ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*	COOK	443	1
F.H.W.A. REG 4		ILLINOIS	FED. AID PROJECT DPI-0137(13)	

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

016-0133

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

FOR INDEX SEE SHEET 2

SCALES		
	PLAN	1" = 50'
	PROFILE HORIZONTAL	1" = 50'
	PROFILE VERTICAL	1" = 5'
	CROSS SECTIONS	1" = 10' (HORIZ)
	CROSS SECTIONS	1" = 5' (VERT)

DESIGN DESIGNATION

NORTHWEST BOUND LANE 203500 (2000)

TRUNK 67.94 (12" CRPCC - 20)

POSTED SPEED LIMIT = 55 MPH

F.A.I. ROUTE 90/94 (JOHN F. KENNEDY EXPRESSWAY)

AREA "C"

SECTION 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

COOK COUNTY

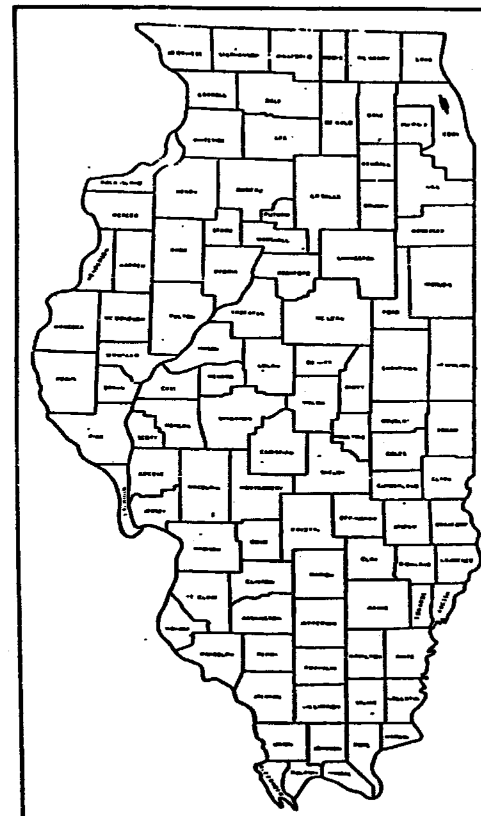
PROJECT: DPI-0137 (13)

C - 91 - 168 - 92

ROADWAY AND BRIDGE DECKS (NORTHWEST BOUND)

NORTH AVENUE TO LOGAN BOULEVARD

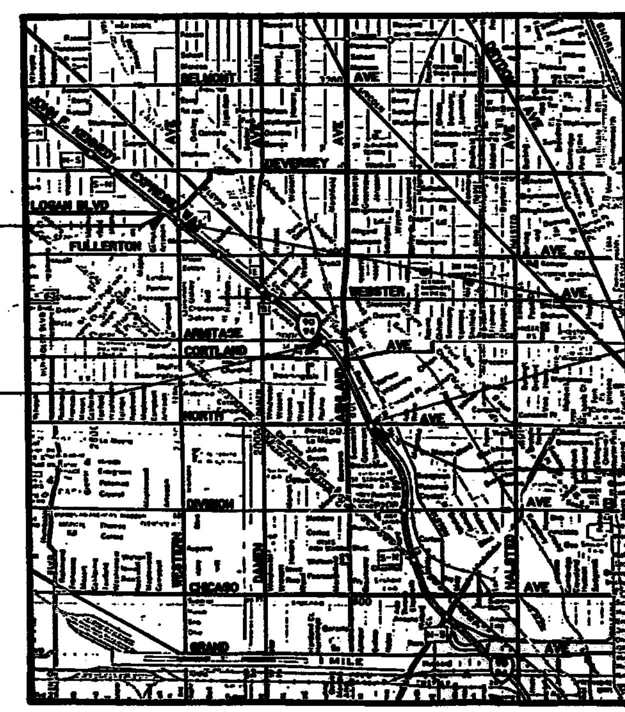
P - 91 - 311 - 86



LOCATION OF SECTION INDICATED THUS:

END PROJECT (AREA C) STATION 290+90.00

STATION EQUATION: STATION 220+20.91 (BK) = STATION 220+20.43 (AH)



LOCATION MAP

SCALE: 1" = ½ MILE

FOR STRUCTURE DESCRIPTIONS, OMISSIONS, AND LENGTHS, SEE SHEET NO. 2

RENOVATION OF NORTHWEST BOUND ROADWAY, REHABILITATION OF EXISTING STRUCTURES AND OTHER PERTINENT WORK

BEGIN PROJECT (AREA C) STATION 192+92.70

GROSS LENGTH = 9797.78 FT (1.856 MILES)
NET LENGTH = 9797.78 FT (1.856 MILES)

NORTHWEST BOUND

BRIDGES

ASHLAND	STA. 198+61.32	TO STA. 213+84.16
ARMITAGE	STA. 220+02.36	TO STA. 222+61.92
WEBSTER	STA. 240+93.53	TO STA. 243+29.73
DAMEN	STA. 246+42.42	TO STA. 428+42.80
FULLERTON	STA. 262+11.79	TO STA. 265+02.76
WESTERN	STA. 280+17.17	TO STA. 282+85.79
VAULTED SLAB	STA. 282+85.79	TO STA. 283+51.00
LOGAN	STA. 283+51.00	TO STA. 287+19.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan 22 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

MUNICIPALITY INVOLVEMENT - CITY OF CHICAGO

1" = 100' (0, 100', 200', 300')
1" = 10' (10', 20', 30')
1" = 50' (0, 50', 100')
1" = 40' (0, 50', 100')
1" = 30' (0, 50', 100')
1" = 20' (0, 50', 100')

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. 82137

Sheets 1 Thru 100 (Set 1 of 5)

EDDY K. NG — ILLINOIS — SEALED FOR SHEET NOS: 166 - 181
EXP. 11/30/14
DATE:

RICHARD E. WITTER — LICENSED STRUCTURAL ENGINEER OF ILLINOIS — SEALED FOR SHEET NOS: 84 - 92, 192 - 302
EXP. 11/30/94
DATE: 6/18/93

ROBERT M. KOSS — REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS — SEALED FOR SHEET NOS: 1 - 61, 63 - 65, 93 - 96, 114 - 130, 148 - 163
EXP. 11-30-94
DATE: 6-21-93

PRINTED UNDER THE AUTHORITY OF THE STATE OF ILLINOIS

CONSULTANT SERVICES - P. SURI (708) 705-4523

INDEX AND STATE STANDARDS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
90/94	*	COOK	443	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* 050542-2B, 3-94, 6-P, 400HB, 403HB, 450, 0506-450, 0605-402HB, 0606-403HB 0707-404HB, 439HR-5

INDEX OF SHEETS

*ADDED 232A. - 232I., 233A., 234A. - 234E., 254A.-254B.

△ *ADDED SHEETS 130A THRU 130F. ADDEL SHEET 338A.

3/24 - 208 TO 263

3/29 286

Profile 109758

STATE STANDARDS

DRAWING NUMBER	DESCRIPTION
1514-9	CATCH BASINS, TYPE A AND TYPE B
1527-9	MANHOLE, TYPE A
1686-4	STANDARD SYMBOLS AND ABBREVIATIONS
2113-2	DETAIL OF NAME PLATE FOR BRIDGE
△ 2122-16	P. C. CONCRETE MEDIANS
2130-14	CONCRETE CURB & GUTTER COMBINATION CURB & GUTTER
2135	DETAILS OF PERMANENT SURVEY MARKERS
2189-16	36 FT. JOINTED P.C.C. PAVEMENT
2213-4	FRAME AND LIDS TYPE 1
2217-3	GRATE, TYPE 8
2225-10	BAR REINFORCEMENT FOR CONTINUOUSLY REINFORCED P.C.C. PAVEMENT
2230-16	STEEL PLATE BEAM GUARDRAIL
2256-10	BREAKAWAY SIGN POSTS
2298-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2299-13	DESIGN OF TRAFFIC CONTROL DEVICES
2300-3	FLAGGER TRAFFIC CONTROL SIGN
△ 2305-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2307-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2314-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2319-5	SIGN PANEL MOUNTING DETAILS
△ 2320-3	SIGN PANEL ERECTION DETAILS
2323-13	PAVEMENT JOINTS
2324-8	BRIDGE APPROACH SHOULDER PAVEMENT
2325-5	GUARD RAIL MOUNTED ON EXISTING CULVERTS
2333-4	CONCRETE BARRIER
2336-4	TRAFFIC BARRIER TERMINAL, TYPE 1 AND 1 A
2337-2	TRAFFIC BARRIER TERMINAL, TYPE 2
2340-4	TRAFFIC BARRIER TERMINAL, TYPE 5
2341-5	TRAFFIC BARRIER TERMINAL, TYPE 6
△ 2350-3	METAL POSTS FOR SIGNS
△ 2363-1	APPLICATIONS OF TYPES A & B METAL POSTS (SIGNS AND MARKERS)
2381	TEMPORARY EROSION CONTROL SYSTEMS
2383-3	TEMPORARY CONCRETE BARRIER
2385	FRAME AND GRATE, TYPE 20
2386	FRAME AND GRATES, TYPE 21
2395	MANHOLE TYPE A, 6 FOOT DIAMETER
2396	TYPICAL PAVEMENT MARKINGS
2409-1	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2419	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2423	FRAME AND GRATES TYPE 23
2424	FRAME AND GRATES, TYPE 24
2427-1	CLASS D PATCHES
△ 2428	TWO LANE JOINTED P.C.C. PAVEMENT
2429-3	PCC SHOULDER DETAILS
TS 2147-7	STANDARD EXTRUDED ALUMINUM SIGN PANELS

STANLEY CONSULTANTS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARDS

NORTHWEST BOUND

ROUTE: FAI-90/94(JFK EXPWY)

SCALE:

SECTION

PROJECT COOK COUNTY

△ Rev. 9-30-93

Rev.

038NBIND.DGN Fri Aug 13 09:59:11 1993

D C B A A B C D

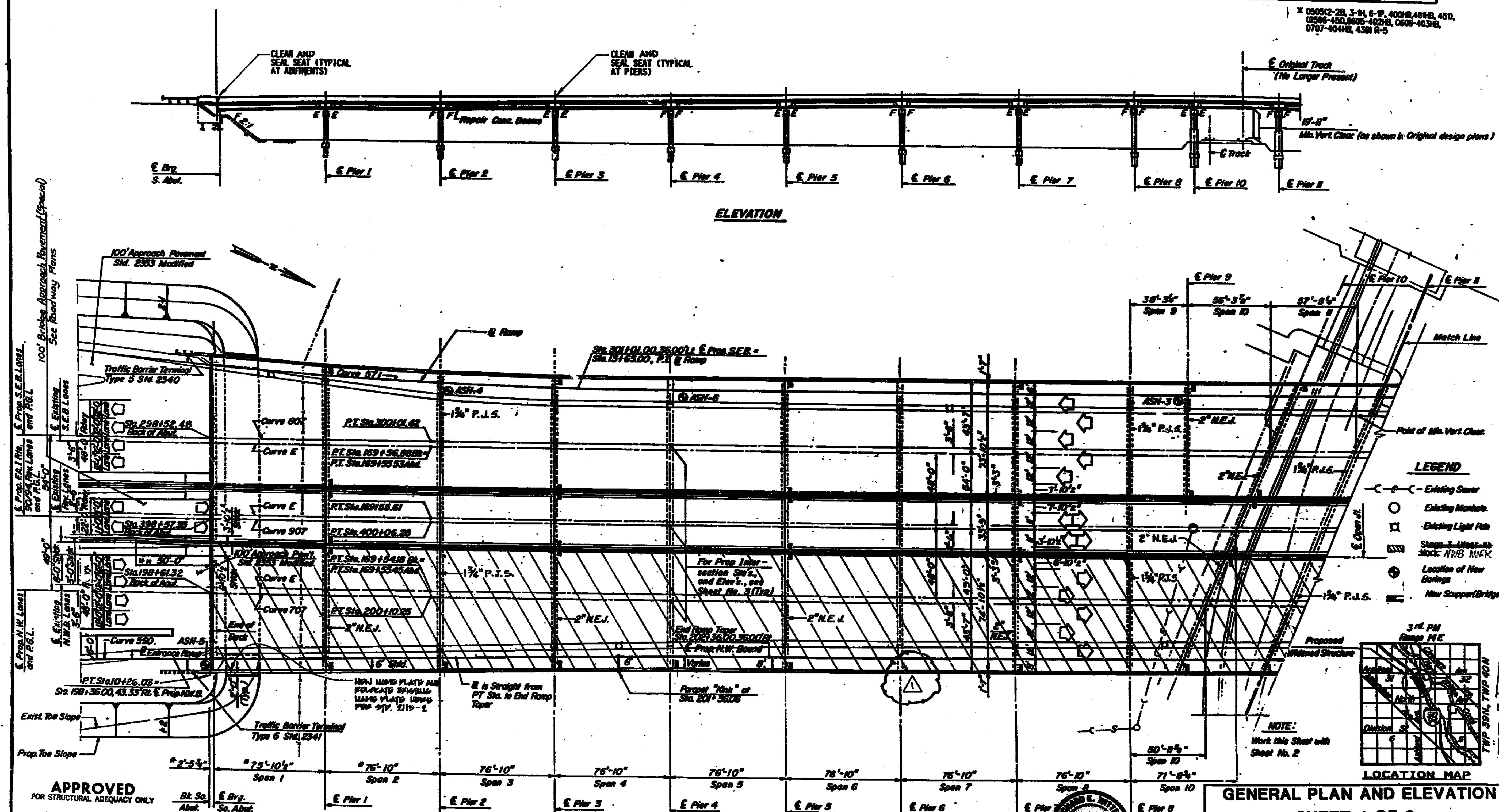
TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER ASHLAND AVENUE - EL.604.09 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	X	COOK	443	192
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 OF 72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 45D, (0506-45D,0605-402HB, 0606-403HB, 0707-404HB, 438) R-5



CLEAN AND SEAL SEAT (TYPICAL AT ABUTMENTS)
CLEAN AND SEAL SEAT (TYPICAL AT PIERS)
℄ Original Track (No Longer Present)
Repair Conc. Beams
15'-11"
Min. Vert. Clear. (as shown in Original design plans)
℄ Track
℄ Brg. S. Abut.
℄ Pier 1
℄ Pier 2
℄ Pier 3
℄ Pier 4
℄ Pier 5
℄ Pier 6
℄ Pier 7
℄ Pier 8
℄ Pier 10
℄ Pier 11
ELEVATION
100' Approach Pavement Std. 2353 Modified
100' Bridge Approach Pavement (Special) See Roadway Plans
℄ Ramp
Sta. 301+01.00 36.00' Lt. ℄ Prop. S.E.R. = Sta. 13+63.00, P.T. ℄ Ramp
Curve 571
Traffic Barrier Terminal Type 5 Std. 2340
Sta. 298+52.48 Back of Abut.
Curve 807
Curve E
P.T. Sta. 300+01.42
P.T. Sta. 169+56.88 Bk.= P.T. Sta. 169+55.53 Ahd.
P.T. Sta. 169+55.61
Curve 907
P.T. Sta. 400+06.28
Sta. 398+57.38 Back of Abut.
Sta. 198+61.32 Back of Abut.
100' Approach Pav't. Std. 2353 Modified
P.T. Sta. 169+54.18 Bk.= P.T. Sta. 169+55.45 Ahd.
P.T. Sta. 200+10.25
Curve 707
Curve 590
ASH-5
ASH-4
ASH-6
ASH-3
1¾" P.J.S.
2" N.E.J.
For Prop. Intersection Sta's., and Elev's., see Sheet No. 3 (Typ.)
End Ramp Taper Sta. 201+36.00 36.00' Rt.
℄ Prop. N.W. Bound
6' Shld.
Varies
Parapet "Kink" at Sta. 201+36.05
℄ is Straight from PT Sta. to End Ramp Taper
P.T. Sta. 10+26.03 = Sta. 198+36.00, 43.33' Rt. ℄ Prop. N.W.B.
Exist. Toe Slope
Prop. Toe Slope
Traffic Barrier Terminal Type 6 Std. 2341
End of Back
℄ Entrance Ramp
℄ Prop. S.E.B. Lanes and P.G.L.
℄ Existing S.E.B. Lanes
℄ Prop. F.A.I. Rte. 90/94 Rev. Lanes and P.G.L.
℄ Existing Rev. Lanes
℄ Prop. N.W. Lanes and P.G.L.
℄ Existing N.W.B. Lanes
℄ Pier 9
38'-3⅝" Span 9
56'-3⅝" Span 10
57'-5¾" Span 11
Match Line
Point of Min. Vert. Clear.
℄ Open Jt.
Proposed Widened Structure
NOTE: Work this Sheet with Sheet No. 2
LEGEND
Existing Sewer
Existing Manhole
Existing Light Pole
Stage 3 (Near Work)
Location of New Borings
New Stopper (Bridge)
*2'-5¾"
*75'-10½" Span 1
*76'-10" Span 2
76'-10" Span 3
76'-10" Span 4
76'-10" Span 5
76'-10" Span 6
76'-10" Span 7
76'-10" Span 8
50'-11⅝" Span 10
71'-8¾" Span 10
Bk. Sq. Abut.
℄ Brg. So. Abut.
PLAN
LOCATION MAP
3rd PM Range 14E
TWP 39N, TWP 40N

* 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 LANES ... WORK ONLY.

Note: N.E.J. = Neoprene Expansion Joint.

P.J.S. = PREFORMED JOINT SEAL

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

ALFRED BENESCH & CO., Consulting Engineers

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

REV. 9-30-93

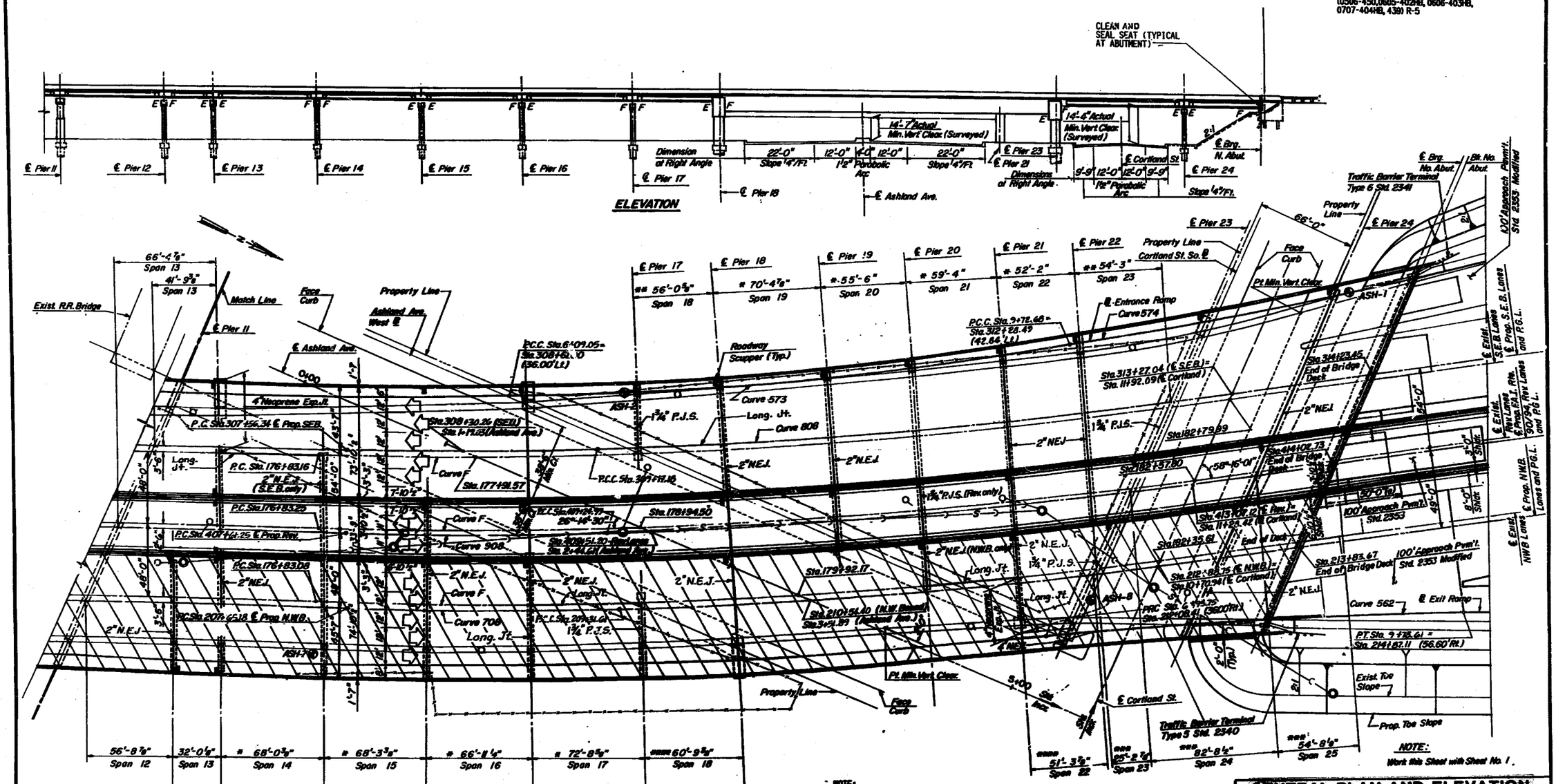
694

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	x	COOK	443	193
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 72 SHEETS

x 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 450, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



* 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 NWB Lanes only)

NOTE:
THE PLAN VIEW SHOWS THE PROPOSED(FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS NWB 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 408+49

1 700

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. 3 OF 72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 450, (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 D T R L E S	166+44.52 1°33'43.0" 0°15'00.0" 312.40' 22,917.91' 624.77' 2.13' NC	186+08.46 28°41'07.9" 1°34'59.8" 925.29' 3,618.78' 1,811.77' 116.42' 0.0125 FT/FT	296+88.95 1°33'44.0" 0°14'59.9" 312.51' 22,921.41' 624.98' 2.13' NC	316+52.95 28°33'58.8" 1°33'41.7" 934.08' 3,669.07' 1,829.30' 117.03' 0.020 FT/FT	
CURVE #	E (307)	F (308)	907	908	
REV PI STA D T R L E S	166+43.91 1°33'43.0" 0°15'01.9" 311.75' 22,869.91' 623.45' 2.13' NC	186+20.81 28°41'07.1" 1°33'45.2" 937.56' 3,666.78' 1,835.79' 117.97' 0.0125 FT/FT	396+94.54 1°33'44.0" 0°15'02.0" 311.77' 22,867.41' 623.51' 2.12' NC	416+71.06 28°33'58.0" 1°32'28.2" 947.83' 3,723.07' 1,856.22' 118.76' 0.033 FT/FT	
CURVE #	E (107)	F (108)	707	708	
NWB PI STA D T R L E S	166+43.13 1°33'43.0" 0°15'03.8" 311.09' 22,821.91' 622.15' 2.12' NC	186+32.93 28°41'08.1" 1°32'32.5" 949.84' 3,714.78' 1,859.84' 119.51' 0.0125 FT/FT	196+99.22 1°33'44.58" 0°15'03.94" 311.13' 22,818.41' 622.22' 2.12' NC	208+48.42 3°06'31.43" 1°52'04.[illegible] 83.24' 166.43' 3067.41' 1.13' 207+65.18 209+31.61	214+80.07 16°32'01.94" 1°31'04.27" 548.46' 1089.29' 3774.79' 39.64' 209+31.61 220+20.91

PROPOSED RAMPS HORIZONTAL CURVE DATA

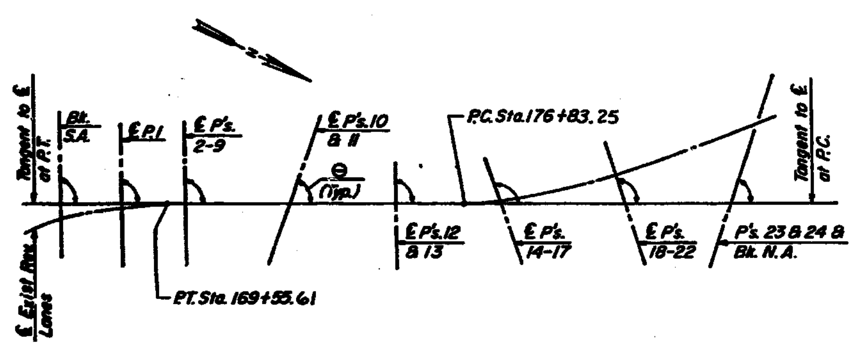
CURVE NO.	560	562	
RAMP ℄ PI STA Δ D T R L E S	9+03.93 7°33'27.20" 3°05'25.39" 122.45' 1854.00' 244.55' 4.04' VARIES	8+37.24 4°07'03.04" 1°27'20.41" 141.49' 3936.04' 282.86' 2.54' VARIES	
CURVE NO.	571	573	574
RAMP ℄ PI STA Δ D T R L E S	11+56.53 7°26'26.185" 1°46'53.7" 209.05' 3216.00' 417.52' 6.79' VARIES	8+01.19 8°34'14.4" 2°09'34.2" 198.81' 2653.19' 396.88' 7.44' 0.020 FT/FT	11+43.17 7°26'57.5" 2°36'19.1" 143.17' 2199.19' 285.93' 4.66' 0.020 FT/FT

PROPOSED INTERSECTION STATIONS

SUBSTRUCTURE	LOCATION: S.E. BOUND LANES	REVERSIBLE LANES	N.W. BOUND LANES
BACK SQ. 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+11.05
" 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 SQ. ABUT.	613.15	613.28	613.11
℄ PIER 1	615.51	615.63	615.96
" 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

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'-08"
P'S. 12&13	91°-50'-50"
P'S. 14-17	91°-50'-50"
P'S. 18-22	94°-28'-47"
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

ANCHOR WITH 3/8" ϕ EXPANSION ANCHORS

NORTHWEST ROUTE
SUPERHIGHWAY
AT
WABANSIA AVE. TO CORTLAND ST.
F.A.I. ROUTE 2-SECTION 0505.2-I
PROJECT I-02-2(88)
LOADING H20 S16
1958

EXISTING NAME PLATE

STANLEY CONSULTANTS

HORIZONTAL ALIGNMENT

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

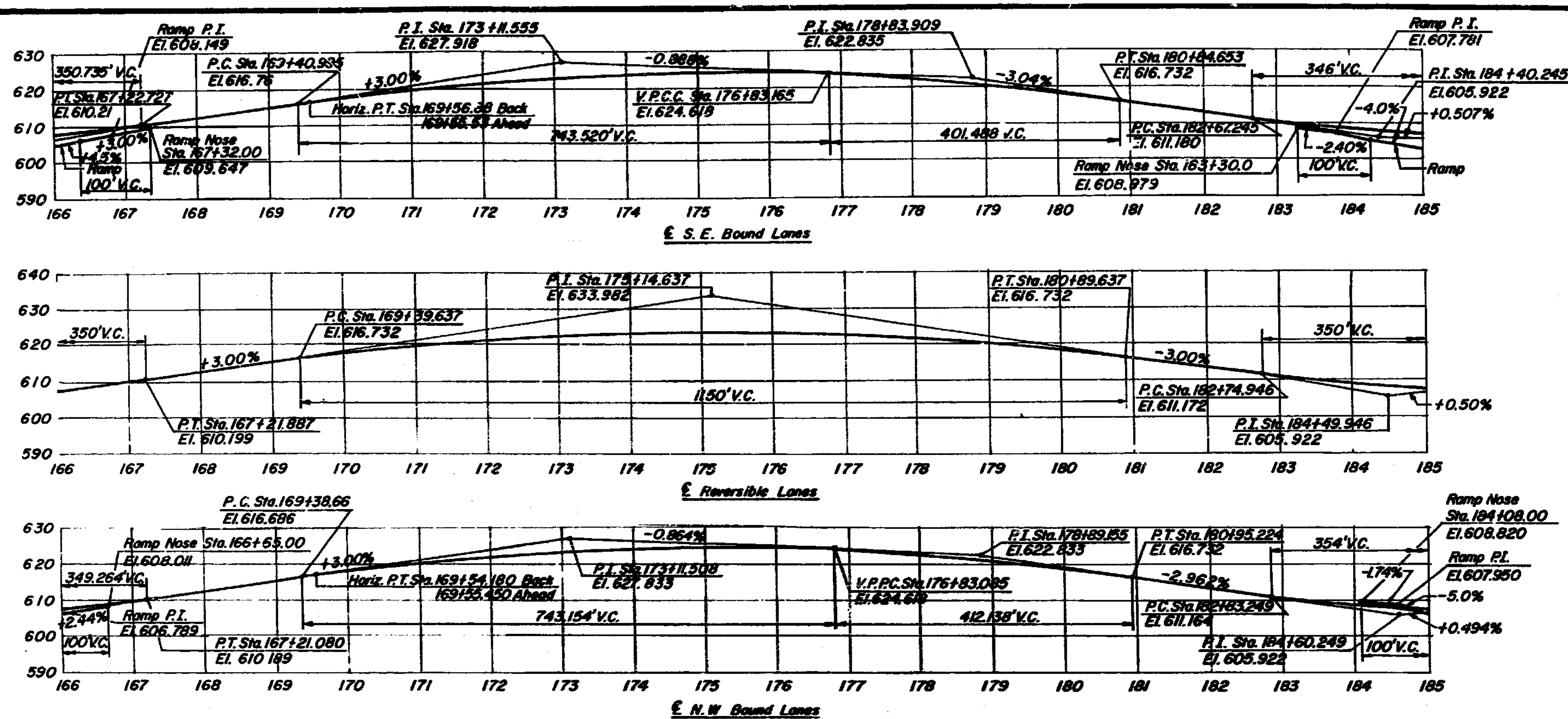
4 701

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	X	COOK	443	195

SHEET NO. 4 OF 72 SHEETS

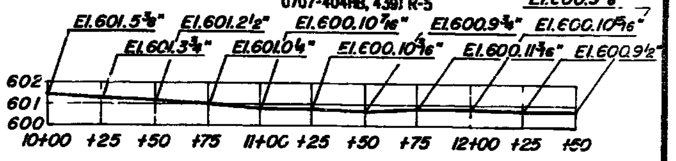
FED. ROAD DIST. NO. 7 ILLINOIS | FED. AID PROJECT -

X 0505(2-2E, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



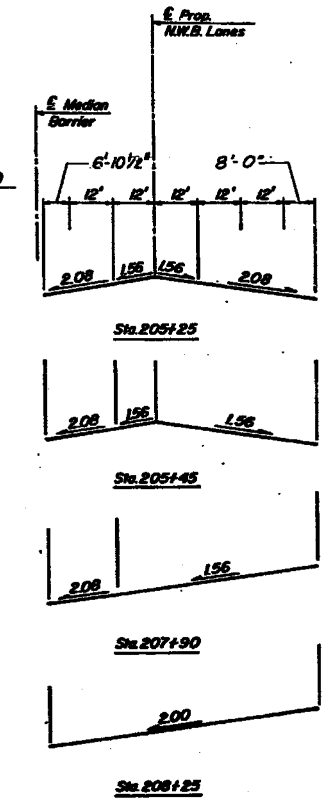
ORIGINAL THEORETICAL PROFILE GRADE

F.A.I. Rte. 90/94



EXISTING TRACK PROFILE

Scales: 1" = 40" Horiz.
¼" = 1'-0" Vert.



PROPOSED CROSS SLOPE TRANSITION

(ALL CROSS SLOPES IN PERCENT)

EXISTING CORTLAND STREET

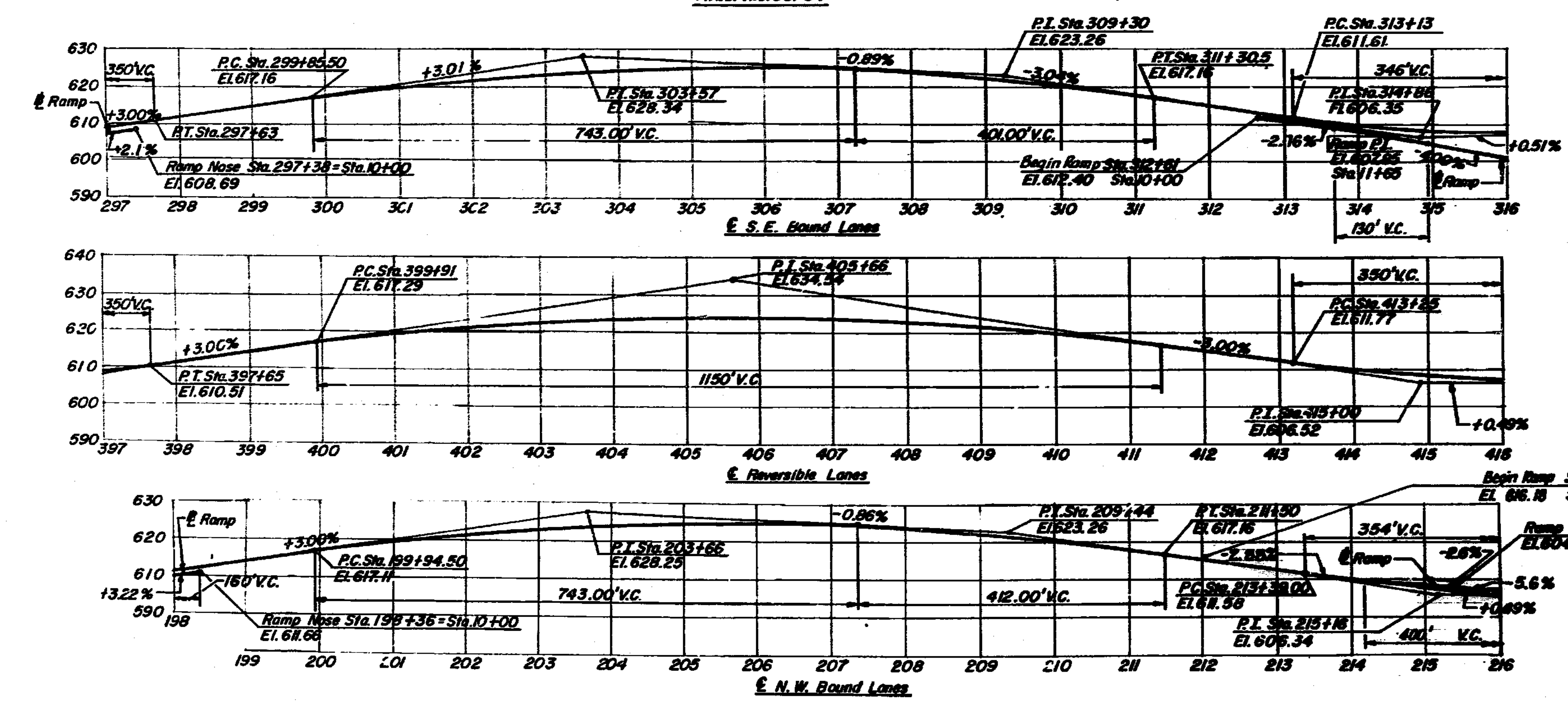
(Along ℄ of Roadway)

Station	Elevation
12+ 94	590.38
12+ 84	590.21
12+ 74	590.06
12+ 64	489.91
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



PROPOSED PROFILE GRADE

F.A.I. Rte. 90/94

STANLEY CONSULTANTS

PROFILES

SECTION

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

COOK COUNTY

STATION 408+49

ANCHOR BOLT REHABILITATION TABLE

Beam No.	Bearing	Anchor Bolts: Loose	Missing	Damaged	Remarks
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			

GENERAL NOTES:

1. Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$"ϕ, $\frac{13}{16}$" 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 $\frac{3}{4}$"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 Mortar Repair (depth < $2\frac{1}{2}$"), 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 5TI) 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."

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 98/94	*	COOK	443	196
		ILLINOIS		

SHEET NO. 5
72 SHEETS

* 05052-2B, 1-H, 6-P, 400HB, 40HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439R-5

TOTAL BILL OF MATERIAL

	Item	Unit	Superstructure	Substructure	Total
(2)	Drainage System	Lin. 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 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.	920,200	680	920,880
	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.	-	62,600	62,600
	Epoxy Crack Sealing	Lin. Ft.	286	95	381
	Epoxy Mortar Repair (Depth < $2\frac{1}{2}$")	Cu. Ft.	30	-	30
1	~~Formed Concrete Repair (Depth < 5")~~	~~Sq. Ft.~~		~~4,048~~	~~4,048~~
	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
1	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 $1\frac{3}{4}$".
1 (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.)

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".

1 Replace loose, damaged, or missing anchor bolts with epoxy grouted anchor bolts. Work will be paid for at contract unit price for "I" 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 "I" 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.

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 consisiing 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.

1 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 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 & 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 ($\frac{1}{2}$"ϕ strands)
F'SI	173,600 psi	202,500 psi

GENERAL NOTES & BILL OF MATERIAL

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 489+49

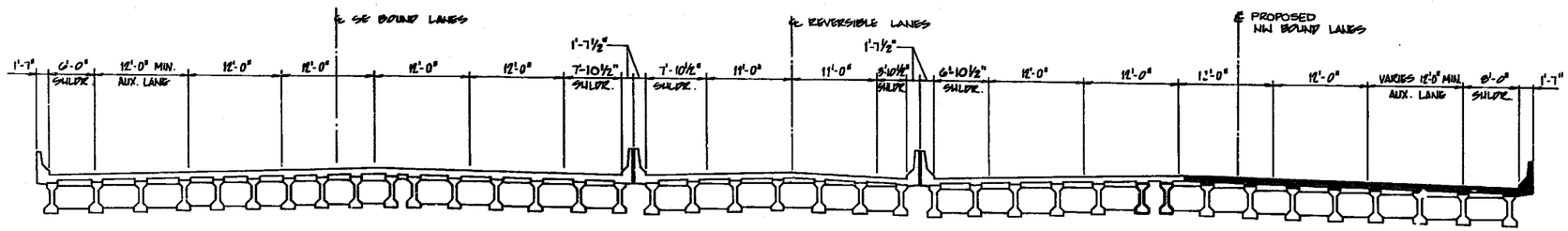
2 Rev. 11-8-95
1 REV. 9-30-93

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

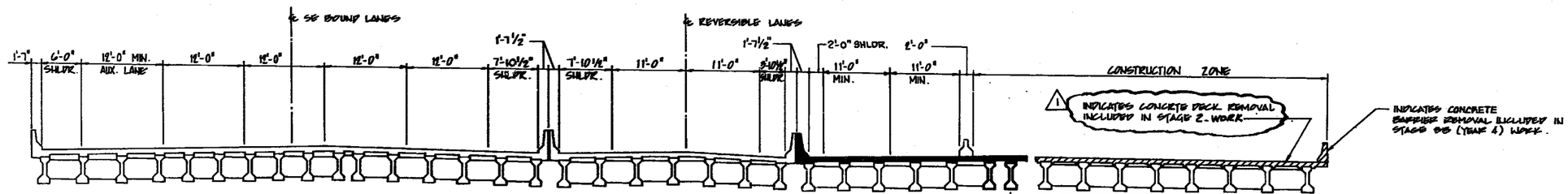
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	197
F. HR. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6
72 SHEETS

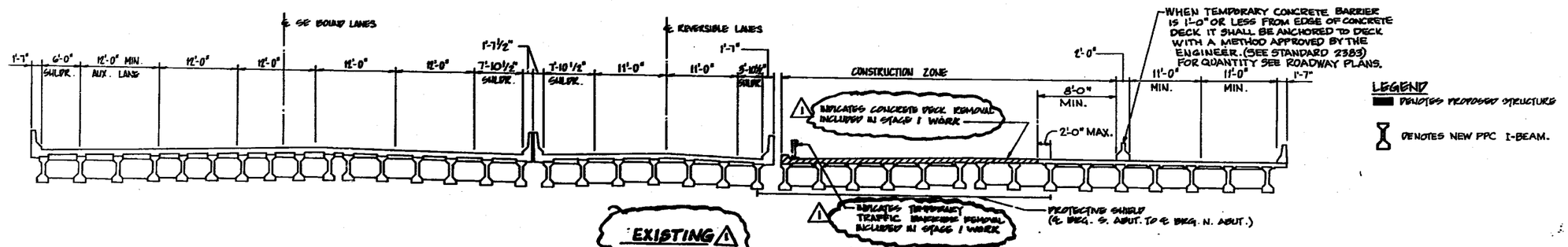
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



STAGE 2 ⚠1



STAGE 1 ⚠1



EXISTING ⚠1

LEGEND
DENOTES PROPOSED STRUCTURE
DENOTES NEW PPC I-BEAM.

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, ENVIRONMENT

BRIDGE CONSTRUCTION STAGING

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+48

⚠1 REV. 9-30-93

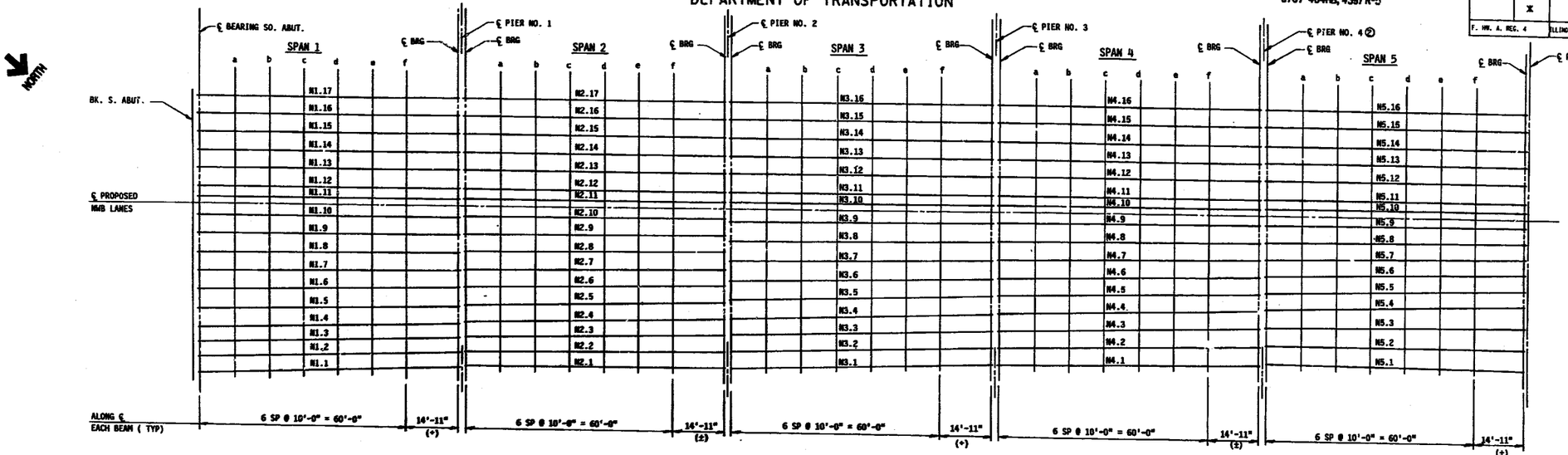
104 4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

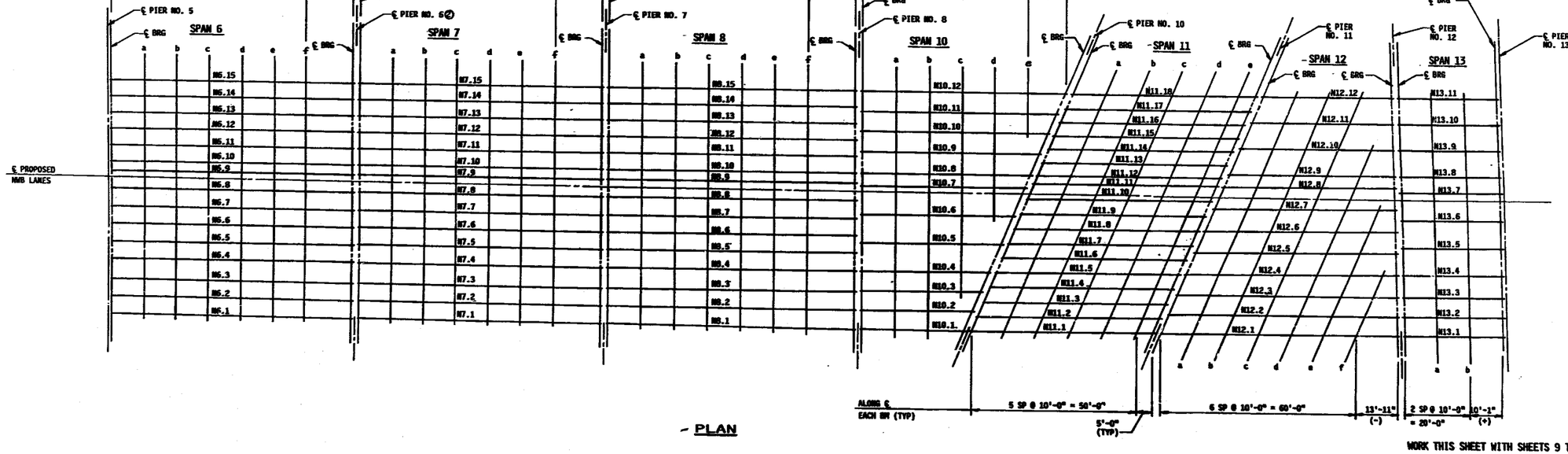
X 050542-2B, 3-1H, 6-1P, 400HB,401HB, 451D, (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	198
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7
72 SHEETS



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.

WORK THIS SHEET WITH SHEETS 9 THRU 18.

TOP OF SLAB ELEVATIONS
SHEET 1 OF 2

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+48

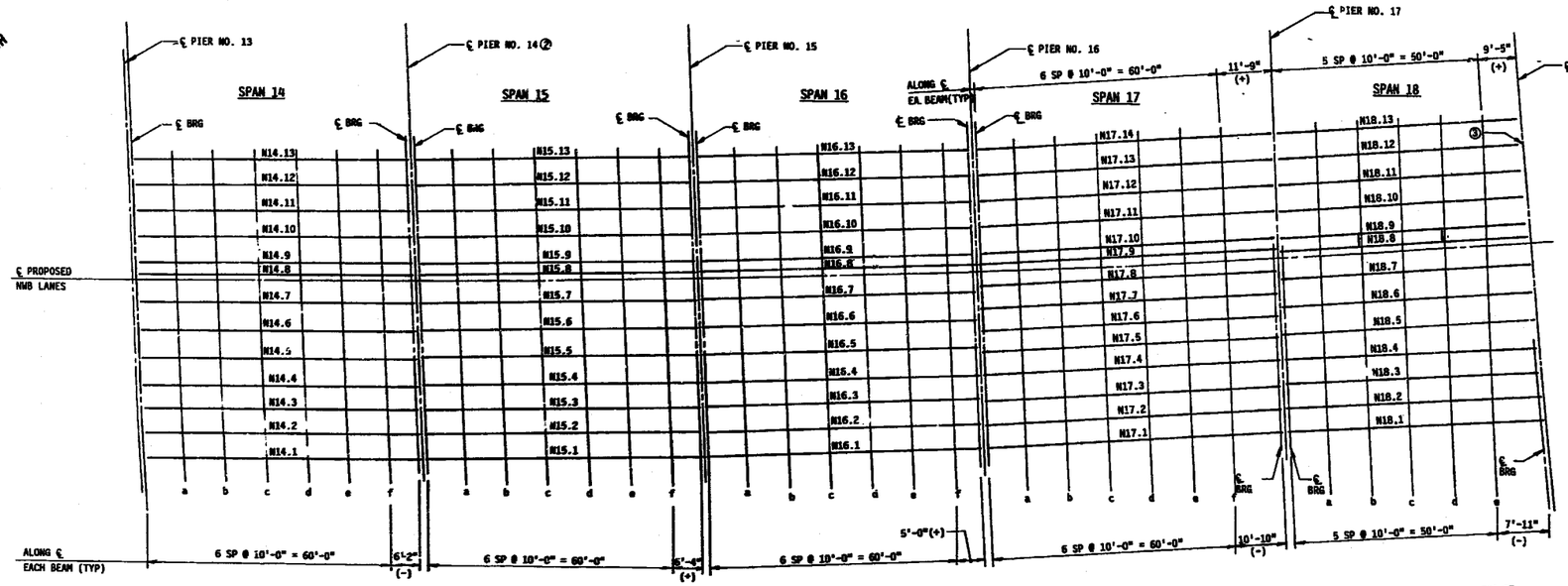
STANLEY CONSULTANTS

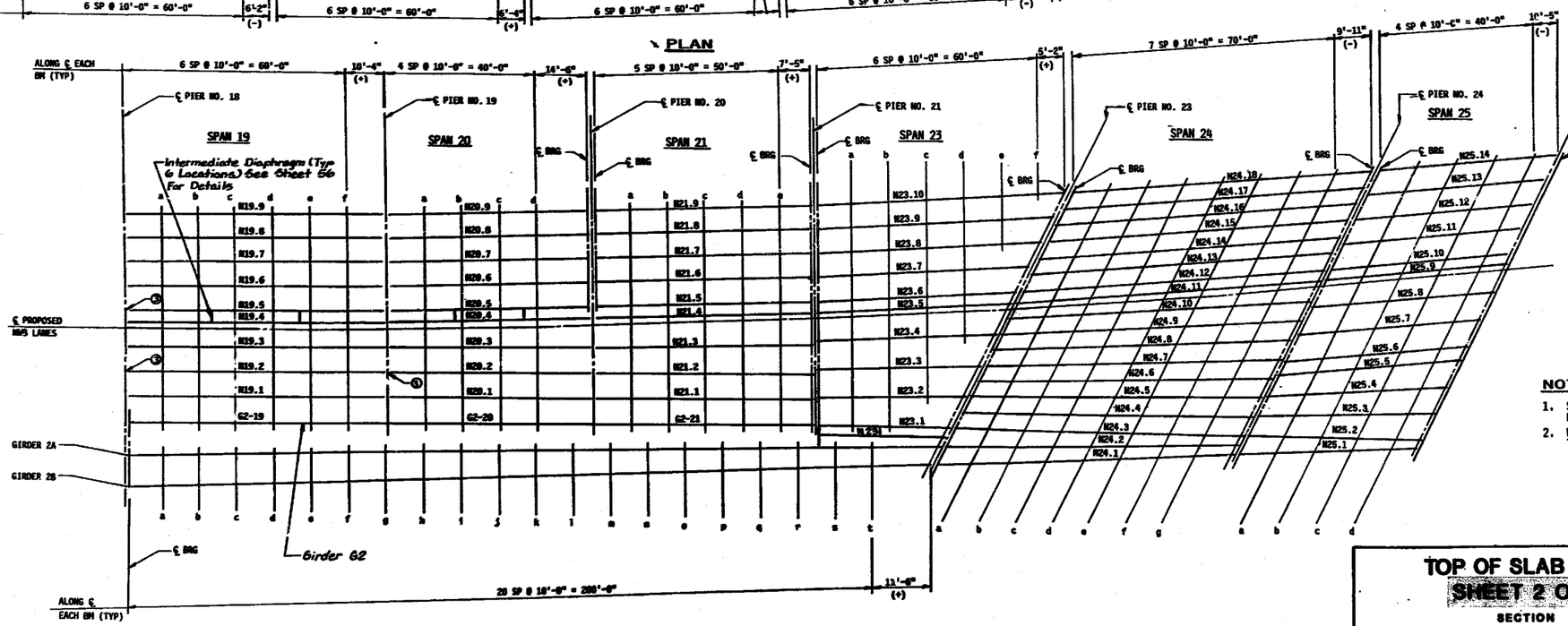
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	199
F. HW. A. RTE. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8
72 SHEETS

X 05052-2B, 3-1H, 6-1P, 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.
	*		443	200
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9
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 N1.17	BK.S.ABUT.	19861.523	-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
BEAM N1.16	BK.S.ABUT.	19861.488	-26.521	612.625	612.625
	℄ BRG.	19863.955	-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
BEAM N1.15	BK.S .ABUT.	19861.454	-21.271	612.733	612.733
	℄ BRG.	19863.931	-21.255	612.808	612.808
	a	19873.922	-21.194	613.109	613.122
	b	19883.912	-21.136	613.410	613.436
	c	19893.903	-21.083	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.	19938.783	-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.	19861.430	-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

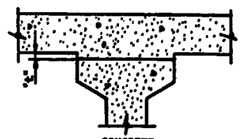
INDICATES STA. 199+38.733 (TYP)

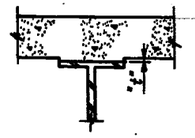
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N1.11	BK.S.ABUT.	19861.332	-2.480	613.072	613.072
	℄ BRG.	19863.811	-2.464	613.146	613.146
	a	19873.809	-2.402	613.447	613.461
	b	19883.805	-2.343	613.748	613.774
	c	19893.807	-2.292	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	614.067
	d	19903.781	2.945	614.337	614.368
	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.	19861.362	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	614.878
	℄ 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	13.451	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	19923.743	13.172	614.770	614.791
	℄ BRG.	19938.676	13.049	615.321	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	613.795
	d	19903.704	18.509	614.058	614.089
	e	19913.712	18.398	614.361	614.388
	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
BEAM N1.6	BK.S .ABUT.	19861.157	24.286	612.661	612.661
	℄ BRG.	19863.639	24.254	612.736	612.736
	a	19873.649	24.121	613.040	613.053
	b	19883.658	23.984	613.343	613.369
	c	19893.668	23.843	613.646	613.675
	d	19903.677	23.697	613.949	613.980
	e	19913.686	23.547	614.253	614.280
	f	19923.695	23.392	614.556	614.577
	℄ BRG.	19938.645	23.153	615.010	615.010
BEAM N1.5	BK.S.ABUT.	19861.122	29.640	612.549	612.549
	℄ BRG.	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
	c	19893.639	29.070	613.536	613.565
	d	19903.650	28.885	613.840	613.871
	e	19913.660	28.696	614.145	614.172
	f	19923.671	28.502	614.449	614.470
	℄ BRG.	19938.629	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.	19938.613	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	612.348	612.348
	℄ BRG.	19863.543	39.154	612.423	612.423
	a	19873.558	38.957	612.728	612.744
	b	19883.573	38.754	613.032	613.064
	c	19893.588	38.548	613.337	613.375
	d	19903.603	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	613.294
	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	5/8"	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.

TOP OF SLAB ELEVATIONS
SPAN 1
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

STANLEY CONSULTANTS

707

D C B A 0 A B C D

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	201
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 10
72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 4?1HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 4391 R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N2.17	℄ BRG.	19940.729	-31.393	614.900	614.900
	a	19950.716	-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 N2.16	℄ BRG.	19940.713	-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 N2.15	℄ 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	-15.643	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	616.126	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	19990.643	-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

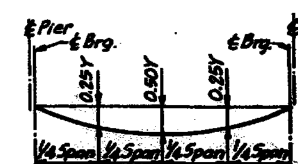
INDICATES STA. 200+15.547 (TYP)

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	616.686
	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	[illegible]
	d	19980.634	0.000	616.689	[illegible]
	e	19990.634	0.000	616.989	[illegible]
	f	20000.634	0.000	617.288	[illegible]
	℄ 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	[illegible].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.	19940.563	23.107	615.068	615.068
	a	19950.572	22.940	615.372	615.386
	b	19960.581	22.769	615.676	615.702
	c	19970.589	22.593	615.980	616.009
	d	19980.597	22.413	616.284	616.314
	e	19990.605	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	28.149	614.963	614.963
	a	19950.558	27.943	615.267	615.281
	b	19960.568	27.732	615.572	615.598
	c	19970.578	27.518	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	616.811
	℄ 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	19960.555	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	615.088
	b	19960.547	37.082	615.376	615.408
	c	19970.561	36.863	615.681	615.719
	d	19980.575	36.639	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	41.348	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	616.536
	℄ 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

Sheets 201 Thru 313 (Set 3 of 5)

TOP OF SLAB ELEVATIONS
[redacted]
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 400+49

708

D C B A 0 A B C D

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	202
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11
72 SHEETS

* 0505(2-28, 3-31, 6-P, 400HB,401&S, 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	-20.793	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

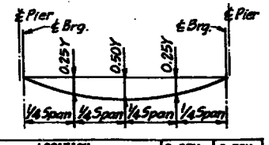
INDICATES STA. 200+92.387 (TYP)

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	618.02-
	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	617.482
	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	20077.442	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	617.517
	c	20047.458	44.356	617.759	617.802
	d	20057.456	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"	5/8"
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

709

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	203
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 12
72 SHEETS

X 050512-2B, 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 NA.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 NA.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 NA.14	℄ BRG.	20094.304	-20.792	619.470	619.470
	a	20104.304	-20.792	619.715	619.728
	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 TABULATED FROM ℄ PROPOSED NWB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM NA.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 NA.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 NA.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

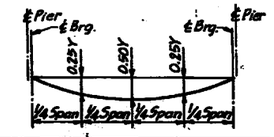
INDICATES STA. 201+69.217 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM NA.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 NA.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	620.305
	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 NA.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 NA.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 NA.6	℄ BRG.	20094.304	18.708	619.513	619.513
	a	20104.303	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	20144.296	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 NA.5	℄ BRG.	20094.304	23.886	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	20134.293	22.968	620.375	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 NA.4	℄ BRG.	20094.304	29.063	619.297	619.297
	a	20104.300	28.787	619.549	619.562
	b	20114.296	28.512	619.795	619.821
	c	20124.292	28.237	620.036	620.065
	d	20134.289	27.962	620.271	620.302
	e	20144.285	27.687	620.502	620.529
	f	20154.281	27.411	620.727	620.747
	℄ BRG.	20169.217	27.000	621.054	621.054
BEAM NA.3	℄ BRG.	20094.304	33.854	619.198	619.198
	a	20104.301	33.632	619.448	619.467
	b	20114.299	33.409	619.693	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 NA.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	620.838	620.838
BEAM NA.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	619.958	620.009
	e	20144.300	42.853	620.186	620.228
	f	20154.300	42.737	620.408	620.437
	℄ BRG.	20169.217	42.562	620.729	620.729



LOCATION	0.25Y	0.50Y
BEAMS NA.1A THRU NA.16	5/16"	3/8"
BEAMS NA.1 THRU NA.3	7/16"	5/8"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED UNLESS DIRECTED BY THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS

[redacted]

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

STANLEY CONSULTANTS

710

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		643	204
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 13
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 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

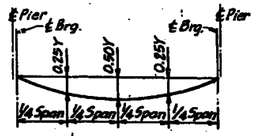
INDICATES STA. 202+46.047 (TYP)

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	621.395	621.396
	a	20181.133	12.335	621.605	621.619
	b	20191.133	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.

TOP OF SLAB ELEVATIONS
[redacted]
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

STANLEY CONSULTANTS

711

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	623.542
	e	20297.964	-10.292	623.656	623.684
	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

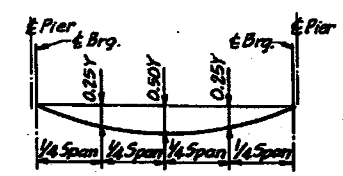
INDICATES STA. 203+22.887 (TYP)

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
[redacted]
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

712

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050542-2B, 3-IH, 6-IP, 400HB,401HB, 451), (0506-450,0805-402HB, 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 NMB 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

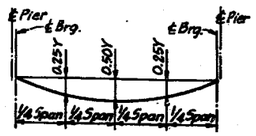
INDICATES STA. 203+99.720 (TYP)

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 NMB 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	624.272
	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: THIS CAMBER DEFLECTION IS NOT TO BE USED IN THE FIELD IF THE ELEVATIONS AS SHOWING FROM THE CAMBER 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 408+49

713

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-28, 3-IR, 6-IP, 400HB,401HB, 45D, (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 430) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	207
F. AW. 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 NB.15	℄ 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 NB.14	℄ 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 NB.13	℄ 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 NWB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM NB.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 NB.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 NB.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

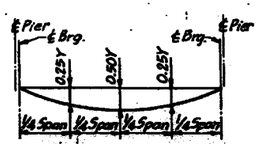
INDICATES STA. 204+76.550 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM NB.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. NWB 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 NB.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 NB.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 NB.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 NB.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 NB.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	624.968
	f	20461.640	24.458	625.004	625.020
	℄ BRG.	20476.550	24.458	625.083	625.083
BEAM NB.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	624.800
	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 NB.2	℄ BRG.	20401.640	36.729	624.311	624.311
	a	20411.640	36.729	624.395	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 NB.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	624.608
	f	20461.640	42.583	624.626	624.655
	℄ BRG.	20476.550	42.583	624.706	624.706



LOCATION	0.25Y	0.50Y
BEAMS NB.A THRU NB.15	1/4"	5/8"
BEAMS NB.2 & NB.3	1/2"	11/16"
BEAM NB.1	7/16"	5/8"

DEAD LOAD DEFLECTION DIAGRAM
(LIMITING WIDTH OF CONCRETE ONLY)

NOTE: [illegible]

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 -

714

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	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	625.078	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	-12.604	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	625.559
	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	625.106
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	42.563	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	625.600	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	-2.428	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.	20583.556	2.045	625.741	625.741
BEAM N11.9	℄ BRG.	20535.952	6.548	625.632	625.632
	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	625.330	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	625.367
	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	624.959
	b	20533.611	38.039	625.057	625.033
	c	20543.611	38.035	625.142	625.122
	d	20553.611	38.030	625.206	625.208
	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	624.922
	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+43

715

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-28, 3-1H, 6-1P, 400HB,401HB, 450, (0506-450,0605-402HB, 0606-403HB, 0707-404, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	209
F. HW. A. 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
BEAM N12.12	℄ 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
BEAM N12.11	℄ 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
BEAM N12.10	℄ 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 TABULATED 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.	20641.630	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	625.643
	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	625.603
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	625.593	625.610
	c	20609.638	17.832	625.598	625.619
	d	20619.638	17.834	625.599	625.617
	e	20629.638	17.836	625.594	625.607
	℄ BRG.	20642.256	17.839	625.581	625.581

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.	20642.469	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.	20642.654	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.	20642.859	36.558	625.521	625.521

SPAN 12 (CONT.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N12.1	℄ BRG.	20569.164	42.557	625.233	625.233
	a	20579.164	42.564	625.285	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
	℄ BRG.	20643.055	42.607	625.503	625.503

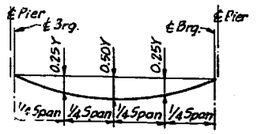
INDICATES STA. 206+43.055 (TYP)

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	625.325
	℄ 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	625.590	625.595
	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 N13.3	℄ BRG.	20644.582	30.510	625.541	625.541
	a	20654.582	30.510	625.539	625.541
	b	20664.582	30.509	625.533	625.535
	℄ BRG.	20674.691	30.509	625.521	625.521
BEAM N13.2	℄ 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	36.558	625.526	625.526
BEAM N13.1	℄ 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

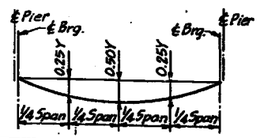


LOCATION	0.25Y	0.50Y
BEAM N10.12	1/4"	5/16"
BEAM N10.11	3/16"	1/4"
BEAMS N10.9 & N10.10	1/8"	3/16"
BEAMS N10.6 THRU N10.8	1/8"	1/8"
BEAMS N10.4 & N10.5	1/16"	1/16"
BEAMS N10.2 & N10.3	0"	1/16"
BEAM N10.1	0"	0"
BEAMS N11.13 THRU N11.18 AND N11.5 THRU N11.10	1/4"	5/16"
BEAMS N11.11 & N11.12	3/16"	1/4"
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	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	3/8"	9/16"
BEAM N12.1	1/2"	11/16"
BEAMS N13.4 THRU N13.9	1/16"	1/16"
BEAMS N13.2 & N13.3	0"	1/16"
BEAM N13.1	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 9 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

716

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. HW. A. REG. 4	ILLINOIS	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	624.796	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	625.091
	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

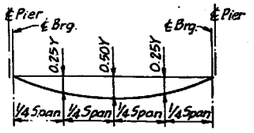
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP NMB LANES	℄ BRG.	20675.625	0.000	625.486	625.488
	a	20685.625	0.000	625.431	625.441
	b	20695.625	0.000	625.370	625.386
	c	20705.625	0.000	625.303	625.323
	d	20715.625	0.000	625.231	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	4.594	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 NMB LANES.



LOCATION	0.25Y	0.50Y
BEAMS N14.10 THRU N14.13	1/4"	5/16"
AND N14.4 THRU N14.7		
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	1/4"	5/16"
AND N15.4 THRU N15.7		
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	20763.982	-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	20793.233	-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	624.195
	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	624.554
	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	-5.105	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.	20810.037	-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	624.796
	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 NMB 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
	c	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	624.779	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	24.451	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	624.808
	℄ 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	625.094
	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	36.472	625.266	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	20754.786	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	20784.423	42.431	625.230	625.259
	e	20794.310	42.466	625.172	625.198
	f	20804.199	42.527	625.110	625.120
	℄ BRG.	20810.909	42.580	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

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	2N
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 20
72 SHEETS

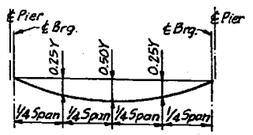
SPAN 16

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	-18.065	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

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 AND N16.4 THRU N16.7	1/4"	5/16"
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.

STANLEY CONSULTANTS

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	-1.675	623.329	623.329

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	621.978
	℄ PIER 17	20951.165	-16.948	621.721	621.725

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N17.6	℄ 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	24.737	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
℄ 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

SPAN 17

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	-11.299	622.249	622.304
	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	622.459
	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	622.835
	d	20918.964	-1.696	622.626	622.671
	e	20928.968	-1.633	622.447	622.498
	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
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	624.028	624.047
	b	20898.373	42.419	623.868	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

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	624.514
	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

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	623.186	623.207
	c	20908.790	8.853	623.016	623.040
	d	20918.767	8.883	622.841	622.856
	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)

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

SEE SHEET 24 FOR SPAN 17 DEAD LOAD DEFLECTION DIAGRAM.

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, 450), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	212
F. HW. 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	20951.511	-29.610	621.461	621.468
	a	20961.589	-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	-30.145	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	20961.398	-23.453	621.389	621.416
	b	20971.460	-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	20950.813	-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	621.255
	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	621.127
	℄ 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.	21007.669	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	621.654	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	622.343
	d	20990.060	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	34.532	618.454	618.589
	m	21139.914	34.727	618.172	618.300
	n	21149.820	34.949	617.886	618.003
	o	21159.725	35.196	617.596	617.703
	p	21169.628	35.470	617.310	617.401
	q	21179.530	35.770	617.023	617.098
	r	21189.430	36.097	616.737	616.795
	s	21199.329	36.449	616.451	616.492
	t	21209.226	36.828	616.165	616.188
	℄ BRG.	21223.052	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	621.207	621.267
	c	21040.765	42.866	620.968	621.054
	d	21050.651	42.683	620.724	620.823
	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	619.705	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	618.509
	n	21149.540	42.293	618.041	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	617.171	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	-30.153	619.241	619.317
	e	21061.807	-30.062	618.993	619.053
	f	21071.886	-29.944	618.739	618.774
	℄ PIER 19	21082.353	-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	619.443
	e	21061.740	-23.729	619.121	619.181
	f	21071.802	-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	-17.551	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	21021.488	-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	21061.536	-4.397	619.513	619.556
	f	21071.547	-4.279	619.261	619.293
	℄ PIER 19	21081.942	-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	620.016
	e	21061.439	4.968	619.703	619.778
	f	21071.425	5.084	619.452	619.526
	℄ PIER 19	21081.794	5.214	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	619.334	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	620.696	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	619.565
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	620.843	620.884
	c	21040.866	24.935	620.607	620.666
	d	21050.800	24.998	620.367	620.442
	e	21060.734	25.086	620.122	620.210
	f	21070.667	25.201	619.874	619.971
	℄ PIER 19	21081.478	25.356	619.597	619.702

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

SEE SHEET 24 FOR SPANS 18 AND 19; GIRDERS 2A AND 2B DEAD LOAD DEFLECTION DIAGRAM.

