718.07	718.17	718.24
℄ Brg. S. Abut.	717.92	718.02	718.10



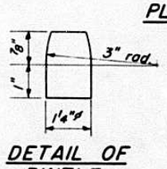
PLAN



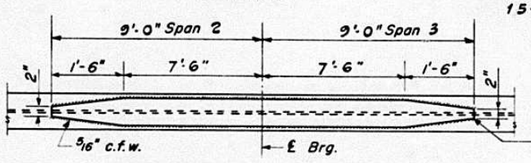
PLAN



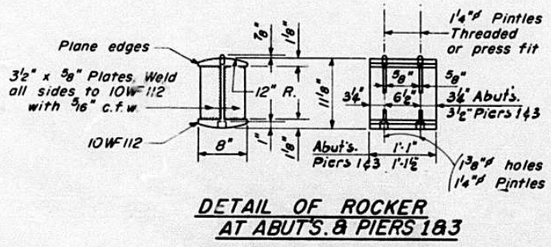
PLAN



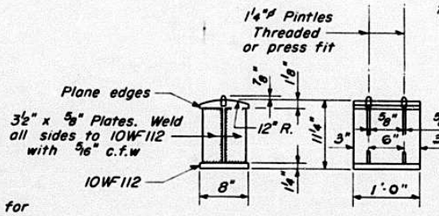
DETAIL OF PINTLE



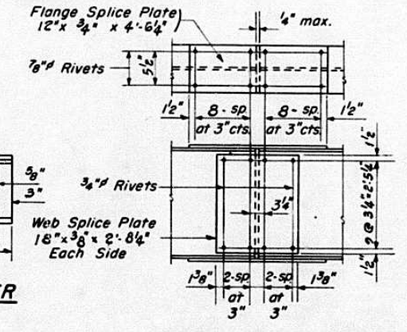
DETAIL OF COVER PLATE



DETAIL OF ROCKER AT ABUTS. & PIERS 1&3



DETAIL OF BOLSTER AT PIER 2



DETAIL OF SPLICE

DESIGNED	M D R
CHECKED	L K
DRAWN	T A B
CHECKED	J H

EXAMINED 19
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

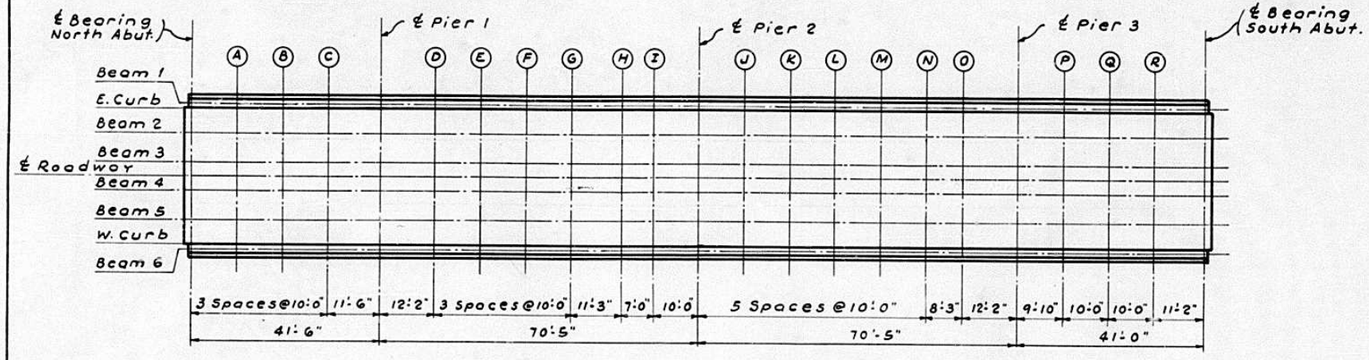
I-2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

STRUCTURAL STEEL
ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30HB-1
PEORIA COUNTY
STA. 808+00.02

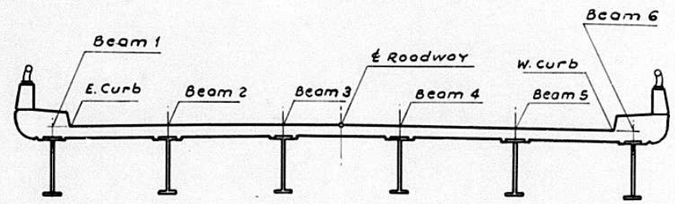
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	72 38HB1	PEORIA	47	11
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
10 SHEETS



PLAN



CROSS SECTION

STATION		℄ Brg. N. Abut 48+88.08	A 48+98.08	B 49+08.08	C 49+18.08	℄ Pier 1 49+29.58	D= Splice 1 49+41.75	E 49+51.75	F 49+61.75	G 49+71.75	H = Splice 2 49+83.00	I 49+90.00	℄ Pier 2 50+00.00	J 50+10.00	K 50+20.00	L 50+30.00	M 50+40.00	N 50+50.00	O = Splice 3 50+58.25	℄ Pier 3 50+70.42	P 50+80.25	Q 50+90.25	R 51+00.25	℄ Brg. S. Abut. 51+11.42
CURBS	TOP OF SLAB ELEVATION	718.780	718.809	718.832	718.852	718.870	718.884	718.892	718.895	718.895	718.891	718.886	718.875	718.861	718.843	718.821	718.795	718.766	718.739	718.694	718.654	718.610	718.561	718.503
	TOP OF SLAB ELEV. + DEFLECTION	718.780	718.814	718.834	718.852	718.870	718.905	718.932	718.942	718.939	718.913	718.891	718.875	718.866	718.876	718.866	718.840	718.803	718.759	718.694	718.654	718.613	718.566	718.503
BEAMS 2 & 5	TOP OF SLAB ELEVATION	718.887	718.915	718.939	718.959	718.977	718.991	718.999	719.003	719.003	718.998	719.993	718.982	718.968	718.950	718.928	718.902	718.873	718.846	718.801	718.761	718.717	718.668	718.610
	TOP OF SLAB ELEV. + DEFLECTION	718.887	718.918	718.941	718.959	718.977	719.006	719.029	719.037	719.035	719.014	719.997	718.982	718.972	718.974	718.961	718.936	718.900	718.861	718.801	718.761	718.719	718.672	718.610
BEAMS 3 & 4	TOP OF SLAB ELEVATION	718.959	718.986	719.010	719.030	719.049	719.063	719.070	719.074	719.074	719.069	719.064	719.054	719.039	719.021	718.999	718.974	718.944	718.917	718.873	718.833	718.788	718.740	718.682
	TOP OF SLAB ELEV. + DEFLECTION	718.959	718.990	719.012	719.031	719.049	719.078	719.100	719.108	719.106	719.086	719.069	719.054	719.043	719.046	719.033	719.007	718.972	718.932	718.873	718.833	718.790	718.744	718.682
	℄ ROADWAY TOP OF SLAB ELEVATION	718.968	718.995	719.019	719.039	719.058	719.072	719.079	719.083	719.083	719.078	719.073	719.063	719.048	719.030	719.008	718.983	718.953	718.926	718.882	718.842	718.797	718.749	718.691
	TOP OF SLAB ELEV. + DEFLECTION	718.968	718.999	719.021	719.039	719.058	719.087	719.109	719.117	719.115	719.095	719.077	719.063	719.052	719.054	719.041	719.015	718.981	718.941	718.882	718.842	718.799	718.753	718.691
BEAMS 1 & 6	TOP OF SLAB ELEVATION	718.758	718.787	718.810	718.830	718.848	718.862	718.870	718.873	718.873	718.869	718.864	718.853	718.839	718.821	718.799	718.773	718.744	718.717	718.672	718.632	718.588	718.539	718.481
	TOP OF SLAB ELEV. + DEFLECTION	718.758	718.792	718.812	718.830	718.848	718.883	718.910	718.920	718.917	718.891	718.869	718.853	718.844	718.854	718.844	718.818	718.781	717.737	718.672	718.632	718.591	718.544	718.481

DESIGNED	JH
CHECKED	LK
DRAWN	TAB
CHECKED	LK

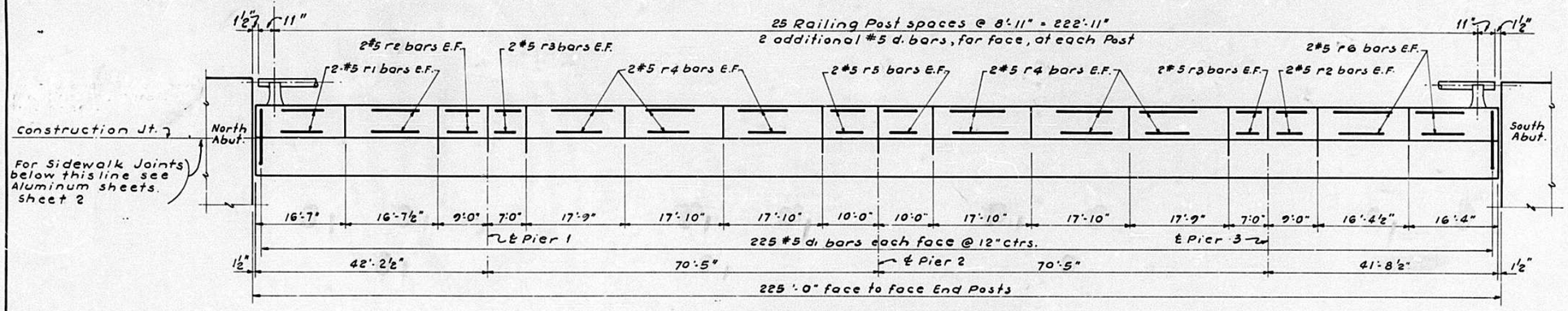
19
EXAMINED
PASSED
APPROVED

SCREED ELEVATIONS
ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30HB-1
PEORIA COUNTY
STA. 808+00.02

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 74	72 30HB-1	PEORIA	47	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

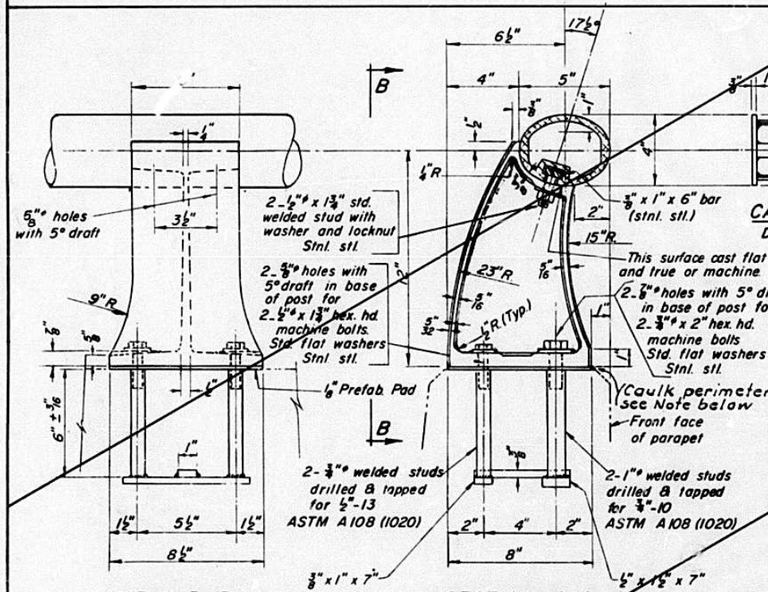
SHEET NO. 5 SHEETS



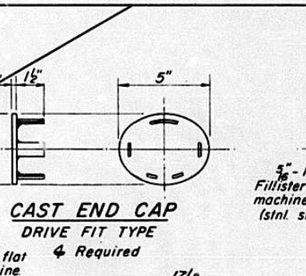
ELEVATION OF WEST PARAPET

East Parapet similar but opposite hand

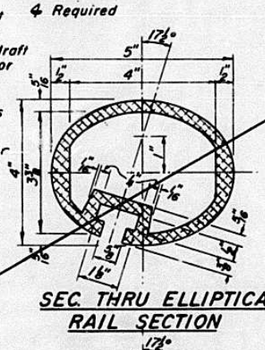
Note: For Rail Details see Sheet #5A of 10.



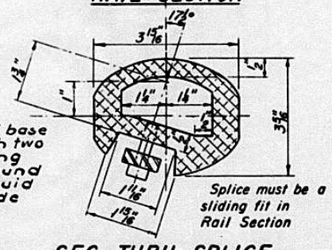
RAIL POST DETAILS
52 Required



CAST END CAP
DRIVE FIT TYPE
4 Required

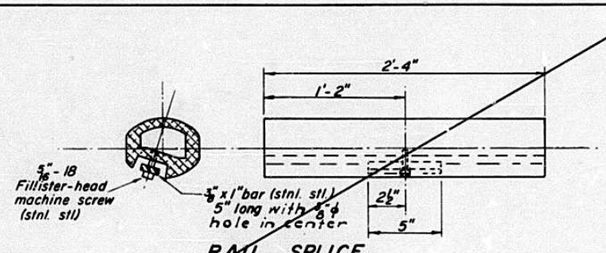


SEC. THRU ELLIPTICAL RAIL SECTION

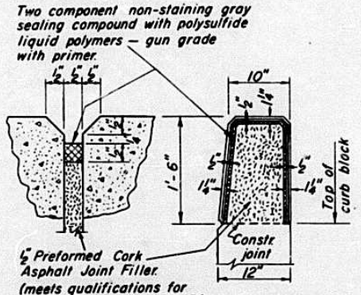


SEC. THRU SPLICE

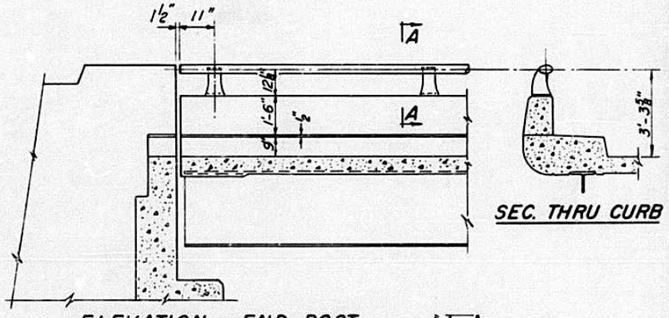
Note: Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers - gun grade with primer.



RAIL SPLICE
Notch abutting ends of rails to clear ⅝" bolt



PARAPET JOINT DETAIL



SEC. THRU CURB

ELEVATION – END POST

BAR di

NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-235 alloy 6061-T6, or 6062-T6, and shall extend a minimum of 2 panel lengths (attached to minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.

See Special Provisions for following Material Specifications:

Cast Aluminum Alloy Bridge Post – Alloy 344-T4.
Stainless Steel Welded Stud Bolts, Washers, and Locknuts.

For material composition of Prefabricated Pad, see Article 54.9(f), (Bearing and Anchorage), of the Standard Specifications.

METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.

BASIS of PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.

Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.

Provide 1-⅛" and 2-1/16" Aluminum shims for 25% of the posts. Rail element shall be parallel to grade - high spots shall be ground and low spots shimmed.

