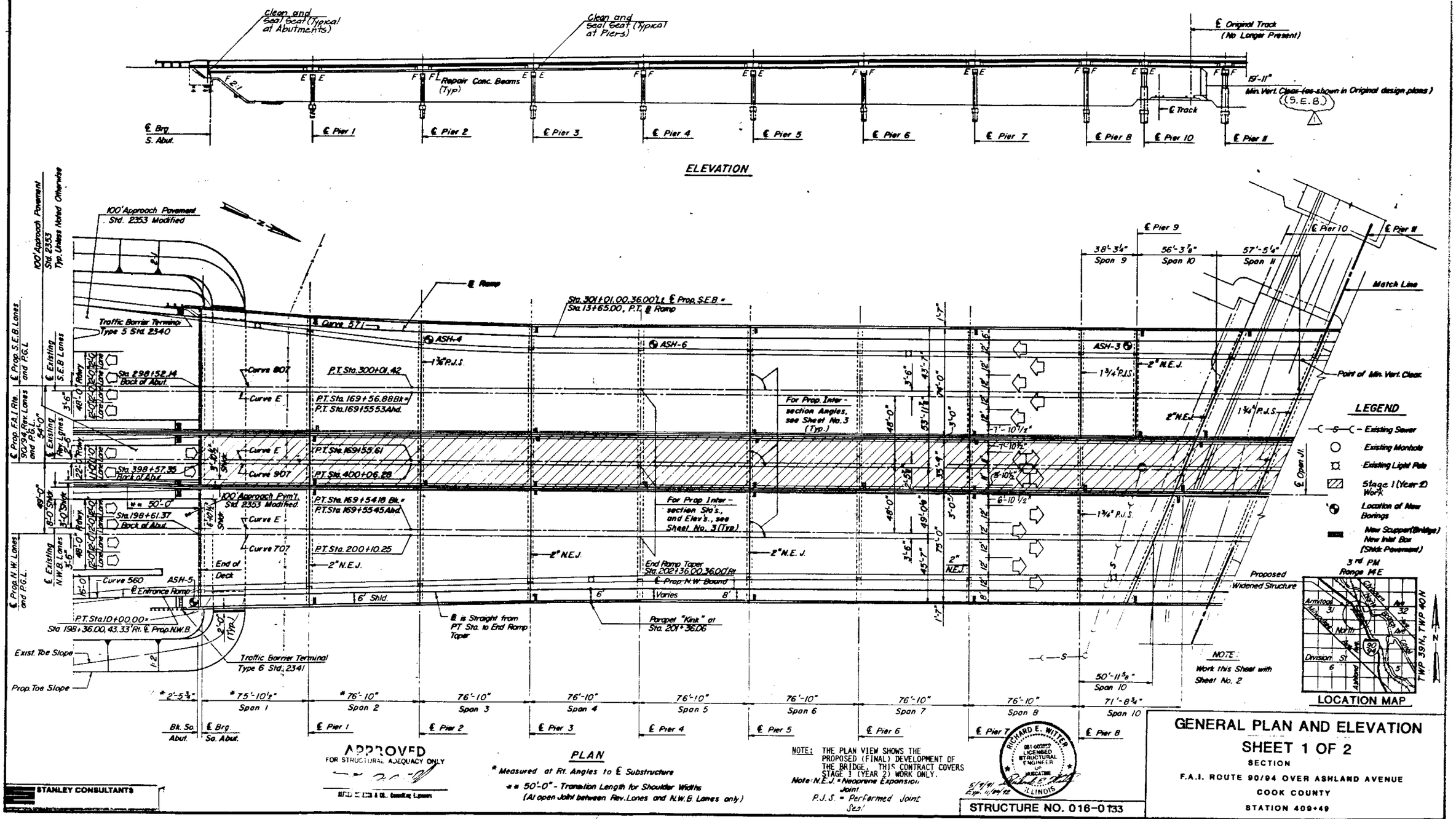
TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER ASHLAND AVENUE - EL 604.09 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	844	526
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

*1991-025R & 0303-474HB-1

SHEET NO. 1 OF SHEETS



GENERAL PLAN AND ELEVATION
SHEET 1 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STRUCTURE NO. 016-0133

IMPROVE SHADING 12-10-91

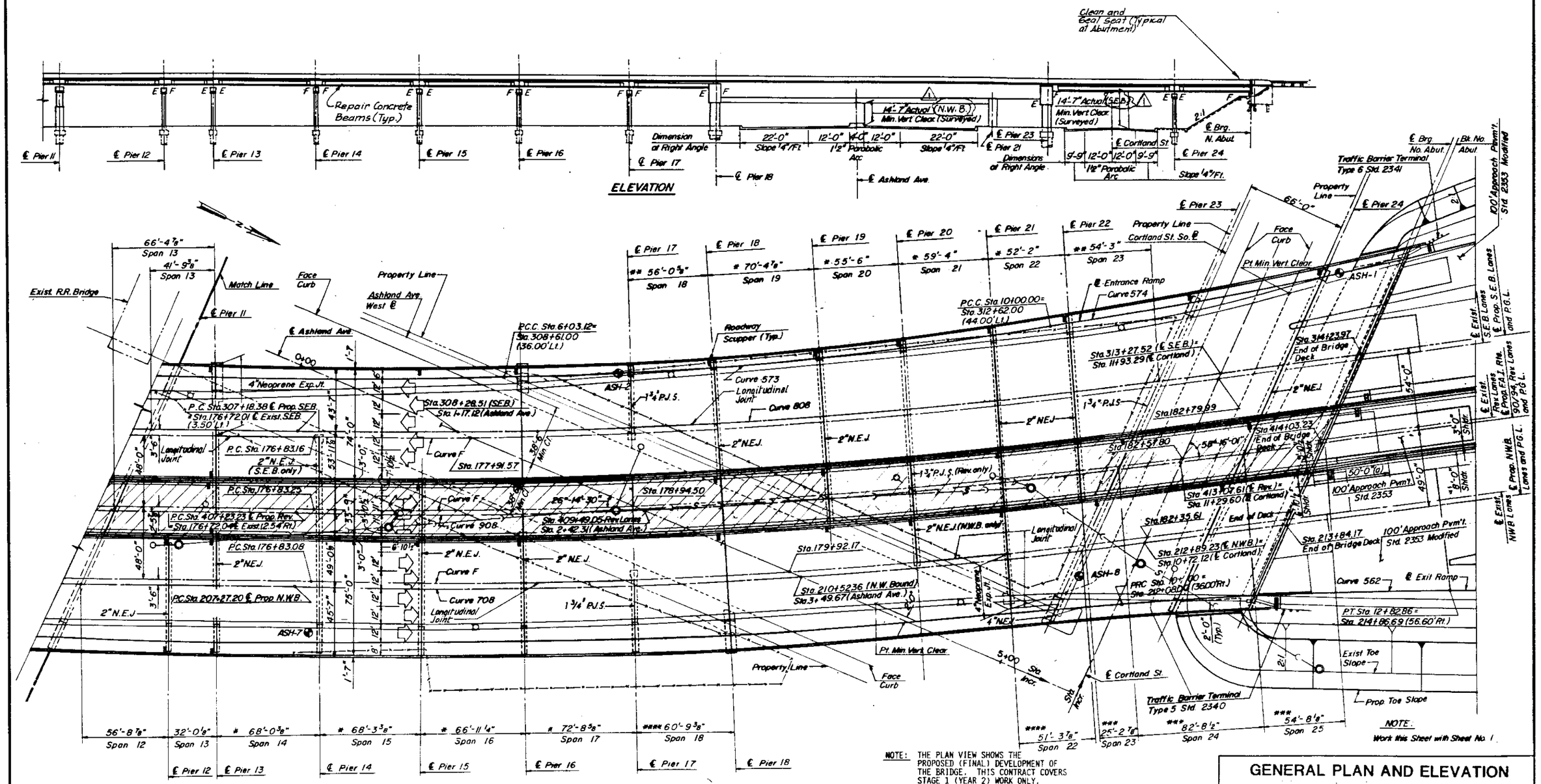
C116

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	844	527
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 2 OF SHEETS

*1991-025R & 0303-474HB-1



NOTE: THE PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 1 (YEAR 2) WORK ONLY.

STANLEY CONSULTANTS

GENERAL PLAN AND ELEVATION
SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

△1 IMPROVED SHADING 12-10-91

C117

MAINLINE HORIZONTAL CURVE DATA

	EXISTING CURVE DATA		PROPOSED CURVE DATA	
CURVE #	E (207)	F (208)	807	808
SEB PI STA	166+44.52	186+08.46	296+88.95	316+52.45
Δ	1°33'43.0"	28°41'07.9"	1°33'44.0"	28°33'58.0"
D	0°15'00.0"	1°34'59.8"	0°14'59.9"	1°33'41.7"
T	312.40'	925.29'	312.51'	934.08'
R	22,917.91'	3,618.78'	22,921.41'	3,669.07'
L	624.77'	1,811.77'	624.98'	1,829.30'
E	2.13'	116.42'	2.13'	117.03'
S	NC	0.0125 FT/FT	NC	0.020 FT/FT
CURVE #	E (307)	F (308)	907	908
REV PI STA	166+43.91	186+20.81	396+94.54	416+71.06
Δ	1°33'43.0"	28°41'07.1"	1°33'44.0"	28°33'58.0"
D	0°15'01.9"	1°33'45.2"	0°15'02.0"	1°32'20.2"
T	311.75'	937.56'	311.77'	947.83'
R	22,869.91'	3,666.78'	22,867.41'	3,723.07'
L	623.45'	1,835.79'	623.51'	1,856.22'
E	2.13'	117.97'	2.12'	118.76'
S	NC	0.0125 FT/FT	NC	0.033 FT/FT
CURVE #	E (107)	F (108)	707	708
NWB PI STA	166+43.13	186+32.93	196+99.18	216+87.50
Δ	1°33'43.0"	28°41'08.1"	1°33'44.0"	28°33'58.0"
D	0°15'03.8"	1°32'32.5"	0°15'03.9"	1°31'08.2"
T	311.09'	949.84'	311.10'	960.30'
R	22,821.91'	3,714.78'	22,818.41'	3,772.06'
L	622.15'	1,859.84'	622.17'	1,880.64
E	2.12'	119.51'	2.12'	120.32'
S	NC	0.0125 FT/FT	NC	0.020 FT/FT

PROPOSED RAMPS HORIZONTAL CURVE DATA

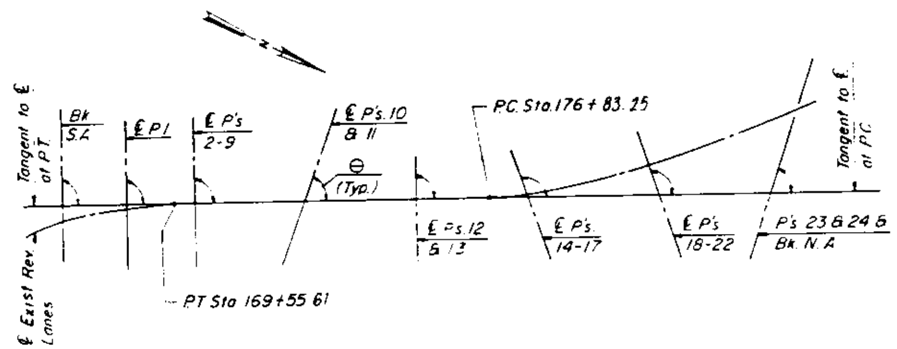
CURVE NO.	560	562	
RAMP ℄ PI STA	8+78.43	11+41.49	
Δ	7°31'31.3"	4°07'03.0"	
D	3°05'26.0"	1°27'20.4"	
T	121.92'	141.49'	
R	1853.90'	3936.04'	
L	243.50'	282.86'	
E	4.01'	2.54'	
S	VARIES	VARIES	
CURVE NO.	571	573	574
RAMP ℄ PI STA	11+56.53	8+01.19	11+43.17
Δ	7°26'26.185"	8°34'14.4"	7°26'57.5"
D	1°46'53.7"	2°09'34.2"	2°36'19.1"
T	209.05'	198.81'	143.17'
R	3216.00'	2653.19'	2199.19'
L	417.52'	396.86'	285.93'
E	6.79'	7.44'	4.66'
S	VARIES	0.020 FT/FT	0.020 FT/FT

PROPOSED INTERSECTION STATIONS

SUBSTRUCTURE	LOCATION: S.E. BOUND LANES	LOCATION: REVERSIBLE LANES	LOCATION: N.W. BOUND LANES
BACK SO. ABUT.	298+52.48	398+57.35	198+61.32
℄ PIER 1	299+30.84	399+35.71	199+39.68
" 2	300+07.67	400+12.54	200+16.51
" 3	300+84.51	400+89.38	200+93.35
" 4	301+61.34	401+66.21	201+70.18
" 5	302+38.17	402+43.04	202+47.01
" 6	303+15.01	403+19.88	203+23.85
" 7	303+91.84	403+96.71	204+00.68
" 8	304+68.67	404+73.54	204+77.51
" 9	305+06.94	---	---
" 10	305+63.29	405+45.29	205+28.50
" 11	306+20.73	406+02.73	205+85.94
" 12	---	---	206+42.64
" 13	306+62.50	406+69.12	206+74.67
" 14	307+30.57	407+37.19	207+42.74
" 15	---	408+05.49	208+11.04
" 16	308+65.81	---	208+77.97
" 17	309+38.54	---	209+50.70
" 18	309+94.60	---	210+11.49
" 19	310+64.98	410+74.08	---
" 20	311+20.50	411+29.60	211+37.40
" 21	311+79.89	411+88.98	211+96.77
" 22	312+32.13	412+41.22	---
" 23	312+86.36	412+66.45	212+48.08
" 24	313+69.53	413+49.15	213+30.37
END OF BRIDGE DECK	314+23.95	414+03.23	213+84.16

PROPOSED INTERSECTION ELEVATIONS (PROFILE GRADE ELEVATIONS)

SUBSTRUCTURE	LOCATION: S.E. BOUND LANES	LOCATION: REVERSIBLE LANES	LOCATION: N.W. BOUND LANES
BACK SO. ABUT.	613.15	613.28	613.11
℄ PIER 1	615.51	615.63	615.46
" 2	617.81	617.92	617.75
" 3	619.88	619.99	619.82
" 4	621.64	621.75	621.57
" 5	623.09	623.19	623.02
" 6	624.23	624.33	[illegible].17
" 7	625.06	625.17	625.[illegible]0
" 8	625.58	625.69	625.[illegible]
" 9	625.72	---	---
" 10	625.80	625.90	625.71
" 11	625.70	625.88	625.7[illegible]
" 12	---	---	625.63
" 13	625.52	625.63	625.48
" 14	625.03	625.15	625.00
" 15	---	624.42	624.27
" 16	623.33	---	623.33
" 17	622.01	---	622.05
" 18	620.80	---	620.79
" 19	619.04	619.18	---
" 20	617.46	617.63	617.55
" 21	615.66	615.85	615.78
" 22	614.07	614.28	---
" 23	612.42	613.53	614.27
" 24	610.05	611.07	611.83
BACK NO. ABUT.	608.87	609.73	610.34



SCHEMATIC FOOTING LAYOUT

SUBSTRUCTURE	ANGLE θ
BK. S.A.	90°-00'-00"
P. 1	90°-00'-00"
P'S. 2-9	90°-00'-00"
P'S. 10&11	67°-02'-42"
P'S. 12&13	91°-50'-50"
P'S. 14-17	[illegible]
P'S. 18-22	[illegible]
P'S. 23&24	67°-15'-35"
BK. N.A.	67°-15'-35"

HORIZONTAL ALIGNMENT

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

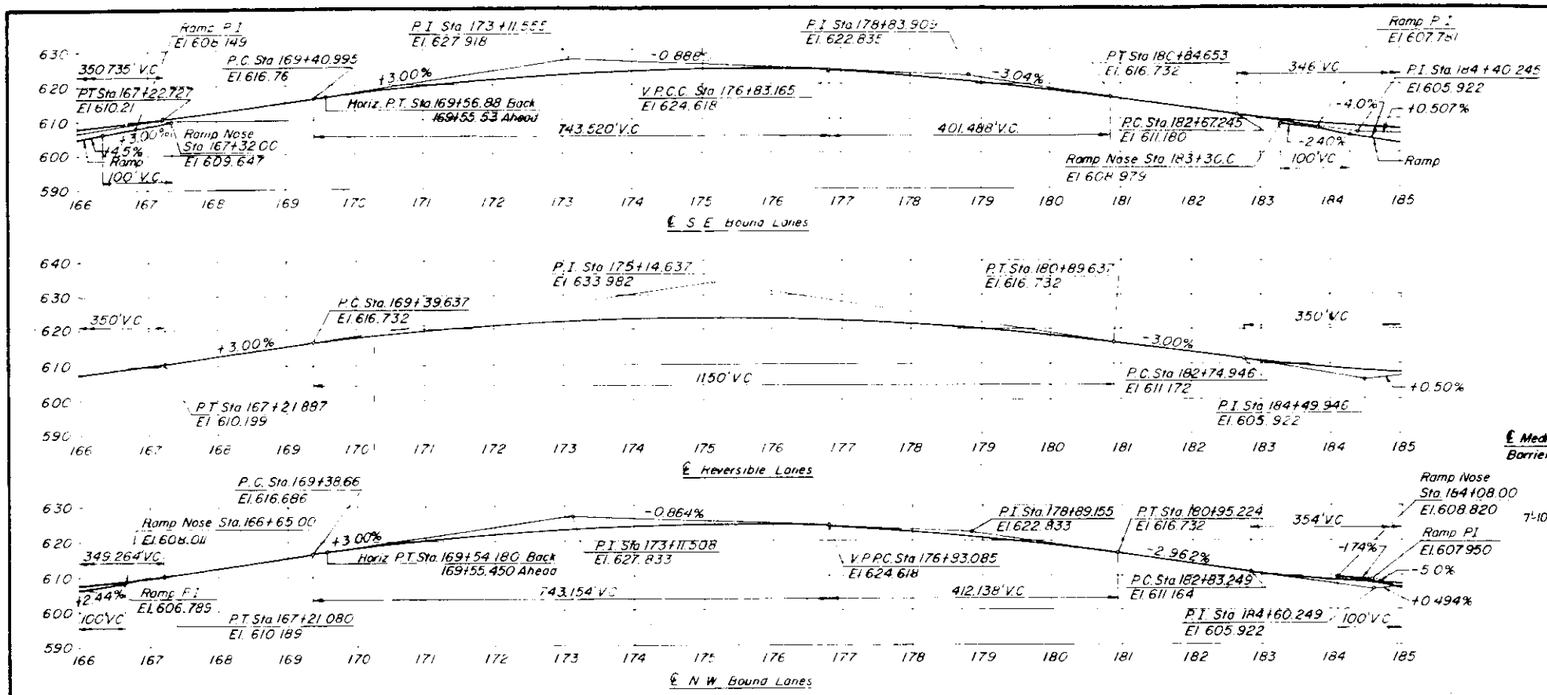
STANLEY CONSULTANTS

C118

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	844	529
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

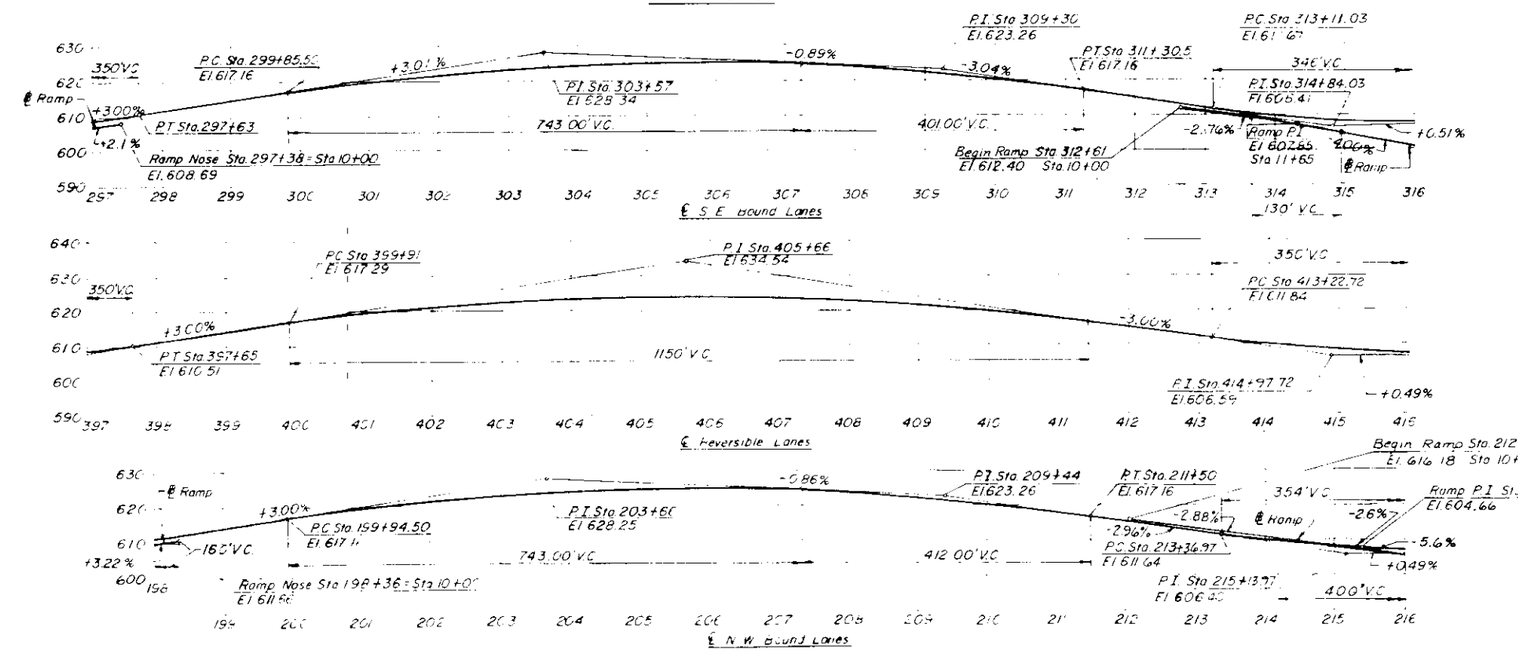
SHEET NO. 4 OF SHEETS

*1991-025R & 0303-474HB-1



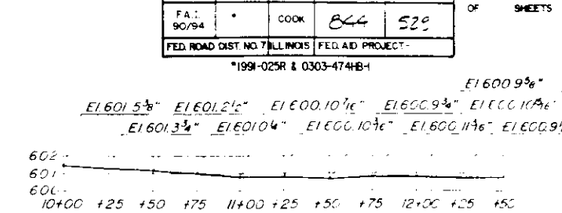
ORIGINAL THEORETICAL PROFILE GRADE

F.A.I. Rte. 90/94



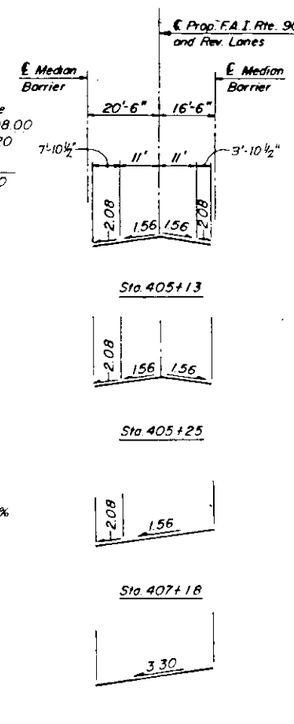
PROPOSED PROFILE GRADE

F.A.I. Rte. 90/94



EXISTING TRACK PROFILE

Scales: 1" = 40' Horiz.
1/4" = 1'-0" Vert.



PROPOSED CROSS SLOPE TRANSITIONS

(All Cross Slopes in Percent)

EXISTING CORTLAND STREET

(Along ℄ of Roadway)

Station	Elevation
12+94	590.38
12+84	590.21
12+74	590.06
12+64	589.91
12+54	589.82
12+44	589.77
12+34	589.75
12+24	589.74
12+14	589.70
12+04	589.66
11+94	589.63
11+69	589.62
11+44	589.49
11+19	589.33
10+94	589.01
10+84	588.84
10+74	588.67
10+64	588.48
10+54	588.12
10+44	587.79
10+34	587.44
10+24	587.07
10+14	586.69
10+04	586.31
9+94	586.12
9+84	585.93
9+74	585.72

EXISTING ASHLAND AVENUE

(Along Concrete Median Gutterline)

Station	Elevation
0+00	588.64
0+10	589.07
0+20	589.46
0+30	589.86
0+40	590.24
0+50	590.55
0+60	590.86
0+70	591.15
0+80	591.36
0+90	591.55
1+00	591.68
1+25	591.78
1+50	591.90
1+75	591.89
2+00	591.83
2+25	591.81
2+50	591.82
2+75	591.86
3+00	591.65
3+25	591.67
3+50	591.83
3+60	591.70
3+70	591.54
3+80	591.40
3+90	591.06
4+00	590.74
4+10	590.39
4+20	590.01
4+30	589.63
4+50	589.24
4+60	588.80

STANLEY CONSULTANTS

PROFILES

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

ROUTE NO.	SECT.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		844	530

*1991-025R & 0303-474HB-1

SHEET NO. 5 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL
	CLASS X CONCRETE SUPERSTRUCTURES	CU. YDS.	2072.5	-	2072.5
(4)	FURNISHING AND ERECTING STRUCTURAL STEEL	LUMP SUM	1	-	1
	REINFORCING BARS (EPOXY COATED)	LBS.	458,280	-	458,280
(2)	REMOVAL OF EXISTING CONCRETE DECK	LUMP SUM	1	-	1
(1)	PROTECTIVE COAT	SQ. YDS.	7415	-	7415
	NEOPRENE EXPANSION JOINT 2"	LIN. FT.	474	-	474
	PREFORMED JOINT SEAL 1-3/4"	LIN. FT.	157	-	157
	SHEAR STUD CONNECTOR	EACH	170	-	170
	3/4"ø EXPANSION BOLTS	EACH	12	-	12
	1" DIA. ANCHOR BOLTS	EACH	-	43	43
	RIVET REMOVAL AND REPLACEMENT	EACH	5	-	5
	BRIDGE SCUPPER	EACH	23	-	23
(5)	BRIDGE SEAT SEALER	LUMP SUM	-	1	1
(3)	PROTECTIVE SHIELD	SQ. YD.	7966	-	7966
	DRAINAGE SYSTEM	LUMP SUM	1	-	1
	EPOXY CRACK SEALING	LIN. FT.	150	50	200
	EPOXY MORTAR REPAIR (DEPTH < 1.5")	CU. FT.	360	20	380
	FORMED CONCRETE REPAIR (1.5" < DEPTH < 5")	SQ.FT.	-	2250	2250
	FORMED CONCRETE REPAIR (DEPTH > 5")	SQ.FT.	-	450	450
	PROTECTIVE SURFACE TREATMENT	SQ.FT.	-	28,400	28,400

(1) — PROTECTIVE COAT QUANTITY INCLUDES DECK SURFACE AND FACE OF BARRIER RAILS. SEE SPECIAL PROVISIONS FOR CURING AND TEXTURING BRIDGE DECK.

(2) — INCLUDES 68,597 SQ. FT. OF EXISTING CONCRETE DECK REMOVAL AND EXISTING BRIDGE RAIL REMOVAL.

(3) — PROTECTIVE SHIELD SHALL EXTEND FROM THE MOST WESTERLY BEAM OF THE N.W. BOUND LANES TO THE MOST EASTERLY BEAM OF THE S.E. BOUND LANES AND FROM S. ABUTMENT TO N. ABUTMENT.

(4) — INCLUDES 4089 POUNDS OF STRUCTURAL STEEL REQUIRED AT PREFORMED JOINT SEAL 1 3/4".

(5) — INCLUDES 2995 SQ. FT. (EST.)

REHABILITATION NOTES:

SEAL CRACKS (1/16" AND WIDER) IN ABUTMENT CAPS, PIER CAPS, AND DIAPHRAGMS (WITHIN THE REVERSIBLE LANES AREA) WITH PRESSURE INJECTED EPOXY. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "EPOXY CRACK SEALING." (SEE SPECIAL PROVISIONS)

REPAIR HOLLOW, SPALLED AND DETERIORATED CONCRETE PORTION OF ABUTMENT CAPS, PIER CAPS, AND DIAPHRAGMS, WITHIN THE REVERSIBLE LANES AREA WITH EPOXY MORTAR OR FORMED CONCRETE. SPLICE IN REBARS WHERE REQUIRED. (SEE SPECIAL PROVISIONS).

REMOVE EXISTING ELECTRICAL CONDUIT, ELECTRICAL BOXES AND LIGHT POLES IN THE REVERSIBLE LANES AREA. WORK IS TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR "REMOVAL OF EXISTING CONCRETE DECK." (SEE SPECIAL PROVISIONS).

CLEAN AND SEAL THE BRIDGE SEATS AT THE ABUTMENTS AND THE PIERS IN THE REVERSIBLE LANES AREA. WORK WILL BE PAID FOR AT LUMP SUM PRICE FOR "BRIDGE SEAT SEALER."

REMOVE LOOSE ANCHOR BOLTS AND REPLACE WITH EPOXY GROUTED ANCHOR BOLTS. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR 1" DIA. ANCHOR BOLTS." (SEE SPECIAL PROVISIONS). LOCATION OF REPAIRS SHALL BE COORDINATED WITH TABLE ON THIS SHEET.

REPLACE MISSING OR LOOSE ANCHOR BOLT NUTS OR SIDE RETAINER NUTS WITH NEW NUTS CONFORMING TO ASTM A307. LOCATION OF WORK SHALL BE COORDINATED WITH TABLE ON THIS SHEET. (COST INCIDENTAL TO 1" DIA. ANCHOR BOLTS").

REPLACE THE MISSING STRUCTURAL STEEL BOLTS, NUTS AND RIVETS AND REMOVE AND REPLACE THE LOOSE BOLTS, NUTS AND RIVETS WITH HIGH STRENGTH BOLTS. GIRDER G5 AT GIRDER R174 A BOLT FOR THE BEAM BEARING SEAT IS LOOSE. GIRDER G6 AT GIRDER R182 A BOLT IS LOOSE IN THE CONNECTION. ANY ADDITIONAL LOOSE OR MISSING BOLTS, NUTS AND RIVETS FOUND DURING REHABILITATION SHOULD ALSO BE REPLACED WITH HIGH STRENGTH BOLTS. (COST INCIDENTAL TO "RIVET REMOVAL AND REPLACEMENT").

THE BUREAU OF BRIDGES AND STRUCTURES SHALL BE CONSULTED CONCERNING THE REPAIR OF ALL PPC BEAMS THAT EXHIBIT MORE THAN SUPERFICIAL DAMAGE.

ANCHOR BOLT REHABILITATION TABLE

BEAM NUMBER	BEARING	ANCHOR BOLTS LOOSE	ANCHOR BOLTS MISSING	ANCHOR BOLTS DAMAGED	REMARKS
R13	SOUTH	WEST			
R16	SOUTH	WEST			
R21	SOUTH	YES		YES	
R26	NORTH	YES			
R52	SOUTH			YES	
R53	SOUTH			YES	
R55	SOUTH			YES	
R57	SOUTH				EAST-NUT LOOSE
R57	NORTH	YES			
R73	SOUTH				WEST-NUT LOOSE
R104	SOUTH			YES	BOLT BENT
R111	SOUTH			YES	
R112	NORTH		BOTH	EAST	EAST-BOLT BROKEN OFF
R115	NORTH		WEST		EAST-NUT LOOSE
R116	NORTH	BOTH			
R118	NORTH	WEST			WEST-NUT LOOSE
R132	SOUTH				WEST-NUT LOOSE
R133	SOUTH				WEST-NUT LOOSE
R134	SOUTH	EAST			
R131	NORTH	YES			
R144	NORTH	WEST			
R146	NORTH	WEST			
R151	SOUTH	BOTH		BOTH	
R152	SOUTH	BOTH		BOTH	
R153	SOUTH	BOTH			
R154	SOUTH	EAST			
R155	SOUTH	EAST			
R205	NORTH			WEST	WEST-BOLT SHEARED
R215	SOUTH	WEST	EAST		
R221	NORTH	WEST			
R222	NORTH	WEST			
R231	NORTH	BOTH			BOLT BENT
R232	NORTH	BOTH			BOLT BENT
R233	NORTH	EAST			EAST-BOLT BENT
R234	NORTH	WEST			
R235	NORTH	BOTH			
R251	NORTH	WEST			

GENERAL NOTES:

1. EXPANSION JOINT STRUCTURAL STEEL ANGLES AND ATTACHED BARS SHALL BE AASHTO M183.
2. FASTENERS SHALL BE HIGH STRENGTH BOLTS ~~(AASHTO M 164, TYPE 3)~~, BOLTS SIZE AS REQUIRED AND DIRECTED BY THE ENGINEER.
3. EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THE ZINC-SILICATE PRIMER.
4. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
5. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.
6. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
7. ~~CLEAN~~ AND PAINT THE EXISTING BEARINGS NOT BEING REPLACED ~~AND STRUCTURAL STEEL~~ UTILIZING METHODS I AND II. ~~THE~~ BOTTOM AND OUTSIDE FACES OF ~~THE EXISTING FASCIA BEAMS~~, ALL REMAINING BEARING ASSEMBLIES, THE ~~BOTTOM~~ FLANGES AND BEAM FACES ADJACENT TO LONGITUDINAL JOINTS AND ALL STRUCTURAL STEEL WITHIN FIVE FEET OF ~~TRANSVERSE~~ DECK JOINTS SHALL BE CLEANED BY METHOD I. REMAINDER OF STRUCTURAL STEEL SHALL BE CLEANED BY METHOD II.
8. EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS., AND 3/4" Ø X 12" HOOKED BOLT.
9. ~~PRIOR TO POURING THE NEW DECK CONCRETE, ALL RUST, LOOSE MILL SCALE AND FOREIGN MATERIALS SHALL BE REMOVED FROM THE FOLLOWING AREAS:~~
   ~~A. EXPOSED TOP OF TOP FLANGES OF EXISTING STRINGERS AND GIRDERS~~
   ~~B. BOTTOM OF BOTTOM FLANGES OF EXISTING STRINGERS AND GIRDERS IN CONTACT WITH NEW BEARINGS.~~
   ~~C. ALL CONTACT SURFACES AT EXISTING STRINGERS AND GIRDERS FOR NEW DIAPHRAGMS AND/OR CROSS-FRAMES.~~
   ~~THIS WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SSPC SURFACE PREPARATION SPECIFICATION SP7 FOR BRUSH-OFF BLAST CLEANING. THE COST IS INCIDENTAL TO "REMOVAL OF EXISTING CONCRETE DECK".~~
10. ALL CONTACT SURFACE AREAS OF THE EXISTING STRUCTURAL STEEL TO WHICH NEW STRUCTURAL STEEL IS TO BE CONNECTED SHALL BE FREE OF PAINT OR LACQUER.
11. THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES IS NOT PERMITTED.
12. STRUCTURAL STEEL SHALL ONLY BE CLEANED AND PAINTED AS REQUIRED BY THE SPECIAL PROVISION "CLEANING AND PAINTING NEW STEEL AND ADJACENT AREAS OF EXISTING STEEL STRUCTURES."
13. PRIOR TO POURING THE NEW CONCRETE FOR THE DECK, ALL LOOSE RUST, LOOSE MILL SCALE, LOOSE PAINT AND ALL OTHER FOREIGN MATERIAL SHALL BE REMOVED FROM THE EMBEDDED PORTIONS OF FLANGES OF STRINGERS (GIRDERS). THE REMOVAL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SSPC SURFACE PREPARATION SPECIFICATIONS SP-11 FOR POWER TOOL CLEANING OR SP-2 FOR HAND TOOL CLEANING. COST SHALL BE INCIDENTAL TO "REMOVAL OF EXISTING CONCRETE DECK."
14. The first two coats of the Lead and Chromate free Alkyd Paint System shall be used for shop and field painting of new structural steel.

EXISTING STRUCTURE

FAI ROUTE 2, SEC 0505.31H, BUILT IN 1958, STRUCTURE NO. 016-0133.

SUPERSTRUCTURE: APPROACH SPANS TO ASHLAND AVENUE: SIMPLY SUPPORTED PRECAST, PRESTRESSED CONCRETE I-BEAMS. ASHLAND AVENUE MAIN SPANS: PLANAR FRAME-TYPE STRUCTURE CONSISTING OF 144" RIVETED BUILT-UP COMPOSITE FASCIA GIRDERS, 96" AND 120" CROSS-GIRDERS, AND 48" LONGITUDINAL GIRDERS.

SUBSTRUCTURE: PILE BENT ABUTMENTS SUPPORTED ON CONCRETE PILES AND MULTIPLE COLUMN PIERS SUPPORTED ON CAISSONS.

SUPERSTRUCTURE DECK TO BE REPLACED. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

EXISTING UTILITIES

THE EXISTING UTILITIES HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE PLANS AND FROM FIELD OBSERVATIONS. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

DESIGN SPECIFICATIONS

AASHTO (1983) WITH 1984 THRU 1988 INTERIM SPECIFICATIONS
LOADING HS20-44 AND ALTERNATE MILITARY LOADING
ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

REINFORCED CONCRETE & STRUCTURE STEEL

F'C =	3,500 PSI	(CONCRETE)
FY =	60,000 PSI	(REINFORCEMENT)
FS =	20,000 PSI	(PROPOSED STRUCTURAL STEEL)
FS =	18,000 PSI	(EXISTING STRUCTURAL STEEL)

PRESTRESSED CONCRETE & PRETENSIONING STEEL

	EXISTING	PROPOSED
F'C	5,000 PSI	5,000 PSI
F'CI	4,000 PSI	4,000 PSI
F'S	248,000 PSI (7/16"ø STRANDS)	270,000 PSI (1/2"ø STRANDS)
F'SI	173,600 PSI	189,000 PSI

STANLEY CONSULTANTS

GENERAL NOTES AND BILL OF MATERIAL

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

REV. 12-10-91

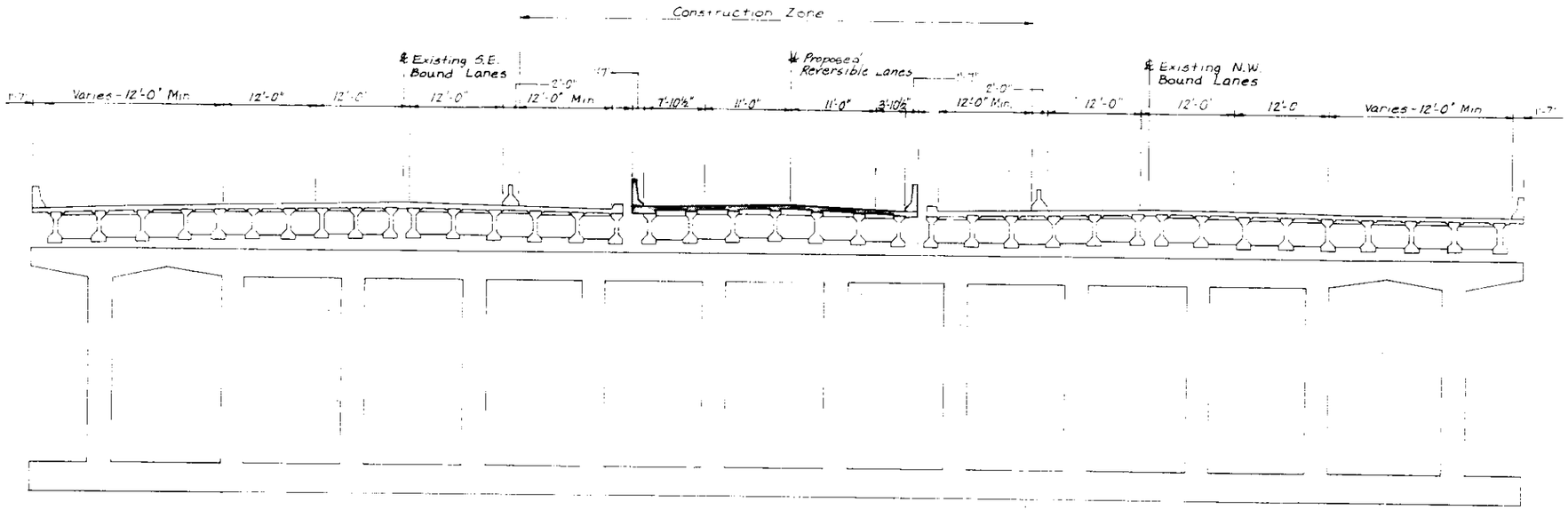
C120

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

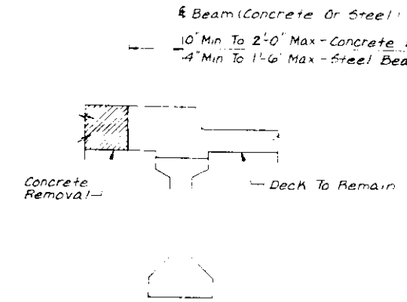
		844	531

SHEET NO. 6 SHEETS

*1991-0.. & 0303-474HB-1



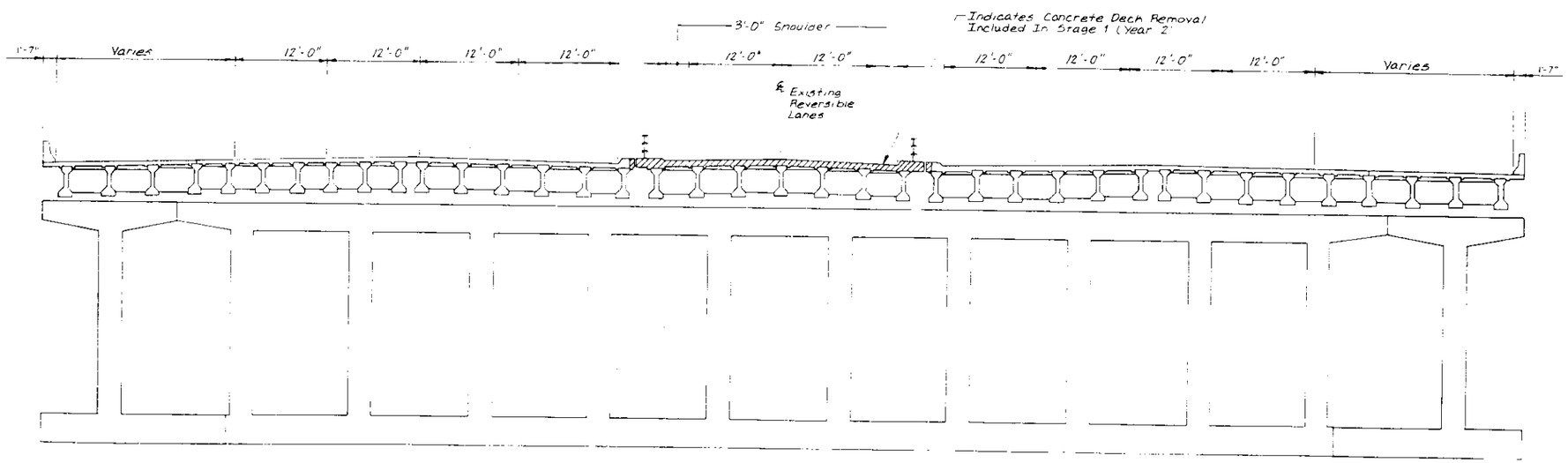
STAGE 1 (YEAR 2)



DETAIL OF DECK REMOVAL

LEGEND

Denotes Proposed Structure



ADVANCE WORK
(YEAR 1)

STANLEY CONSULTANTS

BRIDGE CONSTRUCTION STAGING

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R11	BK.S.ABUT.	39857.263	12.983	613.065	613.065
	¢ BRG	39859.746	13.000	613.139	613.139
	a	39869.751	13.066	613.438	613.452
	b	39879.757	13.129	613.737	613.763
	c	39889.763	13.187	614.036	614.065
	d	39899.768	13.240	614.335	614.366
	e	39909.774	13.289	614.633	614.661
	f	39919.780	13.334	614.933	614.954
	¢ BRG.	39934.710	13.393	615.379	615.379
BEAM R12	BK.S.ABUT.	39857.300	7.649	613.160	613.160
	¢ BRG.	39859.780	7.667	613.233	613.233
	a	39869.783	7.733	613.533	613.547
	b	39879.786	7.795	613.832	613.858
	c	39889.790	7.853	614.131	614.160
	d	39899.793	7.907	614.431	614.462
	e	39909.796	7.956	614.730	614.758
	f	39919.800	8.001	615.029	615.050
	¢ BRG.	39934.727	8.060	615.476	615.476
BEAM R13	BK.S.ABUT.	39857.335	2.316	613.244	613.244
	¢ BRG.	39859.814	2.333	613.318	613.318
	a	39869.815	2.400	613.618	613.632
	b	39879.816	2.462	613.917	613.943
	c	39889.817	2.520	614.219	614.246
	d	39899.818	2.574	614.515	614.546
	e	39909.819	2.623	614.814	614.842
	f	39919.820	2.668	615.113	615.134
	¢ BRG	39934.743	2.726	615.559	615.559
¢ PROP. REV. LANES #1	BK.S.ABUT.	39857.350	0.000	613.281	613.281
	¢ BRG	39859.829	0.000	613.355	613.355
	a	39869.829	0.000	613.655	613.669
	b	39879.829	0.000	613.955	613.981
	c	39889.829	0.000	614.255	614.284
	d	39899.829	0.000	614.555	614.586
	e	39909.829	0.000	614.855	614.883
	f	39919.829	0.000	615.155	615.176
	¢ BRG	39934.752	0.000	615.603	615.603

NOTE

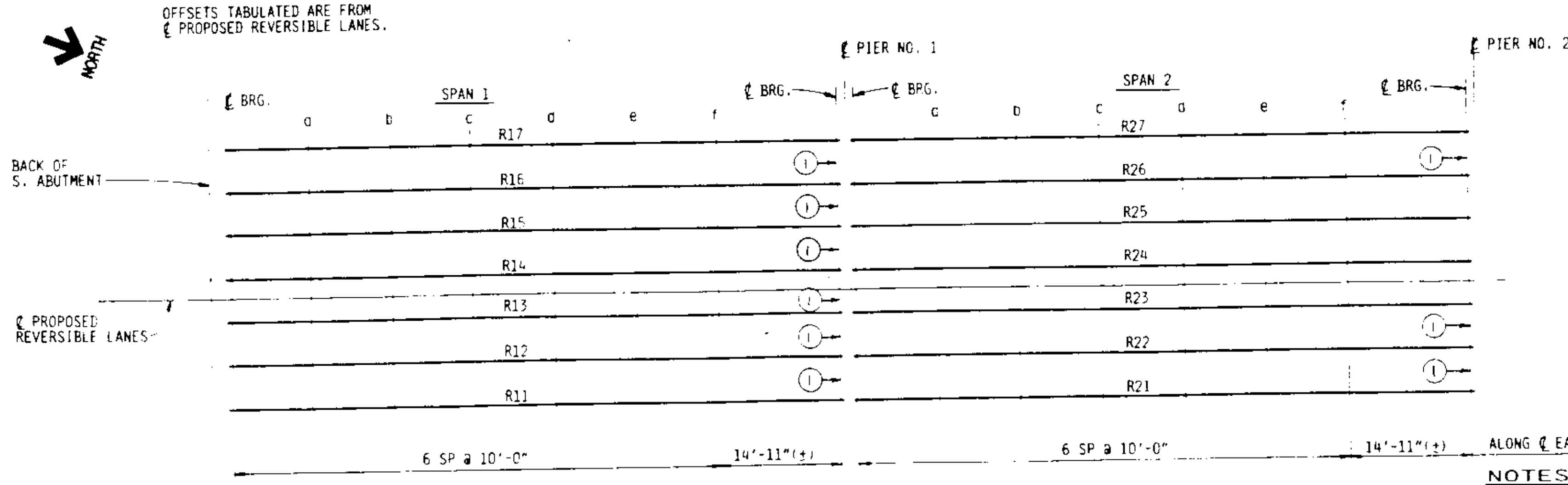
OFFSETS TABULATED ARE FROM ¢ PROPOSED REVERSIBLE LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R14	BK.S.ABUT	39857.370	-3.017	613.234	613.234
	¢ BRG.	39859.848	-3.000	613.309	613.309
	a	39869.847	-2.933	613.609	613.623
	b	39879.845	-2.871	613.910	613.936
	c	39889.844	-2.813	614.211	614.240
	d	39899.843	-2.760	614.512	614.543
	e	39909.841	-2.711	614.813	614.841
	f	39919.840	-2.666	615.113	615.134
	¢ BRG.	39934.760	-2.607	615.562	615.562
BEAM R15	BK.S.ABUT.	39857.404	-8.350	613.152	613.152
	¢ BRG.	39859.883	-8.333	613.227	613.227
	a	39869.879	-8.267	613.527	613.541
	b	39879.875	-8.204	613.828	613.854
	c	39889.871	-8.147	614.129	614.158
	d	39899.868	-8.093	614.430	614.461
	e	39909.864	-8.044	614.730	614.758
	f	39919.860	-7.999	615.031	615.052
	¢ BRG.	39934.777	-7.941	615.479	615.479
BEAM R16	BK.S.ABUT.	39857.439	-13.684	613.055	613.055
	¢ BRG.	39859.917	-13.667	613.131	613.131
	a	39869.911	-13.600	613.431	613.445
	b	39879.904	-13.538	613.732	613.758
	c	39889.898	-13.480	614.034	614.063
	d	39899.892	-13.426	614.335	614.366
	e	39909.886	-13.377	614.636	614.664
	f	39919.880	-13.332	614.936	614.957
	¢ BRG.	39934.793	-13.274	615.385	615.385
BEAM R17	BK.S.ABUT	39857.474	-19.017	612.945	612.945
	¢ BRG.	39859.951	-19.000	613.021	613.021
	a	39869.942	-18.933	613.321	613.335
	b	39879.934	-18.871	613.622	613.648
	c	39889.925	-18.813	613.923	613.952
	d	39899.917	-18.760	614.225	614.256
	e	39909.909	-18.711	614.525	614.553
	f	39919.901	-18.666	614.825	614.846
	¢ BRG.	39934.810	-18.607	615.274	615.274

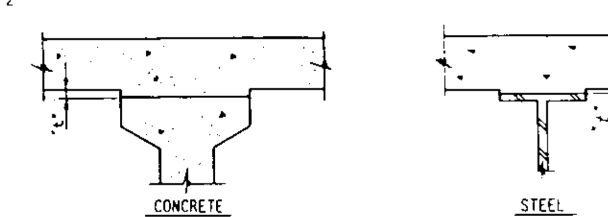
*INDICATES STA. 399+34.810 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R21	¢ BRG.	39936.628	13.399	615.437	615.437
	a	39946.633	13.426	615.737	615.751
	b	39956.639	13.450	616.036	616.067
	c	39966.645	13.469	616.336	616.365
	d	39976.651	13.483	616.636	616.667
	e	39986.657	13.493	616.936	616.964
	f	39996.663	13.499	617.235	617.256
	¢ BRG.	40011.582	13.500	617.672	617.672
BEAM R22	¢ BRG.	39936.644	8.065	615.533	615.533
	a	39946.647	8.093	615.833	615.847
	b	39956.651	8.116	616.133	616.159
	c	39966.654	8.135	616.433	616.462
	d	39976.658	8.150	616.733	616.764
	e	39986.661	8.160	617.033	617.061
	f	39996.665	8.166	617.331	617.352
	¢ BRG.	40011.582	8.167	617.768	617.768
BEAM R23	¢ BRG.	39936.660	2.732	615.617	615.617
	a	39946.661	2.760	615.917	615.931
	b	39956.662	2.783	616.217	616.243
	c	39966.664	2.802	616.516	616.545
	d	39976.665	2.816	616.816	616.847
	e	39986.666	2.827	617.116	617.144
	f	39996.667	2.832	617.415	617.436
	¢ BRG.	40011.582	2.833	617.852	617.852
¢ PROP. REV. LANES #2	¢ BRG.	39936.668	0.000	615.660	615.660
	a	39946.668	0.000	615.960	615.974
	b	39956.668	0.000	616.260	616.286
	c	39966.668	0.000	616.560	616.589
	d	39976.668	0.000	616.860	616.891
	e	39986.668	0.000	617.160	617.188
	f	39996.668	0.000	617.459	617.480
	¢ BRG.	40011.582	0.000	617.896	617.896

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R24	¢ BRG.	39936.676	-2.601	615.619	615.619
	a	39946.675	-2.574	615.920	615.934
	b	39956.674	-2.550	616.220	616.246
	c	39966.673	-2.532	616.520	616.549
	d	39976.672	-2.517	616.821	616.852
	e	39986.671	-2.507	617.121	617.149
	f	39996.670	-2.501	617.420	617.441
	¢ BRG.	40011.582	-2.500	617.857	617.857
BEAM R25	¢ BRG.	39936.692	-7.935	615.537	615.537
	a	39946.689	-7.907	615.838	615.852
	b	39956.686	-7.884	616.138	616.164
	c	39966.682	-7.865	616.438	616.467
	d	39976.679	-7.850	616.737	616.768
	e	39986.675	-7.840	617.038	617.066
	f	39996.672	7.834	617.337	617.358
	¢ BRG.	40011.582	-7.833	617.774	617.774
BEAM R26	¢ BRG.	39936.709	-13.268	615.442	615.442
	a	39946.703	-13.240	615.743	615.757
	b	39956.697	-13.217	616.043	616.069
	c	39966.691	-13.198	616.343	616.372
	d	39976.686	-13.184	616.644	616.675
	e	39986.680	-13.174	616.943	616.971
	f	39996.674	-13.168	617.242	617.263
	¢ BRG.	40011.582	-13.167	617.679	617.679
BEAM R27	¢ BRG.	39936.725	-18.601	615.332	615.332
	a	39946.717	-18.574	615.632	615.646
	b	39956.709	-18.550	615.932	615.958
	c	39966.701	-18.532	616.232	616.261
	d	39976.692	-18.517	616.533	616.564
	e	39986.684	-18.507	616.833	616.861
	f	39996.676	18.501	617.131	617.152
	¢ BRG	40011.582	-18.500	617.568	617.568

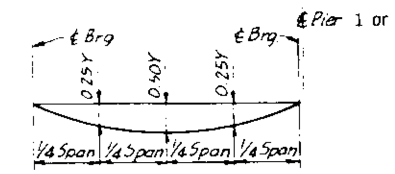


PLAN



TO DETERMINE "t" ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS", MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGES OF BEAMS.

FILLET HEIGHTS



LOCATION	0.25Y	0.50Y
BEAMS R11 THRU R17	5/16"	3/8"
BEAMS R21 THRU R27	5/16"	3/8"

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.

NOTES:

(1) - INDICATES DAMAGED EXISTING DIAPHRAGM, UPPER PORTION TO BE REMOVED WITH DECK SLAB, AS INDICATED ON DETAILS. SEE SHEET 25. REMAINING LOWER PORTION TO BE REPAIRED IN ACCORDANCE WITH "REHABILITATION NOTES" SHOWN ON SHEET 5. ANY ADDITIONAL DIAPHRAGMS THAT ARE FOUND TO BE DAMAGED DURING REHABILITATION SHOULD ALSO BE REPAIRED AS INDICATED ABOVE.

(2) - INDICATES EXISTING DIAPHRAGM TO BE REMOVED AND REPLACED WITH FIXED PIER DIAPHRAGM. SEE SHEET 25 FOR DETAILS.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 1 OF 10

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 8
SHEETS

84 | 533

*1991-025R & 0303-474HB

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R31	℄ BRG.	40013.500	13.500	617.728	617.728
	a	40023.500	13.500	618.013	618.027
	b	40033.500	13.500	618.294	618.320
	c	40043.500	13.500	618.569	618.598
	d	40053.500	13.500	618.839	618.871
	e	40063.500	13.500	619.104	619.139
	f	40073.500	13.500	619.363	619.384
	℄ BRG.	40088.410	13.500	619.741	619.741
BEAM R32	℄ BRG	40013.500	8.167	617.824	617.824
	a	40023.500	8.167	618.110	618.124
	b	40033.500	8.167	618.390	618.416
	c	40043.500	8.167	618.665	618.694
	d	40053.500	8.167	618.935	618.966
	e	40063.500	8.167	619.200	619.228
	f	40073.500	8.167	619.460	619.480
	℄ BRG	40088.410	8.167	619.837	619.837
BEAM R33	℄ BRG.	40013.500	2.833	617.907	617.907
	a	40023.500	2.833	618.193	618.207
	b	40033.500	2.833	618.473	618.500
	c	40043.500	2.833	618.749	618.778
	d	40053.500	2.833	619.019	619.049
	e	40063.500	2.833	619.284	619.311
	f	40073.500	2.833	619.543	619.564
	℄ BRG	40088.410	2.833	619.921	619.921
℄ PROP. REV. LANES #3	℄ BRG.	40013.500	0.000	617.952	617.952
	a	40023.500	0.000	618.237	618.251
	b	40033.500	0.000	618.518	618.544
	c	40043.500	0.000	618.793	618.822
	d	40053.500	0.000	619.063	619.094
	e	40063.500	0.000	619.328	619.356
	f	40073.500	0.000	619.587	619.608
	℄ BRG.	40088.410	0.000	619.965	619.965

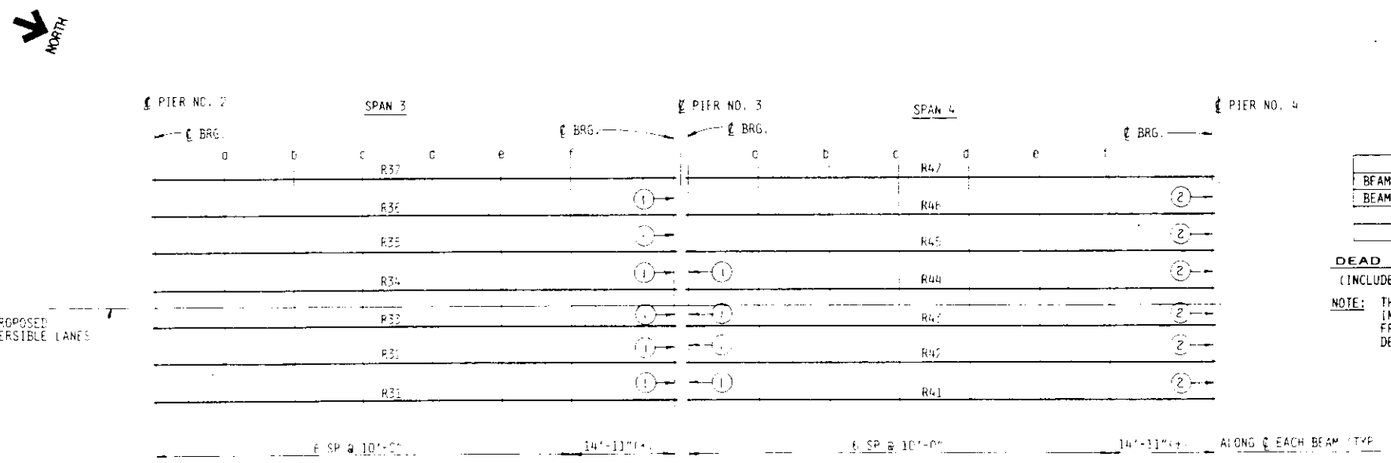
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R34	℄ BRG.	40013.500	-2.500	617.913	617.913
	a	40023.500	-2.500	618.198	618.212
	b	40033.500	-2.500	618.479	618.505
	c	40043.500	-2.500	618.754	618.783
	d	40053.500	-2.500	619.024	619.054
	e	40063.500	-2.500	619.289	619.316
	f	40073.500	-2.500	619.548	619.569
	℄ BRG.	40088.410	-2.500	619.926	619.926
BEAM R35	℄ BRG.	40013.500	-7.833	617.829	617.829
	a	40023.500	-7.833	618.115	618.129
	b	40033.500	-7.833	618.395	618.422
	c	40043.500	-7.833	618.670	618.700
	d	40053.500	-7.833	618.941	618.971
	e	40063.500	-7.833	619.205	619.233
	f	40073.500	-7.833	619.465	619.486
	℄ BRG	40088.410	-7.833	619.842	619.842
BEAM R36	℄ BRG.	40013.500	-13.167	617.735	617.735
	a	40023.500	-13.167	618.020	618.034
	b	40033.500	-13.167	618.301	618.327
	c	40043.500	-13.167	618.576	618.605
	d	40053.500	-13.167	618.846	618.876
	e	40063.500	-13.167	619.111	619.138
	f	40073.500	-13.167	619.370	619.391
	℄ BRG.	40088.410	-13.167	619.748	619.748
BEAM R37	℄ BRG.	40013.500	-18.500	617.674	617.624
	a	40023.500	-18.500	617.909	617.923
	b	40033.500	-18.500	618.190	618.215
	c	40043.500	-18.500	618.465	618.494
	d	40053.500	-18.500	618.735	618.765
	e	40063.500	-18.500	619.000	619.027
	f	40073.500	-18.500	619.259	619.280
	℄ BRG	40088.410	-18.500	619.637	619.637

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R41	℄ BRG.	40090.330	13.500	619.789	619.789
	a	40100.330	13.500	620.034	620.048
	b	40110.330	13.500	620.275	620.301
	c	40120.330	13.500	620.510	620.539
	d	40130.330	13.500	620.740	[illegible]
	e	40140.330	13.500	620.964	[illegible]
	f	40150.330	13.500	621.184	[illegible]
	℄ BRG.	40165.250	13.500	621.501	621.501
BEAM R42	℄ BRG.	40090.330	8.167	619.885	619.885
	a	40100.330	8.167	620.131	620.144
	b	40110.330	8.167	620.371	620.397
	c	40120.330	8.167	620.606	620.635
	d	40130.330	8.167	620.836	620.866
	e	40140.330	8.167	621.061	621.088
	f	40150.330	8.167	621.280	621.301
	℄ BRG.	40165.250	8.167	621.598	621.598
BEAM R43	℄ BRG	40090.330	2.833	619.968	619.968
	a	40100.330	2.833	620.214	620.228
	b	40110.330	2.833	620.454	620.481
	c	40120.330	2.833	620.689	620.718
	d	40130.330	2.833	620.919	620.950
	e	40140.330	2.833	621.144	621.172
	f	40150.330	2.833	621.363	621.384
	℄ BRG	40165.250	2.833	621.681	621.681
℄ PROP. REV. LANES #4	℄ BRG.	40090.330	0.000	620.013	620.013
	a	40100.330	0.000	620.258	620.272
	b	40110.330	0.000	620.499	620.525
	c	40120.330	0.000	620.734	620.763
	d	40130.330	0.000	620.964	620.994
	e	40140.330	0.000	621.188	621.216
	f	40150.330	0.000	621.408	621.428
	℄ BRG	40165.250	0.000	621.725	621.725

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R44	℄ BRG	40090.330	2.500	[illegible]	[illegible]
	a	40100.330	-2.500	620.219	620.233
	b	40110.330	-2.500	[illegible]	620.486
	c	40120.330	-2.500	[illegible]	620.724
	d	40130.330	-2.500	620.924	620.955
	e	40140.330	-2.500	621.149	[illegible]
	f	40150.330	-2.500	621.369	621.389
	℄ BRG.	40165.250	-2.500	621.686	621.686
BEAM R45	℄ BRG	40090.330	-7.833	619.890	619.890
	a	40100.330	-7.833	620.136	620.150
	b	40110.330	-7.833	620.376	620.402
	c	40120.330	-7.833	620.611	620.640
	d	40130.330	-7.833	620.841	620.872
	e	40140.330	-7.833	621.066	621.093
	f	40150.330	-7.833	621.285	621.306
	℄ BRG.	40165.250	-7.833	621.603	621.603
BEAM R46	℄ BRG.	40090.330	-13.167	619.795	619.795
	a	40100.330	-13.167	620.041	620.055
	b	40110.330	-13.167	620.281	620.308
	c	40120.330	-13.167	[illegible]	620.546
	d	40130.330	-13.167	[illegible]	[illegible]
	e	40140.330	-13.167	620.971	620.999
	f	40150.330	-13.167	621.191	621.211
	℄ BRG.	40165.250	-13.167	621.508	621.508
BEAM R47	℄ BRG	40090.330	-18.500	619.684	619.684
	a	40100.330	-18.500	619.930	[illegible]
	b	40110.330	-18.500	[illegible]	[illegible]
	c	40120.330	-18.500	[illegible]	[illegible]
	d	40130.330	-18.500	[illegible]	[illegible]
	e	40140.330	-18.500	620.860	[illegible]
	f	40150.330	-18.500	621.080	[illegible]
	℄ BRG.	40165.250	-18.500	[illegible]	[illegible]

NOTE:
OFFSETS TABULATED ARE FROM
℄ PROPOSED REVERSIBLE LANES.

* INDICATES STA. 400+88.410 (TYP.)



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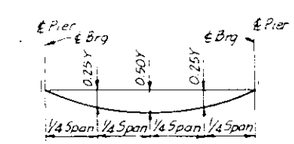


LOCATION	0.25Y	0.50Y
BEAMS R31 THRU R37	1/4"	3/8"
BEAMS R41 THRU R47	5/16"	3/8"

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.

NOTES:

SEE SHEET #7 FOR FILLET HEIGHT DETAIL AND DIAPHRAGM REHABILITATION NOTES.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 2 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

C123

844 | 534

*1991-025R & 0303-474HB-1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R51	℄ BRG	40167.160	13.500	621.541	621.541
	a	40177.160	13.500	[illegible]	621.761
	b	40187.160	13.500	[illegible]	[illegible]
	c	40197.160	13.500	[illegible]	[illegible]
	d	40207.160	13.500	622.332	622.361
	e	40217.160	13.500	622.517	622.544
	f	40227.160	13.500	622.696	[illegible]
	℄ BRG	40242.080	13.500	622.954	622.954
BEAM R52	℄ BRG.	40167.160	8.167	621.638	621.638
	a	40177.160	8.167	621.843	621.857
	b	40187.160	8.167	622.044	622.070
	c	40197.160	8.167	622.239	622.268
	d	40207.160	8.167	622.428	622.459
	e	40217.160	8.167	622.613	622.641
	f	40227.160	8.167	*622.792	622.813
	℄ BRG.	40242.080	8.167	623.050	623.050
BEAM R53	℄ BRG	40167.160	2.833	621.721	621.721
	a	40177.160	2.833	621.927	621.940
	b	40187.160	2.833	622.127	622.153
	c	40197.160	2.833	622.322	622.351
	d	40207.160	2.833	622.512	622.542
	e	40217.160	2.833	622.696	622.724
	f	40227.160	2.833	622.876	622.896
	℄ BRG.	40242.080	2.833	623.134	623.134
℄ PROP. REV. LANES #5	℄ BRG	40167.160	0.000	621.765	621.765
	a	40177.160	0.000	621.971	621.985
	b	40187.160	0.000	622.171	622.197
	c	40197.160	0.000	622.366	622.395
	d	40207.160	0.000	622.556	622.586
	e	40217.160	0.000	622.741	622.768
	f	40227.160	0.000	622.920	622.941
	℄ BRG.	40242.080	0.000	623.178	623.178

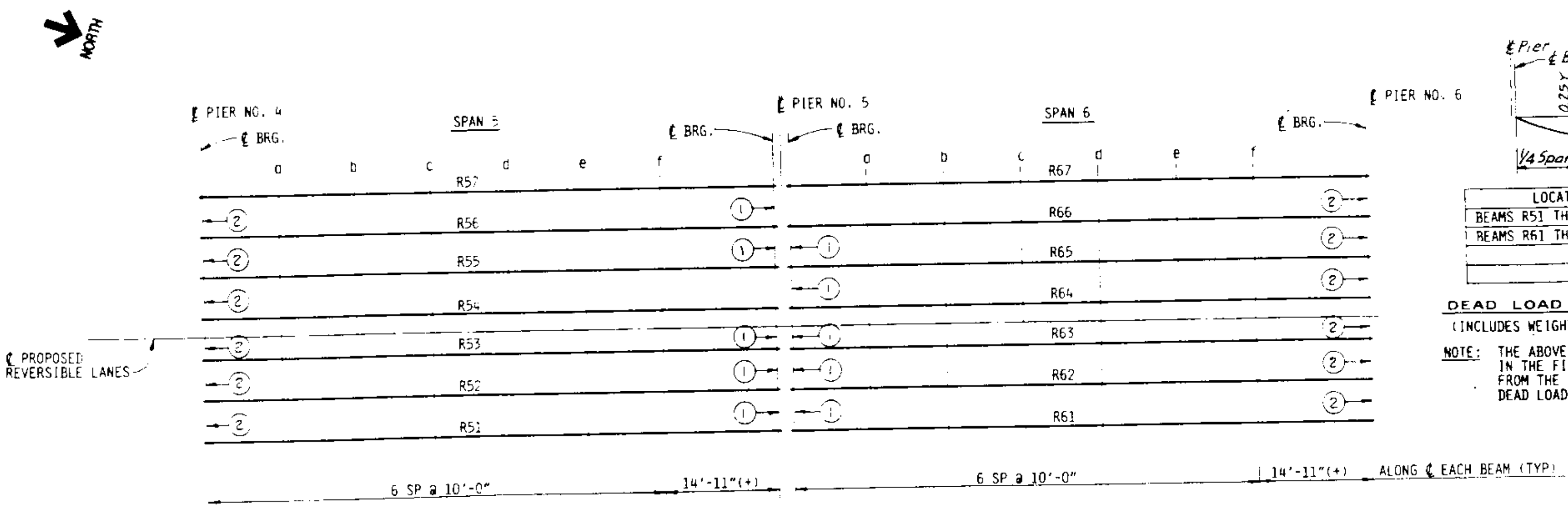
NOTE:
OFFSETS TABULATED ARE FROM
℄ PROPOSED REVERSIBLE LANES.

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R54	℄ BRG.	40167.160	-2.500	621.726	621.726
	a	40177.160	-2.500	621.932	621.946
	b	40187.160	-2.500	622.132	622.158
	c	40197.160	-2.500	622.327	622.356
	d	40207.160	-2.500	622.517	622.547
	e	40217.160	-2.500	622.702	622.729
	f	40227.160	-2.500	622.881	622.902
	℄ BRG.	40242.080	-2.500	623.139	623.139
BEAM R55	℄ BRG.	40167.160	-7.833	621.643	621.643
	a	40177.160	-7.833	621.848	621.862
	b	40187.160	-7.833	622.049	622.075
	c	40197.160	-7.833	622.244	622.273
	d	40207.160	-7.833	622.434	622.464
	e	40217.160	-7.833	622.618	622.646
	f	40227.160	-7.833	622.798	622.818
	℄ BRG.	40242.080	-7.833	623.055	623.055
BEAM R56	℄ BRG.	40167.160	-13.167	621.548	621.548
	a	40177.160	-13.167	621.754	621.768
	b	40187.160	-13.167	621.954	621.980
	c	40197.160	-13.167	622.149	622.178
	d	40207.160	-13.167	622.339	622.369
	e	40217.160	-13.167	622.524	622.551
	f	40227.160	-13.167	622.703	622.724
	℄ BRG.	40242.080	-13.167	622.961	622.961
BEAM R57	℄ BRG.	40167.160	-18.500	621.437	621.437
	a	40177.160	-18.500	621.643	621.656
	b	40187.160	-18.500	621.843	621.869
	c	40197.160	-18.500	622.038	622.067
	d	40207.160	-18.500	622.228	622.258
	e	40217.160	-18.500	622.412	622.440
	f	40227.160	-18.500	622.592	622.612
	℄ BRG.	40242.080	-18.500	622.850	622.850

↖ INDICATES STA. 402+42.080(TYP)

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R61	℄ BRG.	40244.000	13.500	622.986	622.986
	a	40254.000	13.500	623.152	623.165
	b	40264.000	13.500	623.312	623.338
	c	40274.000	13.500	623.467	623.496
	d	40284.000	13.500	623.616	[illegible]
	e	40294.000	13.500	623.761	623.789
	f	40304.000	13.500	623.900	623.921
	℄ BRG.	40318.910	13.500	624.098	624.098
BEAM R62	℄ BRG.	40244.000	8.167	623.083	623.083
	a	40254.000	8.167	623.248	623.262
	b	40264.000	8.167	623.408	623.434
	c	40274.000	8.167	623.563	623.592
	d	40284.000	8.167	623.713	623.743
	e	40294.000	8.167	623.857	623.885
	f	40304.000	8.167	623.997	624.017
	℄ BRG.	40318.910	8.167	624.195	624.195
BEAM R63	℄ BRG.	40244.000	2.833	623.166	623.166
	a	40254.000	2.833	623.331	623.345
	b	40264.000	2.833	623.492	623.518
	c	40274.000	2.833	623.646	623.676
	d	40284.000	2.833	623.796	623.827
	e	40294.000	2.833	623.941	623.968
	f	40304.000	2.833	624.080	624.101
	℄ BRG.	40318.910	2.833	624.278	624.278
℄ PROP. REV. LANES #6	℄ BRG.	40244.000	0.000	623.210	623.210
	a	40254.000	0.000	623.376	623.389
	b	40264.000	0.000	623.536	623.562
	c	40274.000	0.000	623.691	623.720
	d	40284.000	0.000	623.840	623.871
	e	40294.000	0.000	623.985	624.013
	f	40304.000	0.000	624.124	624.145
	℄ BRG	40318.910	0.000	624.322	624.322

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R64	℄ BRG.	40244.000	-2.500	623.171	623.171
	a	40254.000	-2.500	623.336	623.350
	b	40264.000	-2.500	623.497	623.523
	c	40274.000	-2.500	623.652	623.681
	d	40284.000	-2.500	623.801	623.832
	e	40294.000	-2.500	623.946	623.974
	f	40304.000	-2.500	624.085	624.106
	℄ BRG.	40318.910	-2.500	624.283	624.283
BEAM R65	℄ BRG.	40244.000	-7.833	623.088	623.088
	a	40254.000	-7.833	623.253	623.267
	b	40264.000	-7.833	623.413	623.440
	c	40274.000	-7.833	623.568	623.597
	d	40284.000	-7.833	623.718	623.749
	e	40294.000	-7.833	623.863	623.890
	f	40304.000	-7.833	624.002	624.023
	℄ BRG	40318.910	-7.833	624.200	624.200
BEAM R66	℄ BRG.	40244.000	-13.167	622.993	622.993
	a	40254.000	-13.167	623.158	623.172
	b	40264.000	-13.167	623.319	623.345
	c	40274.000	-13.167	623.474	623.503
	d	40284.000	-13.167	623.623	623.654
	e	40294.000	-13.167	623.768	623.796
	f	40304.000	-13.167	623.907	623.928
	℄ BRG.	40318.910	-13.167	624.105	624.105
BEAM R67	℄ BRG.	40244.000	-18.500	622.882	622.882
	a	40254.000	-18.500	623.047	623.061
	b	40264.000	-18.500	623.208	623.234
	c	40274.000	-18.500	623.362	623.392
	d	40284.000	-18.500	623.512	623.543
	e	*40294.000	-18.500	623.657	623.684
	f	40304.000	-18.500	623.796	623.817
	℄ BRG.	40318.910	-18.500	623.994	623.994



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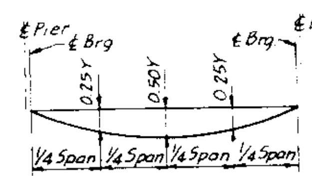


LOCATION	0.25Y	0.50Y
BEAMS R51 THRU R57	5/16"	3/8"
BEAMS R61 THRU R67	5/16"	3/8"

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.

NOTE:
SEE SHEET #7 FOR FILLET HEIGHT DETAIL AND DIAPHRAGM REHABILITATION NOTES.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 3 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

624

			344	535

*1991-025R & 0303-474HB-1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R71	℄ BRG.	40320.830	13.500	624.123	624.123
	a	40330.830	13.500	624.248	624.259
	b	40340.830	13.500	624.368	624.390
	c	40350.830	13.500	624.483	624.510
	d	40360.830	13.500	624.593	624.623
	e	40370.830	13.500	624.697	624.722
	f	40380.830	13.500	624.797	624.813
	℄ BRG	40395.750	13.500	624.935	624.935
BEAM R72	℄ BRG.	40320.830	8.167	624.219	624.219
	a	40330.830	8.167	624.345	624.359
	b	40340.830	8.167	624.465	624.491
	c	40350.830	8.167	624.580	624.609
	d	40360.830	8.167	624.689	624.720
	e	40370.830	8.167	624.794	624.821
	f	40380.830	8.167	624.893	624.914
	℄ BRG.	40395.750	8.167	625.031	625.031
BEAM R73	℄ BRG.	40320.830	2.833	624.303	624.303
	a	40330.830	2.833	624.428	624.442
	b	40340.830	2.833	624.548	624.574
	c	40350.830	2.833	624.663	624.692
	d	40360.830	2.833	624.773	624.803
	e	40370.830	2.833	624.877	624.905
	f	40380.830	2.833	624.976	624.997
	℄ BRG	40395.750	2.833	625.115	625.115
℄ PROP. REV. LANES #7	℄ BRG	40320.830	0.000	624.347	624.347
	a	40330.830	0.000	624.472	624.486
	b	40340.830	0.000	624.592	624.619
	c	40350.830	0.000	624.707	624.736
	d	40360.830	0.000	624.817	624.847
	e	40370.830	0.000	624.921	624.949
	f	40380.830	0.000	625.021	625.041
	℄ BRG.	40395.750	0.000	625.159	625.159

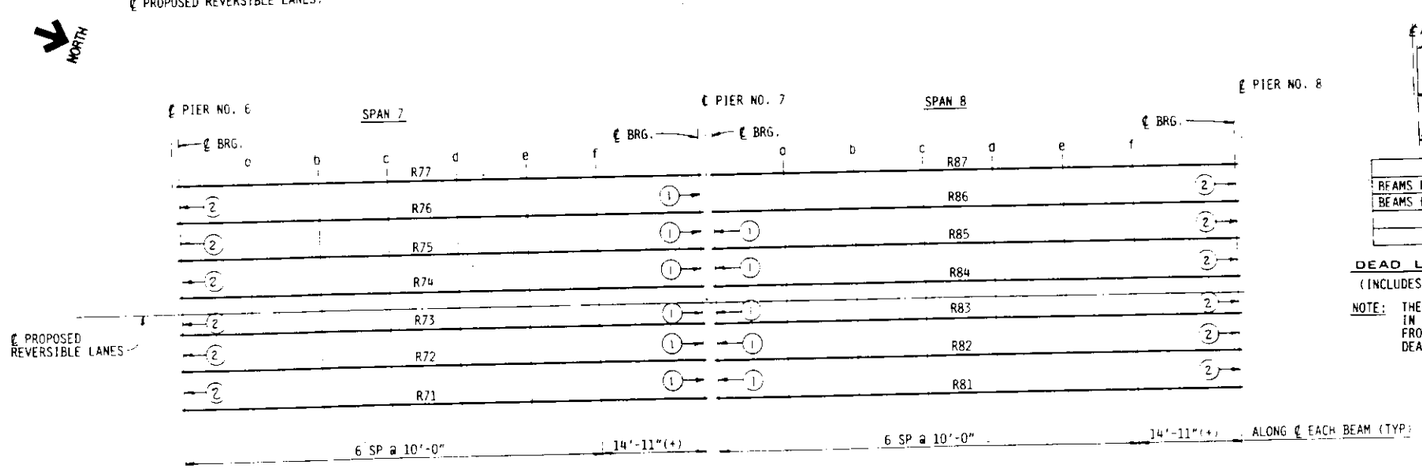
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R74	℄ BRG.	40320.830	-2.500	624.308	624.308
	a	40330.830	-2.500	624.433	624.447
	b	40340.830	-2.500	624.553	624.580
	c	40350.830	-2.500	624.668	624.697
	d	40360.830	-2.500	624.778	624.808
	e	40370.830	-2.500	624.882	624.910
	f	40380.830	-2.500	624.981	625.002
	℄ BRG.	40395.750	-2.500	625.120	625.120
BEAM R75	℄ BRG.	40320.830	-7.833	624.225	624.225
	a	40330.830	-7.833	624.350	624.364
	b	40340.830	-7.833	624.470	624.496
	c	40350.830	-7.833	624.585	624.614
	d	40360.830	-7.833	624.694	624.725
	e	40370.830	-7.833	624.799	624.827
	f	40380.830	-7.833	624.898	624.919
	℄ BRG.	40395.750	-7.833	625.036	625.036
BEAM R76	℄ BRG.	40320.830	-13.167	624.130	624.130
	a	40330.830	-13.167	624.255	624.269
	b	40340.830	-13.167	624.375	624.402
	c	40350.830	-13.167	624.490	624.519
	d	40360.830	-13.167	624.600	624.630
	e	40370.830	-13.167	624.704	624.732
	f	40380.830	-13.167	624.804	624.824
	℄ BRG.	40395.750	-13.167	624.942	624.942
BEAM R77	℄ BRG.	40320.830	-18.500	624.019	624.019
	a	40330.830	-18.500	624.144	624.155
	b	40340.830	-18.500	624.264	624.286
	c	40350.830	-18.500	624.379	624.406
	d	40360.830	-18.500	624.489	624.519
	e	40370.830	-18.500	624.593	624.617
	f	40380.830	-18.500	624.692	624.709
	℄ BRG.	40395.750	-18.500	624.831	624.831

~ INDICATES STA. 403+95.750(TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM RR1	℄ BRG.	40397.660	13.500	624.952	624.952
	a	40407.660	13.500	625.037	625.048
	b	40417.660	13.500	625.117	625.138
	c	40427.660	13.500	625.192	625.219
	d	40437.660	13.500	625.261	625.291
	e	40447.660	13.500	625.326	625.350
	f	40457.660	13.500	625.385	625.401
	℄ BRG.	40472.580	13.500	625.463	625.463
BEAM RR2	℄ BRG.	40397.660	8.167	625.048	625.048
	a	40407.660	8.167	625.133	625.147
	b	40417.660	8.167	625.213	625.240
	c	40427.660	8.167	625.288	625.317
	d	40437.660	8.167	625.358	625.388
	e	40447.660	8.167	625.422	625.450
	f	40457.660	8.167	625.481	625.502
	℄ BRG.	40472.580	8.167	625.560	625.560
BEAM RR3	℄ BRG.	40397.660	2.833	625.132	625.132
	a	40407.660	2.833	625.217	625.231
	b	40417.660	2.833	625.297	625.323
	c	40427.660	2.833	625.372	625.401
	d	40437.660	2.833	625.441	625.472
	e	40447.660	2.833	625.505	625.533
	f	40457.660	2.833	625.565	625.585
	℄ BRG.	40472.580	2.833	625.643	625.643
℄ PROP. REV. LANES #8	℄ BRG.	40397.660	0.000	625.176	625.176
	a	40407.660	0.000	625.261	625.275
	b	40417.660	0.000	625.341	625.367
	c	40427.660	0.000	625.416	625.445
	d	40437.660	0.000	625.485	625.516
	e	40447.660	0.000	625.550	625.577
	f	40457.660	0.000	625.609	625.630
	℄ BRG	40472.580	0.000	625.687	625.687

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM RR4	℄ BRG.	40397.660	-2.500	625.137	625.137
	a	40407.660	-2.500	625.222	625.236
	b	40417.660	-2.500	625.302	625.328
	c	40427.660	-2.500	625.377	625.406
	d	40437.660	-2.500	625.446	625.477
	e	40447.660	-2.500	625.511	625.538
	f	40457.660	-2.500	625.570	625.591
	℄ BRG.	40472.580	-2.500	625.648	625.648
BEAM RR5	℄ BRG.	40397.660	-7.833	625.053	625.053
	a	40407.660	-7.833	625.139	625.152
	b	40417.660	-7.833	625.218	625.245
	c	40427.660	-7.833	625.293	625.322
	d	40437.660	-7.833	625.363	625.393
	e	40447.660	-7.833	625.427	625.455
	f	40457.660	-7.833	625.486	625.507
	℄ BRG.	40472.580	-7.833	625.565	625.565
BEAM RR6	℄ BRG.	40397.660	-13.167	624.959	624.959
	a	40407.660	-13.167	625.044	625.058
	b	40417.660	-13.167	625.124	625.150
	c	40427.660	-13.167	625.199	625.228
	d	40437.660	-13.167	625.268	625.299
	e	40447.660	-13.167	625.333	625.360
	f	40457.660	-13.167	625.392	625.413
	℄ BRG.	40472.580	-13.167	625.470	625.470
BEAM RR7	℄ BRG.	40397.660	-18.500	624.848	624.848
	a	40407.660	-18.500	624.933	624.944
	b	40417.660	-18.500	625.013	625.034
	c	40427.660	-18.500	625.088	625.115
	d	40437.660	-18.500	625.157	625.187
	e	40447.660	-18.500	625.222	625.246
	f	40457.660	-18.500	625.281	625.297
	℄ BRG.	40472.580	-18.500	625.359	625.359

NOTE:
OFFSETS TABULATED ARE FROM ℄ PROPOSED REVERSIBLE LANES.



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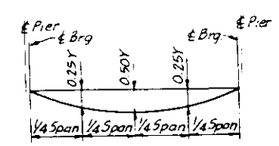


LOCATION	0.25Y	0.50Y
BEAMS R71 THRU R77	1/4"	3/8"
BEAMS RR1 THRU RR7	1/4"	3/8"

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.

NOTE:
SEE SHEET #7 FOR FILLET HEIGHT DETAIL AND DIAPHRAGM REHABILITATION NOTES.

TOP OF SLAB ELEVATIONS
SHEET 4 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

C125

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 11 SHEETS

536

*1991-025R & 0303-474HB-I

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R101	℄ BRG.	40474.498	13.500	625.473	625.473
	a	40484.498	13.501	625.519	625.529
	b	40494.498	13.501	625.556	625.575
	c	40504.498	13.502	625.592	625.612
	d	40514.498	13.502	625.624	625.647
	e	40524.498	13.503	625.659	625.673
	℄ BRG.	40538.32[illegible]	13.503	625.713	625.713
BEAM R102	℄ BRG.	40474.498	8.167	625.569	625.569
	a	40484.498	8.167	625.614	625.623
	b	40494.498	8.168	625.654	625.671
	c	40504.498	8.168	625.688	625.708
	d	40514.496	8.169	625.718	625.737
	e	40524.498	8.169	625.742	625.757
	f	40534.498	8.170	625.761	625.767
	℄ BRG.	40540.586	8.170	625.770	625.770
BEAM R103	℄ BRG.	40474.498	2.833	625.653	625.653
	a	40484.498	2.834	625.698	625.710
	b	40494.498	2.834	625.738	625.760
	c	40504.498	2.835	625.772	625.797
	d	40514.498	2.836	625.801	625.826
	e	40524.498	2.836	625.823	625.844
	f	40534.498	2.837	625.845	625.855
	℄ BRG.	40542.844	2.837	625.857	625.857
℄ PROP. REV. LANES #10	℄ BRG.	40474.498	0.000	625.697	625.697
	a	40484.498	0.000	625.742	625.754
	b	40494.498	0.000	625.782	625.804
	c	40504.498	0.000	625.816	625.844
	d	40514.498	0.000	625.846	625.874
	e	40524.498	0.000	625.870	625.892
	f	40534.498	0.000	625.889	625.900
	℄ BRG.	40544.046	0.000	625.902	625.902

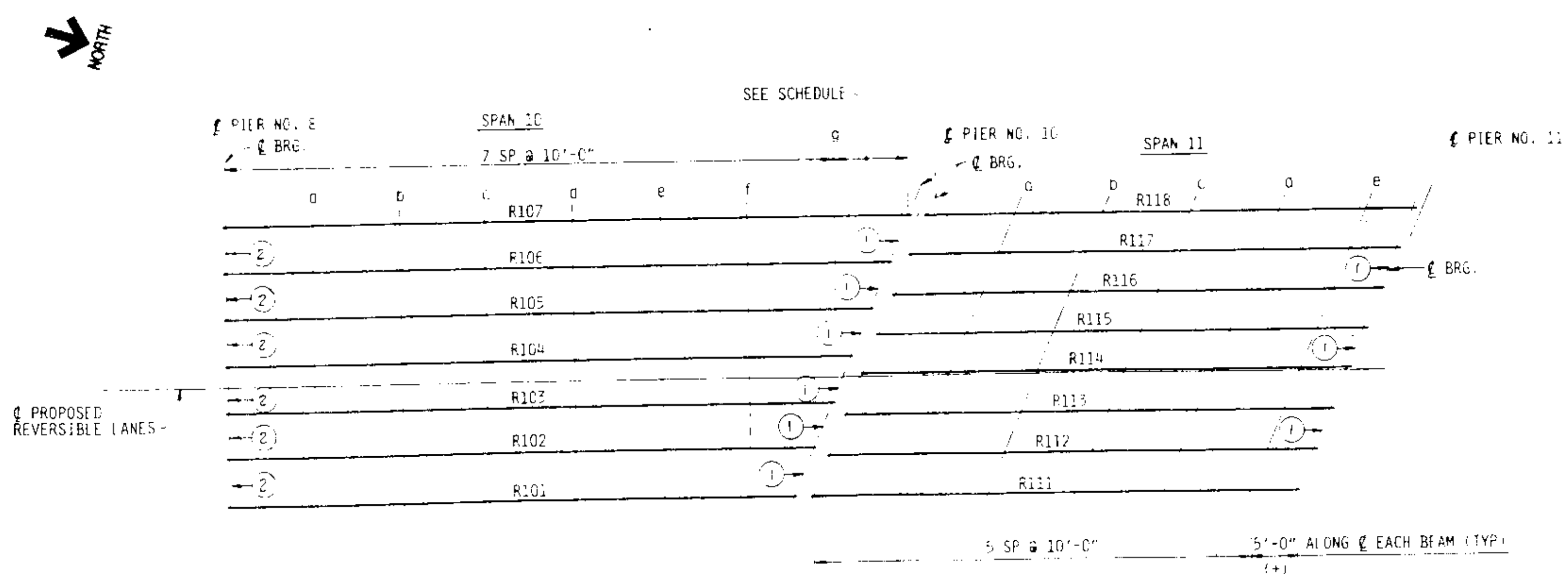
NOTE:
OFFSETS TABULATED ARE FROM ℄ PROPOSED REVERSIBLE LANES.

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R104	℄ BRG.	40474.498	-2.500	625.658	625.658
	a	40484.498	2.499	625.703	625.715
	b	40494.498	-2.499	625.743	625.765
	c	40504.498	-2.498	625.777	625.805
	d	40514.498	-2.498	625.807	625.835
	e	40524.498	-2.497	625.831	625.854
	f	40534.498	-2.497	625.850	625.862
	℄ BRG.	40545.103	2.496	625.865	625.865
BEAM R105	℄ BRG.	40474.498	-7.833	625.575	625.575
	a	40484.498	-7.833	625.620	625.631
	b	40494.498	-7.832	625.660	625.682
	c	40504.498	-7.832	625.694	625.722
	d	40514.498	-7.831	625.724	625.753
	e	40524.498	-7.831	625.748	625.771
	f	40534.496	-7.830	625.767	625.782
	℄ BRG.	40547.361	-7.829	625.784	625.784
BEAM R106	℄ BRG.	40474.498	-13.167	625.480	625.480
	a	40484.498	-13.166	625.525	625.539
	b	40494.498	-13.166	625.565	625.592
	c	40504.498	-13.165	625.599	625.631
	d	40514.498	13.164	625.629	625.664
	e	40524.498	-13.164	625.653	625.683
	f	40534.498	-13.163	625.672	625.693
	g	40544.498	-13.163	625.686	625.693
	℄ BRG.	40549.620	-13.162	625.691	625.691
BEAM R107	℄ BRG.	40474.498	18.500	625.369	625.369
	a	40484.498	-18.499	625.414	625.427
	b	40494.498	-18.499	625.454	625.480
	c	40504.498	-18.498	625.488	625.520
	d	40514.498	-18.498	625.518	625.554
	e	40524.498	-18.497	625.542	625.571
	f	40534.498	-18.496	625.561	625.584
	g	40544.498	-18.496	625.575	625.581
	℄ BRG.	40551.879	-18.495	625.582	625.582

– INDICATES STA 405+51.879 (TYP)

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R111	℄ BRG.	40540.771	13.554	625.721	625.721
	a	40550.771	13.550	625.754	625.769
	b	40560.771	13.546	625.781	625.804
	c	40570.771	13.541	625.803	625.828
	d	40580.771	13.537	625.826	625.842
	e	40590.771	13.533	625.832	625.840
	℄ BRG.	40595.778	13.531	625.836	625.836
BEAM R112	℄ BRG.	40542.713	8.969	625.787	625.787
	a	40552.713	8.965	625.810	625.82[illegible]
	b	40562.713	8.961	625.830	625.853
	c	40572.713	8.957	625.843	625.865
	d	40582.713	8.952	625.852	625.874
	e	40592.713	8.948	625.854	625.862
	℄ BRG.	40597.720	8.946	625.855	625.855
BEAM R113	℄ BRG.	40544.655	4.385	625.848	625.848
	a	40554.655	4.380	625.865	625.880
	b	40564.655	4.376	625.875	625.898
	c	40574.655	4.372	625.880	625.905
	d	40584.655	4.367	625.880	625.902
	e	40594.655	4.363	625.875	625.883
	℄ BRG.	40599.661	4.361	625.870	625.870
℄ PROP. REV. LANES #11	℄ BRG.	40546.512	0.000	625.905	625.905
	a	40556.512	0.000	625.913	625.928
	b	40566.512	0.000	625.915	625.938
	c	40576.512	0.000	625.912	625.937
	d	40586.512	0.000	625.904	625.926
	e	40596.512	0.000	625.891	625.899
	℄ BRG.	40601.508	0.000	625.882	625.882

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R114	℄ BRG.	40546.59[illegible]	-0.20[illegible]	625.90[illegible]	625.9[illegible]
	a	40556.597	-0.205	625.910	625.92[illegible]
	b	40566.597	-0.209	625.912	625.93[illegible]
	c	[illegible]	-0.213	625.909	625.93[illegible]
	d	40586.59[illegible]	-0.219	625.9[illegible]	625.92[illegible]
	e	40596.597	-0.222	625.898	625.896
	℄ BRG.	40601.603	-0.224	625.879	625.87[illegible]
BEAM R115	℄ BRG.	40548.538	-4.785	625.832	625.832
	a	40558.538	-4.790	625.839	625.85[illegible]
	b	40568.538	-4.794	625.840	625.86[illegible]
	c	40578.538	-4.798	625.836	625.86[illegible]
	d	40588.539	-4.803	625.827	625.84[illegible]
	e	40598.538	-4.807	625.812	625.820
	℄ BRG.	40603.545	-4.809	625.803	625.80[illegible]
BEAM R116	℄ BRG.	40550.480	-9.370	625.763	625.763
	a	40560.480	-9.375	625.767	625.782
	b	40570.480	-9.379	625.768	625.791
	c	40580.480	-9.383	625.763	625.788
	d	40590.480	-9.388	625.752	625.774
	e	40600.480	-9.392	625.73[illegible]	625.745
	℄ BRG.	40605.487	-9.394	625.72[illegible]	625.72[illegible]
BEAM R117	℄ BRG.	40552.422	-13.955	625.676	625.676
	a	40562.422	-13.960	625.681	625.696
	b	40572.422	-13.964	625.680	625.70[illegible]
	c	40582.422	-13.968	625.67[illegible]	625.699
	d	40592.422	-13.973	625.663	625.685
	e	40602.422	-13.977	625.646	625.654
	℄ BRG.	40607.429	-13.979	625.636	625.636
BEAM R118	℄ BRG.	40554.364	-18.540	625.5[illegible]	625.5[illegible]
	a	40564.364	-18.545	625.5[illegible]	[illegible]
	b	40574.364	-18.549	625.564	[illegible]
	c	40584.364	-18.553	625.5[illegible]	[illegible]
	d	40594.364	-18.558	625.564	625.5[illegible]
	e	40604.364	-18.562	625.548	625.5[illegible]
	℄ BRG.	40609.370	-18.564	625.53[illegible]	625.53[illegible]



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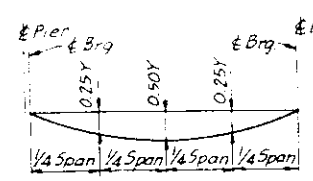


LOCATION	0.25Y	0.50Y
BEAMS R101 & R102	3/16"	1/4"
BEAM R103	1/4"	5/16"
BEAMS R104 & R105	1/4"	3/8"
BEAMS R106 & R107	5/16"	7/16"
BEAMS R111 THRU R118	1/4"	5/16"

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.

NOTE:
SEE SHEET #7 FOR FILLET HEIGHT DETAIL AND DIAPHRAGM REHABILITATION NOTES.

TOP OF SLAB ELEVATIONS
SHEET 5 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R131	℄ BRG.	40598.239	13.543	625.837	625.837
	a	40608.239	13.542	625.841	625.852
	b	40618.239	13.540	625.837	625.859
	c	40628.239	13.539	625.834	625.85
	d	40638.239	13.537	625.812	625.840
	e	40648.239	13.536	625.798	625.820
	f	40658.239	13.535	625.774	625.786
	℄ BRG	40668.598	13.533	625.743	625.743
BEAM R132	℄ BRG	40600.956	7.126	625.859	625.859
	a	40610.956	7.125	625.850	625.862
	b	40620.956	7.124	625.835	625.858
	c	40630.956	7.123	625.816	625.845
	d	40640.956	7.122	625.790	625.81[illegible]
	e	40650.956	7.121	625.761	625.782
	f	40660.956	7.120	625.726	625.735
	℄ BRG	40668.391	7.120	625.696	625.696
BEAM R133	℄ BRG.	40603.674	0.709	625.876	625.876
	a	40613.674	0.709	625.855	625.868
	b	40623.674	0.708	625.828	625.850
	c	40633.674	0.708	625.797	625.822
	d	40643.674	0.708	625.761	625.785
	e	40653.674	0.707	625.719	625.738
	℄ BRG.	40668.184	0.706	625.648	625.648
℄ PROP REV LANES #13	℄ BRG.	40603.974	0.000	625.877	625.877
	a	40613.974	0.000	625.855	625.868
	b	40623.974	0.000	625.827	625.849
	c	40633.974	0.000	625.795	625.820
	d	40643.974	0.000	625.756	625.779
	e	40653.974	0.000	625.713	625.731
	℄ BRG	40668.161	0.000	625.643	625.643
BEAM R134	℄ BRG	40606.392	-5.709	625.783	625.783
	a	40616.392	-5.708	625.760	625.77[illegible]
	b	40626.392	-5.708	625.731	625.748
	c	40636.392	-5.707	625.697	625.718
	d	40646.392	-5.707	625.657	625.675
	e	40656.392	-5.707	625.613	625.625
	℄ BRG	4066[illegible]	-5.707	625.555	625.555

NOTE:
OFFSETS TABULATED ARE FROM ℄ PROPOSED REVERSIBLE LANES.

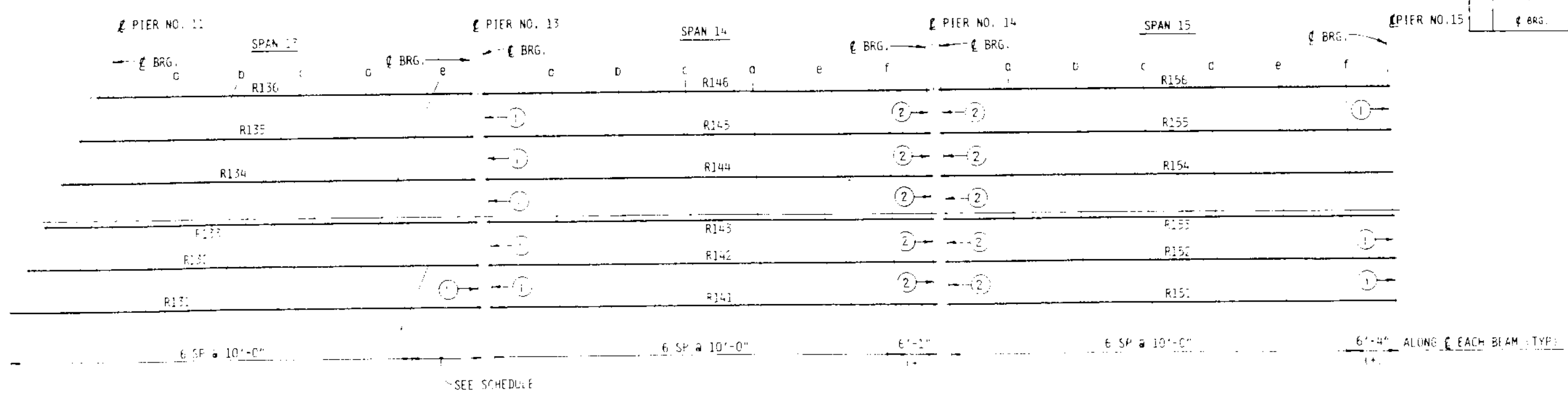
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R135	℄ BRG.	40609.109	-12.125	625.672	625.672
	a	40619.109	-12.124	625.646	625.657
	b	40629.109	-12.123	625.616	625.633
	c	40639.109	-12.122	625.581	625.602
	d	40649.109	-12.122	625.540	625.557
	e	40659.109	-12.121	625.494	625.503
	℄ BRG	40667.770	-12.120	625.450	625.450
BEAM R136	℄ BRG	40611.827	-18.542	625.531	625.531
	a	40621.827	-18.540	625.505	625.516
	b	40631.827	-18.539	625.473	625.491
	c	40641.827	-18.537	625.436	625.456
	d	40651.827	-18.536	625.394	625.410
	e	40661.827	-18.535	625.346	625.352
	℄ BRG.	40667.564	18.534	625.317	625.317
BEAM R141	℄ BRG.	40670.515	13.534	625.737	625.737
	a	40680.515	13.533	625.702	625.715
	b	40690.515	13.533	625.662	625.684
	c	40700.515	13.533	625.616	625.641
	d	40710.515	13.532	625.565	625.589
	e	40720.515	13.532	625.509	625.529
	f	40730.489	13.539	625.448	625.456
	℄ BRG.	40736.620	13.556	625.409	625.409
BEAM R142	℄ BRG.	40670.308	7.120	625.687	625.687
	a	40680.308	7.120	625.642	625.655
	b	40690.308	7.120	625.591	625.613
	c	40700.308	7.119	625.535	625.560
	d	40710.308	7.119	625.473	625.497
	e	40720.308	7.119	625.407	625.427
	f	40730.295	7.125	625.336	625.344
	℄ BRG	40736.436	7.142	625.290	625.290
BEAM R143	℄ BRG	40670.102	0.707	625.638	625.638
	a	40680.102	0.707	625.582	625.595
	b	40690.102	0.706	625.521	625.543
	c	40700.102	0.706	625.455	625.480
	d	40710.102	0.706	625.383	625.407
	e	40720.102	0.706	625.307	625.327
	f	40730.10[illegible]	0.712	625.226	625.234
	℄ BRG	40736.252	0.728	625.173	625.173

INDICATES STA. 407+36.252 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP REV LANES #14	℄ BRG.	40670.079	0.000	625.632	625.632
	a	40680.079	0.000	625.576	625.589
	b	40690.079	0.000	625.513	625.535
	c	40700.079	0.000	625.446	625.471
	d	40710.079	0.000	625.374	625.398
	e	40720.079	0.000	625.296	625.316
	f	40729.130	0.000	625.221	625.230
	℄ BRG.	40736.231	0.000	625.159	625.159
BEAM R144	℄ BRG.	40669.895	-5.706	625.544	625.544
	a	40679.895	-5.707	625.488	625.501
	b	40689.895	5.707	625.426	625.448
	c	40699.895	-5.707	625.358	625.383
	d	40709.895	-5.708	625.286	625.310
	e	40719.895	-5.708	625.206	625.226
	f	40729.905	-5.702	625.114	625.122
	℄ BRG.	40736.068	-5.686	625.056	625.056
BEAM R145	℄ BRG.	40669.688	-12.120	625.440	625.440
	a	40679.688	-12.120	625.383	625.396
	b	40689.688	-12.120	625.321	625.343
	c	40699.688	-12.121	625.254	625.279
	d	40709.688	-12.121	625.181	625.205
	e	40719.688	12.121	625.101	625.121
	f	40729.709	-12.116	624.999	625.007
	℄ BRG.	40735.882	-12.100	624.933	624.933
BEAM R146	℄ BRG.	40669.481	18.533	625.307	625.307
	a	40679.481	-18.533	625.250	625.263
	b	40689.481	-18.534	625.188	625.210
	c	40699.481	-18.534	625.121	625.146
	d	40709.481	-18.534	625.049	625.073
	e	40719.481	-18.535	624.968	624.988
	f	40729.512	-18.530	624.859	624.867
	℄ BRG.	40735.696	-18.514	624.789	624.789
BEAM R151	℄ BRG.	40738.530	13.564	625.396	625.396
	a	40748.494	13.517	625.324	625.337
	b	40758.458	13.496	625.249	625.271
	c	40768.422	13.502	625.168	625.193
	d	40778.386	13.535	625.082	625.106
	e	40788.349	13.595	624.993	625.014
	f	40798.312	13.681	624.899	624.907
	℄ BRG.	40804.674	13.751	624.837	624.837

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R152	℄ BRG.	40738.350	7.150	625.2[illegible]	62[illegible]
	a	40748.331	7.107	625.194	625.207
	b	40758.312	7.081	625.107	625.129
	c	40768.293	7.087	625.017	625.042
	d	40778.274	7.121	624.921	624.945
	e	40788.255	7.179	624.820	624.841
	f	40798.235	7.265	624.716	624.724
	℄ BRG.	40804.608	7.334	624.648	624.648
BEAM R153	℄ BRG.	40738.170	0.736	625.156	625.156
	a	40748.167	0.687	625.063	625.076
	b	40758.166	0.666	624.967	624.989
	c	40768.164	0.671	624.865	624.890
	d	40778.162	0.704	624.759	624.783
	e	40788.160	0.763	624.649	624.670
	f	40798.157	0.849	624.533	624.541
	℄ BRG.	40804.541	0.918	624.458	624.458
℄ PROP REV. LANES #15	℄ BRG.	40738.149	0.000	625.142	625.142
	a	40748.149	0.000	625.050	625.063
	b	40758.149	0.000	624.952	624.974
	c	40768.149	0.000	624.849	624.874
	d	40778.149	0.000	624.741	624.765
	e	40788.149	0.000	624.628	624.649
	f	40798.149	0.000	624.509	624.517
	℄ BRG.	40804.532	0.000	624.431	624.431
BEAM R154	℄ BRG.	40737.988	-5.679	625.036	625.036
	a	40748.003	-5.727	624.934	624.947
	b	40758.019	-5.749	624.826	624.848
	c	40768.034	-5.744	624.714	624.739
	d	40778.050	-5.712	624.597	624.621
	e	40788.065	-5.653	624.476	624.497
	f	40798.079	5.567	624.351	624.359
	℄ BRG	40804.474	-5.498	624.268	624.268
BEAM R155	℄ BRG.	40737.806	-12.093	624.913	624.913
	a	40747.839	-12.142	624.799	624.812
	b	40757.871	-12.164	624.682	624.704
	c	40767.904	-12.159	624.560	624.585
	d	40777.937	-12.126	624.433	624.457
	e	40787.969	-12.069	624.302	624.323
	f	40798.001	11.983	624.167	624.175
	℄ BRG.	40804.407	11.915	624.078	624.078
BEAM R156	℄ BRG.	40737.623	18.501	624.767	624.767
	a	40747.673	-18.556	624.646	624.659
	b	40757.723	-18.579	624.521	624.543
	c	40767.774	-18.575	624.392	624.417
	d	40777.824	-18.543	624.258	624.282
	e	40787.873	18.485	624.119	624.140
	f	40797.923	-18.400	623.976	623.984
	℄ BRG.	40804.340	-18.331	623.882	623.882

NORTH



PLAN

NOTES:

SEE SHEET #7 FOR FILLET HEIGHT DETAIL AND DIAPHRAGM REHABILITATION NOTES

SEE SHEET #13 FOR DEAD LOAD DEFLECTION DIAGRAM.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 6 OF 10

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	•	844	538

*1991-025R & 0303-474HB-1

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER R161	℄ BRG	40806.585	14.[illegible]	624.831	62[illegible].831
	a	40816.550	14.[illegible]	624.723	624.[illegible]
	b	40826.512	14.[illegible]	624.609	624.[illegible]
	c	40836.475	14.016	624.470	624.526
	d	40846.437	14.011	624.325	624.3[illegible]
	e	40856.400	14.033	624.178	624.218
	f	40866.362	14.082	624.027	624.042
	℄ GIRDER	40872.318	14.1[illegible]	623.933	623.933
GIRDER R162	℄ BRG	40806.522	7.357	624.627	624.627
	a	40816.501	7.272	624.508	624.534
	b	40826.481	7.213	624.383	624.430
	c	40836.462	7.182	624.244	624.302
	d	40846.443	7.178	624.100	624.155
	e	40856.424	7.200	623.953	623.997
	f	40866.404	7.249	623.800	623.819
	℄ GIRDER	40872.372	7.292	623.707	623.711
GIRDER R163	℄ BRG	40806.454	0.524	624.423	624.423
	a	40816.452	0.438	624.293	624.320
	b	40826.451	0.380	624.158	624.206
	c	40836.450	0.349	624.019	624.079
	d	40846.449	0.344	623.874	623.931
	e	40856.448	0.367	623.726	623.773
	f	40866.447	0.416	623.574	623.597
	℄ GIRDER	40872.425	0.458	623.481	623.489
℄ PROP. REV. LANES #16	℄ BRG.	40806.448	0.000	624.407	624.407
	a	40816.448	0.000	624.279	624.306
	b	40826.448	0.000	624.145	624.194
	c	40836.448	0.000	624.007	624.068
	d	40846.448	0.000	623.863	623.921
	e	40856.448	0.000	623.714	623.762
	f	40866.448	0.000	623.560	623.584
	℄ GIRDER	40872.428	0.000	623.466	623.476

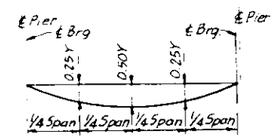
NOTE:
OFFSETS TABULATED ARE FROM ℄ PROPOSED REVERSIBLE LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER R164	℄ BRG.	40806.386	-6.309	624.219	62[illegible].219
	a	40816.403	-6.395	624.077	624.[illegible]
	b	40826.420	-6.453	623.933	623.9[illegible]
	c	40836.437	-6.485	623.793	623.85[illegible]
	d	40846.455	-6.489	623.649	623.708
	e	40856.472	-6.467	623.501	623.551
	f	40866.489	-6.418	623.348	623.374
	℄ GIRDER	40872.479	-6.375	623.255	623.267
GIRDER R165	℄ BRG.	40806.318	-13.143	624.012	624.012
	a	40816.353	-13.228	623.861	623.887
	b	40826.389	-13.286	623.708	623.758
	c	40836.425	-13.318	623.565	623.631
	d	40846.460	-13.322	623.423	623.484
	e	40856.496	-13.300	623.275	623.326
	f	40866.532	-13.251	623.122	623.150
	℄ GIRDER	40872.532	-13.208	623.028	623.042
GIRDER R166	℄ BRG.	40806.254	-19.601	623.814	623.814
	a	40816.306	-19.686	623.656	623.684
	b	40826.359	-19.745	623.495	623.545
	c	40836.413	-19.776	623.354	623.418
	d	40846.466	-19.781	623.210	623.271
	e	40856.519	-19.758	623.061	623.113
	f	40866.572	-19.709	622.908	622.937
	℄ GIRDER	40872.583	-19.666	622.814	622.838
GIRDER R171	℄ GIRDER	40872.318	14.124	623.933	623.933
	a	40882.279	14.283	623.[illegible]	623.807
	b	40892.239	14.469	623.6[illegible]	623.675
	c	40902.198	14.682	623.45[illegible]	623.523
	d	40912.155	14.921	623.28[illegible]	623.360
	e	40922.111	15.187	623.1[illegible]	623.178
	f	40932.066	15.480	622.92[illegible]	622.982
	℄ GIRDER	40944.[illegible]	15.89[illegible]	622.6[illegible]	622.718

INDICATES STA. 409+44.727 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER R172	℄ GIRDER	40872.372	7.292	623.707	623.711
	a	40882.332	7.450	623.550	623.584
	b	40892.334	7.636	623.389	623.431
	c	40902.306	7.849	623.224	623.300
	d	40912.281	8.089	623.054	623.136
	e	40922.256	8.355	622.880	622.932
	f	40932.229	8.649	622.701	622.756
	℄ GIRDER	40944.912	9.060	622.469	622.492
GIRDER R173	℄ GIRDER	40872.425	0.458	623.481	623.489
	a	40882.422	0.617	623.323	623.361
	b	40892.419	0.804	623.163	623.228
	c	40902.414	1.017	622.997	623.076
	d	40912.408	1.257	622.827	622.911
	e	40922.401	1.524	622.651	622.726
	f	40932.392	1.817	622.473	622.530
	℄ GIRDER	40945.099	2.229	622.240	622.265
℄ PROP. REV. LANES #17	℄ GIRDER	40872.428	0.000	623.466	623.476
	a	40882.428	0.000	623.303	623.343
	b	40892.428	0.000	623.136	623.202
	c	40902.428	0.000	622.962	623.042
	d	40912.428	0.000	622.784	622.869
	e	40922.428	0.000	622.601	622.677
	f	40932.428	0.000	622.412	622.469
	℄ GIRDER	40945.160	0.000	622.165	622.190
GIRDER R174	℄ GIRDER	40872.479	-6.375	623.255	623.267
	a	40882.494	-6.216	623.097	623.138
	b	40892.509	-6.029	622.935	623.002
	c	40902.523	-5.816	622.769	622.850
	d	40912.535	-5.575	622.598	622.684
	e	40922.546	-5.308	622.424	622.500
	f	40932.556	-5.014	622.245	622.303
	℄ GIRDER	40945.286	-4.601	622.010	622.035

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER R175	℄ GIRDER	40872.[illegible]	[illegible]	623.028	623.0[illegible]
	a	40882.[illegible]	[illegible]	622.8[illegible]	622.9[illegible]
	b	40892.[illegible]	[illegible]	622.705	622.[illegible]
	c	40902.[illegible]	-10.648	622.5[illegible]	622.6[illegible]
	d	40912.[illegible]	-10.[illegible]	622.3[illegible]	622.4[illegible]
	e	40922.[illegible]	-11.140	622.195	622.2[illegible]
	f	40932.[illegible]	-11.846	622.016	622.073
	℄ GIRDER	40945.[illegible]	-13.432	621.782	621.806
GIRDER R176	℄ GIRDER	40872.583	-19.666	622.814	622.830
	a	40882.633	-19.5[illegible]	622.656	622.7[illegible]
	b	40892.683	-19.320	622.494	622.564
	c	40902.733	-19.106	622.3[illegible]	622.409
	d	40912.784	-18.865	622.156	622.240
	e	40922.83[illegible]	-18.597	621.979	622.054
	f	40932.836	-18.300	621.800	621.859
	℄ GIRDER	40945.8[illegible]	-17.888	621.565	621.587

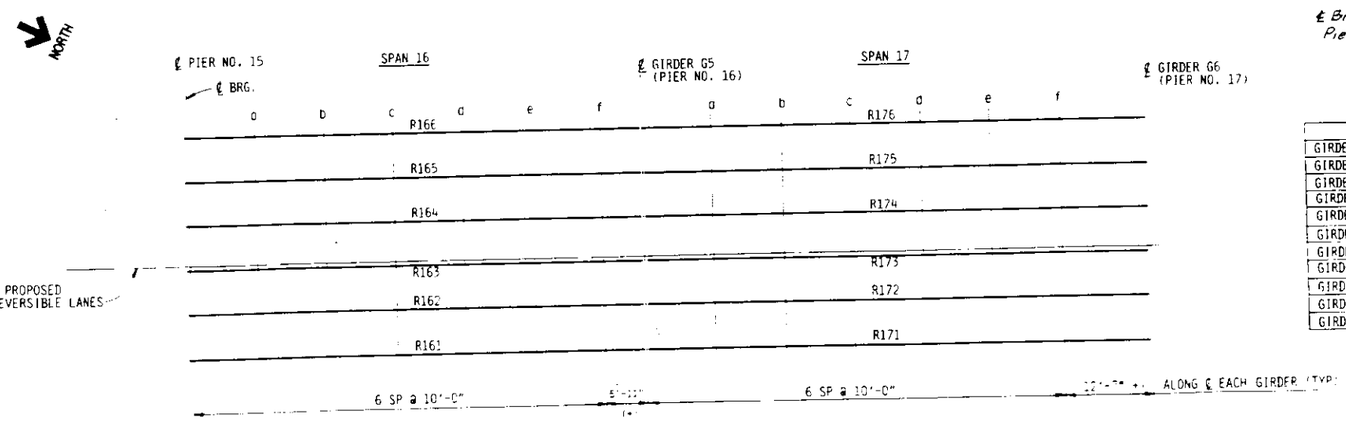


LOCATION	0.25Y	0.50Y
BEAMS R131 & R132	1/4"	3/8"
BEAM R133	1/4"	5/16"
BEAMS R134,R135 & R136	3/16"	1/4"
BEAMS R141 THRU R146	1/4"	5/16"
BEAMS R151 THRU R156	1/4"	5/16"

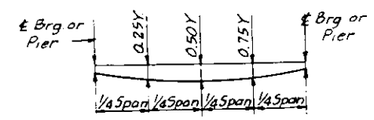
DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

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.

NOTE:
SEE SHEET #7 FOR FILLET HEIGHT DETAIL.



PLAN



LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
GIRDER R161	0"	1/2"	11/16"	1/2"	0"
GIRDER R162	0"	1/2"	3/4"	9/16"	1/16"
GIRDER R163	0"	9/16"	3/4"	9/16"	1/8"
GIRDER R164	0"	9/16"	13/16"	5/8"	1/8"
GIRDERS R165 & R166	0"	9/16"	13/16"	5/8"	3/16"
GIRDER R171	0"	11/16"	1"	13/16"	1/4"
GIRDER R172	1/16"	11/16"	1"	13/16"	5/16"
GIRDER R173	1/8"	3/4"	1 1/16"	7/8"	5/16"
GIRDER R174	1/8"	13/16"	1 1/16"	7/8"	5/16"
GIRDER R175	3/16"	13/16"	1 1/16"	7/8"	5/16"
GIRDER R176	3/16"	13/16"	1 1/16"	7/8"	1/4"

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.

TOP OF SLAB ELEVATIONS
SHEET 7 OF 10

SECTION

F A I ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

C.28

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER R181	¢ GIRDER	[illegible]	[illegible]	[illegible]	[illegible]
	a	40954.683	15.7[illegible]	622.493	622.5[illegible]
	b	40964.6[illegible]	15.580	622.283	622.3[illegible]
	c	40974.598	15.465	622.0[illegible]	622.1[illegible]
	d	40984.556	15.3[illegible]	621.852	621.8[illegible]
	e	40994.51[illegible]	15.314	621.630	621.65[illegible]
	¢ GIRDER	41003.[illegible]	15.280	621.420	621.43[illegible]
GIRDER R182	¢ GIRDER	40944.912	9.060	622.469	622.4[illegible]
	a	40954.887	8.891	622.263	622.299
	b	40964.862	8.748	622.054	622.093
	c	40974.838	8.632	621.840	621.8[illegible]
	d	40984.815	8.543	621.621	621.66[illegible]
	e	40994.792	8.480	621.399	621.426
	¢ GIRDER	41003.717	8.447	621.196	621.2[illegible]
GIRDER R183	¢ GIRDER	40945.094	2.229	622.240	622.2[illegible]
	a	40955.091	2.059	622.034	622.0[illegible]
	b	40965.085	1.916	621.823	621.8[illegible]
	c	40975.079	1.799	621.609	621.6[illegible]
	d	40985.074	1.709	621.390	621.42[illegible]
	e	40995.070	1.64[illegible]	621.166	621.19[illegible]
	¢ GIRDER	41003.698	1.614	620.970	620.98[illegible]
¢ PROP. REV. LANES #18	¢ GIRDER	40945.160	[illegible]	622.165	622.19[illegible]
	a	40955.160	0.000	621.964	622.00[illegible]
	b	40965.160	0.000	621.759	621.803
	c	40975.160	[illegible]	621.548	621.59[illegible]
	d	40985.160	[illegible]	621.33[illegible]	621.3[illegible]
	e	40995.160	[illegible]	621.1[illegible]	621.1[illegible]
	¢ GIRDER	41003.693	0.000	620.917	620.92[illegible]

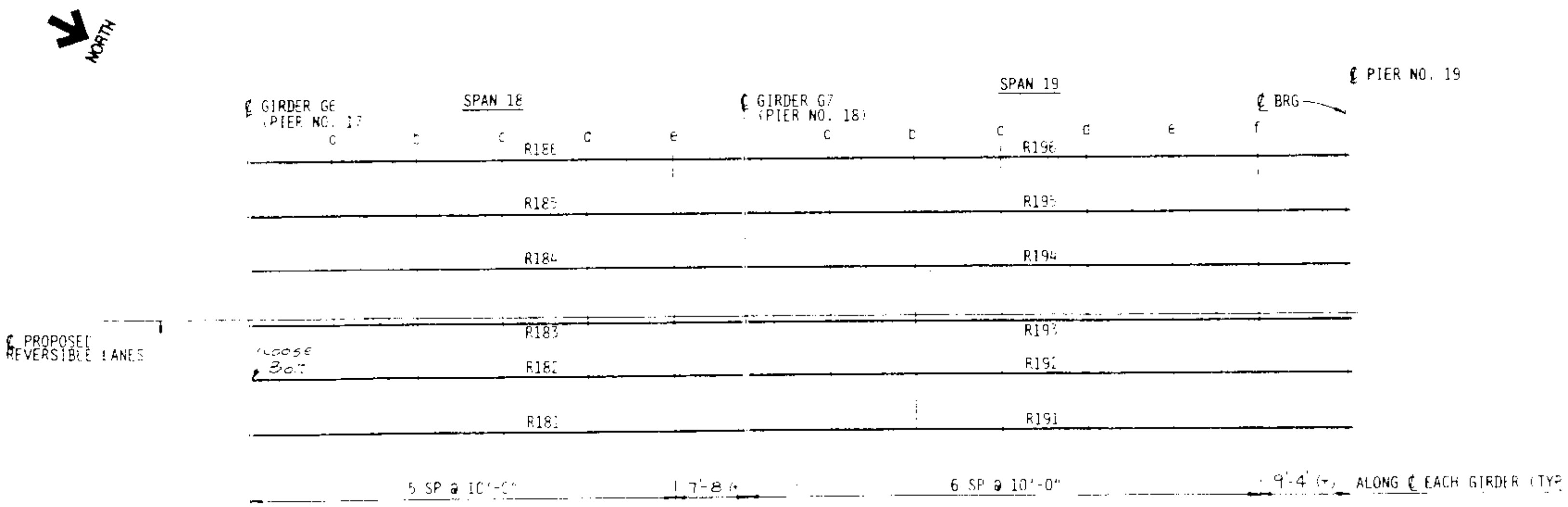
NOTE:
OFFSETS TABULATED ARE FROM
¢ PROPOSED REVERSIBLE LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER R184	¢ GIRDER	[illegible]	-4.631	622.0[illegible]	[illegible]
	a	40955.297	-4.772	621.80[illegible]	621.8[illegible]
	b	40965.309	-4.916	621.59[illegible]	621.6[illegible]
	c	409[illegible].322	-5.034	621.3[illegible]	621.4[illegible]
	d	40985.335	-5.124	621.159	621.1[illegible]
	e	40995.349	-5.187	620.935	620.9[illegible]
	¢ GIRDER	41003.678	-5.220	620.746	620.7[illegible]
GIRDER R185	¢ GIRDER	4094[illegible].47[illegible]	-11.432	621.78[illegible]	621.8[illegible]
	a	40955.503	-11.604	621.574	621.60[illegible]
	b	40965.534	-11.749	621.363	621.4[illegible]
	c	40975.565	-11.866	621.14[illegible]	621.1[illegible]
	d	40985.596	-11.957	620.927	620.9[illegible]
	e	40995.628	-12.021	620.703	620.7[illegible]
	¢ GIRDER	41003.659	-12.053	620.520	620.52[illegible]
GIRDER R186	¢ GIRDER	40945.65[illegible]	-17.888	621.565	621.5[illegible]
	a	40955.699	-18.060	621.357	621.3[illegible]
	b	40965.747	-18.206	621.145	621.1[illegible]
	c	40975.795	-18.324	620.929	620.9[illegible]
	d	40985.844	-18.416	620.70[illegible]	620.7[illegible]
	e	40995.894	-18.480	620.484	620.4[illegible]
	¢ GIRDER	41003.640	-18.511	620.308	620.3[illegible]
GIRDER R191	¢ GIRDER	41003.73[illegible]	15.280	621.42[illegible]	621.4[illegible]
	a	41013.696	15.765	621.190	621.2[illegible]
	b	41023.655	15.276	620.9[illegible]	621.0[illegible]
	c	41033.614	15.314	620.7[illegible]	620.7[illegible]
	d	41043.573	15.378	620.4[illegible]	620.53[illegible]
	e	41053.531	15.470	620.[illegible]	620.2[illegible]
	f	41063.489	15.588	619.973	619.9[illegible]
	¢ BRG.	[illegible]2.874	15.724	619.7[illegible]	619.7[illegible]

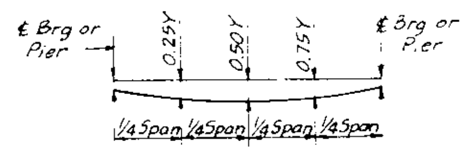
INDICATES STA. 410+72.874 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER R192	¢ GIRDER	[illegible]	[illegible]	621.19[illegible]	[illegible]
	a	41013.6[illegible]	[illegible].431	620.964	620.9[illegible]
	b	41023.6[illegible]	[illegible]	620.730	620.78[illegible]
	c	41033.6[illegible]	[illegible].48[illegible]	620.490	620.5[illegible]
	d	41043.6[illegible]	[illegible].545	620.246	620.[illegible]
	e	41053.6[illegible]	8.637	619.998	620.04[illegible]
	f	41063.5[illegible]	8.755	619.745	619.77[illegible]
	¢ BRG.	4107[illegible].98[illegible]	8.891	619.509	619.5[illegible]
GIRDER R193	¢ GIRDER	41003.69[illegible]	1.614	620.97[illegible]	620.98[illegible]
	a	41013.694	1.598	620.739	620.77[illegible]
	b	41023.689	1.609	620.503	620.556
	c	41033.68[illegible]	1.64[illegible]	620.263	620.32[illegible]
	d	41043.68[illegible]	1.712	620.020	620.080
	e	41053.6[illegible]	1.804	619.771	619.819
	f	41063.669	1.922	619.517	619.542
	¢ BRG.	41073.089	2.059	619.27[illegible]	619.27[illegible]
¢ PROP. REV. LANES #19	¢ GIRDER	41003.693	0.000	620.917	620.926
	a	41013.693	0.000	620.686	620.718
	b	41023.693	0.000	620.450	620.50[illegible]
	c	41033.693	0.000	620.209	620.2[illegible]
	d	41043.693	0.000	619.962	620.021
	e	41053.693	0.000	619.710	619.758
	f	41063.693	0.000	619.453	619.478
	¢ BRG.	4107[illegible]	0.000	619.206	619.206
GIRDER R194	¢ GIRDER	41003.678	-5.220	620.746	620.754
	a	41013.69[illegible]	-5.235	620.513	620.5[illegible]
	b	41023.70[illegible]	-5.224	620.278	620.33[illegible]
	c	41033.720	-5.186	620.037	620.098
	d	41043.734	-5.121	619.792	619.851
	e	41053.74[illegible]	-5.029	619.543	619.590
	f	41063.76[illegible]	-4.910	619.29[illegible]	619.31[illegible]
	¢ BRG.	41073.19[illegible]	-4.774	619.047	619.047

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER R195	¢ GIRDER	41003.6[illegible]	-12.05[illegible]	[illegible]	[illegible]
	a	41013.691	-12.06[illegible]	620.289	620.318
	b	41023.724	-12.057	620.052	620.1[illegible]
	c	41033.756	-12.019	619.810	619.8[illegible]
	d	41043.786	-11.954	619.5[illegible]	619.6[illegible]
	e	41053.820	-11.86[illegible]	619.316	619.3[illegible]
	f	41063.851	-11.743	619.062	619.0[illegible]
	¢ BRG	41073.305	-11.606	618.818	618.818
GIRDER R196	¢ GIRDER	41003.640	-18.511	620.308	620.3[illegible]
	a	41013.690	-18.581	620.074	620.09[illegible]
	b	41023.740	-18.624	619.834	619.88[illegible]
	c	41033.79[illegible]	-18.64[illegible]	619.592	619.6[illegible]
	d	41043.841	-18.628	619.34[illegible]	619.[illegible]
	e	41053.891	-18.590	619.09[illegible]	619.1[illegible]
	f	41063.941	-18.525	618.836	618.86[illegible]
	¢ BRG	41073.414	-18.43[illegible]	618.59[illegible]	618.5[illegible]



PLAN



LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
GIRDER R181	1/4"	1/2"	9/16"	7/16"	3/16"
GIRDER R182	5/16"	1/2"	9/16"	7/16"	3/16"
GIRDER R183	5/16"	1/2"	9/16"	7/16"	1/8"
GIRDER R184	5/16"	1/2"	9/16"	3/8"	1/8"
GIRDER R185	5/16"	1/2"	9/16"	3/8"	1/16"
GIRDER R186	1/4"	7/16"	1/2"	5/16"	0"
GIRDERS R191 & R192	3/16"	5/8"	13/16"	9/16"	0"
GIRDERS R193 & R194	1/8"	5/8"	13/16"	9/16"	0"
GIRDER R195	1/16"	9/16"	3/4"	9/16"	0"
GIRDER R196	0"	1/2"	3/4"	1/2"	0"

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.

NOTE:
SEE SHEET #7 FOR FILLET HEIGHT DETAIL.

SHEET NO. 14 SHEETS | 844 | 539
1991-025R & 0303-474HB-I

TOP OF SLAB ELEVATIONS
SHEET 8 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

C29

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R201	℄ BRG.	41074.806	14.338	619.635	619.635
	a	41084.767	14.298	619.367	619.375
	b	41094.729	14.285	619.093	619.106
	c	41104.691	14.299	618.817	618.831
	d	41114.652	14.340	618.535	618.545
	℄ BRG.	41128.200	14.438	618.147	618.147
BEAM R202	℄ BRG.	41074.936	6.297	619.366	619.366
	a	41084.919	6.256	619.096	619.104
	b	41094.902	6.242	618.824	618.837
	c	41104.886	6.254	618.545	618.559
	d	41114.869	6.294	618.264	618.274
	℄ BRG.	41128.445	6.390	617.874	617.874
℄ PROP. REV. LANES #20	℄ BRG.	41075.038	0.000	619.155	619.155
	a	41085.038	0.000	618.887	618.895
	b	41095.038	0.000	618.614	618.627
	c	41105.038	0.000	618.335	618.349
	d	41115.038	0.000	618.051	618.061
	℄ BRG.	41128.641	0.000	617.657	617.657
BEAM R203	℄ BRG.	41075.067	-1.743	619.098	619.098
	a	41085.072	-1.786	618.827	618.835
	b	41095.076	-1.802	618.554	618.567
	c	41105.081	-1.791	618.275	618.289
	d	41115.086	-1.753	617.992	618.002
	℄ BRG.	41128.692	-1.658	617.600	617.600
BEAM R204	℄ BRG.	41075.198	-9.784	618.828	618.828
	a	41085.225	-9.828	618.558	618.566
	b	41095.251	-9.846	618.283	618.296
	c	41105.278	-9.836	618.003	618.017
	d	41115.304	-9.800	617.721	617.731
	℄ BRG.	41128.940	-9.707	617.328	617.328
BEAM R205	℄ BRG.	41075.331	-17.825	618.560	618.560
	a	41085.379	-17.871	618.288	618.296
	b	41095.427	-17.889	618.013	618.026
	c	41105.475	-17.881	617.733	617.747
	d	41115.523	-17.846	617.448	617.458
	℄ BRG.	41129.189	-17.755	617.055	617.055

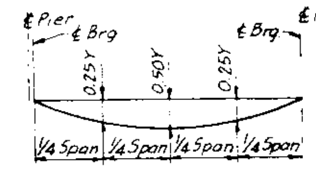
NOTE:
OFFSETS TABULATED ARE FROM ℄ PROPOSED REVERSIBLE LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R211	℄ BRG.	41130.110	14.435	618.090	618.090
	a	41140.071	14.382	617.793	617.804
	b	41150.033	14.355	617.493	617.511
	c	41159.994	14.355	617.194	617.214
	d	41169.956	14.382	616.896	616.913
	e	41179.917	14.436	616.599	616.607
	℄ BRG.	41187.347	14.493	616.378	616.378
BEAM R212	℄ BRG.	41130.360	6.387	617.817	617.817
	a	41140.343	6.334	617.519	617.530
	b	41150.326	6.308	617.218	617.236
	c	41160.309	6.309	616.919	616.939
	d	41170.292	6.337	616.620	616.637
	e	41180.274	6.392	616.323	616.331
	℄ BRG.	41187.720	6.450	616.101	616.101
℄ PROP. REV. LANES #21	℄ BRG.	41130.559	0.000	617.600	617.600
	a	41140.559	0.000	617.303	617.314
	b	41150.559	0.000	617.003	617.021
	c	41160.559	0.000	616.703	616.723
	d	41170.559	0.000	616.403	616.420
	e	41180.559	0.000	616.103	616.111
	℄ BRG.	41188.021	0.000	615.879	615.879
BEAM R213	℄ BRG.	41130.611	-1.661	617.544	617.544
	a	41140.615	-1.713	617.246	617.257
	b	41150.620	-1.738	616.944	616.962
	c	41160.624	-1.737	616.644	616.664
	d	41170.629	-1.708	616.345	616.362
	e	41180.633	-1.652	616.047	616.055
	℄ BRG.	41188.095	-1.593	615.824	615.824
BEAM R214	℄ BRG.	41130.863	-9.710	617.271	617.271
	a	41140.889	-9.761	616.971	616.982
	b	41150.915	-9.785	616.670	616.688
	c	41160.942	-9.782	616.369	616.389
	d	41170.968	-9.753	616.069	616.086
	e	41180.994	-9.696	615.770	615.778
	℄ BRG.	41188.472	-9.637	615.548	615.548
BEAM R215	℄ BRG.	41131.116	-17.758	616.998	616.998
	a	41141.164	-17.808	616.697	616.708
	b	41151.212	-17.832	616.396	616.414
	c	41161.260	-17.828	616.094	616.114
	d	41171.308	-17.798	615.794	615.811
	e	41181.356	-17.740	615.494	615.502
	℄ BRG.	41188.850	-17.680	615.272	615.272

INDICATES STA. 411+88.850 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R221	℄ BRG.	41189.258	14.500	616.321	616.321
	a	41199.219	14.454	616.[illegible]	616.028
	b	41209.180	14.434	615.[illegible]	615.731
	c	41219.142	14.441	615.[illegible]	615.433
	d	41229.103	14.475	615.12[illegible]	615.134
	℄ BRG.	41239.380	14.539	614.819	614.819
BEAM R222	℄ BRG.	41189.635	6.457	616.044	616.044
	a	41199.618	6.411	615.744	615.752
	b	41209.601	6.393	615.443	615.453
	c	41219.583	6.401	615.144	615.154
	d	41229.566	6.437	614.845	614.854
	℄ BRG.	41239.866	6.501	614.539	614.539
℄ PROP. REV. LANES #22	℄ BRG.	41189.939	0.000	615.822	615.822
	a	41199.939	0.000	615.522	615.530
	b	41209.939	0.000	615.222	615.232
	c	41219.939	0.000	614.922	614.932
	d	41229.939	0.000	614.622	614.631
	℄ BRG.	41240.260	0.000	614.312	614.312
BEAM R223	℄ BRG.	41190.014	-1.587	615.768	615.768
	a	41200.019	-1.631	615.465	615.473
	b	41210.023	-1.648	615.165	615.175
	c	41220.027	-1.638	614.865	614.875
	d	41230.032	-1.602	614.566	614.575
	℄ BRG.	41240.353	-1.536	614.258	614.258
BEAM R224	℄ BRG.	41190.395	-9.630	615.490	615.490
	a	41200.421	-9.673	615.188	615.196
	b	41210.447	-9.689	614.887	614.897
	c	41220.473	-9.678	614.587	614.597
	d	41230.499	-9.640	614.287	614.296
	℄ BRG.	41240.843	-9.573	613.979	613.979
BEAM R225	℄ BRG.	41190.778	-17.673	615.214	615.214
	a	41200.825	-17.715	614.910	614.918
	b	41210.873	-17.730	614.609	614.619
	c	41220.921	-17.718	614.307	614.317
	d	41230.969	-17.679	614.008	614.017
	℄ BRG.	41241.335	-17.611	613.699	613.699

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R231	℄ BRG.	41241.293	14.530	614.761	614.761
	a	41251.254	14.535	614.462	614.462
	℄ BRG	41256.287	14.548	614.311	614.311
BEAM R232	℄ BRG.	41241.783	6.493	614.481	614.481
	a	41251.766	6.485	614.181	614.181
	℄ BRG.	41261.104	6.501	613.902	613.902
℄ PROP. REV. LANES #23	℄ BRG	41242.180	0.000	614.255	614.255
	a	41252.180	0.000	613.955	613.955
	℄ BRG	41265.015	0.000	613.570	613.570
BEAM R233	℄ BRG.	41242.275	-1.544	614.201	614.201
	a	41252.279	-1.560	613.901	613.901
	℄ BRG.	41265.943	-1.539	613.491	613.491
BEAM R234	℄ BRG	41242.769	-9.581	613.921	613.921
	a	41252.795	-9.609	613.619	613.621
	b	41262.820	-9.610	613.318	613.319
	℄ BRG.	41270.813	-9.591	613.080	613.080
BEAM R235	℄ BRG.	41243.265	-17.618	613.641	613.641
	a	41253.312	-17.654	613.338	613.339
	b	41263.360	-17.662	613.036	613.039
	℄ BRG.	41275.704	-17.636	612.667	612.667



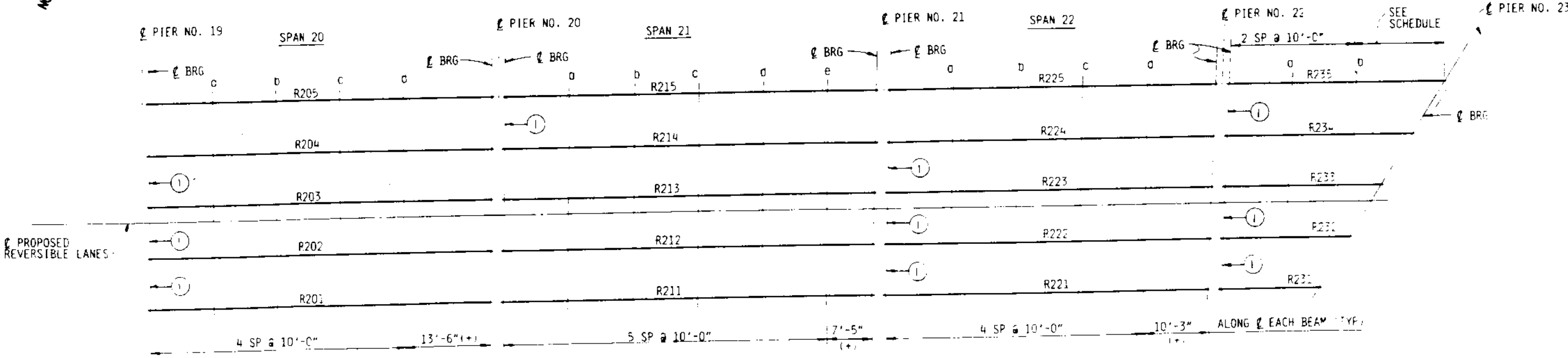
LOCATION	0.25Y	0.50Y
BEAMS R201 THRU R205	1/8"	3/16"
BEAMS R211 THRU R215	3/16"	1/4"
BEAMS R221 THRU R225	1/8"	1/8"
BEAMS R231 THRU R233	0"	0"
BEAMS R234 & R235	0"	1/16"

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.

NOTES:

SEE SHEET #7 FOR FILLET HEIGHT DETAIL AND DIAPHRAGM REHABILITATION NOTES.



PLAN

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS

SHEET 9 OF 10

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R241	℄ BRG.	41259.027	14.498	614.227	614.227
	a	41268.988	14.413	613.926	613.942
	b	41278.950	14.355	613.626	613.657
	c	41288.911	14.324	613.326	613.363
	d	41298.873	14.320	613.027	613.069
	e	41308.835	14.342	612.728	612.764
	f	41318.796	14.391	612.431	612.462
	g	41328.757	14.467	612.135	612.152
	℄ BRG.	41338.633	14.569	611.851	611.851
BEAM R242	℄ BRG.	41261.777	9.909	613.994	613.994
	a	41271.750	9.824	613.692	613.708
	b	41281.723	9.765	613.390	613.421
	c	41291.697	9.734	613.090	613.127
	d	41301.671	9.729	612.791	612.833
	e	41311.645	9.751	612.493	612.530
	f	41321.619	9.800	612.194	612.225
	g	41331.592	9.876	611.900	611.916
	℄ BRG.	41341.518	9.978	611.617	611.617
BEAM R243	℄ BRG.	41264.532	5.322	613.760	613.760
	a	41274.518	5.236	613.458	613.474
	b	41284.504	5.178	613.156	613.187
	c	41294.490	5.146	612.855	612.891
	d	41304.476	5.141	612.556	612.598
	e	41314.462	5.163	612.256	612.293
	f	41324.448	5.212	611.959	611.990
	g	41334.434	5.287	611.666	611.682
	℄ BRG.	41344.410	5.389	611.385	611.385
BEAM R244	℄ BRG.	41267.295	0.737	613.525	613.525
	a	41277.293	0.651	613.222	613.239
	b	41287.291	0.592	612.921	612.952
	c	41297.290	0.560	612.620	612.656
	d	41307.288	0.555	612.319	612.361
	e	41317.286	0.577	612.020	612.057
	f	41327.285	0.625	611.723	611.754
	g	41337.283	0.701	611.432	611.448
	℄ BRG.	41347.310	0.803	611.153	611.153

NOTE

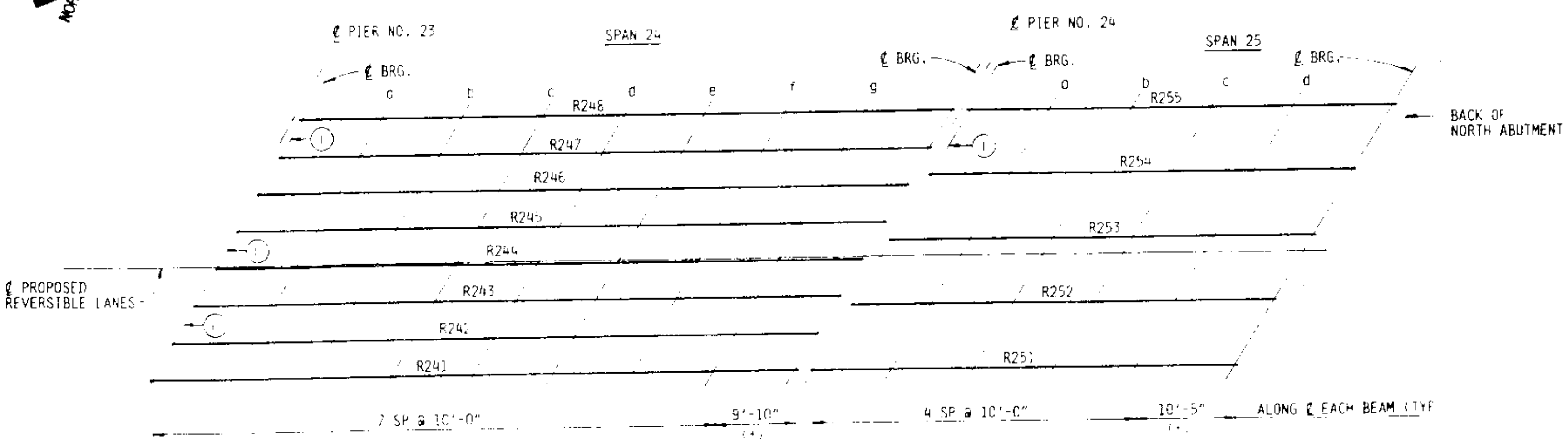
OFFSETS TABULATED ARE FROM
℄ PROPOSED REVERSIBLE LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. REV. LANES #24	℄ BRG.	41267.740	0.000	613.488	613.488
	a	41277.740	0.000	613.188	613.204
	b	41287.740	0.000	612.888	612.919
	c	41297.740	0.000	612.588	612.624
	d	41307.740	0.000	612.288	612.330
	e	41317.740	0.000	611.988	612.025
	f	41327.740	0.000	611.688	611.719
	g	41337.740	0.000	611.396	611.417
	℄ BRG.	41347.818	0.000	611.111	611.111
BEAM R245	℄ BRG.	41270.065	-3.846	613.291	613.291
	a	41280.075	-3.932	612.988	613.004
	b	41290.085	-3.991	612.685	612.716
	c	41300.096	-4.024	612.384	612.420
	d	41310.107	-4.029	612.084	612.126
	e	41320.118	-4.008	611.785	611.822
	f	41330.128	-3.959	611.487	611.518
	g	41340.138	-3.884	611.199	611.215
	℄ BRG.	41350.216	-3.781	610.920	610.920
BEAM R246	℄ BRG.	41272.841	-8.427	613.057	613.057
	a	41282.863	-8.514	612.753	612.769
	b	41292.886	-8.573	612.450	612.481
	c	41302.909	-8.605	612.149	612.185
	d	41312.932	-8.611	611.848	611.890
	e	41322.956	-8.589	611.548	611.585
	f	41332.979	-8.541	611.252	611.283
	g	41343.001	-8.466	610.967	610.983
	℄ BRG.	41353.130	-8.362	610.690	610.690
BEAM R247	℄ BRG.	41275.624	-13.006	612.822	612.822
	a	41285.659	-13.093	612.518	612.534
	b	41295.694	-13.152	612.215	612.246
	c	41305.730	-13.185	611.913	611.949
	d	41315.765	-13.190	611.612	611.654
	e	41325.801	-13.169	611.311	611.348
	f	41335.836	-13.121	611.018	611.049
	g	41345.871	-13.046	610.736	610.752
	℄ BRG.	41356.050	-12.942	610.460	610.460

INDICATES STA 413+56.050 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R248	℄ BRG.	41278.414	-17.583	612.588	612.588
	a	41288.461	-17.670	612.283	612.299
	b	41298.509	-17.729	611.980	612.011
	c	41308.557	-17.762	611.677	611.713
	d	41318.605	-17.768	611.376	611.418
	e	41328.653	-17.747	611.075	611.112
	f	41338.700	-17.698	610.784	610.815
	g	41348.748	-17.623	610.504	610.520
	℄ BRG.	41358.979	-17.519	610.230	610.230
BEAM R251	℄ BRG.	41341.281	14.570	611.776	611.776
	a	41351.247	14.518	611.496	611.504
	b	41361.204	14.493	611.227	611.237
	c	41371.165	14.495	610.969	610.979
	d	41381.126	14.524	610.722	610.731
	℄ BRG.	41391.559	14.582	610.475	610.475
	BK. N. ABUT.	41393.721	14.598	610.426	610.426
BEAM R252	℄ BRG.	41346.342	6.539	611.368	611.368
	a	41356.324	6.487	611.093	611.101
	b	41366.307	6.462	610.829	610.839
	c	41376.290	6.464	610.576	610.586
	d	41386.272	6.492	610.333	610.347
	℄ BRG.	41396.773	6.551	610.090	610.090
	BK. N. ABUT.	41398.941	6.567	610.041	610.041
℄ PROP. REV. LANES #25	℄ BRG.	41350.487	0.000	611.038	611.038
	a	41360.482	0.000	610.768	610.776
	b	41370.482	0.000	610.509	610.519
	c	41380.482	0.000	610.259	610.269
	d	41390.482	0.000	610.019	610.028
	℄ BRG.	41401.046	0.000	609.777	609.777
	BK. N. ABUT.	41403.230	0.000	609.728	609.728

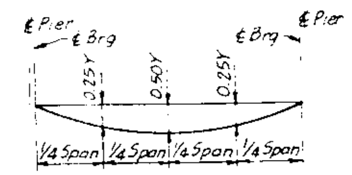
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM R253	℄ BRG.	41351.425	-1.485	610.961	610.961
	a	41361.428	-1.537	610.692	610.700
	b	41371.433	-1.562	610.433	610.443
	c	41381.437	1.561	610.185	610.195
	d	41391.441	-1.532	609.946	609.955
	℄ BRG.	41402.009	-1.473	609.706	609.706
	BK. N. ABUT.	41404.184	-1.457	609.659	609.659
BEAM R254	℄ BRG.	41356.529	-9.502	610.560	610.560
	a	41366.555	-9.554	610.295	610.303
	b	41376.580	-9.579	610.039	610.049
	c	41386.606	-9.578	609.795	609.805
	d	41396.632	-9.549	609.562	609.571
	℄ BRG.	41407.268	-9.490	609.326	609.326
	BK. N. ABUT.	41409.450	-9.474	609.279	609.279
BEAM R255	℄ BRG.	41361.656	-17.512	610.159	610.159
	a	41371.703	-17.564	609.898	609.906
	b	41381.750	-17.589	609.648	609.658
	c	41391.798	-17.588	609.409	609.419
	d	41401.845	-17.559	609.180	609.189
	℄ BRG.	41412.550	-17.499	608.949	608.949
	BK. N. ABUT.	41414.738	-17.483	608.902	608.902



PLAN

NOTES:

SEE SHEET #7 FOR FILLET HEIGHT DETAIL AND DIAPHRAGM REHABILITATION NOTES.



LOCATION	0.25Y	0.50Y
BEAMS R241 THRU R248	3/8"	1/2"
BEAMS R251 THRU R255	1/8"	1/8"

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.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS

SHEET 10 OF 10

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 17
SHEETS

844 | 542

*1991-025R & 0303-474HB-1

NORTH

Along ℄ Proposed Reversible Lanes

77'-10¼" (Span 1)
76'-10" (Span 2)
76'-10" (Span 3)

Back Of South Abutment

79-#4d (E) Bars @ 12" Cts Outside Face
86-#5d1 (E) Bars @ 11" Cts Inside Face
78-#4d (E) Bars @ 12" Cts Outside Face
85-#5d1 (E) Bars @ 11" Cts Inside Face
78-#4d (E) Bars @ 12" Cts Outside Face
85-#5d1 (E) Bars @ 11" Cts Inside Face

29'-0" (Typ)

℄ Light Pole Base

6-#7a2 (E) Bars @ 6" Cts-Top
5-#6a3 (E) Bars @ 6" Cts-Bot
See Section F

6-#7a2 (E) Bars @ 6" Cts-Top
5-#6a3 (E) Bars @ 6" Cts-Bot
See Section A

6-#7a2 (E) Bars @ 6" Cts-Top
5-#6a3 (E) Bars @ 6" Cts-Bot
See Section B

6-#7a2 (E) Bars @ 6" Cts-Top
5-#6a3 (E) Bars @ 6" Cts-Bot
See Section A

Const. Jt

End of Bkb

2" NEJ

1¾" CJS

36'-11" Out To Out Deck
33'-9"

34-#6b (E) Bars @ 12" Cts-Top

35×2-#5b1 (E) Bars @ 12" Cts-Top

29×3-#5b3 (E) Bars Spaced As Shown In Cross Section Bot

34-#6b (E) Bars @ 12" Cts-Top

34-#6b (E) Bars @ 12" Cts-Top

29×3-#5b4 (E) Bars Spaced As Shown In Cross Section Bot

35×2-#5b5 (E) Bars @ 12" Cts-Top

34-#6b (E) Bars @ 12" Cts-Top

34-#6b (E) Bars @ 12" Cts-Top

℄ Pier 1
℄ Pier 2
℄ Pier 3

℄ Proposed Reversible Lanes

Sht #25

3×2-#5b1 (E) Bars Top Of Slab
3×2-#5b5 (E) Bars Top Of Slab
3×7-#5b5 (E) Bars Top of Slab

49-#6a1 (E) Bars @ 18" Cts-Top
96-#5a (E) Bars @ 9" Cts-Top
72-#5a (E) Bars @ 12" Cts-Bot

48-#6a1 (E) Bars @ 18" Cts-Top
95-#5a (E) Bars @ 9" Cts-Top
71-#5a (E) Bars @ 12" Cts-Bot

48-#6a1 (E) Bars @ 18" Cts-Top
95-#5a (E) Bars @ 9" Cts-Top
71-#5a (E) Bars @ 12" Cts-Bot

* Alternate with #5 "b" (E) Longitudinal Top Bars

PLAN

36'-11" Out To Out-Deck
33'-9" Face To Face Parapets

1'-7" | 3⅛" | 8⅞" | 7" | 7'-10½" Shld | 11'-0" | 11'-0" | 3'-10½" Shld | 7" | 1'-7" | 3⅛" | 8⅞"

Slope ¼" Per Ft. | Slope 3/16" Per Ft | Slope 3/16" Per Ft. | Slope ¼" Per Ft

Profile Grade

℄ Proposed Reversible Lanes

4" SURV (TYP)

2½ ELEC (TYP)

Note:
Cross Slopes And Barrier Height Shown For Tangent Area Only Superelevated Areas Similar To Cross Section On Sht. #22.

1'-0" (Typ) | 2'-5" | 1'-6" | 11¼" | 4½" | 2¼" | 2" (Typ) | 9" | 2¼" (±) | 12" | 7½" (Typ) | 12" | d(E) | d(E) | d1(E) | d(E) | "b" Bar See Plan | See Plans For Bar Designation

"b" Bar See Plan | "b" Bar See Plan | "a" Bar See Plan | #5a (E) | "b" Bar See Plan

2 Spaces @ 12" Cts-4-7" Bm Spcg
3 Spaces @ 12" Cts-5-4" Bm Spcg
4 Spaces @ 12" Cts-6-5" Bm Spcg
10 Spaces @ 12" Cts-8-1" (±) Bm Spcg

Near Pier | Near Midspan | Equal

CROSS SECTION
(Looking Up Station)

NOTES:

1. See Sheets 25 And 26 For Superstructure Details And Bill Of Materials.
2. Bars Indicated Thus 20×3-#5 Etc. Indicates 20 Lines Of Bars With 3 Lengths Per Line
3. Minimum Lap Splice Length For #5 Longitudinal Bars = 1'-9".
4. Reinforcement Bars Designated (E) Shall Be Epoxy Coated.
5. See Sheet 25 For Fillet Reinforcing Details.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 1 OF 8

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

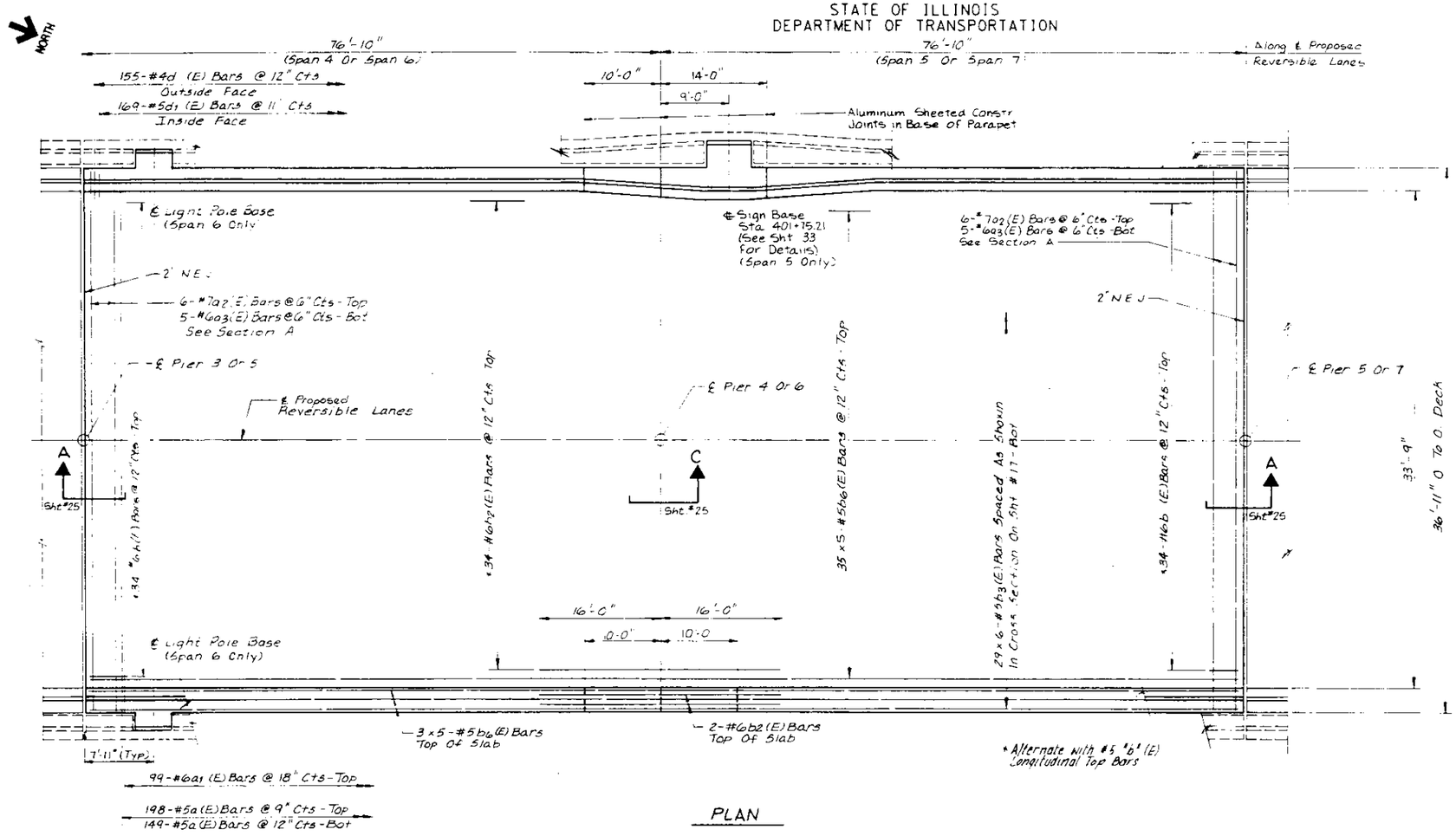
C.32

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 18
SHEETS

241 543

*1991-025R & 0303-474HB-1



PLAN

NOTES

1. For Cross Section See Sheet No. 17
2. For Notes See Sheet No. 17.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN

SHEET 2 OF 8

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

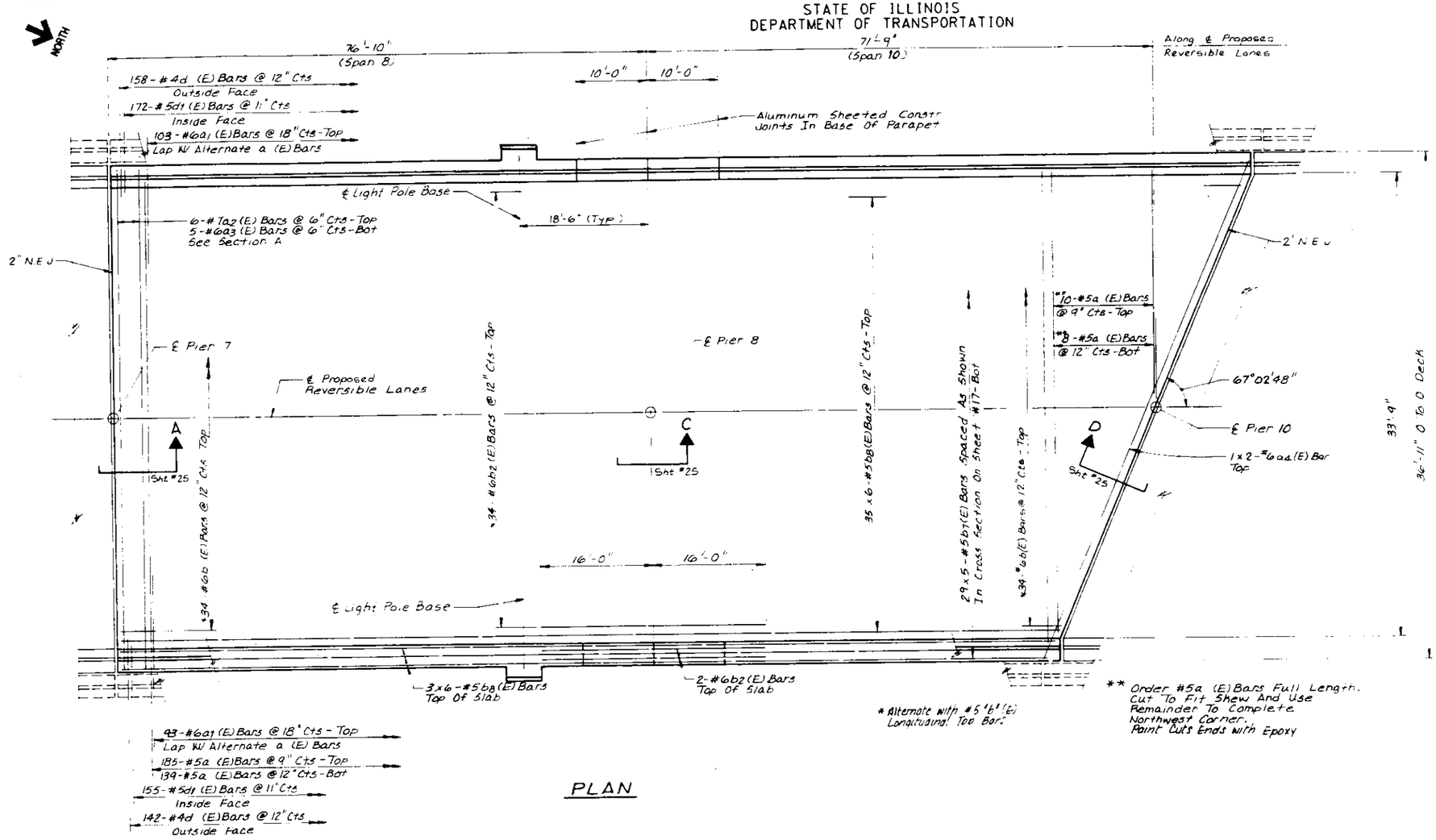
C.33

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

			844	54

*1991-025R & 0303-474HB-1

SHEET NO. 19
SHEET S



PLAN

NOTES:

1. For Cross Section see Sheet No. 17
2. For Notes See Sheet No. 17.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN

SHEET 3 OF 8

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

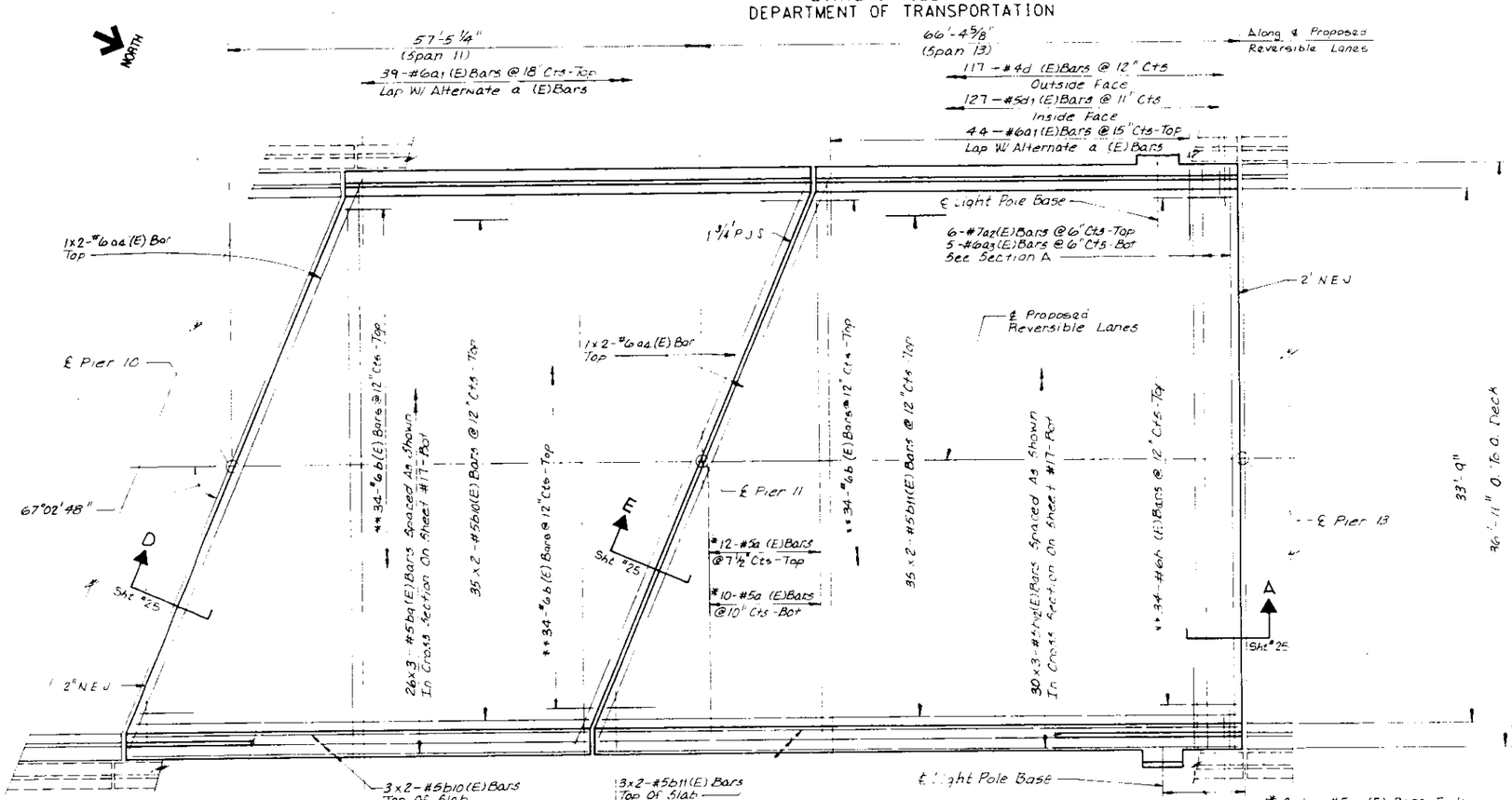
C 36

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 20
SHEETS

644 545

*1991-025R & 0303-474HB-1



PLAN

NOTES:

1. For Cross Section see Sheet No. 17
2. For Notes See Sheet No. 17.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 4 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

C35

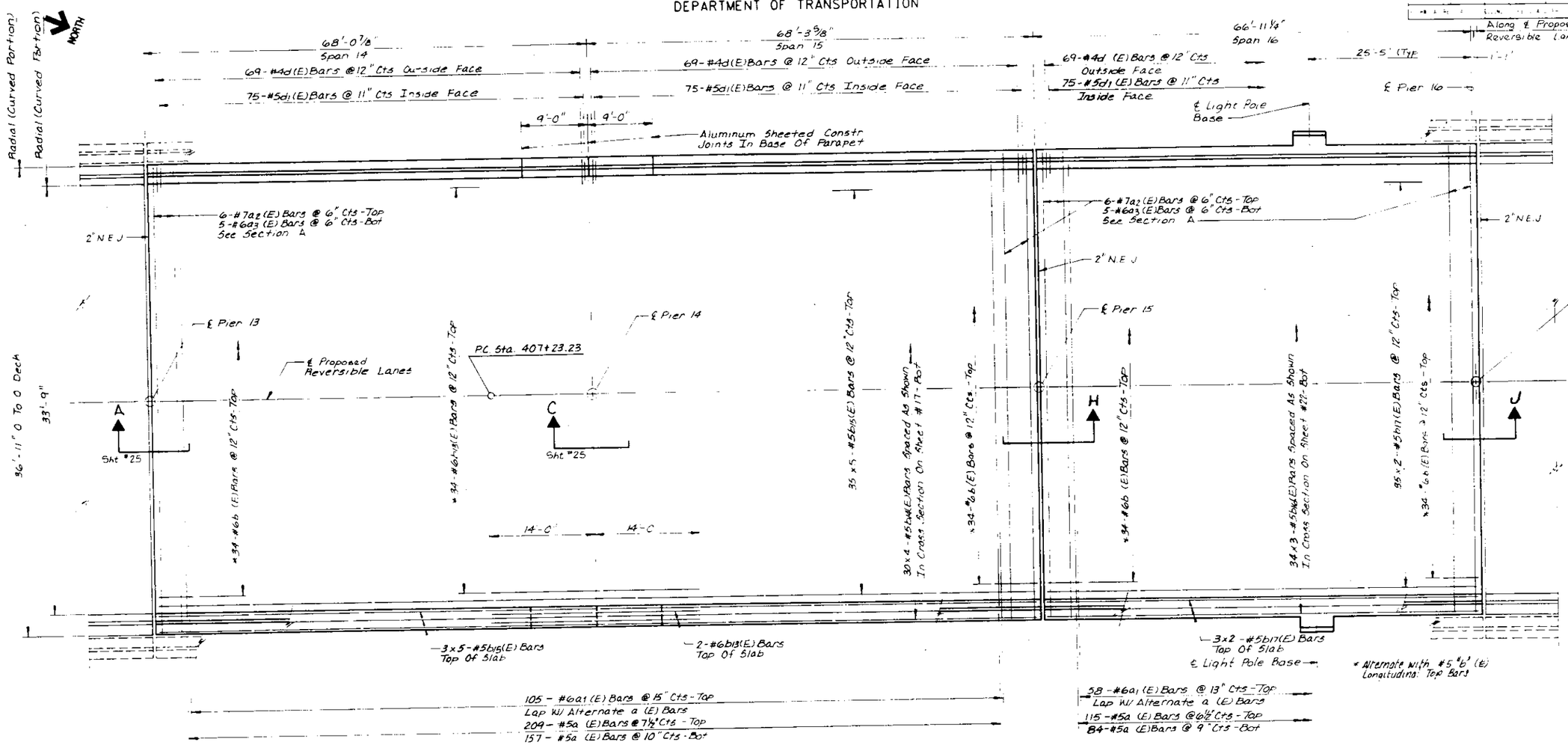
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 21
SHEETS

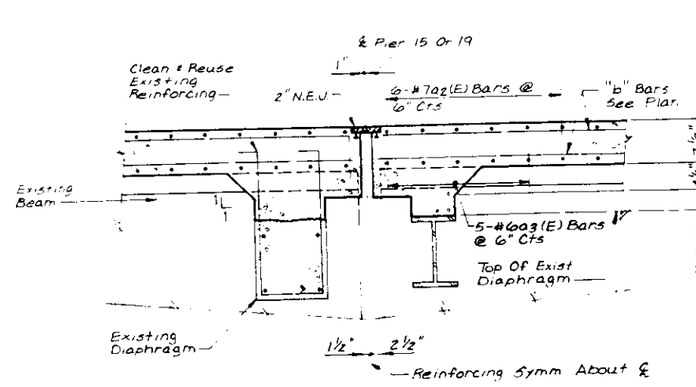
	866	546

Along ℄ Proposed Reversible Lanes

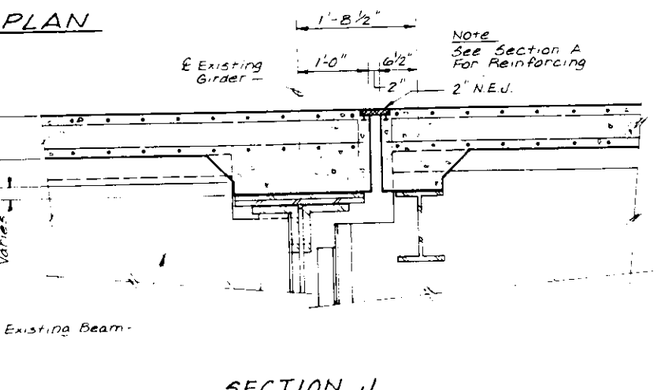
*1991-025R & 0303-474HB-1



PLAN



SECTION H



SECTION J

NOTES:

1. For Cross Section see Sheets No. 17 & 22
2. For Notes See Sheet No. 17.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN

SHEET 5 OF 8

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

C136

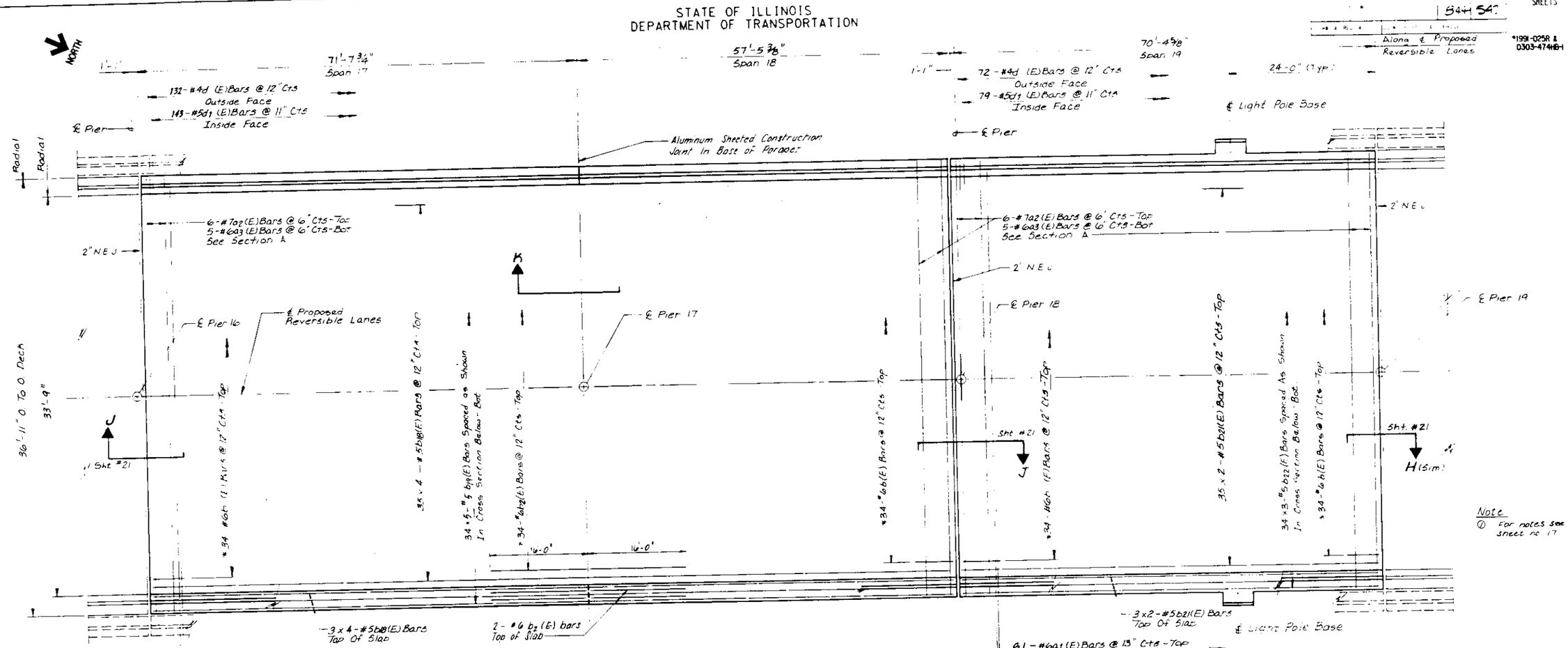
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 22
SHEETS

544 547

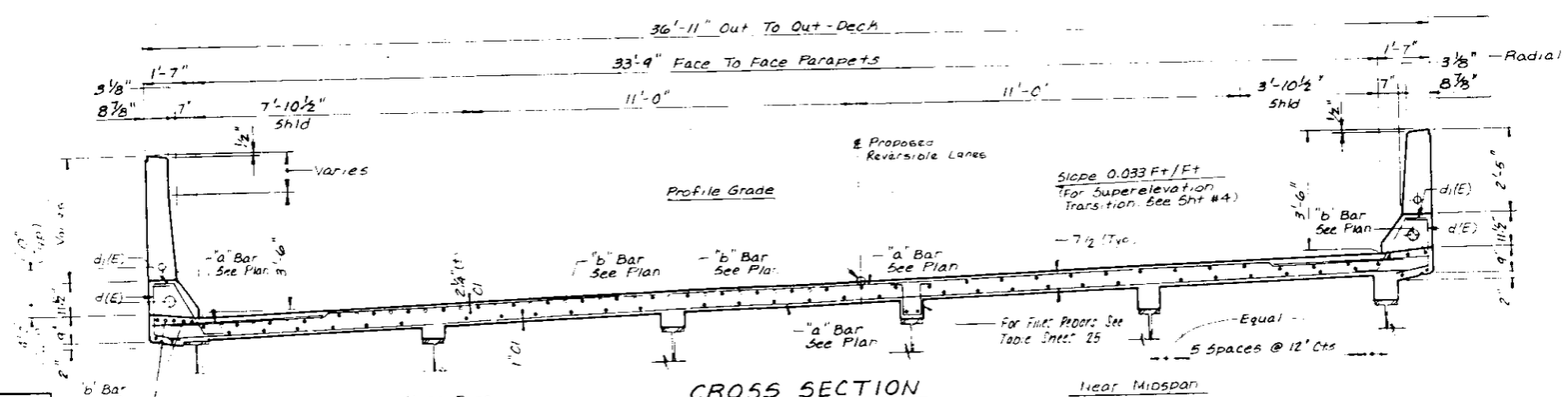
Along ℄ Proposed Reversible Lanes

*1991-025R & 0303-474HB-1

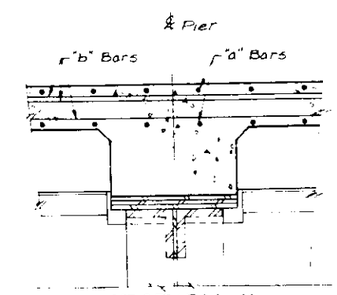


Note
① For notes see sheet no 17

PLAN



CROSS SECTION
(Looking Up Station)



SECTION K

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 6 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

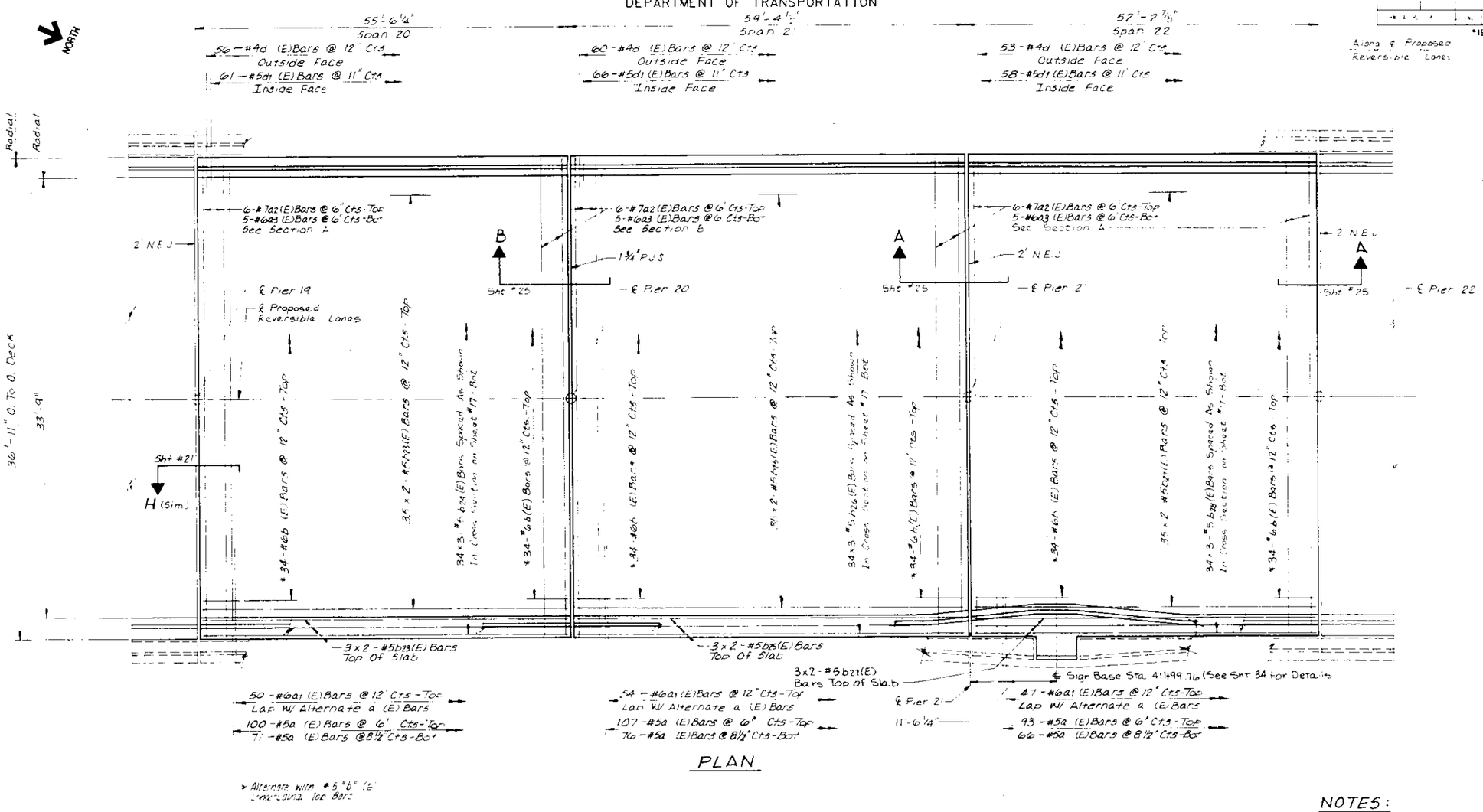
C.2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 23
SHEETS

844	548

*1991-025R & 0303-474HB-1



PLAN

NOTES:

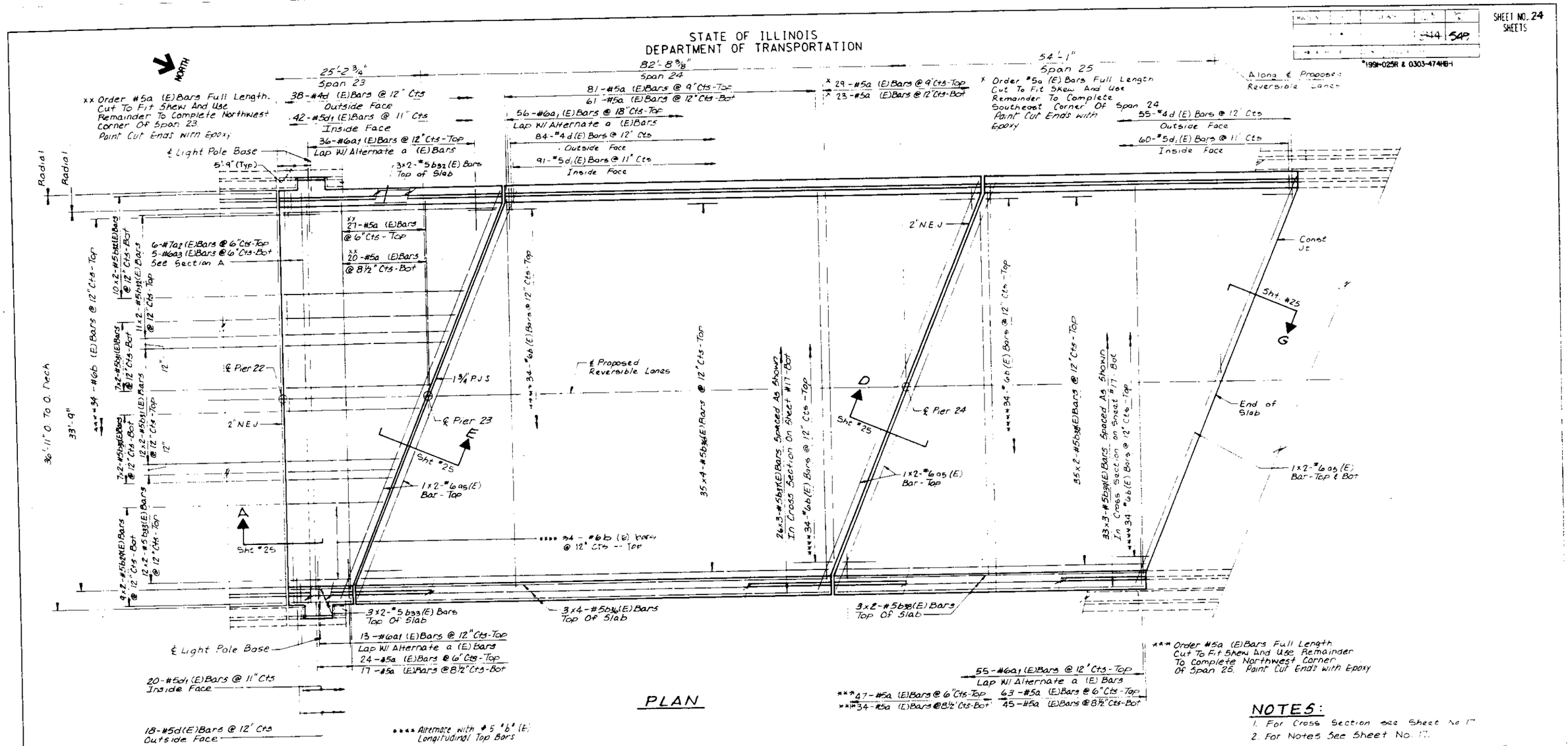
1. For Notes See Sheet No. 17.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 7 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

C35

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

NOTES:

1. For Cross Section See Sheet No. 17
2. For Notes See Sheet No. 17.

STANLEY CONSULTANTS

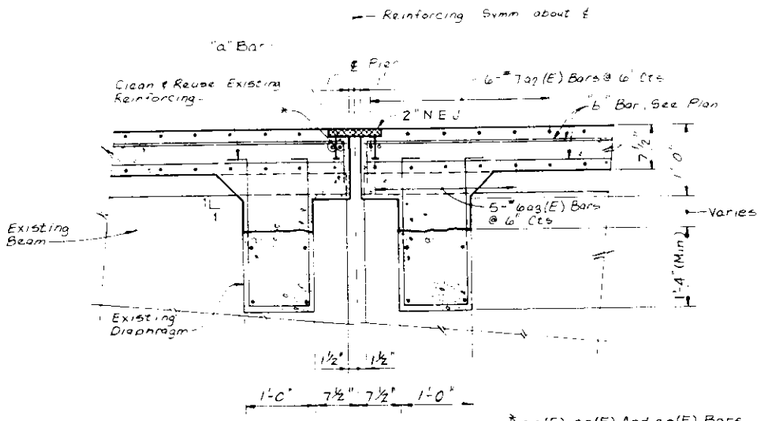
SUPERSTRUCTURE PLAN
SHEET 8 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	•		844	550

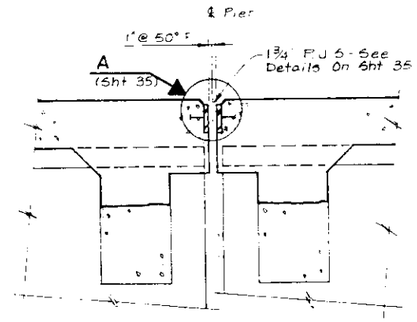
*1994-025R & 0303-474HB-1

SHEET NO. 25
SHEETS



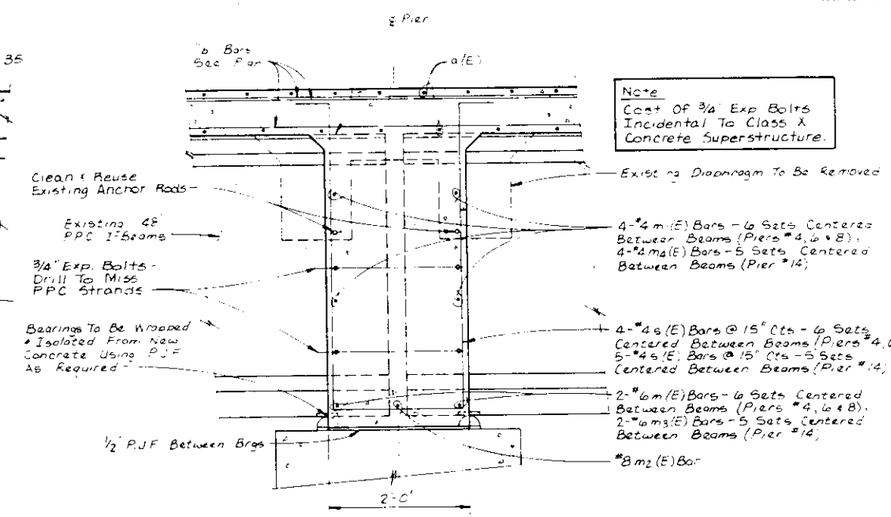
SECTION A

*a4(E), a5(E) And a2(E) Bars In Back Of Anchor Bolt As Shown If Required To Maintain 1" Clear (+0 -⅛"). Anchor Bolts Should be Tied To a4(E), a5(E) And a2(E) Bars.



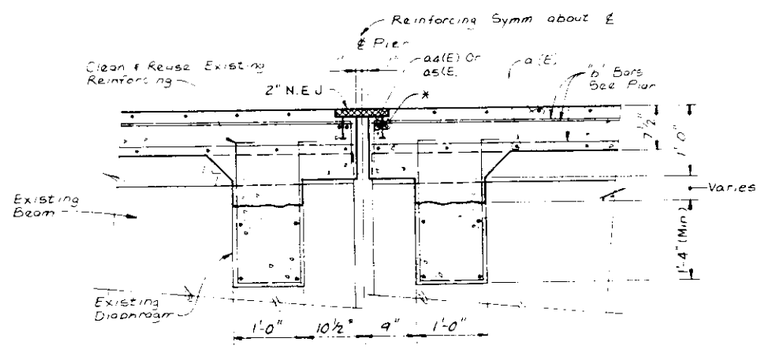
Note:
For Additional Notes, Reinforcing & Dims. See Section A.

SECTION B

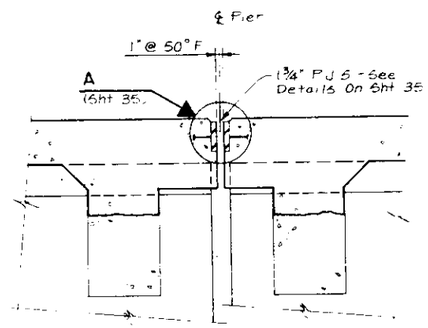


Note
Cost Of ¾" Exp. Bolts Incidental To Class X Concrete Superstructure.

SECTION C



SECTION D

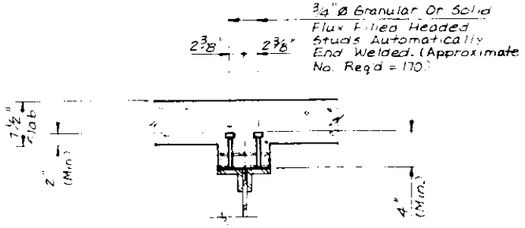


Note:
For Additional Notes, Reinforcing & Dims. See Section D

SECTION E

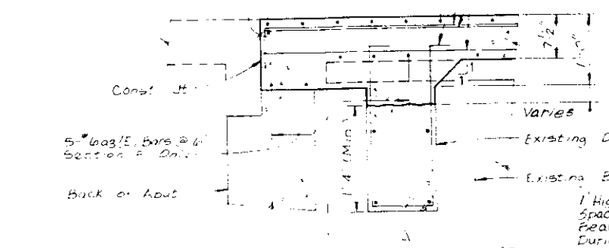
BEAM NUMBER	BAR QUANTITY	BAR NUMBER
R11-R17, R21-R27 R31-R37, R41-R47 R51-R57, R61-R67 R71-R77, R81-R87 R106	78 EACH	S1(E)
R101	67	S1(E)
R102	69	S1(E)
R103	71	S1(E)
R104	73	S1(E)
R105	76	S1(E)
R107	80	S1(E)
R111-R118	58 EACH	S1(E)
R131	73	S2(E)
R132	70	S2(E)
R133	67	S1(E)
R134	64	S1(E)
R135	62	S1(E)
R136	59	S1(E)
R141-R143, R151-R153	69 EACH	S2(E)
R144-R146, R154-R156	69 EACH	S1(E)
R161-R163	68 EACH	S3(E)
R164-R166	68 EACH	S4(E)
R171 & R172	75 EACH	S3(E)
R173-R175	75 EACH	S4(E)
R181 & R182	61 EACH	S3(E)
R183-R186	60 EACH	S4(E)
R191 & R192	72 EACH	S3(E)
R193-R194	72 EACH	S4(E)
R201 & R202	56 EACH	S2(E)
R203 & R204	56 EACH	S1(E)
R211 & R212	60 EACH	S2(E)
R213 & R214	60 EACH	S1(E)
R221 & R222	53 EACH	S2(E)
R223 & R224	53 EACH	S1(E)
R231	18	S2(E)
R232	22	S2(E)
R233	22	S1(E)
R241 & R242	83 EACH	S2(E)
R243-R244	83 EACH	S1(E)
R251 & R252	54 EACH	S2(E)
R253 & R254	54 EACH	S1(E)
R261	32	S2(E)

BEAM FILLET REINFORCING

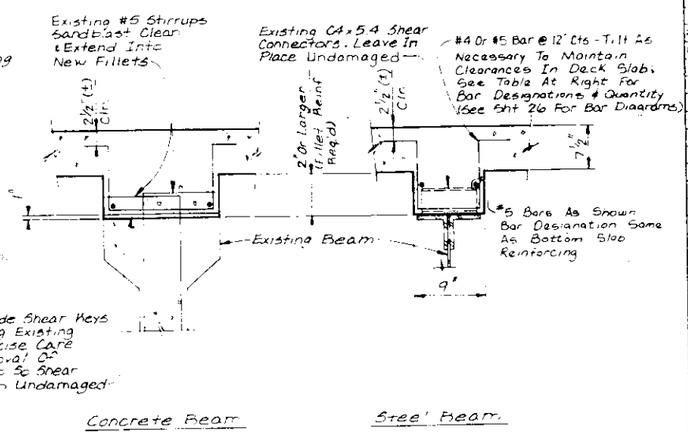


Note
Care Should Be Taken During Removal Of Existing Deck To Minimize Damage To Existing Channel Shear Connectors. Any Existing Channel Shear Connectors That Are Damaged Should Be Replaced With Two Shear Studs As Shown Above.

SHEAR STUD DETAIL



SECTION F
SECTION G



FILLET REINFORCING DETAILS

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

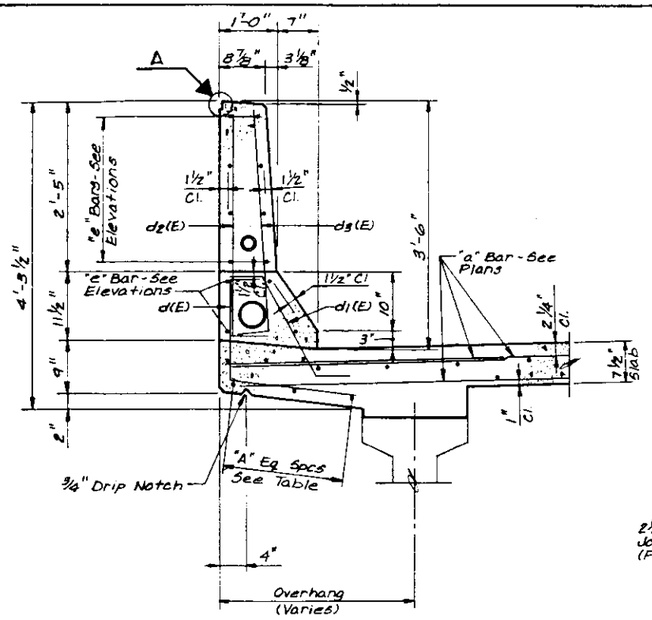
C-40

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

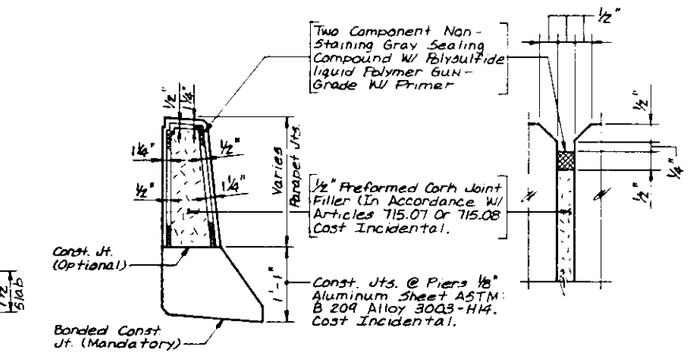
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		844	551
F. NO. A. REG. 4		ILLINOIS	FED. AID PROJECT	

*1991-025R & 0303-474HB-1

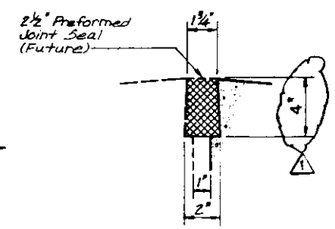
SHEET NO. 26
SHEETS



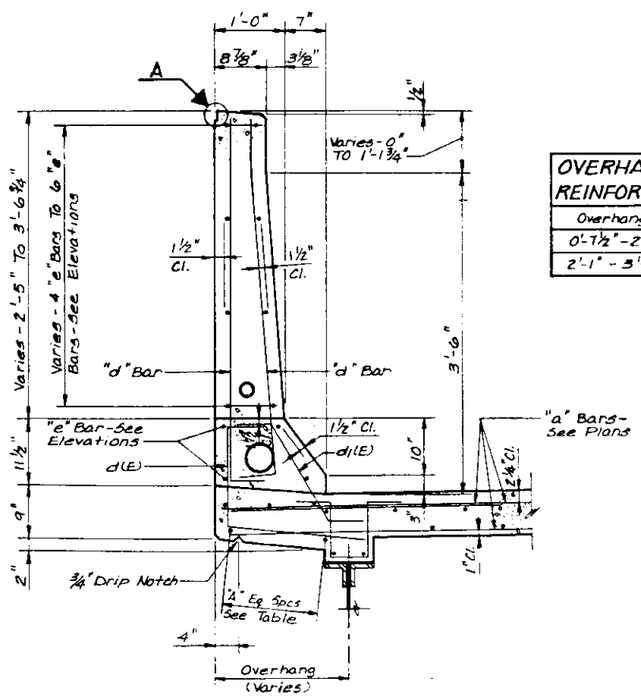
SECTION THRU STANDARD HEIGHT PARAPET



PARAPET JOINT DETAILS

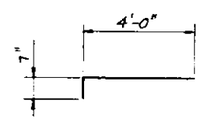


DETAIL A

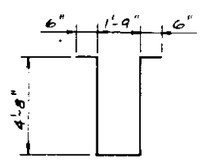


SECTION THRU VARIED HEIGHT PARAPET

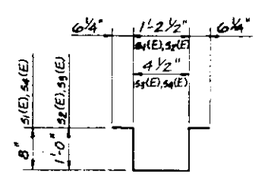
OVERHANG REINFORCING TABLE	
Overhang	"A"
0'-7 1/2"-2'-0"	1
2'-1"-3'-6"	2



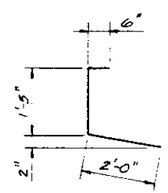
BAR b(E)



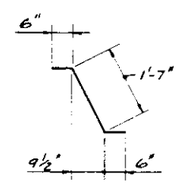
BAR s(E)



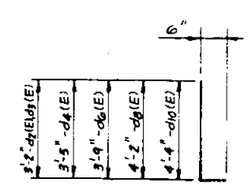
BARS $s_1(E), s_2(E), s_3(E)$ & $s_4(E)$



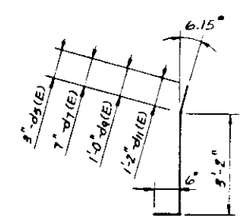
BAR d(E)



BAR $d_1(E)$



BARS $d_2(E), d_3(E), d_4(E), d_6(E), d_8(E)$ & $d_{10}(E)$



BARS $d_5(E), d_7(E), d_9(E)$ & $d_{11}(E)$

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	3965	#5	36'-5"	
a1(E)	2312	#6	4'-0"	
a2(E)	162	#7	36'-7"	
a3(E)	135	#6	36'-7"	
a4(E)	8	#6	21'-0"	
a5(E)	10	#6	22'-10"	
b(E)	1224	#6	4'-7"	
b1(E)	82	#5	39'-8"	
b2(E)	152	#6	32'-0"	
b3(E)	645	#5	27'-1"	
b4(E)	258	#5	26'-8"	
b5(E)	164	#5	39'-2"	
b6(E)	410	#5	32'-1"	
b7(E)	215	#5	32'-10"	
b8(E)	246	#5	27'-7"	
b9(E)	126	#5	20'-3"	
b10(E)	82	#5	29'-6"	
b11(E)	82	#5	38'-4"	
b12(E)	126	#5	25'-7"	
b13(E)	38	#6	28'-0"	
b14(E)	168	#5	35'-5"	
b15(E)	205	#5	28'-8"	
b16(E)	132	#5	23'-9"	
b17(E)	82	#5	34'-9"	
b18(E)	164	#5	33'-8"	
b19(E)	220	#5	27'-2"	
b21(E)	82	#5	36'-6"	
b22(E)	138	#5	24'-11"	
b23(E)	82	#5	28'-6"	
b24(E)	126	#5	19'-7"	
b25(E)	82	#5	30'-5"	
b26(E)	126	#5	20'-11"	
b27(E)	82	#5	26'-10"	
b28(E)	126	#5	18'-6"	
b29(E)	22	#5	11'-3"	
b30(E)	18	#5	13'-6"	
b31(E)	42	#5	15'-6"	
b32(E)	52	#5	18'-10"	
b33(E)	30	#5	12'-3"	
b36(E)	164	#5	22'-0"	
b37(E)	126	#5	28'-9"	
b38(E)	82	#5	27'-10"	
b39(E)	123	#5	19'-2"	
b41(E)	184	#5	2'-0"	
b42(E)	144	#5	5'-0"	

BILL OF MATERIAL (CONT)

BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	3133	#4	3'-11"	
d1(E)	3414	#5	2'-7"	
d2(E)	2376	#4	3'-8"	
d3(E)	2589	#5	3'-8"	
d4(E)	69	#4	3'-11"	
d5(E)	75	#5	3'-11"	
d6(E)	69	#4	4'-3"	
d7(E)	75	#5	4'-3"	
d8(E)	69	#4	4'-8"	
d9(E)	75	#5	4'-8"	
d10(E)	550	#4	4'-10"	
d11(E)	600	#5	4'-10"	
e(E)	64	#4	19'-2"	
e1(E)	18	#8	28'-4"	
e2(E)	8	#5	39'-8"	
e3(E)	176	#4	18'-10"	
e4(E)	16	#5	39'-3"	
e5(E)	288	#4	16'-5"	
e6(E)	40	#8	35'-1"	
e7(E)	40	#5	34'-2"	
e8(E)	88	#4	9'-9"	
e9(E)	22	#5	9'-9"	
e10(E)	22	#8	9'-9"	
e11(E)	68	#4	17'-1"	
e12(E)	12	#8	37'-4"	
e13(E)	12	#5	36'-5"	
e14(E)	22	#8	30'-6"	
e15(E)	16	#5	29'-6"	
e16(E)	24	#4	18'-11"	
e17(E)	174	#4	19'-5"	
e18(E)	28	#5	30'-5"	
e19(E)	28	#8	31'-4"	
e20(E)	36	#4	8'-9"	
e21(E)	8	#5	8'-9"	
e22(E)	8	#8	8'-9"	
e23(E)	8	#8	35'-8"	
e24(E)	8	#5	34'-8"	
e25(E)	80	#4	17'-7"	
e26(E)	8	#8	37'-6"	
e27(E)	8	#5	36'-8"	
e28(E)	84	#4	18'-2"	
e29(E)	12	#8	29'-5"	
e30(E)	24	#5	28'-8"	
e31(E)	8	#8	27'-9"	
e32(E)	8	#5	26'-10"	
e33(E)	68	#4	17'-8"	
e34(E)	24	#4	18'-4"	
e35(E)	100	#4	16'-3"	
e36(E)	8	#8	28'-10"	

BILL OF MATERIAL (CONT)

BAR	NO.	SIZE	LENGTH	SHAPE
e37(E)	8	#5	27'-10"	
e38(E)	6	#8	29'-11"	
e39(E)	8	#4	17'-0"	
e40(E)	2	#8	17'-0"	
e41(E)	2	#5	17'-0"	
e42(E)	80	#4	17'-6"	
e43(E)	24	#4	19'-1"	
e44(E)	36	#4	18'-6"	
e45(E)	96	#4	16'-8"	
e46(E)	2	#8	36'-9"	
e47(E)	2	#5	36'-9"	
e48(E)	32	#4	15'-5"	
e49(E)	8	#4	13'-9"	
e50(E)	32	#4	18'-0"	
e51(E)	4	#8	38'-4"	
e52(E)	4	#5	37'-4"	
e53(E)	18	#8	28'-4"	
e56(E)	2	#5	13'-9"	
e57(E)	2	#8	13'-9"	
m(E)	36	#6	3'-3"	
m1(E)	72	#4	4'-5"	
m2(E)	4	#8	33'-6"	
m3(E)	10	#6	4'-4"	
m4(E)	20	#4	5'-6"	
s(E)	97	#4	12'-1"	
s1(E)	7015	#4	3'-7"	
s2(E)	1209	#4	4'-3"	
s3(E)	620	#5	3'-5"	
s4(E)	829	#5	2'-9"	

REINFORCEMENT BARS (EPOXY COATED)	LBS.	454,110
CLASS X CONCRETE SUPERSTRUCTURES	CU.YDS.	2059.3

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
BAR DIMENSIONS SHOWN ARE OUT-TO-OUT.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

1 REV. 12-10-91

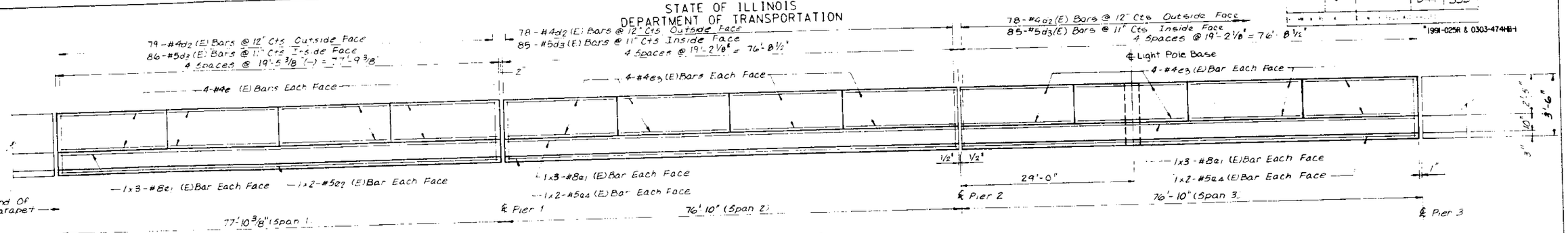
C141

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

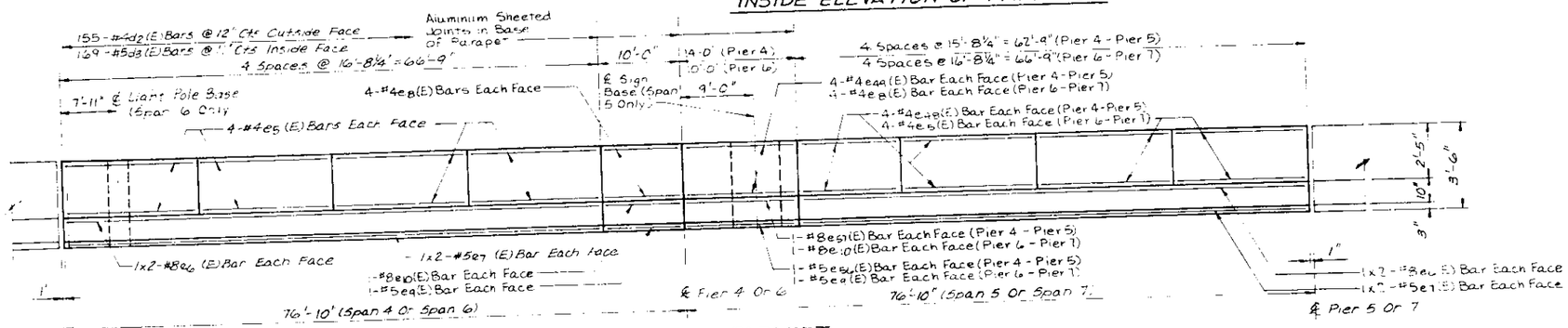
SHEET NO. 27
SHEETS

844 | 552

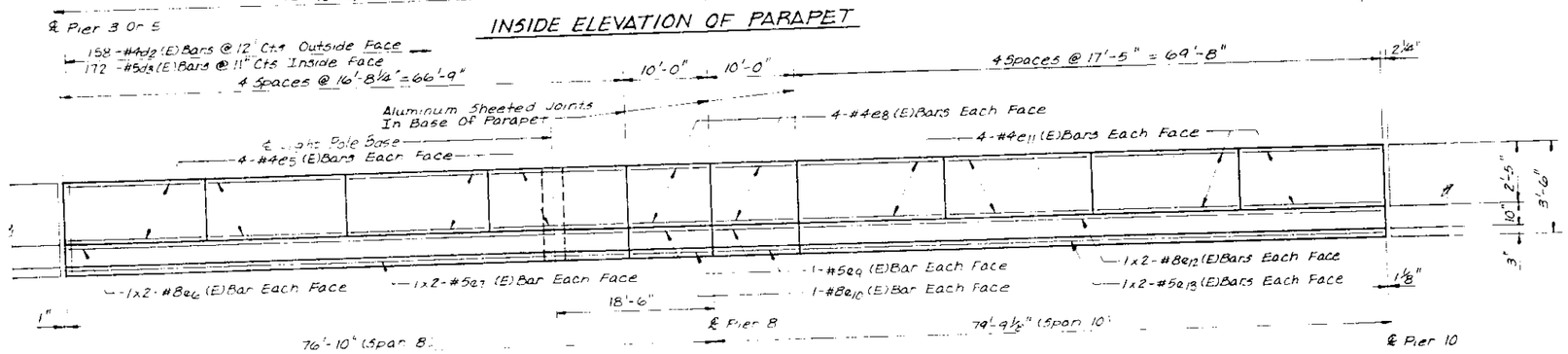
*1991-025R & 0303-474HB-1



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



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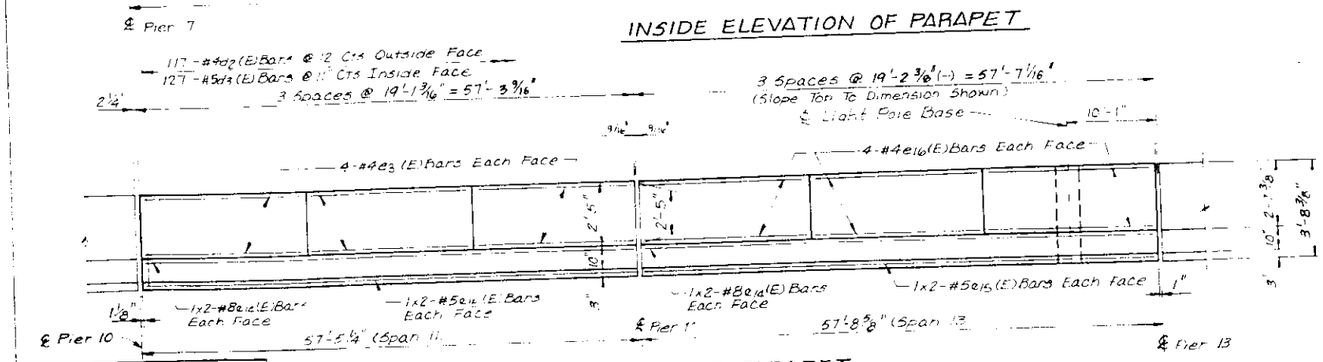


INSIDE ELEVATION OF PARAPET

NOTES:

1. See Sheet #26 For Superstructure Details And Bill Of Material.
2. Minimum Lap #8 Bar : 3'-6"
   Minimum Lap #5 Bar : 1'-9"

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE

SHEET 1 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

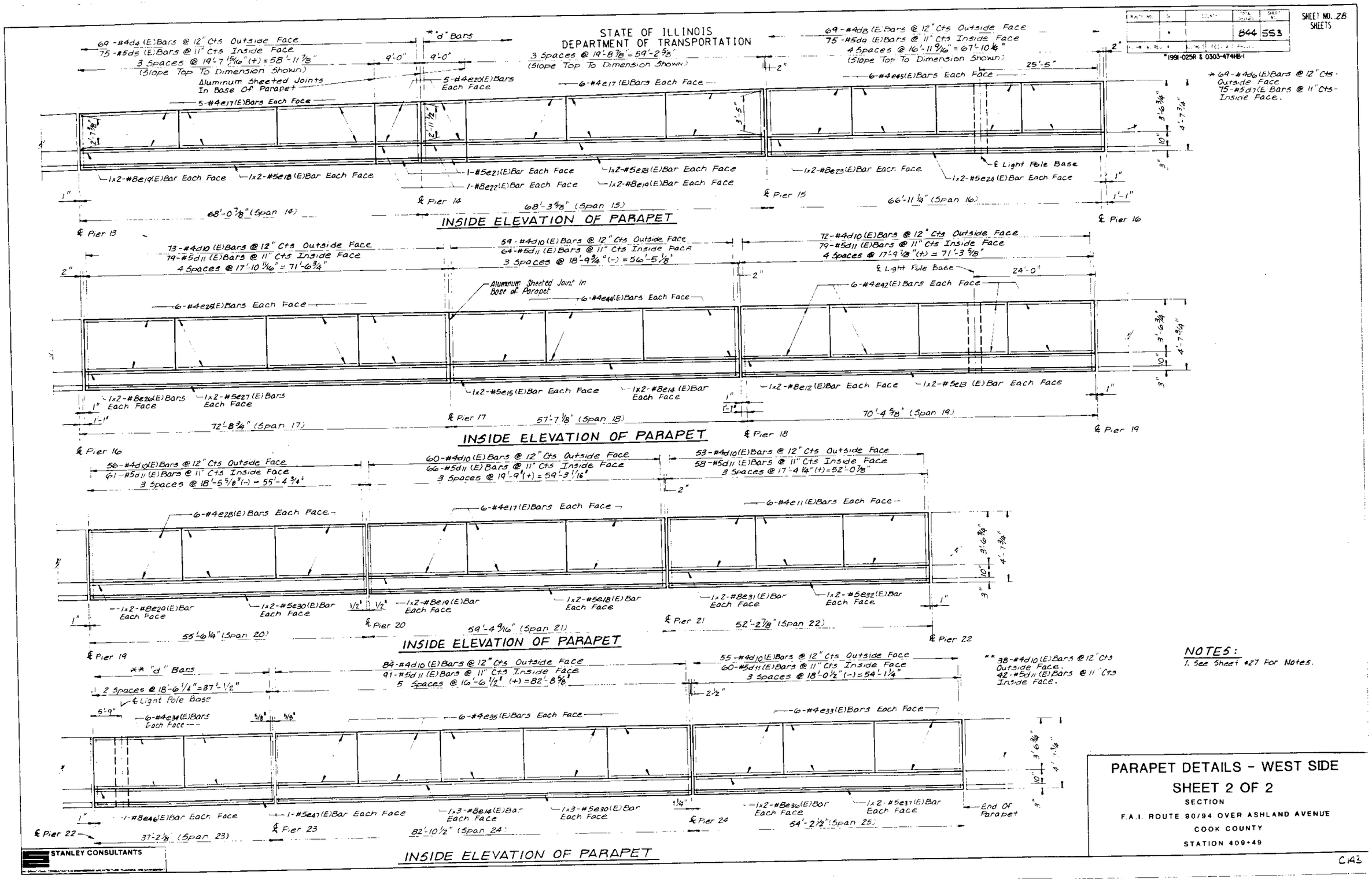
C142

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			844	553

*1991-025R & 0303-474HB-1

SHEET NO. 28
SHEETS



NOTES:

1. See Sheet #27 For Notes.

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE
SHEET 2 OF 2

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

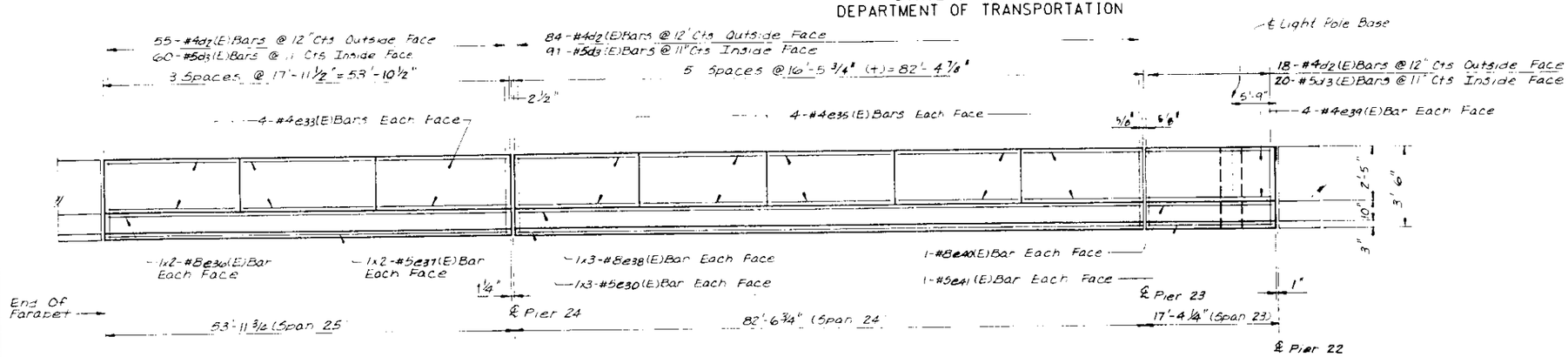
C143

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

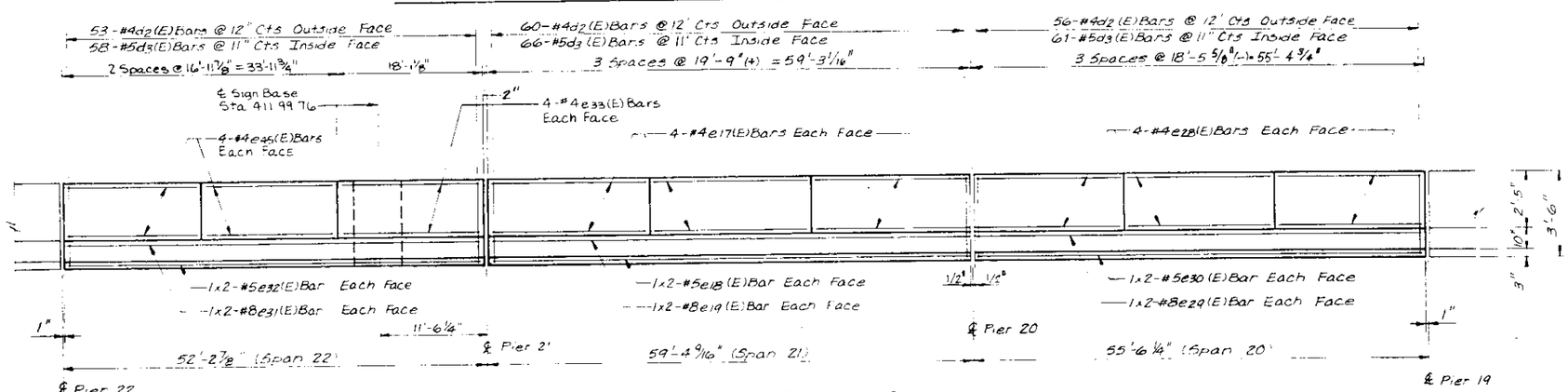
			844	554

SHEET NO. 20
SHEETS

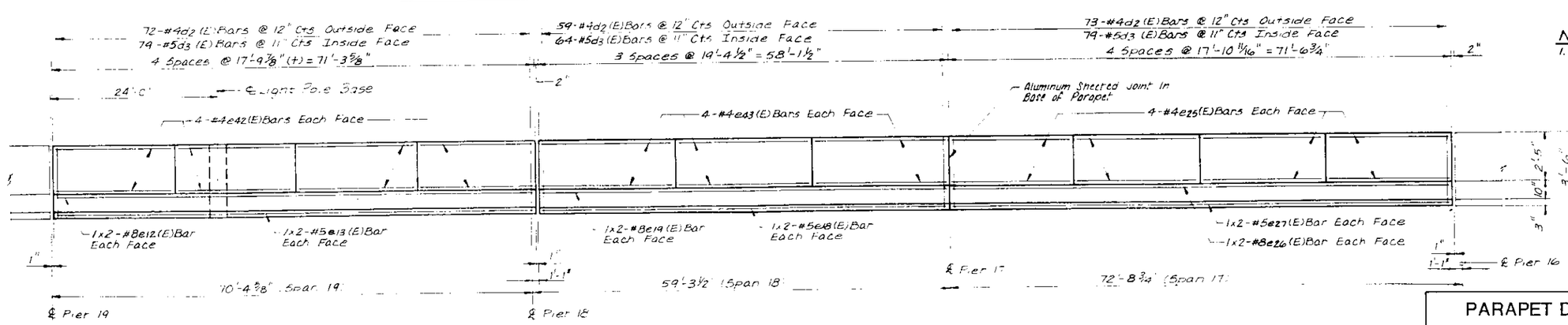
*1991-025R & 0303-474HB-1



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:
1. See Sheet #27 For Notes.

STANLEY CONSULTANTS

PARAPET DETAILS – EAST SIDE
SHEET 1 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

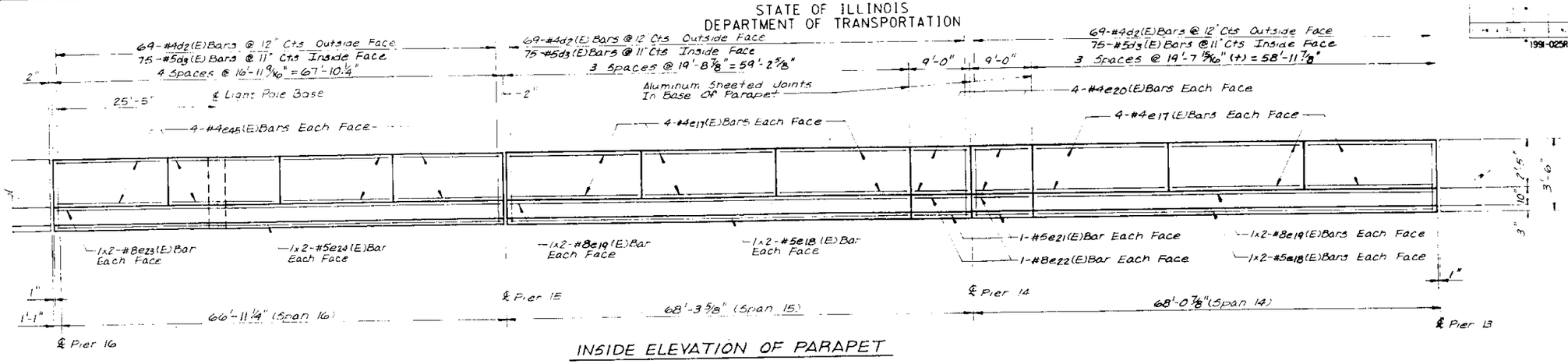
C4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

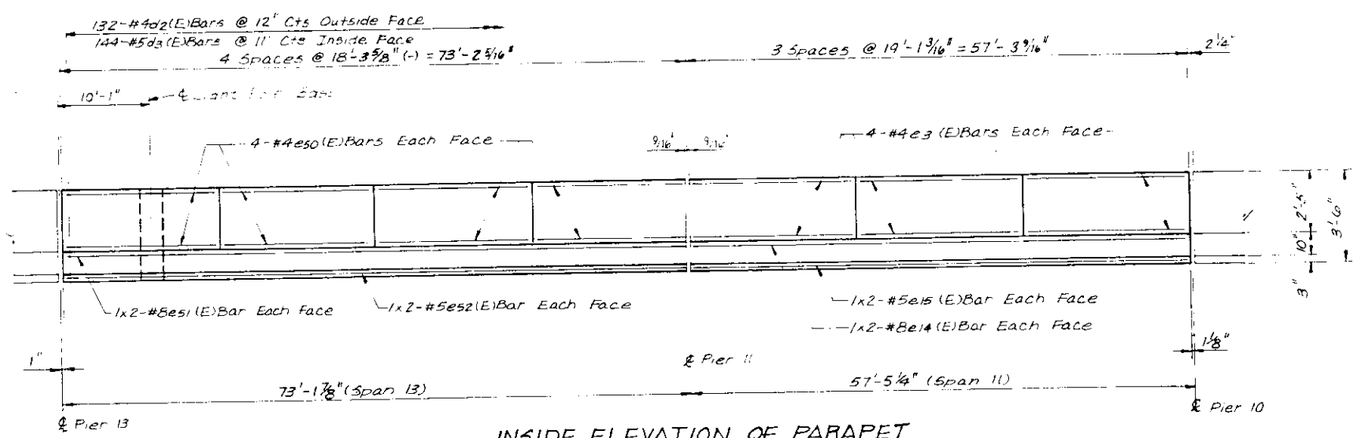
SHEET NO. 30
SHEETS

84 555

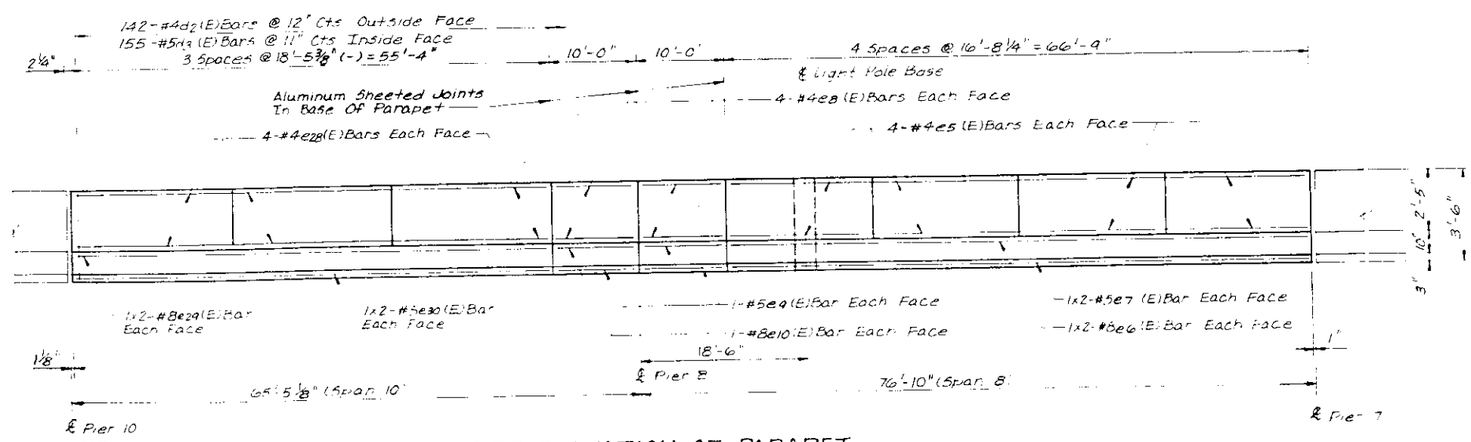
*1991-025R & 0303-474HB-1



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:
1. See Sheet #27 For Notes.

STANLEY CONSULTANTS

PARAPET DETAILS - EAST SIDE
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

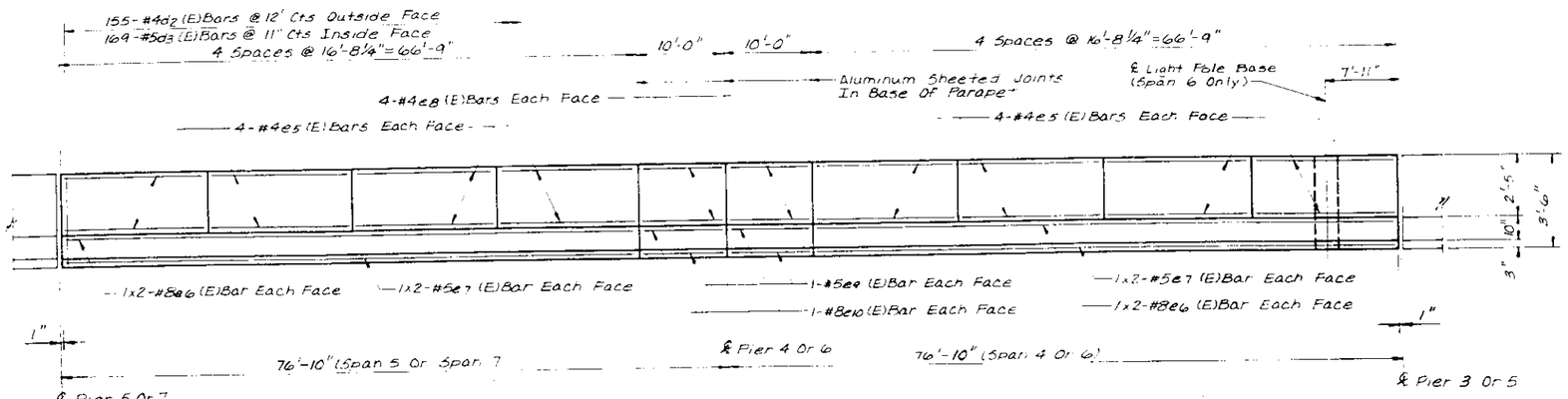
CLE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

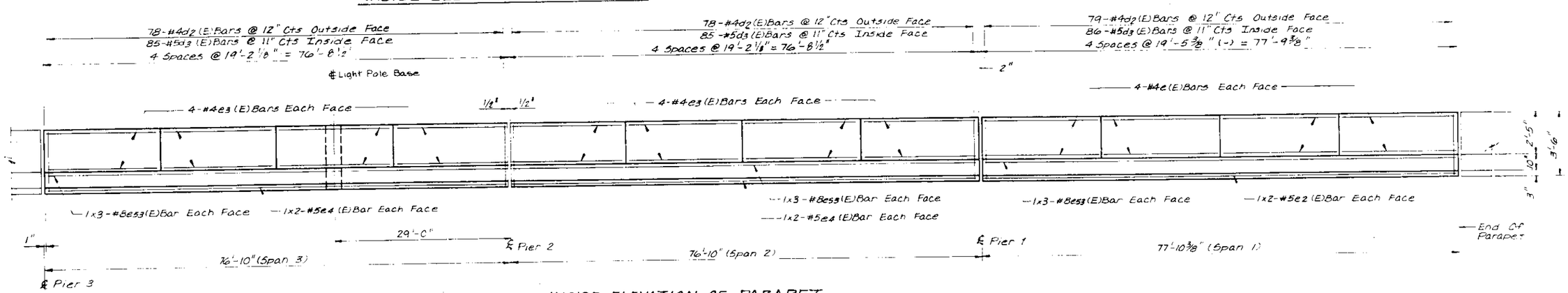
SHEET NO. 31
SHEETS

1896 1556

*1991-025R & 0303-474HB-1



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:
1. See Sheet #27 For Notes.

STANLEY CONSULTANTS

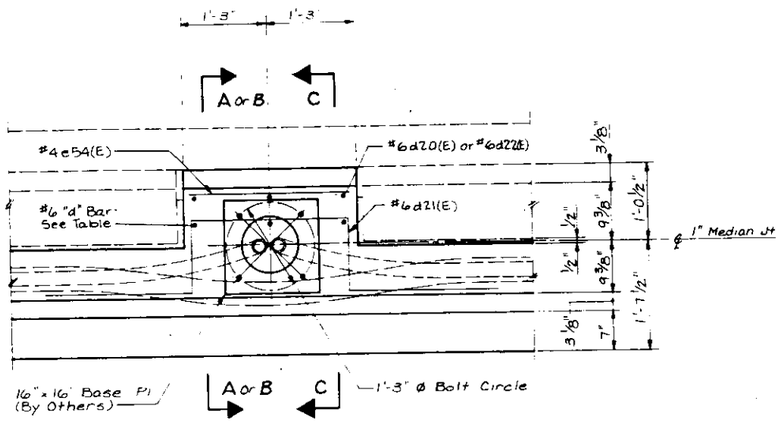
PARAPET DETAILS -EAST SIDE
SHEET 3 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

C.46

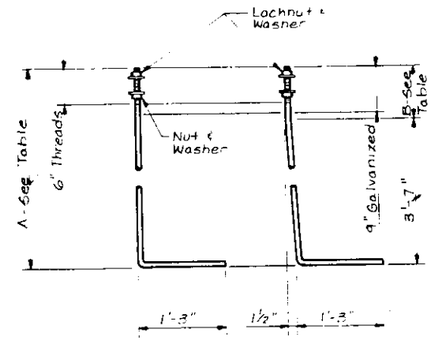
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

844 557

* 1991-025R & 0303-474HB-1



PLAN



1" ø ANCHOR BOLTS

NOTE: PROVIDE 2 FLAT WASHERS, 1 REGULAR NUT & 1 LOCKNUT FOR EACH BOLT. ALL NUTS & WASHERS MUST BE GALVANIZED.

Cost Incidental To Light Standard

DIMENSION AND REINFORCING TABLE				
APPROXIMATE LOCATION	A	B	"d"(E)BAR*	d22(E)*
WEST SIDE PARAPET				
400+41.5	4'-4"	9"	5'-10"	—
402+50	4'-4"	9"	5'-10"	—
404+55	4'-4"	9"	5'-10"	—
406+59	4'-7"	1'-0"	6'-0"	—
408+47	5'-6"	1'-11"	7'-0"	—
410+50	5'-6"	1'-11"	7'-0"	—
412+47	5'-6"	1'-11"	7'-0"	—
EAST SIDE PARAPET				
400+41.5	4'-4"	9"	5'-10"	4'-8"
402+50	4'-4"	9"	5'-10"	4'-8"
404+55	4'-4"	9"	5'-10"	4'-9"
406+59	4'-4"	9"	5'-10"	5'-0"
408+47	4'-4"	9"	5'-10"	5'-5"
410+50	4'-4"	9"	5'-10"	5'-5"
412+47	4'-4"	9"	5'-10"	5'-5"

* TOTAL LENGTH OF BAR (SUBTRACT KNOWN DIMENSIONS FROM TOTAL TO GET VARIABLE DIMENSION).

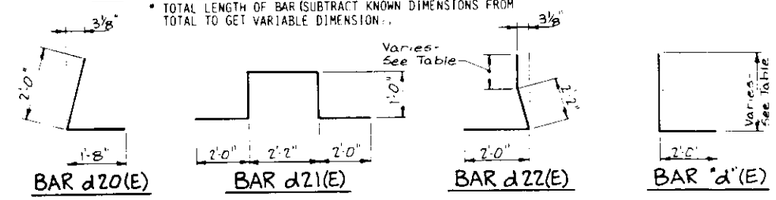
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d	42	#6	(SEE TABLE)	L
d20(E)	21	#6	5'-6"	L
d21(E)	112	#6	8'-2"	J L
d22(E)	21	#6	(SEE TABLE)	L
e54(E)	56	#4	2'-2"	—
REINFORCING BARS (EPOXY COATED)			LBS.	2,120
CLASS X CONCRETE SUPERSTRUCTURE			CU. YDS.	5.2

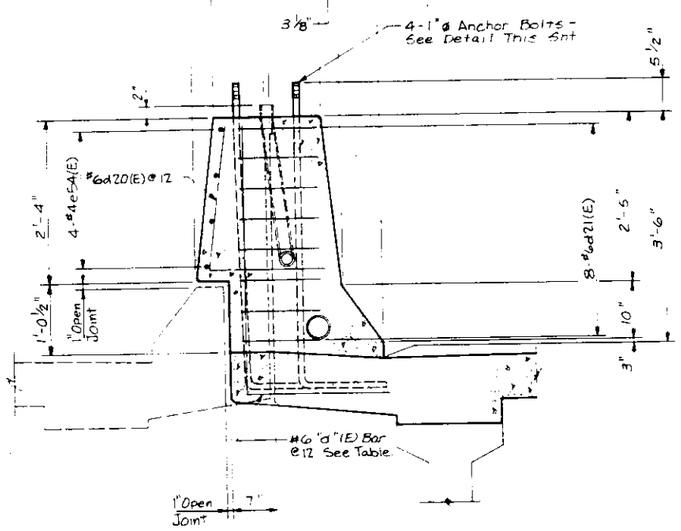
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

BAR DIMENSIONS SHOWN ARE OUT TO OUT.

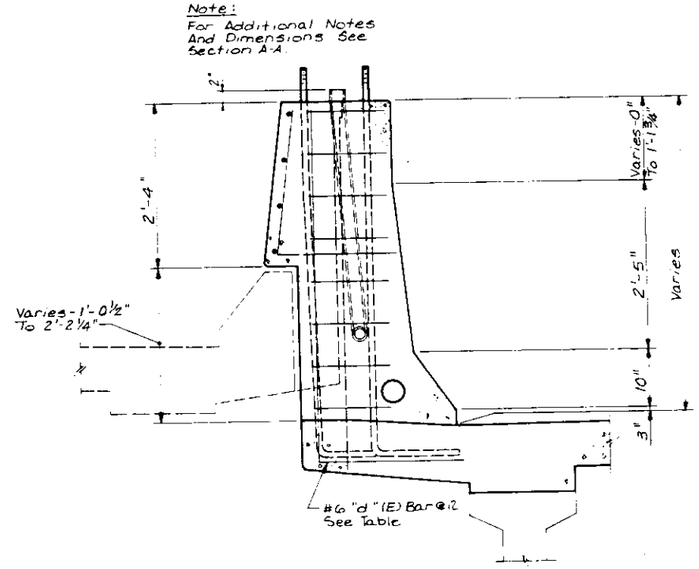
BILL OF MATERIAL INCLUDES 14 LIGHT POLE SUPPORTS



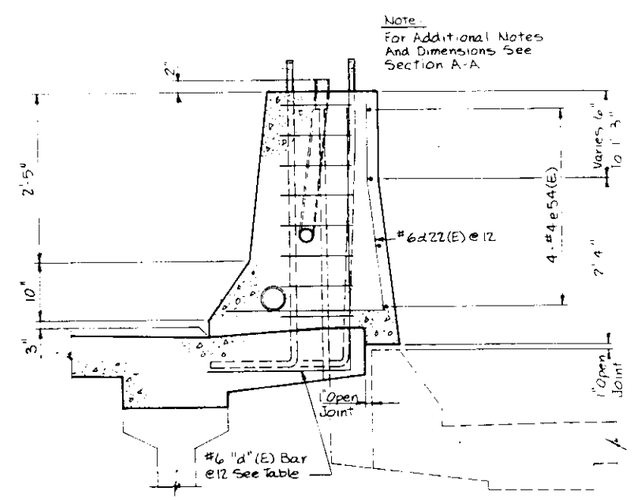
BAR d20(E) BAR d21(E) BAR d22(E) BAR "d"(E)



SECTION A-A
West Side Parapet



SECTION B-B
West Side Parapet



SECTION C-C
East Side Parapet

STANLEY CONSULTANTS

PARAPET MOUNTED LIGHT POLES

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

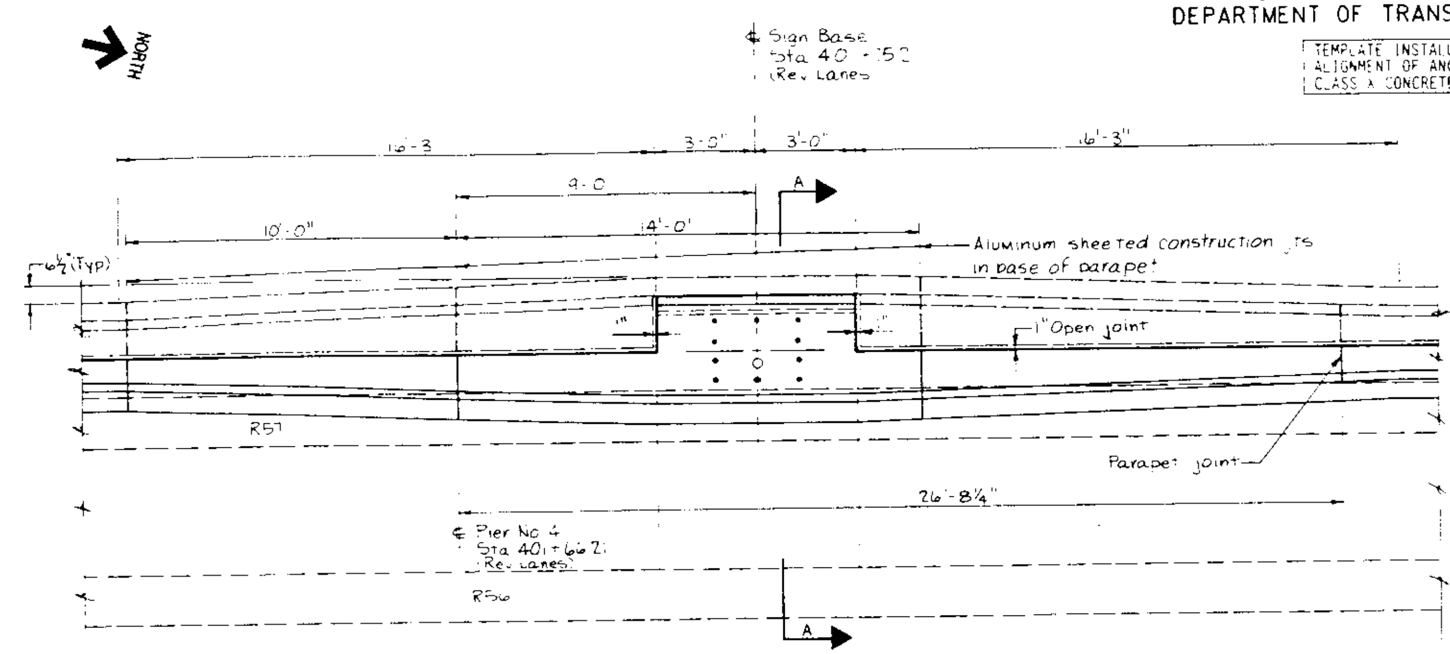
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

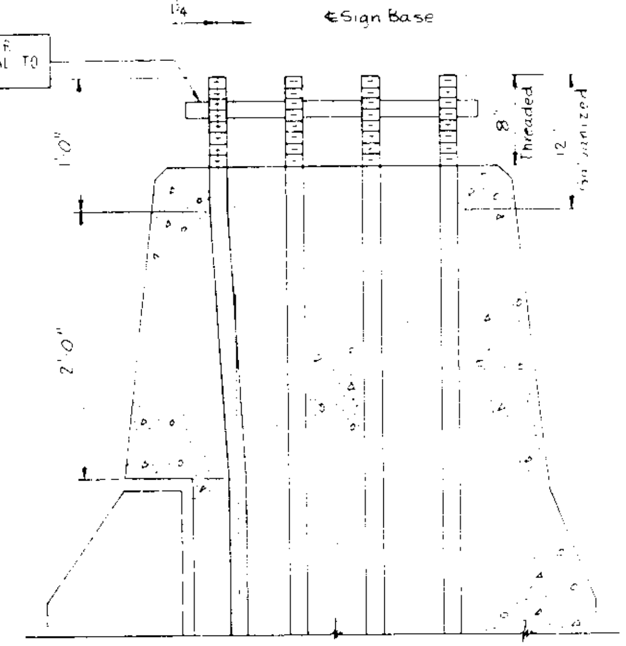
844 SSE

* 1991-025R & 0303-474HB-I

TEMPLATE INSTALLED TEMPORARILY FOR PROPER ALIGNMENT OF ANCHOR BOLTS COST INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE.



PLAN - SIGN BASE NEAR PIER NO. 4



ANCHOR BOLT DETAIL

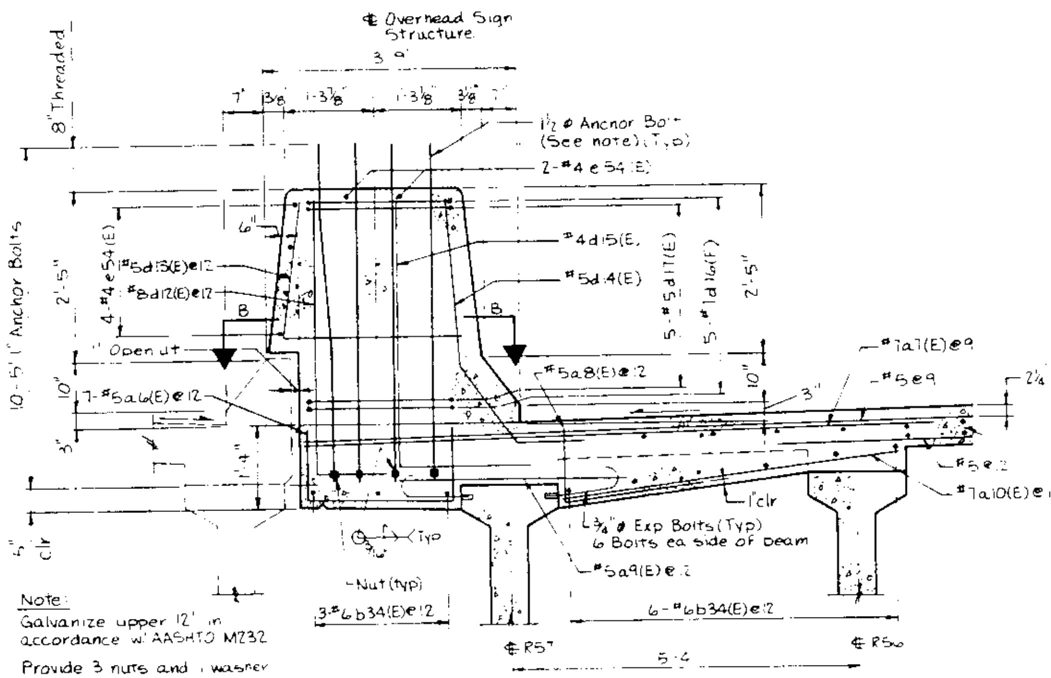
COST OF ANCHOR BOLTS INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a6(E)	[illegible]	#	4'-[illegible]	—
a7(E)	[illegible]	#	4'-9"	—
a8(E)	[illegible]	#5	5'-0"	L
a9(E)	7	#5	4'-6"	—
a10(E)	[illegible]	#	[illegible]	—
b34(E)	9	#6	5'-8"	—
d12(E)	[illegible]	#	7'-0"	L
d13(E)	[illegible]	#	4'-6"	L
d14(E)	[illegible]	#	6'-0"	[illegible]
d15(E)	6	#4	6'-0"	L
d16(E)	5	#	14'-4"	⎍
d17(E)	5	#	10'-8"	⎍
e54(E)	6	#4	5'-8"	—
3/4"Ø EXPANSION BOLTS		EACH		12
REINFORCING BARS (EPOXY COATED)		LBS		900
CLASS X CONCRETE SUPERSTRUCTURE		CU. YDS.		3.8

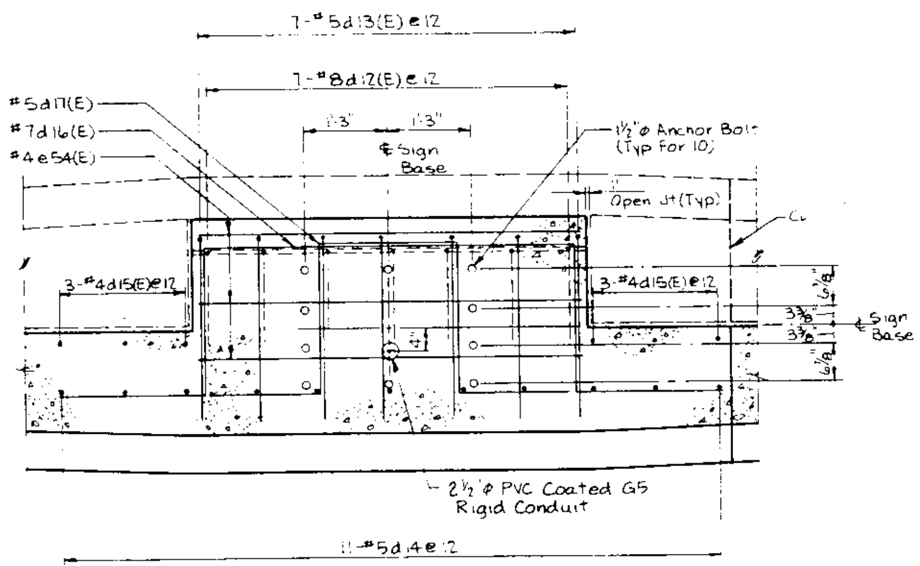
REINFORCING BARS DESIGNATED (E) SHALL BE EPOXY COATED.

BAR DIMENSIONS SHOWN ARE OUT TO OUT.



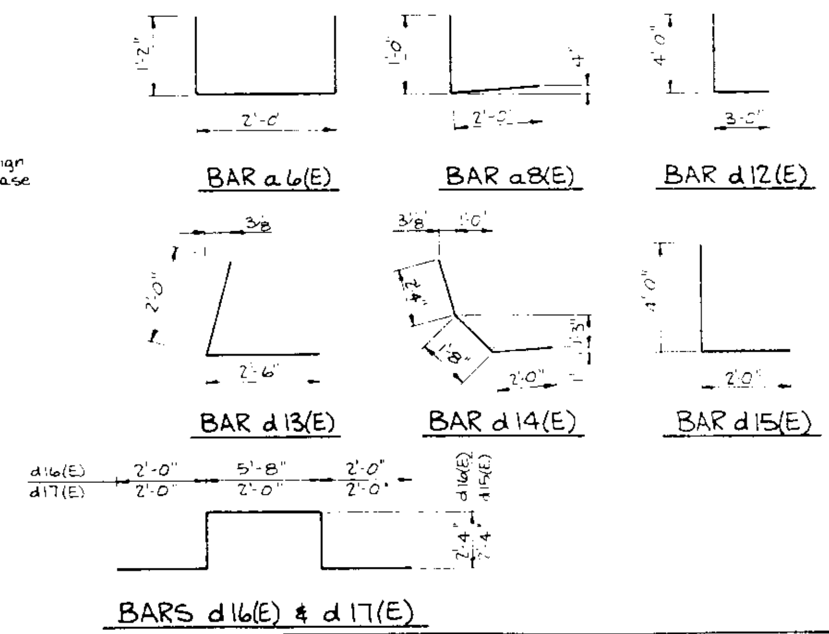
Note:
Galvanize upper 12" in accordance w/ AASHTO M232.
Provide 3 nuts and 1 washer for each bolt.
Anchor bolts ASTM A576, F_y = 55000 PSI.

SECTION A-A



SECTION B-B

NOTE:
OVERHEAD SIGNS MUST BE PERPENDICULAR TO THE FLOW OF TRAFFIC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN THE FIELD THE LOCATION AND THE ANGLE OF THE ANCHOR BOLT GROUP IN ORDER TO PROPERLY ERECT THE SIGN.



PARAPET MOUNTED SIGN BASE

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

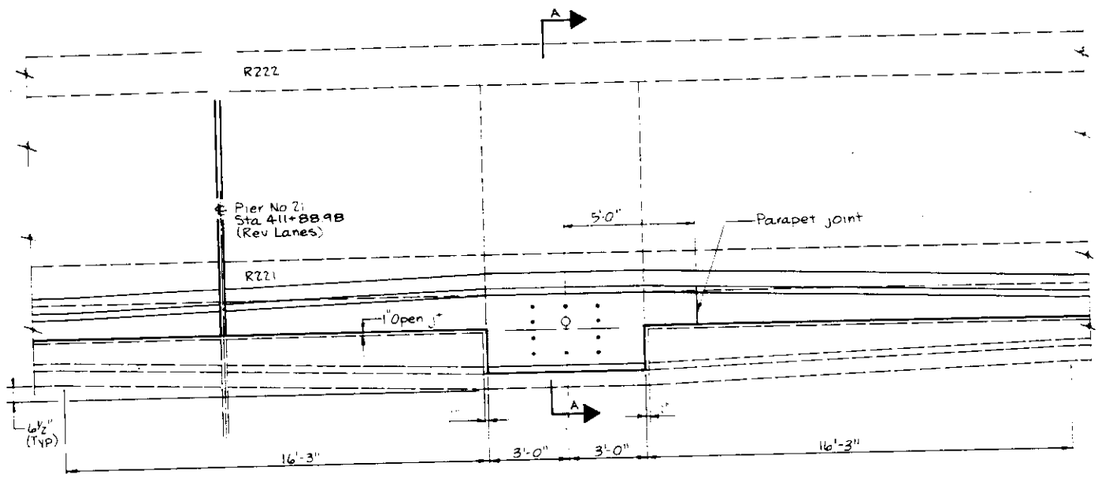
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPLATE INSTALLED TEMPORARILY FOR PROPER ALIGNMENT OF ANCHOR BOLTS COST INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE

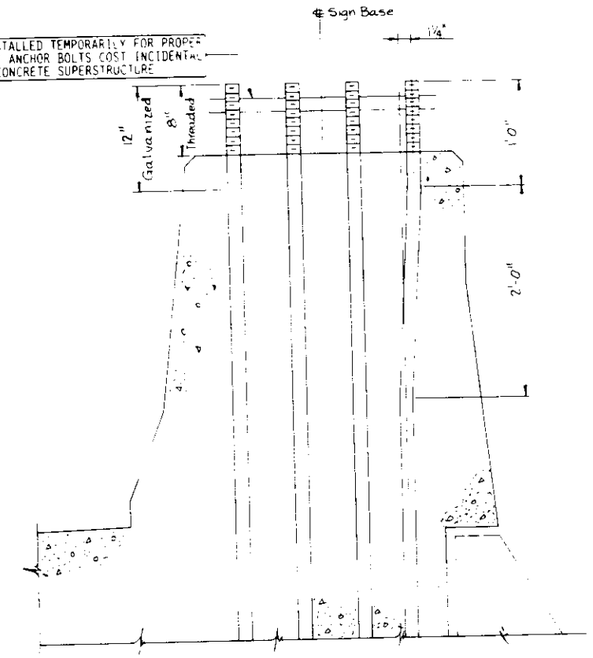
844 | 559

* 1991-025R & 0303-474HB-1



℄ Sign Base, On Radial Line.
Sta 411+99.76
(Rev Lanes)

PLAN - SIGN BASE NEAR PIER NO. 21



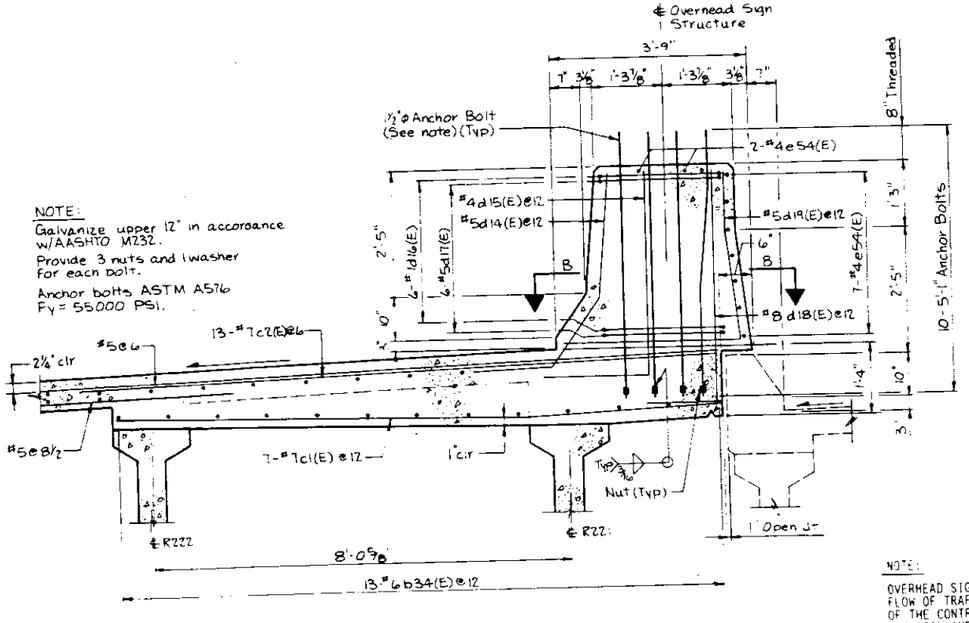
ANCHOR BOLT DETAIL

COST OF ANCHOR BOLTS INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b34(E)	13	#6	5'-8"	
c1(E)	7	#7	11'-6"	
c2(E)	13	#7	12'-3"	
d14(E)	11	#5	6'-0"	
d15(E)	6	#4	5'-10"	
d16(E)	6	#7	14'-4"	
d17(E)	6	#5	10'-8"	
d18(E)	7	#8	7'-8"	
d19(E)	7	#5	5'-3"	
e54(E)	9	#4	5'-8"	
REINFORCING BARS (EPOXY COATED)			LBS.	1150
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	4.2

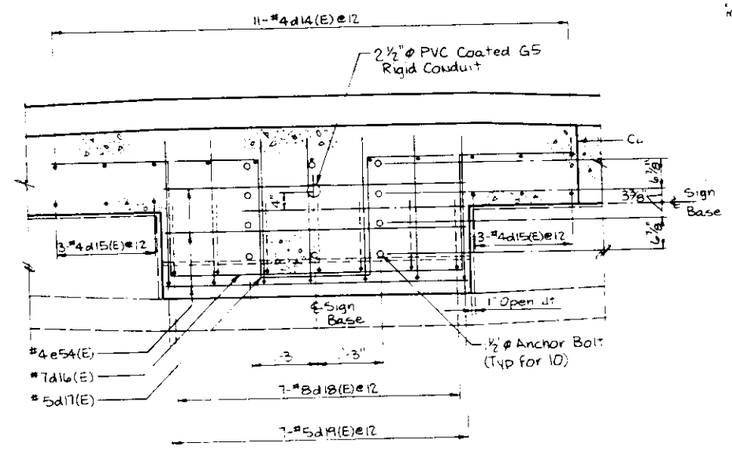
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
BAR DIMENSIONS SHOWN ARE OUT TO OUT.



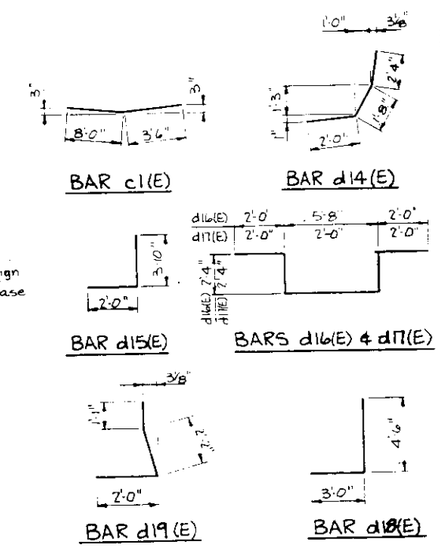
NOTE:
Galvanize upper 12" in accordance w/AASHTO M232.
Provide 3 nuts and 1 washer for each bolt.
Anchor bolts ASTM A576 Fy = 55,000 PSI.

SECTION A-A

NOTE:
OVERHEAD SIGNS MUST BE PERPENDICULAR TO THE FLOW OF TRAFFIC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN THE FIELD THE LOCATION AND THE ANGLE OF THE ANCHOR BOLT GROUP IN ORDER TO PROPERLY ERECT THE SIGN.



SECTION B-B



PARAPET MOUNTED SIGN BASE

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

C149

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 35
B44 560
*1991-025R & 0303-474HB-I

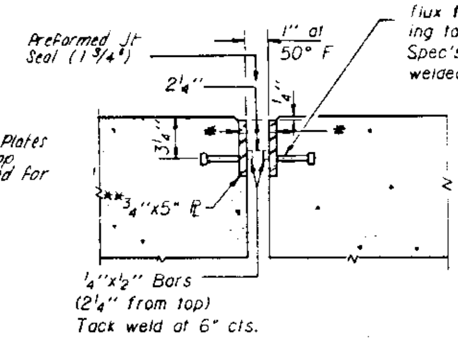
BEAM MOMENT TABLE		BEAM NUMBER												
		R161	R165 R164 R163 R162	R166	R176 R171	R175 R174 R173 R172	R181	R182	R183	R184	R185	R186	R196	R195 R194 R193 R192	R191
Is	in4	17,553	17,553	12,547	15,566	19,872	12,547	15,479	15,479	15,479	15,479	12,547	14,610	19,872	14,610
Ic(n=9)	in4	47,493	50,241	31,318	40,507	61,550	31,318	46,629	46,629	46,629	46,629	34,128	37,163	61,550	35,868
Ic(n=27)	in4	33,158	35,488	22,337	28,886	42,322	22,337	32,922	32,922	32,922	32,922	24,789	26,834	42,322	25,746
Ss	in3	880.1	880.1	548.4	720.9	1109.1	548.4	783.5	783.5	783.5	783.5	548.4	642.6	1109.1	642.6
Sc(n=9)	in3	1224.3	1241.0	785.3	1011.6	1566.0	785.3	1135.8	1135.8	1135.8	1135.8	805.8	906.8	1566.0	897.6
Sc(n=27)	in3	1112.6	1135.2	702.7	917.4	1435.8	702.7	1037.4	1037.4	1037.4	1037.4	729.3	821.3	1435.8	809.7
DL	k/ft	0.745	0.868	0.555	0.656	0.868	0.577	0.868	0.868	0.868	0.868	0.689	0.718	0.868	0.599
MDL	k-ft	405.6	472.6	302.2	427.5	565.6	249.4	365.0	365.0	365.0	365.0	281.8	433.5	524.1	361.7
SDL	k/ft	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338	0.338
MSDL	k-ft	184.0	184.0	184.0	220.2	220.2	146.1	142.1	142.1	142.1	142.1	138.2	204.1	204.1	204.1
MLL	k-ft	538.3	567.6	538.3	612.9	636.5	469.5	478.9	478.9	478.9	478.9	452.2	584.0	606.5	584.0
MIMP	k-ft	141.0	148.7	141.0	155.7	161.7	127.7	130.7	130.7	130.7	130.7	123.9	150.1	155.9	150.1
MLL+I	k-ft	679.3	716.3	679.3	768.6	798.2	597.2	609.6	609.6	609.6	609.6	576.1	734.1	762.4	734.1
fs(DL)	ksi	5.53	6.44	6.61	7.12	6.12	5.46	5.59	5.59	5.59	5.59	6.17	8.10	5.67	6.75
fs(SDL)	ksi	1.98	1.94	3.14	2.88	1.84	2.49	1.64	1.64	1.64	1.64	2.27	2.98	1.71	3.02
fs(LL+I)	ksi	6.66	6.92	10.38	9.12	6.12	9.12	6.44	6.44	6.44	6.44	8.59	9.71	5.84	9.81
fs TOTAL	ksi	14.17	15.31	20.13	19.12	14.08	17.08	13.67	13.67	13.67	13.67	17.02	20.79	13.22	19.58
VR	k	36.5	38.4	36.5	37.5	38.9	36.2	37.5	37.5	37.5	37.5	36.1	37.3	33.8	37.3

Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
Ic AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING fs.
VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

BEAM REACTION TABLE		R161	R165 R164 R163 R162	R166	R176 R171	R175 R174 R173 R172	R181	R182	R183	R184	R185	R186	R196	R195 R194 R193 R192	R191
R_{DL}	k	35.7	39.8	29.5	35.9	43.5	26.9	35.0	35.0	35.0	35.0	29.4	36.7	41.9	32.6
R_{LL}	k	36.5	43.1	36.5	37.5	43.6	36.2	42.3	42.3	42.3	42.3	36.1	37.3	43.5	37.3
R_{IMP}	k	9.6	11.3	9.6	9.5	11.1	9.8	11.5	11.5	11.5	11.5	9.9	9.6	11.2	9.6
R TOTAL	k	81.8	94.2	75.6	82.9	98.2	72.9	88.8	88.8	88.8	88.8	75.4	83.6	96.6	79.5

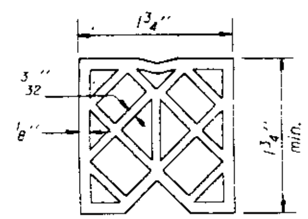
* 7/16" φ Holes at 12" cts. for 3/8" φ bolts set on 3" gage line. Bolts shall be cut off flush when forms are removed.

Note After Fabrication All Surfaces of the Steel Plates Shall be given One Shop Coat of Paint Specified for Structural Steel

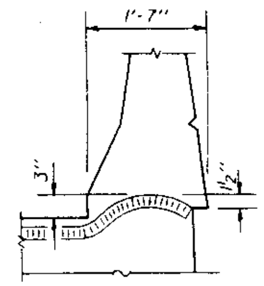


** Furnish in Segments of 20 Ft Maximum Length. Maximum Space between Installed Segments shall be 3/16" Seal Space with Silicone Sealant Suitable for Structural Stee.

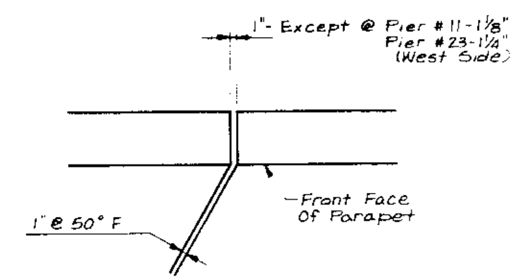
DETAIL "A"



PREFORMED JOINT SEAL (1 3/4")



TYP. END OF SEAL TREATMENT



FORMING BLOCKING SKETCH

PREFORMED JOINT SEAL (1 3/4")

STANLEY CONSULTANTS

MOMENT AND REACTION TABLE AND PREFORMED JOINT DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

C-50

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	*		844	561	SHEET NO. 36

* 1991-025R & 0303-474HB-I

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.

FOR LOCATION OF JOINTS SEE GENERAL PLAN AND ELEVATION SHEETS 1 AND 2.

INSTALLATION NOTES

(1) Install sponge mandrels into positions shown to form flap convolution.

(2) Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).

(3) Install continuous seal in roadway.

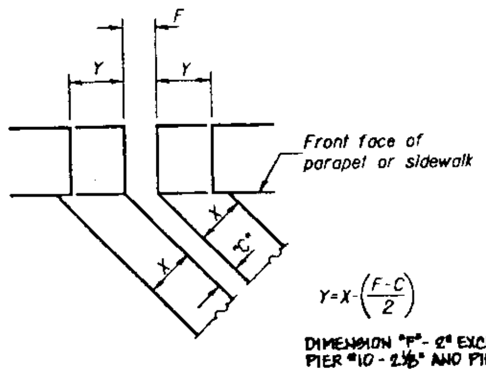
(4) Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

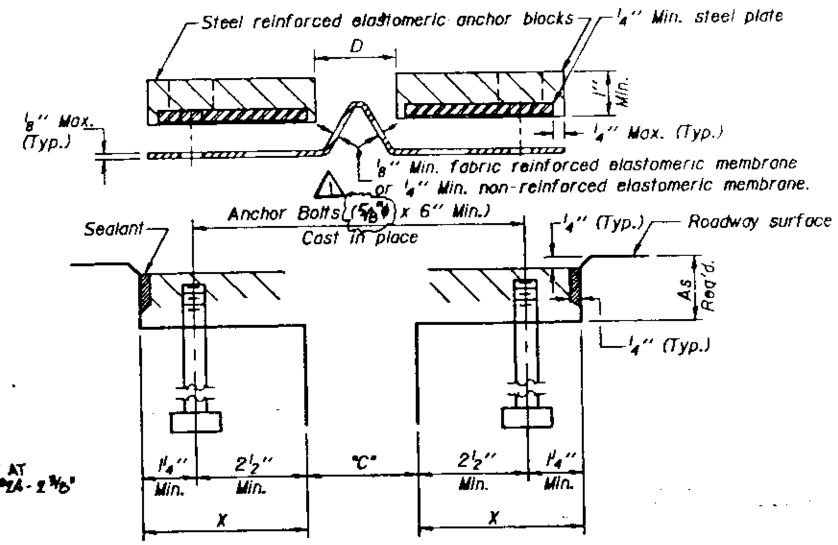
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



$Y = X - \left(\frac{F-C}{2}\right)$

DIMENSION "F" - 2" EXCEPT AT PIER #10 - 2⅛" AND PIER #24 - 2⅜"

FORMING BLOCKOUT SKETCH



CROSS SECTION

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

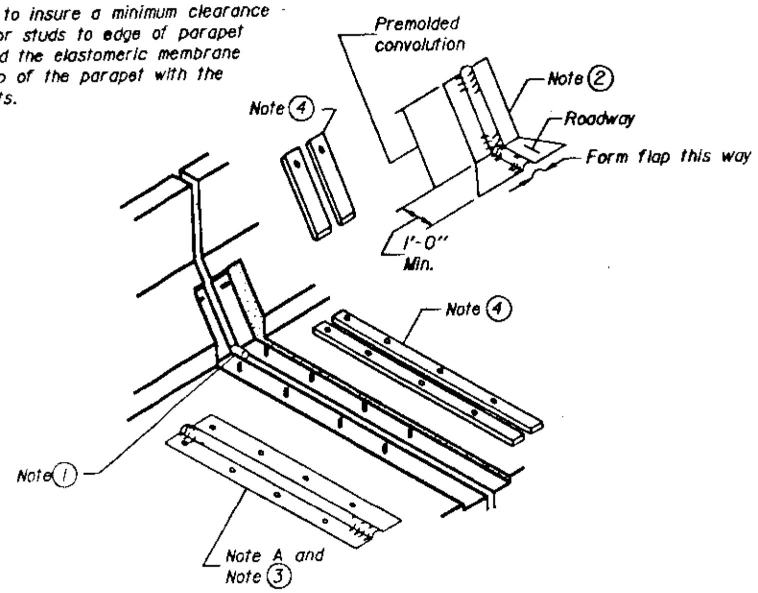
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

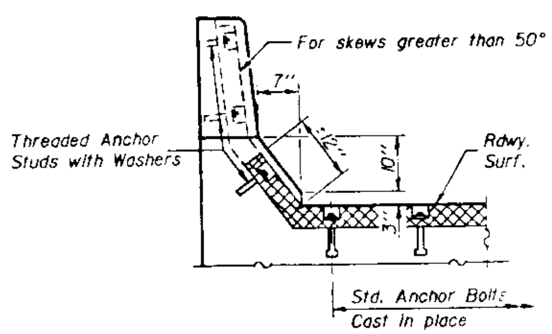
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

All anchor bolts for expansion joint shall be cast-in-place and tied to transverse reinforcing bars in deck.



AT PARAPET



AT PARAPET

EXPANSION JOINT DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

EJ-CS 12-31-87

C151

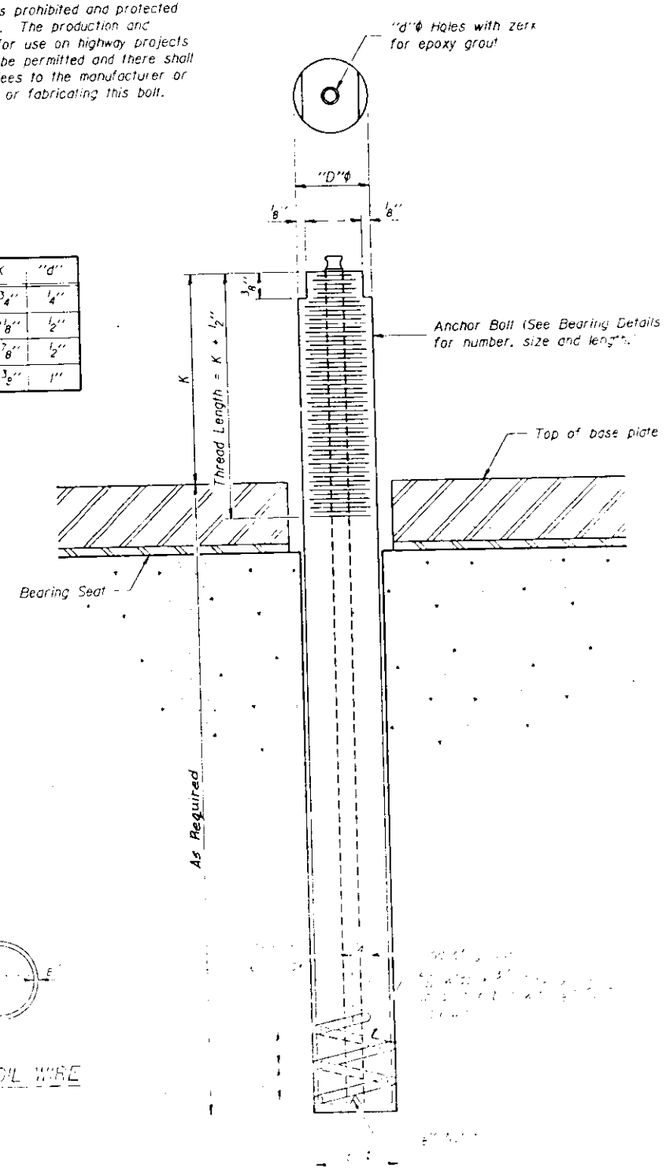
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		84	562
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT *		

* 1991-025R & 0303-474HB-1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

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



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1025 and supplied with hexagonal nuts and cut washers.

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

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

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemicals.

GENERAL NOTES

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

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

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Re-Setting Anchor Bolts."

Anchor bolts, washers and nuts, to be plated against corrosion in accordance with the special provisions, shall be zinc-coated by the mechanical plating method conforming to ASTM B695, Class 50. Zinc-coated nuts shall be tapped oversize in accordance with the requirements of AASHTO M291 and shall meet the supplementary requirements S1.1 thru S1.2.1 of the same specifications for lubricant and testing.

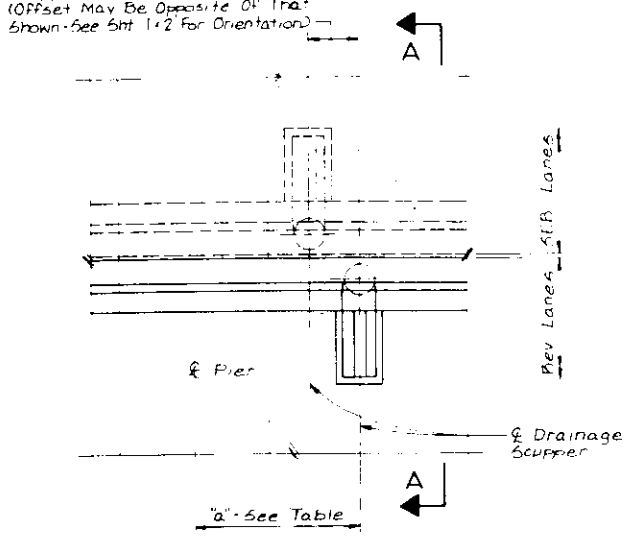
STANLEY CONSULTANTS

ABB-1 12-1-83

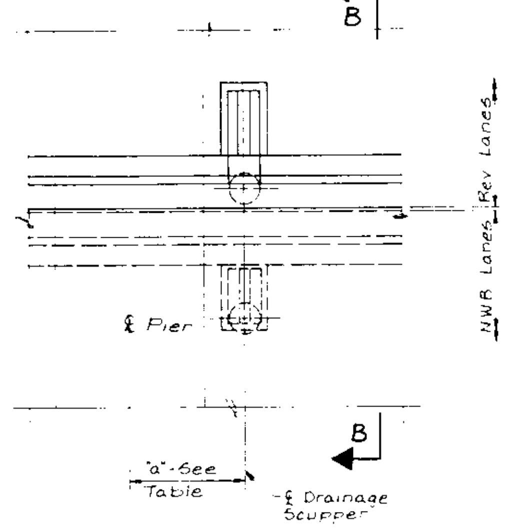
ANCHOR BOLT DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

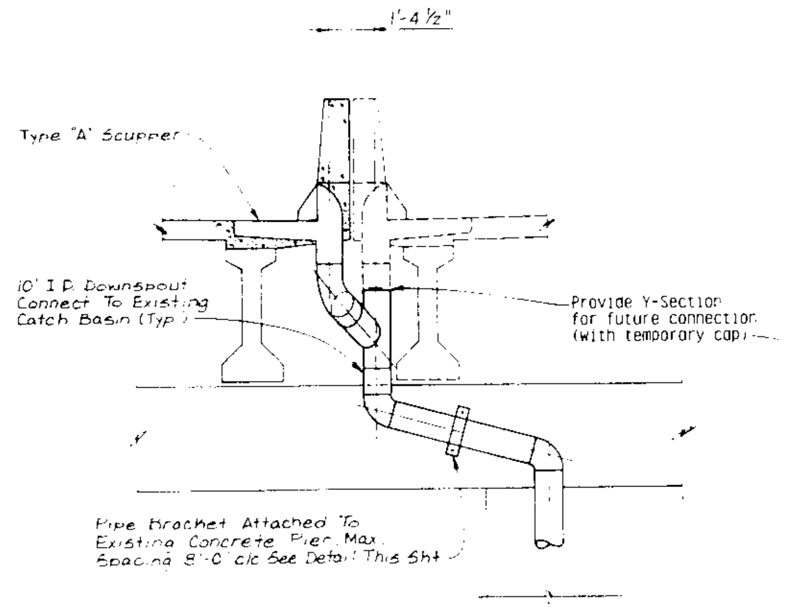
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



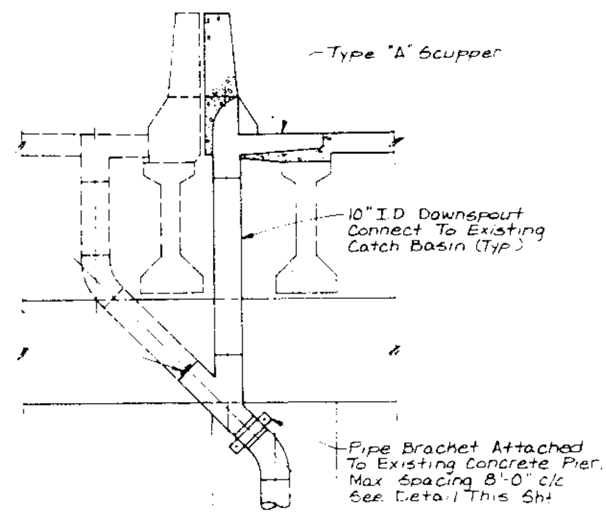
PLAN



PLAN

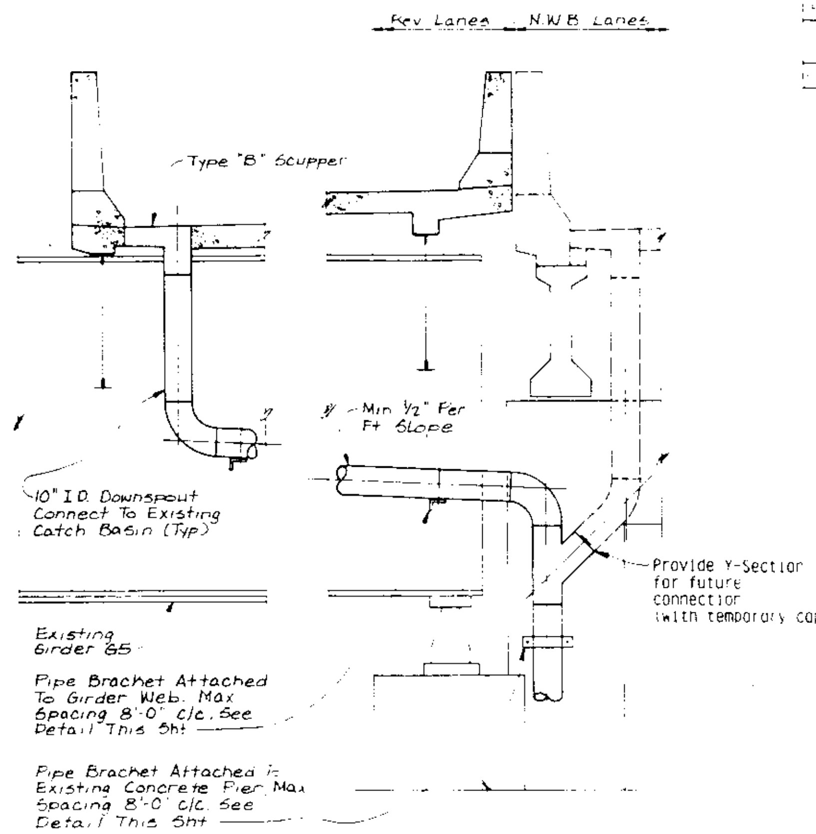


SECTION A-A

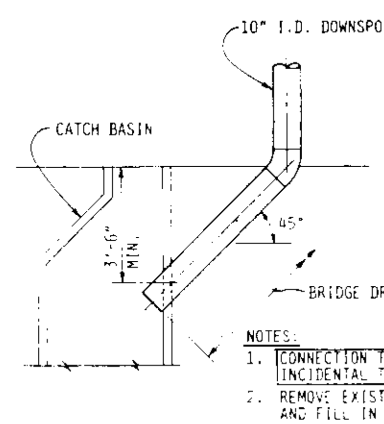


SECTION B-B

TYPICAL DRAIN DETAILS

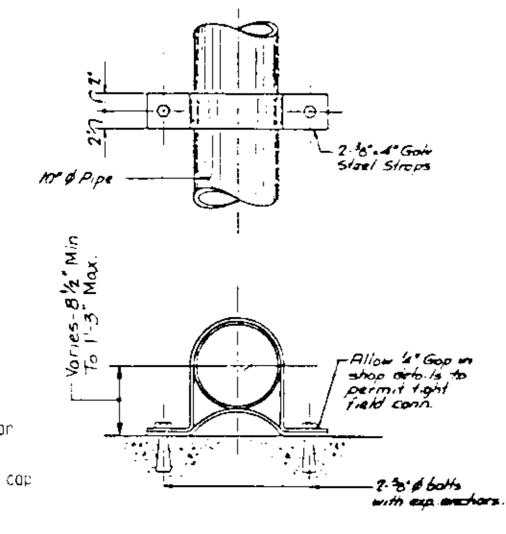


SECTION - DRAINAGE SYSTEM @ PIER 16
(Looking North)
Note: Drainage System @ Pier 18 Similar. (Opposite Hand)

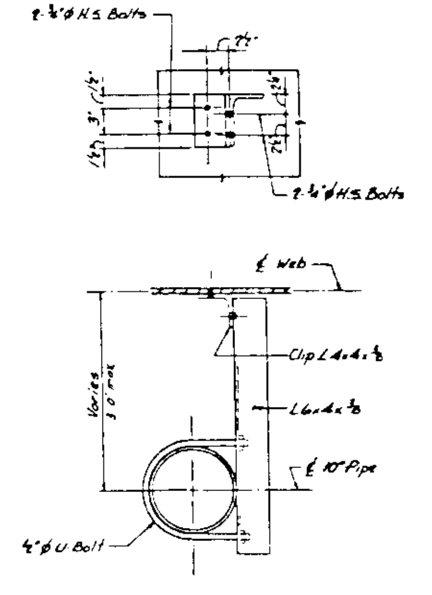


NOTES:
1. CONNECTION TO EXISTING CATCH BASIN SHALL BE INCIDENTAL TO DRAINAGE SYSTEM.
2. REMOVE EXISTING 6"Ø C.I. DOWNSPOUT CONNECTION AND FILL IN HOLE IN CATCH BASIN AS NEEDED.

DOWNSPOUT DRAINAGE SYSTEM
CONNECTION TO CATCH BASIN DETAIL



PIPE BRACKET DETAIL
(TO CONCRETE)



PIPE BRACKET DETAIL
(TO GIRDER WEB)

NOTES:
1. See Sheets 1 And 2 For Location And Orientation Of Drains And Drainage Scuppers
2. For Bridge Scupper Details See Sheets 39 Thru 41
3. Locate Drains To Clear [illegible]

DRAINAGE SCUPPER LOCATION TABLE

LOCATION	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 10	PIER 13	PIER 15	PIER 16	PIER 18	PIER 19	PIER 21	PIER 23	PIER 24
TYPE (EAST)	A	A	A	A	A	A	A	A	A	A	-	-	-	-	-	-	-
DIMENSION "a"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	5'-9"	3'-6"	-	-	-	-	-	-	-
DRAINAGE STRUCTURE NO.**	4	7	14	17	24	27	33	36	6	19	-	-	-	-	-	-	-
TYPE (WEST)	A	-	A	-	A	-	A	-	A	A	A	B	B	B	A	A	A
DIMENSION "a"	3'-6"	-	5'-0"	-	5'-0"	-	5'-0"	-	3'-6"	5'-0"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	5'-9"	5'-9"
DRAINAGE STRUCTURE NO.**	2	-	[illegible]	-	23	-	32	-	5	[illegible]	22	ORIG. CB*	30	33	21	[illegible]	[illegible]
UNDERGROUND PIPING	SEE SHEET 49								SEE SHEET 50						SEE SHEET 51		

* ATTACH DOWNSPOUT TO ORIGINAL CATCH BASIN NEAR PIER COLUMN 16E
** SEE SHEET 49,50,51 FOR TYPE AND LOCATION OF DRAINAGE STRUCTURE TO WHICH SCUPPER DOWNSPOUT WILL CONNECT.

STANLEY CONSULTANTS

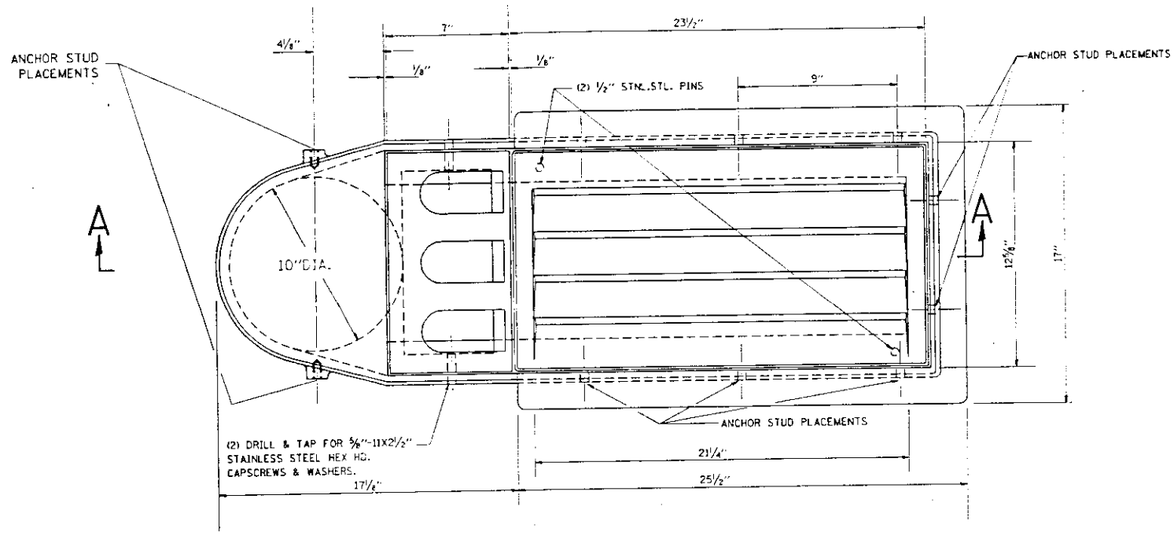
DRAINAGE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

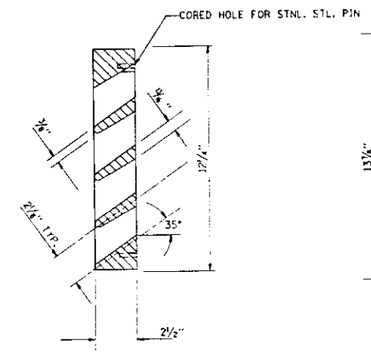
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		844	564
F. HW. & REG. 4		ILLINOIS	FED. AID PROJECT	

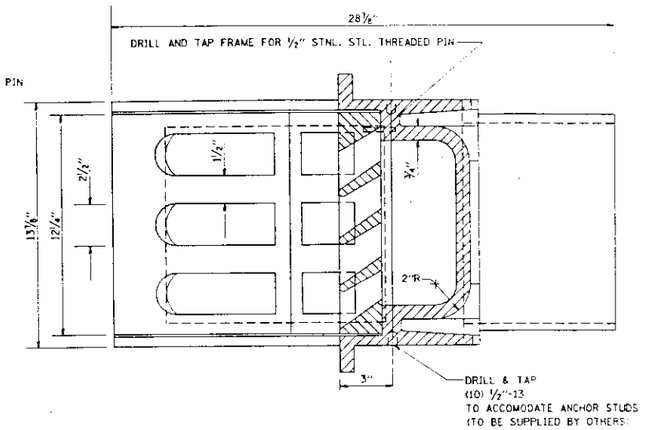
* 1991-025R & 0303-474HB-1

SHEET NO. 39
SHEETS



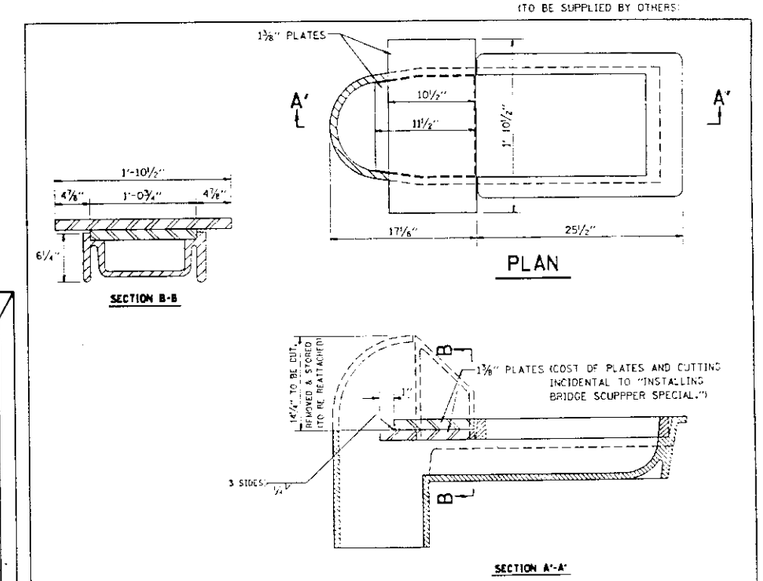
PLAN





BRIDGE SCUPPER - TYPE "A"

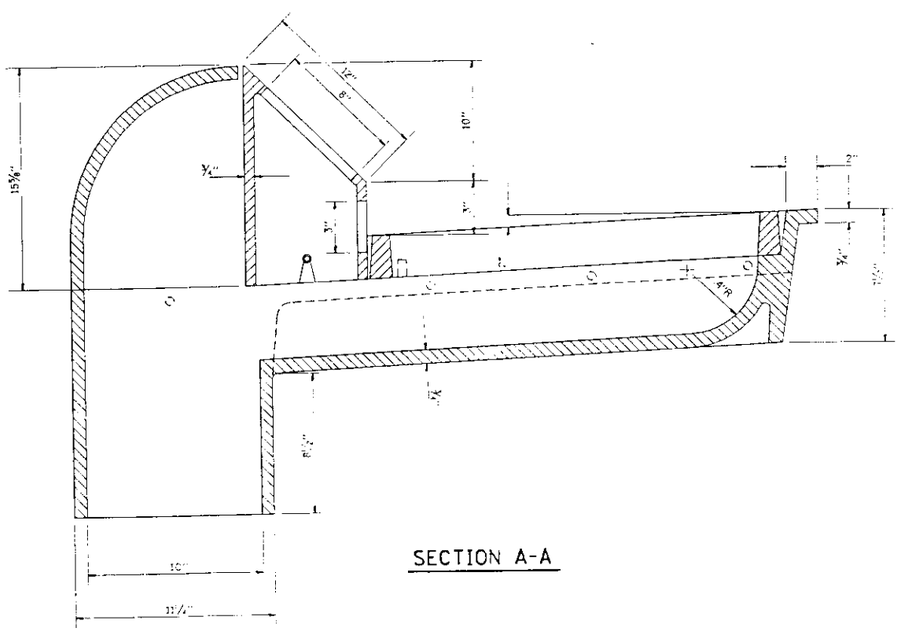
NF - 0332 445
ESTIMATED WEIGHT 512*



PLAN

BRIDGE SCUPPER - SPECIAL

ONLY FOR MEDIAN PARAPET
DURING STAGED CONSTRUCTION.
(MEDIAN PARAPET IS OMITTED TEMPORARILY.)



SECTION A-A

SCHEDULE OF QUANTITIES	
STRUCTURE	NO. REQUIRED
TOTAL	

NOTE: A NEOPRENE PAD SHALL BE PROVIDED BETWEEN THE SCUPPER AND THE BEAM. (BY OTHERS)

MATERIAL: CAST GREY IRON ASTM A-48, CLASS 35B
FINISH: NONE

BRIDGE SCUPPER - TYPE A
SHEET 1 OF 2

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

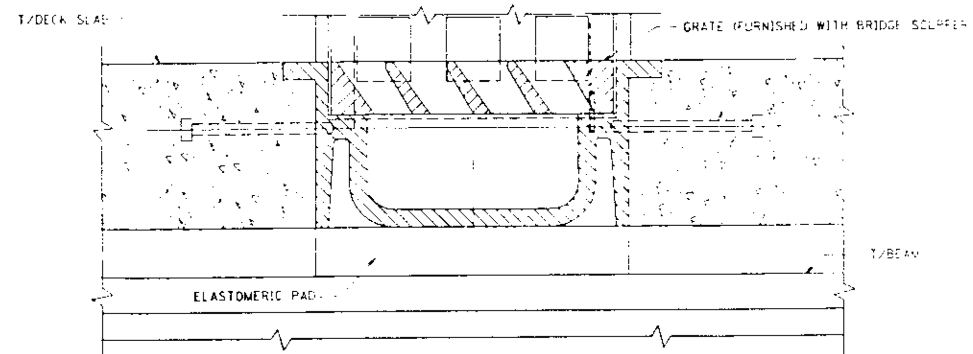
STANLEY CONSULTANTS

C154

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		844	565

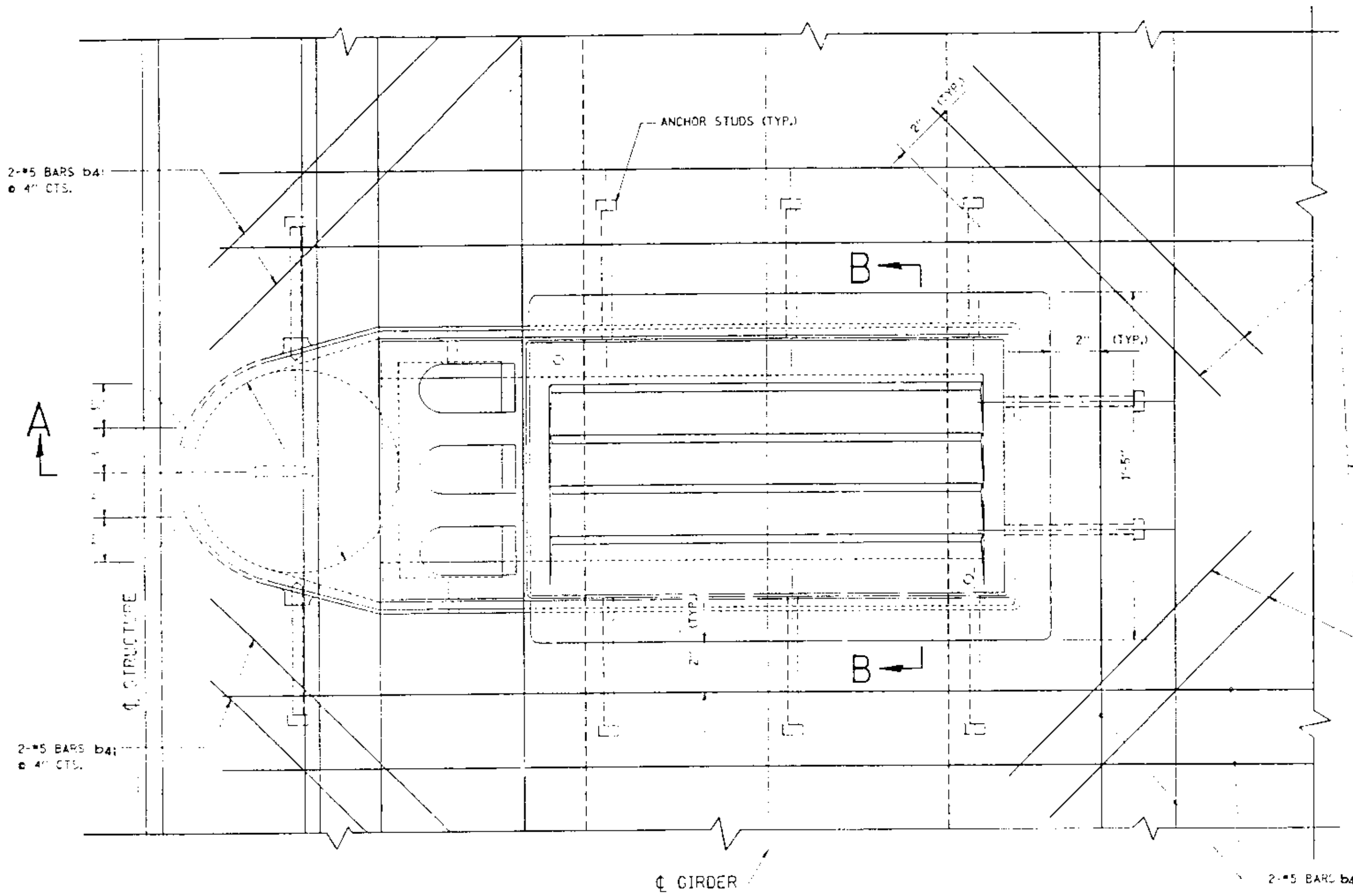
• 1991-025R & 0303-474HB-I

SHEET NO. 40 SHEETS

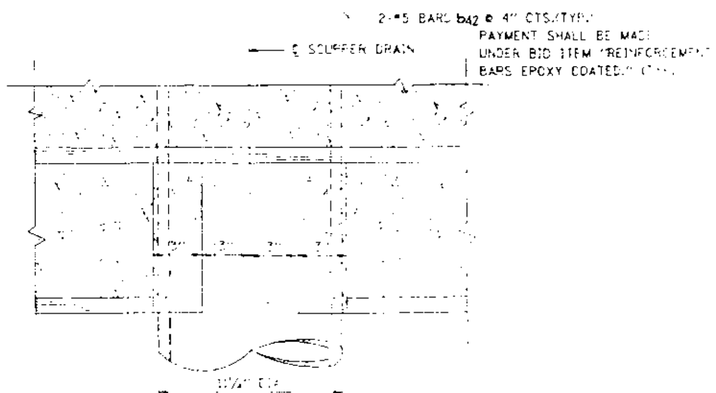


SECTION B-B

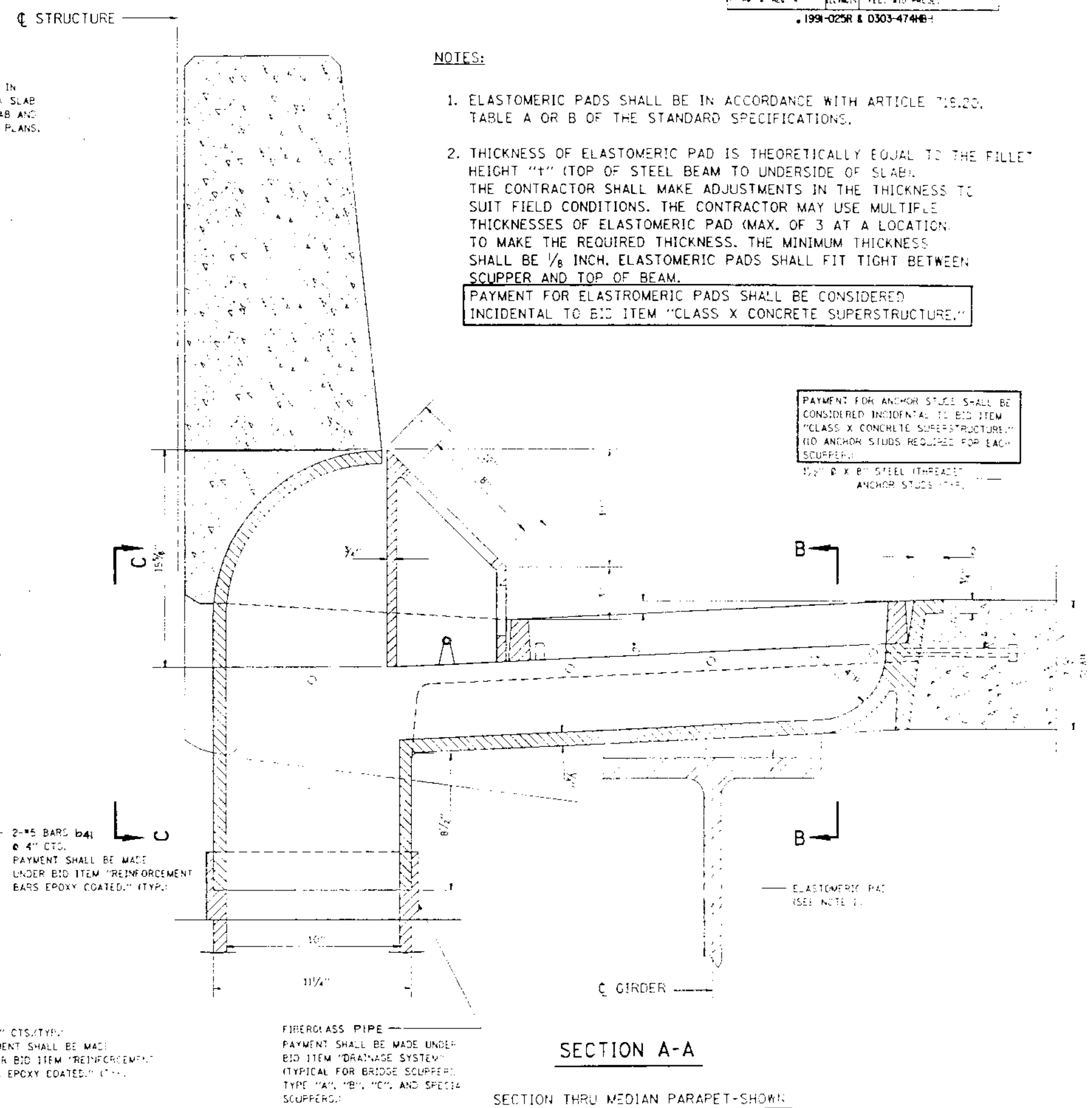
STEEL REINFORCING IN PARAPETS AND DECK SLAB SHOWN ON DECK SLAB AND PARAPET CONTRACT PLANS.



PLAN



VIEW C-C



NOTES:

1. ELASTOMERIC PADS SHALL BE IN ACCORDANCE WITH ARTICLE 719.20, TABLE A OR B OF THE STANDARD SPECIFICATIONS.

2. THICKNESS OF ELASTOMERIC PAD IS THEORETICALLY EQUAL TO THE FILLET HEIGHT "t" (TOP OF STEEL BEAM TO UNDERSIDE OF SLAB). THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE THICKNESS TO SUIT FIELD CONDITIONS. THE CONTRACTOR MAY USE MULTIPLE THICKNESSES OF ELASTOMERIC PAD (MAX. OF 3 AT A LOCATION) TO MAKE THE REQUIRED THICKNESS. THE MINIMUM THICKNESS SHALL BE ⅛ INCH. ELASTOMERIC PADS SHALL FIT TIGHT BETWEEN SCUPPER AND TOP OF BEAM.

PAYMENT FOR ELASTROMERIC PADS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE."

SECTION A-A

SECTION THRU MEDIAN PARAPET-SHOWN

(SIMILAR IF TYPE "A" SCUPPERS ARE USED AT OUTSIDE PARAPET.)

REINFORCEMENT BAR SCHEDULE

MARK	NO.	SIZE	LENGTH	SHAPE
b41	[illegible]	#[illegible]	[illegible]	—
b42	[illegible]	#5	[illegible]	—

STANLEY CONSULTANTS

VI=CS-4

BRIDGE SCUPPER - TYPE A
SHEET 2 OF 2

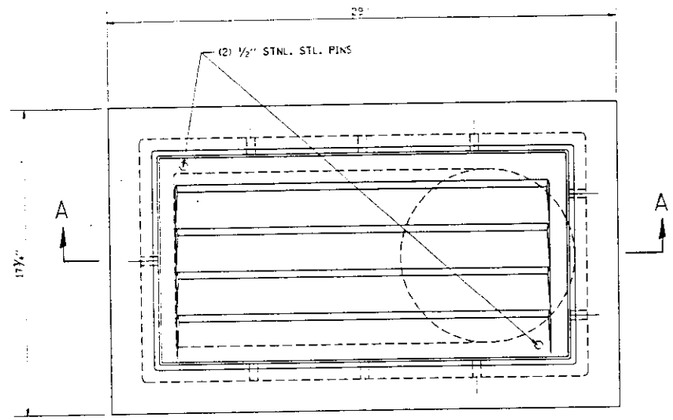
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

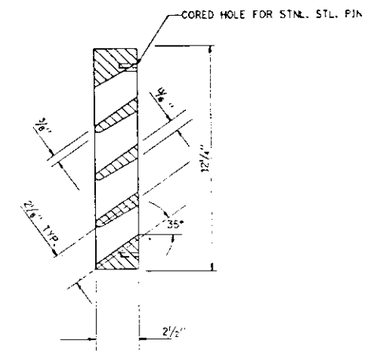
C55

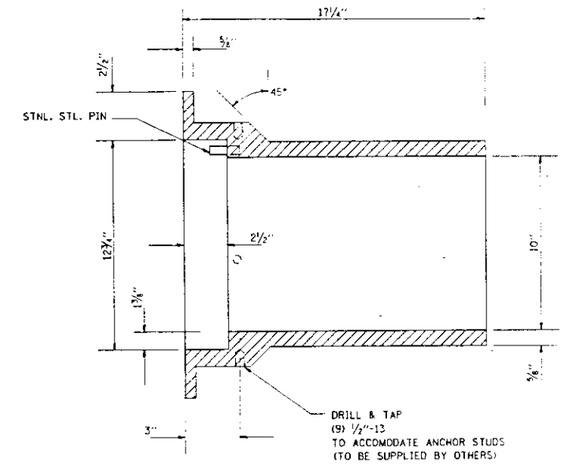
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		844	566
F. HWY. A. REG. 4	ILLINOIS	FED. AID PROJECT		

*1991-025R & 0303-474HB-H

SHEET NO. 41
SHEET

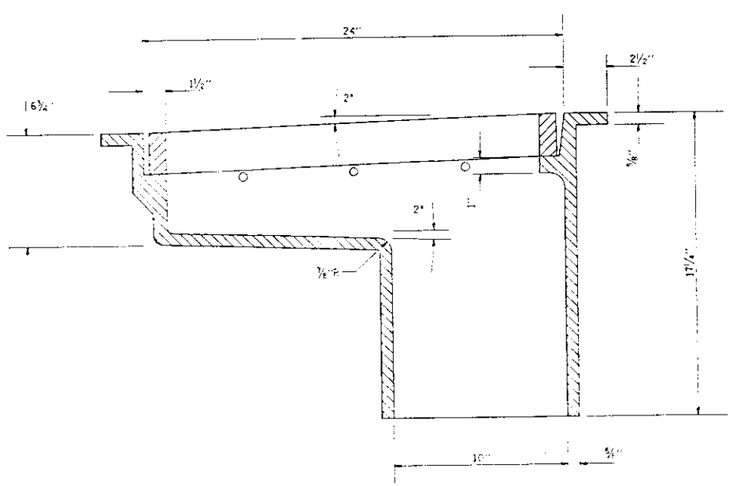






BRIDGE SCUPPER - TYPE "B"

NF - 0332 435
ESTIMATED WEIGHT 235*



SECTION A-A

SCHEDULE OF QUANTITIES	
STRUCTURE	NO. REQUIRED
TOTAL	

NOTE: A NEOPRENE PAD SHALL BE PROVIDED BETWEEN THE SCUPPER AND THE BEAM. (BY OTHERS).

MATERIAL: CAST GREY IRON ASTM A-48, CLASS 35B
FINISH: NONE

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BRIDGE SCUPPER - TYPE B
SHEET 1 OF 2

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

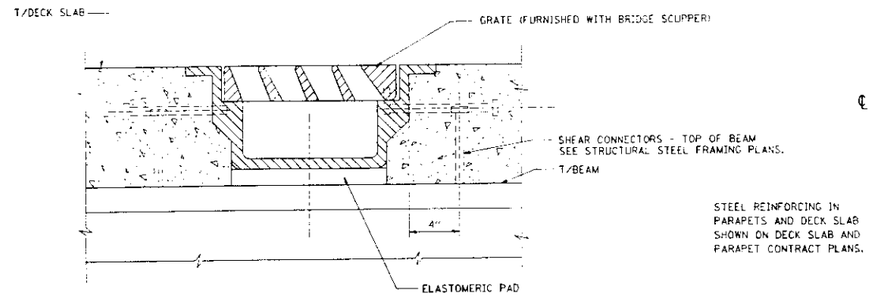
C156

CS-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		846	567
F. HW. A. REG. 4	ILLINOIS FED. AID PROJECT			

SHEET NO. 42
SHEETS

*1994-025R & 0303-474HB-1



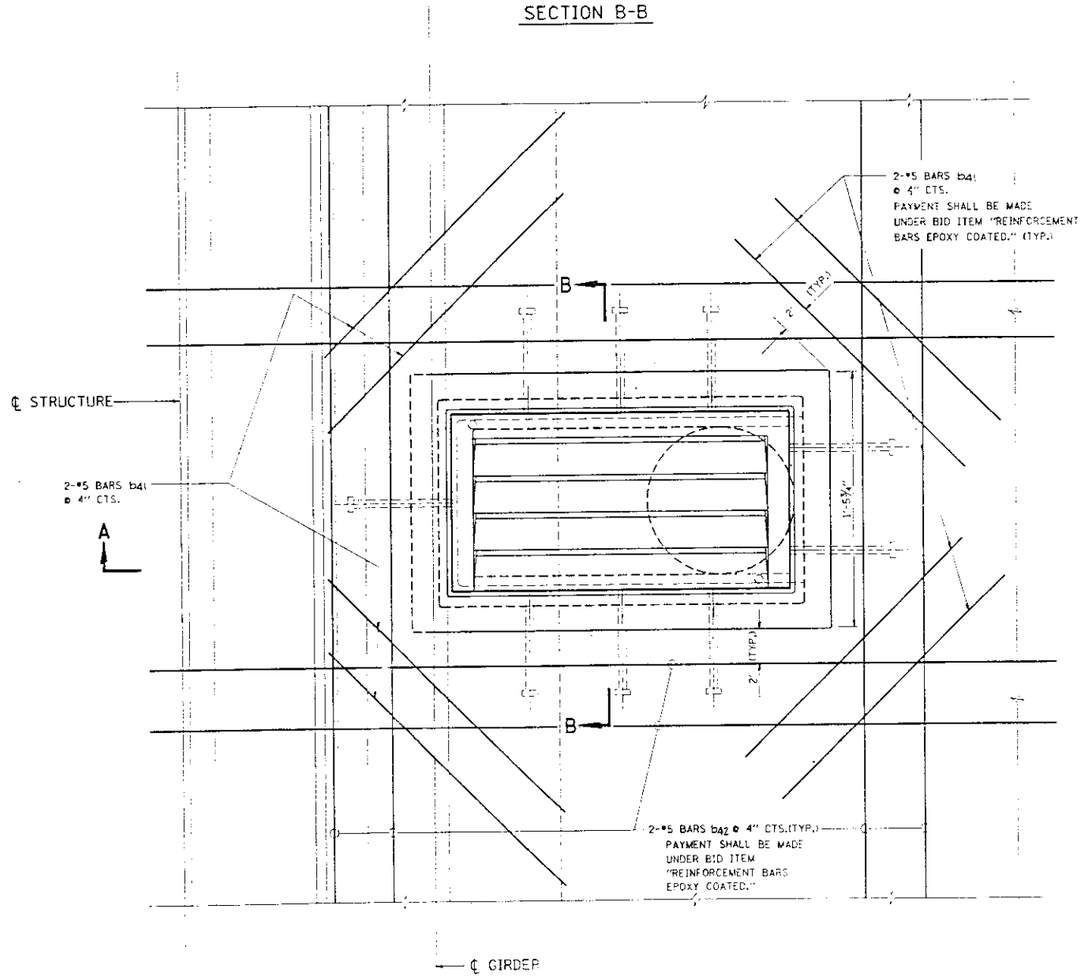
STEEL REINFORCING IN PARAPETS AND DECK SLAB SHOWN ON DECK SLAB AND PARAPET CONTRACT PLANS.

SECTION B-B

NOTES:

1. ELASTOMERIC PADS SHALL BE IN ACCORDANCE WITH ARTICLE 7.8.20, TABLE A OR B OF THE STANDARD SPECIFICATIONS.
2. SHEAR CONNECTORS SHALL BE ¾" STL. GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED.
3. THICKNESS OF ELASTOMERIC PAD IS THEORETICALLY EQUAL TO THE FILLET HEIGHT "t" (TOP OF STEEL BEAM TO UNDERSIDE OF SLAB). THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE THICKNESS TO SUIT FIELD CONDITIONS. THE CONTRACTOR MAY USE MULTIPLE THICKNESSES OF ELASTOMERIC PAD (MAX. OF 3 AT A LOCATION) TO MAKE THE REQUIRED THICKNESS. THE MINIMUM THICKNESS SHALL BE ⅛ INCH. ELASTOMERIC PADS SHALL FIT TIGHT BETWEEN SCUPPER AND TOP OF BEAM.

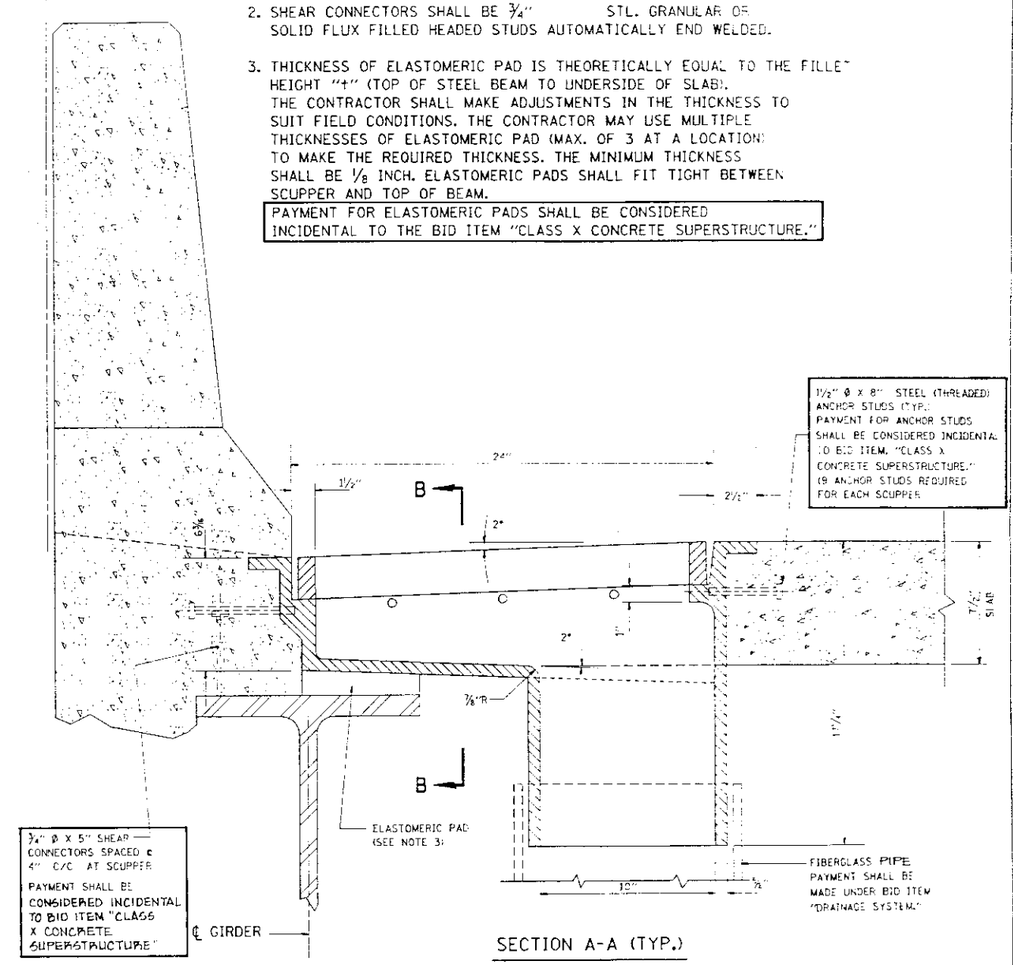
PAYMENT FOR ELASTOMERIC PADS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE."



PLAN

REINFORCEMENT BAR SCHEDULE

MARK	NO.	SIZE	LENGTH	SHAPE
b41 (E)	8	#5	2'-0"	—
b42 (E)	8	#5	5'-0"	—



SECTION A-A (TYP.)

SECTION THRU MEDIAN PARAPET-SHOWN

(SIMILAR IF TYPE "B" SCUPPERS ARE USED AT OUTSIDE PARAPET.)

STANLEY CONSULTANTS

BRIDGE SCUPPER - TYPE B
SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

C 87

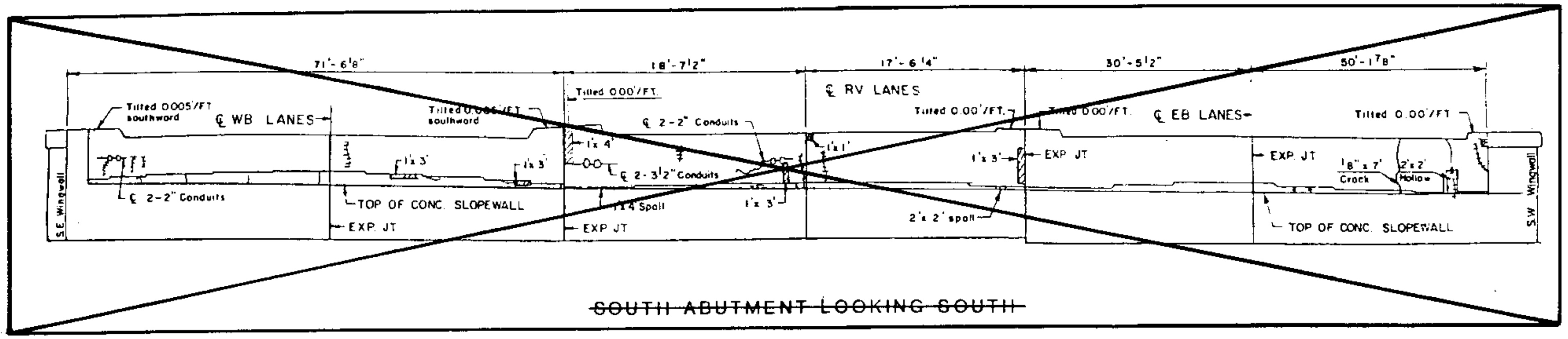
SHEET NO. 43 SHEETS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		344	56

F. HW. A. REG. 4 — ILLINOIS FED. AID PROJECT

• 1991-025R & 0303-474HB-I

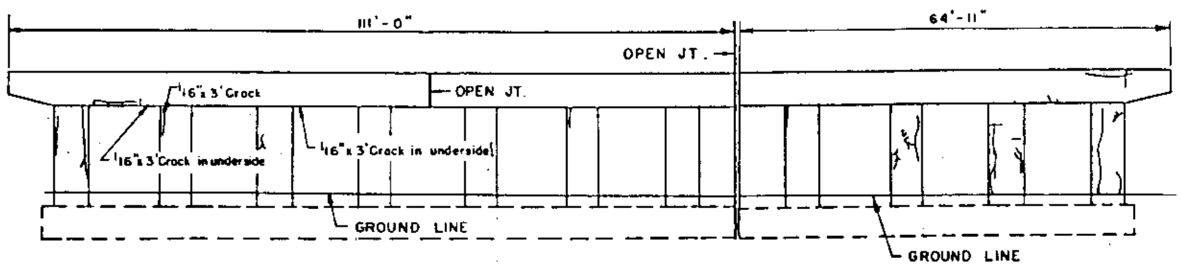
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



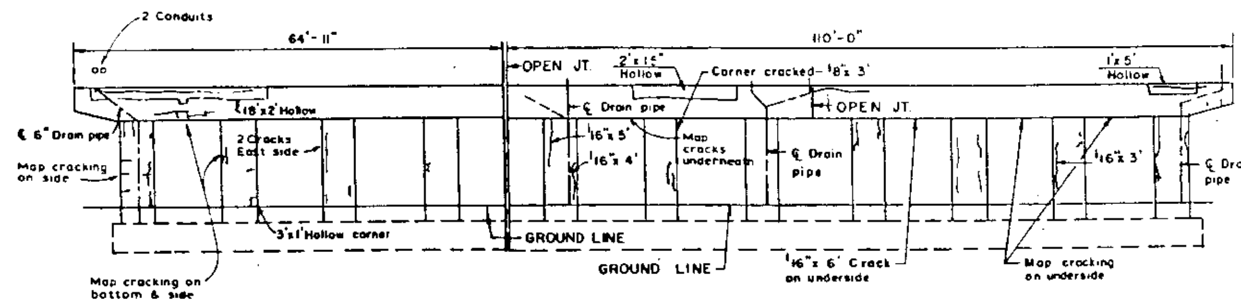
~~SOUTH ABUTMENT LOOKING SOUTH~~

NOTES:

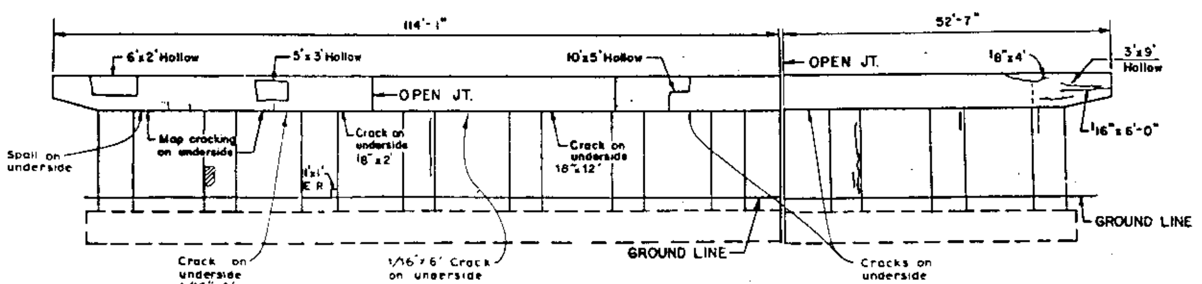
1. THIS DRAWING SHOWS AREAS WHERE CONCRETE SPALLING AND CRACKING HAVE BEEN OBSERVED AT THE EXISTING PIERS AND ABUTMENTS.
2. TO DETERMINE EXACT AREAS WHERE DETERIORATION REQUIRES CONCRETE REPAIR, CONCRETE SURFACES SHALL BE SOUNDED WITH HAMMER TO DETECT LOOSE OR DEFECTIVE AREAS THAT MAY EXIST.
3. SEE SPECIAL PROVISIONS FOR PROCEDURES DESCRIBING THE REHABILITATION WORK.
4. REPAIR AREAS SHOWN REFLECT AN INDEPENDENT FIELD INSPECTION PERFORMED UNDER THE DIRECTION OF IDOT. REPAIR OF THE EXISTING SUBSTRUCTURE SHALL INCLUDE BUT NOT BE LIMITED TO THESE AREAS. ALL LIMITS OF REPAIR SHALL BE AS DIRECTED BY THE ENGINEER.
5. FOR REPAIR DEPTHS < 1-1/2", USE EPOXY MORTAR REPAIR (SEE SPECIAL PROVISIONS.
6. ANY AREAS REQUIRING REPAIR WHICH ARE INACCESSIBLE DURING THIS CONTRACT SHALL BE NOTED AS SUCH ON THE CONSTRUCTION PLANS AS DIRECTED BY THE ENGINEER. REPAIR OF THESE AREAS SHALL BE INCLUDED IN A FUTURE CONTRACT.
7. FOR CONCRETE REMOVAL AND REPLACEMENT DETAILS, SEE "CONCRETE REPAIR DETAILS" ELSEWHERE IN THE PLANS.
8. PIER REPAIR WORK THIS CONTRACT WILL BE APPROXIMATELY 3'-0" EACH SIDE OF NEW REVERSIBLE LANES AND AS DIRECTED BY THE ENGINEER.



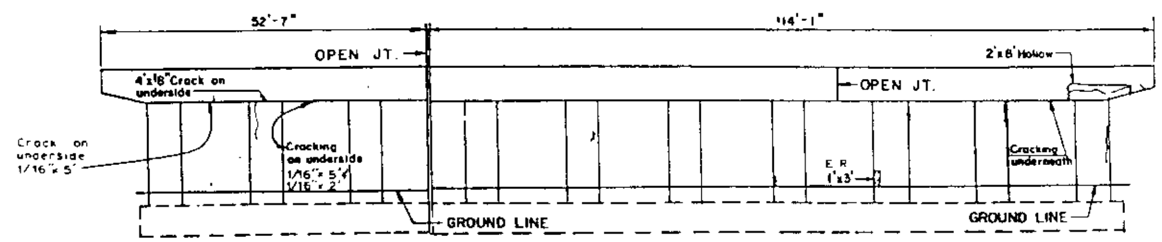
PIER NO. 1 - LOOKING NORTH



PIER NO. 1 - LOOKING SOUTH



PIER NO. 2 - LOOKING NORTH



PIER NO. 2 - LOOKING SOUTH

LEGEND

Symbol	Meaning
E.R.	EXPOSED REINFORCING BAR
~	CRACKS
+++	CRACKS WITH LEACHING
▥	LEACHING
▨	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 1 OF 6

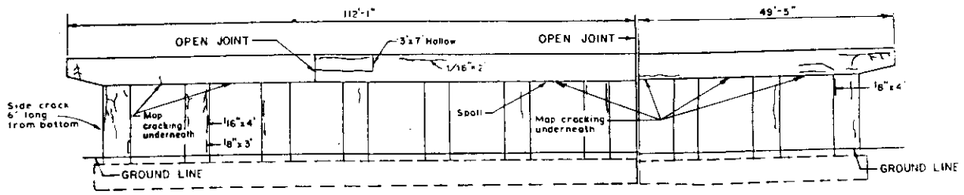
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

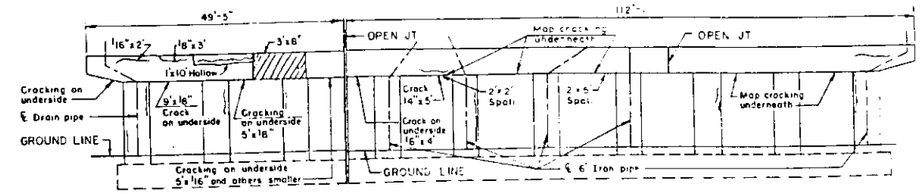
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	4		804	569

*1981-025R & 0303-474HB-1

SHEET NO. 44
SHEETS



PIER NO. 3 - LOOKING NORTH



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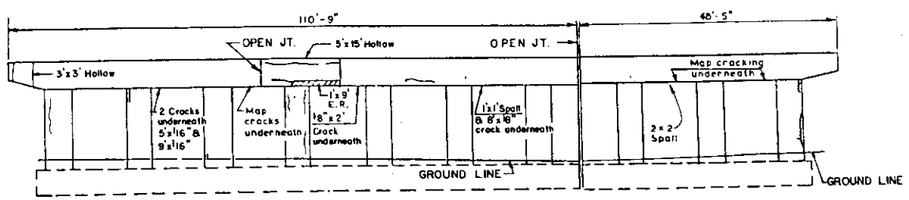

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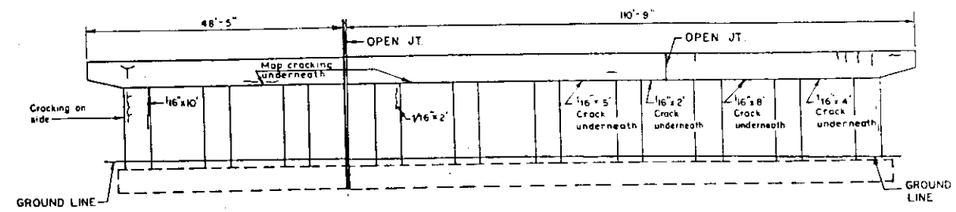

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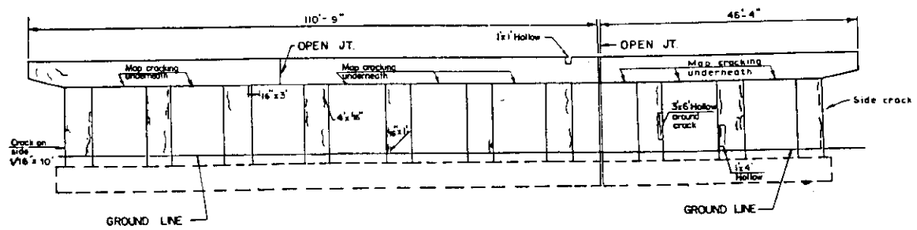

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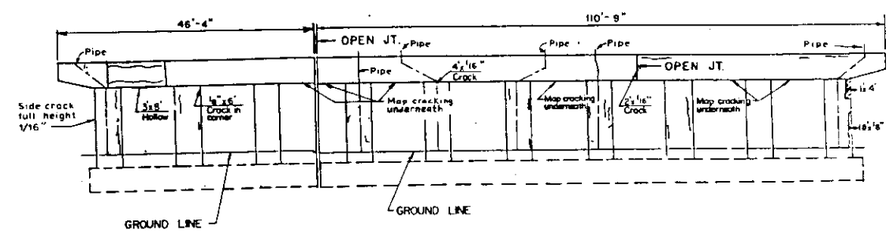


PIER NO. 5 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 6.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

SUBSTRUCTURE REHABILITATION
SHEET 2 OF 6

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

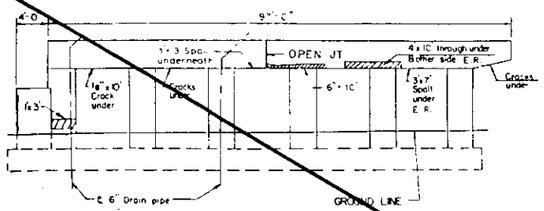
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

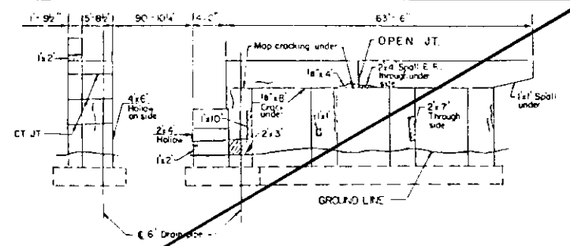
844 570

SHEET NO. 45
SHEETS

* 1991-025R & 0303-474HB-



~~PIER NO. 15 - LOOKING NORTH~~



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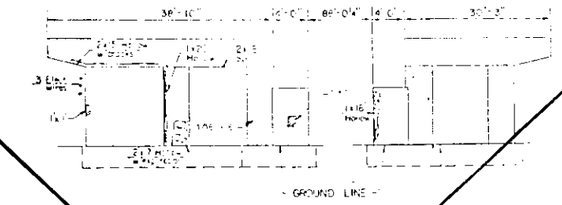

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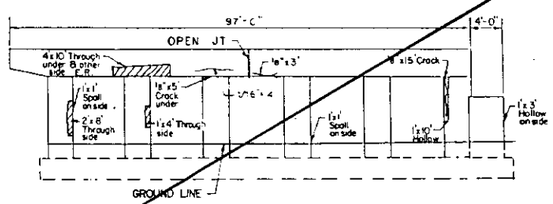
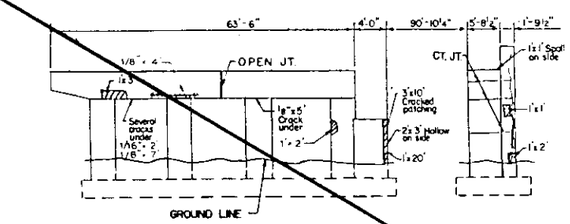


~~PIER NO. 15 - LOOKING SOUTH~~



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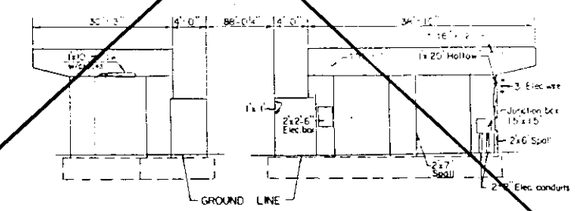

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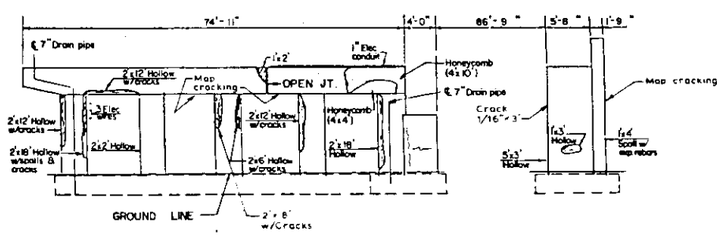

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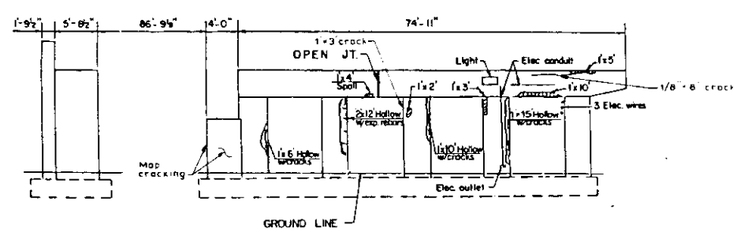


PIER NO. 18 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 6.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 3 OF 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

C160

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

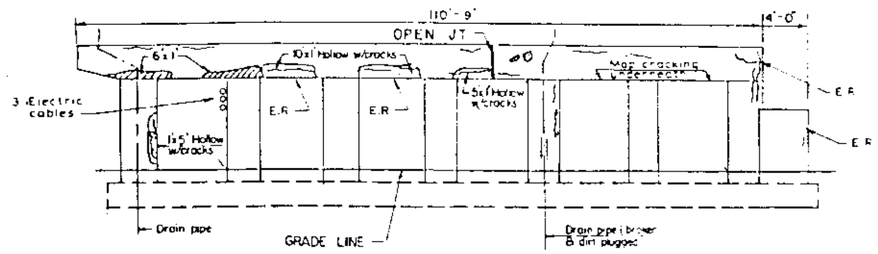
SHEET No. 46

844 57

1999-025R & 0303-474HB

LEGEND
E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING
LEACHING
SPALLS

NOTE:
FOR NOTES SEE SHEET 1 OF 6.



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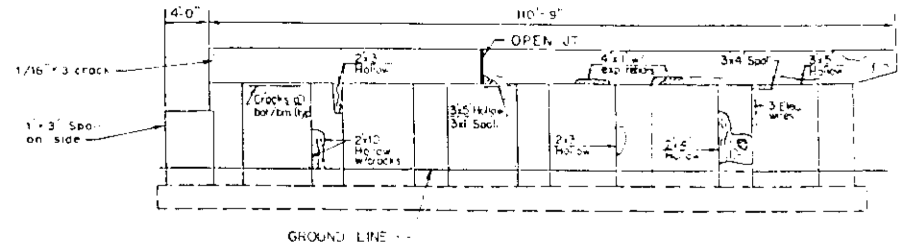
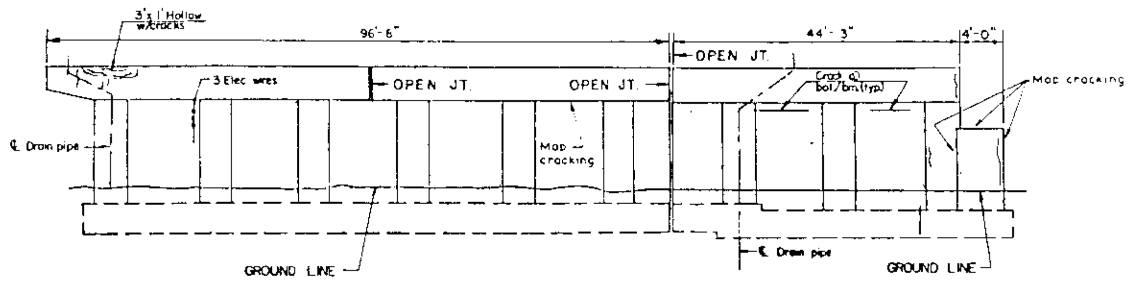


PIER NO. 19 - LOOKING SOUTH



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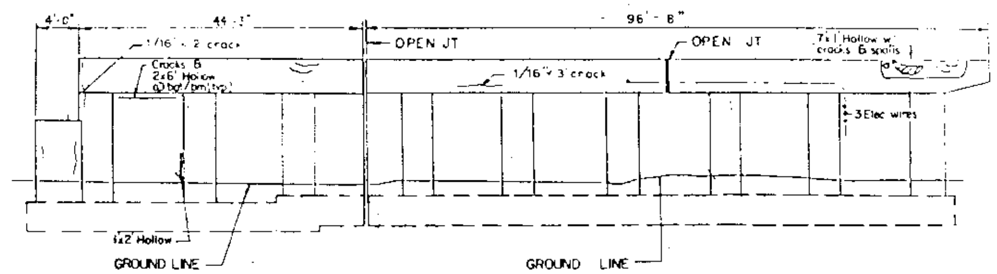

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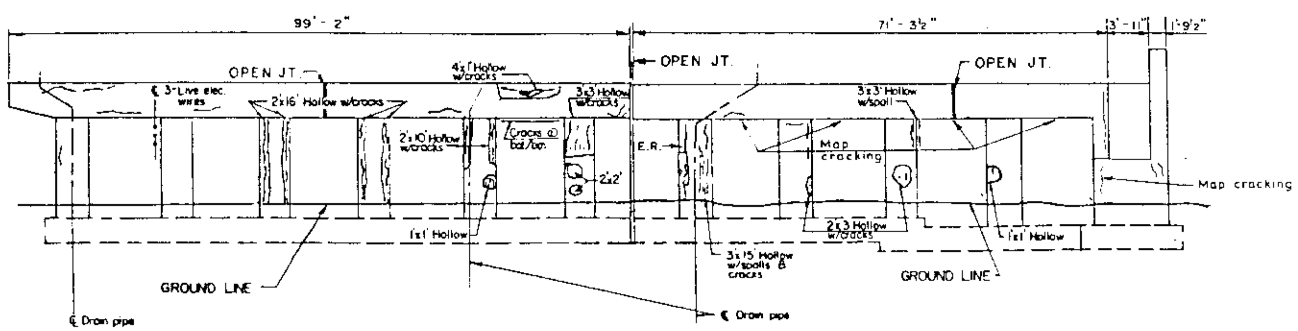

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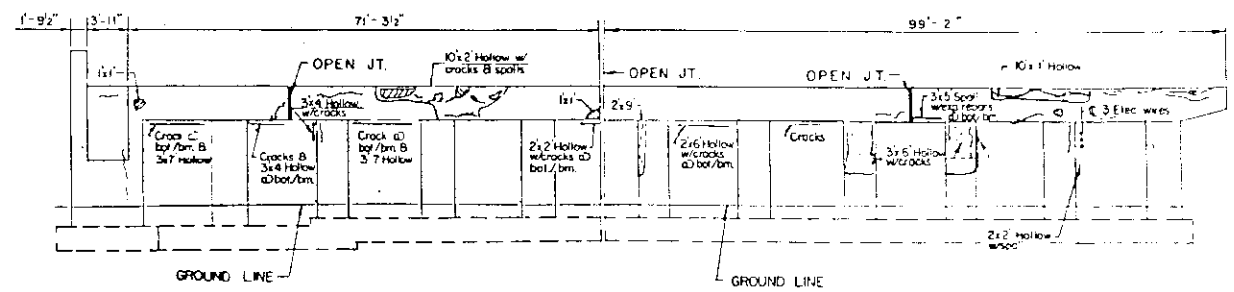


PIER NO. 21 - LOOKING SOUTH

STANLEY CONSULTANTS

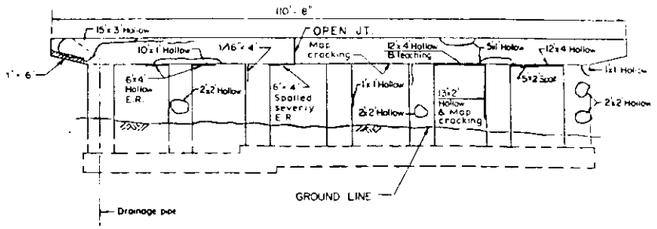
SUBSTRUCTURE REHABILITATION
SHEET 4 OF 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

C161

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

844 572

*1991-025R & 0303-474HEH



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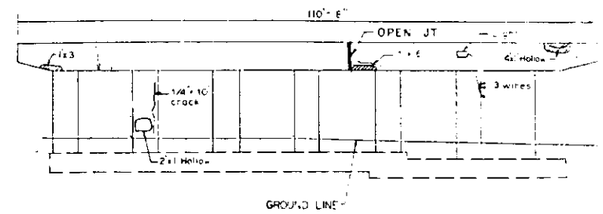

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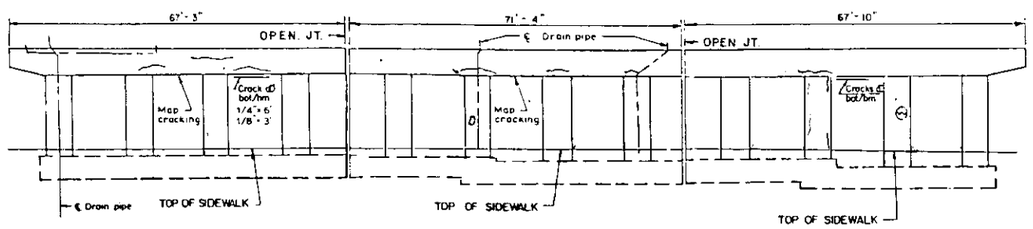

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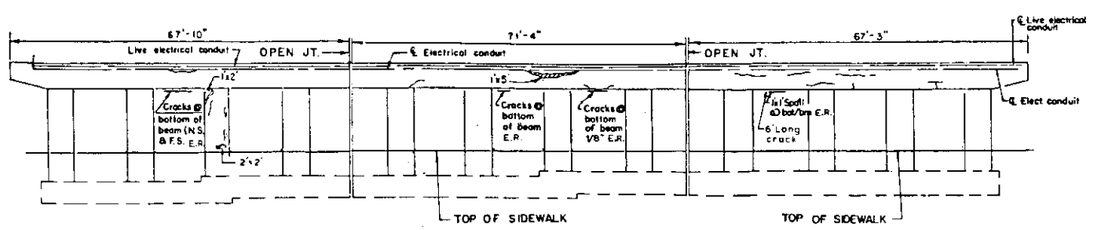


PIER NO. 23 - LOOKING SOUTH

NOTE :
FOR NOTES, SEE SHEET 1 OF 6.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION

SHEET 5 OF 6
SECTION

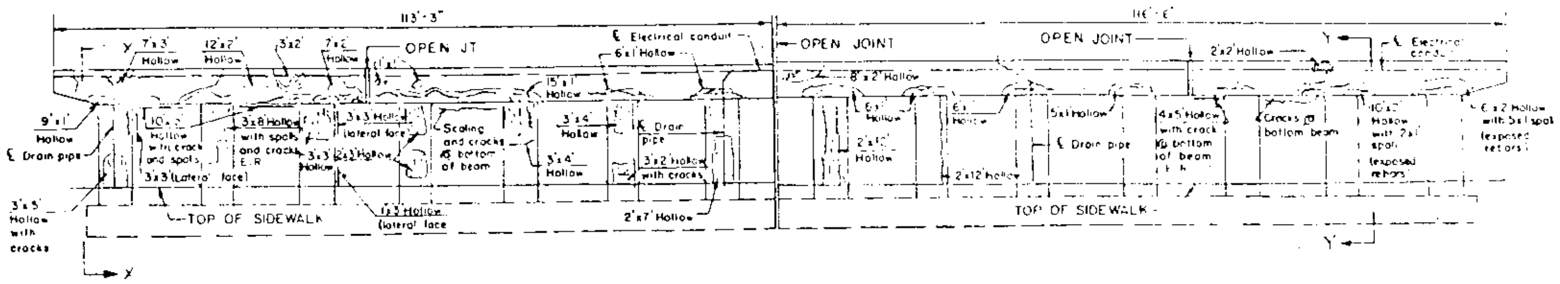
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

C162

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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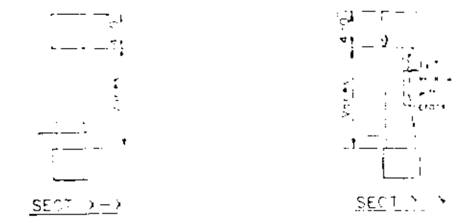

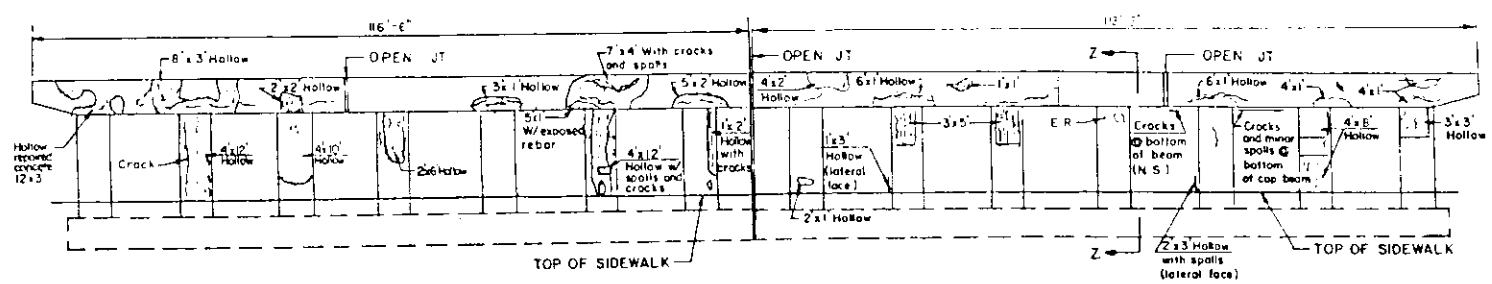

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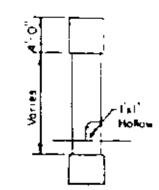
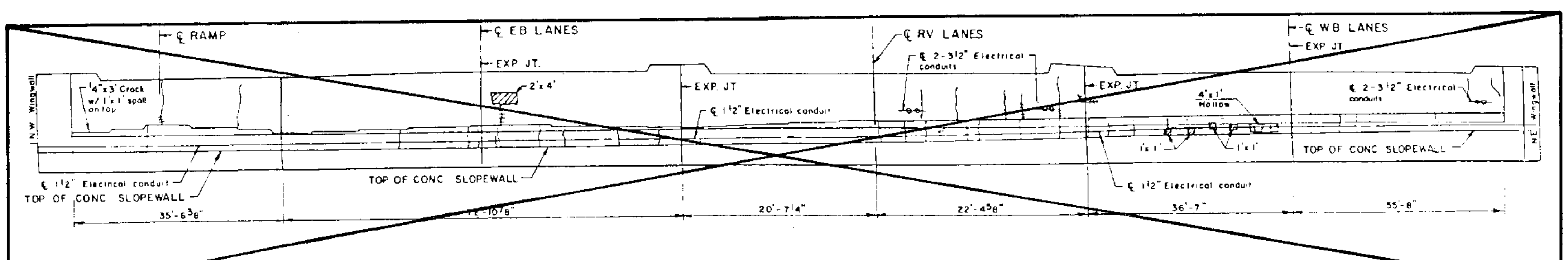


SECT Z-Z



~~NORTH ABUTMENT LOOKING NORTH~~

NOTE:
FOR NOTES, SEE SHEET 1 OF 6.

LEGEND
E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING
LEACHING
SPALLS

SUBSTRUCTURE REHABILITATION
SHEET 6 OF 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

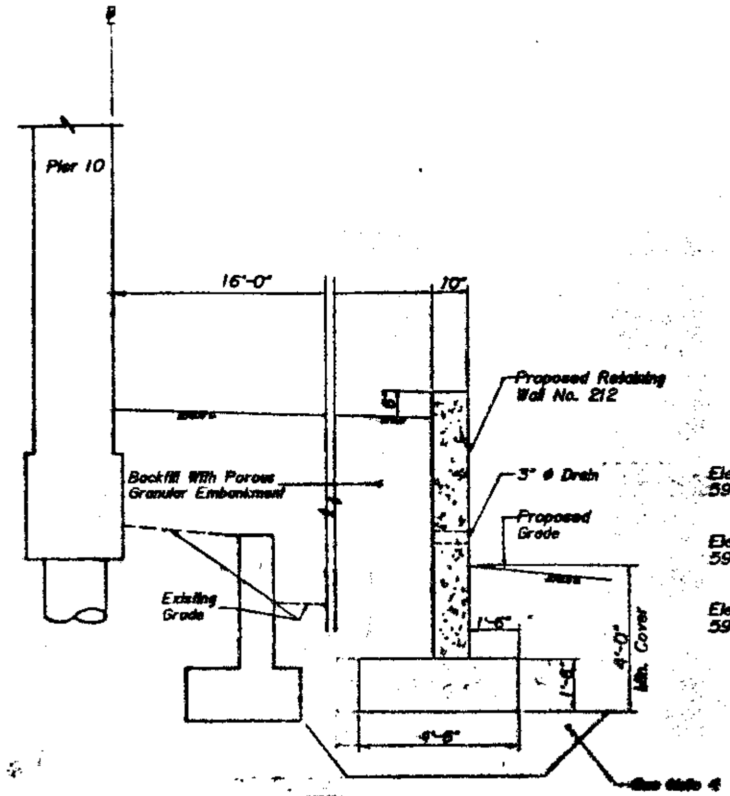
C163

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

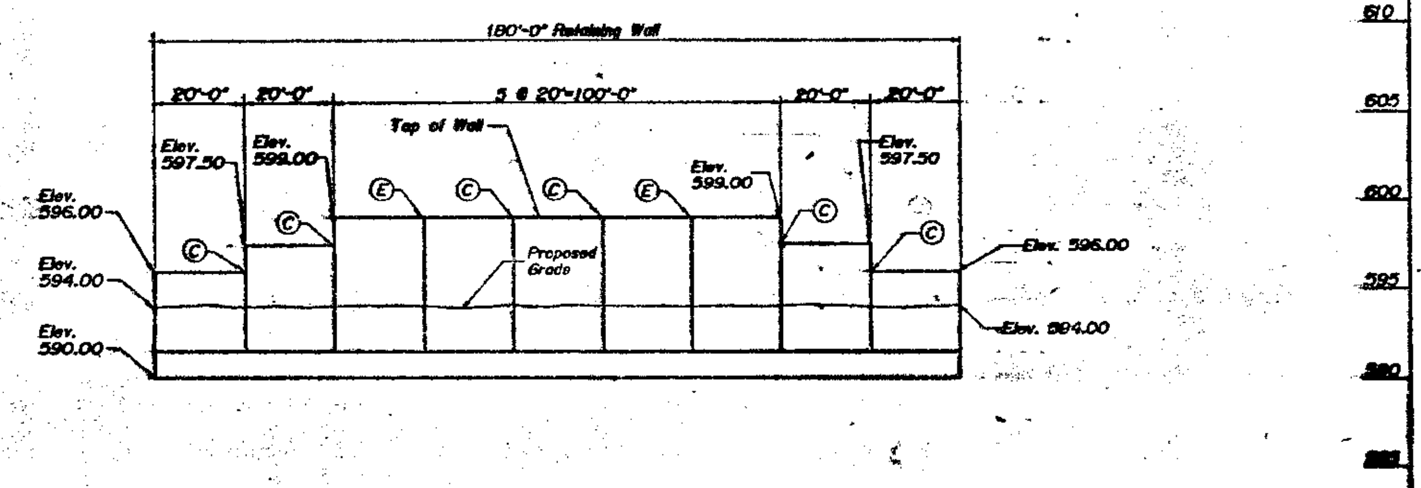
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	844	625

SHEET NO. 1 OF 4 SHEETS

*1991-025R & 0303-474HBH

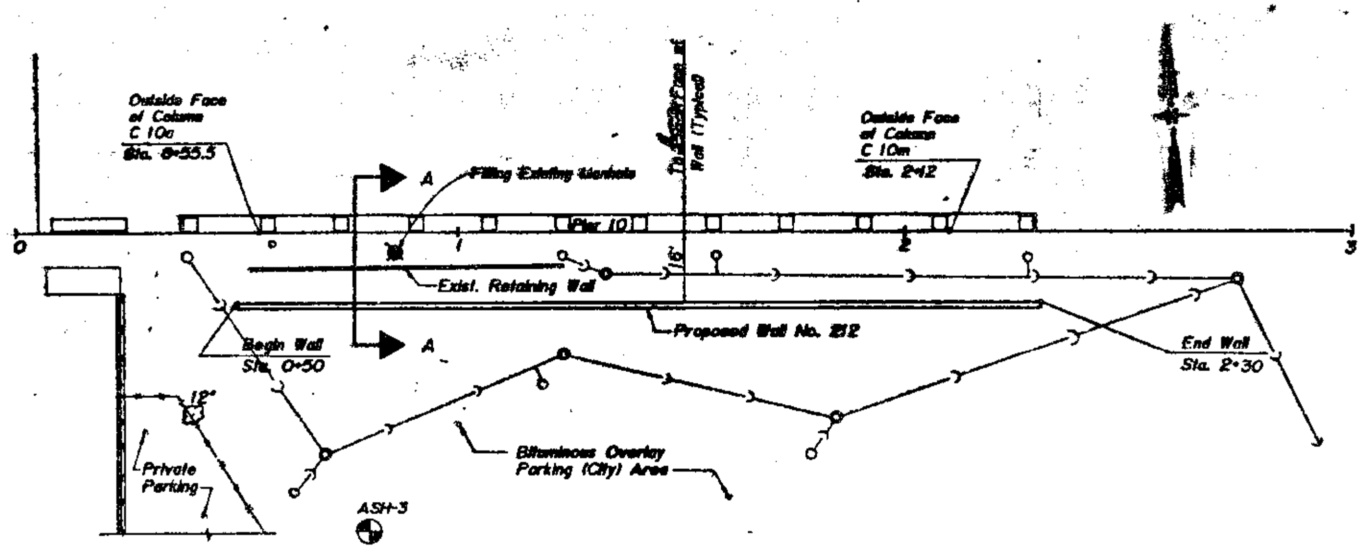


SECTION A-A



ELEVATION

LEGEND
Ⓒ - Construction Joint
Ⓔ - Expansion Joint



PLAN

DATA FOR PROPOSED RETAINING WALL

DESIGN SPECIFICATION: AASHTO (1989) SPECIFICATIONS & 1990 INTERIMS.