TOP OF SLAB ELEVATIONS
[redacted] 18
GIRDERS 2A AND 2B
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

714

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 NMB 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	21081.503	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	519.702
	a	21081.409	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	618.542
	℄ 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	616.008
	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 NMB 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	617.721
	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	616.564
	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	617.306
	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 NMB 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 NMB 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.	21242.487	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.

TOP OF SLAB ELEVATIONS
SPANS 20, 21, AND 23

SECTION

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

COOK COUNTY

STATION 408+48

STANLEY CONSULTANTS

720

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.
	X		443	214
F. HW. A. REG. #	ILLINOIS	FED. A.D 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	610.865
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	613.056
	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)

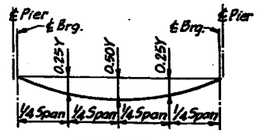
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N24.12	℄ BRG.	21251.816	-4.057	614.087	614.087
	a	21261.827	-4.146	613.789	613.802
	b	21271.838	-4.208	613.491	613.517
	c	21281.849	-4.244	613.194	613.225
	d	21291.860	-4.253	612.897	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
BEAM 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	613.9[illegible]
	b	21269.407	0.000	613.647	613.67[illegible]
	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	3.455	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	613.876	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	43.826	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	615.822	615.837
	℄ 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, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	215
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 24
72 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N25.14	℄ 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 N25.13	℄ 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	-17.198	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.

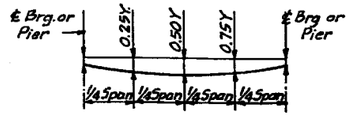
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM N25.11	℄ BRG.	21338.313	-10.588	611.396	611.396
	a	21348.342	-10.625	611.102	611.102
	b	21358.370	-10.635	610.819	610.826
	c	21368.398	-10.619	610.547	610.553
	d	21378.426	-10.577	610.284	610.284
	℄ BRG.	21388.753	-10.505	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	-4.051	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. 213+85.701 (TYP)

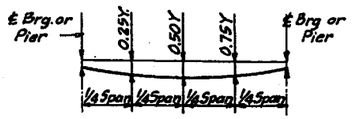
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. NWB LANES	℄ BRG.	21331.695	0.000	611.803	611.803
	a	21341.695	0.000	611.508	611.508
	b	21351.695	0.000	611.219	611.225
	c	21361.695	0.000	610.941	610.947
	d	21371.695	0.000	610.672	610.672
	℄ BRG.	21381.990	0.000	610.405	610.405
	BK.N.ABUT.	21385.139	0.000	610.325	610.325
BEAM N25.8	℄ BRG.	21328.023	5.906	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	12.818	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	12.849	611.145	611.145
	℄ BRG.	21373.732	12.924	610.876	610.876
	BK.N.ABUT.	21376.848	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	612.295
	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.	21317.370	25.163	612.691	612.691
	a	21327.309	25.120	612.396	612.396
	b	21337.248	25.103	612.101	612.107
	c	21347.187	25.112	611.810	611.817
	d	21357.126	25.147	611.530	611.530
	℄ BRG.	21367.207	25.210	611.255	611.255
	BK.N.ABUT.	21370.313	25.235	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 N25.3	℄ BRG.	21311.140	33.342	613.079	613.079
	a	21321.032	33.979	612.799	612.799
	b	21330.920	34.642	612.519	612.526
	c	21340.804	35.331	612.242	612.246
	d	21350.685	36.047	611.969	611.969
	℄ BRG.	21358.746	36.650	611.755	611.755
	BK.N.ABUT.	21361.711	36.876	611.678	611.678
BEAM N25.2	℄ BRG.	21308.038	38.436	613.272	613.272
	a	21317.887	39.433	613.001	613.010
	b	21327.730	40.456	612.730	612.740
	c	21337.568	41.505	612.460	612.470
	d	21347.400	42.580	612.194	612.200
	℄ BRG.	21354.538	43.376	612.007	612.007
	BK.N.ABUT.	21357.433	43.704	611.932	611.932
BEAM N25.1	℄ BRG.	21304.040	45.023	613.522	613.522
	a	21313.905	45.599	613.242	613.246
	b	21323.767	46.201	612.962	612.970
	c	21333.626	46.829	612.683	612.694
	d	21343.481	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

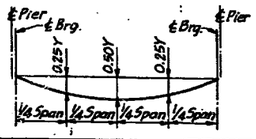


LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
BEAM N17.14	0"	1/2"	13/16"	5/8"	1/16"
BEAMS N17.12 & N17.13	0"	1/2"	3/4"	5/8"	1/16"
BEAM N17.11	0"	1/2"	3/4"	9/16"	1/16"
BEAM N17.10	0"	7/16"	11/16"	1/2"	0"
BEAMS N17.4 THRU N17.9	0"	1/4"	5/16"	1/4"	0"
BEAMS N17.1 THRU N17.3	0"	3/8"	1/2"	3/8"	0"
BEAM N18.13	1/16"	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 1/16"	0"
GIRDER 2B	0"	1 5/8"	2 3/16"	1 7/16"	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"	1/4"	0"
BEAM N20.5	3/16"	1/4"	5/16"	3/16"	0"
BEAM N20.4	3/16"	1/4"	1/4"	3/16"	0"
BEAM N20.3	7/8"	13/16"	3/4"	9/16"	5/16"
BEAM N20.2	1"	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 1/4"	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 N23.9 & N23.10	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	1/8"	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

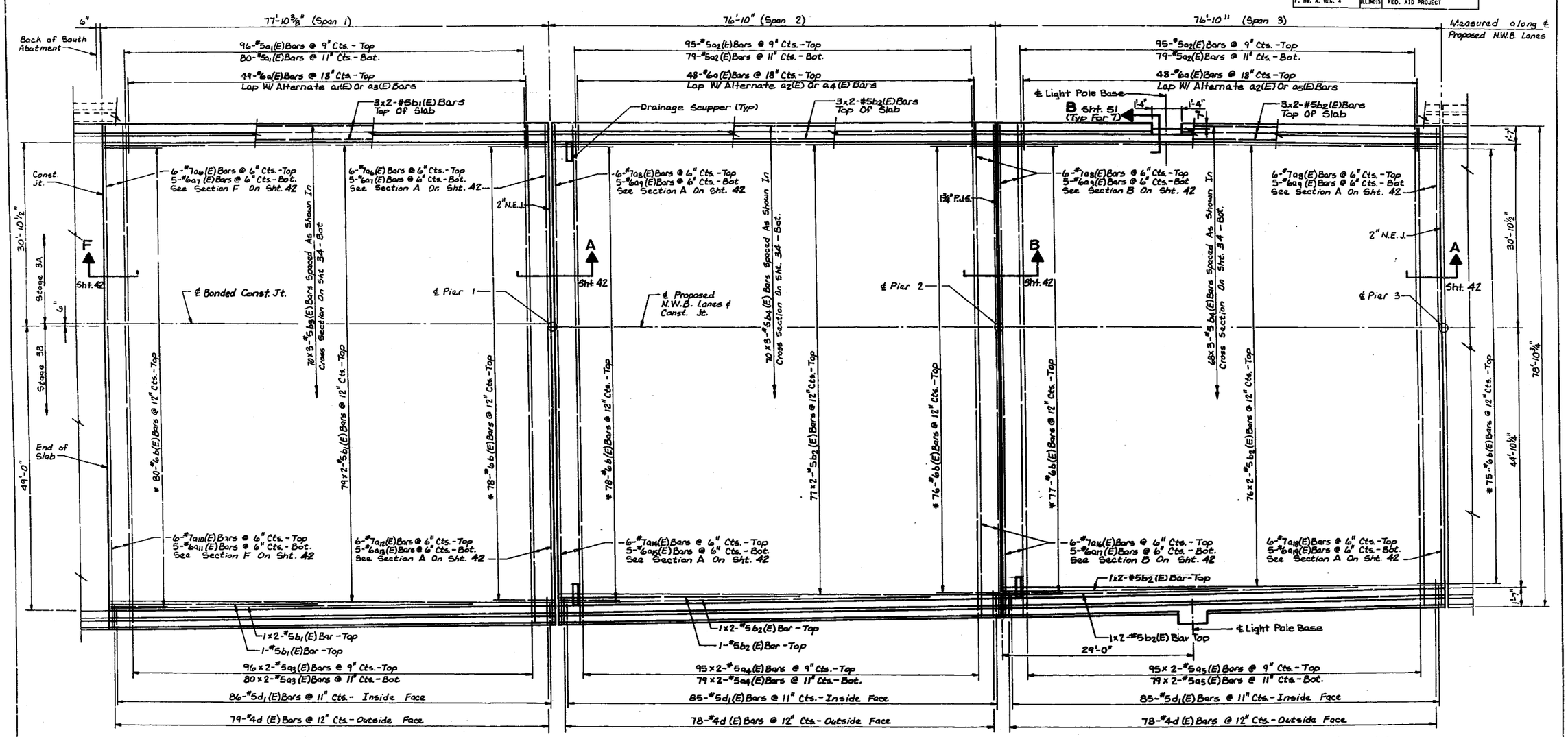
TOP OF SLAB ELEVATIONS
SPAN 25
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 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



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

PLAN

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"

SUPERSTRUCTURE PLAN
SHEET 1 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

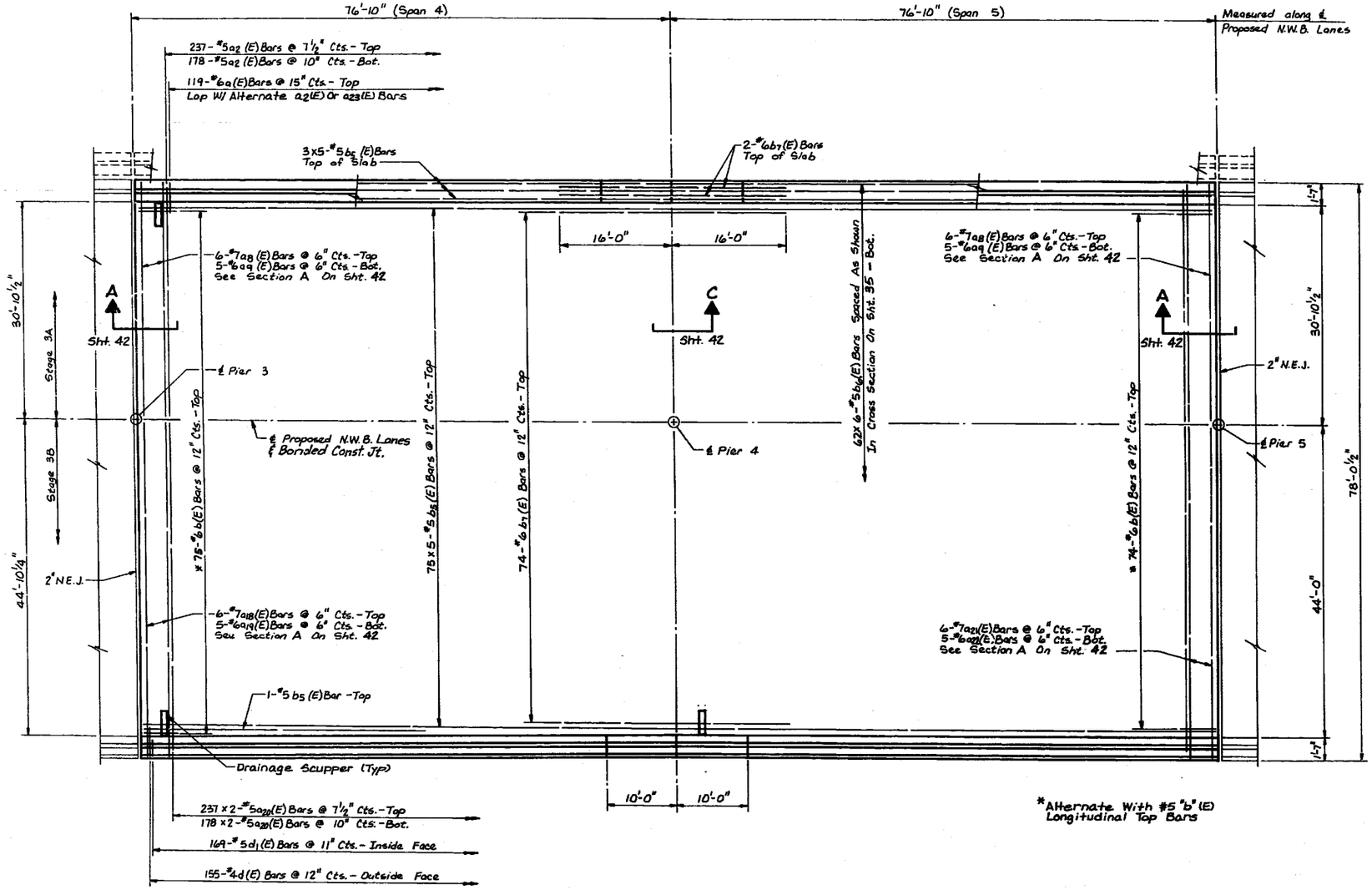
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	217
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 26
72 SHEETS

* 05052-28, 3-1H, 6-1P, 400:1B, 401HB, 451, 10506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



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

PLAN

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEET 35.

SUPERSTRUCTURE PLAN
SHEET 2 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

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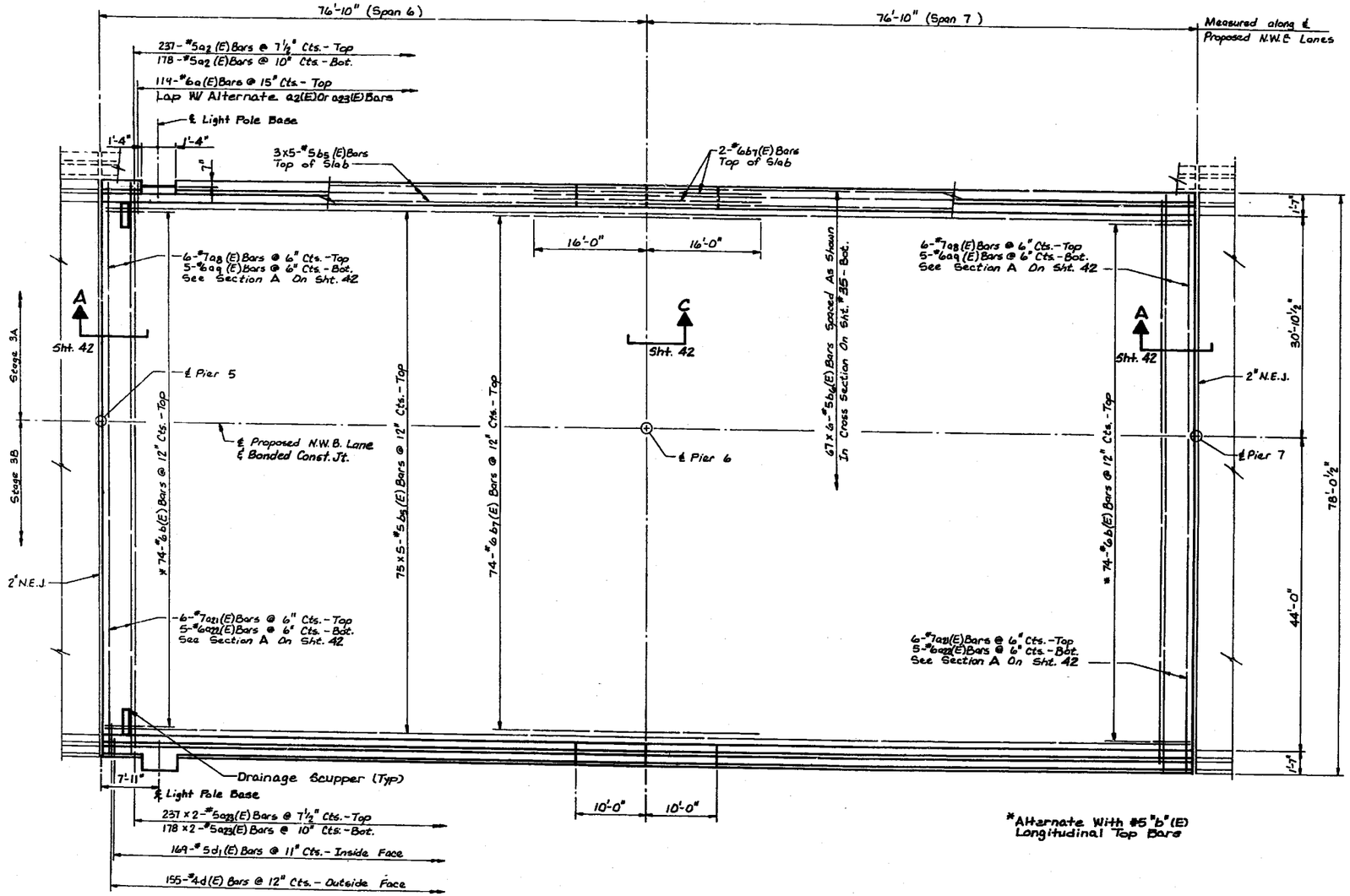
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	218
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 27
72 SHEETS

X 05051-2B, 3-1H, 6-1P, 400HB, 401HB, 451),
(0506-450, 0605-402HB, 0606-403HB,
0707-404HB, 439) R-5



PLAN

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

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEET 35.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 9 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

725

C B A A B C D

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	220
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 29
72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

NORTH

57'-5 1/4" (Span 11)
56'-8 3/8" (Span 12)
32'-0 3/8" (Span 13)
Measured Along ℄ Proposed N.W.B. Lanes

60-#5a24(E) Bars @ 9" Cts.-Top
49-#5a24(E) Bars @ 11" Cts.-Bot.
39-#6a(E) Bars @ 18" Cts.-Top
Lap W/ Alternate a24(E) Or a25(E) Bars

87-#5a2(E) Bars @ 5 1/2" Cts.-Top
61-#5a2(E) Bars @ 8" Cts.-Bot.
44-#6a(E) Bars @ 11" Cts.-Top
Lap W/ Alternate a2(E) Or a23(E) Bars
44-#4d(E) Bars @ 12" Cts.-Outside Face
47-#5d1(E) Bars @ 11" Cts.-Inside Face

57-#5a2(E) Bars @ 5 1/2" Cts-Top
40-#5a2(E) Bars @ 8" Cts.-Bot.
29-#6a(E) Bars @ 11" Cts.-Top
Lap W/ Alternate a23(E) Or a22(E) Bars
6-#7a3(E) Bars @ 6" Cts.-Top
5-#6a22(E) Bars @ 6" Cts.-Bot.
See Section A On Sht. 42

* Order #5a24(E) Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Northwest Corner (Stage 3A) Paint Cut Ends W/ Epoxy

* 17-#5a24(E) Bars @ 9" Cts.-Top
* 14-#5a24(E) Bars @ 11" Cts.-Bot.

3x2-#5b22(E) Bars Top of Slab

3x2-#5b21(E) Bars Top of Slab

3-#5b22(E) Bars Top of Slab

70x3-#5b24(E) Bars Spaced As Shown In Cross Section On Sht. 36 -Bot.

28x3-#5b24(E) Bars Spaced As Shown In Cross Section On Sht. 37 -Bot.

31x2-#5b26(E) Bars @ 12" Cts.-Top

71-#5b21(E) Bars Spaced As Shown In Cross Section On Sht. 37 -Bot.

1-#6b11(E) Bar Top & Bot.

1-#6b11(E) Bar Top & Bot.

1-#6b14(E) Bar Top & Bot.

1-#6b14(E) Bar Top & Bot.

1-#6b16(E) Bar Top & Bot.

1-#6b13(E) Bar Top & Bot.

1-#6b15(E) Bar Top & Bot.

1 3/4" P.J.S.

Sht. 42

Sht. 42

Sht. 42

Sht. 42

Sht. 42

Stage 3A

Stage 3B

1'-0"

℄ Pier 10

℄ Pier 11

℄ Pier 12

℄ Pier 13

℄ Bonded Const. Jt.

67°02'48"

2" N.E.J.

2" N.E.J.

2" N.E.J.

℄ Proposed N.W.B. Lanes

℄ Proposed N.W.B. Lanes & Bonded Const. Jt.

℄ Light Pole Base

℄ Light Pole Base

2" N.E.J.

1'-4" (Typ)

1'-1"

30'-10 1/2"

78'-0 1/2"

44'-0"

1'-1"

10'-1"

** 25x2-#5a25(E) Bars @ 9" Cts.-Top
** 20x2-#5a25(E) Bars @ 11" Cts.-Bot

** Order #5a25(E) Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Northwest Corner (Stage 3B) Paint Cut Ends W/ Epoxy

*** 74-#6b(E) Bars @ 12" Cts.-Top

75x2-#5b21(E) Bars @ 12" Cts.-Top

*** 74-#6b(E) Bars @ 12" Cts.-Top

44x2-#5b24(E) Bars @ 12" Cts.-Top

*** 74-#6b(E) Bars @ 12" Cts.-Top

*** 74-#6b(E) Bars @ 12" Cts.-Top

75-#5b21(E) Bars @ 12" Cts.-Top

*** 74-#6b(E) Bars @ 12" Cts.-Top

18x3-#5b24(E) Bars Spaced As Shown In Cross Section On Sht. 37 -Bot

24x3-#5b21(E) Bars Spaced As Shown In Cross Section On Sht. 37 -Bot.

6-#7a21(E) Bars @ 6" Cts.-Top
5-#6a22(E) Bars @ 6" Cts.-Bot.
See Section A On Sht. 42

Drainage Scupper (Typ)

3x2-#5b21(E) Bars Top of Slab

6-#7a21(E) Bars @ 6" Cts.-Top
5-#6a22(E) Bars @ 6" Cts.-Bot.
See Section A On Sht. 42

52x2-#5a25(E) Bars @ 9" Cts.-Top
43x2-#5a25(E) Bars @ 11" Cts.-Bot.

118x2-#5a23(E) Bars @ 5 1/2" Cts.-Top
81x2-#5a23(E) Bars @ 8" Cts.-Bot.

51x2-#5a25(E) Bars @ 5 1/2" Cts.-Top
40x2-#5a25(E) Bars @ 8" Cts.-Bot.

82-#6a(E) Bars @ 11" Cts.-Top

64-#5d1(E) Bars @ 11" Cts.-Inside Face

85-#5d1(E) Bars @ 11" Cts.-Inside Face.

36-#5d1(E) Bars @ 11" Cts.-Inside Face.

59-#4d(E) Bars @ 12" Cts.-Outside Face

78-#4d(E) Bars @ 12" Cts.-Outside Face.

32-#4d(E) Bars @ 12" Cts.-Outside Face.

**** 16-#5a2(E) Bars @ 5 1/2" Cts.-Top
10-#5a2(E) Bars @ 8" Cts.-Bot.
Order Full Length. Cut To Fit Skew And Use Remainder To Complete Southeast Corner (Stage 3A) Paint Cut Ends W/ Epoxy

***** 22x2-#5a23(E) Bars @ 5 1/2" Cts.-Top
51x2-#5a23(E) Bars @ 8" Cts.-Bot.
Order Full Length. Cut To Fit Skew And Use Remainder To Complete Southeast Corner (Stage 3B) Paint Cut Ends W/ Epoxy

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

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEETS 36 & 37.

PLAN

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 5 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

X 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451D, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 4391 R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	221
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 30
72 SHEETS

NORTH

68'-0 15/16" (Span 14) | 68'-3 5/8" (Span 15) | 66'-11 9/16" (Span 16)

137-#4d1(E) Bars @ 12" Cts (Outside Face)
150-#5d1(E) Bars @ 11" Cts (Inside Face)
209-#5a2(E) Bars @ 7½" Cts-Top
158-#5a2(E) Bars @ 10" Cts-Bot

68-#4d(E) Bars @ 12" Cts (Outside Face)
74-#5d1(E) Bars @ 11" Cts (Inside Face)
99-#5a2(E) Bars @ 7½" Cts-Top
74-#5a2(E) Bars @ 10" Cts-Bot

Along & Proposed N.W. Bound Lanes

9'-0" | 9'-0"

Aluminum Sheeted Constr Joints In Base Of Parapet

Drainage Scupper (Typ)

℄ Light Pole Base

1'-4" | 1'-4" | 7"

1'-7" Radial

Radial

6-#7a8(E) Bars @ 6" Cts-Top
5-#6a9(E) Bars @ 6" Cts-Bot
See Section A On Sht. 42

6-#7a8(E) Bars @ 6" Cts-Top
5-#6a9(E) Bars @ 6" Cts-Bot
See Section H On Sht. 42

A — Sht. 42

C — Sht. 42

H — Sht. 42

℄ Pier 13

℄ Pier 14

℄ Pier 15

℄ Pier 16

30'-10½"

Stage 3A

Stage 3B

78'-0½"

44'-0"

1'-7"

2" E.J.

*74-#6b1(E) Bars @ 12" Cts-Top

6-#7a21(E) Bars @ 6" Cts-Top
5-#6a22(E) Bars @ 6" Cts-Bot
See Section A On Sht 42

69x5-#5b27(E) Bars Spaced As Shown In Cross Section On Sht. 38 - Bot

*74-#6b22(E) Bars @ 12" Cts-Top

14'-0" | 14'-0"

75x4-#5b24(E) Bars @ 12" Cts-Top

2-#6b28(E) Bars Top Of Slab

3x4-#5b24(E) Bars Top Of Slab

6-#7a21(E) Bars @ 6" Cts-Top
5-#6a22(E) Bars @ 6" Cts-Bot
See Section A On Sht. 42

2" N.E.J.

*74-#6b1(E) Bars @ 12" Cts-Top

69x3-#5b30(E) Bars Spaced As Shown In Cross Section On Sht. 38 - Bot

75x2-#6b31(E) Bars @ 12" Cts-Top

*74-#6b1(E) Bars @ 12" Cts-Top

2" N.E.J.

6-#7a21(E) Bars @ 6" Cts-Top
5-#6a22(E) Bars @ 6" Cts-Bot
See Section A On Sht. 42

3x2-#5b21(E) Bars Top Of Slab

25'-5"

℄ Light Pole Base

104-#6a1(E) Bars @ 15" Cts-Top
Lap W/ Alternate a2(E) Or a23(E) Bars
209x 2-#6a23(E) Bars @ 7½" Cts-Top
158 x 2-#5a23(E) Bars @ 10" Cts-Bot

50-#6a1(E) Bars @ 15" Cts-Top
Lap W/ Alternate a2(E) Or a23(E) Bars
99 x 2-#5a23(E) Bars @ 7½" Cts-Top
74 x 2-#5a23(E) Bars @ 10" Cts-Bot

*Alternate With #5'b'(E) Longitudinal Top Bars

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEET 38.

PLAN

STANLEY CONSULTANTS

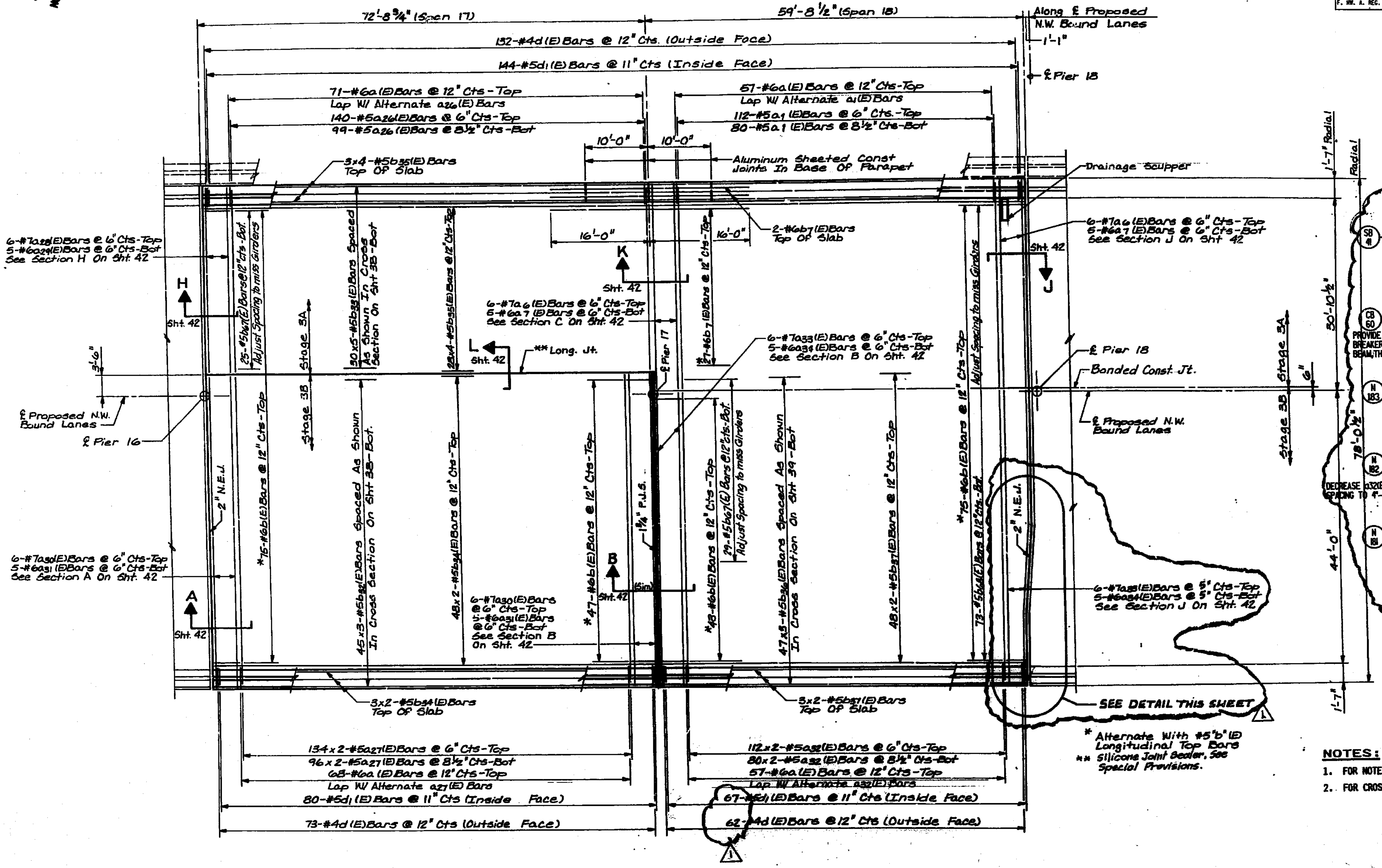
SUPERSTRUCTURE PLAN
SHEET 1 OF 1
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	222
F. NW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

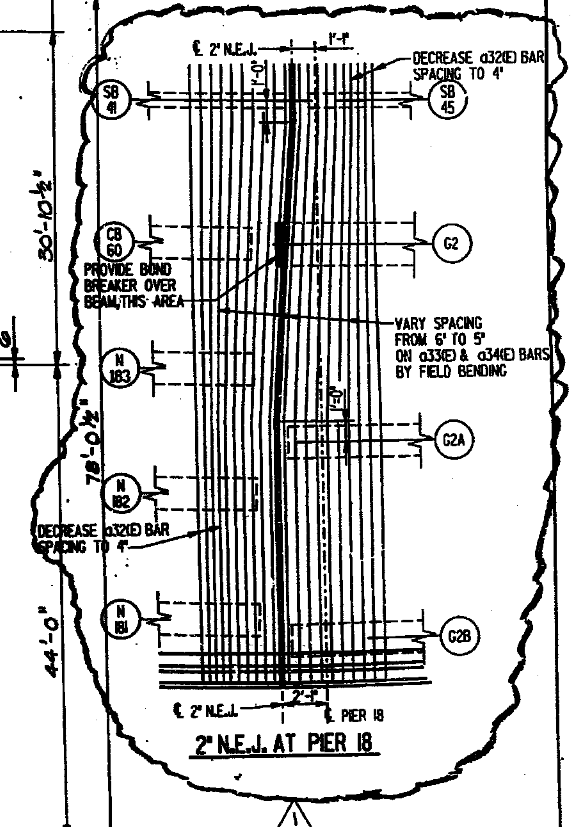
SHEET NO. 31
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400H3, 401HB, 451, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



NORTH
72'-8 3/4" (Span 17)
59'-8 1/2" (Span 18)
Along ℄ Proposed N.W. Bound Lanes
132-#4d(E) Bars @ 12" Cts. (Outside Face)
144-#5d1(E) Bars @ 11" Cts (Inside Face)
1'-1"
℄ Pier 18
71-#6a(E) Bars @ 12" Cts-Top
Lap W/ Alternate a26(E) Bars
140-#5a26(E) Bars @ 6" Cts-Top
99-#5a26(E) Bars @ 8 1/2" Cts-Bot
67-#6a(E) Bars @ 12" Cts-Top
Lap W/ Alternate a1(E) Bars
112-#5a1(E) Bars @ 6" Cts.-Top
80-#5a1(E) Bars @ 8 1/2" Cts-Bot
10'-0"
10'-0"
3x4-#5b35(E) Bars Top Of Slab
Aluminum Sheeted Const Joints In Base Of Parapet
Drainage Scupper
1'-7" Radial
Radial
6-#7a28(E) Bars @ 6" Cts-Top
5-#6a29(E) Bars @ 6" Cts-Bot
See Section H On Sht. 42
16'-0"
16'-0"
2-#6b7(E) Bars Top Of Slab
6-#7a6(E) Bars @ 6" Cts-Top
6-#6a7(E) Bars @ 6" Cts-Bot
See Section J On Sht 42
K
Sht. 42
J
Sht. 42
H
Sht. 42
25-#5b67(E) Bars @ 12" Cts-Bot Adjust Spacing to miss Girders
Stage 3A
50x5-#5b33(E) Bars Spaced As Shown In Cross Section On Sht 38-Bot
23x4-#5b35(E) Bars @ 12" Cts-Top
6-#7a6(E) Bars @ 6" Cts-Top
6-#6a7(E) Bars @ 6" Cts-Bot
See Section C On Sht. 42
L
Sht. 42
** Long. Jt.
℄ Pier 17
7-#6b1(E) Bars @ 12" Cts-Top
6-#7a33(E) Bars @ 6" Cts-Top
5-#6a31(E) Bars @ 6" Cts-Bot
See Section B On Sht. 42
℄ Pier 18
Bonded Const. Jt.
3'-6"
℄ Proposed N.W. Bound Lanes
℄ Pier 16
Stage 3B
*76-#6b1(E) Bars @ 12" Cts-Top
2" N.E.J.
45x3-#5b32(E) Bars Spaced As Shown In Cross Section On Sht 38-Bot.
48x2-#5b34(E) Bars @ 12" Cts-Top
*47-#6b1(E) Bars @ 12" Cts-Top
1 3/4" P.J.S.
*48-#6b1(E) Bars @ 12" Cts-Top
29-#5b67(E) Bars @ 12" Cts-Bot Adjust Spacing to miss Girders
47x5-#5b36(E) Bars Spaced As Shown In Cross Section On Sht 39-Bot
48x2-#5b37(E) Bars @ 12" Cts-Top
*75-#6b1(E) Bars @ 12" Cts-Top Adjust Spacing to miss Girders
73-#5b64(E) Bars @ 12" Cts-Bot
2" N.E.J.
Stage 3A
Stage 3B
6"
30'-10 1/2"
78'-0 1/2"
44'-0"
1'-7"
6-#7a30(E) Bars @ 6" Cts-Top
5-#6a31(E) Bars @ 6" Cts-Bot
See Section A On Sht. 42
A
Sht. 42
B
Sht. 42
6-#7a30(E) Bars @ 6" Cts-Top
5-#6a31(E) Bars @ 6" Cts-Bot
See Section B On Sht. 42
6-#7a33(E) Bars @ 5" Cts-Top
5-#6a34(E) Bars @ 5" Cts-Bot
See Section J On Sht. 42
3x2-#5b34(E) Bars Top Of Slab
3x2-#5b37(E) Bars Top Of Slab
SEE DETAIL THIS SHEET
134x2-#5a27(E) Bars @ 6" Cts-Top
96x2-#5a27(E) Bars @ 8 1/2" Cts-Bot
68-#6a(E) Bars @ 12" Cts-Top
Lap W/ Alternate a27(E) Bars
80-#5d1(E) Bars @ 11" Cts (Inside Face)
73-#4d(E) Bars @ 12" Cts (Outside Face)
112x2-#5a32(E) Bars @ 6" Cts-Top
80x2-#5a32(E) Bars @ 8 1/2" Cts-Bot
57-#6a(E) Bars @ 12" Cts-Top
Lap W/ Alternate a32(E) Bars
67-#5d1(E) Bars @ 11" Cts (Inside Face)
62-#4d(E) Bars @ 12" Cts (Outside Face)
* Alternate With #5"b"(E) Longitudinal Top Bars
** Silicone Joint Sealer, See Special Provisions.

PLAN



2" N.E.J. AT PIER 18

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEETS 38 & 39.

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

STANLEY CONSULTANTS

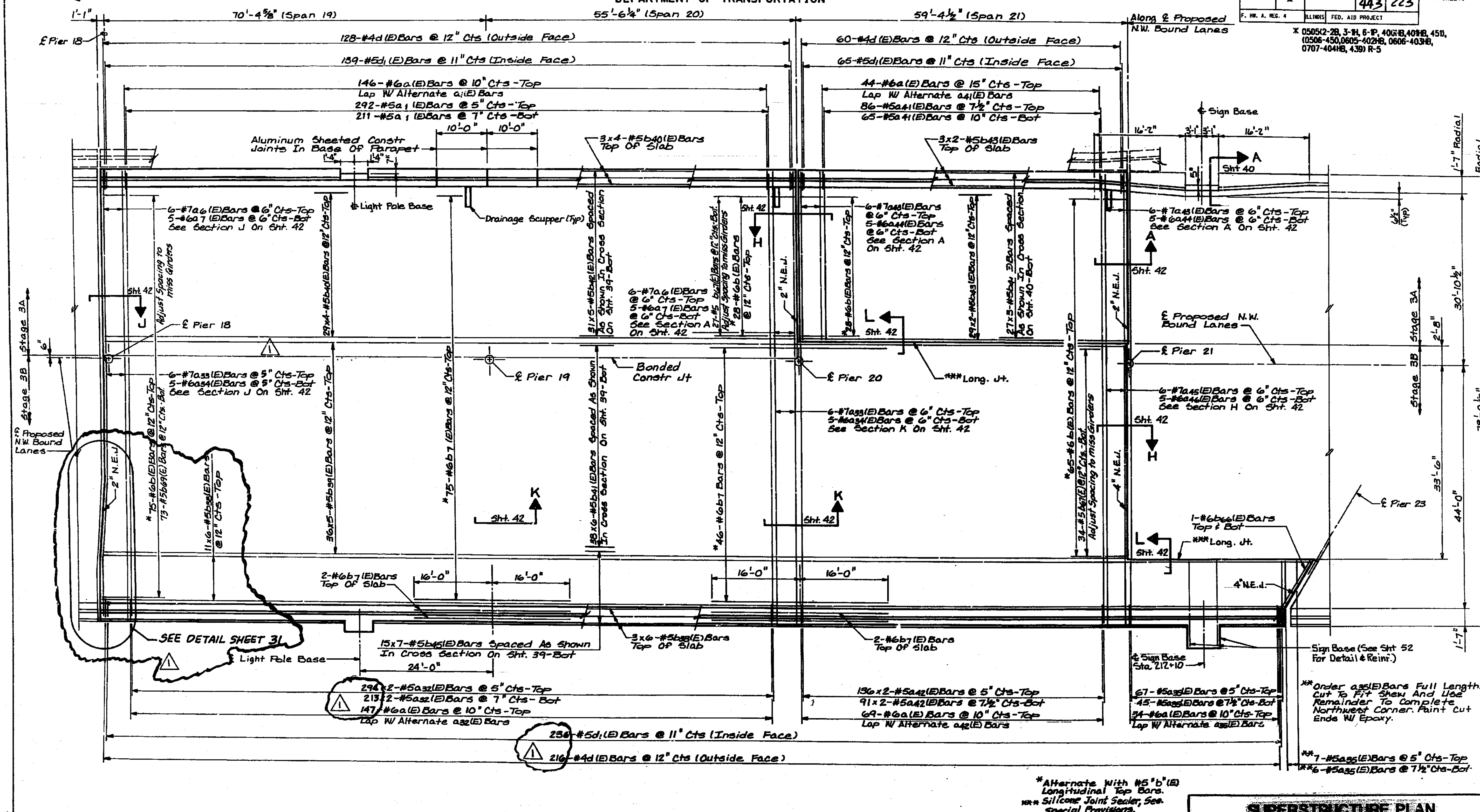
REV. 9-30-93

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 0505(2-2B, 3-1H, 6-1P, 40GHB,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 39 & 40.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 8 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

REV. 9-30-93

730

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

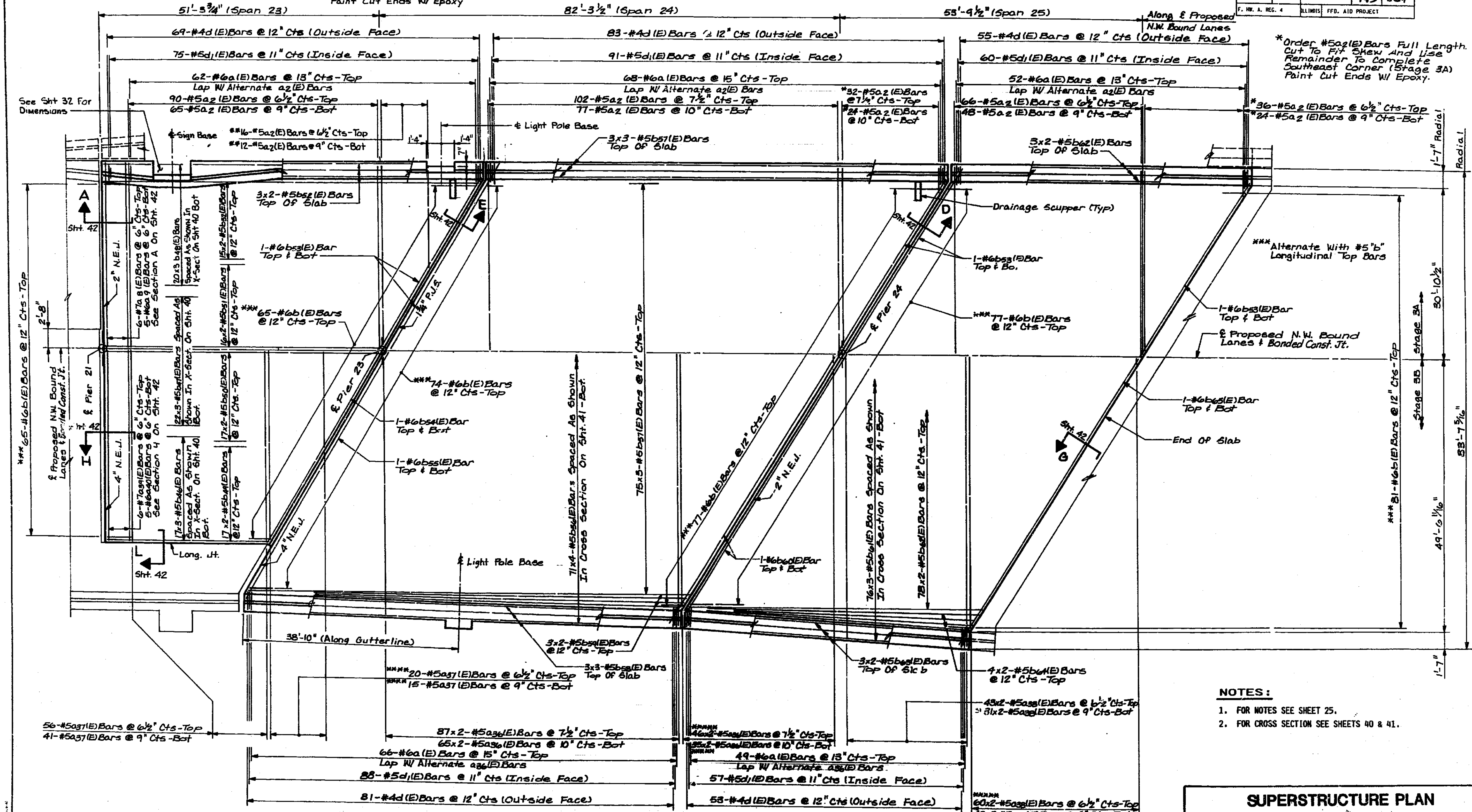
**Order #5a2(E)Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Northwest Corner (Stage 3A) Paint Cut Ends W/ Epoxy

X 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 45D, (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 43I) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	224
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 33
72 SHEETS

*Order #5a2(E)Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Southeast Corner (Stage 3A) Paint Cut Ends W/ Epoxy.



NORTH
51'-3¾" (Span 23)
82'-3½" (Span 24)
53'-9½" (Span 25)
Along ℄ Proposed N.W. Bound Lanes
69-#4d(E)Bars @ 12" Cts (Outside Face)
75-#5d1(E)Bars @ 11" Cts (Inside Face)
62-#6a(E)Bars @ 13" Cts-Top
Lap W/ Alternate a2(E) Bars
90-#5a2(E)Bars @ 6½" Cts-Top
65-#5a2(E)Bars @ 9" Cts-Bot
83-#4d(E)Bars @ 12" Cts (Outside Face)
91-#5d1(E)Bars @ 11" Cts (Inside Face)
68-#6a(E)Bars @ 15" Cts-Top
Lap W/ Alternate a2(E) Bars
102-#5a2(E)Bars @ 7½" Cts-Top
77-#5a2(E)Bars @ 10" Cts-Bot
*32-#5a2(E)Bars @7½" Cts-Top
*24-#5a2(E)Bars @10" Cts-Bot
55-#4d(E)Bars @ 12" Cts (Outside Face)
60-#5d1(E)Bars @ 11" Cts (Inside Face)
52-#6a(E)Bars @ 13" Cts-Top
Lap W/ Alternate a2(E) Bars
66-#5a2(E)Bars @ 6½" Cts-Top
48-#5a2(E)Bars @ 9" Cts-Bot
*36-#5a2(E)Bars @ 6½" Cts-Top
*24-#5a2(E)Bars @ 9" Cts-Bot
See Sht 32 For Dimensions
℄ Sign Base
**16-#5a2(E)Bars @ 6½" Cts-Top
**12-#5a2(E)Bars @ 9" Cts-Bot
℄ Light Pole Base
3x3-#5b57(E)Bars Top Of Slab
3x2-#5b62(E)Bars Top Of Slab
3x2-#5b52(E)Bars Top Of Slab
Drainage Scupper (Typ)
1-#6b53(E)Bar Top & Bot
1-#6b53(E)Bar Top & Bo.
***65-#6b(E)Bars @ 12" Cts-Top
***77-#6b(E)Bars @ 12" Cts-Top
***Alternate With #5"b" Longitudinal Top Bars
1-#6b53(E)Bar Top & Bot
℄ Proposed N.W. Bound Lanes & Bonded Const. Jt.
***74-#6b(E)Bars @ 12" Cts-Top
1-#6b54(E)Bar Top & Bot
1-#6b55(E)Bar Top & Bot
1-#6b65(E)Bar Top & Bot
End Of Slab
℄ Pier 23
℄ Pier 24
℄ Pier 21
2" N.E.J.
4" N.E.J.
1¾" P.J.S.
***65-#6b(E)Bars @ 12" Cts-Top
***81-#6b(E)Bars @ 12" Cts-Top
71x4-#5b66(E)Bars Spaced As Shown In Cross Section On Sht. 41-Bot.
75x5-#5b71(E)Bars @ 12" Cts-Top
***77-#6b(E)Bars @ 12" Cts-Top
1-#6b60(E)Bar Top & Bot
76x3-#5b61(E)Bars Spaced As Shown In Cross Section On Sht. 41-Bot
78x2-#5b68(E)Bars @ 12" Cts-Top
℄ Light Pole Base
Long. Jt.
Sht. 42
38'-10" (Along Gutterline)
3x2-#5b59(E)Bars @ 12" Cts-Top
3x3-#5b58(E)Bars Top Of Slab
3x2-#5b60(E)Bars Top Of Slab
4x2-#5b64(E)Bars @ 12" Cts-Top
****20-#5a37(E)Bars @ 6½" Cts-Top
****15-#5a37(E)Bars @ 9" Cts-Bot
56-#5a37(E)Bars @ 6½" Cts-Top
41-#5a37(E)Bars @ 9" Cts-Bot
87x2-#5a36(E)Bars @ 7½" Cts-Top
65x2-#5a36(E)Bars @ 10" Cts-Bot
66-#6a(E)Bars @ 15" Cts-Top
Lap W/ Alternate a36(E) Bars
88-#5d1(E)Bars @ 11" Cts (Inside Face)
81-#4d(E)Bars @ 12" Cts (Outside Face)
49-#6a(E)Bars @ 13" Cts-Top
Lap W/ Alternate a38(E) Bars
57-#5d1(E)Bars @ 11" Cts (Inside Face)
58-#4d(E)Bars @ 12" Cts (Outside Face)
43x2-#5a38(E)Bars @ 6½" Cts-Top
31x2-#5a38(E)Bars @ 9" Cts-Bot
*****60x2-#5a38(E)Bars @ 6½" Cts-Top
43x2-#5a38(E)Bars @ 9" Cts-Bot
30'-10½"
33'-7⁵⁄₁₆"
49'-6¹¹⁄₁₆"
1'-7" Radial
1'-7"
Stage 3A
Stage 3B

****Order #5a36(E)Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Northwest Corner (Stage 3B) Paint Cut Ends W/ Epoxy.

PLAN

*****Order #6 "a" (E)Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Southeast Corner (Stage 3B) Paint Cut Ends W/ Epoxy.

NOTES:

1. FOR NOTES SEE SHEET 25.
2. FOR CROSS SECTION SEE SHEETS 40 & 41.

STANLEY CONSULTANTS

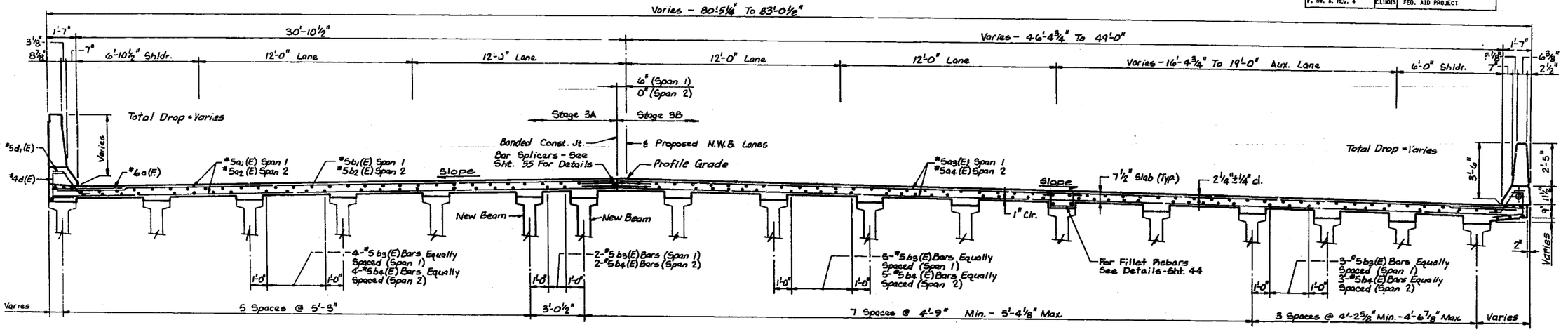
SUPERSTRUCTURE PLAN
SHEET 8 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

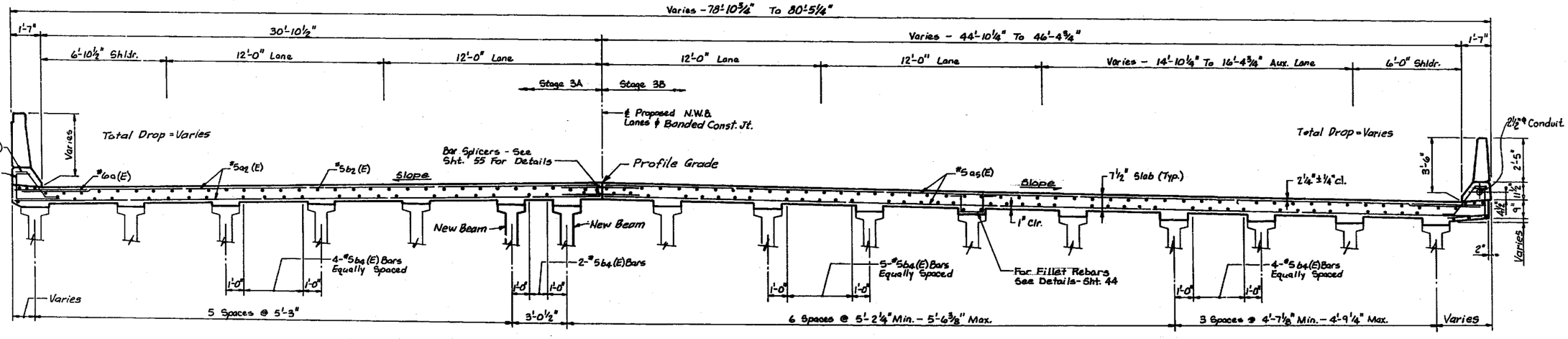
X 0505(2-2B, 3-1H, 6-1P, 400HB, 403HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	225
F. HW. A. REG. 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

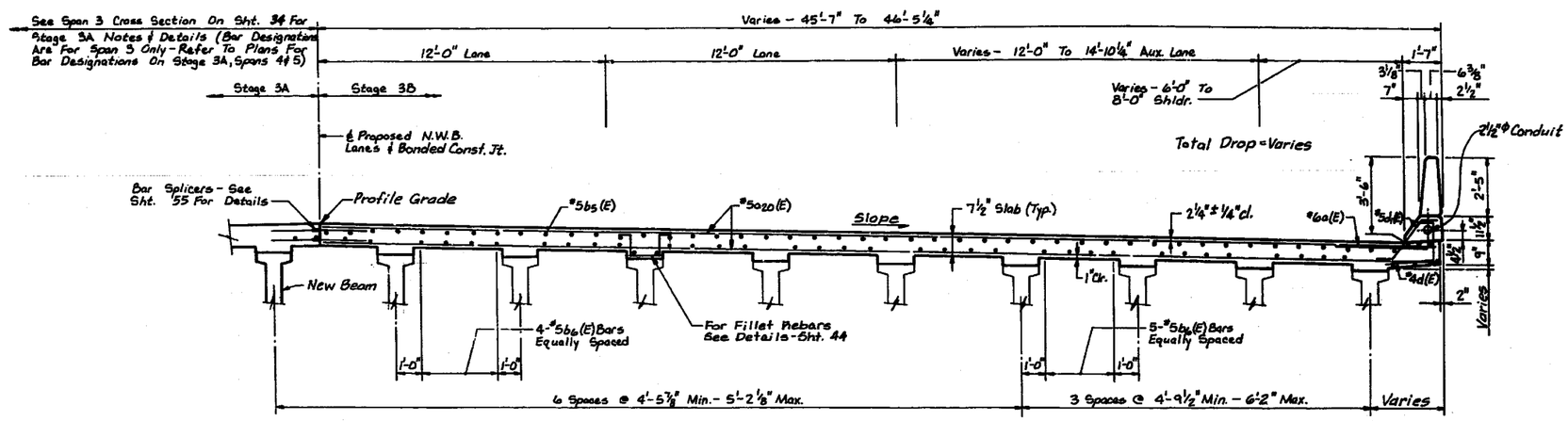
SUPERSTRUCTURE CROSS SECTIONS
SHEET 1 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

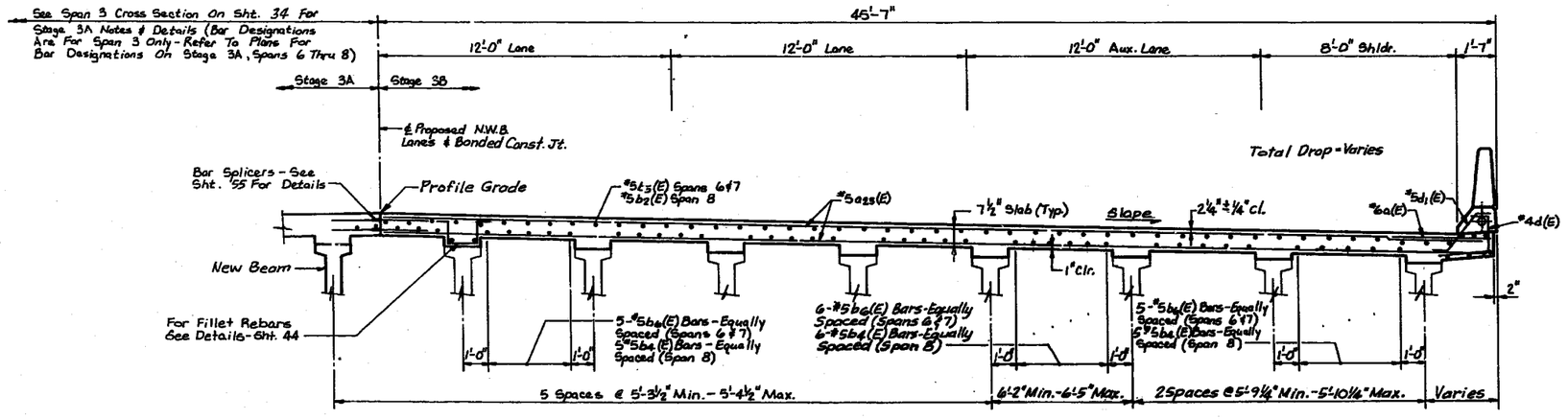
X 050512-2B, 3-1H, 6-1P, 4001HB, 4011HB, 451, (IC)06-450, 0605-402HB, 0606-403HB, 0707-404HB, 4301 R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	226
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 35
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

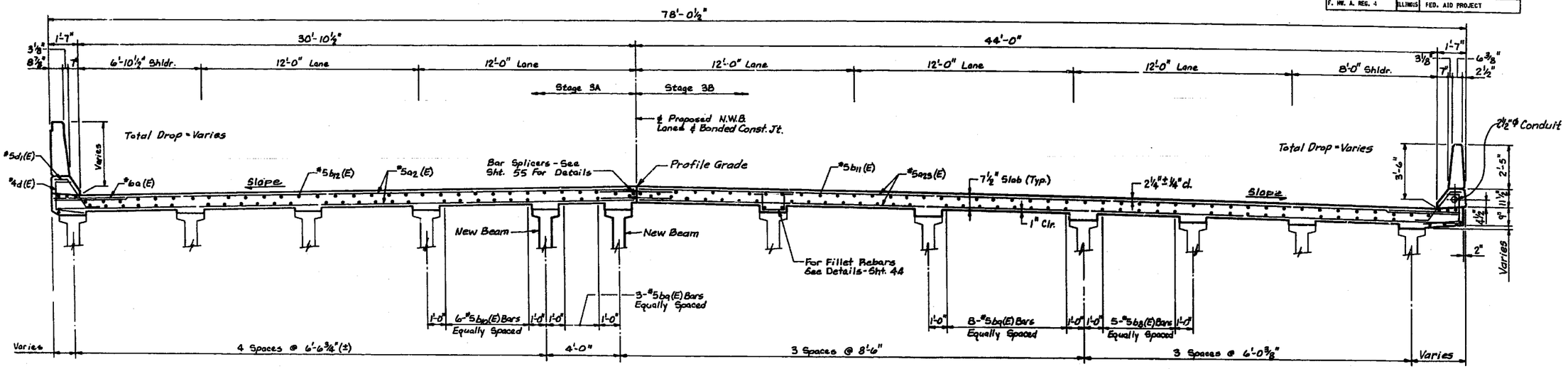
733

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

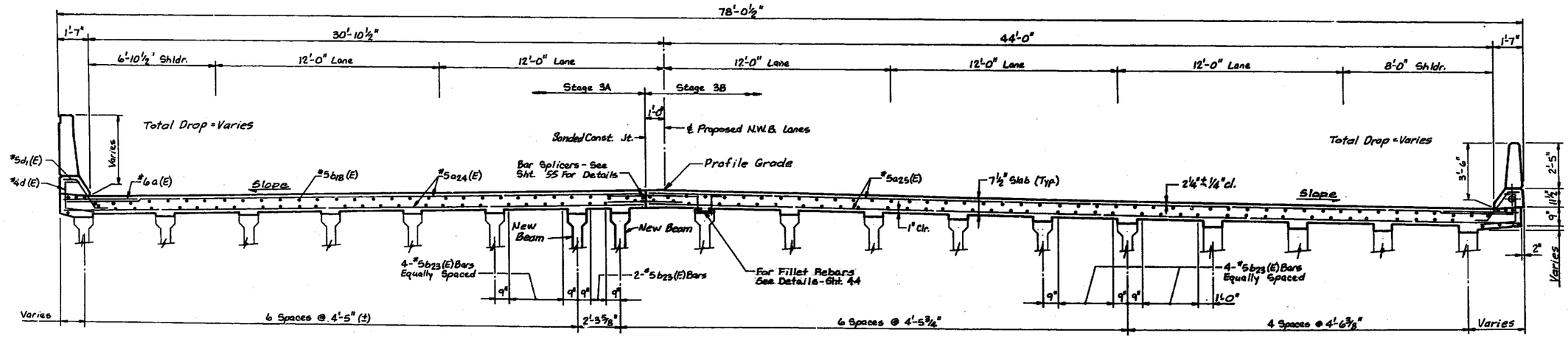
X 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 430 R-5

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	227
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3G
72 SHEETS



CROSS SECTION - SPAN 10
(Looking Up Station)



CROSS SECTION - SPAN 11
(Looking Up Station)

NOTE:
1.. FOR NOTES SEE SHEET 34.

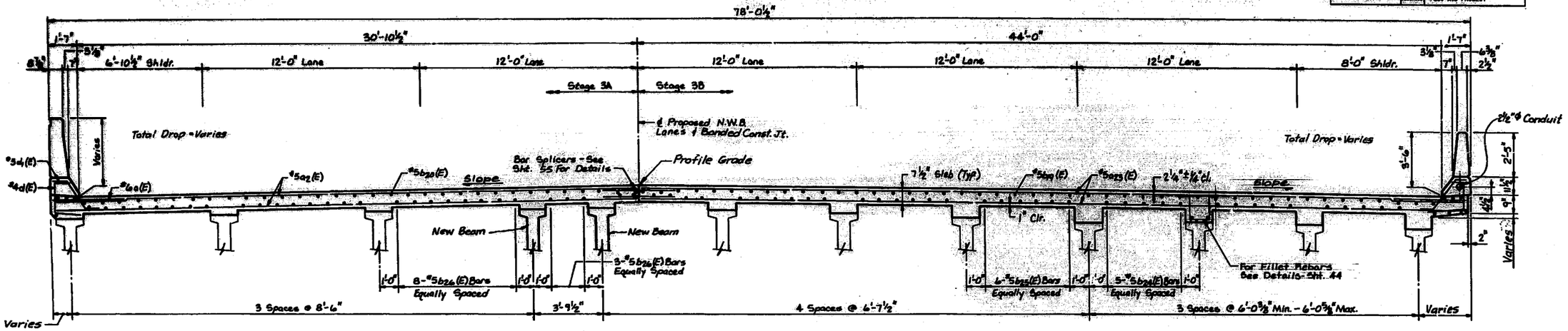
STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTIONS
SHEET 3 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

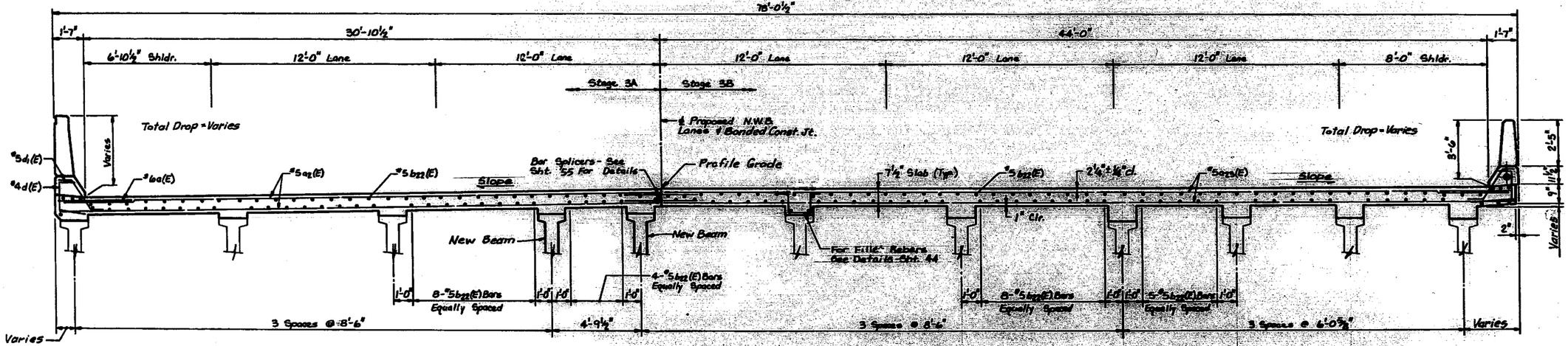
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	228
F. AID I. RTE. 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 39.

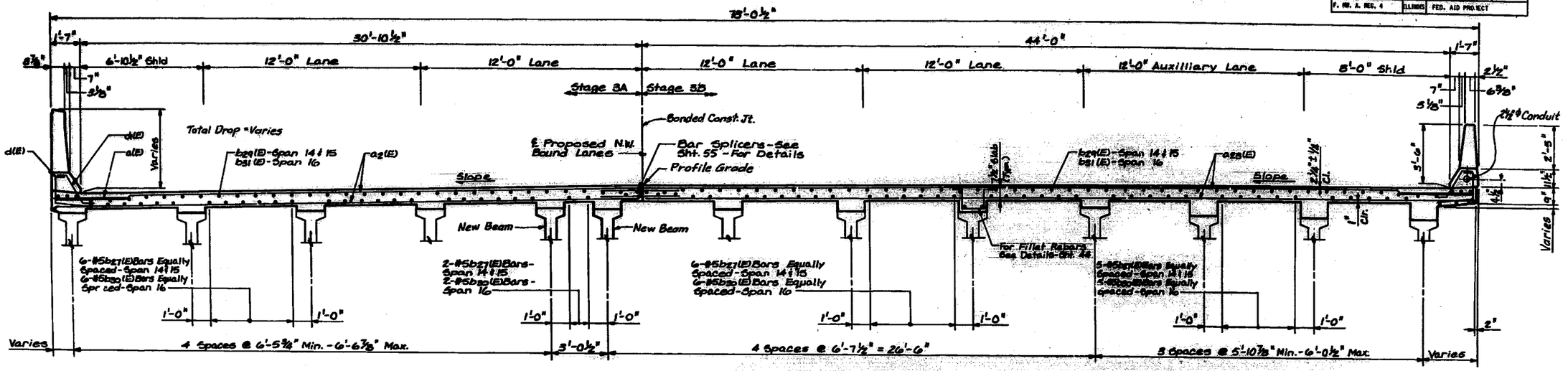
STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTIONS
SHEET 8 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION

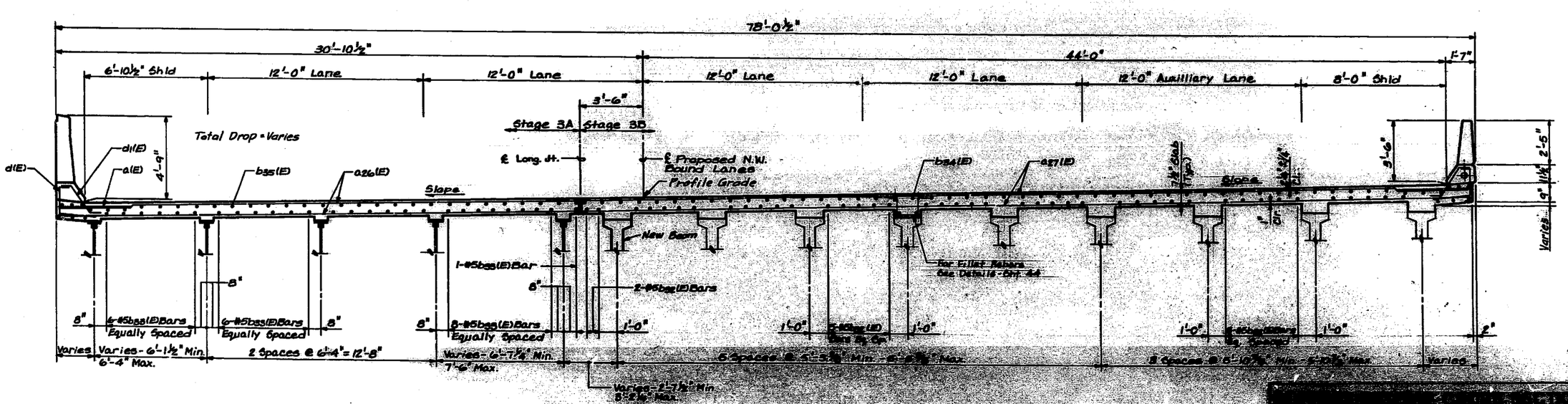
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
			443	229
F. AID. A. 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.