BILL OF MATERIAL

Item			Unit	Quantity
ALUMINUM HANDRAIL			Lin. Ft.	449
Bar	No.	Size	Length	Shape
r1	16	#5	16'-3"	—
r2	16	#5	8'-8"	—
r3	16	#5	6'-8"	—
r4	48	#5	17'-5"	—
r5	16	#5	9'-8"	—
r6	16	#5	16'-0"	—
d1	1,004	#5	3'-3"	⌐
Reinforcement Bars			Lbs.	5,230

ALUMINUM HANDRAIL & PARAPET
ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30HB-1
PEORIA COUNTY
STA. 808+00.02

DESIGNED	JH
CHECKED	LK
DRAWN	TAB
CHECKED	LK

19
EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

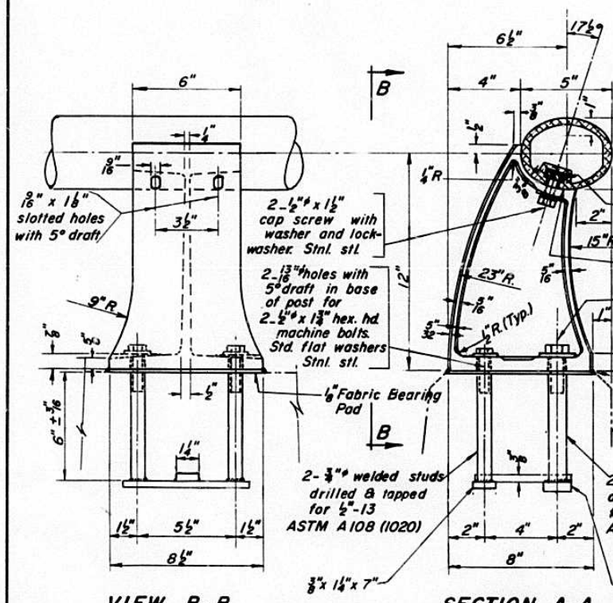
R-17 Dwn 5-28-64

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. I. 74	72-30HB-1	Peoria	49	12A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5A
10 SHEETS

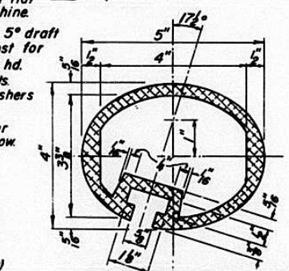
Note: For Parapet Elevation see Sheet # 5 of 10.



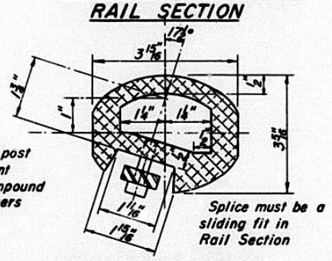
VIEW B-B — SECTION A-A

RAIL POST DETAILS

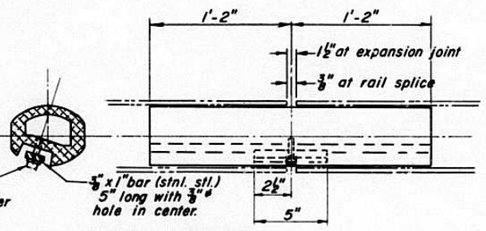
CAST END CAP
DRIVE FIT TYPE



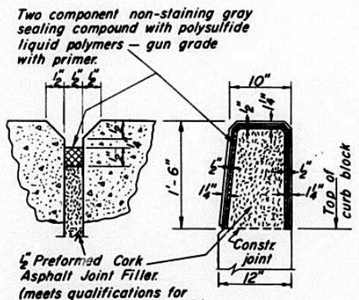
SEC. THRU ELLIPTICAL RAIL SECTION



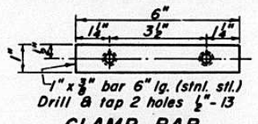
SEC. THRU SPLICE



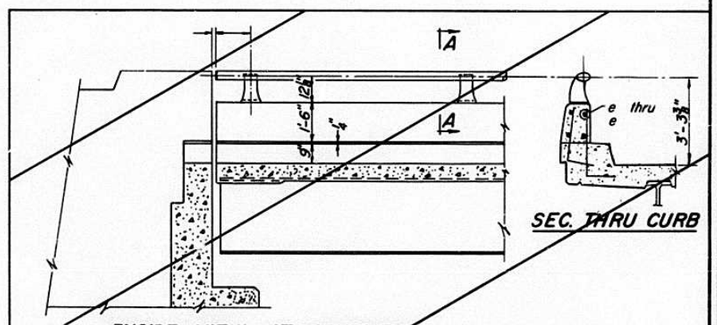
RAIL SPLICE
Notch top of slot in rails to clear ⅛" screw.



PARAPET JOINT DETAIL



CLAMP BAR



SEC. THRU CURB

INSIDE VIEW AT ABUTMENT

NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-221 alloy 6061-T6 and shall extend a minimum of 2 panel lengths (attached to a minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.

See Special Provisions for following Material Specifications:

Cast Aluminum Alloy Bridge Post— Alloy A344-T4.
Stainless Steel Bars, Cap Screws, Washers and Lockwashers.
Fabric Bearing Pad

METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.

BASIS of PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.

Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.

Provide 1-⅛" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade — high spots shall be ground, and low spots shimmed.

PARAPETS & RAILS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e		#5		
e_1		#5		
e_2		#5		
e_3		#5		
e_4		#5		
Class X Concrete			Cu. Yds.	
Reinforcement Bars			Lbs	
Aluminum Handrail			Lin. Ft.	

ALUMINUM HANDRAIL

ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30HB-1
PEORIA COUNTY

DESIGNED	
CHECKED	
DRAWN Wm. M. Best	
CHECKED	

19
EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

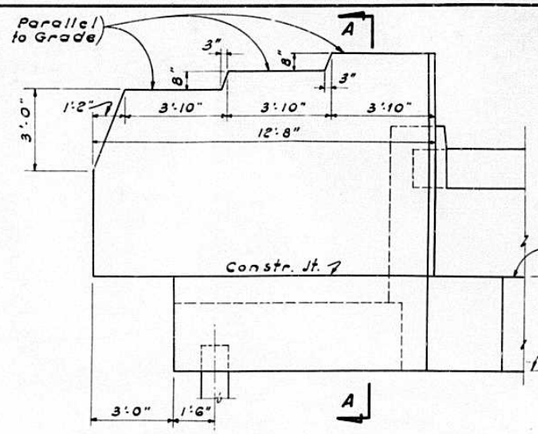
Note:
Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers —gun grade with primer.

R-17 Rev. 10-8-65 1-5-66

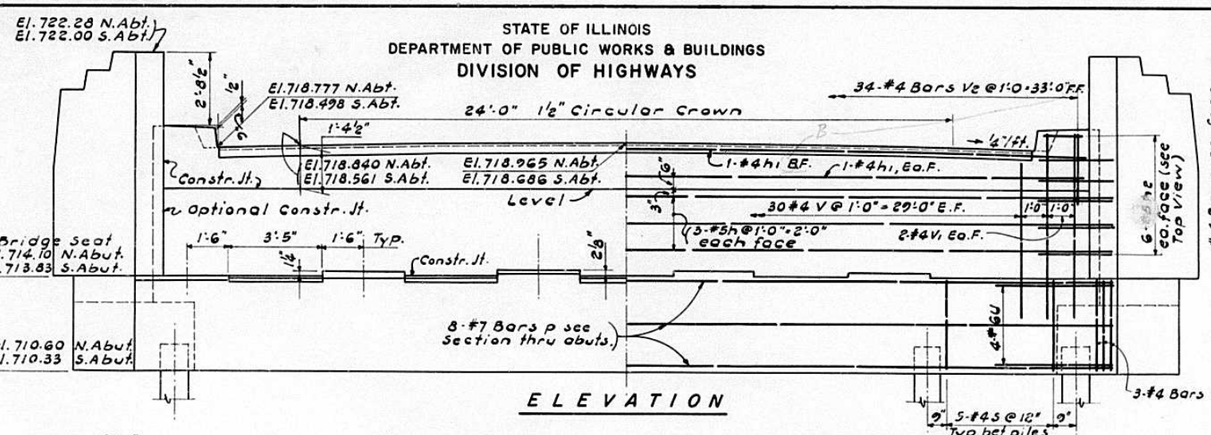
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. I-74	72 30HB-1	PEORIA	49	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

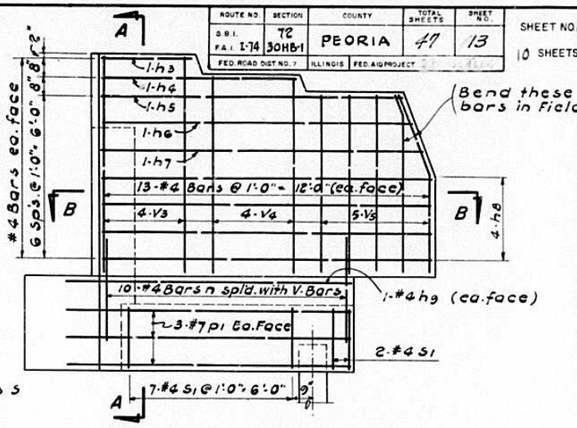
SHEET NO 6
10 SHEETS



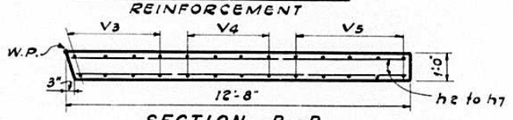
WING WALL ELEVATION
DIMENSIONS



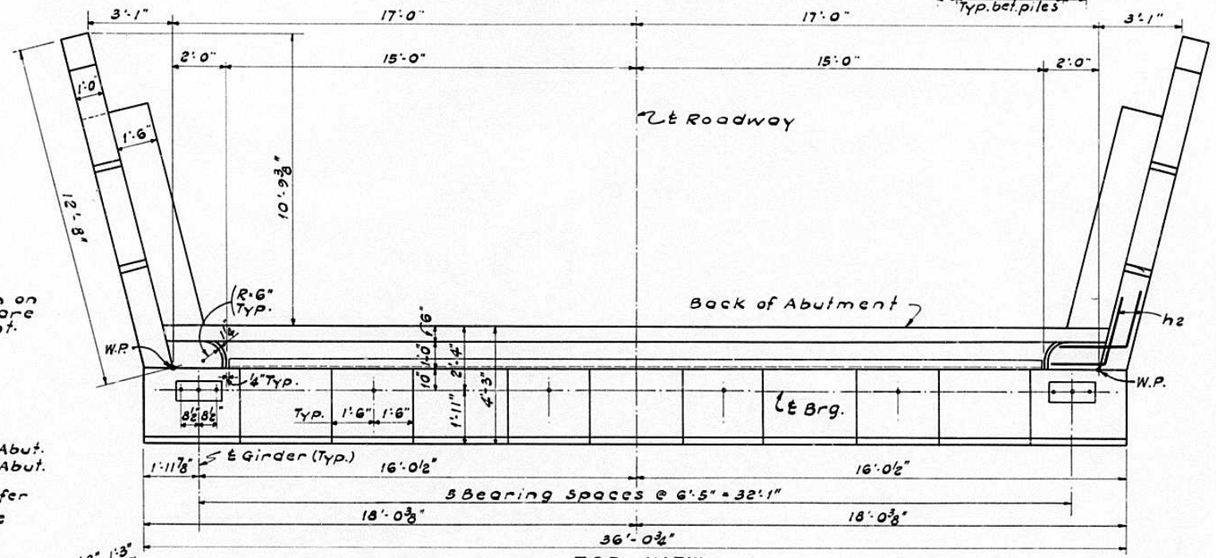
ELEVATION



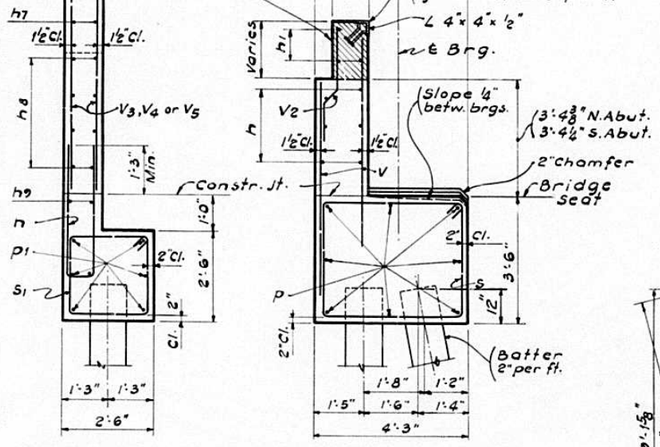
WING WALL ELEVATION
REINFORCEMENT



SECTION B-B



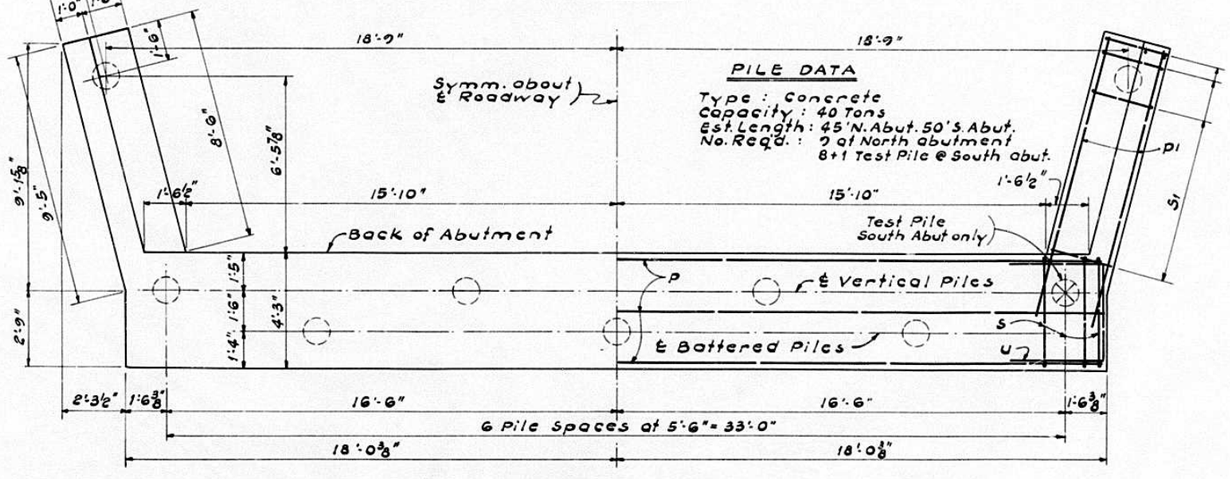
TOP VIEW



SECTION A-A

SECTION
THRU ABUTMENT

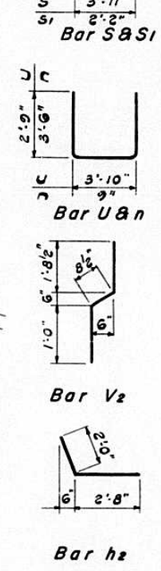
For details of Concrete Piles see Std. Dwg. X-1



PILE DATA

Type : Concrete
Capacity : 40 Tons
Est. Length : 45' N. Abut. 50' S. Abut.
No. Req'd. : 7 at North abutment
8+1 Test Pile @ South abut.