DESIGN STRESSES: CONCRETE, F'C = 3,500 PSI

REINF., FY = 100,000 PSI

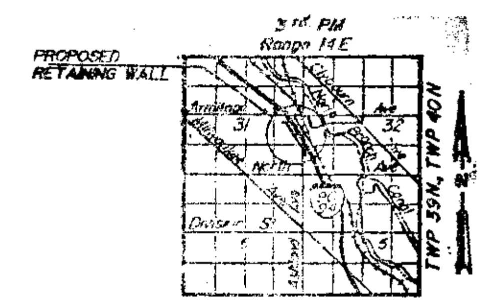
MAXIMUM SOIL PRESSURE 1514 PSF AT FOOTINGS.

NOTES

1. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42, OR M-53 GRADE 60.
2. AT THE VERTICAL EXPANSION JOINTS A HOLLOW BULB TYPE NONMETALLIC WATER SEAL SHALL BE USED. SEE ARTICLES 503.10 AND 718.2 OF THE STANDARD SPECIFICATIONS.
3. THE BACKFACE OF RETAINING WALLS SHALL BE WATERPROOFED ACCORDING TO ARTICLE 503.11 OF STANDARD SPECIFICATIONS.
4. REMOVE UNSUITABLE MATERIAL BENEATH FOOTING AS DIRECTED BY ENGINEER (APPROXIMATELY 2'-0") AND REPLACE WITH POROUS GRANULAR EMBANKMENT. REMOVAL OF UNSUITABLE MATERIAL, APPROXIMATELY 120 CUBIC YARDS, TO BE PAID FOR AS STRUCTURE EXCAVATION.
5. SEE PROPOSAL FOR BORING DATA.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Class X Concrete (Retaining Wall)	Cu. Yd.	81.0
Reinforcement Bars	Pound	4019
Reinforcement Bars (Epoxy Coated)	Pound	1120
Structure Excavation	Cu. Yd.	430
Porous Granular Embankment	Cu. Yd.	343
Filling Existing Manhole	Each	1



LOCATION SKETCH

STRUCTURE NO. 016-W212

RETAINING WALL NO.212
GENERAL PLAN & ELEVATION

SECTION
F.A.I. ROUTE 90/94 PIER NO. 10 OF ASHLAND AVE.
COOK COUNTY

STANLEY CONSULTANTS

REV. 12-10-91

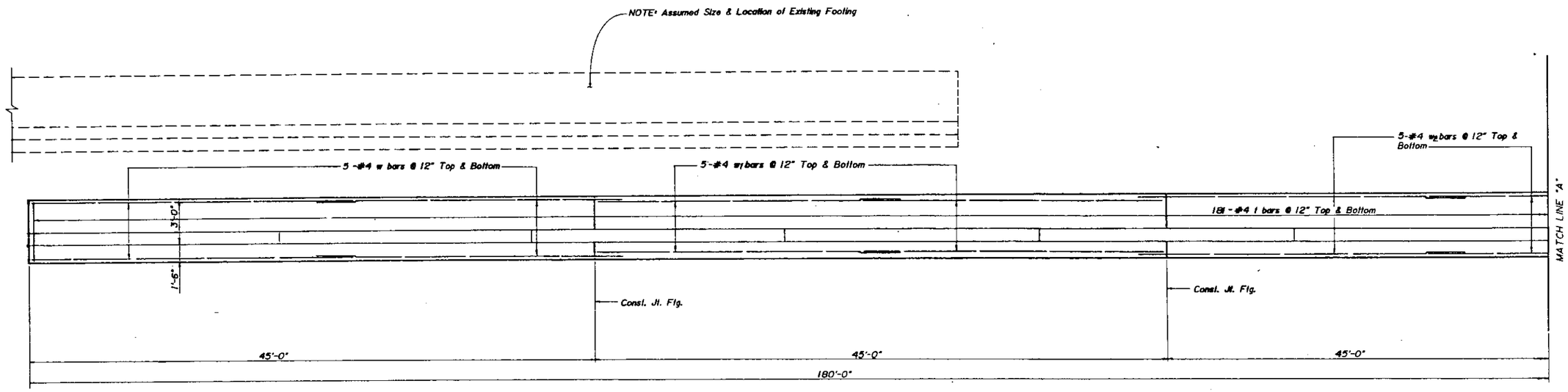
C265

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

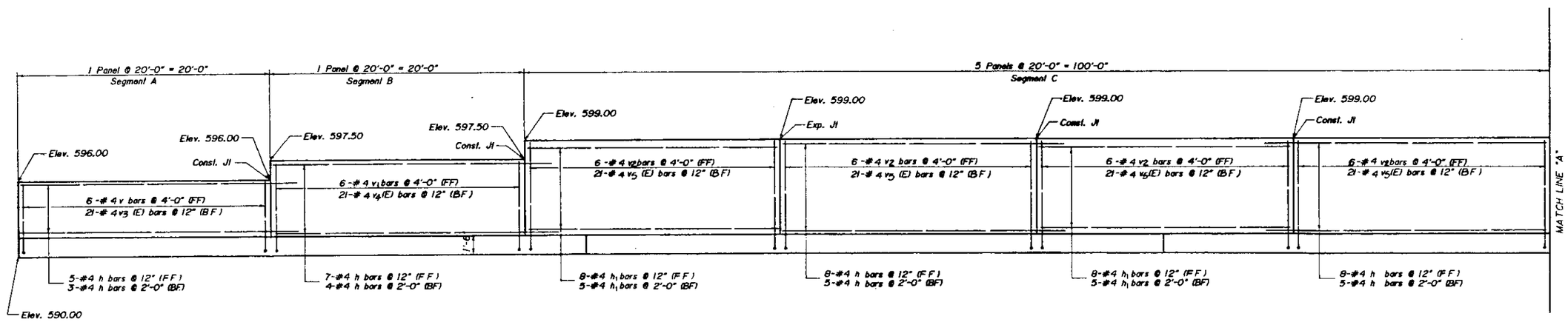
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		844	676
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2 OF 4 SHEETS

*1991-025R & 0303-474HB-1



PLAN



ELEVATION

FF - Denotes Front Face
BF - Denotes Back Face

Bars Designated (E) Shall Be Epoxy Coated

STANLEY CONSULTANTS

RETAINING WALL NO.212
WALL DETAILS

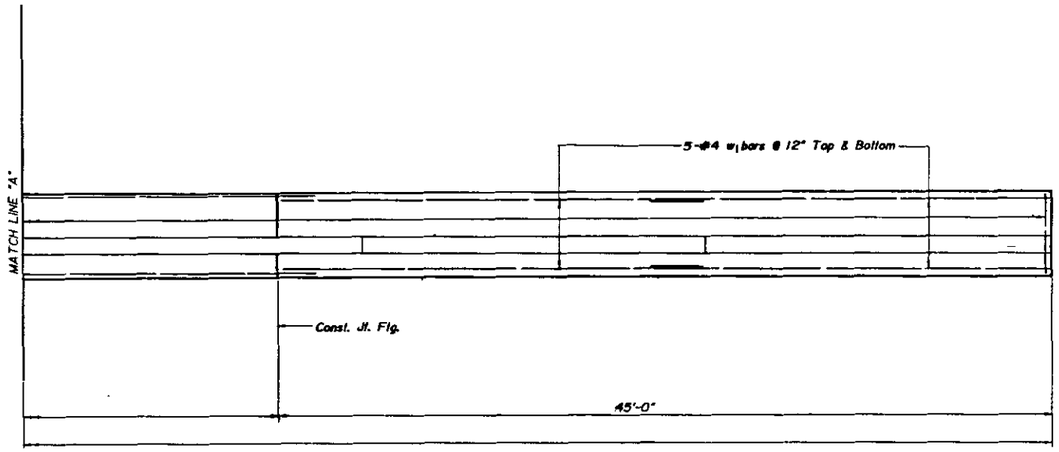
SECTION
F.A.I. ROUTE 90/94 PIER NO. 10 OF ASHLAND AVE.
COOK COUNTY

C266

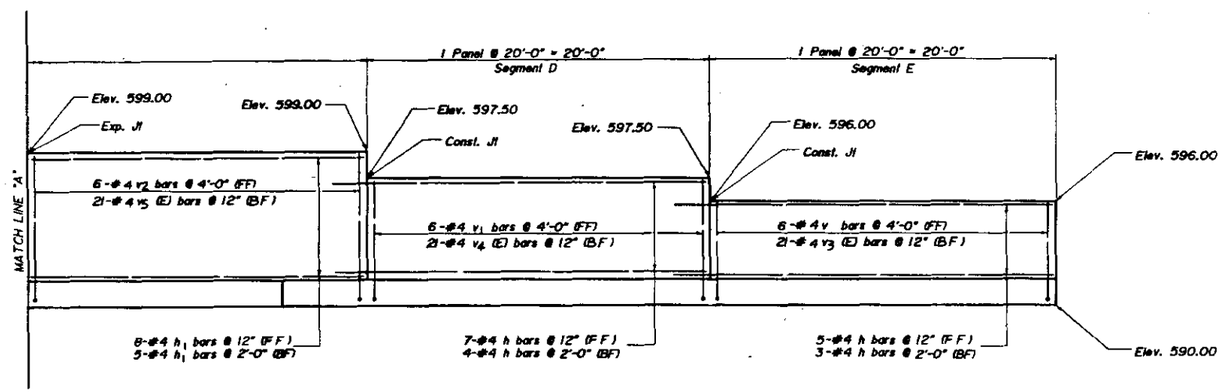
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		844	672
F. HW. & REG. 4	ILLINOIS	FED. AID PROJECT		

*1991-025R & 0303-474HB-1



PLAN



ELEVATION

STANLEY CONSULTANTS

RETAINING WALL NO.212
WALL DETAILS

SECTION
F.A.I. ROUTE 90/94 PIER NO. 10 OF ASHLAND AVE.
COOK COUNTY

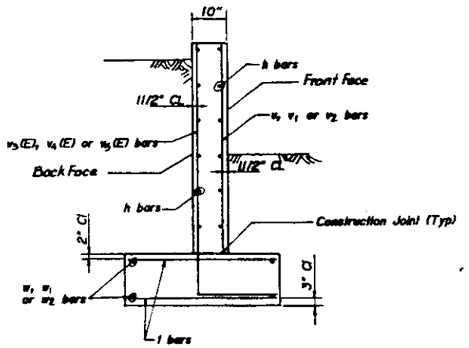
C267

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

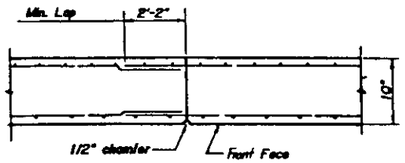
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		844	678
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4 OF 4 SHEETS

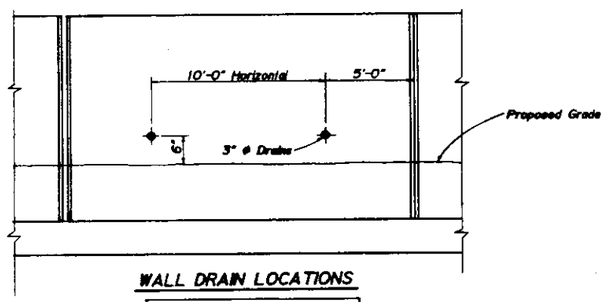
*1991-025R & 0303-474HB-1



TYPICAL SECTION THROUGH RETAINING WALL

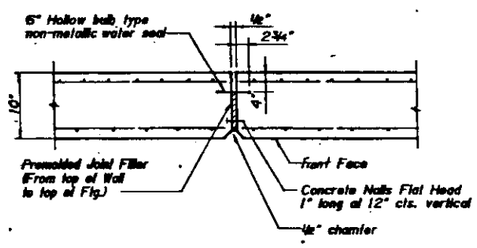


TYPICAL CONSTRUCTION JOINT DETAIL



WALL DRAIN LOCATIONS

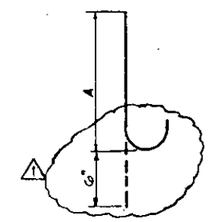
Cost Incidental to Class X Concrete (Retaining Wall)



TYPICAL EXPANSION JOINT DETAIL

Cost Incidental to Class X Concrete (Retaining Wall)

Bar	Number	Size	Length	Shape
h	54	#4	22'-0"	——
h_1	39	#4	19'-8"	——
w	20	#4	24'-8"	——
w_1	40	#4	23'-5"	——
w_2	20	#4	25'-9"	——
1	362	#4	4'-2"	——
v	12	#4	4'-2"	——
v_1	12	#4	5'-8"	——
v_2	30	#4	7'-2"	——
v_3(E)	42	#4	6'-1"	⊔
v_4(E)	42	#4	7'-7"	⊔
v_5(E)	105	#4	9'-3"	⊔



v_3 (E), v_4 (E) & v_5 (E) bars

Bar	A
v_3 (E)	5'-7"
v_4 (E)	7'-1"
v_5 (E)	8'-7"

Bars Designated (E) Shall Be Epoxy Coated

RETAINING WALL NO.212
WALL DETAILS

SECTION
F.A.I. ROUTE 90/94 PIER NO. 10 OF ASHLAND AVE.
COOK COUNTY

STANLEY CONSULTANTS

REV. 12-10-91

C268

COOK SEC. 1990-073BY I E R ~~12-21-90~~

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY

RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-90/94	*	COOK	434	1

* 1990-073 BY

P-91-311-86 P-91-312-86

FOR INDEX OF SHEETS SEE SHEET NO. 4

STATION EQUATIONS

AREA C - NONE

AREA D - NONE

9690
11-16-91

F.A.I. ROUTE 90/94 (KENNEDY EXPRESSWAY)
SECTION 1990-073 BY
PROJECT IDR-94-2(194)43
COOK COUNTY
C-91-205-90

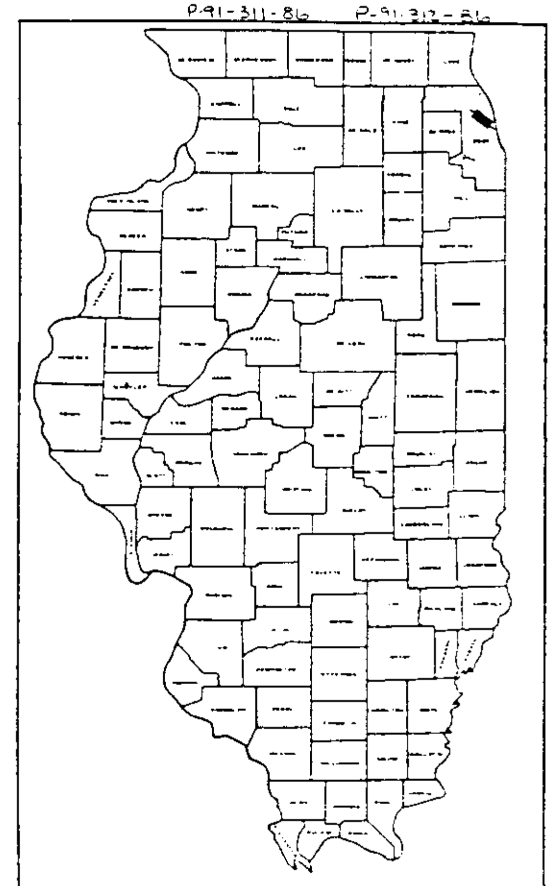
TEMPORARY ROADWAY WIDENING, SUBSTRUCTURE WIDENING AND BRIDGE DECKS

MUNICIPALITY INVOLVEMENT

CITY OF CHICAGO

SCALES		
	PLAN	1 INCH = 50 FEET
	PROFILE HORIZ.	1 INCH = 50 FEET
	PROFILE VERT.	1 INCH = 5 FEET
	CROSS SECTIONS	1 INCH = 10 FEET HORIZONTAL 5 FEET VERTICAL

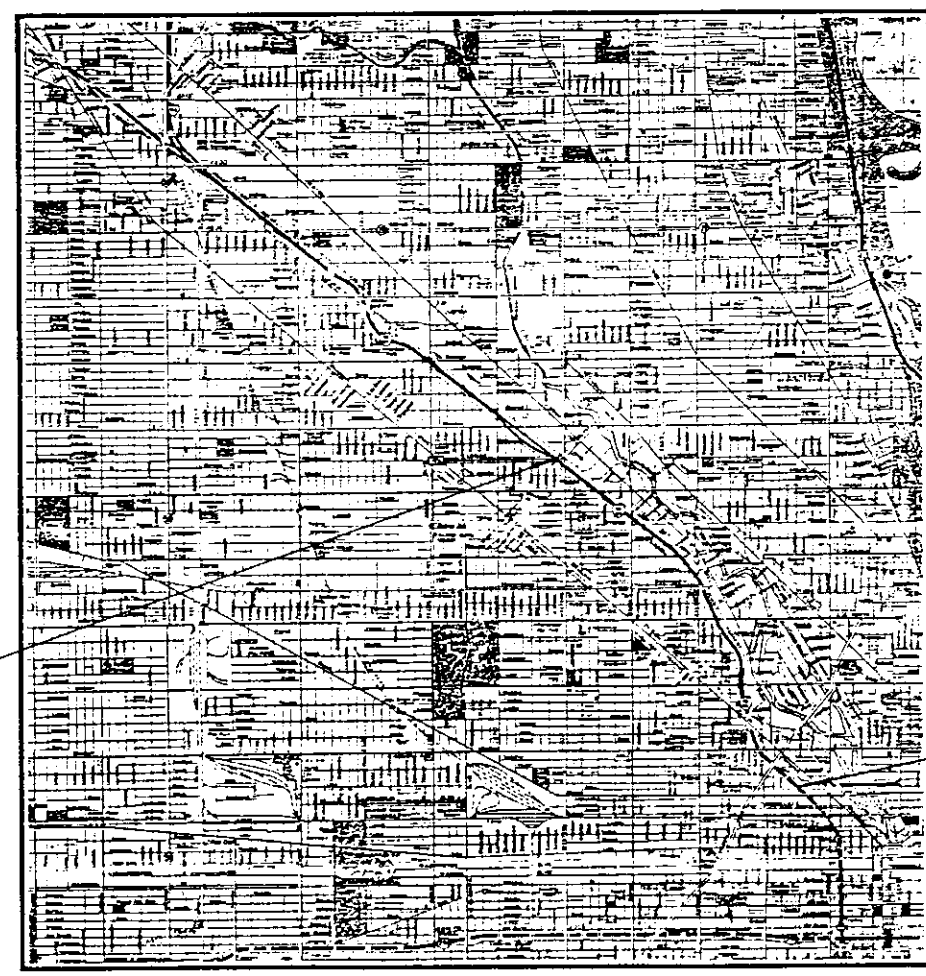
FOR STRUCTURE DESCRIPTIONS, GROSS & NET LENGTHS PER AREA SEE SHEET NO. 2 & 3



LOCATION OF SECTION INDICATED THUS: —

PROJECT ENDS
STA. 390+25 ℄ SEB I-90/94

PROJECT BEGINS
STA. 212+87 ℄ SEB I-90/94



SCALE: 1 INCH = 3520 FEET
GROSS LENGTH OF PROJECT = 17,738.00 FT. 3.360 MI.
NET LENGTH OF PROJECT = 17,738.00 FT. 3.360 MI.

1" = 100' / 1" = 10'; 1" = 50'; 1" = 40'; 1" = 30'; 1" = 20'

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED August 15 1990
James C. Sl...
DISTRICT ENGINEER
EXAMINED 8-7 1992
Gary D. Gould
ENGINEER OF PLANS AND CONTRACTS
PASSED 9-7 1990
ENGINEER OF DESIGN
APPROVED 9-7 1990
Ralph C. Wehner
DIRECTOR DIVISION OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

DIVISION ADMINISTRATOR DATE

CONSULTANT SERVICES K. HEMSTREET / J. KOS (708) - 705 - 4269

CONTRACT NO. 80779

Rev
0-242

TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER ASHLAND AVENUE - EL 604.09 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

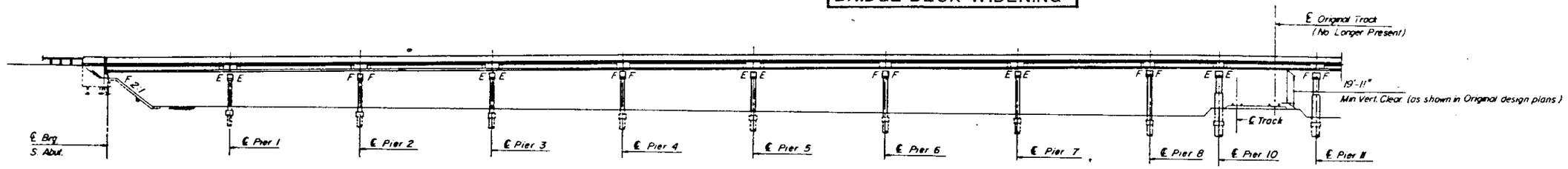
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	434	262
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 OF SHEETS

* 1990-073BY

SHEET C184 OF C317

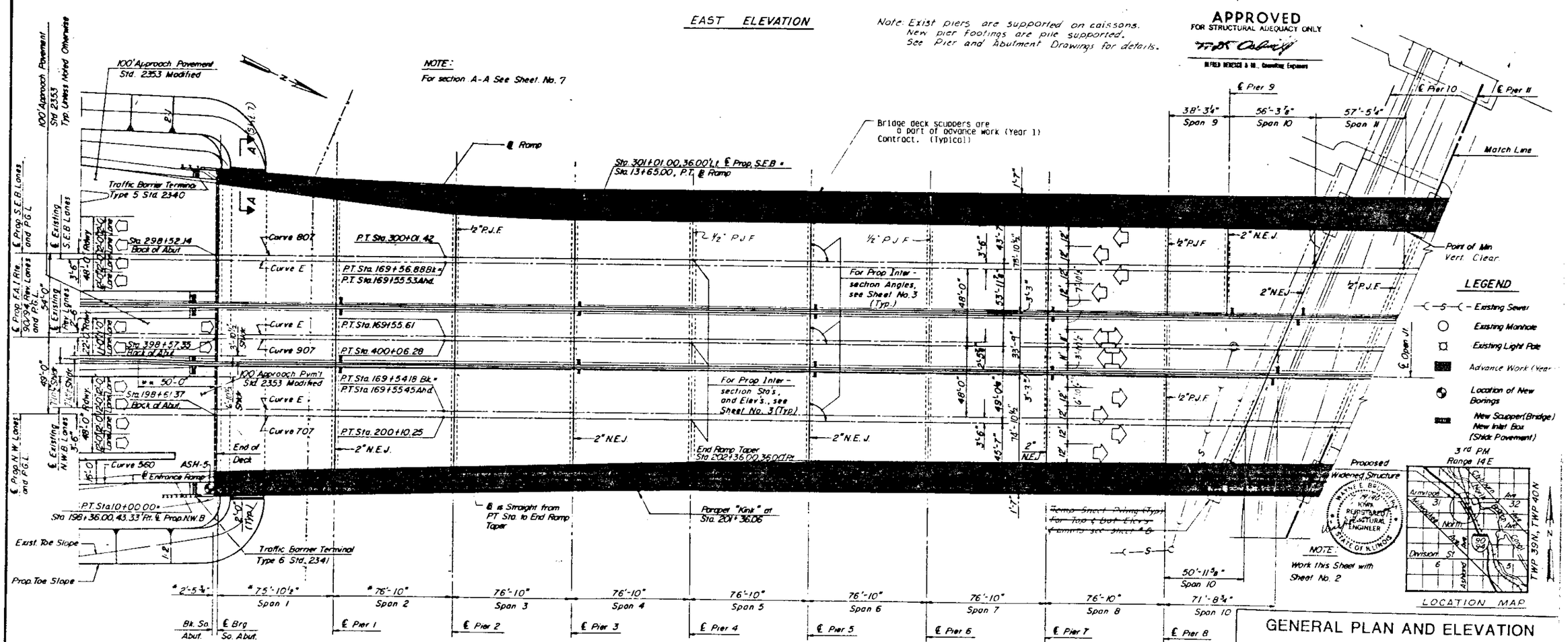
TEMPORARY ROADWAY & BRIDGE DECK WIDENING



EAST ELEVATION

Note: Exist piers are supported on caissons. New pier footings are pile supported. See Pier and Abutment Drawings for details.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Mitchell Engineering
MITCHELL ENGINEERING & ASS., Consulting Engineers



LEGEND

- Existing Sewer
- Existing Manhole
- Existing Light Pole
- Advance Work (Year 1)
- Location of New Borings
- New Scupper (Bridge) New Inlet Box (Shldr. Pavement)

LOCATION MAP

PLAN

* Measured at Rt. Angles to ℄ Substructure

** 50'-0" - Transition Length for Shoulder Widths (At open joint between Rev. Lanes and N.W.B. Lanes only)

Note: N.E.J. = Neoprene Expansion Joint. P.J.F. = Preformed Joint Filler.

Note: The plan view shows the proposed (final) development of the bridge. This contract covers advance work (Year 1) only

STANLEY CONSULTANTS

STRUCTURE NO. 016-0133

GENERAL PLAN AND ELEVATION
SHEET 1 OF 2

SECTION

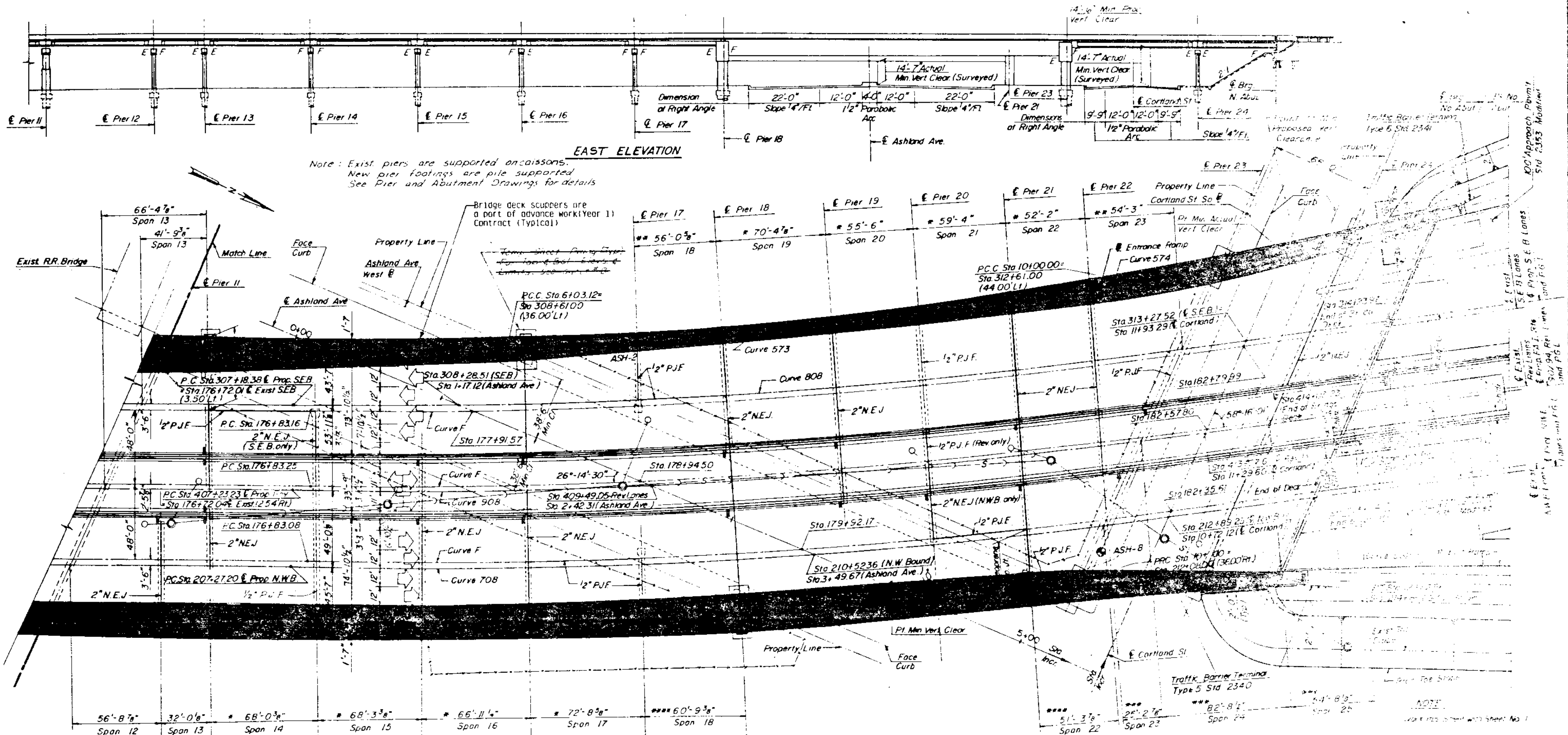
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF SHEETS



Note: The plan view shows the proposed (final) development of the bridge. This contract covers advance work (Year 1) only

* Measured at Rt. Angles to ℄ Substructure
** Measured along ℄ S.E. Bound Lanes
*** Measured along ℄ Reversible Lanes
**** Measured along ℄ N.W. Bound Lanes

(a) 50'-0" Transition Length for Shoulder Width (at Open Jt. between Rev. Lanes and N.W.B. Lanes only)

STANLEY CONSULTANTS

GENERAL PLAN AND ELEVATION
SHEET 1 OF 2
SECTION
F.A.I. ROUTE 90-94 OVER ASHLAND AVENUE
COOK COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	434	264
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3 OF SHEETS

* 1990-073BY

SHEET C186 OF C317

MAINLINE HORIZONTAL CURVE DATA

	EXISTING CURVE DATA		PROPOSED CURVE DATA	
CURVE #	E (207)	F (208)	807	808
SEB PI STA	166+44.52	186+08.46	296+88.95	316+52.45
Δ	1°33'43.0"	28°41'07.9"	1°33'44.0"	28°33'58.0"
D	0°15'00.0"	1°34'59.8"	0°14'59.9"	1°33'41.7"
T	312.40'	975.29'	312.51'	934.08'
R	22,917.91'	3,618.78'	22,921.41'	3,669.07'
L	624.77'	1,811.77'	624.98'	1,829.30'
E	2.13'	116.42'	2.13'	117.03'
S	NC	0.0125 FT/FT	NC	0.020 FT/FT
CURVE #	E (307)	F (308)	907	- 908
REV PI STA	166+43.91	186+20.81	396+94.54	416+71.06
Δ	1°33'43.0"	28°41'07.1"	1°33'44.0"	28°33'58.0"
D	0°15'01.9"	1°33'45.2"	0°15'02.0"	1°32'20.2"
T	311.75'	937.56'	311.77'	947.83'
R	22,869.91'	3,666.78'	22,867.41'	3,723.07'
L	623.45'	1,835.79'	623.51'	1,856.22'
E	2.13'	117.97'	2.12'	118.76'
S	NC	0.0125 FT/FT	NC	0.033 FT/FT
CURVE #	E (107)	F (108)	707	708
NWB PI STA	166+43.13	186+32.93	196+99.18	216+87.50
Δ	1°33'43.0"	28°41'08.1"	1°33'44.0"	28°33'58.0"
D	0°15'03.8"	1°32'32.5"	0°15'03.9"	1°31'08.2"
T	311.09'	949.84'	311.10'	960.30'
R	22,821.91'	3,714.78'	22,818.41'	3,772.06'
L	622.15'	1,859.84'	622.17'	1,880.64
E	2.12'	119.51'	2.12'	120.32'
S	NC	0.0125 FT/FT	NC	0.020 FT/FT

PROPOSED RAMPS HORIZONTAL CURVE DATA

CURVE NO.	560	562	
RAMP B PI STA	8+78.43	11+41.49	
Δ	7°31'31.3"	4°07'03.0"	
D	3°06'26.0"	1°27'20.4"	
T	121.92'	141.49'	
R	1853.90'	3936.04'	
L	243.50'	282.86'	
E	4.01'	2.54'	
S	VARIES	VARIES	
CURVE NO.	571	573	574
RAMP B PI STA	11+56.53	8+01.19	11+43.17
Δ	7°26'26.18"	8°34'14.4"	7°26'57.5"
D	1°46'53.7"	2°09'34.2"	2°36'19.1"
T	209.06'	198.81'	143.17'
R	3216.00'	2653.19'	2199.19'
L	417.52'	396.88'	285.93'
E	6.79'	7.44'	4.66'
S	VARIES	0.020 FT/FT	0.020 FT/FT

PROPOSED INTERSECTION STATIONS

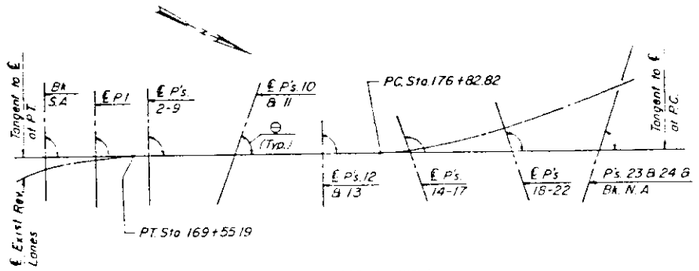
SUBSTRUCTURE	LOCATION S.E. BOUND LANES	REVERSIBLE LANES	N.W. BOUND LANES
BACK SO. ABUT.	298+52.14	398+57.35	198+61.37
℄ PIER 1	299+50.50	399+35.71	199+39.73
" 2	300+07.33	400+12.54	200+16.56
" 3	300+84.17	400+89.38	200+93.40
" 4	301+61.00	401+66.21	201+70.23
" 5	302+37.83	402+43.04	202+47.06
" 6	303+14.67	403+19.88	203+25.90
" 7	303+91.50	403+96.71	204+00.73
" 8	304+68.33	404+73.54	204+77.56
" 9	305+06.66	---	---
" 10	305+62.95	405+45.29	205+28.55
" 11	306+20.39	406+02.73	205+86.00
" 12	---	---	206+42.71
" 13	306+62.17	406+69.12	206+74.72
" 14	307+30.24	407+37.19	207+42.79
" 15	---	408+05.49	208+11.08
" 16	308+65.47	---	208+78.01
" 17	309+38.20	---	209+50.75
" 18	309+94.25	---	210+11.53
" 19	310+64.65	410+74.08	---
" 20	311+20.17	411+29.60	211+37.46
" 21	311+79.55	411+88.98	211+96.82
" 22	312+31.79	412+41.22	---
" 23	312+86.03	412+66.45	212+48.13
" 24	313+69.20	413+49.15	213+30.42
END OF BRIDGE DECK	314+23.97	414+03.23	213+84.17

PROPOSED INTERSECTION ELEVATIONS (PROFILE GRADE ELEVATIONS)

SUBSTRUCTURE	LOCATION S.E. BOUND LANES	REVERSIBLE LANES	N.W. BOUND LANES
BACK SO. ABUT.	613.14	613.28	613.11
℄ PIER 1	615.50	615.63	615.46
" 2	617.80	617.92	617.75
" 3	619.87	619.99	619.82
" 4	621.63	621.75	621.57
" 5	623.08	623.19	623.02
" 6	624.22	624.33	624.17
" 7	625.05	625.17	625.01
" 8	625.57	625.69	625.54
" 9	625.72	---	---
" 10	625.79	625.90	625.72
" 11	625.69	625.88	625.76
" 12	---	---	625.64
" 13	625.51	625.63	625.49
" 14	625.04	625.15	624.98
" 15	---	624.42	624.26
" 16	623.34	---	623.32
" 17	622.02	---	622.05
" 18	620.81	---	620.77
" 19	619.05	619.18	---
" 20	617.47	617.63	617.53
" 21	615.67	615.85	615.77
" 22	614.08	614.28	---
" 23	612.44	613.53	614.26
" 24	610.06	611.07	611.82
BACK NO. ABUT.	608.87	609.73	610.34

PROPOSED INTERSECTION ANGLES (MEASURED FROM ℄ SUBSTRUCTURE TO INSTANTANEOUS TANGENT TO CURVE AT ℄ SUBSTRUCTURE, WHERE APPLICABLE)

SUBSTRUCTURE	LOCATION S.E. BOUND LANES	REVERSIBLE LANES	N.W. BOUND LANES
BACK SO. ABUT.	89°-37'-40"	89°-37'-36"	89°-37'-34"
℄ PIER 1	89°-49'-25"	89°-49'-23"	89°-49'-22"
" 2	90°-00'-00"	90°-00'-00"	90°-00'-00"
" 3	"	"	"
" 4	"	"	"
" 5	"	"	"
" 6	"	"	"
" 7	"	"	"
" 8	"	"	"
" 9	"	---	---
" 10	67°-02'-48"	67°-02'-48"	67°-02'-48"
" 11	67°-02'-48"	67°-02'-48"	67°-02'-48"
" 12	---	---	91°-50'-50"
" 13	91°-50°-50"	91°-50'-50"	91°-50'-50"
" 14	91°-39'-19"	91°-37'-53"	91°-36'-37"
" 15	---	90°-54'-44"	90°-54'-22"
" 16	89°-32'-37"	---	89°-33'-22"
" 17	88°-24'-28"	---	88°-27'-06"
" 18	90°-09'-54"	---	90°-09'-38"
" 19	89°-03'-57"	89°-04'-46"	---
" 20	88°-11'-56"	88°-13'-30"	88°-14'-53"
" 21	87°-16'-18"	87°-18'-40"	87°-20'-46"
" 22	86°-27'-21"	86°-30'-27"	---
" 23	58°-23'-20"	58°-53'-56"	59°-20'-49"
" 24	57°-05'-25"	57°-37'-35"	58°-05'-49"
BACK NO. ABUT.	56°-13'-53"	56°-46'-06"	57°-16'-16"



SCHEMATIC FOOTING LAYOUT

SUBSTRUCTURE	ANGLE B
BK.S.A.	90°-09'-00"
P's. 2-9	90°-00'-00"
P's. 10&11	67°-02'-48"
P's. 12&13	91°-50'-50"
P's. 14-17	91°-50'-50"
P's. 18-22	88°-28'-42"
P's. 23&24	87°-16'-35"
BK.N.A.	87°-16'-35"

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HORIZONTAL ALIGNMENT

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

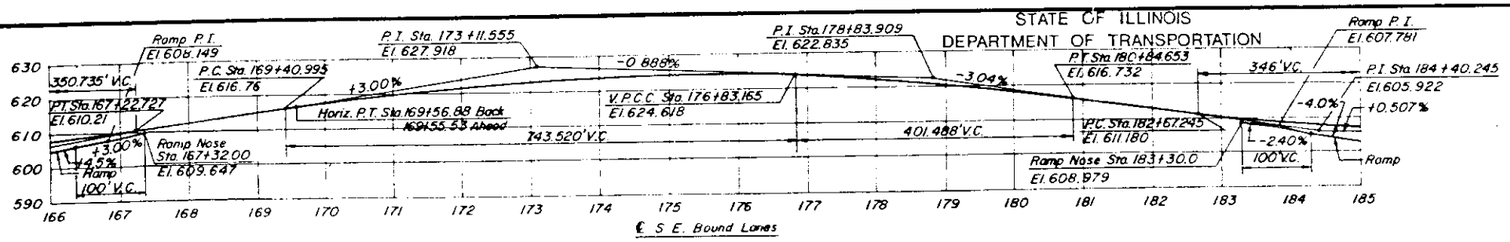
STATION 409+49

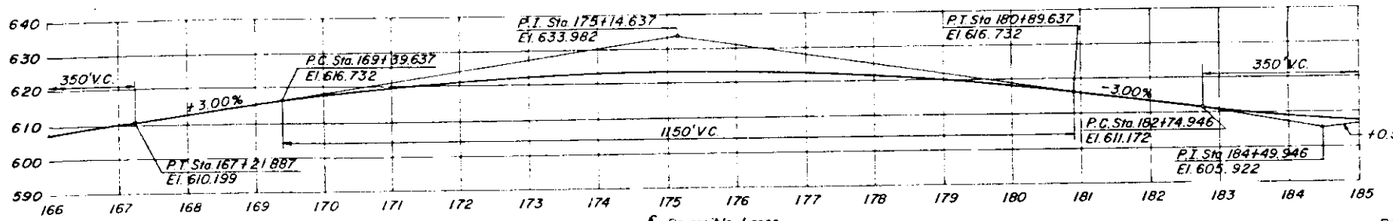
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

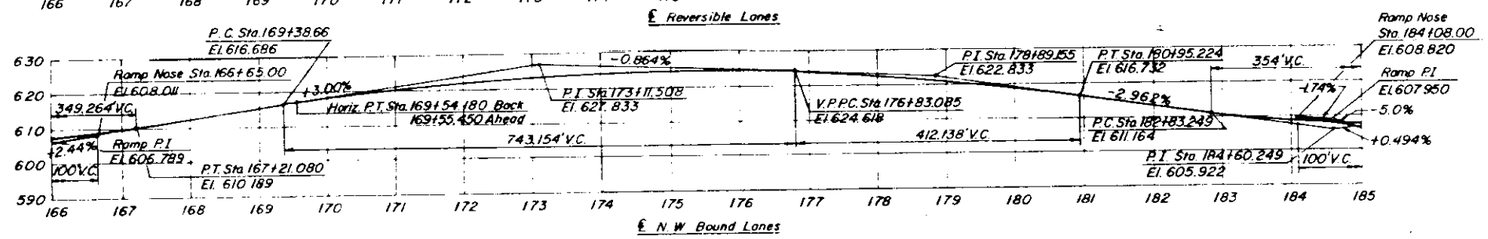
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	434	265
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 4 OF SHEETS

* 1990-073BY SHEET C187 OF C317

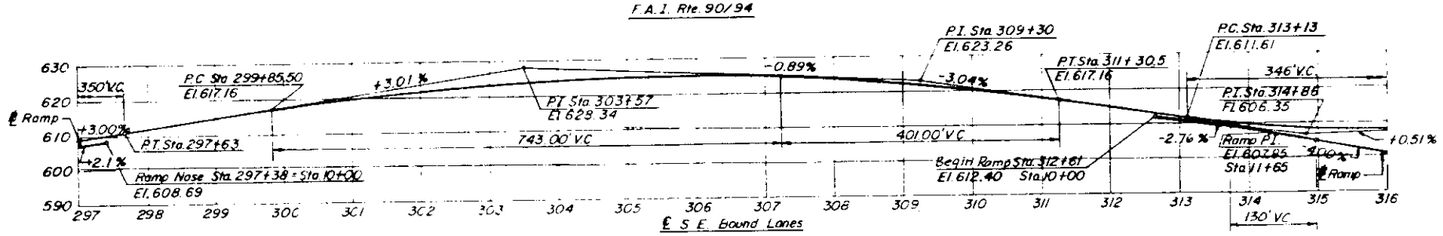


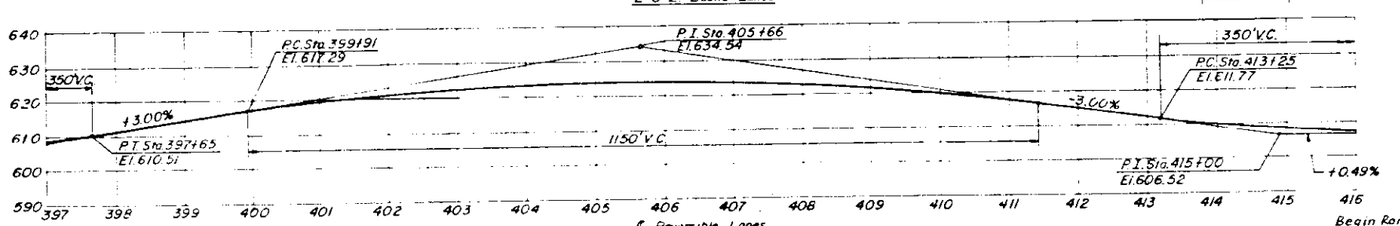


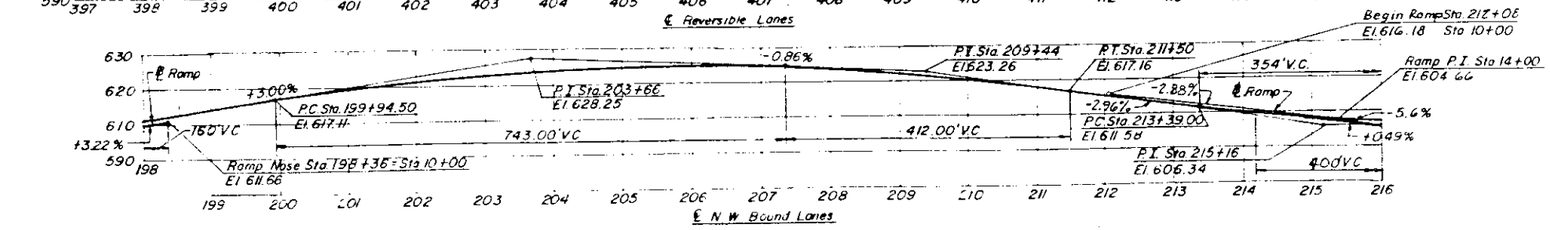


ORIGINAL THEORETICAL PROFILE GRADE

F.A.I. Rte. 90/94

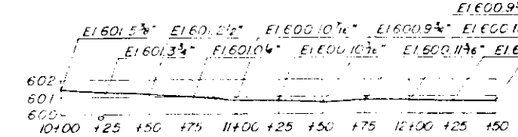






PROPOSED PROFILE GRADE

F.A.I. Rte. 90/94



EXISTING TRACK PROFILE

Scales 1" = 40' Horiz.
1/4" = 1'-0" Vert.

EXISTING CORTLAND STREET

(Along ℄ of Roadway)

Station	Elevation
12+94	590.38
12+84	590.21
12+74	590.06
12+64	589.91
12+54	589.82
12+44	589.77
12+34	589.75
12+24	589.74
12+14	589.70
12+04	589.66
11+94	589.63
11+69	589.62
11+44	589.49
11+19	589.33
10+94	589.01
10+84	588.84
10+74	588.67
10+64	588.48
10+54	588.19
10+44	587.79
10+34	587.44
10+24	587.07
10+14	586.69
10+04	586.31
9+94	586.12
9+84	585.93
9+70	585.72

EXISTING ASHLAND AVENUE

(Along Concrete Median Gutterline)

Station	Elevation
0+00	588.64
0+10	589.07
0+20	589.46
0+30	589.86
0+40	590.24
0+50	590.55
0+60	590.86
0+70	591.15
0+80	591.36
0+90	591.55
1+00	591.66
1+25	591.78
1+50	591.90
1+75	591.89
2+00	591.93
2+25	591.81
2+50	591.82
2+75	591.86
3+00	591.85
3+25	591.87
3+50	591.93
3+60	591.70
3+70	591.54
3+80	591.40
3+90	591.06
4+00	590.74
4+10	590.39
4+20	590.01
4+30	589.63
4+40	589.24
4+50	588.80

STANLEY CONSULTANTS

PROFILES

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+40

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER-STRUCTURE	SUB-STRUCTURE	TOTAL
	~~[illegible]~~	~~[illegible]~~	-	—	—
	CLASS X CONC SUPERSTRUCTURE	CU. YD.	1628	-	1628
	CLASS X CONCRETE	CU. YD.	-	37	37
△1	REINFORCEMENT BARS	LBS	407,080	~~[illegible]~~	407,080
△1	REINFORCEMENT BARS (EPOXY COATED	LBS		3,160	3,160
	EXPANSION BOLTS 3/4"ø	EACH	-	20	20
(2)	PROTECTIVE COAT	SQ. YD.	6881	-	6881
	NEOPRENE EXPANSION JOINT 2"	LIN. FT.	387	-	387
	NEOPRENE EXPANSION JOINT 4"	LIN. FT.	36	-	36
	POROUS GRANULAR EMBANKMENT	CU. YD.	-	23	23
(4)	CONCRETE REMOVAL	CU. YD.	-	24.7	24.7
	STRUCTURE EXCAVATION	CU. YD.	-	62.8	62.8
	~~[illegible]~~	~~SQ. FT.~~	-	~~[illegible]~~	~~[illegible]~~
	FURNISHING CONCRETE PILES	LIN. FT.	-	94	94
	DRIVING CONCRETE PILES	LIN. FT.	-	94	94
(3)	TEST PILE (CONCRETE)	EACH	-	2	2
(1)	~~FURNISHING AND~~ ERECTING STRUCTURAL STEEL	LUMP SUM	.27	-	.27
	~~FURNISH &~~ ERECT P.P.C. I-BEAMS 48"	LIN. FT.	6496.8	-	6496.8
	~~FURNISH &~~ ERECT P.P.C. BEAMS 18"x30"	LIN. FT.	454.3	-	454.3
	PROTECT & MAINTAIN EXST. UNDERPASS LUMINAIRES	LUMP SUM	.2	-	.2
	INSTALL ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	104	-	104
	STUD SHEAR CONNECTORS	EACH	1,224		1,224
	~~[illegible]~~	~~SQ. FT.~~	-	~~[illegible]~~	~~[illegible]~~
	~~[illegible]~~	~~LIN. FT.~~	-	~~[illegible]~~	~~[illegible]~~
	SLOPE WALL 4"	SQ. YD.	-	370	370
	DRAINAGE SYSTEM	LUMP SUM	0.5	-	0.5
	DRAINAGE SCUPPER	EACH	23	-	23
	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~		~~[illegible]~~
	PROTECTIVE SURFACE TREATMENT	SQ. FT.	-	444	444
△	PROTECTIVE SHIELD	SQ. YD.	~~[illegible]~~ 5028	-	5028 ~~[illegible]~~
	BRIDGE PARAPET/SIDEWALK REMOVAL	LIN. FT.	3,100	-	3,100
	~~[illegible]~~	~~SQ. FT.~~	-	~~[illegible]~~	~~[illegible]~~

(1) INCLUDES 565,000 POUNDS OF STRUCTURAL STEEL, PIER BEARINGS & ANCHOR BOLTS.

(2) PROTECTIVE COAT QUANTITY INCLUDES DECK AND CONCRETE BARRIER SURFACE. SEE SPECIAL PROVISIONS FOR CURING AND TEXTURING BRIDGE DECK.

(3) THE CONTRACTOR SHALL DRIVE CONCRETE TEST PILES IN PERMANENT LOCATIONS AT WIDENED ABUTMENTS AS DIRECTED BY ENGINEER BEFORE ORDERING REMAINDER OF THE PILES.

(4) EXISTING NAMEPLATE SHALL BE SALVAGED WITHOUT DAMAGE, FROM THE EXISTING STRUCTURE, REFURBISHED AND PLACED ON THE PROPOSED WINGWALL. COST INCIDENTAL TO CONCRETE REMOVAL.

STANLEY CONSULTANTS

GENERAL NOTES:

~~1. [illegible]~~

2. FASTENERS SHALL BE HIGH STRENGTH BOLTS ~~[illegible]~~ BOLTS 7/8"ø, OPEN HOLES 15/16"ø, UNLESS OTHERWISE NOTED.

~~3. THE ZINC [illegible] AND VINYL PAINT SYSTEM [illegible] FOR SHOP AND FIELD [illegible] STEEL EXCEPT WHERE [illegible]~~

4. ALL STRUCTURAL STEEL SHALL BE AASHTO M 183. EXPANSION JOINT ANGLES AND ATTACHED BARS SHALL BE AASHTO M 183.

~~5. EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE [illegible] PAINTED WITH THE ZINC SILICATE PRIMER.~~

6. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

7. ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.

~~8. THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. [illegible] COMPONENTS ARE THE TENSION FLANGES, WEBS AND ALL SPLICE PLATE MATERIAL OF THE STEEL [illegible]~~

9. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

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

11. EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS., AND 3/4"ø X 12" HOOKED BOLTS.

12. BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.

13. THE CONCRETE, FOR BRIDGE FLOORS FINISHED IN ACCORDANCE WITH ARTICLE 503.16 OF THE STANDARD SPECIFICATIONS, SHALL BE PLACED AND COMPACTED PARALLEL TO THE SKEW IN UNIFORM INCREMENTS ALONG CENTERLINE OF BRIDGE. THE FINISHING MACHINE, WHEN REQUIRED, SHALL BE SET PARALLEL TO THE SKEW FOR STRIKING OFF AND SCREEDING THE CONCRETE.

~~14. [illegible] STEEL SHALL BE STORED AT THE [illegible] SHOP UNTIL REQUESTED [illegible] SHALL BE DELIVERED [illegible]~~

~~15. THE INFORMATION SHOWN FOR THE TEMPORARY SHEET PILING IS ESTIMATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A DESIGN OF THE TEMPORARY SHEET PILING AND ASSOCIATED MEMBERS, IF REQUIRED, SUBJECT TO THE APPROVAL OF THE ENGINEER.~~

~~16. ALL STRUCTURAL STEEL FABRICATORS PERFORMING WORK ON THE MAIN LOAD CARRYING COMPONENTS OF STEEL STRUCTURES SHALL BE CERTIFIED UNDER CATEGORY III [illegible] OF THE QUALITY CERTIFICATION [illegible]~~

17. SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, [illegible] WEIGHING [illegible]

~~18. [illegible] SHOWN [illegible] EMBANKMENT [illegible] CONSTRUCTION OF [illegible]~~

19. CALCULATED WEIGHT OF STRUCTURAL STEEL (AASHTO M 183) = 565,000 LBS.

20. ALL REINFORCING STEEL BARS ARE MEASURED [illegible]

21. THE CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR [illegible] OF REINFORCING [illegible] BE 2" EXCEPT 3" WHEN DEPOSITED AGAINST EARTH, UNLESS OTHERWISE NOTED.

~~22. [illegible] SHALL BE STORED AT FABRICATOR [illegible] REQUESTED [illegible] SHALL BE DELIVERED [illegible]~~

23. ALL CONTACT SURFACES OF JOINTS FOR THE DIAPHRAGMS, CROSS FRAMES AND/OR LATERAL BRACING SHALL BE FREE OF PAINT OR LACQUER.

NOTE:

PRIOR TO POURING THE NEW DECK CONCRETE, ALL RUST, LOOSE MILL SCALE AND FOREIGN MATERIALS SHALL BE REMOVED FROM THE FOLLOWING AREAS:

1. EXPOSED TOP OF TOP FLANGES OF EXISTING STRINGERS AND GIRDERS.
2. BOTTOM OF BOTTOM FLANGES OF EXISTING STRINGERS AND GIRDERS IN CONTACT WITH NEW BEARINGS.
3. ALL CONTACT SURFACES AT EXISTING STRINGERS AND GIRDERS FOR NEW DIAPHRAGMS AND/OR CROSS-FRAMES.

THIS WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SSPC SURFACE PREPARATION SPECIFICATION SP7 FOR BRUSH-OFF BLAST CLEANING. THE COST IS INCIDENTAL TO "BRIDGE PARAPET/SIDEWALK REMOVAL"

EXISTING STRUCTURE

FAI ROUTE 2, SEC 0505.31H, BUILT IN 1958, STRUCTURE NO. 016-0133

SUPERSTRUCTURE: APPROACH SPANS TO ASHLAND AVENUE: SIMPLY SUPPORTED PRECAST, PRESTRESSED CONCRETE I-BEAM.
ASHLAND AVENUE MAIN SPAN: PLANAR FRAME-TYPE STRUCTURE CONSISTING OF 144" RIVETED BUILT-UP COMPOSITE FASCIA GIRDERS, 90" AND 120" CROSS-GIRDERS, AND 48" LONGITUDINAL GIRDERS.

SUBSTRUCTURE: PILE BENT ABUTMENTS SUPPORTED ON CONCRETE PILES AND MULTIPLE COLUMN PIERS SUPPORTED ON CAISSONS.

SUPERSTRUCTURE DECK TO BE REPLACED AND STRUCTURE WIDENED. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

EXISTING UTILITIES

THE EXISTING UTILITIES HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE PLANS AND FROM FIELD OBSERVATIONS. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

REHABILITATION NOTES

~~SEAL CRACKS IN ABUTMENTS AND PIERS WITH PRESSURE INJECTED EPOXY. REMOVE ALL DETERIORATED CONCRETE IN ABUTMENTS AND PIERS, AND REPLACE WITH EPOXY MORTAR OR FORMED CONCRETE. SPLICE IN REBARS WHERE REQUIRED. (SEE SPECIAL PROVISIONS)~~

EXISTING LIGHT POLES AND CONDUITS ARE TO BE REMOVED. ~~[illegible]~~ (SEE SPECIAL PROVISIONS).

DESIGN SPECIFICATIONS

AASHTO (1983) WITH CURRENT INTERIM SPECIFICATIONS

LOADING HS20-44 AND ALTERNATE MILITARY LOADING

ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

REINFORCED CONCRETE & STRUCTURE STEEL

F'C = 3,500 PSI (CONCRETE)
FY = 60,000 PSI (REINFORCEMENT)
FS = 20,000 PSI (PROPOSED STRUCTURAL STEEL)
FS = 18,000 PSI (EXISTING STRUCTURAL STEEL)

PRESTRESSED CONCRETE & PRETENSIONING STEEL

	EXISTING	PROPOSED
F'C	5,000 PSI	5,000 PSI
F'CI	4,000 PSI	4,000 PSI
F'S	248,000 PSI 7/16"ø STRAND	270,000 PSI 1/2"ø STRAND
[illegible]	[illegible]	[illegible]

BILL OF MATERIAL

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

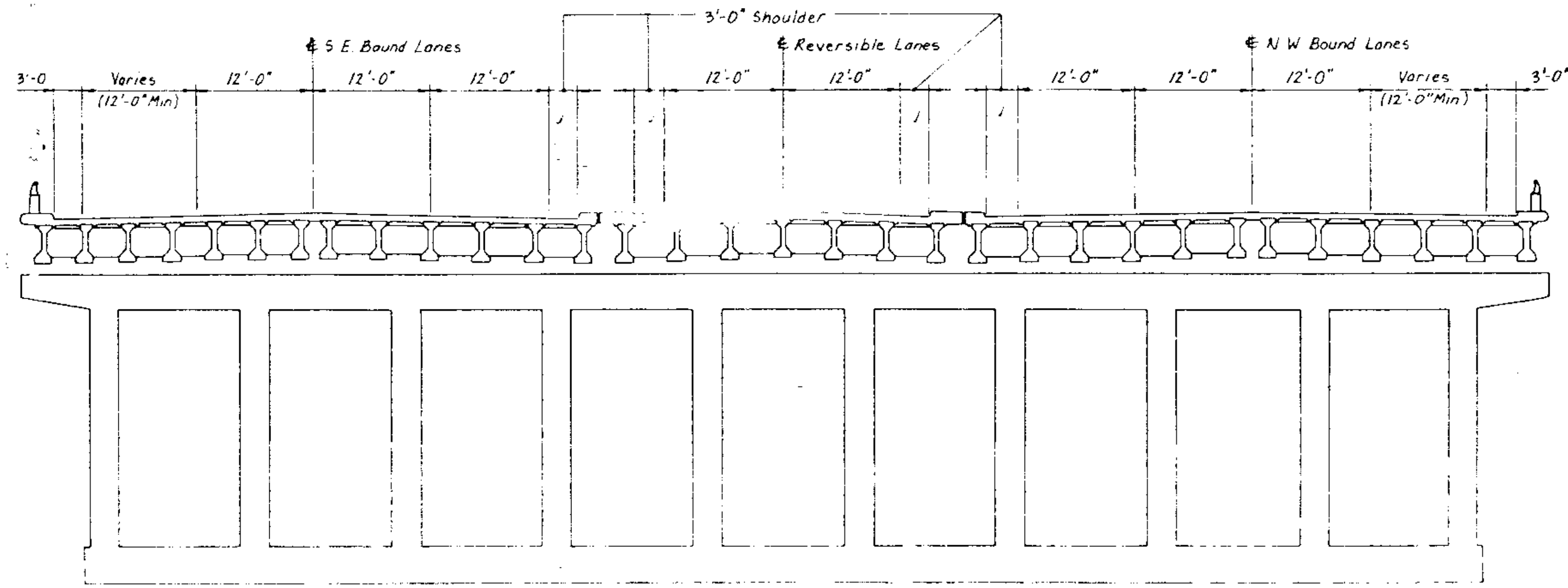
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	267

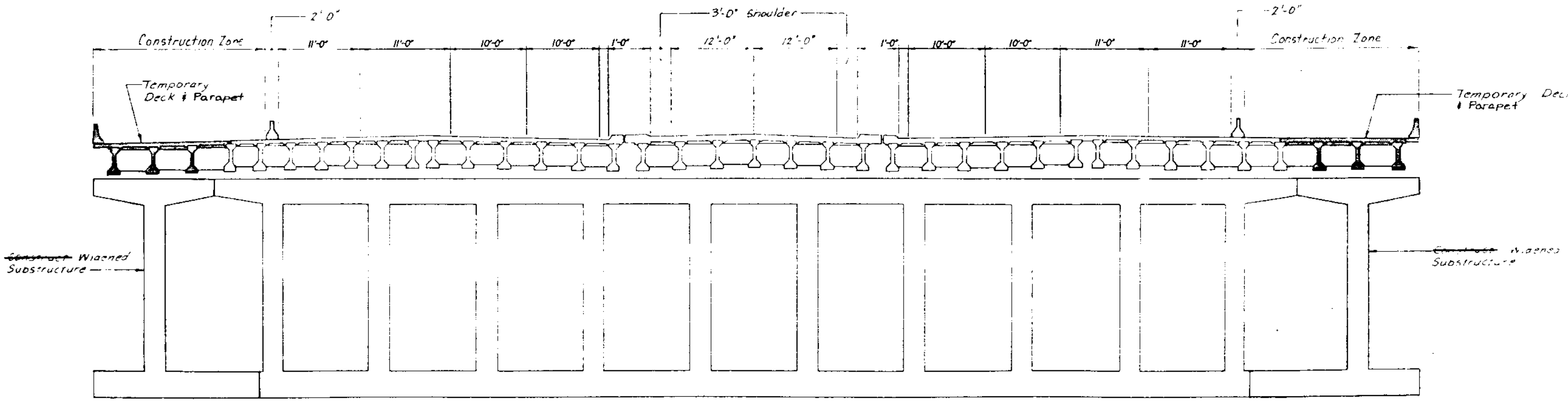
SHEET NO. 6
SHEETS

* 1990-073BY

SHEET C189 OF C317



EXISTING



ADVANCE WORK
(YEAR 1)

LEGEND

Denotes "Temporary Concrete Barrier" Std. 2383

STANLEY CONSULTANTS

BRIDGE CONSTRUCTION STAGING

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

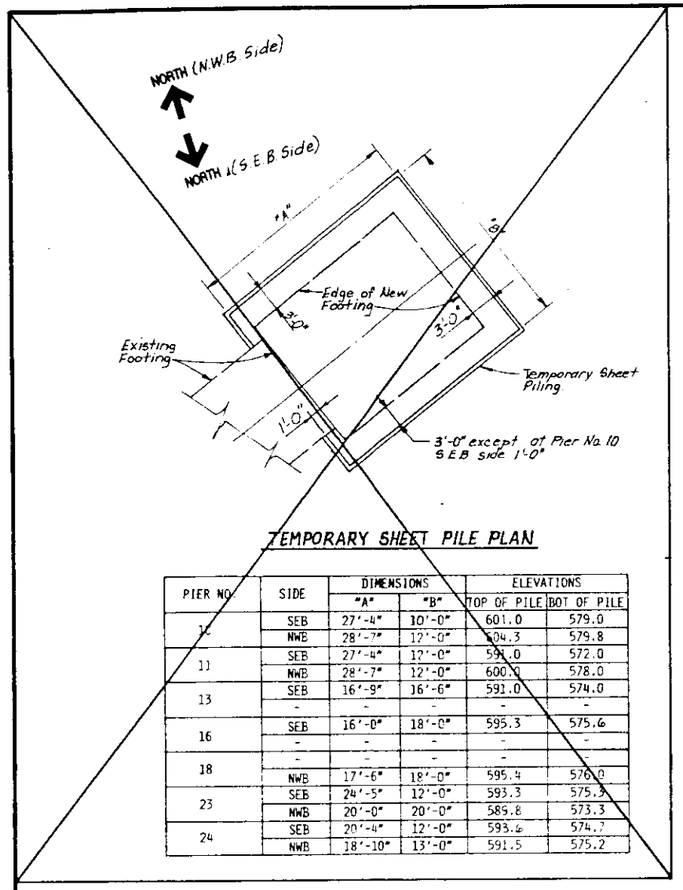
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	434	268
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 7 OF SHEETS

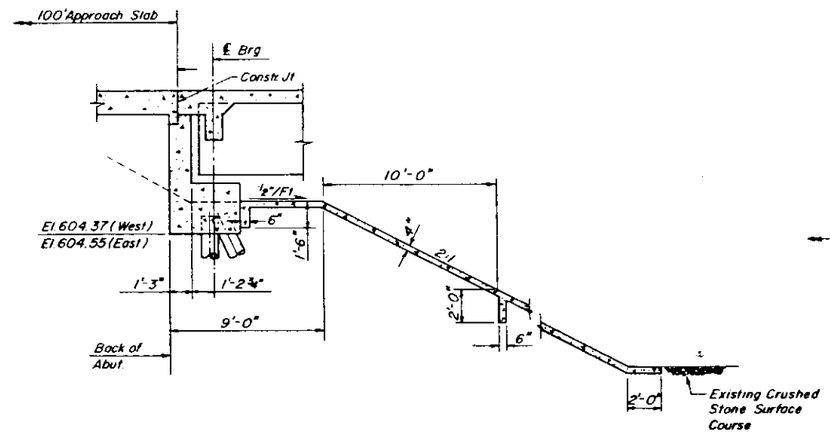
* 1990-073BY

SHEET C190 OF C317



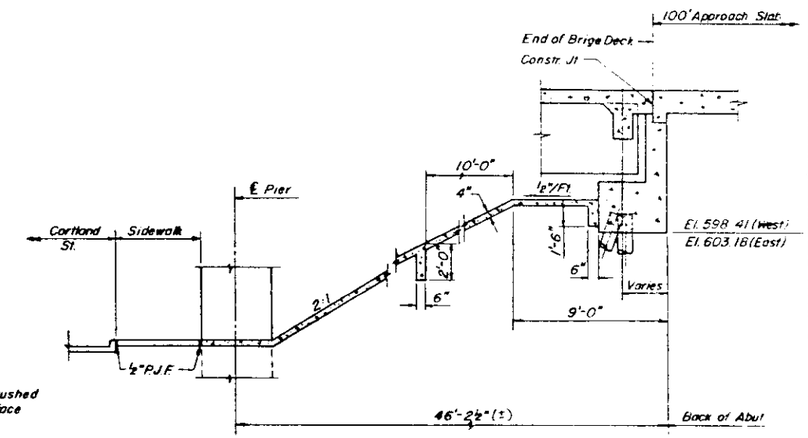
TEMPORARY SHEET PILE PLAN

PIER NO.	SIDE	DIMENSIONS "A"	DIMENSIONS "B"	ELEVATIONS TOP OF PILE	ELEVATIONS BOT OF PILE
10	SEB	27'-4"	10'-0"	601.0	579.0
	NWB	28'-7"	12'-0"	594.3	579.8
11	SEB	27'-4"	12'-0"	591.0	572.0
	NWB	28'-7"	12'-0"	600.0	578.0
13	SEB	16'-9"	16'-6"	591.0	574.0
	-	-	-	-	-
16	SEB	16'-0"	18'-0"	595.3	575.6
	-	-	-	-	-
18	-	-	-	-	-
	NWB	17'-6"	18'-0"	595.4	576.0
23	SEB	24'-5"	12'-0"	593.3	575.3
	NWB	20'-0"	20'-0"	589.8	573.3
24	SEB	20'-4"	12'-0"	593.6	574.7
	NWB	18'-10"	13'-0"	591.5	575.2



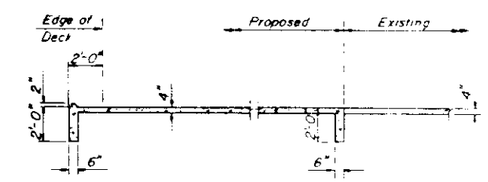
SECTION THRU WIDENED SOUTH ABUTMENT

(At Right Angles to Abutment)



SECTION THRU WIDENED NORTH ABUTMENT

(At Right Angles to Abutment)



SECTION A-A

(For Location, see Sheet No. 1 & 2)

STANLEY CONSULTANTS

SLOPE PROTECTION

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECT.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	269

SHEET NO. 8
SHEETS

* 1990-073BY

SHEET C191 OF C317

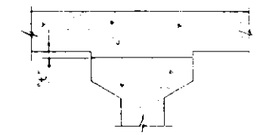
		STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N11	BK. S. ABUT.	19861.004	47.627	611.882	611.882
	℄ BRG	19863.489	47.592	611.949	611.949
	a	19873.508	47.447	612.255	612.272
	b	19883.528	47.297	612.583	612.616
	c	19893.548	47.144	612.867	612.908
	d	19903.567	46.985	613.176	613.221
	e	19913.586	46.823	613.521	613.558
	f	19923.606	46.656	613.831	613.856
	℄ BRG	19938.571	46.398	614.275	614.275
BEAM N21	℄ BRG	19940.492	46.363	614.358	614.358
	a	19950.511	46.191	614.744	614.761
	b	19960.530	46.014	615.041	615.073
	c	19970.548	45.834	615.377	615.418
	d	19980.567	45.649	615.686	615.731
	e	19990.585	45.459	616.001	616.037
	f	20000.603	45.265	616.280	616.305
	℄ BRG	20015.547	44.969	616.784	616.784
BEAM N31	℄ BRG	20017.464	44.969	616.842	616.842
	a	20027.462	44.764	617.125	617.144
	b	20037.460	44.560	617.388	617.425
	c	20047.458	44.356	617.657	617.699
	d	20057.455	44.151	617.930	617.975
	e	20067.453	43.947	618.208	618.248
	f	20077.451	43.743	618.510	618.540
	℄ BRG	20092.387	43.438	618.825	618.825
BEAM N41	℄ BRG	20094.304	43.438	618.879	618.879
	a	20104.303	43.321	619.156	619.175
	b	20114.302	43.204	619.394	619.431
	c	20124.302	43.087	619.639	619.685
	d	20134.301	42.970	619.874	619.924
	e	20144.300	42.853	620.097	620.139
	f	20154.300	42.737	620.306	620.335
	℄ BRG	20169.217	42.562	620.594	620.594

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED NWB LANES.

		STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N12	BK. S. ABUT.	19861.032	43.415	611.963	611.963
	℄ BRG	19863.516	43.373	612.030	612.030
	a	19873.533	43.202	612.337	612.354
	b	19883.551	43.026	612.666	612.698
	c	19893.568	42.846	612.950	612.987
	d	19903.585	42.661	613.261	613.301
	e	19913.602	42.472	613.606	613.641
	f	19923.619	42.279	613.916	613.941
	℄ BRG	19938.585	41.982	614.360	614.360
BEAM N22	℄ BRG	19940.506	41.935	614.436	614.436
	a	19950.522	41.764	614.830	614.847
	b	19960.539	41.548	615.127	615.159
	c	19970.555	41.348	615.465	615.502
	d	19980.571	41.144	615.774	615.814
	e	19990.587	40.935	616.089	616.123
	f	20000.602	40.722	616.368	616.393
	℄ BRG	20015.547	40.396	616.871	616.871
BEAM N32	℄ BRG	20017.464	40.375	616.930	616.930
	a	20027.461	40.147	617.214	617.231
	b	20037.459	39.919	617.478	617.511
	c	20047.456	39.691	617.747	617.788
	d	20057.453	39.463	618.021	618.066
	e	20067.451	39.235	618.300	618.336
	f	20077.448	39.007	618.603	618.628
	℄ BRG	20092.387	38.667	618.918	618.918
BEAM N42	℄ BRG	20094.304	38.646	618.971	618.971
	a	20104.302	38.476	619.250	619.269
	b	20114.301	38.307	619.489	619.527
	c	20124.300	38.137	619.735	619.781
	d	20134.298	37.967	619.971	620.021
	e	20144.297	37.798	620.196	620.237
	f	20154.295	37.628	620.405	620.434
	℄ BRG	20169.217	37.375	620.697	620.697

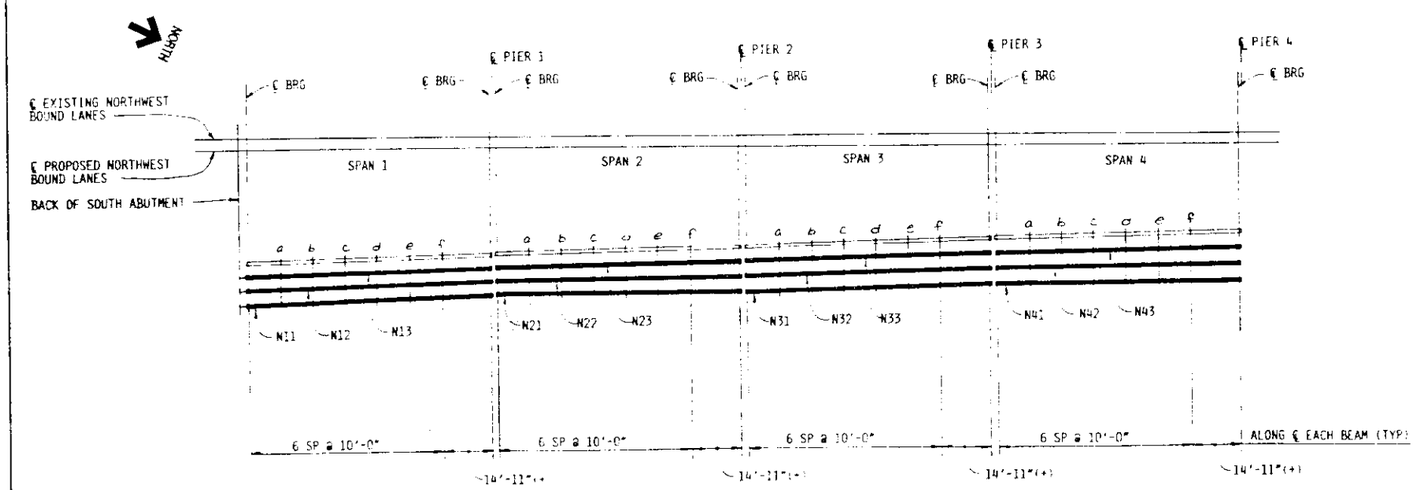
INDICATES STA 201+69.217 (TYP)

		STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N13	BK. S. ABUT.	19861.059	39.203	612.054	612.054
	℄ BRG	19863.543	39.154	612.121	612.121
	a	19873.558	38.957	612.430	612.447
	b	19883.573	38.754	612.759	612.791
	c	19893.588	38.548	613.042	613.080
	d	19903.603	38.337	613.355	613.395
	e	19913.617	38.121	613.701	613.736
	f	19923.631	37.902	614.011	614.036
	℄ BRG	19938.599	37.565	614.455	614.455
BEAM N23	℄ BRG	19940.519	37.508	614.536	614.536
	a	19950.533	37.298	614.927	614.943
	b	19960.547	37.082	615.224	615.256
	c	19970.561	36.863	615.562	615.600
	d	19980.575	36.639	615.871	615.911
	e	19990.588	36.411	616.187	616.221
	f	20000.601	36.178	616.465	616.490
	℄ BRG	20015.547	35.823	616.970	616.970
BEAM N33	℄ BRG	20017.464	35.781	617.029	617.029
	a	20027.461	35.530	617.314	617.331
	b	20037.457	35.278	617.578	617.611
	c	20047.454	35.027	617.848	617.888
	d	20057.451	34.775	618.122	618.167
	e	20067.448	34.523	618.402	618.438
	f	20077.445	34.272	618.706	618.731
	℄ BRG	20092.387	33.896	619.020	619.020
BEAM N43	℄ BRG	20094.304	33.854	619.074	619.074
	a	20104.301	33.632	619.354	619.373
	b	20114.299	33.409	619.595	619.632
	c	20124.296	33.187	619.842	619.887
	d	20134.294	32.964	620.079	620.129
	e	20144.291	32.742	620.304	620.345
	f	20154.289	32.520	620.514	620.544
	℄ BRG	20169.217	32.187	620.807	620.807



TO DETERMINE "t": AFTER ALL PRECAST PRESTRESSED BEAMS HAVE BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN BELOW. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS" MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGES OF BEAMS.

FILLET HEIGHTS



PLAN

NOTES:

BRIDGE DECK ELEVATIONS AT BEAMS WERE ESTABLISHED TO MEET EDGE OF EXISTING DECK ELEVATIONS, ASSUMING A .020'/FT CROSS SLOPE. CONTRACTOR SHALL DETERMINE EXACT EDGE OF EXISTING DECK ELEVATIONS AND ADJUST NEW BRIDGE DECK ELEVATION ACCORDINGLY, IF REQUIRED TO MEET MINIMUM SLAB THICKNESS AS SHOWN ON SHEETS 18-21.

FOR DEAD LOAD DEFLECTION DIAGRAM FOR PRESTRESSED CONCRETE BEAMS, SEE SHEETS 37 AND 38.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 1 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+45

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

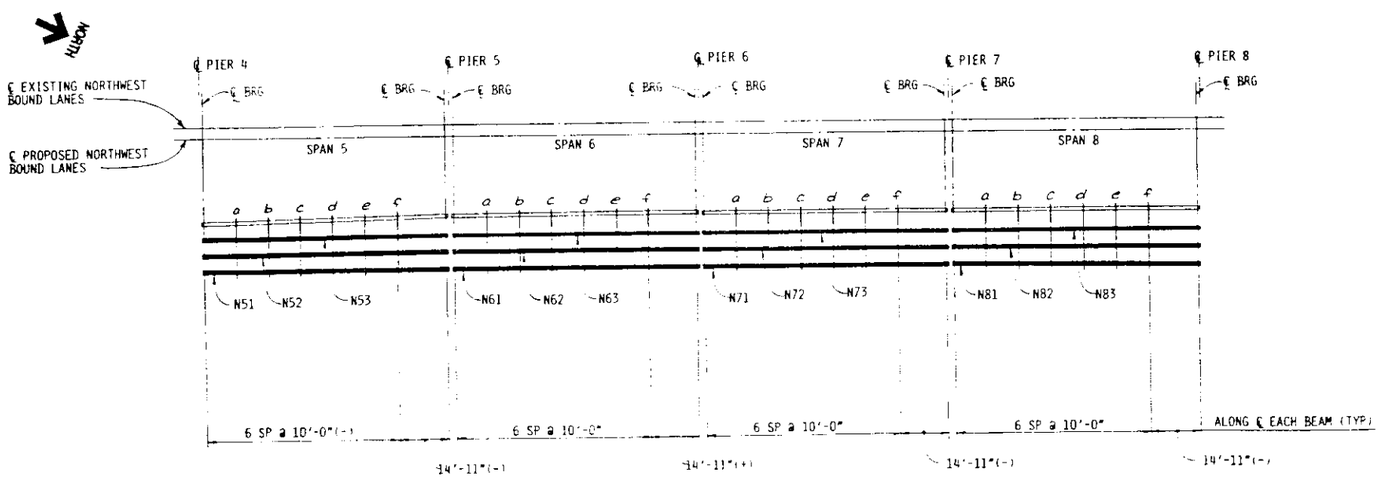
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N51	℄ BRG	20171.134	42.500	620.629	620.629
	a	20181.134	42.514	620.836	620.855
	b	20191.134	42.528	621.050	621.087
	c	20201.134	42.542	621.230	621.276
	d	20211.134	42.556	621.421	621.471
	e	20221.134	42.569	621.649	621.690
	f	20231.134	42.583	621.824	621.853
	℄ BRG	20246.047	42.604	622.075	622.075
BEAM N61	℄ BRG	20247.964	42.583	622.109	622.109
	a	20257.964	42.583	622.252	622.272
	b	20267.964	42.583	622.384	622.421
	c	20277.964	42.583	622.544	622.589
	d	20287.964	42.583	622.701	622.751
	e	20297.964	42.583	622.839	622.880
	f	20307.964	42.583	622.979	623.008
	℄ BRG	20322.887	42.583	623.152	623.152
BEAM N71	℄ BRG	20324.804	42.583	623.189	623.189
	a	20334.804	42.583	623.345	623.365
	b	20344.804	42.583	623.451	623.488
	c	20354.804	42.583	623.591	623.637
	d	20364.804	42.583	623.690	623.740
	e	20374.804	42.583	623.771	623.812
	f	20384.804	42.583	623.868	623.897
	℄ BRG	20399.717	42.583	623.972	623.972
BEAM N81	℄ BRG	20401.634	42.583	623.988	623.988
	a	20411.634	42.583	624.096	624.115
	b	20421.634	42.583	624.196	624.234
	c	20431.634	42.583	624.287	624.333
	d	20441.634	42.583	624.377	624.427
	e	20451.634	42.583	624.429	624.471
	f	20461.634	42.583	624.479	624.509
	℄ BRG	20476.547	42.583	624.566	624.566

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED NWB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N52	℄ BRG	20171.134	37.312	620.730	620.730
	a	20181.134	37.251	620.938	620.955
	b	20191.133	37.190	621.154	621.186
	c	20201.133	37.129	621.335	621.376
	d	20211.133	37.068	621.528	621.573
	e	20221.133	37.007	621.758	621.794
	f	20231.133	36.945	621.934	621.959
	℄ BRG	20246.047	36.854	622.188	622.188
BEAM N62	℄ BRG	20247.964	36.813	622.229	622.229
	a	20257.964	36.801	622.373	622.395
	b	20267.964	36.790	622.505	622.548
	c	20277.964	36.779	622.665	622.716
	d	20287.964	36.768	622.823	622.878
	e	20297.964	36.757	622.960	623.007
	f	20307.964	36.746	623.101	623.134
	℄ BRG	20322.887	36.729	623.275	623.275
BEAM N72	℄ BRG	20324.804	36.729	623.311	623.311
	a	20334.804	36.729	623.467	623.490
	b	20344.804	36.729	623.573	623.616
	c	20354.804	36.729	623.713	623.764
	d	20364.804	36.729	623.812	623.868
	e	20374.804	36.729	623.893	623.940
	f	20384.804	36.729	623.990	624.023
	℄ BRG	20399.717	36.729	624.094	624.094
BEAM N82	℄ BRG	20401.634	36.729	624.110	624.110
	a	20411.634	36.729	624.218	624.240
	b	20421.634	36.729	624.318	624.361
	c	20431.634	36.729	624.409	624.460
	d	20441.634	36.729	624.499	624.554
	e	20451.634	36.729	624.551	624.598
	f	20461.634	36.729	624.601	624.635
	℄ BRG	20476.547	36.729	624.688	624.688

INDICATES STA 204+76.547 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N53	℄ BRG	20171.134	32.125	620.840	620.840
	a	20181.133	31.989	621.051	621.068
	b	20191.132	31.852	621.268	621.301
	c	20201.131	31.716	621.451	621.491
	d	20211.130	31.580	621.645	621.690
	e	20221.129	31.444	621.877	621.914
	f	20231.128	31.307	622.054	622.079
	℄ BRG	20246.047	31.104	622.310	622.310
BEAM N63	℄ BRG	20247.964	31.042	622.350	622.350
	a	20257.964	31.019	622.494	622.516
	b	20267.964	30.997	622.626	622.669
	c	20277.964	30.975	622.787	622.838
	d	20287.964	30.953	622.944	623.000
	e	20297.964	30.930	623.082	623.129
	f	20307.964	30.908	623.223	623.256
	℄ BRG	20322.887	30.875	623.397	623.397
BEAM N73	℄ BRG	20324.804	30.875	623.433	623.433
	a	20334.804	30.875	623.589	623.612
	b	20344.804	30.875	623.695	623.738
	c	20354.804	30.875	623.835	623.886
	d	20364.804	30.875	623.934	623.989
	e	20374.804	30.875	624.015	624.061
	f	20384.804	30.875	624.112	624.145
	℄ BRG	20399.717	30.874	624.216	624.216
BEAM N83	℄ BRG	20401.634	30.874	624.232	624.232
	a	20411.634	30.875	624.340	624.362
	b	20421.634	30.875	624.440	624.483
	c	20431.634	30.875	624.531	624.582
	d	20441.634	30.875	624.621	624.676
	e	20451.634	30.875	624.673	624.720
	f	20461.634	30.875	624.723	624.757
	℄ BRG	20476.547	30.875	624.809	624.809



PLAN

NOTES:
SEE SHEET #8 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 2 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N111	℄ BRG	20511.694	42.575	624.710	624.710
	a	20521.694	42.571	624.713	624.736
	b	20531.694	42.566	624.713	624.751
	c	20541.694	42.562	624.732	624.776
	d	20551.694	42.558	624.743	624.776
	e	20561.694	42.553	624.763	624.775
	℄ BRG	20566.701	42.551	624.764	624.764

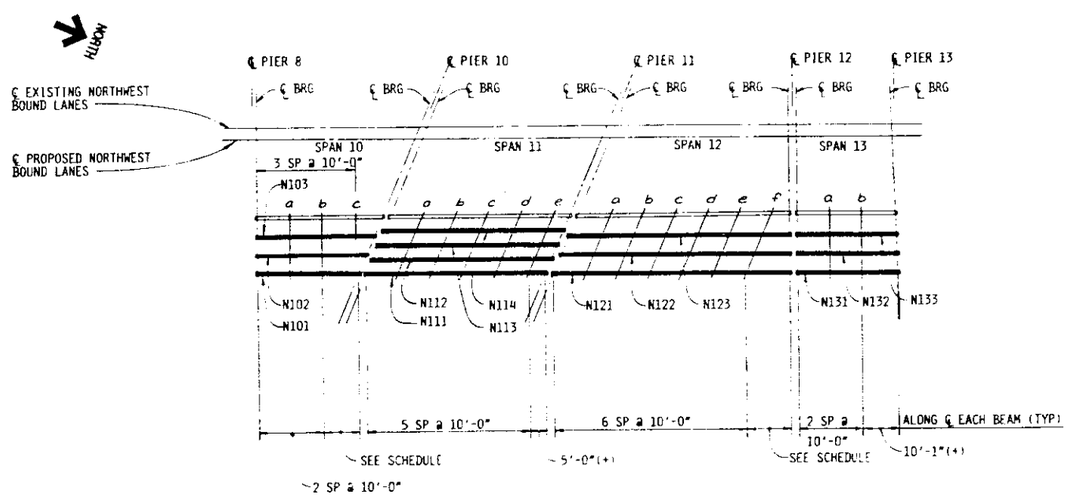
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N101	℄ BRG	20478.464	42.552	624.585	624.585
	a	20488.464	42.555	624.636	624.636
	b	20498.464	42.559	624.655	624.655
	℄ BRG	20509.233	42.562	624.698	624.698
BEAM N112	℄ BRG	20513.611	38.048	624.807	624.807
	a	20523.611	38.043	624.807	624.830
	b	20533.611	38.039	624.810	624.846
	c	20543.611	38.035	624.841	624.881
	d	20553.611	38.030	624.848	624.880
	e	20563.611	38.026	624.860	624.871
	℄ BRG	20568.618	38.024	624.857	624.857
BEAM N121	℄ BRG	20569.164	42.557	624.784	624.784
	a	20579.164	42.564	624.797	624.819
	b	20589.164	42.571	624.811	624.854
	c	20599.164	42.577	624.820	624.871
	d	20609.164	42.584	624.836	624.890
	e	20619.164	42.591	624.850	624.896
	f	20629.164	42.598	624.866	624.897
	℄ BRG	20643.055	42.607	624.864	624.864
BEAM N131	℄ BRG	20644.972	42.608	624.860	624.860
	a	20654.972	42.607	624.844	624.844
	b	20664.972	42.607	624.841	624.841
	℄ BRG	20675.081	42.607	624.851	624.851

INDICATES STA 206+75.081 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N102	℄ BRG	20478.464	36.521	624.711	624.711
	a	20488.464	36.523	624.761	624.762
	b	20498.464	36.526	624.781	624.784
	℄ BRG	20511.788	36.529	624.836	624.836
BEAM N113	℄ BRG	20515.529	33.520	624.901	624.901
	a	20525.529	33.516	624.901	624.924
	b	20535.529	33.512	624.908	624.944
	c	20545.529	33.507	624.928	624.968
	d	20555.529	33.503	624.933	624.965
	e	20565.529	33.499	624.936	624.948
	℄ BRG	20570.535	33.496	624.931	624.931
BEAM N122	℄ BRG	20571.721	36.521	624.881	624.881
	a	20581.721	36.526	624.893	624.910
	b	20591.721	36.531	624.897	624.931
	c	20601.721	36.537	624.900	624.942
	d	20611.721	36.542	624.913	624.956
	e	20621.721	36.547	624.918	624.952
	f	20631.721	36.552	624.930	624.950
	℄ BRG	20642.859	36.558	624.929	624.929
BEAM N132	℄ BRG	20644.777	36.559	624.924	624.924
	a	20654.777	36.559	624.901	624.903
	b	20664.777	36.558	624.892	624.893
	℄ BRG	20674.886	36.558	624.895	624.895

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N103	℄ BRG	20478.464	30.490	624.837	624.837
	a	20488.464	30.491	624.887	624.887
	b	20498.464	30.493	624.907	624.911
	c	20508.464	30.495	624.946	624.946
	℄ BRG	20514.344	30.496	624.964	624.964
BEAM N114	℄ BRG	20517.446	28.993	624.996	624.996
	a	20527.446	28.989	624.996	625.018
	b	20537.446	28.984	625.006	625.042
	c	20547.446	28.980	625.016	625.056
	d	20557.446	28.976	625.017	625.050
	e	20567.446	28.971	625.012	625.024
	℄ BRG	20572.453	28.969	625.006	625.006
BEAM N123	℄ BRG	20574.276	30.488	624.982	624.982
	a	20584.276	30.491	624.987	625.005
	b	20594.276	30.494	624.984	625.017
	c	20604.276	30.497	624.983	625.022
	d	20614.276	30.500	624.988	625.026
	e	20624.276	30.503	624.988	625.020
	f	20634.276	30.507	624.995	625.010
	℄ BRG	20642.664	30.509	624.999	624.999
BEAM N133	℄ BRG	20644.582	30.510	624.993	624.993
	a	20654.582	30.510	624.962	624.964
	b	20664.582	30.509	624.946	624.948
	℄ BRG	20674.691	30.509	624.946	624.946

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED NWB LANES.



PLAN

NOTES:
SEE SHEET #8 FOR NOTES AND FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 3 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

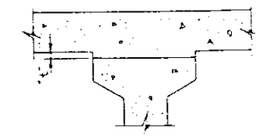
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N141	℄ BRG	20676.998	42.576	624.847	624.847
	a	20686.998	42.576	624.807	624.823
	b	20696.998	42.576	624.775	624.807
	c	20706.998	42.576	624.767	624.797
	d	20716.998	42.575	624.746	624.775
	e	20726.998	42.575	624.741	624.766
	f	20736.888	42.587	624.736	624.745
	℄ BRG	20747.973	42.608	624.723	624.723
BEAM N151	℄ BRG	20744.867	42.554	624.722	624.722
	a	20754.756	42.484	624.715	624.731
	b	20764.644	42.440	624.704	624.731
	c	20774.533	42.423	624.685	624.715
	d	20784.422	42.431	624.676	624.705
	e	20794.310	42.466	624.634	624.660
	f	20804.199	42.527	624.601	624.611
	℄ BRG	20810.509	42.580	624.564	624.564
BEAM N161	℄ BRG	20812.405	42.582	624.553	624.553
	a	20822.293	42.504	624.446	624.462
	b	20832.181	42.452	624.359	624.386
	c	20842.070	42.426	624.239	624.270
	d	20851.959	42.426	624.077	624.106
	e	20861.848	42.453	623.956	623.980
	f	20871.736	42.506	623.825	623.833
	℄ BRG	20876.701	42.542	623.749	623.749
BEAM N171	℄ BRG	20878.596	42.546	623.726	623.726
	a	20888.484	42.469	623.561	623.579
	b	20898.373	42.419	623.384	623.416
	c	20908.262	42.395	623.218	623.256
	d	20918.151	42.396	623.072	623.111
	e	20928.039	42.425	622.860	622.893
	f	20937.928	42.479	622.641	622.660
	℄ BRG	20948.619	42.567	622.454	622.454
BEAM N181	℄ BRG	20950.514	42.597	622.430	622.430
	a	20960.403	42.531	622.194	622.204
	b	20970.291	42.490	622.020	622.038
	c	20980.180	42.476	621.784	621.804
	d	20990.068	42.488	621.572	621.589
	e	20999.957	42.526	621.391	621.400
	℄ BRG	21007.732	42.574	621.191	621.191

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED NWB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N142	℄ BRG	20676.803	36.538	624.890	624.890
	a	20686.803	36.538	624.845	624.861
	b	20696.803	36.537	624.806	624.834
	c	20706.803	36.537	624.791	624.825
	d	20716.803	36.537	624.764	624.796
	e	20726.803	36.536	624.752	624.777
	f	20736.711	36.548	624.741	624.751
	℄ BRG	20742.805	36.568	624.725	624.725
BEAM N152	℄ BRG	20744.703	36.535	624.722	624.722
	a	20754.607	36.473	624.708	624.724
	b	20764.511	36.437	624.690	624.718
	c	20774.416	36.427	624.663	624.697
	d	20784.320	36.443	624.647	624.679
	e	20794.224	36.485	624.598	624.623
	f	20804.128	36.554	624.557	624.567
	℄ BRG	20810.449	36.612	624.516	624.516
BEAM N162	℄ BRG	20812.348	36.613	624.502	624.502
	a	20822.251	36.545	624.389	624.405
	b	20832.155	36.502	624.293	624.322
	c	20842.060	36.486	624.167	624.202
	d	20851.964	36.496	624.003	624.035
	e	20861.868	36.532	623.883	623.907
	f	20871.772	36.595	623.751	623.759
	℄ BRG	20876.744	36.636	623.676	623.676
BEAM N172	℄ BRG	20878.642	36.640	623.651	623.651
	a	20888.546	36.569	623.486	623.504
	b	20898.450	36.525	623.309	623.341
	c	20908.354	36.507	623.143	623.181
	d	20918.258	36.515	622.997	623.036
	e	20928.162	36.549	622.784	622.818
	f	20938.066	36.610	622.566	622.585
	℄ BRG	20948.773	36.705	622.379	622.379
BEAM N182	℄ BRG	20950.671	36.725	622.353	622.353
	a	20960.575	36.656	622.115	622.126
	b	20970.479	36.613	621.943	621.961
	c	20980.382	36.597	621.705	621.726
	d	20990.286	36.607	621.495	621.511
	e	21000.190	36.644	621.314	621.322
	℄ BRG	21007.709	36.689	621.119	621.119

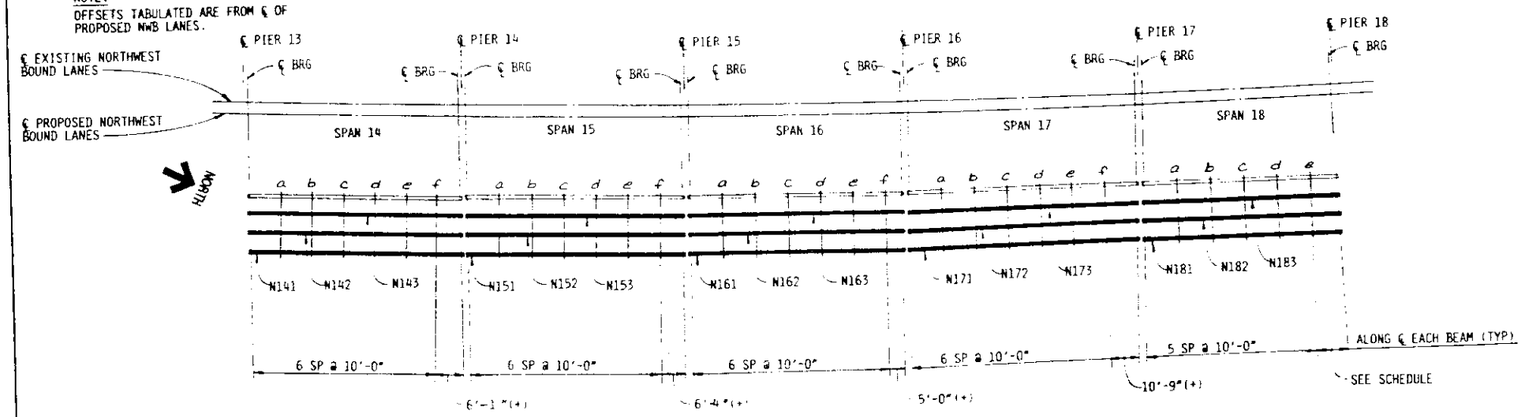
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM N143	℄ BRG	20676.608	30.499	624.938	624.938
	a	20686.608	30.499	624.888	624.904
	b	20696.608	30.499	624.842	624.870
	c	20706.608	30.498	624.820	624.855
	d	20716.608	30.498	624.788	624.820
	e	20726.608	30.498	624.768	624.793
	f	20736.533	30.509	624.752	624.761
	℄ BRG	20742.637	30.529	624.733	624.733
BEAM N153	℄ BRG	20744.538	30.517	624.728	624.728
	a	20754.458	30.462	624.708	624.723
	b	20764.378	30.433	624.681	624.709
	c	20774.298	30.430	624.647	624.682
	d	20784.218	30.454	624.624	624.656
	e	20794.137	30.504	624.567	624.593
	f	20804.057	30.581	624.519	624.529
	℄ BRG	20810.389	30.643	624.473	624.473
BEAM N163	℄ BRG	20812.290	30.645	624.457	624.457
	a	20822.210	30.586	624.337	624.353
	b	20832.129	30.553	624.234	624.262
	c	20842.049	30.546	624.096	624.131
	d	20851.969	30.565	623.930	623.961
	e	20861.888	30.611	623.809	623.833
	f	20871.807	30.683	623.678	623.686
	℄ BRG	20876.788	30.730	623.602	623.602
BEAM N173	℄ BRG	20878.689	30.734	623.575	623.575
	a	20888.608	30.669	623.411	623.428
	b	20898.527	30.631	623.233	623.267
	c	20908.447	30.619	623.068	623.110
	d	20918.366	30.633	622.923	622.965
	e	20928.285	30.673	622.709	622.743
	f	20938.204	30.740	622.491	622.510
	℄ BRG	20948.927	30.842	622.305	622.305
BEAM N183	℄ BRG	20950.829	30.852	622.276	622.276
	a	20960.747	30.781	622.037	622.048
	b	20970.666	30.737	621.866	621.884
	c	20980.586	30.719	621.627	621.647
	d	20990.505	30.727	621.417	621.433
	e	21000.424	30.761	621.237	621.244
	℄ BRG	21007.687	30.803	621.047	621.047

INDICATES STA 210+07.687 (TYP)



TO DETERMINE "t": AFTER ALL PRECAST PRESTRESSED BEAMS HAVE BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN BELOW. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS" MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGES OF BEAMS.

FILLET HEIGHTS



PLAN

NOTES:

BRIDGE DECK ELEVATIONS AT BEAMS WERE ESTABLISHED TO MEET EDGE OF EXISTING DECK ELEVATIONS, ASSUMING A .0125'/FT CROSS SLOPE. CONTRACTOR SHALL DETERMINE EXACT EDGE OF EXISTING DECK ELEVATIONS AND ADJUST NEW BRIDGE DECK ELEVATION ACCORDINGLY, IF REQUIRED TO MEET MINIMUM SLAB THICKNESS AS SHOWN ON SHEETS 18-21.

FOR DEAD LOAD DEFLECTION DIAGRAM FOR PRESTRESSED CONCRETE BEAMS SEE SHEETS 37 AND 38

TOP OF SLAB ELEVATIONS
SHEET 4 OF 10
SECTION
F.A.I. ROUTE 80/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

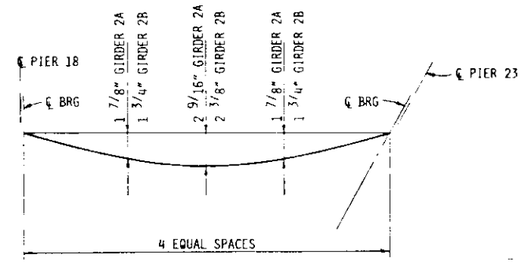
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
GIRDER 2B	℄ BRG	21011.113	43.573	621.121	621.121
	a	21020.996	43.311	620.946	620.979
	b	21030.880	43.076	620.681	620.746
	c	21040.765	42.866	620.391	*620.485
	d	21050.651	42.683	620.148	620.267
	e	21060.538	42.526	619.905	620.047
	f	21070.426	42.396	619.660	619.821
	g	21080.315	42.291	619.380	619.556
	h	21090.204	42.213	619.139	619.326
	j	21100.093	42.161	618.926	619.121
	k	21109.982	42.135	618.564	618.763
	l	21119.872	42.135	618.377	618.576
	m	21129.761	42.162	618.051	618.246
	n	21139.651	42.214	617.740	617.927
	p	21149.540	42.293	617.467	617.642
	q	21159.428	42.398	617.182	617.341
	r	21169.316	42.530	616.869	617.010
	s	21179.203	42.688	616.608	616.727
	t	21189.089	42.871	616.341	616.435
	u	21198.974	43.081	616.150	616.216
	v	21208.858	43.318	615.800	615.837
	℄ BRG	21220.281	43.623	615.471	615.471
BEAM N241	℄ BRG	21224.458	42.624	615.346	615.346
	a	21234.344	42.826	615.010	615.029
	b	21244.229	43.055	614.706	614.742
	c	21254.113	43.310	614.436	614.481
	d	21263.995	43.591	614.091	614.142
	e	21273.876	43.898	613.810	613.854
	f	21283.755	44.231	613.533	613.567
	g	21293.632	44.591	613.229	613.244
	℄ BRG	21301.510	44.897	613.008	613.008

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED NWB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
GIRDER 2A	℄ BRG	21011.086	34.240	621.006	621.006
	a	21020.996	34.120	620.831	620.866
	b	21030.906	34.026	620.568	620.637
	c	21040.816	33.958	620.280	620.380
	d	21050.727	33.917	620.039	620.166
	e	21060.638	33.902	619.797	619.948
	f	21070.549	33.913	619.553	619.724
	g	21080.459	33.951	619.265	619.452
	h	21090.370	34.014	619.026	619.225
	j	21100.280	34.105	618.814	619.022
	k	21110.190	34.221	618.455	618.668
	l	21120.098	34.363	618.264	618.477
	m	21130.007	34.532	617.934	618.143
	n	21139.914	34.727	617.626	617.828
	p	21149.820	34.949	617.362	617.552
	q	21159.725	35.196	617.081	617.256
	r	21169.628	35.470	616.772	616.928
	s	21179.530	35.770	616.511	616.645
	t	21189.430	36.097	616.245	616.353
	u	21199.329	36.449	616.059	616.139
	v	21209.226	36.828	615.710	615.759
	℄ BRG	21223.852	37.436	615.297	615.297
BEAM N242	℄ BRG	21227.664	37.085	615.197	615.197
	a	21237.554	37.577	614.843	614.862
	b	21247.441	38.096	614.565	614.601
	c	21257.326	38.641	614.290	614.333
	d	21267.207	39.212	613.931	613.977
	e	21277.086	39.809	613.690	613.731
	f	21286.961	40.433	613.399	613.431
	g	21296.834	41.082	613.096	613.109
	℄ BRG	21303.543	41.538	612.920	612.920
BEAM N251	℄ BRG	21304.040	45.023	612.941	612.941
	a	21313.905	45.599	612.692	612.696
	b	21323.767	46.201	612.368	612.376
	c	21333.626	46.829	612.069	612.077
	d	21343.481	47.483	611.764	611.768
	℄ BRG	21351.629	48.043	611.535	611.535
	Bk. N. ABUT.	21354.593	48.252	611.455	611.455

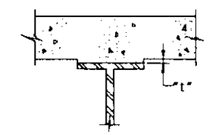
INDICATES STA 213+54.593 (TYP)



DEAD LOAD DEFLECTION DIAGRAM
FOR GIRDERS 2A & 2B

(INCLUDES WEIGHT OF CONCRETE ONLY)

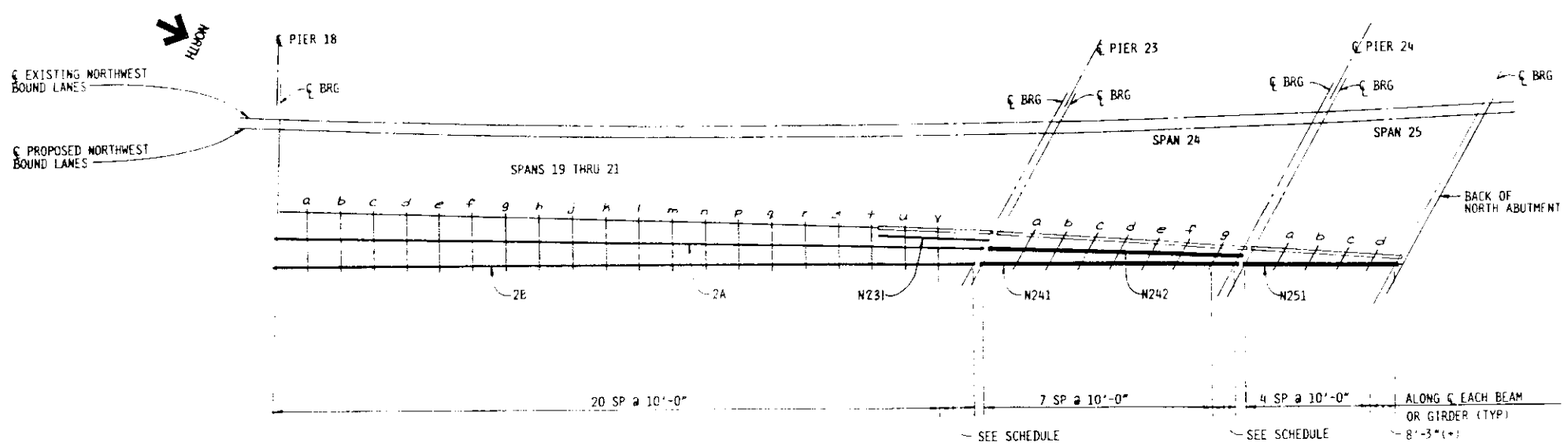
NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN. THE DEAD LOAD DEFLECTION DIAGRAM FOR THE PRESTRESSED CONCRETE BEAMS ARE SHOWN ON SHEETS 37 AND 38.



GIRDERS

TO DETERMINE "t": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGE OF THE GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS" SHOWN, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGE OF GIRDERS.

FILLET HEIGHT DETAIL



PLAN

NOTES:
SEE SHEET #11 FOR NOTES.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 5 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

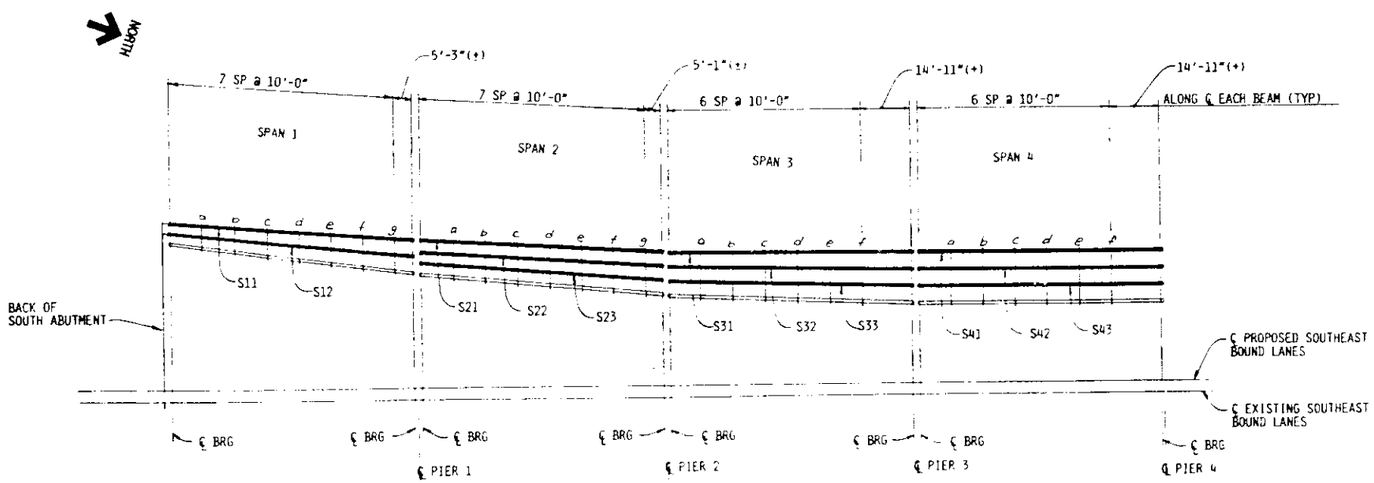
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S11	BK. S. ABUT.	29852.810	51.547	611.989	611.989
	℄ BRG	29855.282	51.340	612.100	612.100
	a	29865.225	50.511	612.415	612.432
	b	29875.170	49.685	612.728	612.761
	c	29885.114	48.864	613.014	613.055
	d	29895.060	48.047	613.341	613.386
	e	29905.006	47.235	613.696	613.732
	f	29914.953	46.427	614.030	614.055
	g	29924.901	45.623	614.367	614.375
	℄ BRG	29930.018	45.211	614.526	614.526
BEAM S21	℄ BRG	29931.931	45.196	614.578	614.578
	a	29941.901	44.749	614.882	614.899
	b	29951.872	44.307	615.187	615.219
	c	29961.843	43.869	615.501	615.541
	d	29971.815	43.435	615.819	615.864
	e	29981.787	43.006	616.137	616.174
	f	29991.759	42.581	616.445	616.470
	g	30001.733	42.161	616.722	616.730
	℄ BRG	30006.707	41.952	616.855	616.855
BEAM S31	℄ BRG	30008.624	41.937	616.915	616.915
	a	30018.622	41.765	617.223	617.242
	b	30028.621	41.592	617.494	617.531
	c	30038.619	41.420	617.773	617.815
	d	30048.618	41.247	618.041	618.086
	e	30058.616	41.075	618.303	618.343
	f	30068.615	40.902	618.548	618.577
	℄ BRG	30083.547	40.645	618.903	618.903
BEAM S41	℄ BRG	30085.464	40.634	618.952	618.952
	a	30095.464	40.627	619.209	619.228
	b	30105.464	40.621	619.430	619.468
	c	30115.464	40.614	619.678	619.724
	d	30125.464	40.607	619.898	619.948
	e	30135.464	40.600	620.118	620.160
	f	30145.464	40.593	620.339	620.368
	℄ BRG	30160.377	40.583	620.691	620.691

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S12	BK. S. ABUT.	29852.791	48.613	612.045	612.045
	℄ BRG	29855.263	48.340	612.156	612.156
	a	29865.182	47.248	612.472	612.485
	b	29875.103	46.161	612.792	612.818
	c	29885.024	45.077	613.082	613.115
	d	29894.947	43.998	613.420	613.454
	e	29904.870	42.923	613.781	613.811
	f	29914.794	41.853	614.120	614.141
	g	29924.719	40.787	614.463	614.470
	℄ BRG	29930.003	40.221	614.628	614.628
BEAM S22	℄ BRG	29931.921	41.796	614.647	614.647
	a	29941.883	41.175	614.944	614.958
	b	29951.846	40.559	615.252	615.279
	c	29961.810	39.947	615.570	615.603
	d	29971.774	39.339	615.893	615.928
	e	29981.739	38.735	616.223	616.253
	f	29991.705	38.136	616.534	616.555
	g	30001.671	37.541	616.814	616.821
	℄ BRG	30006.707	37.242	616.951	616.951
BEAM S32	℄ BRG	30008.624	37.187	617.014	617.014
	a	30018.621	36.936	617.322	617.339
	b	30028.618	36.685	617.596	617.628
	c	30038.614	36.434	617.876	617.916
	d	30048.611	36.182	618.146	618.190
	e	30058.608	35.931	618.412	618.449
	f	30068.605	35.680	618.659	618.684
	℄ BRG	30083.547	35.305	619.018	619.018
BEAM S42	℄ BRG	30085.464	35.294	619.063	619.063
	a	30095.464	35.283	619.320	619.340
	b	30105.464	35.271	619.542	619.580
	c	30115.464	35.260	619.790	619.836
	d	30125.464	35.248	620.010	620.060
	e	30135.464	35.237	620.230	620.272
	f	30145.464	35.225	620.451	620.480
	℄ BRG	30160.377	35.208	620.804	620.804

INDICATES STA 301+60.377 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S23	℄ BRG	29931.910	38.396	614.721	614.721
	a	29941.862	37.601	615.022	615.036
	b	29951.815	36.811	615.334	615.361
	c	29961.768	36.026	615.657	615.689
	d	29971.722	35.244	615.983	616.018
	e	29981.677	34.467	616.309	616.339
	f	29991.632	33.694	616.623	616.644
	g	30001.588	32.926	616.905	616.912
	℄ BRG	30006.707	32.532	617.049	617.049
BEAM S33	℄ BRG	30008.624	32.437	617.105	617.105
	a	30018.618	32.107	617.414	617.431
	b	30028.613	31.777	617.689	617.722
	c	30038.608	31.448	617.971	618.011
	d	30048.602	31.118	618.243	618.287
	e	30058.597	30.788	618.510	618.547
	f	30068.591	30.458	618.759	618.784
	℄ BRG	30083.547	29.965	619.120	619.120
BEAM S43	℄ BRG	30085.464	29.954	619.174	619.174
	a	30095.464	29.938	619.432	619.451
	b	30105.464	29.922	619.654	619.691
	c	30115.464	29.906	619.902	619.948
	d	30125.464	29.889	620.122	620.172
	e	30135.464	29.873	620.342	620.384
	f	30145.464	29.857	620.563	620.592
	℄ BRG	30160.377	29.833	620.916	620.916



PLAN

NOTES:
SEE SHEET #6 FOR NOTES AND FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 6 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	275
F.A.I. RTE. 94	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14 SHEETS

* 1990-073BY

SHEET C197 OF C317

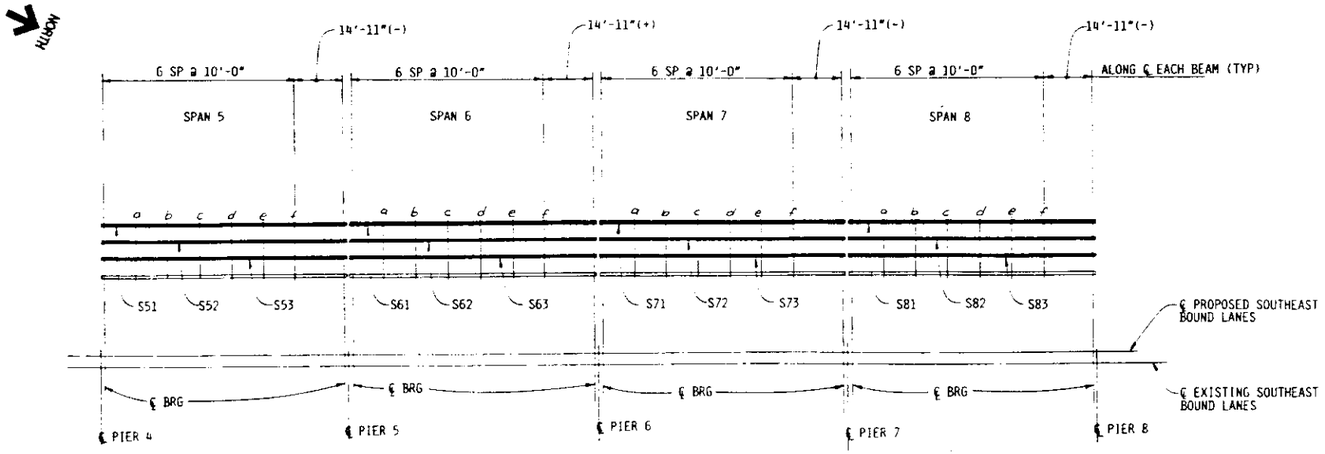
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S51	℄ BRG	30162.294	40.583	620.736	620.736
	a	30172.294	40.583	620.943	620.963
	b	30182.294	40.583	621.106	621.144
	c	30192.294	40.583	621.316	621.362
	d	30202.294	40.583	621.531	621.581
	e	30212.294	40.583	621.719	621.760
	f	30222.294	40.583	621.906	621.935
	℄ BRG	30237.207	40.583	622.144	622.144
BEAM S61	℄ BRG	30239.124	40.583	622.184	622.184
	a	30249.124	40.583	622.369	622.388
	b	30259.124	40.583	622.523	622.560
	c	30269.124	40.583	622.674	622.720
	d	30279.124	40.583	622.806	622.856
	e	30289.124	40.583	622.939	622.980
	f	30299.124	40.583	623.089	623.118
	℄ BRG	30314.047	40.583	623.266	623.266
BEAM S71	℄ BRG	30315.964	40.583	623.288	623.288
	a	30325.964	40.583	623.427	623.446
	b	30335.964	40.583	623.537	623.574
	c	30345.964	40.583	623.650	623.696
	d	30355.964	40.583	623.789	623.839
	e	30365.964	40.583	623.910	623.951
	f	30375.964	40.583	623.967	623.996
	℄ BRG	30390.877	40.583	624.073	624.073
BEAM S81	℄ BRG	30392.794	40.583	624.077	624.077
	a	30402.794	40.583	624.180	624.199
	b	30412.794	40.583	624.252	624.289
	c	30422.794	40.583	624.320	624.366
	d	30432.794	40.583	624.390	624.440
	e	30442.794	40.583	624.452	624.494
	f	30452.794	40.583	624.528	624.557
	℄ BRG	30467.707	40.583	624.599	624.599

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S52	℄ BRG	30162.294	35.208	620.848	620.848
	a	30172.294	35.208	621.055	621.075
	b	30182.294	35.208	621.218	621.256
	c	30192.294	35.208	621.428	621.474
	d	30202.294	35.208	621.643	621.693
	e	30212.294	35.208	621.831	621.872
	f	30222.294	35.208	622.018	622.047
	℄ BRG	30237.207	35.208	622.256	622.256
BEAM S62	℄ BRG	30239.124	35.208	622.296	622.296
	a	30249.124	35.208	622.481	622.500
	b	30259.124	35.208	622.635	622.672
	c	30269.124	35.208	622.786	622.832
	d	30279.124	35.208	622.918	622.968
	e	30289.124	35.208	623.051	623.092
	f	30299.124	35.208	623.201	623.230
	℄ BRG	30314.047	35.208	623.378	623.378
BEAM S72	℄ BRG	30315.964	35.208	623.400	623.400
	a	30325.964	35.208	623.539	623.558
	b	30335.964	35.208	623.649	623.686
	c	30345.964	35.208	623.762	623.808
	d	30355.964	35.208	623.901	623.951
	e	30365.964	35.208	624.022	624.063
	f	30375.964	35.208	624.079	624.108
	℄ BRG	30390.877	35.208	624.185	624.185
BEAM S82	℄ BRG	30392.794	35.208	624.189	624.189
	a	30402.794	35.208	624.292	624.311
	b	30412.794	35.208	624.364	624.401
	c	30422.794	35.208	624.432	624.478
	d	30432.794	35.208	624.502	624.552
	e	30442.794	35.208	624.564	624.606
	f	30452.794	35.208	624.640	624.669
	℄ BRG	30467.707	35.208	624.711	624.711

INDICATES STA 304+67.707 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S53	℄ BRG	30162.294	29.833	620.960	620.960
	a	30172.294	29.833	621.167	621.187
	b	30182.294	29.833	621.330	621.368
	c	30192.294	29.833	621.540	621.586
	d	30202.294	29.833	621.755	621.805
	e	30212.294	29.833	621.942	621.984
	f	30222.294	29.833	622.130	622.159
	℄ BRG	30237.207	29.833	622.368	622.368
BEAM S63	℄ BRG	30239.124	29.833	622.408	622.408
	a	30249.124	29.833	622.593	622.612
	b	30259.124	29.833	622.747	622.784
	c	30269.124	29.833	622.898	622.944
	d	30279.124	29.833	623.030	623.080
	e	30289.124	29.833	623.163	623.204
	f	30299.124	29.833	623.313	623.342
	℄ BRG	30314.047	29.833	623.490	623.490
BEAM S73	℄ BRG	30315.964	29.833	623.512	623.512
	a	30325.964	29.833	623.651	623.670
	b	30335.964	29.833	623.761	623.798
	c	30345.964	29.833	623.874	623.920
	d	30355.964	29.833	624.013	624.063
	e	30365.964	29.833	624.134	624.175
	f	30375.964	29.833	624.191	624.220
	℄ BRG	30390.877	29.833	624.297	624.297
BEAM S83	℄ BRG	30392.794	29.833	624.301	624.301
	a	30402.794	29.833	624.404	624.423
	b	30412.794	29.833	624.476	624.513
	c	30422.794	29.833	624.544	624.590
	d	30432.794	29.833	624.614	624.664
	e	30442.794	29.833	624.676	624.718
	f	30452.794	29.833	624.752	624.781
	℄ BRG	30467.707	29.833	624.823	624.823



PLAN

NOTES:
SEE SHEET #8 FOR NOTES AND FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 7 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

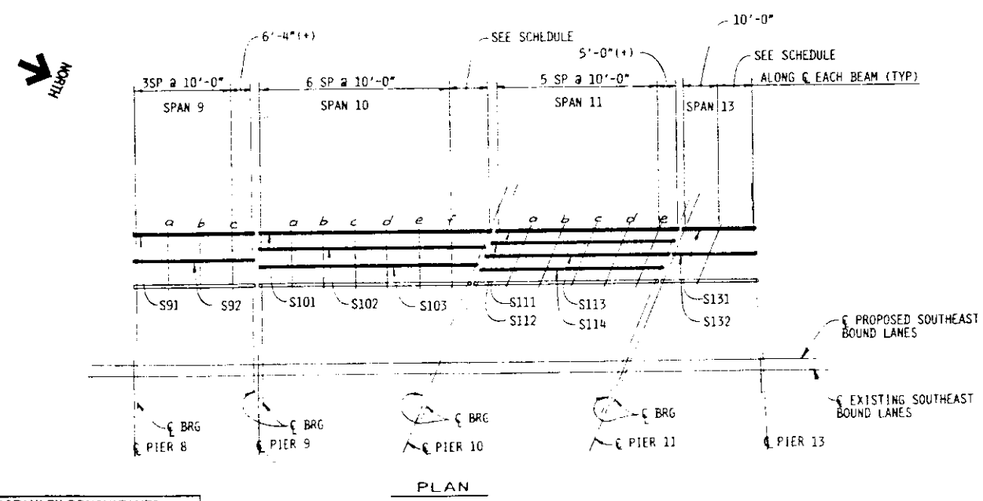
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S91	℄ BRG	30469.624	40.583	624.610	624.610
	a	30479.624	40.583	624.668	624.669
	b	30489.624	40.583	624.704	624.708
	c	30499.624	40.583	624.728	624.728
	℄ BRG	30505.978	40.583	624.750	624.750
BEAM S101	℄ BRG	30507.895	40.583	624.754	624.754
	a	30517.895	40.584	624.760	624.778
	b	30527.895	40.584	624.783	624.816
	c	30537.895	40.585	624.810	624.849
	d	30547.895	40.585	624.833	624.872
	e	30557.895	40.586	624.863	624.897
	f	30567.895	40.586	624.877	624.897
	℄ BRG	30579.230	40.587	624.836	624.836
BEAM S111	℄ BRG	30581.695	40.584	624.827	624.827
	a	30591.695	40.582	624.800	624.823
	b	30601.695	40.579	624.787	624.826
	c	30611.695	40.577	624.736	624.780
	d	30621.695	40.574	624.687	624.720
	e	30631.695	40.572	624.662	624.674
	℄ BRG	30636.686	40.571	624.655	624.655
BEAM S131	℄ BRG	30639.158	40.585	624.654	624.654
	a	30649.158	40.589	624.654	624.654
	℄ BRG	30660.236	40.592	624.654	624.654

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S92	℄ BRG	30469.624	32.520	624.778	624.778
	a	30479.624	32.521	624.836	624.841
	b	30489.624	32.521	624.872	624.877
	c	30499.624	32.521	624.896	624.900
	℄ BRG	30505.978	32.521	624.918	624.918
BEAM S102	℄ BRG	30507.895	35.208	624.866	624.866
	a	30517.895	35.208	624.872	624.887
	b	30527.895	35.209	624.895	624.923
	c	30537.895	35.209	624.922	624.956
	d	30547.895	35.209	624.945	624.978
	e	30557.895	35.209	624.975	625.002
	f	30567.895	35.209	624.989	625.002
	℄ BRG	30576.953	35.209	624.957	624.957
BEAM S112	℄ BRG	30579.987	36.551	624.917	624.917
	a	30589.987	36.550	624.888	624.907
	b	30599.987	36.549	624.873	624.904
	c	30609.987	36.549	624.832	624.867
	d	30619.987	36.548	624.778	624.805
	e	30629.987	36.547	624.750	624.759
	℄ BRG	30634.982	36.547	624.739	624.739
BEAM S132	℄ BRG	30635.742	32.519	624.822	624.822
	a	30645.742	32.522	624.822	624.822
	℄ BRG	30660.496	32.527	624.822	624.822

INDICATES STA 306+60.496 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S103	℄ BRG	30507.895	29.833	624.978	624.978
	a	30517.895	29.833	624.984	624.997
	b	30527.895	29.833	625.007	625.030
	c	30537.895	29.833	625.034	625.063
	d	30547.895	29.832	625.057	625.084
	e	30557.895	29.832	625.087	625.108
	f	30567.895	29.832	625.101	625.109
	℄ BRG	30574.675	29.832	625.079	625.079
BEAM S113	℄ BRG	30578.279	32.518	625.008	625.008
	a	30588.279	32.519	624.975	624.994
	b	30598.279	32.519	624.959	624.990
	c	30608.279	32.520	624.928	624.963
	d	30618.279	32.521	624.868	624.895
	e	30628.279	32.522	624.836	624.846
	℄ BRG	30633.277	32.523	624.826	624.826
BEAM S114	℄ BRG	30576.571	28.484	625.099	625.099
	a	30586.571	28.487	625.063	625.082
	b	30596.571	28.490	625.044	625.075
	c	30606.571	28.492	625.024	625.059
	d	30616.571	28.495	624.959	624.986
	e	30626.571	28.498	624.923	624.933
	℄ BRG	30631.573	28.499	624.914	624.914

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.



PLAN

NOTES:
SEE SHEET #5 FOR NOTES AND FILLET HEIGHT DETAILS.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 8 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	277

SHEET NO. 160 SHEETS

* 1990-073BY

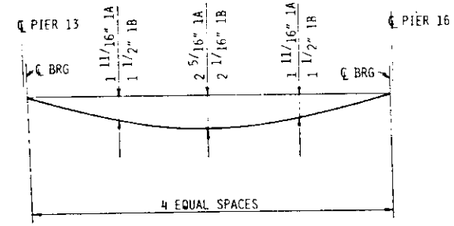
SHEET C199 OF C317

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
GIRDER 1B	℄ BRG	30663.446	40.583	624.655	624.655
	a	30673.445	40.731	624.522	624.551
	b	30683.444	40.878	624.467	624.526
	c	30693.443	41.026	624.411	624.495
	d	30703.442	41.173	624.336	624.444
	e	30713.441	41.321	624.269	624.395
	f	30723.498	41.465	624.327	624.471
	g	30733.611	41.584	624.231	624.386
	h	30743.726	41.676	624.124	624.290
	j	30753.841	41.741	624.043	624.213
	k	30763.956	41.778	623.965	624.139
	l	30774.071	41.787	623.869	624.040
	m	30784.186	41.769	623.799	623.966
	n	30794.301	41.724	623.603	623.759
	p	30804.416	41.650	623.432	623.578
	q	30814.530	41.549	623.319	623.447
	r	30824.643	41.421	623.156	623.267
	s	30834.756	41.265	622.997	623.084
	t	30844.868	41.082	622.885	622.948
	u	30854.979	40.870	622.759	622.793
	℄ BRG	30866.645	40.593	622.574	622.574
BEAM S171	℄ BRG	30870.100	40.563	622.532	622.532
	a	30880.211	40.697	622.358	622.373
	b	30890.322	40.802	622.175	622.203
	c	30900.435	40.881	621.987	622.021
	d	30910.547	40.932	621.795	621.827
	e	30920.660	40.955	621.607	621.634
	f	30930.773	40.950	621.419	621.431
	℄ BRG	30938.725	40.928	621.265	621.265
BEAM S181	℄ BRG	30940.662	40.860	621.230	621.230
	a	30950.773	41.035	621.035	621.039
	b	30960.885	41.183	620.810	620.818
	c	30970.998	41.304	620.575	620.584
	d	30981.117	41.397	620.359	620.364
	℄ BRG	30993.506	41.473	620.093	620.093
BEAM S191	℄ BRG	30995.444	41.482	620.042	620.042
	a	31005.556	41.739	619.805	619.820
	b	31015.668	41.968	619.531	619.559
	c	31025.782	42.169	619.307	619.341
	d	31035.897	42.343	619.062	619.095
	e	31046.013	42.490	618.795	618.822
	f	31056.130	42.608	618.509	618.522
	℄ BRG	31064.717	42.688	618.254	618.254
BEAM S201	℄ BRG	31066.656	42.649	618.200	618.200
	a	31076.769	42.951	617.918	617.926
	b	31086.884	43.225	617.628	617.641
	c	31097.001	43.472	617.337	617.351
	d	31107.119	43.691	617.055	617.065
	℄ BRG	31120.931	43.946	616.615	616.615

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
GIRDER 1A	℄ BRG	30663.706	32.522	624.823	624.823
	a	30673.704	32.756	624.688	624.720
	b	30683.701	32.991	624.631	624.696
	c	30693.698	33.225	624.574	624.666
	d	30703.695	33.460	624.497	624.616
	e	30713.693	33.695	624.428	624.567
	f	30723.739	33.925	624.421	624.579
	g	30733.831	34.131	624.324	624.494
	h	30743.923	34.310	624.216	624.398
	j	30754.017	34.461	624.134	624.321
	k	30764.111	34.585	624.055	624.246
	l	30774.206	34.681	623.958	624.145
	m	30784.301	34.750	623.886	624.069
	n	30794.397	34.791	623.689	623.861
	p	30804.493	34.804	623.517	623.677
	q	30814.588	34.790	623.403	623.544
	r	30824.684	34.749	623.239	623.361
	s	30834.779	34.680	623.079	623.174
	t	30844.874	34.584	622.966	623.034
	u	30854.968	34.460	622.839	622.875
	℄ BRG	30866.593	34.283	622.661	622.661
BEAM S172	℄ BRG	30870.042	34.253	622.606	622.606
	a	30880.127	34.691	622.428	622.443
	b	30890.214	35.102	622.241	622.269
	c	30900.304	35.485	622.050	622.084
	d	30910.396	35.841	621.853	621.886
	e	30920.489	36.169	621.661	621.688
	f	30930.585	36.470	621.470	621.482
	℄ BRG	30938.606	36.689	621.316	621.316
BEAM S182	℄ BRG	30940.543	36.701	621.280	621.280
	a	30950.638	37.065	621.034	621.088
	b	30960.734	37.401	620.858	620.866
	c	30970.833	37.710	620.619	620.628
	d	30980.933	37.991	620.401	620.406
	℄ BRG	30993.516	38.303	620.127	620.127

INDICATES STA 309+93.516 (TYP)

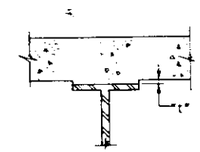
NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.



DEAD LOAD DEFLECTION DIAGRAM FOR GIRDERS 1A & 1B

(INCLUDES WEIGHT OF CONCRETE ONLY)

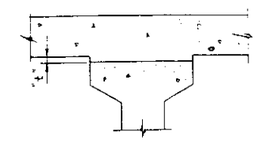
NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.



GIRDERS

TO DETERMINE "t*": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGE OF THE GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS" SHOWN, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t*" ABOVE TOP FLANGE OF GIRDERS.

FILLET HEIGHT DETAIL



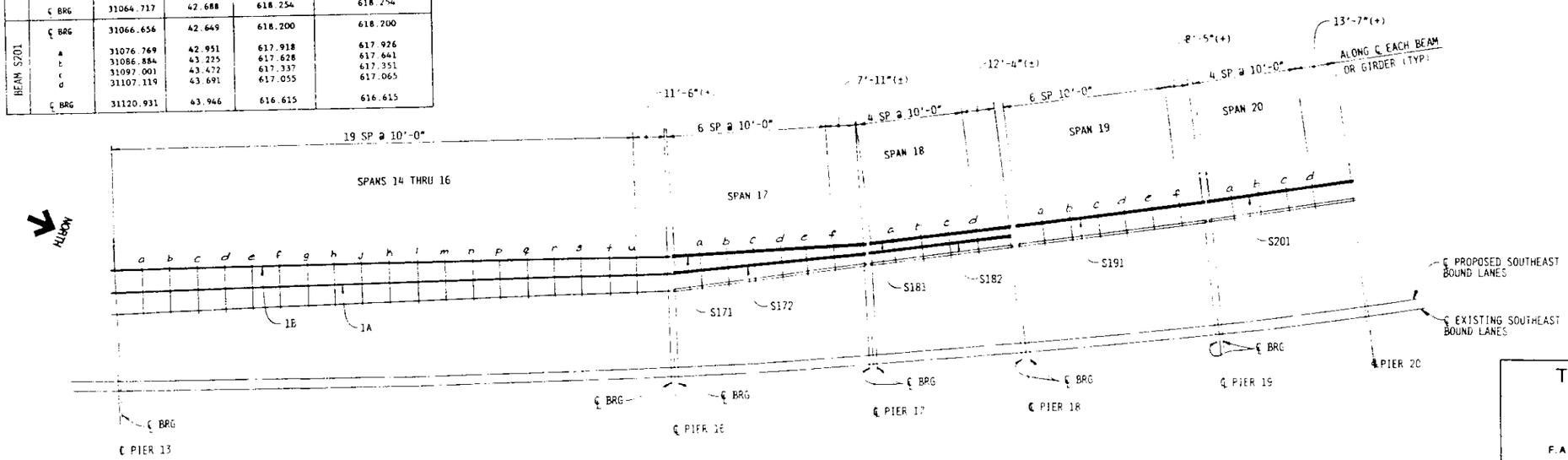
TO DETERMINE "t*": AFTER ALL PRECAST PRESTRESSED BEAMS HAVE BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN BELOW. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS" MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t*" ABOVE TOP FLANGES OF BEAMS.

FILLET HEIGHTS

NOTES:

BRIDGE DECK ELEVATIONS AT BEAMS WERE ESTABLISHED TO MEET EDGE OF EXISTING DECK ELEVATIONS, ASSUMING A .0125'/FT CROSS SLOPE. CONTRACTOR SHALL DETERMINE EXACT EDGE OF EXISTING DECK ELEVATIONS AND ADJUST NEW BRIDGE DECK ELEVATION ACCORDINGLY, IF REQUIRED TO MEET MINIMUM SLAB THICKNESS AS SHOWN ON SHEETS 18-21.

FOR DEAD LOAD DEFLECTION DIAGRAM FOR PRESTRESSED CONCRETE BEAMS, SEE SHEET 37 AND 38.



PLAN

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 9 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	278
F.A.P. & REV. A		ILLINOIS	FED. AID PROJECT	

SHEET NO. 17 SHEETS

* 1990-073BY

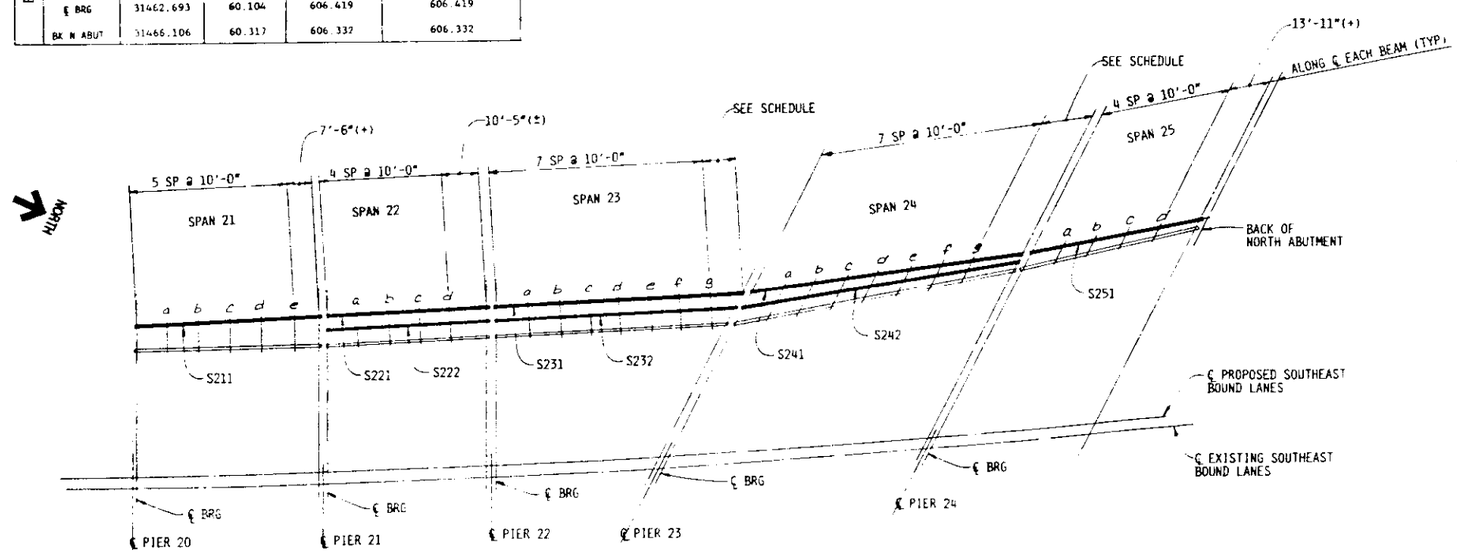
SHEET C200 OF C317

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S211	℄ BRG	31122.875	44.018	616.562	616.562
	a	31132.990	44.379	616.273	616.283
	b	31143.107	44.713	615.974	615.992
	c	31153.226	45.019	615.670	615.691
	d	31163.347	45.298	615.371	615.388
	e	31173.469	45.549	615.053	615.061
	℄ BRG	31181.119	45.720	614.809	614.809
BEAM S221	℄ BRG	31183.062	45.711	614.758	614.758
	a	31193.180	46.128	614.456	614.460
	b	31203.300	46.517	614.134	614.142
	c	31213.422	46.879	613.826	613.835
	d	31223.547	47.214	613.543	613.548
	℄ BRG	31234.137	47.534	613.190	613.190
BEAM S231	℄ BRG	31236.083	47.548	613.116	613.116
	a	31246.201	48.081	612.767	612.790
	b	31256.322	48.586	612.418	612.465
	c	31266.445	49.063	612.137	612.194
	d	31276.571	49.513	611.854	611.922
	e	31286.699	49.935	611.517	611.574
	f	31296.830	50.330	611.178	611.224
	g	31306.962	50.697	610.853	610.876
	℄ BRG	31316.822	51.028	610.582	610.582
BEAM S241	℄ BRG	31319.713	51.181	610.554	610.554
	a	31329.831	51.865	610.228	610.253
	b	31339.954	52.521	609.955	610.004
	c	31350.080	53.150	609.679	609.742
	d	31360.209	53.751	609.371	609.446
	e	31370.342	54.324	609.097	609.166
	f	31380.478	54.871	608.822	608.878
	g	31390.617	55.389	608.597	608.632
	℄ BRG	31405.142	56.083	608.161	608.161
BEAM S251	℄ BRG	31408.007	56.270	608.087	608.087
	a	31418.134	57.041	607.801	607.809
	b	31428.265	57.785	607.465	607.478
	c	31438.400	58.501	607.104	607.118
	d	31448.538	59.190	606.808	606.819
	℄ BRG	31462.693	60.104	606.419	606.419
	BK N ABUT	31466.106	60.317	606.332	606.332

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS
BEAM S222	℄ BRG	31182.876	41.925	614.809	614.809
	a	31192.991	42.078	614.511	614.515
	b	31203.106	42.203	614.192	614.200
	c	31213.222	42.300	613.887	613.895
	d	31223.339	42.370	613.607	613.611
	℄ BRG	31233.813	42.414	613.281	613.281
BEAM S232	℄ BRG	31235.756	42.418	613.197	613.197
	a	31245.866	42.800	612.847	612.866
	b	31255.979	43.154	612.501	612.539
	c	31266.093	43.480	612.217	612.263
	d	31276.209	43.779	611.938	611.989
	e	31286.326	44.050	611.605	611.648
	f	31296.445	44.294	611.267	611.298
	g	31306.565	44.510	610.943	610.955
	℄ BRG	31312.762	44.629	610.760	610.760
BEAM S242	℄ BRG	31315.572	44.666	610.722	610.722
	a	31325.650	45.631	610.427	610.453
	b	31335.732	46.568	610.129	610.182
	c	31345.820	47.478	609.852	609.917
	d	31355.913	48.360	609.561	609.637
	e	31366.011	49.215	609.277	609.349
	f	31376.113	50.043	609.000	609.062
	g	31386.220	50.843	608.762	608.805
	℄ BRG	31402.451	52.070	608.298	608.298

INDICATES STA 314+02.451

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.



PLAN

NOTES:
SEE SHEET #16 FOR NOTES AND FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 10 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

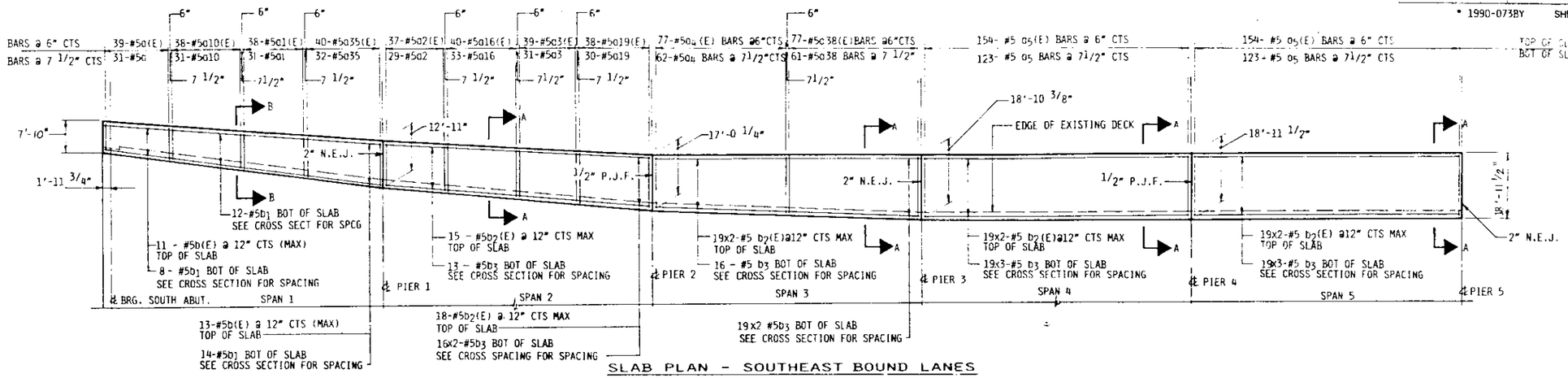
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	279

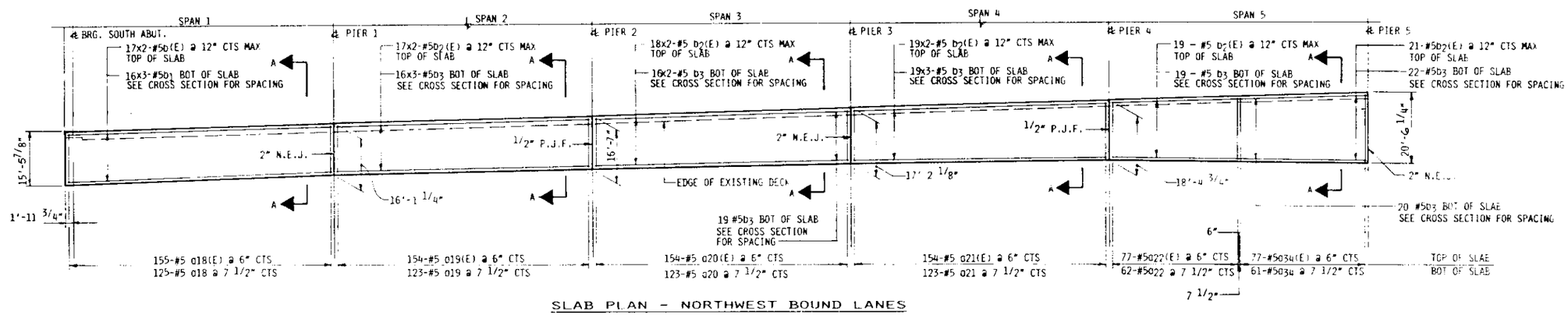
SHEET NO. 18 SHEETS

* 1990-073BY SHEET C201 OF C317

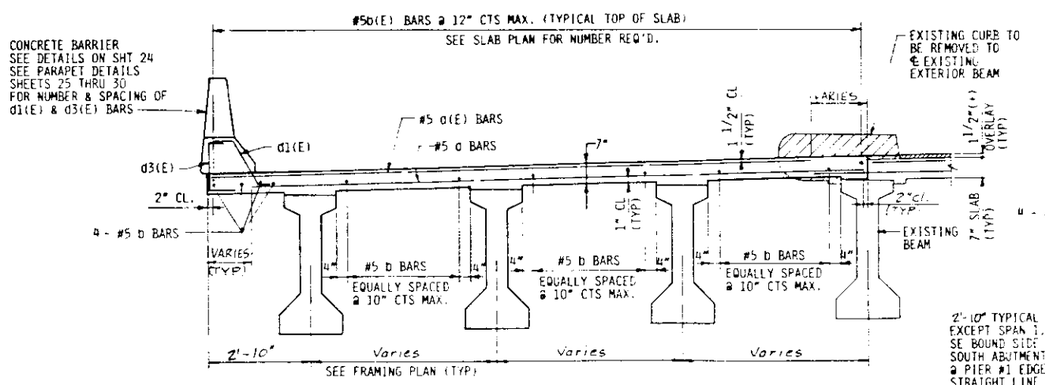
NORTH



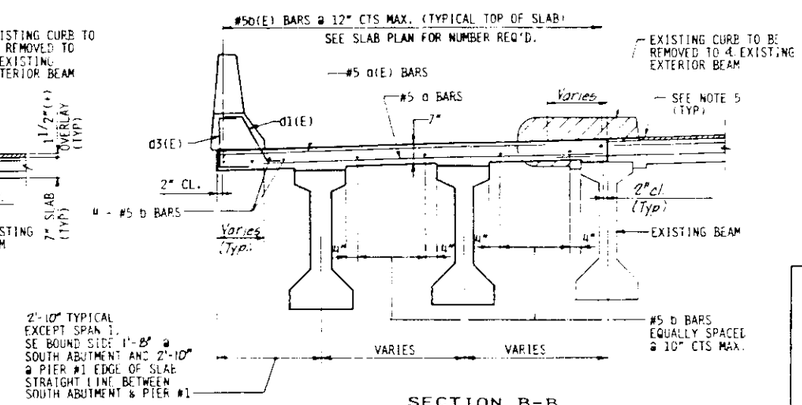
SLAB PLAN - SOUTHEAST BOUND LANES



SLAB PLAN - NORTHWEST BOUND LANES



SECTION A-A



SECTION B-B

NOTES:

1. MINIMUM LAP SPLICE LENGTH FOR #5 BAR = 2'-2".
2. 15X3 INDICATES 15 LINES OF BARS WITH 3 BARS PER LINE
3. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED
4. ADJUST CROSS SLOPE AS REQUIRED AND AS DIRECTED BY THE ENGINEER TO MAINTAIN MIN. SLAB THICKNESS & MATCH EXISTING DECK.
5. REPAIR OVERLAY AT THIS POINT AS REQD. (COST OF REPAIR INCIDENTAL TO CLASS X CONC SUPERSTRUCTURE.)

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS
SHEET 1 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

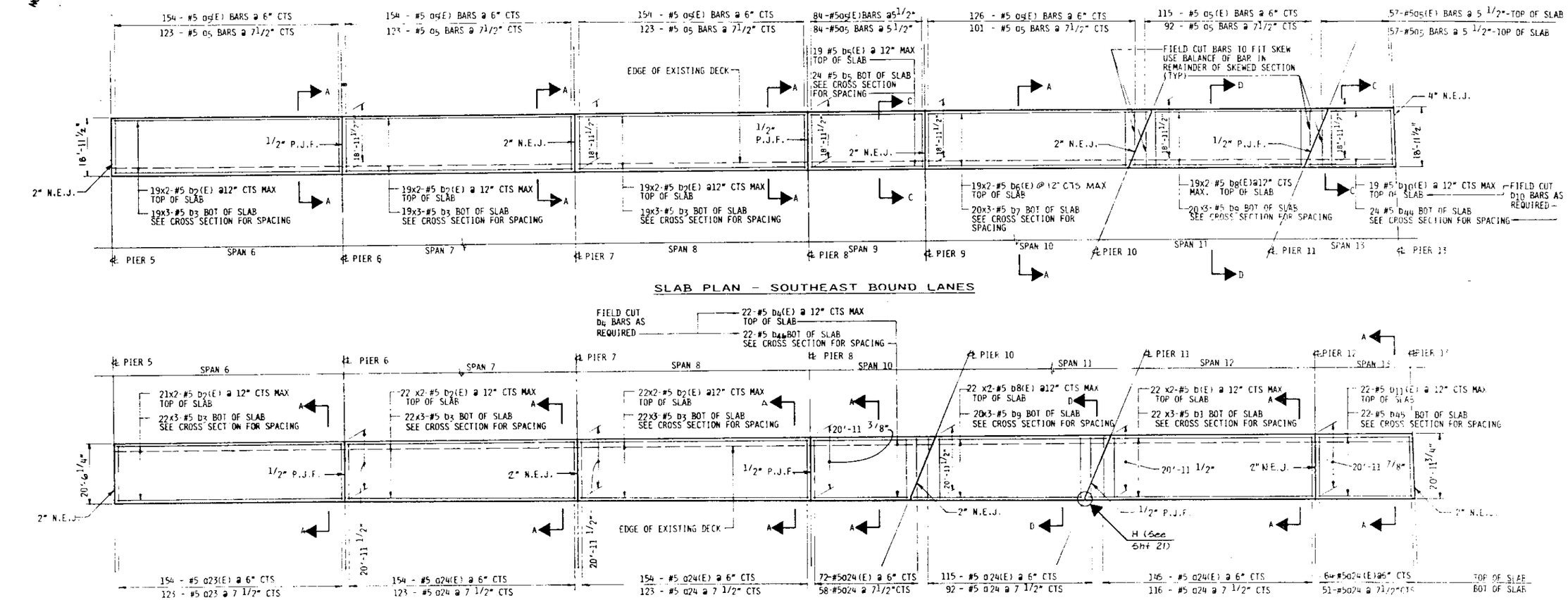
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	280

SHEET NO. 19 SHEETS

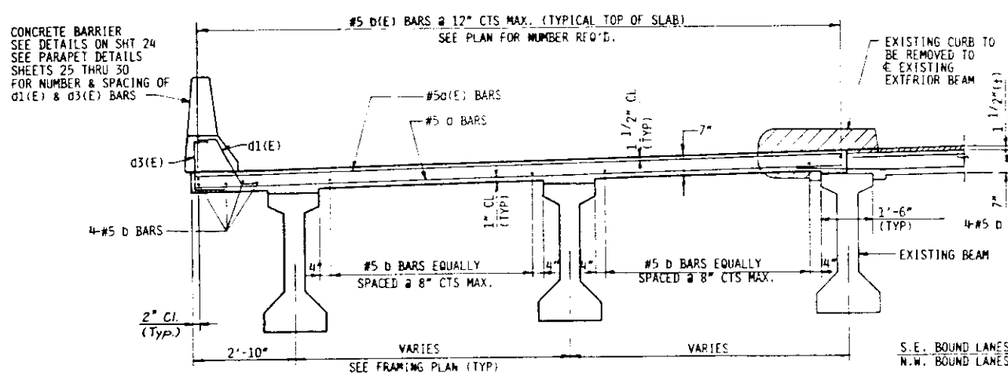
*. 1990-073BY

SHEET C202 OF C317

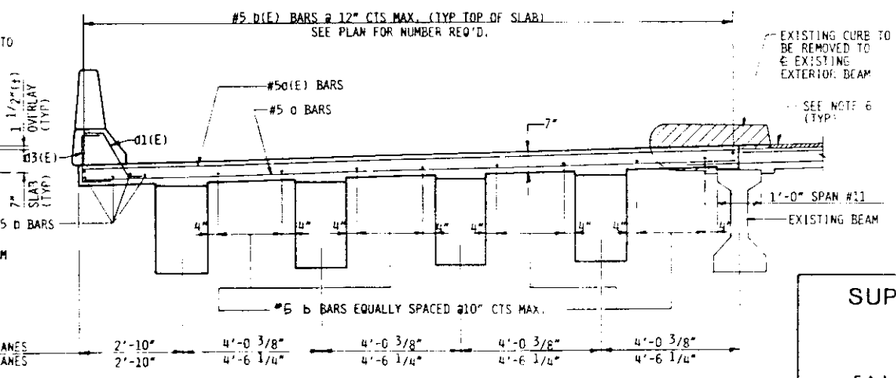


SLAB PLAN - SOUTHEAST BOUND LANES

SLAB PLAN - NORTHWEST BOUND LANES



SECTION C-C



SECTION D-D

NOTES:

1. MINIMUM LAP SPLICE LENGTH FOR #5 BAR - 2'-2".
2. 15x3 INDICATES 15 LINES OF BARS WITH 3 BAR PER LINE
3. SEE SHEET 1 OF 4 FOR SECTION A-A.
4. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
5. ADJUST CROSS SLOPE AS REQUIRED AND AS DIRECTED BY THE ENGINEER TO MAINTAIN MIN. SLAB THICKNESS & MATCH EXISTING DECK.
6. REPAIR OVERLAY AT THIS POINT AS REQD. (COST OF REPAIR INCIDENTAL TO CLASS X CONC SUPERSTRUCTURE.)

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS
SHEET 2 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

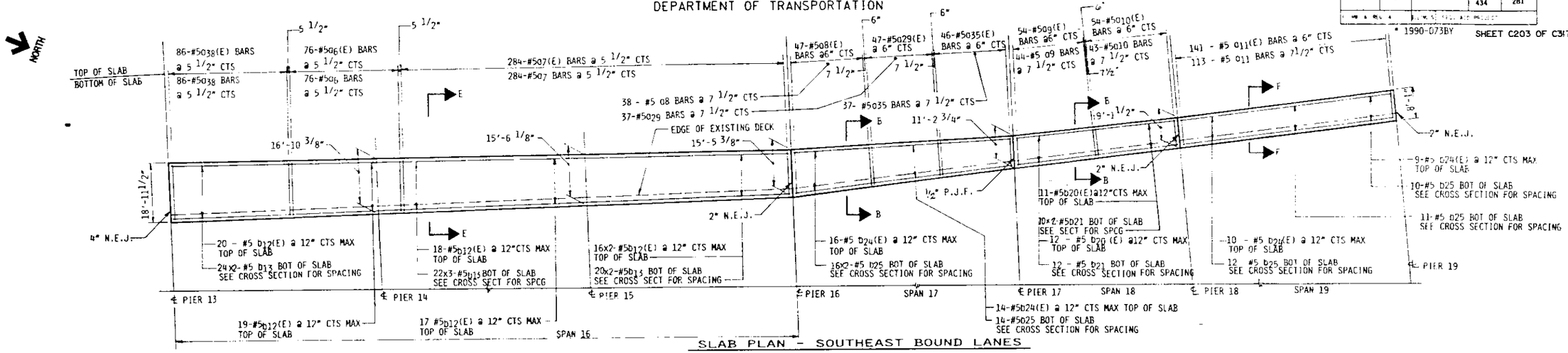
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	281

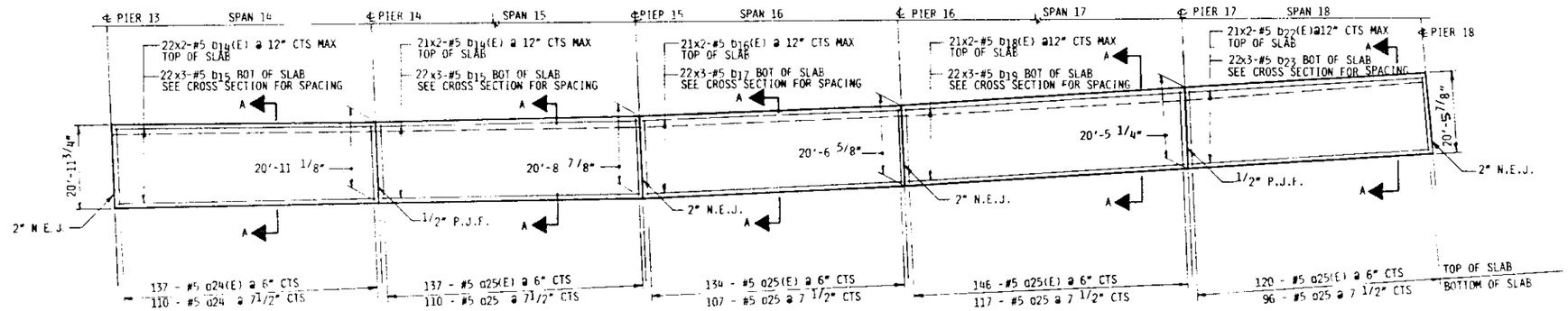
SHEET NO. 20 SHEETS

* 1990-073BY

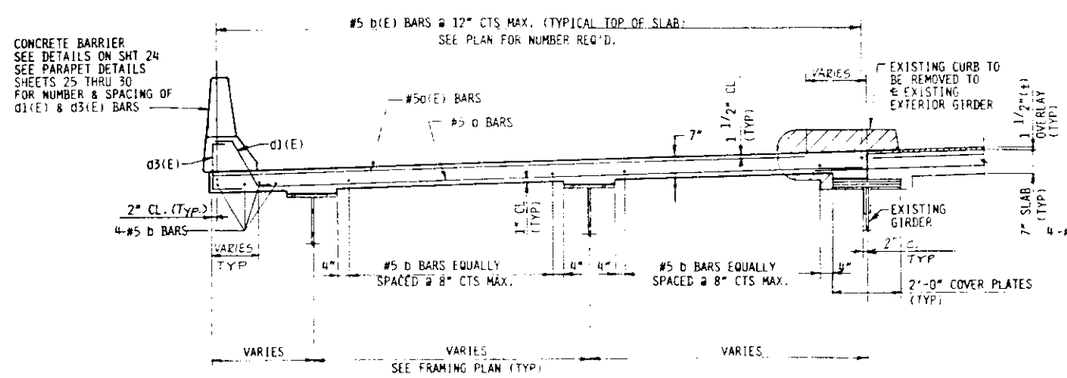
SHEET C203 OF C317



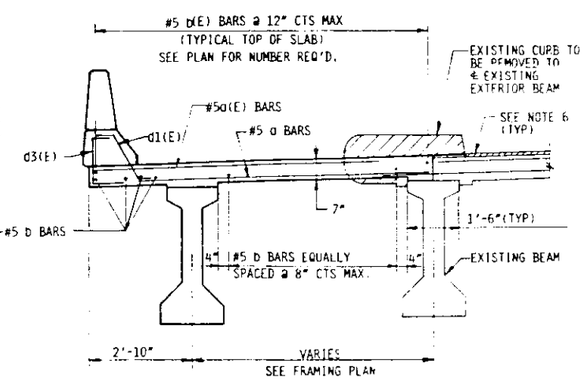
SLAB PLAN - SOUTHEAST BOUND LANES



SLAB PLAN - NORTHWEST BOUND LANES



SECTION E-E



SECTION F-F

NOTES:

1. MINIMUM LAP SPLICE LENGTH FOR #5 BAR = 2'-2".
2. 15X3 INDICATES 15 LINES OF BARS WITH 3 BARS PER LINE.
3. SEE SHEET 1 OF 4 FOR SECTION A-A & SECTION B-B.
4. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
5. ADJUST CROSS SLOPE AS REQUIRED AND AS DIRECTED BY THE ENGINEER TO MAINTAIN MIN. SLAB THICKNESS & MATCH EXISTING DECK.
6. REPAIR OVERLAY AT THIS POINT AS REQD. (COST OF REPAIR INCIDENTAL TO CLASS X CONC SUPERSTRUCTURE).

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS
SHEET 3 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

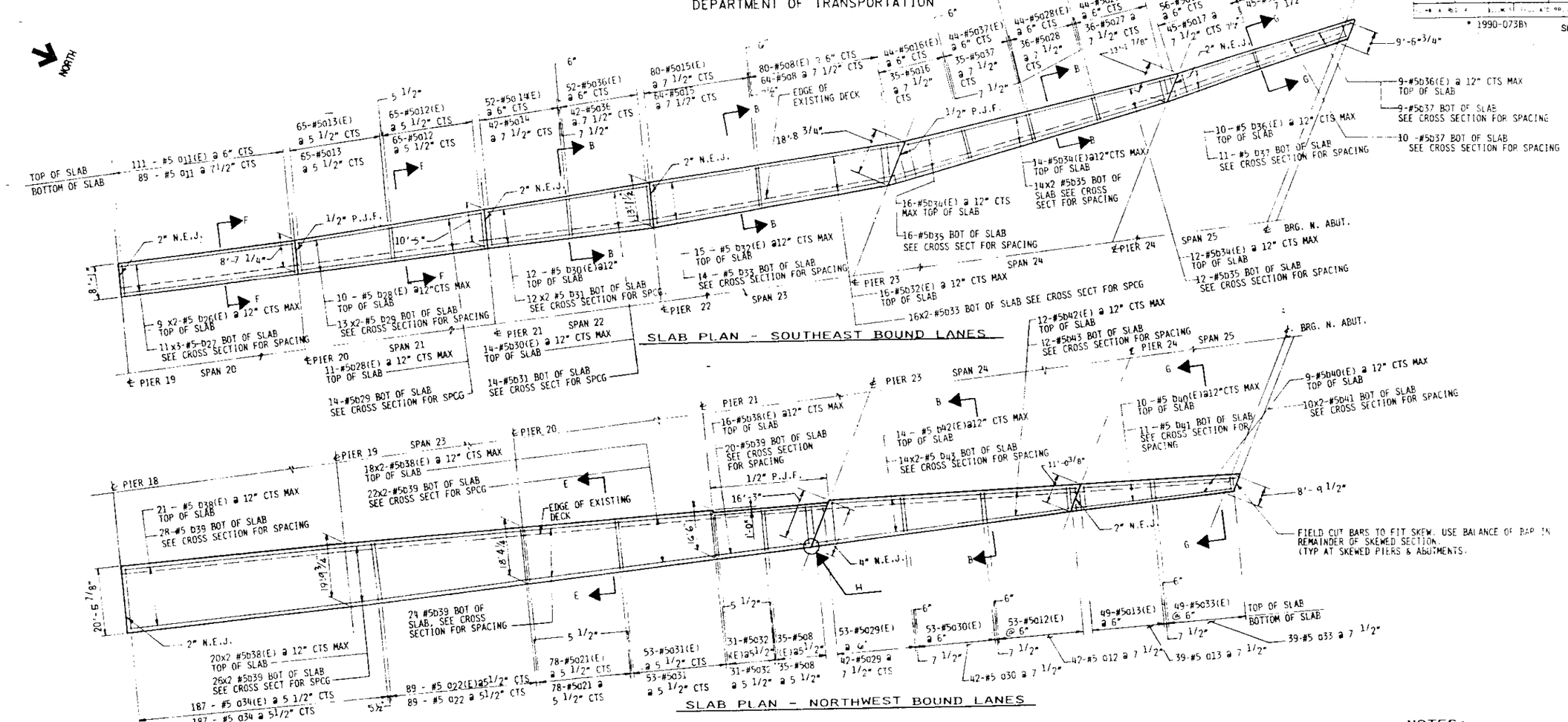
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

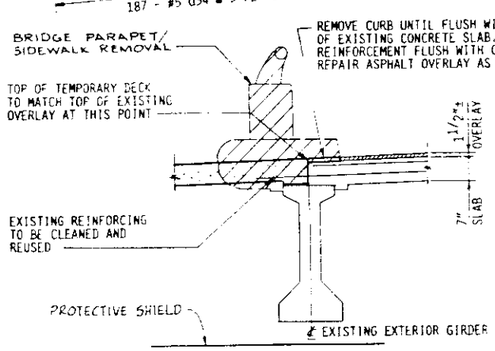
			434	282

* 1990-073B)

SHEET NO. 21 SHEETS

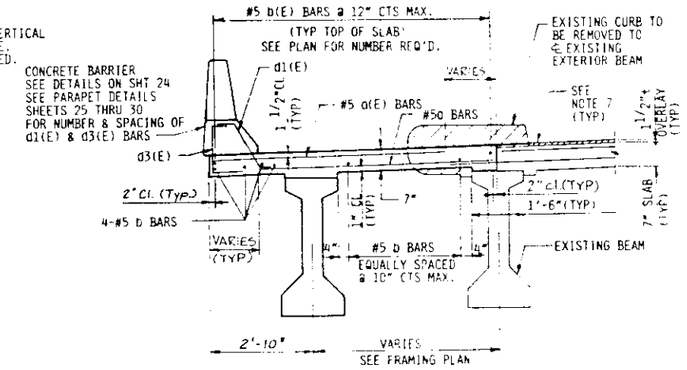
SHEET C204 OF C317



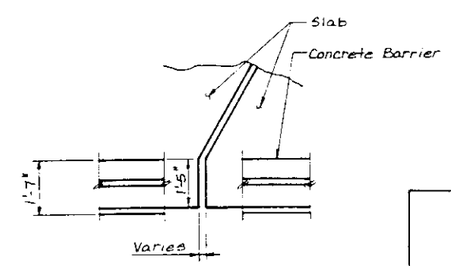


CONCRETE REMOVAL DETAIL

NOTE: 1" HIGH X 6" WIDE SHEAR KEYS SPACED ALONG EXISTING BEAMS. EXERCISE CARE DURING REMOVAL OF EXISTING SLAB SO SHEAR KEYS REMAIN UNDAMAGED. EXISTING CHANNEL SHEAR CONNECTORS ALONG TOP OF PLATE GIRDERS, SHALL BE LEFT IN PLACE UNDAMAGED.



SECTION G - G



@ Pier 10,11,23,24 And North Abutment

DETAIL H

NOTES:

1. MINIMUM LAP SPLICE LENGTH FOR #5 BAR = 2'-2".
2. 15x3 INDICATES 15 LINES OF BARS WITH 3 BARS PER LINE.
3. SEE SHEET 1 OF 4 FOR SECTION B-B.
4. SEE SHEET 3 OF 4 FOR SECTION E-E & SECTION F-F.
5. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
6. ADJUST CROSS SLOPE AS REQUIRED AND AS DIRECTED BY THE ENGINEER TO MAINTAIN MIN. SLAB THICKNESS & MATCH EXISTING DECK.
7. REPAIR OVERLAY AT THIS POINT AS REQ'D. (COST OF REPAIR INCIDENTAL TO CLASS X CONC SUPERSTRUCTURE.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS SHEET 4 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

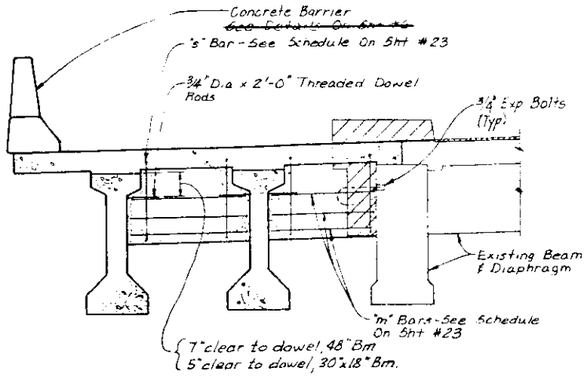
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

			434	283

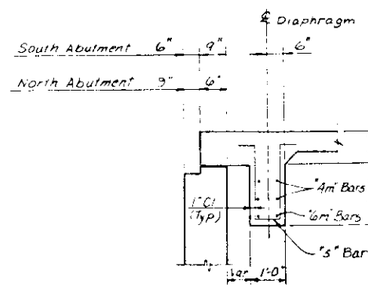
SHEET NO. 22
SHEETS

* 1990-073BY

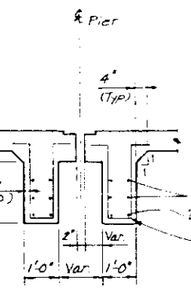
SHEET C205 OF C317



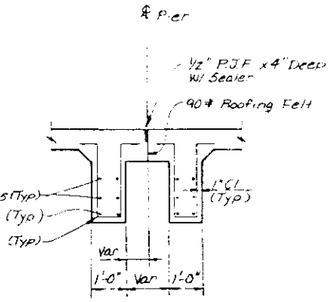
DIAPHRAGM ELEVATION @ PIERS



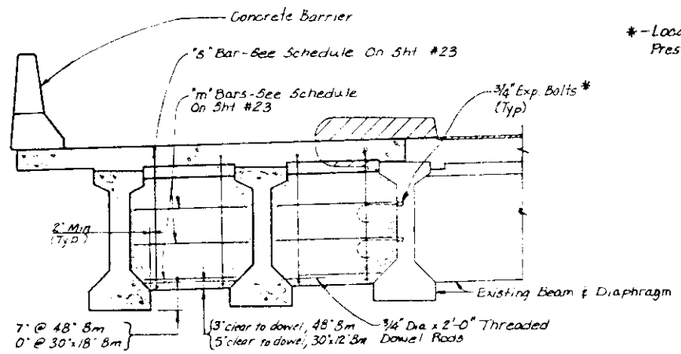
DIAPHRAGM SECTION @ ABUTMENT



DIAPHRAGM SECTION @ EXPANSION PIER

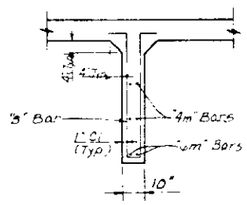


DIAPHRAGM SECTION @ FIXED PIER



INTERMEDIATE DIAPHRAGM ELEVATION

* - Locate to miss Prestress Strands.



INTERMEDIATE DIAPHRAGM SECTION

Note:
Cost of 3/4" Exp Bolts Incidental to Class X Superstructure Concrete.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 80/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49.59

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

1990-073BY	SHEET NO. 23	SHEET C206 OF C317
	434	284

NUMBER OF DIAPHRAGMS IN SPAN

Lanes	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20	#21	#22	#23	#24	#25	MARK	STIRRUPS	BOTTOM BARS	SIDE BARS
SOUTHEAST BOUND LANES	2																	2								D1	2-#4S	2-#6m3	4-#4m19
	2	3																2								D26	3-#4S1	2-#6m2	4-#4m21
	2																									D28	3-#4S1	2-#6m4	4-#4m23
	2																									D8	4-#4S	2-#6m11	4-#4m26
		3																								D2	2-#4S	2-#6m5	4-#4m20
		3																								D27	3-#4S1	2-#6m3	4-#4m22
		3	3																					2		D7	4-#4S	2-#6m11	4-#4m25
			3														2									D31	4-#4S1	2-#6m7	4-#4m26
			3	6																						D32	4-#4S1	2-#6m8	4-#4m27
			3	3															1	1		2	2			D9	4-#4S	2-#6m13	4-#4m27
				3	6	6	6	6		3																D10	4-#4S	2-#6m13	4-#4m28
					6	6	6	6		3							2		1	2			2	2		D33	4-#4S1	2-#6m9	4-#4m28
									4				2													D17	6-#4S	2-#6m18	4-#4m35
									2																	D41	6-#4S1	2-#6m16	4-#4m35
										3										1	1				1	D11	4-#4S	2-#6m14	4-#4m29
											8															D20	2-#4S2	2-#6m38	4-#4m20
											4															D21	2-#4S3	2-#6m38	4-#4m20
													2													D18	7-#4S	2-#6m18	4-#4m36
																	2		1							D14	5-#4S	2-#6m15	4-#4m31
																	2	2								D4	3-#4S	2-#6m9	4-#4m22
																		2								D25	3-#4S1	2-#6m1	4-#4m20
																			1				2			D36	5-#4S1	2-#6m11	4-#4m30
																					1					D37	5-#4S1	2-#6m12	4-#4m31
																					1					D39	5-#4S1	2-#6m14	4-#4m33
																					1		2	2		D16	6-#4S	2-#6m17	4-#4m34
																						2				D3	3-#4S	2-#6m7	4-#4m21
																						2				D29	3-#4S	2-#6m5	4-#4m24
																								2		D38	5-#4S1	2-#6m13	4-#4m32
																									1	D19	7-#4S	2-#6m40	4-#4m37
																									1	D40	6-#4S1	2-#6m15	4-#4m34
NORTHWEST BOUND LANES	3																									D4	3-#4S	2-#6m9	4-#4m22
	3																									D27	3-#4S1	2-#6m3	4-#4m22
	3																									D28	3-#4S1	2-#6m4	4-#4m23
	3	3																								D5	3-#4S	2-#6m9	4-#4m23
		6																								D29	3-#4S1	2-#6m5	4-#4m24
		3	3																							D6	3-#4S	2-#6m10	4-#4m24
			6																					2		D30	3-#4S1	2-#6m6	4-#4m25
					1	4	4	4																		D34	4-#4S1	2-#6m10	4-#4m29
			3	3																						D7	4-#4S	2-#6m11	4-#4m25
				6																						D31	4-#4S1	2-#6m7	4-#4m26
		1		3	3																					D9	4-#4S	2-#6m23	4-#4m27
					5																			2		D33	4-#4S1	2-#6m9	4-#4m28
					2	4	4	4																		D11	4-#4S	2-#6m14	4-#4m29
					1	1																		2		D14	5-#4S	2-#6m15	4-#4m31
						1																				D37	5-#4S1	2-#6m12	4-#4m31
						1	2	2																	1	D38	5-#4S1	2-#6m13	4-#4m32
						1	2	2		3		3														D15	5-#4S	2-#6m15	4-#4m32
										3		3	6	6	6	3										D13	5-#4S	2-#6m14	4-#4m30
											6															D22	3-#4S2	2-#6m39	4-#4m21
											4															D23	3-#4S3	2-#6m39	4-#4m21
												6		6	6	6										D36	5-#4S1	2-#6m11	4-#4m30
																3	6	6								D12	4-#4S	2-#6m14	4-#4m35
																	6	6								D35	4-#4S1	2-#6m11	4-#4m30
																								2		D3	3-#4S	2-#6m7	4-#4m21
																									1	D16	6-#4S	2-#6m17	4-#4m34
																									1	D10	4-#4S	2-#6m13	4-#4m28

NO. OF BARS PER DIAPHRAGM: STIRRUPS / BOTTOM BARS / SIDE BARS

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
c	31	#5	7'-9"	—
c(E)	39	#5	7'-9"	—
c1	31	#5	10'-4"	—
c1(E)	38	#5	10'-4"	—
c2	29	#5	12'-10"	—
c2(E)	37	#5	12'-10"	—
c3	31	#5	14'-10"	—
c3(E)	39	#5	14'-10"	—
c4	62	#5	16'-11"	—
c4(E)	77	#5	16'-11"	—
c5	949	#5	18'-10"	—
c5(E)	1152	#5	18'-10"	—
c6	76	#5	16'-8"	—
c6(E)	76	#5	16'-8"	—
c7	284	#5	15'-6"	—
c7(E)	284	#5	15'-6"	—
c8	137	#5	14'-0"	—
c8(E)	162	#5	14'-0"	—
c9	44	#5	10'-0"	—
c9(E)	54	#5	10'-0"	—
c10	74	#5	9'-0"	—
c10(E)	92	#5	9'-0"	—
c11	202	#5	8'-0"	—
c11(E)	252	#5	8'-0"	—
c12	107	#5	9'-6"	—
c12(E)	118	#5	9'-6"	—
c13	104	#5	8'-6"	—
c13(E)	114	#5	8'-6"	—
c14	42	#5	10'-6"	—
c14(E)	52	#5	10'-6"	—
c15	64	#5	13'-0"	—
c15(E)	80	#5	13'-0"	—
c16	68	#5	13'-8"	—
c16(E)	84	#5	13'-8"	—
c17	45	#5	8'-2"	—
c17(E)	56	#5	8'-2"	—
c18	125	#5	15'-5"	—
c18(E)	155	#5	15'-5"	—
c19	153	#5	16'-0"	—
c19(E)	192	#5	16'-0"	—
c20	123	#5	16'-6"	—
c20(E)	154	#5	16'-6"	—
c21	201	#5	17'-2"	—
c21(E)	232	#5	17'-2"	—
c22	151	#5	18'-3"	—
c22(E)	166	#5	18'-3"	—
c23	123	#5	20'-6"	—
c23(E)	154	#5	20'-6"	—
c24	673	#5	20'-10"	—
c24(E)	841	#5	20'-10"	—
c25	430	#5	20'-4"	—
c25(E)	537	#5	20'-4"	—
c26	45	#5	6'-9"	—
c26(E)	56	#5	6'-9"	—
c27	36	#5	9'-9"	—
c27(E)	44	#5	9'-9"	—
c28	36	#5	11'-0"	—
c28(E)	44	#5	11'-0"	—
c29	79	#5	12'-6"	—
c29(E)	100	#5	12'-6"	—
c30	42	#5	10'-9"	—
c30(E)	53	#5	10'-9"	—
c31	53	#5	16'-3"	—
c31(E)	53	#5	16'-3"	—
c32	31	#5	15'-0"	—
c32(E)	31	#5	15'-0"	—
c33	39	#5	7'-6"	—
c33(E)	49	#5	7'-6"	—
c34	24[illegible]	#5	19'-4"	—
c34(E)	264	#5	19'-4"	—
c35	69	#5	[illegible]	—
c35(E)	86	#5	[illegible]	—
c36	42	#5	12'-3"	—
c36(E)	52	#5	12'-3"	—
c37	35	#5	12'-3"	—
c37(E)	44	#5	12'-3"	—
c38	147	#5	17'-10"	—
c38(E)	163	#5	17'-10"	—

BILL OF MATERIAL (CONT)

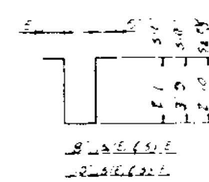
BAR	NO.	SIZE	LENGTH	SHAPE
b(E)	102	#5	39'-9"	—
b1	148	#5	27'-3"	—
b2(E)	539	#5	39'-4"	—
b3	799	#5	26'-10"	—
b4(E)	22	#5	40'-3"	—
b5	43	#5	37'-10"	—
b6(E)	38	#5	38'-4"	—
b7	60	#5	26'-3"	—
b8(E)	82	#5	29'-7"	—
b9	120	#5	20'-5"	—
b10(E)	19	#5	30'-3"	—
b11(E)	22	#5	31'-6"	—
b12(E)	106	#5	35'-10"	—
b13	154	#5	31'-0"	—
b14(E)	86	#5	35'-0"	—
b15	132	#5	24'-1"	—
b16(E)	42	#5	34'-5"	—
b17	66	#5	23'-7"	—
b18(E)	42	#5	37'-4"	—
b19	66	#5	25'-7"	—
b20(E)	23	#5	28'-2"	—
b21	32	#5	19'-6"	—
b22(E)	42	#5	31'-2"	—
b23	66	#5	21'-6"	—
b24(E)	49	#5	36'-0"	—
b25	79	#5	24'-9"	—
b26(E)	18	#5	28'-7"	—
b27	33	#5	19'-9"	—
b28(E)	21	#5	30'-6"	—
b29	40	#5	21'-2"	—
b30(E)	26	#5	26'-11"	—
b31	38	#5	18'-9"	—
b32(E)	31	#5	43'-0"	—
b33	46	#5	29'-4"	—
b34(E)	42	#5	31'-3"	—
b35	56	#5	24'-0"	—
b36(E)	19	#5	29'-6"	—
b37	30	#5	20'-5"	—
b38(E)	113	#5	38'-8"	—
b39	168	#5	33'-5"	—
b40(E)	19	#5	25'-7"	—
b41	31	#5	37'-10"	—
b42(E)	26	#5	41'-0"	—
b43	40	#5	28'-1"	—
b44	24	#5	30'-3"	—
b45	22	#5	31'-6"	—
b46	22	#5	40'-3"	—

BILL OF MATERIAL (CONT)

BAR	NO.	SIZE	LENGTH	SHAPE
m1(E)	4	#6	1'-4"	—
m2(E)	14	#6	1'-8"	—
m3(E)	20	#6	[illegible]	—
m4(E)	10	#6	2'-4"	—
m5(E)	22	#6	[illegible]	—
m6(E)	16	#6	2'-7"	—
m7(E)	30	#6	2'-10"	—
m8(E)	18	#6	[illegible]	—
m9(E)	112	#6	3'-4"	—
m10(E)	36	#6	3'-8"	—
m11(E)	110	#6	3'-10"	—
m12(E)	4	#6	4'-2"	—
m13(E)	114	#6	4'-5"	—
m14(E)	[illegible]	#6	4'-11"	—
m15(E)	38	#6	5'-5"	—
m16(E)	4	#6	6'-0"	—
m17(E)	12	#6	6'-8"	—
m18(E)	16	#6	7'-4"	—
m19(E)	16	#4	2'-2"	—
m20(E)	68	#4	2'-6"	—
m21(E)	90	#4	2'-10"	—
m22(E)	52	#4	3'-4"	—
m23(E)	44	#4	3'-6"	—
m24(E)	56	#4	3'-8"	—
m25(E)	88	#4	3'-10"	—
m26(E)	52	#4	4'-1"	—
m27(E)	108	#4	[illegible]	—
m28(E)	296	#4	[illegible]	—
m29(E)	132	#4	4'-11"	—
m30(E)	324	#4	5'-1"	—
m31(E)	36	#4	5'-4"	—
m32(E)	76	#4	5'-7"	—
m33(E)	4	#4	[illegible]	—
m34(E)	[illegible]	#4	[illegible]	—
m35(E)	32	#4	7'-3"	—
m36(E)	8	#4	7'-11"	—
m37(E)	4	#4	[illegible]	—
m38(E)	[illegible]	#6	2'-6"	—
m39(E)	[illegible]	#6	2'-10"	—
m40(E)	[illegible]	#6	[illegible]	—
S(E)	801	#4	5'-10"	
S1(E)	668	#4	9'-0"	
S2(E)	40	#4	7'-4"	
S3(E)	20	#4	7'-2"	

BRIDGE PARAPET / SIDEWALK REMOVAL	LIN. FT.	3,100
REINFORCEMENT BARS	LBS.	407,080
CLASS X CONC. SUPERSTR.	[illegible]	1622
PROTECTIVE COAT	[illegible]	6881
~~FURNISHING &~~ ERECTING STRUCTURAL STEEL	LUMP SUM	
STUD SHEAR CONNECTORS	EACH	[illegible]

⚠1 TOTALS FOR CLASS X CONCRETE SUPERSTRUCTURE AND REINFORCEMENT BARS (EPOXY COATED) INCLUDE TEMPORARY CONCRETE PARAPET TOTALS FROM SHEET 24



BARS S(E) S1(E) S2(E)(S3(E))

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

⚠1 Rev. 11-26-90

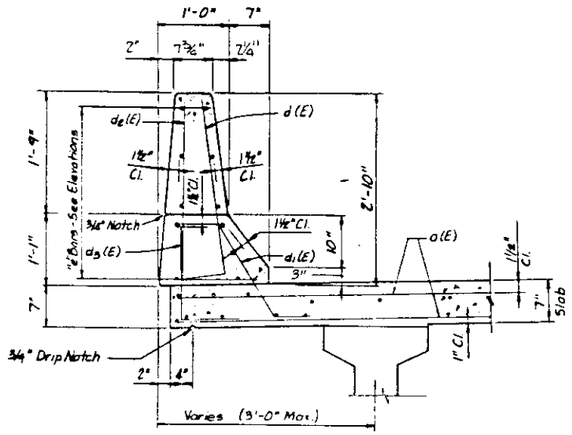
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	285
F.A.P. RTE. 94		ILLINOIS FED. AID PROJECT		

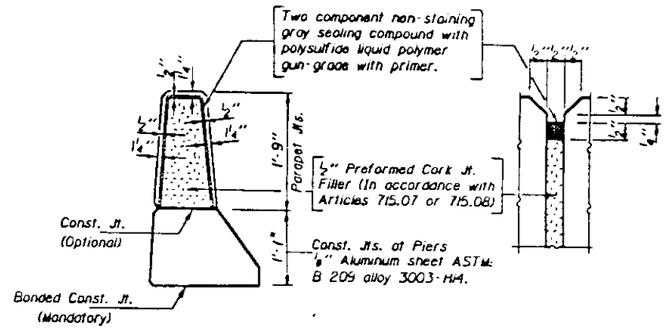
SHEET NO. 24
SHEETS

* 1990-073BV

SHEET C207 OF C317

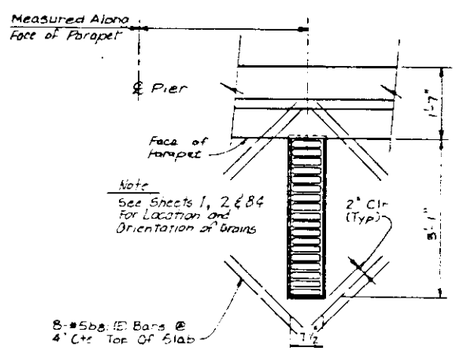


SECTION THRU PARAPET



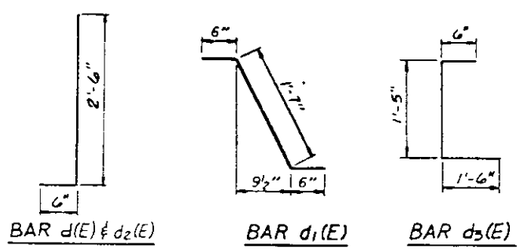
PARAPET JOINT DETAILS

COST OF PARAPET JOINTS INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE



DRAINAGE SCUPPER REINFORCING PLAN

Note: Locate Drains Clear Of All Diaphragms.



BAR d(E) & d₂(E) BAR d₁(E) BAR d₃(E)

PARAPET REINFORCING

MIN. BAR LAPS

#4 - 1'-6"
#5 - 1'-8"
#6 - 2'-0"
#8 - 3'-8"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	3393	#4	3'-0"	
d(E)	6190	#4	2'-7"	
d₂(E)	3111	#4	3'-0"	
d₃(E)	3110	#4	3'-6"	
e(E)	24	#4	19'-1"	
e1(E)	54	#8	28'-3"	
e2(E)	36	#5	39'-8"	
e3(E)	198	#4	18'-9"	
e4(E)	2	#8	37'-10"	
e5(E)	2	#5	37'-10"	
e6(E)	108	#4	18'-2"	
e7(E)	4	#8	38'-7"	
e8(E)	4	#5	37'-8"	
e9(E)	42	#4	18'-9"	
e10(E)	8	#8	30'-4"	
e11(E)	8	#5	29'-5"	
e12(E)	6	#4	22'-2"	
e14(E)	2	#8	22'-0"	
e15(E)	2	#5	22'-2"	
e16(E)	12	#8	36'-11"	
e17(E)	12	#5	35'-5"	
e18(E)	24	#4	17'-6"	
e19(E)	4	#8	37'-4"	
e20(E)	4	#5	36'-5"	
e21(E)	18	#4	27'-8"	
e22(E)	4	#8	28'-7"	
e23(E)	4	#5	27'-8"	
e24(E)	24	#4	17'-2"	
e25(E)	4	#8	36'-8"	
e26(E)	4	#5	35'-0"	
e27(E)	4	#8	29'-4"	
e28(E)	4	#5	28'-5"	
e29(E)	18	#4	19'-5"	
e30(E)	4	#8	31'-3"	
e31(E)	4	#5	30'-0"	
e32(E)	18	#4	17'-1"	
e33(E)	4	#8	27'-8"	
e34(E)	4	#5	26'-9"	
e35(E)	54	#4	16'-2"	
e36(E)	6	#8	39'-10"	
e37(E)	6	#5	28'-5"	
e38(E)	30	#4	17'-0"	
e39(E)	6	#8	31'-8"	
e40(E)	6	#5	30'-0"	
e41(E)	162	#4	18'-0"	
e42(E)	4	#8	50'-5"	
e43(E)	4	#5	24'-6"	
e44(E)	66	#4	16'-6"	
e45(E)	4	#8	27'-4"	
e46(E)	4	#5	26'-5"	
e47(E)	42	#4	18'-9"	
e48(E)	6	#8	29'-0"	
e49(E)	6	#5	27'-10"	
e50(E)	66	#4	18'-2"	
e51(E)	12	#8	38'-7"	
e52(E)	12	#5	37'-2"	
e53(E)	24	#4	15'-2"	
e54(E)	4	#8	39'-5"	
e55(E)	4	#5	37'-6"	
e56(E)	24	#4	17'-10"	
e57(E)	4	#8	37'-11"	
e58(E)	4	#5	37'-0"	
e59(E)	4	#8	35'-0"	
e60(E)	4	#5	34'-1"	
e62(E)	8	#8	35'-8"	
e63(E)	8	#5	34'-10"	
e64(E)	12	#5	15'-7"	
e65(E)	2	#8	31'-6"	
e66(E)	2	#5	31'-6"	
e67(E)	24	#4	18'-10"	
e68(E)	4	#8	39'-11"	
e69(E)	4	#5	39'-0"	
e70(E)	2	#8	31'-11"	
e71(E)	2	#5	31'-11"	
e72(E)	4	#8	39'-11"	
e73(E)	4	#5	39'-2"	
e74(E)	24	#8	40'-0"	
e75(E)	24	#5	39'-3"	
e76(E)	24	#4	19'-3"	
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	323
REINFORCEMENT BARS			LBS.	71,100

ALL BAR DIMENSIONS ARE OUT TO OUT. SEE SHEET 23 FOR GRAND TOTAL OF CLASS X CONCRETE SUPERSTRUCTURE AND REINFORCEMENT BARS (EPOXY COATED)

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

Rev. 11-26-96

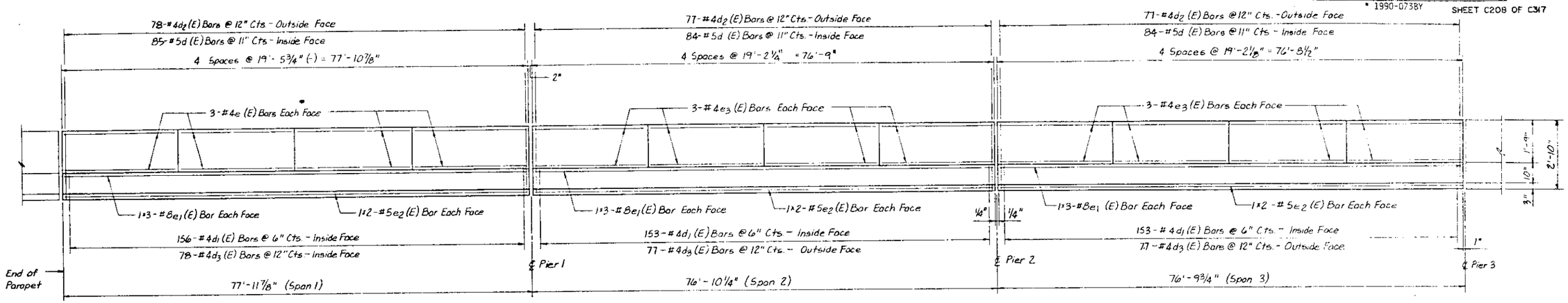
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	286
F.A.I. RTE. 94	ILLINOIS FED. AID PROJECT			

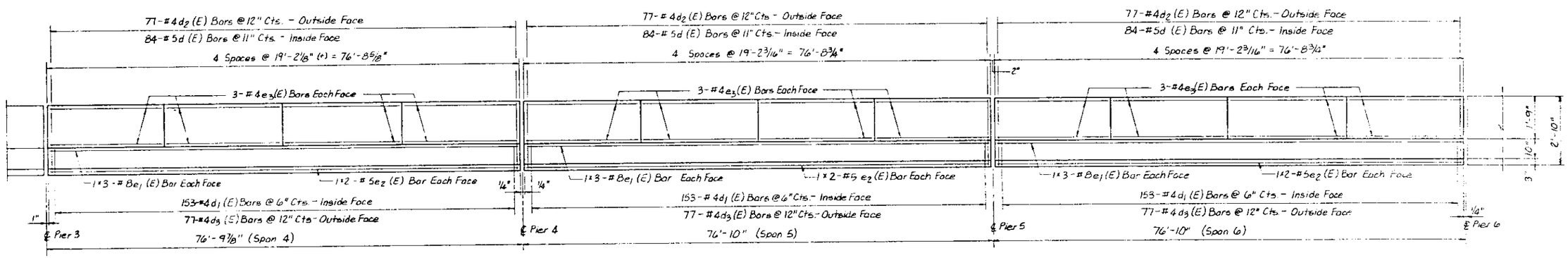
SHEET NO. 25 SHEETS

* 1990-073BY

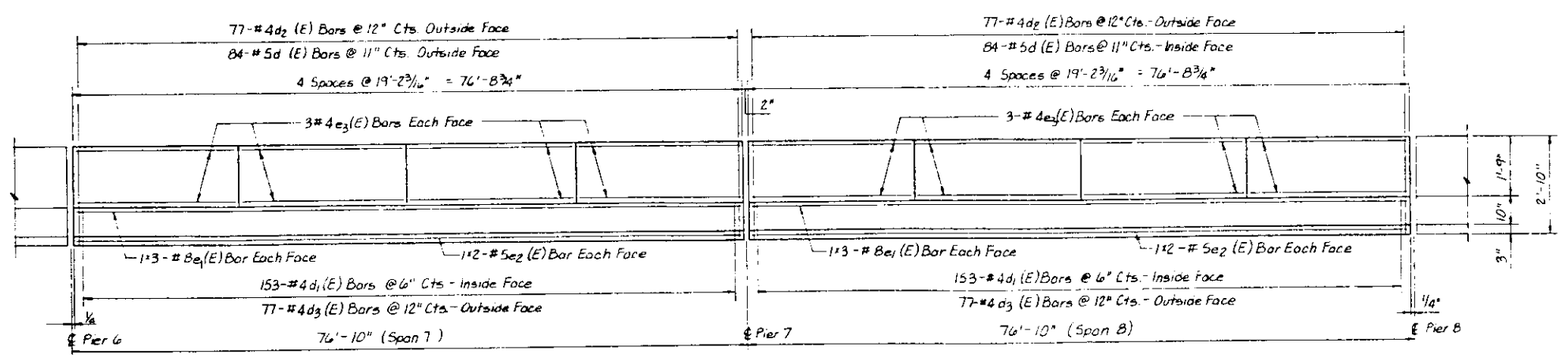
SHEET C208 OF C347



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:

1. See Sheet 24 For Superstructure Details And Bill Of Materials.
2. Minimum Lap #8 Bar: 2'-6"
   Minimum Lap #5 Bar: 1'-9"

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE
SHEET 1 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

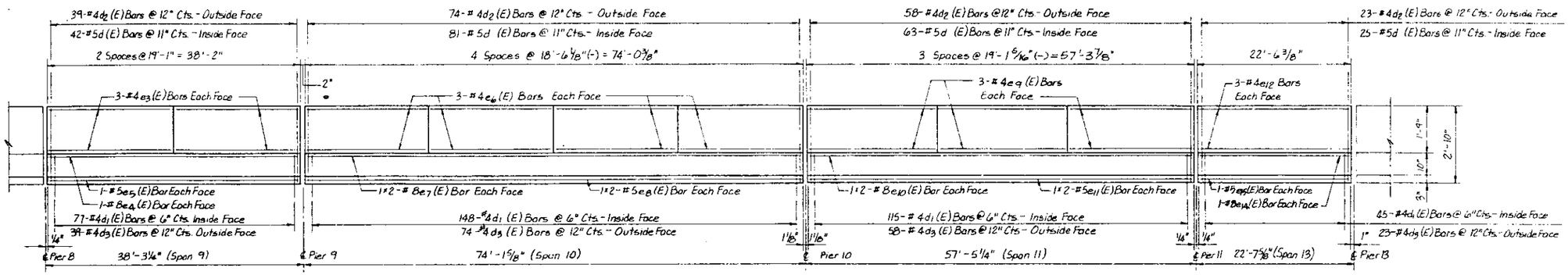
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	287
F. HW. A. REG. 4		ILLINOIS FED. AID PROJECT		

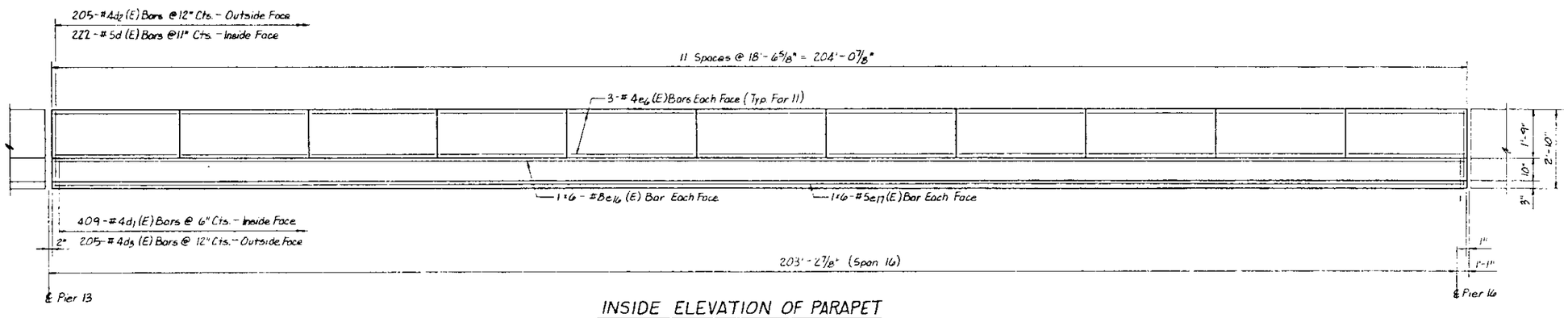
SHEET NO. 26 SHEETS

* 1990-073BY

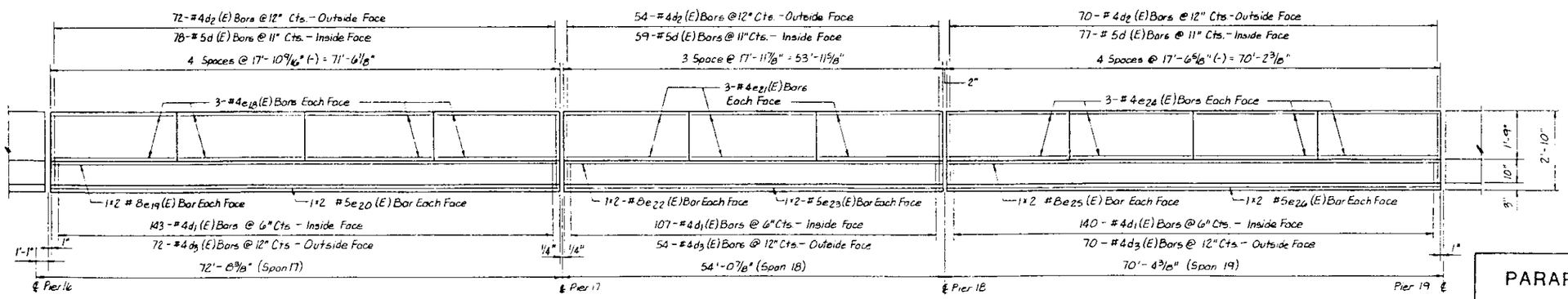
SHEET C209 OF C317



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:

1. For Notes See Sheet 25.

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

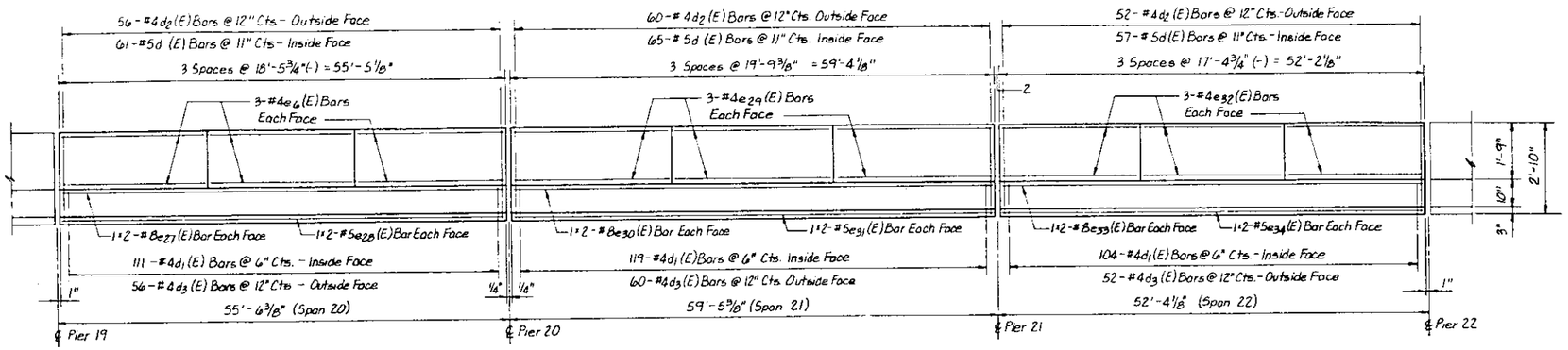
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	288
F.A.I. NO. & REG. #	B.R. NO.'S	FED. AID PROJECT		

SHEET NO. 27 SHEETS

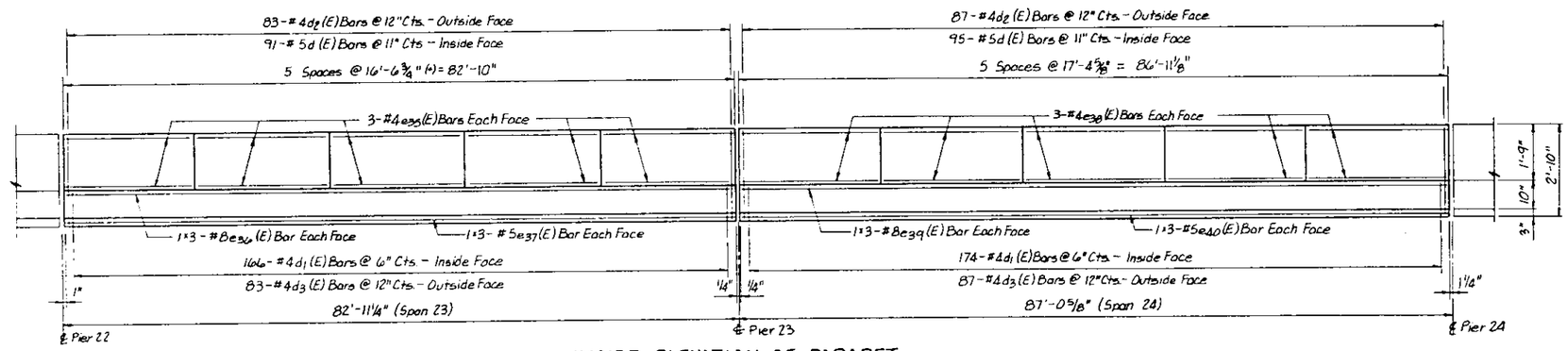
* 1990-073BY

SHEET C210 OF C317

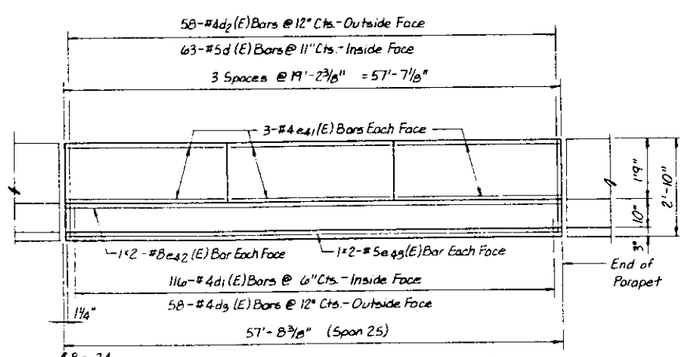
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:

1. For Notes See Sheet 25.

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE
SHEET 3 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

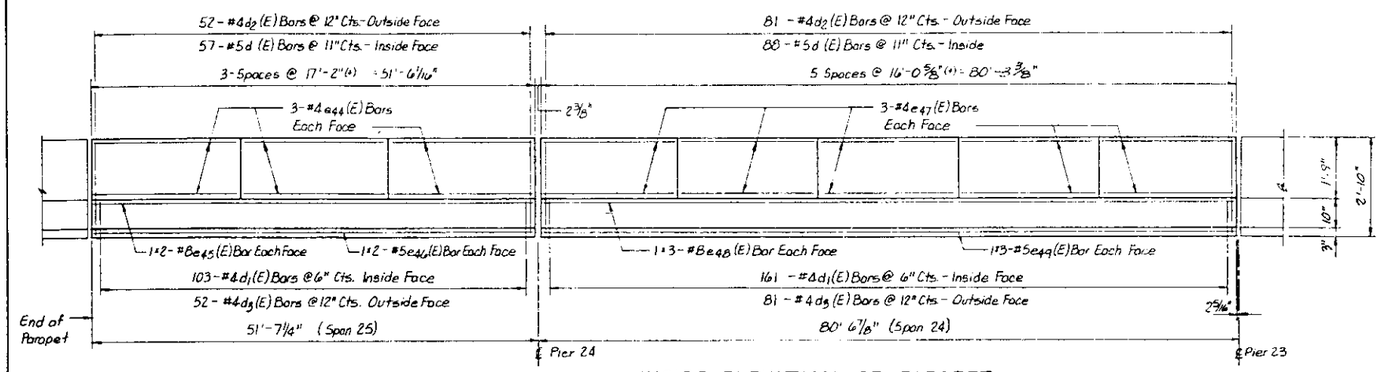
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	289

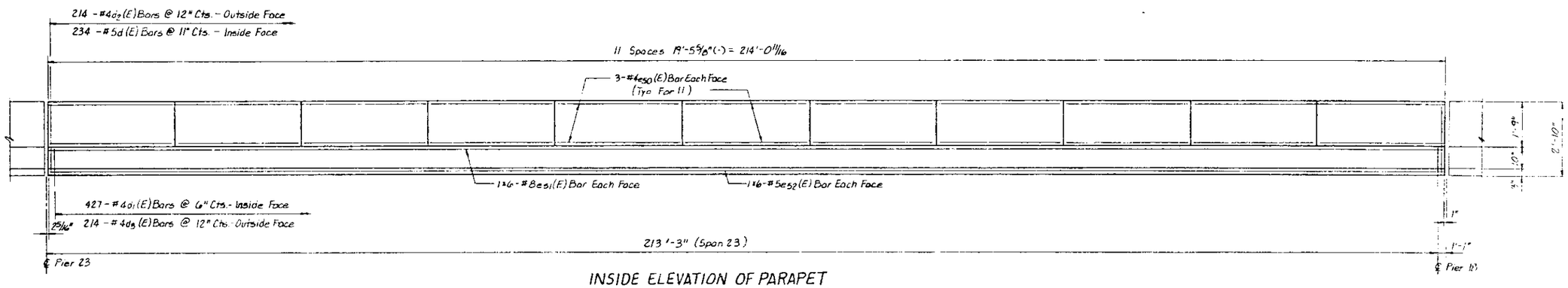
SHEET NO. 28
SHEETS

* 1990-073EY

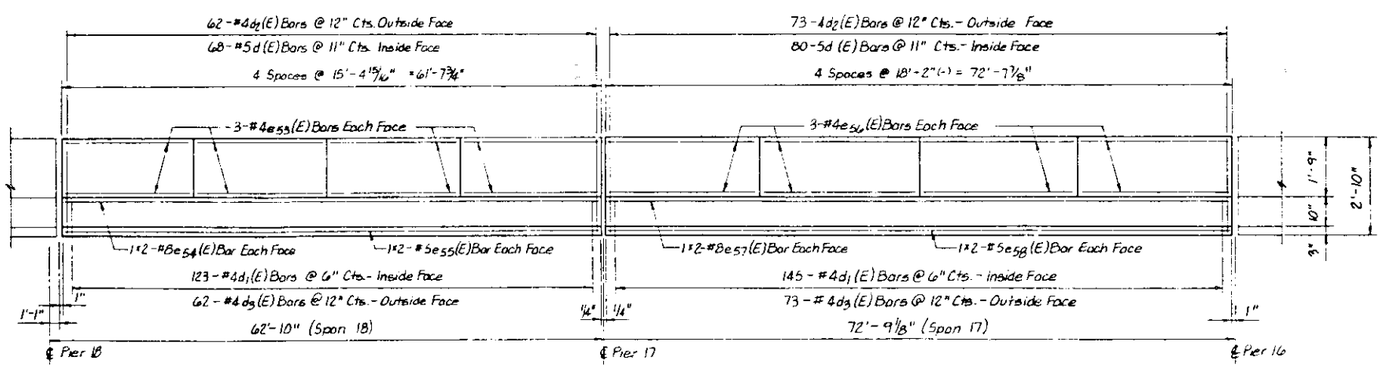
SHEET C211 OF C317



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:

1. For Notes see Sheet 28.

STANLEY CONSULTANTS

PARAPET DETAILS - EAST SIDE
SHEET 1 OF 3

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

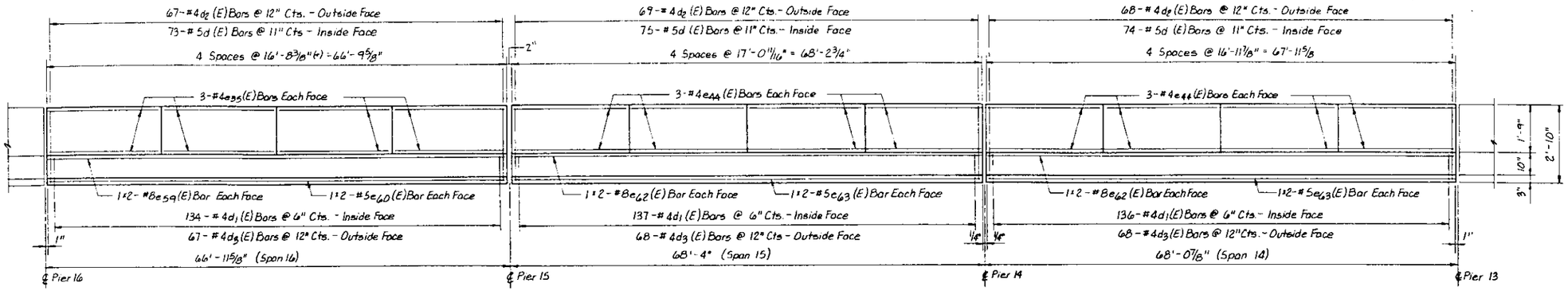
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	290
F. HR. A. REG. 4	ILLINOIS	FED. AID PROJECT		

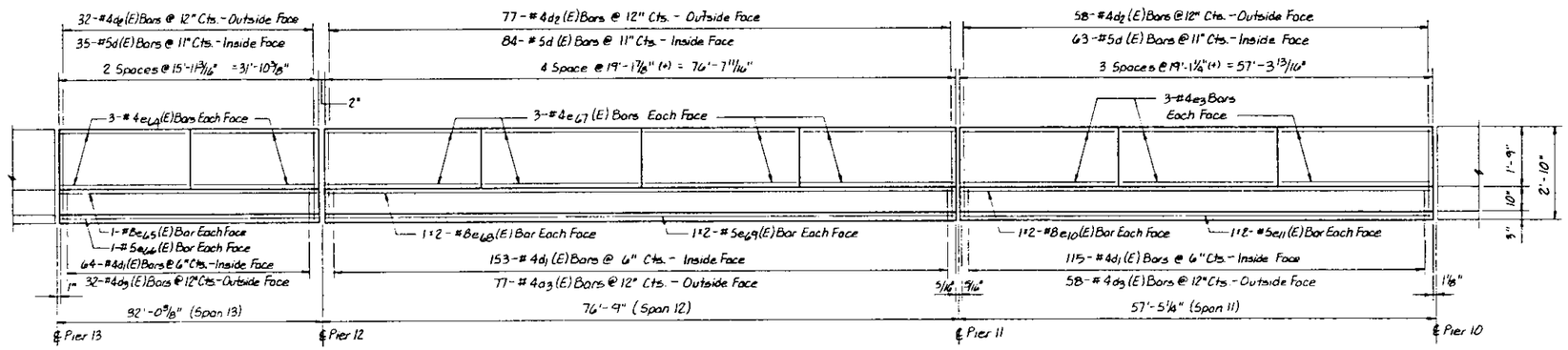
SHEET NO. 29 SHEETS

* 1990-073BY

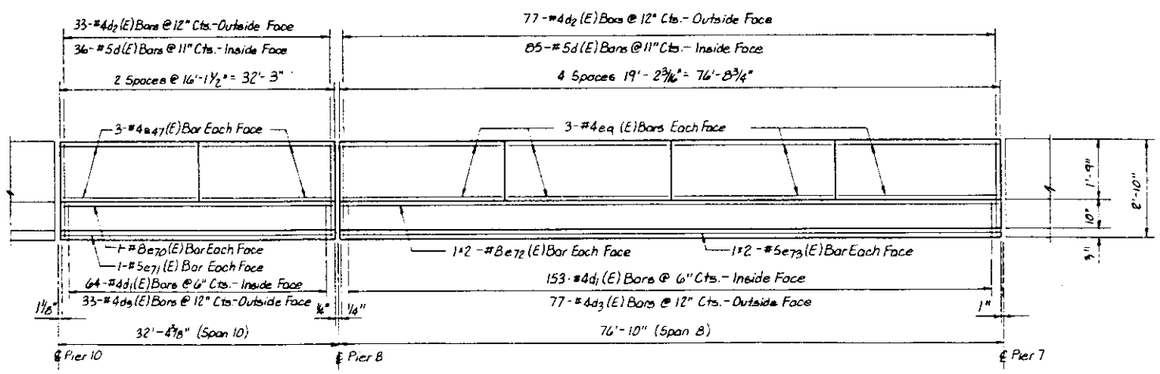
SHEET C212 OF C317



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:

1. For Notes See Sheet 25.

STANLEY CONSULTANTS

PARAPET DETAILS - EAST SIDE
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

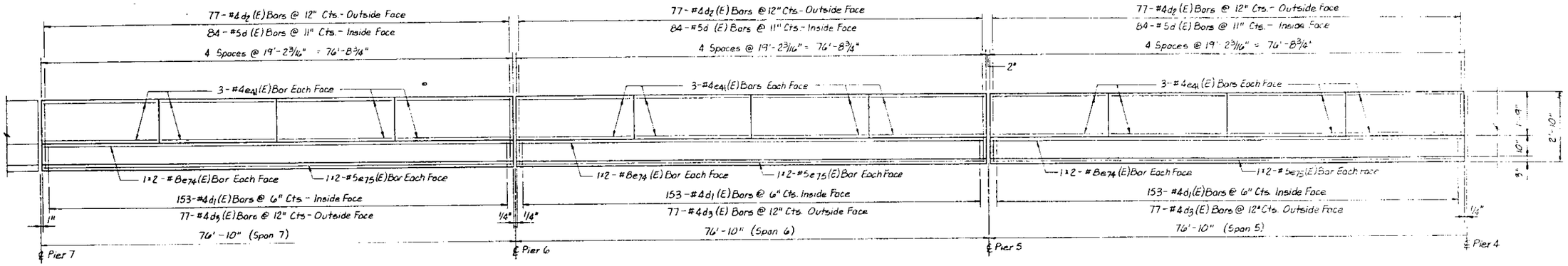
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	291

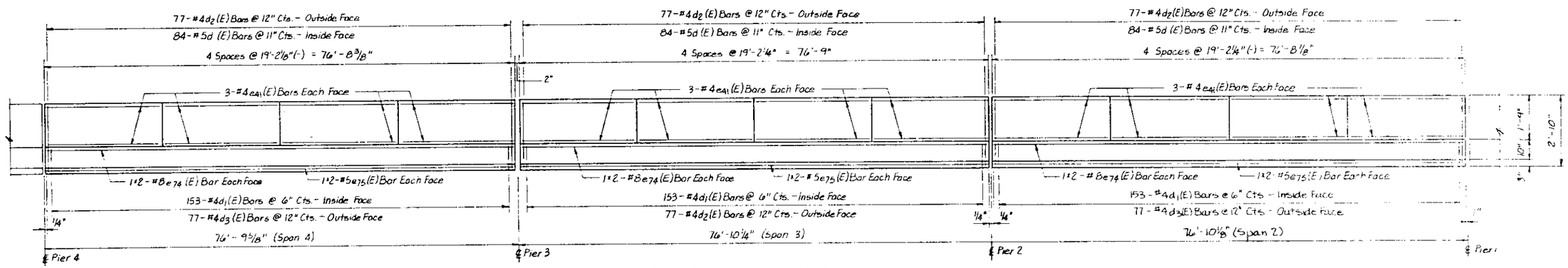
SHEET NO. 30 SHEETS

* 1990-COMBY

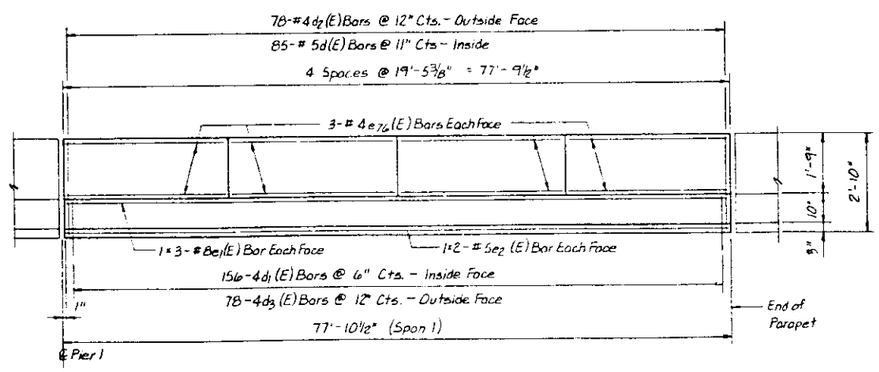
SHEET C213 OF C317



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



NOTES:

1. For Notes see Sheet 25.

STANLEY CONSULTANTS

PARAPET DETAILS - EAST SIDE
SHEET 3 OF 3
SECTION
F.A.I. ROUTE 80/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

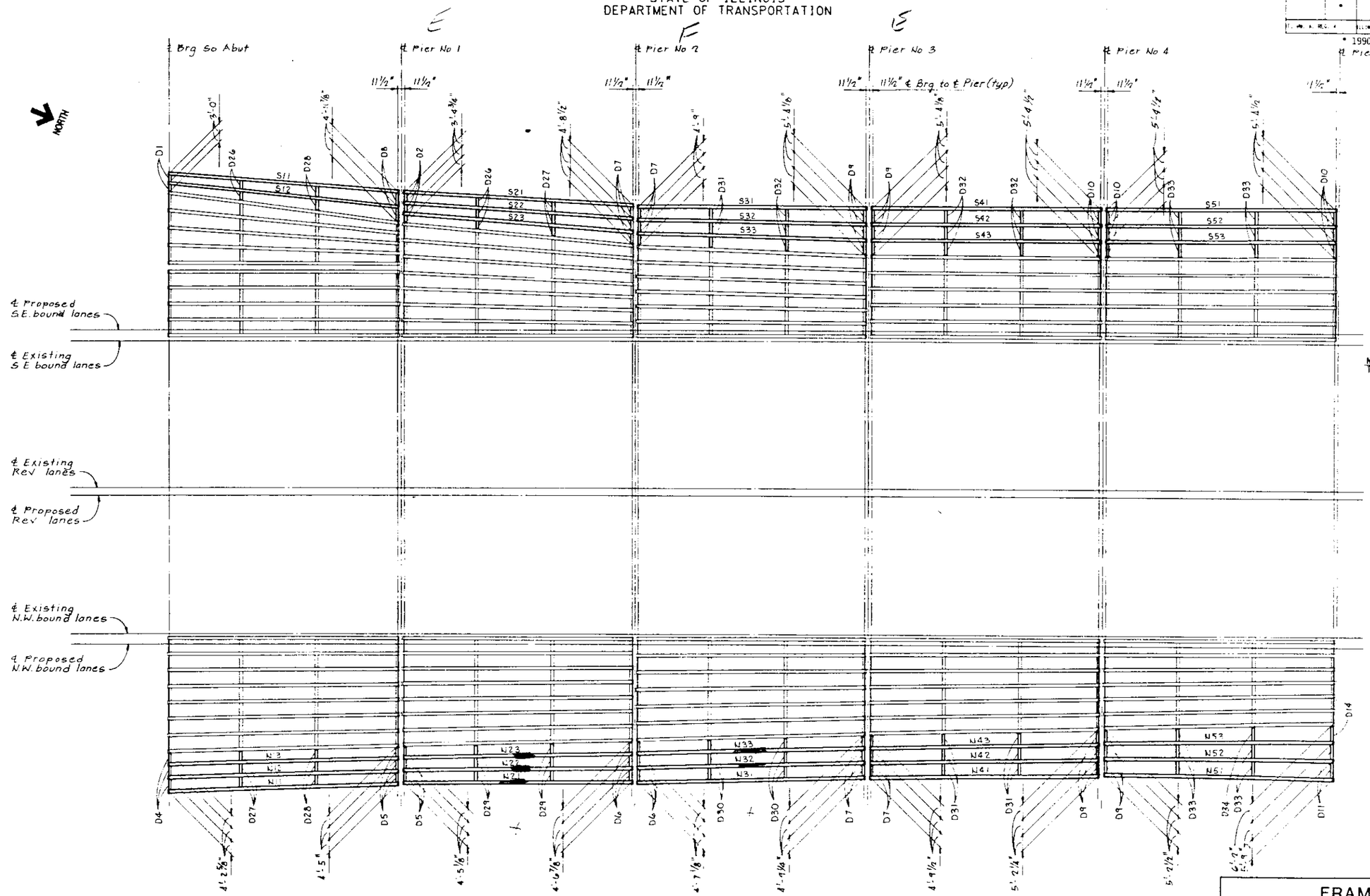
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	292
F.A.P. NO. 4	SECTIONS	FED. AID PROJECT		

SHEET NO. 31 SHEETS

* 1990-073BY

SHEET C214 OF C317



NOTE: FOR BEAM DETAILS SEE SHT 35 THRU 38.

STANLEY CONSULTANTS

FRAMING PLAN
SHEET 1 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

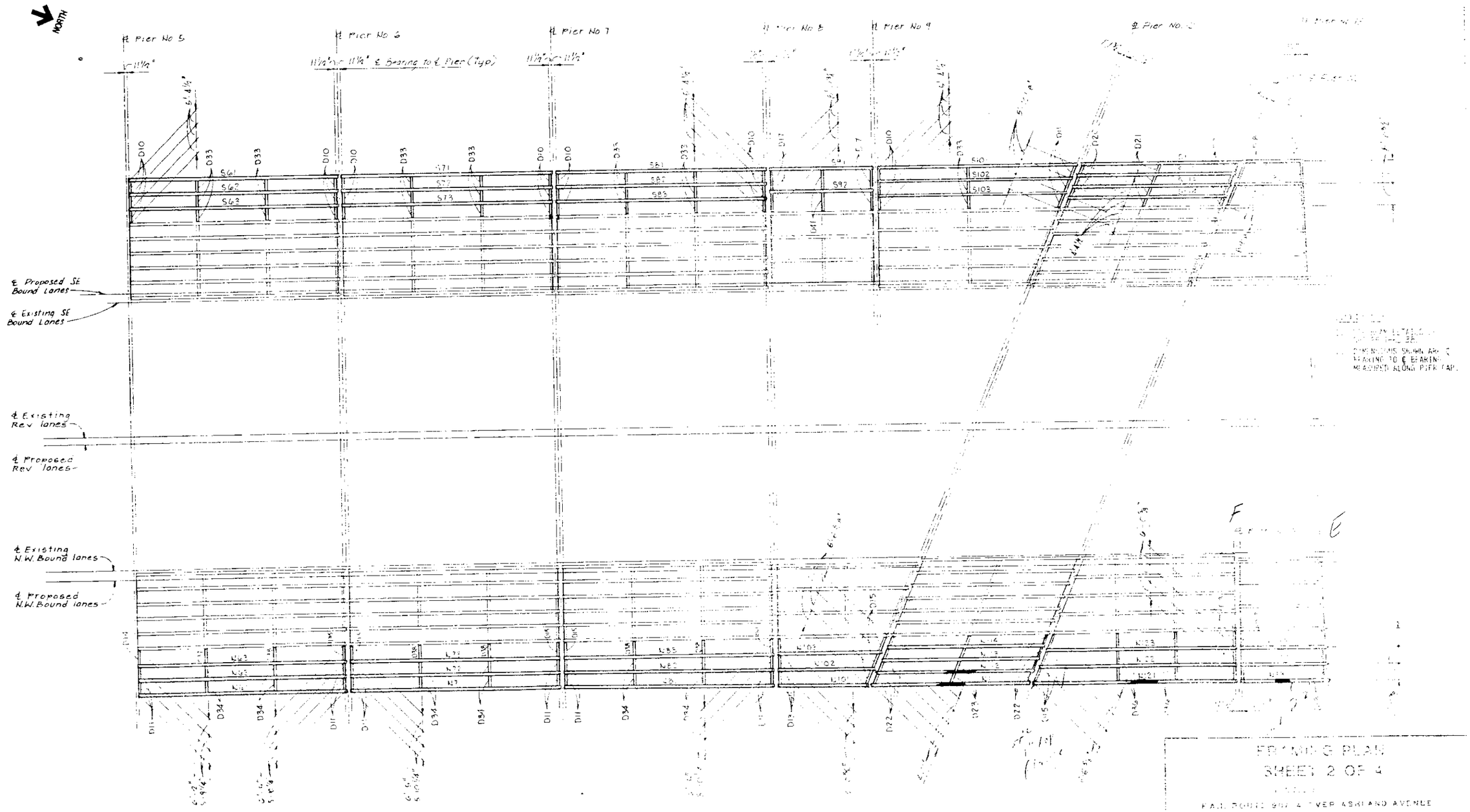
COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 32
SHEETS

SHEET C215 OF C317



FRAMING PLAN
SHEET 2 OF 4

RAIL POINT 997 & OVER ASHLAND AVENUE
COOK COUNTY
SECTION 409-45

STANLEY CONSULTANTS

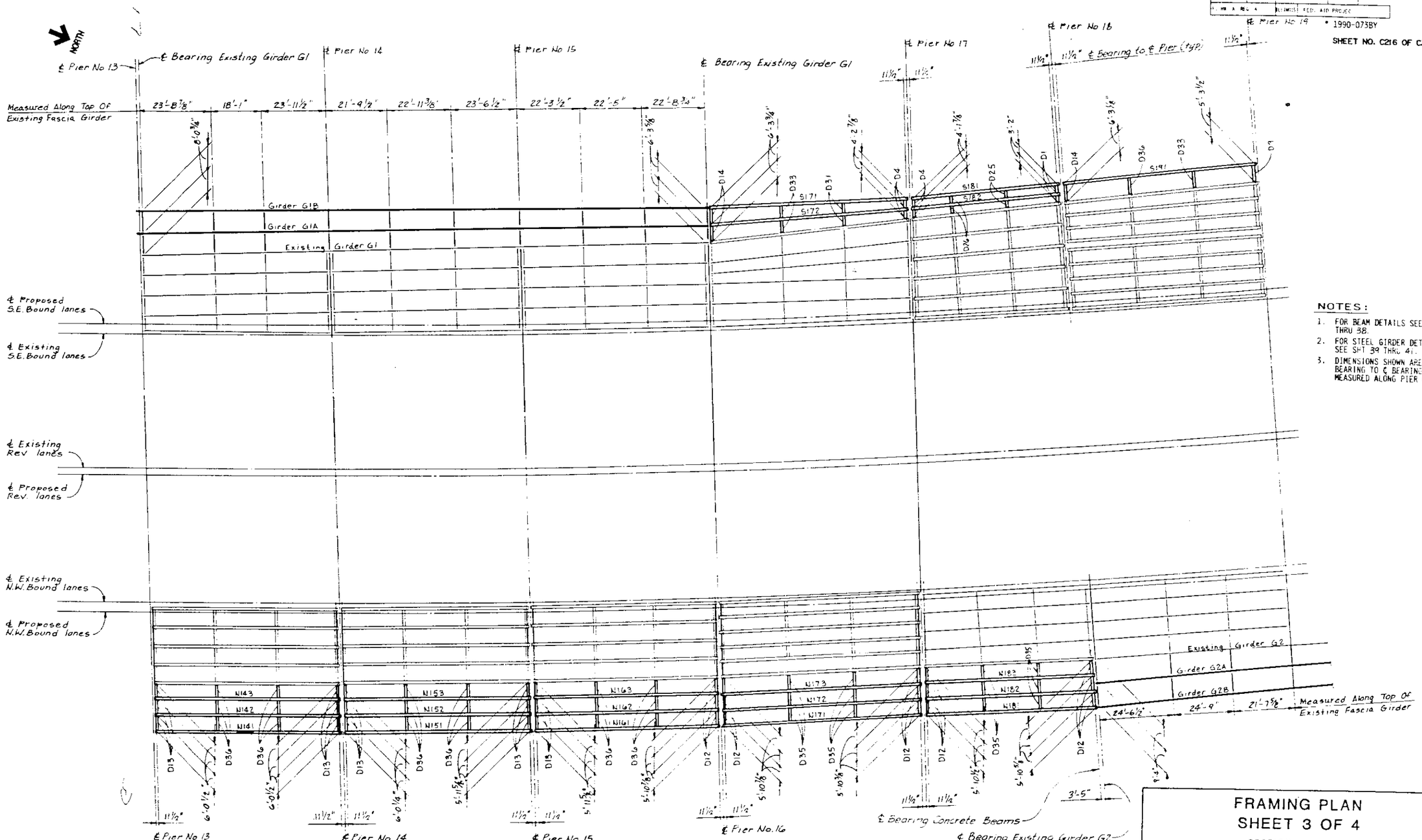
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		434	294
F.A.I. NO. 3 SEC. 4	ILLINOIS FED. AID PROJECT			

SHEET NO. 33 SHEETS

• 1990-073BY

SHEET NO. C216 OF C317



NOTES:

1. FOR BEAM DETAILS SEE SHT 35 THRU 38.
2. FOR STEEL GIRDER DETAILS SEE SHT 39 THRU 41.
3. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.

STANLEY CONSULTANTS

FRAMING PLAN
SHEET 3 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

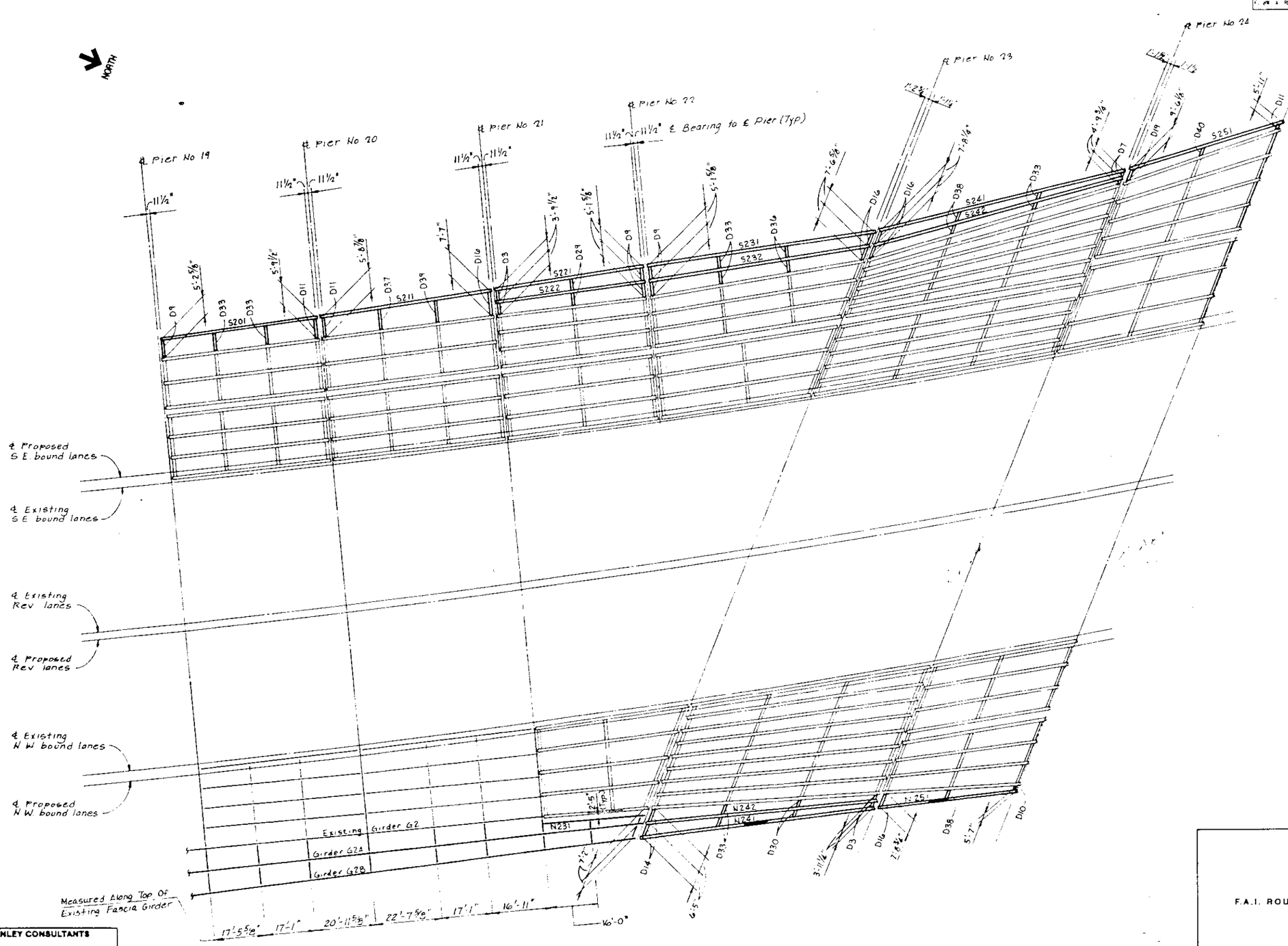
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECT.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	295
F.A.P. & REG. #	ILLINOIS FEDERAL AID PROJECT			

SHEET NO. 34
SHEETS

1990-073BY

SHEET NO. C217 OF C317



NOTES:

1. FOR BEAM DETAILS SEE SHT 35 THRU 38.
2. FOR STEEL GIRDER DETAILS SEE SHT 39 THRU 41.
3. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.

STANLEY CONSULTANTS

FRAMING PLAN
SHEET 4 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

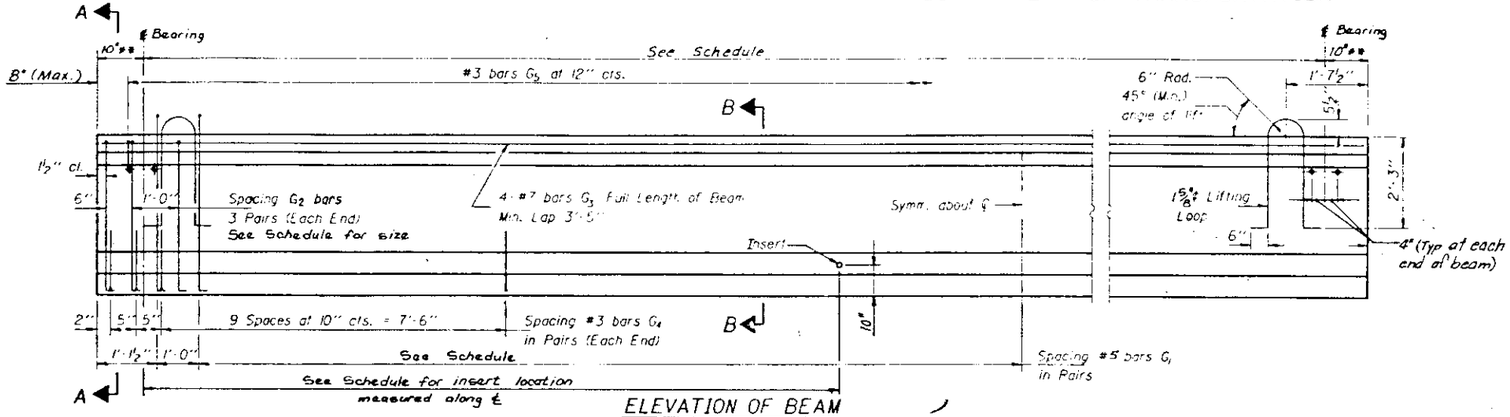
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

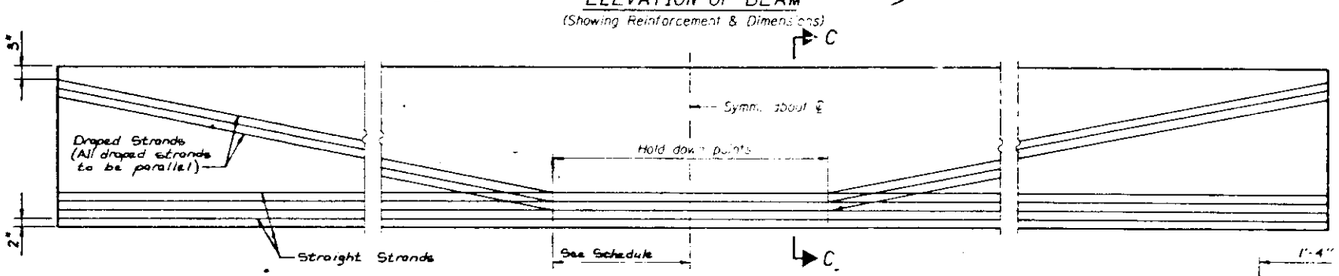
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		434	296

SHEET NO. 35
SHEETS

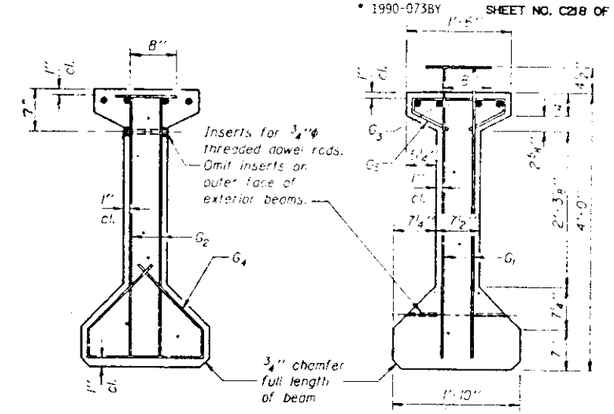
* 1990-073BY SHEET NO. C28 OF C317



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

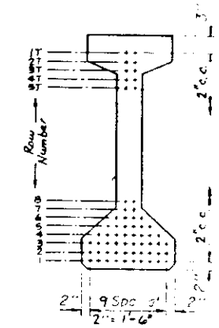


ELEVATION OF BEAM
(Showing Prestressing Steel)

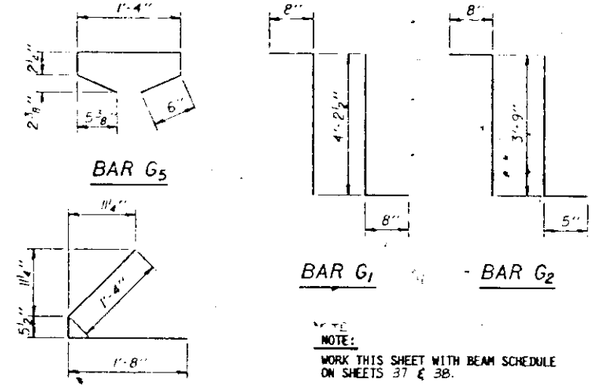


SECTION A-A

SECTION B-B



SECTION C-C



NOTE:
WORK THIS SHEET WITH BEAM SCHEDULE ON SHEETS 37 & 38.

FOR ERECTION ONLY

* BAR LIST

Bar	No.	Size	Length	Shape
G_1	Varies	#5	5'-6"	1L
G_2	12	#8	4'-10"	1L
G_3	Varies	#7	Varies	—
G_4	48	#3	3'-5½"	C
G_5	Varies	#3	9'-8½"	2

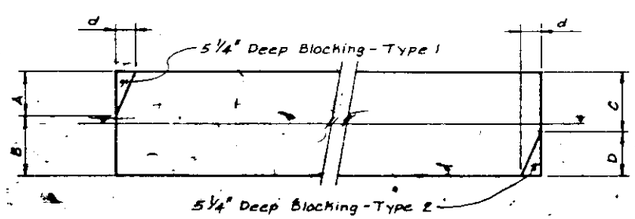
* For one beam only.
Δ See Schedule

BILL OF MATERIAL

Item	Unit	Total
~~Furnishing and~~ Erecting Precast Prestressed Concrete I-Beams, 48"	Lin. Ft.	4956.8

BEAM OVERHANG SCHEDULE		
BEAM	END OVERHANG	
	SOUTH	NORTH
N101	10"	1'-1 1/2"
N121	1'-1 1/2"	10"
N241	1'-3"	1'-4 1/2"
N251	1'-4 1/2"	10"
S101	10"	1'-1 1/2"
S131	1'-1 1/2"	10"
S231	10"	1'-3"
S241	1'-1"	1'-4 1/2"
S251	1'-4 1/2"	10"

** END OVERHANG EQUALS 10 INCHES FOR ALL BEAMS EXCEPT THOSE LISTED ABOVE.



Note: Dimensions A,B,C,D & d Are Shown In Beam Schedule.

SOUTH END. NORTH END

PLAN OF GIRDERS @ PIERS 10,11,23 & 24

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per lineal foot of "Furnishing ~~and Erecting~~ Precast Prestressed Concrete I-Beams, 48 in." BY OTHERS.

Insert for ¾"φ threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270.

The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Non-prestressing steel shall conform to AASHTO designation M-31, M-42, or M-53 Grade 60.

Steel for lifting loops shall be non-deformed bars fy=40,000 psi.

Required release strength, f'ci, shall be 4,000 psi.

PRESTRESSED BEAM DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

PI-4-48 12-31-85

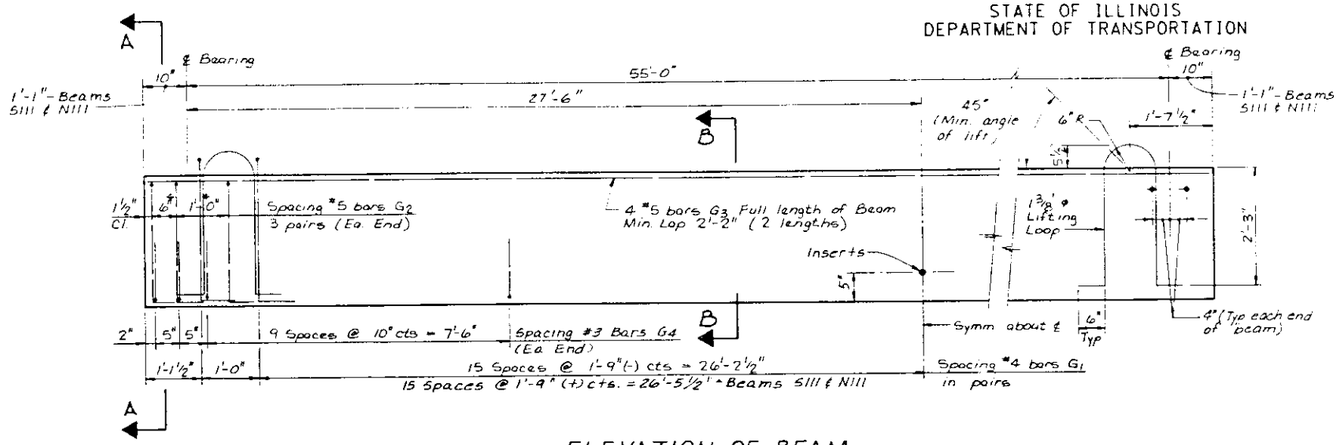
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	297

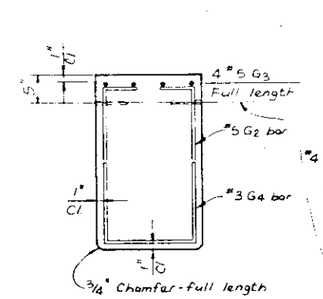
SHEET NO. 36 SHEETS

* 1990-073B)

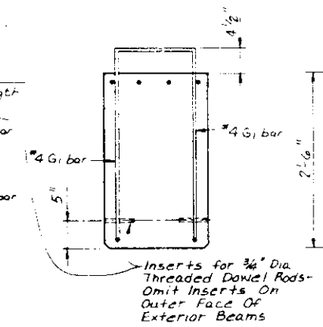
SHEET NO. C219 OF C317



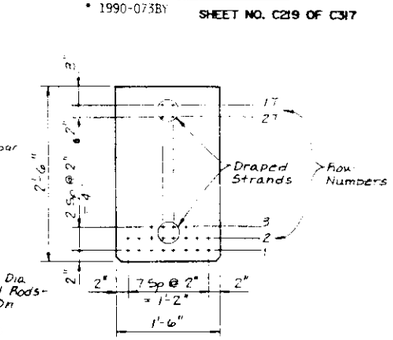
ELEVATION OF BEAM
(Showing reinforcement & dimensions)



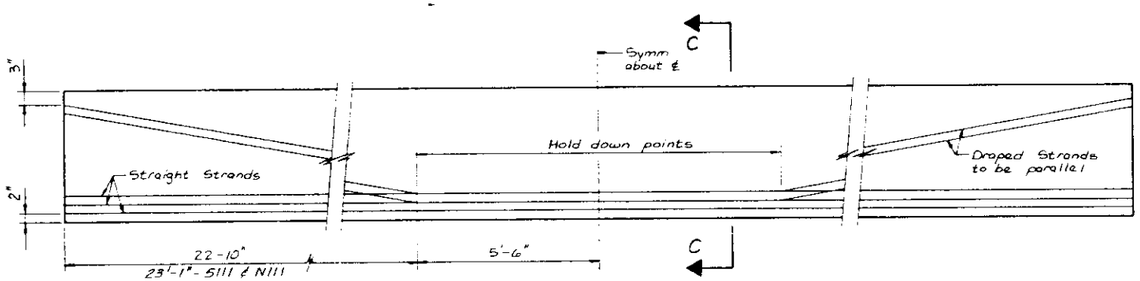
SECTION A-A



SECTION B-B



SECTION C-C



ELEVATION OF BEAM
(Showing Prestressing Steel)
(See Schedule @ Right)

BEAM NUMBER	STRANDS			STRANDS @ END ROW			STRANDS @ END ROW				
	STRAIGHT	DRAPED	TOTAL	1	2	3	1	2	3	2T	1T
N111, S111	16	4	20	8	8	4	8	6	2	2	2
N112, N113	14	4	18	8	6	4	8	4	2	2	2
N114, S112	14	4	18	8	6	4	8	4	2	2	2
S113, S114	14	4	18	8	6	4	8	4	2	2	2

PRESTRESSING STEEL STRAND SCHEDULE

* BAR LIST

Mat.	No.	Size	Length	Shape
G1	66	#4	4'-0½"	7L
G2	12	#5	3'-3"	7L
G3	8	#5	29'-6"	—
G4	24	#3	3'-7"	U

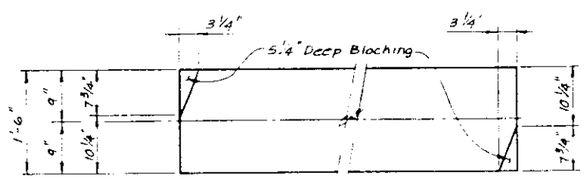
* For one beam only.

BILL OF MATERIAL

Item	Unit	Total
~~Furnishing and Erecting~~ Erecting Precast Prestressed Concrete Beams, 18" x 30"	Lin. Ft.	454.3

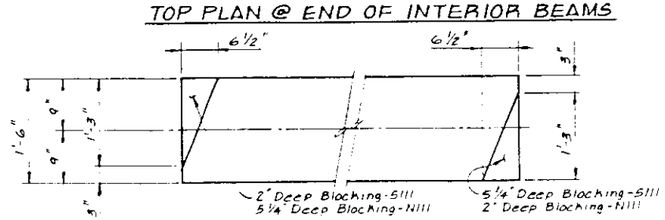
NOTE:

SEE SHEET 45 FOR EXPANSION BEARING TO BE USED ON SOUTH END OF BEAMS AND SHEET 46 FOR FIXED BEARING TO BE USED ON NORTH END OF BEAMS.



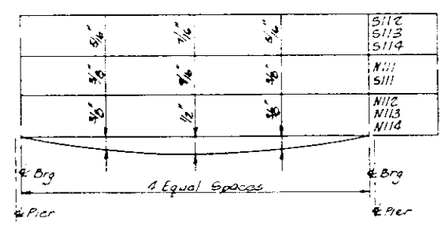
SOUTH END NORTH END

TOP PLAN @ END OF INTERIOR BEAMS



SOUTH END NORTH END

TOP PLAN @ END OF EXTERIOR BEAMS



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.

FOR ERECTION ONLY

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete Beams shall be included in the contract unit price per lineal foot of "Furnishing ~~and Erecting~~ Precast Prestressed Concrete Beams, 18" x 30", BY OTHERS

Insert for ¾"φ threaded dowel rods are to be two strut, coil type for interior Beams and single coil, flared loop type for exterior Beams.

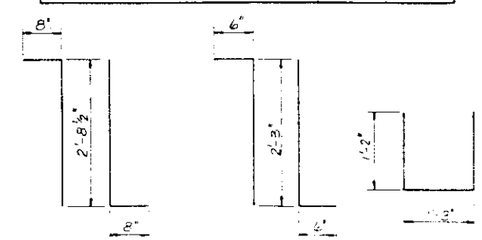
Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand, Grade 270.

The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Non-prestressing steel shall conform to AASHTO designation M-31, M-42, or M-53 Grade 60.

Steel for lifting loops shall be non-deformed bars fy=40,000 psi.

Required release strength, f'ci, shall be 4,000 psi.



BAR G1 BAR G2 BAR G4

STANLEY CONSULTANTS

PRESTRESSED BEAM DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+45

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	* 298
F. A. RD. A. REC. 4	ILLINOIS FED. AID PROJECT			

SHEET NO. 37 SHEETS

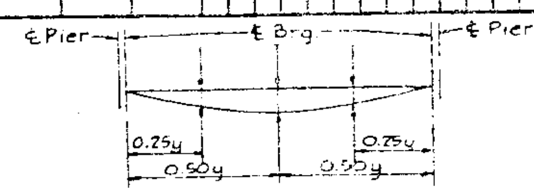
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 1990-0735 SHEET NO. C220 OF C347

48" DEEP PRECAST PRESTRESSED CONCRETE I-BEAM SCHEDULE

I-BEAM NUMBER	QUANTITY	LENGTH ℄ BRG-℄ BRG	INSERT		BLOCKING OF GIRDER FLANGES SOUTH BRG				NORTH BRG				G1 BARS (SPACING)	G2 BARS (SIZE)	STRANDS			STRANDS LOCATION AT ℄ ROW								STRANDS LOCATION AT END ROW													HOLD DOWN POINT FROM ℄	BEARING TYPE		DEAD LOAD DEFLECTION (DUE TO DECK WEIGHT ONLY)		REMARKS
			SOUTH	NORTH	TYPE	A	B	d	TYPE	C	D	d			STRAIGHT	DRAPED	TOTAL	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	5T	4T	3T	2T	1T		SOUTH	NORTH	0.25y	0.50y	
N11	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	4	20	10	8	2						10	6										2	2	7'-6"	FIXED	10-b	3/8"	9/16"	
N12,N13	2	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	2	18	10	8							10	6											2	7'-6"	FIXED	10-b	3/8"	1/2"	
N21	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 21",10 SP @ 23 1/2"(+)	#5	16	2	18	10	8							10	6											2	7'-6"	10-c	FIXED	3/8"	3/16"	
N22,N23	2	74'-11"	25'-0"	25'-0"									4 SP @ 19",15 SP @ 24"(-)	#5	14	2	16	10	6							10	4											2	7'-6"	10-c	FIXED	3/8"	1/2"	
N31	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 21",10 SP @ 23 1/2"(+)	#5	16	2	18	10	8							10	6											2	7'-6"	FIXED	10-b	7/16"	9/16"	
N32,N33	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 21",10 SP @ 23 1/2"(+)	#5	16	2	18	10	8							10	6											2	7'-6"	FIXED	10-b	3/8"	9/16"	
N41	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6										2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
N42,N43	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6										2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
N51	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6										2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
N52,N53	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6										2	2	7'-6"	FIXED	10-a	3/8"	9/16"	
N61	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 22",8 1/2" SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6										2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
N62	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 22",8 1/2" SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6										2	2	7'-6"	10-a	FIXED	1/2"	11/16"	
N71	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 22",8 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6										2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
N63	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 21",8 1/2 SP @ 24"(-)	#5	18	4	22	10	10	2						10	8										2	2	7'-6"	10-a	FIXED	1/2"	11/16"	
N72	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 22",8 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6										2	2	7'-6"	FIXED	10-a	1/2"	11/16"	
N73	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 21",8 1/2 SP @ 24"(-)	#5	18	4	22	10	10	2						10	8										2	2	7'-6"	FIXED	10-a	1/2"	11/16"	
N81	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)-	#5	18	4	22	10	10	2						10	8										2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
N82	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	18	4	22	10	10	2						10	8										2	2	7'-6"	10-a	FIXED	1/2"	11/16"	
N83	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#6	20	4	24	10	10	4						10	8	2									2	2	7'-6"	10-a	FIXED	1/2"	11/16"	
N101	1	30'-9"	24'-8"						2	2"	16"	6 1/2"	7 1/2 SP @ 23"(-)	#4	10	-	10	4	6							4	6												~~[illegible]~~	FIXED	7-a	0"	0"	
N102	1	33'-4"	24'-8"						2	10 3/4"	7 1/4"	3"	8 SP @ 23"(+)	#4	10	-	10	4	6							4	6												~~[illegible]~~	FIXED	7-a	0"	1/16"	
N103	1	35'-11"	24'-8"						2	10 3/4"	7 1/4"	3"	8 1/2 SP @ 23 1/2"(+)	#4	10	-	10	4	6							4	6												~~[illegible]~~	FIXED	7-a	0"	1/16"	
N121	1	73'-11"	31'-11"	21'-0"	1	16"	2"	6 1/2"					18 SP @ 24"(-)	#6	20	4	24	10	10	4						10	8	2									2	2	7'-5"	FIXED	10-a	1/2"	11/16"	
N122	1	71'-2"	29'-2"	21'-0"	1	7 1/4"	10 3/4"	3"					17 SP @ 24"(+)	#5	16	4	20	10	8	2						10	6										2	2	7'-2"	FIXED	10-a	3/8"	9/16"	
N123	1	68'-5"	26'-5"	21'-0"	1	7 1/4"	10 3/4"	3"					16 1/2 SP @ 24"(-)	#5	16	2	18	10	8							10	6											2	6'-10"	FIXED	10-a	3/8"	1/2"	
N131	1	30'-1"											7 SP @ 23 1/2"(+)	#4	10	-	10	4	6							4	6												~~[illegible]~~	FIXED	7-a	0"	0"	
N132,N133	2	30'-1"											7 SP @ 23 1/2"(+)	#4	10	-	10	4	6							4	6												~~[illegible]~~	FIXED	7-a	0"	1/16"	
N141	1	66'-2"	22'-0"	22'-0"									12 SP @ 12",2 SP @ 22",8 SP @ 24"(+)	#5	14	2	16	10	6							10	4											2	6'-8"	10-a	FIXED	5/16"	3/8"	
N142,N143	2	66'-2"	22'-0"	22'-0"									12 SP @ 12",2 SP @ 22",8 SP @ 24"(+)	#5	14	2	16	10	6							10	4											2	6'-8"	10-a	FIXED	5/16"	7/16"	
N151	1	66'-5"	22'-1"	22'-1"									12 SP @ 12",2 SP @ 22",8 SP @ 24"(+)	#5	14	2	16	10	6							10	4											2	6'-8"	FIXED	10-a	5/16"	3/8"	
N152,N153	2	66'-5"	22'-1"	22'-1"									12 SP @ 12",2 SP @ 22",8 SP @ 24"(+)	#5	14	2	16	10	6							10	4											2	6'-8"	FIXED	10-a	5/16"	7/16"	
N161	1	65'-0"	21'-9"	21'-9"									15 1/2 SP @ 24"(+)	#5	16	2	18	10	8							10	6											2	6'-6"	10-a	FIXED	5/16"	3/8"	
N162,N163	2	65'-0"	21'-9"	21'-9"									15 1/2 SP @ 24"(+)	#5	16	2	18	10	8							10	6											2	6'-6"	10-a	FIXED	5/16"	7/16"	
N171,N172	2	70'-10"	23'-8"	23'-8"									17 SP @ 24"(+)	#5	18	4	22	10	10	2						10	8										2	2	7'-1"	10-a	FIXED	3/8"	1/2"	
N173	1	70'-10"	23'-8"	23'-8"									17 SP @ 24"(+)	#5	18	4	22	10	10	2						10	8										2	2	7'-1"	10-a	FIXED	3/8"	9/16"	
N181	1	57'-10"	18'-9 1/2"	18'-9 1/2"									14 SP @ 23 1/2"(+)	#4	12	2	14	10	4							10	2											2	5'-10"	FIXED	10-a	3/16"	1/4"	
N182	1	57'-7"	18'-8"	18'-8"									14 SP @ 23 1/2"(+)	#4	12	2	14	10	4							10	2											2	5'-9"	FIXED	10-a	3/16"	1/4"	
N183	1	57'-4"	18'-6 1/2"	18'-6 1/2"									14 SP @ 23 1/2"(-)	#4	12	2	14	10	4							10	2											2	5'-9"	FIXED	10-a	3/16"	1/4"	
N241	1	78'-0"	26'-0"	26'-0"	1	13 1/2"	4 1/2"	9"	2	1"	17"	10 1/2"	19 SP @ 24"(+)	#6	20	4	24	10	10	4						10	8	2									2	2	7'-11"	FIXED	10-b	7/16"	5/8"	
N242	1	76'-10"	25'-7"	25'-7"	1	6"	12"	4"	2	11 1/2"	6 1/2"	4"	18 1/2 SP @ 24"(+)	#5	18	4	22	10	10	2						10	8										2	2	7'-8"	FIXED	10-b	7/16"	9/16"	
N251	1	48'-3"		24'-1 1/2"	1	17"	1"	10 1/2"					11 1/2 SP @ 24"(+)	#4	10	-	10	4	6							4	6												~~[illegible]~~	10-b	FIXED	1/16"	1/8"	

FOR INFORMATION ONLY



DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE SLAB ONLY)

NOTE: THE DEFLECTIONS SHOWN ON THIS SCHEDULE 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 "TOP OF SLAB ELEVATIONS" SHEETS 8 THRU 17

WORK THIS SHEET WITH BEAM DETAILS ON SHEET 35.

STANLEY CONSULTANTS

BEAM SCHEDULE
SHEET 1 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 40+69

MONTH YEAR	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	299
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 38 SHEETS

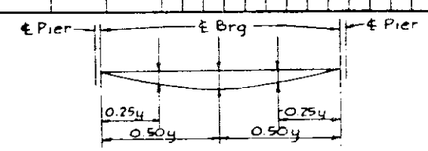
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

48" DEEP PRECAST PRESTRESSED CONCRETE I-BEAM SCHEDULE

* 1990-073BY SHEET NO. C221 OF C317

I-BEAM NUMBER	QUANTITY	LENGTH ℄ BRG-℄ BRG	INSERT SOUTH	INSERT NORTH	BLOCKING OF GIRDER FLANGES SOUTH BRG TYPE	A	B	d	NORTH BRG TYPE	C	D	d	G_1 BARS (SPACING)	G_2 BARS (SIZE)	STRANDS STRAIGHT	DRAPED	TOTAL	STRANDS LOCATION AT ℄ ROW 1	2	3	4	5	6	7	8	STRANDS LOCATION AT END ROW 1	2	3	4	5	6	7	8	5T	4T	3T	2T	1T	HOLD DOWN POINT FROM ℄	BEARING TYPE SOUTH	NORTH	DEAD LOAD DEFLECTION (DUE TO DECK WEIGHT ONLY) 0.25y	0.50y	REMARKS
S11	1	75'-2"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	FIXED	10-c	3/8"	9/16"	
S12	1	75'-4"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	14	2	16	10	6							10	4										2	7'-7"	FIXED	10-c	5/16"	7/16"	
S21	1	75'-0"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	10-c	FIXED	3/8"	9/16"	
S22	1	75'-1"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	14	2	16	10	6							10	4										2	7'-6"	10-c	FIXED	5/16"	7/16"	
S23	1	75'-2"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	14	2	16	10	6							10	4										2	7'-6"	10-c	FIXED	5/16"	7/16"	
S31	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	FIXED	10-b	7/16"	9/16"	
S32,S33	2	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	FIXED	10-b	3/8"	9/16"	
S41	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S42,S43	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S51	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
S52,S53	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
S61	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S62,S63	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S71	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
S72,S73	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2						10	6									2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
S81	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	18	4	22	10	10	2						10	8									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S82,S83	2	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	18	4	22	10	10	2						10	8									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S91	1	36'-4"	18'-3"										8 1/2 SP @ 24"(-)	#4	10	-	10	4	6							4	6											3'-8"	FIXED	10-a	0"	1/16"	
S92	1	36'-4"	18'-3"										8 1/2 SP @ 24"(-)	#4	10	-	10	4	6							4	6											3'-8"	FIXED	10-a	1/16"	1/16"	
S101	1	71'-4"	32'-3"						2	2"	16"	6 1/2"	17 1/2 SP @ 23 1/2"(+)	#5	16	2	18	10	8							10	6										2	7'-2"	FIXED	10-a	3/8"	1/2"	
S102	1	69'-1"	32'-3"						2	10 3/4"	7 1/4"	3"	16 1/2 SP @ 24"(+)	#5	16	2	18	10	8							10	6										2	6'-11"	FIXED	10-a	5/16"	7/16"	
S103	1	66'-9"	32'-3"						2	10 3/4"	7 1/4"	3"	16 SP @ 24"(+)	#5	14	2	16	10	6							10	4										2	6'-8"	FIXED	10-a	1/4"	3/8"	
S131	1	21'-1"		18'-3"	1	16"	2"	6 1/2"					5 SP @ 22 1/2"(+)	#4	10	-	10	4	6							4	6											2'-2"	FIXED	7-a	0"	0"	
S132	1	24'-9"		18'-3"	1	7 1/4"	10 3/4"	3"					5 1/2 SP @ 24"(+)	#4	10	-	10	4	6							4	6											2'-6"	FIXED	7-a	0"	0"	
S171	1	67'-10"	22'-8"	22'-8"									16 1/2 SP @ 23 1/2"(+)	#5	14	2	16	10	6							10	4										2	6'-10"	10-a	FIXED	5/16"	7/16"	
S172	1	67'-11"	22'-8 1/2"	22'-8 1/2"									16 1/2 SP @ 23 1/2"(+)	#5	14	2	16	10	6							10	4										2	6'-10"	10-a	FIXED	5/16"	7/16"	
S181	1	52'-3"	13'-7"	19'-4"									12 1/2 SP @ 24"(-)	#4	10	-	10	4	6							4	6											5'-3"	FIXED	10-c	1/16"	1/8"	
S182	1	52'-5"	13'-7"	19'-5"									12 1/2 SP @ 24"(-)	#4	10	-	10	4	6							4	6											5'-3"	FIXED	10-a	1/16"	1/8"	
S191	1	68'-6"	22'-10"	22'-10"									16 1/2 SP @ 24"(-)	#5	16	2	18	10	8							10	6										2	6'-10"	FIXED	10-b	5/16"	7/16"	
S201	1	53'-8"	17'-10"	17'-10"									4 SP @ 18",10 SP @ 23 1/2"(-)	#4	10	-	10	4	6							4	6											5'-4"	10-b	FIXED	1/8"	3/16"	
S211	1	57'-7"	19'-2"	19'-2"									12 SP @ 12",3 SP @ 23",5 SP @ 23 1/2"(-)	#4	12	-	12	4	4	2	2					4	4	2	2									5'-9"	FIXED	10-c	3/16"	1/4"	
S221	1	50'-6"	25'-3"										12 SP @ 24"(-)	#4	10	-	10	4	6							4	6											5'-1"	10-c	FIXED	1/16"	1/8"	
S222	1	50'-4"	25'-2"										12 SP @ 24"(-)	#4	10	-	10	4	6							4	6											5'-1"	10-c	FIXED	1/16"	1/8"	
S231	1	79'-9"	23'-3"	33'-3"					2	5"	13"	8"	19 1/2 SP @ 24"(-)	#6	20	4	24	10	10	4						10	8	2								2	2	7'-11"	10-c	FIXED	9/16"	13/16"	
S232	1	76'-1"	23'-3"	29'-7"					2	13"	5"	3"	18 1/2 SP @ 24"(-)	#5	18	4	22	10	10	2						10	8									2	2	7'-7"	10-c	FIXED	9/16"	13/16"	
S241	1	84'-4"	28'-1"	28'-1"	1	11"	7"	7"	2	1"	17"	10 1/2"	21 SP @ 23 1/2"(+)	#6	20	6	26	10	10	4	2					10	8	2							2	2	2	8'-5"	FIXED	10-b	5/8"	15/16"	
S242	1	86'-1"	28'-8"	28'-8"	1	6"	12"	4"	2	11 1/2"	6 1/2"	4"	21 SP @ 24"(-)	#6	22	6	28	10	10	6	2					10	8	4							2	2	2	8'-7"	FIXED	10-b	13/16"	1 1/8"	
S251	1	53'-11"		26'-11 1/2"	1	17"	1"	10 1/2"					13 SP @ 24"(-)	#4	12	-	12	4	4	2	2					4	4	2	2									5'-5"	10-b	FIXED	1/8"	3/16"	

FOR INFORMATION ONLY



DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE SLAB ONLY.

NOTE: THE DEFLECTIONS SHOWN ON THIS SCHEDULE 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 "TOP OF SLAB ELEVATIONS" SHEETS 2 THRU 17.

WORK THIS SHEET WITH BEAM DETAILS ON SHEET 35.

STANLEY CONSULTANTS

BEAM SCHEDULE
SHEET 2 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

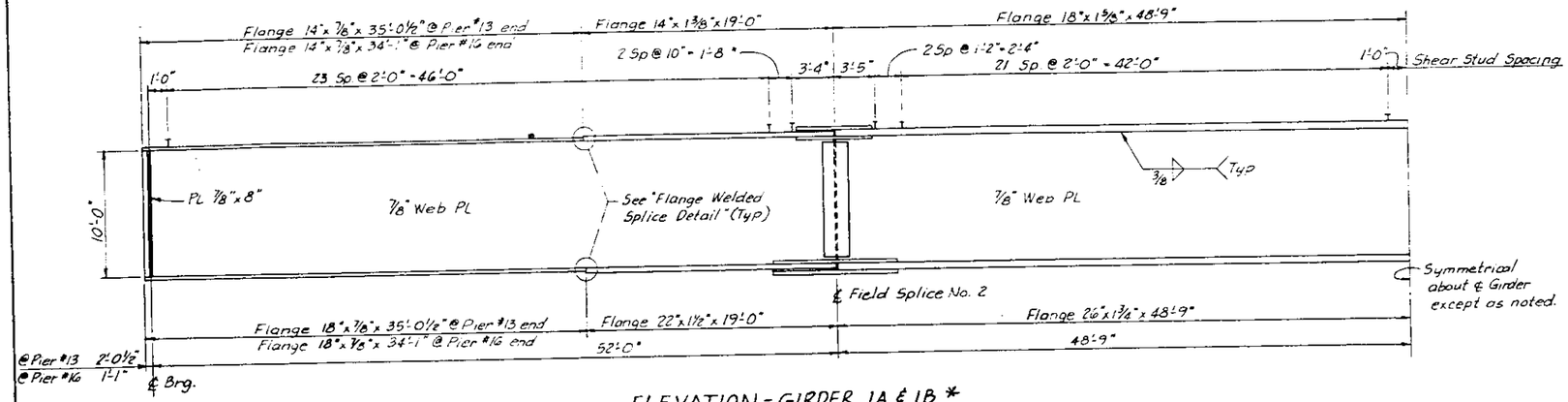
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Dimensions Are Measured Horizontally.

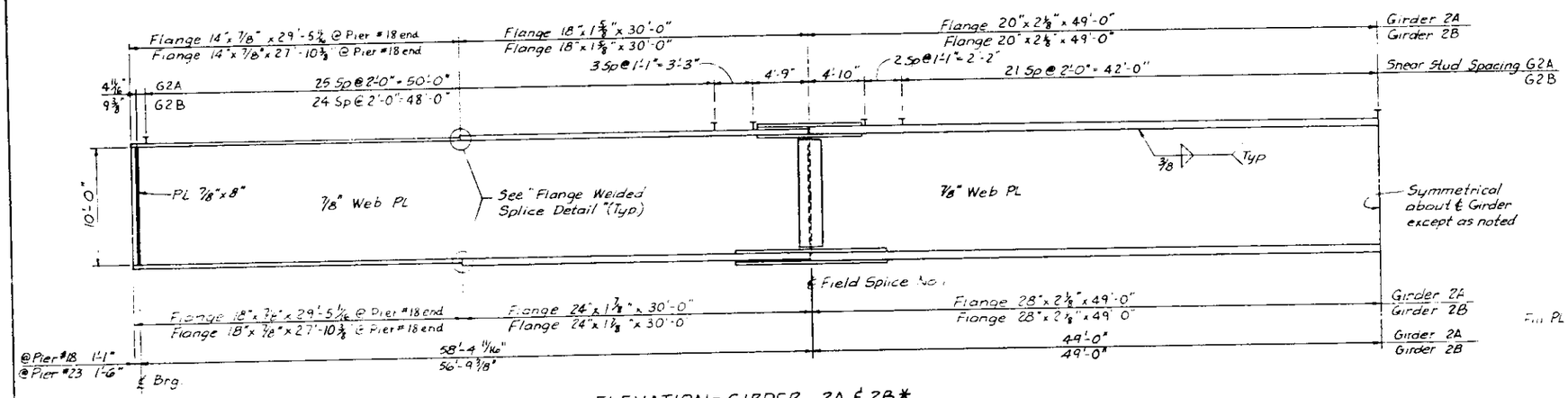
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		434	300
F.A. RTE. & REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 39 SHEETS

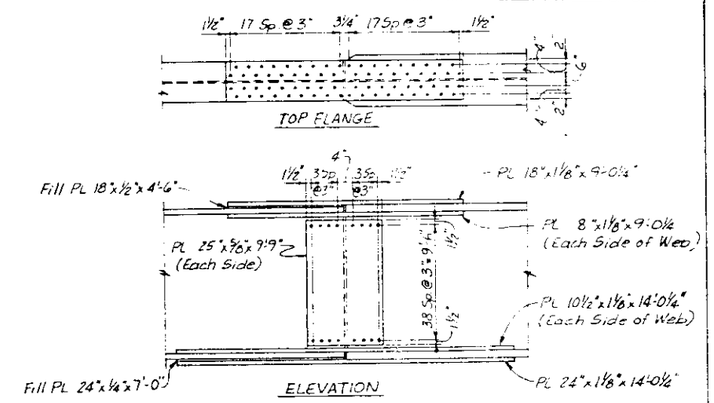
* 1990-073BY SHEET NO. C222 OF C317

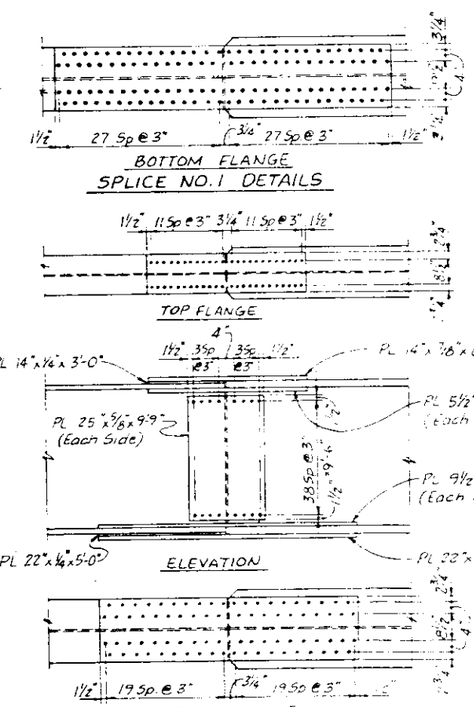


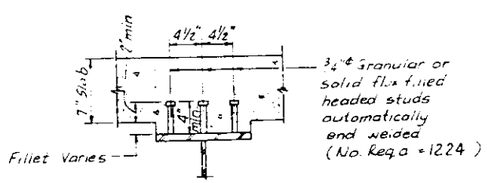
ELEVATION - GIRDER 1A & 1B *



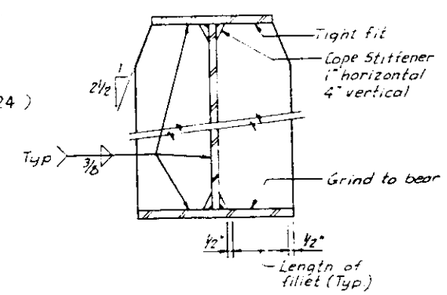
ELEVATION - GIRDER 2A & 2B*



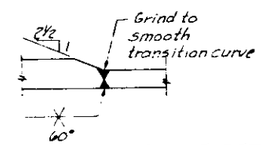




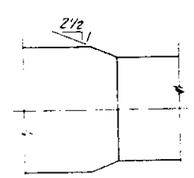
SHEAR STUD DETAILS



BEARING STIFFENERS



FLANGE WELDED SPLICE DETAIL



FLANGE WIDTH TRANSITION DETAIL

NOTE:

ALL SPLICE BOLTS ARE 7/8"ϕ HIGH STRENGTH M164.

ALL SPLICE PLATES ARE N.T.R.

ALL WEB AND FLANGE PLATES ARE N.T.R.

N.T.R. INDICATES THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS, ZONE 2.

FOR ERECTION ONLY

STANLEY CONSULTANTS

FRAMING DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

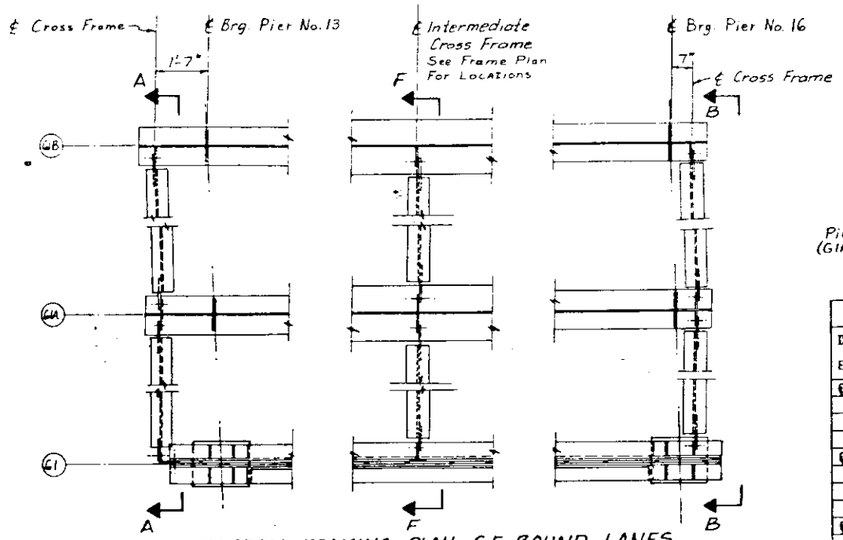
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	301
F.A. RTE. & SEC. 4	ILLINOIS	FED. AID PROJECT		

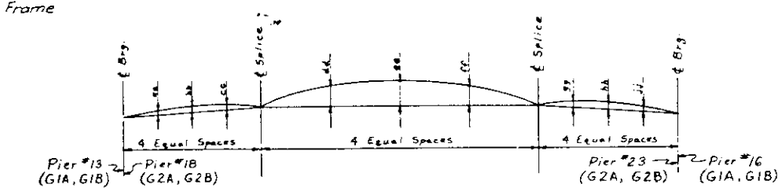
SHEET NO. 40 SHEETS

* 1990-073BY

SHEET NO. C223 OF C317



PARTIAL FRAMING PLAN- S.E. BOUND LANES



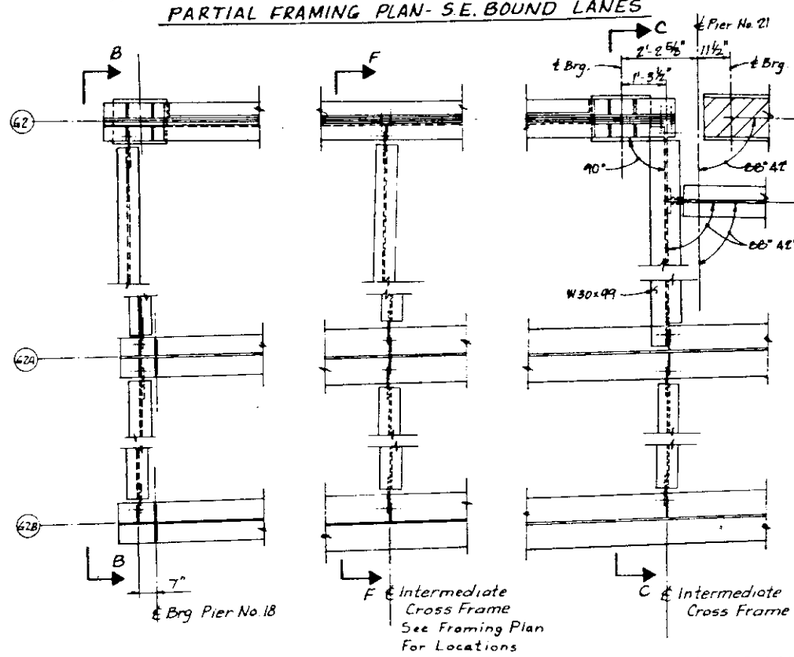
TYPICAL CAMBER DIAGRAM

DIMENSIONS AND ELEVATIONS	GIRDER 1A		GIRDER 1B		GIRDER 2A		GIRDER 2B	
	CAMBER DIMENSION	TOP OF WEB ELEVATION	CAMBER DIMENSION	TOP OF WEB ELEVATION	CAMBER DIMENSION	TOP OF WEB ELEVATION	CAMBER DIMENSION	TOP OF WEB ELEVATION
℄ BRG.	-	624.06	-	623.89	-	620.27	-	620.38
aa	0"	-	0"	-	7/16"	-	5/16"	-
bb	0"	-	0"	-	9/16"	-	7/16"	-
cc	0"	-	0"	-	7/16"	-	5/16"	-
℄ SPLICE	-	623.79	-	623.62	-	619.02	-	619.17
dd	2 11/16"	-	2 13/16"	-	1 15/16"	-	1 13/16"	-
ee	3 9/16"	-	3 3/4"	-	2 9/16"	-	2 3/8"	-
ff	2 11/16"	-	2 13/16"	-	1 15/16"	-	1 13/16"	-
℄ SPLICE	-	622.79	-	622.65	-	616.31	-	616.43
gg	13/16"	-	11/16"	-	7/8"	-	9/16"	-
hh	1 1/16"	-	15/16"	-	1 1/8"	-	3/4"	-
jj	13/16"	-	11/16"	-	7/8"	-	9/16"	-
℄ BRG.	-	621.85	-	621.73	-	614.56	-	614.73

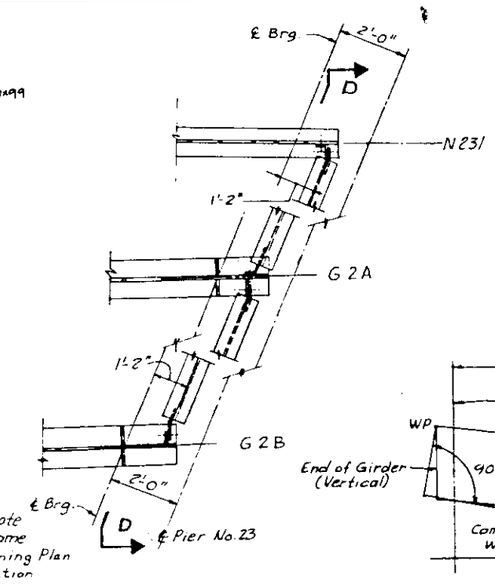
GIRDER MOMENT TABLE		GIRDERS 1A & 1B			GIRDERS 2A & 2B		
		.17 SPAN	.27 SPAN	.5 SPAN	.13 SPAN	.27 SPAN	.5 SPAN
Is	in4	227,941	314,245	397,337	227,941	396,115	501,155
Ic(n=9)	in4	451,452	581,104	670,793	451,451	676,314	793,998
Ic(n=27)	in4	325,984	427,570	509,936	325,984	512,350	614,780
Ss	in3	3,845	5,594	7,065	3,845	7,011	8,775
Sc(n=9)	in3	5,382	7,303	8,702	5,382	8,675	10,379
Sc(n=27)	in3	4,652	6,467	7,867	4,652	7,834	9,540
DL	k/ft	1.324	1.324	1.338	1.516	1.560	1.580
MDL	k-ft	4,019	5,636	7,198	4,065	7,033	8,840
SDL	k/ft	.332	.332	.317	.381	.371	.355
MSDL	k-ft	907	1,266	1,609	962	1,646	2,047
MLL	k-ft	1,697	2,381	3,052	1,804	3,112	3,931
MIMP	k-ft	260	364	467	271	467	590
MLL+I	k-ft	1,957	2,745	3,519	2,075	3,579	4,521
fs (DL)	ksi	12.5	12.1	12.2	12.7	12.0	12.1
fs (SDL)	ksi	2.3	2.3	2.5	2.5	2.5	2.6
fs (LL+I)	ksi	4.4	4.5	4.9	4.6	5.0	5.2
fs TOTAL	ksi	19.2	18.9	19.6	19.8	19.5	19.9
VR	k	56.1	45.3	24.7	71.4	49.2	25.6

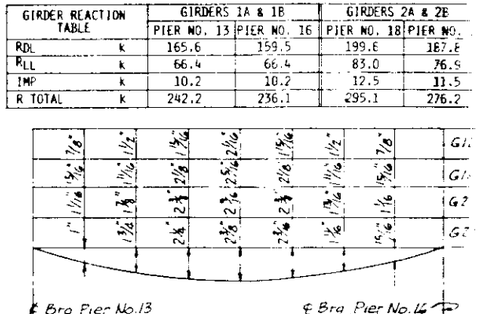
Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
Ic AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING fs.
VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

GIRDER REACTION TABLE		GIRDERS 1A & 1B		GIRDERS 2A & 2B	
		PIER NO. 13	PIER NO. 16	PIER NO. 18	PIER NO.
RDL	k	165.6	159.5	199.6	187.8
RLL	k	66.4	66.4	83.0	76.9
IMP	k	10.2	10.2	12.5	11.5
R TOTAL	k	242.2	236.1	295.1	276.2



PARTIAL FRAMING PLAN- N.W. BOUND LANES

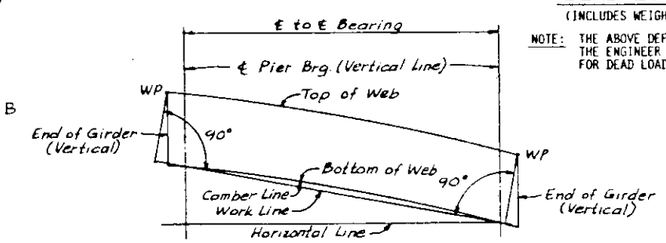




DEAD LOAD DEFLECTION DIAGRAM

(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.



For Top of Web Elevations, see "Typical Camber Diagram Table" above.

WORK LINES FOR GIRDER

NOTE: SEE SHEET 41 FOR SECTIONS A-A THRU F-F.

FOR ERECTION ONLY

FRAMING DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

Cook 1990-073EY (301-434)

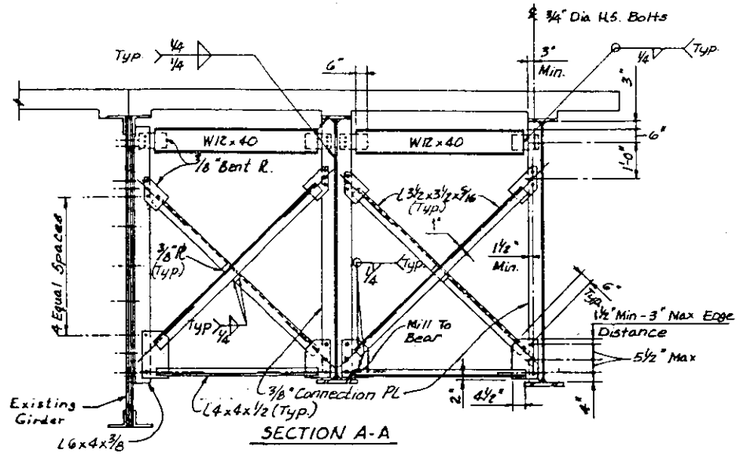
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	434	302
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

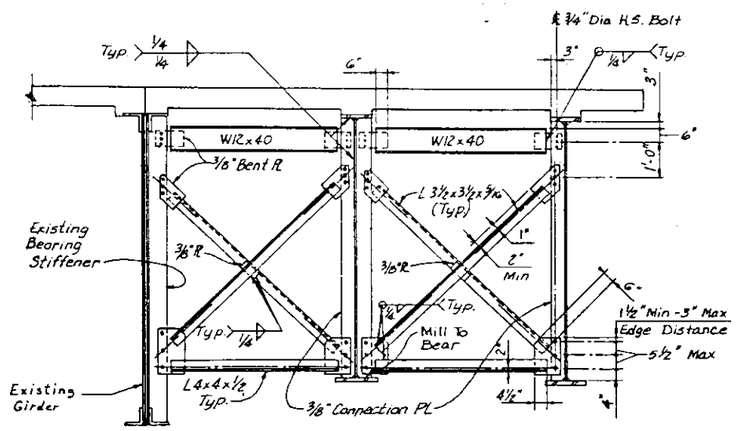
*1990-073BY

SHEET NO. 41 SHEETS

SHEET NO. C224 OF C317



SECTION A-A



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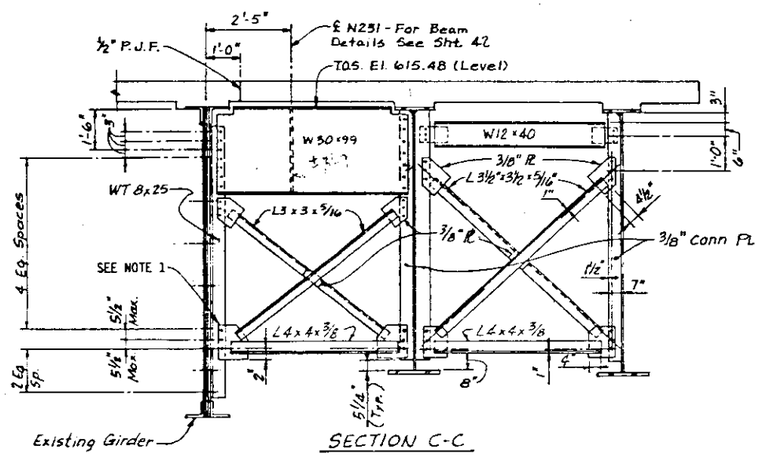
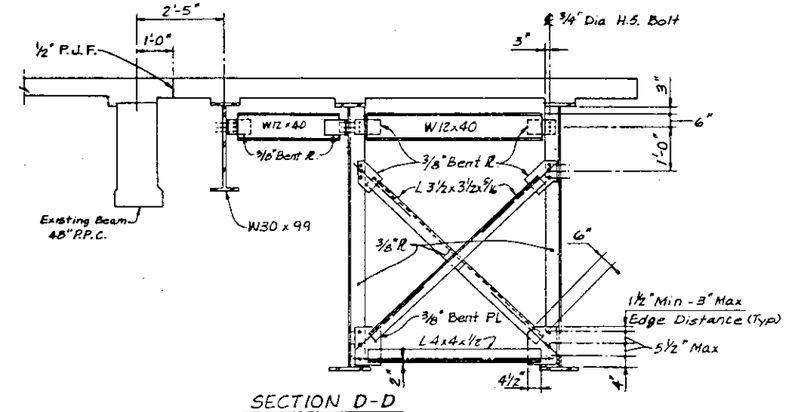
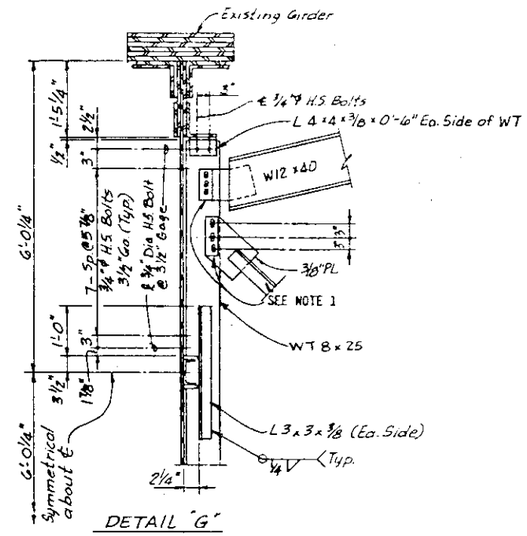


SECTION C-C



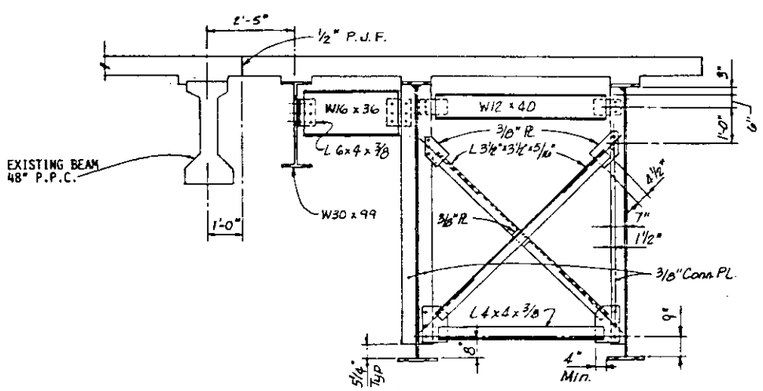
SECTION D-D



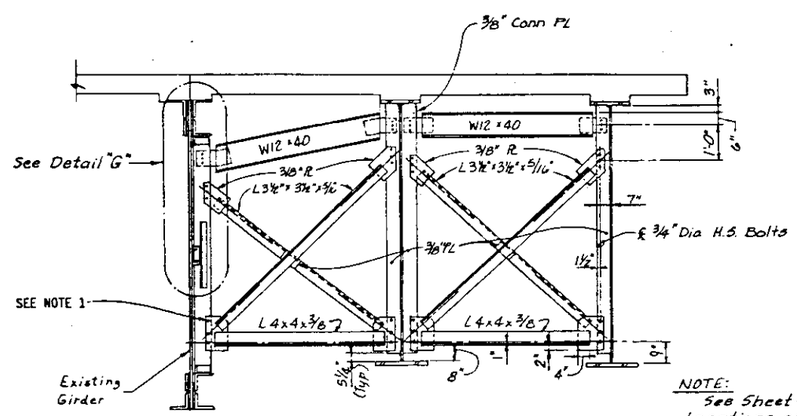
DETAIL "G"

NOTES:

1. FOR CONNECTION TO EXISTING GIRDER, PROVIDE 1 1/2" LONG X 13/16" VERTICAL SLOTTED HOLES IN 3/8" PLATE. PROVIDE 3/8" X 4" X 0'-10 1/2" PLATE W/13/16"Ø HOLES TO COVER SLOTTED HOLES IN CONNECTION PLATES. FINGER TIGHTEN PRIOR TO POURING DECK SLAB. FULLY TIGHTEN AFTER COMPLETION OF DECK SLAB.
2. ALL HOLES IN EXISTING STEEL ARE TO BE DRILLED.



SECTION E-E



SECTION F-F

NOTE:
See Sheet 40 for Locations of Sections A-A thru F-F.

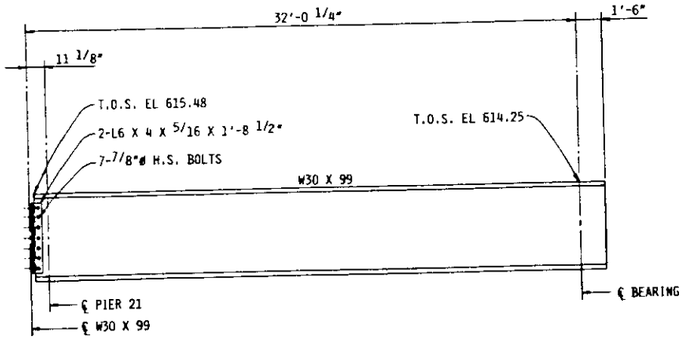
FOR ERECTION ONLY

FRAMING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BEAM NO. N231

BEAM MOMENT TABLE		BEAM N231 .5 SPAN
Is	in^4	4000
SS	in^3	270
DL	k/ft	.542
MDL	k-ft	69.4
SDL	k/ft	.105
MSDL	k-ft	13.4
MLL	k-ft	156.3
MIMP	k-ft	46.9
MLL+I	k-ft	203.2
fs(DL)	ksi	3.1
fs(SDL)	ksi	.6
fs(LL+I)	ksi	9.0
fs(TOTAL)	ksi	12.7
VR	k	43.5

Is and Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.

VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

BEAM REACTION TABLE		BEAM N231
R_{DL}	k	10.4
R_{LL}	k	25.5
IMP	k	7.6
R TOTAL	k	43.5

DL DEFLECTION AT ℄ BEAM(INCLUDES WEIGHT OF CONCRETE ONLY)
Δ = 1/8"

FOR ERECTION ONLY

STANLEY CONSULTANTS

FRAMING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 43 | 434 | 304 SHEETS

* 1990-073BY

SHEET NO. C226 OF C317

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
~~2½"~~	~~2½"~~	~~1¾" Min.~~
4"	3"	2½" Min.

INSTALLATION NOTES

(1) Install sponge mandrels into positions shown to form flap convolution.

(2) Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).

(3) Install continuous seal in roadway.

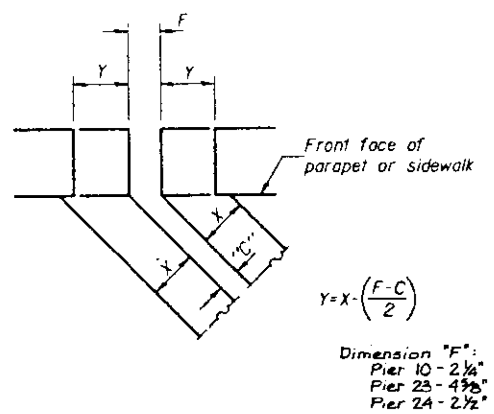
(4) Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

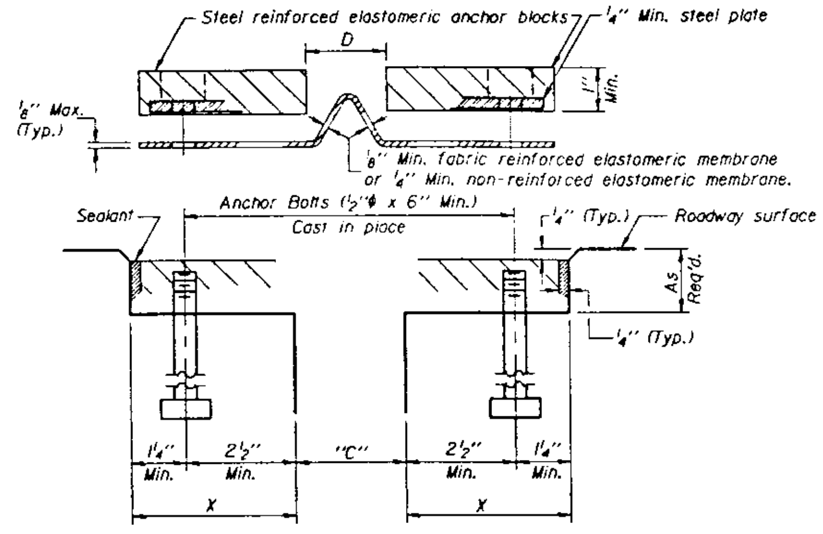
SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

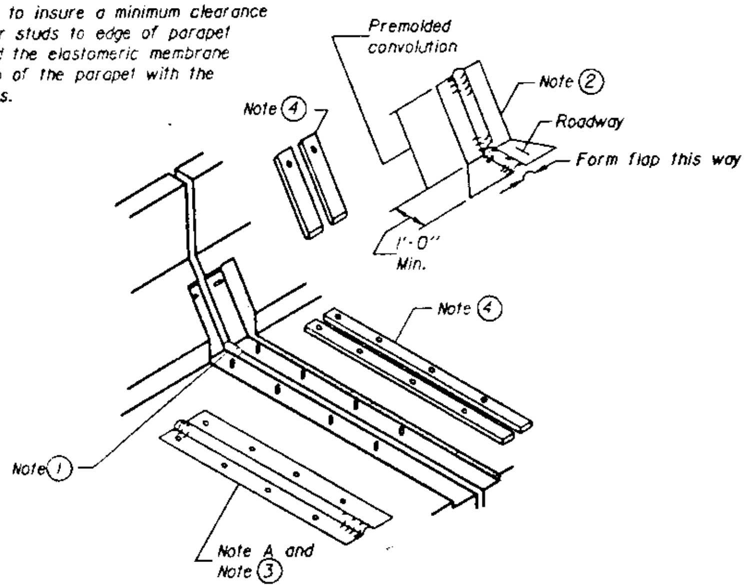
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



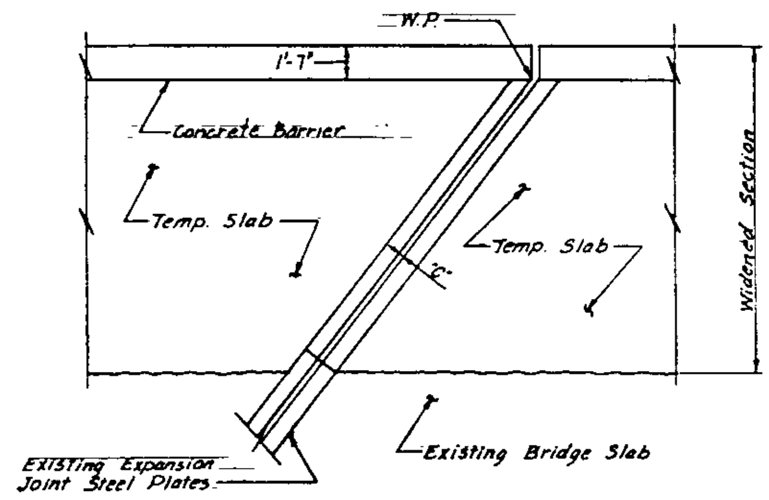
FORMING BLOCKOUT SKETCH



CROSS SECTION

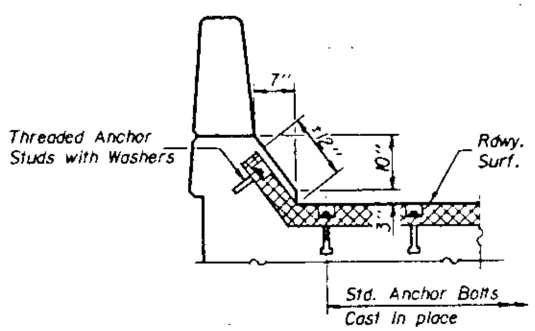


AT PARAPET



PARTIAL PLAN AT EXPANSION PIERS

EXPANSION JOINT DETAILS



AT PARAPET

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

The anchor bolts of the neoprene expansion joint shall be tied to the transverse reinforcing bars and shall be cast-in-place.

FOR ERECTION ONLY - COST INCIDENTAL TO "ERECTING STRUCTURAL STEEL"

EXPANSION JOINT DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

EJ-CS 12-1-83

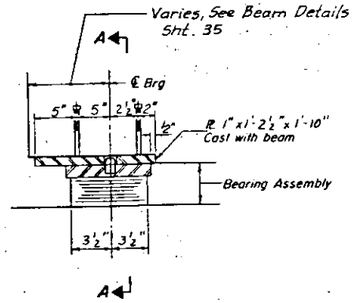
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	305
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

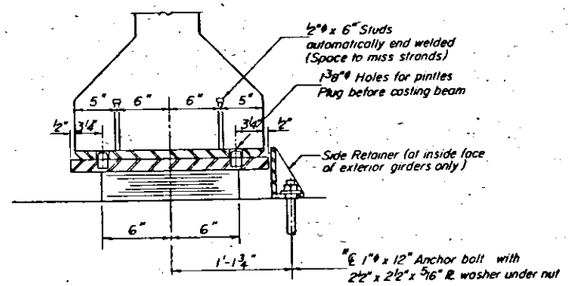
SHEET NO. 44
SHEETS

* 1990-073BY

SHEET NO. C227 OF C317



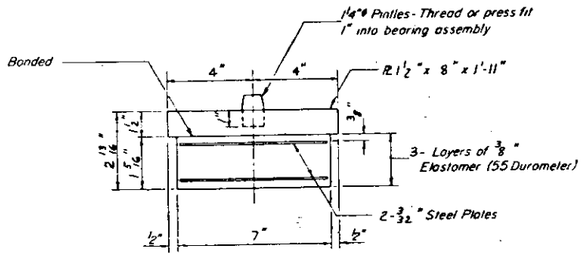
SECTION AT PIER



SECTION A-A

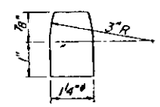
TYPE I ELASTOMERIC EXP BRG.
(Size 7-a, See Beam Schedules Sht. 37 & 38 for location)
(8 Required)

*Note. After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. See Sheet #82 for anchor bolt installation.

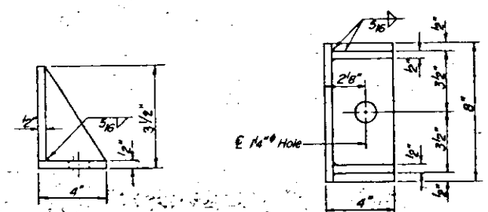


BEARING ASSEMBLY

Note: Shim plates shall not be placed under bearing assembly.



PINTLE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (3 Req'd)

BILL OF MATERIAL

Item	Unit	Total
Install Elastomeric Bearing Assembly, Type I (7"x12")	Each	8

FOR ERECTION ONLY - COST INCIDENTAL TO "ERECTING STRUCTURAL STEEL"

STANLEY CONSULTANTS

PI-2E-1 12-31-85

BEARING DETAILS

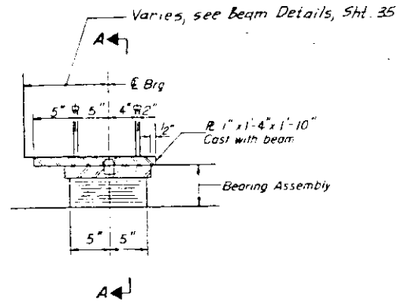
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

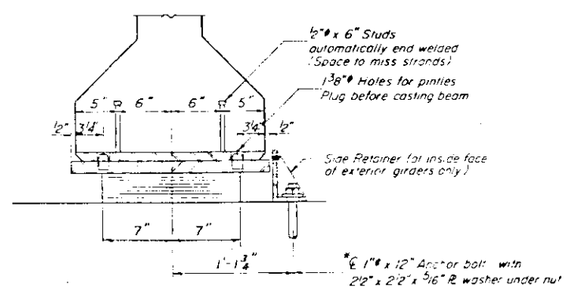
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
* * * * *	*		434	306

SHEET NO. A5
SHEETS

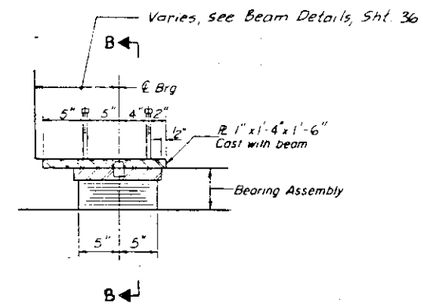
* 1990-073BY SHEET NO. C228 OF C317



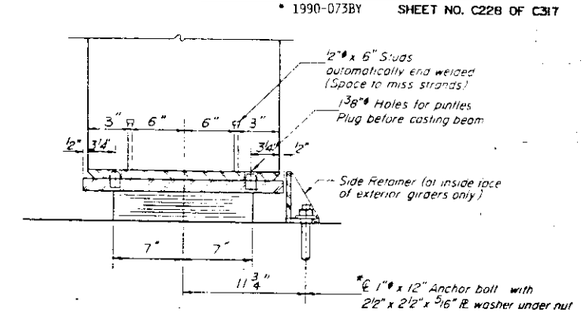
SECTION AT PIERS



SECTION A-A



SECTION AT PIER NO. 10



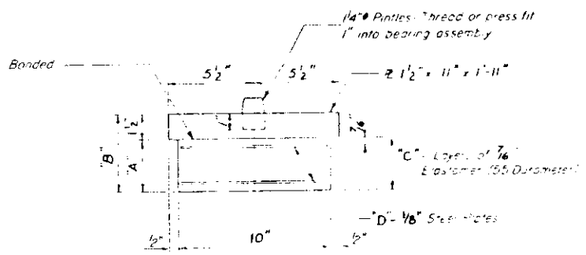
SECTION B-B

* Note After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place See Sheet #82 for anchor bolt installation

TYPE I ELASTOMERIC EXP BRG.
(Size 10-a, 10-b & 10-c, see Beam Schedules Sht. 37 & 38 for location)

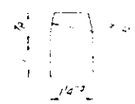
* Note After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. See sheet #82 for anchor bolt installation.

TYPE I ELASTOMERIC EXP BRG.
(Size 10-aa ; Span 11 South End
For 18" x 30" Prestressed Beams)
(8 Required)



BEARING ASSEMBLY

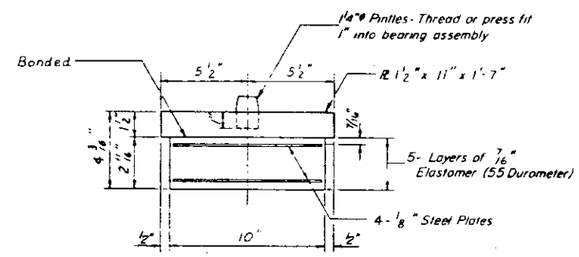
Note: Shim plates shall not be placed under bearing assembly



PINTLE

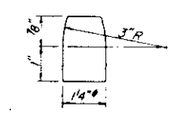
TABLE OF VARIABLES

Bearing Size	A	B	C	D	E	No Req'd
10-a	2 11/16"	4 3/16"	5	4	5"	57
10-b	3¼"	4¾"	6	5	5½"	17
10-c	3 13/16"	5 5/16"	7	6	6"	13

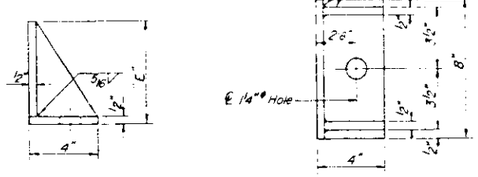


BEARING ASSEMBLY

Note: Shim plates shall not be placed under bearing assembly

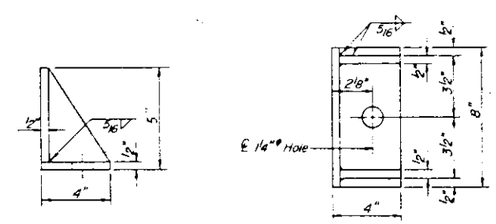


PINTLE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates (35 Req'd.)



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (2 Req'd.)

BILL OF MATERIAL

Item	Unit	Total
Install Elastomeric Bearing Assembly, Type I (10"x14")	Each	95

FOR ERECTION ONLY - COST INCIDENTAL TO "ERECTING STRUCTURAL STEEL"

STANLEY CONSULTANTS

PI-2E-1 12-31-84

BEARING DETAILS

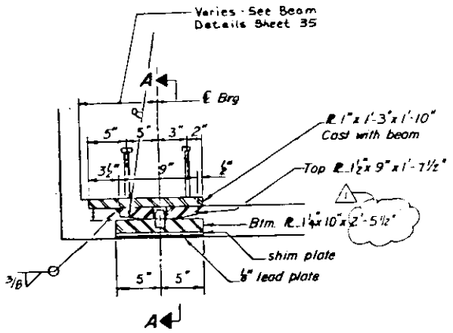
SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

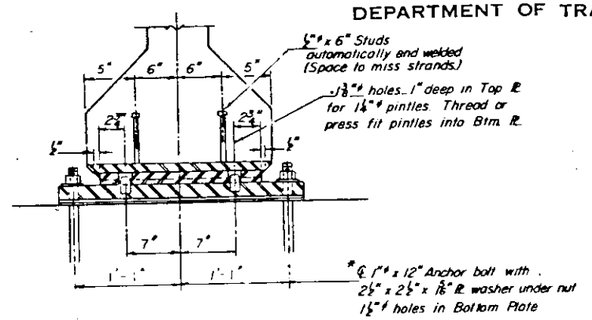
COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION AT ABUT. OR PIER

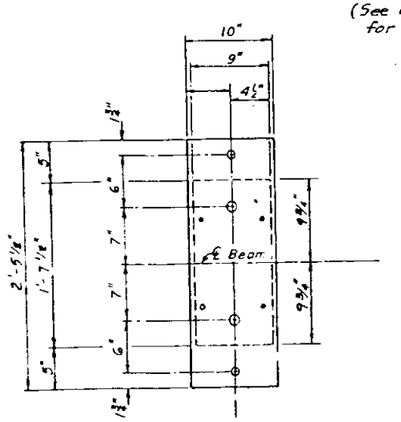


SECTION A-A

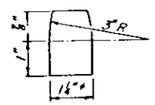
*ANCHOR BOLTS SHALL BE DRILLED AND GROUTED IN PLACE AFTER BEAMS HAVE BEEN ERECTED.

See Sheet #82 for anchor bolt installation

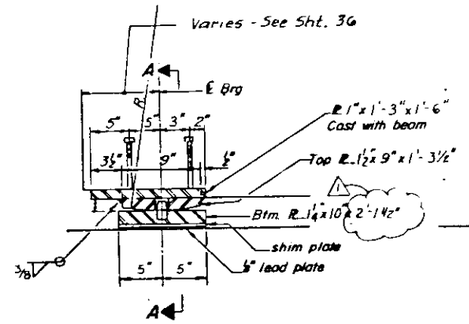
FIXED BEARING
(See Beam Schedules, Sht. 37 & 38 for location)
(95 Required)



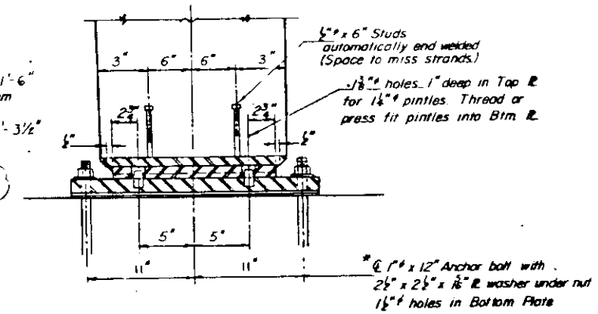
PLAN OF
TOP & BOTTOM PLATES



PINTLE
(Typ Both Bearings)



SECTION AT PIER #11

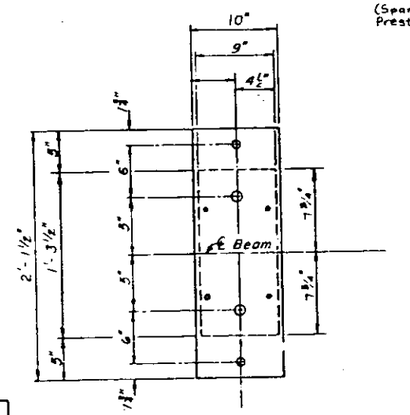


SECTION A-A

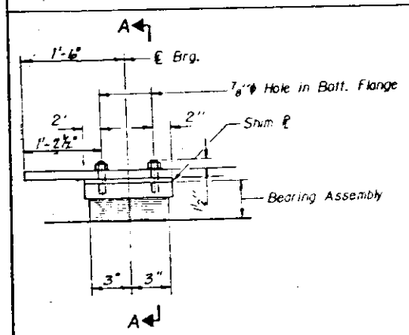
*ANCHOR BOLTS SHALL BE DRILLED AND GROUTED IN PLACE AFTER BEAMS HAVE BEEN ERECTED.

See Sheet #82 for anchor bolt installation

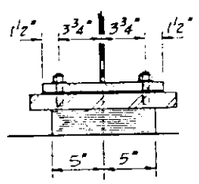
FIXED BEARING
(Span 11 North End For 18" x 30" Prestressed Beams)
(8 Required)



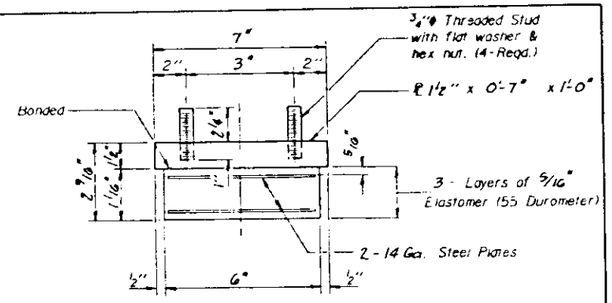
PLAN OF
TOP & BOTTOM PLATES



ELEVATION AT PIER



SECTION A-A



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.

TYPE I ELASTOMERIC EXP. BRG.
(BEAM NO. N231 AT PIER 23)
(1 Required)

Item	Unit	Total
Install Elastomeric Bearing Assembly Type I (6" x 10")	Each	1

FOR ERECTION ONLY - COST INCIDENTAL TO "ERECTING STRUCTURAL STEEL"

STANLEY CONSULTANTS

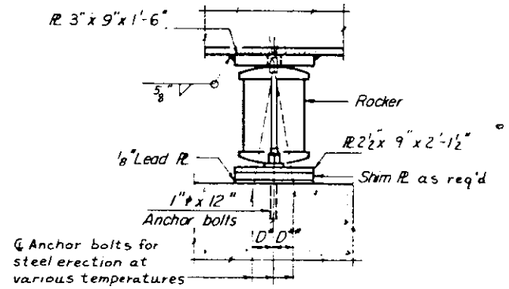
PI-2FB 12-31-85

Rev. 11-26-90

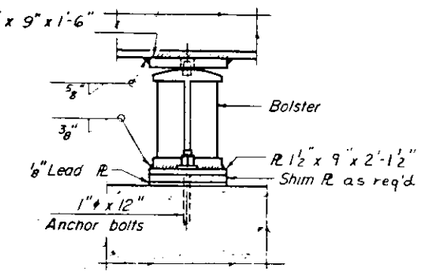
BEARING DETAILS
SECTION
F.A.I. ROUTE 80/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 400+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

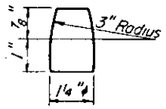
					SHEET NO. 47
			434	308	SHEETS
* 1990-073BY					SHEET NO. C230 OF C317



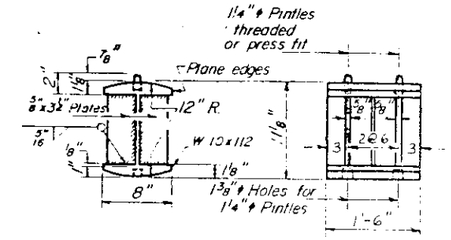
ELEVATION



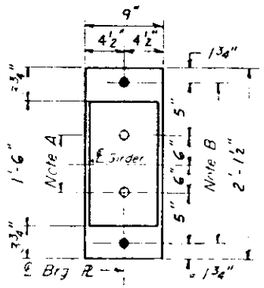
ELEVATION



PINTLE

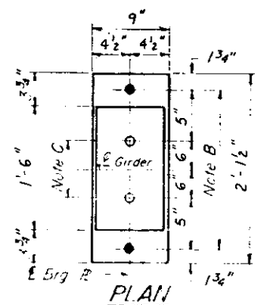


ROCKER



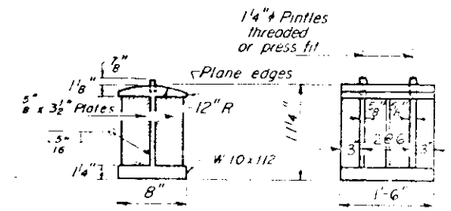
PLAN

AT PIER 13 & 23
(No. Req'd 4)



PLAN

AT PIER 16 & 18
(No. Req'd 4)



BOLSTER

NOTE A
1⅜"φ Holes - 1" deep in top PL for pintles. Thread or press fit pintles into bottom PL

NOTE B
[illegible] under nut

NOTE C
1⅜"φ Holes 1" deep in top PL only for 1¼"φ pintles.

BEARING ASSEMBLY DETAILS

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

a) D* (Side of brg. away from fixed brg.)
D* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
D** (Side of brg. toward fixed brg.)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.

b) After girders have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be installed as shown on Sheet 61 & 79.

FOR ERECTION ONLY - COST INCIDENTAL TO "ERECTING STRUCTURAL STEEL"

STANLEY CONSULTANTS

I-2-B 12-31-84

BEARING DETAILS

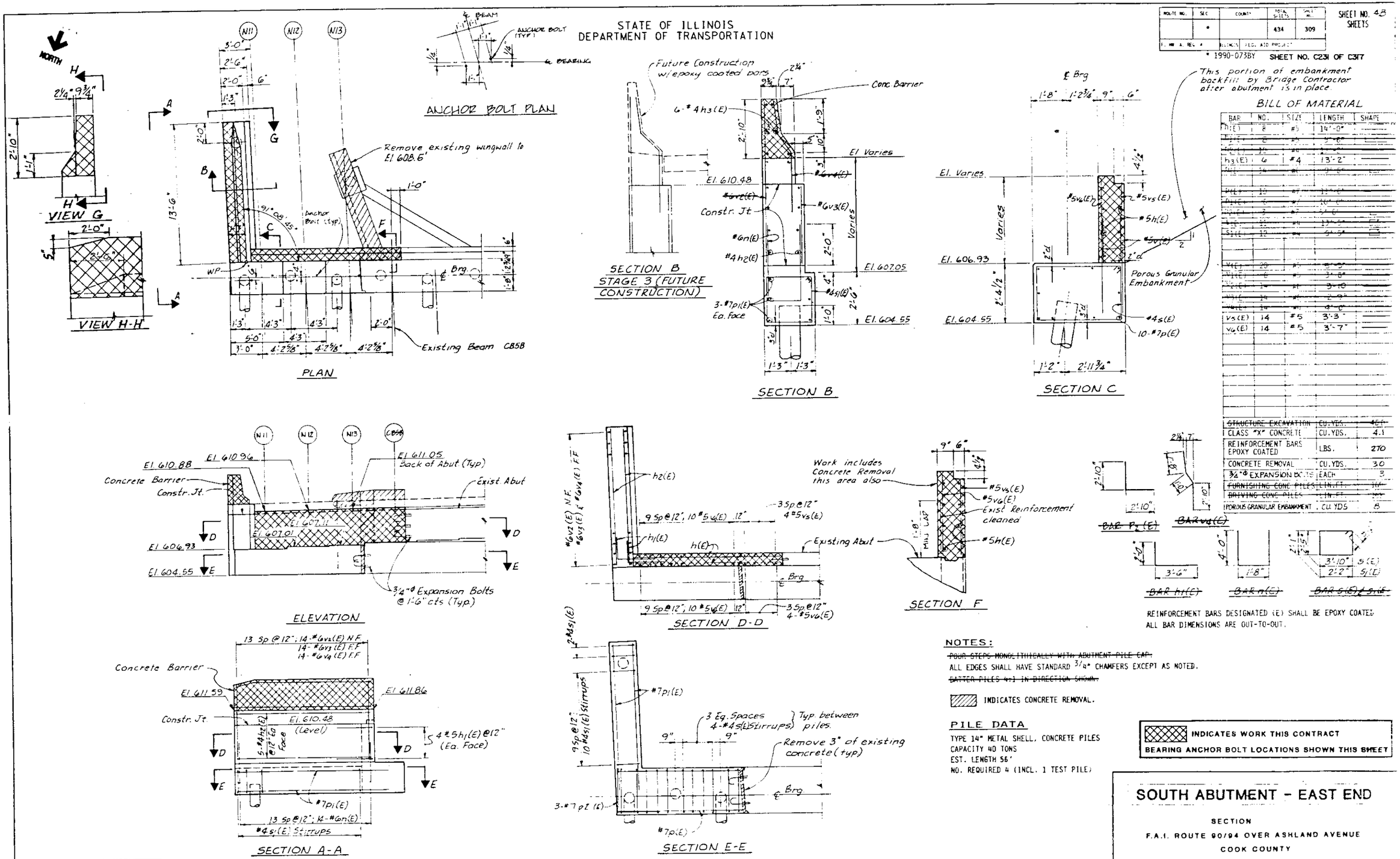
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	309
F.A. RTE. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 48 SHEETS

* 1990-073BY SHEET NO. C231 OF C317

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h1(E)	8	#5	14'-0"	
h2(E)	6	#5	3'-6"	
h3(E)	6	#4	13'-2"	
h4(E)	16	#4	9'-6"	
h5(E)	10	#7	11'-6"	
h6(E)	6	#7	10'-0"	
h7(E)	3	#7	14'-0"	
h8(E)	12	#4	13'-5"	
S1(E)	12	#4	9'-5"	
V1(E)	20	#5	5'-0"	
V2(E)	6	#5	3'-6"	
V3(E)	14	#5	3'-10"	
V4(E)	14	#5	2'-9"	
V5(E)	14	#5	4'-0"	
V6(E)	14	#5	3'-3"	
V7(E)	14	#5	3'-7"	

STRUCTURE EXCAVATION	CU. YDS.	4.1
CLASS "X" CONCRETE	CU. YDS.	4.1
REINFORCEMENT BARS EPOXY COATED	LBS.	270
CONCRETE REMOVAL	CU. YDS.	3.0
3/4"ϕ EXPANSION BOLTS	EACH	3
FURNISHING CONC PILES	LIN. FT.	196
DRIVING CONC PILES	LIN. FT.	196
POROUS GRANULAR EMBANKMENT	CU. YDS.	8

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

NOTES:

~~POUR STEPS MONOLITHICALLY WITH ABUTMENT PILE CAP.~~

ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

~~batter piles 4:1 in direction shown.~~

INDICATES CONCRETE REMOVAL.

PILE DATA

TYPE 14" METAL SHELL, CONCRETE PILES
CAPACITY 40 TONS
EST. LENGTH 56'
NO. REQUIRED 4 (INCL. 1 TEST PILE)

INDICATES WORK THIS CONTRACT
BEARING ANCHOR BOLT LOCATIONS SHOWN THIS SHEET

SOUTH ABUTMENT - EAST END

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

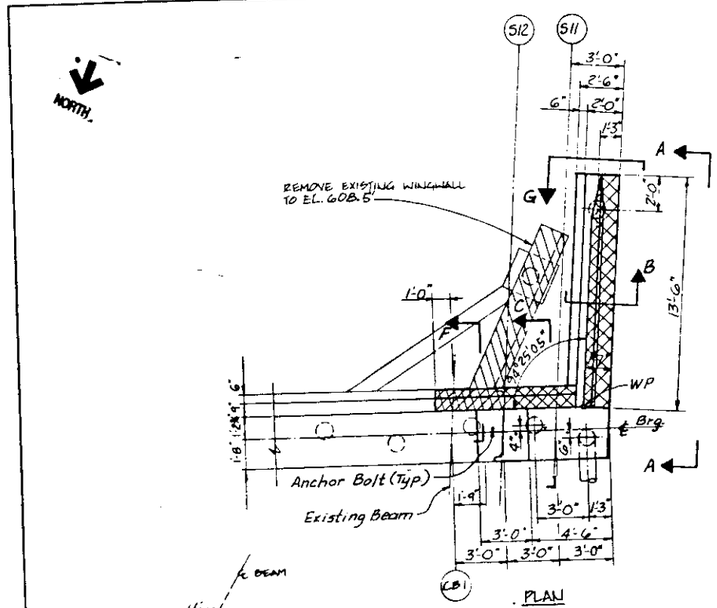
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

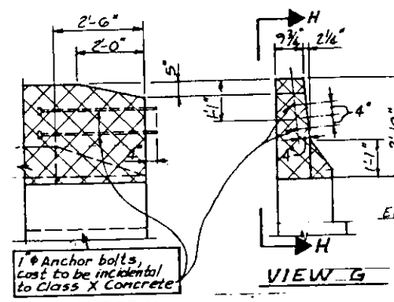
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	310

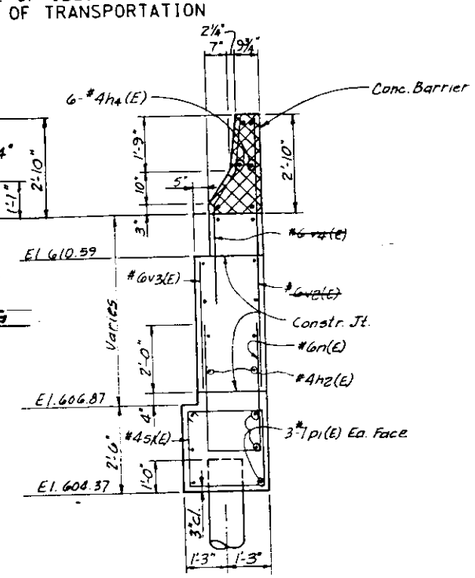
SHEET NO. 49 SHEETS

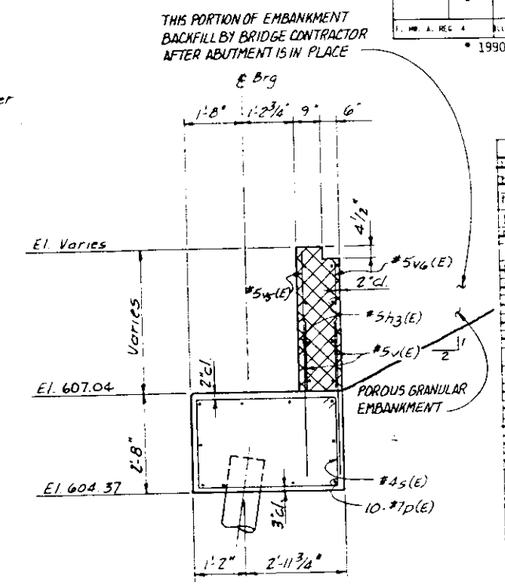
* 1990-073BY

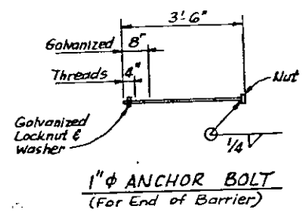
SHEET NO. C232 OF C317

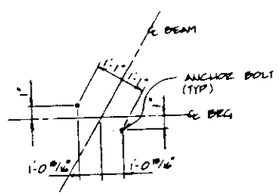


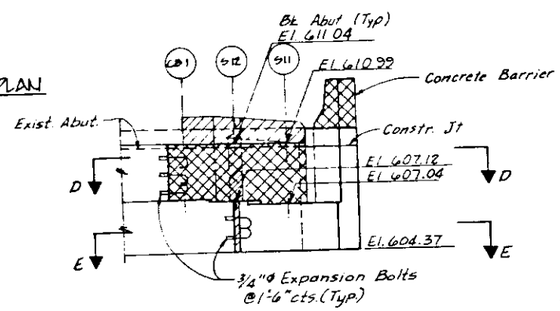


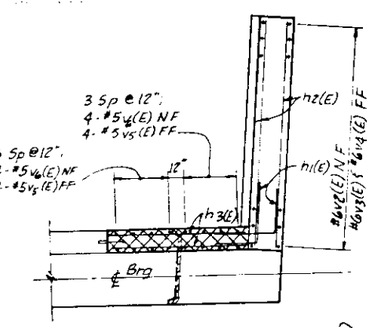


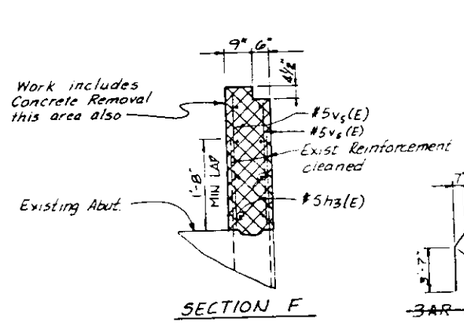


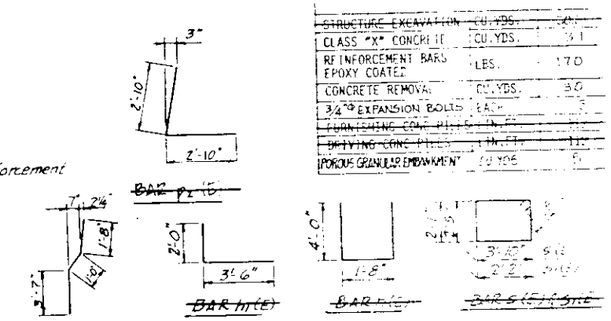


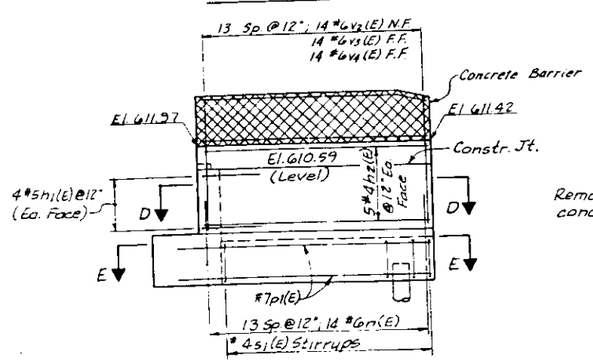


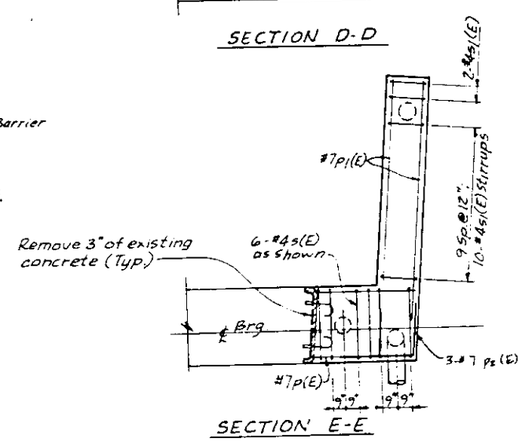












BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h3(E)	8	#5	7'-8"	
h4(E)	6	#4	7'-2"	
v5(E)	8	#5	3'-8"	
v6(E)	8	#5	3'-3"	

STRUCTURE EXCAVATION	CU. YDS.	24
CLASS "X" CONCRETE	CU. YDS.	31
REINFORCEMENT BARS EPOXY COATED	LBS.	170
CONCRETE REMOVAL	CU. YDS.	30
3/4"φ EXPANSION BOLTS	EACH	3
FURNISHING CONC. PILES	LIN. FT.	112
DRIVING CONC. PILES	LIN. FT.	112
POROUS GRANULAR EMBANKMENT	CU. YDS.	5

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

NOTES:

~~POUR STEPS MONOLITHICALLY WITH ABUTMENT PILE CAP.~~

ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.

~~BATTER PILES 4:1 IN DIRECTION SHOWN.~~

INDICATES CONCRETE REMOVAL.

PILE DATA

TYPE 14" METAL SHELL, CONCRETE PILES
CAPACITY 40 TONS
EST. LENGTH 56'
NO. REQUIRED 3 (INCL. 1 TEST PILE)

INDICATES WORK THIS CONTRACT
BEARING ANCHOR BOLT LOCATIONS SHOWN THIS SHEET

SOUTH ABUTMENT - WEST END

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

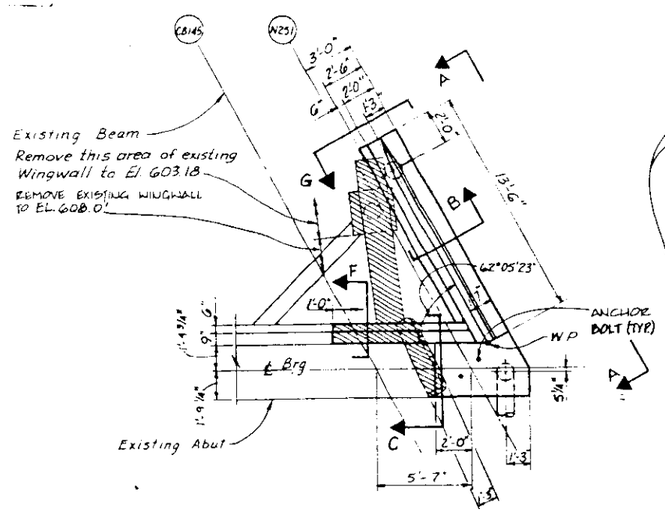
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		434	311
ILLINOIS FED. AID PROJECT				

SHEET NO. 50 SHEETS

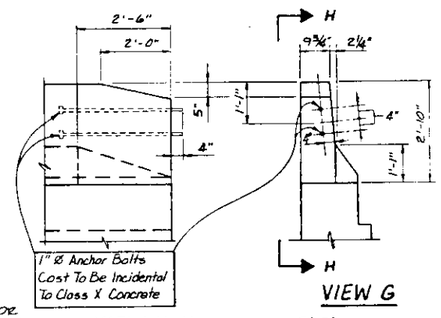
* 1990-073BY SHEET NO. C233 OF C317

This portion of embankment backfill by Bridge Contractor after abutment is in place.

NORTH

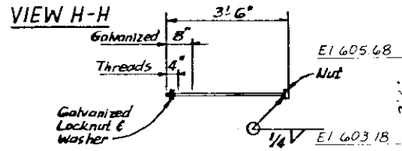


PLAN

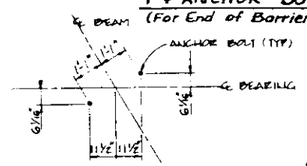


VIEW G

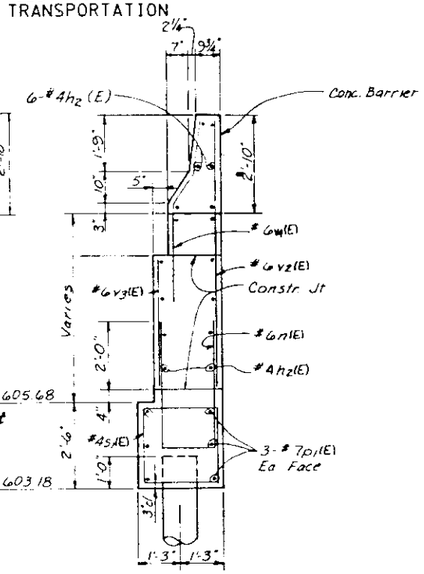
VIEW H-H



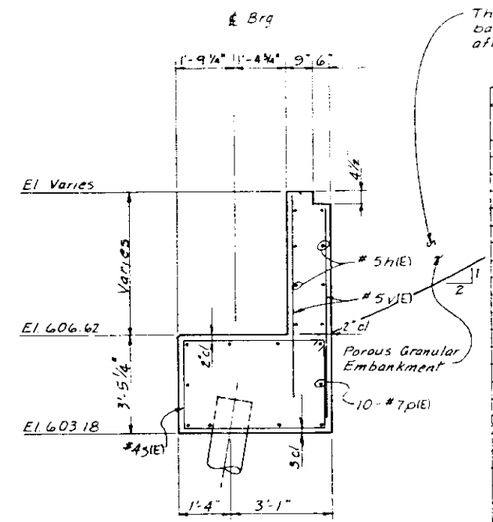
1"Ø ANCHOR BOLT (For End of Barrier)



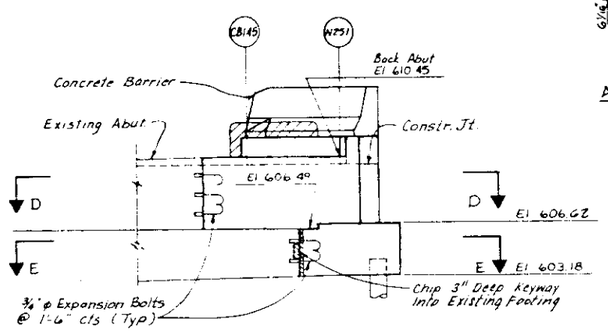
ANCHOR BOLT PLAN



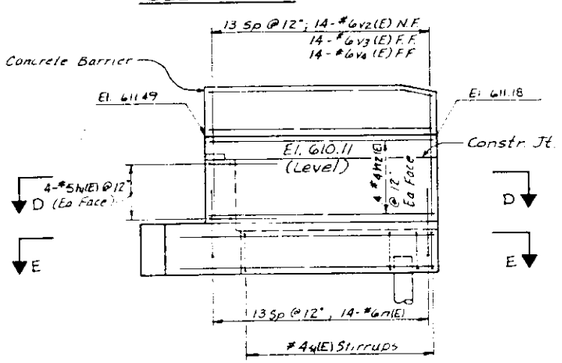
SECTION B



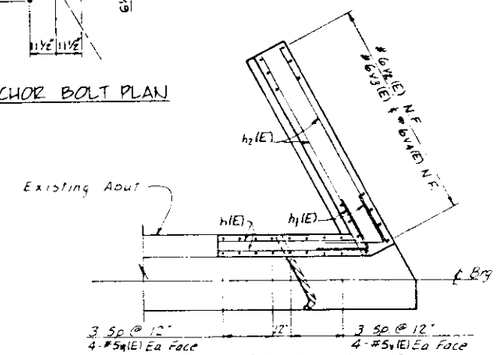
SECTION C



ELEVATION



SECTION A-A



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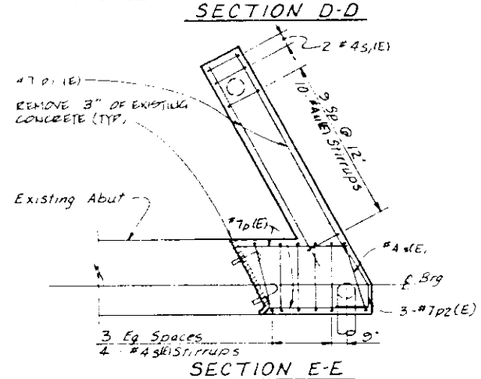
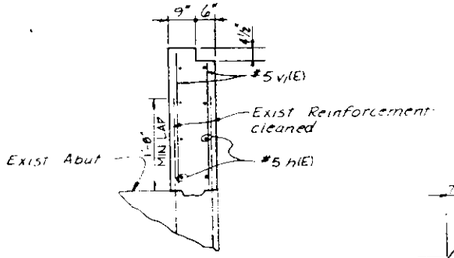
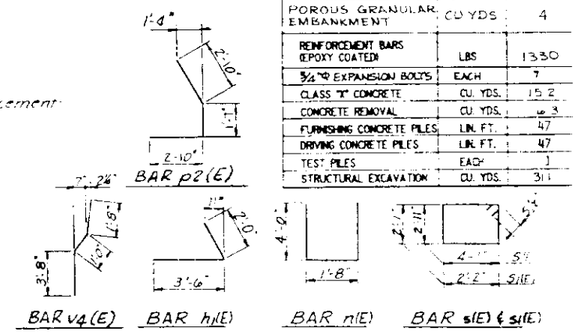


SECTION E-E



SECTION F



All bar dimensions are out-to-out

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	8	#5	7'-6"	
h1(E)	8	#5	5'-6"	
h2(E)	14	#4	13'-2"	
n(E)	14	#6	9'-8"	
p(E)	10	#7	4'-6"	
p1(E)	6	#7	15'-6"	
p2(E)	3	#7	7'-3"	
s(E)	5	#4	14'-3"	
s1(E)	12	#4	9'-5"	
v(E)	8	#5	7'-0"	
v1(E)	8	#5	3'-9"	
v2(E)	14	#6	7'-0"	
v3(E)	14	#6	3'-9"	
v4(E)	14	#6	6'-4"	

POROUS GRANULAR EMBANKMENT	CU YDS	4
REINFORCEMENT BARS (EPOXY COATED)	LBS	1330
¾"Ø EXPANSION BOLTS	EACH	7
CLASS "X" CONCRETE	CU. YDS.	15.2
CONCRETE REMOVAL	CU. YDS.	6.3
FURNISHING CONCRETE PILES	LIN. FT.	47
DRIVING CONCRETE PILES	LIN. FT.	47
TEST PILES	EACH	1
STRUCTURAL EXCAVATION	CU. YDS.	311

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA

TYPE 14" METAL SHELL, CONCRETE PILES
CAPACITY 40 TONS
EST. LENGTH 47
NO. REQUIRED 2 (INCL. 1 TEST PILE)

STANLEY CONSULTANTS

NORTH ABUTMENT - EAST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

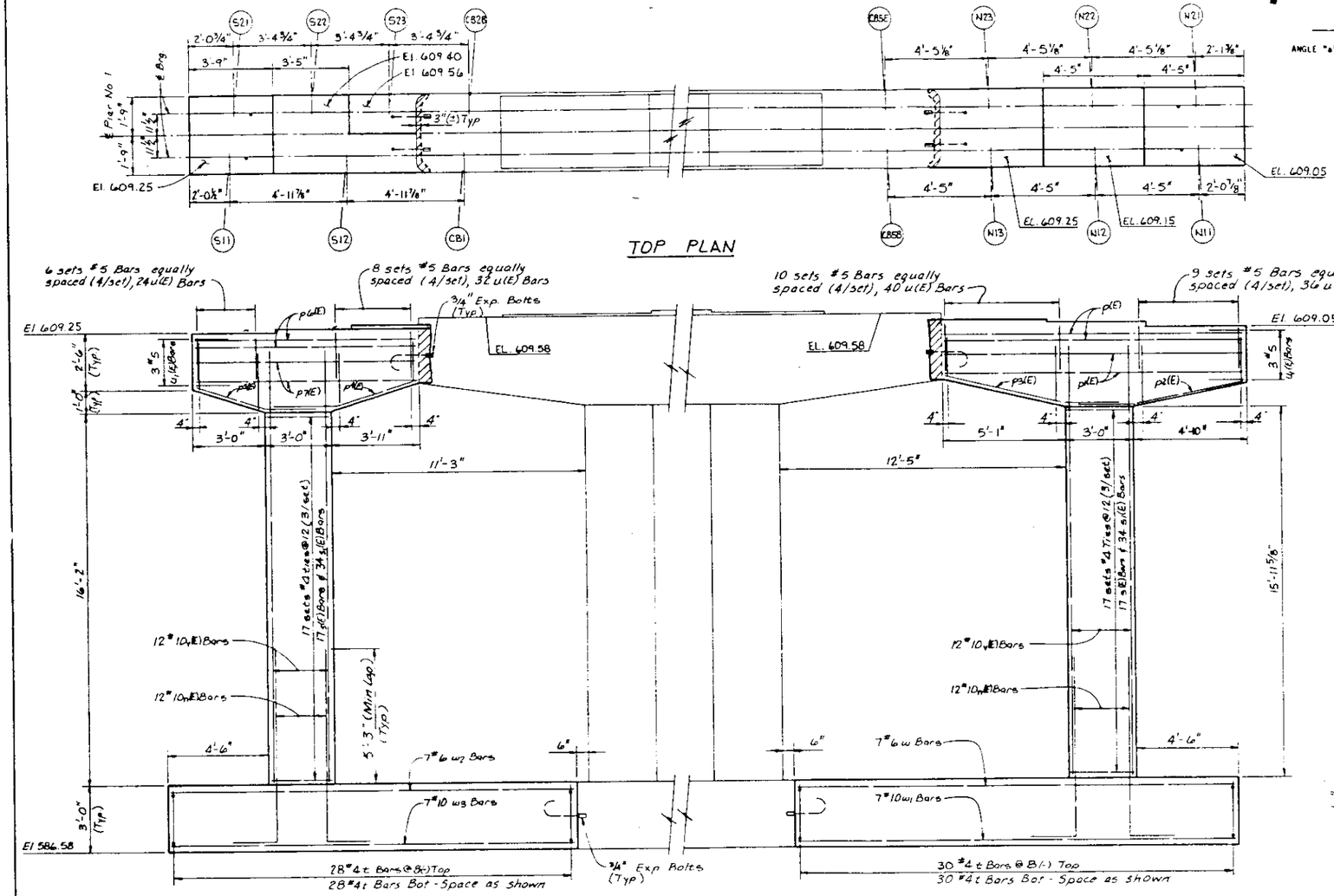
STATION 409+45

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	313
F.A.I. RTE. 90 & 94	ILLINOIS FED. AID PROJECT			

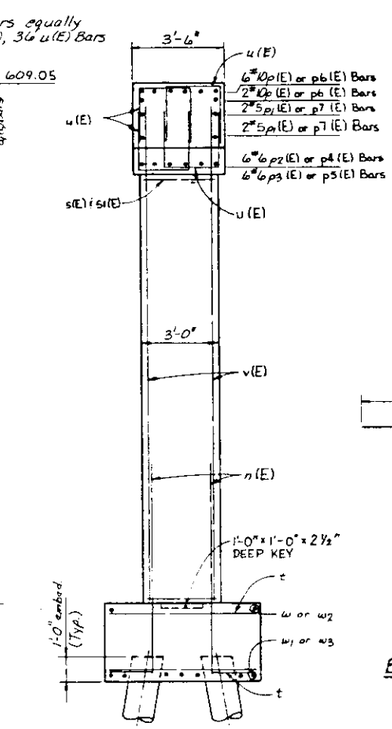
SHEET NO. 52
SHEETS

* 1990-073BY SHEET NO. C235 OF C317

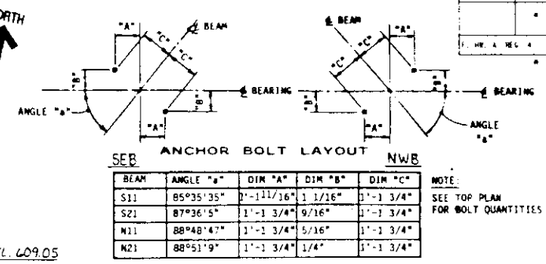


TOP PLAN

ELEVATION



END VIEW



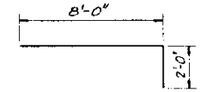
ANCHOR BOLT LAYOUT

SEB				NWB
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S11	85°35'35"	1'-1 11/16"	1 1/16"	1'-1 3/4"
S21	87°36'5"	1'-1 3/4"	9/16"	1'-1 3/4"
N11	88°48'47"	1'-1 3/4"	5/16"	1'-1 3/4"
N21	88°51'9"	1'-1 3/4"	1/4"	1'-1 3/4"

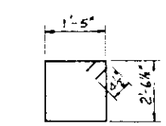
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES

BILL OF MATERIAL

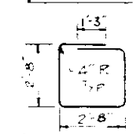
BAR	NO.	SIZE	LENGTH	SHAPE
t(E)	24	#10	10'-0"	
p(E)	8	#10	12'-10"	
p1(E)	4	#5	12'-10"	
p2(E)	6	#6	7'-2"	
p3(E)	6	#6	7'-5"	
p4(E)	6	#6	6'-0"	
p5(E)	6	#6	5'-4"	
p6(E)	8	#10	9'-10"	
p7(E)	8	#5	9'-10"	
s(E)	34	#4	11'-4"	
s1(E)	68	#4	8'-8"	
t	116	#4	3'-8"	
u(E)	132	#6	6'-4"	
u1(E)	6	#5	6'-2"	
v(E)	24	#10	19'-0"	
w	7	#6	19'-1"	
w1	7	#10	19'-1"	
w2	7	#6	17'-11"	
w3	7	#10	17'-11"	
REINFORCEMENTS BARS (EPOXY COATED)			LBS.	5670
REINFORCEMENT BARS			LBS.	940
CLASS "X" CONCRETE			CU. YDS.	45
CONCRETE REMOVAL			CU. YDS.	2
3/4" EXPANSION BOLTS			EA.	6
1" EXPANSION BOLTS			EA.	4
FURNISHING CONC PILES			LIN. FT.	576
DRIVING CONC PILES			LIN. FT.	576
TEST PILES			EACH	
STRUCTURE EXCAVATION			CU. YDS.	121.5



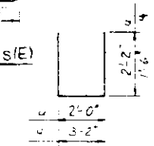
BAR n(E)



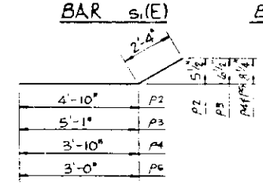
BAR s1(E)



BAR s(E)

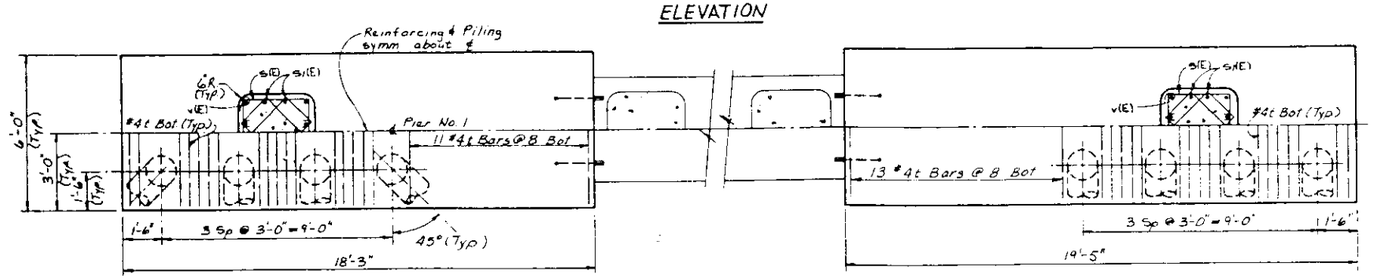


BARS u(E) & u1(E)



BARS p2(E) - p5(E)

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS



FOOTING PLAN

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 16

STANLEY CONSULTANTS

PIER NO. 1

SECTION

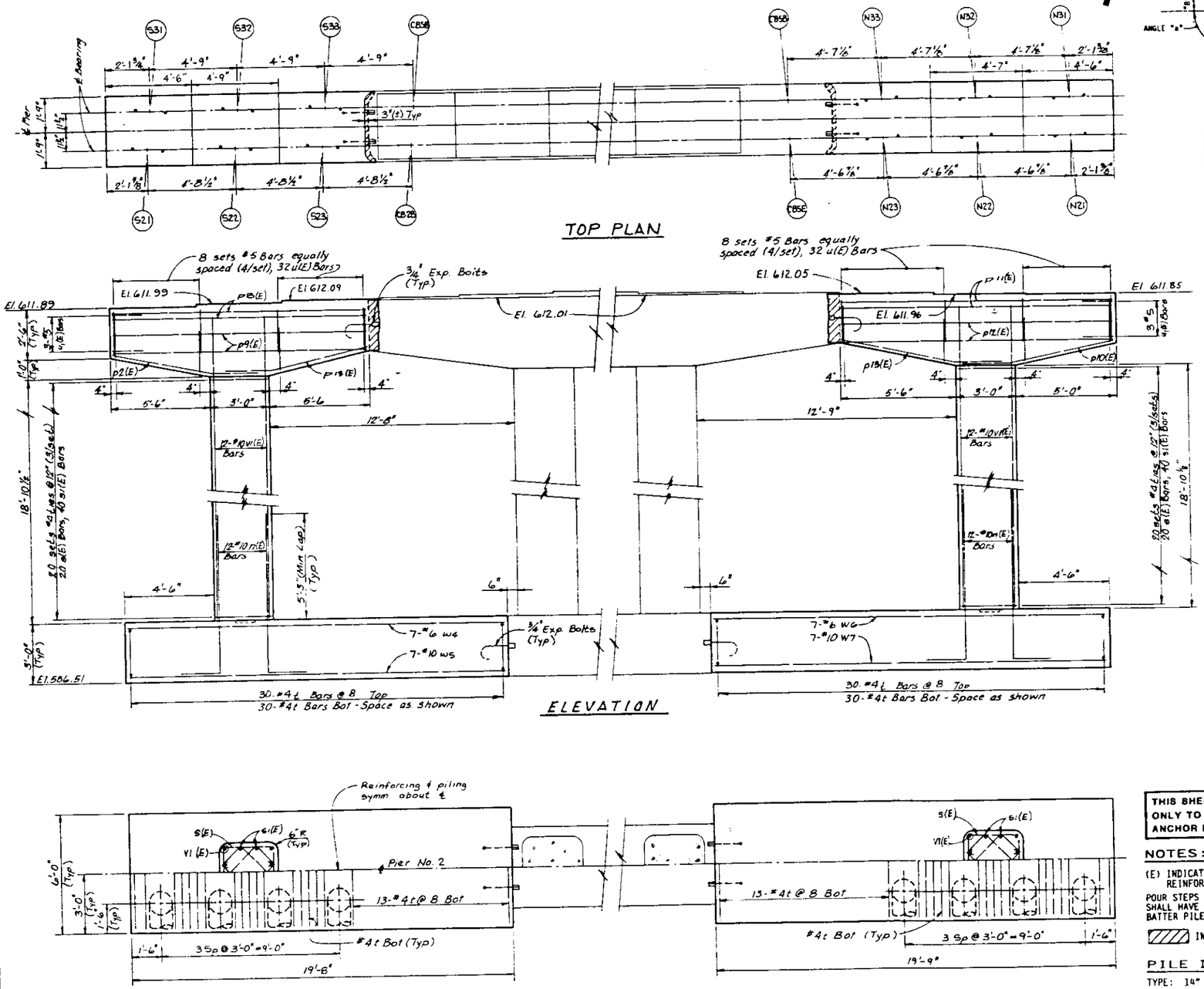
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

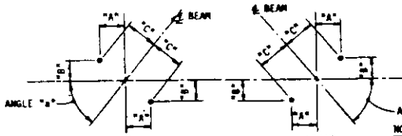
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	314
F.A.I. NO. & REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 53 SHEETS

* 1990-073BY SHEET NO. C236 OF C317





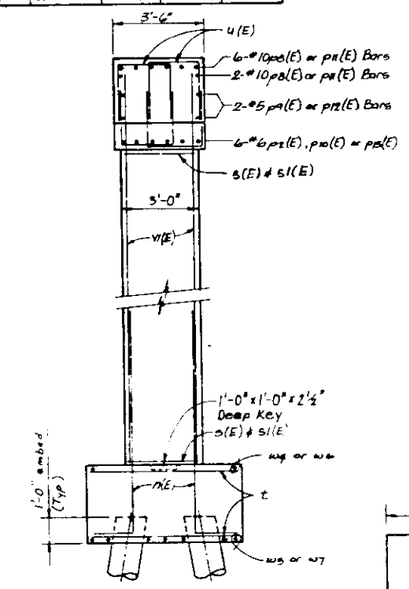
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

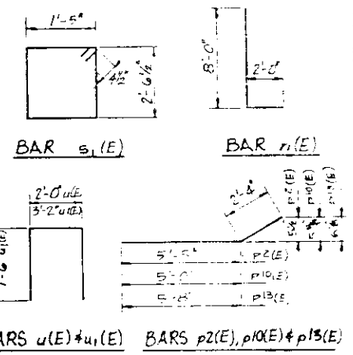
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S21	87°36'5"	1'-2 1/4"	5/8"	1'-2 1/4"
S22	86°36'8"	1'-2 1/4"	13/16"	1'-2 1/4"
S23	85°36'17"	1'-2 3/16"	1 1/16"	1'-2 1/4"
S31	89°00'42"	1'-2 1/4"	1/4"	1'-2 1/4"
S32	88°33'39"	1'-2 1/4"	3/8"	1'-2 1/4"
S33	88°6'36"	1'-2 1/4"	7/16"	1'-2 1/4"
N21	88°51'9"	1'-2 1/4"	5/16"	1'-2 1/4"
N22	88°44'28"	1'-2 1/4"	5/16"	1'-2 1/4"
N23	88°37'47"	1'-2 1/4"	5/16"	1'-2 1/4"
N31	88°49'45"	1'-2 1/4"	5/16"	1'-2 1/4"
N32	88°41'38"	1'-2 1/4"	5/16"	1'-2 1/4"
N33	88°33'31"	1'-2 1/4"	3/8"	1'-2 1/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	24	#10	10'-0"	
P8(E)	6	#6	7'-9"	
P8(E)	8	#10	13'-9"	
P9(E)	4	#5	13'-9"	
P10(E)	6	#6	7'-4"	
P11(E)	8	#10	13'-5"	
P12(E)	4	#5	13'-5"	
P13(E)	12	#6	8'-0"	
s(E)	40	#4	11'-4"	
s1(E)	80	#4	8'-8"	
t	120	#4	5'-8"	
u(E)	128	#5	6'-4"	
u1(E)	6	#5	6'-2"	
v1(E)	24	#10	22'-2"	
W4	7	#6	19'-4"	
W5	7	#10	19'-4"	
W6	7	#6	19'-5"	
W7	7	#10	19'-5"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	6290	
REINFORCEMENT BARS		LBS.	2040	
CLASS "X" CONCRETE		CU. YDS.	49.8	
CONCRETE REMOVAL		CU. YDS.	2	
3/4" EXPANSION BOLTS		EA.	8	
1" EXPANSION BOLTS		EA.	4	
FURNISHING CONC PILES		LIN. FT.	504	
DRIVING CONC PILES		LIN. FT.	504	
TEST PILES		EA.	2	
STRUCTURE EXCAVATION		CU. YDS.	105.4	



END VIEW



THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 16 (INCL. 2 TEST PILES, ONE EA SIDE)

PIER NO. 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

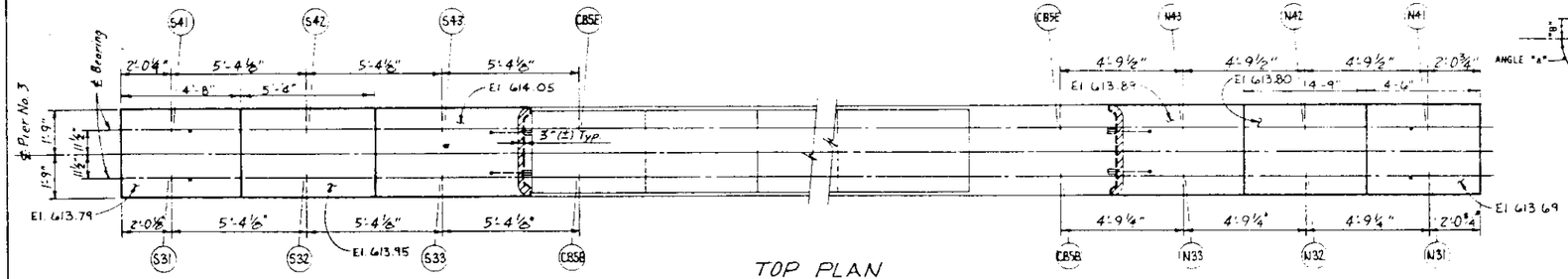
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
			434	315

SHEET NO. 54 SHEETS

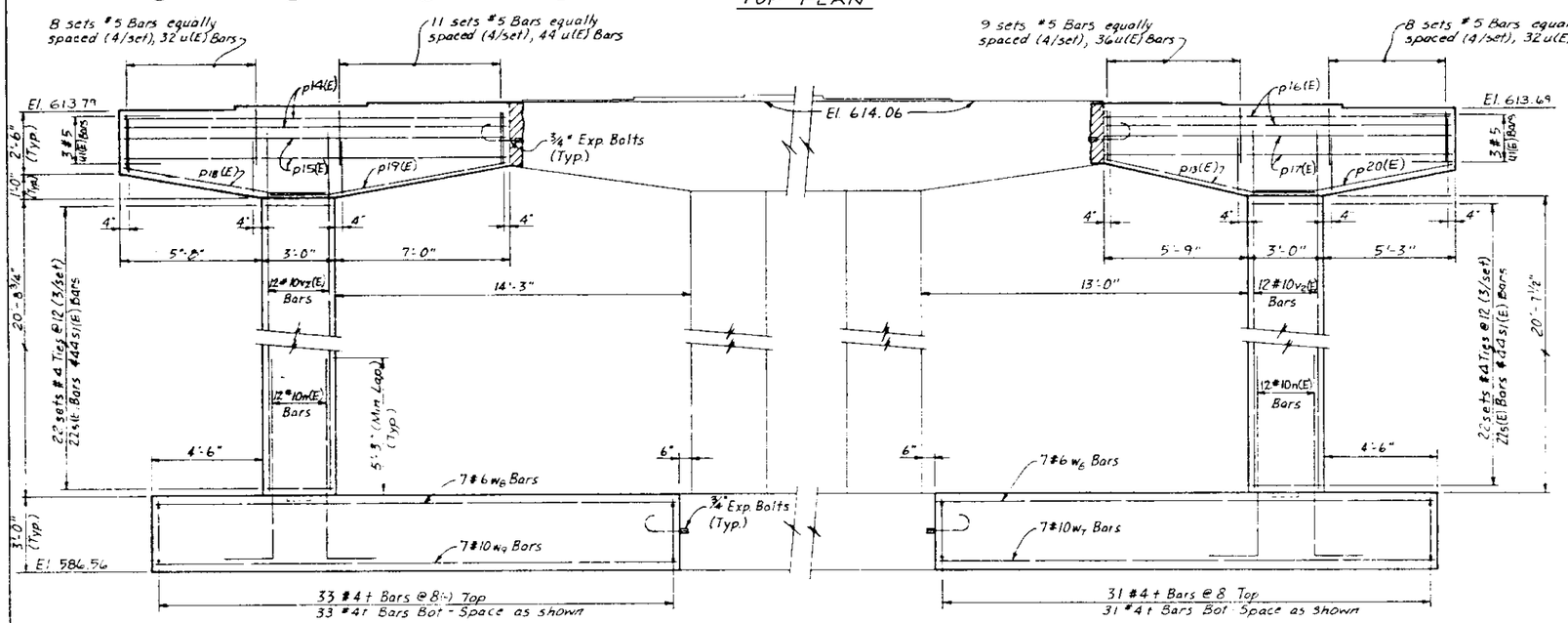
* 1990-073BY

SHEET NO. C237 OF C317

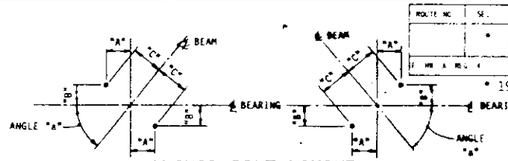
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES



TOP PLAN



ELEVATION



ANCHOR BOLT LAYOUT

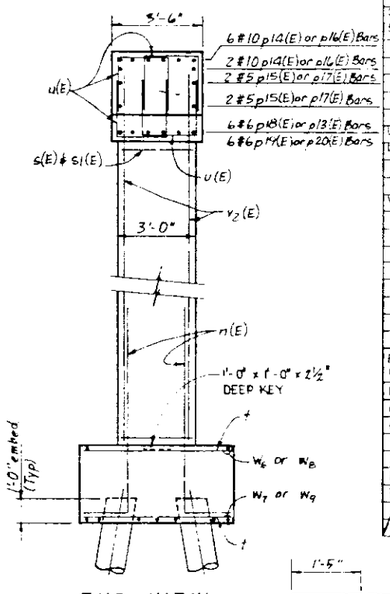
SEB

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S31	89°01'42"	1'-1 3/4"	1/4"	1'-1 3/4"
S41	89°57'39"	1'-1 3/4"	-	1'-1 3/4"
N31	88°49'45"	1'-1 3/4"	1/4"	1'-1 3/4"
N41	89°29'50"	1'-1 3/4"	3/16"	1'-1 3/4"

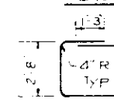
NWB

BILL OF MATERIAL

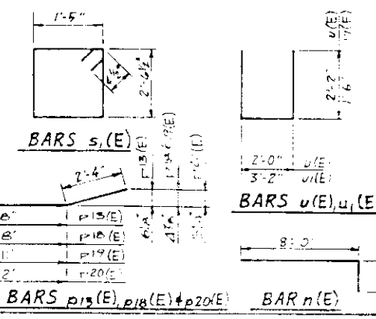
Bar	No.	Size	Length	Shape
A1	24	#10	10'-0"	
P13(E)	6	#6	8'-0"	
P14(E)	8	#10	15'-7"	
P15(E)	4	#5	15'-7"	
P16(E)	8	#10	13'-11"	
P17(E)	4	#5	13'-11"	
P18(E)	6	#6	8'-0"	
P19(E)	6	#6	8'-3"	
P20(E)	6	#6	7'-6"	
S(E)	44	#4	11'-6"	
S1(E)	88	#4	8'-8"	
t	128	#4	7'-8"	
U(E)	144	#5	6'-4"	
U1(E)	6	#5	6'-2"	
V2(E)	24	#10	33'-3"	
W6	7	#6	19'-9"	
W7	7	#10	19'-6"	
W8	7	#6	20'-11"	
W9	7	#10	20'-11"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.		6700
REINFORCEMENT BARS		LBS.		2130
CLASS "X" CONCRETE		CU. YDS.		53.0
CONCRETE REMOVAL		CU. YDS.		-
3/4" EXPANSION BOLTS		EA.		-
1" EXPANSION BOLTS		EA.		-
FURNISHING CONC PILES		LIN. FT.		720
DRIVING CONC PILES		LIN. FT.		720
TEST PILES		EACH		-
STRUCTURE EXCAVATION		CU. YDS.		105



END VIEW

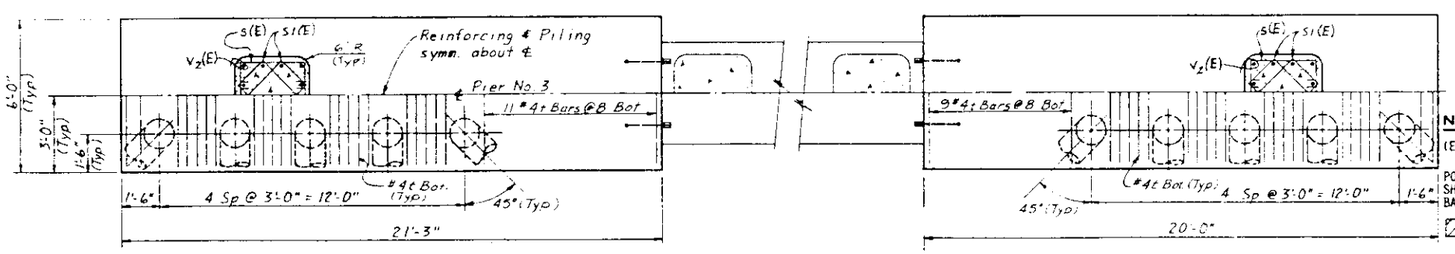


BAR s(E)



BARS p13(E), p18(E) & p20(E)

BAR n(E)



FOOTING PLAN

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.

BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 20

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

STANLEY CONSULTANTS

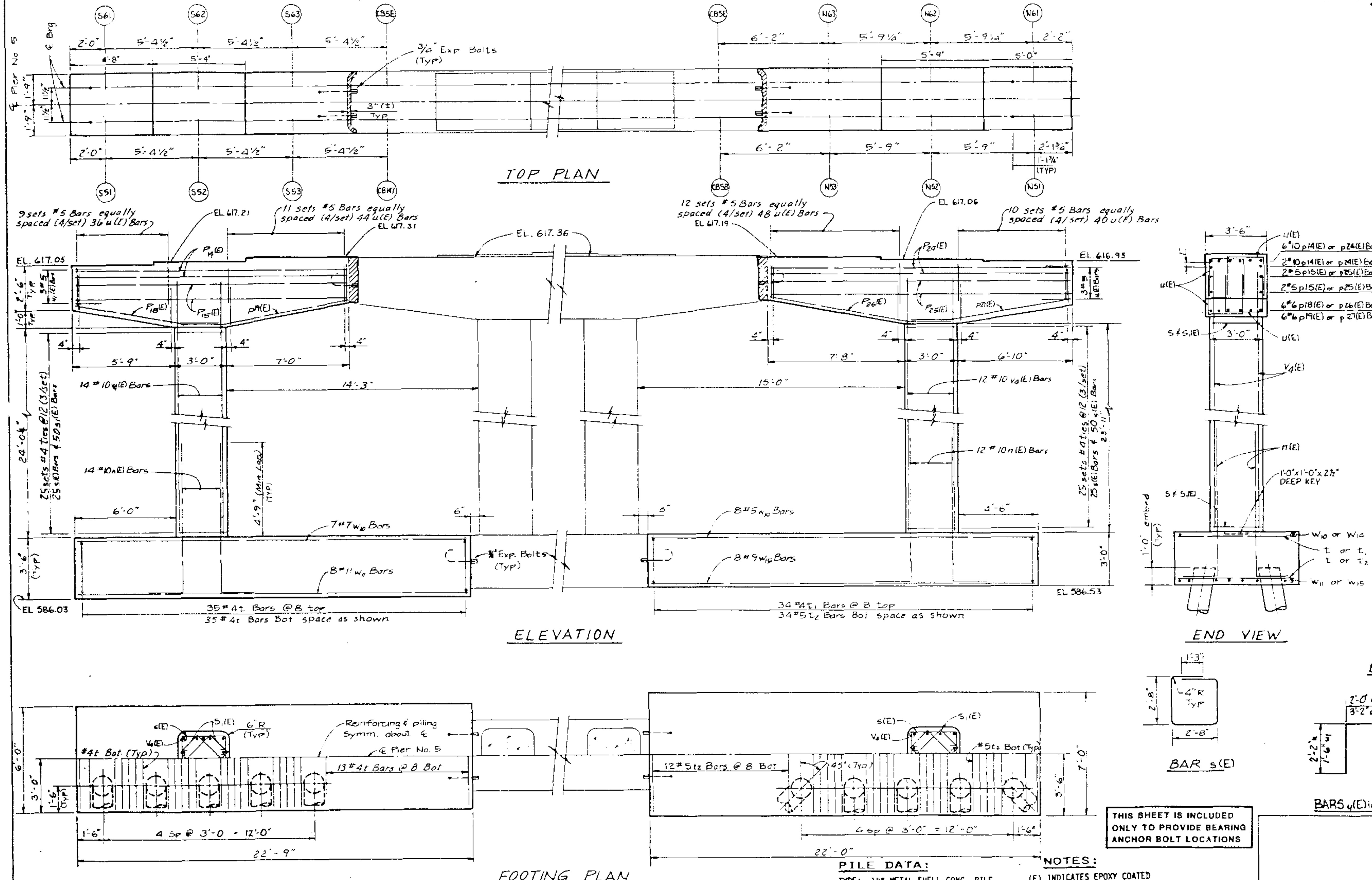
PIER NO. 3

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

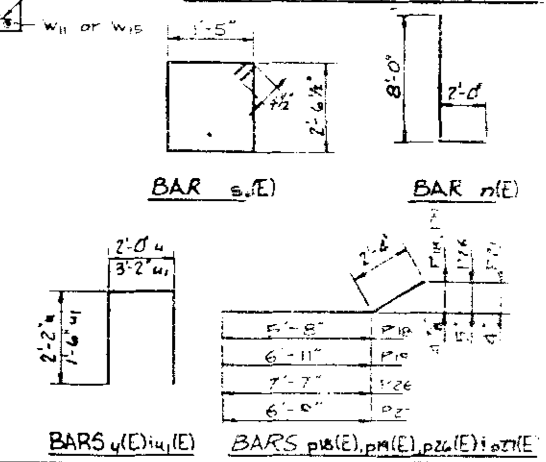
COOK COUNTY

STATION 409+49



BILL OF MATERIAL

Bar	No	Size	Length	Shape
V(E)	26	#10	10'-0"	
P14(E)	8	#10	15'-8"	
P15(E)	4	#5	15'-8"	
P18(E)	6	#6	8'-0"	
P19(E)	6	#6	9'-3"	
P24(E)	8	#10	17'-5"	
P25(E)	4	#5	17'-5"	
P26(E)	6	#6	9'-11"	
P27(E)	6	#6	9'-1"	
S(E)	50	#4	11'-4"	
S1(E)	100	#4	8'-8"	
t	70	#4	5'-8"	
t1	34	#4	6'-8"	
t2	34	#5	6'-8"	
U(E)	268	#5	6'-4"	
U1(E)	6	#5	6'-2"	
V4(E)	26	#10	26'-6"	
W10	7	#7	22'-5"	
W11	8	#11	22'-5"	
W14	8	#5	21'-8"	
W15	[illegible]	#9	21'-8"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.		7790
REINFORCEMENT BARS		LBS.		2700
CLASS "X" CONCRETE		CU. YDS.		64
CONCRETE REMOVAL		CU. YDS.		[illegible]
3/4" EXPANSION BOLTS		EA.		[illegible]
1" EXPANSION BOLTS		EA.		[illegible]
FURNISHING CONC PILES		LIN. FT.		648
DRIVING CONC PILES		LIN. FT.		648
TEST PILES		EACH		2
STRUCTURE EXCAVATION		CU. YDS.		128



THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 20 (INCL. 2 TEST PILES, ONE EACH SIDE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS
POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.
BATTER PILES IN DIRECTION SHOWN 6:1.
▨ INDICATES CONCRETE REMOVAL

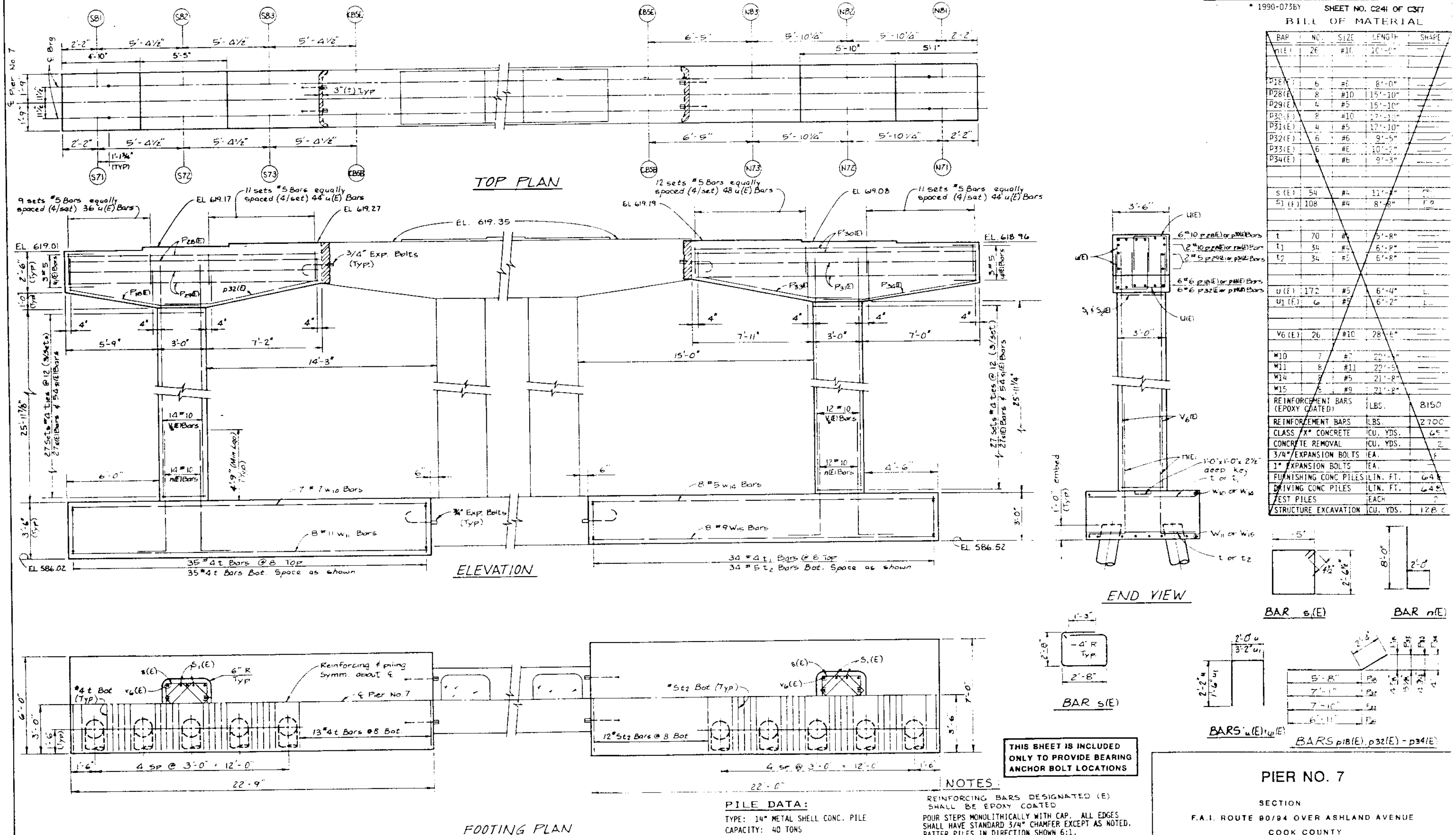
PIER NO. 5

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 58 SHEETS | 434 | 319
F.A.I. RTE. 90/94 | ILLINOIS FED. AID PROJECT
* 1990-073BY
SHEET NO. C241 OF C317



BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	26	#10	10'-0"	
P18(E)	6	#6	8'-0"	
P28(E)	8	#10	15'-10"	
P29(E)	4	#5	15'-10"	
P30(E)	8	#10	17'-10"	
P31(E)	4	#5	17'-10"	
P32(E)	6	#6	9'-5"	
P33(E)	6	#6	10'-2"	
P34(E)		#6	9'-3"	
s(E)	54	#4	11'-8"	
s1(E)	108	#4	8'-8"	
t	70	#4	5'-8"	
t1	34	#4	6'-8"	
t2	34	#5	6'-8"	
u(E)	172	#5	6'-4"	
u1(E)	6	#5	6'-2"	
V6(E)	26	#10	28'-6"	
W10	7	#7	22'-4"	
W11	8	#11	22'-5"	
W14	8	#5	21'-8"	
W15	5	#9	21'-8"	

REINFORCEMENT BARS (EPOXY COATED)	LBS.	8150
REINFORCEMENT BARS	LBS.	2700
CLASS "X" CONCRETE	CU. YDS.	65
CONCRETE REMOVAL	CU. YDS.	2
3/4" EXPANSION BOLTS	EA.	8
1" EXPANSION BOLTS	EA.	
FURNISHING CONC PILES	LIN. FT.	648
DRIVING CONC PILES	LIN. FT.	648
TEST PILES	EACH	2
STRUCTURE EXCAVATION	CU. YDS.	128

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

PILE DATA:
TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 20 (INCL. 2 TEST PILES, ONE EA. SIDE)

NOTES:
REINFORCING BARS DESIGNATED (E) SHALL BE EPOXY COATED
POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.
▨ INDICATES CONCRETE REMOVAL

PIER NO. 7

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

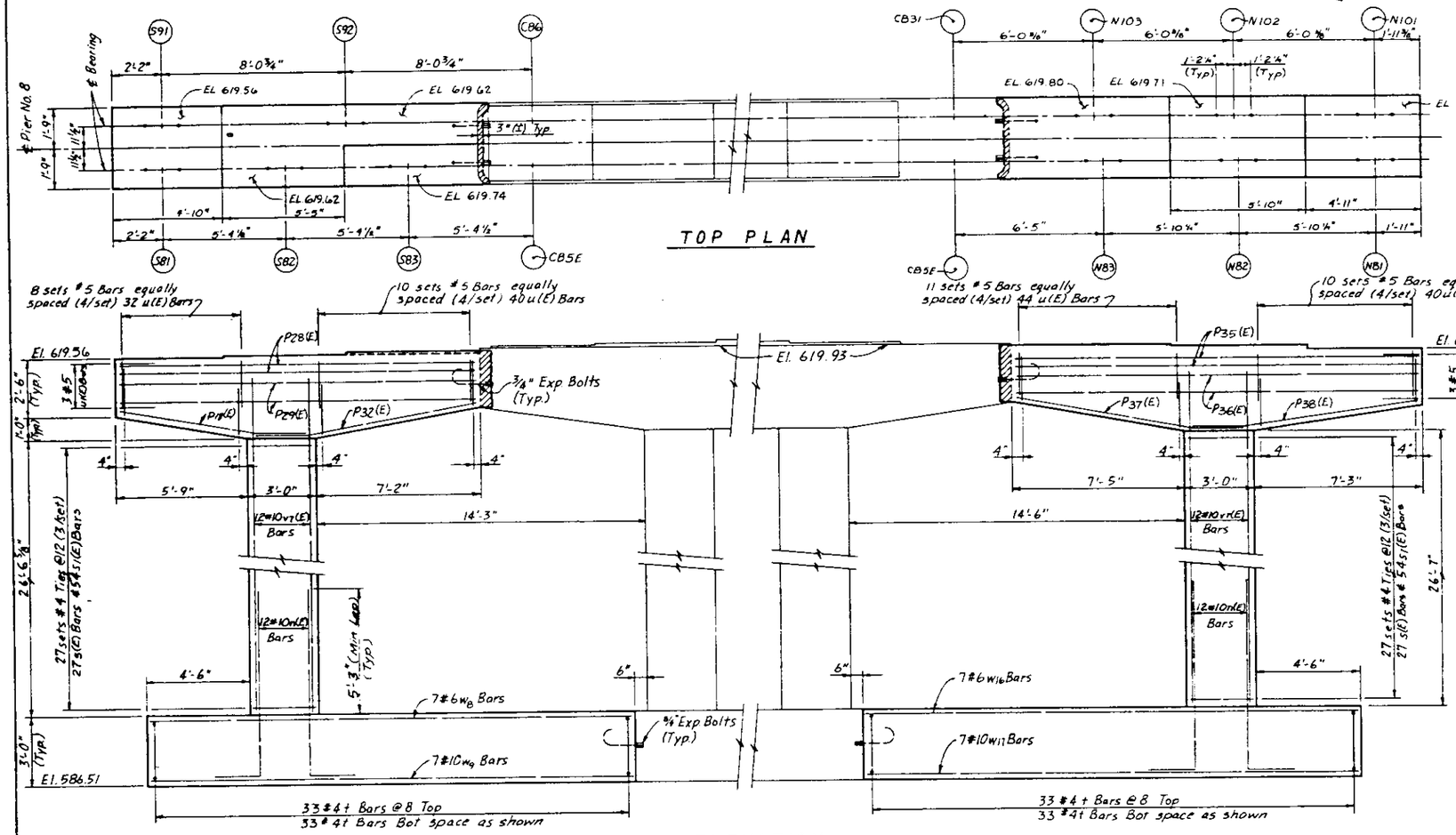
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

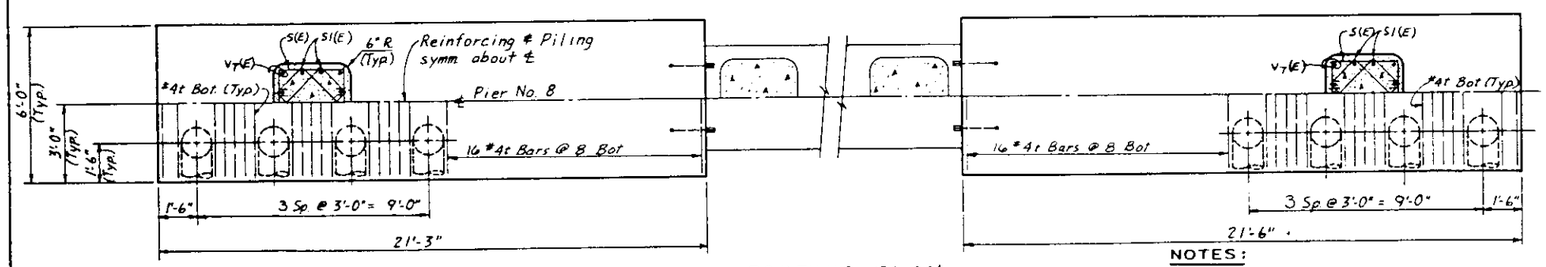
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	320
F.A.I. NO. & REG. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 59
SHEET S

* 1990-073BY

SHEET NO. C242 OF C317





BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	24	#10	10'-0"	
p18(E)	6	#6	8'-0"	
p28(E)	8	#10	15'-10"	
p29(E)	4	#5	15'-10"	
p32(E)	6	#6	9'-5"	
p35(E)	8	#10	17'-7"	
p36(E)	4	#5	17'-7"	
p37(E)	6	#6	9'-10"	
p38(E)	6	#6	9'-6"	
s(E)	54	#4	11'-4"	
s1(E)	108	#4	8'-5"	
t	132	#4	5'-8"	
u(E)	356	#5	6'-4"	
u1(E)	6	#5	6'-2"	
v7(E)	24	#10	29'-1"	
w8	7	#6	20'-11"	
w9	7	#10	20'-11"	
w16	7	#6	21'-2"	
w17	7	#10	21'-2"	

REINFORCEMENT BARS (EPOXY COATED)	LBS.	7760
REINFORCEMENT BARS	LBS.	2210
CLASS "X" CONCRETE	CU. YDS.	60.0
CONCRETE REMOVAL	CU. YDS.	2
3/4" EXPANSION BOLTS	EA.	8
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	518
DRIVING CONC PILES	LIN. FT.	518
TEST PILES	EACH	2
STRUCTURE EXCAVATION	CU. YDS.	112.8

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 37 FT.
NO. REQUIRED: 16 (INCL. 2 TEST PILES, ONE EACH SIDE)

PIER NO. 8

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

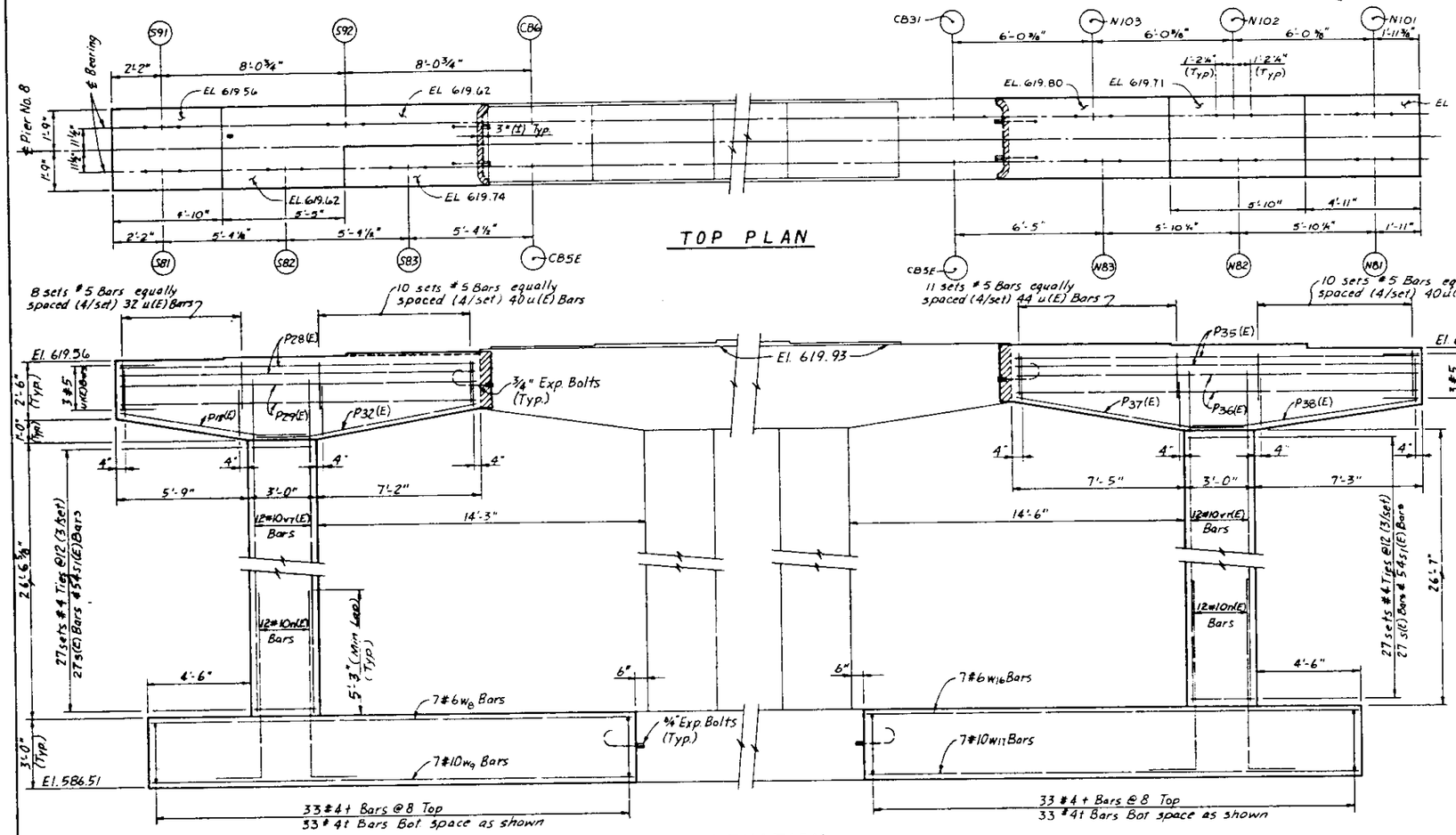
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

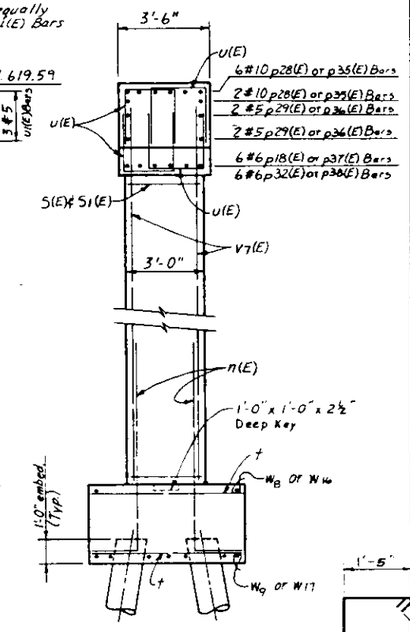
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	320
F.A.P. & REG. 4	ILLINOIS	FED. AID PROJECT		

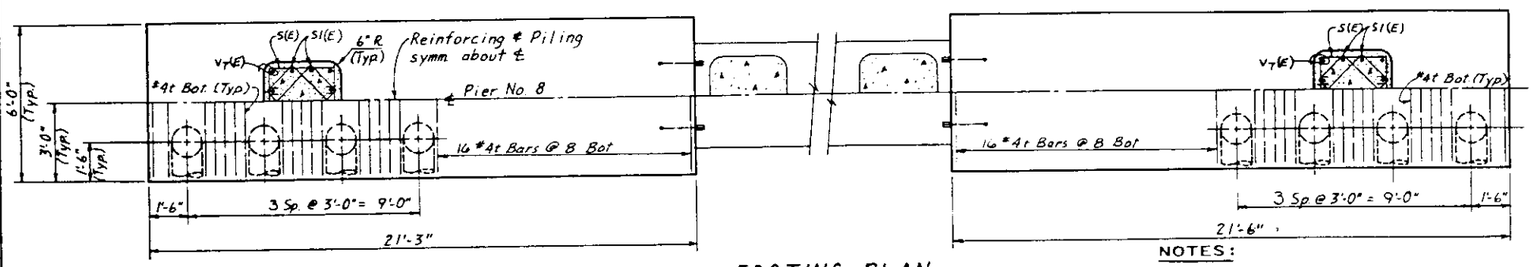
SHEET NO. 59
SHEETS

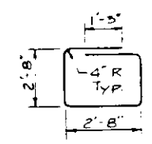
* 1990-073BY

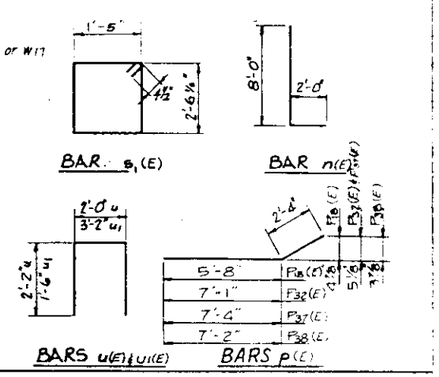
SHEET NO. C242 OF C317











BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	24	#10	10'-0"	
P18(E)	6	#6	8'-0"	
P28(E)	8	#10	15'-10"	
P29(E)	4	#5	15'-10"	
P32(E)	6	#6	9'-5"	
P35(E)	8	#10	17'-7"	
P36(E)	4	#5	17'-7"	
P37(E)	6	#6	9'-10"	
P38(E)	6	#6	9'-6"	
s(E)	54	#4	11'-4"	
s1(E)	108	#4	8'-4"	
t	132	#4	5'-8"	
u(E)	356	#5	6'-4"	
u1(E)	6	#5	6'-2"	
v7(E)	24	#10	29'-1"	
w8	7	#6	20'-11"	
w9	7	#10	20'-11"	
w16	7	#6	21'-2"	
w17	7	#10	21'-2"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	7760	
REINFORCEMENT BARS		LBS.	2210	
CLASS "X" CONCRETE		CU. YDS.	600	
CONCRETE REMOVAL		CU. YDS.	2	
3/4" EXPANSION BOLTS		EA.	8	
1" EXPANSION BOLTS		EA.	—	
FURNISHING CONC PILES		LIN. FT.	518	
DRIVING CONC PILES		LIN. FT.	518	
TEST PILES		EACH	2	
STRUCTURE EXCAVATION		CU. YDS.	112.8	

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 37 FT.
NO. REQUIRED: 16 (INCL. 2 TEST PILES. ONE EACH SIDE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PIER NO. 8

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

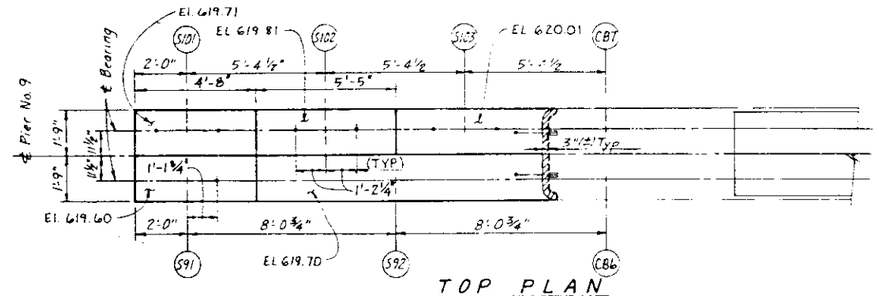
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	321

SHEET NO. 60 SHEETS

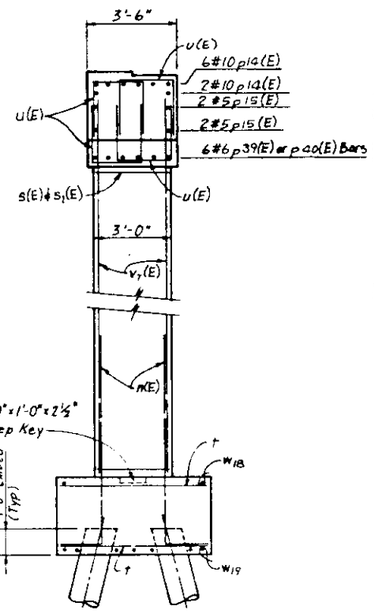
* 1990-073BY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

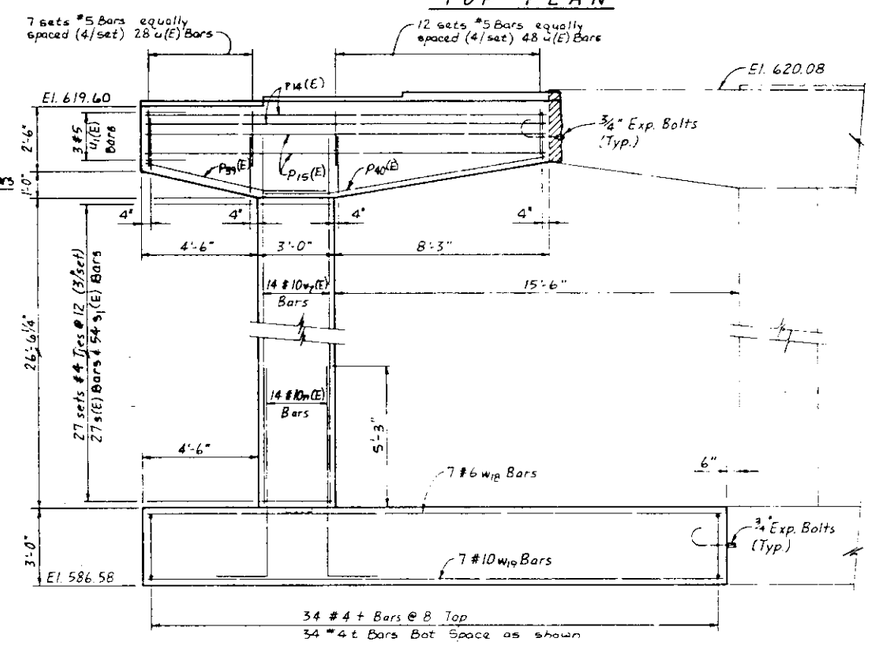
NORTH



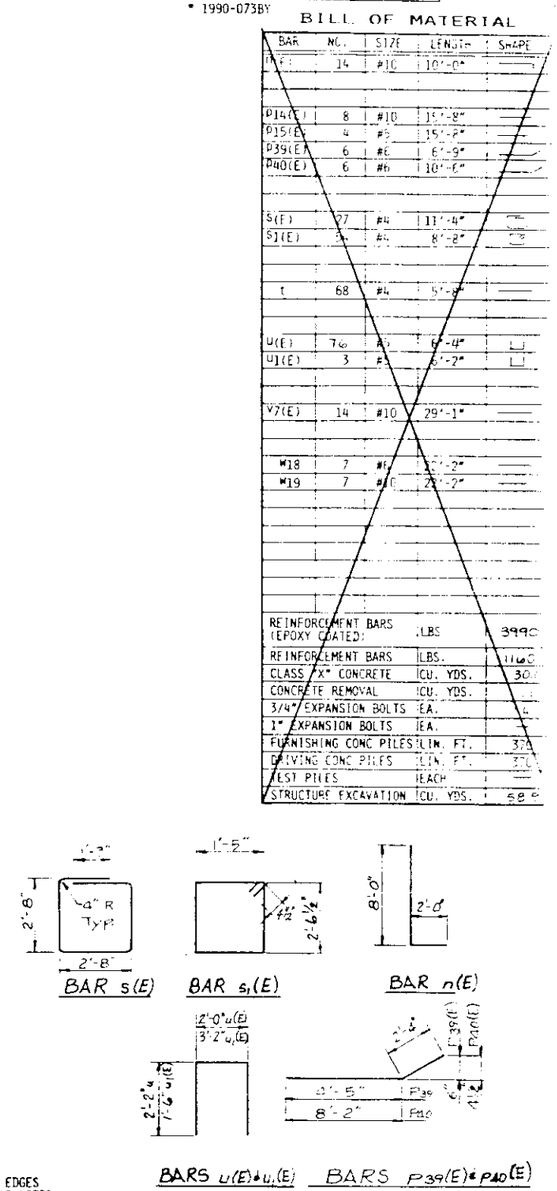
TOP PLAN



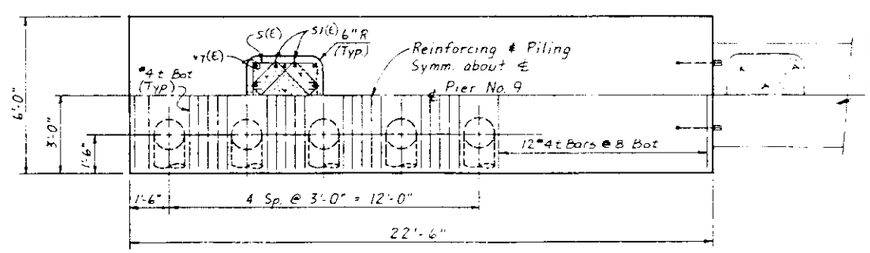
END VIEW



ELEVATION



BAR	NO.	SIZE	LENGTH	SHAPE
[illegible]	14	#10	10'-0"	
p14(E)	8	#10	15'-8"	
p15(E)	4	#5	15'-2"	
p39(E)	6	#6	6'-9"	
p40(E)	6	#6	10'-6"	
s(E)	27	#4	11'-4"	
s1(E)	3[illegible]	#4	8'-2"	
t	68	#4	5[illegible]	
u(E)	7[illegible]	#5	6'-4"	
u1(E)	3	#[illegible]	[illegible]'-2"	
v7(E)	14	#10	29'-1"	
w18	7	#6	[illegible]'-2"	
w19	7	#10	[illegible]'-2"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	3990	
REINFORCEMENT BARS		LBS.	1160	
CLASS "X" CONCRETE		CU. YDS.	30	
CONCRETE REMOVAL		CU. YDS.	[illegible]	
3/4" EXPANSION BOLTS		EA.	4	
1" EXPANSION BOLTS		EA.	[illegible]	
FURNISHING CONC PILES		LIN. FT.	37[illegible]	
DRIVING CONC PILES		LIN. FT.	37[illegible]	
TEST PILES		EACH	[illegible]	
STRUCTURE EXCAVATION		CU. YDS.	58[illegible]	



FOOTING PLAN

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 37 FT.
NO. REQUIRED: 10

PIER NO. 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

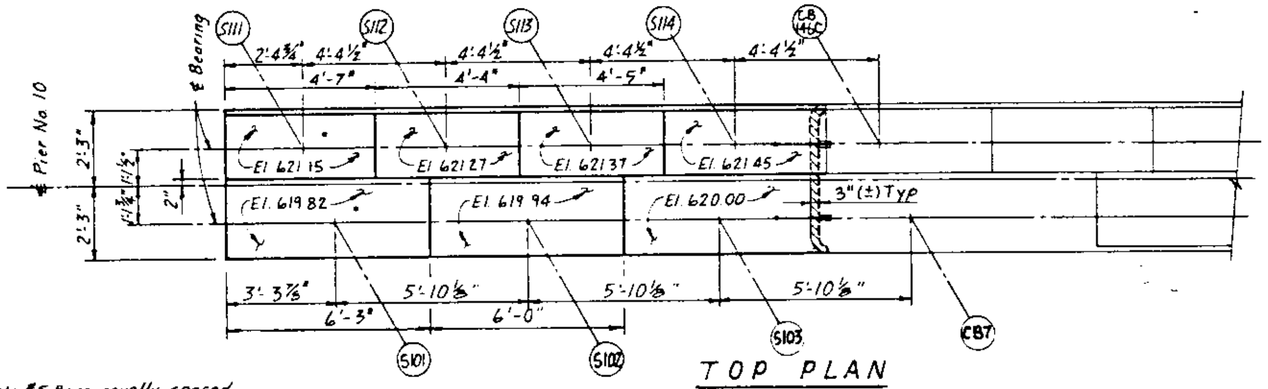
NORTH

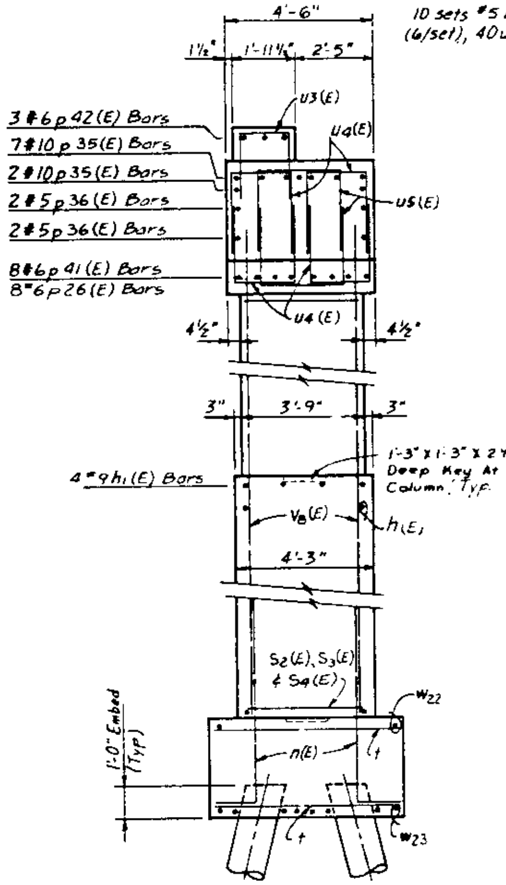
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		434	322

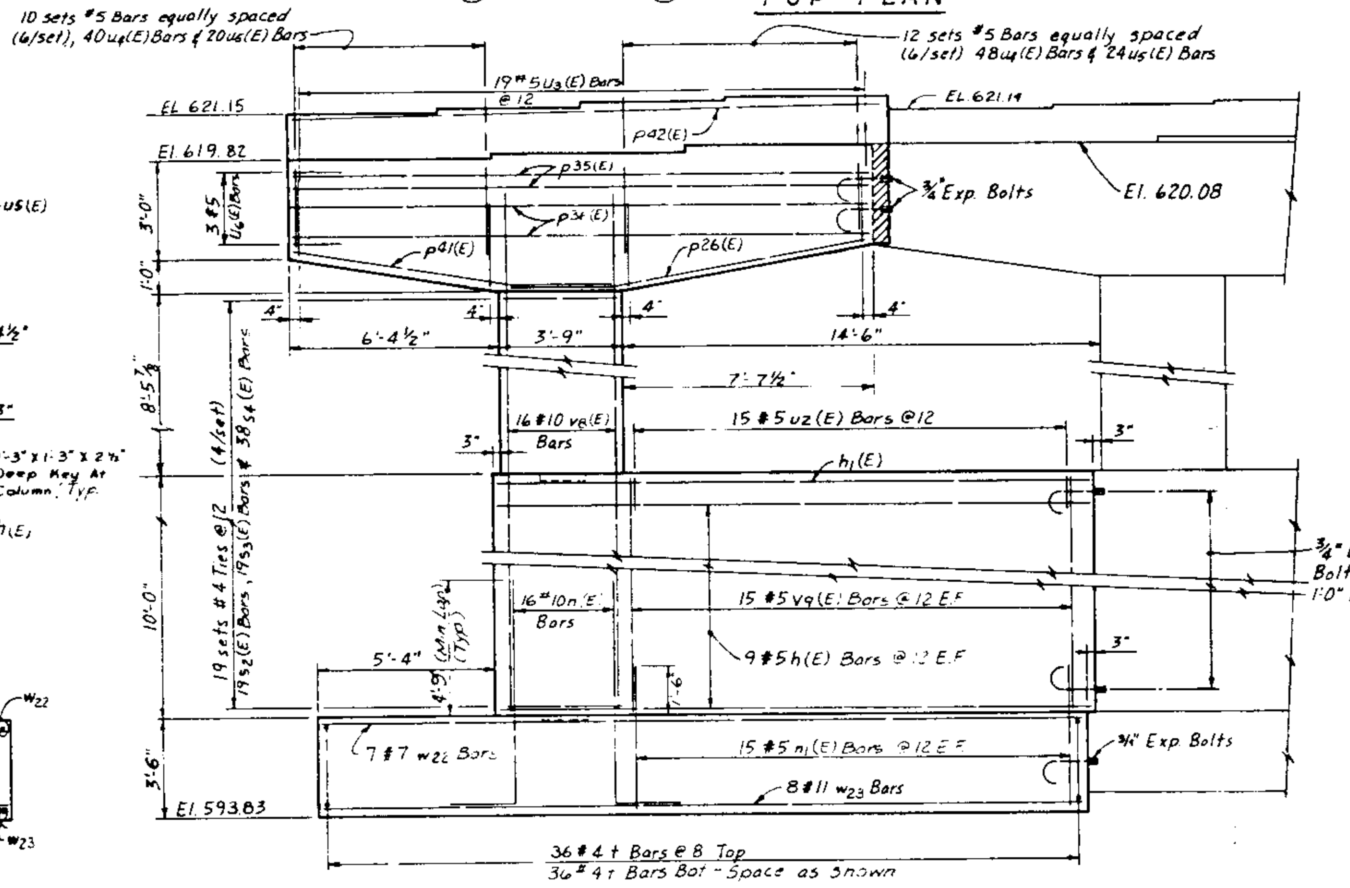
F. A. I. RTE. / ILLINOIS / FED. AID PROJECT

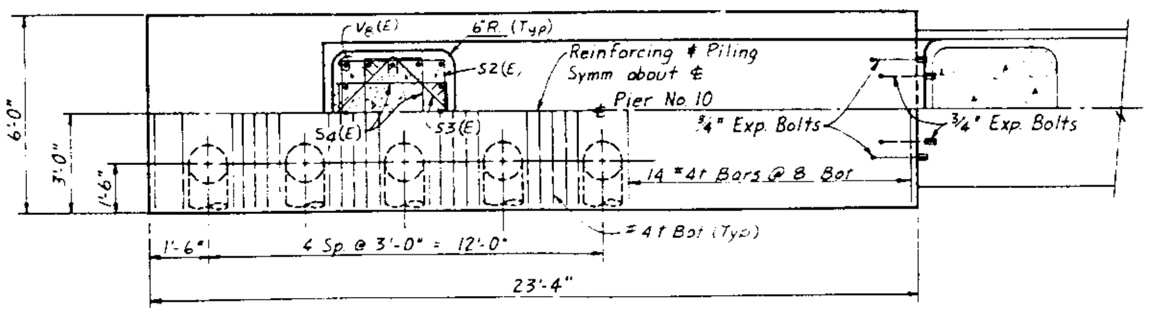
SHEET NO. 61 SHEETS

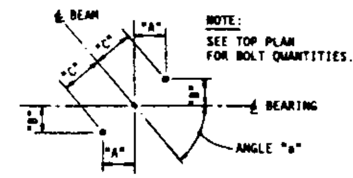
• 1990-073BY SHEET NO. 244 OF C317





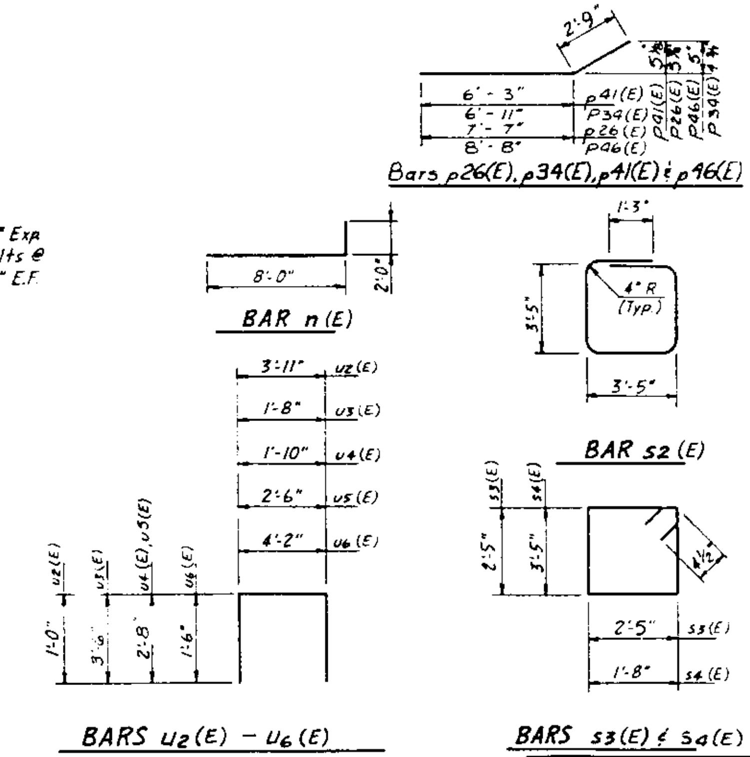






ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S101	67°02'37"	1'-0 11/16"	5 3/8"	1'-1 3/4"
S111	67°03'37"	10 13/16"	4 9/16"	11 3/4"



BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	18	#5	17'-11"	
h1(E)	4	#9	17'-11"	
h2(E)	18	#5	19'-2"	
h3(E)	4	#9	19'-2"	
n(E)	32	#10	10'-0"	
n1(E)	62	#5	4'-3"	
p34(E)	8	#6	9'-8"	
p35(E)	9	#10	17'-8"	
p36(E)	4	#5	17'-8"	
p41(E)	8	#6	9'-0"	
p26(E)	8	#6	10'-4"	
p42(E)	3	#6	17'-9"	
p43(E)	9	#10	19'-7"	
p44(E)	4	#5	19'-7"	
p45(E)	3	#6	19'-8"	
p46(E)	8	#6	11'-5"	
s2(E)	38	#4	14'-4"	
s3(E)	38	#4	10'-5"	
s4(E)	76	#4	10'-11"	
t	148	#4	5'-8"	
u2(E)	31	#5	5'-11"	
u3(E)	39	#5	8'-8"	
u4(E)	184	#5	7'-2"	
u5(E)	92	#5	7'-10"	
u6(E)	6	#5	7'-2"	
v8(E)	32	#10	20'-11"	
v9(E)	62	#5	9'-8"	
w22	7	#7	23'-0"	
w23	8	#11	23'-0"	
w24	7	#7	24'-3"	
w25	[illegible]	#11	24'-3"	

REINFORCEMENT BARS (EPOXY COATED)	LBS.	[illegible]2520
REINFORCEMENT BARS	LBS.	3250
CLASS "X" CONCRETE	CU. YDS.	132.[illegible]
CONCRETE REMOVAL	CU. YDS.	3
3/4" EXPANSION BOLTS	EA.	6[illegible]
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	666
DRIVING CONC PILES	LIN. FT.	666
TEST PILES	EACH	2
STRUCTURE EXCAVATION	CU. YDS.	1554

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS
POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 37 FT.
NO. REQUIRED: 20 (INCL. 2 TEST PILES, ONE EACH SIDE)

PIER NO. 10
SHEET 1 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

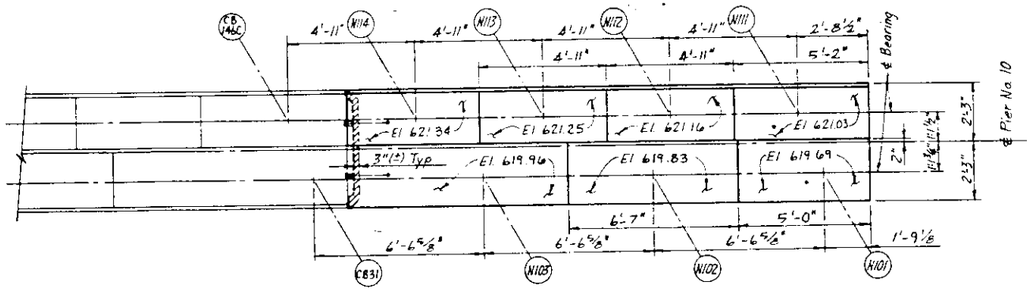
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	323
F. HR. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 62 SHEETS

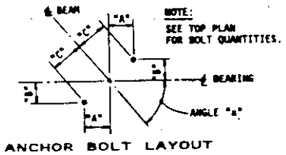
* 1990-073BY SHEET NO. C245 OF C317

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH



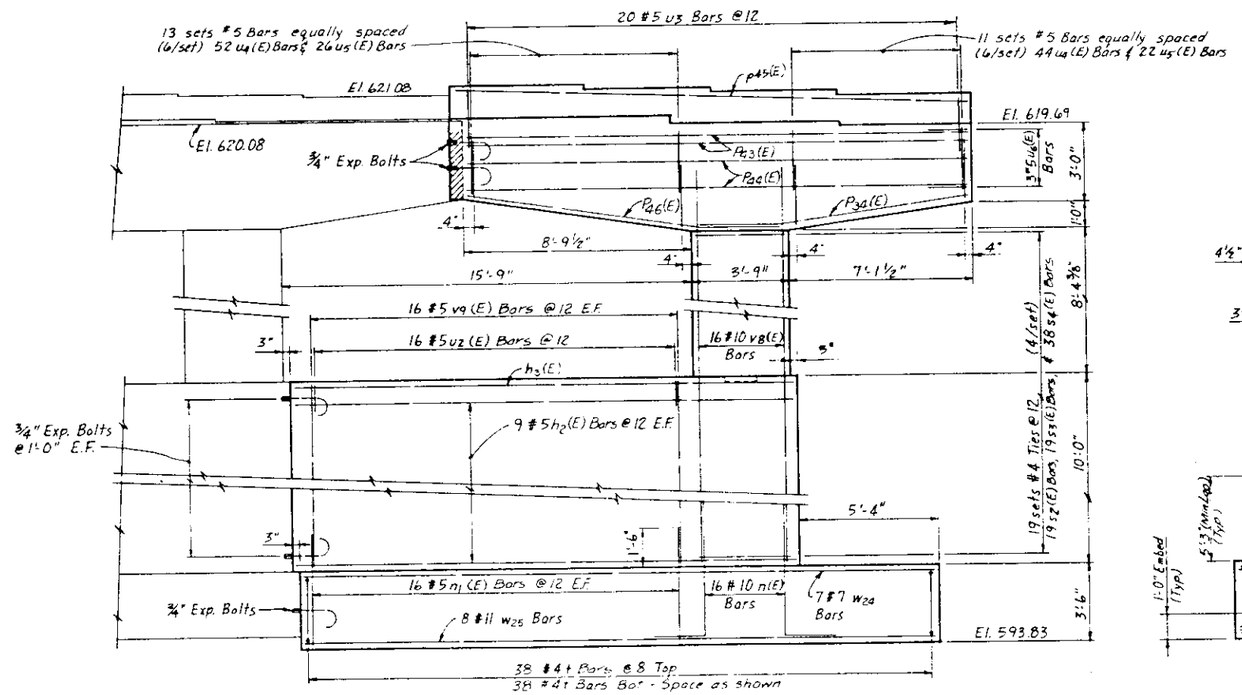
TOP PLAN



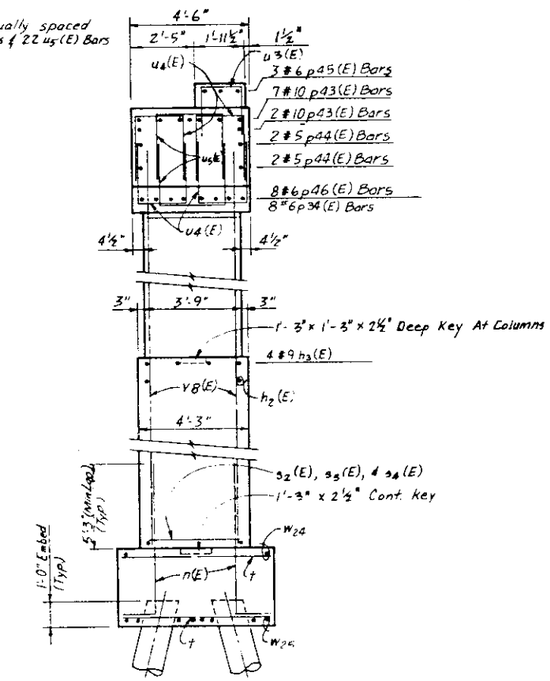
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N101	67°3'56"	1'-0 11/16"	5 3/8"	2'-1 3/4"
N111	67°1'19"	10 13/16"	4 9/16"	11 3/4"



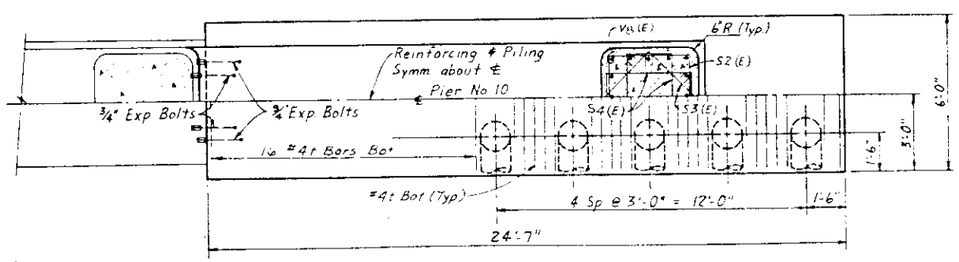
ELEVATION



END VIEW

NOTES:

FOR BILL OF MATERIAL, PILE DATA AND GENERAL NOTES SEE SHEET 1 OF 2



FOOTING PLAN

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

PIER NO. 10
SHEET 2 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

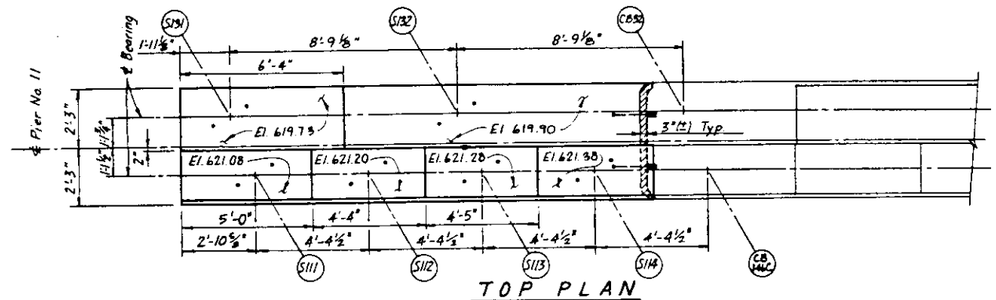
NORTH

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	324
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT	-	

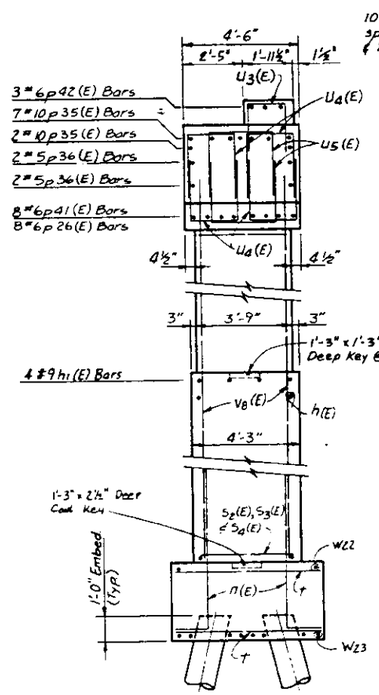
SHEET NO. 63 SHEETS

* 1990-073BY

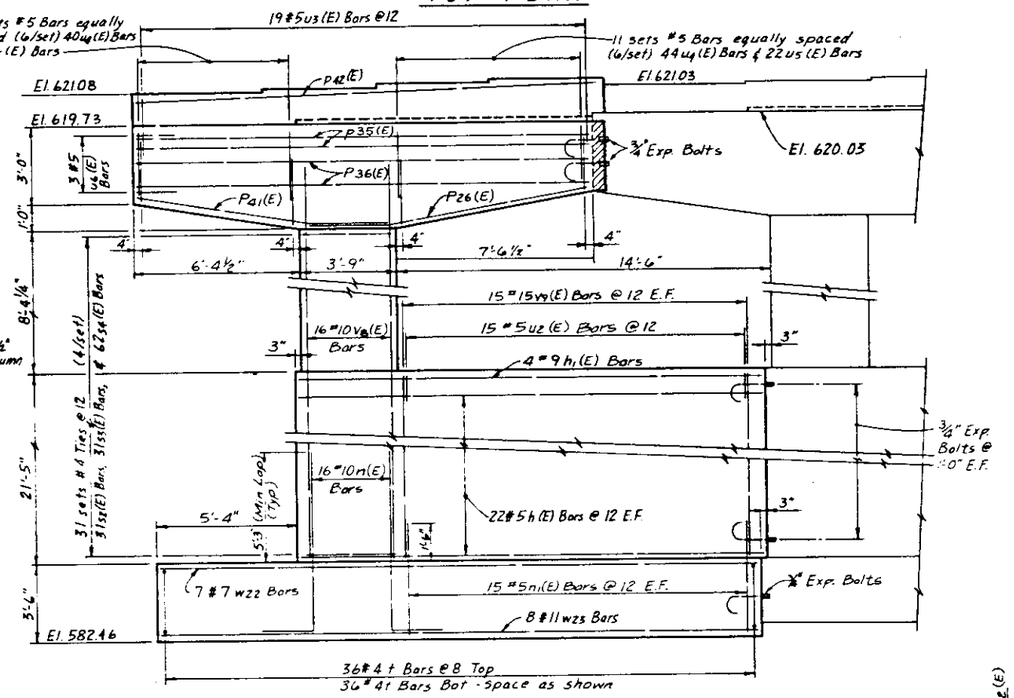
SHEET NO. C246 OF C317



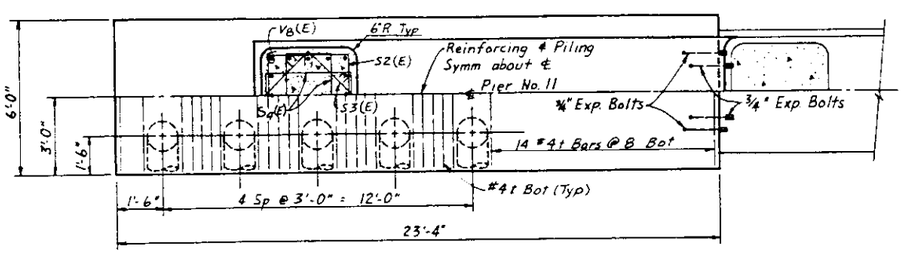
TOP PLAN



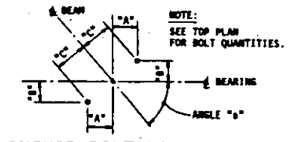
END VIEW



ELEVATION



FOOTING PLAN



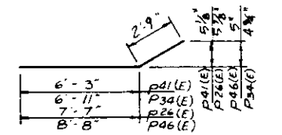
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

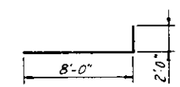
BEAM	ANGLE "B"	DIM "A"	DIM "B"	DIM "C"
S111	67°03'37"	11 1/4"	4 3/4"	1'-0 1/4"
S112	67°03'02"	11 1/4"	4 3/4"	1'-0 1/4"
S113	67°02'28"	11 1/4"	4 3/4"	1'-0 1/4"
S114	67°01'53"	11 1/4"	4 3/4"	1'-0 1/4"
S131	67°01'40"	1'-1 1/8"	5 9/16"	1'-2 1/4"
S132	67°01'45"	1'-1 1/8"	5 9/16"	1'-2 1/4"

BILL OF MATERIAL

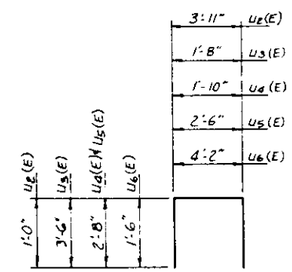
BAR	NO.	SIZE	LENGTH	SHAPE
P(E)	44	#5	17'-11"	
P1(E)	4	#9	17'-11"	
P2(E)	28	#5	19'-2"	
P3(E)	4	#9	19'-2"	
n(E)	32	#10	10'-0"	
n1(E)	62	#5	4'-3"	
P34(E)	8	#6	9'-8"	
P35(E)	9	#10	17'-7"	
P36(E)	4	#5	17'-7"	
P41(E)	8	#6	9'-0"	
P26(E)	8	#6	10'-4"	
P42(E)	3	#6	17'-8"	
P43(E)	3	#10	19'-8"	
P44(E)	4	#5	19'-9"	
P45(E)	3	#6	19'-6"	
P46(E)	8	#6	11'-8"	
S2(E)	54	#4	14'-4"	
S3(E)	54	#4	10'-5"	
S4(E)	108	#4	10'-11"	
t	148	#4	5'-8"	
U2(E)	31	#5	5'-11"	
U3(E)	39	#5	8'-8"	
U4(E)	180	#5	7'-2"	
U5(E)	90	#5	7'-10"	
U6(E)	6	#5	7'-2"	
V8(E)	16	#10	32'-4"	
V9(E)	62	#5	9'-8"	
V22(E)	16	#10	24'-4"	
W22		#7	23'-0"	
W23	8	#11	23'-0"	
W24	7	#7	24'-3"	
W25	8	#11	24'-3"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	14,670
REINFORCEMENT BARS			LBS.	3250
CLASS "X" CONCRETE			CU. YDS.	176.9
CONCRETE REMOVAL			CU. YDS.	13
3/4" EXPANSION BOLTS			EA.	84
1" EXPANSION BOLTS			EA.	—
FURNISHING CONC PILES			LIN. FT.	666
DRIVING CONC PILES			LIN. FT.	666
TEST PILES			EACH	2
STRUCTURE EXCAVATION			CU. YDS.	176.0

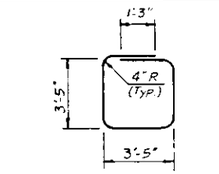


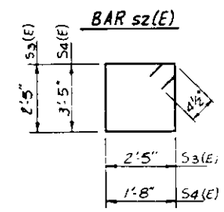
BARS p26(E), p34(E), p41(E) & p46(E)



BAR n(E)







BAR s2(E)

BARS U2(E) - U6(E)

BARS s3(E) & s4(E)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 37 FT.
NO. REQUIRED: 20 (INCL. 2 TEST PILES, ONE EACH SIDE)

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

PIER NO. 11

SHEET 1 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

WORK NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	325
F.A.P. RTE. 4	BLDING 5	FED. AID PROJECT		

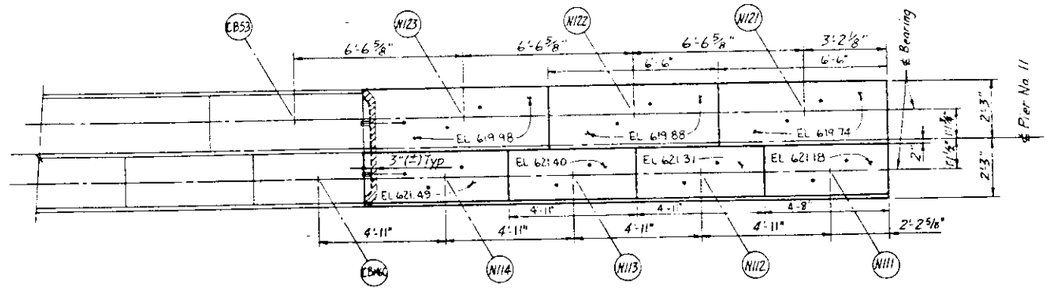
SHEET NO. 64
SHEETS

* 1990-073BY

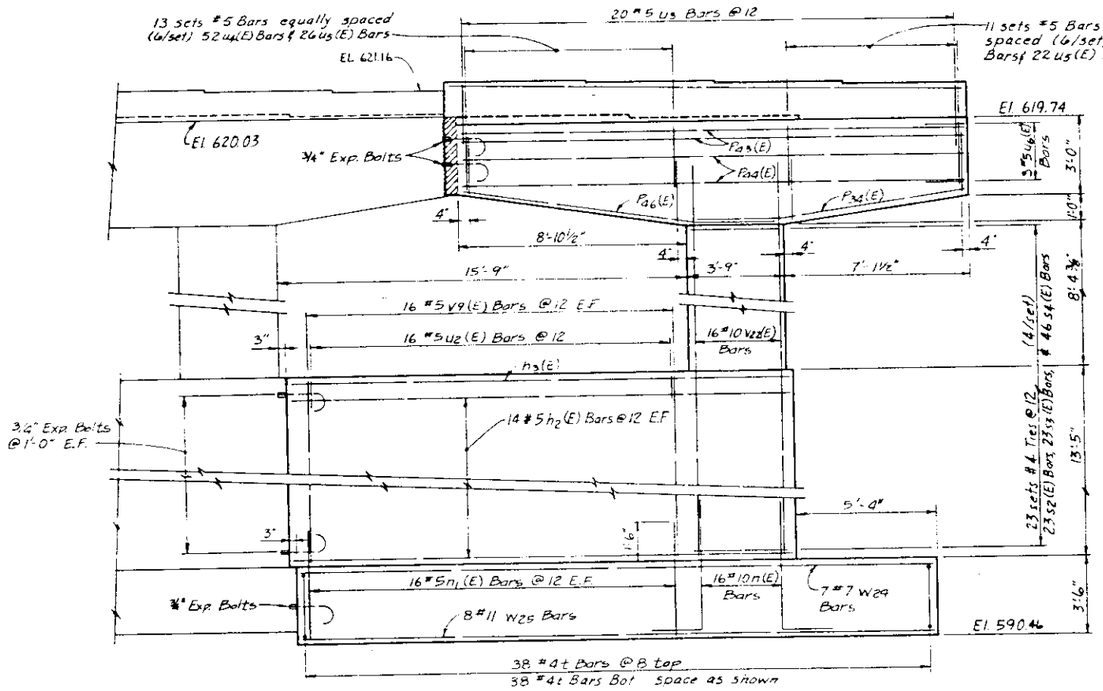
SHEET NO. C247 OF C317

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

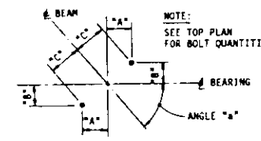
NORTH



TOP PLAN



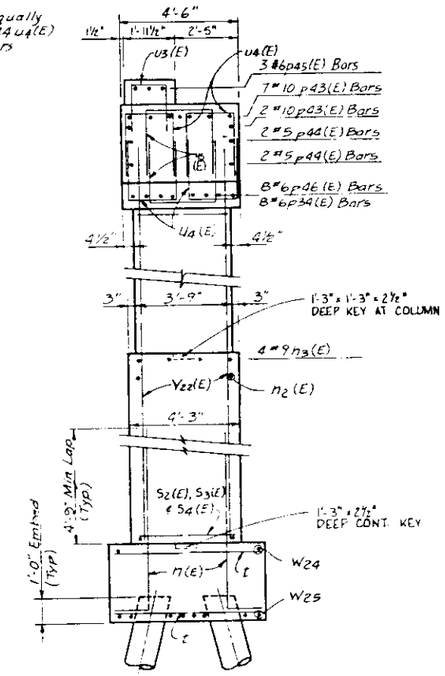
ELEVATION



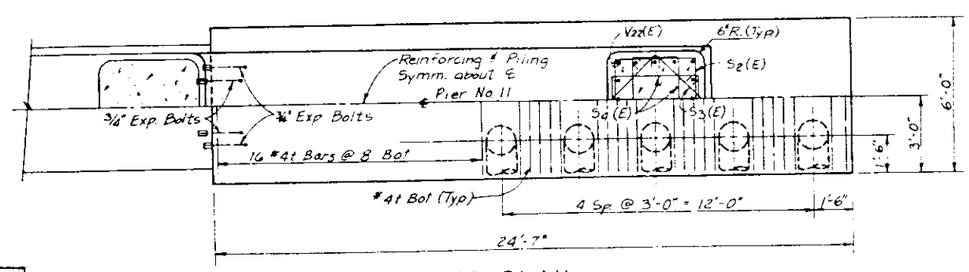
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N111	67°01'19"	11 1/4"	4 13/16"	1'-0 1/4"
N112	67°01'19"	11 1/4"	4 13/16"	1'-0 1/4"
N113	67°01'19"	11 1/4"	4 13/16"	1'-0 1/4"
N114	67°01'19"	11 1/4"	4 13/16"	1'-0 1/4"
N121	67°05'08"	1'-1 1/8"	5 9/16"	1'-2 1/4"
N122	67°04'36"	1'-1 1/8"	5 9/16"	1'-2 1/4"
N123	67°03'53"	1'-1 1/8"	5 9/16"	1'-2 1/4"



END VIEW



FOOTING PLAN

NOTES:

FOR BILL OF MATERIAL, PILE DATA AND GENERAL NOTES SEE SHEET 1 OF 2.

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

STANLEY CONSULTANTS

PIER NO. 11

SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

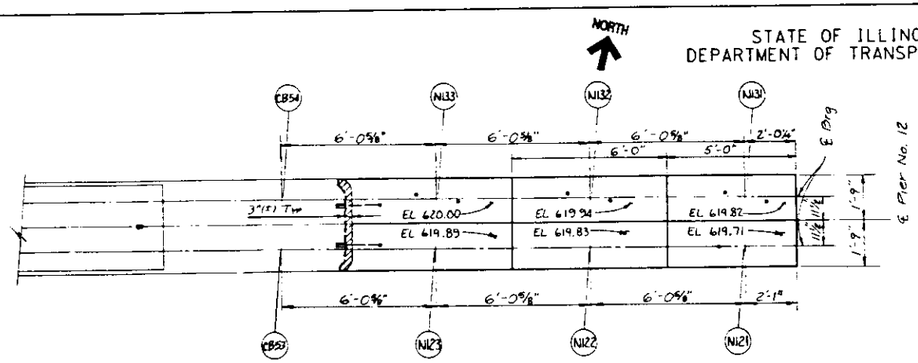
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

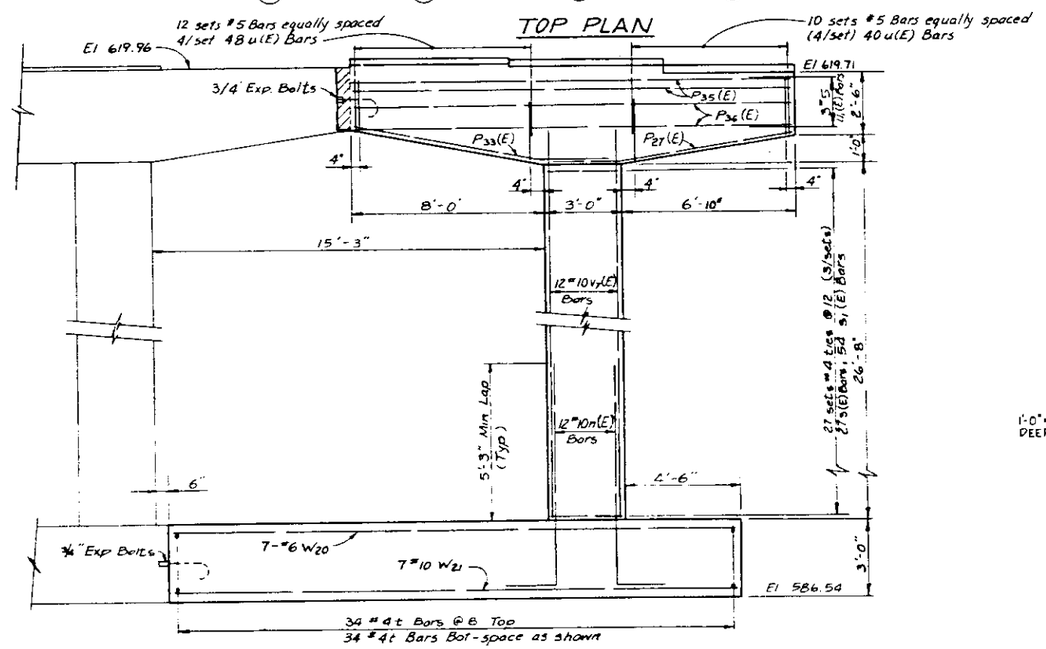
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	326
F.A.P. & REG. #		ILLINOIS FED. AID PROJECT		

SHEET NO. 65
SHEETS

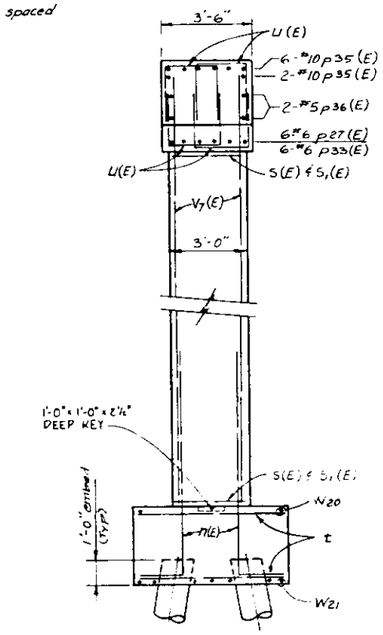
* 1990-073BY SHEET NO. C248 OF C317



TOP PLAN

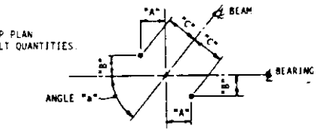


ELEVATION



END VIEW

NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

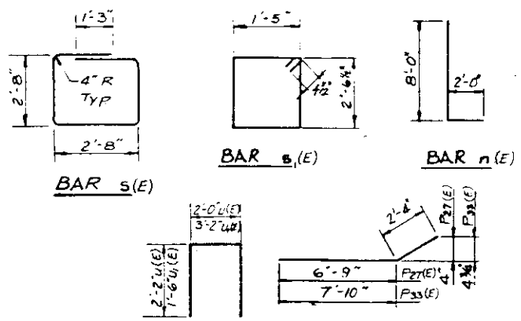


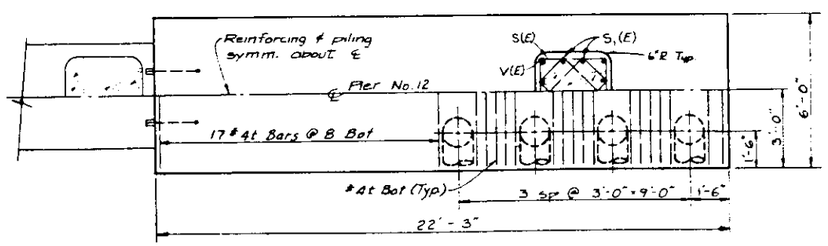
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N121	88°06'50"	1'-1 3/4"	7/16"	1'-1 3/4"
N131	88°09'15"	1'-2 1/4"	7/16"	1'-2 1/4"
N132	88°09'15"	1'-2 1/4"	7/16"	1'-2 1/4"
N133	88°09'15"	1'-2 1/4"	7/16"	1'-2 1/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#10	10'-0"	
P27(E)	6	#6	9'-1"	
P33(E)	6	#6	10'-2"	
P35(E)	8	#10	17'-9"	
P36(E)	4	#5	17'-9"	
s(E)	27	#4	11'-4"	
s1(E)	54	#4	8'-8"	
t	68	#4	5'-8"	
u(E)	88	#5	6'-4"	
u1(E)	3	#5	6'-2"	
v7(E)	12	#10	29'-1"	
W20	7	#6	21'-11"	
W21	7	#10	21'-11"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	3990
REINFORCEMENT BARS			LBS.	1150
CLASS "X" CONCRETE			CU. YDS.	31.2
CONCRETE REMOVAL			CU. YDS.	1
3/4" EXPANSION BOLTS			EA.	4
1" EXPANSION BOLTS			EA.	—
FURNISHING CONC PILES			LIN. FT.	248
DRIVING CONC PILES			LIN. FT.	248
TEST PILES			EACH	—
STRUCTURE EXCAVATION			CU. YDS.	58.5





FOOTING PLAN

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:
TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 8

PIER NO. 12

SECTION

F.A.I. ROUTE 80/94 OVER ASHLAND AVENUE

COOK COUNTY

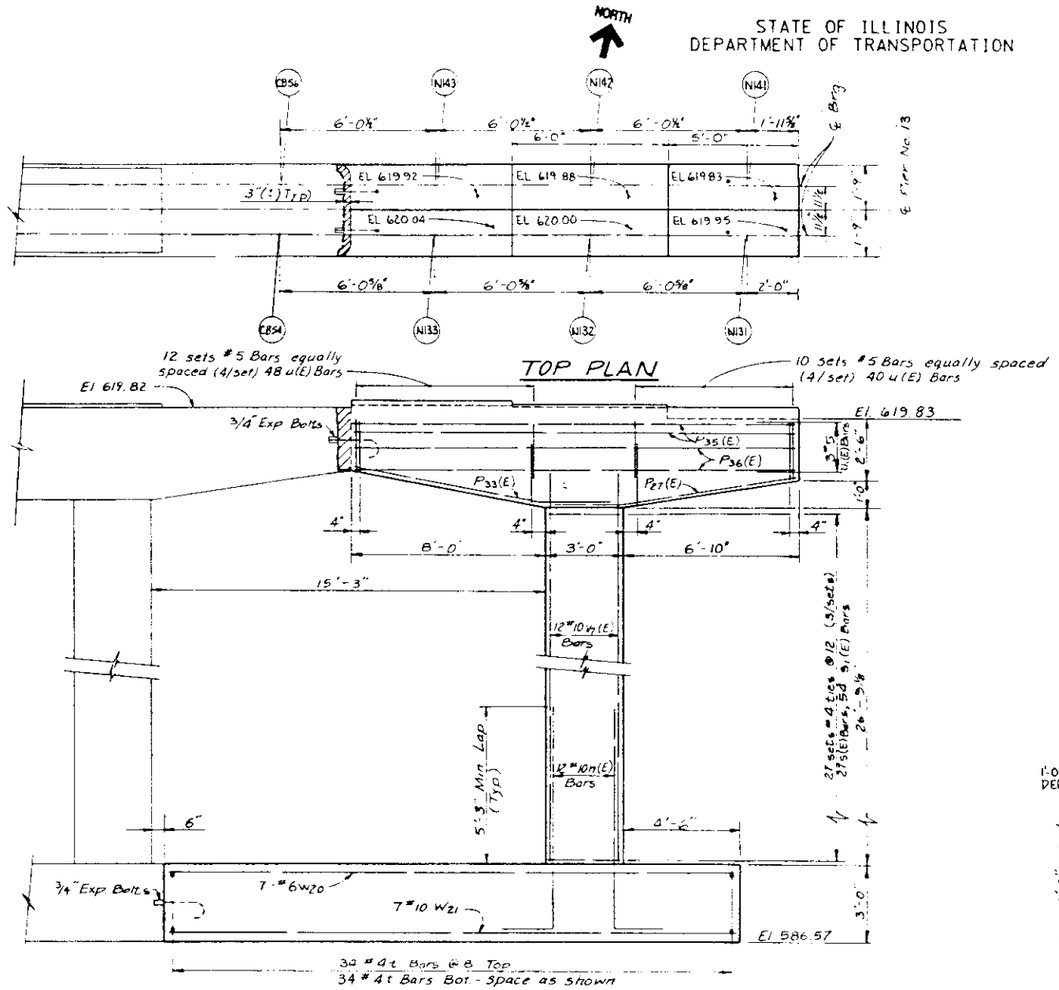
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

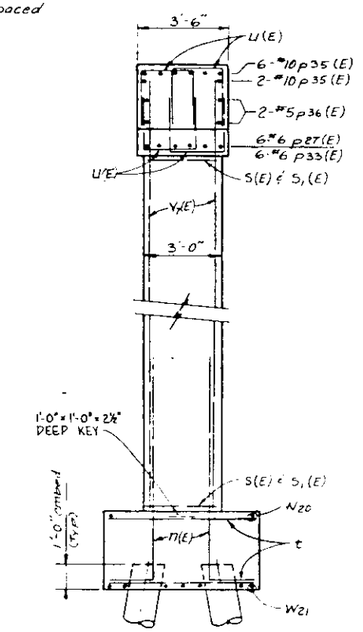
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	327
F.A.I. RTE. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 66 SHEETS

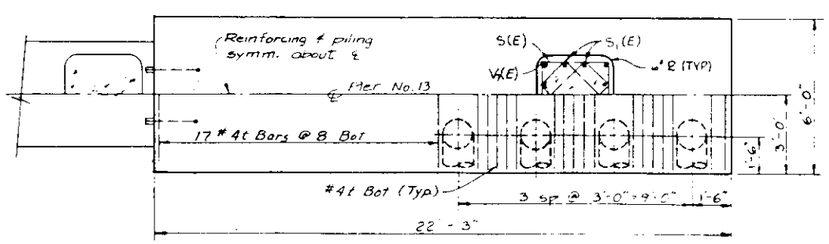
* 1990-0736Y SHEET NO. C249 OF C347



ELEVATION

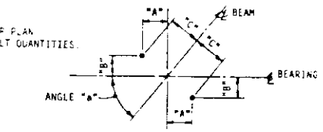


END VIEW



FOOTING PLAN

NOTE
SEE TOP PLAN FOR BOLT QUANTITIES.

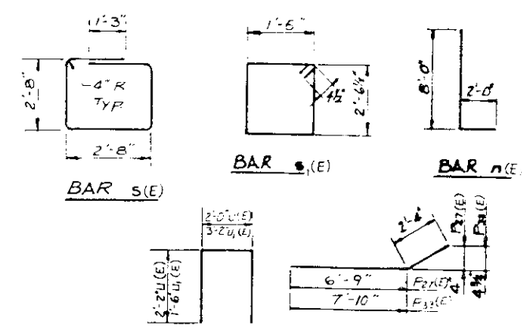


ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N131	88°09'15"	1'-1 3/4"	7/16"	1'-1 3/4"
N141	88°09'17"	1'-1 3/4"	7/16"	1'-1 3/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
[illegible](E)	12	#10	10'-0"	
P27(E)	6	#6	9'-1"	
P33(E)	6	#6	10'-2"	
P35(E)	8	#10	17'-9"	
P36(E)	4	#5	17'-9"	
S(E)	27	#4	11'-4"	
S1(E)	54	#4	9'-6"	
[illegible]	68	#4	5'-8"	
u(E)	88	#4	6'-4"	
u1(E)	3	#5	6'-2"	
V1(E)	12	#10	29'-1"	
W20	7	#6	23'-11"	
W21	7	#10	23'-11"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	3550	
REINFORCEMENT BARS		LBS.	1150	
CLASS "X" CONCRETE		CU. YDS.	30.9	
CONCRETE REMOVAL		CU. YDS.	[illegible]	
3/4" EXPANSION BOLTS		EA.	[illegible]	
1" EXPANSION BOLTS		EA.	[illegible]	
FURNISHING CONC PILES		LIN. FT.	2[illegible]	
DRIVING CONC PILES		LIN. FT.	2[illegible]	
TEST PILES		EACH	[illegible]	
STRUCTURE EXCAVATION		CU. YDS.	58.3	



THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

IIIIII INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 8 (INCL. 1 TEST PILES)

STANLEY CONSULTANTS

PIER 13 - EAST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

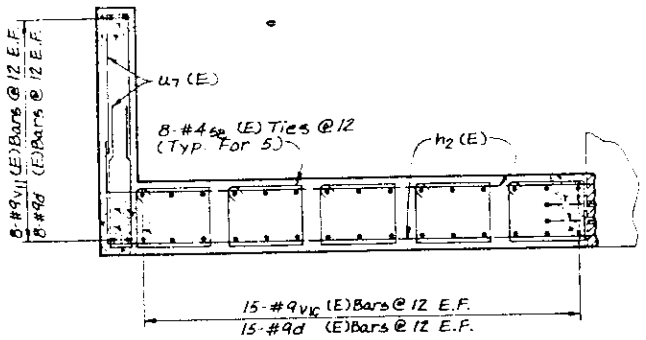
COOK COUNTY

STATION 409+40

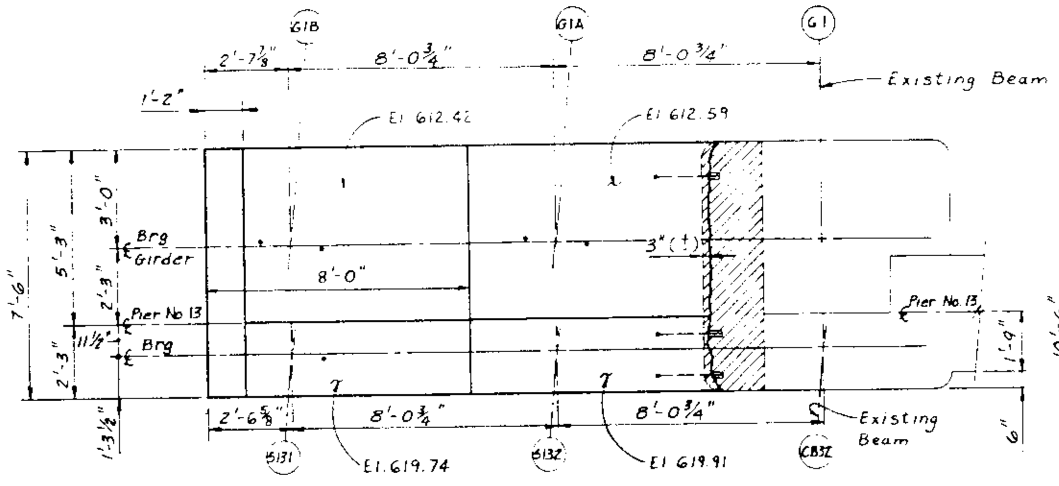
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 67 | 434 | 328

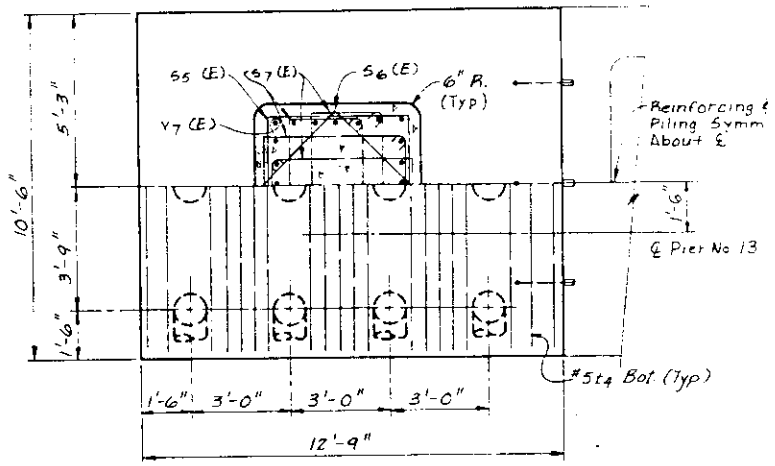
* 1990-073BY SHEET NO. C250 OF C317



PLAN-SECTION A-A

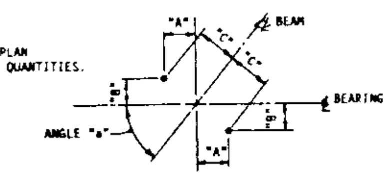


TOP PLAN



FOOTING PLAN

NOTE:
SEE TOP PLAN
FOR BOLT QUANTITIES.



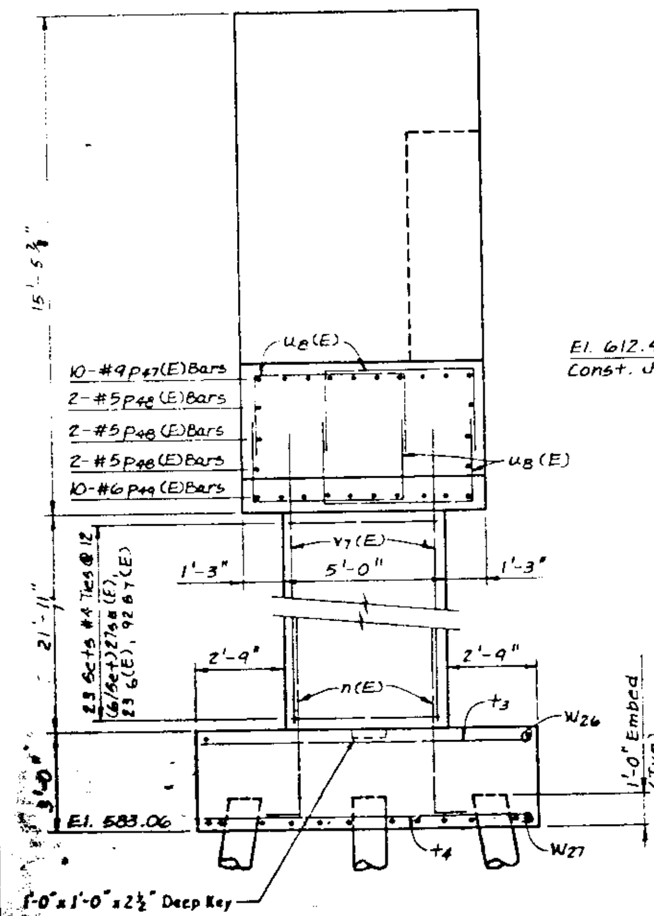
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
G1A	89°29'49"	11"	1/8"	11"
G1B	88°59'52"	11"	3/16"	11"
S131	88°10'18"	1'-1 3/4"	7/16"	1'-1 3/4"

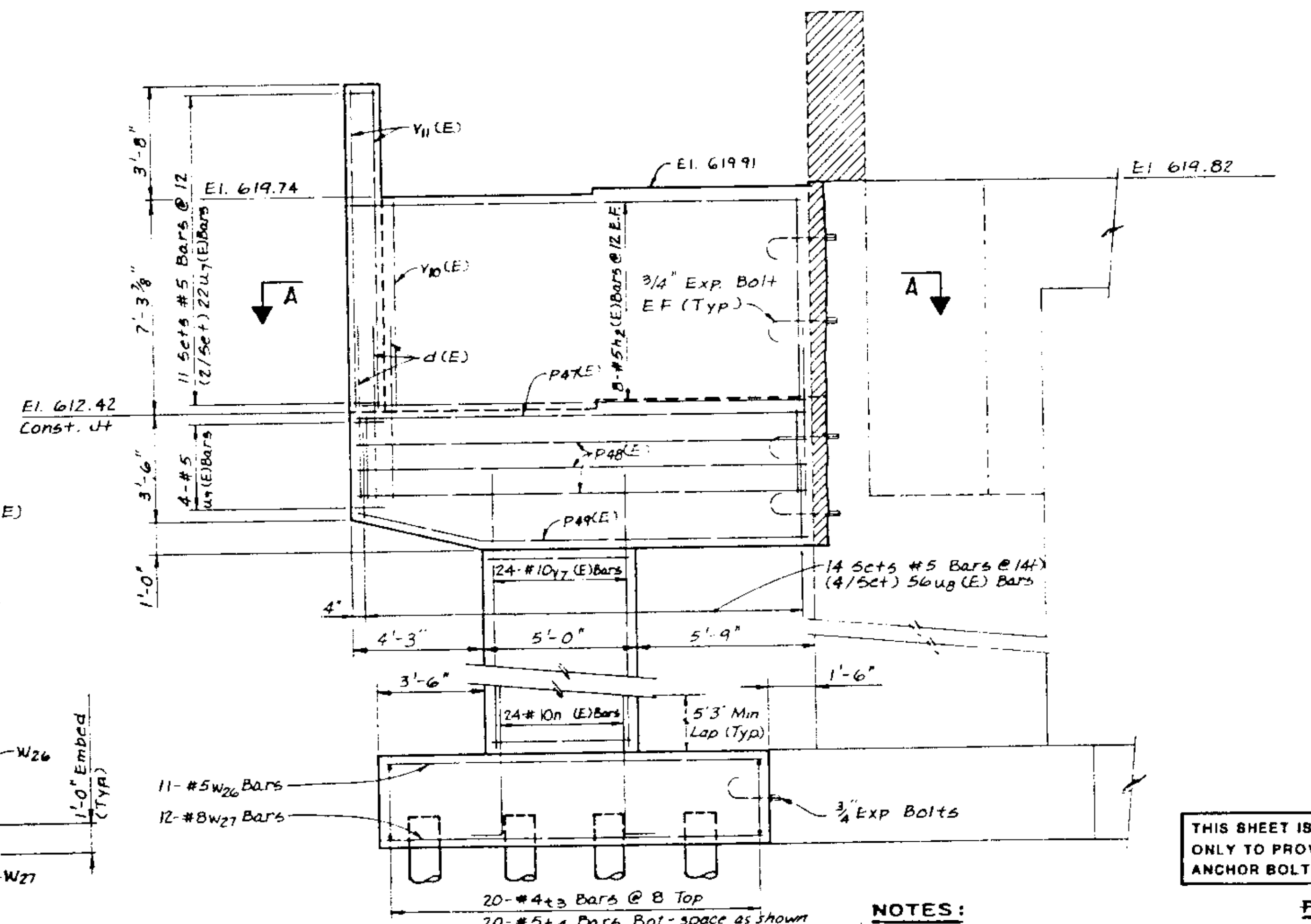
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d (E)	46	#9	7'-0"	
n27	16	#7	15'-9"	
n (E)	24	#10	32'-0"	
P47(E)	10	#9	14'-8"	
P48(E)		#5	14'-9"	
P49(E)	10	#6	14'-10"	
S5(E)	27	#4	19'-4"	
S6(E)	27	#4	13'-9"	
S7(E)	108	#4	14'-9"	
S8(E)	40	#4	8'-9"	
t3	20	#4	10'-2"	
t4	20	#5	10'-2"	
U7(E)	22	#5	9'-6"	
U8(E)	56	#5	11'-2"	
U9(E)	4	#5	10'-2"	
V7(E)	24	#10	24'-6"	
V10(E)	30	#9	7'-2"	
V11(E)	16	#9	10'-7"	
W26	11	#5	12'-5"	
W27	12	#8	12'-5"	

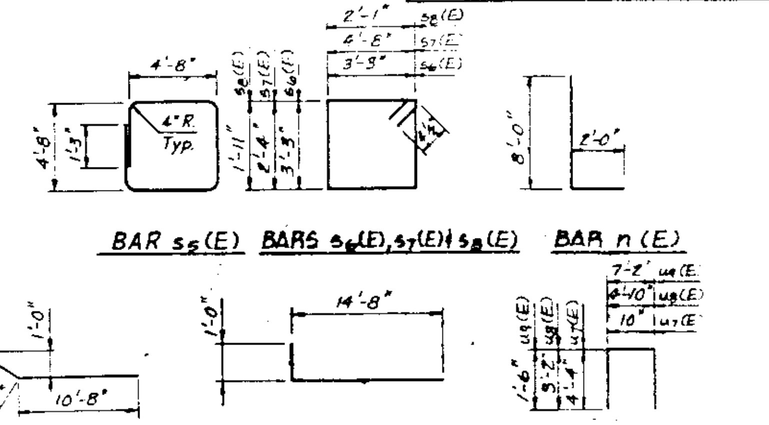
REINFORCEMENT BARS (EPOXY COATED)	LBS.	9860
REINFORCEMENT BARS	LBS.	860
CLASS "X" CONCRETE	CU. YDS.	65.4
CONCRETE REMOVAL	CU. YDS.	3.3
3/4" EXPANSION BOLTS	EA.	11
1" EXPANSION BOLTS	EA.	-
FURNISHING CONC PILES	LIN. FT.	341
DRIVING CONC PILES	LIN. FT.	341
TEST PILES	EACH	1
STRUCTURE EXCAVATION	CU. YDS.	54.0



END VIEW



ELEVATION



BAR s5 (E) BARS s6(E), s7(E) & s8(E) BAR n (E)

BAR p49 (E) BAR h2 (E) BARS u7(E), u8(E) & u9(E)

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED., BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 12 (INCL. 1 TEST PILE)

PIER NO. 13 – WEST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+43

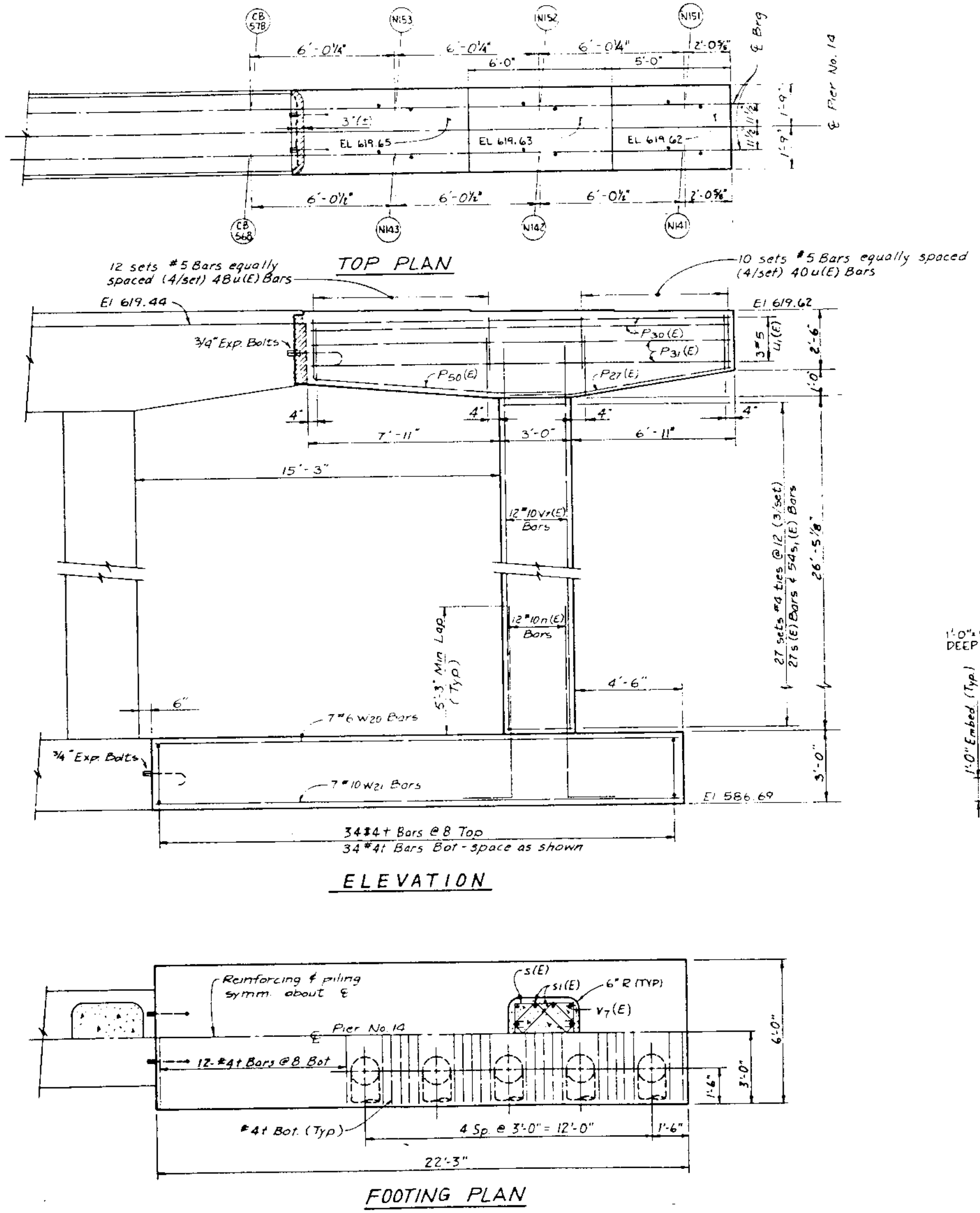
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

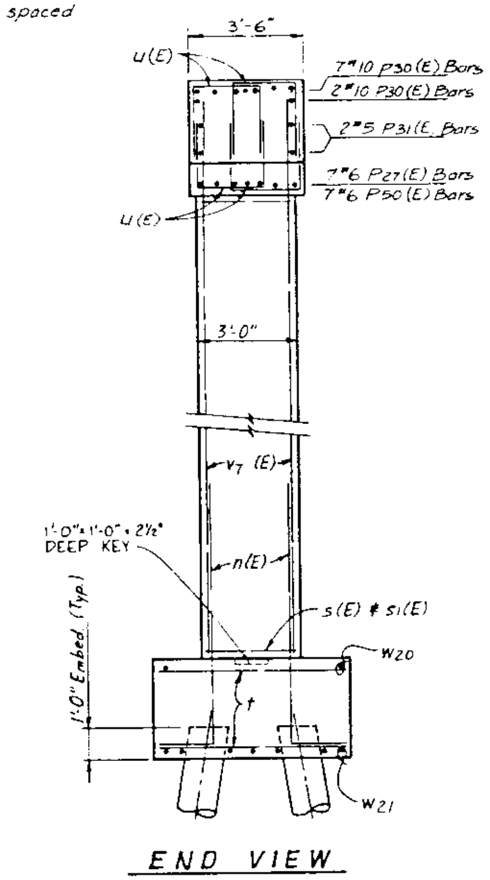
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	329

SHEET NO. 68 SHEETS

* 1990-073BY

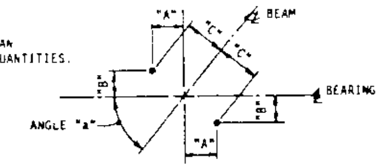
SHEET NO. C251 OF C317





NOTE

SEE TOP PLAN FOR BOLT QUANTITIES.



ANCHOR BOLT LAYOUT

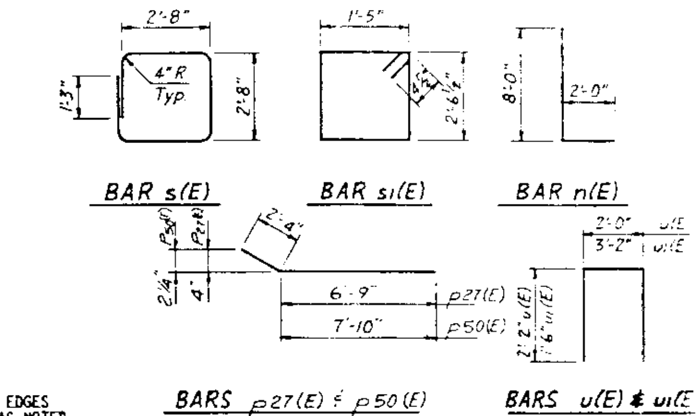
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N141	88°09'16"	1'-2 1/4"	7/16"	1'-2 1/4"
N142	88°09'16"	1'-2 1/4"	7/16"	1'-2 1/4"
N143	88°09'16"	1'-2 1/4"	7/16"	1'-2 1/4"
N151	88°53'49"	1'-2 1/4"	1/4"	1'-2 1/4"
N152	88°51'08"	1'-2 1/4"	5/16"	1'-2 1/4"
N153	88°48'26"	1'-2 1/4"	5/16"	1'-2 1/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#10	10'-0"	
P27(E)	7	#6	[illegible]	
P30(E)	9	#10	17'-9"	
P31(E)	4	#5	17'-9"	
P50(E)	7	#6	10'-2"	
S(E)	27	#4	11'-4"	
S1(E)	54	#4	8'-8"	
t	68	#4	5'-8"	
U(E)	88	#5	6'-4"	
U1(E)	3	#5	6'-2"	
V7(E)	12	#10	29'-1"	
W20	7	#6	21'-11"	
W21	7	#10	21'-11"	

ITEM	UNIT	QUANTITY
REINFORCEMENT BARS (EPOXY COATED)	LBS.	4100
REINFORCEMENT BARS	LBS.	150
CLASS "X" CONCRETE	CU. YDS.	80.5
CONCRETE REMOVAL	CU. YDS.	
3/4" EXPANSION BOLTS	EA.	
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	310
DRIVING CONC PILES	LIN. FT.	310
TEST PILES	EACH	—
STRUCTURE EXCAVATION	CU. YDS.	55

(Bill of material crossed out on sheet.)



THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

PILE DATA:

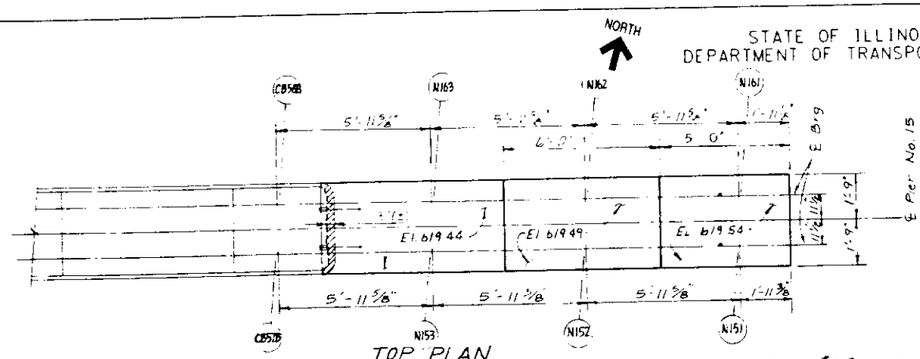
TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 10

PIER NO. 14

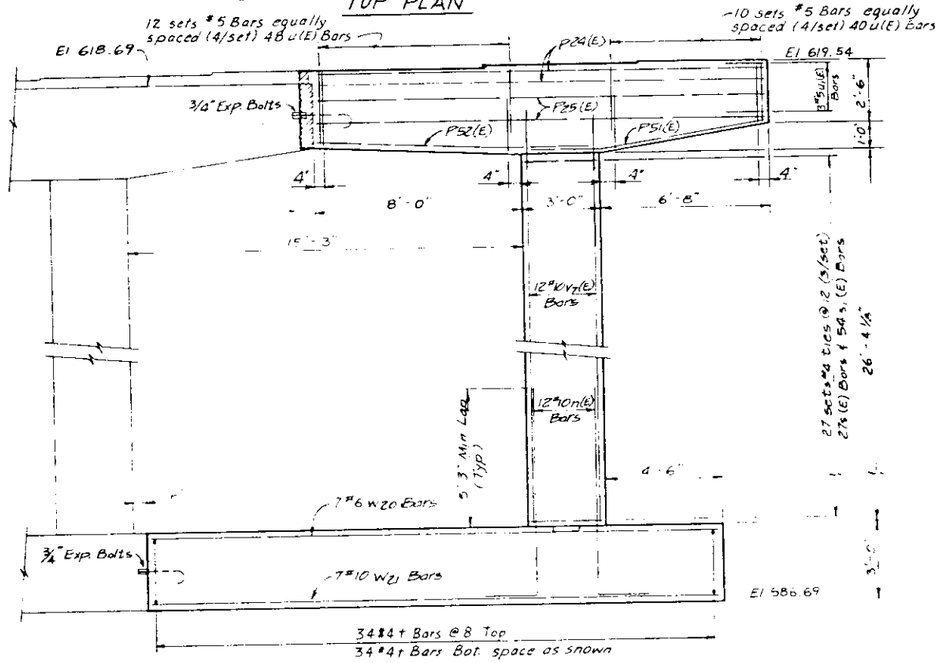
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 809+49

CONSULTANTS

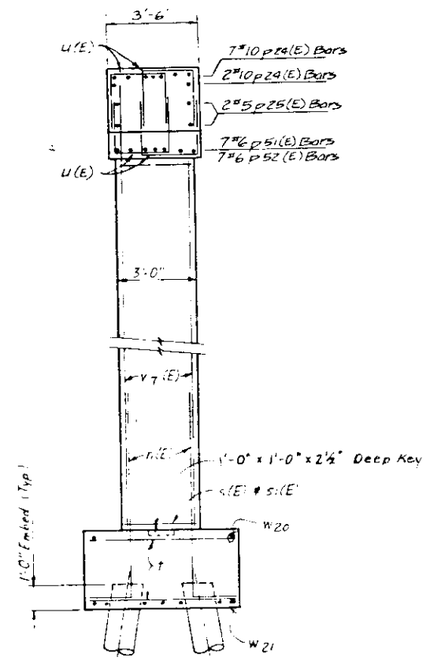
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



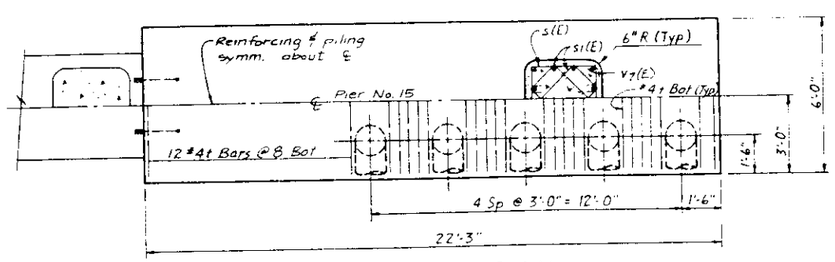
TOP PLAN



ELEVATION

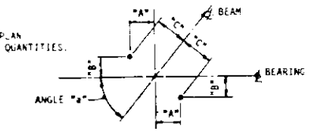


END VIEW



FOOTING PLAN

NOTE
SEE TOP PLAN FOR BOLT QUANTITIES.



ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N151	88°53'49"	1'-1 3/4"	1/4"	1'-1 3/4"
N161	89°58'14"	1'-1 3/4"	-	1'-1 3/4"

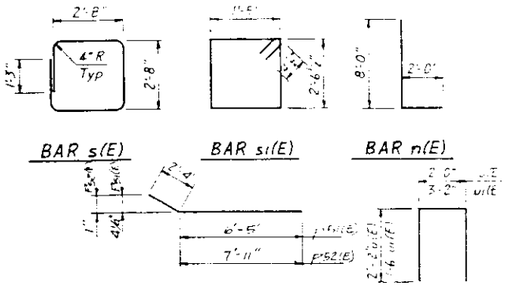
		434	330	

SHEET NO. 69
SHEETS

* 1990-073BY SHEET NO. C252 OF C317

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
E	12	#10	10'-0"	
p24(E)	9	#10	17'-7"	
p25(E)	4	#5	12'-7"	
p51(E)	7	#6	8'-9"	
p52(E)	7	#6	10'-3"	
s(E)	27	#4	11'-4"	
s1(E)	54	#4	8'-8"	
t	68	#4	5'-8"	
u(E)	88	#5	6'-4"	
u1(E)	3	#5	6'-2"	
v7(E)	12	#10	29'-1"	
w20	7	#6	21'-11"	
w21	7	#10	21'-11"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	4090	
REINFORCEMENT BARS		LBS	450	
CLASS "X" CONCRETE		CU. YDS.	31.0	
CONCRETE REMOVAL		CU. YDS.	1	
3/4" EXPANSION BOLTS		EA.	-	
1" EXPANSION BOLTS		EA.	-	
FURNISHING CONC PILES		LIN. FT.	279	
DRIVING CONC PILES		LIN. FT.	279	
TEST PILES		EACH	1	
STRUCTURE EXCAVATION		CU. YDS.	58.3	



THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 10 (INCL. 1 TEST PILE)

PIER NO. 15

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

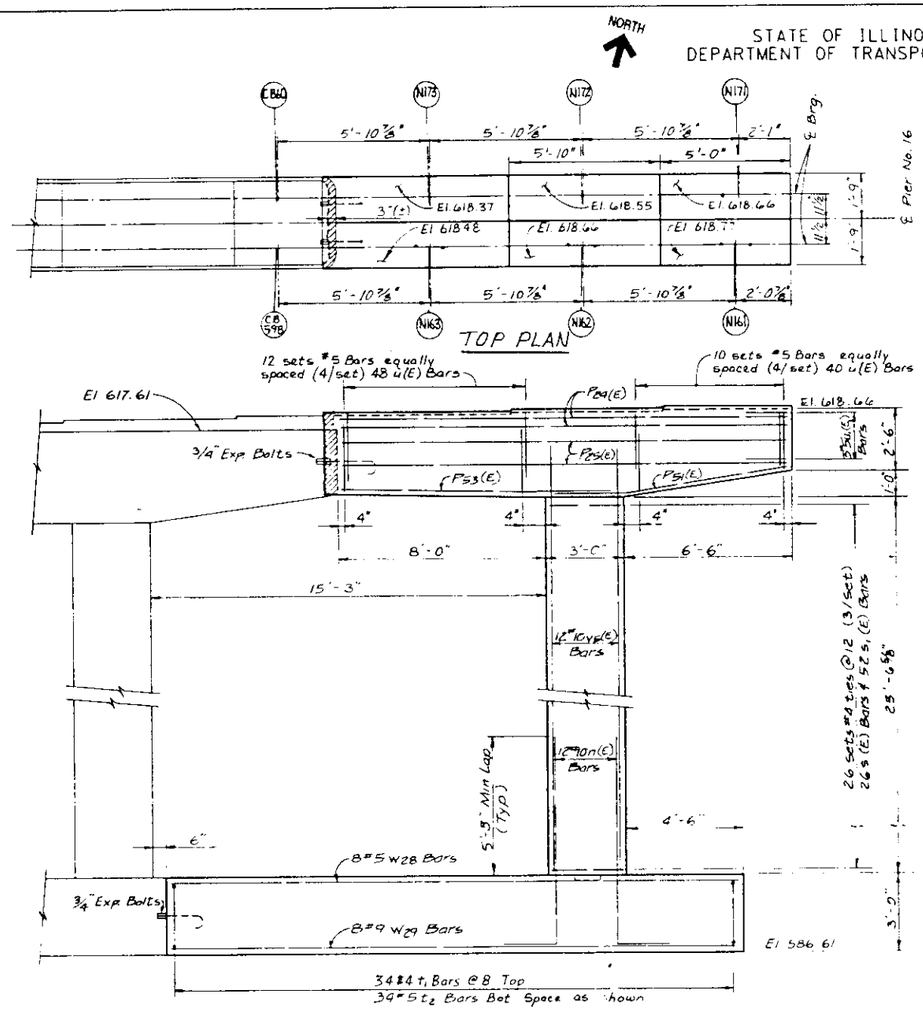
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	331

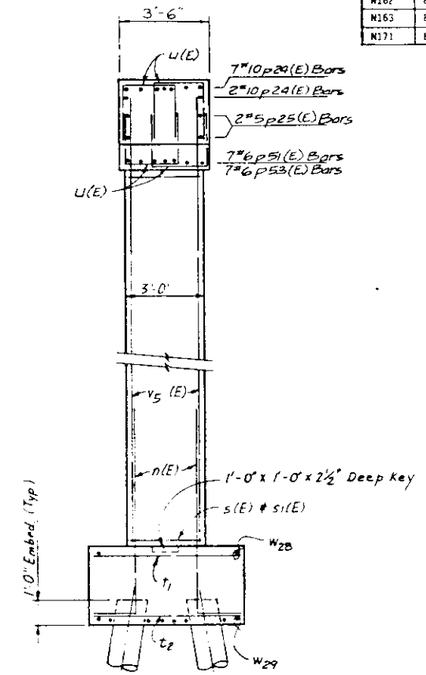
SHEET NO. 70 SHEETS

* 1990-073BY SHEET NO. C253 OF C317

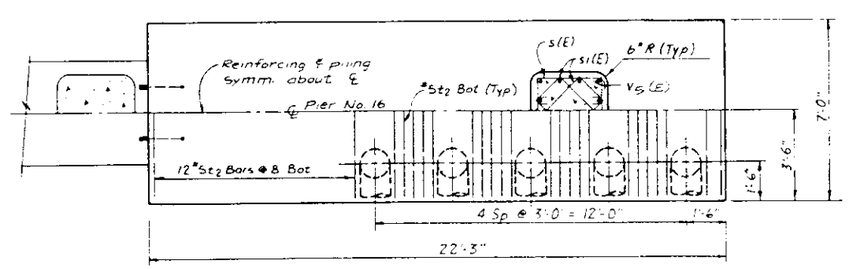


TOP PLAN

ELEVATION

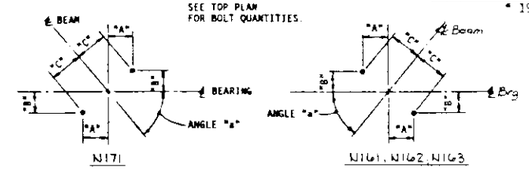


END VIEW



FOOTING PLAN

NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

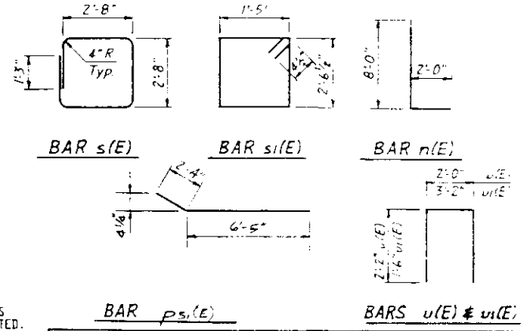


ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N161	89°58'14"	0'-2 1/4"	–	1'-2 1/4"
N162	89°54'55"	0'-2 1/4"	–	1'-2 1/4"
N163	89°51'57"	0'-2 1/4"	1/16"	1'-2 1/4"
N171	89°01'58"	0'-1 3/4"	1/4"	1'-1 3/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
Vs(E)	12	#10	10'-0"	
p24(E)	9	#10	17'-5"	
p25(E)	4	#5	17'-5"	
p51(E)	7	#6	8'-9"	
p53(E)	7	#6	10'-7"	
S(E)	76	#4	11'-4"	
S1(E)	3	#4	8'-8"	
t1	34	#4	6'-8"	
t2	34	#5	6'-8"	
U(E)	88	#5	8'-4"	
U1(E)	3	#5	5'-2"	
Vs(E)	12	#10	27'-11"	
W28	8	#5	21'-11"	
W29	8	#5	21'-11"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	4010	
REINFORCEMENT BARS		LBS.	[illegible]	
CLASS "X" CONCRETE		CU. YDS.	[illegible]	
CONCRETE REMOVAL		CU. YDS.	[illegible]	
3/4" EXPANSION BOLTS		EA.	[illegible]	
1" EXPANSION BOLTS		EA.	[illegible]	
FURNISHING CONC. PILES		LIN. FT.	310	
DRIVING CONC. PILES		LIN. FT.	310	
TEST PILES		EACH	—	
STRUCTURE EXCAVATION		CU. YDS.	64.2	



THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 10

PIER NO. 16 - EAST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

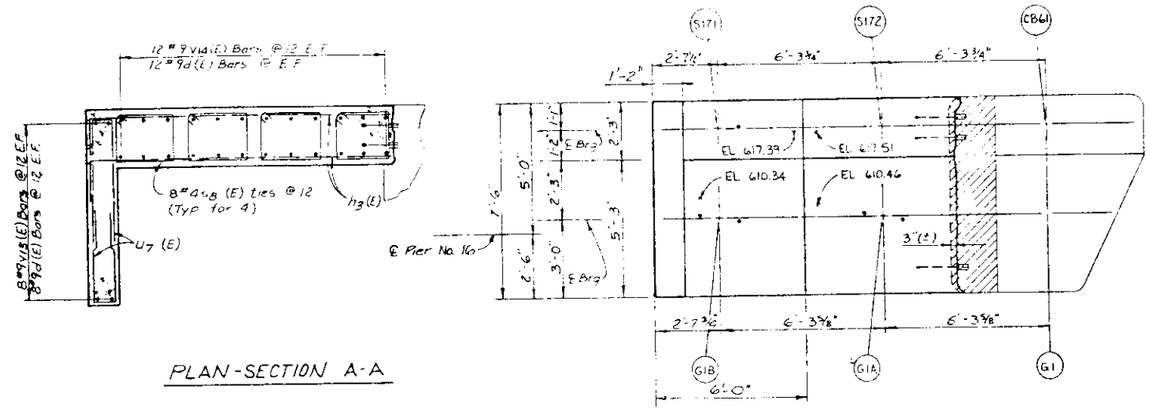
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	332
F.A. RTE. A. REG. 4	ILLINOIS	F.A.D. AID PROJECT		

SHEET NO. 75 SHEETS

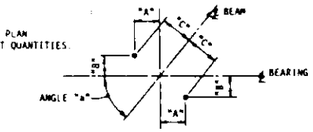
* 1990-073BY SHEET NO. C254 OF C317



PLAN-SECTION A-A

TOP PLAN

NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

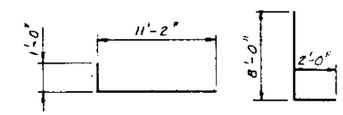


ANCHOR BOLT LAYOUT

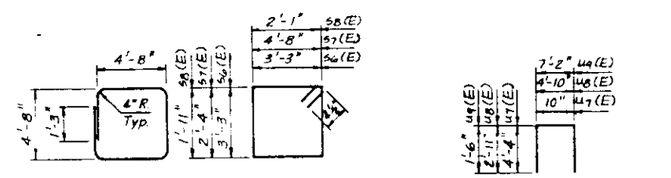
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
G1A	89°29'49"	11"	1/8"	11"
G1B	88°59'52"	11"	3/16"	11"
S171	91°23'57"	1'-1 3/4"	5/16"	1'-1 3/4"
S172	93°06'40"	-	-	-

BILL OF MATERIAL

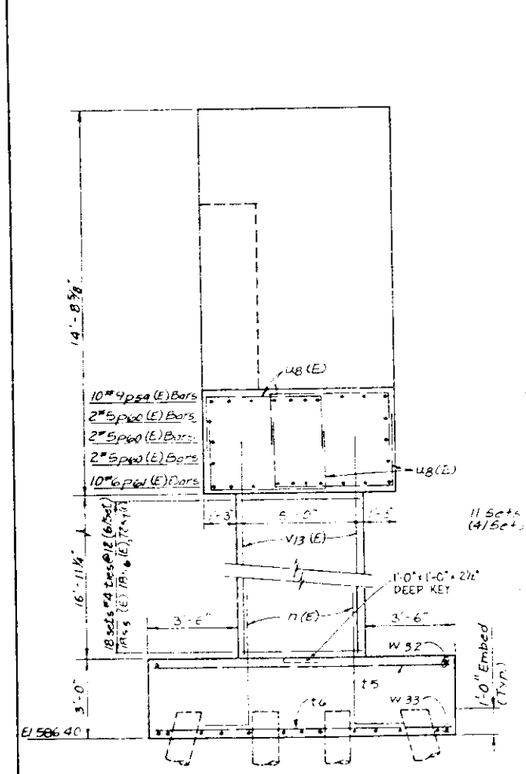
BAR	NO.	SIZE	LENGTH	SHAPE
J(E)	40	#9	7'-0"	
h5(E)	16	#5	12'-2"	
n(E)	24	#10	10'-0"	
P59(E)	10	#9	11'-2"	
P60(E)	6	#5	11'-2"	
P61(E)	10	#6	11'-2"	
S5(E)	18	#4	19'-4"	
S6(E)	18	#4	13'-9"	
S7(E)	72	#4	14'-9"	
S8(E)	32	#4	8'-9"	
t5	13	#5	11'-8"	
t6	13	#9	11'-8"	
U7(E)	22	#5	9'-6"	
U8(E)	44	#5	10'-8"	
U9(E)	5	#5	10'-2"	
V13(E)	24	#10	19'-6"	
V14(E)	24	#9	6'-0"	
V15(E)	16	#9	10'-0"	
W32	13	#5	11'-8"	
W33	13	#9	11'-8"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	7980
REINFORCEMENT BARS			LBS.	350
CLASS "A" CONCRETE			CU. YDS.	53.6
CONCRETE REMOVAL			CU. YDS.	2.3
3/4" EXPANSION BOLTS			EA.	4
1" EXPANSION BOLTS			EA.	-
FURNISHING CONC PILES			LIN. FT.	465
DRIVING CONC PILES			LIN. FT.	465
TEST PILES			EACH	1
STRUCTURE EXCAVATION			CU. YDS.	56.9



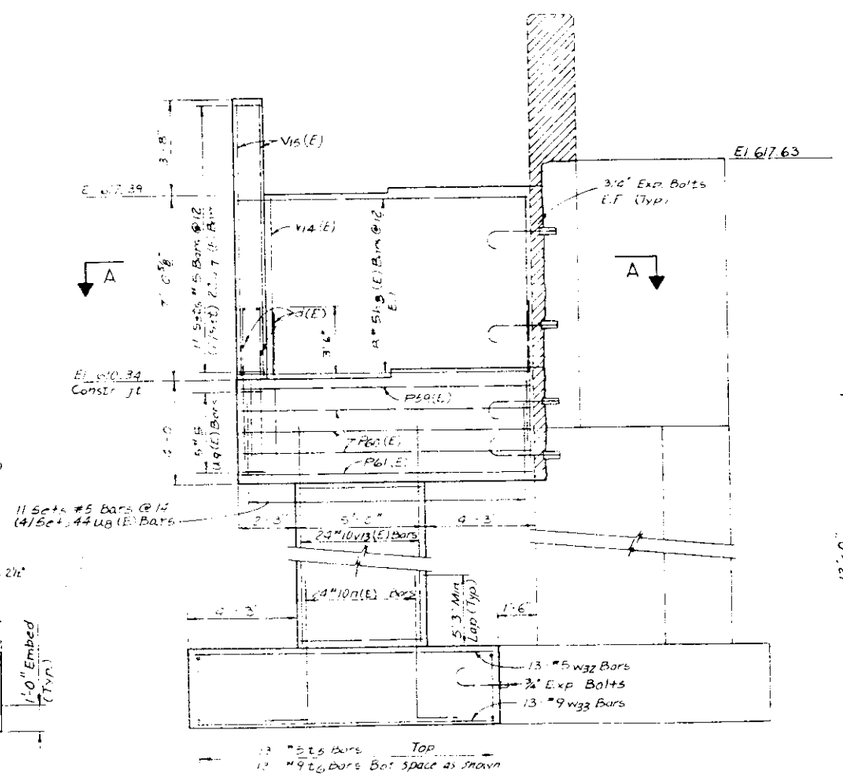
BAR h_5(E) BAR n(E)



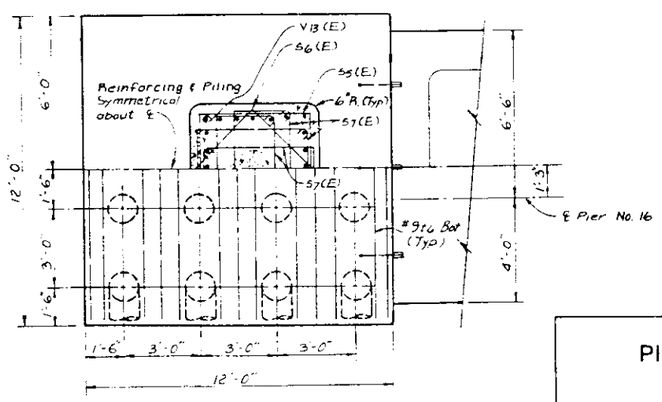
BAR s_5(E) BARS s_6(E), s_7(E) & s_8(E) BARS u_7(E), u_8(E) & u_9(E)



END VIEW



ELEVATION



FOOTING PLAN

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 46 (INCL. 1 TEST PILE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

IND. INDICATES CONCRETE REMOVAL

STANLEY CONSULTANTS

PIER NO. 16 - WEST END

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+45

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

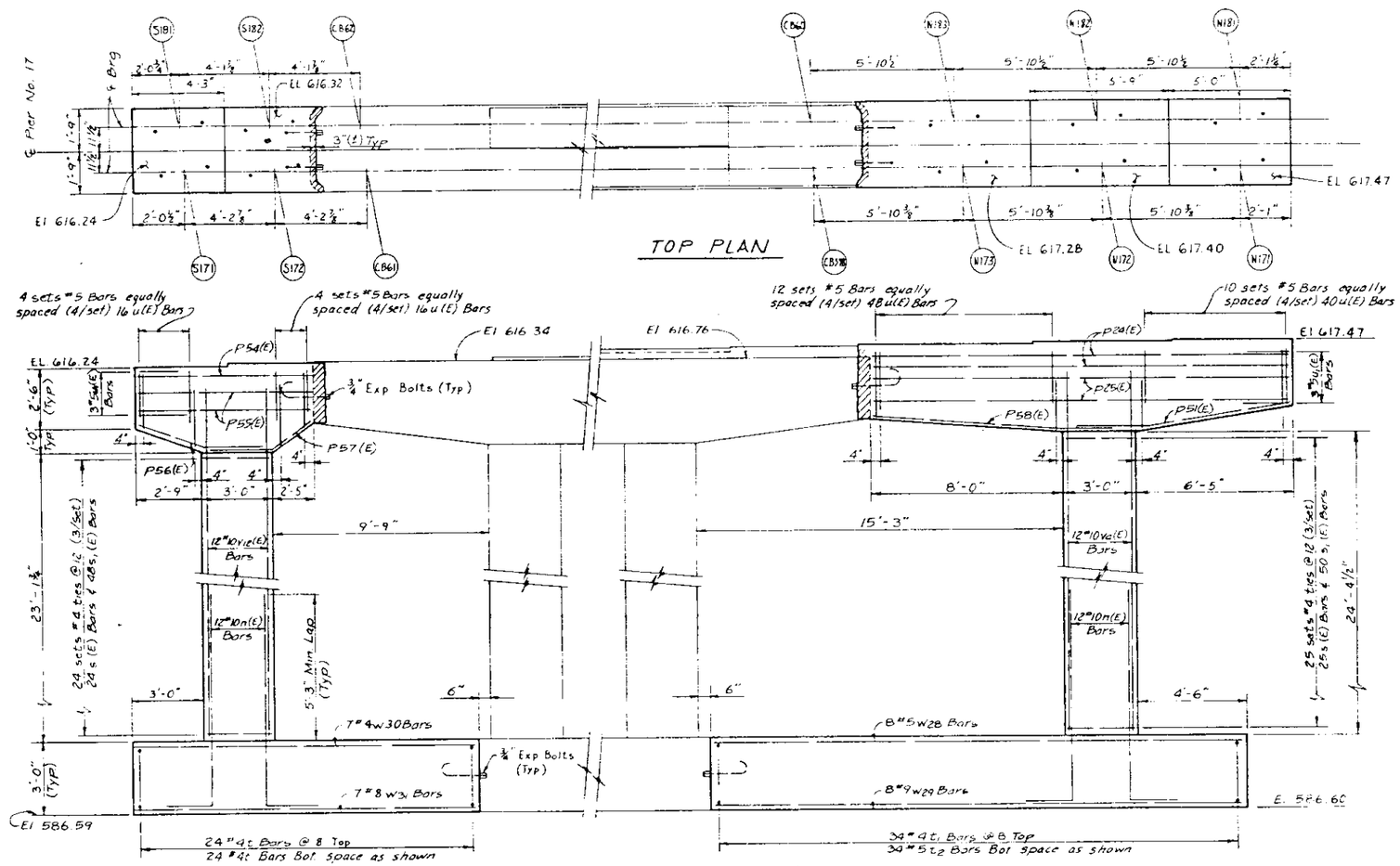
NORTH

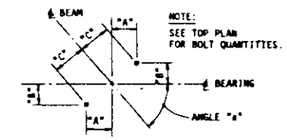
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		434	333
F.A.I. RTE. 94	ILLINOIS	FED. AID PROJECT		

SHEET NO. 72
SHEETS

• 1990-073BY

SHEET NO. C255 OF C347

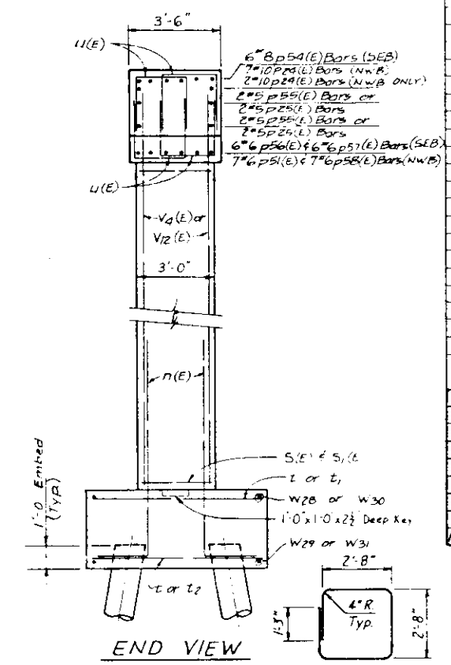




NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

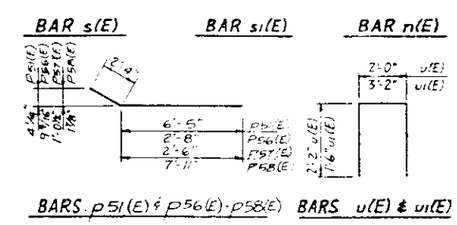
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S171	88°38'03"	1'-2 1/4"	5/16"	1'-2 1/4"
S172	86°53'20"	1'-2 1/4"	3/4"	1'-2 1/4"
N171	89°01'58"	1'-2 1/4"	1/4"	1'-2 1/4"
N172	89°04'00"	1'-2 1/4"	1/4"	1'-2 1/4"
N173	89°06'01"	1'-2 1/4"	1/4"	1'-2 1/4"
S181	87°17'27"	1'-2 1/4"	11/16"	1'-2 1/4"
S182	86°12'52"	1'-2 1/4"	15/16"	1'-2 1/4"
N181	87°59'52"	1'-2 1/4"	1/2"	1'-2 1/4"
N182	87°59'03"	1'-2 1/4"	1/2"	1'-2 1/4"
N183	87°58'14"	1'-2 1/4"	1/2"	1'-2 1/4"



BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	24	#10	10'-0"	
p24(E)	9	#10	17'-4"	
p25(E)	4	#5	17'-4"	
p51(E)	7	#6	1'-8" 9"	
p54(E)	6	#5	5'-1"	
p55(E)	4	#5	5'-1"	
p56(E)	6	#6	5'-0"	
p57(E)	[illegible]	#5	4'-10"	
p58(E)	[illegible]	#6	2'-3"	
s(E)	48	#4	11'-8"	
s1(E)	98	#4	8'-8"	
t	48	#4	6'-8"	
t1	34	#4	6'-8"	
t2	34	#5	6'-8"	
u(E)	120	#5	6'-4"	
u1(E)	6	#5	6'-2"	
V4(E)	12	#10	26'-6"	
V12(E)	12	#10	25'-7"	
W30	7	#4	15'-1"	
W31	7	#8	14'-11"	
W28	8	#5	21'-11"	
W29	8	#9	21'-11"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	6690	
REINFORCEMENT BARS		LBS.	700	
CLASS "X" CONCRETE		CU. YDS.	53.3	
CONCRETE REMOVAL		CU. YDS.	2	
3/4" EXPANSION BOLTS		EA.	6	
1" EXPANSION BOLTS		EA.	-	
FURNISHING CONC PILES		LIN. FT.	434	
DRIVING CONC PILES		LIN. FT.	434	
TEST PILES		EACH	2	
STRUCTURE EXCAVATION		CU. YDS.	106.9	



THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 16 (INCL. 2 TEST PILES, ONE EACH SIDE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

STANLEY CONSULTANTS

PIER NO. 17

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

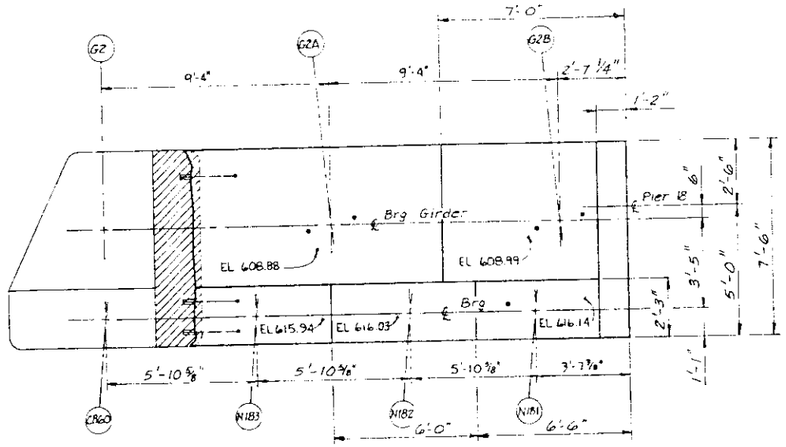
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	334
F.A.I. NO. & REG. 4	ILLINOIS	FED. AID PROJECT		

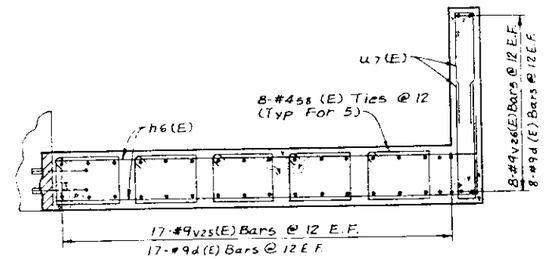
SHEET NO. 73 SHEETS

* 1990-073BY

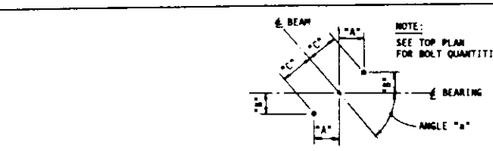
SHEET NO. C256 OF C317



TOP PLAN



PLAN-SECTION A-A

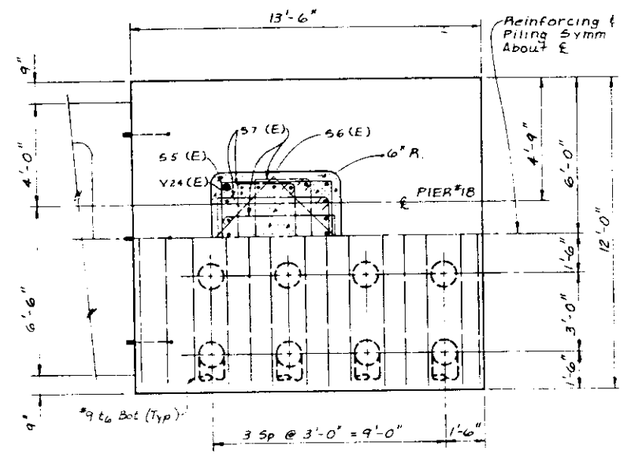


ANCHOR BOLT LAYOUT

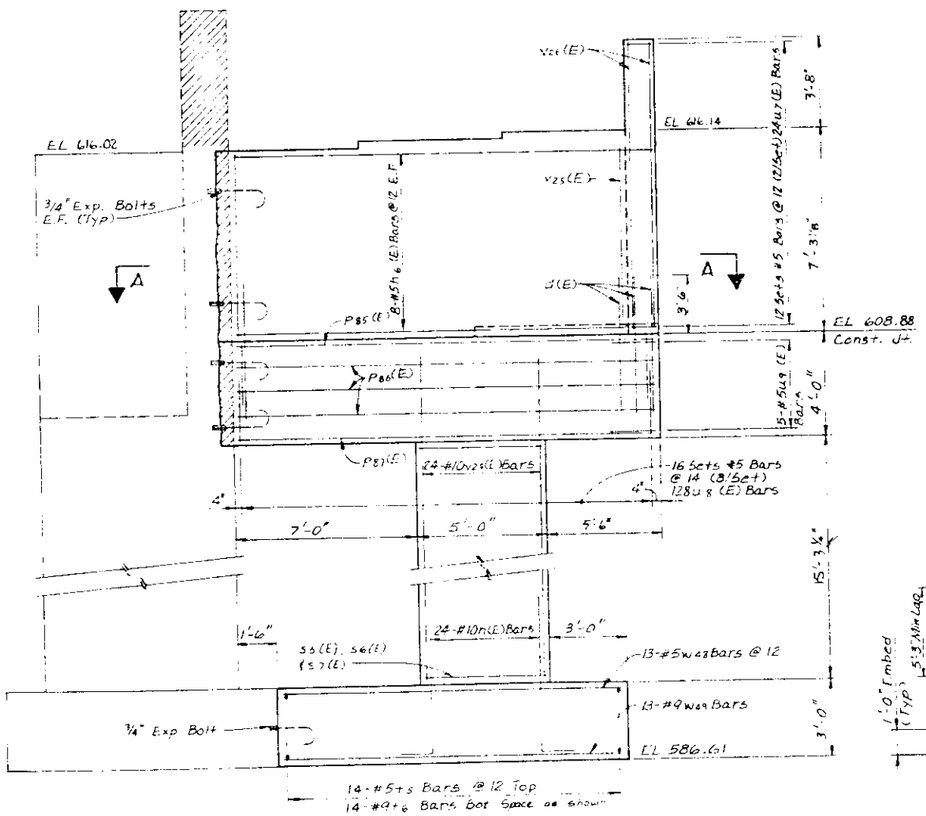
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
G2A	89°24'15"	11"	1/8"	11"
G2B	88°35'32"	11"	1/4"	11"
N181	90°37'49"	1'-1 3/4"	1/8"	1'-1 3/4"

BILL OF MATERIAL

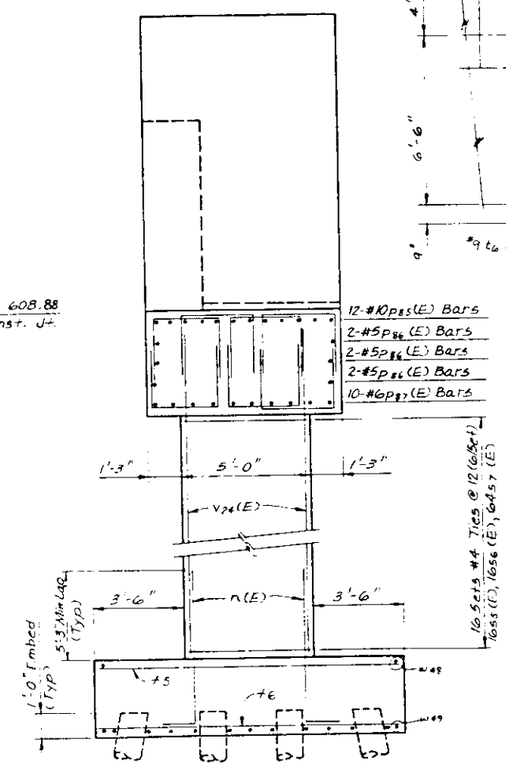
BAR	NO.	SIZE	LENGTH	SHAPE
Q(E)	50	#9	7'-0"	
N6(E)	16	#5	18'-5"	
n(E)	24	#10	10'-0"	
P85(E)	12	#10	17'-5"	
P86(E)	6	#5	17'-5"	
P87(E)	10	#6	17'-5"	
S5(E)	16	#4	19'-4"	
S6(E)	16	#4	13'-9"	
S7(E)	64	#4	14'-9"	
S8(E)	40	#4	8'-9"	
T5	14	#5	11'-0"	
T6	14	#9	11'-8"	
U7(E)	24	#5	9'-6"	
U8(E)	128	#5	10'-8"	
U9(E)	5	#9	10'-2"	
V24(E)	24	#10	17'-0"	
V25(E)	34	#9	7'-0"	
V26(E)	16	#9	10'-0"	
W48	13	#5	13'-2"	
W49	13	#9	13'-2"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	9970
REINFORCEMENT BARS			LBS.	1490
CLASS "X" CONCRETE			CU. YDS.	64.2
CONCRETE REMOVAL			CU. YDS.	3.2
3/4" EXPANSION BOLTS			EA.	8
1" EXPANSION BOLTS			EA.	6
FURNISHING CONC PILES			LIN. FT.	465
DRIVING CONC PILES			LIN. FT.	465
TEST PILES (CONCRETE)			EACH	1
STRUCTURE EXCAVATION			CU. YDS.	62.2



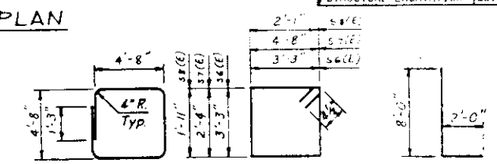
FOOTING PLAN



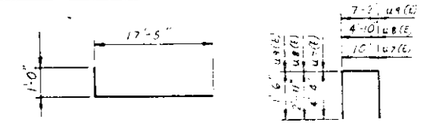
ELEVATION



END VIEW



BAR s5(E) BARS s6(E), s7(E) & s8(E) BAR n(E)



BAR h6(E) BARS u7(E), u8(E) & u9(E)

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE (1/4" WALL)
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 16 (INCL. 1 TEST PILE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

STANLEY CONSULTANTS

PIER NO. 18 – EAST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

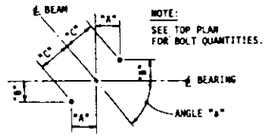
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	335
F.A.I. NO. & REG. #	ILLINOIS	FED. AID PROJECT		

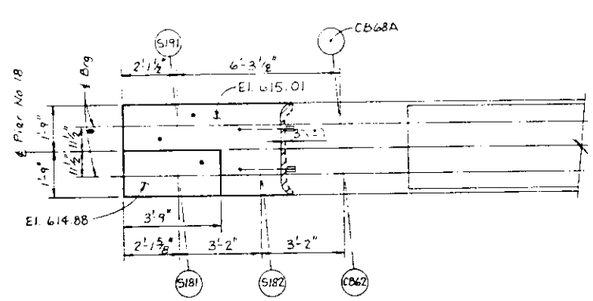
SHEET NO. 74 SHEETS

* 1990-073BY SHEET NO. C257 OF C317

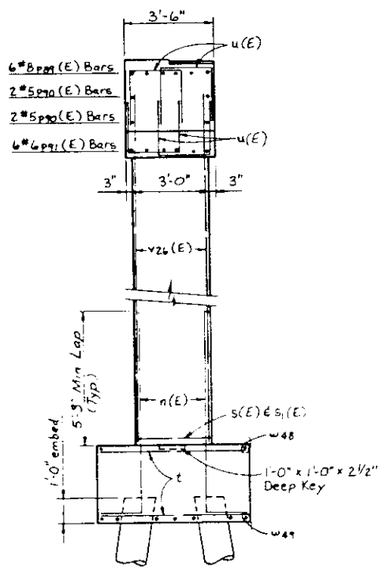


ANCHOR BOLT LAYOUT

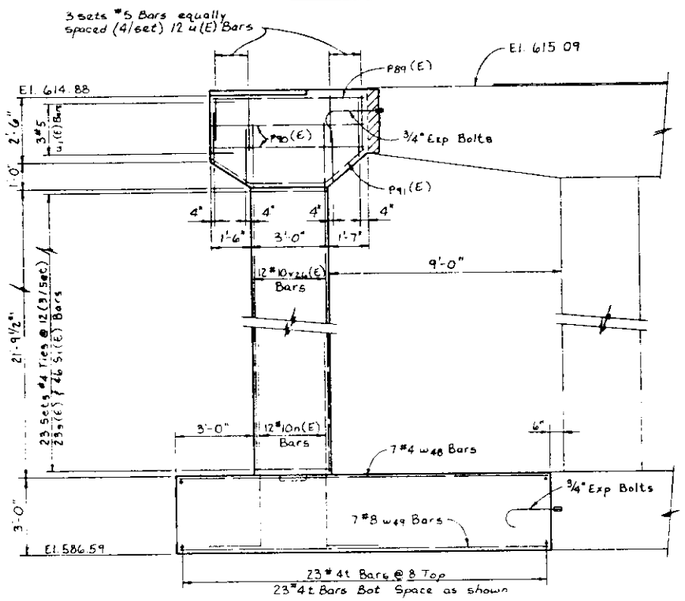
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S181	89°55'24"	1'-1 3/4"	-	1'-1 3/4"
S191	88°36'12"	1'-2 1/4"	3/8"	1'-2 1/4"



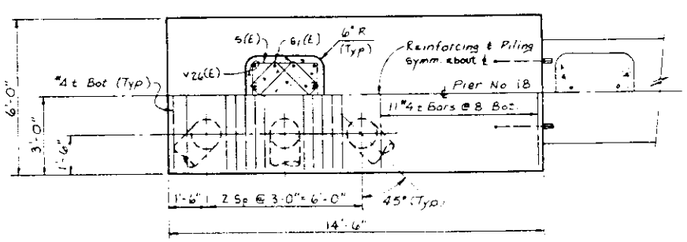
TOP PLAN



END VIEW



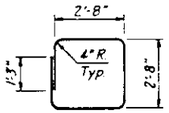
ELEVATION



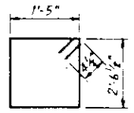
FOOTING PLAN

BILL OF MATERIAL

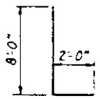
BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#7	10'-9"	
p89(E)	6	#8	6'-0"	
p90(E)	4	#5	6'-0"	
p91(E)	6	#6	6'-7"	
s(E)	23	#4	11'-4"	
s1(E)	46	#4	8'-8"	
t	46	#4	5'-8"	
u(E)	24	#5	6'-4"	
u1(E)	3	#5	6'-2"	
v26(E)	12	#10	24'-5"	
w48	7	#4	14'-2"	
w49	7	#8	14'-2"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.		2580
REINFORCEMENT BARS		LBS.		510
CLASS "X" CONCRETE		CU. YDS.		19.3
CONCRETE REMOVAL		CU. YDS.		.3
3/4" EXPANSION BOLTS		EA.		-
1" EXPANSION BOLTS		EA.		-
FURNISHING CONC PILES		LIN. FT.		186
DRIVING CONC PILES		LIN. FT.		186
TEST PILES		EACH		-
STRUCTURE EXCAVATION		CU. YDS.		4[illegible]



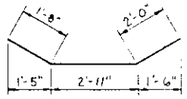
BAR s(E)



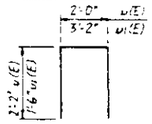
BAR s1(E)



BAR n(E)



BAR p91(E)



BARS u(E) & u1(E)

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 6

PIER NO. 18 - WEST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

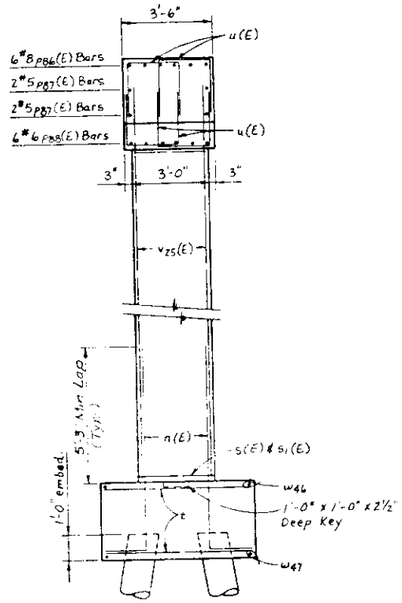
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

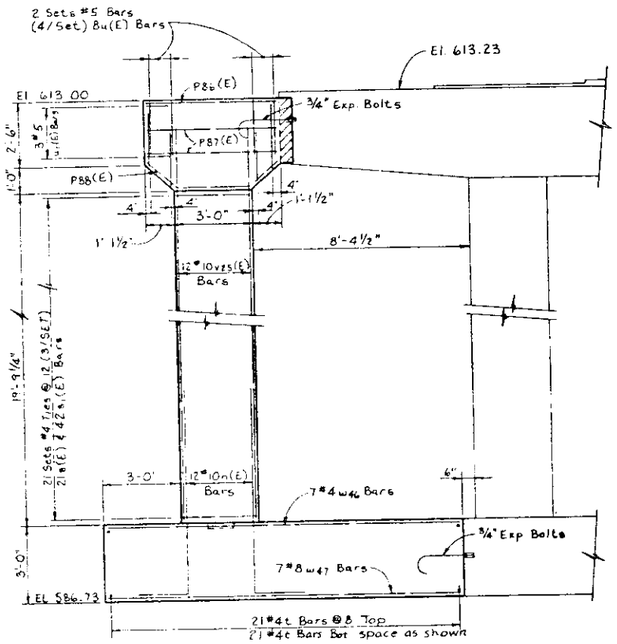
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	336
F.A.I. RTE. 4		ILLINOIS FED. AID PROJECT		

SHEET NO. 75
SHEETS

* 1990-073BY SHEET NO. C258 OF C317

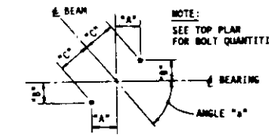


END VIEW



ELEVATION

TOP PLAN



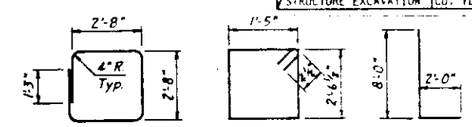
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

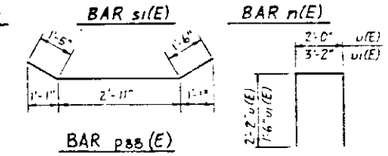
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S191	88°36'12"	1'-1 3/4"	5/16"	1'-1 3/4"
S201	87°13'55"	1'-1 3/4"	11/16"	1'-1 3/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
(E)	12	#10	10'-0"	
P86(E)	6	#8	5'-2"	
P87(E)	4	#5	5'-2"	
P88(E)	6	#6	5'-10"	
S(E)	21	#4	11'-4"	
S1(E)	42	#4	8'-8"	
T	42	#4	5'-8"	
U(E)	16	#5	6'-4"	
U1(E)	3	#5	6'-2"	
V25(E)	12	#10	22'-1"	
W46	7	#4	13'-6"	
W47	7	#8	13'-6"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	2340
REINFORCEMENT BARS			LBS.	470
CLASS "X" CONCRETE			CU. YDS.	17.7
CONCRETE REMOVAL			CU. YDS.	-
3/4" EXPANSION BOLTS			EA.	4
1" EXPANSION BOLTS			EA.	-
FURNISHING CONC PILES			LIN. FT.	186
DRIVING CONC PILES			LIN. FT.	186
TEST PILES			EACH	-
STRUCTURE EXCAVATION			CU. YDS.	35.7

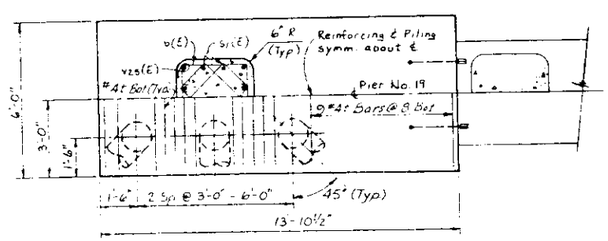


BAR s(E) BAR s1(E) BAR n(E)



BAR P88(E)

BARS u(E) & u1(E)



FOOTING PLAN

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 6

PIER NO. 19

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

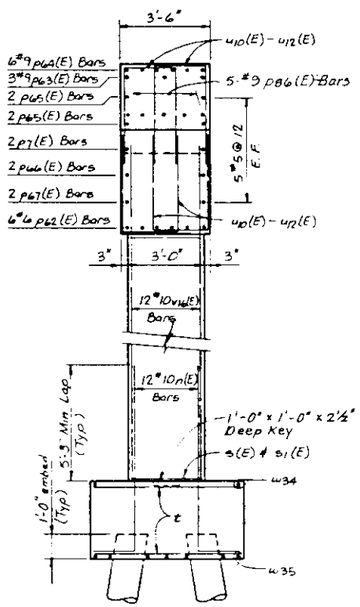
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	337
F. HW. & REG. 4		ILLINOIS	FED. AID PROJECT	

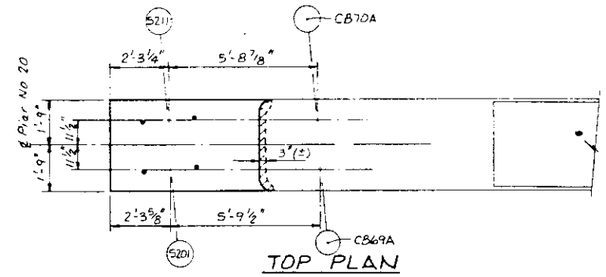
SHEET NO. 76
SHEETS

* 1990-073BY

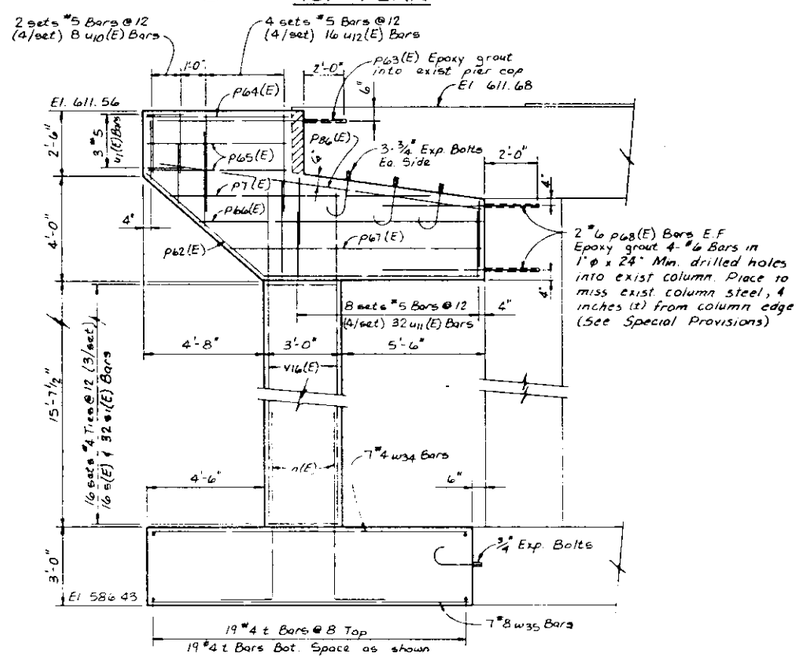
SHEET NO. C259 F C317



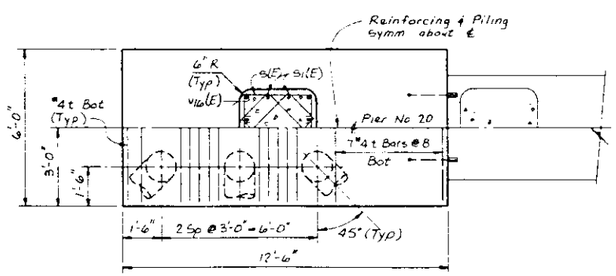
END VIEW



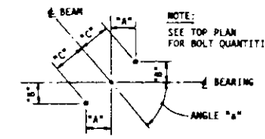
TOP PLAN



ELEVATION



FOOTING PLAN



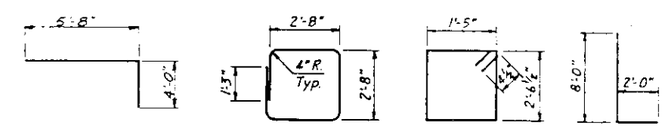
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

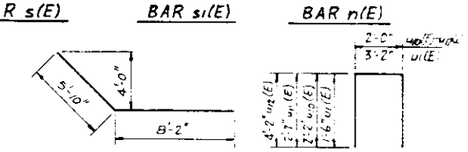
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S201	87°13'55"	1'-2 1/4"	11/16"	1'-2 1/4"
S211	86°00'50"	1'-2 3/16"	1"	1'-2 1/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
V(E)	12	#10	10'-0"	
p7(E)	2	#5	9'-11"	
p62(E)	6	#6	14'-0"	
p63(E)	3	#9	7'-10"	
p64(E)	6	#9	9'-8"	
p65(E)	4	#5	5'-8"	
p66(E)	2	#5	10'-10"	
p67(E)	2	#5	9'-8"	
p68(E)	4	#6	6'-0"	
p86(E)	5	#9	12'-0"	
s(E)	16	#4	11'-4"	
s1(E)	32	#4	8'-8"	
t	38	#4	5'-8"	
u1(E)	3	#5	6'-2"	
u10(E)	8	#5	6'-4"	
u11(E)	32	#5	7'-2"	
u12(E)	16	#5	10'-4"	
v16(E)	12	#10	12'-6"	
w34	7	#4	12'-0"	
w35	7	#8	12'-0"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	2990
REINFORCEMENT BARS			LBS.	430
CLASS "X" CONCRETE			CU. YDS.	20.4
CONCRETE REMOVAL			CU. YDS.	
3/4" EXPANSION BOLTS			EA.	4
1" EXPANSION BOLTS			EA.	
FURNISHING CONC PILES			LIN. FT.	186
DRIVING CONC PILES			LIN. FT.	186
TEST PILES			EACH	—
STRUCTURE EXCAVATION			CU. YDS.	36.0



BAR p64(E) BAR s(E) BAR s1(E) BAR n(E)



BAR p62(E) BARS u1(E) & u10(E)-u12(E)

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 6

STANLEY CONSULTANTS

PIER NO. 20

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

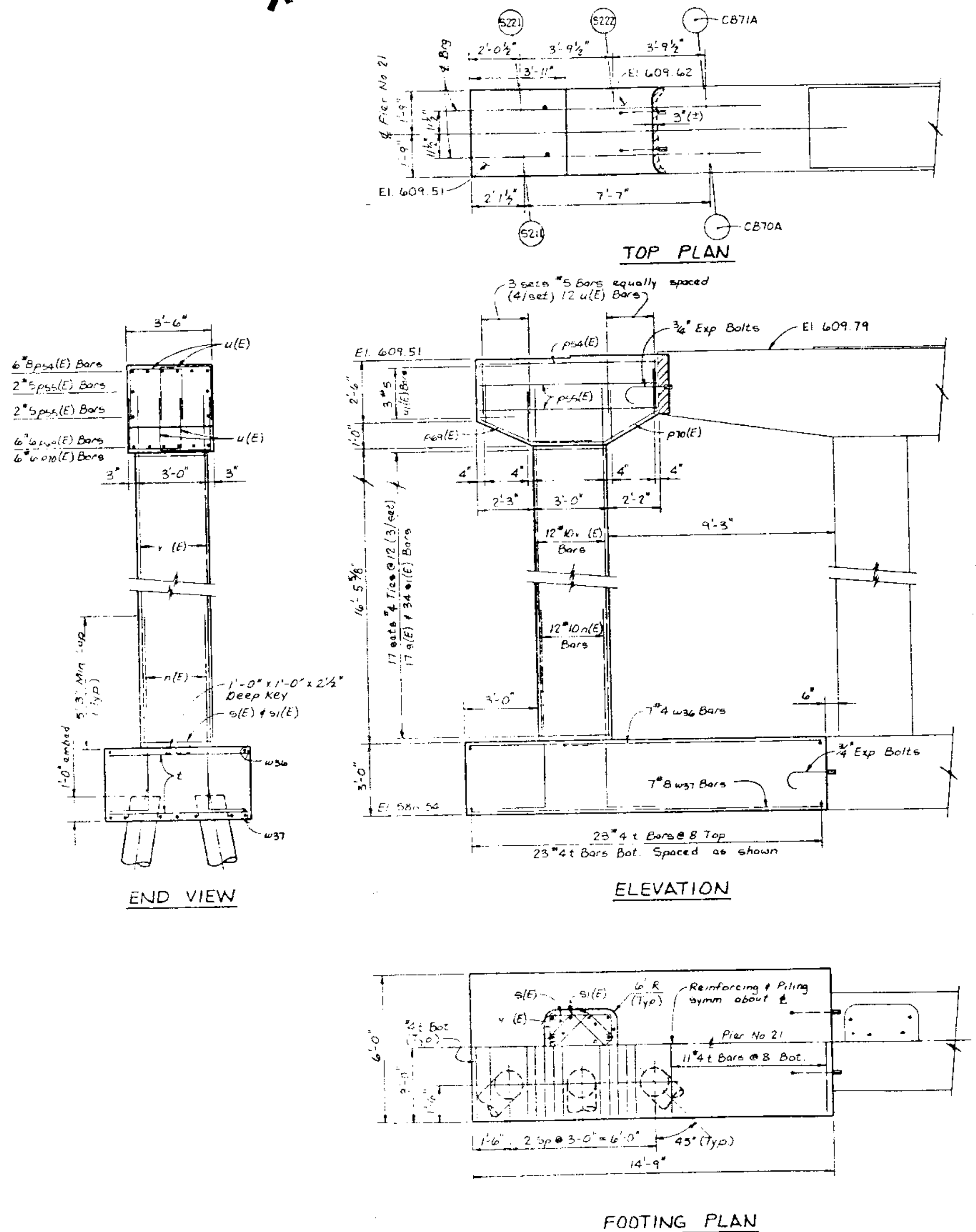
COOK COUNTY

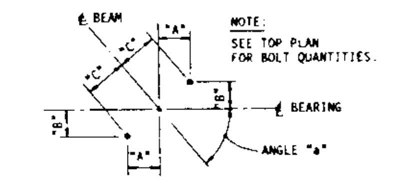
STATION 408+45

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY			SHEET NO. 77 SHEETS
	•		434	338	
F.A. REG. 4		ILLINOIS FED. AID PROJECT			

• 1990-073BY SHEET NO. 0260 OF 0317



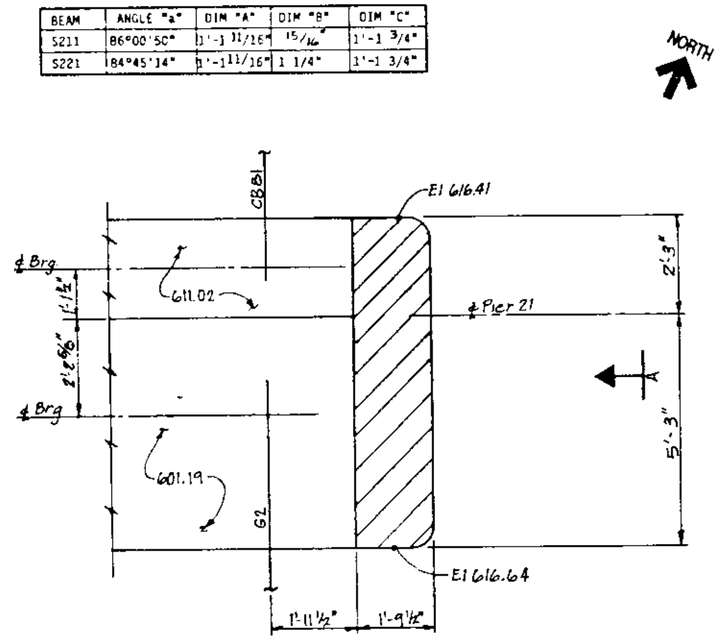


ANCHOR BOLT LAYOUT

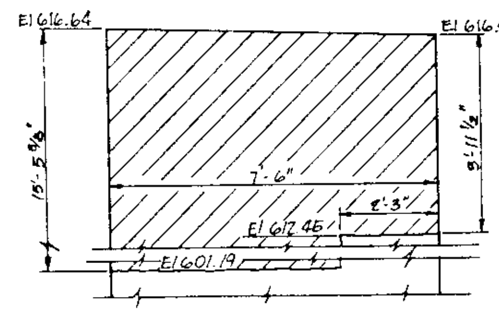
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S211	86°00'50"	1'-1 11/16"	15/16"	1'-1 3/4"
S221	84°45'14"	1'-1 11/16"	1 1/4"	1'-1 3/4"

BILL OF MATERIAL

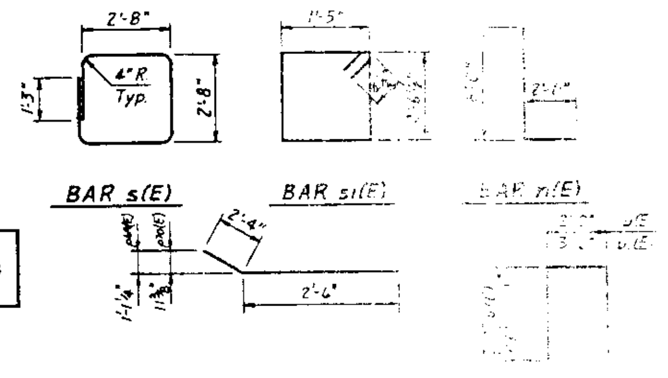
BAR	NO.	SIZE	LENGTH	SHAPE
D(E)	12	[illegible]	[illegible]	
P54(E)	[illegible]	[illegible]	[illegible]	
P55(E)	4	#5	[illegible]	
P69(E)	6	[illegible]	[illegible]	
P70(E)	[illegible]	[illegible]	[illegible]	
S(E)	17	#4	[illegible]	
S1(E)	34	[illegible]	[illegible]	
t	46	#4	[illegible]	
U(E)	[illegible]	#5	[illegible]	
U1(E)	3	#5	[illegible]	
V(E)	[illegible]	[illegible]	[illegible]	
W36	[illegible]	[illegible]	[illegible]	
W37	[illegible]	[illegible]	[illegible]	
REINFORCEMENT BARS (EPOXY COATED)		LBS.		
REINFORCEMENT BARS		LBS.		
CLASS "X" CONCRETE		CU. YDS.		
CONCRETE REMOVAL		CU. YDS.		[illegible]
3/4" EXPANSION BOLTS		[illegible]		
1" EXPANSION BOLTS		[illegible]		
FURNISHING [illegible]		[illegible] FT.		
DRIVING CONC PILES		[illegible] FT.		
TEST PILES		EACH		
STRUCTURE EXCAVATION		CU. YDS.		



PLAN - MASK WALL REMOVAL NWB SIDE



ELEVATION A



THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS AND MASK WALL REMOVAL DETAILS.

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 6 (INCL. 1 TEST PILE)

PIER NO. 21

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+43

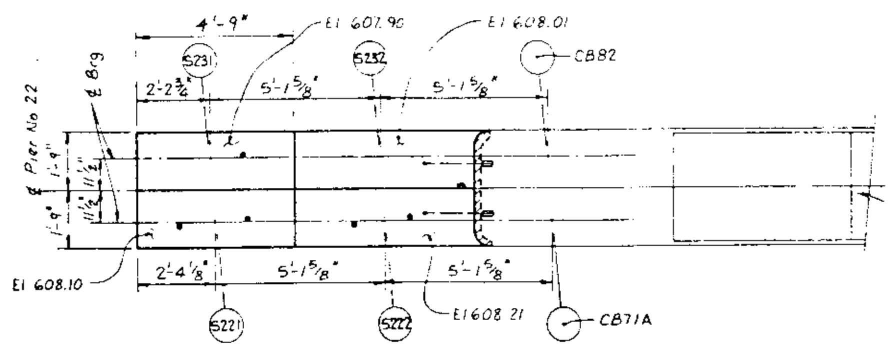
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

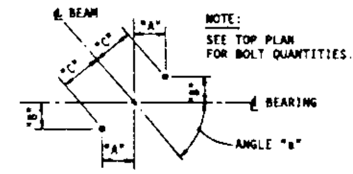
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	339
F. HW. A. REG. 4	ILLINOIS FED. AID PROJECT			

SHEET NO. 78
SHEETS

* 1990-073BY SHEET NO. C261 OF C317



TOP PLAN



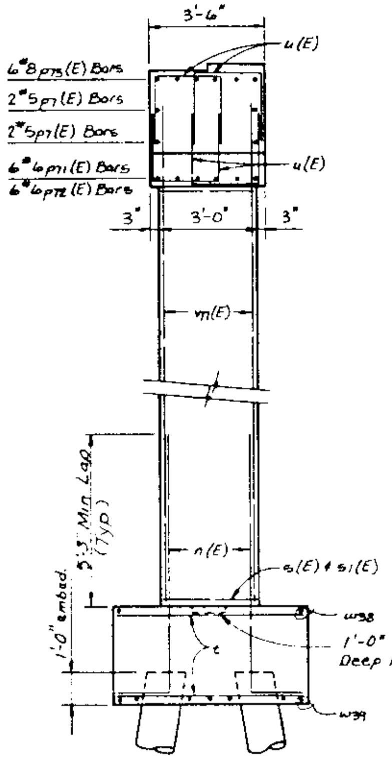
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S221	84°45'14"	1'-2 3/16"	1 5/16"	1'-2 1/4"
S222	86°16'21"	1'-2 1/4"	15/16"	1'-2 1/4"
S231	83°15'48"	1'-1 5/8"	1 5/8"	1'-1 3/4"

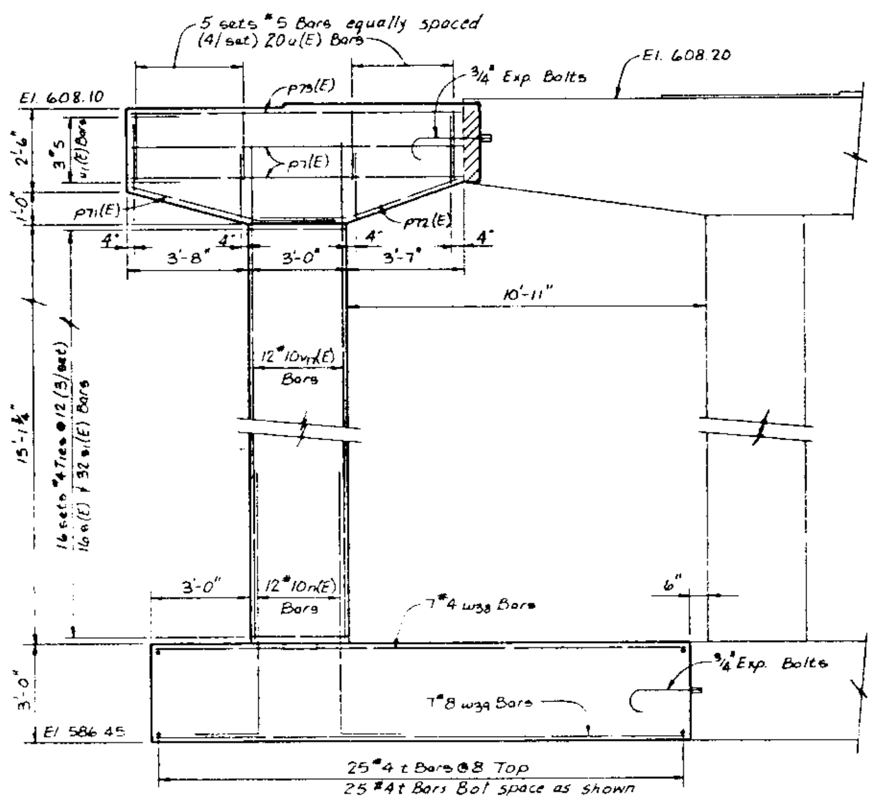
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#10	10'-0"	
P7(E)	4	#5	10'-2"	
P71(E)	6	#6	5'-10"	
P72(E)	6	#6	5'-9"	
P73(E)	6	#8	10'-2"	
S(E)	16	#4	11'-4"	
S1(E)	32	#4	8'-8"	
t	50	#4	5'-8"	
U(E)	40	#5	6'-4"	
U1(E)	3	#5	8'-2"	
V17(E)	12	#10	17'-6"	
W38	7	#4	16'-1"	
W39	7	#8	16'-1"	

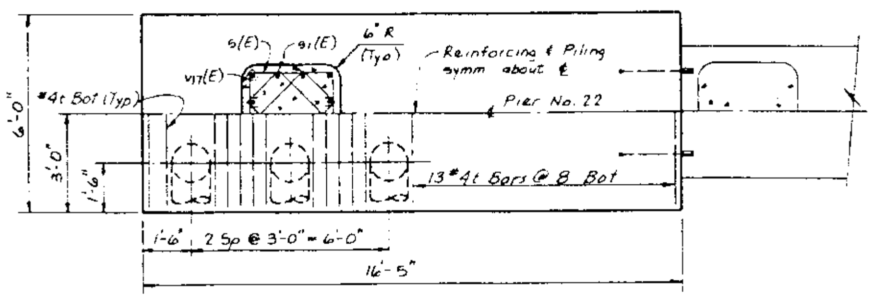
REINFORCEMENT BARS (EPOXY COATED)	LBS.	2,320
REINFORCEMENT BARS	LBS.	570
CLASS "X" CONCRETE	CU. YDS.	20.[illegible]
CONCRETE REMOVAL	CU. YDS.	[illegible]
3/4" EXPANSION BOLTS	EA.	[illegible]
1" EXPANSION BOLTS	EA.	-
FURNISHING CONC PILES	LIN. FT.	186
DRIVING CONC PILES	LIN. FT.	186
TEST PILES	EACH	—
STRUCTURE EXCAVATION	CU. YDS.	45.[illegible]



END VIEW



ELEVATION



FOOTING PLAN

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

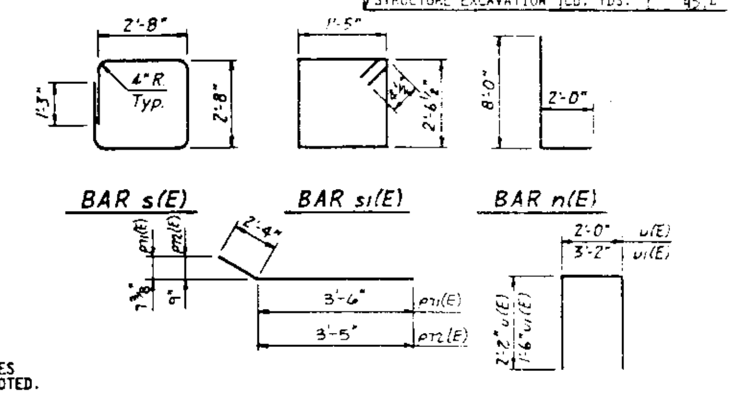
(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 6



BAR s(E) BAR s1(E) BAR n(E)

BARS p71(E) & p72(E) BARS u(E) & u1(E)

PIER NO. 22

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

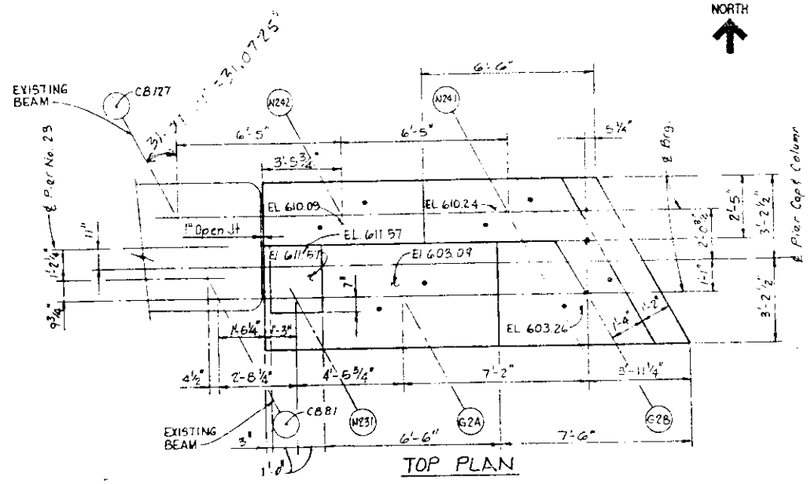
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

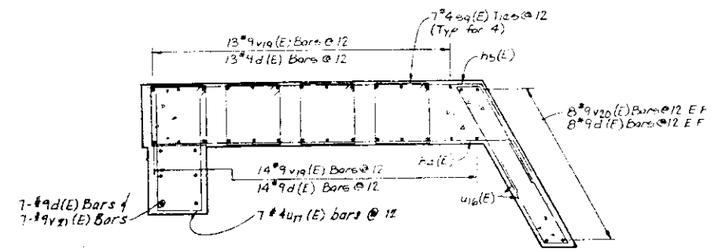
SHEET NO. 79
SHEETS

* 1990-0358 SHEET NO. 2002 OF CM7

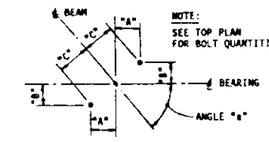
NORTH



TOP PLAN



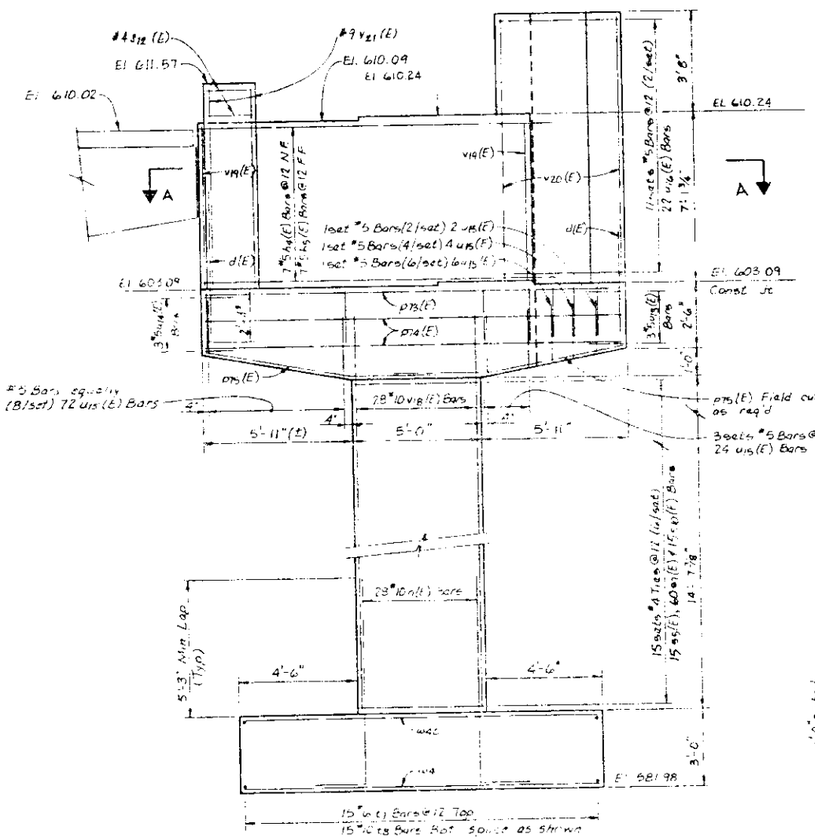
PLAN-SECTION A-A



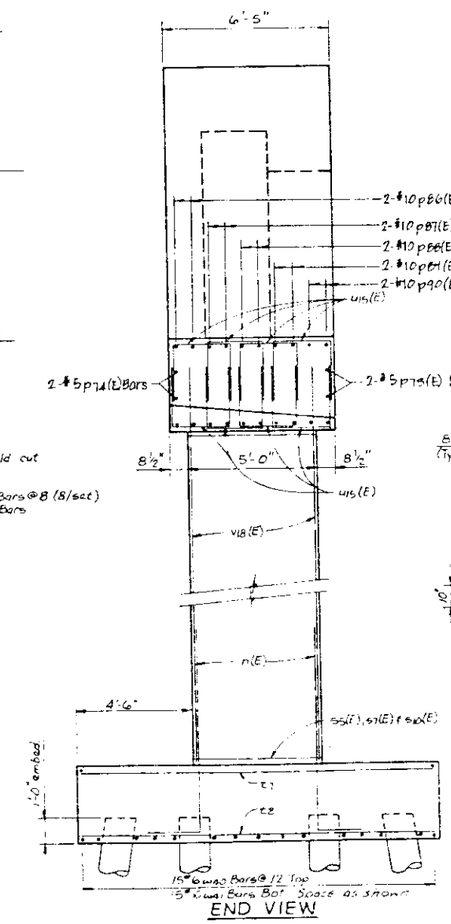
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

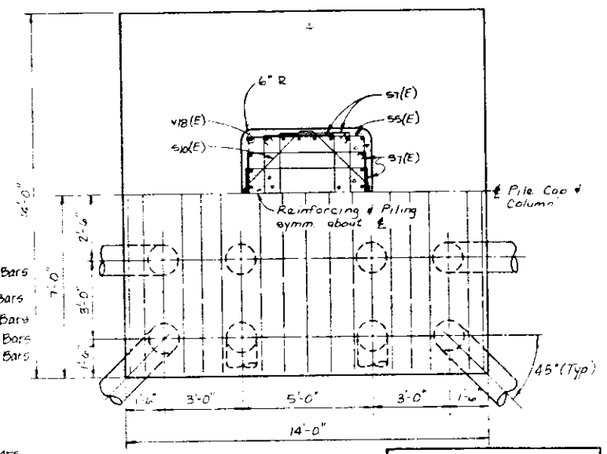
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
G26	61°22'20"	9 5/8"	5 1/4"	11"
N241	60°47'30"	1'-0 7/16"	6 15/16"	1'-2 1/4"
N242	62°24'22"	1'-0 5/8"	6 5/8"	1'-2 1/4"
G2A	62°11'03"	9 3/4"	5 1/8"	11"



ELEVATION



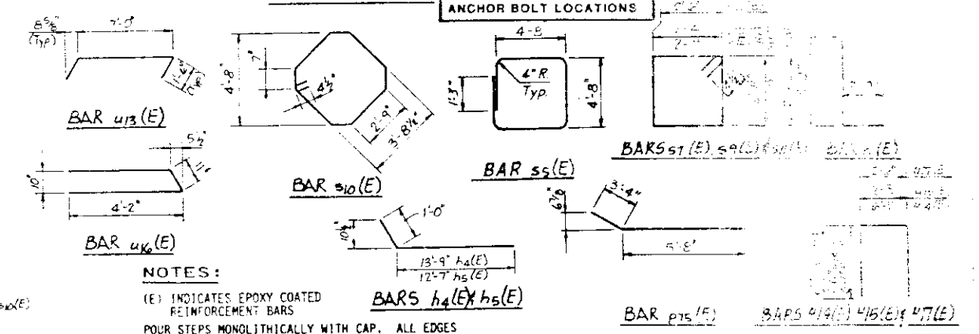
END VIEW



FOOTING PLAN

THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

BILL OF MATERIAL



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE (1/4" WALL)
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 16 (INCL. 1 TEST PILE.

STANLEY CONSULTANTS

PIER NO. 20 - EAST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 406+3.

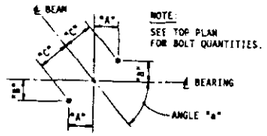
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	341
F.A.I. RTE. & RTE. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. BC SHEETS

* 1990-073BY

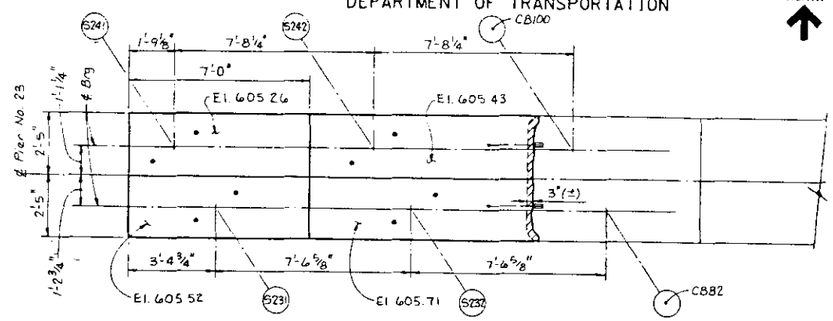
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

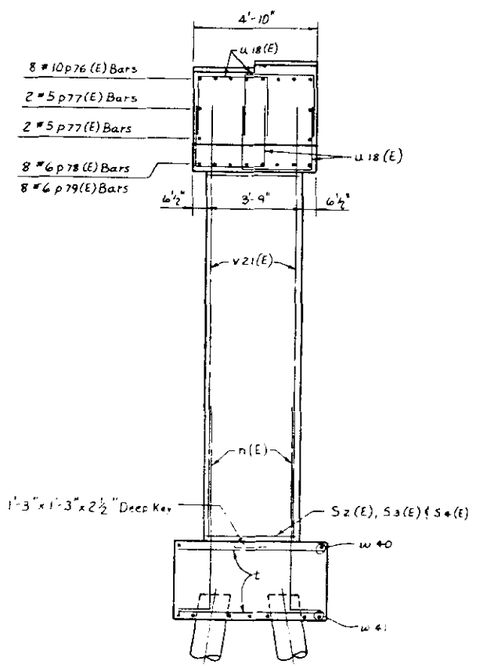


ANCHOR BOLT LAYOUT

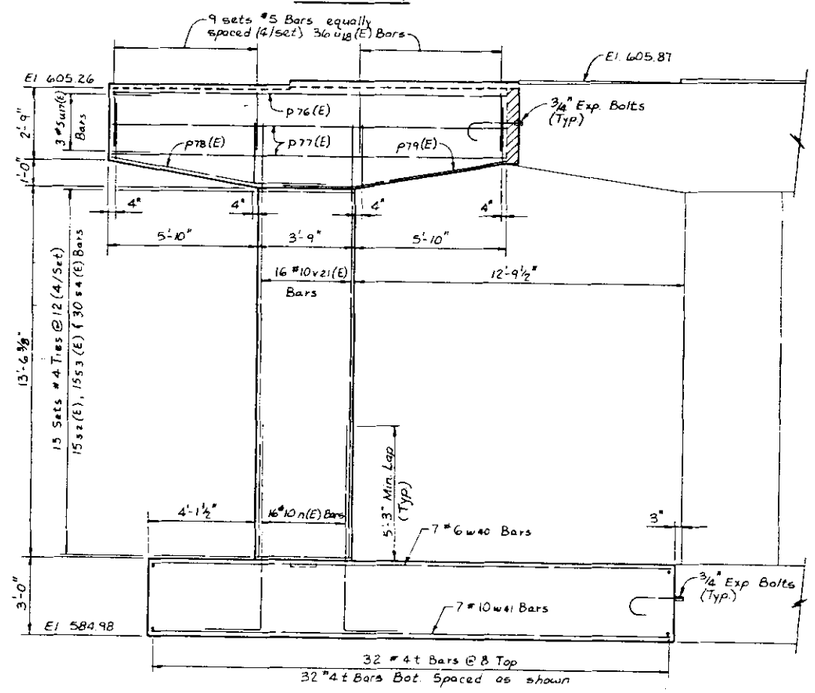
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S231	56°02'36"	11 13/16"	7 15/16"	1'-2 1/4"
S232	56°54'54"	11 15/16"	7 3/4"	1'-2 1/4"
S241	53°52'09"	11 1/2"	8 3/8"	1'-2 1/4"
S242	52°19'12"	11 1/4"	8 11/16"	1'-2 1/4"



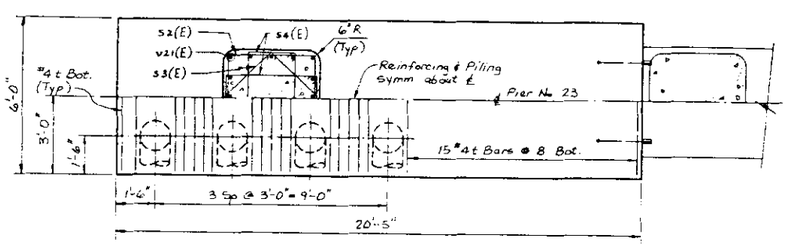
TOP PLAN



END VIEW



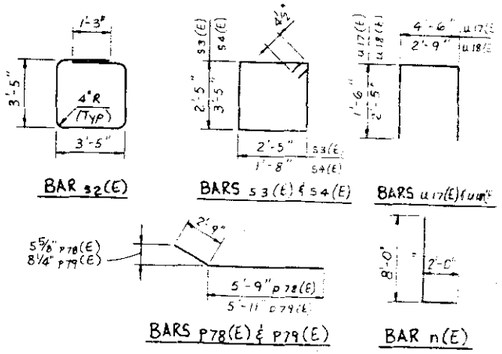
ELEVATION



FOOTING PLAN

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	16	#10	10'-0"	
P76(E)	8	#10	15'-4"	
P77(E)	4	#5	15'-4"	
P78(E)	8	#6	8'-6"	
P79(E)	8	#6	8'-2"	
S2(E)	15	#4	14'-4"	
S3(E)	15	#4	10'-5"	
S4(E)	30	#4	10'-11"	
t	64	#4	5'-8"	
U17(E)	3	#5	7'-6"	
U18(E)	72	#5	7'-7"	
V21(E)	16	#10	36'-9"	
W40	7	#6	20'-3"	
W41	7	#10	23'-3"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	3700	
REINFORCEMENT BARS		LBS.	1060	
CLASS "X" CONCRETE		CU. YDS.	30.3	
CONCRETE REMOVAL		CU. YDS.	[illegible]	
3/4" EXPANSION BOLTS		EA.	4	
1" EXPANSION BOLTS		EA.	—	
FURNISHING CONC PILES		LIN. FT.	217	
DRIVING CONC PILES		LIN. FT.	217	
TEST PILES		EACH	1	
STRUCTURE EXCAVATION		CU. YDS.	54.3	



THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 8 (INCL. 1 TEST PILE)

STANLEY CONSULTANTS

PIER NO. 23 – WEST END

SECTION

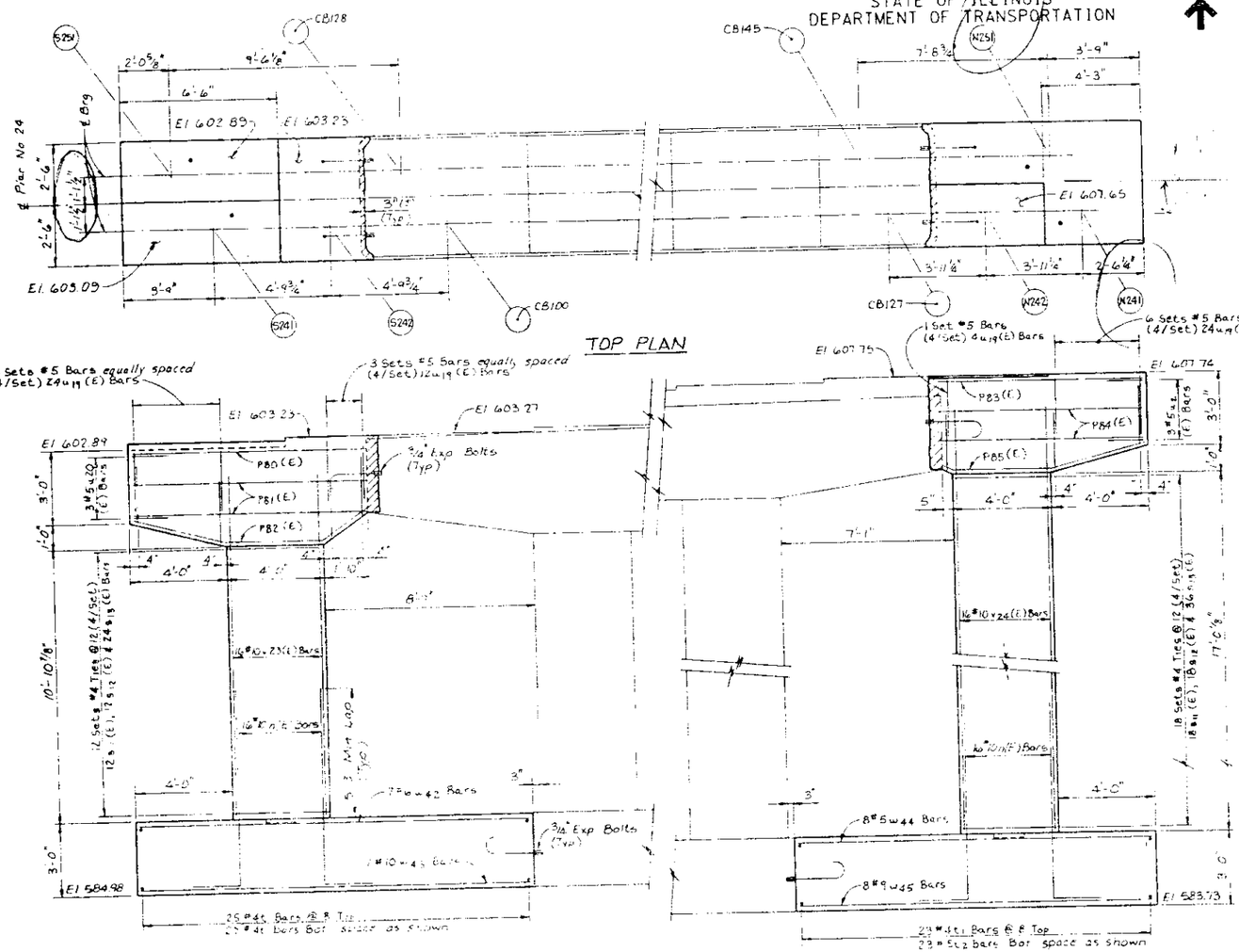
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

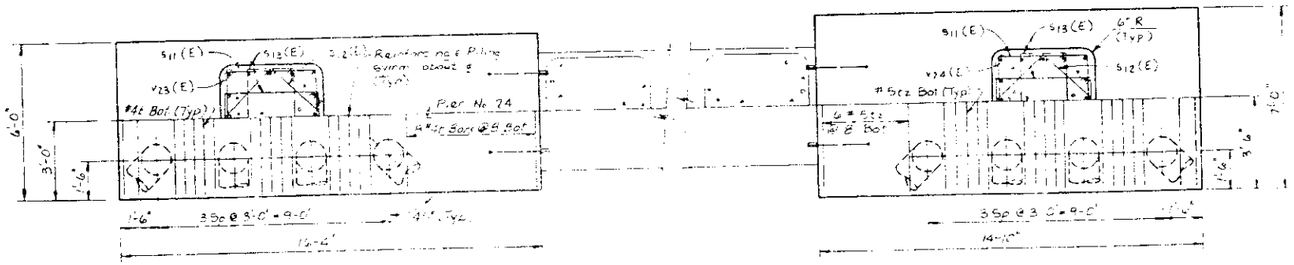
COOK COUNTY

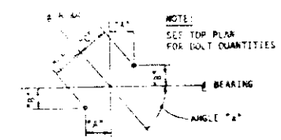
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH

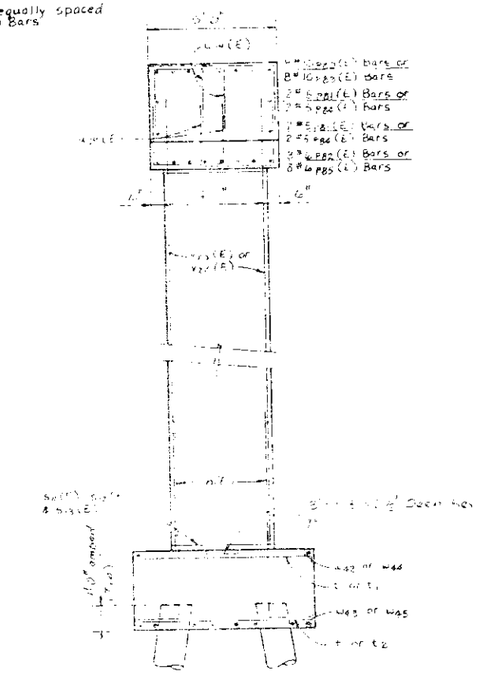


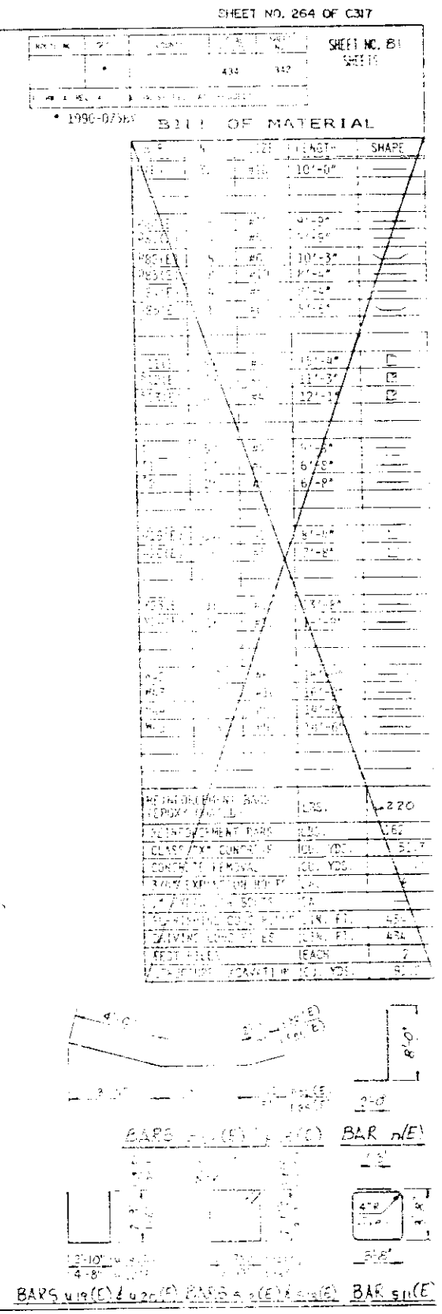




ANCHOR BOLT LAYOUT

REAR	ANGLE "A"	DIM "A"	DIM "B"	DIM "C"
S241	53°45'[illegible]"	[illegible] 1/8"	15 1/8"	[illegible] 3/4"
N241	60°47'30"	1'-0"	16 11/16"	[illegible]'-3 3/4"
S242	52°59'[illegible]"	110 13/16"	18 7/16"	[illegible]'-1 3/4"
N242	61°42'29"	1'-0 1/8"	16 [illegible]	[illegible]'-3 3/4"





THIS SHEET IS INCLUDED ONLY TO PROVIDE BEARING ANCHOR BOLT LOCATIONS

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS.
FOUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES OR DIRECTION SHOWN BY.

▨ INDICATES CONCRETE REMOVAL

PILE DATA

TYPE: 14" METAL SHELL CONCRETE PILE
CAPACITY: 40 TONS
EST. LENGTH: [illegible] FT.
NO. REQUIRED: [illegible] EACH; 2 TEST PILES

PIER NO. 24

SECTION

F.A.I. ROUTE 65/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+[illegible]

STANLEY CONSULTANTS

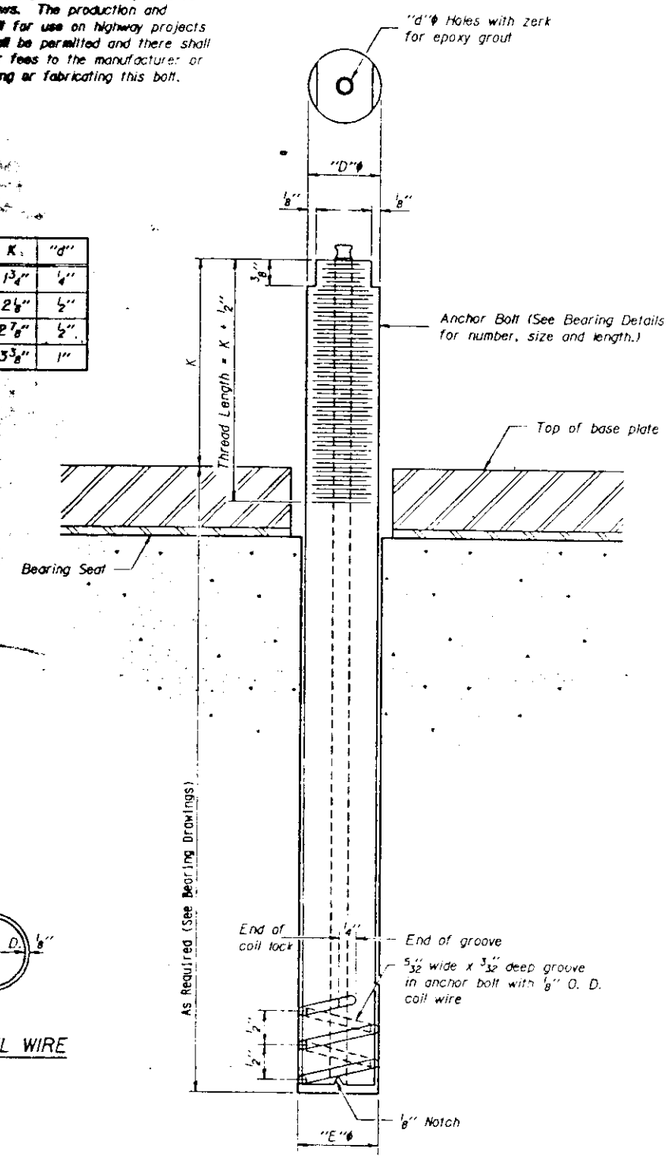
...-Lock Anchor Bolt is a proprietary property of the Illinois Department of ... use, reproduction or disclosure without permission is prohibited and protected ... copyright laws. The production and ... this bolt for use on highway projects ... shall be permitted and there shall ... charges or fees to the manufacturer or ... producing or fabricating this bolt.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

					SHEET NO. 82
			434	343	SHEETS

1990-073BY — SHEET NO. C265 OF C317

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



ILLINOIS COIL-LOCK ANCHOR BOLT

...AN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

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

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

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

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

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

The* anchor bolts, ~~furnished and~~ installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "~~Furnishing and~~ Erecting Structural Steel".

Anchor bolts, washers and nuts, to be plated against corrosion in accordance with the special provisions, shall be zinc-coated by the mechanical plating method conforming to ASTM B695, Class 50. Zinc-coated nuts shall be tapped oversize in accordance with the requirements of AASHTO M291 and shall meet the supplementary requirements S1.1 thru S1.2.1 of the same specifications for lubricant and testing.

*FOR BEAMS ERECTED ONLY

ANCHOR BOLTS

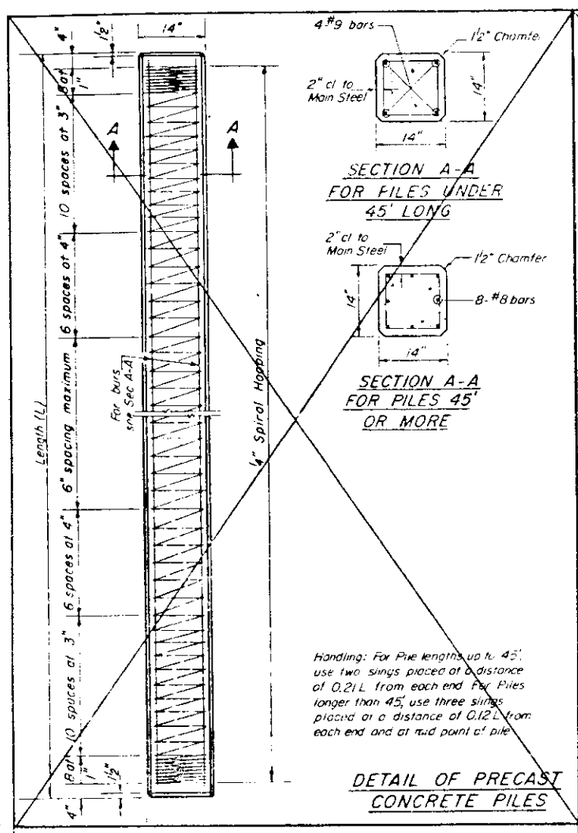
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

			434	384

SHEET NO 83 SHEETS

* 1990-073BY SHEET NO. C266 OF C266

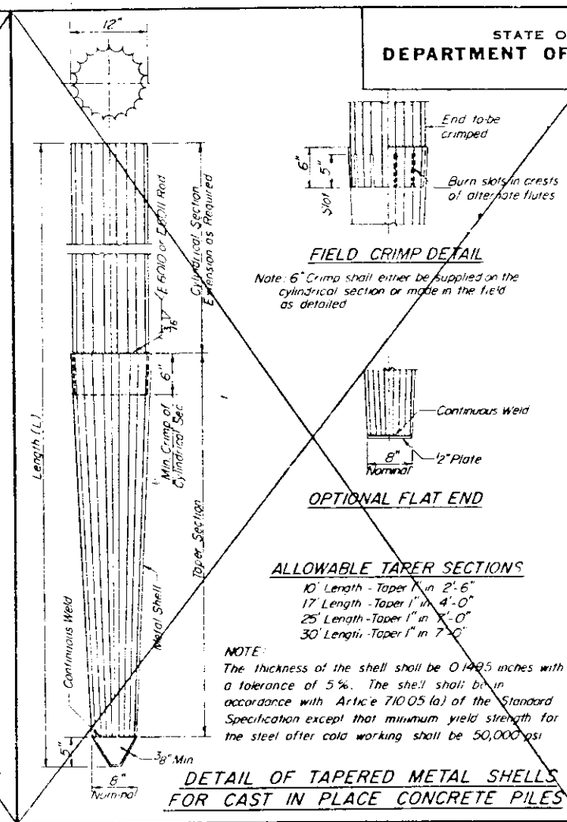


SECTION A-A FOR PILES UNDER 45' LONG

SECTION A-A FOR PILES 45' OR MORE

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.

DETAIL OF PRECAST CONCRETE PILES



DETAIL OF TAPERED METAL SHELLS FOR CAST IN PLACE CONCRETE PILES

FIELD CRIMP DETAIL

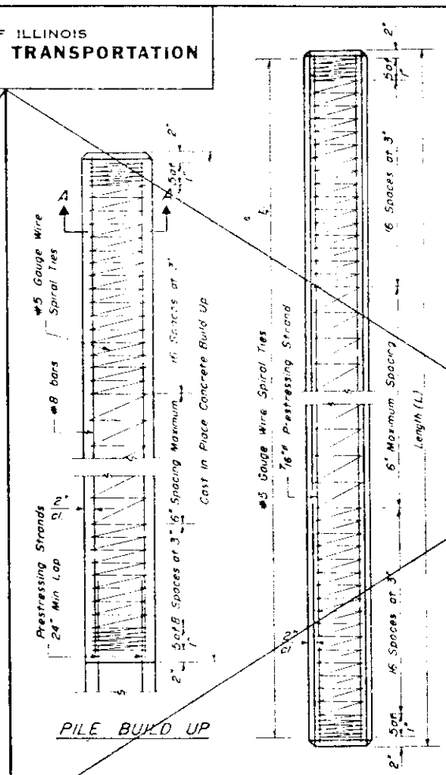
Note: 6" Crimp shall either be supplied on the cylindrical section or made in the field as detailed

OPTIONAL FLAT END

ALLOWABLE TAPER SECTIONS

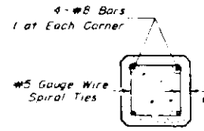
10' Length - Taper 1" in 2'-6"
17' Length - Taper 1" in 4'-0"
25' Length - Taper 1" in 7'-0"
30' Length - Taper 1" in 7'-0"

NOTE:
The thickness of the shell shall be 0.1495 inches with a tolerance of 5%. The shell shall be in accordance with Article 710.05 (a) of the Standard Specification except that minimum yield strength for the steel after cold working shall be 50,000 psi

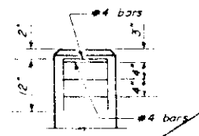


PILE BUILD UP

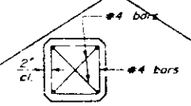
PILE PLAN



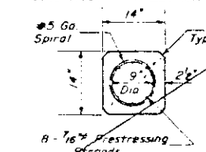
SECTION A-A



ELEVATION
(End Reinforcement)



PLAN
(End Reinforcement)



SECTION THRU PILE

DESIGN STRESSES

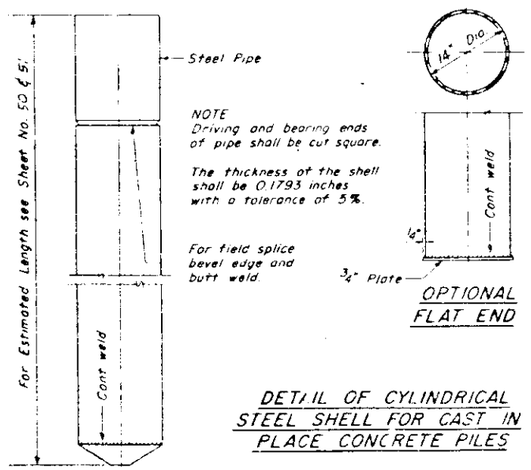
f'_c = 5,000 psi
f'_{ci} = 4,000 psi
f'_s = 270,000 psi (31,000 lbs - 7/16" ϕ or 41,300 lbs - 1/2" ϕ)
f'_{si} = 189,000 psi (21,700 lbs - 7/16" ϕ or 28,900 lbs - 1/2" ϕ)

NOTES

Prestressing steel shall be non-galvanized extra high strength stress-relieved 7-wire strand. The nominal diameter shall be 7/16" and the minimum nominal cross-sectional area shall be 0.115 sq in or the equivalent 6-1/2" ϕ strands with a cross-sectional area of 0.153 sq in may be used.

For Pile lengths up to 65', use two slings placed at a distance of 0.21 L * from each end. For Piles longer than 65', 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.

PRECAST PRESTRESSED CONCRETE PILE



NOTE
Driving and bearing ends of pipe shall be cut square.

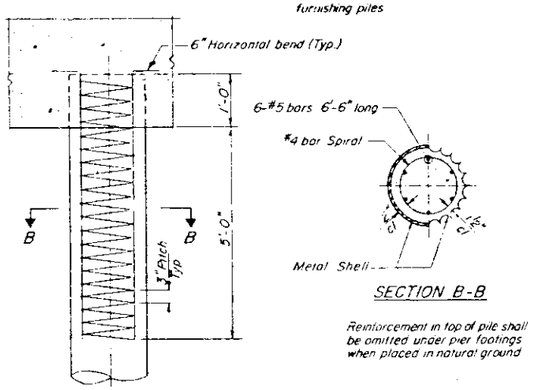
The thickness of the shell shall be 0.1793 inches with a tolerance of 5%.

For field splice bevel edge and butt weld.

OPTIONAL FLAT END

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

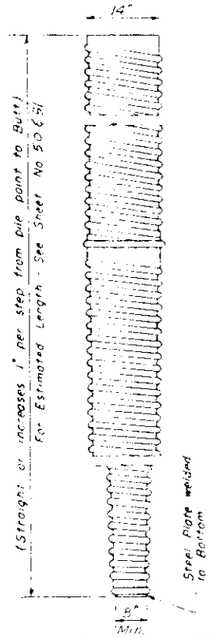
The cost of Reinforcement is incidental to the cost of furnishing piles

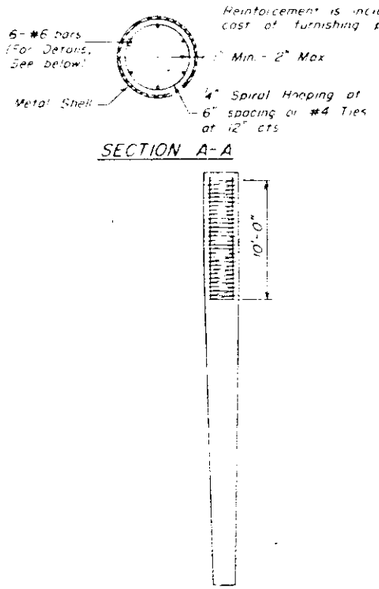


SECTION B-B

Reinforcement in top of pile shall be omitted under pier footings when placed in natural ground

DETAIL OF REINFORCEMENT FOR METAL SHELLS





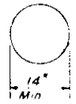
SECTION A-A

PILE REINFORCEMENT

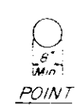
Reinforcement is incidental to the cost of furnishing piles

At least 10% of the length of pile shall have a Butt diameter equal to or greater than 14"

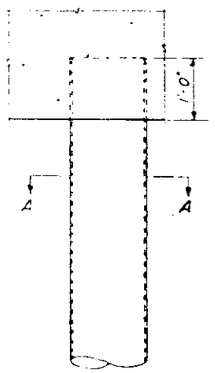
Gauges are furnished to suit soil conditions (16 Gauge avg. min.)



BUTT



POINT
(Applies only to Step Taper type pile)



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

PILING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

X-3 8-30-80

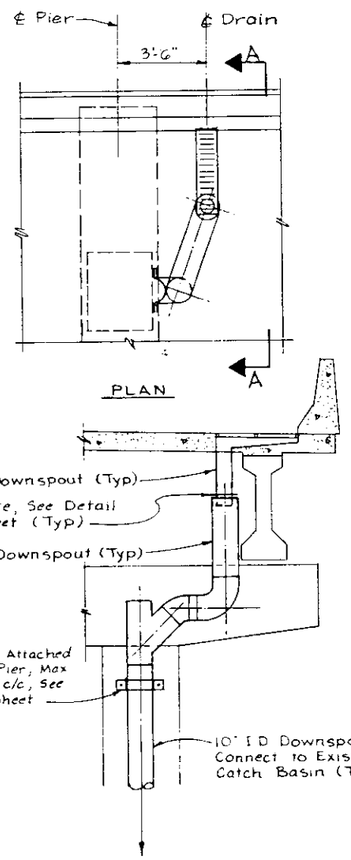
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		434	345
F.A.I. RTE. 94 REG. 4		ILLINOIS FED. AID PROJECT		

SHEET NO. 84 SHEETS

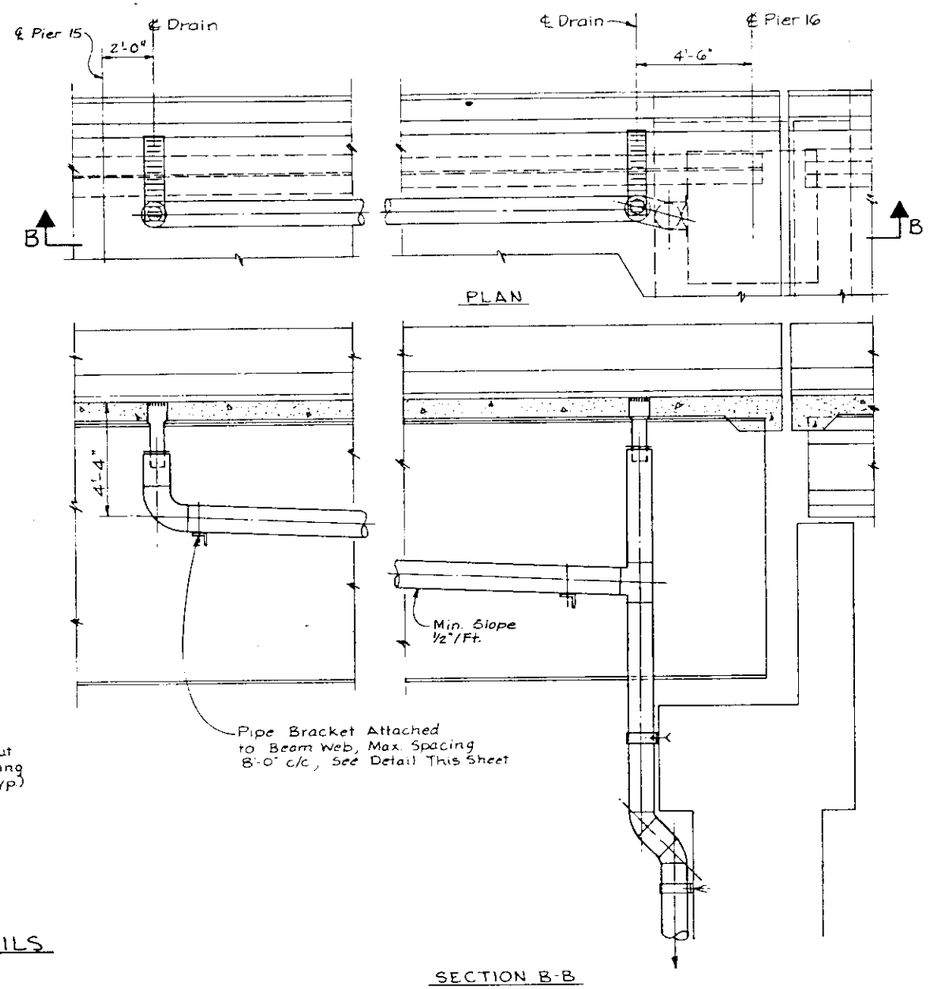
* 1990-073BY

SHEET NO. C257 OF C317



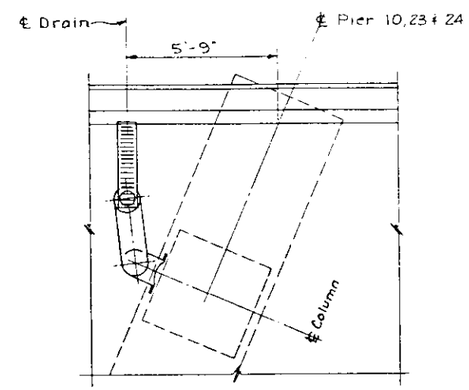
SECTION A-A

TYPICAL DRAIN DETAILS

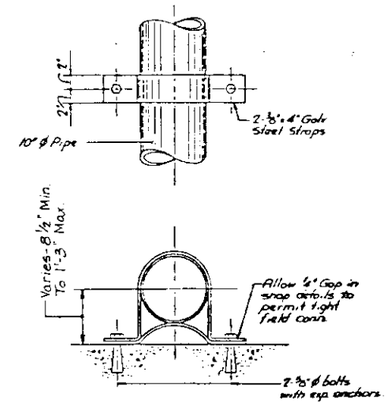


SECTION B-B

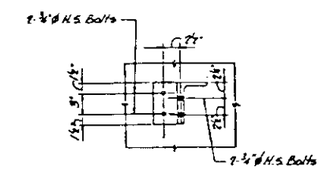
DRAINS AT PIER 15 & PIER 16 S.E.B LANES

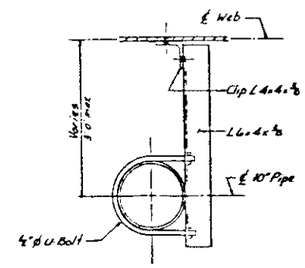


PLAN-DRAINS AT PIER 10, 23 AND 24

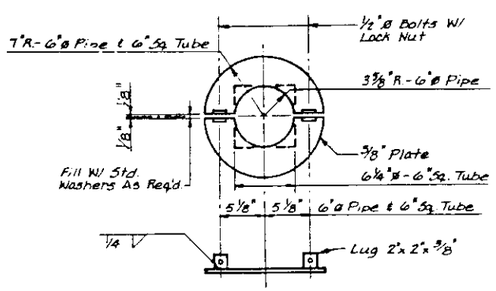


PIPE BRACKET DETAIL
(TO CONCRETE)





PIPE BRACKET DETAIL
(TO BEAM WEB)



CAP PLATE DETAIL

NOTES:

1. SEE SHEETS 1 AND 2 FOR LOCATION AND ORIENTATION OF DRAINS.
2. SEE SHEETS 87, 88 & 89 FOR CATCH BASIN LOCATIONS AND ELEVATIONS
3. SEE SHEET 89 FOR PROPOSED CONNECTION TO CATCH BASINS.

STANLEY CONSULTANTS

DECK DRAINAGE DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

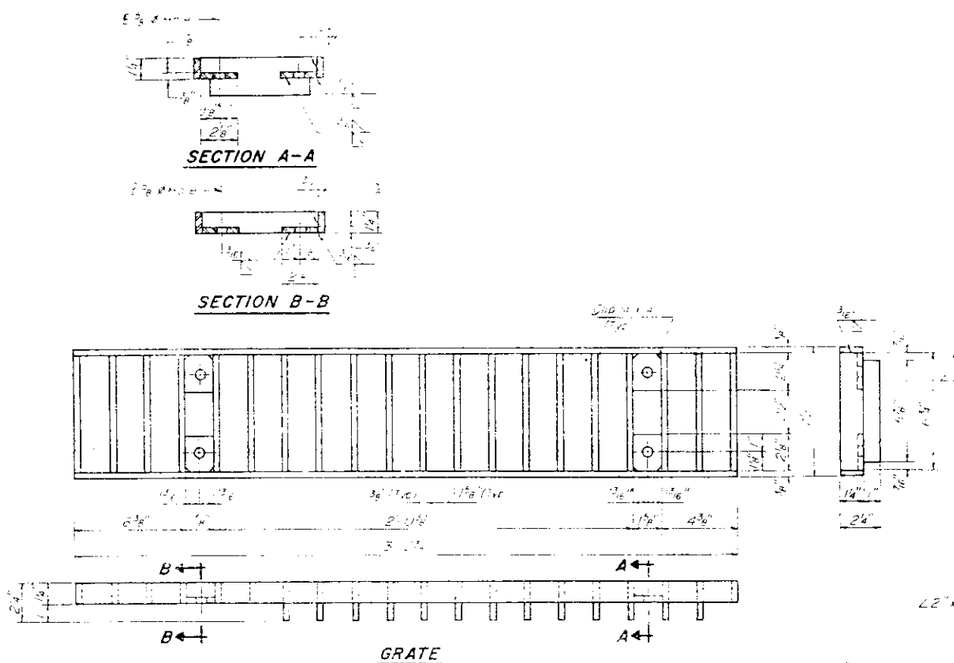
STATION 409+49

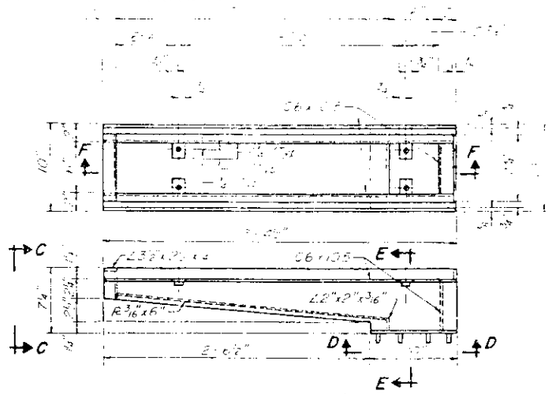
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

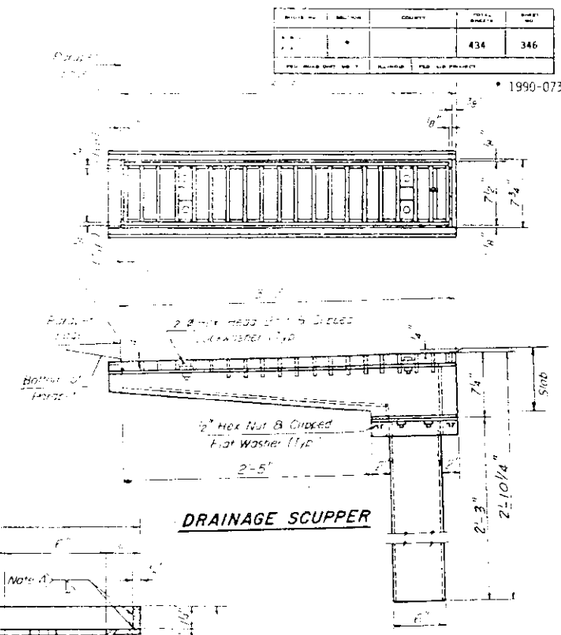
			434	346

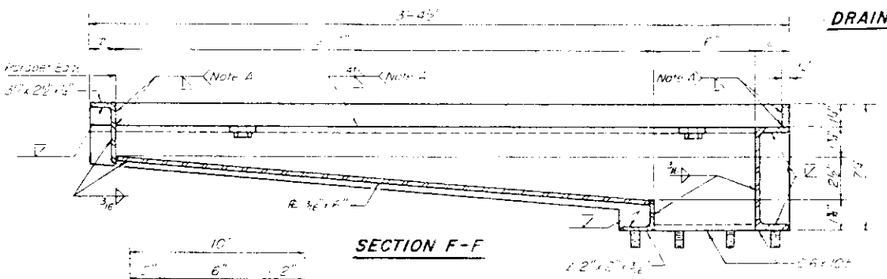
SHEET NO 85
SHEETS

* 1990-073BY

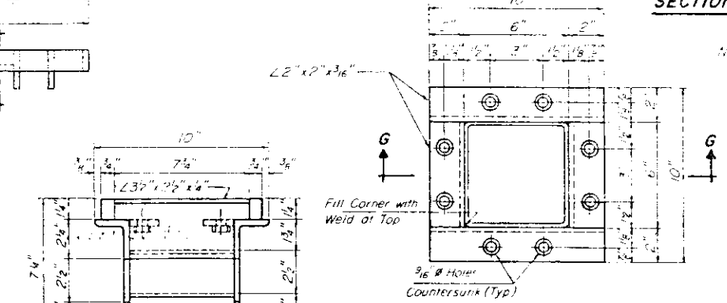


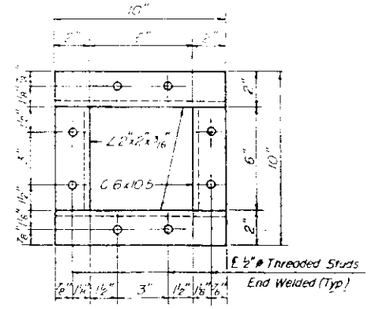


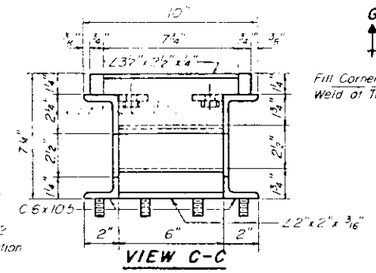


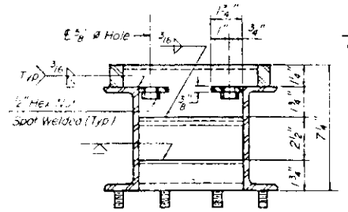


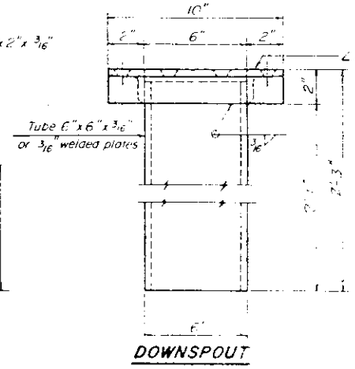
Note A: Surface of welds shall be recessed 1/16" [illegible] ground flush with inside face of bars to provide clearance for Grate.

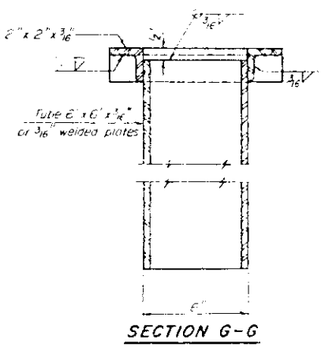












Notes

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B, or A-501 Structural Steel Tubing.

All other shapes, plates and bars shall conform to the requirements of A.A.S.H.T.O. - M 183.

Bolts, studs, washers and nuts shall conform to the requirements of A.S.T.M. A-307.

The Grate, Frame, and Downspout shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 & A.S.T.M. A-385.

All bolts, washers and nuts shall be galvanized in accordance with A.A.S.H.T.O. M 232.

Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS."

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper	Each	23

STANLEY CONSULTANTS

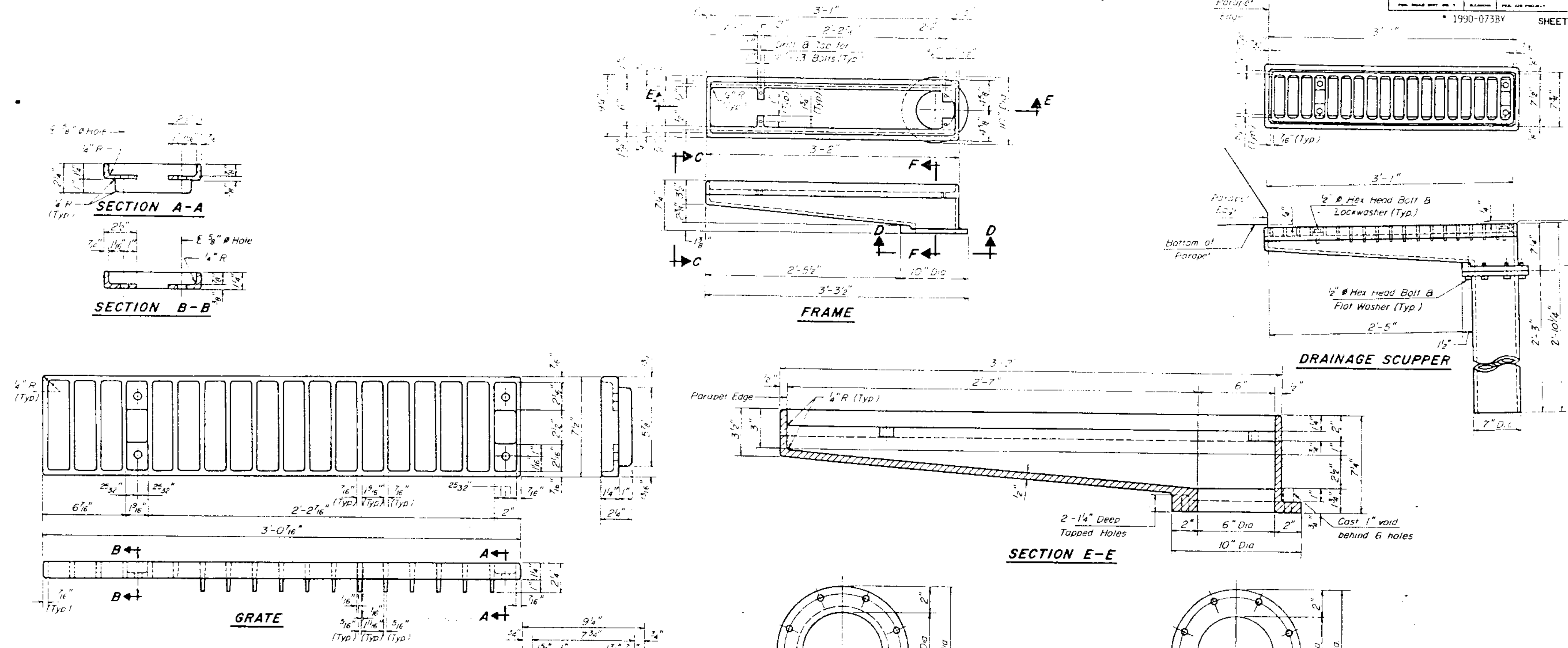
DS-3 12-1-83 (W.T. to inside of exterior stringer flange shall not be > 3" [illegible])

DRAINAGE SCUPPER DETAILS - STEEL

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 86 — 434 — 347 SHEETS
1990-073BY
SHEET NO. C269 OF C317



Notes

All cast iron parts shall be gray iron conforming to the requirements of AASHTO M-105, Class 30.

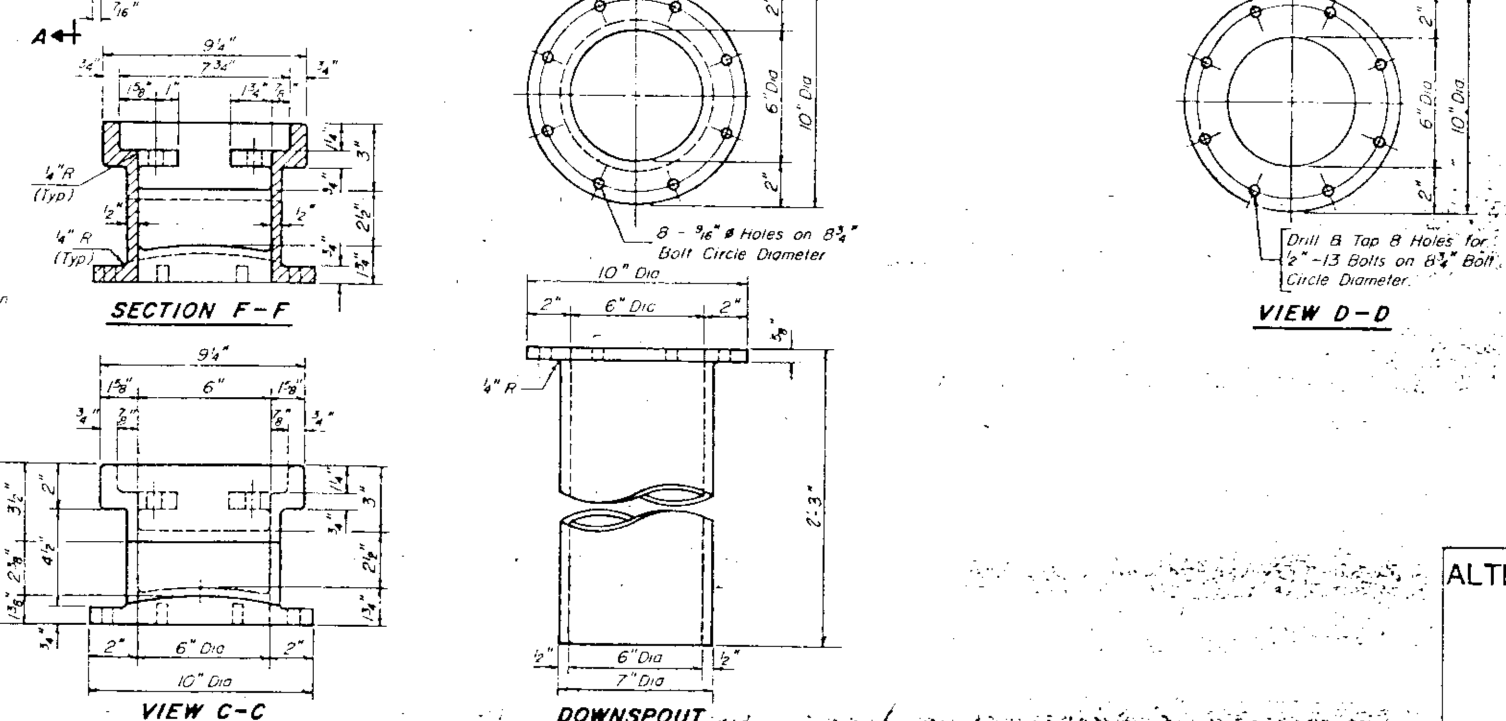
Bolts and washers shall conform to the requirements of A.S.T.M. A-307.

All bolts and washers shall be galvanized in accordance with A.A.S.H.T.O. M-232.

As an alternate bolts and washers may be stainless steel conforming to the requirements of A.S.T.M. A-193 Type 304.

Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS."

The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.



STANLEY CONSULTANTS

DS-4 12-1-83 (W.T. to inside of exterior stringer flange shall not be > 3'-11")

ALTERNATE DRAINAGE SCUPPER DETAILS
CAST IRON

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

COOK SEC. 1989-084 RS I&R AUGUST 3, 1990

FAI 90/94	*	COOK
STA.		TO STA.
F.H.W.A. REG 4	ILLINOIS	FED. AID PROJ.

*1989-084 RS

INDEX OF SHEETS

1	TITLE SHEET
2	SUMMARY OF QUANTITIES
3-4	LOCATION MAP
5-26	MAINTENANCE OF TRAFFIC
27-41	PLANS
42-48	DETAILS

STATE STANDARDS

2298-7
2299-30
2306-3
2307-6
2314-5
2419
U-1
U-2
U-3
U-4
U-5

99-92
11-19-97

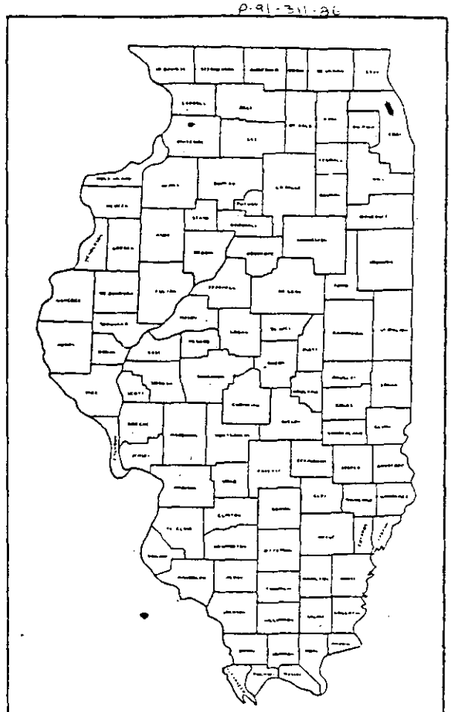
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY

SCALES: PLAN 1"=50'

F.A.I. ROUTE 90/94 (JOHN F. KENNEDY EXPRESSWAY)
SECTION 1989-084 RS
COOK COUNTY
C-91-374-89
BRIDGE DECK TREATMENT
DIVISION STREET TO KOSTNER AVENUE
PROJECT ACIR-94-2(197) 50

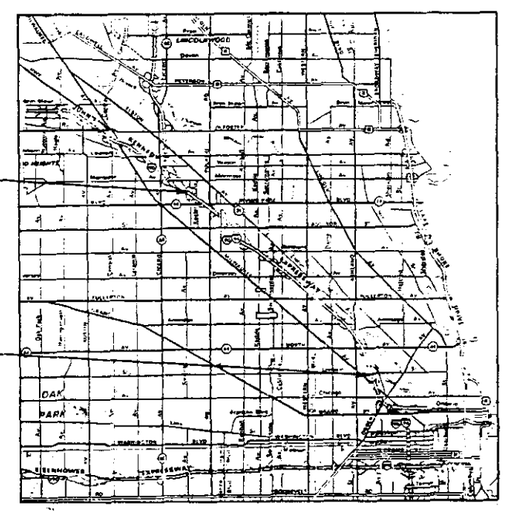
P-91-311-86



LOCATION OF SECTION INDICATED THUS:

IMPROVEMENT ENDS

IMPROVEMENT BEGINS



LOCATION MAP
SCALE: 5/8" = 1 MILE

NET LENGTH = 8,500 FT (1.610 MILES)
GROSS LENGTH = 30,240 FT (5.727 MILES)

ROBERT H. KOS 40073 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

REVISED SET 6-21-90

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 19 90 — DISTRICT ENGINEER
EXAMINED 19 — ENGINEER OF PLANS AND CONTRACTS
PASSED 19 — ENGINEER OF DESIGN
APPROVED 19 — DIRECTOR, DIVISION OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED — DIVISION ADMINISTRATOR — DATE

100' 200' 300' 1"= 100'
10' 20' 30' 1"= 10'
50' 100' 1"= 50'
50' 100' 1"= 40'
50' 100' 1"= 30'
50' 100' 1"= 20'

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

CONTRACT NO. 80524
016-0133

CONSULTANT SECTION ENGINEER K. HEMSTREET / J. KOS 708 705-4269
STANLEY CONSULTANTS

0-237

SEC 1989-091F
COOK

F.A.I. RTE. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	1
F.H.W.A. REG 4	ILLINOIS	FED. AID PROJECT ACIR-94-2(203)50		

* 1989-091F

FOR INDEX OF SHEETS SEE SHEET NO.4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

STATION EQUATIONS:

AREA A
STA. 643+38.93, ℄ REV. BK.=
STA. 800+00.00, ℄ REV. AH.

AREA B
NONE

AREA C
STA. 49_+43.90, ℄ REV. BK.=
STA. 490+44.56, ℄ REV. AH.

AREA D
NONE

SCALES
PLAN 1" = 50'
PROFILE HORIZONTAL 1" = 50'
PROFILE VERTICAL 1" = 5'
CROSS SECTIONS 1" = 10' (HORIZ)
CROSS SECTIONS 1" = 5' (VERT)

F.A.I. ROUTE 90/94 (JOHN F. KENNEDY EXPRESSWAY)

SECTION 1989 - 091F

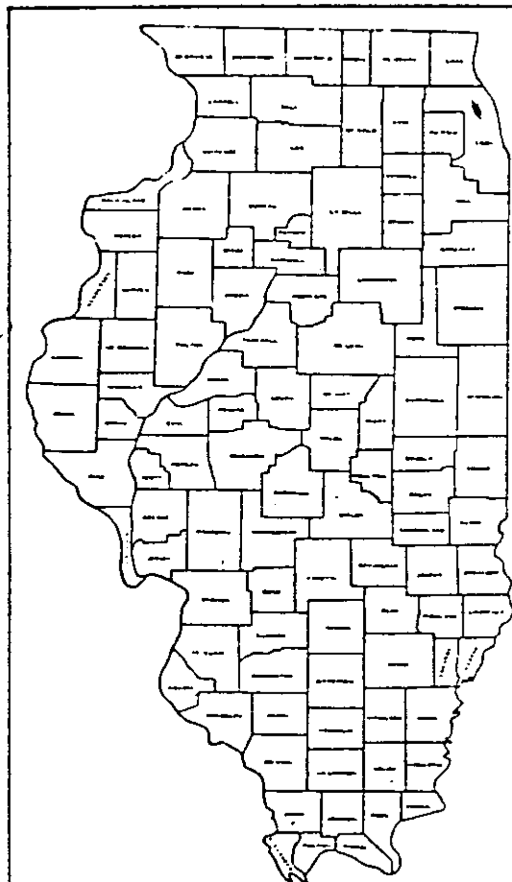
PROJECT ACIR-94-2(203)50

COOK COUNTY

C - 91 - 410 - 89

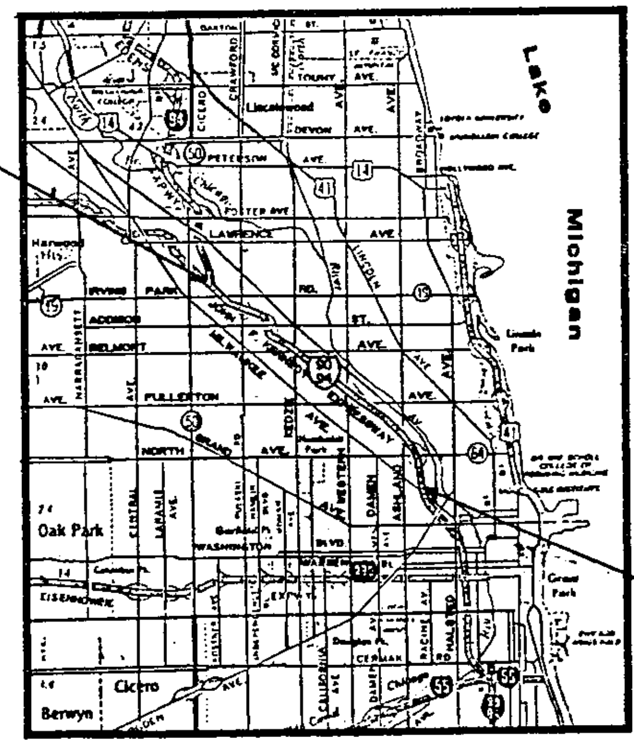
BEAM AND BEARING FABRICATION - ADVANCE WORK

Steel



LOCATION OF SECTION INDICATED THUS:

PROJECT AND IMPROVEMENT ENDS STATION 817+02.06 ℄ REVERSIBLE F.A.I. - 90/94



PROJECT AND IMPROVEMENT BEGINS STATION 360+26.20 ℄ REVERSIBLE F.A.I. - 90/94

FOR STRUCTURE DESCRIPTIONS, OMISSIONS, AND LENGTHS PER AREA SEE SHEET NO. 2 & 3

LOCATION MAP
NOT TO SCALE

GROSS LENGTH = 29,994.79 LIN. FT. (5.681 MILES)
NET LENGTH = 5,164.73 LIN. FT. (0.978 MILES)

MUNICIPALITY INVOLVEMENT - CITY OF CHICAGO

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED April 11 1990
DISTRICT ENGINEER

EXAMINED 4-24 1990
ENGINEER OF PLANS AND SPECIFICATIONS

PASSED
ENGINEER OF DESIGN

APPROVED 4-24 1990
DIRECTOR, DIVISION OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

1" = 100', 1" = 10', 1" = 50', 1" = 40', 1" = 30', 1" = 20'

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

CONTRACT NO. 80532

CONSULTANT SERVICES - K. HEMSTREET / J. KOS (708) 705-423_

0-236

TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N ABUTMENT ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER ASHLAND AVENUE - EL604.09 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

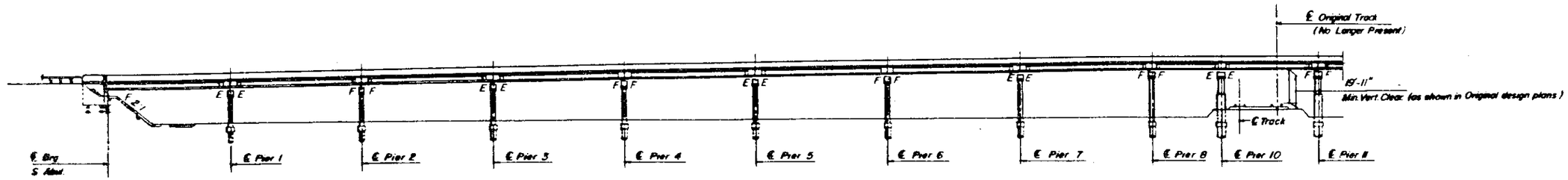
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	19
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 1 OF 14 SHEETS

C2 OF C66

* 1989-091

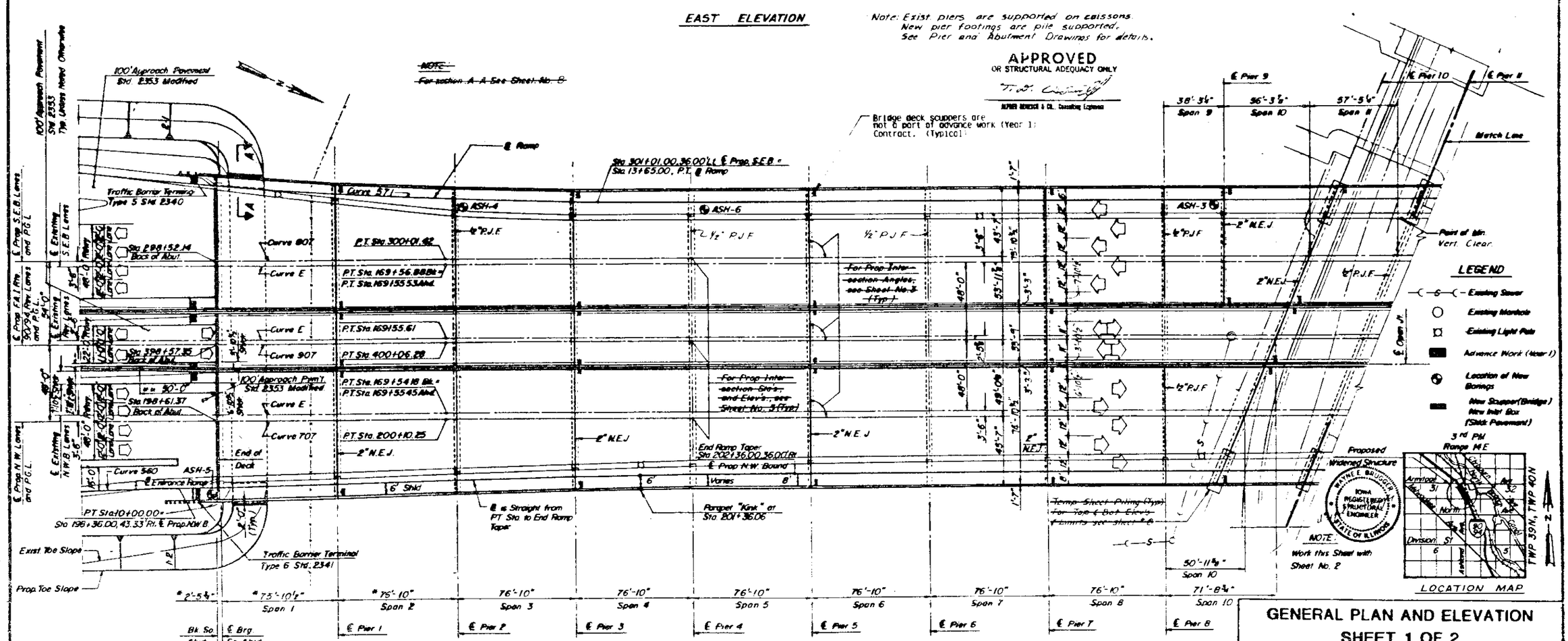
BEAM AND BEARING FABRICATION-ADVANCE WORK



EAST ELEVATION

Note: Exist. piers are supported on caissons. New pier footings are pile supported. See Pier and Abutment Drawings for details.

APPROVED
OR STRUCTURAL ADEQUACY ONLY
T. W. Chaney
ALFRED BENESCH & CO. Consulting Engineers



PLAN

* Measured at Rt. Angles to ℄ Substructure

** = 50'-0" - Transition Length for Shoulder Widths (At open joint between Rev. Lanes and N.W.B. Lanes only)

Note: N.E.J. = Neoprene Expansion Joint. P.J.F. = Preformed Joint Filler.

Note: The plan view shows the proposed (final) development of the bridge. This contract covers advance work (Year 1) only.

STANLEY CONSULTANTS

STRUCTURE NO. 016-0133

GENERAL PLAN AND ELEVATION
SHEET 1 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

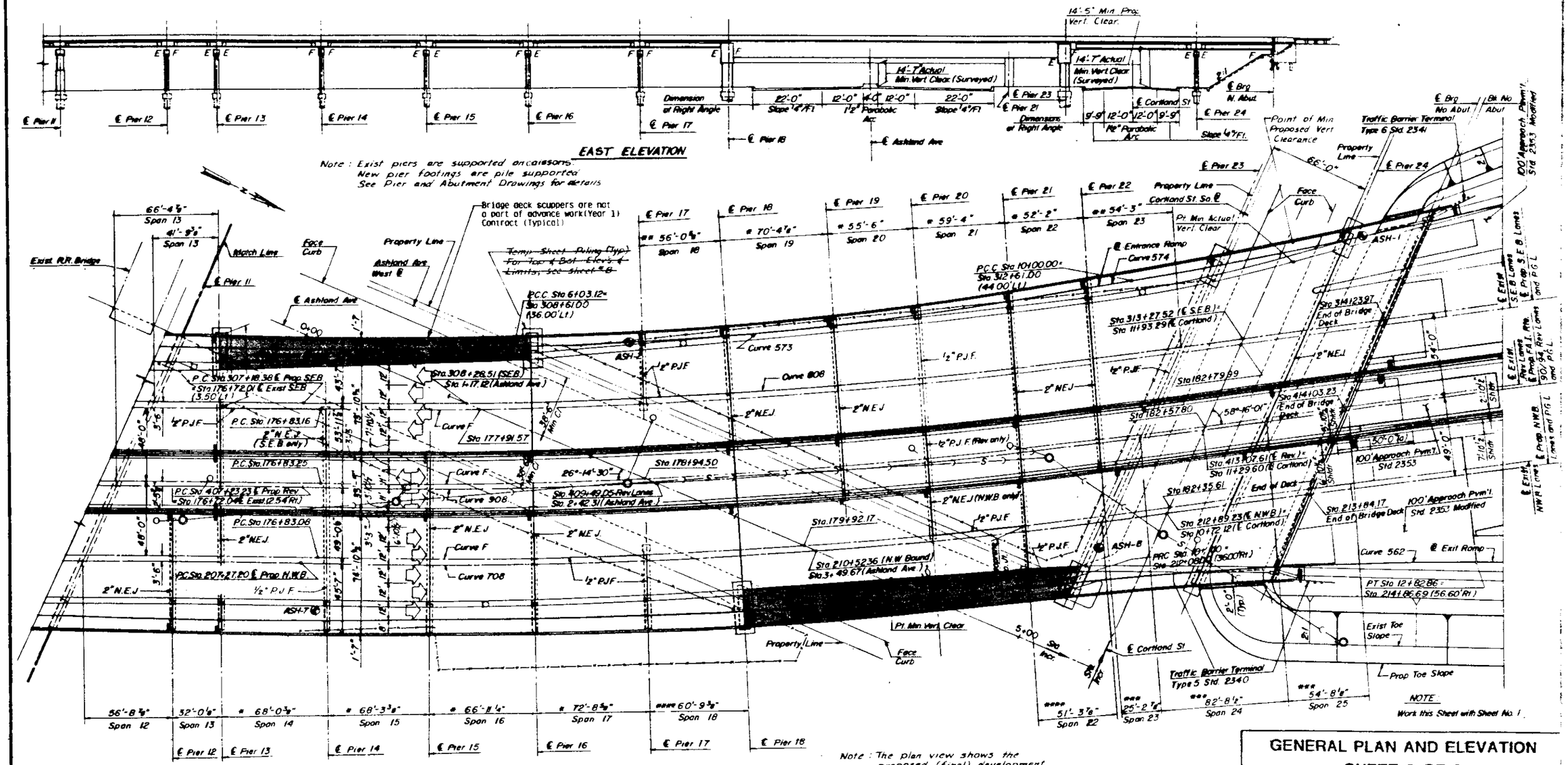
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 14 SHEETS

C3 OF C96

* 1989-041F



STANLEY CONSULTANTS

GENERAL PLAN AND ELEVATION
SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	21
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
14 SHEETS

C4 OF C66

* 1989-091

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER-STRUCTURE	SUB-STRUCTURE	TOTAL
	RAILROAD PROTECTIVE LIABILITY INSURANCE	LUMP SUM	-	1	1
	CLASS X CONC SUPERSTRUCTURE	CU. YD.	1315	-	1315
	CLASS X CONCRETE	CU. YD.	-	1484.1	1484.1
	REINFORCEMENT BARS	POUND	155,370	45,000	200,370
	REINFORCEMENT BARS (EPOXY COATED)	POUND	179,870	179,690	359,560
	EXPANSION BOLTS 3/4"ø	EACH	-	337	337
(2)	PROTECTIVE COAT	SQ. YD.	5905	-	5905
	NEOPRENE EXPANSION JOINT 2"	LIN. FT.	387	-	387
	NEOPRENE EXPANSION JOINT 4"	LIN. FT.	36	-	36
(4)	CONCRETE REMOVAL	CU. YD.	-	36.2	36.2
	STRUCTURE EXCAVATION	CU. YD.	-	2459	2459
	TEMPORARY SHEET PILING	SQ. FT.	-	14,585	14,585
	FURNISHING CONCRETE PILES	LIN. FT.	-	12,070	12,070
	DRIVING CONCRETE PILES	LIN. FT.	-	12,070	12,070
(3)	TEST PILE (CONCRETE)	EACH	-	32	32
(1)	FURNISHING AND ERECTING STRUCTURAL STEEL	LUMP SUM	0.16	-	0.16
	FIELD MEASUREMENTS	LUMP SUM	0.09	-	0.09
	STORAGE OF FABRICATED MATERIALS	CAL. DAY	4	-	4
	FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	1	-	1
	STUD SHEAR CONNECTOR	EACH	1,224	-	1,224
	REPAIR CONCRETE STRUCTURES	SQ. FT.	-	5,200	5,200
	EPOXY CRACK SEALING	LIN. FT.	-	1,500	1,500
	SLOPE WALL 4"	SQ. YD.	-	370	370
	TEMPORARY DRAINAGE SYSTEM	LIN. FT.	350	-	350
	RELOCATE TEMPORARY CONC BARRIER	UNITS	314	-	314
	PROTECTIVE SHIELD	SQ. YD.	2,235	-	2,235
	BRIDGE PARAPET/SIDEWALK REMOVAL	LIN. FT.	3,100	-	3,100
	BRIDGE SEAT SEALER	SQ. FT.	-	2,500	2,500

(1) INCLUDES 573,350 POUNDS OF STRUCTURAL STEEL. INCLUDES BEARINGS AND ANCHOR BOLTS.

(2) PROTECTIVE COAT QUANTITY INCLUDES DECK SURFACE. SEE SPECIAL PROVISIONS FOR CURING AND TEXTURING BRIDGE DECK.

(3) THE CONTRACTOR SHALL DRIVE CONCRETE TEST PILES IN PERMANENT LOCATIONS AT WIDENED PIERS & ABUTMENTS AS DIRECTED BY ENGINEER BEFORE ORDERING REMAINDER OF THE PILES

(4) EXISTING NAME PLATE SHALL BE REMOVED FROM THE EXISTING STRUCTURE WITHOUT DAMAGE FOR REUSE BY THE OWNER. CONTRACTOR SHALL STORE THE NAME PLATE WHERE DESIGNATED BY THE OWNER.

STANLEY CONSULTANTS

GENERAL NOTES:

1. ~~SEE PROPOSAL FOR BORING DATA.~~
2. FASTENERS SHALL BE HIGH STRENGTH BOLTS ~~(AASHTO M 164, TYPE 3)~~, BOLTS 7/8"ø, OPEN HOLES 15/16"ø, UNLESS OTHERWISE NOTED.
3. PAINTING: STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH LEAD & CHROMATE-FREE ALKYD PAINT SYSTEM.
4. ALL STRUCTURAL STEEL SHALL BE AASHTO M 183. ~~EXPANSION JOINT ANGLES AND ATTACHED BARS SHALL BE AASHTO M 183.~~
5. ~~EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THE ZINC SILICATE PRIMER.~~
6. ~~FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.~~
7. ~~ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.~~
8. THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE TENSION FLANGES, WEBS AND ALL SPLICE PLATE MATERIAL OF THE STEEL GIRDERS.
9. ~~REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 31, M 42 OR M 53 GRADE 60.~~
10. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO SUBMITTAL OF SHOP DRAWINGS OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
11. ~~EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,000 LBS., AND 3/4"ø x 12" HOOKED BOLTS.~~
12. ~~BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING.~~ TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.
13. ~~THE CONCRETE, FOR BRIDGE FLOORS FINISHED IN ACCORDANCE WITH ARTICLE 503.15 OF THE STANDARD SPECIFICATIONS, SHALL BE PLACED AND COMPACTED PARALLEL TO THE SKEW IN UNIFORM INCREMENTS ALONG CENTERLINE OF BRIDGE. THE FINISHING MACHINE, WHEN REQUIRED, SHALL BE SET PARALLEL TO THE SKEW FOR STRIKING OFF AND SCREEDING THE CONCRETE.~~
14. ~~FURNISHING STRUCTURAL STEEL SHALL BE STORED AT FABRICATORS SHOP UNTIL REQUESTED. UPON REQUEST STEEL SHALL BE DELIVERED F.O.B. JOB SITE.~~
15. ~~THE INFORMATION SHOWN FOR THE TEMPORARY SHEET PILING IS ESTIMATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A DESIGN OF THE TEMPORARY SHEET PILING AND ASSOCIATED MEMBERS, IF REQUIRED, SUBJECT TO THE APPROVAL OF THE ENGINEER.~~
16. ALL STRUCTURAL STEEL FABRICATORS PERFORMING WORK ON THE MAIN LOAD CARRYING COMPONENTS OF STEEL STRUCTURES SHALL BE CERTIFIED UNDER CATEGORY I & III(AISC)OF THE QUALITY CERTIFICATION PROGRAM.
17. ~~SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6"x6"-W2.9xW2.9, WEIGHING 58 LBS. PER 100 SQ. FT.~~
18. ~~THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.~~
19. CALCULATED WEIGHT OF STRUCTURAL STEEL (AASHTO M 183) = 573,350 LBS.
20. ~~ALL REINFORCING STEEL BARS ARE MEASURED OUT-TO-OUT.~~
21. ~~THE CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR EDGE OR END OF REINFORCING SHALL BE 2" EXCEPT 3" WHEN DEPOSITED AGAINST EARTH, UNLESS OTHERWISE NOTED.~~
22. ALL CONTACT SURFACES OF JOINTS FOR THE DIAPHRAGMS CROSS-FRAMES, LATERAL BRACING AND BOLTED SPLICES SHALL BE FREE OF PAINT OR LACQUER.

EXISTING STRUCTURE

FAI ROUTE 2, SEC 0505.31H, BUILT IN 1958, STRUCTURE NO. 016-0133.

SUPERSTRUCTURE: APPROACH SPANS TO ASHLAND AVENUE
SIMPLY SUPPORTED PRECAST, PRESTRESSED CONCRETE I-BEAM.
ASHLAND AVENUE MAIN SPANS
PLANAR FRAME-TYPE STRUCTURE CONSISTING OF 144" RIVETED BUILT-UP COMPOSITE FASCIA GIRDERS, 96" AND 120" CROSS-GIRDERS, AND 48" LONGITUDINAL GIRDER.

SUBSTRUCTURE: PILE BENT ABUTMENTS SUPPORTED ON CONCRETE PILES AND MULTIPLE COLUMN PIERS SUPPORTED ON CAISSONS.

SUPERSTRUCTURE DECK TO BE REPLACED AND STRUCTURE WIDENED. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION

EXISTING UTILITIES

THE EXISTING UTILITIES HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE PLANS AND FROM FIELD OBSERVATIONS. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

REHABILITATION NOTES

SEAL CRACKS IN ABUTMENTS AND PIERS WITH PRESSURE INJECTED EPOXY. REMOVE ALL DETERIORATED CONCRETE IN ABUTMENTS AND PIERS, AND REPLACE WITH EPOXY MORTAR OR FORMED CONCRETE. SPLICE THE REBARS WHERE REQUIRED. (SEE SPECIAL PROVISIONS).

EXISTING LIGHT POLES AND CONDUITS ARE TO BE REMOVED. (COST INCIDENTAL TO COST OF CONSTRUCTION

DESIGN SPECIFICATIONS

AASHTO (1983) WITH CURRENT INTERIM SPECIFICATIONS

LOADING HS20-44 AND ALTERNATE MILITARY LOADING

ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

REINFORCED CONCRETE & STRUCTURE STEEL

F'C = 3,500 PSI	(CONCRETE)
FY = 60,000 PSI	(REINFORCEMENT)
FS = 20,000 PSI	(PROPOSED STRUCTURAL STEEL
FS = 18,000 PSI	(EXISTING STRUCTURAL STEEL)

PRESTRESSED CONCRETE & PRETENSIONING STEEL

	EXISTING	PROPOSED
F'C	5,000 PSI	5,000 PSI
F'CI	4,000 PSI	4,000 PSI
F'S	248,000 PSI(7/16"ø STRANDS)	270,000 PSI(1/2"ø STRANDS)
F'SI	173,600 PSI	189,000 PSI

BILL OF MATERIAL

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 408+49

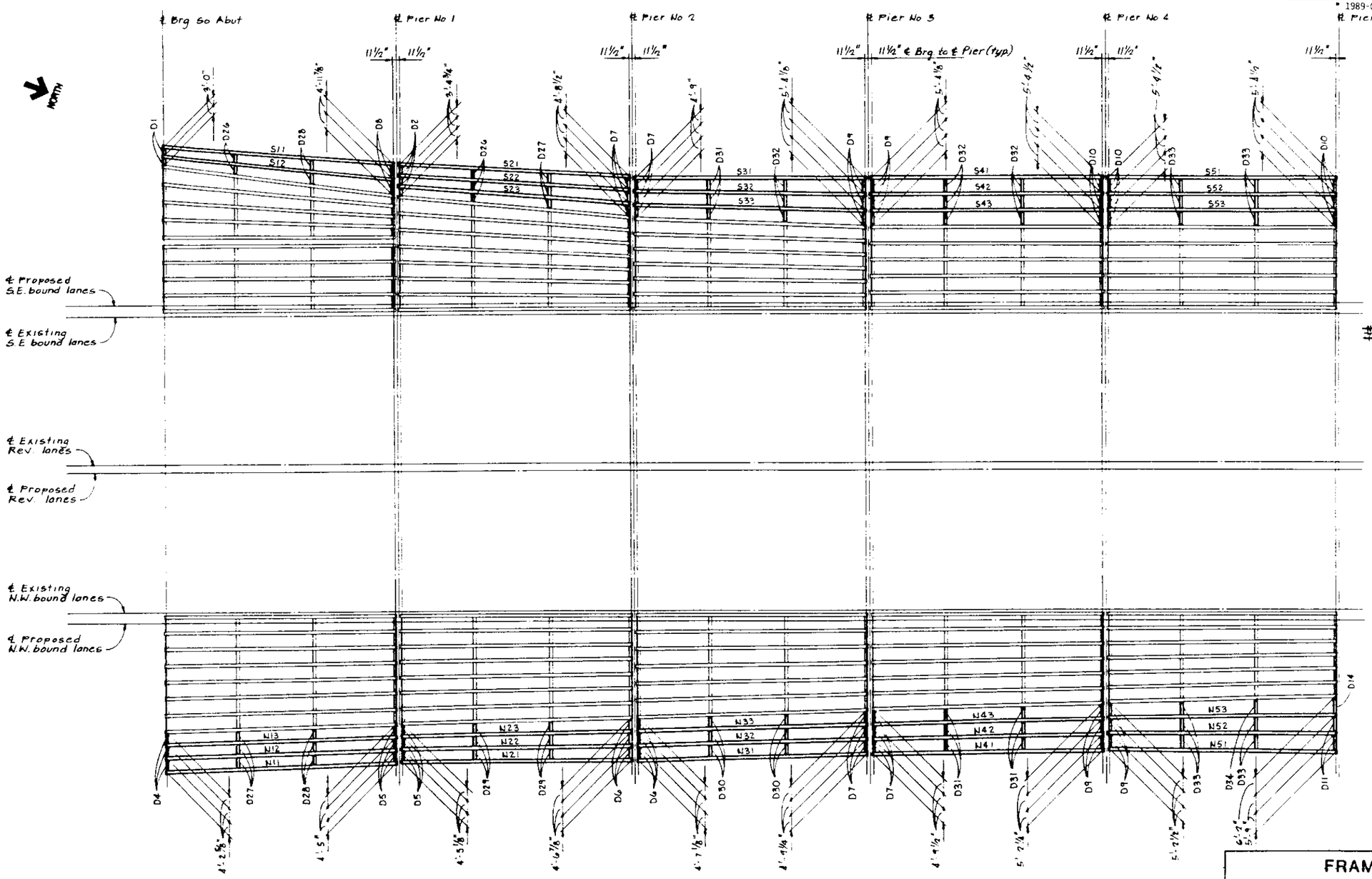
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	22
F. NO. A. REG. 4	ILLINOIS FED. AID PROJECT			

SHEET NO. 4
14 SHEETS

C5 OF C86

* 1989-091F



~~NOTE: FOR BEAM DETAILS SEE SHT 25 THRU 32.~~

FOR REFERENCE ONLY

FRAMING PLAN
SHEET 1 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

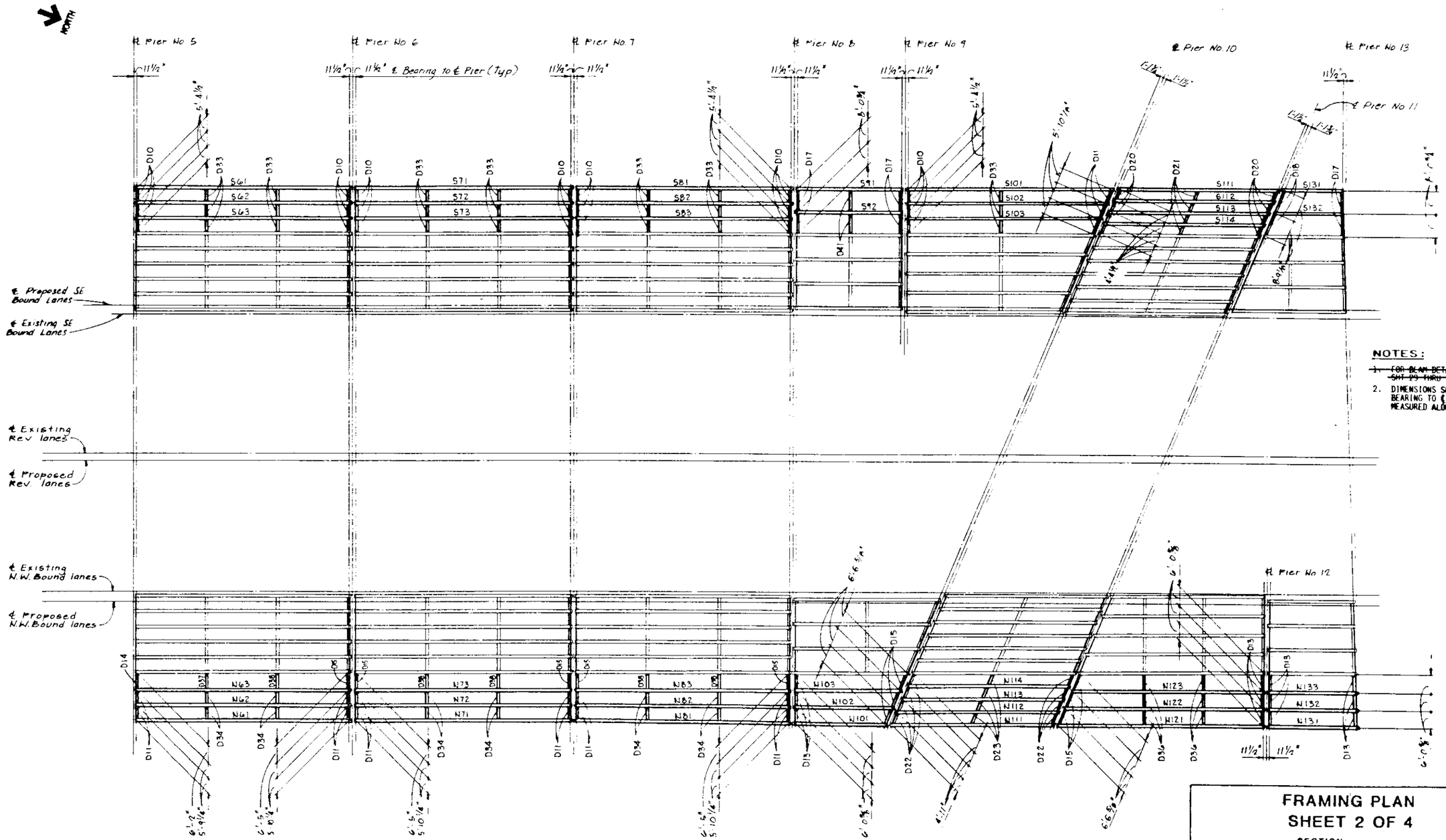
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	23
F. HWY. A. REG. 4	ILLINOIS	FED. AID PROJECT		

* 1989-091

SHEET NO. 5
14 SHEETS

C6 OF C66



NOTES:

1. ~~FOR BEAM DETAILS SEE SHT 29 THRU 32.~~
2. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.

STANLEY CONSULTANTS

FOR REFERENCE ONLY

FRAMING PLAN
SHEET 2 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

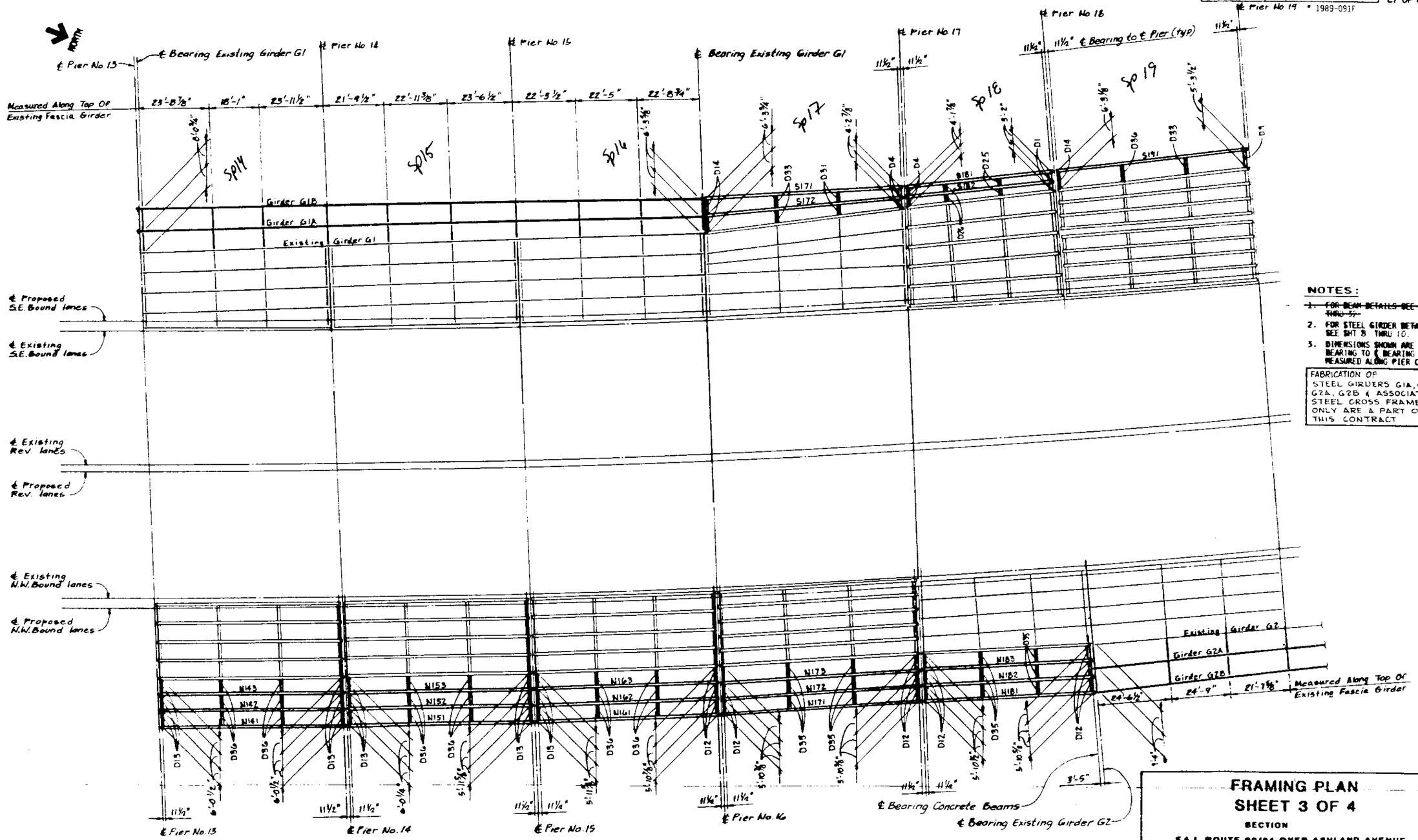
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	24
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 6
14 SHEETS

C7 OF 1066



NOTES:

1. ~~FOR BEAM DETAILS SEE SHT 2 THRU 5.~~
2. FOR STEEL GIRDER DETAILS SEE SHT 8 THRU 10.
3. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.

FABRICATION OF STEEL GIRDERS G1A, G1B G2A, G2B & ASSOCIATED STEEL CROSS FRAMES ONLY ARE A PART OF THIS CONTRACT

STANLEY CONSULTANTS

FRAMING PLAN
SHEET 3 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

1989-091F

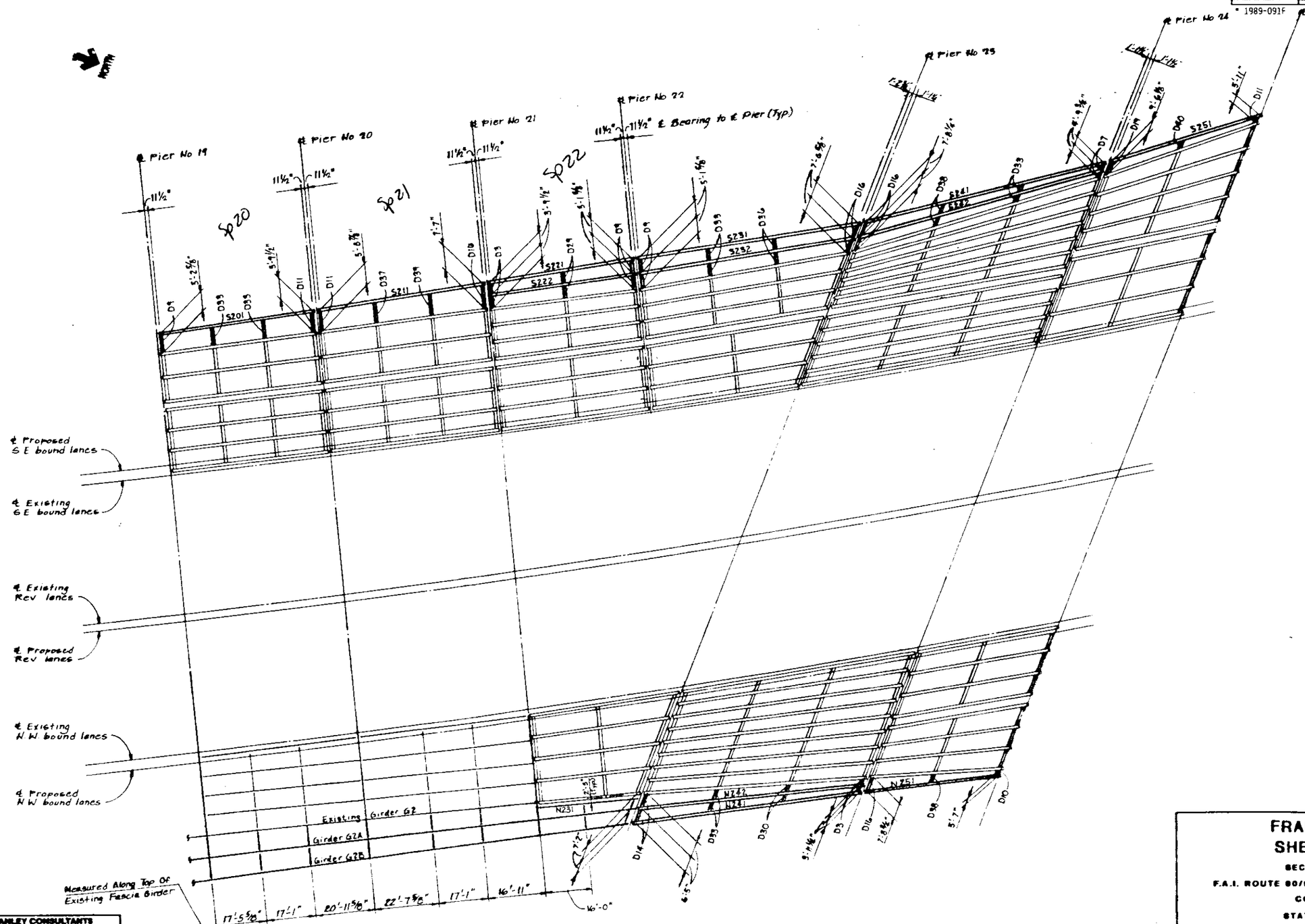
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	25
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7
14 SHEETS

C8 OF C86

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 1989-091F



NOTES:

~~1. FOR BEAM DETAILS SEE SHT 29 THRU 37.~~

2. FOR STEEL GIRDER DETAILS SEE SHT 8 THRU 10.

3. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.

FABRICATION OF STEEL GIRDERS G2A, G2B, STEEL BEAM N231 & ASSOCIATED CROSS FRAMES ONLY ARE A PART OF THIS CONTRACT.

STANLEY CONSULTANTS

FRAMING PLAN
SHEET 4 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 408+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

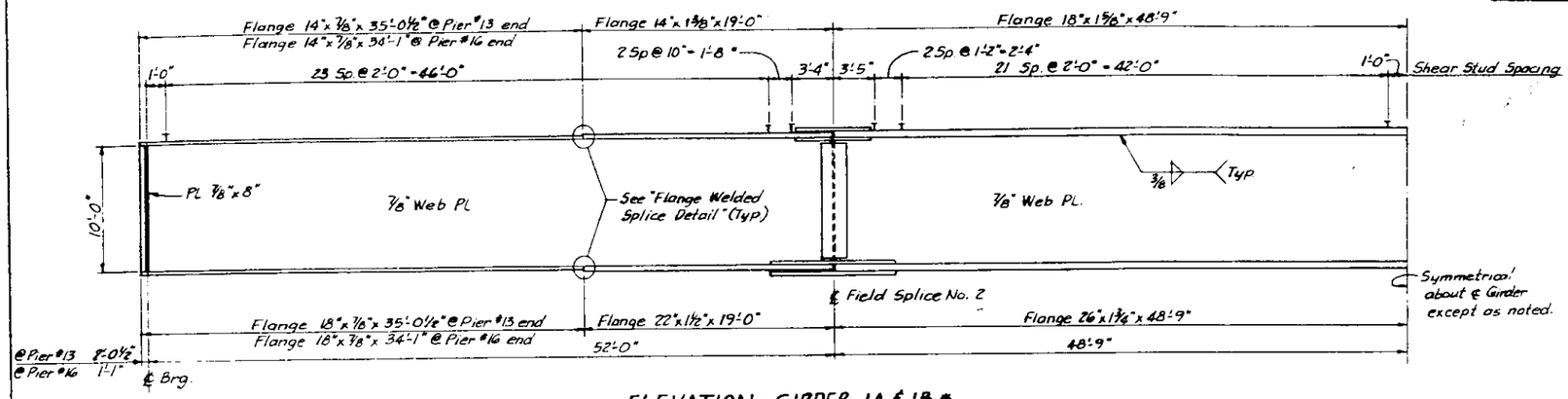
*** DIMENSIONS ARE MEASURED HORIZONTALLY**

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	26
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT:		

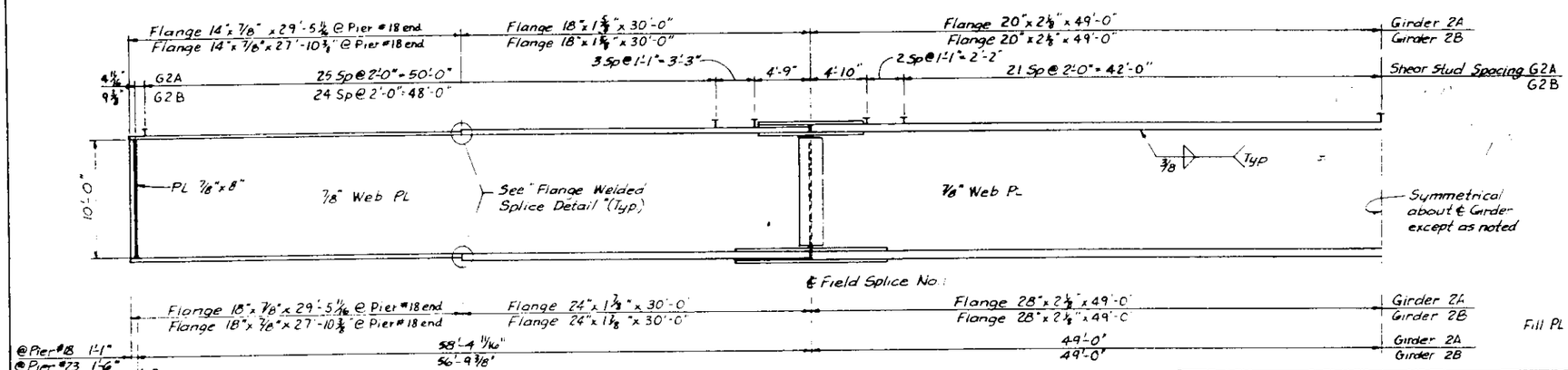
* 1989-091F

SHEET NO. 8
14 SHEETS

C9 OF C66

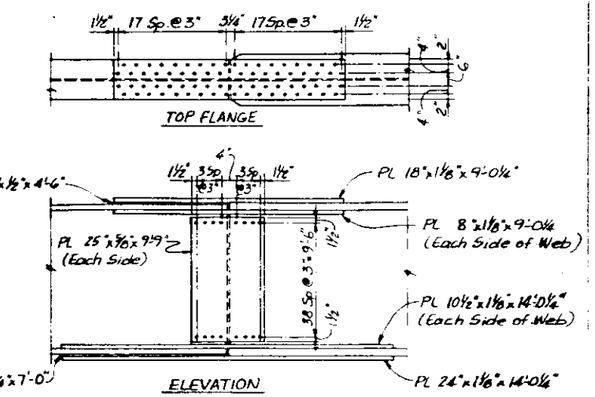


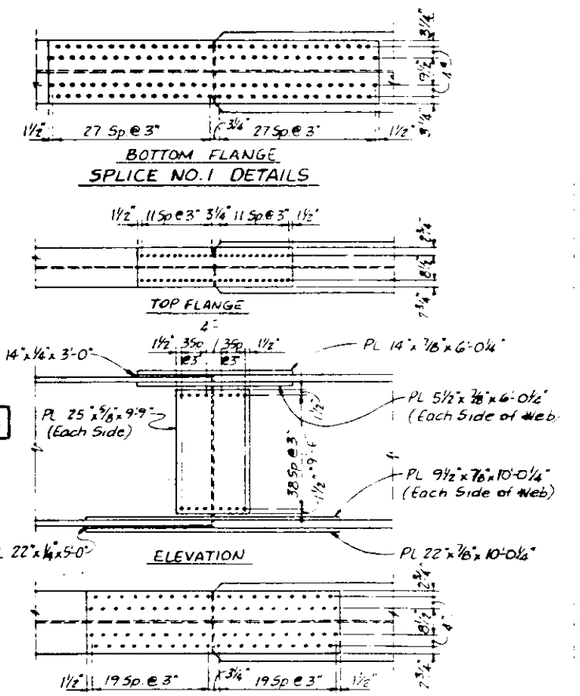
ELEVATION - GIRDER 1A & 1B *

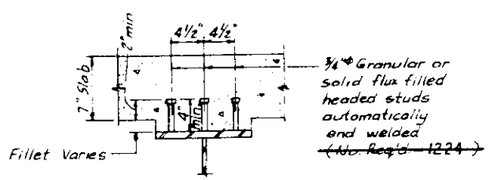


ELEVATION - GIRDER 2A & 2B *

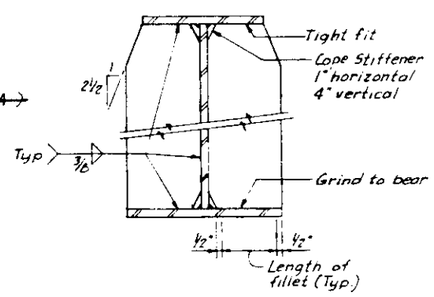
SHEAR STUDS FURNISHED AND INSTALLED BY OTHERS.



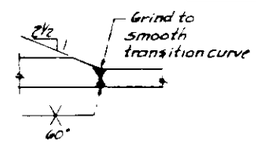




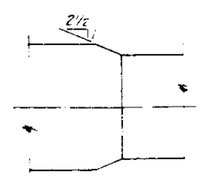
SHEAR STUD DETAILS



BEARING STIFFENERS



FLANGE WELDED SPLICE DETAIL



FLANGE WIDTH TRANSITION DETAIL

NOTE:

ALL SPLICE BOLTS ARE 7/8"ϕ HIGH STRENGTH M164.

ALL SPLICE PLATES ARE N.T.R.

ALL WEB AND FLANGE PLATES ARE N.T.R.

N.T.R. INDICATES THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS, ZONE 2.

STANLEY CONSULTANTS

FRAMING DETAILS

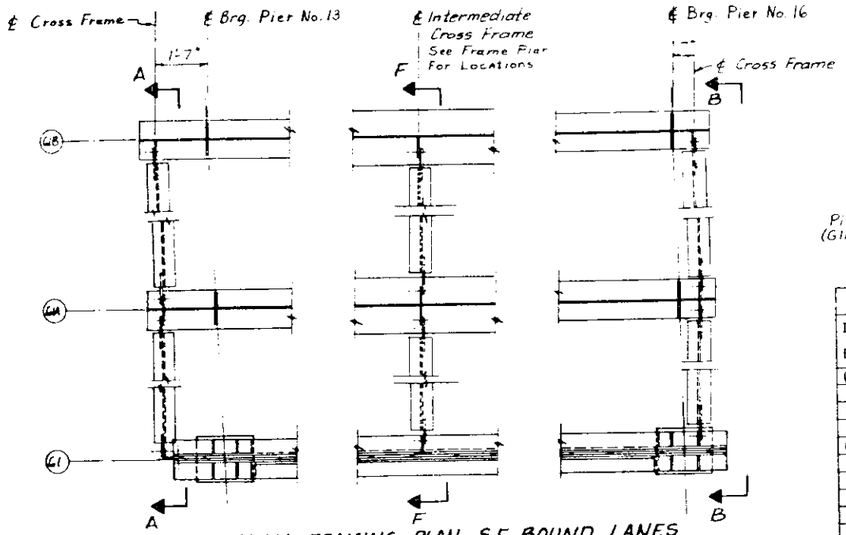
SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

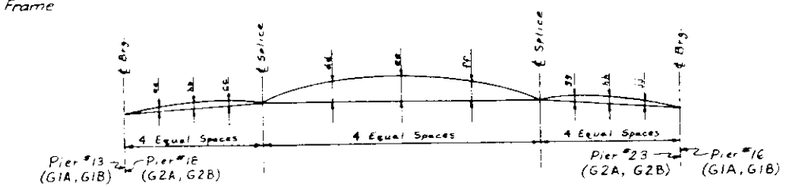
COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PARTIAL FRAMING PLAN- S.E. BOUND LANES



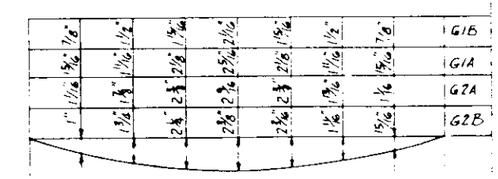
TYPICAL CAMBER DIAGRAM

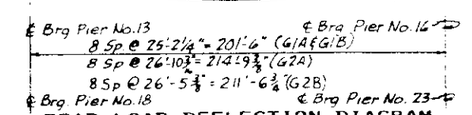
DIMENSIONS AND ELEVATIONS	GIRDER 1A		GIRDER 1B		GIRDER 2A		GIRDER 2B	
	CAMBER DIMENSION	TOP OF WEB ELEVATION	CAMBER DIMENSION	TOP OF WEB ELEVATION	CAMBER DIMENSION	TOP OF WEB ELEVATION	CAMBER DIMENSION	TOP OF WEB ELEVATION
℄ BRG.	-	624.06	-	623.89	-	620.27		620.38
aa	0"	-	0"	-	7/16"	-	5/16"	-
bb	0"	-	0"	-	9/16"	-	7/16"	-
cc	0"	-	0"	-	7/16"	-	5/16"	-
℄ SPLICE	-	623.79	-	623.62	-	619.02	-	619.17
dd	2 11/16"	-	2 13/16"	-	1 15/16"	-	1 13/16"	-
ee	3 9/16"	-	3 3/4"	-	2 9/16"	-	2 3/8"	-
ff	2 11/16"	-	2 13/16"	-	1 15/16"	-	1 13/16"	-
℄ SPLICE	-	622.79	-	622.65	-	616.31	-	616.43
gg	13/16"	-	11/16"	-	7/8"	-	9/16"	-
hh	1 1/16"	-	15/16"	-	1 1/8"	-	3/4"	-
jj	13/16"	-	11/16"	-	7/8"	-	9/16"	-
℄ BRG.	-	621.85	-	621.73	-	614.56	-	614.73

GIRDER MOMENT TABLE		GIRDERS 1A & 1B			GIRDERS 2A & 2B		
		.17 SPAN	.27 SPAN	.5 SPAN	.13 SPAN	.27 SPAN	.5 SPAN
Is	in4	227,941	314,245	397,337	227,941	396,115	501,153
Ic(n=9)	in4	451,452	581,104	670,793	451,451	676,314	793,996
Ic(n=27)	in4	325,984	427,570	509,936	325,984	512,350	614,780
Ss	in3	3,845	5,594	7,065	3,845	7,011	8,775
Sc(n=9)	in3	5,382	7,303	8,702	5,382	8,675	10,379
Sc(n=27)	in3	4,652	6,467	7,867	4,652	7,834	9,540
DL	k/ft	1.324	1.324	1.338	1.516	1.560	1.580
MDL	k-ft	4,019	5,636	7,198	4,065	7,033	8,840
SDL	k/ft	.332	.332	.317	.381	.371	.355
MSDL	k-ft	907	1,268	1,609	962	1,646	2,040
MLL	k-ft	1,697	2,381	3,052	1,804	3,112	3,931
MIMP	k-ft	260	364	467	271	467	590
MLL+I	k-ft	1,957	2,745	3,519	2,075	3,579	4,521
fs (DL)	ksi	12.5	12.1	12.2	12.7	12.0	12.1
fs (SDL)	ksi	2.3	2.3	2.5	2.5	2.5	2.6
fs (LL+I)	ksi	4.4	4.5	4.9	4.6	5.0	5.2
fs TOTAL	ksi	19.2	18.9	19.6	19.8	19.5	19.9
VR	k	56.1	45.3	24.7	71.4	49.2	25.4

Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
Ic AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING fs.
VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

GIRDER REACTION TABLE		GIRDERS 1A & 1B		GIRDERS 2A & 2B	
		PIER NO. 13	PIER NO. 16	PIER NO. 18	PIER NO. 23
RDL	k	165.6	159.5	199.6	187.8
RLL	k	66.4	66.4	83.0	76.9
IMP	k	10.2	10.2	12.5	11.5
R TOTAL	k	242.2	236.1	295.1	276.2

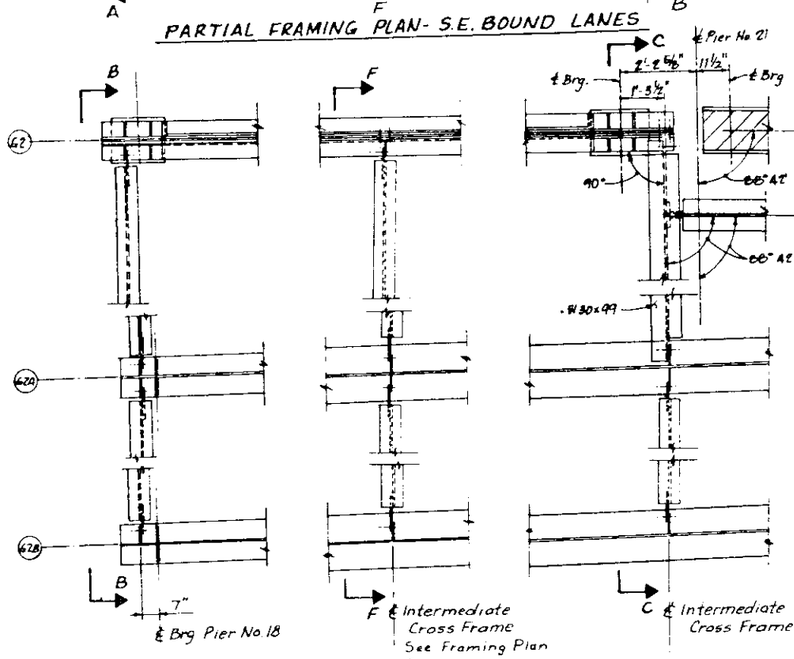




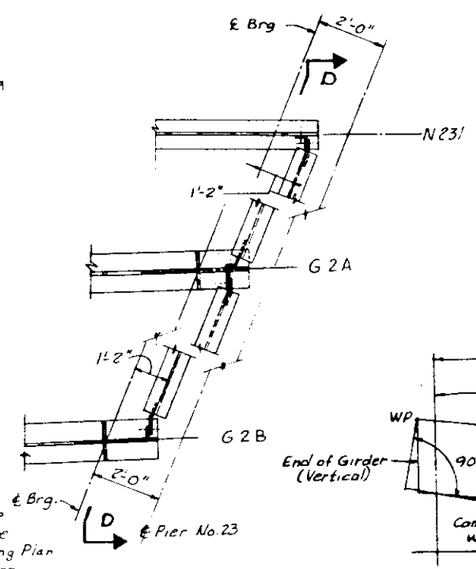
DEAD LOAD DEFLECTION DIAGRAM

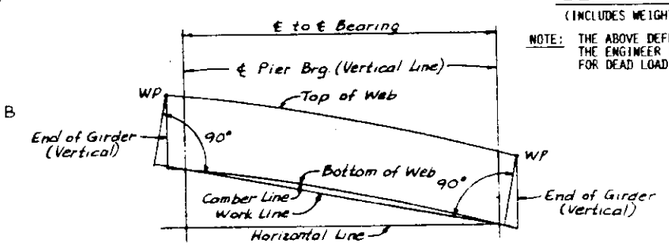
(INCLUDES WEIGHT OF CONCRETE ONLY)

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.



PARTIAL FRAMING PLAN- N.W. BOUND LANES





For Top of Web Elevations, see "Typical Camber Diagram Table" above.

WORK LINES FOR GIRDER

NOTE: SEE SHEET 10 FOR SECTIONS A-A THRU F-F.

FRAMING DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

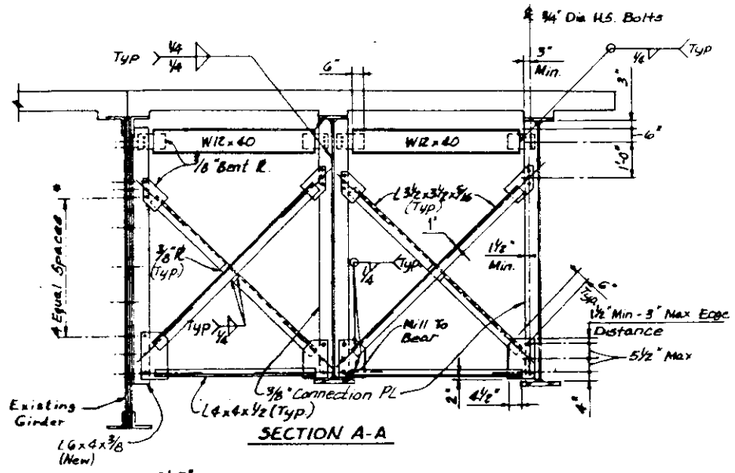
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	28
F. AID R. REG. 4		ILLINOIS	FED. AID PROJECT	

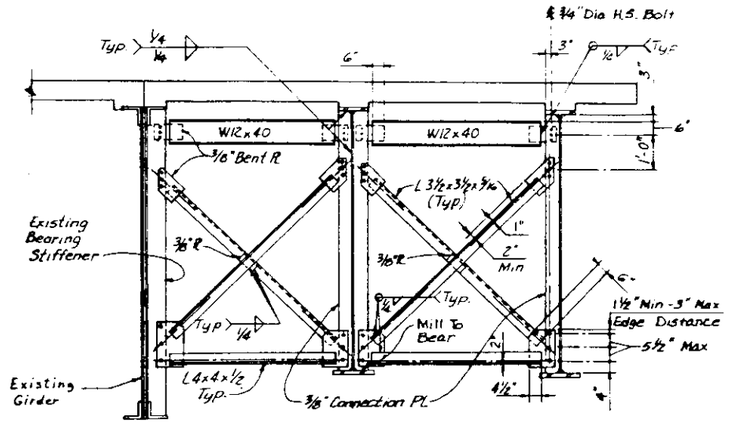
SHEET NO. 10
14 SHEETS

CH OF D66

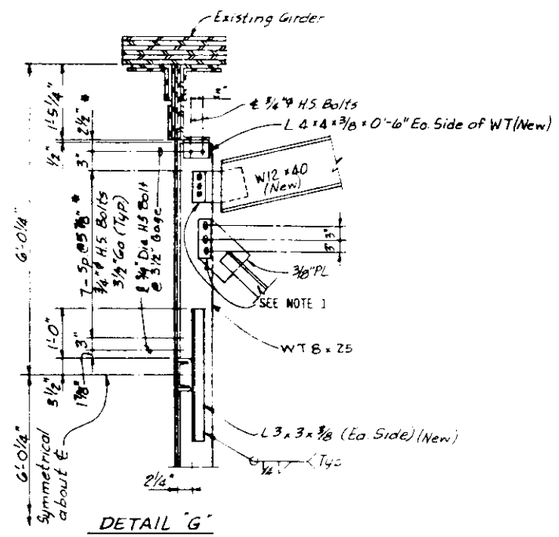
* 1989-091F



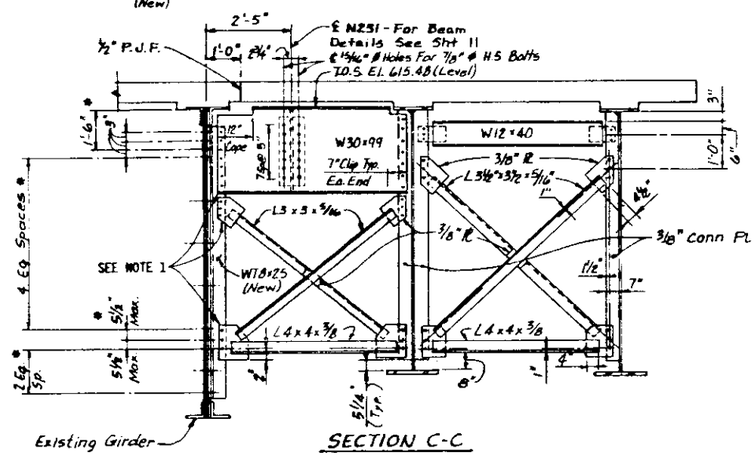
SECTION A-A



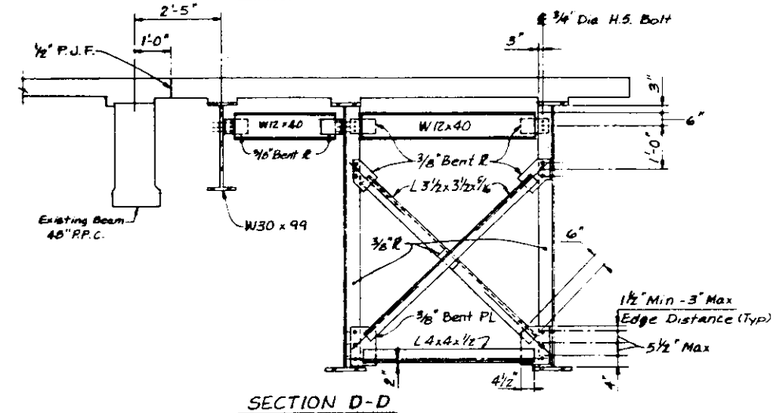
SECTION B-B



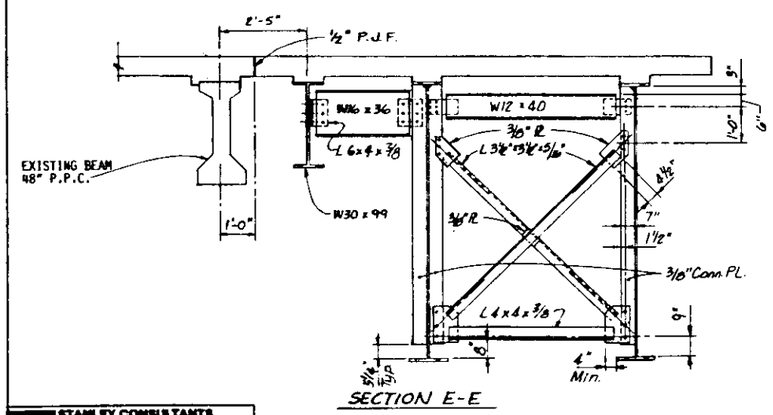
DETAIL "G"



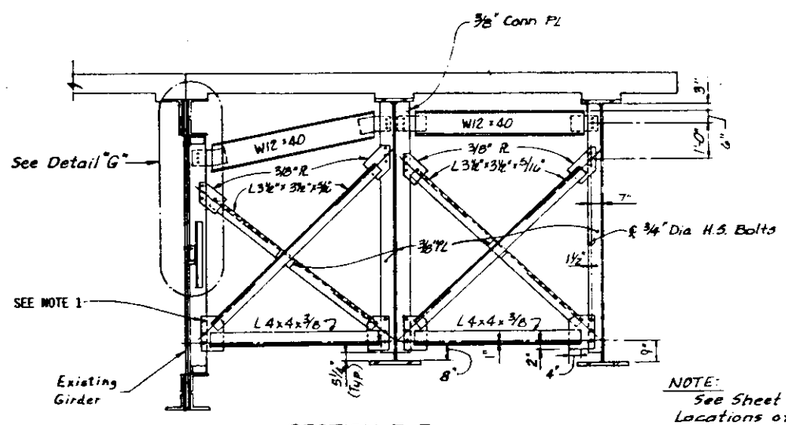
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

NOTE:
See Sheet 9 for Locations of Sections A-A thru F-F.

NOTES:

1. FOR CONNECTION TO EXISTING GIRDER, PROVIDE 1 1/2" LONG X 13/16" VERTICAL SLOTTED HOLES IN 3/8" PLATE. PROVIDE 3/8" X 4" X 0'-10 1/2" PLATE W/13/16"ø HOLES TO COVER SLOTTED HOLES IN CONNECTION PLATES. ~~FINGER TIGHTEN PRIOR TO POURING DECK SLAB. FULLY TIGHTEN AFTER COMPLETION OF DECK SLAB.~~

~~2. ALL HOLES IN EXISTING STEEL ARE TO BE DRILLED.~~

* NOTE: FIELD DRILL NEW L'S AND NEW WT'S TO MATCH EXISTING HOLES, WHERE REQUIRED (NOT THIS CONTRACT)

STANLEY CONSULTANTS

FRAMING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

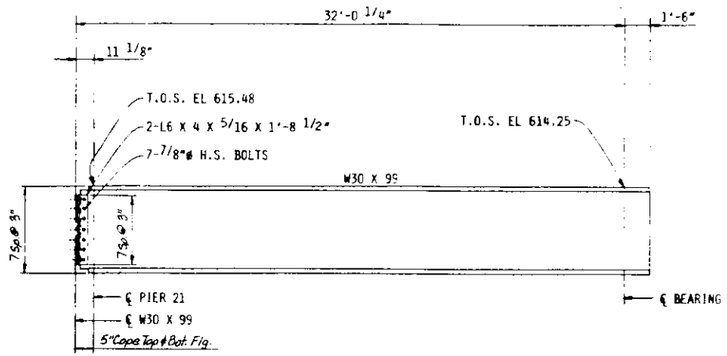
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	138	29
F.A.P. REG. 6		ILLINOIS	FED. AID PROJ.	

* 1989-091

SHEET NO. 1 OF 14 SHEETS

012 OF C66



BEAM NO. N231

BEAM MOMENT TABLE		BEAM N231 .5 SPAN
Is	in^4	4000
Ss	in^3	270
DL	k/ft	.542
MDL	k-ft	69.4
SDL	k/ft	.105
MSDL	k-ft	13.4
MLL	k-ft	156.3
MIMP	k-ft	46.9
MLL+I	k-ft	203.2
fs(DL)	ksi	3.1
fs(SDL)	ksi	.6
fs(LL+I)	ksi	9.0
fs(TOTAL)	ksi	12.7
VR	k	43.5

Is and Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.

VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

BEAM REACTION TABLE		BEAM N231
R_{DL}	k	10.4
R_{LL}	k	25.5
IMP	k	7.6
R TOTAL	k	43.5

DL DEFLECTION AT ℄ BEAM (INCLUDES WEIGHT OF CONCRETE ONLY)
Δ = 1/8"

STANLEY CONSULTANTS

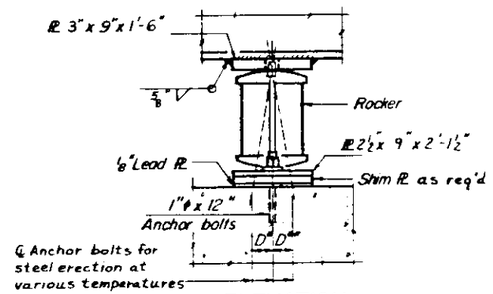
FRAMING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

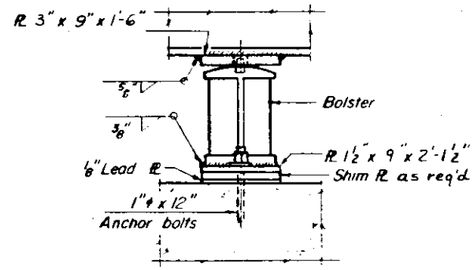
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.I. 90/94	*	COOK	138	30	SHEET NO. 12 / 14 SHEETS
					C13 OF C66

* 1989-091F



ELEVATION



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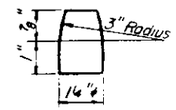
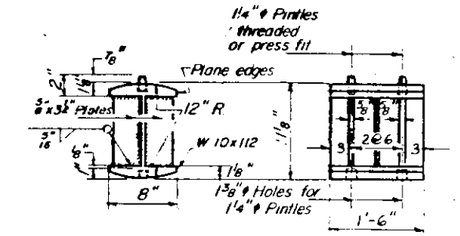
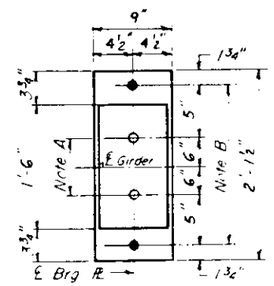


PINTLE

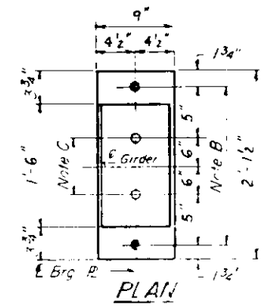


ROCKER



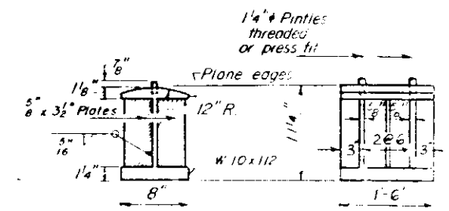
PLAN

AT PIER 13 & 23
(No. Req'd 4)



PLAN

AT PIER 16 & 18
(No. Req'd 4)



BOLSTER

NOTE A
1⅜"φ Holes - 1" deep in top PL for pintles. Thread or press fit pintles into bottom PL

NOTE B
1½"φ Holes for 1"φ anchor bolts 5/16" x 2½ x 2½ PL Washers under nut

NOTE C
1⅜"φ Holes 1" deep in top PL only for 1¼"φ pintle

BEARING ASSEMBLY DETAILS

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

a) D* (Side of brg away from fixed brg.)
D* = ⅛" per each 100' of expansion for every 15° fall below the normal temp of 50°F
D** (Side of brg toward fixed brg.)
D** = ⅛" per each 100' of expansion for every 15° rise above the normal temp of 50°F

~~b) After girders have been erected and dimensions D* or D** determined, holes shall be drilled and anchor bolts shall be installed as shown on Sheet #59 of 72~~

NOT THIS CONTRACT

FOR FABRICATION ONLY

STANLEY CONSULTANTS

I-2-B 12-31-84

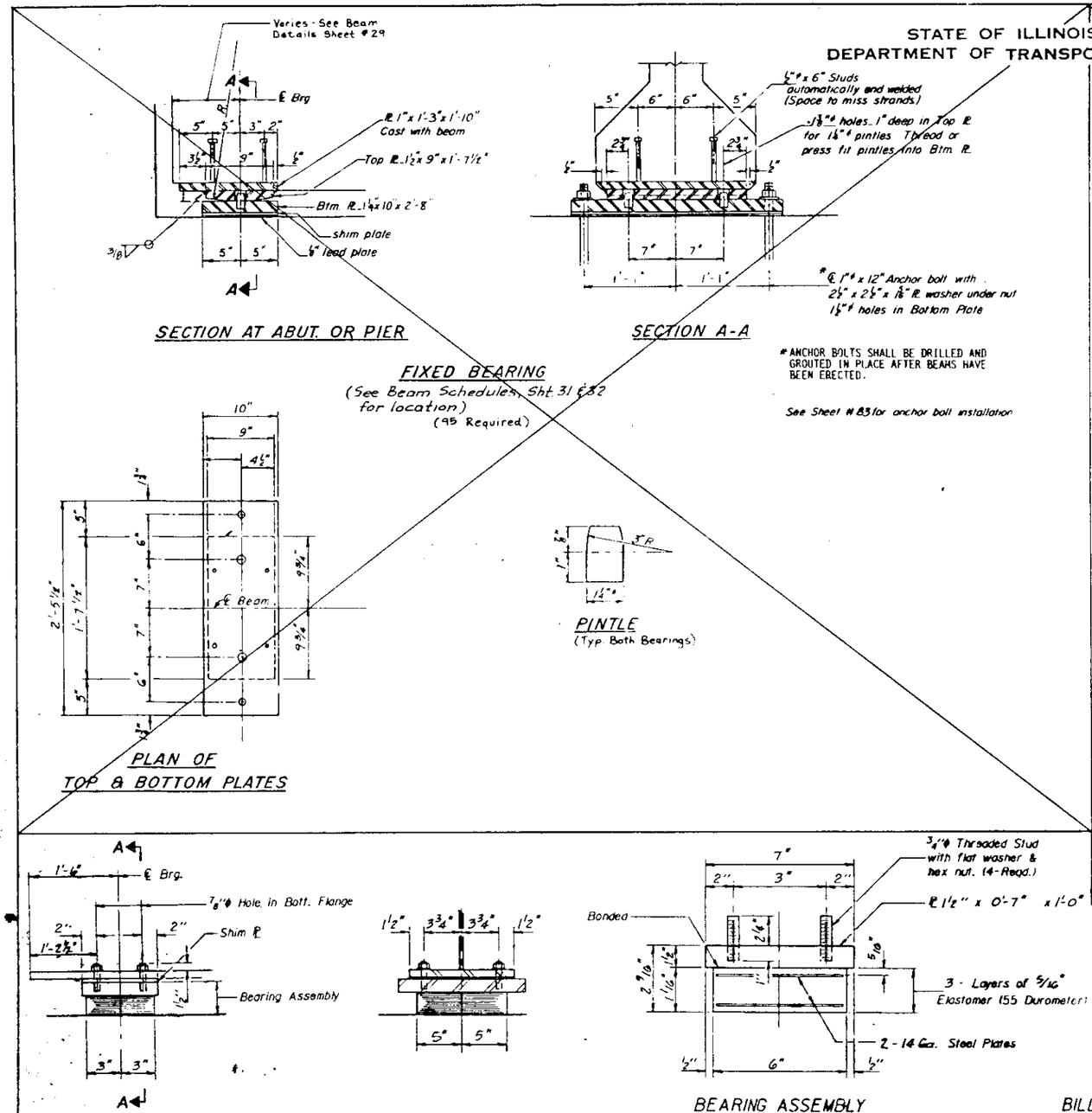
BEARING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

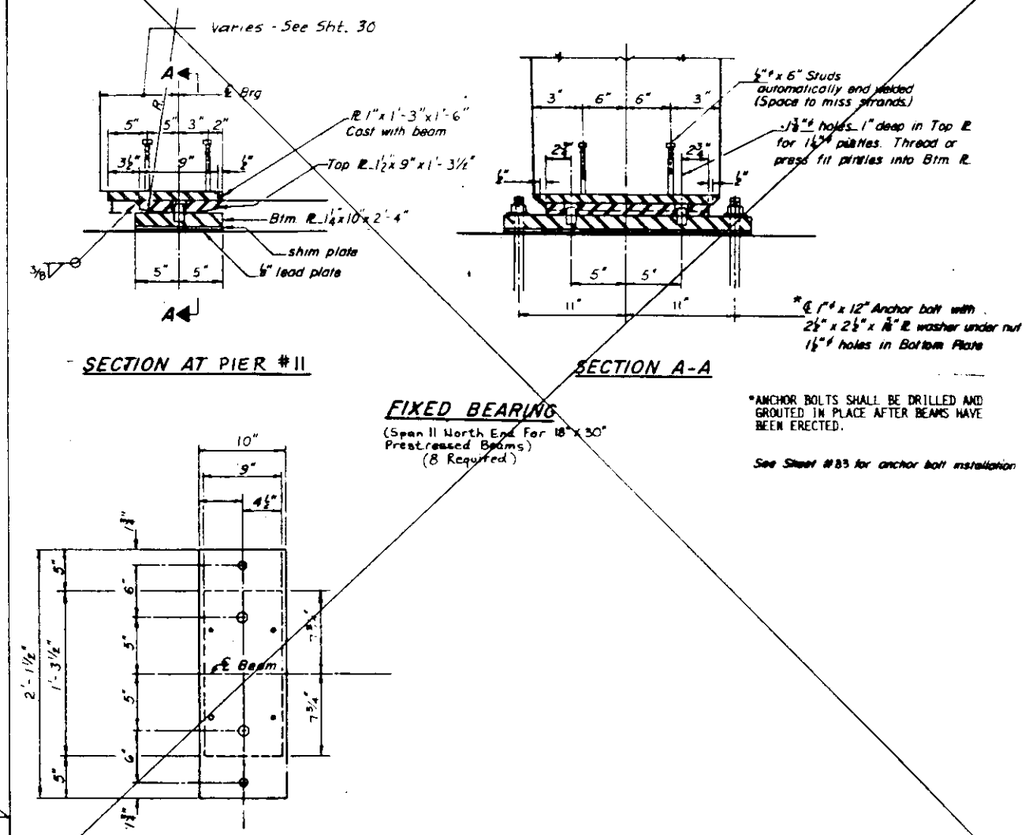
FAU 9094		COOK	138	31	SHEET NO. 13 / 14 SHEETS
					C14 OF C66

* 1989-091F



* ANCHOR BOLTS SHALL BE DRILLED AND GROUTED IN PLACE AFTER BEAMS HAVE BEEN ERECTED.

See Sheet #83 for anchor bolt installation



*ANCHOR BOLTS SHALL BE DRILLED AND GROUTED IN PLACE AFTER BEAMS HAVE BEEN ERECTED.

See Sheet #83 for anchor bolt installation

Note: Shim plates shall not be placed under Bearing Assembly.

BILL OF MATERIAL

Item	Unit	Total
FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE I	Each	1

FOR FABRICATION ONLY

STANLEY CONSULTANTS

PI-2FB 12-31-85

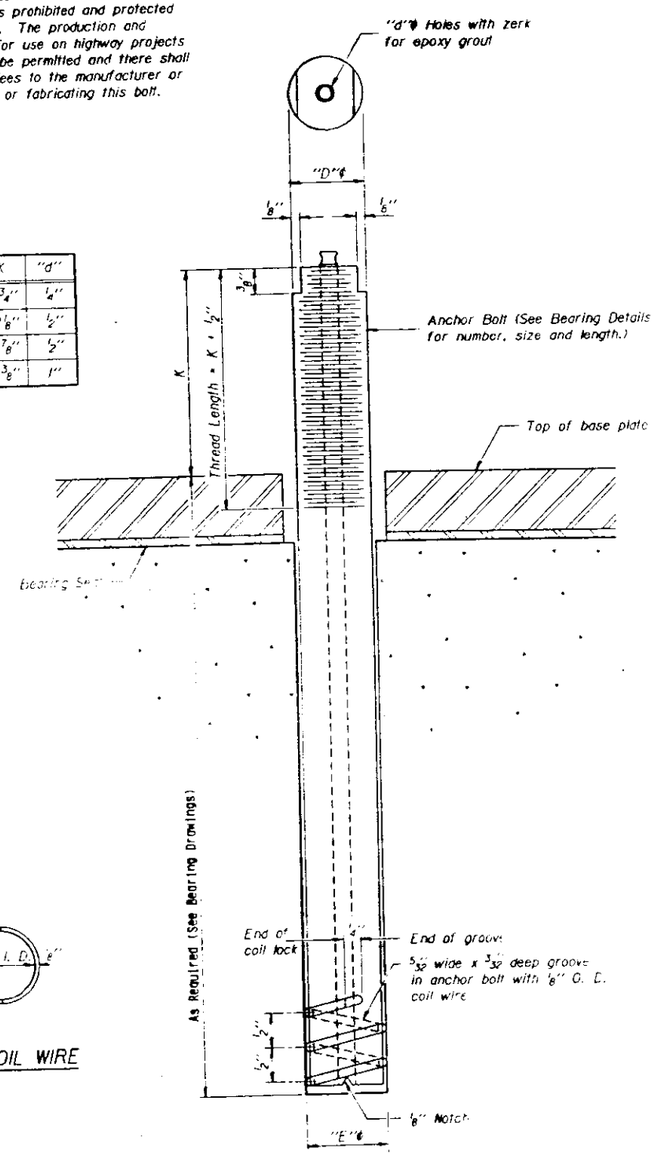
TYPE I ELASTOMERIC EXP. BRG.

(BEAM NO. N231 AT PIER 23)
(1 Required)

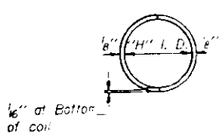
The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

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

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

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

1. A threaded rod stud with nut and washer conforming to ASTM A36.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemicals.

GENERAL NOTES

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

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

The anchor bolts ~~furnished and installed and~~ including the epoxy grout or capsules ~~shall not be paid for separately but~~ shall be included in the unit bid price for "Furnishing ~~and Erecting~~ Structural Steel".

Anchor bolts, washers and nuts, to be plated against corrosion in accordance with the special provisions, shall be zinc-coated by the mechanical plating method conforming to ASTM B695, Class 50. Zinc-coated nuts shall be tapped oversize in accordance with the requirements of AASHTO M291 and shall meet the supplementary requirements S1.1 thru S1.2.1 of the same specifications for lubricant and testing.

STANLEY CONSULTANTS

ABB-1 12-1-83

ANCHOR BOLTS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

90/94 | F.A.I. RTE. | ILLINOIS | FED. AID PROJECT ACIR-94-2(202)49
0505.3-1H-F(89)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SUMMARY OF QUANTITIES, GENERAL NOTES AND STATE STANDARDS
3-13	ASHLAND AVENUE BRIDGE
14-16	BEARING DETAILS
17	ANCHOR BOLTS

STATE STANDARDS TO BE INCLUDED

DRAWING NO.	DESCRIPTION
1686-4	STANDARD SYMBOLS AND ABBREVIATIONS

SCALES

PLAN	1" = 50'
PROFILE HORIZONTAL	1" = 50'
PROFILE VERTICAL	1" = 5'
CROSS SECTIONS	1" = 10' (HORIZ)
CROSS SECTIONS	1" = 5' (VERT)

F.A.I. ROUTE 90/94 (JOHN F. KENNEDY EXPRESSWAY)

SECTION 0505.3 - 1H - F(89)

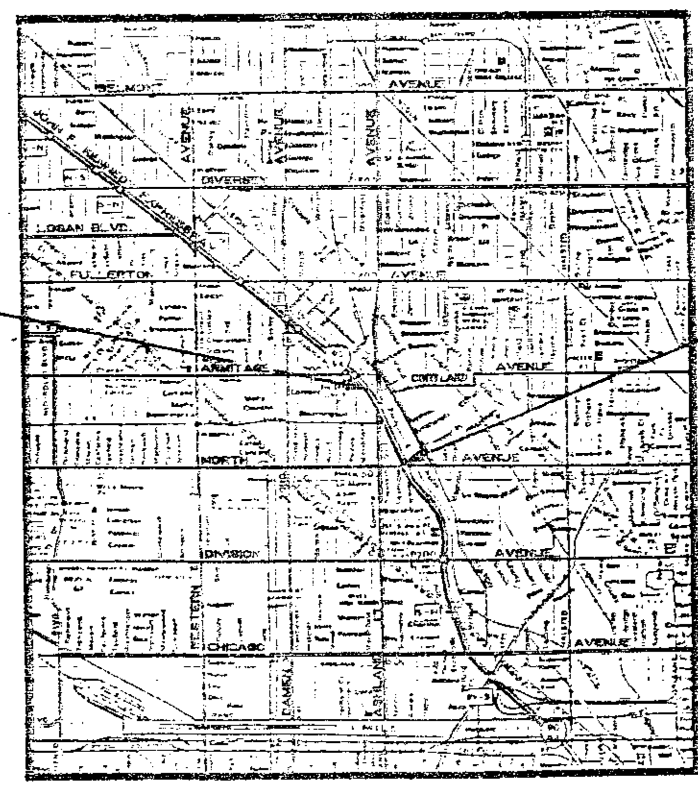
PROJECT ACIR-94-2(202)49

COOK COUNTY

C - 91 - 409 - 89

P.P.C. BEAM AND BEARING FABRICATION - ADVANCE WORK

PROJECT AND IMPROVEMENT ENDS STATION 414+03.23 ℄ REVERSIBLES F.A.I. - 90/94

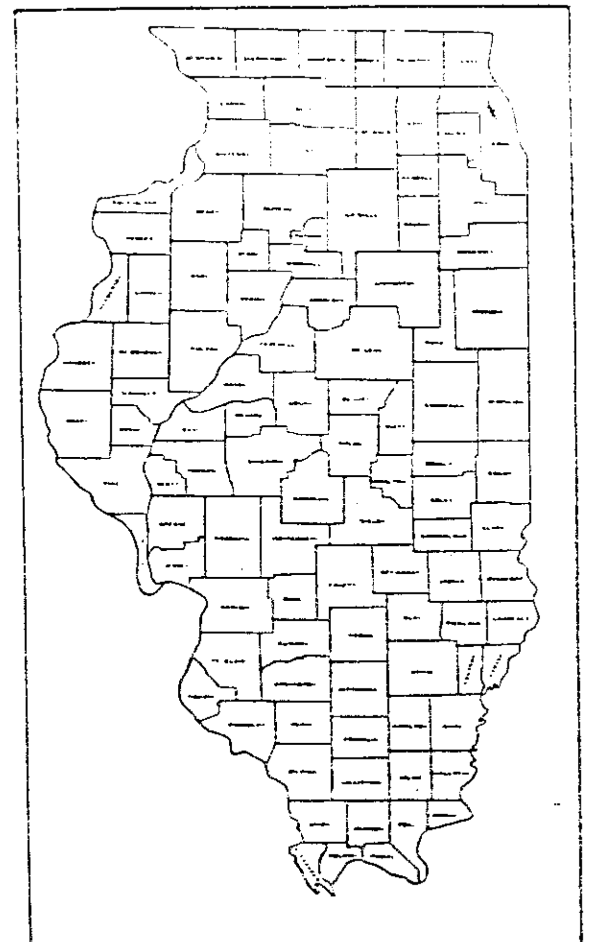


PROJECT AND IMPROVEMENT BEGINS STATION 398+57.35 ℄ REVERSIBLES F.A.I. - 90/94

LOCATION MAP

SCALE: 1" = ¼ MILE

GROSS LENGTH = 1545.88 FT. (0.293 MILES)
NET LENGTH = 1545.88 FT. (0.293 MILES)



LOCATION OF SECTION INDICATED THUS:

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED April 12 1990 — DISTRICT ENGINEER
EXAMINED 4-24 1990 — ENGINEER OF PLANS AND CONTRACTS
PASSED 4-24 1990 — ENGINEER OF DESIGN
APPROVED 4-24 1990 — DIVISION OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED — DIVISION ADMINISTRATOR — DATE

0 100' 200' 300' 1" = 100'
0 10' 20' 30' 1" = 10'
0 50' 100' 1" = 50'
0 50' 100' 1" = 40'
0 50' 100' 1" = 30'
0 50' 100' 1" = 20'

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

CONTRACT NO. 80531

CONSULTANT SERVICES
708-4231

F.A.I. 90/94	*	COOK	17	2
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

* 0505.3-1H-F(89)

CODE #	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE X581-5Ø
X5052300	FURNISHING PRECAST PRESTRESSED CONCRETE	LIN. FT.	6496.8	6496.8
	I-BEAMS 48"			
X0300659	FURNISHING PRECAST PRESTRESSED CONCRETE	LIN. FT.	454.3	454.3
	BEAMS, 18"x30"			
X0320622	FIELD MEASUREMENTS	LUMP SUM	1	1
X0300660	STORAGE OF FABRICATED MATERIALS	CAL. DAY	60	60
X5032700	FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	103	103

GENERAL NOTES:

1. FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 7/8"ø, OPEN HOLES 15/16"ø, UNLESS OTHERWISE NOTED.

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

3. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. (FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF TOP PLATE SHALL BE PROVIDED).

4. REINFORCEMENT BARS SHALL CONFORM TO REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

5. ALL REINFORCING STEEL BARS ARE MEASURED OUT-TO-OUT.

6. THE CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR EDGE OR END OF REINFORCING SHALL BE 2" EXCEPT 3" WHEN DEPOSITED AGAINST EARTH, UNLESS OTHERWISE NOTED.

SUMMARY OF QUANTITIES AND GENERAL NOTES

P.P.C. BEAM AND BEARING FABRICATION - ADVANCE WORK

ROUTE: FAI-90/94 (JFK EXPWY)

SCALE:

PROJECT COOK COUNTY

TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER ASHLAND AVENUE - EL.804.09 (U.S.G.S. DATUM)

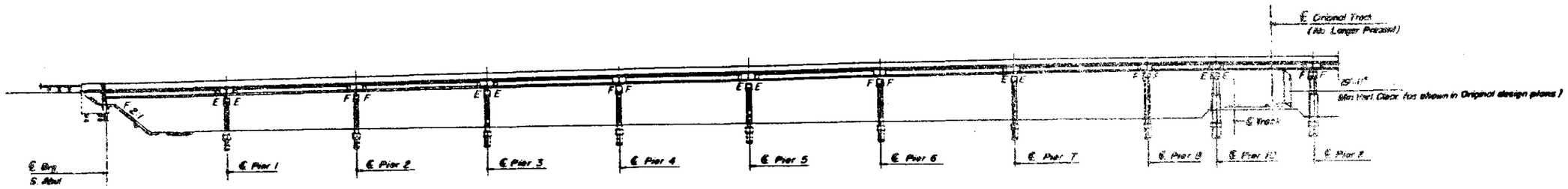
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	3
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 1 OF SHEETS

* 0505.7-1H-F189

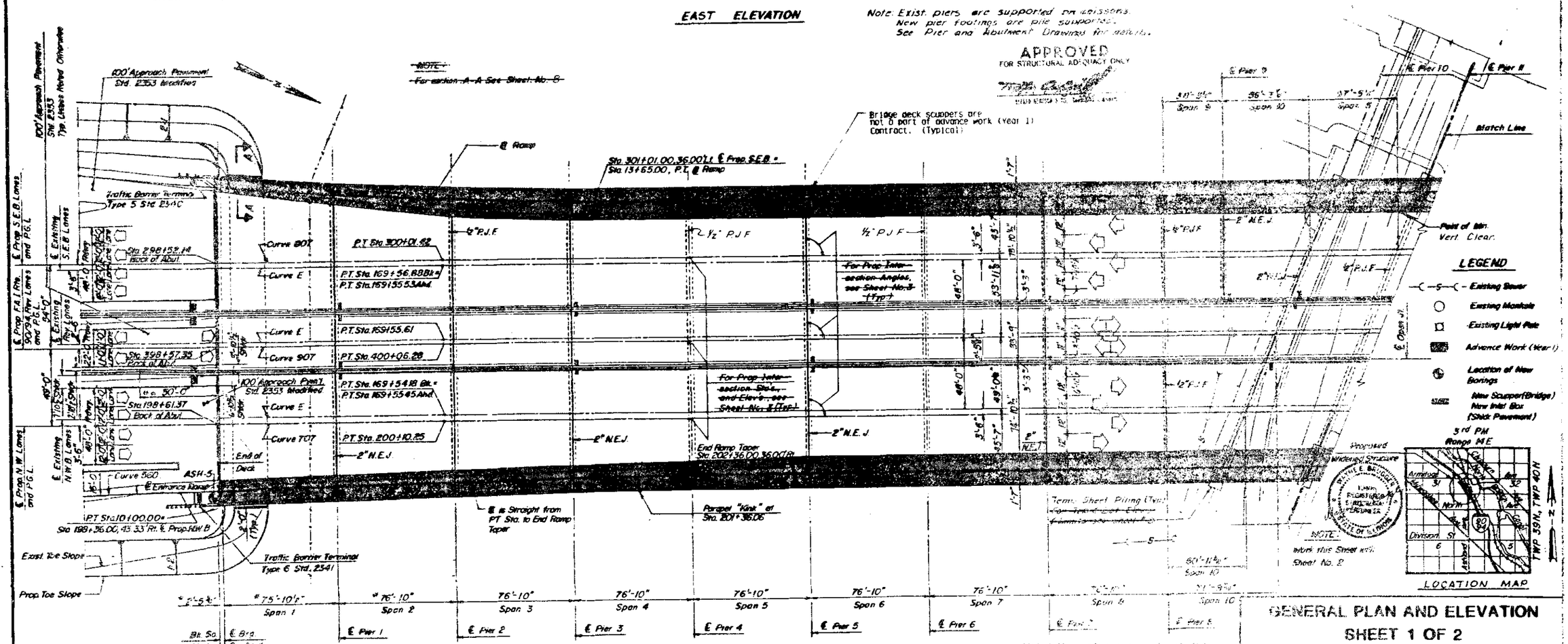
PPC BEAM AND BEARING FABRICATION-ADVANCE WORK



EAST ELEVATION

Note: Exist. piers are supported on [illegible]. New pier footings are pile supported. See Pier and Abutment Drawings for details.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY



PLAN

* Measured at Rt. Angles to ℄ Substructure

** 50'-0" - Transition Length for Shoulder Widths (At open joint between Rev. Lanes and N.W.B. Lanes only)

Note: N.E.J. = Neoprene Expansion Joint
P.J.F. = Preformed Joint Filler

Note: The plan view shows the proposed (final) development of the bridge. This contract covers advance work (Year 1) only.

LEGEND

- Existing Sewer
- Existing Manhole
- Existing Light Pole
- Advance Work (Year 1)
- Location of New Borings
- New Scupper (Bridge) New Inlet Box (Solid Pavement)

LOCATION MAP

NOTE: Work this Sheet with Sheet No. 2

GENERAL PLAN AND ELEVATION
SHEET 1 OF 2

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STRUCTURE NO. 016-0133

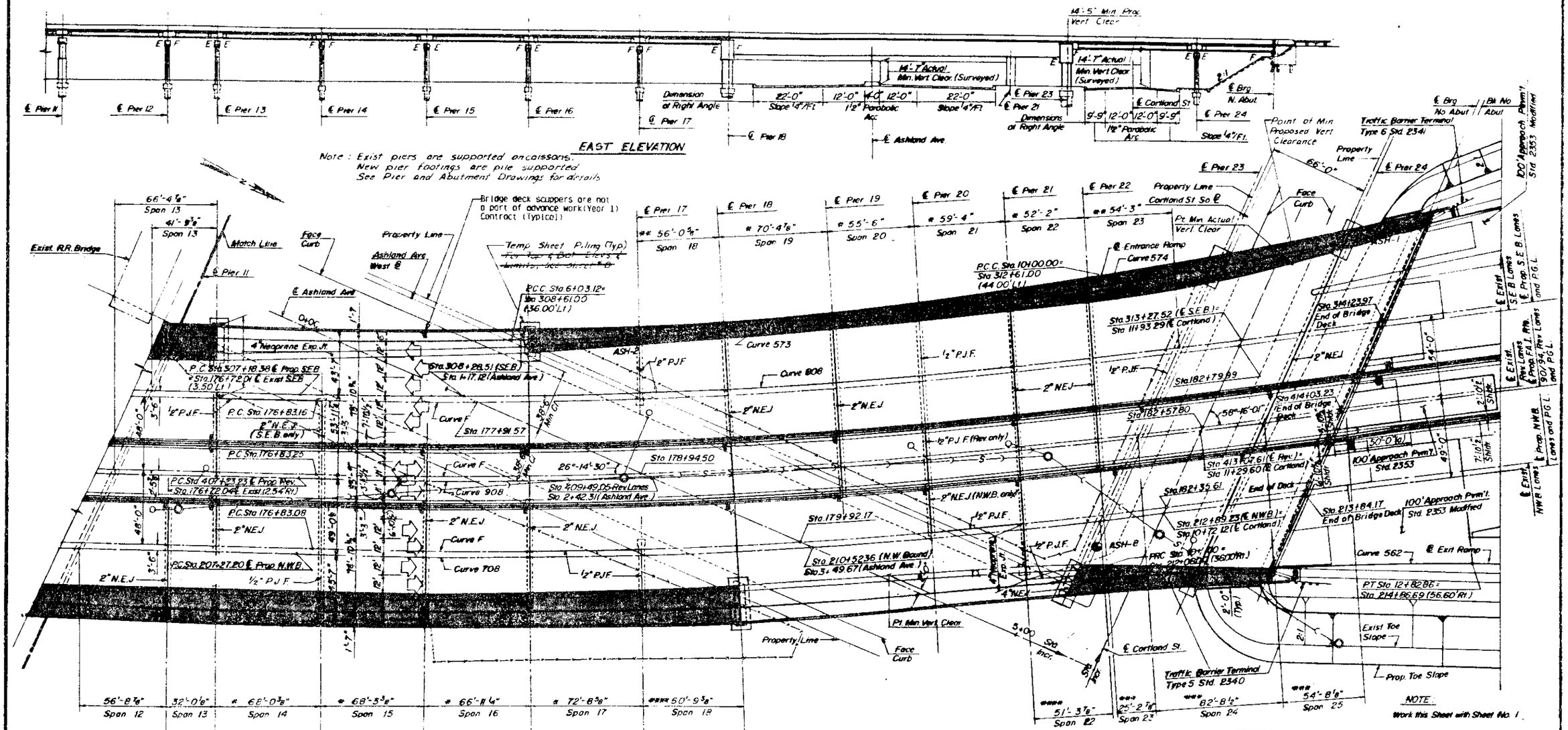
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 2 OF SHEETS

* 0505.3-1H-F(85)



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GENERAL PLAN AND ELEVATION
SHEET 2 OF 2

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 5 SHEETS

90/94 | * | COOK | 17 | 5

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER-STRUCTURE	SUB-STRUCTURE	TOTAL
RAILROAD PROTECTIVE LIABILITY INSURANCE	LUMP SUM	-	1	1
CLASS X CONC SUPERSTRUCTURE	CU. YD.	1315	-	1315
CLASS X CONCRETE	CU. YD.	-	1484.2	1484.2
REINFORCEMENT BARS	POUND	155,370	45,000	200,370
REINFORCEMENT BARS (EPOXY COATED)	POUND	179,870	179,690	359,560
EXPANSION BOLTS 3/4"ø	EACH	-	337	337
(2) PROTECTIVE COAT	SQ. YD.	5905	-	5905
NEOPRENE EXPANSION JOINT 2"	LIN. FT.	387	-	387
NEOPRENE EXPANSION JOINT 4"	LIN. FT.	36	-	36
(4) CONCRETE REMOVAL	CU. YD.	-	36.2	36.2
STRUCTURE EXCAVATION	CU. YD.	-	2459	2459
TEMPORARY SHEET PILING	SQ. FT.	-	14,585	14,585
FURNISHING CONCRETE PILES	LIN. FT.	-	12,070	12,070
DRIVING CONCRETE PILES	LIN. FT.	-	12,070	12,070
(3) TEST PILE (CONCRETE)	EACH		32	32
~~(1) FURNISHING AND ERECTING STRUCTURAL STEEL~~	~~LUMP SUM~~	~~1~~	-	~~1~~
FURNISHING PPC I-BEAMS, 48"	LIN. FT.	6496.8	-	6496.8
FURNISHING PPC BEAMS, 18"x30"	LIN. FT.	454.3	-	454.3
FIELD MEASUREMENTS	LUMP SUM	1		1
STORAGE OF FABRICATED MATERIALS	CAL. DAY	60		60 ⚠1
(5) FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	103	-	103
STUD SHEAR CONNECTOR	EACH	1,224		1,224
REPAIR CONCRETE STRUCTURES	SQ. FT.	-	5,200	5,200
EPOXY CRACK SEALING	LIN. FT.	-	1,500	1,500
SLOPE WALL 4"	SQ. YD.	-	370	370
TEMPORARY DRAINAGE SYSTEM	LIN. FT.	350	-	350
RELOCATE TEMPORARY CONC BARRIER	UNITS	314	-	314
PROTECTIVE SHIELD	SQ. YD.	2,235	-	2,235
BRIDGE PARAPET/SIDEWALK REMOVAL	LIN. FT.	3,100	-	3,100
BRIDGE SEAT SEALER	SQ. FT.	-	2,500	2,500

(1) INCLUDES 561,570 POUNDS OF STRUCTURAL STEEL

(2) PROTECTIVE COAT QUANTITY INCLUDES DECK SURFACE. SEE SPECIAL PROVISIONS FOR CURING AND TEXTURING BRIDGE DECK

(3) THE CONTRACTOR SHALL DRIVE CONCRETE TEST PILES IN PERMANENT LOCATIONS AT WIDENED PIERS & ABUTMENTS AS DIRECTED BY ENGINEER BEFORE ORDERING REMAINDER OF THE PILES

(4) EXISTING NAME PLATE SHALL BE REMOVED FROM THE EXISTING STRUCTURE WITHOUT DAMAGE FOR REUSE BY THE OWNER. CONTRACTOR SHALL STORE THE NAME PLATE WHERE DESIGNATED BY THE OWNER.