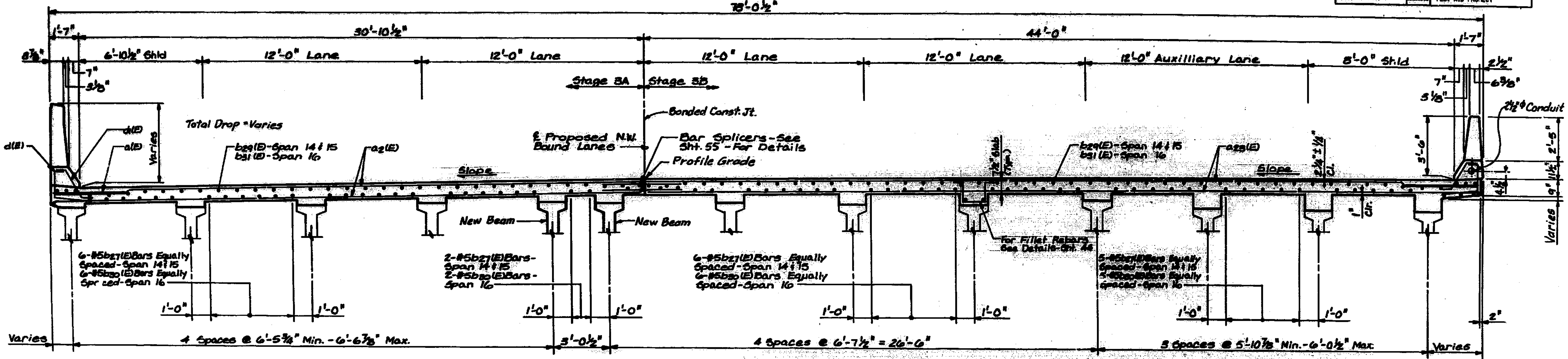
STANLEY CONSULTANTS

[redacted]
SHEET OF
[redacted]
F.A.I. ROUTE [redacted] OAKLAND AVENUE
[redacted]

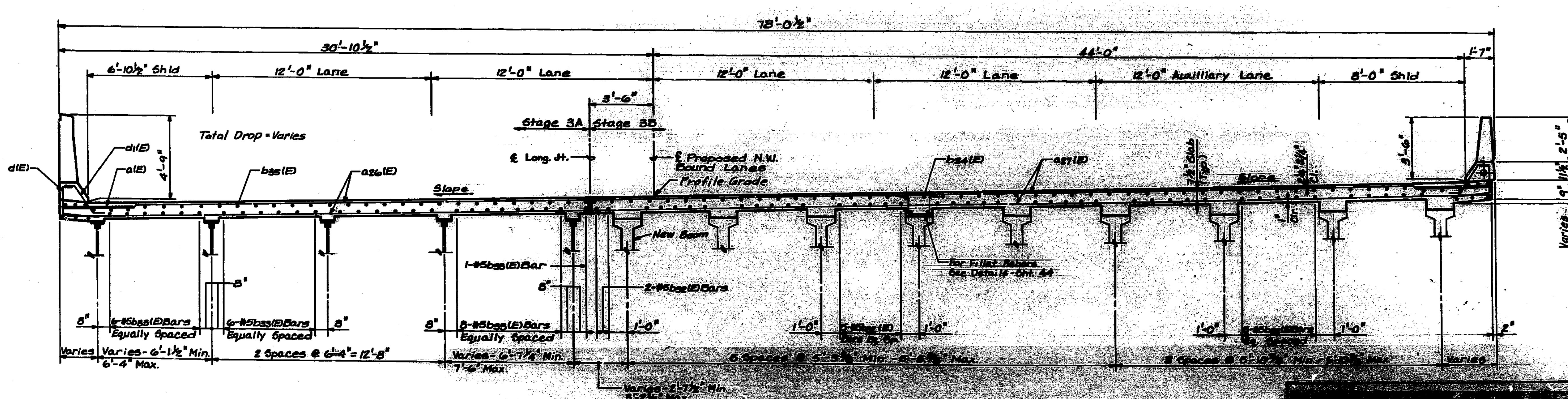
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 38
72 SHEETS

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
			443	229
F. HR. A. REG. 4	ILLINOIS	FED. AID PROJECT		



CROSS SECTION - SPANS 14 THRU 16
(Looking Up Station)



NOTE:
1. FOR NOTES SEE SHEET 34.

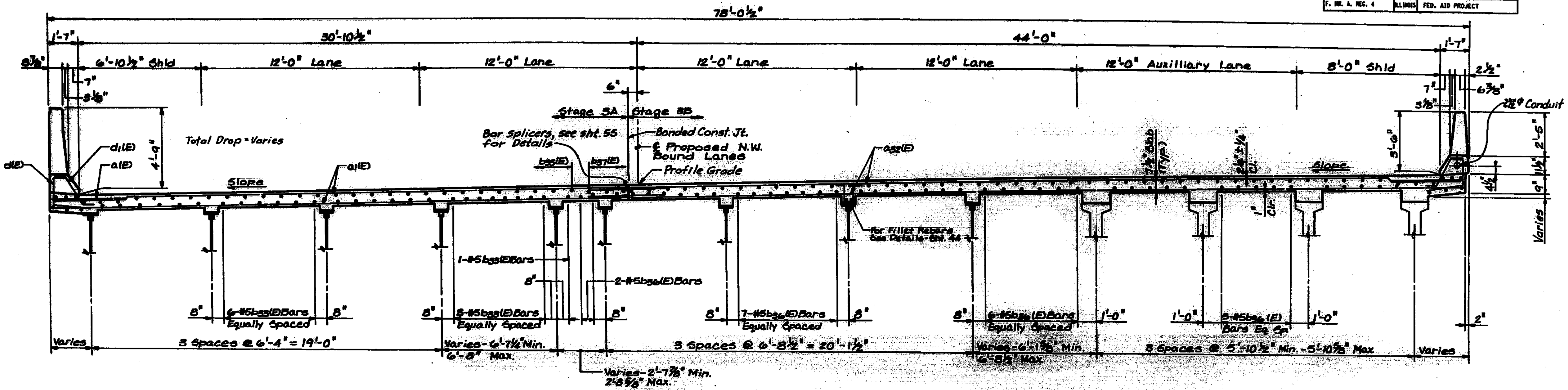
CROSS SECTION - SPAN 17
(Looking Up Station)

STANLEY CONSULTANTS

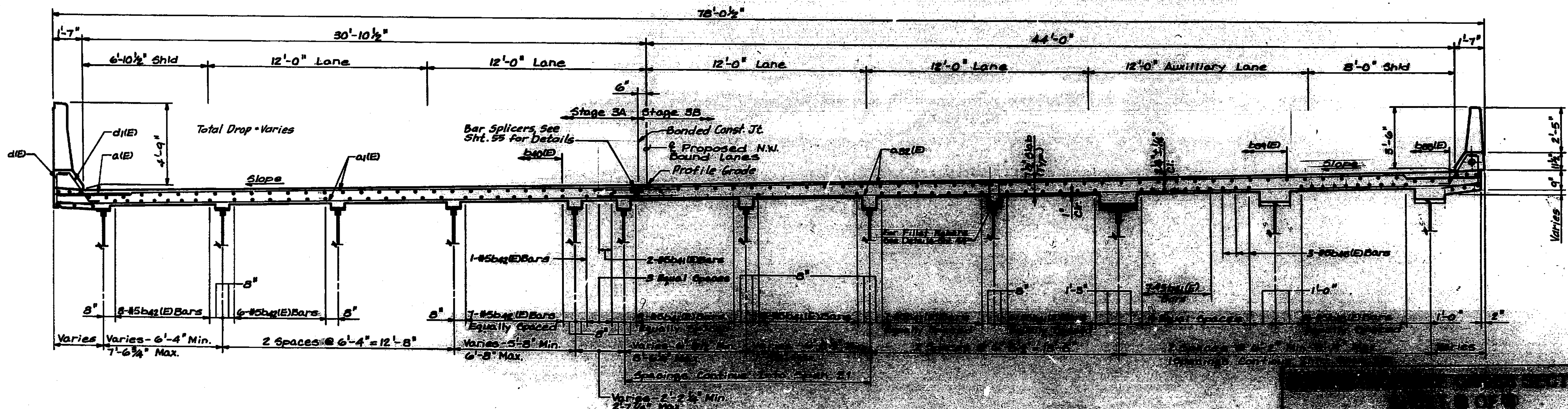
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	230
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 39
72 SHEETS



CROSS SECTION-SPAN 18
(Looking Up Station)



NOTE:
1. FOR NOTES SEE SHEET 38.

CROSS SECTION-SPAN 19 & SPAN 20
(Looking Up Station)

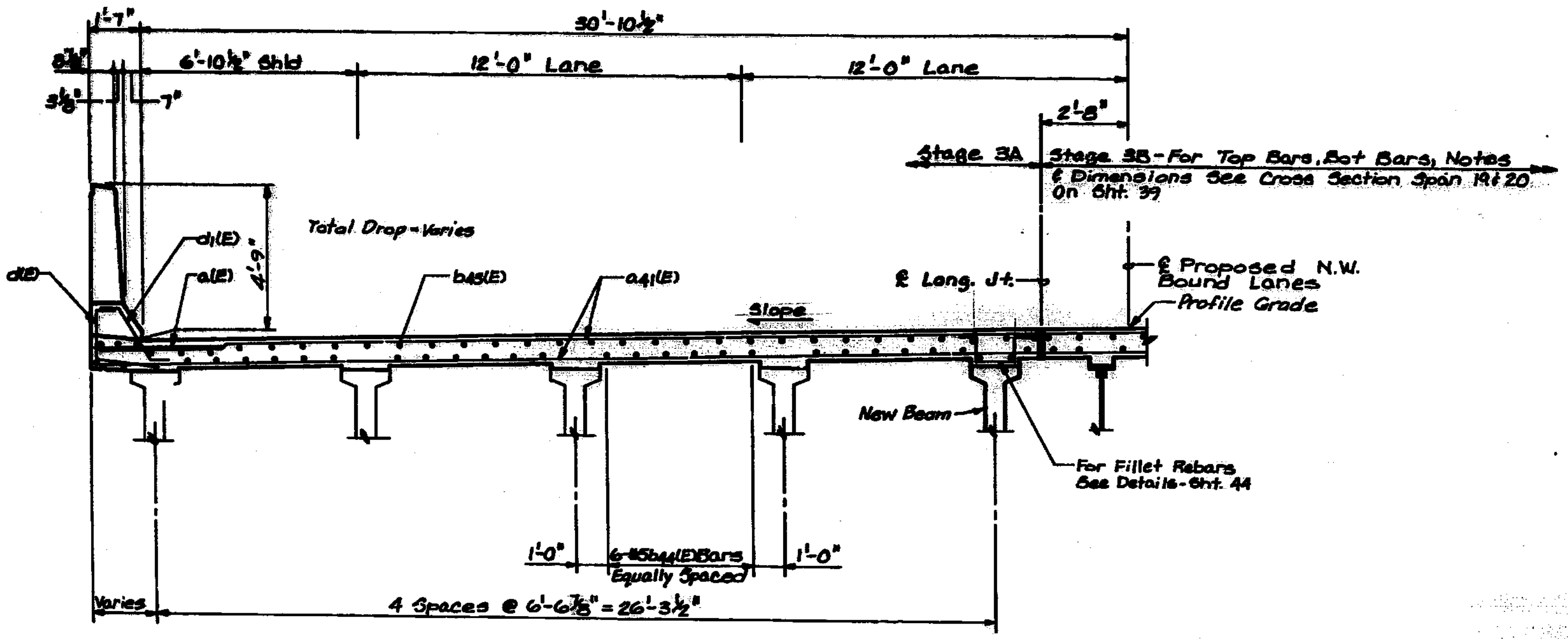
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

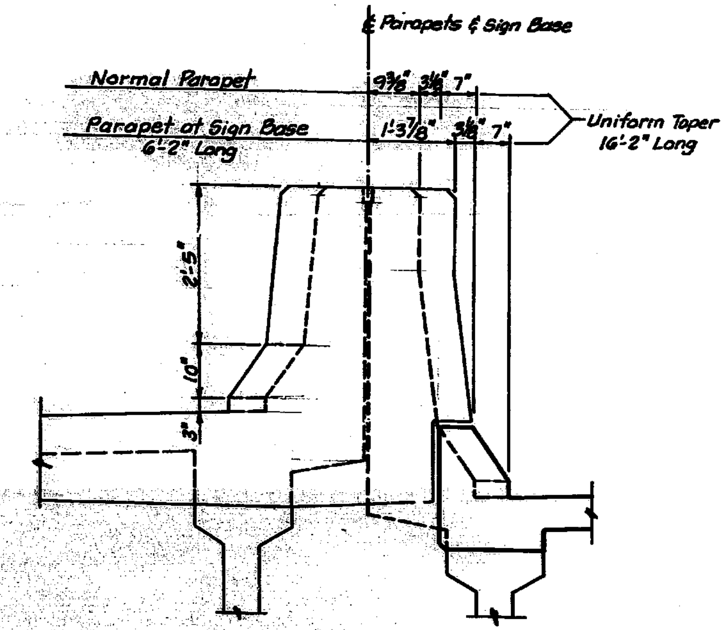
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	231
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 40
72 SHEETS

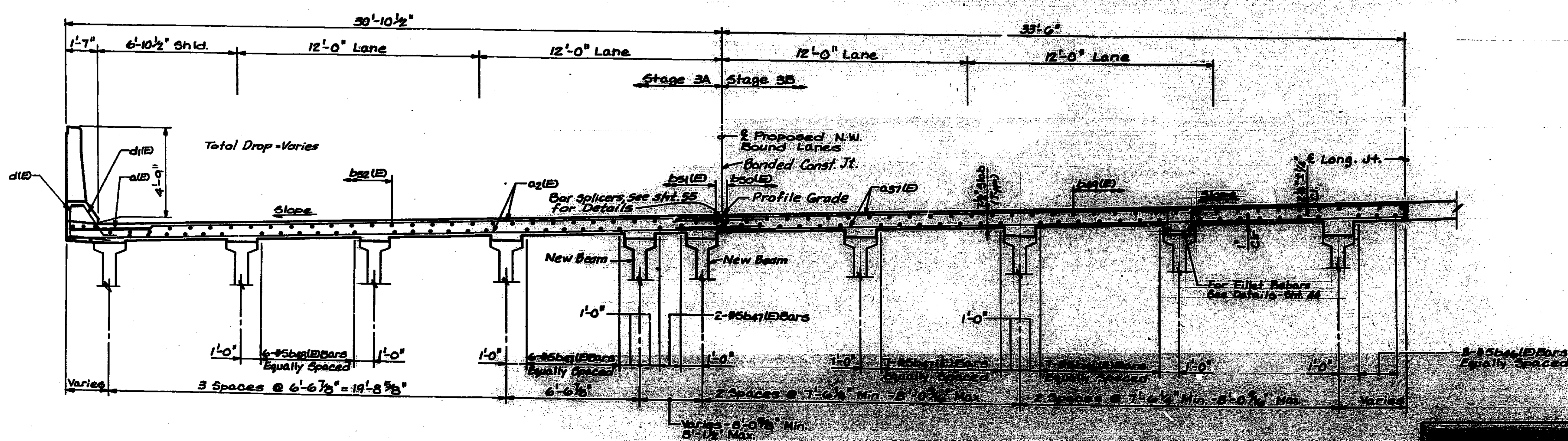
* 0505(2-2B, 3-1H, 6-7P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HG, 0707-404HB, 439) R-5



CROSS SECTION-SPAN 21
(Looking Up Station)



SECTION A
Sht. 32



NOTE:
1. FOR NOTES SEE SHEET 34.

CROSS SECTION-SPAN 23
(Looking Up Station)

STANLEY CONSULTANTS

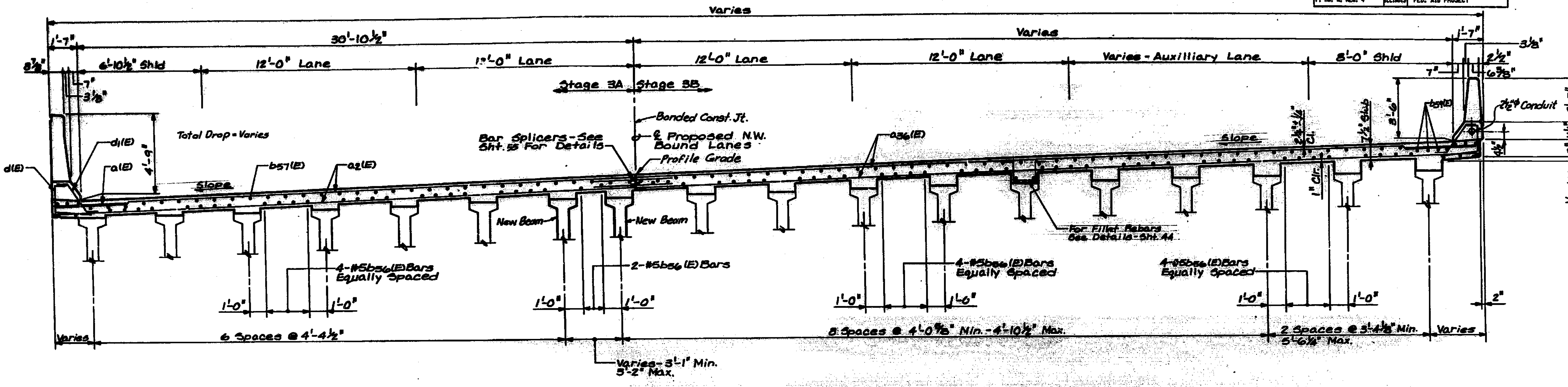
[illegible] SECTIONS
[illegible] AVENUE
[illegible] COUNTY

X 0505(2-2R, 3-1R, 6-1P, 400HB-401HB, 450, 0506-450, 0805-402HB, 0806-403HB, 0707-404HB, 430) R-5

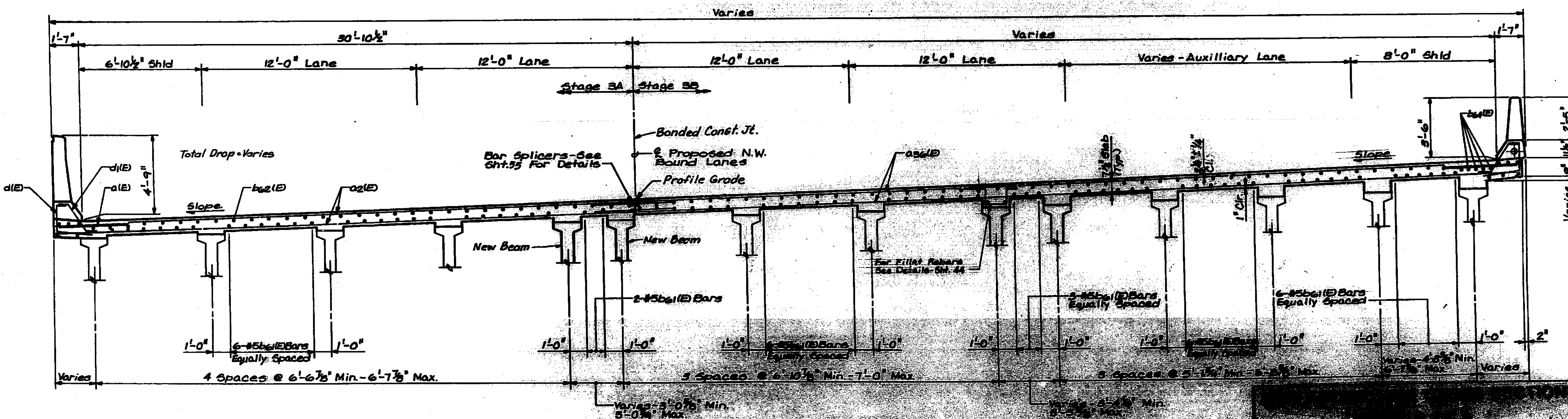
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	232
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 41
72 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



CROSS SECTION-SPAN 24
(Looking Up Station)



CROSS SECTION-SPAN 25
(Looking Up Station)

NOTE:
1. FOR NOTES SEE SHEET 34.

F.A.I. ROUTE ... OVER ASHLAND AVENUE
COOK COUNTY
STATION ...

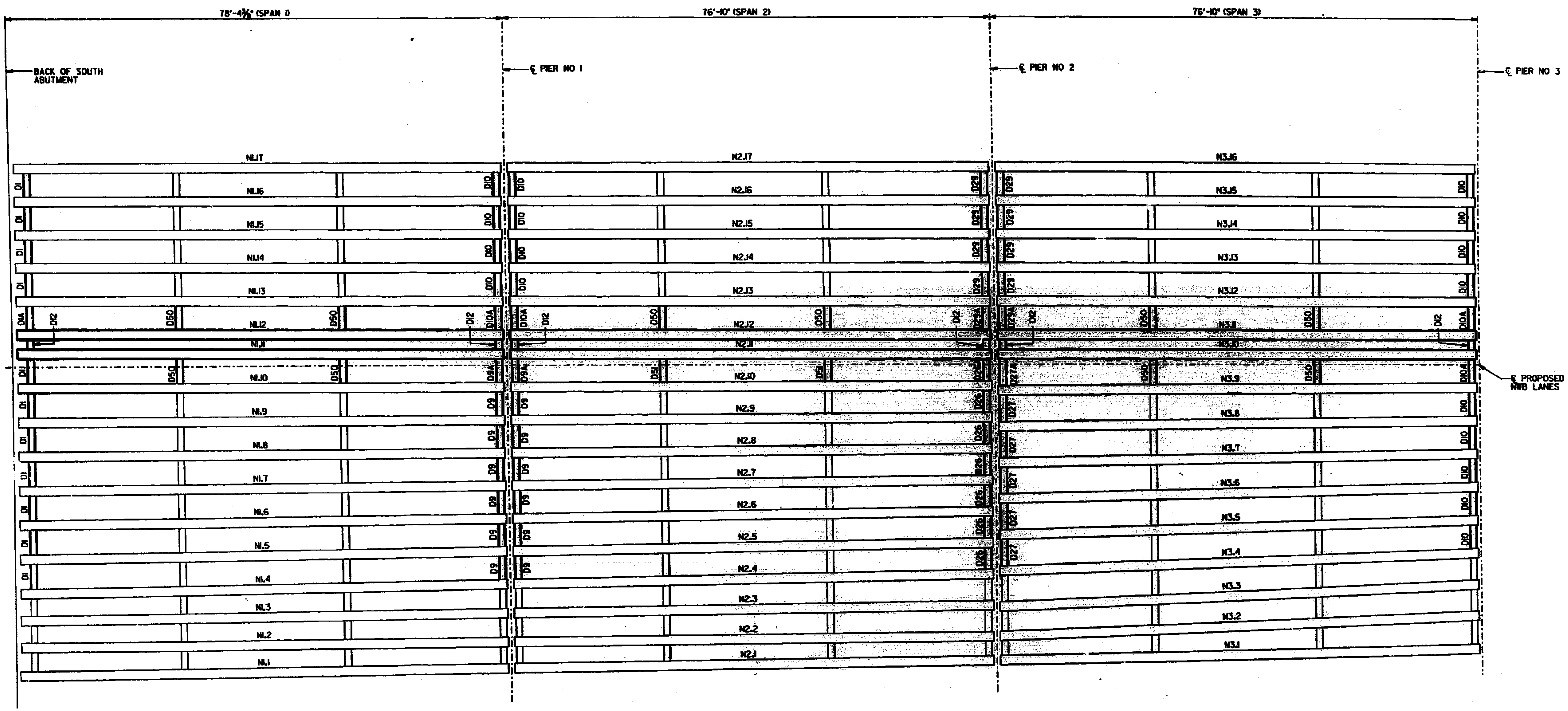
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	232A

SHEET NO. 41a
72 SHEETS

* 0505(2-2R), 3-H, 6-IP, 400HB, 40HB, 45R, (0506-45D, 0505-402HB, 0506-403HB, 0707-404HB, 435HR-5



BEAM AND DIAPHRAGM REPLACEMENT PLAN
SHEET 1 OF 9

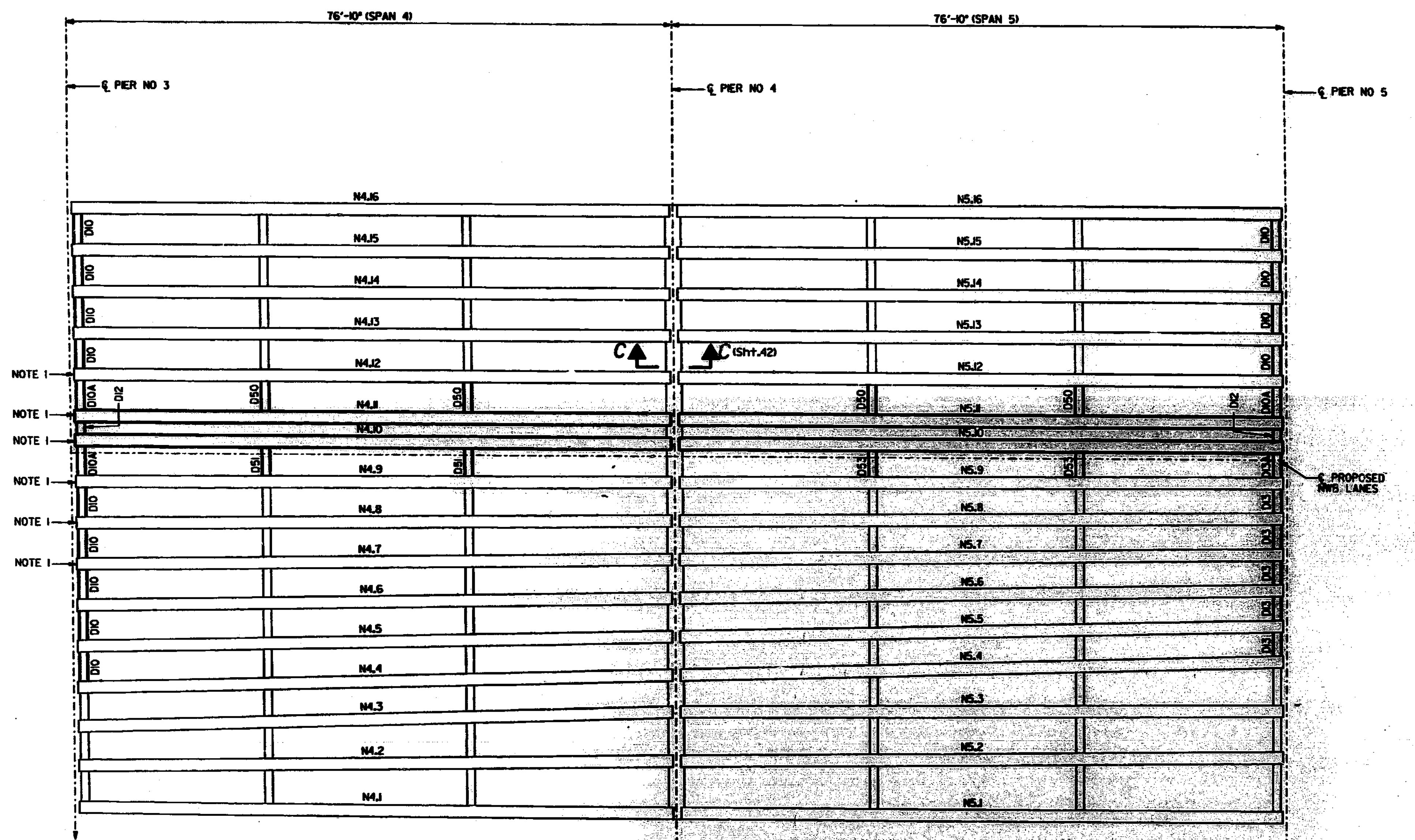
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	443	232B
		ILLINOIS		

SHEET NO. 41b
72 SHEETS

* 0505(2-28, 3-H, 6-P, 400HB, 40HB, 45R, 0505-450, 0605-402HB, 0606-403HB, 0707-404HB, 439R-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

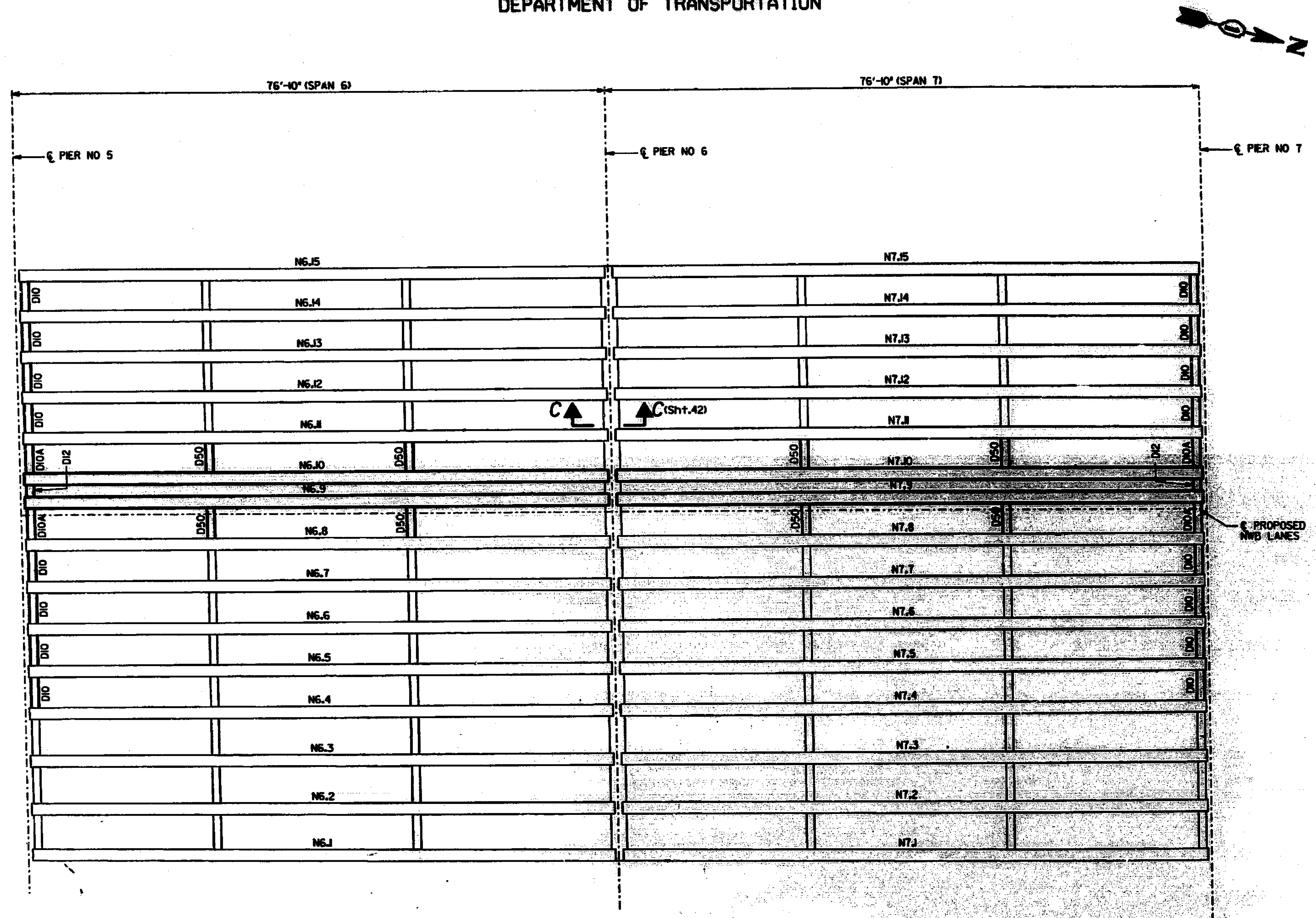
REV. 9-30-93

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	443	232C
		ILLINOIS		

SHEET NO. 41c
72 SHEETS

* 0505(2-2B, 3-H, 6-P, 400HB, 40HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 4399R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BEAM AND DIAPHRAGM REPLACEMENT PLAN SHEET 3 OF 9

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

COOK COUNTY

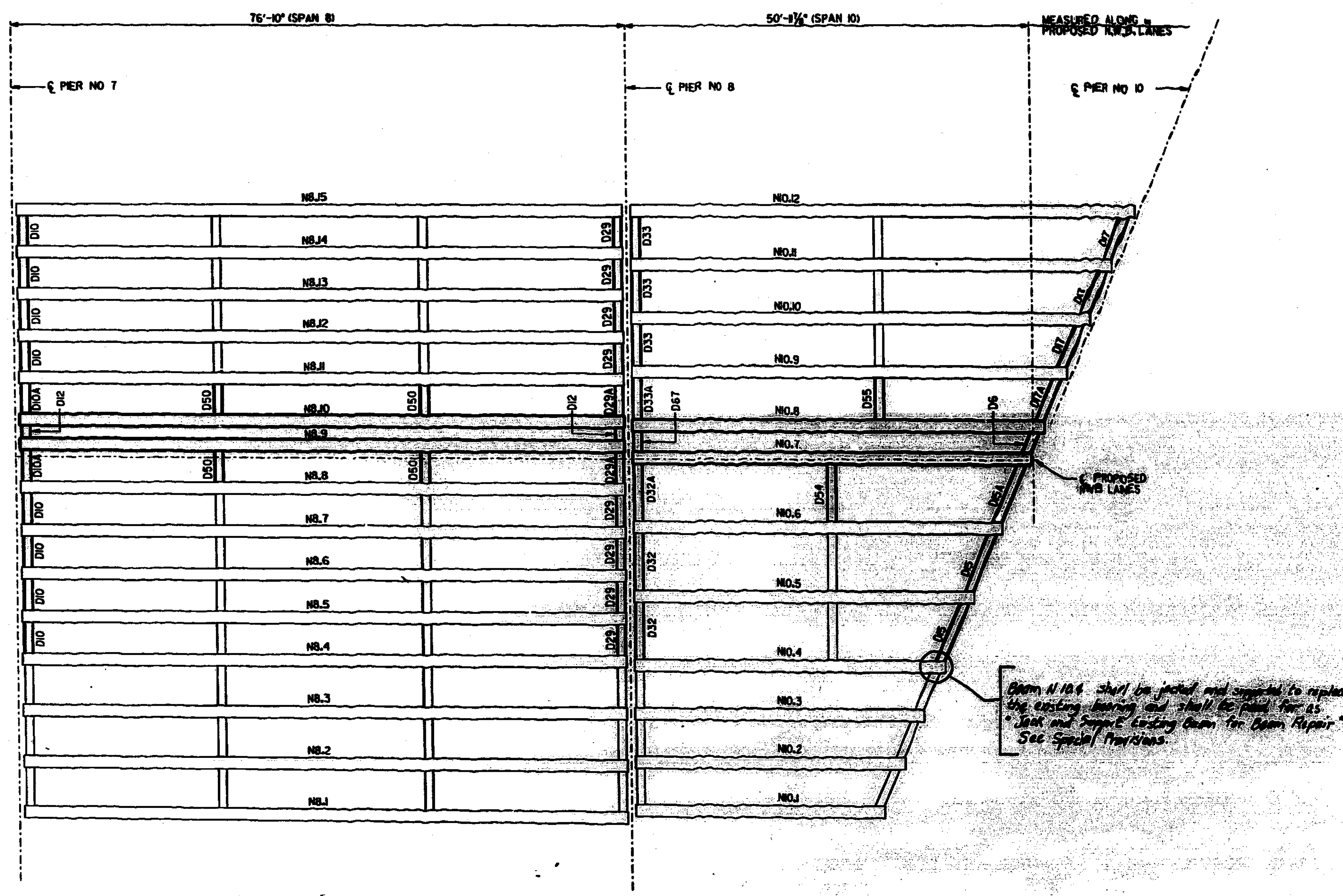
STATION 409+49

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	443	232 D
		ILLINOIS		

SHEET NO. 41d
72 SHEETS

* 0505(2-2R), 1-H, 6-P, 400HB, 40HB, 450, 0505-450, 0605-402HB, 0606-403HB, 0707-404HB, 4390R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SHEET 4 OF 9

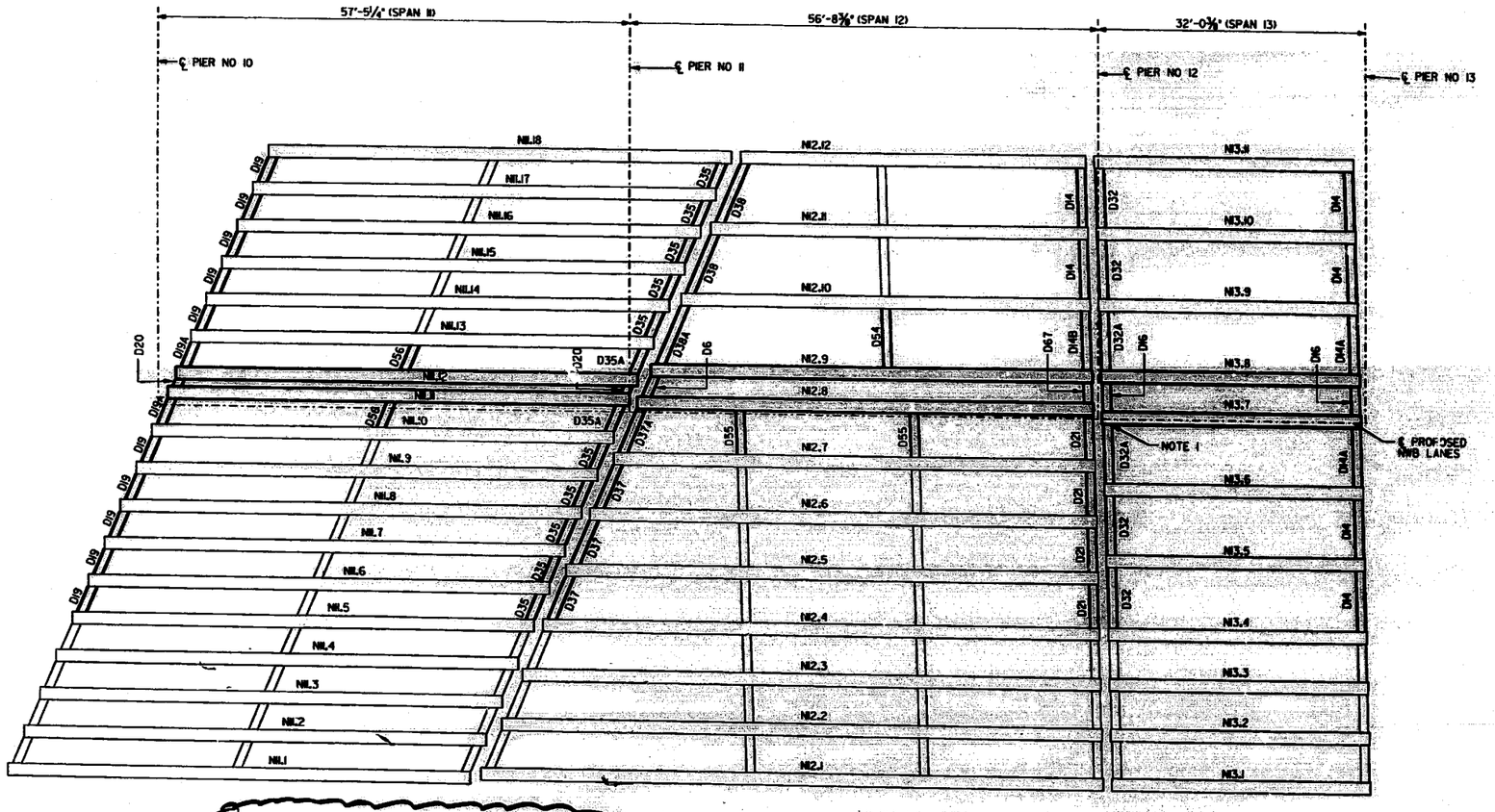
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	443	232 E
		ILLINOIS		

SHEET NO. 41e
72 SHEETS

* 05052-2B, 3-IN, 6-IP, 400HB, 401HB, 458, 0506-401, 0505-402HB, 0606-403HB, 0707-404HB, 439M-5



NOTE 1: PIER CAP REPAIR AT DESIGNATED BEAM BEARINGS. TO BE PAID FOR AS "FORMED CONCRETE REPAIR."

BEAM AND DIAPHRAGM REPLACEMENT PLAN SHEET 5 OF 9

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 489+49

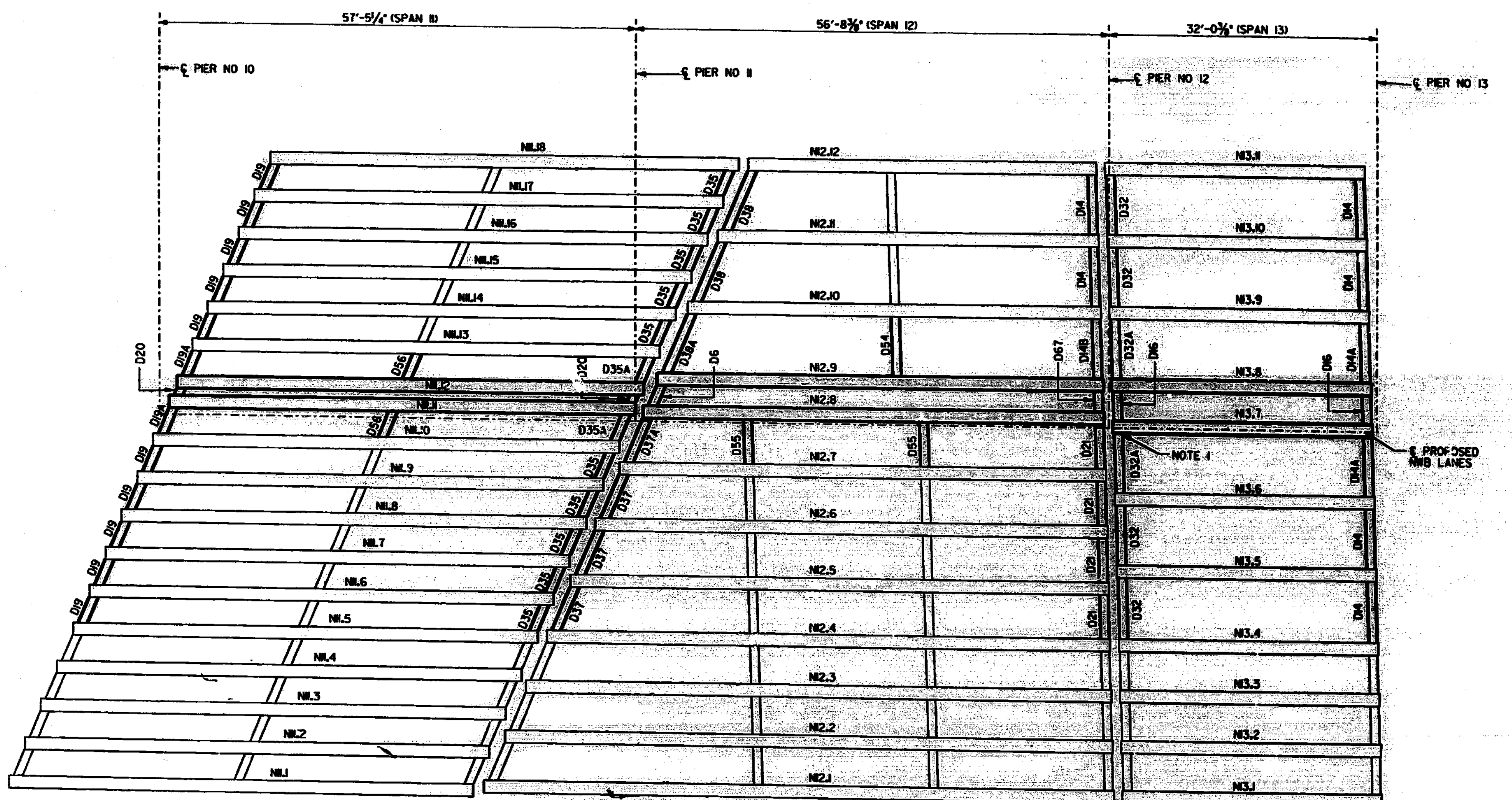
1 REV. 9-30-93

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	232E
		ILLINOIS		

SHEET NO. 41e
72 SHEETS

* 0505(2-2B, 3-H, 6-P, 400HB, 401HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439R-5



NOTE 1: PIER CAP REPAIR AT DESIGNATED BEAM BEARINGS. TO BE PAID FOR AS "FORMED CONCRETE REPAIR."

BEAM AND DIAPHRAGM REPLACEMENT PLAN
SHEET 5 OF 9

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

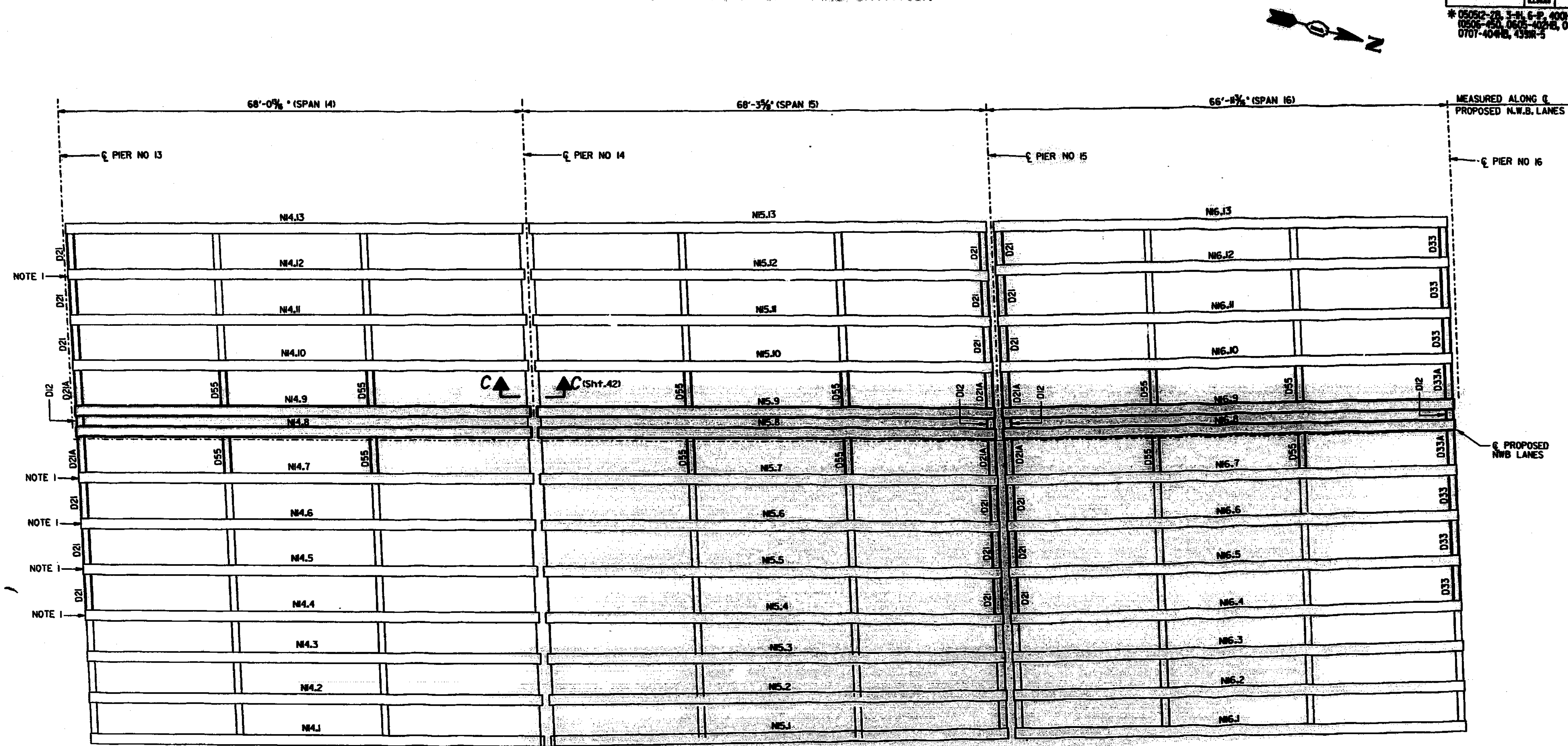
REV. 9-30-93

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	443	232F
		ILLINOIS		

SHEET NO. 41f
72 SHEETS

* 0505(2-2R, 3-H, 6-P, 400HB, 40HB, 45B, (0506-45D, 0605-402HB, 0606-403HB, 0707-404HB, 439R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTE 1: PIER CAP REPAIR AT DESIGNATED BEAM BEARINGS. TO BE PAID FOR AS "FORMED CONCRETE REPAIR."

⚠1

BEAM AND DIAPHRAGM REPLACEMENT PLAN
SHEET 6 OF 9

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 489+49

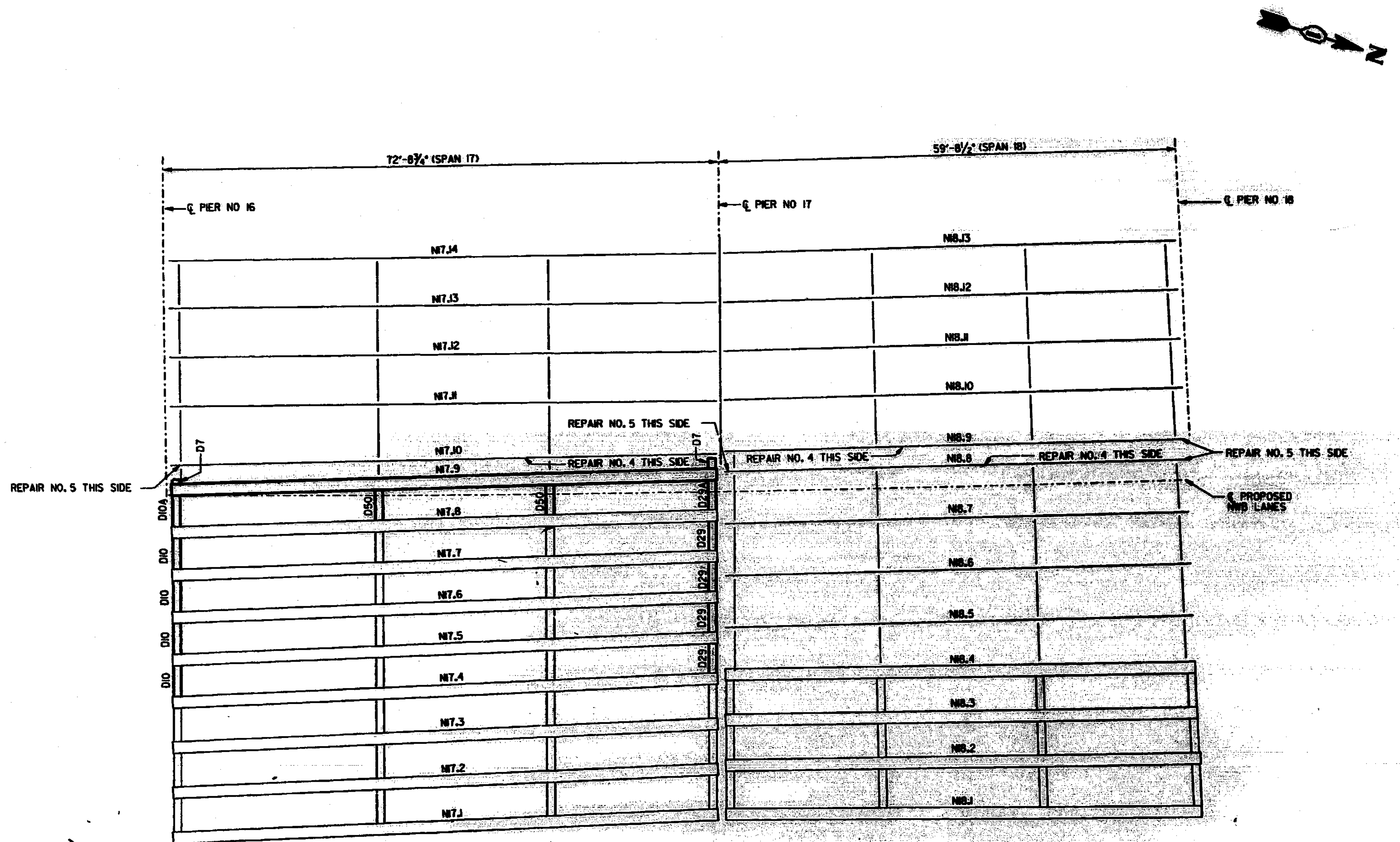
⚠1 REV. 9-30-93

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	232G
	ILLINOIS			

SHEET NO. 41g
72 SHEETS

* 050502-2R, 3-H, 6-IP, 400HB, 40HB, 450, 00506-450, 0605-402HPL, 0606-403HB, 0707-404HB, 439R-5



NOTES:

1. FOR BEAM REPAIR DETAILS SEE SHEET 63b.

BEAM AND DIAPHRAGM REPLACEMENT PLAN
SHEET 7 OF 9

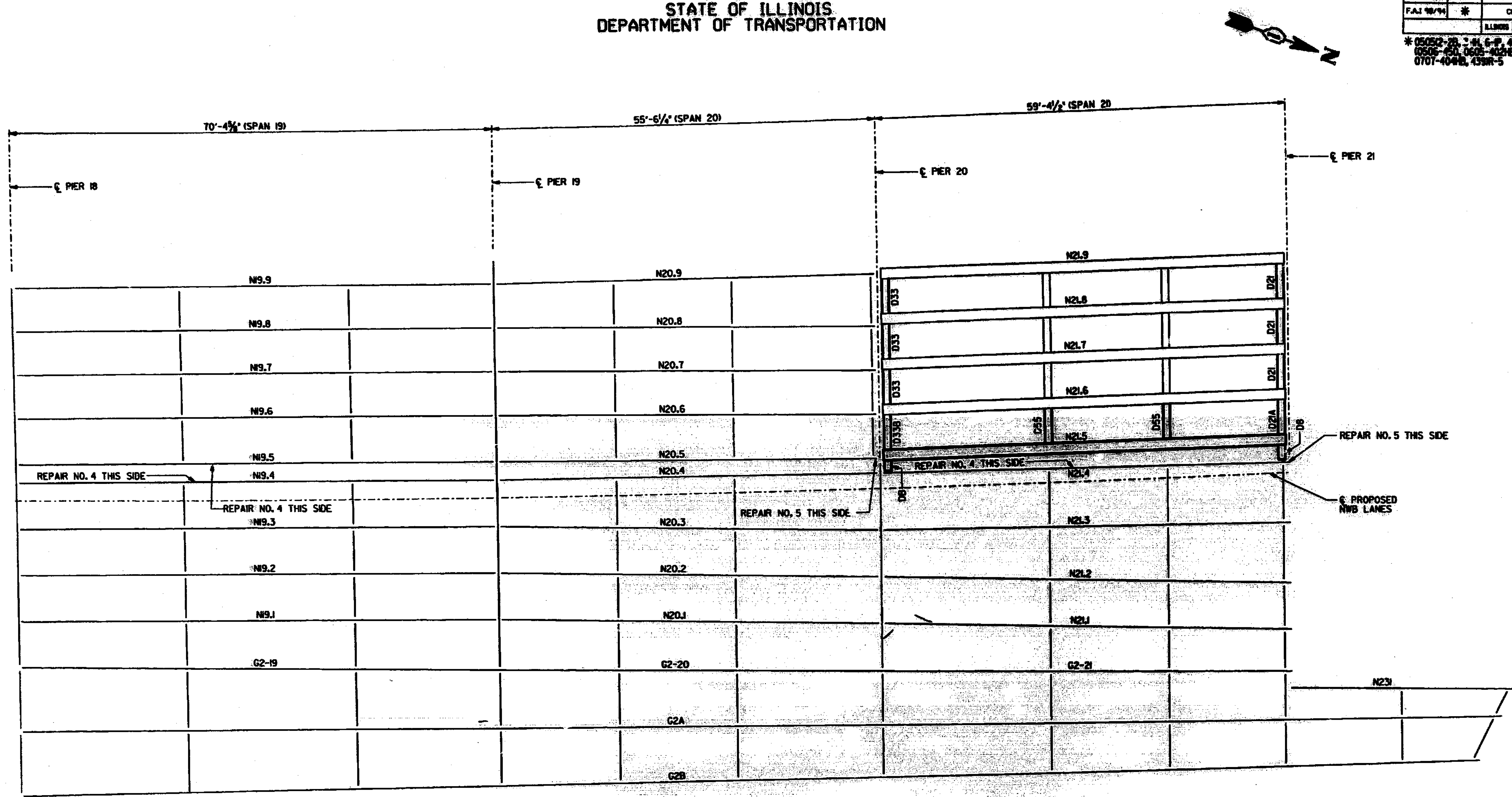
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	443	232A
		ILLINOIS		

SHEET NO.41h
72 SHEETS

* 0505(2-2B, 3-4)I, 6-IP, 400HB, 401HB, 45I, 00506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439IR-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NOTES:

1. FOR BEAM REPAIR DETAILS SEE SHEET 63b.

BEAM AND DIAPHRAGM REPLACEMENT PLAN SHEET 8 OF 9

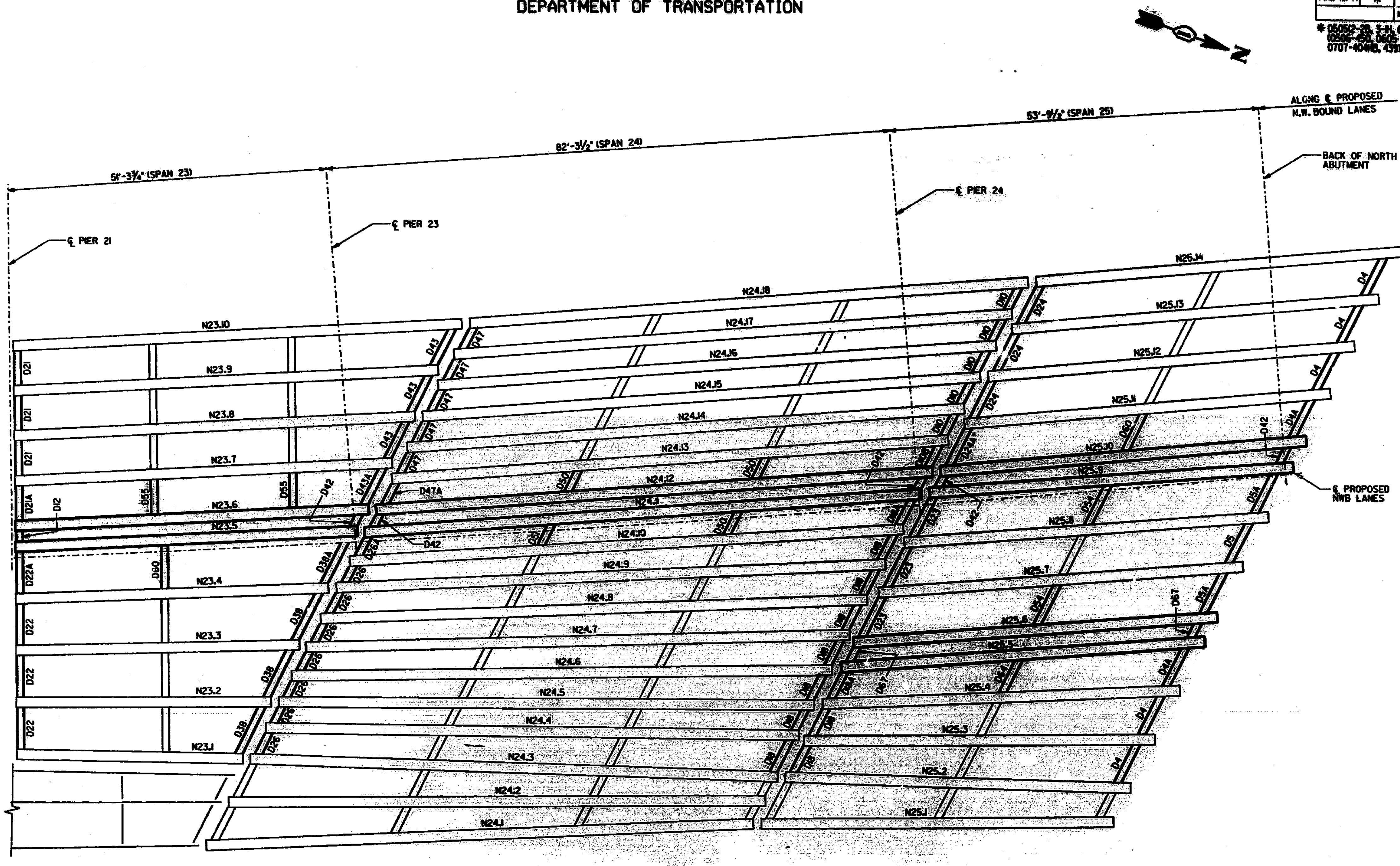
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	232 I
		ILLINOIS		

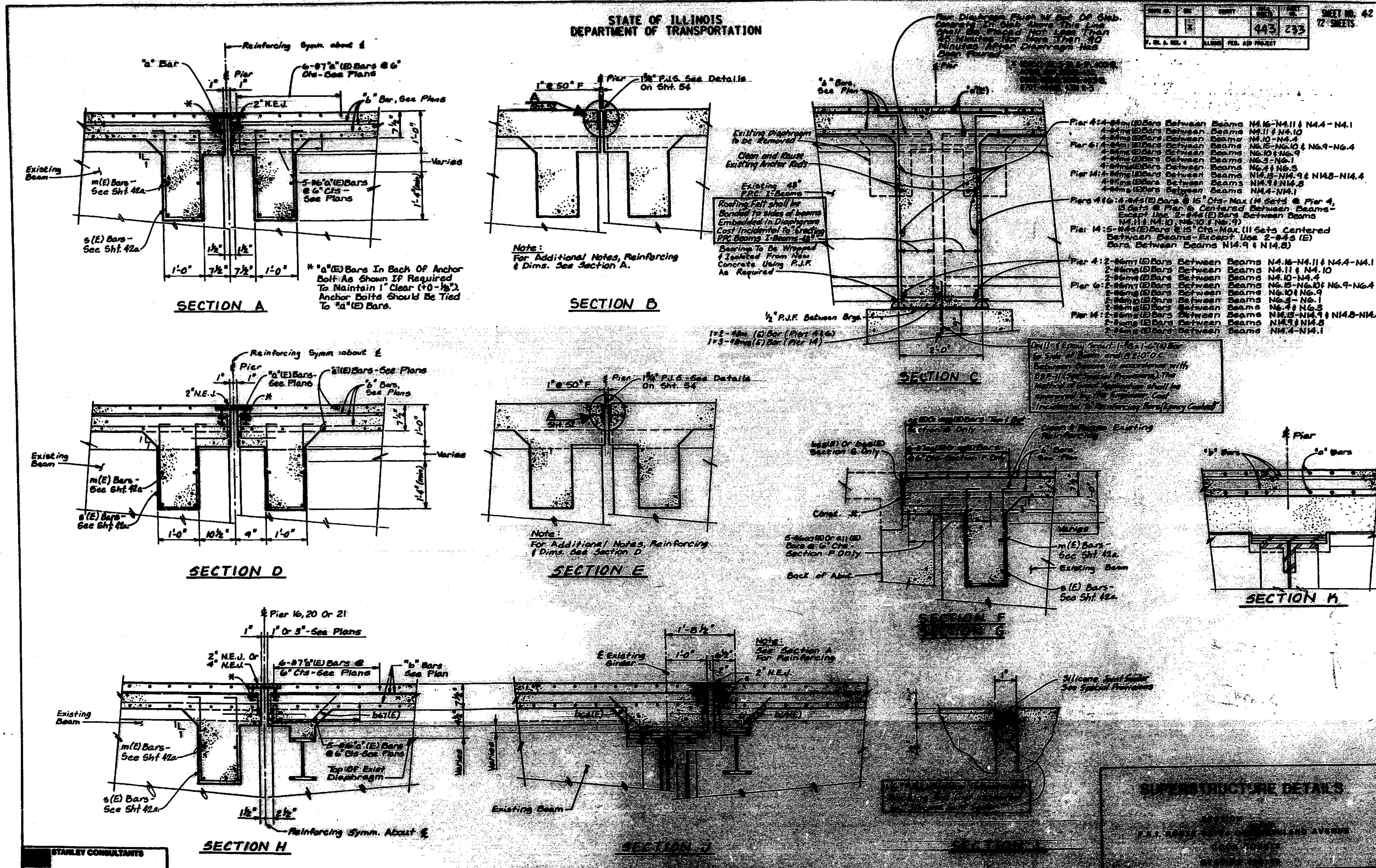
SHEET NO. 41
72 SHEETS

* 0505(2-28, 3-H, 6-P, 400HB, 40HB, 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+49


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SHEET NO. 42
72 SHEETS
443
233
SECTION A
Reinforcing Symm. about ℄
"a" Bar
℄ Pier
6-#7 "a" (E) Bars @ 6" Cts-See Plans
2" N.E.J.
"b" Bar, See Plans
Existing Beam
m(E) Bars-See Sht. 42a
5-#6 "a" (E) Bars @ 6" Cts-See Plans
s(E) Bars-See Sht. 42a
Varies
1'-0"
1'-4"(min)
1'-0"
7½"
7½"
1'-0"
* "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 B
1" @ 50° F
℄ Pier
1½" P.J.S. See Details On Sht. 54
Note: For Additional Notes, Reinforcing & Dims. See Section A.
SECTION C
"a" Bars See Plan
Existing Diaphragm to be Removed
Clean and Reuse Existing Anchor Rods
Existing 48" P.P.C. I-Beams
Roofing Felt shall be Bonded to sides of beams Embedded in Diaphragm Cost Incidental to Erecting PPC Beams I-Beams 48"
Bearing To Be Wrapped & Isolated From New Concrete Using P.J.F. As Required
½" P.J.F. Between Brgs.
2'-0"
Pier 4: 4-#4m(E) Bars Between Beams N4.16-N4.11 & N4.4-N4.1
Pier 6
Pier 14
Pier 4: 2-#6m(E) Bars Between Beams N4.16-N4.11 & N4.4-N4.1
Pier 6
Pier 14
Pier 14: 5-#4s(E) Bars @ 15" Cts-Max (11 Sets Centered Between Beams-Except Use 2-#4s (E) Bars Between Beams N14.9 & N14.8)
SECTION D
Reinforcing Symm. about ℄
℄ Pier
2" N.E.J.
"a" (E) Bars-See Plans
"a" (E) Bars-See Plans
"b" Bars, See Plans
Existing Beam
m(E) Bars-See Sht. 42a
s(E) Bars-See Sht. 42a
Varies
1'-0"
10½"
9"
1'-0"
SECTION E
1" @ 50° F
℄ Pier
1½" P.J.S. See Details On Sht. 54
Note: For Additional Notes, Reinforcing & Dims. See Section D.
SECTION F
SECTION G
Const. Jt.
Back of Abut.
m(E) Bars-See Sht. 42a
Existing Beam
s(E) Bars-See Sht. 42a
Varies
SECTION K
℄ Pier
"b" Bars
"a" Bars
SECTION H
℄ Pier 16, 20 Or 21
1" Or 3"-See Plans
2" N.E.J. Or 4" N.E.J.
6-#7 "a" (E) Bars @ 6" Cts-See Plans
"b" Bars See Plan
Existing Beam
m(E) Bars-See Sht 42a
5-#6 "a" (E) Bars @ 6" Cts-See Plans
Top Of Exist Diaphragm
s(E) Bars-See Sht 42a
1½"
2½"
Reinforcing Symm. About ℄
Varies
SECTION J
1'-8½"
1'-0"
℄ Existing Girder
Note: See Section A For Reinforcing
2" N.E.J.
Existing Beam
Silicone Joint Sealer See Special Provisions
SECTION L
SUPERSTRUCTURE DETAILS
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