PLAN - PILE CAP



TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	12	#5	35'-8"	—
h1	6	#5	33'-7"	—
h2	24	#5	4'-8"	⌞
h3	8	#4	3'-4"	—
h4	8	#4	7'-2"	—
h5	8	#4	11'-0"	—
h6	8	#4	11'-6"	—
h7	8	#4	11'-10"	—
h8	32	#4	12'-2"	—
h9	8	#4	10'-6"	—
n	40	#4	7'-9"	⊔
p	16	#7	35'-8"	—
p1	24	#7	10'-6"	—
S	72	#4	14'-11"	◹
S1	36	#4	9'-5"	◹
U	16	#6	9'-4"	⊔
V	120	#4	5'-9"	—
V1	16	#4	6'-10"	—
V2	68	#4	3'-5"	⌡
V3	32	#4	8'-0"	—
V4	32	#4	7'-4"	—
V5	40	#4	6'-8"	—
Class X Concrete		Cu. Yds.	74.5	
Reinforcement Bars		Lbs.	5,580	
Concrete Piles		Lin. Ft.	805	
Test Piles (Conc.)		Ea.	1	

DESIGNED	J.H.
CHECKED	L.K.
DRAWN	A.M.P.
CHECKED	J.H.

EXAMINED
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

ABUTMENTS
ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30HB-1
PEORIA COUNTY

STA. 808+00.02 FAI-RT.74

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

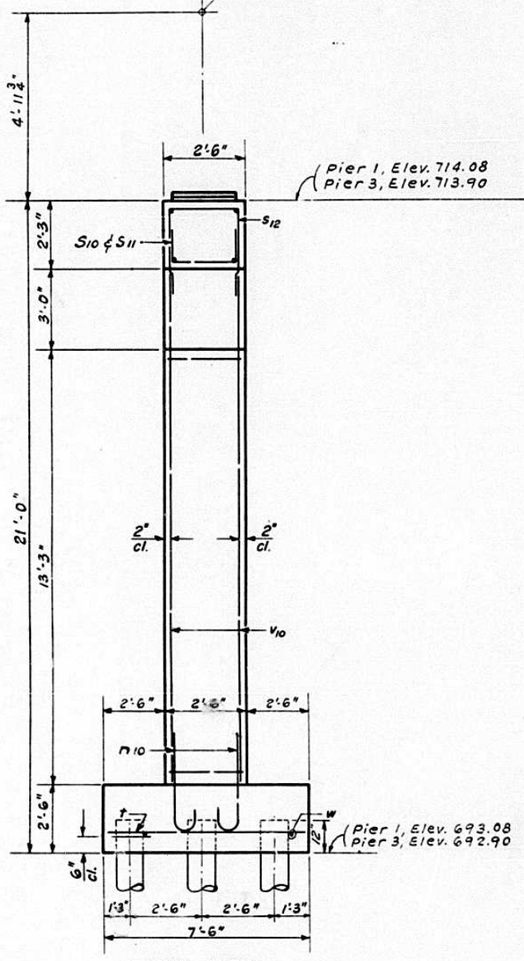
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. I-74	72 30HB-1	PEORIA	47	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

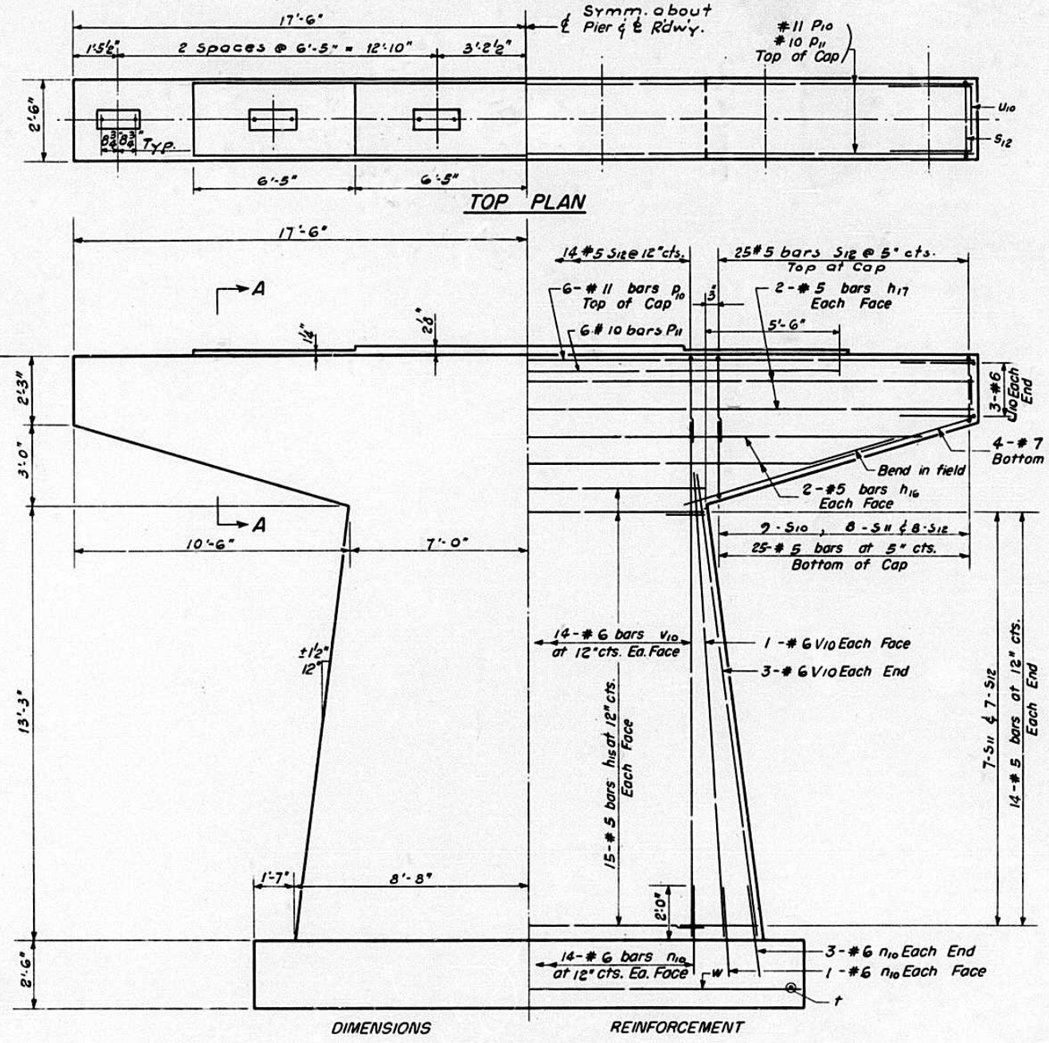
SHEET NO. 7
10 SHEETS

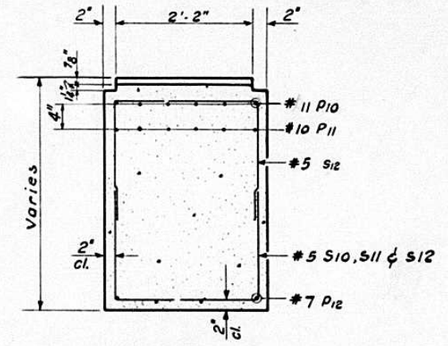
PILE DATA

Type : Creosoted
Capacity : 23 Tons
Est. Length : 25 Ft.
No. Req'd. : 36 (2 Piers)
Test Pile at Pier #1

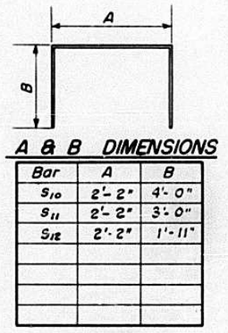
Pier # 1 Sta. 49+29.58 Cr. Elev. 719.06
Pier 3 Sta. 50+70.42 Cr. Elev. 718.88



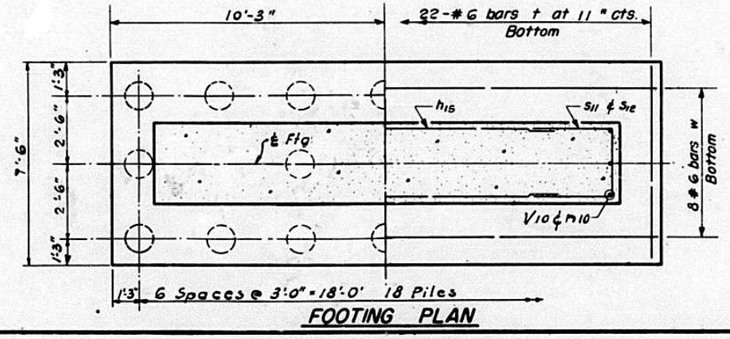




Note: All edges shall have standard ¾" chamfers except footings.



Bar	A	B
S10	2'-2"	4'-0"
S11	2'-2"	3'-0"
S12	2'-2"	1'-11"



Note: Space t and w bars in footings to miss piles. (Typical)

PIER 1 & 3
BILL OF MATERIAL (2 Piers)

Bar	No.	Size	Length	Shape
h15	60	#5	13'-6"	—
h16	8	#5	27'-0"	—
h17	8	#5	34'-6"	—
n10	76	#6	4'-8"	U
P10	12	#11	34-6"	—
P11	12	#10	25'-0"	—
P12	16	#7	12'-6"	—
S10	36	#5	10-2"	⊓
S11	60	#5	8'-2"	⊓
S12	188	#5	6'-0"	⊓
t	44	#6	7'-0"	—
U10	12	#6	6'-3"	⊏
V10	76	#6	17'-6"	—
w	16	#6	19'-6"	—
Metal Shoes			Ea.	35
Class X Concrete			Cu.Yds.	94.5
Reinforcement Bars			Lbs.	10,900
Creosoted Piles			Lin.Ft.	875
Test Piles			Each	1

DESIGNED	M D R
CHECKED	L K
DRAWN	T A B
CHECKED	J. H

19
EXAMINED
PASSED
APPROVED

P-2 Re-drawn 7-17-59 Rev. 11-25-59

PIERS 1 & 3
ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30HB-1
PEORIA COUNTY
STA. 808+00.02

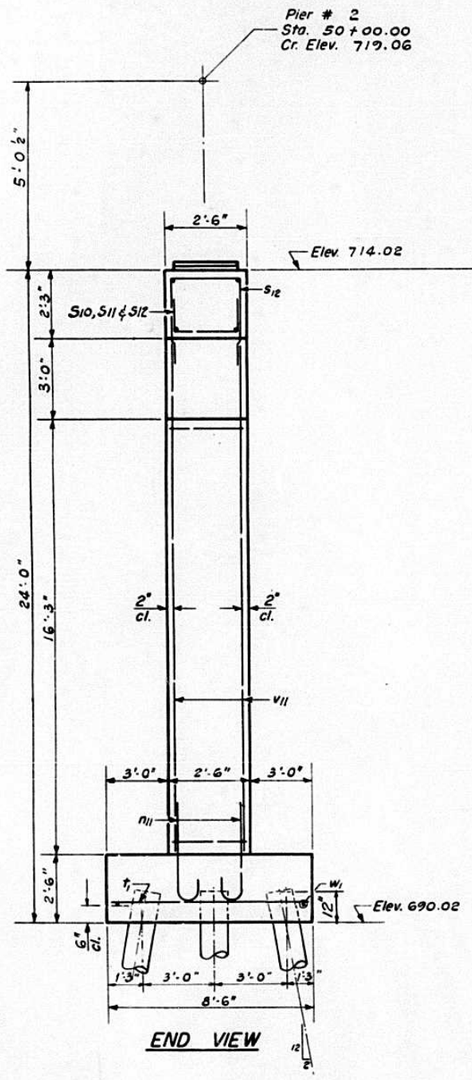
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	72 30HB-1	PEORIA	47	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 8
SHEETS

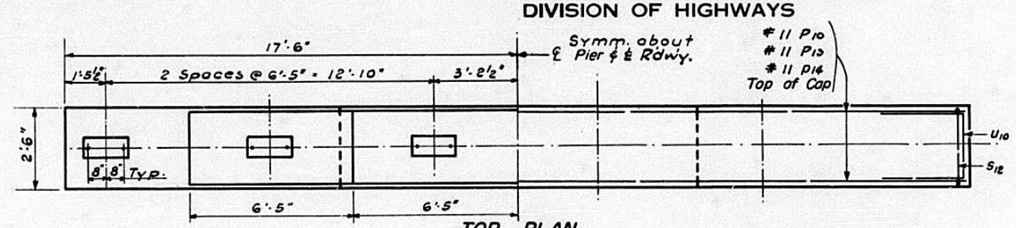
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PILE DATA

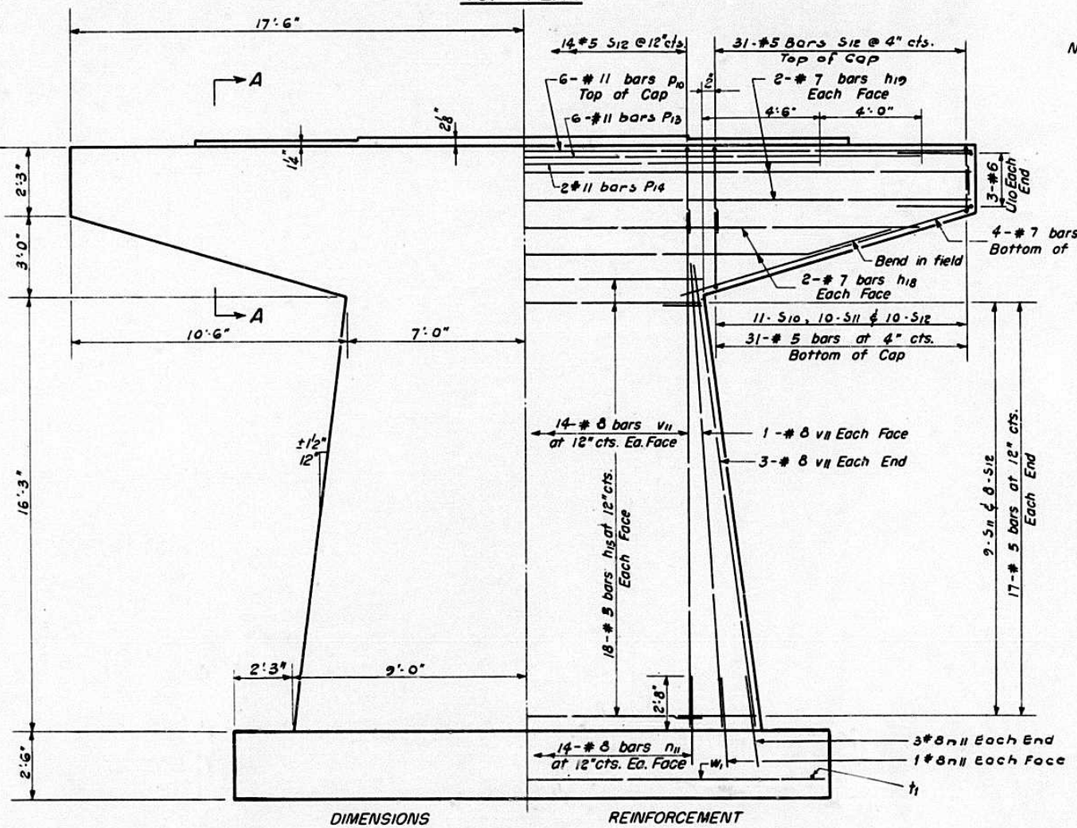
Type : Creosoted
Capacity : 21 Tons
Est. Length 25 Ft.
No. Req'd. : 27



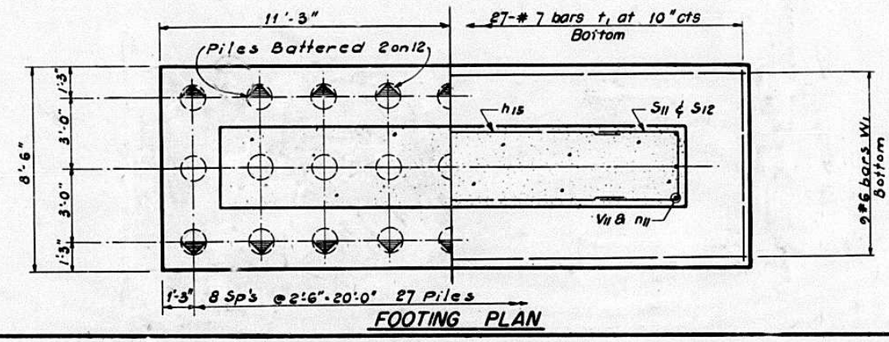
END VIEW



TOP PLAN

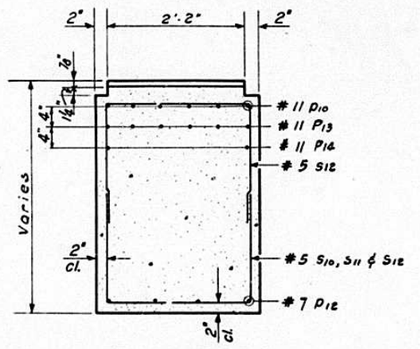


ELEVATION

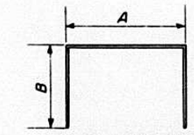


FOOTING PLAN

Note: All edges shall have standard ¾" chamfers except footings.