(5) INCLUDES TOTAL BEARING ASSEMBLY, SIDE RETAINERS & PLATES

GENERAL NOTES:

1. SEE PROPOSAL FOR BORING DATA
2. FASTENERS SHALL BE HIGH STRENGTH BOLTS (AASHTO M 164), TYPE 3, BOLTS 7/8"ø, OPEN HOLES 15/16"ø, UNLESS OTHERWISE NOTED.
3. THE ZINC-SILICATE AND VINYL PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED.
4. ALL STRUCTURAL STEEL SHALL BE AASHTO M 183. EXPANSION JOINT ANGLES AND ATTACHED BARS SHALL BE AASHTO M 183.
5. EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THE ZINC-SILICATE PRIMER.
6. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
7. ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.
8. THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE TENSION FLANGES, WEBS AND ALL SPLICE PLATE MATERIAL OF THE STEEL GIRDERS.
9. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.
10. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO SUBMITTAL OF SHOP DRAWINGS OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
11. EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS., AND 3/4"ø X 12" HOOKED BOLTS.
12. BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.
13. THE CONCRETE, FOR BRIDGE FLOORS FINISHED IN ACCORDANCE WITH ARTICLE 503.15 OF THE STANDARD SPECIFICATIONS, SHALL BE PLACED AND COMPACTED PARALLEL TO THE SKEW IN UNIFORM INCREMENTS ALONG CENTERLINE OF BRIDGE. THE FINISHING MACHINE, WHEN REQUIRED, SHALL BE SET PARALLEL TO THE SKEW FOR STRIKING OFF AND SCREEDING THE CONCRETE.
14. P.P.C. BEAMS SHALL BE STORED AT FABRICATORS YARD UNTIL REQUESTED. UPON REQUEST P.P.C. BEAMS SHALL BE DELIVERED F.O.B. JOB SITE.
15. THE INFORMATION SHOWN FOR THE TEMPORARY SHEET PILING IS ESTIMATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A DESIGN OF THE TEMPORARY SHEET PILING AND ASSOCIATED MEMBERS, IF REQUIRED, SUBJECT TO THE APPROVAL OF THE ENGINEER.
16. ALL STRUCTURAL STEEL FABRICATORS PERFORMING WORK ON THE MAIN LOAD CARRYING COMPONENTS OF STEEL STRUCTURES SHALL BE CERTIFIED UNDER CATEGORY III (AISC) OF THE QUALITY CERTIFICATION PROGRAM.
17. SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" X 6" - W4.0 X W4.0, WEIGHING 58 LBS. PER 100 SQ. FT.
18. THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.
19. CALCULATED WEIGHT OF STRUCTURAL STEEL (AASHTO M 183) = 561,570 LBS.
20. ALL REINFORCING STEEL BARS ARE MEASURED OUT-TO-OUT.
21. THE CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR EDGE OR END OF REINFORCING SHALL BE 2" EXCEPT 3" WHEN DEPOSITED AGAINST EARTH, UNLESS OTHERWISE NOTED.

EXISTING STRUCTURE

FAI ROUTE 2, SEC 0505.3IH, BUILT IN 1958, STRUCTURE NO. 016-0133.

SUPERSTRUCTURE: APPROACH SPANS TO ASHLAND AVENUE
SIMPLY SUPPORTED PRECAST, PRESTRESSED CONCRETE I-BEAMS
ASHLAND AVENUE MAIN SPANS:
PLANAR FRAME-TYPE STRUCTURE CONSISTING OF 144" RIVETED BUILT-UP COMPOSITE FASCIA GIRDERS, 96" AND 120" CROSS-GIRDERS, AND 48" LONGITUDINAL GIRDERS

SUBSTRUCTURE: PILE BENT ABUTMENTS SUPPORTED ON CONCRETE PILES AND MULTIPLE COLUMN PIERS SUPPORTED ON CAISSONS.

SUPERSTRUCTURE DECK TO BE REPLACED AND STRUCTURE WIDENED. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

EXISTING UTILITIES

THE EXISTING UTILITIES HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE PLANS AND FROM FIELD OBSERVATIONS. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

REHABILITATION NOTES

SEAL CRACKS IN ABUTMENTS AND PIERS WITH PRESSURE INJECTED EPOXY. REMOVE ALL DETERIORATED CONCRETE IN ABUTMENTS AND PIERS, AND REPLACE WITH EPOXY MORTAR OR FORMED CONCRETE. SPLICE IN REBARS WHERE REQUIRED. (SEE SPECIAL PROVISIONS).

EXISTING LIGHT POLES AND CONDUITS ARE TO BE REMOVED. (COST INCIDENTAL TO COST OF CONSTRUCTION.)

DESIGN SPECIFICATIONS

AASHTO (1983) WITH CURRENT INTERIM SPECIFICATIONS

LOADING HS20-44 AND ALTERNATE MILITARY LOADING

ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

REINFORCED CONCRETE & STRUCTURE STEEL

F'C =	3,500 PSI	(CONCRETE)
FY =	60,000 PSI	(REINFORCEMENT)
FS =	20,000 PSI	(PROPOSED STRUCTURAL STEEL)
FS =	18,000 PSI	(EXISTING STRUCTURAL STEEL)

PRESTRESSED CONCRETE & PRETENSIONING STEEL

	EXISTING	PROPOSED
F'C	5,000 PSI	5,000 PSI
F'CI	4,000 PSI	4,000 PSI
F'S	248,000 PSI (7/16"ø STRANDS)	270,000 PSI (1/2"ø STRANDS)
F'SI	173,600 PSI	189,000 PSI

STANLEY CONSULTANTS

BILL OF MATERIAL

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

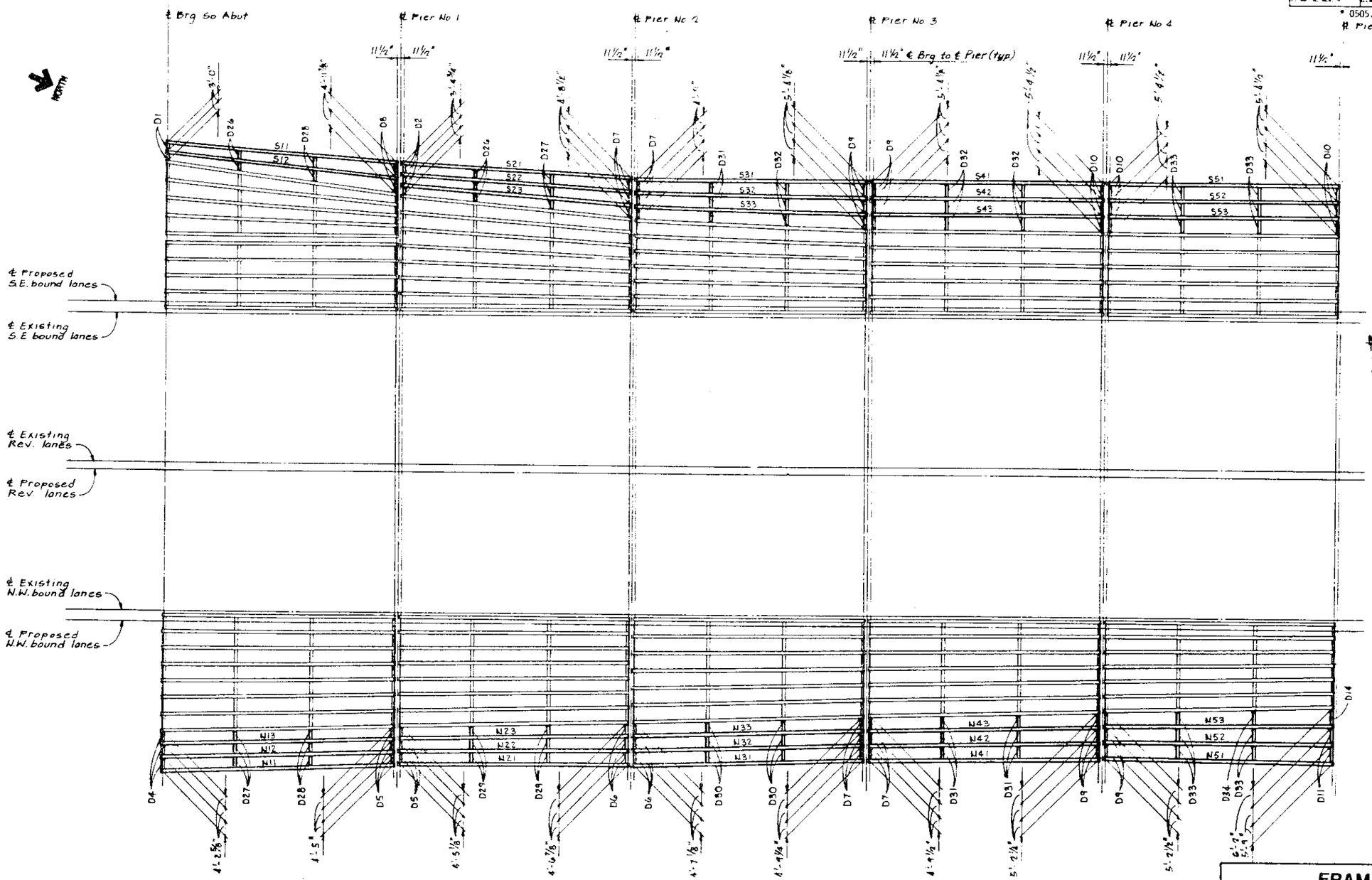
⚠1 Rev. 5-25-90

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	6
F. AID A. REG. 4		ILLINOIS	FED. AID PROJECT	

* 0505.3-1H-F(89)

SHEET NO. 4
SHEETS



NOTE: FOR BEAM DETAILS SEE SHT 8 THRU 11.

BEAM DIAPHRAGMS ARE NOT A PART OF THIS CONTRACT.

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FRAMING PLAN
SHEET 1 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

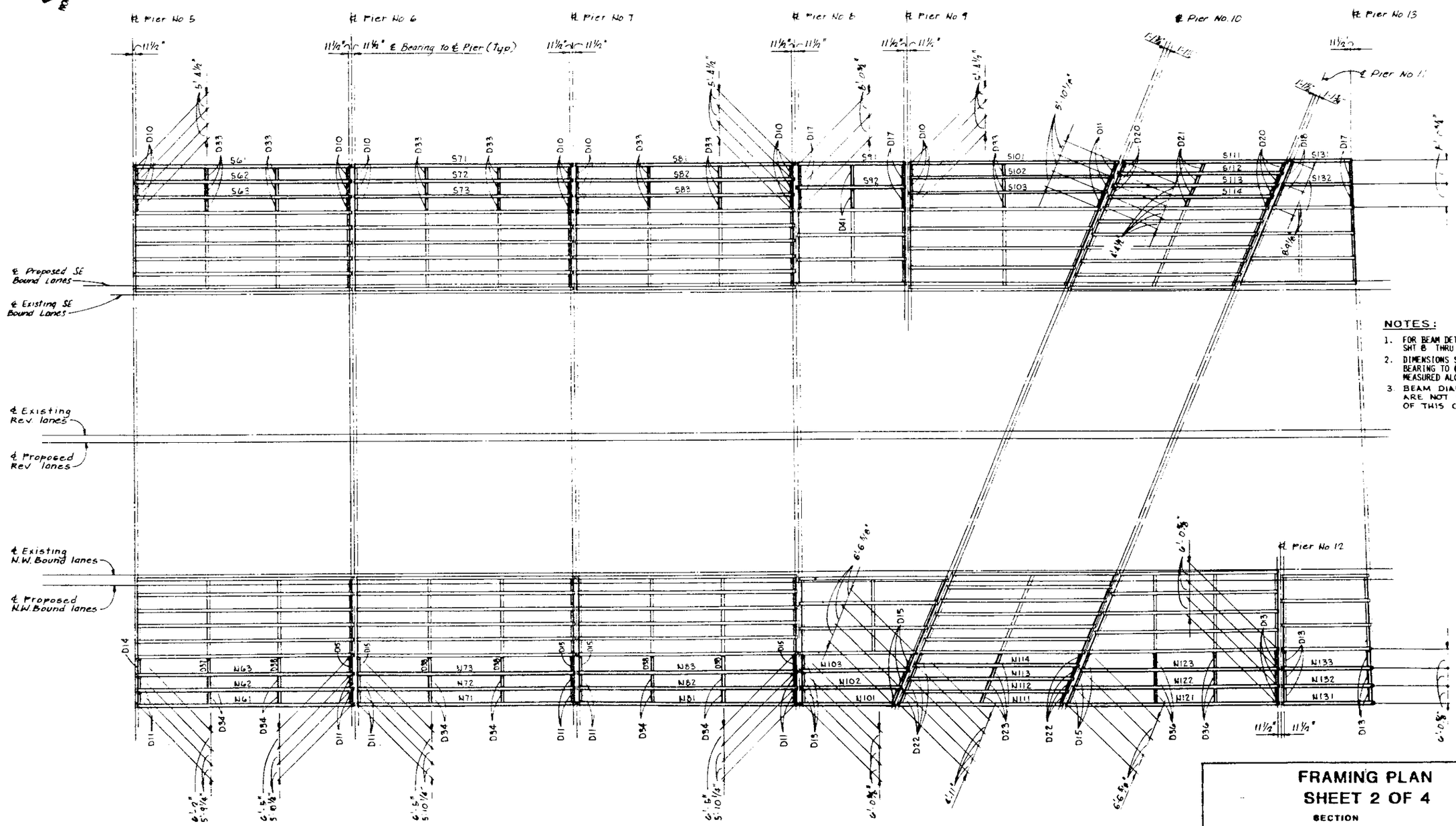
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	7

SHEET NO. 5 SHEETS

* 0505.3-1H-F(89)



NOTES:

1. FOR BEAM DETAILS SEE SHT 8 THRU 11
2. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.
3. BEAM DIAPHRAGMS ARE NOT A PART OF THIS CONTRACT

FRAMING PLAN
SHEET 2 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 408+49

STANLEY CONSULTANTS

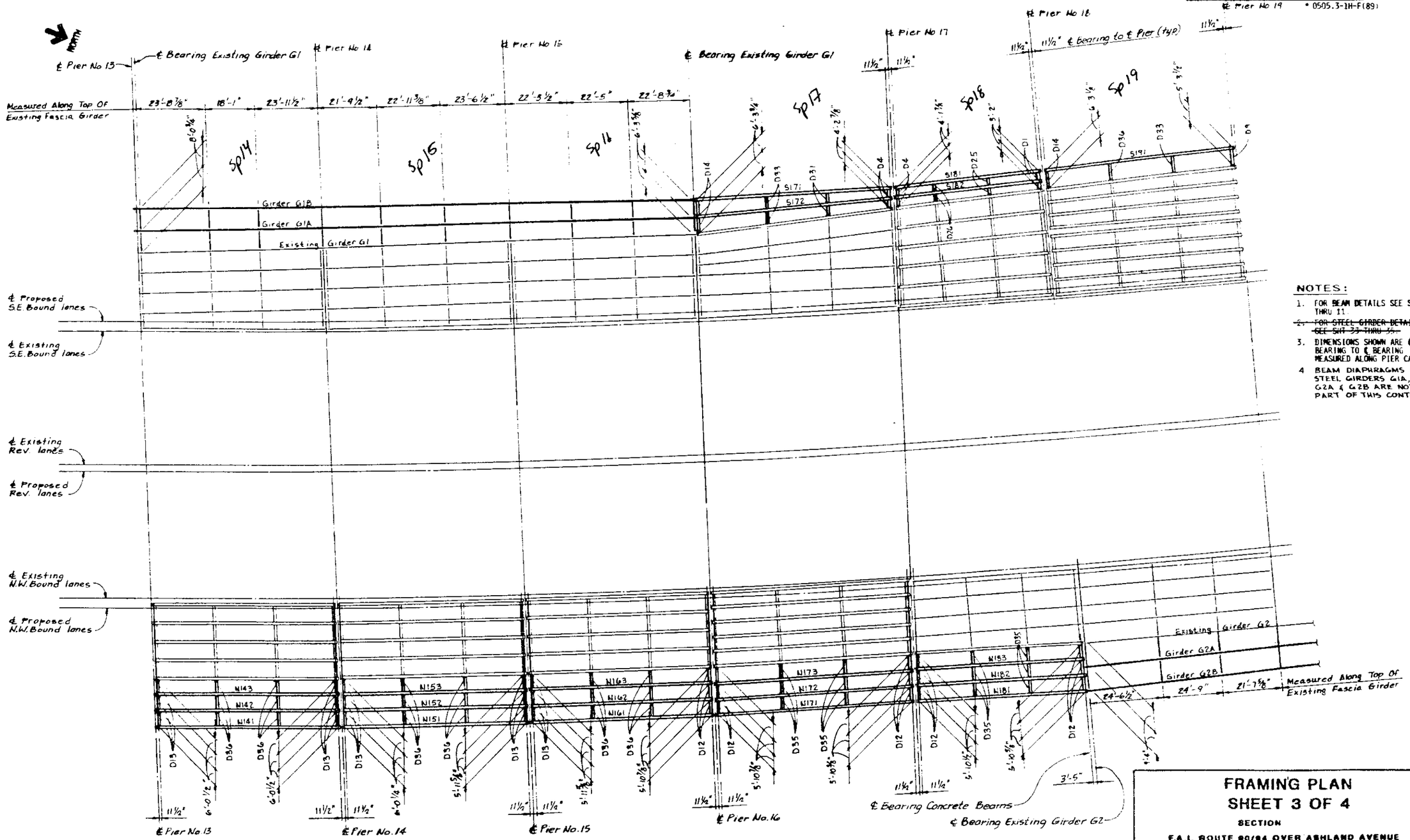
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	8

F. AID & REG. # ILLINOIS FED. AID PROJ.

SHEET NO. 6 SHEETS

* 0505.3-1H-F(89)



NOTES:

1. FOR BEAM DETAILS SEE SHT 8 THRU 11.
2. ~~FOR STEEL GIRDER DETAILS SEE SHT 33 THRU 35.~~
3. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.
4. BEAM DIAPHRAGMS AND STEEL GIRDERS G1A, G1B, G2A & G2B ARE NOT A PART OF THIS CONTRACT.

FRAMING PLAN
SHEET 3 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

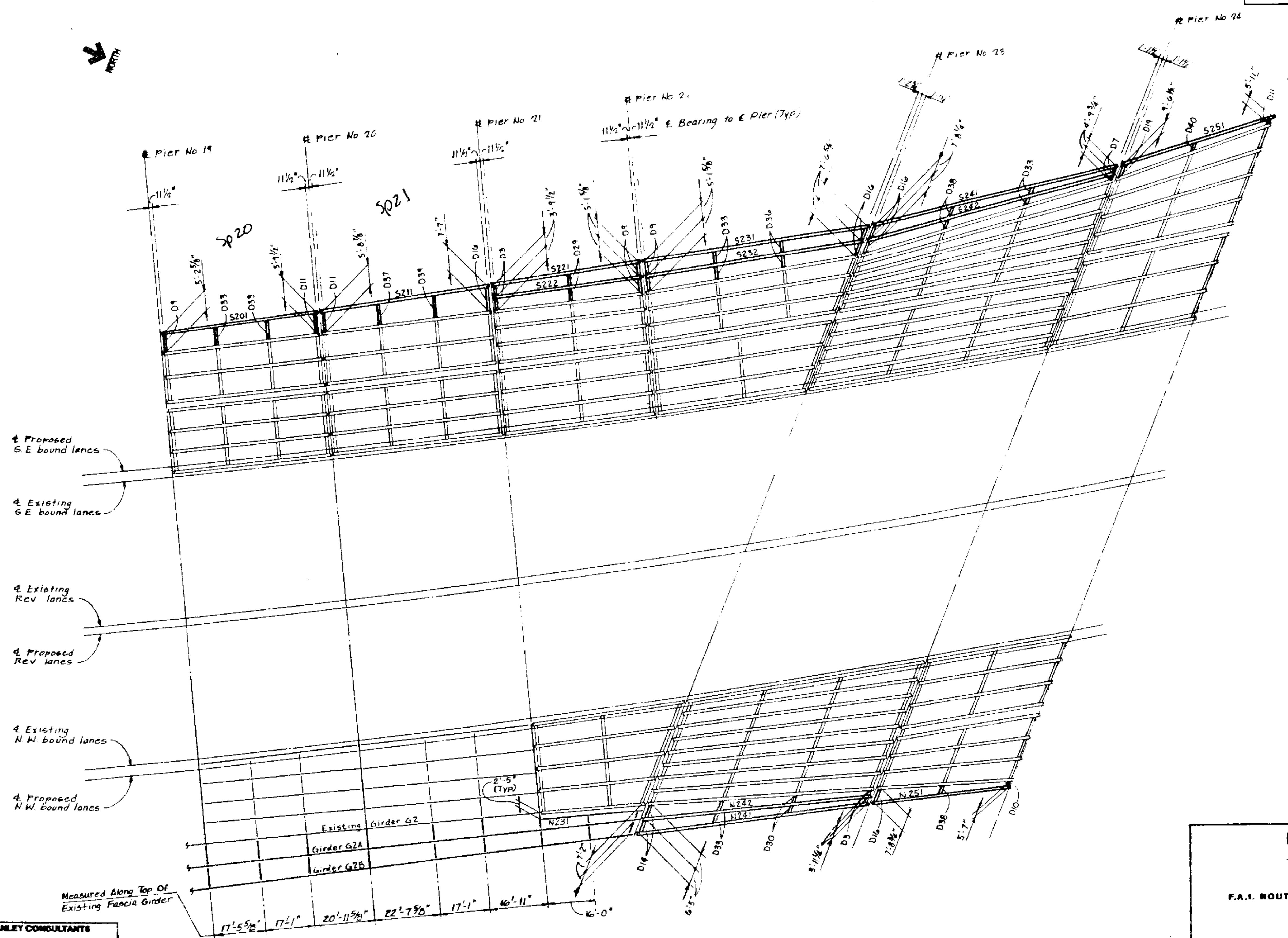
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	9

F. NO. & REG. 4 | ILLINOIS | FED. AID PROJECT

SHEET NO. 7
SHEETS

* 0505.3-1H-F(89)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTES:

1. FOR BEAM DETAILS SEE SHT 8 THRU 11
2. ~~FOR STEEL GIRDER DETAILS SEE SHT 33 THRU 35.~~
3. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.
4. BEAM DIAPHRAGMS, STEEL GIRDERS G2A & G2B AND STEEL BEAM N231 ARE NOT A PART OF THIS CONTRACT.

STANLEY CONSULTANTS

FRAMING PLAN
SHEET 4 OF 4

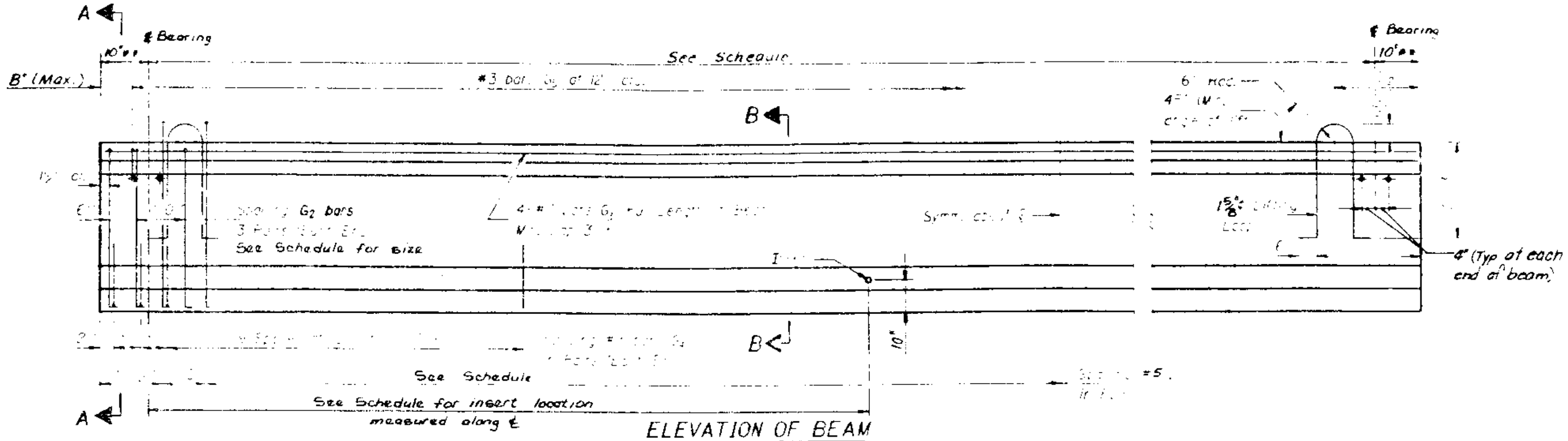
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

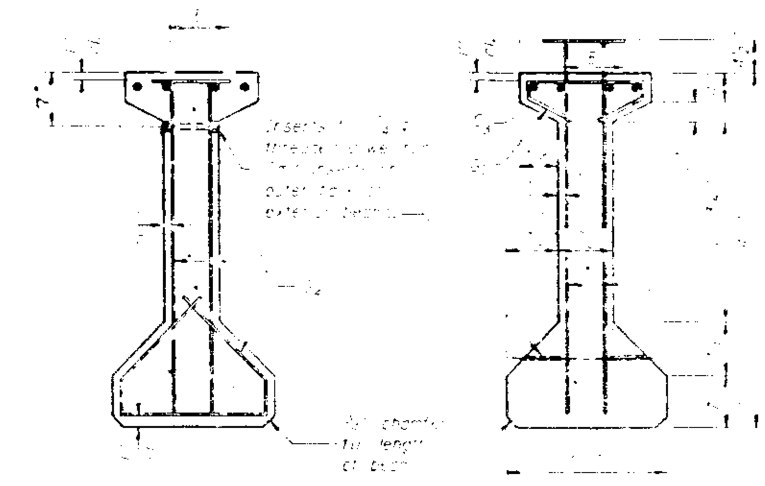
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	10

SHEET NO. 8
SHEETS

* 0505.3-1H-F(89

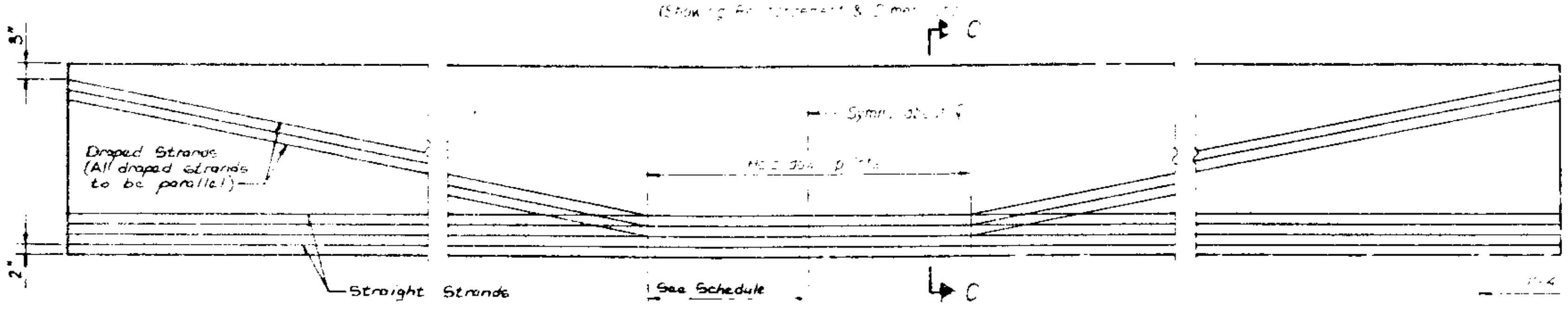


ELEVATION OF BEAM

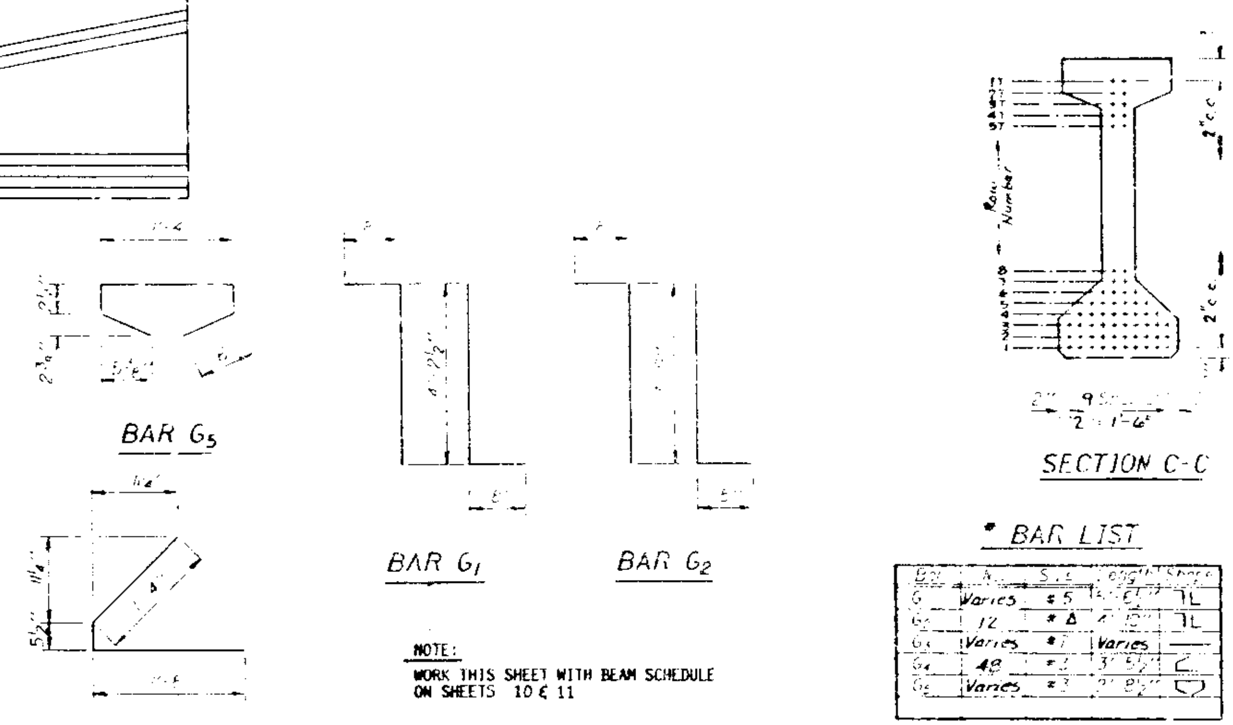


SECTION A-A

SECTION B-B



ELEVATION OF BEAM



BAR G5

BAR G4

BAR G1

BAR G2

SECTION C-C

NOTE:
WORK THIS SHEET WITH BEAM SCHEDULE ON SHEETS 10 & 11

* BAR LIST

Bar	No.	Size	Length	Shape
G1	Varies	#5	[illegible]	⅂L
G2	12	#Δ	[illegible]	⅂L
G3	Varies	#7	Varies	—
G4	48	#[illegible]	3'-5½"	[illegible]
G5	Varies	#3	2'-8½"	[illegible]

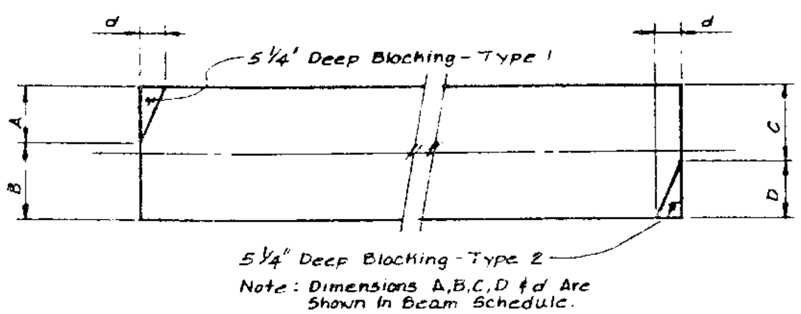
* For one beam only
Δ See Schedule

BILL OF MATERIAL

Item	Unit	Total
Furnishing ~~and Erecting~~ Precast Prestressed Concrete I-Beams, 45"	Lin. Ft.	6496.8

BEAM OVERHANG SCHEDULE		
BEAM	END OVERHANG	
	SOUTH	NORTH
N101	10"	1'-1 1/2"
N131	1'-1 1/2"	10"
N241	1'-3"	1'-4 1/2"
N251	1'-4 1/2"	10"
S101	10"	1'-1 1/2"
S131	1'-1 1/2"	10"
S231	10"	1'-3"
S241	1'-1"	1'-4 1/2"
S251	1'-4 1/2"	10"

** END OVERHANG EQUALS 10 INCHES FOR ALL BEAMS EXCEPT THOSE LISTED ABOVE.



PLAN OF GIRDERS @ PIERS 10, 11, 23 & 24

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I Beams shall be included in the contract unit price per lineal foot of "Furnishing ~~and Erecting~~ Precast Prestressed Concrete I-Beams, 45 in."

Insert for ¾"φ threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Prestressing steel shall be non-galvanized high strength, stress relieved 7-wire strand, Grade 270.

The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Non-prestressing steel shall conform to AASHTO designation M-31, M-42, or M-53 Grade 60.

Steel for lifting loops shall be non-deformed bars fy=40,000 psi.

Required release strength, f'ci, shall be 4,000 psi.

STANLEY CONSULTANTS

PI-4-48

PRESTRESSED BEAM DETAILS

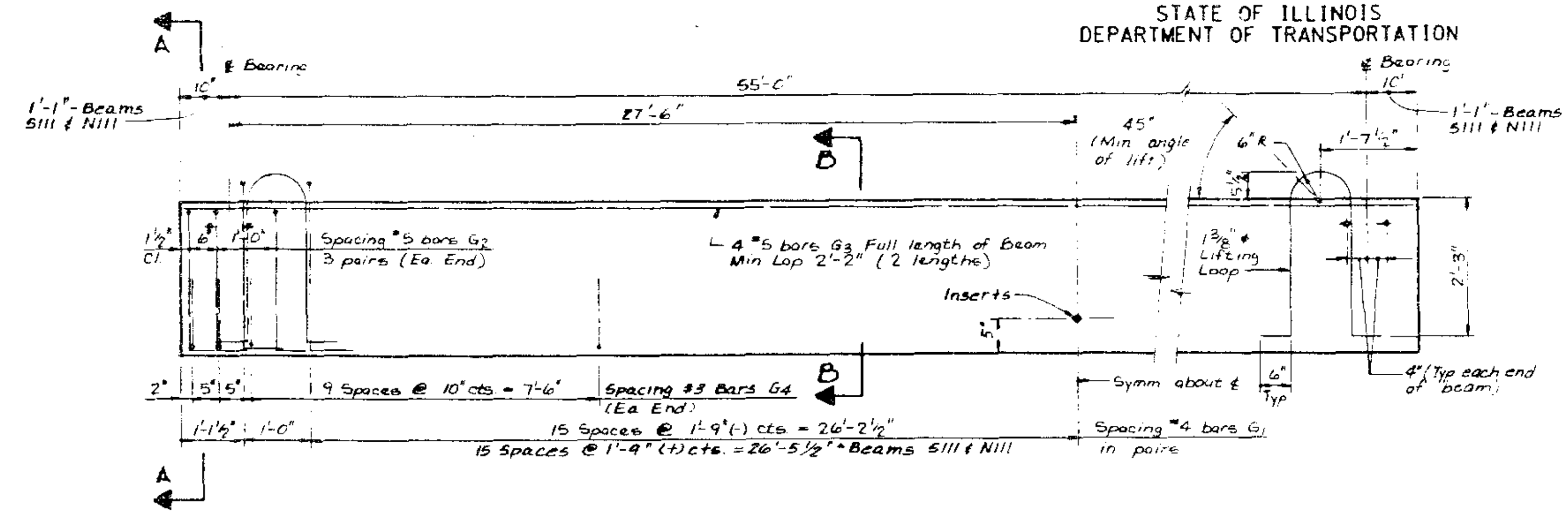
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

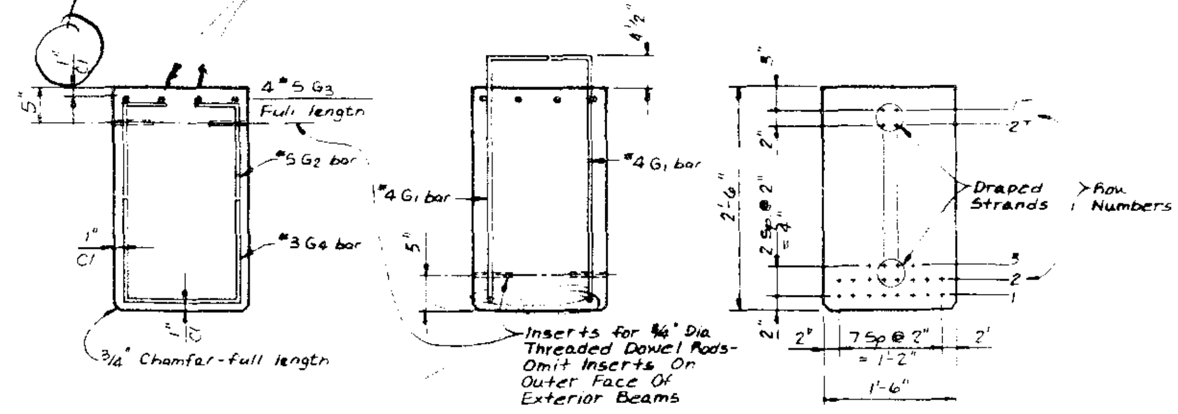
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	11

SHEET NO. 9 SHEETS

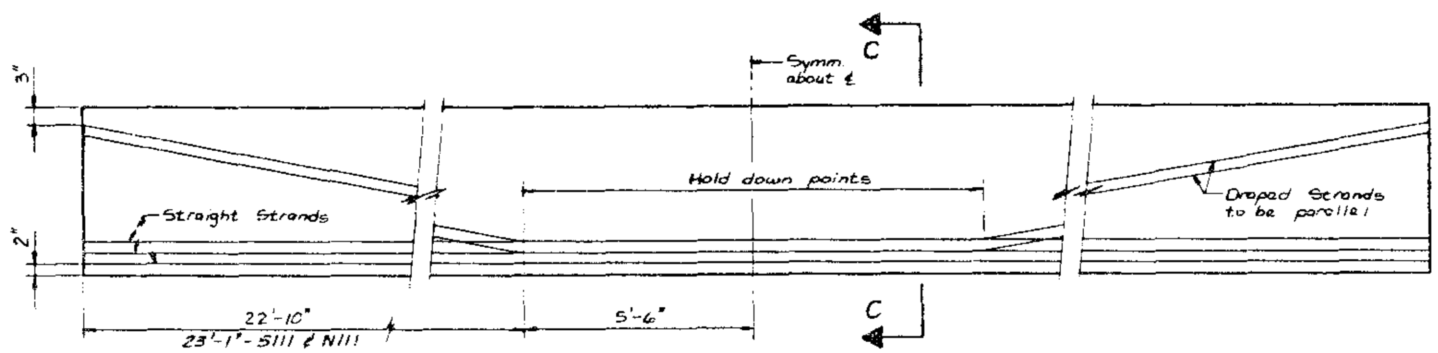
* 0505.3-1H-F(89)



ELEVATION OF BEAM
(Showing reinforcement ¢ dimensions)



SECTION A-A SECTION B-B SECTION C-C



ELEVATION OF BEAM
(Showing Prestressing Steel)
(See Schedule @ Right)

PRESTRESSING STEEL STRAND SCHEDULE											
BEAM NUMBER	STRANDS			STRANDS @ ¢ ROW			STRANDS @ END ROW				
	STRAIGHT	DRAPED	TOTAL	1	2	3	1	2	3	2T	1T
N111,S111	16	4	20	8	8	4	8	6	2	2	2
N112,N113	14	4	18	8	6	4	8	4	2	2	2
N114,S112	14	4	18	8	6	4	8	4	2	2	2
S113,S114	14	4	18	8	6	4	8	4	2	2	2

* BAR LIST

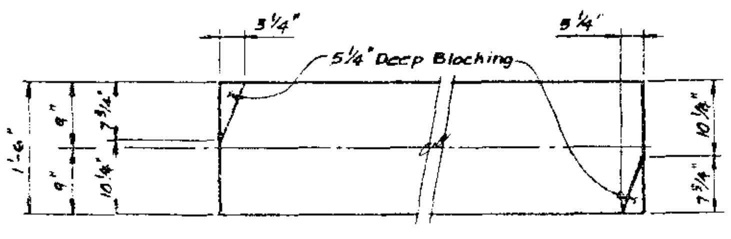
Bar	No.	Size	Length	Shape
G_1	66	#4	4'-0½"	⅂L
G_2	12	#5	3'-3"	⅂L
G_3	8	#5	29'-6"	—
G_4	24	#3	3'-7"	⊔

* For one beam only.

BILL OF MATERIAL

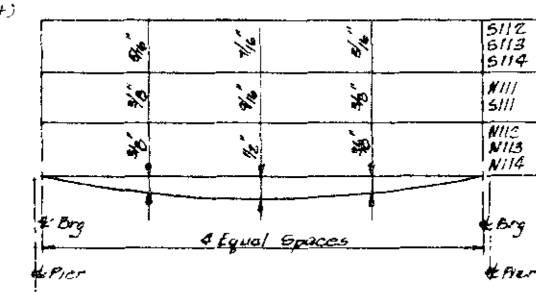
Item	Unit	Total
Furnishing ~~and Erecting~~ Precast Prestressed Concrete Beams, 18"x30"	Lin. Ft.	454.3

NOTE:
SEE SHEET 13 FOR EXPANSION BEARING TO BE USED ON SOUTH END OF BEAMS AND SHEET 14 FOR FIXED BEARING TO BE USED ON NORTH END OF BEAMS.



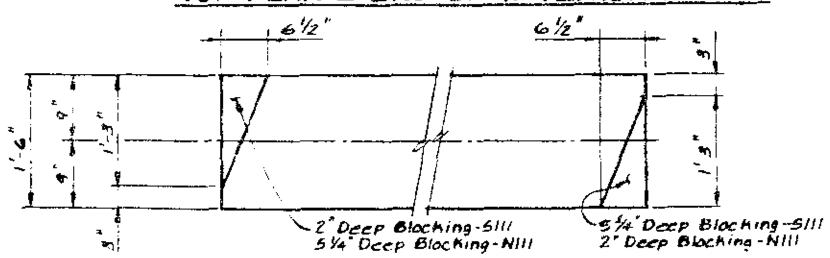
SOUTH END NORTH END

TOP PLAN @ END OF INTERIOR BEAMS



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.



SOUTH END NORTH END

TOP PLAN @ END OF EXTERIOR BEAMS

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete Beams shall be included in the contract unit price per lineal foot of "Furnishing ~~and Erecting~~ Precast Prestressed Concrete Beams, 18" x 30".

Insert for ¾"Φ threaded dowel rods are to be two strut, coil type for interior Beams and single coil, flared loop type for exterior Beams.

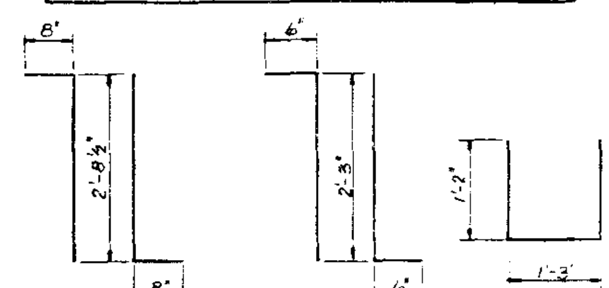
Prestressing steel shall be non-galvanized high strength, stress-relieved 7-wire strand. Grade 270.

The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Non-prestressing steel shall conform to AASHTO designation M-31, M-42, or M-53 Grade 60.

Steel for lifting loops shall be non-deformed bars fy=40,000 psi.

Required release strength, f'ci, shall be 4,000 psi.



BAR G_1 BAR G_2 BAR G_4

STANLEY CONSULTANTS

PRESTRESSED BEAM DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	12
F. NO. & REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 10 SHEETS

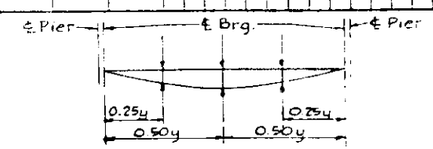
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505.3-1H-F(89)

48" DEEP PRECAST PRESTRESSED CONCRETE I-BEAM SCHEDULE

I-BEAM NUMBER	QUANTITY	LENGTH ℄ BRG-℄ BRG	INSERT SOUTH	INSERT NORTH	BLOCKING OF GIRDER FLANGES SOUTH BRG TYPE	A	B	d	NORTH BRG TYPE	C	D	d	G1 BARS (SPACING)	G2 BARS (SIZE)	STRANDS STRAIGHT	DRAPED	TOTAL
N11	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	4	20
N12,N13	2	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	2	18
N21	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 21",10 SP @ 23 1/2"(+)	#5	16	2	18
N22,N23	2	74'-11"	25'-0"	25'-0"									4 SP @ 19",15 SP @ 24"(-)	#5	14	2	16
N31	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 21",10 SP @ 23 1/2"(+)	#5	16	2	18
N32,N33	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 21",10 SP @ 23 1/2"(+)	#5	16	2	18
N41	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20
N42,N43	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20
N51	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20
N52,N53	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20
N61	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 22",8 1/2" SP @ 23 1/2"(+)	#5	16	4	20
N62	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 22",8 1/2" SP @ 23 1/2"(+)	#5	16	4	20
N71	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 22",8 1/2 SP @ 23 1/2"(+)	#5	16	4	20
N63	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 21",8 1/2 SP @ 24"(-)	#5	18	4	22
N72	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 22",8 1/2 SP @ 23 1/2"(+)	#5	16	4	20
N73	1	74'-11"	25'-0"	25'-0"									14 SP @ 12",3 SP @ 21",8 1/2 SP @ 24"(-)	#5	18	4	22
N81	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	18	4	22
N82	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	18	4	22
N83	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#6	20	4	24
N101	1	30'-9"	24'-8"						2	2"	16"	6 1/2"	7 1/2 SP @ 23"(-)	#4	10	-	10
N102	1	33'-4"	24'-8"						2	10 3/4"	7 1/4"	3"	8 SP @ 23"(+)	#4	10	-	10
N103	1	35'-11"	24'-8"						2	10 3/4"	7 1/4"	3"	8 1/2 SP @ 23 1/2"(+)	#4	10	-	10
N121	1	73'-11"	31'-11"	31'-6"	1	16"	2"	6 1/2"					18 SP @ 24"(-)	#6	20	4	24
N122	1	71'-2"	29'-2"	31'-0"	1	10 1/4"	10 3/4"	3"					17 SP @ 24"(+)	#5	16	4	20
N123	1	68'-5"	26'-5"	27'-0"	1	10 1/4"	10 3/4"	3"					16 1/2 SP @ 24"(-)	#5	16	2	18
N131	1	30'-1"											7 SP @ 23 1/2"(+)	#4	10	-	10
N132,N133	2	30'-1"											7 SP @ 23 1/2"(+)	#4	10	-	10
N141	1	66'-2"	22'-0"	22'-0"									12 SP @ 12",2 SP @ 22",8 SP @ 24"(+)	#5	14	2	16
N142,N143	2	66'-2"	22'-0"	22'-0"									12 SP @ 12",2 SP @ 22",8 SP @ 24"(+)	#5	14	2	16
N151	1	66'-5"	22'-1"	22'-1"									12 SP @ 12",2 SP @ 22",8 SP @ 24"(+)	#5	14	2	16
N152,N153	2	66'-5"	22'-1"	22'-1"									12 SP @ 12",2 SP @ 22",8 SP @ 24"(+)	#5	14	2	16
N161	1	65'-0"	21'-9"	21'-9"									15 1/2 SP @ 24"(+)	#5	16	2	18
N162,N163	2	65'-0"	21'-9"	21'-9"									15 1/2 SP @ 24"(+)	#5	16	2	18
N171,N172	2	70'-10"	23'-8"	23'-8"									17 SP @ 24"(+)	#5	18	4	22
N173	1	70'-10"	23'-8"	23'-8"									17 SP @ 24"(+)	#5	18	4	22
N181	1	57'-10"	18'-9 1/2"	18'-9 1/2"									14 SP @ 23 1/2"(+)	#4	12	2	14
N182	1	57'-2"	18'-8"	18'-8"									14 SP @ 23 1/2"(+)	#4	12	2	14
N183	1	57'-4"	18'-6 1/2"	18'-6 1/2"									14 SP @ 23 1/2"(-)	#4	12	2	14
N241	1	78'-0"	26'-0"	26'-0"	1	03 1/2"	4 1/2"	9"	2	1"	17"	10 1/2"	19 SP @ 24"(+)	#6	20	4	24
N242	1	75'-10"	25'-7"	25'-7"	1	6"	12"	4"	2	11 1/2"	6 1/2"	4"	18 1/2 SP @ 24"(+)	#5	18	4	22
N251	1	48'-3"		24'-11 1/2"	1	17"	1"	10 1/2"					11 1/2 SP @ 24"(+)	#4	10	-	10

I-BEAM NUMBER	STRANDS LOCATION AT ℄ ROW 1	2	3	4	5	6	7	8	STRANDS LOCATION AT END ROW 1	2	3	4	5	6	7	8	5T	4T	3T	2T	1T	HOLD DOWN POINT FROM ℄	BEARING TYPE SOUTH	NORTH	DEAD LOAD DEFLECTION (DUE TO DECK WEIGHT ONLY) 0.25y	0.50y	REMARKS
N11	10	8	2						10	6										2	2	7'-6"	FIXED	10-b	3/8"	9/16"	
N12,N13	10	8							10	6										2	2	7'-6"	FIXED	10-b	3/8"	[illegible]	
N21	10	8							10	6										2	2	7'-6"	10-c	FIXED	3/8"	9/16"	
N22,N23	10	6							10	4										2	2	7'-6"	10-c	FIXED	3/8"	[illegible]	
N31	10	8							10	6										2	2	7'-6"	FIXED	10-a	7/16"	9/16"	
N32,N33	10	8							10	6										2	2	7'-6"	FIXED	10-b	3/8"	9/16"	
N41	10	8	2						10	6										2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
N42,N43	10	8	2						10	6										2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
N51	10	8	2						10	6										2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
N52,N53	10	8	2						10	6										2	2	7'-6"	FIXED	10-a	3/8"	9/16"	
N61	10	8	2						10	6										2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
N62	10	8	2						10	6										2	2	7'-6"	10-a	FIXED	1/2"	11/16"	
N71	10	8	2						10	6										2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
N63	10	10	2						10	8										2	2	7'-6"	10-a	FIXED	1/2"	11/16"	
N72	10	8	2						10	6										2	2	7'-6"	FIXED	10-a	1/2"	11/16"	
N73	10	10	2						10	8										2	2	7'-6"	FIXED	10-a	1/2"	11/16"	
N81	10	10	2						10	8										2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
N82	10	10	2						10	8										2	2	7'-6"	10-a	FIXED	1/2"	11/16"	
N83	10	10	4						10	8	2									2	2	7'-6"	10-a	FIXED	1/2"	11/16"	
N101	4	6							4	6												3'-1"	FIXED	7-a	0"	0"	
N102	4	6							4	6												3'-4"	FIXED	7-a	0"	1/16"	
N103	4	6							4	6												3'-7"	FIXED	7-a	0"	1/16"	
N121	10	10	4						10	8	2									2	2	7'-5"	FIXED	10-a	1/2"	11/16"	
N122	10	8	2						10	6										2	2	7'-2"	FIXED	10-a	3/8"	9/16"	
N123	10	8							10	6											2	6'-10"	FIXED	10-a	3/8"	[illegible]	
N131	4	6							4	6												3'-0"	FIXED	7-a	0"	0"	
N132,N133	4	6							4	6												3'-0"	FIXED	7-a	0"	1/16"	
N141	10	6							10	4											2	6'-8"	10-a	FIXED	5/16"	3/8"	
N142,N143	10	6							10	4											2	6'-8"	10-a	FIXED	5/16"	7/16"	
N151	10	6							10	4											2	6'-8"	FIXED	10-a	5/16"	3/8"	
N152,N153	10	6							10	4											2	6'-8"	FIXED	10-a	5/16"	7/16"	
N161	10	8							10	6											2	6'-6"	10-a	FIXED	5/16"	3/8"	
N162,N163	10	8							10	6											2	6'-6"	10-a	FIXED	5/16"	7/16"	
N171,N172	10	10	2						10	8										2	2	7'-1"	10-a	FIXED	3/8"	1/2"	
N173	10	10	2						10	8										2	2	7'-1"	10-a	FIXED	3/8"	9/16"	
N181	10	4							10	2											2	5'-10"	FIXED	10-a	3/16"	1/4"	
N182	10	4							10	2											2	5'-9"	FIXED	10-a	3/16"	1/4"	
N183	10	4							10	2											2	5'-9"	FIXED	10-a	3/16"	1/4"	
N241	10	10	4						10	8	2									2	2	7'-11"	FIXED	10-b	7/16"	5/8"	
N242	10	10	2						10	8										2	2	7'-8"	FIXED	10-b	7/16"	9/16"	
N251	4	6							4	6												4'-10"	10-b	FIXED	1/16"	1/8"	



DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE SLAB ONLY)

~~NOTE: THE DEFLECTIONS SHOWN ON THIS SCHEDULE ARE NOT TO BE USED IN THE FIELD. IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS, ADJUST IF FOR DEAD LOAD DEFLECTIONS AS SHOWN ON TOP OF SLAB ELEVATIONS SHOULD THEN BE.~~

WORK THIS SHEET WITH BEAM DETAILS ON SHEET 2.

STANLEY CONSULTANTS

BEAM SCHEDULE
SHEET 1 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	13
F. NO. A. REG. 4		ILLINOIS	FED. AID PROJECT	

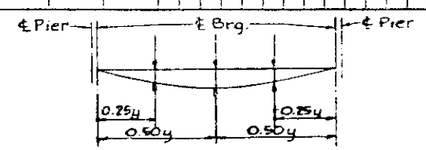
SHEET NO. 11 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

48" DEEP PRECAST PRESTRESSED CONCRETE I-BEAM SCHEDULE

* 0505.3-1H-F(89)

I-BEAM NUMBER	QUANTITY	LENGTH ℄ BRG-℄ BRG	INSERT SOUTH	INSERT NORTH	BLOCKING OF GIRDER FLANGES SOUTH BRG TYPE	A	B	d	NORTH BRG TYPE	C	D	d	G_1 BARS (SPACING)	G_2 BARS (SIZE)	STRANDS STRAIGHT	DRAPED	TOTAL	STRANDS LOCATION AT ℄ ROW 1	2	3	4	5	6	7	8	STRANDS LOCATION AT END ROW 1	2	3	4	5	6	7	8	5T	4T	3T	2T	1T	HOLD DOWN POINT FROM ℄	BEARING TYPE SOUTH	NORTH	DEAD LOAD DEFLECTION (DUE TO DECK WEIGHT ONLY) 0.25y	0.50y	REMARKS
S11	1	75'-2"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	FIXED	10-c	3/8"	9/16"	
S12	1	75'-4"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	14	2	16	10	6						10	4										2	7'-7"	FIXED	10-c	5/16"	7/16"	
S21	1	75'-0"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	10-c	FIXED	3/8"	9/16"	
S22	1	75'-1"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	14	2	16	10	6						10	4										2	7'-6"	10-c	FIXED	5/16"	7/16"	
S23	1	75'-2"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	14	2	16	10	6						10	4										2	7'-6"	10-c	FIXED	5/16"	7/16"	
S31	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	FIXED	10-b	7/16"	9/16"	
S32,S33	2	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	FIXED	10-b	3/8"	9/16"	
S41	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S42,S43	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S51	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
S52,S53	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
S61	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S62,S63	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S71	1	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
S72,S73	2	74'-11"	25'-0"	25'-0"									6 SP @ 12",6 SP @ 19",10 1/2 SP @ 23 1/2"(+)	#5	16	4	20	10	8	2					10	6									2	2	7'-6"	FIXED	10-a	7/16"	5/8"	
S81	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	18	4	22	10	10	2					10	8									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S82,S83	2	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	#5	18	4	22	10	10	2					10	8									2	2	7'-6"	10-a	FIXED	7/16"	5/8"	
S91	1	36'-4"	18'-3"										8 1/2 SP @ 24"(-)	#4	10	-	10	4	6						4	6											3'-8"	FIXED	10-a	0"	1/16"	
S92	1	36'-4"	18'-3"										6 1/2 SP @ 24"(-)	#4	10	-	10	4	6						4	6											3'-8"	FIXED	10-a	1/16"	1/16"	
S101	1	71'-4"	32'-3"						2	2"	16"	6 1/2"	17 1/2 SP @ 23 1/2"(+)	#5	16	2	18	10	8						10	6										2	7'-2"	FIXED	10-a	3/8"	1/2"	
S102	1	69'-1"	32'-3"						2	10 3/4"	7 1/4"	3"	16 1/2 SP @ 24"(+)	#5	16	2	18	10	8						10	6										2	6'-11"	FIXED	10-a	5/16"	7/16"	
S103	1	66'-9"	32'-3"						2	10 3/4"	7 1/4"	3"	16 SP @ 24"(+)	#5	14	2	16	10	6						10	4										2	6'-8"	FIXED	10-a	1/4"	3/8"	
S131	1	21'-1"		18'-3"	1	16"	2"	6 1/2"					5 SP @ 22 1/2"(+)	#4	10	-	10	4	6						4	6											2'-2"	FIXED	7-a	0"	0"	
S132	1	24'-9"		18'-3"	1	7 1/4"	10 3/4"	3"					5 1/2 SP @ 24"(+)	#4	10	-	10	4	6						4	6											2'-6"	FIXED	7-a	0"	0"	
S171	1	67'-10"	22'-8"	22'-8"									16 1/2 SP @ 23 1/2"(+)	#5	14	2	16	10	6						10	4										2	6'-10"	10-a	FIXED	5/16"	7/16"	
S172	1	67'-11"	22'-8 1/2"	22'-8 1/2"									16 1/2 SP @ 23 1/2"(+)	#5	14	2	16	10	6						10	4										2	6'-10"	10-a	FIXED	5/16"	7/16"	
S181	1	52'-3"	13'-7"	19'-4"									12 1/2 SP @ 24"(-)	#4	10	-	10	4	6						4	6											5'-3"	FIXED	10-a	1/16"	1/8"	
S182	1	52'-5"	13'-7"	19'-5"									12 1/2 SP @ 24"(-)	#4	10	-	10	4	6						4	6											5'-3"	FIXED	10-a	1/16"	1/8"	
S191	1	68'-6"	22'-10"	22'-10"									16 1/2 SP @ 24"(-)	#5	16	2	18	10	8						10	6										2	6'-10"	FIXED	10-b	5/16"	7/16"	
S201	1	53'-8"	17'-10"	17'-10"									4 SP @ 18",10 SP @ 23 1/2"(-)	#4	10	-	10	4	6						4	6											5'-4"	10-b	FIXED	1/8"	3/16"	
S211	1	57'-7"	19'-2"	19'-2"									12 SP @ 12",3 SP @ 23",5 SP @ 23 1/2"(-)	#4	12	-	12	4	4	2	2				4	4	2	2									5'-9"	FIXED	10-c	3/16"	1/4"	
S221	1	50'-6"	25'-3"										12 SP @ 24"(-)	#4	10	-	10	4	6						4	6											5'-1"	10-c	FIXED	1/16"	1/8"	
S227	1	50'-4"	25'-2"										12 SP @ 24"(-)	#4	10	-	10	4	6						4	6											5'-1"	10-c	FIXED	1/16"	1/8"	
S231	1	79'-9"	23'-3"	33'-3"					2	5"	13"	8"	19 1/2 SP @ 24"(-)	#6	20	4	24	10	10	4					10	8	2								2	2	7'-11"	10-c	FIXED	9/16"	13/16"	
S232	1	76'-1"	23'-3"	29'-7"					2	13"	5"	3"	18 1/2 SP @ 24"(-)	#5	18	4	22	10	10	2					10	8									2	2	7'-7"	10-c	FIXED	9/16"	13/16"	
S241	1	84'-4"	28'-1"	28'-1"	1	11"	7"	7"	2	1"	17"	10 1/2"	21 SP @ 23 1/2"(+)	#6	20	6	26	13	10	4	2				10	8	2								2	2	2	8'-5"	FIXED	10-b	5/8"	15/16"	
S242	1	86'-1"	28'-8"	28'-8"	1	6"	12"	4"	2	11 1/2"	6 1/2"	4"	21 SP @ 24"(-)	#6	22	6	28	10	10	6	2				10	8	4								2	2	2	8'-7"	FIXED	10-b	13/16"	1 1/8"	
S251	1	53'-11"		26'-11 1/2"	1	17"	1"	10 1/2"					13 SP @ 24"(-)	#4	12	-	12	4	4	2	2				4	4	2	2									5'-5"	10-b	FIXED	1/8"	3/16"	



DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE SLAB ONLY)

~~NOTE: THE DEFLECTIONS SHOWN ON THIS SCHEDULE 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 "TOP OF SLAB ELEVATIONS" SHEETS 5 THRU 10~~

WORK THIS SHEET WITH BEAM DETAILS ON SHEET 8 .

STANLEY CONSULTANTS

BEAM SCHEDULE
SHEET 2 OF 2

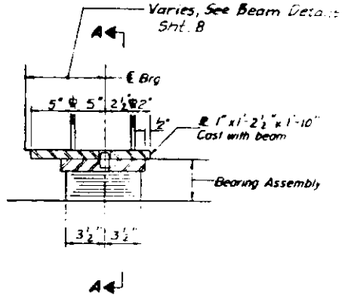
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

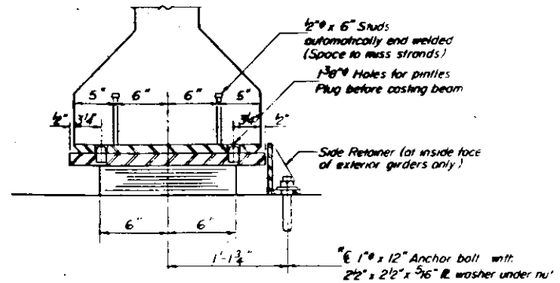
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	14
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 12
SHEETS

* 0505.3-1H-F(89)



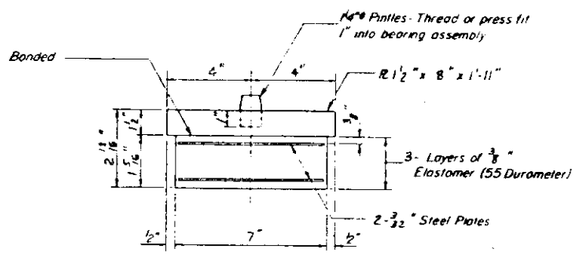
SECTION AT PIER



SECTION A-A

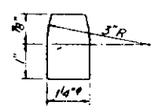
TYPE I ELASTOMERIC EXP BRG.
(Size 7-a, See Beam Schedules Sht. 10 & 11 for location)
(8 Required)

*Note: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place by others. See Sheet #15 for anchor bolt detail

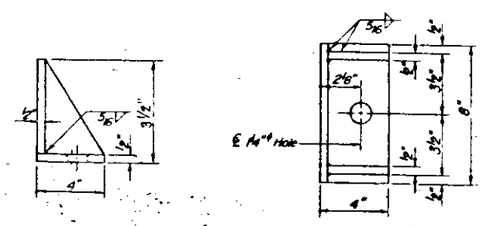


BEARING ASSEMBLY

Note: Shim plates shall not be placed under bearing assembly.

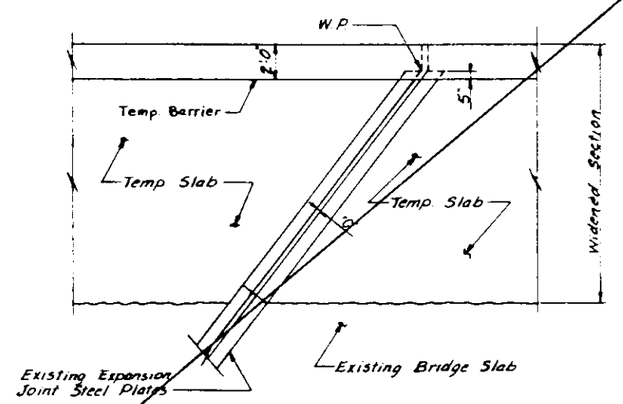


PINTLE



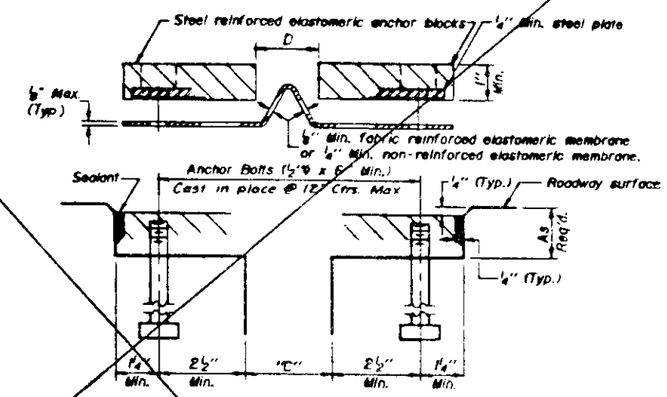
SIDE RETAINER

*Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (3 Req'd)



PARTIAL PLAN AT EXPANSION PIERS

EXPANSION JOINT DETAILS



CROSS SECTION

JOINT SIZE	"C" AT 50°F	"D" AT 50°F
4"	3"	2 1/2" MIN
2"	2"	1 1/2" MIN

For Location and size of Joints see General Plan and Elevation Sheets 1 and 2.

GENERAL NOTES

CONTINUOUS SEAL NEOPRENE EXPANSION JOINT SHALL CONSIST OF MOLDED ANCHOR BLOCKS OF ELASTOMER AND STEEL, FIELD ASSEMBLED OVER CONTINUOUS LENGTHS OF ELASTOMERIC MEMBRANE.

THE ELASTOMERIC MEMBRANE SHALL BE PREMOLDED WITH A SINGLE OR A DOUBLE UPWARD CONVOLUTION THAT WILL HAVE A "MEMORY" TO RETURN TO ITS MOLDED POSITION UPON JOINT CLOSURE.

THE CONVOLUTION LENGTH SHALL BE SUCH THAT THE EXTENDED LENGTH WILL NOT BE GREATER THAN THE MANUFACTURED LENGTH WHEN THE JOINT IS FULLY EXPANDED IN ITS DESIGN RANGE AND WILL NOT PROTRUDE ABOVE THE ANCHOR BLOCKS WHEN THE JOINT IS FULLY COMPRESSED.

JOINT OPENINGS SHALL BE ADJUSTED IN ACCORDANCE WITH ARTICLE 503.07(c) OF THE STANDARD SPECIFICATIONS WHEN THE DECK IS POURED AT AN AMBIENT TEMPERATURE OTHER THAN 50°F.

THE ANCHOR BOLTS OF THE NEOPRENE EXPANSION JOINT SHALL BE TIED TO THE TRANSVERSE REINFORCING BARS AND SHALL BE CAST-IN-PLACE.

BILL OF MATERIAL

Item	Unit	Total
FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE I	Each	8

STANLEY CONSULTANTS

PI-2E-1 · 12-31-85

BEARING AND EXPANSION JOINT DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

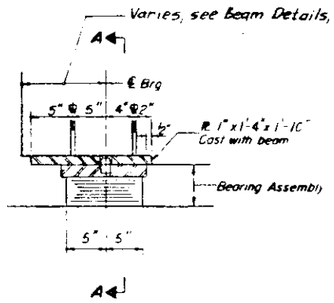
STATION 409+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

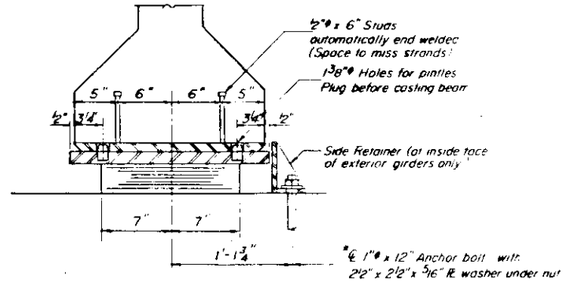
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	17	15

SHEET NO. 13 OF SHEETS

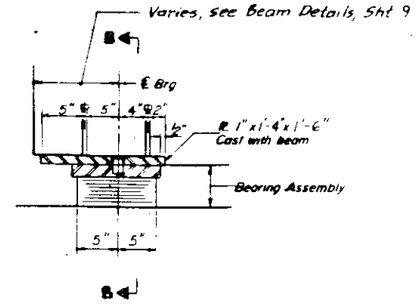
* 0505.3-1H-F(89)



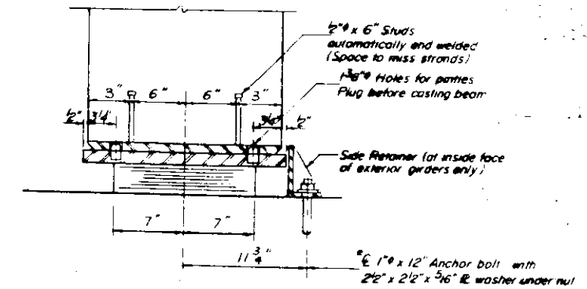
SECTION AT PIERS



SECTION A-A



SECTION AT PIER NO. 10



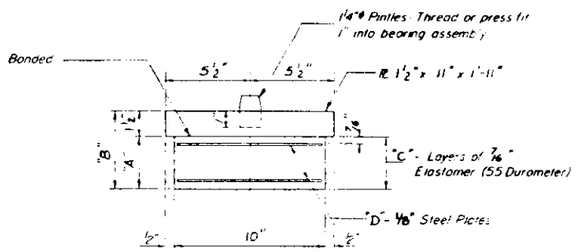
SECTION B-B

TYPE I ELASTOMERIC EXP BRG.
(Size 10-a, 10-b & 10-c, see Beam Schedules Sht. 10 & 11 for location)

* Note: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place by others. See Sheet #15 for anchor bolt detail.

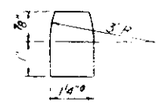
* Note: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. See sheet #15 for anchor bolt detail.

TYPE I ELASTOMERIC EXP. BRG.
(Size 10-aa ; Span 11 South End
For 18" x 30" Prestressed Beams)
(8 Required)



BEARING ASSEMBLY

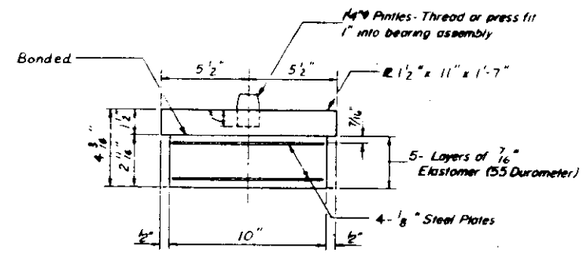
Note: Shim plates shall not be placed under bearing assembly.



PINTLE

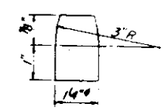
TABLE OF VARIABLES

Bearing Size	A	B	C	D	E	No. Req'd
10-a	2 9/16"	4 3/16"	5	4	5"	57
10-b	3 1/4"	4 3/4"	6	5	5 1/4"	17
10-c	3 13/16"	5 5/16"	7	6	6"	13

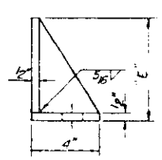


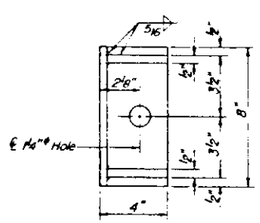
BEARING ASSEMBLY

Note: Shim plates shall not be placed under bearing assembly.



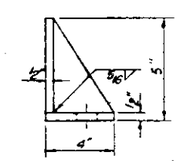
PINTLE

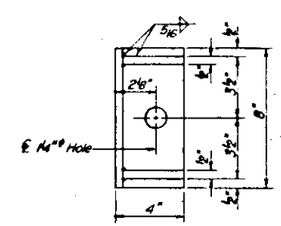




SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (35 Req'd)





SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (2 Req'd)

BILL OF MATERIAL

Item	Unit	Total
FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE I	Each	95

STANLEY CONSULTANTS

PI-2E-1 12-31-85

BEARING DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

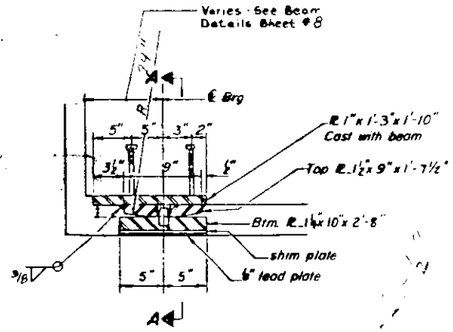
STATION 469+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

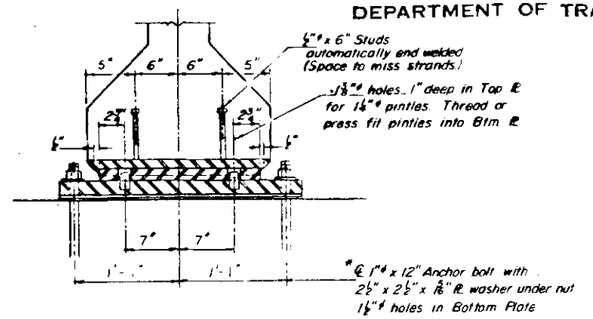
F.A.I. 90/94		COOK	17	16

SHEET NO. 14 OF SHEETS

* 0505.3-1H-F(89)



SECTION AT ABUT. OR PIER

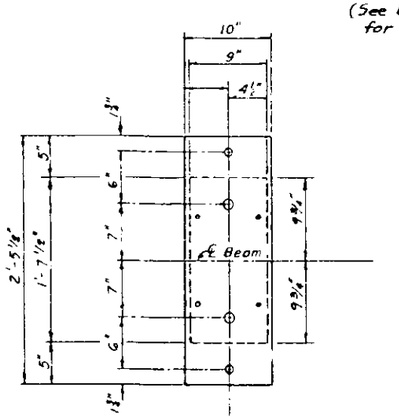


SECTION A-A

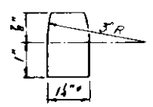
* ANCHOR BOLTS SHALL BE DRILLED AND GROUTED IN PLACE AFTER BEAMS HAVE BEEN ERECTED. (BY OTHERS)

See Sheet #15 for anchor bolt detail.

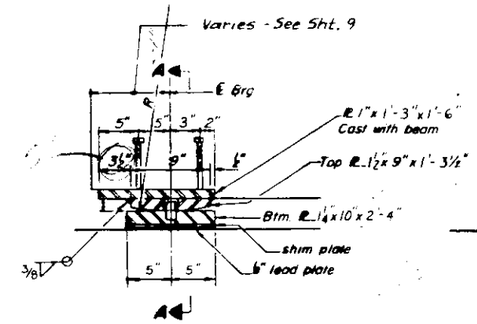
** FIXED BEARING
(See Beam Schedules, Sht 10 & 11 for location)
(48 Required)



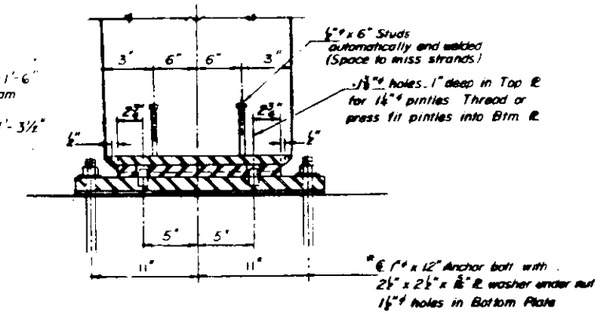
PLAN OF
TOP & BOTTOM PLATES



PINTLE
(Typ. Both Bearings)



SECTION AT PIER #11



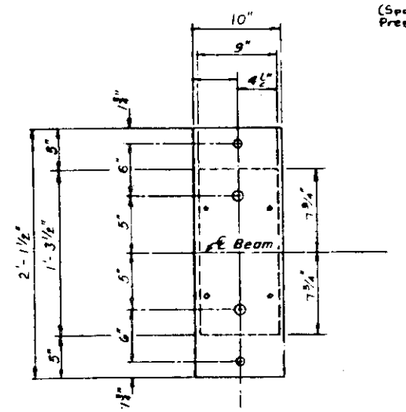
SECTION A-A

** FIXED BEARING
(Span 11 North End For 18" x 30" Prestressed Beams)
(8 Required)

* ANCHOR BOLTS SHALL BE DRILLED AND GROUTED IN PLACE AFTER BEAMS HAVE BEEN ERECTED. (BY OTHERS)

See Sheet #15 for anchor bolt detail.

** Cost of Fixed Bearings and Anchor Bolts are incidental to cost of "Furnishing P.C.C. Beams."



PLAN OF
TOP & BOTTOM PLATES

STANLEY CONSULTANTS

PI-2FB 12-31-85

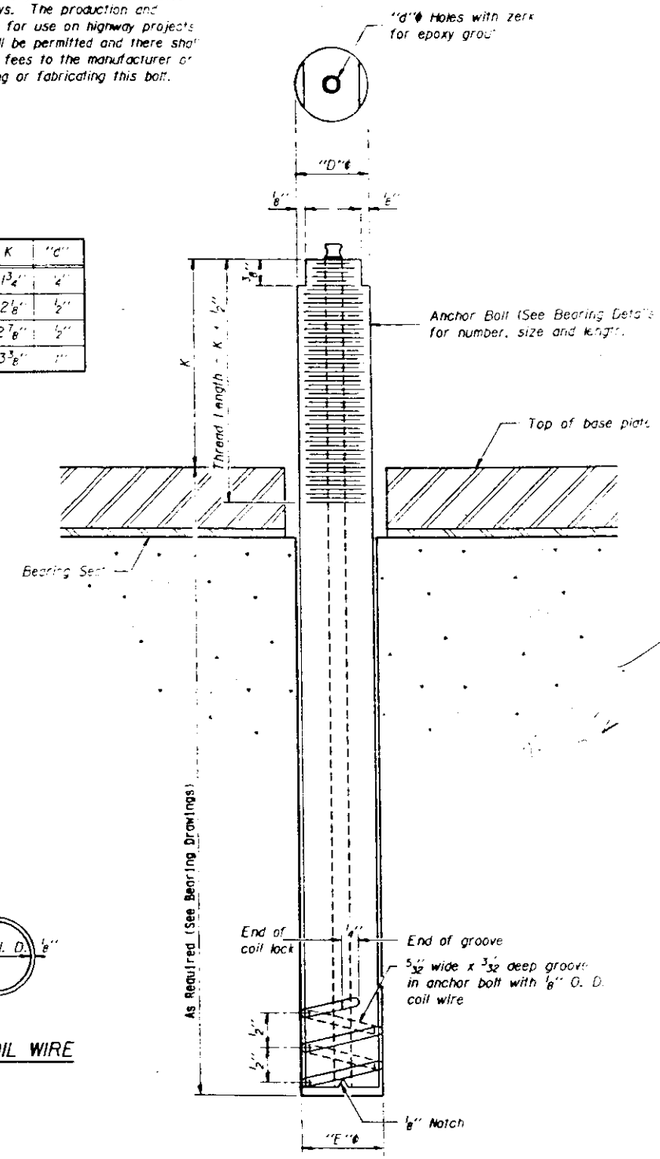
BEARING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

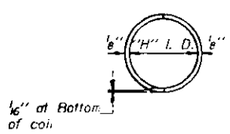
The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

D	E	H	K	"C"
1"	1 1/8"	9/16"	1 3/4"	4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

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

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

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type 1, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

1. A threaded rod stud with nut and washer conforming to ASTM A36.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemicals.

GENERAL NOTES

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

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

The anchor bolts, furnished ~~and installed and~~ including the epoxy grout or capsules ~~shall not be paid for separately but~~ shall be included in the unit bid price for "Furnishing P.P.C. Beams."

Anchor bolts, washers and nuts, to be plated against corrosion in accordance with the special provisions, shall be zinc-coated by the mechanical plating method conforming to ASTM B695, Class 50. Zinc-coated nuts shall be tapped oversize in accordance with the requirements of AASHTO M291 and shall meet the supplementary requirements S1.1 thru S1.2.1 of the same specifications for lubricant and testing.

STANLEY CONSULTANTS

ABB-1 12-1-83

ANCHOR BOLTS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 406+49

Cook Sec. 1988-093-BY I&R March 13, 1990 #131

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	1988-093 BY	COOK	395	1

FOR INDEX OF SHEETS, SEE SHEET NO. 4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

F.A.I. ROUTE 90/94 (KENNEDY EXPRESSWAY)
SECTION 1988 - 093 BY
PROJECT ACIR-94-2(184)50
COOK COUNTY
C - 91 - 275 - 88

SUBSTRUCTURE WIDENING

STATION EQUATIONS

AREA A
STA. 643 + 38.93, ℄ REV. BK =
STA. 800 + 00.00, ℄ REV. AH

AREA B
NONE

AREA C
STA. 490 + 43.90, ℄ REV. BK =
STA. 490 + 44.56, ℄ REV. AH

AREA D
STA. 110 + 47.00, ℄ NWB. BK =
STA. 10 + 46.03, ℄ RAMP G AH

STA. 23 + 78.04, ℄ RAMP G BK =
STA. 323 + 58.28, ℄ REV. AH

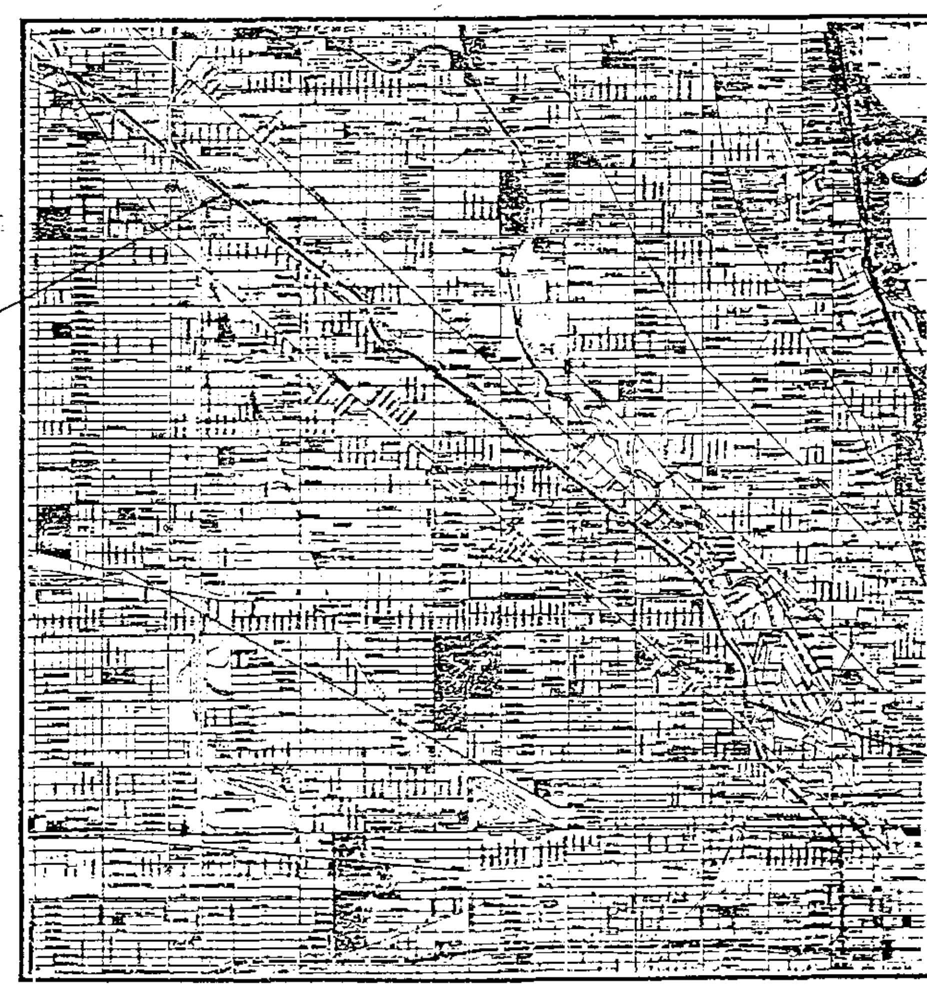
9491
1-26-91

MUNICIPALITY INVOLVMENT
CITY OF CHICAGO

SCALES
- PLAN — 1 INCH = 50 FEET
- PROFILE HORIZ. — 1 INCH = 50 FEET
- PROFILE VERT. — 1 INCH = 5 FEET
- CROSS SECTIONS — 1 INCH = 10 FEET HORIZONTAL, 5 FEET VERTICAL

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

CONSULTANT SERVICES - K. HEMSTREET / J. KOS (708) - 705 - 4231



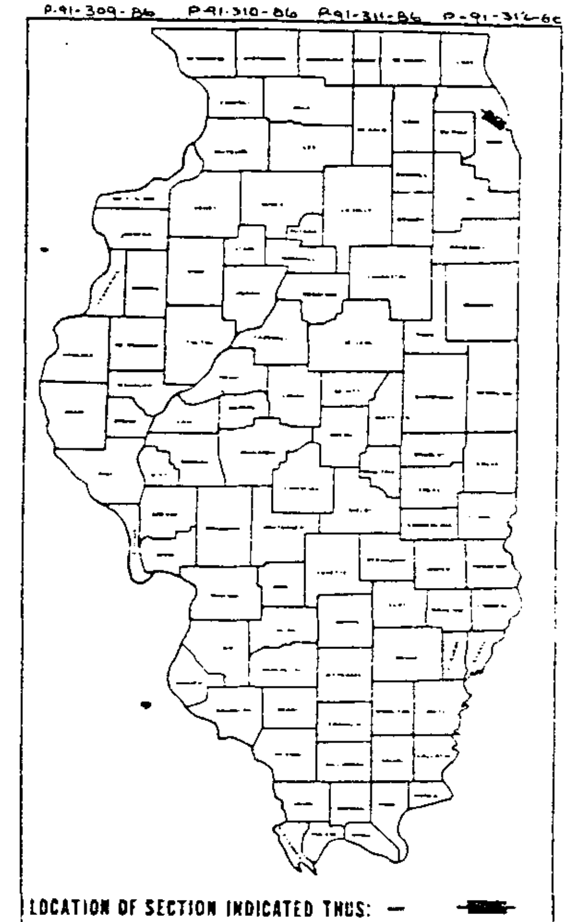
PROJECT AND IMPROVEMENT ENDS STA. 841 + 00.00 ℄ REVERSIBLE F.A.I.-90/94

PROJECT AND IMPROVEMENT BEGINS STA. 103 + 21.93 ℄ NWB F.A.I.-90/94

FOR STRUCTURE DESCRIPTIONS, OMISSIONS, AND LENGTHS PER AREA SEE SHEET NO. 2 & 3

SCALE: 1 INCH = 3520 FEET
GROSS LENGTH OF PROJECT = 38,137.73 FT. 7.223 MI.
NET LENGTH OF PROJECT = 5,489.76 FT. 1.040 MI.

P-91-309-86 P-91-310-86 P-91-311-86 P-91-312-86



LOCATION OF SECTION INDICATED THUS:

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED ... 19 90 — DISTRICT ENGINEER
EXAMINED 2-9 19 90 — Gary D. Gould — ENGINEER OF CONTRACTS
PASSED 2-2 19 90 — ENGINEER OF DESIGN
APPROVED 2-2 19 90 — DIRECTOR DIVISION OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

DIVISION ADMINISTRATOR — DATE

CONTRACT NO. 80159

COUNTY COOK SECTION ... BY — ROUTE F.A.I. ROUTE 90/94 (KENNEDY EXPRESSWAY)

0-232

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*	COOK	395	39
STA.		TO STA.		
F.H.W.A. REG. 4	ILLINOIS	FED. AID PROJECT		

* 1988-093 BY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

SCALES: PLAN 1"=50'

AREA C

F.A.I. ROUTE 90/94 (JOHN F. KENNEDY EXPRESSWAY)

SECTION NO. 1988-093 BY

COOK COUNTY

C-91-275-88

SUBSTRUCTURE WIDENING

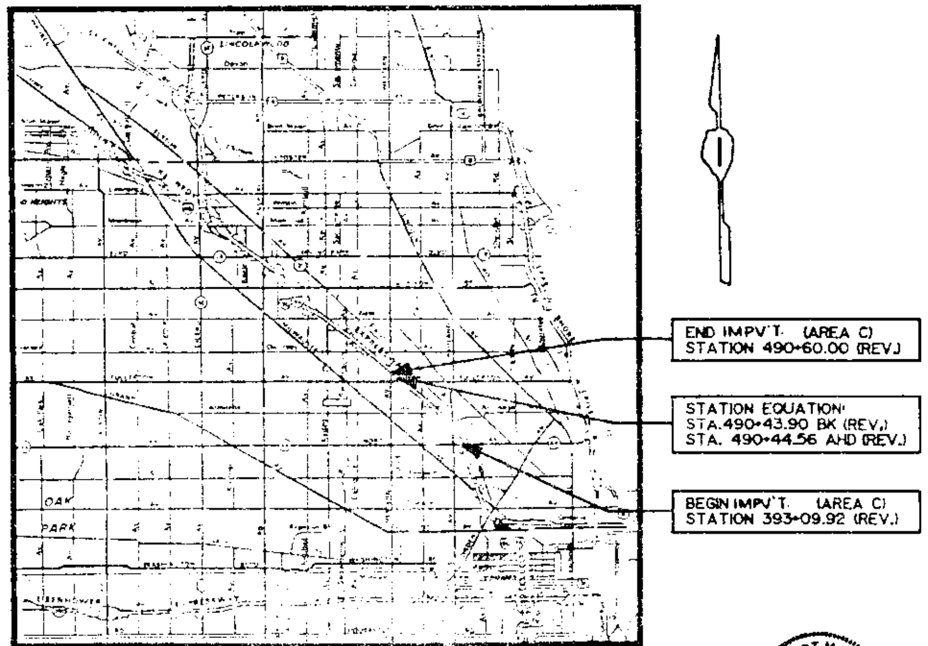
NORTH AVENUE TO LOGAN BOULEVARD

INDEX OF SHEETS

C1	TITLE SHEET
C2	HORIZONTAL ALIGNMENTS
C3	ALIGNMENT TIES
C4-C8	ASHLAND AVENUE
C9-C10	ARMITAGE AVENUE
C11-C13	WEBSTER AVENUE / DAMEN AVENUE
C14-C15	FULLERTON AVENUE
C16-C18	WESTERN AVENUE / LOGAN BOULEVARD
C19	TRAFFIC CONTROL PLAN
C20	RELOCATED LOGAN BOULEVARD
C21	RELOCATED LOGAN BOULEVARD CROSS SECTION
C22	DETAILS
C23-C75	ASHLAND AVENUE BRIDGE
C76-C88	ARMITAGE AVENUE BRIDGE
C89-C100	WEBSTER AVENUE BRIDGE
C101-C107	DAMEN AVENUE BRIDGE
C108-C122	FULLERTON AVENUE BRIDGE
C123-C148	WESTERN AVENUE / LOGAN BOULEVARD BRIDGE

GENERAL NOTES:

1. WHERE EXISTING SEWERS ARE TO BE ABANDONED AND APPURTENANCES FILLED, THE CONTRACTOR SHALL COORDINATE THE TIMING OF THIS WORK SO AS TO MAINTAIN THE EXISTING FLOW WHEN REQUIRED.
2. ALL ABANDONED SEWERS SHALL BE PLUGGED WITH CONCRETE.
3. ALL CATCH BASINS WITH CLOSED LIDS HAVE DOWNSPOUT CONNECTIONS AND DO NOT PICK UP SURFACE DRAINAGE.
4. THE PROPOSED SEQUENCE OF WORK SHALL BE ARRANGED SUCH THAT THE PIER WIDENING OF ASHLAND AVENUE BRIDGE PIERS NO.6 AND NO.7 BE SCHEDULED LAST TO ALLOW FOR THE PROPOSED RIGHT-OF-WAY AND TEMPORARY CONSTRUCTION EASEMENT TO BE OBTAINED BY THE DEPARTMENT.
   THE ENGINEER SHALL HAVE AUTHORITY TO SUSPEND THE WORK FOR SUCH PERIOD OF TIME AS IS NECESSARY TO OBTAIN THE PROPOSED RIGHT-OF-WAY AND TEMPORARY CONSTRUCTION EASEMENT. IF IT BECOMES NECESSARY TO SUSPEND WORK FOR AN INDEFINITE AMOUNT OF TIME, THE CONTRACTOR SHALL STORE ALL MATERIALS IN SUCH A MANNER THAT THEY WILL NOT BECOME DAMAGED IN ANY WAY, AND SHALL TAKE EVERY PRECAUTION TO PREVENT DAMAGE OR DETERIORATION OF THE WORK PERFORMED.
   LIQUIDATED DAMAGES SHALL NOT ACCRUE DURING THE PERIOD IN WHICH WORK IS SUSPENDED BY WRITTEN APPROVAL OF THE ENGINEER.
5. POROUS GRANULAR EMBANKMENT (PGE) SHALL BE USED TO BACKFILL EXCAVATIONS FOR PIER WIDENING. PGE SHALL BE BROUGHT TO SUBGRADE ELEVATION IN ALL PAVED AREAS. UNPAVED AREAS AND AREAS WITHIN THE EXISTING MAINTENANCE YARD UNDER THE ASHLAND AVENUE BRIDGE SHALL BE BROUGHT TO FINISHED GRADE.



LOCATION MAP

SCALE: 5/8" = 1 MILE

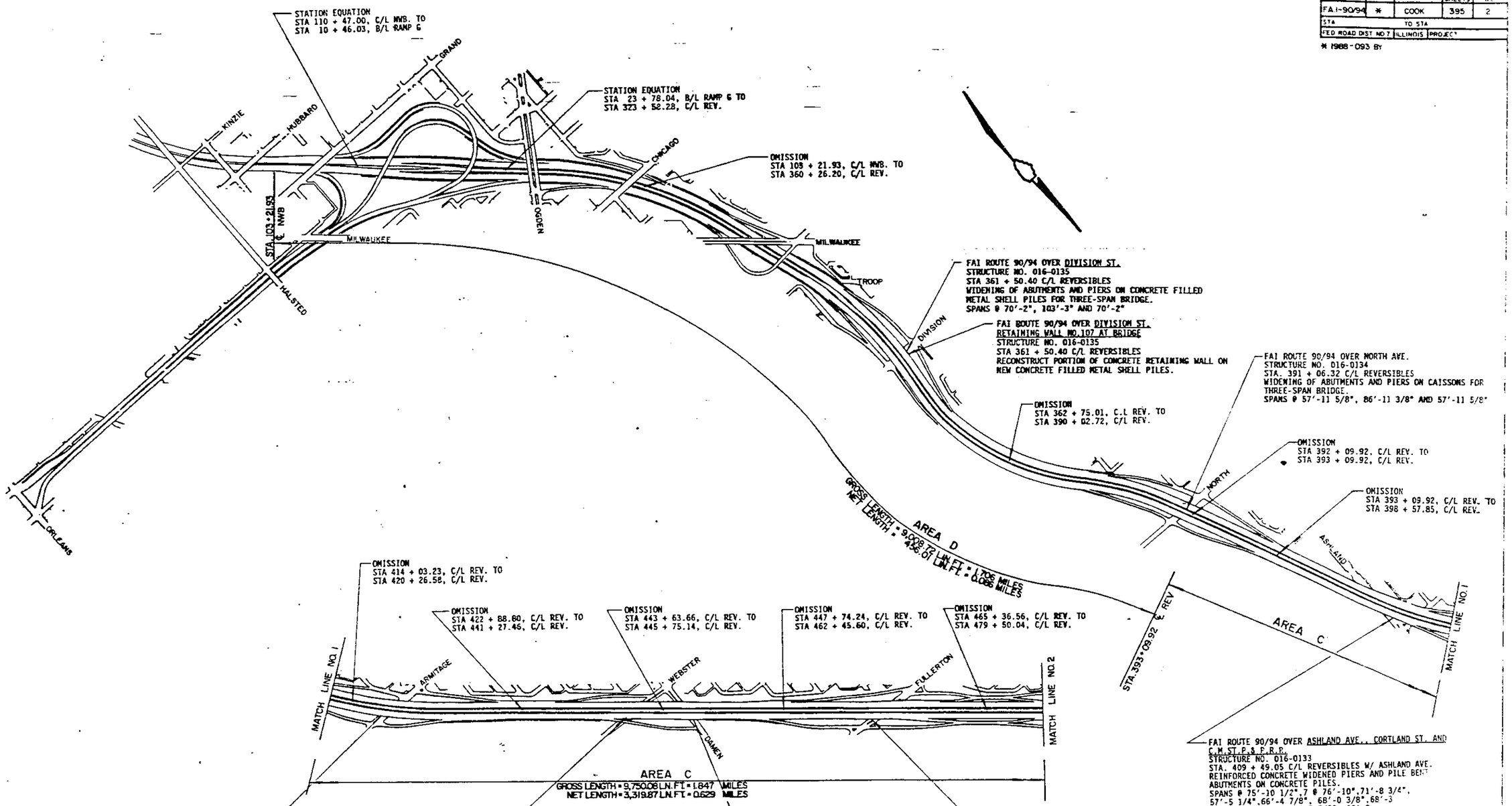
LOCATION OF SECTION INDICATED THUS:

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

CONSULTANT SECTION ENGINEER: K. HEMSTREET / J. KOS (708) 705-4269

ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-90/94	*	COOK	395	2
STA	TO STA			
FED ROAD DIST NO 7	ILLINOIS	PROJECT		

* 1988-093 BY



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
KENNEDY EXPRESSWAY

KEY MAP

SUBSTRUCTURE WIDENING

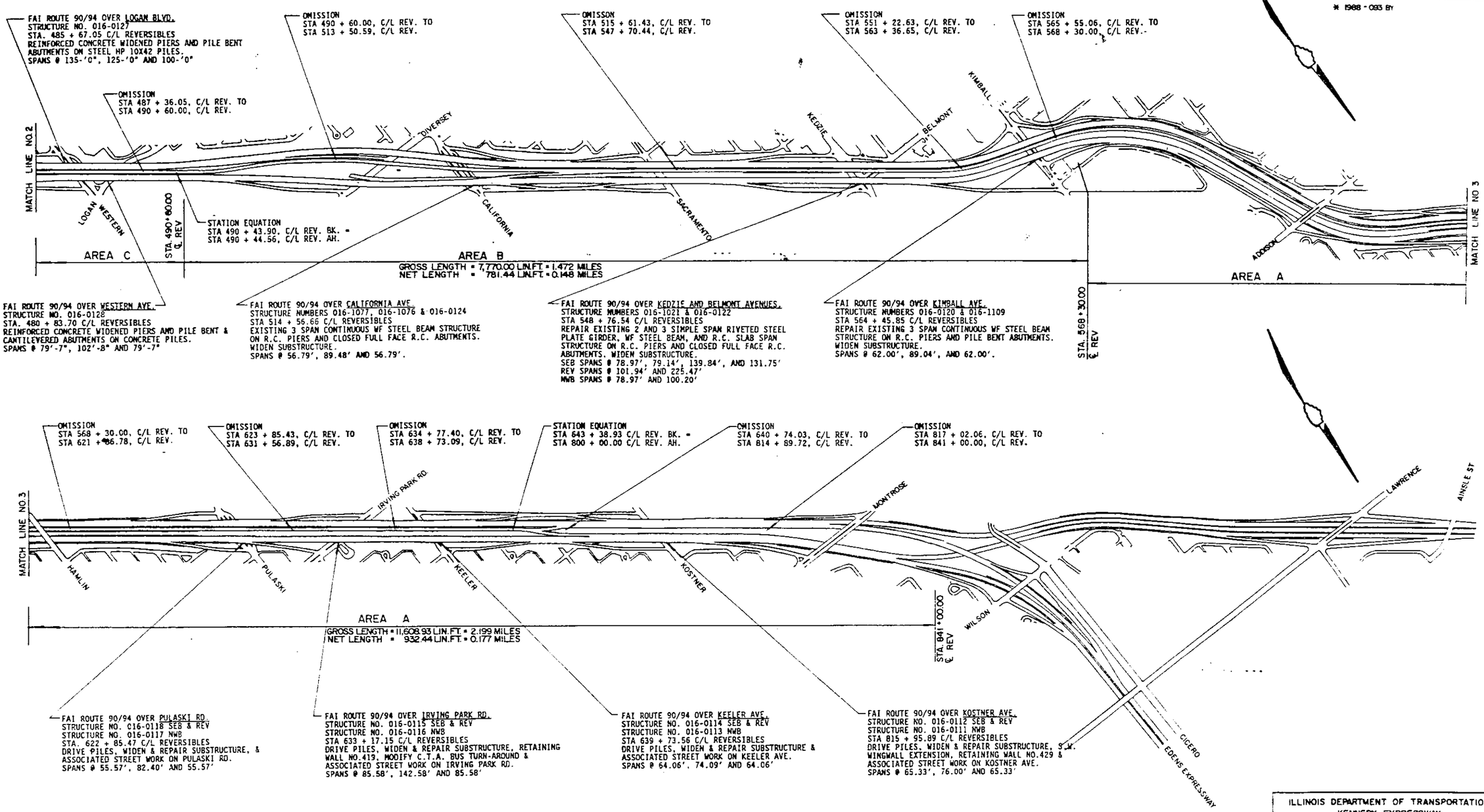
SCALE: NONE — DRAWN BY G.E.W.

DATE 1/90 — CHECKED BY T.W.L.

AMERICAN ENGINEERING COMPANY — CONSULTING ENGINEERS, ROLLING MEADOWS, ILLINOIS

ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO
FAI-90/94	*	COOK	395	3
STA		TO STA		
FED ROAD DIST NO 7	ILLINOIS	PROJECT		

* 1988 - 093 BY



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
KENNEDY EXPRESSWAY

KEY MAP

SUBSTRUCTURE WIDENING

SCALE NONE DRAWN BY G.E.W.

DATE 1/90 CHECKED BY T.W.L.

AMERICAN ENGINEERING COMPANY CONSULTING ENGINEERS ROLLING MEADOWS, ILLINOIS

TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER ASHLAND AVENUE - EL 604.09 (U.S.G.S. DATUM)

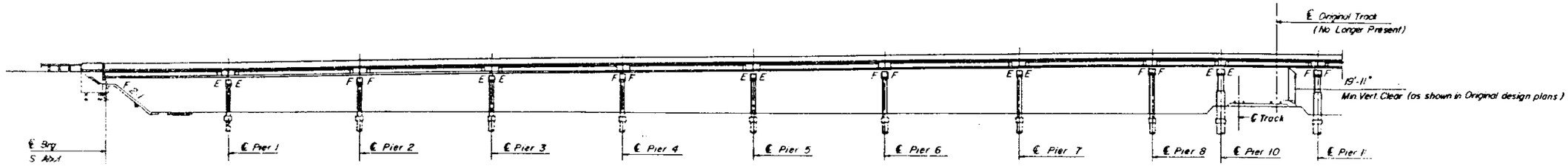
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE WIDENING

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	395	61
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

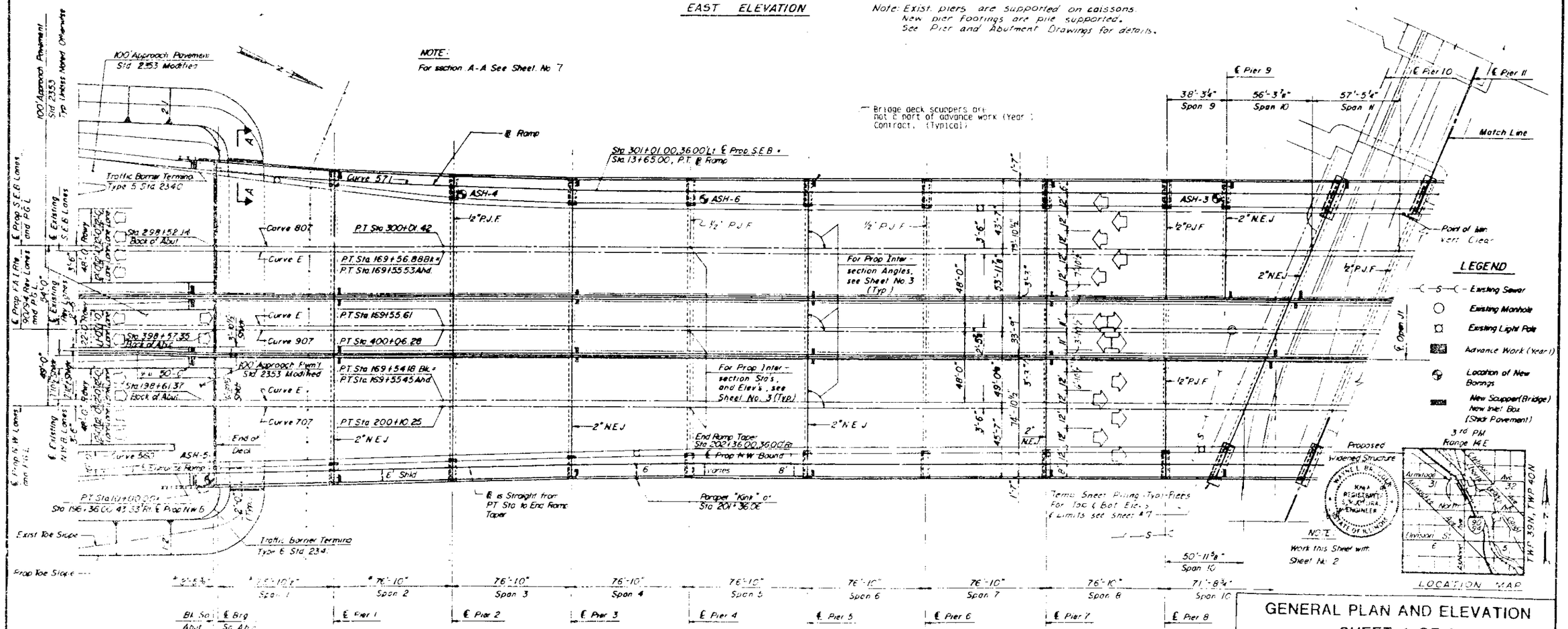
SHEET NO. 1 OF 63 SHEETS

*1988-093 BY



EAST ELEVATION

Note: Exist. piers are supported on caissons. New pier footings are pile supported. See Pier and Abutment Drawings for details.



PLAN

* Measured at Rt. Angles to ℄ Substructure

** 50'-0" - Transition Length for Shoulder Widths. (All open joint between Rev. Lanes and N.W.B. Lanes only.)

Note: N.E.J. = Neoprene Expansion Joint
P.J.F. = Preformed Joint Filler

Note: The plan view shows the proposed (final) development of the bridge. This contract covers advance work (Year 1) only.

STANLEY CONSULTANTS

STRUCTURE NO. 016-0133

GENERAL PLAN AND ELEVATION
SHEET 1 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

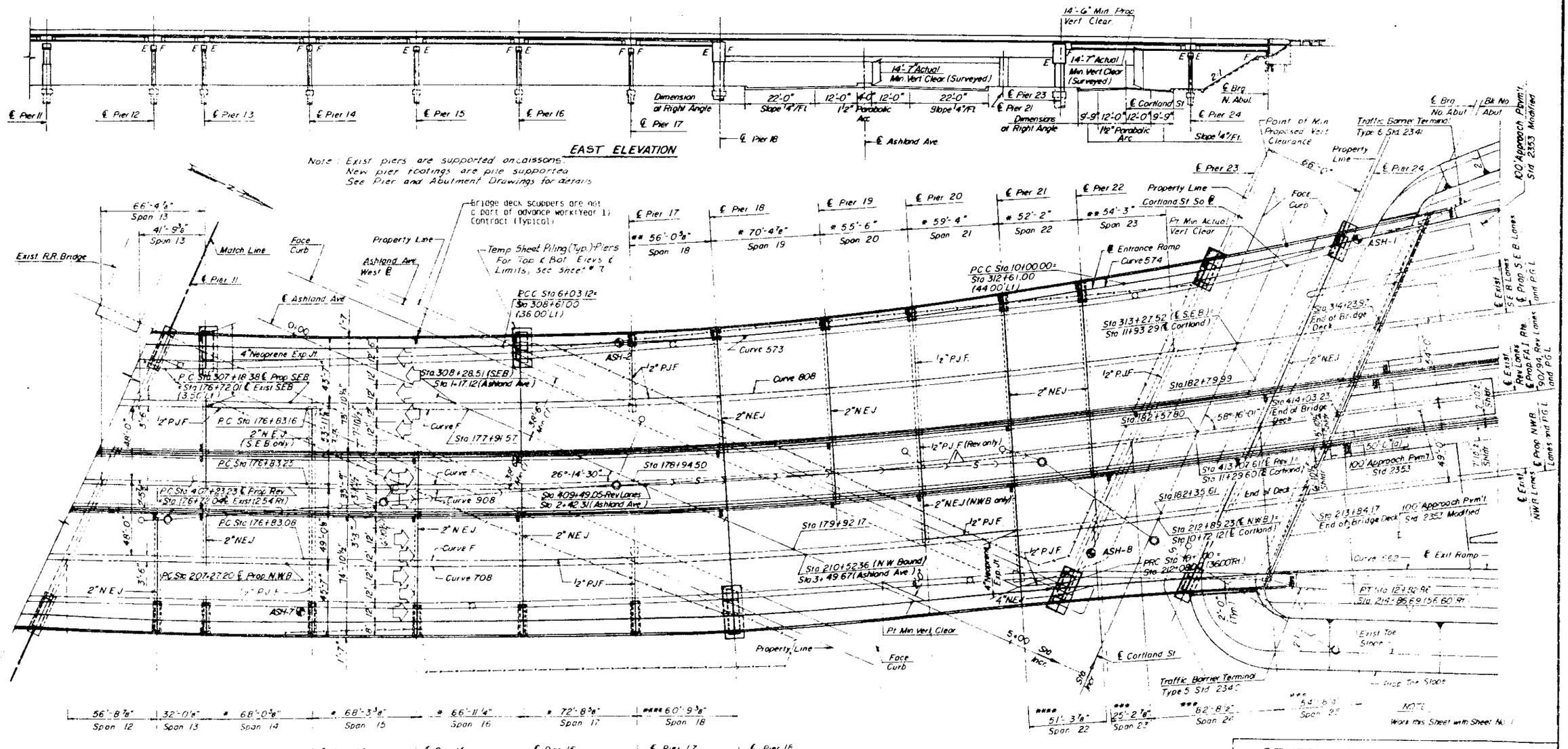
022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	7	COOK	395	62
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 2 OF 93 SHEETS

*1988-0715 BY



STANLEY CONSULTANTS

GENERAL PLAN AND ELEVATION
SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	395	63
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

*1988-093 BY

SHEET NO. 3 OF 53 SHEETS

MAINLINE HORIZONTAL CURVE DATA

	EXISTING CURVE DATA		PROPOSED CURVE DATA	
CURVE #	E (207)	F (208)	807	808
S.E.B. PI STA	1?+44.52	186+08.46	296+88.95	316+52.45
Δ	1°33'43.0"	28°41'07.9"	1°33'44.0"	28°33'58.0"
D	0°15'00.0"	1°34'59.8"	0°14'59.5"	1°33'41.7"
T	312.40'	925.29'	312.51'	934.08'
R	22,917.91'	3,618.78'	22,921.41'	3,669.07'
L	624.77'	1,811.77'	624.98'	1,829.30'
E	2.13'	116.42'	2.13'	117.03'
S	NC	0.0125 FT/FT	NC	0.020 FT/FT
CURVE #	E (307)	F (308)	907	908
REV. PI STA	166+43.91	186+20.81	395+94.54	416+71.06
Δ	1°33'43.0"	28°41'07.1"	1°33'44.0"	28°33'58.0"
D	0°15'01.9"	1°33'45.2"	0°15'02.0"	1°32'20.2"
T	311.75'	937.56'	311.77'	947.83'
R	22,869.91'	3,666.78'	22,867.41'	3,723.07'
L	623.45'	1,835.79'	623.51'	1,856.22'
E	2.13'	117.97'	2.12'	118.76'
S	NC	0.0125 FT/FT	NC	0.033 FT/FT
CURVE #	E (107)	F (108)	707	708
N.W.B. PI STA	166+43.13	186+32.93	196+99.18	216+87.50
Δ	1°33'43.0"	28°41'08.1"	1°33'44.0"	28°33'58.0"
D	0°15'03.8"	1°32'32.5"	0°15'03.9"	1°31'08.2"
T	311.09'	949.84'	311.10'	960.30'
R	22,821.91'	3,714.76'	22,818.41'	3,772.06'
L	622.15'	1,859.84'	622.17'	1,880.64'
E	2.12	119.51'	2.12'	120.32'
S	NC	0.0125 FT/FT	NC	0.020 FT/FT

PROPOSED RAMPS HORIZONTAL CURVE DATA

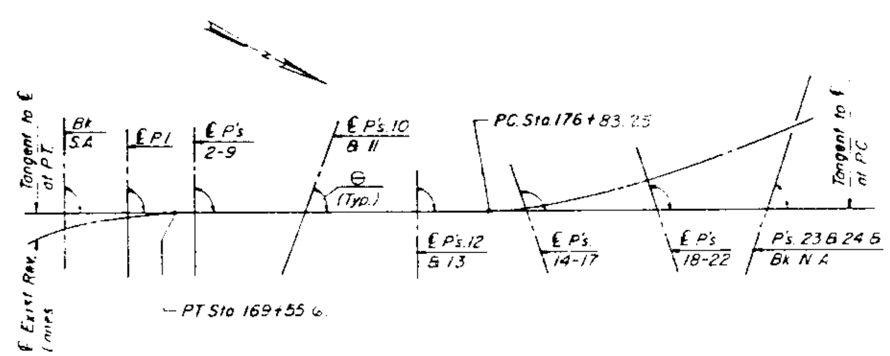
CURVE NO.	560	562	
RAMP F PI STA	8+78.45	11+41.49	
Δ	7°31'31.3"	4°07'03.0"	
D	3°05'26.0"	1°27'20.4"	
T	121.92'	141.49'	
R	1853.90'	3936.04'	
L	243.50'	282.86'	
E	4.01'	2.54'	
S	VARIES	VARIES	
CURVE NO.	571	573	574
RAMP E PI STA	11+56.53	8+01.19	11+43.17
Δ	7°26'26.185"	8°34'14.4"	7°26'57.5"
D	1°46'53.7"	2°09'34.2"	2°36'19.1"
T	209.05'	198.81'	143.17'
R	3216.00'	2653.19'	2199.19'
L	417.52'	396.88'	285.93'
E	6.79'	7.44	4.66'
S	VARIES	0.020 FT/FT	0.020 FT/FT

PROPOSED INTERSECTION STATIONS

SUBSTRUCTURE	LOCATION S.E. BOUND LANES	REVERSIBLE LANES	N.W. BOUND LANES
BACK SO. ABUT.	298+52.48	398+57.35	198+61.32
℄ PIER 1	299+30.84	399+35.71	199+39.68
" 2	300+07.67	400+12.54	200+16.51
" 3	300+84.51	400+83.38	200+93.35
" 4	301+61.34	401+66.21	201+70.18
" 5	302+38.17	402+43.04	202+47.01
" 6	303+15.01	403+19.88	203+23.85
" 7	303+91.84	403+96.71	204+00.68
" 8	304+68.67	404+73.54	204+77.51
" 9	305+06.94	---	---
" 10	305+63.29	405+45.29	205+28.50
" 11	306+20.73	406+02.73	205+85.94
" 12	---	---	206+47.64
" 13	306+62.50	406+69.12	206+74.67
" 14	307+30.57	407+37.19	207+42.74
" 15	---	408+05.49	208+11.04
" 16	308+65.81	---	208+77.97
" 17	309+38.54	---	209+50.70
" 18	309+94.60	---	210+11.49
" 19	310+64.98	410+74.08	---
" 20	311+20.50	411+29.60	211+37.40
" 21	311+79.89	411+88.98	211+96.77
" 22	312+32.13	412+41.22	---
" 23	312+86.36	412+66.45	212+48.08
" 24	313+69.53	413+49.15	213+30.37
END OF BRIDGE DECK	314+23.95	414+03.23	213+84.16

PROPOSED INTERSECTION ELEVATIONS (PROFILE GRADE ELEVATIONS)

SUBSTRUCTURE	LOCATION S.E. BOUND LANES	REVERSIBLE LANES	N.W. BOUND LANES
BACK SO. ABUT.	613.15	613.28	613.11
℄ PIER 1	615.51	615.63	615.45
" 2	617.81	617.92	617.75
" 3	619.88	619.99	619.85
" 4	621.64	621.75	621.57
" 5	623.09	623.19	623.02
" 6	624.23	624.33	624.17
" 7	625.06	625.17	625.02
" 8	625.58	625.69	625.53
" 9	625.72	---	---
" 10	625.80	625.90	625.71
" 11	625.70	625.88	625.75
" 12	---	---	625.63
" 13	625.52	625.64	625.48
" 14	625.03	625.15	625.06
" 15	---	624.42	624.27
" 16	623.33	---	623.33
" 17	622.01	---	622.05
" 18	620.80	---	620.79
" 19	619.04	619.18	---
" 20	617.46	617.63	617.55
" 21	615.66	615.85	615.78
" 22	614.07	614.28	---
" 23	612.42	613.53	614.27
" 24	610.05	611.07	611.83
BACK NO. ABUT.	608.87	609.73	610.34



SCHEMATIC FOOTING LAYOUT

SUBSTRUCTURE	ANGLE Θ
BK.S.A.	90°-00'-00"
P.1	90°-00'-00"
P'S. 2-9	[illegible]
P'S. 10&11	[illegible]
P'S. 12&13	[illegible]
P'S. 14-17	[illegible]
P'S. 18-22	[illegible]
P'S. 23&24	[illegible]
BK.N.A.	[illegible]

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HORIZONTAL ALIGNMENT

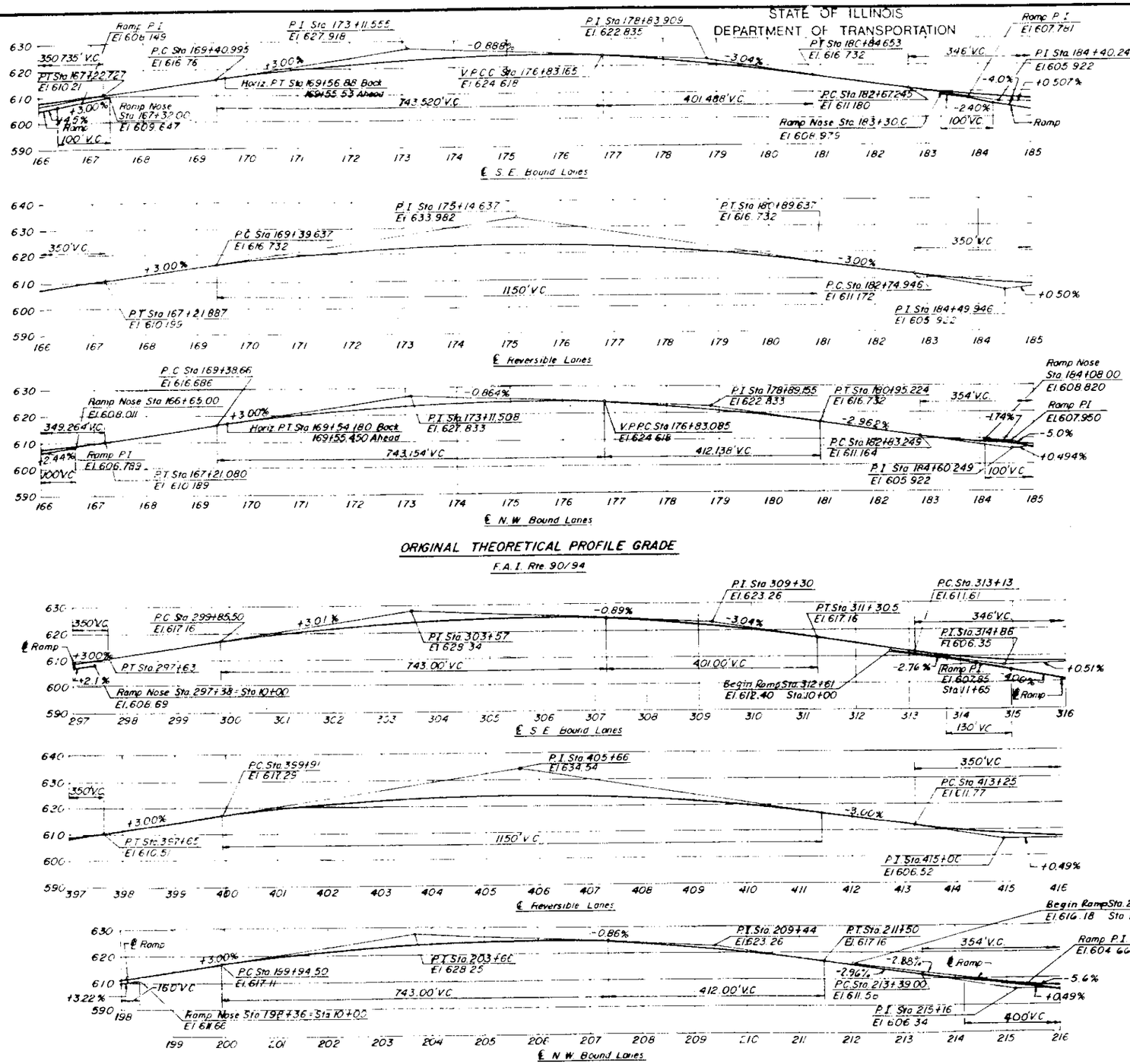
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	395	64
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT -	

SHEET NO. 4 OF 53 SHEETS

*1989-035 BY

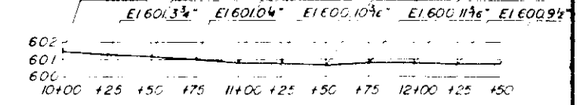


ORIGINAL THEORETICAL PROFILE GRADE

F.A.I. Rte. 90/94

PROPOSED PROFILE GRADE

F.A.I. Rte. 90/94



EXISTING TRACK PROFILE

Scales 1" = 40' Horiz
1/4" = 1'-0" Vert

EXISTING CORTLAND STREET

(Along ℄ of roadway)

Station	Elevation
12+94	590.38
12+84	590.21
12+74	590.06
12+64	589.91
12+54	589.82
12+44	589.77
12+34	589.75
12+24	589.74
12+14	589.70
12+04	589.66
11+94	589.63
11+69	589.62
11+44	589.49
11+19	589.33
10+94	589.01
10+84	588.84
10+74	588.67
10+64	588.48
10+54	588.12
10+44	587.79
10+34	587.44
10+24	587.07
10+14	586.69
10+04	586.31
9+94	586.12
9+84	585.93
9+74	585.72

EXISTING ASHLAND AVENUE

(Along Concrete Median Gutterline)

Station	Elevation
0+00	588.64
0+10	589.07
0+20	589.46
0+30	589.86
0+40	590.24
0+50	590.55
0+60	590.86
0+70	591.15
0+80	591.36
0+90	591.55
1+00	591.68
1+25	591.78
1+50	591.90
1+75	591.89
2+00	591.83
2+25	591.81
2+50	591.82
2+75	591.86
3+00	591.85
3+25	591.87
3+50	591.83
3+60	591.70
3+70	591.54
3+80	591.40
3+90	591.06
4+00	590.74
4+10	590.39
4+20	590.01
4+30	589.63
4+50	589.24
4+60	588.80

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PROFILES

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*	COOK	395	65

*1986-0?5 BY

SHEET NO. 5
53 SHEETS

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER-STRUCTURE	SUB-STRUCTURE	TOTAL
	RAILROAD PROTECTIVE LIABILITY INSURANCE	LUMP SUM	-	1	1
	~~CLASS X CONC SUPERSTRUCTURE~~	~~CU. YD.~~	~~1315~~	-	~~1315~~
	CLASS X CONCRETE	CU. YD.	-	1,455.9	1,455.9
	REINFORCEMENT BARS	POUND	~~155,370~~	45,420	45,420
	REINFORCEMENT BARS (EPOXY COATED)	POUND	~~179,870~~	179,150	179,150
	EXPANSION BOLTS 3/4"ø	EACH	-	317	317
(2)	~~PROTECTIVE COAT~~	~~SQ. YD.~~	~~5965~~	-	~~5965~~
	~~NEOPRENE EXPANSION JOINT 2"~~	~~LIN. FT.~~	~~367~~	-	~~367~~
	~~NEOPRENE EXPANSION JOINT 4"~~	~~LIN. FT.~~	~~36~~	-	~~36~~
(4)	CONCRETE REMOVAL	CU. YD.	-	16.1	16.1
	STRUCTURE EXCAVATION	CU. YD.	-	2,395	2,395
	TEMPORARY SHEET PILING	SQ. FT.	-	14,621	14,621
	FURNISHING CONCRETE PILES	LIN. FT.	-	12,050	12,050
	DRIVING CONCRETE PILES	LIN. FT.	-	12,050	12,050
(3)	TEST PILE (CONCRETE)	EACH	-	30	30
(1)	~~FURNISHING AND ERECTING STRUCTURAL STEEL~~	~~LUMP SUM~~	~~1~~	-	~~1~~
	~~FURNISHING PRECAST P.P.C. I-BEAMS 40"~~	~~LIN. FT.~~	~~6496.8~~	-	~~6496.8~~
	~~FURNISHING PRECAST P.P.C. BEAMS 18"x30"~~	~~LIN. FT.~~	~~454.3~~	-	~~454.3~~
	~~ELASTOMERIC BEARING ASSEMBLY TYPE I~~	~~EACH~~	~~103~~	-	~~103~~
	~~STUD SHEAR CONNECTOR~~	~~EACH~~	~~1,224~~		~~1,224~~
	FORMED CONCRETE REPAIR(1.5"< DEPTH < 5")	SQ. FT.	-	1,950	1,950
	FORMED CONCRETE REPAIR (DEPTH > 5")	SQ. FT.	-	650	650
	EPOXY CRACK SEALING	LIN. FT.	-	1,500	1,500
	EPOXY MORTAR REPAIR (DEPTH < 1.5")	CU. FT.		325	325
	~~SLOPE WALL 4"~~	~~SQ. YD.~~	-	~~370~~	~~370~~
	~~TEMPORARY DRAINAGE SYSTEM~~	~~LIN. FT.~~	~~350~~	-	~~350~~
	PROTECT & MAINTAIN EXST UNDERPASS LUMINAIRES	LUMP SUM	-	.04	.04
	~~RELOCATE TEMPORARY CONC BARRIER~~	~~UNITS~~	~~314~~	-	~~314~~
	PROTECTIVE SURFACE TREATMENT	SQ. FT.	-	133,900	133,900
	~~PROTECTIVE SHIELD~~	~~SQ. YD.~~	~~2,235~~	-	~~2,235~~
	~~BRIDGE PARAPET/SIDEWALK REMOVAL~~	~~LIN. FT.~~	~~3,100~~	-	~~3,100~~

~~(1) INCLUDES 561,576 POUNDS OF STRUCTURAL STEEL.~~

~~(2) PROTECTIVE COAT QUANTITY INCLUDES DECK SURFACE. SEE SPECIAL PROVISIONS FOR CURING AND TEXTURING BRIDGE DECK.~~

(3) THE CONTRACTOR SHALL DRIVE CONCRETE TEST PILES IN PERMANENT LOCATIONS AT WIDENED PIERS & ABUTMENTS AS DIRECTED BY ENGINEER BEFORE ORDERING REMAINDER OF THE PILES.

~~(4) EXISTING NAME PLATE SHALL BE SALVAGED AND REFURBISHED FROM THE EXISTING STRUCTURE WITHOUT DAMAGE FOR REUSE BY THE OWNER. CONTRACTOR SHALL DELIVER THE NAME PLATE WHERE DESIGNATED BY THE ENGINEER. (COST INCIDENTAL TO "CONCRETE REMOVAL").~~

GENERAL NOTES:

1. SEE PROPOSAL FOR BORING DATA.
2. ~~FASTENERS SHALL BE HIGH STRENGTH BOLTS (AASHTO M 164, TYPE 3), BOLTS 7/8"ø, OPEN HOLES 15/16"ø, UNLESS OTHERWISE NOTED.~~
3. ~~THE ZINC SILICATE AND VINYL PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED.~~
4. ~~ALL STRUCTURAL STEEL SHALL BE AASHTO M 164. EXPANSION JOINT ANGLES AND ATTACHED BARS SHALL BE AASHTO M 183.~~
5. ~~EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THE ZINC SILICATE PRIMER.~~
6. ~~FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.~~
7. ~~ANCHOR BOLTS SHALL BE SET BEFORE DSETTING DIAPHRAGMS OVER SUPPORTS.~~
8. ~~THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE TENSION FLANGES, WEBS AND ALL SPLICE PLATE MATERIAL OF THE STEEL GIRDERS.~~
9. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60
10. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
11. EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD - 4,080 LBS., AND 3/4"ø X 12" HOOKED BOLTS.
12. BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. ~~TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.~~
13. ~~THE CONCRETE, FOR BRIDGE FLOORS FINISHED IN ACCORDANCE WITH ARTICLE 503.15 OF THE STANDARD SPECIFICATIONS, SHALL BE PLACED AND COMPACTED PARALLEL TO THE SKEW IN UNIFORM INCREMENTS ALONG CENTERLINE OF BRIDGE. THE FINISHING MACHINE, WHEN REQUIRED, SHALL BE SET PARALLEL TO THE SKEW FOR STRIKING OFF AND SCREEDING THE CONCRETE.~~
14. ~~FURNISHING STRUCTURAL STEEL SHALL BE STORED AT FABRICATORS SHOP UNTIL REQUESTED. UPON REQUEST STEEL SHALL BE DELIVERED F.O.B. JOB SITE.~~
15. THE INFORMATION SHOWN FOR THE TEMPORARY SHEET PILING IS ESTIMATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A DESIGN OF THE TEMPORARY SHEET PILING AND ASSOCIATED MEMBERS, IF REQUIRED, SUBJECT TO THE APPROVAL OF THE ENGINEER.
16. ~~ALL STRUCTURAL STEEL FABRICATORS PERFORMING WORK ON THE MAIN LOAD CARRYING COMPONENTS OF STEEL STRUCTURES SHALL BE CERTIFIED UNDER CATEGORY III (AISC) OF THE QUALITY CERTIFICATION PROGRAM.~~
17. ~~SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6" x 6" - W4.0 X W4.0, WEIGHING 58 LBS. PER 100 SQ. FT.~~
18. THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS
19. ~~CALCULATED WEIGHT OF STRUCTURAL STEEL (AASHTO M 183) = 561,576 LBS.~~
20. ALL REINFORCING STEEL BARS ARE MEASURED OUT-TO-OUT.
21. THE CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR EDGE OR END OF REINFORCING SHALL BE 2" EXCEPT 3" WHEN DEPOSITED AGAINST EARTH, UNLESS OTHERWISE NOTED.
22. PIER ANCHOR BOLTS WILL BE FURNISHED AND INSTALLED BY OTHERS. PLACE PIER CAP REINFORCEMENT TO CLEAR ANCHOR BOLTS

EXISTING STRUCTURE

FAI ROUTE 2, SEC 0505.3IH, BUILT IN 1958, STRUCTURE NO. 016-0133.

SUPERSTRUCTURE: APPROACH SPANS TO ASHLAND AVENUE:
SIMPLY SUPPORTED PRECAST, PRESTRESSED CONCRETE I-BEAMS.
ASHLAND AVENUE MAIN SPANS:
PLANAR FRAME-TYPE STRUCTURE CONSISTING OF 144" RIVETED BUILT-UP COMPOSITE FASCIA GIRDERS, 96" AND 120" CROSS-GIRDERS, AND 48" LONGITUDINAL GIRDERS.

SUBSTRUCTURE: PILE BENT ABUTMENTS SUPPORTED ON CONCRETE PILES AND MULTIPLE COLUMN PIERS SUPPORTED ON CAISSONS.

SUPERSTRUCTURE DECK TO BE REPLACED AND STRUCTURE WIDENED. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

EXISTING UTILITIES

THE EXISTING UTILITIES HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE PLANS AND FROM FIELD OBSERVATIONS. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

REHABILITATION NOTES

SEAL CRACKS IN ABUTMENTS AND PIERS WITH PRESSURE INJECTED EPOXY. REMOVE ALL DETERIORATED CONCRETE IN ABUTMENTS AND PIERS, AND REPLACE WITH EPOXY MORTAR OR FORMED CONCRETE. SPLICE IN REBARS WHERE REQUIRED. (SEE SPECIAL PROVISIONS).

~~EXISTING LIGHT POLES AND CONDUITS ARE TO BE REMOVED. (COST INCIDENTAL TO COST OF CONSTRUCTION).~~

DESIGN SPECIFICATIONS

AASHTO (1983) WITH CURRENT INTERIM SPECIFICATIONS

LOADING HS20-44 AND ALTERNATE MILITARY LOADING

ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

REINFORCED CONCRETE & STRUCTURE STEEL

F'C =	3,500 PSI	(CONCRETE)
FY =	60,000 PSI	(REINFORCEMENT)
FS =	20,000 PSI	(PROPOSED STRUCTURAL STEEL)
FS =	18,000 PSI	(EXISTING STRUCTURAL STEEL)

PRESTRESSED CONCRETE & PRETENSIONING STEEL

	EXISTING	PROPOSED
F'C	5,000 PSI	5,000 PSI
F'CI	4,000 PSI	4,000 PSI
F'S	248,000 PSI(7/16"ø STRANDS)	270,000 PSI(1/2"ø STRANDS)
F'SI	173,600 PSI	189,000 PSI

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BILL OF MATERIAL

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

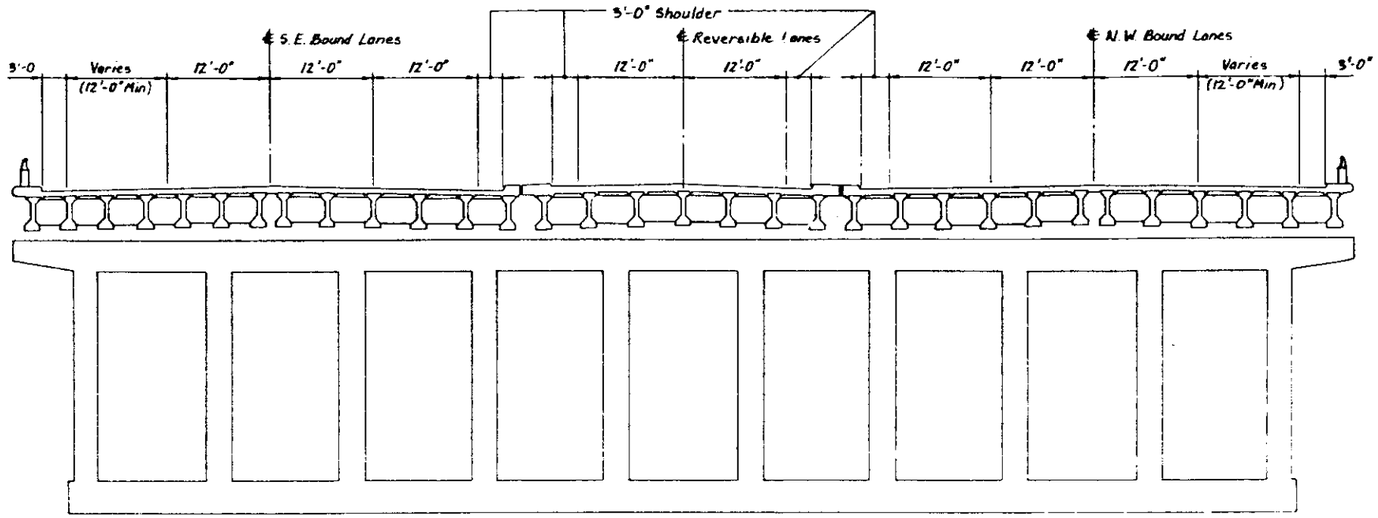
C27

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*	COOK	395	66
F. AP. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6
53 SHEETS

*1988-015 BY

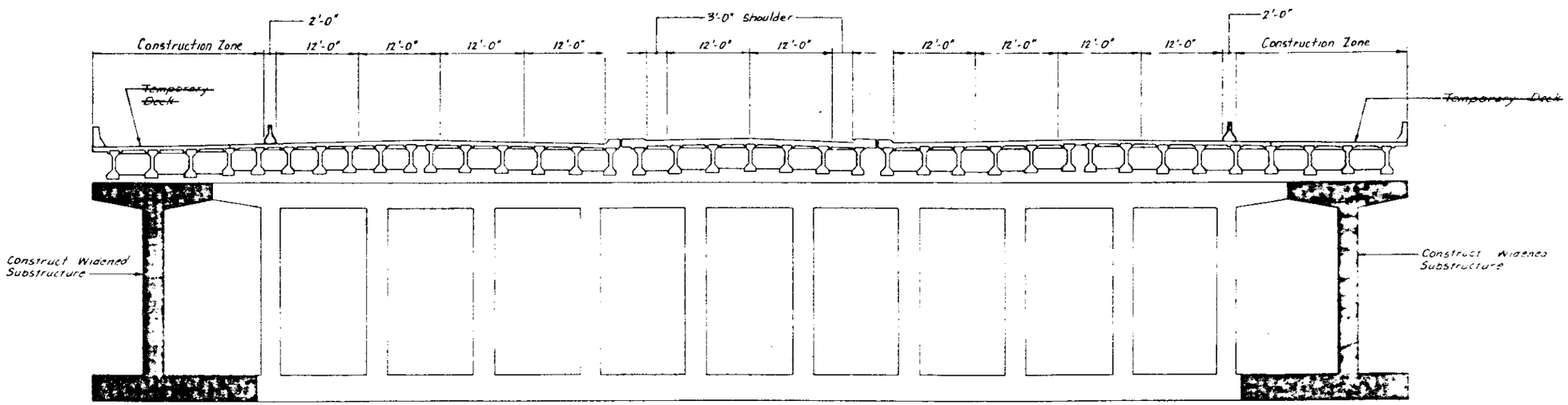


EXISTING

LEGEND

Denotes "Work This Contract."

Denotes "Temporary Concrete Barrier" Std 2383-1



ADVANCE WORK
(YEAR 1)

STANLEY CONSULTANTS

BRIDGE CONSTRUCTION STAGING

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

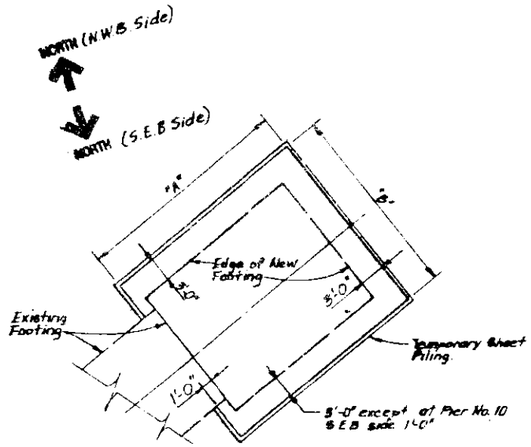
C28

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	395	67
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

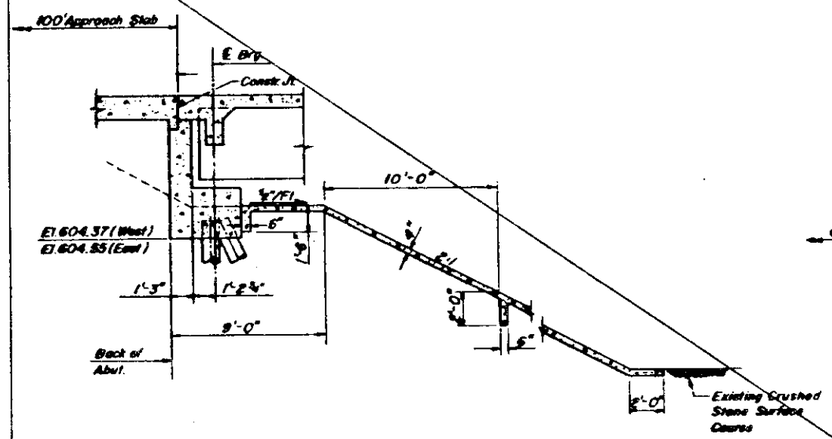
SHEET NO. 7 OF 53 SHEETS

*1988-045 BY



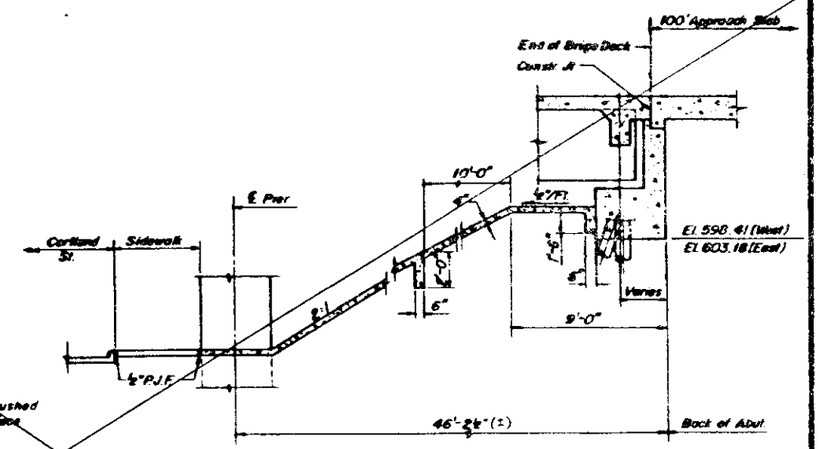
TEMPORARY SHEET PILE PLAN - PIERS

PIER NO.	SIDE	DIMENSIONS "A"	DIMENSIONS "B"	ELEVATIONS TOP OF PILE	ELEVATIONS BOT OF PILE
10	SEB	27'-4"	10'-0"	601.0	579.0
	NWB	28'-7"	12'-0"	604.3	579.8
11	SEB	22'-0"	15'-0"	591.0	572.0
	NWB	28'-7"	12'-0"	600.0	578.0
13	SEB	16'-9"	16'-6"	591.0	574.0
	-	-	-	-	-
16	SEB	16'-0"	18'-0"	595.3	575.6
	-	-	-	-	-
18	-	-	-	-	-
	NWB	17'-6"	18'-0"	595.4	576.0
23	SEB	24'-5"	12'-0"	593.3	575.3
	NWB	20'-0"	20'-0"	589.8	573.3
24	SEB	20'-4"	12'-0"	593.6	574.7
	NWB	18'-10"	13'-0"	591.5	575.7



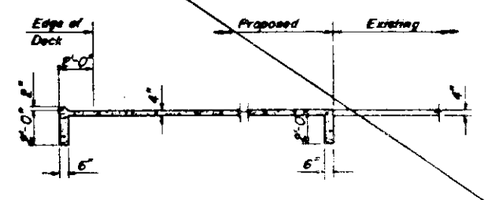
SECTION THRU WIDENED SOUTH ABUTMENT

(At Right Angles to Abutment)



SECTION THRU WIDENED NORTH ABUTMENT

(At Right Angles to Abutment)



SECTION A-A

(For Location, see Sheet No. 1)

STANLEY CONSULTANTS

TEMPORARY SHEET PILE

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

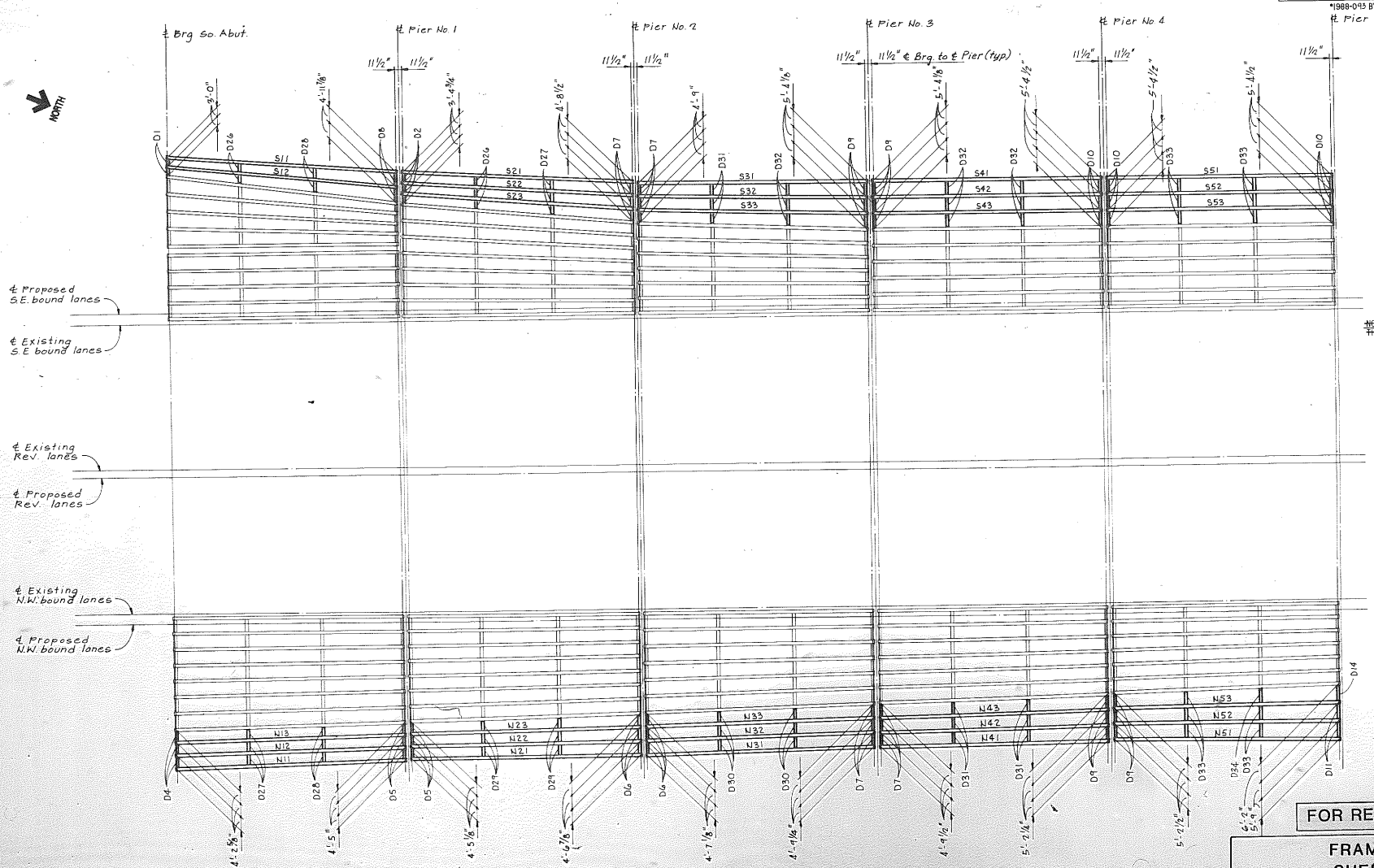
STATION 409+49

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	68
F. HR. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 8
53 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

*1988-093 BY



~~NOTE: FOR BEAM DETAILS SEE SHT 29 THRU 32.~~

FOR REFERENCE ONLY

FRAMING PLAN
SHEET 1 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

C30

C B A 0 A B C D

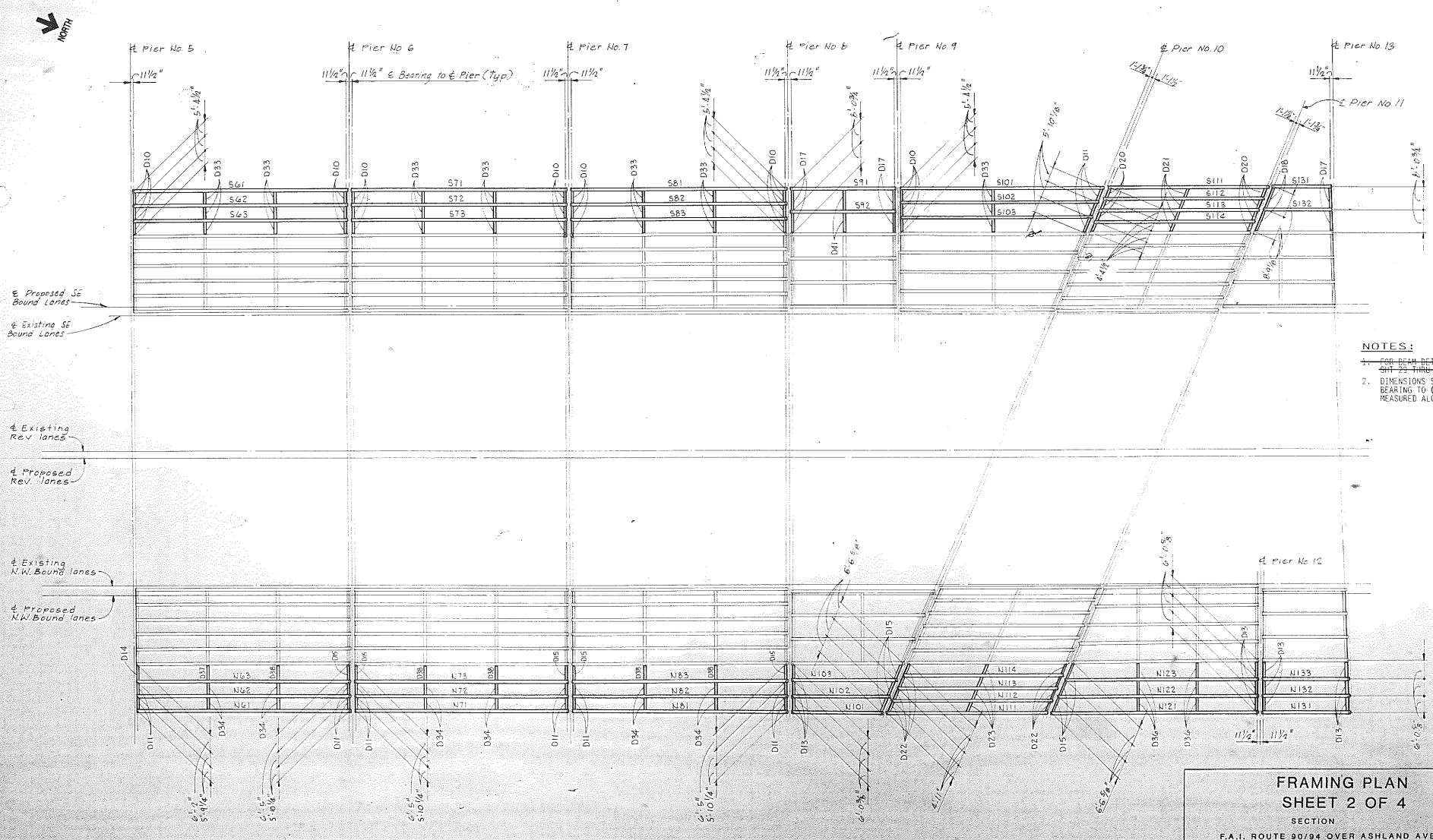
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	69
F. AM. A, REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9
53 SHEETS

*1988-045 BY



NOTES:

1. ~~FOR BEAM DETAILS SEE SHT 23 THRU 32.~~
2. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.

FOR REFERENCE ONLY

FRAMING PLAN
SHEET 2 OF 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

C31

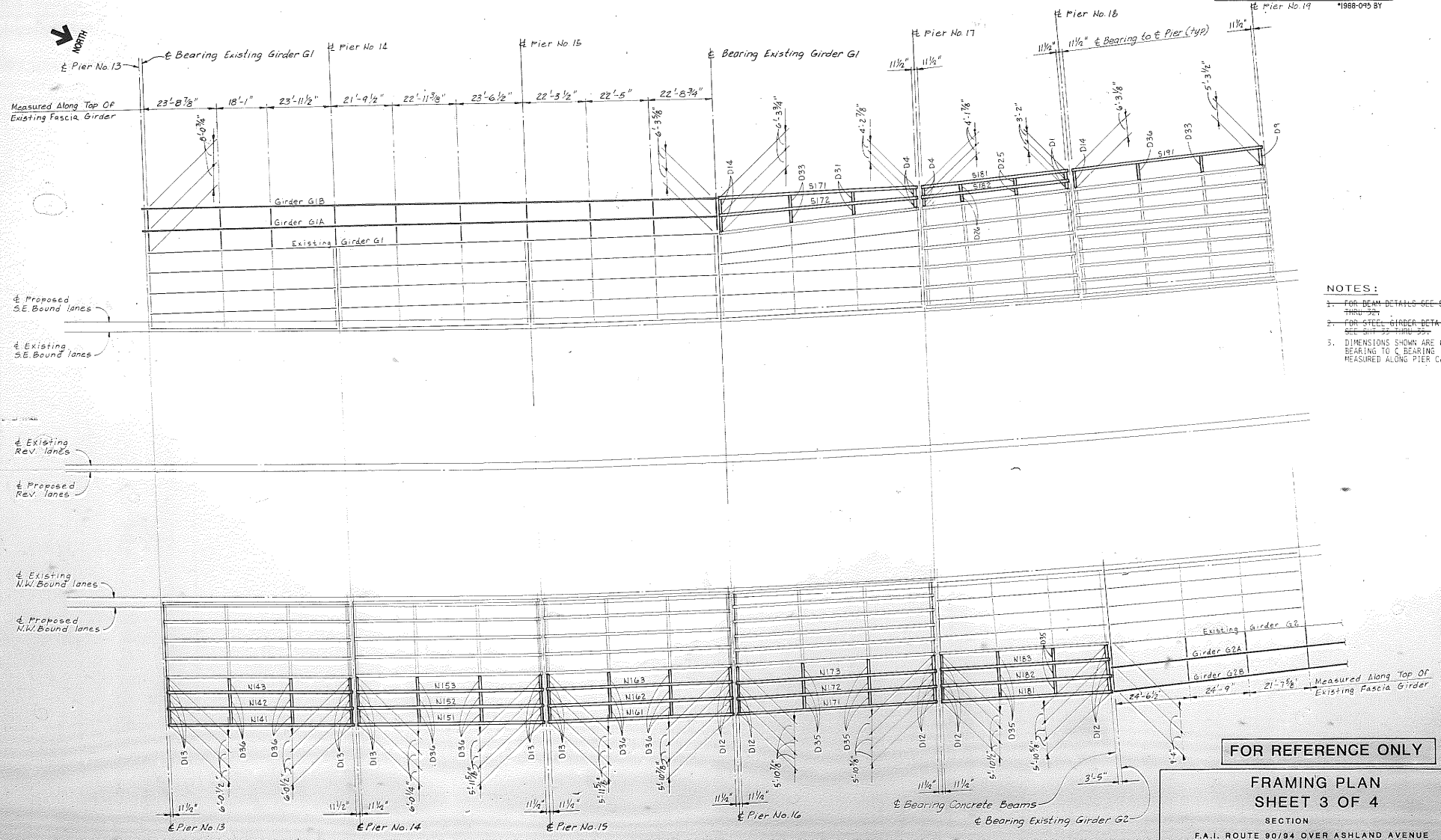
C B A 0 A B C D

TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	70
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10
53 SHEETS



NOTES:

1. ~~FOR BEAM DETAILS SEE SHT 29 THRU 32.~~
2. ~~FOR STEEL GIRDER DETAILS SEE SHT 33 THRU 35.~~
3. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.

FOR REFERENCE ONLY

FRAMING PLAN
SHEET 3 OF 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

C32

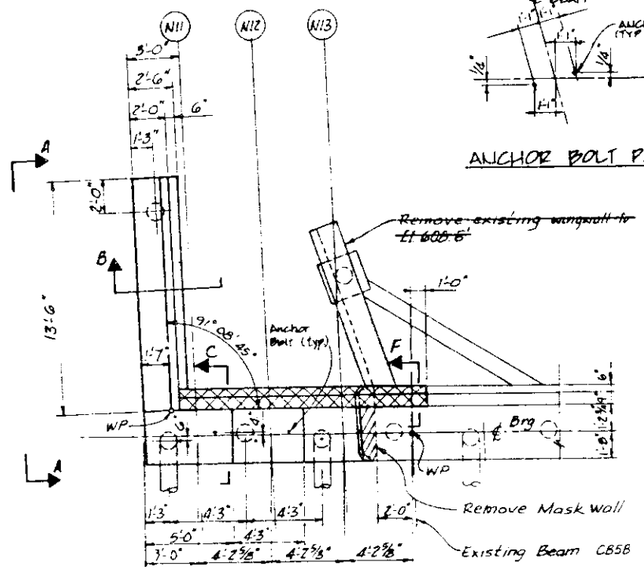
C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

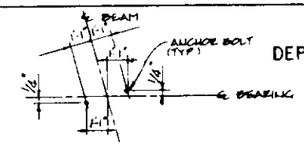
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	72
F.A.I. RTE. 4		ILLINOIS FED. AID PROJECT		

SHEET NO. 12
53 SHEETS

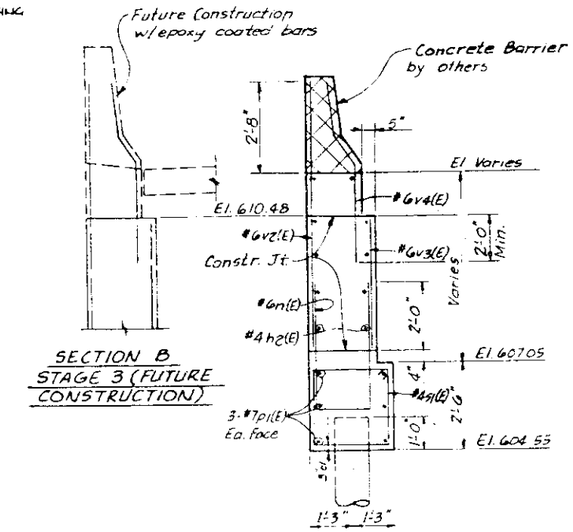
*1988-093 BY



PLAN

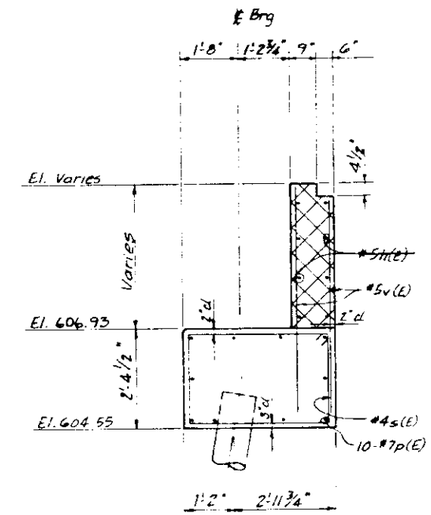


ANCHOR BOLT PLAN



SECTION B
STAGE 3 (FUTURE CONSTRUCTION)

SECTION B

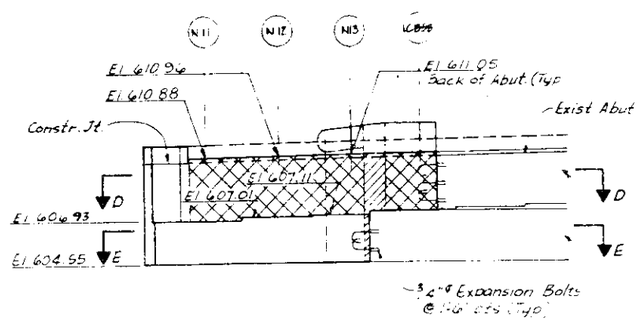


SECTION C

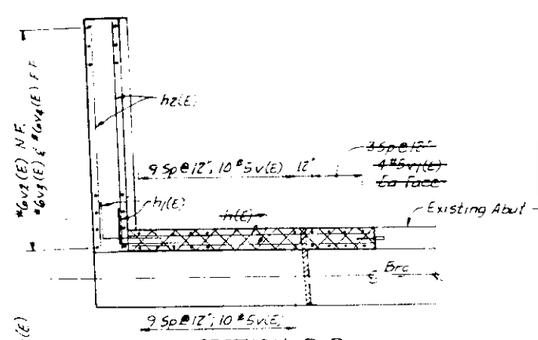
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h1(E)	8	#5	14'-0"	
n1(E)	8	#5	5'-6"	
n2(E)	10	#4	13'-2"	
n(E)	14	#6	9'-8"	
p(E)	10	#7	11'-6"	
p1(E)	6	#7	16'-0"	
p2(E)	3	#7	5'-8"	
s(E)	11	#4	12'-5"	
s1(E)	12	#4	9'-5"	
v(E)	20	#5	5'-9"	
v1(E)	8	#5	4'-6"	
v2(E)	14	#6	6'-9"	
v3(E)	14	#6	2'-9"	
v4(E)	14	#6	6'-0"	

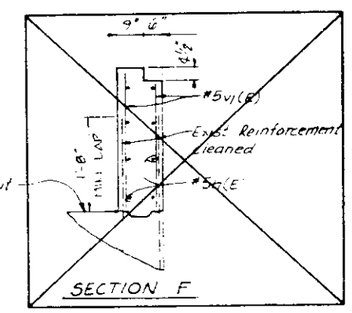
STRUCTURE EXCAVATION	CU. YDS.	41
CLASS "X" CONCRETE	CU. YDS.	12.4
REINFORCEMENT BARS EPOXY COATED	LBS.	1410
CONCRETE REMOVAL	CU. YDS.	0.5
3/4"Φ EXPANSION BOLTS	EACH	4
FURNISHING CONC PILES	LIN. FT.	168
DRIVING CONC PILES	LIN. FT.	168
TEST PILES (CONC)	EACH	1



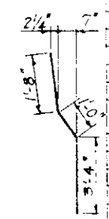
ELEVATION

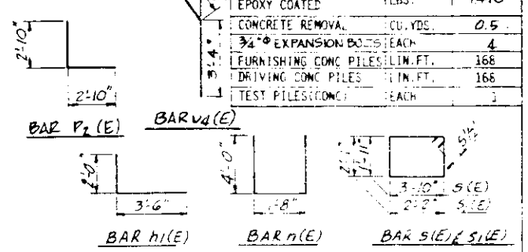


SECTION D-D

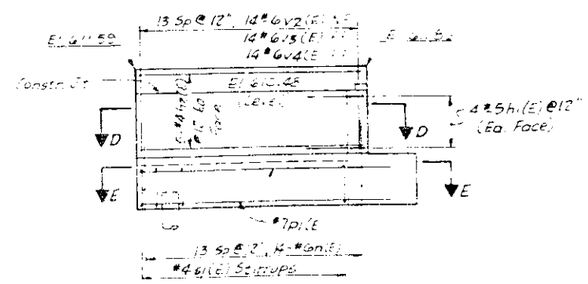


SECTION F

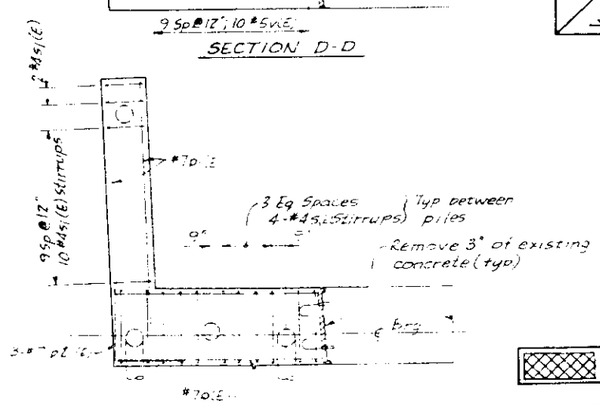




REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
ALL BAR DIMENSIONS ARE OUT-TO-OUT



SECTION A-A



SECTION E-E

NOTES:

POUR STEPS MONOLITHICALLY WITH ABUTMENT PILE CAP.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
BATTER PILES 4:1 IN DIRECTION SHOWN.

INDICATES CONCRETE REMOVAL

PILE DATA

TYPE 14" METAL SHELL, CONCRETE PILE
CAPACITY 40 TONS
EST. LENGTH 56'
NO. REQUIRED 4 (INCL. 1 TEST PILE)

INDICATES CONCRETE WORK BY OTHERS

ANCHOR BOLTS WILL BE FURNISHED AND INSTALLED BY OTHERS. PLACE ABUTMENT PILE CAP REINFORCEMENT TO CLEAR ANCHOR BOLTS.

STANLEY CONSULTANTS

SOUTH ABUTMENT - EAST END

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

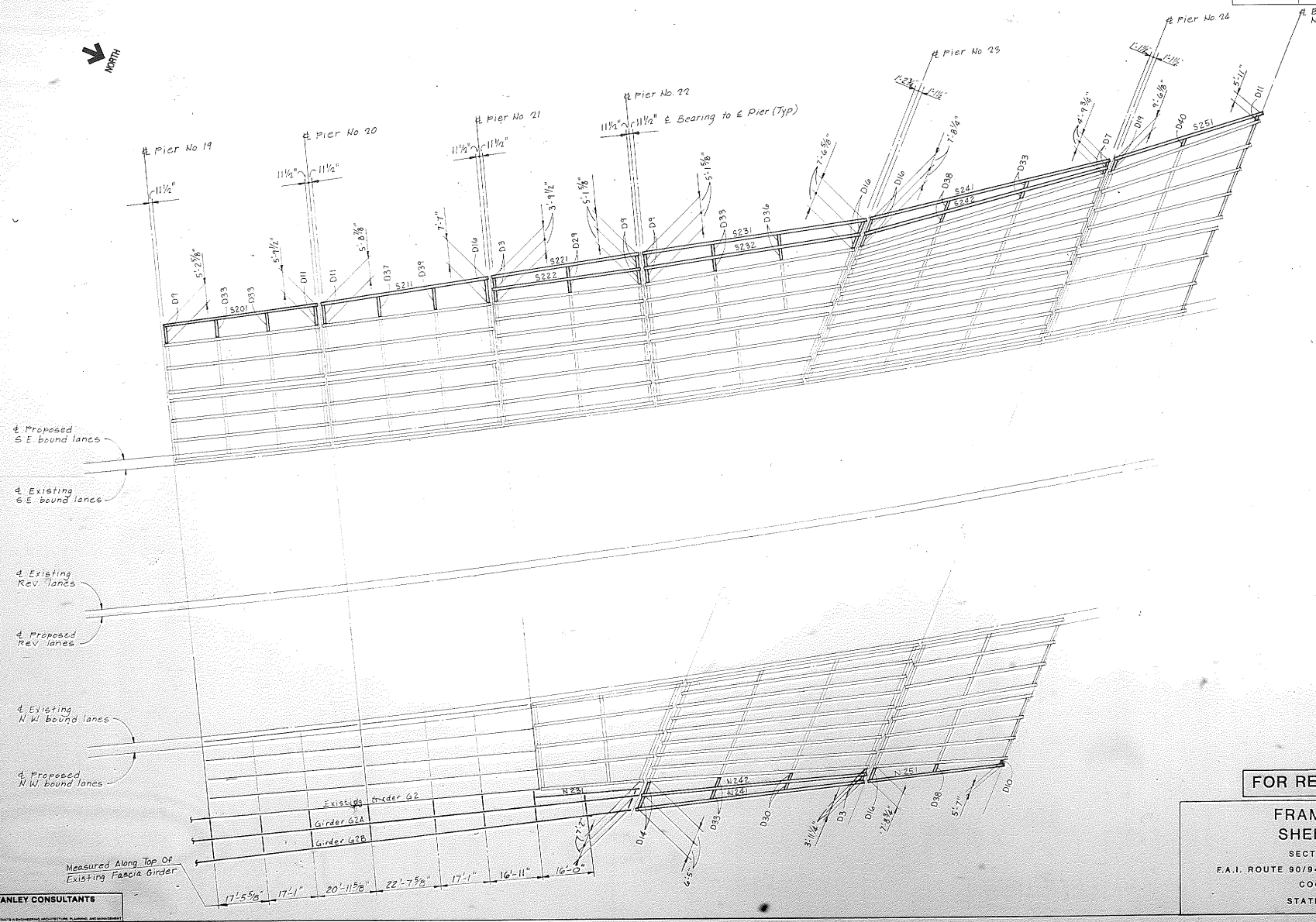
C34

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	71
F. HW. S. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11
55 SHEETS

*1988-045 BY



NOTES:

~~1. FOR BEAM DETAILS SEE SHT 25 THRU 32.~~

~~2. FOR STEEL GIRDER DETAILS SEE SHT 35 THRU 55.~~

3. DIMENSIONS SHOWN ARE ℄ BEARING TO ℄ BEARING MEASURED ALONG PIER CAP.

FOR REFERENCE ONLY

FRAMING PLAN
SHEET 4 OF 4

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

C33

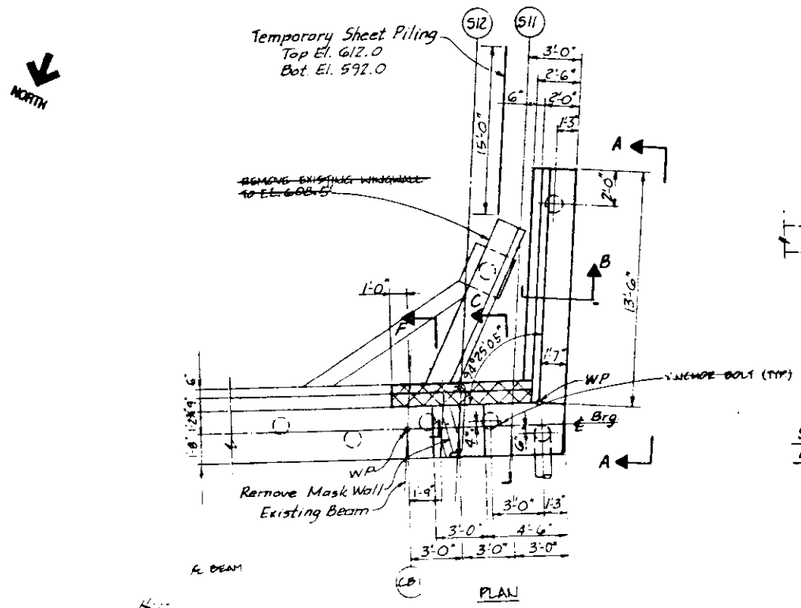
C B A 0 A B C D
TAMERAN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

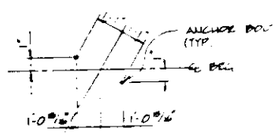
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	73
F. AID. & REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 13
53 SHEETS

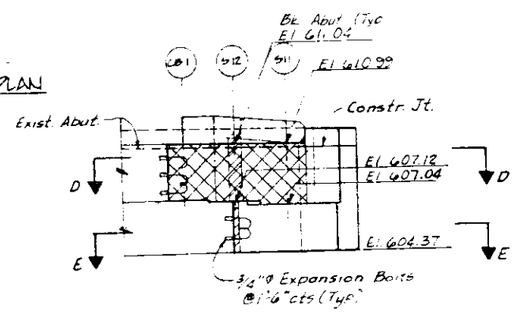
*1988-075 BY



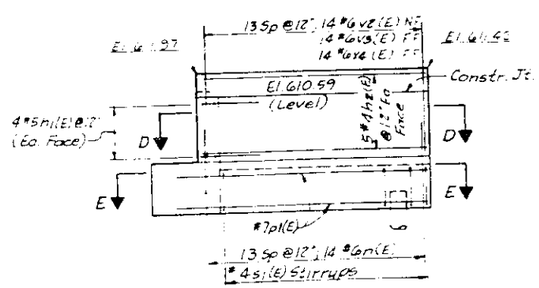
PLAN



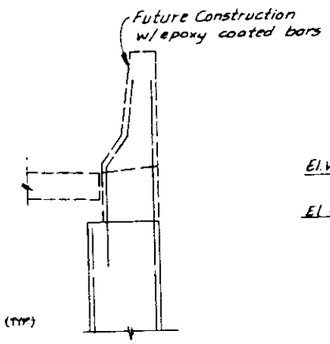
ANCHOR BOLT PLAN



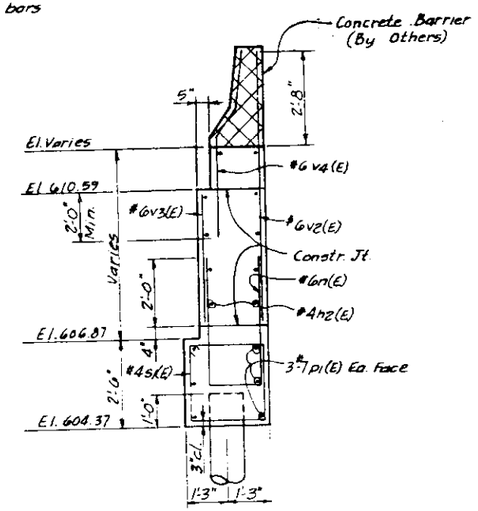
ELEVATION



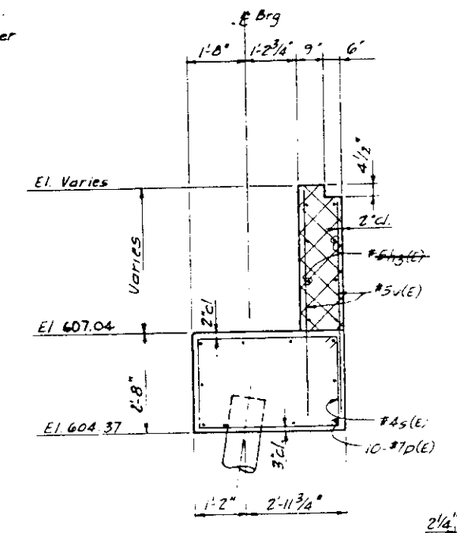
SECTION A-A



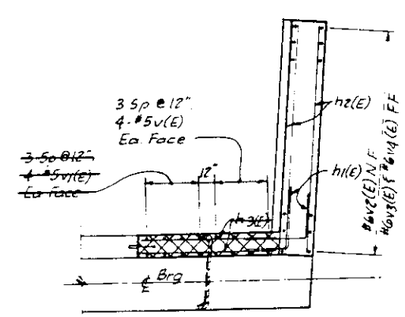
SECTION B
STAGE 4 (FUTURE CONSTRUCTION)



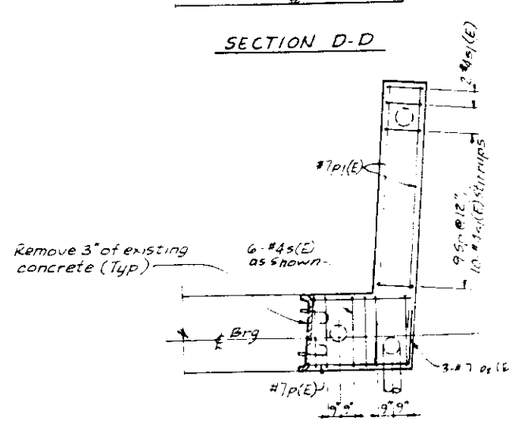
SECTION B



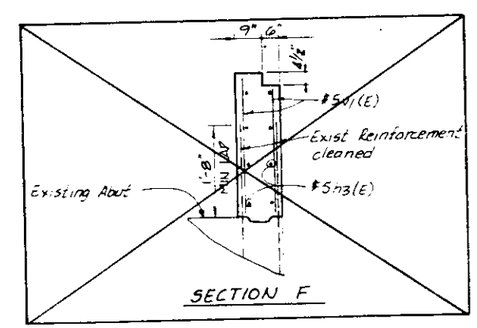
SECTION C



SECTION D-D



SECTION E-E

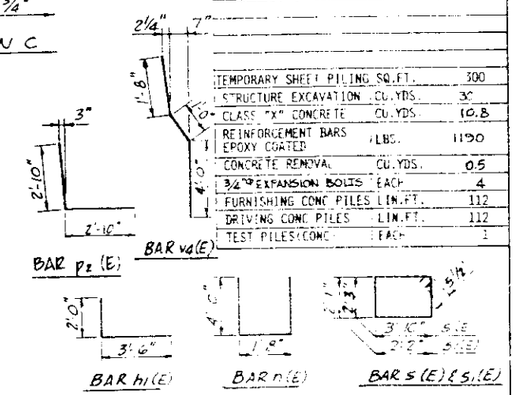


SECTION F

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n1(E)	8	#5	5'-6"	L
n2(E)	10	#4	13'-2"	
~~n3(E)~~	~~6~~	~~#6~~	~~7'-8"~~	
n(E)	14	#6	9'-8"	U
p1(E)	6	#7	16'-0"	
p(E)	10	#7	5'-8"	
p2(E)	5	#7	5'-8"	L
s(E)	6	#4	13'-1"	
s1(E)	12	#4	9'-5"	
v(E)	8	#5	6'-0"	
~~v1(E)~~	~~5~~	~~#6~~	~~2'-6"~~	
v2(E)	14	#6	6'-9"	
v3(E)	14	#6	3'-0"	
v4(E)	14	#6	6'-0"	

TEMPORARY SHEET PILING	SQ.FT.	300
STRUCTURE EXCAVATION	CU.YDS.	30
CLASS "X" CONCRETE	CU.YDS.	10.8
REINFORCEMENT BARS EPOXY COATED	LBS.	1190
CONCRETE REMOVAL	CU.YDS.	0.5
3/4"ø EXPANSION BOLTS	EACH	4
FURNISHING CONC PILES	LIN.FT.	112
DRIVING CONC PILES	LIN.FT.	112
TEST PILES (CONC)	EACH	1



REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

NOTES:

POUR STEPS MONOLITHICALLY WITH ABUTMENT PILE CAP.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFERS EXCEPT AS NOTED.
BATTER PILES 4:1 IN DIRECTION SHOWN.

INDICATES CONCRETE REMOVAL.

PILE DATA

TYPE 14" METAL SHELL, CONCRETE PILES
CAPACITY 40 TONS
EST. LENGTH 56'
NO. REQUIRED 3 (INCL. 1 TEST PILE)

INDICATES CONCRETE WORK BY OTHERS

ANCHOR BOLTS WILL BE FURNISHED AND INSTALLED BY OTHERS. PLACE ABUTMENT PILE CAP REINFORCEMENT TO CLEAR ANCHOR BOLTS.

SOUTH ABUTMENT - WEST END

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

STANLEY CONSULTANTS

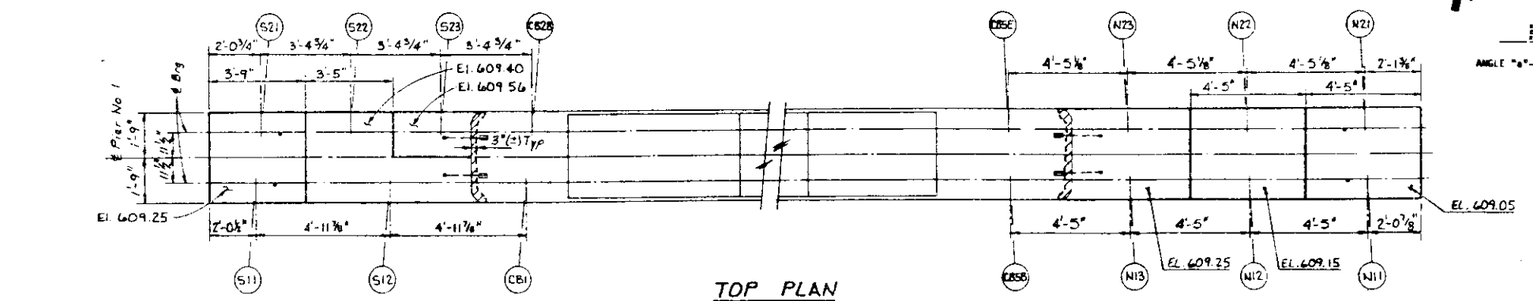
C35

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

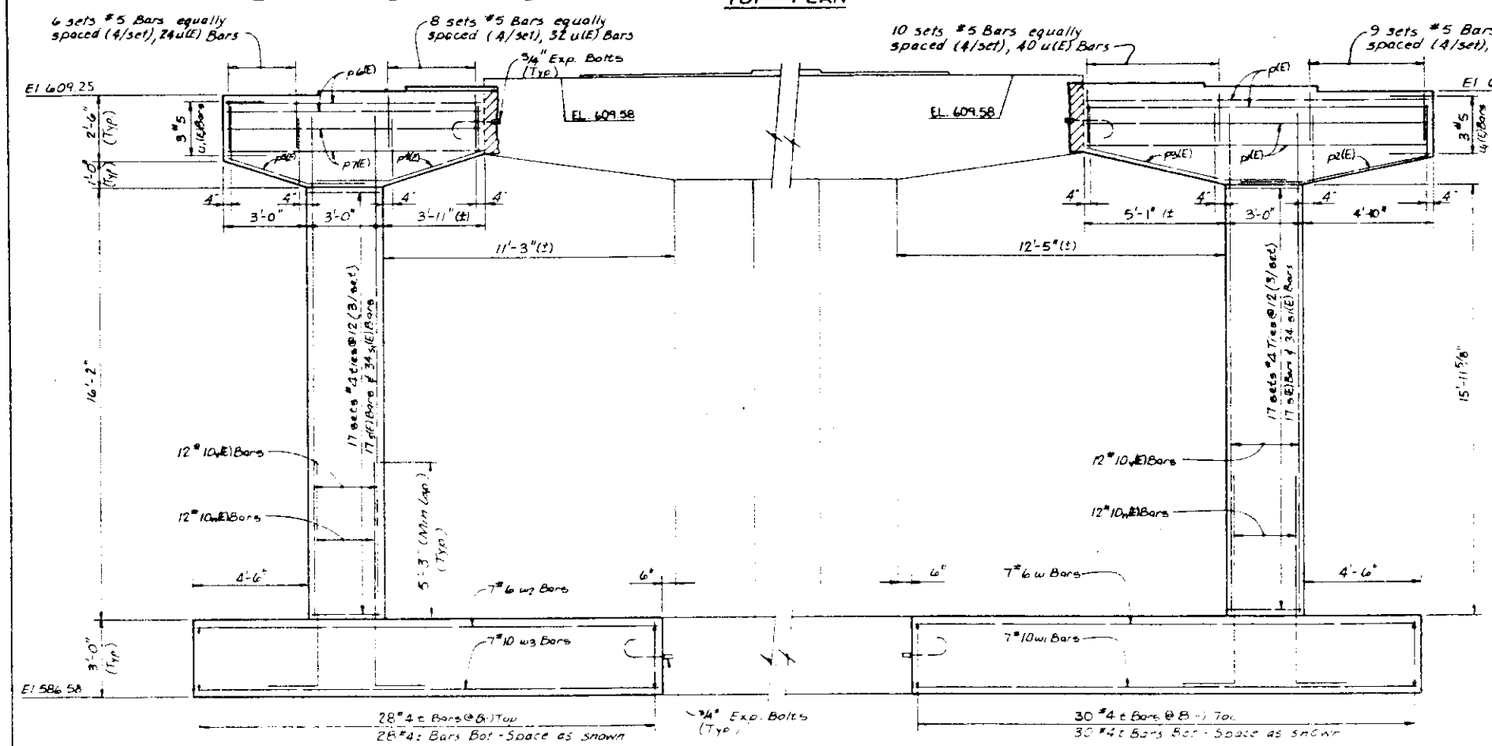
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	74
F.A. RTE. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14
53 SHEETS

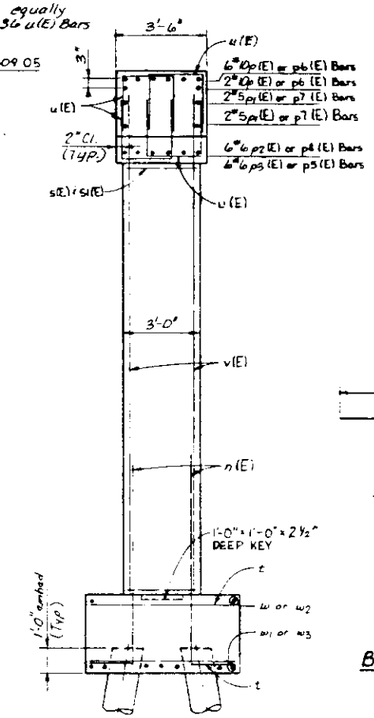
*1988-095 BM



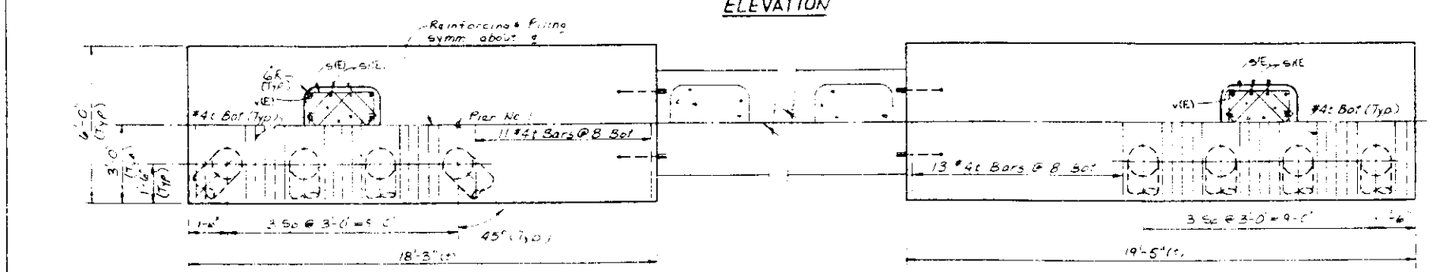
TOP PLAN



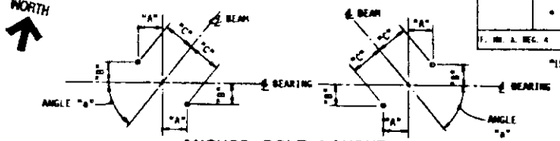
ELEVATION



END VIEW



FOOTING PLAN



ANCHOR BOLT LAYOUT

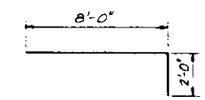
SEB NWB

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S11	85°35'35"	1'-1 11/16"	1 1/16"	1'-1 3/4"
S21	87°36'5"	1'-1 3/4"	9/16"	1'-1 3/4"
N11	88°48'47"	1'-1 3/4"	5/16"	1'-1 3/4"
N21	88°51'9"	1'-1 3/4"	1/4"	1'-1 3/4"

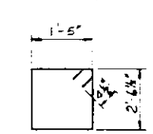
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES

BILL OF MATERIAL

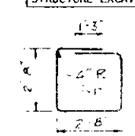
BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	24	#10	10'-0"	
p(E)	8	#10	12'-10"	
p1(E)	4	#5	12'-10"	
p2(E)	6	#6	7'-2"	
p3(E)	6	#6	7'-5"	
p4(E)	6	#6	6'-2"	
p5(E)	6	#6	5'-4"	
p6(E)	8	#10	9'-10"	
p7(E)	4	#5	9'-10"	
s(E)	34	#4	11'-4"	
s1(E)	68	#4	8'-8"	
t	116	#4	5'-8"	
u(E)	132	#5	6'-4"	
u1(E)	6	#5	6'-2"	
v(E)	24	#10	19'-0"	
w	7	#6	19'-1"	
w1	7	#10	19'-1"	
w2	7	#6	17'-11"	
w3	7	#10	17'-11"	
REINFORCEMENTS BARS (EPOXY COATED)			LBS.	5670
REINFORCEMENT BARS			LBS.	1940
CLASS "X" CONCRETE			CU. YDS.	45.0
CONCRETE REMOVAL			CU. YDS.	2
3/4" EXPANSION BOLTS			EA.	8
1" EXPANSION BOLTS			EA.	—
FURNISHING CONC PILES			LIN. FT.	576
DRIVING CONC PILES			LIN. FT.	576
TEST PILES			EACH	—
STRUCTURE EXCAVATION			CU. YDS.	10.



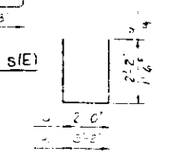
BAR n(E)



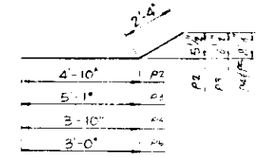
BAR s1(E)



BAR s(E)



BARS u(E) & u1(E)



BARS p2(E) - p5(E)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BAR.

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL.

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 26 FT.
NO. REQUIRED: 16

STANLEY CONSULTANTS

PIER NO. 1

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

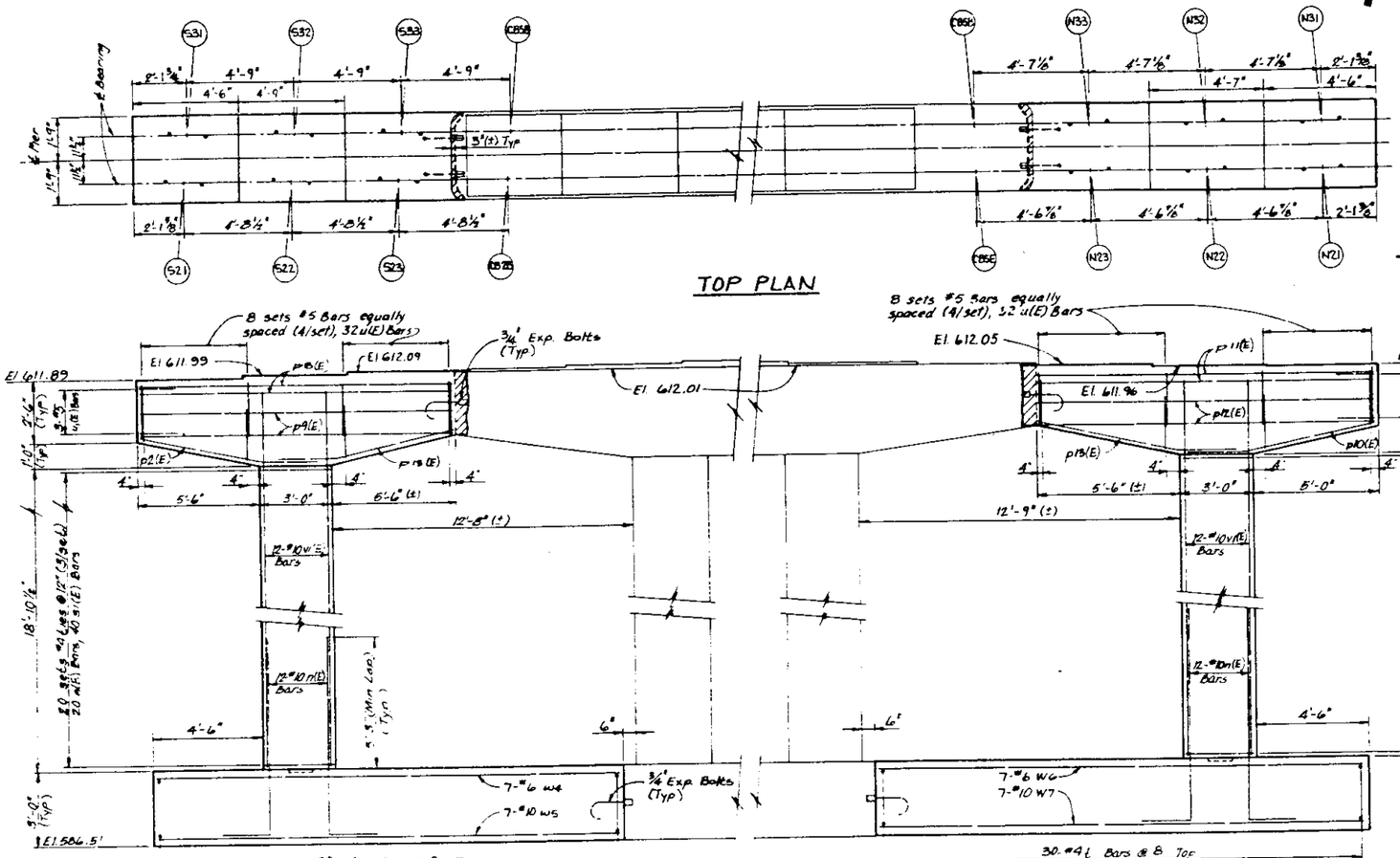
C36

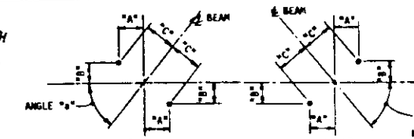
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	75
F. AV. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 15
53 SHEETS





NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

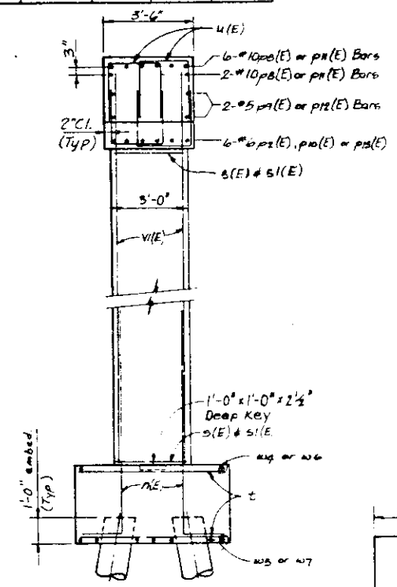
ANCHOR BOLT LAYOUT

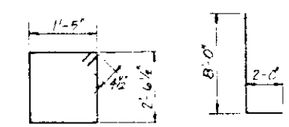
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S21	87°36'5"	1'-2 1/4"	5/8"	1'-2 1/4"
S22	86°36'8"	1'-2 1/4"	13/16"	1'-2 1/4"
S23	85°36'17"	1'-2 3/16"	1 1/16"	1'-2 1/4"
S31	89°00'42"	1'-2 1/4"	1/4"	1'-2 1/4"
S32	88°33'39"	1'-2 1/4"	3/8"	1'-2 1/4"
S33	88°6'36"	1'-2 1/4"	7/16"	1'-2 1/4"
N21	88°51'9"	1'-2 1/4"	5/16"	1'-2 1/4"
N22	88°44'28"	1'-2 1/4"	5/16"	1'-2 1/4"
N23	88°37'47"	1'-2 1/4"	5/16"	1'-2 1/4"
N31	88°49'45"	1'-2 1/4"	5/16"	1'-2 1/4"
N32	88°41'38"	1'-2 1/4"	5/16"	1'-2 1/4"
N33	88°33'31"	1'-2 1/4"	3/8"	1'-2 1/4"

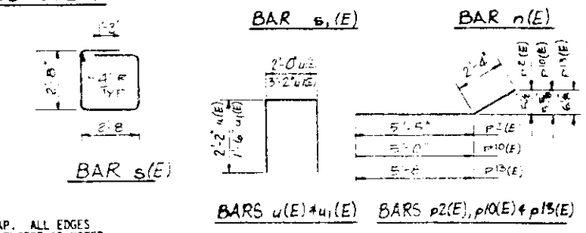
*1988-093 BY

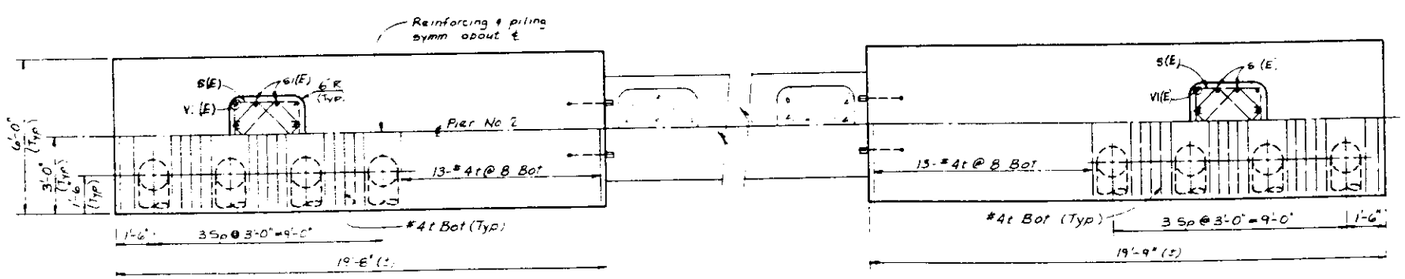
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	24	#10	10'-0"	
p2(E)	6	#6	7'-9"	
p8(E)	8	#10	13'-9"	
p9(E)	4	#5	13'-9"	
p10(E)	6	#6	7'-4"	
p11(E)	8	#10	13'-5"	
p12(E)	4	#5	13'-5"	
p13(E)	12	#6	8'-0"	
s(E)	40	#4	11'-4"	
s1(E)	80	#4	8'-8"	
t	170	#4	5'-8"	
u(E)	128	#5	6'-4"	
u1(E)	6	#5	6'-2"	
v1(E)	24	#10	22'-2"	
w4	7	#6	19'-4"	
w5	7	#10	19'-4"	
w6	7	#6	19'-5"	
w7	7	#10	19'-5"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	6290	
REINFORCEMENT BARS		LBS.	2040	
CLASS "X" CONCRETE		CU. YDS.	49.8	
CONCRETE REMOVAL		CU. YDS.	2	
3/4" EXPANSION BOLTS		EA.	8	
1" EXPANSION BOLTS		EA.	--	
FURNISHING CONC PILES		LIN. FT.	504	
DRIVING CONC PILES		LIN. FT.	504	
TEST PILES		EACH	2	
STRUCTURE EXCAVATION		CU. YDS.	105	









NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 16 (INCL. 2 TEST PILES, ONE EA SIDE)

PIER NO. 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49.

STANLEY CONSULTANTS

C37

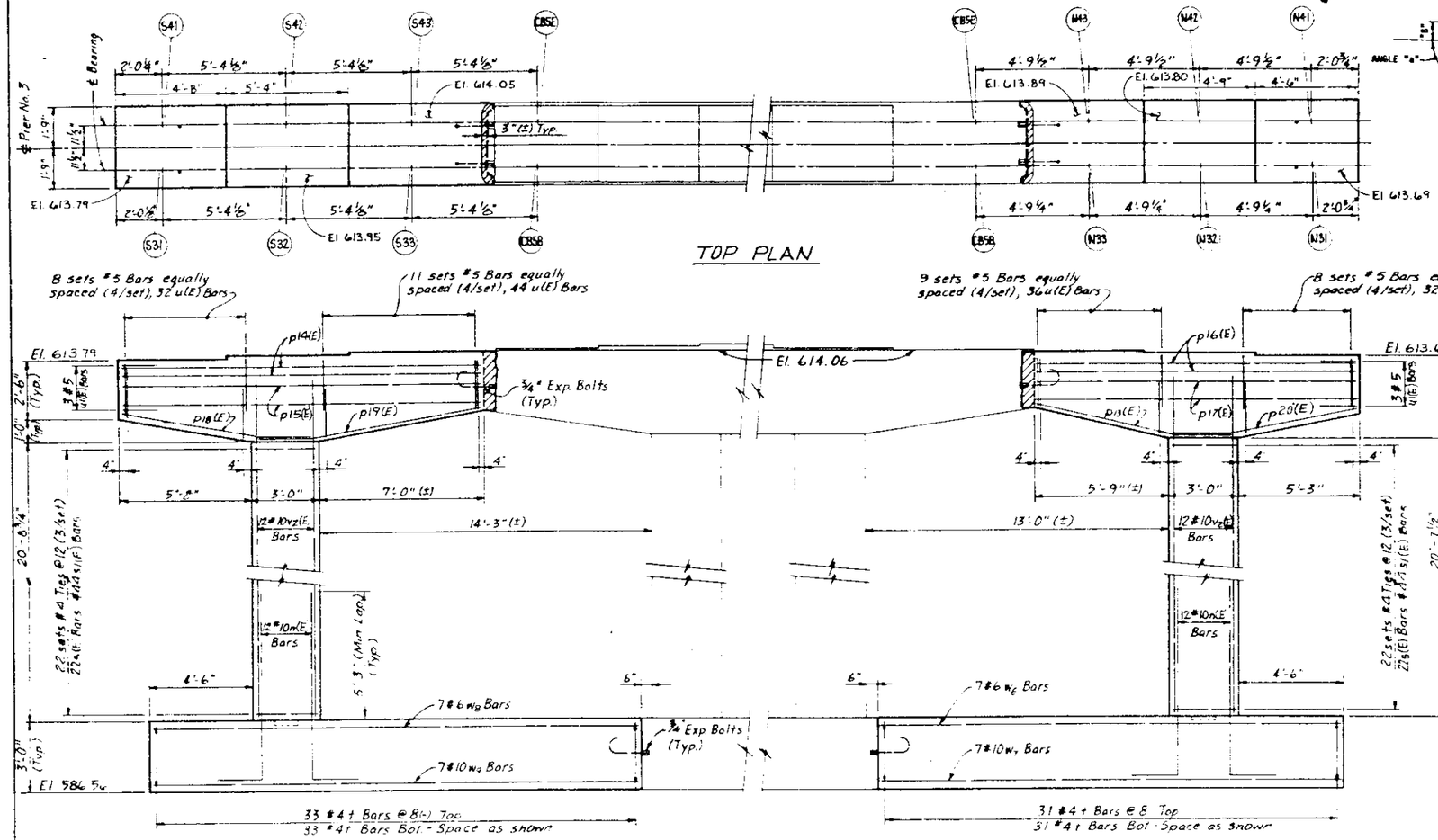
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

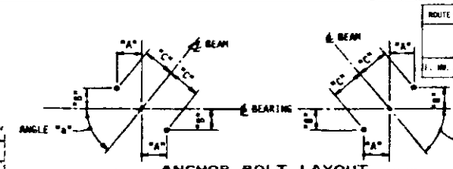
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	76
F.A.I. NO. & REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 16
53 SHEETS

*1988-095 BY

NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

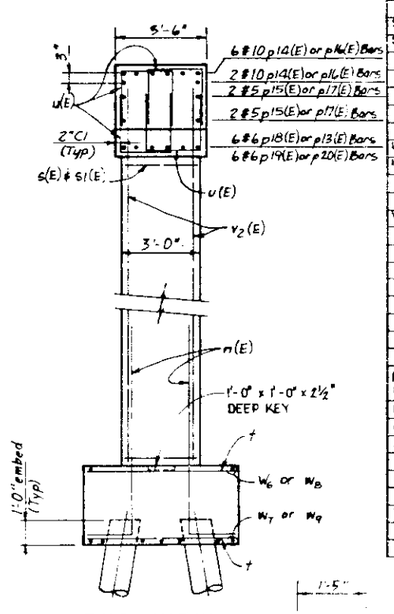




SEB BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"	NWB
S31	89°0'42"	1'-1 3/4"	1/4"	1'-1 3/4"	
S41	89°57'39"	1'-1 3/4"	-	1'-1 3/4"	
N31	88°49'45"	1'-1 3/4"	1/4"	1'-1 3/4"	
N41	89°19'50"	1'-1 3/4"	3/16"	1'-1 3/4"	

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n(E)	24	#10	10'-0"	
P13(E)	6	#6	8'-0"	
P14(E)	8	#10	15'-7"	
P15(E)	4	#5	15'-7"	
P16(E)	8	#10	13'-11"	
P17(E)	4	#5	13'-11"	
P18(E)	6	#6	8'-0"	
P19(E)	6	#6	9'-3"	
P20(E)	6	#6	7'-6"	
s(E)	44	#4	11'-4"	
s1(E)	88	#4	8'-8"	
t	128	#4	5'-8"	
u(E)	144	#5	6'-4"	
u1(E)	6	#5	6'-2"	
v2(E)	24	#10	23'-3"	
w6	7	#6	19'-8"	
w7	7	#10	19'-8"	
w8	7	#6	20'-11"	
w9	7	#10	20'-11"	
REINFORCEMENT BARS (EPOXY COATED)	LBS.		6700	
REINFORCEMENT BARS	LBS.		2130	
CLASS "X" CONCRETE	CU. YDS.		53.0	
CONCRETE REMOVAL	CU. YDS.		2	
3/4" EXPANSION BOLTS	EA.		8	
1" EXPANSION BOLTS	EA.		-	
FURNISHING CONC. PILES	LIN. FT.		720	
DRIVING CONC. PILES	LIN. FT.		720	
TEST PILES	EACH		-	
STRUCTURE EXCAVATION	CU. YDS.		108	



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.

BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 20

STANLEY CONSULTANTS

PIER NO. 3

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+40

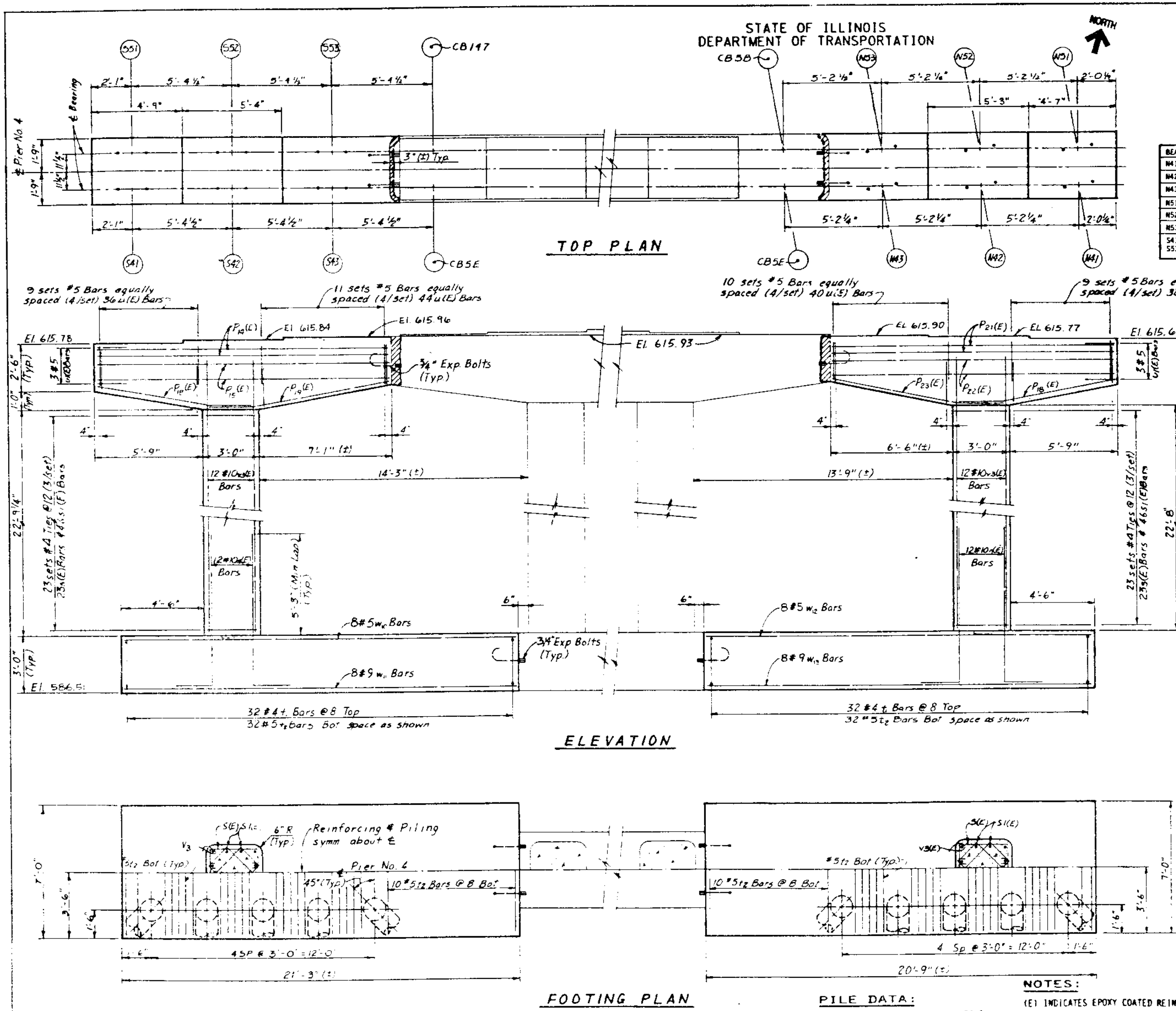
C36

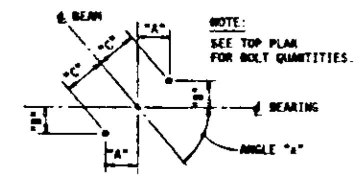
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	77
F. A. & REV. 4		ILLINOIS FED. AID PROJECT		

SHEET NO. 17
53 SHEETS

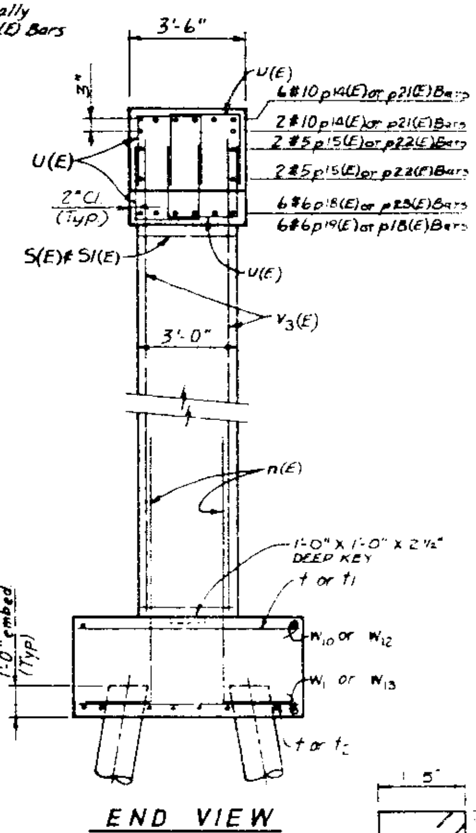
#1986-093 BY





ANCHOR BOLT LAYOUT

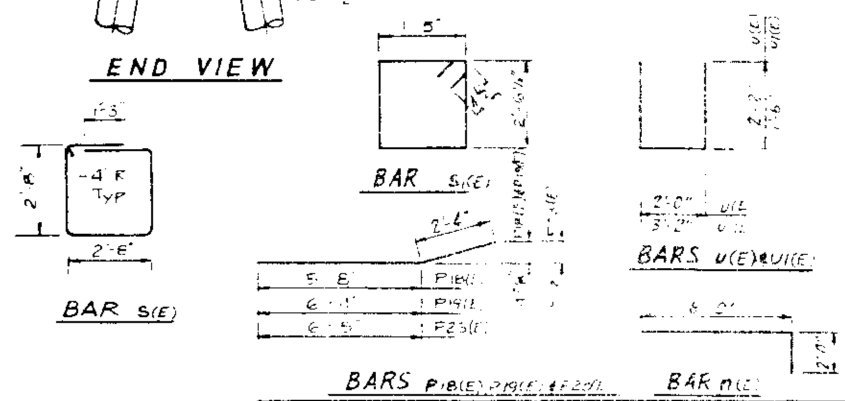
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N41	89°19'50"	1'-2 1/4"	3/16"	1'-2 1/4"
N42	89°1'40"	1'-2 1/4"	1/4"	1'-2 1/4"
N43	88°43'31"	1'-2 1/4"	5/16"	1'-2 1/4"
N51	90°4'48"	1'-2 1/4"	-	1'-2 1/4"
N52	89°38'59"	1'-2 1/4"	1/16"	1'-2 1/4"
N53	89°13'10"	1'-2 1/4"	3/16"	1'-2 1/4"
S41-S53	90°00'00"	1'-2 1/4"	-	1'-2 1/4"



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n(E)	24	#10	10'-0"	
p14(E)	8	#10	15'-9"	
p15(E)	4	#5	15'-9"	
p18(E)	12	#6	8'-0"	
p19(E)	6	#6	9'-3"	
p21(E)	8	#10	15'-2"	
p22(E)	4	#5	15'-2"	
p23(E)	6	#6	8'-9"	
S(E)	46	[illegible]	[illegible]	
S1(E)	92	[illegible]	8'-8"	
t1	64	#4	6'-8"	
t2	64	#5	6'-8"	
u(E)	156	#5	5'-4"	
u1(E)	6	#5	[illegible]	
v3(E)	24	[illegible]	[illegible]	
w10	8	#5	20'-11"	
w11	8	#9	20'-11"	
w12	8	#5	20'-5"	
w13	8	#9	20'-5"	

REINFORCEMENT BARS (EPOXY COATED)	LBS.	7070
REINFORCEMENT BARS	LBS.	2200
CLASS "X" CONCRETE	CU. YDS.	600
CONCRETE REMOVAL	CU. YDS.	2
3/4" EXPANSION BOLTS	EA.	8
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	648
DRIVING CONC PILES	LIN. FT.	648
TEST PILES	EA.	2
STRUCTURE EXCAVATION	CU. YDS.	122



PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 20 (INCL. 2 TEST PILES, ONE EA. SIDE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS
POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.
[hatched box] INDICATES CONCRETE REMOVAL

STANLEY CONSULTANTS

PIER NO. 4

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 408+45

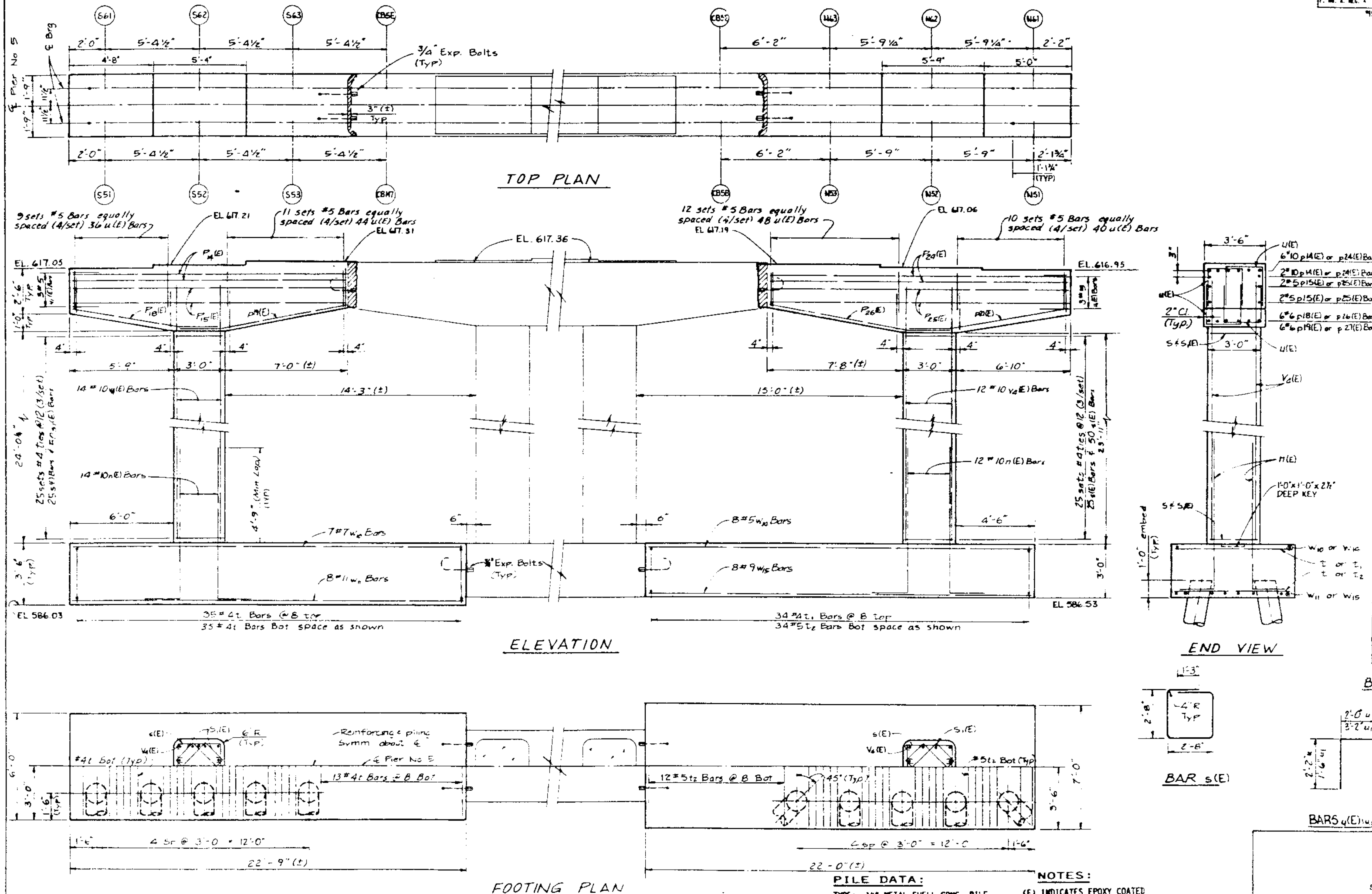
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	78

F. A. R. REG. 4 | ILLINOIS | FED. AID PROJECT

1988-093 BY

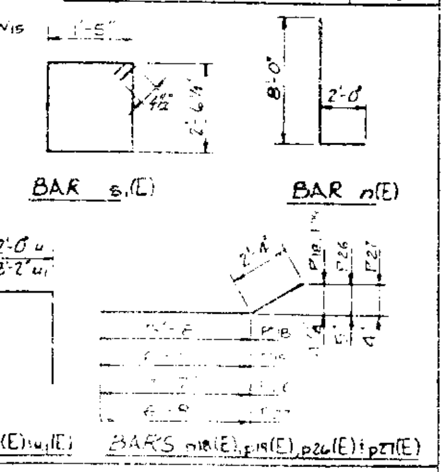
SHEET NO. 18
53 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BILL OF MATERIAL

Bar	No	Size	Length	Shape
P(E)	26	#10	10'-0"	
P14(E)	8	#10	15'-8"	
P15(E)	8	#5	15'-8"	
P18(E)	6	#6	8'-0"	
P19(E)	6	#6	9'-3"	
P24(E)	8	#10	17'-5"	
P25(E)	4	#5	17'-5"	
P26(E)	6	#6	9'-11"	
P27(E)	6	#6	9'-1"	
S(E)	[illegible]	[illegible]	11'-0"	
S1(E)	103	#4	8'-8"	
[illegible]	70	#4	5'-8"	
[illegible]	34	#4	6'-8"	
T2	34	#5	6'-8"	
U(E)	168	#5	6'-4"	
U1(E)	[illegible]	[illegible]	[illegible]'-2"	
V4(E)	25	#10	20'-[illegible]"	
W10	7	#7	22'-5"	
W11	8	#11	22'-5"	
W14	8	#[illegible]	21'-8"	
W15	8	#9	21'-8"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	7790
REINFORCEMENT BARS			LBS.	2700
CLASS "X" CONCRETE			CU. YDS.	64.0
CONCRETE REMOVAL			CU. YDS.	.2
3/4" EXPANSION BOLTS			EA.	8
1" EXPANSION BOLTS			EA.	—
FURNISHING CONC PILES			LIN. FT.	648
DRIVING CONC PILES			LIN. FT.	648
TEST PILES			EACH	2
STRUCTURE EXCAVATION			CU. YDS.	128



PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 20 (INCL. 2 TEST PILES, ONE EACH SIDE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS
POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.
BATTER PILES IN DIRECTION SHOWN 6:1.
▨ INDICATES CONCRETE REMOVAL

STANLEY CONSULTANTS

PIER NO. 5

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+45

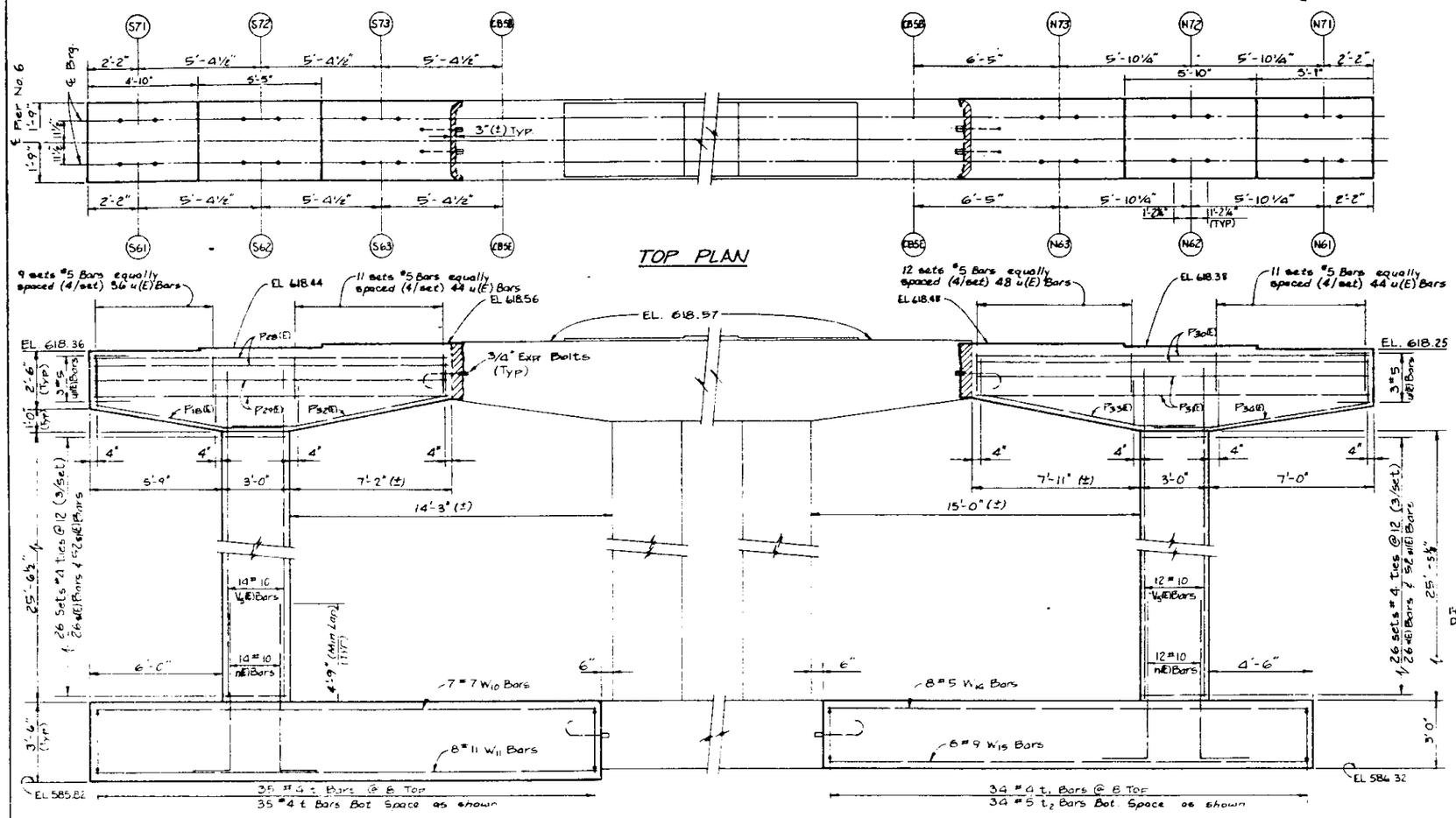
CAC

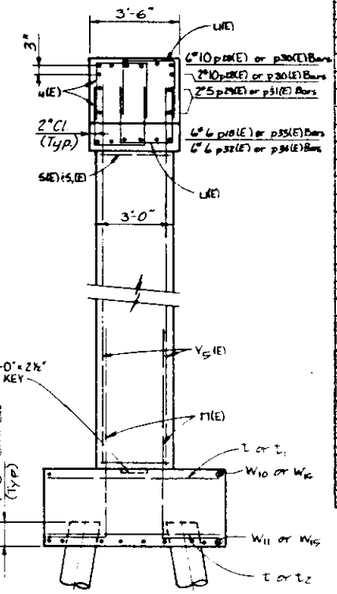
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	79
F. AID. A. REG. 4		ILLINOIS FED. AID PROJECT		

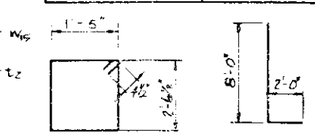
SHEET NO. 19
53 SHEETS

*1968-093 BY



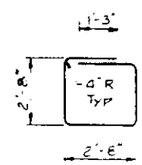


BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	26	#10	10'-0"	
P18(E)	6	#6	8'-0"	
P28(E)	8	#10	15'-10"	
P29(E)	4	#5	15'-10"	
P30(E)	8	#10	17'-10"	
P31(E)	4	#5	17'-10"	
P32(E)	6	#6	9'-5"	
P33(E)	6	#6	10'-2"	
P34(E)	6	#6	9'-3"	
S(E)	52	#4	11'-4"	
S1(E)	104	#4	8'-8"	
t	70	#4	5'-8"	
t1	34	#4	6'-8"	
t2	34	#5	6'-8"	
u(E)	172	#5	6'-4"	
u1(E)	6	#5	6'-2"	
V5(E)	26	#10	22'-11"	
W10	7	#7	22'-5"	
W11	8	#11	22'-5"	
W14	8	#5	21'-8"	
W15	8	#9	21'-8"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	8040	
REINFORCEMENT BARS		LBS.	2700	
CLASS "X" CONCRETE		CU. YDS.	65.2	
CONCRETE REMOVAL		CU. YDS.	2	
3/4" EXPANSION BOLTS		EA.	8	
1" EXPANSION BOLTS		EA.	—	
FURNISHING CONC PILES		LIN. FT.	648	
DRIVING CONC PILES		LIN. FT.	648	
TEST PILES		EACH	2	
STRUCTURE EXCAVATION		CU. YDS.	128	

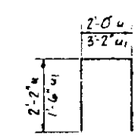


BARS s1(E)

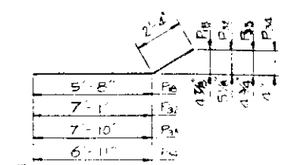
BAR n(E)



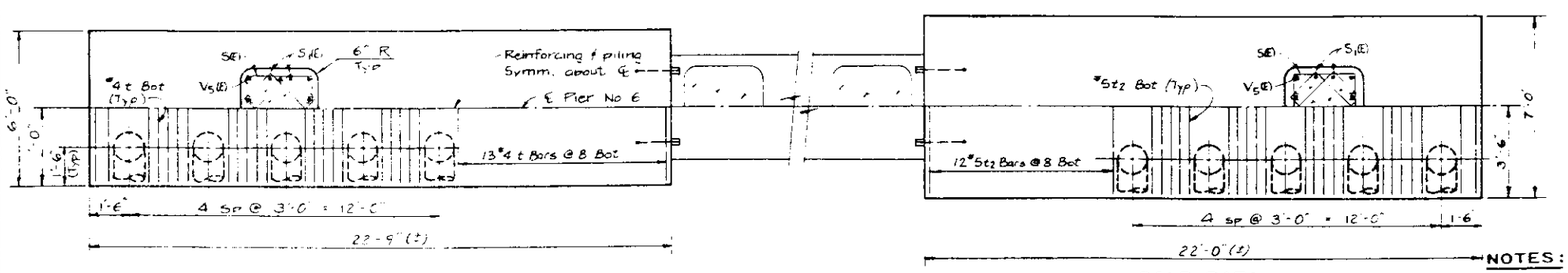
BAR s



BARS u(E) + u1(E)



BARS P18(E), P32(E), P33(E)



FOOTING PLAN

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 20 (INCL. 2 TEST PILES, ONE EA SIDE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

STANLEY CONSULTANTS

PIER NO. 6

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

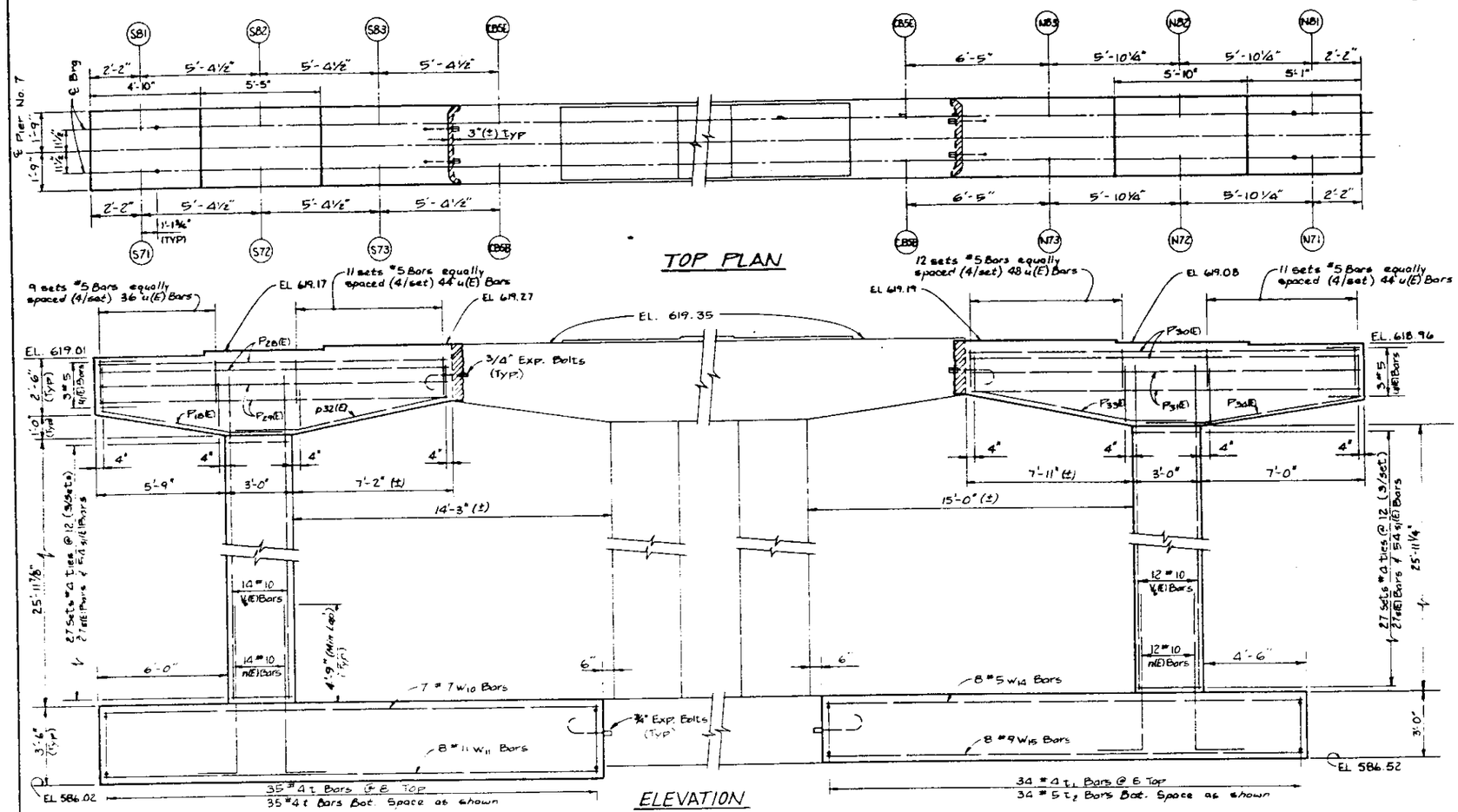
C4.

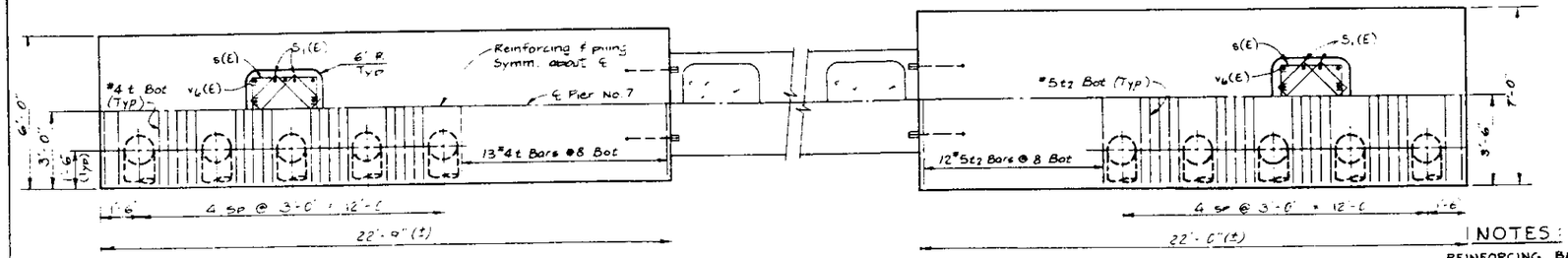
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

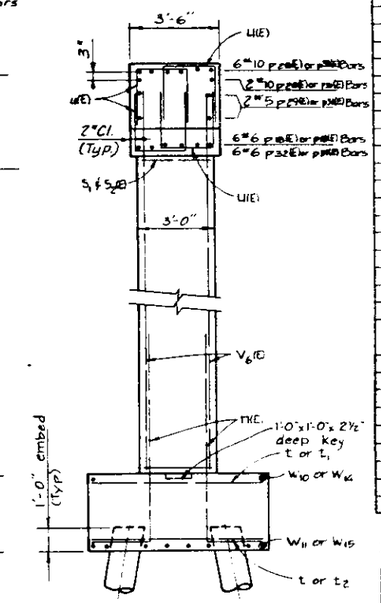
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	80
F. AID A. REG. 4	ILLINOIS	FED. AID PROJECT		

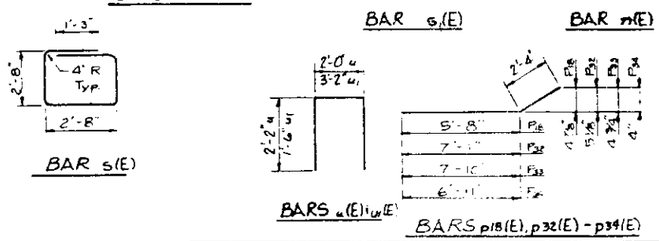
SHEET NO. 20
53 SHEETS

*1988-093 BY









BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	26	#10	10'-0"	
p18(E)	6	#6	8'-0"	
p28(E)	8	#10	15'-10"	
p29(E)	4	#5	15'-10"	
p30(E)	8	#10	17'-10"	
p31(E)	4	#5	17'-10"	
p32(E)	6	#6	9'-5"	
p33(E)	6	#6	10'-2"	
p34(E)	6	#6	9'-3"	
s(E)	54	#4	11'-4"	
s1(E)	108	#4	8'-8"	
t	70	#4	5'-8"	
t1	34	#4	6'-8"	
t2	34	#5	6'-8"	
u(E)	172	#5	6'-4"	
u1(E)	6	#5	6'-2"	
v6(E)	26	#10	28'-6"	
w10	7	#7	22'-5"	
w11	8	#11	22'-5"	
w14	8	#5	21'-8"	
w15	8	#9	21'-8"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	8150
REINFORCEMENT BARS			LBS.	2700
CLASS "X" CONCRETE			CU. YDS.	65.7
CONCRETE REMOVAL			CU. YDS.	.2
3/4" EXPANSION BOLTS			EA.	8
1" EXPANSION BOLTS			EA.	—
FURNISHING CONC PILES			LIN. FT.	648
DRIVING CONC PILES			LIN. FT.	648
TEST PILES			EACH	2
STRUCTURE EXCAVATION			CU. YDS.	128

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 36 FT.
NO. REQUIRED: 20 (INCL. 2 TEST PILES, ONE EA. SIDE)

NOTES:

REINFORCING BARS DESIGNATED (E) SHALL BE EPOXY COATED

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PIER NO. 7

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

C42

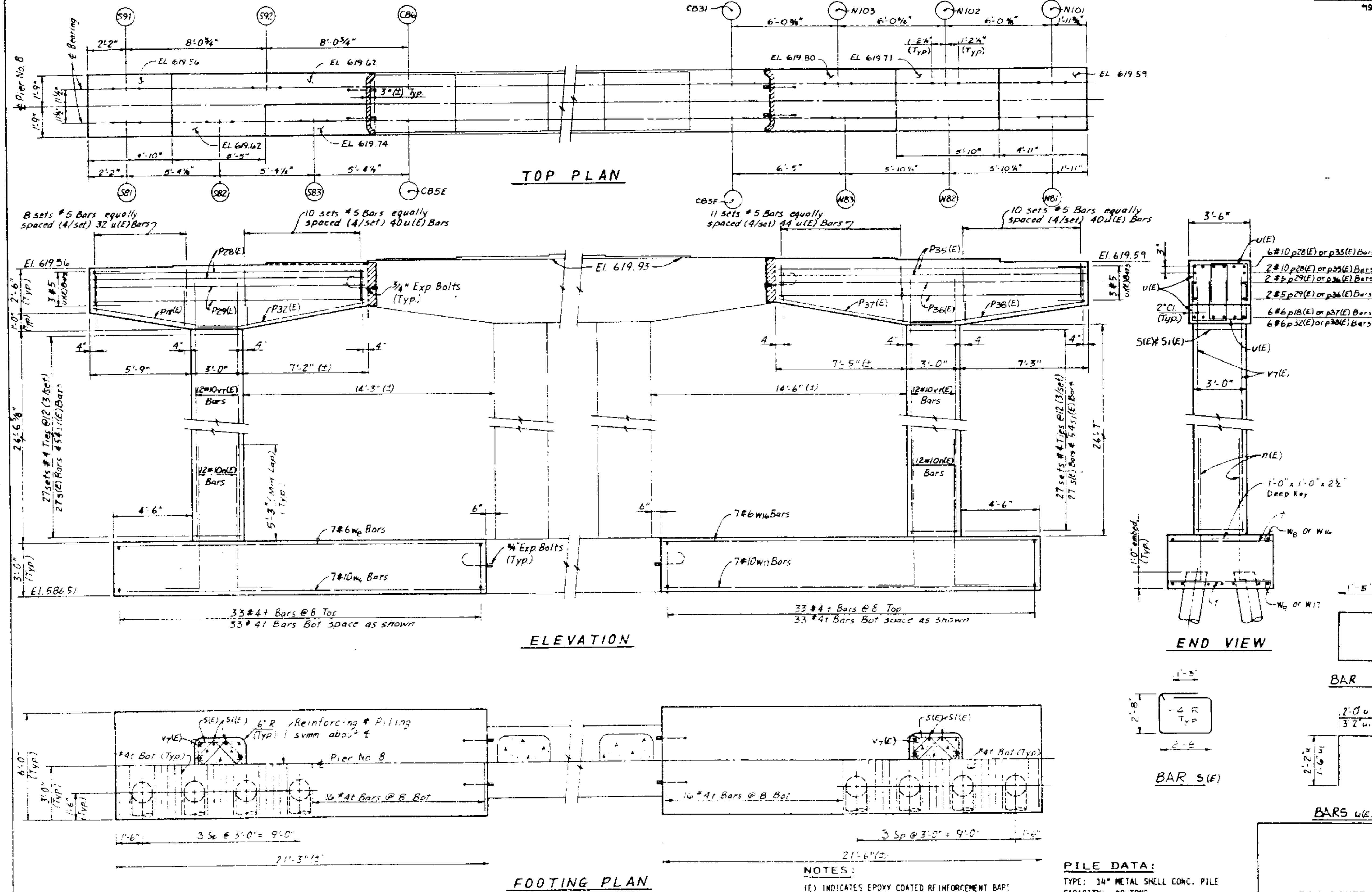
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	81

F. A. I. RTE. 4 | ILLINOIS | FED. AID PROJECT

SHEET NO. 21
53 SHEETS

#1988-093 BY

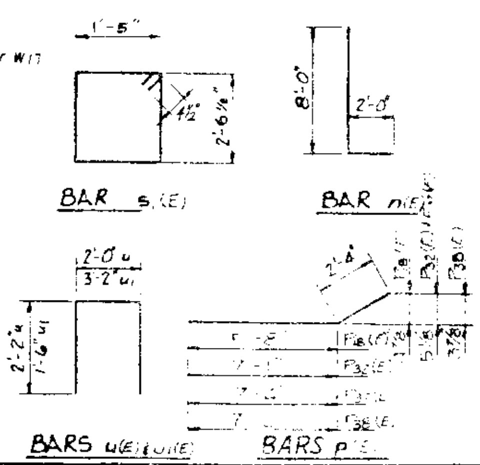
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	24	#10	10'-0"	
P18(E)	6	#6	8'-0"	
P28(E)	8	#10	15'-10"	
P29(E)	4	#5	15'-10"	
P32(E)	6	#6	9'-5"	
P35(E)	8	#10	17'-7"	
P36(E)	4	#5	17'-7"	
P37(E)	6	#6	9'-10"	
P38(E)	6	#6	9'-6"	
s(E)	54	#4	11'-4"	
s1(E)	108	#4	8'-8"	
t	132	#4	5'-8"	
u(E)	356	#5	6'-4"	
u1(E)	5	#5	6'-2"	
v7(E)	24	#10	29'-1"	
w8	7	#6	20'-11"	
w9	7	#10	20'-11"	
w16	7	#6	21'-2"	
w17	7	#10	21'-2"	

REINFORCEMENT BARS (EPOXY COATED)	LBS.	7760
REINFORCEMENT BARS	LBS.	2210
CLASS "X" CONCRETE	CU. YDS.	60.0
CONCRETE REMOVAL	CU. YDS.	2
3/4" EXPANSION BOLTS	EA.	8
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	518
DRIVING CONC PILES	LIN. FT.	518
TEST PILES	EACH	2
STRUCTURE EXCAVATION	CU. YDS.	112



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS
POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.
BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 37 FT.
NO. REQUIRED: 16 (INCL. 2 TEST PILES, ONE EACH SIDE)

STANLEY CONSULTANTS

PIER NO. 8

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

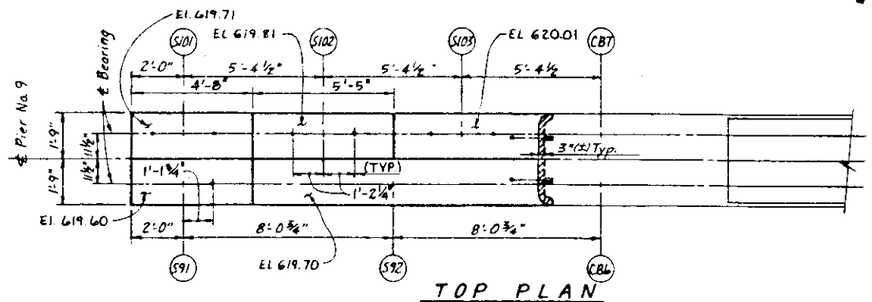
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	82

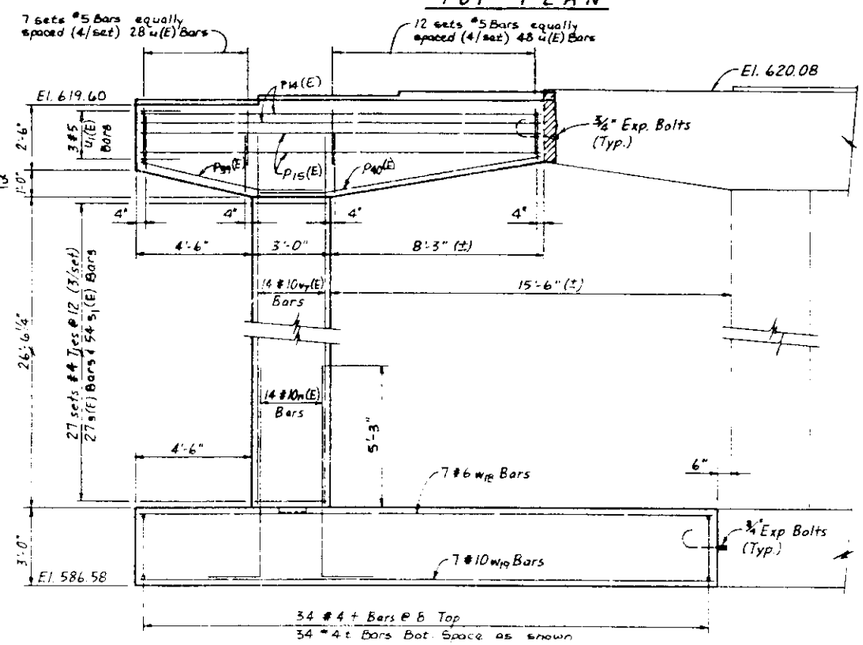
F. AID. R. REG. 4 | ILLINOIS | FED. AID PROJECT

SHEET NO. 22
53 SHEETS

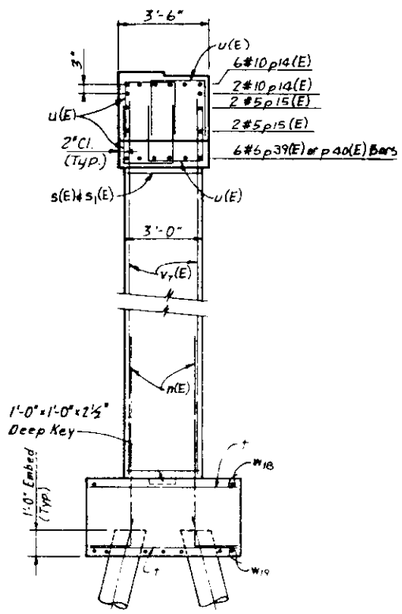
*1988-095 BY



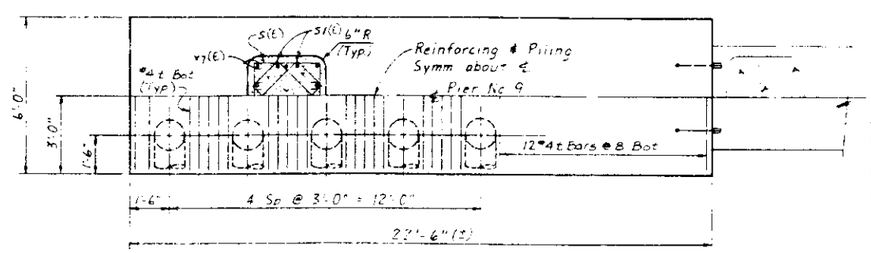
TOP PLAN



ELEVATION



END VIEW

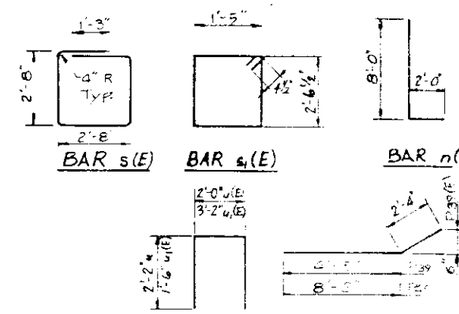


FOOTING PLAN

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	14	#10	10'-0"	
p14(E)	8	#10	15'-8"	
p15(E)	4	#5	15'-8"	
p39(E)	6	#6	6'-9"	
p40(E)	6	#6	10'-6"	
s(E)	27	#4	11'-4"	
s1(E)	54	#4	8'-8"	
t	68	#4	5'-8"	
u(E)	74	#5	6'-4"	
u1(E)	3	#5	6'-2"	
v7(E)	14	#10	29'-1"	
w18	7	#6	22'-2"	
w19	7	#10	22'-2"	

REINFORCEMENT BARS (EPOXY COATED)	LBS	3990
REINFORCEMENT BARS	LBS.	1160
CLASS "X" CONCRETE	CU. YDS.	30.0
CONCRETE REMOVAL	CU. YDS.	.1
3/4" EXPANSION BOLTS	EA.	4
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	370
DRIVING CONC PILES	LIN. FT.	370
TEST PILES	EACH	—
STRUCTURE EXCAVATION	CU. YDS	58



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 37 FT.
NO. REQUIRED: 10

STANLEY CONSULTANTS

PIER NO. 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+46

C44

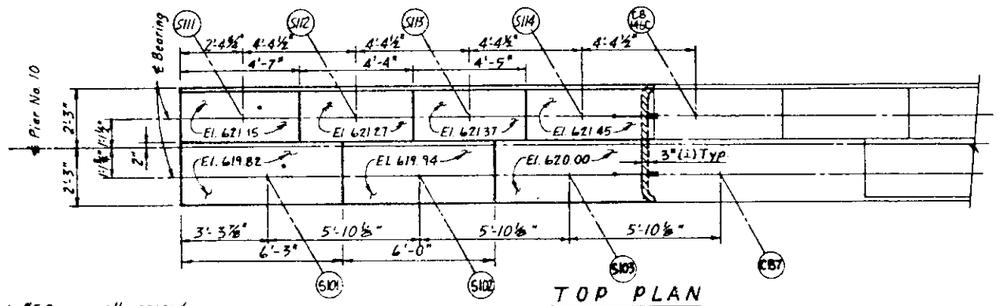
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	83
F. AID A. REG. 4	ILLINOIS	FED. AID PROJECT		

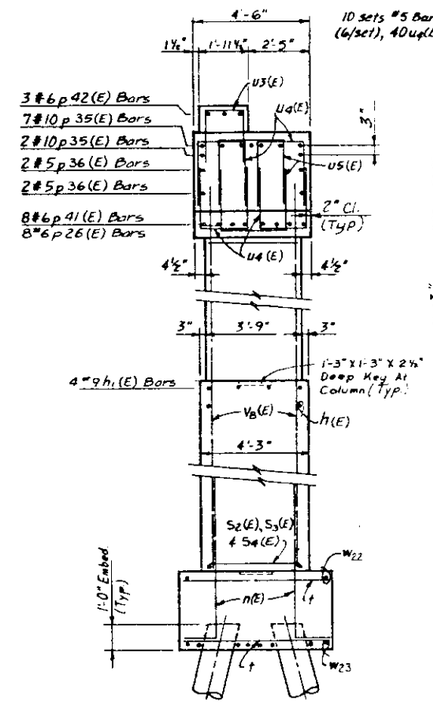
*1988-093 BY

SHEET NO. 23
53 SHEETS

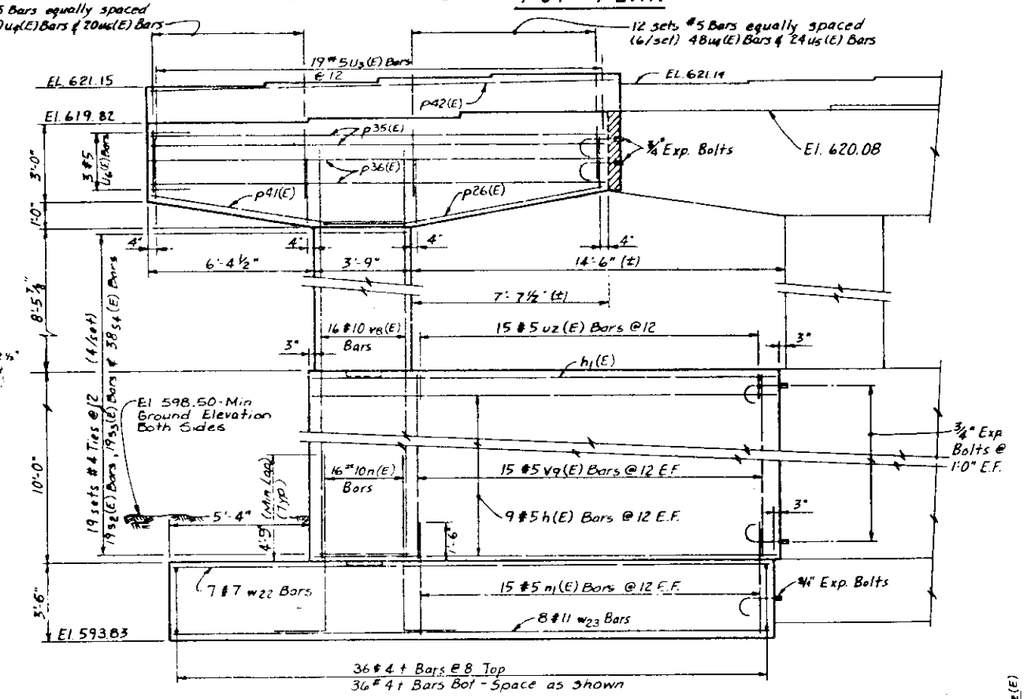
NORTH



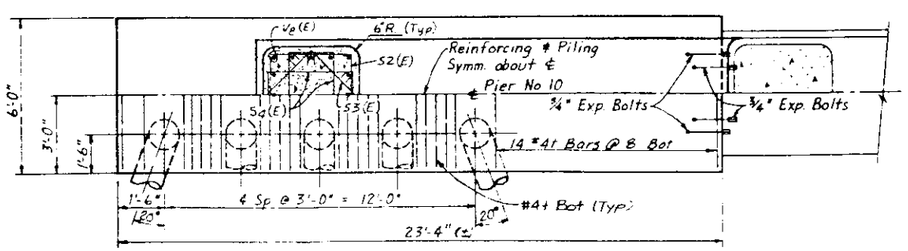
TOP PLAN



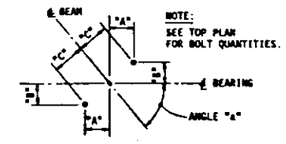
END VIEW



ELEVATION



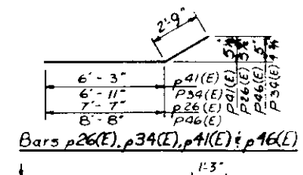
FOOTING PLAN



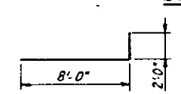
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

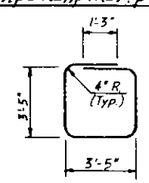
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S101	67°02'37"	8'-0 11/16"	5 3/8"	1'-1 3/4"
S111	67°03'37"	10 13/16"	4 9/16"	11 3/4"



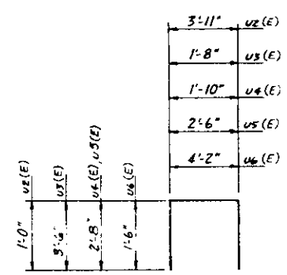
Bars p26(E), p34(E), p41(E) & p46(E)



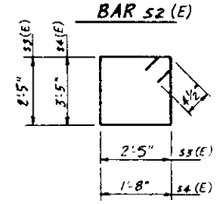
BAR n(E)



BAR s2(E)



BARS u2(E) – u6(E)



BARS s3(E) & s4(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	18	#5	17'-11"	
n1(E)	4	#9	17'-11"	
n2(E)	18	#5	19'-2"	
n3(E)	4	#9	19'-2"	
n(E)	32	#10	10'-0"	
n1(E)	62	#5	4'-3"	
p34(E)	8	#6	9'-8"	
p35(E)	9	#10	17'-8"	
p36(E)	4	#5	17'-8"	
p41(E)	8	#6	9'-0"	
p26(E)	8	#6	10'-4"	
p42(E)	3	#6	17'-9"	
p43(E)	9	#10	19'-7"	
p44(E)	4	#5	19'-7"	
p45(E)	3	#6	19'-8"	
p46(E)	8	#6	11'-5"	
s2(E)	38	#4	14'-4"	
s3(E)	38	#4	10'-5"	
s4(E)	76	#4	10'-11"	
t	148	#4	5'-8"	
u2(E)	31	#5	5'-11"	
u3(E)	39	#5	8'-8"	
u4(E)	184	#5	7'-2"	
u5(E)	52	#5	7'-10"	
u6(E)	6	#5	7'-2"	
v8(E)	32	#10	22'-0"	
v9(E)	62	#5	9'-8"	
w22	7	#7	23'-0"	
w23	8	#11	23'-0"	
w24	7	#7	24'-3"	
w25	8	#11	24'-3"	

TEMPORARY SHEET PILING	SQ.FT.	3,410
REINFORCEMENT BARS (EPOXY COATED)	LBS.	12,660
REINFORCEMENT BARS	LBS.	3250
CLASS "X" CONCRETE	CU. YDS.	132.5
CONCRETE REMOVAL	CU. YDS.	.3
3/4" EXPANSION BOLTS	EA.	60
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	666
DRIVING CONC PILES	LIN. FT.	666
TEST PILES	EACH	2
STRUCTURE EXCAVATION	CU. YDS.	155

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 37 FT.
NO. REQUIRED: 20 (INCL. 2 TEST PILES, ONE EACH SIDE)

STANLEY CONSULTANTS

PIER NO. 10

SHEET 1 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

C45

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	84
F. AP. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 24
53 SHEETS

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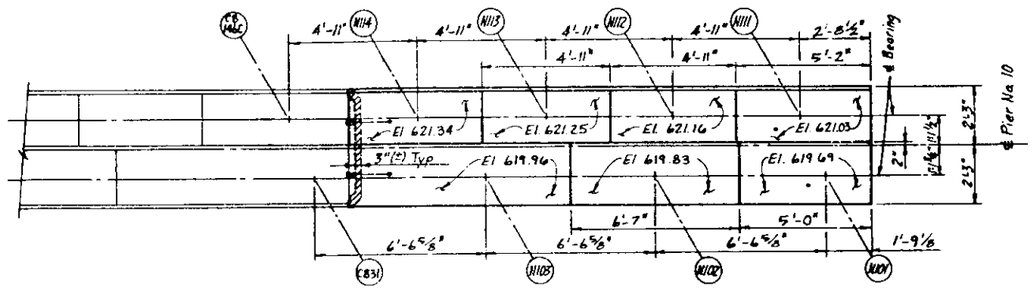
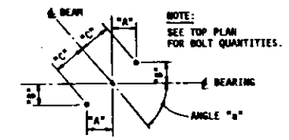
NORTH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

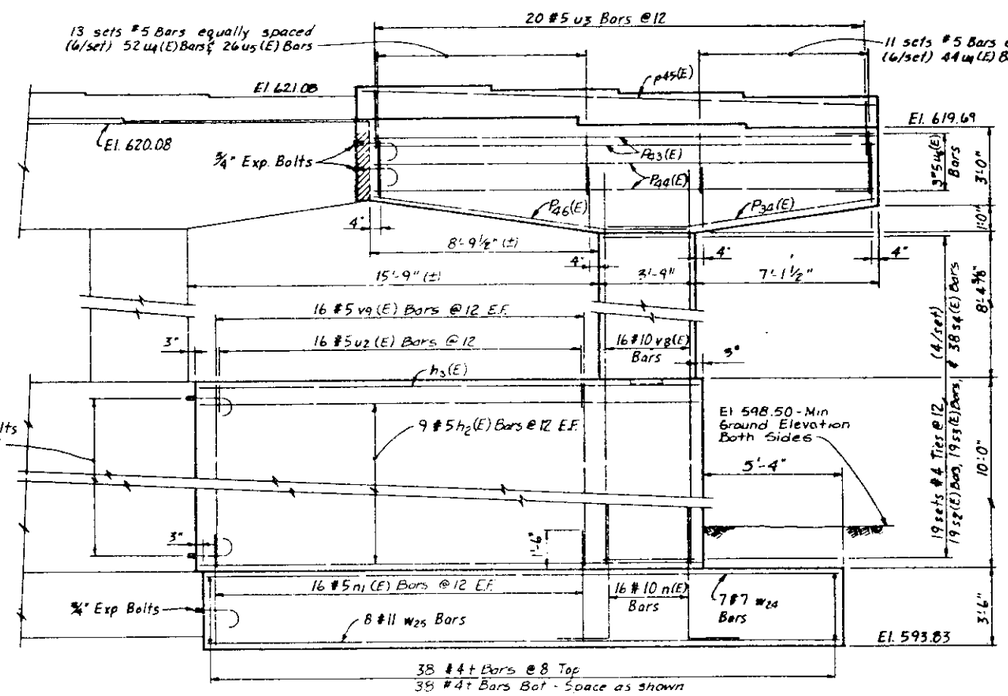


TOP PLAN

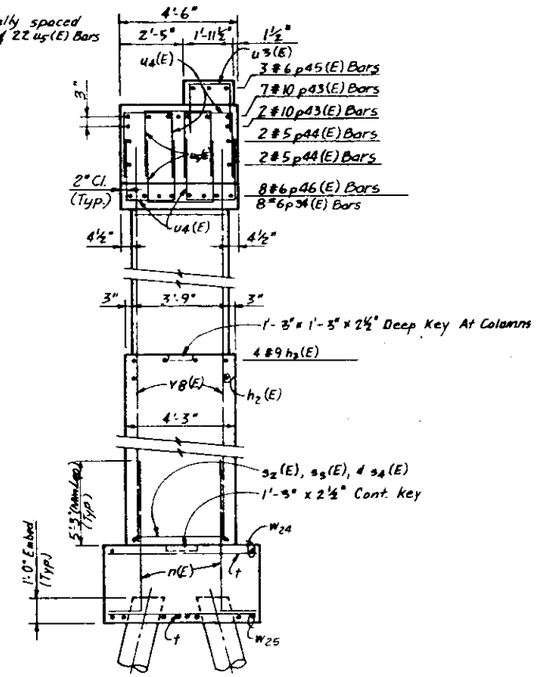


ANCHOR BOLT LAYOUT

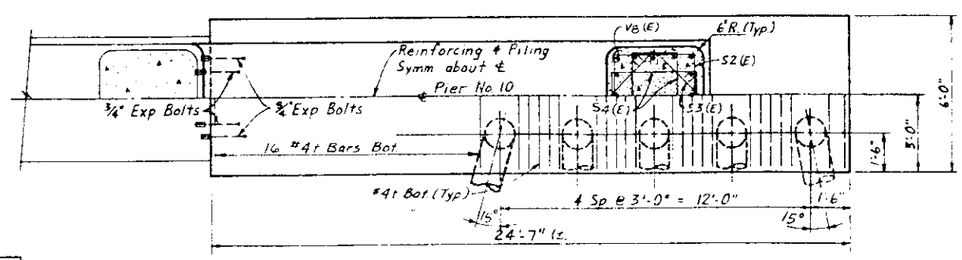
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N101	67°3'56"	1'-0 11/16"	5 3/8"	1'-1 3/4"
N111	67°1'19"	10 13/16"	4 9/16"	11 3/4"



ELEVATION



END VIEW



FOOTING PLAN

NOTES:

FOR BILL OF MATERIAL, PILE DATA AND GENERAL NOTES SEE SHEET 1 OF 2.

STANLEY CONSULTANTS

PIER NO. 10
SHEET 2 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

C46

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

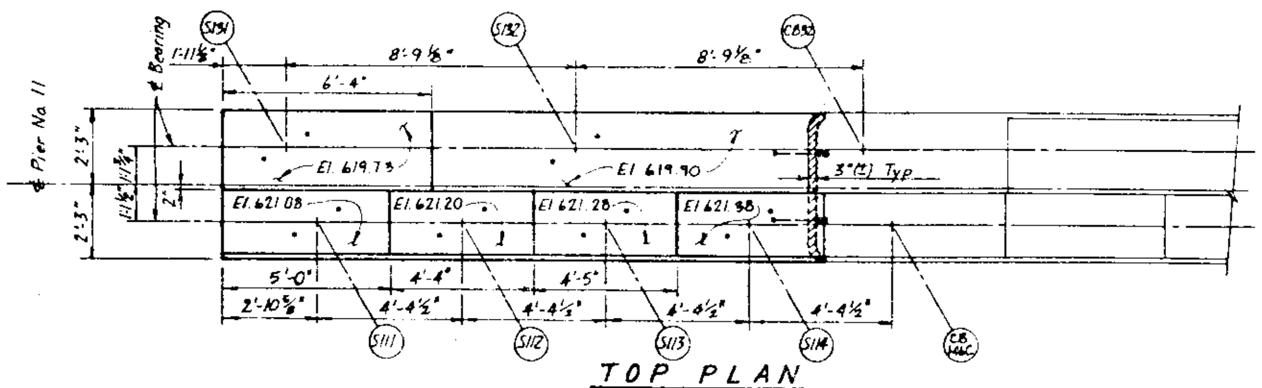
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	85

ILL. FED. AID PROJECT

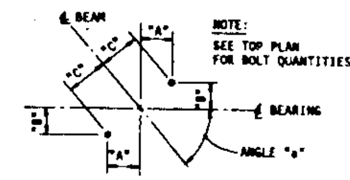
*1988-093 BY

SHEET NO. 25
53 SHEETS

NORTH



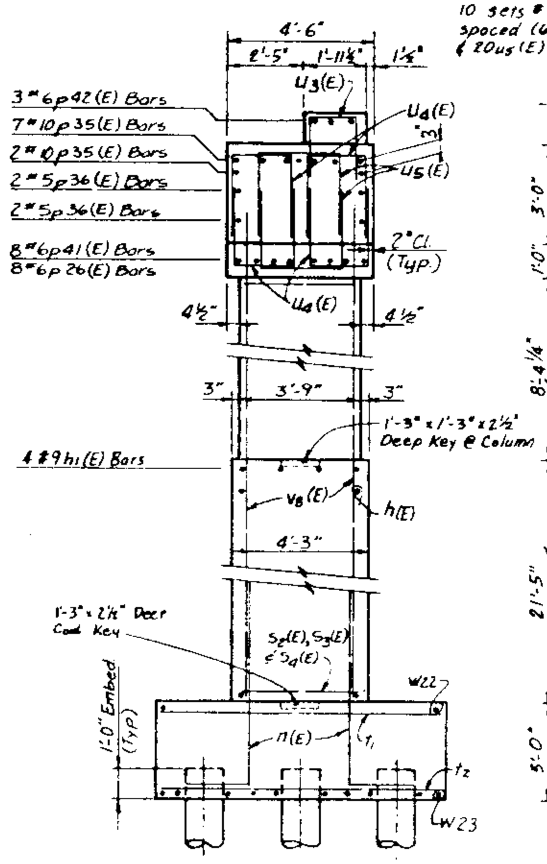
TOP PLAN



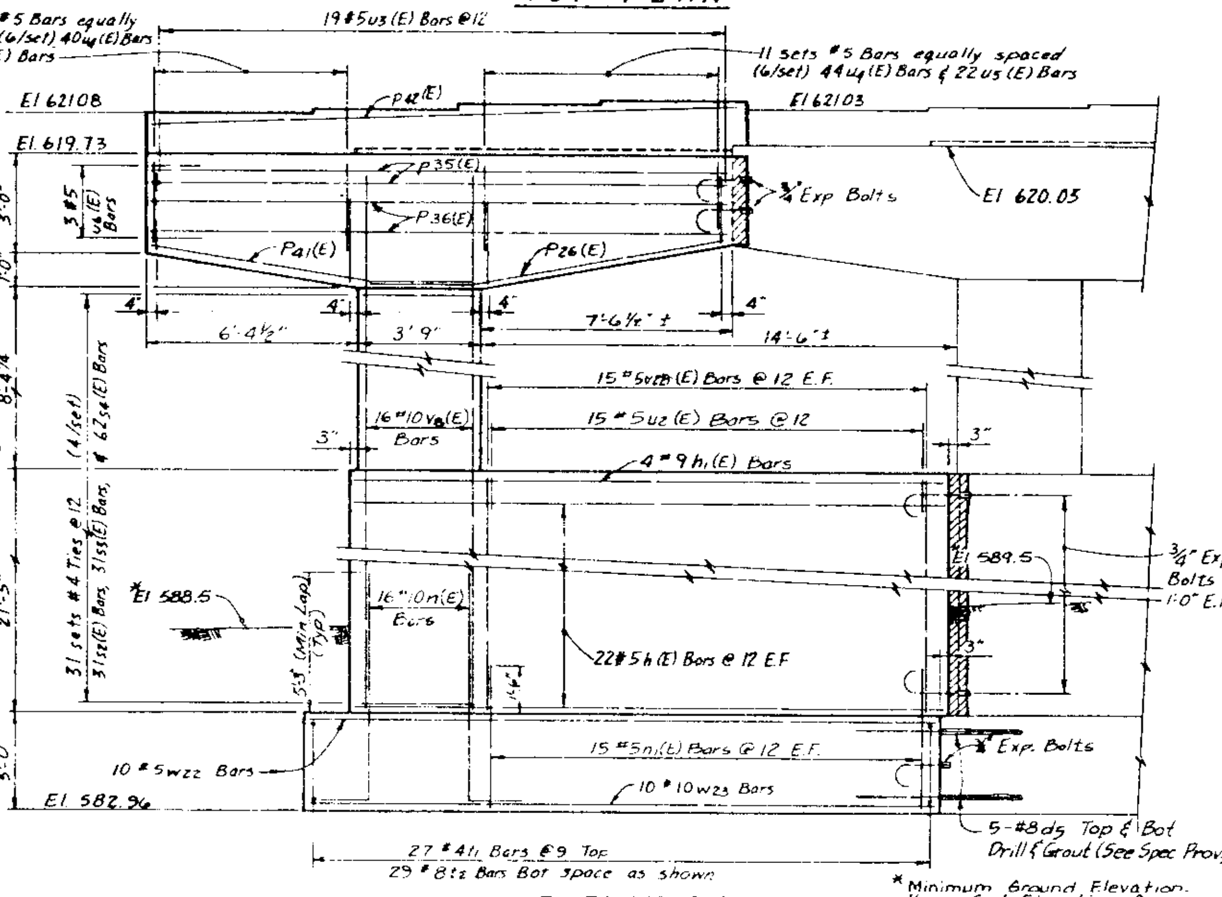
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S111	67°03'37"	11 1/4"	4 3/4"	1'-0 1/4"
S112	67°03'02"	11 1/4"	4 3/4"	1'-0 1/4"
S113	67°02'28"	11 1/4"	4 3/4"	1'-0 1/4"
S114	67°01'53"	11 1/4"	4 3/4"	1'-0 1/4"
S131	67°01'40"	1'-1 1/8"	5 9/16"	1'-2 1/4"
S132	67°01'45"	1'-1 1/8"	5 9/16"	1'-2 1/4"

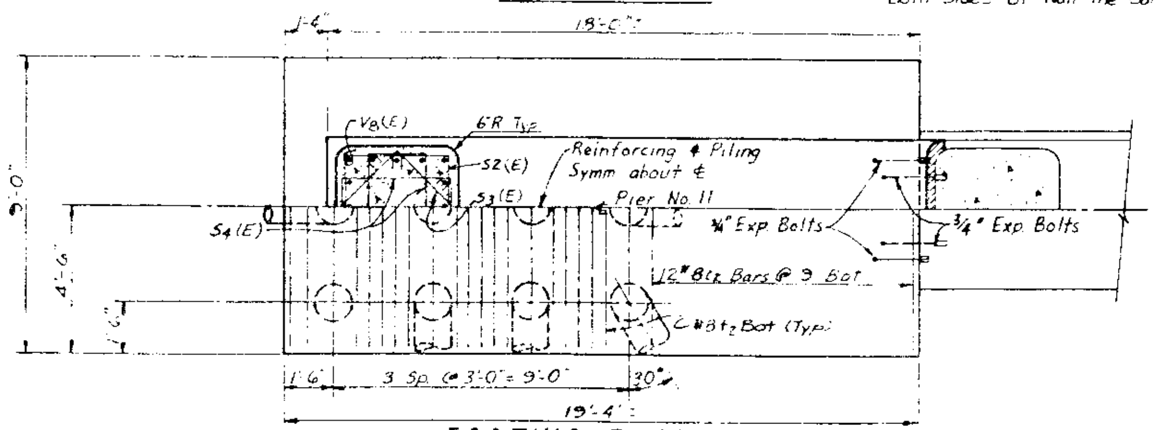


END VIEW

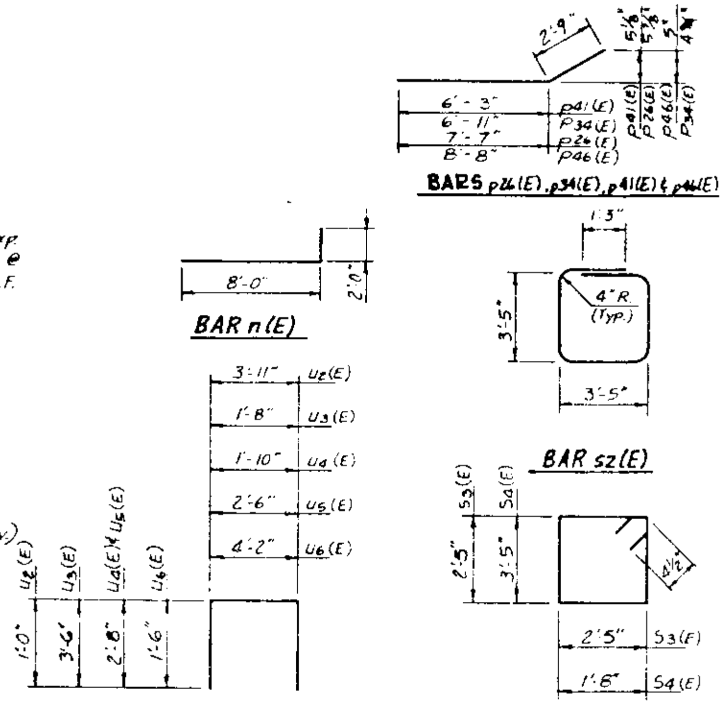


*Minimum Ground Elevation. Keep Soil Elevation On Both Sides Of Wall The Same

ELEVATION



FOOTING PLAN



BARS p26(E), p34(E), p41(E) & p46(E)

BAR n(E)

BAR s2(E)

BARS u2(E) – u6(E)

BARS s3(E) & s4(E)

BILL OF MATERIAL

BAR	NO	SIZE	LENGTH	SHAPE
h(E)	44	#5	17'-11"	
h1(E)	4	#9	17'-11"	
h2(E)	28	#5	19'-2"	
h3(E)	4	#9	19'-2"	
n(E)	32	#10	10'-0"	
n1(E)	62	#5	4'-3"	
p34(E)	8	#6	9'-8"	
p35(E)	9	#10	17'-7"	
p36(E)	4	#5	17'-7"	
p41(E)	8	#6	9'-0"	
p26(E)	8	#6	10'-4"	
p42(E)	3	#6	17'-8"	
p43(E)	9	#10	19'-8"	
p44(E)	4	#5	19'-9"	
p45(E)	3	#6	19'-6"	
p46(E)	8	#6	11'-5"	
s2(E)	54	#4	14'-4"	
s3(E)	54	#4	10'-5"	
s4(E)	108	#4	10'-11"	
t	76	#4	5'-8"	
t1	27	#4	8'-8"	
t2	29	#8	8'-8"	
u2(E)	31	#5	5'-11"	
u3(E)	39	#5	8'-8"	
u4(E)	180	#5	7'-2"	
u5(E)	90	#5	7'-10"	
u6(E)	6	#5	7'-2"	
v8(E)	16	#10	33'-4"	
v28(E)	30	#5	21'-1"	
v22(E)	16	#10	25'-4"	
v29(E)	32	#5	13'-1"	
w22	10	#5	19'-0"	
w23	10	#10	19'-0"	
w24	7	#7	24'-3"	
w25	8	#11	24'-3"	
d5	10	#8	5'-0"	

ITEM	UNIT	QUANTITY
REINFORCEMENT BARS (EPOXY COATED)	LBS.	15,280
REINFORCEMENT BARS	LBS.	3640
CLASS "X" CONCRETE	CU. YDS.	176.1
CONCRETE REMOVAL	CU. YDS.	1.7
3/4" EXPANSION BOLTS	EA.	84
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	740
DRIVING CONC PILES	LIN. FT.	740
TEST PILES	EACH	2
STRUCTURE EXCAVATION	CU. YDS.	185
TEMPORARY SHEET PILING	SQ.FT.	2,997

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS
POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.
BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 37 FT.
NO. REQUIRED: 22 (INCL. 2 TEST PILES, ONE EACH SIDE)

STANLEY CONSULTANTS

PIER NO. 11
SHEET 1 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+46

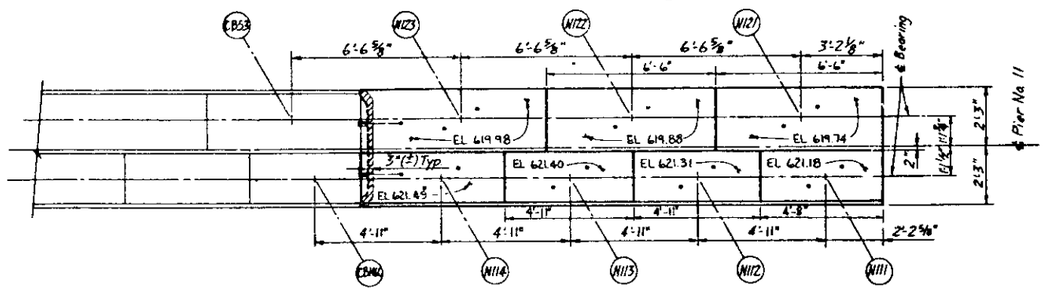
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	86
F. AH. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 26
53 SHEETS

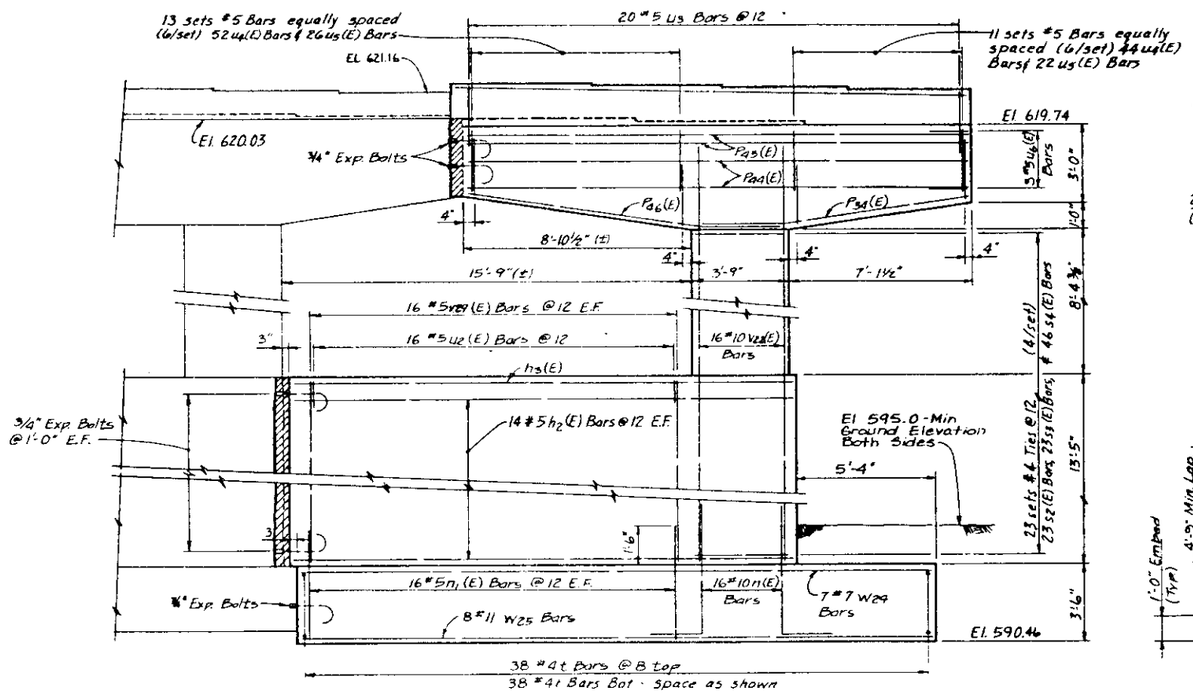
*1988-095 BT

NORTH

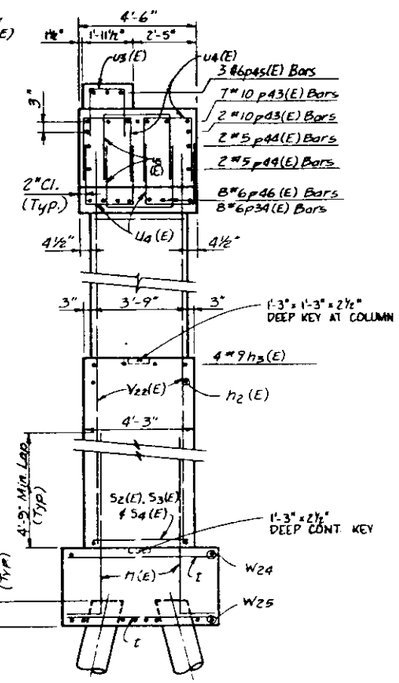
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



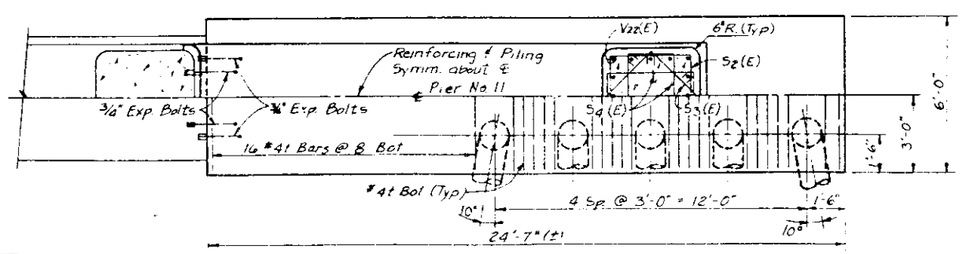
TOP PLAN



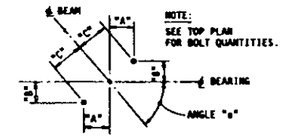
ELEVATION



END VIEW



FOOTING PLAN



NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N111	67°01'19"	11 1/4"	4 13/16"	1'-0 1/4"
N112	67°01'19"	11 1/4"	4 13/16"	1'-0 1/4"
N113	67°01'19"	11 1/4"	4 13/16"	1'-0 1/4"
N114	67°01'19"	11 1/4"	4 13/16"	1'-0 1/4"
N121	67°05'08"	1'-1 1/8"	5 9/16"	1'-2 1/4"
N122	67°04'36"	1'-1 1/8"	5 9/16"	1'-2 1/4"
N123	67°03'53"	1'-1 1/8"	5 9/16"	1'-2 1/4"

NOTES:

FOR BILL OF MATERIAL, PILE DATA AND GENERAL NOTES SEE SHEET 1 OF 2.

STANLEY CONSULTANTS

PIER NO. 11
SHEET 2 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

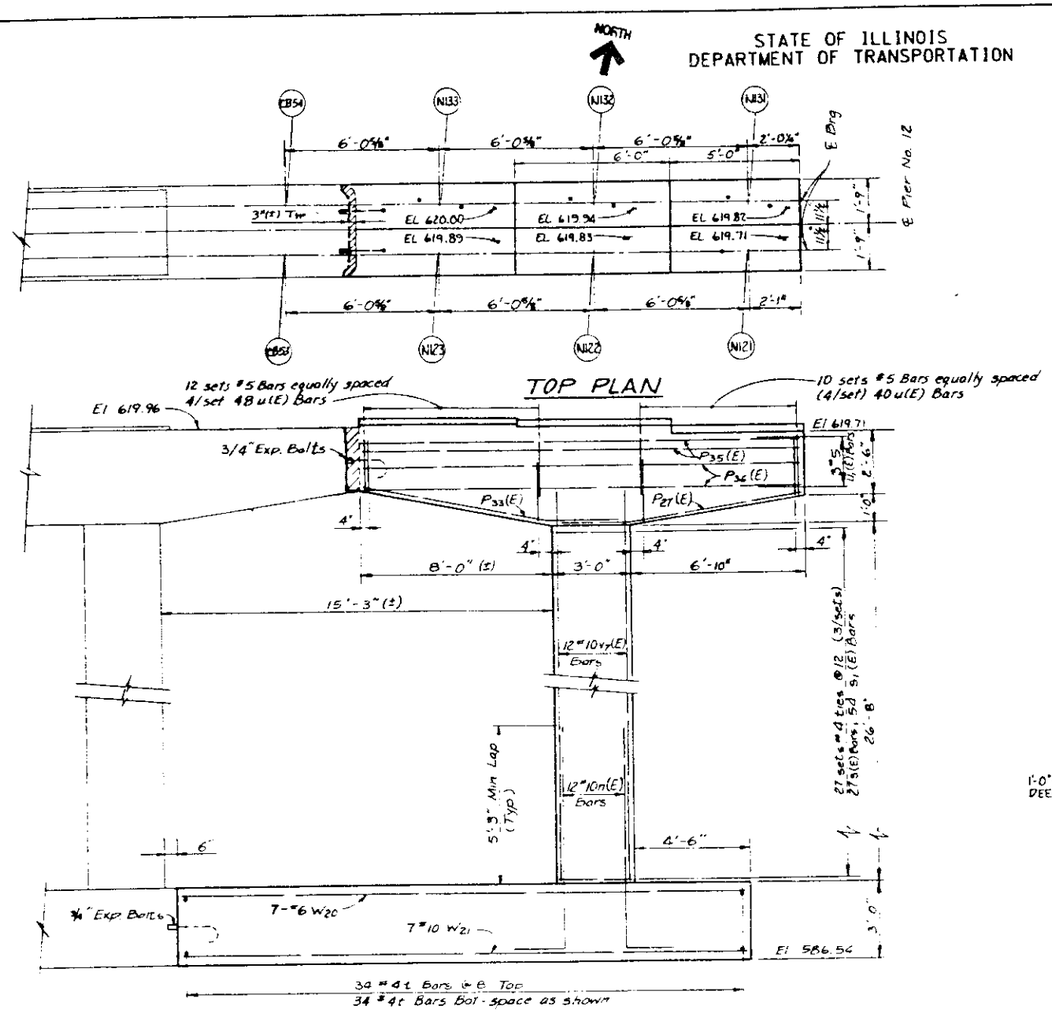
C48

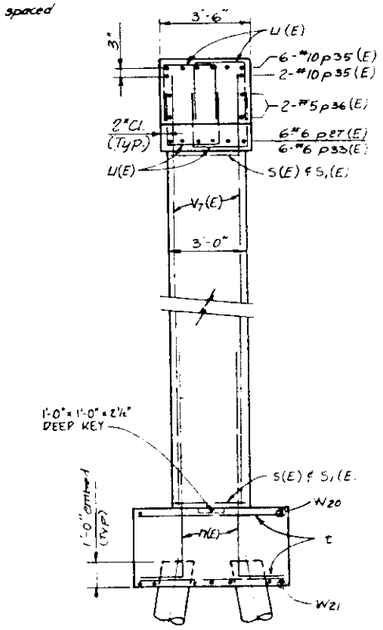
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	87
F. AID. A. REG. 4		ILLINOIS	FED. AID PROJECT	

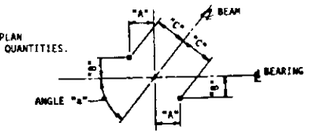
SHEET NO. 27
53 SHEETS

*1988-093 BY





NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

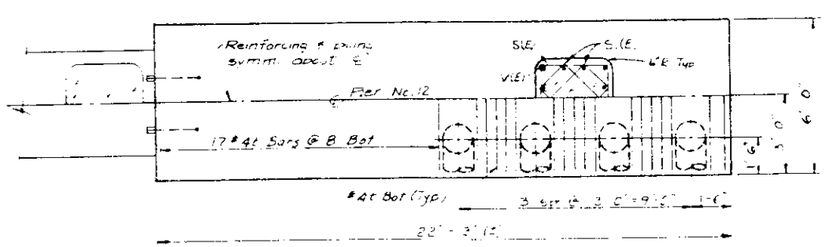


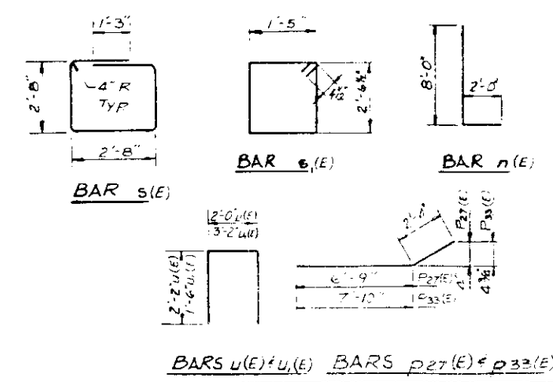
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N123	88°06'50"	1'-1 3/4"	7/16"	1'-1 3/4"
N131	88°09'15"	1'-2 1/4"	7/16"	1'-2 1/4"
N132	88°09'15"	1'-2 1/4"	7/16"	1'-2 1/4"
N133	88°09'15"	1'-2 1/4"	7/16"	1'-2 1/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#10	10'-0"	
P27(E)	6	#6	9'-1"	
P33(E)	6	#6	10'-2"	
P35(E)	8	#10	17'-9"	
P36(E)	4	#5	17'-9"	
s(E)	27	#4	11'-4"	
s1(E)	54	#4	8'-8"	
t	68	#4	5'-8"	
u(E)	88	#5	6'-4"	
u1(E)	3	#5	6'-2"	
V7(E)	12	#10	29'-1"	
W20	7	#6	21'-11"	
W21	7	#10	21'-11"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	3550
REINFORCEMENT BARS			LBS.	1150
CLASS "X" CONCRETE			CU. YDS.	31.2
CONCRETE REMOVAL			CU. YDS.	--
3/4" EXPANSION BOLTS			EA.	4
1" EXPANSION BOLTS			EA.	--
FURNISHING CONC PILES			LIN. FT.	248
DRIVING CONC PILES			LIN. FT.	248
TEST PILES			EACH	--
STRUCTURE EXCAVATION			CU. YDS.	58





PILE DATA:
TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 8

NOTES:
(E) INDICATES EPOXY COATED REINFORCEMENT BARS
POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.
INDICATES CONCRETE REMOVAL

PIER NO. 12

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

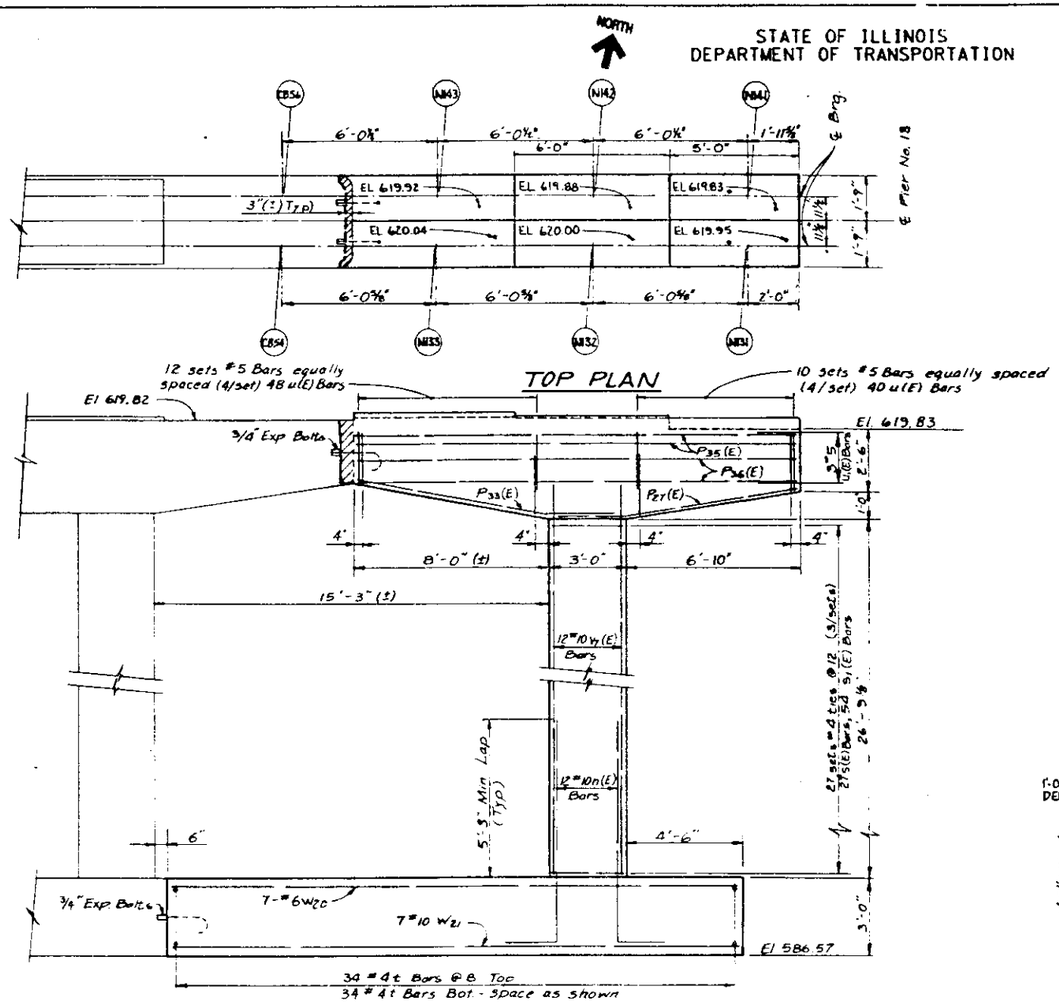
C49

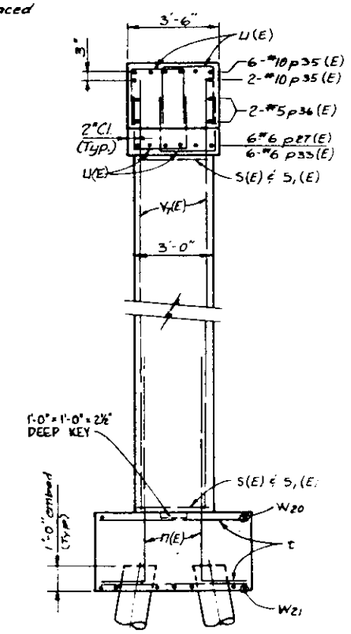
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	88
F. AID & REG. #	ILLINOIS	FED. AID PROJECT		

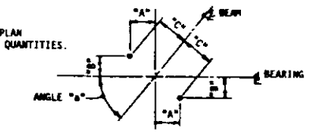
SHEET NO. 28
53 SHEETS

*1988-0-95 BY





NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

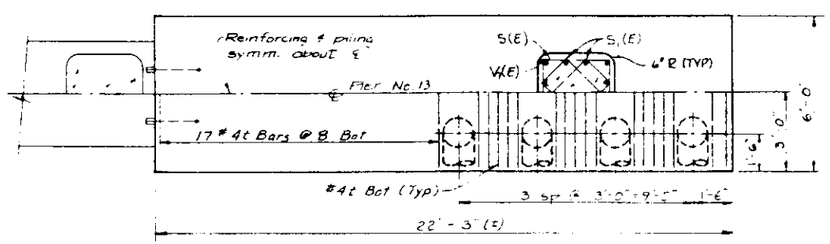


ANCHOR BOLT LAYOUT

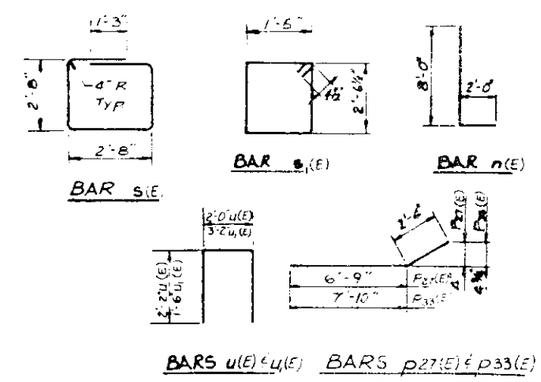
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N131	88°09'15"	1'-1 3/4"	7/16"	1'-1 3/4"
N141	88°09'17"	1'-1 3/4"	7/16"	1'-1 3/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#10	10'-0"	
P27(E)	6	#6	9'-1"	
P33(E)	6	#6	10'-2"	
P35(E)	8	#10	17'-9"	
P36(E)	4	#5	17'-9"	
S(E)	27	#4	11'-4"	
S1(E)	54	#4	9'-8"	
t	68	#4	9'-8"	
u(E)	88	#5	6'-4"	
u1(E)	3	#5	6'-2"	
Y7(E)	12	#10	29'-1"	
W20	7	#6	21'-11"	
W21	7	#10	21'-11"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	3990
REINFORCEMENT BARS			LBS.	1150
CLASS "X" CONCRETE			CU. YDS.	30.9
CONCRETE REMOVAL			CU. YDS.	[illegible]
3/4" EXPANSION BOLTS			EA.	4
1" EXPANSION BOLTS			EA.	—
FURNISHING CONC PILES			LIN. FT.	217
DRIVING CONC PILES			LIN. FT.	217
TEST PILES			EACH	1
STRUCTURE EXCAVATION			CU. YDS.	58



FOOTING PLAN



PILE DATA:
TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 8 (INCL. 1 TEST PILES)

NOTES:
(E) INDICATES EPOXY COATED REINFORCEMENT BARS
POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.
INDICATES CONCRETE REMOVAL

PIER 13 - EAST END
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

C50

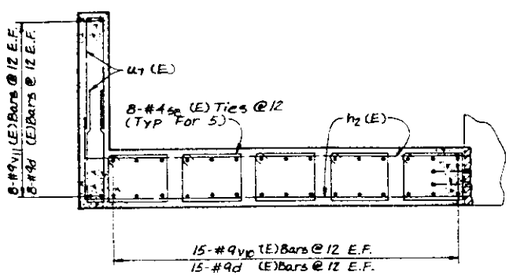
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH

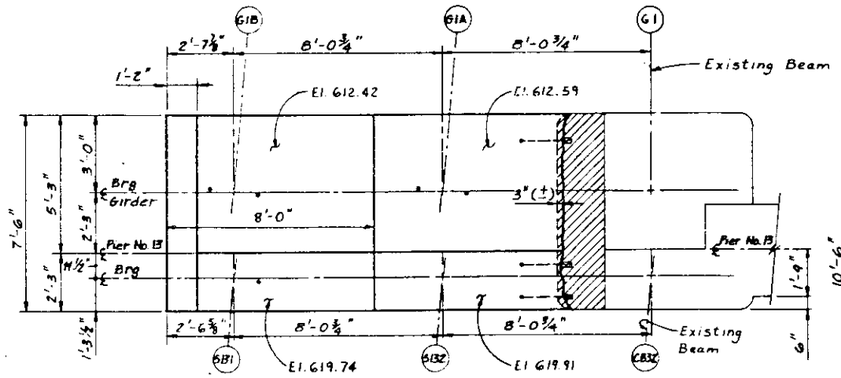
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	89
F.A.I. RTE. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 29
53 SHEETS

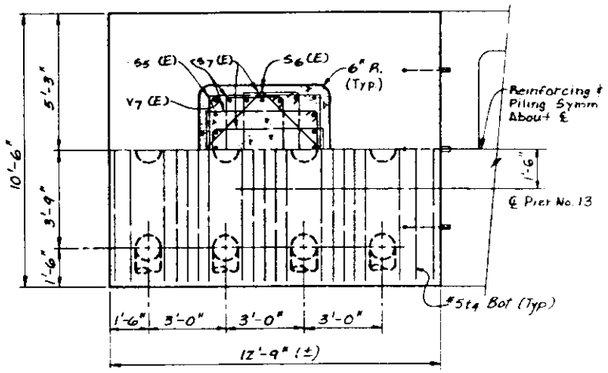
*1988-095 BY



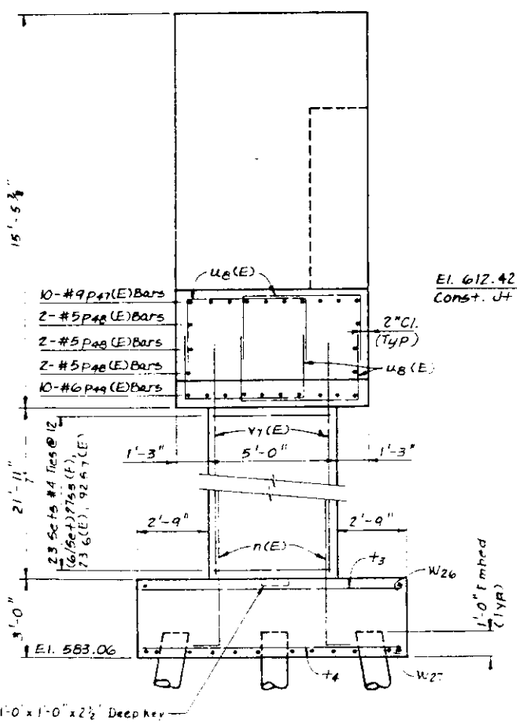
PLAN-SECTION A-A



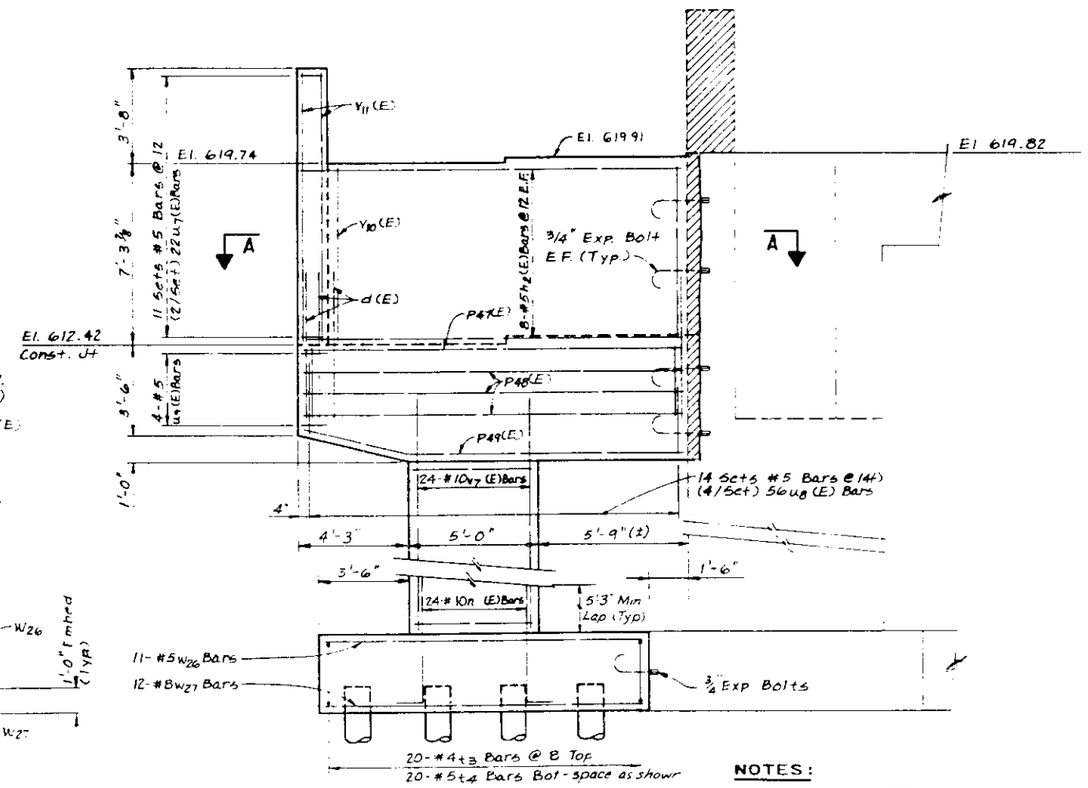
TOP PLAN



FOOTING PLAN

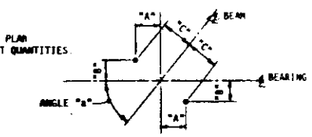


END VIEW



ELEVATION

NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

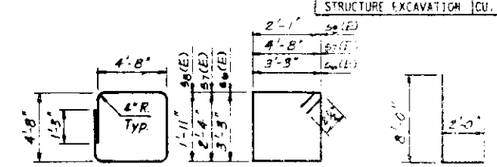


ANCHOR BOLT LAYOUT

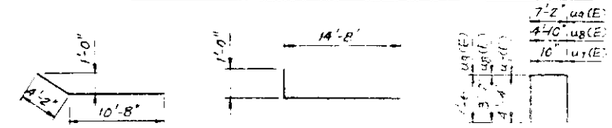
BEAR	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
G1A	89°29'49"	11"	1/8"	11"
G1B	88°59'52"	11"	3/16"	11"
S131	88°10'18"	1'-1 3/4"	7/16"	1'-1 3/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	46	#9	7'-0"	
h_2(E)	16	#5	15'-8"	
n(E)	24	#10	10'-0"	
p_{47}(E)	10	#9	14'-8"	
p_{48}(E)	6	#5	14'-8"	
p_{49}(E)	10	#6	14'-10"	
s_5(E)	22	#4	19'-4"	
s_6(E)	27	#4	13'-9"	
s_7(E)	108	#4	14'-9"	
s_8(E)	40	#4	8'-9"	
t_3	20	#4	10'-2"	
t_4	20	#5	10'-2"	
u_7(E)	22	#5	9'-6"	
u_8(E)	56	#5	11'-2"	
u_9(E)	4	#5	10'-2"	
v_7(E)	24	#10	20'-6"	
v_{10}(E)	30	#9	7'-2"	
v_{11}(E)	16	#9	10'-3"	
w_{26}	11	#5	12'-5"	
w_{27}	12	#8	12'-5"	
TEMPORARY SHEET PILING			SQ. FT.	952
REINFORCEMENT BARS (EPOXY COATED)			LBS.	5830
REINFORCEMENT BARS			LBS.	890
CLASS "X" CONCRETE			CU. YDS.	65
CONCRETE REMOVAL			CU. YDS.	3.3
3/4" EXPANSION BOLTS			EA.	11
1" EXPANSION BOLTS			EA.	-
FURNISHING CONC. PILES			LIN. FT.	341
DRIVING CONC. PILES			LIN. FT.	341
TEST PILES			EACH	1
STRUCTURE EXCAVATION			CU. YDS.	54



BAR s_5(E) BARS s_6(E), s_7(E) & s_8(E) BAR n(E)



BAR p_{49} (E) BAR h_2(E) BARS u_7(E), u_8(E) & u_9(E)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS.

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 12 (INCL. 1 TEST PILE)

PIER NO. 13 - WEST END

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

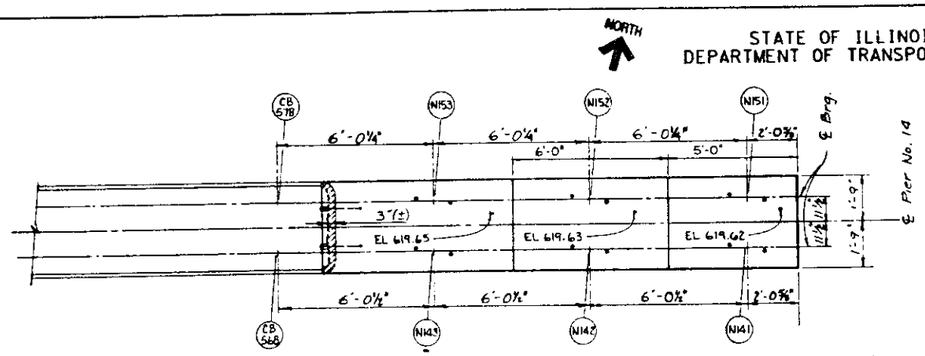
C51

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

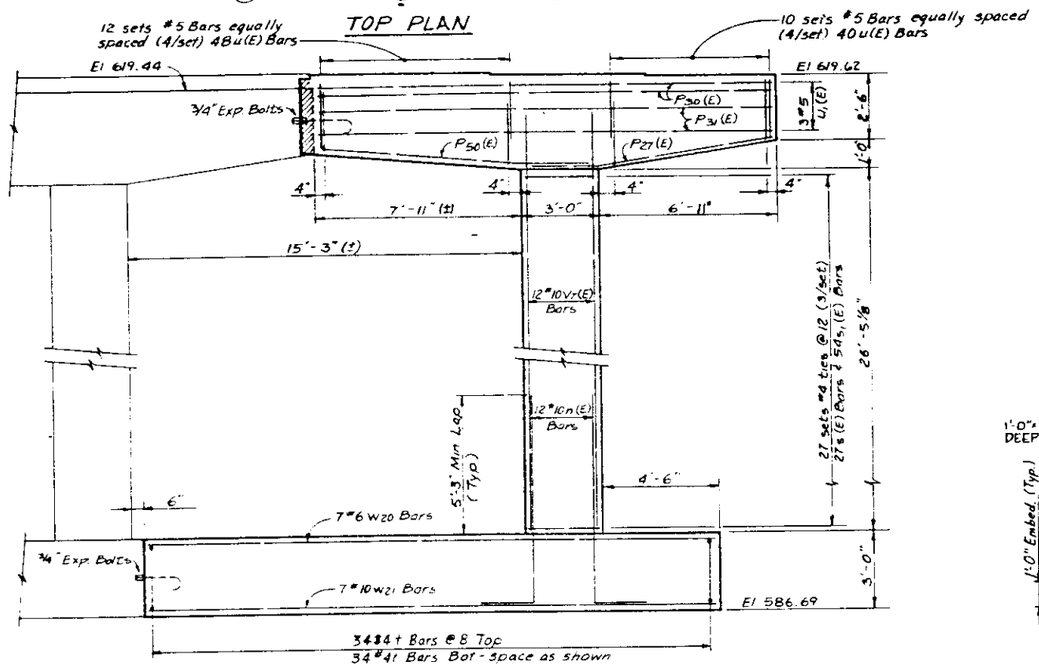
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	90
F. NO. & REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 30
93 SHEETS

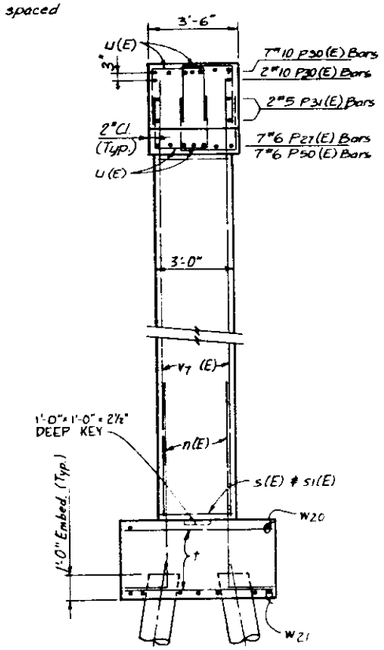
*1988-095 BY



TOP PLAN

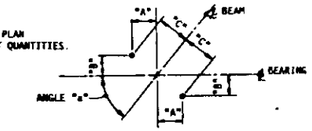


ELEVATION



END VIEW

NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

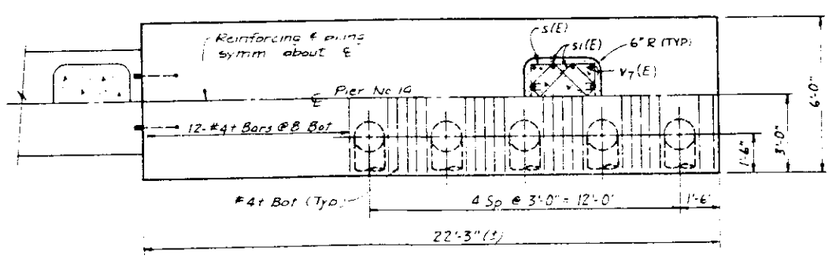


ANCHOR BOLT LAYOUT

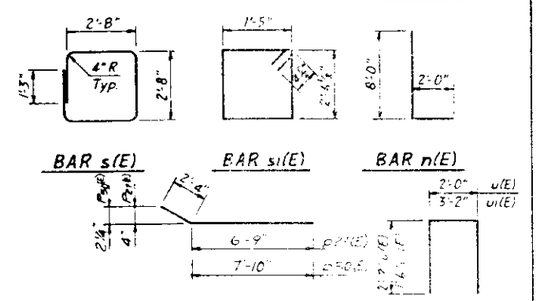
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N141	88°09'16"	1'-2 1/4"	7/16"	1'-2 1/4"
N142	88°09'16"	1'-2 1/4"	7/16"	1'-2 1/4"
N143	88°09'16"	1'-2 1/4"	7/16"	1'-2 1/4"
N151	88°53'49"	1'-2 1/4"	1/4"	1'-2 1/4"
N152	88°51'08"	1'-2 1/4"	5/16"	1'-2 1/4"
N153	88°48'26"	1'-2 1/4"	5/16"	1'-2 1/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#10	10'-0"	
P27(E)	7	#6	9'-1"	
P30(E)	9	#10	17'-9"	
P31(E)	4	#5	17'-9"	
P50(E)	7	#6	10'-2"	
s(E)	27	#4	11'-8"	
s1(E)	54	#4	8'-8"	
t	68	#4	5'-8"	
u(E)	88	#5	6'-4"	
u1(E)	3	#5	5'-2"	
V7(E)	12	#10	29'-1"	
W20	7	#6	21'-11"	
W21	7	#10	21'-11"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	4100	
REINFORCEMENT BARS		LBS.	1750	
CLASS "X" CONCRETE		CU. YDS.	30.5	
CONCRETE REMOVAL		CU. YDS.	.1	
3/4" EXPANSION BOLTS		EA.	4	
1" EXPANSION BOLTS		EA.	—	
FURNISHING CONC PILES		LIN. FT.	310	
DRIVING CONC PILES		LIN. FT.	310	
TEST PILES		EACH	—	
STRUCTURE EXCAVATION		CU. YDS.	58	



FOOTING PLAN



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 10

PIER NO. 14

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 408+69

STANLEY CONSULTANTS

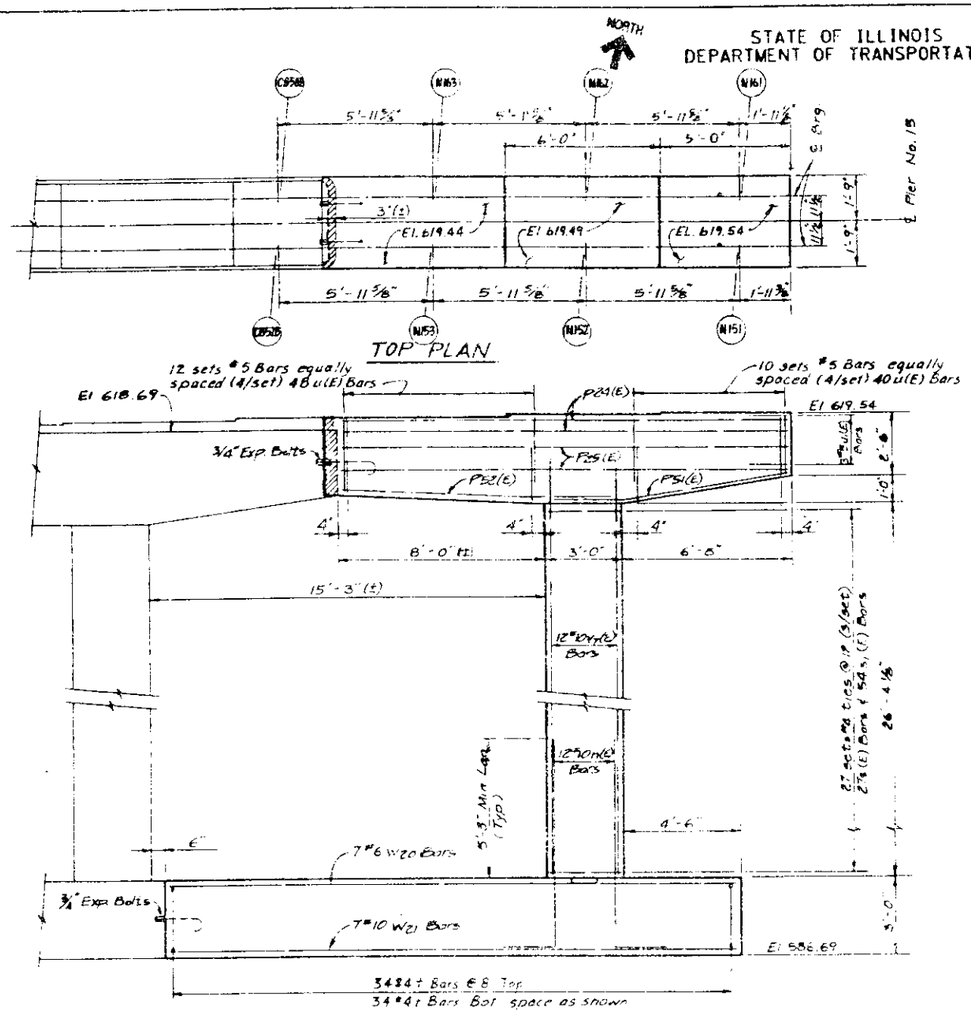
C52

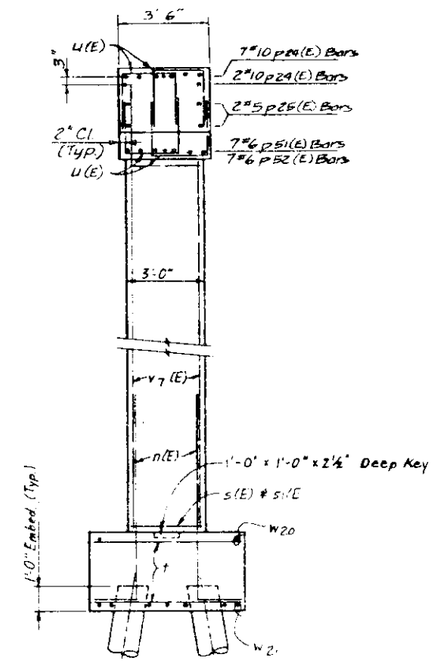
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	91
F.A.I. NO. & REG. 4	ILLINOIS	FED. AID PROJECT		

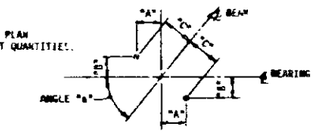
SHEET NO. 31
53 SHEETS

*1989-095 BY





NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

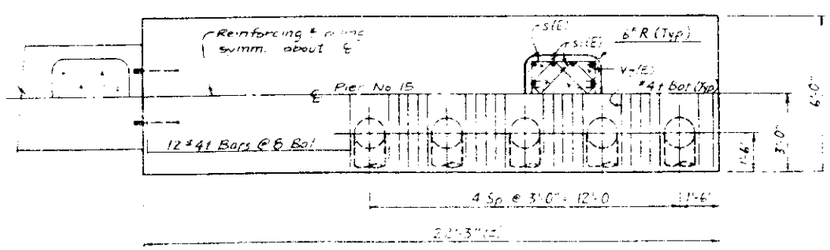


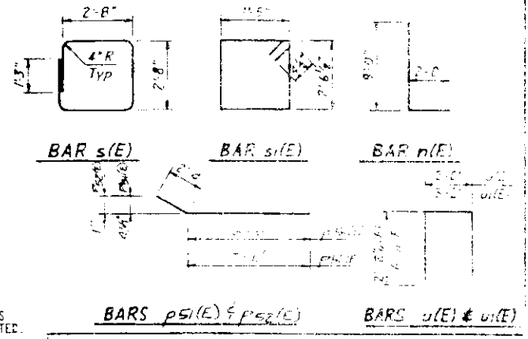
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N152	88°53'49"	0'-1 3/4"	1/4"	1'-1 3/4"
N161	89°58'14"	0'-1 3/4"	-	1'-1 3/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
P(E)	12	#10	10'-0"	
P24(E)	9	#10	17'-7"	
P25(E)	4	#6	17'-7"	
P51(E)	7	#6	2'-9"	
P52(E)	7	#6	10'-3"	
S(E)	27	#4	11'-4"	
S1(E)	54	#4	8'-8"	
T	68	#4	5'-8"	
U(E)	88	#5	[illegible]	
U1(E)	3	#5	[illegible]	
V7(E)	12	#10	29'-7"	
W20	7	#6	21'-11"	
W21	7	#10	21'-11"	
REINFORCEMENT BARS (EPOXY COATED)	LBS.		4090	
REINFORCEMENT BARS	LBS.		1150	
CLASS "X" CONCRETE	CU. YDS.		31.0	
CONCRETE REMOVAL	CU. YDS.		[illegible]	
3/4" EXPANSION BOLTS	EA.		4	
1" EXPANSION BOLTS	EA.		—	
FURNISHING CONC PILES	LIN. FT.		279	
DRIVING CONC PILES	LIN. FT.		279	
TEST PILES	EACH		1	
STRUCTURE EXCAVATION	CU. YD.		58	





NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 10 (INCL. 1 TEST PILE)

PIER NO. 15

SECTION

F.A.I. ROUTE 90/94 OVER SANDLAND AVENUE

COOK COUNTY

STATION 409+<>

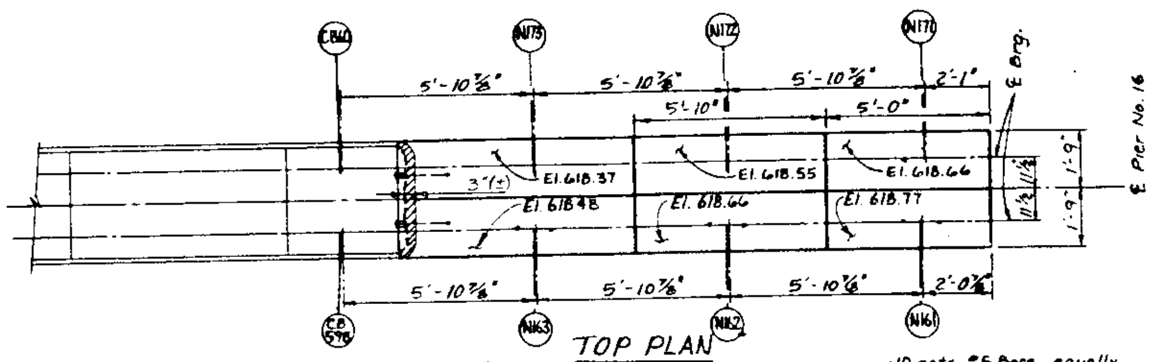
STANLEY CONSULTANTS

053

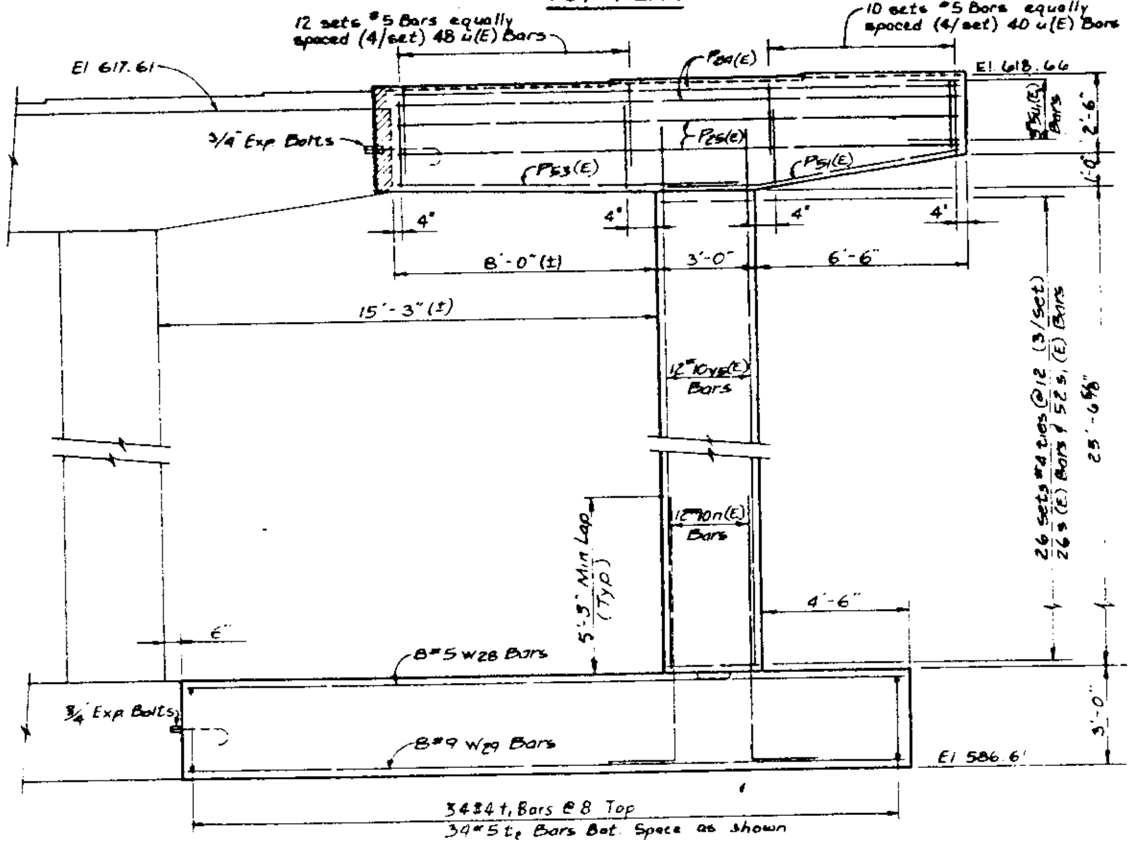
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	92
F. NO. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 32
53 SHEETS

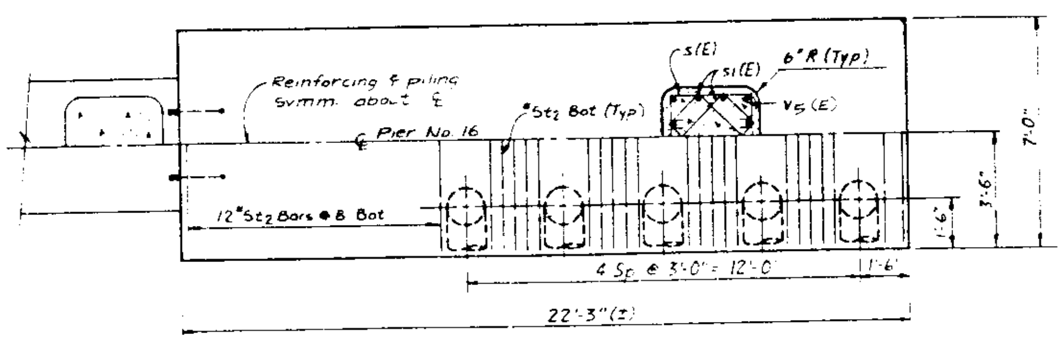
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



TOP PLAN

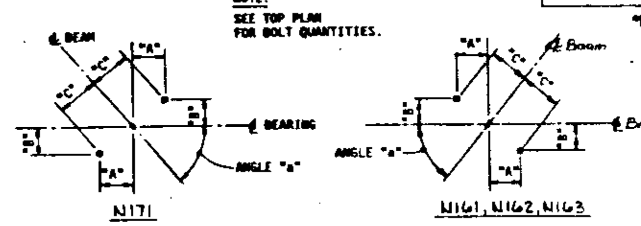


ELEVATION



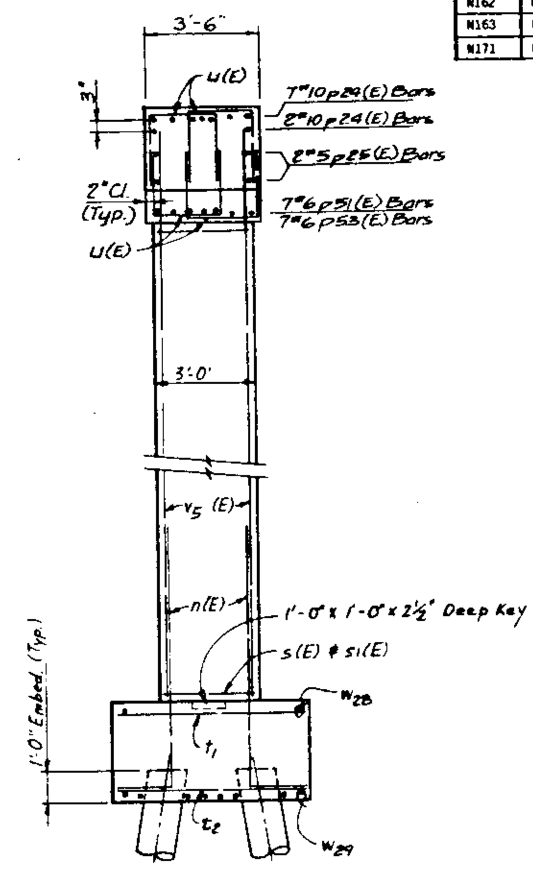
FOOTING PLAN

NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.



ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
N161	89°58'14"	1'-2 1/4"	-	1'-2 1/4"
N162	89°54'55"	1'-2 1/4"	-	1'-2 1/4"
N163	89°51'97"	1'-2 1/4"	1/16"	1'-2 1/4"
N171	89°01'58"	1'-1 3/4"	1/4"	1'-1 3/4"



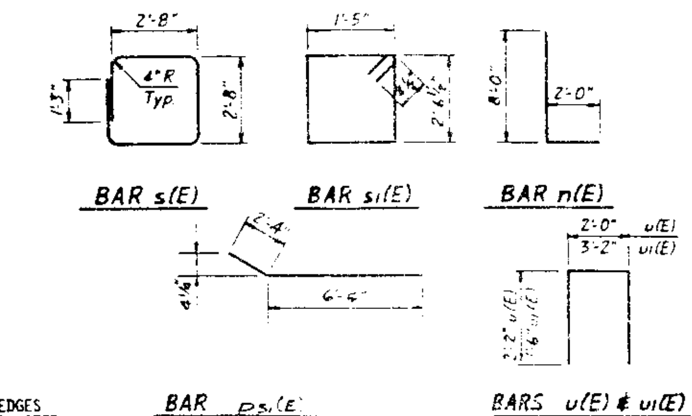
END VIEW

*1988-0 15 BY

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#10	10'-0"	
P24(E)	3	#10	17'-5"	
P25(E)	4	#5	17'-5"	
P51(E)	7	#6	8'-9"	
P53(E)	7	#6	10'-3"	
S(E)	26	#4	11'-4"	
S1(E)	52	#4	8'-8"	
T1	34	#4	6'-8"	
T2	34	#5	6'-8"	
U(E)	88	#5	6'-4"	
U1(E)	3	#5	6'-2"	
V5(E)	12	#10	27'-11"	
W28	8	#5	21'-11"	
W29	8	#9	21'-11"	

REINFORCEMENT BARS (EPOXY COATED)	LBS.	4010
REINFORCEMENT BARS	LBS.	1170
CLASS "X" CONCRETE	CU. YDS.	33.2
CONCRETE REMOVAL	CU. YDS.	.1
3/4" EXPANSION BOLTS	EA.	4
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	310
DRIVING CONC PILES	LIN. FT.	310
TEST PILES	EACH	—
STRUCTURE EXCAVATION	CU. YDS.	64



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 10

PIER NO. 16 - EAST END

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+69

STANLEY CONSULTANTS

C54

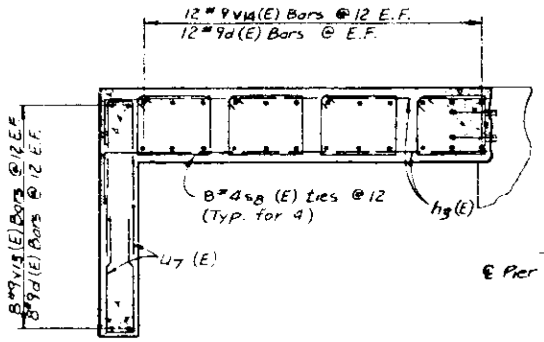
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•		396	93

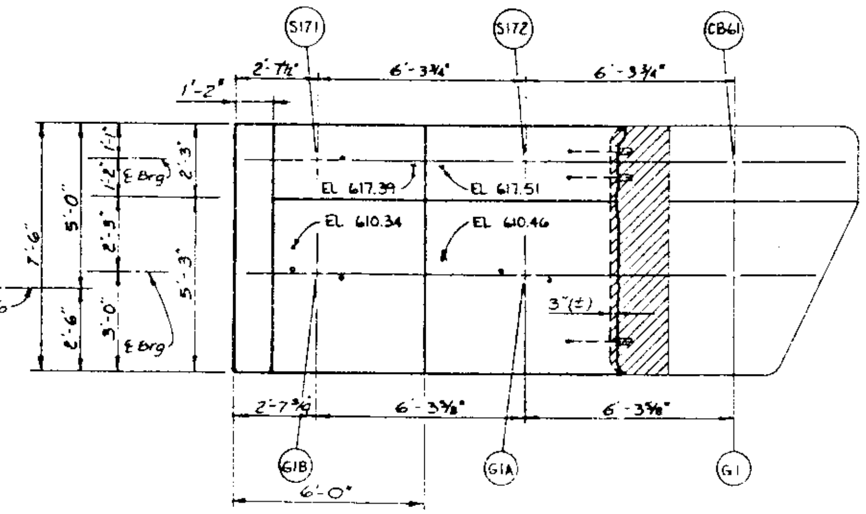
ILLINOIS FED. AID PROJECT

*1988-095 BY

SHEET NO. 33
53 SHEETS

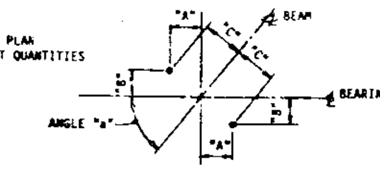


PLAN-SECTION A-A



TOP PLAN

NOTE:
SEE TOP PLAN
FOR BOLT QUANTITIES



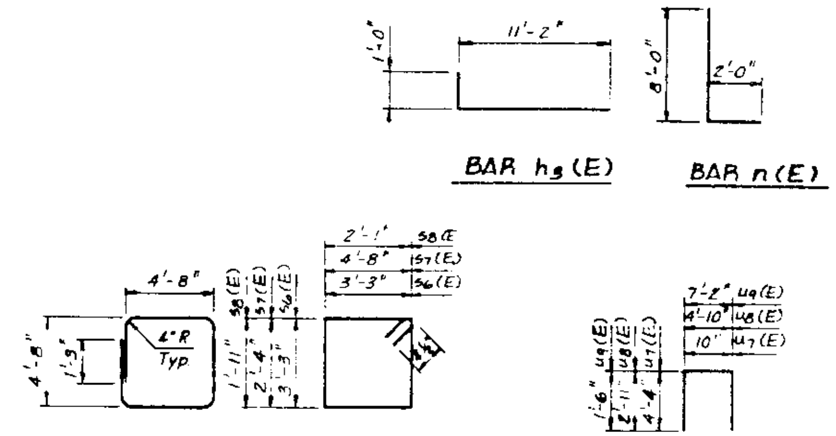
ANCHOR BOLT LAYOUT

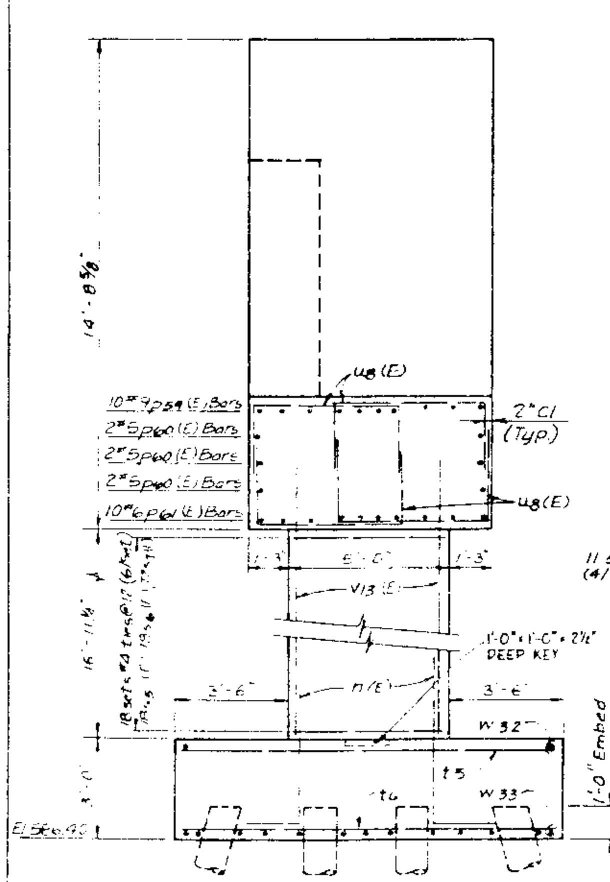
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
G1A	89°29'49"	11"	1/8"	11"
G1B	88°59'52"	11"	3/16"	11"
S171	91°21'57"	1'-1 3/4"	5/16"	1'-1 3/4"
S172	93°06'40"	-	-	-

BILL OF MATERIAL

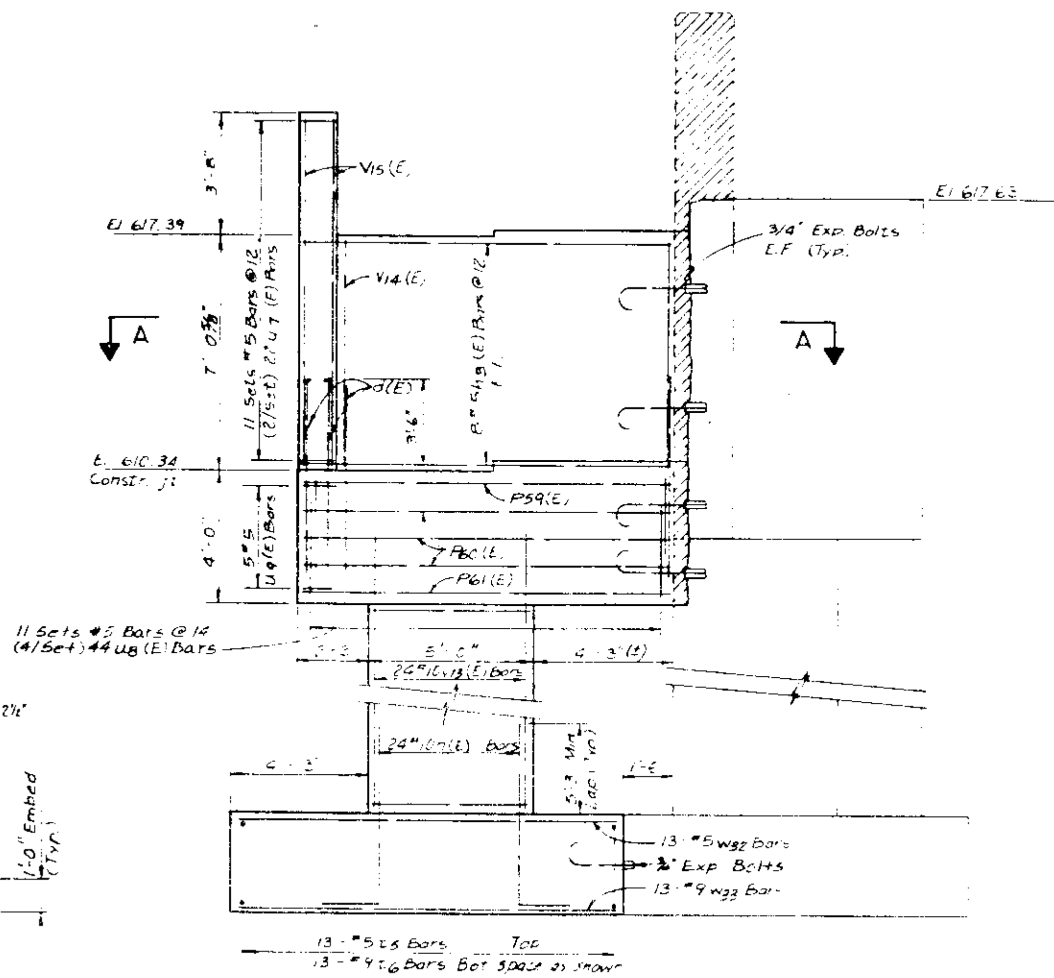
BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	12	#9	7'-0"	
h8(E)	16	#5	10'-2"	
n(E)	24	#10	10'-0"	
P59(E)	10	#9	11'-2"	
P60(E)	6	#5	11'-2"	
P61(E)	10	#6	11'-2"	
S5(E)	18	#4	19'-0"	
S6(E)	18	#4	13'-9"	
S7(E)	72	#4	14'-9"	
S8(E)	32	#4	8'-9"	
t5	13	#5	11'-8"	
t6	13	#9	11'-8"	
u7(E)	22	#5	9'-6"	
u8(E)	44	#5	10'-8"	
u9(E)	[illegible]	#5	10'-2"	
v13(E)	24	#10	19'-4"	
v14(E)	24	#9	6'-9"	
v15(E)	16	#9	10'-5"	
w32	13	#5	11'-8"	
w33	13	#9	11'-8"	

TEMPORARY SHEET PILING	SQ.FT.	1,133
REINFORCEMENT BARS (EPOXY COATED)	LBS.	7980
REINFORCEMENT BARS	LBS.	1350
CLASS "X" CONCRETE	CU. YDS.	53.6
CONCRETE REMOVAL	CU. YDS.	3.3
3/4" EXPANSION BOLTS	EA.	11
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	465
DRIVING CONC PILES	LIN. FT.	465
TEST PILES	EACH	1
STRUCTURE EXCAVATION	CU. YDS.	54

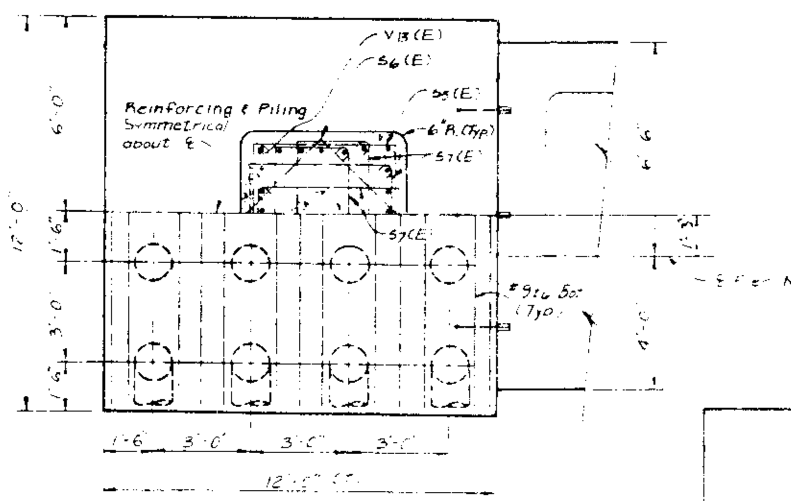




END VIEW



ELEVATION



FOOTING PLAN

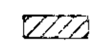
PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 50 TONS
EST. LENGTH: 3_ FT.
NO. REQUIRED: 1_ (INCL. 1 TEST PILE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN E.I.


INDICATES CONCRETE REMOVAL

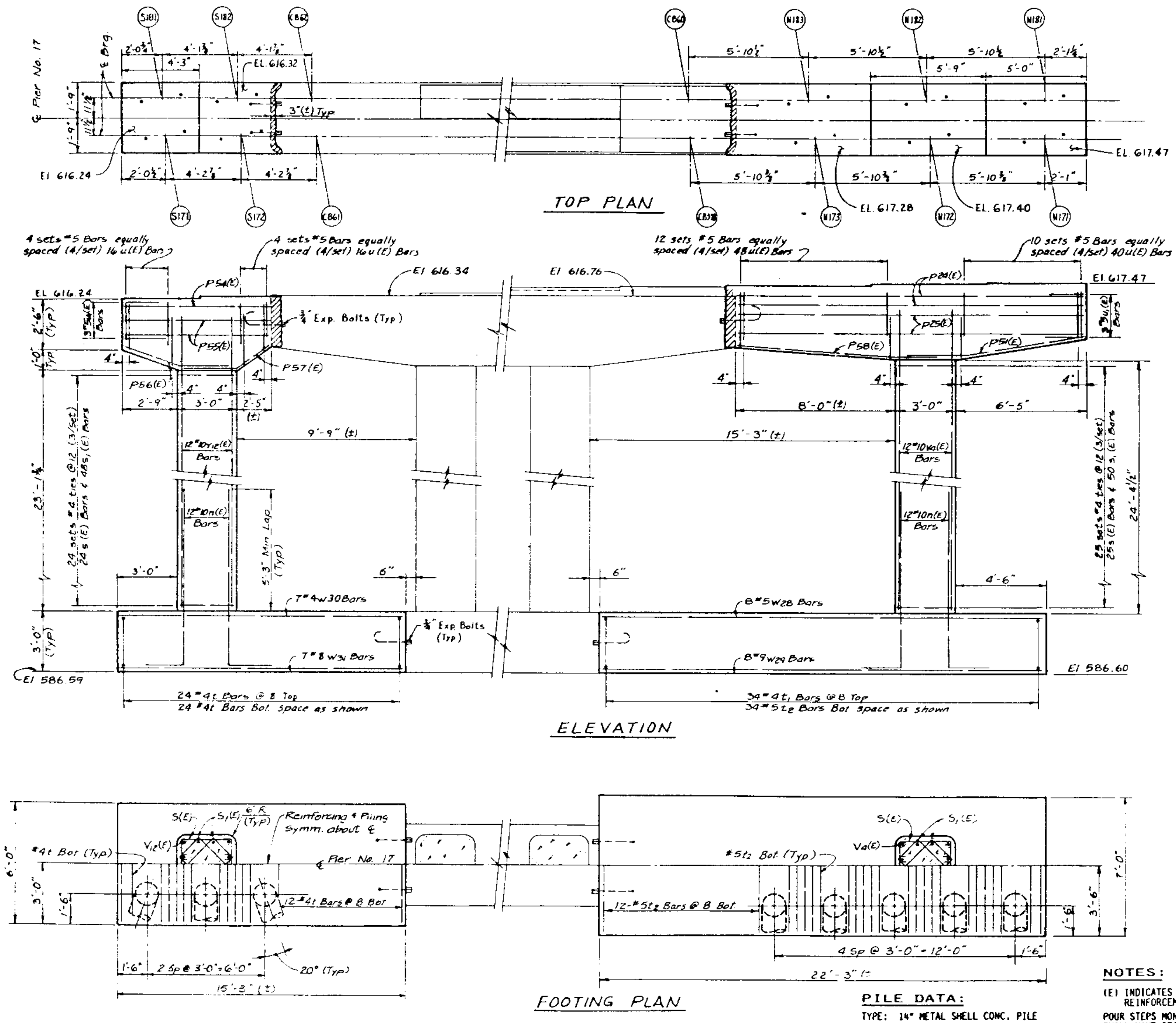
STANLEY CONSULTANTS

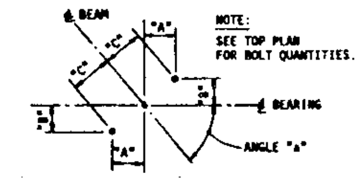
PIER NO. 16 - WEST END

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+46

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	94
F. A. I. RTE. 4	ILLINOIS	FED. AID PROJECT		

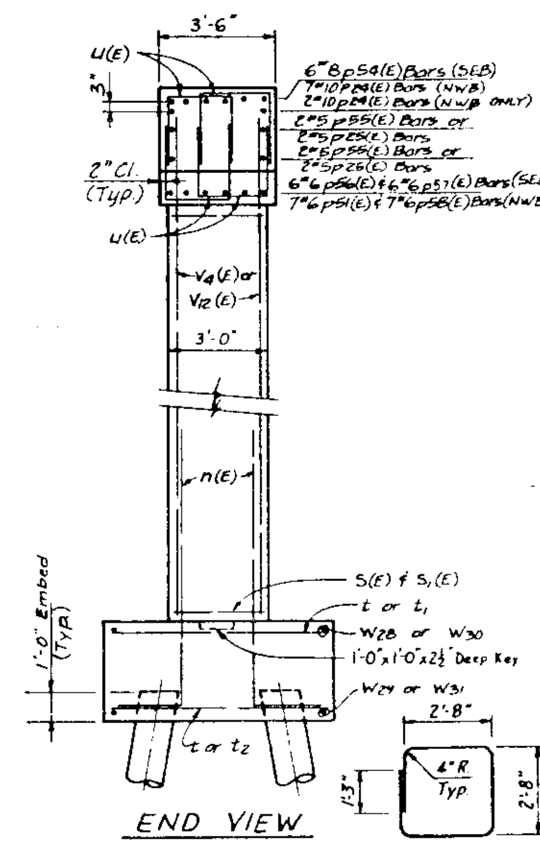
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION





ANCHOR BOLT LAYOUT

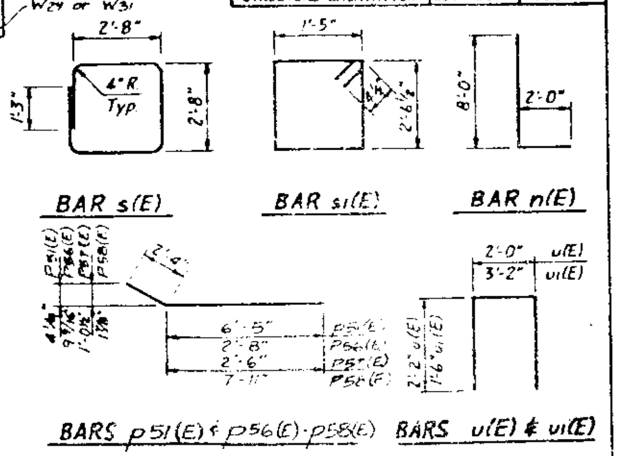
BEAM	ANGLE "A"	DIM "A"	DIM "B"	DIM "C"
S171	88°38'03"	1'-2 1/4"	5/16"	1'-2 1/4"
S172	86°53'20"	1'-2 1/4"	3/4"	1'-2 1/4"
N171	89°01'58"	1'-2 1/4"	1/4"	1'-2 1/4"
N172	89°04'00"	1'-2 1/4"	1/4"	1'-2 1/4"
N173	89°06'01"	1'-2 1/4"	1/4"	1'-2 1/4"
S181	87°17'27"	1'-2 1/4"	11/16"	1'-2 1/4"
S182	86°12'52"	1'-2 1/4"	15/16"	1'-2 1/4"
N181	87°59'52"	1'-2 1/4"	1/2"	1'-2 1/4"
N182	87°59'03"	1'-2 1/4"	1/2"	1'-2 1/4"
N183	87°58'14"	1'-2 1/4"	1/2"	1'-2 1/4"



*1988-075 BY

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
P(E)	24	#10	10'-0"	
P24(E)	9	#10	17'-4"	
P25(E)	4	#5	17'-4"	
P51(E)	7	#6	8'-9"	
P54(E)	5	#8	8'-1"	
P55(E)	4	#5	8'-1"	
P56(E)	6	#6	5'-0"	
P57(E)	6	#6	4'-10"	
P58(E)	7	#6	10'-3"	
S(E)	49	#4	11'-4"	
S1(E)	98	#4	8'-8"	
t	48	#4	5'-8"	
t1	34	#4	6'-8"	
t2	34	#5	6'-8"	
U(E)	120	#5	6'-4"	
U1(E)	5	#5	6'-2"	
V4(E)	12	#10	26'-6"	
V12(E)	12	#10	25'-7"	
W30	7	#4	14'-11"	
W31	7	#8	14'-11"	
W28	8	#5	21'-11"	
W29	8	#9	21'-11"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	6690
REINFORCEMENT BARS			LBS.	1700
CLASS "X" CONCRETE			CU. YDS.	53.3
CONCRETE REMOVAL			CU. YDS.	.2
3/4" EXPANSION BOLTS			EA.	8
1" EXPANSION BOLTS			EA.	–
FURNISHING CONC PILES			LIN. FT.	434
DRIVING CONC PILES			LIN. FT.	434
TEST PILES			EACH	2
STRUCTURE EXCAVATION			CU. YDS.	106



PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 16 (INCL. 2 TEST PILES, ONE EACH SIDE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

STANLEY CONSULTANTS

PIER NO. 17

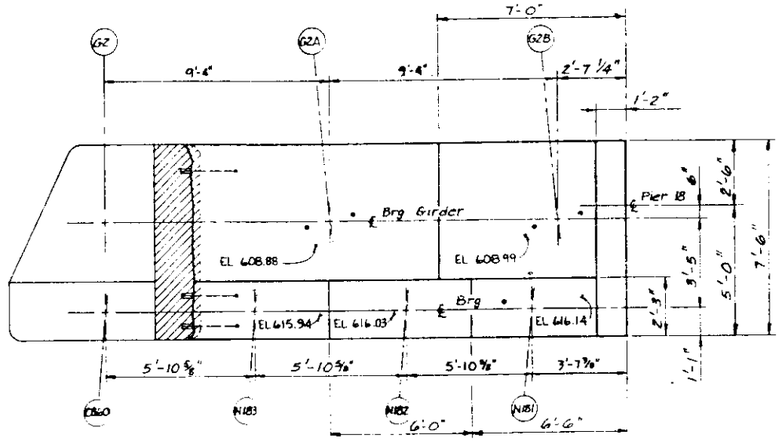
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

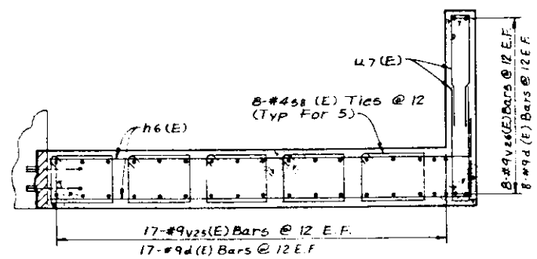
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
			395	95
F.A. RTE. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 35
53 SHEETS

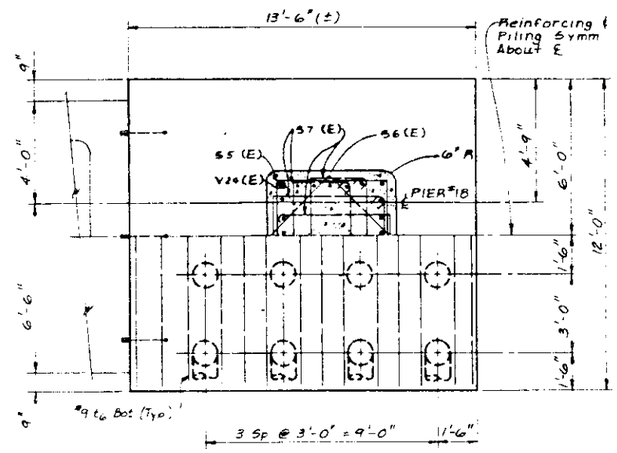
*1889-095 BY



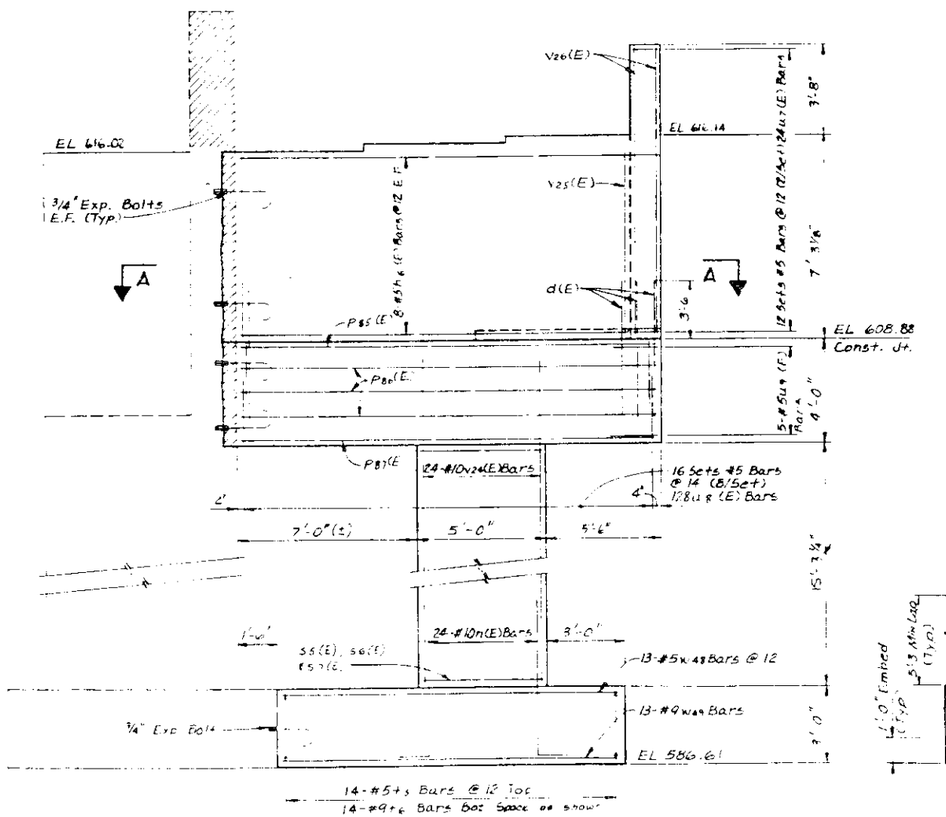
TOP PLAN



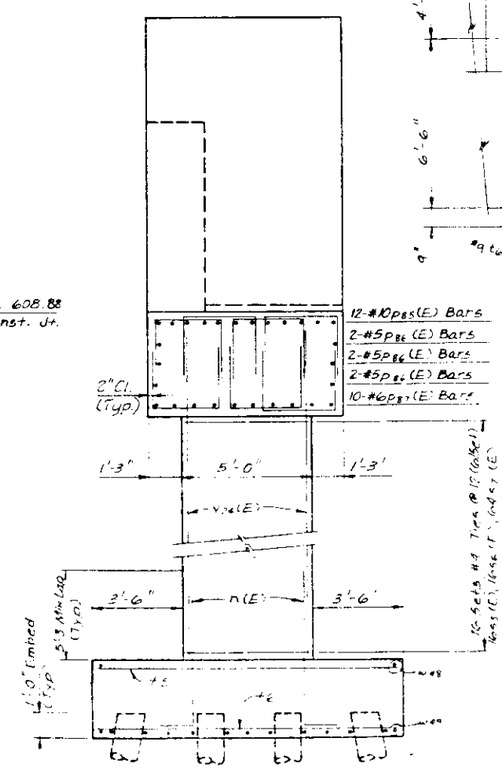
PLAN-SECTION A-A



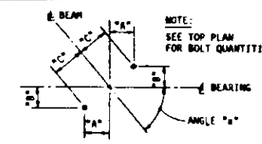
FOOTING PLAN



ELEVATION



END VIEW



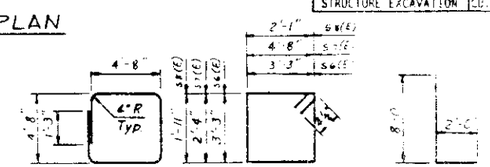
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

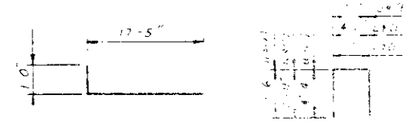
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
G2A	89°24'15"	11"	1/8"	11"
G2B	88°35'32"	11"	1/4"	11"
N181	90°37'49"	1'-1 3/4"	1/8"	1'-1 3/4"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	50	#5	7'-0"	
h6(E)	16	#5	18'-5"	
n(E)	24	#10	10'-0"	
P85(E)	12	#10	17'-5"	
P86(E)	6	#5	17'-5"	
P87(E)	10	#6	17'-5"	
s5(E)	16	#4	19'-9"	
s6(E)	16	#4	13'-9"	
s7(E)	64	#4	14'-9"	
s8(E)	40	#4	8'-9"	
t5	14	#5	11'-8"	
t6	14	#5	11'-8"	
u7(E)	24	#5	9'-6"	
u8(E)	128	#5	10'-8"	
u9(E)	5	#5	10'-2"	
V24(E)	24	#10	17'-9"	
V25(E)	34	#9	7'-0"	
V26(E)	16	#9	10'-8"	
w48	13	#5	13'-2"	
w49	13	#9	17'-2"	
REINFORCEMENT BARS (EPOXY COATED)			LBS	9970
REINFORCEMENT BARS			LBS	1490
CLASS "X" CONCRETE			CU. YDS.	64.7
CONCRETE REMOVAL			CU. YDS.	3.2
3/4" EXPANSION BOLTS			EA.	11
TEMPORARY SHEET PILING			SQ. FT.	1,174
FURNISHING CONC. PILES			LIN. FT.	465
DRIVING CONC. PILES			LIN. FT.	465
TEST PILES (CONCRETE)			EACH	1
STRUCTURE EXCAVATION			CU. YDS.	62



BAR s5(E) BARS s6(E), s7(E) & s8(E) BAR n(E)



BAR h6(E) BARS u7(E), u8(E) & u9(E)

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE (1/4 WALL)
CAPACITY: 40 TONS
EST. LENGTH: 3[illegible] FT.
NO. REQUIRED: 16 (INCL. 1 TEST PILE)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

STANLEY CONSULTANTS

PIER NO. 18 - EAST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+48

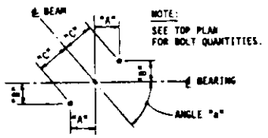
C5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	96
F.A. RTE. A. REG. 4	ILLINOIS	FED. AID PROJ.		