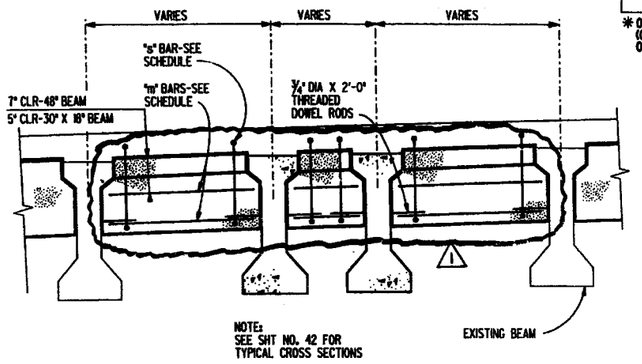
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 98/94	*	COOK	443	233A
		ILLINOIS		

SHEET NO. 42a OF 72 SHEETS

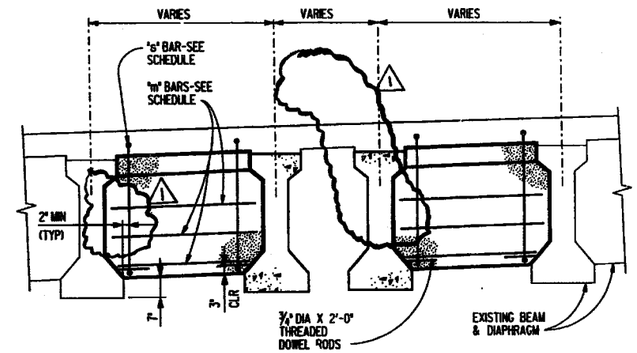
* 050512-2B, 3-RL 6-IP, 400HB, 40HB, 450, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439IR-5

DIAPHRAGM SCHEDULE

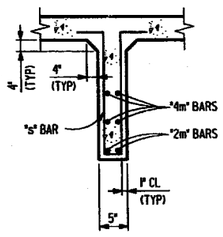
MARK	SPAN																					NUMBER OF BARS PER DIAPHRAGM			
	#1	#2	#3	#4	#5	#6	#7	#8	#10	#11	#12	#13	#14	#15	#16	#17	#21	#23	#24	#25	MARK	STIRRUPS	BOTTOM BARS	SIDE BARS
D1	11																				D1	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D1A	1																				D1A	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D4																				5	D4	7-#4s6 (E)	2-#6m18 (E)	2-#4m9 (E)
D4A																				2	D4A	7-#4s6 (E)	2-#6m18 (E)	2-#4m9 (E)
D5																				1	D5	7-#4s6 (E)	2-#6m20 (E)	2-#4m21 (E)
D5A																				2	D5A	7-#4s6 (E)	2-#6m20 (E)	2-#4m21 (E)
D6									1		1										D6	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D7																2					D7	4-#4s6 (E)	-	-
D8																	2				D8	4-#4s6 (E)	-	-
D9	6	6																			D9	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D9A	1	1																			D9A	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D10	4	4	9	9	4	8	8	8								4			5		D10	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D10A	1	1	2	2	1	2	2	2								1					D10A	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D10B																			1		D10B	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D12	2	2	2	1	1	1	1	2					1	1	2			1			D12	2-#4s6 (E)	2-#6m50 (E)	2-#4m51 (E)
D13					5																D13	3-#4s6 (E)	2-#6m9 (E)	2-#4m25 (E)
D13A					1																D13A	3-#4s6 (E)	2-#6m9 (E)	2-#4m25 (E)
D14											2	4									D14	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D14A												2									D14A	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D14B											1										D14B	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D15									2												D15	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D15A									1												D15A	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D16												2									D16	4-#4s6 (E)	2-#6m32 (E)	2-#4m33 (E)
D17									3												D17	6-#4s6 (E)	2-#6m30 (E)	2-#4m31 (E)
D17A									1												D17A	6-#4s6 (E)	2-#6m30 (E)	2-#4m31 (E)
D18																			7	2	D18	5-#4s6 (E)	2-#6m32 (E)	2-#4m33 (E)
D18A																			1	1	D18A	5-#4s6 (E)	2-#6m32 (E)	2-#4m33 (E)
D19										10											D19	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D19A										2											D19A	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D20										2											D20	2-#4s6 (E)	2-#6m48 (E)	2-#4m49 (E)
D21												3		6	6	6		3	3		D21	5-#4s6 (E)	2-#6m34 (E)	2-#4m14 (E)
D21A												1		2	2	2		1	1		D21A	5-#4s6 (E)	2-#6m34 (E)	2-#4m14 (E)
D22																		3			D22	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D22A																		1			D22A	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D23																				3	D23	7-#4s6 (E)	2-#6m38 (E)	2-#4m39 (E)
D24																				3	D24	7-#4s6 (E)	2-#6m40 (E)	2-#4m41 (E)
D24A																				1	D24A	7-#4s6 (E)	2-#6m40 (E)	2-#4m41 (E)
D26		6																	7		D26	4-#4s6 (E)	2-#6m42 (E)	2-#4m43 (E)
D26A		1																	1		D26A	4-#4s6 (E)	2-#6m42 (E)	2-#4m43 (E)
D27			5																		D27	4-#4s6 (E)	2-#6m44 (E)	2-#4m45 (E)
D27A			1																		D27A	4-#4s6 (E)	2-#6m44 (E)	2-#4m45 (E)
D29		4	4					8								4					D29	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D29A		1	1					2								1					D29A	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D32									2				4								D32	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D32A									1				2								D32A	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D33									3							6		3			D33	5-#4s6 (E)	2-#6m34 (E)	2-#4m14 (E)
D33A									1							2					D33A	5-#4s6 (E)	2-#6m34 (E)	2-#4m14 (E)
D33B																		1			D33B	5-#4s6 (E)	2-#6m34 (E)	2-#4m14 (E)
D35										10											D35	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D35A										2											D35A	4-#4s6 (E)	2-#6m6 (E)	2-#4m1 (E)
D37												3									D37	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D37A												1									D37A	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D38												2						3			D38	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D38A												1						1			D38A	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D42																	1	2	2		D42	2-#4s6 (E)	2-#6m52 (E)	2-#4m53 (E)
D43																		3			D43	6-#4s6 (E)	2-#6m46 (E)	2-#4m47 (E)
D43A																		1			D43A	6-#4s6 (E)	2-#6m46 (E)	2-#4m47 (E)
D47																			5		D47	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D47A																			1		D47A	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D50	4	2	4	2	2	4	4	4									2		3		D50	4-#4s7(E)	2-#4m43 (E)	4-#4m6 (E)
D51		2		2															1		D51	4-#4s7(E)	2-#4m25 (E)	4-#4m33 (E)
D53					2																D53	3-#4s7(E)	2-#4m53 (E)	4-#4m45 (E)
D54										1		1							2		D54	7-#4s7(E)	2-#4m39 (E)	4-#4m29 (E)
D55										1		2		4	4	4		2	2		D55	3-#4s7(E)	2-#4m6 (E)	4-#4m37 (E)
D56										2											D56	3-#4s7(E)	2-#4m25 (E)	4-#4m33 (E)
D60																			1	1	D60	6-#4s7(E)	2-#4m37 (E)	4-#4m27 (E)
D64																				1	D64	5-#4s7(E)	2-#4m14 (E)	4-#4m9 (E)
D67										1		1								2	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 98 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 489+49

1 REV. 9-30-93

/usr/9088608/mnt/908842a.dgn $$$DATE$$$

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

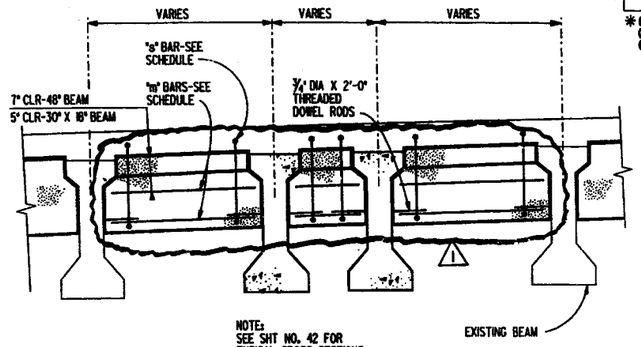
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 98/94	*	COOK	443	233A
		ILLINOIS		

SHEET NO. 42a
12 SHEETS

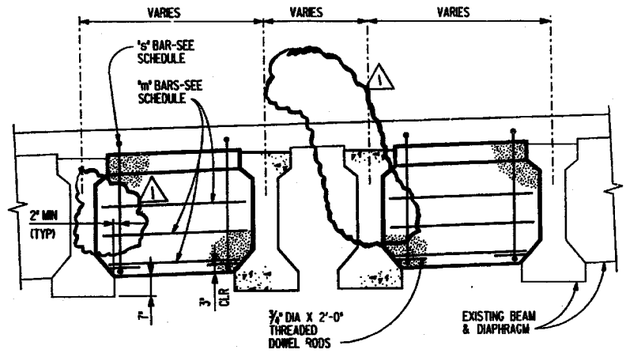
* 05052-28, 1-BL 6-IP, 400HB, 40HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439IR-5

DIAPHRAGM SCHEDULE

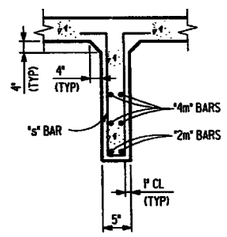
MARK	SPAN																					MARK	NUMBER OF BARS PER DIAPHRAGM		
	#1	#2	#3	#4	#5	#6	#7	#8	#10	#11	#12	#13	#14	#15	#16	#17	#21	#23	#24	#25			STIRRUPS	BOTTOM BARS	SIDE BARS
DI	11																					DI	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
DIA	1																					DIA	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D4																				5		D4	7-#4s6 (E)	2-#6m18 (E)	2-#4m19 (E)
D4A																				2		D4A	7-#4s6 (E)	2-#6m18 (E)	2-#4m19 (E)
D5																				1		D5	7-#4s6 (E)	2-#6m20 (E)	2-#4m21 (E)
D5A																				2		D5A	7-#4s6 (E)	2-#6m20 (E)	2-#4m21 (E)
D6									1		1											D6	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D7																2						D7	4-#4s6 (E)	-	-
D8																	2					D8	4-#4s6 (E)	-	-
D9	6	6																				D9	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D9A	1	1																				D9A	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D10	4	4	9	9	4	8	8	8								4			5			D10	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D10A	1	1	2	2	1	2	2	2								1						D10A	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D10B																			1			D10B	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D12	2	2	2	1	1	1	1	2					1	1	2			1				D12	2-#4s6 (E)	2-#6m50 (E)	2-#4m51 (E)
D13					5																	D13	3-#4s6 (E)	2-#6m9 (E)	2-#4m25 (E)
D13A					1																	D13A	3-#4s6 (E)	2-#6m9 (E)	2-#4m25 (E)
D14											2	4										D14	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D14A												2										D14A	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D14B											1											D14B	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D15									2													D15	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D15A									1													D15A	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D16												2										D16	4-#4s6 (E)	2-#6m32 (E)	2-#4m33 (E)
D17									3													D17	6-#4s6 (E)	2-#6m30 (E)	2-#4m31 (E)
D17A									1													D17A	6-#4s6 (E)	2-#6m30 (E)	2-#4m31 (E)
D18																			7	2		D18	5-#4s6 (E)	2-#6m32 (E)	2-#4m33 (E)
D18A																			1	1		D18A	5-#4s6 (E)	2-#6m32 (E)	2-#4m33 (E)
D19										10												D19	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D19A										2												D19A	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D20										2												D20	2-#4s6 (E)	2-#6m48 (E)	2-#4m49 (E)
D21												3		6	6	6		3	3			D21	5-#4s6 (E)	2-#6m34 (E)	2-#4m14 (E)
D21A												1		2	2	2		1	1			D21A	5-#4s6 (E)	2-#6m34 (E)	2-#4m14 (E)
D22																			3			D22	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D22A																			1			D22A	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D23																				3		D23	7-#4s6 (E)	2-#6m38 (E)	2-#4m39 (E)
D24																				3		D24	7-#4s6 (E)	2-#6m40 (E)	2-#4m41 (E)
D24A																				1		D24A	7-#4s6 (E)	2-#6m40 (E)	2-#4m41 (E)
D26		6																	7			D26	4-#4s6 (E)	2-#6m42 (E)	2-#4m43 (E)
D26A		1																	1			D26A	4-#4s6 (E)	2-#6m42 (E)	2-#4m43 (E)
D27			5																			D27	4-#4s6 (E)	2-#6m44 (E)	2-#4m45 (E)
D27A			1																			D27A	4-#4s6 (E)	2-#6m44 (E)	2-#4m45 (E)
D29		4	4					8								4						D29	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D29A		1	1					2								1						D29A	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D32									2			4										D32	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D32A									1			2										D32A	7-#4s6 (E)	2-#6m26 (E)	2-#4m27 (E)
D33									3						6		3					D33	5-#4s6 (E)	2-#6m34 (E)	2-#4m14 (E)
D33A									1						2							D33A	5-#4s6 (E)	2-#6m34 (E)	2-#4m14 (E)
D33B																	1					D33B	5-#4s6 (E)	2-#6m34 (E)	2-#4m14 (E)
D35										10												D35	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D35A										2												D35A	4-#4s6 (E)	2-#6m16 (E)	2-#4m1 (E)
D37												3										D37	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D37A												1										D37A	6-#4s6 (E)	2-#6m36 (E)	2-#4m37 (E)
D38												2							3			D38	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D38A												1							1			D38A	8-#4s6 (E)	2-#6m28 (E)	2-#4m29 (E)
D42																			1	2	2	D42	2-#4s6 (E)	2-#6m52 (E)	2-#4m53 (E)
D43																			3			D43	6-#4s6 (E)	2-#6m46 (E)	2-#4m47 (E)
D43A																			1			D43A	6-#4s6 (E)	2-#6m46 (E)	2-#4m47 (E)
D47																				5		D47	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D47A																				1		D47A	4-#4s6 (E)	2-#6m22 (E)	2-#4m23 (E)
D50	4	2	4	2	2	4	4	4								2				3		D50	4-#4s7(E)	2-#4m43 (E)	4-#4m6 (E)
D51		2		2																1		D51	4-#4s7(E)	2-#4m25 (E)	4-#4m33 (E)
D53					2																	D53	3-#4s7(E)	2-#4m53 (E)	4-#4m45 (E)
D54									1		1									2		D54	7-#4s7(E)	2-#4m39 (E)	4-#4m29 (E)
D55									1		2		4	4	4		2	2				D55	3-#4s7(E)	2-#4m6 (E)	4-#4m37 (E)
D56										2												D56	3-#4s7(E)	2-#4m25 (E)	4-#4m33 (E)
D60																			1		1	D60	6-#4s7(E)	2-#4m37 (E)	4-#4m27 (E)
D64																				1		D64	5-#4s7(E)	2-#4m14 (E)	4-#4m9 (E)
D67									1		1									2		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 98 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

1 REV. 9-30-95

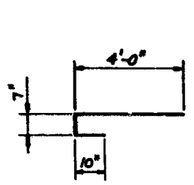
/usr/9088608/mnt/908842a.dgn $$$DATE$$$

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

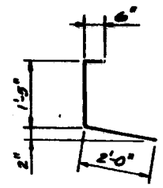
* 0505(2-2B, 3-3H, 6-1P, 400HB, 401HB, 450), 0506-450, 0805-402HB, 0806-403HB, 0707-404HB, 4301 R-5

SHEET NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	234
F. AID. & SEC. 4	ILLINOIS	FED. AID PROJECT		

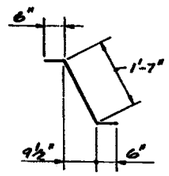
SHEET NO. 43
72 SHEETS



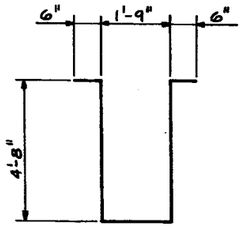
BAR b(E)



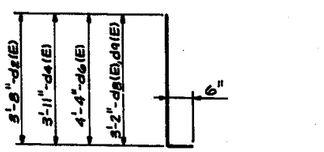
BAR d(E)



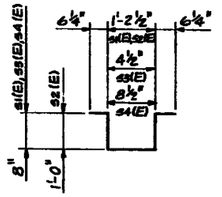
BAR d1(E)



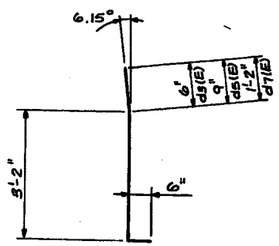
BAR s(E)



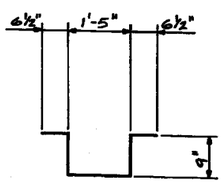
BARS d2(E),d4(E),d6(E),d8(E),d9(E)



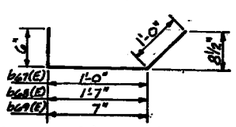
BARS s1(E), s2(E), s3(E), s4(E)



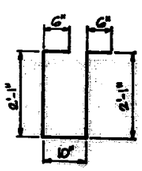
BARS d3(E), d5(E), d7(E)



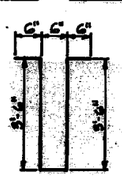
BAR s5(E)



BARS b67(E), b68(E), b69(E)



BAR s6(E)



BAR s7(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b(E)	2541	#6	4'-0"	
b1(E)	871	#5	31'-3"	
b2(E)	2982	#5	31'-9"	
b3(E)	352	#5	26'-1"	
b4(E)	348	#5	25'-3"	
b5(E)	348	#5	24'-7"	
b6(E)	36	#7	31'-3"	
b7(E)	30	#6	31'-3"	
b8(E)	114	#7	31'-9"	
b9(E)	95	#6	31'-9"	
b10(E)	6	#7	50'-8"	
b11(E)	5	#6	50'-8"	
b12(E)	6	#7	49'-6"	
b13(E)	5	#6	49'-6"	
b14(E)	6	#7	49'-0"	
b15(E)	5	#6	49'-0"	
b16(E)	12	#7	47'-7"	
b17(E)	10	#6	47'-7"	
b18(E)	12	#7	46'-0"	
b19(E)	10	#6	46'-0"	
b20(E)	830	#5	23'-9"	
b21(E)	78	#7	44'-11"	
b22(E)	65	#6	44'-11"	
b23(E)	3298	#5	23'-4"	
b24(E)	140	#5	30'-9"	
b25(E)	280	#5	23'-10"	
b26(E)	239	#5	28'-3"	
b27(E)	460	#5	25'-2"	
b28(E)	6	#7	28'-5"	
b29(E)	5	#6	28'-5"	
b30(E)	12	#7	48'-5"	
b31(E)	10	#6	48'-5"	
b32(E)	1398	#5	23'-8"	
b33(E)	24	#7	45'-5"	
b34(E)	20	#6	45'-5"	
b35(E)	125	#5	11'-5"	
b36(E)	466	#5	24'-7"	
b37(E)	132	#5	33'-0"	
b38(E)	358	#5	26'-2"	
b39(E)	6	#7	33'-0"	
b40(E)	5	#6	33'-0"	
b41(E)	151	#5	29'-1"	
b42(E)	454	#5	24'-10"	
b43(E)	12	#7	29'-1"	
b44(E)	10	#6	29'-1"	
b45(E)	6	#7	47'-7"	
b46(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	38'-5"	
b36(E)	195	#5	21'-0"	
b37(E)	102	#5	30'-7"	
b38(E)	84	#5	38'-4"	
b39(E)	180	#5	38'-6"	
b40(E)	128	#5	32'-3"	
b41(E)	288	#5	32'-6"	
b42(E)	201	#5	26'-8"	
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)	254	#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"	
s8(E)	136	#4	19'-2"	
s9(E)	12	#8	28'-2"	
s10(E)	8	#5	39'-8"	
s11(E)	232	#4	18'-11"	
s12(E)	28	#8	40'-0"	
s13(E)	28	#5	39'-2"	
s14(E)	368	#4	16'-5"	
s15(E)	40	#8	35'-0"	
s16(E)	40	#5	34'-2"	
s17(E)	96	#4	9'-9"	
s18(E)	20	#8	9'-9"	
s19(E)	20	#5	9'-9"	
s20(E)	40	#4	15'-9"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
s13(E)	4	#8	33'-7"	
s14(E)	4	#5	32'-9"	
s15(E)	54	#4	18'-10"	
s16(E)	8	#8	30'-4"	
s17(E)	8	#5	29'-5"	
s18(E)	30	#4	13'-11"	
s19(E)	4	#8	22'-11"	
s20(E)	4	#5	22'-0"	
s21(E)	36	#4	15'-8"	
s22(E)	4	#8	31'-7"	
s23(E)	8	#5	31'-7"	
s24(E)	54	#4	19'-5"	
s25(E)	8	#8	31'-2"	
s26(E)	8	#5	30'-3"	
s27(E)	60	#4	8'-9"	
s28(E)	12	#8	8'-9"	
s29(E)	12	#5	8'-9"	
s30(E)	90	#4	19'-6"	
s31(E)	12	#8	31'-3"	
s32(E)	12	#5	30'-4"	
s33(E)	48	#4	15'-5"	
s34(E)	4	#8	32'-11"	
s35(E)	4	#5	32'-1"	
s36(E)	92	#4	15'-10"	
s37(E)	4	#8	25'-9"	
s38(E)	4	#5	24'-10"	
s39(E)	48	#4	15'-4"	
s40(E)	4	#8	32'-10"	
s41(E)	6	#5	32'-0"	
s42(E)	30	#4	15'-2"	
s43(E)	4	#8	24'-10"	
s44(E)	4	#5	24'-0"	
s45(E)	48	#4	16'-8"	
s46(E)	4	#8	35'-6"	
s47(E)	4	#5	34'-7"	
s48(E)	60	#4	16'-3"	
s49(E)	6	#8	29'-9"	
s50(E)	6	#5	28'-7"	
s51(E)	36	#4	17'-8"	
s52(E)	4	#8	28'-7"	
s53(E)	4	#5	27'-8"	
s54(E)	24	#4	16'-11"	
s55(E)	4	#8	27'-5"	
s56(E)	4	#5	26'-6"	
s57(E)	6	#8	29'-0"	
s58(E)	6	#5	27'-10"	
s59(E)	12	#8	38'-7"	
s60(E)	12	#5	37'-2"	
s61(E)	4	#8	32'-6"	
s62(E)	32	#4	17'-11"	
s63(E)	4	#8	38'-0"	
s64(E)	4	#5	37'-1"	
s65(E)	2	#8	32'-0"	
s66(E)	32	#4	14'-10"	
s67(E)	24	#4	12'-5"	
s68(E)	32	#4	14'-4"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
w(E)	4	#8	38'-6"	
w1(E)	354	#4	3'-6"	
w2(E)	12	#4	1'-3"	
w3(E)	24	#4	3'-1"	
w4(E)	8	#4	4'-2"	
w5(E)	32	#4	4'-10"	
w6(E)	174	#4	4'-3"	
w7(E)	36	#6	3'-2"	
w8(E)	4	#6	0'-11"	
w9(E)	24	#6	2'-9"	
w10(E)	4	#6	3'-10"	
w11(E)	16	#6	4'-6"	
w12(E)	6	#6	3'-11"	
w13(E)	3	#8	26'-6"	
w14(E)	110	#4	4'-9"	
w15(E)	2	#6	4'-5"	
w16(E)	282	#6	3'-6"	
w18(E)	14	#6	6'-0"	
w19(E)	18	#4	6'-0"	
w20(E)	6	#6	6'-6"	
w21(E)	6	#4	6'-6"	
w22(E)	40	#6	3'-3"	
w23(E)	40	#4	3'-3"	
w25(E)	26	#4	2'-9"	
w26(E)	36	#6	6'-9"	
w27(E)	44	#4	6'-9"	
w28(E)	20	#6	7'-6"	
w29(E)	36	#4	7'-6"	
w30(E)	8	#6	5'-3"	
w31(E)	8	#4	5'-3"	
w32(E)	26	#6	4'-0"	
w33(E)	54	#4	4'-0"	
w34(E)	104	#6	4'-9"	
w35(E)	108	#4	4'-9"	
w36(E)	16	#6	5'-6"	
w37(E)	96	#4	5'-6"	
w38(E)	6	#6	6'-3"	
w39(E)	14	#4	6'-3"	
w40(E)	8	#6	6'-0"	
w41(E)	8	#4	6'-0"	
w42(E)	38	#6	3'-0"	
w43(E)	100	#4	3'-0"	
w44(E)	12	#6	3'-9"	
w45(E)	20	#4	3'-9"	
w46(E)	8	#6	5'-9"	
w47(E)	8	#4	5'-9"	
w48(E)	4	#6	1'-6"	
w49(E)	4	#4	1'-6"	
w50(E)	34	#6	2'-0"	
w51(E)	34	#4	2'-0"	
w52(E)	10	#6	2'-6"	
w53(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 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

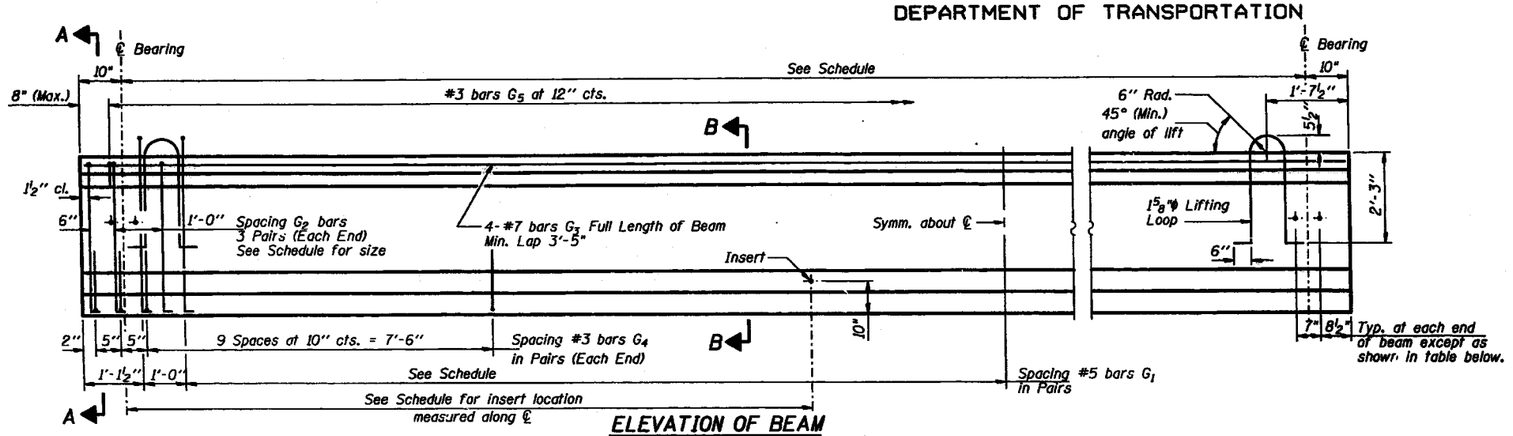
REV. 9-30-98

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

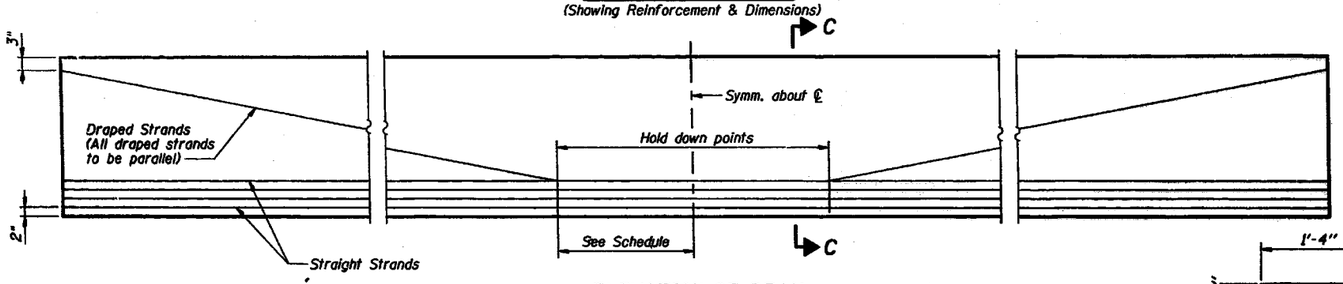
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	234A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

* 0595(2-2B, 3-1H, 6-1P, 402HB, 401, 451), (0506-458, 0605-402HB, 0606-403HB, 0707-404HB, 439)R-5

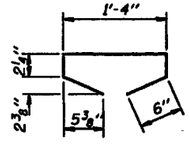
SHEET NO. 43a
72 SHEETS



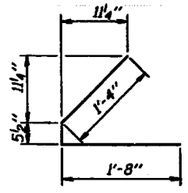
ELEVATION OF BEAM
(Showing Reinforcement & Dimensions)



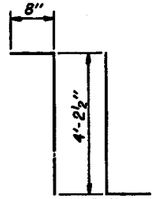
ELEVATION OF BEAM
(Showing Prestressing Steel)



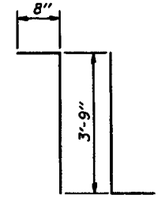
BAR G_5



BAR G_4

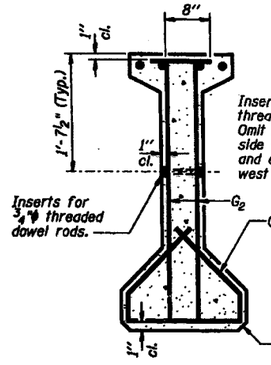


BAR G_1

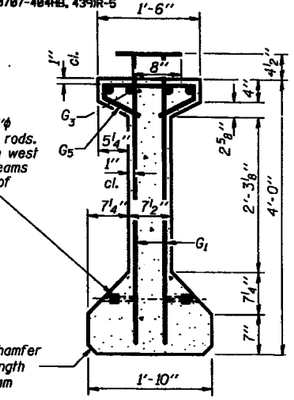


BAR G_2

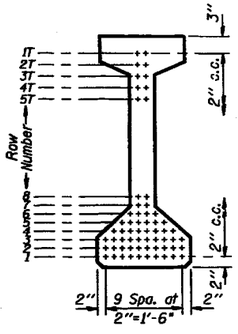
Note:
Work this sheet with beam schedule on sheet 43b.



SECTION A-A



SECTION B-B



SECTION C-C

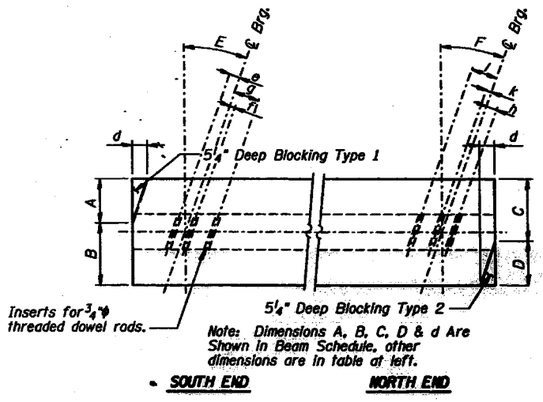
* BAR LIST

Bar	No.	Size	Length	Shape
G_1	Δ	#5	5'-6½"	7L
G_2	12	#Δ	4'-10"	7L
G_3	Δ	#7	Δ	—
G_4	48	#3	3'-5½"	⊏
G_5	Δ	#3	2'-8½"	⊐

* For one beam only.
Δ See Schedule.

INSERT LOCATION TABLE

Beam	South End				North End			
	E angle	e inch	f inch	g inch	F angle	h inch	k inch	l inch
N10.7	0°00'	1½	-	5½	22°57'	¾	-	6¼
N10.8	0°00'	1½	-	5½	22°57'	¾	-	6¼
N12.8	22°57'	¾	-	6¼	1°51'	1½	-	5½
N12.9	22°57'	¾	-	6¼	1°51'	1½	-	5½
N23.5	2°38'	1½	-	5½	31°05'	-	2	9
N23.6	2°38'	1½	-	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

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 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 5,000 psi.

FOR ERECTION ONLY

BILL OF MATERIAL

Item	Unit	Total
Erecting Precast Prestressed Concrete I-Beams, 48"	Lin. Ft.	2512

48" PRESTRESSED BEAM DETAILS

F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 489+49

STANLEY CONSULTANTS

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. 45
72 SHEETS

* 0505I2-2B, 3-M, 6-P, 400HB, 40HB, 450, 00506-450, 0605-402HB, 0606-403HB, 0707-404HB, 435R-5

48" DEEP PRECAST PRESTRESSED CONCRETE I-BEAM SCHEDULE

I-BEAM NUMBER	QUANTITY	LENGTH ℄ BRG-℄ BRG	INSERT		BLOCKING OF GIRDER FLANGES								G1 BARS		G2 BARS	G3 BARS		G5 BARS	STRANDS		
					SOUTH BRG				NORTH BRG												
			SOUTH	NORTH	TYPE	A	B	d	TYPE	C	D	d	SPACING	NO.	SIZE	NO.	LENGTH	NO.	STRAIGHT	DRAPED	TOTAL
N1.11	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14
N1.12	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14
N2.11	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14
N2.12	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14
N3.10	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14
N3.11	1	74'-11"	25'-0"	25'-0"									18 SP @ 24"(+)	78	#5	8	39'-10"	77	12	2	14
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
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
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
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
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
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
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
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
N8.9	1	74'-11"	25'-0"	25'-0"									18 SP @ 24" (+)	78	#5	8	39'-10"	77	12	2	14
N8.10	1	74'-11"	25'-0"	25'-0"									18 SP @ 24" (+)	78	#5	8	39'-10"	77	12	2	14
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
N10.8	1	50'-11"	3'-0"	-					2	10 3/4"	7 1/4"	3"	12 SP @ 24" (+)	54	#4	4	52'-3"	53	10	-	10
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
N12.9	1	51'-10"	-	24'-0"	1	7 1/4"	10 3/4"	3"					12 SP @ 24" (+)	54	#4	4	53'-2"	54	10	-	10
N13.7	1	30'-1"	-	-									7 SP @ 23 1/2" (+)	34	#4	4	31'-5"	32	10	-	10
N13.8	1	30'-1"	-	-									7 SP @ 23 1/2" (+)	34	#4	4	31'-5"	32	10	-	10
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
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
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
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
N16.8	1	65'-0"	21'-9"	21'-9"									15 1/2 SP @ 24" (+)	68	#5	8	34'-11"	67	12	2	14
N16.9	1	65'-0"	21'-9"	21'-9"									15 1/2 SP @ 24" (+)	68	#5	8	34'-11"	67	12	2	14
N17.9	1	70'-10"	23'-8"	23'-8"									17 SP @ 24" (+)	74	#5	8	37'-10"	73	12	2	14
N21.5	1	57'-6"	19'-2"	19'-2"									14 SP @ 23 1/2" (+)	62	#4	4	58'-10"	59	12	-	12
N23.5	1	49'-5"	-	26'-10"					2	13"	5"	3"	12 SP @ 23 1/2" (-)	54	#4	4	50'-9"	51	10	-	10
N23.6	1	51'-1"	20'-6"	10'-1"					2	13"	5"	3"	12 SP @ 24" (+)	54	#4	4	52'-5"	53	10	-	10
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
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
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
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
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
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

I-BEAM NUMBER	STRANDS LOCATION AT ℄ ROW								STRANDS LOCATION AT END ROW													HOLD DOWN POINT FROM ℄	BEARING TYPE		DEAD LOAD DEFLECTION (DUE TO DECK WEIGHT ONLY)		REMARKS
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	5T	4T	3T	2T	1T		NORTH	SOUTH	0.25y	0.50y	
N1.11	10	4							10	2											2	7'-6"	FIXED	10-b	3/8"	9/16"	
N1.12	10	4							10	2											2	7'-6"	FIXED	10-b	3/8"	9/16"	
N2.11	10	4							10	2											2	7'-6"	10-b	FIXED	3/8"	9/16"	
N2.12	10	4							10	2											2	7'-6"	10-b	FIXED	3/8"	9/16"	
N3.10	10	4							10	2											2	7'-6"	FIXED	10-b	3/8"	9/16"	
N3.11	10	4							10	2											2	7'-6"	FIXED	10-b	3/8"	9/16"	
N4.10	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	9/16"	
N4.11	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	9/16"	
N5.10	10	4							10	2											2	7'-6"	FIXED	10-a	3/8"	9/16"	
N5.11	10	4							10	2											2	7'-6"	FIXED	10-a	3/8"	9/16"	
N6.9	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	9/16"	
N6.10	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	9/16"	
N7.9	10	4							10	2											2	7'-6"	FIXED	10-a	3/8"	9/16"	
N7.10	10	4							10	2											2	7'-6"	FIXED	10-a	3/8"	9/16"	
N8.9	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	9/16"	
N8.10	10	4							10	2											2	7'-6"	10-a	FIXED	3/8"	9/16"	
N10.7	4	6							4	6												-	FIXED	10-a	1/8"	3/16"	
N10.8	4	6							4	6												-	FIXED	10-a	1/8"	3/16"	
N12.8	4	6							4	6												-	FIXED	10-a	1/8"	3/16"	
N12.9	4	6							4	6												-	FIXED	10-a	1/8"	3/16"	
N13.7	4	6							4	6												-	FIXED	10-a	0"	0"	
N13.8	4	6							4	6												-	FIXED	10-a	0"	0"	
N14.8	10	4							10	2											2	6'-8"	10-a	FIXED	5/16"	3/8"	
N14.9	10	4							10	2											2	6'-8"	10-a	FIXED	5/16"	3/8"	
N15.8	10	4							10	2											2	6'-8"	FIXED	10-a	5/16"	3/8"	
N15.9	10	4							10	2											2	6'-8"	FIXED	10-a	5/16"	3/8"	
N16.8	10	4							10	2											2	6'-6"	10-a	FIXED	1/4"	3/8"	
N16.9	10	4							10	2											2	6'-6"	10-a	FIXED	1/4"	3/8"	
N17.9	10	4							10	2											2	7'-1"	10-a	FIXED	5/16"	7/16"	REQUIRED FOR STAGE 2 CONSTRUCTION
N21.5	4	4	2	2					4	4	2	2										-	FIXED	10-b	5/16"	1/4"	
N23.5	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	
N23.6	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	
N24.11	10	6							10	4											2	8'-0"	FIXED	10-b	5/16"	5/8"	
N24.12	10	6							10	4											2	8'-0"	FIXED	10-b	5/16"	5/8"	
N25.5	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	REQUIRED FOR STAGE 2 CONSTRUCTION
N25.6	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	REQUIRED FOR STAGE 2 CONSTRUCTION
N25.9	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	
N25.10	4	6							4	6												-	10-b	FIXED	1/8"	3/16"	

PLAN

REMOVE CONCRETE IN THIS AREA TO ±1/4" ABOVE ELEVATION REQUIRED, THEN GRIND TO ELEVATION REQUIRED. COST INCIDENTAL TO "ERECTING PPC BEAMS I BEAMS-48".

ELEVATION

PIER STEP REMOVAL

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.

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.

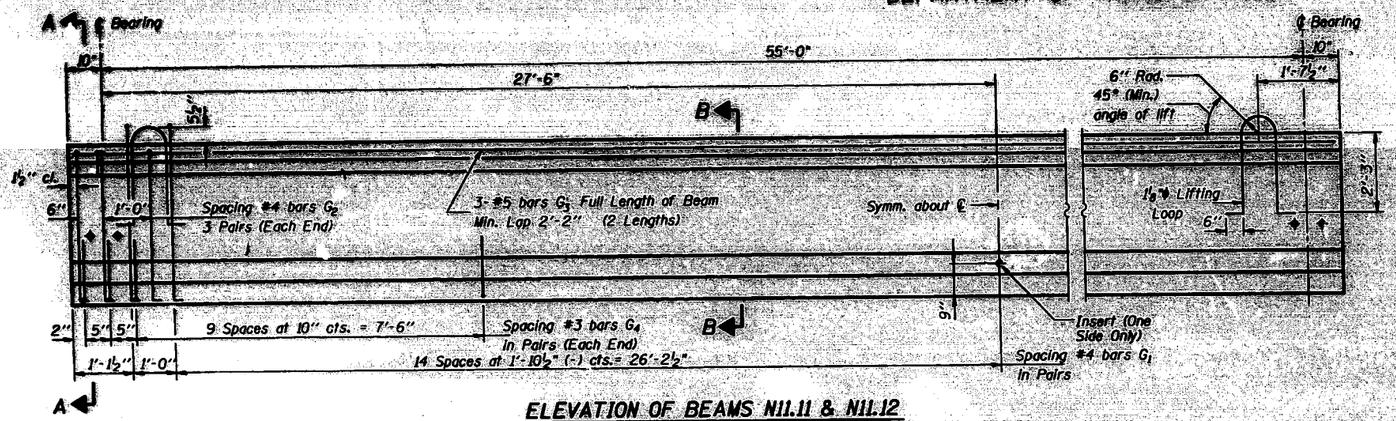
WORK THIS SHEET WITH BEAM DETAILS ON SHEET 43a AND 43c.

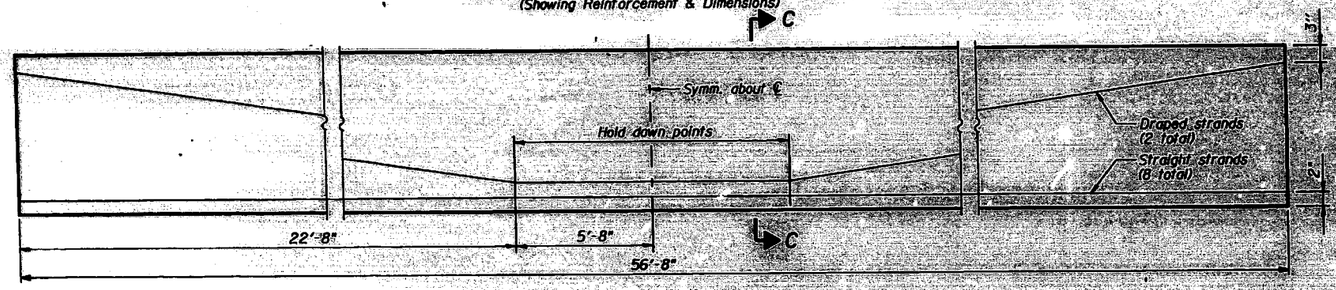
FOR ERECTION ONLY

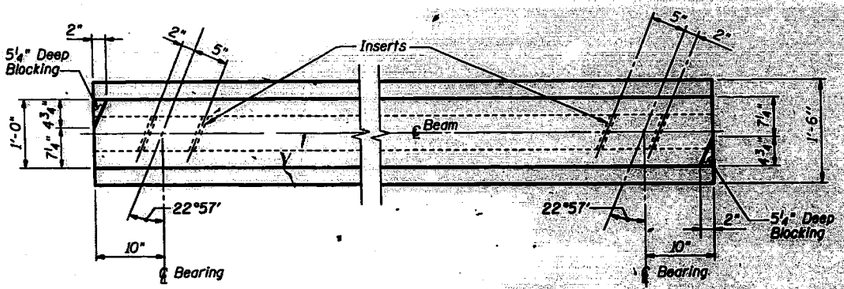
STANLEY CONSULTANTS

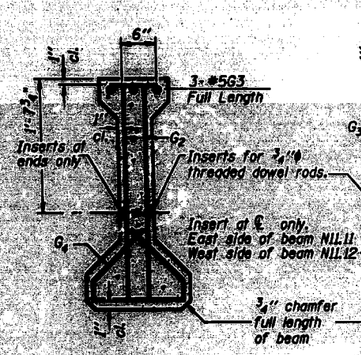
BEAM SCHEDULE

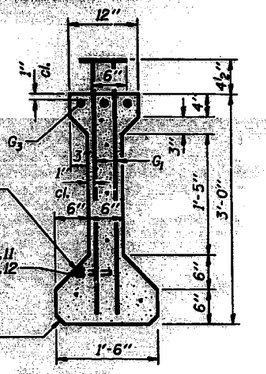
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

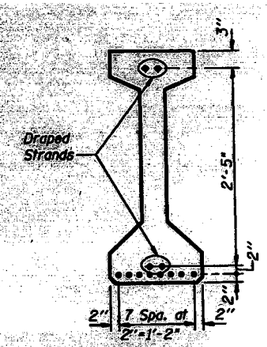


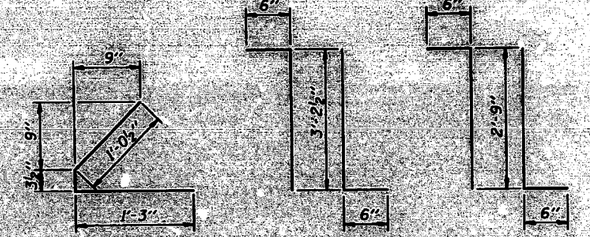












ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	234C
	ILLINOIS			

SHEET NO. 43e
72 SHEETS

* [illegible]

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 G4

BAR G1

BAR G2

* BAR LIST

Bar	No.	Size	Length	Shape
G_1	62	#4	4'-2½"	˥L
G_2	12	#4	3'-9"	˥L
G_3	6	#5	29'-3"	—
G_4	48	#3	2'-7"	∠

* For one beam only.

FOR ERECTION ONLY

BILL OF MATERIAL

Item	Unit	Total
[illegible] Concrete [illegible]	Lin. Ft.	113

DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete slab)

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.

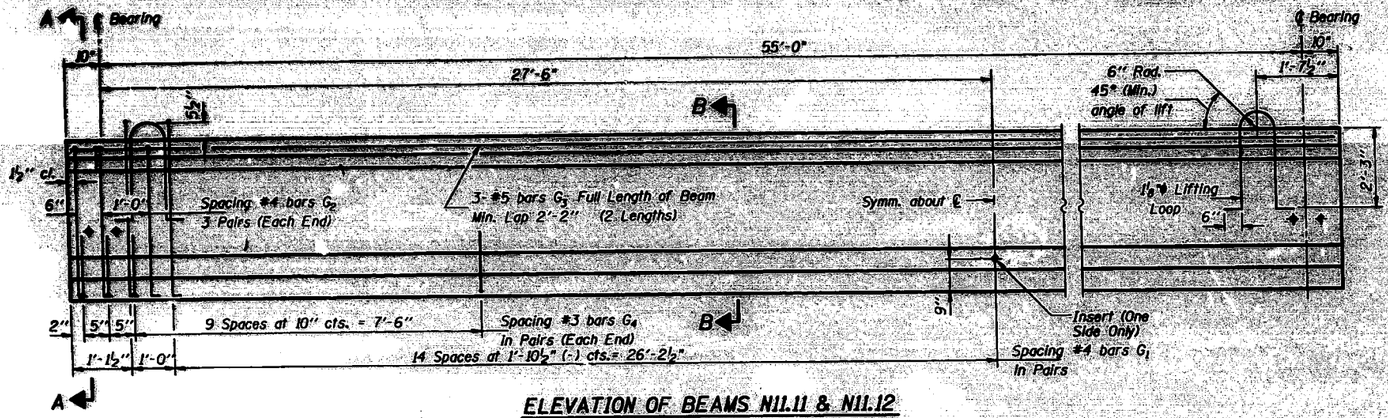
NOTES

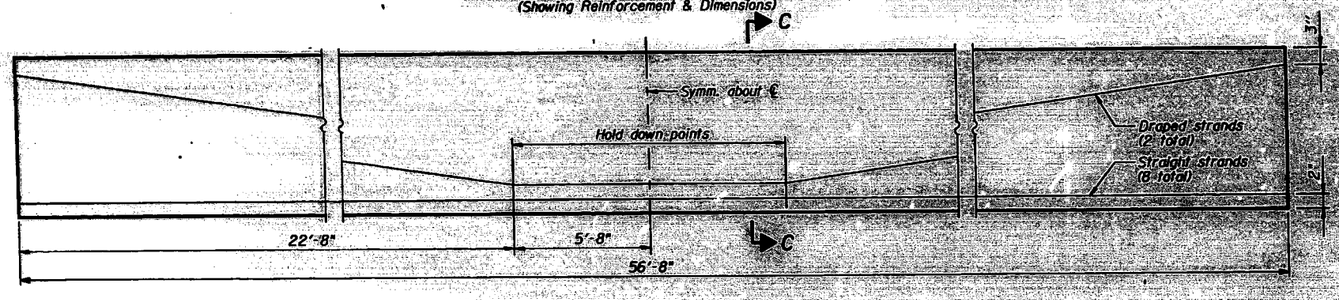
Insert for ¾"Ø threaded dowel rods are to be two stud, coil type for I-Beam [illegible] flanges.
[illegible] shall be non-polarized [illegible]
[illegible]
The [illegible] shall be ½" and the nominal [illegible]
[illegible]
[illegible] steel shall conform to AASHTO designation M-31, M-42 or M-[illegible]
[illegible] loops shall be non-deformed bars Fy=40,000 psi.
[illegible] strength, f'ci shall be 5000 psi.
Details are for beams N11.11 and N11.12.

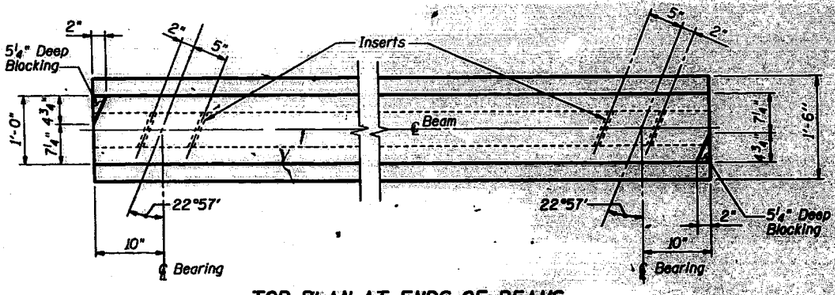
36" PRESTRESSED BEAM DETAILS

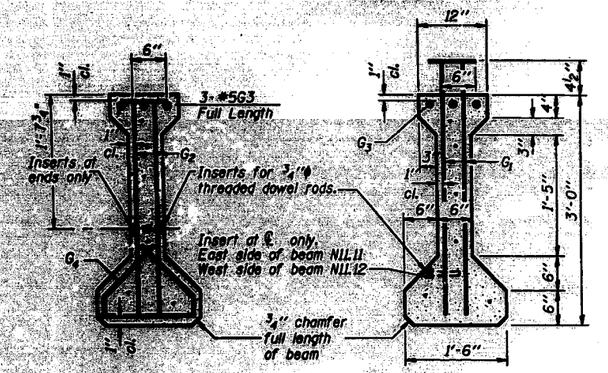
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION [illegible]

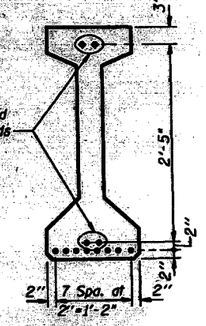
STANLEY CONSULTANTS

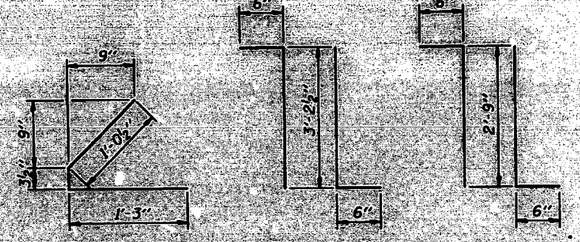


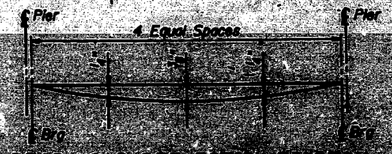












ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	234C
		ILLINOIS		

SHEET NO. 43e
72 SHEETS

* [illegible]
0707-404HB, 43[illegible]-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 G₄

BAR G₁

BAR G₂

* BAR LIST

Bar	No.	Size	Length	Shape
G_1	62	#4	4'-2½"	⅂L
G_2	12	#4	3'-9"	⅂L
G_3	6	#5	29'-3"	—
G_4	48	#3	2'-7"	∠

* For one beam only.

FOR ERECTION ONLY

BILL OF MATERIAL

Item	Unit	Total
[illegible] Prestressed Concrete [illegible]	Lin. Ft.	113

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 [illegible] [illegible] non-galvanized [illegible]
[illegible] 290.
[illegible] shall be ½" and the [illegible]
[illegible] steel shall conform to AASHTO designation M-31, M-42 or [illegible]
[illegible] shall be non-deformed bars, fy=40,000 psi.
[illegible] release strength, f'ci, shall be 5000 psi.
Bar list [illegible] for beams N11.11 and N11.12.

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36" PRESTRESSED BEAM DETAILS

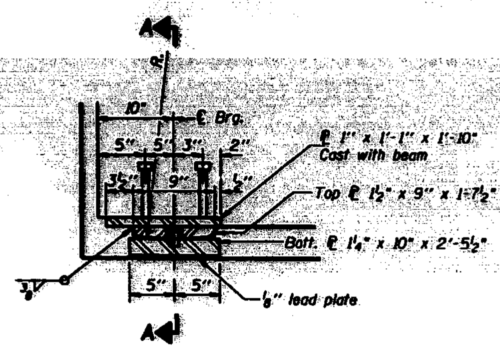
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION [illegible]

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	234 D
		ILLINOIS		

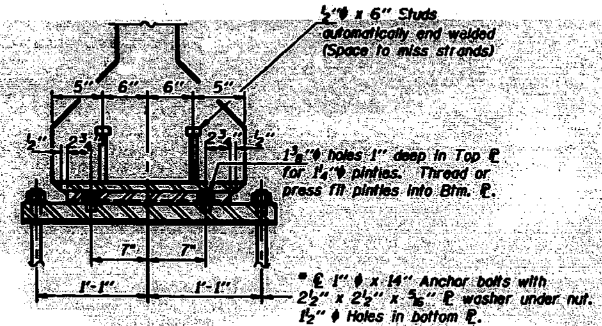
SHEET NO. 43d
72 SHEETS

* 0505B-2R, I-H, C-IF, 4001B, 401B, 45B, 0505-45B, 0606-402HB, 0606-403HB, 0707-404HB, 45BR-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION AT ABUT. OR PIER

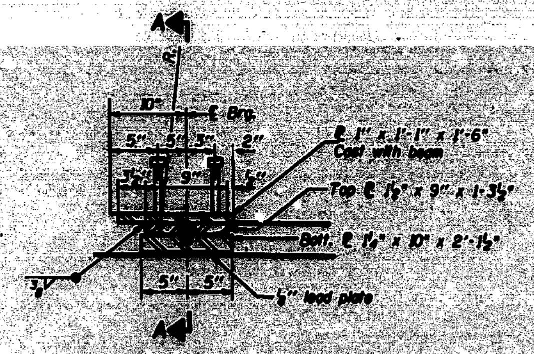


SECTION A-A

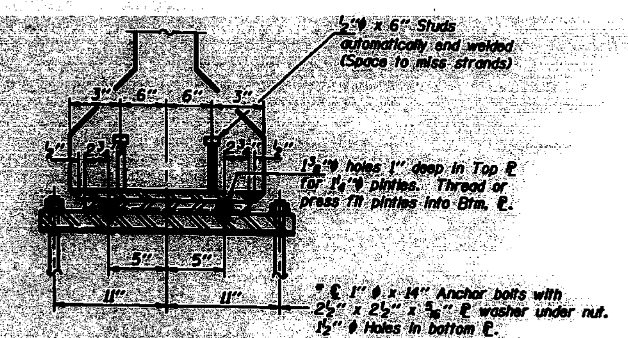
FIXED BEARING
(See Beam Schedules, Sht #43b for location)
(38 Required)

* Anchor Bolts Shall Be Drilled And Grouted In Place After Beams Have Been Erected.

See sheet 63 of 72 for anchor bolt installation.



SECTION AT PIER #11

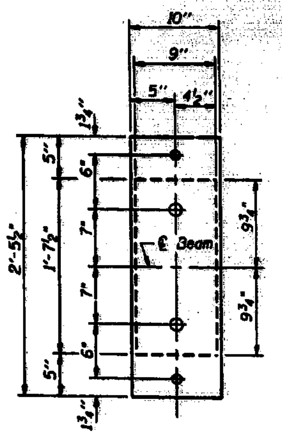


SECTION A-A

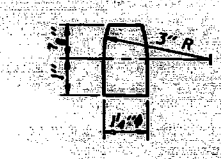
FIXED BEARING
(Span 11 North End For 36" Prestressed Beams)
(2 Required)

* Anchor Bolts Shall Be Drilled And Grouted In Place After Beams Have Been Erected.

See sheet 63 of 72 for anchor bolt installation.



PLAN OF TOP & BOTTOM PLATES



PINTLE

PLAN OF TOP & BOTTOM PLATES

BILL OF MATERIAL

Item	Unit	Total
[illegible] Structural Steel	Lump Sum	*

BEARING DETAILS

F.A.I. ROUTE 90/94 OVER [illegible] AVENUE
COOK COUNTY

STANLEY CONSULTANTS

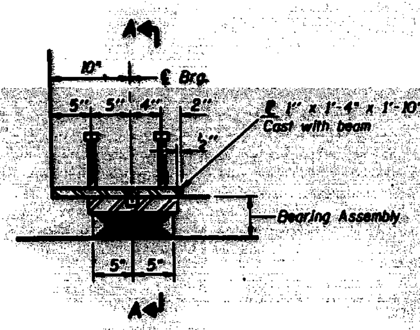
/usr/9088608/mnt/908843d.dgn ***DATE***

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

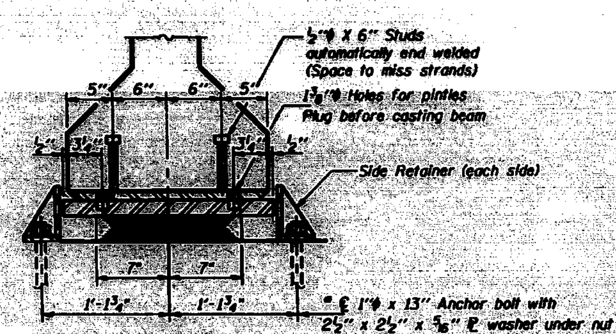
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	443	284E
		ILLINOIS		

SHEET NO. 43e
72 SHEETS

* 0505[illegible], 3-H, 6-F, 4001[illegible], 40[illegible], 0505-4[illegible], 0505-40[illegible], 0506-40[illegible], 0707-404[illegible], 45[illegible]-5



SECTION AT PIERS



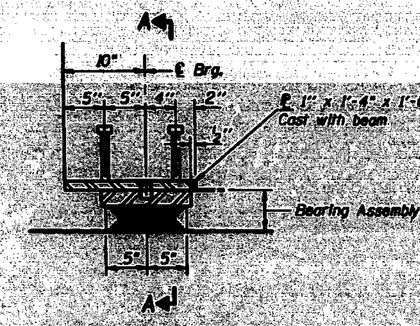
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

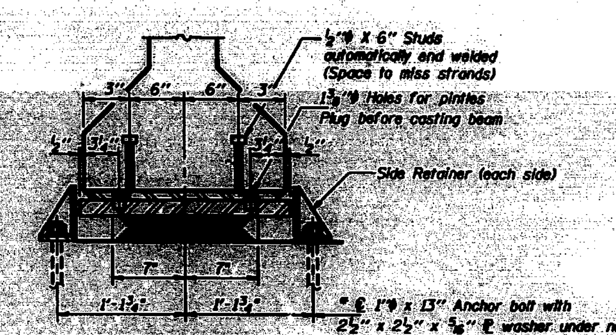
(Size 10-a, 10-b, see Beam Schedules Sht 43c for location)

* Notes: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place.

See sheet 63 of 72 for anchor bolt details.



SECTION AT PIER 10



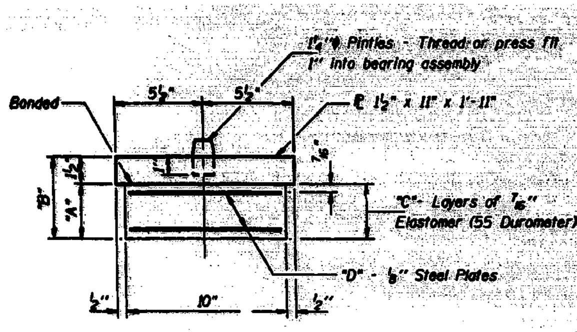
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

(Size 10-aa, Span 11 South End For 36" Prestressed Beams)
(2 Required)

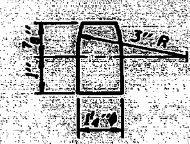
* Note: After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place.

See sheet 63 of 72 for anchor bolt detail.

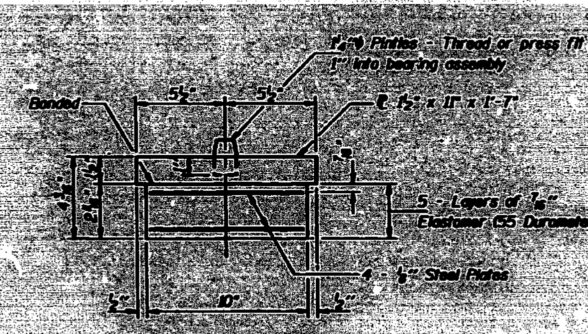


BEARING ASSEMBLY

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

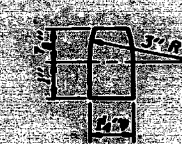


PINTLE



BEARING ASSEMBLY

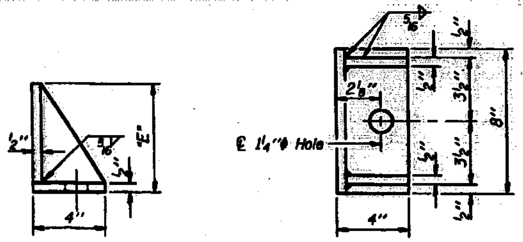
Note: Shim plates shall not be placed under Bearing Assembly.



PINTLE

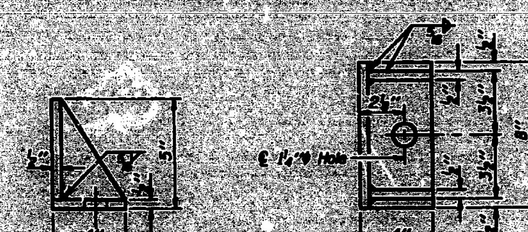
BILL OF MATERIAL

Bearing Size	A	B	C	D	E	No. Req'd
10-a	2 5/16"	4 5/16"	5	4	5"	24
10-b	3¼"	4¾"	6	5	5¼"	15



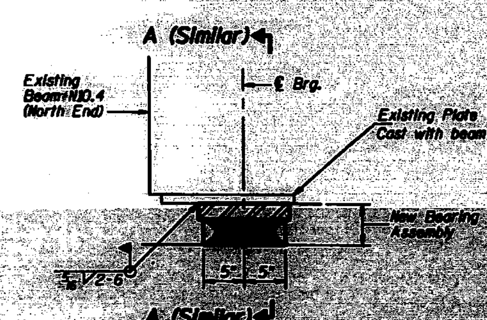
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(78 Required)



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(4 Required)



SECTION AT PIER 10

TYPE I ELASTOMERIC EXP. BRG. MODIFIED
(Size 10-a, For Beam #10.4)

BILL OF MATERIAL

Item	Unit	Total
Install Elastomeric Bearing Assembly, Type I	Each	41
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

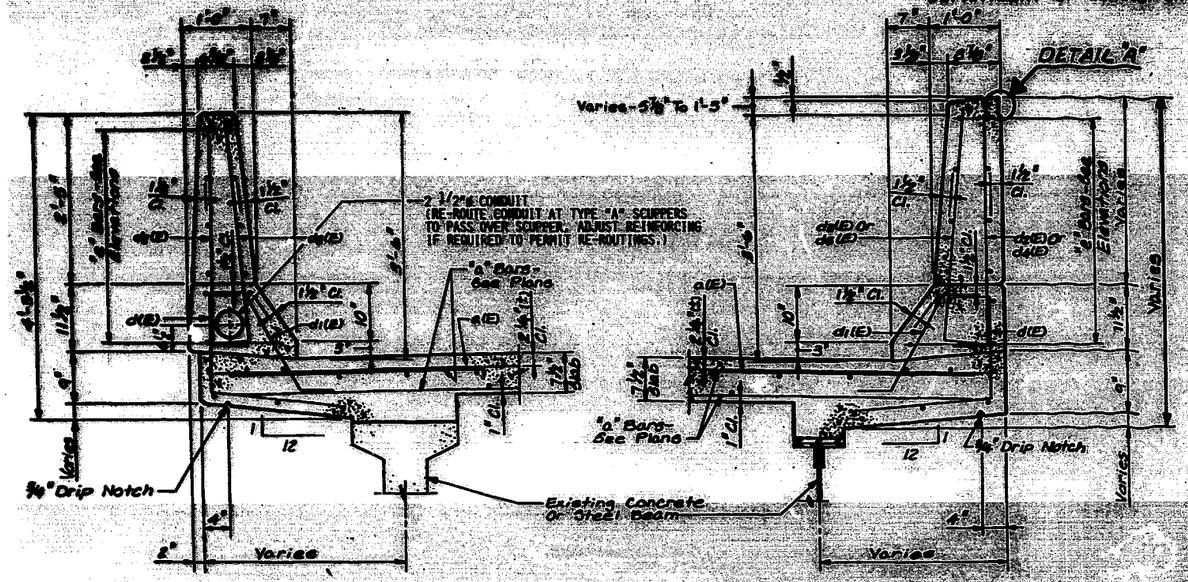
/usr/9088608/mnt/908843e.dgn ###DATE###

Rev. 11-8-93
Rev. 4-30-93

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

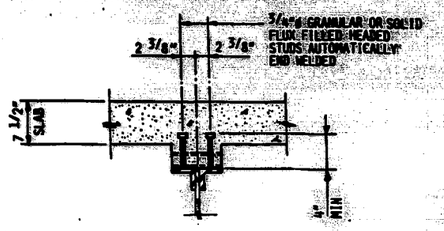
	2			443	235
		ILLINOIS	FED. AID PROJECT		

SHEET NO. 44
72 SHEETS

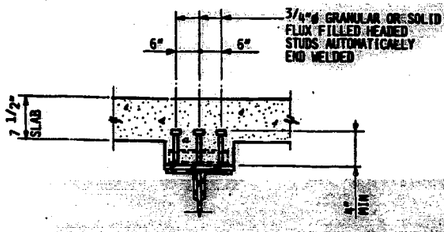


SECTION @ EAST PARAPET

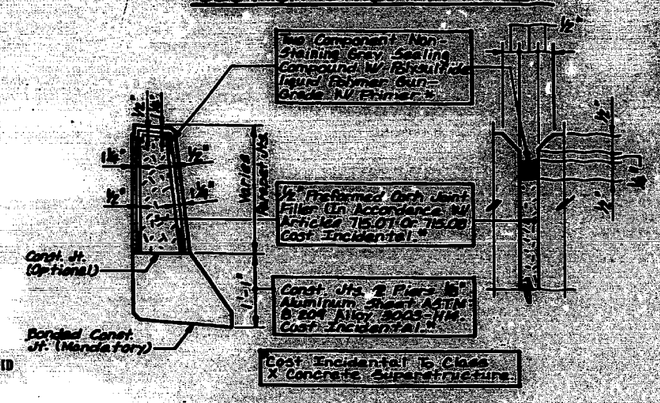
SECTION @ WEST PARAPET



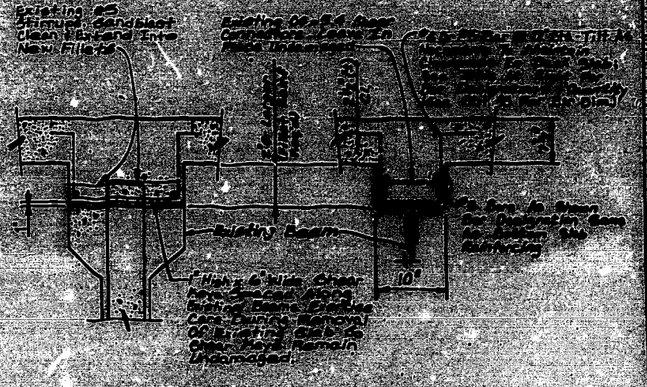
SHEAR STUD DETAILS FOR BEAMS



SHEAR STUD DETAILS FOR GIRDERS.