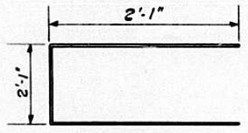
SECTION A-A



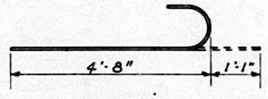
A & B DIMENSIONS

Bar	A	B
S10	2'-2"	4'-0"
S11	2'-2"	3'-0"
S12	2'-2"	1'-11"

S BARS



U10 BAR



n11 BAR

PIER 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h15	36	# 5	13'-6"	—
h18	4	# 7	27'-0"	—
h19	4	# 7	54'-6"	—
n11	38	# 8	5'-9"	⊃
P10	6	# 11	34'-6"	—
P12	8	# 7	12'-6"	—
P13	6	# 11	31'-0"	—
P14	2	# 11	23'-0"	—
S10	22	# 5	10'-2"	⊓
S11	38	# 5	8'-2"	⊓
S12	112	# 5	6'-0"	⊓
t1	27	# 7	8'-0"	—
U10	6	# 6	6'-3"	⊏
V11	38	# 8	20'-6"	—
W1	9	# 6	22'-0"	—
Class X Concrete			Cu.Yds.	55.8
Reinforcement Bars			Lbs.	8,260
Creosoted Piles			Lin.Ft.	675
Metal Shoes			Each	27

DESIGNED	M D R
CHECKED	L K
DRAWN	T A B
CHECKED	J H

19
EXAMINED
PASSED
APPROVED

P-2 Re-drawn 7-17-59 Rev. 11-25-59

PIER 2
ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30HB-1
PEORIA COUNTY
STA. 808+00.02

	72				
74	30HB-1	PEORIA	47	16	

SHEET NO 9
SHEETS

BRIDGE FOUNDATION BORING LOG

PROJECT I-74-3(5)61 BRIDGE Illinois Route 78 Date 1-8-65
ROUTE FAI 74 over FAI Route 74 Bored By R. L. Squires
SEC 72-3HB-1 STA 30+00 Illi. 78 Checked By Alvin E. Meine
COUNTY Peoria

Boring No 1 Station 48+86 Offset 15' Lt. of ℄ along N. Abut.
Surface Water El. —
Groundwater El. at Completion 666.2 After — Hours —

Elevation		N	Qu t/s.f.		w (%)
Ground Surface	700.2	0			
Medium Dark Brown Silty CLAY LOAM		7	---		—
	696.2				
Stiff Light Brown and Light Gray Silty CLAY		8	1.1 B		27
	693.7				
Medium Light Brown and Light Gray Silty CLAY LOAM		6	0.7 B		—
		6	1.0 B		24
	688.7				
Stiff Dark Brown and Gray Silty CLAY		6	1.1 B		31
	686.2				
Stiff Dark Brown and Gray CLAY		6	1.1 B		—
		11	1.5 E		—
	681.2				
Stiff Brown CLAY LOAM		9	1.4 E		—
	678.7				
Hard Brown CLAY (Trace of Sand)		56	4.2 B		18
	673.7				
Hard Brown and Gray CLAY		31	5.4 B		14
	671.2				
Hard Gray CLAY (Till)		100 10"	3.6 B		
EST. TIP OF PILES NO. ABUT. EL. 666.6 ?		42	6.9 B		13
		40	6.5 B		—
		36	6.5 E		—
		50 7"	5.0 E		—
		34	4.7 E		—
End of Boring	654.7	33	4.4 B		13

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

COUNTY Peoria
Boring No 2 Station 49+30 Offset 15' Rt. ℄ along Pier 1
Surface Water El. —
Groundwater El. at Completion 665.1 After 20 Hours 665.1

Elevation		N	Qu t/s.f.		w (%)
Ground Surface	700.1	0			
Very Stiff Dark Brown Silty CLAY LOAM		20	2.6 S		—
	696.1				
Stiff Light Brown Silty CLAY LOAM		8	2.0 B		—
FOOTING PIER #1 EL. 693.08 ?	693.6				
Stiff Light Brown and Light Gray Silty CLAY		7	1.8 E		—
	691.1				
Medium Light Brown and Light Gray Silty CLAY LOAM		5	0.7 E		—
	688.6				
Medium Brown CLAY LOAM		6	0.8 E		—
	686.1				
Medium Brown CLAY		8	0.8 E		—
		9	0.9 B		—
	681.1				
Medium Light Brown and Light Gray Silty CLAY		9	0.9 E		—
	678.6				
Hard Brown CLAY LOAM		22	4.1 B		—
		25	4.5 E		—
	673.6				
Hard Gray CLAY (Till) (Trace of Gravel)		29	5.0 E		—
EST. TIP OF PILES PIER #1, EL. 668.6 ?		22	4.9 B		—
		23	4.8 E		—
		23	4.7 E		—
		26	4.2 B		—
		25	4.2 B		—
Hard Gray CLAY (Till) (Trace of Gravel)		30	5.5 B		—
		46	—		—
		35	—		—
End of Boring	649.6	29	—		—

Note: Moisture content comparable to Boring 1

COUNTY Peoria
Boring No 3 Station 50+00 Offset 19' Lt. of ℄ along Pier 2
Surface Water El.
Groundwater El. at Completion 691.3 After 18 Hours 694.3

Elevation		N	Qu t/s.f.		w (%)
Ground Surface	699.8	0			
Medium Dark Brown Silty CLAY LOAM		6	—		—
	695.8				
Stiff Light Brown and Light Gray Silty CLAY		8	1.5 B		—
	693.3				
Soft Light Brown Silty LOAM		3	—		—
FOOTING PIER #2 EL. 690.02 ?					
		3	0.3 B		—
	688.3				
Medium Light Brown and Light Gray Silty CLAY LOAM		8	1.0 B		—
		6	1.0 E		—
	683.3				
Stiff Light Brown and Light Gray Silty CLAY		11	1.5 B		—
	680.8				
Loose Light Brown Sandy LOAM		3	—		—
Hard Brown and Gray CLAY LOAM		26	—		—
	673.3				
Hard Gray CLAY (Till) (Trace Sand and Gravel)		31	5.5 S		—
		25	4.5 E		—
	668.3				
Very Stiff Gray Silty CLAY (Till)		21	3.6 B		—
EST. TIP OF PILES PIER # 2, EL. 665.5 ?	665.8				
Hard Gray Silty CLAY (Till) (Trace of Sand and Gravel)		34	4.6 B		—
		26	4.5 E		—
	660.8				
Hard Gray CLAY (Till) (Trace of Sand and Gravel)		20	4.6 B		—
		24	4.0 E		—
End of Boring 654.3		31	4.5 E		—

COUNTY Peoria
Boring No 4 Station 50+70 Offset 21' Lt. of ℄ along Pier 3
Surface Water El. —
Groundwater El. at Completion 687.7 After 24 Hours 686.7

Elevation		Z	Qu t/s.f.		w (%)
Ground Surface	699.7	0			
Stiff Brown Silty CLAY		9	1.6 B		—
	695.7				
Stiff Light Brown and Light Gray Silty CLAY LOAM		8	1.0 B		—
FOOTING PIER #3 EL. 692.90 ?					
		8	1.1 B		—
		6	1.1 B		—
	688.2				
Stiff Brown CLAY		7	1.2 E		—
	685.7				
Stiff Brown and Gray CLAY		10	1.3 B		—
	683.2				
Very Stiff Brown CLAY LOAM		13	2.0 B		—
	680.7				
Medium Brown and GRAY CLAY LOAM		7	0.8 B		—
	678.2				
Hard Brown and Gray Clay LOAM		38	4.0 B		—
	675.7				
Hard Gray CLAY (Till) (Trace of Gravel)		34	4.0 E		—
	670.7				
Very Stiff Gray CLAY (Till) (Trace of Sand and Gravel)		26	—		—
EST. TIP OF PILES PIER # 3, EL. 668.4 ?		26	—		—
		30	3.6 B		—
		26	3.6 B		—
		50/ 8"	3.6 B		—
	658.2				
Hard Gray CLAY (Till) (Trace of Sand and Gravel)		28	6.2 B		—
		30	4.6 B		—
		38	4.5 E		—
End of Boring	649.2	54	4.4 B		—

COUNTY Peoria
Boring No 5 Station 51+14 Offset 25' Rt. ℄ along Pier 3
Surface Water El. —
Groundwater El. at Completion 669.0 After 24 Hours 676.0

Elevation		Z	Qu t/s.f.		w (%)
Ground Surface	699.0	0			
Stiff Light Brown and Light Gray Silty CLAY		11	1.8 B		28
	695.0				
Medium Light Brown and Light Gray Silty CLAY LOAM		8	1.0 B		24
		7	0.9 B		—
	690.0				
Very Stiff Light Brown and Light Gray Silty CLAY LOAM		7	2.2 B		—
	687.5				
Stiff Brown Silty CLAY		6	1.2 B		26
	685.0				
Stiff Brown CLAY		8	1.4 B		—
		10	1.5 E		—
	680.0				
Soft Brown CLAY LOAM		5	0.3 B		—
	677.5				
Very Soft Brown CLAY LOAM		1	—		29
	675.0				
Hard Brown CLAY (Trace Sand and Gravel)		24	4.0 B		15
		26	4.7 S		—
	670.0				
Hard Gray CLAY (Till) (Trace of Sand, Gravel and Boulders)		30	5.5 S		—
		50/ 4"	5.0 E		—
		33	5.5 S		12
EST. TIP OF PILES SO. ABUT. EL. 661.3 ?		50/ 3"	4.6 S		—
		35	5.7 S		—
		39	6.4 B		12
End of Boring	653.5	35	5.4 B		—

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

19
EXAMINED
PASSED
APPROVED

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %

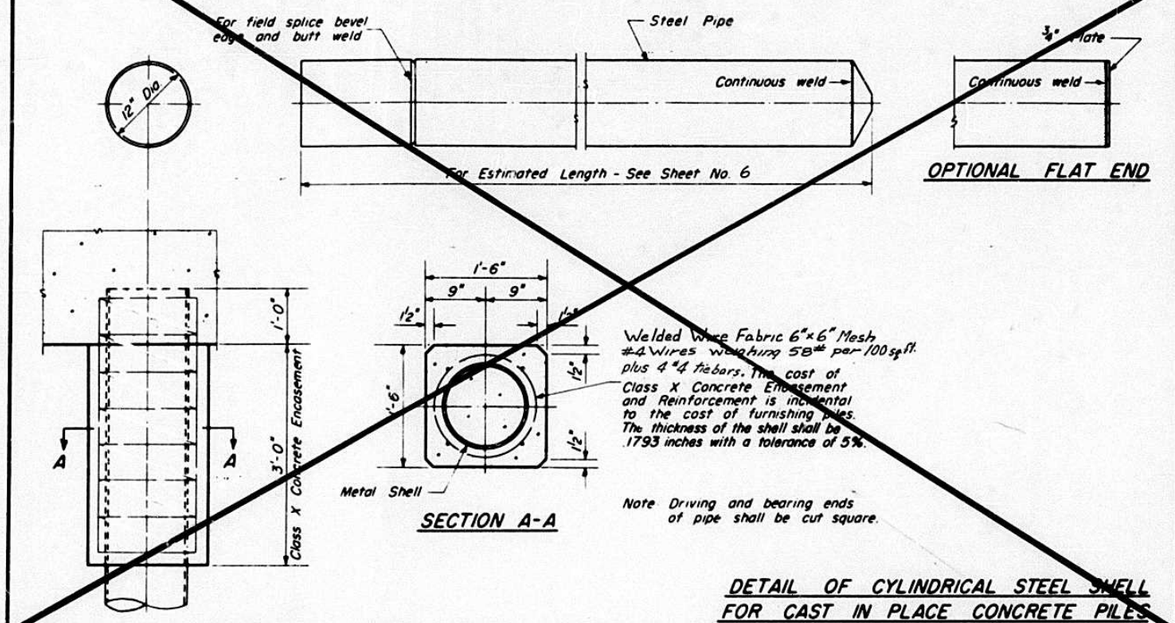
Type failure:
B – Bulge Failure
S – Shear Failure
E – Estimated Value

BORINGS
ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30HB-1
PEORIA COUNTY
STA. 808+00.02

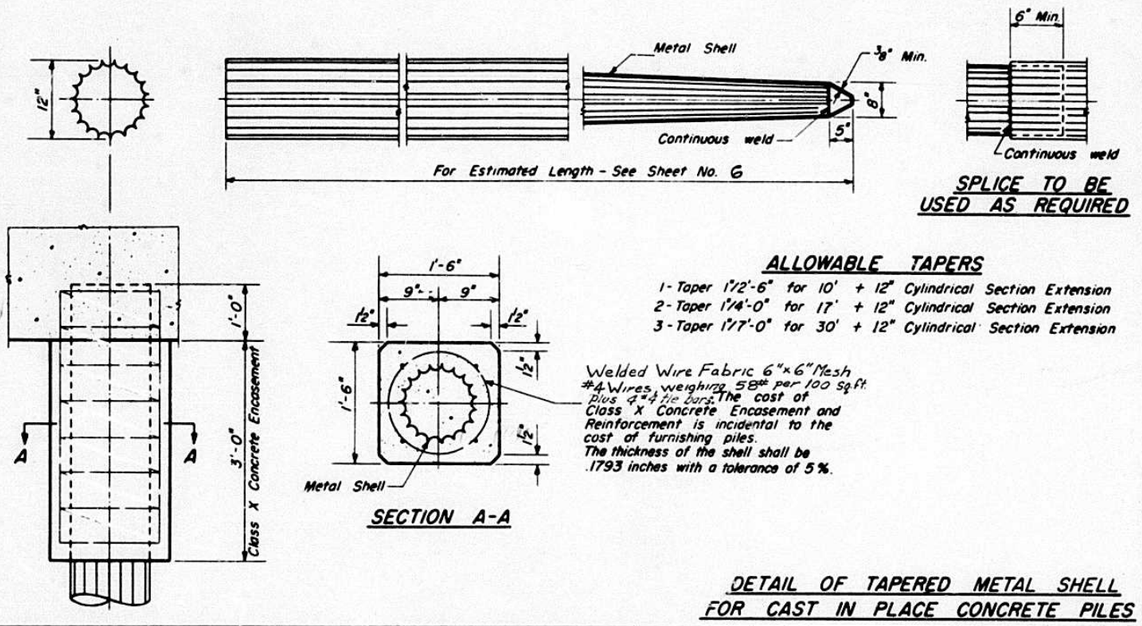
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 1-74	72 30HB-1	PEORIA	47	17

SHEET NO. 10
10 SHEETS



DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

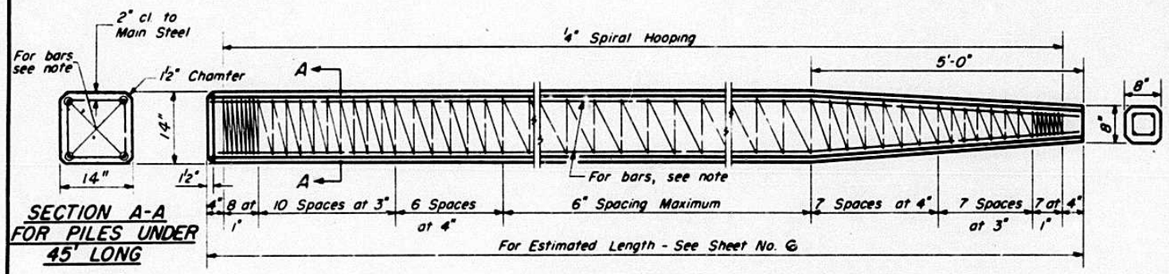


SPLICE TO BE USED AS REQUIRED

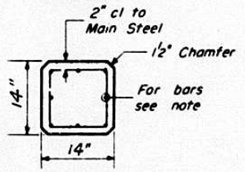
ALLOWABLE TAPERS

1 - Taper 1'12'-6" for 10' + 12" Cylindrical Section Extension
2 - Taper 1'14'-0" for 17' + 12" Cylindrical Section Extension
3 - Taper 1'17'-0" for 30' + 12" Cylindrical Section Extension

DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES



SECTION A-A FOR PILES UNDER 45' LONG



SECTION A-A FOR PILES 45' OR MORE

Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 14" Piles under 45' long use 4-#9 bars the full length.

Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L* from each end. For Piles longer than 45', use three slings placed at a distance of 0.12 L* from each end and at mid-point of pile.

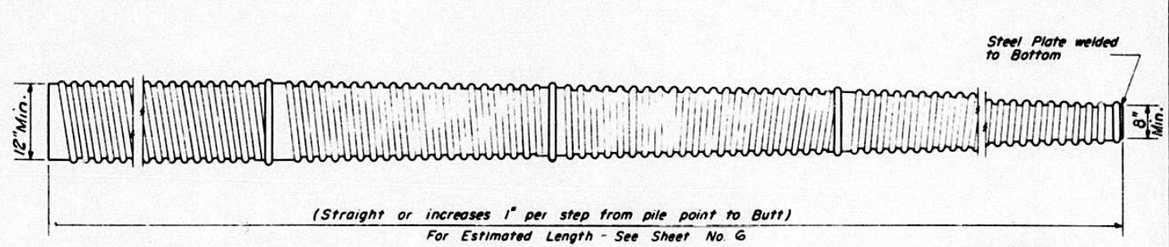
*L = Over all length of pile to be handled

DESIGNED	
CHECKED	
DRAWN	P.G. Barnett W.A. Sausaman
CHECKED	

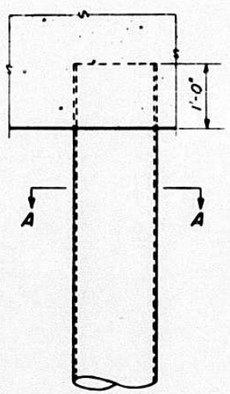
19
EXAMINED
ENGINEER OF BRIDGES AND TUNNEL STRUCTURES
PASSED
ENGINEER OF ROADS
APPROVED
CHIEF HIGHWAY ENGINEER

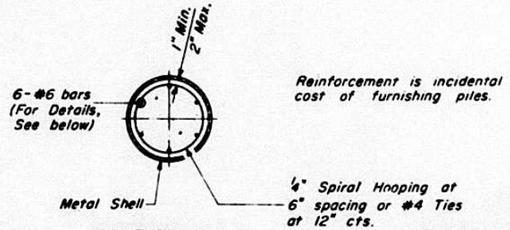
X-1 Rev. 5-12-61 & 2-27-62 4-20-64

DETAIL OF PRECAST CONCRETE PILES



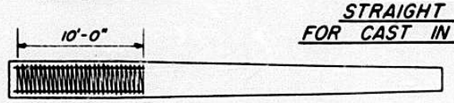
At least 1/4 of the length of pile shall have a Butt diameter equal to or greater than 12".
Gages are furnished to suit soil conditions (14 Gage Min.)

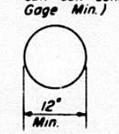




Reinforcement is incidental to the cost of furnishing piles.

SECTION A-A





BUTT

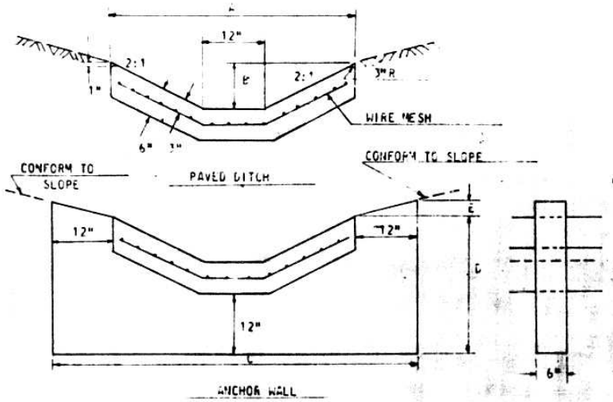
POINT (Applies only to Step Taper type pile)

DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

PILE DETAILS
ILL. 78 OVER F.A.I. RT. 74
F.A.I. RT. 74 SEC. 72-30 HB-1
PEORIA COUNTY
STA. 808+00.02

Rev. Deleted detail of cylindrical steel shell

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	72-30HB-1	PEORIA		18
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		



ANCHOR WALLS SHALL BE BUILT (1) AT THE BEGINNING AND END OF EACH SERIES (2) AT BOTH ENDS OF EACH ENTRANCE CULVERT WHERE PAVED DITCH IS LOCATED AND AT INTERVALS OF NOT MORE THAN 100 LINEAL FEET ALONG PAVED DITCH.

WHEN A PAVED DITCH IS SHOWN ON THE PLANS ADJACENT TO AN ENTRANCE CULVERT THE LAST 5 FEET ON THE UPSTREAM END SHALL BE SHAPED TO FIT THE CULVERT TO INSURE DRAINAGE THRU THE CULVERT.

ANCHOR WALLS AND WIRE MESH SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAVED DITCH AND NO EXTRA COMPENSATION WILL BE ALLOWED.

WIRE MESH TO BE USED SHOULD HAVE A WEIGHT OF AT LEAST 58 POUNDS PER 100 SQ.FEET.

THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAL FOOT FOR 4' PAVED DITCH ; 5' PAVED DITCH , MEASURED ALONG FLOW LINE.

DESIGN	A	B	C	D	E 2:1	E 3:1	E 4:1
4'	4'-0"	0'-9"	6'-0"	2'-3"	0'-6"	0'-4"	0'-3"
5'	5'-0"	1'-0"	7'-0"	2'-6"	0'-6"	0'-4"	0'-3"

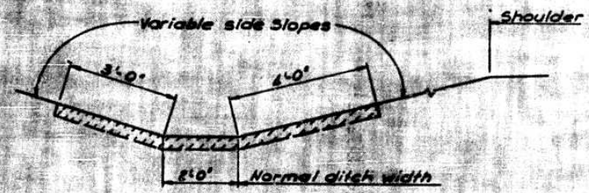
P.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 30HB-1	PEORIA	47	18?
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA.	LOC.	S.Y.	REM.
48+70 to 49+18	Lt.	100	
54+90 to 56+10	Rt.	120	
56+90 to 62+00	Lt.	510	
57+90 to 62+00	Rt.	382	
Total		1112	

NOTES

At the ends of culverts, where side ditches are sodded sodding shall be placed from the ditch to the cut-off wall and wing walls of culvert.

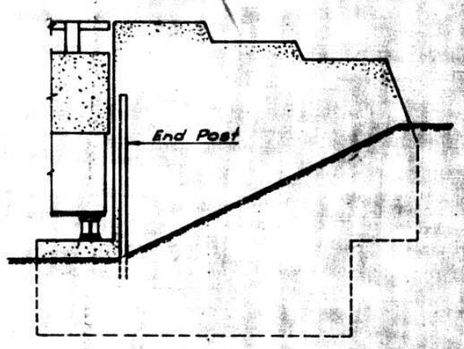
All listed ditches have a normal bottom width (2) ft. except as noted.



SODDED DITCH

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	72-30 HB-1	PEORIA		18B
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

Note: Place End Post as close as possible to wing wall

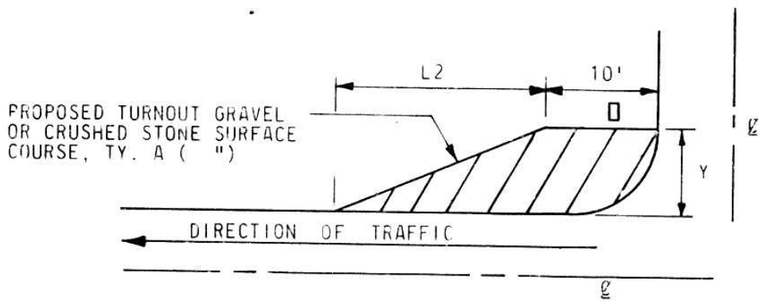


END POST DETAIL

DETAIL OF MAIL BOX TURNOUT

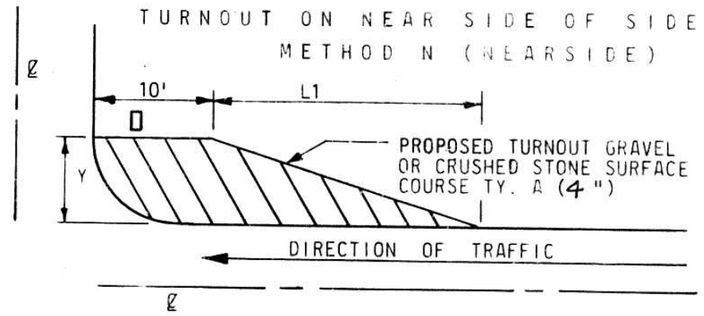
ROUTE	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	72-30 HB-1	PEORIA	47	19

TURNOUT ON FAR SIDE OF SIDE ROAD (FOR SIDE ROADS WITH 15' RADIUS)
METHOD F (FARSIDE)



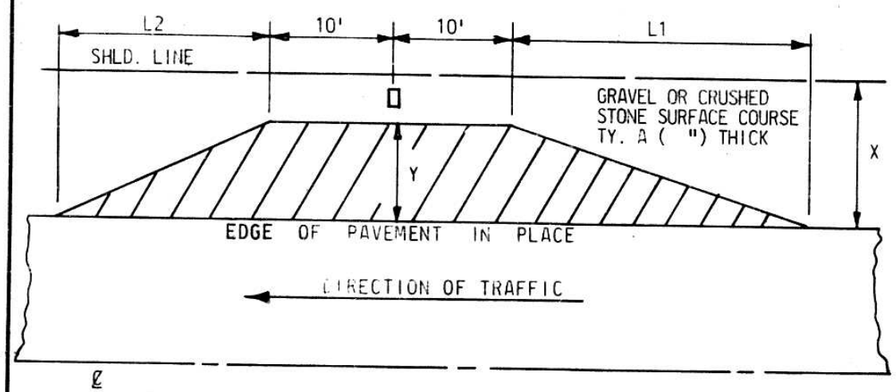
NOTE: FOR DIMENSION L2 SEE STANDARD 2171

TURNOUT ON NEAR SIDE OF SIDE ROAD
METHOD N (NEARSIDE)



NOTE: FOR DIMENSION L1 SEE STANDARD 2171

FULL MAILBOX TURNOUT
METHOD S (STANDARD)



NOTE: FOR DIMENSIONS X, L1 & L2 SEE STANDARD 2171

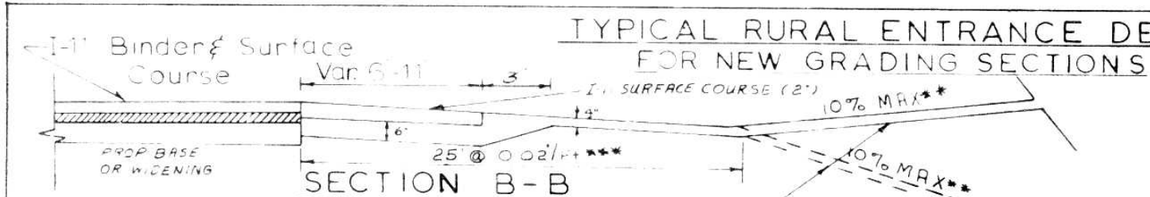
QUANTITIES FOR MAILBOX TURNOUTS
GR. OR CR. ST. SURF. CSE. TYPE A

METHOD	WID. FT. Y	AREA SQ. YD	INCHES IN THICKNESS: 1 1/2	2	2 1/2	3	3 1/2	4
			TONS					
F 15' R RETURN	4	4.131	.35	.5	.6	.7	.8	.9
	6	7.585	.7	.9	1.1	1.3	1.5	1.7
	8	12.861	1.1	1.5	1.8	2.2	2.6	2.9
N 15' R RETURN	4	4.797	.4	.6	.7	.8	.9	1.1
	6	9.252	.8	1.1	1.3	1.6	1.8	2.1
	8	17.306	1.5	2.0	2.5	3.0	3.5	3.9
S	4	11.778	1.0	1.4	1.7	2.0	2.3	2.7
	6	21.667	1.9	2.5	3.1	3.7	4.3	4.9
	8	40.000	3.4	4.6	5.7	6.8	8.0	9.1