SHEET NO. 36
53 SHEETS

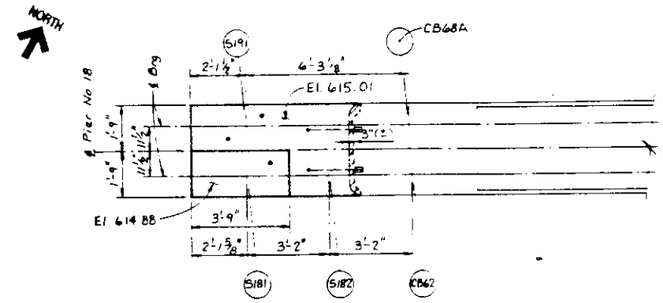
*1988-093 BY



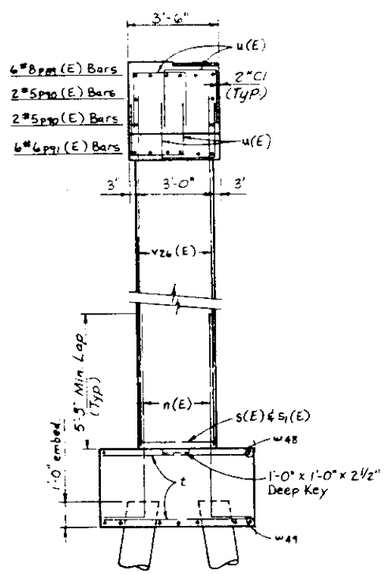
NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

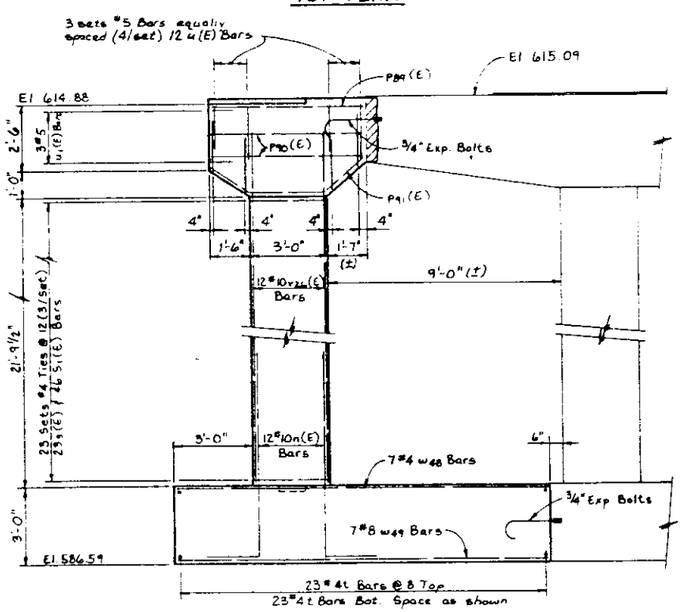
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S18I	89°55'24"	1'-1 3/4"	-	1'-1 3/4"
S19I	88°36'12"	1'-2 1/4"	3/8"	1'-2 1/4"



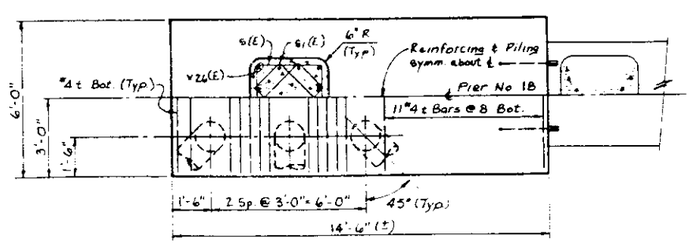
TOP PLAN



END VIEW



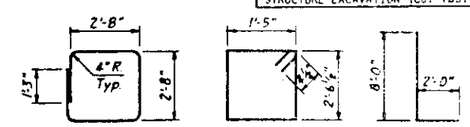
ELEVATION



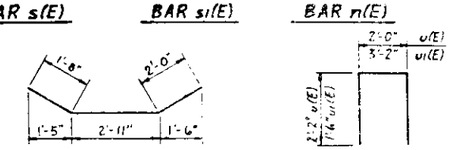
FOOTING PLAN

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#10	10'-0"	
P89(E)	6	#8	6'-0"	
P90(E)	4	#5	6'-0"	
P91(E)	6	#6	6'-7"	
s(E)	23	#4	11'-4"	
s1(E)	46	#4	8'-8"	
t	46	#4	5'-8"	
u(E)	24	#5	6'-4"	
u1(E)	3	#5	6'-2"	
v26(E)	12	#10	24'-5"	
w48	7	#4	14'-2"	
w49	7	#8	14'-2"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.		2580
REINFORCEMENT BARS		LBS.		510
CLASS "X" CONCRETE		CU. YDS.		19.3
CONCRETE REMOVAL		CU. YDS.		.1
3/4" EXPANSION BOLTS		EA.		4
1" EXPANSION BOLTS		EA.		-
FURNISHING CONC PILES		LIN. FT.		186
DRIVING CONC PILES		LIN. FT.		186
TEST PILES		EACH		-
STRUCTURE EXCAVATION		CU. YDS.		41



BAR s(E) BAR s1(E) BAR n(E)



BAR p91(E) BARS u(E) & u1(E)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 6

PIER NO. 18 - WEST END

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

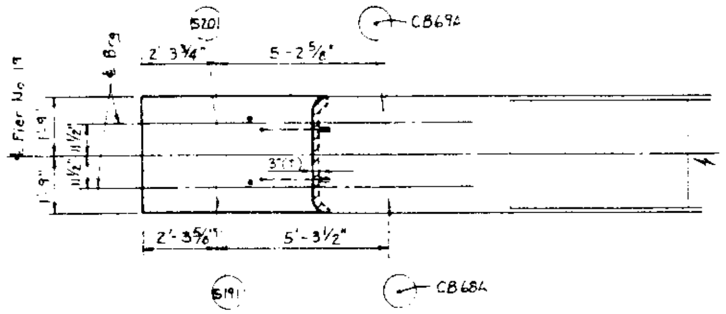
C58

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

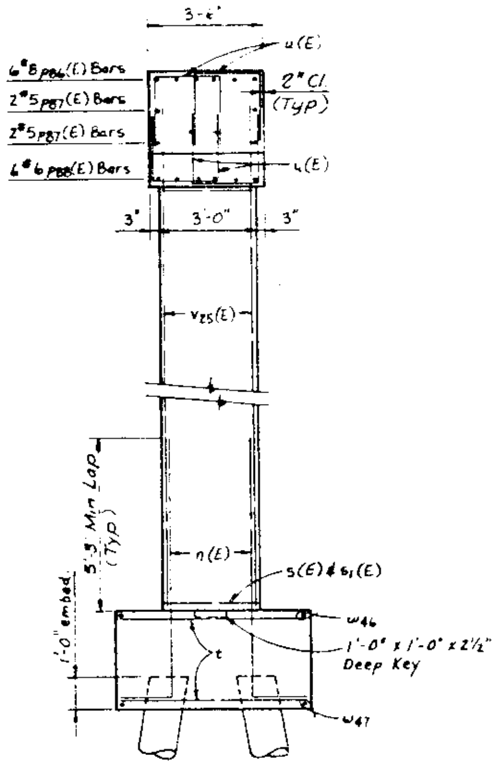
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	•		395	97

SHEET NO. 37
83 SHEETS

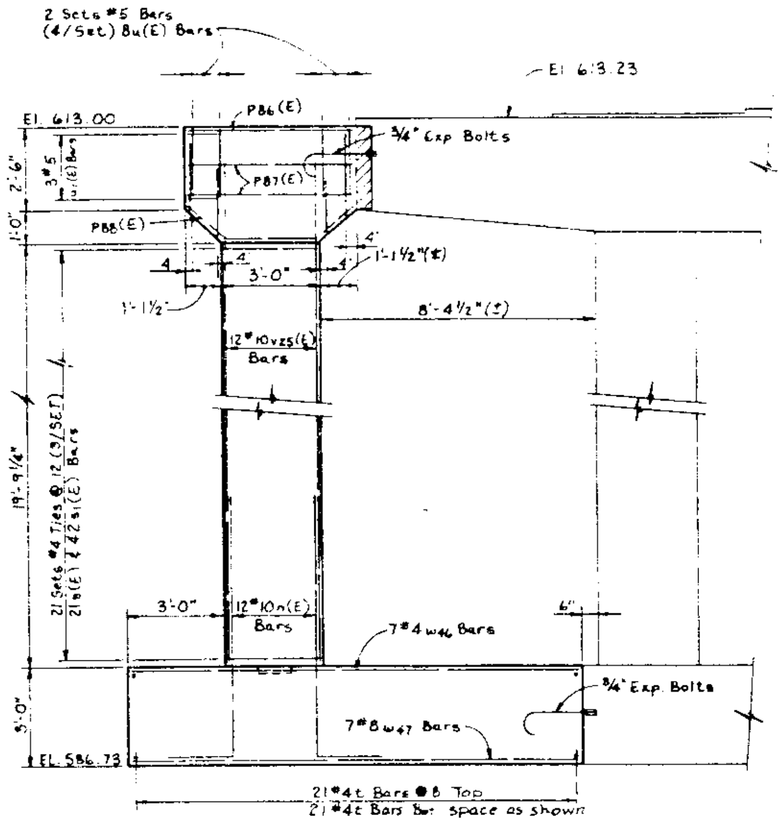
1988-093 BY



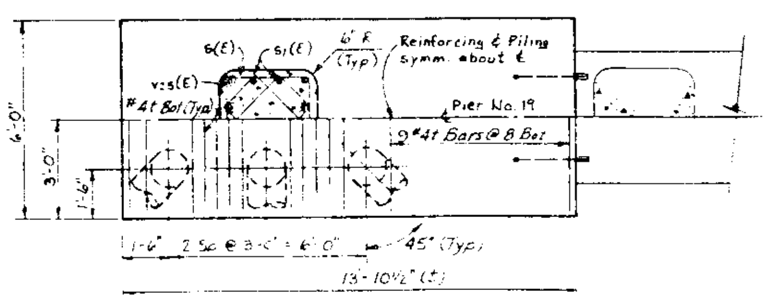
TOP PLAN



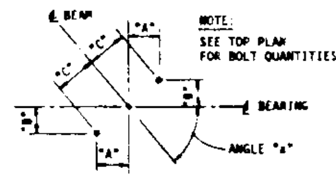
END VIEW



ELEVATION



FOOTING PLAN



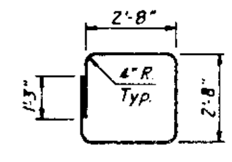
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S191	88°36'12"	1'-1 3/4"	5/16"	1'-1 3/4"
S201	87°13'55"	1'-1 3/4"	11/16"	1'-1 3/4"

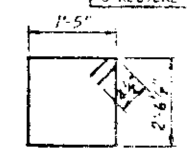
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
P(E)	12	#10	[illegible]	
P86(E)	6	#8	5'-[illegible]	
P87(E)	4	#5	5'-2"	
P88(E)	6	#6	5'-10"	
S(E)	21	#4	11'-4"	
S1(E)	42	#4	[illegible]	
t	42	#4	5'-6"	
U(E)	16	#5	[illegible]-4"	
U1(E)	[illegible]	#5	[illegible]	
V25(E)	12	#10	22'-1"	
W46	7	#4	13'-6"	
W47	7	#8	13'-6"	

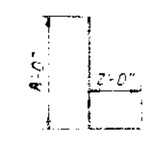
REINFORCEMENT BARS (EPOXY COATED)	LBS.	2340
REINFORCEMENT BARS	LBS.	470
CLASS "X" CONCRETE	CU. YDS.	17.7
CONCRETE REMOVAL	CU. YDS.	.1
3/4" EXPANSION BOLTS	EA.	4
1" EXPANSION BOLTS	EA.	-
FURNISHING CONC PILES	LIN. FT.	186
DRIVING CONC PILES	LIN. FT.	186
TEST PILES	EACH	-
STRUCTURE EXCAVATION	CU. YDS.	39



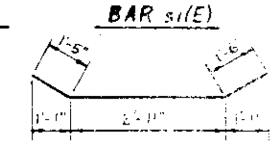
BAR s(E)



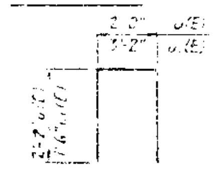
BAR s1(E)



BAR n(E)



BAR p88(E)



BARS u(E) & u1(E)

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS
POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.
BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 6

STANLEY CONSULTANTS

PIER NO. 19
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

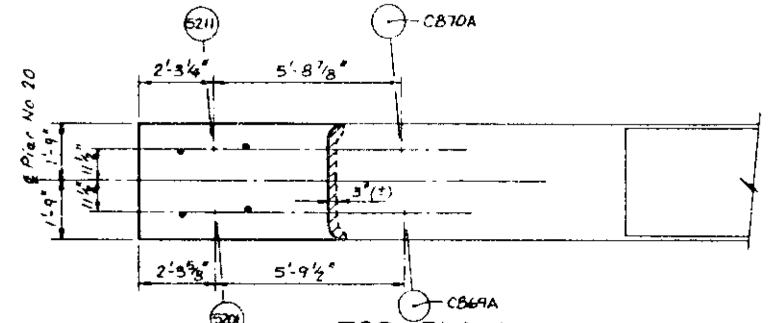
C59

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

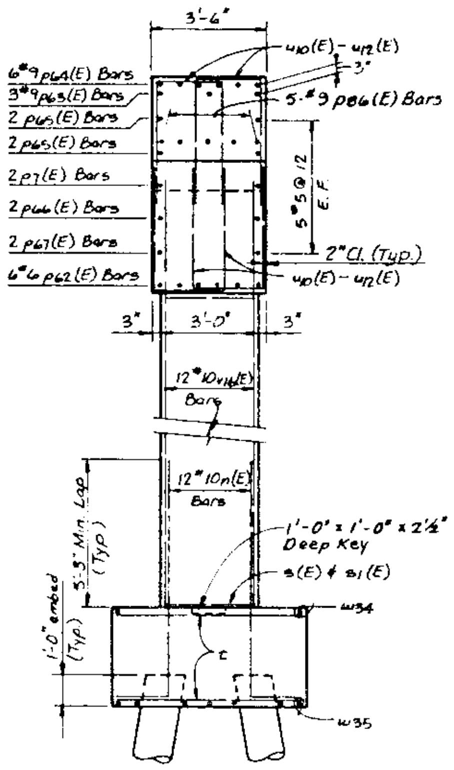
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	98
F. NO. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 38
53 SHEETS

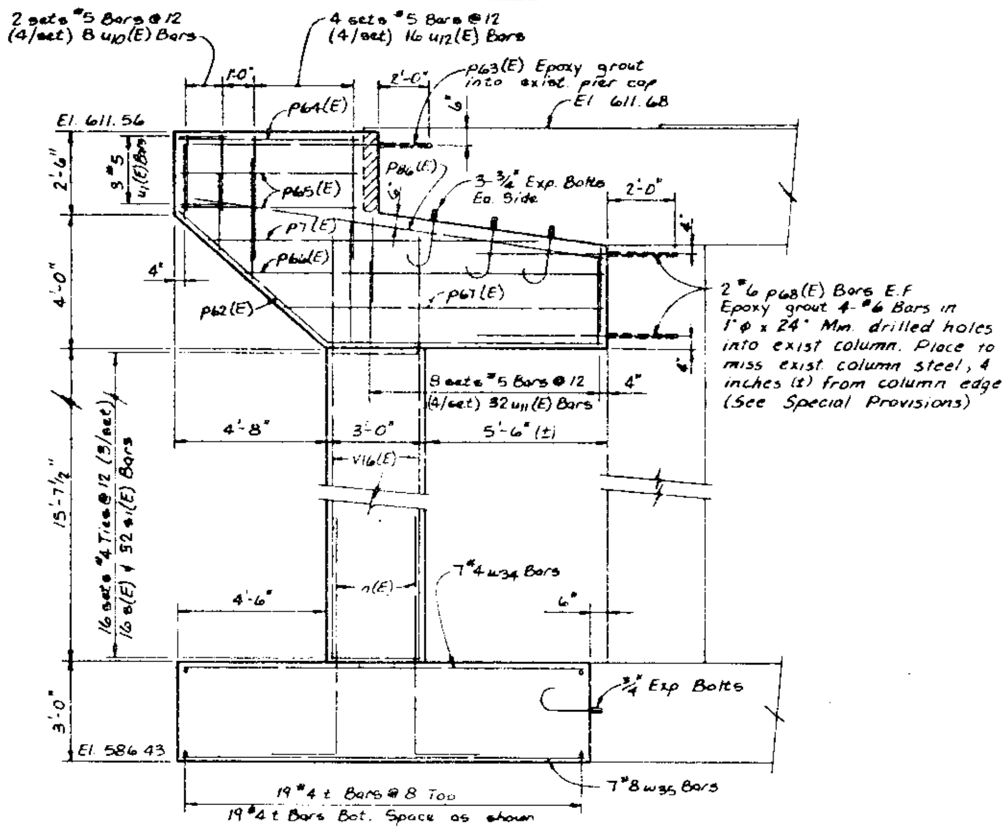
*1988-095BY



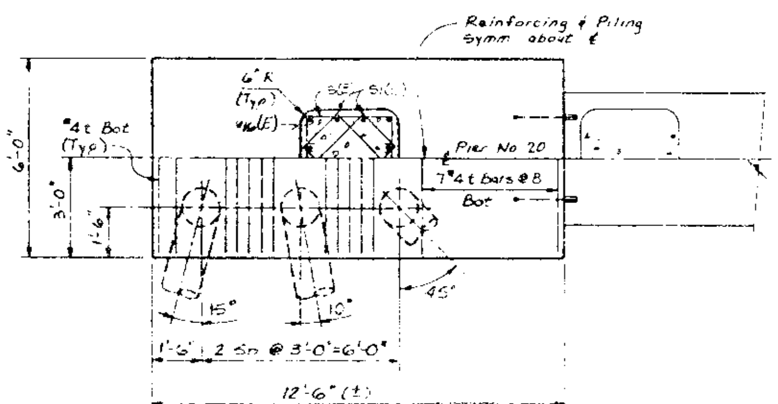
TOP PLAN



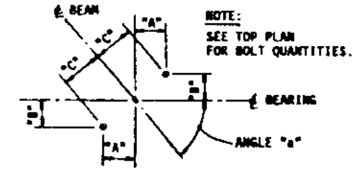
END VIEW



ELEVATION



FOOTING PLAN



NOTE:
SEE TOP PLAN
FOR BOLT QUANTITIES.

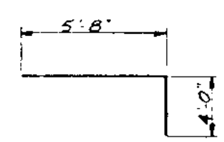
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
5201	87°13'55"	1'-2 1/4"	11/16"	1'-2 1/4"
5211	86°00'50"	1'-2 3/16"	1"	1'-2 1/4"

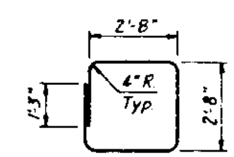
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#10	20'-0"	
P7(E)	2	#5	9'-11"	
P62(E)	6	#6	19'-0"	
P63(E)	3	#9	7'-10"	
P64(E)	6	#9	9'-8"	
P65(E)	4	#5	5'-8"	
P66(E)	2	#5	10'-10"	
P67(E)	2	#5	9'-8"	
P68(E)	4	#6	6'-0"	
P86(E)	5	[illegible]	[illegible]	
S(E)	15	#4	11'-4"	
S1(E)	32	#4	8'-8"	
t	58	#4	5'-8"	
U1(E)	3	#5	6'-2"	
U10(E)	8	#5	6'-4"	
U11(E)	32	#5	7'-2"	
U12(E)	16	#5	10'-9"	
V16(E)	12	#10	18'-6"	
W34	7	#4	12'-2"	
W35	7	#8	12'-2"	

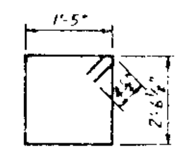
REINFORCEMENT BARS (EPOXY COATED)	LBS.	2990
REINFORCEMENT BARS	LBS.	430
CLASS "X" CONCRETE	CU. YDS.	20.4
CONCRETE REMOVAL	CU. YDS.	.1
3/4" EXPANSION BOLTS	EA.	6
1" EXPANSION BOLTS	EA.	--
FURNISHING CONC PILES	LIN. FT.	186
DRIVING CONC PILES	LIN. FT.	186
TEST PILES	EACH	—
STRUCTURE EXCAVATION	CU. YDS.	36



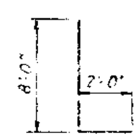
BAR p64(E)



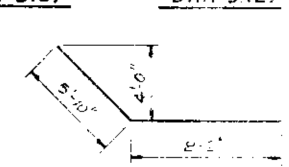
BAR s(E)



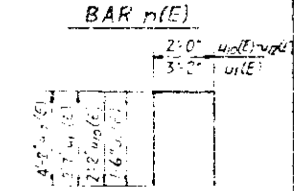
BAR s1(E)



BAR n(E)



BAR p62(E)



BARS u1(E) ⁊ u10(E)-u12(E)

NOTES:

(E) INDICATES EPOXY COATED
REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 6

STANLEY CONSULTANTS

PIER NO. 20

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

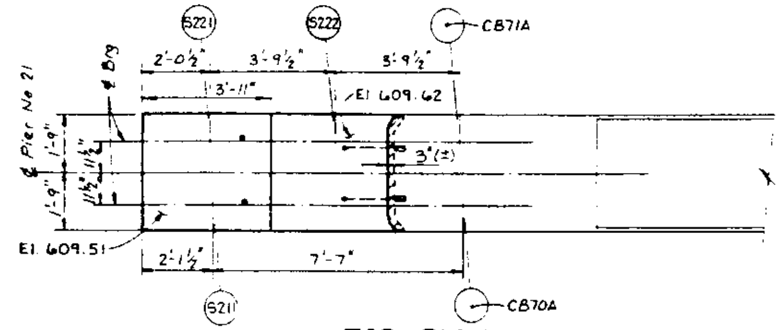
CLC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

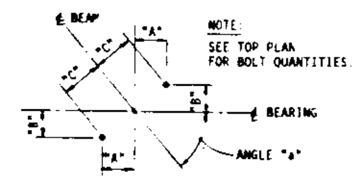
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	99

SHEET NO. 39
53 SHEETS

*1988-093 BY



TOP PLAN



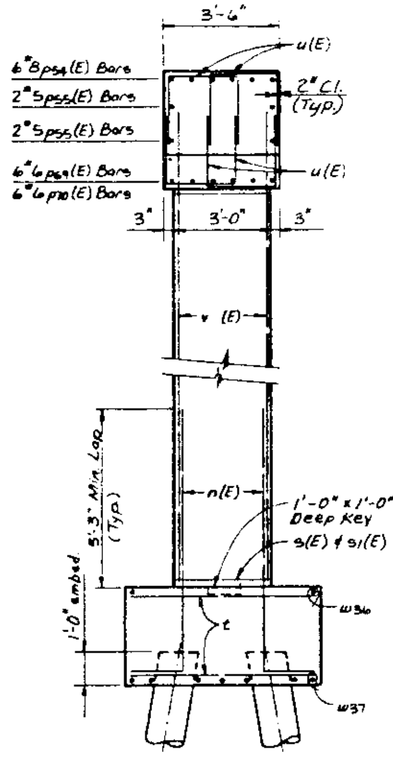
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S211	86°00'50"	1'-1 11/16"	15/16"	1'-1 3/4"
S221	84°45'14"	1'-1 11/16"	1 1/4"	1'-1 3/4"

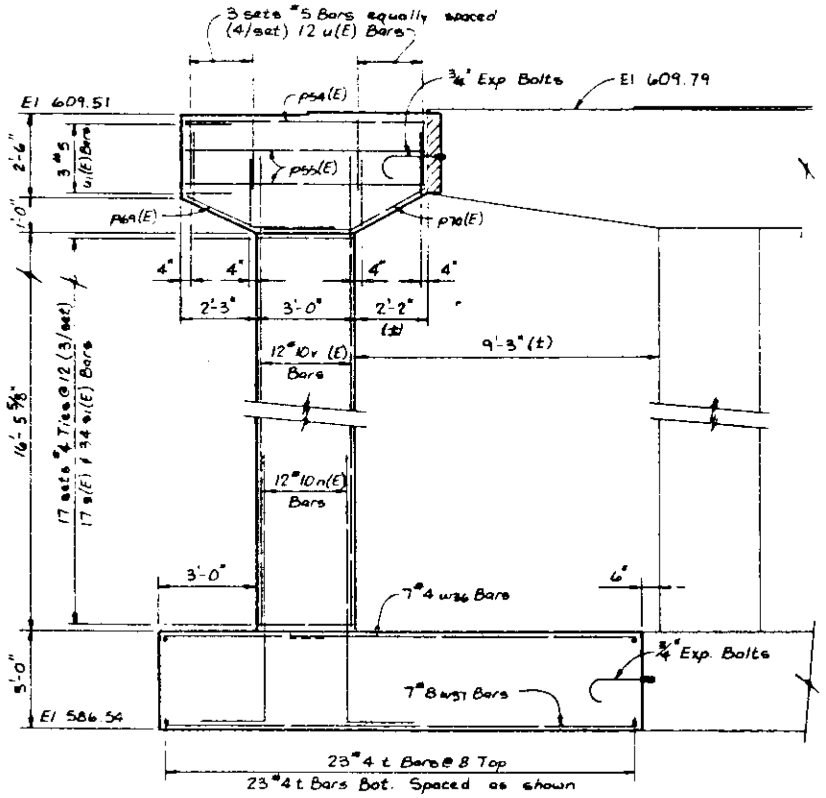
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	12	#10	10'-0"	
P54(E)	6	#8	7'-4"	
P55(E)	4	#5	7'-4"	
P69(E)	6	#6	4'-10"	
P70(E)	6	#6	4'-10"	
S(E)	17	#4	11'-4"	
S1(E)	34	#4	8'-8"	
t	46	#4	5'-8"	
u(E)	24	#5	6'-4"	
u1(E)	3	#5	6'-2"	
v(E)	12	#10	19'-0"	
W36	7	#4	14'-5"	
W37	7	#8	14'-5"	

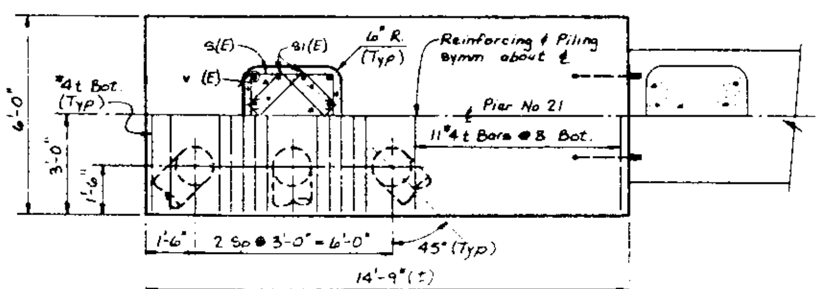
REINFORCEMENT BARS (EPOXY COATED)	LBS.	2240
REINFORCEMENT BARS	LBS.	510
CLASS "X" CONCRETE	CU. YDS.	18.3
CONCRETE REMOVAL	CU. YDS.	.1
3/4" EXPANSION BOLTS	EA.	4
1" EXPANSION BOLTS	EA.	—
FURNISHING CONC PILES	LIN. FT.	155
DRIVING CONC PILES	LIN. FT.	155
TEST PILES	EACH	1
STRUCTURE EXCAVATION	CU. YDS.	41



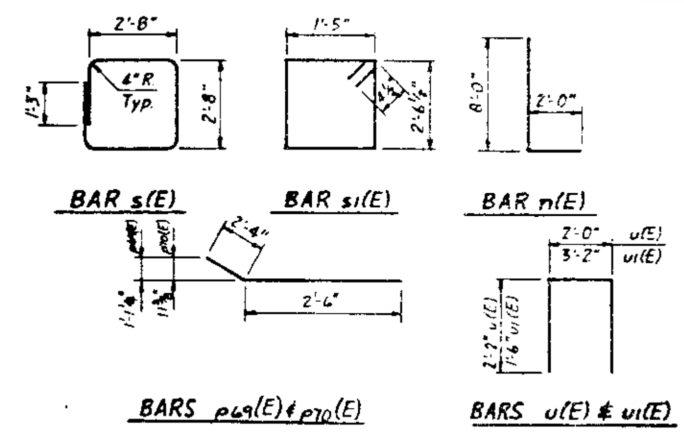
END VIEW



ELEVATION



FOOTING PLAN



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 6 (INCL. 1 TEST PILE)

STANLEY CONSULTANTS

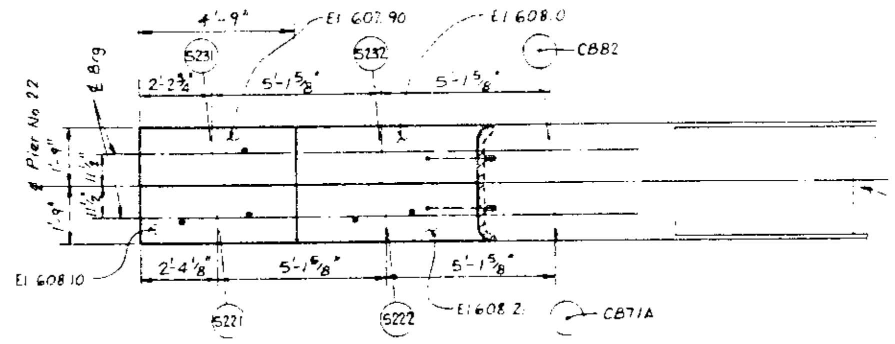
PIER NO. 21

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

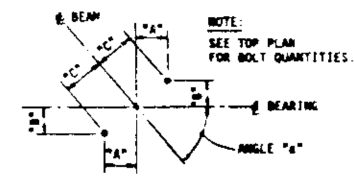
C61

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

*1988-0935BY



TOP PLAN



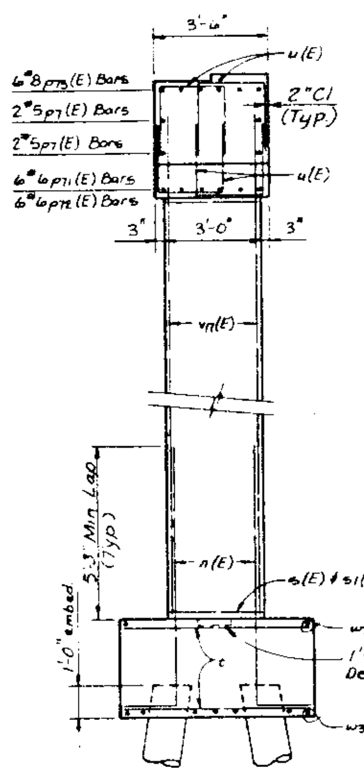
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S221	84°45'14"	1'-2 3/16"	1 5/16"	1'-2 1/4"
S222	86°16'21"	1'-2 1/4"	15/16"	1'-2 1/4"
S231	83°15'48"	1'-1 5/8"	1 5/8"	1'-1 3/4"

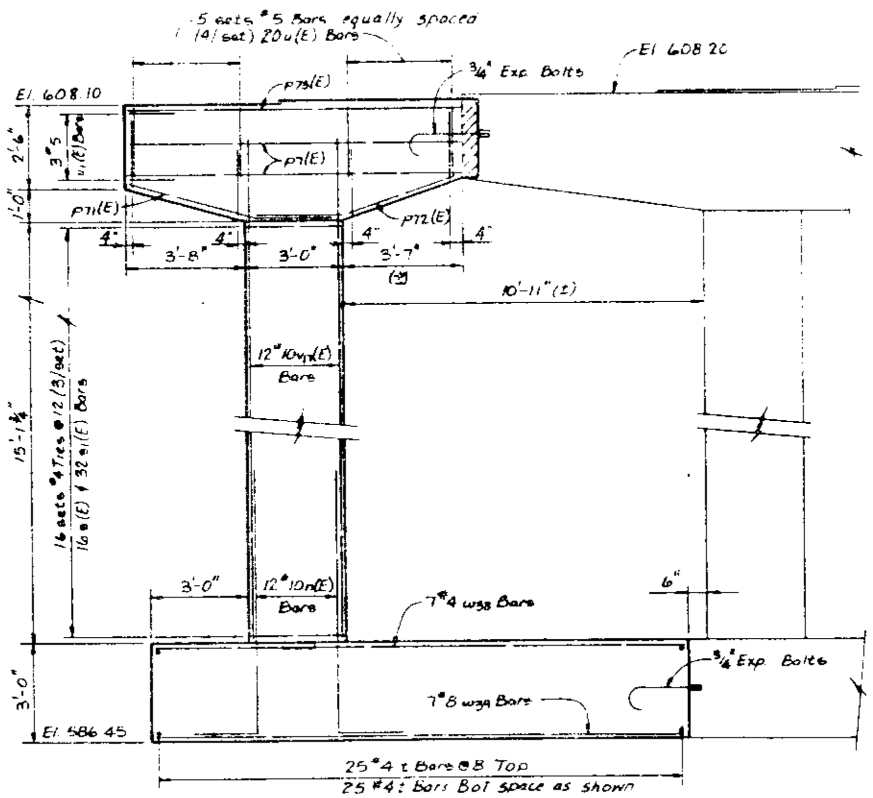
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
E	12	#10	16'-0"	
P7(E)	6	#5	10'-2"	
P71(E)	6	#6	5'-10"	
P72(E)	6	#6	5'-9"	
P73(E)	6	#8	10'-2"	
S(E)	30	#4	11'-4"	
S1(E)	32	#4	6'-8"	
T	50	#4	5'-8"	
U(E)	40	#5	6'-4"	
U1(E)	5	#5	6'-2"	
V12(E)	12	#10	17'-0"	
W38	7	#4	16'-1"	
W39	7	#8	16'-2"	

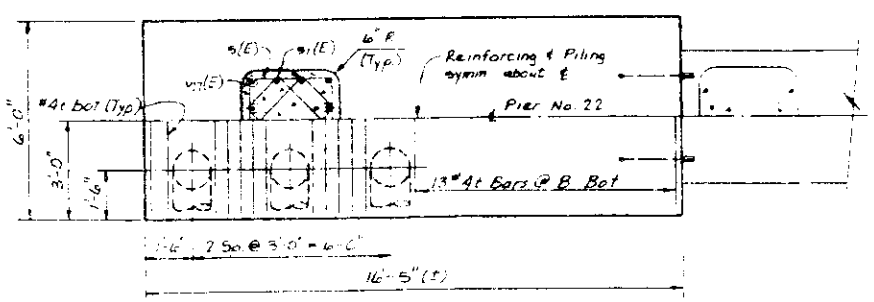
REINFORCEMENT BARS (EPOXY COATED)	LBS.	2,320
REINFORCEMENT BARS	LBS.	570
CLASS "X" CONCRETE	CU. YDS.	20.1
CONCRETE REMOVAL	CU. YDS.	.1
3/4" EXPANSION BOLTS	EA.	4
1" EXPANSION BOLTS	EA.	-
FURNISHING CONC PILES	LIN. FT.	186
DRIVING CONC PILES	LIN. FT.	186
TEST PILES	EACH	—
STRUCTURE EXCAVATION	CU. YDS.	45



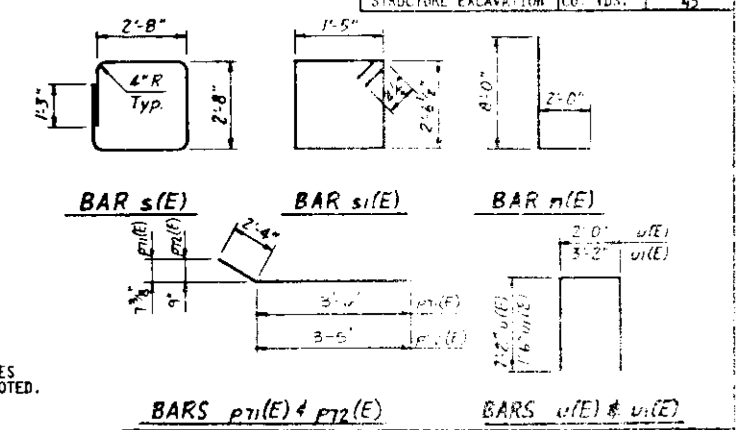
END VIEW



ELEVATION



FOOTING PLAN



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

▨ INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 6

STANLEY CONSULTANTS

PIER NO. 22

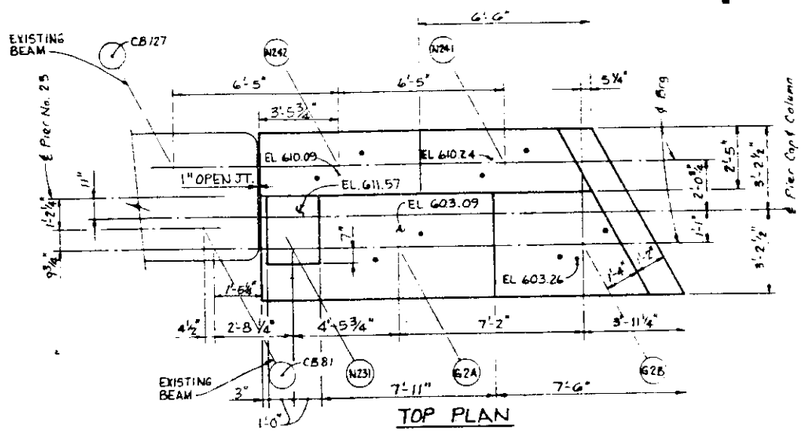
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SEC.	COUNTY	CONTR. NO.	SHEET NO.
FAI 90/94	*	COOK	395	101
D. HW. A. REV. 4		ILLINOIS FED. AID PROJ.		

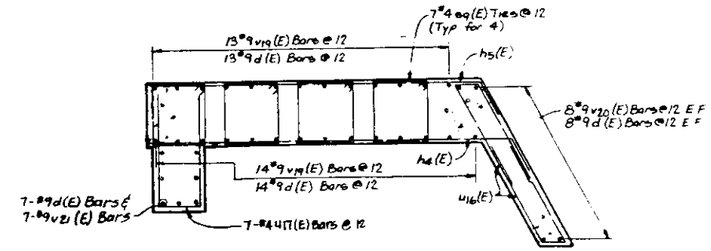
SHEET NO. 41
53 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

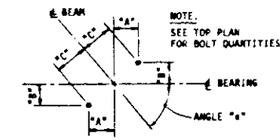
NORTH



TOP PLAN



PLAN-SECTION A-A



NOTE.
SEE TOP PLAN FOR BOLT QUANTITIES.

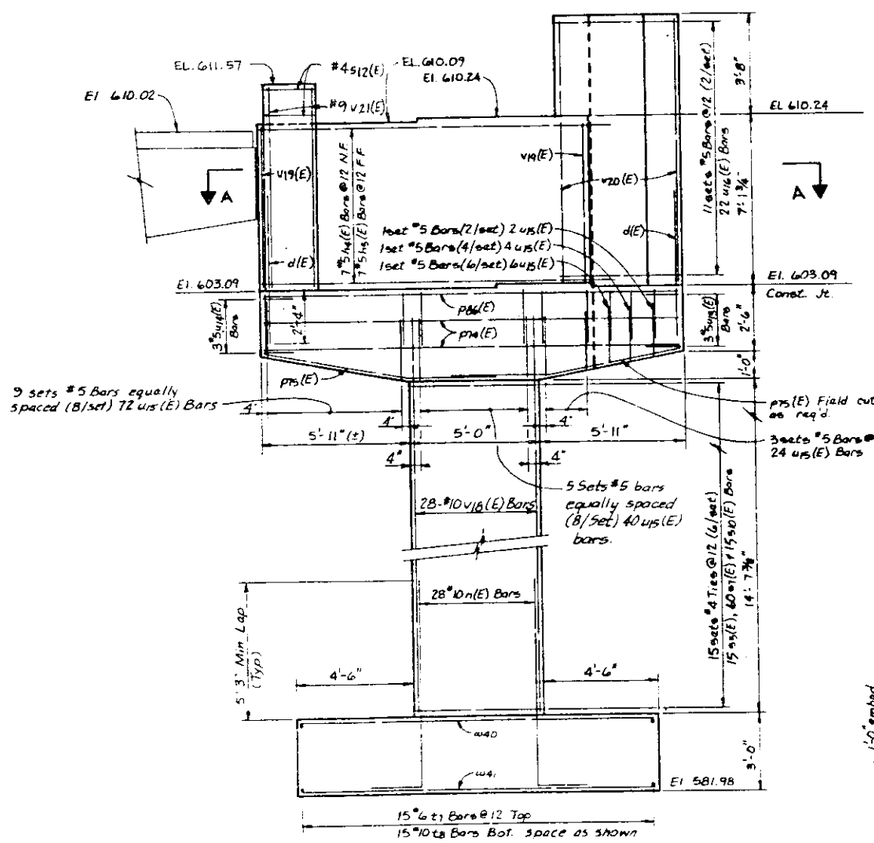
ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
G2B	61°22'20"	9 5/8"	5 1/4"	11"
N241	60°47'30"	1'-0 7/16"	6 15/16"	1'-2 1/4"
N242	62°24'22"	1'-0 5/8"	6 5/8"	1'-2 1/4"
G2A	62°11'03"	9 3/4"	5 1/8"	11"

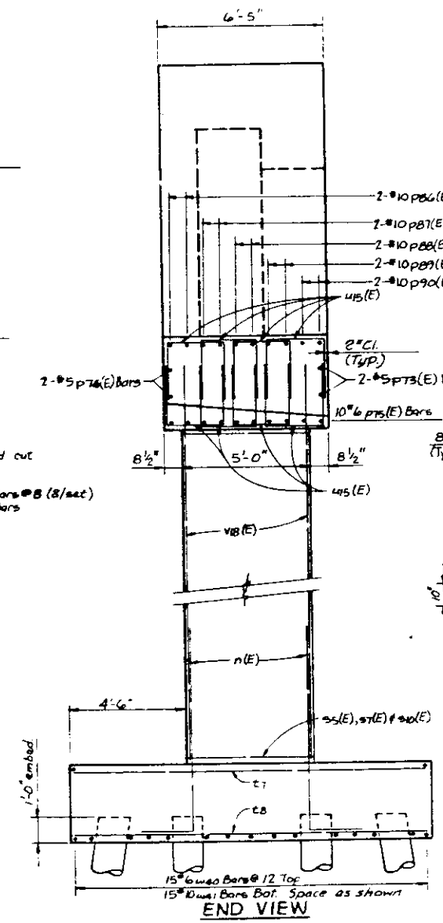
*1988-093 BY

BILL OF MATERIAL

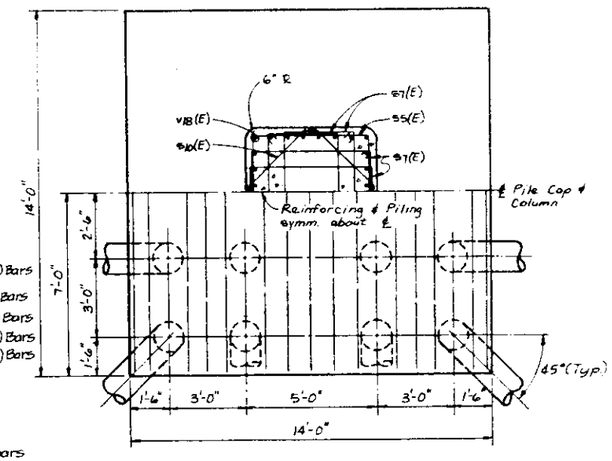
BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	50	#9	7'-0"	
h4(E)	7	#5	14'-9"	
h5(E)	7	#5	13'-7"	
n(E)	28	#10	10'-0"	
p73(E)	2	#5	13'-1"	
p74(E)	2	#5	16'-1"	
p75(E)	20	#6	9'-0"	
p86(E)	2	#10	16'-1"	
p87(E)	2	#10	15'-3"	
p88(E)	2	#10	14'-4"	
p89(E)	2	#10	13'-9"	
p90(E)	2	#10	13'-1"	
s5(E)	13	#4	19'-9"	
s7(E)	62	#5	15'-7"	
s9(E)	26	#5	8'-11"	
s10(E)	15	#5	14'-1"	
s12(E)	2	#4	8'-3"	
t7	15	#6	13'-8"	
t8	15	#10	13'-8"	
u13(E)	3	#5	10'-0"	
u14(E)	3	#5	9'-1"	
u15(E)	148	#5	6'-7"	
u16(E)	22	#5	9'-3"	
u17(E)	7	#4	10'-4"	
v18(E)	28	#10	17'-6"	
v19(E)	27	#9	6'-7"	
v20(E)	16	#9	10'-5"	
v21(E)	7	#9	8'-3"	
w40	15	#6	13'-8"	
w41	15	#10	13'-8"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.		9500
REINFORCEMENT BARS		LBS.		2380
CLASS "X" CONCRETE		CU. YDS.		60.8
CONCRETE REMOVAL		CU. YDS.		-
3/4" EXPANSION BOLTS		EA.		—
TEMPORARY SHEET PILING		SQ.FT.		1,320
FURNISHING CONC PILES		LIN. FT.		465
DRIVING CONC PILES		LIN. FT.		465
TEST PILES (CONCRETE)		EACH		1
STRUCTURE EXCAVATION		CU. YDS.		72



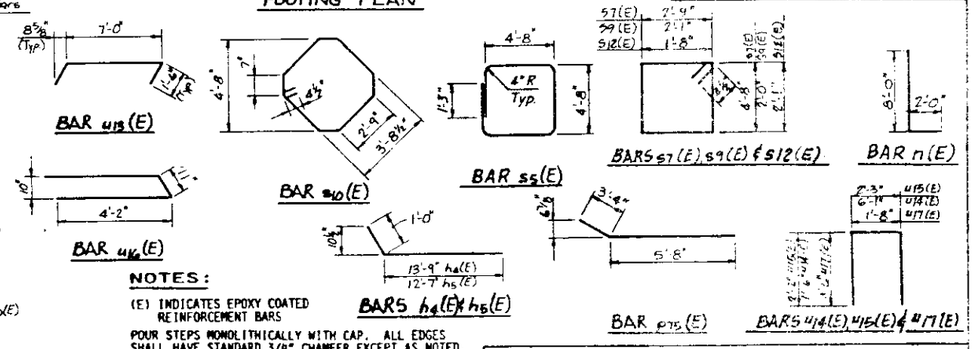
ELEVATION



END VIEW



FOOTING PLAN



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE (¼" WALL)
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 16 (INCL. 1 TEST PILE)

STANLEY CONSULTANTS

PIER NO. 23 - EAST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

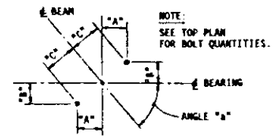
STATION 409+46

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	102
F.A.I. RTE. 4		ILLINOIS	FED. AID PROJECT	

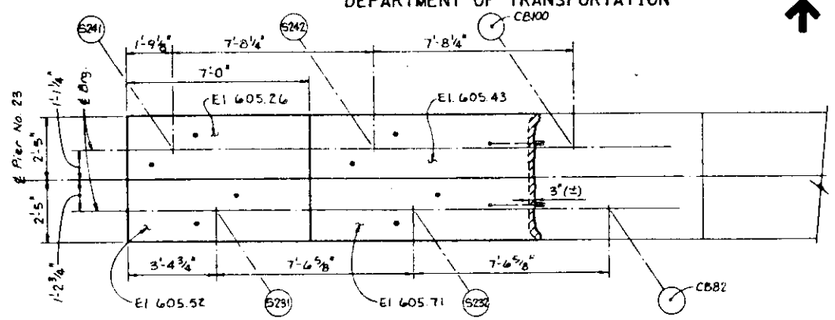
SHEET NO. 42
53 SHEETS

*1988-095 BY

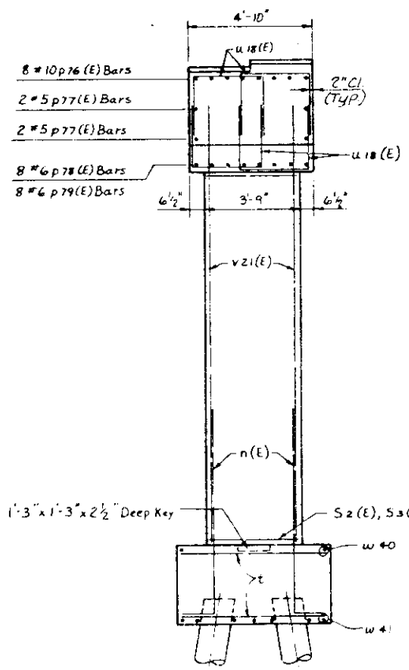


ANCHOR BOLT LAYOUT

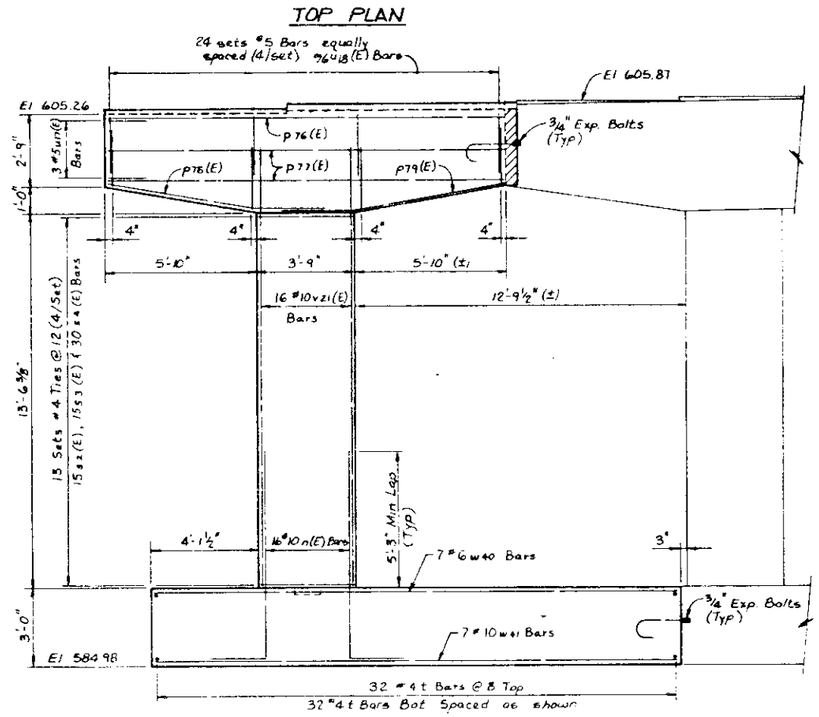
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S231	56°02'36"	11 13/16"	7 15/16"	1'-2 1/4"
S232	56°54'54"	11 15/16"	7 3/4"	1'-2 1/4"
S241	53°52'09"	11 1/2"	8 3/8"	1'-2 1/4"
S242	52°19'12"	11 1/4"	8 11/16"	1'-2 1/4"



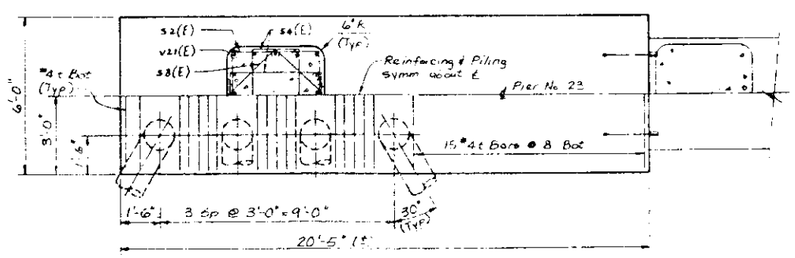
TOP PLAN



END VIEW



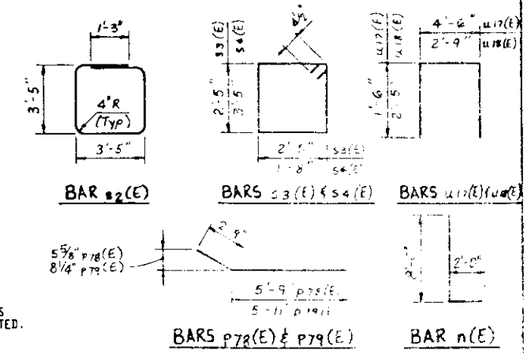
ELEVATION



FOOTING PLAN

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	16	#10	10'-0"	L
p76(E)	8	#10	15'-4"	
p77(E)	4	#5	15'-4"	
p78(E)	8	#6	8'-6"	
p79(E)	8	#6	8'-8"	
s2(E)	15	#4	14'-4"	
s3(E)	15	#4	10'-5"	
s4(E)	30	#4	10'-11"	
t	64	#4	5'-8"	
u17(E)	3	#5	7'-6"	
u18(E)	96	#5	7'-7"	
v21(E)	16	#10	16'-9"	
w40	7	#6	20'-1"	
w41	7	#10	20'-1"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	3890
REINFORCEMENT BARS			LBS.	1060
CLASS "X" CONCRETE			CU. YDS.	30.1
CONCRETE REMOVAL			CU. YDS.	.1
3/4" EXPANSION BOLTS			EA.	4
TEMPORARY SHEET PILING			SQ.FT.	1,234
FURNISHING CONC PILES			LIN. FT.	217
DRIVING CONC PILES			LIN. FT.	217
TEST PILES			EACH	1
STRUCTURE EXCAVATION			CU. YDS.	54



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 8 (INCL. 1 TEST PILE)

PIER NO. 23 - WEST END

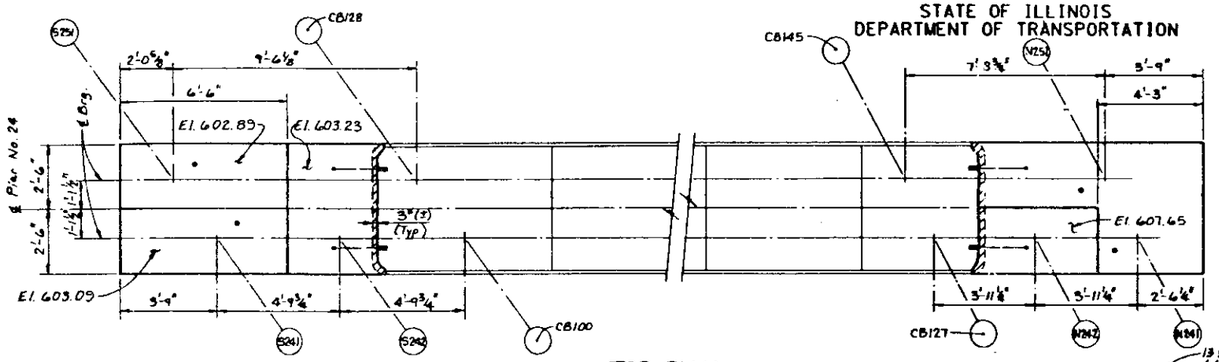
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

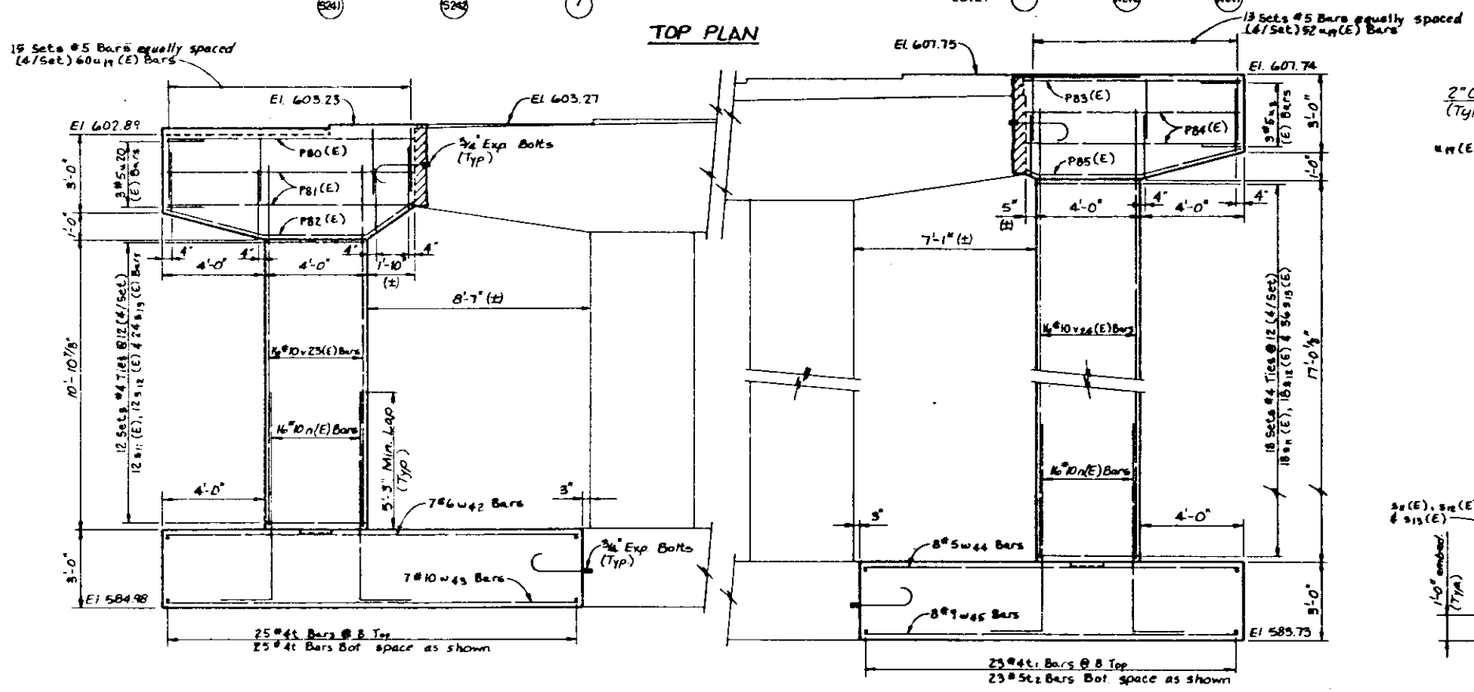
C64

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

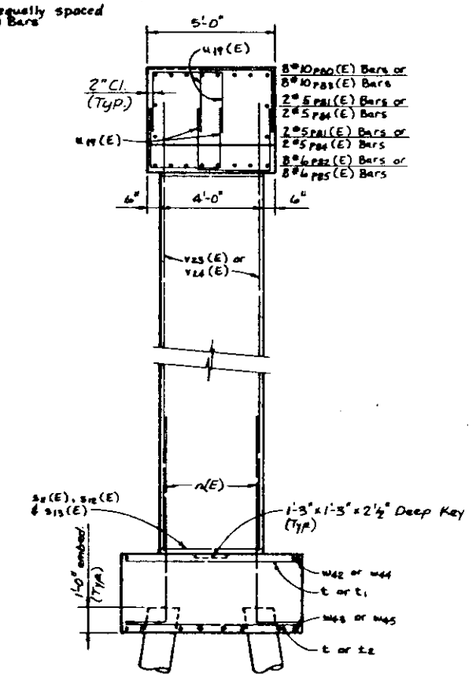
NORTH



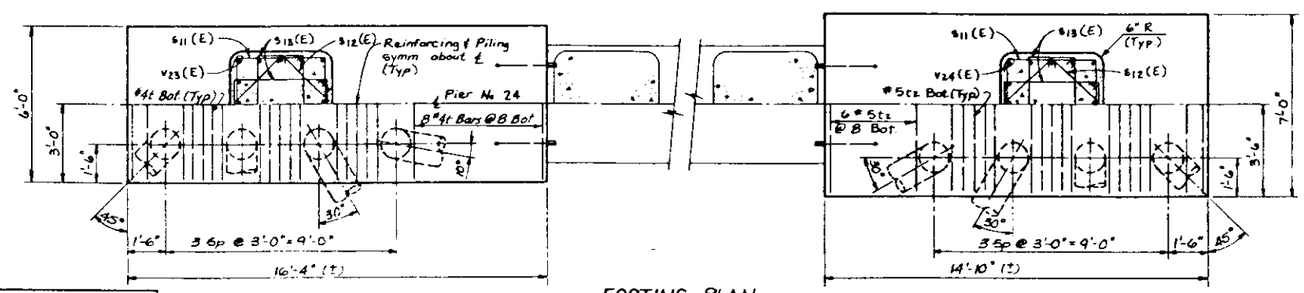
TOP PLAN



ELEVATION

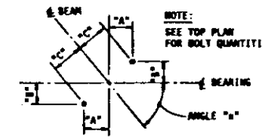


END VIEW



FOOTING PLAN

NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.



ANCHOR BOLT LAYOUT

BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
S241	53°52'09"	11 1/8"	8 1/8"	1'-1 3/4"
N241	60°47'30"	1'-0"	6 11/16"	1'-1 3/4"
S251	51°59'19"	10 13/16"	8 7/16"	1'-1 3/4"
N251	61°43'23"	1'-0 1/8"	6 1/2"	1'-1 3/4"

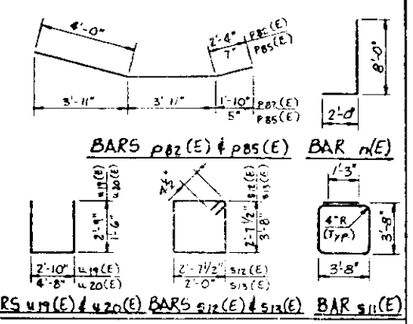
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
			395	103
F. AID. & REC. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 43
53 SHEETS

*1988-093 BY

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
n(E)	32	#10	10'-0"	
p80(E)	8	#10	9'-9"	
p81(E)	4	#5	9'-9"	
p82(E)	8	#6	10'-3"	
p83(E)	8	#10	8'-4"	
p84(E)	4	#5	8'-4"	
p85(E)	8	#6	8'-6"	
s11(E)	30	#4	15'-4"	
s12(E)	30	#4	11'-3"	
s13(E)	60	#4	12'-1"	
t	50	#4	5'-8"	
t1	23	#4	6'-8"	
t2	23	#5	6'-8"	
u19(E)	112	#5	8'-4"	
u20(E)	6	#5	7'-8"	
v23(E)	16	#10	13'-8"	
v24(E)	16	#10	19'-9"	
w42	7	#6	16'-0"	
w43	7	#10	16'-0"	
w44	8	#5	14'-6"	
w45	8	#9	14'-6"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	6640
REINFORCEMENT BARS			LBS.	1620
CLASS "X" CONCRETE			CU. YDS.	51.3
CONCRETE REMOVAL			CU. YDS.	.3
3/8" EXPANSION BOLTS			EA.	8
TEMPORARY SHEET PILING			SQ. FT.	2,101
FURNISHING CONC PILES			LIN. FT.	434
DRIVING CONC PILES			LIN. FT.	434
TEST PILES			EACH	2
STRUCTURE EXCAVATION			CU. YDS.	91



NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

POUR STEPS MONOLITHICALLY WITH CAP. ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED. BATTER PILES IN DIRECTION SHOWN 6:1.

INDICATES CONCRETE REMOVAL

PILE DATA:

TYPE: 14" METAL SHELL CONC. PILE
CAPACITY: 40 TONS
EST. LENGTH: 31 FT.
NO. REQUIRED: 16 (INCL. 2 TEST PILES ONE EACH SIDE)

STANLEY CONSULTANTS

PIER NO. 24

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

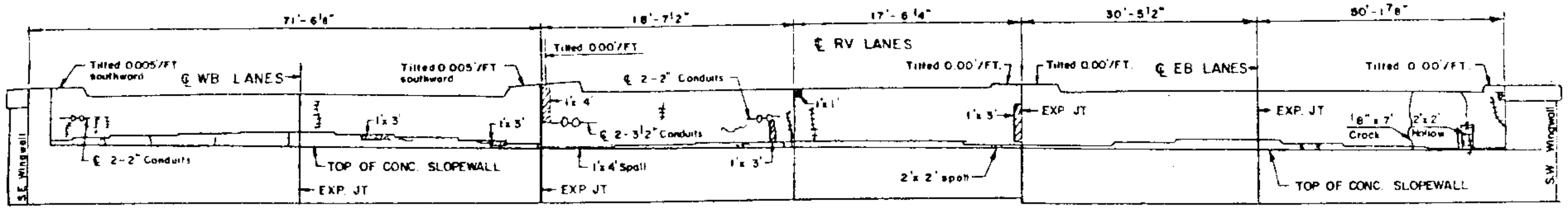
C65

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
			395	104

SHEET NO. 44
53 SHEETS

"1968-015 BY

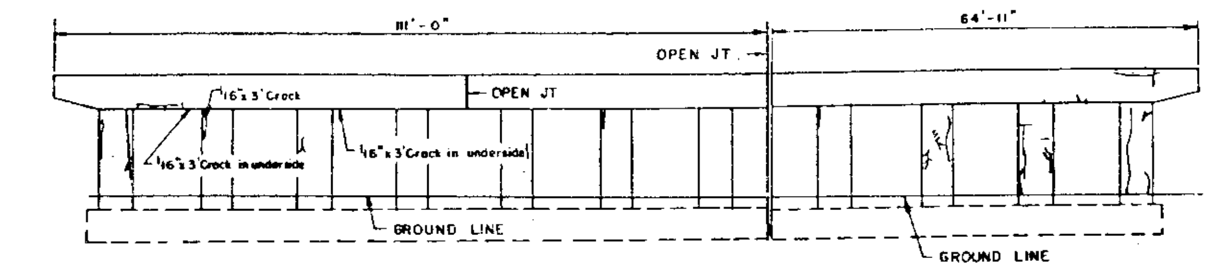
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



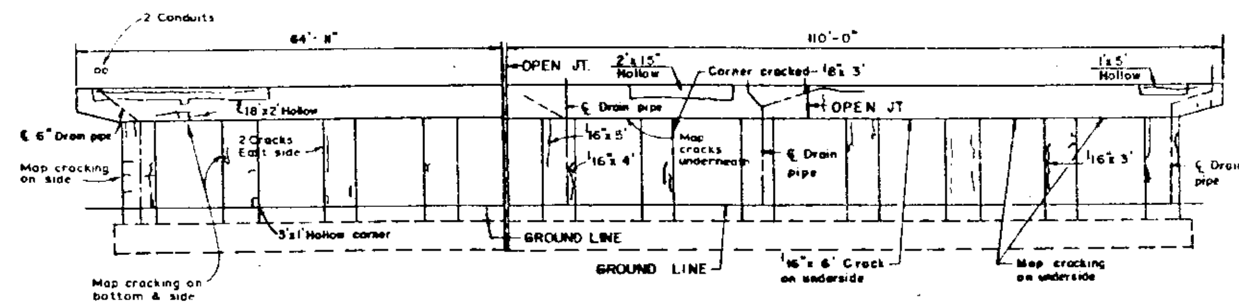
SOUTH ABUTMENT LOOKING SOUTH

NOTES:

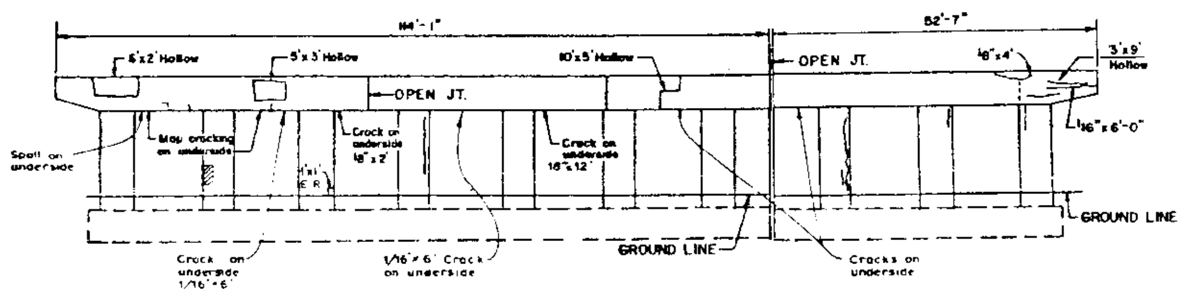
1. THIS DRAWING SHOWS AREAS WHERE CONCRETE SPALLING AND CRACKING HAVE BEEN OBSERVED AT THE EXISTING PIERS AND ABUTMENTS.
2. TO DETERMINE EXACT AREAS WHERE DETERIORATION REQUIRES CONCRETE REPAIR, CONCRETE SURFACES SHALL BE SOUNDED WITH HAMMER TO DETECT LOOSE OR DEFECTIVE AREAS THAT MAY EXIST.
3. SEE SPECIAL PROVISIONS FOR PROCEDURES DESCRIBING THE REHABILITATION WORK.
4. REPAIR AREAS SHOWN REFLECT AN INDEPENDENT FIELD INSPECTION PERFORMED UNDER THE DIRECTION OF IDOT. REPAIR OF THE EXISTING SUBSTRUCTURE SHALL INCLUDE BUT NOT BE LIMITED TO THESE AREAS. ALL LIMITS OF REPAIR SHALL BE AS DIRECTED BY THE ENGINEER.
5. FOR REPAIR DEPTHS < 1-1/2", USE EPOXY MORTAR REPAIR (SEE SPECIAL PROVISIONS.
6. ANY AREAS REQUIRING REPAIR WHICH ARE INACCESSIBLE DURING THIS CONTRACT SHALL BE NOTED AS SUCH ON THE CONSTRUCTION PLANS AS DIRECTED BY THE ENGINEER. REPAIR OF THESE AREAS SHALL BE INCLUDED IN A FUTURE CONTRACT.
7. FOR CONCRETE REMOVAL AND REPLACE DETAILS, SEE "CONCRETE REPAIR DETAILS" ELSEWHERE IN THE PLANS.



PIER NO. 1 - LOOKING NORTH



PIER NO. 1 - LOOKING SOUTH



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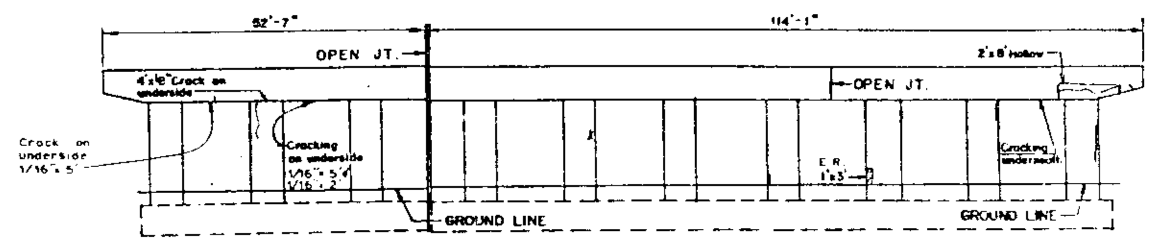


PIER NO. 2 - LOOKING SOUTH

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 1 OF 9

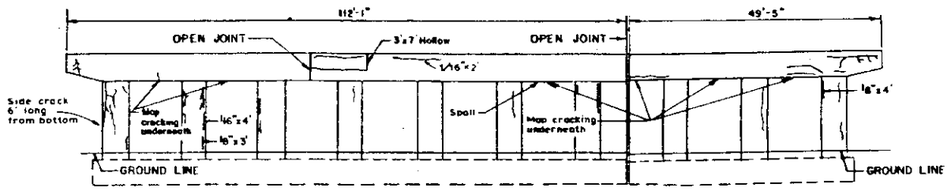
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	105
F.A. RR. & REC. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 45
53 SHEETS

*1988-095BY



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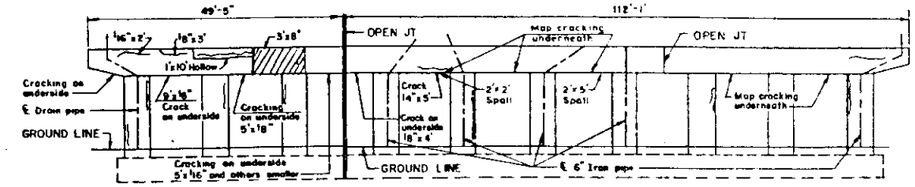

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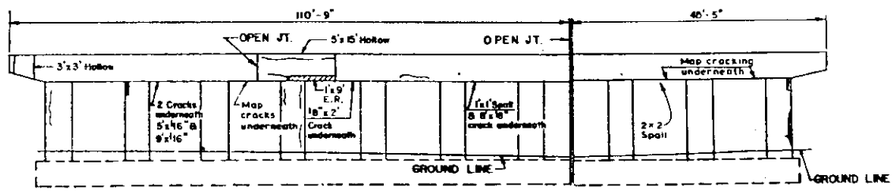

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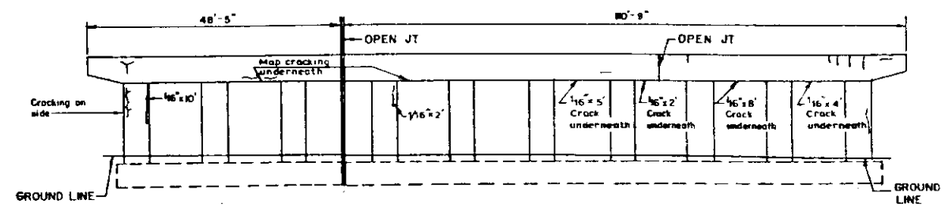

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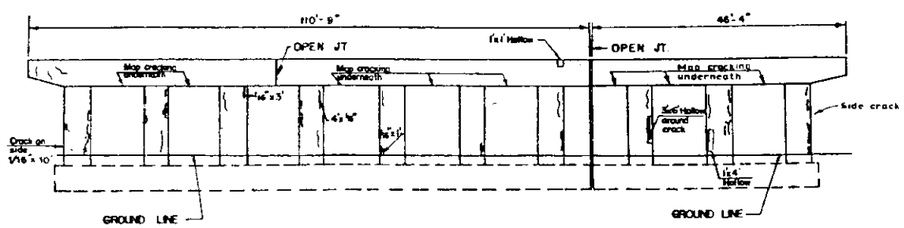

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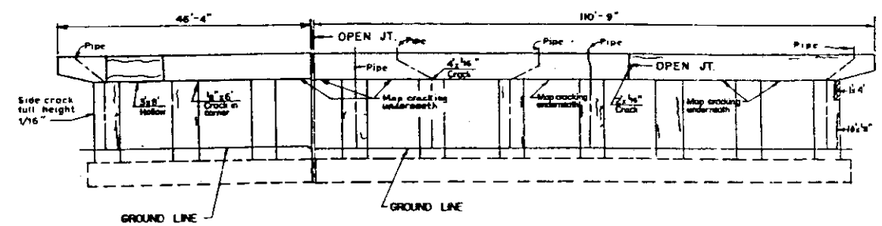


PIER NO. 5 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND
E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING
LEACHING
SPALLS

SUBSTRUCTURE REHABILITATION
SHEET 2 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

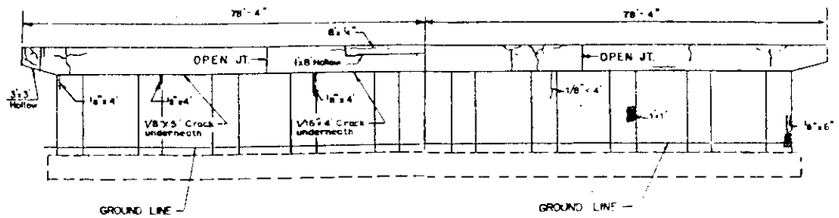
C67

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	106
F.A.I. RTE. 94	ILLINOIS FED. AID PROJECT			

*1988-095 BY

SHEET NO. 46
53 SHEETS



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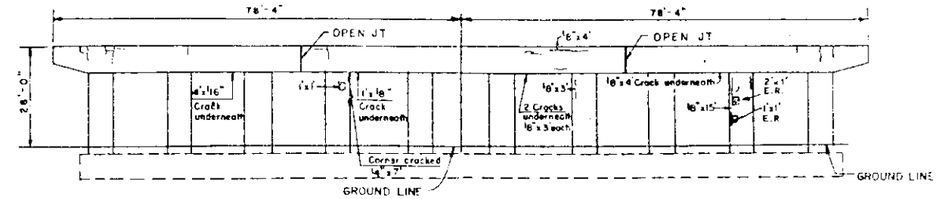

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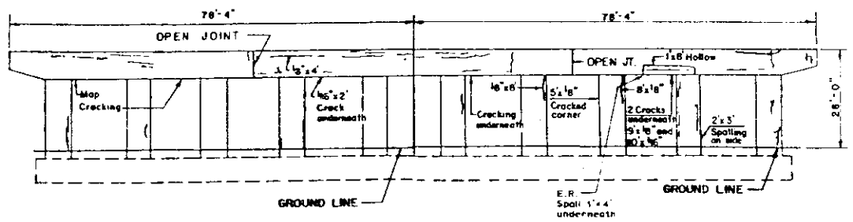

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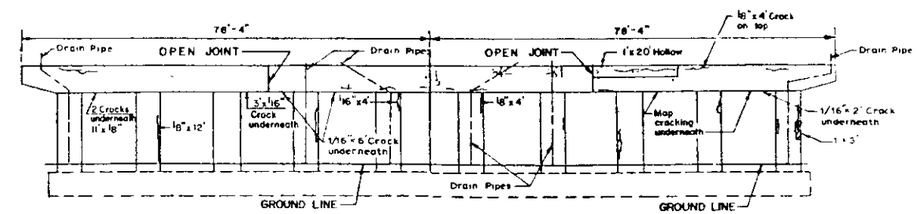

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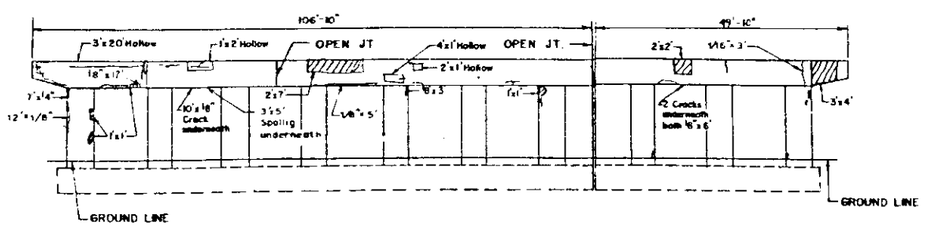

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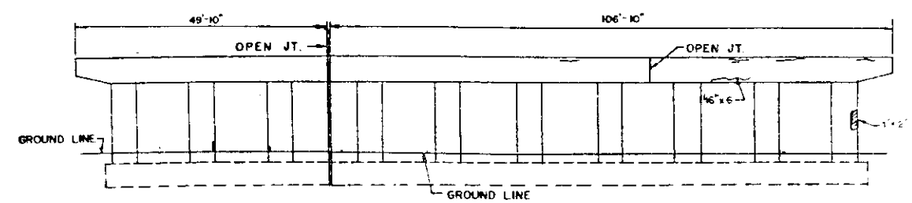


PIER NO. 8 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND
E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING
LEACHING
SPALLS

SUBSTRUCTURE REHABILITATION
SHEET 3 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

C68

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	•		395	107

SHEET NO. 4 7
53 SHEETS

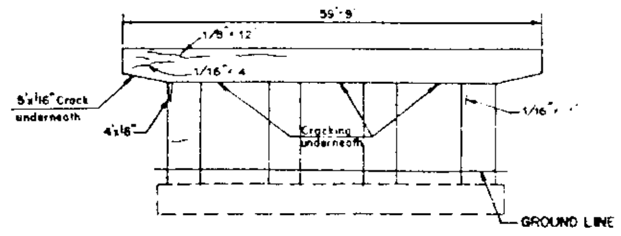
*1988-075 BY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LEGEND

- E.R. — EXPOSED REINFORCING BAR
- CRACKS
- CRACKS WITH LEACHING
- LEACHING
- SPALLS

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.



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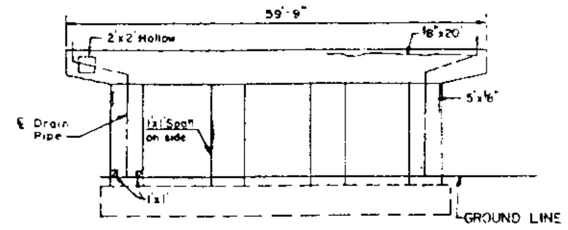

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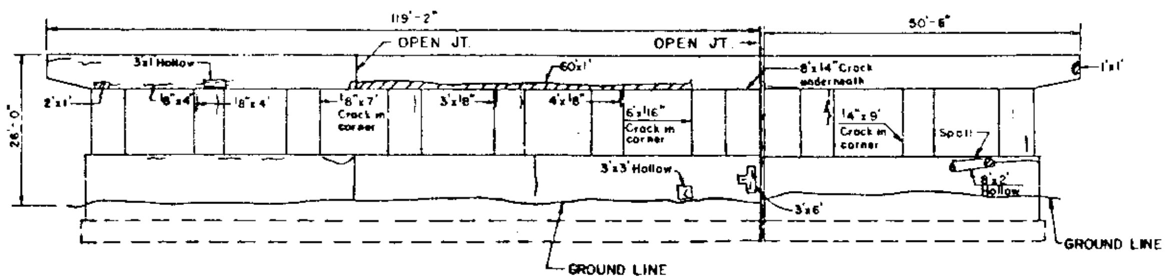

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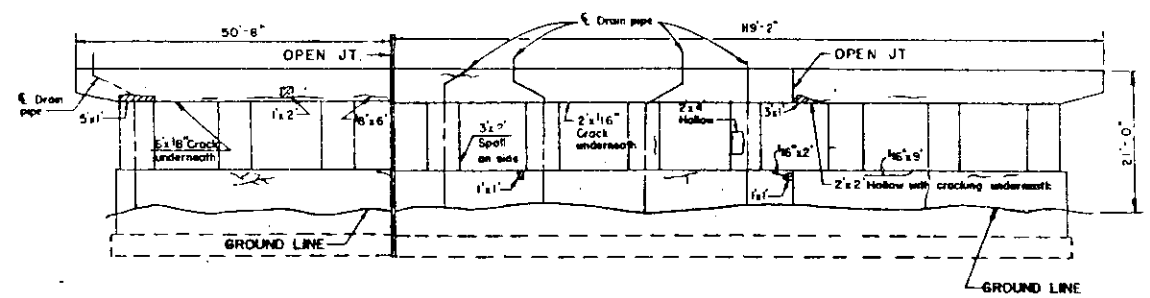

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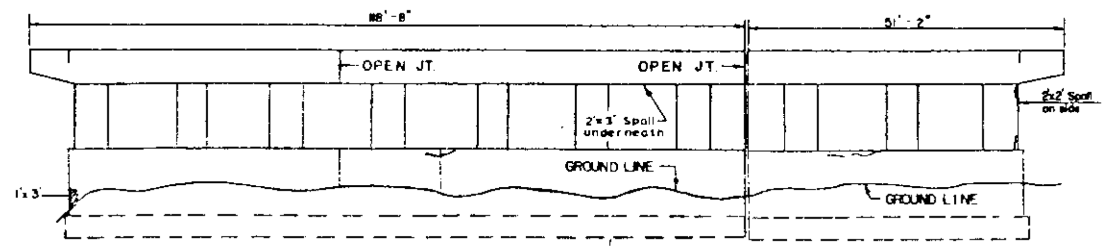
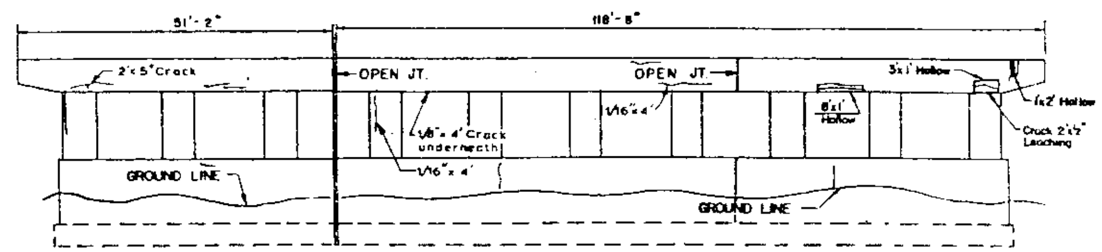


PIER NO. 11 - LOOKING NORTH



PIER NO. 11 - LOOKING SOUTH

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 4 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

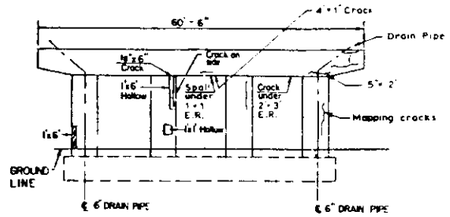
C69

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	0		395	108
F. NO. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 48
53 SHEETS

*1988-045 BY



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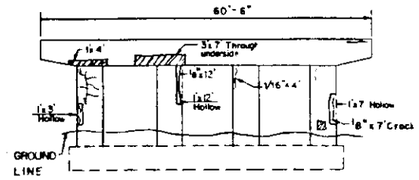

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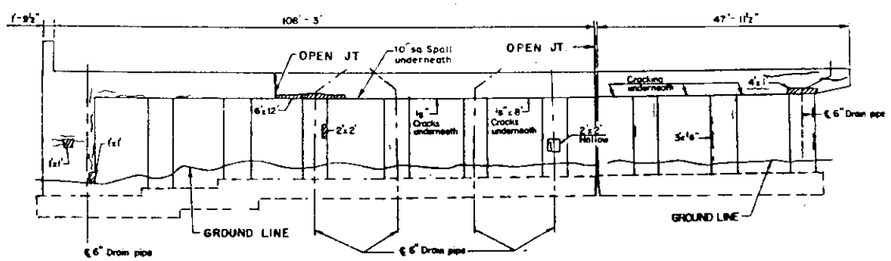

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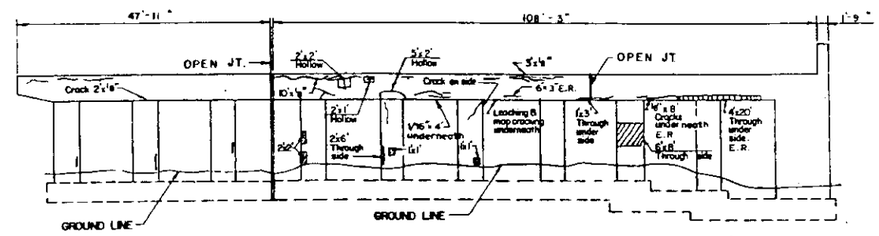
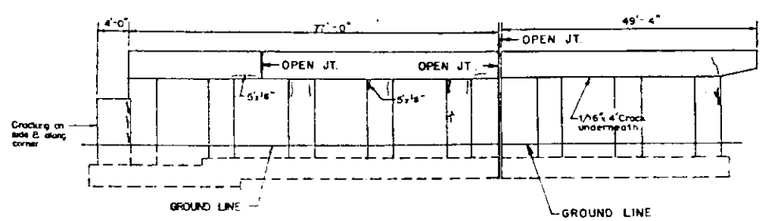


PIER NO. 13 - LOOKING SOUTH



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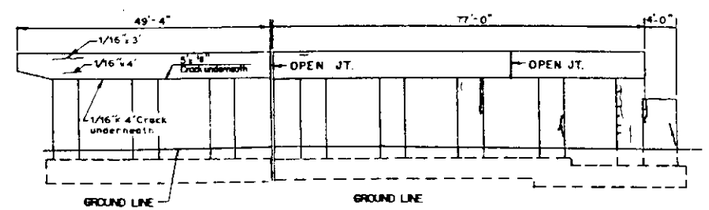


PIER NO. 14 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 5 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

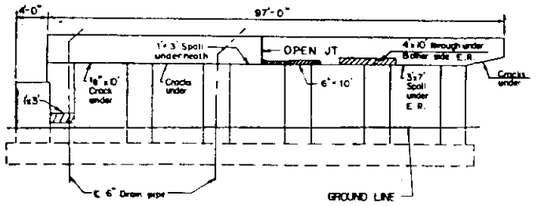
C70

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	109
F. AID. & REG. 4	ILLINOIS	FED. AID PROJECT		

*1988-015BY

SHEET NO. 49
53 SHEETS



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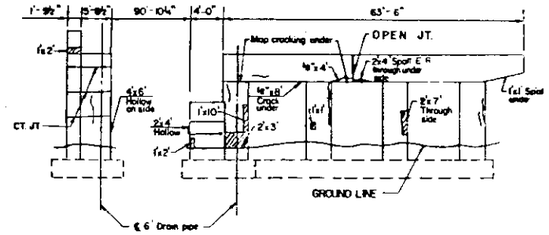

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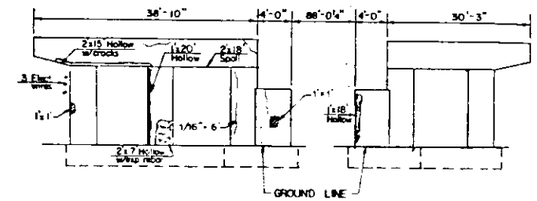

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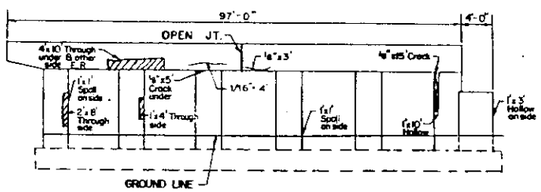

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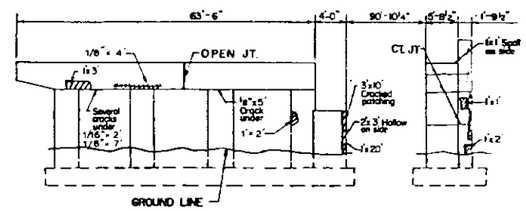

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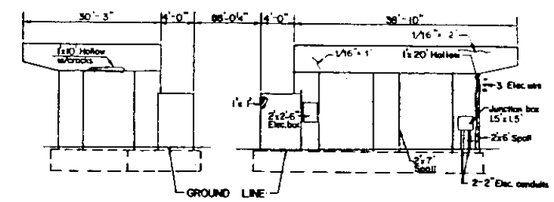

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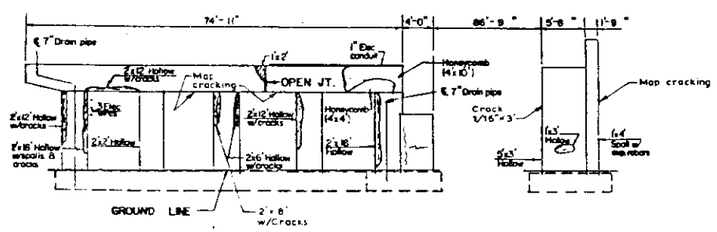

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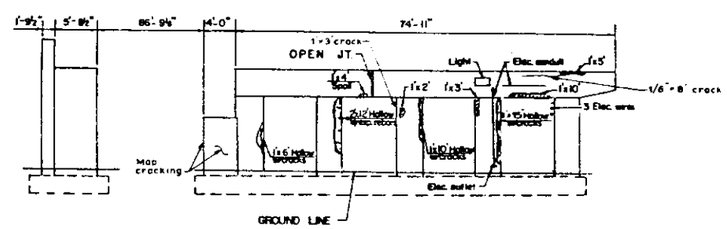


PIER NO. 18 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND

E.R.	EXPOSED REINFORCING BAR
~~	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION

SHEET 6 OF 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

C71

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	110
F.A.I. RTE. 4	ILLINOIS	FED. AID PROJECT		

*1988-095BY

SHEET NO. 50
53 SHEETS

LEGEND

E.R. EXPOSED REINFORCING BAR

CRACKS

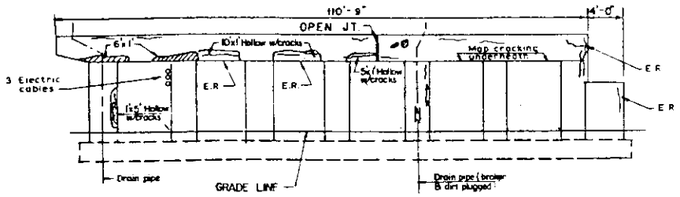
CRACKS WITH LEACHING

LEACHING

SPALLS

NOTE:

FOR NOTES, SEE SHEET 1 OF 5.



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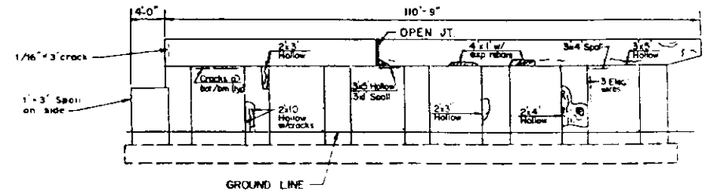

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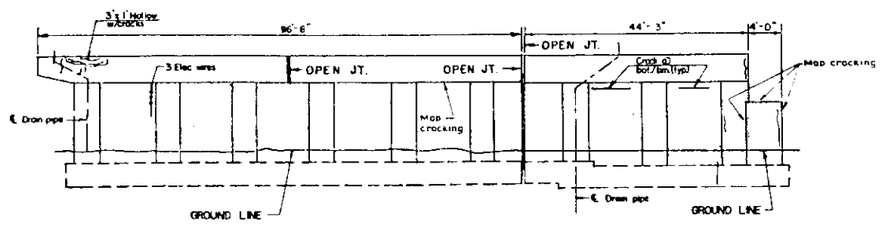

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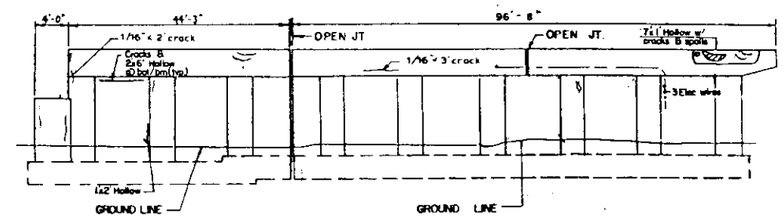

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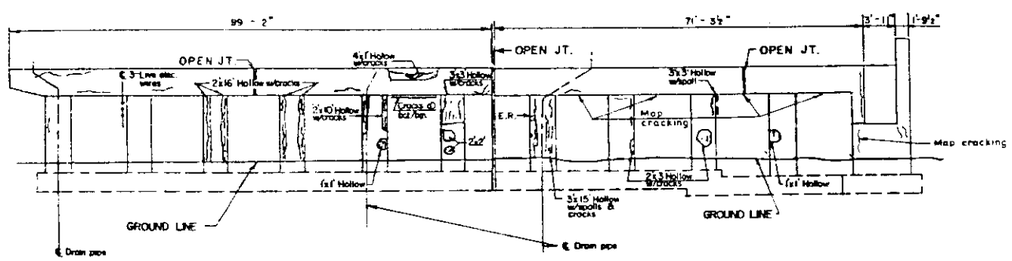

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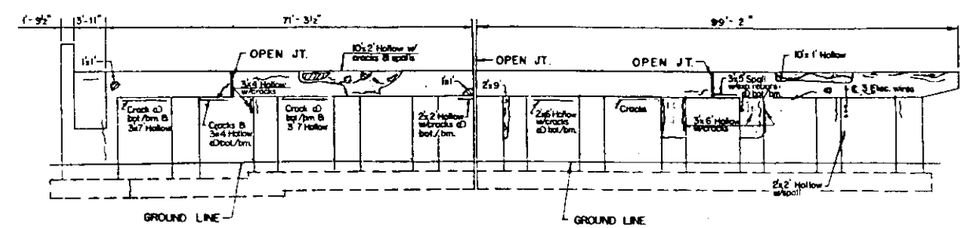


PIER NO. 21 - LOOKING SOUTH

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION

SHEET 7 OF 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

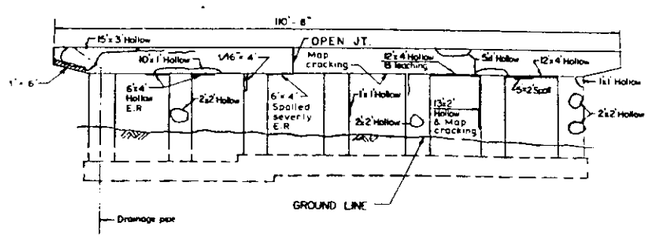
CT2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	111
F. AID. A. REG. #	ILLINOIS FED. AID PROJECT			

*1988-093 BY

SHEET NO. 51
53 SHEETS



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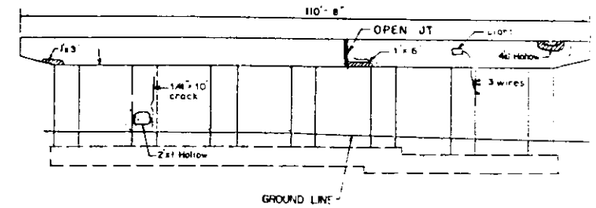

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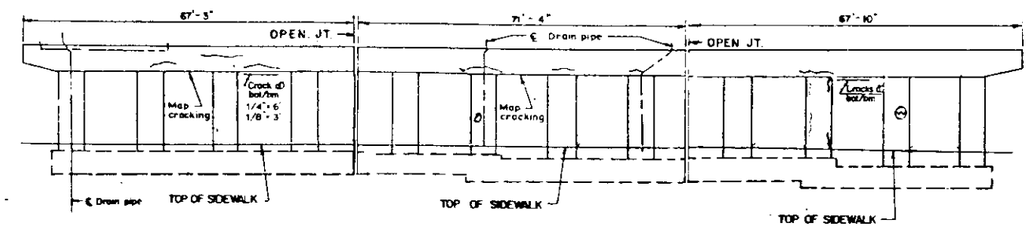

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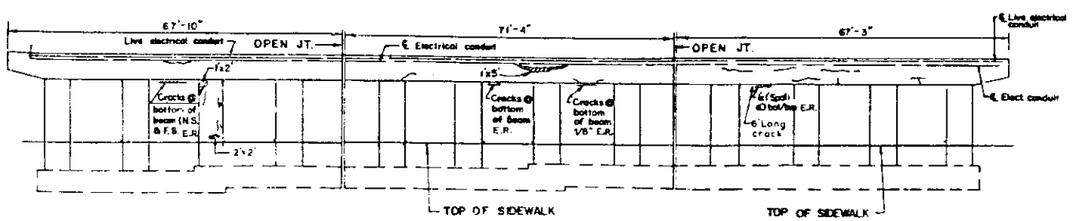


PIER NO. 23 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 8 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

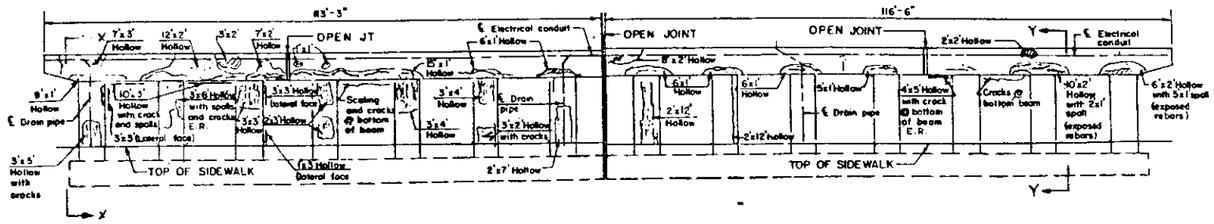
C73

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		395	112
F. AI. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 52
53 SHEETS

*1988-095 BY



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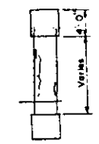
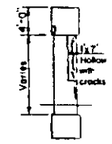


SECT. X-X



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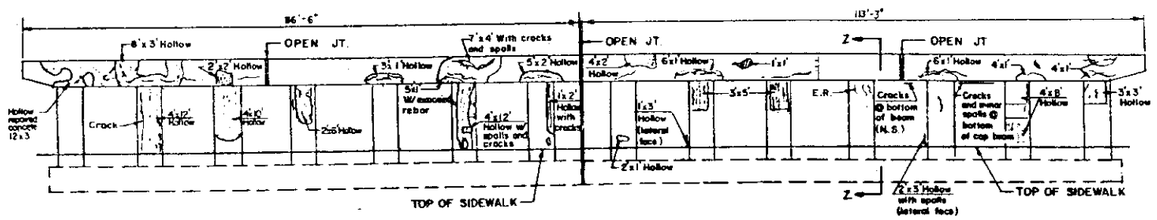

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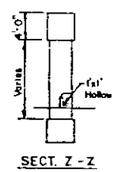
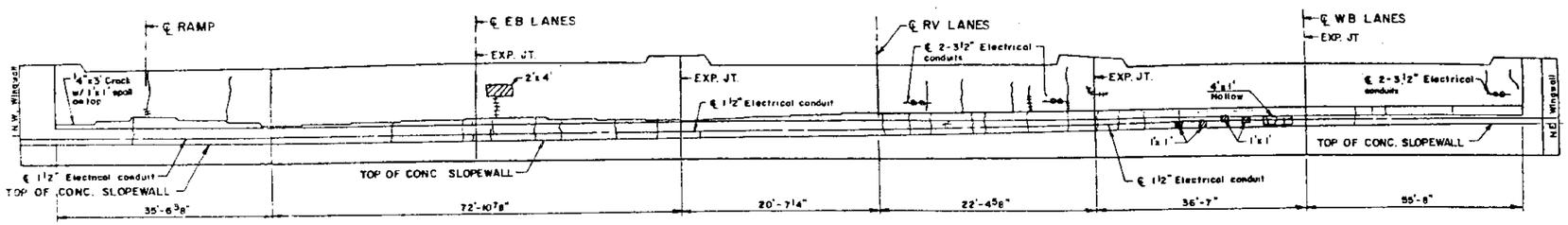


SECT. Z-Z



NORTH ABUTMENT LOOKING NORTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

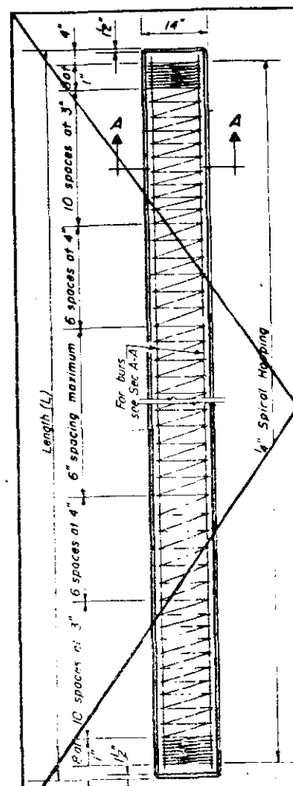
SUBSTRUCTURE REHABILITATION
SHEET 9 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

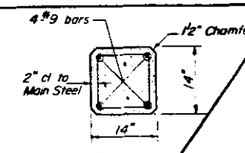
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94			396	113

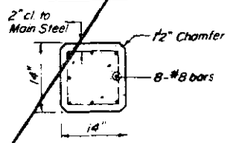
SHEET NO. 53
53 SHEETS

*1988-045 BY





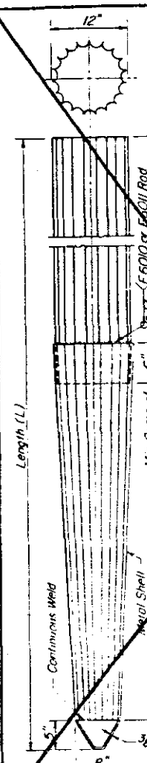
SECTION A-A
FOR PILES UNDER 45' LONG

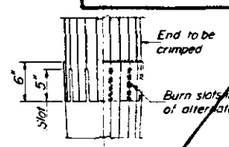


SECTION A-A
FOR PILES 45' OR MORE

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.

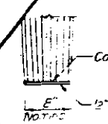
DETAIL OF PRECAST CONCRETE PILES





FIELD CRIMP DETAIL

Note: 6" Crimp shall either be supplied on the cylindrical section or made in the field as detailed



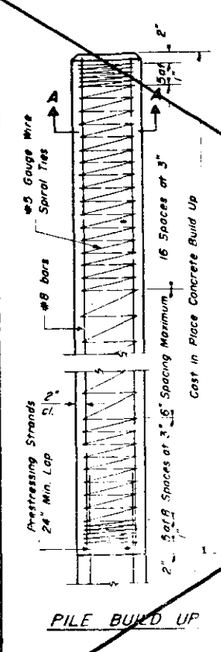
OPTIONAL FLAT END

ALLOWABLE TAPER SECTIONS

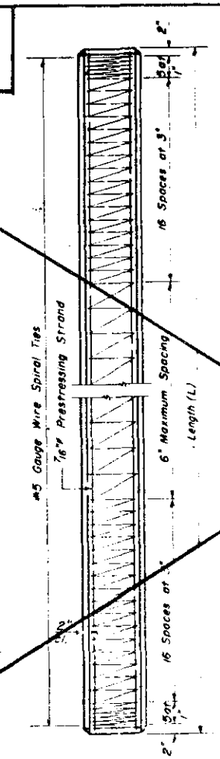
10' Length - Taper 1" in 2'-6"
17' Length - Taper 1" in 4'-0"
25' Length - Taper 1" in 6'-0"
30' Length - Taper 1" in 7'-0"

NOTE
The thickness of the shell shall be 0.125 inches with a tolerance of 5%. The steel shall be in accordance with Article 710.05 (a) of the Standard Specification except that minimum yield strength for the steel after cold working shall be 50,000 psi.

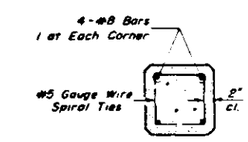
DETAIL OF TAPERED METAL SHELLS FOR CAST IN PLACE CONCRETE PILES



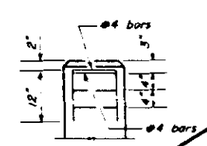
PILE BUILD UP



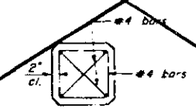
PILE PLAN



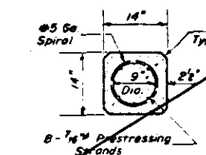
SECTION A-A



ELEVATION
(End Reinforcement)



PLAN
(End Reinforcement)



SECTION THRU PILE

DESIGN STRESSES

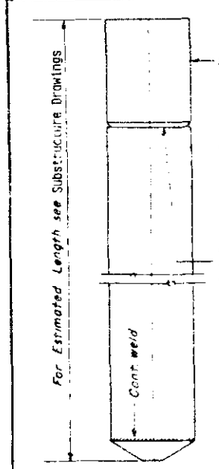
f'c = 5,000 psi
f'c' = 4,000 psi
fs' = 270,000 psi. (31,000 lbs - 7/16"ϕ or 41,300 lbs - 1/2"ϕ)
f's' = 189,000 psi. (21,700 lbs - 7/16"ϕ or 28,900 lbs - 1/2"ϕ)

NOTES

Prestressing steel shall be non-galvanized extra high strength stress-relieved 7-wire strand. The nominal diameter shall be 7/16" and the minimum nominal cross-sectional area shall be 0.115 sq in or the equivalent 6-1/2"ϕ strands with a cross-sectional area of 0.153 sq in. may be used.

For Pile lengths up to 65' use two slings placed at a distance of 0.21 L* from each end. For Piles longer than 65', 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.

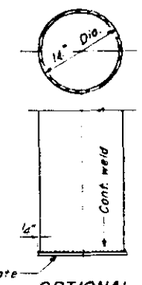
PRECAST PRESTRESSED CONCRETE PILE



NOTE
Driving and bearing ends of pipe shall be cut square.

The thickness of the shell shall be 0.25 inches with a tolerance of 5%.

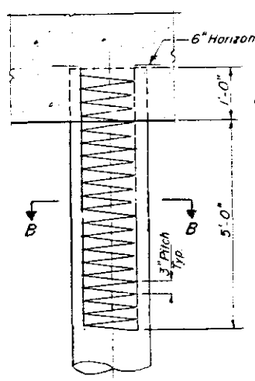
For field splice bevel edge and butt weld.

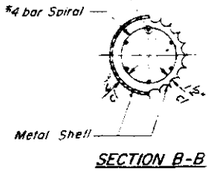


OPTIONAL FLAT END

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

The cost of Reinforcement is incidental to the cost of furnishing piles

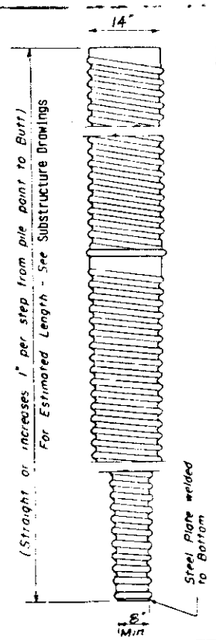


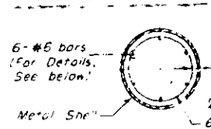


SECTION B-B

Reinforcement in top of pile shall be omitted under pier footings when placed in natural ground

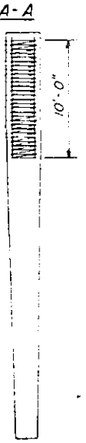
DETAIL OF REINFORCEMENT FOR METAL SHELLS





SECTION A-A

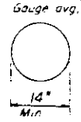
Reinforcement is incidental to the cost of furnishing piles



PILE REINFORCEMENT

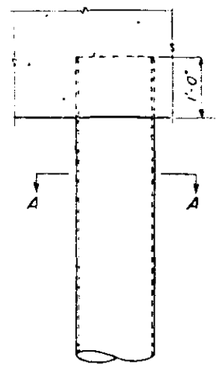
At least 10% of the length of pile shall have a Butt diameter equal to or greater than 14"

Gauges are furnished to suit soil conditions (16 Gauge avg. min.)



BUTT

POINT
(Applies only to Step Taper type pile)



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

STANLEY CONSULTANTS

X-3 8-30-80

PILE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

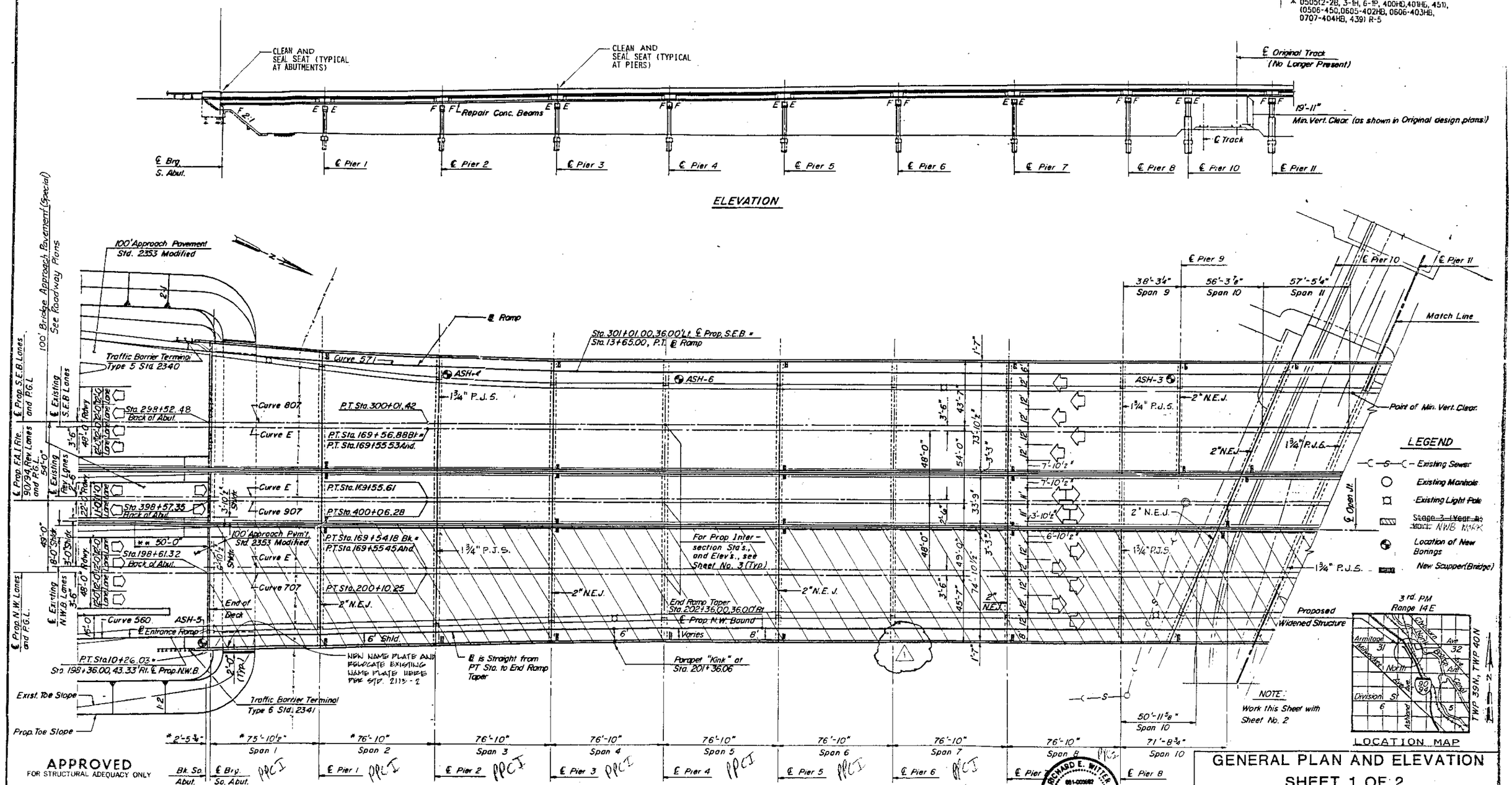
TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER ASHLAND AVENUE - EL 604.09 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	192
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 1 OF 72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

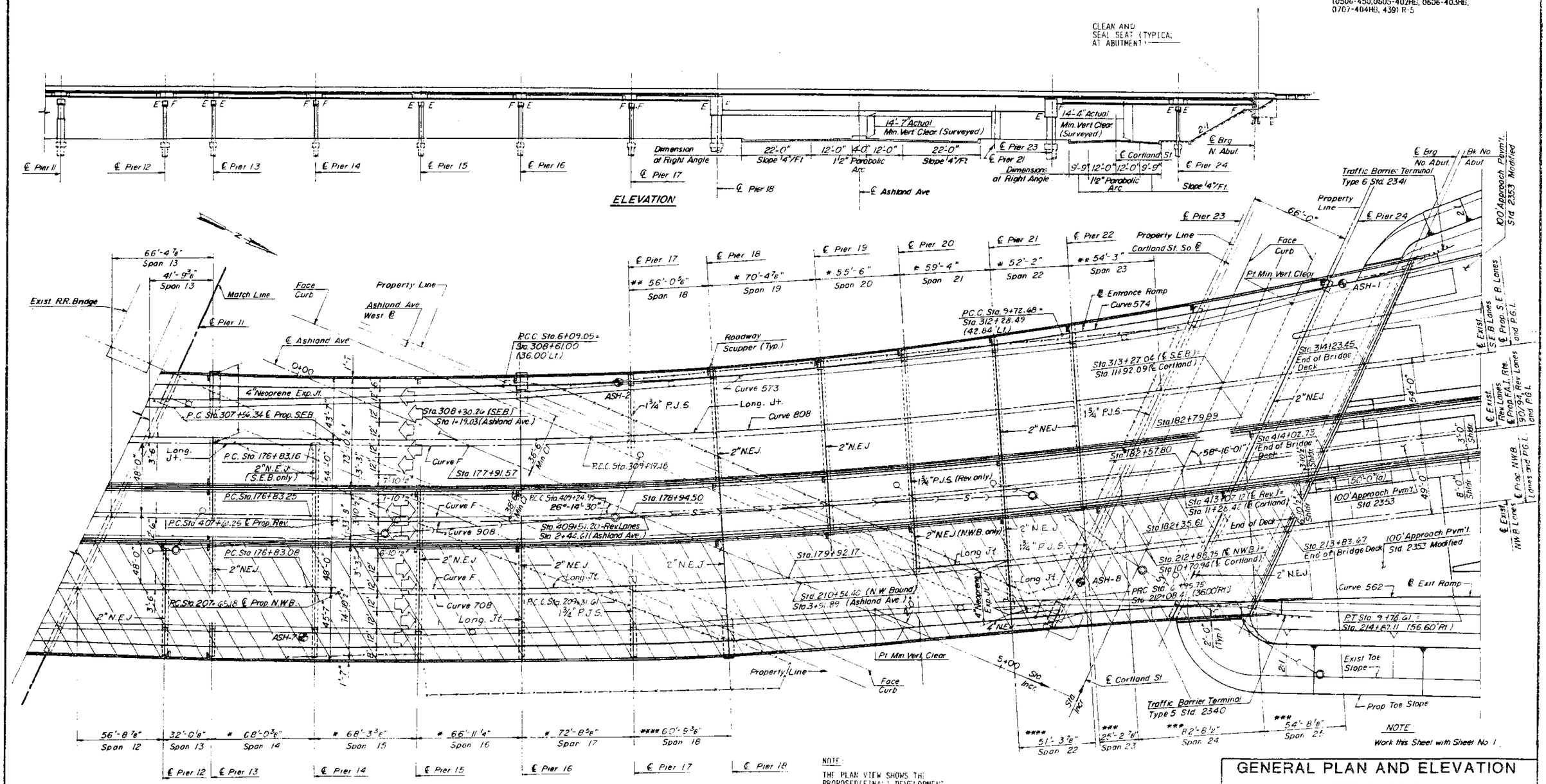


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	193
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 2 OF 72 SHEETS

* 0505(2-2B, 3-3L, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



NOTE:
THE PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS N.W.B. LANE WORK ONLY

NOTE
Work this Sheet with Sheet No. 1

STANLEY CONSULTANTS

GENERAL PLAN AND ELEVATION
SHEET 2 OF 2

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	X	COOK	443	194
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. OF 72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451U, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

MAINLINE HORIZONTAL CURVE DATA

	EXISTING CURVE DATA		PROPOSED CURVE DATA		
CURVE #	E (207)	F (208)	807	808	
SEB PI STA	166+44.52	186+08.46	296+88.95	316+57.45	
Δ	1°33'43.0"	28°41'07.9"	1°33'44.0"	28°33'58.0"	
D	0°15'00.0"	1°34'59.8"	0°14'59.9"	1°33'41.7"	
T	312.40'	925.29'	312.51'	934.08'	
R	22,917.91'	3,616.78'	22,921.41'	3,669.07'	
L	624.77'	1,811.77'	624.98'	1,829.30'	
E	2.13'	116.42'	2.13'	117.03'	
S	NC	0.0125 FT/FT	NC	0.020 FT/FT	
CURVE #	E (307)	F (308)	907	908	
REV PI STA	166+43.91	186+20.81	396+94.54	416+71.06	
Δ	1°33'43.0"	28°41'07.1"	1°33'44.0"	28°33'58.0"	
D	0°15'01.9"	1°33'45.2"	0°15'02.0"	1°32'20.2"	
T	311.75'	937.56'	311.77'	947.83'	
R	22,869.91'	3,666.78'	22,867.41'	3,723.07'	
L	623.45'	1,835.79'	623.51'	1,856.22'	
E	2.13'	117.97'	2.12'	118.76'	
S	NC	0.0125 FT/FT	NC	0.033 FT/FT	
CURVE #	E (107)	F (108)	707	708	
NWB PI STA	166+43.13	186+32.93	196+99.22	208+48.42	214+80.07
Δ	1°33'43.0"	28°41'08.1"	1°33'44.56"	3°06'31.43"	16°32'01.94"
D	0°15'03.8"	1°32'32.5"	0°15'03.96"	1°52'04.39"	1°31'04.27"
T	311.09'	949.84'	311.15'	87.24'	548.46'
R	22,821.91'	3,714.78'	22,818.41'	166.43'	1089.29'
L	622.15'	1,859.84'	622.22'	306.41'	3774.79'
E	2.12'	119.51'	2.12'	1.13'	39.64'
S	NC	0.0125 FT/FT	NC	207+65.18 209+31.61	209+31.61 220+20.91

PROPOSED RAMPS HORIZONTAL CURVE DATA

CURVE NO.	560	562
RAMP B		
PI STA	9+03.93	8+37.24
Δ	7°33'27.20"	4°07'03.04"
D	3°05'25.39"	1°27'20.41"
T	122.45'	141.49'
R	1854.00'	3936.04'
L	244.55'	282.86'
E	4.04'	2.54'
S	VARIES	VARIES

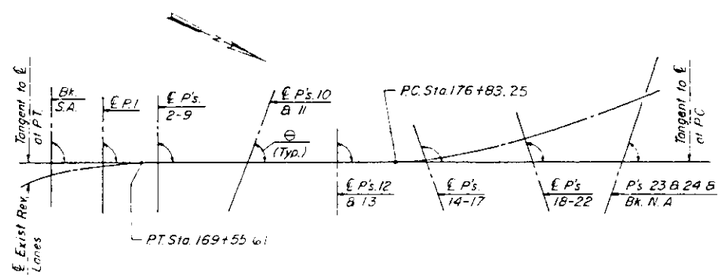
CURVE NO.	571	573	574
RAMP B			
PI STA	11+56.53	8+01.19	11+43.17
Δ	7°26'26.185"	8°34'14.4"	7°26'57.5"
D	1°46'53.7"	2°09'34.2"	2°36'19.1"
T	209.05'	196.81'	143.17'
R	3216.00'	2653.19'	2199.19'
L	417.52'	396.86'	285.93'
E	6.79'	7.44'	4.66'
S	VARIES	0.020 FT/FT	0.020 FT/FT

PROPOSED INTERSECTION STATIONS

SUBSTRUCTURE	LOCATION S.E. BOUND LANES	REVERSIBLE LANES	N.W. BOUND LANES
BACK SO. ABUT.	298+52.48	398+57.35	198+61.32
℄ PIER 1	299+30.84	399+35.71	199+39.68
" 2	300+07.67	400+12.54	200+16.51
" 3	300+84.51	400+89.38	200+93.35
" 4	301+61.34	401+66.21	201+70.18
" 5	302+38.17	402+43.04	202+47.01
" 6	303+15.01	403+19.88	203+23.85
" 7	303+91.84	403+96.71	204+00.68
" 8	304+68.67	404+73.54	204+77.51
" 9	305+06.94	---	---
" 10	305+63.24	405+45.29	205+28.50
" 11	306+20.73	406+02.73	205+85.94
" 12	---	---	206+42.64
" 13	306+62.50	406+69.12	206+74.67
" 14	307+30.57	407+37.19	207+42.74
" 15	---	408+05.49	208+11.05
" 16	308+65.83	---	208+77.99
" 17	309+38.56	---	209+50.75
" 18	309+94.66	---	210+11.55
" 19	310+65.04	410+74.16	---
" 20	311+20.57	411+29.67	211+37.46
" 21	311+79.95	411+89.04	211+96.83
" 22	312+31.26	412+40.35	---
" 23	312+85.89	412+65.98	212+47.60
" 24	313+69.04	413+48.66	213+29.88
END OF BRIDGE DECK	314+23.45	414+02.73	213+83.67

PROPOSED INTERSECTION ELEVATIONS (PROFILE GRADE ELEVATIONS)

SUBSTRUCTURE	LOCATION S.E. BOUND LANES	REVERSIBLE LANES	N.W. BOUND LANES
BACK SO. ABUT.	613.15	613.28	613.11
℄ PIER 1	615.51	615.63	615.46
" 2	617.81	617.92	617.75
" 3	619.88	619.99	619.82
" 4	621.64	621.75	621.57
" 5	623.09	623.19	623.02
" 6	624.23	624.33	624.17
" 7	625.06	625.17	625.00
" 8	625.58	625.69	625.53
" 9	625.72	- - -	- - -
" 10	625.80	625.90	625.71
" 11	625.70	625.88	625.75
" 12	- - -	- - -	625.63
" 13	625.52	625.64	625.48
" 14	625.03	625.15	625.00
" 15	- - -	624.42	624.27
" 16	623.33	- - -	623.33
" 17	622.01	- - -	622.05
" 18	620.80	- - -	620.79
" 19	619.04	619.18	- - -
" 20	617.46	617.63	617.55
" 21	615.66	615.85	615.78
" 22	614.07	614.28	- - -
" 23	612.42	613.53	614.27
" 24	610.05	611.07	611.83
END OF BRIDGE DECK	608.87	609.73	610.34



SCHEMATIC FOOTING LAYOUT

ANCHOR WITH 3/8" ⌀ EXPANSION ANCHORS

SUBSTRUCTURE	ANGLE B
Bk.S.A.	90°-00'-00"
P.1	90°-00'-00"
P's. 2-9	90°-00'-00"
P's. 10&11	67°-02'-48"
P's. 12&13	91°-50'-50"
P's. 14-17	91°-50'-50"
P's. 18-22	94°-22'-40"
P's. 23&24	67°-15'-35"
Bk.N.A.	67°-15'-35"

STATION 409+49
REHABILITATED 199 BY
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC. -IHB-
F.A. PROJ. DPI-0137(13)
LOADING HS20 & ALT.
STR. NO. 016-0133

NEW NAME PLATE

SEE STANDARD 2113.2

NORTHWEST ROUTE
SUPERHIGHWAY
AT
WABANSIA AVE. TO CORTLAND ST.
F.A.I. ROUTE 2-SECTION 0505.3-1
PROJECT I-02-2(88)
LOADING H20 SIG
1958

EXISTING NAME PLATE

STANLEY CONSULTANTS

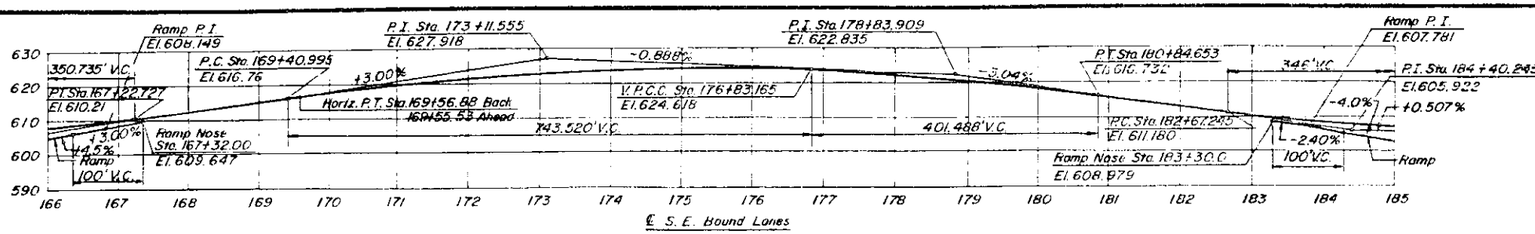
HORIZONTAL ALIGNMENT

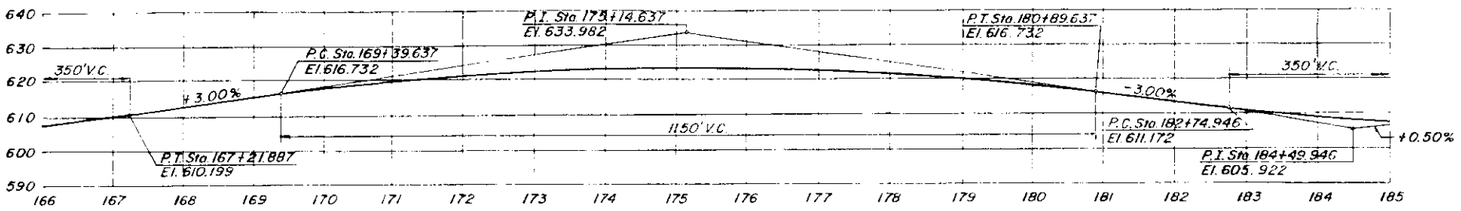
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

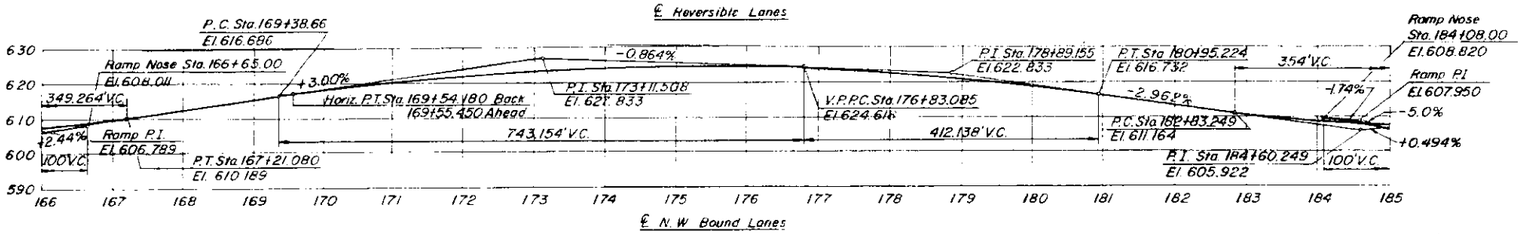
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	x	COOK	443	195
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 4 OF 72 SHEETS

X. 0505(2-25, 3-14, 6-14, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

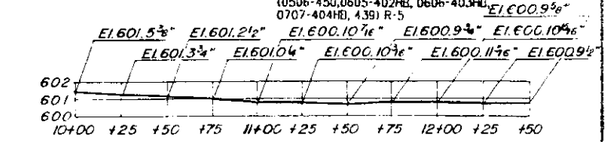






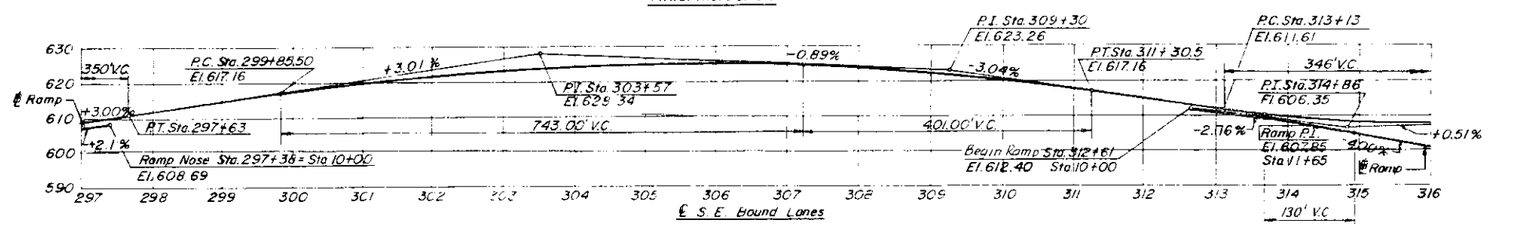
ORIGINAL THEORETICAL PROFILE GRADE

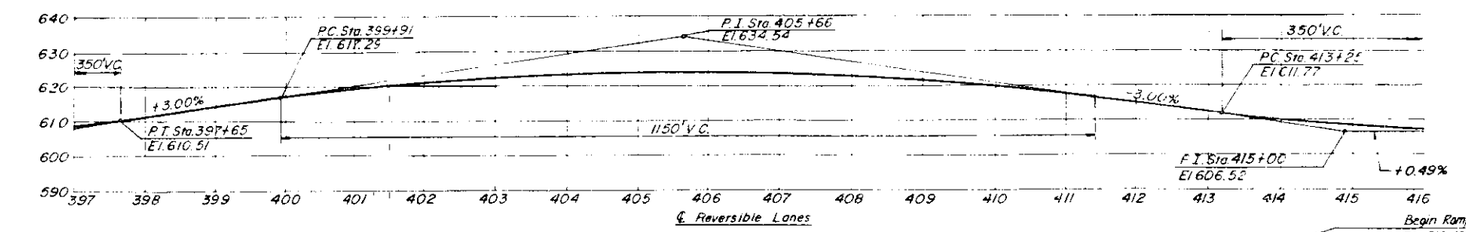
F.A.I. Rte. 90/94

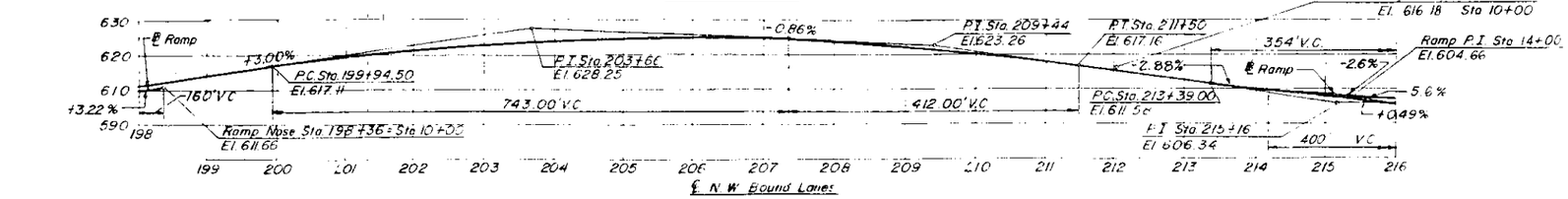


EXISTING TRACK PROFILE

Scales: 1" = 40" Horiz
1/4" = 1'-0" Vert

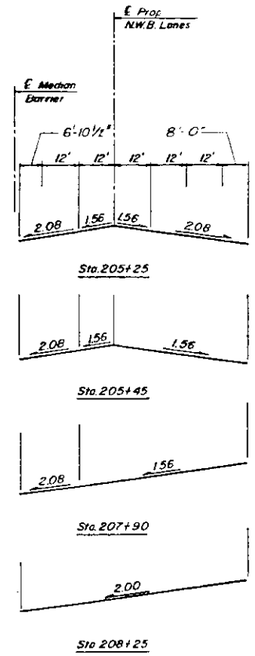






PROPOSED PROFILE GRADE

F.A.I. Rte. 90/94



PROPOSED CROSS SLOPE TRANSITION

(ALL CROSS SLOPES IN PERCENT)

EXISTING CORTLAND STREET

(Along ℄ of roadway)

Station	Elevation
12+94	590.38
12+84	590.21
12+74	590.06
12+64	589.91
12+54	589.82
12+44	589.77
12+34	589.75
12+24	589.74
12+14	589.70
12+04	589.66
11+94	589.63
11+69	589.62
11+44	589.49
11+19	589.33
10+94	589.01
10+84	588.84
10+74	588.67
10+64	588.48
10+54	588.12
10+44	587.79
10+34	587.44
10+24	587.07
10+14	586.69
10+04	586.31
9+94	586.12
9+84	585.93
9+74	585.72

EXISTING ASHLAND AVENUE

(Along Concrete Median Gutterline)

Station	Elevation
0+00	588.64
0+10	589.07
0+20	589.46
0+30	589.86
0+40	590.24
0+50	590.55
0+60	590.86
0+70	591.15
0+80	591.36
0+90	591.55
1+00	591.68
1+25	591.78
1+50	591.90
1+75	591.89
2+00	591.83
2+25	591.81
2+50	591.82
2+75	591.86
3+00	591.85
3+25	591.87
3+50	591.83
3+60	591.70
3+70	591.54
3+80	591.40
3+90	591.06
4+00	590.74
4+10	590.39
4+20	590.01
4+30	589.63
4+50	589.24
4+60	588.80

STANLEY CONSULTANTS

PROFILES

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+48

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	196A
ILLINOIS				

SHEET NO. 5
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439)R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHOR BOLT REHABILITATION TABLE

Beam No.	Bearing	Anchor Bolts: Loose	Missing	Damaged	Remarks
N1.8	South	East			
N1.11	South			Both	
N1.12	South			West	
N2.12	South	Yes		Yes	
N2.17	North				Nut Missing
N5.5	South			Yes	
N5.6	South			Yes	
N5.7	South			Yes	West Nut Missing
N5.8	South			Yes	
N5.9	South			Yes	West Nut Loose
N5.12	South				West Nut Loose
N5.13	South			Yes	Both Nuts Loose
N5.15	South			Yes	
N6.10	North	Both			
N8.9	South	Yes			
N8.15	South	Yes			
N10.4	South			Yes	
N10.8	North	West			
N10.12	North			East	
N11.10	South			Yes	
N11.9	North			West	
N11.11	North	West			
N11.12	North				East Nut Loose
N11.13	North				East Nut Loose
N11.15	North		West		
N11.16	North			Both	
N12.5	South	East			
N12.7	South				West Nut Loose
N12.9	South				West Nut Loose
N12.10	South		West		
N12.11	South			West	
N13.4	South		Both		
N13.10	South	East			
N14.12	South	Yes			
N14.4	North	Both	East		
N14.6	North	Both			
N14.7	North	West			
N14.10	North	Both	Both	East	
N14.11	North	West			
N15.4	South	East		East	
N15.5	South	Both		Both	
N15.6	South	Both		Both	
N15.7	South			Both	
N15.8	South	West		Both	
N15.9	South	West		West	
N15.10	South	West		Both	
N15.11	South	Both			
N15.12	South	Both		Both	
N15.13	South	Both			
N16.4	North	Both			
N16.5	North	West			
N16.6	North	West			
N16.8	North	East			
N16.9	North	West			
N16.10	North	Both			
N16.11	North	West			
N16.12	North	Both			
N17.4	North	East			
N17.5	North	East	East		
N17.6	North	Both			
N17.7	North	East			
N17.8	North	West			
N17.9	North	Both			
N18.4	South		Both		
N18.5	South	Both		Both	
N18.6	South	Both		Both	
N18.7	South	Both		Both	
G9	West				Sealing Under Rocker
N20.7	North		Both		
N20.6	North		West		
G9	North		Northeast		
N23.1	North		West		
N23.2	North	Both			Bolts Bent
N23.3	North	Both			Bolts Bent
N23.4	North	West	East		West Nut Missing
N23.5	North	West	Both		
N23.6	North	Both			Nuts Missing
N23.7	North	Both			Nuts Missing
N23.8	North	Both			Nuts Missing
N23.9	North	Both			Nuts Missing
N23.10	North	Both			Nuts Missing
N24.3	South		Both		
N25.2	North				Nuts Missing
N25.3	North	East			
N25.6	North				West Nut Missing
N25.7	North	West			West Nut Missing
N25.15	North	West			

TOTAL BILL OF MATERIAL

	Item	Unit	Superstructure	Substructure	Total
(2)	Drainage System	Sq. Ft.	230		230
	Furnish And Install Bridge Scupper - Type A	Each	15		15
	Furnish And Install Bridge Scupper - Type B	Each	9		9
	Bridge Deck Grooving	Sq. Yds.	12,751		12,751
	Class S Concrete Superstructure	Cu. Yds.	3,876.[illegible]		3,876.[illegible]
	Class X Concrete	Cu. Yds.		6.1	6.1
	Reinforcing Bars (Epoxy Coated)	Lbs.	921,370	680	922,050
	Bar Splicers	Each	4,231		4,231
(4)	Removal Of Existing Concrete Deck	Lump Sum	0.3		0.3
(1)	Protective Coat	Sq. Yds.	14,259		14,259
	Neoprene Expansion Joint 2"	Lin. Ft.	932		932
	Neoprene Expansion Joint 4"	Lin. Ft.	49		49
	Preformed Joint Seal 1¾"	Lin. Ft.	369		369
	1" Dia. Anchor Bolts	Each	112		112
(5)	Furnishing And Erecting Structural Steel	Pounds	36,000		36,000
(6)	Erecting Structural Steel	Lump Sum	0.01		0.01
	Rivet Removal And Replacement	Each	3,500		3,500
	Concrete Removal	Cu. Yds.	-	2.5	2.5
	Jack & Support Existing Beam For Beam Repair	Each	14	-	14
(2)	Silicone Joint Sealer	Lin. Ft.	167	-	167
(3)	Protective Shield	Sq. Yd.	15,049	-	15,049
	Protect & Maintain Existing Underpass Luminaires	Lump Sum	0.4		0.4
	Protective Surface Treatment	Sq. Ft.		62,500	62,500
	Epoxy Crack Sealing	Lin. Ft.	286	95	381
	Epoxy Mortar Repair (Depth < 1½")	Cu. Ft.	30		30
	~~Formed Concrete Repair (Depth [illegible])~~	~~[illegible]~~		~~[illegible]~~	~~[illegible]~~
	Formed Concrete Repair (Depth > 5")	Sq. Ft.		330	330
	Nameplates	Each	1	-	1
	Erecting PPC Beams I Beams 48"	Lin. Ft.	2,512	-	2,512
	Erecting PPC Beams I Beams 36"	Lin. Ft.	113	-	113
	Install Elastomeric Bearing Assembly-Type I	Each	41		41
	Removal Of Existing PPC Beams	Each	40		40
	PPC Beam Repair No. 1	Each	266		266
	PPC Beam Repair No. 2	Each	126		126
	Cleaning And Painting Steel Bridge SP3	Lump Sum	0.14		0.14
	Power Tool Cleaning Residue Containment And Disposal	Lump Sum	0.14		0.14
(7)	Structural Steel Removal	Lump Sum	0.20		0.20
	High Performance Enhanced Shotcrete	Sq. Ft.	6000		6000

(1) Protective coat quantity includes deck surface and face of barrier rails. See special provisions for curing and texturing bridge deck.
(2) See special provisions.
(3) See sheet 6 for limits of protective shield.
(4) Includes 119,320 sq. ft. of existing concrete deck removal and portions of concrete diaphragms indicated.
(5) Includes 10,050 pounds of structural steel required at preformed joint seal 1¾".
(6) Includes 1840 pounds of structural steel (diaphragm assemblies, bearing assemblies).
(7) Includes 6,850 pounds of structural steel (bottom flange angles and bearing stiffener angles.)

EXISTING STRUCTURE

F.A.I. Route 2, Sec. 0505.3(I), built in 1958, Structure No. 016-0135.

Superstructure: Approach spans to Ashland Avenue: Simply supported Precast, Prestressed Concrete I Beams. Ashland Avenue Main spans: Planar Frame Type structure consisting of 144" riveted built up composite fascia girders, 96" and 120" cross-girders, and 48" longitudinal girders.

Substructure: Pile Bent Abutments supported on concrete piles and multiple column piers supported on caissons.

Superstructure deck to be replaced. Traffic to be maintained utilizing stage construction.

EXISTING UTILITES

The existing utilities have been taken from the original bridge plans and from field observations. The information shown concerning type and location is not guaranteed to be accurate or all inclusive. The contractor is responsible for making his own determinations as to the type and location of underground and other utilites as may be necessary to avoid damage thereto.

DESIGN SPECIFICATIONS

AASHTO (1989) with 1990 & 1991 Interim Specifications. Loading HS20-44 and Alternate Military Loading.

Allow 25 psf for future wearing surface.

DESIGN STRESSES

Reinforced Concrete & Structural Steel

F'C = 3,500 psi (concrete)
FY = 60,000 psi (reinforcement)
FY = 36,000 psi, M270, GR. 36 (proposed structural steel)
FS = 18,000 psi (existing structural steel)

Prestressed Concrete & Pretensioning Steel

	Existing	Proposed
F'C	5,000 psi	6,000 psi
F'CI	4,000 psi	5,000 psi
F'S	248,000 psi ($\frac{7}{16}$"Φ strands)	270,000 psi (½"Φ strands)
F'SI	173,600 psi	202,500 psi

GENERAL NOTES:

1. Fasteners shall be high strength bolts. Bolts ¾"Φ, $\frac{15}{16}$" holes unless noted otherwise.
2. Field Welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the engineer.
3. Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
4. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of work, however, the contractor will be paid for the quantity actually furnished at the unit price bid for the work.
5. Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and ¾"Φx12" hooked bolts.
6. The contractor will be required to mark on top of the concrete deck the locations of the top flange of all the steel beams or girders, prior to any removal of the bridge concrete deck. Saw cutting directly over the top of the beam or girder flanges is not permitted.
7. Existing structural steel shall be cleaned and painted only as required by the special provision "Cleaning And Painting Existing Steel Structures Partial Removal (modified SSPC SP3) Surface Preparation" or as otherwise noted.
8. All existing structural steel components located within two feet from either side of all expansion joints shall be cleaned and painted. The system shall consist of spot cleaning as per SP3, spot priming, spot intermediate, and one full top coat of the Lead and Chromate Free Alkyd Paint System. The color of the finish coat for the exterior face and bottom flange of the fascia girders shall be Reddish Brown Munsell No. 2.5YR 3/4. For all interior surfaces the color shall be Light Grey Munsell No. 10Y 7/1.
9. The Zinc-Silicate and vinyl paint system shall be used for shop and field painting of new structural steel. The first coat has been applied in the shop. The second & third coats shall be applied in the field under this contract. The color of the vinyl finish coats shall be Munsell No. 2.5YR 3/4, Reddish Brown for the fascia of the exterior beams and their bearings and Munsell No. 10Y 7/1 Light Grey for all other structural steel.
10. Expansion plates and attached bars shall be shop painted with the Zinc-Silicate and vinyl painting system. The color of the finish coats shall be Munsell No. 10 YR 7/1 Light Grey.
11. The repair of the precast beams in the reversible lanes will be included in this contract if directed by the engineer. Cost included in Epoxy Crack Sealing, Epoxy Motar Repair (depth < 1½"), PPC Beam Repair No. 1 or PPC Beam Repair No. 2.
12. Contractor shall provide temporary drainage system during the repair of the substructure. The drainage system shall collect the water just below the deck and discharge the water at grade. Cost incidental to "Drainage System".
13. Existing nameplate to be mounted adjacent to new nameplate, cost incidental to "Nameplates".
14. The cleaning and painting shall be done after the deck is removed, but prior to forming for the new deck. See special provisions "Cleaning and Painting Existing Steel Structures partial removal (Modified SSPC SP3) Surface Preparation" and "Containment and Disposal of Lead Paint Residues from Power Tool Cleaning."
15. Prior to pouring the new Backwall and / or New Concrete for the deck, all loose rust, loose mill scale, loose paint, and all foreign material shall be removed from the embedded portions of flanges of stringers (Girders). The removal shall be accomplished in accordance with the requirements of the SSPC Surface Preparation Specifications SP3 for Power Tool Cleaning or SP2 for Hand Tool Cleaning. Cost shall be incidental to "Removal of Existing Concrete Deck."

REHABILITATION NOTES:

Seal cracks (1/16" and wider) in abutment caps, pier caps and diaphragms (within N.W.B. Lanes area) with pressure injected epoxy. Work will be paid for at contact unit price for "Epoxy Crack Sealing". (See Special Provisions)

Repair hollow, spalled and deteriorated concrete portion of abutment caps, pier caps and diaphragms (within the N.W.B. Lanes Area) with formed concrete repair. Splice in rebars where required. (See Special Provisions)

Remove existing electrical conduit, electrical boxes and light poles (in N.W.B. lanes area). Work is to be paid for under the contract unit price for "Removal **Existing Concrete Deck.**" (See Special Provisions).

Clean and seal the bridge seats at the abutments and the piers (in the N.W.B. Lanes Area). Work will be paid for at contract unit price for "Protective Surface Treatment".

Replace loose, damaged, or missing anchor bolts with epoxy grouted anchor bolts. Work will be paid for at contract unit price for "1" Dia. Anchor Bolts". (See Special Provisions). Location of repairs shall be coordinated with table on this sheet and as determined by the Engineer.

Replace missing or loose anchor bolt nuts or side retainer bolts with new nuts conforming to ASTM A307. Location of work shall be coordinated with table on this sheet. (cost incidental to "1" Dia. Anchor Bolts").

Replace the missing structural steel bolts, nuts and rivets and remove and replace the loose bolts, nuts and rivets with high strength bolts. Girder G7 at stringer N19.5 there is a loose bolt in connection. Girder G7 at stringer N18.12 there is a loose bolt at the bearing seat stiffener angle. Any additional loose or missing bolts, nuts and rivets found during rehabilitation should also be replaced with high strength bolts as directed by engineer. Method of removal shall be by mechanical means only, no burning allowed. (cost incidental to "Rivet Removal and Replacement").

The Bureau Of Bridges And Structures shall be consulted concerning the repair of all PPC beams that exhibit more than superficial damages.

3 AS REVISED

GENERAL NOTES & BILL OF MATERIAL

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+44

STANLEY CONSULTANTS

/usr/9088608/mnt/908805.dgn $$$DATE$$$

3 REVISED 4-20-94 PMP
2 Rev 11-8-93
1 REV. 9-30-93

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	196
		ILLINOIS		

SHEET NO. 5
72 SHEETS

* 0505(2-2B, 3-R, 6-P, 400HB, 401HB, 454, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439)R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ANCHOR BOLT REHABILITATION TABLE

Beam No.	Bearing	Anchor Bolts			Remarks
		Loose	Missing	Damaged	
N1.8	South	East			
N1.11	South			Both	
N1.17	South			West	
N2.17	South	Yes		Yes	
N2.17	North				Nut Missing
N5.5	South			Yes	
N5.6	South			Yes	
N5.7	South			Yes	West Nut Missing
N5.8	South			Yes	
N5.9	South			Yes	West Nut Loose
N5.12	South				West Nut Loose
N5.13	South			Yes	Both Nuts Loose
N5.15	South			Yes	
N6.10	North	Both			
N8.9	South	Yes			
N8.15	South	Yes			
N10.4	South			Yes	
N10.8	North	West			
N10.12	North			East	
N11.18	South			Yes	
N11.9	North			West	
N11.11	North	West			
N11.12	North				East Nut Loose
N11.13	North				East Nut Loose
N11.15	North		West		
N11.16	North			Both	
N12.5	South	East			
N12.7	South				West Nut Loose
N12.9	South				West Nut Loose
N12.10	South		West		
N12.11	South			West	
N13.4	South		Both		
N13.10	South	East			
N14.13	South	Yes			
N14.4	North	Both	East		
N14.6	North	Both			
N14.7	North	West			
N14.10	North	Both	Both	East	
N14.11	North	West			
N15.4	South	East		East	
N15.5	South	Both		Both	
N15.6	South	Both		Both	
N15.7	South			Both	
N15.8	South	West		Both	
N15.9	South	West		West	
N15.10	South	West		Both	
N15.11	South	Both			
N15.12	South	Both		Both	
N15.13	South	Both			
N16.4	North	Both			
N16.5	North	West			
N16.6	North	West			
N16.8	North	East			
N16.9	North	West			
N16.10	North	Both			
N16.11	North	West			
N16.13	North	Both			
N17.4	North	East			
N17.5	North	East	East		
N17.6	North	Both			
N17.7	North	East			
N17.8	North	West			
N17.9	North	Both			
N18.4	South		Both		
N18.5	South	Both		Both	
N18.6	South	Both		Both	
N18.7	South	Both		Both	
G9	West				Scaling Under Rocker
N20.7	North		Both		
N20.6	North		West		
G2	North		Northeast		
N23.1	North		West		
N23.2	North	Both			Bolts Bent
N23.3	North	Both			Bolts Bent
N23.4	North	West	East		West Nut Missing
N23.5	North	West	Both		
N23.6	North	Both			Nuts Missing
N23.7	North	Both			Nuts Missing
N23.8	North	Both			Nuts Missing
N23.9	North	Both			Nuts Missing
N23.10	North	Both			Nuts Missing
N24.3	South		Both		
N25.2	North				Nuts Missing
N25.3	North	East			
N25.6	North				West Nut Missing
N25.7	North	West			West Nut Missing
N25.15	North	West			

TOTAL BILL OF MATERIAL

	Item	Unit	Superstructure	Substructure	Total
(2)	Drainage System	Lin. Ft.	230	-	23[illegible]
	Furnish And Install Bridge Scupper - Type A	Each	15	-	15
	Furnish And Install Bridge Scupper - Type B	Each	9	-	9
	Bridge Deck Grooving	Sq. Yds.	12,751	-	12,751
	Class X Concrete Superstructure	Cu. Yds.	3,876.7	-	3,876.7
	Class X Concrete	Cu. Yds.		6.1	6.1
	Reinforcing Bars (Epoxy Coated)	Lbs.	[illegible]	680	920,88[illegible]
	Bar Splicers	Each	4,231	-	4,231
(4)	Removal Of Existing Concrete Deck	Lump Sum	0.3	-	0.3
(1)	Protective Coat	Sq. Yds.	14,359	-	14,359
	Neoprene Expansion Joint 2"	Lin. Ft.	932	-	932
	Neoprene Expansion Joint 4"	Lin. Ft.	49	-	49
	Preformed Joint Seal $1\frac{3}{4}$"	Lin. Ft.	369	-	369
	1" Dia. Anchor Bolts	Each	112	-	112
(5)	Furnishing And Erecting Structural Steel	Pounds	36,000	-	36,000
(6)	Erecting Structural Steel	Lump Sum	0.01	-	0.01
	Rivet Removal And Replacement	Each	3,500	-	3,500
	Concrete Removal	Cy. Yds.	-	2.5	2.5
	Jack & Support Existing Beam For Beam Repair	Each	14	-	14
(2)	Silicone Joint Sealer	Lin. Ft.	167	-	167
(3)	Protective Shield	Sq. Yd.	15,049	-	15,049
	Protect & Maintain Existing Underpass Luminaires	Lump Sum	0.4	-	0.4
	Protective Surface Treatment	Sq. Ft.	-	62,500	62,500
	Epoxy Crack Sealing	Lin. Ft.	286	95	381
	Epoxy Mortar Repair (Depth < $1\frac{1}{2}$")	Cu. Ft.	30	-	30
	[illegible]	[illegible]		[illegible]	[illegible]
	Formed Concrete Repair (Depth > 5")	Sq. Ft.	-	330	330
	Nameplates	Each	1	-	1
	Erecting PPC Beams I Beams-48"	Lin. Ft.	2,512	-	2,512
	Erecting PPC Beams I Beams-36"	Lin. Ft.	113	-	113
	Install Elastomeric Bearing Assembly-Type I	Each	41	-	41
	Removal Of Existing PPC Beams	Each	40	-	40
	PPC Beam Repair No. 1	Each	266	-	266
	PPC Beam Repair No. 2	Each	126	-	126
	Cleaning And Painting Steel Bridge-SP3	Lump Sum	0.14	-	0.14
	Power Tool Cleaning Residue Containment And Disposal	Lump Sum	0.14	-	0.14
(7)	Structural Steel Removal	Lump Sum	0.20	-	0.20
	High Performance Enhanced Shotcrete	Sq. Ft.	6000		6000

(1) Protective coat quantity includes deck surface and face of barrier rails. See special provisions for curing and texturing bridge deck
(2) See special provisions.
(3) See sheet 6 for limits of protective shield.
(4) Includes 119,320 sq. ft. of existing concrete deck removal and portions of concrete diaphragms indicated.
(5) Includes 10,050 pounds of structural steel required at preformed joint seal $1\frac{3}{4}$".
(6) Includes 840 pounds of structural steel (diaphragm assemblies, bearing assemblies).
(7) Includes 6,850 pounds of structural steel (bottom flange angles and bearing stiffener angles.)

EXISTING STRUCTURE

F.A.I. Route 2, Sec 0505.31H, built in 1958. Structure No. 016-0133.

Superstructure: Approach spans to Ashland Avenue: Simply supported Precast, Prestressed Concrete I-Beams. Ashland Avenue Main Spans: Planar Frame-Type Structure consisting of 144" riveted built-up composite fascia girders, 96" and 120" cross-girders, and 48" longitudinal girders.

Substructure: Pile Bent Abutments supported on concrete piles and multiple column piers supported on caissons.

Superstructure deck to be replaced. Traffic to be maintained utilizing stage construction.

EXISTING UTILITES

The existing utilities have been taken from the orignal bridge plans and from field observations. The information shown concerning type and location is not guaranteed to be accurate or all inclusive. The contractor is responsible for making his own determinations as to the type and location of underground and other utilites as may be necessary to avoid damage thereto.

DESIGN SPECIFICATIONS

AASHTO (1989) with 1990 & 1991 Interim Specifications. Loading HS20-44 and Alternate Military Loading.

Allow 25 psf for future wearing surface.

DESIGN STRESSES

Reinforced Concrete & Structural Steel

F'C = 3,500 psi (concrete)
FY = 60,000 psi (reinforcement)
FY = 36,000 psi, M270, GR. 36 (proposed structural steel)
FS = 18,000 psi (existing structural steel)

Prestressed Concrete & Pretensioning Steel

	Existing	Proposed
F'C	5,000 psi	6,000 psi
F'CI	4,000 psi	5,000 psi
F'S	248,000 psi ($\frac{7}{16}$" strands)	270,000 psi ($\frac{1}{2}$" strands)
F'SI	173,600 psi	202,500 psi

GENERAL NOTES:

1. Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$"⌀, $\frac{13}{16}$" holes unless noted otherwise.
2. Field Welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the engineer.
3. Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
4. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of work, however, the contractor will be paid for the quantity actually furnished at the unit price bid for the work.
5. Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and $\frac{3}{4}$"⌀x12" hooked bolts.
6. The contractor will be required to mark on top of the concrete deck the locations of the top flange of all the steel beams or girders, prior to any removal of the bridge concrete deck. Saw cutting directly over the top of the beam or girder flanges is not permitted.
7. Existing structural steel shall be cleaned and painted only as required by the special provision "Cleaning And Painting Existing Steel Structures Partial Removal (modified SSPC SP3) Surface Preparation" or as otherwise noted.
8. All existing structural steel components located within two feet from either side of all expansion joints shall be cleaned and painted. The system shall consist of spot cleaning as per SP3, spot priming, spot intermediate, and one full top coat of the Lead and Chromate Free Alkyd Paint System. The color of the finish coat for the exterior face and bottom flange of the fascia girders shall be Reddish Brown Munsell No. 2.5YR 3/4, for all interior surfaces the color shall be Light Grey Munsell No. 10Y 7/1.
9. The Zinc-Silicate and vinyl paint system shall be used for shop and field painting of new structural steel. The first coat has been applied in the shop. The second & third coats shall be applied in the field under this contract. The color of the vinyl finish coats shall be Munsell No. 2.5YR 3/4, Reddish Brown for the fascia of the exterior beams and their bearings and Munsell No. 10Y 7/1 Light Grey for all other structural steel.
10. Expansion plates and attached bars shall be shop painted with the Zinc-Silicate and vinyl painting system. The color of the finish coats shall be Munsell No. 10 YR 7/1 Light Grey.
11. The repair of the precast beams in the reversible lanes will be included in this contract if directed by the engineer. Cost included in Epoxy Crack Sealing, Epoxy Motar Repair (depth < $1\frac{1}{2}$"), PPC Beam Repair No. 1 or PPC Beam Repair No. 2.
12. Contractor shall provide temporary drainage system during the repair of the substructure. The drainage system shall collect the water just below the deck and discharge the water at grade. Cost incidental to "Drainage System".
13. Existing nameplate to be mounted adjacent to new nameplate, cost incidental to "Nameplates".
14. The cleaning and painting shall be done after the deck is removed, but prior to forming for the new deck. See special provisions "Cleaning and Painting Existing Steel Structures partial Removal (Modified SSPC S7D Surface Preparation" and "Containment and Disposal of Lead Paint Residues from Power Tool Cleaning."
15. Prior to pouring the new Backwall and /or New Concrete for the deck, all loose rust, loose mill scale, loose paint, and all foreign material shall be removed from the embedded portions of flanges of stringers (Girders). The removal shall be accomplished in accordance with the requirements of the SSPC Surface Preparation Specifications SP3 for Power Tool Cleaning of SP2 for Hand Tool Cleaning. Cost shall be incidental to "Removal of Existing Concrete Deck."

REHABILITATION NOTES:

Seal cracks (1/16" and wider) in abutment caps, pier caps and diaphragms (within N.W.B. Lanes area) with pressure injected epoxy. Work will be paid for at contract unit price for "Epoxy Crack Sealing". (See Special Provisions)

Repair hollow, spalled and deteriorated concrete portion of abutment caps, pier caps and diaphragms (within the N.W.B. Lanes Area) with formed concrete repair. Splice in rebars where required. (See Special Provisions)

Remove existing electrical conduit, electrical boxes and light poles (in N.W.B. lanes area). Work is to be paid for under the contract unit price for "Removal **Existing Concrete Deck.**" (See Special Provisions).

Clean and seal the bridge seats at the abutments and the piers (in the N.W.B. Lanes Area). Work will be paid for at contract unit price for "Protective Surface Treatment".

Replace loose, damaged, or missing anchor bolts with epoxy grouted anchor bolts. Work will be paid for at contract unit price for "1" Dia. Anchor Bolts". (See Special Provisions). Location of repairs shall be coordinated with table on this sheet and as determined by the Engineer.

Replace missing or loose anchor bolt nuts or side retainer nuts with new nuts conforming to ASTM A307. Location of work shall be coordinated with table on this sheet. (cost incidental to "1" Dia. Anchor Bolts").

Replace the missing structural steel bolts, nuts and rivets and remove and replace the loose bolts, nuts and rivets with high strength bolts. Girder G7 at stringer N19.5 there is a loose bolt in connection. Girder G1 at stringer N18.12 there is a loose bolt at the bearing seat stiffener angle. Any additional loose or missing bolts, nuts and rivets found during rehabilitation should also be replaced with high strength bolts as directed by engineer. Method of removal shall be by mechanical means only, no burning allowed. (cost incidental to "Rivet Removal and Replacement").

The Bureau Of Bridges And Structures shall be consulted concerning the repair of all PPC beams that exhibit more than superficial damages.

GENERAL NOTES & BILL OF MATERIAL

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

/usr/9088608/mnt/908805.dgn $$$DATE$$$

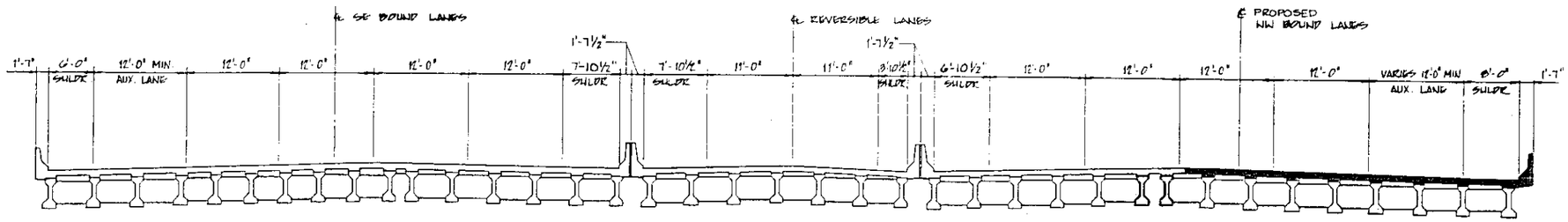
(2) Rev. 11-8-93
(1) REV. 9-30-93

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

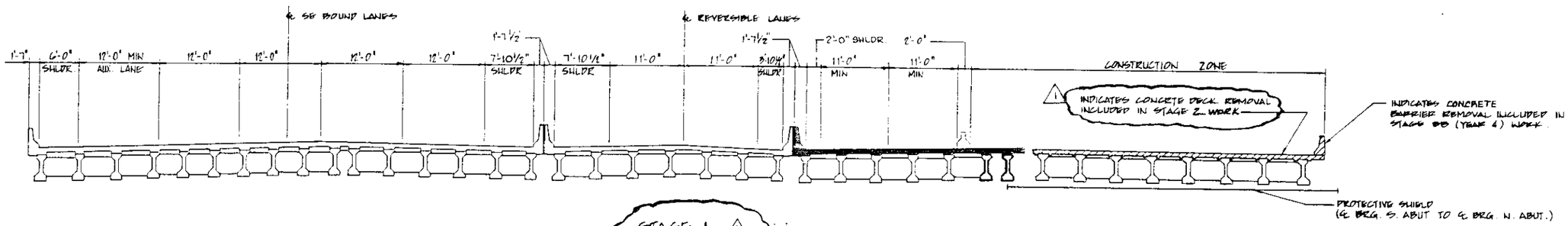
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	197
F.A.I. RTE. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6
72 SHEETS

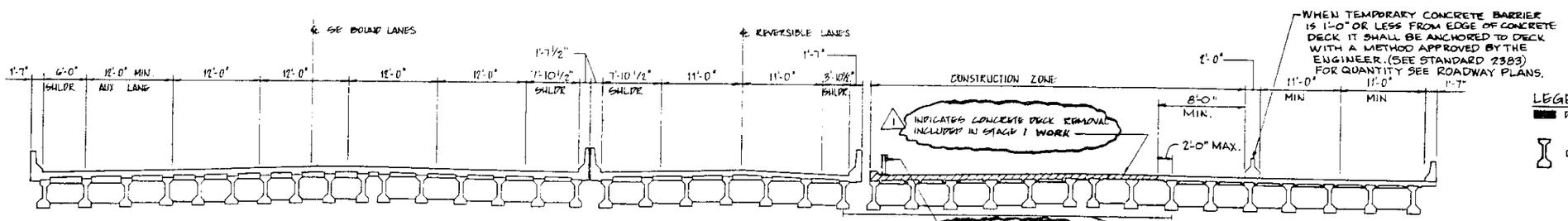
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



STAGE 2 △1



STAGE 1 △1



WHEN TEMPORARY CONCRETE BARRIER IS 1'-0" OR LESS FROM EDGE OF CONCRETE DECK IT SHALL BE ANCHORED TO DECK WITH A METHOD APPROVED BY THE ENGINEER. (SEE STANDARD 2383) FOR QUANTITY SEE ROADWAY PLANS.

EXISTING △1

LEGEND

DENOTES PROPOSED STRUCTURE

DENOTES NEW PPC I-BEAM.

STANLEY CONSULTANTS

BRIDGE CONSTRUCTION STAGING

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

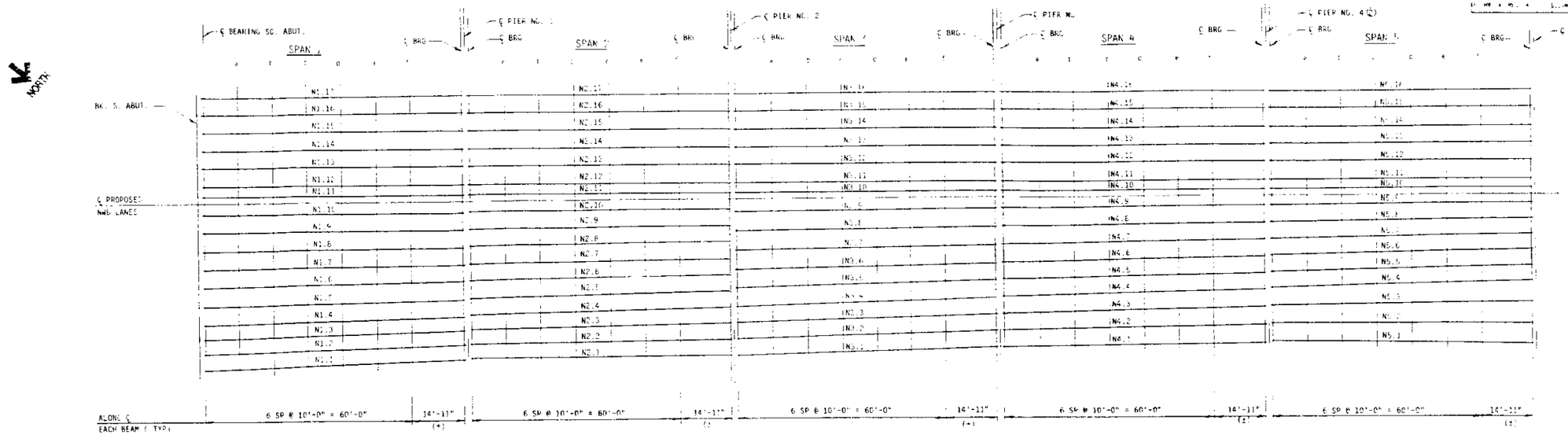
△1 REV. 9-30-93

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

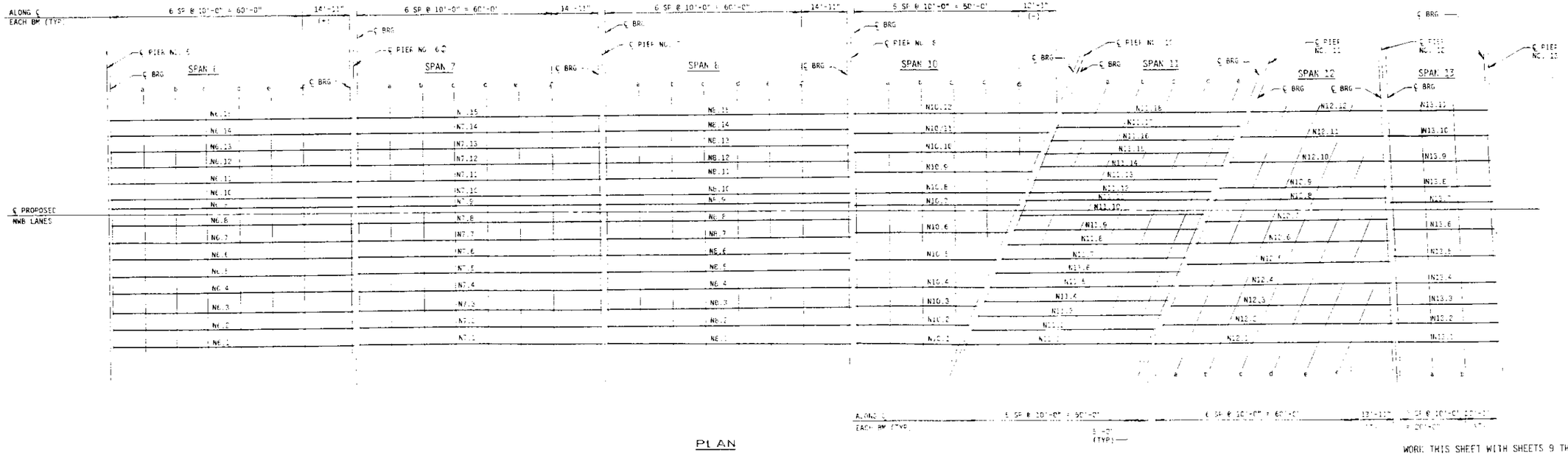
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	198

SHEET NO. 7 OF SHEETS



PLAN



PLAN

WORK THIS SHEET WITH SHEETS 9 THRU 18.

NOTES:

(2) INDICATES EXISTING DIAPHRAGM AT PIERS 4, 6, AND 14 TO BE REMOVED AND REPLACED WITH FIXED PIER DIAPHRAGM. SEE SHEET 42 FOR DETAIL.

(3) INDICATES MISSING OR LOOSE BOLTS, NUTS, OR RIVETS. SEE "REHABILITATION NOTES" SHOWN ON SHEET 8

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS SHEET 1 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

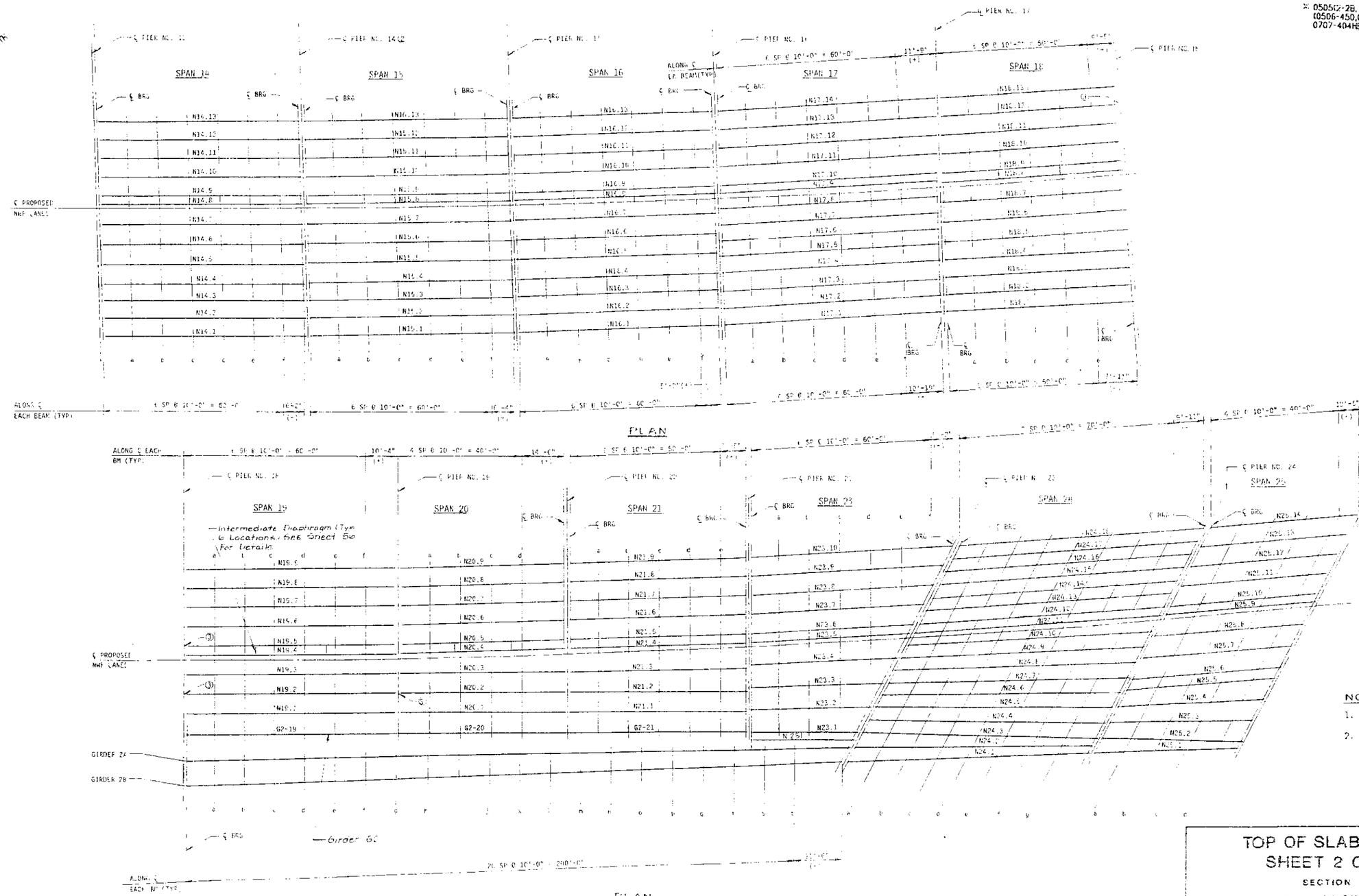
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECT.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	199
F.A.P. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8
72 SHEETS

* 0505(2-2B, 3-1H, 6-1H, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



NOTES:

1. SEE SHEET 7 FOR DIAPHRAGM REHABILITATION NOTES.
2. WORK THIS SHEET WITH SHEET 19 THRU 24.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 408+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	x		443	200
F. HW. A. RLG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 9
72 SHEETS

x 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
[illegible]	BK.S.ABUT.	19861.525	-31.771	612.516	612.516
	℄ BRG.	19863.998	-31.755	612.591	612.591
	a	19873.984	-31.693	612.892	612.906
	b	19883.970	-31.636	613.193	613.219
	c	19893.956	-31.583	613.493	613.522
	d	19903.942	-31.534	613.794	613.824
	e	19913.928	-31.490	614.094	614.122
	f	19923.915	-31.450	614.395	614.415
	℄ BRG.	19938.815	-31.399	614.843	614.843
[illegible]	BK.S.ABUT.	19861.498	-26.521	612.625	612.625
	℄ BRG.	19863.965	-26.505	612.699	612.699
	a	19873.953	-26.443	613.000	613.014
	b	19883.941	-26.386	613.301	613.327
	c	19893.929	-26.333	613.602	613.631
	d	19903.918	-26.284	613.902	613.933
	e	19913.906	-26.240	614.203	614.231
	f	19923.895	-26.200	614.504	614.524
	℄ BRG.	19938.799	-26.149	614.952	614.952
[illegible]	BK.S.ABUT.	19861.454	-21.271	612.733	612.733
	℄ BRG.	19863.9[illegible]	-21.255	612.808	612.808
	a	19873.927	-21.194	613.109	613.122
	b	[illegible]	-21.136	613.410	613.436
	c	19893.903	-21.085	613.710	613.740
	d	19903.893	-21.034	614.011	614.042
	e	19913.884	-20.990	614.312	614.339
	f	19923.875	-20.950	614.612	614.633
	℄ BRG.	19938.782	-20.899	615.061	615.061

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N1.14	BK.S.ABUT.	19861.420	-16.021	612.841	612.841
	℄ BRG.	19863.897	-16.005	612.916	612.916
	a	19873.890	-15.944	613.217	613.231
	b	19883.883	-15.886	613.518	613.544
	c	19893.876	-15.833	613.819	613.848
	d	19903.869	-15.785	614.120	614.150
	e	19913.862	-15.740	614.420	614.448
	f	19923.855	-15.700	614.721	614.742
	℄ BRG.	19938.766	-15.649	615.170	615.170
BEAM N1.13	BK.S.ABUT.	19861.386	-10.772	612.943	612.943
	℄ BRG.	19863.864	-10.756	613.018	613.018
	a	19873.859	-10.694	613.319	613.333
	b	19883.854	-10.636	613.619	613.646
	c	19893.849	-10.583	613.920	613.949
	d	19903.845	-10.535	614.221	614.251
	e	19913.840	-10.490	614.521	614.549
	f	19923.835	-10.450	614.822	614.843
	℄ BRG.	19938.750	-10.399	615.270	615.270
BEAM N1.12	BK.S.ABUT.	19861.352	-5.522	613.024	613.024
	℄ BRG.	19863.830	-5.506	613.099	613.099
	a	19873.827	-5.444	613.400	613.414
	b	19883.825	-5.386	613.701	613.727
	c	19893.822	-5.333	614.001	614.031
	d	19903.820	-5.285	614.302	614.333
	e	19913.818	-5.240	614.603	614.630
	f	19923.815	-5.200	614.903	614.924
	℄ BRG.	19938.733	-5.149	615.352	615.352

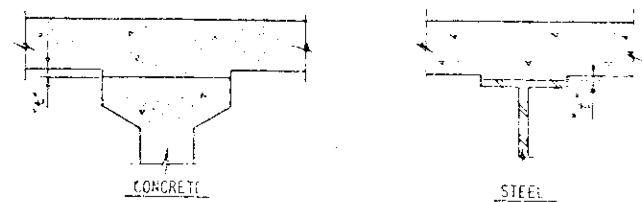
← INDICATES STA. 199+38.733 (TYP.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N1.11	BK.S.ABUT.	19861.332	-2.480	613.071	613.071
	℄ BRG.	19863.811	-2.464	613.146	613.146
	a	19873.809	-2.402	613.447	613.461
	b	19883.808	-2.345	613.748	613.774
	c	19893.807	-2.292	614.048	614.078
	d	19903.806	-2.243	614.349	614.380
	e	19913.805	-2.199	614.650	614.677
	f	19923.804	-2.159	614.950	614.971
	℄ BRG.	19938.724	-2.107	615.399	615.399
℄ PROP NWB LANES	BK.S.ABUT.	19861.316	0.000	613.110	613.110
	℄ BRG.	19863.795	0.000	613.184	613.184
	a	19873.795	0.000	613.484	613.498
	b	19883.795	0.000	613.784	613.810
	c	19893.795	0.000	614.084	614.113
	d	19903.795	0.000	614.384	614.414
	e	19913.795	0.000	614.684	614.712
	f	19923.795	0.000	614.984	615.005
	℄ BRG.	19938.717	0.000	615.432	615.432
BEAM N1.10	BK.S.ABUT.	19861.297	2.873	613.064	613.064
	℄ BRG.	19863.776	2.880	613.138	613.138
	a	19873.778	2.903	613.438	613.452
	b	19883.779	2.921	613.738	613.764
	c	19893.780	2.935	614.038	614.057
	d	19903.781	2.945	614.337	614.369
	e	19913.783	2.950	614.637	614.665
	f	19923.784	2.951	614.937	614.958
	℄ BRG.	19938.708	2.945	615.385	615.385

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N1.9	BK.S.ABUT.	19861.262	8.226	612.979	612.979
	℄ BRG.	19863.742	8.223	613.054	613.054
	a	19873.746	8.207	613.354	613.368
	b	19883.749	8.187	613.655	613.681
	c	19893.753	8.162	613.955	613.984
	d	19903.756	8.133	614.256	614.286
	e	19913.760	8.099	614.556	614.584
	f	19923.763	8.062	614.857	614.876
	℄ BRG.	19938.692	7.997	615.306	615.306
BEAM N1.8	BK.S.ABUT.	19861.227	13.580	612.886	612.886
	℄ BRG.	19863.708	13.567	612.961	612.961
	a	19873.713	13.512	613.262	613.276
	b	19883.719	13.453	613.564	613.590
	c	19893.725	13.389	613.865	613.894
	d	19903.730	13.321	614.167	614.197
	e	19913.736	13.249	614.469	614.496
	f	19923.742	13.172	614.770	614.791
	℄ BRG.	19938.676	13.049	615.221	615.221
BEAM N1.7	BK.S.ABUT.	19861.192	18.933	612.774	612.774
	℄ BRG.	19863.673	18.910	612.849	612.849
	a	19873.681	18.817	613.151	613.165
	b	19883.689	18.719	613.453	613.480
	c	19893.697	18.616	613.756	613.785
	d	19903.704	18.509	614.058	614.089
	e	19913.712	18.398	614.361	614.386
	f	19923.719	18.282	614.663	614.684
	℄ BRG.	19938.660	18.101	615.115	615.115

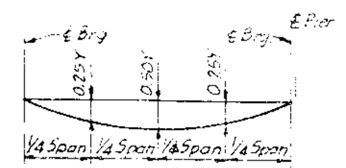
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
[illegible]	[illegible]	[illegible]	24.286	612.661	612.661
	[illegible]	19863.6[illegible]	24.254	612.736	612.736
	[illegible]	[illegible]	24.121	613.040	613.053
	b	[illegible]	23.984	613.343	613.369
	[illegible]	[illegible]	[illegible]	613.646	613.675
	[illegible]	[illegible]	23.697	613.949	613.980
	e	[illegible]	23.547	614.253	614.280
	[illegible]	[illegible]	[illegible]	614.556	614.577
	[illegible]	[illegible]	23.153	615.010	615.010
[illegible]	[illegible]	[illegible]	29.640	612.549	612.549
	[illegible]	19863.605	29.598	612.624	612.624
	a	19873.616	29.426	612.928	612.942
	b	19883.627	29.250	613.232	613.258
	[illegible]	[illegible]	29.070	613.536	613.565
	[illegible]	19903.650	28.885	613.840	613.873
	e	19913.660	28.696	614.145	614.172
	[illegible]	19923.671	28.502	614.449	614.470
	[illegible]	[illegible]	28.205	614.904	614.904
BEAM N1.4	BK.S.ABUT.	19861.087	34.993	612.436	612.436
	℄ BRG.	19863.570	34.941	612.512	612.512
	a	19873.583	34.731	612.816	612.830
	b	19883.596	34.516	613.121	613.148
	c	19893.609	34.297	613.426	613.455
	d	19903.621	34.073	613.731	613.762
	e	19913.634	33.845	614.036	614.064
	f	19923.646	33.613	614.342	614.362
	℄ BRG.	19938.615	33.257	614.798	614.798

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N1.3	BK.S.ABUT.	19861.059	39.203	612.346	612.348
	℄ BRG.	19863.543	39.154	612.423	612.423
	a	19873.556	38.957	612.728	612.744
	b	19883.570	38.754	613.032	613.064
	c	19893.583	38.548	613.337	613.375
	d	[illegible]	38.337	613.642	613.682
	e	19913.617	38.121	613.947	613.982
	f	19923.631	37.902	614.252	614.277
	℄ BRG.	19938.599	37.565	614.708	614.708
BEAM N1.2	BK.S.ABUT.	19861.032	43.415	612.259	612.259
	℄ BRG.	19863.516	43.373	612.334	612.334
	a	19873.533	43.202	612.639	612.655
	b	19883.551	43.026	612.943	612.975
	c	19893.568	42.846	613.247	613.284
	d	19903.585	42.661	613.551	613.591
	e	19913.602	42.472	613.856	613.891
	f	19923.619	42.279	614.160	614.185
	℄ BRG.	19938.585	41.982	614.616	614.616
BEAM N1.1	BK.S.ABUT.	19861.004	47.627	612.170	612.170
	℄ BRG.	19863.489	47.592	612.246	612.246
	a	19873.508	47.447	612.549	612.566
	b	19883.528	47.297	612.853	612.885
	c	19893.548	47.144	613.157	613.197
	d	19903.567	46.985	613.461	613.505
	e	19913.586	46.823	613.765	613.801
	f	19923.606	46.656	614.069	614.094
	℄ BRG.	19938.571	46.398	614.523	614.523



TO DETERMINE "t" ELEVATIONS OF THE TOP FLANGES OF THE BEAMS OR GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS", MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGES OF BEAMS OR GIRDERS.

FILLET HEIGHTS



LOCATION	0.25Y	0.50Y
BEAMS N1.4 THRU N1.17	5/16"	3/8"
BEAMS N1.2 & N1.3	3/8"	1/2"
BEAM N1.1	3/8"	9/16"

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.

NOTE

WORK THIS SHEET WITH SHEET 7 & 8.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 1

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	201
F. HW. A. RSG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N2.14	℄ BRG.	19940.720	-31.393	614.900	614.900
	a	19950.736	-31.365	615.201	615.214
	b	19960.702	-31.342	615.501	615.527
	c	19970.688	-31.323	615.801	615.830
	d	19980.674	-31.309	616.100	616.131
	e	19990.661	-31.298	616.400	616.428
	f	20000.647	-31.293	616.699	616.720
	℄ BRG.	20015.547	-31.292	617.136	617.136
BEAM N2.13	℄ BRG.	19940.723	-26.143	615.009	615.009
	a	19950.702	-26.115	615.310	615.323
	b	19960.691	-26.092	615.610	615.636
	c	19970.679	-26.073	615.910	615.939
	d	19980.668	-26.059	616.210	616.240
	e	19990.656	-26.048	616.510	616.537
	f	20000.645	-26.043	616.808	616.829
	℄ BRG.	20015.547	-26.042	617.245	617.245
BEAM N2.12	℄ BRG.	19940.697	-20.893	615.118	615.118
	a	19950.688	-20.865	615.418	615.432
	b	19960.679	-20.842	615.719	615.745
	c	19970.670	-20.823	616.019	616.048
	d	19980.661	-20.809	616.319	616.349
	e	19990.652	-20.798	616.619	616.647
	f	20000.643	-20.793	616.918	616.938
	℄ BRG.	20015.547	-20.792	617.354	617.354

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N2.14	℄ BRG	19940.682	-15.613	615.227	615.227
	a	19950.675	-15.615	615.527	615.541
	b	19960.668	-15.592	615.828	615.854
	c	19970.661	-15.573	616.128	616.157
	d	19980.654	-15.559	616.428	616.458
	e	19990.647	-15.548	616.728	616.756
	f	20000.640	-15.543	617.027	617.048
	℄ BRG.	20015.547	-15.542	617.464	617.464
BEAM N2.13	℄ BRG.	19940.666	-10.393	615.328	615.328
	a	19950.661	-10.365	615.628	615.642
	b	19960.656	-10.342	615.928	615.954
	c	19970.652	-10.323	616.228	616.257
	d	19980.647	-10.309	616.528	616.559
	e	19990.642	-10.298	616.828	616.856
	f	20000.638	-10.293	617.127	617.148
	℄ BRG.	20015.547	-10.292	617.564	617.564
BEAM N2.12	℄ BRG.	19940.650	-5.143	615.409	615.409
	a	19950.647	-5.115	615.710	615.723
	b	19960.645	-5.092	616.010	616.036
	c	19970.643	-5.073	616.310	616.339
	d	19980.640	-5.059	616.610	616.641
	e	19990.638	-5.048	616.910	616.938
	f	20000.636	-5.043	617.209	617.230
	℄ BRG.	20015.547	-5.042	617.646	617.646

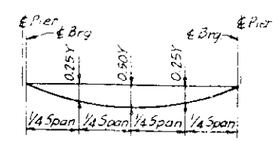
INDICATES STA. 260+15.547 (TYP.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N2.11	℄ BRG.	19940.640	-2.101	615.456	615.456
	a	19950.639	-2.074	615.757	615.771
	b	19960.638	-2.050	616.057	616.083
	c	19970.637	-2.032	616.357	616.387
	d	19980.637	-2.017	616.658	616.688
	e	19990.636	-2.007	616.958	616.985
	f	20000.635	-2.001	617.257	617.278
	℄ BRG.	20015.547	-2.000	617.694	617.694
℄ PROP NWB LANES	℄ BRG.	19940.634	0.000	615.489	615.489
	a	19950.634	0.000	615.789	615.803
	b	19960.634	0.000	616.089	616.115
	c	19970.634	0.000	616.389	616.418
	d	19980.634	0.000	616.689	616.720
	e	19990.634	0.000	616.989	617.017
	f	20000.634	0.000	617.288	617.309
	℄ BRG.	20015.547	0.000	617.725	617.725
BEAM N2.10	℄ BRG.	19940.625	2.940	615.443	615.443
	a	19950.626	2.929	615.743	615.757
	b	19960.627	2.913	616.043	616.070
	c	19970.629	2.893	616.344	616.373
	d	19980.630	2.869	616.644	616.675
	e	19990.631	2.840	616.944	616.972
	f	20000.632	2.807	617.244	617.265
	℄ BRG.	20015.547	2.750	617.682	617.682

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N2.9	℄ BRG.	19940.609	7.982	615.364	615.364
	a	19950.613	7.932	615.664	615.678
	b	19960.616	7.877	615.965	615.992
	c	19970.619	7.818	616.267	616.296
	d	19980.623	7.755	616.568	616.598
	e	19990.626	7.687	616.869	616.896
	f	20000.629	7.615	617.169	617.190
	℄ BRG.	20015.547	7.500	617.608	617.608
BEAM N2.8	℄ BRG.	19940.594	13.024	615.279	615.279
	a	19950.599	12.934	615.581	615.595
	b	19960.605	12.841	615.883	615.909
	c	19970.610	12.743	616.185	616.214
	d	19980.615	12.641	616.488	616.518
	e	19990.620	12.534	616.790	616.818
	f	20000.625	12.423	617.092	617.112
	℄ BRG.	20015.547	12.250	617.532	617.532
BEAM N2.7	℄ BRG.	19940.579	18.065	615.174	615.174
	a	19950.586	17.937	615.476	615.490
	b	19960.593	17.805	615.779	615.806
	c	19970.600	17.668	616.082	616.112
	d	19980.606	17.527	616.386	616.416
	e	19990.613	17.381	616.689	616.717
	f	20000.619	17.231	616.991	617.012
	℄ BRG.	20015.547	17.000	617.433	617.433

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N2.6	℄ BRG.	19940.568	22.107	615.068	615.068
	a	19950.572	22.940	615.372	615.386
	b	19960.581	22.769	615.676	615.702
	c	19970.592	22.591	615.980	616.009
	d	19980.597	22.413	616.284	616.314
	e	19990.599	22.228	616.588	616.615
	f	20000.613	22.040	616.891	616.911
	℄ BRG.	20015.547	21.750	617.334	617.334
BEAM N2.5	℄ BRG.	19940.548	28.349	614.963	614.963
	a	19950.558	27.963	615.267	615.281
	b	19960.568	27.772	615.572	615.598
	c	19970.578	27.576	615.877	615.906
	d	19980.587	27.299	616.181	616.212
	e	19990.597	27.076	616.486	616.514
	f	20000.606	26.848	616.790	616.815
	℄ BRG.	20015.547	26.500	617.235	617.235
BEAM N2.4	℄ BRG.	19940.532	33.190	614.857	614.857
	a	19950.544	32.945	615.163	615.176
	b	19960.556	32.696	615.468	615.494
	c	19970.566	32.443	615.774	615.803
	d	19980.577	32.185	616.079	616.110
	e	19990.588	31.923	616.385	616.413
	f	20000.598	31.656	616.690	616.711
	℄ BRG.	20015.547	31.250	617.136	617.136

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N2.3	℄ BRG.	19940.519	37.508	614.767	614.767
	a	19950.533	37.298	615.072	615.086
	b	19960.547	37.082	615.376	615.408
	c	19970.561	36.863	615.681	615.719
	d	19980.575	36.630	615.986	616.027
	e	19990.588	36.411	616.292	616.326
	f	20000.601	36.178	616.596	616.621
	℄ BRG.	20015.547	35.823	617.041	617.041
BEAM N2.2	℄ BRG.	19940.506	41.935	614.674	614.674
	a	19950.522	41.744	614.979	614.995
	b	19960.539	41.548	615.283	615.315
	c	19970.555	41.346	615.588	615.625
	d	19980.571	41.144	615.892	615.933
	e	19990.587	40.935	616.197	616.232
	f	20000.602	40.722	616.501	616.526
	℄ BRG.	20015.547	40.396	616.946	616.946
BEAM N2.1	℄ BRG.	19940.492	46.363	614.581	614.581
	a	19950.511	46.191	614.886	614.902
	b	19960.530	46.014	615.190	615.222
	c	19970.548	45.834	615.494	615.535
	d	19980.567	45.649	615.799	615.843
	e	19990.585	45.459	616.103	616.139
	f	20000.603	45.265	616.407	616.432
	℄ BRG.	20015.547	44.969	616.851	616.851



LOCATION	0.25Y	0.50Y
BEAMS N2.4 THRU N2.17	5/16"	3/8"
BEAMS N2.2 & N2.3	3/8"	1/2"
BEAM N2.1	3/8"	9/16"

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.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	202
F. HWY. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11
72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N3.16	℄ BRG.	20017.464	-31.292	617.191	617.191
	a	20027.464	-31.292	617.476	617.490
	b	20037.464	-31.292	617.757	617.783
	c	20047.464	-31.292	618.032	618.061
	d	20057.464	-31.292	618.302	618.332
	e	20067.464	-31.292	618.566	618.594
	f	20077.464	-31.292	618.826	618.846
	℄ BRG.	20092.387	-31.292	619.203	619.203
BEAM N3.15	℄ BRG.	20017.464	-26.042	617.300	617.300
	a	20027.464	-26.042	617.586	617.599
	b	20037.464	-26.042	617.866	617.892
	c	20047.464	-26.042	618.141	618.170
	d	20057.464	-26.042	618.411	618.441
	e	20067.464	-26.042	618.676	618.703
	f	20077.464	-26.042	618.935	618.956
	℄ BRG.	20092.387	-26.042	619.313	619.313
BEAM N3.14	℄ BRG.	20017.464	-20.792	617.410	617.410
	a	20027.464	-20.792	617.695	617.709
	b	20037.464	-20.792	617.975	618.002
	c	20047.464	-20.792	618.250	618.279
	d	20057.464	-20.792	618.520	618.551
	e	20067.464	-20.792	618.785	618.813
	f	20077.464	-20.792	619.044	619.065
	℄ BRG.	20092.387	-20.792	619.422	619.422

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N3.13	℄ BRG.	20017.464	-15.542	617.519	617.519
	a	20027.464	-15.542	617.804	617.818
	b	20037.464	-15.542	618.085	618.111
	c	20047.464	-15.542	618.360	618.389
	d	20057.464	-15.542	618.630	618.660
	e	20067.464	-15.542	618.894	618.922
	f	20077.464	-15.542	619.154	619.175
	℄ BRG.	20092.387	-15.542	619.531	619.531
BEAM N3.12	℄ BRG.	20017.464	-10.292	617.619	617.619
	a	20027.464	-10.292	617.905	617.919
	b	20037.464	-10.292	618.185	618.212
	c	20047.464	-10.292	618.460	618.489
	d	20057.464	-10.292	618.730	618.761
	e	20067.464	-10.292	618.995	619.023
	f	20077.464	-10.292	619.254	619.275
	℄ BRG.	20092.387	-10.292	619.632	619.632
BEAM N3.11	℄ BRG.	20017.464	-5.042	617.701	617.701
	a	20027.464	-5.042	617.987	618.001
	b	20037.464	-5.042	618.267	618.294
	c	20047.464	-5.042	618.542	618.571
	d	20057.464	-5.042	618.812	618.843
	e	20067.464	-5.042	619.077	619.105
	f	20077.464	-5.042	619.336	619.357
	℄ BRG.	20092.387	-5.042	619.714	619.714

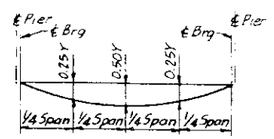
INDICATES STA. 200+92.387 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N3.10	℄ BRG.	20017.464	-2.000	617.749	617.749
	a	20027.464	-2.000	618.034	618.048
	b	20037.464	-2.000	618.315	618.341
	c	20047.464	-2.000	618.590	618.619
	d	20057.464	-2.000	618.860	618.890
	e	20067.464	-2.000	619.124	619.152
	f	20077.464	-2.000	619.384	619.405
	℄ BRG.	20092.387	-2.000	619.762	619.762
℄ PROP NWB LANES	℄ BRG.	20017.464	0.000	617.780	617.780
	a	20027.464	0.000	618.066	618.080
	b	20037.464	0.000	618.346	618.372
	c	20047.464	0.000	618.621	618.650
	d	20057.464	0.000	618.891	618.921
	e	20067.464	0.000	619.156	619.183
	f	20077.464	0.000	619.415	619.436
	℄ BRG.	20092.387	0.000	619.793	619.793
BEAM N3.9	℄ BRG.	20017.464	3.531	617.725	617.725
	a	20027.464	3.486	618.011	618.025
	b	20037.464	3.440	618.292	618.319
	c	20047.463	3.394	618.568	618.597
	d	20057.463	3.348	618.839	618.869
	e	20067.463	3.302	619.104	619.132
	f	20077.463	3.256	619.364	619.385
	℄ BRG.	20092.387	3.188	619.743	619.743

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N3.8	℄ BRG.	20017.464	9.063	617.639	617.639
	a	20027.463	8.971	617.926	617.939
	b	20037.463	8.879	618.207	618.234
	c	20047.463	8.787	618.484	618.513
	d	20057.462	8.696	618.755	618.786
	e	20067.462	8.604	619.021	619.049
	f	20077.461	8.512	619.282	619.303
	℄ BRG.	20092.387	8.375	619.662	619.662
BEAM N3.7	℄ BRG.	20017.464	14.594	617.539	617.539
	a	20027.463	14.456	617.827	617.841
	b	20037.462	14.319	618.110	618.136
	c	20047.461	14.181	618.388	618.417
	d	20057.460	14.043	618.661	618.691
	e	20067.459	13.906	618.928	618.956
	f	20077.458	13.768	619.191	619.211
	℄ BRG.	20092.387	13.563	619.573	619.573
BEAM N3.6	℄ BRG.	20017.464	20.125	617.424	617.424
	a	20027.462	19.942	617.713	617.726
	b	20037.460	19.758	617.997	618.023
	c	20047.459	19.575	618.276	618.305
	d	20057.457	19.391	618.549	618.580
	e	20067.455	19.208	618.818	618.845
	f	20077.454	19.024	619.081	619.102
	℄ BRG.	20092.387	18.750	619.465	619.465

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N3.5	℄ BRG.	20017.464	25.656	617.308	617.308
	a	20027.461	25.427	617.598	617.612
	b	20037.459	25.198	617.883	617.910
	c	20047.456	24.968	618.163	618.192
	d	20057.453	24.739	618.438	618.468
	e	20067.451	24.510	618.707	618.735
	f	20077.448	24.280	618.971	618.992
	℄ BRG.	20092.387	23.938	619.357	619.357
BEAM N3.4	℄ BRG.	20017.464	31.188	617.193	617.193
	a	20027.460	30.912	617.484	617.498
	b	20037.456	30.637	617.770	617.796
	c	20047.452	30.362	618.051	618.080
	d	20057.449	30.087	618.326	618.357
	e	20067.445	29.812	618.597	618.624
	f	20077.441	29.537	618.862	618.882
	℄ BRG.	20092.387	29.125	619.249	619.249
BEAM N3.3	℄ BRG.	20017.464	35.781	617.097	617.097
	a	20027.461	35.530	617.388	617.405
	b	20037.457	35.278	617.673	617.706
	c	20047.454	35.027	617.954	617.994
	d	20057.451	34.775	618.229	618.273
	e	20067.448	34.523	618.499	618.535
	f	20077.445	34.272	618.763	618.788
	℄ BRG.	20092.387	33.896	619.149	619.149

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N3.2	℄ BRG.	20017.464	40.375	617.002	617.002
	a	20027.461	40.147	617.292	617.308
	b	20037.459	39.919	617.577	617.609
	c	20047.456	39.691	617.856	617.897
	d	20057.453	39.463	618.131	618.176
	e	20067.451	39.235	618.400	618.437
	f	20077.448	39.007	618.665	618.690
	℄ BRG.	20092.387	38.667	619.050	619.050
BEAM N3.1	℄ BRG.	20017.464	44.969	616.906	616.906
	a	20027.462	44.764	617.196	617.215
	b	20037.460	44.560	617.480	617.537
	c	20047.458	44.356	617.759	617.802
	d	20057.455	44.151	618.033	618.079
	e	20067.453	43.947	618.302	618.342
	f	20077.451	43.743	618.566	618.595
	℄ BRG.	20092.387	43.438	618.950	618.950



LOCATION	0.25Y	0.50Y
BEAMS N3.4 THRU N3.16	5/16"	3/8"
BEAMS N3.2 & N3.3	3/8"	9/16"
BEAM N3.1	7/16"	9/16"

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.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 3

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	203
F.A.P. NO. 4	ILLINOIS FED. AID PROJECT			

SHEET NO. 12
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 450), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N4.16	℄ BRG.	20094.304	-31.292	619.251	619.251
	a	20104.304	-31.292	619.497	619.510
	b	20114.304	-31.292	619.737	619.763
	c	20124.304	-31.292	619.972	620.001
	d	20134.304	-31.292	620.202	620.233
	e	20144.304	-31.292	620.427	620.455
	f	20154.304	-31.292	620.646	620.667
	℄ BRG.	20169.217	-31.292	620.964	620.964
BEAM N4.15	℄ BRG.	20094.304	-26.042	619.360	619.360
	a	20104.304	-26.042	619.606	619.620
	b	20114.304	-26.042	619.846	619.873
	c	20124.304	-26.042	620.081	620.111
	d	20134.304	-26.042	620.311	620.342
	e	20144.304	-26.042	620.536	620.564
	f	20154.304	-26.042	620.756	620.776
	℄ BRG.	20169.217	-26.042	621.074	621.074
BEAM N4.14	℄ BRG.	20094.304	-20.792	619.470	619.470
	a	20104.304	-20.792	619.715	619.729
	b	20114.304	-20.792	619.956	619.982
	c	20124.304	-20.792	620.191	620.220
	d	20134.304	-20.792	620.421	620.451
	e	20144.304	-20.792	620.646	620.673
	f	20154.304	-20.792	620.865	620.886
	℄ BRG.	20169.217	-20.792	621.183	621.183

NOTE: OFFSETS TAPERED FROM ℄ PROPOSED NWB LANES

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N4.13	℄ BRG.	20094.304	-15.542	619.579	619.579
	a	20104.304	-15.542	619.825	619.838
	b	20114.304	-15.542	620.065	620.091
	c	20124.304	-15.542	620.300	620.329
	d	20134.304	-15.542	620.530	620.561
	e	20144.304	-15.542	620.755	620.783
	f	20154.304	-15.542	620.975	620.995
	℄ BRG.	20169.217	-15.542	621.292	621.292
BEAM N4.12	℄ BRG.	20094.304	-10.292	619.680	619.680
	a	20104.304	-10.292	619.925	619.939
	b	20114.304	-10.292	620.166	620.192
	c	20124.304	-10.292	620.401	620.430
	d	20134.304	-10.292	620.631	620.661
	e	20144.304	-10.292	620.855	620.883
	f	20154.304	-10.292	621.075	621.096
	℄ BRG.	20169.217	-10.292	621.393	621.393
BEAM N4.11	℄ BRG.	20094.304	-5.042	619.762	619.762
	a	20104.304	-5.042	620.007	620.021
	b	20114.304	-5.042	620.247	620.274
	c	20124.304	-5.042	620.483	620.512
	d	20134.304	-5.042	620.713	620.743
	e	20144.304	-5.042	620.937	620.965
	f	20154.304	-5.042	621.157	621.178
	℄ BRG.	20169.217	-5.042	621.475	621.475

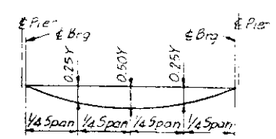
* INDICATES STA. 201+69.217 (TYP.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N4.10	℄ BRG.	20094.304	-2.000	619.809	619.809
	a	20104.304	-2.000	620.055	620.068
	b	20114.304	-2.000	620.295	620.321
	c	20124.304	-2.000	620.530	620.559
	d	20134.304	-2.000	620.760	620.791
	e	20144.304	-2.000	620.985	621.013
	f	20154.304	-2.000	621.205	621.225
	℄ BRG.	20169.217	-2.000	621.522	621.522
℄ PROP NWB LANES	℄ BRG.	20094.304	0.000	619.840	619.840
	a	20104.304	0.000	620.086	620.100
	b	20114.304	0.000	620.326	620.353
	c	20124.304	0.000	620.561	620.591
	d	20134.304	0.000	620.791	620.822
	e	20144.304	0.000	621.016	621.044
	f	20154.304	0.000	621.236	621.257
	℄ BRG.	20169.217	0.000	621.554	621.554
BEAM N4.9	℄ BRG.	20094.304	3.177	619.791	619.791
	a	20104.304	3.131	620.037	620.051
	b	20114.304	3.085	620.278	620.304
	c	20124.303	3.040	620.514	620.543
	d	20134.303	2.994	620.745	620.775
	e	20144.303	2.948	620.970	620.998
	f	20154.303	2.902	621.190	621.211
	℄ BRG.	20169.217	2.833	621.509	621.509

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N4.8	℄ BRG.	20094.304	8.354	619.710	619.710
	a	20104.303	8.262	619.957	619.971
	b	20114.303	8.171	620.199	620.225
	c	20124.303	8.079	620.435	620.464
	d	20134.302	7.987	620.667	620.697
	e	20144.302	7.895	620.893	620.921
	f	20154.301	7.804	621.114	621.135
	℄ BRG.	20169.217	7.667	621.434	621.434
BEAM N4.7	℄ BRG.	20094.304	13.531	619.621	619.621
	a	20104.303	13.394	619.869	619.883
	b	20114.302	13.256	620.113	620.139
	c	20124.301	13.118	620.351	620.380
	d	20134.300	12.981	620.583	620.614
	e	20144.299	12.843	620.811	620.839
	f	20154.298	12.705	621.033	621.054
	℄ BRG.	20169.217	12.500	621.356	621.356
BEAM N4.6	℄ BRG.	20094.304	18.708	619.513	619.513
	a	20104.302	18.525	619.763	619.776
	b	20114.300	18.341	620.007	620.033
	c	20124.299	18.158	620.246	620.275
	d	20134.297	17.974	620.479	620.510
	e	20144.295	17.791	620.708	620.736
	f	20154.294	17.607	620.931	620.952
	℄ BRG.	20169.217	17.333	621.255	621.255

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N4.5	℄ BRG.	20094.304	23.896	619.405	619.405
	a	20104.301	23.656	619.656	619.669
	b	20114.299	23.427	619.901	619.927
	c	20124.296	23.197	620.141	620.170
	d	20134.294	22.968	620.376	620.406
	e	20144.291	22.739	620.605	620.632
	f	20154.288	22.509	620.829	620.850
	℄ BRG.	20169.217	22.167	621.154	621.154
BEAM N4.4	℄ BRG.	20094.304	29.063	619.297	619.297
	a	20104.300	28.787	619.549	619.562
	b	20114.296	28.532	619.795	619.821
	c	20124.292	28.237	620.036	620.065
	d	20134.288	27.962	620.271	620.302
	e	20144.285	27.687	620.502	620.529
	f	20151.281	27.411	620.727	620.747
	℄ BRG.	20169.217	27.000	621.054	621.054
BEAM N4.3	℄ BRG.	20094.304	33.854	619.198	619.198
	a	20104.301	33.632	619.448	619.467
	b	20114.299	33.409	619.692	619.730
	c	20124.296	33.187	619.932	619.978
	d	20134.294	32.964	620.167	620.217
	e	20144.291	32.742	620.396	620.438
	f	20154.289	32.520	620.620	620.650
	℄ BRG.	20169.217	32.187	620.946	620.946

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N4.2	℄ BRG.	20094.304	38.646	619.098	619.098
	a	20104.302	38.476	619.347	619.366
	b	20114.301	38.307	619.591	619.628
	c	20124.300	38.137	619.829	619.875
	d	20134.298	37.967	620.063	620.113
	e	20144.297	37.798	620.291	620.333
	f	20154.295	37.628	620.514	620.543
	℄ BRG.	20169.217	37.375	620.836	620.836
BEAM N4.1	℄ BRG.	20094.304	43.438	618.998	618.998
	a	20104.303	43.321	619.246	619.265
	b	20114.302	43.204	619.489	619.526
	c	20124.302	43.087	619.726	619.772
	d	20134.301	42.970	619.959	620.009
	e	20144.300	42.853	620.186	620.228
	f	20151.300	42.737	620.408	620.437
	℄ BRG.	20169.217	42.562	620.729	620.729



LOCATION	0.25Y	0.50Y
BEAMS N4.14 THRU N4.16	5/16"	3/8"
BEAMS N4.1 THRU N4.3	7/16"	5/8"

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.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	204
F. HWY. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 13
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N5.16	℄ BRG.	20171.134	-31.292	621.004	621.004
	a	20181.134	-31.292	621.210	621.224
	b	20191.134	-31.292	621.410	621.437
	c	20201.134	-31.292	621.606	621.635
	d	20211.134	-31.292	621.796	621.826
	e	20221.134	-31.292	621.980	622.008
	f	20231.134	-31.292	622.160	622.181
	℄ BRG.	20246.047	-31.292	622.418	622.418
BEAM N5.15	℄ BRG.	20171.134	-26.042	621.114	621.114
	a	20181.134	-26.042	621.319	621.333
	b	20191.134	-26.042	621.520	621.546
	c	20201.134	-26.042	621.715	621.744
	d	20211.134	-26.042	621.905	621.936
	e	20221.134	-26.042	622.090	622.118
	f	20231.134	-26.042	622.270	622.290
	℄ BRG.	20246.047	-26.042	622.528	622.528
BEAM N5.14	℄ BRG.	20171.134	-20.792	621.223	621.223
	a	20181.134	-20.792	621.429	621.442
	b	20191.134	-20.792	621.629	621.655
	c	20201.134	-20.792	621.824	621.853
	d	20211.134	-20.792	622.014	622.045
	e	20221.134	-20.792	622.199	622.227
	f	20231.134	-20.792	622.379	622.400
	℄ BRG.	20246.047	-20.792	622.637	622.637

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N5.13	℄ BRG.	20171.134	-15.542	621.332	621.332
	a	20181.134	-15.542	621.538	621.552
	b	20191.134	-15.542	621.738	621.765
	c	20201.134	-15.542	621.934	621.963
	d	20211.134	-15.542	622.124	622.154
	e	20221.134	-15.542	622.309	622.336
	f	20231.134	-15.542	622.488	622.509
	℄ BRG.	20246.047	-15.542	622.747	622.747
BEAM N5.12	℄ BRG.	20171.134	-10.292	621.433	621.433
	a	20181.134	-10.292	621.638	621.652
	b	20191.134	-10.292	621.839	621.865
	c	20201.134	-10.292	622.034	622.063
	d	20211.134	-10.292	622.224	622.255
	e	20221.134	-10.292	622.409	622.437
	f	20231.134	-10.292	622.589	622.609
	℄ BRG.	20246.047	-10.292	622.847	622.847
BEAM N5.11	℄ BRG.	20171.134	-5.042	621.515	621.515
	a	20181.134	-5.042	621.720	621.734
	b	20191.134	-5.042	621.921	621.947
	c	20201.134	-5.042	622.116	622.145
	d	20211.134	-5.042	622.306	622.337
	e	20221.134	-5.042	622.491	622.519
	f	20231.134	-5.042	622.671	622.691
	℄ BRG.	20246.047	-5.042	622.929	622.929

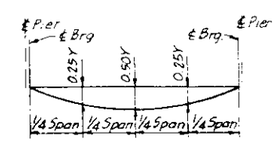
INDICATES STA. 202+46.047 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N5.10	℄ BRG.	20171.134	-2.000	621.562	621.562
	a	20181.134	-2.000	621.768	621.782
	b	20191.134	-2.000	621.968	621.995
	c	20201.134	-2.000	622.164	622.193
	d	20211.134	-2.000	622.354	622.384
	e	20221.134	-2.000	622.539	622.566
	f	20231.134	-2.000	622.718	622.739
	℄ BRG	20246.047	-2.000	622.977	622.977
℄ PROP. NWB LANES	℄ BRG.	20171.134	0.000	621.594	621.594
	a	20181.134	0.000	621.799	621.813
	b	20191.134	0.000	622.000	622.026
	c	20201.134	0.000	622.195	622.224
	d	20211.134	0.000	622.385	622.416
	e	20221.134	0.000	622.570	622.598
	f	20231.134	0.000	622.750	622.770
	℄ BRG.	20246.047	0.000	623.008	623.008
BEAM N5.9	℄ BRG.	20171.134	2.823	621.550	621.550
	a	20181.134	2.779	621.756	621.770
	b	20191.134	2.734	621.957	621.983
	c	20201.134	2.690	622.153	622.182
	d	20211.133	2.645	622.344	622.374
	e	20221.133	2.601	622.529	622.557
	f	20231.133	2.556	622.710	622.730
	℄ BRG.	20246.047	2.490	622.969	622.969

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N5.8	℄ BRG.	20171.134	7.646	621.474	621.474
	a	20181.133	7.557	621.681	621.695
	b	20191.133	7.468	621.883	621.909
	c	20201.133	7.379	622.080	622.109
	d	20211.132	7.290	622.271	622.302
	e	20221.132	7.201	622.457	622.485
	f	20231.131	7.112	622.638	622.659
	℄ BRG.	20246.047	6.979	622.899	622.899
BEAM N5.7	℄ BRG.	20171.134	12.469	621.396	621.396
	a	20181.133	12.335	621.605	621.619
	b	20191.132	12.202	621.808	621.834
	c	20201.131	12.068	622.006	622.035
	d	20211.130	11.935	622.198	622.229
	e	20221.129	11.801	622.385	622.413
	f	20231.128	11.668	622.567	622.588
	℄ BRG.	20246.047	11.469	622.829	622.829
BEAM N5.6	℄ BRG.	20171.134	17.292	621.296	621.296
	a	20181.132	17.114	621.505	621.519
	b	20191.131	16.936	621.709	621.736
	c	20201.129	16.758	621.908	621.937
	d	20211.127	16.580	622.102	622.132
	e	20221.126	16.402	622.291	622.318
	f	20231.124	16.224	622.474	622.495
	℄ BRG.	20246.047	15.958	622.738	622.738

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N5.5	℄ BRG.	20171.134	22.115	621.195	621.195
	a	20181.131	21.892	621.406	621.419
	b	20191.129	21.670	621.611	621.637
	c	20201.126	21.447	621.811	621.840
	d	20211.124	21.225	622.005	622.036
	e	20221.121	21.003	622.194	622.222
	f	20231.119	20.780	622.379	622.400
	℄ BRG.	20246.047	20.448	622.644	622.644
BEAM N5.4	℄ BRG.	20171.134	26.938	621.095	621.095
	a	20181.130	26.671	621.306	621.320
	b	20191.127	26.404	621.512	621.538
	c	20201.123	26.137	621.713	621.742
	d	20211.120	25.870	621.908	621.939
	e	20221.116	25.603	622.099	622.126
	f	20231.112	25.336	622.284	622.305
	℄ BRG.	20246.047	24.938	622.551	622.551
BEAM N5.3	℄ BRG.	20171.134	32.125	620.987	620.987
	a	20181.133	31.989	621.195	621.212
	b	20191.132	31.852	621.399	621.431
	c	20201.131	31.716	621.597	621.637
	d	20211.130	31.580	621.790	621.834
	e	20221.129	31.444	621.977	622.014
	f	20231.128	31.307	622.160	622.185
	℄ BRG.	20246.047	31.104	622.422	622.422

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N5.2	℄ BRG.	20171.134	37.312	620.879	620.879
	a	20181.134	37.251	621.086	621.102
	b	20191.133	37.190	621.287	621.320
	c	20201.133	37.129	621.484	621.525
	d	20211.133	37.068	621.675	621.720
	e	20221.133	37.007	621.861	621.898
	f	20231.133	36.945	622.042	622.067
	℄ BRG.	20246.047	36.854	622.303	622.303
BEAM N5.1	℄ BRG.	20171.134	42.500	620.771	620.771
	a	20181.134	42.514	620.976	620.995
	b	20191.134	42.528	621.176	621.214
	c	20201.134	42.542	621.371	621.417
	d	20211.134	42.556	621.561	621.611
	e	20221.134	42.569	621.746	621.787
	f	20231.134	42.583	621.925	621.954
	℄ BRG.	20246.047	42.604	622.183	622.183



LOCATION	0.25Y	0.50Y
BEAMS N5.4 THRU N5.16	5/16"	3/8"
BEAMS N5.2 & N5.3	3/8"	9/16"
BEAM N5.1	7/16"	5/8"

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.

NOTE:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 5

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	205
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 14
72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N6.15	℄ BRG.	20247.964	-31.292	622.451	622.451
	a	20257.964	-31.292	622.617	622.630
	b	20267.964	-31.292	622.777	622.803
	c	20277.964	-31.292	622.932	622.961
	d	20287.964	-31.292	623.083	623.113
	e	20297.964	-31.292	623.227	623.255
	f	20307.964	-31.292	623.367	623.388
	℄ BRG.	20322.887	-31.292	623.566	623.566
BEAM N6.14	℄ BRG.	20247.964	-26.042	622.560	622.560
	a	20257.964	-26.042	622.726	622.740
	b	20267.964	-26.042	622.886	622.913
	c	20277.964	-26.042	623.042	623.071
	d	20287.964	-26.042	623.192	623.222
	e	20297.964	-26.042	623.337	623.364
	f	20307.964	-26.042	623.476	623.497
	℄ BRG.	20322.887	-26.042	623.675	623.675
BEAM N6.13	℄ BRG.	20247.964	-20.792	622.669	622.669
	a	20257.964	-20.792	622.835	622.849
	b	20267.964	-20.792	622.996	623.022
	c	20277.964	-20.792	623.151	623.180
	d	20287.964	-20.792	623.301	623.332
	e	20297.964	-20.792	623.446	623.474
	f	20307.964	-20.792	623.586	623.607
	℄ BRG.	20322.887	-20.792	623.785	623.785

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N6.12	℄ BRG.	20247.964	-15.542	622.779	622.779
	a	20257.964	-15.542	622.945	622.958
	b	20267.964	-15.542	623.105	623.131
	c	20277.964	-15.542	623.260	623.290
	d	20287.964	-15.542	623.411	623.441
	e	20297.964	-15.542	623.556	623.583
	f	20307.964	-15.542	623.695	623.716
	℄ BRG.	20322.887	-15.542	623.894	623.894
BEAM N6.11	℄ BRG.	20247.964	-10.292	622.879	622.879
	a	20257.964	-10.292	623.045	623.059
	b	20267.964	-10.292	623.206	623.232
	c	20277.964	-10.292	623.361	623.390
	d	20287.964	-10.292	623.511	623.54[illegible]
	e	20297.964	-10.292	623.656	623.68[illegible]
	f	20307.964	-10.292	623.796	623.816
	℄ BRG.	20322.887	-10.292	623.995	623.995
BEAM N6.10	℄ BRG.	20247.964	-5.042	622.961	622.961
	a	20257.964	-5.042	623.127	623.141
	b	20267.964	-5.042	623.288	623.314
	c	20277.964	-5.042	623.443	623.472
	d	20287.964	-5.042	623.593	623.624
	e	20297.964	-5.042	623.738	623.766
	f	20307.964	-5.042	623.878	623.898
	℄ BRG.	20322.887	-5.042	624.077	624.077

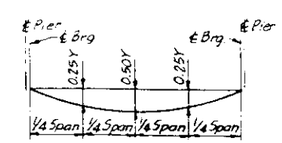
INDICATES STA. 203+22.887 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N6.9	℄ BRG.	20247.964	-2.000	623.009	623.009
	a	20257.964	-2.000	623.175	623.188
	b	20267.964	-2.000	623.335	623.361
	c	20277.964	-2.000	623.491	623.520
	d	20287.964	-2.000	623.641	623.671
	e	20297.964	-2.000	623.786	623.813
	f	20307.964	-2.000	623.925	623.946
	℄ BRG.	20322.887	-2.000	624.124	624.124
℄ PROP NWB LANES	℄ BRG.	20247.964	0.000	623.040	623.040
	a	20257.964	0.000	623.206	623.220
	b	20267.964	0.000	623.366	623.393
	c	20277.964	0.000	623.522	623.551
	d	20287.964	0.000	623.672	623.702
	e	20297.964	0.000	623.817	623.845
	f	20307.964	0.000	623.957	623.977
	℄ BRG.	20322.887	0.000	624.155	624.155
BEAM N6.8	℄ BRG.	20247.964	3.375	622.987	622.987
	a	20257.964	3.364	623.153	623.167
	b	20267.964	3.353	623.314	623.340
	c	20277.964	3.342	623.470	623.499
	d	20287.964	3.331	623.620	623.650
	e	20297.964	3.319	623.765	623.793
	f	20307.964	3.308	623.905	623.926
	℄ BRG.	20322.887	3.292	624.104	624.104

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N6.7	℄ BRG.	20247.964	8.750	622.903	622.903
	a	20257.964	8.728	623.069	623.083
	b	20267.964	8.706	623.230	623.257
	c	20277.964	8.683	623.386	623.415
	d	20287.964	8.661	623.537	623.567
	e	20297.964	8.639	623.682	623.710
	f	20307.964	8.617	623.822	623.843
	℄ BRG.	20322.887	8.583	624.021	624.021
BEAM N6.6	℄ BRG.	20247.964	14.125	622.808	622.808
	a	20257.964	14.092	622.975	622.989
	b	20267.964	14.058	623.136	623.162
	c	20277.964	14.025	623.292	623.321
	d	20287.964	13.992	623.443	623.473
	e	20297.964	13.958	623.589	623.616
	f	20307.963	13.925	623.729	623.750
	℄ BRG.	20322.887	13.875	623.929	623.929
BEAM N6.5	℄ BRG.	20247.964	19.500	622.696	622.696
	a	20257.964	19.456	622.863	622.877
	b	20267.964	19.411	623.025	623.051
	c	20277.964	19.367	623.181	623.210
	d	20287.963	19.322	623.332	623.362
	e	20297.963	19.278	623.478	623.505
	f	20307.963	19.233	623.618	623.639
	℄ BRG.	20322.887	19.167	623.819	623.819

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N6.4	℄ BRG.	20247.964	24.875	622.584	622.584
	a	20257.964	24.819	622.751	622.765
	b	20267.964	24.764	622.913	622.939
	c	20277.963	24.708	623.069	623.099
	d	20287.963	24.653	623.221	623.251
	e	20297.963	24.597	623.367	623.395
	f	20307.963	24.541	623.508	623.528
	℄ BRG.	20322.887	24.458	623.708	623.708
BEAM N6.3	℄ BRG.	20247.964	31.042	622.456	622.456
	a	20257.964	31.019	622.622	622.644
	b	20267.964	30.997	622.783	622.826
	c	20277.964	30.975	622.939	622.990
	d	20287.964	30.953	623.090	623.145
	e	20297.964	30.930	623.235	623.282
	f	20307.964	30.908	623.375	623.408
	℄ BRG.	20322.887	30.875	623.575	623.575
BEAM N6.2	℄ BRG.	20247.964	36.813	622.336	622.336
	a	20257.964	36.801	622.502	622.524
	b	20267.964	36.790	622.662	622.705
	c	20277.964	36.779	622.818	622.869
	d	20287.964	36.768	622.968	623.024
	e	20297.964	36.757	623.114	623.160
	f	20307.964	36.746	623.253	623.287
	℄ BRG.	20322.887	36.729	623.453	623.453

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N6.1	℄ BRG.	20247.964	42.583	622.216	622.216
	a	20257.964	42.583	622.381	622.401
	b	20267.964	42.583	622.542	622.579
	c	20277.964	42.583	622.697	622.743
	d	20287.964	42.583	622.847	622.897
	e	20297.964	42.583	622.992	623.034
	f	20307.964	42.583	623.132	623.161
	℄ BRG.	20322.887	42.583	623.331	623.331



LOCATION	0.25Y	0.50Y
BEAMS N6.4 THRU N6.15	5/16"	3/8"
BEAMS N6.2 & N6.3	1/2"	11/16"
BEAM N6.1	7/16"	5/8"

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.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 6

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 45D, (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	206
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 15
72 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N7.15	℄ BRG.	20324.800	-31.292	623.591	623.591
	a	20334.800	-31.292	623.717	623.728
	b	20344.800	-31.292	623.837	623.859
	c	20354.800	-31.292	623.953	623.981
	d	20364.800	-31.292	624.063	624.091
	e	20374.800	-31.292	624.168	624.192
	f	20384.800	-31.292	624.268	624.284
	℄ BRG.	20399.720	-31.292	624.407	624.407
BEAM N7.14	℄ BRG.	20324.800	-26.042	623.700	623.700
	a	20334.800	-26.042	623.826	623.837
	b	20344.800	-26.042	623.947	623.968
	c	20354.800	-26.042	624.062	624.090
	d	20364.800	-26.042	624.172	624.201
	e	20374.800	-26.042	624.277	624.301
	f	20384.800	-26.042	624.377	624.394
	℄ BRG.	20399.720	-26.042	624.516	624.516
BEAM N7.13	℄ BRG.	20324.800	-20.792	623.809	623.809
	a	20334.800	-20.792	623.935	623.946
	b	20344.800	-20.792	624.056	624.077
	c	20354.800	-20.792	624.171	624.200
	d	20364.800	-20.792	624.282	624.310
	e	20374.800	-20.792	624.387	624.410
	f	20384.800	-20.792	624.486	624.503
	℄ BRG.	20399.720	-20.792	624.626	624.626

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N7.12	℄ BRG.	20324.800	-15.542	623.919	623.919
	a	20334.800	-15.542	624.045	624.056
	b	20344.800	-15.542	624.165	624.187
	c	20354.800	-15.542	624.281	624.309
	d	20364.800	-15.542	624.391	624.420
	e	20374.800	-15.542	624.496	624.520
	f	20384.800	-15.542	624.596	624.612
	℄ BRG.	20399.720	-15.542	624.735	624.735
BEAM N7.11	℄ BRG.	20324.800	-10.292	624.019	624.019
	a	20334.800	-10.292	624.145	624.156
	b	20344.800	-10.292	624.266	624.287
	c	20354.800	-10.292	624.381	624.409
	d	20364.800	-10.292	624.491	624.520
	e	20374.800	-10.292	624.596	624.620
	f	20384.800	-10.292	624.696	624.713
	℄ BRG.	20399.720	-10.292	624.835	624.835
BEAM N7.10	℄ BRG.	20324.800	-5.042	624.101	624.101
	a	20334.800	-5.042	624.227	624.238
	b	20344.800	-5.042	624.348	624.369
	c	20354.800	-5.042	624.463	624.491
	d	20364.800	-5.042	624.573	624.602
	e	20374.800	-5.042	624.678	624.702
	f	20384.800	-5.042	624.778	624.795
	℄ BRG.	*20399.720	-5.042	624.918	624.918

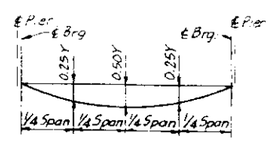
*INDICATES STA. 203+99.720 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N7.9	℄ BRG.	20324.800	-2.000	624.149	624.149
	a	20334.800	-2.000	624.275	624.286
	b	20344.800	-2.000	624.395	624.417
	c	20354.800	-2.000	624.511	624.539
	d	20364.800	-2.000	624.621	624.650
	e	20374.800	-2.000	624.726	624.750
	f	20384.800	-2.000	624.826	624.842
	℄ BRG.	20399.720	-2.000	624.965	624.965
℄ PROP NWB LANES	℄ BRG.	20324.800	0.000	624.180	624.180
	a	20334.800	0.000	624.306	624.317
	b	20344.800	0.000	624.427	624.448
	c	20354.800	0.000	624.542	624.570
	d	20364.800	0.000	624.652	624.681
	e	20374.800	0.000	624.757	624.781
	f	20384.800	0.000	624.857	624.874
	℄ BRG.	20399.720	0.000	624.996	624.996
BEAM N7.8	℄ BRG.	20324.800	3.292	624.129	624.129
	a	20334.800	3.292	624.255	624.266
	b	20344.800	3.292	624.375	624.397
	c	20354.800	3.292	624.491	624.519
	d	20364.800	3.292	624.601	624.629
	e	20374.800	3.292	624.706	624.729
	f	20384.800	3.292	624.806	624.822
	℄ BRG.	20399.720	3.292	624.945	624.945

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N7.7	℄ BRG.	20324.800	8.583	624.046	624.046
	a	20334.800	8.583	624.172	624.183
	b	20344.800	8.583	624.292	624.314
	c	20354.800	8.583	624.408	624.436
	d	20364.800	8.583	624.518	624.547
	e	20374.800	8.583	624.623	624.647
	f	20384.800	8.583	624.723	624.739
	℄ BRG.	20399.720	8.583	624.862	624.862
BEAM N7.6	℄ BRG.	20324.800	13.875	623.954	623.954
	a	20334.800	13.875	624.079	624.090
	b	20344.800	13.875	624.200	624.222
	c	20354.800	13.875	624.315	624.344
	d	20364.800	13.875	624.426	624.454
	e	20374.800	13.875	624.531	624.554
	f	20384.800	13.875	624.630	624.647
	℄ BRG.	20399.720	13.875	624.770	624.770
BEAM N7.5	℄ BRG.	20324.800	19.167	623.843	623.843
	a	20334.800	19.167	623.969	623.980
	b	20344.800	19.167	624.090	624.111
	c	20354.800	19.167	624.205	624.233
	d	20364.800	19.167	624.315	624.344
	e	20374.800	19.167	624.420	624.444
	f	20384.800	19.167	624.520	624.537
	℄ BRG.	20399.720	19.167	624.660	624.660

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N7.4	℄ BRG.	20324.800	24.458	623.733	623.733
	a	20334.800	24.458	623.859	623.870
	b	20344.800	24.458	623.979	624.001
	c	20354.800	24.458	624.095	624.123
	d	20364.800	24.458	624.205	624.234
	e	20374.800	24.458	624.310	624.334
	f	20384.800	24.458	624.410	624.426
	℄ BRG.	20399.720	24.458	624.549	624.549
BEAM N7.3	℄ BRG.	20324.800	30.875	623.599	623.599
	a	20334.800	30.875	623.725	623.747
	b	20344.800	30.875	623.846	623.889
	c	20354.800	30.875	623.961	624.014
	d	20364.800	30.875	624.071	624.125
	e	20374.800	30.875	624.177	624.223
	f	20384.800	30.875	624.276	624.309
	℄ BRG.	20399.720	30.875	624.416	624.416
BEAM N7.2	℄ BRG.	20324.800	36.729	623.477	623.477
	a	20334.800	36.729	623.603	623.625
	b	20344.800	36.729	623.724	623.767
	c	20354.800	36.729	623.839	623.892
	d	20364.800	36.729	623.949	624.003
	e	20374.800	36.729	624.055	624.101
	f	20384.800	36.729	624.154	624.188
	℄ BRG.	20399.720	36.729	624.294	624.294

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N7.1	℄ BRG.	20324.800	42.583	623.355	623.355
	a	20334.800	42.583	623.481	623.501
	b	20344.800	42.583	623.602	623.640
	c	20354.800	42.583	623.717	623.765
	d	20364.800	42.583	623.828	623.876
	e	20374.800	42.583	623.933	623.973
	f	20384.800	42.583	624.032	624.061
	℄ BRG.	20399.720	42.583	624.172	624.172



LOCATION	0.25Y	0.50Y
BEAMS N7.14 THRU N7.15	1/4"	3/8"
BEAMS N7.2 & N7.3.	1/2"	11/16"
BEAM N7.1	7/16"	5/8"

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.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 7

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 451), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	207
F. HR. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 16
72 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N8.16	℄ BRG.	20401.640	-31.292	624.424	624.424
	a	20411.640	-31.292	624.510	624.521
	b	20421.640	-31.292	624.591	624.612
	c	20431.640	-31.292	624.666	624.693
	d	20441.640	-31.292	624.736	624.766
	e	20451.640	-31.292	624.801	624.826
	f	20461.640	-31.292	624.861	624.878
	℄ BRG.	20476.550	-31.292	624.941	624.941
BEAM N8.15	℄ BRG.	20401.640	-26.042	624.533	624.533
	a	20411.640	-26.042	624.619	624.630
	b	20421.640	-26.042	624.700	624.721
	c	20431.640	-26.042	624.775	624.803
	d	20441.640	-26.042	624.846	624.875
	e	20451.640	-26.042	624.911	624.935
	f	20461.640	-26.042	624.971	624.987
	℄ BRG.	20476.550	-26.042	625.050	625.050
BEAM N8.14	℄ BRG.	20401.640	-20.792	624.643	624.643
	a	20411.640	-20.792	624.729	624.740
	b	20421.640	-20.792	624.809	624.831
	c	20431.640	-20.792	624.885	624.912
	d	20441.640	-20.792	624.955	624.985
	e	20451.640	-20.792	625.020	625.044
	f	20461.640	-20.792	625.080	625.097
	℄ BRG.	20476.550	-20.792	625.160	625.160

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N8.12	℄ BRG	20401.640	-15.542	624.752	624.752
	a	20411.640	-15.542	624.838	624.849
	b	20421.640	-15.542	624.919	624.940
	c	20431.640	-15.542	624.994	625.021
	d	20441.640	-15.542	625.064	625.094
	e	20451.640	-15.542	625.130	625.154
	f	20461.640	-15.542	625.190	625.206
	℄ BRG.	20476.550	-15.542	625.269	625.269
BEAM N8.11	℄ BRG.	20401.640	-10.292	624.853	624.853
	a	20411.640	-10.292	624.938	624.950
	b	20421.640	-10.292	625.019	625.041
	c	20431.640	-10.292	625.095	625.122
	d	20441.640	-10.292	625.165	625.195
	e	20451.640	-10.292	625.230	625.254
	f	20461.640	-10.292	625.290	625.306
	℄ BRG.	20476.550	-10.292	625.370	625.370
BEAM N8.10	℄ BRG.	20401.640	-5.042	624.935	624.935
	a	20411.640	-5.042	625.020	625.032
	b	20421.640	-5.042	625.101	625.123
	c	20431.640	-5.042	625.177	625.204
	d	20441.640	-5.042	625.247	625.277
	e	20451.640	-5.042	625.312	625.336
	f	20461.640	-5.042	625.372	625.388
	℄ BRG.	*20476.550	-5.042	625.452	625.452

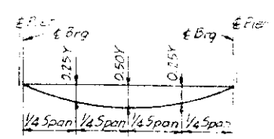
* INDICATES STA. 204+76.550 (TYP.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N8.9	℄ BRG.	20401.640	-2.000	624.982	624.982
	a	20411.640	-2.000	625.068	625.079
	b	20421.640	-2.000	625.149	625.170
	c	20431.640	-2.000	625.224	625.251
	d	20441.640	-2.000	625.294	625.324
	e	20451.640	-2.000	625.360	625.384
	f	20461.640	-2.000	625.420	625.436
	℄ BRG.	20476.550	-2.000	625.499	625.499
℄ PROP. NB LANES	℄ BRG.	20401.640	0.000	625.013	625.013
	a	20411.640	0.000	625.099	625.110
	b	20421.640	0.000	625.180	625.201
	c	20431.640	0.000	625.255	625.283
	d	20441.640	0.000	625.326	625.356
	e	20451.640	0.000	625.391	625.415
	f	20461.640	0.000	625.451	625.467
	℄ BRG.	20476.550	0.000	625.531	625.531
BEAM N8.8	℄ BRG.	20401.640	3.292	624.962	624.962
	a	20411.640	3.292	625.048	625.059
	b	20421.640	3.292	625.129	625.150
	c	20431.640	3.292	625.204	625.231
	d	20441.640	3.292	625.274	625.304
	e	20451.640	3.292	625.339	625.364
	f	20461.640	3.292	625.399	625.416
	℄ BRG	20476.550	3.292	625.479	625.479

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N8.7	℄ BRG.	20401.640	8.583	624.879	624.879
	a	20411.640	8.583	624.965	624.976
	b	20421.640	8.583	625.046	625.067
	c	20431.640	8.583	625.121	625.148
	d	20441.640	8.583	625.192	625.221
	e	20451.640	8.583	625.257	625.281
	f	20461.640	8.583	625.317	625.333
	℄ BRG.	20476.550	8.583	625.396	625.396
BEAM N8.6	℄ BRG.	20401.640	13.875	624.787	624.787
	a	20411.640	13.875	624.873	624.884
	b	20421.640	13.875	624.953	624.975
	c	20431.640	13.875	625.029	625.056
	d	20441.640	13.875	625.099	625.129
	e	20451.640	13.875	625.164	625.188
	f	20461.640	13.875	625.224	625.241
	℄ BRG.	20476.550	13.875	625.304	625.304
BEAM N8.5	℄ BRG.	20401.640	19.167	624.677	624.677
	a	20411.640	19.167	624.763	624.774
	b	20421.640	19.167	624.843	624.865
	c	20431.640	19.167	624.919	624.946
	d	20441.640	19.167	624.989	625.019
	e	20451.640	19.167	625.054	625.078
	f	20461.640	19.167	625.114	625.131
	℄ BRG.	20476.550	19.167	625.194	625.194

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N8.4	℄ BRG.	20401.640	24.458	624.566	624.566
	a	20411.640	24.458	624.652	624.663
	b	20421.640	24.458	624.733	624.754
	c	20431.640	24.458	624.808	624.835
	d	20441.640	24.458	624.879	624.908
	e	20451.640	24.458	624.944	624.965
	f	20461.640	24.458	625.004	625.020
	℄ BRG.	20476.550	24.458	625.083	625.083
BEAM N8.3	℄ BRG.	20401.640	30.875	624.433	624.433
	a	20411.640	30.875	624.519	624.541
	b	20421.640	30.875	624.599	624.642
	c	20431.640	30.875	624.675	624.726
	d	20441.640	30.875	624.745	624.802
	e	20451.640	30.875	624.810	624.857
	f	20461.640	30.875	624.870	624.903
	℄ BRG.	20476.550	30.875	624.950	624.950
BEAM N8.2	℄ BRG.	20401.640	36.729	624.311	624.311
	a	20411.640	36.729	624.396	624.419
	b	20421.640	36.729	624.477	624.520
	c	20431.640	36.729	624.553	624.604
	d	20441.640	36.729	624.623	624.678
	e	20451.640	36.729	624.688	624.735
	f	20461.640	36.729	624.748	624.781
	℄ BRG.	20476.550	36.729	624.828	624.828

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N8.1	℄ BRG.	20401.640	42.583	624.189	624.189
	a	20411.640	42.583	624.275	624.294
	b	20421.640	42.583	624.355	624.393
	c	20431.640	42.583	624.431	624.477
	d	20441.640	42.583	624.501	624.551
	e	20451.640	42.583	624.566	624.605
	f	20461.640	42.583	624.626	624.655
	℄ BRG.	20476.550	42.583	624.706	624.706



LOCATION	0.25Y	0.50Y
BEAMS N8.4 THRU N8.15	1/4"	3/8"
BEAMS N8.2 & N8.3	1/2"	11/16"
BEAM N8.1	7/16"	5/8"

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.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 8

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	208
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 17
72 SHEETS

SPAN 10

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N10.12	℄ BRG.	20478.464	-31.292	624.950	624.950
	a	20488.464	-31.297	624.996	625.010
	b	20498.464	-31.302	625.037	625.059
	c	20508.464	-31.307	625.072	625.098
	d	20518.464	-31.313	625.103	625.126
	e	20528.464	-31.318	625.128	625.144
	℄ BRG.	20540.525	-31.324	625.151	625.151
BEAM N10.11	℄ BRG.	20478.464	-24.729	625.087	625.087
	a	20488.464	-24.735	625.133	625.144
	b	20498.464	-24.741	625.174	625.191
	c	20508.464	-24.747	625.209	625.230
	d	20518.464	-24.752	625.239	625.257
	e	20528.464	-24.758	625.265	625.274
	℄ BRG.	20537.747	-24.763	625.283	625.283
BEAM N10.10	℄ BRG.	20478.464	-18.167	625.224	625.224
	a	20488.464	-18.173	625.270	625.277
	b	20498.464	-18.179	625.310	625.323
	c	20508.464	-18.186	625.346	625.361
	d	20518.464	-18.192	625.376	625.387
	e	20528.464	-18.198	625.401	625.406
	℄ BRG.	20534.968	-18.203	625.415	625.415

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N10.9	℄ BRG.	20478.464	-11.604	625.359	625.359
	a	20488.464	-11.611	625.404	625.412
	b	20498.464	-11.618	625.445	625.458
	c	20508.464	-11.625	625.481	625.495
	d	20518.464	-11.632	625.511	625.521
	℄ BRG.	20532.189	-11.642	625.544	625.544
BEAM N10.8	℄ BRG.	20478.464	-5.042	625.461	625.461
	a	20488.464	-5.049	625.507	625.515
	b	20498.464	-5.057	625.548	625.558
	c	20508.464	-5.065	625.583	625.593
	d	20518.464	-5.072	625.613	625.622
	℄ BRG.	20529.411	-5.081	625.641	625.641
BEAM N10.7	℄ BRG.	20478.464	-1.042	625.524	625.524
	a	20488.464	-1.040	625.570	625.578
	b	20498.464	-1.038	625.610	625.621
	c	20508.464	-1.036	625.646	625.656
	d	20518.464	-1.035	625.677	625.684
	℄ BRG.	20527.696	-1.033	625.700	625.700

INDICATES STA. 205+27.696 (TYP.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP NWB LANES	℄ BRG.	20478.464	0.000	625.540	625.540
	a	20488.464	0.000	625.586	625.594
	b	20498.464	0.000	625.627	625.637
	c	20508.464	0.000	625.662	625.673
	d	20518.464	0.000	625.693	625.700
	℄ BRG.	20527.259	0.000	625.715	625.715
BEAM N10.6	℄ BRG.	20478.464	7.458	625.423	625.423
	a	20488.464	7.460	625.469	625.478
	b	20498.464	7.461	625.510	625.520
	c	20508.464	7.463	625.545	625.556
	d	20518.464	7.465	625.576	625.581
	℄ BRG.	20524.097	7.465	625.591	625.591
BEAM N10.5	℄ BRG.	20478.464	15.958	625.270	625.270
	a	20488.464	15.960	625.316	625.321
	b	20498.464	15.961	625.357	625.362
	c	20508.464	15.962	625.392	625.397
	℄ BRG.	20520.498	15.964	625.428	625.428

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N10.4	℄ BRG.	20478.464	24.458	625.093	625.093
	a	20488.464	24.459	625.139	625.144
	b	20498.464	24.460	625.180	625.185
	c	20508.464	24.461	625.215	625.220
	℄ BRG.	20516.899	24.462	625.241	625.241
BEAM N10.3	℄ BRG.	20478.464	30.490	624.967	624.967
	a	20488.464	30.491	625.013	625.014
	b	20498.464	30.493	625.054	625.058
	c	20508.464	30.495	625.089	625.089
	℄ BRG.	20514.344	30.496	625.108	625.108
BEAM N10.2	℄ BRG.	20478.464	36.521	624.841	624.841
	a	20488.464	36.523	624.887	624.888
	b	20498.464	36.526	624.928	624.931
	℄ BRG.	20511.788	36.529	624.974	624.974
BEAM N10.1	℄ BRG.	20478.464	42.552	624.716	624.716
	a	20488.464	42.555	624.762	624.762
	b	20498.464	42.559	624.802	624.802
	℄ BRG.	20509.233	42.562	624.841	624.841

SPAN 11

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N11.18	℄ BRG.	20542.933	-31.187	625.158	625.158
	a	20552.933	-31.191	625.170	625.185
	b	20562.933	-31.196	625.177	625.201
	c	20572.933	-31.200	625.179	625.204
	d	20582.933	-31.204	625.176	625.197
	e	20592.933	-31.209	625.168	625.175
	℄ BRG.	20597.940	-31.211	625.162	625.162
BEAM N11.17	℄ BRG.	20541.064	-26.775	625.247	625.247
	a	20551.064	-26.779	625.260	625.275
	b	20561.064	-26.783	625.268	625.291
	c	20571.064	-26.788	625.271	625.296
	d	20581.064	-26.792	625.269	625.290
	e	20591.064	-26.796	625.262	625.269
	℄ BRG.	20596.071	-26.798	625.256	625.256
BEAM N11.16	℄ BRG.	20539.196	-22.362	625.336	625.336
	a	20549.196	-22.367	625.350	625.365
	b	20559.196	-22.371	625.359	625.382
	c	20569.196	-22.375	625.363	625.388
	d	20579.196	-22.380	625.362	625.383
	e	20589.196	-22.384	625.355	625.363
	℄ BRG.	20594.202	-22.386	625.350	625.350

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N11.15	℄ BRG.	20537.327	-17.950	625.424	625.424
	a	20547.327	-17.954	625.440	625.455
	b	20557.327	-17.959	625.450	625.473
	c	20567.327	-17.963	625.455	625.480
	d	20577.327	-17.967	625.454	625.476
	e	20587.327	-17.972	625.449	625.456
	℄ BRG.	20592.334	-17.974	625.444	625.444
BEAM N11.14	℄ BRG.	20535.458	-13.538	625.513	625.513
	a	20545.458	-13.542	625.529	625.544
	b	20555.458	-13.546	625.540	625.563
	c	20565.458	-13.551	625.546	625.571
	d	20575.458	-13.555	625.547	625.568
	e	20585.458	-13.559	625.542	625.550
	℄ BRG.	20590.465	-13.562	625.538	625.538
BEAM N11.13	℄ BRG.	20533.590	-9.125	625.586	625.586
	a	20543.590	-9.130	625.603	625.618
	b	20553.590	-9.134	625.616	625.639
	c	20563.590	-9.138	625.622	625.647
	d	20573.590	-9.143	625.624	625.645
	e	20583.590	-9.147	625.621	625.628
	℄ BRG.	20588.596	-9.149	625.617	625.617

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N11.12	℄ BRG.	20531.721	-4.713	625.651	625.651
	a	20541.721	-4.718	625.670	625.681
	b	20551.721	-4.722	625.683	625.700
	c	20561.721	-4.726	625.690	625.710
	d	20571.721	-4.731	625.693	625.709
	e	20581.721	-4.735	625.690	625.696
	℄ BRG.	20586.728	-4.737	625.687	625.687
BEAM N11.11	℄ BRG.	20530.746	-2.411	625.685	625.685
	a	20540.746	-2.416	625.704	625.715
	b	20550.746	-2.420	625.717	625.735
	c	20560.746	-2.424	625.726	625.746
	d	20570.746	-2.429	625.729	625.745
	e	20580.746	-2.433	625.727	625.733
	℄ BRG.	20585.753	-2.435	625.724	625.724
℄ PROP NWB LANES	℄ BRG.	20529.725	0.000	625.721	625.721
	a	20539.725	0.000	625.740	625.755
	b	20549.725	0.000	625.754	625.777
	c	20559.725	0.000	625.763	625.788
	d	20569.725	0.000	625.767	625.788
	e	20579.725	0.000	625.765	625.773
	℄ BRG.	20584.722	0.000	625.763	625.763

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N11.10	℄ BRG.	20528.849	2.068	625.686	625.686
	a	20538.849	2.064	625.706	625.721
	b	20548.849	2.060	625.722	625.745
	c	20558.849	2.055	625.734	625.759
	d	20568.849	2.051	625.741	625.762
	e	20578.849	2.047	625.743	625.750
	℄ BRG.	20583.856	2.045	625.741	625.741
BEAM N11.9	℄ BRG.	20526.952	6.548	625.612	625.612
	a	20536.952	6.543	625.633	625.648
	b	20546.952	6.539	625.650	625.673
	c	20556.952	6.535	625.669	625.694
	d	20566.952	6.530	625.683	625.704
	e	20576.952	6.526	625.691	625.698
	℄ BRG.	20581.959	6.524	625.693	625.693
BEAM N11.8	℄ BRG.	20525.055	11.027	625.538	625.538
	a	20535.055	11.023	625.559	625.574
	b	20545.055	11.019	625.576	625.599
	c	20555.055	11.014	625.602	625.627
	d	20565.055	11.010	625.622	625.643
	e	20575.055	11.006	625.637	625.645
	℄ BRG.	20580.062	11.003	625.643	625.643

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N11.7	℄ BRG.	20523.158	15.507	625.444	625.444
	a	20533.158	15.502	625.475	625.490
	b	20543.158	15.498	625.502	625.525
	c	20553.158	15.494	625.532	625.557
	d	20563.158	15.489	625.559	625.580
	e	20573.158	15.485	625.581	625.588
	℄ BRG.	20578.164	15.483	625.590	625.590
BEAM N11.6	℄ BRG.	20521.261	19.986	625.346	625.346
	a	20531.261	19.982	625.383	625.398
	b	20541.261	19.977	625.423	625.446
	c	20551.261	19.973	625.460	625.485
	d	20561.261	19.969	625.493	625.515
	e	20571.261	19.964	625.522	625.529
	℄ BRG.	20576.267	19.962	625.534	625.534

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N11.5	℄ BRG.	20519.364	24.465	625.248	625.248
	a	20529.364	24.461	625.287	625.302
	b	20539.364	24.457	625.339	625.362
	c	20549.364	24.452	625.385	625.410
	d	20559.364	24.448	625.426	625.447
	e	20569.364	24.444	625.461	625.468
	℄ BRG.	20574.370	24.442	625.476	625.476
BEAM N11.4	℄ BRG.	20517.446	28.993	625.148	625.148
	a	20527.446	28.989	625.185	625.208
	b	20537.446	28.984	625.250	625.286
	c	20547.446	28.980	625.308	625.347
	d	20557.446	28.976	625.355	625.387
	e	20567.446	28.971	625.397	625.408
	℄ BRG.	20572.453	28.969	625.416	625.416

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N11.3	℄ BRG.	20515.529	33.520	625.048	625.048
	a	20525.529	33.516	625.078	625.101
	b	20535.529	33.512	625.156	625.192
	c	20545.529	33.507	625.228	625.267
	d	20555.529	33.503	625.281	625.314
	e	20565.529	33.499	625.330	625.341
	℄ BRG.	20570.535	33.496	625.353	625.353
BEAM N11.2	℄ BRG.	20513.611	38.048	624.948	624.948
	a	20523.611	38.043	624.976	624.999
	b	20533.611	38.039	625.057	625.093
	c	20543.611	38.035	625.142	625.182
	d	20553.611	38.030	625.206	625.238
	e	20563.611	38.026	625.261	625.273
	℄ BRG.	20568.618	38.024	625.287	625.287

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N11.1	℄ BRG.	20511.694	42.575	624.848	624.848
	a	20521.694	42.571	624.877	624.900
	b	20531.694	42.566	624.954	624.992
	c	20541.694	42.562	625.052	625.096
	d	20551.694	42.558	625.128	625.160
	e	20561.694	42.553	625.190	625.201
	℄ BRG.	20566.701	42.551	625.219	625.219

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.
SEE SHEET 18 FOR DEAD LOAD DEFLECTION DIAGRAMS.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS SPAN 10 AND 11

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

x 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 451), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	x		443	209
F. AR. & REG. 4		ILLINOIS FED. AID PROJECT		

SHEET NO. 18
72 SHEETS

SPAN 12

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
[illegible]	℄ BRG.	20600.457	-31.332	625.156	625.156
	a	20610.457	-31.333	625.138	625.143
	b	20620.457	-31.333	625.116	625.121
	c	20630.457	-31.333	625.088	625.093
	℄ BRG.	20640.670	-31.334	625.054	625.054
[illegible]	℄ BRG.	20596.858	-22.834	625.338	625.338
	a	20606.858	-22.832	625.322	625.332
	b	20616.858	-22.831	625.302	625.312
	c	20626.858	-22.830	625.276	625.286
	℄ BRG.	20640.944	-22.828	625.230	625.230
[illegible]	℄ BRG.	20593.259	-14.335	625.519	625.519
	a	20603.259	-14.333	625.505	625.514
	b	20613.259	-14.330	625.487	625.497
	c	20623.259	-14.327	625.463	625.473
	d	20633.259	-14.324	625.433	625.440
	℄ BRG.	20641.218	-14.322	625.406	625.406

NOTE: OFFSETS [illegible] FROM ℄ PROPOSED NWB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N12.9	℄ BRG.	20589.660	-5.837	625.668	625.668
	a	20599.660	-5.833	625.656	625.664
	b	20609.660	-5.829	625.639	625.649
	c	20619.660	-5.825	625.617	625.627
	d	20629.660	-5.821	625.590	625.599
	℄ BRG.	20641.493	-5.816	625.550	625.550
BEAM N12.8	℄ BRG.	20588.059	-2.058	625.728	625.728
	a	20598.059	-2.052	625.717	625.725
	b	20608.059	-2.046	625.701	625.714
	c	20618.059	-2.040	625.680	625.694
	d	20628.059	-2.034	625.653	625.664
	℄ BRG.	20641.615	-2.026	625.609	625.609
℄ PROP NWB LANES	℄ BRG.	20587.188	0.000	625.761	625.761
	a	20597.188	0.000	625.750	625.758
	b	20607.188	0.000	625.735	625.748
	c	20617.188	0.000	625.714	625.728
	d	20627.188	0.000	625.688	625.698
	℄ BRG.	20641.680	0.000	625.641	625.641

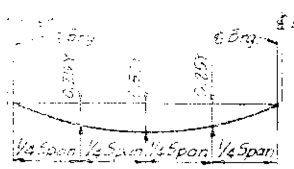
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N12.7	℄ BRG.	20585.252	4.570	625.714	625.714
	a	20595.252	4.575	625.711	625.718
	b	20605.252	4.579	625.702	625.714
	c	20615.252	4.584	625.688	625.703
	d	20625.252	4.588	625.668	625.680
	e	20635.252	4.593	625.644	625.649
	℄ BRG.	20641.829	4.596	625.625	625.625
BEAM N12.6	℄ BRG.	20582.445	11.198	625.643	625.642
	a	20592.445	11.202	625.649	625.659
	b	20602.445	11.205	625.650	625.667
	c	20612.445	11.208	625.646	625.666
	d	20622.445	11.211	625.636	625.653
	e	20632.445	11.214	625.622	625.632
	℄ BRG.	20642.042	11.217	625.603	625.602
BEAM N12.5	℄ BRG.	20579.638	17.826	625.566	625.566
	a	20589.638	17.828	625.582	625.592
	b	20599.638	17.830	[illegible]	625.610
	c	20609.638	17.832	625.593	625.619
	d	20619.638	17.834	625.599	625.617
	e	20629.638	17.836	625.594	625.607
	℄ BRG.	20642.257	[illegible]	625.561	625.561

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N12.4	℄ BRG.	20576.831	24.454	625.484	625.484
	a	20586.831	24.455	625.510	625.519
	b	20596.831	24.456	625.531	625.547
	c	20606.831	24.457	625.546	625.566
	d	20616.831	24.458	625.557	625.575
	e	20626.831	24.459	625.562	625.577
	f	20636.831	24.460	625.562	625.567
	℄ BRG.	20642.409	24.460	625.560	625.560
BEAM N12.3	℄ BRG.	20574.276	30.488	625.404	625.404
	a	20584.276	30.491	625.439	625.458
	b	20594.276	30.494	625.469	625.502
	c	20604.276	30.497	625.494	625.533
	d	20614.276	30.500	625.513	625.552
	e	20624.276	30.503	625.528	625.560
	f	20634.276	30.507	625.537	625.552
	℄ BRG.	20642.664	30.509	625.541	625.541
BEAM N12.2	℄ BRG.	20571.721	36.521	625.321	625.321
	a	20581.721	36.526	625.365	625.382
	b	20591.721	36.531	625.404	625.437
	c	20601.721	36.537	625.437	625.479
	d	20611.721	36.542	625.466	625.509
	e	20621.721	36.547	625.489	625.523
	f	20631.721	36.552	625.507	625.527
	℄ BRG.	20642.659	36.558	625.521	625.521

SPAN 12 (CONT.)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
[illegible]	℄ BRG.	20569.164	42.557	625.233	625.233
	a	20579.164	42.564	625.286	625.309
	b	20589.164	42.571	625.334	625.377
	c	20599.164	42.577	625.377	625.428
	d	20609.164	42.584	625.414	625.469
	e	20619.164	42.591	625.446	625.493
	f	20629.164	42.598	625.474	625.505
	*	20643.055	42.607	625.503	625.503

* - INDICATES STA. 206+43.055 (TYP)



LOCATION	0.25Y	0.50Y
BEAM N10.12	1/4"	5/16"
BEAM N10.11	3/16"	1/4"
BEAMS N10.9 & N10.10	1/8"	3/16"
BEAMS N10.6 THRU N10.8	1/8"	1/8"
BEAMS N10.4 & N10.5	1/16"	1/16"
BEAMS N10.2 & N10.3	0"	1/16"
BEAM N10.1	0"	0"
BEAMS N11.13 THRU N11.18 AND N11.5 THRU N11.10	1/4"	5/16"
BEAMS N11.11 & N11.12	3/16"	1/4"
BEAMS N11.2 THRU N11.4	3/8"	1/2"
BEAM N11.1	3/8"	5/8"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

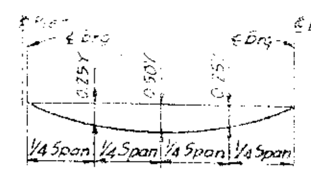
NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N13.11	℄ BRG.	20642.587	-31.333	625.047	625.047
	a	20652.587	-31.333	625.008	625.013
	b	20662.587	-31.334	624.963	624.968
	℄ BRG.	20672.696	-31.334	624.913	624.913
BEAM N13.10	℄ BRG.	20642.862	-22.827	625.223	625.223
	a	20652.862	-22.827	625.184	625.189
	b	20662.862	-22.828	625.139	625.144
	℄ BRG.	20672.971	-22.828	625.089	625.089
BEAM N13.9	℄ BRG.	20643.136	-14.321	625.400	625.400
	a	20653.136	-14.321	625.360	625.365
	b	20663.136	-14.322	625.315	625.320
	℄ BRG.	20673.245	-14.322	625.265	625.265
BEAM N13.8	℄ BRG	20643.410	-5.815	625.543	625.543
	a	20653.410	-5.815	625.504	625.509
	b	20663.410	-5.816	625.459	625.464
	℄ BRG.	20673.519	-5.816	625.408	625.408

SPAN 13

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N13.7	℄ BRG.	20643.565	-1.026	625.618	625.618
	a	20653.565	-1.026	625.578	625.583
	b	20663.565	-1.026	625.533	625.538
	℄ BRG.	20673.674	-1.027	625.482	625.482
℄ PROP NWB LANES	℄ BRG.	20643.598	0.000	625.634	625.634
	a	20653.598	0.000	625.594	625.599
	b	20663.598	0.000	625.549	625.554
	℄ BRG.	20673.707	0.000	625.498	625.498
BEAM N13.6	℄ BRG.	20643.839	7.470	625.610	625.610
	a	20653.839	7.470	625.580	625.585
	b	20663.839	7.469	625.544	625.549
	℄ BRG.	20673.948	7.469	625.503	625.503
BEAM N13.5	℄ BRG.	20644.113	15.965	625.584	625.584
	a	20654.113	15.965	625.564	625.569
	b	20664.113	15.965	625.539	625.545
	℄ BRG.	20674.222	15.965	625.509	625.509

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N13.4	℄ BRG.	20644.387	24.461	625.559	625.559
	a	20654.387	24.461	625.550	625.555
	b	20664.387	24.460	625.535	625.541
	℄ BRG.	20674.496	24.460	625.516	625.516
BEAM [illegible]	℄ BRG.	20644.592	30.510	625.541	625.542
	a	20654.592	30.510	625.539	625.541
	b	20664.592	30.509	625.533	625.535
	℄ BRG.	20674.[illegible]	30.509	625.521	625.523
BEAM [illegible]	℄ BRG.	20644.777	36.559	625.523	625.523
	a	20654.777	36.559	625.530	625.531
	b	20664.777	36.558	625.530	625.532
	℄ BRG.	20674.886	36.557	625.525	625.526
BEAM [illegible]	℄ BRG.	20644.972	42.608	625.506	625.506
	a	20654.972	42.607	625.520	625.520
	b	20664.972	42.607	625.528	625.528
	℄ BRG.	20675.081	42.607	625.532	625.532



LOCATION	0.25Y	0.50Y
BEAM N12.12	1/16"	1/16"
BEAMS N12.9 THRU N12.11	1/8"	1/8"
BEAMS N12.7 & N12.8	1/8"	3/16"
BEAMS N12.4 THRU N12.6	3/16"	1/4"
BEAM N12.3	3/8"	1/2"
BEAM N12.2	[illegible]	5/16"
BEAM N12.1	1/2"	11/16"
BEAMS [illegible] THRU N13.[illegible]	[illegible]	1/16"
BEAMS [illegible] & N13.[illegible]	0"	1/16"
BEAM N1[illegible]	0"	0"

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

NOTE:
SEE SHEET 8 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 12 AND 13

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 451), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	210
F.A. RTE. A. REG. A	S. INDIST. FED. AID PROJECT			

SHEET NO. 19
72 SHEETS

SPAN 14

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N14.13	℄ BRG.	20674.614	-31.344	624.903	624.903
	a	20684.614	-31.344	624.847	624.859
	b	20694.614	-31.344	624.786	624.807
	c	20704.614	-31.345	624.719	624.744
	d	20714.614	-31.345	624.648	624.672
	e	20724.614	-31.345	624.571	624.591
	f	20734.676	-31.338	624.489	624.497
	℄ BRG.	20740.880	-31.321	624.436	624.436
BEAM N14.12	℄ BRG.	20674.826	-24.774	625.039	625.039
	a	20684.826	-24.774	624.982	624.995
	b	20694.826	-24.775	624.921	624.943
	c	20704.826	-24.775	624.855	624.880
	d	20714.826	-24.775	624.783	624.807
	e	20724.826	-24.776	624.706	624.727
	f	20734.876	-24.768	624.624	624.632
	℄ BRG.	20741.070	-24.751	624.571	624.571
BEAM N14.11	℄ BRG.	20675.038	-18.205	625.174	625.174
	a	20685.038	-18.205	625.118	625.131
	b	20695.038	-18.205	625.057	625.078
	c	20705.038	-18.205	624.990	625.015
	d	20715.038	-18.206	624.919	624.942
	e	20725.038	-18.206	624.841	624.862
	f	20735.075	-18.198	624.759	624.767
	℄ BRG.	20741.258	-18.181	624.706	624.706

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N14.10	℄ BRG.	20675.249	-11.635	625.308	625.308
	a	20685.249	-11.635	625.252	625.264
	b	20695.249	-11.636	625.190	625.212
	c	20705.249	-11.636	625.124	625.149
	d	20715.249	-11.636	625.052	625.076
	e	20725.249	-11.637	624.975	624.995
	f	20735.274	-11.628	624.892	624.900
	℄ BRG.	20741.446	-11.610	624.840	624.840
BEAM N14.9	℄ BRG.	20675.461	-5.066	625.410	625.410
	a	20685.461	-5.066	625.353	625.363
	b	20695.461	-5.066	625.292	625.308
	c	20705.461	-5.066	625.225	625.245
	d	20715.461	-5.067	625.153	625.171
	e	20725.461	-5.067	625.076	625.093
	f	20735.472	-5.058	624.993	624.999
	℄ BRG.	20741.634	-5.040	624.941	624.941
BEAM N14.8	℄ BRG.	20675.559	-2.025	625.456	625.456
	a	20685.559	-2.026	625.400	625.409
	b	20695.559	-2.026	625.338	625.355
	c	20705.559	-2.026	625.272	625.291
	d	20715.559	-2.027	625.200	625.218
	e	20725.559	-2.027	625.122	625.138
	f	20735.564	-2.018	625.040	625.046
	℄ BRG.	20741.720	-2.000	624.987	624.987

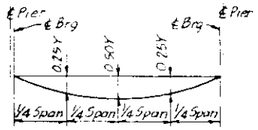
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP NWB LANES	℄ BRG.	20675.625	0.000	625.489	625.488
	a	20685.625	0.000	625.431	625.441
	b	20695.625	0.000	625.370	625.386
	c	20705.625	0.000	625.303	625.323
	d	20715.625	0.000	625.231	625.249
	e	20725.625	0.000	625.154	625.169
	f	20734.725	0.000	625.079	625.085
	℄ BRG.	20741.777	0.000	625.018	625.018
BEAM N14.7	℄ BRG.	20675.773	4.596	625.492	625.492
	a	20685.773	4.596	625.441	625.454
	b	20695.773	4.596	625.385	625.407
	c	20705.773	4.595	625.324	625.349
	d	20715.773	4.595	625.258	625.282
	e	20725.773	4.595	625.187	625.207
	f	20735.762	4.604	625.110	625.118
	℄ BRG.	20741.908	4.623	625.061	625.061
BEAM N14.6	℄ BRG.	20675.986	11.218	625.498	625.498
	a	20685.986	11.217	625.456	625.468
	b	20695.986	11.217	625.408	625.430
	c	20705.986	11.217	625.355	625.380
	d	20715.986	11.217	625.298	625.321
	e	20725.986	11.216	625.234	625.255
	f	20735.960	11.226	625.166	625.174
	℄ BRG.	20742.095	11.245	625.122	625.122

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N14.5	℄ BRG.	20676.200	17.839	625.505	625.505
	a	20686.200	17.839	625.471	625.483
	b	20696.200	17.839	625.431	625.453
	c	20706.200	17.838	625.387	625.412
	d	20716.200	17.838	625.337	625.361
	e	20726.200	17.838	625.283	625.303
	f	20736.158	17.848	625.223	625.231
	℄ BRG.	20742.282	17.868	625.184	625.184
BEAM N14.4	℄ BRG.	20676.414	24.461	625.511	625.511
	a	20686.414	24.461	625.486	625.498
	b	20696.414	24.460	625.455	625.477
	c	20706.414	24.460	625.419	625.444
	d	20716.414	24.460	625.378	625.401
	e	20726.414	24.459	625.331	625.351
	f	20736.354	24.470	625.280	625.288
	℄ BRG.	20742.468	24.490	625.246	625.246
BEAM N14.3	℄ BRG.	20676.608	30.499	625.518	625.518
	a	20686.608	30.499	625.500	625.516
	b	20696.608	30.499	625.477	625.505
	c	20706.608	30.498	625.448	625.483
	d	20716.608	30.498	625.414	625.447
	e	20726.608	30.498	625.376	625.401
	f	20736.533	30.509	625.332	625.342
	℄ BRG.	20742.637	30.529	625.303	625.303

SPAN 14 (CONT.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N14.2	℄ BRG.	20676.803	36.538	625.525	625.525
	a	20686.803	36.538	625.514	625.530
	b	20696.803	36.537	625.499	625.527
	c	20706.803	36.537	625.478	625.512
	d	20716.803	36.537	625.452	625.484
	e	20726.803	36.536	625.420	625.446
	f	20736.711	36.548	625.385	625.394
	℄ BRG.	20742.805	36.568	625.360	625.360
BEAM N14.1	℄ BRG.	20676.998	42.576	625.532	625.532
	a	20686.998	42.576	625.529	625.545
	b	20696.998	42.576	625.521	625.548
	c	20706.998	42.576	625.508	625.538
	d	20716.998	42.575	625.489	625.518
	e	20726.998	42.575	625.466	625.491
	f	20736.888	42.587	625.437	625.447
	℄ BRG.	20742.973	42.608	625.418	625.418

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.



LOCATION	0.25Y	0.50Y
BEAMS N14.10 THRU N14.13 AND N14.4 THRU N14.7	1/4"	5/16"
BEAMS N14.8 & N14.9	3/16"	1/4"
BEAMS N14.2 & N14.3	5/16"	7/16"
BEAM N14.1	5/16"	3/8"
BEAMS N15.10 THRU N15.13 AND N15.4 THRU N15.7	1/4"	15/16"
BEAMS N15.8 & N15.9	3/16"	1/4"
BEAMS N15.2 & N15.3	5/16"	7/16"
BEAM N15.1	5/16"	3/8"

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.

STANLEY CONSULTANTS

SPAN 15

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N15.13	℄ BRG.	20742.814	-31.313	624.419	624.419
	a	20752.898	-31.360	624.326	624.339
	b	20762.982	-31.380	624.229	624.251
	c	20773.066	-31.374	624.127	624.152
	d	20783.149	-31.341	624.020	624.044
	e	20793.223	-31.281	623.906	623.926
	f	20803.316	-31.194	623.779	623.787
	℄ BRG.	20809.755	-31.125	623.696	623.696
BEAM N15.12	℄ BRG.	20743.000	-24.743	624.554	624.554
	a	20753.066	-24.791	624.461	624.474
	b	20763.132	-24.812	624.364	624.386
	c	20773.198	-24.807	624.262	624.287
	d	20783.265	-24.775	624.156	624.180
	e	20793.330	-24.716	624.041	624.061
	f	20803.396	-24.631	623.913	623.921
	℄ BRG.	20809.823	-24.562	623.829	623.829
BEAM N15.11	℄ BRG.	20743.185	-18.172	624.689	624.689
	a	20753.234	-18.221	624.597	624.609
	b	20763.282	-18.244	624.500	624.521
	c	20773.331	-18.240	624.398	624.423
	d	20783.379	-18.209	624.291	624.315
	e	20793.428	-18.152	624.176	624.196
	f	20803.475	-18.068	624.046	624.054
	℄ BRG.	20809.891	-18.000	623.961	623.961

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N15.10	℄ BRG.	20743.370	-11.602	624.823	624.823
	a	20753.401	-11.652	624.730	624.743
	b	20763.432	-11.676	624.633	624.655
	c	20773.463	-11.673	624.531	624.556
	d	20783.494	-11.644	624.425	624.449
	e	20793.524	-11.588	624.309	624.329
	f	20803.555	-11.505	624.178	624.186
	℄ BRG.	20809.959	-11.438	624.093	624.093
BEAM N15.9	℄ BRG.	20743.554	-5.032	624.924	624.924
	a	20753.567	-5.083	624.831	624.841
	b	20763.581	-5.108	624.734	624.751
	c	20773.594	-5.106	624.633	624.653
	d	20783.608	-5.078	624.526	624.545
	e	20793.621	-5.023	624.413	624.428
	f	20803.634	-4.942	624.291	624.297
	℄ BRG.	20810.027	-4.876	624.211	624.211
BEAM N15.8	℄ BRG.	20743.639	-1.991	624.970	624.970
	a	20753.644	-2.041	624.878	624.887
	b	20763.649	-2.064	624.781	624.798
	c	20773.655	-2.060	624.680	624.699
	d	20783.660	-2.030	624.573	624.592
	e	20793.665	-1.974	624.461	624.477
	f	20803.670	-1.891	624.343	624.349
	℄ BRG.	20810.058	-1.824	624.266	624.266

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP NWB LANES	℄ BRG.	20743.694	0.000	625.001	625.001
	a	20753.694	0.000	624.910	624.919
	b	20763.694	0.000	624.813	624.830
	c	20773.694	0.000	624.711	624.731
	d	20783.694	0.000	624.605	624.623
	e	20793.694	0.000	624.493	624.508
	f	20803.694	0.000	624.376	624.382
	℄ BRG.	20810.077	0.000	624.299	624.299
BEAM N15.7	℄ BRG.	20743.823	4.631	625.045	625.045
	a	20753.811	4.582	624.959	624.972
	b	20763.799	4.560	624.868	624.890
	c	20773.787	4.563	624.772	624.797
	d	20783.775	4.594	624.672	624.696
	e	20793.762	4.650	624.567	624.587
	f	20803.749	4.734	624.457	624.465
	℄ BRG.	20810.126	4.801	624.385	624.385
BEAM N15.6	℄ BRG.	20744.007	11.254	625.108	625.108
	a	20753.977	11.205	625.031	625.043
	b	20763.948	11.183	624.948	624.970
	c	20773.918	11.187	624.861	624.886
	d	20783.888	11.218	624.769	624.793
	e	20793.859	11.275	624.673	624.693
	f	20803.828	11.358	624.571	624.579
	℄ BRG.	20810.194	11.425	624.505	624.505

INDICATES STA 208+10.194 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N15.5	℄ BRG.	20744.190	17.876	625.171	625.171
	a	20754.143	17.828	625.102	625.115
	b	20764.096	17.806	625.028	625.050
	c	20774.049	17.811	624.950	624.975
	d	20784.002	17.842	624.867	624.890
	e	20793.955	17.899	624.778	624.799
	f	20803.907	17.983	624.686	624.694
	℄ BRG.	20810.261	18.050	624.624	624.624
BEAM N15.4	℄ BRG.	20744.373	24.499	625.235	625.235
	a	20754.308	24.453	625.175	625.187
	b	20764.244	24.430	625.109	625.131
	c	20774.180	24.434	625.039	625.064
	d	20784.115	24.466	624.964	624.988
	e	20794.050	24.523	624.884	624.905
	f	20803.985	24.607	624.800	624.806
	℄ BRG.	20810.329	24.675	624.744	624.744
BEAM N15.3	℄ BRG.	20744.538	30.517	625.293	625.293
	a	20754.458	30.462	625.240	625.256
	b	20764.378	30.433	625.182	625.210
	c	20774.298	30.430	625.120	625.154
	d	20784.218	30.454	625.052	625.084
	e	20794.137	30.504	624.980	625.006
	f	20804.057	30.581	624.903	624.913
	℄ BRG.	20810.389	30.643	624.852	624.852

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N15.2	℄ BRG.	20744.703	36.535	625.352	625.352
	a	20754.607	36.473	625.306	625.322
	b	20764.511	36.437	625.256	625.284
	c	20774.416	36.427	625.201	625.235
	d	20784.320	36.443	625.141	625.173
	e	20794.224	36.485	625.076	625.102
	f	20804.128	36.554	625.006	625.016
	℄ BRG.	20810.449	36.612	624.960	624.960
BEAM N15.1	℄ BRG.	20744.867	42.554	625.410	625.410
	a	20754.756	42.484	625.372	625.388
	b	20764.644	42.440	625.330	625.357
	c	20774.533	42.423	625.282	625.312
	d	20784.422	42.431	625.230	625.259
	e	20794.310	42.466	625.172	625.196
	f	20804.199	42.527	625.110	625.120
	℄ BRG.	20810.509	42.560	625.068	625.068

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS SPANS 14 AND 15

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

* 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 451), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	211
F. HB A. REG 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 20
72 SHEETS

SPAN 16

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N16.13	℄ BRG.	20811.687	-31.123	623.670	623.670
	a	20821.770	-31.160	623.532	623.544
	b	20831.854	-31.170	623.396	623.418
	c	20841.937	-31.153	623.259	623.284
	d	20852.020	-31.109	623.117	623.140
	e	20862.103	-31.039	622.970	622.989
	f	20872.185	-30.942	622.819	622.826
	℄ BRG.	20877.248	-30.883	622.741	622.741
BEAM N16.12	℄ BRG.	20811.752	-24.561	623.803	623.803
	a	20821.818	-24.610	623.663	623.675
	b	20831.883	-24.633	623.526	623.548
	c	20841.949	-24.629	623.389	623.414
	d	20852.015	-24.598	623.247	623.271
	e	20862.080	-24.541	623.101	623.120
	f	20872.145	-24.457	622.949	622.956
	℄ BRG.	20877.199	-24.404	622.872	622.872
BEAM N16.11	℄ BRG.	20811.817	-17.999	623.935	623.935
	a	20821.865	-18.048	623.794	623.806
	b	20831.913	-18.071	623.657	623.679
	c	20841.961	-18.066	623.520	623.545
	d	20852.009	-18.036	623.378	623.402
	e	20862.057	-17.978	623.232	623.251
	f	20872.104	-17.894	623.081	623.088
	℄ BRG.	20877.149	-17.842	623.004	623.004

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N16.10	℄ BRG.	20811.882	-11.437	624.066	624.066
	a	20821.912	-11.486	623.924	623.937
	b	20831.943	-11.508	623.788	623.810
	c	20841.973	-11.504	623.651	623.676
	d	20852.004	-11.473	623.510	623.533
	e	20862.034	-11.416	623.364	623.383
	f	20872.064	-11.332	623.213	623.220
	℄ BRG.	20877.100	-11.280	623.136	623.136
BEAM N16.9	℄ BRG.	20811.946	-4.874	624.186	624.186
	a	20821.959	-4.923	624.053	624.062
	b	20831.972	-4.946	623.919	623.935
	c	20841.985	-4.941	623.782	623.802
	d	20851.998	-4.911	623.641	623.659
	e	20862.011	-4.853	623.495	623.510
	f	20872.023	-4.770	623.345	623.350
	℄ BRG.	20877.051	-4.717	623.268	623.268
BEAM N16.8	℄ BRG.	20811.976	-1.823	624.242	624.242
	a	20821.981	-1.873	624.112	624.122
	b	20831.986	-1.897	623.979	623.996
	c	20841.991	-1.894	623.843	623.863
	d	20851.996	-1.865	623.702	623.720
	e	20862.000	-1.809	623.556	623.571
	f	20872.005	-1.727	623.406	623.411
	℄ BRG.	20877.028	-1.676	623.329	623.329

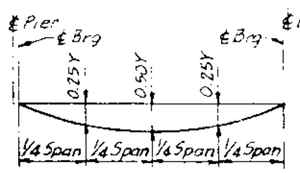
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP NWB LANES	℄ BRG.	20811.994	0.000	624.275	624.275
	a	20821.994	0.000	624.149	624.158
	b	20831.994	0.000	624.017	624.034
	c	20841.994	0.000	623.881	623.901
	d	20851.994	0.000	623.739	623.758
	e	20861.994	0.000	623.593	623.607
	f	20871.994	0.000	623.441	623.446
	℄ BRG.	20877.015	0.000	623.363	623.363
BEAM N16.7	℄ BRG.	20812.040	4.802	624.363	624.363
	a	20822.028	4.752	624.242	624.254
	b	20832.015	4.728	624.112	624.134
	c	20842.003	4.731	623.975	624.000
	d	20851.990	4.760	623.835	623.858
	e	20861.977	4.816	623.689	623.708
	f	20871.964	4.898	623.539	623.546
	℄ BRG.	20876.978	4.949	623.462	623.462
BEAM N16.6	℄ BRG.	20812.105	11.427	624.484	624.484
	a	20822.075	11.377	624.371	624.384
	b	20832.045	11.353	624.244	624.266
	c	20842.015	11.356	624.108	624.133
	d	20851.984	11.385	623.967	623.991
	e	20861.954	11.441	623.822	623.841
	f	20871.923	11.523	623.673	623.679
	℄ BRG.	20876.929	11.574	623.596	623.596

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N16.5	℄ BRG.	20812.169	18.052	624.605	624.605
	a	20822.121	18.002	624.501	624.513
	b	20832.074	17.978	624.376	624.398
	c	20842.026	17.981	624.240	624.265
	d	20851.979	18.010	624.100	624.123
	e	20861.931	18.066	623.955	623.974
	f	20871.883	18.148	623.806	623.812
	℄ BRG.	20876.880	18.199	623.729	623.729
BEAM N16.4	℄ BRG.	20812.233	24.676	624.726	624.726
	a	20822.168	24.627	624.630	624.643
	b	20832.103	24.603	624.508	624.530
	c	20842.038	24.606	624.372	624.397
	d	20851.973	24.635	624.232	624.256
	e	20861.908	24.691	624.088	624.107
	f	20871.843	24.772	623.939	623.945
	℄ BRG.	20876.831	24.823	623.862	623.862
BEAM N16.3	℄ BRG.	20812.290	30.645	624.835	624.835
	a	20822.210	30.586	624.747	624.763
	b	20832.129	30.553	624.627	624.655
	c	20842.049	30.546	624.491	624.526
	d	20851.969	30.565	624.351	624.383
	e	20861.888	30.611	624.206	624.230
	f	20871.807	30.683	624.057	624.065
	℄ BRG.	20876.788	30.730	623.981	623.981

SPAN 16 (CONT.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N16.2	℄ BRG.	20812.348	36.613	624.945	624.945
	a	20822.251	36.545	624.864	624.880
	b	20832.155	36.502	624.745	624.774
	c	20842.060	36.486	624.610	624.644
	d	20851.964	36.496	624.470	624.501
	e	20861.868	36.532	624.325	624.349
	f	20871.772	36.595	624.176	624.184
	℄ BRG.	20876.744	36.636	624.100	624.100
BEAM N16.1	℄ BRG.	20812.405	42.582	625.054	625.054
	a	20822.293	42.504	624.981	624.996
	b	20832.181	42.452	624.864	624.891
	c	20842.070	42.426	624.728	624.759
	d	20851.959	42.426	624.588	624.617
	e	20861.848	42.453	624.444	624.468
	f	20871.736	42.506	624.295	624.303
	℄ BRG.	20876.701	42.542	624.218	624.219

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES..



LOCATION	0.25Y	0.50Y
BEAMS N16.10 THRU N16.13	1/4"	5/16"
AND N16.4 THRU N16.7		
BEAMS N16.8 & N16.9	3/16"	1/4"
BEAMS N16.2 & N16.3	5/16"	7/16"
BEAM N16.1	5/16"	3/8"

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.

SPAN 17

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N17.14	℄ BRG.	20879.183	-31.160	622.705	622.705
	a	20889.265	-31.027	622.546	622.572
	b	20899.347	-30.867	622.383	622.431
	c	20909.427	-30.680	622.214	622.277
	d	20919.506	-30.466	622.041	622.108
	e	20929.585	-30.226	621.863	621.922
	f	20939.661	-29.959	621.681	621.722
	℄ PIER 17	20951.511	-29.610	621.461	621.468
BEAM N17.13	℄ BRG.	20879.133	-25.035	622.829	622.829
	a	20889.199	-24.873	622.670	622.696
	b	20899.263	-24.684	622.508	622.556
	c	20909.326	-24.468	622.340	622.402
	d	20919.388	-24.226	622.168	622.233
	e	20929.449	-23.957	621.991	622.049
	f	20939.508	-23.661	621.810	621.850
	℄ PIER 17	20951.337	-23.279	621.591	621.597
BEAM N17.12	℄ BRG.	20879.082	-18.702	622.956	622.956
	a	20889.130	-18.540	622.798	622.823
	b	20899.178	-18.351	622.636	622.683
	c	20909.224	-18.136	622.468	622.529
	d	20919.269	-17.894	622.297	622.361
	e	20929.313	-17.625	622.120	622.177
	f	20939.355	-17.330	621.939	621.976
	℄ PIER 17	20951.165	-16.948	621.721	621.725

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N17.11	℄ BRG.	20879.031	-12.369	623.084	623.084
	a	20889.062	-12.207	622.926	622.950
	b	20899.093	-12.018	622.764	622.809
	c	20909.122	-11.803	622.597	622.655
	d	20919.150	-11.562	622.425	622.487
	e	20929.177	-11.293	622.249	622.303
	f	20939.202	-10.998	622.069	622.105
	℄ PIER 17	20950.992	-10.617	621.851	621.853
BEAM N17.10	℄ BRG.	20878.971	-4.869	623.235	623.235
	a	20888.984	-4.832	623.075	623.097
	b	20898.996	-4.769	622.910	622.953
	c	20909.008	-4.679	622.741	622.796
	d	20919.020	-4.562	622.568	622.625
	e	20929.031	-4.419	622.390	622.439
	f	20939.041	-4.249	622.207	622.239
	℄ PIER 17	20950.813	-4.016	621.986	621.986
BEAM N17.9	℄ BRG	20878.945	-1.682	623.299	623.299
	a	20888.950	-1.725	623.137	623.149
	b	20898.954	-1.742	622.972	622.993
	c	20908.959	-1.732	622.801	622.825
	d	20918.964	-1.696	622.626	622.651
	e	20928.968	-1.633	622.447	622.468
	f	20938.972	-1.544	622.262	622.275
	℄ BRG.	20949.784	-1.417	622.058	622.058

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP NWB LANES	℄ BRG.	20878.932	0.000	623.333	623.333
	a	20888.932	0.000	623.172	623.184
	b	20898.932	0.000	623.007	623.028
	c	20908.932	0.000	622.836	622.861
	d	20918.932	0.000	622.661	622.685
	e	20928.932	0.000	622.480	622.501
	f	20938.932	0.000	622.294	622.307
	℄ BRG.	20949.746	0.000	622.087	622.087
BEAM N17.8	℄ BRG.	20878.903	3.620	623.406	623.406
	a	20888.894	3.574	623.244	623.256
	b	20898.884	3.554	623.079	623.100
	c	20908.875	3.561	622.908	622.933
	d	20918.865	3.594	622.734	622.758
	e	20928.855	3.653	622.554	622.576
	f	20938.845	3.739	622.370	622.383
	℄ BRG.	20949.643	3.862	622.166	622.166
BEAM N17.7	℄ BRG.	20878.861	8.922	623.512	623.512
	a	20888.837	8.873	623.351	623.363
	b	20898.814	8.850	623.185	623.207
	c	20908.790	8.853	623.016	623.040
	d	20918.767	8.883	622.841	622.866
	e	20928.743	8.939	622.662	622.684
	f	20938.719	9.022	622.478	622.491
	℄ BRG.	20949.502	9.141	622.275	622.275

INDICATES STA. 209+49.502 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N17.6	℄ BRG.	20878.819	14.224	623.619	623.619
	a	20888.781	14.171	623.458	623.470
	b	20898.744	14.145	623.293	623.314
	c	20908.707	14.146	623.123	623.147
	d	20918.669	14.172	622.949	622.973
	e	20928.631	14.226	622.770	622.791
	f	20938.593	14.305	622.586	622.599
	℄ BRG.	20949.361	14.421	622.383	622.383
BEAM N17.5	℄ BRG.	20878.777	19.526	623.726	623.726
	a	20888.725	19.470	623.565	623.577
	b	20898.674	19.441	623.400	623.421
	c	20908.623	19.438	623.230	623.255
	d	20918.571	19.462	623.056	623.081
	e	20928.520	19.512	622.878	622.899
	f	20938.468	19.588	622.694	622.707
	℄ BRG.	20949.221	19.700	622.491	622.491
BEAM N17.4	℄ BRG.	20878.735	24.828	623.832	623.832
	a	20888.670	24.769	623.672	623.684
	b	20898.604	24.727	623.507	623.528
	c	20908.539	24.731	623.338	623.362
	d	20918.474	24.751	623.164	623.188
	e	20928.409	24.798	622.985	623.007
	f	20938.343	24.871	622.802	622.815
	℄ BRG.	20949.082	24.980	622.600	622.600

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N17.3	℄ BRG.	20878.689	30.734	623.951	623.951
	a	20888.608	30.669	623.791	623.809
	b	20898.527	30.631	623.626	623.659
	c	20908.447	30.619	623.457	623.496
	d	20918.366	30.633	623.283	623.322
	e	20928.285	30.673	623.105	623.138
	f	20938.204	30.740	622.922	622.941
	℄ BRG.	20948.927	30.842	622.720	622.720
BEAM N17.2	℄ BRG.	20878.642	36.640	624.070	624.070
	a	20888.546	36.569	623.910	623.928
	b	20898.450	36.525	623.745	623.778
	c	20908.354	36.507	623.576	623.615
	d	20918.258	36.515	623.403	623.442
	e	20928.162	36.549	623.225	623.258
	f	20938.066	36.610	623.042	623.061
	℄ BRG.	20948.773	36.705	622.840	622.840
BEAM N17.1	℄ BRG.	20878.596	42.546	624.189	624.189
	a	20888.484	42.469	624.029	624.047
	b	20898.373	42.419	623.865	623.897
	c	20908.262	42.395	623.696	623.734
	d	20918.151	42.396	623.522	623.561
	e	20928.039	42.425	623.345	623.378
	f	20937.928	42.479	623.162	623.181
	℄ BRG.	20948.619	42.567	622.960	622.960

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

SEE SHEET 24 FOR SPAN 17 DEAD LOAD DEFLECTION DIAGRAM.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS SPANS 16 AND 17

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 451), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	212
F. AID A. REG. 4		ILLINOIS	FED. AID PROJECT:	

SHEET NO. 21
72 SHEETS

SPAN 18

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N18.13	℄ PIER 17	20951.811	-29.610	621.461	621.468
	a	20960.589	-29.784	621.258	621.288
	b	20971.667	-29.931	621.051	621.098
	c	20981.747	-30.052	620.839	620.893
	d	20991.827	-30.165	620.623	620.672
	e	21001.907	-30.212	620.402	620.438
	℄ PIER 18	21011.404	-30.251	620.190	620.209
BEAM N18.12	℄ PIER 17	20951.337	-23.279	621.591	621.597
	a	20960.398	-23.453	621.389	621.416
	b	20971.650	-23.599	621.182	621.225
	c	20981.522	-23.719	620.971	621.020
	d	20991.585	-23.812	620.755	620.801
	e	21001.649	-23.879	620.534	620.569
	℄ PIER 18	21011.422	-23.918	620.316	620.336
BEAM N18.11	℄ PIER 17	20951.165	-16.948	621.721	621.725
	a	20961.208	-17.121	621.519	621.543
	b	20971.253	-17.267	621.313	621.351
	c	20981.299	-17.386	621.102	621.147
	d	20991.345	-17.479	620.887	620.930
	e	21001.391	-17.545	620.667	620.700
	℄ PIER 18	21011.440	-17.584	620.442	620.462

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N18.10	℄ PIER 17	20950.992	-10.617	621.851	621.853
	a	20961.019	-10.789	621.650	621.669
	b	20971.047	-10.935	621.444	621.476
	c	20981.076	-11.053	621.234	621.272
	d	20991.105	-11.146	621.019	621.056
	e	21001.134	-11.211	620.799	620.829
	℄ PIER 18	21011.458	-11.251	620.568	620.587
BEAM N18.9	℄ PIER 17	20950.843	-4.016	621.986	621.986
	a	20960.823	-4.177	621.786	621.800
	b	20970.833	-4.311	621.581	621.605
	c	20980.844	-4.419	621.371	621.401
	d	20990.856	-4.500	621.157	621.186
	e	21000.867	-4.555	620.938	620.963
	℄ PIER 18	21011.477	-4.584	620.701	620.719
BEAM N18.8	℄ BRG	20951.698	-1.272	622.024	622.024
	a	20961.700	-1.448	621.823	621.834
	b	20971.703	-1.597	621.617	621.637
	c	20981.707	-1.720	621.407	621.432
	d	20991.711	-1.816	621.192	621.218
	e	21001.715	-1.886	620.973	620.995
	℄ PIER 18	21011.484	-1.928	620.754	620.771

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP NWB LANES	℄ BRG.	20951.663	0.000	622.050	622.050
	a	20961.663	0.000	621.852	621.864
	b	20971.663	0.000	621.650	621.670
	c	20981.663	0.000	621.442	621.467
	d	20991.663	0.000	621.229	621.253
	e	21001.663	0.000	621.012	621.034
	℄ PIER 18	21011.490	0.000	620.793	620.809
BEAM N18.7	℄ BRG.	20951.515	5.434	622.161	622.161
	a	20961.500	5.259	621.961	621.973
	b	20971.485	5.110	621.756	621.775
	c	20981.471	4.988	621.546	621.569
	d	20991.457	4.892	621.332	621.352
	e	21001.444	4.823	621.113	621.137
	℄ PIER 18	21011.503	4.780	620.888	620.893
BEAM N18.6	℄ BRG.	20951.333	12.140	622.299	622.299
	a	20961.300	11.965	622.099	622.117
	b	20971.267	11.817	621.894	621.924
	c	20981.236	11.696	621.685	621.718
	d	20991.204	11.601	621.471	621.501
	e	21001.173	11.532	621.253	621.271
	℄ PIER 18	21011.522	11.488	621.022	621.025

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N18.5	℄ BRG.	20951.152	18.846	622.437	622.437
	a	20961.101	18.672	622.237	622.260
	b	20971.051	18.525	622.033	622.071
	c	20981.001	18.404	621.824	621.867
	d	20990.952	18.309	621.611	621.648
	e	21000.904	18.241	621.393	621.415
	℄ PIER 18	21011.541	18.197	621.155	621.157
BEAM N18.4	℄ BRG.	20950.986	24.979	622.563	622.563
	a	20960.921	24.906	622.365	622.380
	b	20970.855	24.860	622.164	622.189
	c	20980.789	24.840	621.957	621.988
	d	20990.724	24.846	621.747	621.769
	e	21000.658	24.879	621.531	621.542
	℄ BRG.	21007.689	24.918	621.377	621.377
BEAM N18.3	℄ BRG.	20950.829	30.852	622.683	622.683
	a	20960.747	30.781	622.486	622.497
	b	20970.666	30.737	622.285	622.303
	c	20980.586	30.719	622.079	622.100
	d	20990.505	30.727	621.869	621.886
	e	21000.424	30.761	621.656	621.662
	℄ BRG.	21007.687	30.803	621.494	621.494

SPAN 18 (CONT.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N18.2	℄ BRG.	20950.671	36.725	622.804	622.804
	a	20960.575	36.656	622.607	622.618
	b	20970.479	36.613	622.406	622.424
	c	20980.382	36.597	622.201	622.221
	d	20990.286	36.607	621.991	622.008
	e	21000.190	36.644	621.777	621.785
	℄ BRG.	21007.709	36.689	621.611	621.611
BEAM N18.1	℄ BRG.	20950.514	42.597	622.924	622.924
	a	20960.403	42.531	622.728	622.739
	b	20970.291	42.490	622.528	622.545
	c	20980.180	42.476	622.323	622.340
	d	20990.068	42.488	622.113	622.130
	e	20999.957	42.526	621.900	621.908
	℄ BRG.	21007.732	42.574	621.728	621.728

GIRDER 2A

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER 2A	℄ BRG.	21011.086	34.240	621.487	621.487
	a	21020.996	34.120	621.258	621.284
	b	21030.906	34.026	621.026	621.076
	c	21040.816	33.958	620.789	620.861
	d	21050.727	33.917	620.547	620.638
	e	21060.638	33.902	620.301	620.409
	f	21070.549	33.913	620.051	620.172
	g	21080.459	33.951	619.796	619.927
	h	21090.370	34.014	619.536	619.675
	i	21100.280	34.105	619.272	619.415
	j	21110.190	34.221	619.004	619.147
	k	21120.098	34.363	618.731	618.872
	l	21130.007	34.533	618.454	618.588
	m	21139.914	34.727	618.172	618.300
	n	21149.820	34.949	617.886	618.003
	o	21159.725	35.196	617.598	617.703
	p	21169.628	35.470	617.310	617.401
	q	21179.530	35.770	617.025	617.098
	r	21189.430	36.097	616.737	616.786
	s	21198.329	36.449	616.451	616.492
	t	21209.226	36.828	616.165	616.188
	℄ BRG.	21223.852	37.436	615.744	615.744

GIRDER 2B

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER 2B	℄ BRG.	21011.113	43.573	621.673	621.673
	a	21020.996	43.311	621.442	621.473
	b	21030.880	43.076	621.227	621.267
	c	21040.765	42.866	620.982	621.051
	d	21050.651	42.683	620.724	620.833
	e	21060.538	42.526	620.476	620.606
	f	21070.426	42.396	620.223	620.370
	g	21080.315	42.291	619.966	620.127
	h	21090.204	42.213	619.708	619.876
	i	21100.093	42.161	619.439	619.617
	j	21109.982	42.135	619.168	619.350
	k	21119.872	42.135	618.893	619.074
	l	21129.761	42.162	618.613	618.791
	m	21139.651	42.214	618.330	618.500
	n	21149.540	42.293	618.042	618.201
	o	21159.428	42.398	617.751	617.896
	p	21169.316	42.530	617.461	617.589
	q	21179.203	42.688	617.173	617.279
	r	21189.089	42.871	616.882	616.966
	s	21198.974	43.081	616.594	616.651
	t	21208.858	43.318	616.301	616.330
	℄ BRG.	21220.281	43.623	615.973	615.973

SPAN 19

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N19.9	℄ PIER 18	21011.404	-30.251	620.190	620.209
	a	21021.485	-30.267	619.959	620.007
	b	21031.566	-30.256	619.725	619.793
	c	21041.646	-30.218	619.485	619.564
	d	21051.727	-30.150	619.241	619.317
	e	21061.807	-30.062	618.993	619.053
	f	21071.836	-29.944	618.739	618.774
	℄ PIER 19	21082.352	-29.793	618.471	618.472
BEAM N19.8	℄ PIER 18	21011.422	-23.918	620.316	620.336
	a	21021.486	-23.933	620.086	620.132
	b	21031.550	-23.922	619.852	619.917
	c	21041.613	-23.884	619.613	619.687
	d	21051.677	-23.820	619.369	619.442
	e	21061.740	-23.726	619.121	619.181
	f	21071.807	-23.611	618.868	618.905
	℄ PIER 19	21082.251	-23.460	618.601	618.606

* INDICATES STA. 210+82.251 (TYP).

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

SPAN 19 (CONT.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N19.7	℄ PIER 18	21011.440	-17.584	620.442	620.462
	a	21021.487	-17.600	620.213	620.257
	b	21031.534	-17.589	619.979	620.040
	c	21041.580	-17.553	619.740	619.810
	d	21051.627	-17.487	619.497	619.566
	e	21061.673	-17.396	619.249	619.307
	f	21071.718	-17.278	618.997	619.035
	℄ PIER 19	21082.149	-17.128	618.730	618.740
BEAM N19.6	℄ PIER 18	21011.458	-11.251	620.568	620.587
	a	21021.428	-11.267	620.339	620.379
	b	21031.518	-11.256	620.106	620.161
	c	21041.548	-11.218	619.868	619.930
	d	21051.577	-11.154	619.625	619.687
	e	21061.606	-11.063	619.378	619.431
	f	21071.635	-10.946	619.126	619.162
	℄ PIER 19	21082.048	-10.796	618.859	618.873
BEAM N19.5	℄ PIER 18	21011.477	-4.584	620.701	620.719
	a	21021.489	-4.600	620.473	620.505
	b	21031.501	-4.589	620.240	620.284
	c	21041.513	-4.551	620.002	620.052
	d	21051.525	-4.487	619.760	619.809
	e	21061.538	-4.397	619.513	619.556
	f	21071.547	-4.279	619.261	619.293
	℄ PIER 19	21081.962	-4.130	618.996	619.011

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N19.4	℄ PIER 18	21011.484	-1.928	620.754	620.771
	a	21021.489	-1.944	620.526	620.555
	b	21031.495	-1.933	620.293	620.331
	c	21041.500	-1.895	620.055	620.099
	d	21051.504	-1.831	619.813	619.857
	e	21061.509	-1.741	619.567	619.605
	f	21071.512	-1.623	619.315	619.344
	℄ PIER 19	21081.900	-1.474	619.050	619.066
℄ PROP NWB LANES	℄ PIER 18	21011.490	0.000	620.793	620.809
	a	21021.490	0.000	620.565	620.594
	b	21031.490	0.000	620.332	620.370
	c	21041.490	0.000	620.093	620.137
	d	21051.490	0.000	619.850	619.894
	e	21061.490	0.000	619.602	619.640
	f	21071.490	0.000	619.348	619.377
	℄ PIER 19	21081.877	0.000	619.080	619.096
BEAM N19.3	℄ PIER 18	21011.503	4.780	620.888	620.893
	a	21021.491	4.765	620.660	620.686
	b	21031.478	4.776	620.427	620.471
	c	21041.465	4.813	620.190	620.248
	d	21051.452	4.877	619.949	620.017
	e	21061.439	4.966	619.702	619.775
	f	21071.425	5.084	619.452	619.526
	℄ PIER 19	21081.794	5.234	619.187	619.259

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N19.2	℄ PIER 18	21011.522	11.488	621.022	621.025
	a	21021.492	11.473	620.794	620.822
	b	21031.461	11.484	620.562	620.612
	c	21041.431	11.521	620.325	620.392
	d	21051.400	11.585	620.084	620.163
	e	21061.369	11.676	619.838	619.923
	f	21071.337	11.792	619.588	619.674
	℄ PIER 19	21081.688	11.941	619.324	619.407
BEAM N19.1	℄ PIER 18	21011.541	18.197	621.155	621.157
	a	21021.493	18.181	620.928	620.954
	b	21031.445	18.192	620.695	620.744
	c	21041.397	18.230	620.460	620.526
	d	21051.348	18.293	620.220	620.299
	e	21061.300	18.383	619.974	620.062
	f	21071.250	18.500	619.725	619.817
	℄ PIER 19	21081.583	18.649	619.461	619.560
GIRDER G2-19	℄ BRG.	21011.063	24.907	621.300	621.300
	a	21020.997	24.890	621.074	621.095
	b	21030.932	24.899	620.845	620.884
	c	21040.866	24.935	620.607	620.666
	d	21050.800	24.998	620.367	620.443
	e	21060.734	25.086	620.122	620.220
	f	21070.667	25.201	619.874	619.991
	℄ PIER 19	21081.478	25.356	619.597	619.702

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

SEE SHEET 2B FOR SPANS 18 AND 19; GIRDERS 2A AND 2B DEAD LOAD DEFLECTION DIAGRAM.

TOP OF SLAB ELEVATIONS
SPAN 18 AND 19
GIRDERS 2A AND 2B
SECTION

F.A.I. ROUTE 80/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 609+49

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	213
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 22
72 SHEETS

SPAN 20

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N20.9	℄ PIER 19	21082.352	-29.793	618.471	618.472
	a	21092.432	-29.843	618.204	618.212
	b	21102.512	-29.866	617.932	617.946
	c	21112.591	-29.863	617.656	617.671
	d	21122.671	-29.833	617.375	617.386
	℄ BRG.	21137.346	-29.741	616.957	616.957
BEAM N20.8	℄ PIER 19	21082.251	-23.460	618.601	618.606
	a	21092.311	-23.286	618.339	618.354
	b	21102.371	-23.084	618.072	618.094
	c	21112.430	-22.856	617.801	617.823
	d	21122.487	-22.601	617.525	617.541
	℄ BRG.	21137.114	-22.182	617.115	617.115
BEAM N20.7	℄ PIER 19	21082.149	-17.128	618.730	618.740
	a	21092.193	-16.953	618.468	618.489
	b	21102.236	-16.752	618.202	618.229
	c	21112.278	-16.524	617.931	617.958
	d	21122.318	-16.270	617.656	617.676
	℄ BRG.	21136.920	-15.852	617.247	617.247

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N20.6	℄ PIER 19	21082.048	-10.796	618.859	618.873
	a	21092.075	-10.621	618.598	618.621
	b	21102.101	-10.420	618.333	618.361
	c	21112.126	-10.193	618.062	618.090
	d	21122.149	-9.938	617.787	617.807
	℄ BRG.	21136.727	-9.521	617.380	617.380
BEAM N20.5	℄ PIER 19	21081.942	-4.130	618.996	619.011
	a	21091.953	-4.139	618.731	618.753
	b	21101.964	-4.122	618.462	618.487
	c	21111.975	-4.078	618.189	618.212
	d	21121.985	-4.007	617.911	617.927
	℄ BRG.	21136.554	-3.857	617.498	617.498
BEAM N20.4	℄ PIER 19	21081.900	-1.474	619.050	619.066
	a	21091.904	-1.564	618.784	618.805
	b	21101.908	-1.628	618.514	618.536
	c	21111.912	-1.666	618.239	618.259
	d	21121.916	-1.677	617.959	617.974
	℄ PIER 20	21137.446	-1.642	617.516	617.516

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP NWB LANES	℄ PIER 19	21081.877	0.000	619.080	619.096
	a	21091.877	0.000	618.816	618.837
	b	21101.877	0.000	618.547	618.570
	c	21111.877	0.000	618.273	618.294
	d	21121.877	0.000	617.994	618.009
	℄ PIER 20	21137.396	0.000	617.551	617.551
BEAM N20.3	℄ PIER 19	21081.794	5.234	619.187	619.259
	a	21091.778	5.406	618.927	618.998
	b	21101.762	5.604	618.662	618.729
	c	21111.744	5.828	618.393	618.452
	d	21121.725	6.080	618.120	618.167
	℄ PIER 20	21137.197	6.521	617.687	617.711
BEAM N20.2	℄ PIER 19	21081.688	11.941	619.324	619.407
	a	21091.655	12.113	619.064	619.149
	b	21101.621	12.311	618.800	618.884
	c	21111.585	12.535	618.532	618.610
	d	21121.549	12.786	618.259	618.328
	℄ PIER 20	21136.993	13.226	617.827	617.875

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N20.1	℄ PIER 19	21081.583	18.649	619.461	619.555
	a	21091.532	18.820	619.202	619.299
	b	21101.480	19.017	618.938	619.036
	c	21111.427	19.241	618.670	618.765
	d	21121.373	19.492	618.398	618.486
	℄ PIER 20	21136.790	19.932	617.967	618.038
GIRDER G2-20	℄ PIER 19	21081.478	25.356	619.597	619.702
	a	21091.409	25.527	619.339	619.448
	b	21101.340	25.724	619.076	619.186
	c	21111.269	25.948	618.809	618.918
	d	21121.197	26.198	618.537	618.642
	℄ PIER 20	21136.588	26.637	618.107	618.197

INDICATES STA. 211+36.588 (TYP.)

SPAN 21

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N21.9	℄ BRG.	21139.301	-30.442	616.887	616.887
	a	21149.382	-30.496	616.590	616.597
	b	21159.464	-30.523	616.291	616.303
	c	21169.545	-30.523	615.993	616.006
	d	21179.627	-30.497	615.695	615.706
	e	21189.708	-30.443	615.397	615.403
	℄ BRG.	21197.227	-30.386	615.176	615.176
BEAM N21.8	℄ BRG.	21139.095	-23.873	617.024	617.024
	a	21149.159	-23.927	616.728	616.735
	b	21159.223	-23.954	616.430	616.442
	c	21169.287	-23.955	616.132	616.147
	d	21179.351	-23.929	615.834	615.846
	e	21189.414	-23.877	615.537	615.543
	℄ BRG.	21196.920	-23.820	615.316	615.316
BEAM N21.7	℄ BRG.	21138.891	-17.303	617.161	617.161
	a	21148.937	-17.357	616.866	616.873
	b	21158.983	-17.386	616.568	616.580
	c	21169.029	-17.387	616.271	616.286
	d	21179.075	-17.362	615.974	615.985
	e	21189.121	-17.310	615.677	615.683
	℄ BRG.	21196.614	-17.254	615.457	615.457

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N21.6	℄ BRG.	21138.687	-10.733	617.299	617.299
	a	21148.715	-10.788	617.004	617.011
	b	21158.744	-10.817	616.706	616.719
	c	21168.773	-10.819	616.410	616.425
	d	21178.801	-10.795	616.113	616.125
	e	21188.830	-10.744	615.817	615.823
	℄ BRG.	21196.310	-10.689	615.597	615.597
BEAM N21.5	℄ BRG.	21138.483	-4.163	617.436	617.436
	a	21148.494	-4.219	617.142	617.149
	b	21158.506	-4.248	616.845	616.857
	c	21168.517	-4.251	616.549	616.564
	d	21178.528	-4.228	616.253	616.264
	e	21188.539	-4.177	615.957	615.963
	℄ BRG.	21196.006	-4.123	615.737	615.737
BEAM N21.4	℄ PIER 20	21137.446	-1.642	617.516	617.516
	a	21147.450	-1.569	617.226	617.243
	b	21157.454	-1.471	616.932	616.961
	c	21167.457	-1.345	616.638	616.671
	d	21177.459	-1.193	616.345	616.374
	e	21187.460	-1.015	616.053	616.068
	℄ BRG.	21195.855	-0.845	615.807	615.807

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP NWB LANES	℄ PIER 20	21137.396	0.000	617.551	617.551
	a	21147.396	0.000	617.259	617.276
	b	21157.396	0.000	616.963	616.992
	c	21167.396	0.000	616.667	616.700
	d	21177.396	0.000	616.371	616.399
	e	21187.396	0.000	616.075	616.090
	℄ BRG.	21195.816	0.000	615.826	615.826
BEAM N21.3	℄ PIER 20	21137.197	6.521	617.687	617.711
	a	21147.179	6.653	617.398	617.433
	b	21157.160	6.812	617.106	617.147
	c	21167.140	6.997	616.814	616.854
	d	21177.119	7.209	616.523	616.554
	e	21187.097	7.447	616.232	616.248
	℄ BRG.	21195.463	7.667	615.989	615.989
BEAM N21.2	℄ PIER 20	21136.993	13.226	617.827	617.875
	a	21146.953	13.547	617.543	617.593
	b	21156.911	13.894	617.255	617.305
	c	21166.866	14.268	616.968	617.012
	d	21176.820	14.668	616.681	616.713
	e	21186.772	15.094	616.395	616.411
	℄ BRG.	21195.106	15.471	616.156	616.156

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N21.1	℄ PIER 20	21136.790	19.932	617.967	618.038
	a	21146.732	20.252	617.683	617.750
	b	21156.672	20.598	617.396	617.455
	c	21166.610	20.971	617.109	617.157
	d	21176.547	21.370	616.823	616.856
	e	21186.481	21.796	616.538	616.554
	℄ BRG.	21194.800	22.173	616.299	616.299
GIRDER G2-21	℄ PIER 20	21136.588	26.637	618.107	618.197
	a	21146.512	26.957	617.824	617.902
	b	21156.435	27.303	617.537	617.602
	c	21166.355	27.675	617.251	617.299
	d	21176.274	28.073	616.965	616.995
	e	21186.191	28.498	616.680	616.689
	℄ BRG.	21193.246	28.817	616.478	616.478

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

SPAN 23

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N23.10	℄ BRG.	21199.161	-30.380	615.119	615.119
	a	21209.242	-30.445	614.819	614.829
	b	21219.324	-30.482	614.520	614.537
	c	21229.405	-30.493	614.221	614.241
	d	21239.487	-30.478	613.923	613.942
	e	21249.568	-30.435	613.626	613.640
	f	21259.649	-30.366	613.329	613.334
	℄ BRG.	21264.820	-30.321	613.177	613.177
BEAM N23.9	℄ BRG.	21198.851	-23.814	615.259	615.259
	a	21208.914	-23.874	614.960	614.970
	b	21218.978	-23.907	614.662	614.679
	c	21229.042	-23.914	614.364	614.384
	d	21239.105	-23.893	614.066	614.084
	e	21249.169	-23.846	613.769	613.781
	℄ BRG.	21260.868	-23.758	613.425	613.425
BEAM N23.8	℄ BRG.	21198.542	-17.249	615.400	615.400
	a	21208.587	-17.303	615.101	615.108
	b	21218.634	-17.331	614.803	614.816
	c	21228.680	-17.332	614.506	614.521
	d	21238.726	-17.306	614.209	614.221
	e	21248.772	-17.254	613.913	613.919
	℄ BRG.	21256.930	-17.192	613.673	613.673

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N23.7	℄ BRG.	21198.233	-10.683	615.540	615.540
	a	21208.262	-10.731	615.242	615.250
	b	21218.290	-10.752	614.945	614.958
	c	21228.319	-10.747	614.648	614.663
	d	21238.347	-10.716	614.352	614.363
	℄ BRG.	21253.005	-10.622	613.920	613.920
BEAM N23.6	℄ BRG.	21197.926	-4.117	615.681	615.681
	a	21207.937	-4.158	615.384	615.392
	b	21217.948	-4.172	615.087	615.097
	c	21227.959	-4.160	614.791	614.801
	d	21237.970	-4.121	614.495	614.504
	℄ BRG.	21249.095	-4.047	614.168	614.168
BEAM N23.5	℄ BRG.	21197.784	-1.068	615.746	615.746
	a	21207.787	-1.094	615.449	615.458
	b	21217.790	-1.094	615.153	615.164
	c	21227.793	-1.066	614.858	614.868
	d	21237.795	-1.013	614.563	614.571
	℄ BRG.	21247.250	-0.938	614.284	614.284

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP NWB LANES	℄ BRG.	21197.734	0.000	615.769	615.769
	a	21207.734	0.000	615.473	615.481
	b	21217.734	0.000	615.177	615.187
	c	21227.734	0.000	614.881	614.891
	d	21237.734	0.000	614.585	614.592
	℄ BRG.	21246.695	0.000	614.319	614.319
BEAM N23.4	℄ BRG.	21197.435	6.444	615.906	615.906
	a	21207.417	6.548	615.613	615.622
	b	21217.399	6.678	615.320	615.331
	c	21227.379	6.835	615.028	615.038
	d	21237.359	7.018	614.736	614.741
	℄ BRG.	21247.487	7.123	614.586	614.586
BEAM N23.3	℄ BRG.	21197.086	13.957	616.067	616.067
	a	21207.046	14.218	615.777	615.777
	b	21217.004	14.506	615.488	615.493
	c	21226.960	14.819	615.200	615.200
	℄ BRG.	21237.744	15.189	614.888	614.888

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N23.2	℄ BRG.	21196.740	21.470	616.228	616.228
	a	21206.672	21.925	615.943	615.943
	b	21216.602	22.407	615.658	615.663
	c	21226.530	22.915	615.375	615.375
	℄ BRG.	21233.021	23.261	615.189	615.189
BEAM N23.1	℄ BRG.	21196.394	28.983	616.388	616.388
	a	21206.293	29.684	616.109	616.110
	b	21216.187	30.411	615.831	615.833
	℄ BRG.	21228.318	31.339	615.495	615.495

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

SEE SHEET 24 FOR SPANS 20, 21 AND 23 DEAD LOAD DEFLECTION DIAGRAM.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS SPANS 20, 21, AND 23

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-28, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	214
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 23
72 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N24.18	℄ BRG.	21267.550	-30.301	613.096	613.096
	a	21277.631	-30.388	612.796	612.812
	b	21287.712	-30.449	612.496	612.528
	c	21297.794	-30.483	612.197	612.234
	d	21307.875	-30.490	611.899	611.940
	e	21317.956	-30.470	611.601	611.637
	f	21328.038	-30.424	611.303	611.334
	g	21338.119	-30.351	611.006	611.022
	℄ BRG.	21348.045	-30.253	610.718	610.718
BEAM N24.17	℄ BRG.	21264.913	-25.931	613.262	613.262
	a	21274.982	-26.019	612.962	612.977
	b	21285.051	-26.080	612.663	612.694
	c	21295.121	-26.114	612.364	612.400
	d	21305.190	-26.122	612.066	612.107
	e	21315.260	-26.103	611.768	611.804
	f	21325.330	-26.057	611.471	611.502
	g	21335.399	-25.985	611.174	611.190
	℄ BRG.	21345.280	-25.888	610.885	610.885
BEAM N24.16	℄ BRG.	21262.281	-21.560	613.427	613.427
	a	21272.338	-21.648	613.127	613.143
	b	21282.396	-21.709	612.829	612.860
	c	21292.454	-21.744	612.530	612.567
	d	21302.512	-21.752	612.232	612.274
	e	21312.570	-21.733	611.935	611.971
	f	21322.628	-21.688	611.638	611.669
	g	21332.685	-21.616	611.342	611.357
	℄ BRG.	21342.522	-21.520	611.053	611.053

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N24.15	℄ BRG.	21259.656	-17.187	613.592	613.592
	a	21269.701	-17.275	613.293	613.309
	b	21279.747	-17.337	612.994	613.026
	c	21289.793	-17.372	612.696	612.733
	d	21299.840	-17.380	612.399	612.440
	e	21309.886	-17.362	612.102	612.138
	f	21319.932	-17.317	611.805	611.836
	g	21329.978	-17.246	611.509	611.525
	℄ BRG.	21339.771	-17.150	611.221	611.221
BEAM N24.14	℄ BRG.	21257.037	-12.812	613.757	613.757
	a	21267.070	-12.900	613.458	613.474
	b	21277.105	-12.962	613.160	613.191
	c	21287.139	-12.998	612.862	612.899
	d	21297.174	-13.007	612.565	612.607
	e	21307.208	-12.989	612.268	612.305
	f	21317.243	-12.944	611.972	612.003
	g	21327.277	-12.873	611.677	611.692
	℄ BRG.	21337.026	-12.779	611.390	611.390
BEAM N24.13	℄ BRG.	21254.423	-8.435	613.922	613.922
	a	21264.446	-8.524	613.624	613.639
	b	21274.468	-8.586	613.326	613.357
	c	21284.491	-8.622	613.028	613.065
	d	21294.514	-8.631	612.731	612.773
	e	21304.537	-8.613	612.435	612.472
	f	21314.559	-8.569	612.139	612.170
	g	21324.582	-8.499	611.844	611.859
	℄ BRG.	21334.287	-8.405	611.559	611.559

INDICATES STA. 213+34.287 (TYP)

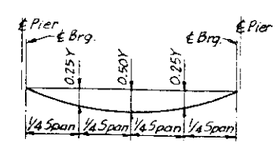
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N24.12	℄ BRG.	21251.816	-4.057	614.087	614.087
	a	21261.827	-4.146	613.789	613.802
	b	21271.838	-4.208	613.491	613.517
	c	21281.849	-4.244	613.194	613.225
	d	21291.860	-4.253	612.897	612.934
	e	21301.871	-4.236	612.602	612.633
	f	21311.883	-4.193	612.306	612.332
	g	21321.893	-4.122	612.011	612.024
	℄ BRG.	21331.554	-4.030	611.727	611.727
DEAM N24.11	℄ BRG.	21249.938	-0.895	614.206	614.206
	a	21259.940	-0.994	613.908	613.921
	b	21269.943	-1.067	613.610	613.636
	c	21279.945	-1.114	613.313	613.344
	d	21289.948	-1.134	613.016	613.053
	e	21299.951	-1.128	612.721	612.752
	f	21309.954	-1.095	612.425	612.451
	g	21319.957	-1.035	612.130	612.143
	℄ BRG.	21329.637	-0.952	611.845	611.845
℄ PROP. NWB LANES	℄ BRG.	21249.407	0.000	614.239	614.239
	a	21259.407	0.000	613.943	613.956
	b	21269.407	0.000	613.647	613.673
	c	21279.407	0.000	613.351	613.382
	d	21289.407	0.000	613.055	613.092
	e	21299.407	0.000	612.759	612.790
	f	21309.407	0.000	612.463	612.489
	g	21319.407	0.000	612.167	612.180
	℄ BRG.	21329.045	0.000	611.882	611.882

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N24.10	℄ BRG.	21247.538	3.156	614.358	614.358
	a	21257.529	3.162	614.062	614.078
	b	21267.521	3.195	613.767	613.798
	c	21277.512	3.254	613.472	613.509
	d	21287.503	3.340	613.178	613.220
	e	21297.493	3.453	612.885	612.921
	f	21307.483	3.591	612.592	612.622
	g	21317.472	3.757	612.300	612.314
	℄ BRG.	21326.603	3.931	612.033	612.033
BEAM N24.9	℄ BRG.	21245.142	7.207	614.510	614.510
	a	21255.123	7.321	614.216	614.230
	b	21265.102	7.462	613.924	613.950
	c	21275.081	7.629	613.632	613.663
	d	21285.058	7.822	613.340	613.376
	e	21295.035	8.042	613.049	613.080
	f	21305.010	8.288	612.759	612.784
	g	21314.984	8.561	612.469	612.481
	℄ BRG.	21323.576	8.817	612.220	612.220
BEAM N24.8	℄ BRG.	21242.752	11.260	614.661	614.661
	a	21252.720	11.483	614.371	614.384
	b	21262.686	11.733	614.081	614.107
	c	21272.651	12.009	613.791	613.823
	d	21282.614	12.311	613.502	613.538
	e	21292.576	12.640	613.214	613.245
	f	21302.536	12.995	612.926	612.951
	g	21312.494	13.377	612.639	612.650
	℄ BRG.	21320.557	13.705	612.407	612.407

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N24.7	℄ BRG.	21240.367	15.315	614.813	614.813
	a	21250.321	15.649	614.525	614.539
	b	21260.273	16.009	614.238	614.264
	c	21270.222	16.395	613.951	613.983
	d	21280.170	16.808	613.665	613.701
	e	21290.116	17.247	613.379	613.410
	f	21300.059	17.713	613.094	613.118
	g	21309.999	18.205	612.810	612.820
	℄ BRG.	21317.546	18.596	612.594	612.594
BEAM N24.6	℄ BRG.	21237.987	19.371	614.965	614.965
	a	21247.926	19.817	614.679	614.693
	b	21257.862	20.289	614.395	614.421
	c	21267.795	20.787	614.111	614.143
	d	21277.726	21.312	613.827	613.863
	e	21287.654	21.863	613.544	613.575
	f	21297.579	22.441	613.262	613.285
	g	21307.501	23.044	612.981	612.990
	℄ BRG.	21314.543	23.489	612.781	612.781
BEAM N24.5	℄ BRG.	21235.613	23.429	615.116	615.116
	a	21245.535	23.988	614.834	614.847
	b	21255.454	24.574	614.552	614.579
	c	21265.369	25.186	614.270	614.302
	d	21275.282	25.824	613.990	614.026
	e	21285.191	26.488	613.710	613.740
	f	21295.097	27.179	613.430	613.453
	g	21304.999	27.895	613.152	613.161
	℄ BRG.	21311.547	28.384	612.967	612.967

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N24.4	℄ BRG.	21233.243	27.488	615.276	615.276
	a	21243.147	28.161	614.988	614.999
	b	21253.048	28.860	614.709	614.730
	c	21262.945	29.586	614.430	614.457
	d	21272.838	30.338	614.152	614.182
	e	21282.727	31.116	613.875	613.899
	f	21292.612	31.920	613.599	613.617
	g	21302.493	32.750	613.323	613.330
	℄ BRG.	21308.564	33.273	613.154	613.154
BEAM N24.3	℄ BRG.	21230.878	31.548	615.425	615.425
	a	21240.763	32.339	615.142	615.153
	b	21250.644	33.156	614.866	614.887
	c	21260.520	33.999	614.590	614.617
	d	21270.392	34.868	614.315	614.346
	e	21280.260	35.764	614.041	614.065
	f	21290.123	36.685	613.768	613.785
	g	21299.981	37.632	613.495	613.501
	℄ BRG.	21305.579	38.182	613.340	613.340
BEAM N24.2	℄ BRG.	21227.664	37.085	615.628	615.628
	a	21237.554	37.577	615.342	615.361
	b	21247.441	38.096	615.059	615.096
	c	21257.326	38.641	614.778	614.820
	d	21267.207	39.212	614.497	614.543
	e	21277.086	39.809	614.216	614.257
	f	21286.961	40.433	613.936	613.968
	g	21296.834	41.082	613.657	613.670
	℄ BRG.	21303.543	41.538	613.467	613.467

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N24.1	℄ BRG.	21224.458	42.624	615.831	615.831
	a	21234.344	42.826	615.542	615.561
	b	21244.229	43.055	615.254	615.291
	c	21254.113	43.310	614.966	615.011
	d	21263.995	43.591	614.679	614.730
	e	21273.876	43.898	614.393	614.437
	f	21283.755	44.231	614.107	614.141
	g	21293.632	44.591	613.822	613.837
	℄ BRG.	21301.510	44.897	613.595	613.595



LOCATION	0.25Y	0.50Y
BEAMS N24.13 THRU N24.18 AND N24.10	3/8"	1/2"
BEAMS N24.11, N24.12, N24.5 THRU N24.9	5/16"	7/16"
BEAMS N24.3 & N24.4	1/4"	3/8"
BEAM N24.2	7/16"	9/16"
BEAM N24.1	7/16"	5/8"

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.

NOTE:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 24

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB,40HB, 451), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	215
F.A.I. RTE. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 24
72 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N25.16	℄ BRG.	21350.725	-30.253	610.642	610.642
	a	21360.806	-30.294	610.359	610.367
	b	21370.887	-30.308	610.087	610.097
	c	21380.968	-30.295	609.825	609.835
	d	21391.049	-30.256	609.574	609.582
	℄ BRG.	21401.548	-30.187	609.323	609.323
	BK.N.ABUT.	21404.716	-30.160	609.249	609.249
BEAM N25.15	℄ BRG.	21346.573	-23.703	610.892	610.892
	a	21356.636	-23.742	610.606	610.606
	b	21366.700	-23.755	610.330	610.336
	c	21376.763	-23.741	610.064	610.070
	d	21386.826	-23.701	609.809	609.809
	℄ BRG.	21397.268	-23.631	609.555	609.555
	BK.N.ABUT.	21400.428	-23.604	609.481	609.481
BEAM N25.12	℄ BRG.	21342.436	-17.148	611.143	611.143
	a	21352.482	-17.186	610.853	610.853
	b	21362.528	-17.196	610.574	610.580
	c	21372.573	-17.183	610.305	610.311
	d	21382.619	-17.141	610.046	610.046
	℄ BRG.	21393.003	-17.070	609.789	609.789
	BK.N.ABUT.	21396.155	-17.043	609.714	609.714

NOTE: OFFSETS TABULATED FROM ℄ PROPOSED NWB LANES.

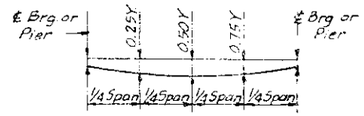
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N25.11	℄ BRG.	21338.313	-10.588	611.396	611.396
	a	21348.342	-10.625	611.102	611.102
	b	21358.370	-10.635	610.819	610.826
	c	21368.398	-10.619	610.547	610.553
	d	21378.426	-10.577	610.284	610.284
	℄ BRG.	21388.753	-10.506	610.025	610.025
	BK.N.ABUT.	21391.897	-10.477	609.948	609.948
BEAM N25.10	℄ BRG.	21334.205	-4.024	611.649	611.649
	a	21344.216	-4.059	611.353	611.353
	b	21354.227	-4.069	611.067	611.073
	c	21364.237	-4.053	610.790	610.797
	d	21374.248	-4.007	610.524	610.524
	℄ BRG.	21384.518	-3.935	610.262	610.262
	BK.N.ABUT.	21387.654	-3.907	610.184	610.184
BEAM N25.9	℄ BRG.	21332.319	-1.001	611.765	611.765
	a	21342.321	-1.034	611.469	611.469
	b	21352.324	-1.042	611.181	611.187
	c	21362.327	-1.022	610.903	610.909
	d	21372.330	-0.976	610.635	610.635
	℄ BRG.	21382.569	-0.902	610.372	610.372
	BK.N.ABUT.	21385.701	-0.874	610.294	610.294

INDICATES STA. 21[illegible].701 (TYP.)

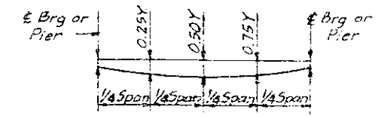
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. NWB LANES	℄ BRG.	21331.695	0.000	611.803	611.803
	a	21341.695	0.000	611.508	611.508
	b	21351.695	0.000	611.219	611.225
	c	21361.695	0.000	610.941	610.947
	d	21371.695	0.000	610.672	610.672
	℄ BRG.	21381.990	0.000	610.405	610.405
	BK.N.ABUT.	21385.135	0.000	610.325	610.325
BEAM N25.8	℄ BRG.	21328.023	5.905	612.030	612.030
	a	21338.007	5.873	611.734	611.734
	b	21347.992	5.867	611.442	611.448
	c	21357.976	5.887	611.161	611.167
	d	21367.960	5.934	610.890	610.890
	℄ BRG.	21378.142	6.008	610.624	610.624
	BK.N.ABUT.	21381.266	6.037	610.544	610.544
BEAM N25.7	℄ BRG.	21323.742	12.618	612.295	612.295
	a	21333.708	12.786	612.000	612.000
	b	21343.675	12.780	611.706	611.712
	c	21353.641	12.801	611.420	611.427
	d	21363.607	12.845	611.145	611.145
	℄ BRG.	21375.732	12.924	610.876	610.876
	BK.N.ABUT.	21378.848	12.953	610.796	610.796

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N25.6	℄ BRG.	21319.477	19.734	612.560	612.560
	a	21329.425	19.703	612.265	612.265
	b	21339.373	19.699	611.970	611.976
	c	21349.321	19.721	611.681	611.688
	d	21359.269	19.769	611.403	611.403
	℄ BRG.	21369.337	19.845	611.131	611.131
	BK.N.ABUT.	21372.445	19.874	611.049	611.049
BEAM N25.5	℄ BRG.	21317.770	23.163	612.691	612.691
	a	21327.309	23.100	612.396	612.396
	b	21337.248	23.103	612.101	612.107
	c	21347.187	23.132	611.810	611.817
	d	21357.126	23.147	611.530	611.530
	℄ BRG.	21367.207	23.210	611.255	611.255
	BK.N.ABUT.	21370.313	23.235	611.173	611.173
BEAM N25.4	℄ BRG.	21314.251	28.252	612.885	612.885
	a	21324.172	28.541	612.597	612.597
	b	21334.092	28.857	612.310	612.317
	c	21344.009	29.200	612.024	612.030
	d	21353.925	29.568	611.748	611.748
	℄ BRG.	21362.969	29.928	611.504	611.504
	BK.N.ABUT.	21366.004	30.053	611.424	611.424

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N17.14	℄ BRG.	21311.140	33.342	613.079	613.079
	a	21321.032	33.979	612.799	612.795
	b	21330.920	34.642	612.519	612.526
	c	21340.804	35.331	612.247	612.246
	d	21350.685	36.047	611.969	611.969
	℄ BRG.	21356.746	36.650	611.755	611.755
	BK.N.ABUT.	21361.731	36.876	611.678	611.678
BEAM N17.13	℄ BRG.	21308.038	38.436	613.272	613.272
	a	21317.897	39.433	613.001	613.007
	b	21327.730	40.456	612.730	612.740
	c	21337.565	41.505	612.460	612.470
	d	21347.400	42.580	612.194	612.200
	℄ BRG.	21354.038	43.376	612.007	612.007
	BK.N.ABUT.	21357.433	43.704	611.932	611.932
BEAM N17.12	℄ BRG.	21304.040	45.023	613.522	613.522
	a	21313.905	45.599	613.242	613.248
	b	21323.767	46.201	612.962	612.970
	c	21333.626	46.829	612.683	612.691
	d	21343.483	47.483	612.405	612.408
	℄ BRG.	21351.629	48.043	612.182	612.182
	BK.N.ABUT.	21354.593	48.252	612.103	612.103



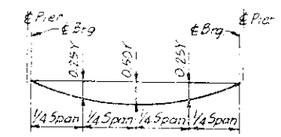
LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
BEAM N17.14	0"	1/2"	13/16"	5/8"	1/16"
BEAMS N17.12 & N17.13	0"	1/2"	3/4"	5/8"	1/16"
BEAM N17.11	0"	1/2"	3/4"	9/16"	1/16"
BEAM N17.10	0"	7/16"	11/16"	1/2"	0"
BEAMS N17.4 THRU N17.9	0"	1/4"	5/16"	1/4"	0"
BEAMS N17.1 THRU N17.3	0"	3/8"	1/2"	3/8"	0"
BEAM N18.12	1/16"	7/16"	5/8"	1/2"	1/4"
BEAM N18.12	1/16"	7/16"	9/16"	1/2"	1/4"
BEAM N18.11	1/16"	3/8"	9/16"	7/16"	1/4"
BEAM N18.10	1/16"	5/16"	7/16"	3/8"	1/4"
BEAM N18.9	0"	1/4"	3/8"	5/16"	3/16"
BEAM N18.8	0"	3/16"	5/16"	5/16"	3/16"
BEAM N18.7	0"	3/16"	1/4"	3/16"	1/16"
BEAM N18.6	0"	5/16"	3/8"	5/16"	1/16"
BEAM N18.5	0"	3/8"	1/2"	3/8"	0"
BEAM N18.4	0"	1/4"	3/8"	1/4"	0"
BEAMS N18.1 THRU N18.3	0"	3/16"	1/4"	3/16"	0"
BEAM N19.9	1/4"	3/4"	15/16"	5/8"	0"
BEAM N19.8	1/4"	3/4"	7/8"	5/8"	1/16"
BEAM N19.7	1/4"	11/16"	13/16"	5/8"	1/8"
BEAM N19.6	1/4"	5/8"	3/4"	9/16"	3/16"
BEAM N19.5	3/16"	1/2"	5/8"	1/2"	3/16"
BEAM N19.4	3/16"	7/16"	1/2"	7/16"	3/16"
BEAM N19.3	1/16"	1/2"	3/4"	7/8"	7/8"
BEAM N19.2	1/16"	9/16"	7/8"	1"	1"
BEAM N19.1	0"	1/2"	7/8"	1 1/16"	1 1/8"
GIRDER G2-19	0"	7/16"	13/16"	1 1/16"	1 1/4"



LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
GIRDER 2A	0"	1 3/8"	1 11/16"	1 [illegible]	0"
GIRDER 2B	0"	1 5/8"	2 3/16"	1 9/16"	0"
BEAM N20.9	0"	1/8"	3/16"	1/8"	0"
BEAM N20.8	1/16"	3/16"	1/4"	3/16"	0"
BEAM N20.7	1/8"	1/4"	5/16"	1/16"	0"
BEAM N20.6	3/16"	5/16"	5/16"	1/16"	0"
BEAM N20.5	3/16"	1/4"	5/16"	1/16"	0"
BEAM N20.4	3/16"	1/4"	1/4"	3/16"	0"
BEAM N20.3	1/8"	3/16"	3/4"	9/16"	5/16"
BEAM N20.2	[illegible]	1"	15/16"	13/16"	9/16"
BEAM N20.1	1 1/8"	1 3/16"	1 1/8"	1 1/16"	7/8"
GIRDER G2-20	1 1/4"	1 5/16"	1 5/16"	1 3/16"	1 1/16"
BEAM N21.5 THRU N21.9	0"	1/8"	3/16"	1/8"	0"
BEAM N21.4	0"	1/4"	3/8"	5/16"	0"
BEAM N21.3	5/16"	7/16"	1/2"	5/16"	0"
BEAM N21.2	9/16"	5/8"	9/16"	5/16"	0"
BEAM N21.1	7/8"	3/4"	9/16"	5/16"	0"
GIRDER G2-21	1 1/16"	7/8"	5/8"	5/16"	0"

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.



LOCATION	0.25Y	0.50Y
BEAMS N27.9 & N27.10	3/16"	1/4"
BEAMS N23.7 & N23.8	1/8"	3/16"
BEAMS N23.4 THRU N23.6	1/8"	1/8"
BEAMS N23.1 THRU N23.3	0"	1/16"
BEAMS N25.2 & N25.14	1/2"	1/8"
BEAMS N25.3 THRU N25.13	0"	1/8"
BEAM N25.1	1/16"	1/8"

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

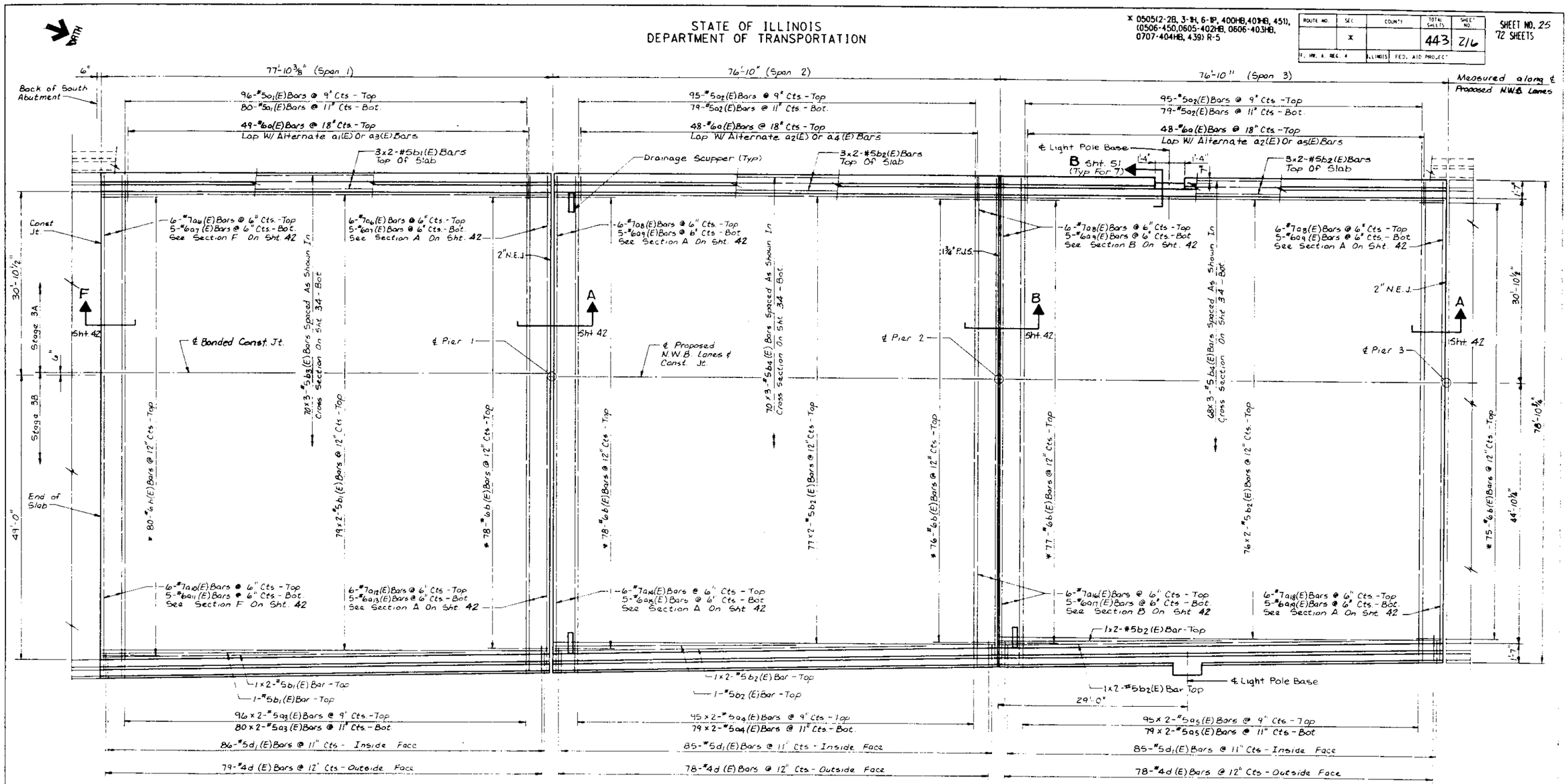
TOP OF SLAB ELEVATIONS
SPAN 25
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 403HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	216
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 25
72 SHEETS



PLAN

*Alternate With #5 "b" (E) Longitudinal Top Bars.

NOTES:

1. SEE SHEETS 42, 43, & 44 FOR SUPERSTRUCTURE DETAILS AND BILL OF MATERIAL.
2. BARS INDICATED THUS 20x3 - #5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.
3. MINIMUM LAP SPLICE LENGTHS FOR #5 LONGITUDINAL BARS = 1'-9".
4. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
5. SEE SHEET 44 FOR FILLET REINFORCING.
6. MINIMUM LAP SPLICE LENGTH FOR:
   #6 BARS - 2'-6"
   #7 BARS - 3'-0"

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 1 OF 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

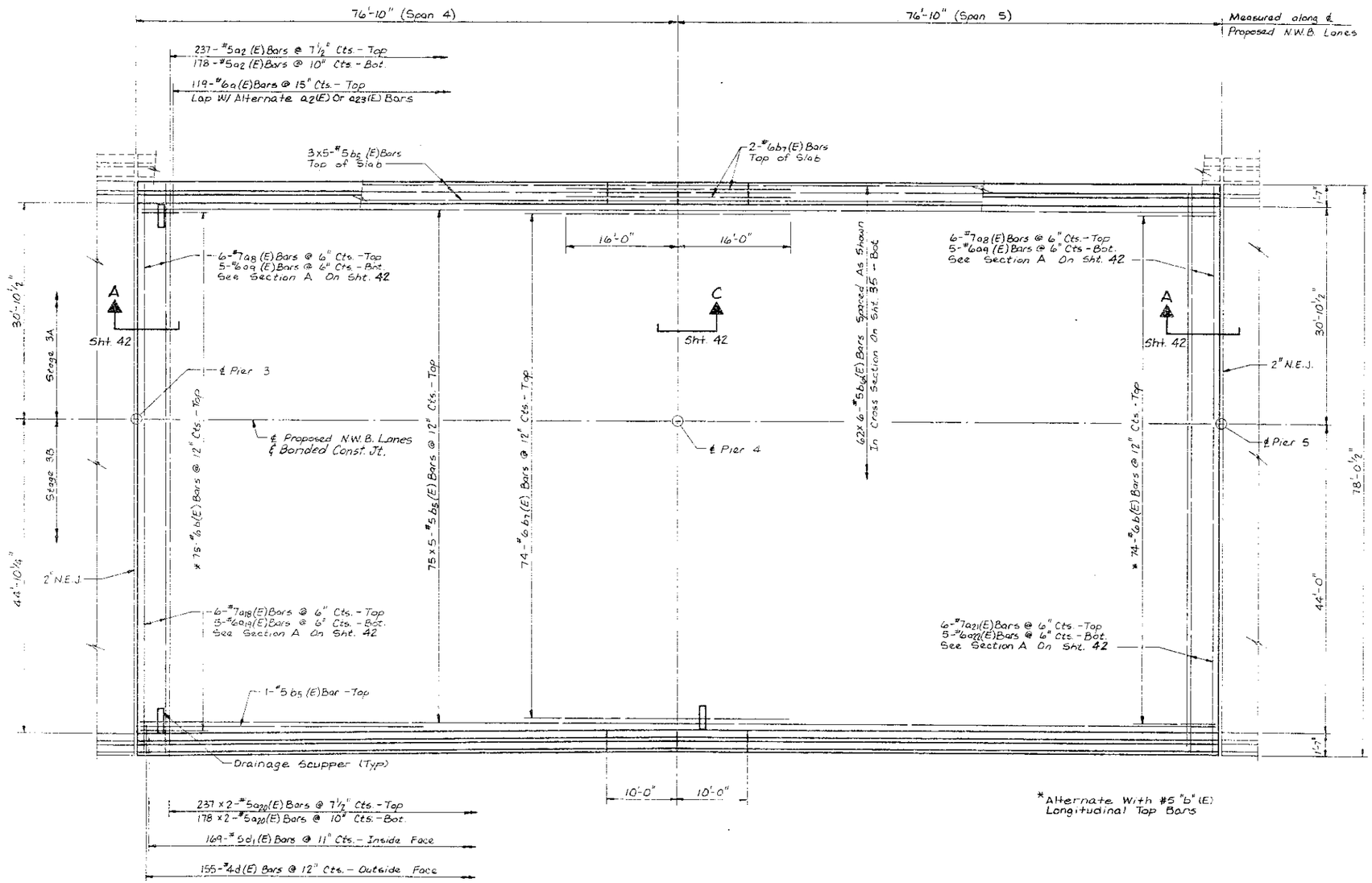
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	217
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 26
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



PLAN

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEET 35.

STANLEY CONSULTANTS

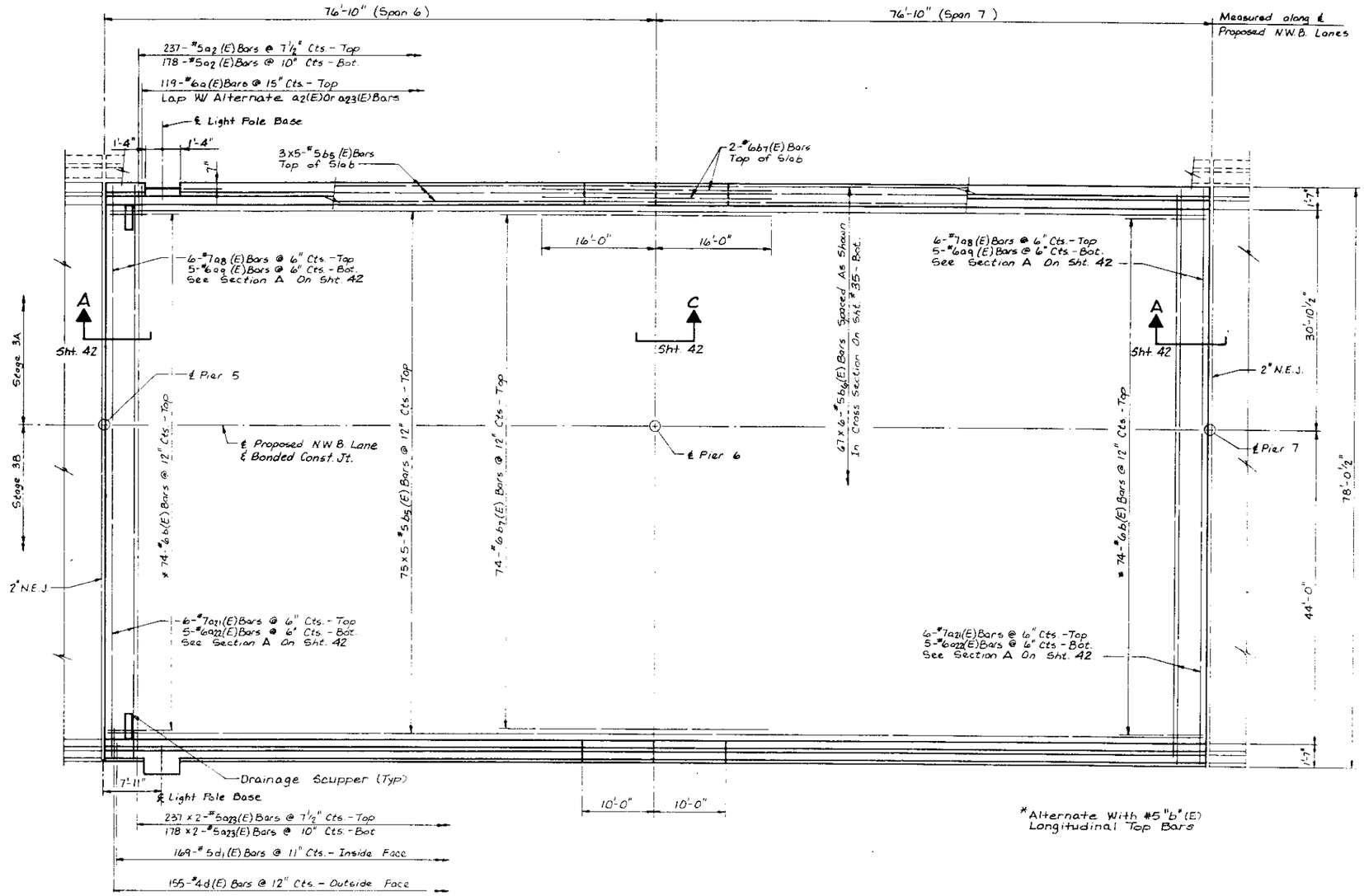
SUPERSTRUCTURE PLAN
SHEET 2 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	218
F. HWY. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 27
72 SHEETS

* 0505(2-28, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



PLAN

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEET 35.