PARAPET JOINT DETAILS



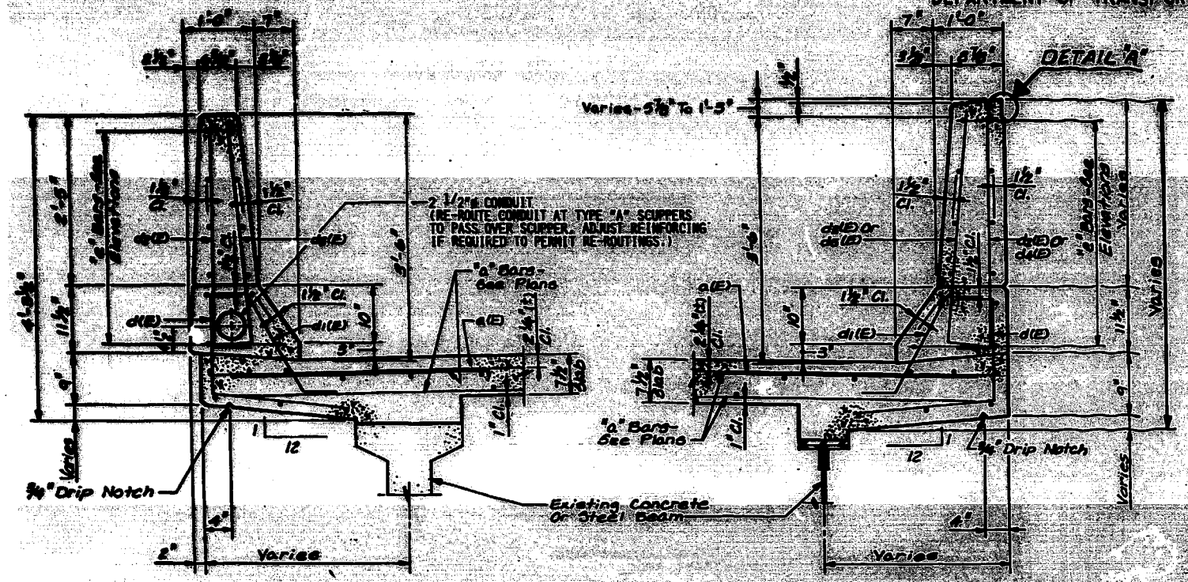
FILLET REINFORCING DETAILS

BEAM FILLET REINFORCING TABLE

BEAM NUMBERS	BAR QUANTITY	BAR NUMBER
	78 EACH	a1
	34	a1
	35	a1
	41	a1
	42	a1
	43	a1
	89 EACH	a1
	37	a2
	71	a2
	71	a2
	89	a2
	89	a1
	43	a1
	89	a1
	33 EACH	a2
	33 EACH	a1
	89 EACH	a2
	89 EACH	a1
	89 EACH	a2
	89 EACH	a1
	89 EACH	a1
	74 EACH	a1
	57	a1
	61	a1
	61 EACH	a1
	61	a2
	63 EACH	a3
	218 EACH	a5
	187	a5
	75 EACH	a3
	67 EACH	a3
	60 EACH	a3
	35	a1
	40	a1
	44	a1
	40	a1
	61	a2
	80	a2
	78 EACH	a1
	89 EACH	a1
	42 EACH	a1
	83 EACH	a1
	61	a2
	80	a2
	61	a1
	53 EACH	a1
	57	a1
	53	a1
	57	a1
	33	a1
	57	a1
	31	a1
	85	a1
	89	a1
	55	a1
	82	a1
	58	a1
	47	a1
	74 EACH	a3
	52	a1
	56	a1
	60	a1

STANLEY CONSULTANTS

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.



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

[illegible]	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	235

F.A.P. | 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

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-N8.15	78 EACH	a1
N10.1	34	a1
N10.3	38	a1
N10.4	41	a1
N10.5	45	a1
N10.6	49	a1
N11.1-N11.13	59 EACH	a4
N12.1	77	a2
N12.2	74	a2
N12.3	71	a2
N12.4	69	a2
N12.5	66	a1
N12.6	63	a1
N12.7	60	a1
[illegible]	33 EACH	a2
[illegible]	33 EACH	a1
[illegible]	68 EACH	a2
[illegible]	68 EACH	a1
[illegible]	69 EACH	a2
[illegible]	69 EACH	a1
[illegible]	68 EACH	a1
[illegible]	74 EACH	a1
[illegible]	57	a1
[illegible]	61	a1
[illegible]	61 EACH	a1
[illegible]	61	a2
[illegible]	63 EACH	a3
[illegible]	218 EACH	a5
[illegible]	187	a5
[illegible]	72 EACH	a3
[illegible]	57 EACH	a3
[illegible]	60 EACH	a3
[illegible]	35	a1
[illegible]	40	a1
[illegible]	44	a1
[illegible]	48	a1
[illegible]	61	a2
[illegible]	60	a2
[illegible]	79 EACH	a1
[illegible]	80 EACH	a1
[illegible]	82 EACH	a1
[illegible]	83 EACH	a1
[illegible]	51	a2
[illegible]	50	a2
[illegible]	51	a1
[illegible]	53 EACH	a1
[illegible]	37	a1
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[illegible]	57	a1
[illegible]	61	a1
[illegible]	65	a1
[illegible]	69	a1
[illegible]	55	a1
[illegible]	52	a1
[illegible]	50	a1
[illegible]	47	a1
[illegible]	74 EACH	a3
[illegible]	52	a1
[illegible]	56	a1
[illegible]	60	a1

NOTES:

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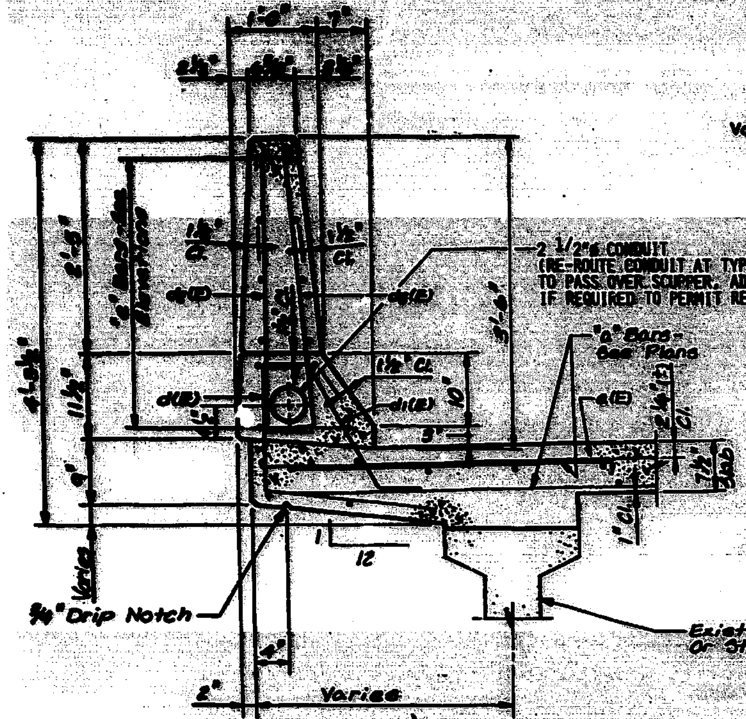
STANLEY CONSULTANTS

F.A.P. ROUTE [illegible] AVENUE

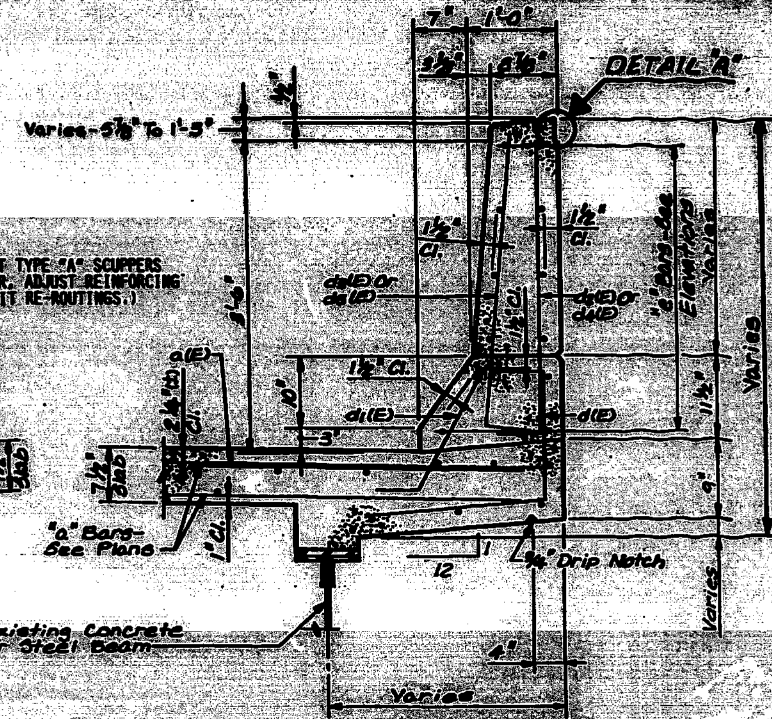
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

[illegible]	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	235

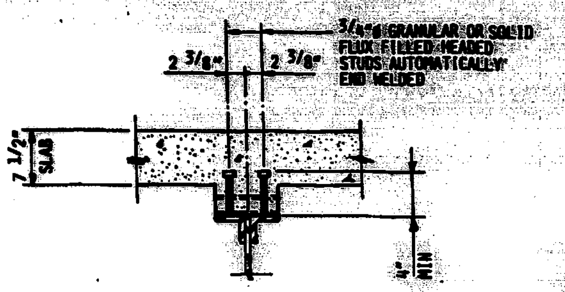
SHEET NO. 44
72 SHEETS



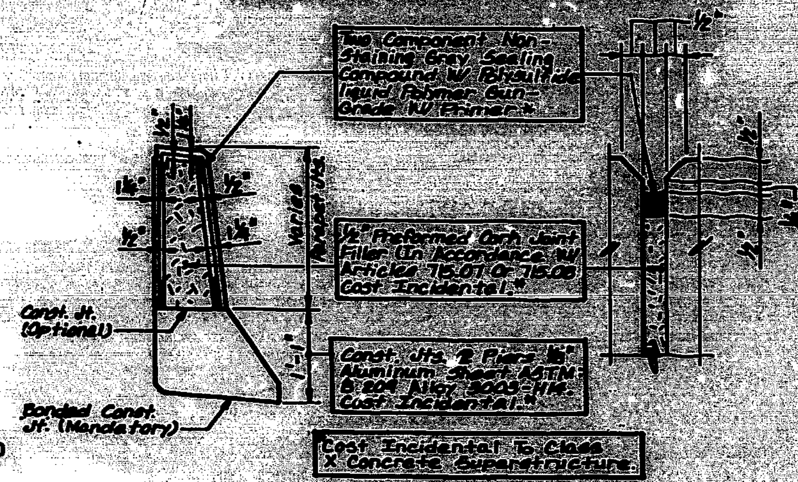
SECTION @ EAST PARAPET



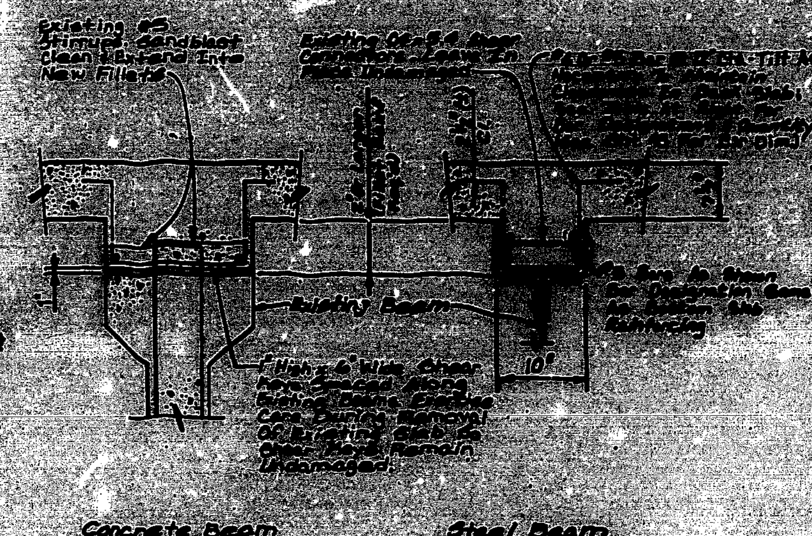
SECTION @ WEST PARAPET



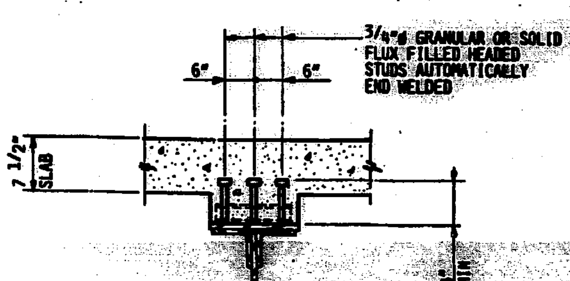
SHEAR STUD DETAILS FOR BEAMS



PARAPET JOINT DETAILS



FILLET REINFORCING DETAILS



SHEAR STUD DETAILS FOR GIRDERS

BEAM FILLET REINFORCING TABLE

BEAM NUMBER	BAR QUANTITY	BAR NUMBER
[illegible]	78 EACH	a1
[illegible]	34	a1
[illegible]	30	a1
[illegible]	41	a1
[illegible]	45	a1
[illegible]	49	a1
[illegible]	90 EACH	a4
[illegible]	77	a2
[illegible]	74	a2
[illegible]	71	a2
[illegible]	68	a2
[illegible]	66	a1
[illegible]	63	a1
[illegible]	60	a1
[illegible]	33 EACH	a2
[illegible]	33 EACH	a1
[illegible]	60 EACH	a2
[illegible]	60 EACH	a1
[illegible]	69 EACH	a2
[illegible]	69 EACH	a1
[illegible]	60 EACH	a1
[illegible]	74 EACH	a1
[illegible]	57	a1
[illegible]	61	a1
[illegible]	61 EACH	a1
[illegible]	61	a2
[illegible]	63 EACH	a3
[illegible]	218 EACH	a5
[illegible]	187	a5
[illegible]	72 EACH	a3
[illegible]	67 EACH	a3
[illegible]	60 EACH	a3
[illegible]	35	a1
[illegible]	40	a1
[illegible]	44	a1
[illegible]	48	a1
[illegible]	61	a2
[illegible]	60	a2
[illegible]	79 EACH	a1
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[illegible]	82 EACH	a1
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[illegible]	51	a2
[illegible]	50	a2
[illegible]	51	a1
[illegible]	53 EACH	a1
[illegible]	37	a1
[illegible]	53	a1
[illegible]	57	a1
[illegible]	61	a1
[illegible]	65	a1
[illegible]	69	a1
[illegible]	55	a1
[illegible]	52	a1
[illegible]	50	a1
[illegible]	47	a1
[illegible]	74 EACH	a3
[illegible]	52	a1
[illegible]	56	a1
[illegible]	60	a1

NOTES:

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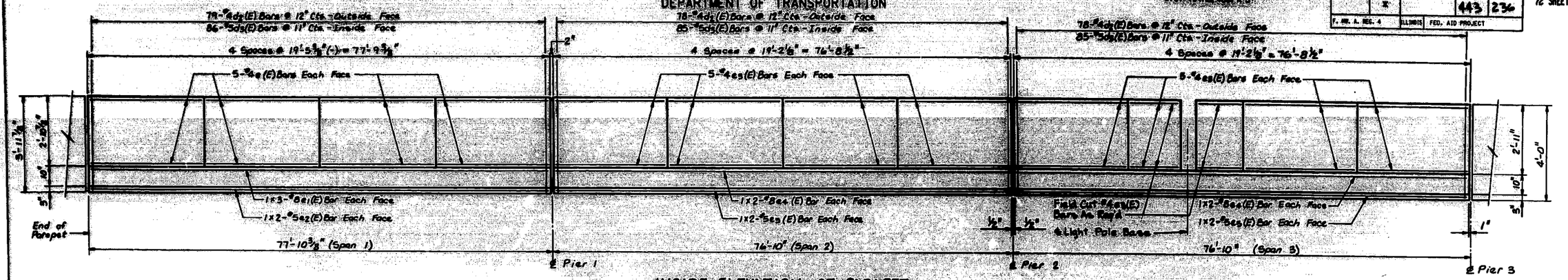
STANLEY CONSULTANTS

[illegible] AVENUE

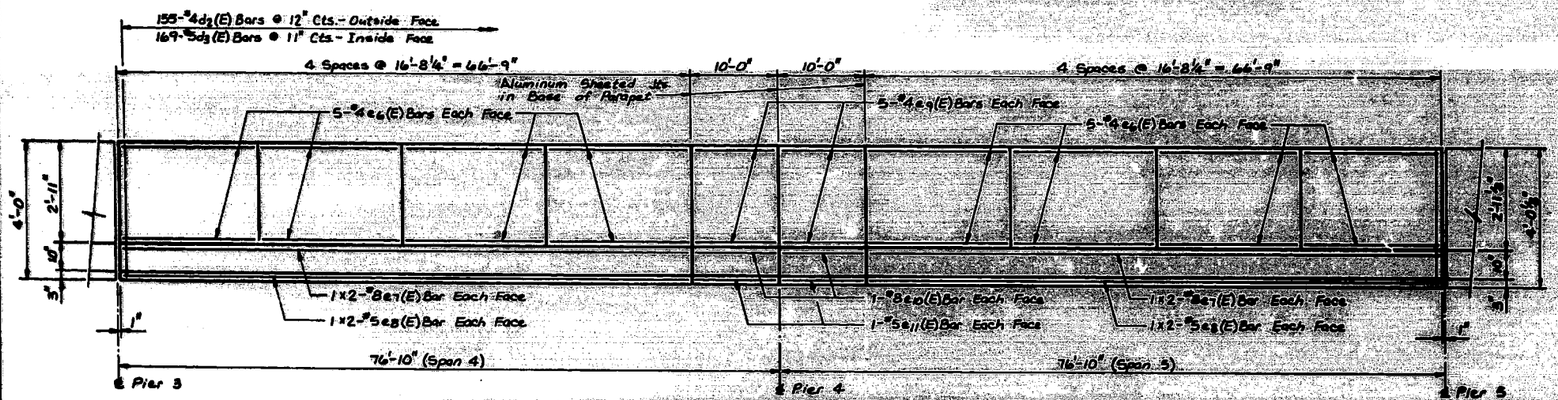
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	W		443	236
F. AID A. REG. 4		ILLINOIS	FED. AID PROJECT	

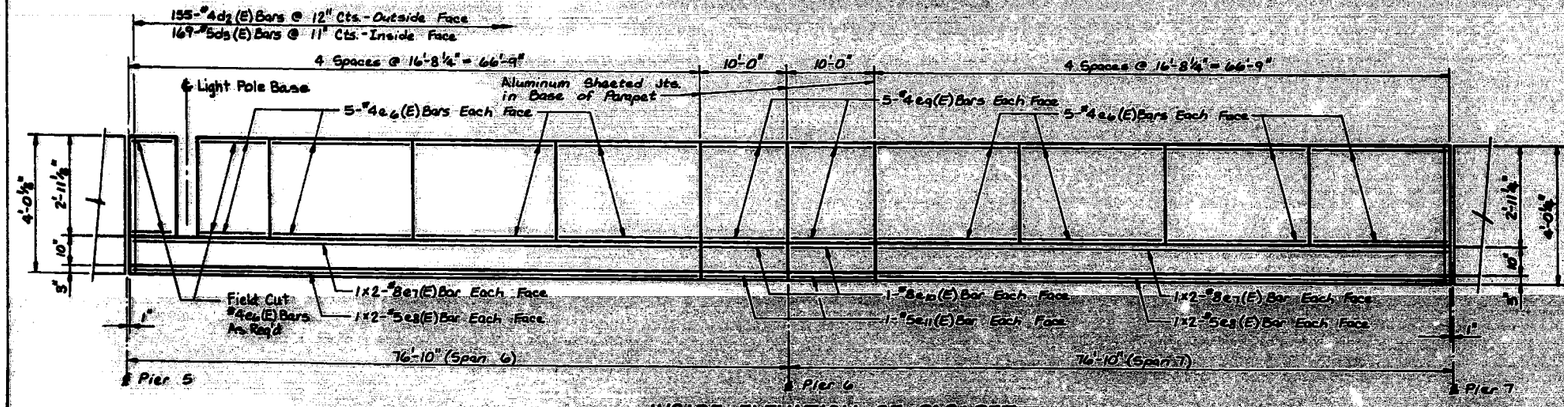
SHEET NO. 45
72 SHEETS



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

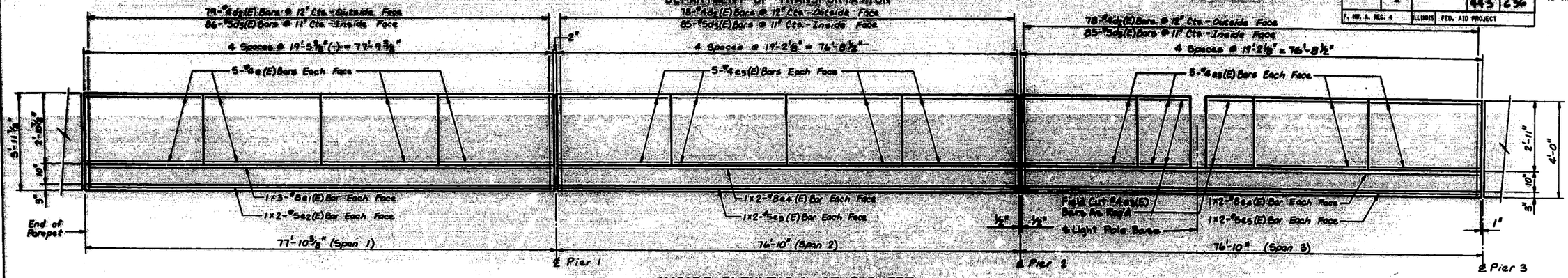
PARAPET DETAILS - WEST SIDE
SHEET 2 OF 3

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+48

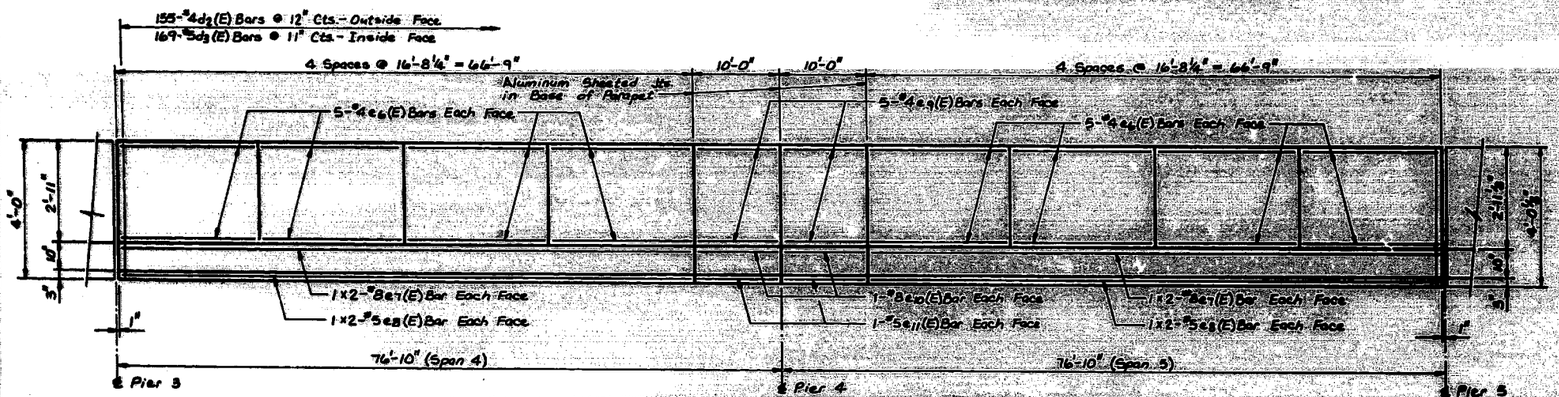
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	236
F. AID. A. REG. 4		ILLINOIS	FED. AID PROJECT	

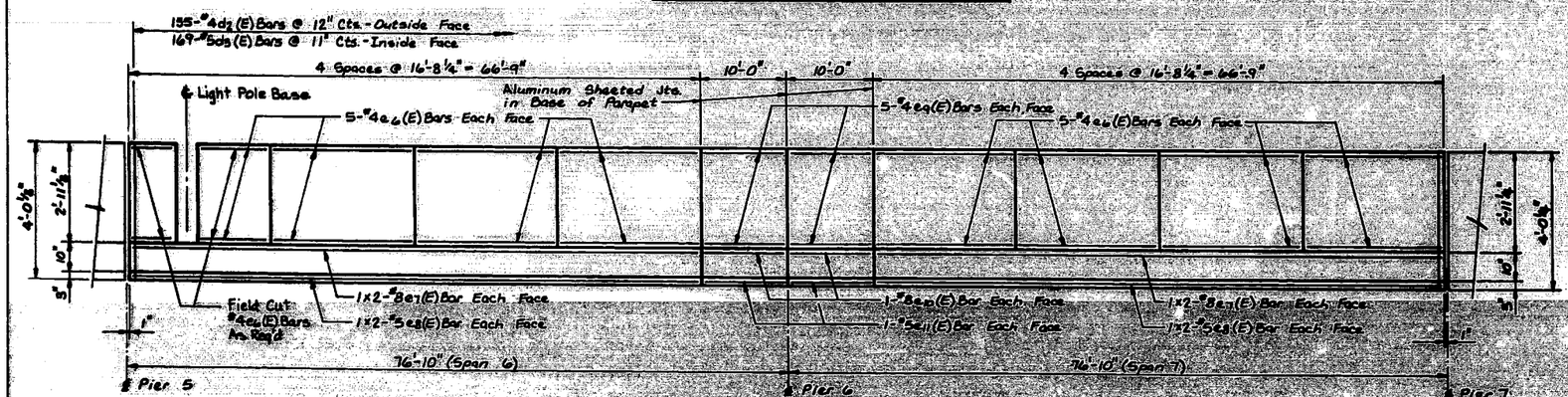
SHEET NO. 45
72 SHEETS



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 2 OF 3

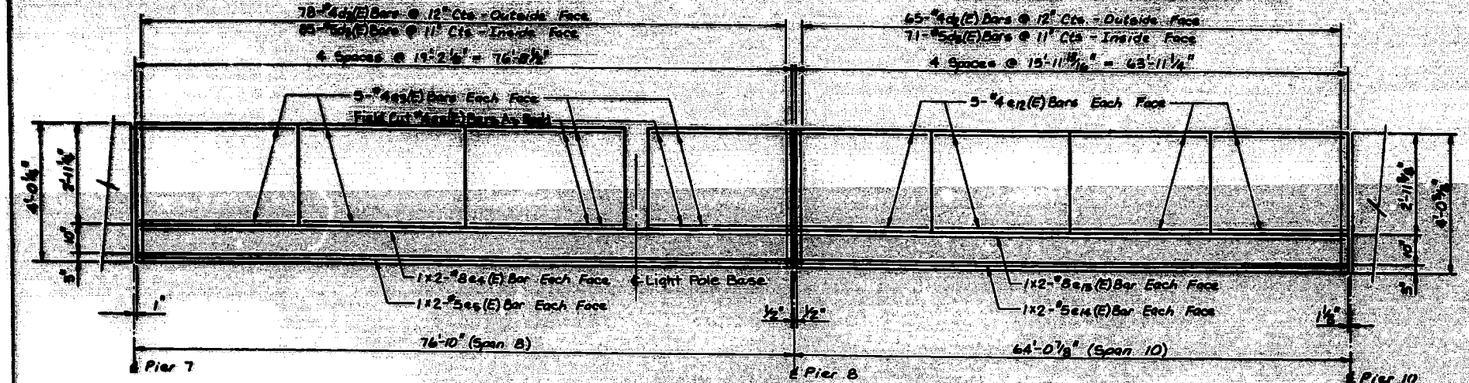
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

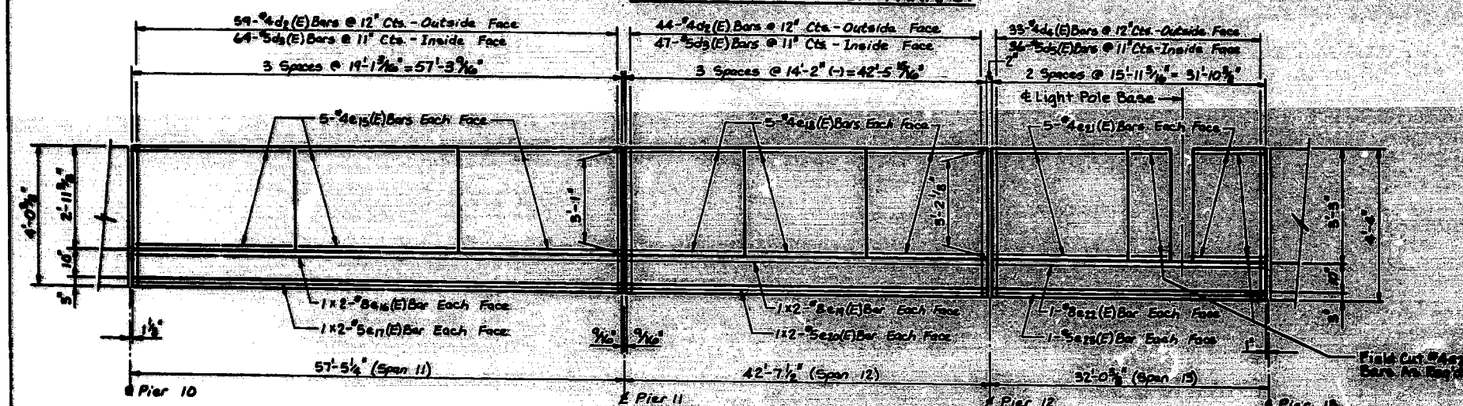
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	3		443	237
F. AID. & REG. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 46
72 SHEETS

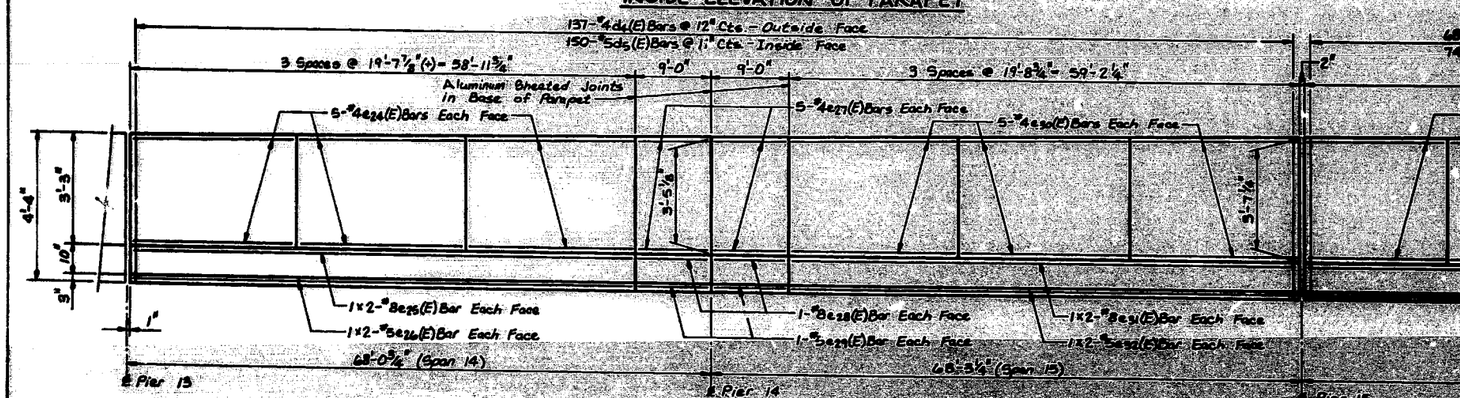
X 050542-2P, 3-11, 6-P, 4001B, 4011B, 4511, 0506-4501, 0805-4021B, 0806-4039B, 0707-4041B, 4301 R-5



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTE:
FOR NOTES SEE SHEET 45.

STANLEY CONSULTANTS

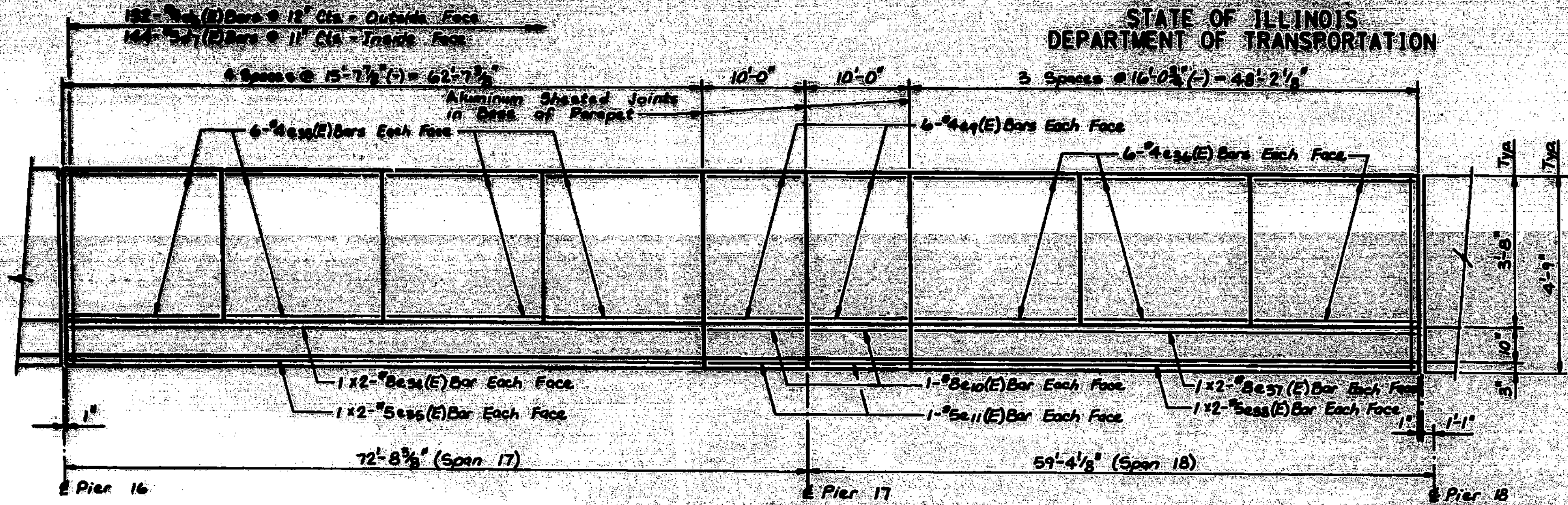
PARAPET DETAILS - WEST SIDE
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+48

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	238
F. NO. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 47
72 SHEETS

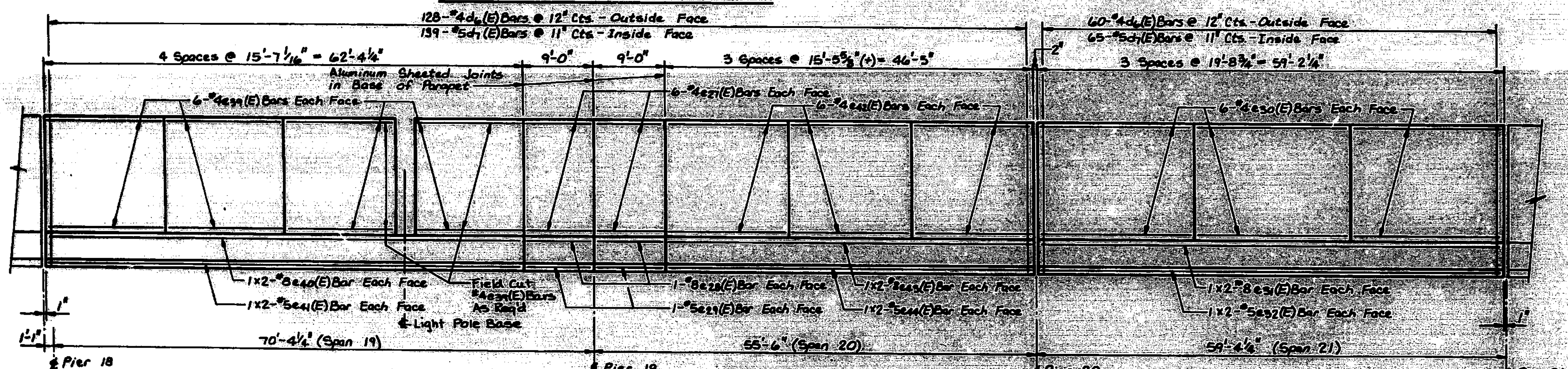
X 0505(2-2R, 3-1R, 6-1P, 400HB, 401HB, 450, (0506-450, 0606-402HB, 0606-403HB, 0707-404HB, 439) R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



4 Spaces @ 15'-7 7/8"(+) = 62'-7 1/2"
Aluminum Sheeted Joints in Base of Parapet
10'-0"
10'-0"
3 Spaces @ 16'-0 3/8"(-) = 48'-2 1/8"
6-#4e39(E) Bars Each Face
6-#4e19(E) Bars Each Face
6-#4e36(E) Bars Each Face
1×2-#8e34(E) Bar Each Face
1×2-#5e35(E) Bar Each Face
1-#8e10(E) Bar Each Face
1-#5e11(E) Bar Each Face
1×2-#8e37(E) Bar Each Face
1×2-#5e38(E) Bar Each Face
72'-8 5/8" (Span 17)
59'-4 1/8" (Span 18)
℄ Pier 16
℄ Pier 17
℄ Pier 18

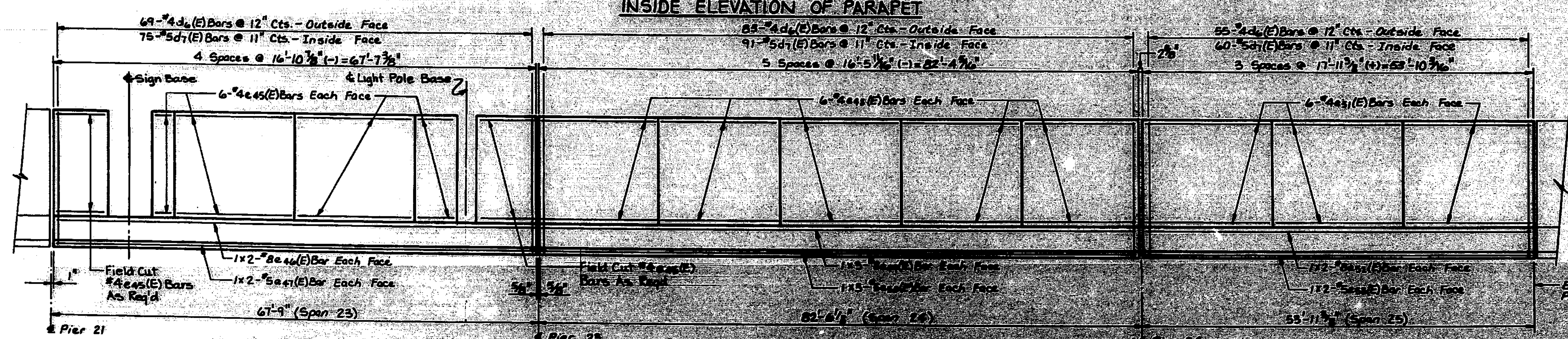
INSIDE ELEVATION OF PARAPET



128-#4d6(E) Bars @ 12" Cts. - Outside Face
139-#5d7(E) Bars @ 11" Cts. - Inside Face
60-#4d6(E) Bars @ 12" Cts. - Outside Face
65-#5d7(E) Bars @ 11" Cts. - Inside Face
4 Spaces @ 15'-7 1/16" = 62'-4 1/4"
9'-0"
9'-0"
3 Spaces @ 15'-5 5/8"(+) = 46'-5"
3 Spaces @ 19'-8 3/4" = 59'-2 1/4"
Aluminum Sheeted Joints in Base of Parapet
6-#4e39(E) Bars Each Face
6-#4e27(E) Bars Each Face
6-#4e43(E) Bars Each Face
6-#4e50(E) Bars Each Face
1×2-#8e40(E) Bar Each Face
1×2-#5e41(E) Bar Each Face
Field Cut #4e39(E) Bars As Req'd
℄ Light Pole Base
1-#8e28(E) Bar Each Face
1-#5e29(E) Bar Each Face
1×2-#8e45(E) Bar Each Face
1×2-#5e44(E) Bar Each Face
1×2-#8e51(E) Bar Each Face
1×2-#5e52(E) Bar Each Face
70'-4 1/4" (Span 19)
55'-6" (Span 20)
59'-4 1/4" (Span 21)
℄ Pier 18
℄ Pier 19
℄ Pier 20
℄ Pier 21

INSIDE ELEVATION OF PARAPET

NOTE:
FOR NOTES SEE SHEET 45.



69-#4d6(E) Bars @ 12" Cts. - Outside Face
75-#5d7(E) Bars @ 11" Cts. - Inside Face
4 Spaces @ 16'-10 7/8"(-) = 67'-7 3/8"
℄ Sign Base
℄ Light Pole Base
6-#4e45(E) Bars Each Face
85-#4d6(E) Bars @ 12" Cts. - Outside Face
91-#5d7(E) Bars @ 11" Cts. - Inside Face
5 Spaces @ 16'-5 11/16"(-) = 82'-4 5/16"
6-#4e48(E) Bars Each Face
55-#4d6(E) Bars @ 12" Cts. - Outside Face
60-#5d7(E) Bars @ 11" Cts. - Inside Face
3 Spaces @ 17'-11 3/8"(+) = 53'-10 3/16"
6-#4e31(E) Bars Each Face
1×2-#8e46(E) Bar Each Face
1×2-#5e47(E) Bar Each Face
Field Cut #4e45(E) Bars As Req'd
Field Cut #4e48(E) Bars As Req'd
End of Parapet
67'-9" (Span 23)
82'-8 1/8" (Span 24)
53'-11 3/8" (Span 25)
℄ Pier 21
℄ Pier 23
℄ Pier 24

INSIDE ELEVATION OF PARAPET

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE
SHEET [illegible] OF 8
SECTION
F.A.I. ROUTE [illegible] OVER ASHLAND AVENUE
COOK COUNTY
STATION [illegible]

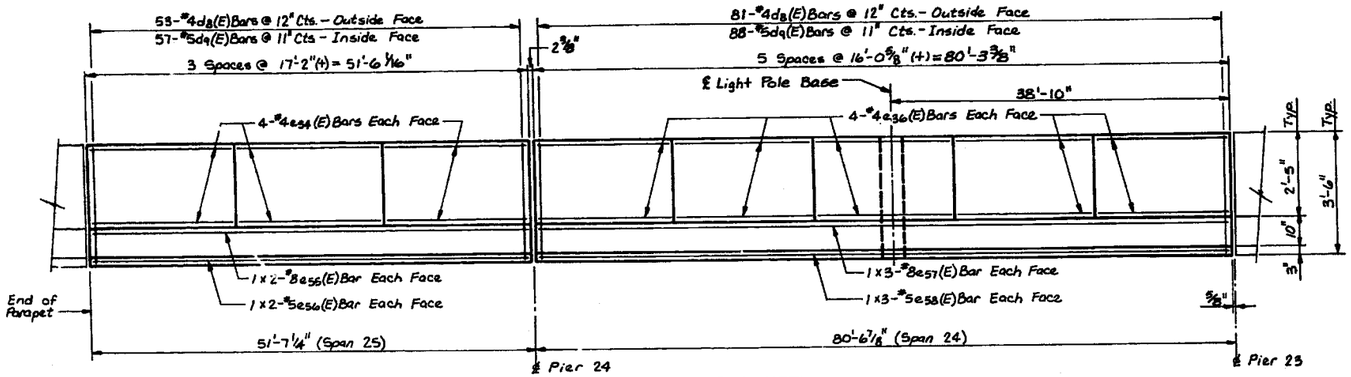
745

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

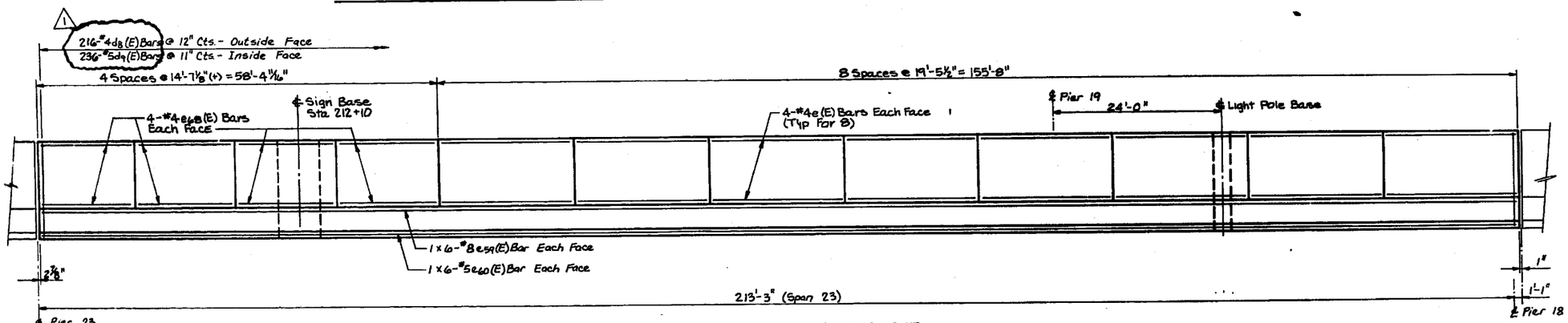
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	239
F. HW. A. REC. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 48
72 SHEETS

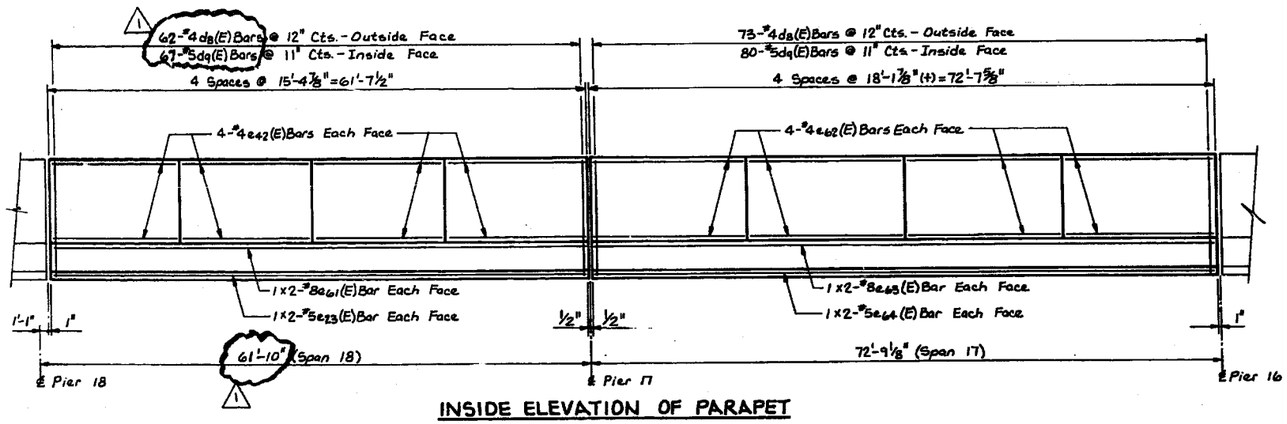
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTE:
FOR NOTES SEE SHEET 45.

PARAPET DETAILS - EAST SIDE
SHEET 1 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

1 REV. 9-30-93

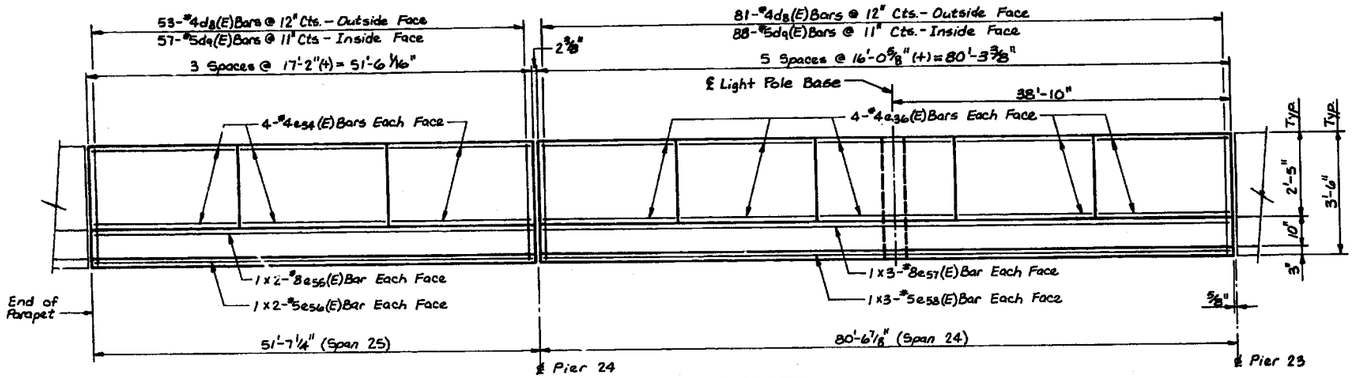
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

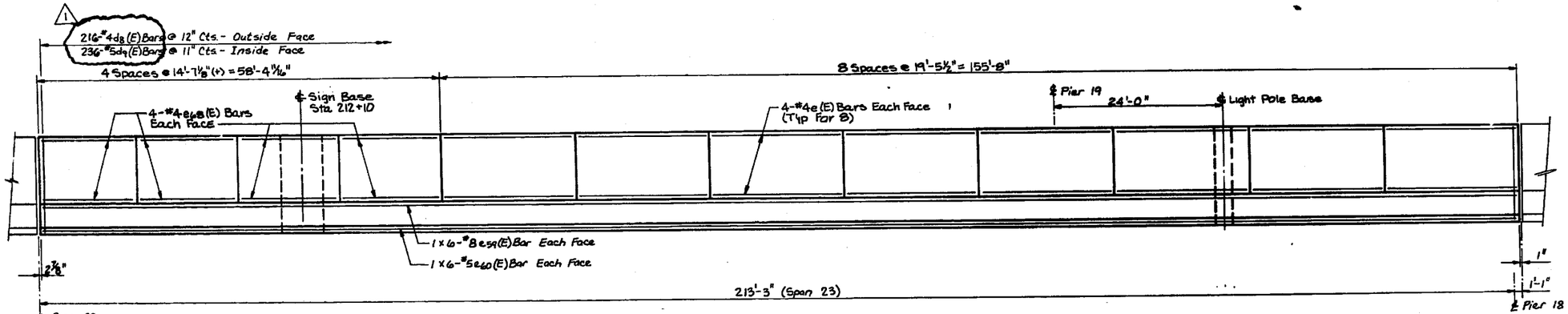
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	239
F. AW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 48
72 SHEETS

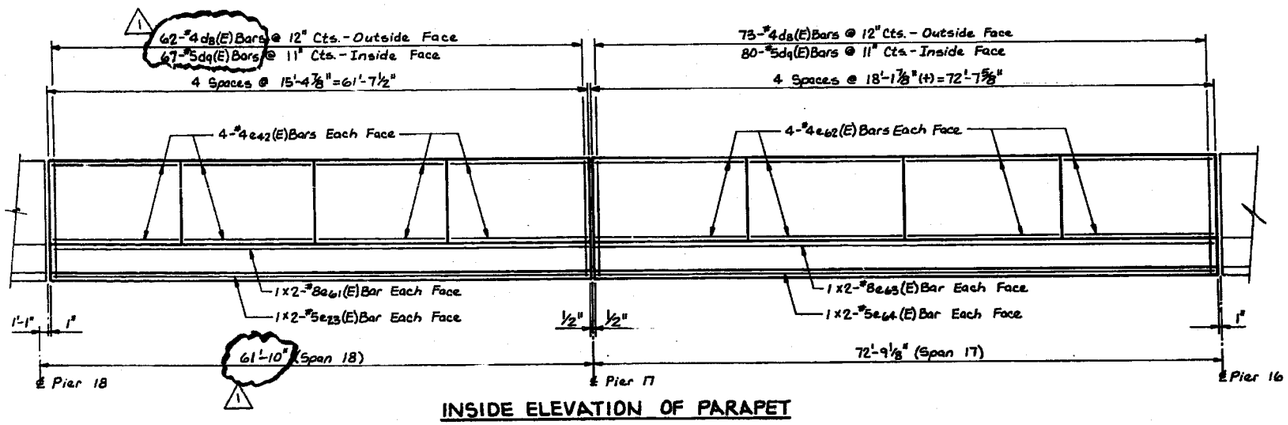
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTE:
FOR NOTES SEE SHEET 45.

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

STANLEY CONSULTANTS

1 REV. 9-30-93

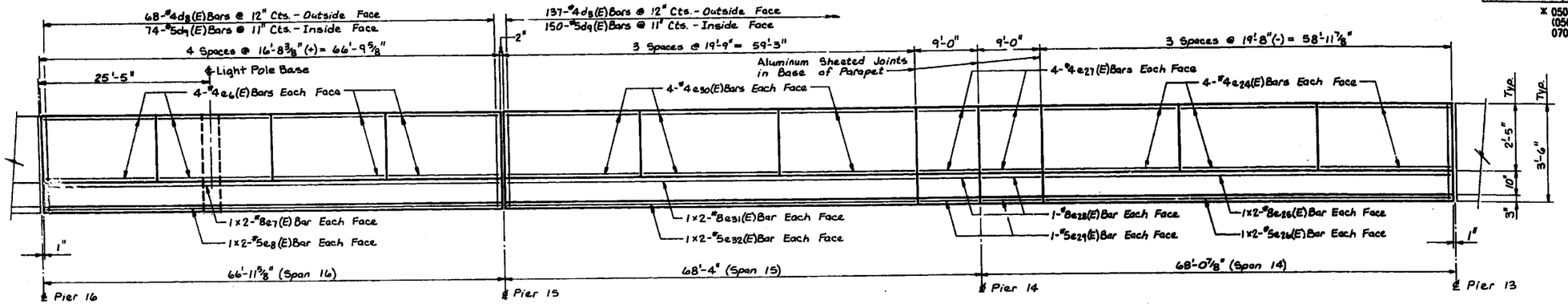
746

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

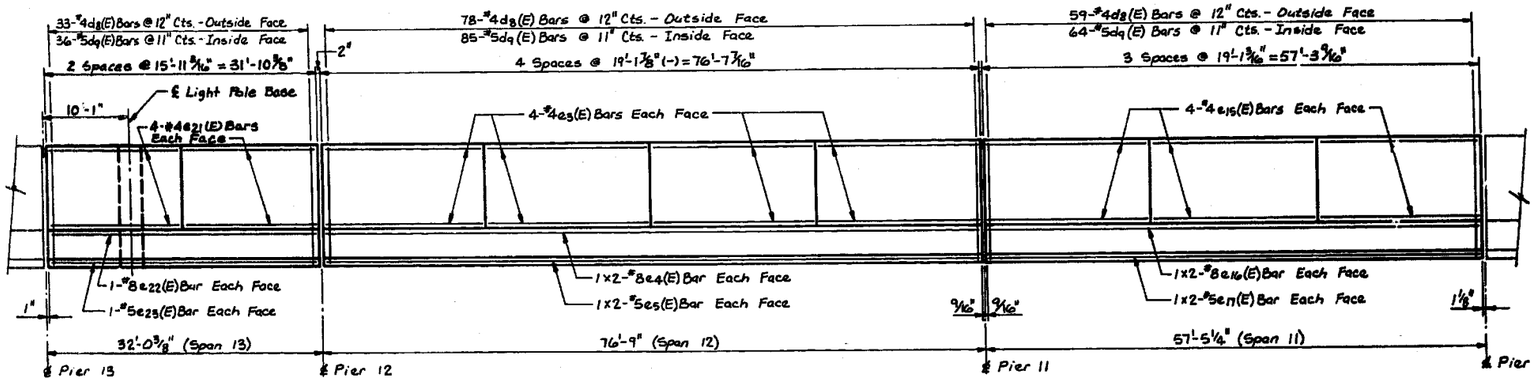
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	240
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 49
72 SHEETS

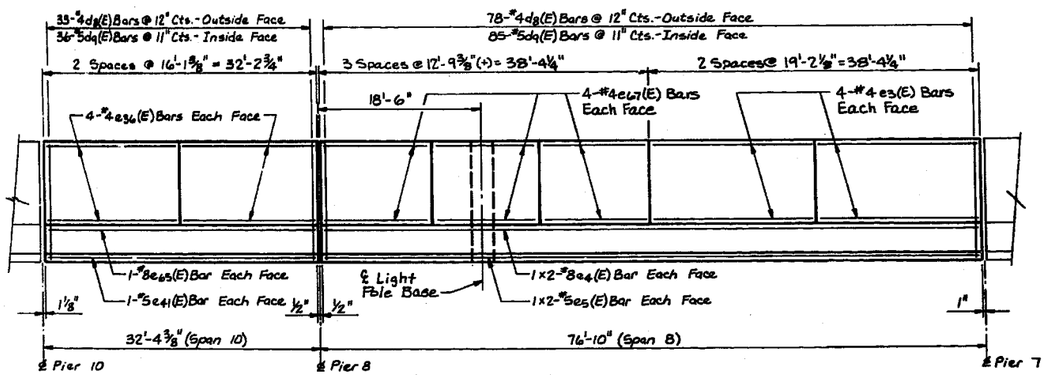
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTE:
FOR NOTES SEE SHEET 45.

PARAPET DETAILS - EAST SIDE
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+48

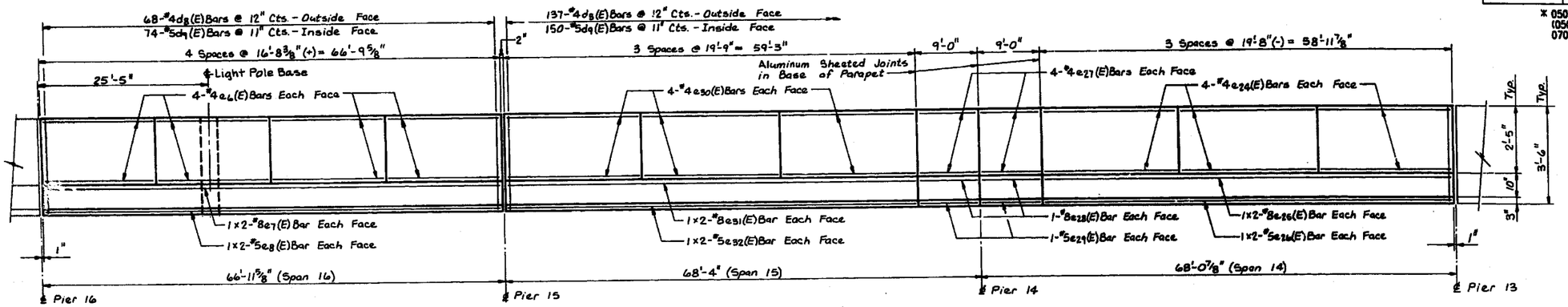
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

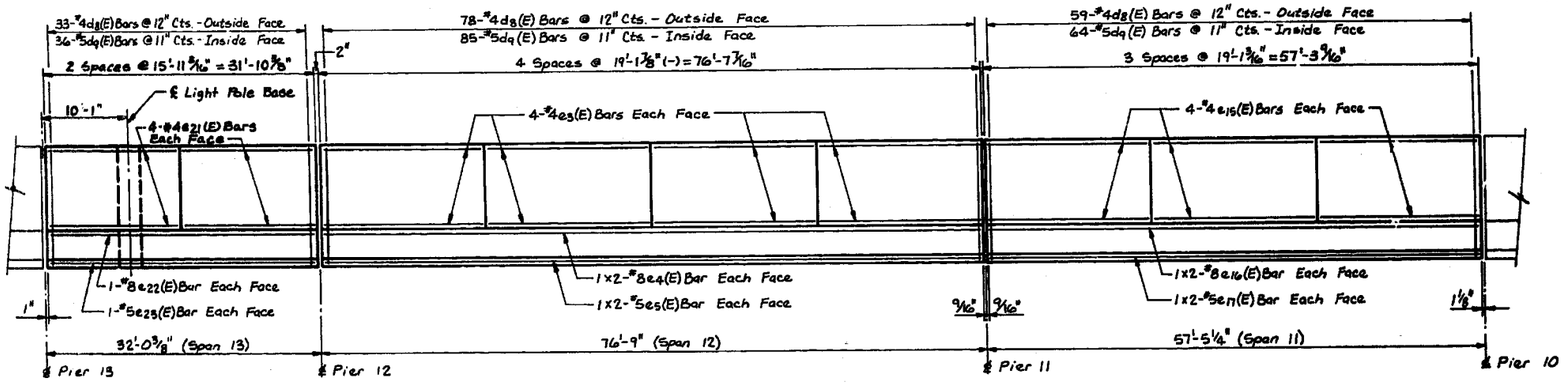
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	240
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 49
72 SHEETS

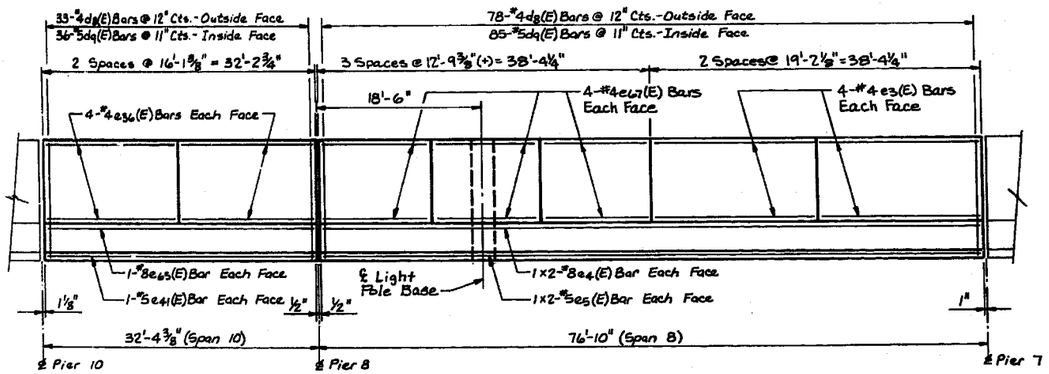
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTE:
FOR NOTES SEE SHEET 45.

PARAPET DETAILS - EAST SIDE
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

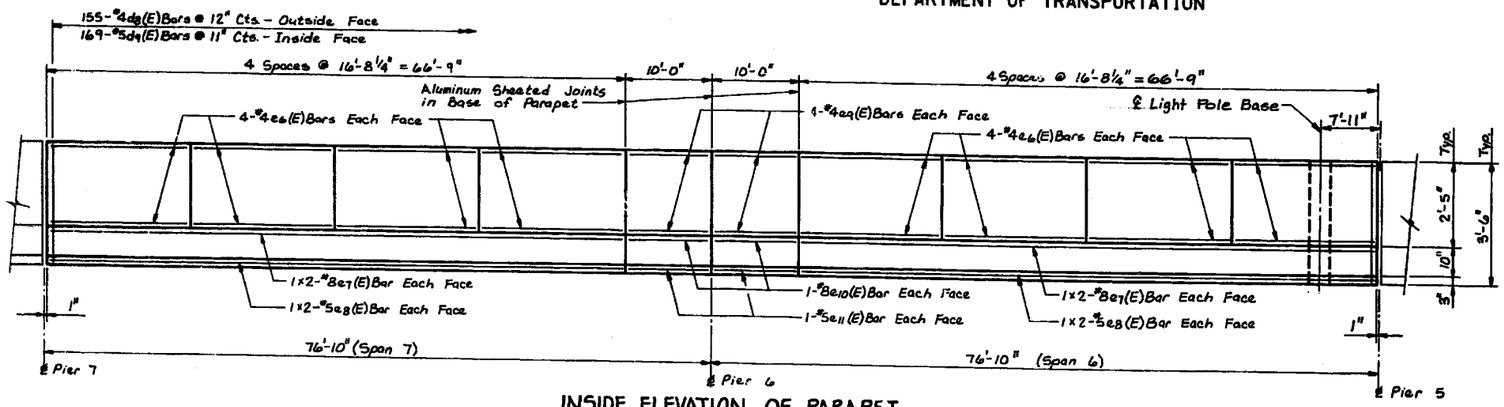
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

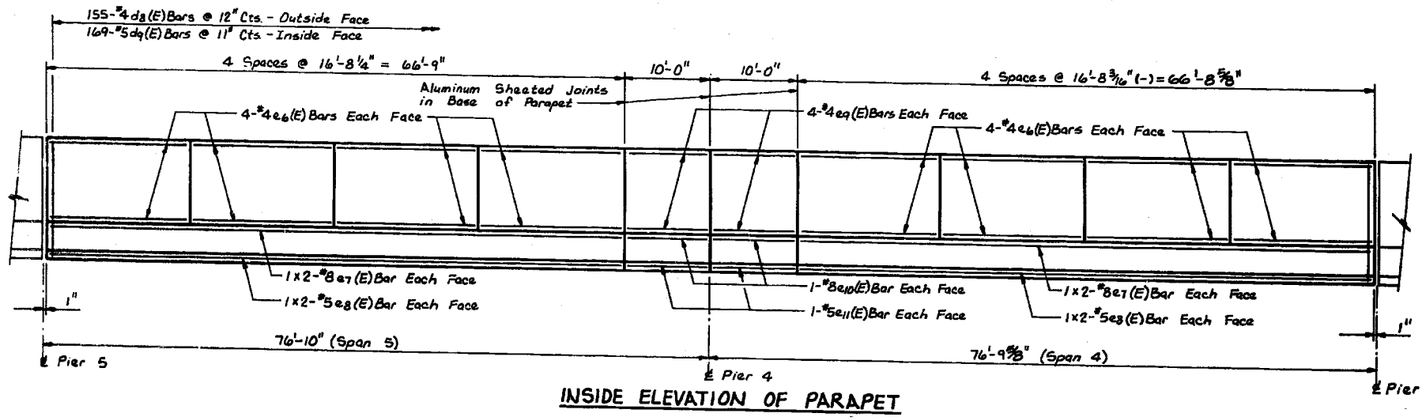
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	241
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 50
72 SHEETS

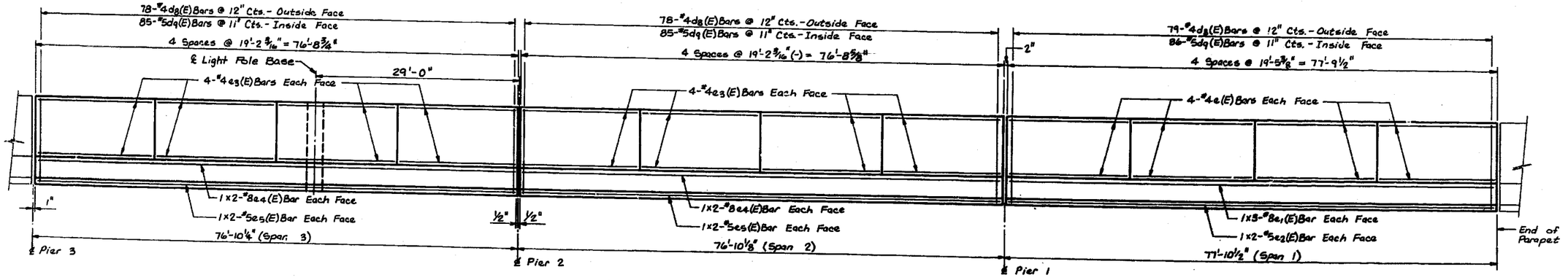
* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



NOTE:
FOR NOTES SEE SHEET 45.