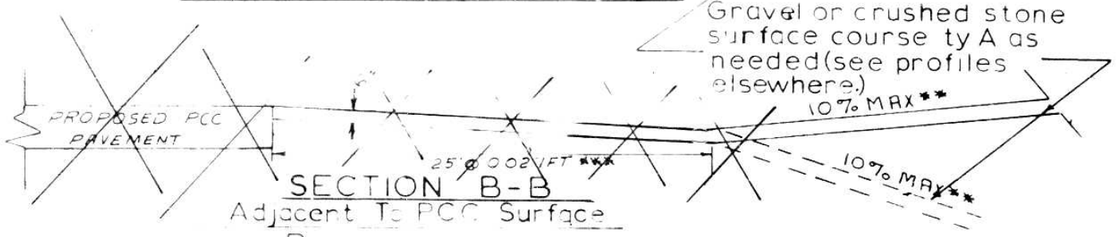
MAI-1

TYPICAL RURAL ENTRANCE DETAIL
FOR NEW GRADING SECTIONS

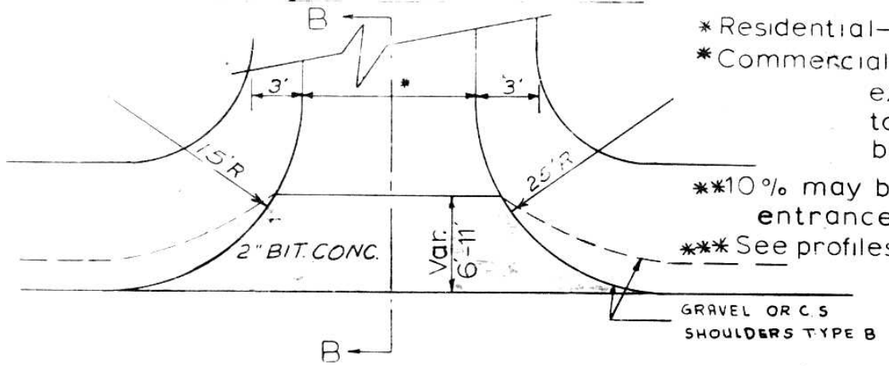
FA' 72 74 30HB-1 PEORIA 47 19A



SECTION B-B
Adjacent To Bituminous Surface

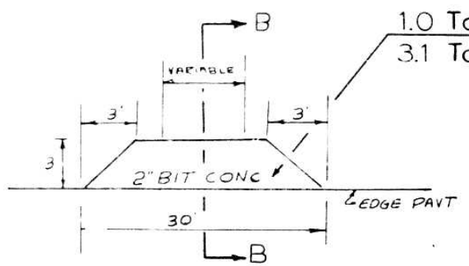


SECTION B-B
Adjacent To PCC Surface



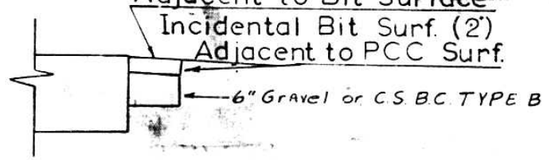
* Residential—10' min-18' max
* Commercial—match existing ent. except that max. shldr to shldr of ent. shall be 35'

**10% may be exceeded if existing entrance exceeds 10%
*** See profiles elsewhere for excpts



FIELD ENTRANCE

1.0 Ton I-11 Sur Cse 2"
3.1 Tons Gr. or C.S. Base Cse. Ty B



SECTION B-B

I-11 SURFACE COURSE TON

Entrance Width	SHLDR WIDTH 6	7	8	9	10	11
10	2.3	2.5	2.7	3.0	3.1	3.4
12	2.4	2.7	2.9	3.2	3.4	3.6
14	2.5	2.9	3.1	3.4	3.6	3.9
16	2.7	3.0	3.3	3.6	3.9	4.2
18	2.8	3.2	3.5	3.9	4.2	4.5
20	3.0	3.4	3.7	4.1	4.4	4.7
22	3.1	3.6	3.9	4.3	4.6	5.0
24	3.3	3.7	4.1	4.5	4.9	5.2
26	3.4	3.9	4.3	4.8	5.2	5.6
28	3.6	4.1	4.5	5.0	5.4	5.8
29	3.7	4.2	4.7	5.1	5.6	6.0

****GRAVEL or C S S C T.Y.A "TONS"

* Reconstructed Entrance Leng.	ENTRANCE WIDTH 10	12	14	16	18	20	22	24	26	28	29
25	14.4	16.0	17.6	19.3	20.7	22.3	24.0	25.6	27.3	28.7	29.7
27	14.8	16.6	18.2	20.1	21.7	23.4	25.0	26.9	28.5	30.1	31.2
28	15.0	17.0	18.7	20.5	22.1	24.0	25.6	27.5	29.3	31.0	32.0
30	15.6	17.6	19.3	21.3	23.0	25.0	26.7	28.7	30.5	32.4	33.4
32	16.0	18.2	20.1	22.1	24.0	26.0	27.9	29.9	32.0	33.6	34.9
34	16.6	18.9	20.7	23.0	24.8	27.1	28.9	31.0	33.2	35.1	36.3
36	17.0	19.5	21.5	23.8	25.8	28.1	29.9	32.2	34.4	36.4	37.7
38	17.6	20.1	22.1	24.6	26.7	28.9	31.2	33.4	35.9	37.9	39.2
40	18.0	20.7	23.0	25.4	27.5	29.9	32.2	34.6	37.1	39.3	40.8
42	18.7	21.3	23.6	26.0	28.5	31.0	33.4	35.9	38.5	40.8	42.2
44	19.1	21.9	24.2	26.9	29.3	32.0	34.4	37.1	39.8	42.2	43.7
46	19.7	22.6	25.0	27.7	30.3	33.0	35.7	38.3	41.0	43.7	45.1
48	20.3	23.0	25.6	28.5	31.2	34.0	36.7	39.6	42.4	45.1	46.5
50	20.7	23.6	26.4	29.3	32.2	35.1	37.7	40.8	43.7	46.5	48.0
52	21.1	24.2	27.1	30.1	33.0	36.1	39.0	42.0	45.1	48.0	49.6
54	21.5	24.8	27.9	31.0	34.0	37.1	40.0	43.3	46.3	49.4	51.0
56	22.1	25.4	28.5	31.8	34.9	38.1	41.2	44.5	47.8	50.6	52.5
58	22.6	26.0	29.3	32.6	35.7	39.2	42.2	45.7	49.0	52.1	53.8
60	23.2	26.7	29.9	33.4	36.7	40.2	43.5	46.9	50.2	53.5	55.4
62	23.6	27.3	30.8	34.2	37.5	41.2	44.5	48.0	51.7	54.9	56.8

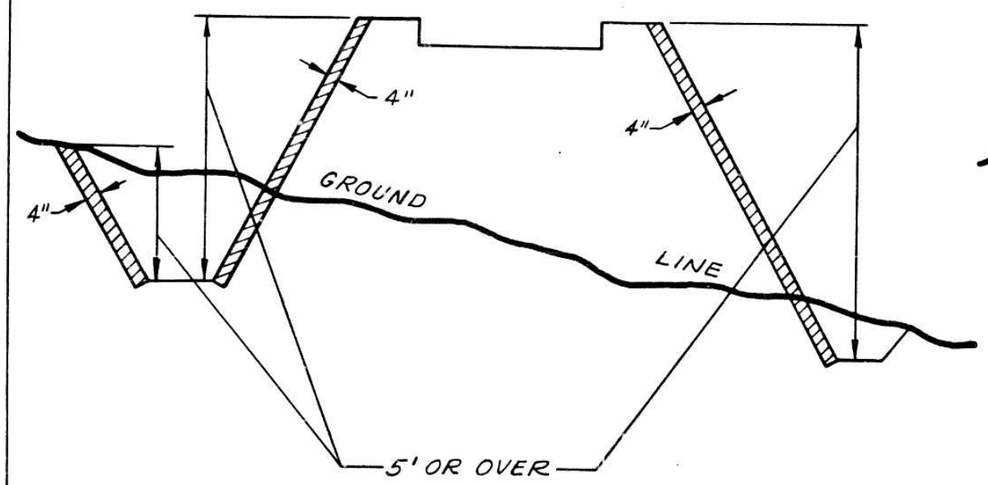
* Beginning at edge of pavement
**** Gravel quantities based on 10' shldr. width

1-9-62

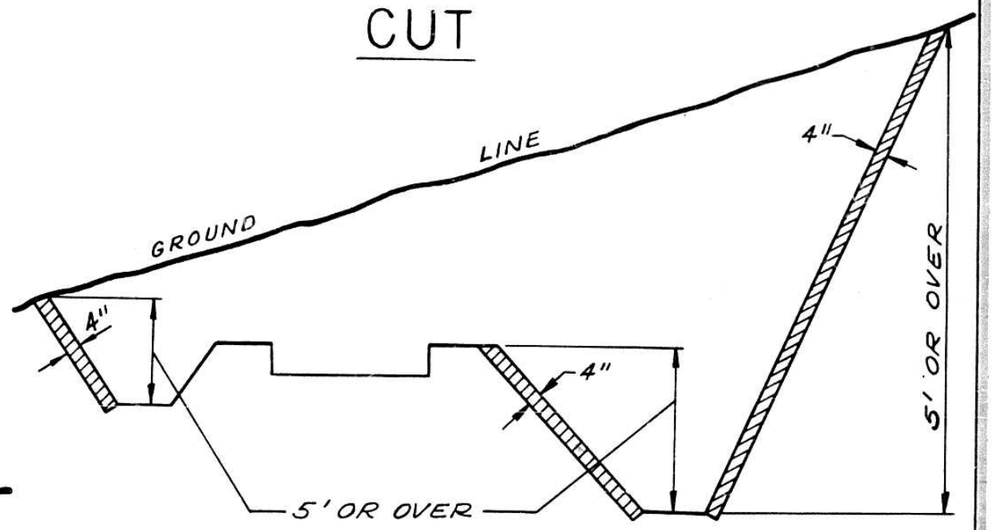
TOPSOIL PLACEMENT DETAIL

ALSO SEE TYPICAL X-SECTION (ILL. 78)

FILL



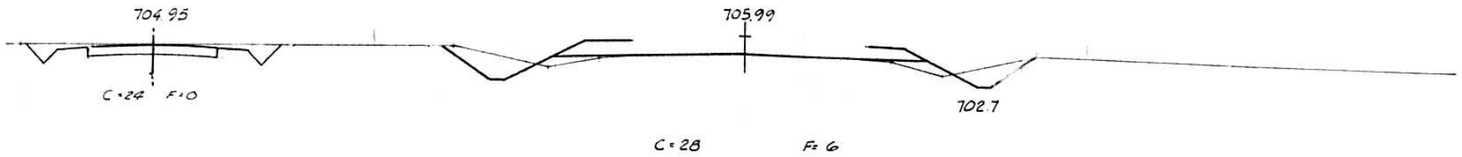
CUT



NOTE: TOP SOIL QUANTITIES IN EACH EARTH BALANCE ARE SHOWN ON PLAN SHEETS.
NOTE: SEE "X" SECTIONS FOR 4" TOPSOIL PLACEMENT

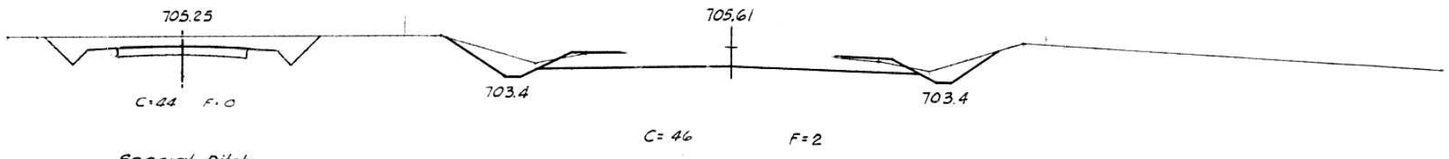
NOT TO SCALE

705 (40 +00)



705 (40 +00)

705 (39 +00)

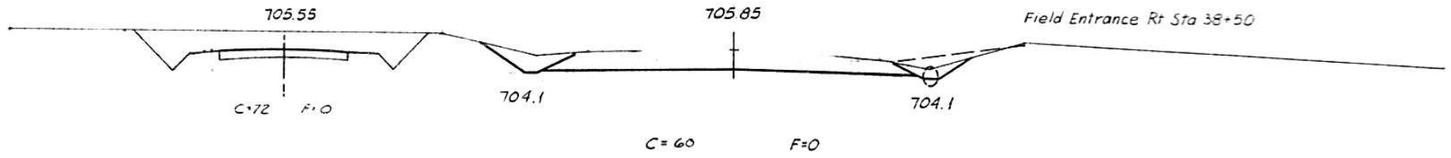


Special Ditch
Sta. 38+00 to Sta. 41+00
(Grade -0.7%)

705 (39 +00)

Special Ditch Sta 38+00 to Sta 41+00 (Grade -0.7%)

705 (38 +00)



705 (38 +00)

8-64
10-64
10-64

KAG
KAA
AMD

705 (37 +00)

Detour Road Starts Sta 36+20±

705 (37 +00)

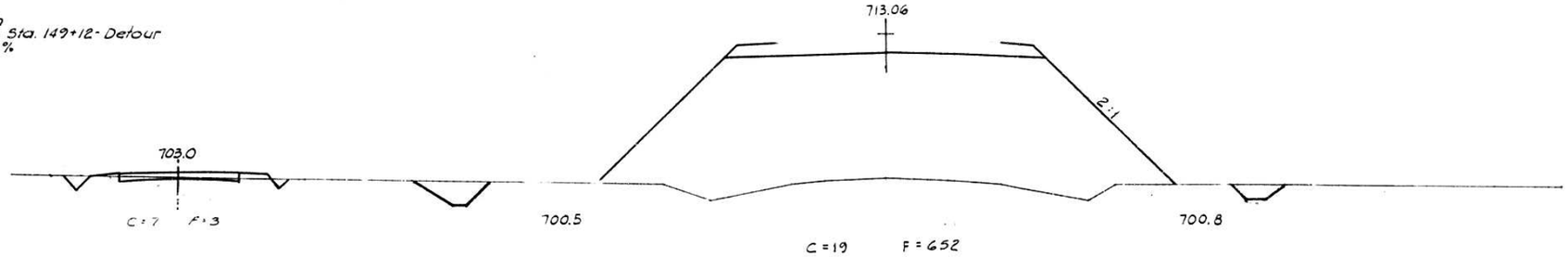
705 (36 +00)

705 (36 +00)

F.A.I.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
74	32-B	PEORIA	47	21
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA. 41+00 TO STA. 44+00 ILL. 78

Special ditch
Sta. 144+00 to Sta. 149+12 - Detour
Grade -0.85%



700 (44+00)

700 (43+00)

700 (42+00)

700 (41+00)

700 (44+00)

700 (43+00)

700 (42+00)

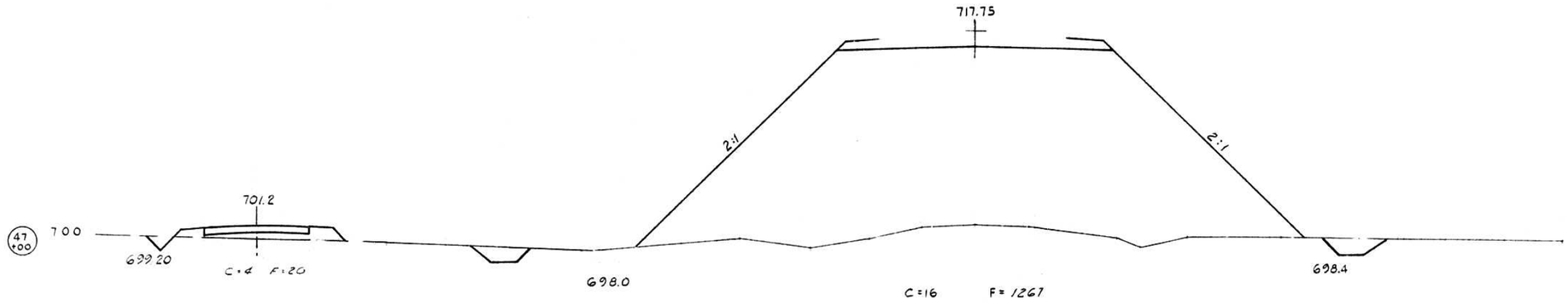
700 (41+00)