STANLEY CONSULTANTS

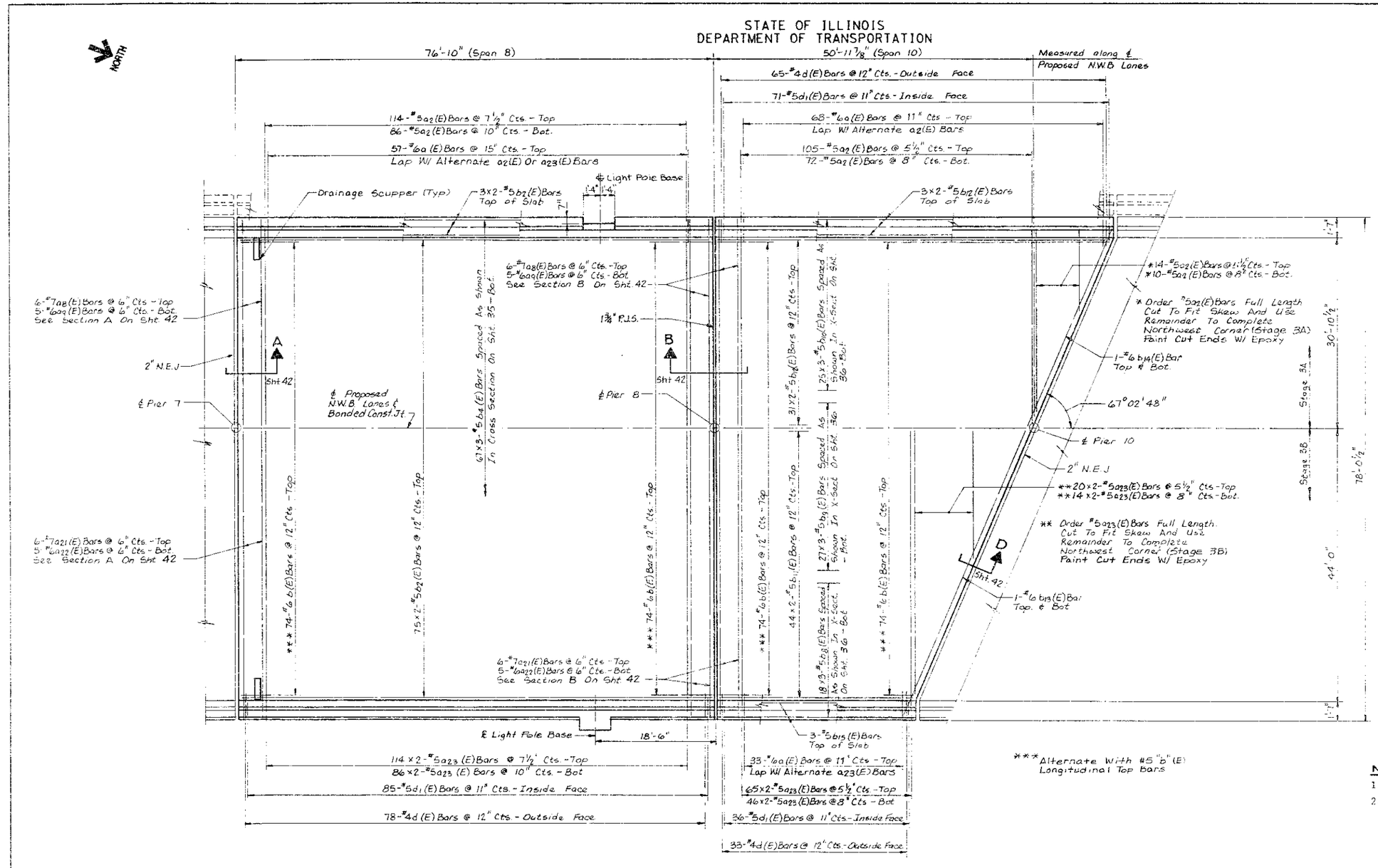
SUPERSTRUCTURE PLAN
SHEET 3 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	219
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 28
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



PLAN

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEETS 35 & 36.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 4 OF 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

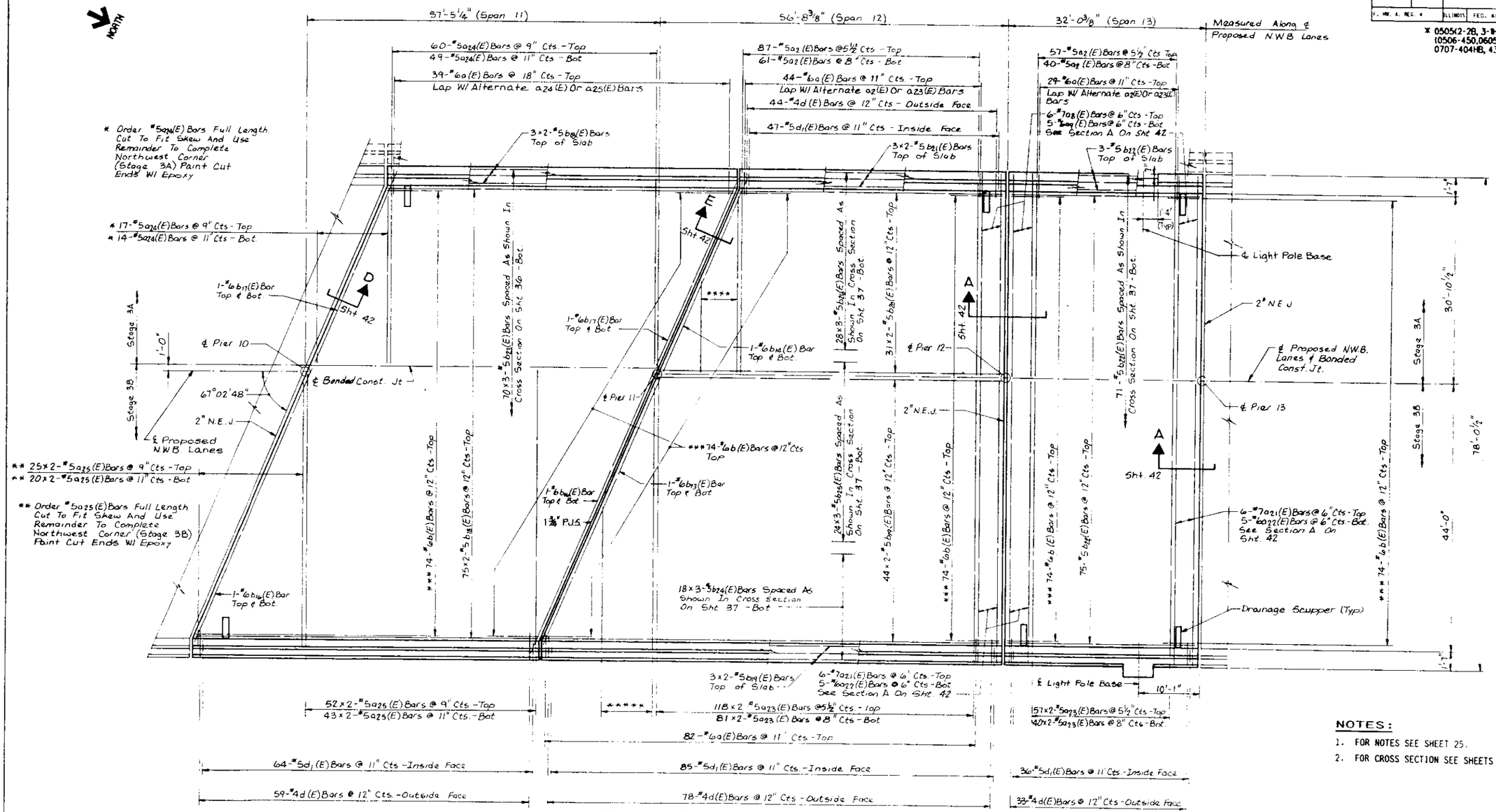
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	220
F.A.I. RTE. 90/94		ILLINOIS	FED. AID PROJECT	

SHEET NO. 29
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



PLAN

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEETS 36 & 37.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 5 OF 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

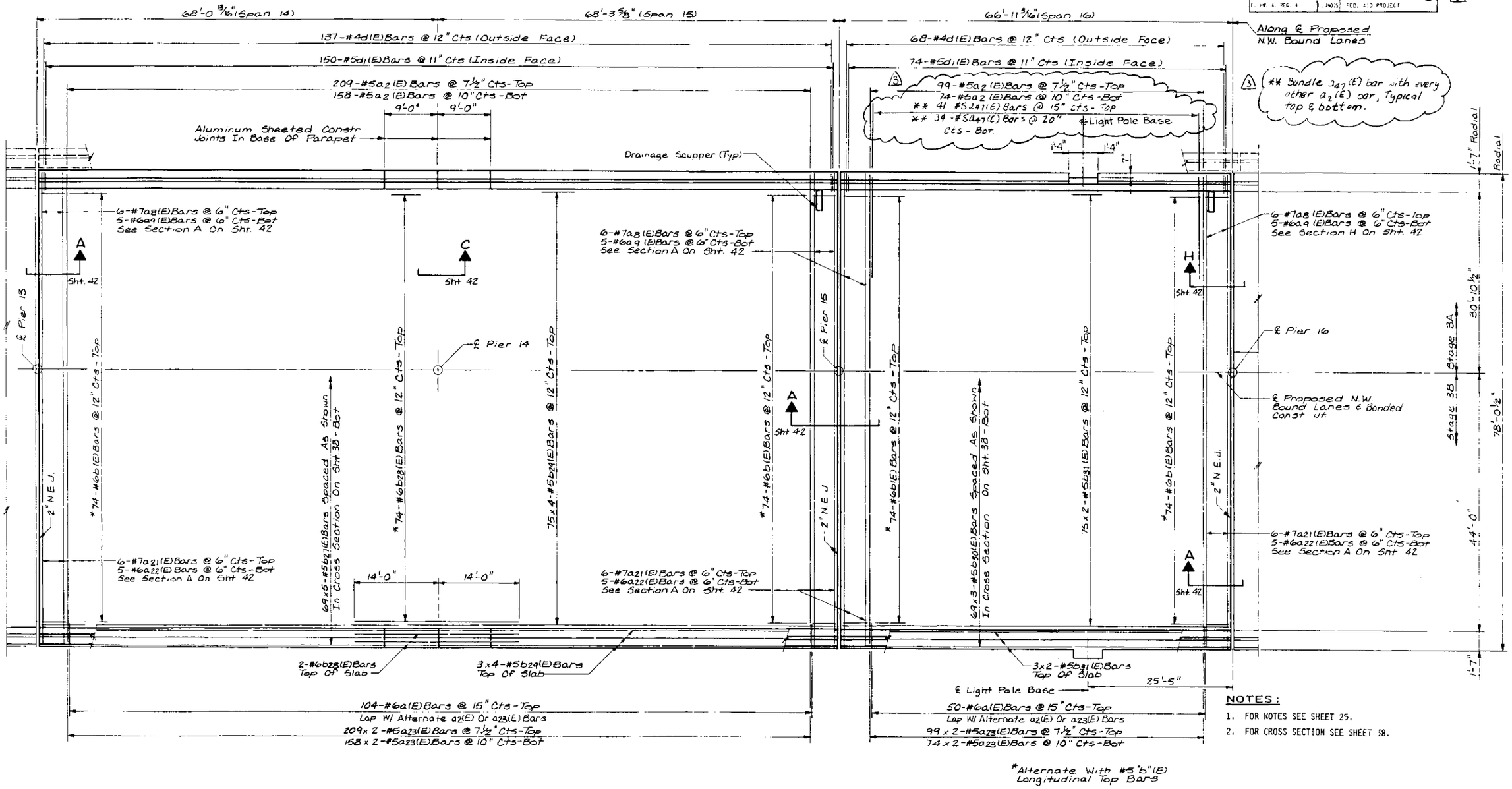
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	221A
F. HW. 6, SEC. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 30
72 SHEETS



NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEET 38.

PLAN

AS REVISED

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 6 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

REVISED 4-20-94 PMP

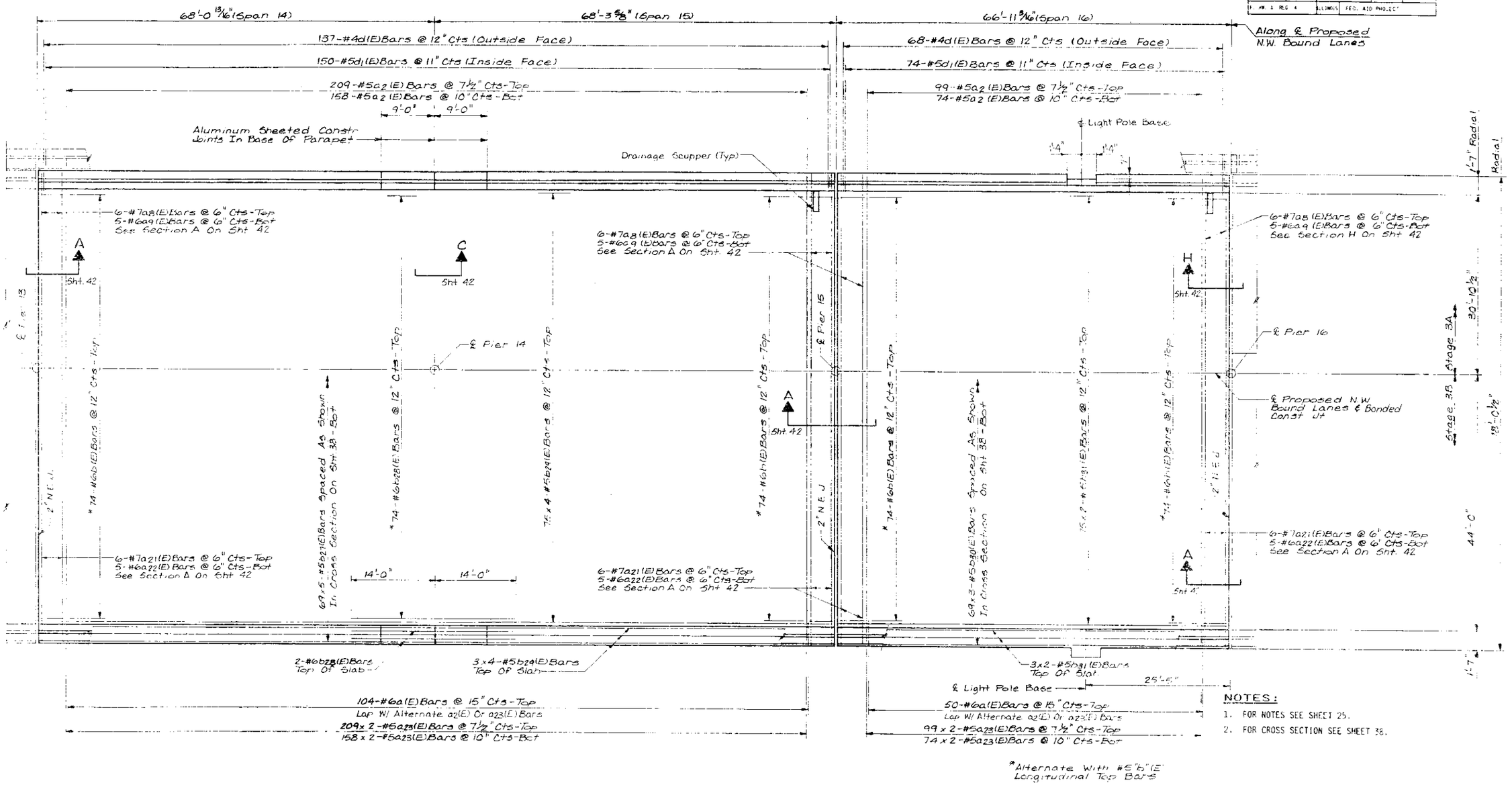
728

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-4H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	221
F.A.P. RTE. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 30
72 SHEETS



NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEET 38.

PLAN

STANLEY CONSULTANTS

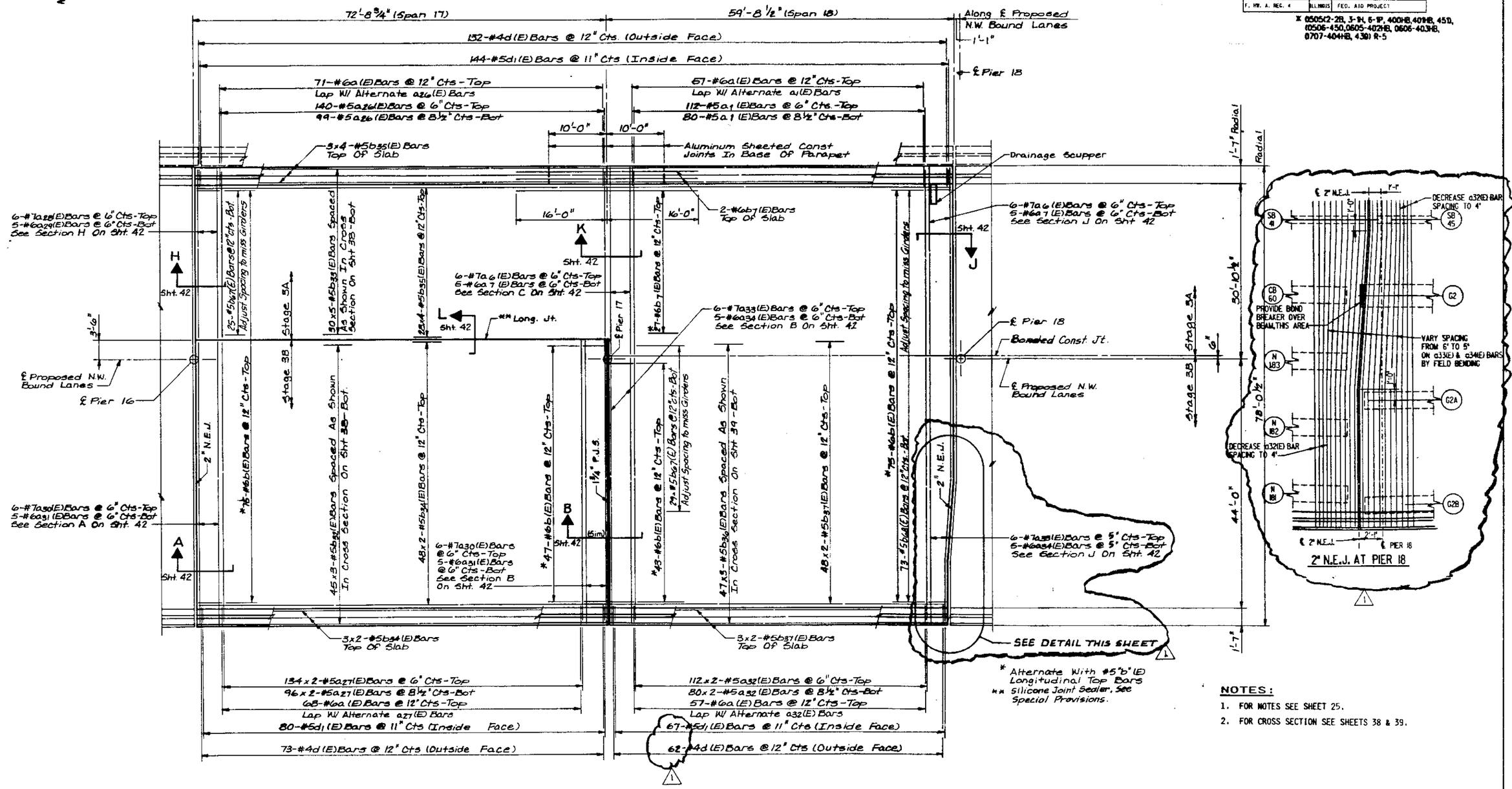
SUPERSTRUCTURE PLAN
SHEET 6 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	222
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 31
72 SHEETS

X 0505(2-2B), J-14, 6-1P, 400HB, 401HB, 451D, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 4301 R-5



PLAN

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEETS 38 & 39.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 7 OF 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

1 REV. 9-30-93

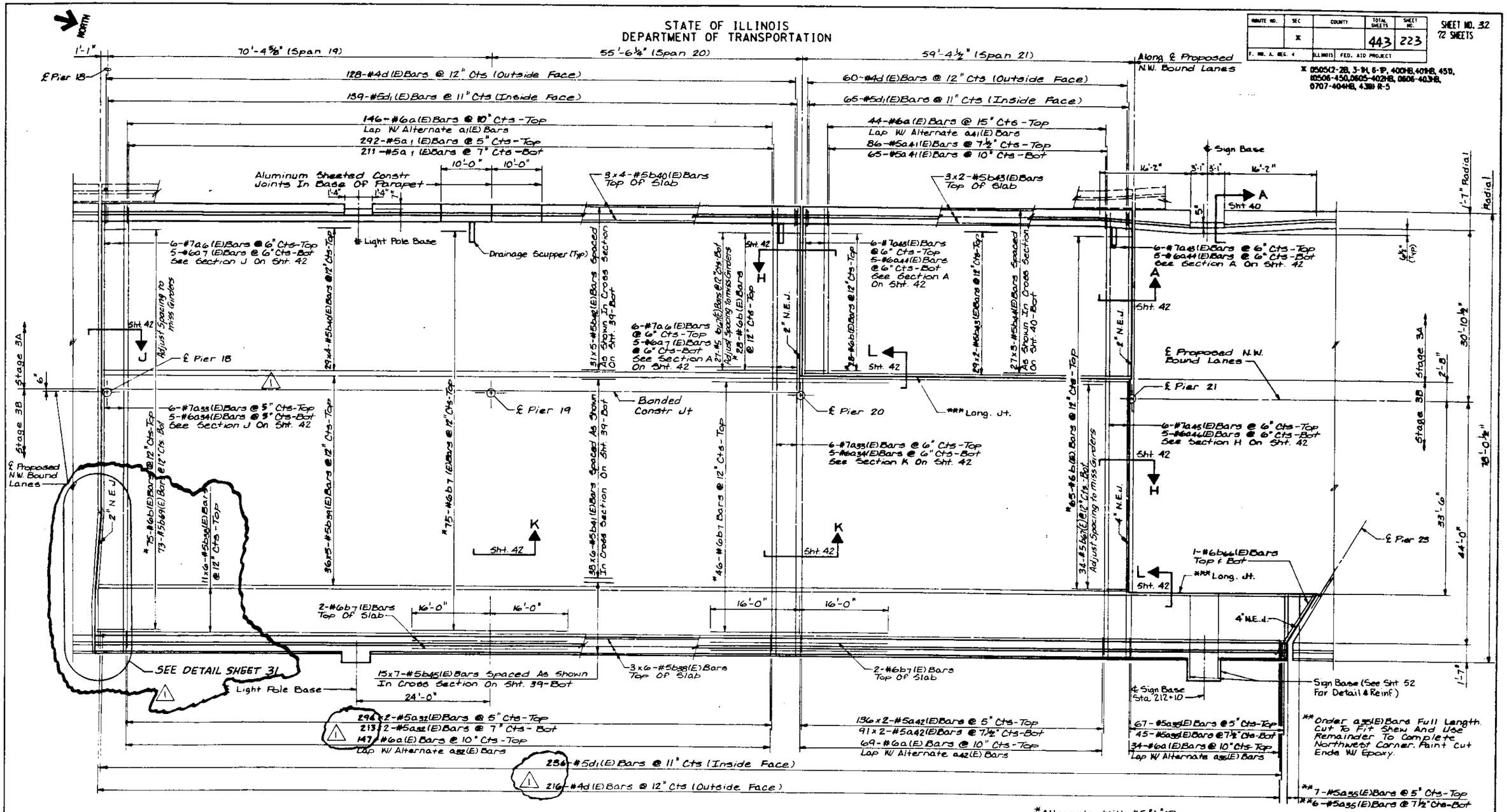
724

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	223
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 32
72 SHEETS

X 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 450, 00506-450, 0605-402HB, 0606-403HB, 0707-404HB, 4.3B) R-5



*Alternate With #5 "b"(E) Longitudinal Top Bars.
*** Silicone Joint Sealer, See Special Provisions.

PLAN

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEETS 39 & 40.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 8 OF 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+48

REV. 9-30-93

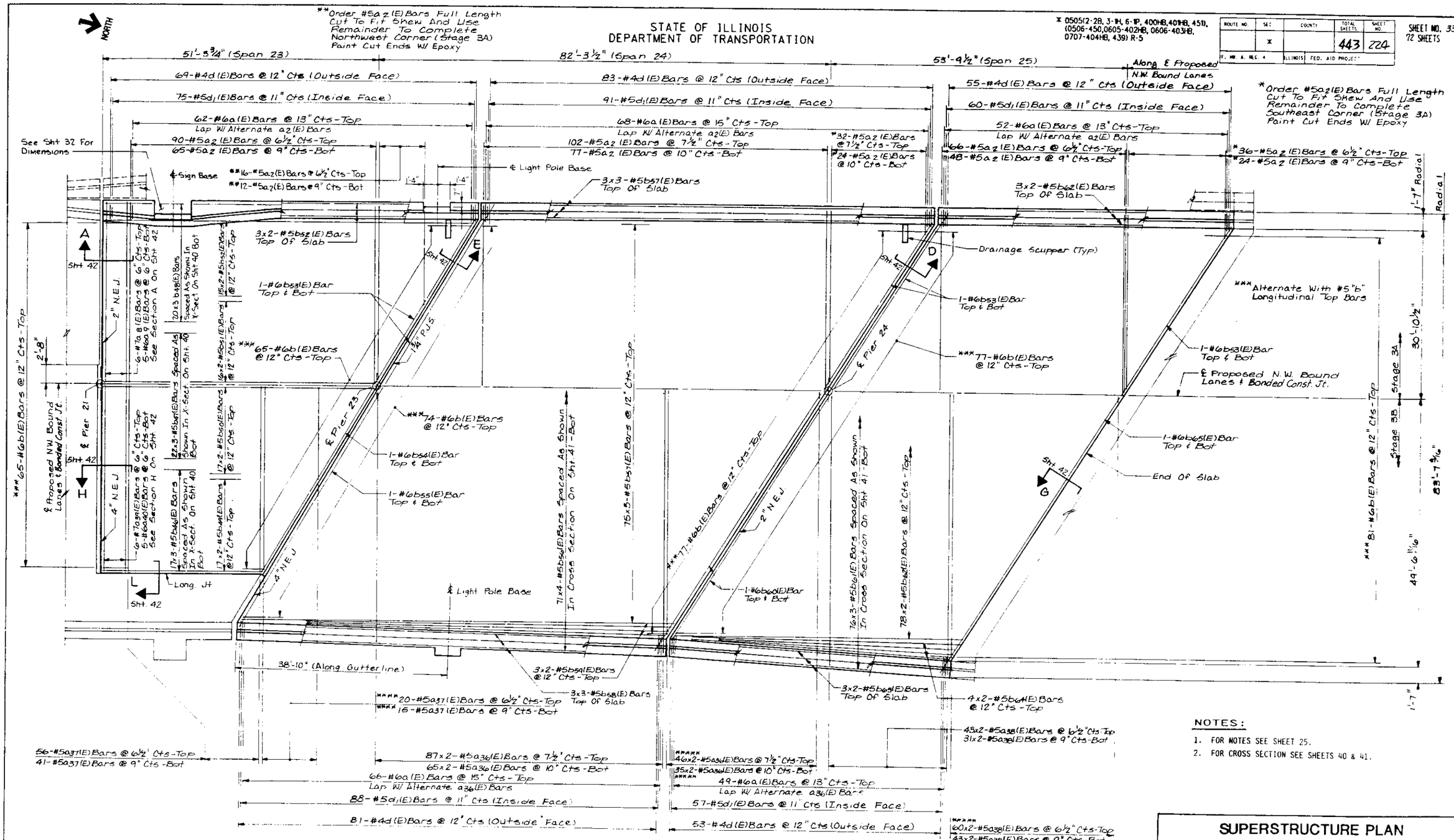
7.30

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	224
F. AID. & REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 33
72 SHEETS



PLAN

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEETS 40 & 41.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 9 OF 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

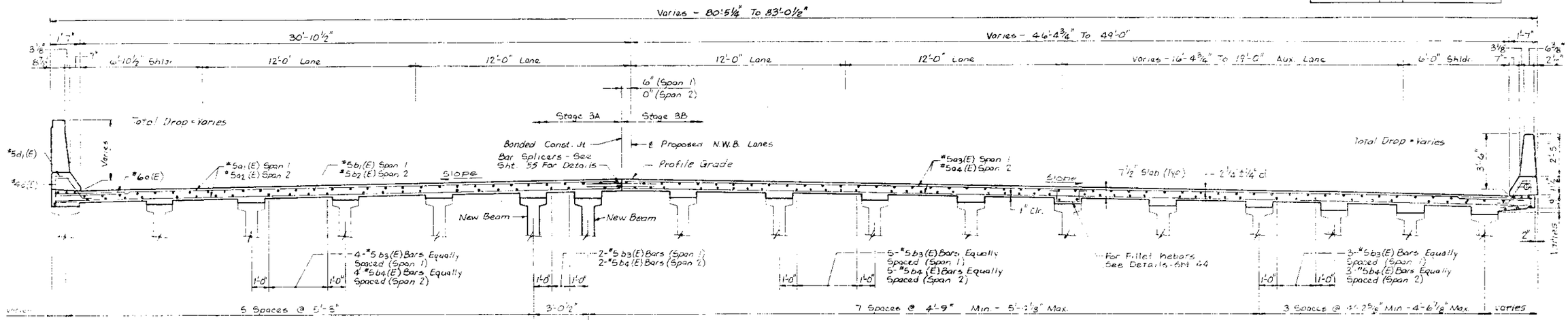
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

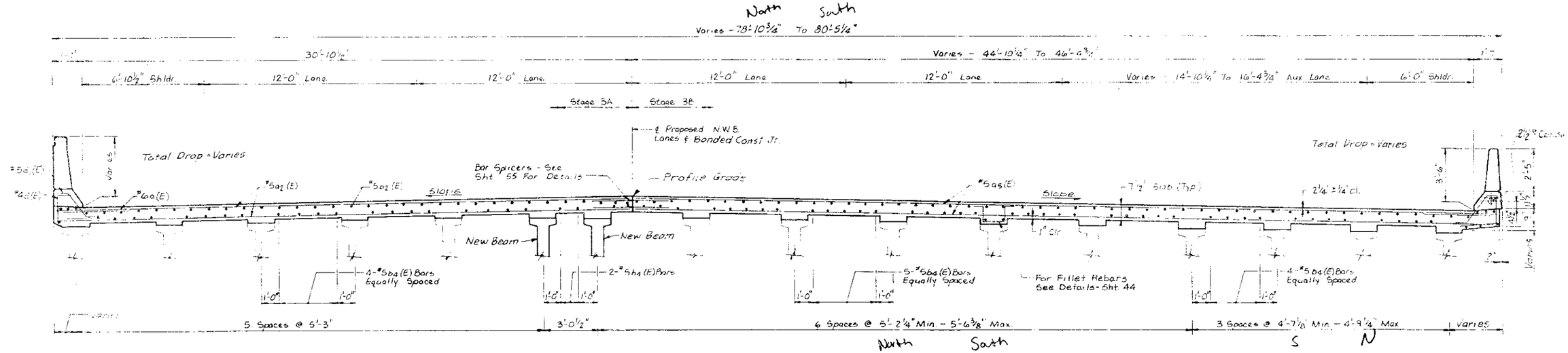
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	225
F.A.P. RTE. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 34
72 SHEETS



CROSS SECTION - SPANS 1 & 2
(Looking Up Station)



CROSS SECTION - SPAN 3
(Looking Up Station)

NOTES:

1. SEE SHEETS 42 AND 43 FOR SUPERSTRUCTURE DETAILS AND BILL OF MATERIALS.
2. BARS INDICATED THUS 20 X 3-#5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.
3. MINIMUM LAP SPLICE LENGTH FOR #5 LONGITUDINAL BARS = 1'-9"
4. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
5. SEE SHEET 44 FOR FILLET REINFORCING DETAILS.
6. FOR PROPOSED CROSS SLOPES SEE SHEET 4.

STANLEY CONSULTANTS

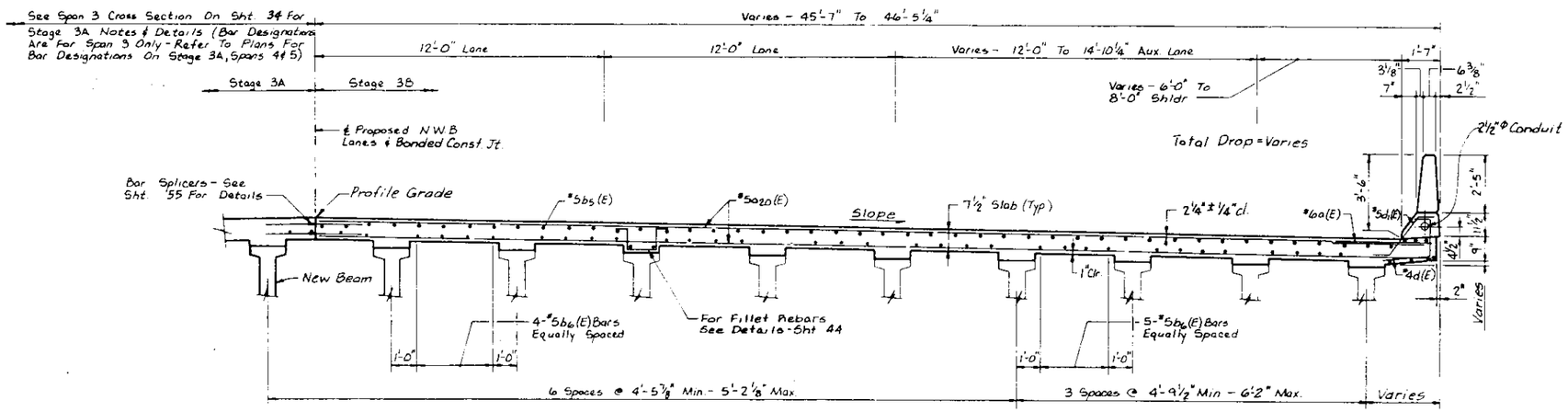
SUPERSTRUCTURE CROSS SECTIONS
SHEET 1 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

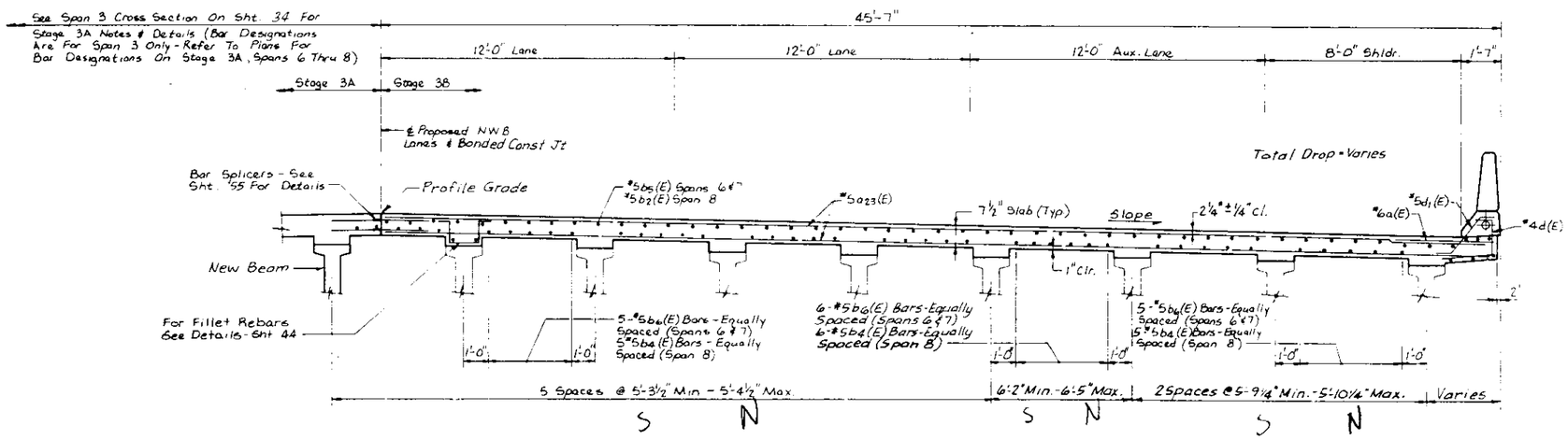
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451D, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	226
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3F
72 SHEETS



CROSS SECTION - SPANS 4 & 5
(Looking Up Station)



CROSS SECTION - SPANS 6 THRU 8
(Looking Up Station)

NOTE:
1. FOR NOTES SEE SHEET 34.

STANLEY CONSULTANTS

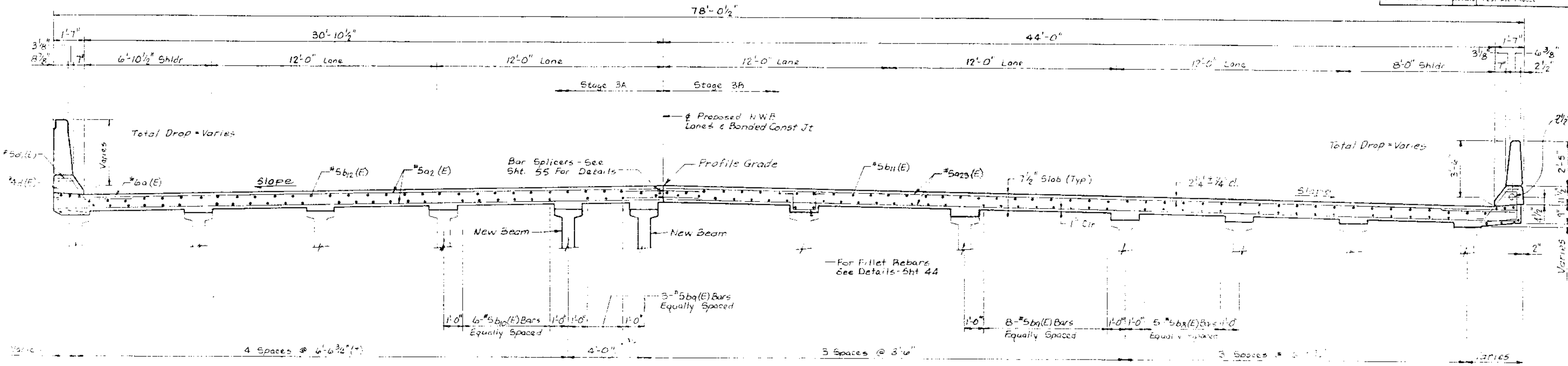
SUPERSTRUCTURE CROSS SECTIONS
SHEET 2 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

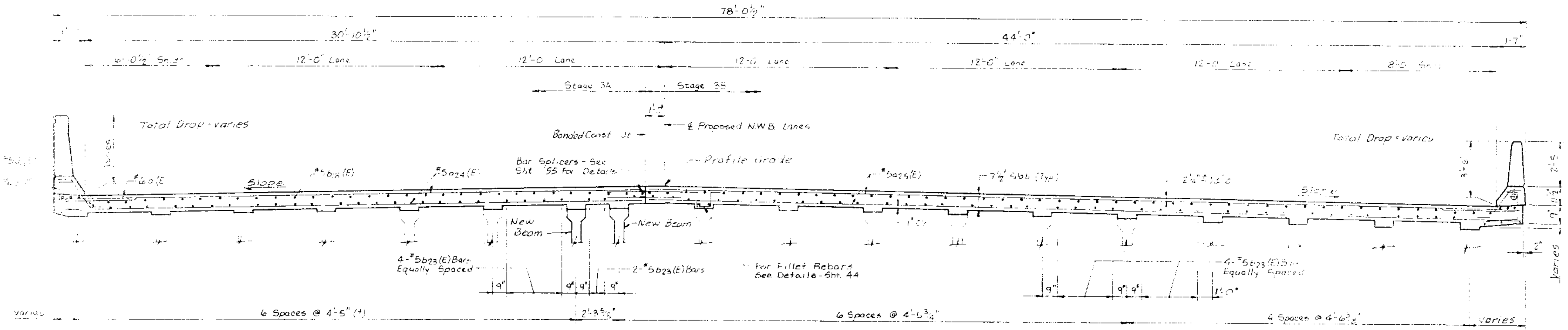
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	x		443	227

SHEET NO. 36
72 SHEETS



CROSS SECTION - SPAN 10
(Looking Up Station)



CROSS SECTION - SPAN 11
(Looking Up Station)

NOTE:

1. FOR NOTES SEE SHEET 34.

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTIONS
SHEET 3 OF 8

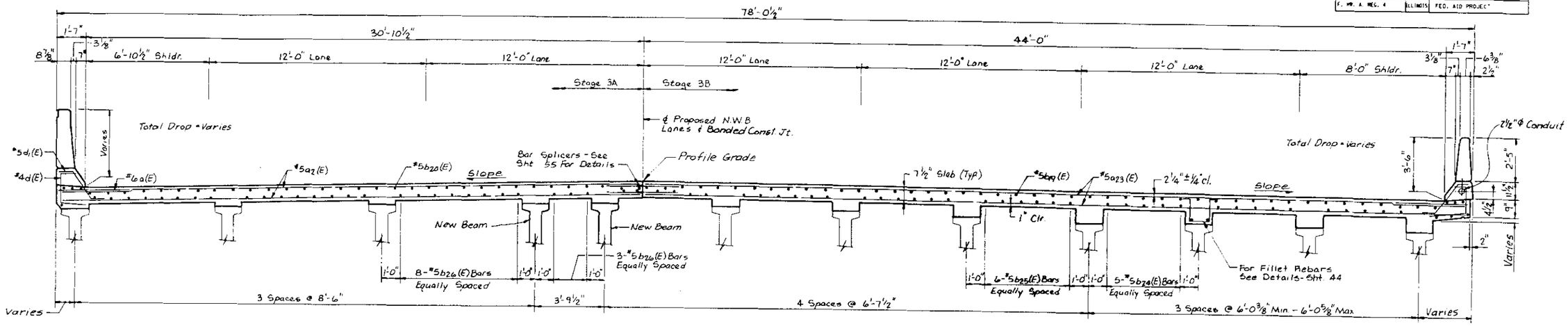
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 400+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

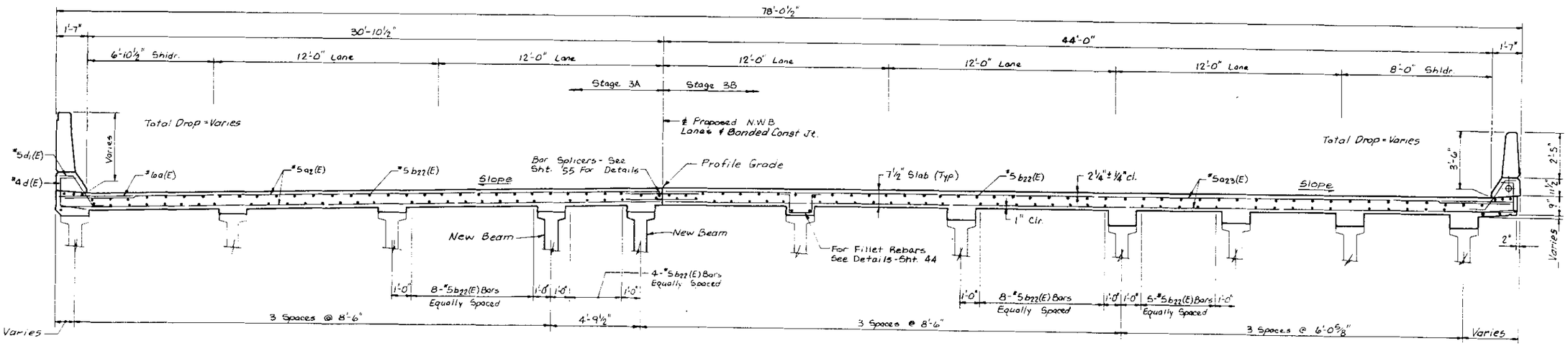
X 0505(2-2B, 3-1L, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	228
F. HR. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 37
72 SHEETS



CROSS SECTION - SPAN 12
(Looking Up Station)



CROSS SECTION - SPAN 13
(Looking Up Station)

NOTE:

1. FOR NOTES SEE SHEET 34.

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTIONS
SHEET 4 OF 8

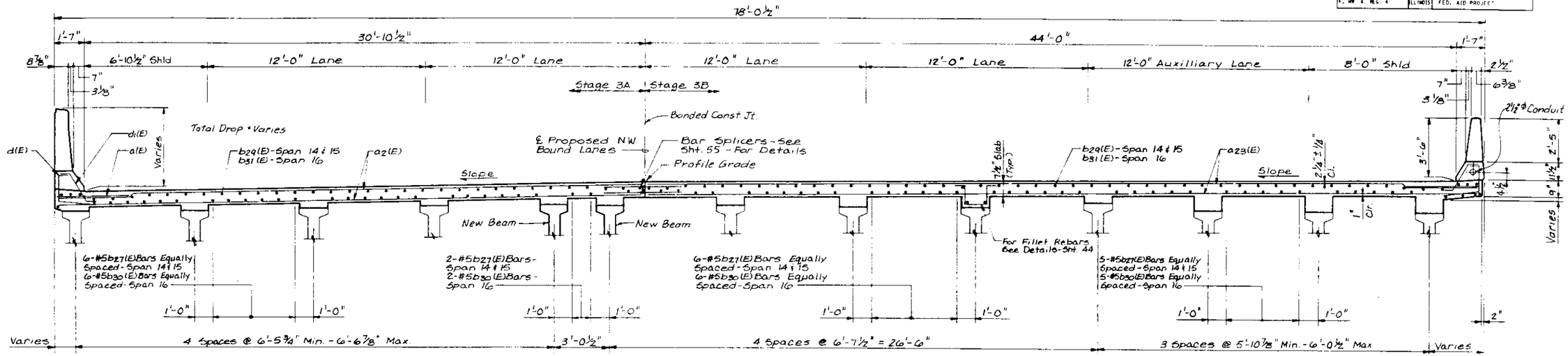
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

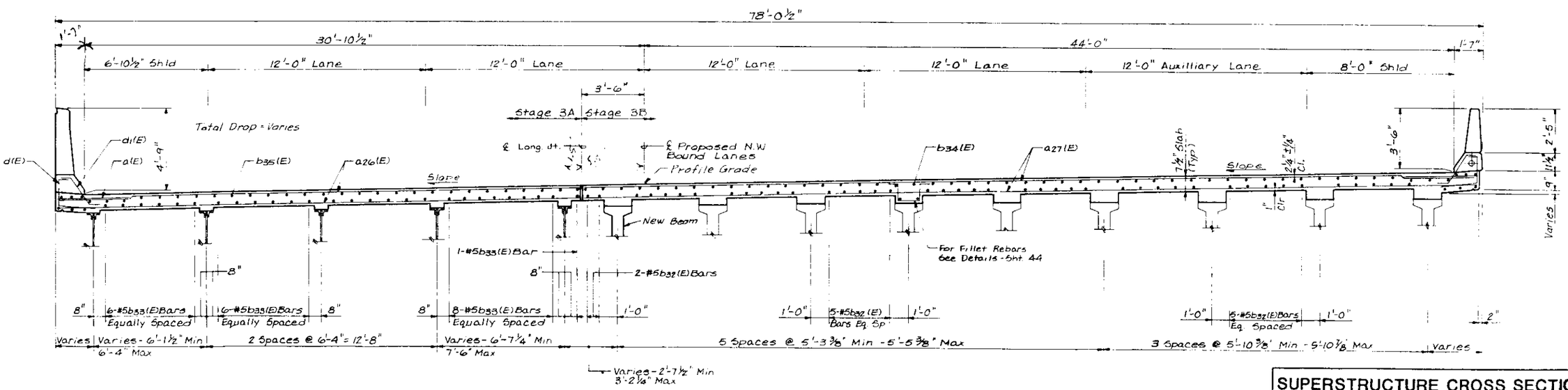
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	229
F.A. RTE. & REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 38
72 SHEETS



CROSS SECTION-SPANS 14 THRU 16
(Looking Up Station)



CROSS SECTION-SPAN 17
(Looking Up Station)

NOTE:
1. FOR NOTES SEE SHEET 34.

STANLEY CONSULTANTS

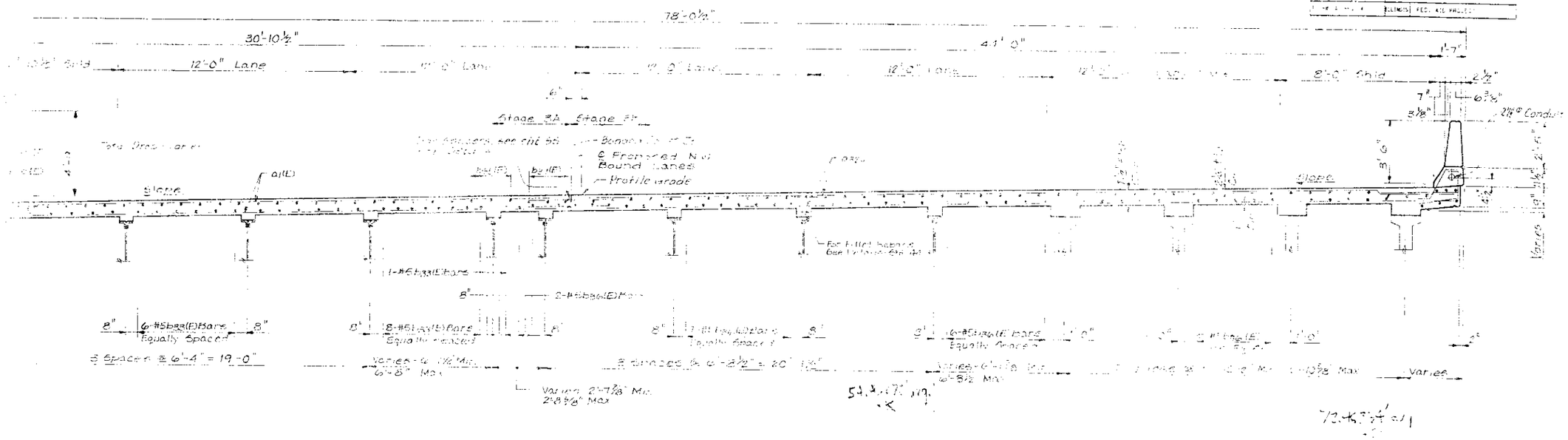
SUPERSTRUCTURE CROSS SECTIONS
SHEET 5 OF 8

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

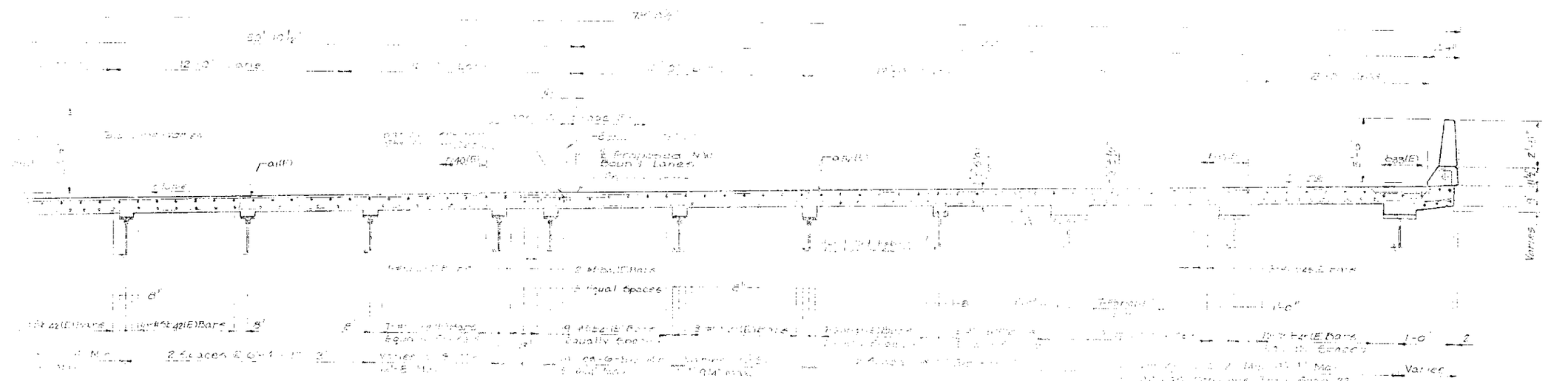
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONTR. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	230
F.A.P. RTE. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 39
72 SHEETS



CROSS SECTION-SPAN 18



SUPERSTRUCTURE CROSS SECTION
SHEET 6 OF 8

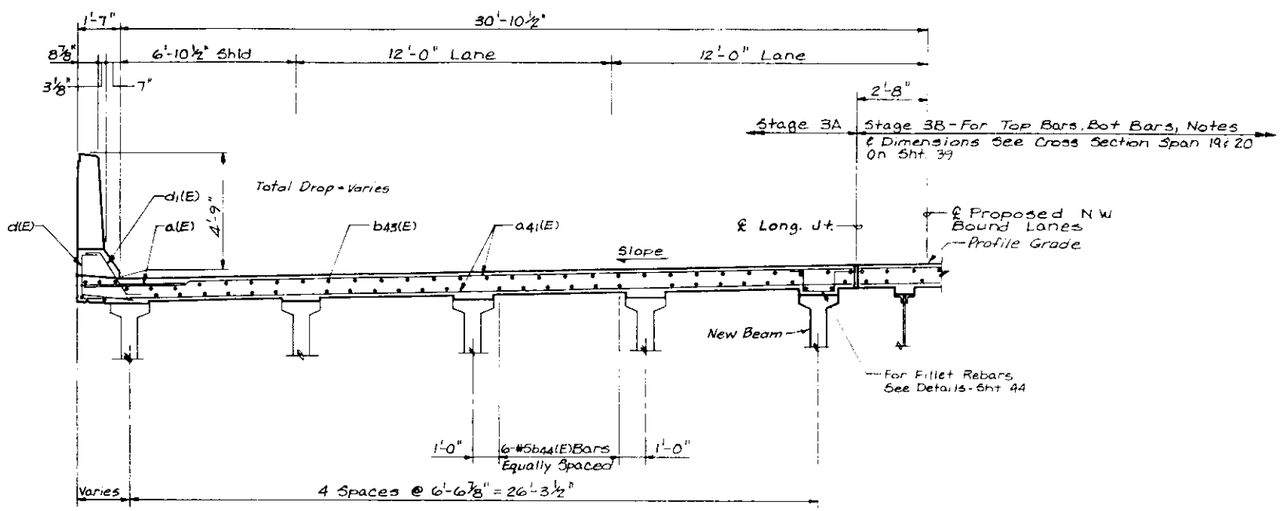
SECTION
ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

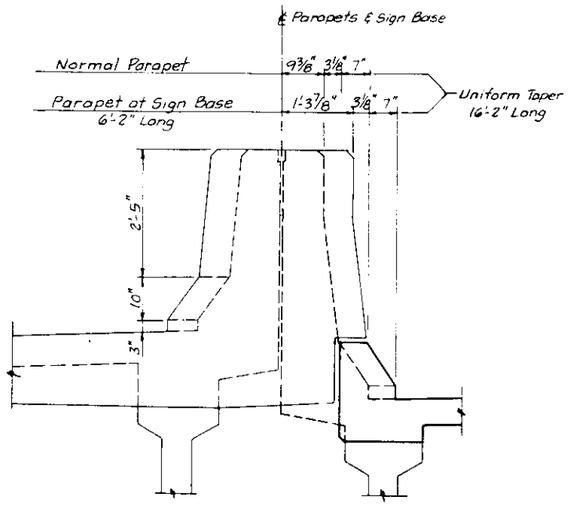
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	231
F. HWY. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 40
72 SHEETS

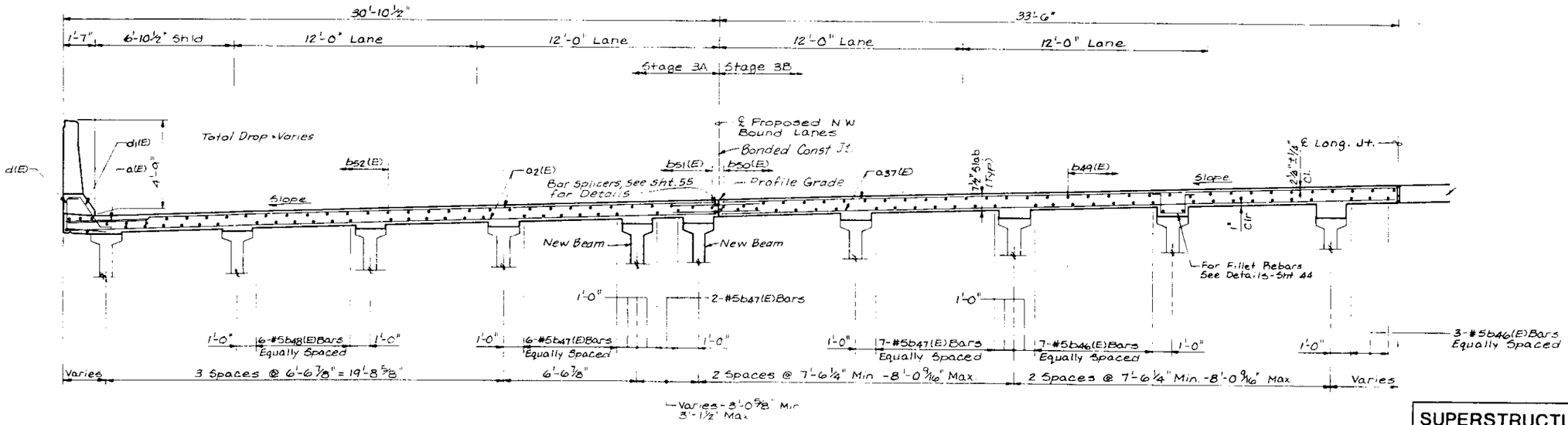
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



CROSS SECTION-SPAN 21
(Looking Up Station)



SECTION A
Sht. 32



CROSS SECTION-SPAN 23
(Looking Up Station)

NOTE:
1. FOR NOTES SEE SHEET 34.

STANLEY CONSULTANTS

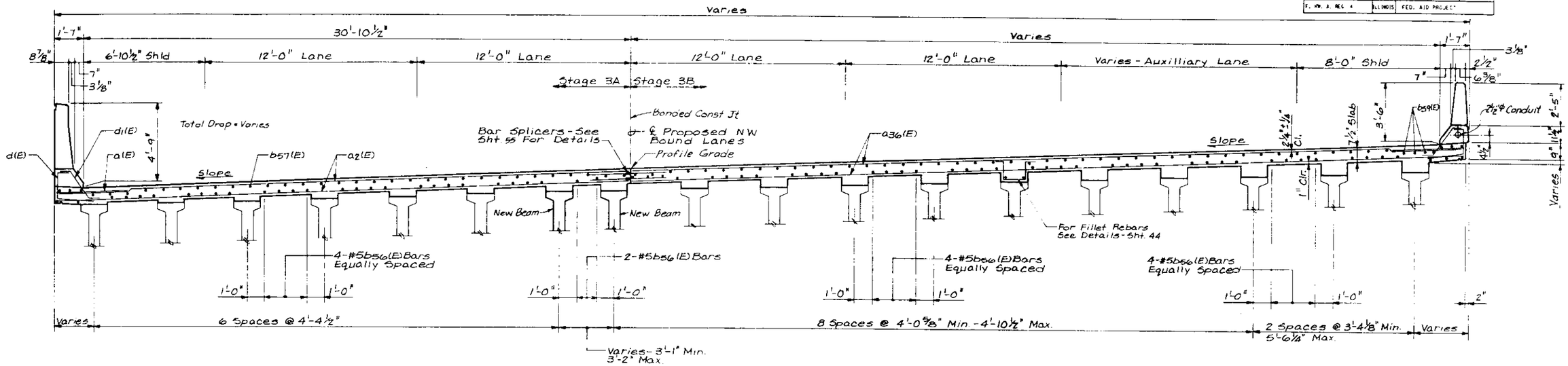
SUPERSTRUCTURE CROSS SECTIONS
SHEET 7 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

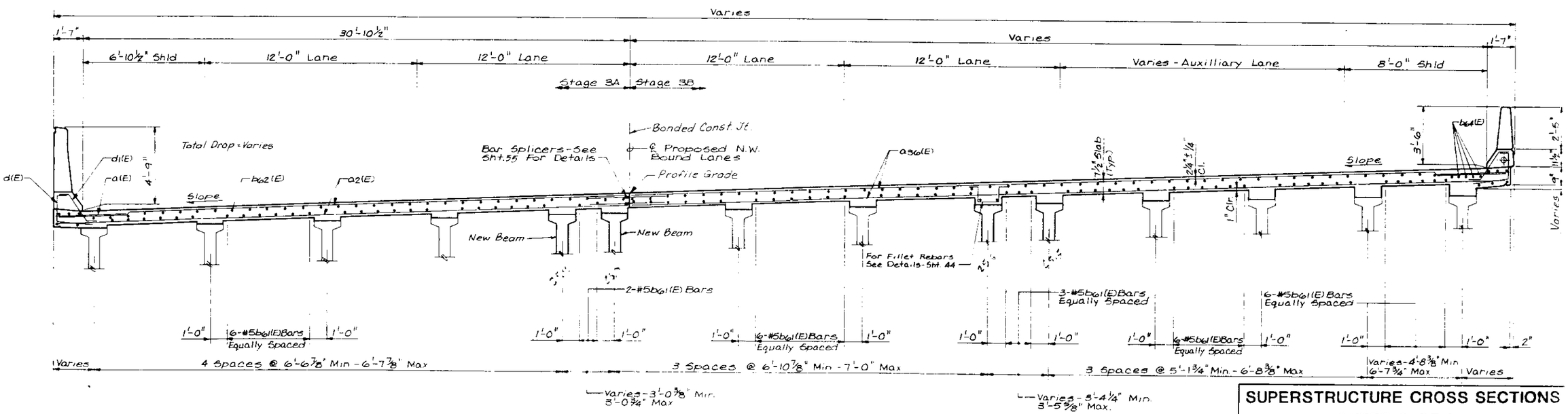
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	232
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 41
72 SHEETS



CROSS SECTION - SPAN 24
(Looking Up Station)



CROSS SECTION - SPAN 25
(Looking Up Station)

NOTE:
1. FOR NOTES SEE SHEET 34.

STANLEY CONSULTANTS

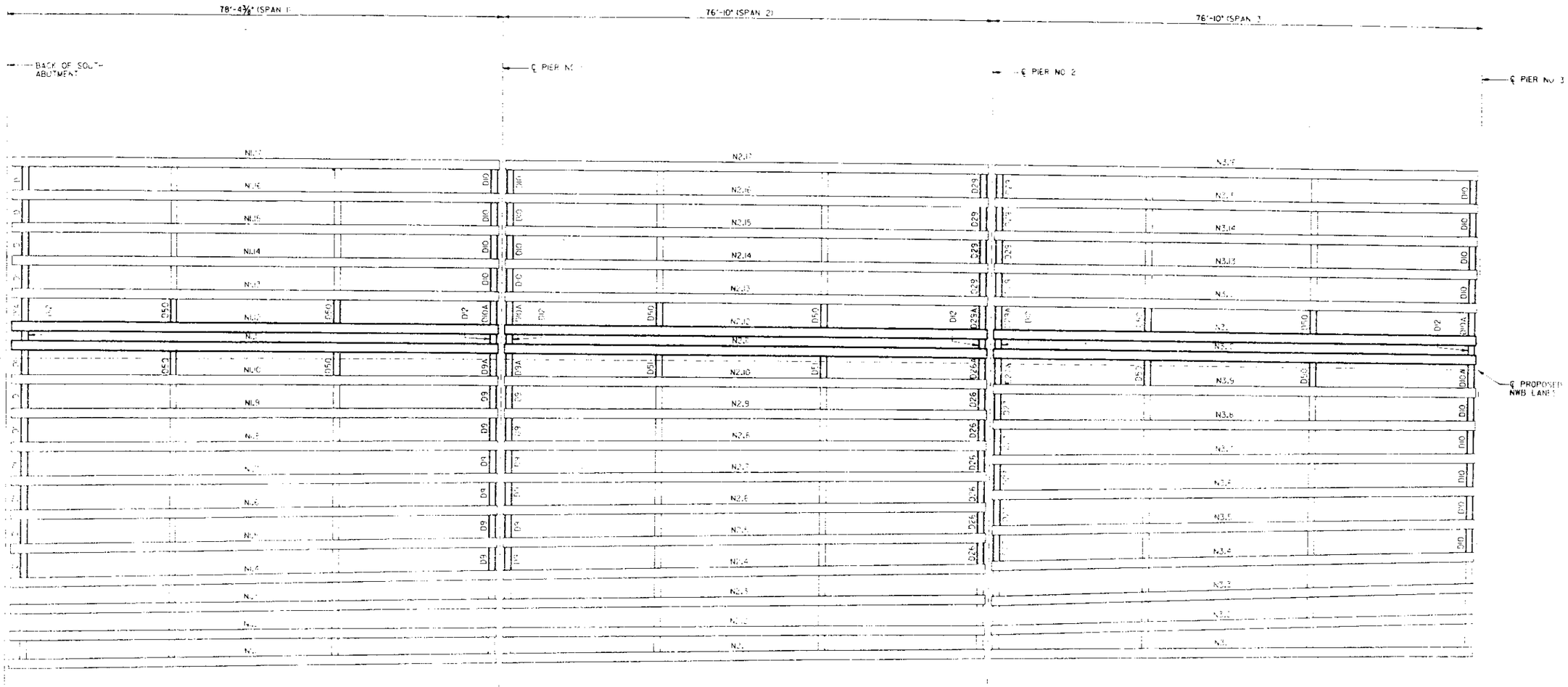
SUPERSTRUCTURE CROSS SECTIONS
SHEET 8 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	232 A
		ILLINOIS		

SHEET NO. A - 72 SHEETS

* 050542-2B, 3-H, 6-P, 400HB, 40HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439R-5



BEAM AND DIAPHRAGM
REPLACEMENT PLAN
SHEET 1 OF 9

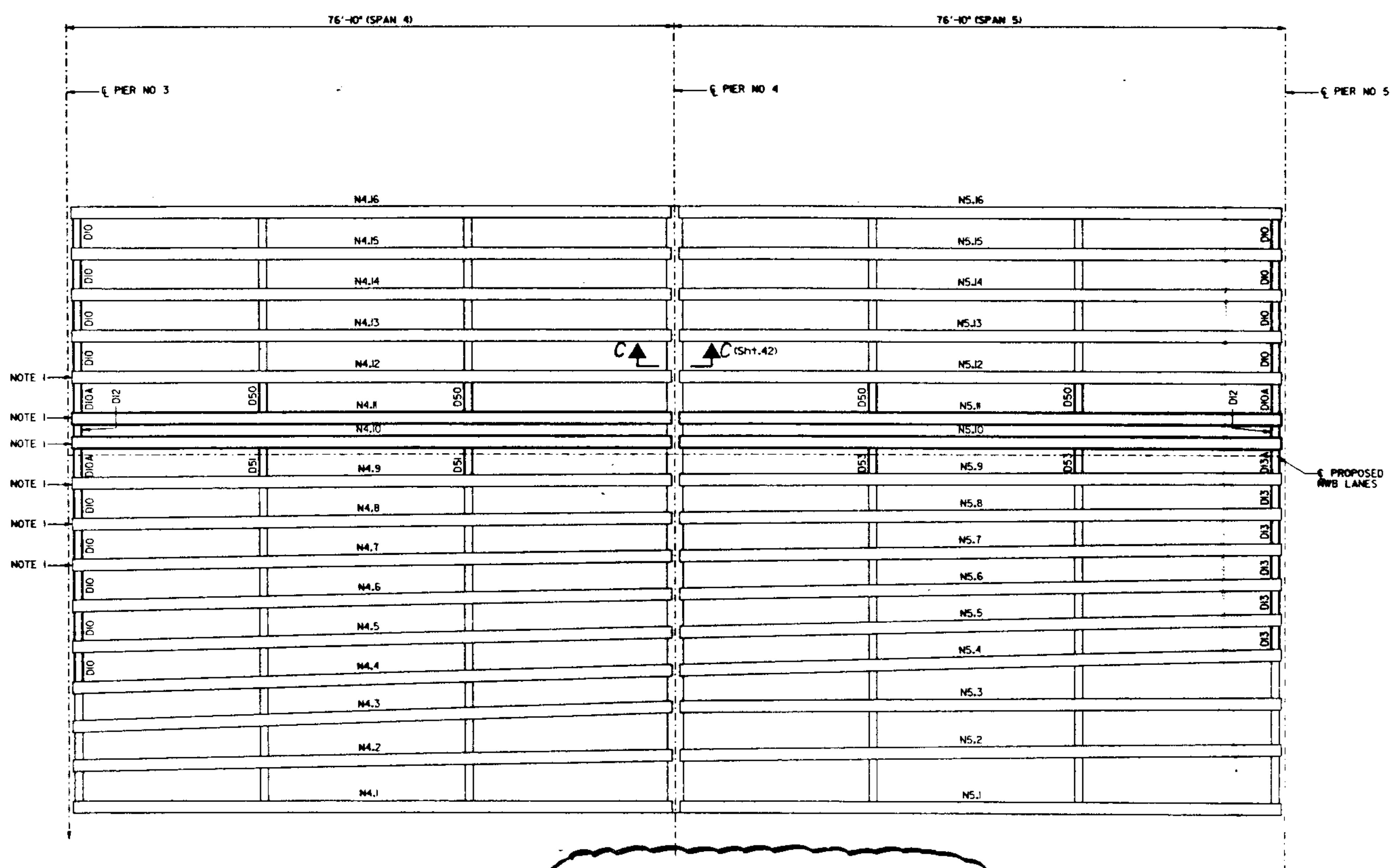
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+45

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	232B
		ILLINOIS		

SHEET NO. 41
72 SHEETS

* 0505(2-2B, 3-H, 6-P, 400HB, 40HB, 454, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 438R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTE 1: PIER CAP REPAIR AT DESIGNATED BEAM BEARINGS. TO BE PAID FOR AS "FORMED CONCRETE REPAIR."

BEAM AND DIAPHRAGM REPLACEMENT PLAN
SHEET 2 OF 9

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

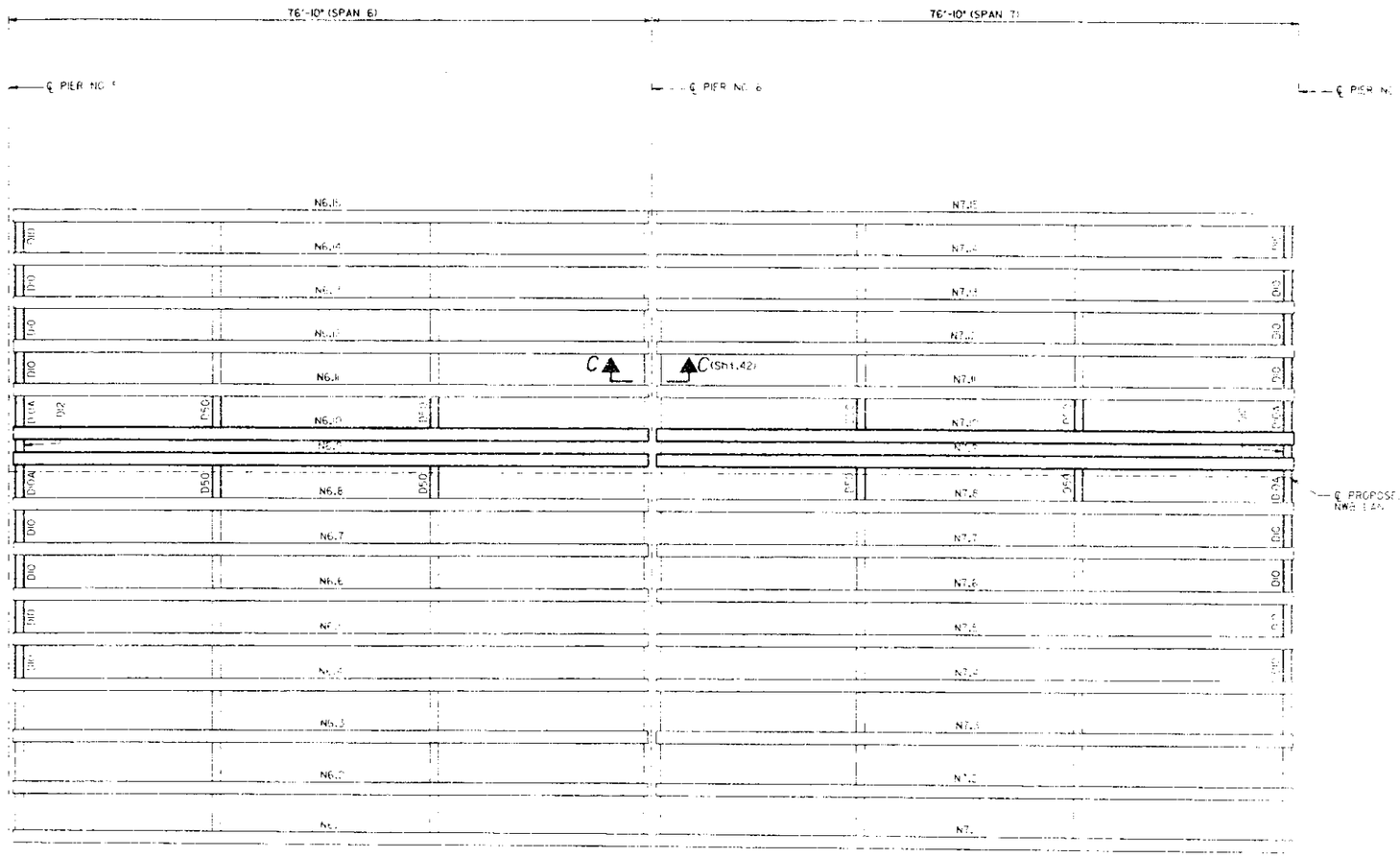
REV. 9-30-93

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	1232C
		ILLINOIS		

SHEET NO. 4
72 SHEETS

* 0505(2-2B, 3-H, 6-IP, 400HB, 40HB, 450, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439R-5



BEAM AND DIAPHRAGM
REPLACEMENT PLAN
SHEET 3 OF 9

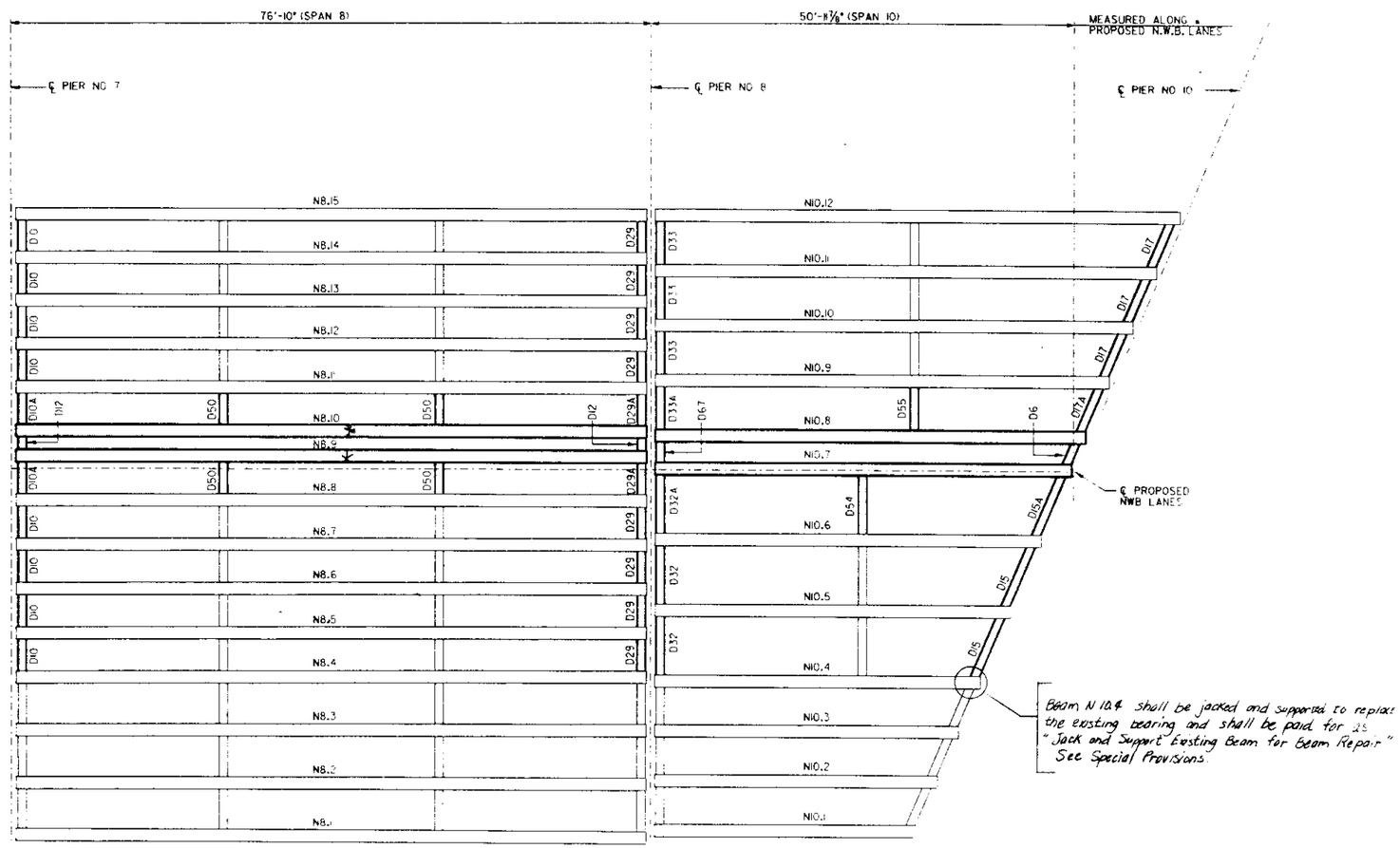
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+4-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	232 D
		ILLINOIS		

SHEET NO. 4
72 SHEETS

* 0505(2-28, 3-H, 6-P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439XR-5



* 48" PPC-I Beam

BEAM AND DIAPHRAGM
REPLACEMENT PLAN
SHEET 4 OF 9

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE

COOK COUNTY

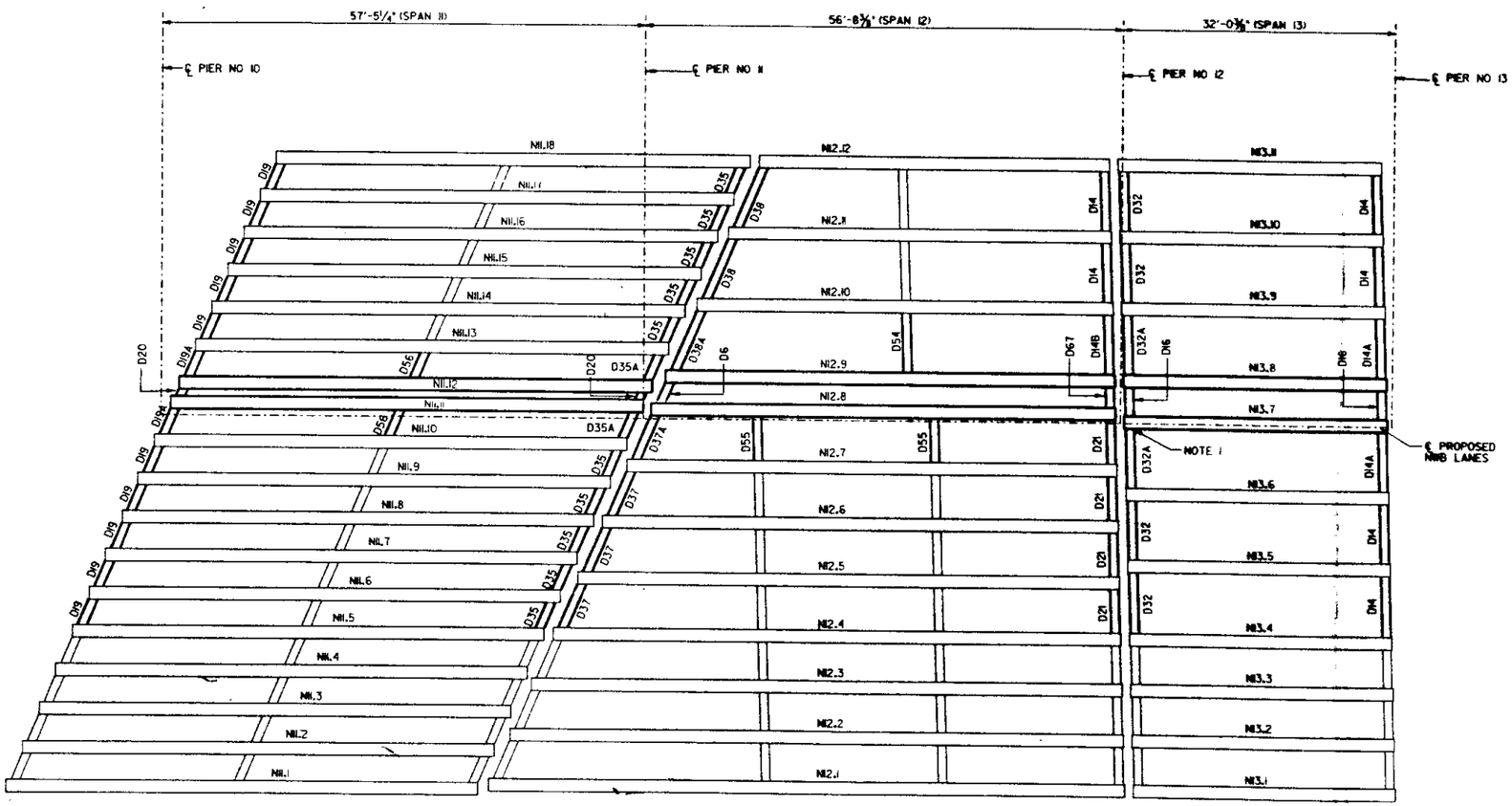
STATION 409+4[illegible]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	232E
		ILLINOIS		

SHEET NO. 4in 72 SHEETS

* 05052-2B, 3-H, 6-P, 400HB, 40HB, 45A, 0506-45D, 0605-402HB, 0606-403HB, 0707-404HB, 439IR-5



NOTE 1: PIER CAP REPAIR AT DESIGNATED BEAM BEARINGS. TO BE PAID FOR AS *FORMED CONCRETE REPAIR.

1

BEAM AND DIAPHRAGM REPLACEMENT PLAN SHEET 5 OF 9

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

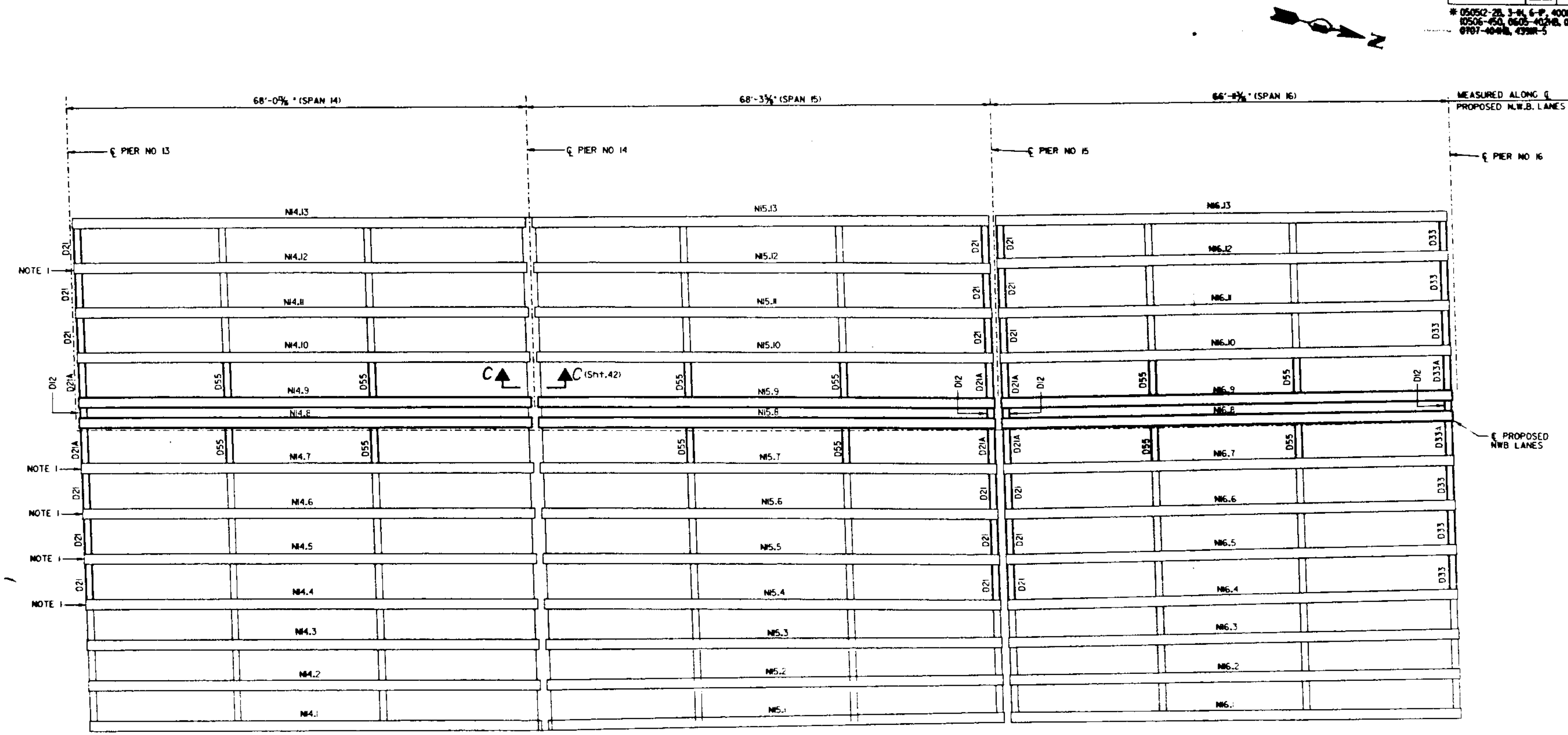
1 REV. 9-30-93

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	232F
		ILLINOIS		

SHEET NO. 41 OF 72 SHEETS

* 05052-2B, 3-H, 6-P, 400HB, 401HB, 454, 10506-450, 0605-402HB, 0606-403HB, 0707-404HB, 459R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTE 1: PIER CAP REPAIR AT DESIGNATED BEAM BEARINGS. TO BE PAID FOR AS "FORMED CONCRETE REPAIR."

BEAM AND DIAPHRAGM REPLACEMENT PLAN
SHEET 6 OF 9

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

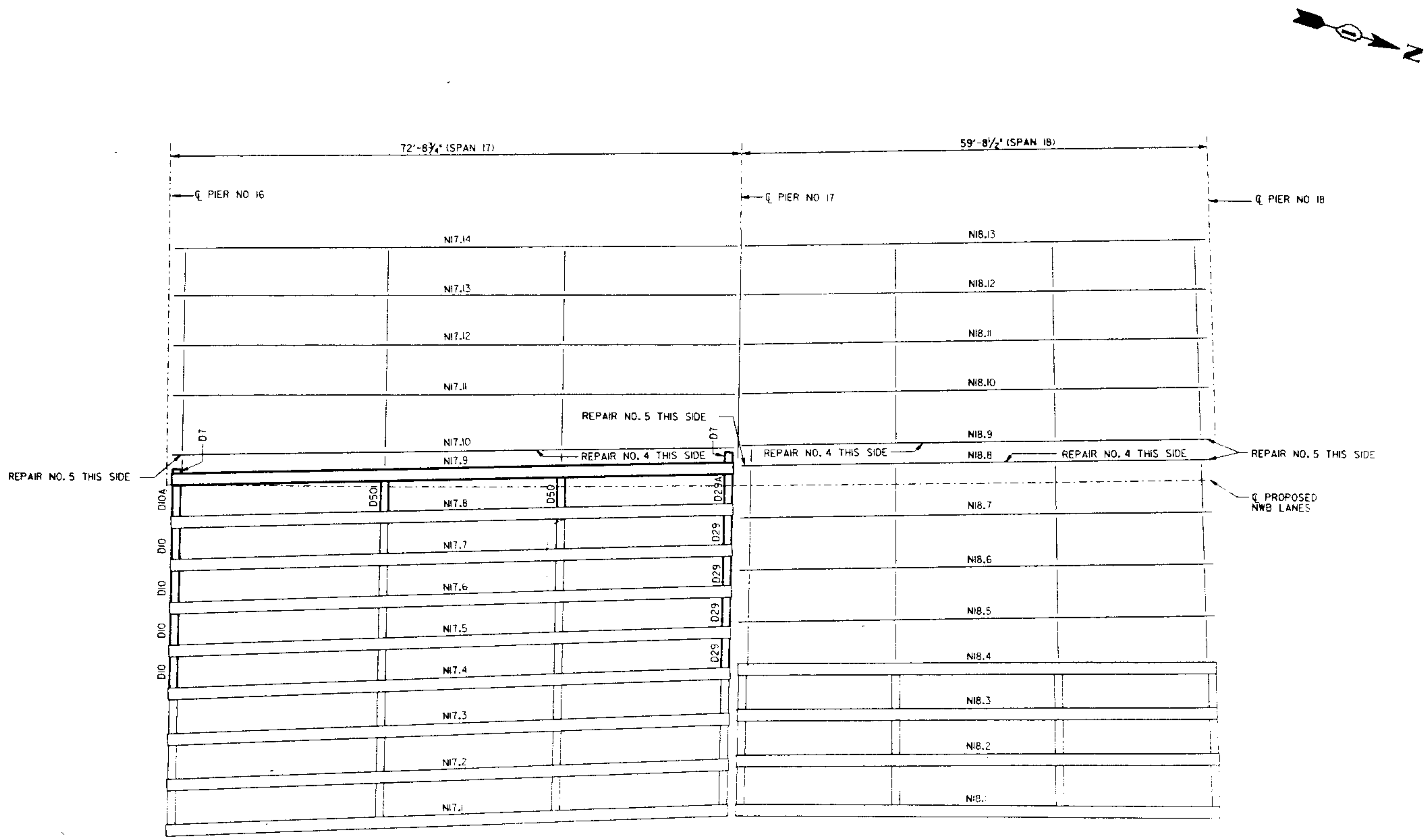
REV. 9-30-93

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	443	2326
		ILLINOIS		

SHEET NO. 41
72 SHEETS

* 0505(2-2B, 3-IH, 6-IP, 400HB, 40IHB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439)R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTES:
1. FOR BEAM REPAIR DETAILS SEE SHEET 63.

BEAM AND DIAPHRAGM REPLACEMENT PLAN
SHEET 7 OF 9

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+45

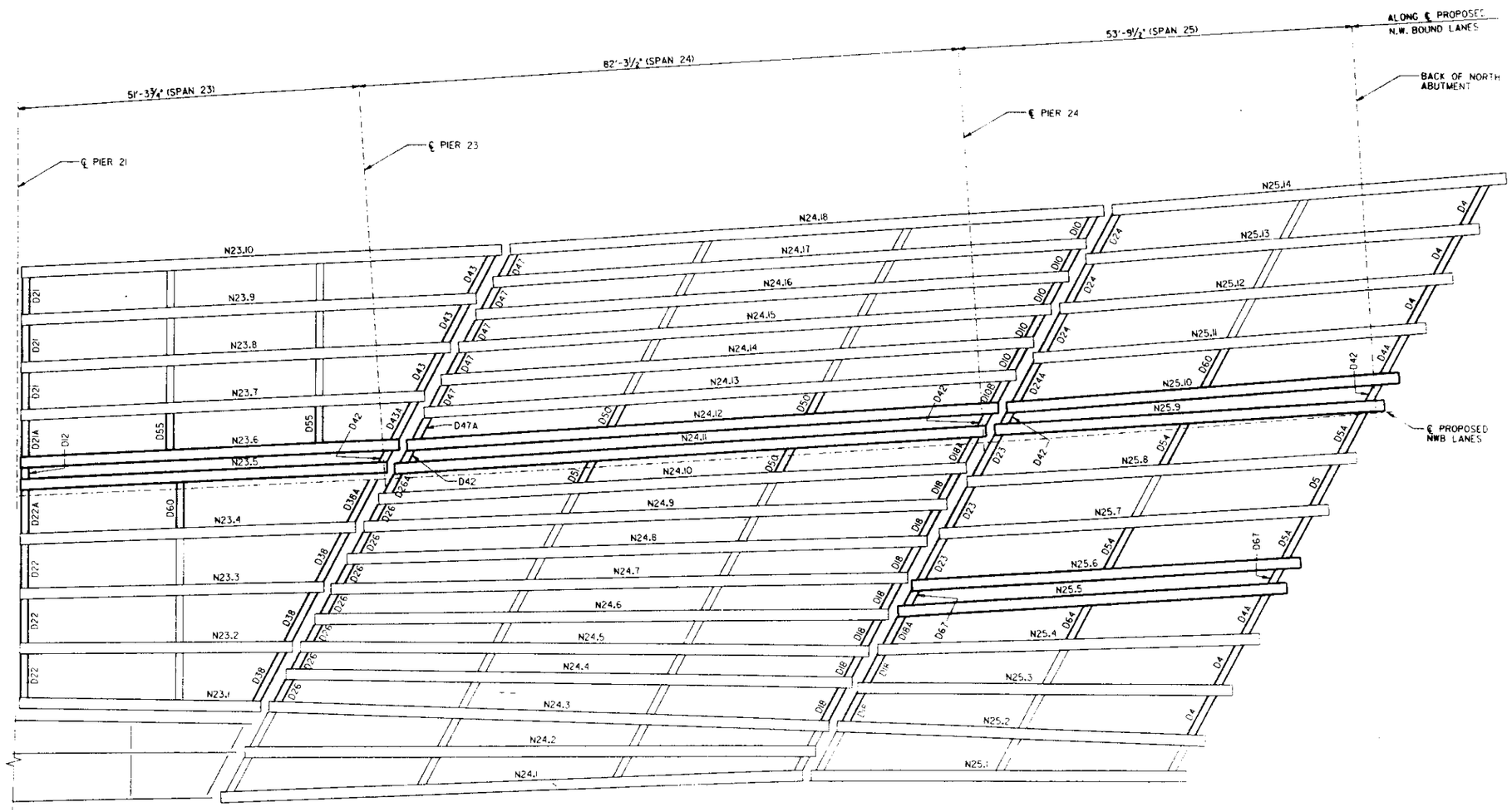
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	232
		ILLINOIS		

SHEET NO. 232 OF 443

* 050512-2B, 3-IH, 6-IP, 400HB, 404HB, 450, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439IR-5



BEAM AND DIAPHRAGM REPLACEMENT PLAN
SHEET 9 OF 9

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE

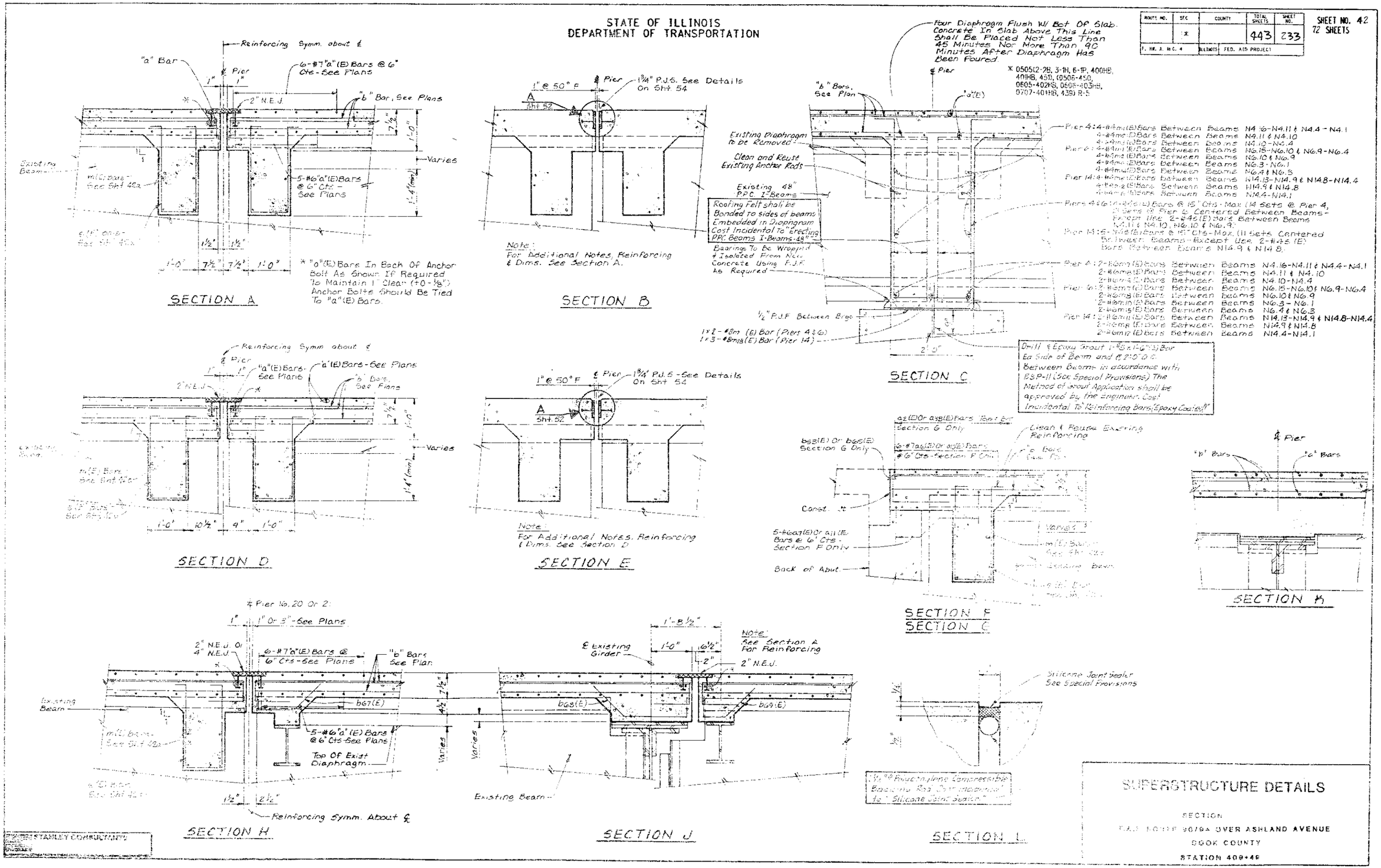
COOK COUNTY

STATION 409+45

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	233
F. HR. A. NO. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 42
72 SHEETS



SUPERSTRUCTURE DETAILS

SECTION

T.A.S. ROUTE 50/19A OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+46

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	233A
		ILLINOIS		

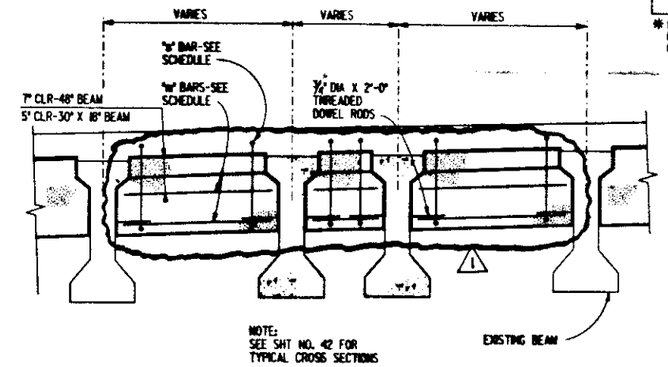
SHEET NO. 48a OF 72 SHEETS

* 05052-2B, 3-B4, 6-P, 400HB, 401HB, 45A, 0506-45D, 0605-402HB, 0606-403HB, 0707-404HB, 439WR-5

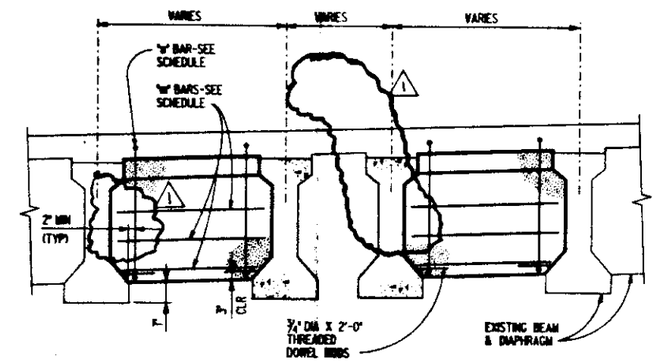
DIAPHRAGM SCHEDULE

MARK	SPAN #1	#2	#3	#4	#5	#6	#7	#8	#10	#11	#12	#13	#14	#15	#16	#17	#21	#23	#24	#25
D1	1																			
D1A	1																			
D4																				5
D4A																				2
D5																				1
D5A																				2
D6									1		1									
D7																2				
D8																	2			
D9	6	6																		
D9A	1	1																		
D10	4	4	9	9	4	8	8	8								4			5	
D10A	1	1	2	2	1	2	2	2								1				
D10B																			1	
D12	2	2	2	1	1	1	1	2					1	1	2			1		
D13					5															
D13A					1															
D14											2	4								
D14A												2								
D14B											1									
D15									2											
D15A									1											
D16												2								
D17									1											
D17A									1											
D18																			7	2
D18A																			1	1
D19										10										
D19A										2										
D20										2										
D21											3		6	6	6		3	3		
D21A											1		2	2	2		1	1		
D22																		3		
D22A																		1		
D23																				3
D24																				3
D24A																				1
D26		6																	7	
D26A		1																	1	
D27			5																	
D27A			1																	
D29		4	4					8								4				
D29A		1	1					2								1				
D32									2			4								
D32A									1			2								
D33									3						6		3			
D33A									1						2					
D33B																	1			
D35										10										
D35A										2										
D37											3									
D37A											1									
D38											2							3		
D38A											1							1		
D42																		1	2	2
D43																		3		
D43A																		1		
D47																			5	
D47A																			1	
D50	4	2	4	2	2	4	4	4								2			3	
D51		2		2															1	
D53					2															
D54									1		1									2
D55									1		2		4	4	4		2	2		
D56										2										
D60																		1		1
D64																				1
D67									1		1									2

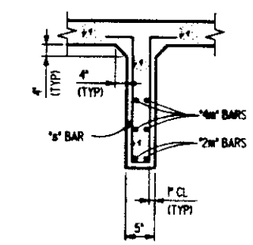
MARK	NUMBER OF BARS PER DIAPHRAGM: STIRRUPS	BOTTOM BARS	SIDE BARS
D1	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D1A	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D4	7-#4s6 (E)	2-#6m18 (E)	2-#4m9 (E)
D4A	7-#4s6 (E)	2-#6m18 (E)	2-#4m9 (E)
D5	7-#4s6 (E)	2-#6m20 (E)	2-#4m21 (E)
D5A	7-#4s6 (E)	2-#6m20 (E)	2-#4m21 (E)
D6	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D7	4-#4s6 (E)	-	-
D8	4-#4s6 (E)	-	-
D9	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D9A	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D10	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D10A	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D10B	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D12	2-#4s6 (E)	2-#6m50 (E)	2-#4m51 (E)
D13	3-#4s6 (E)	2-#6m9 (E)	2-#4m25 (E)
D13A	3-#4s6 (E)	2-#6m9 (E)	2-#4m25 (E)
D14	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D14A	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D14B	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D15	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D15A	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D16	4-#4s6 (E)	2-#6m32 (E)	2-#4m33 (E)
D17	6-#4s6 (E)	2-#6m30 (E)	2-#4m31 (E)
D17A	6-#4s6 (E)	2-#6m30 (E)	2-#4m31 (E)
D18	5-#4s6 (E)	2-#6m32 (E)	2-#4m33 (E)
D18A	5-#4s6 (E)	2-#6m32 (E)	2-#4m33 (E)
D19	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D19A	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D20	2-#4s6 (E)	2-#6m48 (E)	2-#4m49 (E)
D21	5-#4s6 (E)	2-#6m34 (E)	2-#4m4 (E)
D21A	5-#4s6 (E)	2-#6m34 (E)	2-#4m4 (E)
D22	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D22A	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D23	7-#4s6 (E)	2-#6m38 (E)	2-#4m39 (E)
D24	7-#4s6 (E)	2-#6m40 (E)	2-#4m41 (E)
D24A	7-#4s6 (E)	2-#6m40 (E)	2-#4m41 (E)
D26	4-#4s6 (E)	2-#6m42 (E)	2-#4m43 (E)
D26A	4-#4s6 (E)	2-#6m42 (E)	2-#4m43 (E)
D27	4-#4s6 (E)	2-#6m44 (E)	2-#4m45 (E)
D27A	4-#4s6 (E)	2-#6m44 (E)	2-#4m45 (E)
D29	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D29A	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D32	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D32A	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D33	5-#4s6 (E)	2-#6m34 (E)	2-#4m4 (E)
D33A	5-#4s6 (E)	2-#6m34 (E)	2-#4m4 (E)
D33B	5-#4s6 (E)	2-#6m34 (E)	2-#4m4 (E)
D35	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D35A	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D37	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D37A	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D38	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D38A	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D42	2-#4s6 (E)	2-#6m52 (E)	2-#4m53 (E)
D43	6-#4s6 (E)	2-#6m46 (E)	2-#4m47 (E)
D43A	6-#4s6 (E)	2-#6m46 (E)	2-#4m47 (E)
D47	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D47A	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D50	4-#4s7(E)	2-#4m43 (E)	4-#4m6 (E)
D51	4-#4s7(E)	2-#4m25 (E)	4-#4m33 (E)
D53	3-#4s7(E)	2-#4m53 (E)	4-#4m45 (E)
D54	7-#4s7(E)	2-#4m39 (E)	4-#4m29 (E)
D55	3-#4s7(E)	2-#4m6 (E)	4-#4m37 (E)
D56	3-#4s7(E)	2-#4m25 (E)	4-#4m33 (E)
D60	6-#4s7(E)	2-#4m37 (E)	4-#4m27 (E)
D64	5-#4s7(E)	2-#4m4 (E)	4-#4m9 (E)
D67	2-#4s6(E)	2-#6m42 (E)	2-#4m43 (E)



DIAPHRAGM ELEVATION AT PIERS



INTERMEDIATE DIAPHRAGM ELEVATION



INTERMEDIATE DIAPHRAGM SECTION

DIAPHRAGM SCHEDULE

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

1 REV. 9-30-93

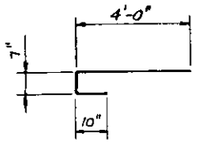
/usr/9088608/mnt/908842a.dgn $$$DATE$$$

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

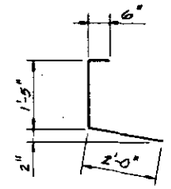
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	234A
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

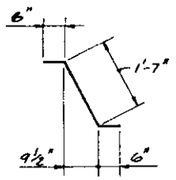
SHEET NO. 43
72 SHEETS
3



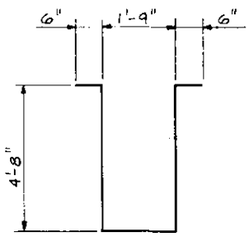
BAR b(E)



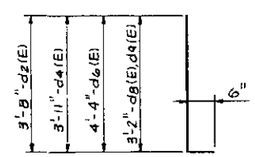
BAR d(E)



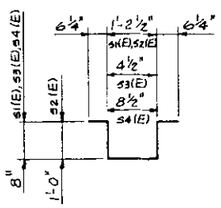
BAR d1(E)



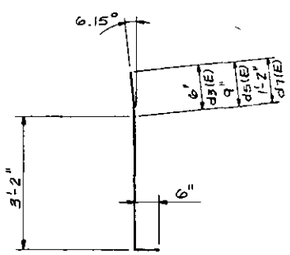
BAR s(E)



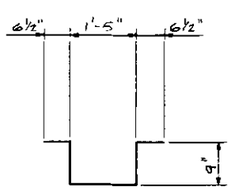
BARS d2(E),d4(E),d6(E),d8(E),d9(E)



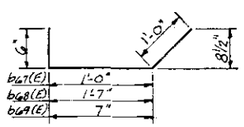
BARS s1(E),s2(E),s3(E),s4(E)



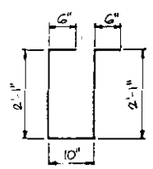
BARS d3(E),d5(E),d7(E)



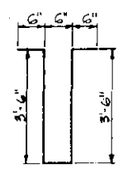
BAR s5(E)



BARS b67(E), b68(E), b69(E)



BAR s6(E)



BAR s7(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a1(E)	2541	#6	4'-0"	
a1(E)	871	#5	31'-3"	
a2(E)	2982	#5	31'-9"	
a3(E)	352	#5	26'-1"	
a4(E)	348	#5	25'-3"	
a5(E)	348	#5	24'-7"	
a6(E)	36	#7	31'-3"	
a7(E)	30	#6	31'-3"	
a8(E)	114	#7	31'-9"	
a9(E)	95	#6	31'-9"	
a10(E)	6	#7	50'-8"	
a11(E)	5	#6	50'-8"	
a12(E)	6	#7	49'-6"	
a13(E)	5	#6	49'-6"	
a14(E)	6	#7	49'-0"	
a15(E)	5	#6	49'-0"	
a16(E)	12	#7	47'-7"	
a17(E)	10	#6	47'-7"	
a18(E)	12	#7	46'-0"	
a19(E)	10	#6	46'-0"	
a20(E)	830	#5	23'-9"	
a21(E)	78	#7	44'-11"	
a22(E)	65	#6	44'-11"	
a23(E)	3298	#5	23'-4"	
a24(E)	140	#5	30'-9"	
a25(E)	280	#5	23'-10"	
a26(E)	239	#5	28'-3"	
a27(E)	460	#5	25'-2"	
a28(E)	6	#7	28'-5"	
a29(E)	5	#6	28'-5"	
a30(E)	12	#7	48'-5"	
a31(E)	10	#6	48'-5"	
a32(E)	1398	#5	23'-8"	
a33(E)	24	#7	45'-5"	
a34(E)	20	#6	45'-5"	
a35(E)	125	#5	11'-5"	
a36(E)	466	#5	24'-7"	
a37(E)	132	#5	33'-0"	
a38(E)	354	#5	26'-2"	
a39(E)	6	#7	33'-0"	
a40(E)	5	#6	33'-0"	
a41(E)	151	#5	29'-1"	
a42(E)	454	#5	24'-10"	
a43(E)	12	#7	29'-1"	
a44(E)	10	#6	29'-1"	
a45(E)	6	#7	47'-7"	
a46(E)	5	#6	47'-7"	
a47(E)	75	#5	15'-0"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b(E)	2672	#6	5'-5"	
b1(E)	173	#5	39'-8"	
b2(E)	498	#5	39'-2"	
b3(E)	312	#5	27'-0"	
b4(E)	903	#5	26'-9"	
b5(E)	811	#5	32'-2"	
b6(E)	1116	#5	27'-1"	
b7(E)	312	#6	32'-0"	
b8(E)	72	#5	14'-7"	
b9(E)	111	#5	18'-8"	
b10(E)	93	#5	22'-6"	
b11(E)	88	#5	26'-3"	
b12(E)	68	#5	32'-9"	
b13(E)	4	#6	48'-0"	
b14(E)	4	#6	33'-6"	
b15(E)	3	#5	32'-0"	
b16(E)	4	#6	49'-0"	
b17(E)	4	#6	32'-6'	
b18(E)	162	#5	29'-6"	
b19(E)	94	#5	39'-1"	
b20(E)	62	#5	29'-1"	
b21(E)	6	#5	22'-1"	
b22(E)	174	#5	31'-8"	
b23(E)	288	#5	20'-3"	
b24(E)	78	#5	26'-8"	
b25(E)	95	#5	23'-10"	
b26(E)	108	#5	19'-6"	
b27(E)	467	#5	28'-8"	
b28(E)	78	#6	28'-0"	
b29(E)	324	#5	35'-4"	
b30(E)	273	#5	23'-5"	
b31(E)	162	#5	34'-2"	
b32(E)	189	#5	25'-4"	
b33(E)	182	#5	27'-11"	
b34(E)	102	#5	37'-1"	
b35(E)	124	#5	34'-5"	
b36(E)	195	#5	21'-0"	
b37(E)	102	#5	30'-7"	
b38(E)	84	#5	38'-4"	
b39(E)	180	#5	38'-8"	
b40(E)	128	#5	32'-8"	
b41(E)	288	#5	32'-6"	
b42(E)	201	#5	26'-6"	
b43(E)	64	#5	30'-5"	
b44(E)	99	#5	20'-10"	
b45(E)	133	#5	32'-10"	
b46(E)	63	#5	15'-9"	
b47(E)	96	#5	20'-0"	
b48(E)	60	#5	23'-10"	
b49(E)	34	#5	22'-6"	
b50(E)	34	#5	27'-5"	
b51(E)	32	#5	32'-2"	
b52(E)	36	#5	34'-7"	
b53(E)	10	#6	35'-9"	
b54(E)	2	#6	40'-4"	
b55(E)	2	#6	51'-0"	
b56(E)	428	#5	21'-11"	
b57(E)	234	#5	28'-7"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b58(E)	9	#5	27'-10"	
b59(E)	6	#5	38'-0"	
b60(E)	4	#6	54'-4"	
b61(E)	312	#5	19'-1"	
b62(E)	162	#5	27'-9"	
b63(E)	6	#5	26'-6"	
b64(E)	8	#5	24'-0"	
b65(E)	2	#6	60'-0"	
b66(E)	2	#6	14'-0"	
b67(E)	115	#5	2'-6"	
b68(E)	73	#5	3'-1"	
b69(E)	73	#5	2'-1"	
b70(E)	192	#5	2'-0"	
b71(E)	162	#5	5'-0"	
d(E)	3072	#4	3'-11"	
d1(E)	3347	#5	2'-7"	
d2(E)	791	#4	4'-2"	
d3(E)	861	#5	4'-2"	
d4(E)	170	#4	4'-5"	
d5(E)	186	#5	4'-5"	
d6(E)	595	#4	4'-10"	
d7(E)	648	#5	4'-10"	
d8(E)	1516	#4	3'-8"	
d9(E)	1652	#5	3'-8"	
s(E)	169	#4	12'-1"	
s1(E)	15797	#4	3'-7"	
s2(E)	1229	#4	4'-3"	
s3(E)	2250	#5	2'-9"	
s4(E)	767	#4	3'-1"	
s5(E)	623	#4	4'-0"	
s6(E)	1562	#4	6'-0"	
s7(E)	266	#4	8'-6"	
e(E)	136	#4	19'-2"	
e1(E)	12	#8	28'-2"	
e2(E)	8	#5	39'-8"	
e3(E)	232	#4	18'-11"	
e4(E)	28	#8	40'-0"	
e5(E)	28	#5	39'-2"	
e6(E)	368	#4	16'-5"	
e7(E)	40	#8	35'-0"	
e8(E)	40	#5	34'-2"	
e9(E)	96	#4	9'-9"	
e10(E)	20	#8	9'-9"	
e11(E)	20	#5	9'-9"	
e12(E)	40	#4	15'-9"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
e13(E)	4	#8	33'-7"	
e14(E)	4	#5	32'-9"	
e15(E)	54	#4	18'-10"	
e16(E)	8	#8	30'-4"	
e17(E)	8	#5	29'-5"	
e18(E)	30	#4	13'-11"	
e19(E)	4	#8	22'-11"	
e20(E)	4	#5	22'-0"	
e21(E)	36	#4	15'-8"	
e22(E)	4	#8	31'-7"	
e23(E)	8	#5	31'-7"	
e24(E)	54	#4	19'-5"	
e25(E)	8	#8	31'-2"	
e26(E)	8	#5	30'-3"	
e27(E)	60	#4	8'-9"	
e28(E)	12	#8	8'-9"	
e29(E)	12	#5	8'-9"	
e30(E)	90	#4	19'-6"	
e31(E)	12	#8	31'-3"	
e32(E)	12	#5	30'-4"	
e33(E)	48	#4	15'-5"	
e34(E)	4	#8	32'-11"	
e35(E)	4	#5	32'-1"	
e36(E)	92	#4	15'-10"	
e37(E)	4	#8	25'-9"	
e38(E)	4	#5	24'-10"	
e39(E)	48	#4	15'-4"	
e40(E)	4	#8	32'-10"	
e41(E)	6	#5	32'-0"	
e42(E)	36	#4	15'-2"	
e43(E)	4	#8	24'-10"	
e44(E)	4	#5	24'-0"	
e45(E)	48	#4	16'-8"	
e46(E)	4	#8	25'-6"	
e47(E)	4	#5	34'-7"	
e48(E)	60	#4	16'-3"	
e49(E)	6	#8	29'-9"	
e50(E)	6	#5	28'-7"	
e51(E)	36	#4	17'-8"	
e52(E)	4	#8	28'-7"	
e53(E)	4	#5	27'-8"	
e54(E)	24	#4	16'-11"	
e55(E)	4	#8	27'-5"	
e56(E)	4	#5	26'-6"	
e57(E)	6	#8	29'-0"	
e58(E)	6	#5	27'-10"	
e59(E)	12	#8	38'-7"	
e60(E)	12	#5	37'-2"	
e61(E)	4	#8	32'-6"	
e62(E)	32	#4	17'-11"	
e63(E)	4	#8	38'-0"	
e64(E)	4	#5	37'-1"	
e65(E)	2	#8	32'-0"	
e66(E)	32	#4	14'-10"	
e67(E)	24	#4	12'-6"	
e68(E)	32	#4	14'-4"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
m(E)	4	#8	38'-6"	
m1(E)	354	#4	3'-6"	
m2(E)	12	#4	1'-3"	
m3(E)	24	#4	3'-1"	
m4(E)	8	#4	4'-2"	
m5(E)	32	#4	4'-10"	
m6(E)	174	#4	4'-3"	
m7(E)	36	#6	3'-2"	
m8(E)	4	#6	0'-11"	
m9(E)	24	#6	2'-9"	
m10(E)	4	#6	3'-10"	
m11(E)	16	#6	4'-6"	
m12(E)	6	#6	3'-11"	
m13(E)	3	#8	26'-6"	
m14(E)	110	#4	4'-9"	
m15(E)	2	#6	4'-5"	
m16(E)	282	#6	3'-6"	
m18(E)	14	#6	6'-0"	
m19(E)	18	#4	6'-0"	
m20(E)	6	#6	6'-6"	
m21(E)	6	#4	6'-6"	
m22(E)	40	#6	3'-3"	
m23(E)	40	#4	3'-3"	
m25(E)	26	#4	2'-9"	
m26(E)	36	#6	6'-9"	
m27(E)	44	#4	6'-9"	
m28(E)	20	#6	7'-6"	
m29(E)	36	#4	7'-6"	
m30(E)	8	#6	5'-3"	
m31(E)	8	#4	5'-3"	
m32(E)	26	#6	4'-0"	
m33(E)	54	#4	4'-0"	
m34(E)	104	#6	4'-9"	
m35(E)	108	#4	4'-9"	
m36(E)	16	#6	5'-6"	
m37(E)	96	#4	5'-6"	
m38(E)	6	#6	6'-3"	
m39(E)	14	#4	6'-3"	
m40(E)	8	#6	6'-0"	
m41(E)	8	#4	6'-0"	
m42(E)	38	#6	3'-0"	
m43(E)	100	#4	3'-0"	
m44(E)	12	#6	3'-9"	
m45(E)	20	#4	3'-9"	
m46(E)	8	#6	5'-9"	
m47(E)	8	#4	5'-9"	
m48(E)	4	#6	1'-6"	
m49(E)	4	#4	1'-6"	
m50(E)	34	#6	2'-0"	
m51(E)	34	#4	2'-0"	
m52(E)	10	#6	2'-6"	
m53(E)	14	#4	2'-6"	

Reinforcement Bars (Epoxy Coated)	Lbs.	319,310
Class X Concrete Superstructure	Cu. Yds.	3,871.0

Reinforcement Bars Designated (E) shall be Epoxy Coated.

AS REVISED

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

REVISED 4-20-94 pmp

REV. 9-30-93

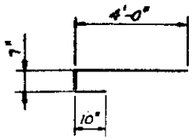
741

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

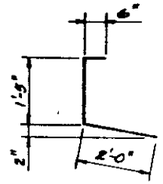
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 430) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	234
F. AID & REG. 4	ILLINOIS	FED. AID PROJECT		

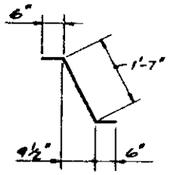
SHEET NO. 43
72 SHEETS



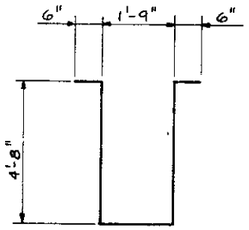
BAR b(E)



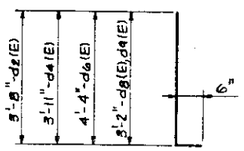
BAR d(E)



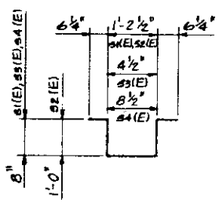
BAR d1(E)



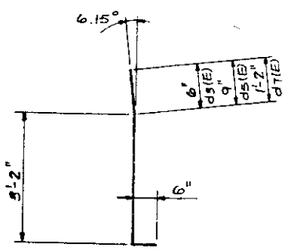
BAR s(E)



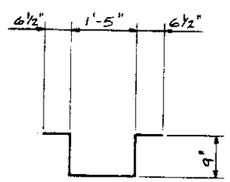
BARS d2(E),d4(E),d6(E),d8(E),d9(E)



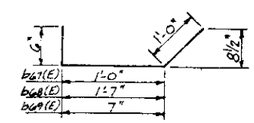
BARS s1(E),s2(E),s3(E),s4(E)



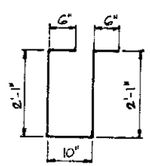
BARS d3(E),d5(E),d7(E)



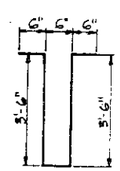
BAR s5(E)



BARS b67(E),b68(E),b69(E)



BAR s6(E)



BAR s7(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a1(E)	2541	#6	4'-0"	
a1(E)	871	#5	31'-3"	
a2(E)	2982	#5	31'-9"	
a3(E)	352	#5	26'-1"	
a4(E)	348	#5	25'-3"	
a5(E)	348	#5	24'-7"	
a6(E)	36	#7	31'-3"	
a7(E)	30	#6	31'-3"	
a8(E)	114	#7	31'-9"	
a9(E)	95	#6	31'-9"	
a10(E)	6	#7	50'-8"	
a11(E)	5	#6	50'-8"	
a12(E)	6	#7	49'-6"	
a13(E)	5	#6	49'-6"	
a14(E)	6	#7	49'-0"	
a15(E)	5	#6	49'-0"	
a16(E)	12	#7	47'-7"	
a17(E)	10	#6	47'-7"	
a18(E)	12	#7	46'-0"	
a19(E)	10	#6	46'-0"	
a20(E)	830	#5	23'-9"	
a21(E)	78	#7	44'-11"	
a22(E)	65	#6	44'-11"	
a23(E)	3298	#5	23'-4"	
a24(E)	140	#5	30'-9"	
a25(E)	280	#5	23'-10"	
a26(E)	239	#5	28'-3"	
a27(E)	460	#5	25'-2"	
a28(E)	6	#7	28'-5"	
a29(E)	5	#6	28'-5"	
a30(E)	12	#7	48'-5"	
a31(E)	10	#6	48'-5"	
a32(E)	1396	#5	23'-8"	
a33(E)	24	#7	45'-5"	
a34(E)	20	#6	45'-5"	
a35(E)	125	#5	11'-5"	
a36(E)	466	#5	24'-7"	
a37(E)	132	#5	33'-0"	
a38(E)	354	#5	26'-2"	
a39(E)	6	#7	33'-0"	
a40(E)	5	#6	33'-0"	
a41(E)	151	#5	29'-1"	
a42(E)	454	#5	24'-10"	
a43(E)	12	#7	29'-1"	
a44(E)	10	#6	29'-1"	
a45(E)	6	#7	47'-7"	
a46(E)	5	#6	47'-7"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b(E)	2672	#6	5'-5"	
b1(E)	173	#5	39'-8"	
b2(E)	498	#5	39'-2"	
b3(E)	312	#5	27'-0"	
b4(E)	903	#5	26'-9"	
b5(E)	811	#5	32'-2"	
b6(E)	1116	#5	27'-1"	
b7(E)	312	#6	32'-0"	
b8(E)	72	#5	14'-7"	
b9(E)	111	#5	18'-8"	
b10(E)	93	#5	22'-6"	
b11(E)	88	#5	26'-3"	
b12(E)	68	#5	32'-9"	
b13(E)	4	#6	48'-0"	
b14(E)	4	#6	33'-6"	
b15(E)	3	#5	32'-0"	
b16(E)	4	#6	49'-0"	
b17(E)	4	#6	32'-6'	
b18(E)	162	#5	29'-6"	
b19(E)	94	#5	39'-1"	
b20(E)	62	#5	29'-1"	
b21(E)	6	#5	22'-1"	
b22(E)	174	#5	31'-8"	
b23(E)	288	#5	20'-3"	
b24(E)	78	#5	26'-8"	
b25(E)	96	#5	23'-10"	
b26(E)	108	#5	19'-6"	
b27(E)	467	#5	28'-8"	
b28(E)	78	#6	28'-0"	
b29(E)	324	#5	35'-4"	
b30(E)	273	#5	23'-5"	
b31(E)	162	#5	34'-2"	
b32(E)	189	#5	25'-4"	
b33(E)	182	#5	27'-11"	
b34(E)	102	#5	37'-1"	
b35(E)	124	#5	34'-5"	
b36(E)	195	#5	21'-0"	
b37(E)	102	#5	30'-7"	
b38(E)	84	#5	38'-4"	
b39(E)	180	#5	38'-8"	
b40(E)	128	#5	32'-9"	
b41(E)	288	#5	32'-6"	
b42(E)	201	#5	26'-6"	
b43(E)	64	#5	30'-5"	
b44(E)	99	#5	20'-10"	
b45(E)	133	#5	32'-10"	
b46(E)	63	#5	15'-9"	
b47(E)	96	#5	20'-0"	
b48(E)	60	#5	23'-10"	
b49(E)	34	#5	22'-6"	
b50(E)	34	#5	27'-5"	
b51(E)	32	#5	32'-2"	
b52(E)	36	#5	34'-7"	
b53(E)	10	#6	35'-9"	
b54(E)	2	#6	40'-4"	
b55(E)	2	#6	51'-0"	
b56(E)	428	#5	21'-11"	
b57(E)	234	#5	28'-7"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b58(E)	9	#5	27'-10"	
b59(E)	6	#5	38'-0"	
b60(E)	4	#6	54'-4"	
b61(E)	312	#5	19'-1"	
b62(E)	162	#5	27'-9"	
b63(E)	6	#5	26'-6"	
b64(E)	8	#5	24'-0"	
b65(E)	2	#6	60'-0"	
b66(E)	2	#6	14'-0"	
b67(E)	115	#5	2'-6"	
b68(E)	73	#5	3'-1"	
b69(E)	73	#5	2'-1"	
b70(E)	192	#5	2'-0"	
b71(E)	162	#5	5'-0"	
d(E)	3072	#4	3'-11"	
d1(E)	3347	#5	2'-7"	
d2(E)	791	#4	4'-2"	
d3(E)	861	#5	4'-2"	
d4(E)	170	#4	4'-5"	
d5(E)	186	#5	4'-5"	
d6(E)	595	#4	4'-10"	
d7(E)	648	#5	4'-10"	
d8(E)	1516	#4	3'-8"	
d9(E)	1652	#5	3'-8"	
s(E)	169	#4	12'-1"	
s1(E)	15797	#4	3'-7"	
s2(E)	1229	#4	4'-3"	
s3(E)	2250	#5	2'-9"	
s4(E)	767	#4	3'-1"	
s5(E)	623	#4	4'-0"	
s6(E)	1562	#4	6'-0"	
s7(E)	266	#4	8'-6"	
e(E)	136	#4	19'-2"	
e1(E)	12	#8	28'-2"	
e2(E)	8	#5	39'-8"	
e3(E)	232	#4	18'-11"	
e4(E)	28	#8	40'-0"	
e5(E)	28	#5	39'-2"	
e6(E)	368	#4	16'-5"	
e7(E)	40	#8	35'-0"	
e8(E)	40	#5	34'-2"	
e9(E)	96	#4	9'-9"	
e10(E)	20	#8	9'-9"	
e11(E)	20	#5	9'-9"	
e12(E)	40	#4	15'-9"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
e13(E)	4	#8	33'-7"	
e14(E)	4	#5	32'-9"	
e15(E)	54	#4	18'-10"	
e16(E)	8	#8	30'-4"	
e17(E)	8	#5	29'-5"	
e18(E)	30	#4	13'-11"	
e19(E)	4	#8	22'-11"	
e20(E)	4	#5	22'-0"	
e21(E)	36	#4	15'-8"	
e22(E)	4	#8	31'-7"	
e23(E)	8	#5	31'-7"	
e24(E)	54	#4	19'-5"	
e25(E)	8	#8	31'-2"	
e26(E)	8	#5	30'-3"	
e27(E)	60	#4	8'-9"	
e28(E)	12	#8	8'-9"	
e29(E)	12	#5	8'-9"	
e30(E)	90	#4	19'-6"	
e31(E)	12	#8	31'-3"	
e32(E)	12	#5	30'-4"	
e33(E)	48	#4	15'-5"	
e34(E)	4	#8	32'-11"	
e35(E)	4	#5	32'-1"	
e36(E)	92	#4	15'-10"	
e37(E)	4	#8	25'-9"	
e38(E)	4	#5	24'-10"	
e39(E)	48	#4	15'-4"	
e40(E)	4	#8	32'-10"	
e41(E)	6	#5	32'-0"	
e42(E)	36	#4	15'-2"	
e43(E)	4	#8	24'-10"	
e44(E)	4	#5	24'-0"	
e45(E)	48	#4	16'-8"	
e46(E)	4	#8	35'-6"	
e47(E)	4	#5	34'-7"	
e48(E)	60	#4	16'-3"	
e49(E)	6	#8	29'-9"	
e50(E)	6	#5	28'-7"	
e51(E)	36	#4	17'-8"	
e52(E)	4	#8	28'-7"	
e53(E)	4	#5	27'-8"	
e54(E)	24	#4	16'-11"	
e55(E)	4	#8	27'-5"	
e56(E)	4	#5	26'-6"	
e57(E)	6	#8	29'-0"	
e58(E)	6	#5	27'-10"	
e59(E)	12	#8	38'-7"	
e60(E)	12	#5	37'-2"	
e61(E)	4	#8	32'-6"	
e62(E)	32	#4	17'-11"	
e63(E)	4	#8	38'-0"	
e64(E)	4	#5	37'-1"	
e65(E)	2	#8	32'-0"	
e66(E)	32	#4	14'-10"	
e67(E)	24	#4	12'-6"	
e68(E)	32	#4	14'-4"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
m(E)	4	#8	38'-6"	
m1(E)	354	#4	3'-6"	
m2(E)	12	#4	1'-3"	
m3(E)	24	#4	3'-1"	
m4(E)	8	#4	4'-2"	
m5(E)	32	#4	4'-10"	
m6(E)	174	#4	4'-3"	
m7(E)	36	#6	3'-2"	
m8(E)	4	#6	0'-11"	
m9(E)	24	#6	2'-9"	
m10(E)	4	#6	3'-10"	
m11(E)	16	#6	4'-6"	
m12(E)	6	#6	3'-11"	
m13(E)	3	#8	26'-6"	
m14(E)	110	#4	4'-9"	
m15(E)	2	#6	4'-5"	
m16(E)	282	#6	3'-6"	
m18(E)	14	#6	6'-0"	
m19(E)	18	#4	6'-0"	
m20(E)	6	#6	6'-6"	
m21(E)	6	#4	6'-6"	
m22(E)	40	#6	3'-3"	
m23(E)	40	#4	3'-3"	
m25(E)	26	#4	2'-9"	
m26(E)	36	#6	6'-9"	
m27(E)	44	#4	6'-9"	
m28(E)	20	#6	7'-6"	
m29(E)	36	#4	7'-6"	
m30(E)	8	#6	5'-3"	
m31(E)	8	#4	5'-3"	
m32(E)	26	#6	4'-0"	
m33(E)	54	#4	4'-0"	
m34(E)	104	#6	4'-9"	
m35(E)	108	#4	4'-9"	
m36(E)	16	#6	5'-6"	
m37(E)	96	#4	5'-6"	
m38(E)	6	#6	6'-3"	
m39(E)	14	#4	6'-3"	
m40(E)	8	#6	6'-0"	
m41(E)	8	#4	6'-0"	
m42(E)	38	#6	3'-0"	
m43(E)	100	#4	3'-0"	
m44(E)	12	#6	3'-9"	
m45(E)	20	#4	3'-9"	
m46(E)	8	#6	5'-9"	
m47(E)	8	#4	5'-9"	
m48(E)	4	#6	1'-6"	
m49(E)	4	#4	1'-6"	
m50(E)	34	#6	2'-0"	
m51(E)	34	#4	2'-0"	
m52(E)	10	#6	2'-6"	
m53(E)	14	#4	2'-6"	
Reinforcement Bars (Epoxy Coated)			Lbs.	918,140
Class X Concrete Superstructure			Cu. Yds.	3,871.0

Reinforcement Bars Designated (E) shall be Epoxy Coated.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION

F.A.I. ROUTE 80/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

REV. 9-30-93

741

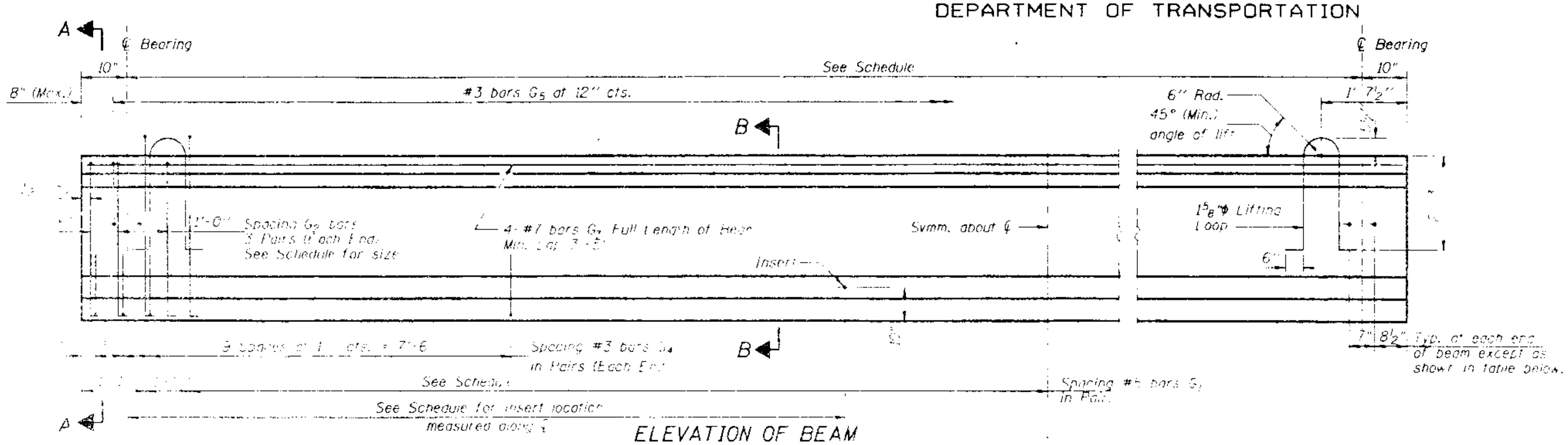
Route No.	Section	County	Total Sheets	Sheet No.
90/94	•	COOK	443	234A

• 0505(2-2B, 3-1H, 6-1P, 400HB, 401, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439)R-5

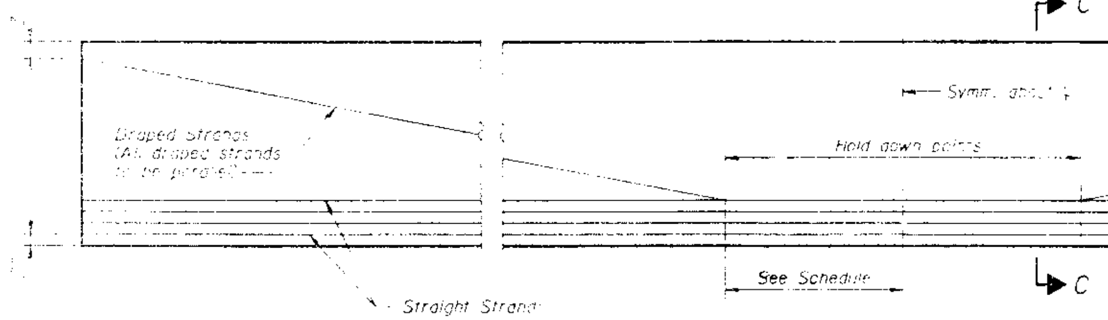
SHEET NO. 43c

72 SHEETS

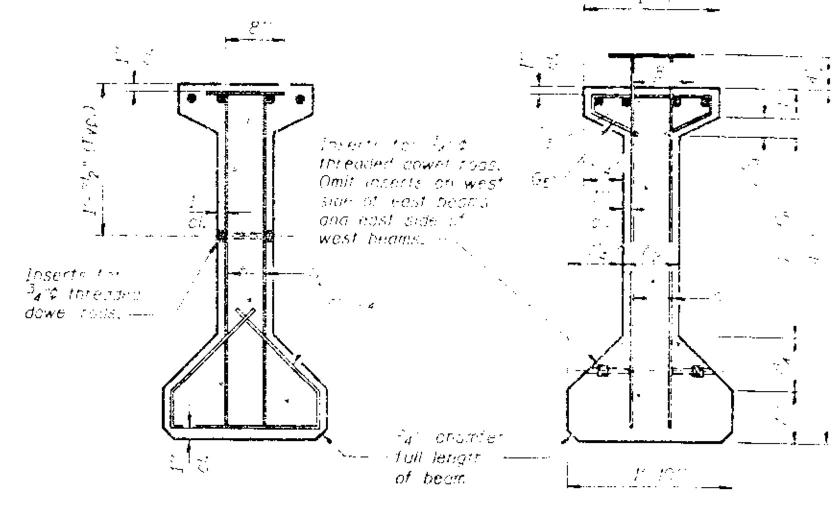
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

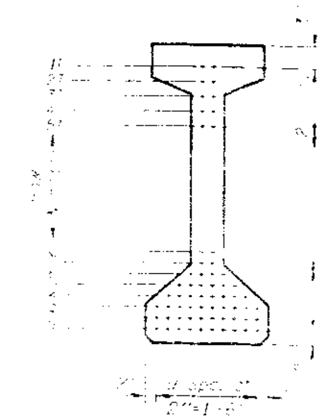


ELEVATION OF BEAM
(Showing Prestressing Steel)

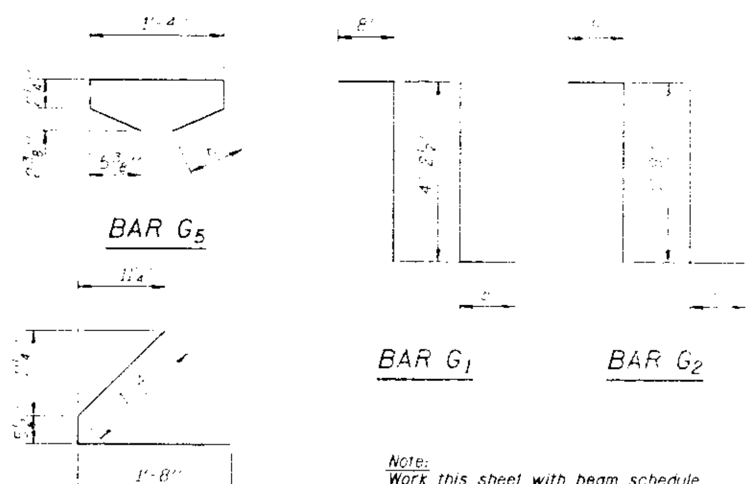


SECTION A-A

SECTION B-B



SECTION C-C



BAR G_5

BAR G_1

BAR G_2

BAR G_4

Note:
Work this sheet with beam schedule on sheet 43b

FOR ERECTION ONLY

* BAR LIST

Bar	No.	Size	Length	Shape
G_1	Δ	#5	5'-6	
G_2	[illegible]	#Δ	4'	
G_3	Δ	#7	Δ	
G_4	48	#3	3'-5½	
G_5	Δ	#3	2'-6	

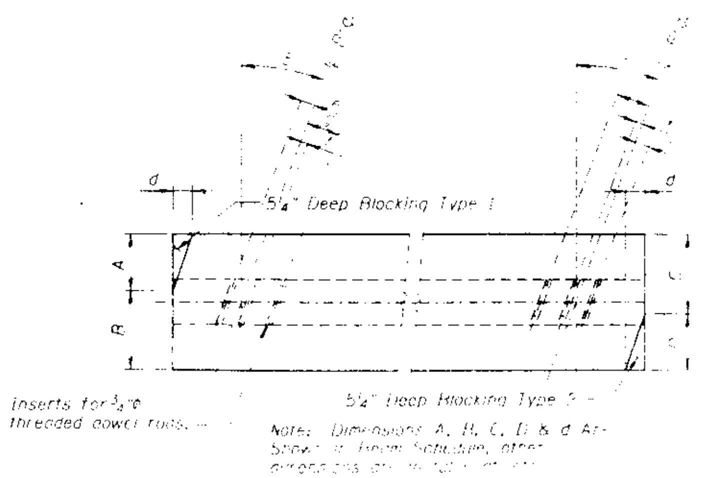
* For one beam only
Δ See Schedule

BILL OF MATERIAL

Item	Unit	Total
Erecting Precast [illegible]		
Prestressed Concrete I-Beams 48"	[illegible]	

INSERT LOCATION TABLE

	South End				North End			
	angle	inch	inch	inch	angle	inch	inch	inch
[illegible]	[illegible]	1½	-	5½	[illegible]	¾	-	[illegible]
[illegible]	[illegible]	1½	-	5½	[illegible]	¾	-	[illegible]
N12.8	[illegible]	¾	-	6¼	1°51'	1½	-	5½
N12.9	[illegible]	¾	-	6¼	1°51'	1½	-	5½
[illegible]	[illegible]	1½	-	5½	31°05'		2	[illegible]
[illegible]	[illegible]	1½	-	5½	31°05'	-	2	[illegible]
N24.11	31°05'	-	¾	10¼	31°0[illegible]	-	1	8
N24.12	[illegible]	-	¾	10¼	[illegible]		1	[illegible]
[illegible]	[illegible]			8	[illegible]	-	1	[illegible]
[illegible]	[illegible]	-		8	[illegible]		1	[illegible]
[illegible]	[illegible]	-		[illegible]	[illegible]	-	1	[illegible]
[illegible]	[illegible]			8	[illegible]			[illegible]



PLAN OF GIRDERS @ PIERS 10, 11, 23 & 24

NOTES

Insert for ¾"Φ threaded dowel rods are to be two strut, coil type for I-Beam Webs and single coil, flared loop type for I-Beam Bottom Flanges.

Prestressing steel shall be non-galvanized high strength, low relaxation 7 wire strand, Grade [illegible]

The nominal diameter shall be [illegible] and the nominal cross section [illegible] shall be [illegible]

Non-prestressing steel shall conform to AASHTO [illegible] M [illegible] M-53 Grade [illegible]

Steel for lifting loops shall be non-deformed bars fy=40,000 [illegible]

Required release strength, f'ci, shall be 5,000 [illegible]

48" PRESTRESSED BEAM DETAILS

[illegible] ASHLAND AVENUE

COOK COUNTY

STATION [illegible]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

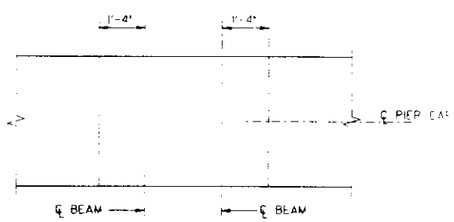
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	443	234B
		ILLINOIS		

SHEET NO. 43a
22 SHEETS

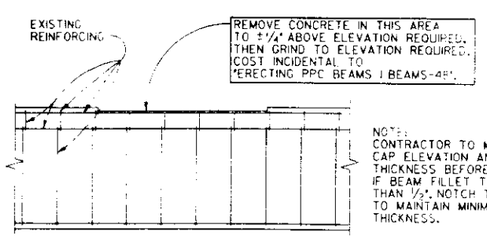
* 050512-2B, 3-H, 6-P, 400HB, 401HB, 450, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439R-5

48" DEEP PRECAST PRESTRESSED CONCRETE I-BEAM SCHEDULE

I-BEAM NUMBER	QUANTITY	LENGTH ℄ BRG-℄ BRG	INSERT SOUTH	INSERT NORTH	BLOCKING OF GIRDER FLANGES SOUTH BRG TYPE	SOUTH BRG A	SOUTH BRG B	SOUTH BRG d	NORTH BRG TYPE	NORTH BRG C	NORTH BRG D	NORTH BRG d	G1 BARS SPACING	G1 BARS NO.	G2 BARS SIZE	G3 BARS NO.	G3 BARS LENGTH	G5 BARS NO.	STRANDS STRAIGHT	STRANDS DRAPED	STRANDS TOTAL	STRANDS LOCATION AT ℄ ROW 1	2	3	4	5	6	7	8	STRANDS LOCATION AT END ROW 1	2	3	4	5	6	7	8	5T	4T	3T	2T	1T	HOLD DOWN POINT FROM ℄	BEARING TYPE NORTH	BEARING TYPE SOUTH	DEAD LOAD DEFLECTION (DUE TO DECK WEIGHT ONLY) 0.25y	0.50y	REMARKS
N1.1	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	FIXED	10-b	3/8"	9/16"	
N1.2	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	FIXED	10-b	3/8"	9/16"	
N2.1	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	10-b	FIXED	3/8"	9/16"	
N2.2	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	10-b	FIXED	3/8"	9/16"	
N3.10	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	FIXED	10-b	3/8"	9/16"	
N3.11	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	FIXED	10-b	3/8"	9/16"	
N4.10	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14½ SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	FIXED	10-b	3/8"	9/16"	
N4.11	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14½ SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	10-a	FIXED	3/8"	9/16"	
N5.10	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14½ SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	10-a	FIXED	3/8"	9/16"	
N5.11	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14½ SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	FIXED	10-a	3/8"	9/16"	
N6.9	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14½ SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	FIXED	10-a	3/8"	9/16"	
N6.10	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14½ SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	10-a	FIXED	3/8"	9/16"	
N7.9	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14½ SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	10-a	FIXED	3/8"	9/16"	
N7.10	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14½ SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	FIXED	10-a	3/8"	9/16"	
N8.9	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	FIXED	10-a	3/8"	9/16"	
N8.10	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2										2	7'-6"	10-a	FIXED	3/8"	9/16"	
N10.7	1	49'-3"	24'-8"	-					2	10¾"	7¼"	3"	12 SP @ 23½"(-)	54	#4	4	50'-7"	51	10	-	10	4	6							4	6												10-a	FIXED	10-a	1/8"	3/16"	
N10.8	1	50'-11"	31'-0"	-					2	10¾"	7¼"	3"	12 SP @ 24"(+)	54	#4	4	52'-3"	53	10	-	10	4	6							4	6												FIXED	10-a	1/8"	3/16"	
N12.8	1	53'-7"	11'-7"	21'-0"	1	7¼"	10¾"	3"					13 SP @ 23½"(+)	58	#4	4	54'-11"	55	10	-	10	4	6							4	6												FIXED	10-a	1/8"	3/16"	
N12.9	1	51'-10"	-	24'-0"	1	7¼"	10¾"	3"					12 SP @ 24"(+)	54	#4	4	53'-2"	54	10	-	10	4	6							4	6												FIXED	10-a	1/8"	3/16"	
N13.7	1	30'-1"	-	-									7 SP @ 23½"(+)	34	#4	4	31'-5"	32	10	-	10	4	6							4	6												FIXED	10-a	1/8"	3/16"	
N13.8	1	30'-1"	-	-									7 SP @ 23½"(+)	34	#4	4	31'-5"	32	10	-	10	4	6							4	6												FIXED	10-a	0"	0"	
N14.8	1	66'-2"	22'-0"	22'-0"									4 SP @ 20", 12½ SP @ 24"(+)	72	#5	8	35'-6"	68	12	2	14	10	4							10	2										2	6'-8"	10-a	FIXED	5/16"	5/8"	
N14.9	1	66'-2"	22'-0"	22'-0"									4 SP @ 20", 12½ SP @ 24"(+)	72	#5	8	35'-6"	68	12	2	14	10	4							10	2										2	6'-8"	10-a	FIXED	5/16"	5/8"	
N15.8	1	66'-5"	22'-1"	22'-1"									4 SP @ 20", 13 SP @ 23½"(+)	74	#5	8	35'-7"	68	12	2	14	10	4							10	2										2	6'-8"	FIXED	10-a	5/16"	3/8"	
N15.9	1	66'-5"	22'-1"	22'-1"									4 SP @ 20", 13 SP @ 23½"(+)	74	#5	8	35'-7"	68	12	2	14	10	4							10	2										2	6'-8"	FIXED	10-a	5/16"	3/8"	
N16.8	1	65'-0"	21'-9"	21'-9"									15½ SP @ 24"(+)	68	#5	8	34'-11"	67	12	2	14	10	4							10	2										2	6'-6"	10-a	FIXED	1/4"	3/8"	
N16.9	1	65'-0"	21'-9"	21'-9"									15½ SP @ 24"(+)	68	#5	8	34'-11"	67	12	2	14	10	4							10	2										2	6'-6"	10-a	FIXED	1/4"	3/8"	
N17.9	1	70'-10"	23'-8"	23'-8"									17 SP @ 24"(+)	74	#5	8	37'-10"	73	12	2	14	10	4							10	2										2	7'-1"	10-a	FIXED	5/16"	1/2"	REQUIRED FOR STAGE 2 CONSTRUCTION
N21.5	1	57'-6"	19'-2"	19'-2"									14 SP @ 23½"(+)	62	#4	4	58'-10"	59	12	-	12	4	4	2	2					4	4	2	2										-	FIXED	10-b	3/16"	1/4"	
N23.5	1	49'-5"	-	26'-10"					2	13"	5"	3"	12 SP @ 23½"(-)	54	#4	4	50'-9"	51	10	-	10	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	
N23.6	1	51'-1"	20'-6"	10'-1"					2	13"	5"	3"	12 SP @ 24"(+)	54	#4	4	52'-5"	53	10	-	10	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	
N24.11	1	79'-8"	26'-7"	26'-7"	1	6"	12"	4"	2	11½"	6½"	4"	20 SP @ 23"(+)	86	#5	8	42'-3"	81	14	2	16	10	6							10	4										2	8'-0"	-	FIXED	10-b	7/16"	5/8"	
N24.12	1	79'-8"	26'-7"	26'-7"	1	6"	12"	4"	2	11½"	6½"	4"	20 SP @ 23"(+)	86	#5	8	42'-3"	81	14	2	16	10	6							10	4										2	8'-0"	-	FIXED	10-b	7/16"	5/8"	
N25.5	1	50'-2"	25'-1"	-	1	6½"	11½"	4"					12 SP @ 24"(-)	54	#4	4	51'-6"	52	10	-	10	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	
N25.6	1	50'-2"	25'-1"	-	1	6½"	11½"	4"					12 SP @ 24"(-)	54	#4	4	51'-6"	52	10	-	10	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	REQUIRED FOR STAGE 2 CONSTRUCTION
N25.9	1	50'-4"	25'-2"	-	1	6½"	11½"	4"					12 SP @ 24"(-)	54	#4	4	51'-8"	52	10	-	10	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	REQUIRED FOR STAGE 2 CONSTRUCTION
N25.10	1	50'-4"	25'-2"	-	1	6½"	11½"	4"					12 SP @ 24"(-)	54	#4	4	51'-8"	52	10	-	10	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	



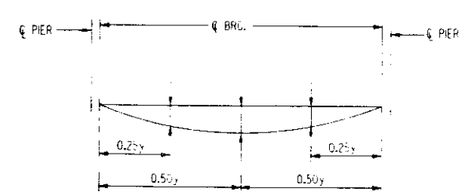
PLAN



NOTE:
CONTRACTOR TO MEASURE TOP OF PIER CAP ELEVATION AND CHECK BEAM FILLET THICKNESS BEFORE ERECTING BEAMS. IF BEAM FILLET THICKNESS IS LESS THAN 1/2", NOTCH TOP OF PIER CAP TO MAINTAIN MINIMUM OF 1/2" FILLET THICKNESS.

ELEVATION

PIER STEP REMOVAL



DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE SLAB ONLY)

NOTE:

THE DEFLECTIONS SHOWN ON THIS SCHEDULE 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 "TOP OF SLAB ELEVATIONS" SHEETS 7 THRU 24.

WORK THIS SHEET WITH BEAM DETAILS ON SHEET 43a AND 43c.

FOR ERECTION ONLY

STANLEY CONSULTANTS

BEAM SCHEDULE

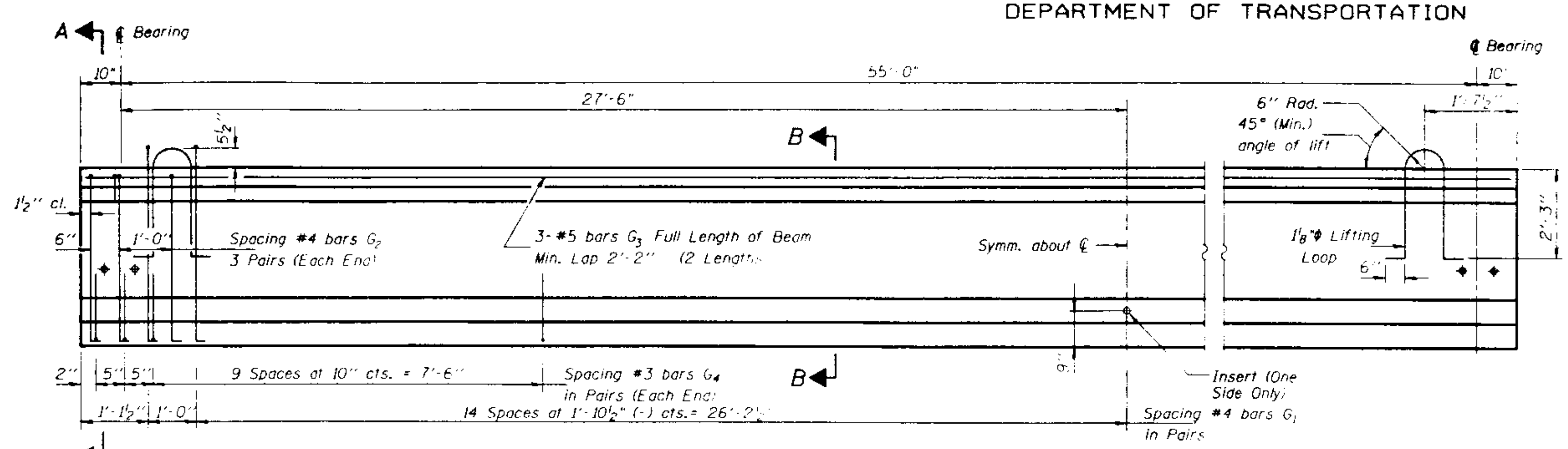
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+44

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	234C
		ILLINOIS		

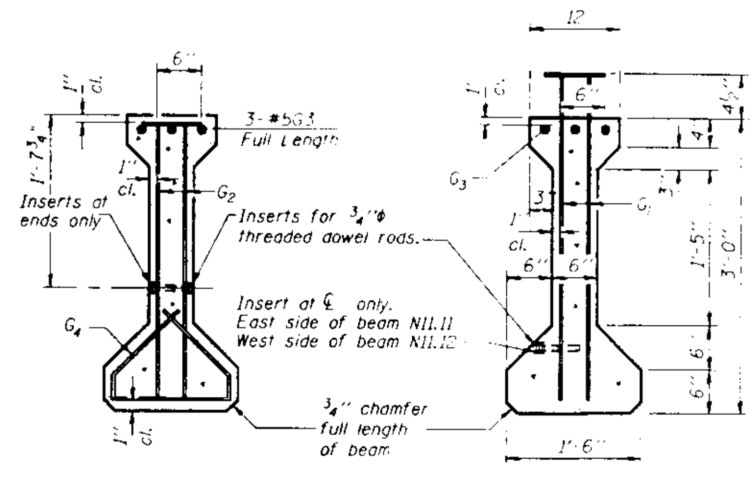
SHEET NO. 43c
72 SHEETS

* 0505(2-2B, 3-H, 6-IP, 400HB, 404B, 450, 10506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439)R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

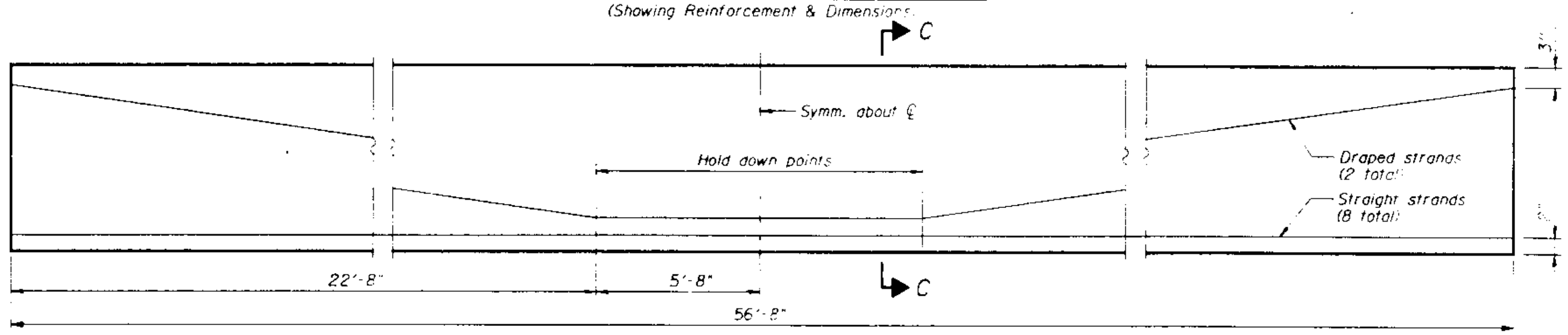


ELEVATION OF BEAMS N11.11 & N11.12
(Showing Reinforcement & Dimensions)

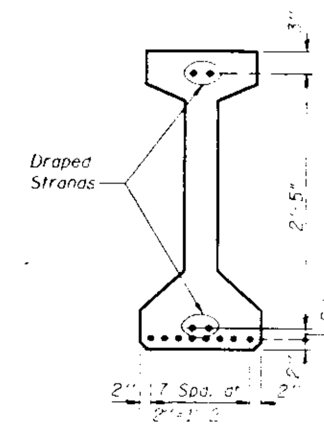


SECTION A-A

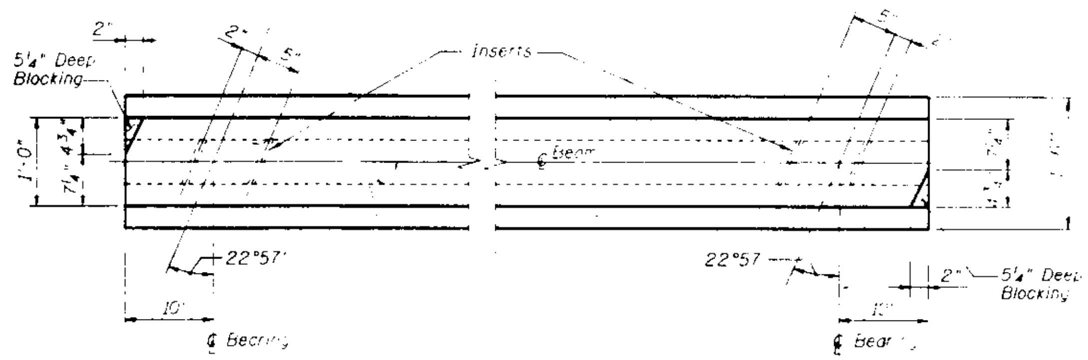
SECTION B-B



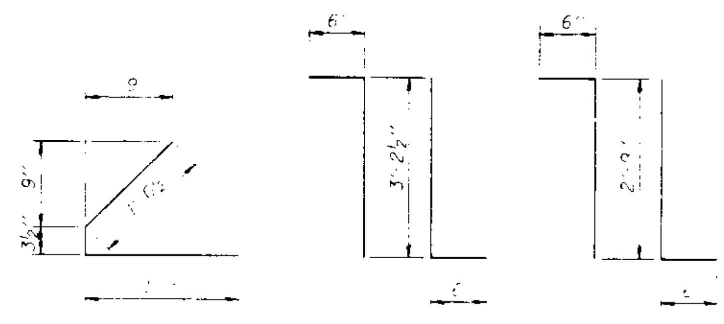
ELEVATION OF BEAMS N11.11 & N11.12
(Showing Prestressing Steel)



SECTION C-C



TOP PLAN AT ENDS OF BEAMS



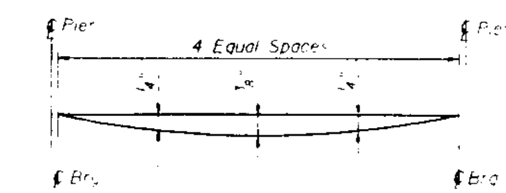
BAR G_4 BAR G_1 BAR G_2

FOR ERECTION ONLY

* BAR LIST

Bar	No.	Size	Length	Shape
G_1	62	#4	4' 2½"	
G_2	12	#4	[illegible]	
G_3	6	#5	29' 3"	
G_4	48	#3	2' 7"	

* For one beam only



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.

NOTES

Insert for ¾"Φ threaded dowel rods are to be two strut, coil type for I-Beam Webs and single coil, flared loop type for I-Beam Bottom Flange.

Prestressing steel shall be non-galvanized high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Non-prestressing steel shall conform to AASHTO designation M-31, M 42 or M-53 Grade 60.

Steel for lifting loops shall be non-deformed bars f'y=40,000 psi.

Required release strength, f'ci, shall be 5000 psi.

Details are for beams N11.11 and N11.12.

BILL OF MATERIAL

Item	Unit	Total
Erecting Precast Prestressed Concrete I-Beam, 36"	Lin. Ft.	[illegible]

36" PRESTRESSED BEAM DETAILS

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 489+4-

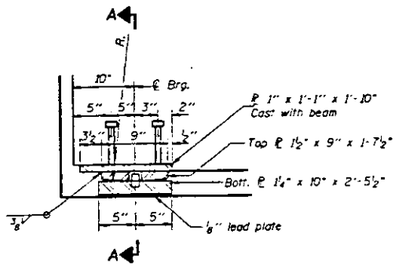
STANLEY CONSULTANTS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	234 D
		ILLINOIS		

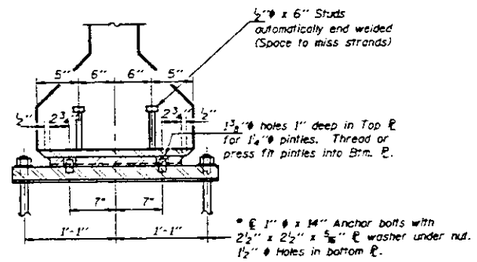
SHEET NO. 43d
72 SHEETS

* 050512-2B, 3-H, 6-P, 400HB, 40HB, 45B, 0506-45B, 0605-402HB, 0606-403HB, 0707-404HB, 439R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION AT ABUT. OR PIER

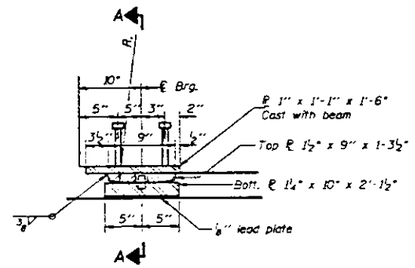


SECTION A-A

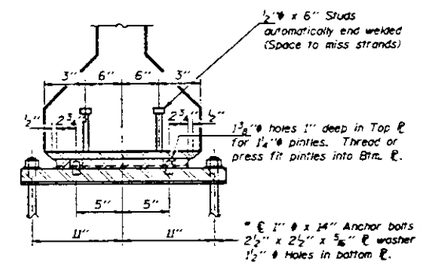
* Anchor Bolts Shall Be Drilled And Grouted In Place After Beams Have Been Erected.

See sheet 63 of 72 for anchor bolt installation.

FIXED BEARING
(See Beam Schedules, Sht #43b for location)
(38 Required)



SECTION AT PIER #11

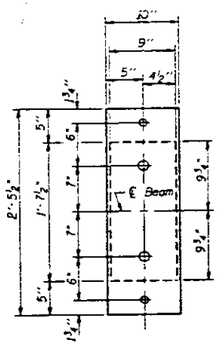


SECTION A-A

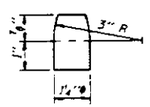
* Anchor Bolts Shall Be Drilled And Grouted In Place After Beams Have Been Erected.

See sheet 63 of 72 for anchor bolt installation.

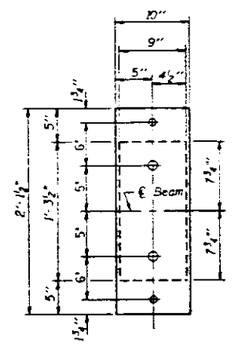
FIXED BEARING
(Span 11 North End For 36" Prestressed Beams)
(2 Required)



PLAN OF
TOP & BOTTOM PLATES



PINTLE



PLAN OF
TOP & BOTTOM PLATES

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Lump Sum	*

* Includes 1540 Lbs.

BEARING DETAILS

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 489+49

STANLEY CONSULTANTS

/usr/9088608/mnt/908843d.dgn $$$DATE$$$

2 Rev. 11-8-93

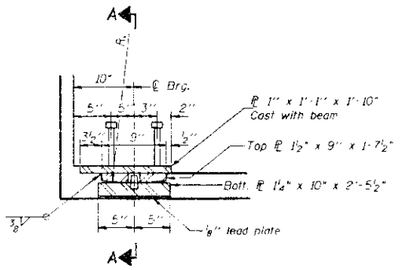
1 REV. 9-30-93

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET No.
F.A.I. 90/94	*	COOK	443	234b
		ILLINOIS		

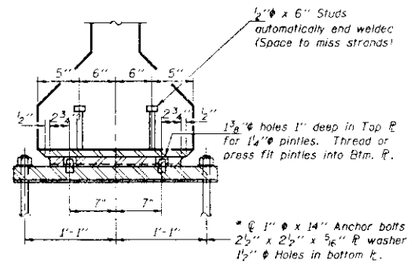
SHEET NO. 43b
72 SHEETS

* 050542-2B, 3-IH, 6-IP, 400HB, 40HB, 450, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 4391R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION AT ABUT. OR PIER

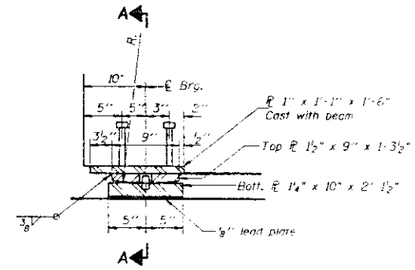


SECTION A-A

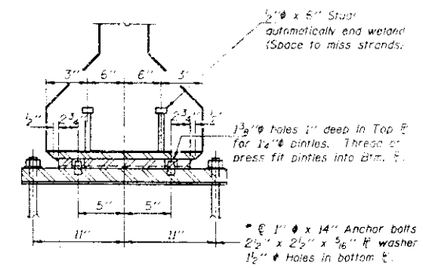
* Anchor Bolts Shall Be Drilled And Grouted In Place After Beams Have Been Erected.

See sheet 63 of 72 for anchor bolt installation.

** FIXED BEARING
(See Beam Schedules, Sht #43b for location)
(38 Required)



SECTION AT PIER #11



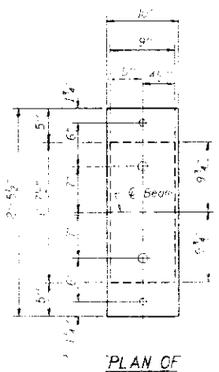
SECTION A-A

* Anchor Bolts Shall Be Drilled And Grouted In Place After Beams Have Been Erected.

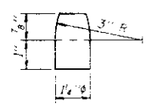
See sheet 63 of 72 for anchor bolt installation.

** FIXED BEARING
(Span 11 North End For 36" Prestressed Beams)
(2 Required)

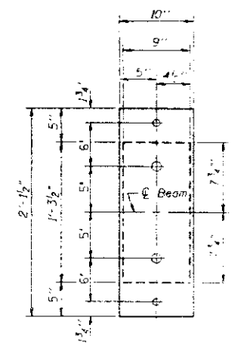
** Cost of Installing Fixed Bearings and Anchor Bolts are incidental to cost of "Erecting Structural Steel".



PLAN OF
TOP & BOTTOM PLATES



PINTLE



PLAN OF
TOP & BOTTOM PLATES

BILL OF MATERIAL

Item	Unit	Total
Furnishing and erecting structural steel	1 Lump Sum	*

* Includes 7540 Lbs.

BEARING DETAILS

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+45

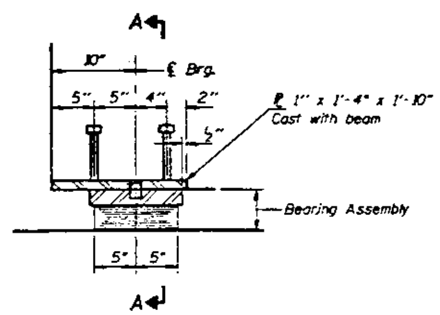
STANLEY CONSULTANTS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	234E
		ILLINOIS		

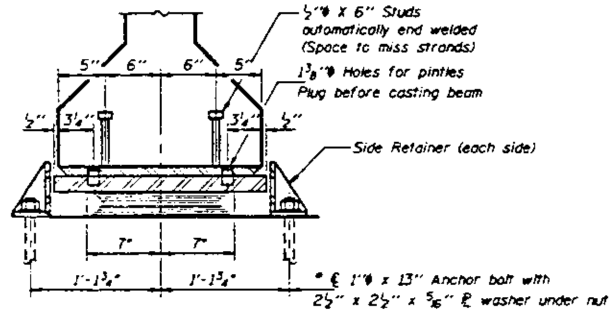
SHEET NO. 43e
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439)R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION AT PIERS



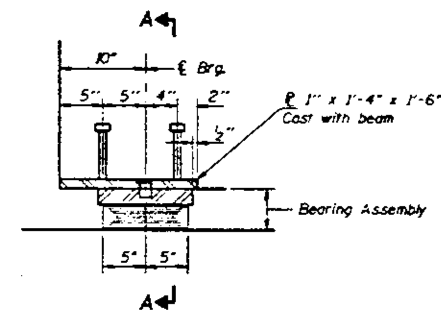
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

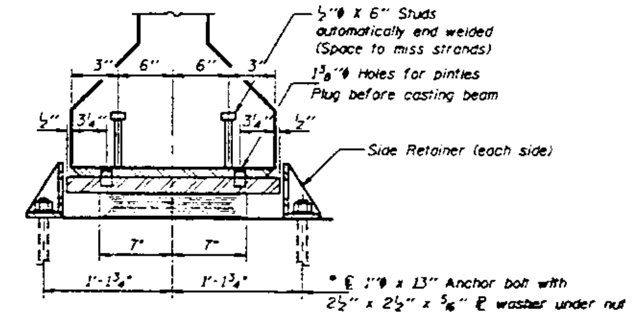
(Size 10-a, 10-b, see Beam Schedules Sht 43c for location)

* Notes: After beams have been erected holes of expansion bearings shall be drilled and anchor bolts grouted in place.

See sheet 63 of 72 for anchor bolt details.



SECTION AT PIER 10



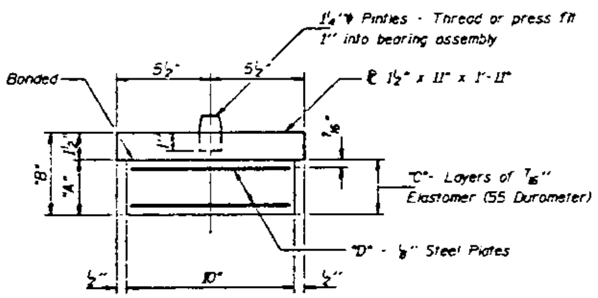
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

(Size 10-aa; Span 11 South End For 36" Prestressed Beams)
(2 Required)

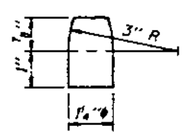
* Note: After beams have been erected holes of expansion bearings shall be drilled and anchor bolts grouted in place.

See sheet 63 of 72 for anchor bolt detail.



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



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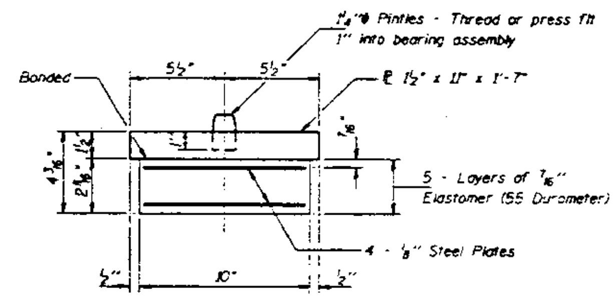
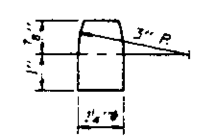


BEARING ASSEMBLY

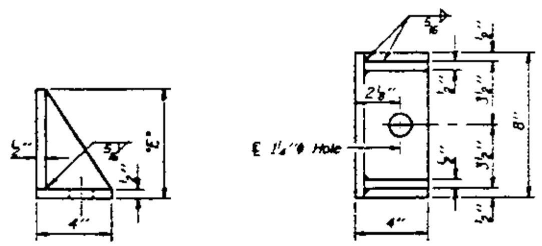
Note: Shim plates shall not be placed under Bearing Assembly.



PINTLE

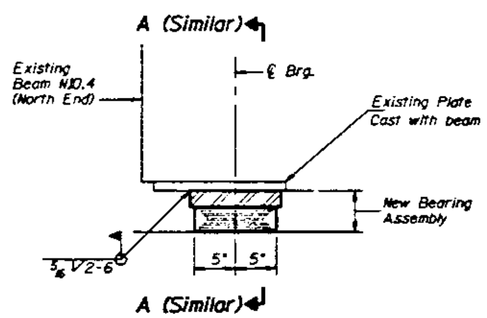
BILL OF MATERIAL

Bearing Size	A	B	C	D	E	No. Req'd
10-a	$2\frac{1}{16}$"	$4\frac{3}{16}$"	5	4	5"	24
10-b	$3\frac{1}{4}$"	$4\frac{3}{4}$"	6	5	$5\frac{1}{4}$"	15



SIDE RETAINER

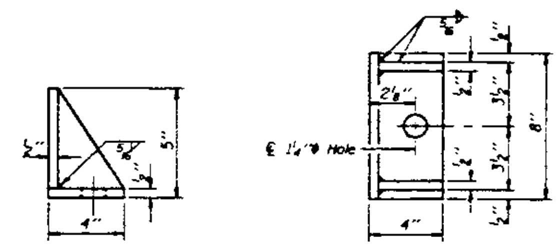
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(78 Required)



SECTION AT PIER 10

TYPE I ELASTOMERIC EXP. BRG. MODIFIED

(Size 10-a, For Beam N10.4)



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(4 Required)

BILL OF MATERIAL

Item	Unit	Total
Install Elastomeric Bearing Assembly Type I	Each	41
Furnishing and Erecting Structural Steel	Lump Sum	*

(Erecting Structural Steel includes Side Retainers and Anchor Bolts.)
* Includes 1350 Lbs

BEARING DETAILS

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

/usr/9088608/mnt/908843e.dgn ***DATE***

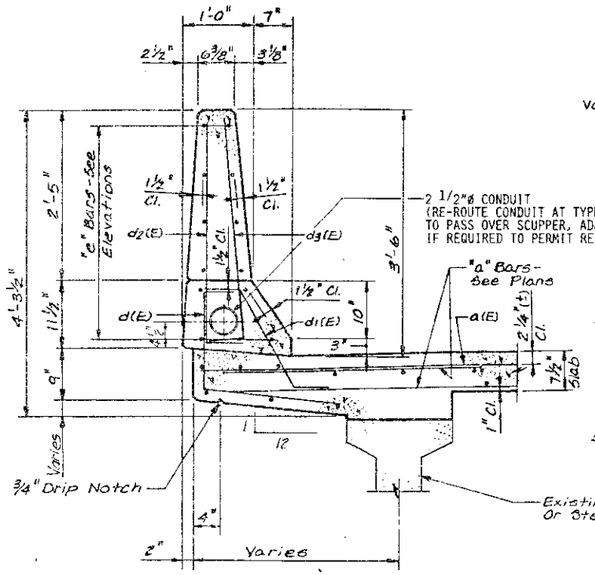
2 Rev. 11-8-93
1 REV. 9-30-93

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

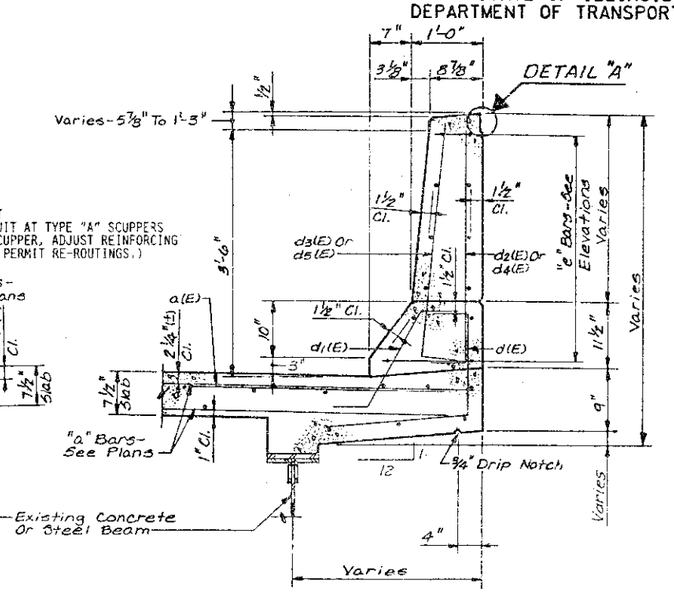
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	235
F. HY. A. REG. 4		ILLINOIS	FED. AID PROJECT	

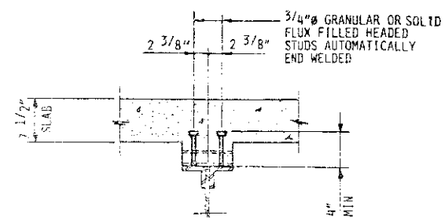
SHEET NO. 44
72 SHEETS



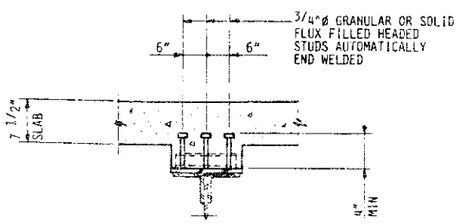
SECTION @ EAST PARAPET



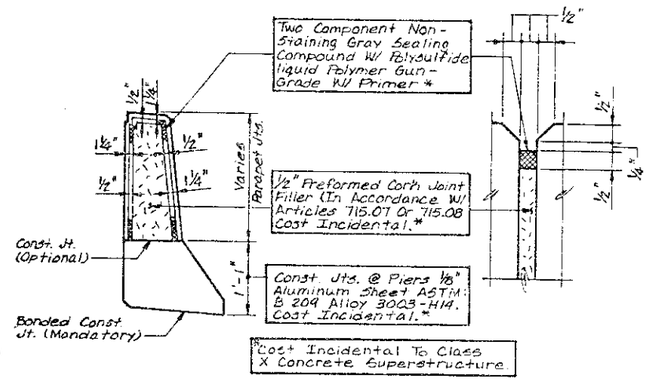
SECTION @ WEST PARAPET



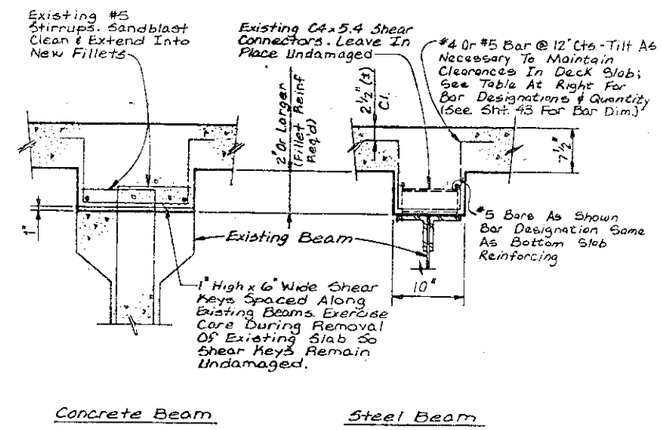
SHEAR STUD DETAILS FOR BEAMS



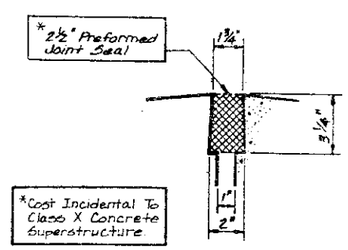
SHEAR STUD DETAILS FOR GIRDERS



PARAPET JOINT DETAILS



FILLET REINFORCING DETAILS



DETAIL A

BEAM FILLET REINFORCING TABLE

BEAM NUMBER	BAR QUANTITY	BAR NUMBER
N1.1-N1.17, N2.1-N2.17, N3.1-N3.16, N4.1-N4.11, N5.1-N5.16, N6.1-N6.15, N7.1-N7.15, N8.1-N8.12	78 EACH	s1
N10.1	34	s1
N10.3	39	s1
N10.4	41	s1
N10.5	45	s1
N10.6	49	s1
N11.1-N11.13	59 EACH	s6
N12.1	77	s2
N12.2	74	s2
N12.3	73	s2
N12.4	69	s2
N12.5	66	s1
N12.6	63	s1
N12.7	60	s1
N13.1-N13.4	33 EACH	s2
N13.5-N13.11	33 EACH	s1
N14.1-N14.4	69 EACH	s2
N14.5-N14.12	69 EACH	s1
N15.1-N15.3	69 EACH	s2
N15.4-N15.11	69 EACH	s1
N16.1-N16.11	66 EACH	s1
N17.1-N17.9	74 EACH	s1
N12.8	57	s1
N18.1	61	s1
N18.2, N18.4	61 EACH	s1
N18.3	61	s2
N18.5-N18.12	63 EACH	s3
G2B, G2A	216 EACH	s6
G2	107	s5
N19.1-N19.6	72 EACH	s3
N20.1-N20.8	57 EACH	s3
N21.1-N21.7	60 EACH	s3
N23.1	35	s1
N23.2	40	s1
N23.3	44	s1
N23.4	48	s1
N24.1	81	s2
N24.2	80	s2
N24.3-N24.4	79 EACH	s2
N24.5-N24.6	80 EACH	s1
N24.7-N24.9	82 EACH	s1
N24.10-N24.18	83 EACH	s1
N25.1	51	s2
N25.2	50	s2
N25.3	51	s1
N25.4-N25.14	53 EACH	s1
N10.2	27	s3
N10.7	53	s1
N10.8	57	s1
N10.9	61	s1
N10.10	65	s1
N10.11	69	s1
N12.9	55	s1
N12.10	52	s1
N12.11	50	s1
N12.12	47	s1
N17.10-N17.18	74 EACH	s3
N23.5	52	s1
N23.6	56	s1
N23.7	60	s1

NOTES:

CARE SHOULD BE TAKEN DURING REMOVAL OF EXISTING DECK TO MINIMIZE DAMAGE TO EXISTING CHANNEL SHEAR CONNECTORS AND EXISTING SHEAR STUDS. ANY EXISTING CHANNEL SHEAR CONNECTORS OR EXISTING SHEAR STUDS THAT ARE DAMAGED SHALL BE REPLACED WITH SHEAR STUDS AT CONTRACTOR'S EXPENSE.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

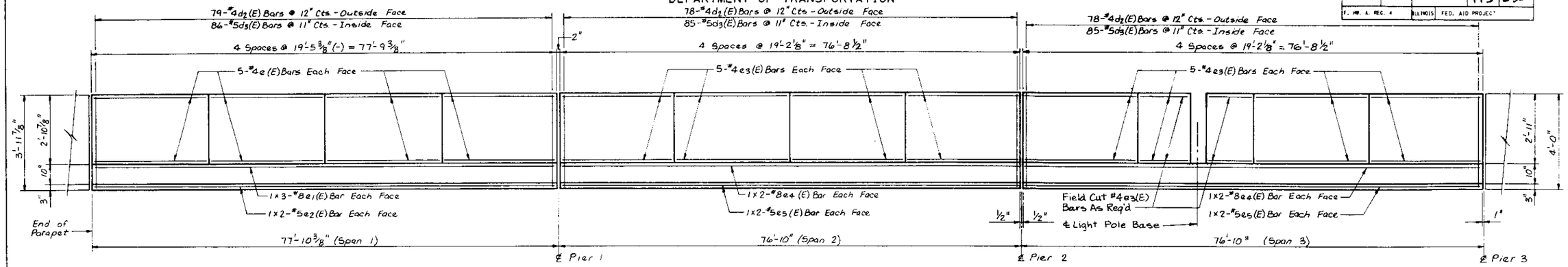
STATION 409+45

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

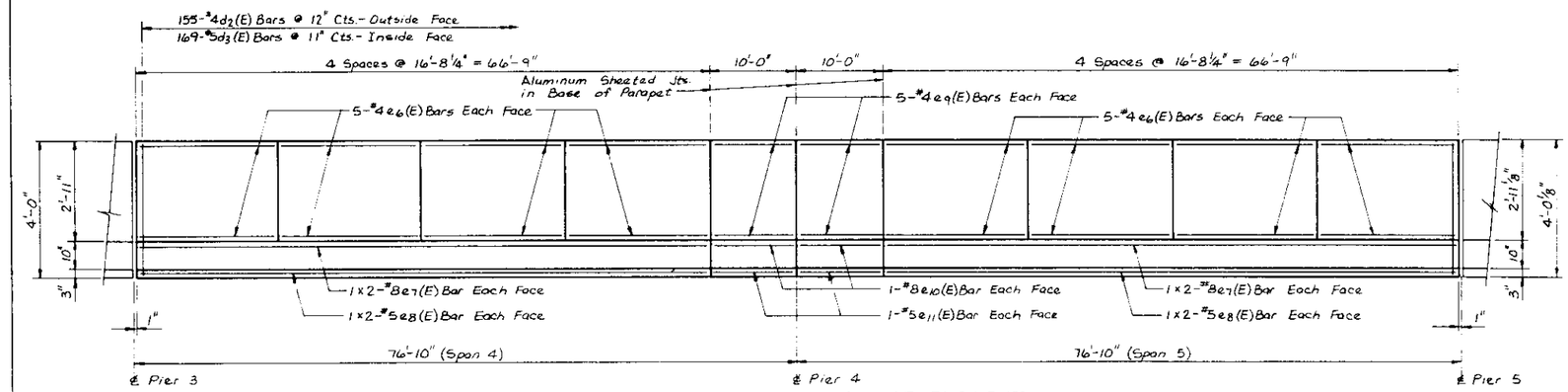
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	236
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

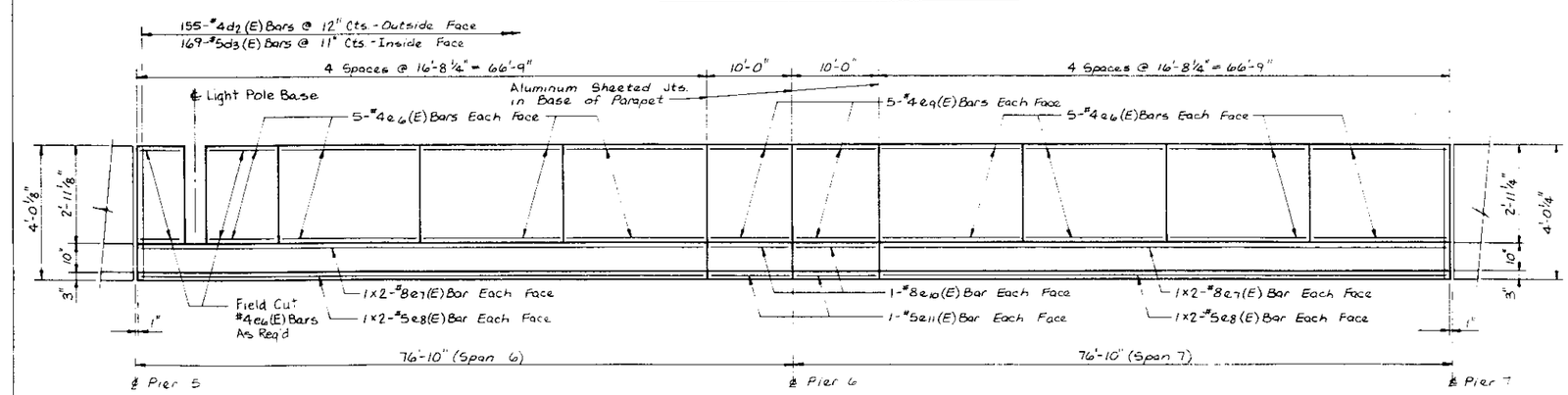
SHEET NO. 45
72 SHEETS



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:

1. SEE SHEET 44 FOR SUPERSTRUCTURE DETAILS.
2. SEE SHEET 43 FOR BILL OF MATERIAL.
3. MINIMUM LAP #8 BAR: 3'-6"
   MINIMUM LAP #5 BAR: 1'-9".

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE
SHEET 1 OF 3

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

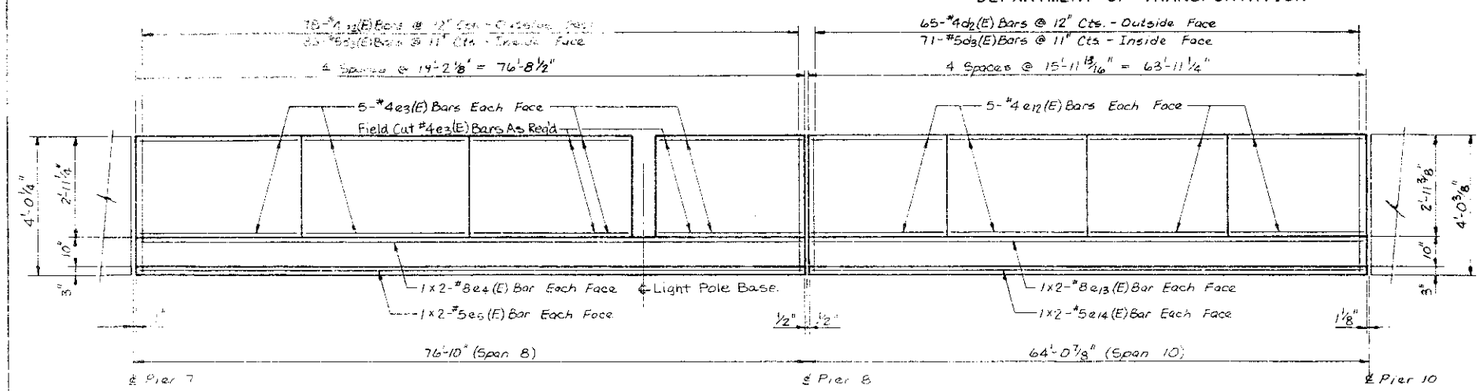
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	237
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 46
72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 45D, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



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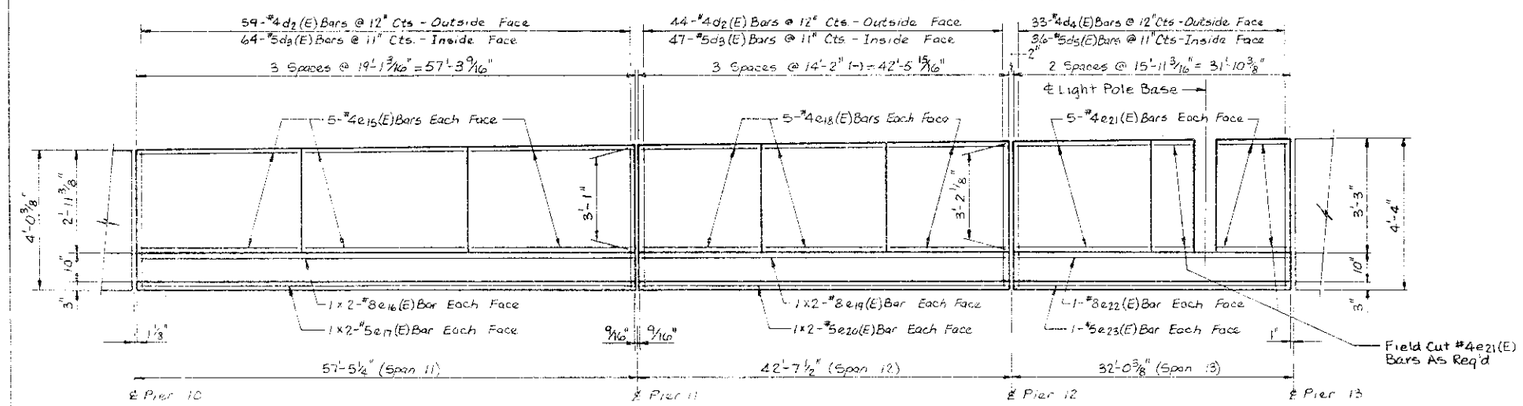
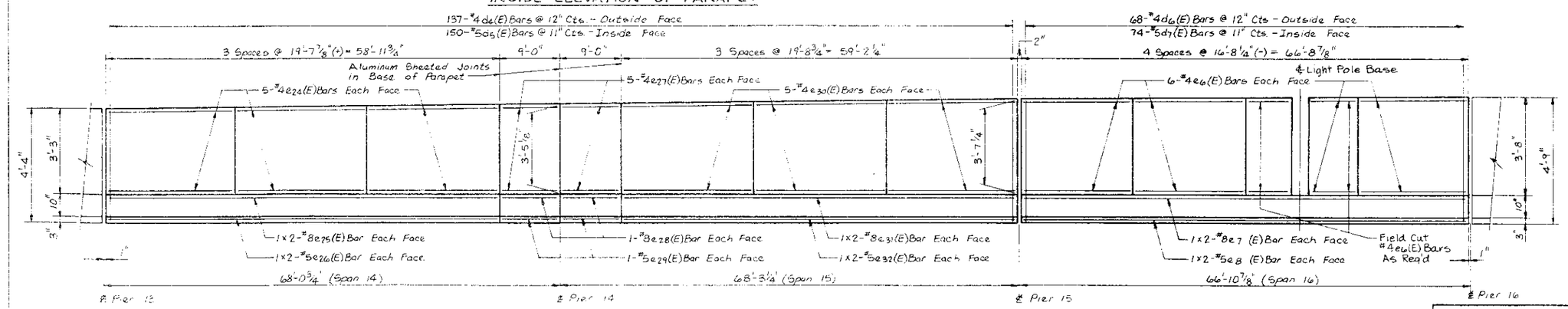


INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTE:

FOR NOTES SEE SHEET 45.

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE
SHEET 2 OF 3

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

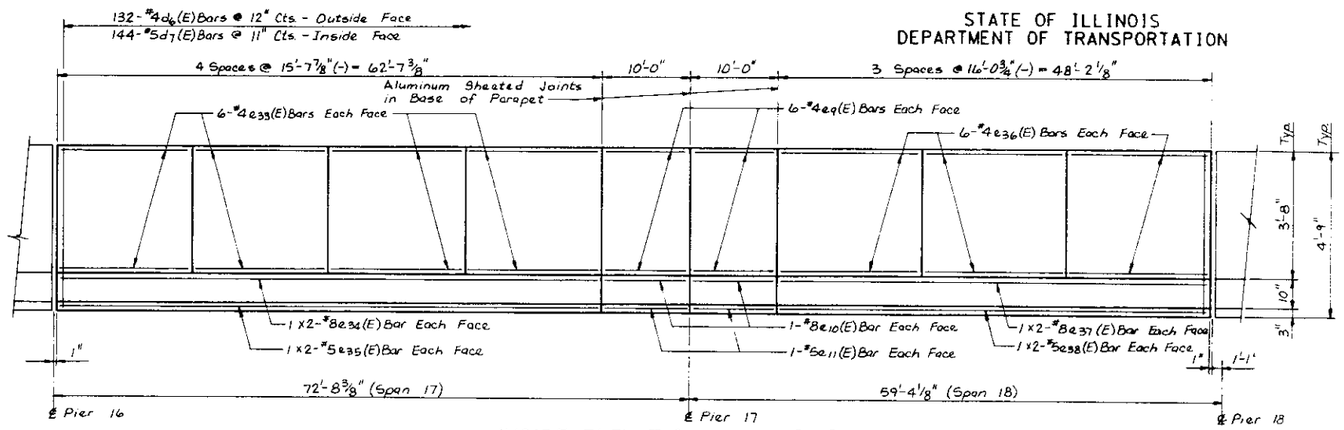
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

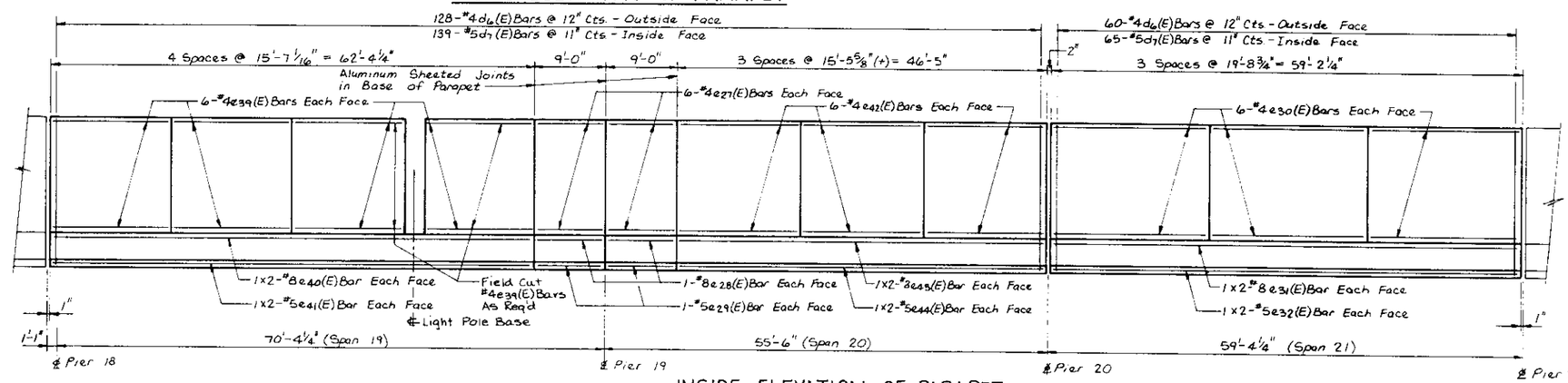
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	x		443	238
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 47
72 SHEETS

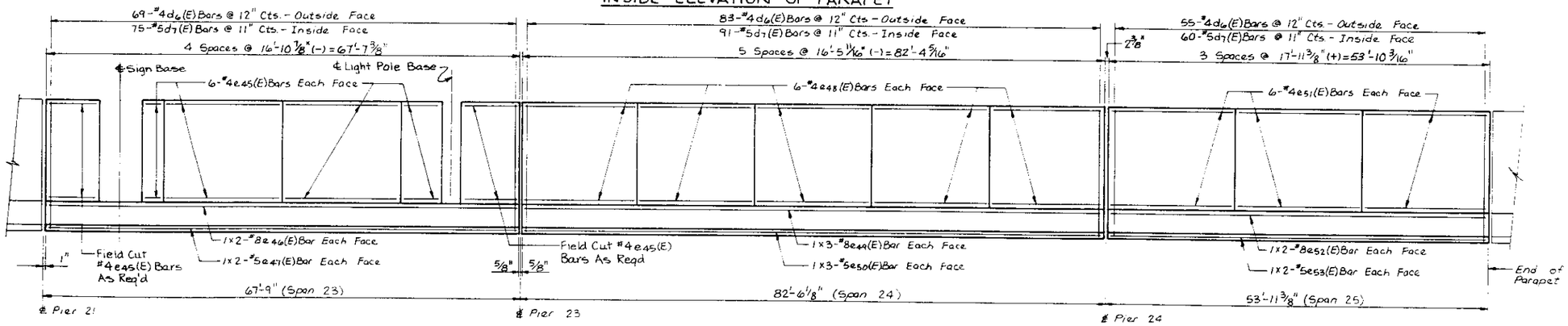
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTE:

FOR NOTES SEE SHEET 45.

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE
SHEET 3 OF 3

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

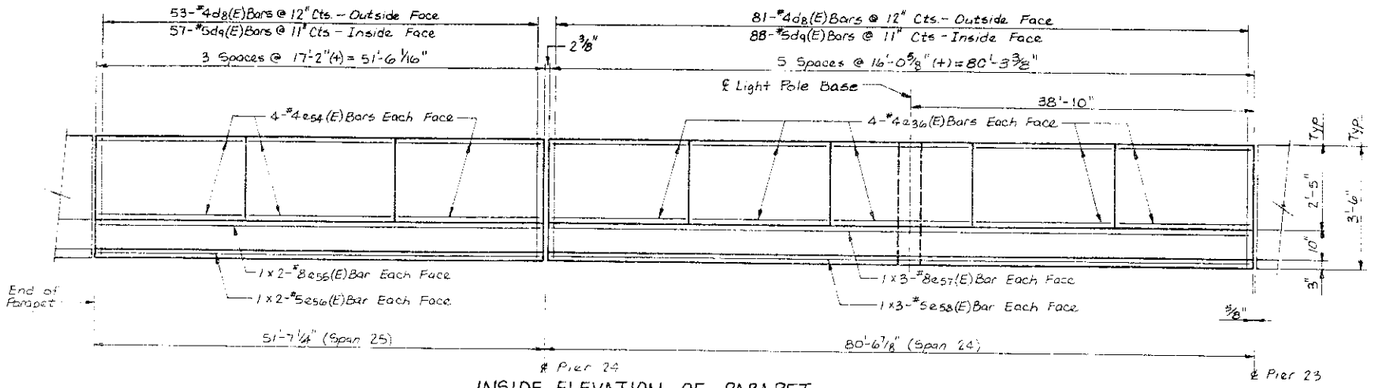
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

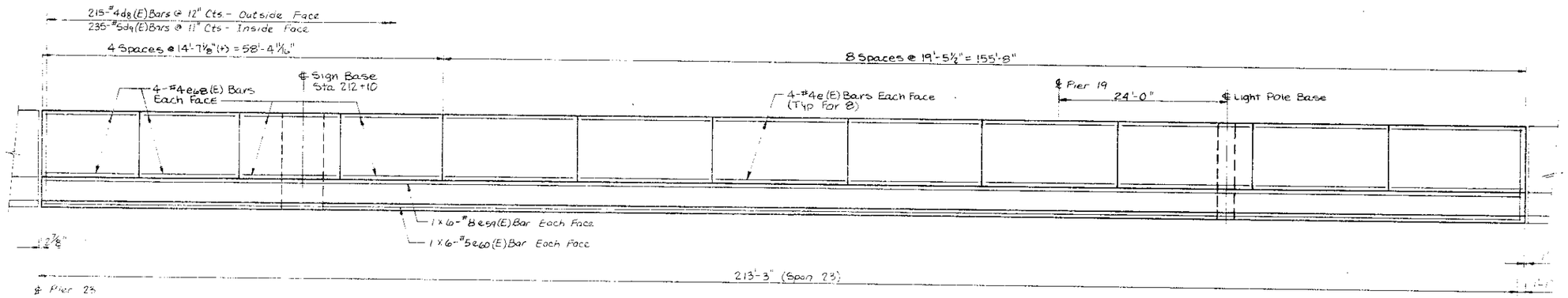
ROUTE NO.	SEC	COUN'T	TOTAL SHEETS	SHEET NO.
	X		443	239
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 48
72 SHEETS

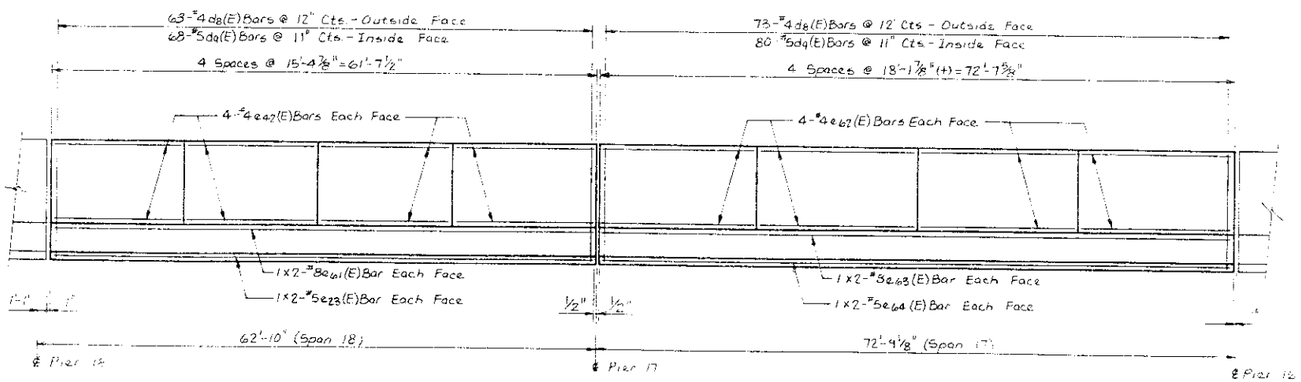
* 0505(2-28, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTE:
FOR NOTES SEE SHEET 45.

STANLEY CONSULTANTS

PARAPET DETAILS - EAST SIDE
SHEET 1 OF 3

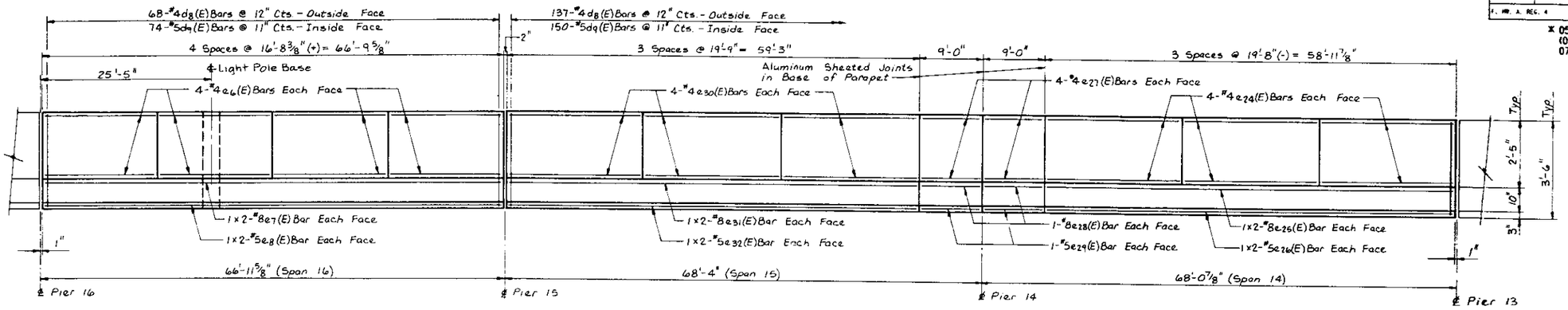
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	240
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 49
72 SHEETS

X 0505(2-28, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



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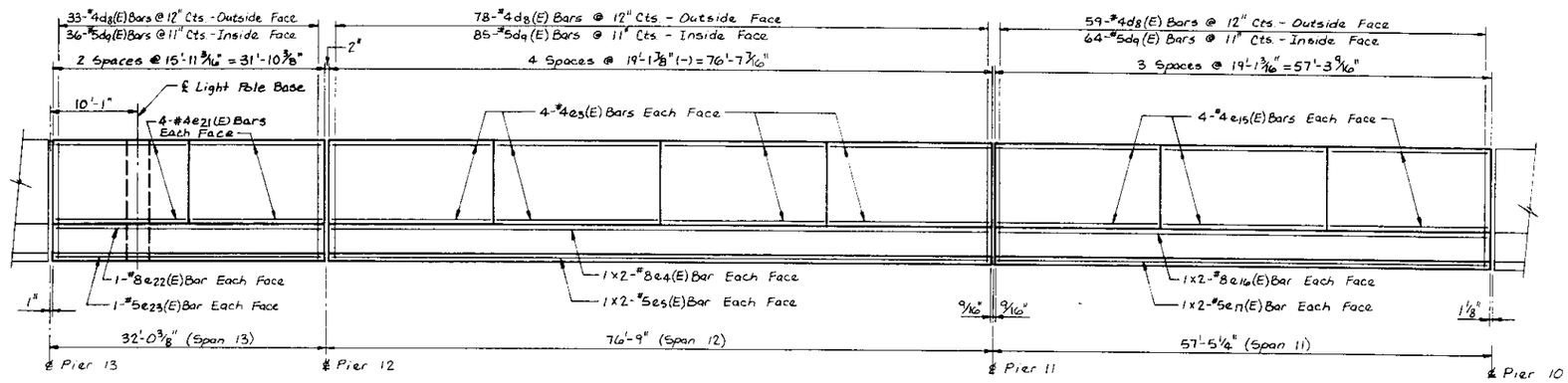

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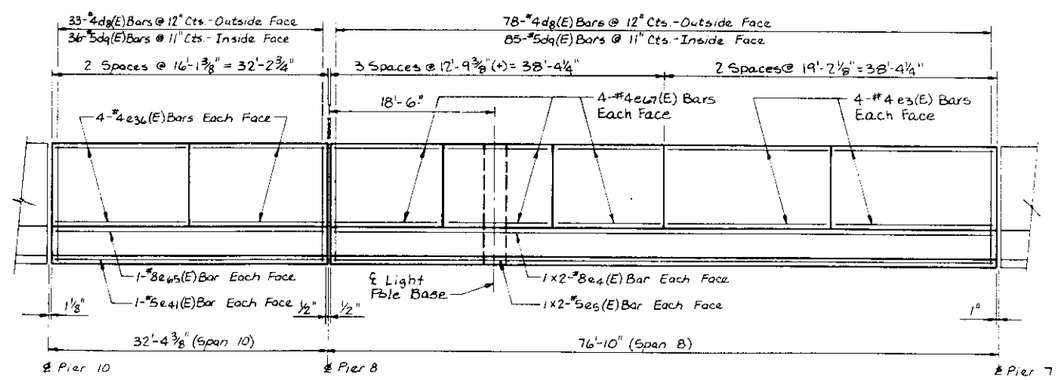


INSIDE ELEVATION OF PARAPET

NOTE:
FOR NOTES SEE SHEET 45.

STANLEY CONSULTANTS

PARAPET DETAILS - EAST SIDE
SHEET 2 OF 3

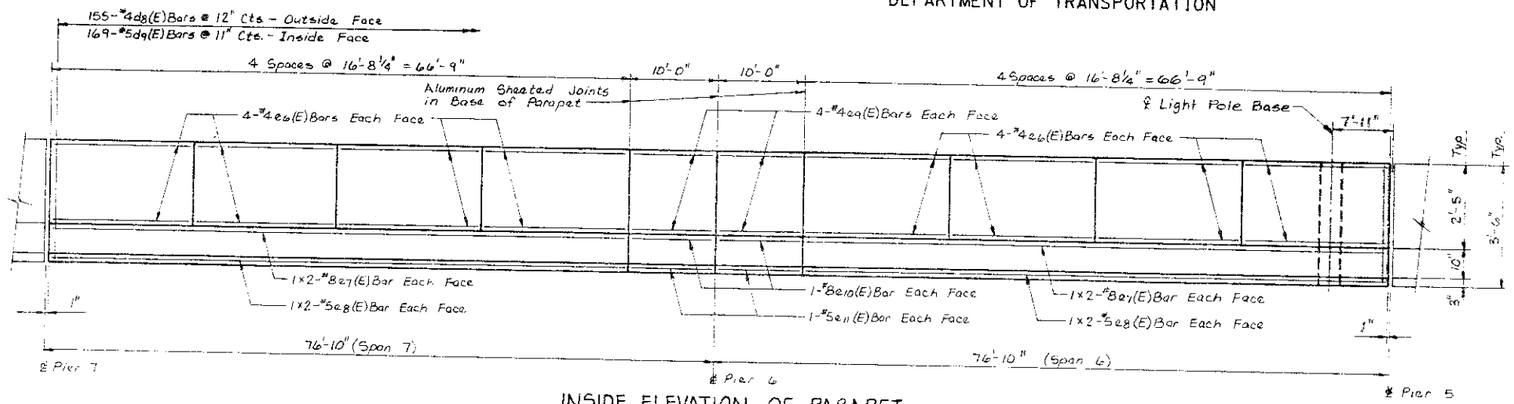
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

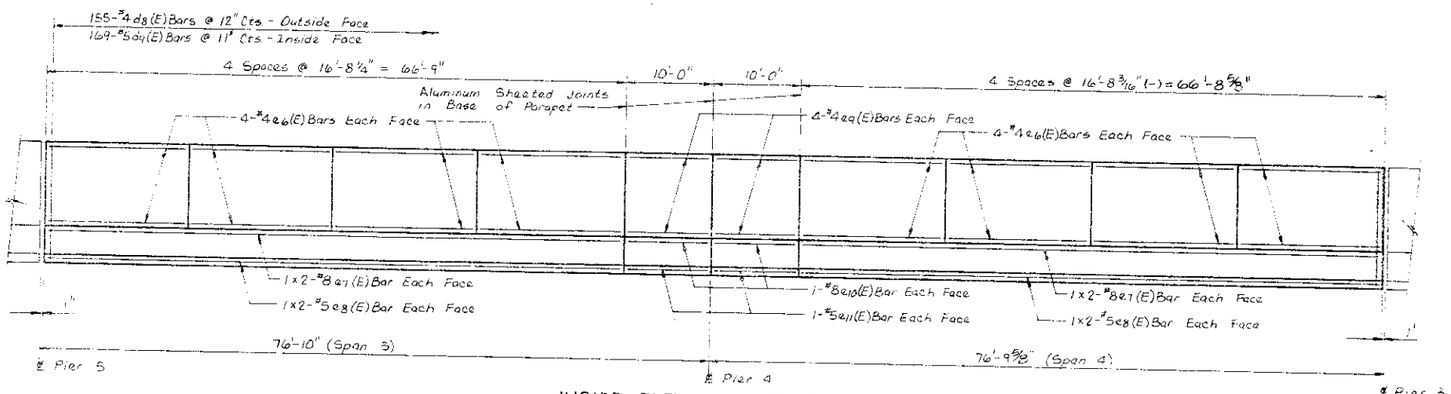
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	241
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 50
72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

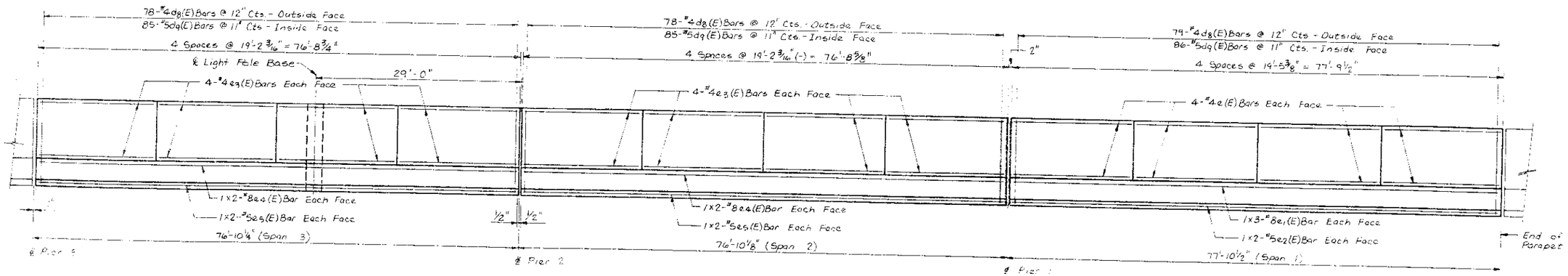


INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTE:
FOR NOTES SEE SHEET 45.



STANLEY CONSULTANTS

PARAPET DETAILS – EAST SIDE
SHEET 3 OF 3

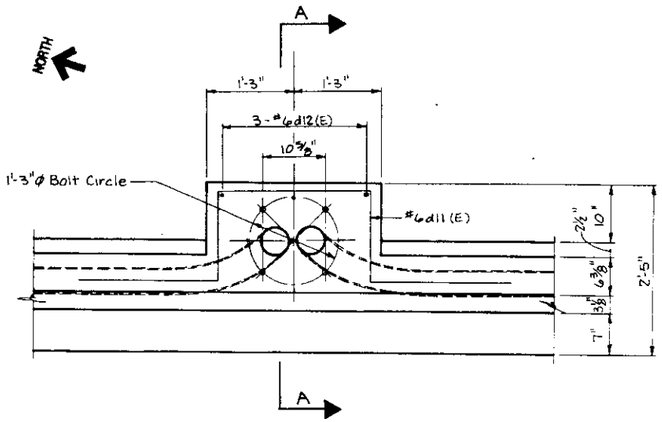
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

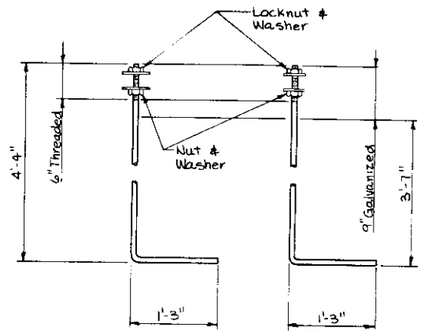
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	242
F. HR. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 51
72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



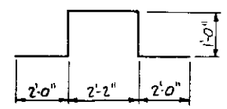
PLAN



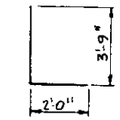
1"ϕ ANCHOR BOLTS (ASTM 687)

COST OF 1" DIA. ANCHOR BOLTS TO BE INCIDENTAL TO "CLASS X CONCRETE SUPERSTRUCTURE."

NOTE: PROVIDE 2 FLAT WASHERS, 1 REGULAR NUT & 1 LOCKNUT FOR EACH BOLT. ALL NUTS & WASHERS MUST BE GALVANIZED.



BAR d11 (E)



BAR d12 (E)

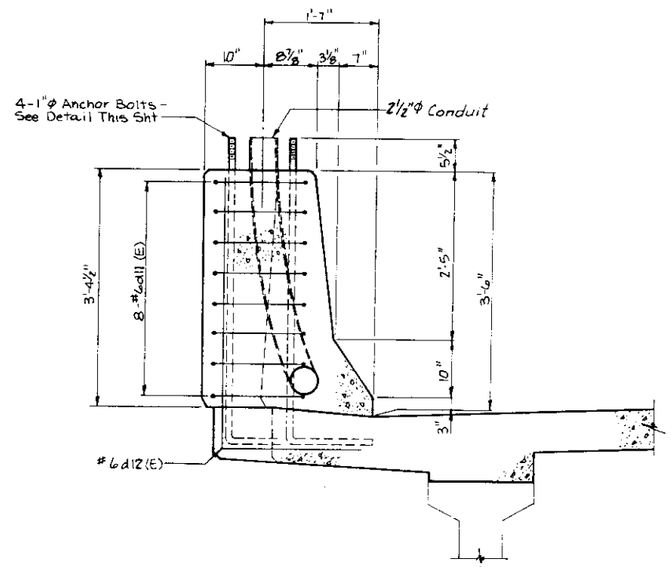
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d11(E)	56	#6	8'-2"	
d12(E)	21	#6	5'-9"	L
REINFORCING BARS (EPOXY COATED)			LBS.	870
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	2.5

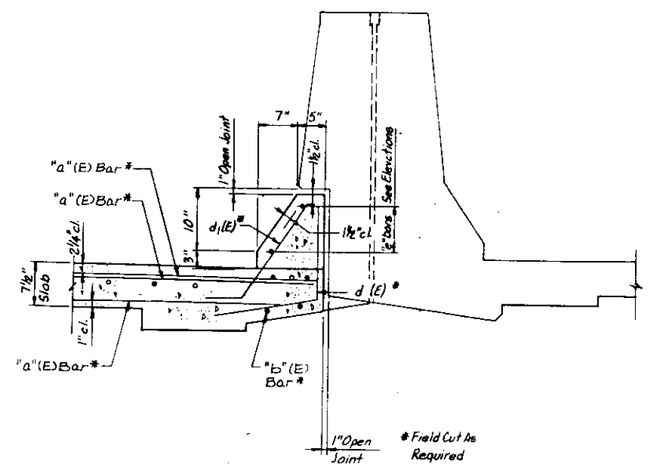
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED

BAR DIMENSIONS SHOWN ARE OUT TO OUT.

BILL OF MATERIAL INCLUDES 7 LIGHT POLE SUPPORTS.



SECTION A-A



SECTION B

For Location See Sheet 25

STANLEY CONSULTANTS

PARAPET MOUNTED LIGHT POLES

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

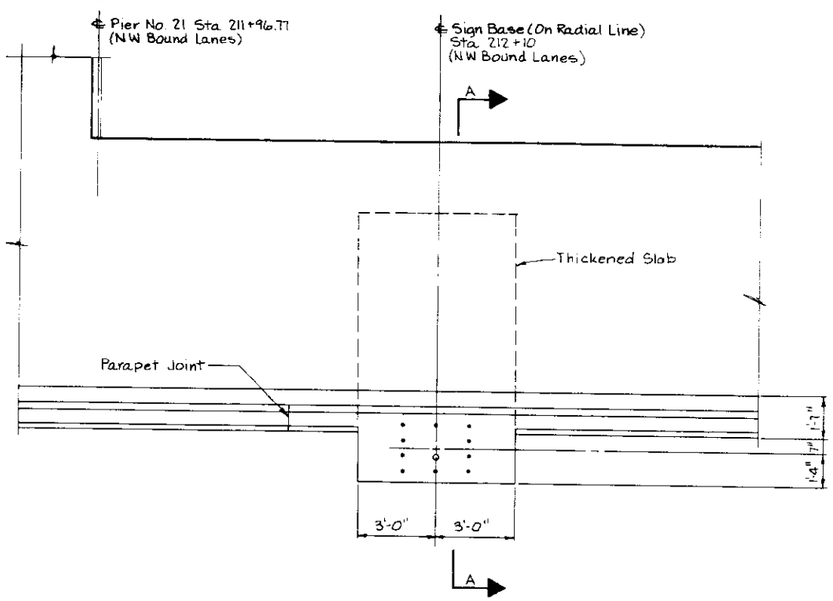
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

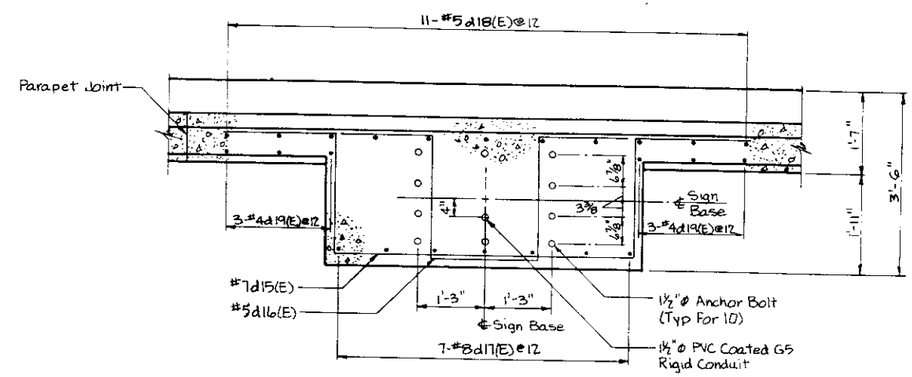
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	243
F. HR. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 52
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



PLAN - SIGN BASE NEAR PIER NO. 21



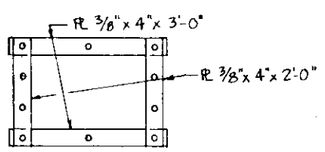
SECTION B-B

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a55(E)	7	#7	10'-0"	
a56(E)	15	#7	12'-0"	
a57(E)	15	#5	5'-0"	
a58(E)	14	#5	3'-1"	
b75(E)	14	#6	5'-8"	
d15(E)	5	#7	14'-4"	
d16(E)	5	#5	10'-8"	
d17(E)	7	#8	7'-0"	
d18(E)	11	#5	6'-0"	
d19(E)	6	#4	6'-0"	
e70(E)	2	#4	5'-8"	
REINFORCING BARS (EPOXY COATED)			LBS.	1,190
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	3.2

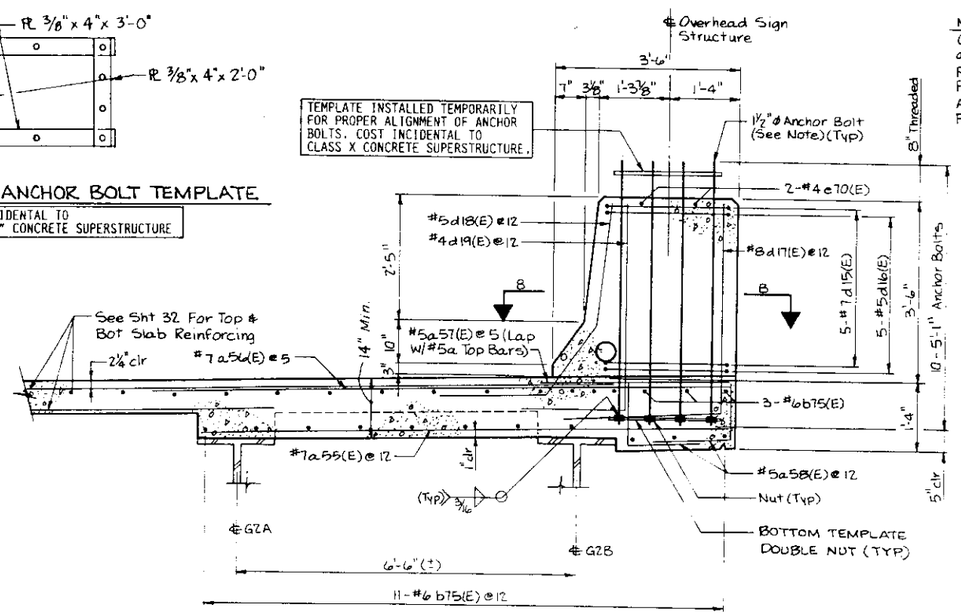
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

BAR DIMENSIONS SHOWN ARE OUT TO OUT.



BOTTOM ANCHOR BOLT TEMPLATE

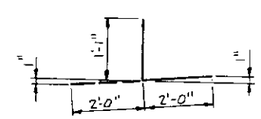
COST INCIDENTAL TO CLASS "X" CONCRETE SUPERSTRUCTURE



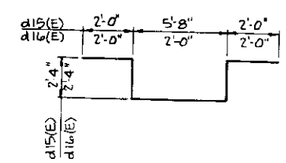
SECTION A-A

COST OF ANCHOR BOLTS INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE.

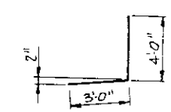
Note:
Galvanize upper 12" in accordance W/AASHTO M232.
Provide 3 nuts & 1 washer for each bolt.
Anchor bolts ASTM A576 Fy = 55000 PSI.



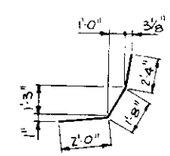
BAR a58(E)



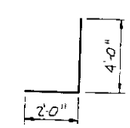
BARS d15(E) & d16(E)



BAR d17(E)



BAR d18(E)



BAR d19(E)

NOTE:
OVERHEAD SIGNS MUST BE PERPENDICULAR TO THE FLOW OF TRAFFIC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN THE FIELD THE LOCATION AND THE ANGLE OF THE ANCHOR BOLT GROUP IN ORDER TO PROPERLY ERECT THE SIGN.

STANLEY CONSULTANTS

PARAPET MOUNTED SIGN BASE

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	244
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 53
72 SHEETS

* 0505(2-2R, 3-1H, 6-1P, 400HB,401HB, 451), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

BEAM MOMENT TABLE — BEAM NUMBER

		N17.10	N17.13 N17.12 N17.11	N17.14	N18.5	N18.6	N18.7	N18.8	N18.9	N18.10	N18.11	N18.12	N18.13	N19.3 N19.1	N19.2	N19.4
Is	in4	17,729	17,729	15,479	15,479	15,479	15,479	15,479	15,479	14,610	14,610	14,610	12,546	17,729	18,673	15,479
Ic(n=9)	in4	52,837	57,083	43,264	46,629	46,629	46,629	43,264	43,264	39,066	39,066	39,066	32,866	57,083	63,979	43,264
Ic(n=27)	in4	35,508	38,953	30,006	32,922	32,922	32,922	30,006	30,006	28,569	28,569	28,569	23,638	38,953	42,911	30,006
Ss	in3	1010.3	1010.3	783.5	783.5	783.5	783.5	783.5	783.5	642.6	642.6	642.6	548.4	1010.3	1148.0	783.5
Sc(n=9)	in3	1432.4	1456.8	1115.0	1135.8	1135.8	1135.8	1115.0	1115.0	919.7	919.7	919.7	796.8	1456.8	1668.6	1115.0
Sc(n=27)	in3	1297.5	1331.5	1008.7	1037.4	1037.4	1037.4	1008.7	1008.7	838.5	838.5	838.5	717.3	1331.5	1526.5	1008.6
DL	k/ft	0.675	0.817	0.683	0.817	0.817	0.817	0.630	0.630	0.782	0.782	0.782	0.708	0.859	0.859	0.631
MDL	k-ft	435.0	526.5	440.1	366.4	366.4	366.4	280.7	280.7	347.2	347.2	347.2	307.0	532.2	532.2	390.9
SDL	k/ft	0.271	0.271	0.271	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.168	0.168	0.117
MSDL	k-ft	174.6	174.6	174.6	103.2	103.2	103.2	102.5	102.5	102.1	102.1	102.1	99.7	104.1	104.1	72.5
MLL	k-ft	455.0	595.4	577.1	490.9	490.9	490.9	342.0	342.0	463.7	463.7	463.7	453.3	605.6	605.6	421.9
MIMP	k-ft	115.5	151.2	146.6	132.5	132.5	132.5	92.3	92.3	125.2	125.2	125.2	123.3	155.0	155.0	108.0
MLL+I	k-ft	570.6	746.6	723.7	623.4	623.4	623.4	434.3	434.3	588.9	588.9	588.9	576.6	760.6	760.6	529.9
fs(DL)	ksi	5.17	6.25	6.74	5.61	5.61	5.61	4.30	4.30	6.48	6.48	6.48	6.72	6.32	5.56	5.99
fs(SDL)	ksi	1.61	1.57	2.08	1.19	1.19	1.19	1.22	1.22	1.46	1.46	1.46	1.67	0.94	0.82	0.86
fs(LL+I)	ksi	4.78	6.15	7.79	6.59	6.59	6.59	4.67	4.67	7.68	7.68	7.68	8.68	6.26	5.47	5.70
fs TOTAL	ksi	11.56	13.97	16.61	13.39	13.39	13.39	10.19	10.19	15.62	15.62	15.62	17.07	13.52	11.85	12.6
VR	k	31.3	39.4	35.6	37.1	37.1	37.1	25.8	25.8	35.3	35.3	35.3	34.5	38.2	38.1	25.6

		N19.5	N19.8 N19.7 N19.6	N19.9	N20.3 N20.1	N20.2	N20.4	N20.5	N20.7 N20.6	N20.8	N20.9	N21.1	N21.2	N21.3	N21.4	GIRDER G2
Is	in4	17,729	17,729	15,479	15,479	16,770	15,479	12,547	12,547	15,479	12,547	15,479	16,770	15,479	15,479	1,814,72[illegible]
Ic(n=9)	in4	51,960	57,083	43,264	46,629	54,014	43,264	31,140	35,104	46,629	35,104	46,629	55,249	48,656	45,762	2,220,899
Ic(n=27)	in4	34,848	38,953	30,006	32,922	37,389	30,006	22,195	25,740	32,922	25,740	32,922	38,534	34,881	32,133	1,963,758
Ss	in3	1010.3	1010.3	783.5	783.5	929.9	784.3	548.4	548.4	783.5	548.4	783.5	929.9	783.5	783.5	25556.0
Sc(n=9)	in3	1427.1	1456.8	1115.0	1135.8	1350.4	1115.0	783.9	812.5	1135.8	812.5	1135.8	1357.1	1147.4	1130.6	25542.5
Sc(n=27)	in3	1290.4	1331.5	1008.7	1037.4	1236.4	1008.7	701.1	738.7	1037.4	738.7	1037.4	1246.5	1054.8	1029.9	24590.3
DL	k/ft	0.651	0.824	0.721	0.848	0.848	0.654	0.572	0.795	0.795	0.753	0.863	0.863	0.924	0.746	2.01
MDL	k-ft	403.3	510.5	466.7	326.5	326.5	251.8	213.2	296.3	296.3	280.6	367.9	367.9	393.9	318.0	21,112
SDL	k/ft	0.271	0.271	0.271	0.171	0.171	0.123	0.279	0.279	0.279	0.279	0.175	0.175	0.195	0.148	.326
MSDL	k-ft	167.9	167.9	167.9	65.8	65.8	47.4	104.0	104.0	104.0	104.0	74.6	74.6	83.1	63.1	4,178
MLL	k-ft	420.9	586.7	562.9	451.0	451.0	325.3	276.9	415.4	415.4	430.3	494.0	494.0	551.5	417.0	5,740
MIMP	k-ft	107.8	150.2	144.1	124.9	124.9	90.1	77.1	115.5	115.5	119.6	134.7	134.7	150.4	113.7	95[illegible]
MLL+I	k-ft	528.7	736.9	707.0	575.9	575.9	415.4	354.0	530.9	530.9	549.9	628.7	628.7	701.9	530.7	6,670
fs(DL)	ksi	4.76	6.06	7.15	5.00	4.21	3.85	4.67	6.48	4.54	6.16	5.63	4.75	6.03	4.87	10.[illegible]
fs(SDL)	ksi	1.56	1.51	2.00	0.76	0.64	0.56	1.78	1.69	1.20	1.69	0.86	0.72	0.95	0.74	2.0
fs(LL+I)	ksi	4.45	6.07	7.61	6.08	5.12	4.47	5.42	7.84	5.61	8.12	6.64	5.56	7.34	5.63	3.1
fs TOTAL	ksi	10.76	13.64	16.76	11.84	9.97	8.88	11.87	16.01	11.35	15.95	13.13	11.03	14.32	11.24	15.7
VR	k	26.5	36.9	35.4	40.5	40.5	28.2	25.3	37.7	37.7	36.1	39.9	39.9	44.8	33.0	110.5

Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
Ic AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING fs.
VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

BEAM REACTION TABLE — BEAM NUMBER

		N17.10	N17.13 N17.12 N17.11	N17.14	N18.5	N18.6	N18.7	N18.8	N18.9	N18.10	N18.11	N18.12	N18.13	N19.3 N19.1	N19.2	N19.4
RDL	k	34.0	39.1	34.2	31.4	31.4	31.4	25.7	25.7	30.2	30.2	30.2	27.6	36.2	36.2	26.3
RLL	k	38.8	44.4	35.6	41.7	41.7	41.7	34.7	34.7	39.4	39.4	39.4	34.5	42.8	42.8	35.4
IMP	k	9.9	11.3	9.0	11.3	11.3	11.3	9.4	9.4	10.6	10.6	10.6	9.3	11.0	11.0	9.1
R TOTAL	k	82.7	94.8	78.8	84.4	84.4	84.4	69.8	69.8	80.2	80.2	80.2	71.4	90.0	90.0	70.8

		N19.5	N19.8 N19.7 N19.6	N19.9	N20.3 N20.1	N20.2	N20.4	N20.5	N20.7 N20.6	N20.8	N20.9	N21.1	N21.2	N21.3	N21.4	GIRDER G2
RDL	k	32.5	38.5	34.9	28.3	28.3	21.6	23.2	29.3	29.3	26.3	30.3	30.3	32.7	26.1	503.2
RLL	k	35.3	41.5	35.4	45.5	45.5	37.3	34.1	42.6	42.6	36.1	44.9	44.9	49.6	40.0	114.3
IMP	k	9.0	10.6	9.1	12.6	12.6	10.3	9.5	11.8	11.8	10.9	12.2	12.2	13.5	10.9	1[illegible]
R TOTAL	k	76.8	90.6	79.4	86.4	86.4	69.2	66.8	83.7	83.7	73.3	87.4	87.4	95.8	77.0	63[illegible]

STANLEY CONSULTANTS

MOMENT AND REACTION TABLE

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

	X		443	245	SHEET NO. 54
					72 SHEETS

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
4"	3"	2½" Min.

INSTALLATION NOTES

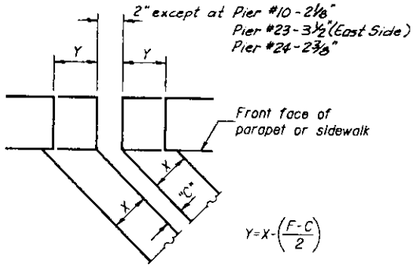
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

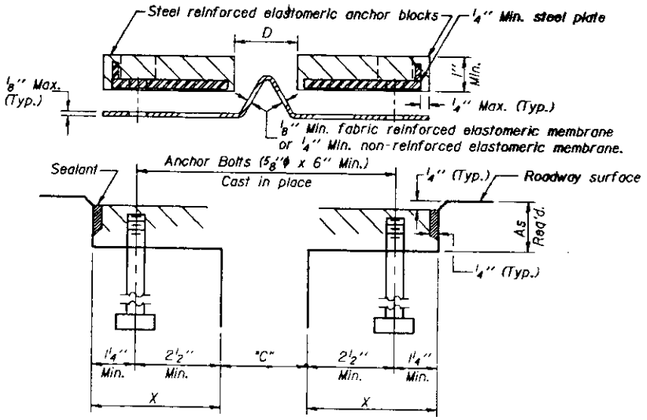
SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



FORMING BLOCKOUT SKETCH



CROSS SECTION

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

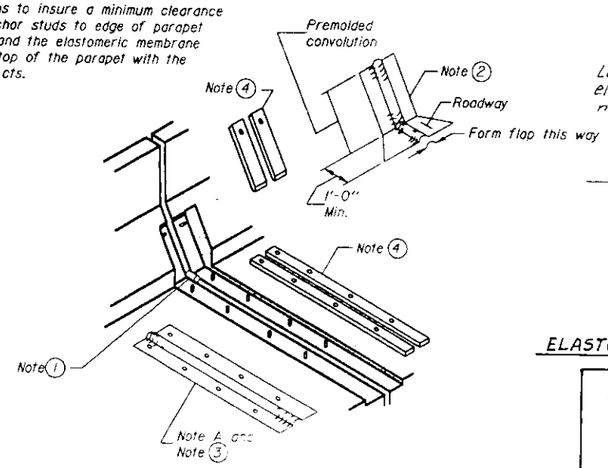
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

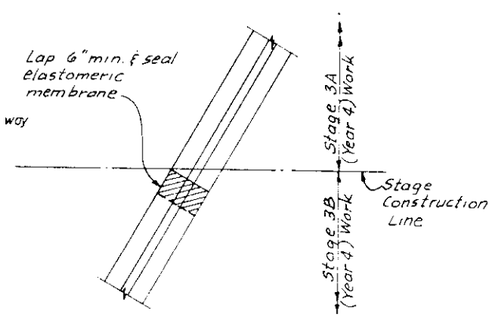
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

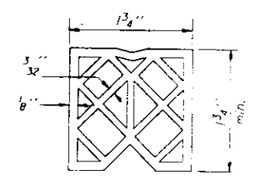
All anchor bolts for expansion joint shall be cast-in-place and tied to transverse reinforcing bars in deck.



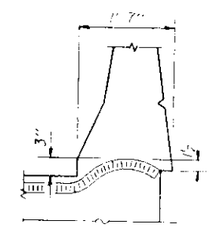
AT PARAPET



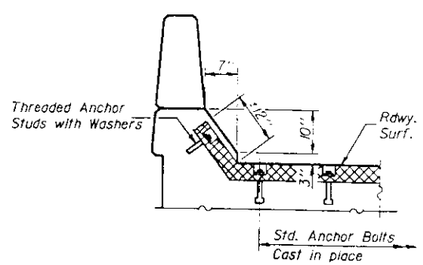
ELASTOMERIC MEMBRANE SPLICE LOCATIONS



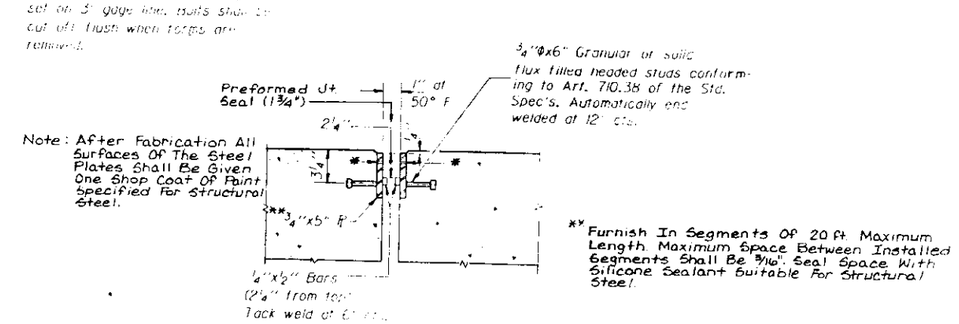
PREFORMED JOINT SEAL (1¾")



TYP. END OF SEAL TREATMENTS

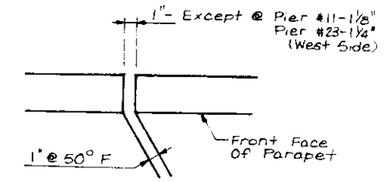


AT PARAPET



DETAIL "A"

PREFORMED JOINT SEAL (1¾")



FORMING BLOCKING SKETCH

STANLEY CONSULTANTS

EJ-CS 2-26-92

EXPANSION JOINT AND PREFORMED JOINT SEAL DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

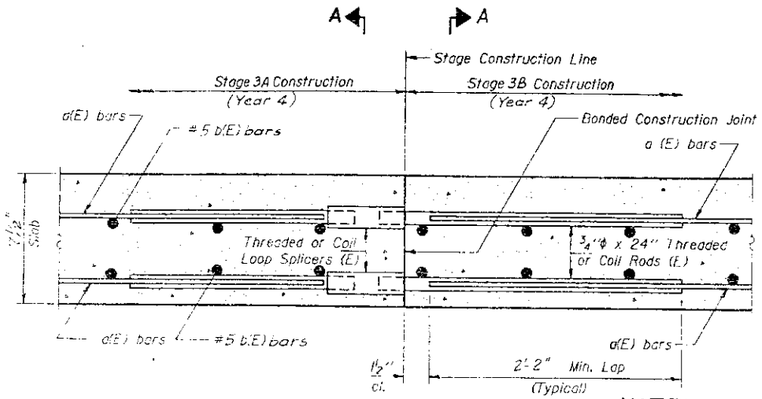
COOK COUNTY

STATION 409+49

ORG

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

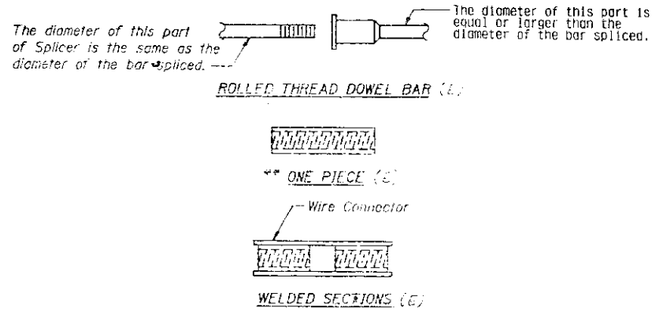
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



A A

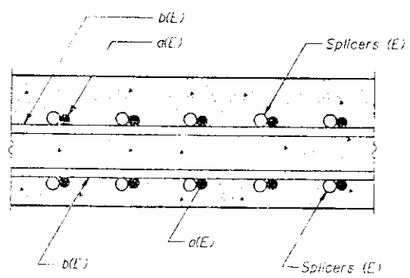
SECTION THRU SLAB

NOTE:
If Bars Are Lapped, Provide Double Ties To Prevent Traffic Vibration Movement During Stage 3B Pour.



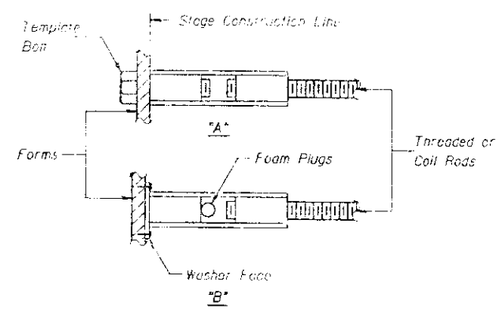
SPLICER ALTERNATIVES

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



SECTION A-A

SPLICER DETAILS
(No. Req'd. 4231)



INSTALLATION AND SETTING METHODS

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

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal to or greater than that of the lapped reinforcement bars.

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

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

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

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

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

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

Typical Splicer (Coupler) Assembly Sizes:

In Slab:	#5 bar lap with ¾"Φ Splicer (Coupler) x 2'-2" Splicer Rods	Minimum Capacity = 23.0 kips-tension Minimum Pull-out Strength = 9.2 kips-tension
	#6 bar lap with ⅞"Φ Splicer (Coupler) x 2'-6" Splicer Rods	Minimum Capacity = 33.0 kips-tension Minimum Pull-out Strength = 13.2 kips-tension
	#7 bar lap with 1"Φ Splicer (Coupler) x 3'-5" Splicer Rods	Minimum Capacity = 45.1 kips-tension Minimum Pull-out Strength = 18.0 kips-tension

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STAGE CONSTRUCTION
BAR SPLICER

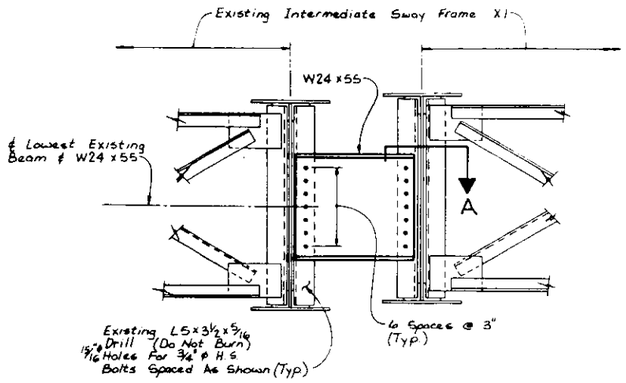
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	247
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

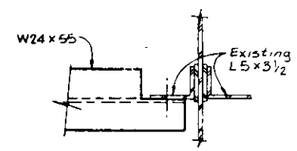
SHEET NO. 56
72 SHEETS

* 0505(2-2B, 3-9H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



INTERMEDIATE DIAPHRAGM (6 REQ'D.)
@ Spans 18, 19 & 20

Two hardened washers shall be required over all oversized holes.



SECTION A

FOR ERECTION ONLY

STANLEY CONSULTANTS

MISCELLANEOUS DETAILS

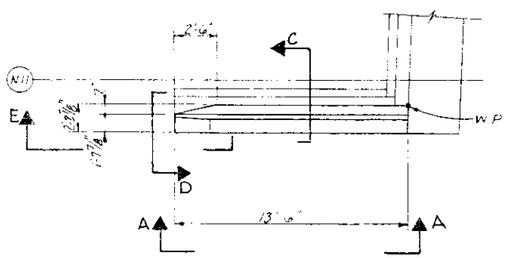
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

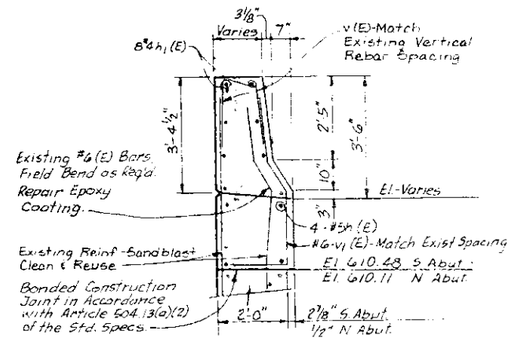
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	248
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 57 OF 72 SHEETS

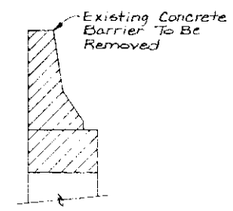
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451T), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



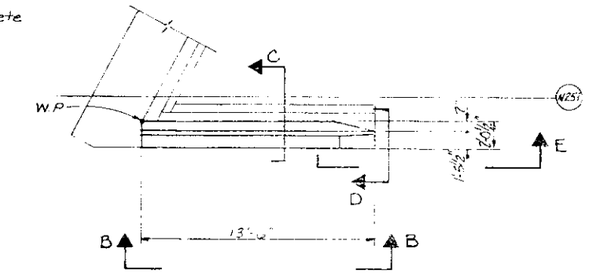
PLAN



SECTION C



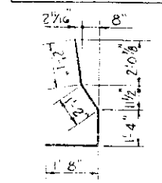
SECTION C
(EXISTING)



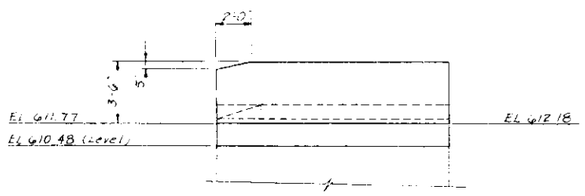
PLAN

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	Shape
h1(E)	13	#5	13'-2"	
h2(E)	16	#4	13'-2"	
V(E)	56	#6	2'-0"	
vi(E)	28	#6	6'-3"	
Reinforcement Bars (Epoxy Coated)			LBS.	680
Class "X" Concrete			Cu.Yds.	6.1
Concrete Removal			Cu.Yds.	3.1

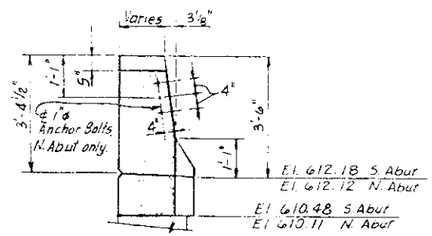


BAR vi(E)

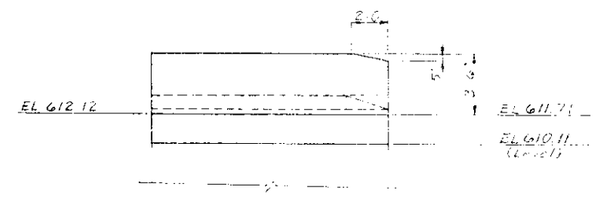


ELEVATION A-A

SOUTH ABUTMENT - EAST END



VIEW D



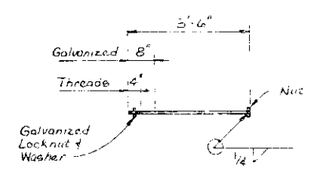
ELEVATION B-B

NORTH ABUTMENT - EAST END

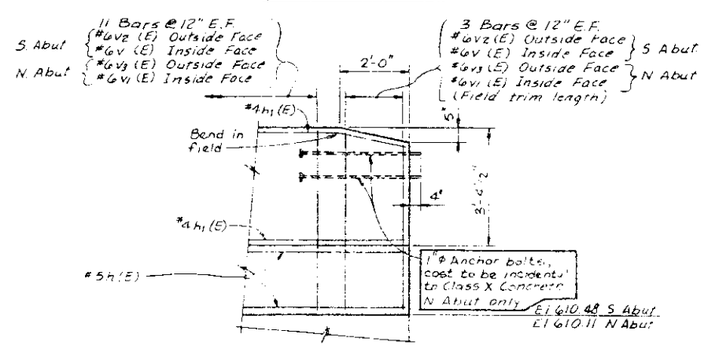
Reinforcement bars designated (E) shall be epoxy coated.

All bar dimensions are out-to-out.

▨ indicates concrete removal.



1" φ ANCHOR BOLT



VIEW E

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SOUTH ABUTMENT - EAST END
NORTH ABUTMENT - EAST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

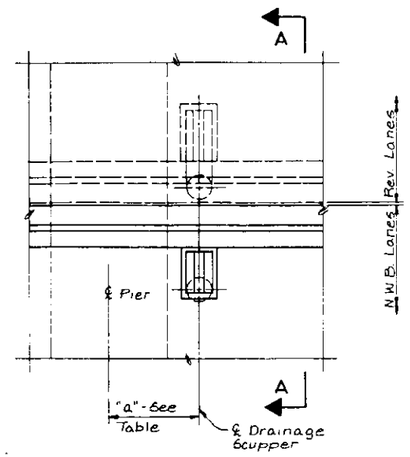
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

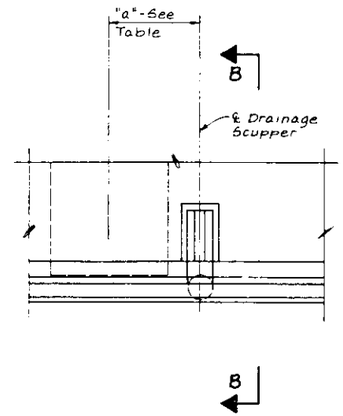
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	249
F. HW. R. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 58
72 SHEETS

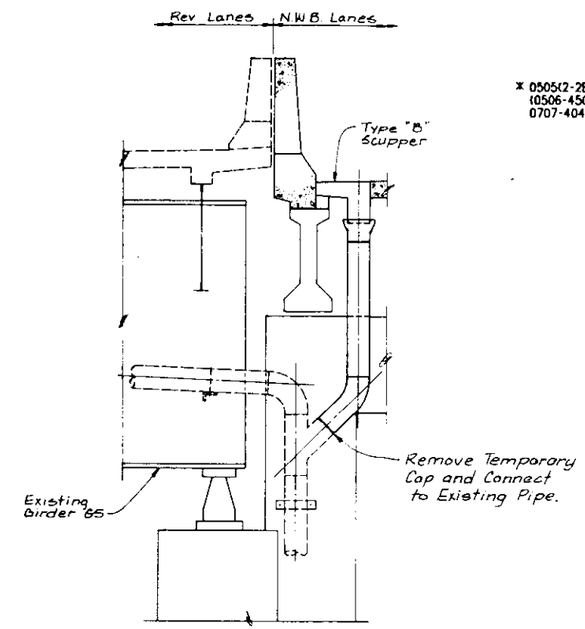
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



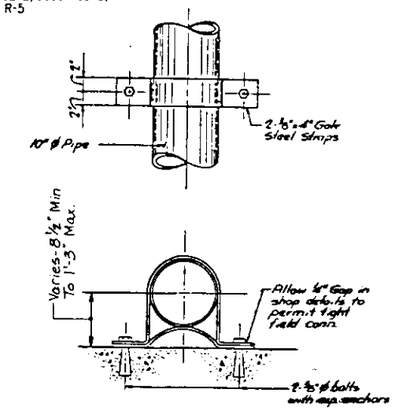
PLAN



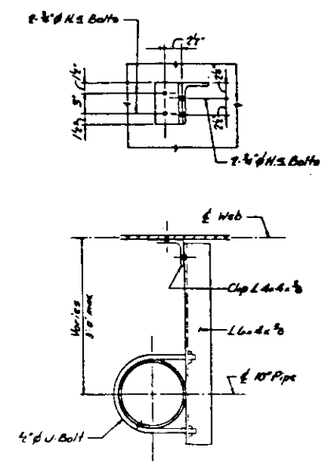
PLAN



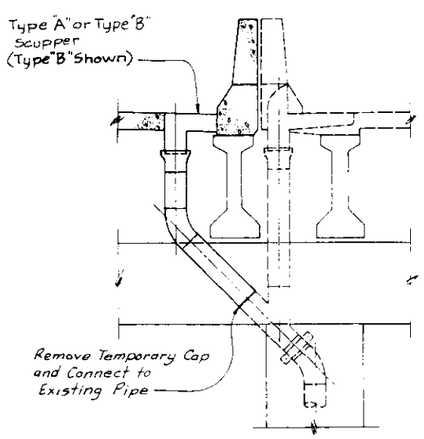
SECTION-DRAINAGE SYSTEM @ PIER 16
(Looking North)
Note: Drainage System @ Pier 18 Similar. (Opposite Hand & Type "A" Scupper)



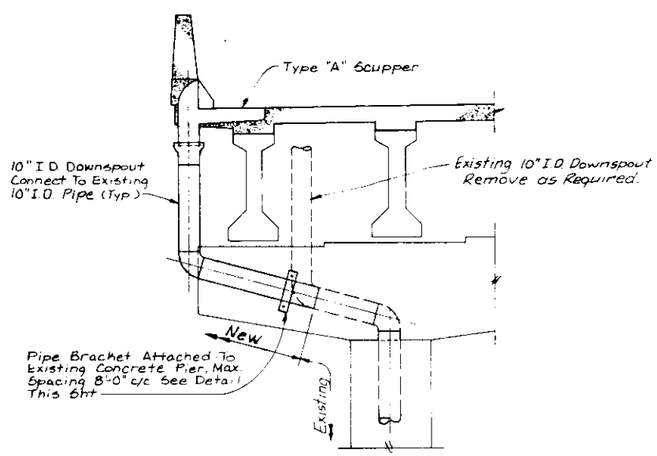
PIPE BRACKET DETAIL
(TO CONCRETE)



PIPE BRACKET DETAIL
(TO BEAM WEB)



SECTION A-A



SECTION B-B

TYPICAL DRAIN DETAILS

NOTES:
1. SEE SHEETS 1 AND 2 FOR LOCATION AND ORIENTATION OF DRAINS.
2. FOR BRIDGE SCUPPER DETAILS SEE SHEETS 59 THRU 62.
3. LOCATE DRAINS TO CLEAR ALL DIAPHRAGMS.

DRAINAGE SCUPPER LOCATION TABLE

LOCATION	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 7	PIER 10	PIER 12	PIER 13	PIER 15	PIER 16	PIER 18	PIER 19	PIER 20	PIER 21	PIER 23	PIER 24
TYPE (EAST)	A	A	A	A	A	A	A	A	A	-	-	-	-	-	-	-	-
DIMENSION a*	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	5'-9"	3'-6"	3'-6"	-	-	-	-	-	-	-	-
TYPE (WEST)	B	-	B	-	B	B	B	B	B	B	B	A	A	A	A	A	A
DIMENSION a*	3'-6"	-	3'-6"	-	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	5'-9"	5'-9"

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* SEE SHEETS 1 AND 2 FOR ORIENTATION OF DRAINAGE SCUPPERS.

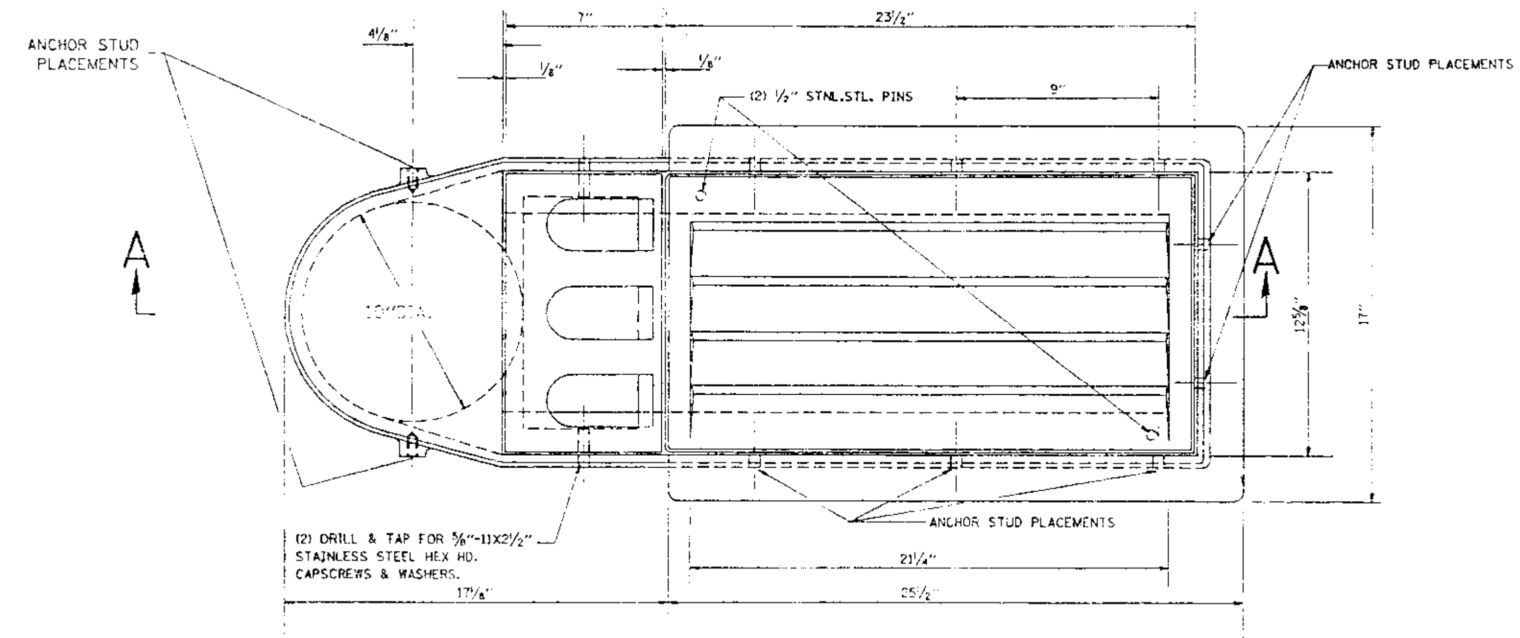
DRAINAGE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

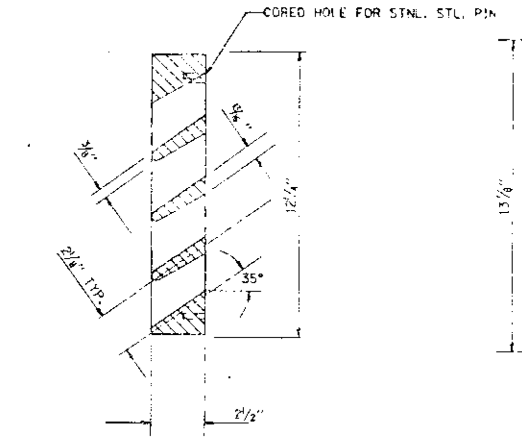
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	250

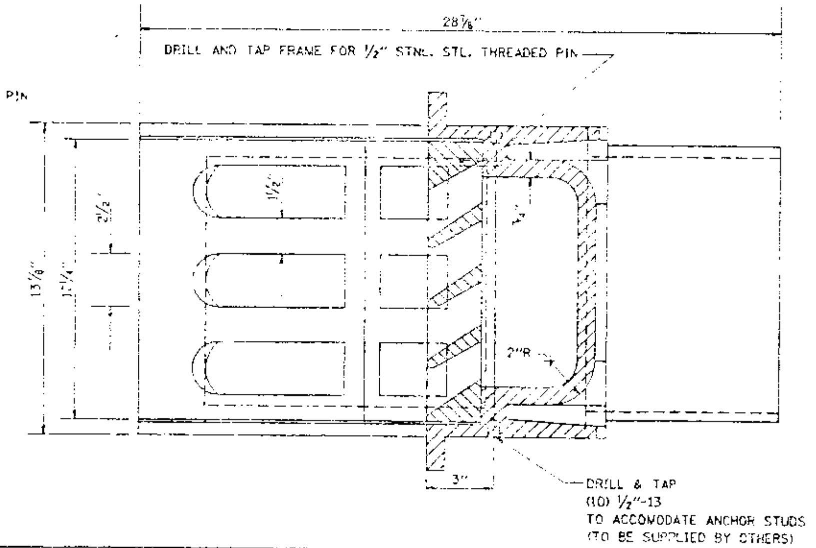
SHEET NO. 59
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 451), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



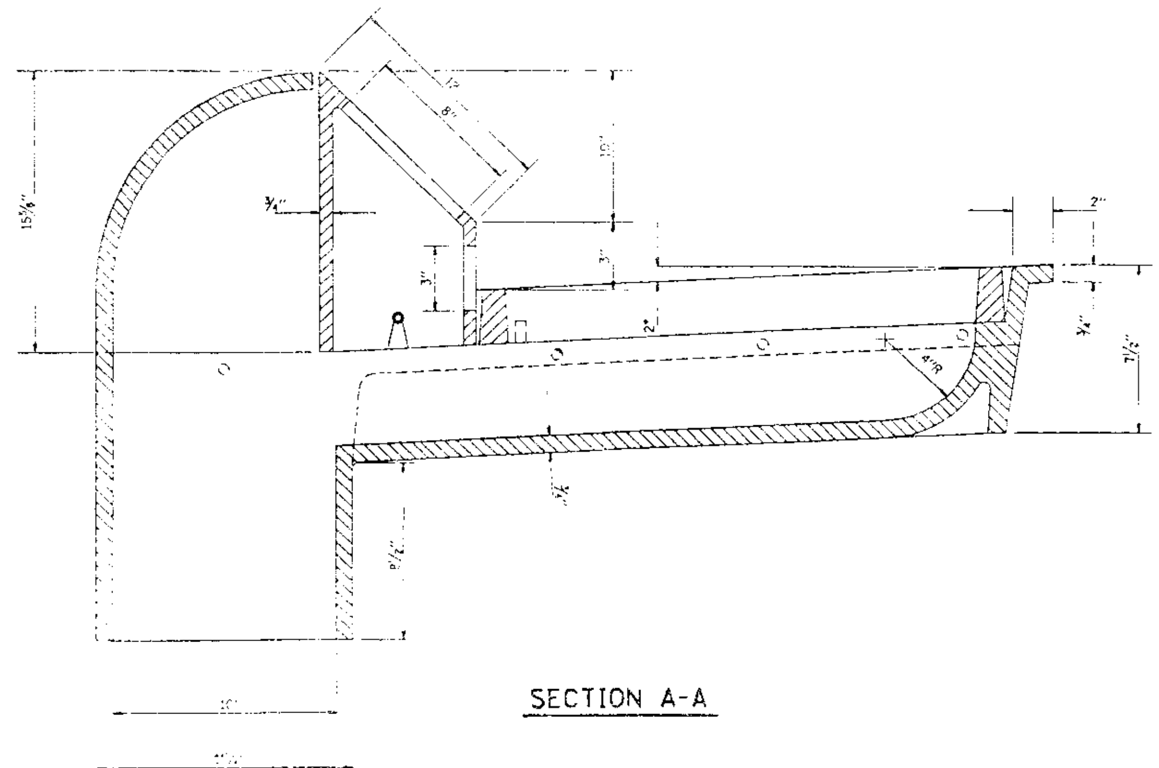
PLAN





BRIDGE SCUPPER - TYPE "A"

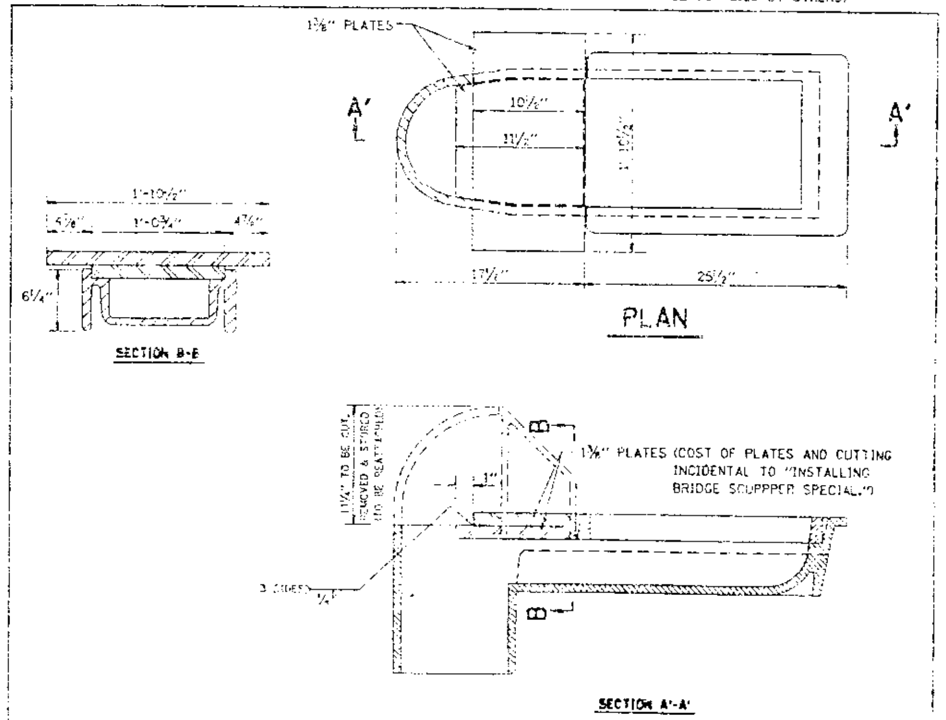
NF - 0332 445
ESTIMATED WEIGHT 512#



SECTION A-A

SCHEDULE OF QUANTITIES	
STRUCTURE	NO. REQUIRED
TOTAL	

NOTE: A NEOPRENE PAD SHALL BE PROVIDED BETWEEN THE SCUPPER AND THE BEAM. (BY OTHERS)



BRIDGE SCUPPER - SPECIAL

ONLY FOR MEDIAN PARAPET DURING STAGED CONSTRUCTION (MEDIAN PARAPET IS OMITTED TEMPORARILY)

MATERIAL: CAST GREY IRON ASTM A-48, CLASS 35
FINISH: NONE

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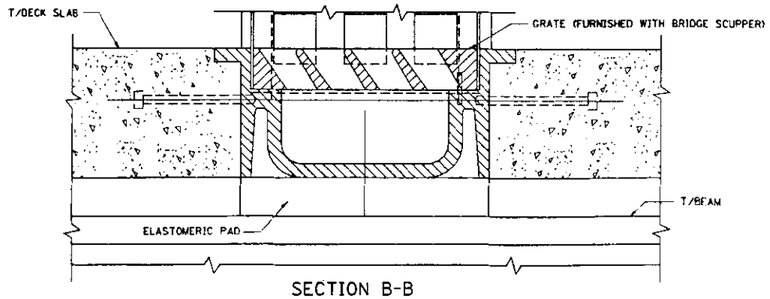
BRIDGE SCUPPER - TYPE A
SHEET 1 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	251
F. AID. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 60
72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



SECTION B-B

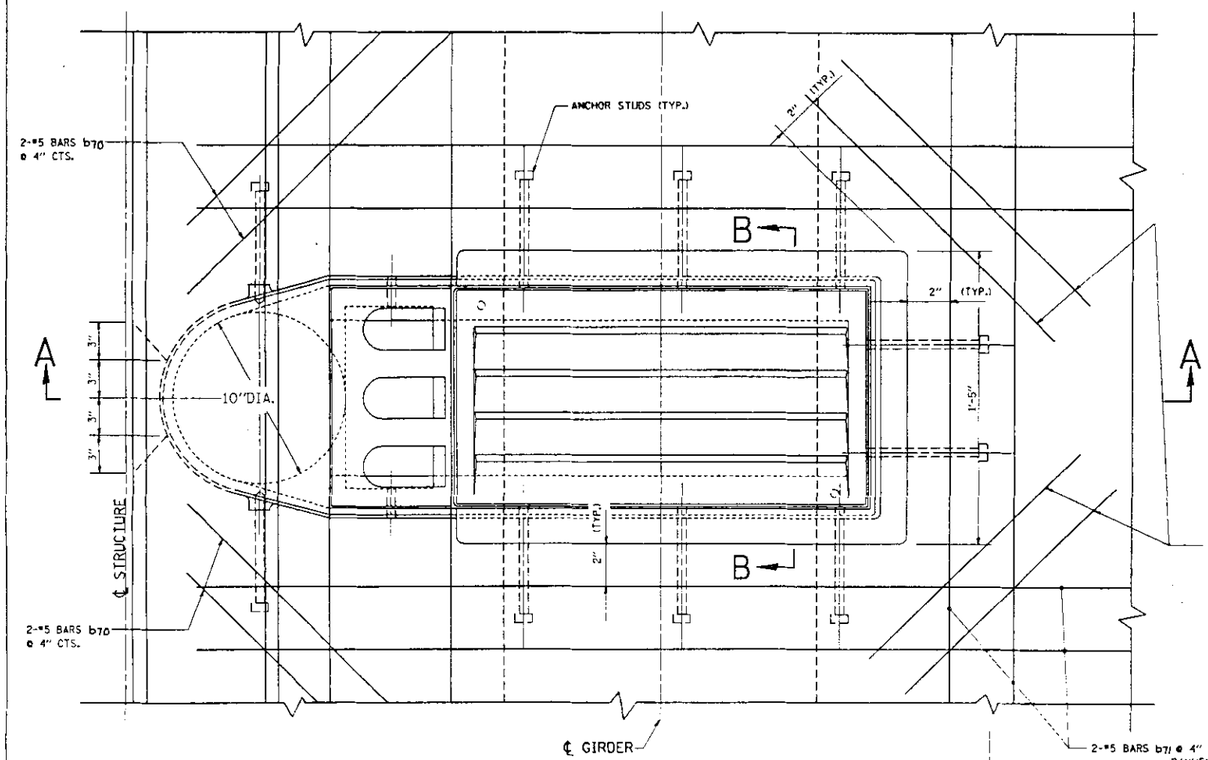
STEEL REINFORCING IN PARAPETS AND DECK SLAB SHOWN ON DECK SLAB AND PARAPET CONTRACT PLANS.

NOTES:

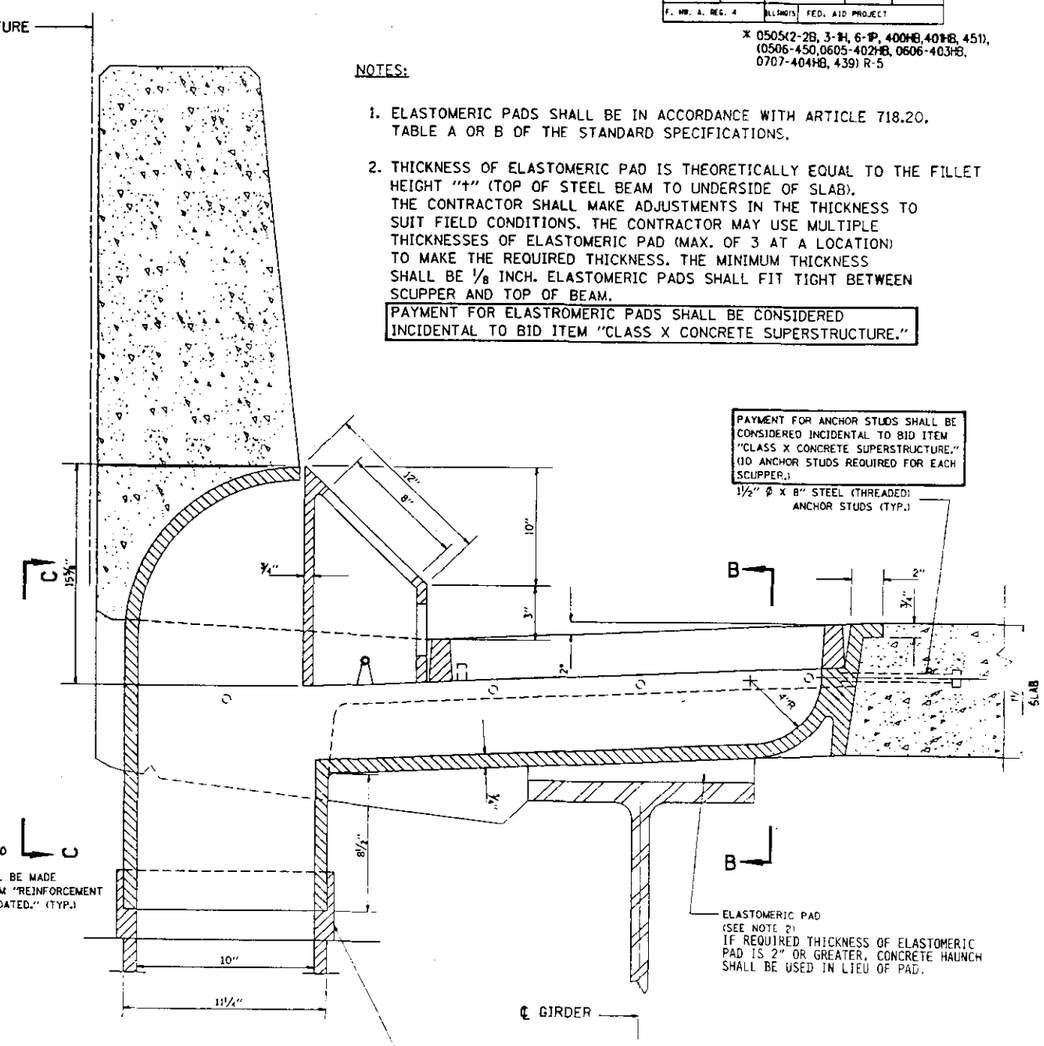
1. ELASTOMERIC PADS SHALL BE IN ACCORDANCE WITH ARTICLE 718.20, TABLE A OR B OF THE STANDARD SPECIFICATIONS.

2. THICKNESS OF ELASTOMERIC PAD IS THEORETICALLY EQUAL TO THE FILLET HEIGHT "t" (TOP OF STEEL BEAM TO UNDERSIDE OF SLAB). THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE THICKNESS TO SUIT FIELD CONDITIONS. THE CONTRACTOR MAY USE MULTIPLE THICKNESSES OF ELASTOMERIC PAD (MAX. OF 3 AT A LOCATION) TO MAKE THE REQUIRED THICKNESS. THE MINIMUM THICKNESS SHALL BE 1/8 INCH. ELASTOMERIC PADS SHALL FIT TIGHT BETWEEN SCUPPER AND TOP OF BEAM.

PAYMENT FOR ELASTROMERIC PADS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE."



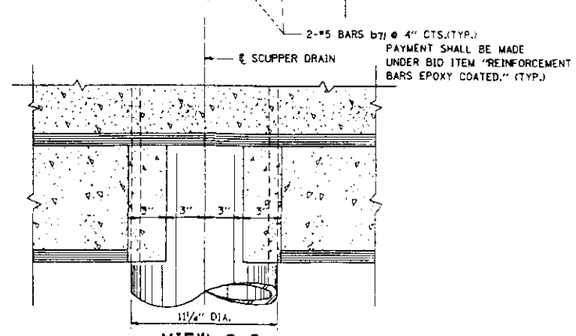
PLAN



SECTION A-A

SECTION THRU MEDIAN PARAPET-SHOWN

(SIMILAR IF TYPE "A" SCUPPERS ARE USED AT OUTSIDE PARAPET.)



VIEW C-C

REINFORCEMENT BAR SCHEDULE

MARK	NO.	SIZE	LENGTH	SHAPE
b70(E)	8	#5	2'-0"	—
b71(E)	6	#5	5'-0"	—

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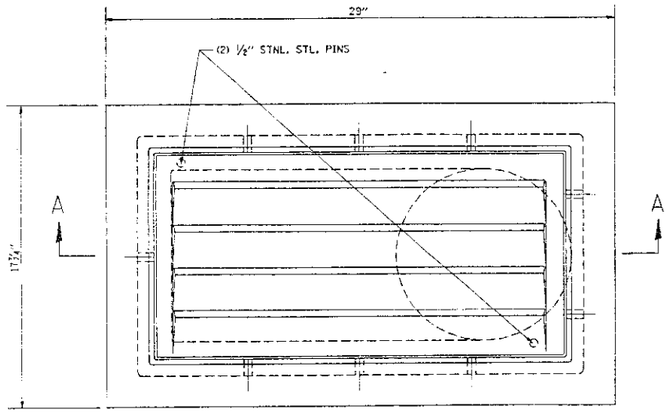
BRIDGE SCUPPER - TYPE A
SHEET 2 OF 2

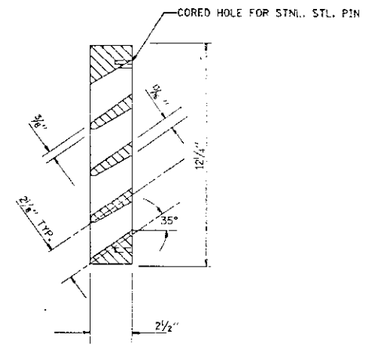
SECTION

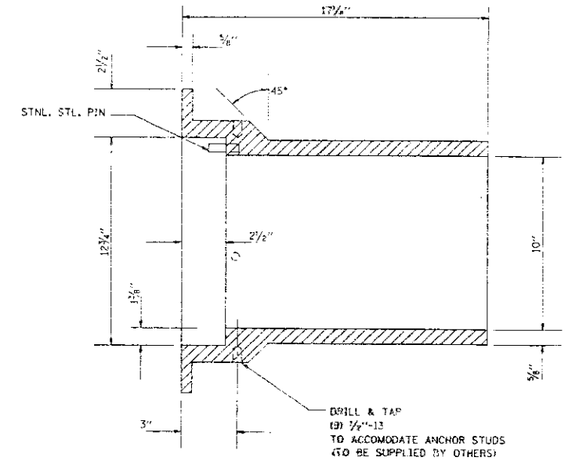
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

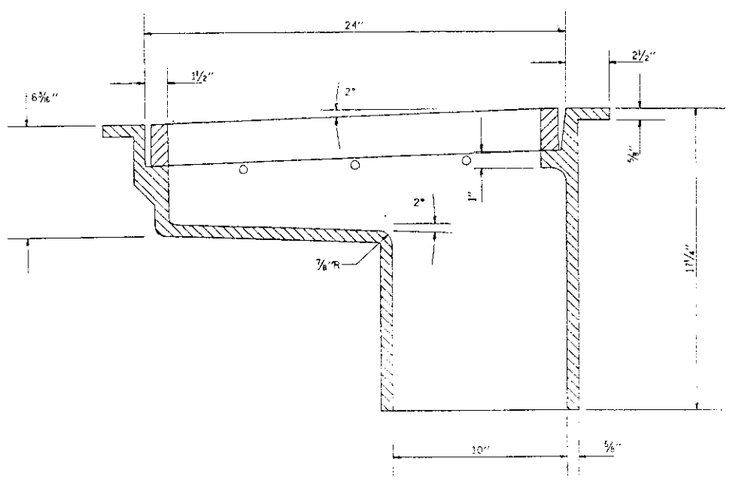






BRIDGE SCUPPER - TYPE "B"

NF - 0332 435
ESTIMATED WEIGHT 235*



SECTION A-A

SCHEDULE OF QUANTITIES	
STRUCTURE	NO. REQUIRED
TOTAL	

NOTE: A NEOPRENE PAD SHALL BE PROVIDED BETWEEN THE SCUPPER AND THE BEAM. (BY OTHERS.)

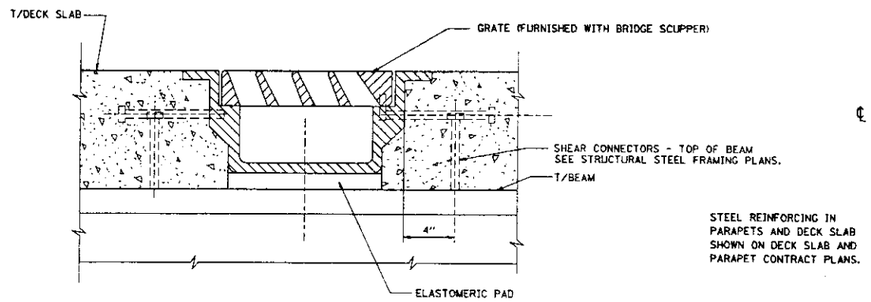
MATERIAL: CAST GREY IRON ASTM A-48, CLASS 35B
FINISH: NONE

STANLEY CONSULTANTS

BRIDGE SCUPPER - TYPE B
SHEET 1 OF 2

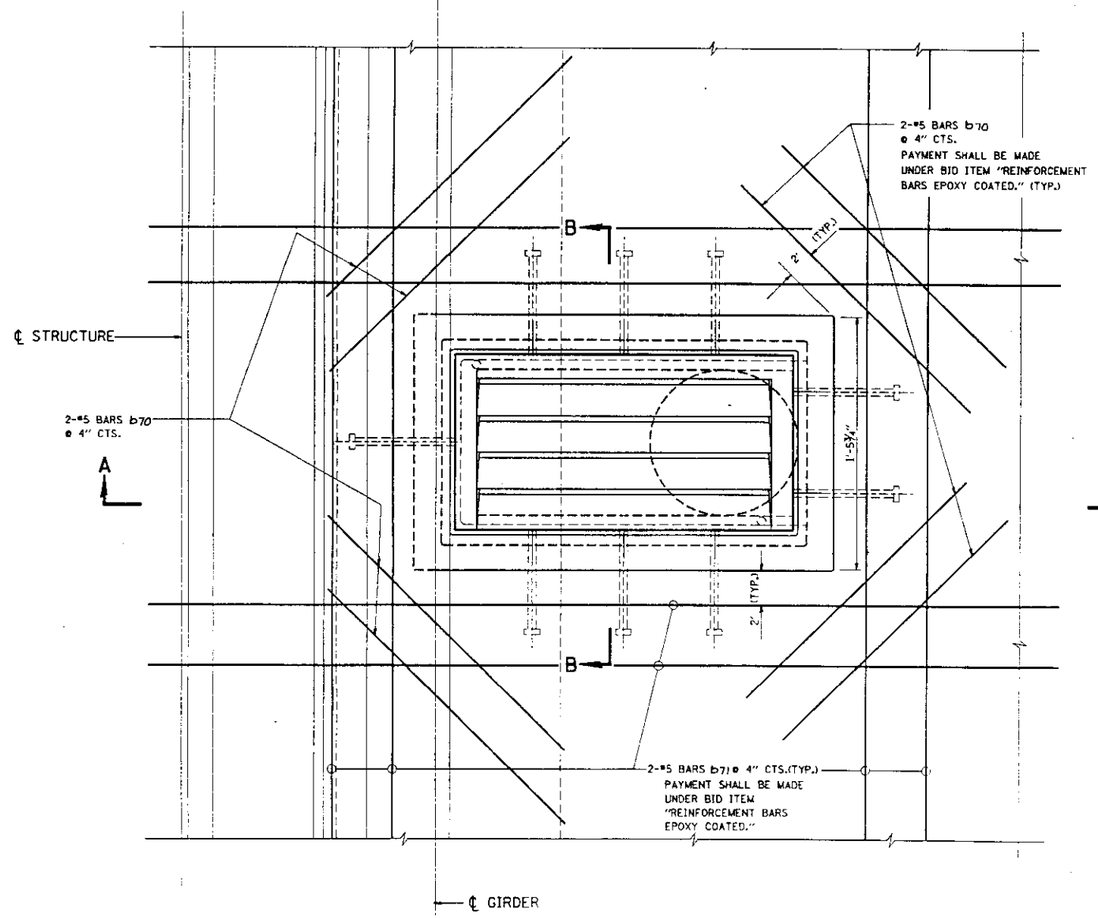
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



STEEL REINFORCING IN PARAPETS AND DECK SLAB SHOWN ON DECK SLAB AND PARAPET CONTRACT PLANS.

SECTION B-B



PLAN

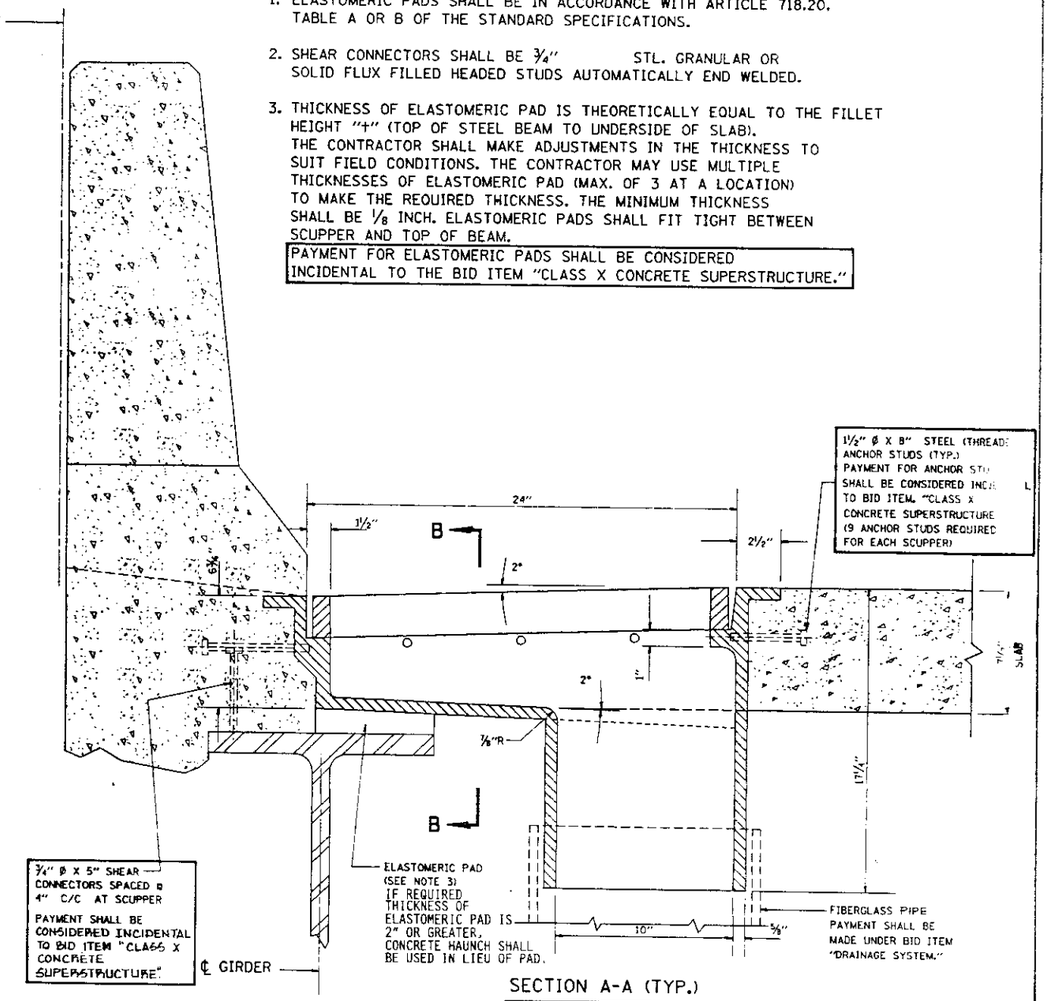
REINFORCEMENT BAR SCHEDULE

MARK	NO.	SIZE	LENGTH	SHAPE
b70(E)	8	#5	2'-0"	—
b71(E)	8	#5	5'-0"	—

NOTES:

1. ELASTOMERIC PADS SHALL BE IN ACCORDANCE WITH ARTICLE 718.20, TABLE A OR B OF THE STANDARD SPECIFICATIONS.
2. SHEAR CONNECTORS SHALL BE ¾" STL. GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED.
3. THICKNESS OF ELASTOMERIC PAD IS THEORETICALLY EQUAL TO THE FILLET HEIGHT "t" (TOP OF STEEL BEAM TO UNDERSIDE OF SLAB). THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE THICKNESS TO SUIT FIELD CONDITIONS. THE CONTRACTOR MAY USE MULTIPLE THICKNESSES OF ELASTOMERIC PAD (MAX. OF 3 AT A LOCATION) TO MAKE THE REQUIRED THICKNESS. THE MINIMUM THICKNESS SHALL BE ⅛ INCH. ELASTOMERIC PADS SHALL FIT TIGHT BETWEEN SCUPPER AND TOP OF BEAM.

PAYMENT FOR ELASTOMERIC PADS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE."



SECTION A-A (TYP.)

SECTION THRU MEDIAN PARAPET-SHOWN

(SIMILAR IF TYPE "B" SCUPPERS ARE USED AT OUTSIDE PARAPET.)

STANLEY CONSULTANTS

BRIDGE SCUPPER - TYPE B
SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

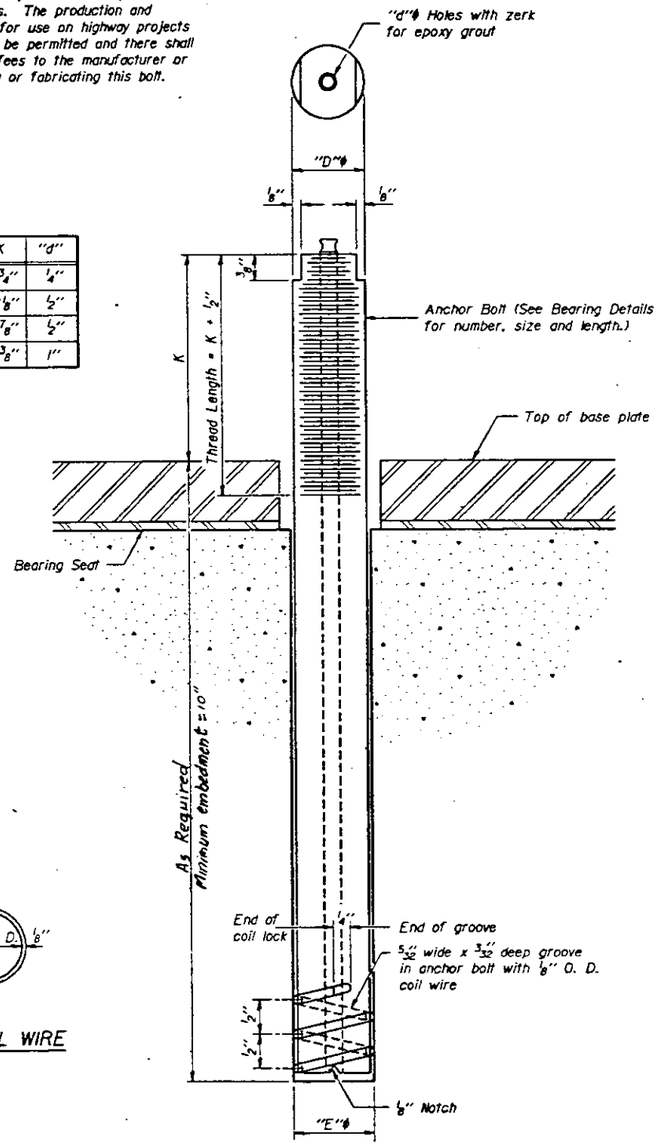
The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

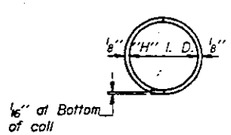
					SHEET NO. 63
	X		443	254	72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 450), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

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



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

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

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

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

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

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

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "1" Diameter Anchor Bolts.", except that the anchor bolt installation for new PPC beam bearing shall be included in the unit bid price for "Furnishing and Erecting Structural Steel". △2

STANLEY CONSULTANTS

ABB-1 7-1-91

△2 Rev. 11-8-93

ANCHOR BOLT DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM REPAIR SCHEDULE

BEAM NUMBER	REPAIR NUMBER NO. 1*	NO. 2**	NO. 3**
SOUTH ABUTMENT			
N1.4	1	-	-
N1.5	2	X	-
N1.8	1	-	-
N1.17	2	X	-
PIER 1			
N1.4	1	-	-
N1.5	1	-	-
N1.6	2	-	-
N1.7	1	-	-
N1.8	1	-	-
N1.9	2	X	-
N1.10	1	-	-
N1.13	2	-	-
N1.14	2	X	-
N1.15	2	-	-
N1.16	2	X	-
N1.17	2	-	-
N2.4	1	-	-
N2.5	2	-	-
N2.6	1	-	-
N2.7	1	-	-
N2.8	2	-	-
N2.9	2	-	-
N2.13	2		-
N2.14	1	-	-
N2.16	1	-	-
PIER 2			
N2.7	2	-	-
N2.8	2	-	-
N2.9	2	X	-
N2.10	2	-	-
N2.13	2	-	-
N2.14	2	X	-
N2.15	2	X	-
N2.16	2	X	-
N2.17	2	-	-
N3.7	2	X	-
N3.8	2	X	-
N3.9	2	-	-
N3.10	2	-	-
N3.13	2	X	-
N3.14	2	-	-
N3.15	2	-	
N3.16	2	X	-
PIER 3			
N3.4	2	X	X
N3.5	2	X	
N3.6	2	X	X
N3.7	2	X	X
N3.8	2	X	X
N3.9	2	X	X
N3.12	2	X	X
N3.13	2	X	X
N3.14	2	X	X
N3.15	2	X	X
N3.16	2	X	X
N4.4	2	X	X
N4.5	2	X	X
N4.6	2	X	X
N4.7	2	X	X
N4.8	2	X	X
N4.9	2	X	X
N4.12	2	X	X
N4.13	2	X	X
N4.14	2	X	X
N4.15	2	X	X
N4.16	2	X	X

* NUMBER DENOTES NUMBER OF FLANGES TO BE REPAIRED.

** "X" DENOTES APPLICABLE REPAIR.

BEAM REPAIR SCHEDULE

BEAM NUMBER	REPAIR NUMBER NO. 1*	NO. 2**	NO. 3**
PIER 4			
N4.4	2	X	X
N4.5	1	X	
N4.6	2	X	-
N4.9	-	-	X
N4.15	1	-	-
N4.16	2	X	X
N5.4	1	X	X
N5.7	-	-	X
N5.12	2	-	-
N5.13	1	-	X
N5.16	1	-	-
PIER 5			
N5.4	2	X	-
N5.5	2	X	-
N5.6	2	X	-
N5.7	2	X	-
N5.8	2	X	X
N5.9	2	X	X
N5.12	2	X	-
N5.13	2	X	X
N5.14	2	X	X
N5.15	2	X	X
N5.16	2	X	X
N6.4	2	-	X
N6.5	2	-	X
N6.6	2	X	X
N6.7	2	-	-
N6.8	2	X	X
N6.11	2	X	-
N6.12	2	X	X
N6.13	2	X	-
N6.14	2	X	X
N6.15	2	-	-
PIER 6			
N6.4	2	X	X
N6.5	2	X	X
N6.6	2	X	-
N6.7	2	X	-
N6.8	1	-	-
N6.13	1	-	X
N6.14	1	-	-
N6.15	1	X	-
N7.4	2	-	X
N7.5	2	-	
N7.6		-	X
N7.[illegible]		-	-
N7.[illegible]		-	X
N7.[illegible]	-	-	X
N7.[illegible]		X	X
PIER 7			
N7.4	1	-	X
N7.5	1	-	X
N7.6	2	X	-
N7.7	2	X	X
N7.8	2	X	X
N7.9	2	X	X
N7.12	2	X	X
N7.13	2	X	X
N7.14	2	X	X
N7.15	2	X	-
N8.4	2	-	-
N8.5	1	-	X
N8.6	2	-	X
N8.7	1	-	X
N8.8	1	-	X
N8.[illegible]	2	X	X
N8.[illegible]	2	X	-

BEAM REPAIR SCHEDULE

BEAM NUMBER	REPAIR NUMBER NO. 1*	NO. 2**	NO. 3**
PIER 7 CONT'D			
N8.13	2	X	X
N8.14	1	-	-
N8.15	1	-	-
PIER 8			
N8.4	2	-	X
N8.5	1	-	-
N8.8	1	-	-
N8.9	2	X	X
N8.12	2	-	-
N8.14	1	-	-
N8.15	2	X	X
N10.4	2	-	X
N10.5	1	-	X
N10.6	1	-	-
N10.10	-	-	X
N10.11	1	-	X
N10.12	1	X	-
PIER 10			
N10.4	2	X	X
N10.5	2	-	X
N10.6	2	-	X
N10.9	-	-	X
N10.10		-	-
N10.11	2	X	-
N10.12	2	X	-
N11.5	2	X	-
N11.6	2	X	X
N11.9	1	-	-
N11.10	2	X	X
N11.11	2	X	X
N11.12	2	X	X
N11.13		X	-
N11.14	1	-	X
N11.16	1	-	-
N11.17	2	X	X
N11.18	2	X	X
PIER 11			
N11.5	2	-	-
N11.6	1	-	-
N11.9	1	-	-
N12.4	2	X	-
.N12.9	2	X	X
PIER 12			
N12.4	2	X	-
N12.5	2		-
N12.6	2	X	X
N12.7	2	X	X
N12.10	2		X
N12.11	2	X	X
N12.12	2	X	X
N13.4	2	X	X
N13.5	2	X	-
N13.6		-	-
N13.9	1	-	X
N13.10	2	-	X
N13.[illegible]	2	X	X
PIER 13			
N13.4	2	X	X
N13.5	-		X
N13.6	-	-	X
N13.[illegible]	-	-	X
N13.[illegible]	1	X	X
N[illegible]		-	X
N14.4	[illegible]	-	-
N14.5	2	X	X

BEAM REPAIR SCHEDULE

BEAM NUMBER	REPAIR NUMBER NO. 1*	NO. 2**	NO. 3**
PIER 13 CONT'D			
N14.6	2	X	X
N14.9	1	-	X
N14.10	2	-	X
N14.11	2	-	-
N14.12	1	X	X
N14.13	1	X	-
PIER 14			
N14.4	2	-	X
N14.5	2	-	X
N14.6	2	-	-
N14.7	2	X	-
N14.10	1	-	-
N14.11	2	-	-
N14.12	2	-	X
N14.13	2	X	-
N15.4	2	X	-
N15.5	2	-	X
N15.6	1	-	-
N15.7	1	-	X
N15.10	1	-	X
N15.11	2	-	-
N15.13	2	X	-
PIER 15			
N15.4	2	X	X
N15.5	1	-	X
N15.6	2	-	X
N15.7	1	-	X
N15.10	2	-	X
N15.1	2	-	X
N15.12	2	-	X
N15.13	1	-	-
N16.4	1	-	-
N16.5	2	X	X
N16.6	2	-	X
N16.7	-	-	X
N16.10	2	X	X
N16.11			X
N16.12			X
N16.13	2		-
PIER 16			
N16.4	2	X	-
N16.5		-	X
N16.10	2	X	X
N16.[illegible]	2	-	
N16.[illegible]	-	-	
N[illegible]	-	-	
N17.4	2	X	X
N17.5	2		X
N17.6		-	-
N17.7	2	-	X
N17.8	2		X
PIER 17			
N17.4	2	X	X
N[illegible]	2	X	-
N[illegible]	-	-	X
N[illegible]	2	X	
PIER 18			
N18.4	-	-	X
PIER 20			
N2[illegible]	2	X	X
N2[illegible]	2	-	X
N2[illegible]	2	X	X
N2[illegible]	-	X	-

BEAM REPAIR SCHEDULE

BEAM NUMBER	REPAIR NUMBER NO. 1*	NO. 2**	NO. 3**
PIER 21			
N21.6	2	-	X
N21.7	1	-	-
N21.8	1	-	-
N21.9	1	-	X
N23.1	2	X	X
N23.2	2	X	X
N23.3	2	-	X
N23.4	2	X	X
N23.7	2	X	X
N23.8	1	-	X
N23.9	2	-	X
N23.10	1	-	X
PIER 23			
N23.8	1	-	-
N23.9	-	-	X
N24.3	2	X	-
N24.16	1	-	-
PIER 24			
N24.3	1	-	-
N24.5	2	X	X
N24.6	2	X	X
N24.8	2	X	X
N24.9	2	-	-
N24.10	2	X	X
N24.14	2	X	X
N24.15	1	-	-
N24.16	1	-	-
N24.17	1	-	-
N24.18	1	-	-
N25.2	2	-	-
N25.3	2	-	X
N25.4	2	-	X
N25.1[illegible]	2	-	-
N25.12	2	-	
N25.13	2	-	X
N25.14	2	-	X

BEAM REPAIRS

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+4[illegible]

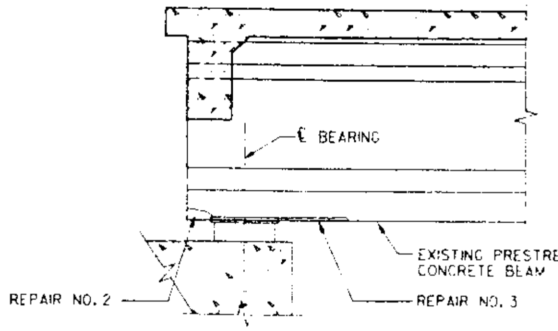
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	254B
		ILLINOIS		

SHEET NO. 65

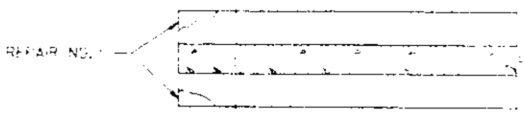
12 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439)P-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

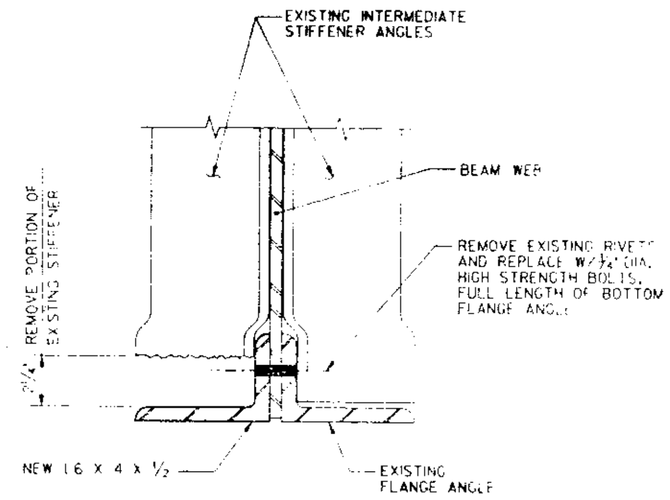


ELEVATION

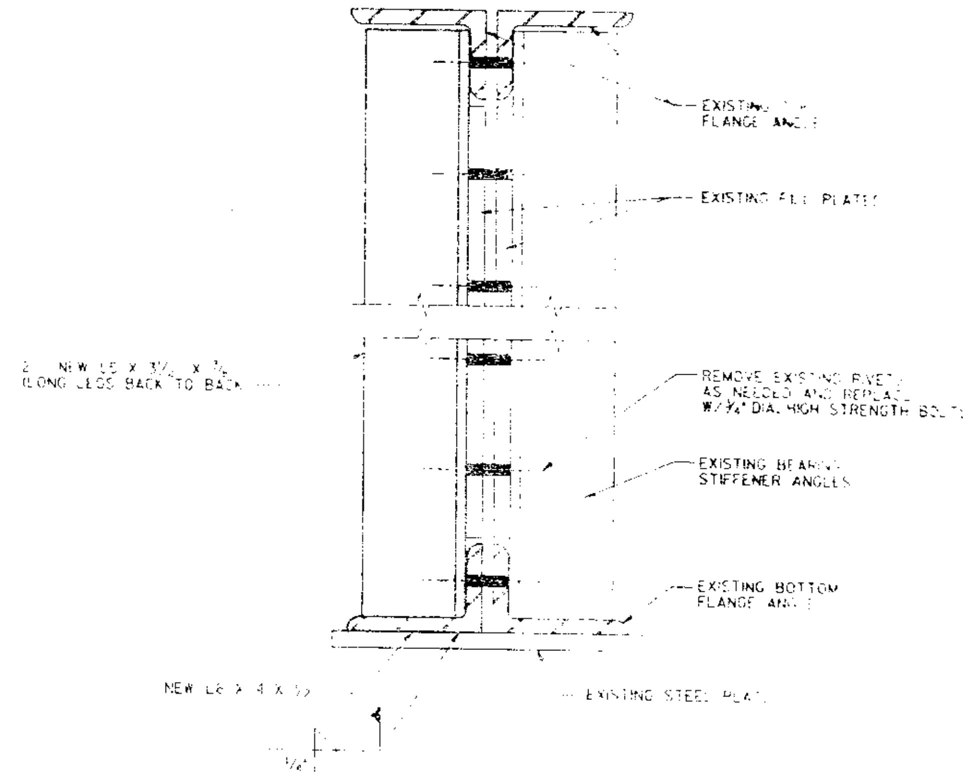


PLAN - SECTION

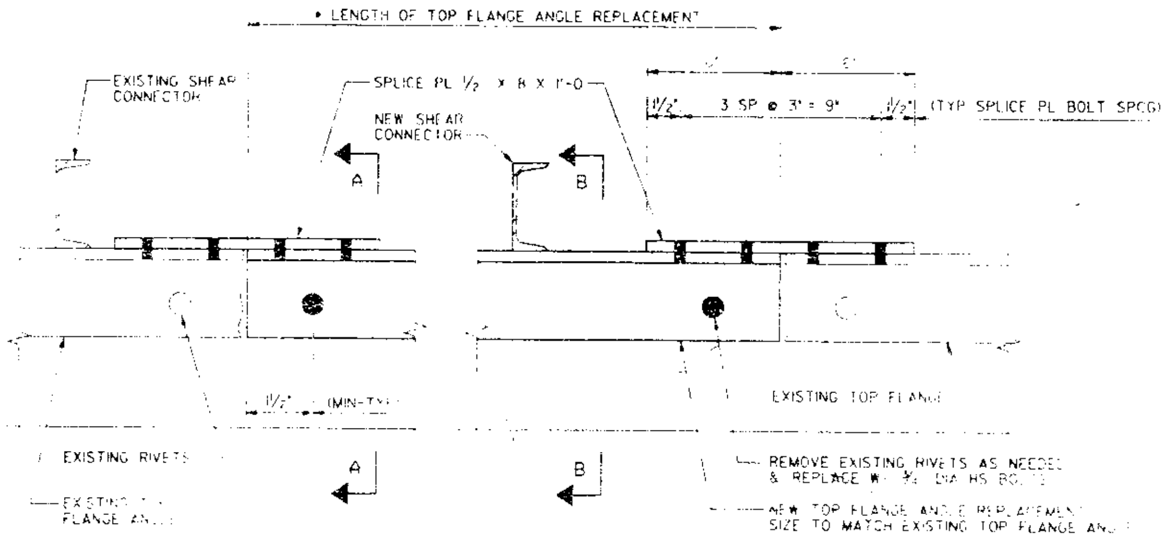
BEAM REPAIR DETAIL



REPAIR NO. 4

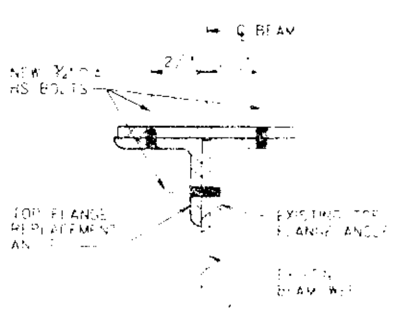


REPAIR NO. 5

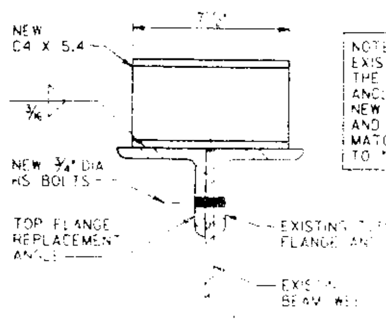


TOP FLANGE ANGLE REPAIR DETAIL

* TO BE DETERMINED IN THE FIELD BY THE ENGINEER.



SECTION A-A



SECTION B-B

NOTE:
EXISTING SHEAR CONNECTORS LOCATED WITHIN THE LENGTH OF THE TOP FLANGE REPLACEMENT ANGLE ARE TO BE REMOVED AND REPLACED WITH NEW STRUCTURAL CHANNELS AS SHOWN. THE NUMBER AND LOCATION OF NEW SHEAR CONNECTORS IS TO MATCH THE EXISTING CONNECTORS. COST INCIDENTAL TO "FURNISHING & ERECTING STRUCTURAL STEEL".

BEAM REPAIR NOTES:

Repair No. 1

PPC Beam Ends Designated For Repair No. 1 Shall Have All Loose And Unsound Concrete Completely Removed And All Exposed Prestressing Tendons Thoroughly Cleaned Of Rust. The Entire Area Shall Then Be Painted With An Epoxy Based Concrete Sealer.

Repair No. 2

PPC Beam Ends Designated For Repair No. 2 Shall Have All Loose And Unsound Concrete Completely Removed And All Exposed Prestressing Tendons Thoroughly Cleaned Of Rust. The Entire Area Shall Then Be Painted With An Epoxy Based Concrete Sealer.

Repair No. 3

PPC Beams Designated For Repair No. 3 Shall Have All Loose And Unsound Concrete Completely Removed From Bottom of The Beam and All Exposed Prestressing Tendons And or Reinforcing Bars Thoroughly Cleaned. The Cleaned Area Shall Then Be Repaired With A "Formed Concrete Repair" or "Epoxy Mortar Repair" (As Applicable) in Which The Beam is Restored To It's Original Section.

▲ Repair No. 4

Repair No. 4 Consists Of The Removal Of An Existing Bottom Flange Angle On The Designated Side Of The Beam And is To be Replaced With A New Angle. The Repair Includes The Removal Of All Rivets Necessary To Completely Detach The Existing Angle From The Beam Web; including Rivet Removal At Cover Plates, Bearing Stiffeners, Intermediate Stiffeners And Web Splices. All Removed Rivets Are To be Replaced With High Strength Bolts.

▲ Repair No. 5

The Beams That Are Designated For Bottom Flange Angle Replacement And Have Bearing Stiffeners At Both Ends Of The Beam Are To Have The Bearing Stiffener Angles On The Indicated Side Of The Beam Removed And Replaced. This Repair Includes The Removal Of All Rivets Necessary To Completely Detach The Existing Stiffener Angles From The Beam Web. All Removed Rivets Are To Be Replaced With High Strength Bolts.

GENERAL NOTE:

▲ New Structural Steel Flange Angles, Bearing Stiffeners and Splice Plates Will Be Paid For as "Furnishing and Erecting Structural Steel".
Removal Of Existing Rivets and Replacement With High-Strength Bolts Will Be Paid For as "Rivet Removal and Replacement".
Cost of removal of existing structural steel flange angles and bearing stiffener angles will be paid for as "Structural Steel Removal".

BEAM REPAIR DETAILS

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

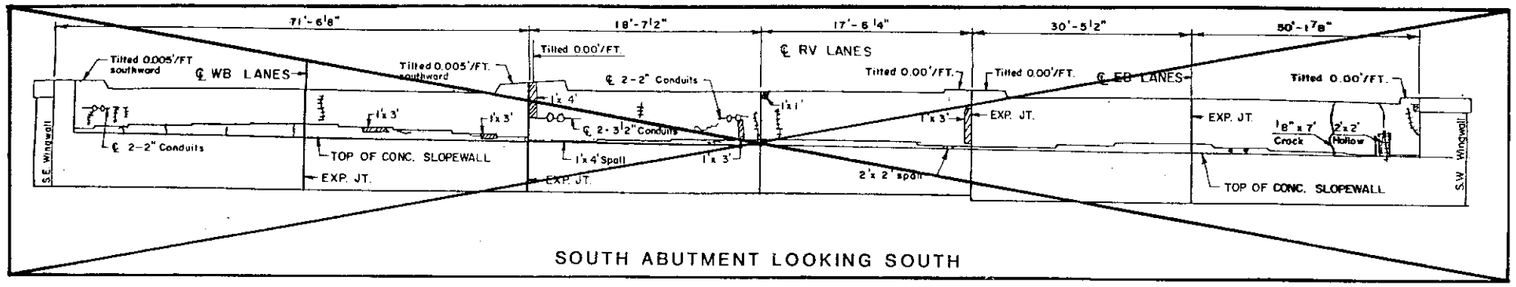
STATION 4[illegible]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*	-	443	255
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 64
72 SHEETS

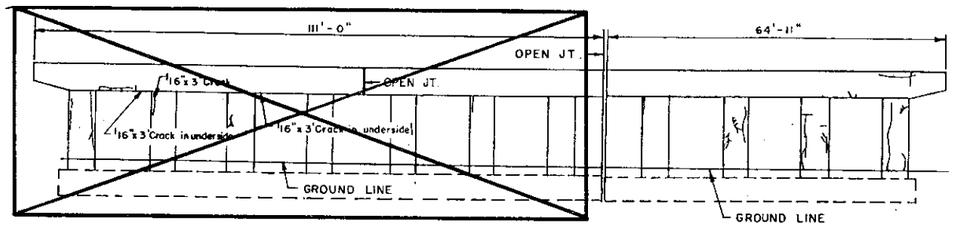
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



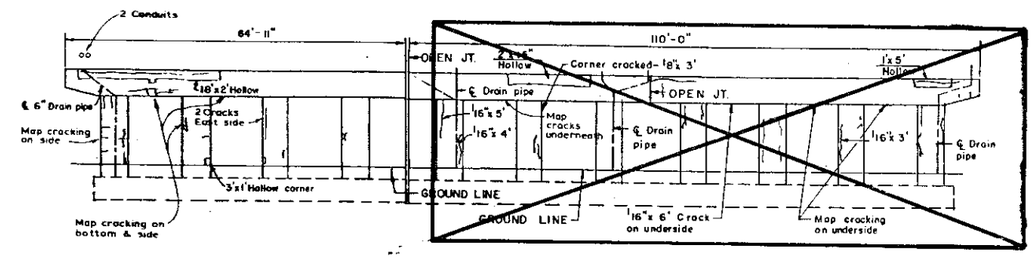
SOUTH ABUTMENT LOOKING SOUTH

NOTES:

1. THIS DRAWING SHOWS AREAS WHERE CONCRETE SPALLING AND CRACKING HAVE BEEN OBSERVED AT THE EXISTING PIERS AND ABUTMENTS.
2. TO DETERMINE EXACT AREAS WHERE DETERIORATION REQUIRES CONCRETE REPAIR, CONCRETE SURFACES SHALL BE SOUNDED WITH HAMMER TO DETECT LOOSE OR DEFECTIVE AREAS THAT MAY EXIST.
3. SEE SPECIAL PROVISIONS FOR PROCEDURES DESCRIBING THE REHABILITATION WORK.
4. REPAIR AREAS SHOWN REFLECT AN INDEPENDENT FIELD INSPECTION PERFORMED UNDER THE DIRECTION OF IDOT. REPAIR OF THE EXISTING SUBSTRUCTURE SHALL INCLUDE BUT NOT BE LIMITED TO THESE AREAS. ALL LIMITS OF REPAIR SHALL BE AS DIRECTED BY THE ENGINEER.
5. FOR REPAIRS, USE FORMED CONCRETE REPAIRS, DEPTH≤5" OR >5" AS APPLICABLE (SEE SPECIAL PROVISIONS).
6. FOR CONCRETE REMOVAL AND REPLACEMENT DETAILS, SEE "CONCRETE REPAIR DETAILS" ELSEWHERE IN THE PLANS.
7. PIER REPAIR WORK THIS CONTRACT WILL BE FROM THE APPROXIMATE EDGE OF RECONSTRUCTED REVERSIBLE LANES TO PIER EXTENSION CONSTRUCTED AS A PART OF SUBSTRUCTURE WIDENING CONTRACT. (NWB SIDE)

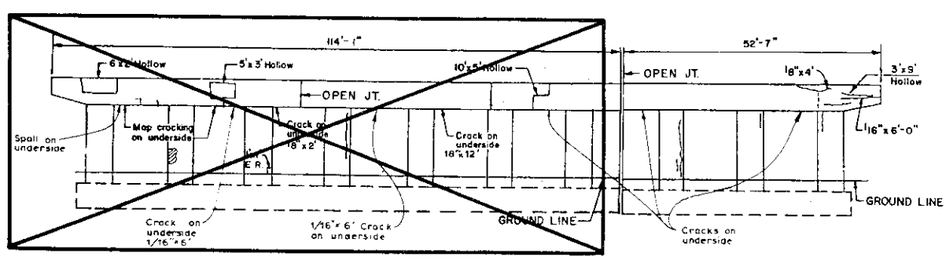


PIER NO. 1 - LOOKING NORTH

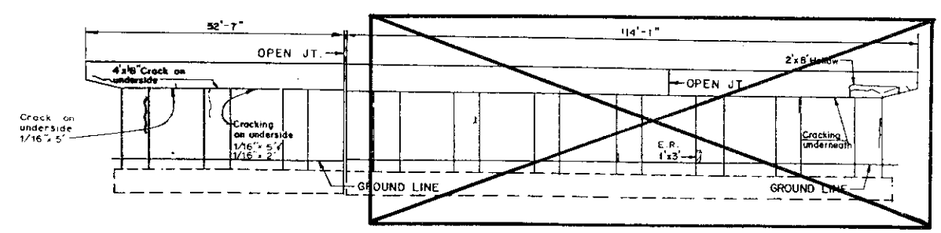


PIER NO. 1 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT.



PIER NO. 2 - LOOKING NORTH



PIER NO. 2 - LOOKING SOUTH

LEGEND

E.R.	EXPOSED REINFORCING BAR
~~	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 1 OF 9

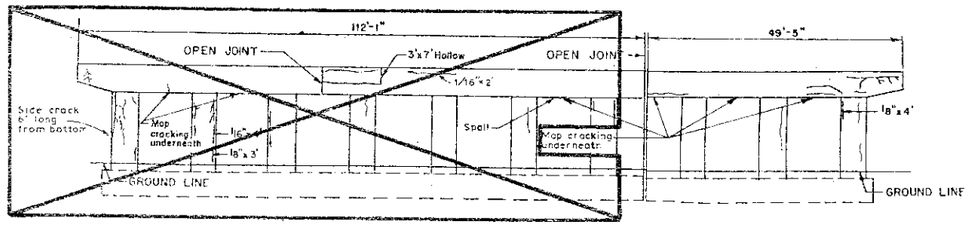
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

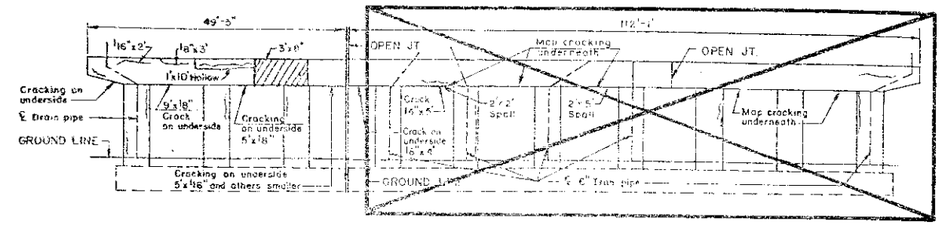
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	256
F.A.I. NO. 3, REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 6
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

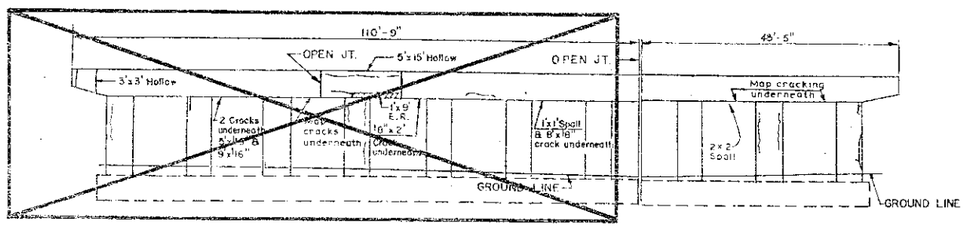


PIER NO. 3 - LOOKING NORTH



PIER NO. 3 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT.



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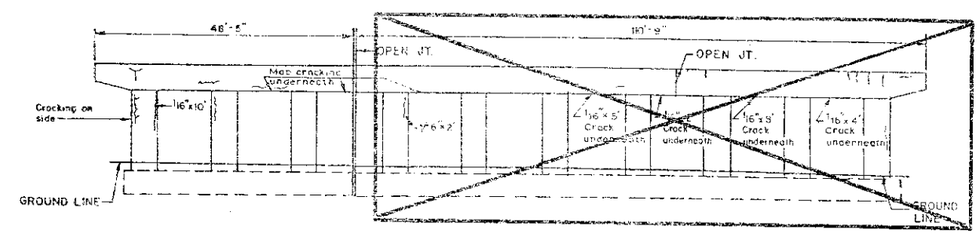

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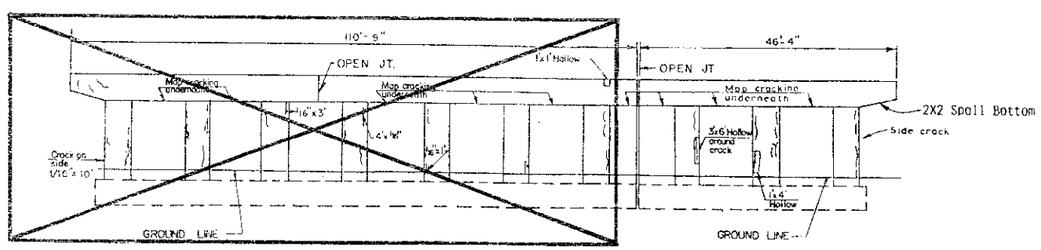

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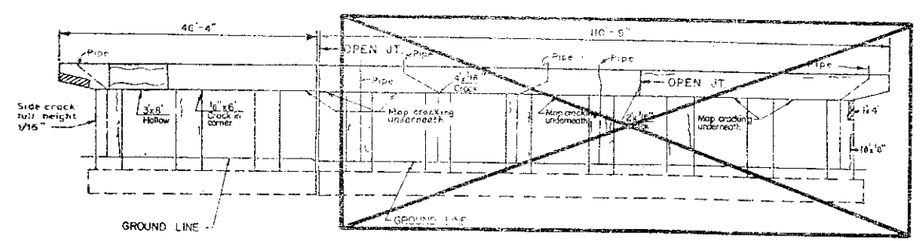


PIER NO. 5 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9

LEGEND
E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING
LEACHING
SPALLS

STANLEY CONSULTANTS

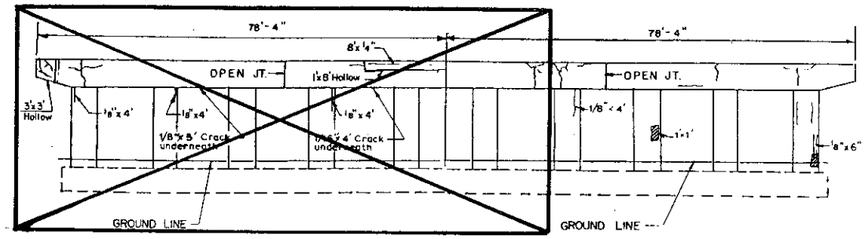
SUBSTRUCTURE REHABILITATION
SHEET 2 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	257
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 66
72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



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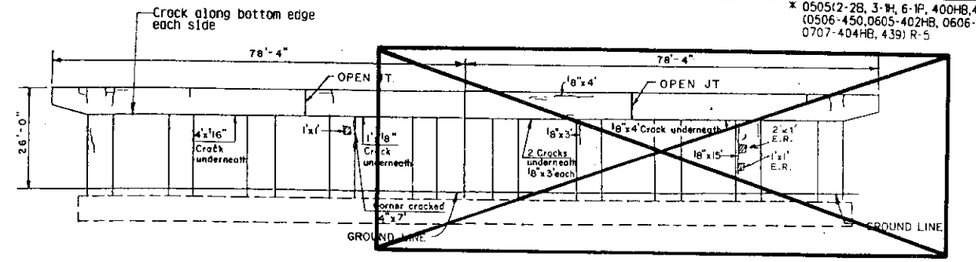
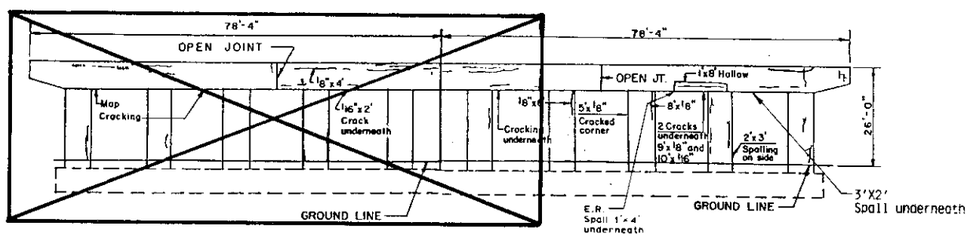


PIER NO. 6 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



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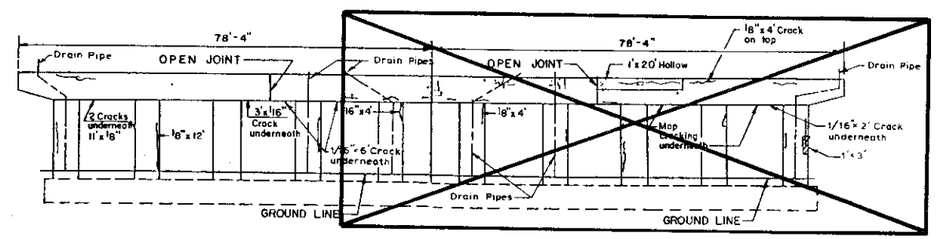

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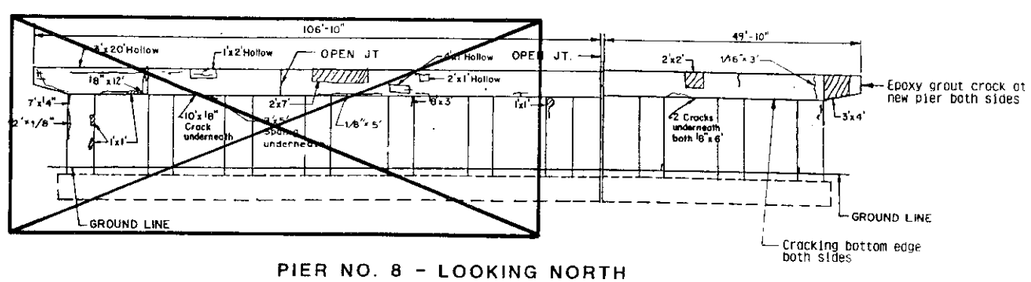

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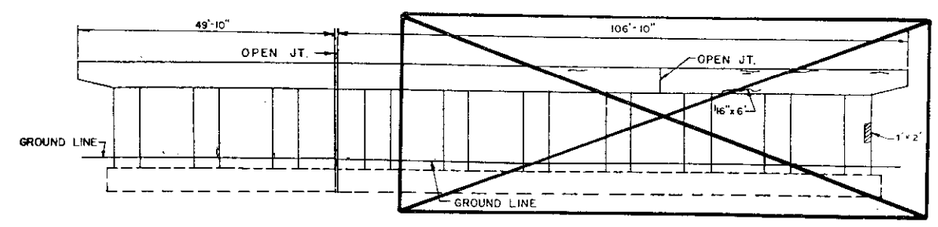


PIER NO. 8 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND
E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING
LEACHING
SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 3 OF 9

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	258
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

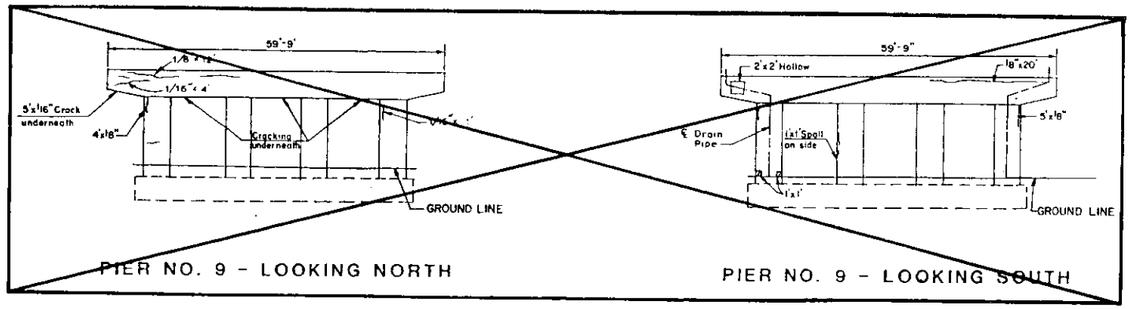
SHEET NO. 67
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

LEGEND

E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING
LEACHING
SPALLS

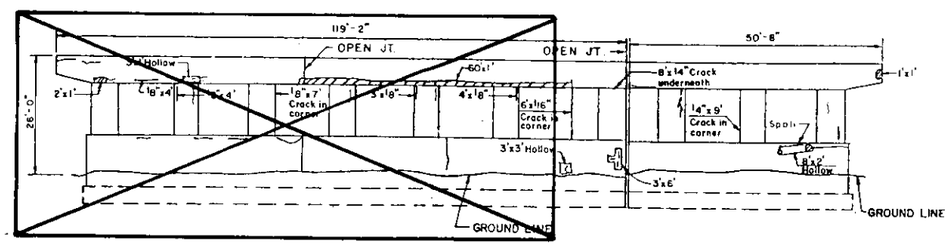
NOTE:
FOR NOTES, SEE SHEET 1 OF 9.



PIER NO. 9 - LOOKING NORTH

PIER NO. 9 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



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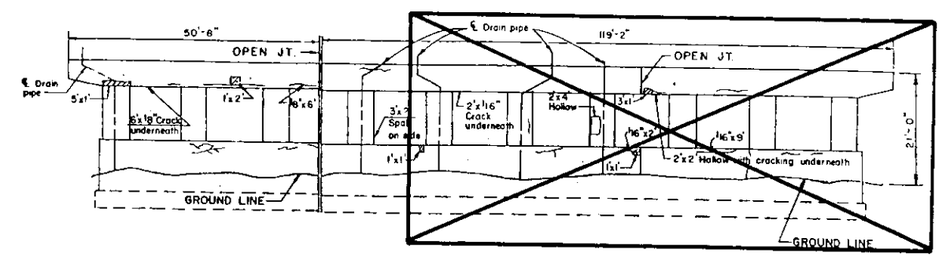

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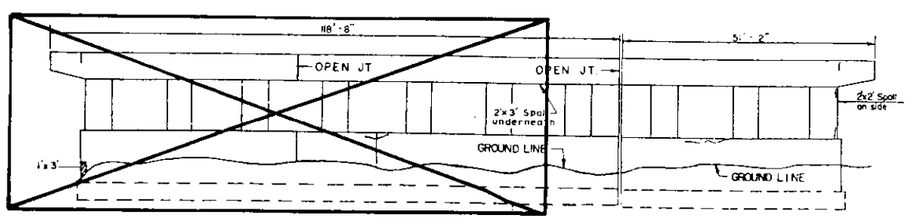
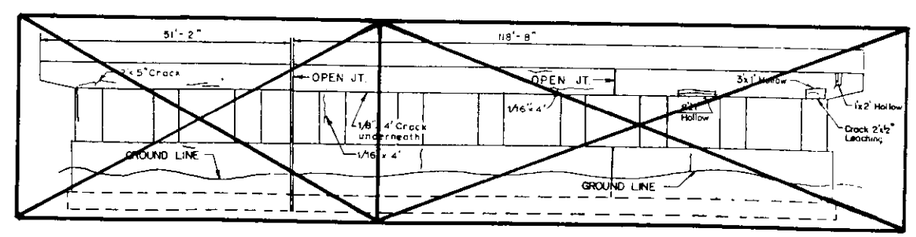


PIER NO. 11 - LOOKING NORTH



PIER NO. 11 - LOOKING SOUTH

STANLEY CONSULTANTS

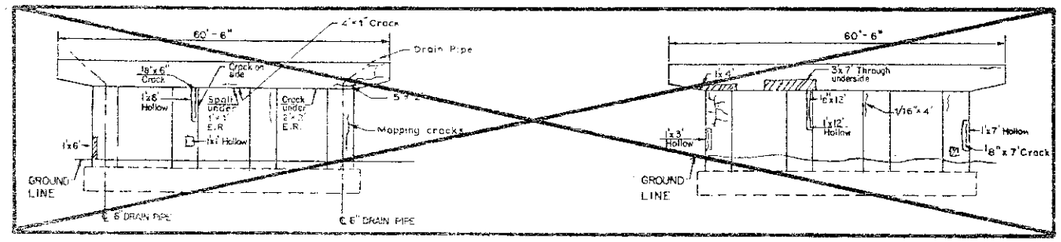
SUBSTRUCTURE REHABILITATION
SHEET 4 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	259
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 68
72 SHEETS

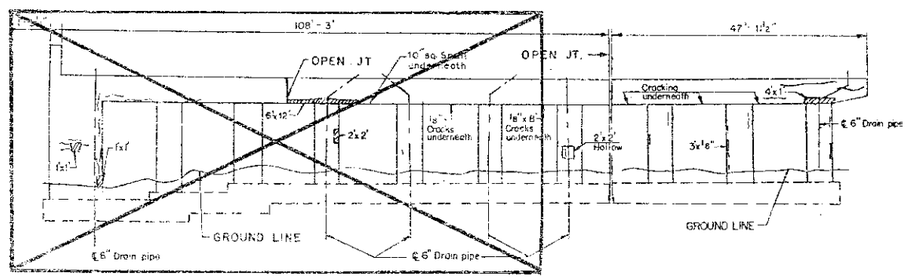
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



PIER NO. 12 - LOOKING NORTH

PIER NO. 12 - LOOKING SOUTH

ALL REPAIRS SHOWN TO
BE DONE IN THIS CONTRACT



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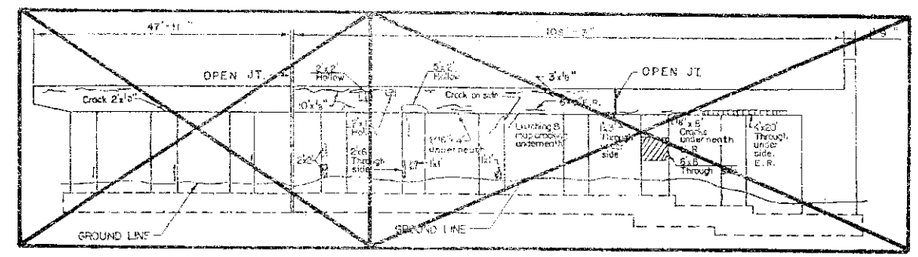

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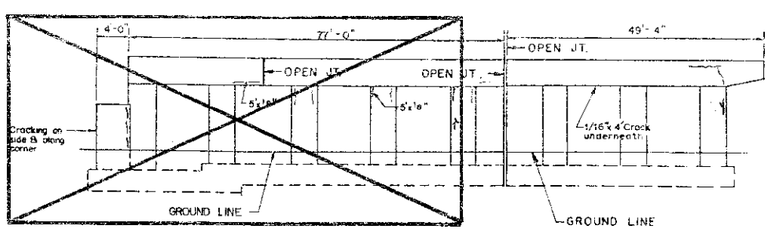
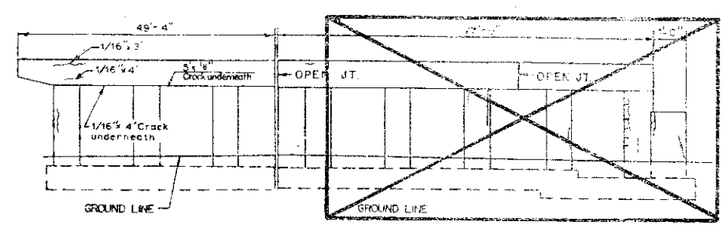


PIER NO. 14 - LOOKING NORTH



PIER NO. 14 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

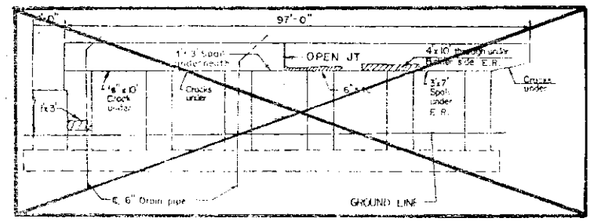
SUBSTRUCTURE REHABILITATION
SHEET 5 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

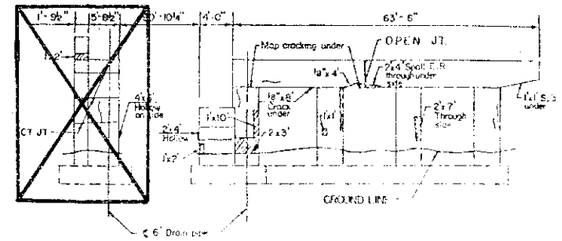
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	260
F.A.P. RTE. 4	SECTION	FED. AID PROJECT		

SHEET NO. 69
72 SHEETS

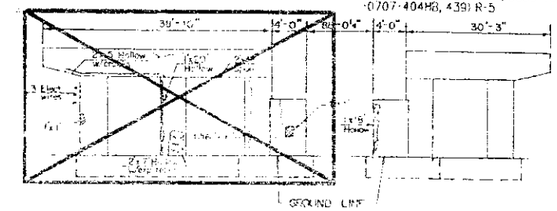
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0505-402HB, 0606-403HB, 0707-404HB, 439) R-5



PIER NO. 15 - LOOKING NORTH



PIER NO. 16 - LOOKING NORTH



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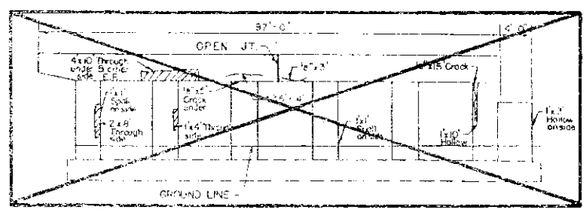

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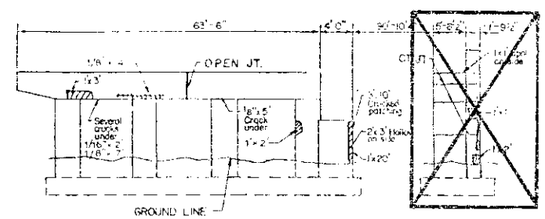
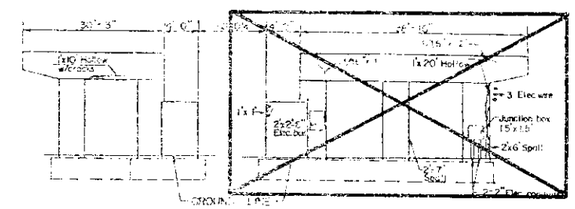
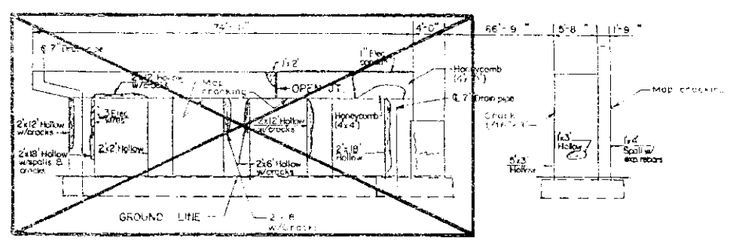


PIER NO. 16 - LOOKING SOUTH

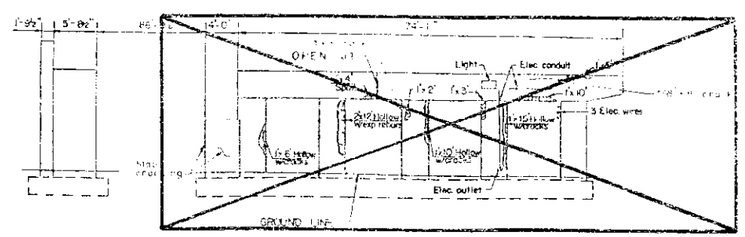


PIER NO. 17 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



PIER NO. 18 - LOOKING NORTH



PIER NO. 18 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 6 OF 9
SECTION
F.A.P. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	261

SHEET NO. 70
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 451), 0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

LEGEND

E.R. EXPOSED REINFORCING BAR

CRACK

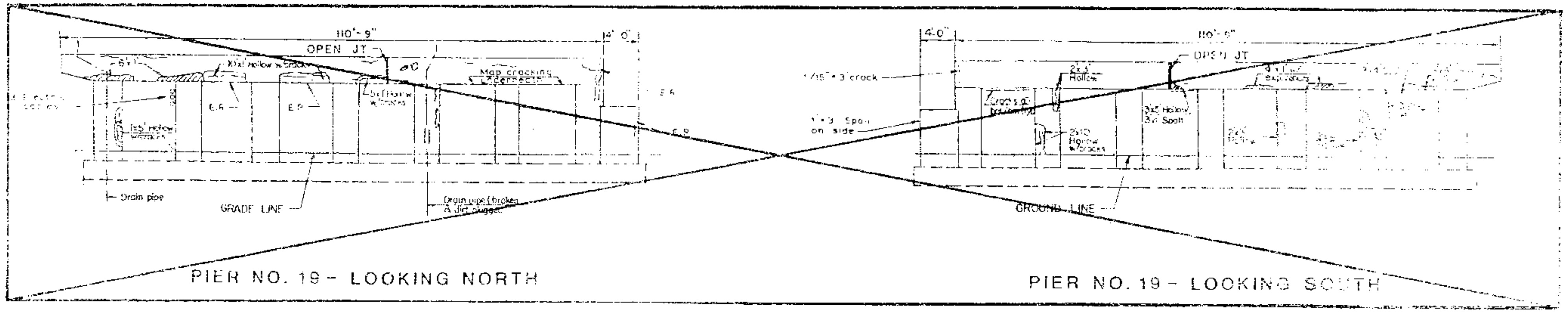
CRACKS WITH LEACHING

LEACHING

SPALLS

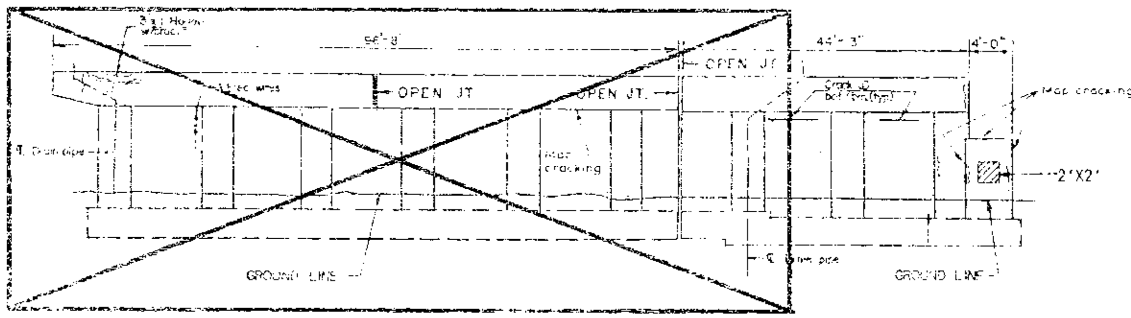
NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



PIER NO. 19 - LOOKING NORTH

PIER NO. 19 - LOOKING SOUTH



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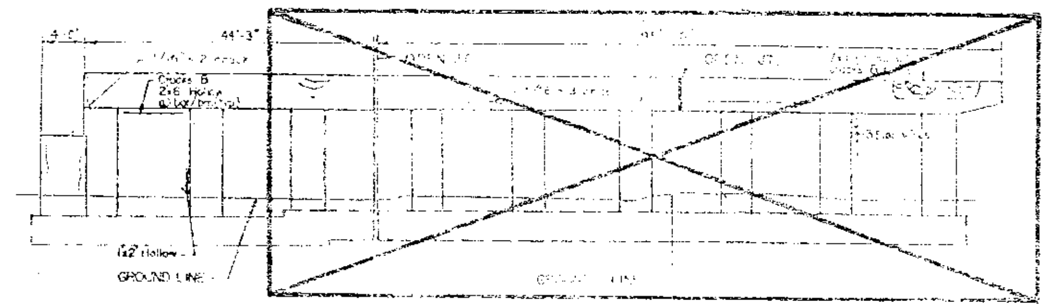
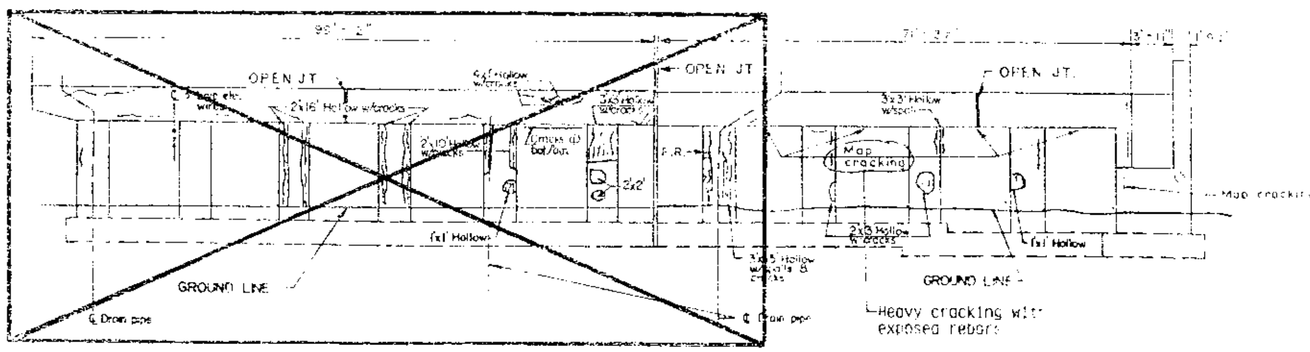


PIER NO. 20 - LOOKING SOUTH



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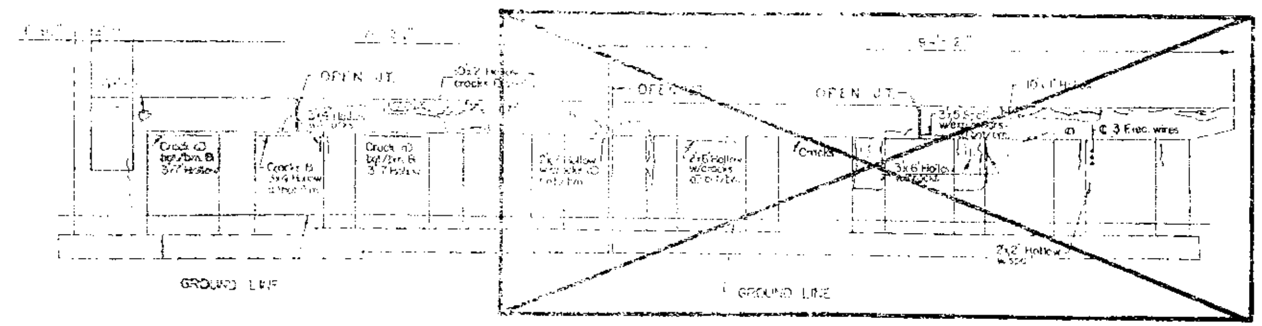


PIER NO. 21 - LOOKING SOUTH

SUBSTRUCTURE REHABILITATION
SHEET 7 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

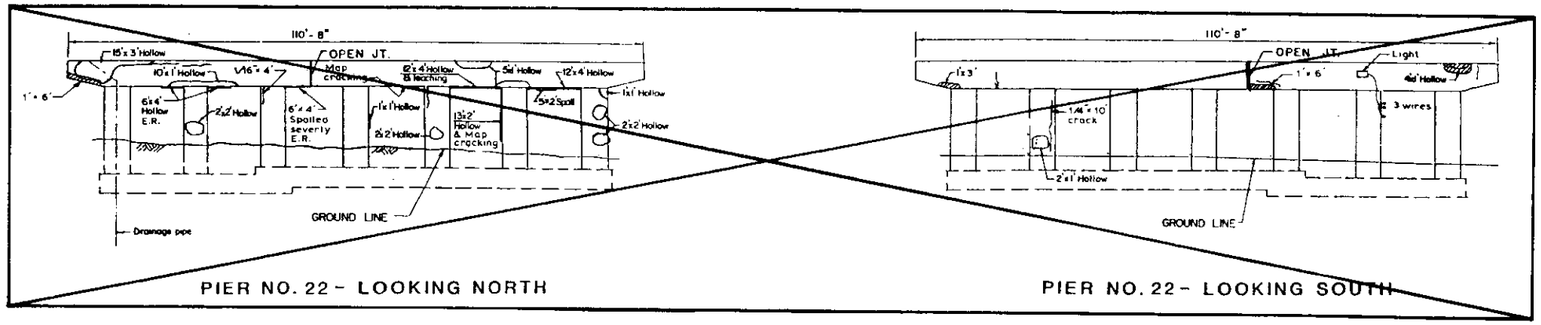
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	262
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 71
72 SHEETS

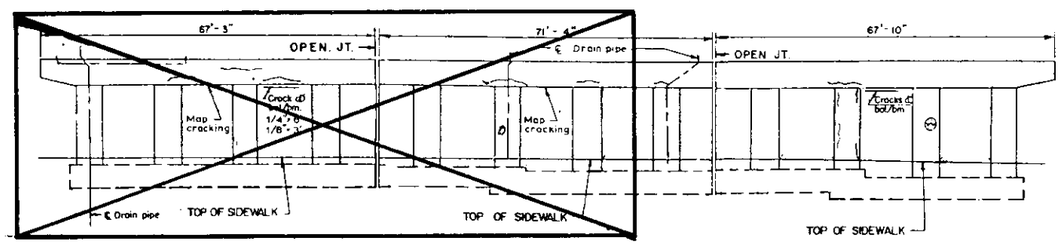
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



PIER NO. 22 - LOOKING NORTH

PIER NO. 22 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



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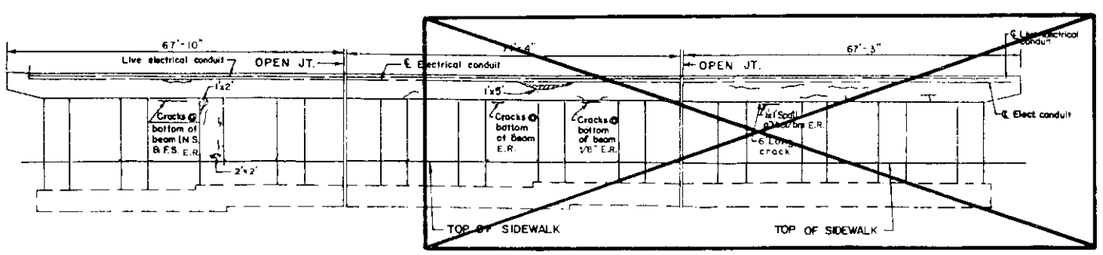


PIER NO. 23 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION

SHEET 8 OF 9

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

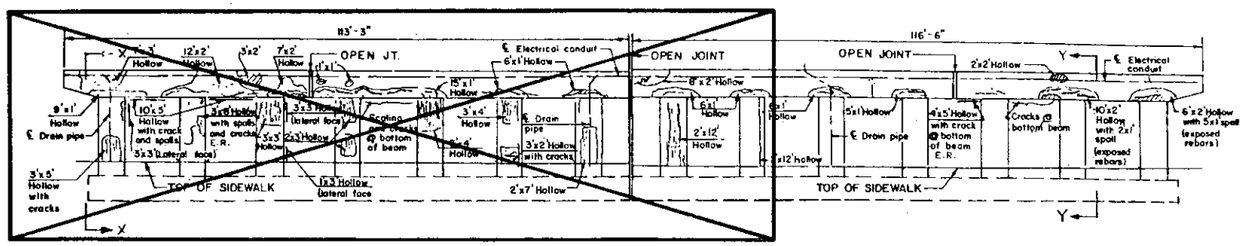
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

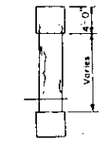
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	263
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 72
72 SHEETS

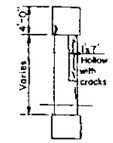
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 461), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



PIER NO. 24 - LOOKING NORTH

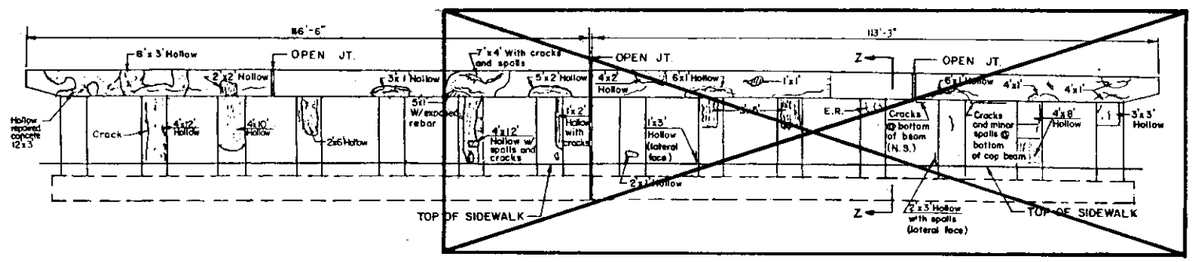


SECT. X-X

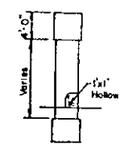


SECT. Y-Y

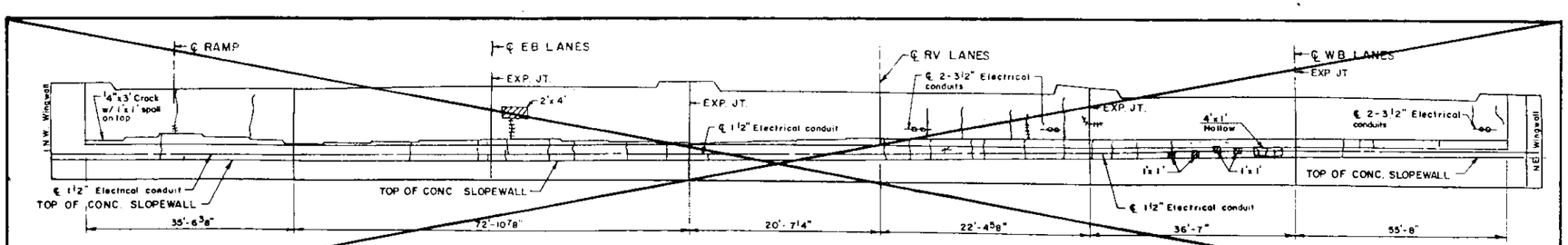
ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



PIER NO. 24 - LOOKING SOUTH



SECT. Z-Z



NORTH ABUTMENT LOOKING NORTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 9 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

*0505 (2-2B, 3-HH, 6-HP, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	397

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-310-79 BRIDGE I-90/94 over Ashland Ave. Date 5-22-86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02, 32
SEC. I-94 to I-290 STA. West end of Pier # 24 on sidewalk, north of Courtland Avenue Checked By DJA
COUNTY Cook
Boring No. ASH-1 Station ____ Offset ____
Surface Water El. ____ Groundwater El. at Completion ____ After ____ Hours ____

Ground Surface 0

Description	Depth	N	Qu (t/sf)	w (%)
4" CONCRETE SIDEWALK over SANDY CLAY LOAM: little gravel; dark brown and gray; stiff to very stiff (A-4)		6	2.3 P	15
		6	1.0 S	25
SILTY CLAY LOAM: trace gravel; brown; stiff to very stiff (A-6)	6.5	9	3.5 S	20
		16	0.8 S	20
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft. (A-6 to A-7-6)	11.3	12	0.0 B	21
		4	0.2 B	26
		5	0.2 B	26
		7	0.8 B	24
		7	0.9 B	23
		7	0.5 B	22
SILTY LOAM: some sand; dark gray; brown; dense (A-4 to A-6)	26.0	31	4.4 S	18
SILTY SAND: trace gravel; dark gray and brown; v. dense; too granular for Rimac (A-3 to A-4)	28.5	110	4.7 S	17
		74	-	15
		31	-	17
		60	-	12
		50	-	14
		56	-	15
		62	-	17

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG Sh 2 of 2 Sh

Boring ASH-1 (cont)

Description	Depth	N	Qu (t/sf)	w (%)
		86	-	13
		57	-	12
		65	-	15
Grades medium to coarse grained below 53.5'. Some gravel 53.5' to 55.0'		62	-	15
		52	-	9
		48	-	19
Interbedded with fine gravel below 63.0'		52	-	11
		47	-	18
		75	-	10
TOP OF BEDROCK 67.8'. DOLOMITE: light gray; smooth drilling	67.8			
EOB	70.0			

Boring Terminated at 70.0'
Solid Stem Auger to 10.0'
Casing installed to 10.0'
Rotary wash to 70.0'
Boring backfilled upon completion

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-310-79 BRIDGE I-90/94 over Ashland Ave. Date 5-21-86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02, 32
SEC. I-94 to I-290 STA. West end of Pier # 17 in Parking Lot Checked By DJA
COUNTY Cook
Boring No. ASH-2 Station ____ Offset ____
Surface Water El. ____ Groundwater El. at Completion ____ After ____ Hours ____

Ground Surface 0

Description	Depth	N	Qu (t/sf)	w (%)
4" ASPHALT over SAND & GRAVEL FILL: black; loose (A-1-a to A-2). No Return @ 2.5' - Bricks		-		
		8	-	29
Grades with clay pockets		14	-	33
SILTY CLAY LOAM: trace gravel; brown and gray mottled; very stiff (A-6)	8.5	14	3.1 S	19
		34	2.6 B	21
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; stiff to soft (A-6 to A-7-6)	13.0	26	1.5 B	19
		9	1.0 B	24
Medium dense SILT layer 18.6' to 20.5'		13	-	19
		6	1.0 B	23
Disturbed sample		7	0.8 P	23
Interlayered SILTY & SAND: gray; dense to very dense (A-3 to A-4)		30	-	16
SILTY CLAY LOAM: trace gravel; dark gray; hard (A-6)	28.0	34	7.0 B	13
SILT: dark gray; hard (A-4)	31.2	77	4.5 P	18
		134	5.3 S	20
SAND: fine grained; gray/brown; very dense to dense (A-3)		139	-	20
		64	-	21
		83	-	20
		73	-	19

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG Sh. 2 of 2 Sh.