STANLEY CONSULTANTS

PARAPET DETAILS - EAST SIDE
SHEET 3 OF 3

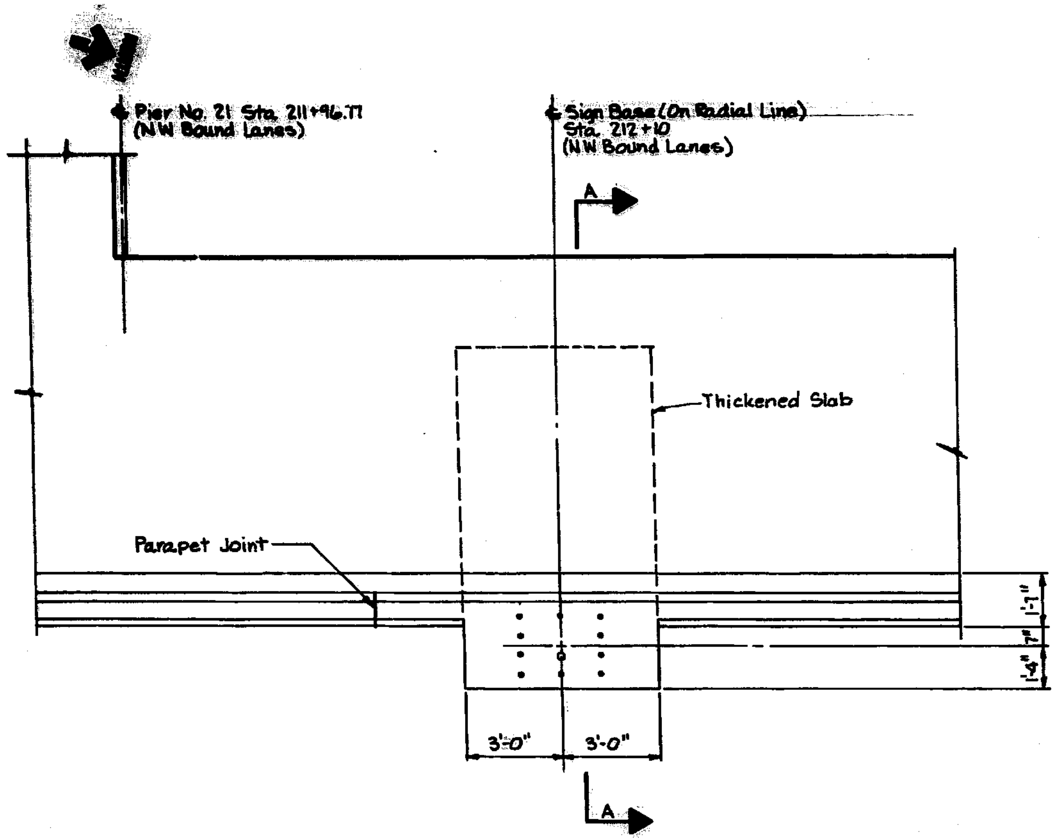
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

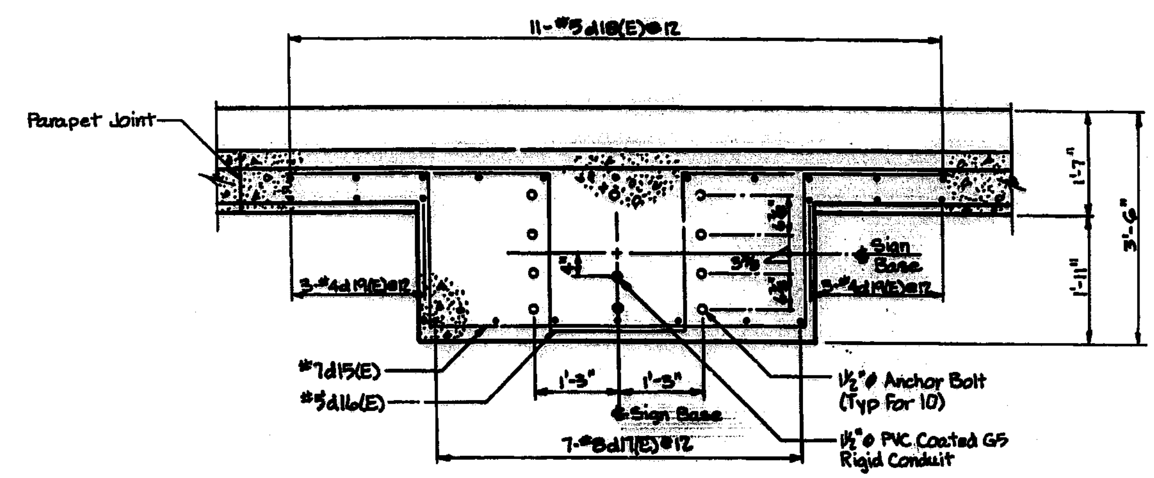
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	243
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 52
72 SHEETS

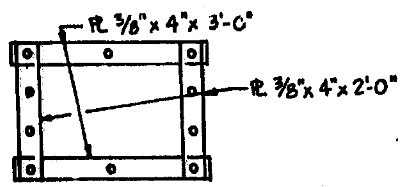
X 0505(2-28, 3-1H, 6-1P, 400HB, 401HB, 450, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 430) R-5



PLAN - SIGN BASE NEAR PIER NO. 21

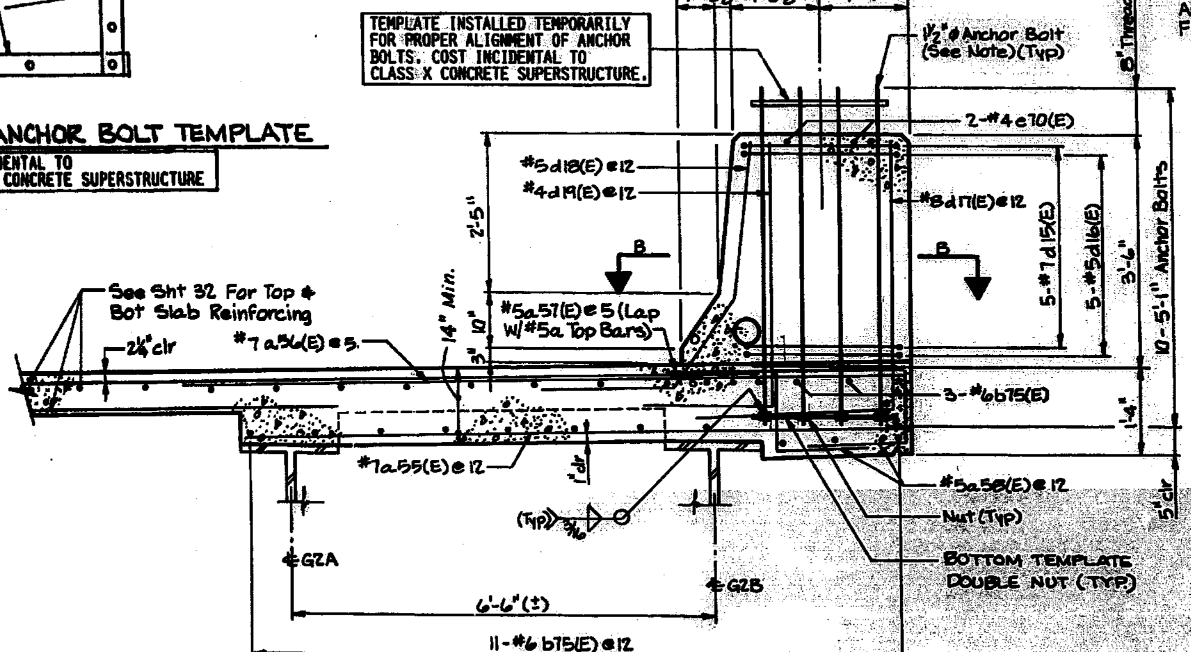


SECTION B-B



BOTTOM ANCHOR BOLT TEMPLATE

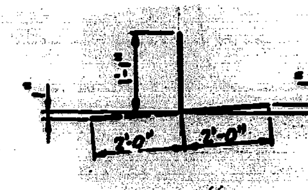
COST INCIDENTAL TO CLASS "X" CONCRETE SUPERSTRUCTURE



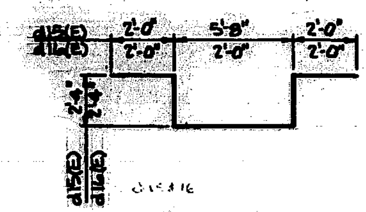
SECTION A-A

COST OF ANCHOR BOLTS INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE.

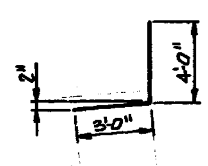
Note:
Galvanize upper 12" in accordance W/ AASHTO M232.
Provide 3 nuts & 1 washer for each bolt.
Anchor bolts ASTM A516
Fy = 55000 PSI.



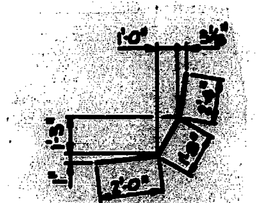
BAR a58(E)



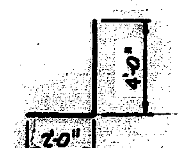
BARS d15(E) & d16(E)



BAR d17(E)



BAR d18(E)



BAR a19(E)

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"	L
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.

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 [illegible] OVER ASHLAND AVENUE
COOK COUNTY
STATION [illegible]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	R		443	244
F. AP. & SEC. #	ILLINOIS	FED. AID PROJECT		

SHEET NO. 53
72 SHEETS

K 0505(2-28) 3-94, 6-P, 400HB,401HB, 451),
(0506-480,0605-402HB, 0606-403HB,
0707-404HB, 430) 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	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
	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	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	1,814,725
(n=9)	in⁴	92,837	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	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
(n=27)	in⁴	39,508	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	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	1,965,758
	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	1010.3	1010.3	783.5	783.5	929.9	784.5	548.4	548.4	783.5	548.4	783.5	929.9	783.5	783.5	23956.8
(n=9)	in³	1452.4	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	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
(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	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
	k/ft	0.679	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	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
L	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	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
L	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	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	.328
DL	k-ft	178.6	178.6	178.6	103.2	103.2	103.2	102.5	102.5	102.1	102.1	102.1	99.7	104.1	104.1	72.5	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
L	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	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
MP	k-ft	115.6	151.7	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	107.8	150.2	144.1	128.9	128.9	90.1	77.1	115.5	115.5	119.6	134.7	134.7	150.4	113.7	930
L+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	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
(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	4.76	6.06	7.15	5.00	4.21	3.85	4.67	6.48	4.54	6.14	5.63	4.75	6.03	4.87	10.6
(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	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
(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	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
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	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
	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	38.1	38.1	26.6	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

S AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
C AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION
USED IN COMPUTING fs.
R 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	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
DL	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	32.5	38.5	34.9	28.3	28.3	21.6	23.2	29.3	29.3	28.2	30.3	30.3	32.7	26.1	503.2
LL	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	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
MP	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	9.0	10.6	9.1	12.6	12.6	10.3	9.5	11.8	11.8	10.0	12.2	12.2	13.5	10.9	18.5
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	76.8	90.6	79.4	86.4	86.4	69.2	66.8	83.7	83.7	74.3	87.4	87.4	95.8	77.0	636.0

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MOMENT AND REACTION TABLE

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

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1/2" Min.
4"	3"	2 1/2" Min.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

			443	245

SHEET NO. 54
72 SHEETS

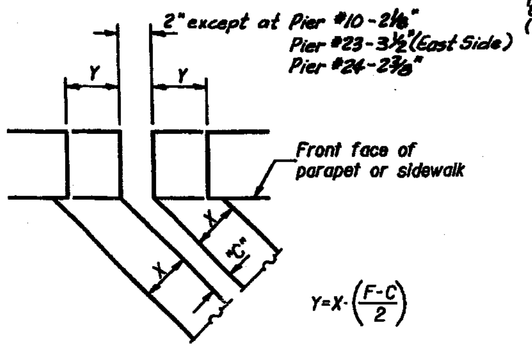
INSTALLATION NOTES

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.

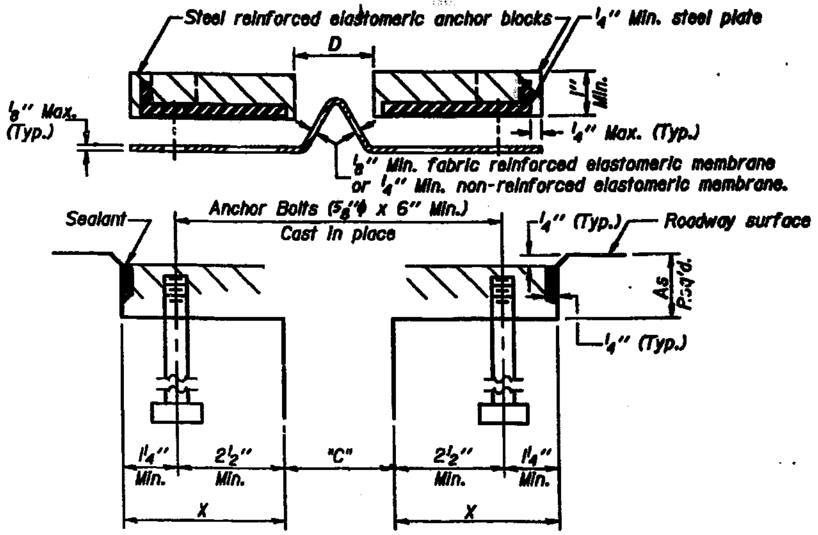
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

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 1 1/2" 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.

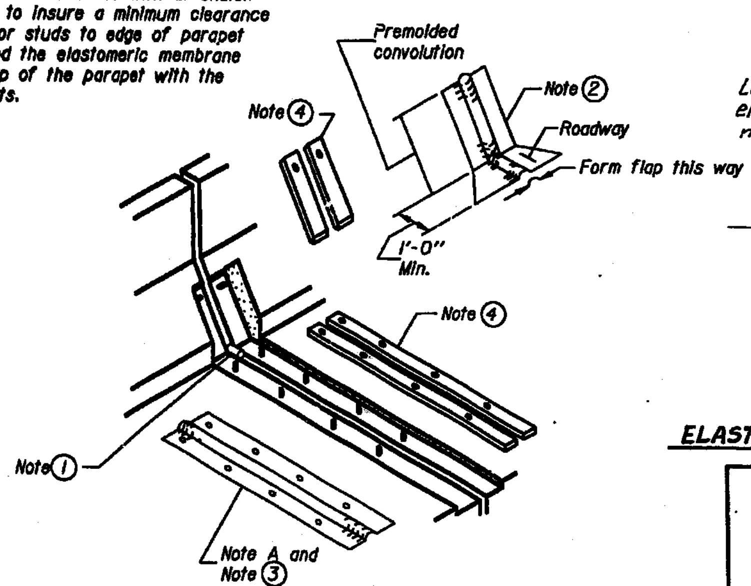
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

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.

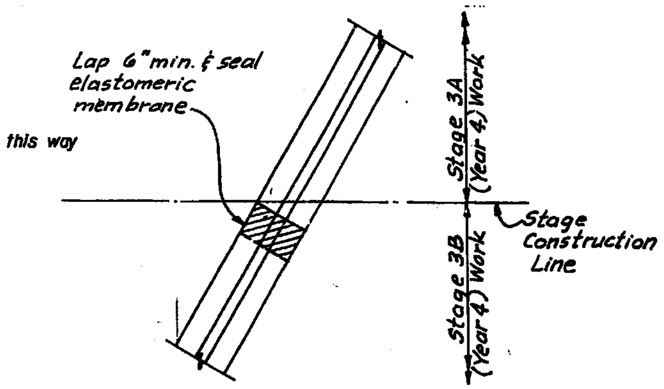
Joint openings shall be adjusted in accordance with Article 503.07(a) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

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.

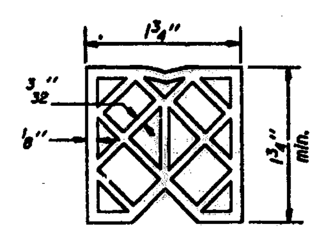
All anchor bolts for expansion joint shall be cast-in-place and tied to transverse reinforcing bars in deck.



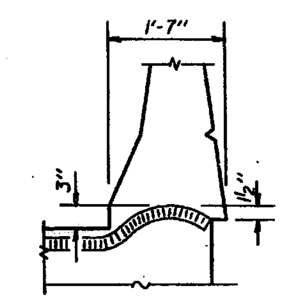
AT PARAPET



ELASTOMERIC MEMBRANE SPLICE LOCATIONS

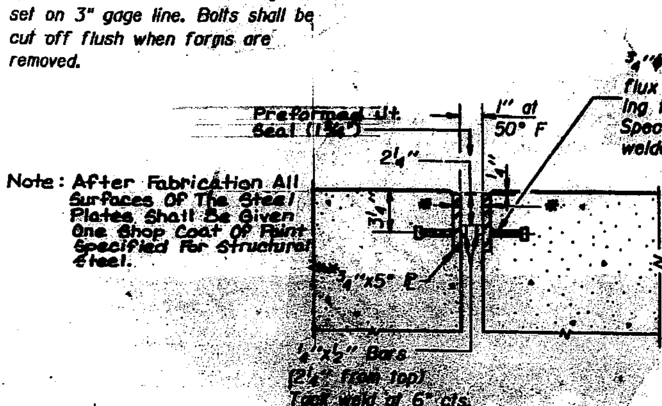


PREFORMED JOINT SEAL (1 3/4")



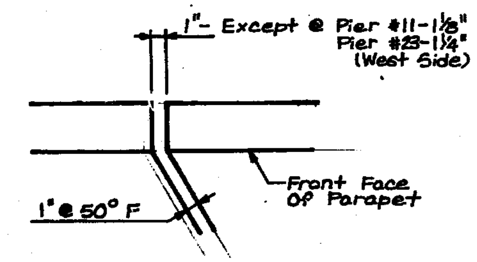
TYP. END OF SEAL TREATMENTS

* 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.

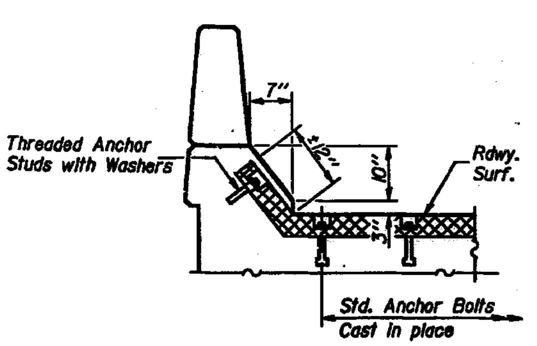


** Furnish In Segments Of 20 Ft. Maximum Length. Maximum Space Between Installed Segments Shall Be 1/4". Seal Space With Silicone Sealant Suitable For Structural Steel.

DETAIL "A"



FORMING BLOCKING SKETCH



AT PARAPET

PREFORMED JOINT SEAL (1 3/4")

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EJ-CS 2-26-93

[redacted]

F.A.I. ROUTE [redacted] OVER ASHLAND AVENUE

[redacted]

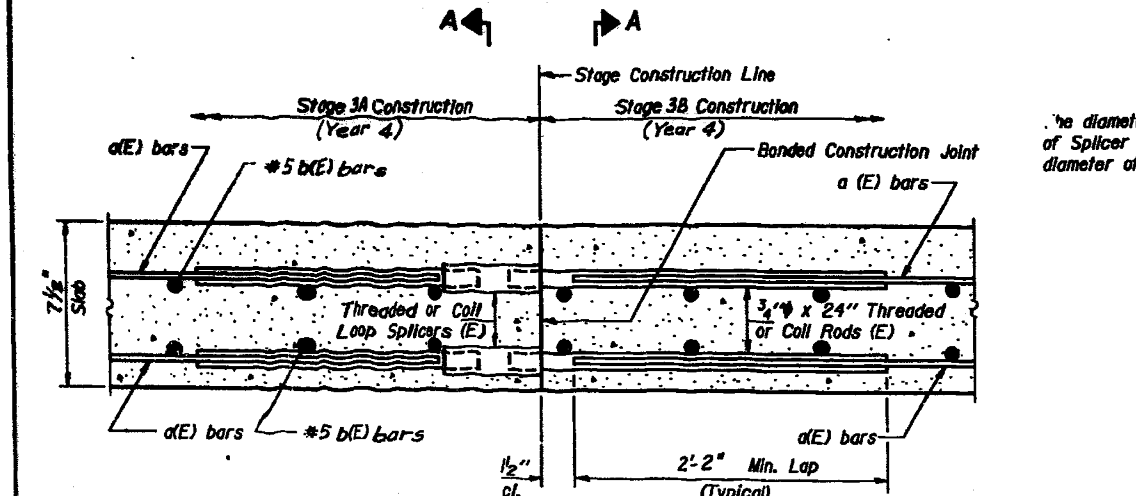
ORG.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. R.A.	X		443	246

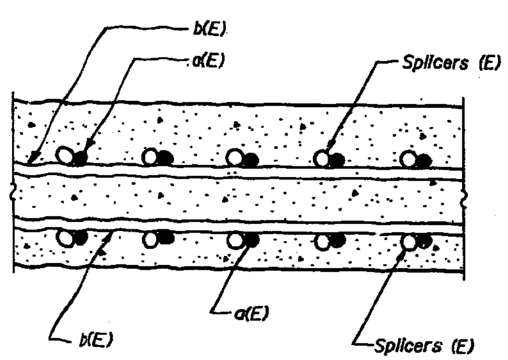
SHEET NO. 55
72 SHEETS

X 0505(2-2B, 3-1, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



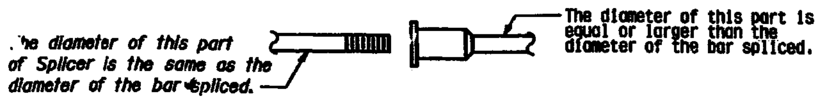
SECTION THRU SLAB

NOTE:
If Bars Are Lapped, Provide Double Ties To Prevent Traffic Vibration Movement During Stage 3B Pour.



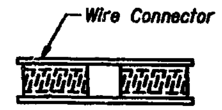
SECTION A-A

SPLICER DETAILS
(No. Req'd. 4231)



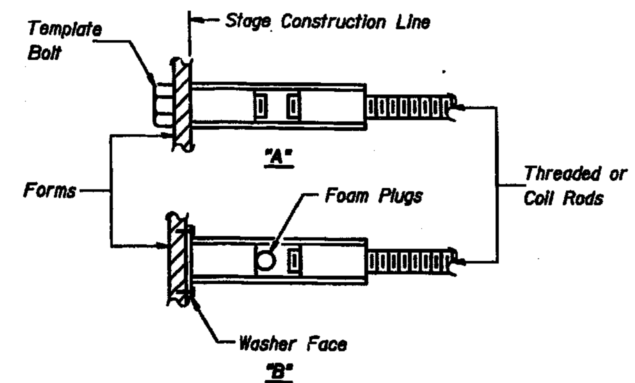
ROLLED THREAD DOWEL BAR (E)

** ONE PIECE (E)



WELDED SECTIONS (E)

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



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) ascembly 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 Slabs		
	#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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BSD-1 2-26-93

[redacted]

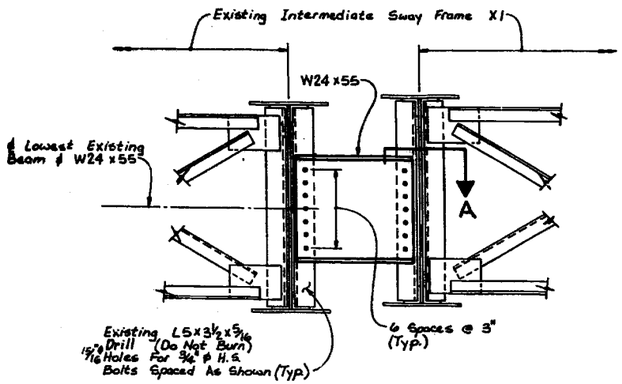
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION [illegible]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	247
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

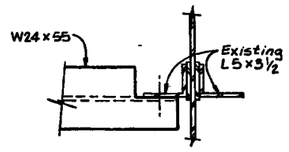
SHEET NO. 56
72 SHEETS

X 0505(2-2E, 3-IH, 6-IP, 400HB, 401HB, 451),
(0506-450, 0605-402HB, 0606-403HB,
0707-404HB, 431) 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 408+48

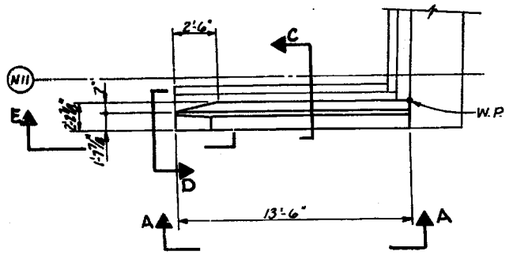
754

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

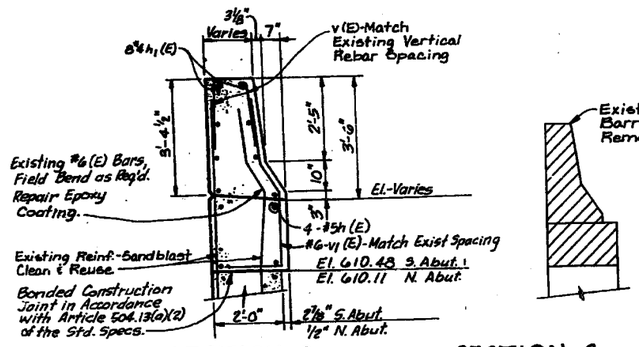
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	248
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 57 OF 72 SHEETS

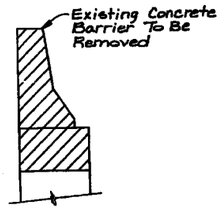
X 05052-2B, 3-91, 6-1P, 4001HB, 4011HB, 4511, (0506-4501, 0605-4021HB, 0606-4031HB, 0707-4041HB, 4391 R-5



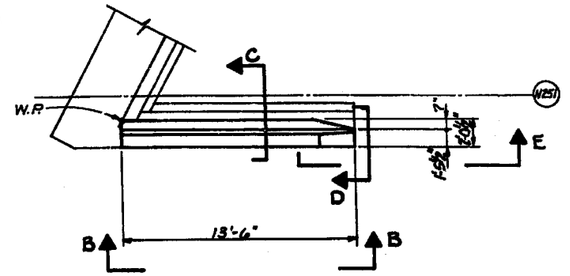
PLAN



SECTION C



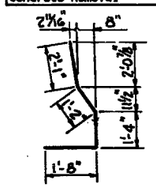
SECTION C (EXISTING)



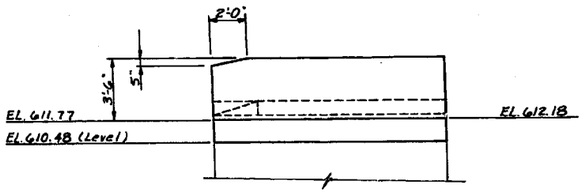
PLAN

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h1(E)	8	#5	13'-2"	
v1(E)	16	#4	13'-2"	
v(E)	56	#6	2'-0"	
v1(E)	28	#6	6'-3"	
Reinforcement Bars (Epoxy Coated)		Lbs.		680
Class "X" Concrete		Cu.Yds.		6.1
Concrete Removal		Cu.Yds.		3.1

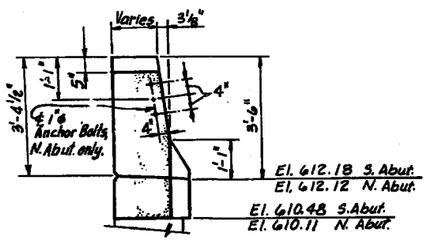


BAR v1(E)

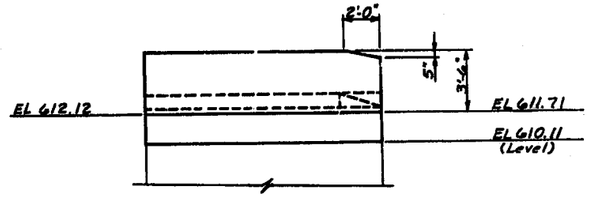


ELEVATION A-A

SOUTH ABUTMENT - EAST END

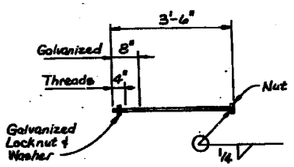


VIEW D

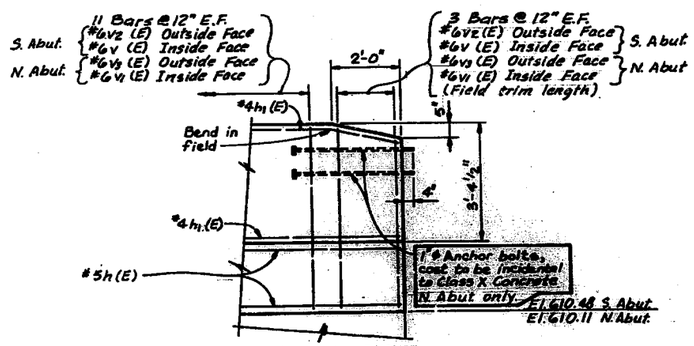


ELEVATION B-B

NORTH ABUTMENT - EAST END



1" ϕ ANCHOR BOLT



VIEW E

Reinforcement bars designated (E) shall be epoxy coated.

All bar dimensions are out-to-out.

▨ Indicates concrete removal.

SOUTH ABUTMENT - EAST END
NORTH ABUTMENT - EAST END
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 488+48

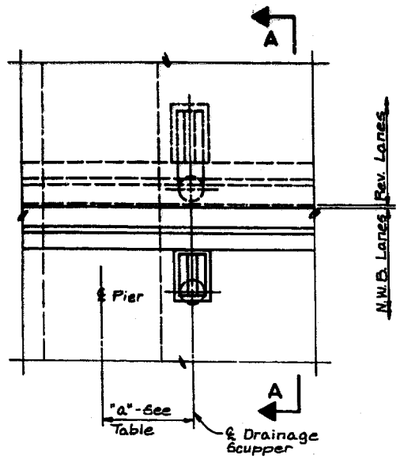
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

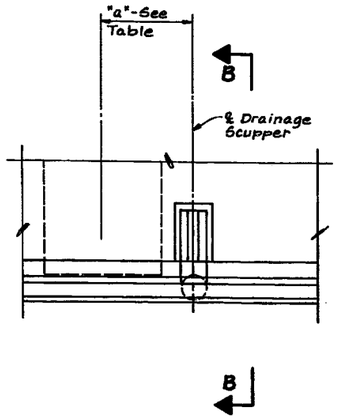
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	249
F. HW. A. REG. 4	ILLINOIS	FED. A19 PROJECT		

SHEET NO. 58
72 SHEETS

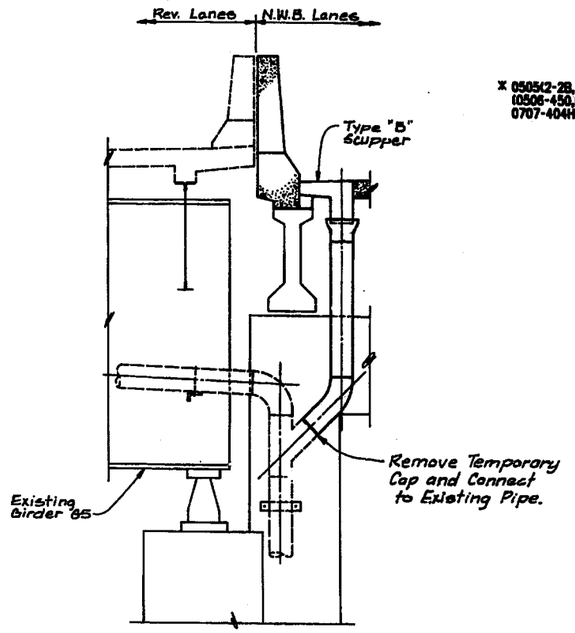
X 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 451),
(0506-450,0605-402HB, 0606-403HB,
0707-404HB, 439) R-5

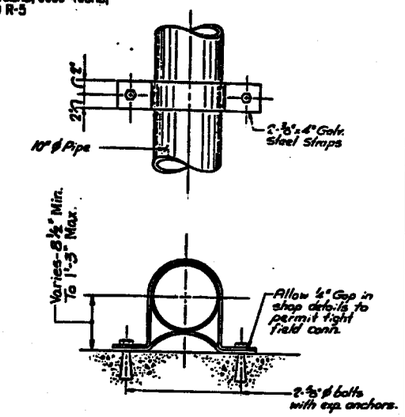


PLAN

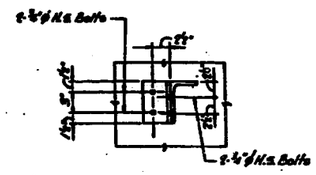


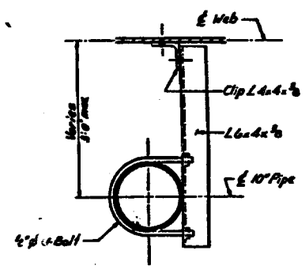
PLAN



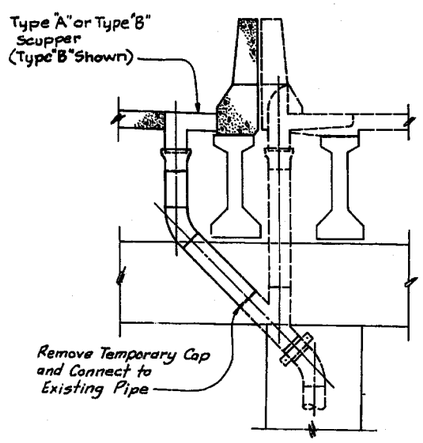


PIPE BRACKET DETAIL
(TO CONCRETE)

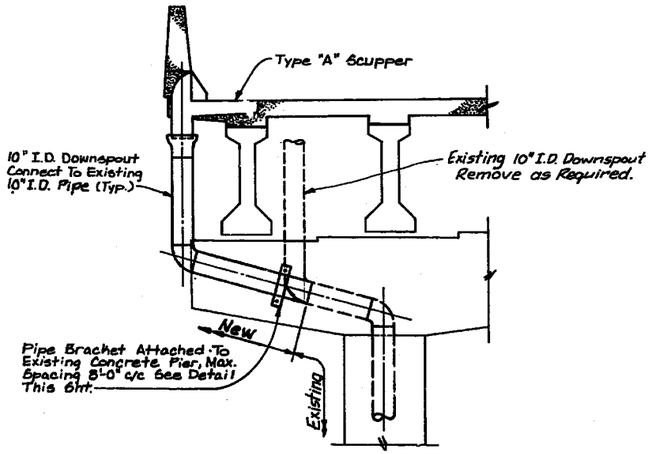




PIPE BRACKET DETAIL
(TO BEAM WEB)



SECTION A-A



SECTION B-B

SECTION-DRAINAGE SYSTEM @ PIER 16

(Looking North)

Note: Drainage System @ Pier 18 Similar. (Opposite Hand & Type "A" Scupper)

TYPICAL DRAIN DETAILS

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"

* SEE SHEETS 1 AND 2 FOR ORIENTATION OF DRAINAGE SCUPPERS.

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.

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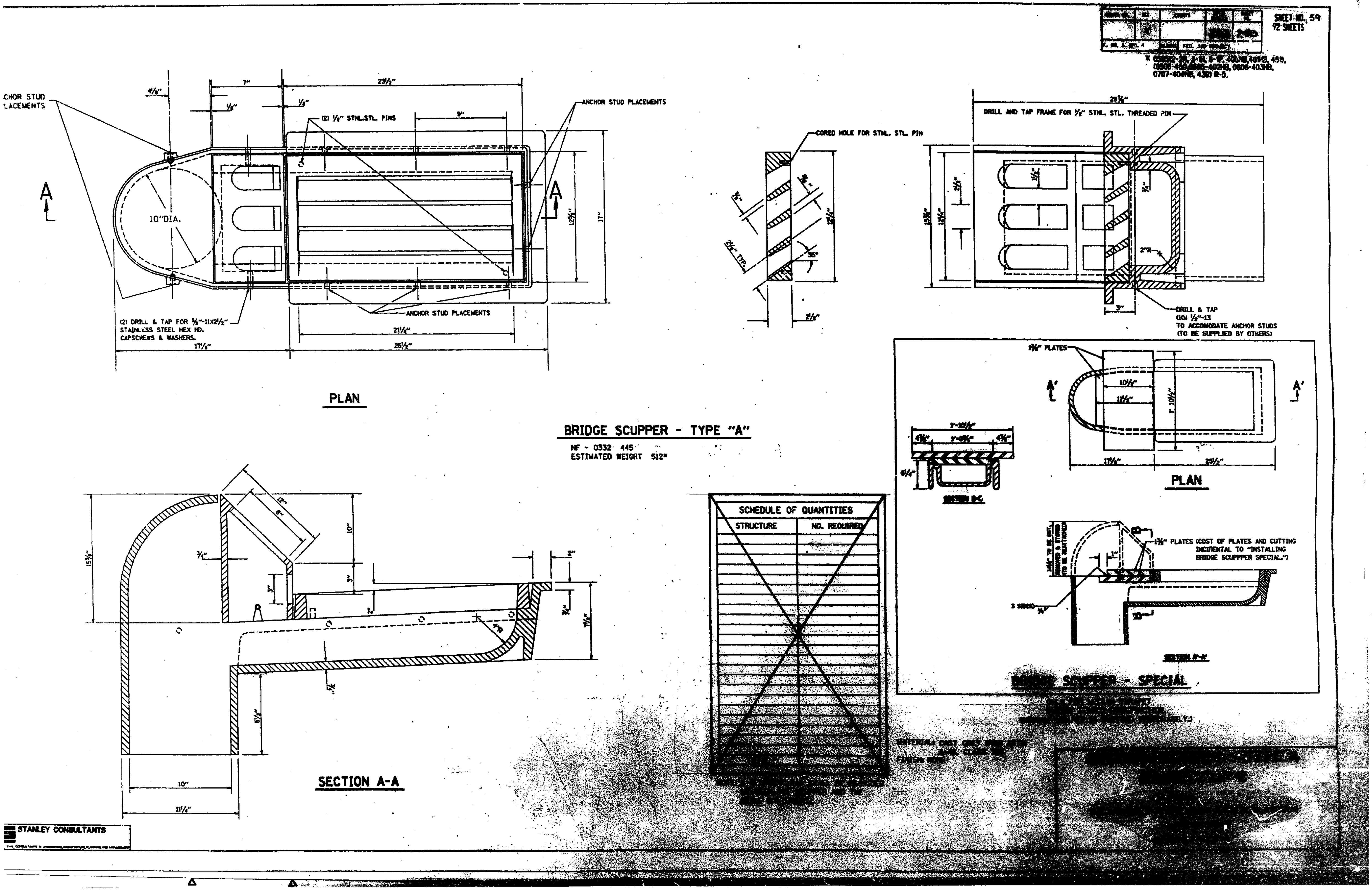
DRAINAGE DETAILS
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+48

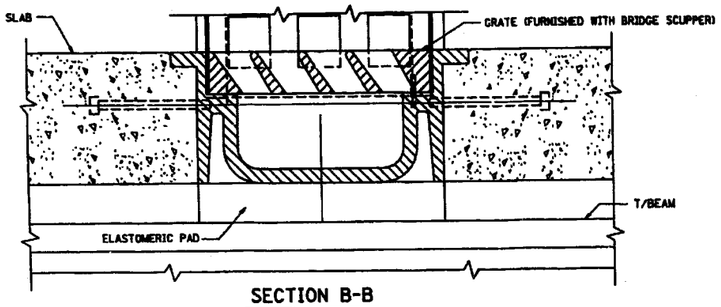


SHEET NO. 59
72 SHEETS
FED. AID PROJECT
0506-402HB, 0606-403HB,
0707-404HB, 438) R-5.
ANCHOR STUD PLACEMENTS
(2) ½" STNL.STL. PINS
10"DIA.
(2) DRILL & TAP FOR ⅝"-11X2½" STAINLESS STEEL HEX HD. CAPSCREWS & WASHERS.
ANCHOR STUD PLACEMENTS
PLAN
BRIDGE SCUPPER - TYPE "A"
NF - 0332 445
ESTIMATED WEIGHT 512#
CORED HOLE FOR STNL. STL. PIN
DRILL AND TAP FRAME FOR ½" STNL. STL. THREADED PIN
DRILL & TAP (10) ½"-13 TO ACCOMODATE ANCHOR STUDS (TO BE SUPPLIED BY OTHERS)
SECTION A-A
SCHEDULE OF QUANTITIES
STRUCTURE
NO. REQUIRED
1⅜" PLATES
PLAN
1⅜" PLATES (COST OF PLATES AND CUTTING INCIDENTAL TO "INSTALLING BRIDGE SCUPPPER SPECIAL.")
SECTION A'-A'
BRIDGE SCUPPER - SPECIAL
FINISH: NONE
STANLEY CONSULTANTS

F.A. RTE.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	251
F. AD. A. REG. 4	ILLINOIS	FED. AID PROJECT		

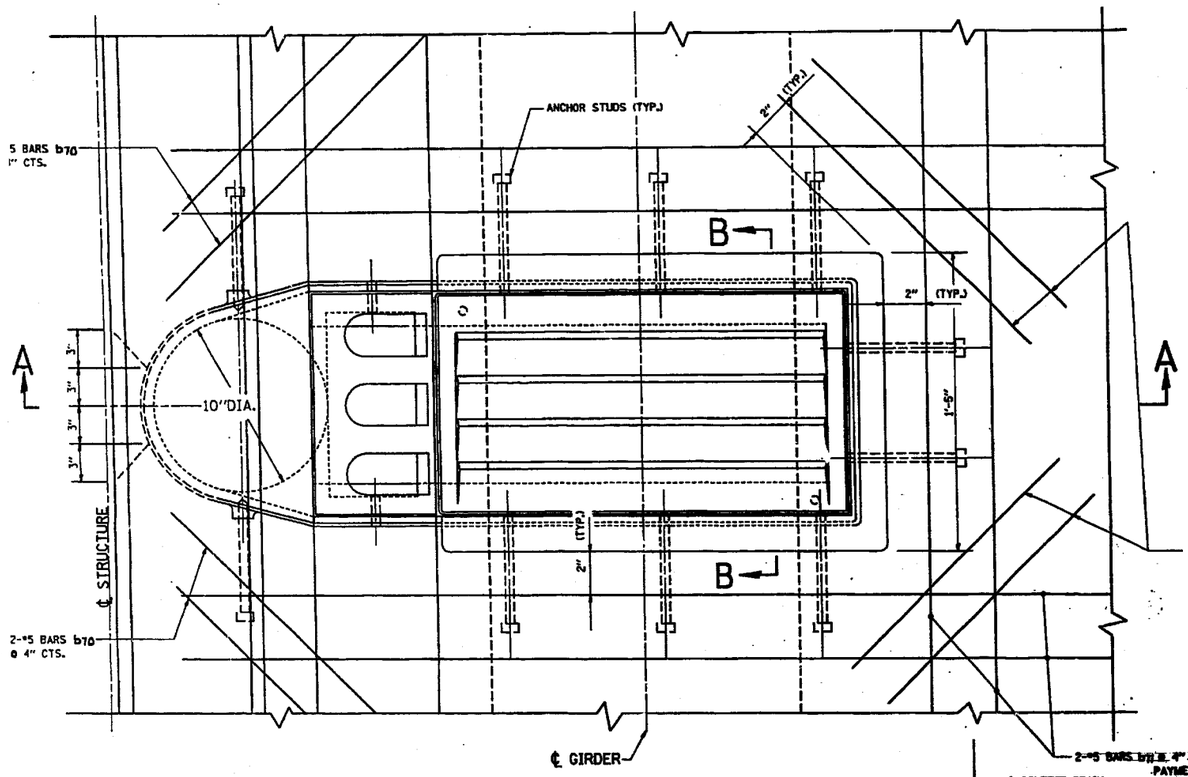
SHEET NO. 60
72 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 451), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



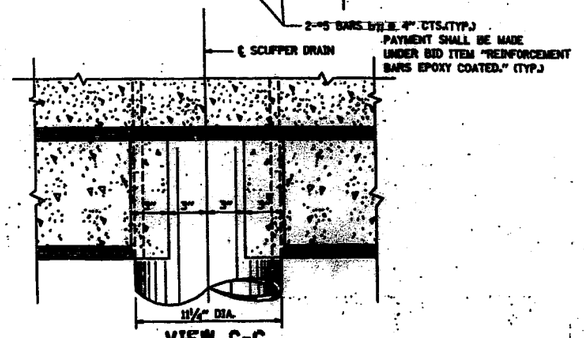
SECTION B-B

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



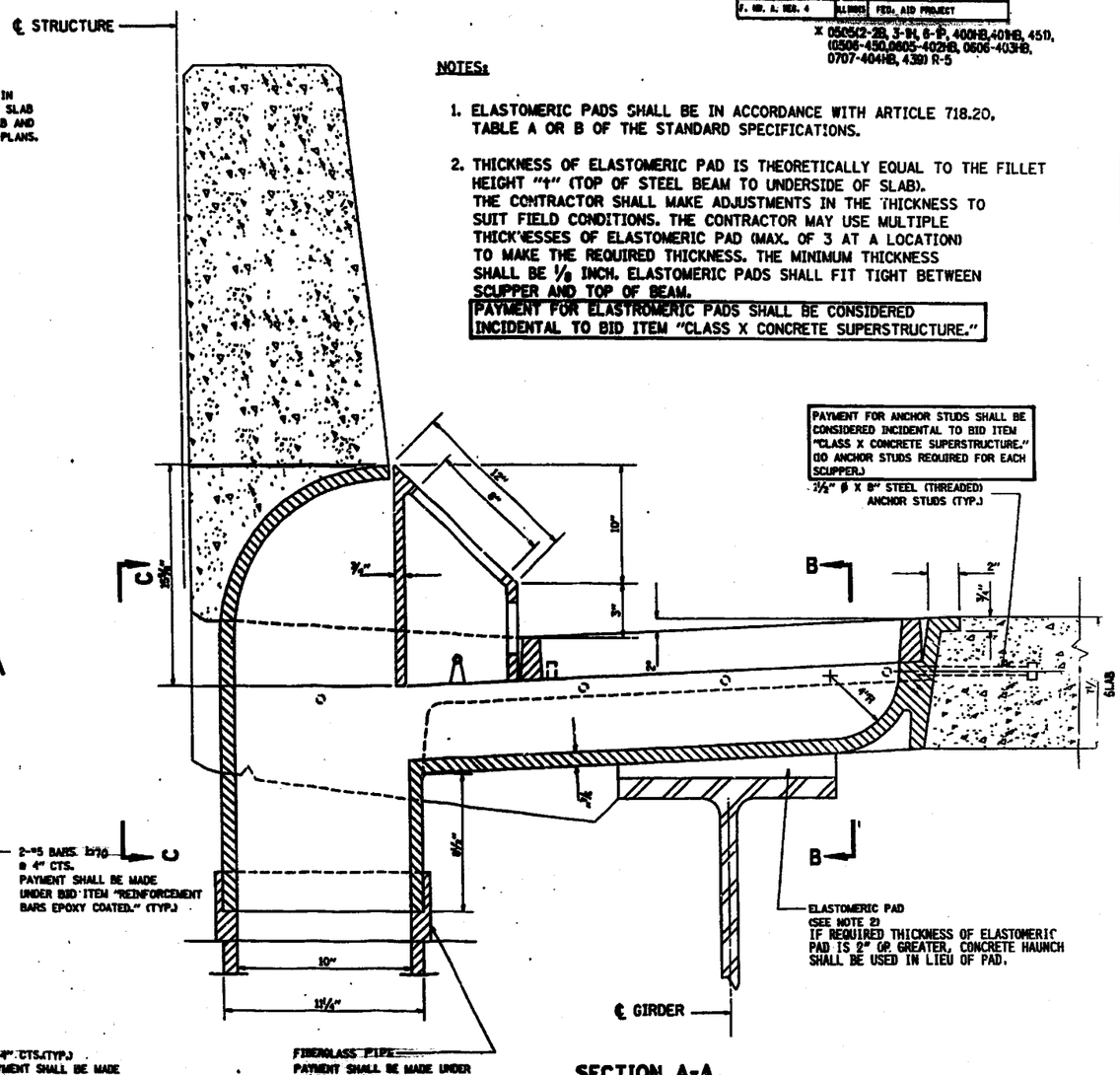
2-#5 BARS b70 @ 4" CTS. PAYMENT SHALL BE MADE UNDER BID ITEM "REINFORCEMENT BARS EPOXY COATED." (TYP.)

PLAN



2-#5 BARS b71 @ 4" CTS.(TYP.) PAYMENT SHALL BE MADE UNDER BID ITEM "REINFORCEMENT BARS EPOXY COATED." (TYP.)

VIEW C-C



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 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."

PAYMENT FOR ANCHOR STUDS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE." (10 ANCHOR STUDS REQUIRED FOR EACH SCUPPER.)

1½" ∅ X 8" STEEL (THREADED) ANCHOR STUDS (TYP.)

ELASTOMERIC PAD (SEE NOTE 2) IF REQUIRED THICKNESS OF ELASTOMERIC PAD IS 2" OR GREATER, CONCRETE HAUNCH SHALL BE USED IN LIEU OF PAD.

FIBERGLASS PIPE PAYMENT SHALL BE MADE UNDER BID ITEM "DRAINAGE SYSTEM" (TYPICAL FOR BRIDGE SCUPPERS TYPE "A", "B", "C", AND SPECIAL SCUPPERS.)

SECTION A-A

SECTION THRU MEDIAN PARAPET SHOWN

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

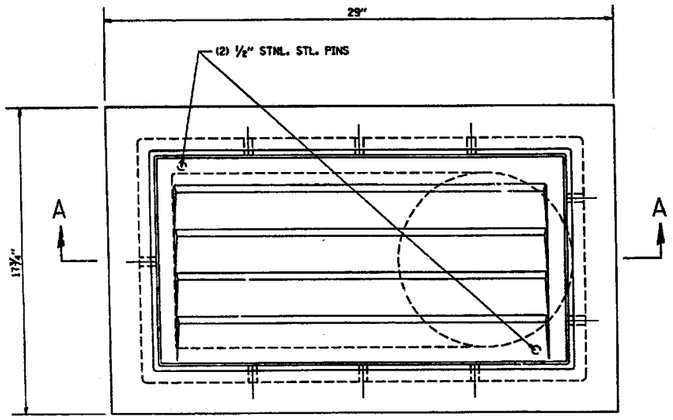
REINFORCEMENT BAR SCHEDULE

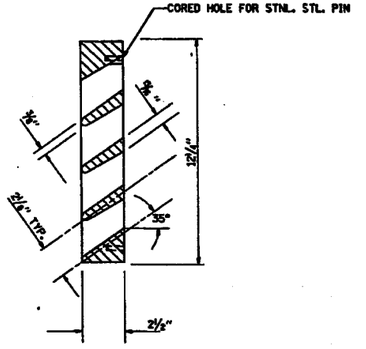
MARK	NO.	SIZE	LENGTH	SHAPE
b_{70}(E)	8	#5	2'-0"	——
b_{71}(E)	6	#5	5'-0"	——

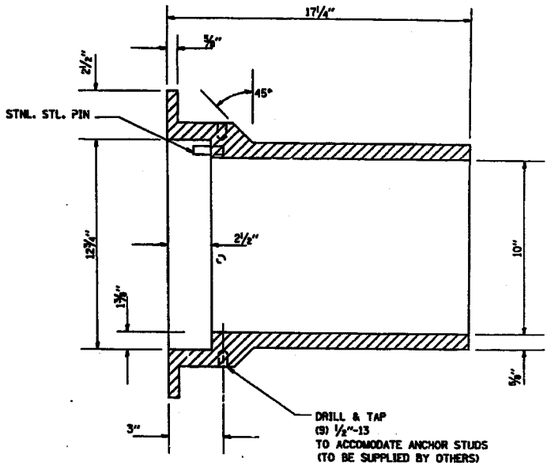
STANLEY CONSULTANTS

[illegible] TYPE A

[illegible]

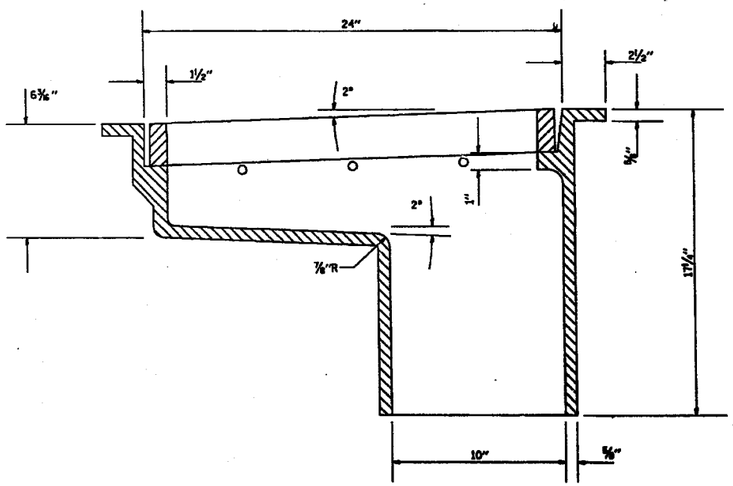






BRIDGE SCUPPER - TYPE "B"

NF - 0332 435
ESTIMATED WEIGHT 235#



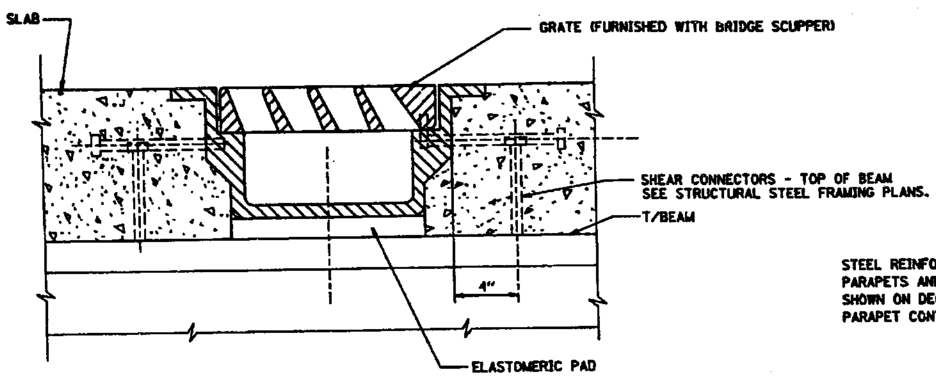
SECTION A-A

SCHEDULE OF QUANTITIES	
STRUCTURE	NO. REQUIRED
TOTAL	

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

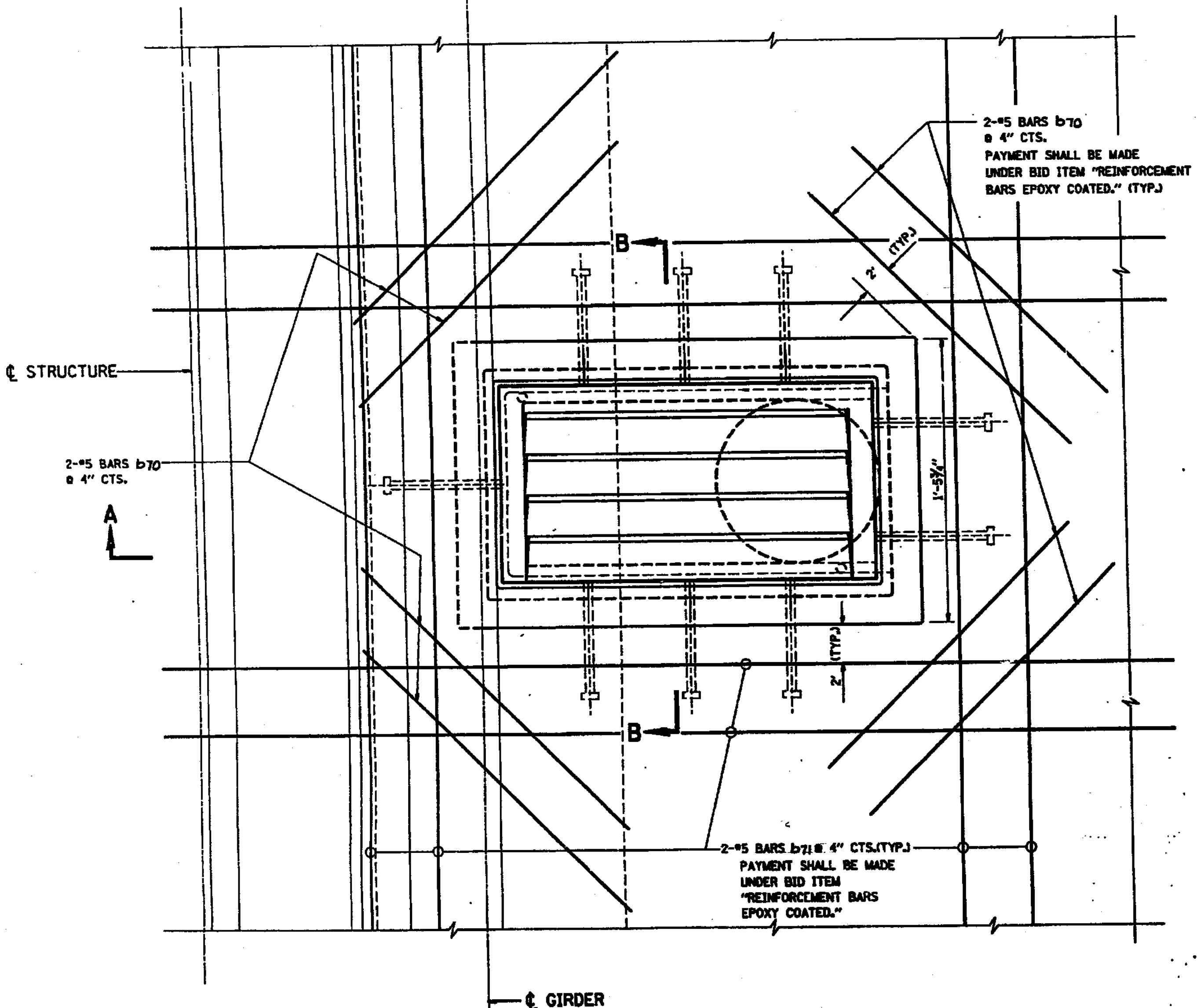
MATERIAL: CAST GREY IRON ASTM A-48, CLASS 35B
FINISH: NONE

STANLEY CONSULTANTS



SECTION B-B

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



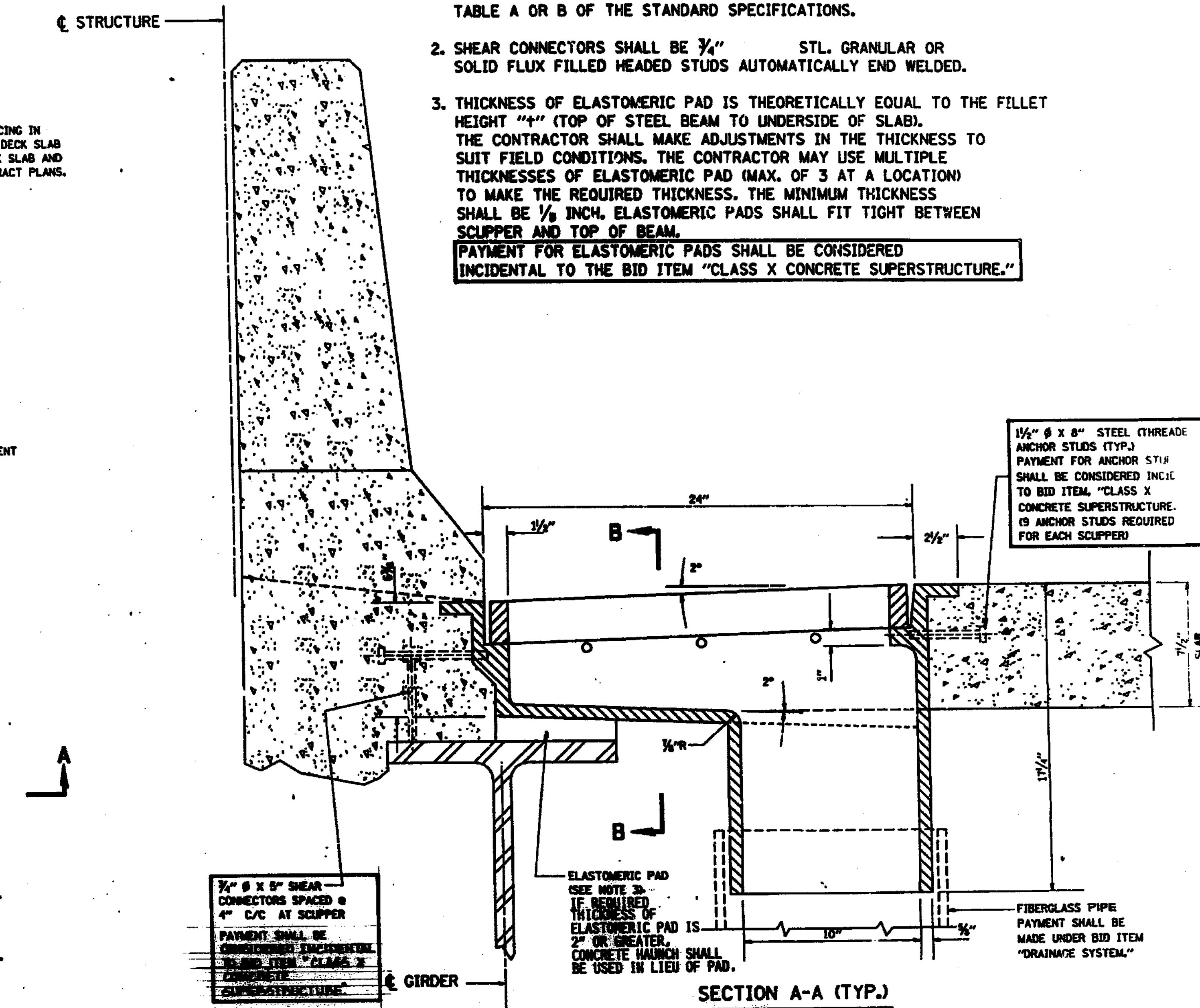
PLAN

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.)