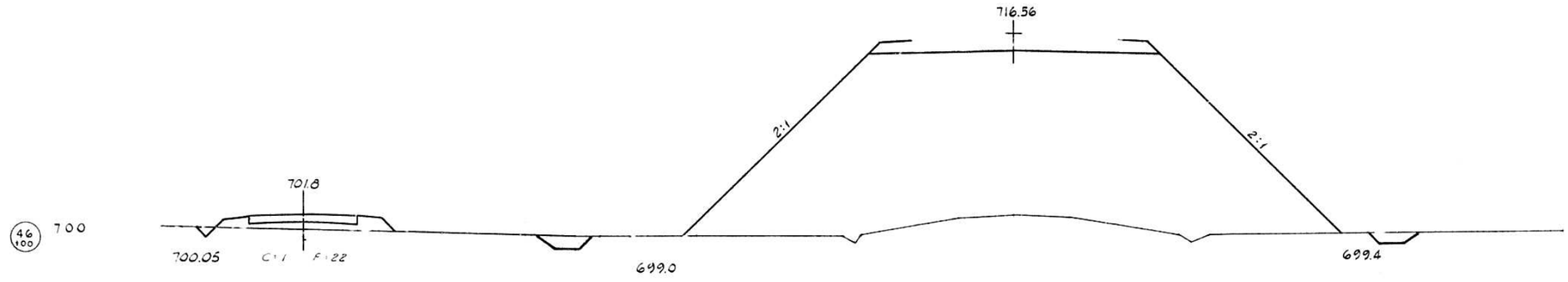
Special ditch Sta. 41+00
to Sta. 45+00, Grade -0.5%

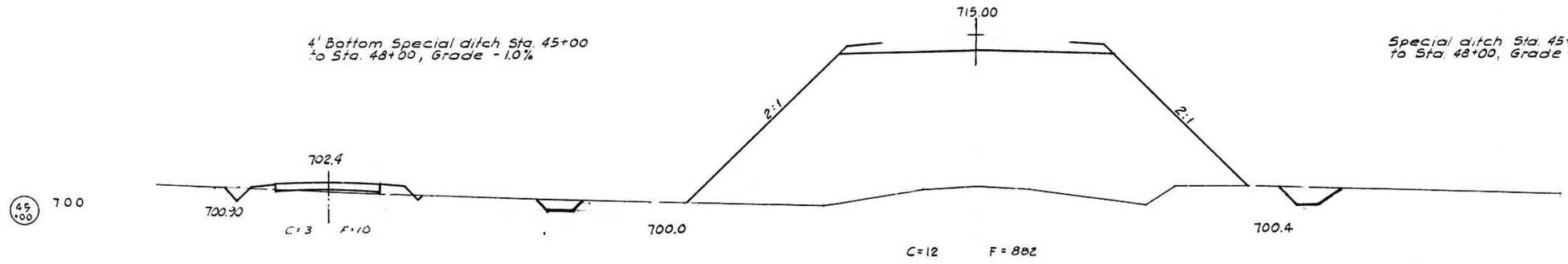
Special ditch Sta. 41+00
to Sta. 45+00, Grade -0.4%

F.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 307B-1	PEORIA	47	22
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA. 45+00 TO STA. 47+00 ILL. 78

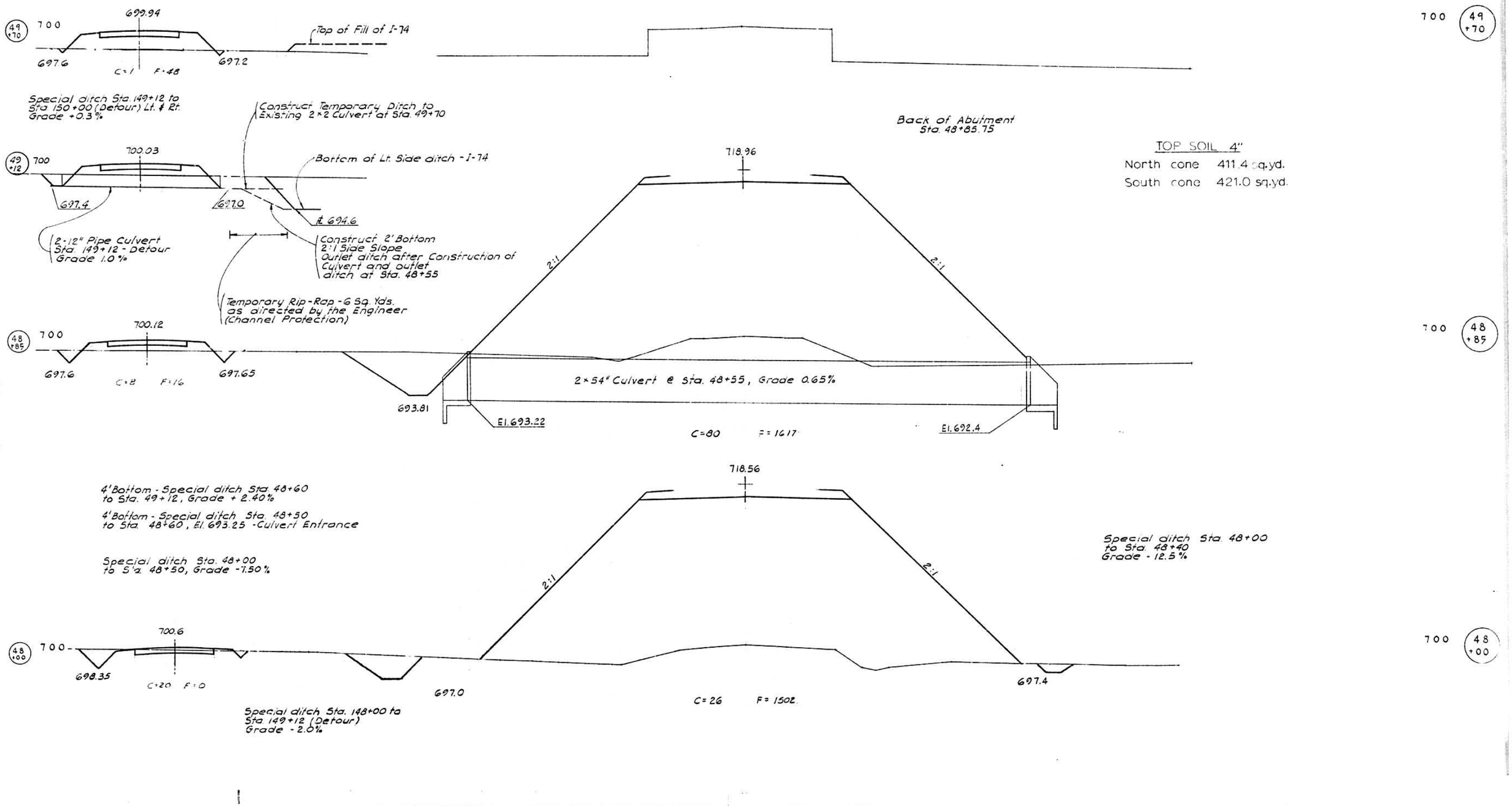






F.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	92 32HB-1	PEORIA	47	23
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA. 48+00 TO STA. 49+70 ILL. 78



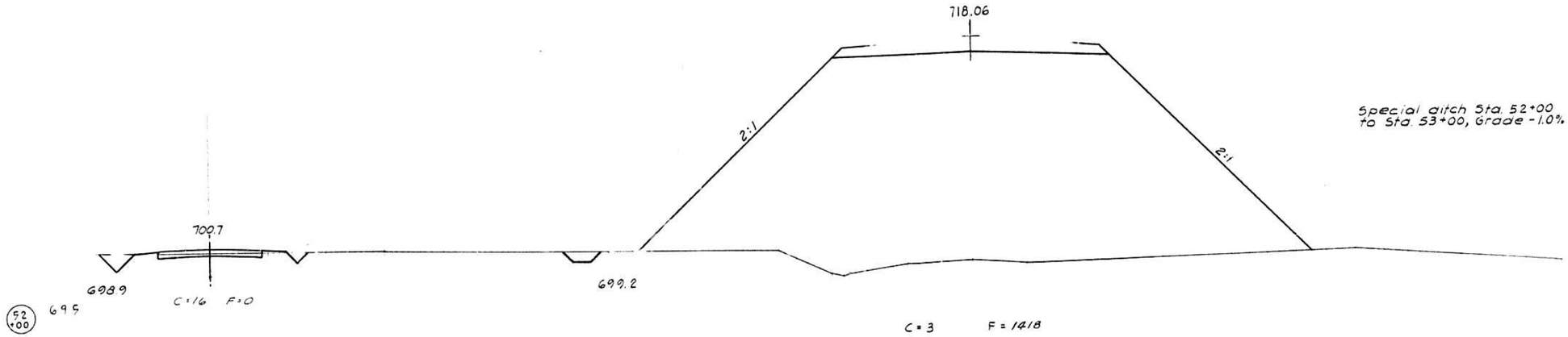
TOP SOIL 4"

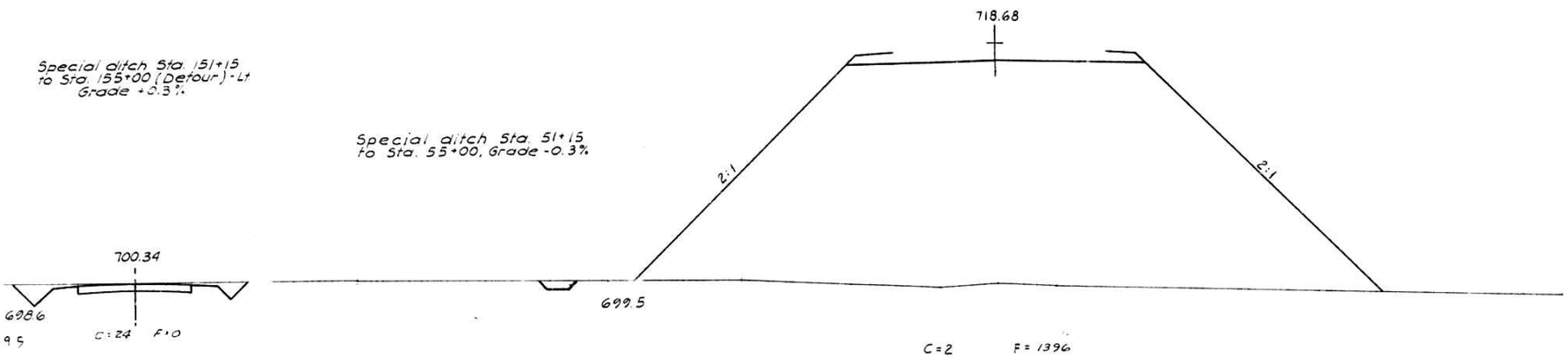
North cone 411.4 sq.yd.

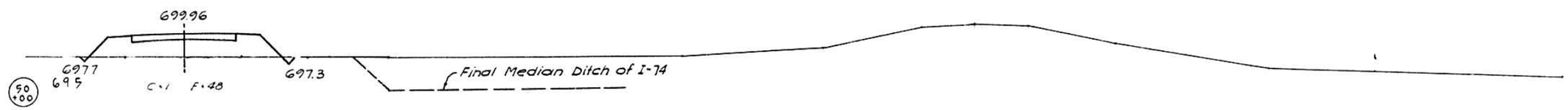
South cone 421.0 sq.yd.

F. A. I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 30HB-1	PEORIA	47	24
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA. 50+00 TO STA. 52+00 ILL. 78

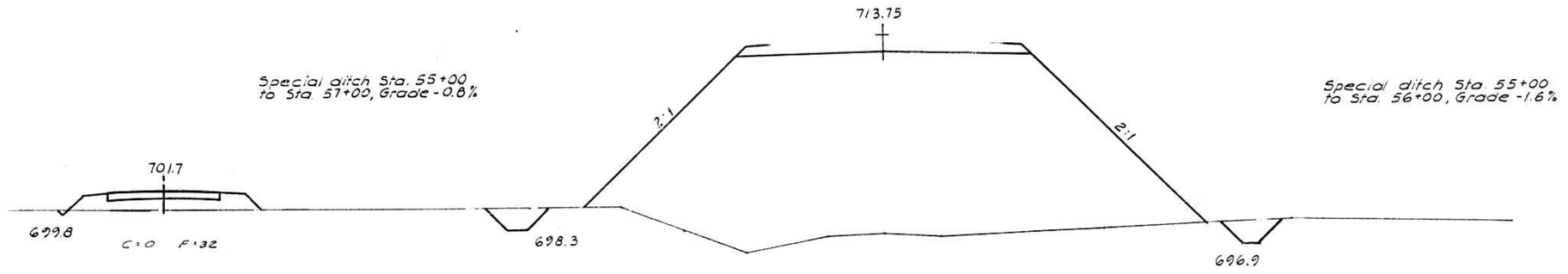






F.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 30WB.	PEORIA	47	25
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA. 53+00 TO STA 55+00 ILL. 78



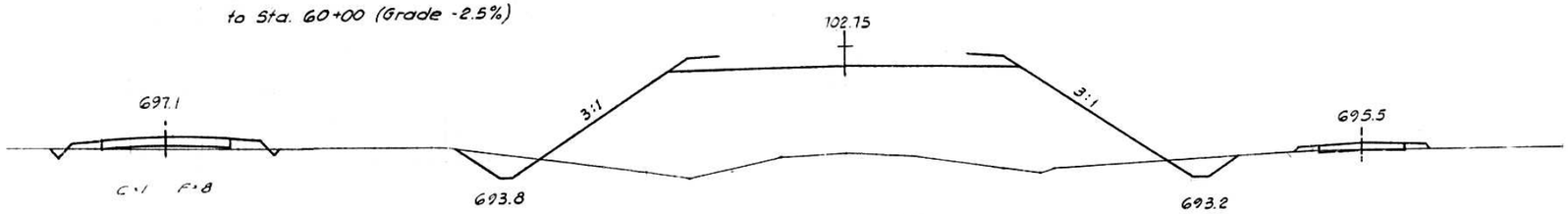
8-64
8-64
2-94
10-83

KAG
CAK
MAL
AMP

F.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 30HB-1	PEORIA	47	26
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA. 56+00 TO STA. 59+00 ILL. 78

Special ditch Sta. 59+00
to Sta. 60+00 (Grade -2.5%)

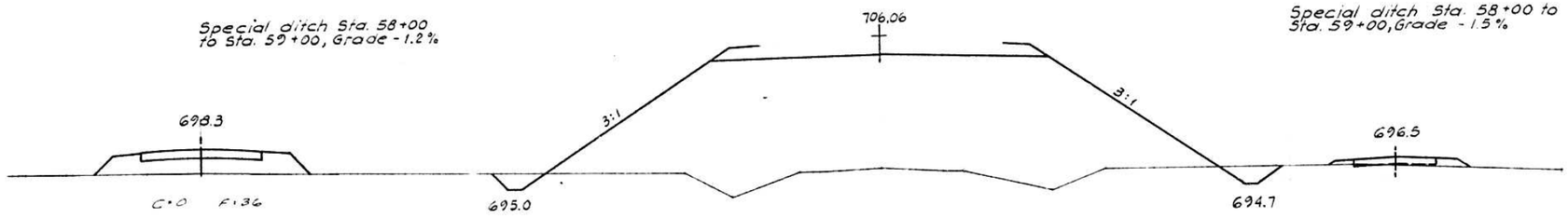


695 (59+00)