Boring ASH-2 (cont)

Description	Depth	N	Qu (t/sf)	w (%)
		78	-	23
		37	-	20
		24	-	19
	52.5			

Boring Terminated at 52.5'
Solid stem auger to 10.0'
Casing installed to 10.0'
Rotary wash to 52.5'
Boring backfilled upon completion

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-310-79 BRIDGE I-90/94 over Ashland Ave Date 5-23-86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02, 32
SEC. I-94 to I-290 STA. West end of pier # 9 Checked By DJA
COUNTY Cook
Boring No. ASH-3 Station ____ Offset ____
Surface Water El. ____ Groundwater El. at Completion ____ After ____ Hours ____

Ground Surface 0

Description	Depth	N	Qu (t/sf)	w (%)
4" GRAVEL FILL over SAND & GRAVEL FILL: with brick, glass and cinders, black and dark gray, loose (A-1-a to A-2)		8	-	27
	4.3	6	-	[illegible]
SILTY CLAY LOAM: trace gravel; brown; stiff (A-6)		10	1.9 B	23
		12	2.8 B	[illegible]
		12	2.4 B	22
SILTY CLAY to SILTY CLAY LOAM: trace gravel, gray; soft (A-6 to A-7-6)	12.5	4	0.4 B	22
		2	0.2 B	22
Disturbed sample		4	0.3 P	24
		6	0.4 B	24
Disturbed sample		6	0.3 P	25
		10	0.8 B	22
SILTY CLAY LOAM: little gravel, dark gray; hard (A-6). Dense sand layer at [illegible]	27.5	41	5.9 B	13
		26	6.2 B	33
		26	4.2 B	16
		24	5.1 B	14
		34	5.4 B	20
SILT to SAND: gray, extremely dense to dense (A-3 to A-4)		112	-	17
		88	-	17

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG Sh 2 of 2 Sh

Boring ASH-3 (cont)

Description	Depth	N	Qu (t/sf)	w (%)
SILT to SAND: gray; v. dense (A-3 to A-4)		47	-	20
		118	-	18
		107	-	22
		73	-	21
		36	-	23
		73	-	21
		33	-	22
		29	-	24
SILTY CLAY: trace gravel, dark grey; hard (A-7-6). Boulder 67.8 to 68.3'	66.6	25	5.0 B	[illegible]
		81/8"	6.6 S	17
TOP OF BEDROCK 69.7'	69.7			
DOLOMITE: smooth drilling	71.0			

Boring Terminated at 71.0'
Solid stem auger to 10.0'
Casing installed to 10.0'
Rotary wash to 71.0'
Boring backfilled upon completion.

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-310-79 BRIDGE I-90/94 over Ashland Ave. Date 05/29/86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02, 32
SEC. I-94 to I-290 STA. West end of Pier #2 Checked By DJA
COUNTY Cook
Boring No. ASH-4 Station ____ Offset ____
Surface Water El. ____ Groundwater El. at Completion ____ After ____ Hours ____

Ground Surface 0

Description	Depth	N	Qu (t/sf)	w (%)
SANDY CLAY LOAM FILL: some gravel, bricks, cinders, brown/black mottled, hard to very stiff (A-4). Sample disturbed		27	4.5 P	15
Sample disturbed		9	3.5 P	18
Sample disturbed		21	2.0 P	30
SILTY CLAY LOAM: trace gravel; brown, very stiff (A-4)	8.0	14	2.3 P	23
		26	2.2 P	22
SILTY CLAY to SILTY CLAY LOAM: trace gravel, gray, medium stiff to soft (A-6 to A-7-6)	13.0	5	0.3 B	28
		4	0.3 B	33
		4	0.3 B	20
Sample disturbed		6	2.3 P	[illegible]
		5	0.3 B	18
		6	0.6 B	25
		6	0.5 B	24
		5	[illegible]	25
SAND to SILT: gray, medium dense, wet (A-3 to A-4)		23	3.8 P	59
SILTY CLAY LOAM: little gravel, gray, very stiff to hard (A-6)		21	2.9 B	14
		26	3.1 B	17
Sample disturbed		[illegible]	4.5	[illegible]
		43	8.3 S	10

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG Sh 2 of 2 Sh

Boring ASH-4 (continued)

Description	Depth	N	Qu (t/sf)	w (%)
		42	4.6 B	16
SANDY SILT to SAND: trace gravel; gray, very dense (A-3 to A-4)	48.0	70	3.0 S	18
		75	4.[illegible] S	[illegible]
Too granular for Rimac		92	-	17
Trace clay below 55.5		72	[illegible].5	10
		50	[illegible].5 S	9
SILTY CLAY LOAM: little to some gravel, gray, hard (A-6). Disturbed sample	61.0	67	-	[illegible]
		[illegible]	6.3 S	[illegible]
TOP OF BEDROCK 65.5	65.5			
DOLOMITE: smooth drilling	66.0			

Boring terminated at 66.0'
Solid stem auger to 10.0'
Casing installed to 10.0'
Rotary wash to 66.0'
Boring backfilled upon completion.

REVISIONS NAME	DATE	REVISIONS NAME	DATE

DATE DRAWN BY CHECKED BY

* 0505 (2-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	358

Bridge Foundation Boring Log — Boring ASH-5

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-510-79 BRIDGE I-90/94 over Ashland Ave. Date 09/26/86

ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02; JZ

SEC. I-94 to I-290 STA. East End of South Abutment; on Pavement; Through Embankment Checked By DJA

COUNTY Cook

Boring No. ASH-5 Station ____ Offset: ____

Surface Water El. ____ Groundwater El. at Completion ____ After ____ Hours ____

Ground Surface 0

3" ASPHALT, 1" CONCRETE 6" GRAVEL base course over

SILTY CLAY LOAM FILL: little to some gravel; cinders, bricks & wood; brown/black mottled; stiff to very stiff (A-6)

Partially disturbed

Grades hard

Obstruction encountered; possible steel plate 18.5' to 18.7'

N	Qu (t/s.f.)	w (%)
16	2.9 B-S	13
11	2.9 B-S	23
13	1.6 B	18
16	1.8 B-S	21
12	-	31
27	4.5 S	15
8	3.0 P	18
-	3.0 P	-
9	1.6 S	27

25.5

SILTY CLAY LOAM: trace gravel; brown; stiff to very stiff (A-6)

32.2

SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; soft to medium stiff (A-6 to A-7-6)

N	Qu (t/s.f.)	w (%)
7	1.8 S	44
9	1.9 B	23
14	3.0 B-S	21
12	2.5 B-S	17
5	0.9 B	19
4	0.3 B	24
4	0.2 B	26
3	0.3 B	26
8	0.4 B	26

N-Standard Penetration Test-Blows per foot to drive 2 O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG

Sh 2 of 2 Sh

Boring ASH-5 (continued)

No recovery - pushed rock

No recovery

SILTY CLAY LOAM: trace gravel; dark gray; stiff (A-6)

65.5

SILTY CLAY LOAM: trace sand; gray

N	Qu (t/s.f.)	w (%)
7	0.5 B	24
7	0.5 B	24
29	-	-
22	-	-
20	1.9 B	19
26	2.5 B	20
37	1.7 B	23
31	3.1 B	13
55	6.3 S	14
26	2.9 B	23

Grades with increasing silt percentage

N	Qu (t/s.f.)	w (%)
64	5.9 S	-
105	3.0 S	-
89	2.1 S	-
91	4.8 B	-
157	3.4 B	-

82.5

Boring terminated at 82.5'. Solid stem auger to 10.0'. Casing installed to 15.0'. Rotary wash to 82.5'. Boring backfilled upon completion.

Bridge Foundation Boring Log — Boring ASH-6

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-510-79 BRIDGE I-90/94 over Ashland Ave. Date 05/29/86

ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02; FT

SEC. I-94 to I-290 STA. East End of Pier #4 Checked By DJA

COUNTY Cook

Boring No. ASH-6 Station ____ Offset: ____

Surface Water El. ____ Groundwater El. at Completion ____ After ____ Hours ____

Ground Surface 0

2" ASPHALT over SAND & GRAVEL FILL: (A-1-a to A-2)

SILTY CLAY LOAM: trace gravel; gray/brown, hard to stiff (A-6)

13.5

SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft; (A-6 to A-7-6)

N	Qu (t/s.f.)	w (%)
33	4.2 P	16
8	1.4 B	21
6	0.8 B	13
12	1.7 B	23
19	1.7 B	26
10	0.9 B	18
10	1.1 B	17
4	0.5 B	26
-	-	-

N	Qu (t/s.f.)	w (%)
4	0.6 B	26
-	-	-
5	0.3 B	24
-	-	-
36	2.4 S	18
20	2.9 B	15
23	3.8 B	18
34	4.7 B	12
38	6.6 S	13

32.5

SILT: trace gravel; gray; dense (A-4)

36.1

SILTY CLAY LOAM: trace gravel; dark gray; very stiff to hard (A-6)

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG

Sh 2 of 2 Sh

Boring ASH-6 (continued)

46.2

SANDY SILT to SAND: dark gray/brown; extremely dense (A-3 to A-4)

SILTY CLAY: trace gravel; dark gray; hard (A-7-6)

Sample disturbed

Grades with limestone fragments

N	Qu (t/s.f.)	w (%)
155	6.8 S	18
100	3.6 S	19
-	-	-
160	3.5 B	21
115	5.3 S	20
112	2.9 S	25
-	-	-
57	-	17
86	4.4 S	12
85	4.7 S	13

TOP OF BEDROCK - 73.0'

N	Qu (t/s.f.)	w (%)
80	3.2 S	11

73.0

Run #1 74.0'-79.0'
DOLOMITE: light gray & white; fine grained
Broken & weathered 80.0' to 83.0'
Soft clay seams at 74.0' to 74.1', 74.8' to 75.1', 79.1' to 79.2', 80.0' to 83.0'
Fracture zones at 74.0', 74.8' to 75.0', 75.8' to 75.9', 78.2' to 78.6'
RQD 74.0' to 79.0' = 67%
Recovery = 88%

Run #2 79.0' to 83.0'
Grades very broken & weathered with numerous clay seams; core barrel blocked at 83.0'
RQD 79.0' to 83.0' = 0%
Recovery = 79%

Boring terminated at 83.0'. Solid stem auger to 10.0'. Casing installed to 10.0'. Rotary wash to 74.0'. NX core barrel from 74.0' to 83.0'. Boring backfilled upon completion.

Bridge Foundation Boring Log — Boring ASH-7

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-510-79 BRIDGE I-90/94 over Ashland Ave Date 05/22/86

ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02, JZ

SEC. I-94 to I-290 STA. East End of Pier No. 14 Checked By DJA

COUNTY Cook

Boring No. ASH-7 Station ____ Offset: ____

Surface Water El. ____ Groundwater El. at Completion ____ After ____ Hours ____

Ground Surface 0

SAND & GRAVEL FILL: some cinders & bricks, black & gray; medium dense (A-1-a to A-2)

No recovery pushed rock

8.6

SILTY CLAY LOAM: trace gravel; brown; very stiff (A-6)

Sample disturbed

13.0

SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; medium to soft (A-6 to A-7-6)

Poor return

N	Qu (t/s.f.)	w (%)
50/6"	-	-
22	-	19
6	-	14
8	2.5 P	23
11	3.3 S	15
7	0.4 B	20
5	<0.3 P	21
5	0.4 B	24
6	0.6 B	24

27.5

SAND: brown/gray; dense (A-3)

29.9

SILTY CLAY LOAM: trace gravel; dark gray; hard (A-6)

Sample disturbed

36.5

SILTY SAND: dark gray/brown; very dense to dense (A-3 to A-4)

Grades too granular for Rimac

N	Qu (t/s.f.)	w (%)
6	0.8 B	24
35	0.8 B	23
37	-	-
25	3.3 B	15
45	2.5 P	21
61	-	-
65	3.6 S	23
63	5.0 S	22
52	-	21

N-Standard Penetration Test-Blows per foot to drive 2 O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG

Sh 2 of 2 Sh

Boring ASH-7 (continued)

SILTY SAND: dark gray/brown; dense to medium dense (A-3 to A-9)

N	Qu (t/s.f.)	w (%)
44	-	26
40	-	25
39	-	25
28	-	26
22	-	24
25	-	26
28	-	28
20	-	25
25	-	24
37	-	23

TOP OF BEDROCK 71.5'

DOLOMITE: smooth drilling

N	Qu (t/s.f.)	w (%)
70/6"	-	-

Boring terminated at 72.0'. Solid stem auger to 10.0'. Casing installed to 10.0'. Rotary wash to 72.0'. Boring backfilled upon completion.

Bridge Foundation Boring Log — Boring ASH-8

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-510-79 BRIDGE I-90/94 over Ashland Ave. Date 05/30/86

ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02, JZ

SEC. I-94 to I-290 STA. North of East End of Pier 23, through Cortland Avenue Pavement Checked By DJA

COUNTY Cook

Boring No. ASH-8 Station ____ Offset: ____

Surface Water El. ____ Groundwater El. at Completion ____ After ____ Hours ____

Ground Surface 0

8" ASPHALT PAVEMENT over SAND & GRAVEL FILL: gray; medium dense (A-1-a to A-2)

SILTY CLAY LOAM: trace gravel, brown, stiff to very stiff (A-6)

SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft (A-6 to A-7-6)

18.0

SILT to SAND: trace gravel, dark gray/brown; dense to very dense (A-3 to A-4)

N	Qu (t/s.f.)	w (%)
15	-	5
16	3.1 B	24
10	2.4 B	15
10	0.8 B	24
9	0.5 B	26
4	0.3 B	26
9	0.8 B	23
29	-	21
68	-	20

25.5

SILTY CLAY LOAM: trace gravel; dark gray, hard to very hard (A-4 to A-6)

SILTY SAND: trace gravel, gray/brown, dense to very dense (A-3)

No recovery pushed rock

N	Qu (t/s.f.)	w (%)
26	-	18
45	5.6 B	14
38	9.0 S	12
38	-	-
24	-	-
22	-	19
23	-	21
56	-	20
60	-	17

N-Standard Penetration Test-Blows per foot to drive 2 O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG

Sh 2 of 2 Sh

Boring ASH-8 (continued)

Grades dense to medium dense

N	Qu (t/s.f.)	w (%)
38	-	17
29	-	21
30	-	22
23	-	22
33	-	20
32	-	45

Boring terminated at 60.0'. Solid stem auger 60 20.0'. Casing installed at 20.0'. Rotary wash to 60.0'. Boring backfilled upon completion.

REVISIONS NAME	DATE	REVISIONS NAME	DATE

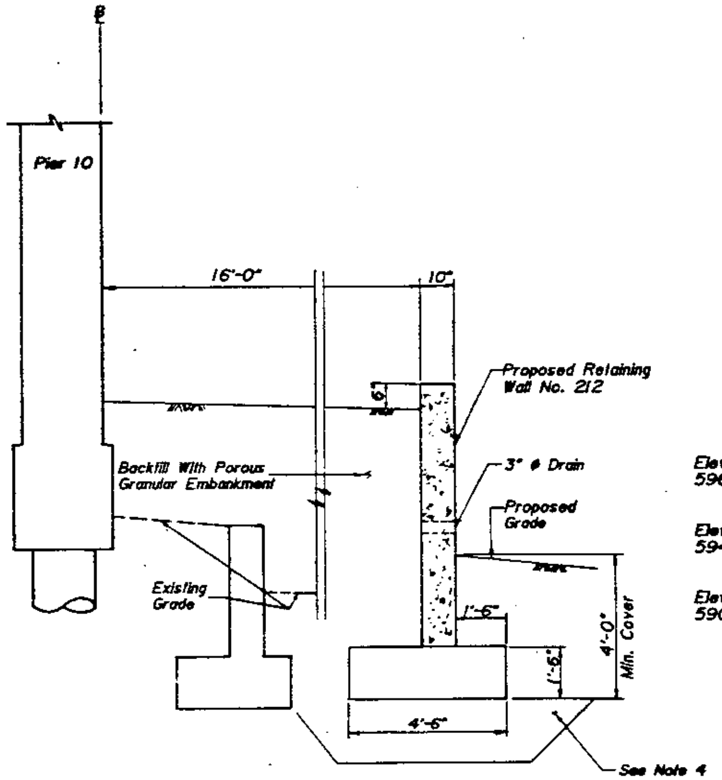
DATE ____ DRAWN BY ____ CHECKED BY ____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

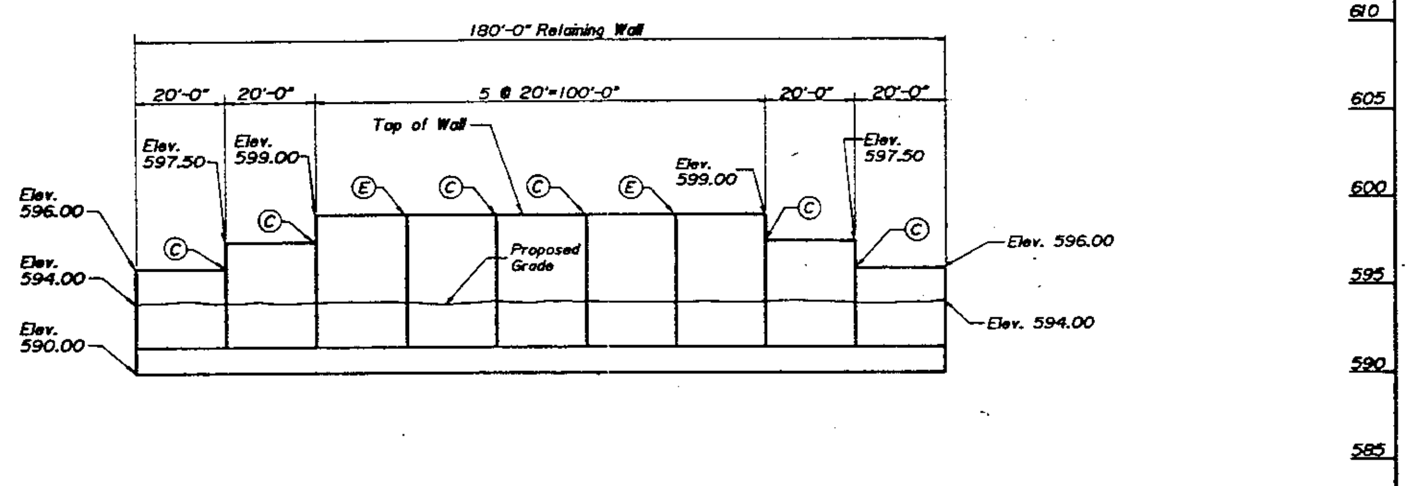
* 0505 12-2B, 3-1H, 6-1P, 400HB, 401HB, 4511, 10506-450, 0605-402HB, 0606-403HB, 0707-404HB, 4391 R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	•	COOK	443	393
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1 OF 4 SHEETS



SECTION A-A



ELEVATION

LEGEND
Ⓒ = Construction Joint
Ⓔ = Expansion Joint

DATA FOR PROPOSED RETAINING WALL

DESIGN SPECIFICATION: AASHTO (1989) SPECIFICATIONS & 1990 INTERIMS.

DESIGN STRESSES: CONCRETE, F'C = 3,500 PSI

REINF., FY = 60,000 PSI

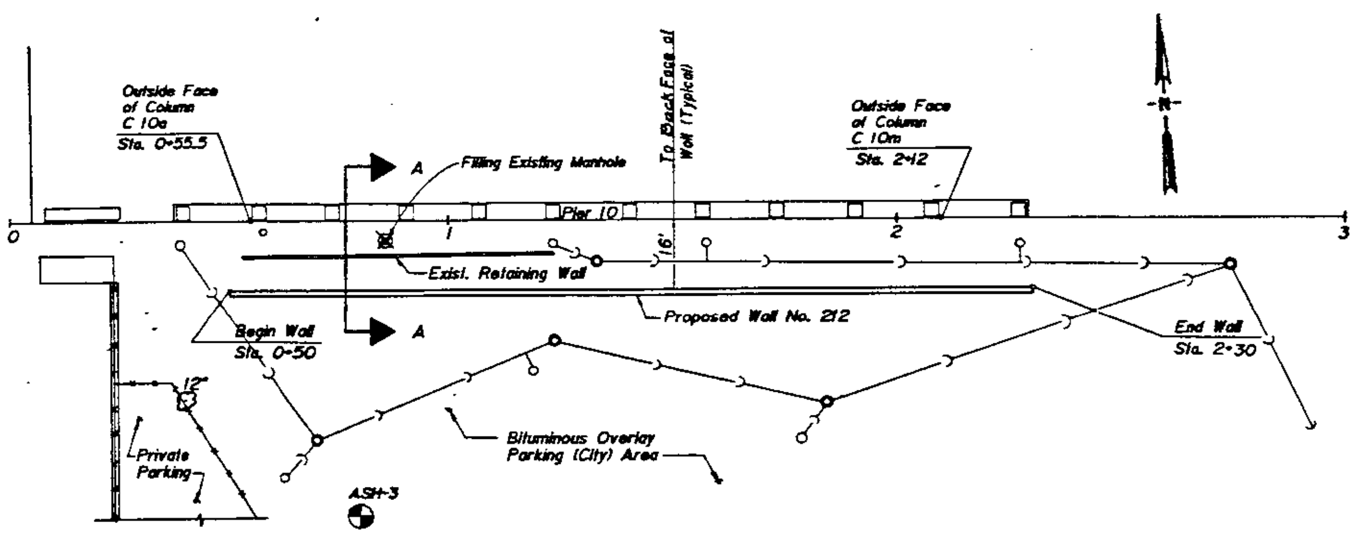
MAXIMUM SOIL PRESSURE 1514 PSF AT FOOTINGS.

NOTES

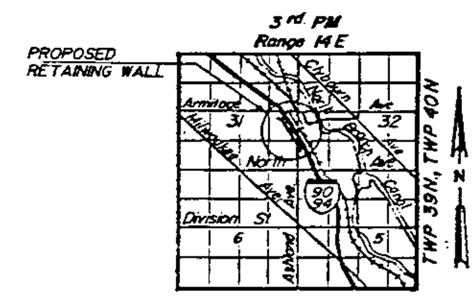
1. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42, OR M-53 GRADE 60.
2. AT THE VERTICAL EXPANSION JOINTS A HOLLOW BULB TYPE NONMETALLIC WATER SEAL SHALL BE USED. SEE ARTICLES 503.10 AND 718.12 OF THE STANDARD SPECIFICATIONS.
3. THE BACKFACE OF RETAINING WALLS SHALL BE WATERPROOFED ACCORDING TO ARTICLE 503.11 OF STANDARD SPECIFICATIONS. COST IS INCIDENTAL TO CLASS "X" CONCRETE.
4. REMOVE UNSUITABLE MATERIAL BENEATH FOOTING AS DIRECTED BY ENGINEER (APPROXIMATELY 2'-0") AND REPLACE WITH POROUS GRANULAR EMBANKMENT, REMOVAL OF UNSUITABLE MATERIAL, APPROXIMATELYY 120 CUBIC YARDS, TO BE PAID FOR AS STRUCTURE EXCAVATION.
5. SEE PROPOSAL FOR BORING DATA.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Class X Concrete (Retaining Wall)	Cu. Yd.	81.0
Reinforcement Bars	Pound	4010
Reinforcement Bars (Epoxy Coated)	Pound	1120
Structure Excavation	Cu. Yd.	430
Porous Granular Backfill, Special	Cu. Yd.	643
Filling Existing Manhole	Each	1



PLAN



LOCATION SKETCH

STRUCTURE NO. 016-W212

RETAINING WALL NO.212
GENERAL PLAN & ELEVATION

SECTION

F.A.I. ROUTE 90/94 PIER NO. 10 OF ASHLAND AVE.

COOK COUNTY

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

STATE OF ILLINOIS
RICHARD E. WITTER
81-3662
REGISTERED STRUCTURAL ENGINEER

2 Rev. 11-8-93
1 R.P. 10-5-93
1 REV. 12-10-91

STANLEY CONSULTANTS

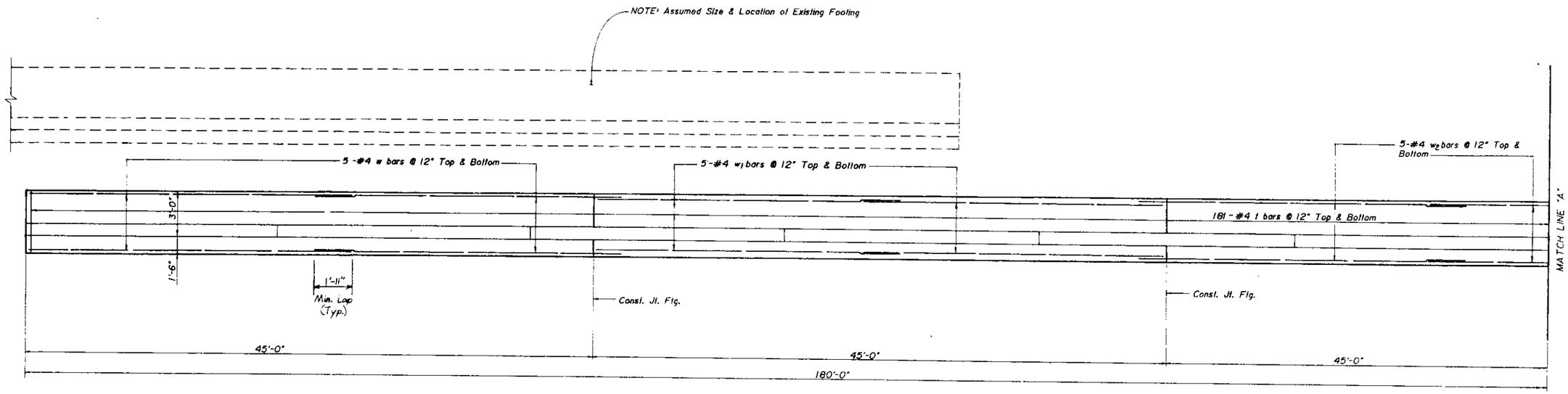
C265

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

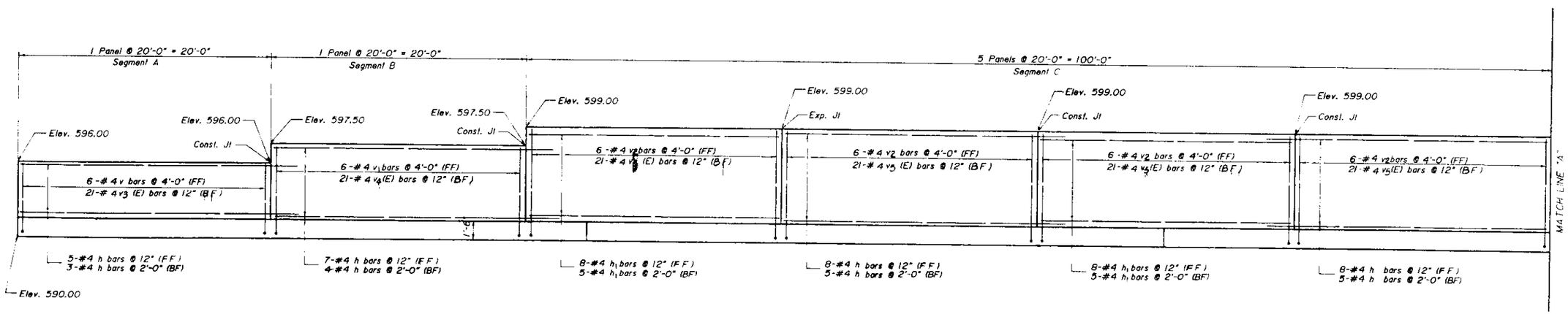
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	344
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 2 OF 4 SHEETS

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) A-5



PLAN



ELEVATION

FF - Denotes Front Face
BF - Denotes Back Face

Bars Designated (E) Shall Be Epoxy Coated

STANLEY CONSULTANTS

RETAINING WALL NO.212
WALL DETAILS

SECTION
F.A.I. ROUTE 90/94 PIER NO. 10 OF ASHLAND AVE.
COOK COUNTY

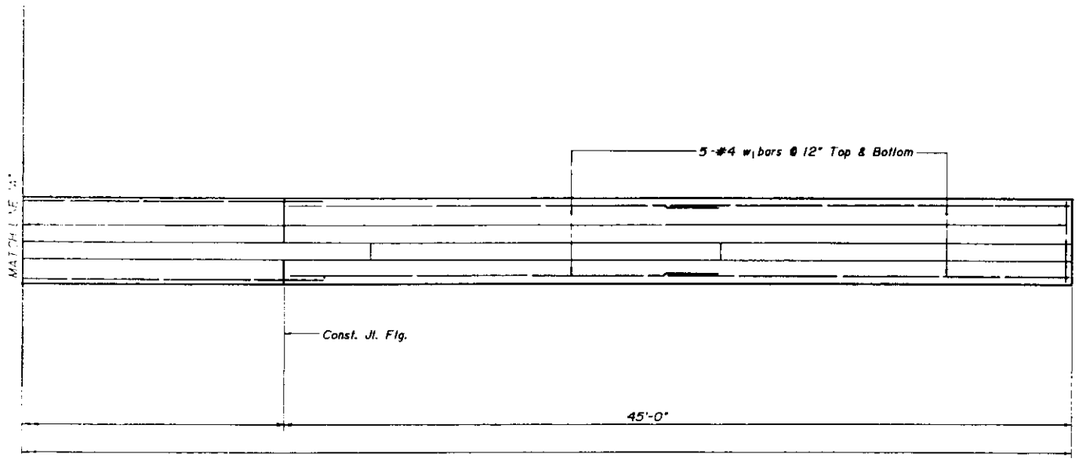
C266

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

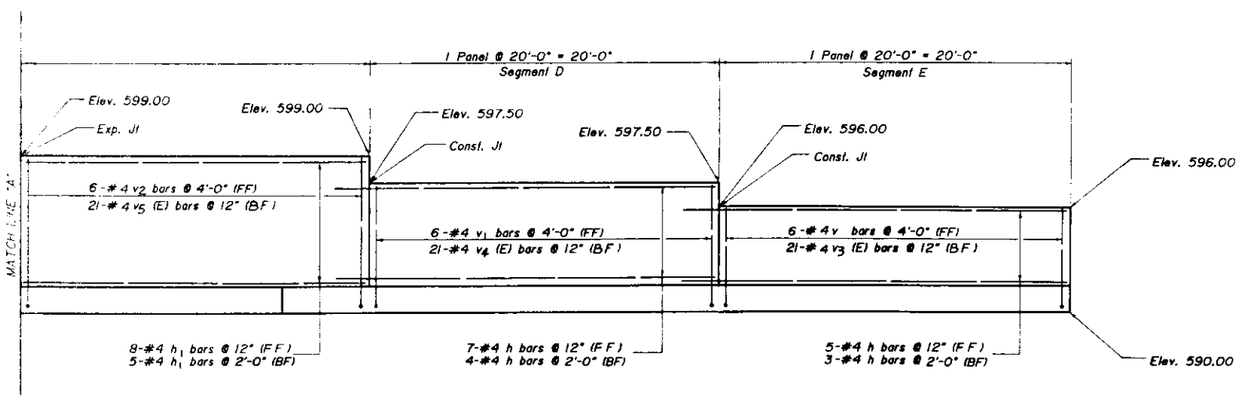
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	395
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3 OF 4 SHEETS

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 10506-450, 0605-402HB, 0606-403HB, 0707-404HB, 4351 R-5



PLAN



ELEVATION

STANLEY CONSULTANTS

RETAINING WALL NO.212
WALL DETAILS

SECTION
F.A.I. ROUTE 90/94 PIER NO. 10 OF ASHLAND AVE.
COOK COUNTY

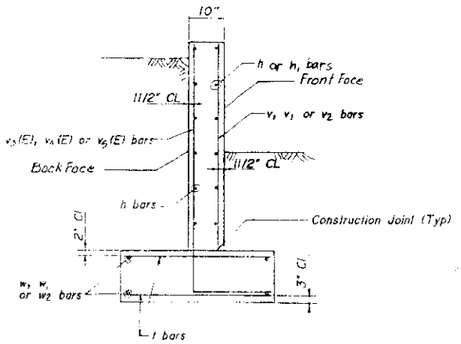
C26

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

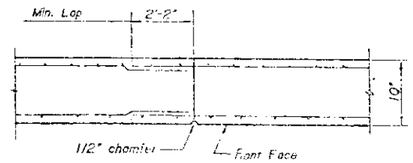
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	396
F. HY. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4 OF 4 SHEETS

* 0505 (2-2B, 3-H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HE, 4391 R-5

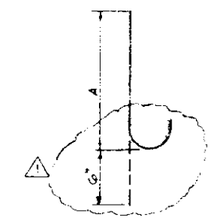


TYPICAL SECTION THROUGH RETAINING WALL



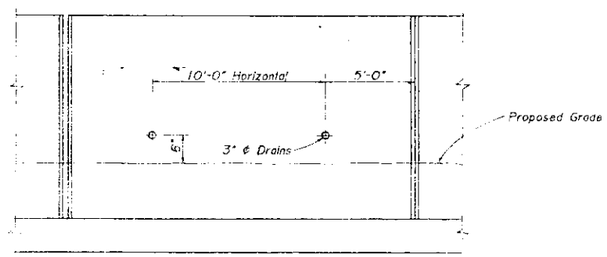
TYPICAL CONSTRUCTION JOINT DETAIL

Bar	Number	Size	Length	Shape
r	64	#4	22'-0"	
h_1	39	#4	19'-8"	
w	20	#4	24'-8"	
w_1	40	#4	23'-5"	
w_2	20	#4	25'-9"	
t	362	#4	4'-2"	
v	12	#4	4'-2"	
v_1	12	#4	5'-8"	
v_2	30	#4	7'-2"	
v_3 (E)	42	#4	6'-1"	
v_4 (E)	42	#4	7'-7"	
v_5 (E)	105	#4	9'-1"	



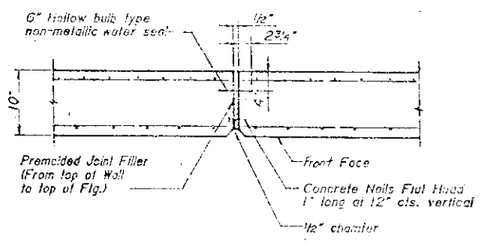
v_3 (E), v_4 (E) & v_5 (E) bars

Bar	A
v_3 (E)	5'-7"
v_4 (E)	7'-1"
v_5 (E)	8'-7"



WALL DRAIN LOCATIONS

Cost incidental to Class X Concrete Retaining Wall



TYPICAL EXPANSION JOINT DETAIL

Cost incidental to Class X Concrete Retaining Wall

Bars Designated (E) Shall Be Epoxy Coated

RETAINING WALL NO.212
WALL DETAILS

SECTION
F.A.I. ROUTE 90/94 PIER NO. 10 OF ASHLAND AVE.
COOK COUNTY

STANLEY CONSULTANTS

REV. 12-10-91

C266

Cook I & R copy 0505.3-1H-F-1

100%
7-27-94

S.N. 016-0133

FA RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	0505.3-1H-F-1	COOK	12	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

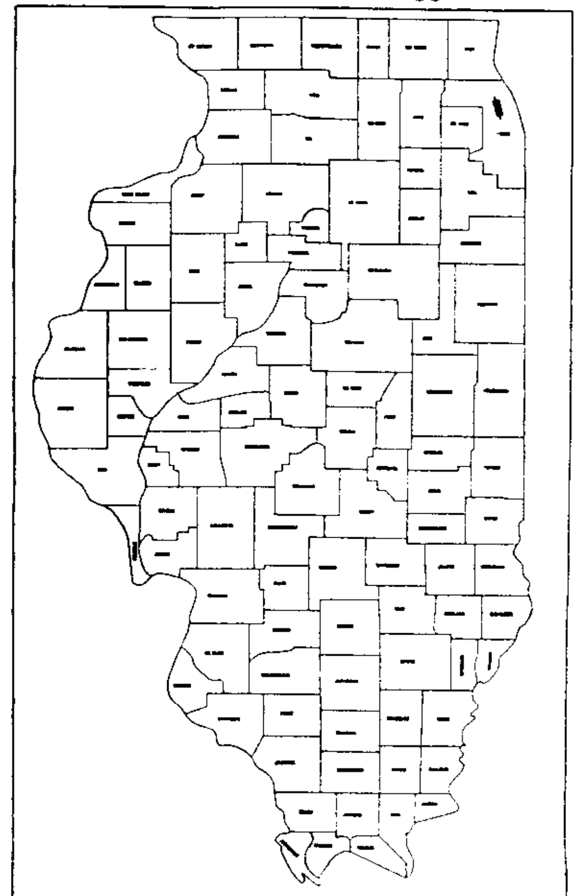
PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

SCALES
- PLAN 1" = 50'
- PROFILE HORIZ. 1" = 50'
- PROFILE VERT. 1" = 5'
- CROSS SECTIONS 1" = 10'
- CROSS SECTIONS 1" = 5'

F.A.I. ROUTE 90/94 (JOHN F. KENNEDY EXPRESSWAY)
SECTION 0505.3-1H-F-1
PROJECT : DPI-0137(15)
COOK COUNTY
C-91-446-93

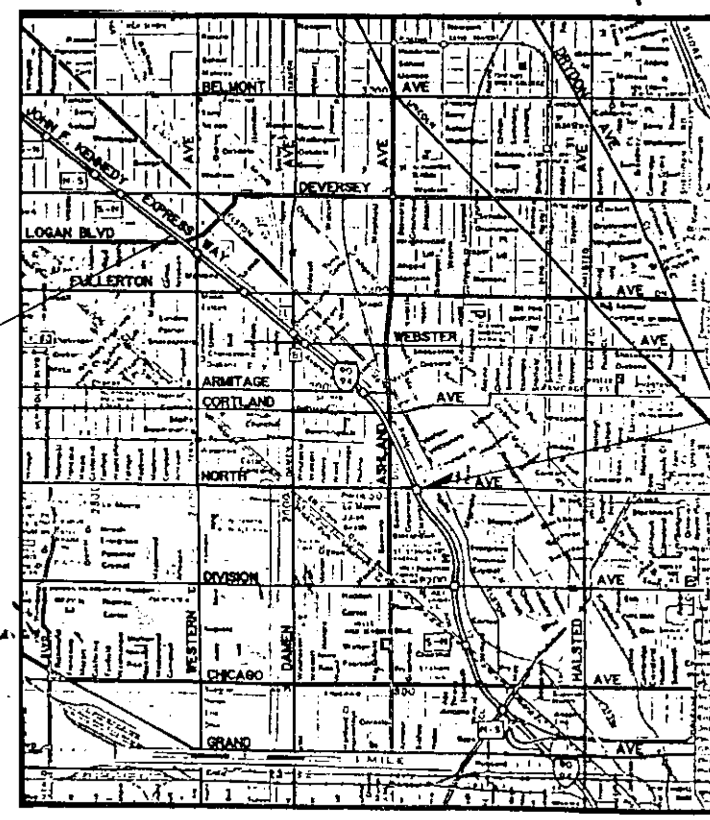
P.P.C BEAM AND BEARING FABRICATION (NORTHWEST BOUND)

P - 91 - 311 - 86



LOCATION OF SECTION INDICATED THUS:-

PROJECT AND IMPROVEMENT ENDS STATION 290+90.00 ℄ NWB F.A.I. - 90/94



PROJECT AND IMPROVEMENT BEGINS STATION 192+92.70 ℄ NWB F.A.I. - 90/94

N

LOCATION MAP
SCALE: 1"=1 MILE

THIS PROJECT CONSISTS OF FABRICATION OF P.P.C. BEAMS AND BEARINGS.

NORTHWEST BOUND
BRIDGE:
ASHLAND STA. 198+61.32 TO STA. 213+84.16

MUNICIPALITY INVOLVEMENT - CITY OF CHICAGO

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

CONTRACT NO. 82543

CONSULTANT SERVICES - P. SURI (708) 705-4523

RICHARD E. WITTER LICENSED STRUCTURAL ENGINEER OF ILLINOIS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED July 13 19 93
DISTRICT ENGINEER

EXAMINED ________ 19__
ENGINEER OF PLANS AND CONTRACTS

PASSED SEPT. 30 19 93
ENGINEER OF DESIGN

APPROVED SEPT. 3 19 93 Ralph C. Wehner
DIRECTOR, DIVISION OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR
DATE

PRINTED UNDER THE AUTHORITY OF THE STATE OF ILLINOIS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	12	2
		ILLINOIS		

* 0505.3-IH-F-I

SHEET NO. 2 OF 12 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CODE *	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE X571-50
X5052300	FURNISHING PPC I-BEAMS, 48"	LIN. FT.	2512	2512
X5052100	FURNISHING PPC I-BEAMS, 36"	LIN. FT.	113	113
X0320622	FIELD MEASUREMENTS	LUMP SUM		
X0301649	STORAGE OF FABRICATED MATERIALS, PPC BEAMS	UNIT	600	600
X0301596	STORAGE OF FABRICATED MATERIALS, BEARING ASSEMBLIES	UNIT	62	62
X5032700	FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	41	41

GENERAL NOTES:

1. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
2. ALL EXPOSED STEEL MATERIALS SHALL BE SHOP PAINTED WITH THE ZINC-SILICITATE AND VINYL PAINT SYSTEM THE COLOR OF THE VINYL FINISH COATS SHALL BE MUNSELL NO. 10Y 7/1 LIGHT GREY

DESIGN SPECIFICATIONS:

AASHTO 1992
LOADING HS20-44 AND ALTERNATE MILITARY LOADING
ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

REINFORCED CONCRETE & STRUCTURAL STEEL

Fy = 60,000 psi (REINFORCEMENT)
Fs = 20,000 psi M270, GR. 36 (STRUCTURAL STEEL)

PRESTRESSED CONCRETE & PRETENSIONING STEEL

F'c = 6,000 PSI
F'ci = 5,000 PSI
F's = 270,000 PSI 1/2" DIA. STRANDS
F'si = 202,500 PSI

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	GENERAL PLAN AND ELEVATION SHEET 1 OF 2
4.	GENERAL PLAN AND ELEVATION SHEET 2 OF 2
5.	TOP OF SLAB ELEVATIONS SHEET 1 OF 2
6.	TOP OF SLAB ELEVATIONS SHEET 2 OF 2
7.	48" PRESTRESSED BEAM DETAILS
8.	BEAM SCHEDULE
9.	36" PRESTRESSED BEAM DETAIL
10.	BEARING DETAIL
[illegible]	BEARING DETAIL
[illegible]	ANCHOR BOLT DETAIL

FOR FABRICATION ONLY

SUMMARY OF QUANTITIES
AND GENERAL NOTES

[illegible]
STATION [illegible]

REV.

/usr/9088608/mnt/908832.dgn $$$DATE$$$

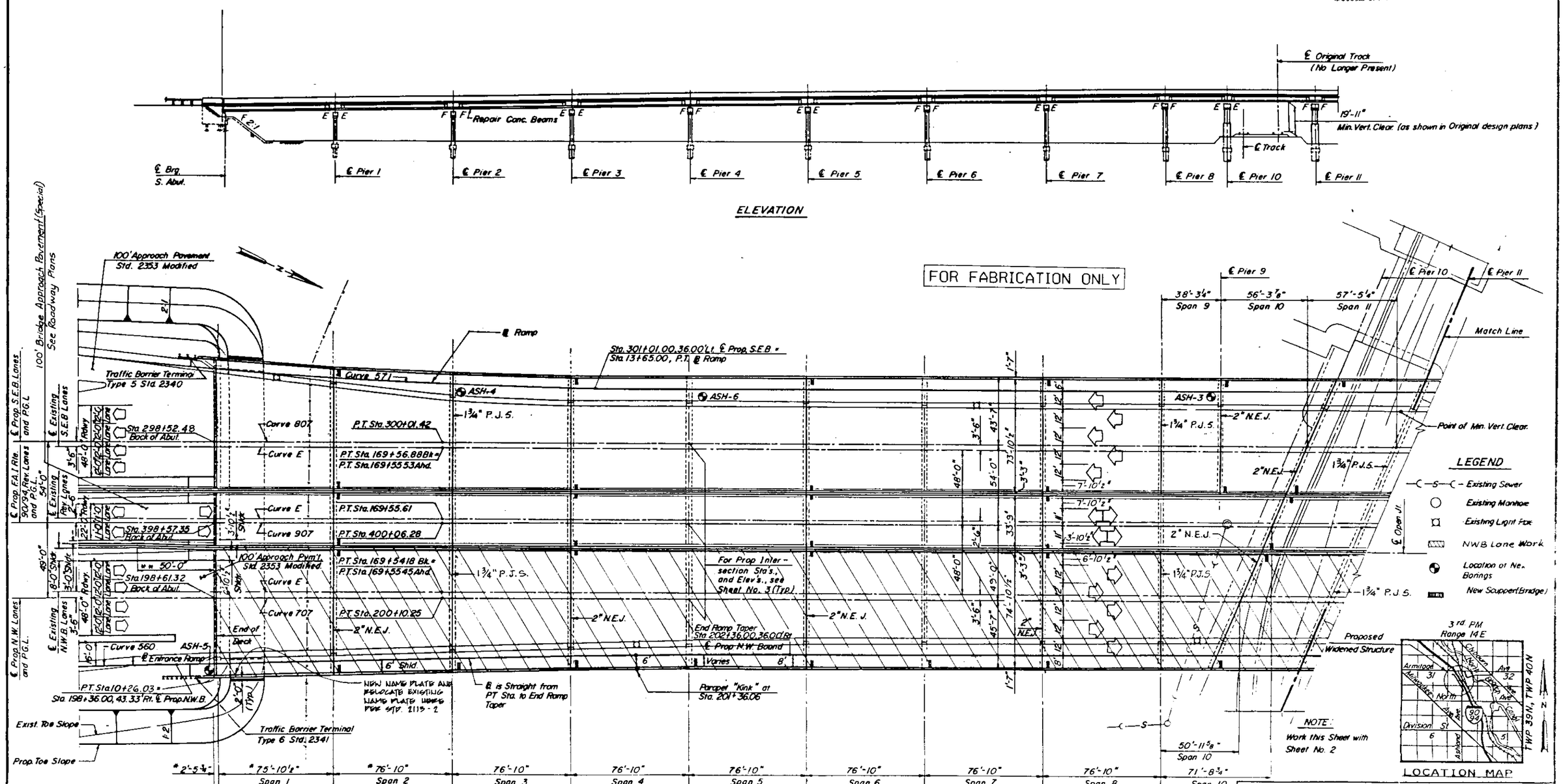
TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT
ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER
ASHLAND AVENUE - EL 604.09 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	X	COOK	12	3
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3 OF 12 SHEETS

*0505.3-IH-F-1



APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridges and Structures

PLAN

* Measured at Rt. Angles to ℄ Substructure
** 50'-0" - Transition Length for Shoulder Widths.
(At open joint between Rev. Lanes and N.W.B. Lanes only)

NOTE: THIS PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS NWB LANE WORK ONLY.
Note: N.E.J. = Neoprene Expansion Joint
P.J.S. = PREFORMED JOINT SEAL

RICHARD E. WITTER
081-002997
LICENSED STRUCTURAL ENGINEER OF ILLINOIS
6/18/99
Exp. 11/30/99

STANLEY CONSULTANTS

STRUCTURE NO. 016-0133

GENERAL PLAN AND ELEVATION
SHEET 1 OF 2

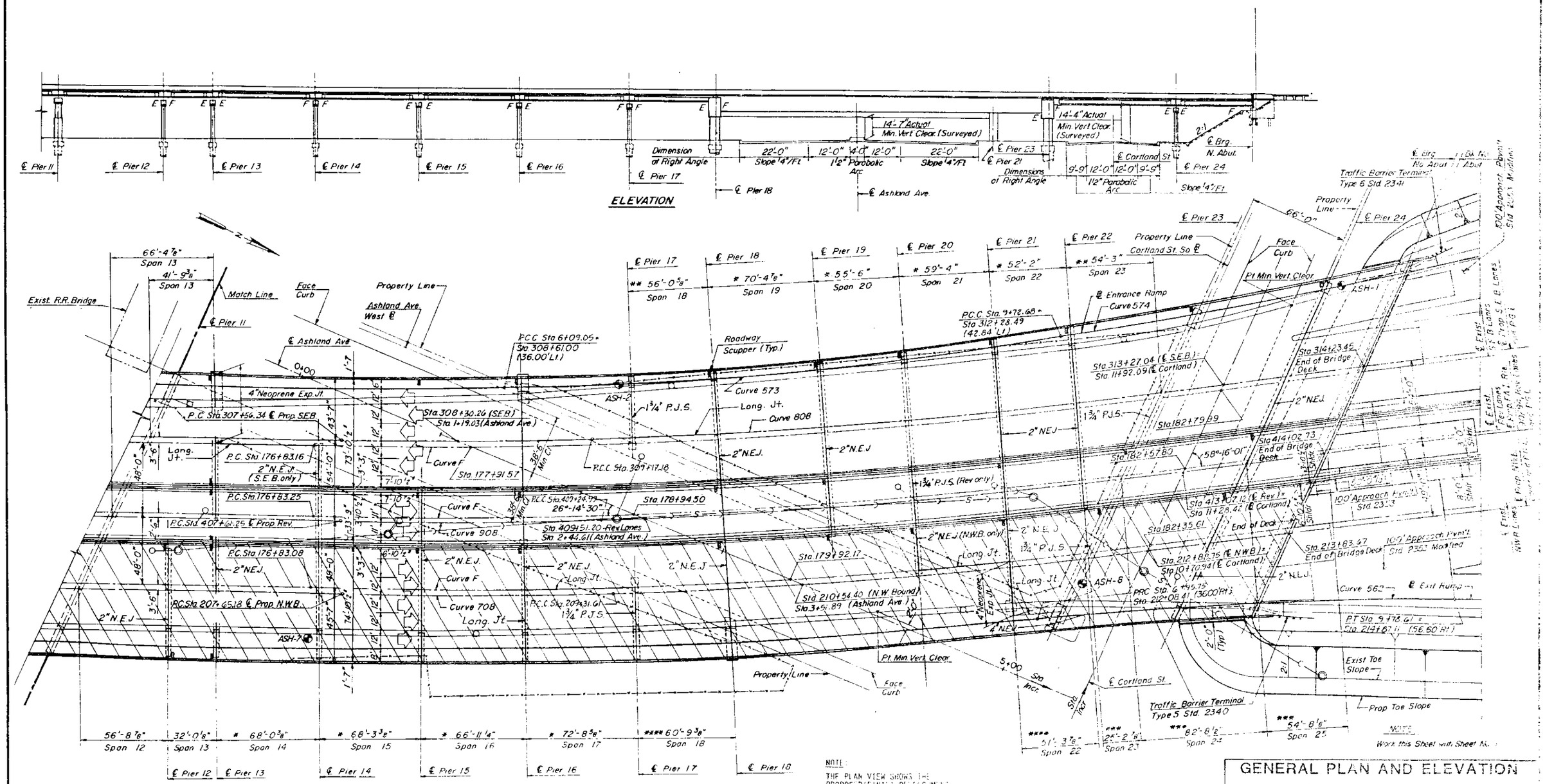
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	X	COOK	12	2
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 2 OF 12 SHEETS

*0505.3-04-F-1



NOTE:
THE PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS N.W.B. LANE WORK ONLY.

FOR FABRICATION ONLY

STANLEY CONSULTANTS

GENERAL PLAN AND ELEVATION
SHEET 2 OF 2

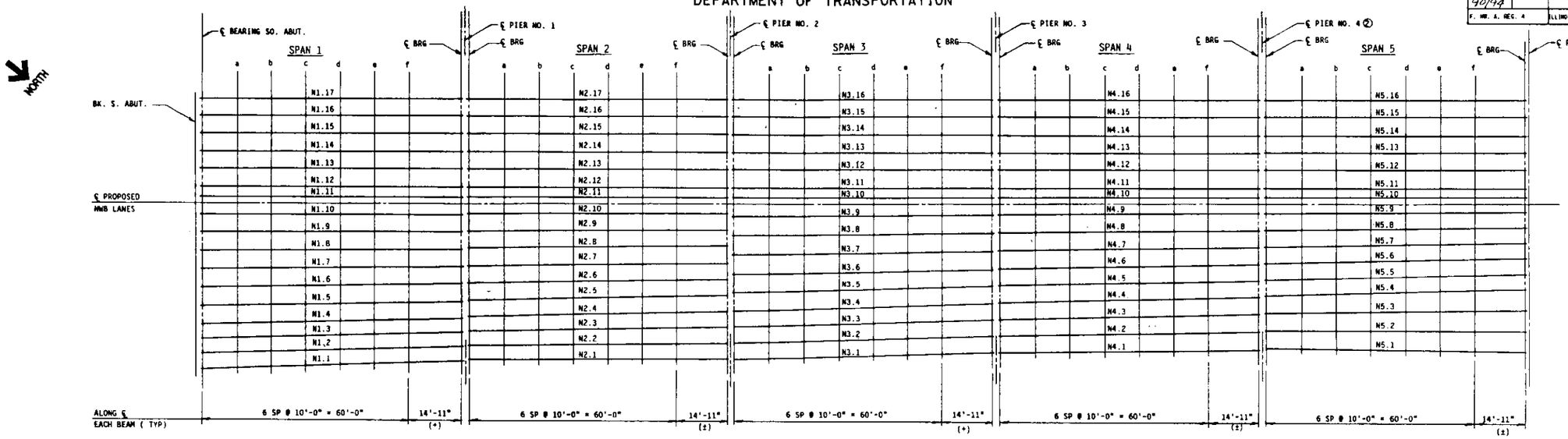
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

*0505.3-IH-F-1

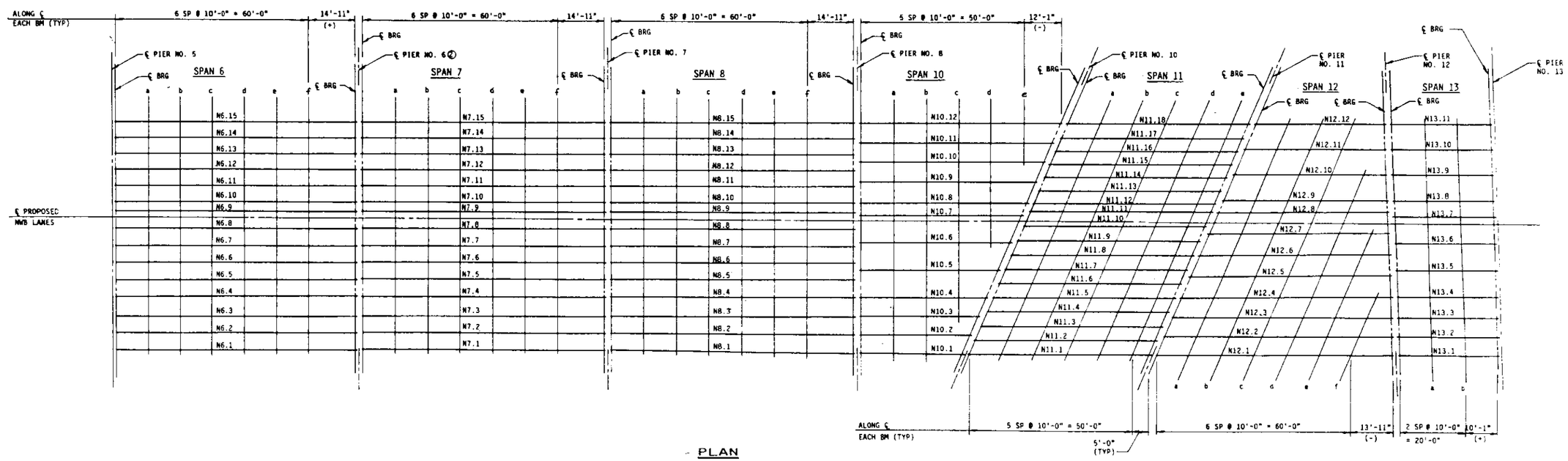
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	X	COOK	12	5
F. HWY. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5
12 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



PLAN

NOTES:

② INDICATES EXISTING DIAPHRAGM AT PIERS 4, 6, AND 14 TO BE REMOVED AND REPLACED WITH FIXED PIER DIAPHRAGM, SEE SHEET 42 FOR DETAILS.

③ INDICATES MISSING OR LOOSE BOLTS, NUTS, OR RIVETS. SEE "REHABILITATION NOTES" SHOWN ON SHEET 5.

FOR INFORMATION ONLY

TOP OF SLAB ELEVATIONS
SHEET 1 OF 2

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

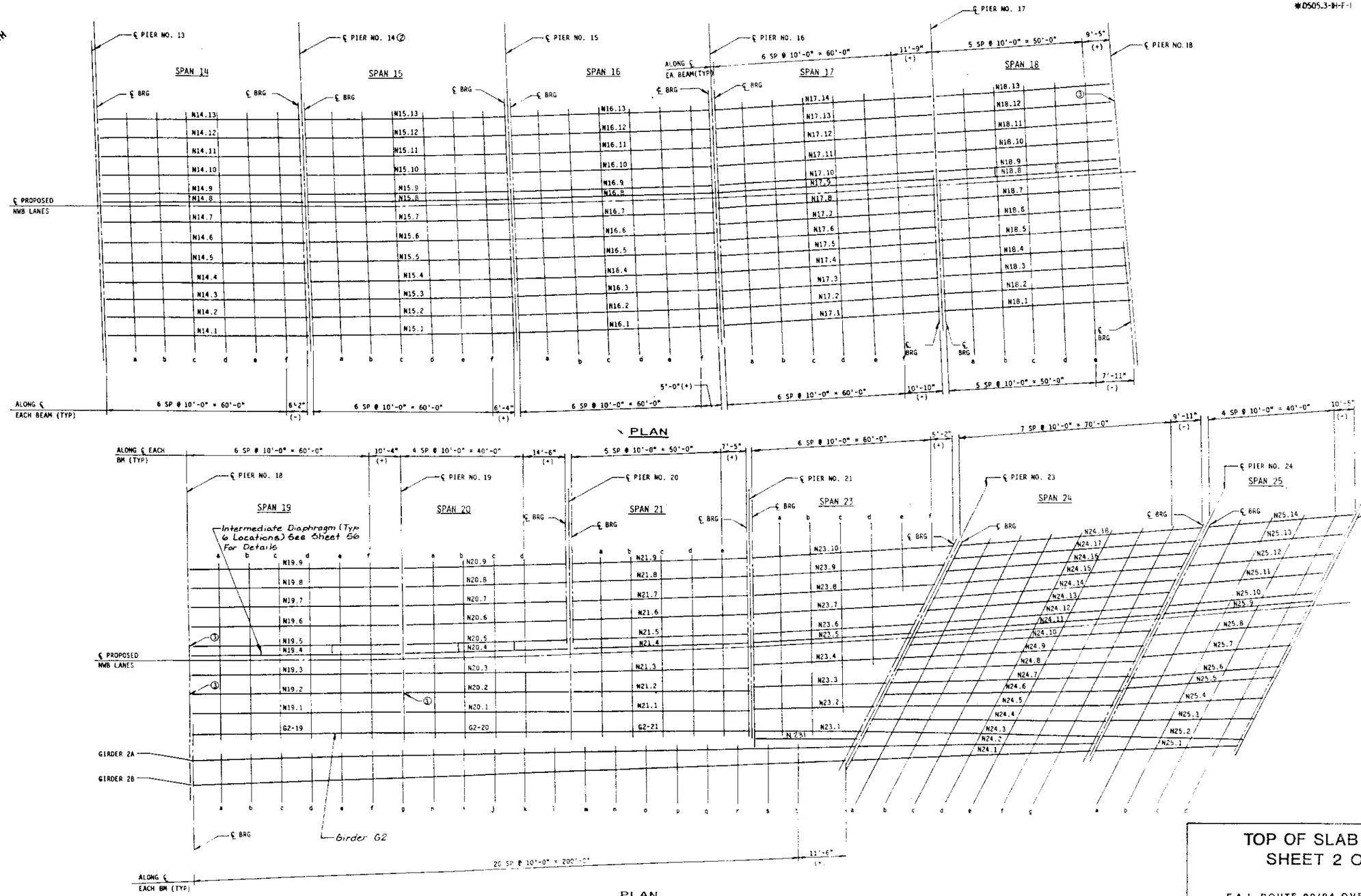
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 90/94	X	COOK	12	6
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6
12 SHEETS

*D505.3-H-F-1



STANLEY CONSULTANTS

FOR INFORMATION ONLY

TOP OF SLAB ELEVATIONS
SHEET 2 OF 2

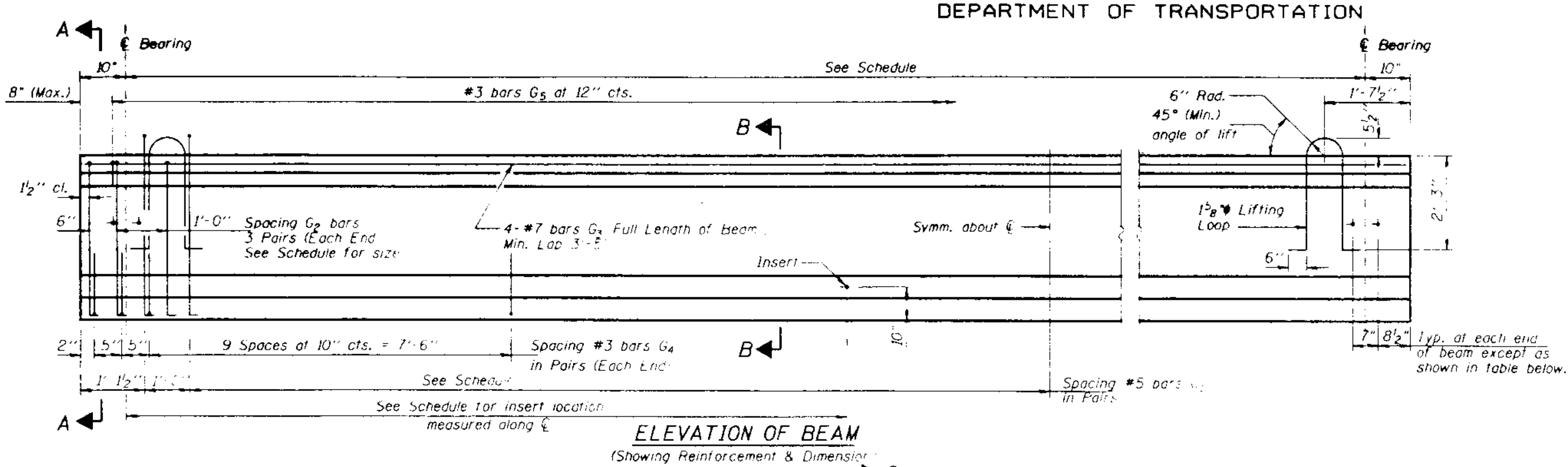
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

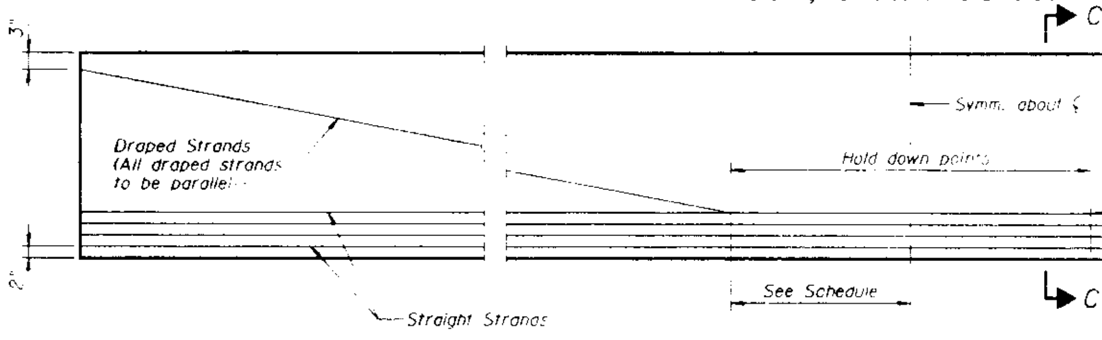
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	•	COOK	12	7

SHEET NO. 7
12 SHEETS

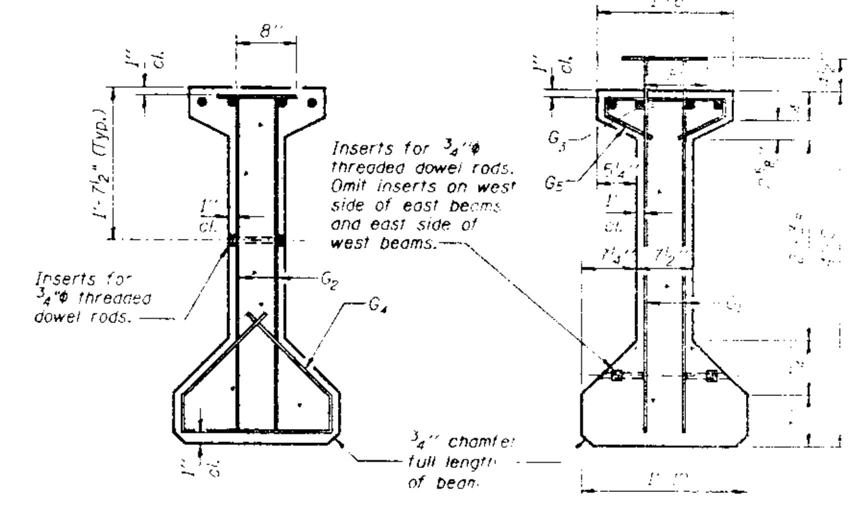
• 0505.3-1H-F-1



ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)

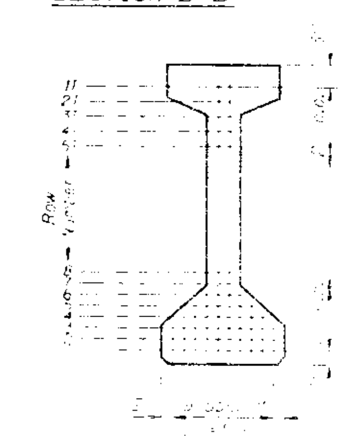


ELEVATION OF BEAM
(Showing Prestressing Steel)

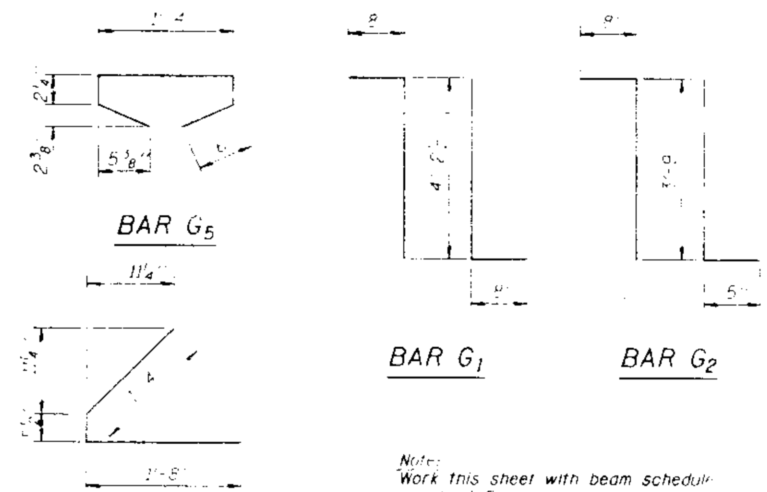


SECTION A-A

SECTION B-B



SECTION C-C



BAR G_5

BAR G_4

BAR G_1

BAR G_2

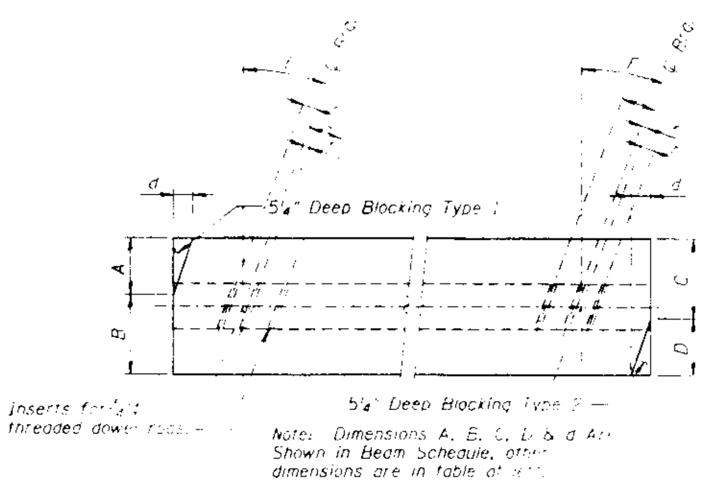
Note:
Work this sheet with beam schedule on sheet 8.

* BAR LIST

Bar	No.	Size	Length	Shape
G_1	Δ	# [illegible]	[illegible]	[illegible]
G_2	[illegible]	[illegible]	[illegible]	[illegible]
G_3	Δ	# [illegible]	[illegible]	[illegible]
G_4	[illegible]	# [illegible]	[illegible]	[illegible]
G_5	Δ	# [illegible]	[illegible]	[illegible]

* For one beam only.
Δ See Schedule.

INSERT LOCATION TABLE								
	South End				North End			
Beam	E angle	e inch	f inch	g inch	F angle	r inch	k inch	l inch
N10.7	0°00'	½	-	5½	22°57'	¾	-	6¼
N10.8	0°00'	½	-	5½	22°57'	¾	-	6¼
N12.8	22°57'	¾	-	6¼	1°51'	½		5½
N12.9	22°57'	¾		6¼	1°51'	½	-	5½
N23.5	2°38'	½	-	5½	31°05'	-	2	9
N23.6	2°38'	½	-	5½	31°05'	-	2	9
N24.11	31°05'	-	3¼	10¼	31°05'	-	1	8
N24.12	31°05'		3¼	10¼	31°05'	-	1	8
N25.5	32°00'		1	8	32°00'	-	1	8
N25.6	32°00'	-	1	8	32°00'	-	1	8
N25.9	32°28'		1	8	32°28'	-	1	8
N25.10	32°28'	-	1	8	32°28'	-	1	8



SOUTH END

NORTH END

PLAN OF GIRDERS @ PIERS 10, 11, 23 & 24

FOR FABRICATION ONLY

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per lineal foot of "Furnishing Precast Prestressed Concrete I-beams, 48"".

Insert for ¾"φ threaded dowel rods are to be two strut, coil type for I-Beam Web and single coil, flared loop type for I Beam Bottom Flange.

Prestressing steel shall be non-galvanized high strength, low relaxation 7-wire strand, Grade [illegible].

The nominal diameter shall be [illegible] and the nominal cross-sectional area shall be 0.[illegible] sq. [illegible].

Non-prestressing steel shall conform to AASHTO designation M-31, M-42 or M-53 Grade 60.

Steel for lifting loops shall be non-deformed bars fy=40,000 psi.

Required release strength, f'ci, shall be 5,000 psi.

BILL OF MATERIAL

Item	Unit	Total
Furnishing Precast Prestressed Concrete I-Beams 48"	[illegible]	[illegible]

48" PRESTRESSED BEAM DETAILS

F.A.I. ROUTE NO. 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 429+4[illegible]

STANLEY CONSULTANTS

PI-4-48 12-31-[illegible]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

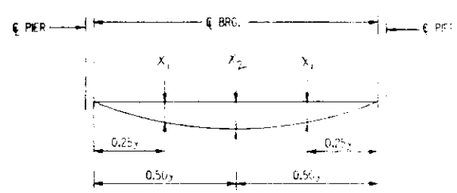
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	12	8
		ILLINOIS		

SHEET NO. 8
12 SHEETS

* 0525.3-1[illegible]

48" DEEP PRECAST PRESTRESSED CONCRETE I-BEAM SCHEDULE

I-BEAM NUMBER	QUANTITY	LENGTH ℄ BRG-℄ BRG	INSERT SOUTH	INSERT NORTH	BLOCKING OF GIRDER FLANGES SOUTH BRG TYPE	SOUTH BRG A	SOUTH BRG B	SOUTH BRG d	NORTH BRG TYPE	NORTH BRG C	NORTH BRG D	NORTH BRG d	G1 BARS SPACING	G1 BARS NO.	G2 BARS SIZE	G3 BARS NO.	G3 BARS LENGTH	G5 BARS NO.	STRANDS STRAIGHT	STRANDS DRAPED	STRANDS TOTAL	STRANDS LOCATION AT ℄ ROW 1	2	3	4	5	6	7	8	STRANDS LOCATION AT END ROW 1	2	3	4	5	6	7	8	5T	4T	3T	2T	1T	HOLD DOWN POINT FROM ℄	BEARING TYPE NORTH	BEARING TYPE SOUTH	DEAD LOAD DEFLECTION (DUE TO DECK WEIGHT ONLY) 0.25y (X_1)	0.50y (X_2)	REMARKS
N1.8	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	FIXED	10-b	3/8"	3/8"	
N1.12	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	FIXED	10-b	3/8"	3/8"	
N2.11	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	10-b	FIXED	3/8"	3/8"	
N2.12	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	10-b	FIXED	3/8"	3/8"	
N3.10	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	FIXED	10-b	3/8"	3/8"	
N3.11	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	FIXED	10-b	3/8"	3/8"	
N4.10	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14 1/2" SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	3/8"	
N4.11	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14 1/2" SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	3/8"	
N5.10	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14 1/2" SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	FIXED	10-a	3/8"	3/8"	
N5.11	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14 1/2" SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	FIXED	10-a	3/8"	3/8"	
N6.9	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14 1/2" SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	3/8"	
N6.10	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14 1/2" SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	3/8"	
N7.9	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14 1/2" SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	FIXED	10-a	3/8"	3/8"	
N7.10	1	74'-11"	25'-0"	25'-0"									4 SP @ 22", 14 1/2" SP @ 24"(-)	80	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	FIXED	10-a	3/8"	3/8"	
N8.9	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	3/8"	
N8.10	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	3/8"	
N10.7	1	49'-3"	24'-8"	-					2	10 3/4"	7 1/4"	3"	12 SP @ 23 1/2"(-)	54	#4	4	50'-7"	51	10	-	10	4	6							4	6												-	FIXED	10-a	1/4"	7/8"	
N10.8	1	50'-11"	31'-0"	-					2	10 3/4"	7 1/4"	3"	12 SP @ 24"(+)	54	#4	4	52'-3"	53	10	-	10	4	6							4	6												-	FIXED	10-a	1/4"	7/8"	
N12.8	1	53'-7"	11'-7"	21'-0"	1	7 1/4"	10 3/4"	3"					13 SP @ 23 1/2"(+)	58	#4	4	54'-11"	55	10	-	10	4	6							4	6												-	FIXED	10-a	1/8"	3/8"	
N12.9	1	54'-10"	-	24'-0"	1	7 1/4"	10 3/4"	3"					12 SP @ 24"(+)	54	#4	4	53'-2"	54	10	-	10	4	6							4	6												-	FIXED	10-a	1/8"	3/8"	
N13.7	1	30'-1"	-	-									7 SP @ 23 1/2"(+)	34	#4	4	31'-5"	32	10	-	10	4	6							4	6												-	FIXED	10-a	0"	0"	
N13.8	1	30'-1"	-	-									7 SP @ 23 1/2"(+)	34	#4	4	31'-5"	32	10	-	10	4	6							4	6												-	FIXED	10-a	0"	0"	
N14.8	1	66'-2"	22'-0"	22'-0"									4 SP @ 20", 12 1/2" SP @ 24"(+)	72	#5	8	35'-6"	68	12	2	14	10	4							10	2											2	6'-8"	10-a	FIXED	5/8"	1/2"	
N14.9	1	66'-2"	22'-0"	22'-0"									4 SP @ 20", 12 1/2" SP @ 24"(+)	72	#5	8	35'-6"	68	12	2	14	10	4							10	2											2	6'-8"	10-a	FIXED	5/8"	1/2"	
N15.8	1	66'-5"	22'-1"	22'-1"									4 SP @ 20", 13 SP @ 23 1/2"(+)	74	#5	8	35'-7"	68	12	2	14	10	4							10	2											2	6'-8"	FIXED	10-a	5/8"	1/2"	
N15.9	1	66'-5"	22'-1"	22'-1"									4 SP @ 20", 13 SP @ 23 1/2"(+)	74	#5	8	35'-7"	68	12	2	14	10	4							10	2											2	6'-8"	FIXED	10-a	5/8"	1/2"	
N16.8	1	65'-0"	21'-9"	21'-9"									15 1/2" SP @ 24"(+)	68	#5	8	34'-11"	67	12	2	14	10	4							10	2											2	6'-6"	10-a	FIXED	1/4"	3/8"	
N16.9	1	65'-0"	21'-9"	21'-9"									15 1/2" SP @ 24"(+)	68	#5	8	34'-11"	67	12	2	14	10	4							10	2											2	6'-6"	10-a	FIXED	1/4"	3/8"	
N17.9	1	70'-10"	23'-8"	23'-8"									17 SP @ 24"(+)	74	#5	8	37'-10"	73	12	2	14	10	4							10	2											2	7'-1"	10-a	FIXED	5/8"	7/8"	REQUIRED FOR STAGE 2 CONSTRUCTION
N21.5	1	57'-6"	19'-2"	19'-2"									14 SP @ 23 1/2"(+)	62	#4	4	58'-10"	59	12	-	12	4	4	2	2					4	4	2	2										-	FIXED	10-b	5/8"	1/4"	
N23.5	1	49'-5"	-	26'-10"					2	13"	5"	3"	12 SP @ 23 1/2"(-)	54	#4	4	50'-9"	51	10	-	10	4	6							4	6												-	10-b	FIXED	1/8"	3/8"	
N23.6	1	51'-1"	20'-6"	10'-1"					2	13"	5"	3"	12 SP @ 24"(+)	54	#4	4	52'-5"	53	10	-	10	4	6							4	6												-	10-b	FIXED	1/4"	5/8"	
N24.11	1	79'-8"	26'-7"	26'-7"	1	6"	12"	4"	2	11 1/2"	6 1/2"	4"	20 SP @ 23"(+)	86	#5	8	42'-3"	81	14	2	16	10	6							10	4											2	8'-0"	FIXED	10-b	1/8"	5/8"	
N24.12	1	79'-8"	26'-7"	26'-7"	1	6"	12"	4"	2	11 1/2"	6 1/2"	4"	20 SP @ 23"(+)	86	#5	8	42'-3"	81	14	2	16	10	6							10	4											2	8'-0"	FIXED	10-b	1/8"	5/8"	
N25.5	1	50'-2"	25'-1"	-	-1	6 1/2"	11 1/2"	4"					12 SP @ 24"(-)	54	#4	4	51'-6"	52	10	-	10	4	6							4	6												-	10-b	FIXED	1/2"	3/4"	REQUIRED FOR STAGE 2 CONSTRUCTION
N25.6	1	50'-2"	25'-1"	-	1	6 1/2"	11 1/2"	4"					12 SP @ 24"(-)	54	#4	4	51'-6"	52	10	-	10	4	6							4	6												-	10-b	FIXED	1/2"	3/4"	REQUIRED FOR STAGE 2 CONSTRUCTION
N25.9	1	50'-4"	25'-2"	-	1	6 1/2"	11 1/2"	4"					12 SP @ 24"(-)	54	#4	4	51'-8"	52	10	-	10	4	6							4	6													10-b	FIXED	1/2"	3/4"	
N25.10	1	50'-4"	25'-2"	-	1	6 1/2"	11 1/2"	4"					12 SP @ 24"(-)	54	#4	4	51'-8"	52	10	-	10	4	6							4	6												-	10-b	FIXED	1/2"	3/4"	



DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE SLAB ONLY)

NOTE:
WORK THIS SHEET WITH BEAM DETAILS ON SHEET

FOR FABRICATION ONLY

BEAM SCHEDULE

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVEN.
COOK COUNTY
STATION 40[illegible]

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

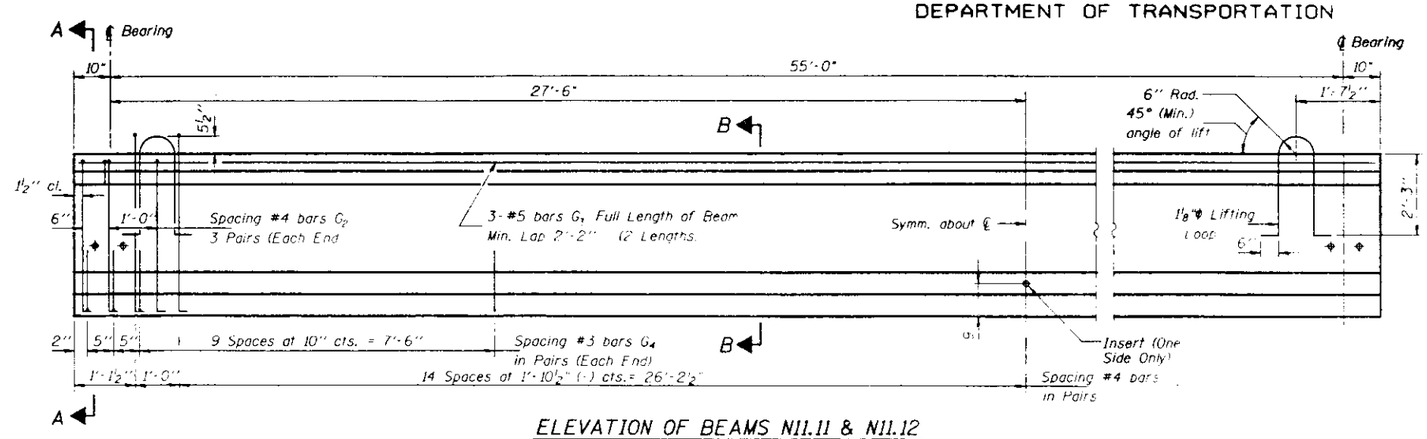
/usr/9088608/mnt/908808.dgn $$$DATE$$$

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

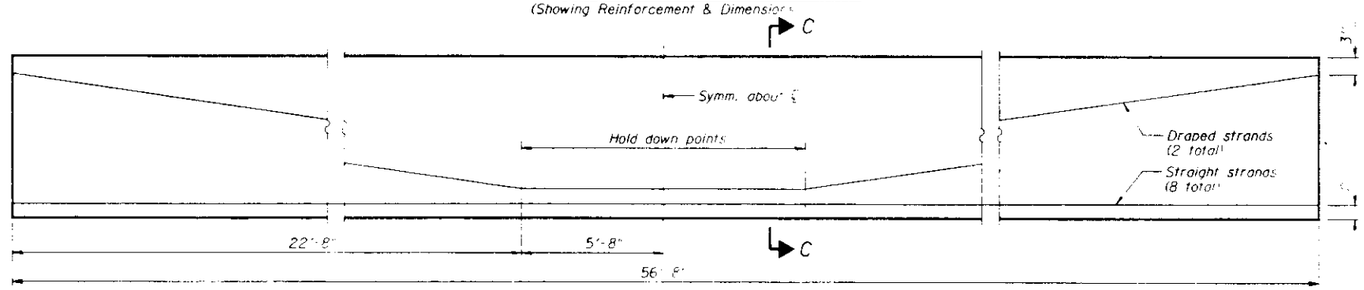
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	12	9

SHEET NO. 9
12 SHEETS

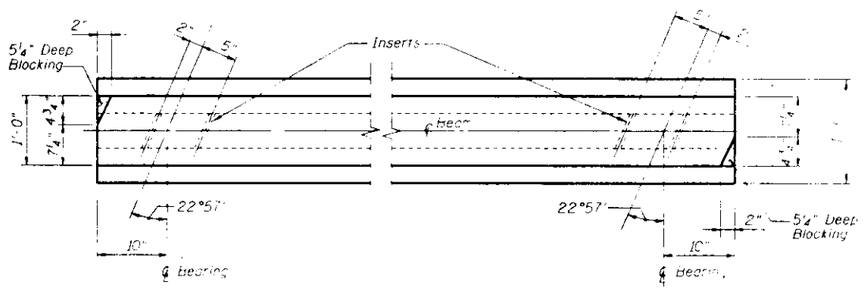
* 0505.3-1H-F-1



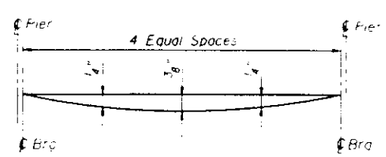
ELEVATION OF BEAMS N11.11 & N11.12
(Showing Reinforcement & Dimensions)



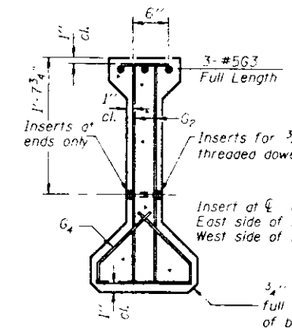
ELEVATION OF BEAMS N11.11 & N11.12
(Showing Prestressing Steel)



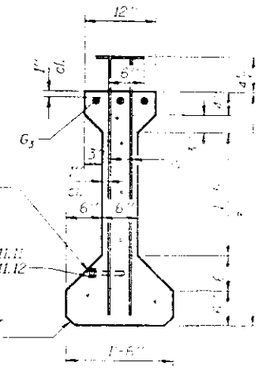
TOP PLAN AT ENDS OF BEAMS



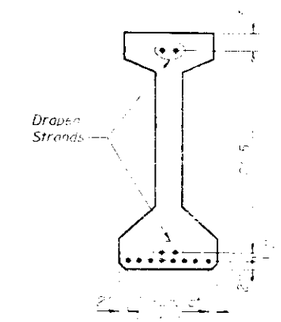
DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete)



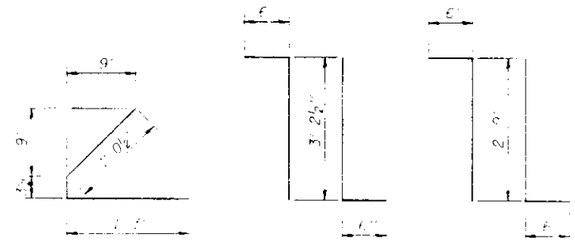
SECTION A-A



SECTION B-B



SECTION C-C



BAR G_4 BAR G_1 BAR G_2

FOR FABRICATION ONLY

* BAR LIST

Mark	No.	Size	Length	Shape
G1	6	#5		
G2	4	#4		
G3	6	#5		
G4	48	#3		

* For one beam only

BILL OF MATERIAL

Item	Unit	Total
Furnishing Precast Prestressed Concrete I-Beams, 36"	Lin. Ft.	[illegible]

NOTES

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per lineal foot of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36".

Insert for ¾"φ threaded dowel rods are to be two strut, coil type for I-Beam Webs and single coil, flared loop type for I-Beam Bottom Flanges.

Prestressing steel shall be non-galvanized high strength, low relaxation 7-wire strand, Grade [illegible].

The nominal diameter shall be ½" and the nominal cross-sectional area shall be [illegible].

Non-prestressing steel shall conform to AASHTO designation M 31, M 42 or M 53 Grade [illegible].

Steel for lifting loops shall be non-deformed bars f'y=40,000 psi.

Required release strength, f'ci, shall be 5000 psi.

Details are for beams N11.11 and N11.12.

36" PRESTRESSED BEAM DETAILS

F.A.I. ROUTE 90/94 OVER ASHLAND AVE.
COOK COUNTY
STATION 425+[illegible]

STANLEY CONSULTANTS

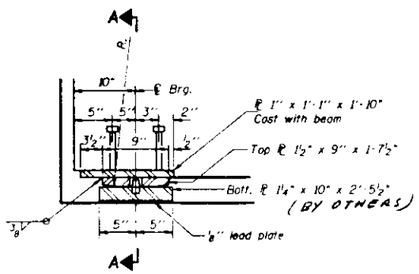
PI-4-36 4-15-[illegible]

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	12	10
		ILLINOIS		

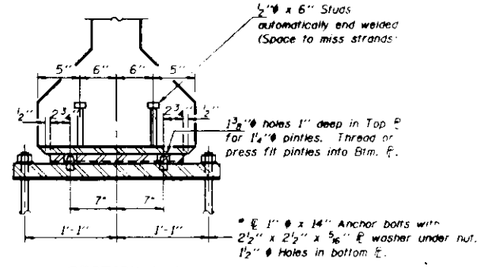
SHEET NO. 10
12 SHEETS

* 0505.3-BI-F-1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION AT ABUT. OR PIER

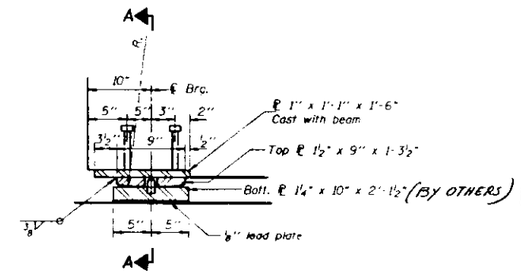


SECTION A-A

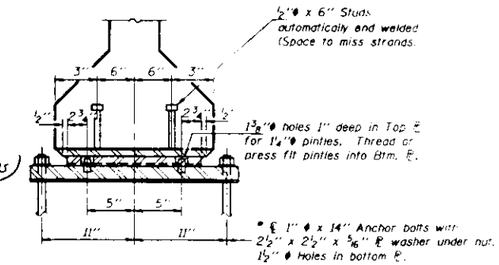
** FIXED BEARING
(See Beam Schedules, Sht 8 for location)
(38 Required)

* Anchor Bolts Shall Be Drilled And Grouted In Place After Beams Have Been Erected.(By Others)

See sheet 12 of 12 for anchor bolt installation.



SECTION AT PIER #11

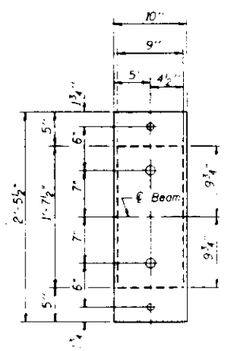


SECTION A-A

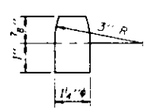
** FIXED BEARING
(Span 11 North End For 36" Prestressed Beams)
(2 Required)

* Anchor Bolts Shall Be Drilled And Grouted In Place After Beams Have Been Erected.(By Others)

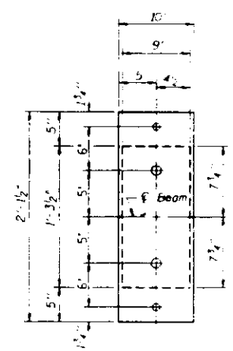
See sheet 12 of 12 for anchor bolt installation.



PLAN OF
TOP & BOTTOM PLATES



PINTLE



PLAN OF
TOP & BOTTOM PLATES

** Cost of Embedded Plates, Top Plates and Studs are incidental to cost of furnishing F.F.C. I-Beams.

BILL OF MATERIAL

Item	Unit	Total
Furnishing Structural Steel	Lump Sum	*

* Includes 7540 Lbs. BY OTHERS

FOR FABRICATION ONLY

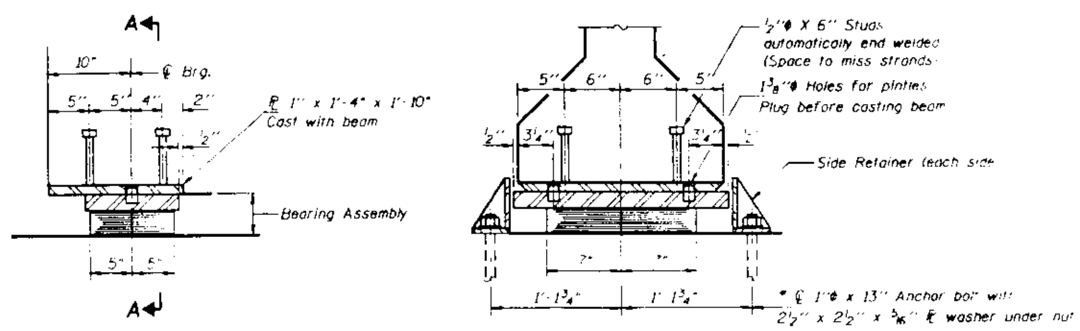
STANLEY CONSULTANTS

BEARING DETAILS

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+4[illegible]

/usr/9088608/mnt/908810.dgn $$$DATE$$$

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION AT PIERS

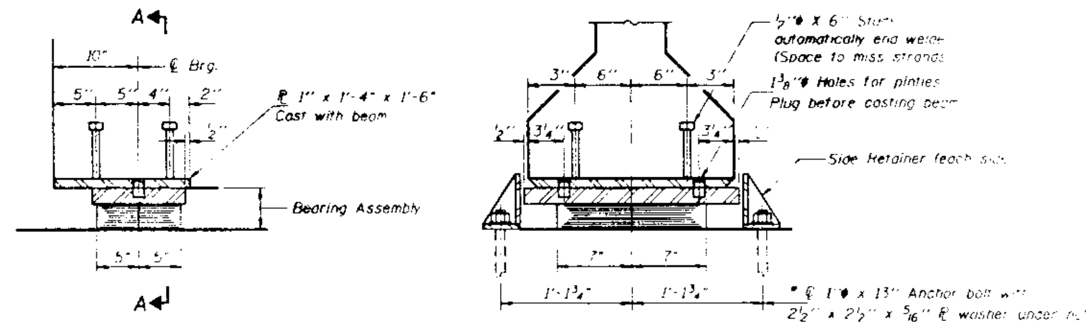
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

(Size 10-a, 10-b, see Beam Schedules Sht 8 for location)

* Notes: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. (By Others)

See sheet 12 of 12 for anchor bolt details.



SECTION AT PIER 10

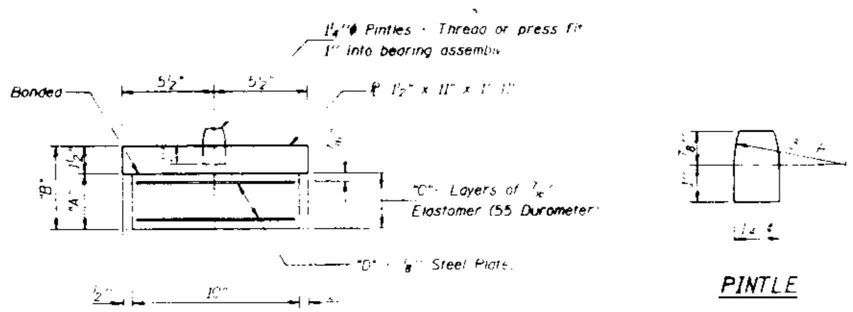
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

(Size 10-aa; Span 11 South End For 36" Prestressed Beams)
(2 Required)

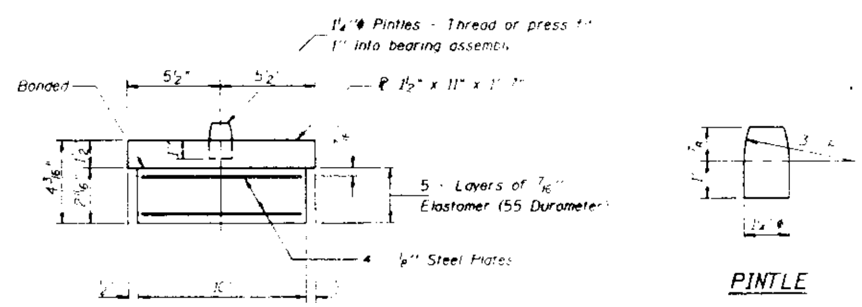
* Note: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. (By Others)

See sheet 12 of 12 for anchor bolt details.



BEARING ASSEMBLY

PINTLE

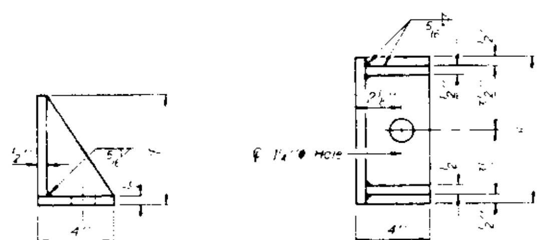


BEARING ASSEMBLY

PINTLE

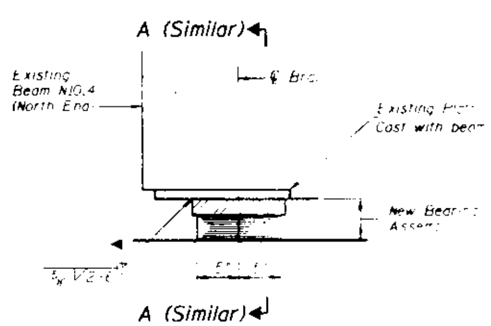
BILL OF MATERIAL

Bearing Size	A	B	C	D	E	No. Req'd
10-a	2 $\frac{?}{16}$"	4 $\frac{?}{16}$"	5	4	[illegible]	[illegible]4
10-b	3 $\frac{?}{4}$"	4 $\frac{?}{4}$"	6	5	[illegible]	[illegible]



SIDE RETAINER (BY OTHERS)

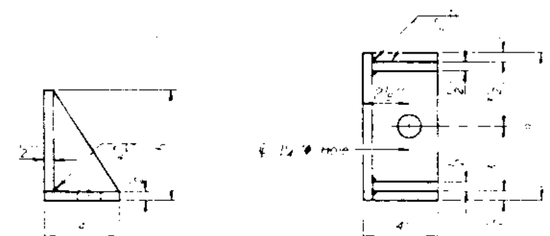
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(78 Required)



SECTION AT PIER 10

TYPE I ELASTOMERIC EXP. BRG. MODIFIED

(Size 10-a, For Beam No. 4)



SIDE RETAINER (BY OTHERS)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(4 Required)

BILL OF MATERIAL

Item	Unit	Total
Furnish Elastomeric Bearing Assembly, Type I	Each	4
Furnishing Structural Steel	~~Lump~~	*

(Furnishing Structural Steel Includes Side Retainers and Anchor [illegible])
* Includes 1350 Lbs. BY OTHERS

FOR FABRICATION ONLY

BEARING DETAILS

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION [illegible]

STANLEY CONSULTANTS

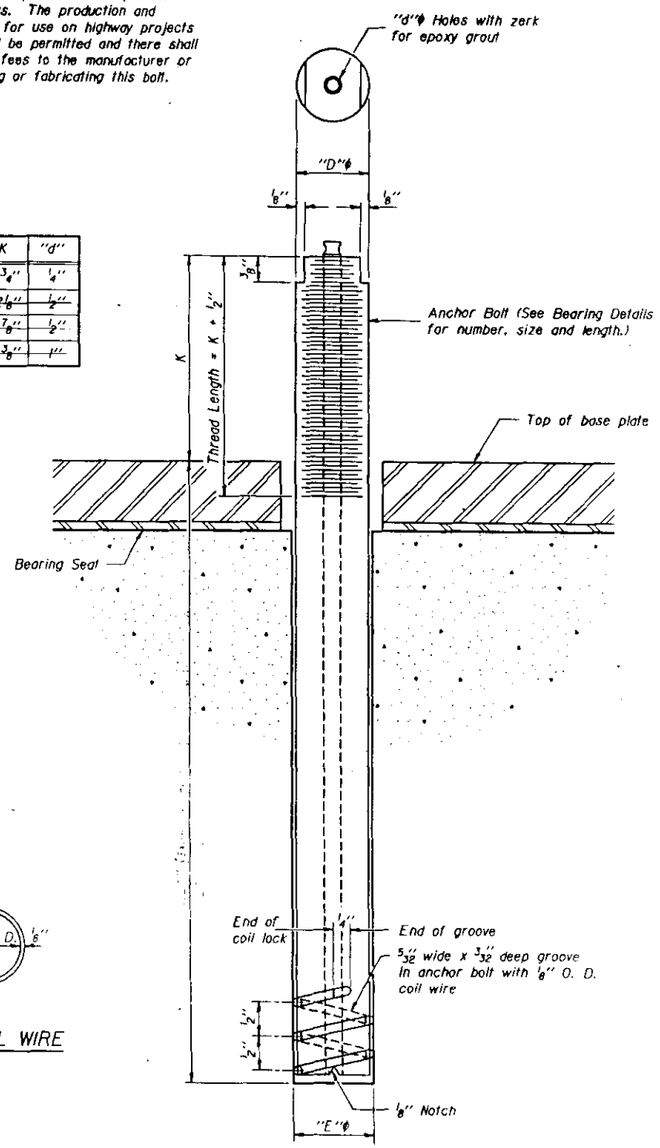
The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

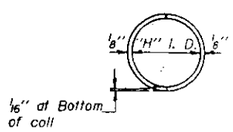
					SHEET NO. 12
	X		12	12	12 SHEETS

*0505.3-H-F-1

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



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

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

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

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

The anchor bolts, furnished including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing Structural Steel". (BY OTHERS)

FOR ~~FABRICATION~~ ONLY
FOR INFORMATION ONLY

ANCHOR BOLT DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

ABB-1 12-1-83

COOK I FR COPY 1992-081F

90/94	●	COOK	1	194
F.H.W.A. REG 4	ILLINOIS	FED. AID PROJECT		

✱1992-081 F

FOR INDEX OF SHEETS SEE SHEET NO.4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

P - 91 - 309 - 86, P - 91 - 310 - 86
P - 91 - 311 - 86, P - 91 - 312 - 86

STATION EQUATIONS:

AREA A
STA. 380+88.47, ℄ NWB BK=
STA. 380+88.09, ℄ NWB AH

AREA B
STA. 296+54.25, ℄ NWB BK=
STA. 296+54.71, ℄ NWB AH

AREA C
STA. 220+20.19, ℄ NWB BK
STA. 220+20.43, ℄ NWB AH

AREA D
NONE

100%
10-1-94

SCALES
PLAN 1" = 50'
PROFILE HORIZONTAL 1" = 50'
PROFILE VERTICAL 1" = 5'
CROSS SECTIONS 1" = 10' (HORIZ)
CROSS SECTIONS 1" = 5' (VERT)

F.A.I. ROUTE 90/94 (JOHN F. KENNEDY EXPRESSWAY)

SECTION 1992-081 F

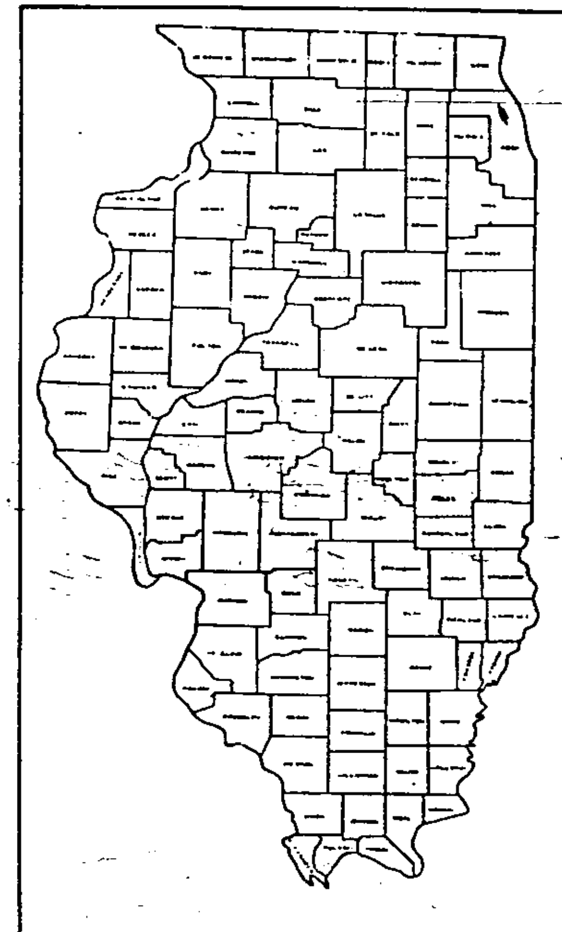
PROJECT DPI-0137(10)

COOK COUNTY

C - 91 - 180 - 92

BEAM AND BEARING FABRICATION - NORTHWEST BOUND

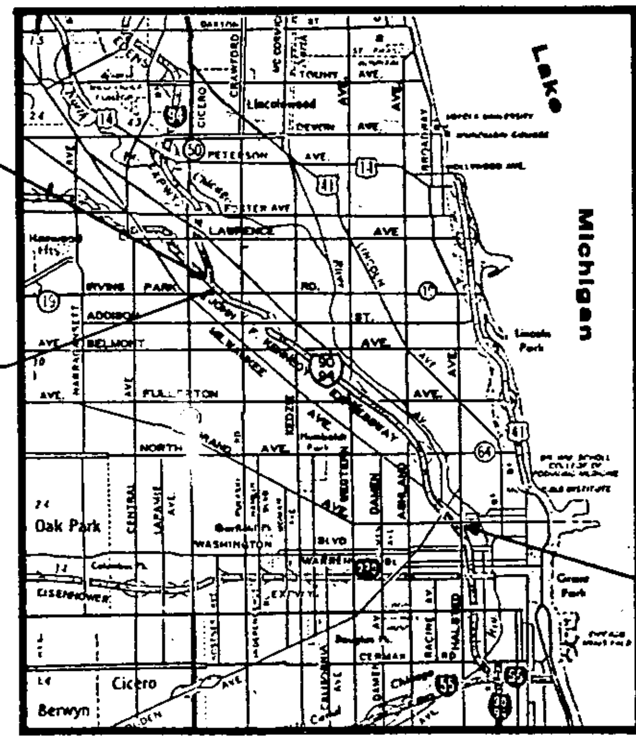
THIS PROJECT IS WITHIN THE MUNICIPAL LIMITS OF THE CITY OF CHICAGO



LOCATION OF SECTION INDICATED THUS:

PROJECT AND IMPROVEMENT ENDS STATION 494+79.00, ℄ NWB F.A.I. 90/94

PROPOSED IMPROVEMENTS CONSISTS OF THE FURNISHING OF STRUCTURAL STEEL & BEARINGS FOR 19 BRIDGES ON N.W.B. ROADWAY FROM NORTH OF HUBBARD STREET TO THE EDENS JUNCTION OF KENNEDY EXPRESSWAY IN COOK COUNTY



FOR STRUCTURE DESCRIPTIONS, OMISSIONS, AND LENGTHS PER AREA SEE SHEET NO. 2 & 3

PROJECT AND IMPROVEMENT BEGINS STATION 103+21.93 ℄ NWB F.A.I. - 90/94

LOCATION MAP
NOT TO SCALE

GROSS LENGTH OF PROJECT = 40,501.41 LIN. FT. (7.6707 MILES)
NET LENGTH OF PROJECT = 6,046.64 LIN. FT. (1.1452 MILES)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED April 13 19 93
EXAMINED 19
PASSED June 4 19 93
APPROVED June 4 19 93

0-279

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

100' 200' 300' 1" = 100'
0 10' 20' 30' 1" = 10'
50' 100' 1" = 50'
50' 100' 1" = 40'
50' 100' 1" = 30'
50' 100' 1" = 20'

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

CONTRACT NO. 82140

CONSULTANT SERVICES - P. SURI (708)705-4523

DATE SIGNED: 4-09-93
EXP. DATE: 11-30-93

AREA A	AREA B	AREA C	AREA D
McDonough Associates Inc.	American Engineering	Stanley Consultants Inc.	Parsons Delew
STA. TO STA.	STA. TO STA.	STA. TO STA.	STA. TO STA.
SHEETS 141 THRU 194	SHEETS 69 THRU 140	SHEETS 18 THRU 68	SHEETS 5 THRU 17

PRINTED UNDER THE AUTHORITY OF THE STATE OF ILLINOIS

TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER ASHLAND AVENUE - EL604.09 (U.S.G.S. DATUM)

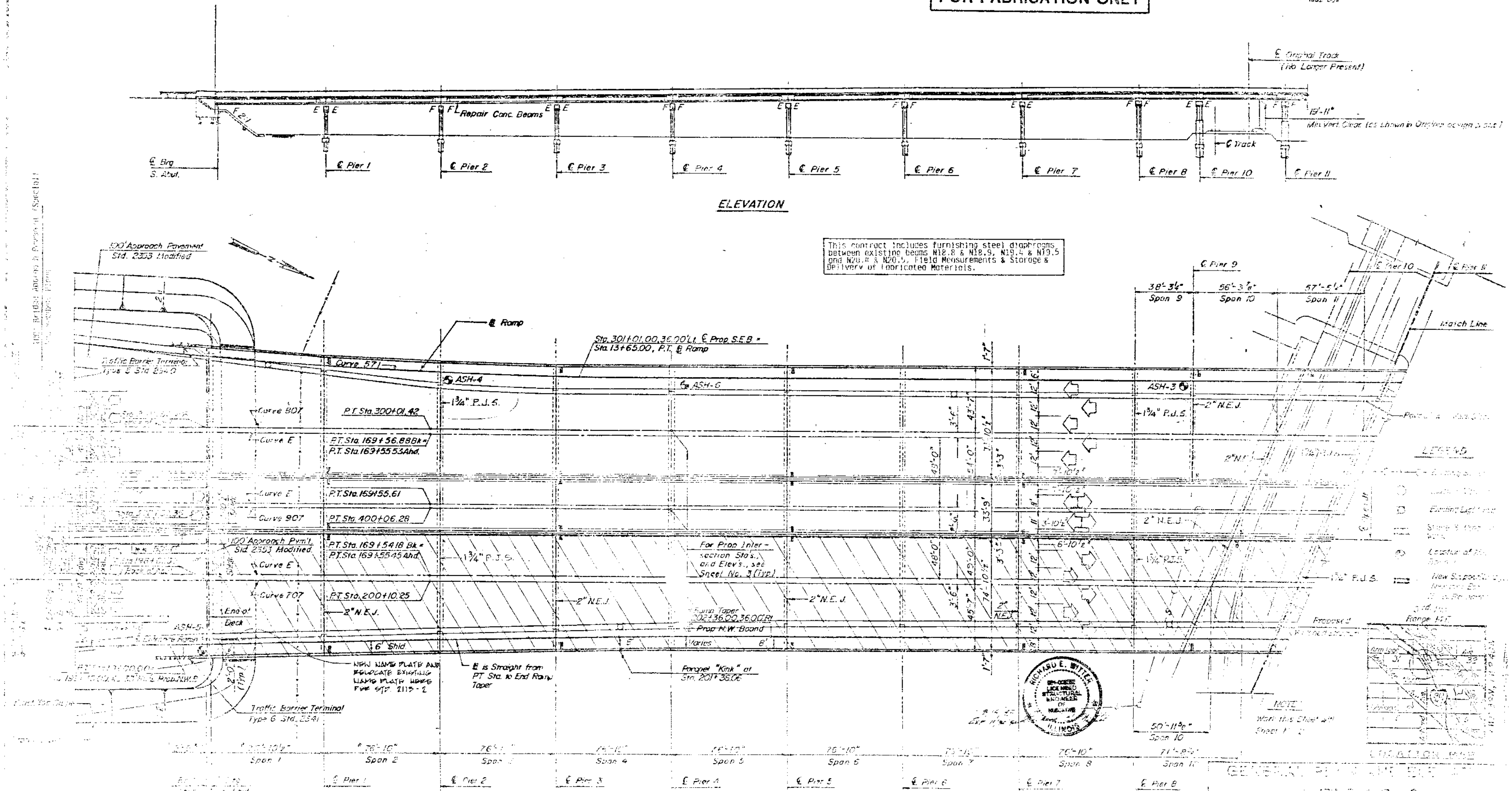
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	X	COOK	194	19
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT -		

SHEET NO. 1 OF 4 SHEETS

X 1992-06F

FOR FABRICATION ONLY



PLAN

* Measured at Rt. Angles to € Substructure

** 50'-0" - Transition Length for Shoulder Widths (At open Joint between Rev. Lanes and N.W.B. Lanes only)

NOTE: THIS PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 3 (YEAR 4) WORK ONLY.
Note: N.E.J. = Neoprene Expansion Joint.
P.J.S. = PREFORMED JOINT SEAL

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

STRUCTURE NO. 016-0133

GENERAL PLAN AND ELEVATION
SHEET 1 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

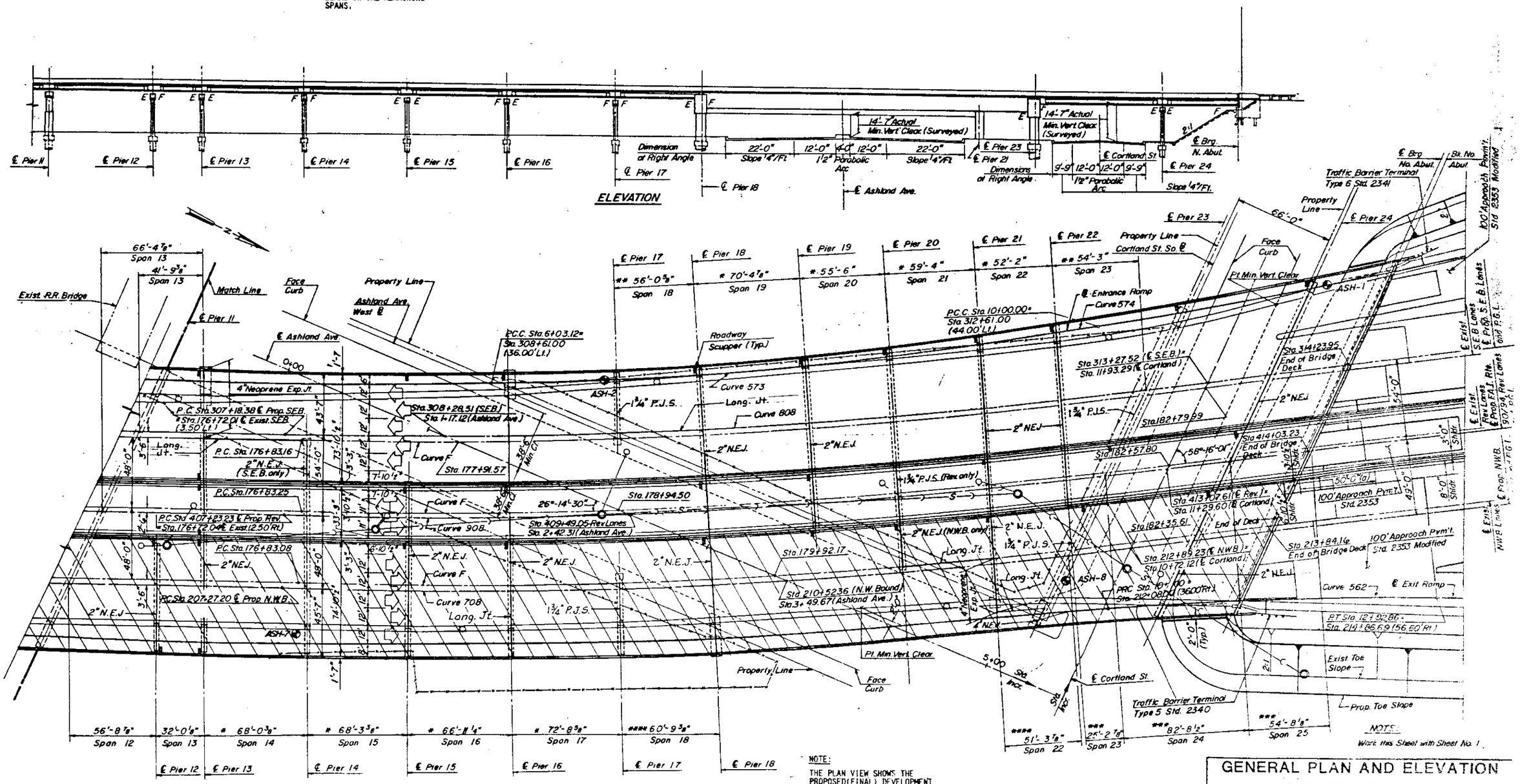
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	X	COOK	194	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 4 SHEETS

X 1992-081F

FOR FABRICATION ONLY

NOTE: CLEAN AND PAINT STEEL IN SPANS 17, 18, 19, 20, 21 & 22. REPAIR CONCRETE BEAMS IN THE REMAINING SPANS.



* Measured at Rt. Angles to ℄ Substructure
** Measured along ℄ S.E. Bound Lanes
*** Measured along ℄ Reversible Lanes
**** Measured along ℄ N.W. Bound Lanes

(a) 50'-0" Transition Length for Shoulder Width (at Open Jt. between Rev. Lanes and N.W.B. Lanes only)

NOTE:
THE PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 3 (YEAR 4) WORK ONLY.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

STANLEY CONSULTANTS

GENERAL PLAN AND ELEVATION
SHEET 2 OF 2

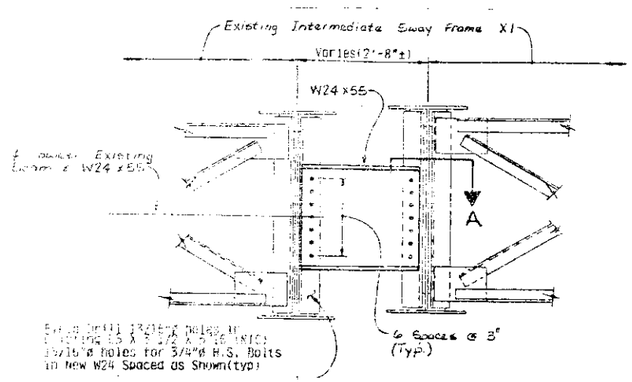
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	x		194	21
F.A. RTE. 4	ILLINOIS	FED. AID PROJECT		

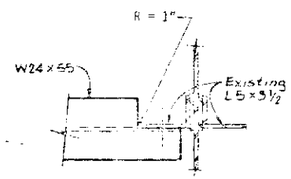
SHEET NO. 3
4 SHEETS

* 1992-081F



INTERMEDIATE DIAPHRAGM (6 REQ'D)
@ Spans 18, 19 & 20

2 Hardened Washers are Req'd over all 15/16"ø oversize holes.



SECTION A
(Typ top & Bottom Each Side)

This contract includes furnishing steel diaphragms between existing beams N18.8 & N18.9, N19.4 & N19.5 and N20.4 & N20.5. Field Measurements & Storage & Delivery of Fabricated Materials.

DESIGN SPECIFICATIONS
AASHTO (1989) WITH 1990 & 1991 INTERIM SPECIFICATIONS

LOADING HS 20-44 AND ALTERNATE MILITARY LOADING
ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

F'C =	3,500 PSI	(CONCRETE)
FY =	60,000 PSI	(REINFORCEMENT)
FY =	36,000 PSI	(PROPOSED STRUCTURAL STEEL)
FS =	18,000 PSI	(EXISTING STRUCTURAL STEEL)

GENERAL NOTES:

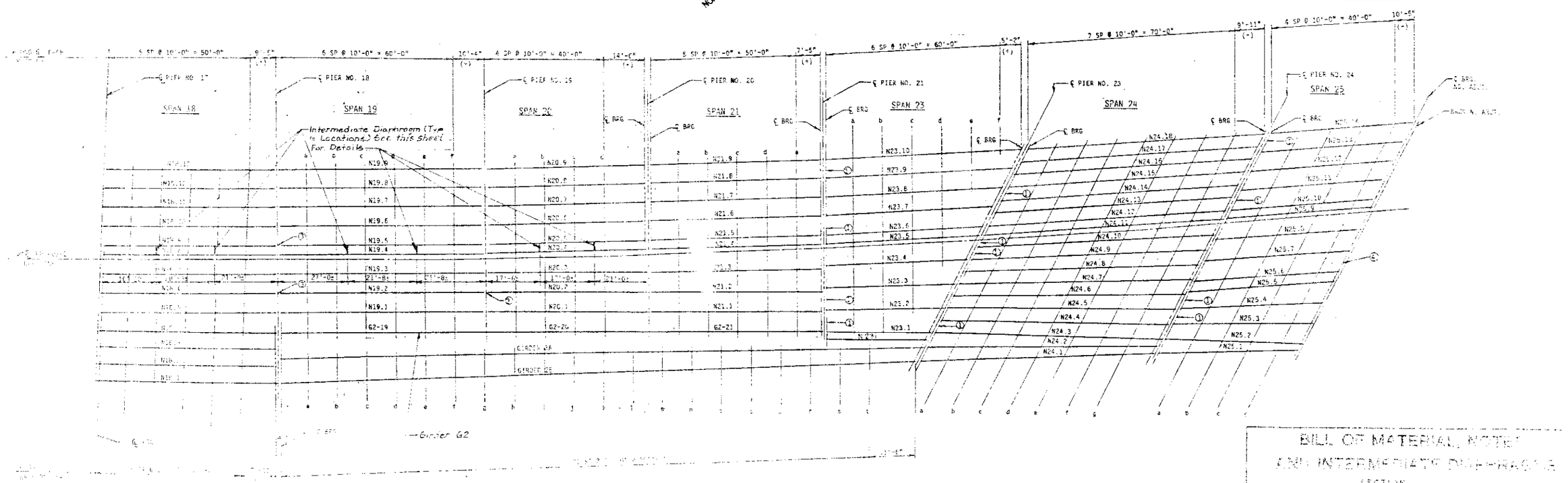
1. FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 7/8"ø, OPEN HOLES 15/16"ø UNLESS OTHERWISE NOTED.
2. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NORMAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE [illegible] THE QUANTITY ACTUALLY FURNISHED AT THE UNIT [illegible] THE WORK.
3. The Zinc Silicate and Vinyl Paint System shall be used for shop and field painting of new structural steel. The first coat shall be applied in the shop. The second or third coat shall be applied in the field by others.

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPERSTRUCTURE	TOTAL
*	FURNISHING STRUCTURAL STEEL	LUMP SUM	[illegible]	[illegible]
**	FIELD MEASUREMENTS	LUMP SUM	0.07	[illegible]

* Includes Diaphragm Assemblies. Calculated Weight of Structural Steel = 4440 Pounds
** See Special Provisions

FOR FABRICATION ONLY



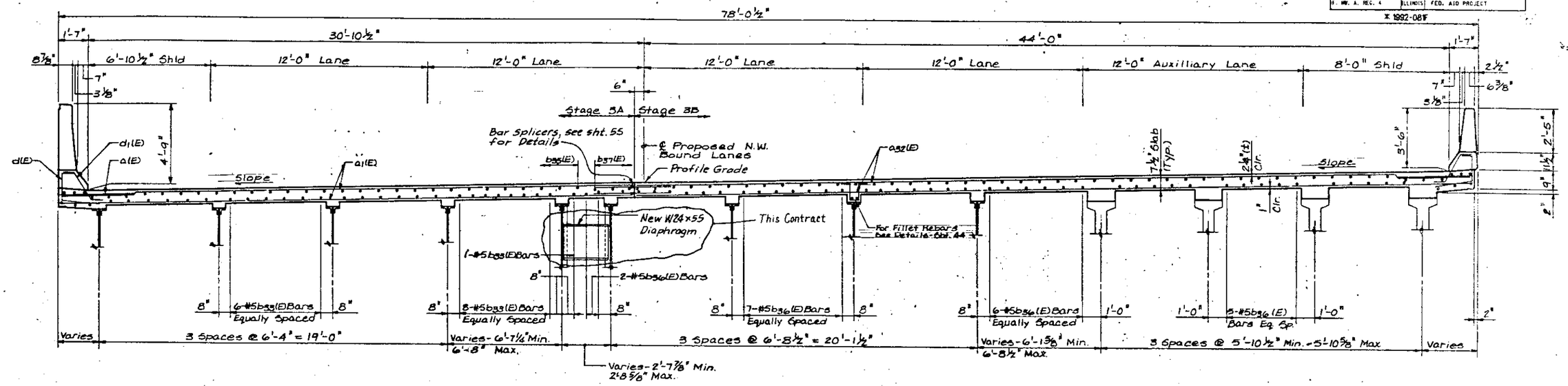
BILL OF MATERIAL NOTES
AND INTERMEDIATE DIAPHRAGMS
SECTION
F.A.I. ROUTE 294 OVER [illegible]
COOK COUNTY
STATION 408+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

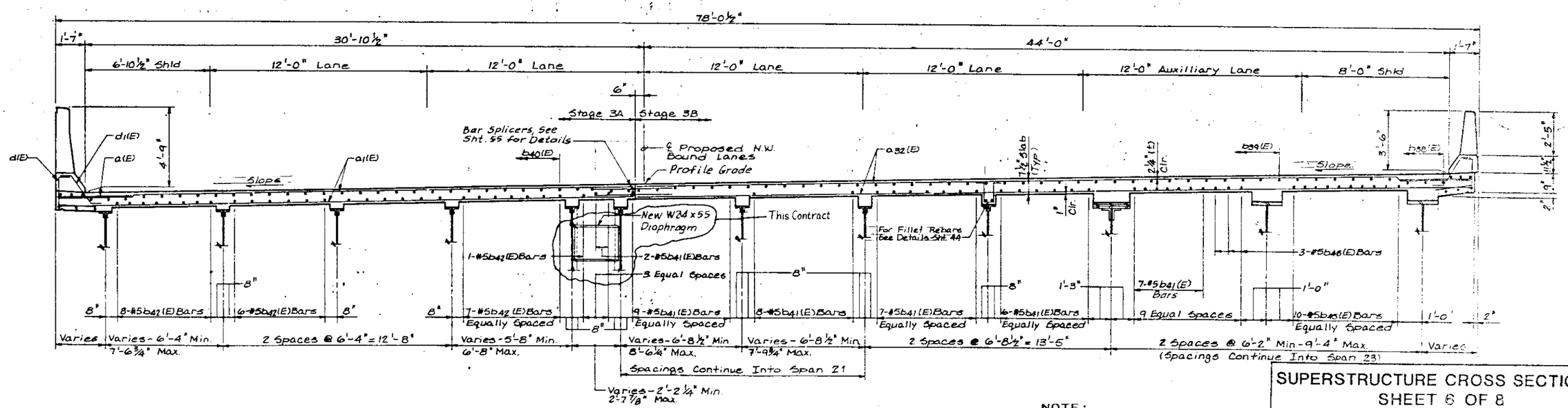
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		194	22
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

X 1992-081F

SHEET NO. 4
4 SHEETS



CROSS SECTION-SPAN 18
(Looking Up Station)



CROSS SECTION-SPAN 19 & SPAN 20
(Looking Up Station)

NOTE:
1. FOR NOTES SEE SHEET 34.

EXCEPT AS SHOWN FOR INFORMATION ONLY

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTIONS
SHEET 6 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

COOK 0505(2-2B,3-1H,6-1P... I&R copy

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*	COOK	426	1
F.H.W.A. REG. 4	ILLINOIS	F.A.I. PROJECT DPI-0137(4)		

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

FOR INDEX SEE SHEET 2

REVISED PLAN

99% 10-16-93

P - 91 - 311 - 86

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

SCALES

PLAN	1" = 50'
PROFILE HORIZONTAL	1" = 50'
PROFILE VERTICAL	1" = 5'
CROSS SECTIONS	1" = 10' (HORIZ)
CROSS SECTIONS	1" = 5' (VERT)

F.A.I. ROUTE 90/94 (JOHN F. KENNEDY EXPRESSWAY)

SECTION 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

PROJECT DPI-0137(4)

COOK COUNTY

C - 91 - 126 - 92

AREA "C"

ROADWAY AND BRIDGE DECKS (SOUTHEAST BOUND)

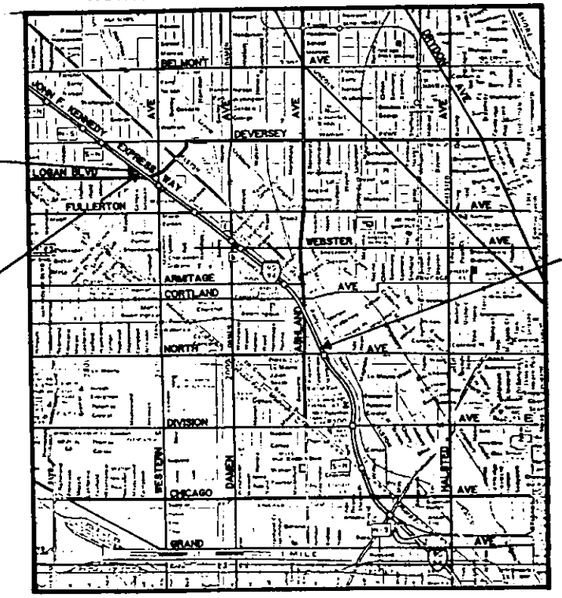
NORTH AVENUE TO LOGAN BOULEVARD

FOR STRUCTURE DESCRIPTIONS, OMISSIONS, AND LENGTHS, SEE SHEET NO. 2

STATION EQUATION
STATION 391+11.40 BK=
STATION 391+12.10 AH

END PROJECT (AREA C)
STATION 390+25.00

BEGIN PROJECT (AREA C)
STATION 293+28.42



LOCATION MAP

SCALE: 1" = 1/2 MILE

NET LENGTH = 9696.56 FT. (1.836 MILES)
GROSS LENGTH = 9696.58 FT. (1.836 MILES)

DESIGN DESIGNATION:
3574(961) TRUNK 0.047 (CRC-20)

SOUTHEAST BOUND

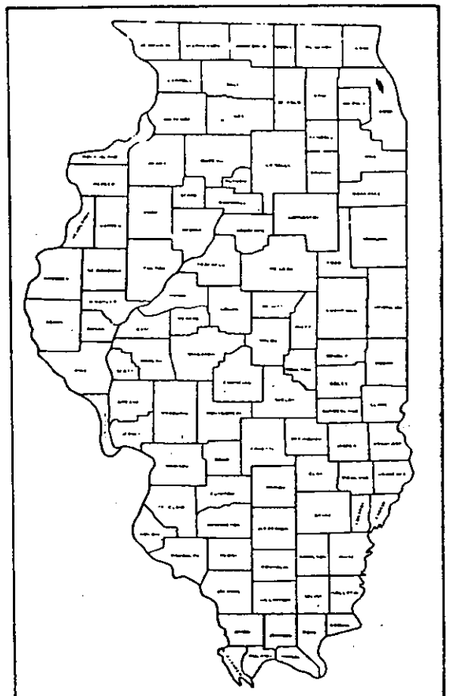
BRIDGES

ASHLAND	STA. 298+52.98 TO STA. 314+23.95
ARMITAGE	STA. 320+53.16 TO STA. 323+19.25
WEBSTER	STA. 341+62.25 TO STA. 343+98.45
DAMEN	STA. 344+99.82 TO STA. 348+98.92
FULLERTON	STA. 362+82.37 TO STA. 365+73.33
WESTERN	STA. 378+74.86 TO STA. 381+41.02
VAULTED SLAB	STA. 381+41.02 TO STA. 383+89.11
LOGAN	STA. 383+89.11 TO STA. 387+55.18

ROBERT M. KOAS REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Robert Koas

PRINTED UNDER THE AUTHORITY OF THE STATE OF ILLINOIS



LOCATION OF SECTION INDICATED THUS:

NOTE: WHEREVER IN THESE PLANS BRIDGE APPROACH PAVT. (STD. 2353) SPECIAL IS REFERRED TO, IT SHALL MEAN BRIDGE APPROACH PAVEMENT (SPECIAL).

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED July 29 1993 — DISTRICT ENGINEER

EXAMINED _____ 19__ — ENGINEER OF PLANS AND CONTRACTS

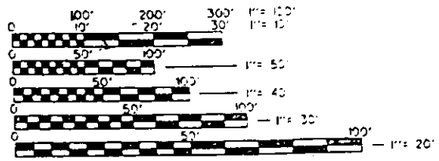
PASSED Sept. 7 1993 — ENGINEER OF BRIDGES

APPROVED Sept. 7 1993 — DIRECTOR, DIVISION OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE _____

MUNICIPALITY INVOLVEMENT - CITY OF CHICAGO



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

CONTRACT NO. 82107

Cook SHEETS 1 TO 426

CONSULTANT SERVICES - P. SURI (708) 705 - 4523

O-272

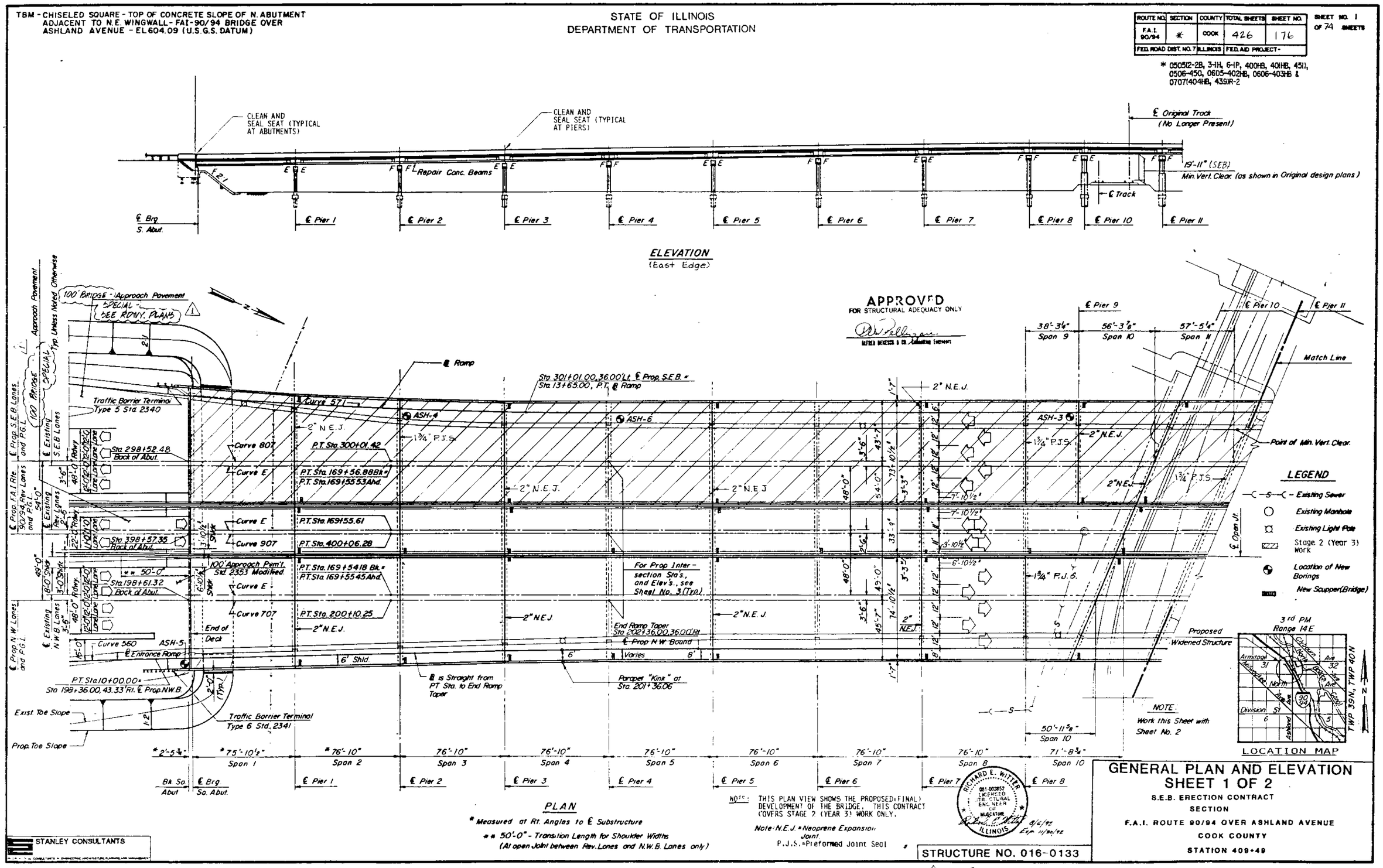
TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER ASHLAND AVENUE - EL 604.09 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	176
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 1 OF 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2



STANLEY CONSULTANTS

STRUCTURE NO. 016-0133

GENERAL PLAN AND ELEVATION SHEET 1 OF 2

S.E.B. ERECTION CONTRACT
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

1 REVISED 9-22-92 PMP

5

STATION 409+49
REHABILITATED 199 BY
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC. -IHB-
F.A. PROJ. DPI-0137(4)
LOADING HS20 & ALT.
STR. NO. 016-0133

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUILT BY
CITY OF CHICAGO
WITH THE CO-OPERATION OF
COUNTY OF COOK
STATE OF ILLINOIS
FEDERAL GOVERNMENT
1958

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	177
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 2 OF 74 SHEETS

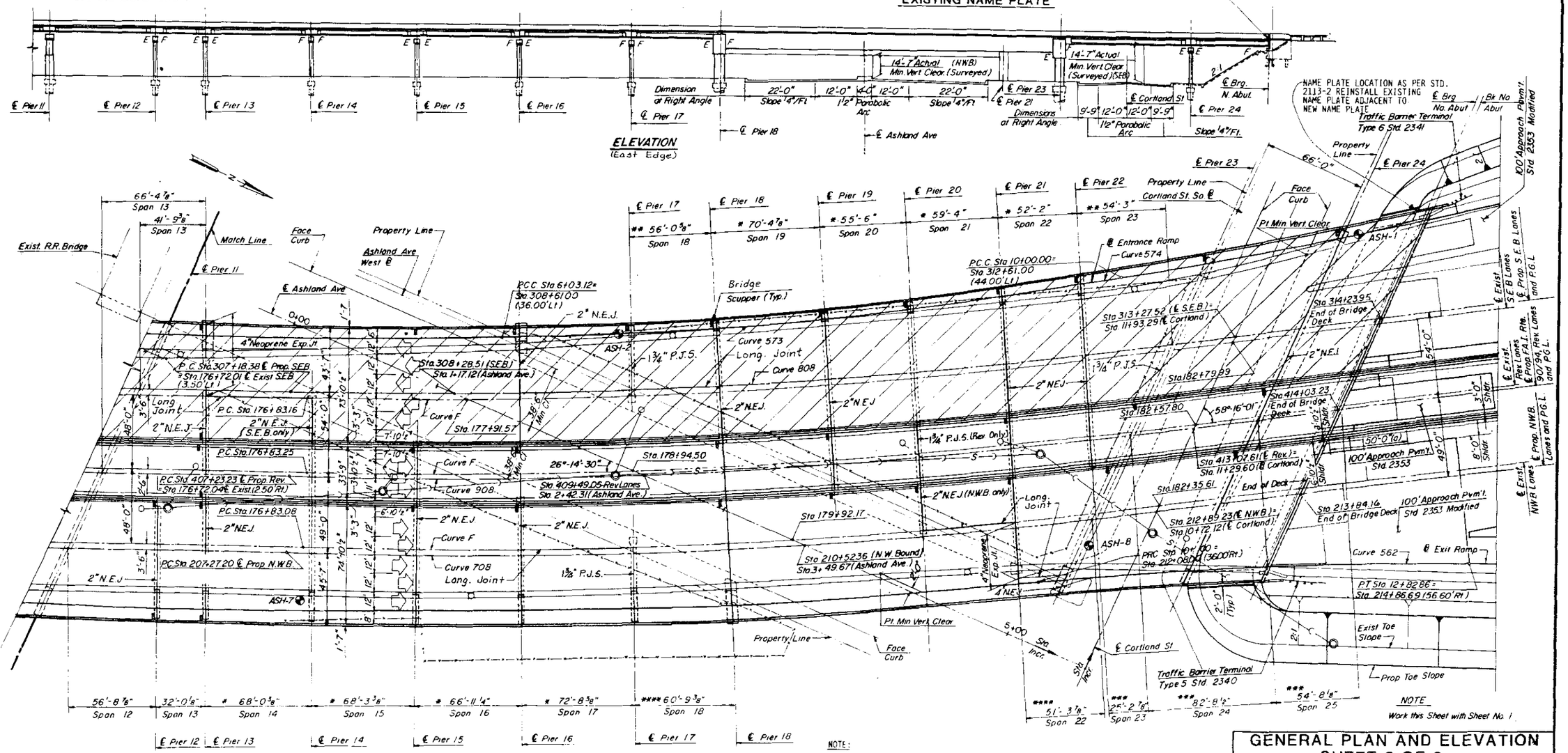
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

NEW NAME PLATE
See Standard 2113-2

EXISTING NAME PLATE

Anchor with 3/8"Φ Exp. Anchors

CLEAN AND SEAL SEAT (TYPICAL AT ABUTMENT)



PLAN

NOTE
Work this Sheet with Sheet No. 1

* Measured at Rt Angles to ℄ Substructure
** Measured along ℄ S.E. Bound Lanes
*** Measured along ℄ Reversible Lanes
**** Measured along ℄ N.W. Bound Lanes

NOTE:
THE PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 2 (YEAR 3) WORK ONLY.

STANLEY CONSULTANTS

(a) 50'-0" Transition Length for Shoulder Width (at Open Jt. between Rev. Lanes and N.W.B. Lanes only)

GENERAL PLAN AND ELEVATION
SHEET 2 OF 2

S.E.B. ERECTION CONTRACT
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	178
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 3 OF 74 SHEETS

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451H, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

MAINLINE HORIZONTAL CURVE DATA

	EXISTING CURVE DATA		PROPOSED CURVE DATA	
CURVE #	E (207)	F (208)	807	808
SEB PI STA	166+44.52	186+08.46	296+88.95	316+52.45
Δ	1°33'43.0"	28°41'07.9"	1°33'44.0"	28°33'58.0"
D	0°15'00.0"	1°34'59.8"	0°14'59.9"	1°33'41.7"
T	312.40'	925.29'	312.51'	934.08'
R	22,917.91'	3,618.78'	22,921.41'	3,669.07'
L	624.77'	1,811.77'	624.98'	1,829.30'
E	2.13'	116.42'	2.13'	117.03'
S	NC	0.0125 FT/FT	NC	0.020 FT/FT
CURVE #	E (307)	F (308)	907	908
REV PI STA	166+43.91	186+20.81	396+94.54	416+71.06
Δ	1°33'43.0"	28°41'07.1"	1°33'44.0"	28°33'58.0"
D	0°15'01.9"	1°33'45.2"	0°15'02.0"	1°32'20.2"
T	311.75'	937.56'	311.77'	947.83'
R	22,869.91'	3,666.78'	22,867.41'	3,723.07'
L	623.45'	1,835.79'	623.51'	1,856.22'
E	2.13'	117.97'	2.12'	118.76'
S	NC	0.0125 FT/FT	NC	0.033 FT/FT
CURVE #	E (107)	F (108)	707	708
NWB PI STA	166+43.13	186+32.93	196+99.18	216+87.50
Δ	1°33'43.0"	28°41'08.1"	1°33'44.0"	28°33'58.0"
D	0°15'03.8"	1°32'32.5"	0°15'03.9"	1°31'08.2"
T	311.09'	949.84'	311.10'	960.30'
R	22,821.91'	3,714.78'	22,818.41'	3,772.06'
L	622.15'	1,859.84'	622.17'	1,880.64
E	2.12'	119.51'	2.12'	120.32'
S	NC	0.0125 FT/FT	NC	0.020 FT/FT

PROPOSED RAMPS HORIZONTAL CURVE DATA

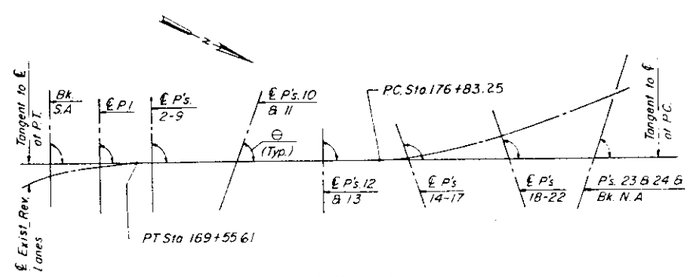
CURVE NO.	560	562	
RAMP B PI STA	8+78.43	11+41.49	
Δ	7°31'31.3"	4°07'03.0"	
D	3°05'26.0"	1°27'20.4"	
T	121.92'	141.49'	
R	1853.90'	3936.04'	
L	243.50'	282.86'	
E	4.01'	2.54'	
S	VARIES	VARIES	
CURVE NO.	571	573	574
RAMP B PI STA	11+56.53	8+01.19	11+43.17
Δ	7°26'26.185"	8°34'14.4"	7°26'57.5"
D	1°46'53.7"	2°09'34.2"	2°36'19.1"
T	209.05'	198.81'	143.17'
R	3216.00'	2653.19'	2195.19'
L	417.52'	396.88'	285.93'
E	6.79'	7.44'	4.66'
S	VARIES	0.020 FT/FT	0.020 FT/FT

PROPOSED INTERSECTION STATIONS

SUBSTRUCTURE	LOCATION S.E. BOUND LANES	REVERSIBLE LANES	N.W. BOUND LANES
BACK SO. ABUT.	298+52.48	398+57.35	198+61.32
℄ PIER 1	299+30.84	399+35.71	199+39.68
" 2	300+07.67	400+12.54	200+16.51
" 3	300+84.51	400+89.38	200+93.35
" 4	301+61.34	401+66.21	201+70.18
" 5	302+38.17	402+43.04	202+47.01
" 6	303+15.01	403+19.88	203+23.85
" 7	303+91.84	403+96.71	204+00.68
" 8	304+68.67	404+73.54	204+77.51
" 9	305+06.94	---	---
" 10	305+63.29	405+45.29	205+28.50
" 11	306+20.73	406+02.73	205+85.94
" 12	---	---	206+42.64
" 13	306+62.50	406+69.12	206+74.67
" 14	307+30.57	407+37.19	207+42.74
" 15	---	408+05.49	208+11.04
" 16	308+65.81	---	208+77.97
" 17	309+38.54	---	209+50.70
" 18	309+94.60	---	210+11.49
" 19	310+64.98	410+74.08	---
" 20	311+20.50	411+29.60	211+37.40
" 21	311+79.89	411+88.98	211+96.77
" 22	312+32.13	412+41.22	---
" 23	312+86.36	412+66.45	212+48.08
" 24	313+69.53	413+49.15	213+30.37
END OF BRIDGE DECK	314+23.95	414+03.23	213+84.16

PROPOSED INTERSECTION ELEVATIONS (PROFILE GRADE ELEVATIONS)

SUBSTRUCTURE	LOCATION S.E. BOUND LANES	REVERSIBLE LANES	N.W. BOUND LANES
BACK SO. ABUT.	613.15	613.28	613.11
℄ PIER 1	615.51	615.63	615.46
" 2	617.81	617.92	617.75
" 3	619.88	619.99	619.82
" 4	621.64	621.75	621.57
" 5	623.09	623.19	623.02
" 6	624.23	624.33	624.17
" 7	625.06	625.17	625.00
" 8	625.58	625.69	625.53
" 9	625.72	- - -	- - -
" 10	625.80	625.90	625.71
" 11	625.70	625.80	625.75
" 12	- - -	- - -	625.63
" 13	625.52	625.64	625.48
" 14	625.03	625.15	625.00
" 15	- - -	624.42	624.27
" 16	623.33	- - -	623.33
" 17	622.01	- - -	622.05
" 18	620.80	- - -	620.79
" 19	619.04	619.18	- - -
" 20	617.46	617.63	617.55
" 21	615.66	615.85	615.78
" 22	614.07	614.28	- - -
" 23	612.42	613.53	614.27
" 24	610.05	611.07	611.83
END OF BRIDGE DECK	608.87	609.73	610.34



SCHEMATIC FOOTING LAYOUT

SUBSTRUCTURE	ANGLE B
BK.S.A.	90°-00'-00"
P.1	90°-00'-00"
P'S. 2-9	90°-00'-00"
P'S. 10&11	67°-07'-46"
P'S. 12&13	91°-50'-5"
P'S. 14-17	91°-50'-5"
P'S. 18-22	96°-22'-24"
P'S. 23&24	67°-15'-35"
BK.N.A.	67°-15'-35"

STANLEY CONSULTANTS

HORIZONTAL ALIGNMENT

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

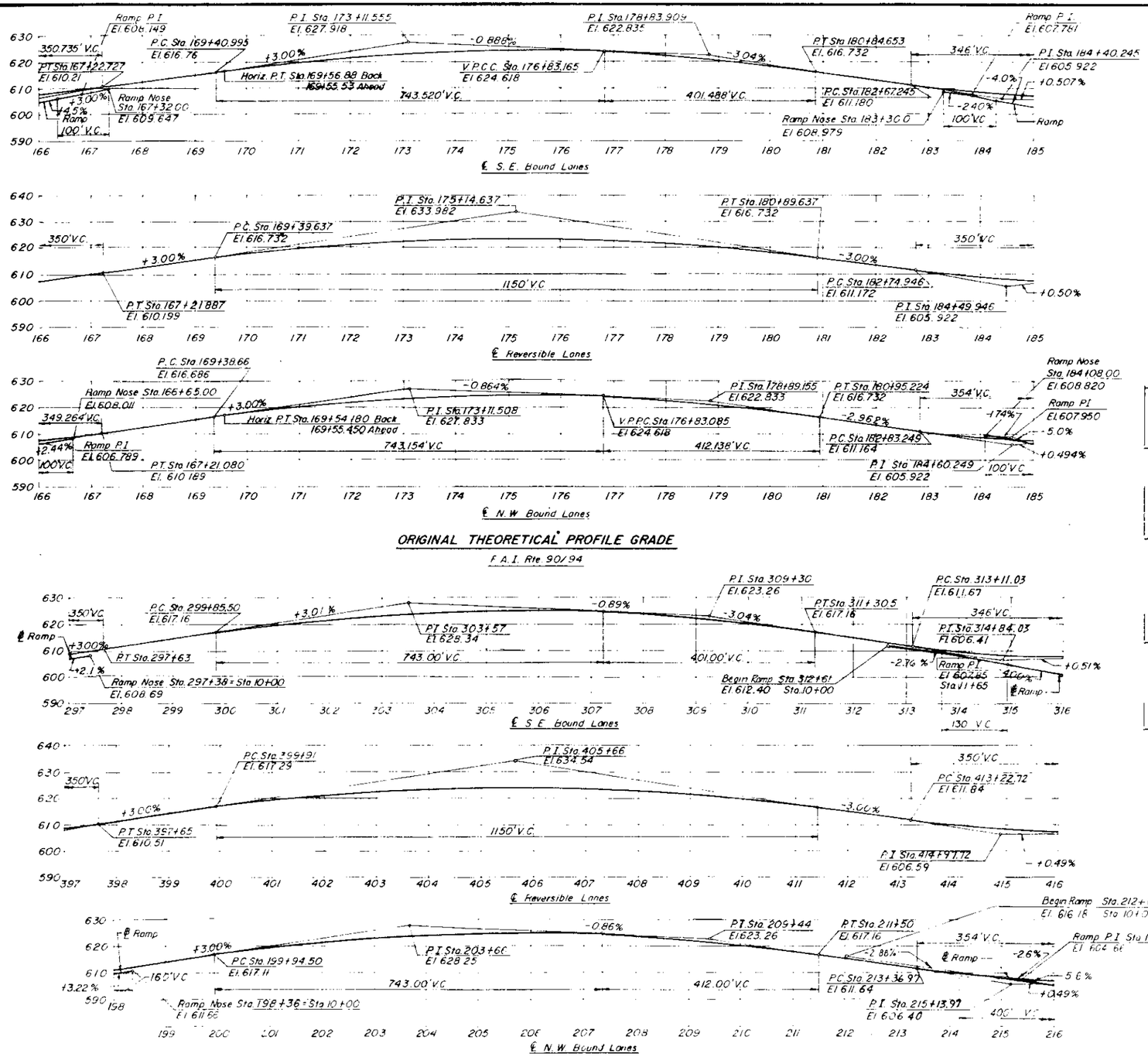
COOK COUNTY

STATION 409+49

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 4 OF 74 SHEETS

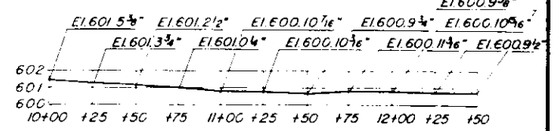


ORIGINAL THEORETICAL PROFILE GRADE

F.A.I. Rte. 90/94

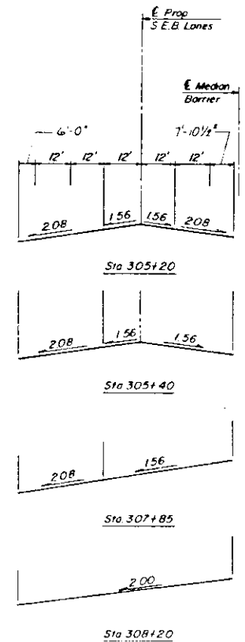
PROPOSED PROFILE GRADE

F.A.I. Rte. 90/94



EXISTING TRACK PROFILE

Scales: 1" = 40' Horiz
1/4" = 1'-0" Vert



PROPOSED CROSS SLOPE TRANSITION

(ALL CROSS SLOPES IN PERCENT)

EXISTING CORTLAND STREET

(Along ℄ of roadway)

Station	Elevation
12+94	590.38
12+84	590.21
12+74	590.06
12+64	589.91
12+54	589.82
12+44	589.77
12+34	589.75
12+24	589.74
12+14	589.70
12+04	589.66
11+94	589.63
11+69	589.62
11+44	589.49
11+19	589.33
10+94	589.01
10+84	588.84
10+74	588.67
10+64	588.48
10+54	588.12
10+44	587.79
10+34	587.44
10+24	587.07
10+14	586.69
10+04	586.31
9+94	586.12
9+84	585.93
9+74	585.72

EXISTING ASHLAND AVENUE

(Along Concrete Median Gutterline)

Station	Elevation
0+00	588.64
0+10	589.07
0+20	589.46
0+30	589.86
0+40	590.24
0+50	590.55
0+60	590.86
0+70	591.15
0+80	591.36
0+90	591.55
1+00	591.68
1+25	591.78
1+50	591.90
1+75	591.89
2+00	591.83
2+25	591.81
2+50	591.82
2+75	591.86
3+00	591.85
3+25	591.87
3+50	591.83
3+60	591.70
3+70	591.54
3+80	591.40
3+90	591.06
4+00	590.74
4+10	590.39
4+20	590.01
4+30	589.63
4+50	589.24
4+60	588.80

STANLEY CONSULTANTS

PROFILES

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL
	BRIDGE DECK GROOVING	SQ. YD.	13,932	-	13,932
	CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	3937.8	-	3937.8
	CLASS X CONCRETE	CU. YD.	-	4.8	4.8
	REINFORCING BARS (EPOXY COATED)	LBS.	943,010	420	943,430
	STRUCTURE EXCAVATION	CU. YD.	-	6	6
5	REMOVAL OF EXISTING CONCRETE DECK	LUMP SUM	0.3	-	0.3
1	PROTECTIVE COAT	SQ. YD.	15,161	-	15,161
	NEOPRENE EXPANSION JOINT 2"	LIN. FT.	1,031	-	1,031
	NEOPRENE EXPANSION JOINT 4"	LIN. FT.	47	-	47
2	BEAM REPOSITIONING	EACH	1	-	1
9	FURNISHING AND ERECTING STRUCTURAL STEEL	LBS.	10,617	-	10,617
7	ERECTING STRUCTURAL STEEL	LUMP SUM	0.1	-	0.1
	1" DIA. ANCHOR BOLTS	EACH	102	-	102
1	SILICONE JOINT SEALER	LIN. FT.	124		124
6	CONCRETE REMOVAL	CU. YD.	2.0	5.1	7.1
	FURNISH & INSTALL BRIDGE SCUPPER-TYPE A	EACH	23	-	23
	RIVET REMOVAL AND REPLACEMENT	EACH	13	-	13
4	PROTECTIVE SHIELD	SQ. YD.	15,770	-	15,770
3	DRAINAGE SYSTEM	LUMP SUM	0.7	-	0.7
	PREFORMED JOINT SEAL 1 3/4"	LIN. FT.	389	-	389
	EPOXY CRACK SEALING	LIN. FT.	300	100	400
	EPOXY MORTAR REPAIR (DEPTH < 1 1/2")	CU. FT.	250	50	300
	FORMED CONCRETE REPAIR (1 1/2" < DEPTH < 5")	SQ. FT.	-	3560	3560
	FORMED CONCRETE REPAIR (DEPTH > 5")	SQ. FT.	-	710	710
	PROTECTIVE SURFACE TREATMENT	SQ. FT.	-	61,700	61,700
	JACK & SUPPORT EXISTING BEAM FOR BEAM REPAIR	EACH	4	-	4
	PROTECT & MAINTAIN EXISTING UNDERPASS LUMINARIES	LUMP SUM	0.4	-	0.4
	NAME PLATES	EACH	1	-	1

(1) PROTECTIVE COAT QUANTITY INCLUDES DECK SURFACE AND FACE OF BARRIER RAILS. SEE SPECIAL PROVISIONS FOR CURING AND TEXTURING BRIDGE DECK.

(2) JACKING BEAM S24.1 TO ITS FINAL POSITION.

(3) SEE SPECIAL PROVISIONS.

(4) SEE SHEET 6 FOR LIMITS OF PROTECTIVE SHIELD.

(5) INCLUDES 125,390 SQ. FT. OF EXISTING CONCRETE DECK REMOVAL AND PORTIONS OF CONCRETE DIAPHRAGMS INDICATED.

(6) INCLUDES 2.0 CU. YDS. OF CONCRETE DIAPHRAGMS CONNECTED TO BEAM S24.1.

(7) INCLUDES 840 LBS OF STRUCTURAL STEEL (DIAPHRAGM ASSEMBLIES)

(9) INCLUDES 10,617 POUNDS OF STRUCTURAL STEEL REQUIRED AT PERFORMED JOINT SEAL 1 3/4".

GENERAL NOTES CON'D.:

12. PRIOR TO POURING THE NEW CONCRETE FOR THE DECK, ALL LOOSE RUST, LOOSE MILL SCALE, LOOSE PAINT AND ALL OTHER FOREIGN MATERIAL SHALL BE REMOVED FROM THE EMBEDDED PORTIONS OF FLANGES OF STRINGERS (GIRDERS). THE REMOVAL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SSPC SURFACE PREPARATION SPECIFICATIONS SP 11 FOR POWER TOOL CLEANING OR SP 2 FOR HAND TOOL CLEANING. COST SHALL BE INCIDENTAL TO "REMOVAL OF EXISTING CONCRETE DECK."
13. THE THREE COAT LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL. THE FIRST COAT HAS BEEN APPLIED IN THE SHOP. THE SECOND COAT SHALL BE APPLIED IN THE FIELD UNDER THIS CONTRACT. THE THIRD COAT SHALL BE APPLIED IN THE FIELD BY OTHERS. THE COLOR OF THE ALKYD FINISH COATS SHALL BE MUNSELL NO. 2.5 YR 3/4 REDDISH BROWN FOR FASCIA OF EXTERIOR BEAMS AND THEIR BEARINGS AND MUNSELL NO. 10 YR 7/1 LIGHT GREY FOR ALL OTHER STRUCTURAL STEEL.
14. EXPANSION PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THREE COATS OF THE LEAD AND CHROMATE-FREE ALKYD PAINTING SYSTEM. THE COLOR OF THE FINISH COATS SHALL BE MUNSELL NO. 10 YR 7/1 LIGHT GREY.
15. THE REPAIR OF THE PRECAST BEAMS IN THE REVERSIBLE LANES WILL BE INCLUDED IN THIS CONTRACT IF DIRECTED BY THE ENGINEER.
16. CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE SYSTEM DURING THE REPAIR OF THE SUBSTRUCTURE. THE DRAINAGE SYSTEM SHALL COLLECT THE WATER JUST BELOW THE DECK AND DISCHARGE THE WATER AT GRADE.
17. EXISTING NAMEPLATE TO BE MOUNTED ADJACENT TO NEW NAMEPLATE, COST INCIDENTAL TO "NAMEPLATES".

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REHABILITATION NOTES:

SEAL CRACKS (1/16" AND WIDER) IN ABUTMENT CAPS, PIER CAPS, AND DIAPHRAGMS (WITHIN THE SOUTHEAST BOUND AREA) WITH PRESSURE INJECTED EPOXY. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "EPOXY CRACK SEALING." (SEE SPECIAL PROVISIONS).

REPAIR HOLLOW, SPALLED AND DETERIORATED CONCRETE PORTION OF ABUTMENT CAPS, PIER CAPS, AND DIAPHRAGMS, WITHIN THE SOUTHEAST BOUND AREA WITH EPOXY MORTAR OR FORMED CONCRETE. SPLICE IN REBARS WHERE REQUIRED. (SEE SPECIAL PROVISIONS).

REMOVE EXISTING ELECTRICAL CONDUIT, ELECTRICAL BOXES AND LIGHT POLES IN THE SOUTHEAST BOUND AREA. WORK IS TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR "REMOVAL OF EXISTING CONCRETE DECK." (SEE SPECIAL PROVISIONS).

CLEAN AND SEAL THE BRIDGE SEATS AT THE ABUTMENTS AND THE PIERS IN THE SOUTHEAST BOUND AREA. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "PROTECTIVE SURFACE TREATMENT."

REMOVE LOOSE ANCHOR BOLTS AND REPLACE WITH EPOXY GROUTED ANCHOR BOLTS. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR 1" DIA. ANCHOR BOLTS." (SEE SPECIAL PROVISIONS). LOCATION OF REPAIRS SHALL BE COORDINATED WITH TABLE ON THIS SHEET.

REPLACE MISSING OR LOOSE ANCHOR BOLT NUTS OR SIDE RETAINER NUTS WITH NEW NUTS CONFORMING TO ASTM A307. LOCATION OF WORK SHALL BE COORDINATED WITH TABLE ON THIS SHEET. (COST INCIDENTAL TO 1" DIA. ANCHOR BOLTS").

THE BUREAU OF BRIDGES AND STRUCTURES SHALL BE CONSULTED CONCERNING THE REPAIR OF ALL PPC BEAMS THAT EXHIBIT MORE THAN SUPERFICIAL DAMAGE.

REPLACE THE MISSING STRUCTURAL STEEL BOLTS, NUTS AND RIVETS AND REMOVE AND REPLACE THE LOOSE BOLTS, NUTS AND RIVETS WITH HIGH STRENGTH BOLTS. CROSS BRACING CONNECTION TO GIRDER G1 AT BEAM S16.2 AND GIRDER G4 A BOLT IS LOOSE. GIRDER G5 BETWEEN STRINGERS S16.1 AND S16.2 RIVETS ARE MISSING. GIRDER G6 AT STRINGER S17.12 THERE IS A LOOSE BOLT IN THE CONNECTION OF THE BOTTOM CHORD BRACING. CROSS BRACING BETWEEN STRINGERS S14.3 AND S14.4 NEAR PIER 14, ONE OF THE BOLTS ATTACHED TO THE STIFFENERS IS MISSING A NUT. CROSS BRACING BETWEEN STRINGER S14.2 AND S14.3 NEAR PIER 14, NINE OF THE TWELVE BOLTS ATTACHED TO THE STIFFENERS ARE LOOSE. ANY ADDITIONAL LOOSE OR MISSING BOLTS, NUTS AND RIVETS FOUND DURING REHABILITATION SHOULD ALSO BE REPLACED WITH HIGH STRENGTH BOLTS AS DIRECTED BY ENGINEER. METHOD OF REMOVAL SHALL BE BY MECHANICAL MEANS ONLY. NO BURNING ALLOWED. (COST INCIDENTAL TO ~~"FURNISHING AND ERECTING STRUCTURAL STEEL."~~ "RIVET REMOVAL & REPLACEMENT.")

GENERAL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE AASHTO M 183.
2. FASTENERS SHALL BE HIGH STRENGTH BOLTS ~~(AASHTO M 164, TYPE 3).~~ BOLTS 3/4"ø, 15/16" HOLES UNLESS NOTED OTHERWISE.
3. EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THE ZINC-SILICATE PRIMER.
4. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
5. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.
6. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
7. EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS., AND 3/4"ø X 12" HOOKED BOLTS.
8. BEAM S24.1 SHALL BE JACKED TO ITS FINAL POSITION. REFER TO SHEET 63 FOR ADDITIONAL DETAILS.
9. ALL CONTACT SURFACE AREAS OF THE EXISTING STRUCTURAL STEEL TO WHICH NEW STRUCTURAL STEEL IS TO BE CONNECTED SHALL BE FREE OF PAINT OR LACQUER.
10. THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES IS NOT PERMITTED.
11. ~~EXIST.~~ STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED ONLY AS REQUIRED BY THE SPECIAL PROVISION "CLEANING AND PAINTING NEW STEEL AND ADJACENT AREAS OF EXISTING STEEL STRUCTURES". (2)

ANCHOR BOLT REHABILITATION TABLE

BEAM NUMBER	BEARING	ANCHOR BOLTS LOOSE	MISSING	DAMAGED	REMARKS
S1.5	SOUTH	EAST			
S1.6	SOUTH		WEST		
S1.7	SOUTH	EAST	EAST		
S1.8	SOUTH		WEST		
S1.9	SOUTH			EAST	
S1.8	NORTH	EAST			
S2.4	SOUTH	YES			
S2.8	NORTH	WEST			NUT NOT TIGHT
S2.14	NORTH	WEST			NUT NOT TIGHT
S2.17	NORTH	EAST			
S5.5	SOUTH			YES	
S5.6	SOUTH			YES	
S5.7	SOUTH			YES	
S5.8	SOUTH			YES	
S5.9	SOUTH			YES	
S5.15	NORTH	YES			
S6.9	SOUTH	YES			
S6.7	NORTH		EAST		
S7.15	NORTH	YES			
S8.15	SOUTH	YES			
S9.9	SOUTH			EAST	E. BOLT BENT
S11.5	NORTH	BOTH		BOTH	BOLTS BENT
S11.6	NORTH	BOTH		BOTH	BOLTS BENT
S11.7	NORTH	WEST			
S11.8	NORTH			WEST	WEST BOLT BENT
S11.10	NORTH	BOTH			
S11.12	NORTH	BOTH			
S11.13	NORTH	BOTH			
S11.14	NORTH	BOTH		BOTH	BOLTS BENT
S11.15	NORTH	BOTH		BOTH	BOLTS BENT
S11.16	NORTH	EAST			
S11.17	NORTH		BOTH		
S13.3	SOUTH	EAST			
S13.4	SOUTH	BOTH		EAST	EAST NUT MISSING
S13.5	SOUTH	WEST			
S13.6	SOUTH			EAST	EAST NUT MISSING
S13.7	SOUTH	WEST			
S13.9	SOUTH	EAST			

ANCHOR BOLT REHABILITATION TABLE

BEAM NUMBER	BEARING	ANCHOR BOLTS LOOSE	MISSING	DAMAGED	REMARKS
S13.10	SOUTH	EAST		EAST	
G1	SOUTH			RUST	
S14.9	NORTH	EAST			
S17.3	NORTH	EAST	EAST	BOTH	
S17.4	NORTH		BOTH		
S17.5	NORTH			EAST	
S18.4	SOUTH		EAST		
S18.5	SOUTH		EAST		
S18.6	SOUTH		EAST		
S19.12	SOUTH		EAST		
S19.13	SOUTH		EAST		
S19.14	SOUTH		EAST		
S21.10	SOUTH	BOTH			
S21.13	SOUTH	BOTH			
S23.3	NORTH	EAST	WEST		EAST BOLT BENT
S23.4	NORTH	EAST	WEST		EAST BOLT BENT
S23.5	NORTH	WEST	EAST		
S23.6	NORTH		BOTH		
S23.7	NORTH		BOTH		
S23.8	NORTH	WEST		EAST	
S23.9	NORTH	EAST	WEST		
S23.10	NORTH		BOTH		
S23.11	NORTH	EAST	WEST		
S23.12	NORTH	EAST	WEST		
S23.13	NORTH	WEST		EAST	
S23.14	NORTH	WEST			
S23.15	NORTH	BOTH			
S24.3	SOUTH	BOTH			NUTS MISSING
S24.5	SOUTH	EAST			
S24.13	SOUTH	WEST			
S24.17	SOUTH	WEST			
S24.18	SOUTH	EAST			
S25.3	NORTH	WEST			
S25.4	NORTH	WEST			
S25.5	NORTH	EAST			
S25.14	NORTH	EAST			
S25.15	NORTH	WEST			

EXISTING STRUCTURE

FAI ROUTE 2, SEC 0505.31H, BUILT IN 1958, STRUCTURE NO. 016-0255

SUPERSTRUCTURE: APPROACH SPANS TO ASHLAND AVENUE: SIMPLY SUPPORTED PRECAST, PRESTRESSED CONCRETE I-BEAMS. ASHLAND AVENUE MAIN SPANS: PLANAR FRAME-TYPE STRUCTURE CONSISTING OF 144" RIVETED BUILT-UP COMPOSITE FASCIA GIRDERS, 96" AND 120" CROSS-GIRDERS, AND 48" LONGITUDINAL GIRDERS.

SUBSTRUCTURE: PILE BENT ABUTMENTS SUPPORTED ON CONCRETE PILES AND MULTIPLE COLUMN PIERS SUPPORTED ON CAISSONS

SUPERSTRUCTURE DECK TO BE REPLACED. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

EXISTING UTILITIES

THE EXISTING UTILITIES HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE PLANS AND FROM FIELD OBSERVATIONS. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

DESIGN SPECIFICATIONS

AASHTO (1989) WITH 1990 & 1991 INTERIM SPECIFICATIONS. LOADING HS20-44 AND ALTERNATE MILITARY LOADING

ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

REINFORCED CONCRETE & STRUCTURE STEEL

F'C = 3,500 PSI (CONCRETE)
FY = 60,000 PSI (REINFORCEMENT)
FS = 20,000 PSI (PROPOSED STRUCTURAL STEEL)(M183)
FS = 18,000 PSI (EXISTING STRUCTURAL STEEL)

PRESTRESSED CONCRETE & PRETENSIONING STEEL

	EXISTING	PROPOSED
F'C	5,000 PSI	5,000 PSI
F'CI	4,000 PSI	4,000 PSI
F'S	248,000 PSI(7/16"ø STRANDS)	270,000 PSI(1/2"ø STRANDS)
F'SI	173,600 PSI	189,000 PSI

GENERAL NOTES AND BILL OF MATERIAL

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

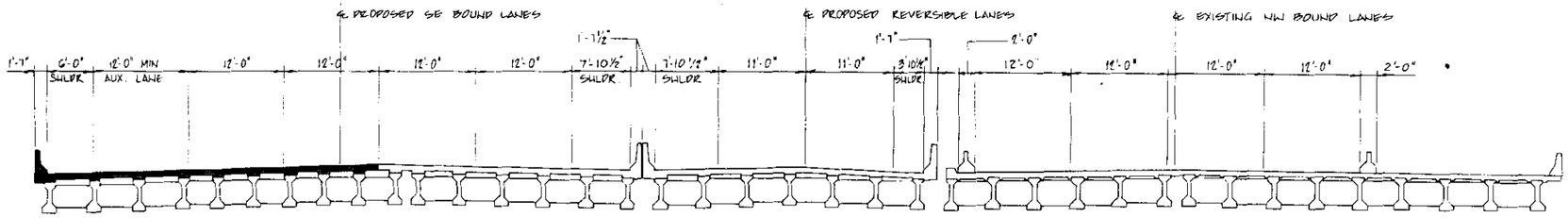
(1) (2) AS REVISED 9-22-92 PMP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

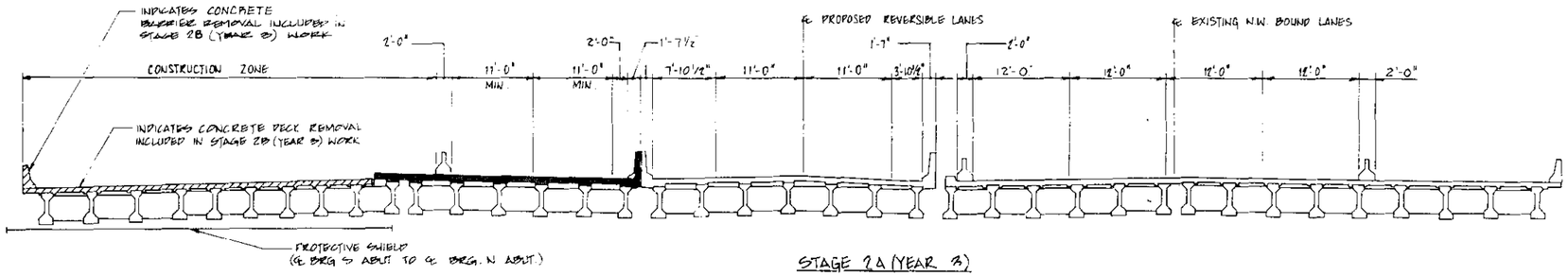
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	181
F. HR. & REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6 OF 74 SHEETS

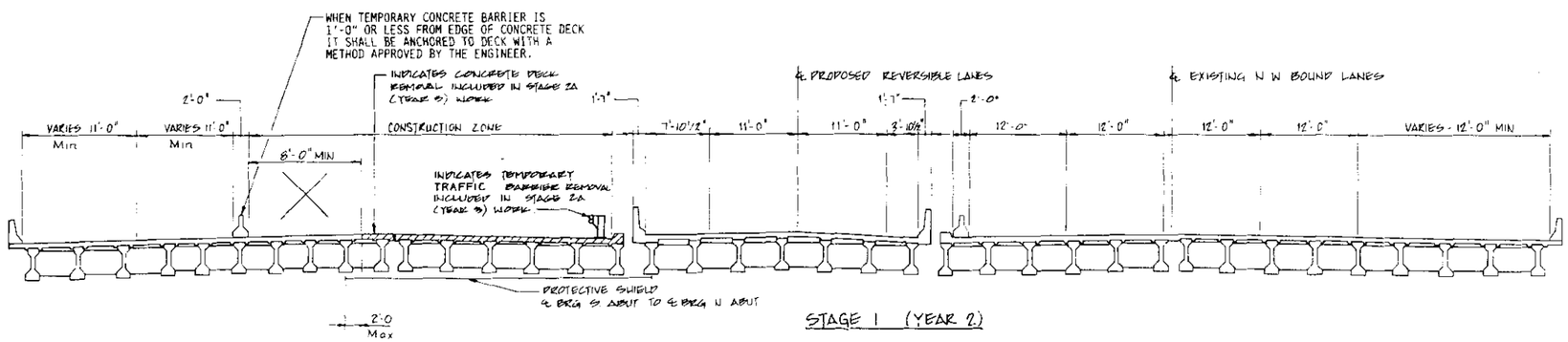
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439JR-2



STAGE 2B (YEAR 3)



STAGE 2A (YEAR 3)



STAGE 1 (YEAR 2)

LEGEND
DENOTES PROPOSED STRUCTURE

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

BRIDGE CONSTRUCTION STAGING

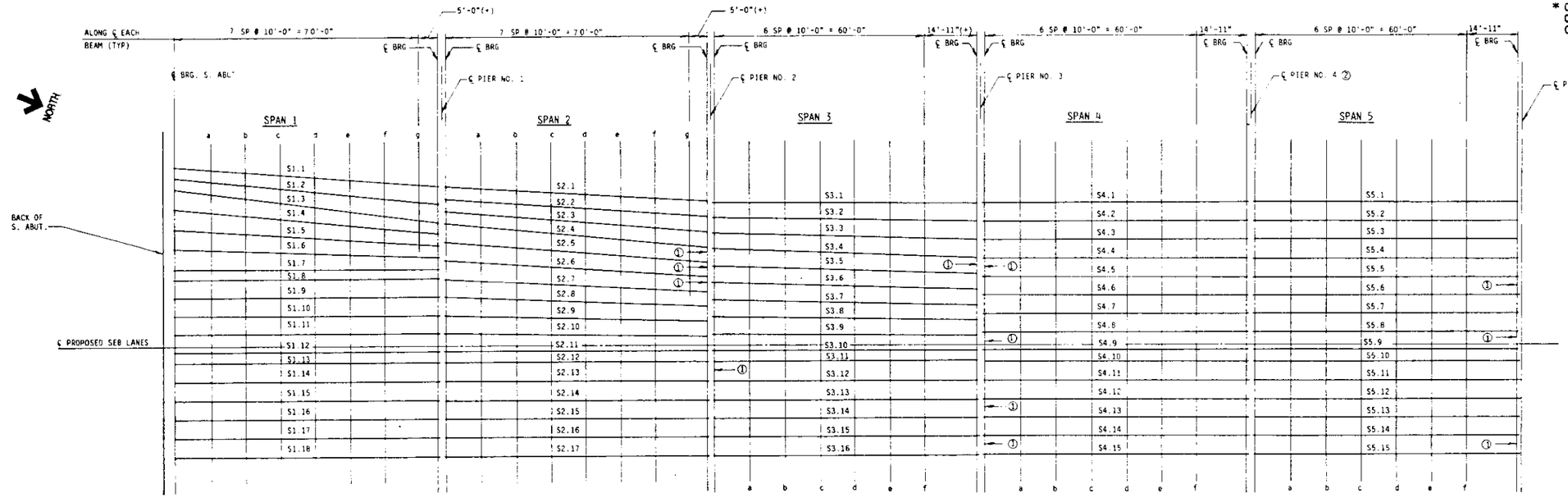
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

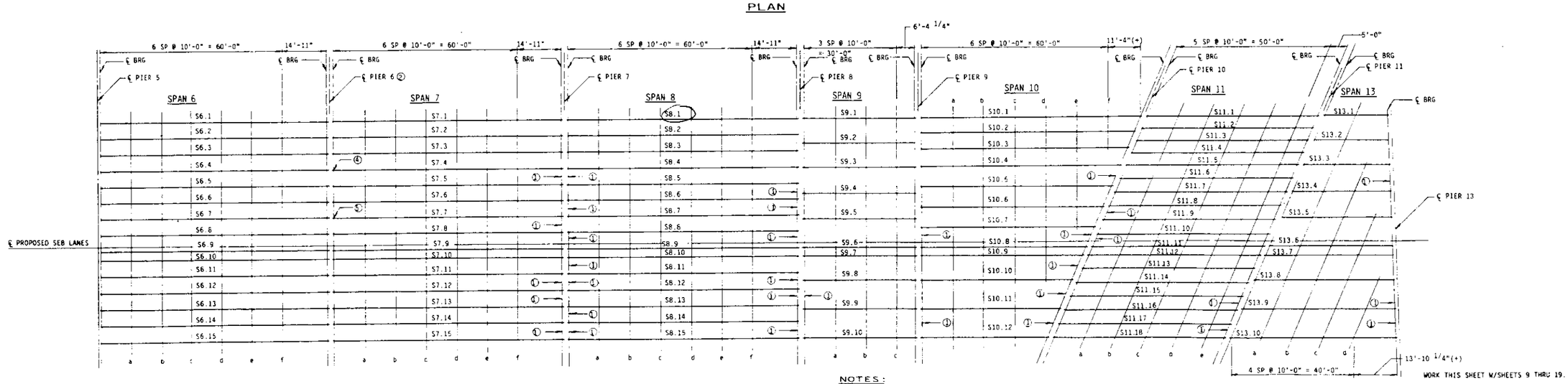
ROUTE NO.	SECT.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	182
F. HW. A. REG. 4		ILLINOIS FED. AID PROJECT		

SHEET NO. 7 of 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 40HB, 45U, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2



PLAN



PLAN

WORK THIS SHEET W/SHEETS 9 THRU 19.

NOTES:

① INDICATES DAMAGED EXISTING DIAPHRAGM. UPPER PORTION TO BE REMOVED WITH DECK SLAB, AS INDICATED ON DETAILS, SEE SHEET 47. REMAINING LOWER PORTION TO BE REPAIRED IN ACCORDANCE WITH "REHABILITATION NOTES" SHOWN ON SHEET 5. ANY ADDITIONAL DIAPHRAGMS THAT ARE FOUND TO BE DAMAGED DURING REHABILITATION SHOULD ALSO BE REPAIRED AS INDICATED ABOVE.

② INDICATES EXISTING DIAPHRAGM AT PIERS 4, 6, AND 20 TO BE REMOVED AND REPLACED WITH FIXED PIER DIAPHRAGM, SEE SHEET 47 FOR DETAILS

③ INDICATES MISSING OR LOOSE BOLTS, NUTS, OR RIVETS. SEE "REHABILITATION NOTES" SHOWN ON SHEET 5.

④ INDICATES CRACK IN BOTTOM FLANGE.

⑤ INDICATES CRACK IN WEB.

⑥ EXISTING CROSS BRACING (TYP).

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TOP OF SLAB ELEVATIONS
SHEET 1 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

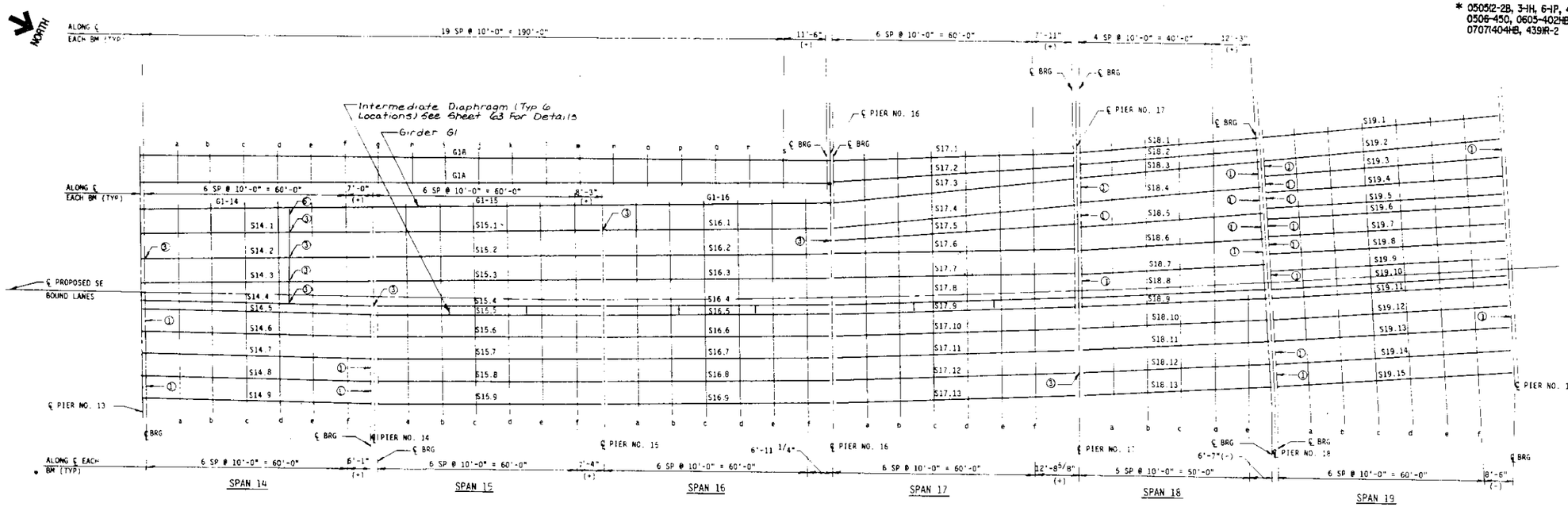
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

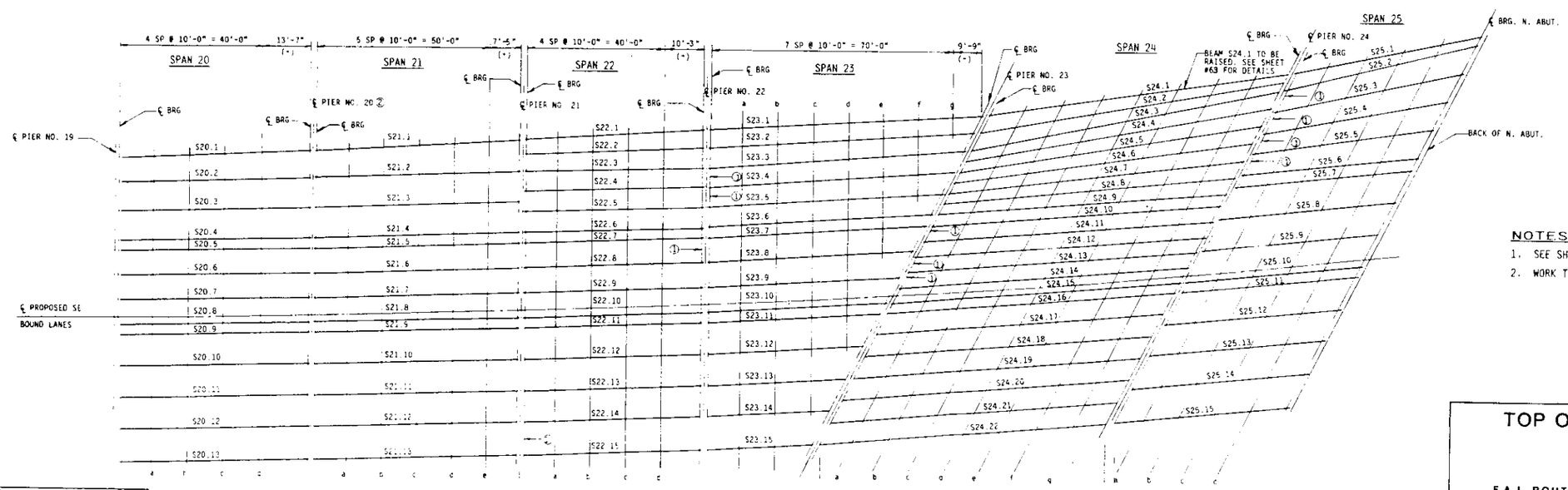
CONTRACT NO.			TOTAL SHEETS	SHEET NO.
	*		426	183
FEDERAL AID PROJECT				

SHEET NO. 8 of 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2



PLAN



PLAN

NOTES:

1. SEE SHEET 7 FOR DIAPHRAGM REHABILITATION NOTES.
2. WORK THIS SHEET WITH SHEETS 19 THRU 28.

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TOP OF SLAB ELEVATIONS
SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	184
F. HW. A. REG. 4		ILLINOIS FED. AID PROJECT		

SHEET NO. 9 of 74 SHEETS

* 0505(2-2B, 3-HH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.18	BK. S. ABUT.	29852 275	30.813	612.568	612.568
	℄ BRG.	29854.758	30.829	612.643	612.643
	a	29864.771	30.891	612.943	612.957
	b	29874.784	30.948	613.243	613.269
	c	29884.796	31.001	613.543	613.572
	d	29894.811	31.050	613.844	613.874
	e	29904.824	31.094	614.144	614.172
	f	29914 838	31.134	614.445	614.466
	℄ BRG.	29929.780	31.185	614.894	614.894
BEAM S1.17	BK. S. ABUT.	29852 309	25.564	612.679	612.679
	℄ BRG.	29854.791	25.580	612.753	612.753
	a	29864.802	25.641	613.053	613.067
	b	29874.813	25.698	613.353	613.380
	c	29884.824	25.751	613.654	613.683
	d	29894.835	25.800	613.954	613.984
	e	29904.847	25.844	614.254	614.282
	f	29914.858	25.884	614.555	614.575
	℄ BRG.	29929.796	25.935	615.003	615.003
BEAM S1.16	BK. S. ABUT.	29852.343	20.314	612.789	612.789
	℄ BRG.	29854.825	20.330	612.864	612.864
	a	29864.833	20.391	613.164	613 177
	b	29874.842	20.449	613.464	613.490
	c	29884.851	20.501	613.764	613.793
	d	29894.860	20.550	614.064	614.095
	e	29904.869	20.594	614.364	614.392
	f	29914.878	20.634	614.665	614.685
	℄ BRG.	29929.813	20.685	615.113	615.113

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.15	BK. S. ABUT.	29852.378	15.064	612.900	612.900
	℄ BRG.	29854 858	15.080	612.974	612.974
	a	29864.865	15.141	613.274	613.288
	b	29874.871	15.199	613.574	613.600
	c	29884.878	15.252	613.874	613.903
	d	29894.884	15.300	614.174	614.205
	e	29904.891	15.344	614.474	614.502
	f	29914.898	15.384	614.775	614.795
	℄ BRG.	29929.829	15.435	615.223	615.223
BEAM S1.14	BK. S. ABUT.	29852.412	9.814	612.999	612.999
	℄ BRG.	29854.892	9.830	613.073	613.073
	a	29864 896	9.891	613.373	613.387
	b	29874.900	9.949	613.673	613.700
	c	29884.904	10.002	613.974	614.003
	d	29894.909	10.050	614.274	614.305
	e	29904.913	10.094	614.574	614.602
	f	29914.917	10.134	614.875	614.896
	℄ BRG.	29929.845	10.185	615.324	615.324
BEAM S1.13	BK. S. ABUT.	29852.446	4.564	613.082	613.082
	℄ BRG.	29854.926	4.580	613.156	613.156
	a	29864.927	4.642	613.456	613.470
	b	29874.929	4.699	613.756	613.783
	c	29884.931	4.752	614.057	614.086
	d	29894.933	4.800	614.357	614.387
	e	29904.935	4.844	614.657	614.685
	f	29914.937	4.884	614.958	614.978
	℄ BRG.	29929.862	4.935	615.406	615.406

INDICATES STA. 299+29.862(TYP)

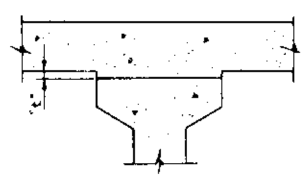
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.12	BK. S. ABUT.	29852.466	1.522	613.130	613.130
	℄ BRG.	29854.945	1.538	613.204	613.204
	a	29864.945	1.600	613.504	613.518
	b	29874.946	1.657	613.804	613.831
	c	29884.947	1.710	614.105	614.134
	d	29894.947	1.758	614.405	614.435
	e	29904.948	1.803	614.705	614.733
	f	29914.949	1.842	615.006	615.026
	℄ BRG.	29929.871	1.894	615.454	615.454
℄ PROPOSED SEB LANES	BK. S. ABUT.	29852.476	0.000	613.154	613.154
	℄ BRG.	29854.955	0.000	613.228	613.228
	a	29864.955	0.000	613.529	613.543
	b	29874.955	0.000	613.830	613.857
	c	29884.955	0.000	614.131	614.161
	d	29894.955	0.000	614.432	614.463
	e	29904.955	0.000	614.733	614.761
	f	29914.955	0.000	615.034	615.055
	℄ BRG.	29929.877	0.000	615.484	615.484
BEAM S1.11	BK. S. ABUT.	29852.500	-3.707	613.097	613.097
	℄ BRG.	29854.978	-3.691	613.171	613.171
	a	29864.977	-3.629	613.473	613.487
	b	29874.975	-3.572	613.775	613.802
	c	29884.973	-3.519	614.077	614.106
	d	29894.972	-3.471	614.379	614.409
	e	29904.970	-3.427	614.680	614.708
	f	29914.968	-3.387	614.982	615.003
	℄ BRG.	29929.888	-3.336	615.432	615.432

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.10	BK. S. ABUT.	29852.534	-8.936	613.016	613.016
	℄ BRG.	29855.012	-8.920	613.091	613.091
	a	29865.008	-8.858	613.393	613.406
	b	29875.004	-8.801	613.694	613.721
	c	29885.000	-8.748	613.996	614.025
	d	29894.996	-8.700	614.298	614.328
	e	29904.992	-8.656	614.599	614.627
	f	29914.988	-8.616	614.901	614.922
	℄ BRG.	29929.904	-8.565	615.351	615.351
BEAM S1.9	BK. S. ABUT.	29852.568	-14.165	612.924	612.924
	℄ BRG.	29855.045	-14.149	612.999	612.999
	a	29865.039	-14.087	613.301	613.315
	b	29875.033	-14.030	613.603	613.629
	c	29885.026	-13.977	613.905	613.934
	d	29895.020	-13.929	614.207	614.237
	e	29905.014	-13.885	614.509	614.536
	f	29915.008	-13.845	614.810	614.831
	℄ BRG.	29929.920	-13.794	615.260	615.260
BEAM S1.8	BK. S. ABUT.	29852.601	-19.394	612.816	612.816
	℄ BRG.	29855.079	-19.378	612.891	612.891
	a	29865.070	-19.316	613.193	613.207
	b	29875.061	-19.259	613.495	613.521
	c	29885.053	-19.206	613.797	613.826
	d	29895.044	-19.158	614.098	614.129
	e	29905.036	-19.114	614.400	614.428
	f	29915.027	-19.074	614.702	614.722
	℄ BRG.	29929.937	-19.023	615.152	615.152

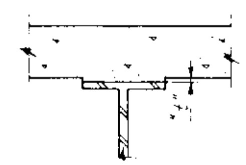
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.7	BK. S. ABUT.	29852.621	-22.477	612.752	612.752
	℄ BRG.	29855.098	-22.461	612.827	612.827
	a	29865.088	-22.400	613.129	613.143
	b	29875.078	-22.343	613.431	613.458
	c	29885.068	-22.290	613.733	613 762
	d	29895.059	-22.241	614.035	614 065
	e	29905.049	-22.197	614.336	614.364
	f	29915.039	-22.158	614 638	614.659
	℄ BRG.	29929.946	-22.106	615 088	615.088
BEAM S1.6	BK. S. ABUT.	29852.659	-28.276	612.722	612.722
	℄ BRG.	29855.135	-28.180	612.796	612.796
	a	29865.115	-27.793	613.097	613.111
	b	29875.096	-27.411	613.397	613.424
	c	29885.077	-27.033	613.698	613.727
	d	29895.058	-26.659	613.998	614 029
	e	29905.040	-26.290	614.299	614.326
	f	29915.022	-25.925	614.599	614.620
	℄ BRG.	29929.956	-25.388	615.049	615.049
BEAM S1.5	BK. S. ABUT.	29852.697	-34.076	612.668	612 668
	℄ BRG	29855.171	-33.899	612.745	612.745
	a	29865.131	-33.188	613.053	613.067
	b	29875.092	-32.482	613.361	613 388
	c	29885.053	-31.780	613.670	613.695
	d	29895.015	-31.082	613 978	614.008
	e	29904.978	-30.389	614 286	614 314
	f	29914.941	-29.700	614.594	614.615
	g	29924.905	-29.015	614 896	614.903
	℄ BRG	29929.967	-28 669	614 949	614 949

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.4	BK. S. ABUT.	29852.734	-39.875	612.548	612.548
	℄ BRG.	29855.207	-39.617	612.626	612.626
	a	29865.137	-38.585	612.941	612.955
	b	29875.068	-37.556	613.255	613.281
	c	29884.999	-36.532	613.569	613.598
	d	29894.931	-35.513	613.883	613.913
	e	29904.864	-34.497	614.197	614.225
	f	29914.798	-33.486	614 511	614.532
	g	29924.733	-32.480	614.825	614.832
	℄ BRG.	29929.977	-31.950	614 990	614.990
BEAM S1.3	BK. S. ABUT.	29852.772	-45.674	612.429	612.429
	℄ BRG.	29855.244	-45.336	612.508	612.508
	a	29865.133	-43.984	612.828	612.842
	b	29875.023	-42.637	613.148	613.174
	c	29884.914	-41.294	613.467	613.496
	d	29894.807	-39.956	613.787	613.817
	e	29904.700	-38.621	614.106	614.134
	f	29914.595	-37.291	614.426	614.447
	g	29924.491	-35.966	614.745	614.752
	℄ BRG.	29929.987	-35.231	614.922	614.922
BEAM S1.2	BK. S. ABUT.	29852.791	-48.613	612.368	612.368
	℄ BRG.	29855 263	-48.340	612.446	612 446
	a	29865.182	-47.248	612.762	612.778
	b	29875.103	-46.161	613.077	613.105
	c	29885.024	-45.077	613.392	613.426
	d	29894 947	-43.998	613.707	613.740
	e	29904.870	-42.923	614.021	614.050
	f	29914.794	-41.853	614.336	614.355
	g	29924 719	-40.787	614.651	614 657
	℄ BRG.	29930.003	-40.221	614 819	614.819

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.1	BK. S. ABUT.	29852.810	-51.547	612.307	612.307
	℄ BRG.	29855.282	-51.340	612.384	612.384
	a	29865.225	-50.511	612.695	612.714
	b	29875.170	-49.685	613.005	613.039
	c	29885.114	-48.864	613.315	613.358
	d	29895.060	-48.047	613.626	613.668
	e	29905.006	-47.235	613.936	613.970
	f	29914.953	-46.427	614.246	614.268
	g	29924.901	-45.623	614.556	614.563
	℄ BRG.	29930 018	-45.211	614 715	614.715



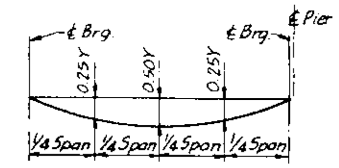
CONCRETE



STEEL

TO DETERMINE "t": ELEVATIONS OF THE TOP FLANGES OF THE BEAMS OR GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS", MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGES OF BEAMS OR GIRDERS.

FILLET HEIGHTS



LOCATION	0.25Y	0.50Y
BEAM S1.1	3/8"	9/16"
BEAM S1.2	5/16"	7/16"
BEAMS S1.3 THRU S1.18	5/16"	3/8"

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.

NOTE:

WORK THIS SHEET WITH SHEET 7 & 8.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 1

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

* 050512-2B, 3-H, 6-P, 400HB, 401HB, 451H, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

	*	426	185

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.17	℄ BEARING	29931.699	31.191	614.951	614.951
	a	29941.713	31.219	615.252	615.266
	b	29951.726	31.242	615.553	615.579
	c	29961.740	31.261	615.854	615.883
	d	29971.753	31.275	616.155	616.186
	e	29981.767	31.285	616.456	616.484
	f	29991.781	31.291	616.757	616.777
	℄ BEARING	30006.707	31.292	617.195	617.195
BEAM S2.16	℄ BEARING	29931.715	25.941	615.061	615.061
	a	29941.726	25.969	615.362	615.376
	b	29951.738	25.992	615.663	615.689
	c	29961.749	26.011	615.964	615.993
	d	29971.760	26.025	616.265	616.295
	e	29981.772	26.035	616.566	616.593
	f	29991.783	26.041	616.866	616.887
	℄ BEARING	30006.707	26.042	617.304	617.304
BEAM S2.15	℄ BEARING	29931.731	20.691	615.171	615.171
	a	29941.740	20.719	615.472	615.485
	b	29951.749	20.742	615.772	615.799
	c	29961.758	20.761	616.073	616.102
	d	29971.767	20.775	616.374	616.405
	e	29981.776	20.785	616.675	616.703
	f	29991.785	20.791	616.975	616.996
	℄ BEARING	30006.707	20.792	617.414	617.414

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.14	℄ BEARING	29931.747	15.441	615.281	615.281
	a	29941.754	15.469	615.581	615.595
	b	29951.760	15.492	615.882	615.908
	c	29961.767	15.511	616.183	616.212
	d	29971.774	15.525	616.484	616.514
	e	29981.781	15.535	616.785	616.812
	f	29991.787	15.541	617.085	617.106
	℄ BEARING	30006.707	15.542	617.523	617.523
BEAM S2.13	℄ BEARING	29931.763	10.191	615.381	615.381
	a	29941.767	10.219	615.682	615.696
	b	29951.772	10.242	615.983	616.009
	c	29961.776	10.261	616.283	616.313
	d	29971.781	10.275	616.584	616.615
	e	29981.785	10.285	616.885	616.913
	f	29991.790	10.291	617.185	617.206
	℄ BEARING	30006.707	10.292	617.624	617.624
BEAM S2.12	℄ BEARING	29931.779	4.941	615.464	615.464
	a	29941.781	4.969	615.764	615.778
	b	29951.783	4.992	616.065	616.091
	c	29961.785	5.011	616.366	616.395
	d	29971.787	5.025	616.667	616.697
	e	29981.790	5.035	616.968	616.995
	f	29991.792	5.041	617.267	617.288
	℄ BEARING	30006.707	5.042	617.706	617.706

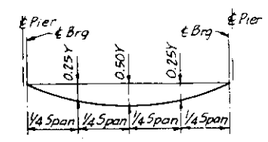
INDICATES STA. 300+06.707 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.11	℄ BEARING	29931.788	1.899	615.511	615.511
	a	29941.789	1.927	615.812	615.826
	b	29951.790	1.950	616.113	616.139
	c	29961.791	1.969	616.414	616.443
	d	29971.791	1.984	616.714	616.745
	e	29981.792	1.994	617.015	617.043
	f	29991.793	1.999	617.315	617.336
	℄ BEARING	30006.707	2.001	617.753	617.753
℄ PROP. SEB LANES	℄ BEARING	29931.794	0.000	615.541	615.541
	a	29941.794	0.000	615.842	615.856
	b	29951.794	0.000	616.143	616.170
	c	29961.794	0.000	616.444	616.473
	d	29971.794	0.000	616.745	616.776
	e	29981.794	0.000	617.046	617.074
	f	29991.794	0.000	617.346	617.367
	℄ BEARING	30006.707	0.000	617.784	617.784
BEAM S2.10	℄ BEARING	29931.804	-3.371	615.489	615.489
	a	29941.801	-3.209	615.792	615.806
	b	29951.799	-3.051	616.096	616.122
	c	29961.796	-2.897	616.399	616.428
	d	29971.794	-2.748	616.702	616.733
	e	29981.792	-2.603	617.006	617.033
	f	29991.790	-2.462	617.308	617.328
	℄ BEARING	30006.707	-2.260	617.749	617.749

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.9	℄ BEARING	29931.820	-8.642	615.407	615.407
	a	29941.812	-8.345	615.712	615.726
	b	29951.804	-8.052	616.018	616.044
	c	29961.796	-7.764	616.323	616.352
	d	29971.789	-7.480	616.628	616.659
	e	29981.782	-7.200	616.933	616.961
	f	29991.775	-6.924	617.238	617.258
	℄ BEARING	30006.707	-6.520	617.683	617.683
BEAM S2.8	℄ BEARING	29931.836	-13.913	615.315	615.315
	a	29941.821	-13.481	615.625	615.639
	b	29951.806	-13.054	615.934	615.961
	c	29961.791	-12.631	616.244	616.273
	d	29971.777	-12.212	616.553	616.583
	e	29981.763	-11.797	616.861	616.889
	f	29991.750	-11.387	617.167	617.188
	℄ BEARING	30006.707	-10.781	617.616	617.616
BEAM S2.7	℄ BEARING	29931.852	-19.184	615.206	615.206
	a	29941.828	-18.618	615.518	615.532
	b	29951.804	-18.056	615.830	615.856
	c	29961.781	-17.498	616.142	616.171
	d	29971.758	-16.945	616.454	616.484
	e	29981.736	-16.396	616.765	616.793
	f	29991.714	-15.852	617.076	617.097
	g	30001.693	-15.312	617.382	617.389
	℄ BEARING	30006.707	-15.041	617.534	617.534

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.6	℄ BEARING	29931.868	-24.455	615.106	615.106
	a	29941.833	-23.754	615.411	615.425
	b	29951.799	-23.058	615.726	615.752
	c	29961.765	-22.367	616.040	616.069
	d	29971.732	-21.679	616.354	616.385
	e	29981.699	-20.996	616.669	616.696
	f	29991.667	-20.318	616.982	617.003
	g	30001.636	-19.643	617.290	617.297
	℄ BEARING	30006.707	-19.302	617.445	617.445
BEAM S2.5	℄ BEARING	29931.884	-29.725	615.093	615.093
	a	29941.836	-28.891	615.404	615.417
	b	29951.790	-28.062	615.706	615.732
	c	29961.743	-27.236	616.005	616.034
	d	29971.698	-26.415	616.305	616.336
	e	29981.653	-25.598	616.605	616.632
	f	29991.609	-24.786	616.903	616.924
	g	30001.566	-23.978	617.198	617.205
	℄ BEARING	30006.707	-23.562	617.356	617.356
BEAM S2.4	℄ BEARING	29931.900	-34.996	614.983	614.983
	a	29941.838	-34.029	615.297	615.310
	b	29951.777	-33.066	615.610	615.636
	c	29961.717	-32.107	615.923	615.952
	d	29971.658	-31.153	616.235	616.266
	e	29981.599	-30.203	616.548	616.576
	f	29991.541	-29.257	616.860	616.881
	g	30001.484	-28.315	617.167	617.174
	℄ BEARING	30006.707	-27.822	617.326	617.326

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.3	℄ BEARING	29931.910	-38.396	614.913	614.913
	a	29941.862	-37.601	615.223	615.237
	b	29951.815	-36.811	615.533	615.559
	c	29961.768	-36.026	615.842	615.874
	d	29971.722	-35.244	616.152	616.187
	e	29981.677	-34.467	616.462	616.491
	f	29991.632	-33.694	616.770	616.791
	g	30001.588	-32.926	617.074	617.081
	℄ BEARING	30006.707	-32.532	617.228	617.228
BEAM S2.2	℄ BEARING	29931.921	-41.796	614.842	614.842
	a	29941.883	-41.175	615.149	615.163
	b	29951.846	-40.559	615.455	615.482
	c	29961.810	-39.947	615.762	615.794
	d	29971.774	-39.339	616.068	616.103
	e	29981.739	-38.735	616.375	616.404
	f	29991.705	-38.136	616.680	616.701
	g	30001.671	-37.541	616.980	616.987
	℄ BEARING	30006.707	-37.242	617.130	617.130
BEAM S2.1	℄ BEARING	29931.931	-45.196	614.772	614.772
	a	29941.901	-44.749	615.075	615.092
	b	29951.872	-44.307	615.378	615.411
	c	29961.843	-43.869	615.681	615.722
	d	29971.815	-43.435	615.984	616.029
	e	29981.787	-43.006	616.287	616.324
	f	29991.759	-42.581	616.589	616.614
	g	30001.733	-42.161	616.886	616.894
	℄ BEARING	30006.707	-41.952	617.032	617.032



LOCATION	0.25Y	0.50Y
BEAM S2.1	3/8"	9/16"
BEAM S2.2 & S2.3	5/16"	7/16"
BEAMS S2.4 THRU S2.17	5/16"	3/8"

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.

NOTE:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS

SPAN 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-4H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 4391R-2

TOTAL SHEETS	SHEET NO.
926	186

SHEET NO. 11 of 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.16	℄ BRG.	30008.624	31.292	617.251	617.251
	a	30018.624	31.292	617.537	617.551
	b	30028.624	31.292	617.818	617.844
	c	30038.624	31.292	618.093	618.123
	d	30048.624	31.292	618.364	618.395
	e	30058.624	31.292	618.629	618.657
	f	30068.624	31.292	618.889	618.910
	℄ BRG.	30083.547	31.292	619.268	619.268
BEAM S3.15	℄ BRG.	30008.624	26.042	617.360	617.360
	a	30018.624	26.042	617.646	617.660
	b	30028.624	26.042	617.927	617.953
	c	30038.624	26.042	618.203	618.232
	d	30048.624	26.042	618.473	618.504
	e	30058.624	26.042	618.739	618.766
	f	30068.624	26.042	618.999	619.019
	℄ BRG.	30083.547	26.042	619.377	619.377
BEAM S3.14	℄ BRG.	30008.624	20.792	617.469	617.469
	a	30018.624	20.792	617.755	617.769
	b	30028.624	20.792	618.036	618.063
	c	30038.624	20.792	618.312	618.341
	d	30048.624	20.792	618.583	618.613
	e	30058.624	20.792	618.848	618.876
	f	30068.624	20.792	619.108	619.129
	℄ BRG.	30083.547	20.792	619.486	619.486

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.13	℄ BRG.	30008.624	15.542	617.579	617.579
	a	30018.624	15.542	617.865	617.879
	b	30028.624	15.542	618.146	618.172
	c	30038.624	15.542	618.422	618.451
	d	30048.624	15.542	618.692	618.723
	e	30058.624	15.542	618.957	618.985
	f	30068.624	15.542	619.217	619.238
	℄ BRG.	30083.547	15.542	619.596	619.596
BEAM S3.12	℄ BRG.	30008.624	10.292	617.679	617.679
	a	30018.624	10.292	617.965	617.979
	b	30028.624	10.292	618.246	618.273
	c	30038.624	10.292	618.522	618.551
	d	30048.624	10.292	618.793	618.823
	e	30058.624	10.292	619.058	619.086
	f	30068.624	10.292	619.318	619.339
	℄ BRG.	30083.547	10.292	619.696	619.696
BEAM S3.11	℄ BRG.	30008.624	5.042	617.761	617.761
	a	30018.624	5.042	618.047	618.061
	b	30028.624	5.042	618.328	618.355
	c	30038.624	5.042	618.604	618.633
	d	30048.624	5.042	618.875	618.905
	e	30058.624	5.042	619.140	619.168
	f	30068.624	5.042	619.400	619.421
	℄ BRG.	30083.547	5.042	619.778	619.778

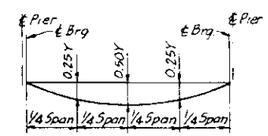
INDICATES STA. 300+83.547(TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.10	℄ BRG.	30008.624	2.001	617.809	617.809
	a	30018.624	2.001	618.095	618.109
	b	30028.624	2.001	618.376	618.402
	c	30038.624	2.001	618.652	618.681
	d	30048.624	2.000	618.922	618.953
	e	30058.624	2.000	619.187	619.215
	f	30068.624	2.000	619.447	619.468
	℄ BRG.	30083.547	2.000	619.826	619.826
℄ PROP. SEB LANES	℄ BRG.	30008.624	0.000	617.840	617.840
	a	30018.624	0.000	618.126	618.140
	b	30028.624	0.000	618.407	618.433
	c	30038.624	0.000	618.683	618.712
	d	30048.624	0.000	618.953	618.984
	e	30058.624	0.000	619.219	619.246
	f	30068.624	0.000	619.479	619.499
	℄ BRG.	30083.547	0.000	619.857	619.857
BEAM S3.9	℄ BRG.	30008.624	-2.947	617.794	617.794
	a	30018.624	-2.879	618.081	618.095
	b	30028.623	-2.811	618.363	618.390
	c	30038.623	-2.743	618.640	618.669
	d	30048.623	-2.675	618.912	618.942
	e	30058.623	-2.607	619.178	619.206
	f	30068.622	-2.539	619.439	619.460
	℄ BRG.	30083.547	-2.437	619.819	619.819

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.8	℄ BRG.	30008.624	-7.895	617.717	617.717
	a	30018.623	-7.759	618.005	618.019
	b	30028.622	-7.623	618.288	618.314
	c	30038.621	-7.487	618.566	618.595
	d	30048.620	-7.350	618.838	618.869
	e	30058.619	-7.214	619.106	619.134
	f	30068.618	-7.078	619.368	619.389
	℄ BRG.	30083.547	-6.875	619.750	619.750
BEAM S3.7	℄ BRG.	30008.624	-12.843	617.635	617.635
	a	30018.622	-12.639	617.925	617.939
	b	30028.620	-12.435	618.210	618.237
	c	30038.618	-12.230	618.490	618.520
	d	30048.615	-12.026	618.765	618.796
	e	30058.613	-11.822	619.034	619.061
	f	30068.611	-11.617	619.297	619.318
	℄ BRG.	30083.547	-11.312	619.680	619.680
BEAM S3.6	℄ BRG.	30008.624	-17.791	617.532	617.532
	a	30018.620	-17.519	617.824	617.837
	b	30028.616	-17.246	618.110	618.136
	c	30038.613	-16.974	618.392	618.421
	d	30048.609	-16.702	618.668	618.698
	e	30058.605	-16.429	618.938	618.966
	f	30068.602	-16.157	619.204	619.225
	℄ BRG.	30083.547	-15.750	619.591	619.591

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.5	℄ BRG.	30008.624	-22.739	617.429	617.429
	a	30018.618	-22.399	617.722	617.736
	b	30028.612	-22.058	618.010	618.036
	c	30038.606	-21.718	618.292	618.322
	d	30048.601	-21.377	618.570	618.600
	e	30058.595	-21.037	618.842	618.870
	f	30068.589	-20.697	619.109	619.130
	℄ BRG.	30083.547	-20.187	619.499	619.499
BEAM S3.4	℄ BRG.	30008.624	-27.687	617.383	617.383
	a	30018.615	-27.279	617.672	617.685
	b	30028.607	-26.870	617.954	617.981
	c	30038.599	-26.462	618.232	618.261
	d	30048.590	-26.053	618.505	618.535
	e	30058.582	-25.645	618.772	618.800
	f	30068.574	-25.237	619.034	619.055
	℄ BRG.	30083.547	-24.625	619.417	619.417
BEAM S3.3	℄ BRG.	30008.624	-32.437	617.284	617.284
	a	30018.618	-32.107	617.571	617.588
	b	30028.613	-31.777	617.852	617.885
	c	30038.608	-31.448	618.129	618.169
	d	30048.602	-31.118	618.400	618.444
	e	30058.597	-30.788	618.666	618.702
	f	30068.591	-30.458	618.926	618.951
	℄ BRG.	30083.547	-29.965	619.306	619.306

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.2	℄ BRG.	30008.624	-37.187	617.185	617.185
	a	30018.621	-36.936	617.470	617.487
	b	30028.618	-36.685	617.750	617.783
	c	30038.614	-36.434	618.025	618.066
	d	30048.611	-36.182	618.295	618.339
	e	30058.608	-35.931	618.559	618.595
	f	30068.605	-35.680	618.818	618.843
	℄ BRG.	30083.547	-35.305	619.195	619.195
BEAM S3.1	℄ BRG.	30008.624	-41.937	617.086	617.086
	a	30018.622	-41.765	617.370	617.389
	b	30028.621	-41.592	617.648	617.685
	c	30038.619	-41.420	617.921	617.964
	d	30048.618	-41.247	618.189	618.235
	e	30058.616	-41.075	618.452	618.492
	f	30068.615	-40.902	618.709	618.738
	℄ BRG.	30083.547	-40.645	619.084	619.084



LOCATION	0.25Y	0.50Y
BEAM S3.1	7/16"	9/16"
BEAM S3.2 & S3.3	3/8"	9/16"
BEAMS S3.4 THRU S3.16	5/16"	3/8"

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.

NOTE:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS

SPAN 3

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.15	℄ BRG.	30085.464	31.292	619.315	619.315
	a	30095.464	31.292	619.561	619.575
	b	30105.464	31.292	619.802	619.828
	c	30115.464	31.292	620.038	620.067
	d	30125.464	31.292	620.268	620.298
	e	30135.464	31.292	620.493	620.520
	f	30145.464	31.292	620.712	620.733
	℄ BRG.	30160.377	31.292	621.030	621.030
BEAM S4.14	℄ BRG.	30085.464	26.042	619.425	619.425
	a	30095.464	26.042	619.671	619.685
	b	30105.464	26.042	619.911	619.938
	c	30115.464	26.042	620.147	620.176
	d	30125.464	26.042	620.377	620.408
	e	30135.464	26.042	620.602	620.630
	f	30145.464	26.042	620.822	620.843
	℄ BRG.	30160.377	26.042	621.140	621.140
BEAM S4.13	℄ BRG.	30085.464	20.792	619.534	619.534
	a	30095.464	20.792	619.780	619.794
	b	30105.464	20.792	620.021	620.047
	c	30115.464	20.792	620.256	620.285
	d	30125.464	20.792	620.487	620.517
	e	30135.464	20.792	620.711	620.739
	f	30145.464	20.792	620.931	620.952
	℄ BRG.	30160.377	20.792	621.249	621.249

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.12	℄ BRG.	30085.464	15.542	619.643	619.643
	a	30095.464	15.542	619.889	619.903
	b	30105.464	15.542	620.130	620.156
	c	30115.464	15.542	620.366	620.395
	d	30125.464	15.542	620.596	620.626
	e	30135.464	15.542	620.821	620.849
	f	30145.464	15.542	621.041	621.061
	℄ BRG.	30160.377	15.542	621.358	621.358
BEAM S4.11	℄ BRG.	30085.464	10.292	619.744	619.744
	a	30095.464	10.292	619.990	620.004
	b	30105.464	10.292	620.231	620.257
	c	30115.464	10.292	620.466	620.495
	d	30125.464	10.292	620.696	620.727
	e	30135.464	10.292	620.921	620.949
	f	30145.464	10.292	621.141	621.162
	℄ BRG.	30160.377	10.292	621.459	621.459
BEAM S4.10	℄ BRG.	30085.464	5.042	619.826	619.826
	a	30095.464	5.042	620.072	620.086
	b	30105.464	5.042	620.313	620.339
	c	30115.464	5.042	620.548	620.577
	d	30125.464	5.042	620.778	620.809
	e	30135.464	5.042	621.003	621.031
	f	30145.464	5.042	621.223	621.244
	℄ BRG.	30160.377	5.042	621.541	621.541

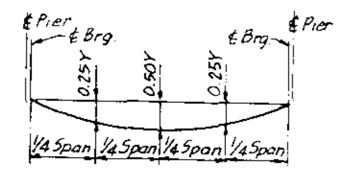
INDICATES STA. 301+60.377 (TYP)

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.9	℄ BRG.	30085.464	2.000	619.874	619.874
	a	30095.464	2.000	620.119	620.133
	b	30105.464	2.000	620.360	620.387
	c	30115.464	2.000	620.596	620.625
	d	30125.464	2.000	620.826	620.856
	e	30135.464	2.000	621.051	621.079
	f	30145.464	2.000	621.271	621.291
	℄ BRG.	30160.377	2.000	621.588	621.588
℄ PROP. SEB LANES	℄ BRG.	30085.464	0.000	619.905	619.905
	a	30095.464	0.000	620.151	620.165
	b	30105.464	0.000	620.391	620.418
	c	30115.464	0.000	620.627	620.656
	d	30125.464	0.000	620.857	620.888
	e	30135.464	0.000	621.082	621.110
	f	30145.464	0.000	621.302	621.323
	℄ BRG.	30160.377	0.000	621.620	621.620
BEAM S4.8	℄ BRG.	30085.464	-3.323	619.853	619.853
	a	30095.464	-3.318	620.099	620.113
	b	30105.464	-3.314	620.340	620.366
	c	30115.464	-3.310	620.575	620.604
	d	30125.464	-3.306	620.806	620.836
	e	30135.464	-3.302	621.031	621.058
	f	30145.464	-3.298	621.250	621.271
	℄ BRG.	30160.377	-3.291	621.568	621.568

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.7	℄ BRG.	30085.464	-8.645	619.770	619.770
	a	30095.464	-8.637	620.016	620.030
	b	30105.464	-8.629	620.257	620.283
	c	30115.464	-8.620	620.492	620.521
	d	30125.464	-8.612	620.723	620.753
	e	30135.464	-8.604	620.948	620.975
	f	30145.464	-8.595	621.168	621.188
	℄ BRG.	30160.377	-8.583	621.486	621.486
BEAM S4.6	℄ BRG.	30085.464	-13.968	619.676	619.676
	a	30095.464	-13.956	619.922	619.936
	b	30105.464	-13.943	620.164	620.190
	c	30115.464	-13.931	620.399	620.428
	d	30125.464	-13.918	620.630	620.660
	e	30135.464	-13.906	620.855	620.883
	f	30145.464	-13.893	621.075	621.096
	℄ BRG.	30160.377	-13.875	621.393	621.393
BEAM S4.5	℄ BRG.	30085.464	-19.291	619.565	619.565
	a	30095.464	-19.275	619.812	619.825
	b	30105.464	-19.258	620.053	620.079
	c	30115.464	-19.241	620.289	620.318
	d	30125.464	-19.225	620.519	620.550
	e	30135.464	-19.208	620.744	620.772
	f	30145.464	-19.191	620.965	620.985
	℄ BRG	30160.377	-19.166	621.283	621.283

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.4	℄ BRG.	30085.464	-24.614	619.464	619.464
	a	30095.464	-24.593	619.704	619.718
	b	30105.464	-24.573	619.942	619.968
	c	30115.464	-24.552	620.178	620.207
	d	30125.464	-24.531	620.409	620.439
	e	30135.464	-24.510	620.634	620.662
	f	30145.464	-24.489	620.854	620.875
	℄ BRG.	30160.377	-24.458	621.173	621.173
BEAM S4.3	℄ BRG.	30085.464	-29.954	619.353	619.353
	a	30095.464	-29.938	619.593	619.612
	b	30105.464	-29.922	619.831	619.868
	c	30115.464	-29.906	620.066	620.112
	d	30125.464	-29.889	620.297	620.347
	e	30135.464	-29.873	620.522	620.564
	f	30145.464	-29.857	620.742	620.771
	℄ BRG.	30160.377	-29.833	621.061	621.061
BEAM S4.2	℄ BRG.	30085.464	-35.294	619.242	619.242
	a	30095.464	-35.283	619.482	619.501
	b	30105.464	-35.271	619.719	619.757
	c	30115.464	-35.260	619.955	620.001
	d	30125.464	-35.248	620.185	620.235
	e	30135.464	-35.237	620.411	620.452
	f	30145.464	-35.225	620.631	620.660
	℄ BRG.	30160.377	-35.208	620.949	620.949

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.1	℄ BRG.	30085.464	-40.634	619.130	619.130
	a	30095.464	-40.627	619.370	619.390
	b	30105.464	-40.621	619.608	619.645
	c	30115.464	-40.614	619.843	619.889
	d	30125.464	-40.607	620.074	620.124
	e	30135.464	-40.600	620.299	620.340
	f	30145.464	-40.593	620.519	620.548
	℄ BRG.	30160.377	-40.583	620.837	620.837



LOCATION	0.25Y	0.50Y
BEAMS S4.1 THRU S4.3	7/16"	5/8"
BEAMS S4.4 THRU S4.16	5/16"	3/8"

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.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	108
F.A.H.R.A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 13 of 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.15	℄ BRG.	30162.290	31.292	621.069	621.069
	a	30172.290	31.292	621.275	621.289
	b	30182.290	31.292	621.475	621.502
	c	30192.290	31.292	621.670	621.700
	d	30202.290	31.292	621.860	621.890
	e	30212.290	31.292	622.045	622.072
	f	30222.290	31.292	622.224	622.245
	℄ BRG.	30237.210	31.292	622.482	622.482
BEAM S5.14	℄ BRG.	30162.290	26.042	621.179	621.179
	a	30172.290	26.042	621.384	621.398
	b	30182.290	26.042	621.585	621.611
	c	30192.290	26.042	621.780	621.809
	d	30202.290	26.042	621.969	621.999
	e	30212.290	26.042	622.154	622.181
	f	30222.290	26.042	622.333	622.354
	℄ BRG.	30237.210	26.042	622.591	622.591
BEAM S5.13	℄ BRG.	30162.290	20.792	621.288	621.288
	a	30172.290	20.792	621.494	621.508
	b	30182.290	20.792	621.694	621.720
	c	30192.290	20.792	621.889	621.919
	d	30202.290	20.792	622.079	622.109
	e	30212.290	20.792	622.263	622.291
	f	30222.290	20.792	622.443	622.463
	℄ BRG.	30237.210	20.792	622.700	622.700

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.12	℄ BRG.	30162.290	15.542	621.398	621.398
	a	30172.290	15.542	621.603	621.617
	b	30182.290	15.542	621.803	621.830
	c	30192.290	15.542	621.998	622.028
	d	30202.290	15.542	622.188	622.218
	e	30212.290	15.542	622.373	622.400
	f	30222.290	15.542	622.552	622.573
	℄ BRG.	30237.210	15.542	622.810	622.810
BEAM S5.11	℄ BRG.	30162.290	10.292	621.498	621.498
	a	30172.290	10.292	621.704	621.717
	b	30182.290	10.292	621.904	621.930
	c	30192.290	10.292	622.099	622.129
	d	30202.290	10.292	622.289	622.319
	e	30212.290	10.292	622.473	622.501
	f	30222.290	10.292	622.653	622.673
	℄ BRG.	30237.210	10.292	622.910	622.910
BEAM S5.10	℄ BRG.	30162.290	5.042	621.580	621.580
	a	30172.290	5.042	621.786	621.799
	b	30182.290	5.042	621.986	622.012
	c	30192.290	5.042	622.181	622.211
	d	30202.290	5.042	622.371	622.401
	e	30212.290	5.042	622.555	622.583
	f	30222.290	5.042	622.735	622.755
	℄ BRG.	30237.210	5.042	622.992	622.992

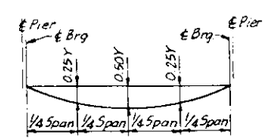
INDICATES STA. 302+37.210 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.9	℄ BRG.	30162.290	2.000	621.628	621.628
	a	30172.290	2.000	621.833	621.847
	b	30182.290	2.000	622.033	622.060
	c	30192.290	2.000	622.228	622.258
	d	30202.290	2.000	622.418	622.448
	e	30212.290	2.000	622.603	622.630
	f	30222.290	2.000	622.782	622.803
	℄ BRG.	30237.210	2.000	623.040	623.040
BEAM S5.8	℄ BRG.	30162.290	0.000	621.659	621.659
	a	30172.290	0.000	621.864	621.878
	b	30182.290	0.000	622.065	622.091
	c	30192.290	0.000	622.260	622.289
	d	30202.290	0.000	622.449	622.479
	e	30212.290	0.000	622.634	622.662
	f	30222.290	0.000	622.813	622.834
	℄ BRG.	30237.210	0.000	623.071	623.071
℄ PROP. SEB LANES	℄ BRG.	30162.290	-3.292	621.607	621.607
	a	30172.290	-3.292	621.813	621.827
	b	30182.290	-3.292	622.013	622.040
	c	30192.290	-3.292	622.208	622.238
	d	30202.290	-3.292	622.398	622.428
	e	30212.290	-3.292	622.583	622.610
	f	30222.290	-3.292	622.762	622.783
	℄ BRG.	30237.210	-3.292	623.020	623.020

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.7	℄ BRG.	30162.290	-8.583	621.525	621.525
	a	30172.290	-8.583	621.730	621.744
	b	30182.290	-8.583	621.931	621.957
	c	30192.290	-8.583	622.126	622.155
	d	30202.290	-8.583	622.315	622.345
	e	30212.290	-8.583	622.500	622.527
	f	30222.290	-8.583	622.679	622.700
	℄ BRG.	30237.210	-8.583	622.937	622.937
BEAM S5.6	℄ BRG.	30162.290	-13.875	621.432	621.432
	a	30172.290	-13.875	621.638	621.652
	b	30182.290	-13.875	621.838	621.864
	c	30192.290	-13.875	622.033	622.063
	d	30202.290	-13.875	622.223	622.253
	e	30212.290	-13.875	622.407	622.435
	f	30222.290	-13.875	622.587	622.607
	℄ BRG.	30237.210	-13.875	622.844	622.844
BEAM S5.5	℄ BRG.	30162.290	-19.167	621.322	621.322
	a	30172.290	-19.167	621.528	621.541
	b	30182.290	-19.167	621.728	621.754
	c	30192.290	-19.167	621.923	621.953
	d	30202.290	-19.167	622.113	622.143
	e	30212.290	-19.167	622.297	622.325
	f	30222.290	-19.167	622.477	622.497
	℄ BRG.	30237.210	-19.167	622.734	622.734

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.4	℄ BRG.	30162.290	-24.458	621.212	621.212
	a	30172.290	-24.458	621.417	621.431
	b	30182.290	-24.458	621.618	621.644
	c	30192.290	-24.458	621.813	621.842
	d	30202.290	-24.458	622.002	622.032
	e	30212.290	-24.458	622.187	622.215
	f	30222.290	-24.458	622.366	622.387
	℄ BRG.	30237.210	-24.458	622;624	622.624
BEAM S5.3	℄ BRG.	30162.290	-29.833	621.100	621.100
	a	30172.290	-29.833	621.305	621.325
	b	30182.290	-29.833	621.506	621.543
	c	30192.290	-29.833	621.701	621.748
	d	30202.290	-29.833	621.890	621.939
	e	30212.290	-29.833	622.075	622.116
	f	30222.290	-29.833	622.254	622.283
	℄ BRG	30237.210	-29.833	622.512	622.512
BEAM S5.2	℄ BRG.	30162.290	-35.208	620.988	620.988
	a	30172.290	-35.208	621.193	621.213
	b	30182.290	-35.208	621.394	621.431
	c	30192.290	-35.208	621.589	621.636
	d	30202.290	-35.208	621.778	621.877
	e	30212.290	-35.208	621.963	622.004
	f	30222.290	-35.208	622.142	622.171
	℄ BRG	30237.210	-35.208	622.400	622.400

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.1	℄ BRG.	30162.290	-40.583	620.876	620.876
	a	30172.290	-40.583	621.081	621.101
	b	30182.290	-40.583	621.282	621.319
	c	30192.290	-40.583	621.477	621.524
	d	30202.290	-40.583	621.666	621.715
	e	30212.290	-40.583	621.851	621.892
	f	30222.290	-40.583	622.030	622.059
	℄ BRG.	30237.210	-40.583	622.288	622.288



LOCATION	0.25Y	0.50Y
BEAMS S5.1 THRU S5.3	7/16"	5/8"
BEAMS S5.4 THRU S5.15	5/16"	3/8"

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.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS

SPAN 5

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.15	℄ BRG.	30239.130	31.292	622.514	622.514
	a	30249.130	31.292	622.679	622.693
	b	30259.130	31.292	622.839	622.865
	c	30269.130	31.292	622.994	623.023
	d	30279.130	31.292	623.143	623.174
	e	30289.130	31.292	623.287	623.315
	f	30299.130	31.292	623.426	623.447
	℄ BRG.	30314.040	31.292	623.624	623.624
BEAM S6.14	℄ BRG.	30239.130	26.042	622.623	622.623
	a	30249.130	26.042	622.788	622.802
	b	30259.130	26.042	622.948	622.975
	c	30269.130	26.042	623.103	623.132
	d	30279.130	26.042	623.253	623.283
	e	30289.130	26.042	623.397	623.424
	f	30299.130	26.042	623.536	623.556
	℄ BRG.	30314.040	26.042	623.733	623.733
BEAM S6.13	℄ BRG.	30239.130	20.792	622.733	622.733
	a	30249.130	20.792	622.898	622.912
	b	30259.130	20.792	623.058	623.084
	c	30269.130	20.792	623.212	623.242
	d	30279.130	20.792	623.362	623.392
	e	30289.130	20.792	623.506	623.534
	f	30299.130	20.792	623.645	623.666
	℄ BRG.	30314.040	20.792	623.843	623.843

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.12	℄ BRG.	30239.130	15.542	622.842	622.842
	a	30249.130	15.542	623.007	623.021
	b	30259.130	15.542	623.167	623.193
	c	30269.130	15.542	623.322	623.351
	d	30279.130	15.542	623.471	623.502
	e	30289.130	15.542	623.615	623.643
	f	30299.130	15.542	623.754	623.775
	℄ BRG.	30314.040	15.542	623.952	623.952
BEAM S6.11	℄ BRG.	30239.130	10.292	622.942	622.942
	a	30249.130	10.292	623.108	623.121
	b	30259.130	10.292	623.268	623.294
	c	30269.130	10.292	623.422	623.451
	d	30279.130	10.292	623.572	623.602
	e	30289.130	10.292	623.716	623.744
	f	30299.130	10.292	623.855	623.876
	℄ BRG.	30314.040	10.292	624.052	624.052
BEAM S6.10	℄ BRG.	30239.130	5.042	623.024	623.024
	a	30249.130	5.042	623.190	623.203
	b	30259.130	5.042	623.350	623.376
	c	30269.130	5.042	623.504	623.533
	d	30279.130	5.042	623.654	623.684
	e	30289.130	5.042	623.798	623.826
	f	30299.130	5.042	623.937	623.958
	℄ BRG.	30314.040	5.042	624.134	624.134

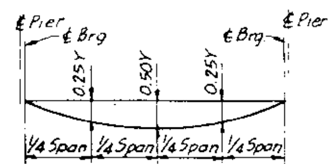
INDICATES STA. 303+14.040 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.9	℄ BRG.	30239.130	2.000	623.072	623.072
	a	30249.130	2.000	623.237	623.251
	b	30259.130	2.000	623.397	623.424
	c	30269.130	2.000	623.552	623.581
	d	30279.130	2.000	623.701	623.732
	e	30289.130	2.000	623.846	623.873
	f	30299.130	2.000	623.984	624.005
	℄ BRG.	30314.040	2.000	624.182	624.182
℄ PROP. SEB LANES	℄ BRG.	30239.130	0.000	623.103	623.103
	a	30249.130	0.000	623.268	623.282
	b	30259.130	0.000	623.428	623.455
	c	30269.130	0.000	623.583	623.612
	d	30279.130	0.000	623.733	623.763
	e	30289.130	0.000	623.877	623.904
	f	30299.130	0.000	624.016	624.036
	℄ BRG.	30314.040	0.000	624.213	624.213
BEAM S6.8	℄ BRG.	30239.130	-3.292	623.052	623.052
	a	30249.130	-3.292	623.217	623.231
	b	30259.130	-3.292	623.377	623.403
	c	30269.130	-3.292	623.532	623.561
	d	30279.130	-3.292	623.681	623.712
	e	30289.130	-3.292	623.825	623.853
	f	30299.130	-3.292	623.964	623.985
	℄ BRG.	30314.040	-3.292	624.162	624.162

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.7	℄ BRG.	30239.130	-8.583	622.969	622.969
	a	30249.130	-8.583	623.134	623.148
	b	30259.130	-8.583	623.294	623.321
	c	30269.130	-8.583	623.449	623.478
	d	30279.130	-8.583	623.598	623.629
	e	30289.130	-8.583	623.743	623.770
	f	30299.130	-8.583	623.882	623.902
	℄ BRG.	30314.040	-8.583	624.079	624.079
BEAM S6.6	℄ BRG.	30239.130	-13.875	622.877	622.877
	a	30249.130	-13.875	623.042	623.056
	b	30259.130	-13.875	623.202	623.228
	c	30269.130	-13.875	623.357	623.386
	d	30279.130	-13.875	623.506	623.537
	e	30289.130	-13.875	623.650	623.678
	f	30299.130	-13.875	623.789	623.810
	℄ BRG.	30314.040	-13.875	623.987	623.987
BEAM S6.5	℄ BRG.	30239.130	-19.167	622.766	622.766
	a	30249.130	-19.167	622.932	622.945
	b	30259.130	-19.167	623.092	623.118
	c	30269.130	-19.167	623.246	623.275
	d	30279.130	-19.167	623.396	623.426
	e	30289.130	-19.167	623.540	623.568
	f	30299.130	-19.167	623.679	623.700
	℄ BRG.	30314.040	-19.167	623.876	623.876

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.4	℄ BRG.	30239.130	-24.458	622.656	622.656
	a	30249.130	-24.458	622.821	622.835
	b	30259.130	-24.458	622.981	623.008
	c	30269.130	-24.458	623.136	623.165
	d	30279.130	-24.458	623.286	623.316
	e	30289.130	-24.458	623.430	623.457
	f	30299.130	-24.458	623.569	623.589
	℄ BRG.	30314.040	-24.458	623.766	623.766
BEAM S6.3	℄ BRG.	30239.130	-29.833	622.544	622.544
	a	30249.130	-29.833	622.709	622.729
	b	30259.130	-29.833	622.869	622.907
	c	30269.130	-29.833	623.024	623.070
	d	30279.130	-29.833	623.174	623.223
	e	30289.130	-29.833	623.318	623.359
	f	30299.130	-29.833	623.457	623.486
	℄ BRG.	30314.040	-29.833	623.654	623.654
BEAM S6.2	℄ BRG.	30239.130	-35.208	622.432	622.432
	a	30249.130	-35.208	622.597	622.617
	b	30259.130	-35.208	622.757	622.795
	c	30269.130	-35.208	622.912	622.958
	d	30279.130	-35.208	623.062	623.111
	e	30289.130	-35.208	623.206	623.247
	f	30299.130	-35.208	623.345	623.374
	℄ BRG.	30314.040	-35.208	623.542	623.542

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.1	℄ BRG.	30239.130	-40.583	622.320	622.320
	a	30249.130	-40.583	622.486	622.505
	b	30259.130	-40.583	622.645	622.683
	c	30269.130	-40.583	622.800	622.846
	d	30279.130	-40.583	622.950	623.000
	e	30289.130	-40.583	623.094	623.135
	f	30299.130	-40.583	623.233	623.262
	℄ BRG.	30314.040	-40.583	623.430	623.430



LOCATION	0.25Y	0.50Y
BEAMS S6.1 THRU S6.3	7/16"	5/8"
BEAMS S6.4 THRU S6.15	5/16"	3/8"

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.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.15	℄ BRG.	30315.960	31.292	623.648	623.648
	a	30325.960	31.292	623.773	623.784
	b	30335.960	31.292	623.893	623.914
	c	30345.960	31.292	624.007	624.034
	d	30355.960	31.292	624.116	624.146
	e	30365.960	31.292	624.220	624.244
	f	30375.960	31.292	624.319	624.335
	℄ BRG.	30390.880	31.292	624.456	624.456
BEAM S7.14	℄ BRG.	30315.960	26.042	623.758	623.758
	a	30325.960	26.042	623.883	623.894
	b	30335.960	26.042	624.002	624.024
	c	30345.960	26.042	624.117	624.144
	d	30355.960	26.042	624.226	624.255
	e	30365.960	26.042	624.330	624.354
	f	30375.960	26.042	624.428	624.445
	℄ BRG.	30390.880	26.042	624.565	624.565
BEAM S7.13	℄ BRG.	30315.960	20.792	623.867	623.867
	a	30325.960	20.792	623.992	624.003
	b	30335.960	20.792	624.112	624.133
	c	30345.960	20.792	624.226	624.253
	d	30355.960	20.792	624.335	624.365
	e	30365.960	20.792	624.439	624.463
	f	30375.960	20.792	624.538	624.554
	℄ BRG.	30390.880	20.792	624.675	624.675

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.12	℄ BRG.	30315.960	15.542	623.976	623.976
	a	30325.960	15.542	624.101	624.112
	b	30335.960	15.542	624.221	624.242
	c	30345.960	15.542	624.335	624.362
	d	30355.960	15.542	624.444	624.474
	e	30365.960	15.542	624.548	624.572
	f	30375.960	15.542	624.647	624.663
	℄ BRG.	30390.880	15.542	624.784	624.784
BEAM S7.11	℄ BRG.	30315.960	10.292	624.077	624.077
	a	30325.960	10.292	624.202	624.213
	b	30335.960	10.292	624.321	624.343
	c	30345.960	10.292	624.436	624.463
	d	30355.960	10.292	624.545	624.575
	e	30365.960	10.292	624.649	624.673
	f	30375.960	10.292	624.747	624.764
	℄ BRG.	30390.880	10.292	624.885	624.885
BEAM S7.10	℄ BRG.	30315.960	5.042	624.159	624.159
	a	30325.960	5.042	624.284	624.295
	b	30335.960	5.042	624.403	624.425
	c	30345.960	5.042	624.518	624.545
	d	30355.960	5.042	624.627	624.657
	e	30365.960	5.042	624.731	624.755
	f	30375.960	5.042	624.829	624.846
	℄ BRG.	30390.880	5.042	624.967	624.967

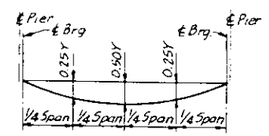
INDICATES STA. 303+90.880 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.9	℄ BRG.	30315.960	2.000	624.207	624.207
	a	30325.960	2.000	624.331	624.342
	b	30335.960	2.000	624.451	624.472
	c	30345.960	2.000	624.565	624.592
	d	30355.960	2.000	624.674	624.704
	e	30365.960	2.000	624.778	624.803
	f	30375.960	2.000	624.877	624.893
	℄ BRG.	30390.880	2.000	625.014	625.014
C PROP. SEB LANES	℄ BRG.	30315.960	0.000	624.238	624.238
	a	30325.960	0.000	624.363	624.374
	b	30335.960	0.000	624.482	624.504
	c	30345.960	0.000	624.597	624.624
	d	30355.960	0.000	624.706	624.735
	e	30365.960	0.000	624.810	624.834
	f	30375.960	0.000	624.908	624.925
	℄ BRG.	30390.880	0.000	625.045	625.045
BEAM S7.8	℄ BRG.	30315.960	-3.292	624.186	624.186
	a	30325.960	-3.292	624.311	624.322
	b	30335.960	-3.292	624.431	624.452
	c	30345.960	-3.292	624.545	624.572
	d	30355.960	-3.292	624.654	624.684
	e	30365.960	-3.292	624.758	624.782
	f	30375.960	-3.292	624.857	624.873
	℄ BRG.	30390.880	-3.292	624.994	624.994

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.7	℄ BRG.	30315.960	-8.583	624.104	624.104
	a	30325.960	-8.583	624.229	624.240
	b	30335.960	-8.583	624.348	624.370
	c	30345.960	-8.583	624.463	624.490
	d	30355.960	-8.583	624.572	624.601
	e	30365.960	-8.583	624.675	624.700
	f	30375.960	-8.583	624.774	624.791
	℄ BRG.	30390.880	-8.583	624.911	624.911
BEAM S7.6	℄ BRG.	30315.960	-13.875	624.011	624.011
	a	30325.960	-13.875	624.136	624.147
	b	30335.960	-13.875	624.256	624.277
	c	30345.960	-13.875	624.370	624.397
	d	30355.960	-13.875	624.479	624.509
	e	30365.960	-13.875	624.583	624.607
	f	30375.960	-13.875	624.682	624.698
	℄ BRG.	30390.880	-13.875	624.819	624.819
BEAM S7.5	℄ BRG.	30315.960	-19.167	623.901	623.901
	a	30325.960	-19.167	624.026	624.037
	b	30335.960	-19.167	624.145	624.167
	c	30345.960	-19.167	624.260	624.287
	d	30355.960	-19.167	624.369	624.399
	e	30365.960	-19.167	624.473	624.497
	f	30375.960	-19.167	624.571	624.588
	℄ BRG.	30390.880	-19.167	624.709	624.709

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.4	℄ BRG.	30315.960	-24.458	623.791	623.791
	a	30325.960	-24.458	623.916	623.927
	b	30335.960	-24.458	624.035	624.057
	c	30345.960	-24.458	624.150	624.177
	d	30355.960	-24.458	624.259	624.288
	e	30365.960	-24.458	624.363	624.387
	f	30375.960	-24.458	624.461	624.478
	℄ BRG.	30390.880	-24.458	624.598	624.598
BEAM S7.3	℄ BRG.	30315.960	-29.833	623.679	623.679
	a	30325.960	-29.833	623.804	623.823
	b	30335.960	-29.833	623.923	623.961
	c	30345.960	-29.833	624.038	624.083
	d	30355.960	-29.833	624.147	624.197
	e	30365.960	-29.833	624.251	624.292
	f	30375.960	-29.833	624.349	624.378
	℄ BRG.	30390.880	-29.833	624.487	624.487
BEAM S7.2	℄ BRG.	30315.960	-35.208	623.567	623.567
	a	30325.960	-35.208	623.692	623.711
	b	30335.960	-35.208	623.811	623.849
	c	30345.960	-35.208	623.926	623.971
	d	30355.960	-35.208	624.035	624.085
	e	30365.960	-35.208	624.139	624.180
	f	30375.960	-35.208	624.237	624.266
	℄ BRG	30390.880	-35.208	624.375	624.375

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.1	℄ BRG.	30315.960	-40.583	623.455	623.455
	a	30325.960	-40.583	623.580	623.599
	b	30335.960	-40.583	623.699	623.737
	c	30345.960	-40.583	623.814	623.859
	d	30355.960	-40.583	623.923	623.973
	e	30365.960	-40.583	624.027	624.068
	f	30375.960	-40.583	624.125	624.154
	℄ BRG.	30390.880	-40.583	624.263	624.263



LOCATION	0.25Y	0.50Y
BEAMS S7.1 THRU S7.3	7/16"	5/8"
BEAMS S7.4 THRU S7.15	1/4"	3/8"

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.

NOTES:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS

SPAN 7

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451H, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	191
F.A.P. RTE. 4	ILLINOIS	FED. AID PROJECT		

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.15	℄ BRG.	30392.790	31.292	624.473	624.473
	a	30402.790	31.292	624.557	624.569
	b	30412.790	31.292	624.637	624.658
	c	30422.790	31.292	624.711	624.738
	d	30432.790	31.292	624.779	624.809
	e	30442.790	31.292	624.843	624.867
	f	30452.790	31.292	624.901	624.918
	℄ BRG.	30467.710	31.292	624.978	624.978
BEAM S8.14	℄ BRG.	30392.790	26.042	624.582	624.582
	a	30402.790	26.042	624.667	624.678
	b	30412.790	26.042	624.746	624.768
	c	30422.790	26.042	624.820	624.847
	d	30432.790	26.042	624.889	624.919
	e	30442.790	26.042	624.952	624.977
	f	30452.790	26.042	625.011	625.027
	℄ BRG.	30467.710	26.042	625.088	625.088
BEAM S8.13	℄ BRG.	30392.790	20.792	624.692	624.692
	a	30402.790	20.792	624.776	624.787
	b	30412.790	20.792	624.855	624.877
	c	30422.790	20.792	624.929	624.957
	d	30432.790	20.792	624.998	625.028
	e	30442.790	20.792	625.062	625.086
	f	30452.790	20.792	625.120	625.136
	℄ BRG.	30467.710	20.792	625.197	625.197

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.12	℄ BRG.	30392.790	15.542	624.801	624.801
	a	30402.790	15.542	624.886	624.897
	b	30412.790	15.542	624.965	624.986
	c	30422.790	15.542	625.039	625.066
	d	30432.790	15.542	625.108	625.137
	e	30442.790	15.542	625.171	625.195
	f	30452.790	15.542	625.229	625.246
	℄ BRG.	30467.710	15.542	625.307	625.307
BEAM S8.11	℄ BRG.	30392.790	10.292	624.901	624.901
	a	30402.790	10.292	624.986	624.997
	b	30412.790	10.292	625.065	625.087
	c	30422.790	10.292	625.139	625.166
	d	30432.790	10.292	625.208	625.238
	e	30442.790	10.292	625.271	625.296
	f	30452.790	10.292	625.330	625.346
	℄ BRG.	30467.710	10.292	625.407	625.407
BEAM S8.10	℄ BRG.	30392.790	5.042	624.984	624.984
	a	30402.790	5.042	625.068	625.079
	b	30412.790	5.042	625.147	625.169
	c	30422.790	5.042	625.221	625.248
	d	30432.790	5.042	625.290	625.320
	e	30442.790	5.042	625.354	625.378
	f	30452.790	5.042	625.412	625.428
	℄ BRG.	30467.710	5.042	625.489	625.489

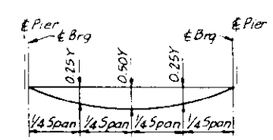
INDICATES STA. 304+67.710 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.9	℄ BRG.	30392.790	2.000	625.031	625.031
	a	30402.790	2.000	625.116	625.127
	b	30412.790	2.000	625.195	625.216
	c	30422.790	2.000	625.269	625.296
	d	30432.790	2.000	625.338	625.367
	e	30442.790	2.000	625.401	625.425
	f	30452.790	2.000	625.459	625.476
	℄ BRG.	30467.710	2.000	625.537	625.537
℄ PROP. SEB LANES	℄ BRG.	30392.790	0.000	625.062	625.062
	a	30402.790	0.000	625.147	625.158
	b	30412.790	0.000	625.226	625.248
	c	30422.790	0.000	625.300	625.327
	d	30432.790	0.000	625.369	625.399
	e	30442.790	0.000	625.432	625.457
	f	30452.790	0.000	625.491	625.507
	℄ BRG.	30467.710	0.000	625.568	625.568
BEAM S8.8	℄ BRG.	30392.790	-3.292	625.011	625.011
	a	30402.790	-3.292	625.095	625.106
	b	30412.790	-3.292	625.175	625.196
	c	30422.790	-3.292	625.249	625.276
	d	30432.790	-3.292	625.317	625.347
	e	30442.790	-3.292	625.381	625.405
	f	30452.790	-3.292	625.439	625.456
	℄ BRG.	30467.710	-3.292	625.516	625.516

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.7	℄ BRG.	30392.790	-8.583	624.928	624.928
	a	30402.790	-8.583	625.013	625.024
	b	30412.790	-8.583	625.092	625.113
	c	30422.790	-8.583	625.166	625.193
	d	30432.790	-8.583	625.235	625.265
	e	30442.790	-8.583	625.298	625.322
	f	30452.790	-8.583	625.357	625.373
	℄ BRG.	30467.710	-8.583	625.434	625.434
BEAM S8.6	℄ BRG.	30392.790	-13.875	624.836	624.836
	a	30402.790	-13.875	624.920	624.931
	b	30412.790	-13.875	625.000	625.021
	c	30422.790	-13.875	625.074	625.101
	d	30432.790	-13.875	625.142	625.172
	e	30442.790	-13.875	625.206	625.230
	f	30452.790	-13.875	625.264	625.281
	℄ BRG.	30467.710	-13.875	625.341	625.341
BEAM S8.5	℄ BRG.	30392.790	-19.167	624.726	624.726
	a	30402.790	-19.167	624.810	624.821
	b	30412.790	-19.167	624.889	624.911
	c	30422.790	-19.167	624.963	624.990
	d	30432.790	-19.167	625.032	625.062
	e	30442.790	-19.167	625.096	625.120
	f	30452.790	-19.167	625.154	625.170
	℄ BRG.	30467.710	-19.167	625.231	625.231

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.4	℄ BRG.	30392.790	-24.458	624.615	624.615
	a	30402.790	-24.458	624.700	624.711
	b	30412.790	-24.458	624.779	624.801
	c	30422.790	-24.458	624.853	624.880
	d	30432.790	-24.458	624.922	624.952
	e	30442.790	-24.458	624.985	625.010
	f	30452.790	-24.458	625.044	625.060
	℄ BRG.	30467.710	-24.458	625.121	625.121
BEAM S8.3	℄ BRG.	30392.790	-29.833	624.503	624.503
	a	30402.790	-29.833	624.588	624.607
	b	30412.790	-29.833	624.667	624.705
	c	30422.790	-29.833	624.741	624.787
	d	30432.790	-29.833	624.810	624.860
	e	30442.790	-29.833	624.873	624.915
	f	30452.790	-29.833	624.932	624.961
	℄ BRG.	30467.710	-29.833	625.009	625.009
BEAM S8.2	℄ BRG.	30392.790	-35.208	624.391	624.391
	a	30402.790	-35.208	624.476	624.495
	b	30412.790	-35.208	624.555	624.593
	c	30422.790	-35.208	624.629	624.675
	d	30432.790	-35.208	624.698	624.748
	e	30442.790	-35.208	624.761	624.803
	f	30452.790	-35.208	624.820	624.849
	℄ BRG.	30467.710	-35.208	624.897	624.897

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.1	℄ BRG.	30392.790	-40.583	624.279	624.279
	a	30402.790	-40.583	624.364	624.383
	b	30412.790	-40.583	624.443	624.481
	c	30422.790	-40.583	624.517	624.563
	d	30432.790	-40.583	624.586	624.636
	e	30442.790	-40.583	624.649	624.691
	f	30452.790	-40.583	624.708	624.737
	℄ BRG.	30467.710	-40.583	624.785	624.785



LOCATION	0.25Y	0.50Y
BEAMS S8.1 THRU S8.3	7/16"	5/8"
BEAMS S8.4 THRU S8.15	1/4"	3/8"

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.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS

SPAN 8

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

	*	426	192

SHEET NO. 17 of 74 SHEETS

SPAN 9

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S9.10	℄ BRG.	30469.624	30.583	625.010	625.010
	a	30479.624	30.583	625.054	625.059
	b	30489.624	30.583	625.093	625.098
	c	30499.624	30.583	625.127	625.131
	℄ BRG.	30505.978	30.583	625.146	625.146
BEAM S9.9	℄ BRG.	30469.624	22.083	625.187	625.187
	a	30479.624	22.083	625.231	625.236
	b	30489.624	22.083	625.270	625.276
	c	30499.624	22.083	625.304	625.308
	℄ BRG.	30505.978	22.083	625.323	625.323
BEAM S9.8	℄ BRG.	30469.624	13.583	625.364	625.364
	a	30479.624	13.583	625.408	625.414
	b	30489.624	13.583	625.447	625.453
	c	30499.624	13.583	625.481	625.485
	℄ BRG.	30505.978	13.583	625.500	625.500

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S9.7	℄ BRG.	30469.624	5.083	625.505	625.505
	a	30479.624	5.083	625.549	625.555
	b	30489.624	5.083	625.589	625.594
	c	30499.624	5.083	625.622	625.626
	℄ BRG.	30505.978	5.083	625.641	625.641
BEAM S9.6	℄ BRG.	30469.624	1.042	625.568	625.568
	a	30479.624	1.042	625.612	625.618
	b	30489.624	1.042	625.652	625.657
	c	30499.624	1.042	625.686	625.689
	℄ BRG.	30505.978	1.042	625.705	625.705
℄ PROP. SEB LANES	℄ BRG.	30469.624	0.000	625.584	625.584
	a	30479.624	0.000	625.629	625.634
	b	30489.624	0.000	625.668	625.673
	c	30499.624	0.000	625.702	625.706
	℄ BRG.	30505.978	0.000	625.721	625.721

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S9.5	℄ BRG.	30469.624	-7.458	625.468	625.468
	a	30479.624	-7.458	625.512	625.517
	b	30489.624	-7.458	625.551	625.557
	c	30499.624	-7.458	625.585	625.589
	℄ BRG.	30505.978	-7.458	625.604	625.604
BEAM S9.4	℄ BRG.	30469.624	-15.958	625.314	625.314
	a	30479.624	-15.958	625.359	625.364
	b	30489.624	-15.958	625.398	625.403
	c	30499.624	-15.958	625.432	625.436
	℄ BRG.	30505.978	-15.958	625.451	625.451
BEAM S9.3	℄ BRG.	30469.624	-24.458	625.137	625.137
	a	30479.624	-24.458	625.182	625.187
	b	30489.624	-24.458	625.221	625.226
	c	30499.624	-24.458	625.255	625.259
	℄ BRG.	30505.978	-24.458	625.274	625.274

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S9.2	℄ BRG.	30469.624	-32.520	624.969	624.969
	a	30479.624	-32.521	625.014	625.019
	b	30489.624	-32.521	625.053	625.058
	c	30499.624	-32.521	625.087	625.091
	℄ BRG.	30505.978	-32.521	625.106	625.106
BEAM S9.1	℄ BRG.	30469.624	-40.583	624.801	624.801
	a	30479.624	-40.583	624.846	624.846
	b	30489.624	-40.583	624.885	624.889
	c	30499.624	-40.583	624.919	624.919
	℄ BRG.	30505.978	-40.583	624.938	624.938

SPAN 10

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S10.12	℄ BRG.	30507.895	30.583	625.151	625.151
	a	30517.895	30.586	625.176	625.181
	b	30527.895	30.588	625.233	625.238
	c	30537.895	30.591	625.295	625.301
	℄ BRG.	30549.084	30.594	625.351	625.351
BEAM S10.11	℄ BRG.	30507.895	22.083	625.329	625.329
	a	30517.895	22.086	625.353	625.362
	b	30527.895	22.089	625.393	625.403
	c	30537.895	22.091	625.433	625.443
	℄ BRG.	30552.683	22.095	625.485	625.485
BEAM S10.10	℄ BRG.	30507.895	13.583	625.506	625.506
	a	30517.895	13.586	625.530	625.539
	b	30527.895	13.589	625.552	625.563
	c	30537.895	13.592	625.570	625.581
	d	30547.895	13.595	625.594	625.601
	℄ BRG.	30556.283	13.597	625.611	625.611

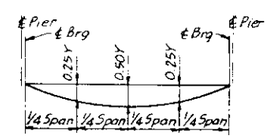
NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S10.9	℄ BRG.	30507.895	5.083	625.647	625.647
	a	30517.895	5.086	625.671	625.679
	b	30527.895	5.089	625.690	625.701
	c	30537.895	5.092	625.704	625.714
	d	30547.895	5.095	625.718	625.727
	℄ BRG.	30559.882	5.099	625.729	625.729
BEAM S10.8	℄ BRG.	30507.895	2.042	625.694	625.694
	a	30517.895	2.045	625.719	625.726
	b	30527.895	2.048	625.738	625.748
	c	30537.895	2.051	625.752	625.762
	d	30547.895	2.054	625.762	625.773
	℄ BRG.	30561.169	2.058	625.769	625.769
℄ PROP. SEB LANES	℄ BRG.	30507.895	0.000	625.726	625.726
	a	30517.895	0.000	625.751	625.758
	b	30527.895	0.000	625.770	625.780
	c	30537.895	0.000	625.784	625.794
	d	30547.895	0.000	625.792	625.803
	℄ BRG.	30562.041	0.000	625.796	625.796

INDICATES STA. 305+62.041 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S10.7	℄ BRG.	30507.895	-4.583	625.655	625.655
	a	30517.895	-4.581	625.679	625.686
	b	30527.895	-4.579	625.698	625.711
	c	30537.895	-4.576	625.712	625.727
	d	30547.895	-4.574	625.721	625.732
	e	30557.895	-4.572	625.724	625.729
	℄ BRG.	30563.977	-4.570	625.724	625.724
BEAM S10.6	℄ BRG.	30507.895	-11.208	625.551	625.551
	a	30517.895	-11.207	625.575	625.586
	b	30527.895	-11.205	625.595	625.612
	c	30537.895	-11.203	625.609	625.629
	d	30547.895	-11.201	625.617	625.634
	e	30557.895	-11.200	625.621	625.630
	℄ BRG.	30566.784	-11.198	625.619	625.619
BEAM S10.5	℄ BRG.	30507.895	-17.833	625.417	625.417
	a	30517.895	-17.832	625.442	625.452
	b	30527.895	-17.831	625.461	625.478
	c	30537.895	-17.830	625.475	625.495
	d	30547.895	-17.829	625.483	625.501
	e	30557.895	-17.828	625.487	625.499
	℄ BRG.	30569.591	-17.826	625.484	625.484

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S10.4	℄ BRG.	30507.895	-24.458	625.279	625.279
	a	30517.895	-24.458	625.304	625.313
	b	30527.895	-24.457	625.323	625.340
	c	30537.895	-24.456	625.337	625.357
	d	30547.895	-24.456	625.345	625.364
	e	30557.895	-24.455	625.349	625.363
	℄ BRG.	30572.398	-24.454	625.344	625.344
BEAM S10.3	℄ BRG.	30507.895	-29.833	625.167	625.167
	a	30517.895	-29.833	625.192	625.204
	b	30527.895	-29.833	625.211	625.234
	c	30537.895	-29.833	625.225	625.254
	d	30547.895	-29.832	625.233	625.260
	e	30557.895	-29.832	625.237	625.258
	f	30567.895	-29.832	625.235	625.243
	℄ BRG.	30574.675	-29.832	625.231	625.231
BEAM S10.2	℄ BRG.	30507.895	-35.208	625.055	625.055
	a	30517.895	-35.208	625.080	625.095
	b	30527.895	-35.209	625.099	625.126
	c	30537.895	-35.209	625.113	625.146
	d	30547.895	-35.209	625.121	625.154
	e	30557.895	-35.209	625.125	625.152
	f	30567.895	-35.209	625.123	625.137
	℄ BRG.	30576.953	-35.209	625.117	625.117
BEAM S10.1	℄ BRG.	30507.895	-40.583	624.943	624.943
	a	30517.895	-40.584	624.968	624.985
	b	30527.895	-40.584	624.987	625.019
	c	30537.895	-40.585	625.001	625.039
	d	30547.895	-40.585	625.009	625.048
	e	30557.895	-40.586	625.013	625.046
	f	30567.895	-40.586	625.011	625.031
	℄ BRG	30579.230	-40.587	625.002	625.002



LOCATION	0.25Y	0.50Y
BEAM S9.1	0"	1/16"
BEAMS S9.2 THRU S9.10	1/16"	1/16"
BEAM S10.1	3/8"	1/2"
BEAM S10.2	5/16"	7/16"
BEAM S10.3	1/4"	3/8"
BEAMS S10.4 THRU S10.6	3/16"	1/4"
BEAM S10.7	1/8"	3/16"
BEAMS S10.8 THRU S10.11	1/8"	1/8"
BEAM S10.12	1/16"	1/16"

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.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPANS 9 AND 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	193
F. HW. & REG. A		ILLINOIS	FED. AID PROJECT	

SHEET NO. 18 of 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.18	℄ BRG.	30551.293	31.201	625.351	625.351
	a	30561.293	31.197	625.393	625.408
	b	30571.293	31.193	625.429	625.452
	c	30581.293	31.188	625.460	625.485
	d	30591.293	31.184	625.486	625.507
	e	30601.293	31.179	625.507	625.514
	℄ BRG.	30606.300	31.177	625.515	625.515
BEAM S11.17	℄ BRG.	30553.162	26.789	625.421	625.421
	a	30563.162	26.785	625.456	625.471
	b	30573.162	26.780	625.486	625.509
	c	30583.162	26.776	625.510	625.535
	d	30593.162	26.772	625.529	625.550
	e	30603.162	26.767	625.543	625.551
	℄ BRG.	30608.168	26.765	625.548	625.548
BEAM S11.16	℄ BRG.	30555.030	22.377	625.489	625.489
	a	30565.030	22.372	625.517	625.532
	b	30575.030	22.368	625.540	625.563
	c	30585.030	22.364	625.558	625.583
	d	30595.030	22.359	625.570	625.591
	e	30605.030	22.355	625.577	625.585
	℄ BRG.	30610.037	22.353	625.579	625.579

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.15	℄ BRG.	30556.899	17.964	625.554	625.554
	a	30566.899	17.960	625.575	625.590
	b	30576.899	17.956	625.592	625.615
	c	30586.899	17.951	625.603	625.628
	d	30596.899	17.947	625.609	625.630
	e	30606.899	17.943	625.610	625.617
	℄ BRG.	30611.906	17.940	625.608	625.608
BEAM S11.14	℄ BRG.	30558.768	13.552	625.617	625.617
	a	30568.768	13.548	625.632	625.647
	b	30578.768	13.543	625.641	625.665
	c	30588.768	13.539	625.646	625.671
	d	30598.768	13.535	625.645	625.667
	e	30608.768	13.530	625.639	625.647
	℄ BRG.	30613.774	13.528	625.634	625.634
BEAM S11.13	℄ BRG.	30560.636	9.140	625.677	625.677
	a	30570.636	9.135	625.685	625.701
	b	30580.636	9.131	625.689	625.712
	c	30590.636	9.127	625.687	625.712
	d	30600.636	9.122	625.679	625.701
	e	30610.636	9.118	625.667	625.674
	℄ BRG.	30615.643	9.116	625.659	625.659

INDICATES STA. 306+15.643 (TYP)

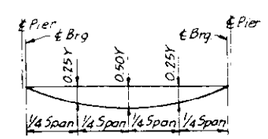
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.12	℄ BRG.	30562.505	4.728	625.735	625.735
	a	30572.505	4.723	625.737	625.748
	b	30582.505	4.719	625.734	625.752
	c	30592.505	4.715	625.725	625.745
	d	30602.505	4.710	625.711	625.727
	e	30612.505	4.706	625.692	625.698
	℄ BRG.	30617.512	4.704	625.680	625.680
BEAM S11.11	℄ BRG.	30563.480	2.425	625.765	625.765
	a	30573.480	2.421	625.763	625.774
	b	30583.480	2.417	625.756	625.774
	c	30593.480	2.412	625.744	625.764
	d	30603.480	2.408	625.727	625.743
	e	30613.480	2.404	625.704	625.710
	℄ BRG.	30618.486	2.402	625.691	625.691
℄ PROP. SEB LANES	℄ BRG.	30564.507	0.000	625.795	625.795
	a	30574.507	0.000	625.790	625.805
	b	30584.507	0.000	625.779	625.802
	c	30594.507	0.000	625.764	625.789
	d	30604.507	0.000	625.743	625.764
	e	30614.507	0.000	625.716	625.724
	℄ BRG.	30619.504	0.000	625.701	625.701

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.10	℄ BRG.	30565.377	-2.054	625.763	625.763
	a	30575.377	-2.058	625.757	625.772
	b	30585.377	-2.063	625.746	625.769
	c	30595.377	-2.067	625.730	625.755
	d	30605.377	-2.071	625.708	625.729
	e	30615.377	-2.076	625.681	625.689
	℄ BRG.	30620.384	-2.078	625.666	625.666
BEAM S11.9	℄ BRG.	30567.274	-6.533	625.692	625.692
	a	30577.274	-6.538	625.685	625.700
	b	30587.274	-6.542	625.673	625.696
	c	30597.274	-6.546	625.656	625.681
	d	30607.274	-6.551	625.633	625.655
	e	30617.274	-6.555	625.606	625.613
	℄ BRG.	30622.281	-6.557	625.590	625.590
BEAM S11.8	℄ BRG.	30569.171	-11.013	625.621	625.621
	a	30579.171	-11.017	625.614	625.629
	b	30589.171	-11.022	625.600	625.623
	c	30599.171	-11.026	625.582	625.607
	d	30609.171	-11.030	625.559	625.580
	e	30619.171	-11.035	625.530	625.537
	℄ BRG.	30624.178	-11.037	625.514	625.514

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.7	℄ BRG.	30571.068	-15.492	625.532	625.532
	a	30581.068	-15.497	625.523	625.538
	b	30591.068	-15.501	625.509	625.532
	c	30601.068	-15.505	625.490	625.515
	d	30611.068	-15.510	625.465	625.487
	e	30621.068	-15.514	625.436	625.443
	℄ BRG.	30626.075	-15.516	625.419	625.419
BEAM S11.6	℄ BRG.	30572.965	-19.972	625.437	625.437
	a	30582.965	-19.976	625.428	625.443
	b	30592.965	-19.980	625.413	625.436
	c	30602.965	-19.985	625.392	625.417
	d	30612.965	-19.989	625.367	625.388
	e	30622.965	-19.993	625.336	625.344
	℄ BRG.	30627.972	-19.996	625.319	625.319
BEAM S11.5	℄ BRG.	30574.862	-24.451	625.343	625.343
	a	30584.862	-24.455	625.332	625.347
	b	30594.862	-24.460	625.316	625.339
	c	30604.862	-24.464	625.295	625.320
	d	30614.862	-24.469	625.268	625.289
	e	30624.862	-24.473	625.236	625.244
	℄ BRG.	30629.869	-24.475	625.218	625.218

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.4	℄ BRG.	30576.571	-28.484	625.257	625.257
	a	30586.571	-28.487	625.246	625.264
	b	30596.571	-28.490	625.229	625.259
	c	30606.571	-28.492	625.207	625.241
	d	30616.571	-28.495	625.179	625.206
	e	30626.571	-28.498	625.146	625.156
	℄ BRG.	30631.573	-28.499	625.128	625.128
BEAM S11.3	℄ BRG.	30578.279	-32.518	625.172	625.172
	a	30588.279	-32.519	625.159	625.178
	b	30598.279	-32.519	625.141	625.172
	c	30608.279	-32.520	625.118	625.153
	d	30618.279	-32.521	625.090	625.117
	e	30628.279	-32.522	625.057	625.066
	℄ BRG.	30633.277	-32.523	625.038	625.038
BEAM S11.2	℄ BRG.	30579.987	-36.551	625.086	625.086
	a	30589.987	-36.550	625.072	625.091
	b	30599.987	-36.549	625.054	625.085
	c	30609.987	-36.549	625.030	625.064
	d	30619.987	-36.548	625.001	625.028
	e	30629.987	-36.547	624.966	624.976
	℄ BRG.	30634.982	-36.547	624.947	624.947

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.1	℄ BRG	30581.695	-40.584	625.000	625.000
	a	30591.695	-40.582	624.986	625.008
	b	30601.695	-40.579	624.966	625.004
	c	30611.695	-40.577	624.941	624.985
	d	30621.695	-40.574	624.911	624.944
	e	30631.695	-40.572	624.876	624.888
	℄ BRG.	30636.686	-40.571	624.857	624.857



LOCATION	0.25Y	0.50Y
BEAM S11.1	3/8"	9/16"
BEAMS S11.2 THRU S11.4	5/16"	7/16"
BEAMS S11.5 THRU S11.10	1/4"	5/16"
AND S11.13 THRU S11.18		
BEAMS S11.11 & S11.12	3/16"	1/4"

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.

NOTE:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS

SPAN 11

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPAN 13

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S13.10	℄ BRG.	30608.699	31.334	625.517	625.517
	a	30618.699	31.334	625.529	625.540
	b	30628.699	31.334	625.535	625.553
	c	30638.699	31.334	625.536	625.556
	d	30648.699	31.333	625.532	625.547
	℄ BRG.	30662.556	31.333	625.517	625.517
BEAM S13.9	℄ BRG.	30612.299	22.835	625.576	625.576
	a	30622.299	22.834	625.575	625.583
	b	30632.299	22.832	625.569	625.582
	c	30642.299	22.830	625.557	625.570
	d	30652.299	22.829	625.540	625.548
	℄ BRG.	30662.281	22.827	625.518	625.518
BEAM S13.8	℄ BRG.	30615.898	14.337	625.627	625.627
	a	30625.898	14.334	625.613	625.622
	b	30635.898	14.330	625.594	625.604
	c	30645.898	14.327	625.569	625.580
	d	30655.898	14.323	625.540	625.545
	℄ BRG.	30662.007	14.321	625.519	625.519

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S13.7	℄ BRG.	30619.497	5.839	625.669	625.669
	a	30629.497	5.833	625.643	625.648
	b	30639.497	5.828	625.611	625.616
	c	30649.497	5.822	625.574	625.579
	℄ BRG.	30661.733	5.815	625.521	625.521
BEAM S13.6	℄ BRG.	30621.528	1.043	625.689	625.689
	a	30631.528	1.039	625.656	625.661
	b	30641.528	1.034	625.616	625.622
	c	30651.528	1.030	625.572	625.577
	℄ BRG.	30661.578	1.026	625.522	625.522
℄ PROP. SEB LANES	℄ BRG.	30621.970	0.000	625.693	625.693
	a	30631.970	0.000	625.658	625.663
	b	30641.970	0.000	625.617	625.622
	c	30651.970	0.000	625.571	625.576
	℄ BRG.	30661.545	0.000	625.523	625.523

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S13.5	℄ BRG.	30625.127	-7.456	625.566	625.566
	a	30635.127	-7.460	625.529	625.534
	b	30645.127	-7.464	625.487	625.492
	c	30655.127	-7.467	625.439	625.443
	℄ BRG.	30661.304	-7.470	625.407	625.407
BEAM S13.4	℄ BRG.	30628.726	-15.954	625.400	625.400
	a	30638.726	-15.958	625.361	625.366
	b	30648.726	-15.961	625.317	625.322
	℄ BRG.	30661.030	-15.965	625.255	625.255
BEAM S13.3	℄ BRG.	30632.326	-24.453	625.210	625.210
	a	30642.326	-24.456	625.169	625.174
	b	30652.326	-24.459	625.122	625.128
	℄ BRG.	30660.756	-24.461	625.080	625.080
BEAM S13.2	℄ BRG.	30635.742	-32.519	625.028	625.028
	a	30645.742	-32.522	624.986	624.986
	℄ BRG.	30660.496	-32.527	624.913	624.913

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S13.1	℄ BRG.	30639.158	-40.585	624.846	624.846
	a	30649.158	-40.589	624.802	624.802
	℄ BRG.	30660.236	-40.592	624.746	624.746

GIRDER 1A

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER 1A	℄ BRG.	30663.706	-32.522	624.896	624.896
	a	30673.704	-32.756	624.834	624.861
	b	30683.701	-32.991	624.766	624.823
	c	30693.698	-33.225	624.694	624.777
	d	30703.695	-33.460	624.616	624.722
	e	30713.693	-33.695	624.533	624.658
	f	30723.739	-33.925	624.444	624.586
	g	30733.831	-34.131	624.350	624.505
	h	30743.923	-34.310	624.252	624.415
	i	30754.017	-34.461	624.149	624.317
	j	30764.111	-34.585	624.041	624.211
	k	30774.206	-34.681	623.928	624.096
	l	30784.301	-34.750	623.810	623.972
	m	30794.397	-34.791	623.678	623.831
	n	30804.493	-34.804	623.540	623.681
	o	30814.588	-34.790	623.398	623.523
	p	30824.684	-34.749	623.255	623.362
	q	30834.779	-34.680	623.113	623.198
	r	30844.874	-34.584	622.966	623.027
	s	30854.968	-34.460	622.813	622.848
	℄ BRG.	30866.593	-34.283	622.633	622.633

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

GIRDER 1B

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER 1B	℄ BRG.	30663.446	-40.583	624.729	624.729
	a	30673.445	-40.731	624.669	624.693
	b	30683.444	-40.878	624.604	624.652
	c	30693.443	-41.026	624.533	624.605
	d	30703.442	-41.173	624.457	624.549
	e	30713.441	-41.321	624.376	624.485
	f	30723.498	-41.465	624.289	624.412
	g	30733.611	-41.584	624.197	624.331
	h	30743.726	-41.676	624.100	624.242
	i	30753.841	-41.741	623.999	624.146
	j	30763.956	-41.778	623.892	624.041
	k	30774.071	-41.787	623.781	623.928
	l	30784.186	-41.769	623.665	623.807
	m	30794.301	-41.724	623.536	623.671
	n	30804.416	-41.650	623.402	623.526
	o	30814.530	-41.549	623.263	623.373
	p	30824.643	-41.421	623.122	623.216
	q	30834.756	-41.265	622.981	623.057
	r	30844.868	-41.082	622.835	622.889
	s	30854.979	-40.870	622.685	622.715
	℄ BRG.	30866.645	-40.593	622.506	622.506

SPAN 14

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S14.9	℄ BRG.	30664.474	31.344	625.515	625.515
	a	30674.474	31.344	625.497	625.509
	b	30684.474	31.344	625.474	625.495
	c	30694.474	31.343	625.446	625.470
	d	30704.474	31.343	625.412	625.436
	e	30714.474	31.343	625.373	625.393
	f	30724.422	31.347	625.330	625.337
	℄ BRG.	30730.523	31.362	625.301	625.301
BEAM S14.8	℄ BRG.	30664.262	24.775	625.513	625.513
	a	30674.262	24.774	625.487	625.500
	b	30684.262	24.774	625.456	625.478
	c	30694.262	24.774	625.420	625.445
	d	30704.262	24.773	625.378	625.402
	e	30714.262	24.773	625.331	625.351
	f	30724.222	24.778	625.279	625.287
	℄ BRG.	30730.334	24.792	625.245	625.245
BEAM S14.7	℄ BRG.	30664.050	18.205	625.513	625.513
	a	30674.050	18.205	625.478	625.491
	b	30684.050	18.205	625.439	625.460
	c	30694.050	18.204	625.394	625.419
	d	30704.050	18.204	625.344	625.368
	e	30714.050	18.204	625.289	625.309
	f	30724.022	18.208	625.229	625.236
	℄ BRG.	30730.145	18.222	625.189	625.189

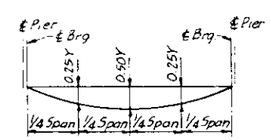
INDICATES STA. 307+30.145 (TYP)

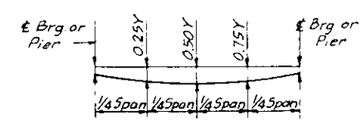
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S14.6	℄ BRG.	30663.838	11.636	625.512	625.512
	a	30673.838	11.635	625.470	625.482
	b	30683.838	11.635	625.422	625.443
	c	30693.838	11.635	625.369	625.394
	d	30703.838	11.634	625.310	625.334
	e	30713.838	11.634	625.247	625.267
	f	30723.821	11.638	625.178	625.186
	℄ BRG.	30729.954	11.652	625.134	625.134
BEAM S14.5	℄ BRG.	30663.626	5.066	625.512	625.512
	a	30673.626	5.066	625.461	625.474
	b	30683.626	5.066	625.405	625.427
	c	30693.626	5.065	625.344	625.369
	d	30703.626	5.065	625.277	625.301
	e	30713.626	5.065	625.206	625.225
	f	30723.619	5.068	625.129	625.136
	℄ BRG.	30729.764	5.082	625.079	625.079
BEAM S14.4	℄ BRG.	30663.545	2.557	625.512	625.512
	a	30673.545	2.560	625.458	625.480
	b	30683.545	2.563	625.399	625.437
	c	30693.545	2.566	625.334	625.380
	d	30703.545	2.568	625.265	625.309
	e	30713.545	2.571	625.190	625.224
	f	30723.542	2.578	625.110	625.126
	℄ PIER NO. 14	30730.649	2.597	625.050	625.050

SPAN 14 (CONT.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG	30663.463	0.000	625.512	625.512
	a	30673.463	0.000	625.455	625.476
	b	30683.463	0.000	625.393	625.430
	c	30693.463	0.000	625.325	625.370
	d	30703.463	0.000	625.252	625.296
	e	30713.463	0.000	625.174	625.208
	f	30722.154	0.000	625.102	625.120
	℄ PIER NO. 14	30730.574	0.000	625.028	625.028
BEAM S14.3	℄ BRG.	30663.380	-2.555	625.473	625.473
	a	30673.375	-2.876	625.411	625.436
	b	30683.370	-3.198	625.343	625.388
	c	30693.365	-3.520	625.271	625.329
	d	30703.360	-3.841	625.193	625.254
	e	30713.355	-4.163	625.110	625.166
	f	30723.355	-4.481	625.021	625.065
	℄ PIER NO. 14	30730.438	-4.692	624.956	624.988
BEAM S14.2	℄ BRG.	30663.145	-9.843	625.360	625.360
	a	30673.140	-10.164	625.298	625.325
	b	30683.135	-10.486	625.231	625.280
	c	30693.130	-10.807	625.158	625.223
	d	30703.125	-11.129	625.081	625.154
	e	30713.119	-11.451	624.998	625.070
	f	30723.130	-11.769	624.909	624.976
	℄ PIER NO. 14	30730.227	-11.981	624.844	624.904

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S14.1	℄ BRG.	30662.910	-17.131	625.221	625.221
	a	30672.905	-17.452	625.157	625.182
	b	30682.900	-17.774	625.088	625.136
	c	30692.895	-18.095	625.014	625.079
	d	30702.890	-18.417	624.935	625.013
	e	30712.884	-18.738	624.851	624.935
	f	30722.903	-19.057	624.761	624.847
	℄ PIER NO. 14	30730.014	-19.269	624.694	624.780
GIRDER G1-14	℄ BRG.	30662.675	-24.419	625.070	625.070
	a	30672.670	-24.740	625.007	625.027
	b	30682.665	-25.062	624.938	624.979
	c	30692.660	-25.383	624.864	624.924
	d	30702.655	-25.705	624.785	624.862
	e	30712.649	-26.026	624.701	624.792
	f	30722.675	-26.345	624.611	624.709
	℄ PIER NO. 14	30729.800	-26.558	624.544	624.648





LOCATION	0.25Y	0.50Y
BEAMS S13.1 AND S13.2	0"	0"
BEAMS S13.3 THRU S13.7	1/16"	1/16"
BEAM S13.8	1/8"	1/8"
BEAM S13.9	1/8"	3/16"
BEAM S13.10	3/16"	1/4"

LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
GIRDER G1-14	0"	7/16"	13/16"	1 1/8"	1 1/4"
BEAM S14.1	0"	1/2"	13/16"	1"	1"
BEAM S14.2	0"	1/2"	13/16"	7/8"	11/16"
BEAM S14.3	0"	7/16"	11/16"	11/16"	3/8"
BEAM S14.4	0"	3/8"	9/16"	3/8"	0"
BEAMS S14.5 THRU S14.9	0"	1/4"	5/16"	1/4"	0"

DEAD LOAD DEFLECTION DIAGRAMS
(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.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS GIRDERS 1A AND 1B SPANS 13 AND 14

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPAN 15

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S15.9	℄ BRG.	30732.437	31.828	625.295	625.295
	a	30742.348	31.559	625.241	625.263
	b	30752.260	31.316	625.180	625.222
	c	30762.173	31.100	625.115	625.167
	d	30772.088	30.912	625.043	625.096
	e	30782.003	30.750	624.967	625.008
	f	30791.919	30.616	624.884	624.905
	℄ PIER NO.15	30799.186	30.534	624.821	624.821
BEAM S15.8	℄ BRG.	30732.256	25.414	625.239	625.239
	a	30742.184	25.144	625.176	625.198
	b	30752.113	24.901	625.108	625.149
	c	30762.044	24.685	625.034	625.085
	d	30771.976	24.496	624.955	625.006
	e	30781.908	24.334	624.870	624.912
	f	30791.842	24.200	624.779	624.804
	℄ PIER NO.15	30799.121	24.118	624.710	624.716
BEAM S15.7	℄ BRG.	30732.075	19.000	625.183	625.183
	a	30742.020	18.729	625.112	625.134
	b	30751.966	18.486	625.036	625.076
	c	30761.914	18.270	624.954	625.004
	d	30771.863	18.081	624.866	624.918
	e	30781.813	17.918	624.773	624.817
	f	30791.764	17.783	624.674	624.702
	℄ PIER NO.15	30799.056	17.702	624.599	624.610

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S15.6	℄ BRG.	30731.892	12.586	625.128	625.128
	a	30741.855	12.315	625.049	625.068
	b	30751.819	12.071	624.964	625.001
	c	30761.784	11.854	624.874	624.920
	d	30771.750	11.665	624.778	624.826
	e	30781.717	11.502	624.676	624.718
	f	30791.685	11.367	624.569	624.599
	℄ PIER NO.15	30798.990	11.285	624.488	624.503
BEAM S15.5	℄ BRG.	30731.683	5.256	625.065	625.065
	a	30741.668	5.120	624.977	624.993
	b	30751.654	5.012	624.885	624.915
	c	30761.640	4.931	624.787	624.826
	d	30771.627	4.877	624.684	624.725
	e	30781.613	4.851	624.576	624.613
	f	30791.600	4.851	624.463	624.491
	℄ PIER NO.15	30798.925	4.869	624.377	624.394
BEAM S15.4	℄ PIER NO.14	30730.649	2.597	625.050	625.050
	a	30740.641	2.457	624.960	624.975
	b	30750.634	2.344	624.865	624.891
	c	30760.628	2.258	624.764	624.798
	d	30770.621	2.200	624.658	624.694
	e	30780.615	2.168	624.547	624.580
	f	30790.609	2.164	624.431	624.457
	℄ PIER NO.15	30798.897	2.182	624.331	624.349

INDICATES STA. 307+98.897 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ PIER NO. 14	30730.574	0.000	625.028	625.028
	a	30740.574	0.000	624.936	624.951
	b	30750.574	0.000	624.839	624.866
	c	30760.574	0.000	624.736	624.770
	d	30770.574	0.000	624.628	624.664
	e	30780.574	0.000	624.515	624.548
	f	30790.574	0.000	624.396	624.422
	℄ PIER NO. 15	30798.875	0.000	624.293	624.311
BEAM S15.3	℄ PIER NO. 14	30730.438	-4.692	624.956	624.988
	a	30740.448	-4.967	624.860	624.910
	b	30750.459	-5.215	624.758	624.825
	c	30760.471	-5.435	624.652	624.731
	d	30770.484	-5.628	624.541	624.627
	e	30780.498	-5.794	624.425	624.512
	f	30790.513	-5.932	624.300	624.383
	℄ PIER NO. 15	30798.812	-6.026	624.190	624.267
BEAM S15.2	℄ PIER NO. 14	30730.227	-11.981	624.844	624.904
	a	30740.256	-12.256	624.746	624.824
	b	30750.287	-12.504	624.644	624.737
	c	30760.319	-12.725	624.536	624.640
	d	30770.352	-12.918	624.424	624.532
	e	30780.386	-13.085	624.307	624.413
	f	30790.421	-13.223	624.177	624.276
	℄ PIER NO. 15	30798.737	-13.318	624.060	624.150

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S15.1	℄ PIER NO. 14	30730.014	-19.269	624.694	624.780
	a	30740.063	-19.545	624.596	624.696
	b	30750.114	-19.794	624.494	624.605
	c	30760.166	-20.015	624.386	624.505
	d	30770.219	-20.209	624.274	624.394
	e	30780.274	-20.375	624.156	624.274
	f	30790.329	-20.514	624.027	624.137
	℄ PIER NO. 15	30798.661	-20.609	623.911	624.013
GIRDER G1-15	℄ PIER NO. 14	30729.800	-26.558	624.544	624.648
	a	30739.870	-26.834	624.446	624.559
	b	30749.941	-27.083	624.343	624.463
	c	30760.013	-27.305	624.236	624.360
	d	30770.086	-27.499	624.123	624.249
	e	30780.161	-27.666	624.006	624.131
	f	30790.236	-27.805	623.877	624.000
	℄ PIER NO. 15	30798.585	-27.900	623.763	623.879

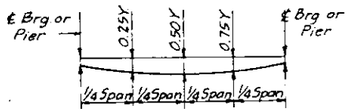
SPAN 16

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S16.9	℄ PIER NO.15	30799.186	30.534	624.821	624.821
	a	30809.104	30.446	624.729	624.759
	b	30819.021	30.385	624.633	624.686
	c	30828.939	30.351	624.497	624.563
	d	30838.857	30.344	624.354	624.421
	e	30848.775	30.363	624.205	624.263
	f	30858.693	30.410	624.052	624.091
	℄ PIER NO.16	30865.573	30.459	623.944	623.966
BEAM S16.8	℄ PIER NO.15	30799.121	24.118	624.710	624.716
	a	30809.056	24.030	624.610	624.643
	b	30818.991	23.968	624.505	624.559
	c	30828.926	23.934	624.369	624.434
	d	30838.861	23.927	624.225	624.291
	e	30848.796	23.947	624.077	624.133
	f	30858.731	23.994	623.923	623.962
	℄ PIER NO.16	30865.623	24.042	623.815	623.838
BEAM S16.7	℄ PIER NO.15	30799.056	17.702	624.599	624.610
	a	30809.008	17.613	624.491	624.526
	b	30818.960	17.552	624.378	624.431
	c	30828.912	17.517	624.241	624.304
	d	30838.865	17.510	624.097	624.160
	e	30848.817	17.530	623.948	624.002
	f	30858.769	17.577	623.794	623.832
	℄ PIER NO.16	30865.674	17.626	623.686	623.709

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S16.6	℄ PIER NO.15	30798.990	11.285	624.488	624.503
	a	30808.959	11.197	624.372	624.407
	b	30818.929	11.135	624.251	624.301
	c	30828.899	11.101	624.113	624.170
	d	30838.869	11.094	623.968	624.026
	e	30848.838	11.113	623.819	623.869
	f	30858.808	11.161	623.665	623.700
	℄ PIER NO.16	30865.724	11.209	623.556	623.579
BEAM S16.5	℄ PIER NO.15	30798.925	4.869	624.377	624.394
	a	30808.911	4.780	624.253	624.285
	b	30818.898	4.719	624.124	624.167
	c	30828.885	4.684	623.985	624.033
	d	30838.872	4.677	623.840	623.888
	e	30848.860	4.697	623.691	623.732
	f	30858.847	4.744	623.536	623.567
	℄ PIER NO.16	30865.775	4.793	623.427	623.449
BEAM S16.4	℄ PIER NO.15	30798.897	2.182	624.331	624.349
	a	30808.891	2.093	624.203	624.233
	b	30818.885	2.031	624.071	624.109
	c	30828.879	1.997	623.931	623.974
	d	30838.874	1.989	623.786	623.829
	e	30848.869	2.009	623.637	623.674
	f	30858.863	2.057	623.482	623.510
	℄ PIER NO.16	30865.796	2.105	623.373	623.394

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ PIER NO.15	30798.875	0.000	624.293	624.311
	a	30808.875	0.000	624.165	624.194
	b	30818.875	0.000	624.031	624.069
	c	30828.875	0.000	623.891	623.934
	d	30838.875	0.000	623.747	623.789
	e	30848.875	0.000	623.596	623.634
	f	30858.875	0.000	623.441	623.469
	℄ PIER NO.16	30865.813	0.000	623.330	623.350
BEAM S16.3	℄ PIER NO.15	30798.812	-6.026	624.190	624.267
	a	30808.829	-6.115	624.052	624.132
	b	30818.845	-6.177	623.908	623.987
	c	30828.862	-6.212	623.767	623.841
	d	30838.879	-6.219	623.622	623.684
	e	30848.896	-6.199	623.472	623.517
	f	30858.913	-6.152	623.317	623.341
	℄ PIER NO.16	30865.862	-6.103	623.208	623.215
BEAM S16.2	℄ PIER NO.15	30798.737	-13.318	624.060	624.150
	a	30808.773	-13.407	623.914	624.007
	b	30818.810	-13.469	623.764	623.855
	c	30828.846	-13.503	623.622	623.705
	d	30838.883	-13.511	623.476	623.546
	e	30848.920	-13.491	623.326	623.376
	f	30858.957	-13.443	623.171	623.195
	℄ PIER NO.16	30865.920	-13.394	623.061	623.066

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S16.1	℄ PIER NO.15	30798.661	-20.609	623.911	624.013
	a	30808.717	-20.698	623.767	623.866
	b	30818.774	-20.760	623.618	623.711
	c	30828.831	-20.795	623.476	623.558
	d	30838.888	-20.802	623.330	623.397
	e	30848.945	-20.782	623.180	623.226
	f	30859.002	-20.735	623.024	623.046
	℄ PIER NO.16	30865.978	-20.686	622.914	622.917
GIRDER G1-16	℄ PIER NO.15	30798.585	-27.900	623.763	623.879
	a	30808.661	-27.990	623.620	623.728
	b	30818.738	-28.052	623.473	623.569
	c	30828.815	-28.087	623.330	623.413
	d	30838.892	-28.094	623.184	623.251
	e	30848.969	-28.074	623.033	623.081
	f	30859.046	-28.026	622.878	622.905
	℄ PIER NO.16	30866.037	-27.977	622.768	622.768



LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
GIRDER G1-15	1 1/4"	1 7/16"	1 1/2"	1 1/2"	1 3/8"
BEAM S15.1	1"	1 5/16"	1 7/16"	1 3/8"	1 1/4"
BEAM S15.2	11/16"	1 1/16"	1 1/4"	1 1/4"	1 1/16"
BEAM S15.3	3/8"	3/4"	1"	1 1/16"	15/16"
BEAM S15.4	0"	1/4"	7/16"	3/8"	3/16"
BEAM S15.5	0"	5/16"	1/2"	7/16"	3/16"
BEAM S15.6	0"	3/8"	9/16"	1/2"	1/8"
BEAM S15.7	0"	1/4"	5/8"	1/2"	1/8"
BEAM S15.8	0"	7/16"	5/8"	1/2"	1/16"
BEAM S15.9	0"	7/16"	5/8"	1/2"	0"

LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
GIRDER G1-16	1 3/8"	1 3/16"	15/16"	9/16"	0"
BEAM S16.1	1 1/4"	1 1/8"	15/16"	9/16"	0"
BEAM S16.2	1 1/16"	1 1/8"	15/16"	9/16"	1/16"
BEAM S16.3	15/16"	15/16"	13/16"	9/16"	1/16"
BEAM S16.4	3/16"	7/16"	1/2"	7/16"	1/4"
BEAM S16.5	3/16"	7/16"	9/16"	1/2"	1/4"
BEAM S16.6	3/16"	7/16"	11/16"	5/8"	1/4"
BEAM S16.7	1/8"	9/16"	3/4"	5/8"	1/4"
BEAM S16.8	1/16"	9/16"	3/4"	11/16"	1/4"
BEAM S16.9	0"	3/8"	13/16"	11/16"	1/4"

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.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS SPANS 15 AND 16

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	196
F. AID & REG. #		ILLINOIS	FED. AID PROJECT	

SHEET NO. 21 of 74 SHEETS

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S17.13	℄ PIER NO.16	30865.573	30.459	623.944	623.966
	a	30875.489	30.619	623.783	623.832
	b	30885.404	30.806	623.618	623.688
	c	30895.319	31.020	623.449	623.529
	d	30905.232	31.261	623.275	623.355
	e	30915.143	31.529	623.096	623.164
	f	30925.053	31.824	622.913	622.958
	℄ PIER NO.17	30937.657	32.238	622.673	622.680
BEAM S17.12	℄ PIER NO.16	30865.623	24.042	623.815	623.838
	a	30875.557	24.202	623.654	623.702
	b	30885.489	24.390	623.489	623.556
	c	30895.421	24.604	623.319	623.397
	d	30905.351	24.845	623.145	623.222
	e	30915.279	25.114	622.966	623.031
	f	30925.207	25.409	622.782	622.826
	℄ PIER NO.17	30937.832	25.824	622.541	622.547
BEAM S17.11	℄ PIER NO.16	30865.674	17.626	623.686	623.709
	a	30875.624	17.786	623.524	623.571
	b	30885.574	17.974	623.359	623.424
	c	30895.523	18.188	623.189	623.262
	d	30905.470	18.430	623.014	623.087
	e	30915.416	18.699	622.835	622.896
	f	30925.361	18.994	622.650	622.691
	℄ PIER NO.17	30938.008	19.410	622.409	622.413

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

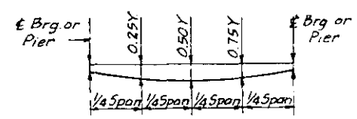
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S17.10	℄ PIER NO.16	30865.724	11.209	623.556	623.579
	a	30875.692	11.370	623.395	623.438
	b	30885.659	11.557	623.229	623.287
	c	30895.625	11.772	623.059	623.124
	d	30905.590	12.014	622.884	622.948
	e	30915.554	12.283	622.704	622.758
	f	30925.515	12.580	622.519	622.554
	℄ PIER NO.17	30938.185	12.996	622.277	622.280
BEAM S17.9	℄ PIER NO.16	30865.775	4.793	623.427	623.449
	a	30875.762	4.747	623.261	623.297
	b	30885.749	4.729	623.091	623.138
	c	30895.736	4.738	622.916	622.968
	d	30905.723	4.774	622.736	622.786
	e	30915.710	4.837	622.552	622.593
	f	30925.696	4.928	622.363	622.389
	℄ PIER NO.17	30938.404	5.082	622.115	622.115
BEAM S17.8	℄ PIER NO.16	30865.796	2.105	623.373	623.394
	a	30875.791	2.118	623.208	623.240
	b	30885.785	2.157	623.039	623.080
	c	30895.778	2.224	622.865	622.910
	d	30905.772	2.317	622.686	622.729
	e	30915.765	2.438	622.503	622.537
	f	30925.757	2.587	622.315	622.335
	℄ BRG.	30937.509	2.796	622.087	622.087

INDICATES STA. 309+37.509 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ PIER NO.16	30865.813	0.000	623.330	623.350
	a	30875.813	0.000	623.165	623.197
	b	30885.813	0.000	622.995	623.036
	c	30895.813	0.000	622.820	622.865
	d	30905.813	0.000	622.639	622.682
	e	30915.813	0.000	622.453	622.488
	f	30925.813	0.000	622.262	622.282
	℄ BRG.	30937.586	0.000	622.029	622.029
BEAM S17.7	℄ PIER NO.16	30865.862	-6.103	623.208	623.215
	a	30875.877	-5.941	623.045	623.066
	b	30885.891	-5.757	622.879	622.909
	c	30895.904	-5.535	622.708	622.744
	d	30905.916	-5.292	622.532	622.567
	e	30915.926	-5.021	622.351	622.379
	f	30925.935	-4.722	622.165	622.182
	℄ BRG.	30937.705	-4.337	621.940	621.940
BEAM S17.6	℄ PIER NO.16	30865.920	-13.394	623.061	623.066
	a	30875.955	-13.232	622.898	622.924
	b	30885.989	-13.043	622.731	622.772
	c	30896.022	-12.826	622.560	622.609
	d	30906.054	-12.582	622.383	622.433
	e	30916.084	-12.311	622.202	622.243
	f	30926.113	-12.012	622.016	622.041
	℄ BRG.	30937.907	-11.626	621.790	621.790

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S17.5	℄ PIER NO.16	30865.949	-17.040	622.987	622.991
	a	30875.990	-17.386	622.815	622.842
	b	30886.033	-17.704	622.638	622.683
	c	30896.078	-17.995	622.455	622.511
	d	30906.124	-18.258	622.268	622.324
	e	30916.172	-18.494	622.077	622.123
	f	30926.220	-18.703	621.880	621.908
	℄ BRG.	30938.109	-18.914	621.641	621.641
BEAM S17.4	℄ PIER NO.16	30865.978	-20.686	622.914	622.917
	a	30876.011	-21.392	622.734	622.763
	b	30886.047	-22.071	622.550	622.597
	c	30896.087	-22.723	622.361	622.420
	d	30906.131	-23.348	622.166	622.228
	e	30916.178	-23.945	621.967	622.021
	f	30926.228	-24.515	621.774	621.830
	℄ BRG.	30938.283	-25.162	621.528	621.528
BEAM S17.3	℄ BRG.	30869.984	-27.944	622.705	622.705
	a	30880.034	-28.685	622.524	622.539
	b	30890.088	-29.399	622.339	622.367
	c	30900.146	-30.086	622.148	622.182
	d	30910.207	-30.745	621.953	621.986
	e	30920.273	-31.377	621.753	621.779
	f	30930.341	-31.982	621.548	621.560
	℄ BRG.	30938.487	-32.451	621.378	621.378

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S17.2	℄ BRG.	30870.042	-34.253	622.578	622.578
	a	30880.127	-34.691	622.403	622.418
	b	30890.214	-35.102	622.223	622.250
	c	30900.304	-35.485	622.038	622.072
	d	30910.396	-35.841	621.848	621.880
	e	30920.489	-36.169	621.653	621.679
	f	30930.585	-36.470	621.453	621.465
	℄ BRG.	30938.606	-36.689	621.291	621.291
BEAM S17.1	℄ BRG.	30870.100	-40.563	622.450	622.450
	a	30880.211	-40.697	622.281	622.296
	b	30890.322	-40.802	622.107	622.135
	c	30900.435	-40.881	621.927	621.961
	d	30910.547	-40.932	621.743	621.776
	e	30920.660	-40.955	621.554	621.580
	f	30930.773	-40.950	621.360	621.372
	℄ BRG.	30938.725	-40.928	621.203	621.203



LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
BEAMS S17.1 THRU S17.3	0"	5/16"	7/16"	5/16"	0"
BEAM S17.4	0"	9/16"	3/4"	1/2"	0"
BEAM S17.5	1/16"	1/2"	11/16"	1/2"	0"
BEAM S17.6	1/16"	7/16"	9/16"	7/16"	0"
BEAM S17.7	1/16"	5/16"	7/16"	5/16"	0"
BEAM S17.8	1/4"	1/2"	1/2"	3/8"	0"
BEAM S17.9	1/4"	9/16"	5/8"	7/16"	0"
BEAM S17.10	1/4"	11/16"	3/4"	9/16"	0"
BEAM S17.11	1/4"	3/4"	7/8"	5/8"	1/16"
BEAM S17.12	1/4"	3/4"	15/16"	11/16"	1/16"
BEAM S17.13	1/4"	13/16"	15/16"	11/16"	1/16"

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.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 17

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-H, 6-P, 400HB, 40HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	197

SHEET NO. 22 of 74 SHEETS

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S18.13	℄ PIER NO.17	30937.657	32.238	622.673	622.680
	a	30947.569	32.075	622.468	622.488
	b	30957.481	31.938	622.259	622.287
	c	30967.395	31.829	622.045	622.074
	d	30977.308	31.746	621.826	621.849
	e	30987.222	31.691	621.602	621.612
	℄ BRG.	30993.738	31.669	621.452	621.452
BEAM S18.12	℄ PIER NO.17	30937.832	25.824	622.541	622.547
	a	30947.761	25.660	622.336	622.355
	b	30957.691	25.523	622.126	622.154
	c	30967.622	25.413	621.911	621.940
	d	30977.553	25.330	621.692	621.715
	e	30987.484	25.274	621.468	621.478
	℄ BRG.	30993.718	25.252	621.324	621.325
BEAM S18.11	℄ PIER NO.17	30938.008	19.410	622.409	622.413
	a	30947.955	19.245	622.204	622.222
	b	30957.902	19.107	621.993	622.020
	c	30967.849	18.996	621.778	621.806
	d	30977.798	18.913	621.558	621.580
	e	30987.746	18.856	621.333	621.343
	℄ BRG.	30993.698	18.836	621.197	621.197

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

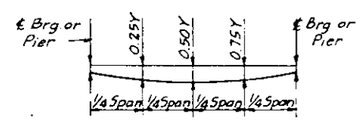
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S18.10	℄ PIER NO.17	30938.185	12.996	622.277	622.280
	a	30948.148	12.830	622.071	622.088
	b	30958.113	12.692	621.860	621.886
	c	30968.078	12.580	621.645	621.672
	d	30978.043	12.496	621.424	621.445
	e	30988.009	12.439	621.199	621.208
	℄ BRG.	30993.677	12.419	621.069	621.069
BEAM S18.9	℄ PIER NO.17	30938.404	5.082	622.115	622.115
	a	30948.389	5.187	621.914	621.928
	b	30958.374	5.319	621.707	621.731
	c	30968.358	5.477	621.497	621.521
	d	30978.341	5.664	621.281	621.301
	e	30988.323	5.877	621.061	621.069
	℄ BRG.	30993.657	6.002	620.941	620.941
BEAM S18.8	℄ BRG.	30939.432	2.547	622.043	622.043
	a	30949.425	2.502	621.838	621.846
	b	30959.418	2.483	621.629	621.639
	c	30969.411	2.492	621.414	621.424
	d	30979.404	2.529	621.195	621.205
	℄ BRG.	30993.647	2.627	620.874	620.874

INDICATES STA. 309+93.647 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	30939.503	0.000	621.991	621.991
BEAM S18.7	a	30949.503	0.000	621.787	621.794
	b	30959.503	0.000	621.577	621.588
	c	30969.503	0.000	621.362	621.373
	d	30979.503	0.000	621.142	621.152
	℄ BRG.	30993.638	0.000	620.821	620.821
BEAM S18.6	℄ BRG.	30939.629	-4.471	621.899	621.899
	a	30949.640	-4.615	621.692	621.699
	b	30959.652	-4.732	621.479	621.490
	c	30969.665	-4.821	621.262	621.273
	d	30979.678	-4.884	621.040	621.051
	℄ BRG.	30993.623	-4.925	620.723	620.723
BEAM S18.5	℄ BRG.	30939.826	-11.489	621.755	621.755
	a	30949.855	-11.733	621.545	621.552
	b	30959.885	-11.949	621.330	621.340
	c	30969.916	-12.139	621.110	621.121
	d	30979.948	-12.301	620.886	620.896
	℄ BRG.	30993.599	-12.477	620.573	620.573

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S18.4	℄ BRG.	30940.025	-18.507	621.610	621.610
	a	30950.070	-18.852	621.398	621.406
	b	30960.117	-19.169	621.181	621.191
	c	30970.166	-19.459	620.959	620.969
	d	30980.216	-19.722	620.731	620.742
	℄ BRG.	30993.575	-20.029	620.422	620.422
BEAM S18.3	℄ BRG.	30940.224	-25.525	621.482	621.482
	a	30950.285	-25.972	621.269	621.277
	b	30960.348	-26.392	621.051	621.062
	c	30970.413	-26.784	620.829	620.839
	d	30980.480	-27.148	620.601	620.611
	℄ BRG.	30993.551	-27.581	620.298	620.298
BEAM S18.2	℄ BRG.	30940.424	-32.543	621.337	621.337
	a	30950.499	-33.093	621.122	621.130
	b	30960.577	-33.616	620.902	620.912
	c	30970.658	-34.111	620.677	620.687
	d	30980.741	-34.579	620.447	620.457
	℄ BRG.	30993.526	-35.133	620.148	620.148

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S18.1	℄ BRG.	30940.543	-36.701	621.252	621.252
	a	30950.638	-37.065	621.040	621.044
	b	30960.734	-37.401	620.823	620.831
	c	30970.833	-37.710	620.601	620.610
	d	30980.933	-37.991	620.374	620.379
	℄ BRG.	30993.516	-38.303	620.085	620.085
	℄ BRG.	30940.662	-40.860	621.166	621.166
	a	30950.773	-41.035	620.958	620.962
	b	30960.885	-41.183	620.744	620.752
	c	30970.998	-41.304	620.526	620.534
	d	30981.112	-41.397	620.322	620.327
	℄ BRG.	30993.506	-41.473	620.021	620.021



LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
BEAMS S18.1 & S18.2	0"	1/16"	1/8"	1/16"	0"
BEAMS S18.3 THRU S18.8	0"	1/8"	1/8"	1/8"	0"
BEAM S18.9	0"	3/16"	5/16"	3/16"	0"
BEAM S18.10	0"	1/4"	5/16"	1/4"	0"
BEAM S18.11	1/16"	1/4"	5/16"	1/4"	0"
BEAMS S18.12 & S18.13	1/16"	1/4"	3/8"	1/4"	0"

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.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 18

SECTION

F.A.I. ROUTE 80/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	198
F. HWY. A. REG. 4		ILLINOIS	FED. AID PROJECT	

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S19.15	℄ BRG.	30995.638	31.892	621.413	621.413
	a	31005.552	31.835	621.179	621.192
	b	31015.466	31.805	620.941	620.964
	c	31025.380	31.802	620.698	620.727
	d	31035.294	31.825	620.451	620.478
	e	31045.208	31.876	620.198	620.220
	f	31055.121	31.954	619.941	619.951
	℄ BRG.	31063.516	32.041	619.720	619.720
BEAM S19.14	℄ BRG.	30995.621	25.330	621.282	621.282
	a	31005.553	25.273	621.048	621.060
	b	31015.484	25.242	620.810	620.832
	c	31025.416	25.239	620.566	620.595
	d	31035.348	25.263	620.318	620.346
	e	31045.279	25.314	620.065	620.087
	f	31055.210	25.392	619.807	619.818
	℄ BRG.	31063.620	25.479	619.586	619.586
BEAM S19.13	℄ BRG.	30995.604	18.767	621.151	621.151
	a	31005.553	18.710	620.917	620.929
	b	31015.503	18.680	620.678	620.700
	c	31025.452	18.677	620.434	620.463
	d	31035.401	18.701	620.185	620.213
	e	31045.350	18.752	619.932	619.954
	f	31055.299	18.830	619.674	619.684
	℄ BRG.	31063.724	18.917	619.452	619.452

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S19.12	℄ BRG.	30995.587	12.205	621.020	621.020
	a	31005.554	12.148	620.786	620.798
	b	31015.521	12.117	620.546	620.569
	c	31025.488	12.114	620.302	620.331
	d	31035.455	12.138	620.053	620.081
	e	31045.422	12.190	619.799	619.821
	f	31055.388	12.268	619.540	619.551
	℄ BRG.	31063.828	12.356	619.318	619.318
BEAM S19.11	℄ BRG.	30995.570	5.643	620.890	620.890
	a	31005.554	5.585	620.654	620.667
	b	31015.539	5.555	620.415	620.436
	c	31025.524	5.552	620.170	620.194
	d	31035.509	5.576	619.920	619.944
	e	31045.494	5.628	619.666	619.687
	f	31055.478	5.706	619.407	619.417
	℄ BRG.	31063.932	5.794	619.184	619.184
BEAM S19.10	℄ BRG.	30995.562	2.684	620.831	620.831
	a	31005.555	2.615	620.595	620.604
	b	31015.547	2.572	620.355	620.371
	c	31025.540	2.557	620.109	620.129
	d	31035.533	2.569	619.859	619.878
	e	31045.526	2.609	619.605	619.621
	f	31055.519	2.675	619.345	619.353
	℄ BRG.	31063.981	2.753	619.121	619.121

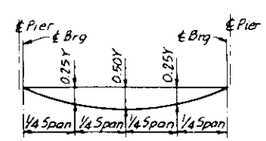
INDICATES STA. 310+63.981 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	30995.555	0.000	620.777	620.777
	a	31005.555	0.000	620.543	620.552
	b	31015.555	0.000	620.303	620.319
	c	31025.555	0.000	620.058	620.077
	d	31035.555	0.000	619.808	619.827
	e	31045.555	0.000	619.552	619.568
	f	31055.555	0.000	619.291	619.298
	℄ BRG.	31064.025	0.000	619.065	619.065
BEAM S19.9	℄ BRG.	30995.548	-2.555	620.726	620.726
	a	31005.555	-2.625	620.490	620.502
	b	31015.562	-2.667	620.250	620.271
	c	31025.569	-2.683	620.004	620.029
	d	31035.577	-2.670	619.754	619.778
	e	31045.584	-2.631	619.498	619.520
	f	31055.591	-2.564	619.238	619.249
	℄ BRG.	31064.065	-2.486	619.014	619.014
BEAM S19.8	℄ BRG.	30995.534	-7.795	620.622	620.622
	a	31005.556	-7.865	620.385	620.397
	b	31015.577	-7.907	620.144	620.166
	c	31025.599	-7.922	619.898	619.923
	d	31035.620	-7.910	619.648	619.672
	e	31045.642	-7.870	619.392	619.413
	f	31055.663	-7.803	619.132	619.142
	℄ BRG.	31064.149	-7.725	618.907	618.907

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S19.7	℄ BRG.	30995.520	-13.035	620.517	620.517
	a	31005.556	-13.104	620.281	620.293
	b	31015.592	-13.147	620.039	620.061
	c	31025.628	-13.162	619.793	619.818
	d	31035.664	-13.149	619.542	619.566
	e	31045.700	-13.109	619.286	619.307
	f	31055.735	-13.042	619.025	619.035
	℄ BRG.	31064.234	-12.964	618.800	618.800
BEAM S19.6	℄ BRG.	30995.507	-18.274	620.413	620.413
	a	31005.556	-18.344	620.176	620.185
	b	31015.607	-18.386	619.934	619.950
	c	31025.657	-18.401	619.687	619.707
	d	31035.707	-18.389	619.436	619.455
	e	31045.758	-18.349	619.179	619.195
	f	31055.808	-18.281	618.918	618.926
	℄ BRG.	31064.318	-18.203	618.693	618.693
BEAM S19.5	℄ BRG.	30995.498	-21.378	620.351	620.351
	a	31005.557	-21.439	620.114	620.123
	b	31015.616	-21.472	619.872	619.889
	c	31025.674	-21.478	619.625	619.645
	d	31035.733	-21.456	619.374	619.393
	e	31045.792	-21.407	619.117	619.133
	f	31055.850	-21.330	618.856	618.864
	℄ BRG.	31064.368	-21.244	618.631	618.631

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S19.4	℄ BRG.	30995.486	-25.993	620.286	620.286
	a	31005.556	-26.166	620.048	620.060
	b	31015.627	-26.312	619.806	619.828
	c	31025.699	-26.430	619.559	619.583
	d	31035.771	-26.521	619.307	619.331
	e	31045.844	-26.584	619.050	619.071
	f	31055.917	-26.620	618.788	618.798
	℄ BRG.	31064.455	-26.629	618.562	618.562
BEAM S19.3	℄ BRG.	30995.474	-30.607	620.194	620.194
	a	31005.554	-30.893	619.954	619.966
	b	31015.636	-31.151	619.709	619.731
	c	31025.719	-31.382	619.459	619.484
	d	31035.804	-31.585	619.205	619.229
	e	31045.889	-31.761	618.945	618.966
	f	31055.976	-31.909	618.680	618.691
	℄ BRG.	31064.543	-32.014	618.452	618.452
BEAM S19.2	℄ BRG.	30995.461	-35.222	620.102	620.102
	a	31005.551	-35.620	619.859	619.871
	b	31015.642	-35.991	619.612	619.634
	c	31025.736	-36.334	619.360	619.384
	d	31035.831	-36.649	619.103	619.127
	e	31045.928	-36.938	618.840	618.861
	f	31056.027	-37.198	618.573	618.583
	℄ BRG.	31064.631	-37.398	618.342	618.342

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S19.1	℄ BRG.	30995.444	-41.482	619.977	619.977
	a	31005.556	-41.739	619.737	619.752
	b	31015.668	-41.968	619.492	619.519
	c	31025.782	-42.169	619.242	619.276
	d	31035.897	-42.343	618.987	619.020
	e	31046.013	-42.490	618.727	618.754
	f	31056.130	-42.608	618.462	618.475
	℄ BRG.	31064.717	-42.688	618.233	618.233



LOCATION	0.25Y	0.50Y
BEAM S19.1	5/16"	7/16"
BEAMS S19.2 THRU S19.4, S19.7 THRU S19.9 & S19.11	1/4"	5/16"
BEAMS S19.5, S19.6 & S19.10	3/16"	1/4"
BEAMS S19.12 THRU S19.15	1/4"	3/8"

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.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 19

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	NO.
	*		426	199

SHEET NO. 24 OF 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S20.13	℄ BRG.	31065.416	32.072	619.669	619.669
	a	31075.329	32.022	619.399	619.406
	b	31085.243	32.000	619.124	619.136
	c	31095.156	32.004	618.843	618.858
	d	31105.070	32.036	618.559	618.569
	℄ BRG.	31118.553	32.122	618.164	618.164
BEAM S20.12	℄ BRG.	31065.523	25.510	619.535	619.535
	a	31075.454	25.461	619.264	619.272
	b	31085.385	25.439	618.988	619.001
	c	31095.316	25.444	618.708	618.722
	d	31105.247	25.476	618.423	618.433
	℄ BRG.	31118.754	25.563	618.027	618.027
BEAM S20.11	℄ BRG.	31065.630	18.948	619.401	619.401
	a	31075.579	18.900	619.129	619.137
	b	31085.527	18.878	618.853	618.866
	c	31095.476	18.883	618.572	618.586
	d	31105.425	18.916	618.286	618.297
	℄ BRG.	31118.956	19.003	617.890	617.890

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

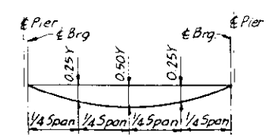
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S20.10	℄ BRG.	31065.738	12.387	619.267	619.267
	a	31075.704	12.338	618.995	619.002
	b	31085.671	12.317	618.718	618.731
	c	31095.637	12.323	618.436	618.451
	d	31105.604	12.356	618.150	618.160
	℄ BRG.	31119.159	12.444	617.752	617.752
BEAM S20.9	℄ BRG.	31065.846	5.825	619.133	619.133
	a	31075.830	5.777	618.860	618.868
	b	31085.814	5.756	618.583	618.596
	c	31095.799	5.762	618.300	618.315
	d	31105.783	5.796	618.013	618.024
	℄ BRG.	31119.362	5.885	617.615	617.615
BEAM S20.8	℄ BRG.	31065.896	2.784	619.070	619.070
	a	31075.888	2.736	618.798	618.805
	b	31085.881	2.715	618.520	618.530
	c	31095.874	2.721	618.237	618.248
	d	31105.866	2.755	617.950	617.961
	℄ BRG.	31119.457	2.844	617.552	617.552

INDICATES STA. 311+19.457 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	31065.942	0.000	619.014	619.014
BEAM S20.7	a	31075.942	0.000	618.741	618.749
	b	31085.942	0.000	618.464	618.474
	c	31095.942	0.000	618.181	618.191
	d	31105.942	0.000	617.893	617.903
	℄ BRG.	31119.545	0.000	617.492	617.492
BEAM S20.6	℄ BRG.	31066.012	-4.205	618.928	618.928
	a	31076.023	-4.253	618.654	618.662
	b	31086.035	-4.273	618.376	618.389
	c	31096.046	-4.266	618.093	618.107
	d	31106.058	-4.232	617.805	617.815
	℄ BRG.	31119.675	-4.142	617.405	617.405
	℄ BRG.	31066.128	-11.193	618.785	618.785
	a	31076.158	-11.241	618.511	618.518
	b	31086.189	-11.261	618.232	618.245
	c	31096.220	-11.254	617.948	617.962
	d	31106.251	-11.219	617.659	617.670
	℄ BRG.	31119.893	-11.128	617.259	617.259

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S20.5	℄ BRG.	31066.244	-18.182	618.642	618.642
	a	31076.294	-18.229	618.367	618.375
	b	31086.344	-18.249	618.088	618.098
	c	31096.394	-18.241	617.803	617.814
	d	31106.444	-18.206	617.514	617.524
	℄ BRG.	31120.113	-18.114	617.113	617.113
BEAM S20.4	℄ BRG.	31066.295	-21.223	618.580	618.580
	a	31076.353	-21.270	618.305	618.312
	b	31086.412	-21.290	618.025	618.035
	c	31096.470	-21.282	617.740	617.751
	d	31106.528	-21.246	617.451	617.461
	℄ BRG.	31120.208	-21.154	617.049	617.049
BEAM S20.3	℄ BRG.	31066.431	-29.326	618.455	618.455
	a	31076.511	-29.452	618.180	618.188
	b	31086.592	-29.551	617.900	617.913
	c	31096.673	-29.622	617.615	617.629
	d	31106.754	-29.666	617.325	617.335
	℄ BRG.	31120.478	-29.681	616.922	616.922

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S20.2	℄ BRG.	31066.568	-37.429	618.289	618.289
	a	31076.669	-37.635	618.012	618.020
	b	31086.771	-37.813	617.730	617.743
	c	31096.874	-37.963	617.442	617.457
	d	31106.978	-38.086	617.150	617.161
	℄ BRG.	31120.749	-38.208	616.744	616.744
BEAM S20.1	℄ BRG.	31066.656	-42.649	618.183	618.183
	a	31076.769	-42.951	617.903	617.911
	b	31086.884	-43.225	617.618	617.631
	c	31097.001	-43.472	617.329	617.343
	d	31107.119	-43.691	617.034	617.044
	℄ BRG.	31120.931	-43.946	616.624	616.624



LOCATION	0.25Y	0.50Y
BEAMS S20.1 THRU S20.3,	1/8"	3/16"
S20.6, S20.7, S20.9		
THRU S20.13		
BEAMS S20.4, S20.5 & S20.8	1/8"	1/8"

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.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 20

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPAN 21

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S21.13	℄ BRG.	31120.454	32.119	618.107	618.107
	a	31130.367	32.069	617.807	617.815
	b	31140.280	32.046	617.506	617.518
	c	31150.194	32.050	617.204	617.219
	d	31160.107	32.081	616.903	616.915
	e	31170.020	32.139	616.603	616.608
	℄ BRG.	31177.414	32.200	616.379	616.379
BEAM S21.12	℄ BRG.	31120.658	25.560	617.970	617.970
	a	31130.589	25.509	617.670	617.677
	b	31140.520	25.484	617.367	617.379
	c	31150.451	25.487	617.065	617.080
	d	31160.382	25.517	616.764	616.775
	e	31170.313	25.574	616.463	616.468
	℄ BRG.	31177.720	25.634	616.239	616.239
BEAM S21.11	℄ BRG.	31120.864	19.001	617.833	617.833
	a	31130.812	18.948	617.532	617.539
	b	31140.761	18.923	617.229	617.241
	c	31150.710	18.924	616.926	616.941
	d	31160.658	18.953	616.624	616.635
	e	31170.607	19.009	616.323	616.328
	℄ BRG.	31178.027	19.068	616.098	616.098

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S21.10	℄ BRG.	31121.070	12.441	617.695	617.695
	a	31131.036	12.388	617.394	617.401
	b	31141.002	12.361	617.090	617.102
	c	31150.969	12.362	616.787	616.802
	d	31160.935	12.389	616.484	616.496
	e	31170.901	12.444	616.182	616.188
	℄ BRG.	31178.336	12.503	615.957	615.957
BEAM S21.9	℄ BRG.	31121.277	5.882	617.558	617.558
	a	31131.261	5.827	617.255	617.263
	b	31141.245	5.799	616.951	616.964
	c	31151.229	5.799	616.648	616.663
	d	31161.213	5.825	616.345	616.356
	e	31171.197	5.879	616.042	616.047
	℄ BRG.	31178.645	5.937	615.817	615.817
BEAM S21.8	℄ BRG.	31121.373	2.842	617.494	617.494
	a	31131.365	2.787	617.192	617.199
	b	31141.357	2.760	616.887	616.899
	c	31151.350	2.760	616.583	616.598
	d	31161.342	2.786	616.280	616.291
	e	31171.335	2.841	615.977	615.982
	℄ BRG.	31178.789	2.899	615.751	615.751

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	31121.463	0.000	617.435	617.435
	a	31131.463	0.000	617.133	617.140
	b	31141.463	0.000	616.829	616.841
	c	31151.463	0.000	616.525	616.540
	d	31161.463	0.000	616.220	616.232
	e	31171.463	0.000	615.916	615.922
	℄ BRG.	31178.926	0.000	615.689	615.689
BEAM S21.7	℄ BRG.	31121.595	-4.155	617.348	617.348
	a	31131.606	-4.209	617.044	617.052
	b	31141.617	-4.235	616.739	616.752
	c	31151.629	-4.235	616.435	616.450
	d	31161.640	-4.207	616.131	616.142
	e	31171.652	-4.152	615.828	615.833
	℄ BRG.	31179.120	-4.093	615.601	615.601
BEAM S21.6	℄ BRG.	31121.817	-11.151	617.201	617.201
	a	31131.848	-11.204	616.897	616.904
	b	31141.878	-11.231	616.591	616.604
	c	31151.909	-11.229	616.286	616.301
	d	31161.940	-11.201	615.982	615.993
	e	31171.970	-11.145	615.678	615.683
	℄ BRG.	31179.453	-11.086	615.452	615.452

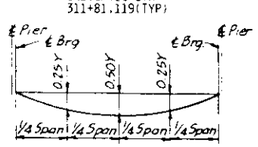
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S21.5	℄ BRG.	31122.041	-18.147	617.054	617.054
	a	31132.090	-18.200	616.750	616.757
	b	31142.140	-18.226	616.444	616.456
	c	31152.190	-18.224	616.138	616.153
	d	31162.240	-18.195	615.833	615.844
	e	31172.290	-18.138	615.528	615.534
	℄ BRG.	31179.787	-18.078	615.302	615.302
BEAM S21.4	℄ BRG.	31122.138	-21.177	616.991	616.991
	a	31132.196	-21.230	616.686	616.693
	b	31142.254	-21.255	616.380	616.392
	c	31152.312	-21.253	616.074	616.089
	d	31162.370	-21.223	615.768	615.780
	e	31172.428	-21.166	615.464	615.469
	℄ BRG.	31179.932	-21.106	615.237	615.237
BEAM S21.3	℄ BRG.	31122.412	-29.704	616.865	616.865
	a	31132.493	-29.756	616.561	616.571
	b	31142.575	-29.780	616.256	616.273
	c	31152.657	-29.777	615.951	615.971
	d	31162.739	-29.746	615.647	615.664
	e	31172.820	-29.688	615.343	615.352
	℄ BRG.	31180.341	-29.627	615.117	615.118

SPAN 21 (CONT.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S21.2	℄ BRG.	31122.687	-38.231	616.686	616.686
	a	31132.792	-38.282	616.381	616.392
	b	31142.898	-38.305	616.075	616.093
	c	31153.003	-38.301	615.770	615.790
	d	31163.109	-38.270	615.465	615.482
	e	31173.214	-38.211	615.161	615.169
	℄ BRG.	31180.752	-38.149	614.935	614.935
BEAM S21.1	℄ BRG.	31122.875	-44.018	616.564	616.564
	a	31132.990	-44.379	616.253	616.264
	b	31143.107	-44.713	615.941	615.958
	c	31153.226	-45.019	615.629	615.649
	d	31163.347	-45.298	615.318	615.334
	e	31173.469	-45.549	615.007	615.015
	℄ BRG.	31181.119	-45.720	614.772	614.772

INDICATES STA. 311+81.119 (TYP)

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.



LOCATION	0.25Y	0.50Y
BEAMS S21.1 THRU S21.3	3/16"	1/4"
BEAMS S21.4 THRU S21.13	1/8"	3/16"
BEAMS S22.1 & S22.2	1/16"	1/8"
BEAMS S22.3 THRU S22.15	1/8"	1/8"

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.

SPAN 22

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S22.15	℄ BRG.	31179.316	32.207	616.322	616.322
	a	31189.229	32.165	616.019	616.027
	b	31199.142	32.151	615.717	615.728
	c	31209.055	32.163	615.416	615.427
	d	31218.968	32.203	615.115	615.124
	℄ BRG.	31229.195	32.272	614.806	614.806
BEAM S22.14	℄ BRG.	31179.625	25.641	616.181	616.181
	a	31189.556	25.601	615.878	615.886
	b	31199.486	25.587	615.576	615.586
	c	31209.417	25.601	615.274	615.284
	d	31219.348	25.641	614.973	614.981
	℄ BRG.	31229.593	25.711	614.663	614.663
BEAM S22.13	℄ BRG.	31179.936	19.076	616.040	616.040
	a	31189.884	19.036	615.737	615.745
	b	31199.832	19.023	615.434	615.444
	c	31209.781	19.038	615.132	615.142
	d	31219.729	19.079	614.830	614.838
	℄ BRG.	31229.993	19.151	614.519	614.519

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S22.12	℄ BRG.	31180.248	12.510	615.899	615.899
	a	31190.214	12.471	615.595	615.604
	b	31200.180	12.460	615.292	615.302
	c	31210.146	12.475	614.989	615.000
	d	31220.112	12.518	614.687	614.696
	℄ BRG.	31230.394	12.590	614.376	614.376
BEAM S22.11	℄ BRG.	31180.561	5.945	615.758	615.758
	a	31190.544	5.907	615.454	615.462
	b	31200.528	5.896	615.150	615.161
	c	31210.512	5.913	614.847	614.857
	d	31220.496	5.956	614.544	614.553
	℄ BRG.	31230.796	6.030	614.232	614.232
BEAM S22.10	℄ BRG.	31180.706	2.907	615.693	615.693
	a	31190.698	2.869	615.389	615.397
	b	31200.690	2.859	615.085	615.095
	c	31210.682	2.876	614.781	614.791
	d	31220.674	2.920	614.478	614.486
	℄ BRG.	31230.983	2.994	614.166	614.166

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	31180.845	0.000	615.631	615.631
	a	31190.845	0.000	615.327	615.335
	b	31200.845	0.000	615.023	615.033
	c	31210.845	0.000	614.718	614.729
	d	31220.845	0.000	614.414	614.423
	℄ BRG.	31231.168	0.000	614.100	614.100
BEAM S22.9	℄ BRG.	31181.041	-4.085	615.543	615.543
	a	31191.052	-4.122	615.238	615.246
	b	31201.063	-4.131	614.933	614.944
	c	31211.074	-4.114	614.629	614.640
	d	31221.085	-4.068	614.326	614.334
	℄ BRG.	31231.414	-3.993	614.013	614.013
BEAM S22.8	℄ BRG.	31181.377	-11.077	615.393	615.393
	a	31191.407	-11.113	615.087	615.096
	b	31201.438	-11.121	614.782	614.793
	c	31211.468	-11.102	614.478	614.488
	d	31221.498	-11.056	614.173	614.182
	℄ BRG.	31231.847	-10.980	613.860	613.860

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S22.7	℄ BRG.	31181.715	-18.069	615.243	615.243
	a	31191.764	-18.104	614.937	614.945
	b	31201.814	-18.111	614.631	614.641
	c	31211.863	-18.091	614.326	614.336
	d	31221.913	-18.044	614.021	614.030
	℄ BRG.	31232.281	-17.966	613.707	613.707
BEAM S22.6	℄ BRG.	31181.861	-21.097	615.178	615.178
	a	31191.919	-21.135	614.871	614.880
	b	31201.977	-21.147	614.565	614.576
	c	31212.035	-21.130	614.260	614.270
	d	31222.093	-21.086	613.955	613.963
	℄ BRG.	31232.471	-21.013	613.641	613.641
BEAM S22.5	℄ BRG.	31182.137	-26.778	615.112	615.112
	a	31192.210	-26.766	614.805	614.813
	b	31202.284	-26.727	614.499	614.509
	c	31212.357	-26.660	614.193	614.203
	d	31222.429	-26.566	613.886	613.895
	℄ BRG.	31232.810	-26.440	613.571	613.571

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S22.4	℄ BRG.	31182.413	-32.459	614.998	614.998
	a	31192.502	-32.396	614.695	614.703
	b	31202.591	-32.307	614.392	614.402
	c	31212.679	-32.189	614.089	614.100
	d	31222.766	-32.044	613.787	613.796
	℄ BRG.	31233.150	-31.867	613.477	613.477
BEAM S22.3	℄ BRG.	31182.691	-38.140	614.876	614.876
	a	31192.795	-38.027	614.573	614.581
	b	31202.899	-37.887	614.271	614.281
	c	31213.001	-37.719	613.969	613.979
	d	31223.103	-37.523	613.668	613.676
	℄ BRG.	31233.491	-37.294	613.358	613.358
BEAM S22.2	℄ BRG.	31182.876	-41.925	614.795	614.795
	a	31192.991	-42.078	614.486	614.490
	b	31203.106	-42.203	614.178	614.186
	c	31213.222	-42.300	613.871	613.879
	d	31223.339	-42.370	613.564	613.568
	℄ BRG.	31233.813	-42.414	613.246	613.246

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S22.1	℄ BRG.	31183.062	-45.711	614.714	614.714
	a	31193.180	-46.128	614.400	614.404
	b	31203.300	-46.517	614.086	614.094
	c	31213.422	-46.879	613.773	613.781
	d	31223.547	-47.214	613.460	613.465
	℄ BRG.	31234.137	-47.534	613.134	613.134

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS SPANS 21 AND 22

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	201
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 26 of 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S23.15	℄ BRG.	31231.099	32.265	614.748	614.748
	a	31241.017	32.232	614.446	614.447
	b	31250.925	32.227	614.144	614.148
	℄ BRG.	31265.280	32.268	613.708	613.708
BEAM S23.14	℄ BRG.	31231.501	25.704	614.604	614.604
	a	31241.431	25.663	614.302	614.302
	b	31251.362	25.649	613.999	614.004
	c	31261.292	25.661	613.697	613.697
	℄ BRG.	31269.249	25.691	613.456	613.456
BEAM S23.13	℄ BRG.	31231.904	19.144	614.461	614.461
	a	31241.852	19.095	614.157	614.157
	b	31251.800	19.073	613.854	613.859
	c	31261.748	19.079	613.552	613.552
	℄ BRG.	31273.233	19.119	613.203	613.203

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S23.12	℄ BRG.	31232.308	12.584	614.317	614.317
	a	31242.274	12.529	614.013	614.022
	b	31252.240	12.501	613.710	613.720
	c	31262.206	12.500	613.406	613.417
	d	31272.172	12.527	613.104	613.109
	℄ BRG.	31277.230	12.551	612.951	612.951
BEAM S23.11	℄ BRG.	31232.714	6.023	614.174	614.174
	a	31242.697	5.963	613.869	613.878
	b	31252.681	5.930	613.565	613.575
	c	31262.665	5.925	613.261	613.271
	d	31272.649	5.947	612.958	612.965
	℄ BRG.	31281.242	5.987	612.697	612.697
BEAM S23.10	℄ BRG.	31232.902	2.987	614.107	614.107
	a	31242.894	2.925	613.802	613.810
	b	31252.886	2.890	613.498	613.508
	c	31262.878	2.883	613.194	613.204
	d	31272.870	2.903	612.890	612.899
	℄ BRG.	31283.104	2.951	612.580	612.580

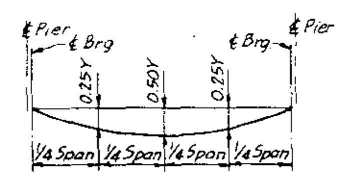
INDICATES STA. 312+83.104 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP SEB LANES	℄ BRG.	31233.088	0.000	614.042	614.042
	a	31243.088	0.000	613.738	613.746
	b	31253.088	0.000	613.434	613.444
	c	31263.088	0.000	613.130	613.140
	d	31273.088	0.000	612.825	612.834
	℄ BRG.	31284.916	0.000	612.466	612.466
BEAM S23.9	℄ BRG.	31233.337	-3.999	613.955	613.955
	a	31243.348	-4.067	613.649	613.656
	b	31253.359	-4.108	613.343	613.356
	c	31263.370	-4.121	613.039	613.053
	d	31273.381	-4.107	612.734	612.745
	℄ BRG.	31287.404	-4.041	612.309	612.309
BEAM S23.8	℄ BRG.	31233.773	-10.986	613.802	613.802
	a	31243.803	-11.058	613.495	613.506
	b	31253.833	-11.104	613.189	613.207
	c	31263.863	-11.121	612.884	612.904
	d	31273.894	-11.112	612.579	612.596
	e	31283.924	-11.075	612.274	612.283
	℄ BRG.	31291.722	-11.028	612.038	612.038

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S23.7	℄ BRG.	31234.211	-17.972	613.648	613.648
	a	31244.260	-18.049	613.341	613.348
	b	31254.309	-18.098	613.035	613.047
	c	31264.359	-18.120	612.729	612.744
	d	31274.408	-18.114	612.423	612.435
	e	31284.458	-18.081	612.118	612.126
	℄ BRG.	31296.056	-18.009	611.767	611.767
BEAM S23.6	℄ BRG.	31234.402	-21.008	613.582	613.582
	a	31244.459	-21.084	613.274	613.281
	b	31254.517	-21.133	612.966	612.979
	c	31264.575	-21.154	612.661	612.676
	d	31274.633	-21.148	612.356	612.368
	e	31284.691	-21.115	612.050	612.059
	℄ BRG.	31297.936	-21.029	611.649	611.649
BEAM S23.5	℄ BRG.	31234.744	-26.435	613.512	613.512
	a	31244.815	-26.560	613.205	613.218
	b	31254.888	-26.659	612.899	612.921
	c	31264.961	-26.730	612.658	612.683
	d	31275.034	-26.773	612.378	612.402
	e	31285.108	-26.789	612.095	612.115
	f	31295.181	-26.777	611.807	611.814
	℄ BRG.	31301.513	-26.756	611.623	611.623

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S23.4	℄ BRG.	31235.086	-31.862	613.419	613.419
	a	31245.173	-32.032	613.111	613.126
	b	31255.260	-32.175	612.803	612.830
	c	31265.348	-32.291	612.560	612.589
	d	31275.436	-32.379	612.295	612.325
	e	31285.525	-32.440	612.031	612.059
	f	31295.615	-32.473	611.769	611.786
	℄ BRG.	31305.101	-32.479	611.523	611.523
BEAM S23.3	℄ BRG.	31235.430	-37.288	613.300	613.300
	a	31245.531	-37.500	612.990	613.005
	b	31255.633	-37.684	612.682	612.708
	c	31265.736	-37.841	612.432	612.462
	d	31275.839	-37.970	612.166	612.197
	e	31285.943	-38.071	611.901	611.928
	f	31296.048	-38.145	611.637	611.655
	℄ BRG.	31308.700	-38.199	611.308	611.308
BEAM S23.2	℄ BRG.	31235.756	-42.418	613.187	613.187
	a	31245.866	-42.800	612.874	612.899
	b	31255.979	-43.154	612.562	612.610
	c	31266.093	-43.480	612.304	612.363
	d	31276.209	-43.779	612.034	612.099
	e	31286.326	-44.050	611.765	611.819
	f	31296.445	-44.294	611.496	611.536
	g	31306.565	-44.510	611.229	611.244
	℄ BRG.	31312.762	-44.629	611.066	611.066

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S23.1	℄ BRG.	31236.083	-47.548	613.075	613.075
	a	31246.201	-48.081	612.759	612.782
	b	31256.322	-48.586	612.443	612.490
	c	31266.445	-49.063	612.177	612.235
	d	31276.571	-49.513	611.903	611.971
	e	31286.699	-49.935	611.630	611.687
	f	31296.830	-50.330	611.358	611.405
	g	31306.962	-50.697	611.087	611.110
	℄ BRG.	31316.822	-51.028	610.824	610.824



LOCATION	0.25Y	0.50Y
BEAMS S23.1 & S23.2	9/16"	13/16"
BEAMS S23.3 & S23.4	5/16"	3/8"
BEAM S23.5	1/4"	5/16"
BEAMS S23.6, S23.7 & S23.9	1/8"	3/16"
BEAM S23.8	3/16"	1/4"
BEAMS S23.10 THRU S23.12	1/8"	1/8"
BEAMS S23.13 THRU S23.15	0"	1/16"

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.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 23

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

Cook 0505(2-2B, 3-1H, 6-1P, Etc., Sheets 201 Thru 300

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.22	℄ BRG.	31267.997	32.252	613.625	613.625
	a	31277.909	32.165	613.322	613.338
	b	31287.822	32.106	613.019	613.051
	c	31297.736	32.073	612.717	612.754
	d	31307.649	32.068	612.416	612.457
	e	31317.562	32.089	612.116	612.152
	f	31327.475	32.138	611.825	611.856
	g	31337.388	32.214	611.545	611.561
	℄ BRG.	31347.515	32.319	611.269	611.269
BEAM S24.21	℄ BRG.	31270.641	27.875	613.457	613.457
	a	31280.565	27.788	613.154	613.169
	b	31290.490	27.728	612.851	612.882
	c	31300.415	27.695	612.548	612.585
	d	31310.340	27.689	612.246	612.288
	e	31320.265	27.710	611.948	611.984
	f	31330.190	27.759	611.659	611.691
	g	31340.115	27.834	611.381	611.397
	℄ BRG.	31350.291	27.939	611.108	611.108
BEAM S24.20	℄ BRG.	31273.292	23.500	613.289	613.289
	a	31283.228	23.412	612.985	613.001
	b	31293.164	23.352	612.682	612.713
	c	31303.101	23.318	612.379	612.415
	d	31313.038	23.312	612.077	612.118
	e	31322.975	23.333	611.780	611.817
	f	31332.911	23.381	611.494	611.525
	g	31342.848	23.456	611.219	611.235
	℄ BRG.	31353.075	23.562	610.947	610.947

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.19	℄ BRG.	31275.948	19.126	613.121	613.121
	a	31285.896	19.039	612.817	612.832
	b	31295.844	18.978	612.513	612.544
	c	31305.793	18.944	612.210	612.246
	d	31315.742	18.937	611.907	611.949
	e	31325.690	18.958	611.613	611.650
	f	31335.639	19.006	611.329	611.361
	g	31345.587	19.081	611.057	611.073
	℄ BRG.	31355.864	19.186	610.786	610.786
BEAM S24.18	℄ BRG.	31278.611	14.755	612.953	612.953
	a	31288.571	14.667	612.648	612.663
	b	31298.531	14.606	612.344	612.375
	c	31308.492	14.572	612.040	612.077
	d	31318.452	14.565	611.739	611.780
	e	31328.412	14.585	611.447	611.483
	f	31338.373	14.632	611.166	611.197
	g	31348.333	14.707	610.895	610.911
	℄ BRG.	31358.661	14.813	610.626	610.626
BEAM S24.17	℄ BRG.	31281.281	10.386	612.784	612.784
	a	31291.252	10.297	612.479	612.492
	b	31301.224	10.236	612.174	612.200
	c	31311.196	10.201	611.870	611.902
	d	31321.169	10.194	611.570	611.607
	e	31331.141	10.214	611.281	611.312
	f	31341.113	10.261	611.002	611.029
	g	31351.085	10.336	610.734	610.748
	℄ BRG.	31361.464	10.442	610.467	610.467

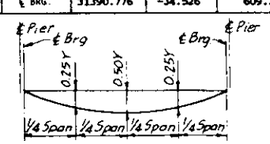
INDICATES STA. 313+61.464 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.16	℄ BRG.	31283.957	6.018	612.615	612.615
	a	31293.940	5.929	612.310	612.323
	b	31303.924	5.868	612.005	612.031
	c	31313.908	5.833	611.701	611.732
	d	31323.892	5.825	611.403	611.439
	e	31333.876	5.845	611.116	611.147
	f	31343.860	5.892	610.840	610.866
	g	31353.843	5.966	610.574	610.588
	℄ BRG.	31364.274	6.073	610.309	610.309
BEAM S24.15	℄ BRG.	31285.831	2.966	612.497	612.497
	a	31295.823	2.872	612.191	612.204
	b	31305.815	2.806	611.886	611.912
	c	31315.807	2.766	611.582	611.613
	d	31325.800	2.754	611.286	611.322
	e	31335.792	2.769	611.000	611.032
	f	31345.785	2.812	610.726	610.752
	g	31355.777	2.881	610.462	610.476
	℄ BRG.	31366.266	2.984	610.197	610.197
℄ PROP. SEB LANES	℄ BRG.	31287.656	0.000	612.382	612.382
	a	31297.656	0.000	612.078	612.091
	b	31307.656	0.000	611.774	611.800
	c	31317.656	0.000	611.471	611.502
	d	31327.656	0.000	611.177	611.213
	e	31337.656	0.000	610.893	610.924
	f	31347.656	0.000	610.619	610.645
	g	31357.656	0.000	610.356	610.369
	℄ BRG.	31368.193	0.000	610.089	610.089

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.14	℄ BRG.	31288.408	-1.221	612.335	612.335
	a	31298.411	-1.315	612.029	612.045
	b	31308.415	-1.382	611.723	611.754
	c	31318.419	-1.422	611.420	611.456
	d	31328.423	-1.435	611.126	611.168
	e	31338.426	-1.420	610.843	610.880
	f	31348.430	-1.378	610.571	610.602
	g	31358.434	-1.309	610.310	610.326
	℄ BRG.	31368.974	-1.207	610.046	610.046
BEAM S24.13	℄ BRG.	31290.992	-5.406	612.173	612.173
	a	31301.006	-5.501	611.866	611.882
	b	31311.021	-5.568	611.560	611.591
	c	31321.036	-5.609	611.258	611.295
	d	31331.051	-5.622	610.967	611.008
	e	31341.067	-5.608	610.686	610.723
	f	31351.082	-5.566	610.416	610.448
	g	31361.097	-5.498	610.158	610.174
	℄ BRG.	31371.688	-5.395	609.896	609.896
BEAM S24.12	℄ BRG.	31293.581	-9.589	612.010	612.010
	a	31303.607	-9.684	611.704	611.719
	b	31313.633	-9.753	611.397	611.428
	c	31323.660	-9.794	611.097	611.134
	d	31333.686	-9.807	610.808	610.850
	e	31343.713	-9.793	610.530	610.567
	f	31353.740	-9.752	610.263	610.294
	g	31363.766	-9.684	610.006	610.023
	℄ BRG.	31374.408	-9.582	609.746	609.746

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.11	℄ BRG.	31296.176	-13.770	611.848	611.848
	a	31306.213	-13.866	611.541	611.556
	b	31316.251	-13.935	611.235	611.266
	c	31326.289	-13.976	610.937	610.973
	d	31336.327	-13.990	610.650	610.692
	e	31346.365	-13.977	610.374	610.411
	f	31356.403	-13.936	610.109	610.141
	g	31366.441	-13.868	609.856	609.872
	℄ BRG.	31377.135	-13.766	609.597	609.597
BEAM S24.10	℄ BRG.	31298.777	-17.949	611.685	611.685
	a	31308.825	-18.046	611.378	611.393
	b	31318.875	-18.115	611.072	611.103
	c	31328.924	-18.157	610.777	610.814
	d	31338.974	-18.172	610.493	610.534
	e	31349.024	-18.159	610.219	610.256
	f	31359.073	-18.119	609.957	609.988
	g	31369.123	-18.051	609.705	609.722
	℄ BRG.	31379.868	-17.948	609.448	609.448
BEAM S24.9	℄ BRG.	31300.720	-21.065	611.564	611.564
	a	31310.778	-21.151	611.256	611.272
	b	31320.836	-21.209	610.952	610.983
	c	31330.894	-21.240	610.659	610.695
	d	31340.952	-21.244	610.377	610.418
	e	31351.010	-21.220	610.105	610.142
	f	31361.068	-21.169	609.845	609.876
	g	31371.126	-21.091	609.595	609.612
	℄ BRG.	31381.852	-20.977	609.341	609.341

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.8	℄ BRG.	31302.501	-23.914	611.453	611.453
	a	31312.563	-24.206	611.276	611.288
	b	31322.626	-24.470	610.972	610.997
	c	31332.691	-24.707	610.668	610.698
	d	31342.756	-24.917	610.362	610.398
	e	31352.823	-25.099	610.054	610.086
	f	31362.891	-25.254	609.746	609.772
	g	31372.960	-25.381	609.496	609.511
	℄ BRG.	31384.819	-25.496	609.207	609.207
BEAM S24.7	℄ BRG.	31304.285	-26.762	611.542	611.542
	a	31314.346	-27.254	611.257	611.274
	b	31324.411	-27.719	610.970	611.005
	c	31334.478	-28.156	610.682	610.723
	d	31344.548	-28.565	610.391	610.437
	e	31354.619	-28.948	610.096	610.139
	f	31364.693	-29.302	609.799	609.836
	g	31374.768	-29.630	609.510	609.533
	℄ BRG.	31387.794	-30.012	609.120	609.120
BEAM S24.6	℄ BRG.	31306.071	-29.610	611.547	611.547
	a	31316.129	-30.296	611.280	611.297
	b	31326.192	-30.955	611.010	611.045
	c	31336.258	-31.586	610.737	610.778
	d	31346.327	-32.190	610.465	610.511
	e	31356.399	-32.766	610.194	610.237
	f	31366.475	-33.315	609.924	609.962
	g	31376.554	-33.837	609.647	609.672
	℄ BRG.	31390.776	-34.526	609.241	609.241



LOCATION	0.25Y	0.50Y
BEAM S24.1	5/8"	15/16"
BEAM S24.2	13/16"	1 1/8"
BEAMS S24.3 THRU S24.7	7/16"	9/16"
BEAMS S24.8,S24.15 THRU S24.17	5/16"	7/16"
BEAMS S24.9 THRU S24.14,	3/8"	1/2"
S24.18 THRU S24.22		

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.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.5	℄ BRG.	31307.860	-32.457	611.452	611.452
	a	31317.912	-33.331	611.173	611.191
	b	31327.968	-34.178	610.896	610.930
	c	31338.030	-34.998	610.619	610.659
	d	31348.095	-35.790	610.343	610.388
	e	31358.165	-36.555	610.067	610.111
	f	31368.239	-37.293	609.792	609.830
	g	31378.318	-38.003	609.509	609.536
	℄ BRG.	31393.765	-39.038	609.059	609.059
BEAM S24.4	℄ BRG.	31309.652	-35.302	611.345	611.345
	a	31319.694	-36.359	611.063	611.079
	b	31329.742	-37.389	610.781	610.815
	c	31339.795	-38.391	610.501	610.541
	d	31349.854	-39.366	610.221	610.266
	e	31359.919	-40.314	609.941	609.985
	f	31369.988	-41.235	609.661	609.700
	g	31380.063	-42.128	609.372	609.400
	℄ BRG.	31396.762	-43.547	608.875	608.875
BEAM S24.3	℄ BRG.	31311.447	-38.147	611.238	611.238
	a	31321.476	-39.381	610.952	610.969
	b	31331.513	-40.587	610.667	610.700
	c	31341.556	-41.767	610.383	610.423
	d	31351.605	-42.919	610.099	610.144
	e	31361.661	-44.044	609.816	609.860
	f	31371.723	-45.142	609.531	609.570
	g	31381.790	-46.212	609.237	609.266
	℄ BRG.	31399.767	-48.054	608.690	608.690

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.2	℄ BRG.	31315.572	-44.666	610.992	610.992
	a	31325.650	-45.631	610.711	610.742
	b	31335.732	-46.568	610.430	610.493
	c	31345.820	-47.478	610.150	610.228
	d	31355.913	-48.360	609.871	609.961
	e	31366.011	-49.215	609.593	609.678
	f	31376.113	-50.043	609.308	609.381
	g	31386.220	-50.843	609.014	609.064
	℄ BRG.	31402.451	-52.070	608.523	608.523
BEAM S24.1	℄ BRG.	31319.713	-51.181	610.746	610.746
	a	31329.831	-51.865	610.469	610.494
	b	31339.954	-52.521	610.193	610.243
	c	31350.080	-53.150	609.919	609.982
	d	31360.209	-53.751	609.644	609.720
	e	31370.342	-54.324	609.369	609.437
	f	31380.478	-54.871	609.084	609.140
	g	31390.617	-55.389	608.791	608.827
	℄ BRG.	31405.142	-56.083	608.356	608.356

NOTES:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 24
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	203
F.A.P. & F.A.I. REG. 4	ILLINOIS	FED. AID PROJECT		

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.15	℄ BRG.	31350.156	32.328	611.199	611.199
	a	31360.068	32.287	610.940	610.940
	b	31369.981	32.273	610.691	610.697
	c	31379.894	32.286	610.452	610.459
	d	31389.807	32.326	610.225	610.225
	℄ BRG.	31400.354	32.398	609.994	609.994
	BK.N.ABUT.	31403.483	32.426	609.928	609.928
BEAM S25.14	℄ BRG.	31354.331	25.758	610.957	610.957
	a	31364.261	25.716	610.702	610.702
	b	31374.191	25.702	610.457	610.463
	c	31384.122	25.714	610.222	610.229
	d	31394.052	25.754	609.999	609.999
	℄ BRG.	31404.658	25.826	609.772	609.772
	BK.N.ABUT.	31407.795	25.853	609.707	609.707
BEAM S25.13	℄ BRG.	31358.521	19.193	610.717	610.717
	a	31368.468	19.151	610.466	610.466
	b	31378.417	19.135	610.224	610.231
	c	31388.365	19.147	609.994	610.000
	d	31398.313	19.186	609.774	609.774
	℄ BRG.	31408.977	19.258	609.550	609.550
	BK.N.ABUT.	31412.122	19.285	609.487	609.487

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.12	℄ BRG.	31362.725	12.632	610.479	610.479
	a	31372.691	12.590	610.231	610.231
	b	31382.657	12.574	609.994	610.000
	c	31392.623	12.585	609.767	609.773
	d	31402.588	12.624	609.551	609.551
	℄ BRG.	31413.311	12.696	609.331	609.331
	BK.N.ABUT.	31416.464	12.723	609.269	609.269
BEAM S25.11	℄ BRG.	31366.945	6.077	610.242	610.242
	a	31376.929	6.034	609.998	609.998
	b	31386.912	6.017	609.764	609.771
	c	31396.896	6.028	609.542	609.548
	d	31406.879	6.067	609.330	609.330
	℄ BRG.	31417.661	6.139	609.113	609.113
	BK.N.ABUT.	31420.822	6.166	609.052	609.052
BEAM S25.10	℄ BRG.	31368.911	3.033	610.132	610.132
	a	31378.902	2.991	609.890	609.890
	b	31388.894	2.977	609.658	609.665
	c	31398.886	2.990	609.438	609.444
	d	31408.878	3.030	609.228	609.228
	℄ BRG.	31419.680	3.105	609.013	609.013
	BK.N.ABUT.	31422.845	3.132	608.953	608.953

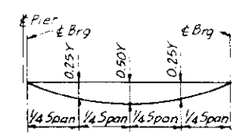
INDICATES STA. 314+22.845 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	31370.873	0.000	610.023	610.023
	a	31380.873	0.000	609.784	609.784
	b	31390.873	0.000	609.554	609.561
	c	31400.873	0.000	609.335	609.341
	d	31410.873	0.000	609.127	609.127
	℄ BRG.	31421.750	0.000	608.911	608.911
	BK.N.ABUT.	31424.937	0.000	608.850	608.850
BEAM S25.9	℄ BRG.	31374.441	-5.499	609.827	609.827
	a	31384.456	-5.536	609.590	609.598
	b	31394.471	-5.545	609.364	609.377
	c	31404.486	-5.527	609.148	609.162
	d	31414.501	-5.482	608.944	608.952
	℄ BRG.	31425.363	-5.402	608.734	608.734
	BK.N.ABUT.	31428.537	-5.373	608.675	608.675
BEAM S25.8	℄ BRG.	31379.997	-14.023	609.524	609.524
	a	31390.036	-14.055	609.292	609.300
	b	31400.074	-14.059	609.071	609.085
	c	31410.113	-14.036	608.861	608.875
	d	31420.151	-13.986	608.662	608.670
	℄ BRG.	31431.072	-13.900	608.458	608.458
	BK.N.ABUT.	31434.256	-13.869	608.401	608.401

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.7	℄ BRG.	31385.580	-22.538	609.224	609.224
	a	31395.641	-22.565	608.997	609.006
	b	31405.703	-22.564	608.782	608.795
	c	31415.765	-22.536	608.577	608.591
	d	31425.827	-22.481	608.384	608.392
	℄ BRG.	31436.808	-22.389	608.185	608.185
	BK.N.ABUT.	31440.001	-22.356	608.130	608.130
BEAM S25.6	℄ BRG.	31387.680	-25.729	609.130	609.130
	a	31397.750	-25.750	608.836	608.845
	b	31407.821	-25.744	608.631	608.641
	c	31417.892	-25.710	608.509	608.519
	d	31427.962	-25.649	608.309	608.317
	℄ BRG.	31438.952	-25.550	608.041	608.041
	BK.N.ABUT.	31442.148	-25.516	608.040	608.040
BEAM S25.5	℄ BRG.	31391.413	-31.385	609.081	609.081
	a	31401.493	-31.746	608.843	608.851
	b	31411.575	-32.079	608.439	608.449
	c	31421.659	-32.386	608.346	608.356
	d	31431.744	-32.664	608.069	608.079
	℄ BRG.	31444.000	-32.966	607.709	607.709
	BK.N.ABUT.	31447.280	-33.040	607.619	607.619

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.4	℄ BRG.	31395.157	-37.037	609.064	609.064
	a	31405.236	-37.721	608.757	608.765
	b	31415.319	-38.377	608.442	608.452
	c	31425.406	-39.007	608.117	608.128
	d	31435.496	-39.608	607.785	607.794
	℄ BRG.	31449.069	-40.374	607.323	607.323
	BK.N.ABUT.	31452.433	-40.556	607.207	607.207
BEAM S25.3	℄ BRG.	31398.913	-42.685	608.832	608.832
	a	31408.983	-43.675	608.515	608.523
	b	31419.057	-44.638	608.189	608.202
	c	31429.138	-45.573	607.854	607.868
	d	31439.223	-46.482	607.510	607.521
	℄ BRG.	31454.158	-47.776	606.985	606.985
	BK.N.ABUT.	31457.607	-48.066	606.861	606.861
BEAM S25.2	℄ BRG.	31402.681	-48.329	608.599	608.599
	a	31412.733	-49.609	608.272	608.279
	b	31422.792	-50.862	607.936	607.948
	c	31432.858	-52.087	607.590	607.603
	d	31442.931	-53.286	607.236	607.247
	℄ BRG.	31459.269	-55.170	606.643	606.643
	BK.N.ABUT.	31462.803	-55.568	606.512	606.512

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.1	℄ BRG.	31408.007	-56.270	608.266	608.266
	a	31418.134	-57.041	607.942	607.950
	b	31428.265	-57.785	607.610	607.622
	c	31438.400	-58.501	607.268	607.282
	d	31448.538	-59.190	606.917	606.927
	℄ BRG.	31462.693	-60.104	606.413	606.413
	BK.N.ABUT.	31466.106	-60.317	606.288	606.288



LOCATION	0.25Y	0.50Y
BEAMS S25.1 THRU S25.3,	1/8"	3/16"
S25.7 THRU S25.9		
BEAMS S25.4 THRU S25.6	1/8"	1/8"
BEAMS S25.10 THRU S25.15	0"	1/8"

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.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 25

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

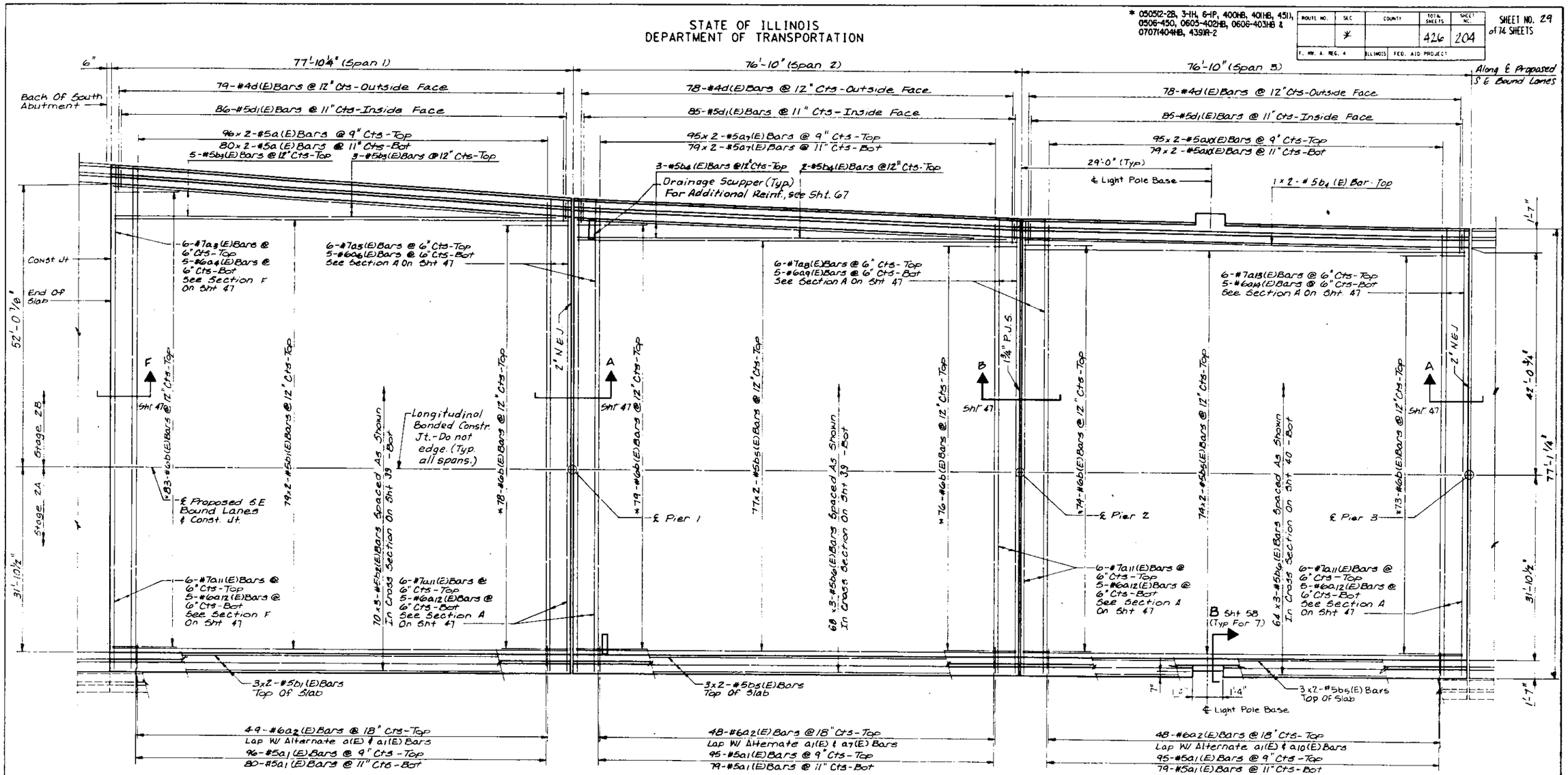
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451H, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	204
F. HW. & REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 29 of 74 SHEETS



* Alternate with #5 "b" (E) Longitudinal Top Bars

PLAN

NOTES:

1. SEE SHEETS 47, 48 & 49 FOR SUPERSTRUCTURE DETAILS AND BILL OF MATERIAL.
2. BARS INDICATED THUS 20X3-#5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.
3. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
4. SEE SHEET 49 FOR FILLET REINFORCING.
5. MINIMUM LAP SPLICE LENGTHS FOR: #5 BAR - 1'-9"
   #6 BAR - 2'-6"
   #7 BAR - 3'-0"
   #8 BAR - 3'-6"
6. FOR BRIDGE SCUPPER DETAIL SEE SHEETS 66 & 67.
7. CUT BARS TO CLEAR DRAINAGE SCUPPERS.
8. BAR SPLICERS WILL BE USED ACROSS LONGITUDINAL CONSTRUCTION JOINT. SIZE AND SPACING TO MATCH TRANSVERSE SLAB BARS. SEE SHEET 62 FOR BAR SPLICER DETAILS.