REINFORCEMENT BAR SCHEDULE

MARK	NO.	SIZE	LENGTH	SHAPE
b70(E)	8	#5	2'-0"	——
b71(E)	8	#5	5'-0"	——

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	443	254A
		ILLINOIS		

SHEET NO. 63a
72 SHEETS

* 0505J2-2B, 3-IH, 6-IP, 400HB, 404HJ, 450, 0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439IR-5

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 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
N7.12	1	-	-
N7.13	-	-	X
N7.14	-	-	X
N7.15	1	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
N7.11	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	2	-	X
N8.8	2	-	X
N8.11	2	X	X
N8.12	2	X	-

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	1	-	-
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	1	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	1	-	-
N13.9	1	-	X
N13.10	2	-	X
N13.11	2	X	X
PIER 13			
N13.4	2	X	X
N13.5	-	-	X
N13.6	-	-	X
N13.9	-	-	X
N13.10	1	X	X
N13.11	1	-	X
N14.4	2	-	-
N14.5	2	X	X

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
N15.11	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	1	-	X
N16.12	1	-	X
N16.13	2	-	-
PIER 16			
N16.4	2	X	-
N16.5	1	-	X
N16.10	2	X	X
N16.11	2	-	-
N16.12	2	-	-
N16.13	2	-	-
N17.4	2	X	X
N17.5	2	-	X
N17.6	1	-	-
N17.7	2	-	X
N17.8	2	-	X
PIER 17			
N17.4	2	X	X
N17.7	2	X	-
N17.9	-	-	X
N18.4	2	X	-
PIER 18			
N18.4	-	-	X
PIER 20			
N21.6	2	X	X
N21.7	2	-	X
N21.8	2	X	X
N21.9	2	X	X

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
	1		
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
N25.11	2	-	-
N25.12	2	-	-
N25.13	2	-	X
N25.14	2	-	X

BEAM REPAIRS

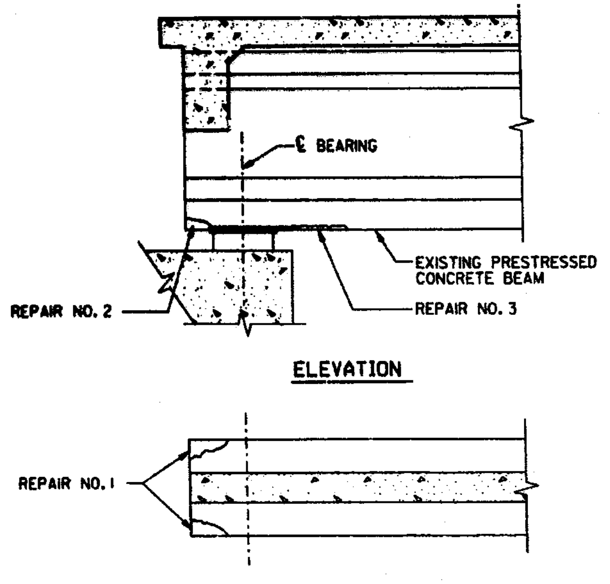
F.A.I. ROUTE 90 / 94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 489+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

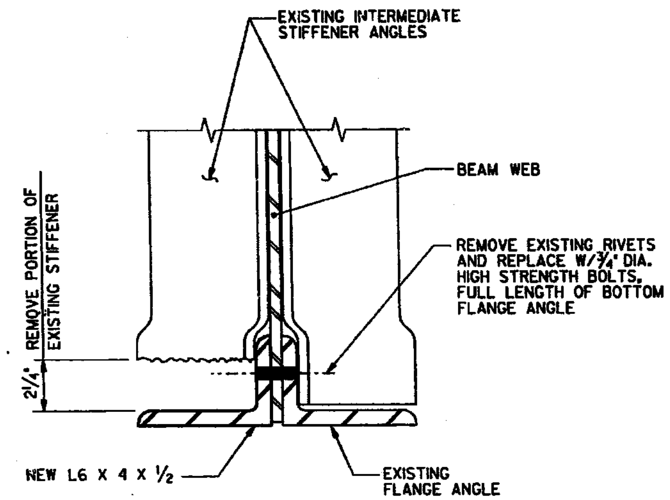
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I 90/94	*	COOK	443	254 B
		ILLINOIS		

SHEET NO. 63b
72 SHEETS

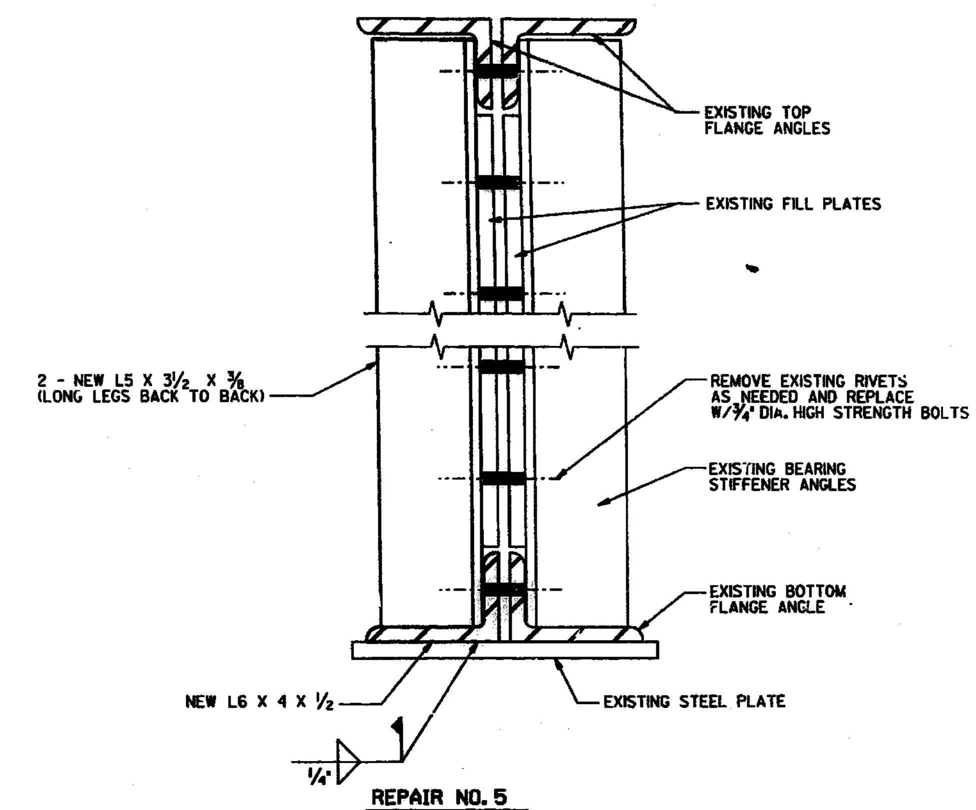
* 0505(2-2B, 3-9I, 6-IP, 400HB, 401HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439R-5



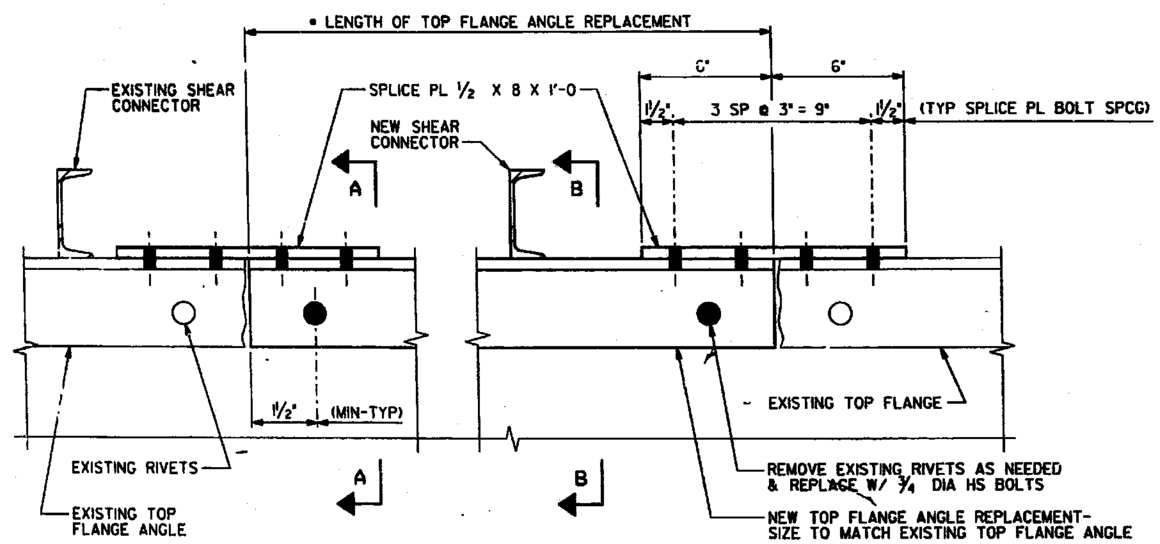
BEAM REPAIR DETAIL



REPAIR NO. 4

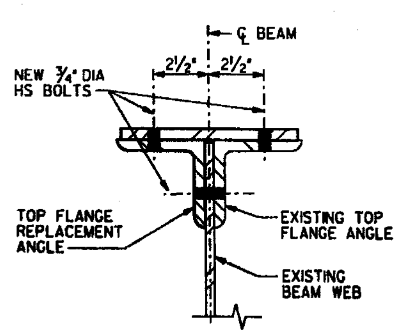


REPAIR NO. 5

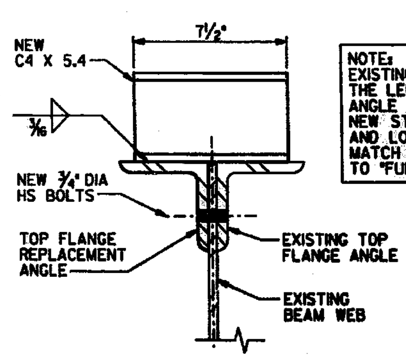


TOP FLANGE ANGLE REPAIR DETAIL

• 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 Sealant.

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 Sealant.

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. This 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 One Or 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 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.

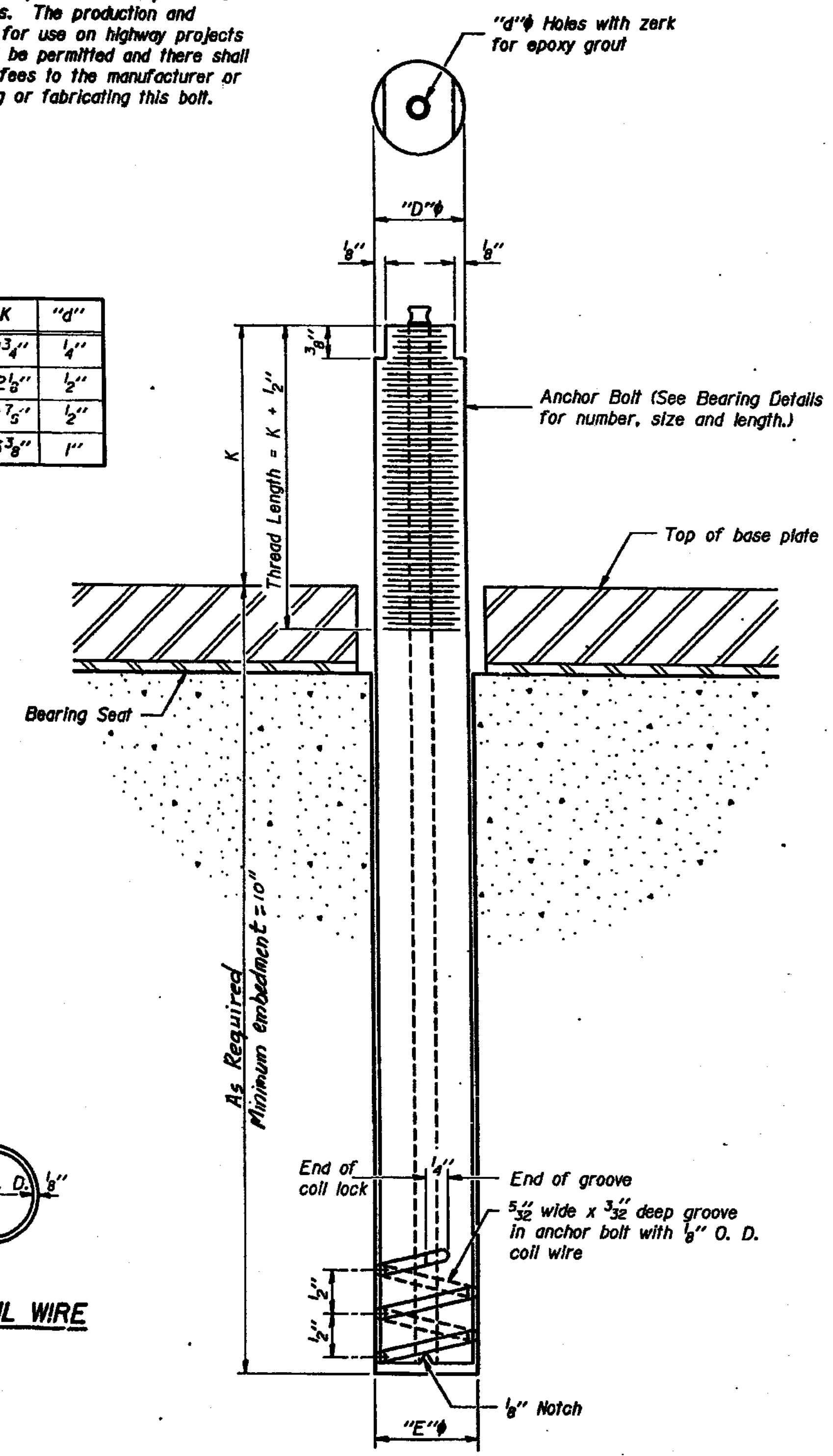
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 63
72 SHEETS

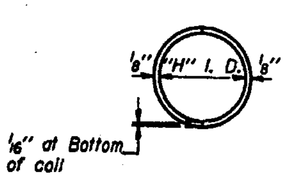
X	443	254

X 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 451); (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 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.", 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)

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ABB-1 7-1-71

(2) Rev. 11-8-95

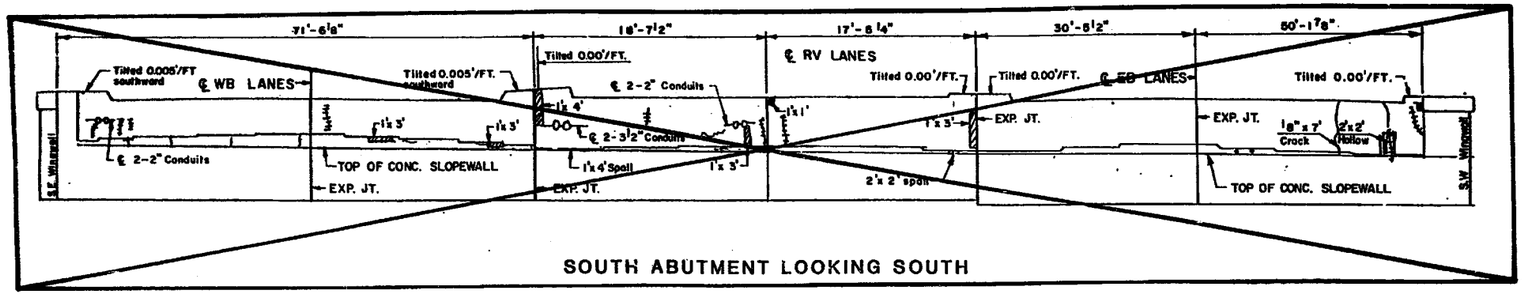
[redacted]
SECTION
F.A.I. ROUTE [illegible] AVENUE
COOK COUNTY
STATION [illegible]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	255
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 64
72 SHEETS

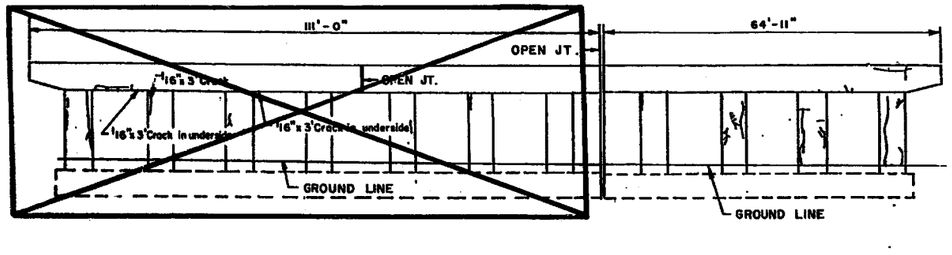
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



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)



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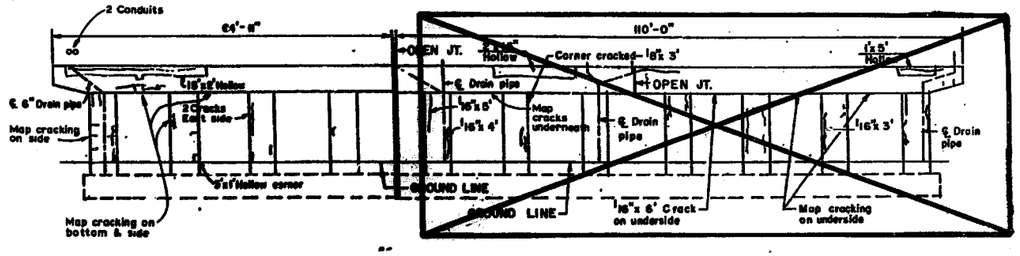
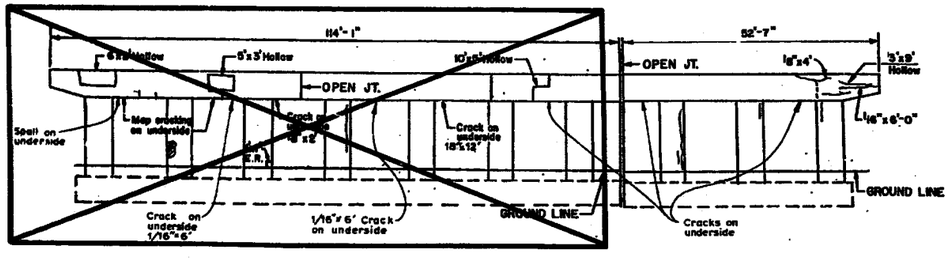


PIER NO. 1 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT.



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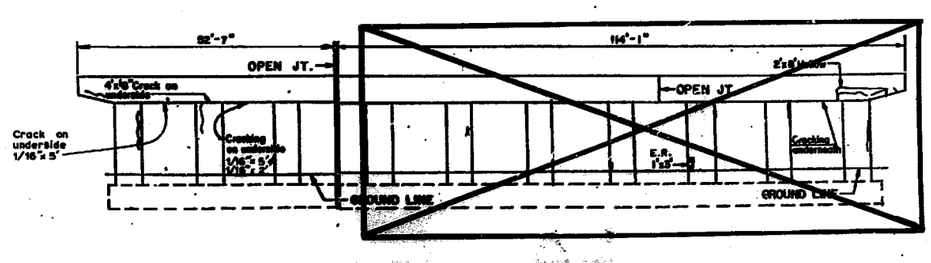

PIER NO. 2 - LOOKING SOUTH

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

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SUBSTRUCTURE REHABILITATION SHEET 1 OF 9

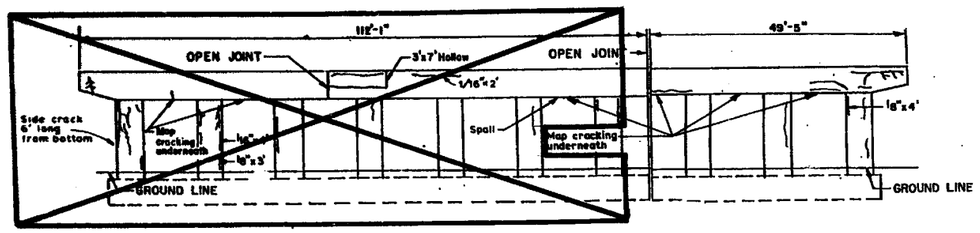
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 406+49.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	256
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 65
72 SHEETS

* 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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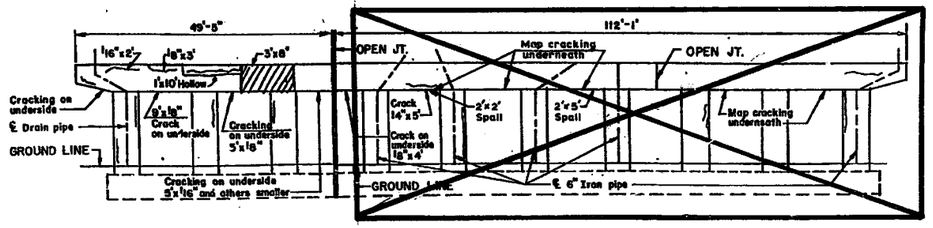

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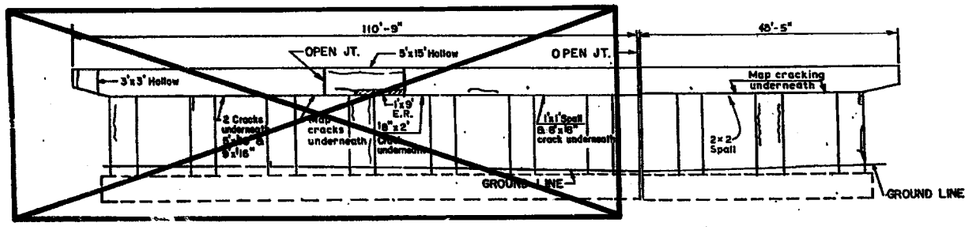
ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT.



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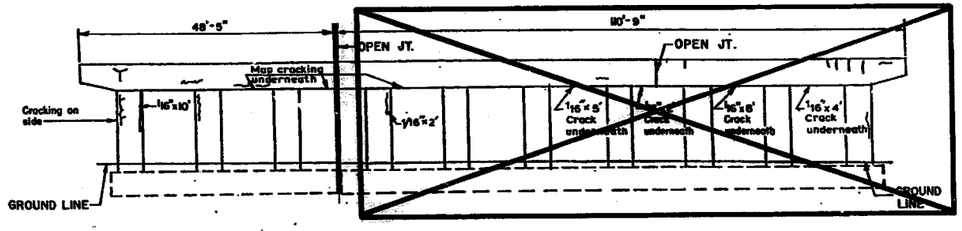

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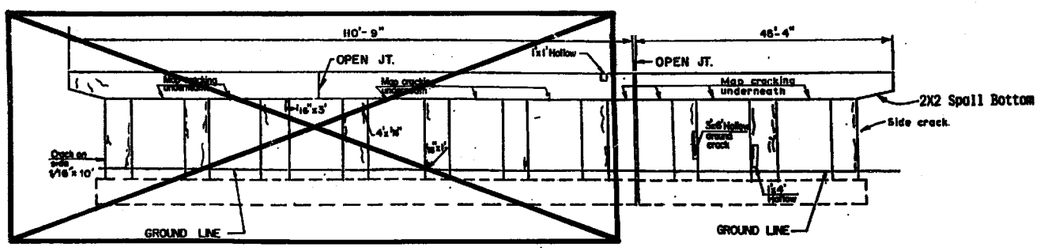

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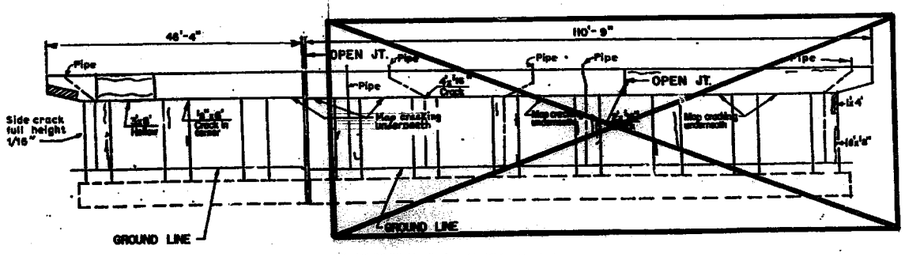

PIER NO. 5 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

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

SUBSTRUCTURE REHABILITATION
SHEET 2 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48...

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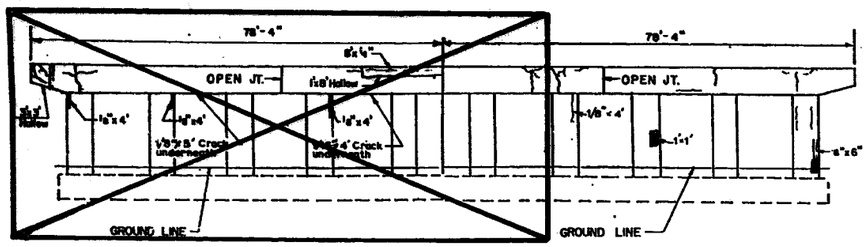
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
			443	257
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 66
72 SHEETS

* 050542-2B, 3-1H, 6-1P, 400HB, 401HB, 451),
0506-450, 0605-402HB, 0806-403HB,
0707-404HB, 439) R-5



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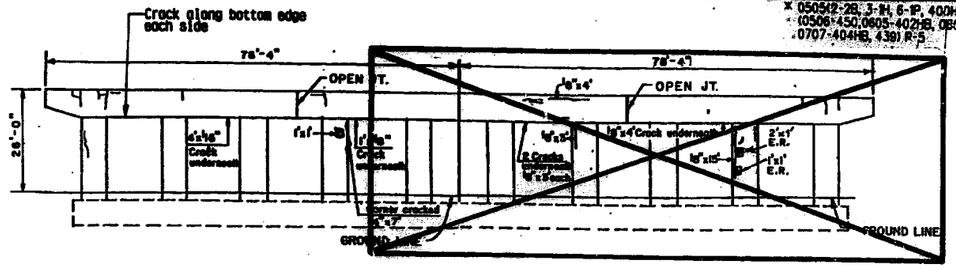

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ALL REPAIRS SHOWN TO
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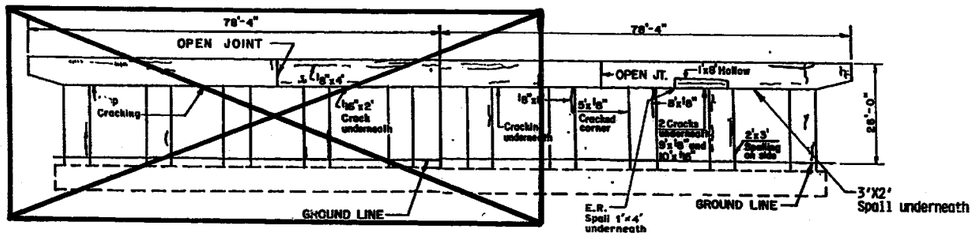

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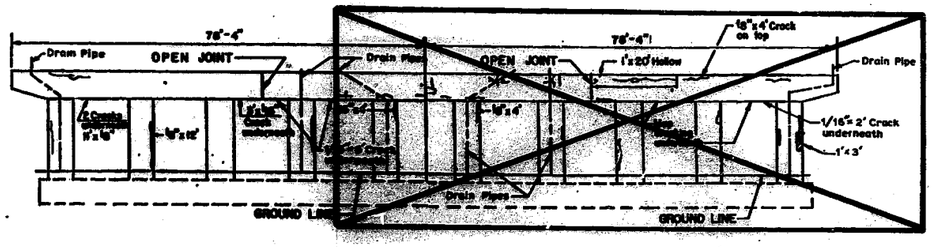

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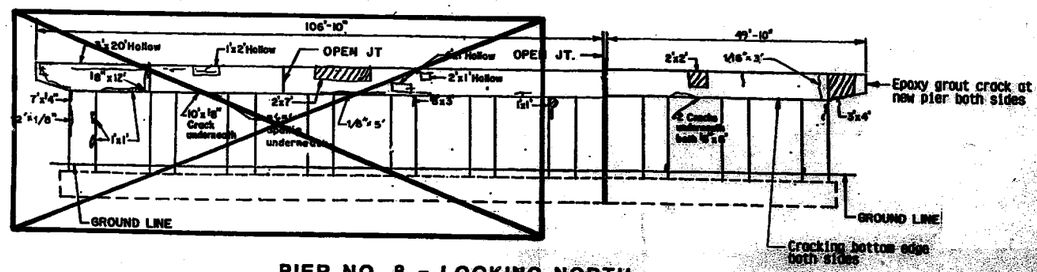

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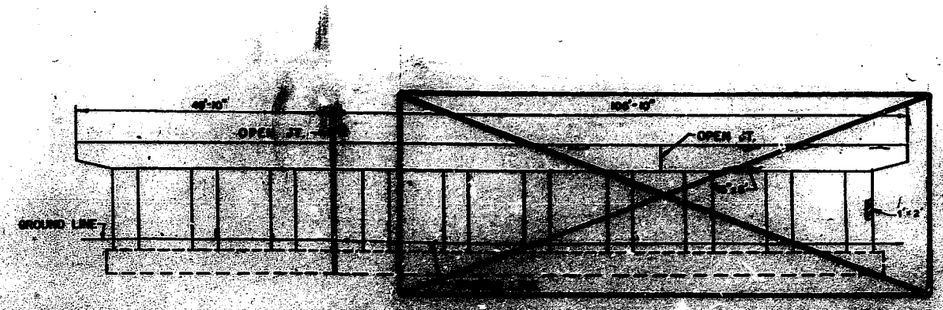

PIER NO. 8 - LOOKING SOUTH

NOTE:

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	258

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

SHEET NO. 67
72 SHEETS

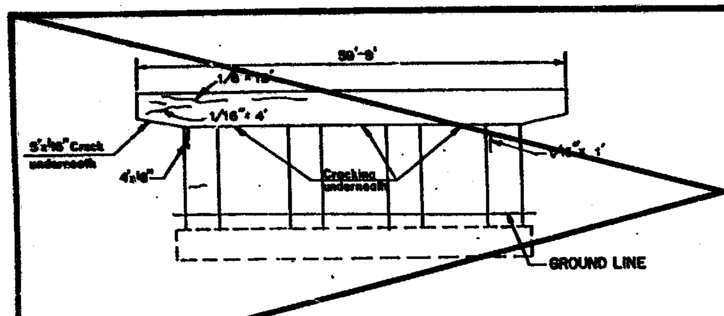
X 0505(2-2B, 3-M, 6-P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

LEGEND

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

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.



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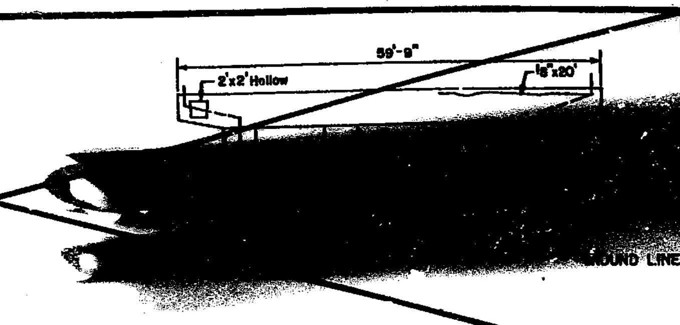

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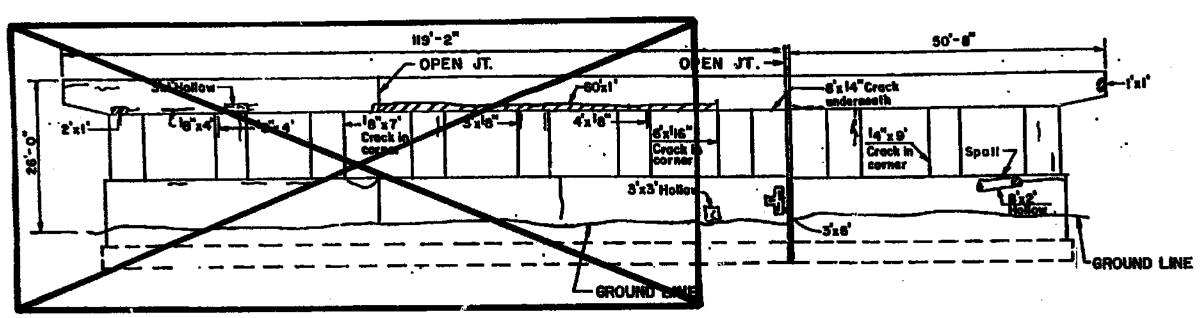

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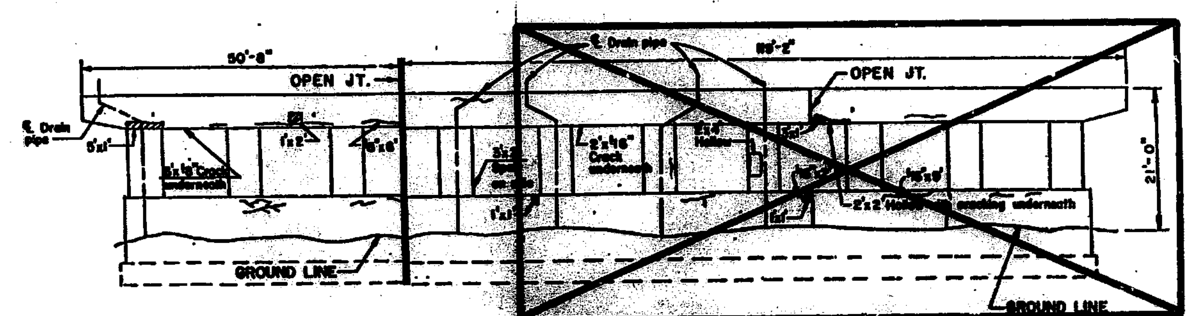

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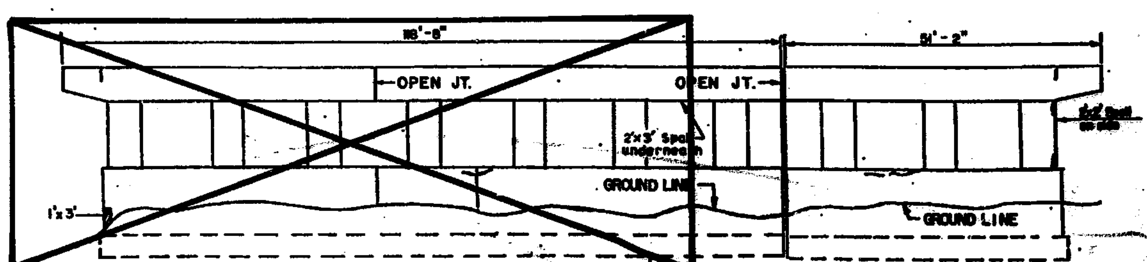

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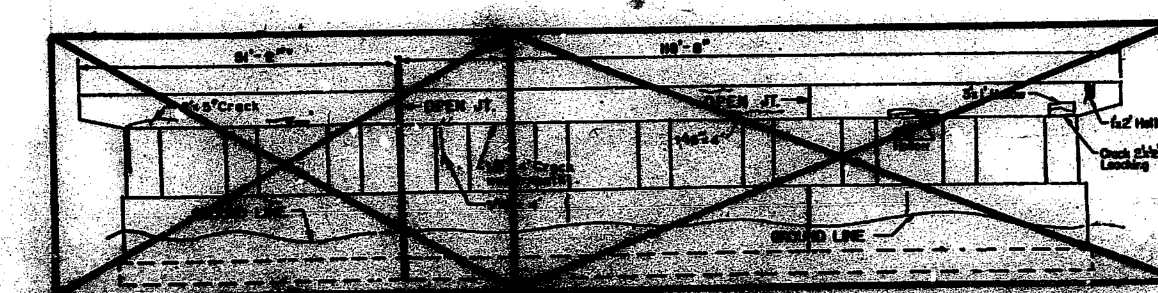


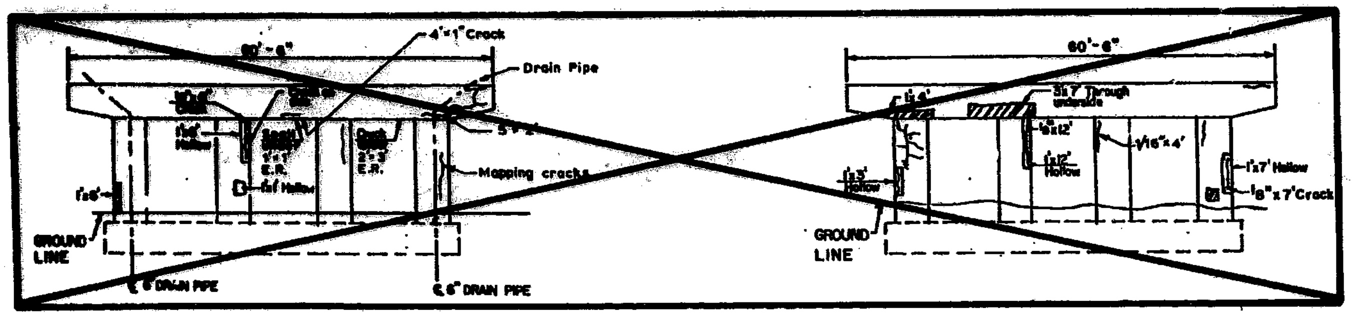
PIER NO. 11 - LOOKING SOUTH

... REHABILITATION
... 4 OF 9

STANLEY CONSULTANTS

F. A. RTE. | SEC. | COUNTY | TOTAL SHEETS 443 | SHEET NO. 259
F. BR. A. REG. 4 | ILLINOIS | FED. AID PROJECT
X-0503(2)-28-3-(4,6-1P) 400HB,409HB,451), (0505-450,0605-402HB,0606-403HB, 0707-404HB,439) R-5

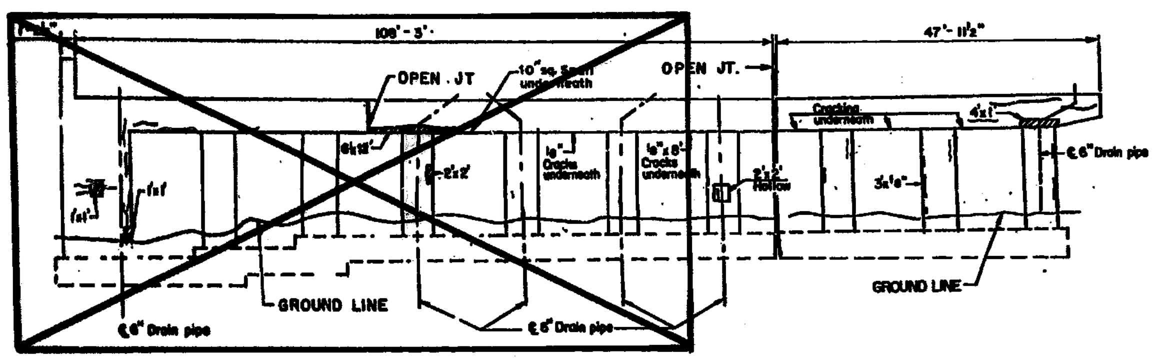
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PIER NO. 12 - LOOKING NORTH

PIER NO. 12 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



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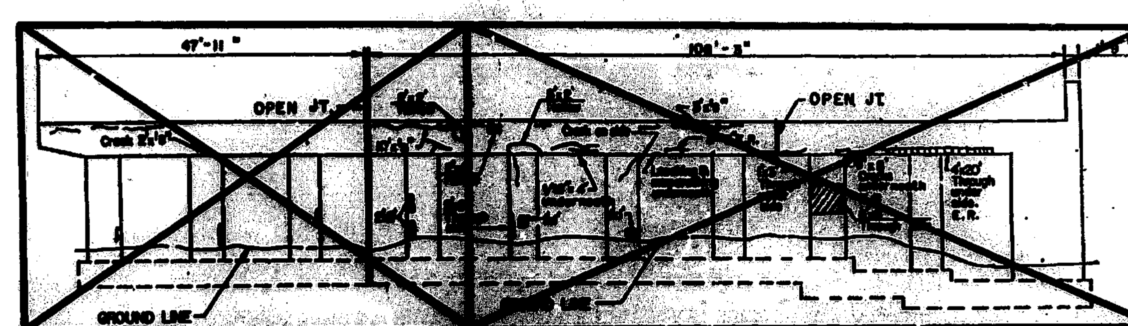

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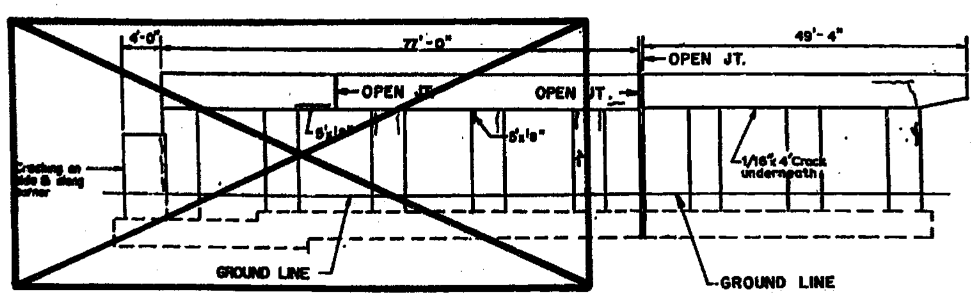


PIER NO. 14 - LOOKING NORTH

PIER NO. 14 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

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

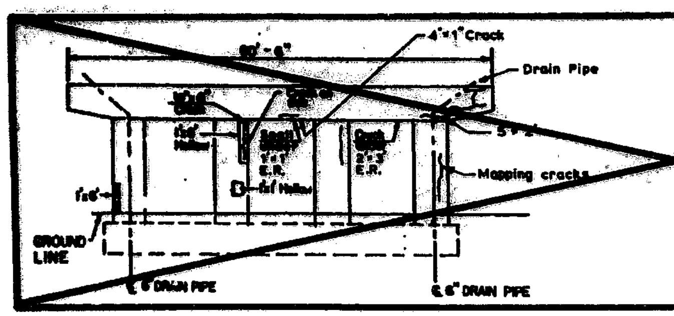
STANLEY CONSULTANTS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	259
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

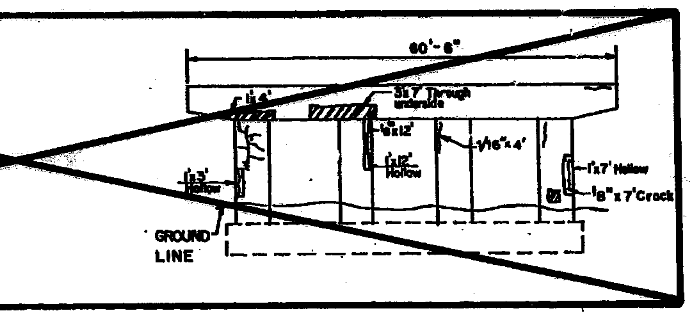
SHEET NO. 68
72 SHEETS

X 0505(2-2B, 3-9, 6-P, 400HB, 402HB, 451), (0506-450, 0605-402HB, 0606-403HB 0707-404HB, 439) R-5

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

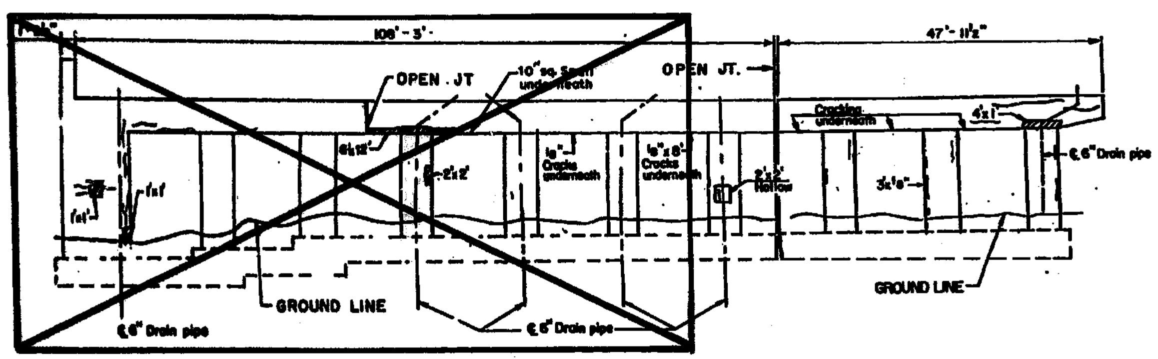


PIER NO. 12 - LOOKING NORTH

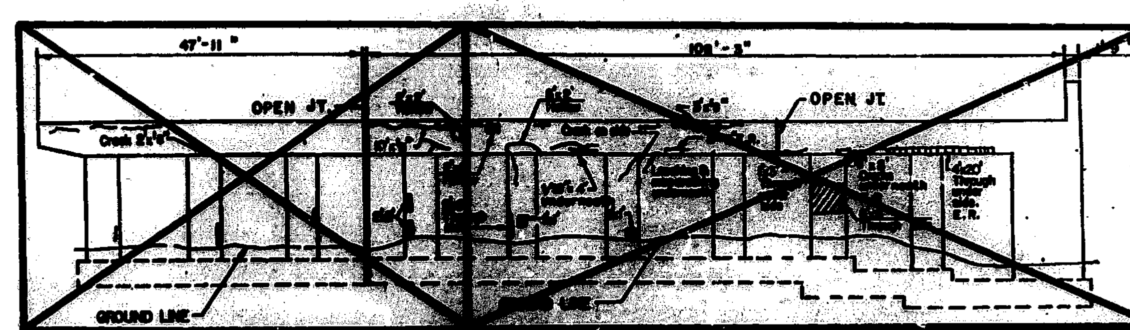


PIER NO. 12 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



PIER NO. 13 - LOOKING NORTH



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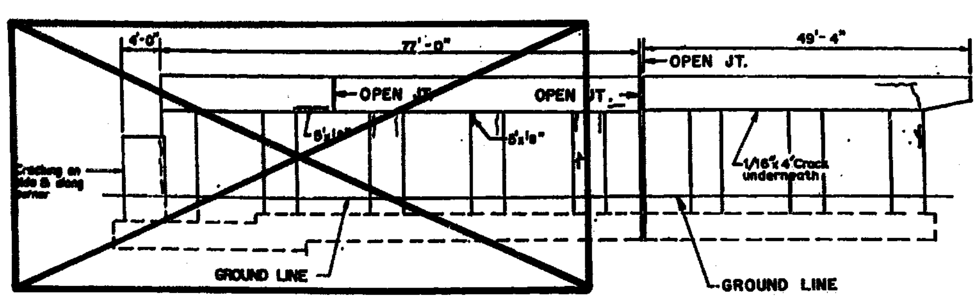


PIER NO. 14 - LOOKING NORTH

PIER NO. 14 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND

E.R.	EXPOSED REINFORCING BAR
~	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	[illegible]

STANLEY CONSULTANTS

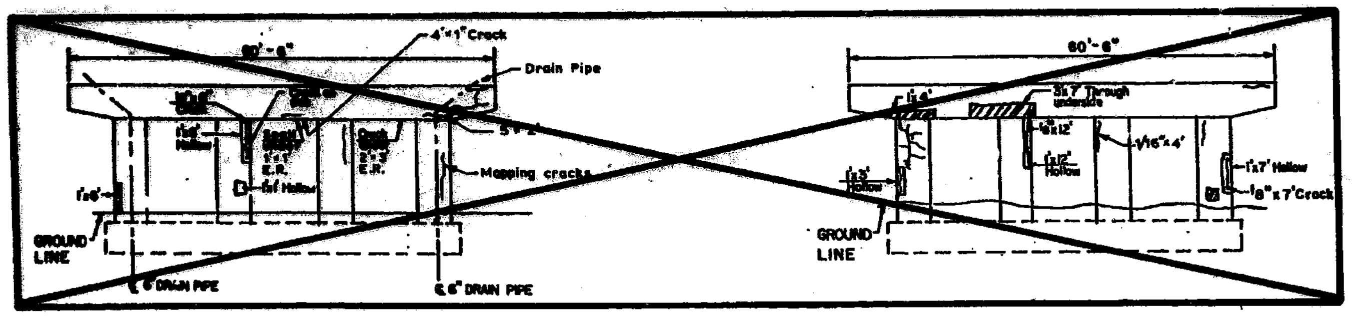
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
			443	259

SHEET NO. 68
72 SHEETS

F.A. 4 — ILLINOIS FED. AID PROJECT

X 0505(2)-2B, 3-9), 6-R, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

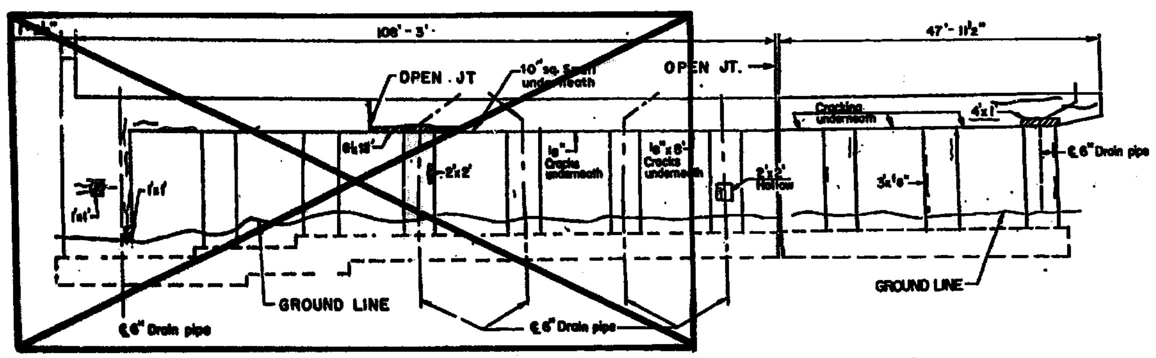
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PIER NO. 12 - LOOKING NORTH

PIER NO. 12 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



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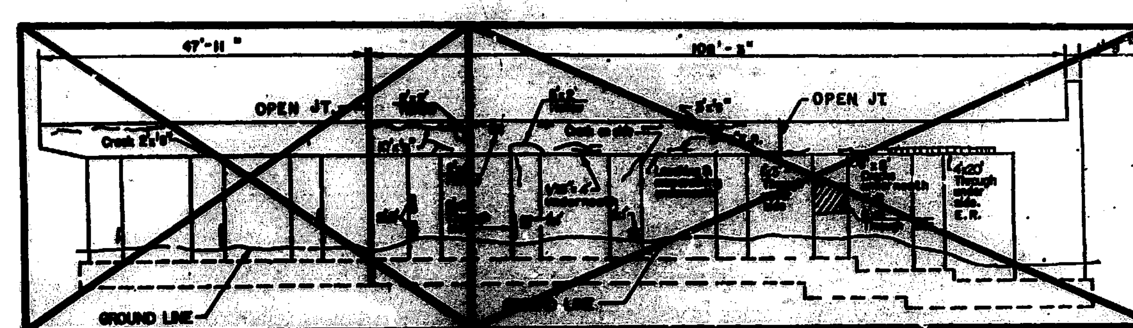
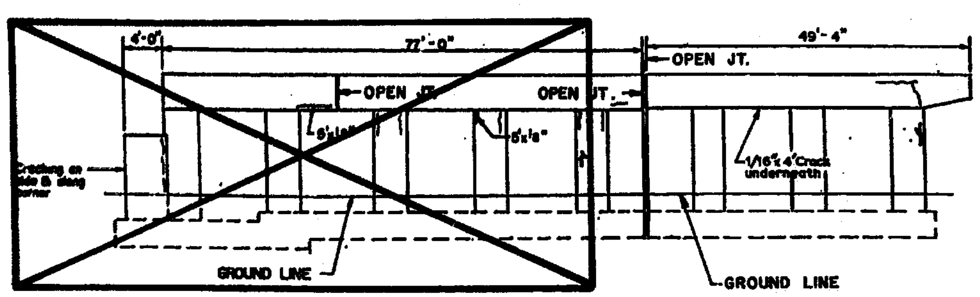


PIER NO. 13 - LOOKING SOUTH



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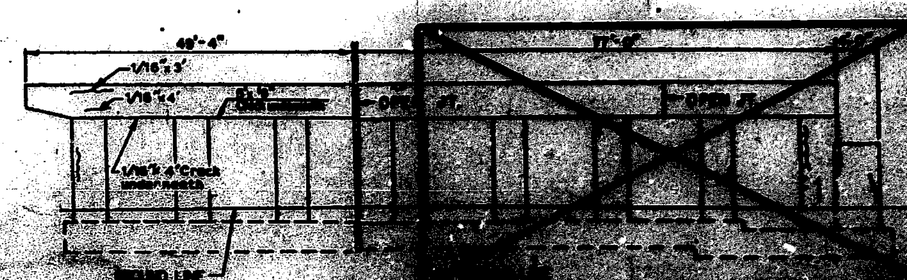


PIER NO. 14 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

LEGEND

E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING

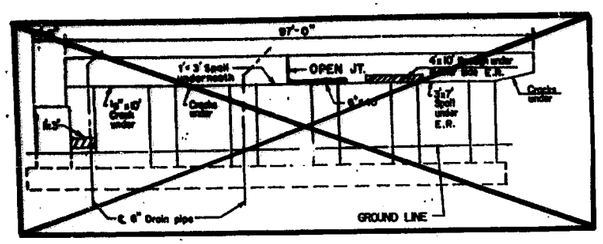
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	260
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 69
72 SHEETS

X 0505(2-28, 3-9, 6-19, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



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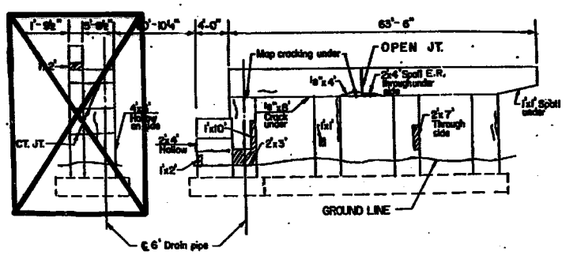

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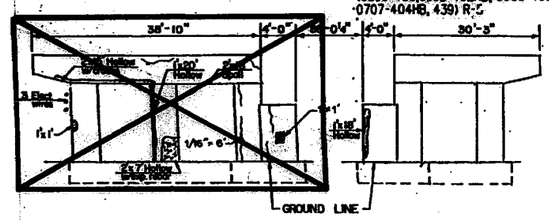

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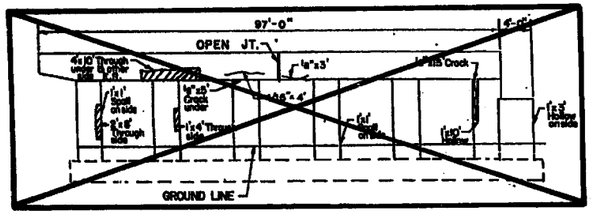

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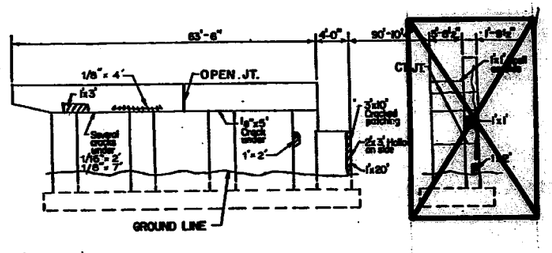
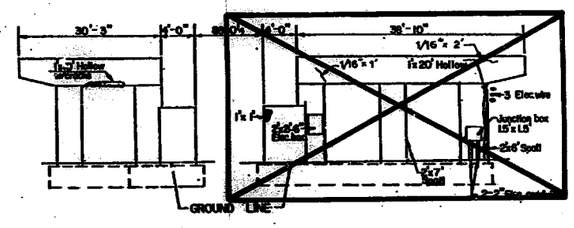
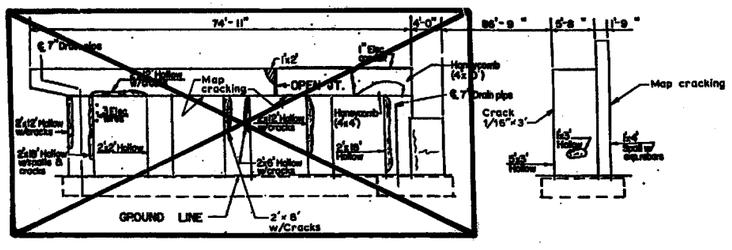


PIER NO. 16 - LOOKING SOUTH



PIER NO. 17- LOOKING SOUTH



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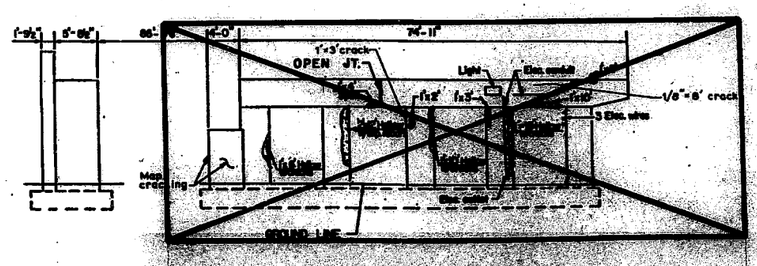


PIER NO. 18 - LOOKING SOUTH

ALL REPAIRS SHOWN TO
BE DONE IN THIS CONTRACT

NOTE:
FOR NOTES, SEE SHEET 1 OF 9.

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

SUBSTRUCTURE REHABILITATION
SHEET 6 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 460+48

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	261
F. AU. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 70
72 SHEETS

X 0505C2-2B, 3-1H, 6-1P, 402HB, 401HB, 451J,
0506-450J, 0605-402HB, 0606-403HB,
0707-404HB, 4391 R-5

LEGEND

E.R. EXPOSED REINFORCING BAR
CRACKS

CRACKS WITH LEACHING

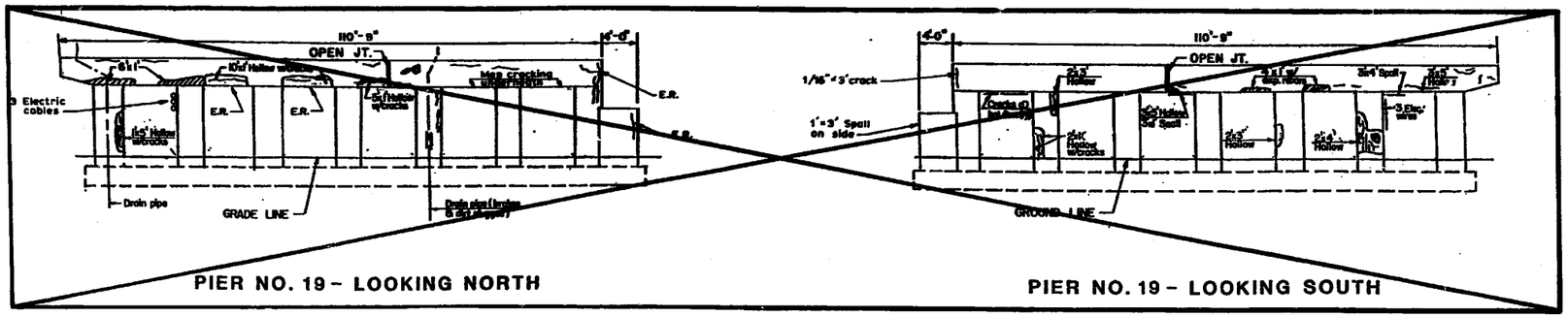
LEACHING

SPALLS

NOTE:

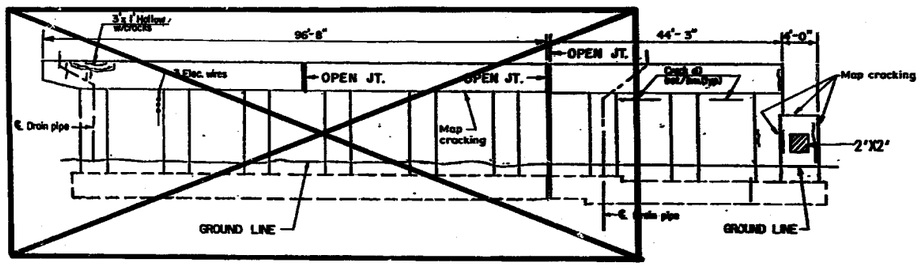
FOR NOTES, SEE SHEET 1 OF 9.

ALL REPAIRS SHOWN TO
BE DONE IN THIS CONTRACT



PIER NO. 19 - LOOKING NORTH

PIER NO. 19 - LOOKING SOUTH



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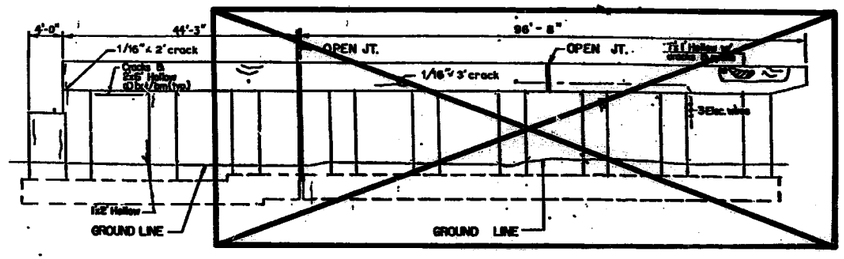

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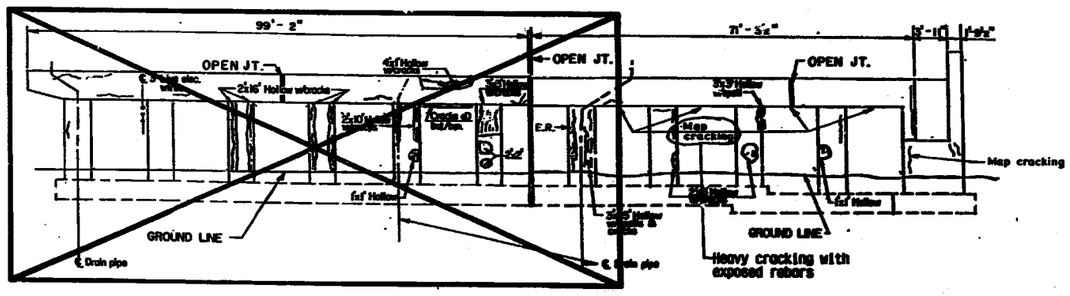

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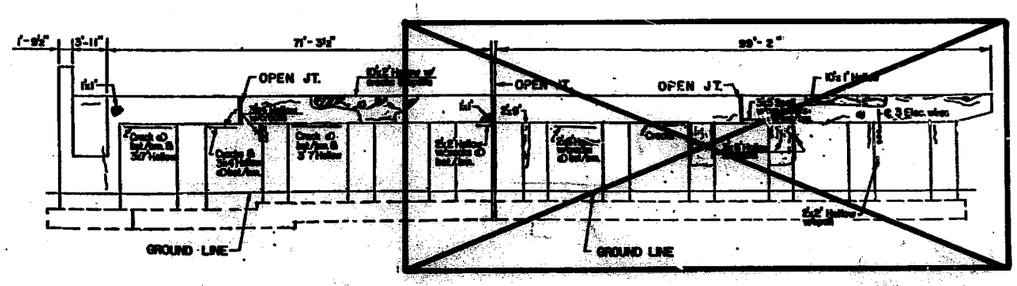


PIER NO. 21 - LOOKING SOUTH

STANLEY CONSULTANTS

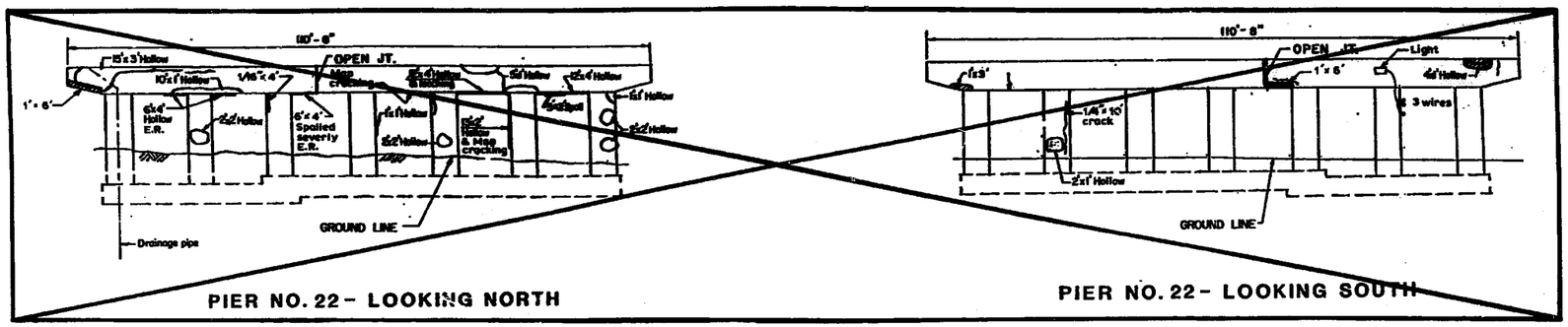
SUBSTRUCTURE REHABILITATION
SHEET 7 OF 9
SECTION
F.A.S. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 498+49

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	262
F. AM. A. PROJ. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 71
72 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 450, 0508-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

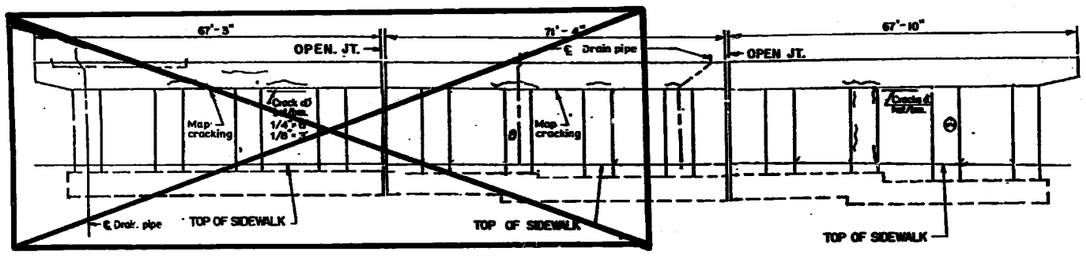
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



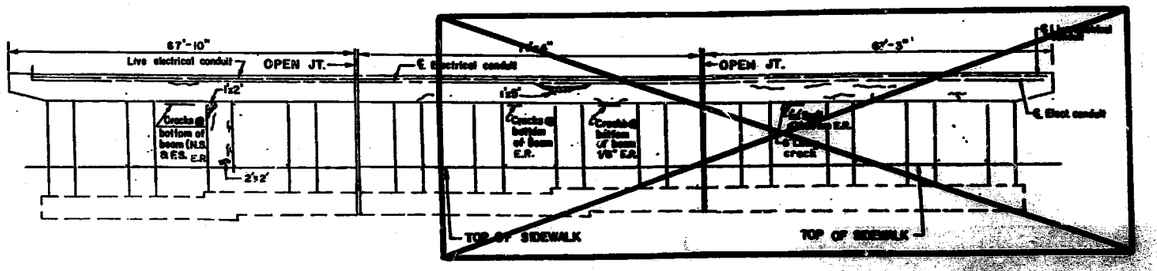
PIER NO. 22 - LOOKING NORTH

PIER NO. 22 - LOOKING SOUTH

ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



PIER NO. 23 - LOOKING NORTH



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

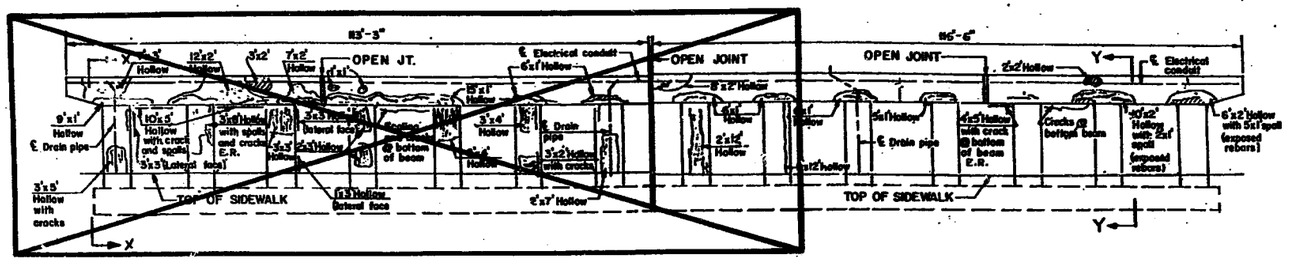
SUBSTRUCTURE REHABILITATION
SHEET 8 OF 9
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 466+44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

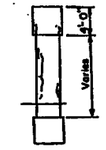
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	263
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 72
72 SHEETS

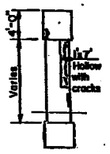
* 0505(2-2B, 3-1H, 6-1P, 403HB, 404HB, 451), (0506-430, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



PIER NO. 24 - LOOKING NORTH

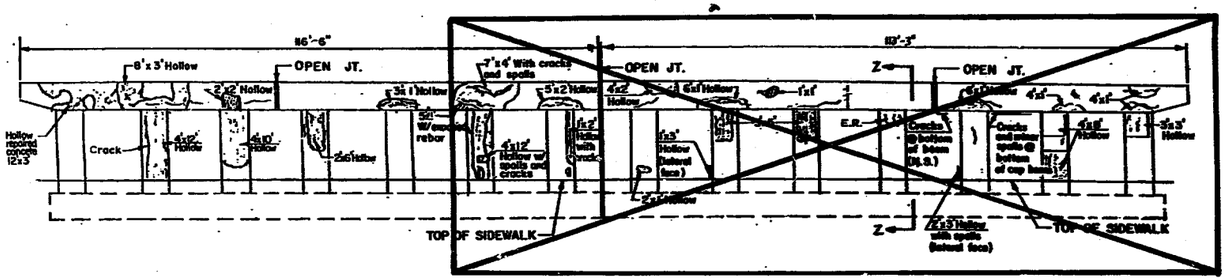


SECT. X-X

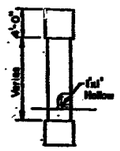


SECT. Y-Y

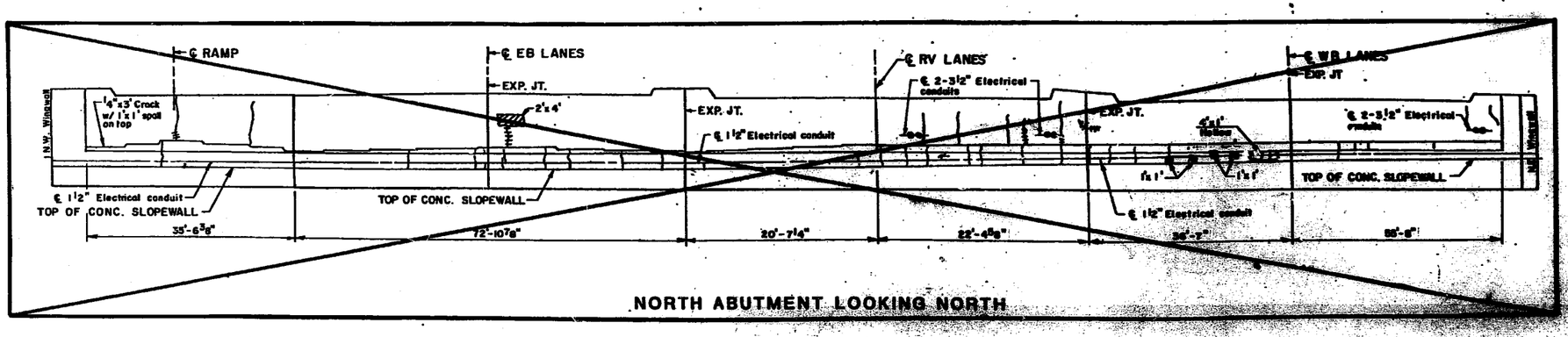
ALL REPAIRS SHOWN TO BE DONE IN THIS CONTRACT



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

SUBSTRUCTURE REHABILITATION
SHEET 9 OF 9

SECTION
T.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 488+48

STANLEY CONSULTANTS

TBM – CHISELED SQUARE – EAST CORNER OF SE WINGWALL
F.A.I – 90/94 BRIDGE OVER ARMITAGE AVENUE.
EL 609.22 (U S G S DATUM)

HORIZONTAL CURVE DATA

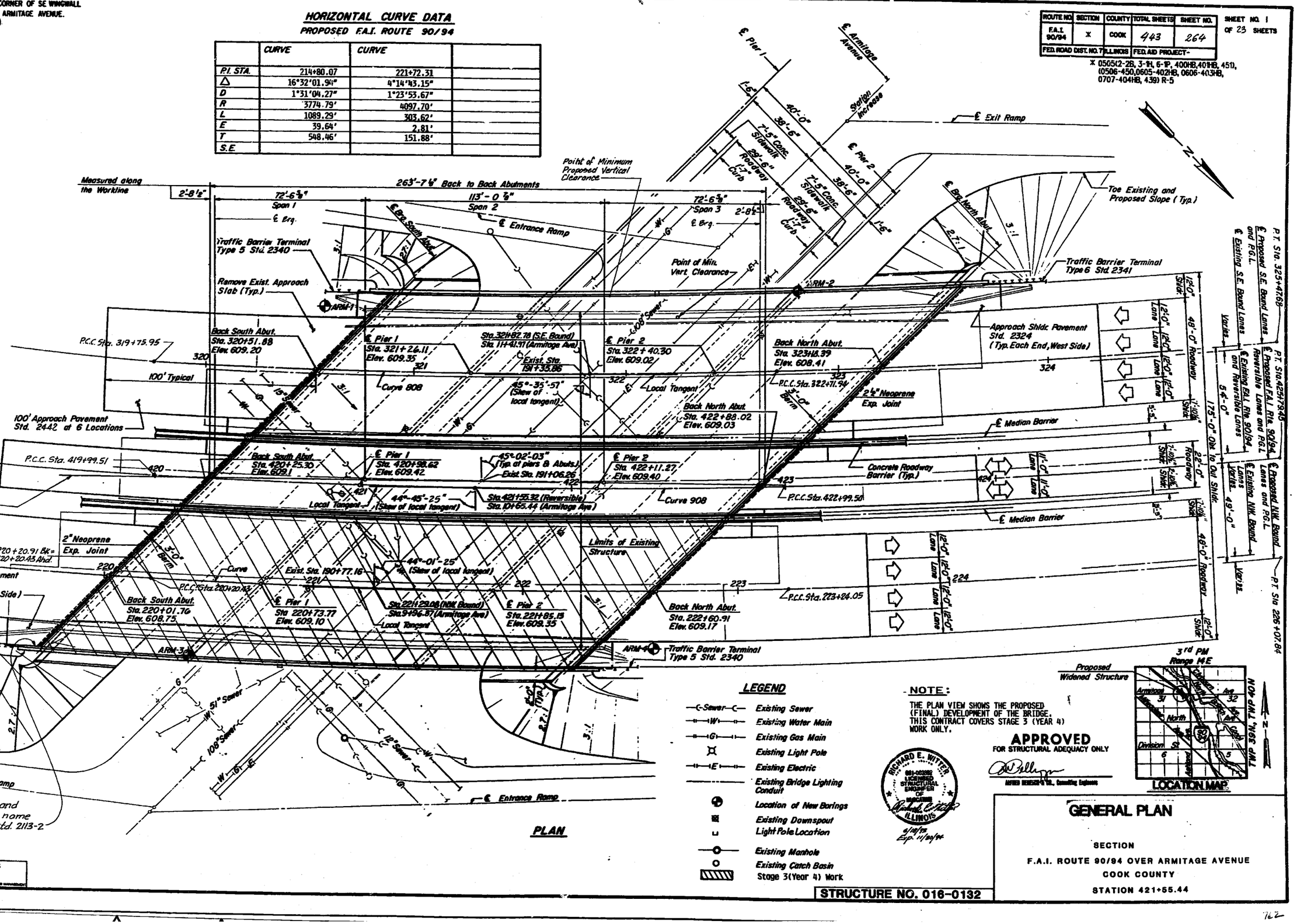
PROPOSED F.A.I. ROUTE 90/94

	CURVE	CURVE	
P.I. STA.	214+80.07	221+72.31	
Δ	16°32'01.94"	4°14'43.15"	
D	1°31'04.27"	1°23'53.67"	
R	3774.79'	4097.70'	
L	1089.29'	303.62'	
E	39.64'	2.81'	
T	548.46'	151.88'	
S.E.			