Special ditch Sta. 59+00
to Sta. 60+00, Grade -2.9%

695 (59+00)

Special ditch Sta. 58+00
to Sta. 59+00, Grade -1.2%

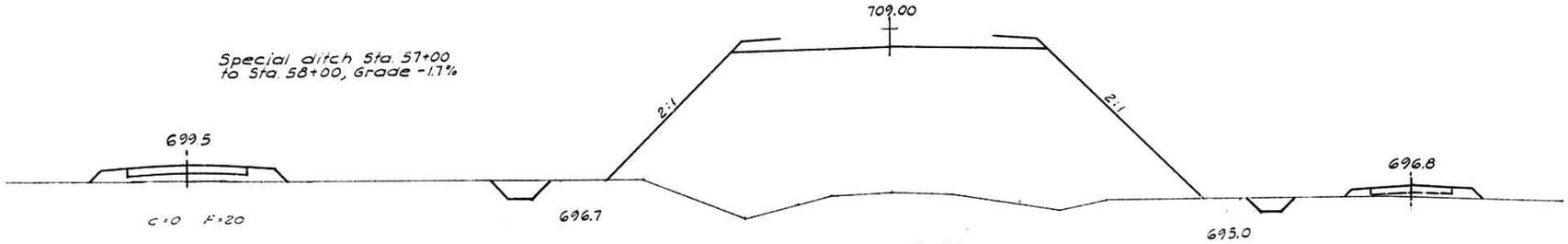


695 (58+00)

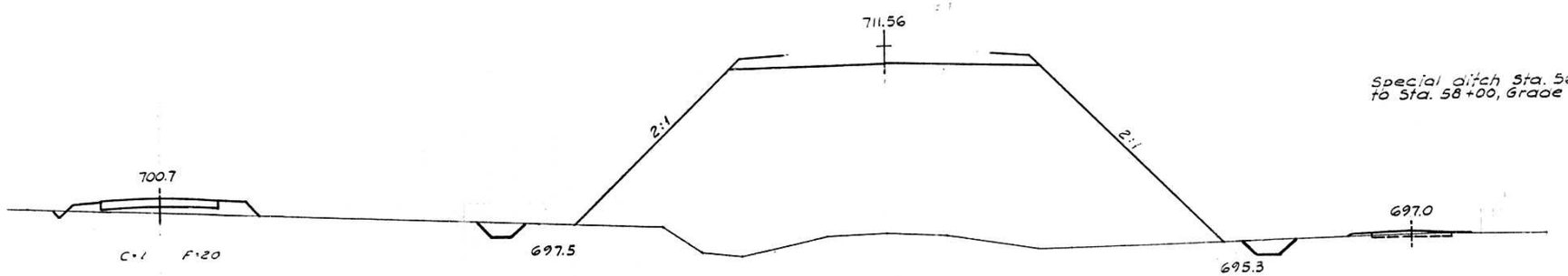
Special ditch Sta. 58+00 to
Sta. 59+00, Grade -1.5%

695 (58+00)

Special ditch Sta. 57+00
to Sta. 58+00, Grade -1.7%



695 (57+00)



695 (56+00)

Special ditch Sta. 56+00
to Sta. 58+00, Grade -0.3%

695 (56+00)

F.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 30HB-1	PEORIA	47	27
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA. 60+00 TO STA. 65+00 ILL. 78

(65 +00) 690

Discharge Into Existing Side ditch

C=4 F=3

End of New Pavement - Sta. 64+18

690 (65 +00)

(64 +00) 690

691.1

C=48 F=0

Section Normal to Detour ℄

4:1

690.54

688.95

C=46 F=2

688.7

690 (64 +00)

(63 +00) 690

692.3

C=13 F=1

4:1

691.63

688.65

C=40 F=3

3:1

688.4

690 (63 +00)

Special ditch (Detour) Sta. 161+90 to Sta. 163+00)
Grade +0.75 %

Construct Temporary Outlet ditch (2' Bott. 2:1 Side Slopes) Grade -0.7%

693.5

690.2

℄ 690.1

C=0 F=72

℄ 690.8

18" Pipe Culvert at Sta. 161+90 Grade 0.7%

Special ditch Sta. 61+90 Sta. 64+18, Grade +0.3%

3:1

693.45

688.35

El. 688.32

C=16

F=30

El. 688.1

688.1

24" Culvert @ Sta. 61+90, Grade -0.4%

FL. 688.67

2'x2' CONC. BOX Sta. 61+99

FL. 688.36

2'x2' CONC. BOX Sta. 61+90

Special ditch Sta. 61+90 to Sta. 64+40 Grade +0.3%

(62 +00) 690

690 (62 +00)

8:64
9:64
10:64
10:64

(61 +99) 690

685 (61 +99)

(61 +90) 690

685 (61 +90)

(61 +00) 695

694.7

C=0 F=96

3:1

695.99

689.8

C=16 F=142

3:1

691.0

689.2

Connect Private Drive at Sta 61+00

695 (61 +00)

Special ditch Sta. 60+00 to Sta. 61+90, Grade -1.5%

699.25

693.9

C=0 F=68

3:1

691.3

C=15 F=307

3:1

691.5

690.3

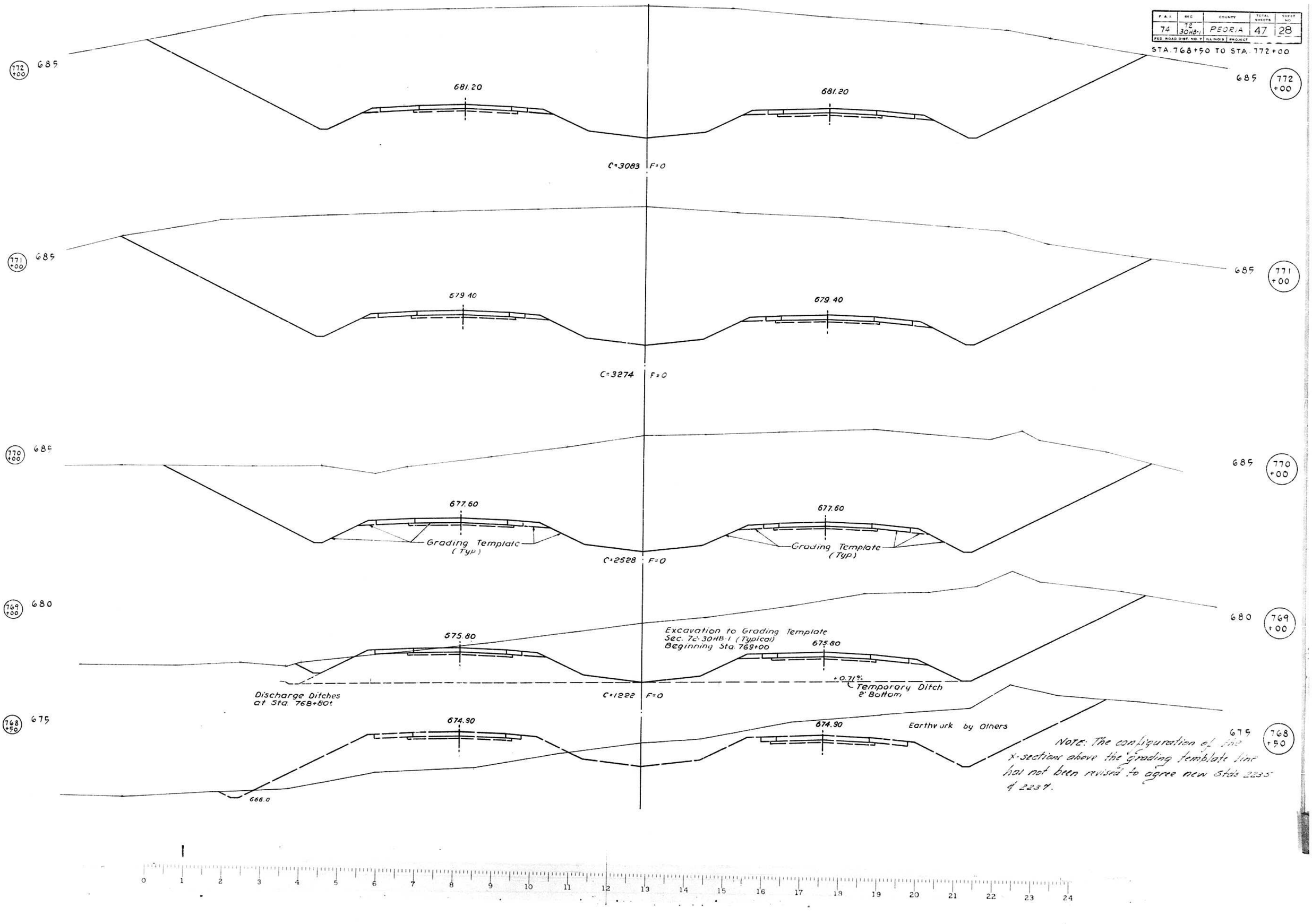
Special ditch Sta. 60+00 to Sta. 61+90, Grade -1.1%

(60 +00) 695

695 (60 +00)

F.A.I.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
74	72 30HB-1	PEORIA	47	28
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA. 768+50 TO STA. 772+00



NOTE: The configuration of the x-sections above the grading template line has not been revised to agree new Sta 2235 & 2237.

F.A.I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72-30HB-1	PEORIA	47	29
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA. 773+00 TO STA 777+00

END OF EXCAVATION STA 775+92

777+00 — 695 — 688.67 — C=2357 F=0 — 688.67 — 683.83 — 695 — 777+00

776+00 — 695 — 687.62 — C=2263 F=0 — 687.62 — 683.25 — 695 — 776+00

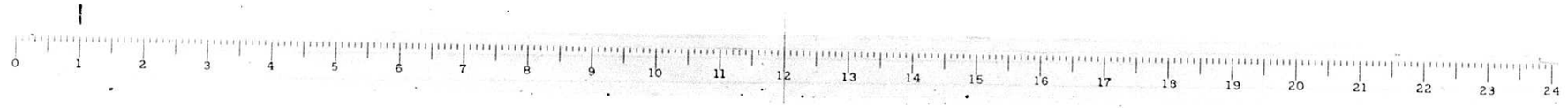
Special Ditch Sta 775+00 to Sta 780+00 (Grade +0.58%)

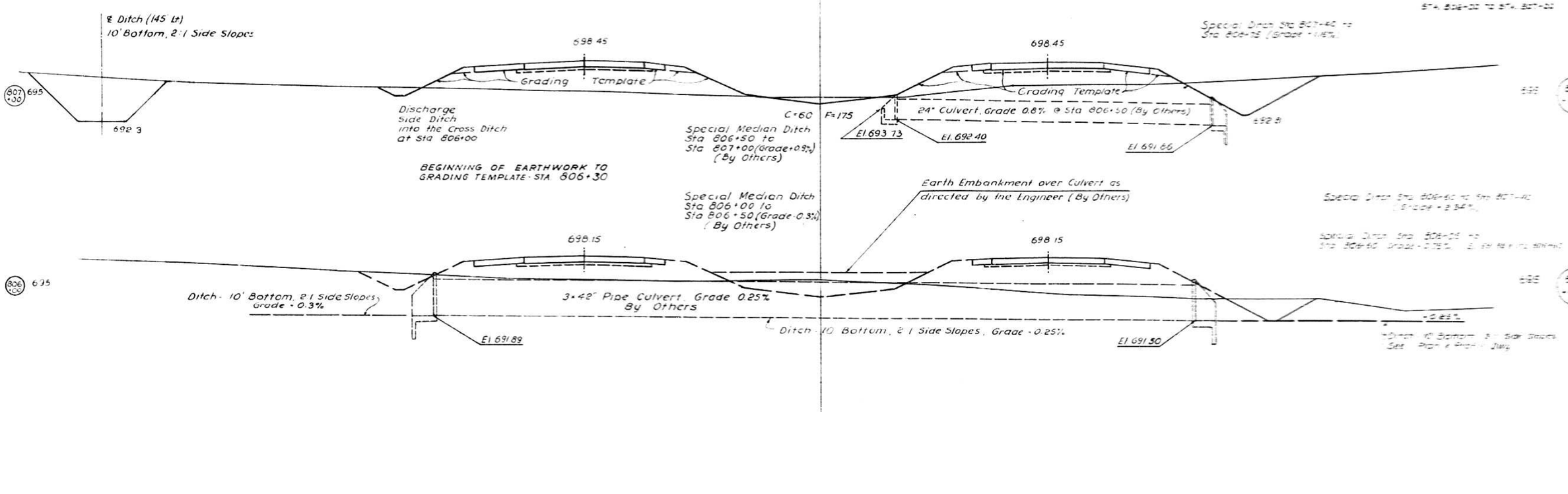
775+00 — 690 — 686.32 — C=2011 F=0 — 686.32 — 690 — 775+00

Excavation to Grading Template Sec. 72-30HB-1 (Typical)

774+00 — 685 — 684.77 — Grading Template (Typ.) — C=2022 F=0 — 684.77 — Grading Template (Typ.) — 685 — 774+00

773+00 — 685 — 683.00 — C=2563 F=0 — 683.00 — 685 — 773+00




℄ Ditch (145 Lt)
10' Bottom, 2:1 Side Slopes
807 +00
695
692.3
698.45
Grading Template
Discharge
Side Ditch
into the Cross Ditch
at Sta 806+00
BEGINNING OF EARTHWORK TO
GRADING TEMPLATE - STA 806+30
C=60 F=175
Special Median Ditch
Sta 806+50 to
Sta 807+00 (Grade +0.9%)
(By Others)
698.45
Grading Template
24" Culvert, Grade 0.8% @ Sta 806+50 (By Others)
El 693.73
El 692.40
El 691.66
692.8
Special Ditch Sta 807+40 to
Sta 808+75 (Grade +1.67%)
Special Median Ditch
Sta 806+00 to
Sta 806+50 (Grade -0.3%)
(By Others)
Earth Embankment over Culvert as
directed by the Engineer (By Others)
698.15
698.15
806 +00
695
Ditch - 10' Bottom, 2:1 Side Slopes
Grade = 0.3%
3-42" Pipe Culvert, Grade 0.25%
By Others
El 691.89
Ditch - 10' Bottom, 2:1 Side Slopes, Grade = 0.25%
El 691.50
Special Ditch Sta 806+60 to Sta 807+40
(Grade = 2.34%)
Special Ditch Sta 806+25 to
Sta 806+60 (Grade = 0.78%)
+2.66%
Ditch - 10' Bottom, 2:1 Side Slopes
See Plan & Profile - Sheet
807 +00
695
806 +00
695

F. A. I.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	72-30HB-1	PEORIA	47	31
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

STA. 807+71 TO STA. 808+09

808+09 695

698.78 698.78

695 808+09

C = 382 F = 0

808+00 695

698.75 698.75

Slope Wall by the Bridge Contractor

695 808+00

C = 407 F = 0

807+90 695

698.72 698.72

695 807+90

C = 414 F = 0

807+79 695

698.69 698.69

Paved Ditch by the Bridge Contractor

36" Pipe Culvert

695 807+79

C = 291 F = 0

807+71 695

698.66 698.66

695 807+71

C = 84 F = 92

NOTE: Earthwork to Grading Template by the Bridge Contractor (Sec. 72-30HB-1)

FAI	SEC	COUNTY	TOTAL SHEETS	SHEET #
74	72 30HB-1	PEORIA	47	32
CONTRACT NO.				

STA. 808+20 TO STA. 810+00