STANLEY CONSULTANTS

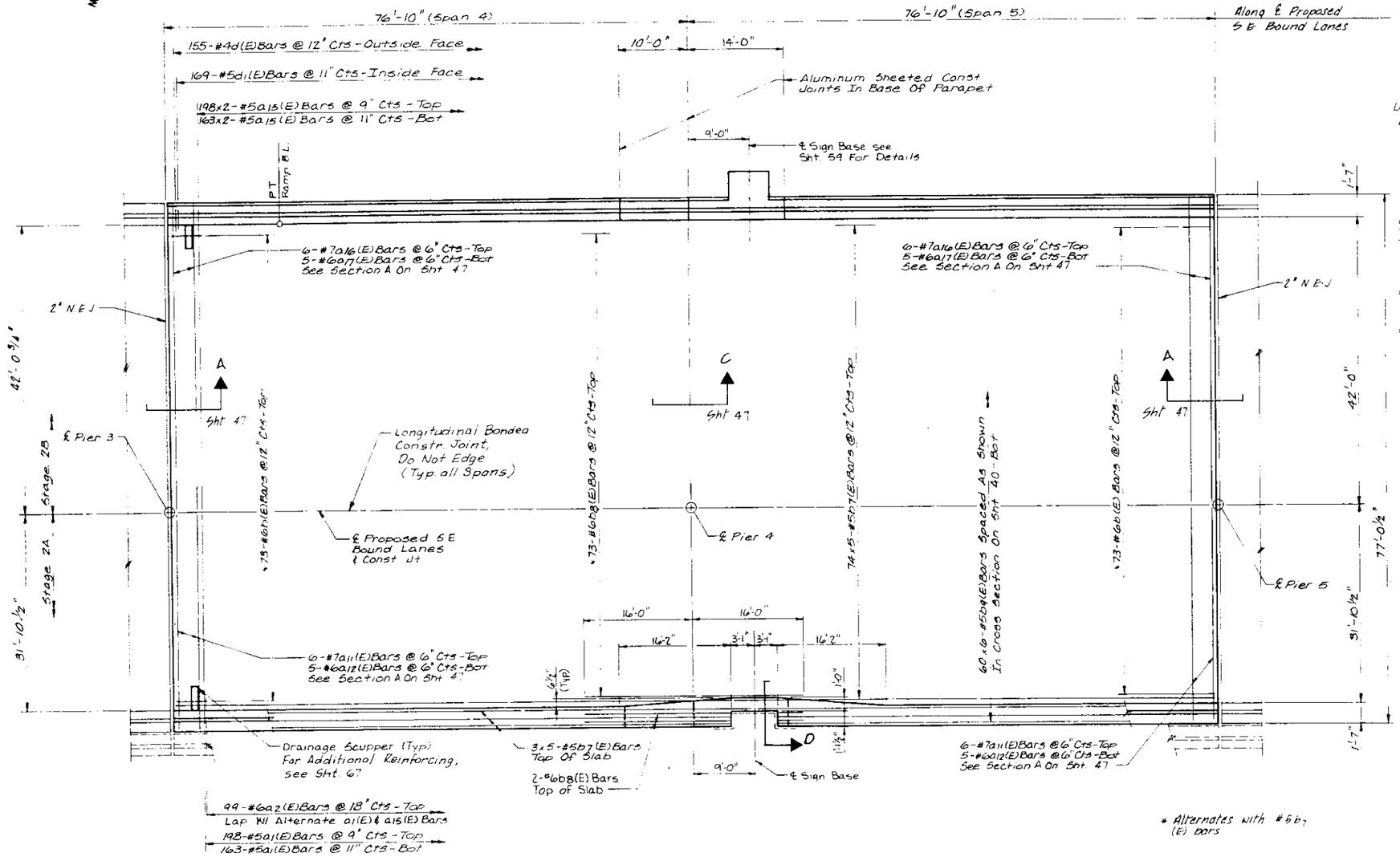
SUPERSTRUCTURE PLAN
SHEET 1 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

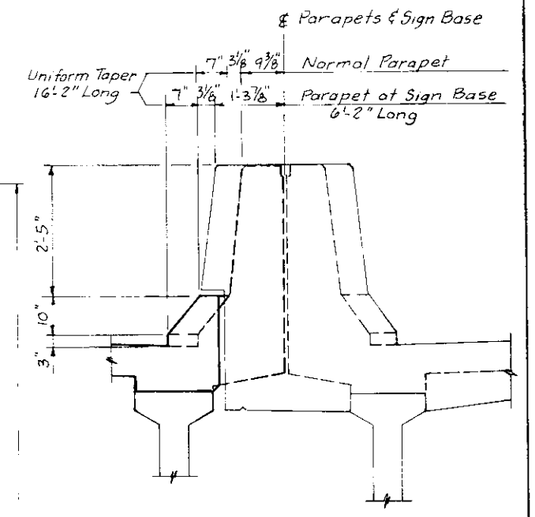
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	205
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 30 of 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2



PLAN



SECTION D

NOTES:
1 FOR NOTES SEE SHEET 29
2 FOR CROSS SECTION SEE SHEET 40

STANLEY CONSULTANTS

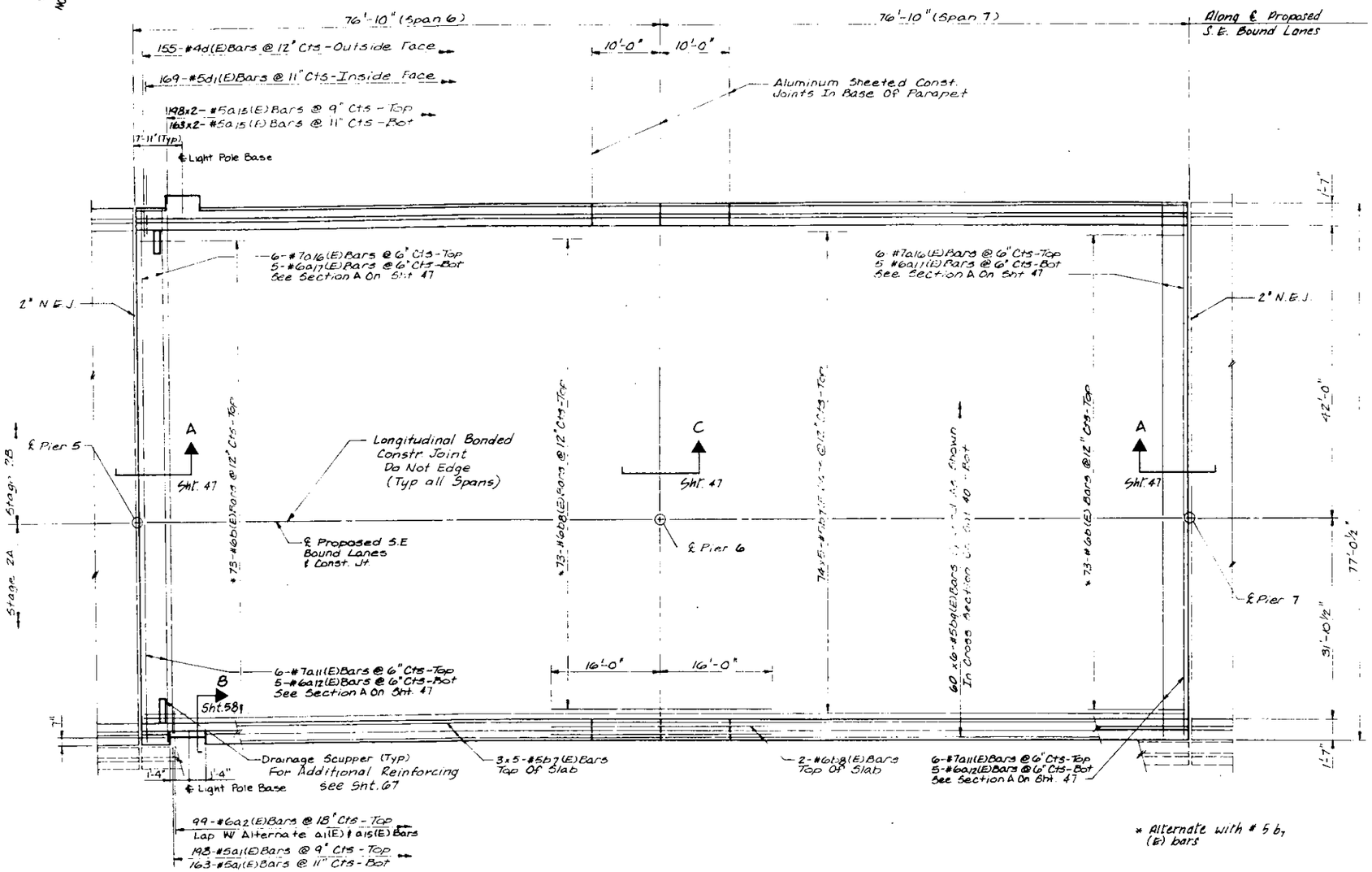
SUPERSTRUCTURE PLAN
SHEET 2 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	206

SHEET NO. 31 of 14 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



* Alternate with # 5 b7 (E) bars

NOTES
1 FOR NOTES SEE SHEET 29
2 FOR CROSS SECTION SEE SHEET 40

PLAN

STANLEY CONSULTANTS

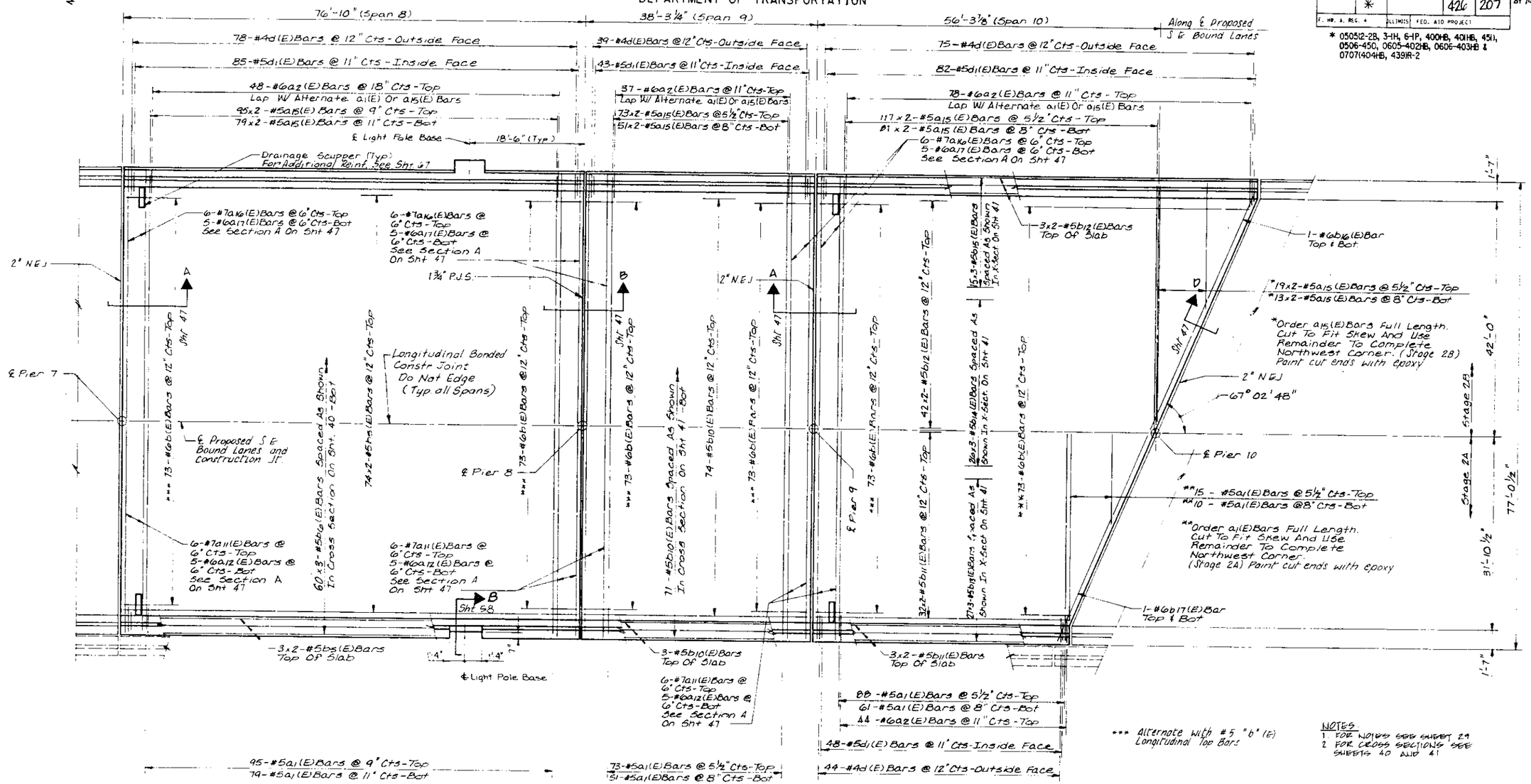
SUPERSTRUCTURE PLAN
SHEET 3 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	207
F. HR. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 32 of 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



NOTES
1. FOR NOTES SEE SHEET 29
2. FOR CROSS SECTIONS SEE SHEETS 40 AND 41

PLAN

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 4 OF 10

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

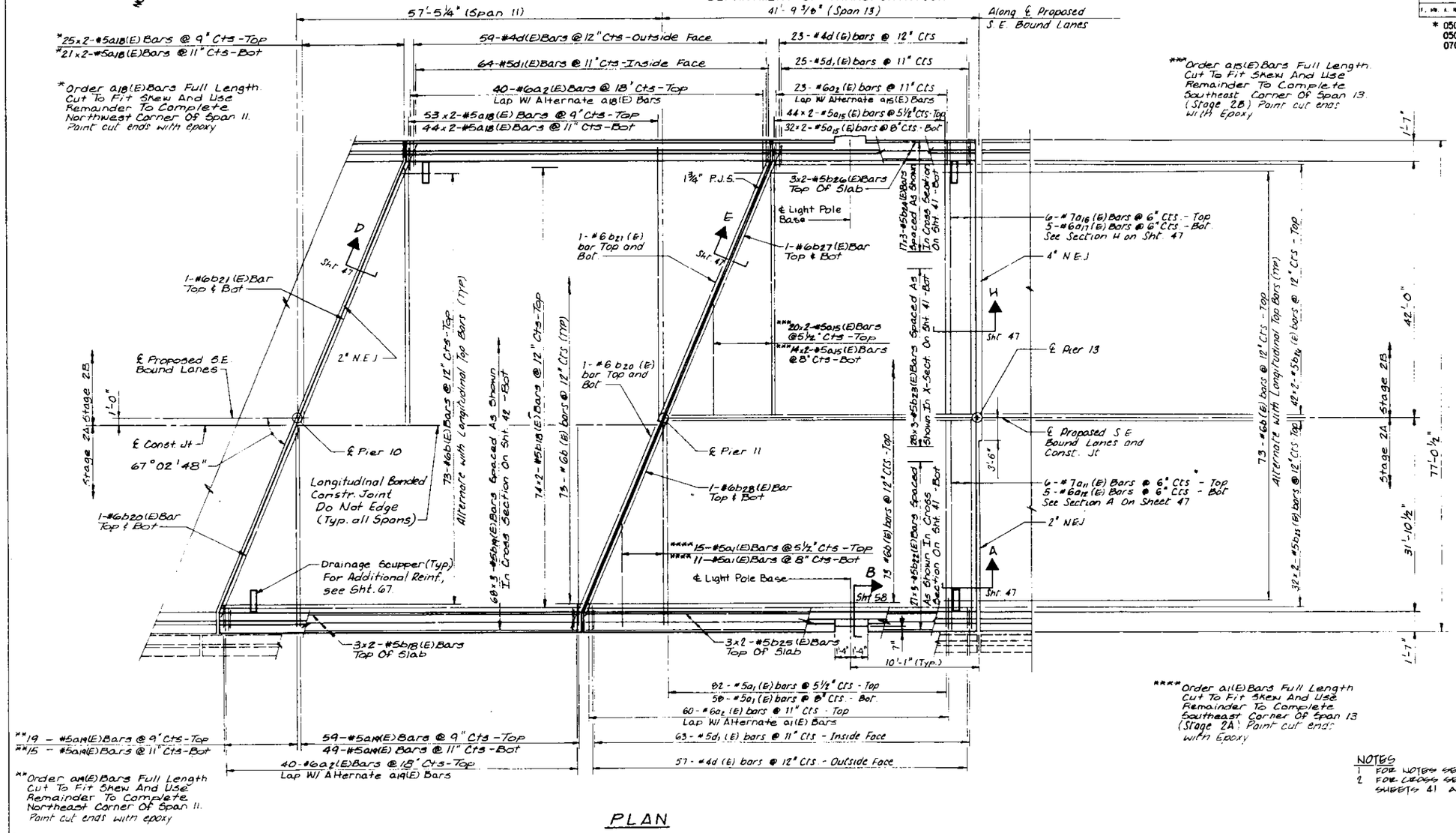
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	208
F. NO. & REG. 4		ILLINOIS FED. AID PROJECT		

SHEET NO. 33 OF 74 SHEETS

* 050512-2B, 3-H, 6-H, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2



PLAN

NOTES
1 FOR NOTES SEE SHEET 29
2 FOR CROSS SECTION SEE SHEETS 41 AND 42

STANLEY CONSULTANTS

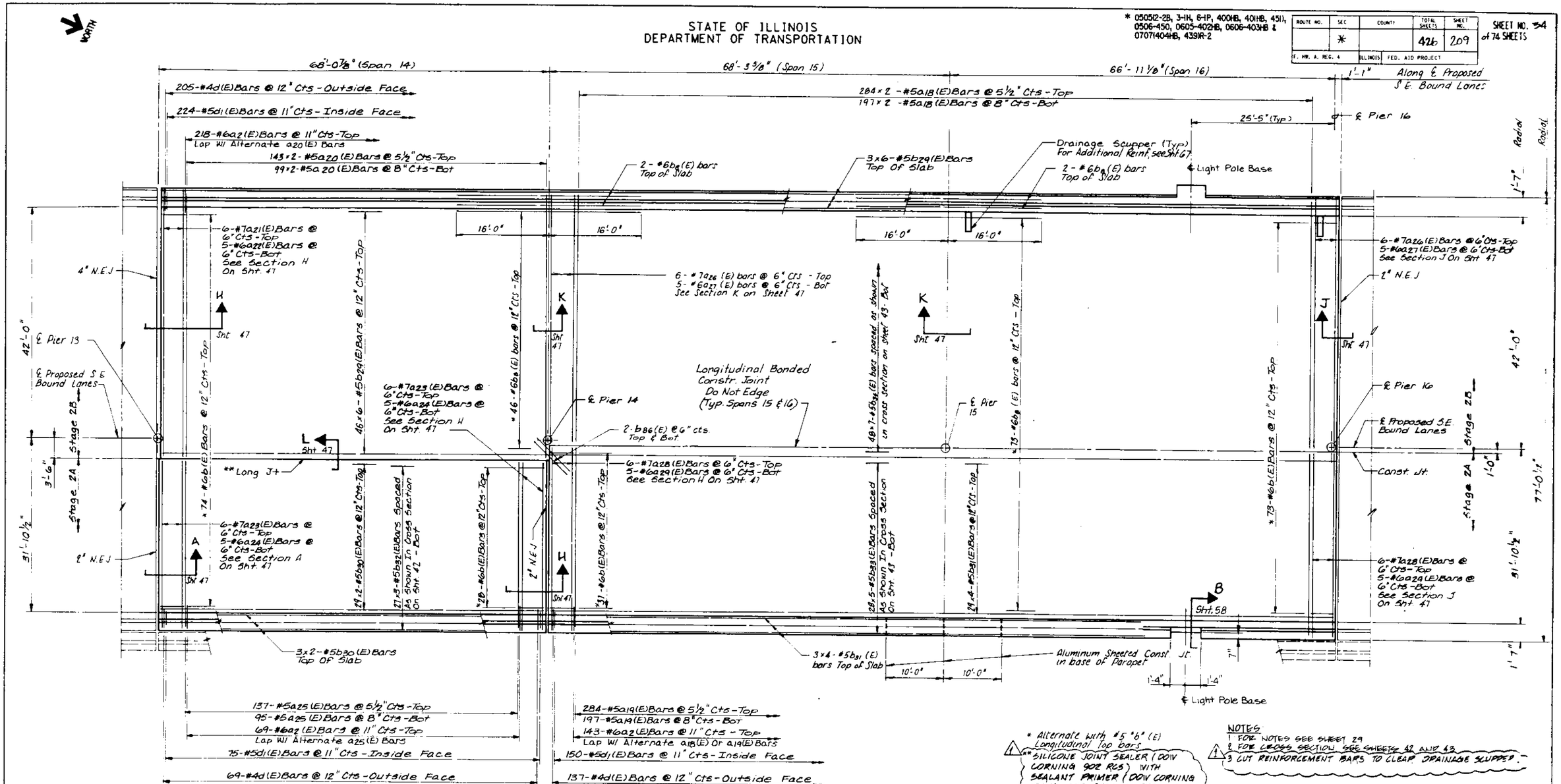
SUPERSTRUCTURE PLAN
SHEET 5 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	209
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 54 of 74 SHEETS



PLAN

* Alternate with #5 "b" (E) Longitudinal top bars

1 ** SILICONE JOINT SEALER (DOW CORNING 902 RCS) WITH SEALANT PRIMER (DOW CORNING 1205) SEE SPECIAL PROVISIONS. SEE SECTION L SHEET #47.

NOTES
1. FOR NOTES SEE SHEET 29
2. FOR CROSS SECTION SEE SHEETS 42 AND 43
1 3. CUT REINFORCEMENT BARS TO CLEAR DRAINAGE SCUPPER.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN

SHEET 6 OF 10

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

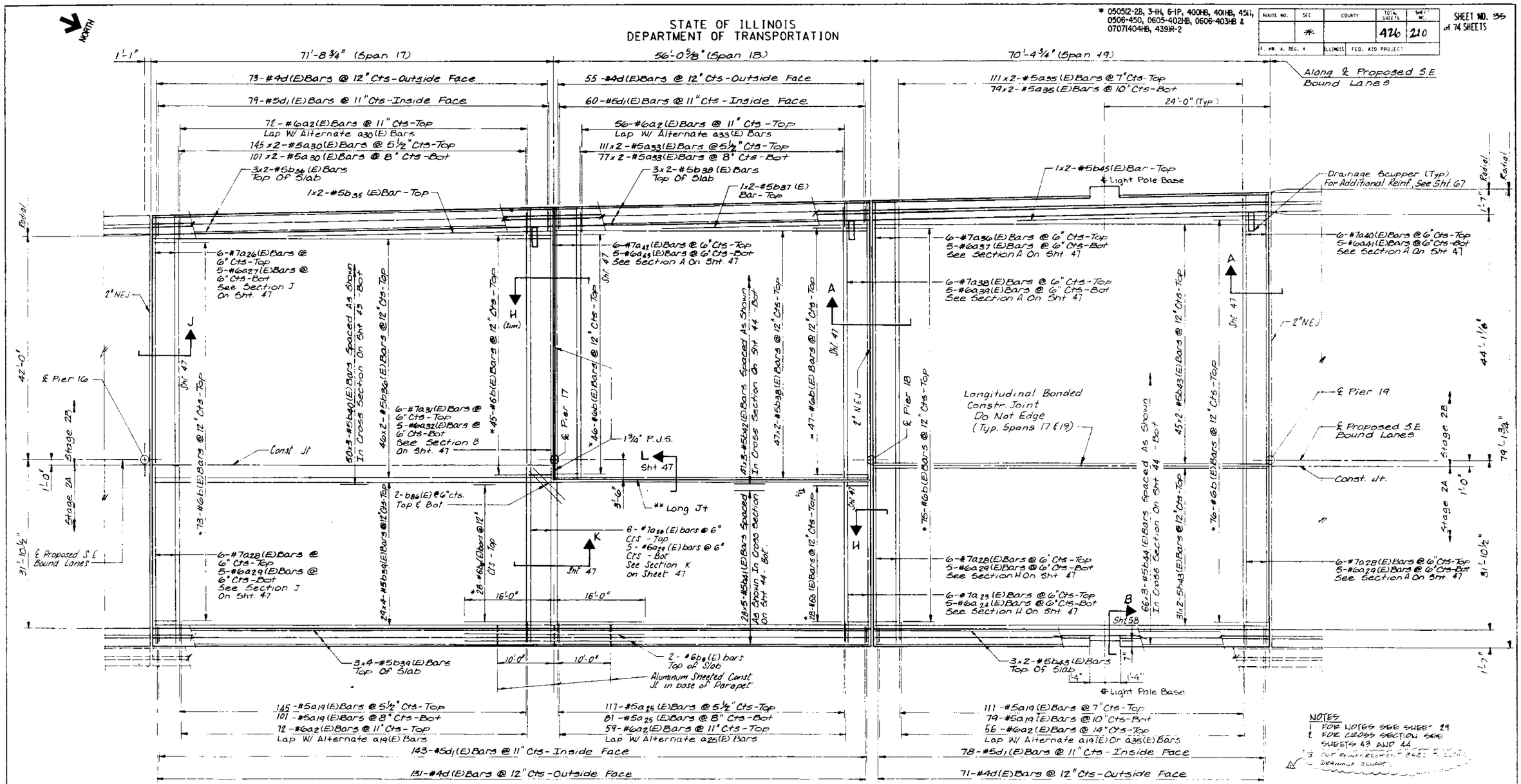
1 AS REVISED 9-22-92 PMP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	210
F. HWY. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 35 of 74 SHEETS



NOTES
1. FOR NOTES SEE SHEET 29
2. FOR CROSS SECTION SEE SHEETS 43 AND 44
3. CUT REINFORCEMENT BACK 2" CLEAR OF DRAINAGE SCUPPER

* Alternate with #5 "b" (E) Longitudinal Top Bars

** SILICONE JOINT SEALER (DOW CORNING 902 RCS) WITH SEALANT PRIMER (DOW CORNING 1205) SEE SPECIAL PROVISION. SEE SECTION — SHEET 49.

PLAN

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN

SHEET 7 OF 10

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

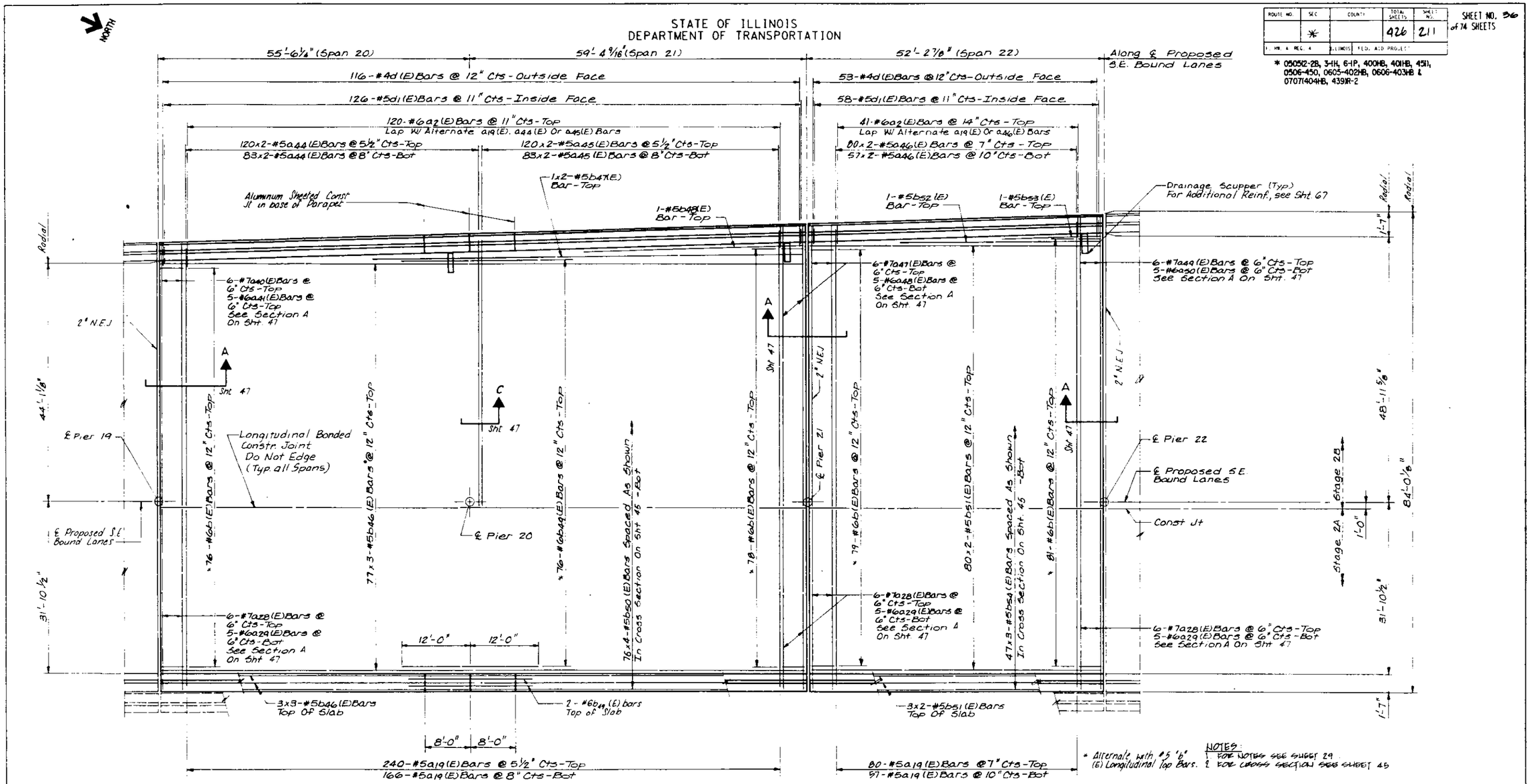
REVISED 9-22-92 PMP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	211
F.A.I. RTE. & REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 36 of 74 SHEETS

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2



* Alternate with #5 'b' (E) Longitudinal Top Bars.

NOTES:
1. FOR NOTES SEE SHEET 29
2. FOR CROSS SECTION SEE SHEET 45

PLAN

STANLEY CONSULTANTS

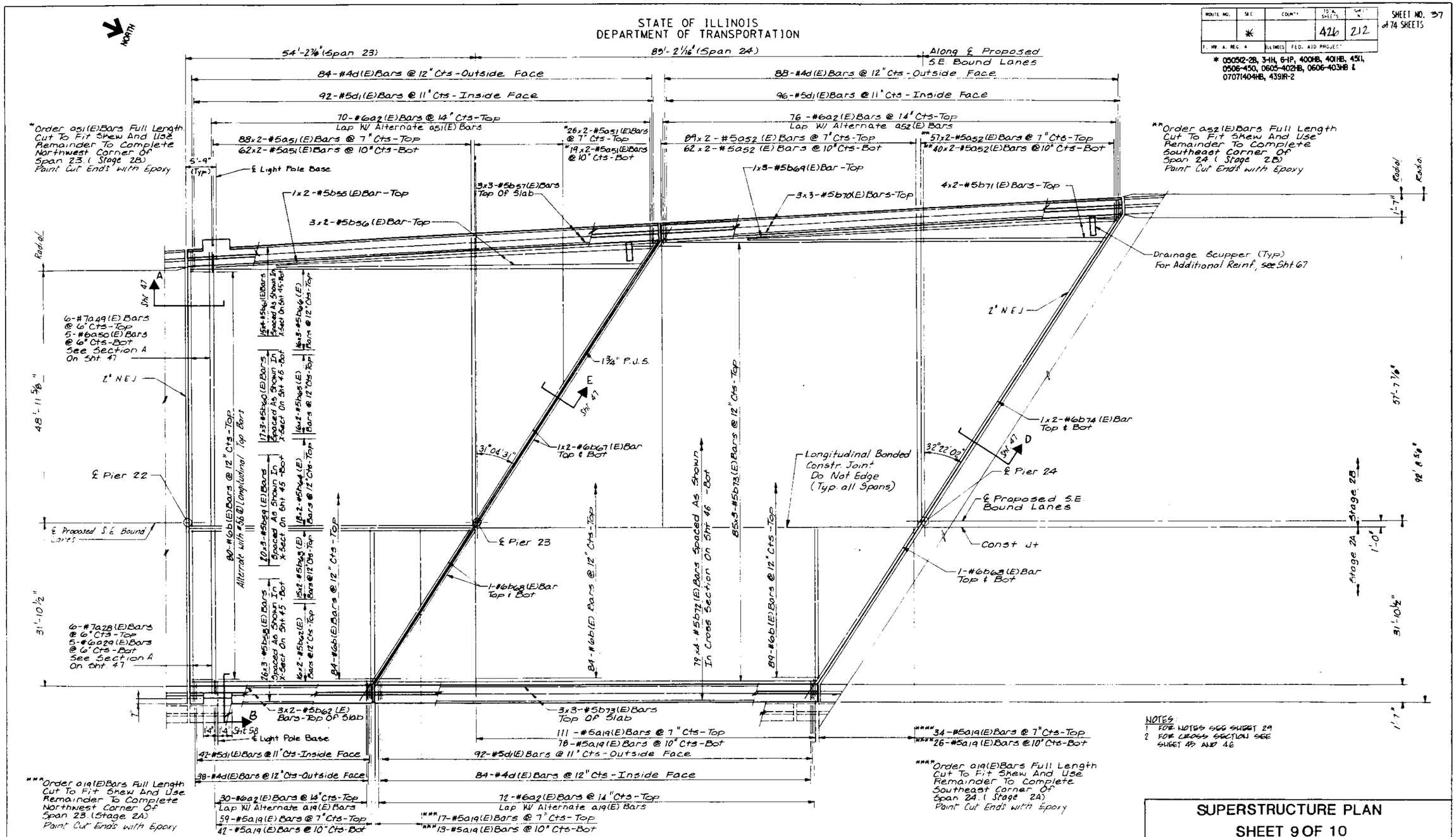
SUPERSTRUCTURE PLAN
SHEET 8 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	212
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 37 of 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



NOTES:
1. FOR NOTES SEE SHEET 29
2. FOR CROSS SECTION SEE SHEET 45 AND 46

PLAN

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN

SHEET 9 OF 10

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

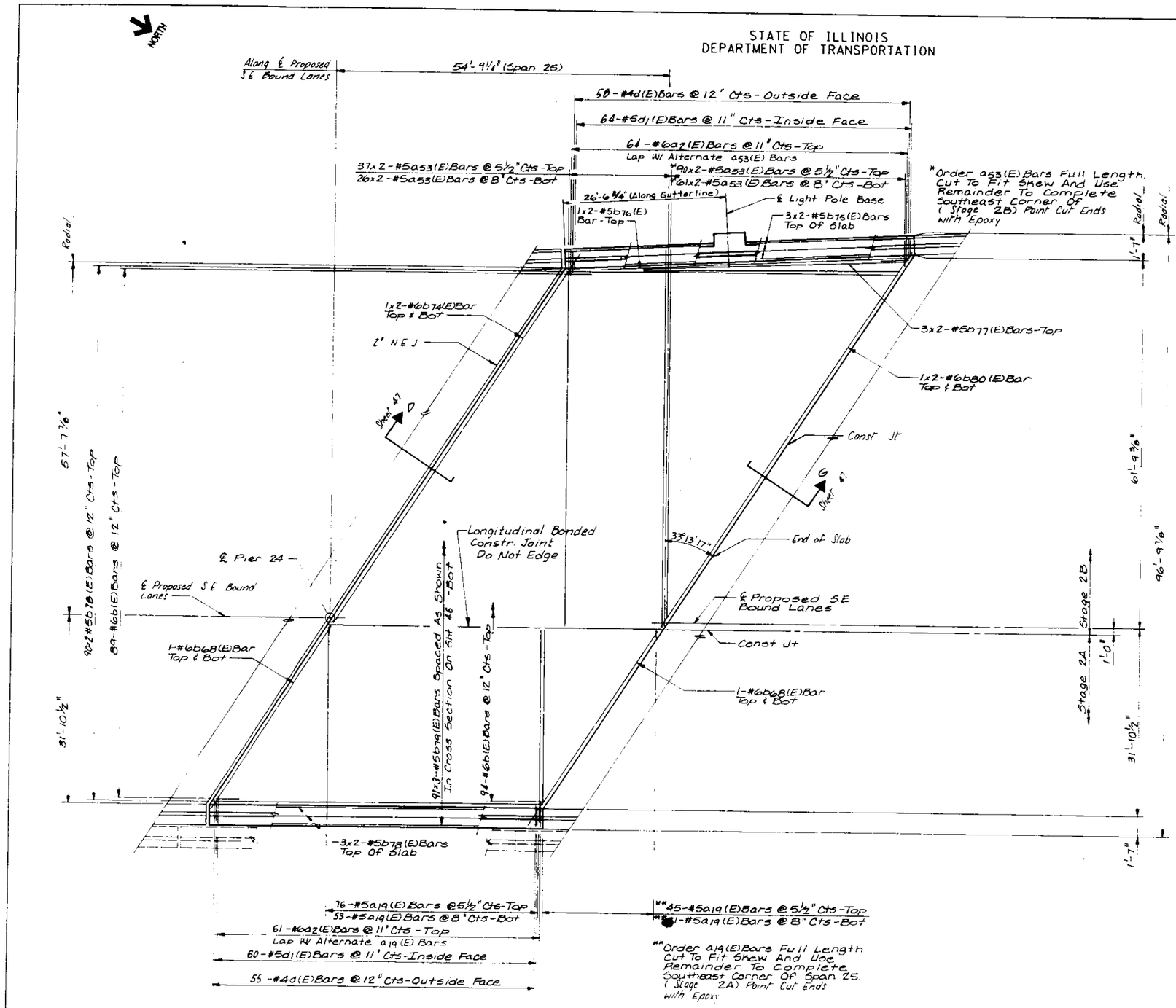
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	213
F.A.I. RTE. A. REG. 6	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5B of 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 4391R-2



PLAN

NOTES
1. FOR NOTES SEE SHEET 29
2. FOR CROSS SECTION SEE SHEET 46

STANLEY CONSULTANTS

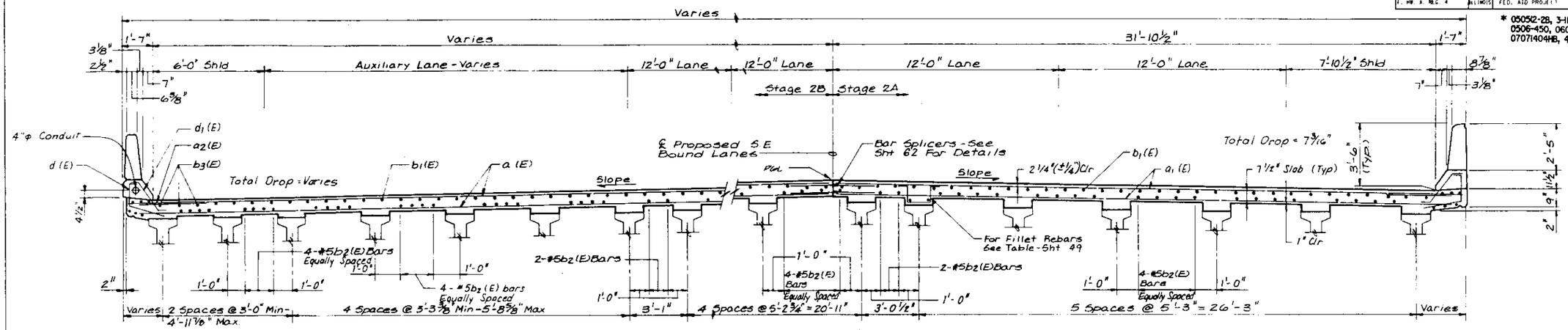
SUPERSTRUCTURE PLAN
SHEET 10 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

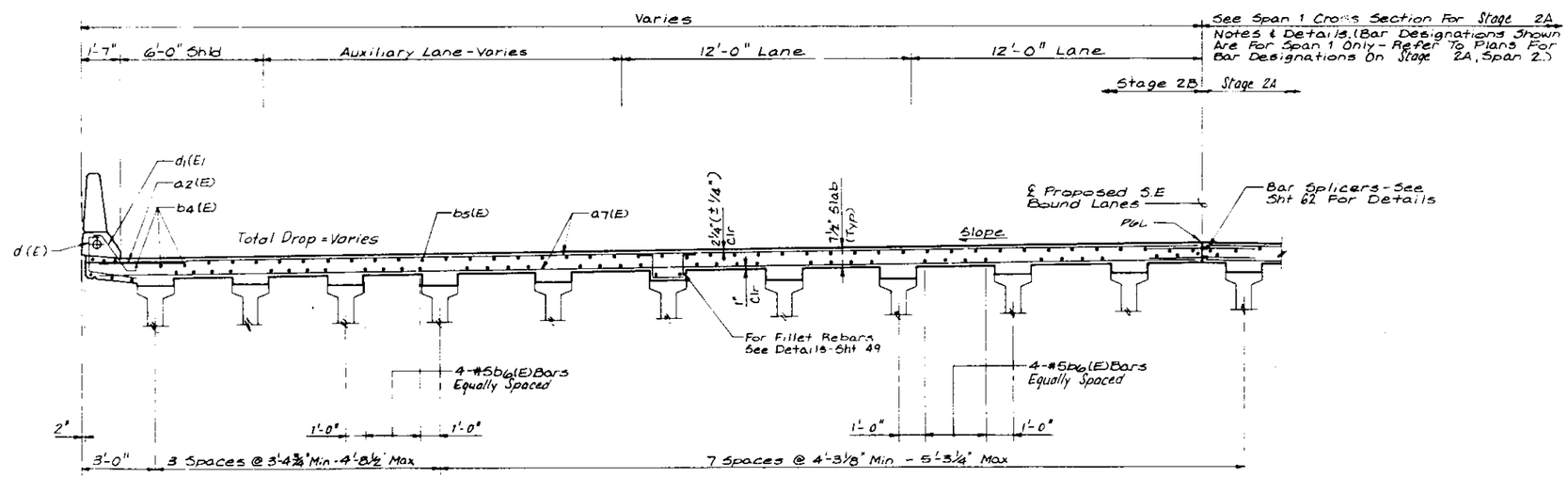
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	214
F. AID. R. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 39 of 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 4311, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2



CROSS SECTION - SPAN 1
(Looking Up Station)



CROSS SECTION - SPAN 2
(Looking Up Station)

NOTES
1. SEE SHEETS 47 AND 48 FOR SUPERSTRUCTURE DETAILS AND BILL OF MATERIALS
2. BARS INDICATED THUS 20 x 3 - #5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE
3. MINIMUM LAP SPLICE LENGTH FOR #5 LONGITUDINAL BARS = 1'-9"
4. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED
5. SEE SHEET 49 FOR FILLET REINFORCING DETAILS

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTION

SHEET 1 OF 8

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

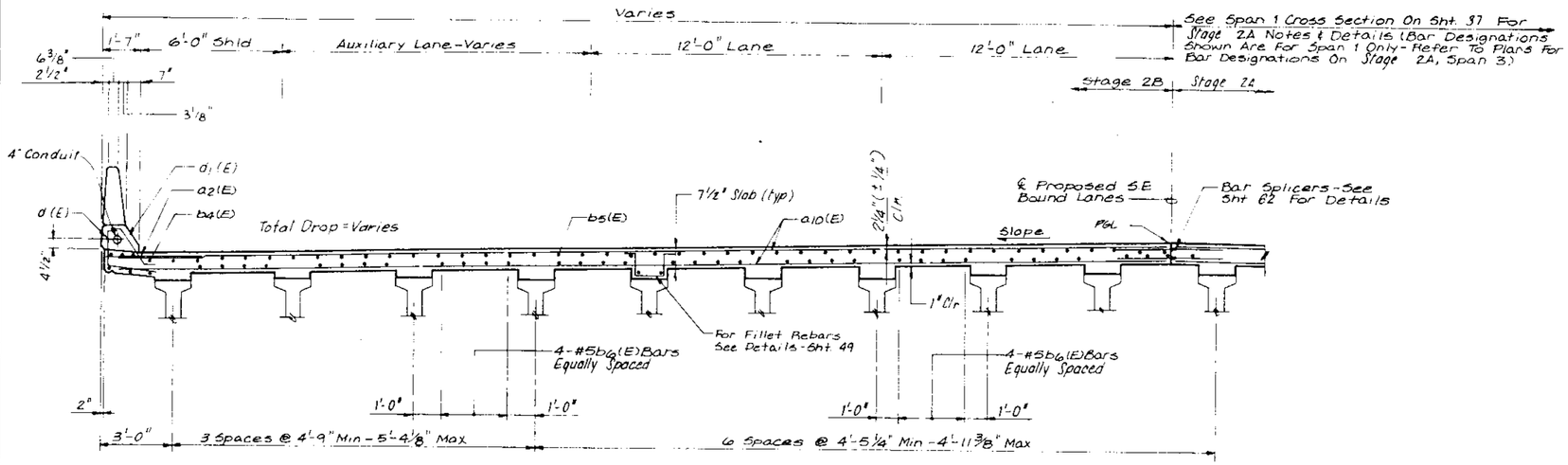
STATION 409+49.59

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

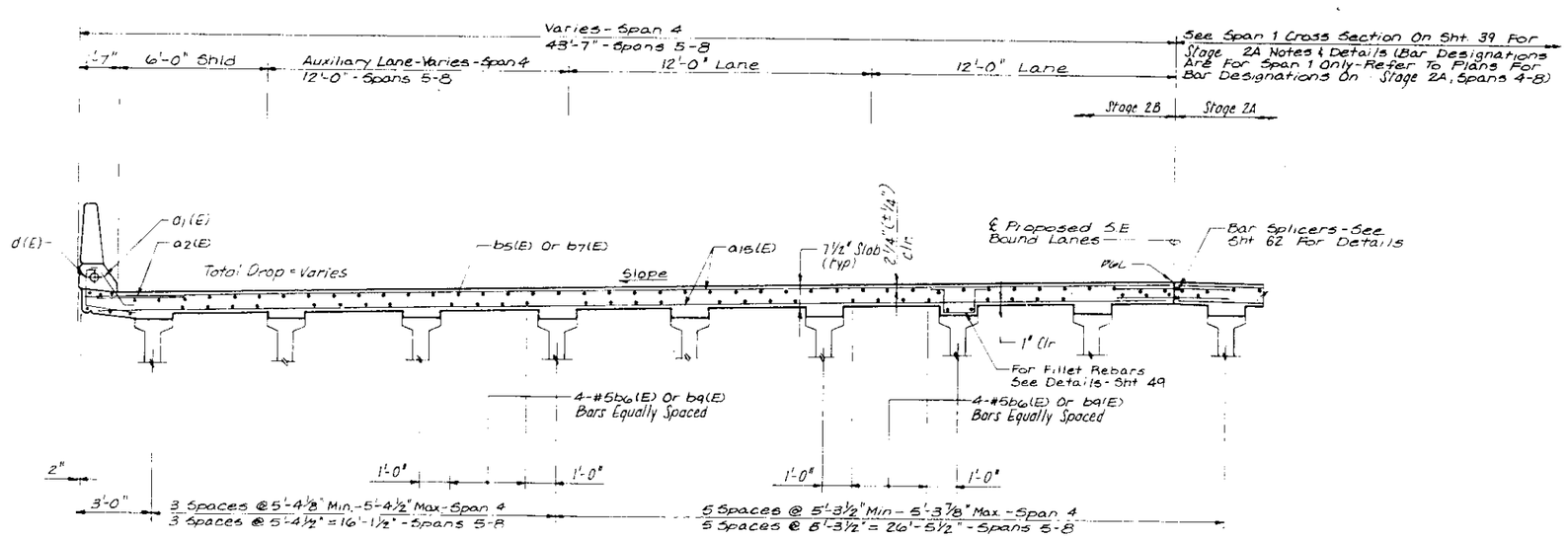
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	215
F.A.I. NO. & REG. #	ILLINOIS	FED. AID PROJECT		

SHEET NO. 40 of 74 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



CROSS SECTION - SPAN 3
(Looking Up Station)



CROSS SECTION-SPANS 4 THRU 8
(Looking Up Station)

NOTES:
1 FOR NOTES SEE SHEET 39

STANLEY CONSULTANTS

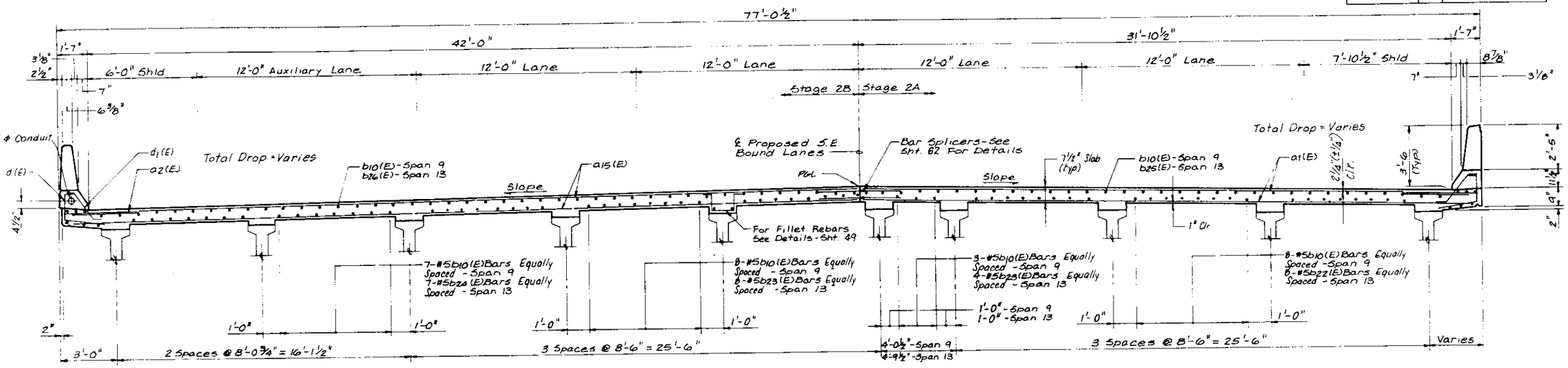
SUPERSTRUCTURE CROSS SECTION
SHEET 2 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

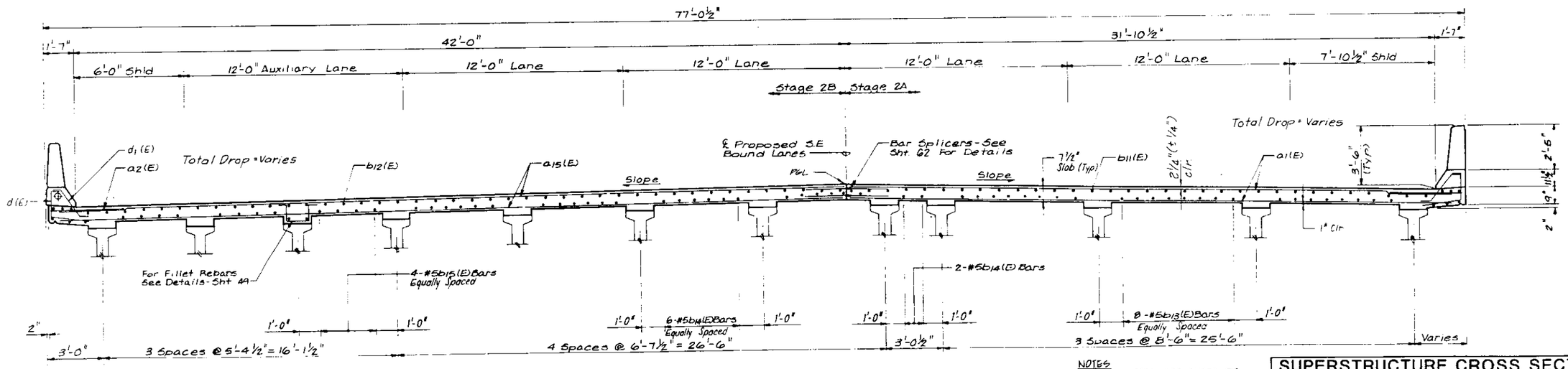
* 0505(2-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	216
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 41 of 74 SHEETS



CROSS SECTION-SPAN 9 & SPAN 13
(Looking Up Station)



NOTES
1 FOR NOTES SEE SHEET 39

CROSS SECTION-SPAN 10
(Looking Up Station)

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTION

SHEET 3 OF 8

SECTION

F.A.I. ROUTE 80/94 OVER ASHLAND AVENUE

COOK COUNTY

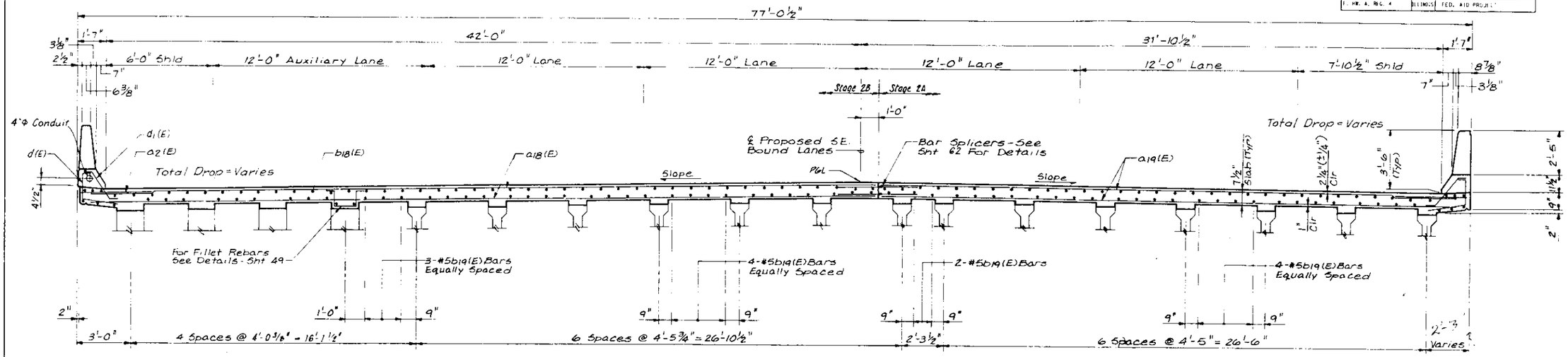
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

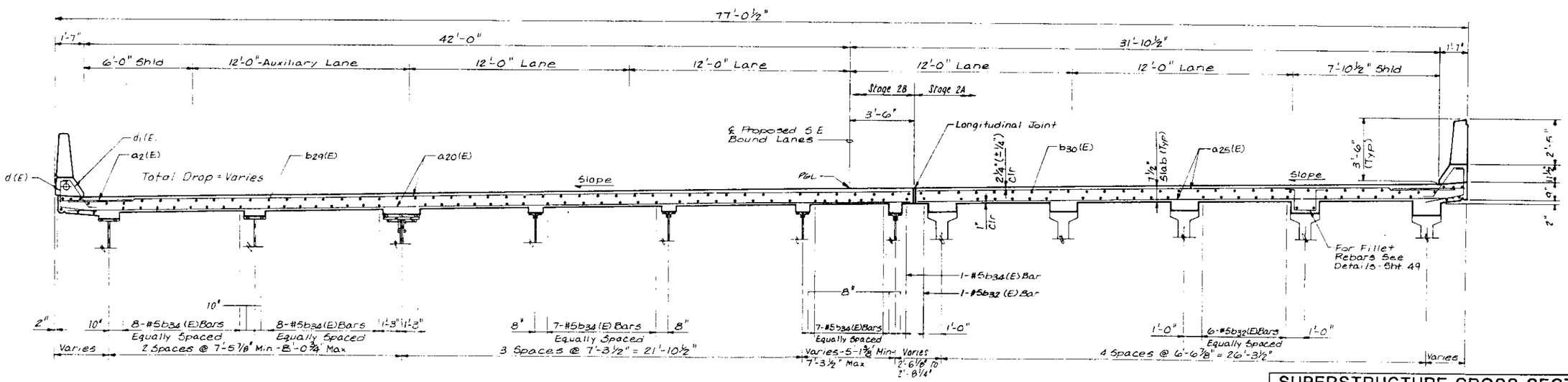
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0603-402HB, 0606-403HB & 0707(404HB, 439IR-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	217
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 42 of 74 SHEETS



CROSS SECTION - SPAN 11
(Looking Up Station)



CROSS SECTION - SPAN 14
(Looking Up Station)

NOTES
FOR NOTES, SEE SHEET 49

STANLEY CONSULTANTS

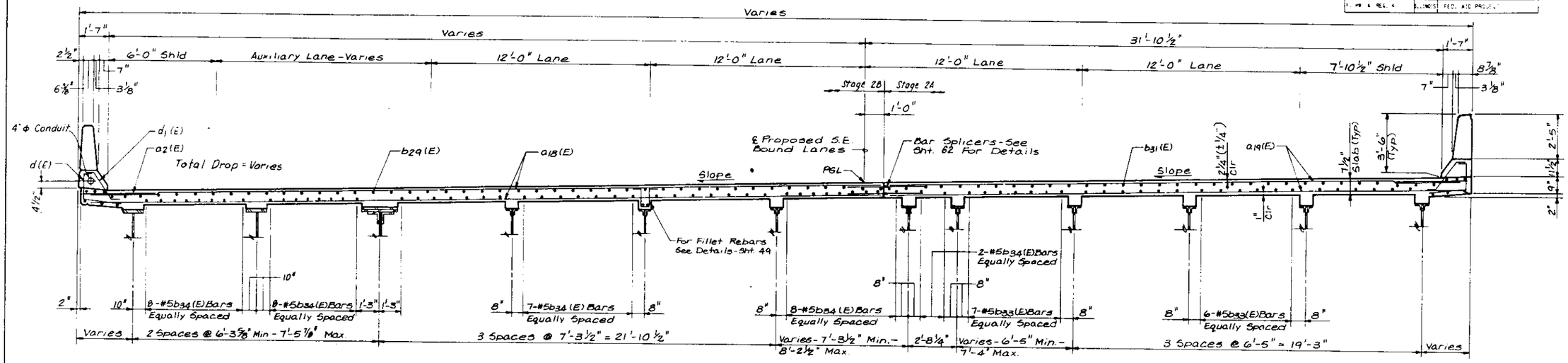
SUPERSTRUCTURE CROSS SECTION
SHEET 4 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

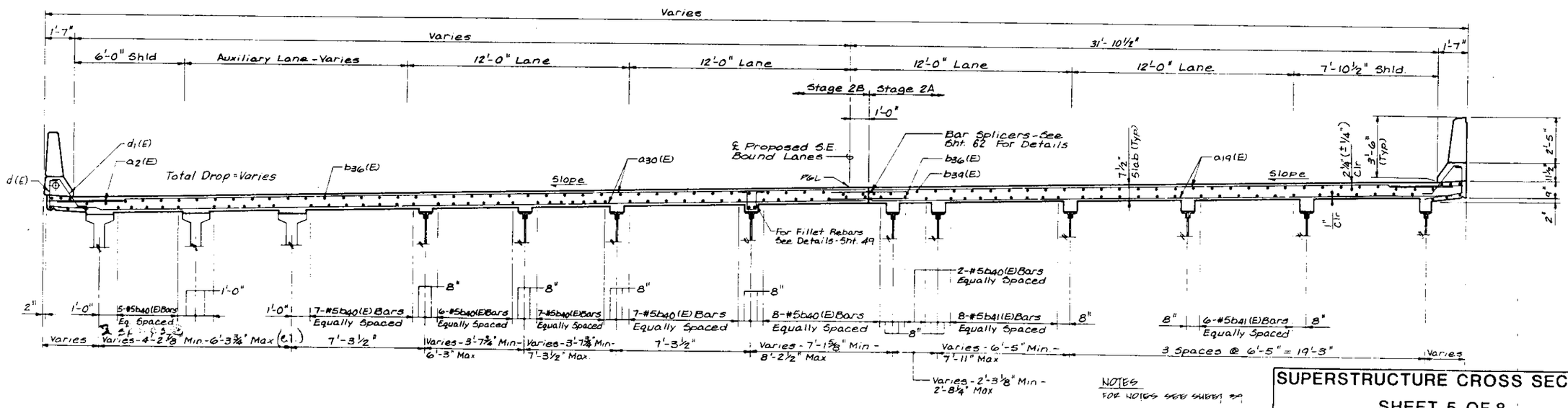
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	218
F.A. RTE. & REG. NO.		ILLINOIS	FED. AID PROJ.	

SHEET NO. 45 of 74 SHEETS



CROSS SECTION - SPAN 15 & SPAN 16
(Looking Up Station)



CROSS SECTION - SPAN 17
(Looking Up Station)

NOTES
FOR NOTES SEE SHEET 2A

STANLEY CONSULTANTS

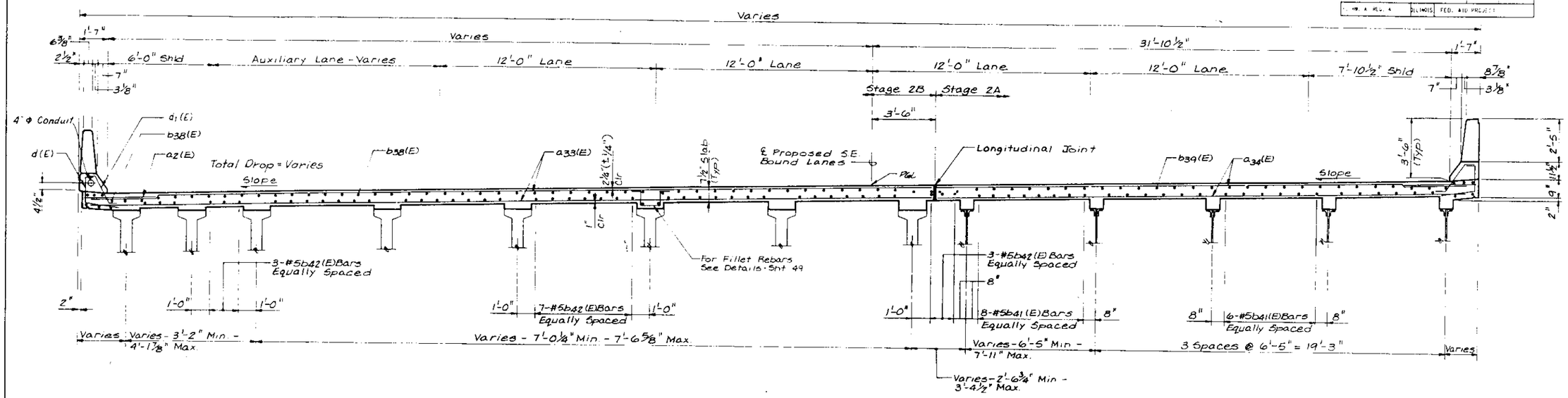
SUPERSTRUCTURE CROSS SECTION
SHEET 5 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

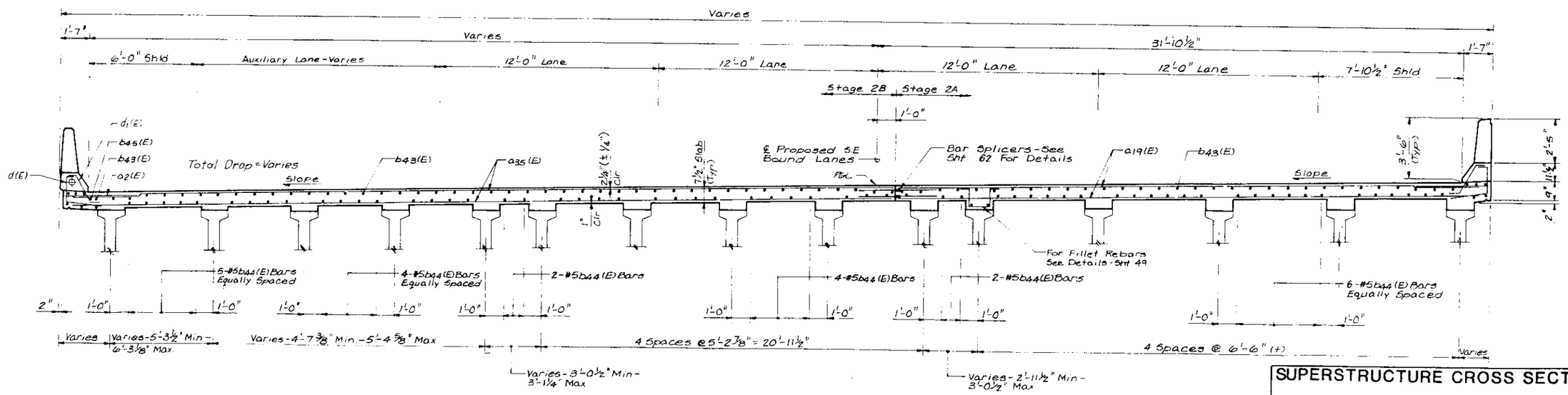
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	219
F.A.P. RTE. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 44 of 74 SHEETS



CROSS SECTION - SPAN 18
(Looking Up Station)



CROSS SECTION - SPAN 19
(Looking Up Station)

NOTE:
For Notes See Sheet 34

STANLEY CONSULTANTS

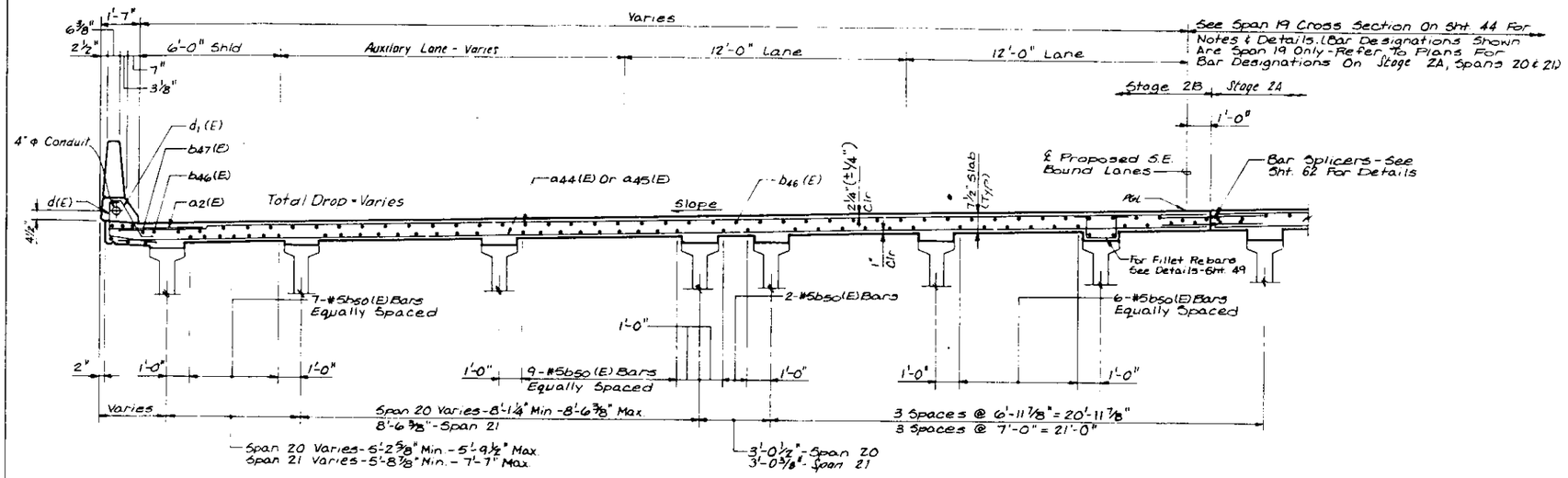
SUPERSTRUCTURE CROSS SECTION
SHEET 6 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

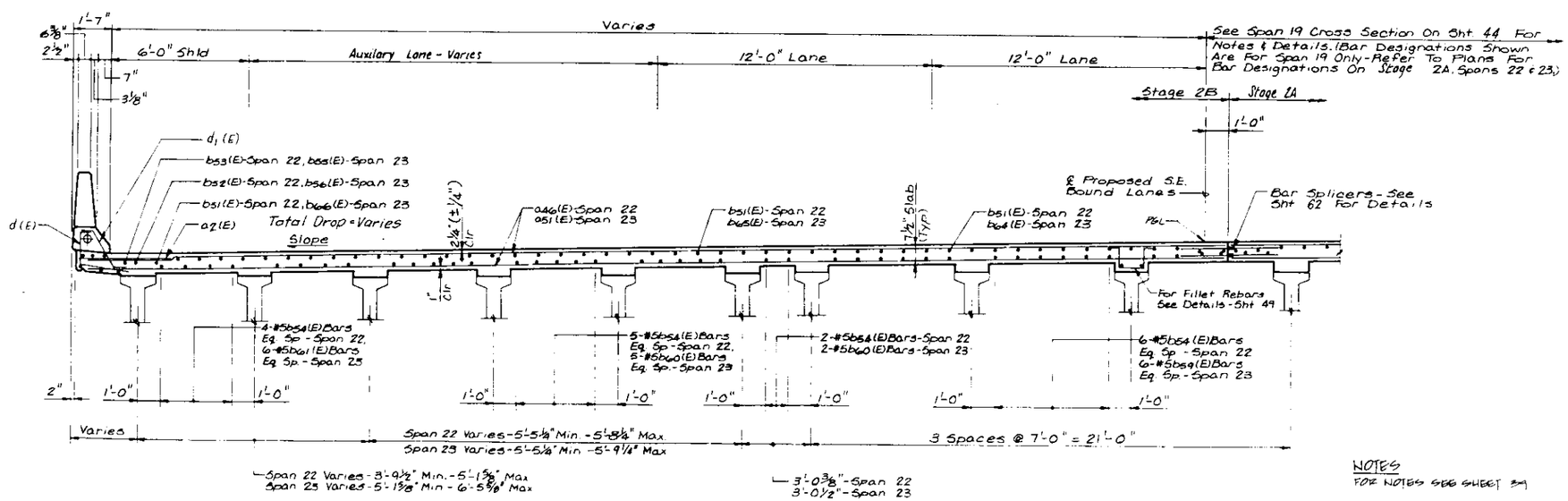
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	120
F. AID & REG. #		ILLINOIS FED. AID PROJECT		

SHEET NO. 45 of 74 SHEETS

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



CROSS SECTION - SPAN 20 & SPAN 21
(Looking Up Station)



CROSS SECTION - SPAN 22 & SPAN 23
(Looking Up Station)

NOTES
FOR NOTES SEE SHEET 39

STANLEY CONSULTANTS

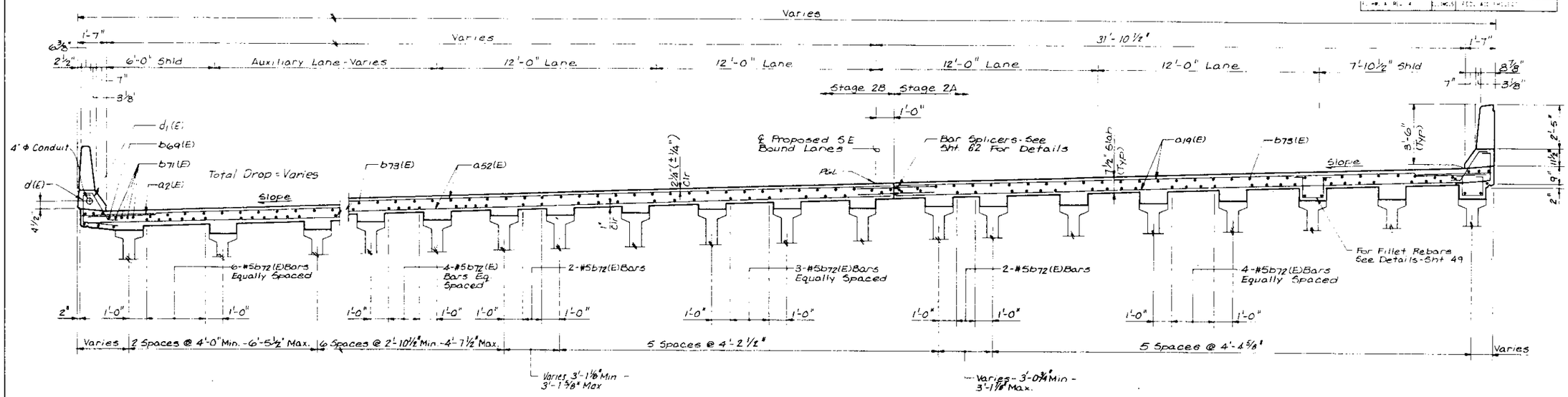
SUPERSTRUCTURE CROSS SECTION
SHEET 7 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

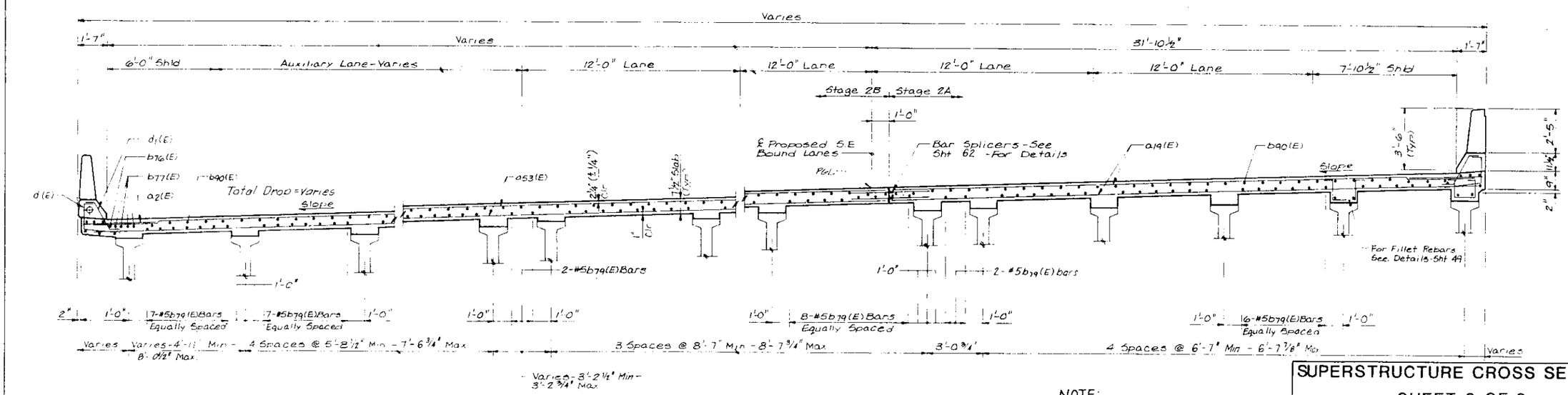
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439HR-2

ROUTE NO.	SEC.	ELEV.	TOTAL SHEETS	SHEET NO.
	*		426	221

SHEET NO. 46 of 74 SHEETS



CROSS SECTION - SPAN 24
(Looking Up Station)



CROSS SECTION-SPAN 25
(Looking Up Station)

NOTE:
For Notes See Sheet 39

STANLEY CONSULTANTS

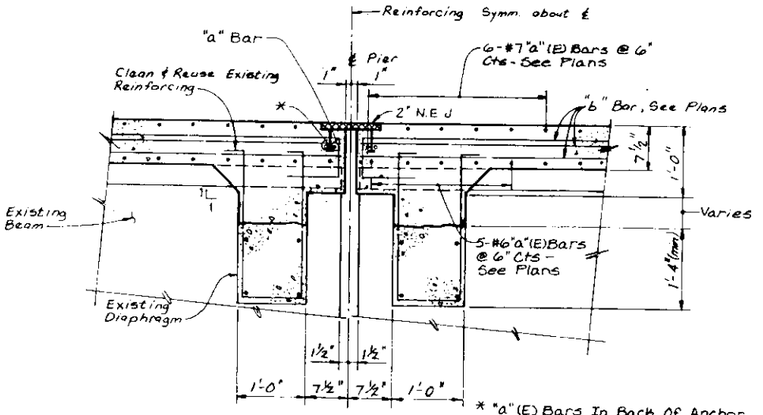
SUPERSTRUCTURE CROSS SECTION
SHEET 8 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	222
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

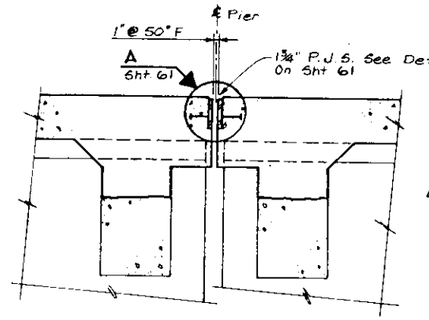
SHEET NO. 47 of 74 SHEETS

NOTE:
COST OF 3/4" EXP BOLTS INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE.



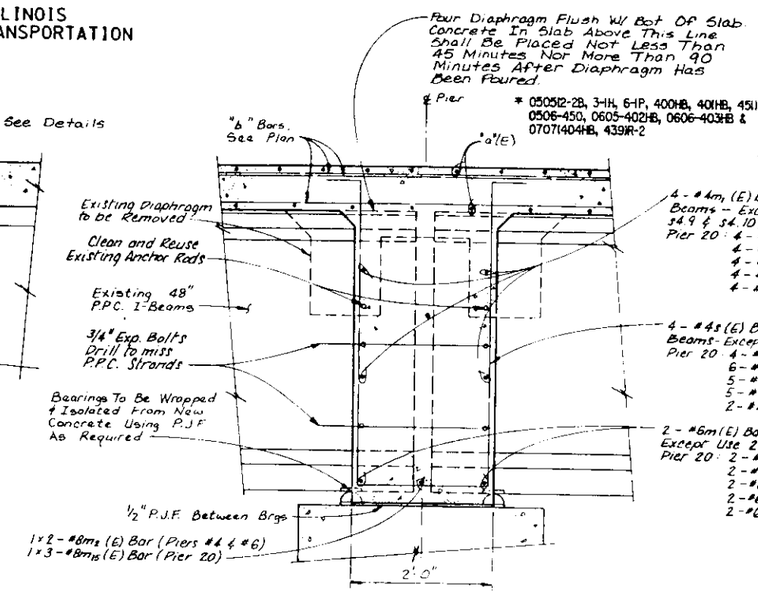
* "a"(E) Bars In Back Of Anchor Bolt As Shown If Required To Maintain 1" Clear (+0-⅛"). Anchor Bolts Should Be Tied To "a"(E) Bars.

SECTION A

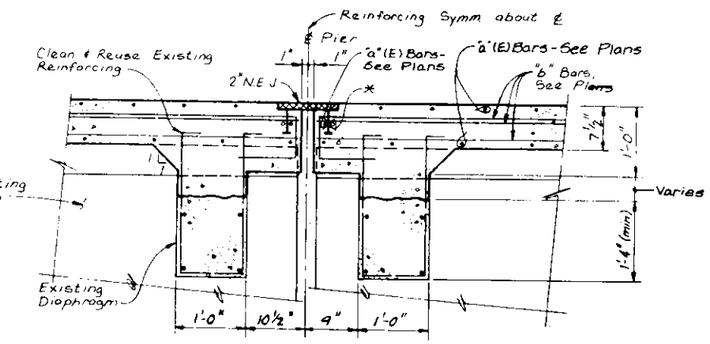


Note:
For Additional Notes, Reinforcing & Dims. See Section A.

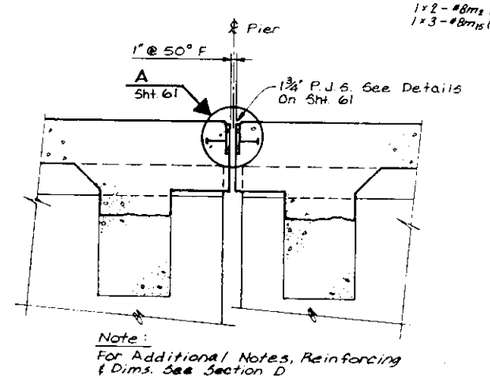
SECTION B



SECTION C

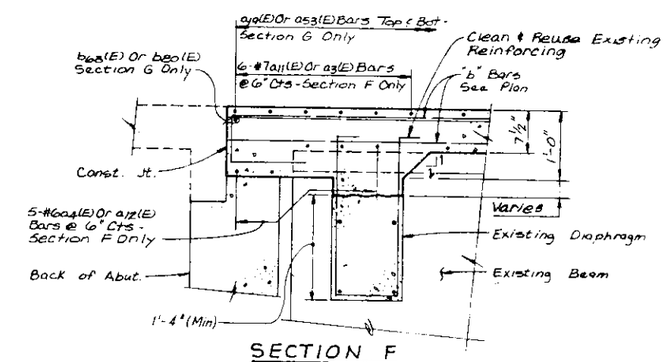


SECTION D

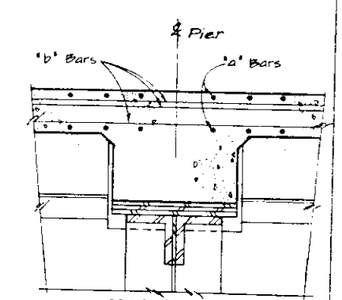


Note:
For Additional Notes, Reinforcing & Dims. See Section D

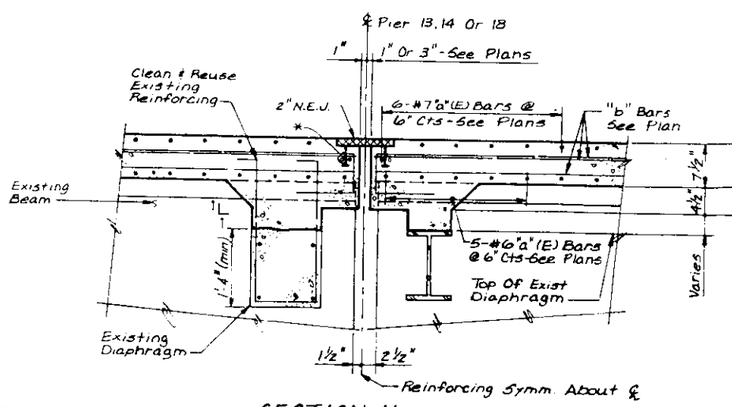
SECTION E



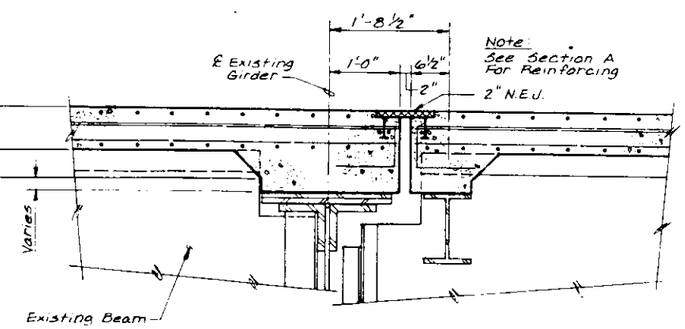
SECTION F
SECTION G



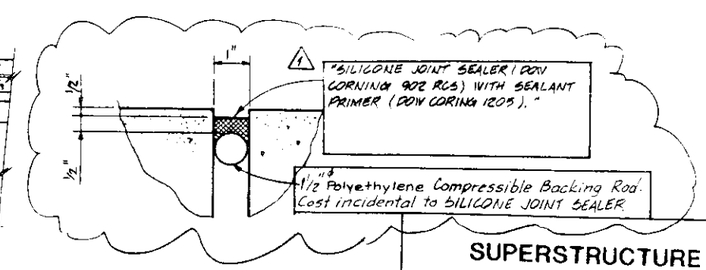
SECTION K



SECTION H



SECTION J



SECTION L

STANLEY CONSULTANTS

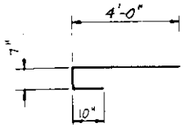
SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

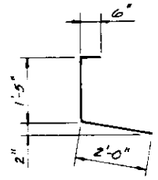
1 As Revised 9-22-92 PMP

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

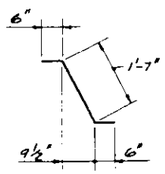
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	223
F.A.P. & REG. #		ILLINOIS	FED. AID PROJECT	



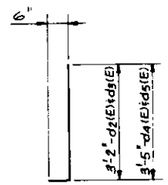
BAR b(E)



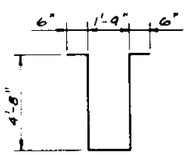
BAR d(E)



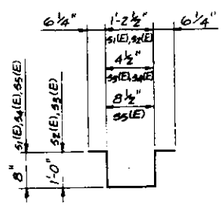
BAR d1(E)



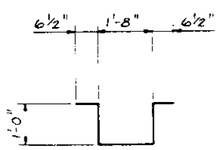
BARS d2(E), d3(E), d4(E) & d5(E)



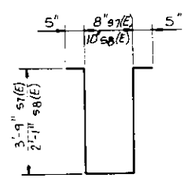
BAR s1(E)



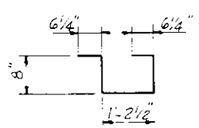
BARS s1(E), s2(E), s3(E), s4(E) & s5(E)



BAR s6(E)



BARS s7(E) & s8(E)



BAR s9(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	352	#5	27'-6"	
a1(E)	1884	#5	32'-9"	
a2(E)	2637	#6	4'-0"	
a3(E)	6	#7	53'-0"	
a4(E)	5	#6	53'-0"	
a5(E)	12	#7	47'-7"	
a6(E)	10	#6	47'-7"	
a7(E)	348	#5	24'-8"	
a8(E)	12	#7	44'-5"	
a9(E)	10	#6	44'-5"	
a10(E)	348	#5	23'-2"	
a11(E)	96	#7	32'-9"	
a12(E)	80	#6	32'-9"	
a13(E)	6	#7	43'-1"	
a14(E)	5	#6	43'-1"	
a15(E)	2720	#5	22'-6"	
a16(E)	60	#7	43'-0"	
a17(E)	50	#6	43'-0"	
a18(E)	1248	#5	23'-0"	
a19(E)	2187	#5	31'-9"	
a20(E)	484	#5	24'-2"	
a21(E)	6	#7	46'-7"	
a22(E)	5	#6	46'-7"	
a23(E)	18	#7	29'-5"	
a24(E)	15	#6	29'-5"	
a25(E)	430	#5	29'-5"	
a26(E)	18	#7	44'-1"	
a27(E)	15	#6	44'-1"	
a28(E)	66	#7	31'-11"	
a29(E)	55	#6	31'-11"	
a30(E)	492	#5	23'-2"	
a31(E)	6	#7	44'-4"	
a32(E)	5	#6	44'-4"	
a33(E)	376	#5	24'-2"	
a35(E)	380	#5	23'-11"	
a36(E)	6	#7	44'-11"	
a37(E)	5	#6	44'-11"	
a38(E)	6	#7	47'-5"	
a39(E)	5	#6	47'-5"	
a40(E)	12	#7	46'-2"	
a41(E)	10	#6	46'-2"	
a42(E)	6	#7	46'-10"	
a43(E)	5	#6	46'-10"	
a44(E)	406	#5	24'-8"	
a45(E)	406	#5	25'-5"	
a46(E)	274	#5	26'-4"	
a47(E)	12	#7	49'-2"	
a48(E)	10	#6	49'-2"	
a49(E)	12	#7	51'-0"	
a50(E)	10	#6	51'-0"	
a51(E)	390	#5	27'-2"	
a52(E)	496	#5	30'-8"	
a53(E)	428	#5	32'-9"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b(E)	2915	#6	5'-5"	
b1(E)	170	#5	39'-8"	
b2(E)	312	#5	27'-1"	
b3(E)	8	#5	39'-0"	
b4(E)	7	#5	38'-6"	
b5(E)	486	#5	39'-2"	
b6(E)	864	#5	26'-8"	
b7(E)	800	#5	32'-1"	
b8(E)	309	#6	32'-0"	
b9(E)	1080	#5	27'-0"	
b10(E)	91	#5	37'-11"	
b11(E)	70	#5	28'-10"	
b12(E)	90	#5	37'-9"	
b13(E)	99	#5	18'-8"	
b14(E)	114	#5	22'-3"	
b15(E)	63	#5	25'-9"	
b16(E)	2	#6	45'-4"	
b17(E)	2	#6	35'-6"	
b18(E)	160	#5	29'-5"	
b19(E)	312	#5	20'-3"	
b20(E)	4	#6	33'-3"	
b21(E)	4	#6	46'-7"	
b22(E)	105	#5	19'-9"	
b23(E)	108	#5	16'-0"	
b24(E)	63	#5	11'-6"	
b25(E)	70	#5	28'-10"	
b26(E)	90	#5	21'-8"	
b27(E)	2	#6	46'-0"	
b28(E)	2	#6	34'-4"	
b29(E)	294	#5	35'-4"	
b30(E)	64	#5	34'-8"	
b31(E)	128	#5	35'-4"	
b32(E)	111	#5	23'-9"	
b33(E)	200	#5	28'-7"	
b34(E)	406	#5	30'-8"	
b35(E)	2	#5	34'-0"	
b36(E)	98	#5	36'-7"	
b37(E)	2	#5	25'-0"	
b38(E)	100	#5	28'-10"	
b39(E)	128	#5	33'-2"	
b40(E)	180	#5	25'-0"	
b41(E)	190	#5	27'-0"	
b42(E)	177	#5	19'-9"	
b43(E)	164	#5	35'-11"	
b44(E)	282	#5	24'-6"	
b45(E)	2	#5	32'-0"	
b46(E)	249	#5	39'-4"	
b47(E)	2	#5	40'-0"	
b48(E)	1	#5	39'-0"	
b49(E)	80	#6	24'-0"	
b50(E)	408	#5	30'-0"	
b51(E)	172	#5	26'-10"	
b52(E)	1	#5	38'-0"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b53(E)	1	#5	22'-0"	
b54(E)	219	#5	18'-6"	
b55(E)	2	#5	39'-6"	
b56(E)	6	#5	35'-0"	
b57(E)	9	#5	28'-9"	
b58(E)	102	#5	18'-1"	
b59(E)	84	#5	25'-0"	
b60(E)	75	#5	27'-0"	
b61(E)	84	#5	22'-3"	
b62(E)	38	#5	22'-11"	
b63(E)	30	#5	27'-8"	
b64(E)	36	#5	33'-2"	
b65(E)	32	#5	38'-0"	
b66(E)	48	#5	29'-1"	
b67(E)	8	#6	32'-2"	
b68(E)	10	#6	37'-6"	
b69(E)	3	#5	29'-8"	
b70(E)	9	#5	30'-0"	
b71(E)	8	#5	36'-0"	
b72(E)	492	#5	22'-1"	
b73(E)	264	#5	28'-10"	
b74(E)	8	#6	35'-0"	
b75(E)	6	#5	29'-6"	
b76(E)	2	#5	28'-0"	
b77(E)	6	#5	23'-0"	
b78(E)	186	#5	28'-2"	
b79(E)	363	#5	19'-3"	
b80(E)	4	#6	38'-2"	
b81(E)				
b82(E)	8	#5	6'-0"	
b83(E)	8	#6	7'-0"	
b84(E)	192	#5	2'-0"	
b85(E)	144	#5	5'-0"	
b86(E)	8	#5	6'-0"	
d(E)	3198	#4	3'-11"	
d1(E)	3491	#5	2'-7"	
d2(E)	2492	#4	3'-8"	
d3(E)	2721	#5	3'-8"	
d4(E)	706	#4	3'-11"	
d5(E)	770	#5	3'-11"	
e(E)	88	#4	19'-2"	
e1(E)	12	#8	28'-4"	
e2(E)	4	#5	39'-9"	
e3(E)	200	#4	18'-11"	
e4(E)	36	#8	28'-0"	
e5(E)	24	#5	39'-2"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
e6(E)	192	#4	16'-5"	
e7(E)	32	#8	35'-1"	
e8(E)	32	#5	34'-2"	
e9(E)	80	#4	9'-9"	
e10(E)	20	#5	9'-9"	
e11(E)	20	#8	9'-9"	
e12(E)	80	#4	18'-10"	
e13(E)	4	#5	37'-11"	
e14(E)	4	#8	37'-11"	
e15(E)	136	#4	18'-3"	
e16(E)	4	#8	38'-8"	
e17(E)	4	#5	37'-9"	
e18(E)	8	#8	30'-5"	
e19(E)	8	#5	29'-5"	
e20(E)	8	#4	22'-3"	
e21(E)	2	#8	22'-3"	
e22(E)	2	#5	22'-3"	
e23(E)	24	#4	19'-0"	
e24(E)	4	#8	30'-8"	
e25(E)	4	#5	29'-8"	
e26(E)	64	#4	15'-5"	
e27(E)	12	#8	36'-11"	
e28(E)	12	#5	35'-5"	
e29(E)	4	#8	30'-10"	
e30(E)	4	#5	29'-11"	
e31(E)	32	#4	16'-9"	
e32(E)	32	#4	17'-8"	
e33(E)	4	#8	37'-6"	
e34(E)	4	#5	36'-6"	
e35(E)	48	#4	17'-9"	
e36(E)	4	#8	28'-9"	
e37(E)	4	#5	27'-9"	
e38(E)	64	#4	17'-4"	
e39(E)	8	#8	36'-10"	
e40(E)	8	#5	35'-10"	
e41(E)	72	#4	15'-7"	
e42(E)	12	#8	25'-5"	
e43(E)	12	#5	24'-6"	
e44(E)	32	#4	7'-9"	
e45(E)	8	#8	7'-9"	
e46(E)	8	#5	7'-9"	
e47(E)	48	#4	16'-10"	
e48(E)	8	#8	27'-5"	
e49(E)	8	#5	26'-5"	
e50(E)	88	#4	17'-2"	
e51(E)	8	#8	27'-10"	
e52(E)	8	#5	26'-10"	
e53(E)	80	#4	16'-4"	
e54(E)	12	#8	30'-0"	
e55(E)	12	#5	28'-9"	
e56(E)	6	#8	31'-4"	
e57(E)	6	#5	30'-1"	
e58(E)	24	#4	14'-0"	
e59(E)	4	#8	30'-6"	
e60(E)	4	#5	29'-7"	
e61(E)	4	#8	23'-1"	
e62(E)	4	#8	28'-10"	
e63(E)	4	#5	27'-10"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
e64(E)	2	#8	36'-9"	
e65(E)	2	#5	36'-9"	
e66(E)	4	#5	22'-1"	
e67(E)	4	#5	39'-8"	
e68(E)	32	#4	15'-2"	
e69(E)	4	#8	32'-6"	
e70(E)	4	#5	31'-7"	
e71(E)	4	#8	35'-8"	
e72(E)	4	#5	34'-9"	
e73(E)	24	#4	18'-6"	
e74(E)	4	#8	29'-10"	
e75(E)	4	#5	28'-11"	
e76(E)	4	#5	13'-9"	
e77(E)	4	#8	13'-9"	
e78(E)	16	#4	13'-9"	
e79(E)	24	#4	12'-6"	
m(E)	52	#6	3'-2"	
m1(E)	104	#4	3'-7"	
m2(E)	4	#8	40'-0"	
m3(E)	4	#6	1'-1"	
m4(E)	8	#4	1'-4"	
m5(E)	4	#4	4'-0"	
m6(E)	8	#4	6'-9"	
m7(E)	8	#4	1'-3"	
m8(E)	12	#4	5'-3"	
m9(E)	16	#4	4'-10"	
m10(E)	2	#6	3'-8"	
m11(E)	4	#6	6'-5"	
m12(E)	4	#6	0'-11"	
m13(E)	6	#6	4'-11"	
m14(E)	8	#6	4'-6"	
m15(E)	3	#8	28'-3"	
m16(E)	2	#6	6'-8"	
m17(E)	4	#4	6'-8"	
m18(E)	2	#6	4'-5"	
m19(E)	4	#4	5'-7"	
m20(E)	2	#6	3'-4"	
m21(E)	4	#4	4'-7"	
m22(E)	2	#6	3'-10"	
m23(E)	4	#4	3'-10"	
s(E)	163	#4	12'-1"	
s1(E)	17711	#4	3'-7"	
s2(E)	478	#4	4'-3"	
s3(E)	472	#5	3'-5"	
s4(E)	2030	#5	2'-9"	
s5(E)	1008	#4	3'-1"	
s6(E)	203	#4	4'-9"	
s7(E)	9	#4	9'-0"	
s8(E)	10	#4	5'-10"	
s9(E)	141	#4	3'-7"	

Reinforcement Bars (Epoxy Coated)	LBS.	94,760
Class X Concrete Superstructures	Cu. Yds.	3930.3

Reinforcement bars designated (E) shall be epoxy coated.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

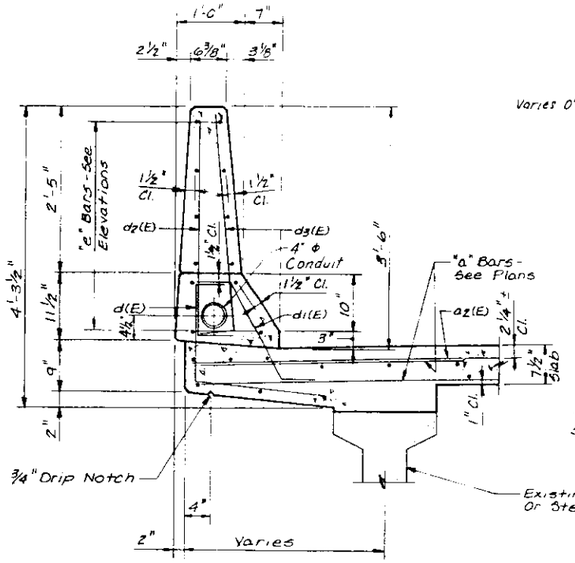
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

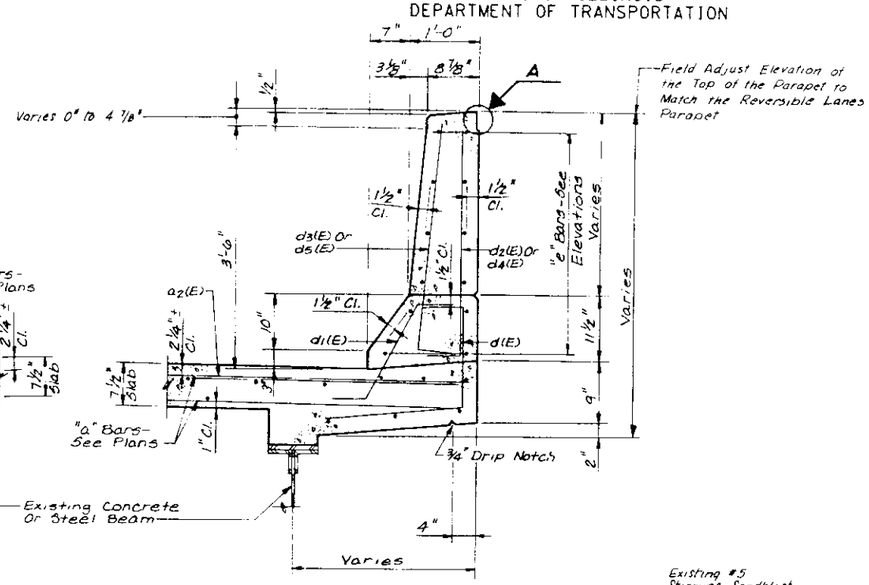
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	NO.
	*		426	224
F.A.I. RTE. 90/94	ILLINOIS	FED. AID PROJECT		

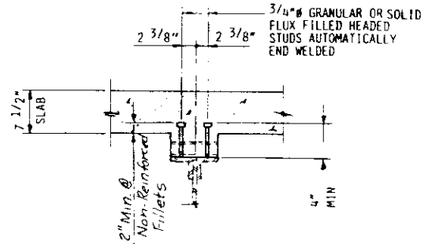
SHEET NO. 49 of 74 SHEETS



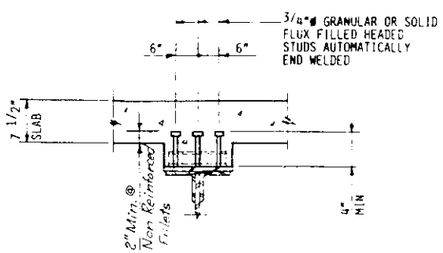
SECTION @ WEST PARAPET



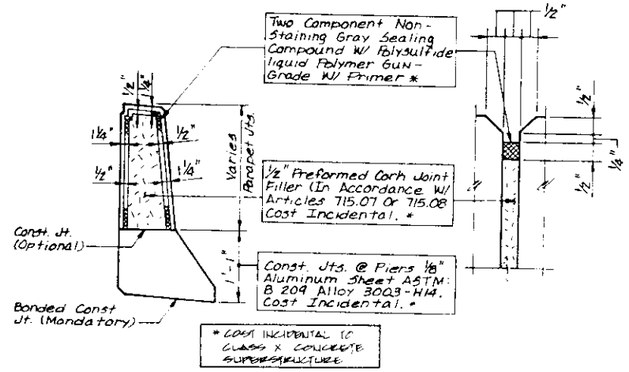
SECTION @ EAST PARAPET



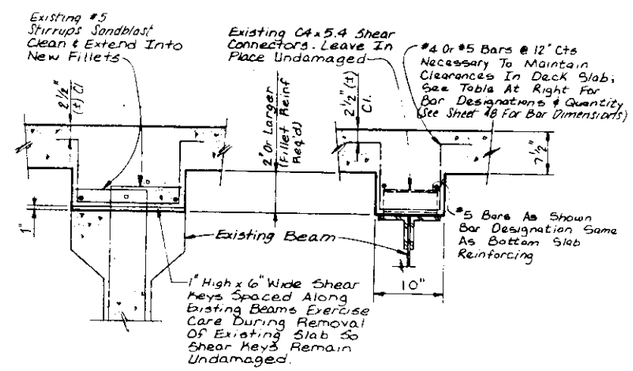
SHEAR STUD DETAILS FOR BEAMS



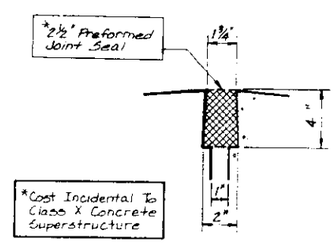
SHEAR STUD DETAILS FOR GIRDERS



PARAPET JOINT DETAILS



FILLET REINFORCING DETAILS



DETAIL A

BEAM FILLET REINFORCING TABLE

BEAM NUMBER	BAR QUANTITY	BAR NUMBER
S1.1-S1.5, S2.1-S2.6	77 EACH	s1(E)
S1.6-S1.17, S2.7-S2.17, S3.1-S3.16, S4.1-4.15, S5.1-S5.15, S6.1-S6.15, S7.1-S7.15, S8.1-S8.15	76 EACH	s1(E)
S9.1-S9.10, S13.5	38 EACH	s1(E)
S10.1	73	s1(E)
S10.2	71	s1(E)
S10.3, S14.5-S14.7, S23.5	68 EACH	s1(E)
S10.4	66	s1(E)
S10.5	63	s1(E)
S10.6	60	s1(E)
S10.7	58	s1(E)
S11.1-S11.18	56 EACH	s5(E)
S13.1	23	s1(E)
S13.2	26	s1(E)
S13.3	30	s1(E)
S13.4	34	s1(E)
S13.6	42	s1(E)
S13.7	44	s1(E)
S13.8	48	s1(E)
S13.9	51	s2(E)
S13.10, S20.13	55 EACH	s2(E)
S14.1-S14.4, S15.1-S15.4	68 EACH	s4(E)
S14.8-S14.9	68 EACH	s2(E)
S15.5-S15.9, S16.1-S16.7	67 EACH	s4(E)
S17.4-S17.10	73 EACH	s4(E)
S17.11-S17.13	74 EACH	s3(E)
S18.3-S18.8, S25.3	56 EACH	s1(E)
S18.9-S18.11	57 EACH	s4(E)
S18.12-S18.13	58 EACH	s3(E)
S19.2-S19.14	70 EACH	s1(E)
S19.15	70	s2(E)
S20.1-S20.12, S23.9, S25.4	55 EACH	s1(E)
S21.1-S21.12, S23.8	59 EACH	s1(E)
S21.13	59	s2(E)
S22.3-S22.15, S23.10, S25.6-S25.14	52 EACH	s1(E)
S23.1	81	s1(E)
S23.2	78	s1(E)
S23.3	74	s3(E)
S23.4	71	s1(E)
S23.11	50	s1(E)
S23.12	47	s1(E)
S23.13	43	s1(E)
S23.14	39	s1(E)
S23.15	36	s1(E)
S24.1	86	s9(E)
S24.2, S24.4	88 EACH	s1(E)
S24.3	89	s1(E)
S24.5	87	s1(E)
S24.6	85	s1(E)
S24.7	84	s1(E)
S24.8-S24.10	83 EACH	s1(E)
S24.11-S24.22	82 EACH	s1(E)
S25.2	58	s1(E)
S25.5	54	s1(E)
S25.15	52	s2(E)
S16.8-S16.9	67 EACH	s3(E)
Q1	203	s6(E)
S10.8	56	s1(E)
S10.9	54	s1(E)
S10.10	51	s1(E)
S10.11	49	s1(E)
S10.12	47	s1(E)
S23.6	65	s1(E)
S23.7	62	s1(E)
S25.1	55	s5(E)

NOTES:

CARE SHOULD BE TAKEN DURING REMOVAL OF EXISTING DECK TO MINIMIZE DAMAGE TO EXISTING CHANNEL SHEAR CONNECTORS AND EXISTING SHEAR STUDS. ANY EXISTING CHANNEL SHEAR CONNECTORS OR EXISTING SHEAR STUDS THAT ARE DAMAGED SHALL BE REPLACED WITH SHEAR STUDS AT CONTRACTOR'S EXPENSE.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

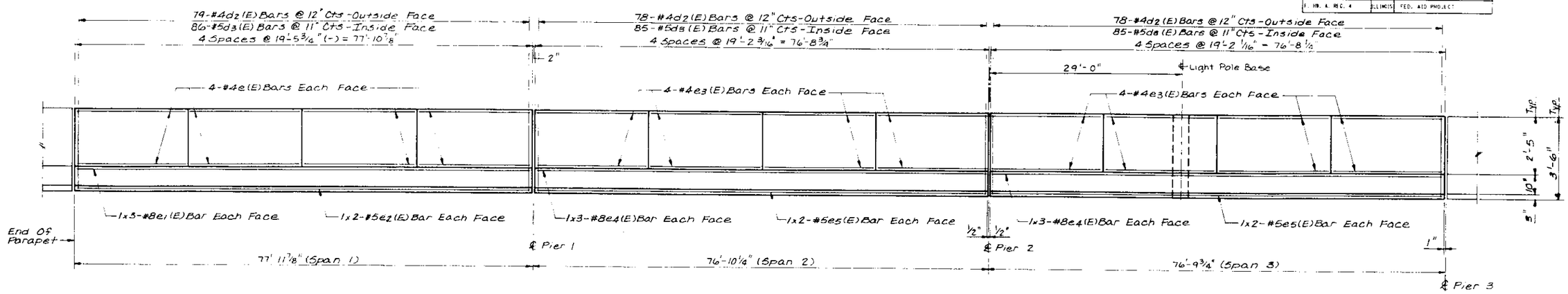
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

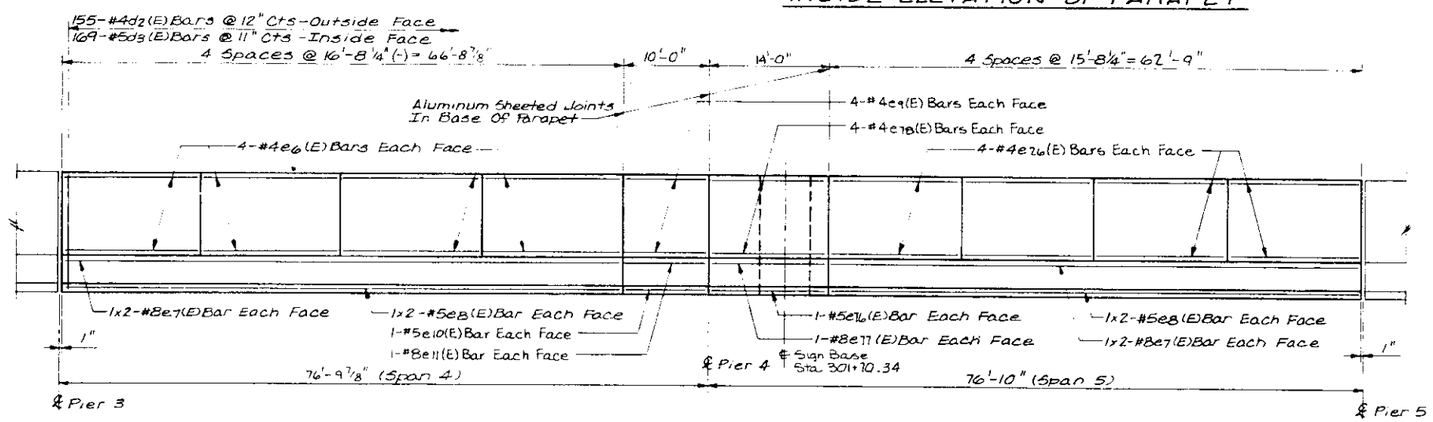
* 0505(12-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439(R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	225
F. HR. & REC. 4	ILLINOIS	FED. AID PROJECT		

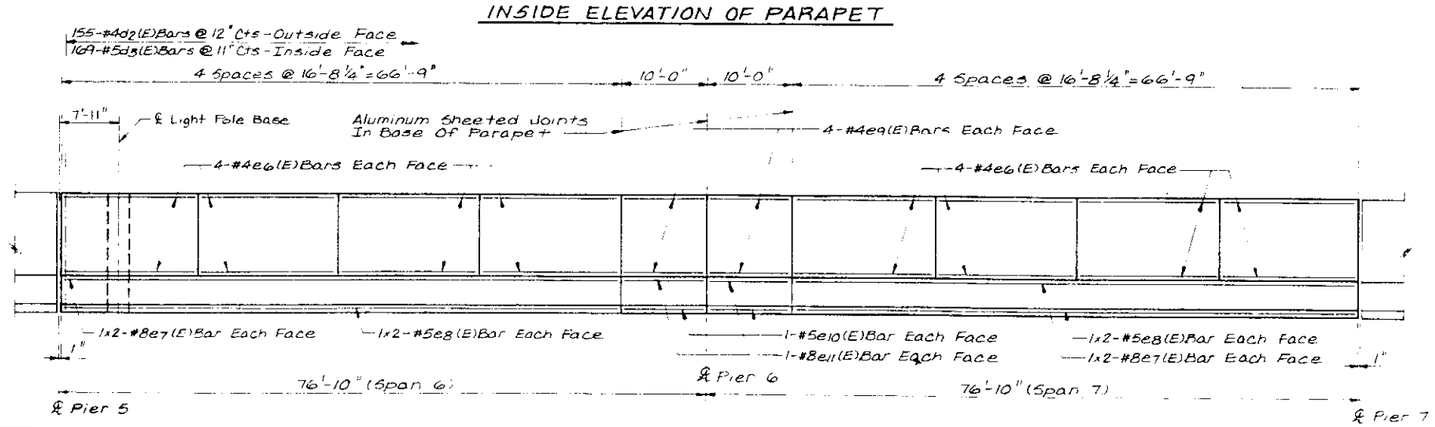
SHEET NO. 50 of 74 SHEETS



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES
1 SEE SHEET 49 FOR SUPERSTRUCTURE DETAILS
2 SEE SHEET 48 FOR BILL OF MATERIAL
3 MINIMUM LAP #8 BAR : 3'-6"
MINIMUM LAP #5 BAR : 1'-4"

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

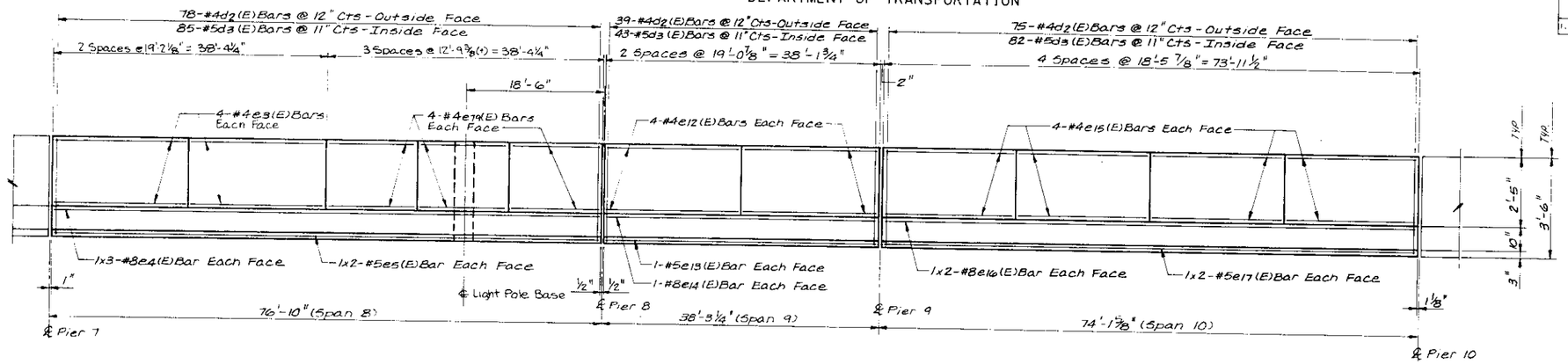
PARAPET DETAILS - WEST SIDE
SHEET 1 OF 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

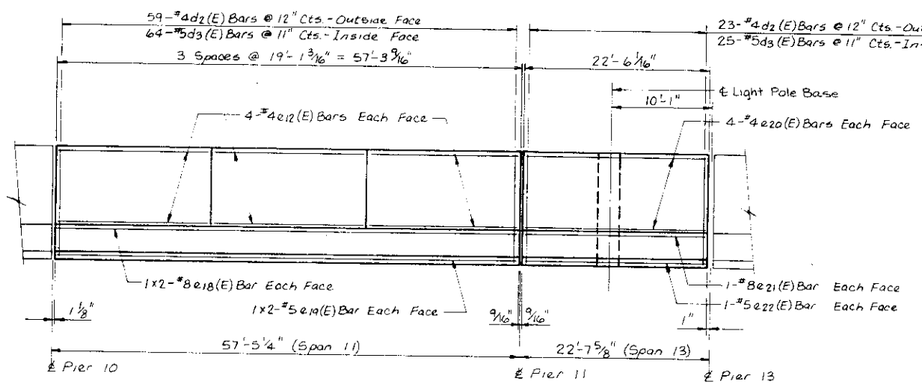
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	226
F. HR. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 51 of 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES
1. FOR NOTES SEE SHEET 50

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

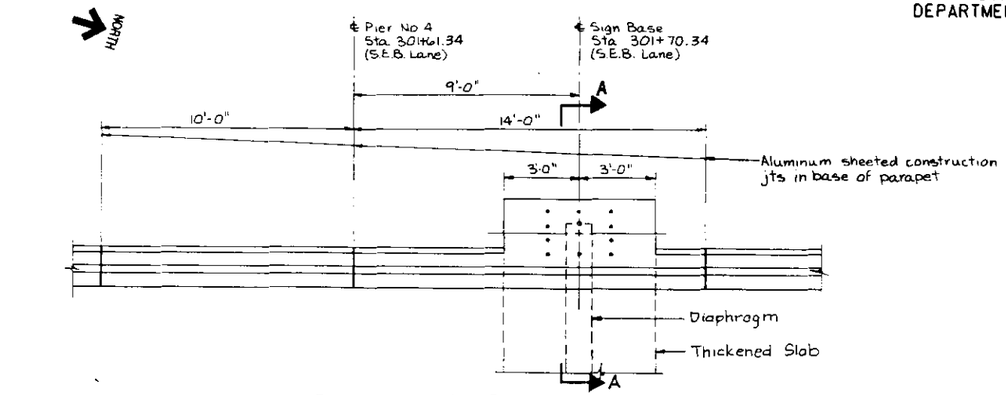
PARAPET DETAILS - WEST SIDE
SHEET 2 OF 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

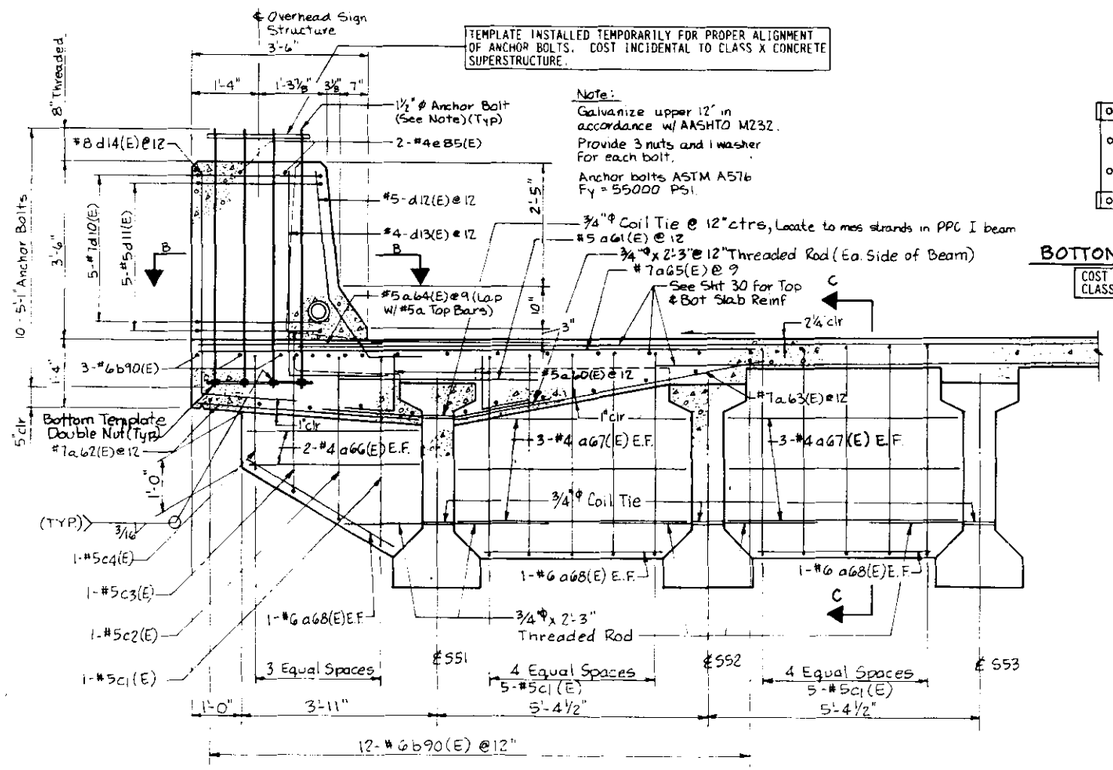
* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 4391R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	234
F.A. RTE. 9 REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 59 of 74 SHEETS

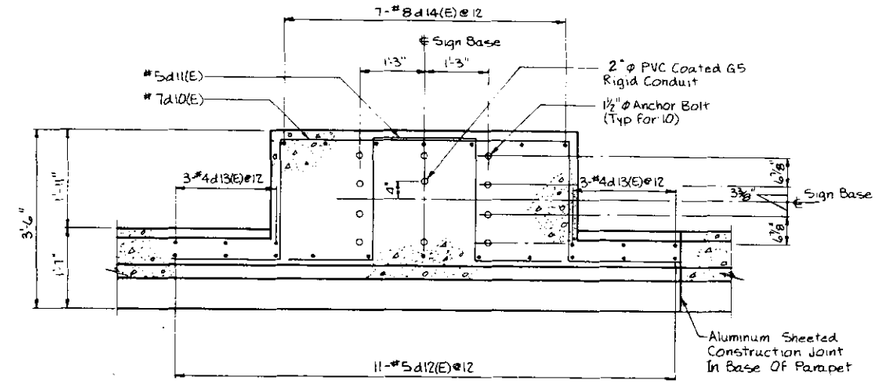


PLAN - SIGN BASE NEAR PIER NO. 4

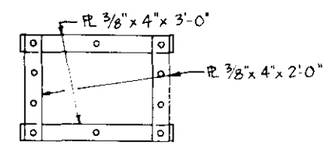


SECTION A-A

COST OF ANCHOR BOLTS AND 3/4"φ THREADED RODS INCIDENTAL TO CLASS "X" CONCRETE SUPERSTRUCTURE

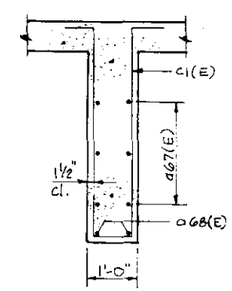


SECTION B-B

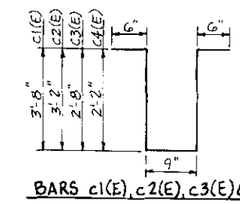


BOTTOM ANCHOR BOLT TEMPLATE

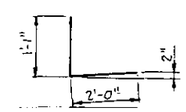
COST INCIDENTAL TO CLASS "X" CONCRETE SUPERSTRUCTURE



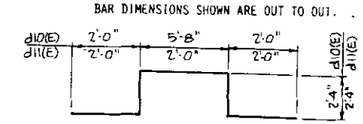
SECTION C-C



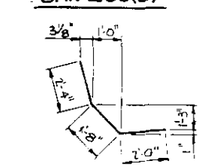
BARS c1(E), c2(E), c3(E) & c4(E)



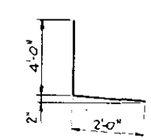
BAR a60(E)



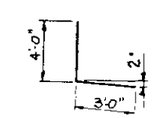
BARS d10(E) & d11(E)



BAR d12(E)



BAR d13(E)



BAR d14(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a60(E)	14	#5	3'-1"	L
a61(E)	7	#5	4'-6"	—
a62(E)	7	#7	4'-3"	—
a63(E)	7	#7	6'-6"	—
a64(E)	9	#5	5'-0"	—
a65(E)	9	#7	11'-6"	—
a66(E)	4	#4	3'-6"	—
a67(E)	12	#4	4'-6"	—
a68(E)	6	#6	3'-4"	—
b90(E)	15	#6	5'-8"	—
c1(E)	11	#5	9'-1"	⊓
c2(E)	1	#5	8'-1"	⊓
c3(E)	1	#5	7'-1"	⊓
c4(E)	1	#5	6'-1"	⊓
d10(E)	5	#7	14'-4"	⊓
d11(E)	5	#5	10'-8"	⊓
d12(E)	11	#5	6'-0"	L
d13(E)	6	#4	6'-0"	L
d14(E)	7	#8	7'-0"	L
e85(E)	2	#4	5'-8"	—
REINFORCING BARS (EPOXY COATED)			LBS.	1,250
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	4.7

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED

BAR DIMENSIONS SHOWN ARE OUT TO OUT.

NOTE:

OVERHEAD SIGNS MUST BE PERPENDICULAR TO THE FLOW OF TRAFFIC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN THE FIELD THE LOCATION AND THE ANGLE OF THE ANCHOR BOLT GROUP IN ORDER TO PROPERLY ERECT THE SIGN.

STANLEY CONSULTANTS

PARAPET MOUNTED SIGN BASE

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	235

SHEET NO. 60 of 74 SHEETS

FED. AID PROJECT

* 0505(2-2B, 3-HH, 6-HP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

BEAM NUMBER

BEAM MOMENT TABLE		S14.3 S14.1	S14.2	S14.4	S15.3 S15.1	S15.2	S15.4	S15.5	S15.8 S15.7 S15.6	S15.9	S16.3 S16.1	S16.2	S16.4	S16.5	S16.8 S16.7 S16.6	S16.9
Is	in4	16,770	17,284	15,479	16,770	19,093	17,553	17,553	17,553	14,610	16,770	17,284	16,770	17,553	17,553	17,553
Ic(n=9)	in4	55,249	57,915	40,971	55,249	68,061	47,493	47,493	50,242	37,163	55,249	57,915	50,903	45,642	50,242	50,242
Ic(n=27)	in4	38,534	40,058	28,227	38,534	45,642	33,158	33,158	35,488	26,834	38,534	40,058	34,705	31,714	35,488	35,488
Ss	in3	929.9	985.4	783.5	929.9	1,200.9	880.1	880.1	880.1	642.6	929.9	985.4	929.9	880.1	880.1	880.1
Sc(n=9)	in3	1357.1	1437.3	1,099.7	1,357.1	1,756.5	1,224.3	1,224.3	1,241.0	906.8	1,357.1	1,437.3	1,332.6	1,212.4	1,241.0	1,241.0
Sc(n=27)	in3	1246.5	1320.2	989.2	1,246.5	1,611.4	1,112.6	1,112.6	1,135.2	821.3	1,246.5	1,320.2	1,210.8	1,097.5	1,135.2	1,135.2
DL	k/ft	0.897	0.897	0.569	0.908	0.908	0.695	0.667	0.819	0.697	0.908	0.908	0.719	0.636	0.809	0.786
MDL	k-ft	504.8	504.8	320.2	529.5	529.5	405.3	377.6	463.7	394.6	508.0	508.0	402.2	355.8	452.6	439.7
SDL	k/ft	0.182	0.182	0.101	0.184	0.184	0.131	0.247	0.247	0.247	0.186	0.186	0.137	0.247	0.247	0.247
MSDL	k-ft	102.4	102.4	56.8	107.3	107.3	76.4	139.8	139.8	139.8	104.1	104.1	76.6	138.2	138.2	138.2
MLL	k-ft	619.0	619.0	340.8	639.9	639.9	453.7	419.9	557.6	537.0	628.7	628.7	461.3	386.0	543.2	532.9
MIMP	k-ft	160.9	160.9	88.6	165.7	165.7	117.5	109.2	145.0	139.6	164.1	164.1	120.3	100.7	141.8	139.1
MLL+I	k-ft	779.9	779.9	429.4	805.6	805.6	571.2	529.1	702.6	676.6	792.8	792.8	581.6	486.7	685.0	672.0
fs (DL)	ksi	6.51	6.14	4.90	6.83	5.29	5.53	5.15	6.32	7.37	6.56	6.19	5.19	4.85	6.17	6.00
fs (SDL)	ksi	0.99	0.93	0.69	1.03	0.80	0.82	1.51	1.48	2.04	1.00	0.95	0.76	1.51	1.46	1.46
fs (LL+I)	ksi	6.90	6.51	4.69	7.12	5.50	5.60	5.19	6.79	8.95	7.00	6.61	5.23	4.81	6.62	6.49
fs TOTAL	ksi	14.40	13.58	10.28	14.98	11.59	11.95	11.85	14.59	18.36	14.56	13.75	11.18	11.17	14.25	13.95
VR	k	41.1	41.1	25.7	41.6	41.6	30.8	29.9	40.4	35.5	43.7	43.7	30.8	25.7	36.2	35.5

BEAM MOMENT TABLE		S17.4	S17.5	S17.6	S17.7	S17.8	S17.9	S17.12 S17.11 S17.10	S17.13	S18.9	S18.10	S18.11	S18.12	S18.13	GIRDER G1
Is	in4	17,553	17,553	19,872	19,872	19,872	15,479	17,729	17,553	15,479	15,479	15,479	15,479	12,547	2,093,80[illegible]
Ic(n=9)	in4	49,600	47,428	59,581	63,110	56,708	43,264	57,083	47,428	43,264	46,629	46,629	46,629	32,866	2,515,642
Ic(n=27)	in4	34,923	33,106	40,671	43,696	38,419	30,006	38,953	33,106	30,006	32,922	32,922	32,922	23,639	2,247,268
Ss	in3	880.1	880.1	1,109.1	1,109.1	1,109.1	783.5	1,010.3	880.1	783.5	783.5	783.5	783.5	548.4	27,280.8
Sc(n=9)	in3	1,237.2	1,223.9	1,555.2	1,574.2	1,538.6	1,115.0	1,456.8	1,223.9	1,115.0	1,135.8	1,135.8	1,135.8	796.8	28,875.6
Sc(n=27)	in3	1,129.9	1,112.1	1,420.5	1,447.9	1,398.2	1,008.7	1,331.5	1,112.1	1,008.7	1,037.4	1,037.4	1,037.4	717.3	27,909.4
DL	k/ft	0.804	0.695	0.804	0.928	0.703	0.644	0.829	0.704	0.666	0.806	0.806	0.806	0.612	2.06
MDL	k-ft	512.3	442.9	512.3	591.4	448.0	419.6	540.2	458.7	255.5	316.0	316.0	316.0	245.0	25.[illegible]
SDL	k/ft	0.218	0.218	0.218	0.218	0.218	0.218	0.216	0.218	0.246	0.246	0.246	0.246	0.246	0.321
MSDL	k-ft	138.9	138.9	138.9	138.9	138.9	142.0	142.0	142.0	94.4	96.4	96.4	96.4	98.5	4,593
MLL	k-ft	574.1	479.1	574.1	686.3	466.9	448.9	609.9	587.3	332.5	437.4	437.4	437.4	427.3	6,228
MIMP	k-ft	146.4	122.2	146.4	175.0	119.1	114.0	154.9	149.2	92.1	120.7	120.7	120.7	117.5	953
MLL+I	k-ft	720.5	601.3	720.5	861.3	586.0	562.9	764.8	736.5	424.6	558.1	558.1	558.1	544.8	7,181
fs (DL)	ksi	6.99	6.04	5.54	6.40	4.85	6.43	6.42	6.25	3.91	4.84	4.84	4.84	5.36	11.0
fs (SDL)	ksi	1.48	1.50	1.17	1.15	1.19	1.69	1.28	1.53	1.12	1.12	1.12	1.12	1.65	2.[illegible]
fs (LL+I)	ksi	6.99	5.90	5.56	6.57	4.57	6.06	6.30	7.22	4.57	5.90	5.90	5.90	8.20	[illegible]3.0
fs TOTAL	ksi	15.46	13.44	12.27	14.12	10.61	14.18	14.00	15.00	9.60	11.86	11.86	11.86	15.21	16.0
VR	k	41.5	38.5	41.5	44.1	31.0	29.0	40.9	35.9	27.6	39.1	39.1	39.1	34.4	127.5

Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
Ic AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING fs.
VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

BEAM NUMBER

BEAM REACTION TABLE		S14.3 S14.1	S14.2	S14.4	S15.3 S15.1	S15.2	S15.4	S15.5	S15.8 S15.7 S15.6	S15.9	S16.3 S16.1	S16.2	S16.4	S16.5	S16.8 S16.7 S16.6	S16.9
R_{DL}	k	36.2	36.2	22.5	37.3	37.3	28.2	30.8	35.9	31.8	36.6	36.6	28.6	29.5	35.3	34.6
R_{LL}	k	45.9	45.9	35.7	46.5	46.5	39.1	38.4	45.5	35.5	48.7	48.7	39.1	34.5	40.6	35.5
IMP	k	11.9	11.9	9.3	12.0	12.0	10.1	10.0	11.8	9.2	12.7	12.7	10.2	9.0	10.6	9.2
R TOTAL	k	94.0	94.0	67.5	95.8	95.8	77.4	79.2	93.2	76.5	98.0	98.0	77.9	73.0	86.5	79.3

BEAM REACTION TABLE		S17.4	S17.5	S17.6	S17.7	S17.8	S17.9	S17.12 S17.11 S17.10	S17.13	S18.9	S18.10	S18.11	S18.12	S18.13	GIRDER G1
R_{DL}	k	36.5	32.6	36.5	40.9	32.9	31.1	37.8	33.3	25.3	29.5	29.5	29.5	24.3	550.6
R_{LL}	k	46.3	43.4	46.3	49.1	39.4	38.1	45.9	35.9	36.7	44.2	44.2	44.2	34.4	131.5
IMP	k	11.8	11.1	11.8	12.5	10.0	9.7	11.7	9.1	10.2	12.2	12.2	12.2	9.5	20.1
R TOTAL	k	94.6	87.1	94.6	102.5	82.3	78.9	95.4	78.3	72.2	85.9	85.9	85.9	68.2	702.2

STANLEY CONSULTANTS

MOMENT AND REACTION TABLE

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

	*		424	236	SHEET NO. 61 of 74 SHEETS

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
4"	3"	2½" Min.

INSTALLATION NOTES

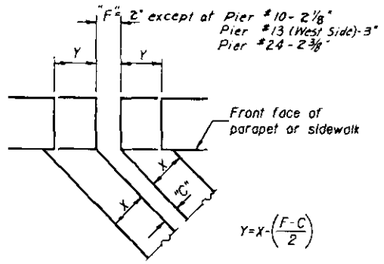
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

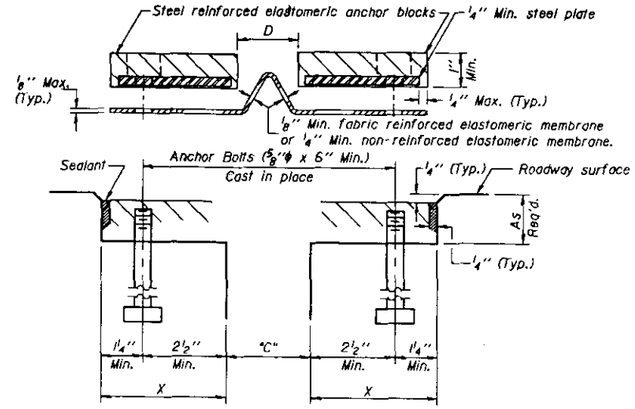
SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



FORMING BLOCKOUT SKETCH



CROSS SECTION

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

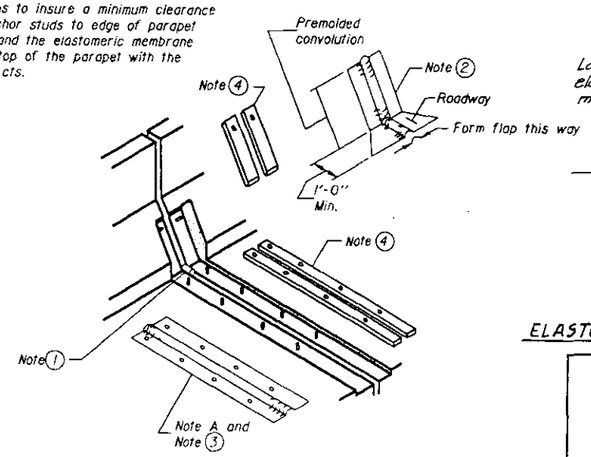
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

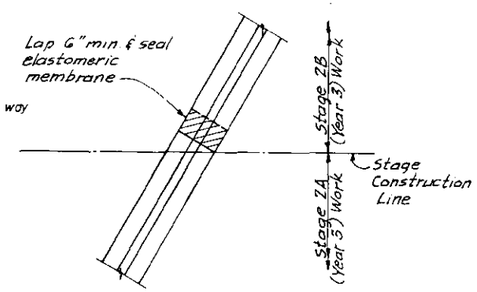
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

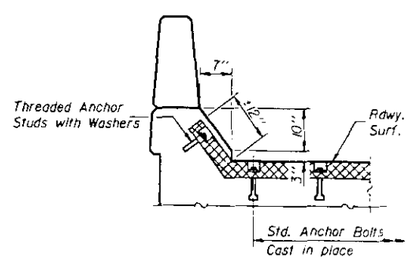
All anchor bolts for expansion joint shall be cast-in-place and tied to transverse reinforcing bars in deck.



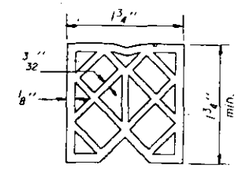
AT PARAPET



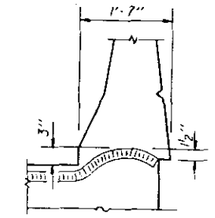
ELASTOMERIC MEMBRANE SPLICE LOCATIONS



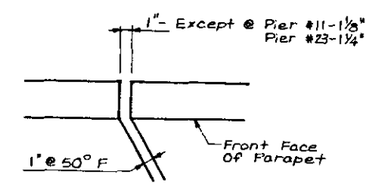
AT PARAPET



PREFORMED JOINT SEAL (1¾")

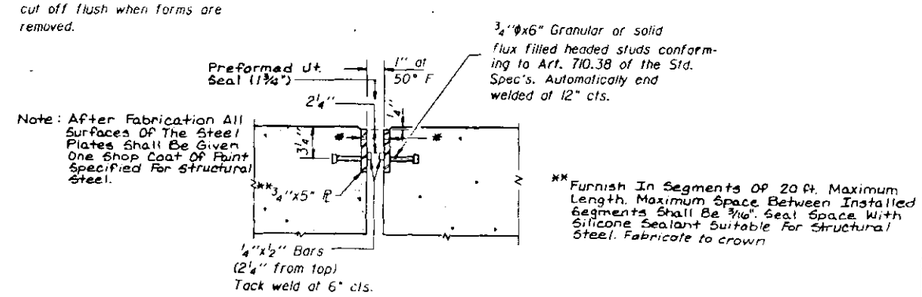


TYP. END OF SEAL TREATMENTS



FORMING BLOCKING SKETCH

* 1/16" φ Holes at 12" cts. for ⅜" φ bolts set on 3" gage line. Bolts shall be cut off flush when forms are removed.



DETAIL "A"

PREFORMED JOINT SEAL (1¾")

STANLEY CONSULTANTS

EJ-CS 12-31-87

EXPANSION JOINT AND PREFORMED JOINT SEAL DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

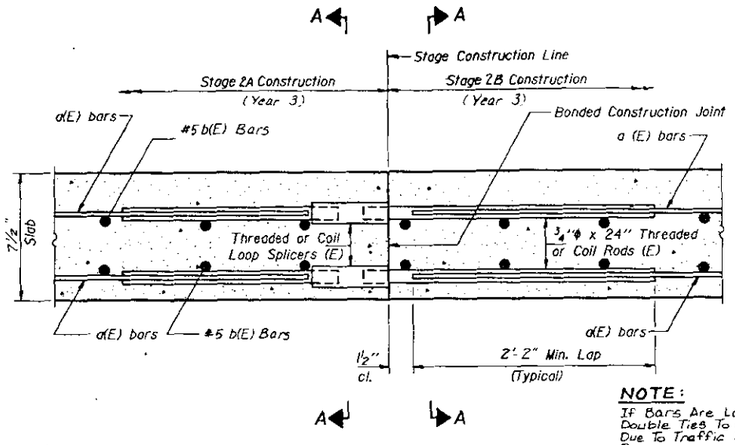
COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

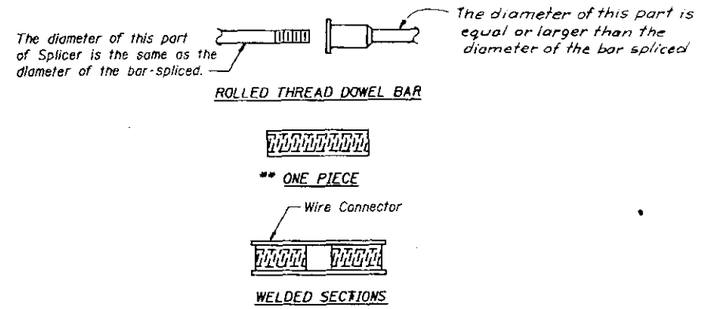
	*		426	237	SHEET NO. 62 of 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2



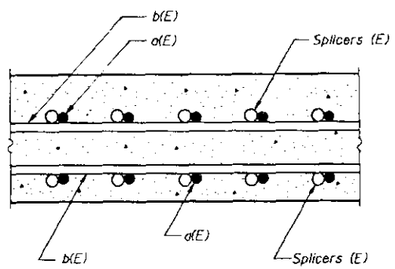
SECTION THRU SLAB

NOTE:
If Bars Are Lapped, Provide Double Ties To Prevent Movement Due To Traffic During Stage 2B Pour.



SPLICER ALTERNATIVES

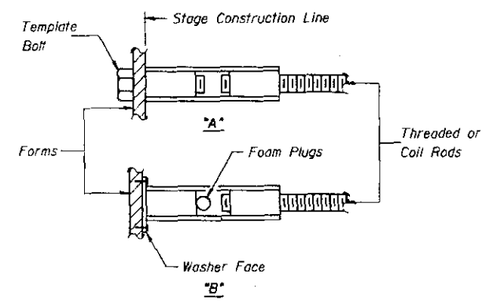
** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



SECTION A-A

SPLICER DETAILS
(No. Req'd. 4260)

Cost incidental to Reinforcement Bars (Epoxy Coated).



INSTALLATION AND SETTING METHODS

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

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal to or greater than that of the lapped reinforcement bars.

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

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

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

① Minimum Capacity (Tension in kips) $= 1.25 \times fy \times A_1$

② Minimum *Pull-out Strength (Tension in kips) $= 1.25 \times fs_{allow} \times A_1$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_1 = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

In Slabs	#5 bar lap with ¾"φ Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension Minimum Pull-out Strength = 9.2 kips-tension
	#6 bar lap with ⅞"φ Splicer (Coupler) x 2'-7" Splicer Rods	Minimum Capacity = 33.1 kips-tension Minimum Pull-out Strength = 13.3 kips-tension
	#7 bar lap with 1"φ Splicer (Coupler) x 3'-5" Splicer Rods	Minimum Capacity = 45.1 kips-tension Minimum Pull-out Strength = 18.0 kips-tension

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BSD-1 12-31-87

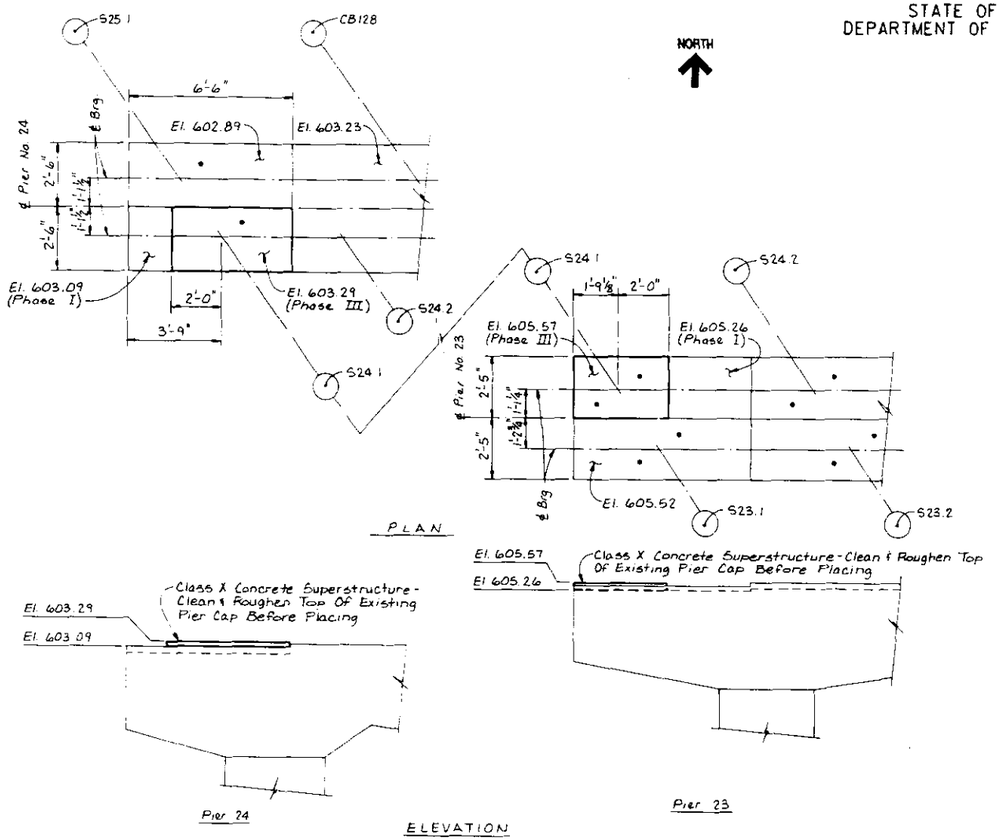
STAGE CONSTRUCTION
BAR SPLICER
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

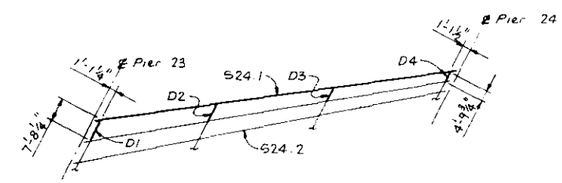
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	238
F.A. RTE. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 63 of 74 SHEETS

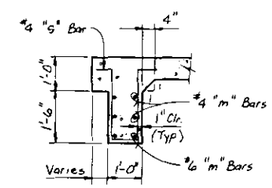
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439R-2



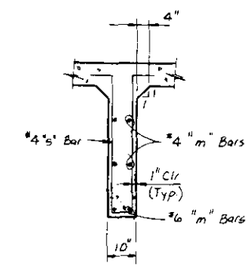
PIER STEP MODIFICATIONS - PIERS NO. 23 & 24



PLAN - DIAPHRAGM REPLACEMENT



SECTION B



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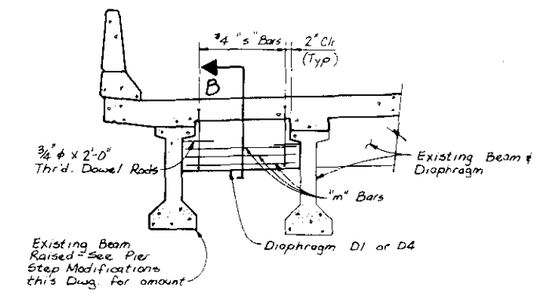
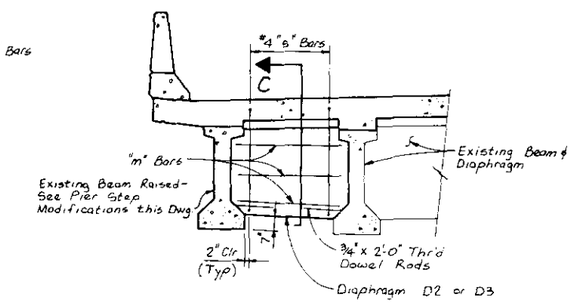
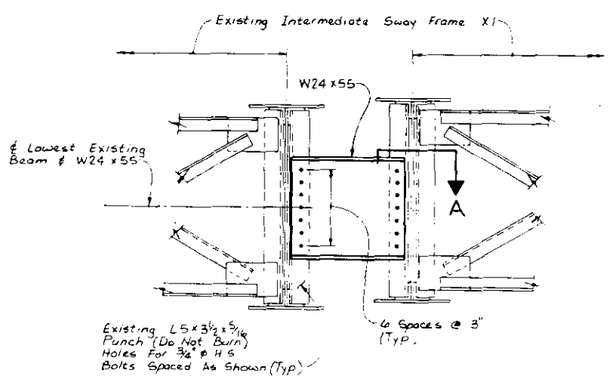


DIAPHRAGM ELEVATION @ PIERS

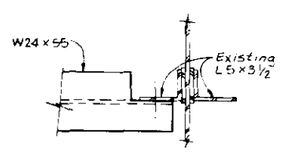


INTERMEDIATE DIAPHRAGM ELEVATION

DIAPHRAGM REINFORCEMENT			
DIAPHRAGM	NO. OF BARS PER DIAPHRAGM		
	STIRRUPS	BOTTOM BARS	SIDE BARS
D1	6-#4s8(E)	2-#6m16(E)	4-#4m17(E)
D2	5-#4s7(E)	2-#6m18(E)	4-#4m19(E)
D3	4-#4s7(E)	2-#6m20(E)	4-#4m21(E)
D4	4-#4s8(E)	2-#6m22(E)	4-#4m23(E)



INTERMEDIATE DIAPHRAGM (6 REQ'D)
@ Spans 15, 16 & 17



SECTION A

FOR ERECTION ONLY

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MISCELLANEOUS DETAILS

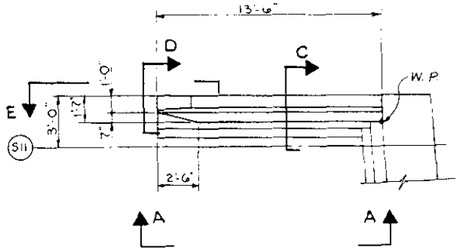
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

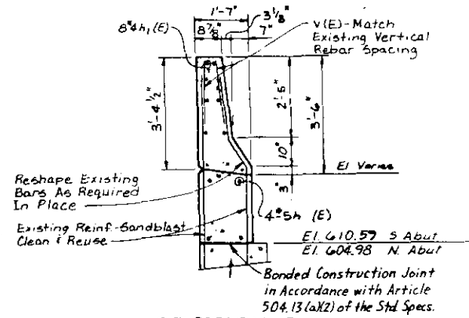
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	239
F. HW. A. REC. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 64 of 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2



PLAN



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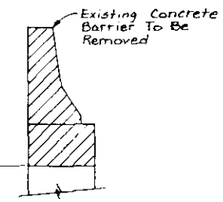
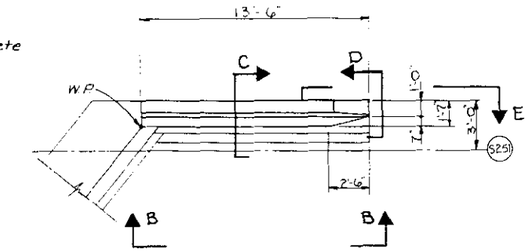


SECTION C
(EXISTING)



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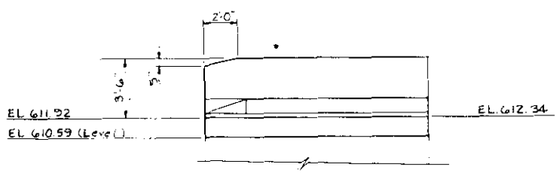
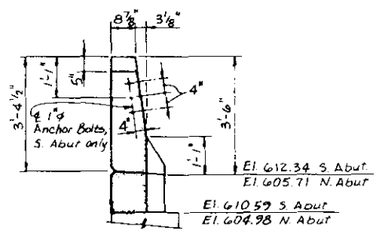
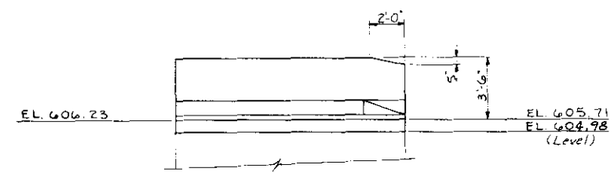


ELEVATION A-A

SOUTH ABUTMENT - WEST END



VIEW D



ELEVATION B-B

NORTH ABUTMENT - WEST END

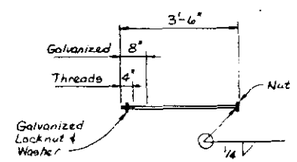
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	8	#5	13'-2"	
h1(E)	16	#4	13'-2"	
V(E)	56	#6	2'-0"	
Reinforcement Bars (Epoxy Coated)			Lbs.	420
Structural Excavation			Cu.Yds.	6
Class "X" Concrete			Cu.Yds.	4.8
Concrete Removal			Cu.Yds.	5.1

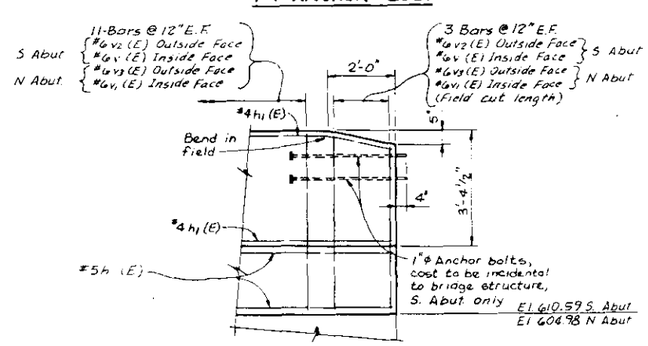
Reinforcement bars designated (E) shall be epoxy coated.

All bar dimensions are out-to-out.

Indicates concrete removal.



1" ϕ ANCHOR BOLT



VIEW E

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SOUTH ABUTMENT - WEST END
NORTH ABUTMENT - WEST END

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

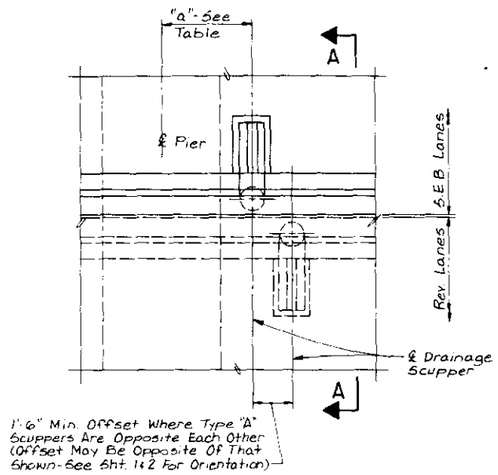
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

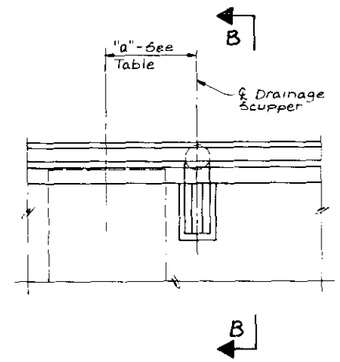
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	240
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJ.	

SHEET NO. 65 of 74 SHEETS

* 05051-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439JR-2



PLAN



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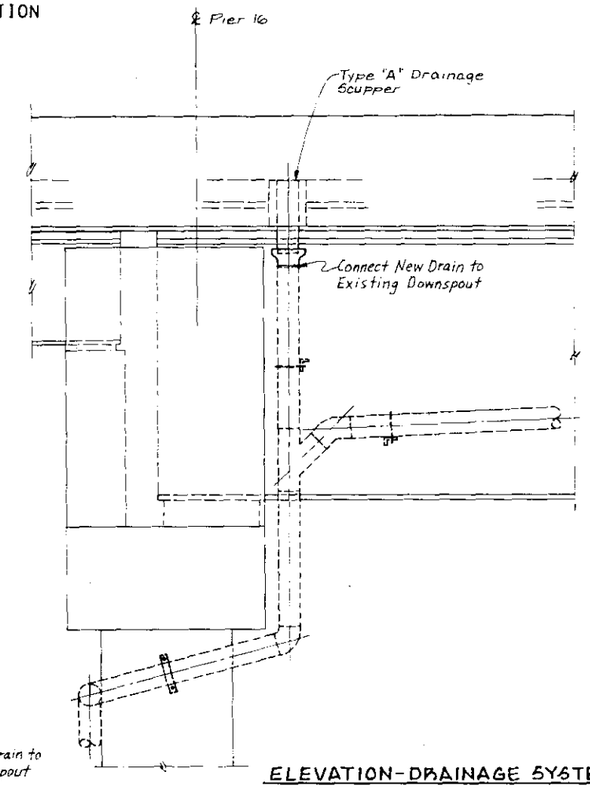
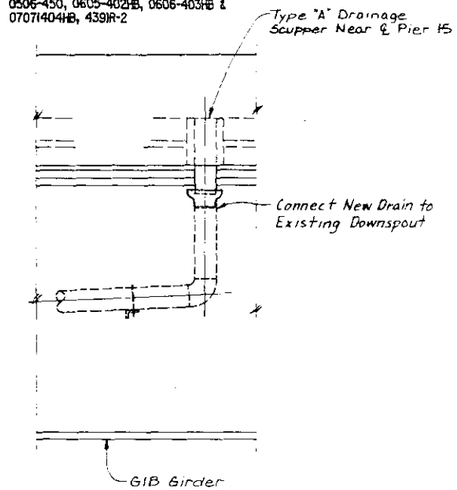
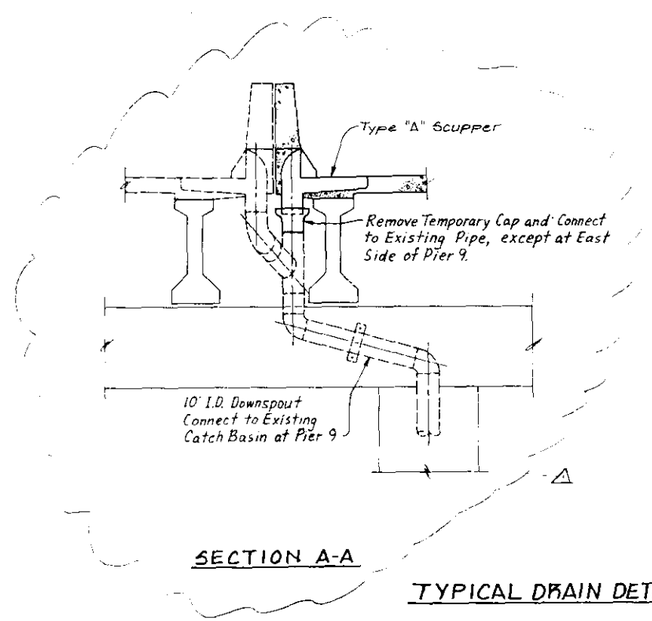
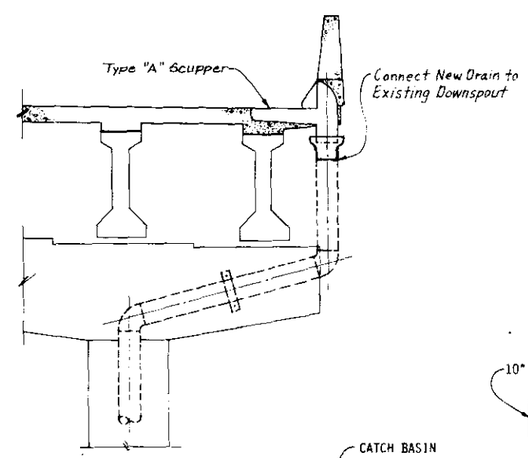


ELEVATION-DRAINAGE SYSTEM @ SPAN 16
(Looking East)



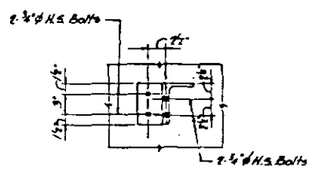


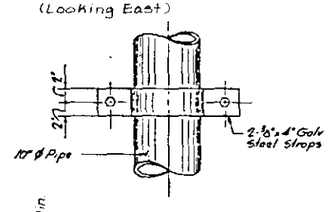
SECTION A-A

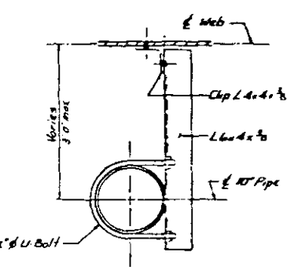


SECTION B-B

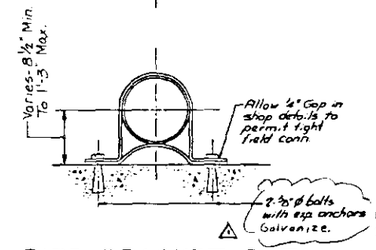
TYPICAL DRAIN DETAILS







PIPE BRACKET DETAIL
(TO BEAM WEB)



PIPE BRACKET DETAIL
(TO CONCRETE)

NOTES:
1. SEE SHEETS 1 AND 2 FOR LOCATION AND ORIENTATION OF DRAINS.
2. FOR BRIDGE SCUPPER DETAILS SEE SHEETS 6E AND 6F.
3. LOCATE DRAINS TO CLEAR ALL DIAPHRAGMS.

DRAINAGE SCUPPER LOCATION TABLE

LOCATION	PIER 1	PIER 3	PIER 5	PIER 7	*PIER 9	PIER 10	PIER 13	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24
TYPE(EAST)	A	A	A	A	A	A	A	-	-	-	-	-	-	-	-	-	-
DIMENSION a**	5'-0"	3'-6"	3'-6"	3'-6"	3'-6"	5'-9"	3'-6"	-	-	-	-	-	-	-	-	-	-
TYPE(WEST)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
DIMENSION a**	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	5'-9"	5'-9"

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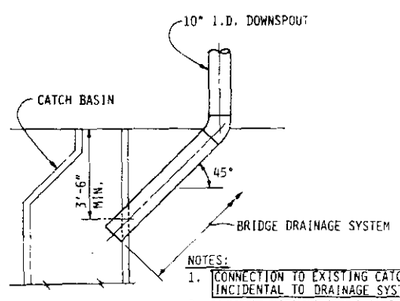
** SEE SHEETS 1 AND 2 FOR ORIENTATION OF DRAINAGE SCUPPERS
* SCUPPER DOWNSPOUT ON EAST SIDE OF PIER 9 WILL CONNECT TO DRAINAGE STRUCTURE NO. (4)
REFER TO SHEET 75 FOR TYPE AND LOCATION.



NOTES:
1. CONNECTION TO EXISTING CATCH BASIN SHALL BE INCIDENTAL TO DRAINAGE SYSTEM.
2. REMOVE EXISTING 6"ø C.I. DOWNSPOUT CONNECTION AND FILL IN HOLE IN CATCH BASIN AS NEEDED.

DOWNSPOUT DRAINAGE SYSTEM
CONNECTION TO CATCH BASIN DETAIL

DRAINAGE DETAILS

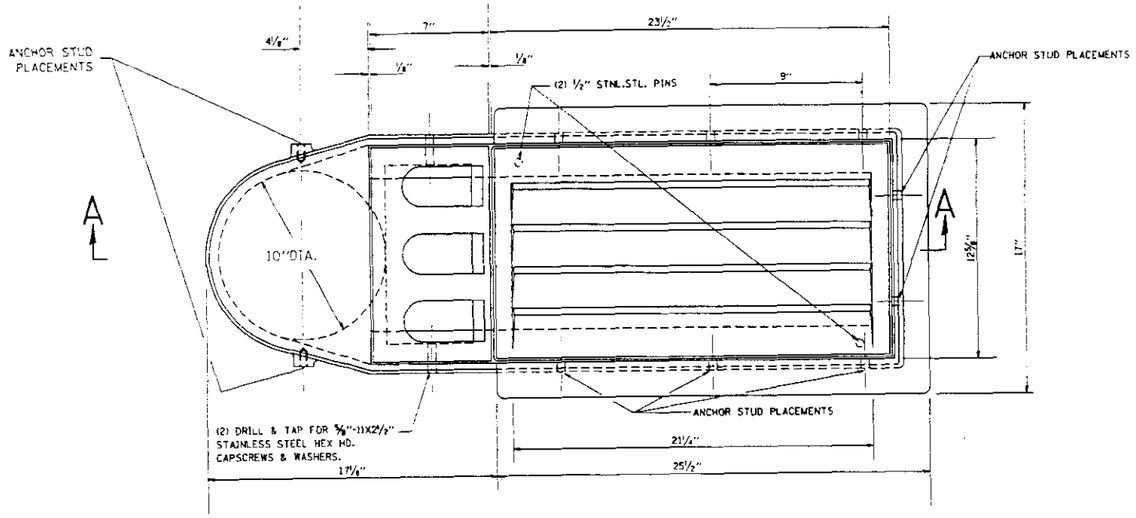
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

△1 As Revised 9-22-92 PMF

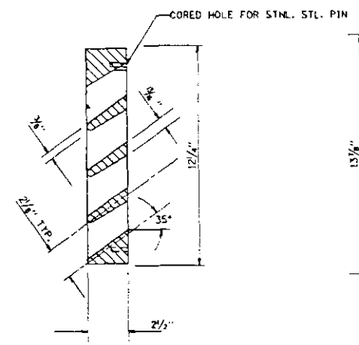
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	2A1
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

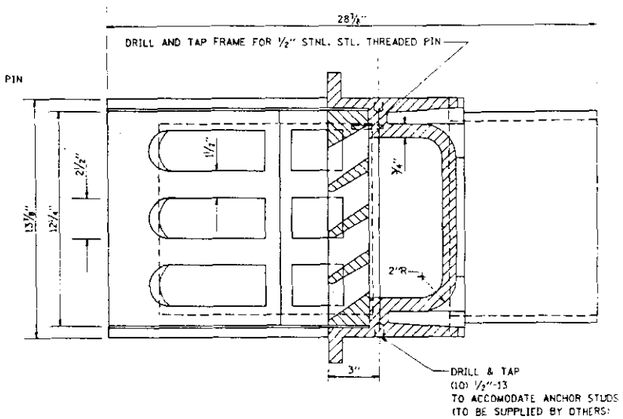
SHEET NO. 66 of 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2



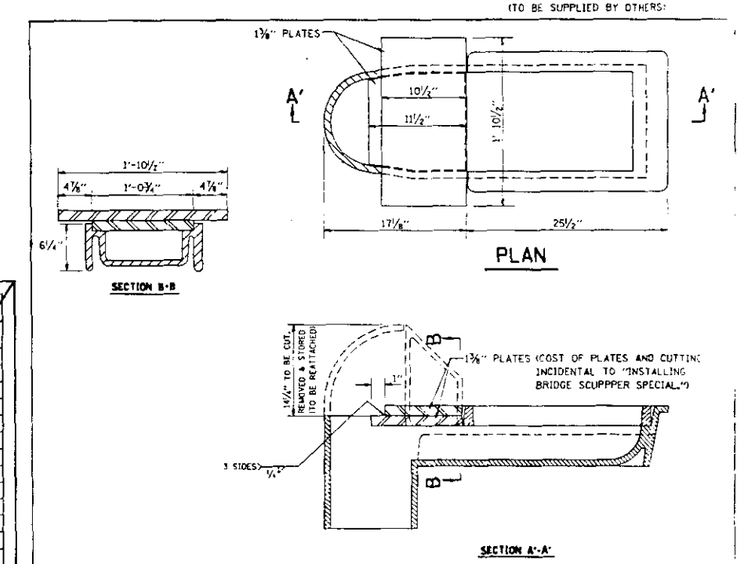
PLAN





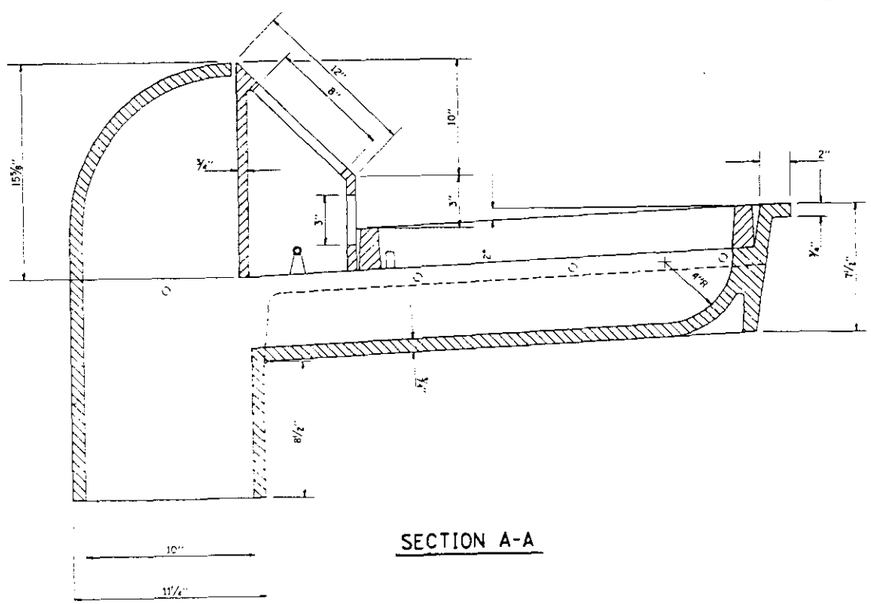
BRIDGE SCUPPER - TYPE "A"

NF - 0332 445
ESTIMATED WEIGHT 512#



BRIDGE SCUPPER - SPECIAL

ONLY FOR MEDIAN PARAPET DURING STAGED CONSTRUCTION. (MEDIAN PARAPET IS OMITTED TEMPORARILY.)



SECTION A-A

SCHEDULE OF QUANTITIES	
STRUCTURE	NO. REQUIRED
TOTAL	

NOTE: A NEOPRENE PAD SHALL BE PROVIDED BETWEEN THE SCUPPER AND THE BEAM. (BY OTHERS)

MATERIAL: CAST GREY IRON ASTM A-48, CLASS 35B
FINISH: NONE

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BRIDGE SCUPPER - TYPE A
SHEET 1 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

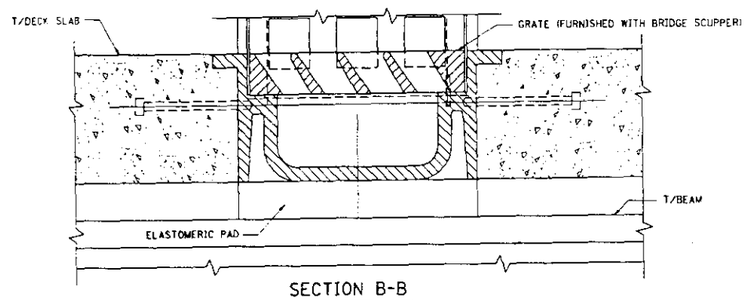
COOK COUNTY

STATION 409+49

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		476	242
F. AID A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 67 of 76 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439R-2



SECTION B-B

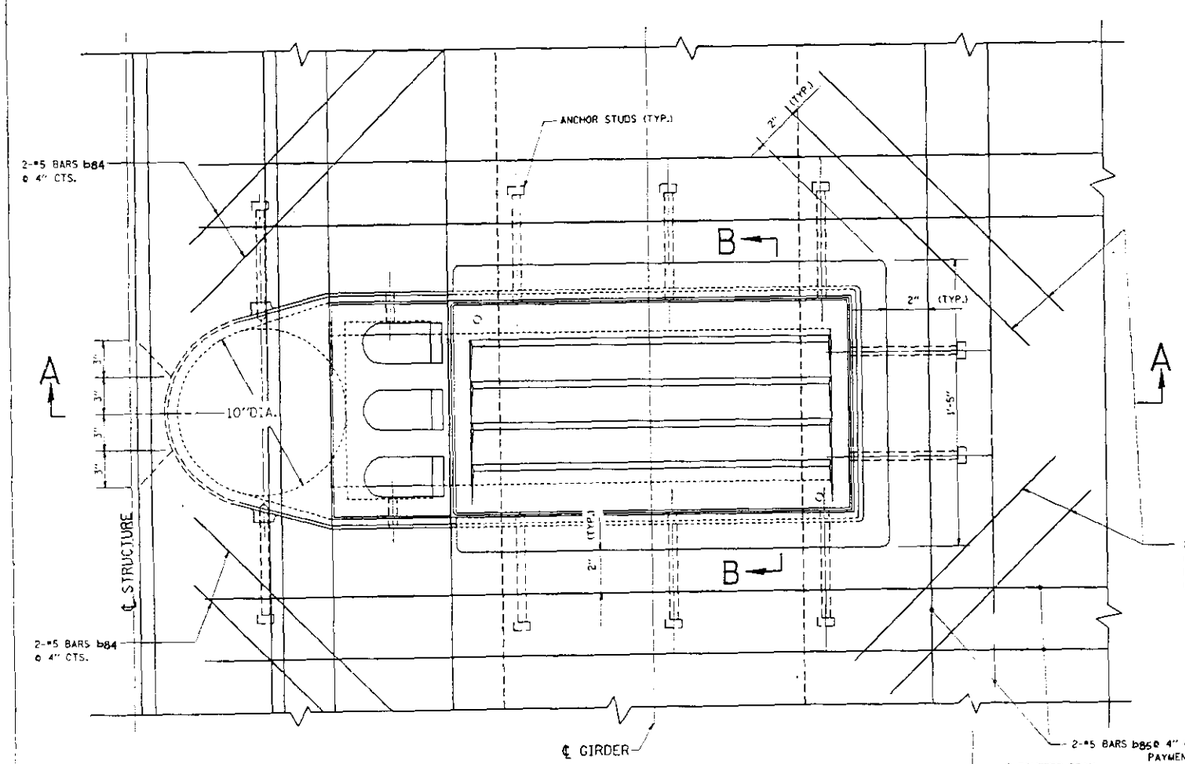
STEEL REINFORCING IN PARAPETS AND DECK SLAB SHOWN ON DECK SLAB AND PARAPET CONTRACT PLANS.

NOTES:

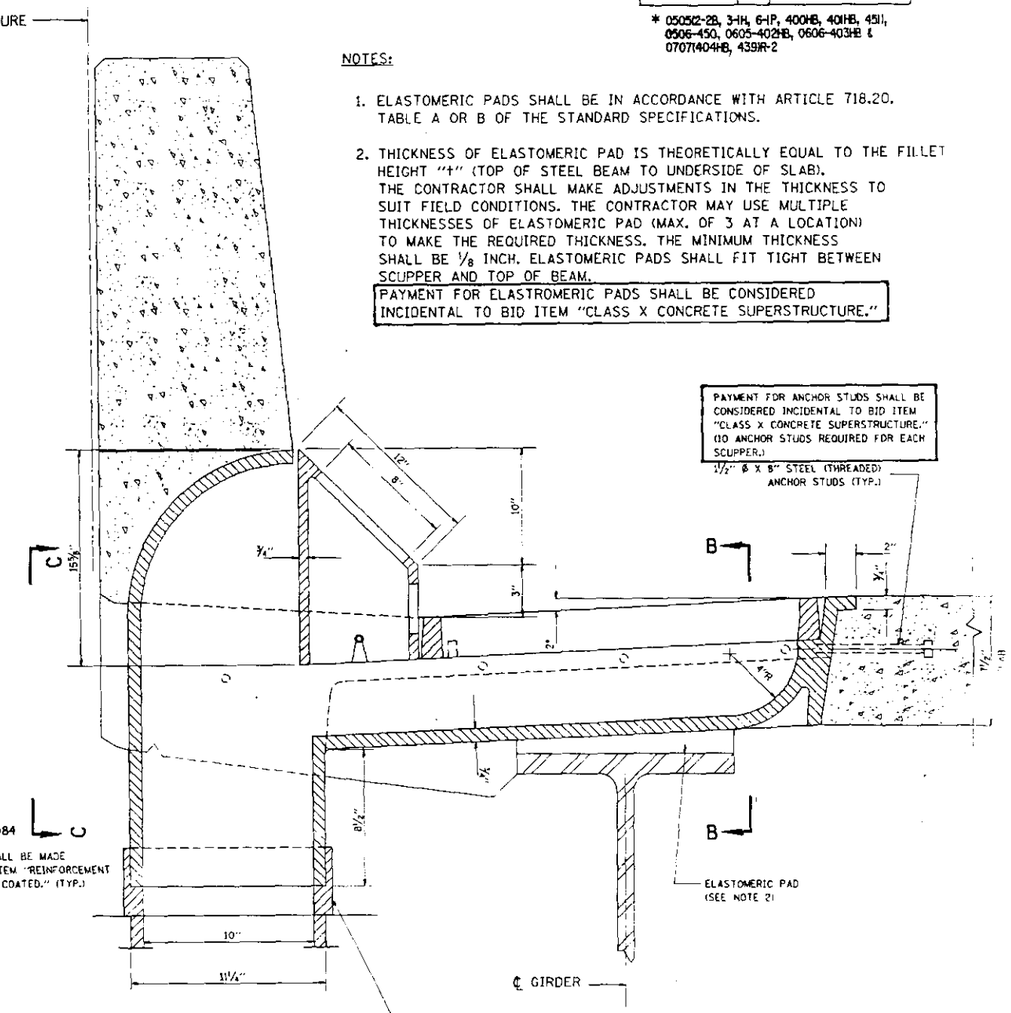
1. ELASTOMERIC PADS SHALL BE IN ACCORDANCE WITH ARTICLE 718.20, TABLE A OR B OF THE STANDARD SPECIFICATIONS.

2. THICKNESS OF ELASTOMERIC PAD IS THEORETICALLY EQUAL TO THE FILLET HEIGHT "t" (TOP OF STEEL BEAM TO UNDERSIDE OF SLAB). THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE THICKNESS TO SUIT FIELD CONDITIONS. THE CONTRACTOR MAY USE MULTIPLE THICKNESSES OF ELASTOMERIC PAD (MAX. OF 3 AT A LOCATION) TO MAKE THE REQUIRED THICKNESS. THE MINIMUM THICKNESS SHALL BE 1/8 INCH. ELASTOMERIC PADS SHALL FIT TIGHT BETWEEN SCUPPER AND TOP OF BEAM.

PAYMENT FOR ELASTROMERIC PADS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE."



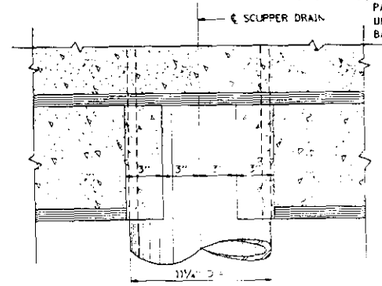
PLAN



SECTION A-A

SECTION THRU MEDIAN PARAPET-SHOWN

(SIMILAR IF TYPE "A" SCUPPERS ARE USED AT OUTSIDE PARAPET.)



VIEW C-C

REINFORCEMENT BAR SCHEDULE

MARK	NO.	SIZE	LENGTH	SHAPE
b84(E)	8	#5	2'-0"	—
b85(E)	6	#5	5'-0"	—

STANLEY CONSULTANTS

BRIDGE SCUPPER - TYPE A
SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

VI-CS-4

616

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

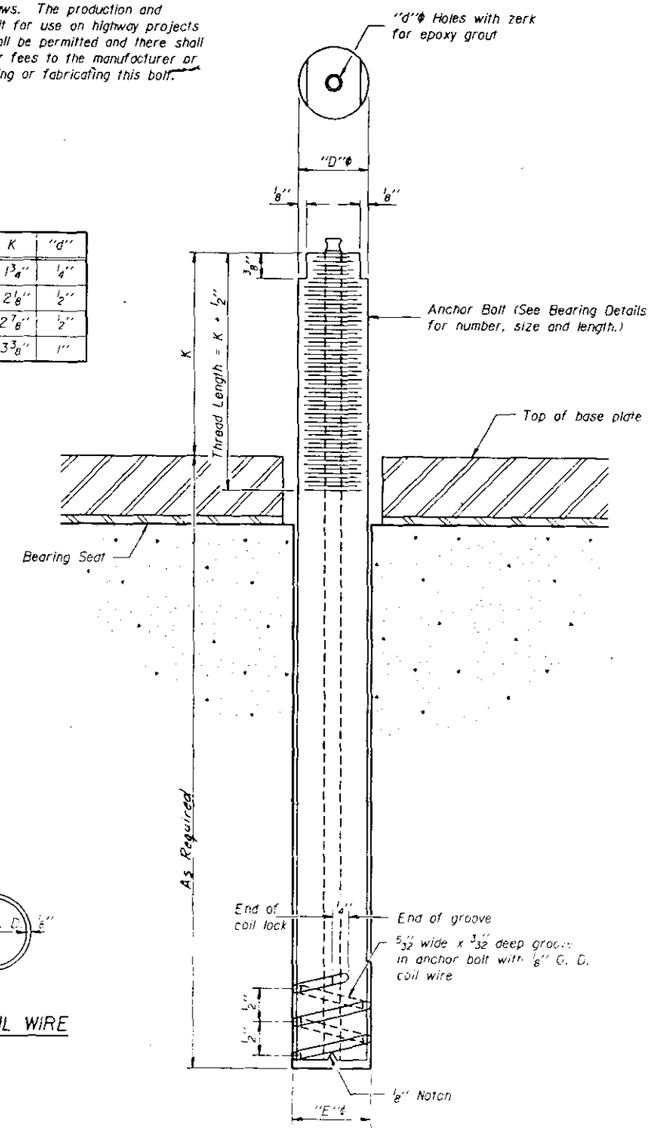
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	243

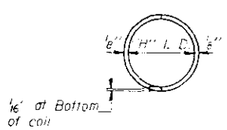
SHEET NO. 68 of 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

D	E	H	K	"d"
1"	$1\frac{1}{8}$"	$1\frac{3}{16}$"	$1\frac{3}{4}$"	$\frac{1}{4}$"
$1\frac{1}{2}$"	$1\frac{5}{8}$"	$1\frac{5}{16}$"	$2\frac{1}{8}$"	$\frac{1}{2}$"
2"	$2\frac{1}{8}$"	$1\frac{13}{16}$"	$2\frac{7}{8}$"	$\frac{1}{2}$"
$2\frac{1}{2}$"	$2\frac{5}{8}$"	$2\frac{5}{16}$"	$3\frac{3}{8}$"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

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

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

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

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

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

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for **"1" Diameter Anchor Bolts."**

STANLEY CONSULTANTS

ABB-1 12-1-83

ANCHOR BOLT DETAILS

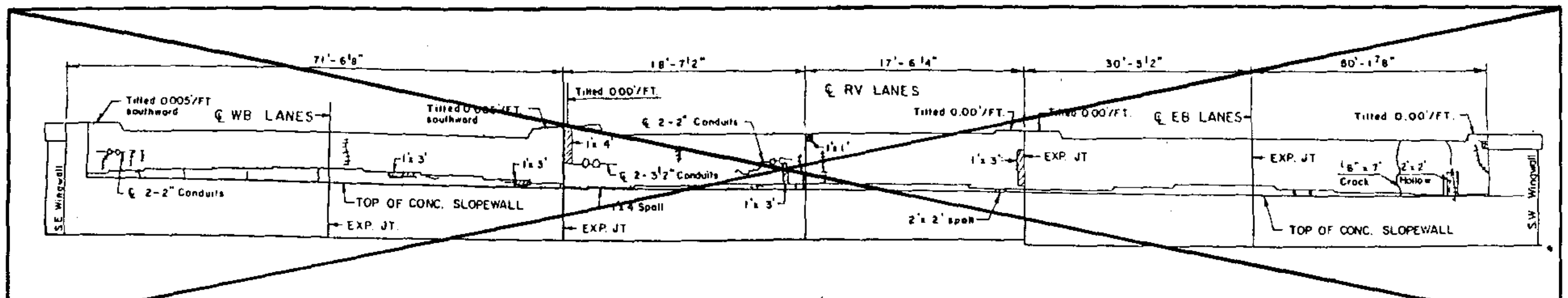
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

* 05052-2B, 3-HH, 6-HP, 400HB, 401HB, 45J), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*	.	426	2AA
F. HWY. & REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 69 of 74 SHEETS

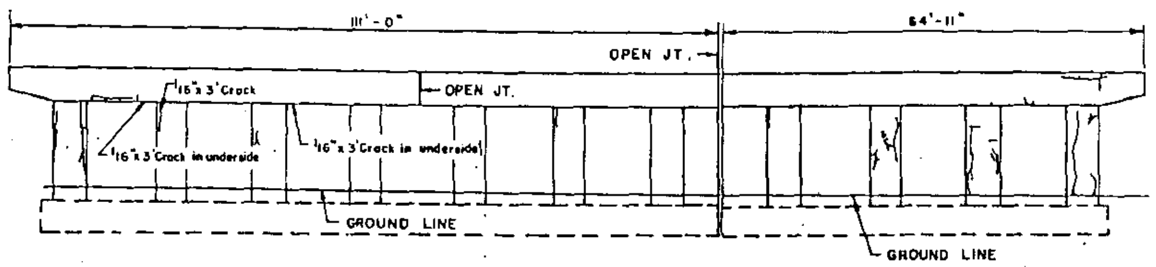
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



~~SOUTH ABUTMENT LOOKING SOUTH~~

NOTES:

1. THIS DRAWING SHOWS AREAS WHERE CONCRETE SPALLING AND CRACKING HAVE BEEN OBSERVED AT THE EXISTING PIERS AND ABUTMENTS.
2. TO DETERMINE EXACT AREAS WHERE DETERIORATION REQUIRES CONCRETE REPAIR, CONCRETE SURFACES SHALL BE SOUNDED WITH HAMMER TO DETECT LOOSE OR DEFECTIVE AREAS THAT MAY EXIST.
3. SEE SPECIAL PROVISIONS FOR PROCEDURES DESCRIBING THE REHABILITATION WORK.
4. REPAIR AREAS SHOWN REFLECT AN INDEPENDENT FIELD INSPECTION PERFORMED UNDER THE DIRECTION OF IDOT. REPAIR OF THE EXISTING SUBSTRUCTURE SHALL INCLUDE BUT NOT BE LIMITED TO THESE AREAS. ALL LIMITS OF REPAIR SHALL BE AS DIRECTED BY THE ENGINEER.
5. FOR REPAIR DEPTHS < 1-1/2", USE EPOXY MORTAR REPAIR (SEE SPECIAL PROVISIONS.
6. ANY AREAS REQUIRING REPAIR WHICH ARE INACCESSIBLE DURING THIS CONTRACT SHALL BE NOTED AS SUCH ON THE CONSTRUCTION PLANS AS DIRECTED BY THE ENGINEER. REPAIR OF THESE AREAS SHALL BE INCLUDED IN A FUTURE CONTRACT.
7. FOR CONCRETE REMOVAL AND REPLACEMENT DETAILS, SEE "CONCRETE REPAIR DETAILS" ELSEWHERE IN THE PLANS.
8. PIER REPAIR WORK THIS CONTRACT WILL BE FROM THE APPROXIMATE EDGE OF RECONSTRUCTED REVERSIBLE LANES TO PIER EXTENSION CONSTRUCTED AS A PART OF SUBSTRUCTURE WIDENING CONTRACT.



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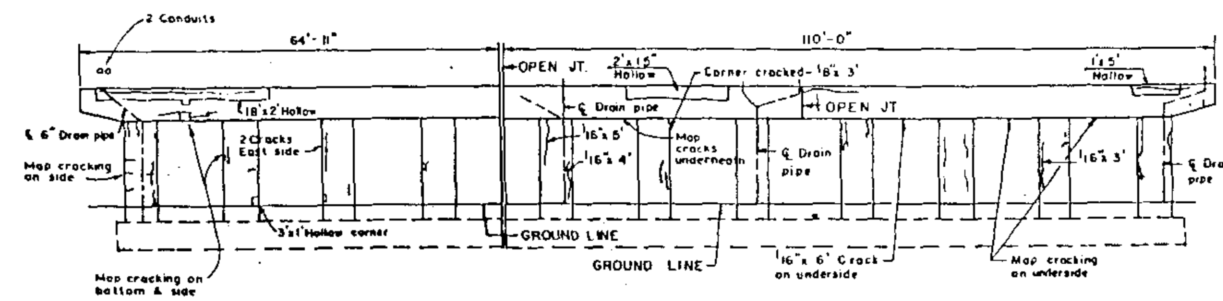

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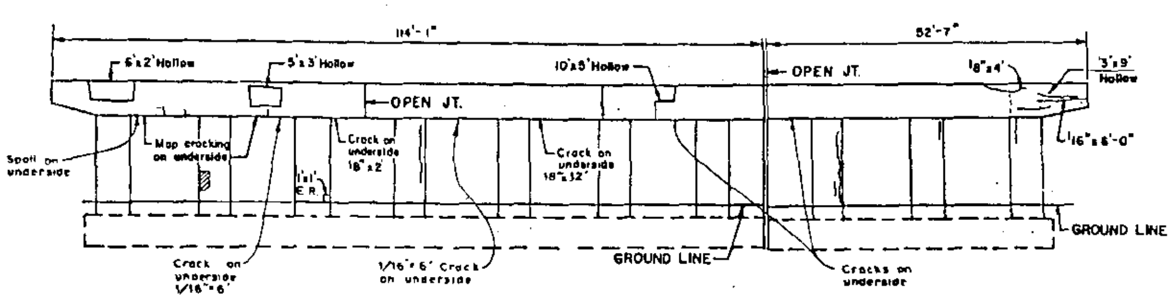

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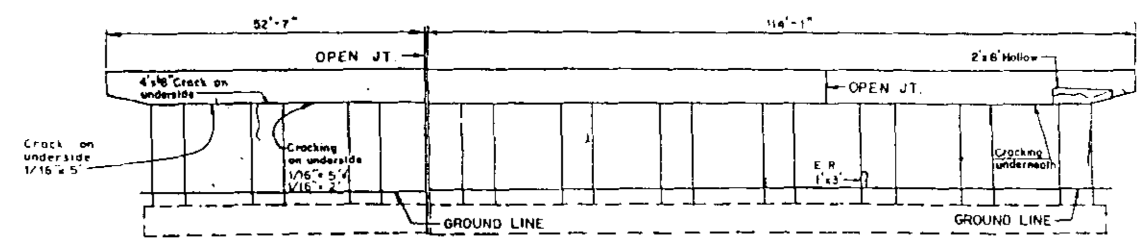


PIER NO. 2 - LOOKING SOUTH

LEGEND

- E.R. — EXPOSED REINFORCING BAR
- CRACKS
- CRACKS WITH LEACHING
- LEACHING
- SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 1 OF 6

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

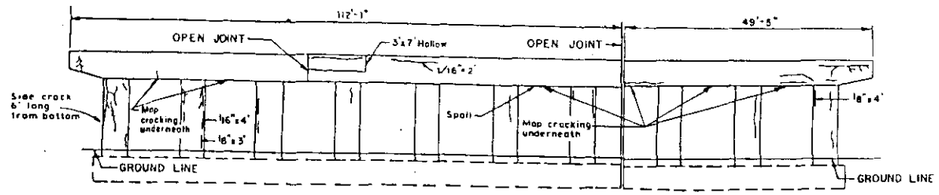
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	245

SHEET NO. 70 of 74 SHEETS

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2



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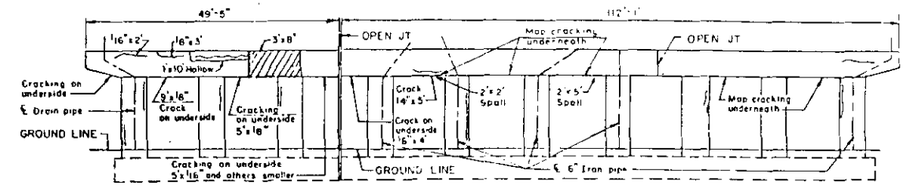

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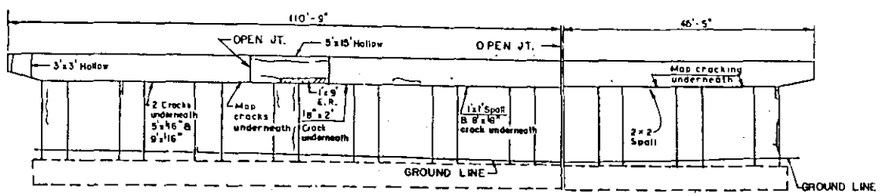

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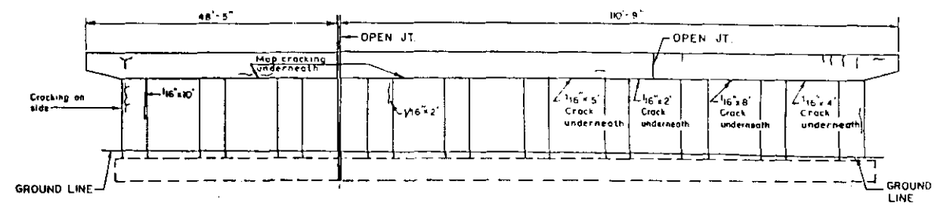

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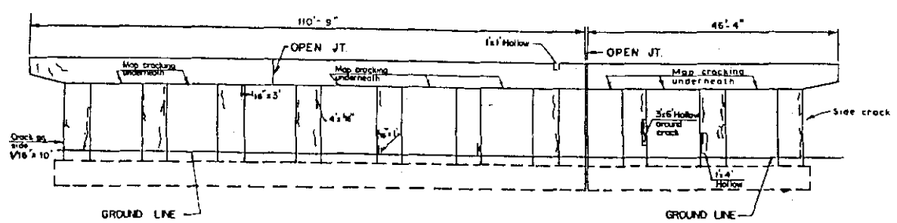

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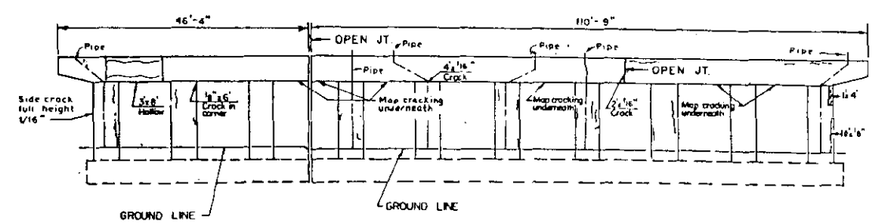


PIER NO. 5 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 6.

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

SUBSTRUCTURE REHABILITATION
SHEET 2 OF 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

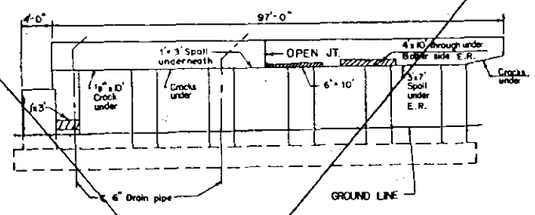
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 4391R-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	246
F. NO. & REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 71 of 74 SHEETS



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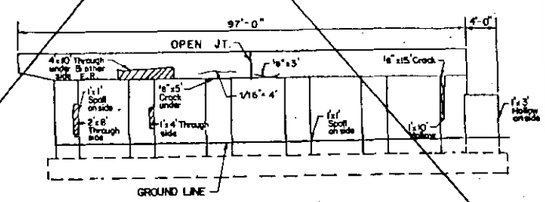

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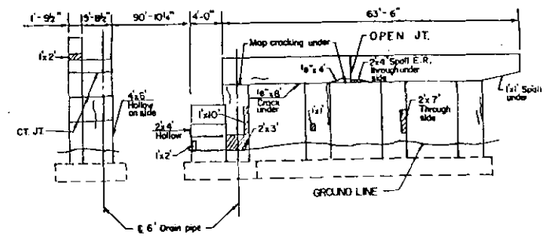

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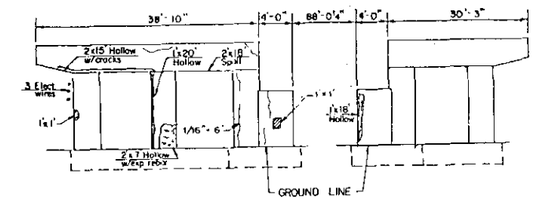

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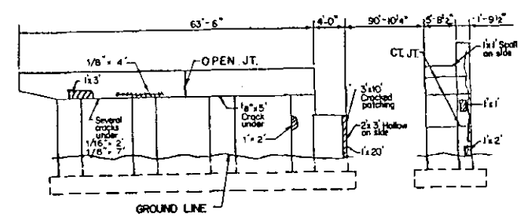

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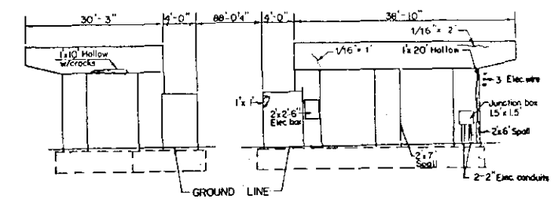

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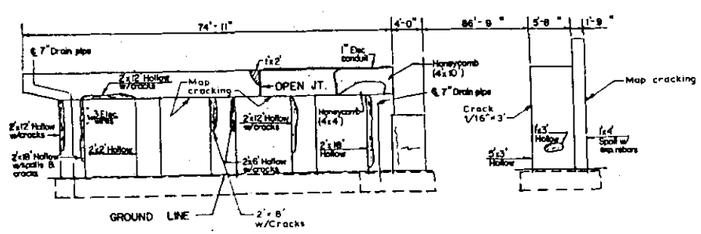

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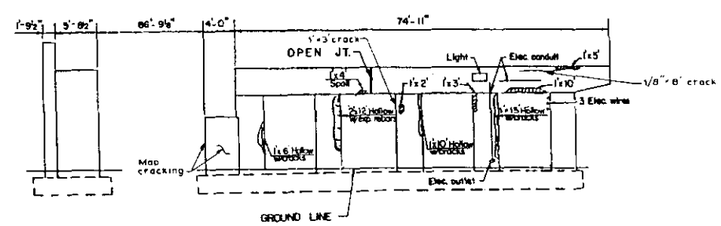


PIER NO. 18 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 6

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

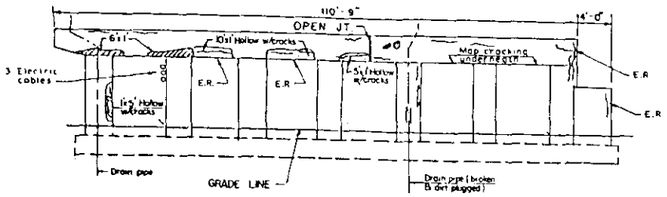
STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 3 OF 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

	*		426	247	SHEET NO. 72 of 74 SHEETS



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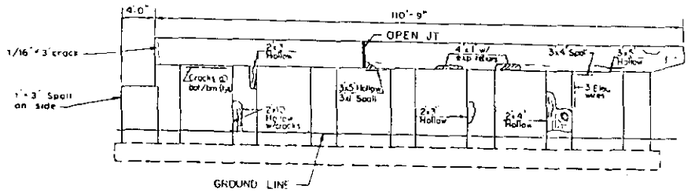
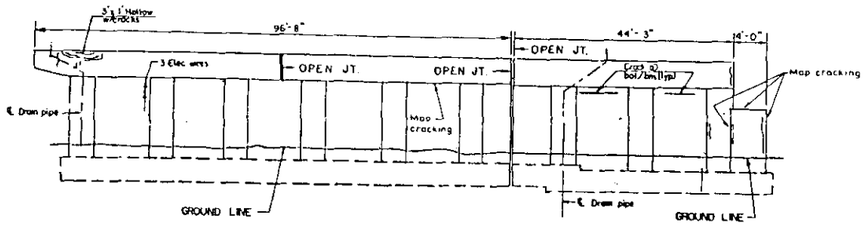


PIER NO. 19 - LOOKING SOUTH

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

NOTE:
FOR NOTES, SEE SHEET 1 OF 6



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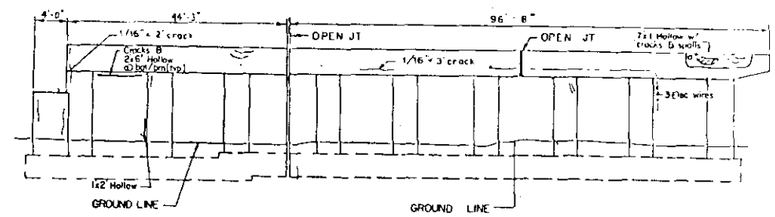

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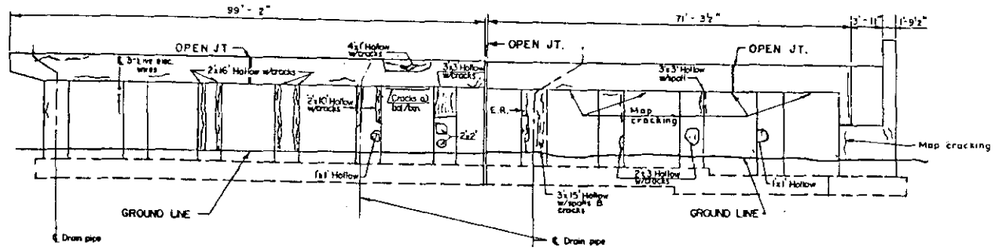

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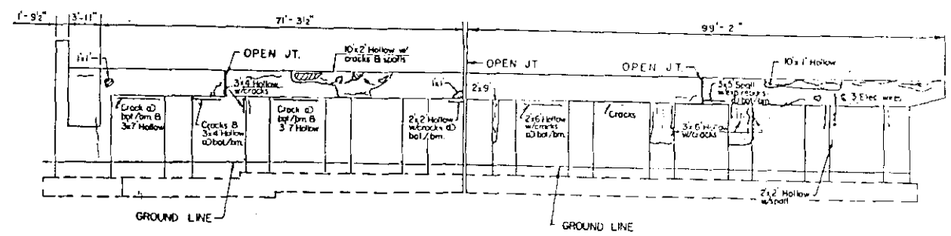


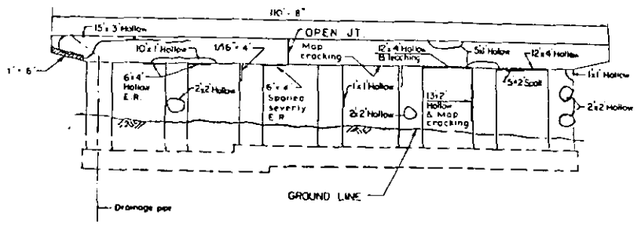
PIER NO. 21 - LOOKING SOUTH

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 4 OF 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



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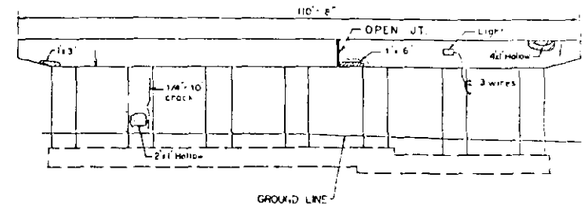

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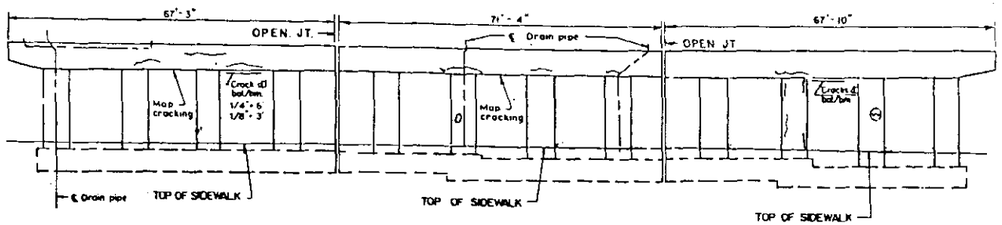

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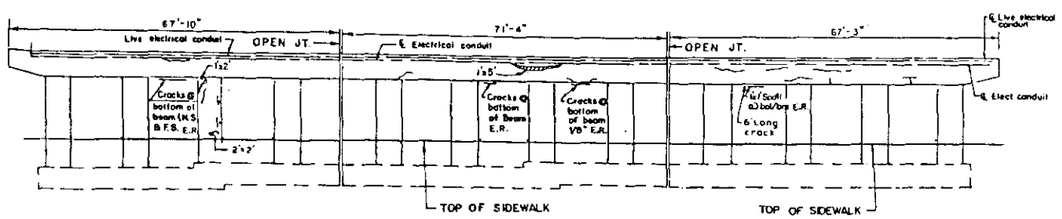


PIER NO. 23 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 6

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

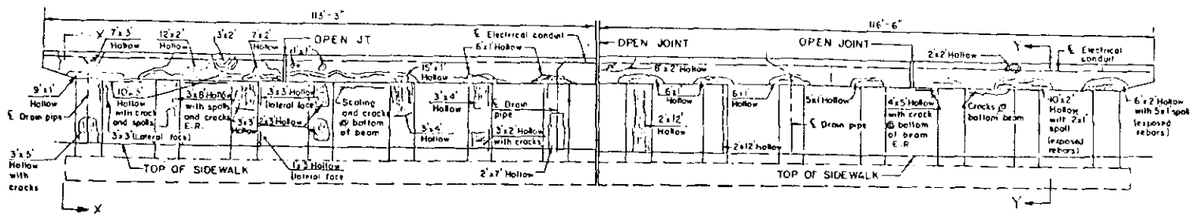
STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 5 OF 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

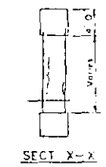
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

426 249

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451H, 0506-450, 0603-402HB, 0606-403HB & 07071404HB, 439IR-2

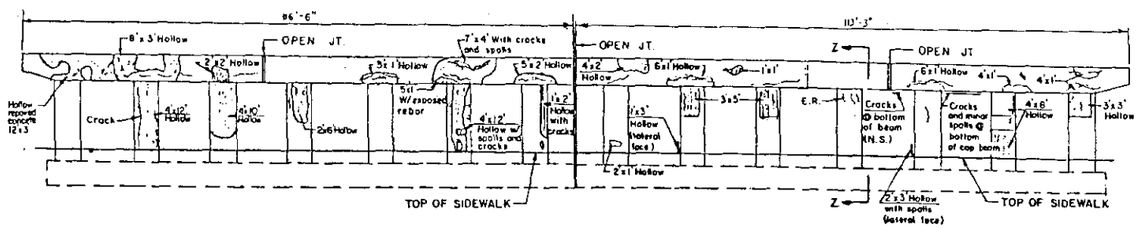


PIER NO. 24 - LOOKING NORTH

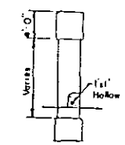


SECT. X-X

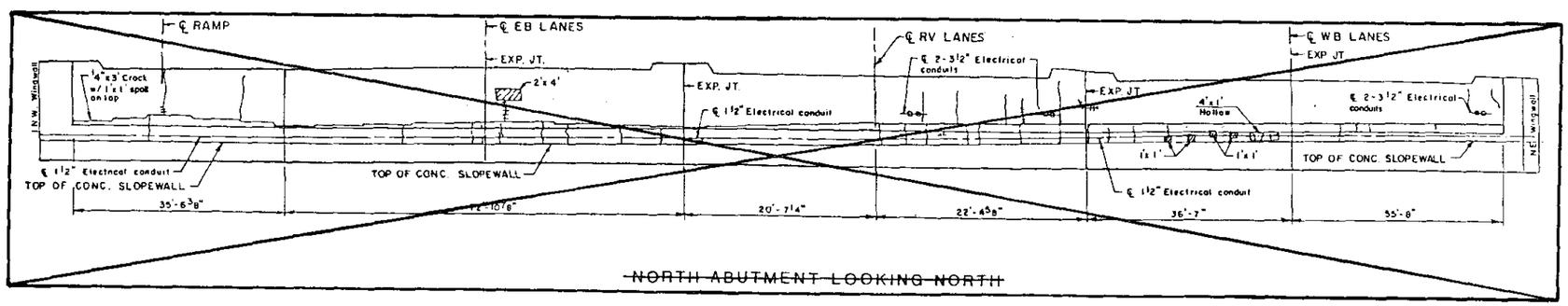
SECT. Y-Y



PIER NO. 24 - LOOKING SOUTH



SECT. Z-Z



~~NORTH ABUTMENT LOOKING NORTH~~

NOTE:
FOR NOTES, SEE SHEET 1 OF 6

LEGEND
- E.R. — EXPOSED REINFORCING BAR
- CRACKS
- CRACKS WITH LEACHING
- LEACHING
- SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 6 OF 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

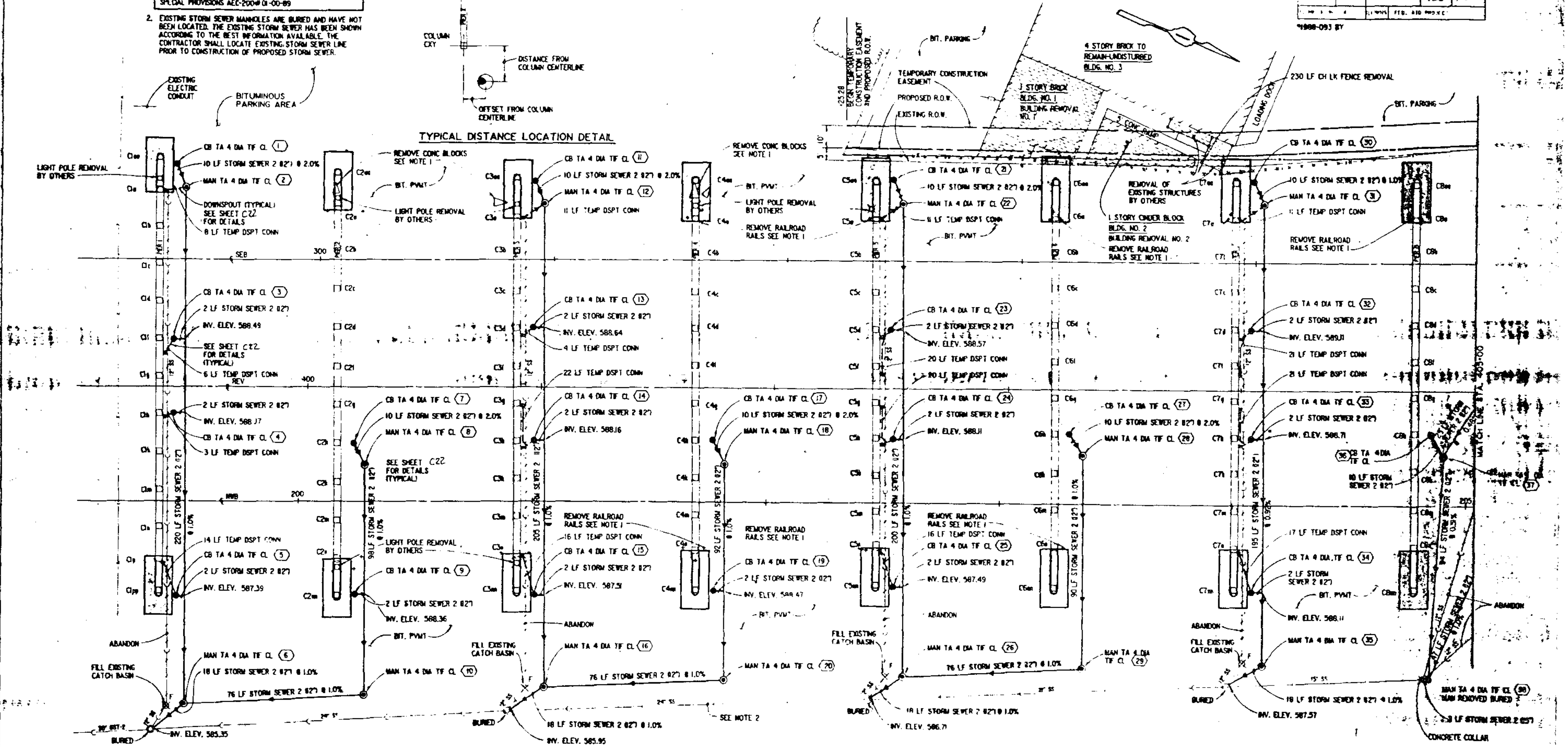
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOTES:

1. THE COST OF REMOVAL OF MISCELLANEOUS ITEMS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. SEE I.D.O.T. SPECIAL PROVISIONS AEC-200# 01-00-89

2. EXISTING STORM SEWER MANHOLES ARE BURIED AND HAVE NOT BEEN LOCATED. THE EXISTING STORM SEWER HAS BEEN SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL LOCATE EXISTING STORM SEWER LINE PRIOR TO CONSTRUCTION OF PROPOSED STORM SEWER.

TYPICAL DISTANCE LOCATION DETAIL



STRUCTURE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13
STRUCTURE TYPE AND DIAMETER	CB TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4
FRAME / LID	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL
DIST, DIR, * COLUMN NO.	℄ C1aa	2' W C1a	℄ C1l	℄ C1h	℄ C1pp	48' W C1pp	℄ C2h	9' E C2h	℄ C2m	42' E C2m	℄ C3aa	9' E C3aa	℄ C3d
OFFSET, DIR	8.5' NW	12.5' NW	8.5' NW	8.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW
RIM ELEVATION	593.43	593.66	593.92	593.92	593.75	592.72	594.50	594.03	593.99	593.61	593.47	593.56	593.90
INV, DIR	589.43,N	588.23, S	588.67,NW	588.42,NW	587.75,NW	586.93,NW	590.00,N	588.92,NE	588.46,NW	587.94,SW	589.47,N	589.17,NE	588.90,NW
INV, DIR	–	589.13,NE	–	–	–	586.53,SW	–	589.80,S	–	587.69,SE	–	589.27,S	–
INV, DIR	–	–	–	–	–	585.53,E	–	–	–	–	–	–	–

STRUCTURE NO.	14	15	16	17	18	19	20	21	22	23	24	25	26
STRUCTURE TYPE AND DIAMETER	CB TA 4	CB TA 4	MH TA4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA4
FRAME / LID	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL
DIST, DIR, * COLUMN NO.	℄ C3h	℄ C3m	38' E C4h	℄ C4h	9' E C4h	℄ C4m	38' E C4m	℄ C5aa	9' E C5aa	℄ C5d	℄ C5h	℄ C5m	38' E C5m
OFFSET, DIR	8.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	8.5' NW	8.5' NW	12.5' NW
RIM ELEVATION	594.27	594.30	593.82	593.38	593.70	594.28	593.70	593.42	593.40	593.58	593.95	594.07	594.26
INV, DIR	588.52,NW	587.80,NW	587.12,NW	589.38,N	589.02,NE	588.78,NW	588.10,SW	589.42,N	589.12,NE	588.83,NW	588.45,NW	587.82,NW	587.12,NW
INV, DIR	–	–	587.12,SW	–	589.18,S	–	587.88,SE	–	589.22,S	–	–	–	587.12,SW
INV, DIR	–	–	586.13,E	–	–	–	–	–	–	–	–	–	586.89,E

STRUCTURE NO.	27	28	29	30	31	32	33	34	35	36	37	38
STRUCTURE TYPE AND DIAMETER	CB TA 4	MH TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 5	MH TA 4
FRAME / LID	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL
DIST, DIR, * COLUMN NO.	℄ C6h	9' E C6h	34' E C6aa	℄ C7aa	9' E C7aa	℄ C7d	℄ C7h	℄ C7m	30' E C7m	℄ C8h	9' E C8h	41' E C8m
OFFSET, DIR	8.5' NW	12.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	8.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	7.5' NW
RIM ELEVATION	593.26	593.35	593.31	593.85	593.73	593.24	593.62	594.49	593.20	593.50	593.66	592.29
INV, DIR	589.26,N	588.88,NE	587.98,SW	589.85,N	589.65,NE	589.24,NW	589.87,NW	588.49,NW	587.85,SW	589.00,NE	588.48,NE	588.00,SE
INV, DIR	–	589.06,S	587.88,SE	–	589.75,S	–	–	–	587.75,E	–	588.48,W	588.00,SW
INV, DIR	–	–	–	–	–	–	–	–	–	–	588.80,S	589.00,W
											588.63,NW	

* SEE TYPICAL DISTANCE LOCATION DETAIL

SHEET NO. 426 SHEETS 250

F.A.I. RTE. FED. AID PROJECT

SUBSTRUCTURE WIDENING

ASHLAND AVE. STA. 399+00 TO STA. 405+00

ROUTE: FAI-90/94 (JFK EXPWY)

SCALE:

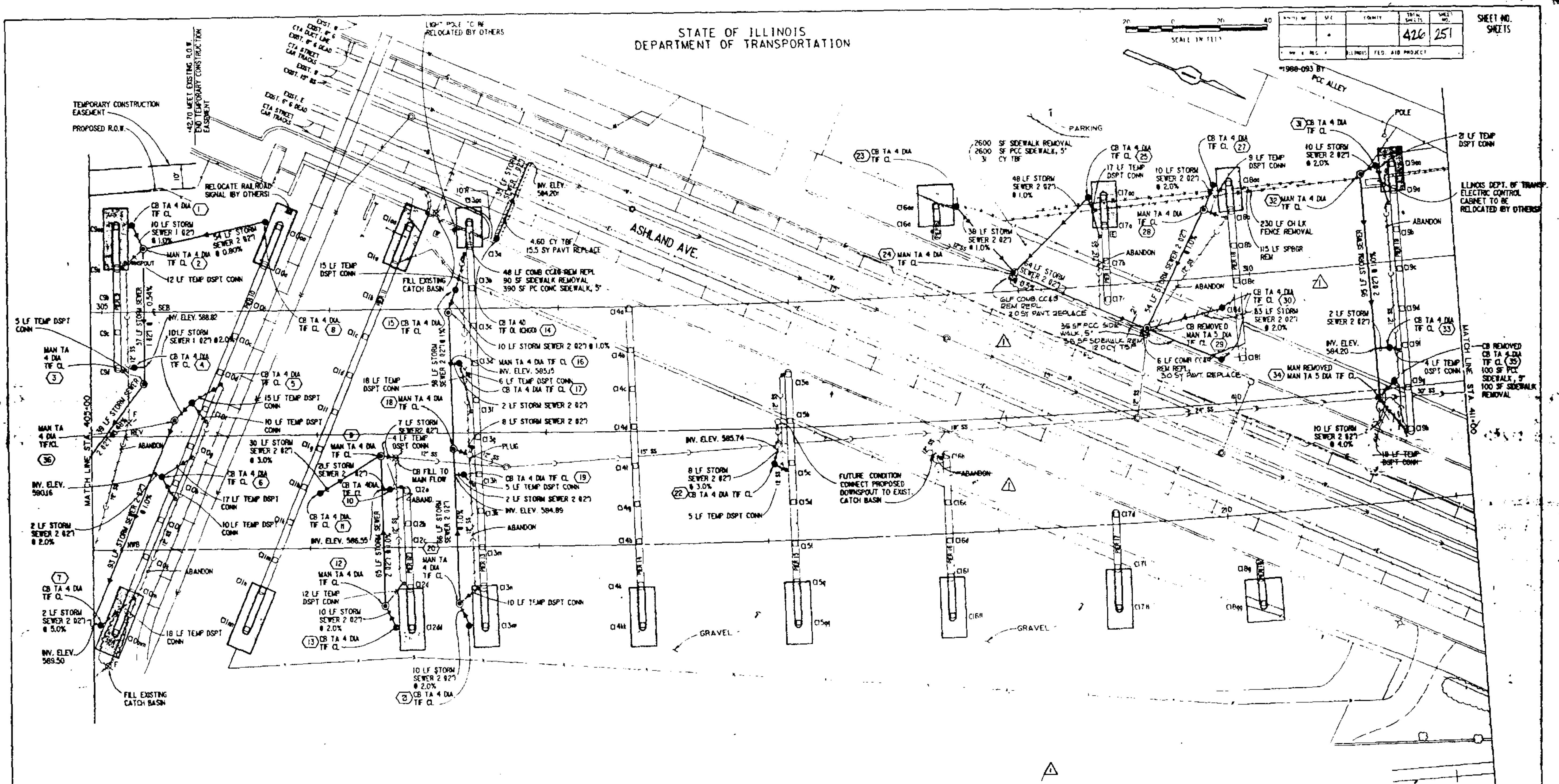
SECTION

PROJECT

COOK COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

			TOTAL SHEETS	SHEET NO.
			426	251



STRUCTURE NO.	1	2	3	4	5	6	7	8	9	10	11	12
STRUCTURE TYPE AND DIAMETER	CB TA 4	MH TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	MH TA 4
FRAME & LID	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL
DIST, DIR COLUMN NO.	℄ C9aa	9' E C9aa	7' E C94	℄ C94	6' W C10f	℄ C10h	℄ C10mm	℄ C10 aa	14.5' W C12a	℄ C12e	℄ C11h	9' W C12dd
OFFSET, DIR	8.5' N	12.5' N	12.5' N	8.5' N	6.5' S	6.5' S	6.5' S	8.5' S	12.5' S	8.5' S	8.5' N	12.5' S
RIM ELEV.	591.93	591.95	592.59	592.44	594.85	594.26	594.48	594.58	590.36	590.57	595.02	591.60
INV, DIR	589.18,NE	589.08,E	588.79,E	588.94,S	590.85,SE	590.26,S	589.60,S	589.98,SE	586.15,W	586.57,S	589.52,NW	587.53,NE
INV, DIR	–	589.54,NW	588.79,W	–	–	–	–	–	588.62,SE	–	–	587.05,W
INV, DIR	–	589.08,SE	588.80,N	–	–	–	–	–	586.40,E	–	–	–
INV, DIR												

STRUCTURE NO.	13	14	15	16	17	18	19	20	21	22	23	24
STRUCTURE TYPE AND DIAMETER	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4
FRAME & LID	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL
DIST, DIR COLUMN NO.	℄ C12dd		℄ C13b	9' E C13b	℄ C134	10.5' W C13b	℄ C13h	9' W C13mm	℄ C13mm	℄ C15c	℄ C16aa	18' E C16aa
OFFSET, DIR	8.5' S		8.5' S	12.5' S	8.5' S	12.5' S	8.5' S	12.5' S	8.5' S	8.5' S	8.5' N	8.5' N
RIM ELEV.	591.73	585.90	589.10	589.74	590.38	590.27	590.53	591.48	591.56	591.48	591.88	591.16
INV, DIR	587.73,SW	584.55	585.60,E	585.37,E	585.88	584.69,N	585.03,S	585.45,W	587.06,SW	585.98,W	587.38,E	587.00,N
INV, DIR	–	–	–	585.50,W	–	584.79,E	–	586.86,NE	–	–	–	587.32,W
INV, DIR	–	–	–	–	–	584.79,W	–	–	–	–	–	587.00SW
INV, DIR												EXIST, S

STRUCTURE NO.	25	26	27	28	29	30	31	32	33	34	35	36
STRUCTURE TYPE AND DIAMETER	CB TA 4	MH TA 4	CB TA 4	MH TA 4	MH TA 5	CB TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 5	CB TA 4	MH TA 4
FRAME & LID	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL
DIST, DIR COLUMN NO.	℄ C17aa	9' E C17aa	℄ C18aa	9' E C18aa	REPLACE EXISTING	C18ff	℄ C19aa	9' E C19aa	℄ C19f	REPLACE	3' W C19g	9' E C10f
OFFSET, DIR	8.5' S	12.5' S	8.5' S	12.5' S	CATCH BASIN	8.5' S	8.5' S	12.5' S	8.5' S	EXISTING MANHOLE	8.5' S	10.9' S
RIM ELEV.	592.30	592.01	592.60	592.42	591.57	591.51	591.90	591.88	591.38	591.38	591.40	598.00
INV, DIR	587.80,E	587.14E	588.60,E	588.21,E	(EXIST) 586.57,E	587.33,SE	586.40,E	584.93,E	584.38,S	(EXIST) 582.48,N	584.90,SE	590.40,E
INV, DIR	–	587.60W	–	588.40,W	586.67,S	–	–	586.20,W	–	(EXIST) 582.56,S	–	590.65,W
INV, DIR	–		–	–	587.67,W	–	–	–	–	584.50,NW	–	–
INV, DIR					586.67,NW	–	–	–	–	583.98,W	–	—

REV. ⚠ SCT 2/15/90

SUBSTRUCTURE WIDENING

ASHLAND AVE. STA. 405+00 TO STA. 411+00

ROUTE: FAI-90/94 (JFK EXPWY)

SCALE:

SECTION

PROJECT

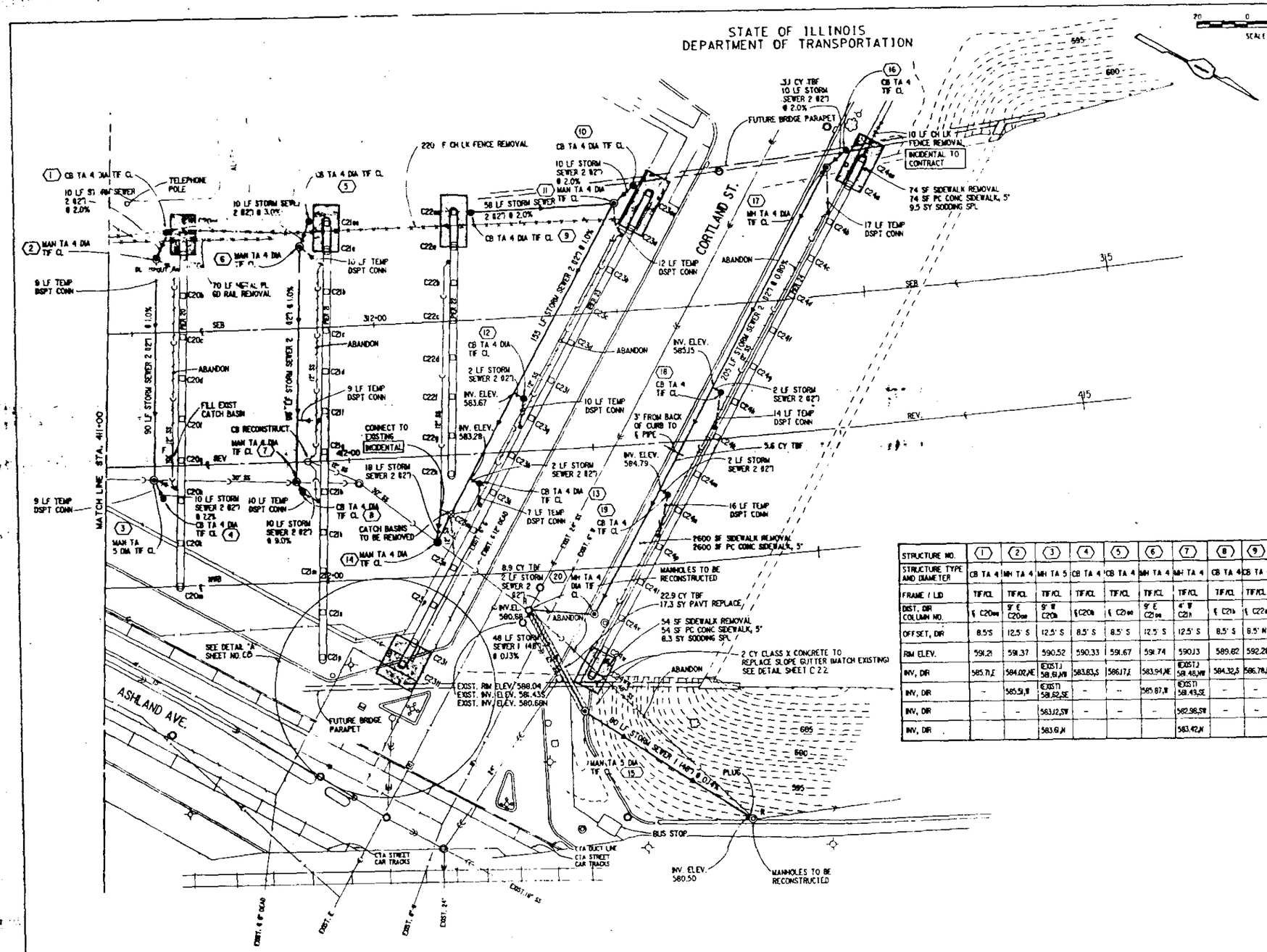
COOK COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	A		426	252
F.A.P. NO. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. SHEETS

*1988-093 BY



STRUCTURE NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
STRUCTURE TYPE AND DIAMETER	CB TA 4	MH TA 4	MH TA 5	CB TA 4	CB TA 4	MH TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	MH TA 4	MH TA 5	CB TA 4	MH TA 4	CB TA 4	CB TA 4	MH TA 4
FRAME / LID	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL
DIST. DR COLUMN NO.	℄ C20aa	9' E C20aa	9' W C20b	℄ C20b	℄ C20aa	9' E C20aa	4' W C21i	℄ C21i	℄ C22aa	℄ C23aa	9' E C23aa	5' W C23a	℄ C23a	6' W C23a	14' E C24aa	℄ C24aa	9' E C24aa	℄ C24a	4' E C24a	10' W C24a
OFFSET, DR	8.5'S	12.5' S	12.5' S	8.5' S	8.5' S	12.5' S	12.5' S	8.5' S	8.5' N	8.5' S	12.5' S	8.5' S	8.5' S	12.5' S	6' N	8.5' S	11.5' S	8.5' S	8.5' S	11.5' S
RIM ELEV.	591.21	591.37	590.52	590.33	591.67	591.74	590.13	589.62	592.28	589.73	590.90	589.97	589.14	589.98	586.89	590.85	590.80	589.95	589.55	589.05
INV, DR	585.71,E	584.02,NE	(EXIST.) 581.61,NW	583.83,S	586.17,E	583.94,NE	(EXIST.) 581.48,NW	584.32,S	586.78,NW	585.23,E	584.54,E	583.47,S	583.64,S	(EXIST.) 581.49,N	580.62,SW	586.35,E	586.05,W	585.45,S	585.05,E	584.3,W
INV, DR	–	585.51,W	(EXIST.) 581.62,SE	–	–	585.87,W	(EXIST.) 581.43,SE	–	–	–	585.62,SE	–	–	(EXIST.) 581.30,S	580.81,N	–	585.35,E	–	–	584.21,SE
INV, DR	–	–	583.12,SW	–	–	–	582.98,SW	–	–	–	585.03,W	–	–	582.98,W	–	–	–	–	–	
INV, DR			583.6,N				583.42,N							585.04,SW						

SUBSTRUCTURE WIDENING

ASHLAND AVE. TO CORTLAND ST.

ROUTE: FAI-90/94 (JFK EXPWY)

SCALE:

SECTION

PROJECT

COOK COUNTY

* 0505R2-2B, 3-HH, 6-HP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 438IR-2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		424	374

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh. 1 of 1 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Logan Blvd. Date 06 February 1987

ROUTE FAI-90/94 016-1271; Retaining Wall No. 211 Bored By Engineers International, Inc. Job Number 1122-02: GFA

SEC. I-94 to I-290 STA North of North West Abutment through embankment @ STA 388+92 Checked By DJA/GCV

COUNTY Cook

Boring No. LGR-5
Station 388+92
Offset [illegible]

Surface Water El. –
Groundwater El. at Completion –
After – Hours –

Description	Elevation	N	Qu (t.s.f.)	w (%)
Ground Surface	0			
3½ asphalt over 8" brn sand and gravel	-1.0			
SILTY CLAY TO SILTY CLAY LOAM FILL: trace sand & gravel; brown & gray; stiff to very stiff (A-6 to A-7-6; FILL)		10	2.10 S	18.1
	-5	13	1.63 P	22.2
		18	3.03 S	17.2
	-10	16	2.13 S	18.4
	-10.5			
SILTY TOPSOIL: trace sand & gravel; black; very stiff (A-7-6)		27	2.95 S	27.5
	-13.0			
SILTY CLAY LOAM: trace sand & gravel; brown & gray; hard (A-6)	-15	13	4.07 S	19.9
		20	4.07 S	19.9
	-20	13	4.27 S	18.4
	-20.5			
		6	1.36 S	24.6
SILTY CLAY TO SILTY CLAY LOAM: trace sand & gravel; gray; soft to medium stiff (A-6 to A-7-6)		8	0.91 S	20.3
	-25	3	0.62 S	26.4
	-30	3	0.66 S	27.2
		3	0.74 S	27.6
	-33.0			
SILTY LOAM: trace sand & gravel; gray; very dense (A-4)		37	5.70 S	14.9
	-35.5			
SILTY CLAY LOAM: trace sand & gravel; gray; hard		29	5.86 S	13.5
	-38.0			
SILTY LOAM: trace sand & gravel; gray; extremely dense (A-4)	-40	138	5.35 S	10.2
		95	[illegible] S	21.6
	-45	110	–	9.8

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

Qu-Unconfined Compressive Strength - t.s.f.

w - Water Content - percentage of oven dry weight-%.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

Sh. 2 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

Boring LGR-5 (con't)	Elevation	N	Qu (t.s.f.)	w (%)
SILTY LOAM: trace sand & gravel; gray; extremely dense (A-4)	-45			
		82	7.35 S	10.2
	-50	100	–	10.2
	-52.0	100	12.14 S	10.3
Boring Terminated at 52.0' Solid Stem Augers to 10' Casing Installed at 10' Rotary Wash to 32' Boring Backfilled Upon Completion	-55			

Project: Retaining Wall 200/201
Armitage Ave. Exit Ramp
Drilled along North Wood Ct.
County: Cook

Sheet: 1 of 1
Date: 08/08/90
Drilled By: EI/MB/CO
Checked By: BM
EI # 1313

Topsoil -0.8

SILTY CLAY TO SILTY CLAY LOAM FILL: trace gravel; brown; Very stiff

Grades to brown - mottled (A-6-FILL) -7.5

SILTY CLAY TO SILTY CLAY LOAM; trace gravel; gray-brown (mottled); Stiff

Grades to gray

Grades to Medium Stiff

Grades to soft (A-6) -18.5

Boring terminated at 35 ft (Elevation -37.8)

Solid stem augers used full depth. Boring backfilled upon completion.

Project: Retaining Wall 200/201
Armitage Ave. Exit Ramp
Drilled along Avondale St.
County: Cook

Sheet: 1 of 1
Date: 08/08/90
Drilled By: EI/MB/CO
Checked By: BM
EI # 1313

Asphalt (2 to 4 inches)

Crushed Gravel / Concrete -1.15

(A-4-6-FILL) -10.15

SILTY CLAY TO SILTY CLAY LOAM; trace gravel; trace organics; black

Grades brown; Very stiff

Grades to brown-gray (mottled); Stiff

Grades to gray; Medium Stiff

Solid stem augers used full depth. Boring backfilled upon completion.

REVISIONS		REVISIONS	
NAME	DATE	NAME	DATE

SOIL BORINGS

DATE DRAWN BY CHECKED BY

* 0505(2-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		416	375

BRIDGE FOUNDATION BORING LOG Sh. 2 of 2 Sh.

Boring No. VES-4 (cont.)

Elevation	N	Qu (t/sf)	w (%)
-45			
	89	7.9 S	10
	93	10. S	10
-50			
	119	3.7 S	8
-55	135	4.0 S	9
57	129/11"	4.2 S	9
-60			
-65			
-70			

Top of bed rock @ 57'.

DOLOMITE: white & light gray; fine grained.
Broken & weathered 58' to 62'.
Fracture zones at 62.3', 63.0 to 63.5', & 65.6'.
Run 1: RQD 58.0' to 63.0' = 13%, Recovery = 100%
Run 2: RQD 63.0' to 68.0' = 73%, Recovery = 93%

Boring terminated @ 68'.
Solid Stem Auger to 10'.
Casing installed to 10'.
Rotary wash to 59'.
NX Core barrel from 58' to 68'.
Boring backfilled upon completion.

(Elevation scale -75, -80, -85, -90, -95)

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh. 1 of 2 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Logan Blvd. Date 28 May 1986
ROUTE FAI-90/94 016-0127 Bored By Engineers International, Inc. Job Number 1122-02; FT
SEC. I-94 to I-290 STA. East end of N. abutment; on outbound shoulder; through embankment Checked By DJA
COUNTY Cook
Boring No. LCH-1 Station ___ Offset ___
Surface Water El. – Groundwater El. at Completion – After – Hours –

Elevation	N	Qu (t/sf)	w (%)
Ground Surface 0			
	7	-	4
3.8			
-5	9	1.8 P	19
	5	1.9 B	23
-10	10	1.0 B	20
	15	2.4 B	20
-15	24	2.3 B	23
	26	3.2 B	23
-20 (20.5)	18	2.0 P	33
	18	3.1 B	16
-25	17	5.4 B	20
28.0	18	4.8 B	17
-30	6	0.5 B	22
-35	5	0.8 B	26
-40 (40.5)	32	-	25
	24	3.2 B	15
-45	33	4.6 B	16

3" Asphalt over SAND & GRAVEL FILL: gray & brown; loose (A-1a to A-2)

SILTY CLAY LOAM FILL: trace large gravel; black & gray; stiff; disturbed (A-6)

Water at 8.5'.

Loose SAND & GRAVEL FILL from 9.5 to 11.0'

SILTY CLAY LOAM: trace gravel; brown & gray; very stiff to hard (A-6)

SILTY CLAY TO SILTY CLAY LOAM: gray; soft to medium stiff (A-6 to A-7-6)

SILTY CLAY LOAM: trace gravel; gray; very stiff to hard (A-6)

N- Standard Penetration Test- Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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, P - Penetrometer

FOUNDATION BORING LOG Sh. 2 of 2 Sh.

Boring No. LCH-1 (cont.)

Elevation	N	Qu (t/sf)	w (%)
-45			
	18	4.3 S	21
48			
	145	4.3 S	18
-50			
	124	7.1 B-S	12
	70	8.5 B	16
-55			
	83	5.8 S-B	16
	112	3.6 S	10
-60	100/6"	4.5+ P	9
-65			
-70			

SILT LOAM: some gravel; gray; extremely dense. (A-4)

Grades with limestone fragments

Boring Terminated @ 61.5'.
Solid Stem Auger to 11'
Casing Installed to 14'
Rotary Wash to 61.5'.
Boring backfilled upon completion.

(Elevation scale -75, -80, -85, -90, -95)

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh. 1 of 2 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Logan Blvd. Date 20 May 1986
ROUTE FAI-90/94 016-0127 Bored By Engineers International, Inc. Job Number 1122-02; FT
SEC. I-94 to I-290 STA. East of south pier, off sidewalk Checked By DJA
COUNTY Cook
Boring No. LCH-2 Station ___ Offset ___
Surface Water El. – Groundwater El. at Completion – After – Hours –

Elevation	N	Qu (t/sf)	w (%)
Ground Surface 0			
1.5			
	12	4.3 B	18
-5			
	9	-	7
6.5			
	4	0.7 B	23
-10	4	0.5 B	25
	4	-	23
-15	6	0.5 B	24
-20	5	0.3 B	29
-21			
-25 (25.5)	15	1.5 B	17
	22	2.5 B	18
-30	16	2.3 B	18
-35	25	3.4 B	27
	41	4.6 S	21
	88	5.4 S	19
	60	9.7 S	11
	130	5.2 S	12
-45	107	4.7 S	10

6" TOPSOIL over SAND & GRAVEL FILL: light gray; loose (A-2)

CLAY LOAM FILL: trace sand & gravel; brown & black; hard (A-6)

SAND FILL: some gravel; light gray; loose (A-3)

SILTY CLAY LOAM: trace sand; gray; medium stiff to soft
Water @8.5'

Sample very soft; disturbed

SILT LOAM: trace clay; gray; stiff (A-4)

SILTY CLAY LOAM: trace sand & gravel; dark gray; stiff to very stiff (A-6)

SILT LOAM TO SILTY CLAY LOAM: trace sand & gravel; gray; hard (A-4 to A-6)

Grades w/limestone fragments

Grades w/ boulders

N- Standard Penetration Test- Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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, P - Penetrometer

BRIDGE FOUNDATION BORING LOG Sh. 2 of 2 Sh.

Boring No. LCH-2 (cont.)

(Elevation scale -45, -50, -55, -60, -65, -70; -75, -80, -85, -90, -95)

Boring Terminated @45'
Solid Stem Auger to 8.5'
Casing Installed to 9'
Rotary Wash to 45'
Boring backfilled upon completion.

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh. 1 of 2 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Logan Blvd. Date 21 May 1986
ROUTE FAI-90/94 016-0127 Bored By Engineers International, Inc. Job Number 1122-02; FT
SEC. I-94 to I-290 STA. West of south abutment, adjacent to sidewalk Checked By DJA
COUNTY Cook
Boring No. LCH-3 Station ___ Offset ___
Surface Water El. – Groundwater El. at Completion – After – Hours –

Elevation	N	Qu (t/sf)	w (%)
Ground Surface 0			
-3.2			
	15	5.1 S-B	19
-5 (5.5)	10	2.1 B	21
	7	0.9 B	22
-10	9	0.9 B	17
	3	0.6 B	24
-15	3	0.5 B	26
-20	4	0.6 B	29
-21.6			
-25	10	1.6 B	15
-26.6	19	1.9 B	16
-30	57/1"	-	-
-32.0			
	N/A	-	-
-35	37	6.7 B	14
	150	2.9 B-S	10
-40	62	8.3 S	11
	74	6.2 S	13
-45	65	1.5+ P	12

6" TOPSOIL over SAND FILL: trace gravel; black; medium dense (A-2-4)

SILTY CLAY LOAM: trace sand; brown & gray; hard to very stiff (A-6)

SILTY CLAY TO SILTY CLAY LOAM: gray; medium stiff to soft (A-6 to A-7-6)

Very soft; disturbed

CLAYEY SILT: trace sand; gray; medium dense (A-4)

SILTY CLAY LOAM: trace sand & gravel; stiff to very stiff (A-6)
NOTE: Wood obstruction encountered from 27.5' to 32.0'; possible tree trunk; possible wood pile.

SILT LOAM TO SILTY CLAY LOAM: trace sand & gravel; gray; hard (A-4 to A-6)

Grades sandy w/limestone fragments to cobbles

Poor recovery; sample disturbed

N-Standard Penetration Test- Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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, P - Penetrometer

BRIDGE FOUNDATION BORING LOG Sh. 2 of 2 Sh.

Boring No. LCH-3

(Elevation scale -45, -50, -55, -60, -65, -70; -75, -80, -85, -90, -95)

Boring Terminated @45'
Solid Stem Auger to 10'
Casing Installed to 9'
Rotary Wash to 45'
Boring backfilled upon completion.

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh. 1 of 1 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Logan Blvd. Date 20 May 1986
ROUTE FAI-90/94 016-0127; Retaining Wall 211 Bored By Engineers International, INC Job Number 1122-02; FT
SEC. I-94 to I-290 STA. West of north pier between sidewalk and Logan Street Checked By DJA
COUNTY Cook
Boring No. LCH-4 Station 386+80 Offset 50L
Surface Water El. – Groundwater El. at Completion – After – Hours –

Elevation	N	Qu (t/sf)	w (%)
Ground Surface 0			
	13	-	13
-5	6	-	5
-8.0	9	2.5 P	16
-10	12	0.5 P	13
	12	0.8 P	14
-15	9	.78 B	18
	5	0.5 B	26
-20	9	.78 B	29
-22.5	19	4.75 P	15
-22.4			
-25	23	3.1 B	16
	29	4.7 B	14
-30	50	-	-
	45	-	-
-35	46	3.8 S	20
	125/10"	8.0 S	11
-40	104/10"	-	8
-41.8	100/4"	-	11
-45			

6" TOPSOIL over SAND & GRAVEL FILL: gray & brown; medium dense to loose (A-2)

SANDY CLAY LOAM: trace gravel; brown & gray; very stiff (A-6)
Sample disturbed; grades w/increasing sand content

SILTY CLAY TO SILTY CLAY LOAM: trace wet sand seams; gray; soft to medium stiff (A-6 to A-7-6)

SILT: trace clay & sand; gray; medium dense; moist. (A-4)

SILTY CLAY LOAM: trace sand & gravel; dark gray; very stiff; moist (A-6)

No recovery; pushed rock.

No recovery; pushed rock.

SAND LOAM: some gravel; gray; extremely dense (A-4 to A-2-4)

Boring Terminated at 41.8'
Solid Stem Auger to 8.5'
Casing Installed to 9'
Rotary Wash to 41.8'
Boring backfilled upon completion

N-Standard Penetration Test- Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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, P - Penetrometer

REVISIONS NAME	DATE	REVISIONS NAME	DATE

SOIL BORINGS

DATE ___ DRAWN BY ___ CHECKED BY ___

* 050502-2B, 3-HH, 6-HP, 400HB, 401HB, 45II, 0506-450, 0605-402HB, 0606-403HB & 0707140408, 4398R-2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	94		426	594

Illinois Department of Transportation — Bridge Foundation Boring Log (Sh. 1 of 2 Sh.)

PROJECT P-91-510-79 BRIDGE I-90/94 over Fullerton Date 10/28/86
ROUTE FAI-90/94 016-0129 Bored By Engineers International, Inc. Job Number 1122-02; GV
SEC. I-94 to I-290 STA. West End of North Abutment Through Embankment Checked By BJA
COUNTY Cook Boring No. FUL-7 Station ___ Offset ___
Surface Water El ___ Groundwater El at Completion ___ After ___ Hours ___

Description	Elevation	N	Qu t/s.f.	w %
Ground Surface	0			
3" ASPHALT SHOULDER over SILTY CLAY LOAM FILL: trace gravel; gray/brown; stiff to very stiff		11	-	-
No recovery @ 2'		8	2.8 B	5
	-5	8	1.2 B	18
		6	1.8 B	18
	-10			
No recovery		23	-	-
No recovery		100/4"	-	-
Concrete, brick, & other refuse from 10.5' to 22.5'	-15			
	-20			
SILTY CLAY LOAM: trace gravel; gray/brown; very stiff	-22.5	16	3.3 B	34
	-25	10	1.6 B	28
	-30	6	0.5 B	34
SILTY CLAY/SILTY CLAY LOAM: trace gravel; gray; very soft	-30.5	4	0.4 B	20
		6	0.4 B	27
	-35	4	-	-
No recovery		13	0.9 B	20
	-40			
SAND: trace gravel; dark gray; stiff	-40.3	24	1.2 B	12
SILTY CLAY LOAM: trace gravel; dark gray; stiff	-43.0	19	1.4 B	15
	-45			

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BD 137 (Rev. 4-78)

BRIDGE FOUNDATION BORING LOG (Sh. 2 of 2 Sh.)

Boring FUL-7 (continued)

Description	Elevation	N	Qu t/s.f.	w %
	-45	28	2.5 B	14
	-50	25	4.3 B	14
		27	5.6 B	14
Intermittent sand seams	-55	33	7.3 B	14
No recovery		65	-	-
	-60	67	3.7 S	12
No recovery		87	-	
	-65	77	9.1 S	11
Boring terminated at 65.0'. Solid stem auger to 25.0'. Casing installed at 25.0'. Rotary wash to 65.0'. Boring backfilled upon completion.	-70			
	-75, -80, -85, -90, -95			

Illinois Department of Transportation — Bridge Foundation Boring Log (Sh 1 of 2 Sh)

PROJECT P-91-510-79 BRIDGE I-90/94 over Western Ave. Date 19 May 1986
ROUTE FAI-90/94 016-0128 Bored By Engineers International, INC Job No. 1122-02/ JJ
SEC I-94 to I-290 STA South of east pier, through sidewalk Checked By BJA
COUNTY Cook Boring No WES-1 Station ___ Offset ___
Surface Water El - Groundwater El at Completion - After - Hours -

Description	Elevation	N	Qu t/s.f.	w %
Ground Surface	0			
4" Concrete Sidewalk over 2" SAND & GRAVEL FILL				
SILTY CLAY LOAM: trace sand & gravel; brown; stiff (A-6)		10	1.3 B	19
* Sample disturbed	-5	6	-	18
		13	1.8 B	22
SILTY CLAY TO SILTY CLAY LOAM: trace sand; gray; medium stiff to soft (A-6 to A-7-6)	-9			
	-10	5	.47 B	24
		8	.25 B	26
	-15	5	.25 B	28
		15	0.5 B	27
SILTY LOAM TO SILTY CLAY LOAM: trace sand & gravel; dark gray; very stiff to hard (A-4 to A-6)	-17.9			
	-20	15	3.3 S	16
		16	4.3 S	16
	-25	22	4.3 B	16
		24	8.0 B	14
	-30	34	2.0 B	18
SILTY CLAY LOAM: trace sand & gravel; gray; hard (A-6)	-33	31	5.8 B	18
	-35	42	7.0 S	16
Grades interbedded with very dense, wet SAND		35	6.8 S	16
	-40	50	-	19
		81	4.5 P	12
	-45	144	4.5 P	11

Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BD 137 (Rev. 4-78)

BRIDGE FOUNDATION BORING LOG Sh. 2 of 2 Sh.

Boring No. WES-1 (cont.)

Description	Elevation	N	Qu t/s.f.	w %
TOP OF BEDROCK @45.8'	-45			
Boring Terminated @46'. Solid Stem Auger to 8.5'. Casing Installed to 9'. Rotary Wash to 46'. Boring backfilled upon completion.	-50			
	-55, -60, -65, -70, -75, -80, -85, -90, -95			

Illinois Department of Transportation — Bridge Foundation Boring Log (Sh 1 of 1 Sh)

PROJECT P-91-510-79 BRIDGE I-90/94 over Western Ave. Date 19 May 1986
ROUTE FAI-90/94 016-0128 Bored By Engineers International, INC Job No. 1122-02; JJ
SEC. I-94 to I-290 STA. South of west abutment; through sidewalk Checked By BJA
COUNTY Cook Boring No. WES-2 Station ___ Offset ___
Surface Water El - Groundwater El at Completion - After - Hours -

Description	Elevation	N	Qu t/s.f.	w %
Ground Surface	0			
6" Concrete Sidewalk; no gravel base.				
SILTY CLAY LOAM: trace sand & gravel; brown & gray; stiff (A-6)		6	1.5 B	20
	-5	6	1.3 B	29
SILTY CLAY TO SILTY CLAY LOAM: trace sand; gray; medium stiff to soft (A-6 to A-7-6)	-5.5	6	0.5 B	19
	-10	9	.75 B	22
		16	0.5 B	26
	-15	5	0.3 B	27
		4	0.5 B	30
	-20	5	.25 B	29
SILT LOAM TO SILTY CLAY LOAM: trace sand & gravel; dark gray; very stiff to hard; moist (A-4 to A-6)	-20.5	24	4.0 B	13
	-25	15	4.0 B	15
		45	5.0 S	16
Cobble encountered	-30	100/4"	-	18
SILT LOAM TO SILTY CLAY LOAM: trace sand & gravel; gray; hard; moist (A-6)	-30.5	50	5.7 S	20
	-35	60	7.5 S	15
Grades w/very dense, wet, SILT		143	-	21
	-40	123	-	11
Boring Terminated @40'. Solid Stem Augers to 8.5'. Casing Installed to 9'. Rotary Wash to 40'. Boring backfilled upon completion	-45			

Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BD 137 (Rev. 4-78)

Illinois Department of Transportation — Bridge Foundation Boring Log (Sh. 1 of 2 Sh.)

PROJECT P-91-510-79 BRIDGE I-90/94 over Western Ave. Date 20 May 1986
ROUTE FAI-90/94 016-0128 Bored By Engineers International, Inc. Job No. 1122-02; JJ
SEC. I-94 to I-290 STA. East end of E. abutment; on eastbound shoulder; through embankment Checked By BJA
COUNTY Cook Boring No. WES-3 Station ___ Offset ___
Surface Water El - Groundwater El at Completion - After - Hours -

Description	Elevation	N	Qu t/s.f.	w %
Ground Surface	0			
3" ASPHALT over SAND & GRAVEL FILL: brown; loose (A-1a to A-2)		6	-	-
SILTY CLAY LOAM FILL: trace gravel; brown & gray; stiff to very stiff. (A-6)	3.0			
	-5	14	4.1 B	18
		13	1.2 B	17
	-10	14	2.5 B	22
		24	2.4 B	15
ASPHALT, GRAVEL, CINDER, & BRICK FILL: gray, brown & black; medium dense.	13.5			
	-15	12	-	26
		18	-	18
SILTY CLAY LOAM: little gravel; brown; stiff. (A-6) Sample disturbed.	18.0			
	-20	18	1.8 P	20
		13	3.8 B	15
	-25	18	1.3 B	28
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft. (A-6 to A-7-6)		10	0.7 B	17
	-30	6	0.5 B	20
		4	0.4 B	26
	-35	4	0.4 B	27
		6	0.4 B	27
SILT LOAM TO SILTY CLAY LOAM: trace gravel; dark gray; very stiff to hard. (A-4 to A-6)	38.9			
	-40	31	4.4 S	13
Grades interbedded with dense, wet SAND.		35	5.2 S	13
	-45	32	5.0 B	16

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

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BRIDGE FOUNDATION BORING LOG (Sh. 2 of 2 Sh.)

Boring No. WES-3 (cont.)

Description	Elevation	N	Qu t/s.f.	w %
	-45			
		27	7.8 B	13
	-50	27	3.8 B?	18
FINE TO MEDIUM SAND: gray; very dense; moist. (A-3).	50.5	81	-	19
	-55	119	-	14
		152	-	13
SILTY LOAM: trace gravel; dark gray; hard. (A-4)	58.0	92	7.3 S	11
	-60	53	10.0 S	12
		100/5"	-	-
Boring terminated @ 64.4'. Solid Stem Auger to 10.0'. Casing installed to 10.0'. Rotary Wash to 64.4'. Boring backfilled upon completion.	64.4 / -65			
	-70, -75			

Illinois Department of Transportation — Bridge Foundation Boring Log (Sh 1 of 2 Sh)

PROJECT P-91-510-79 BRIDGE I-90/94 over Western Ave. Date 22 May 1986
ROUTE FAI-90/94 016-0128 Bored By Engineers International, Inc. Job No. 1122-02; JJ
SEC. I-94 to I-290 STA. North end of West Pier; Through median. Checked By BJA
COUNTY Cook Boring No. WES-6 Station ___ Offset ___
Surface Water El - Groundwater El at Completion - After - Hours -

Description	Elevation	N	Qu t/s.f.	w %
Ground Surface	0			
6" Concrete Median over SAND & GRAVEL FILL: loose. (A-1-a to A-2)	2.2	9	-	6
SILTY CLAY LOAM: brown; stiff. (A-6)	4.2			
SILTY CLAY TO SILTY CLAY LOAM: trace sand; gray; medium stiff. (A-6 to A-7-6)	-5	8	2.4 B	20
		7	1.0 B	24
	-10	6	1.1 B	26
		6	1.0 B	27
	-15	4	0.7 B	28
SILT LOAM: trace sand & gravel; gray; stiff. (A-4 to A-6)	18			
	-20	8	1.4 B	17
		6	1.3 B	17
	-25	11	-	21
SILTY CLAY LOAM: trace gravel; dark gray; very stiff to hard. (A-6)	26.2	42	6.5 B	14
	-30	30	3.6 B	16
		27	2.4 B	19
SILT LOAM: trace gravel; dark gray; extremely dense. (A-4) Sample Disturbed.	33			
	-35	103	0.7 B	18
Grades with boulders & limestone fragments; disturbed.		135	2.1 S	9
	-40	53	8.8 S-B	12
		96	8.4 S	11
	-45	145	6.7 S	9

Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BD 137 (Rev. 4-78)

REVISIONS NAME	DATE	REVISIONS NAME	DATE

SOIL BORINGS

DATE DRAWN BY CHECKED BY

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0805-402HB, 0806-403HB & 0707140?HB, 438R-2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			426	437

Illinois Department of Transportation

Sh. 1 of 2 Sh.

PROJECT P-91-310-79 BRIDGE I-90/94 over Fullerton Avenue Date 06-2-86 Engineers International, Inc.
ROUTE FAI-90/94 016-0129 Bored By Job Number 1122-02: TT
SEC. I-94 to I-290 STA. East end of north abutment on shoulder through embankment Checked By DJA
COUNTY Cook
Boring No. FUL-3 Station Offset
Surface Water El. Groundwater El. at Completion After Hours

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
1" ASPHALT & 18" CONCRETE over SAND & GRAVEL FILL (A-1-a to A-2)	-1.5	9	4.0 B	16.0
SILTY CLAY LOAM FILL: trace gravel; dark gray; hard (A-6)	-5	13	4.5 B	18.4
Grades to very stiff below 6'		10	2.0 B	17.8
	-10	13	2.0 B	17.3
No return; concrete slab at 10.5' to 12.0'		-	-	-
Concrete @ 15.5' to 17.0'	-15	22	1.75 P	23.1
		40	3.5 P	17.4
Disturbed sample	-20	6	-	26.9
	-21.0			
SAND & GRAVEL (OLD ASPHALT) FILL: black; loose (A-1-a to A-2)		14	2.0 B-S	3.8
	-23.6			
SILTY CLAY LOAM FILL: black & dark gray; very stiff (possible disturbed topsoil) (A-6)	-25	16	3.0 B	16.?
	-26			
SILTY CLAY LOAM: trace gravel; brown and gray; very stiff to hard (A-6)		14	1.5 S	19.?
	-30	9	1.? B	19.5
	-31.5			
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft (A-6 to A-7-6)		5	.7 B	29.1
	-35	4	.6 B	28.?
		6	.9	25.7
	-40	5	.7 B	19.?
		8	1.0	21.5
	-45			

Sh. 2 of 2 Sh.

FUL-3 Continued	Elevation	N	Qu t/s.f.	w (%)
	-45	-	-	17.?
	-46.?	26	7.8 S	12.?
SILTY CLAY LOAM: trace gravel; dark gray; hard (A-6)		28	4.4 B	13.?
	-50	30	7.3 B	12.?
		30	4.8 B	14.1
	-55			
Limestone boulders 56.0' to 57.5'		39	3.8 B	17.1
	-60	41	8.3	11.?
Very hard below 61.0'		41	8.5 S-B	12.4
		50	9.3 S	11.5
	-65	57	10.1 S	12.6
		51	10.5 B	13.0
	-70			

Boring terminated @ 70.0'
Solid stem auger to 9.0'
Casing installed to 15.0'
Rotary wash to 70.0'
Boring backfilled upon completion

Illinois Department of Transportation

Sh. 1 of 2 Sh.

PROJECT P-91-310-79 BRIDGE I-90/94 over Fullerton Ave. Date 9-25-86 Engineers International, Inc.
ROUTE FAI-90/94 016-0129 Bored By Job Number 1122-02: TT
SEC. I-94 to I-290 STA. N end of S Abutment Checked By DJA
COUNTY Cook
Boring No. FUL-4 Station Offset
Surface Water El. Groundwater El. at Completion After Hours

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
3" ASPHALT OVER COARSE SAND AND GRAVEL FILL: gray; medium dense (A-1a) Recovery; pushed large gravel		14	-	-
SAND LOAM FILL: some gravel and brick fragments; brown; medium stiff (A-3 to A-4)	-5	13	-	19
Too granular to test		5	-	20
	-10	17	-	21
No recovery; possible void		3	-	-
	-15	63	-	18
		16	2.5 P	17
Reinforced concrete @ 20.5', possible pile cap; relocate boring as shown on location diagram.	-20	34	-	14
SILTY CLAY LOAM: trace gravel; brown; very stiff (A-6)		19	3.1 S	24
	-25	15	3.0 B	16
		9	1.6 B	26
	-30	5	1.4 B	26
SILTY CLAY TO SILTY CLAY LOAM: trace sand and gravel; gray; medium stiff to soft (A-6 to A-7-6)		5	0.9 B	27
	-35	7	0.2 B	26
		6	0.3 B	27
	-40	6	0.4 B	25
		6	0.4 B	26
	-45	19	0.4 B	27

Sh. 2 of 2 Sh.

Boring FUL-4 (continued)	Elevation	N	Qu t/s.f.	w (%)
	-45			
SILTY CLAY LOAM: trace sand and gravel; dark gray; very stiff to hard (A-6)		17	3.0 B	17
	-50	22	2.5 B	14
		29	6.4 B	13
	-55	46	4.1 S	11
		54	9.5 S	11
	-60	58	12.1 S	12
		90/9"	11.5 S	13
	-65	57	7.6 S	15

Boring Terminated @ 65.0'
Solid Stem auger to 10'
Casing installed to 15'
Rotary wash to 65'
Boring backfilled upon completion

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh. 1 of 2 Sh.

PROJECT P-91-310-79 BRIDGE I-90/94 over Fullerton Avenue Date Engineers International, Inc.
ROUTE FAI-90/94 016-0129 Bored By Job Number 1122-02: GV
SEC. I-94 to I-290 STA. East End of South Abutment, West of Retaining Wall, Through Embankment Checked By DJA
COUNTY Cook
Boring No. FUL-5 Station Offset
Surface Water El. Groundwater El. at Completion After Hours

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
3" ASPHALT SHOULDER over SILTY CLAY LOAM FILL: trace gravel; brown; unconsolidated (A-6)		18	-	-
	-5	16	-	11
		4	-	13
	-10	6	-	13
CLAY FILL: trace gravel & organics; black; soft (A-7-6)		6	0.3 B	21
	-13			
SILTY CLAY LOAM FILL: trace gravel & organics; black; soft (A-6)	-15	12	1.8 B	30
No recovery		15	-	-
	-20	19	-	27
	-20.3			
SILTY CLAY LOAM: trace gravel; gray/brown/ soft (A-6)		14	2.0 S	21
		12	2.3 B	23
	-25	6	1.2 B	27
	-30	4	0.4 B	28
		6	0.3 B	26
	-32.8			
SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; soft (A-6 to A-7-6)	-35	4	0.3 B	2?
No recovery		6	-	-
No recovery	-40	4	-	-
		4	0.4 B	24
	-43			
SILTY CLAY LOAM: trace gravel; dark gray; hard to very hard (A-6)	-45	26	2.0 S	13

BRIDGE FOUNDATION BORING LOG

Sh. 2 of 2 Sh.

Boring FUL-5 (cont)	Elevation	N	Qu t/s.f.	w (%)
	-45	27	3.9 B	15
No Recovery		40	-	-
	-50	65	6.4 E	11
No Recovery	-55	100	-	-
		59	7.4 B	14
Boulder 58.0' to 59.5'	-60	-	-	-
No Recovery		62	-	-
	-65	71	4.2 S	9
		57	3.3 S	11
TOP OF BEDROCK 69.5'		100	3.4 S	11
DOLOMITE: smooth drilling	-70			
	-71			

Boring Terminated at 71.0'
Solid stem auger to 10.0'
Casing installed to 20.0'
Rotary wash to 71.0'
Boring backfilled upon completion

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh. 1 of 2 Sh.

PROJECT P-91-310-79 BRIDGE I-90/94 over Fullerton Avenue Date Engineers International, Inc.
ROUTE FAI-90/94 016-0129 Bored By Job Number 1122-02: GV
SEC. I-94 to I-290 STA. East end of south abutment, west of retaining wall, through embankment Checked By DJA
COUNTY
Boring No. FUL-6 Station Offset
Surface Water El. Groundwater El. at Completion After Hours

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
3" ASPHALT SHOULDER over SANDY CLAY TO SAND FILL: trace gravel; brown gray; unconsolidated (A-2-b to A-2-6)		15	-	10
	-5	5	-	5
SILTY CLAY LOAM FILL: trace gravel; black; very stiff to hard (A-6)		25	3.7 E	15
Grades with brick fragments sand and gravel	-10	55	1.7 B	20
		39	-	18
Old asphalt pavement	-15	103	-	26
No Recovery		18	-	-
	-18			
SILTY CLAY LOAM: trace grave; gray/brown; very stiff (A-6)	-20	16	3.1 B	20
		14	2.0 S	25
	-25	13	1.9 B	26
	-26			
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; soft (A-6 to A-7-6)		4	0.8 B	26
	-30	4	0.6 B	26
		4	0.3 B	27
	-35	7	0.5 B	23
		9	0.8 B	26
	-40	12	0.3 B	27
	-40.5			
SILTY CLAY LOAM: trace gravel; dark gray; hard to very hard (A-6)		27	3.4 S	13
	-45	32	7.1 B	15

Sh. 2 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

Boring FUL-6 (cont)	Elevation	N	Qu t/s.f.	w (%)
	-45			
		75	4.8 B	11
	-50	71	6.3 E	12
		100	4.4 S	12
	-55	100	6.0 S	12
		32	3.9 B	15
	-60	38	5.1 B	12
TOP OF BEDROCK 60.5'				
DOLOMITE: smooth drilling	-62.5			

Boring Terminated at 62.5'
Solid stem auger to 10.0'
Casing installed to 20.0'
Rotary wash to 62.5'
Boring backfilled upon completion

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lbs. 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, P - Penetrometer

BD 137 Rev. 4-78

REVISIONS NAME	DATE	REVISIONS NAME	DATE

SOIL BORINGS

DATE DRAWN BY CHECKED BY

* 050512-2B, 3-HN, 6-HP, 400HB, 401HB, 45II, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 436IR-2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		94	316

BRIDGE FOUNDATION BORING LOG

Sh. 3 of 3 Sh.

Boring No. BAN-1

Elevations -45 to -70 (left scale), -75 to -95 (right scale)

Boring Terminated @43.6'
Solid Stem Auger to 21'
Casing installed to 20'
Rotary Wash to 43.6'
Boring backfilled upon completion

BRIDGE FOUNDATION BORING LOG

Sh. 2 of 2 Sh.

Boring No. BAN-4 (cont.)

Description	Elevation	N	Qu t/s.f.	w (%)
SILTY CLAY LOAM: dark gray; trace sand & gravel; very stiff (A-6)	-45			
		38	4.3 S	13
	-49.5	123/10"	4.8 B	19
TOP OF BEDROCK @49.5' Smooth drilling from 49.5' to 51.5'	-50			
	-51.5			

Boring Terminated @51.5'
Solid Stem Auger to 20'
Casing installed to 20'
Rotary Wash to 51.5'
Boring backfilled upon completion

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh 1 of 1 Sh

PROJECT P-91-510-79 BRIDGE I-90/94 over Damen Ave. Date 08 May 1986
ROUTE FAI-90/94 016-0130 Bored By Engineers International, INC Job Number 1122-02
SEC. I-94 to I-290 STA. East of south pier, through sidewalk Checked By DJA
COUNTY Cook
Boring No. BAN-2 Station — Offset —
Surface Water El. — Groundwater El. at Completion — After — Hours —

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
SANDY CLAY FILL: trace wood and brick fragments; brown; stiff (A-6)		4	1.6 B	20
	-5	4	-	26
Sample #2: Large piece of wood; sample disturbed				
		10	1.1 B	16
	-8			
SILTY CLAY TO SILTY CLAY LOAM: trace sand; dark gray; sof to medium stiff (A-6 to A-7-6)	-10	4	1.9 B	21
		5	0.3 B	27
	-15	7	0.5 B	17
	-17	5	1.54 B	22
CLAYEY SILT TO SILT LOAM: dark gray; very stiff (A-4)	-18.5	34	5.0 P	18
SILT LOAM: trace gravel; gray; very hard (A-4)	-20	34	7.5 S	14
		119	9.5 S	11
Sample disturbed		100	-	9
	-25			
TOP OF BEDROCK Smooth drilling 25.5 to 26.5'	-25.5			

Boring Terminated @26.5'
Solid Stem Auger to 10'
Casing Installed to 9'
Boring backfilled upon completion

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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, P - Penetrometer

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Illinois Department of Transportation

Bridge Foundation Boring Log

Sh 1 of 1 Sh

PROJECT P-91-510-79 BRIDGE I-90/94 over Damen Ave. Date 14 May 1986
ROUTE FAI-90/94 016-0130 Bored By Engineers International, INC Job Number 1122-02
SEC. I-94 to I-290 STA. West of north pier Checked By DJA
COUNTY Cook
Boring No. BAN-3 Station — Offset —
Surface Water El. — Groundwater El. at Completion — After — Hours —

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
SAND & GRAVEL FILL: trace silt; gray & brown; medium dense (water @1.5' perched) (A-2)		11	-	19
	-3.7			
SANDY LOAM: possible topsoil; trace gravel; black; loose (A-2-4)	-5	5	-	30
	-5.5			
SILTY CLAY LOAM: trace sand; gray & brown; medium stiff (A-6)		6	1.1 B	25
No Recovery	-10	6	-	-
	-10.5			
SILTY CLAY: gray; very soft (A-7-6)		4	0.1 B	24
	-15	6	0.1 B	28
		5	0.1 B	29
CLAYEY SILT TO SILT LOAM: gray; very stiff (A-4)	-17.5			
	-19			
SILT LOAM: trace gravel; gray; hard (A-4)	-20	37	7.1 S	11
Sample disturbed with limestone gravel		41	-	20
	-25	30	0.5 S	14
	-26.5	185/6"		8
TOP OF BEDROCK @26.5 DOLOMITE: mottled dark gray & light gray; fine grained				
Broken & Weathered 26.5 - 27.5' Soft Clay Seam 27.9 - 28.2 ft. Fracture Zone (2" spacing): 28.2 - 29.1 Hard Clay Seam 29.0 - 29.1	-30			
Smooth drilling from 29.1 to 32.5 ft. RQD 27.5 to 30.0 = 53% RQD 30.0 to 32.5 = 100% Recovery = 100%				

Boring Terminated @32.5
Solid Stem Augers to 8.5'
Casing Installed to 9'
Rotary Wash to 27.5'
NX Core Barrel from 27.5 to 32.5'

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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, P - Penetrometer

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Illinois Department of Transportation

Bridge Foundation Boring Log

Sh. 1 of 2 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Damen Ave. Date 20 May 1986
ROUTE FAI-90/94 016-0130 Bored By Engineers International, INC Job Number 1122-02; JJ
SEC. I-94 to I-290 STA. West of south abutment, on shoulder, through embankment Checked By DJA
COUNTY Cook
Boring No. BAN-4 Station — Offset —
Surface Water El. — Groundwater El. at Completion — After — Hours —

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
1" Asphalt over SAND & GRAVEL FILL: gray & brown; loose (A-2)		9	-	7
	-3			
SANDY CLAY LOAM FILL: trace brick fragments, cinders, gravel; brown & gray; stiff (A-4 to A-6)	-5	5	1.0 B	20
		5	1.0 B	22
	-10	13	2.2 S	17
Sample disturbed		16	1.3 P	19
	-15	12	1.5 B	29
		12	-	-
	-18			
SILTY CLAY LOAM: trace sand & gravel; brown; stiff to very stiff (A-6)	-20	2	1.5 B	26
Sample disturbed		4	1.3 P	25
	-25	14	3.5 B	30
		13	1.5 B	27
	-28			
SILTY CLAY LOAM: gray; soft to medium stiff (A-6)	-30	9	0.5 B	19
		6	0.3 B	21
	-35	4	0.2 B	21
		8	0.3 B	26
	-40	12	0.8 B	25
	-42			
FINE SAND: trace silt; gray; dense (A-2)		36	0.9 B	26
	-44			
	-45	21	36	20

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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, P - Penetrometer

BD 137 (Rev. 4-78)

Illinois Department of Transportation

Sh. 1 of 1 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Fullerton Avenue Date 05-16-86
ROUTE FAI-90/94 016-0129 Bored By Engineers International, Inc. Job Number 1122-02; FT
SEC. I-94 to I-290 STA. East end of south pier Checked By DJA
COUNTY Cook
Boring No. FUL-1 Station — Offset —
Surface Water El. — Groundwater El. at Completion — After — Hours —

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
4" CONCRETE over SAND & GRAVEL FILL (A-1-a to A-2)	1.5			
SILTY CLAY LOAM: trace gravel; brown; very stiff (A-6)		7	2.5 P	22.1
	-5	9	2.4 S	16.0
	-7.3	12	1.5 B	19.4
SILTY CLAY/SILTY CLAY LOAM: trace gravel; gray; soft (A-6 to A-7-6)	-10	5	.39 B	26.7
		8	.25 B	27.1
Sample disturbed	-15	9	1.5 P	23.9
		9	.31 B	28.5
	-20	4	.23 B	14.4
	20.5			
SILTY CLAY LOAM: trace gravel; dark gray; hard (A-6)		22	4.0 B	14.6
	-25	29	4.5 B	11.2
Sample disturbed		41	4.5 P	12.8
No Return (Pushed rock)	-30	41	-	-
Grades little gravel Sample disturbed		102	4.5 P	9.4
	-35	54	10.1 S	10.0
	37.5	41	4.5 B	14.5
	-40			
	-45			

Boring terminated @ 37.5'
Solid stem auger to 20.0'
Casing installed to 20.0'
Rotary wash to 37.5'
Boring backfilled upon completion

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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, P - Penetrometer

BD 137 (Rev. 4-78)

Illinois Department of Transportation

Sh. 1 of 2 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Fullerton Avenue Date 05-16-86
ROUTE FAI-90/94 016-0129 Bored By Engineers International, Inc. Job Number 1122-02; FT
SEC. I-94 to I-290 STA. West end of North Pier Checked By DJA
COUNTY Cook
Boring No. FUL-2 Station — Offset —
Surface Water El. — Groundwater El. at Completion — After — Hours —

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
4" CONCRETE over SAND & GRAVEL FILL: some wood, cinders, & brick; brown; dense (A-1-a to A-2)		35	-	13.7
No return, pushed rock	-5	4	-	-
	6.1			
SILTY CLAY LOAM: trace gravel; light brown; very stiff (A-6)		17	2.75 S	17.5
	-10	16	3.4 B	21.3
	10.5			
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft (A-6 to A-7-6)		10	.75 P	20.4
	-15	6	.25 B	22.6
		4	.25 B	20.7
	-20	4	.35 B	28.8
		4	.5 B	28.1
	-25	4	.25 B	28.2
	27			
SILTY CLAY LOAM: trace gravel; dark gray; hard (A-6)		19	4.5 S	12.9
	-30	41	-	-
Disturbed by gravel		29	3.5 P	14.2
	-35	37	6.1 S	12.2
		34	5.4 S	18.3
Limestone Boulder 38.0' to 40.0'	-40	46	7.0 S	12.0
		42	8.25 S	11.7
	-45			

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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, P - Penetrometer

Sh. 2 of 2 Sh.

FUL-2 Continued

Description	Elevation	N	Qu t/s.f.	w (%)
	-45			
		74	10.6 S	16.5
Coarse SAND layer @ 49.0' .2' thick		56	-	14.4
	-50			

Boring terminated @ 50'
Solid stem auger to 8.0'
Casing installed to 8.0'
Rotary wash to 30.0'
Boring backfilled upon completion

REVISIONS		REVISIONS	
NAME	DATE	NAME	DATE

SOIL BORINGS

DATE DRAWN BY CHECKED BY

BRIDGE FOUNDATION BORING LOG

Sh. 2 of 2 Sh.

Boring No. ARM-4 (cont.)

Description	Elevation	N	Qu t/s.f.	w (%)
TOP OF BEDROCK	-96.7	100/3	4.5 P	12
RUN #1 98.5 to 102.3	-98.5			
DOLOMITE: light and dark gray; fine grained; broken				
	-102.3	102		

BORING TERMINATED @102.3'
Solid Stem Auger to 16'
Casing installed to 25'
Rotary Wash to 102.3'
Boring backfilled upon completion.

Illinois Department of Transportation

Sh. 1 of 1 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Webster Date 05-16-86
ROUTE FAI-90/94 016-0131 Bored By Engineers International, Inc. Job Number 1122-02; TT
SEC. I-94 to I-290 STA. East end of South Pier through Concrete Checked By DJA
COUNTY Cook
Boring No. VEB-1
Station
Offset
Surface Water El
Groundwater El at Completion
After ___ Hours

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
4" Concrete over SAND & GRAVEL FILL: gray; loose (A-1-a to A-2)		6	-	18.2
No return (pushed stone)	-5	6	-	-
	5.5			
SILTY CLAY LOAM: trace to little gravel; brn.; very stiff (A-6)		8	2.05 S	17.3
	8.5			
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; soft (A-6 to A-7-6)	-10	5	.31 B	21.8
Sample disturbed		8	.25 B	24.9
	-15	5	1.04 B	13.9
SANDY LOAM TO SAND: trace to little gravel; brown; dense (A-3 to A-4)		26	1.0 B	24.2
	-20	48	4.0	11.6
		75	-	15.2
		84	-	17.6
	-25	68	-	15.6
		48	8.2 P	16.3
SILTY CLAY LOAM: trace gravel; dark gray; hard (A-6)	-30	102	-	13.4
	31.5			
SAND: trace gravel; brown-gray; extremely dense (A-3)		100/2"	-	-
	33.5			
LIMESTONE BEDROCK	-35			
	35.5			

Boring Terminated @ 35.5'
Solid Stem Auger to 10.0'
Casing Installed to 10.0'
Rotary Wash to 35.5'
Boring backfilled upon completion.

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

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* 0505Z-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0505-450, 0605-402HB, 0606-403HB & 07071404HB, 438R-2

Illinois Department of Transportation

Sh. 1 of 1 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Webster Date 05-15-86
ROUTE FAI-90/94 016-0131 Bored By Engineers International, Inc. Job Number 1122-02; TT
SEC. I-94 to I-290 STA. West end of north pier through Concrete Checked By DJA
COUNTY Cook
Boring No. VEB-2
Station
Offset
Surface Water El
Groundwater El at Completion
After ___ Hours

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
4" Concrete over SAND & GRAVEL FILL (A-1-a to A-2)	1.5			
SILTY CLAY LOAM: trace gravel; brown; stiff to very stiff (A-6)		10	-	18.5
Sample disturbed	-5	9	2.5 P	22.6
		14	2.75 B	23.9
	-10	10	.94 B	19.3
		13	1.25 B	21.3
	13			
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; soft (A-6 to A-7-6)	-15	6	-	26.0
		4	.23 B	23.3
	-20	6	.5 B	24.4
		7	.93 B	24.3
		25	-	13.1
	23			
SANDY LOAM TO SAND: trace gravel; dark gray; medium dense to dense; hard (A-3 to A-4)	-25	80	3.14 S	11.7
		38	3.15	17.1
	28			
SILTY CLAY LOAM: trace gravel; dark gray; hard; moist (A-6)	-30	118/8"	-	15.0
	32.2			

Boring terminated @ 32.2'
Rotary Wash to 32.2'
Casing installed to 10.0'
Boring backfilled upon completion.

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1K		426	579

Illinois Department of Transportation

Sh. 1 of 2 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Webster Date 05-20-86
ROUTE FAI-90/94 016-0131 Bored By Engineers International, Inc. Job Number 1122-02; TT
SEC. I-94 to I-290 STA. East end of North Abutment on shoulder through embankment Checked By DJA
COUNTY Cook
Boring No. VEB-3
Station
Offset
Surface Water El
Groundwater El at Completion
After ___ Hours

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
3" ASPHALT SURFACE				
SAND & GRAVEL FILL: gray; loose (A-1-a to A-2)		6	-	3.0
	4.5			
SANDY LOAM FILL: brown; loose (A-4)	-5	4	.3 B	20.5
Sample disturbed; H_2O at 8.5'		3	-	28.3
	9			
SANDY CLAY LOAM FILL: trace gravel; dark gray & brown; stiff (A-4 to A-6)	-10	16	4.0 P	16.3 / 18.7
		12	1.8 B	18.5
	-15	16	1.5 P	13.4
Possible top soil (21.0 to 22.3')		20	1.0 P	18.4
Sample disturbed	-20	11	2.5 B	17.9
	22.3	4	-	59.3
SILTY CLAY LOAM: trace gravel; gray & brown; stiff (A-6)	-25	14	2.1 B	15.4
		10	1.7 B	23.2
	28.5			
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; soft (A-6 to A-7-6)	-30	9	1.1 B	25.8
		3	-	37.2
	-35	4	.9 B	25.7
		48	3.8 S	15.4
	38.5			
SANDY LOAM TO SAND: trace to little gravel; dark gray; very dense (A-3 to A-4)	-40	33	-	21.4
	42	-	6.7 B	13.3
	-45	54	5.0 S	17.3

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

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Sh. 2 of 2 Sh.

VEB-3 Continued

Description	Elevation	N	Qu t/s.f.	w (%)
SILTY CLAY LOAM: trace gravel; dark gray; very hard (A-6)	-45	60	8.7 B	13.6
	-50	49	7.0 B	12.5
		100/4"	5.6 S	12.2
	54	100/4"	-	13.2
LIMESTONE BEDROCK	-55			

Boring terminated @ 55.0'
Rotary Wash to 55.0'
Casing installed to 20.0'
Boring backfilled upon completion

Illinois Department of Transportation

Sh. 1 of 2 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Webster Date 06-17-86
ROUTE FAI-90/94 016-0131 Bored By Engineers International, Inc. Job Number 1122-02; TT
SEC. I-94 to I-290 STA. West end of south abutment on shoulder through embankment Checked By BJA
COUNTY Cook
Boring No. VEB-4
Station
Offset
Surface Water El
Groundwater El at Completion
After ___ Hours

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
2" Asphalt over GRAVEL & SAND FILL: gray; medium dense (A-1-a to A-2)		12	-	5.3
	3.6			
SANDY CLAY LOAM FILL: some gravel; brown; stiff (A-4); Poor Return	-5	4	-	11.4
Sample disturbed		4	1.0	11.7
Some glass & brick fragments; Sample disturbed	-10	13	1.25 P	16.7
Some wood pieces & cinders		21	2.25 B	15.6
	-15	20	2.13 S	20.5
Sample disturbed; Organic order		13	1.5 P	17.1
	18			
SILTY CLAY LOAM: trace gravel; gray & brown mottled; very stiff (A-6)	-20	20	3.30 S	17.0
		16	2.17 S	19.2
	-25	18	3.06 S	18.8
	27.5	12	1.78 B	21.1
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; soft (A-6 to A-7-6)	-30	11	.76 B	24.2
		5	.19 B	15.7
	-35	7	.43 B	24.7
		36	.93 B	23.7
	38			
SANDY LOAM TO SAND: gray; dense (A-3 to A-4); Sample disturbed	-40	42	-	14.6
Interlayered SILT & SILTY LOAM from 43.5' to 48.0'		28	-	23.7
	-45	79	5.4 S	12.7

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

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Sh. 2 of 2 Sh.

VEB-4 Continued

Description	Elevation	N	Qu t/s.f.	w (%)
	-45			
		38	6.39 S	10.5
	48			
SILTY CLAY LOAM: trace gravel; dark gray; hard (A-6)	-50	43	6.46 B	11.6
	52	100/10"	4.89 S	10.7
Top of Bedrock	53.5			
WEATHERED LIMESTONE BEDROCK		100/3"	-	8.5
	-55			
	56			

Boring terminated @ 56.0'
Solid stem auger to 10.0'
Casing installed to 10.0'
Rotary wash to 56.0'
Boring backfilled upon completion

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh. 1 of 2 Sh.

PROJECT P-91-510-79 BRIDGE I-90/94 over Damen Ave. Date 7 May 1986
ROUTE FAI-90/94 016-0130 Bored By Engineers International, Inc. Job Number 1122-02; TT
SEC. I-94 to I-290 STA. East end of north abutment, on shoulder, through embankment Checked By DJA
COUNTY Cook
Boring No. DAM-1
Station
Offset
Surface Water El —
Groundwater El at Completion —
After — Hours —

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	0			
2" Asphalt over SAND & GRAVEL FILL: brown; medium dense (A-2)		10	-	6
	-4.6			
SANDY CLAY LOAM FILL: trace gravel; brown; stiff to very stiff (A-2-4)	-5	9	-	19
		11	1.7 S	18
	-10	40	2.9 S	18
Grades to SAND LOAM from 11.2 to 13'		16	-	-
	-15	20	3.9 S	15
	-15.5			
SAND & GRAVEL FILL: trace organic material; black & brown; medium dense (A-2)		26	-	19
	-19.2			
TOPSOIL: black; very stiff; moist	-19.6 / -20	26	2.0 P	34
Sample disturbed		11	2.3 P	23
SILTY CLAY LOAM: trace sand & gravel; brown; stiff (A-6)	-25	8	1.6 B	20
	-26.20			
SANDY TO SILTY CLAY LOAM: gray; soft (A-6)		5	0.3 B	17
	-30	2	0.3 B	29
		5	0.3 B	25
	-35	8	0.4 B	20
	-35.5			
SILTY CLAY LOAM: dark gray; trace sand and gravel; very stiff (A-6)		39	3.7 S	13
	-38			
SILT LOAM: some clay and sand; gray; hard (A-4 to A-6)	-40	61	8.3 S	14
	-41			
TOP OF BEDROCK; DOLOMITE: Smooth drilling from 41.0 to 43.6'		100/3"	-	-
	-43.6			
	-45			

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

BD 137 (Rev. 4-78)

REVISIONS NAME	DATE	REVISIONS NAME	DATE

SOIL BORINGS

DATE DRAWN BY CHECKED BY

* 05052-2B, 3-IH, 6-HP, 400HB, 401HB, 4511, 0506-450, 0505-402HB, 0606-403HB & 0707I404HB, 439R-2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	16		626	390

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-510-79 BRIDGE I-90/94 over Armitage Date 06 May 1986

ROUTE FAI - 90/94 016-0132 Bored By Engineers International, INC Job Number 1122-02 : FT/JZ

SEC. I-94 to I-290 STA West end of south abutment, on shoulder; through embankment Checked By BJA

COUNTY Cook

Boring No. ARH-1 Station ___ Offset ___

Surface Water El. –
Groundwater El at Completion –
After – Hours –

Description	Elevation	N	Qu t/s.f.	w %
Ground Surface	0			
ASPHALT SHOULDER				
SAND & GRAVEL FILL: brown; loose (A-2)	-3	6	-	10
SAND LOAM FILL: trace gravel and clay; brown; loose to medium dense (A-2-4)	-5	4	-	15
Grades with trace organics		10	-	20
	-10	6	-	23
		11	-	21
	-15	10	-	20
		9	-	19
	-20 / -20.5	7	-	19
SAND LOAM FILL: Some gravel; dk. gray to black; med. dense; moist (A-2-4)		13	-	22
BRICK FILL. Water Loss @23'. Installed 4"Ø casing to 25'	-25	20	-	29
SILTY LOAM: trace gravel and roots; mottled brown & gray; very stiff; moist (A-4)	-26.2	18	3.5 S	23
SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft; moist (A-6)	-28 / -30	6	1.0 B	23
		4	0.6 B	26
	-35	6	0.4 B	19
		-	-	-
	-40	6	0.5 B	25
SILTY CLAY LOAM: trace sand & gravel; grey; very stiff to hard; moist (A-6)	-42	-	-	-
	-45	23	3.9 B	14

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BD 137 (Rev. 4-78)

BRIDGE FOUNDATION BORING LOG

Sh. 2 of 2 Sh.

Boring No. ARH-1 (cont.)

Description	Elevation	N	Qu t/s.f.	w %
SILTY CLAY LOAM: trace sand & gravel; very stiff to hard; gray; moist (A-6)	-45	23	3.9	14
		23	4.3 S	13
	-50	20	4.7 S	17
		30	4.5 P	17
	-55	26	4.8 S	15
Grades very silty		28	4.7 B	17
	-60	27	2.5 B	18
	-62.5	23	2.0 B	20

Boring Terminated @62.5'. Rotary Wash to 62.5'. Casing installed to 25'. Boring backfilled upon completion.

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-510-79 BRIDGE I-90/94 over Armitage Date 06 May 1986

ROUTE FAI - 90/94 016-0132 Bored By Engineers International, INC Job Number 1122-02 ; JZ

SEC. I-94 to I-290 STA West end of north pier Checked By BJA

COUNTY Cook

Boring No. ARH-2 Station ___ Offset ___

Surface Water El ___
Groundwater El at Completion ___
After ___ Hours ___

Description	Elevation	N	Qu t/s.f.	w %
Ground Surface	0			
SAND & GRAVEL FILL: trace silt and brick fragments; brown; dense (A-2-4)		34	-	12
SAND LOAM FILL: some gravel; brown; medium dense (A-2-4)	-3 / -5	14	-	30
SILTY CLAY LOAM: trace sand & gravel; brown & gray; hard to very stiff; moist (A-6)	-5.5	10	5.0 S	17
	-10	15	2.6 S	19
		13	2.1 B	19
SILTY CLAY to SILTY CLAY LOAM: trace sand & gravel; gray; soft (A-6 to A-7-6)	-13.8 / -15	6	0.5 P	20
		16	0.5 B	21
	-20	8	.23 B	20
		6	.31 B	25
	-25	6	.23 B	26
		5	.25 P	29
No sample recovery (Pushed rock w/spoon)	-30	8	-	-
SILTY CLAY LOAM: trace sand & gravel; stiff; moist (A-6)	-30.6	21	1.3 B	15
	-35	13	1.8 B	16
No sample recovery (Pushed rock w/spoon)		27	-	20
SILTY CLAY LOAM to SILT LOAM: trace of sand & gravel; gray, hard (A-4 to A-6)	-38 / -40	75	3.2 S	12
		25	5.2 S	16
	-45	24	4.9 S	17

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG

Sh 2 of 2 Sh

Boring No. ARH-2 (cont.)

Description	Elevation	N	Qu t/s.f.	w %
	-45			
Sample disturbed		27	3.0 P	19
	-50	30	4.0 B	20
Dense gray SAND layer from 53.0 to 53.8 ft. (A-2)		28	3.1 B	20
	-55	33	4.1 B	21
SILTY CLAY LOAM: trace gravel; dark gray; stiff; moist (A-6)	-55.5	17	1.7 B	20
SILT LOAM: trace clay; gray; very stiff; moist (A-4 to A-6)	-58 / -60	26	3.3 B	16
FINE SAND: trace silt; dark gray; dense; moist (A-2 to A-2-4)	-61.3	34	-	11
SILT LOAM: trace sand; gray; hard; moist (A-4)	-63 / -65	110	6.1 S	17
Grades with sand seams; no Rimac	-67.5	152	4.5+ P	16

Boring terminated at 67.5'. Rotary Wash to 67.5'. Casing installed to 10'. Boring backfilled upon completion.

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-510-79 BRIDGE I-90/94 over Armitage Date 07 May 1986

ROUTE FAI - 90/94 016-0132 Bored By Engineers International, INC Job Number 1122-02 ; JZ

SEC. I-94 to I-290 STA East end of South Pier Checked By BJA

COUNTY Cook

Boring No. ARH-3 Station ___ Offset ___

Surface Water El ___
Groundwater El at Completion ___
After ___ Hours ___

Description	Elevation	N	Qu t/s.f.	w %
Ground Surface	0			
SILT LOAM FILL: trace clay; dark gray, brown, black; medium dense (A-4)		13	3.0 P	31
SILTY CLAY LOAM: trace sand & gravel; brown; very stiff; moist (A-6)	-3 / -5	13	3.6 S	20
		10	3.3 B	22
	-10	10	2.0 B	22
		7	1.6 B	16
SILTY CLAY to SILTY CLAY LOAM: trace sand; gray; soft to medium stiff; moist (A-6 to A-7-6)	-13 / -15	6	0.4 B	24
		6	0.5 P	26
	-20	7	3.5 P	26
		7	0.5 P	25
SILT: trace clay; grey; medium dense; moist (A-4)	-23 / -25	22	1.6 S	13
SILTY CLAY LOAM: trace sand & gravel; very stiff (A-6)	-25.5	16	3.3 B	14
	-30	17	2.6	17
No sample recovery (pushed rock with spoon)		14	-	-
No sample recovery (pushed rock with spoon). No change in drilling effort.	-35	31	-	-
		27	3.4 B	16
	-40	20	2.3 P	19
Medium dense, brownish grey SAND layer from 44.5 to 45.5		16	1.6 B	23
	-45	14	1.4	24

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG

Sh. 2 of 2 Sh.

Boring No. ARH-3 (cont.)

Description	Elevation	N	Qu t/s.f.	w %
Grades w/increasing silt	-45	27	4.9 S	17
CLAY LOAM: trace sand & gravel; gray; medium stiff; wet (A-7-6)	-48 / -50	10	0.7 B	16
		11	0.8 P	24
SILTY LOAM to SILTY CLAY LOAM: gray; hard; moist (A-4 to A-6)	-53.7 / -55	28	4.1 S	21
No sample recovery		34	-	-
	-60	75	7.1 S	11
		52	7.5 S	16
	-65	67	6.4 S	17
	-67.5	56	5.7 S	20

Boring terminated @67.5'. Rotary Wash used full depth. Boring backfilled upon completion.

Illinois Department of Transportation

Bridge Foundation Boring Log

Sh 1 of 3 Sh

PROJECT P-91-510-79 BRIDGE I-90/94 over Armitage Date 09 May 1986

ROUTE FAI - 90/94 016-0132 Bored By Engineers International, INC Job Number 1122-02, JZ

SEC. I-94 to I-290 STA East end of north abutment, off shoulder; through embankment Checked By DJA

COUNTY Cook

Boring No. ARH-4 Station ___ Offset ___

Surface Water El –
Groundwater El at Completion –
After – Hours –

Description	Elevation	N	Qu t/s.f.	w %
Ground Surface	0			
SAND & GRAVEL FILL: trace silt; brown; loose (A-2)		6	-	10
CLAY LOAM FILL: trace sand, gravel, cinders, and bricks; brown; medium stiff; moist (A-7-6)	-3 / -5	5	1.0 P	20
		6	.78 B	21
Grades with trace black organics	-10	6	.58 B	25
		8	1.3 P	35
Hit steel object @15.5. Moved 4.5 to North, along shoulder. Augered down to 16'	-15	8	1.6 S	20
SANDY CLAY FILL: trace bricks, gravel, wood; brown and gray; very stiff (A-6)		17	2.8 P	18
	-20	12	-	24
		7	-	30
SILTY CLAY LOAM: trace gravel; brown, gray; very stiff; moist (A-6 to A-7-6). Casing installed to 25'	-23 / -25	23	3.1 B	21
		18	2.5 P	33
CLAY LOAM: trace sand; grey; soft to medium stiff (A-7-6)	-29.8 / -30	10	2.0 B	24
		6	.31 B	20
	-35	5	.25 P	27
		6	.35 B	26
	-40	8	.23 P	24
		E	.75 P	27
	-45	16	.89 B	15

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG

Sh 2 of 2 Sh

Boring No. ARH-4 (cont.)

Description	Elevation	N	Qu t/s.f.	w %
	-45	15	1.0 P	15
SILTY CLAY LOAM: trace sand & gravel; grey; hard (A-6 to A-7-6)	-48 / -50	24	4.0 B	15
		20	-	18
		26	6.4 B	13
	-55	31	7.2 S	19
		31	5.8 S	20
SILTY CLAY LOAM: trace sand & gravel; gray; very stiff (A-7-6)	-60	27	3.9 B	19
Dense, brownish grey sand from 64.7 to 65.5 ft. (A-2-4)	-65	39	3.9 B	21
		32	3.1 B	19
	-70	27	3.6 B	21
		27	3.1 B	21
Sample very sandy	-75	54	-	33
SILTY LOAM: trace clay and gravel; gray; hard; moist (A-4 to A-6)	-75.5	42	8.8 S	30
		89	6.0 S	13
	-80			
Extremely dense; grey, brown; sand; moist (A-2)		135	-	11
		81	4.7 S	12
	-85	68	9.5 S	16
		58	5.8 B	23
	-90	93	6.8 S	32
Sample disturbed		140	4.5+ P	20
	-95			

REVISIONS NAME	DATE	REVISIONS NAME	DATE

SOIL BORINGS

DATE DRAWN BY CHECKED BY

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 4391R-2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	384

Illinois Department of Transportation — Bridge Foundation Boring Log (Sh. 1 of 2 Sh.)

PROJECT P-91-510-79 BRIDGE I-90/94 over Ashland Ave. Date 09/26/86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02; JZ
SEC. I-94 to I-290 STA. East End of South Abutment; on Pavement, Through Embankment Checked By DJA
COUNTY Cook
Boring No. ASB-5 Station Offset:
Surface Water El. ___ Groundwater El. at Completion ___ After ___ Hours ___

Ground Surface

3" ASPHALT, 1" CONCRETE, 6" GRAVEL base course over

SILTY CLAY LOAM FILL: little to some gravel; cinders, bricks & wood; brown/black mottled; stiff to very stiff (A-6)

Partially disturbed

Grades hard

Obstruction encountered; possible steel plate 18.5' to 18.7'

N	Qu (t/s.f.)	w (%)
16	2.9 B-S	13
11	1.9 B-S	23
15	1.6 B	16
16	1.8 B-S	21
12	-	31
27	4.5 S	15
8	3.0 P	18
-	3.0 P	-
9	1.6 S	17

25.5 SILTY CLAY LOAM: trace gravel; brown; stiff to very stiff (A-6)

32.3 SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; soft to medium stiff (A-6 to A-7-6)

N	Qu (t/s.f.)	w (%)
7	1.8 S	44
9	1.9 B	23
16	3.0 B-S	21
12	2.3 B-S	17
5	0.9 B	19
4	0.3 B	24
4	0.2 B	26
3	0.3 B	26
8	0.4 B	26

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. hammer falling 30"
Qu-Unconfined Compressive Strength - tsf
w - Water Content - percentage of oven dry weight-%
Type failure: B - Bulge Failure; S - Shear Failure; E - Estimated Value; P - Penetrometer

BRIDGE FOUNDATION BORING LOG (Sh. 2 of 2 Sh.)

Boring ASB-5 (continued)

No recovery - pushed rock

No recovery

SILTY CLAY LOAM: trace gravel; dark gray; stiff (A-6)

63.5 SILTY CLAY LOAM: trace sand; gray

N	Qu (t/s.f.)	w (%)
7	0.5 B	24
7	0.5 B	24
29	-	-
22	-	-
20	1.9 B	19
26	2.5 B	20
37	1.7 B	23
31	3.1 B	13
55	4.3 S	14
26	2.9 B	23

Grades with increasing silt percentage

N	Qu (t/s.f.)	w (%)
44	5.9 S	-
105	3.0 S	-
89	2.1 S	-
91	4.8 B	-
157	3.4 B	-

82.5 Boring terminated at 82.5'
Solid stem auger to 10.0'
Casing installed to 15.0'
Rotary wash to 82.5'
Boring backfilled upon completion.

Illinois Department of Transportation — Bridge Foundation Boring Log (Sh. 1 of 2 Sh.)

PROJECT P-91-510-79 BRIDGE I-90/94 over Ashland Ave. Date 05/29/86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02; FT
SEC. I-94 to I-290 STA. East End of Pier [illegible] Checked By DJA
COUNTY Cook
Boring No. ASB-6

Ground Surface

2" ASPHALT over SAND & GRAVEL FILL: (A-1-a to A-2)

SILTY CLAY LOAM: trace gravel; gray/brown; hard to stiff (A-6)

13.5 SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft; (A-6 to A-7-6)

N	Qu (t/s.f.)	w (%)
33	4.2 P	18
8	2.4 B	21
6	0.8 B	13
12	1.7 B	23
19	1.7 B	26
10	0.9 B	18
10	1.1 B	17
4	0.5 B	26
-	-	-

32.5 SILT: trace gravel; gray; dense (A-4)

36.1 SILTY CLAY LOAM: trace gravel; dark gray; very stiff to hard (A-6)

N	Qu (t/s.f.)	w (%)
4	0.6 B	26
-	-	-
5	0.3 B	26
-	-	-
36	2.4 S	18
20	2.9 B	15
23	3.8 B	18
34	4.7 B	12
38	4.6 S	13

BRIDGE FOUNDATION BORING LOG (Sh. 2 of 2 Sh.)

Boring ASB-6 (continued)

46.2 SANDY SILT to SAND: dark gray/brown; extremely dense (A-3 to A-4)

SILTY CLAY: trace gravel; dark gray; hard (A-7-6)

Sample disturbed

Grades with limestone fragments

N	Qu (t/s.f.)	w (%)
135	6.8 S	18
100	3.6 S	19
-	-	-
160	3.5 S	21
115	5.3 S	20
112	2.9 S	25
-	-	-
57	-	17
66	4.4 S	12
85	4.7 S	15

TOP OF BEDROCK - 73.0'

N	Qu (t/s.f.)	w (%)
80	3.2 E	11

73.0

Run #1 74.0'-79.0'
DOLOMITE: light gray & white; fine grained
Broken & weathered 80.0' to 83.0'
Soft clay seams at 74.0' to 74.1', 74.8' to 75.1', 79.1' to 79.2', 80.0' to 83.0'
Fracture seams at 74.0', 74.8' to 75.0', 75.8' to 75.9', 78.2' to 78.6'
RQD 74.0' to 79.0' = 67%
Recovery = 88%

Run #2 79.0' to 83.0'
Grades very broken & weathered with numerous clay seams; core barrel blocked at 83.0'
RQD 79.0' to 83.0' = 0%
Recovery = 79%

Boring terminated at 83.0'
Solid stem auger to 10.0'
Casing installed to 10.0'
Rotary wash to 74.0'
NX core barrel from 74.0' to 83.0'
Boring backfilled upon completion.

Illinois Department of Transportation — Bridge Foundation Boring Log (Sh. 1 of 2 Sh.)

PROJECT P-91-510-79 BRIDGE I-90/94 over Ashland Ave. Date 05/22/86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02; JZ
SEC. I-94 to I-290 STA. East End of Pier No. 14 Checked By DJA
COUNTY Cook
Boring No. ASB-7

Ground Surface

SAND & GRAVEL FILL: some cinders & bricks; black & gray; medium dense (A-1-a to A-2)
No recovery pushed rock

8.5 SILTY CLAY LOAM: trace gravel; brown; very stiff (A-6)
Sample disturbed

13.0 SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; medium to soft (A-6 to A-7-6)
Poor return

N	Qu (t/s.f.)	w (%)
50/6"	-	-
22	-	19
6	-	14
8	2.5 P	23
11	3.3 S	15
7	0.6 S	20
5	<0.3 P	21
5	0.4 S	24
6	0.6 B	24

27.5 SAND: brown/gray; dense (A-3)

29.5 SILTY CLAY LOAM: trace gravel; dark gray; hard (A-6)
Sample disturbed

36.2 SILTY SAND: dark gray/brown; very dense to dense (A-3 to A-4)
Grades too granular for Rimac

N	Qu (t/s.f.)	w (%)
6	0.8 B	24
35	0.8 B	23
37	-	-
25	5.3 B	15
45	7.5 P	21
61	-	-
65	5.6 S	23
63	5.0 S	22
57	-	21

BRIDGE FOUNDATION BORING LOG (Sh. 2 of 2 Sh.)

Boring ASB-7 (continued)

SILTY SAND: dark gray/brown; dense to medium dense (A-3 to A-9)

N	Qu (t/s.f.)	w (%)
44	-	26
40	-	25
39	-	25
28	-	26
22	-	26
25	-	26
28	-	28
20	-	25
25	-	24
37	-	23

TOP OF BEDROCK 71.5'
DOLOMITE: smooth drilling

N	Qu (t/s.f.)	w (%)
50/6"	-	-

Boring terminated at 72.0'
Solid stem auger to 10.0'
Casing installed to 10.0'
Rotary wash to 72.0'
Boring backfilled upon completion.

Illinois Department of Transportation — Bridge Foundation Boring Log (Sh. 1 of 2 Sh.)

PROJECT P-91-510-79 BRIDGE I-90/94 over Ashland Ave. Date 05/30/86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02; JZ
SEC. I-94 to I-290 STA. North of East End of Pier 23; through Cortland Avenue Pavement Checked By DJA
COUNTY Cook
Boring No. ASB-8

Ground Surface

8" ASPHALT PAVEMENT over SAND & GRAVEL FILL: gray; medium dense (A-1-a to A-2)

2.5 SILTY CLAY LOAM: trace gravel; brown; stiff to very stiff (A-6)

7.5 SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft (A-6 to A-7-6)

18.0 SILT to SAND: trace gravel; dark gray/brown; dense to very dense (A-3 to A-4)

N	Qu (t/s.f.)	w (%)
15	-	5
16	3.1 B	24
10	2.8 B	15
10	0.8 B	24
9	0.5 B	26
4	0.3 B	26
9	0.8 B	23
29	-	21
68	-	20

25.5 SILTY CLAY LOAM: trace gravel; dark gray; hard to very hard (A-4 to A-6)

SILTY SAND: trace gravel; gray/brown; dense to very dense (A-3)
No recovery pushed rock

N	Qu (t/s.f.)	w (%)
26	-	18
43	5.6 B	14
38	9.0 S	12
88	-	-
24	-	-
72	-	19
73	-	21
56	-	20
60	-	17

BRIDGE FOUNDATION BORING LOG (Sh. 2 of 2 Sh.)

Boring ASB-8 (continued)

Grades dense to medium dense

N	Qu (t/s.f.)	w (%)
38	-	17
29	-	21
30	-	20
25	-	22
33	-	20
32	-	65

Boring terminated at 60.0'
Solid stem auger to 20.0'
Casing installed at 20.0'
Rotary wash to 60.0'
Boring backfilled upon completion.

REVISIONS NAME	DATE	REVISIONS NAME	DATE

SOIL BORINGS

DATE DRAWN BY CHECKED BY

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0508-450, 0605-402HB, 0606-403HB & 0707I404HB, 439IR-2

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		424	382

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-310-79 BRIDGE I-90/94 over Ashland Ave. Date 5-22-86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02; J2
SEC. I-94 to I-290 STA. West end of Pier # 24 on sidewalk, north of Courtland Avenue Checked By DJA
COUNTY Cook
Boring No. ASB-1 Station ____ Offset: ____
Surface Water El. ____ Groundwater El at Completion ____ After ____ Hours ____

Ground Surface 0

Description	Depth	N	Qu t/s.f.	w (%)
4" CONCRETE SIDEWALK over SANDY CLAY LOAM: little gravel; dark brown and gray; stiff to very stiff (A-4)		6	2.3 P	15
		6	3.0 S	25
SILTY CLAY LOAM: trace gravel; brown; stiff to very stiff (A-6)	5.5	9	3.5 S	20
		16	1.8 S	20
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft. (A-6 to A-7-6)	11.5	12	1.0 B	21
		4	0.2 B	26
		5	0.2 B	26
		7	0.8 B	24
		7	0.9 B	23
		7	0.9 B	22
SILTY LOAM: some sand; dark gray; brown; dense (A-4 to A-6)	26.5	31	4.4 S	18
SILTY SAND: trace gravel; dark gray and brown; v. dense; too granular for Rimac (A-3 to A-4)	28.5	110	4.7 S	17
		74	-	15
		31	-	17
		60	-	12
		50	-	14
		56	-	15
		62	-	12

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG Sh 2 of 2 Sh

Boring ASB-1 (cont)	Depth	N	Qu t/s.f.	w (%)
		86	-	13
		57	-	12
		65	-	15
Grades medium to coarse grained below 53.5'. Some gravel 53.5' to 55.0'		62	-	15
		32	-	9
		48	-	19
Interbedded with fine gravel below 61.0'		52	-	11
		47	-	18
		75	-	10
TOP OF BEDROCK 67.8' — DOLOMITE: light gray; smooth drilling	67.8			
EOB				

Boring Terminated at 70.0'
Solid Stem Auger to 10.0'
Casing installed to 10.0'
Rotary wash to 70.0'
Boring backfilled upon completion

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-310-79 BRIDGE I-90/94 over Ashland Ave. Date 5-21-86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02; J2
SEC. I-94 to I-290 STA. West end of Pier # 17 in Parking Lot Checked By DJA
COUNTY Cook
Boring No. ASB-2 Station ____ Offset: ____
Surface Water El. ____ Groundwater El at Completion ____ After ____ Hours ____

Ground Surface 0

Description	Depth	N	Qu t/s.f.	w (%)
4" ASPHALT over SAND & GRAVEL FILL: black; loose (A-1-a to A-2). No Return @ 2.5' - Bricks				
		8	-	29
Grades with clay pockets		16	-	33
SILTY CLAY LOAM: trace gravel; brown and gray mottled; very stiff (A-6)	8.5	14	3.1 S	19
		14	2.6 B	21
SILTY CLAY TO SILTY CLAY LOAM: trace gravel; gray; stiff to soft (A-6 to A-7-6)	13.0	18	1.5 B	19
		9	1.0 B	24
Medium dense SILT layer 18.6' to 20.5'		13	-	19
		6	1.0 B	23
Disturbed sample		7	0.8 P	23
Interlayered SILTY & SAND: gray; dense to very dense (A-3 to A-4)		30	-	16
SILTY CLAY LOAM: trace gravel; dark gray; hard (A-6)	28.0	34	7.0 B	13
SILT: dark gray; hard (A-4)	31.2	27	4.5 P	18
		134	5.3 S	20
SAND: fine grained; gray/brown; very dense to dense (A-3)		139	-	20
		64	-	21
		83	-	20
		73	-	19

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG Sh. 2 of 2 Sh.

Boring ASB-2 (cont)	Depth	N	Qu t/s.f.	w (%)
		78	-	23
		37	-	20
		24	-	19
	52.5			

Boring Terminated at 52.5'
Solid stem auger to 10.0'
Casing installed to 10.0'
Rotary wash to 52.5'
Boring backfilled upon completion

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-310-79 BRIDGE I-90/94 over Ashland Ave. Date 5-23-86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02; J2
SEC. I-94 to I-290 STA. West end of pier # 9 Checked By DJA
COUNTY Cook
Boring No. ASB-3 Station ____ Offset: ____
Surface Water El. ____ Groundwater El at Completion ____ After ____ Hours ____

Ground Surface 0

Description	Depth	N	Qu t/s.f.	w (%)
4" GRAVEL FILL over SAND & GRAVEL FILL: with brick; glass and cinders; black and dark gray; loose (A-1-a to A-2)		6	-	37
	4.3	6	-	24
SILTY CLAY LOAM: trace gravel; brown; stiff (A-6)		10	1.9 B	23
		12	1.4 B	17
		12	1.4 B	22
SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; soft (A-6 to A-7-6)	12.5	4	0.4 B	22
		2	0.2 B	22
Disturbed sample		4	0.3 P	24
		6	0.4 B	24
Disturbed sample		6	0.3 P	25
	22.5	10	0.8 B	22
SILTY CLAY LOAM: little gravel; dark gray; hard (A-6). Dense sand layer at 29.6' to 30.5'		41	5.9 B	13
		28	4.7 B	13
		26	4.7 B	16
		24	5.3 B	14
		34	5.6 B	16
SILT to SAND: gray; extremely dense to dense (A-3 to A-4)	40.5	113	-	17
		88	-	17

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG Sh 2 of 2 Sh

Boring ASB-3 (cont)	Depth	N	Qu t/s.f.	w (%)
SILT to SAND: gray; v. dense (A-3 to A-4)		47	-	20
		118	-	18
		107	-	21
		73	-	21
		36	-	23
		73	-	21
		33	-	22
		29	-	24
SILTY CLAY: trace gravel; dark gray; hard (A-7-6). Boulder 67.8 to 68.3'	66.6	25	5.0 B	22
		83/8"	6.0 S	17
TOP OF BEDROCK 69.7'	69.7			
DOLOMITE: smooth drilling	71.0			

Boring Terminated at 71.0'
Solid stem auger to 10.0'
Casing installed to 10.0'
Rotary wash to 71.0'
Boring backfilled upon completion.

Illinois Department of Transportation — Bridge Foundation Boring Log

Sh 1 of 2 Sh

PROJECT P-91-310-79 BRIDGE I-90/94 over Ashland Ave. Date 05/29/86
ROUTE FAI-90/94 016-0133 Bored By Engineers International, Inc. Job Number 1122-02; J2
SEC. I-94 to I-290 STA. West end of Pier #2 Checked By DJA
COUNTY Cook
Boring No. ASB-4 Station ____ Offset: ____
Surface Water El. ____ Groundwater El at Completion ____ After ____ Hours ____

Ground Surface 0

Description	Depth	N	Qu t/s.f.	w (%)
SANDY CLAY LOAM FILL: some gravel, bricks, cinders; brown/black mottled; hard to very stiff (A-6). Sample disturbed		27	4.5 P	15
Sample disturbed		9	3.5 P	18
Sample disturbed		21	2.0 P	30
SILTY CLAY LOAM: trace gravel; brown; very stiff (A-4)	8.0	14	2.3 P	23
		24	2.7 B	22
SILTY CLAY to SILTY CLAY LOAM: trace gravel; gray; medium stiff to soft (A-6 to A-7-6)	13.0	5	0.3 B	28
		4	0.3 B	33
		4	0.3 B	20
Sample disturbed		5	0.3 P	25
		5	0.3 B	18
		6	0.6 B	25
		6	0.5 B	24
		5	0.3 B	25
SAND to SILT: gray; medium dense; wet (A-3 to A-4)	33.0			
SILTY CLAY LOAM: little gravel; gray; very stiff to hard (A-6)	34.0	23	0.8 P	59
		21	3.9 B	14
		26	3.1 B	17
Sample disturbed		36	4.5 P	11
		43	8.3 S	10

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 lb. 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; P - Penetrometer

BRIDGE FOUNDATION BORING LOG Sh 2 of 2 Sh

Boring ASB-4 (continued)	Depth	N	Qu t/s.f.	w (%)
		42	4.6 B	16
SANDY SILT to SAND: trace gravel; gray; very dense (A-3 to A-4)	48.0	70	5.0 S	18
		73	4.1 S	19
Too granular for Rimac		90	-	17
		73	7.5	10
Trace clay below 55.5'		50	7.5 S	9
SILTY CLAY LOAM: little to some gravel; gray; hard (A-6). Disturbed sample	61.0	67	-	12
		70	6.3 S	14
TOP OF BEDROCK 65.5'	65.5			
DOLOMITE: smooth drilling	66.0			

Boring terminated at 66.0'
Solid stem auger to 10.0'
Casing installed to 10.0'
Rotary wash to 66.0'
Boring backfilled upon completion.

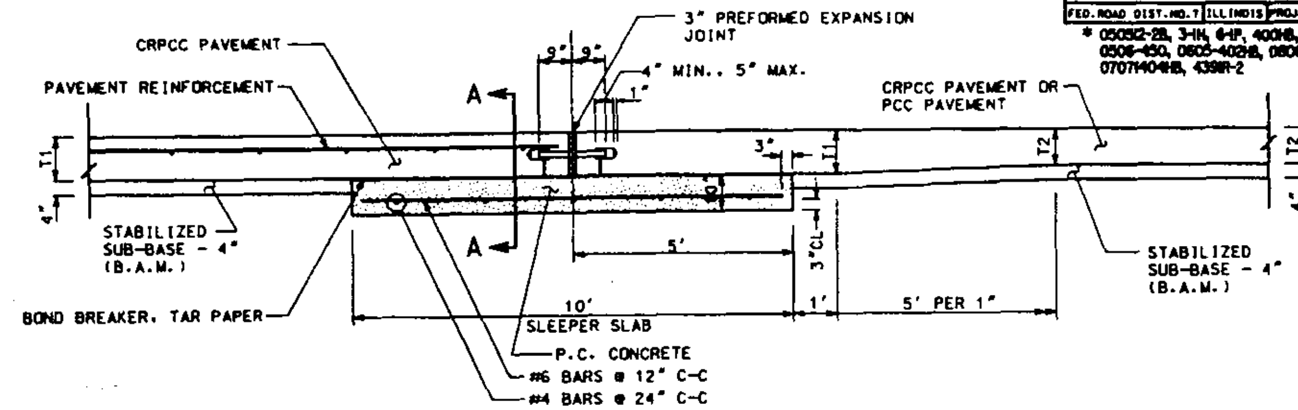
REVISIONS NAME	DATE	REVISIONS NAME	DATE

SOIL BORINGS

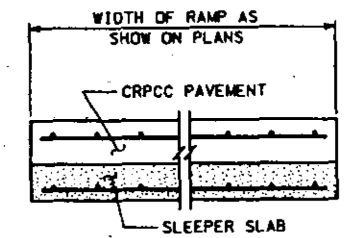
DATE ____ DRAWN BY ____ CHECKED BY ____

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-90/94	*	COOK	426	407
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

* 0505I2-2B, 3-HH, 6-HP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 439R-2



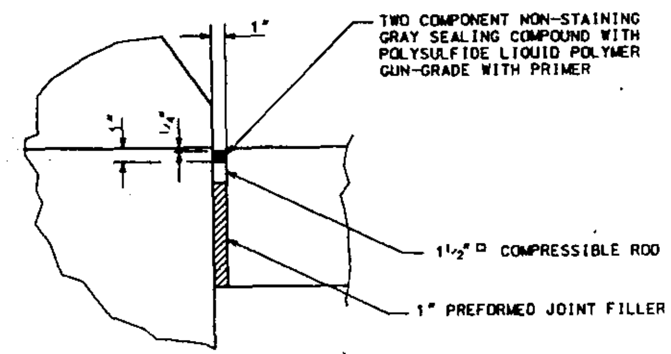
SLEEPER SLAB DETAIL AT RAMP TERMINALS



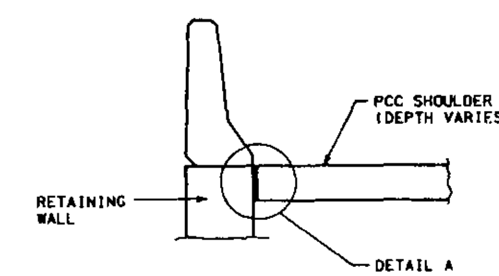
SECTION A-A

NOTES:

1. THE SLEEPER SLAB SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR "SLEEPER SLAB" WHICH PRICE SHALL INCLUDE FURNISHING AND PLACING PC CONCRETE, REINFORCEMENT, BOND BREAKER, DOWEL BARS, AND EXPANSION MATERIAL AS SHOWN.
2. ALL REINFORCEMENT SHALL BE EPOXY COATED AND SHALL BE IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 512 OF THE STANDARD SPECIFICATIONS.
3. DOWEL BARS SHALL BE EPOXY COATED OR PLASTIC COATED AND SHALL BE IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 408 OF THE STANDARD SPECIFICATIONS.
4. THE THICKENED EDGE OF ADJOINING PAVEMENT SHALL BE INCIDENTAL TO CRPCC PAVEMENT OR PCC PAVEMENT OF THE THICKNESS SPECIFIED.



DETAIL A



SHOULDER JOINT AT RETAINING WALL DETAIL

NOTE:
THIS WORK SHALL BE CONSIDERED INCIDENTAL TO PCC SHOULDERS OF THE DEPTH SPECIFIED.

REVISIONS	
NAME	DATE
CAK/RLP	03-25-91
CAK/RLP	08-30-91

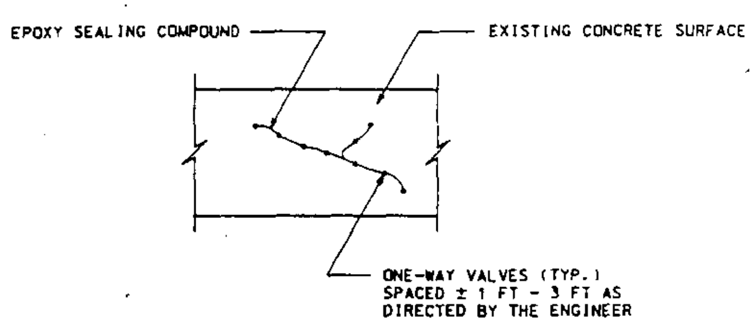
ILLINOIS DEPARTMENT OF TRANSPORTATION
EXPRESSWAY UNIT DETAIL

SLEEPER SLAB DETAIL AND SHOULDER JOINT AT RETAINING WALL DETAIL

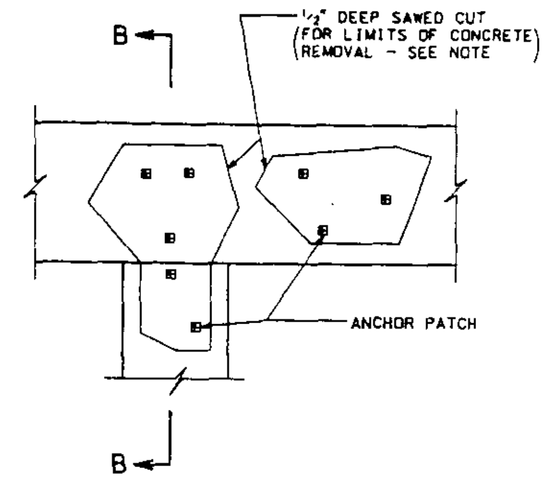
SCALE: NONE — DRAWN BY CAK/CAD
DATE 03/91 — CHECKED BY RLP

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-90/94	*	COOK	466	410
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

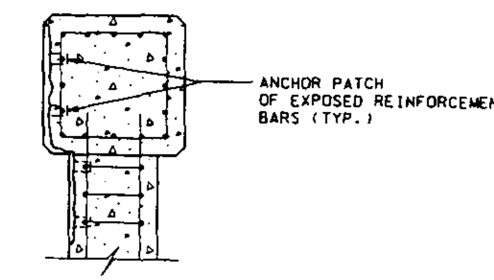
* 05052-2B, 3-HH, 6-HP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707-404HB, 439IR-2



EPOXY CRACK SEALING

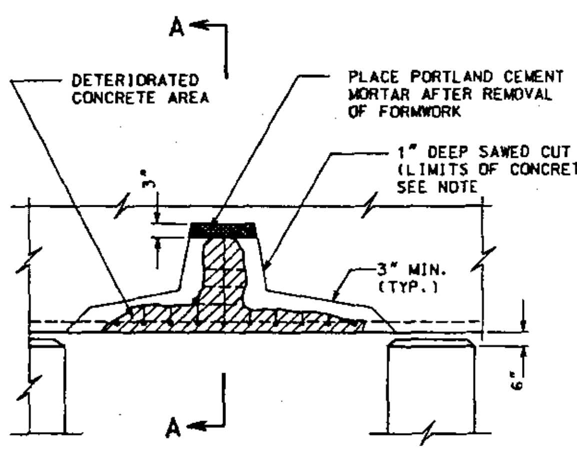


ELEVATION

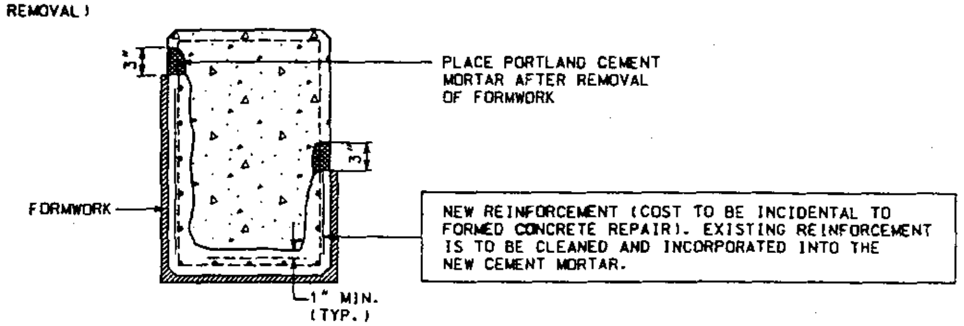


SECTION B-B

EPOXY MORTAR REPAIR (DEPTH LESS THAN 1.5")

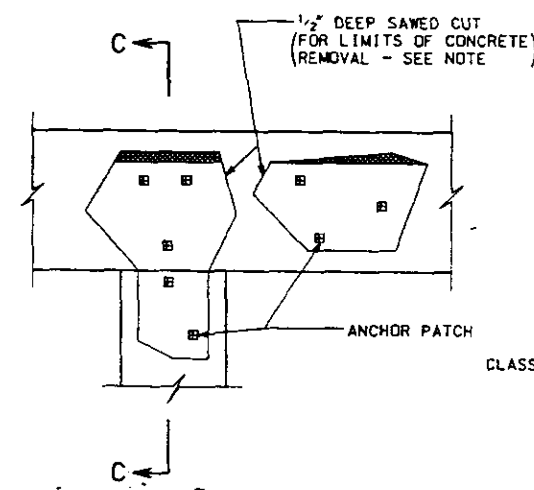


LIMITS OF CONCRETE REMOVAL

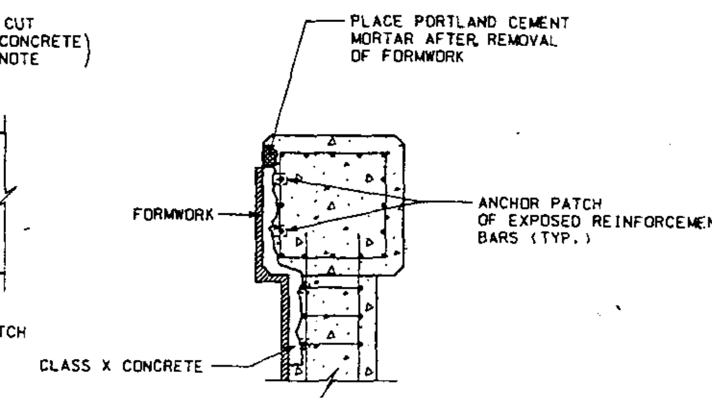


SECTION A-A

FORMED CONCRETE REPAIR (DEPTH GREATER THAN 5")



ELEVATION



SECTION C-C

FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")

NOTE:
LIMITS OF DETERIORATED CONCRETE TO
DETERMINED AS FOLLOWS:
AREAS AROUND EXISTING SPALLS TO BE TAPPED
WITH HAMMER FOR DULL HOLLOW SOUND TO
INDICATE THE EXTENT OF UNSOUND CONCRETE.

REVISIONS	
NAME	DATE
CAK/RLP	2-21-90
CAK/ARZ	8-9-90

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1 STANDARD

CONCRETE STRUCTURE
REPAIR DETAILS

SCALE: NONE DRAWN BY CAD/CA
DATE 1/90 CHECKED BY JSN

AMERICAN ENGINEERING COMPANY CONSULTING ENGINEERS ROLLING MEADOWS, ILLINOIS

COOK 1991-121F I&R copy ~~7-10-92~~ #59

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-94	*	COOK	171	1
F.H.W.A. REG 4	ILLINOIS	FED. AID PROJECT DPI-0137(3)		

*1991-121 F

FOR INDEX OF SHEETS SEE SHEET NO.4

98%
7-24-93

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

P-91-308-86 P-91-311-86
P-91-310-86 P-91-312-86

STATION EQUATIONS:

AREA A

STA. 574+46.85 CL SEB I-90/94 BK=
STA. 400+00 12' LT. BL SEB EDENS AHD=
STA. 600+00 12' LT. BL SEB JFK AHD.
STA. 480+43.79 CL SEB BK=
STA. 480+43.49 CL SEB AHD.

AREA B

STA. 381+41.40 CL SEB BK=
STA. 381+42.10 CL SEB AHD.

AREA C

NONE

AREA D

STA. 250+21.63 CL SEB BK=
STA. 250+21.92 CL SEB AHD.

SCALES

PLAN	1" = 50'
PROFILE HORIZONTAL	1" = 50'
PROFILE VERTICAL	1" = 5'
CROSS SECTIONS	1" = 10' (HORIZ)
CROSS SECTIONS	1" = 5' (VERT)

F.A.I. ROUTE 90/94 (JOHN F. KENNEDY EXPRESSWAY)

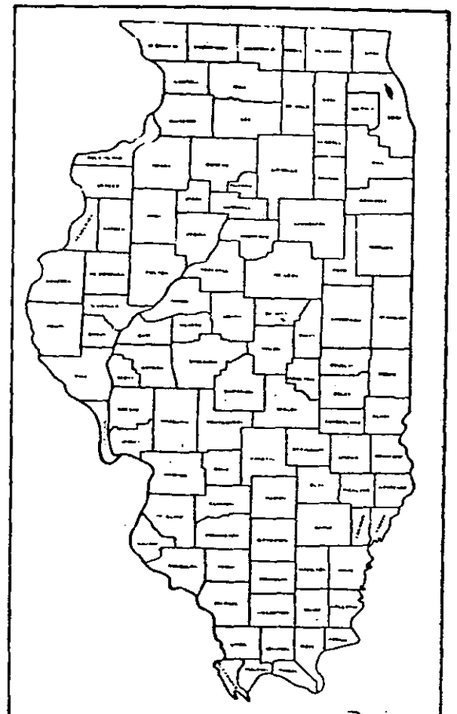
SECTION – 1991-121 F

PROJECT DPI-0137(3)

COOK COUNTY

C – 91-257-91

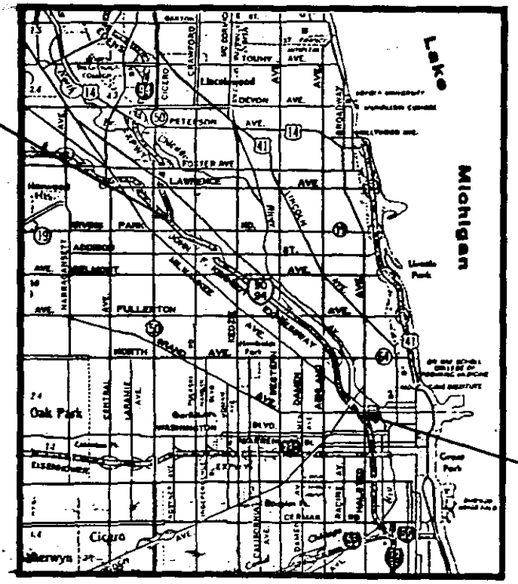
BEAM AND BEARING FABRICATION – SOUTHEAST BOUND



LOCATION OF SECTION INDICATED THUS:

PROJECT AND IMPROVEMENT ENDS STATION 434+31.07 ℄ S.E.B. EDENS

FOR STRUCTURE DESCRIPTIONS, DIMENSIONS, AND LENGTHS PER AREA SEE SHEET NO. 2 & 3

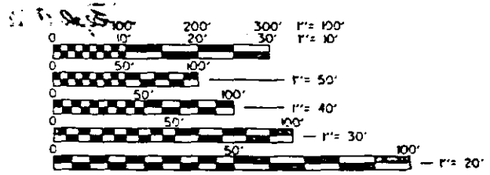


PROJECT AND IMPROVEMENT BEGINS STATION 202+81.62 ℄ S.E.B. F.A.I. - 90/94

LOCATION MAP
NOT TO SCALE

GROSS LENGTH = 40595.75 FT (7.689 MILES)
NET LENGTH = 6179.08 FT (1.170 MILES)

MUNICIPALITY INVOLVEMENT – CITY OF CHICAGO



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED April 22 1992 — District Engineer
EXAMINED _____ 19__ — Engineer of Plans and Contracts
PASSED June 12 1992 — Engineer of Bridges
APPROVED June 12 1992 — Director, Division of Highways

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED _____ DATE _____

CONTRACT NO. 82105 1991-121F Cook Sheets 1 Thru 100

0-264

CONSULTANT SERVICES - J. KOB (708) 706 - 4231

TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT
ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER
ASHLAND AVENUE - EL 604.09 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

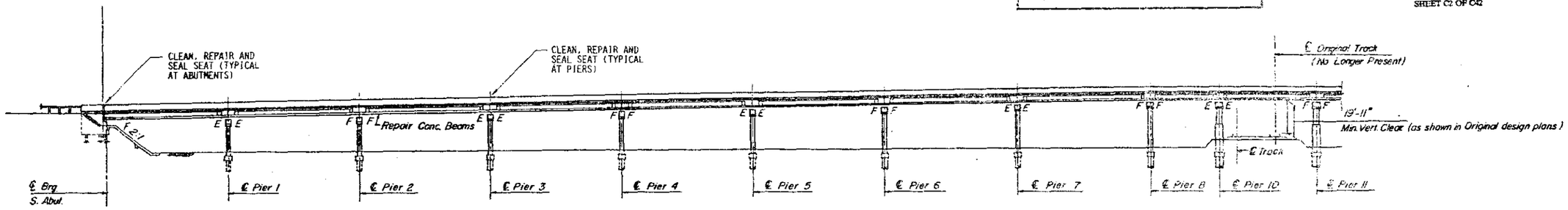
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	171	19
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 OF 4 SHEETS

* 1991-121F

SHEET C2 OF C42

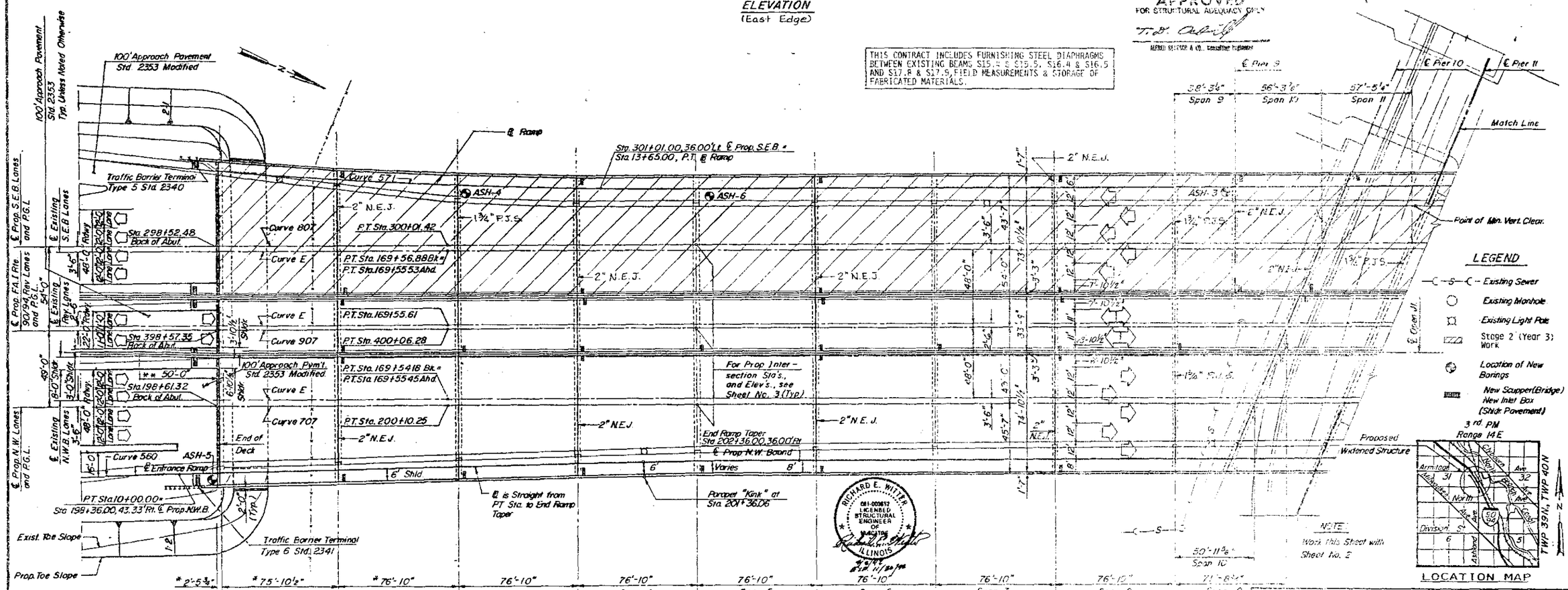
FOR FABRICATION ONLY



ELEVATION
(East Edge)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
T.D. Anderson
HERNI BUTCHER & CO., Consulting Engineers

THIS CONTRACT INCLUDES FURNISHING STEEL DIAPHRAGMS BETWEEN EXISTING BEAMS S15.4 & S15.5, S16.4 & S16.5 AND S17.8 & S17.9, FIELD MEASUREMENTS & STORAGE OF FABRICATED MATERIALS.



PLAN

* Measured at Rt. Angles to ℄ Substructure
** 50'-0" - Transition Length for Shoulder Widths (At open Joint between Rev. Lanes and N.W.B. Lanes only)

NOTE: THIS PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 2 (YEAR 3) WORK ONLY.

Note: N.E.J. = Neoprene Expansion Joint
P.J.S. = Preformed Joint Seal

FOR INFORMATION ONLY

STRUCTURE NO. 016-0113

LEGEND

- Existing Sewer
- Existing Manhole
- Existing Light Pole
- Stage 2 (Year 3) Work
- Location of New Borings
- New Scupper (Bridge) New Inlet Box (Shldr. Pavement)

NOTE: Work this Sheet with Sheet No. 2

LOCATION MAP

GENERAL PLAN AND ELEVATION
SHEET 1 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

STANLEY CONSULTANTS

RICHARD E. WITTER 081-003652 LICENSED STRUCTURAL ENGINEER OF ILLINOIS

STATION 409+49
REHABILITATED 199 BY
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC. -IHB-
F.A. PROJ.
LOADING HS20 & ALT.
STR. NO. 016-0133

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NOTE:
CLEAN AND PAINT STEEL IN SPANS 14, 15, 16, 17 & 18. REPAIR CONCRETE BEAMS IN THE REMAINING SPANS.

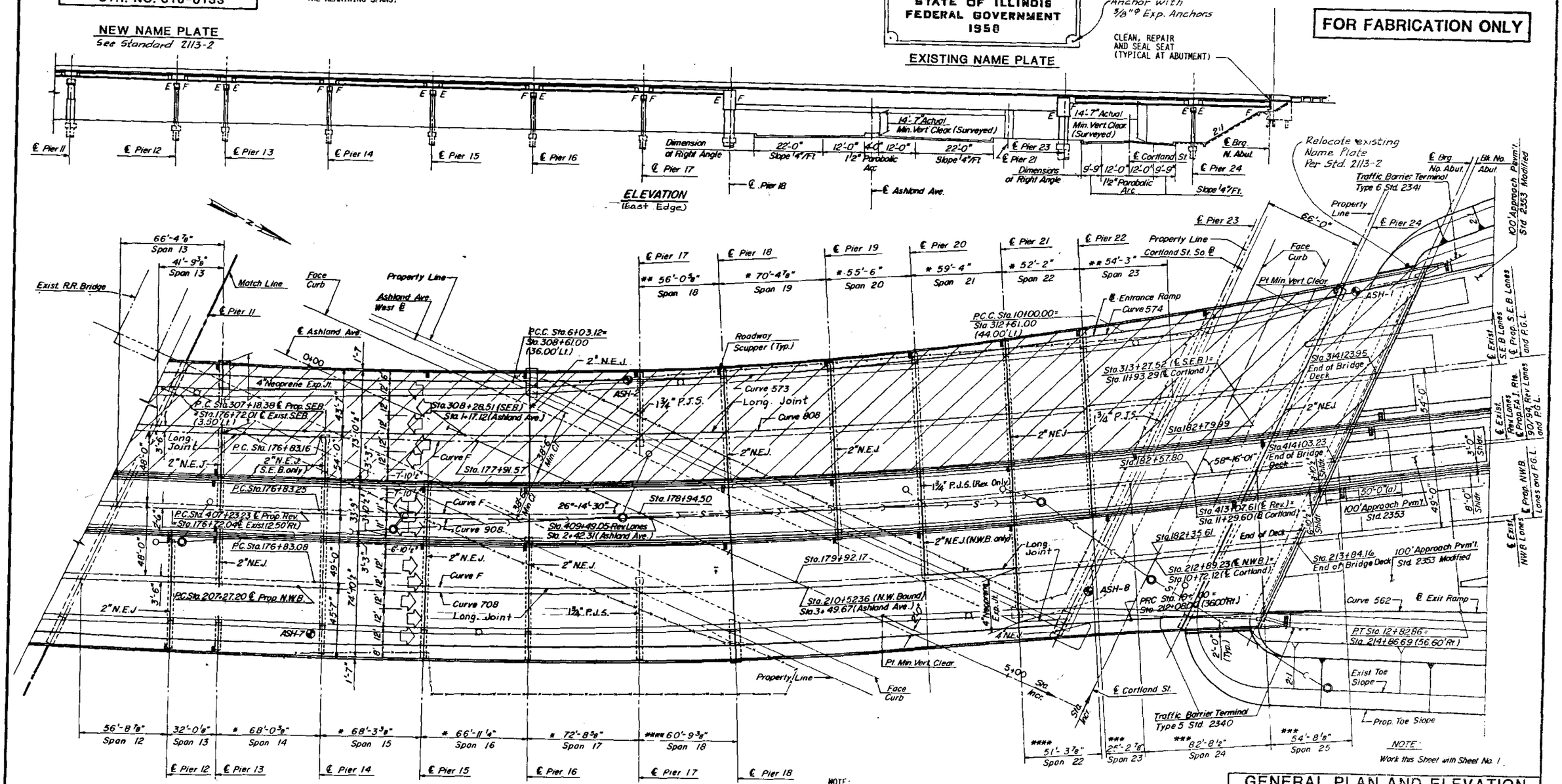
BUILT BY
CITY OF CHICAGO
WITH THE CO-OPERATION OF
COUNTY OF COOK
STATE OF ILLINOIS
FEDERAL GOVERNMENT
1958

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	171	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 4 SHEETS

* 1991-171F SHEET C3 OF C12

FOR FABRICATION ONLY



* Measured at Rt. Angles to ℄ Substructure
** Measured along ℄ S.E. Bound Lanes
*** Measured along ℄ Reversible Lanes
**** Measured along ℄ N.W. Bound Lanes

(a) 50'-0" Transition Length for Shoulder Width (at Open Jt. between Rev. Lanes and N.W.B. Lanes only)

NOTE:
THE PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 2 (YEAR 3) WORK ONLY.

NOTE:
Work this Sheet with Sheet No. 1.

FOR INFORMATION ONLY

STANLEY CONSULTANTS

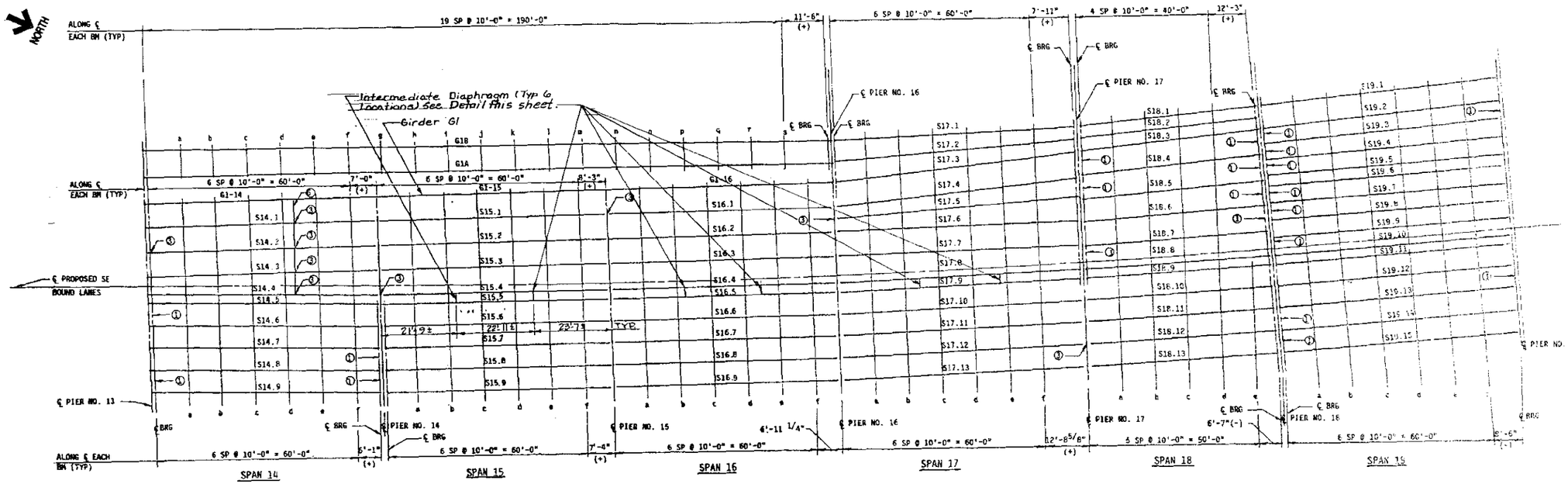
GENERAL PLAN AND ELEVATION
SHEET 2 OF 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		171	21
F. AID A. REG. 4	ILLINOIS FED. AID PROJECT			

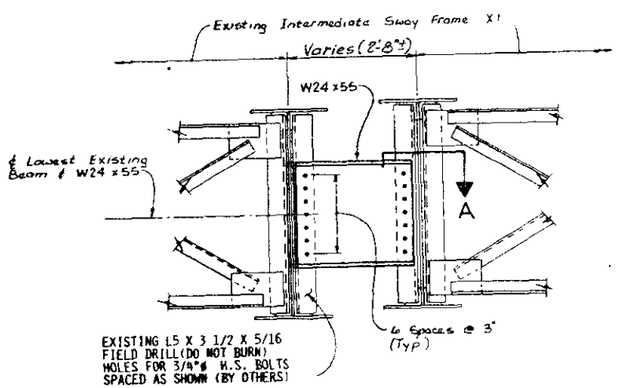
SHEET NO. 3
4 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

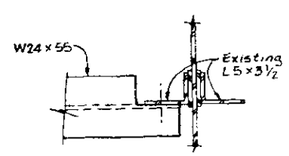
* 1991-121F SHEET C4 OF C42



PLAN



INTERMEDIATE DIAPHRAGM (6 REQ'D)
@ Spans 15, 16 & 17



SECTION A
TYP. T & B EACH SIDE

DESIGN SPECIFICATIONS
AASHTO (1989) WITH 1990 & 1991 INTERIM SPECIFICATIONS

LOADING HS 20-44 AND ALTERNATE MILITARY LOADING
ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

F'C =	3,500 PSI	(CONCRETE)
FY =	60,000 PSI	(REINFORCEMENT)
FY =	36,000 PSI	(PROPOSED STRUCTURAL STEEL)
FS =	18,000 PSI	(EXISTING STRUCTURAL STEEL)

THIS CONTRACT INCLUDES FURNISHING STEEL DIAPHRAGMS BETWEEN EXISTING BEAMS S15.4 & S15.5, S16.4 & S16.5 AND S17.8 & S17.9, FIELD MEASUREMENTS & STORAGE OF FABRICATED MATERIALS.

GENERAL NOTES:

1. ~~ALL STRUCTURAL STEEL SHALL BE AASHTO M 183.~~
2. FASTENERS SHALL BE HIGH STRENGTH BOLTS ~~(AASHTO M 164 TYPE 3).~~ BOLTS 7/8"ø, OPEN HOLES 15/16"ø UNLESS OTHERWISE NOTED.
3. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
4. THE THREE COAT LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL. THE FIRST COAT SHALL BE APPLIED IN THE SHOP. (THE SECOND AND THIRD COATS SHALL BE APPLIED IN THE FIELD BY OTHERS). ALL CONTACT SURFACES OF JOINTS FOR THE DIAPHRAGMS SHALL BE FREE OF PAINT OR LACQUER.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPERSTRUCTURE	TOTAL
* FURNISHING STRUCTURAL STEEL	LUMP SUM	.0004	.0004
FIELD MEASUREMENTS	LUMP SUM	.0004	.0004

* INCLUDES DIAPHRAGM ASSEMBLIES, CALCULATED WEIGHT OF STRUCTURAL STEEL = 840 POUNDS

FOR FABRICATION ONLY

BILL OF MATERIAL, NOTES AND INTERMEDIATE DIAPHRAMS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 406+48

STANLEY CONSULTANTS

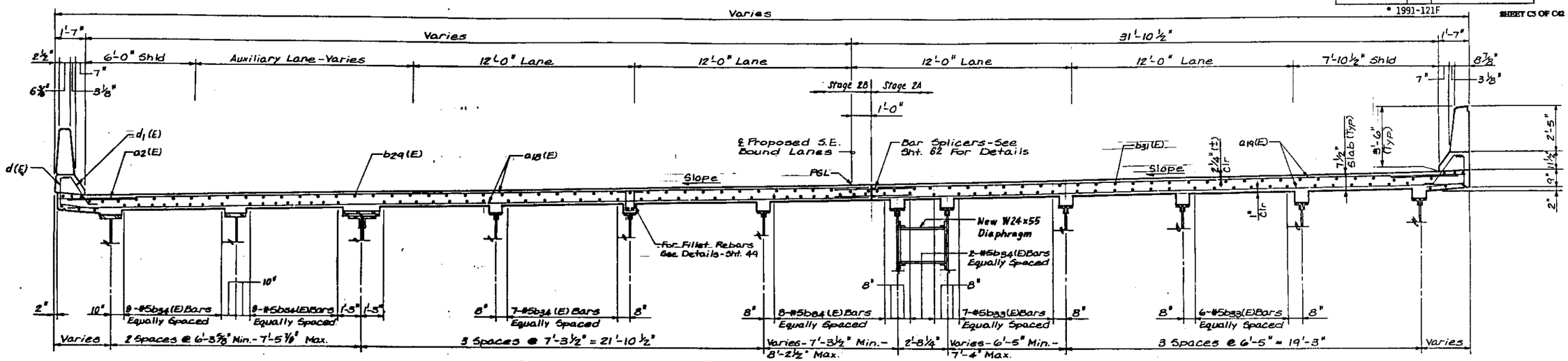
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		171	22
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

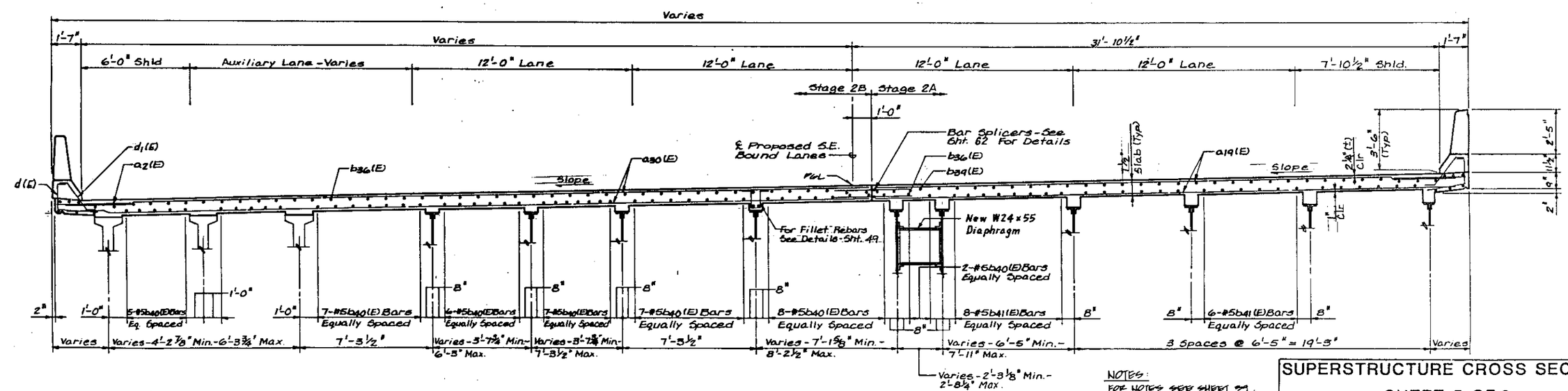
SHEET NO. 4
4 SHEETS

* 1991-121F

SHEET C5 OF C12



CROSS SECTION-SPAN 15 & SPAN 16
(Looking Up Station)



CROSS SECTION-SPAN 17
(Looking Up Station)

NOTES:
FOR NOTES SEE SHEET 54.

FOR INFORMATION ONLY

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTION
SHEET 5 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49