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	X	COOK	443	264
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 OF 23 SHEETS

X (0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 4.39) R-5



PLAN

LEGEND

- Existing Sewer
- Existing Water Main
- Existing Gas Main
- Existing Light Pole
- Existing Electric
- Existing Bridge Lighting Conduit
- Location of New Borings
- Existing Downspout
- Light Pole Location
- Existing Manhole
- Existing Catch Basin
- Stage 3 (Year 4) Work

NOTE:

THE PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 3 (YEAR 4) WORK ONLY.

RICHARD E. WITTER 081-003282 LICENSED STRUCTURAL ENGINEER OF ILLINOIS
6/10/04
Exp. 11/30/04

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

ALFRED BENESCH & CO., Consulting Engineers

Proposed Widened Structure

3rd PM Range 14E

LOCATION MAP

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING/ARCHITECTURE/PLANNING/MANAGEMENT

STRUCTURE NO. 016-0132

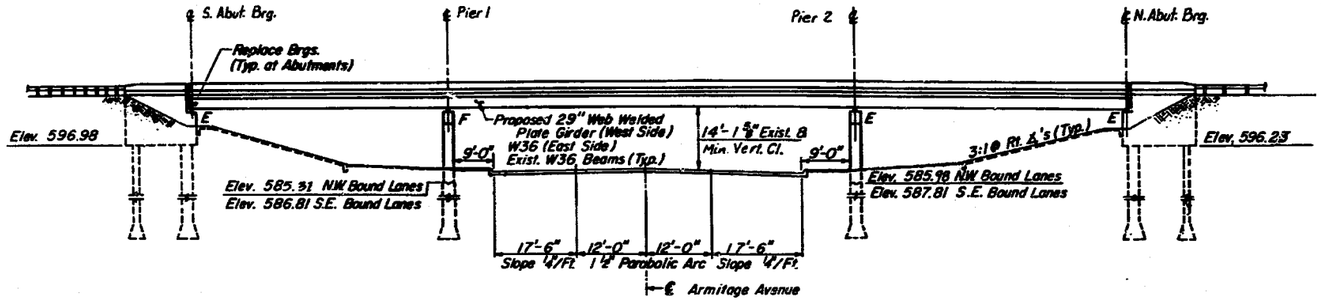
GENERAL PLAN

SECTION

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

COOK COUNTY

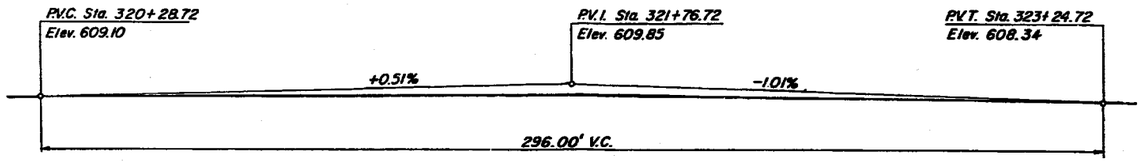
STATION 421+55.44



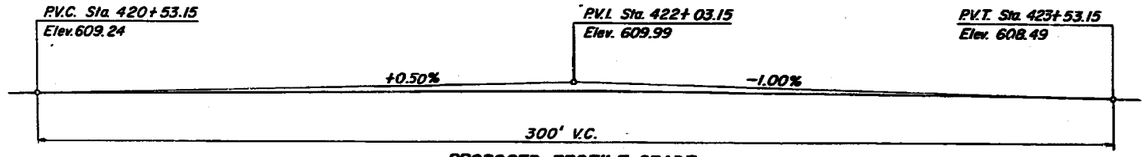
ELEVATION
Looking West
(Dimensions at Right Angles)

PROFILE GRADE
ARMITAGE AVENUE
(Along ℄ Roadway)

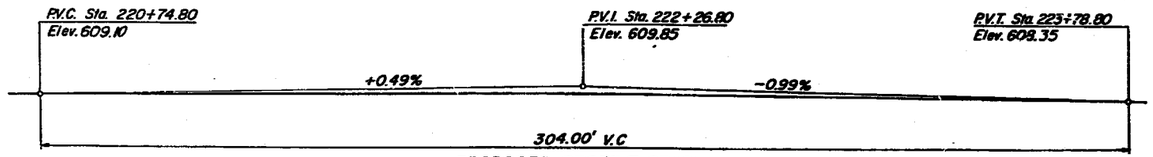
Station	Elevation
9+10	588.19
+20	588.21
+30	588.22
+40	588.31
+50	588.38
+60	588.43
+70	588.49
+80	588.57
+90	588.63
10+00	588.70
+10	588.76
+20	588.87
+30	588.95
+55	589.20
+80	589.44
11+05	589.68
+30	589.94
+40	590.03
+50	590.11
+60	590.20
+70	590.29
+80	590.39
+90	590.55
12+00	590.67
+10	590.79
+20	590.89
12+30	590.96



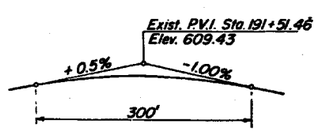
PROPOSED PROFILE GRADE
F.A.I. Rte. 90/94
℄ S.E. Bound Lanes



PROPOSED PROFILE GRADE
F.A.I. Rte. 90/94
℄ Reversible Lanes



PROPOSED PROFILE GRADE
F.A.I. Rte. 90/94
℄ N.W. Bound Lanes



ORIGINAL THEORETICAL PROFILE GRADE
F.A.I. Rte. 90/94
℄ S.E. Bound Lanes
℄ Reversible Lanes
℄ N.W. Bound Lanes

STATION 421+55.35
REBUILT 199 BY
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC. -HB-
F.A. PROJ. DPI-0137(13)
LOADING HS20 & ALT.
STR. NO. 016-0132

NEW NAME PLATE
See Standard 2113-2

Anchor with 3/8"ø Exp Anchors

BUILT BY
CITY OF CHICAGO
WITH THE COOPERATION OF
COUNTY OF COOK
STATE OF ILLINOIS
FEDERAL GOVERNMENT
1926

EXISTING NAME PLATE

STANLEY CONSULTANTS

X 0505(2-2B, 3-14, 6-1P, 400HB,401HB, 450, 0506-450,0605-402HB, 0606-403HB, 0707-404HB, 438) R-5

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	X	COOK	403	265
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 23 SHEETS

GENERAL NOTES:

~~1. ALL STRUCTURAL STEEL SHALL BE AASHTO M183.~~

~~2. EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THE ZINC SILICATE PRIMER.~~

3. 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.

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

5. 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.

6. 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 IT. 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. (FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF TOP PLATE SHALL BE PROVIDED AND PLACED AS DETAILED).

7. 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.

~~8. 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 CONSTRUCTIONAL 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.~~

9. FASTENERS SHALL BE HIGH STRENGTH BOLTS BOLTS 7/8"ø; OPEN HOLES 15/16"ø, UNLESS OTHERWISE NOTED.

~~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. EXISTING 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," OR AS OTHERWISE NOTED.~~

13. PRIOR TO POURING THE NEW BACKWALL AND/OR THE 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); ~~AND THE ENDS OF ALL STEEL STRINGERS(GIRDERS) WITHIN THREE FEET OF THE TRANSVERSE DECK JOINTS. THIS WORK WILL INCLUDE END DIAPHRAGMS, THEIR CONNECTING MATERIAL AND THE BEARING ASSEMBLIES.~~ 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."

14. 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 AND THIRD COATS SHALL BE APPLIED IN THE FIELD UNDER THIS CONTRACT. THE COLOR OF THE VINYL FINISH COATS SHALL BE MUNSELL NO. 2.5 YR 3/4 REDDISH BROWN FOR THE FASCIA OF THE EXTERIOR BEAMS AND THEIR BEARINGS AND MUNSELL NO. 10 YR 7/1 LIGHT GREY FOR ALL OTHER STRUCTURAL STEEL.

15. RELOCATE EXISTING NAME PLATE. LOCATION SHOWN ON GENERAL PLAN SHEET 1. COST OF RELOCATION IS INCIDENTAL TO "NAME PLATES."

UNDER THIS CONTRACT.

EXISTING STRUCTURE

STA. 191+06.262, FAI-2 ROUTE, SEC. 0505.2-2B, BUILT IN 1960, STRUCTURE NO. 016-0132.

SUPERSTRUCTURE: CONTINUOUS, COMPOSITE, REINFORCED CONCRETE DECK ON ROLLED STEEL BEAMS WITH COVER PLATES.

SUBSTRUCTURE: PILE BENT ABUTMENT, MULTIPLE COLUMN PIERS, BOTH SUPPORTED BY CONCRETE CAISSONS.

SUPERSTRUCTURE DECK TO BE REPLACED. SUPERSTRUCTURE TO BE MODIFIED TO A CONTINUOUS, COMPOSITE, REINFORCED CONCRETE DECK. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

TEMPORARY DECK: CONTINUOUS COMPOSITE REINFORCED CONCRETE DECK ON WELDED PLATE GIRDERS (WEST SIDE) OR ON WIDE FLANGE BEAMS (EAST 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, M270, GR.36 (PROPOSED STRUCTURAL STEEL)
FS = 18,000 PSI (EXISTING STRUCTURAL STEEL)

REHABILITATION NOTES

REMOVE EXISTING ROLLER BEARINGS ON BEAMS 1 THRU 10 AT ABUTMENTS INCLUDING TOP PLATE. GRIND CONTINUOUS FILLET WELD SMOOTH AFTER REMOVING TOP PLATE. REPLACE WITH ELASTOMERIC EXPANSION BEARINGS. REMOVAL WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "JACK AND REMOVE EXISTING BEARINGS".

JACK AND REPOSITION ROCKER TYPE EXPANSION BEARINGS TO THEIR CORRECT POSITION AT A TEMPERATURE SETTING OF 50°F FOR BEAMS 1 AND 6, AT PIER 2. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "JACK AND REPOSITION BEARINGS".

REMOVE LOOSE ANCHOR BOLTS AT PIER 2, BEARINGS 6, 7 & 8 AND REPLACE WITH EPOXY GROUTED ANCHOR BOLTS. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "1" DIAMETER ANCHOR BOLTS."

EXISTING UTILITIES

THE EXISTING UTILITIES SHOWN ON GENERAL PLAN SHEET 1 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.

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.

All 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 and Cleaning".

ELEVATION, NOTES & DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	256
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3 of 23 SHEETS

X 0505(2-2B, 3-1H, 6-1F, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL
	CLASS X CONCRETE SUPERSTRUCTURES	CU. YDS.	559.1	-	559.1
	CLASS X CONCRETE	CU. YDS.	-	12.7	12.7
	BAR SPLICERS	EACH	815	12	827
	REINFORCEMENT BARS (EPOXY COATED)	LBS.	143,680	3,380	147,060
	BRIDGE DECK GROOVING	SQ. YDS.	1932	-	1932
(4)	ERECTING STRUCTURAL STEEL	LUMP SUM	0.14	-	0.14
	FURNISHING & ERECTING STRUCTURAL STEEL	LBS.	500	-	500
(2)	REMOVAL OF EXISTING CONCRETE DECK	LUMP SUM	0.1	-	0.1
	CONCRETE REMOVAL	CU. YDS.	-	19.2	19.2
(1)	PROTECTIVE COAT	SQ. YDS.	2,169	-	2,169
	PROTECT & MAINTAIN EXISTING UNDERPASS LUMINAIRE	LUMP SUM	-	0.1	0.1
	NEOPRENE EXPANSION JOINT 2"	LIN. FT.	94	-	94
	NEOPRENE EXPANSION JOINT 2 1/2"	LIN. FT.	100	-	100
	REMOVAL OF TEMP. SLAB SUPPORT SYSTEM	LUMP SUM	0.2	-	0.2
	INSTALL ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	10	-	10
	INSTALL ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	6	-	6
	INSTALL ELASTOMERIC BEARING ASSEMBLY, TYPE III	EACH	4	-	4
⚠	FORMED CONCRETE REPAIR (DEPTH = <5")	SQ. FT.	500		500
	RIVET REMOVAL AND REPLACEMENT	EACH	50	-	50
(7)	1" DIAMETER ANCHOR BOLTS	EACH	10	-	10
	TEMPORARY SLAB SUPPORT SYSTEM	LUMP SUM	0.3	-	0.3
(6)	JACK AND REPOSITION BEARINGS	EACH	2	-	2
(5)	JACK AND REMOVE EXISTING BEARINGS	EACH	20	-	20
(3)	PROTECTIVE SHIELD	SQ. YDS.	2,332	-	2,332
	CLEANING AND PAINTING STEEL BRIDGE - SP3	LUMP SUM	.14		.14
	NAME PLATES	EACH	1	-	1
	POWER TOOL CLEANG. RESIDUE CONTAINMT & DISP.	LUMP SUM	.14		.14
	PROTECTIVE SURFACE TREATMENT	SQ. FT.	-	990	990

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

(2) INCLUDES 17,974 SQ. FT. OF EXISTING CONCRETE DECK REMOVAL.

(3) SEE SHEET 4 FOR LIMITS.

(4) INCLUDES 15,300 LBS. OF STRUCTURAL STEEL TO BE ERECTED
STEEL ITEMS INCLUDE DIAPHRAGM ASSEMBLIES BETWEEN BEAMS 5 & 6, ABUTMENT BEARING SIDE RETAINERS, ANCHOR BOLTS, AND COVER PLATE END SPLICE ASSEMBLIES.

(5) D.L. REACTION = 12k @ ABUTMENTS (D.L. OF BEAM + 200 LBS. PER LIN. FT. CONST. D.L.)

(6) D.L. REACTION = 53k @ PIER #2 (D.L. OF BEAM + 200 LBS. PER LIN. FT. CONST. D.L.)

(7) SEE SPECIAL PROVISIONS.

STANLEY CONSULTANTS

⚠ Rev. 9-30-93

BILL OF MATERIAL

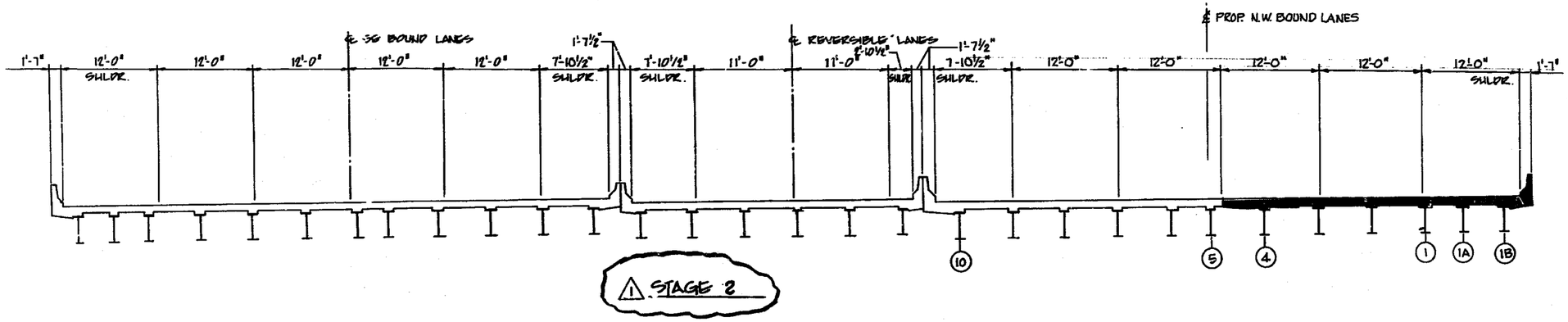
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

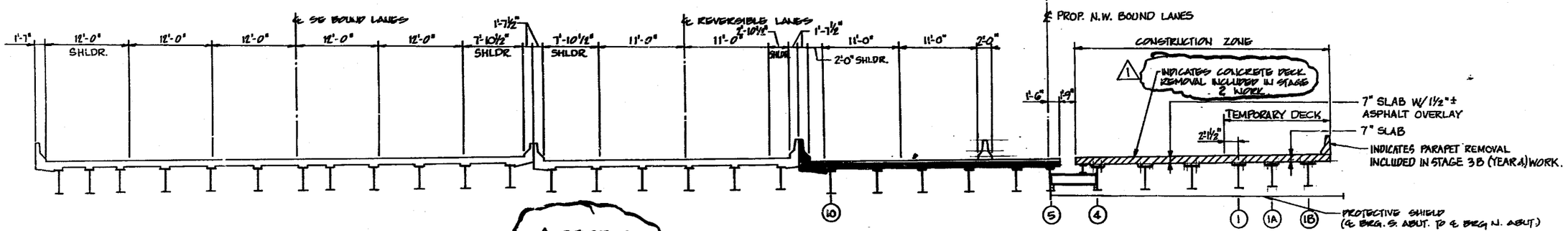
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	267
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4 of 23 SHEETS

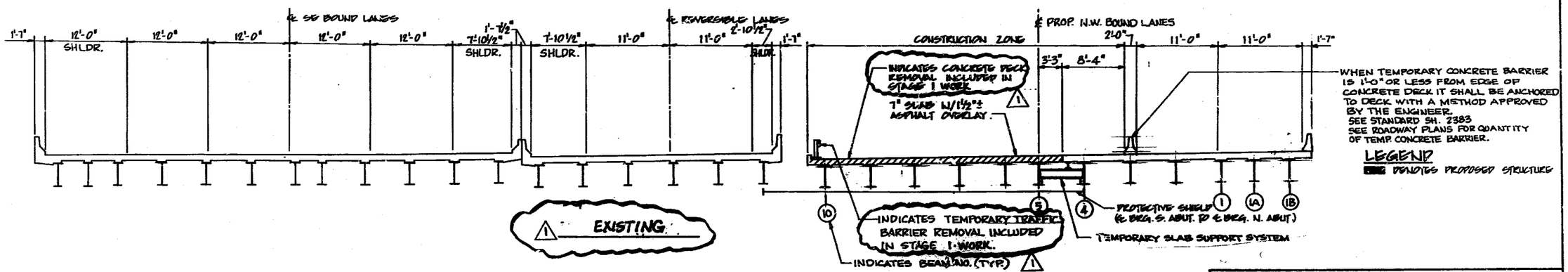
X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



1 STAGE 2



1 STAGE 1



1 EXISTING

BRIDGE CONSTRUCTION STAGING

SECTION

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

COOK COUNTY

STATION 421+55.44

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

1 REV. 9-30-93

265 4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

X 050512-2B, 3-14, 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	268
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5 of 23 SHEETS

GIRDER #1B

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	21971.497	34.614	609.291	609.291
℄ ABUT. BRG.	21974.065	34.584	669.304	609.304
a	21983.973	34.482	609.359	609.359
b	21993.883	34.407	609.397	609.411
c	22003.792	34.358	609.446	609.456
d	22013.702	34.335	609.493	609.498
e	22023.612	34.338	609.541	609.539
f	22033.522	34.368	609.590	609.585
℄ PIER 1	22042.853	34.420	609.637	609.637
g	22052.762	34.501	609.687	609.706
h	22062.671	34.569	609.737	609.782
i	22072.580	34.491	609.784	609.854
j	22082.489	34.439	609.830	609.921
k	22092.399	34.413	609.872	609.974
l	22102.308	34.413	609.910	610.012
m	22112.218	34.439	609.944	610.034
n	22122.127	34.492	609.973	610.042
o	22132.036	34.571	609.997	610.040
p	22141.945	34.492	610.015	610.033
℄ PIER 2	22152.210	34.405	610.027	610.027
q	22162.120	34.349	610.035	610.033
r	22172.030	34.318	610.038	610.042
s	22181.940	34.314	610.037	610.051
t	22191.849	34.336	610.032	610.054
u	22201.759	34.385	610.023	610.046
v	22211.668	34.459	610.009	610.026
℄ ABUT. BRG.	22223.851	34.587	609.987	609.987
BK. N. ABUT.	22226.526	34.620	609.980	609.980

INDICATES STA. 222+26.526 (TYP)

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED NMB LANES AND ARE MEASURED RADIALLY.

GIRDER #1A

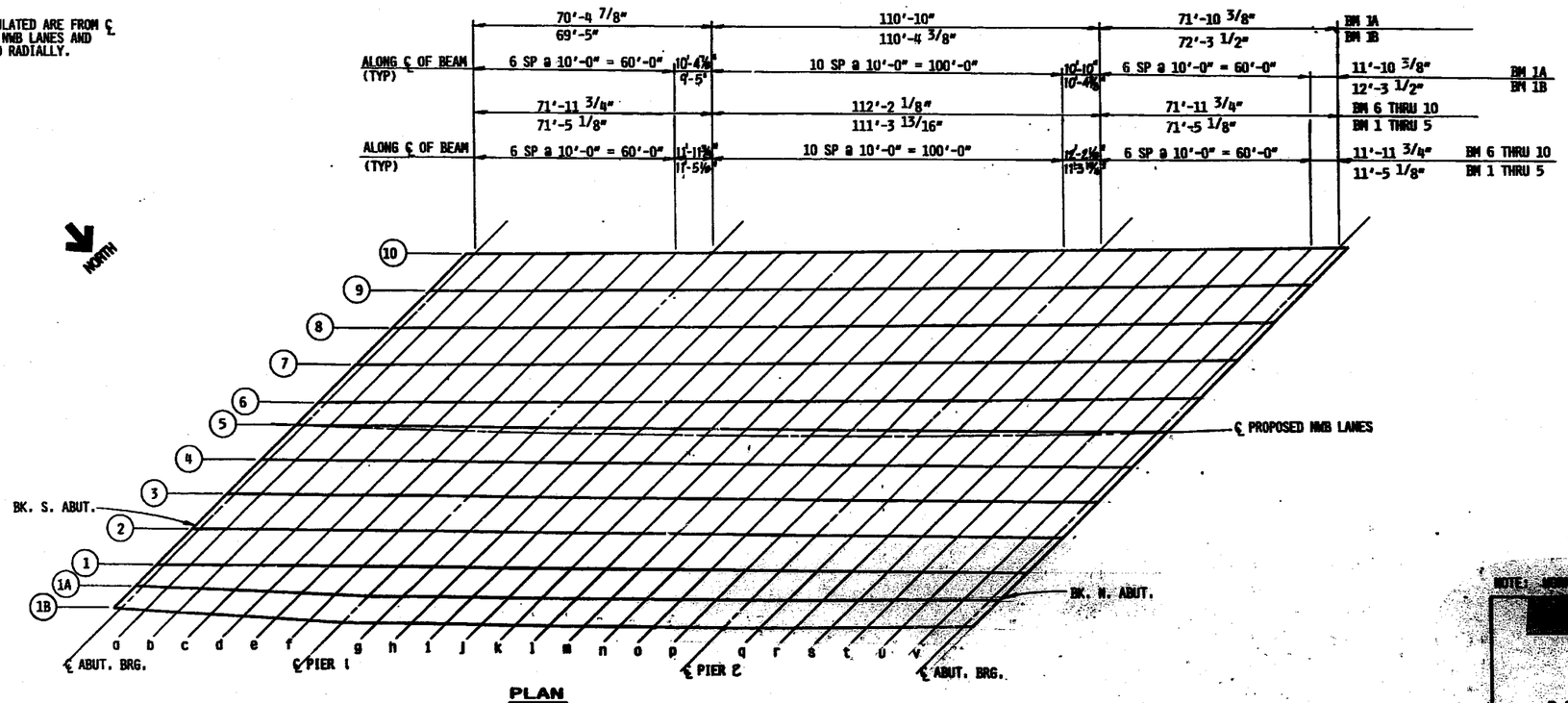
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	21975.166	30.451	609.226	609.226
℄ ABUT. BRG.	21977.773	30.383	609.238	609.238
a	21987.691	30.137	609.281	609.290
b	21997.610	29.918	609.325	609.339
c	22007.529	29.725	609.371	609.383
d	22017.450	29.559	609.415	609.421
e	22027.371	29.418	609.461	609.460
f	22037.294	29.304	609.507	609.502
℄ PIER 1	22047.623	29.214	609.556	609.556
g	22057.546	29.153	609.604	609.623
h	22067.470	29.103	609.651	609.695
i	22077.393	28.991	609.698	609.768
j	22087.316	28.905	609.741	609.832
k	22097.240	28.845	609.780	609.882
l	22107.164	28.812	609.814	609.916
m	22117.088	28.805	609.845	609.936
n	22127.012	28.824	609.872	609.942
o	22136.936	28.870	609.893	609.937
p	22146.860	28.855	609.909	609.928
℄ PIER 2	22157.610	28.846	609.921	609.921
q	22167.534	28.865	609.927	609.925
r	22177.458	28.910	609.930	609.934
s	22187.381	28.982	609.928	609.942
t	22197.304	29.079	609.922	609.944
u	22207.227	29.203	609.911	609.934
v	22217.149	29.354	609.897	609.913
℄ ABUT. BRG.	22228.915	29.566	609.873	609.873
BK. N. ABUT.	22231.577	29.619	609.867	609.867

BEAM NO. 1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	21978.844	26.292	609.161	609.161
℄ ABUT. BRG.	21981.490	26.185	609.172	609.172
a	21991.415	25.800	609.213	609.220
b	22001.341	25.442	609.254	609.263
c	22011.269	25.110	609.296	609.306
d	22021.198	24.804	609.339	609.344
e	22031.130	24.524	609.382	609.382
f	22041.062	24.270	609.425	609.420
℄ PIER 1	22052.407	24.013	609.476	609.476
g	22062.342	23.816	609.520	609.539
h	22072.278	23.646	609.566	609.610
i	22082.215	23.500	609.610	609.679
j	22092.152	23.381	609.651	609.738
k	22102.090	23.288	609.687	609.785
l	22112.029	23.221	609.718	609.817
m	22121.968	23.181	609.746	609.836
n	22131.907	23.167	609.769	609.841
o	22141.845	23.180	609.788	609.835
p	22151.784	23.219	609.802	609.823
℄ PIER 2	22163.025	23.295	609.814	609.814
q	22172.963	23.390	609.820	609.815
r	22182.900	23.511	609.820	609.819
s	22192.837	23.659	609.817	609.821
t	22202.773	23.834	609.811	609.829
u	22212.708	24.034	609.799	609.810
v	22222.642	24.261	609.783	609.791
℄ ABUT. BRG.	22233.992	24.553	609.759	609.759
BK. N. ABUT.	22236.641	24.626	609.754	609.754

BEAM NO. 2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	21984.697	19.700	609.058	609.058
℄ ABUT. BRG.	21987.348	19.597	609.069	609.069
a	21997.290	19.227	609.110	609.119
b	22007.234	18.884	609.152	609.166
c	22017.180	18.568	609.194	609.208
d	22027.127	18.277	609.237	609.245
e	22037.076	18.013	609.281	609.281
f	22047.026	17.776	609.325	609.320
℄ PIER 1	22058.380	17.537	609.376	609.376
g	22068.342	17.355	609.421	609.440
h	22078.296	17.199	609.466	609.512
i	22088.250	17.070	609.508	609.581
j	22098.204	16.967	609.546	609.639
k	22108.159	16.890	609.580	609.684
l	22118.114	16.840	609.609	609.714
m	22128.070	16.816	609.633	609.728
n	22138.026	16.819	609.654	609.730
o	22147.981	16.848	609.670	609.720
p	22157.937	16.903	609.682	609.704
℄ PIER 2	22169.213	16.990	609.691	609.691
q	22179.167	17.101	609.694	609.689
r	22189.121	17.240	609.692	609.691
s	22199.074	17.404	609.686	609.693
t	22209.026	17.595	609.676	609.689
u	22218.977	17.812	609.662	609.677
v	22228.926	18.055	609.643	609.653
℄ ABUT. BRG.	22240.295	18.366	609.616	609.616
BK. N. ABUT.	22242.948	18.443	609.610	609.610



PLAN

NOTE: WORK THIS SHEET WITH S & T.

[redacted]

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+88.44

[redacted] 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.
	X		443	269
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6 of 23 SHEETS

BEAM NO. 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	21990.591	13.094	608.955	608.955
℄ ABUT. BRG.	21993.246	12.995	608.966	608.966
a	22003.206	12.641	609.007	609.016
b	22013.168	12.314	609.050	609.064
c	22023.131	12.013	609.092	609.106
d	22033.096	11.739	609.136	609.144
e	22043.063	11.490	609.180	609.180
f	22053.030	11.269	609.224	609.219
℄ PIER 1	22064.414	11.048	609.275	609.275
g	22074.384	10.882	609.321	609.340
h	22084.354	10.742	609.365	609.411
i	22094.326	10.629	609.405	609.478
j	22104.297	10.542	609.446	609.533
k	22114.269	10.482	609.471	609.575
l	22124.242	10.448	609.497	609.602
m	22134.214	10.440	609.519	609.614
n	22144.186	10.459	609.537	609.613
o	22154.158	10.504	609.551	609.601
p	22164.130	10.576	609.561	609.583
℄ PIER 2	22175.425	10.682	609.566	609.566
q	22185.396	10.810	609.565	609.560
r	22195.366	10.964	609.561	609.560
s	22205.335	11.145	609.553	609.560
t	22215.303	11.353	609.540	609.553
u	22225.270	11.587	609.523	609.538
v	22235.236	11.847	609.502	609.512
℄ ABUT. BRG.	22246.622	12.176	609.473	609.473
BK. N. ABUT.	22249.280	12.258	609.464	609.464

BEAM NO. 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	21996.505	6.497	608.852	608.852
℄ ABUT. BRG.	21999.165	6.403	608.863	608.863
a	22009.143	6.065	608.905	608.914
b	22019.123	5.753	608.947	608.961
c	22029.104	5.468	608.991	609.005
d	22039.086	5.209	609.034	609.042
e	22049.070	4.977	609.079	609.079
f	22059.055	4.771	609.124	609.119
℄ PIER 1	22070.459	4.569	609.175	609.175
g	22080.446	4.419	609.220	609.239
h	22090.434	4.295	609.262	609.308
i	22100.422	4.198	609.299	609.372
j	22110.411	4.127	609.332	609.425
k	22120.400	4.083	609.360	609.464
l	22130.389	4.065	609.383	609.488
m	22140.379	4.074	609.404	609.499
n	22150.368	4.109	609.419	609.495
o	22160.357	4.171	609.429	609.479
p	22170.345	4.259	609.436	609.458
℄ PIER 2	22181.658	4.384	609.439	609.439
q	22191.646	4.528	609.436	609.431
r	22201.632	4.699	609.429	609.428
s	22211.617	4.897	609.418	609.425
t	22221.602	5.121	609.402	609.415
u	22231.585	5.372	609.382	609.397
v	22241.566	5.649	609.358	609.358
℄ ABUT. BRG.	22252.971	5.998	609.326	609.326
BK. N. ABUT.	22255.632	6.084	609.317	609.317

℄ PROPOSED NWB LANES

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	22002.358	0.000	608.750	608.750
℄ ABUT. BRG.	22004.942	0.000	608.763	608.763
a	22014.942	0.000	608.812	608.818
b	22024.942	0.000	608.861	608.871
c	22034.942	0.000	608.910	608.918
d	22044.942	0.000	608.959	608.963
e	22054.942	0.000	609.008	609.005
f	22064.942	0.000	609.057	609.052
℄ PIER 1	22074.740	0.000	609.105	609.105
g	22084.740	0.000	609.152	609.169
h	22094.740	0.000	609.193	609.234
i	22104.740	0.000	609.230	609.294
j	22114.740	0.000	609.262	609.343
k	22124.740	0.000	609.289	609.380
l	22134.740	0.000	609.311	609.403
m	22144.740	0.000	609.329	609.412
n	22154.740	0.000	609.341	609.408
o	22164.740	0.000	609.349	609.393
p	22174.740	0.000	609.352	609.371
℄ PIER 2	22186.015	0.000	609.349	609.349
q	22196.015	0.000	609.342	609.337
r	22206.015	0.000	609.329	609.326
s	22216.015	0.000	609.312	609.315
t	22226.015	0.000	609.290	609.298
u	22236.015	0.000	609.263	609.273
v	22246.015	0.000	609.231	609.239
℄ ABUT. BRG.	22259.163	0.000	609.181	609.181
BK. N. ABUT.	22261.923	0.000	609.170	609.170

BEAM NO. 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	22002.440	-0.090	608.749	608.749
℄ ABUT. BRG.	22005.105	-0.181	608.760	608.760
a	22015.101	-0.503	608.803	608.809
b	22025.098	-0.799	608.846	608.856
c	22035.097	-1.068	608.889	608.898
d	22045.097	-1.311	608.933	608.937
e	22055.098	-1.527	608.978	608.976
f	22065.101	-1.717	609.023	609.018
℄ PIER 1	22076.525	-1.901	609.076	609.076
g	22086.529	-2.035	609.118	609.135
h	22096.534	-2.142	609.157	609.198
i	22106.540	-2.223	609.192	609.256
j	22116.546	-2.278	609.221	609.302
k	22126.552	-2.306	609.248	609.339
l	22136.558	-2.307	609.269	609.361
m	22146.564	-2.282	609.286	609.369
n	22156.570	-2.230	609.298	609.365
o	22166.575	-2.152	609.307	609.351
p	22176.580	-2.047	609.311	609.331
℄ PIER 2	22187.913	-1.904	609.310	609.310
q	22197.916	-1.743	609.305	609.300
r	22207.919	-1.555	609.295	609.292
s	22217.920	-1.341	609.281	609.284
t	22227.921	-1.100	609.263	609.271
u	22237.920	-0.833	609.240	609.250
v	22247.917	-0.539	609.213	609.220
℄ ABUT. BRG.	22259.340	-0.171	609.178	609.178
BK. N. ABUT.	22262.005	-0.080	609.167	609.167

BEAM NO. 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	22005.934	-3.954	608.689	608.689
℄ ABUT. BRG.	22008.622	-4.064	608.700	608.700
a	22018.626	-4.457	608.741	608.747
b	22028.632	-4.823	608.783	608.793
c	22038.639	-5.163	608.825	608.834
d	22048.648	-5.476	608.868	608.872
e	22058.659	-5.763	608.911	608.909
f	22068.671	-6.023	608.955	608.950
℄ PIER 1	22080.667	-6.300	609.007	609.007
g	22090.682	-6.502	609.047	609.064
h	22100.698	-6.677	609.083	609.123
i	22110.715	-6.826	609.114	609.177
j	22120.732	-6.948	609.140	609.221
k	22130.750	-7.044	609.162	609.253
l	22140.769	-7.113	609.181	609.273
m	22150.788	-7.156	609.194	609.278
n	22160.807	-7.172	609.204	609.272
o	22170.826	-7.161	609.206	609.254
p	22180.845	-7.124	609.209	609.230
℄ PIER 2	22193.047	-7.043	609.203	609.203
q	22203.065	-6.947	609.194	609.189
r	22213.083	-6.825	609.181	609.178
s	22223.100	-6.675	609.164	609.167
t	22233.116	-6.500	609.141	609.149
u	22243.131	-6.298	609.114	609.124
v	22253.144	-6.069	609.084	609.091
℄ ABUT. BRG.	22265.139	-5.760	609.041	609.041
BK. N. ABUT.	22267.829	-5.685	609.030	609.030

BEAM NO. 7

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	22011.890	-10.513	608.587	608.587
℄ ABUT. BRG.	22014.583	-10.619	608.598	608.598
a	22026.604	-10.996	608.639	608.648
b	22036.628	-11.346	608.681	608.695
c	22046.653	-11.670	608.724	608.738
d	22056.680	-11.967	608.767	608.775
e	22066.709	-12.238	608.811	608.812
f	22074.739	-12.482	608.855	608.851
℄ PIER 1	22086.756	-12.740	608.905	608.905
g	22096.788	-12.925	608.943	608.962
h	22106.821	-13.085	608.975	609.021
i	22116.855	-13.217	609.004	609.076
j	22126.890	-13.323	609.028	609.120
k	22136.925	-13.402	609.048	609.152
l	22146.961	-13.455	609.063	609.168
m	22156.997	-13.481	609.074	609.170
n	22167.032	-13.481	609.080	609.158
o	22177.068	-13.456	609.083	609.135
p	22187.104	-13.400	609.081	609.105
℄ PIER 2	22199.326	-13.299	609.072	609.072
q	22209.361	-13.186	609.060	609.055
r	22219.395	-13.047	609.044	609.043
s	22229.428	-12.881	609.023	609.030
t	22239.460	-12.689	608.998	609.011
u	22249.491	-12.470	608.969	608.984
v	22259.521	-12.224	608.936	608.946
℄ ABUT. BRG.	22271.534	-11.895	608.889	608.889
BK. N. ABUT.	22274.229	-11.816	608.878	608.878

INDICATES STA. 222+74.229 (TYP)

BEAM NO. 8

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	22017.866	-17.062	608.485	608.485
℄ ABUT. BRG.	22020.564	-17.164	608.496	608.496
a	22030.603	-17.525	608.538	608.547
b	22040.645	-17.859	608.581	608.595
c	22050.688	-18.167	608.624	608.638
d	22060.733	-18.449	608.667	608.675
e	22070.779	-18.703	608.711	608.712
f	22080.827	-18.931	608.755	608.751
℄ PIER 1	22092.864	-19.170	608.803	608.803
g	22102.914	-19.339	608.837	608.856
h	22112.965	-19.482	608.867	608.913
i	22123.016	-19.598	608.893	608.965
j	22133.068	-19.688	608.914	609.006
k	22143.121	-19.751	608.931	609.035
l	22153.173	-19.787	608.944	609.049
m	22163.226	-19.797	608.952	609.048
n	22173.279	-19.780	608.956	609.034
o	22183.331	-19.736	608.955	609.007
p	22193.384	-19.666	608.951	608.975
℄ PIER 2	22205.627	-19.544	608.939	608.939
q	22215.678	-19.415	608.924	608.919
r	22225.728	-19.259	608.905	608.904
s	22235.777	-19.076	608.882	608.889
t	22245.826	-18.867	608.854	608.867
u	22255.873	-18.631	608.821	608.836
v	22265.919	-18.368	608.786	608.796
℄ ABUT. BRG.	22277.951	-18.019	608.736	608.736
BK. N. ABUT.	22280.650	-17.935	608.723	608.723

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

BEAM NO. 9

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	22023.863	-23.602	608.384	608.384
℄ ABUT. BRG.	22026.566	-23.699	608.395	608.395
a	22036.623	-24.045	608.437	608.446
b	22046.683	-24.363	608.480	608.494
c	22056.744	-24.655	608.524	608.538
d	22066.807	-24.920	608.568	608.576
e	22076.871	-25.159	608.612	608.613
f	22086.936	-25.371	608.654	608.650
℄ PIER 1	22098.995	-25.590	608.698	608.698
g	22109.062	-25.743	608.730	608.749
h	22119.130	-25.870	608.758	608.804
i	22129.199	-25.969	608.781	608.853
j	22139.268	-26.043	608.799	608.891
k	22149.337	-26.089	608.813	608.917
l	22159.407	-26.109	608.824	608.929
m	22169.477	-26.102	608.829	608.925
n	22179.546	-26.068	608.830	608.908
o	22189.616	-26.008	608.827	608.879
p	22199.685	-25.921	608.820	608.844
℄ PIER2	22211.948	-25.779	608.803	608.803
q	22222.015	-25.633	608.786	608.781
r	22232.082	-25.460	608.765	608.764
s	22242.147	-25.261	608.739	608.746
t	22252.212	-25.034	608.707	608.720
u	22262.275	-24.781	608.672	608.687
v	22272.337	-24.502	608.633	608.643
℄ ABUT. BRG.	22284.388	-24.152	608.580	608.580
BK. N. ABUT.	22287.092	-24.044	608.567	608.567

NOTE: WORK THIS SHEET WITH 5 & 7.

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

TOP OF SLAB ELEVATIONS
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	270
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7 of 29 SHEETS

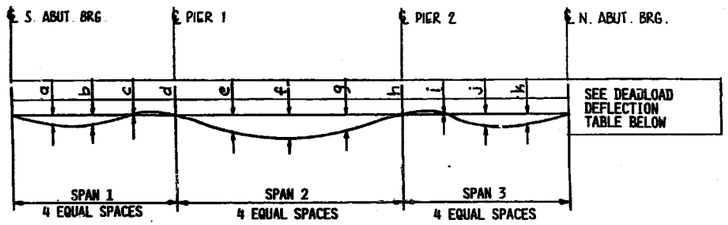
X 050512-2B, 3-1H, 6-1P, 400HB,401HB, 450), (0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

BEAM NO. 10

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	22029.881	-30.133	608.282	608.282
℄ ABUT. BRG.	22032.589	-30.226	608.294	608.294
a	22042.664	-30.555	608.337	608.348
b	22052.742	-30.858	608.380	608.399
c	22062.821	-31.133	608.424	608.445
d	22072.901	-31.382	608.468	608.485
e	22082.983	-31.605	608.512	608.521
f	22093.066	-31.801	608.551	608.553
℄ PIER 1	22105.146	-32.000	608.592	608.592
g	22115.231	-32.137	608.621	608.630
h	22125.316	-32.267	608.646	608.671
i	22135.402	-32.330	608.666	608.707
j	22145.488	-32.387	608.682	608.735
k	22155.575	-32.417	608.694	608.755
l	22165.662	-32.420	608.702	608.764
m	22175.748	-32.397	608.704	608.760
n	22185.835	-32.347	608.702	608.746
o	22195.921	-32.270	608.697	608.725
p	22206.006	-32.166	608.686	608.698
℄ PIER 2	22218.290	-32.003	608.667	608.667
q	22228.374	-31.840	608.647	608.648
r	22238.457	-31.651	608.622	608.630
s	22248.539	-31.434	608.593	608.609
t	22258.619	-31.191	608.559	608.579
u	22268.699	-30.921	608.522	608.542
v	22278.777	-30.625	608.480	608.493
℄ ABUT. BRG.	22290.847	-30.234	608.423	608.423
BK. N. ABUT.	22293.555	-30.141	608.409	608.409

INDICATES STA. 222+93.555 (TYP)

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF NMB LANES AND ARE MEASURED RADIALLY.



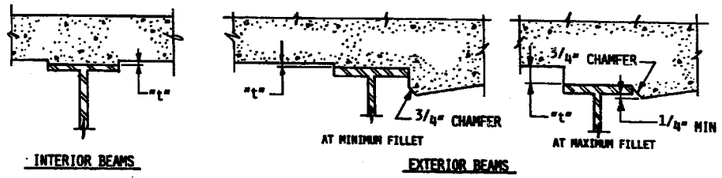
DEAD LOAD DEFLECTION DIAGRAM

(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.

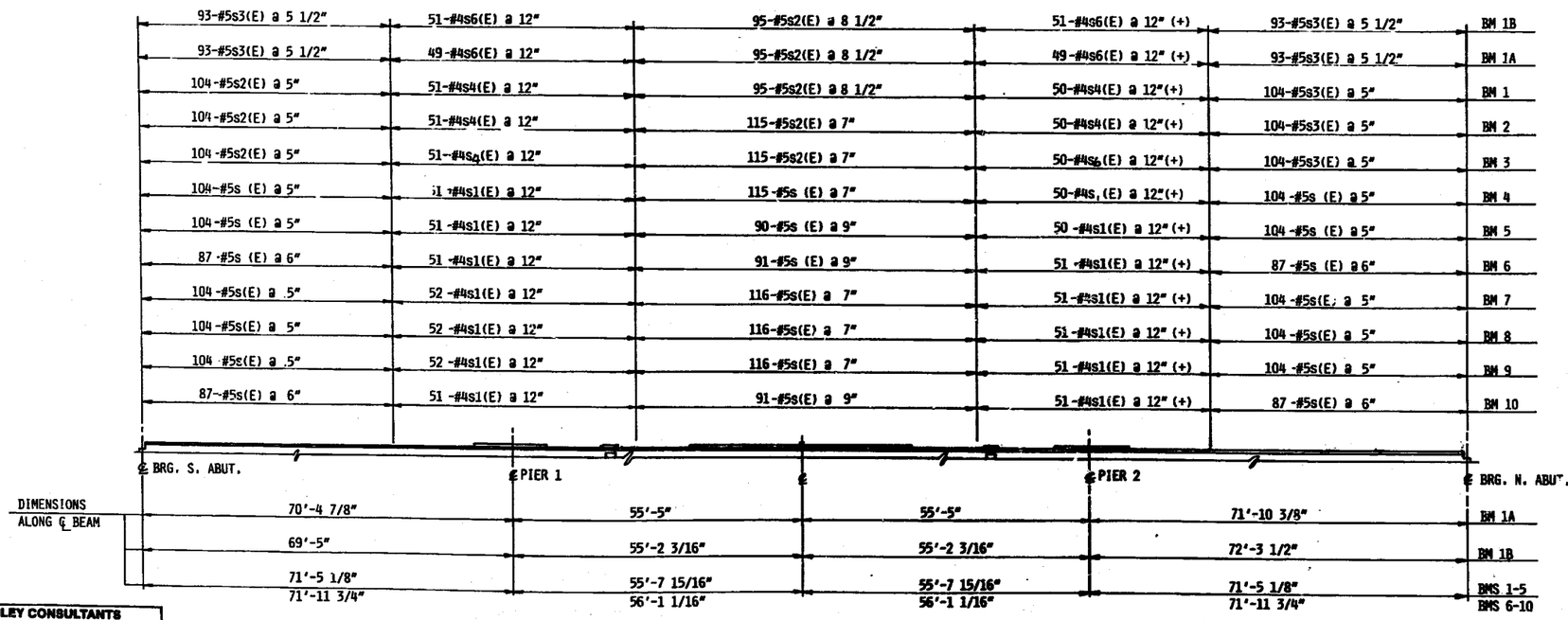
DEAD LOAD DEFLECTION TABLE (INCHES)

BEAMS	a	b	c	d	e	f	g	h	i	j	k
1B & 1A	3/16	1/8	-1/16	0	3/4	1 1/4	3/4	0	0	1/4	1/4
1,5 & 6	1/8	1/8	-1/16	0	3/4	1 3/16	3/4	0	-1/16	1/8	1/8
2-4 & 7-9	3/16	1/8	0	0	13/16	1 5/16	13/16	0	0	1/8	3/16
10	3/16	1/4	1/16	0	7/16	3/4	7/16	0	1/16	1/4	3/16



TO DETERMINE "t": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, 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 DEFLECTION" SHOWN, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGE OF BEAMS.

FILLET HEIGHT DETAILS



REINFORCED FILLET LOCATIONS

NOTES:
1. WORK THIS SHEET WITH 5 & 6.
2. FOR BEAM FILLET DETAIL SEE SHEET 9.

STANLEY CONSULTANTS

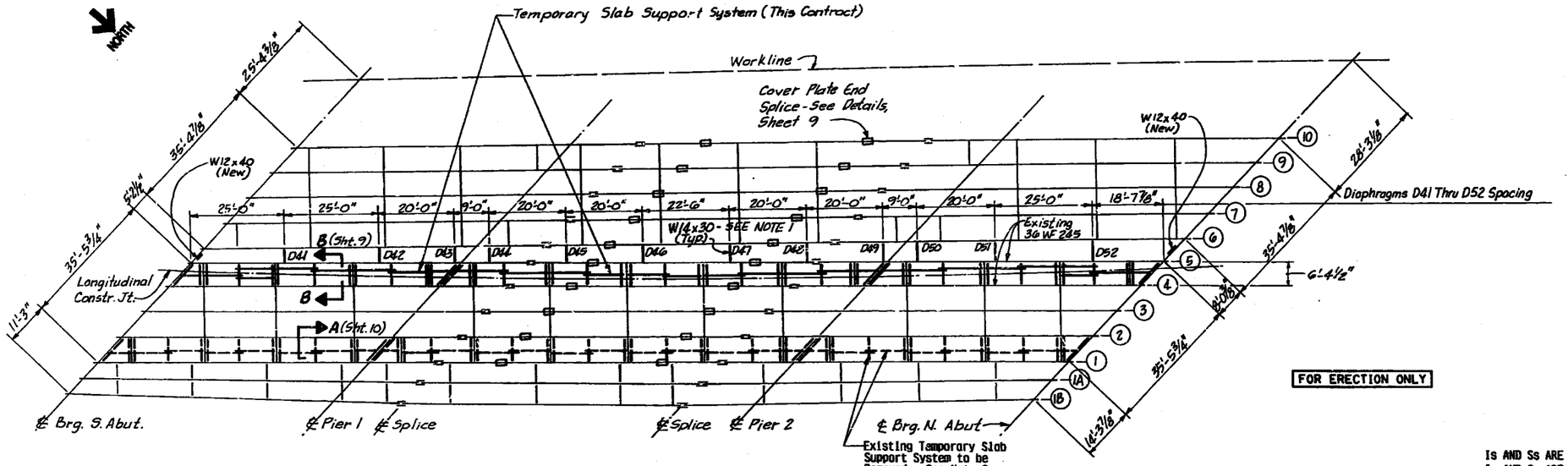
TOP SLAB ELEVATIONS
SHEET 3 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

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	271
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8 of 29 SHEETS



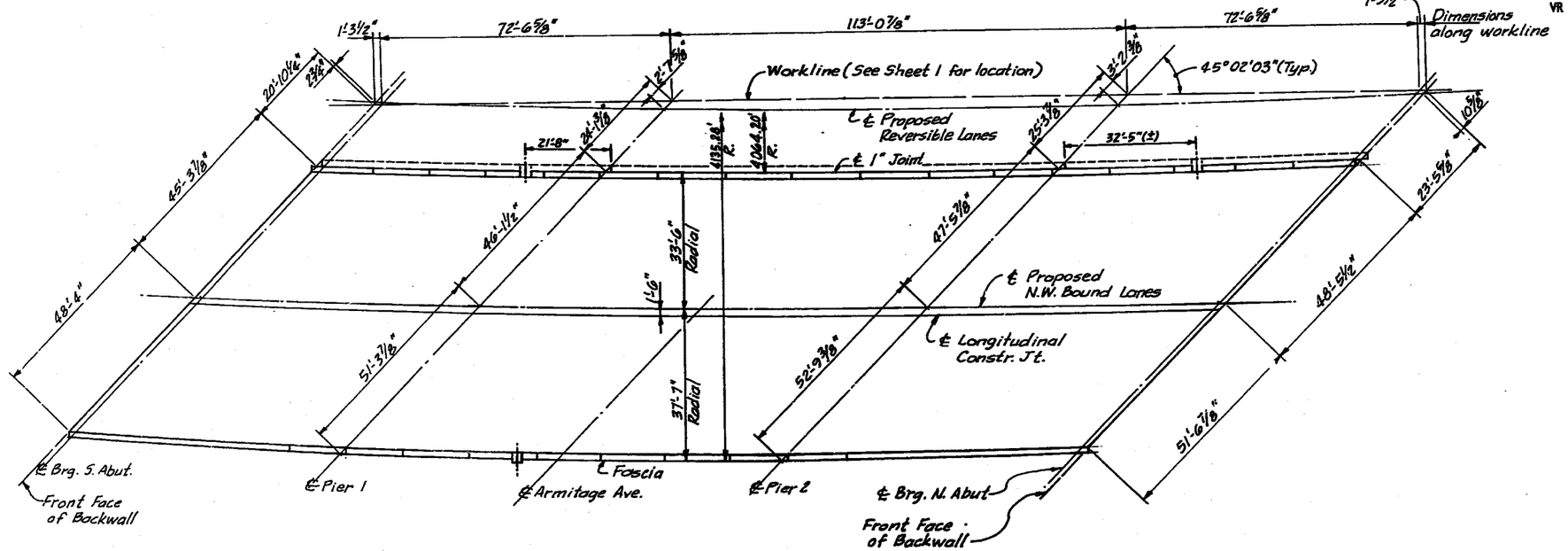
FOR ERECTION ONLY

GIRDER MOMENT TABLE		INTERIOR GIRDER		
		.4 SPAN 1	PIER 1 & 2	.5 SPAN 2
Is	(in^4)	16100.0	24457.0	20306.0
Ic n=9	(in^4)	38588.0	-	44745.0
Ic n=27	(in^4)	26988.0	-	31832.0
Ss	(in^3)	893.0	1293.7	1088.5
Sc n=9	(in^3)	1283.0	-	1496.6
Sc n=27	(in^3)	1129.7	-	1327.2
DL	(k/ft)	0.98	1.08	1.03
MDL	(k-ft)	241.9	923.7	665.5
fs DL	(ksi)	3.25	8.57	7.34
SDL	(k/ft)	0.257	0.257	0.257
MSDL	(k-ft)	82.6	210.8	211.4
MLL	(k-ft)	498.9	439.5	728.9
MIMP	(k-ft)	126.6	101.2	153.7
MLL+I	(k-ft)	625.5	540.7	882.6
fs SDL	(ksi)	0.88	1.96	1.91
fs LL+I	(ksi)	5.85	5.01	7.08
fs TOTAL	(ksi)	9.98	15.54	16.33
VR	(k)	47.9	-	48.6

GIRDER REACTION TABLE		INTERIOR GIRDER	
		N & S ABUT	PIER 1 & 2
R_{DL}	(k)	29.1	131.5
R_{LL}	(k)	39.8	58.4
IMP	(k)	10.1	13.5
R TOTAL	(k)	79.0	203.4

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

FRAMING PLAN



DECK PLAN

℄ TO ℄ DISTANCE @ DIAPHRAGM LOCATIONS: BETWEEN BEAMS 5 & 6			
D41	3'-10 15/16"	D47	4'-10"
D42	4'-1 5/16"	D48	4'-11 15/16"
D43	4'-3 1/4"	D49	5'-1 3/16"
D44	4'-4 1/16"	D50	5'-2 11/16"
D45	4'-6"	D51	5'-4 9/16"
D46	4'-7 7/8"	D52	5'-6 15/16"

NOTES:

1. ERECT STRUCTURAL STEEL DIAPHRAGMS BETWEEN BEAMS 5 AND 6. DIAPHRAGMS ARE TO BE INSTALLED PERPENDICULAR TO BEAM 5
2. REMOVE TEMPORARY SLAB SUPPORT SYSTEM BETWEEN BEAMS 1 AND 2. REMOVED MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

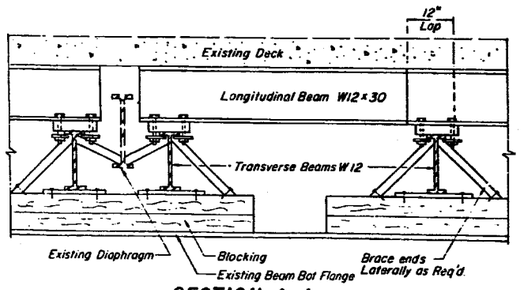
MADE IN PRODUCTION, INC.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

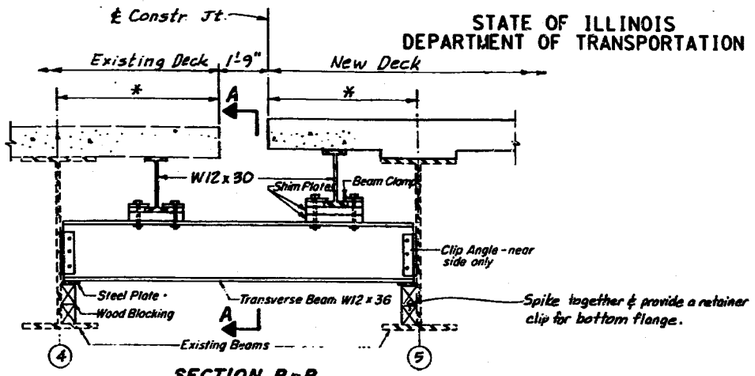
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	272
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9 of 23 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



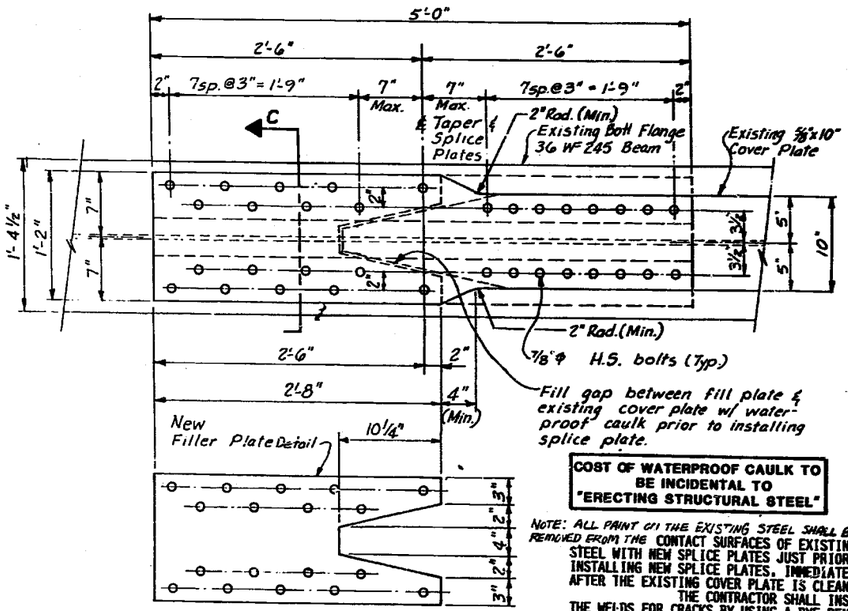
SECTION A-A



SECTION B-B
For Location see Sheet 8.

* Temporary support required only when this dimension is 2'-0" or greater.

TEMPORARY SUPPORT - EDGE DECK
(See Notes)



COST OF WATERPROOF CAULK TO BE INCIDENTAL TO "ERECTING STRUCTURAL STEEL"

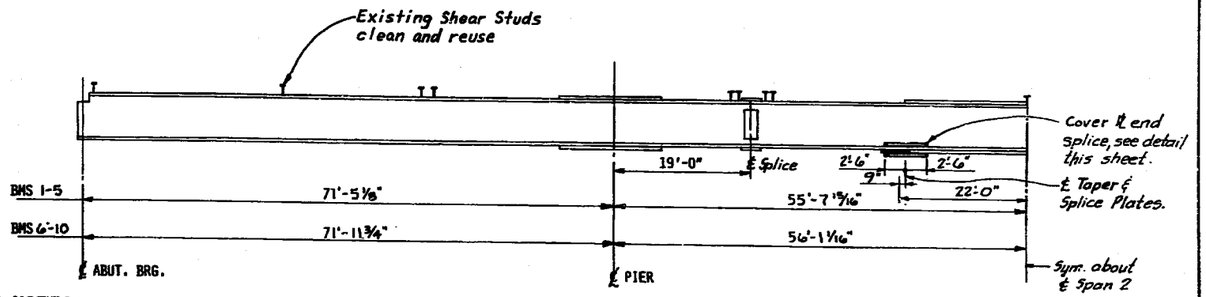
NOTE: ALL PAINT ON THE EXISTING STEEL SHALL BE REMOVED FROM THE CONTACT SURFACES OF EXISTING STEEL WITH NEW SPLICE PLATES JUST PRIOR TO INSTALLING NEW SPLICE PLATES. IMMEDIATELY AFTER THE EXISTING COVER PLATE IS CLEANED THE CONTRACTOR SHALL INSPECT THE WELDS FOR CRACKS BY USING A DYE PENETRANT. IF ANY CRACKS ARE DETECTED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT ONCE.

COST OF THE DYE PENETRANT TEST SHALL BE BE INCIDENTAL TO "ERECTING STRUCTURAL STEEL."

COVER PLATE END SPLICE DETAIL
(20 Req'd.)

SECTION C
"NTR" indicates Notch Toughness Requirement

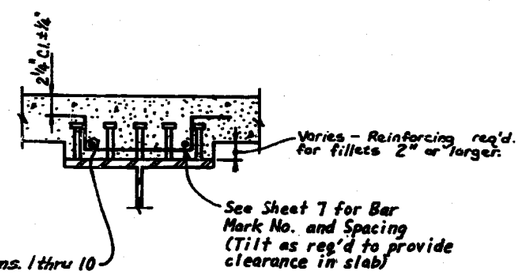
NOTE:
CLAMP THE NEW COVER PLATES IN-PLACE AND FIELD DRILL THE HOLES THROUGH THE NEW FILL PLATES, EXISTING COVER PLATES, AND BEAM FLANGE USING THE NEW COVER PLATE AS A TEMPLATE. COST OF FIELD DRILLING SHALL BE INCLUDED IN ERECTING STRUCTURAL STEEL.



BEAM ELEVATION - BEAMS 1 TO 10

TEMPORARY SLAB SUPPORT NOTES:

1. ALL BOLTS ARE 3/4" DIA. HIGH STRENGTH. BOLT HOLES SHALL BE 15/16" DIA. EXCEPT SLOTTED HOLES WHICH ARE 13/16" X 1 1/2".
2. SLAB SUPPORT ASSSEMBLY SHALL BE IN PLACE PRIOR TO DECK REMOVAL, AND SHALL REMAIN IN PLACE UNTIL SUPPORTED DECK IS REMOVED DURING STAGE 3B CONSTRUCTION.
3. TIMBER BLOCKING SHALL BE OF SOUND CONDITION FREE OF ROT AND DEFECTS WHICH WILL MAKE THE TIMBER UNSUITABLE FOR THE INTENDED USE. ALL BLOCKING SHALL BE SECURED BY CLAMPS, SPIKES OR OTHER APPROVED MEANS, TO PREVENT SHIFTING DUE TO TRAFFIC AND CONSTRUCTION VIBRATIONS.
4. ALL DETAILS AND DRAWINGS SHOWN FOR THE TEMPORARY SLAB SUPPORT SYSTEM ARE FOR INFORMATION ONLY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO SUBMIT PLANS, DESIGN, AND DETAIL FOR THE TEMPORARY SLAB SUPPORT SYSTEM TO THE ENGINEER FOR HIS WRITTEN APPROVAL. THESE PLANS, DESIGN AND DETAILS SHALL BE PREPARED AND SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER.
6. COST OF THE SLAB SUPPORT SYSTEM, INCLUDING ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY, SHALL BE INCLUDED IN THE LUMP SUM BID FOR "TEMPORARY SLAB SUPPORT SYSTEM".
7. NO DRILLING OR WELDING WILL BE ALLOWED ON THE EXISTING BEAMS, EXCEPT AS SHOWN. ALL REQUIRED HOLES SHALL BE DRILLED, NO BURNING ALLOWED.



SECTION THRU BEAM FILLET
(Showing Special Fillet Reinforcing)

FOR ERECTION ONLY

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

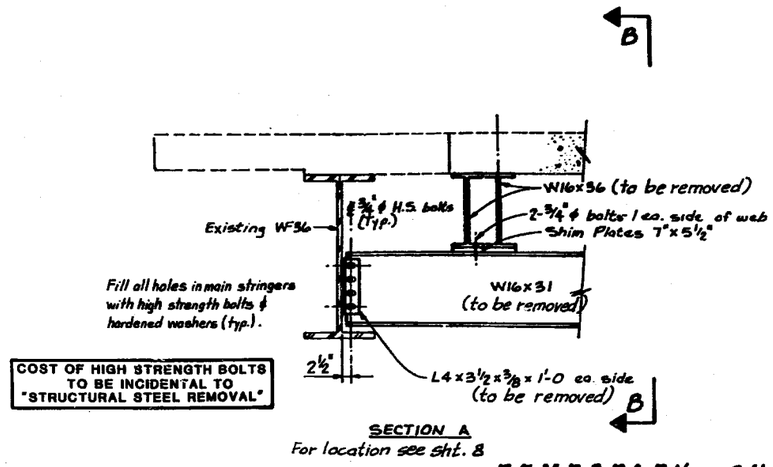
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	273
F. AID. A. REG. 4	ILLINOIS	FED. AID PROJECT		

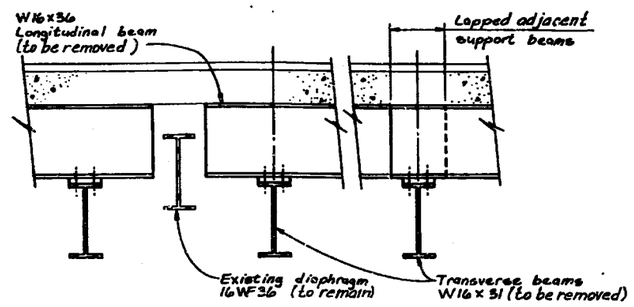
SHEET NO. 10 of 23 SHEETS

X 050512-2S, 3-1H, 6-1P, 400HB, 401HB, 450, 0508-450, 0805-402HB, 0606-403HB, 0707-404HB, 439) R-5



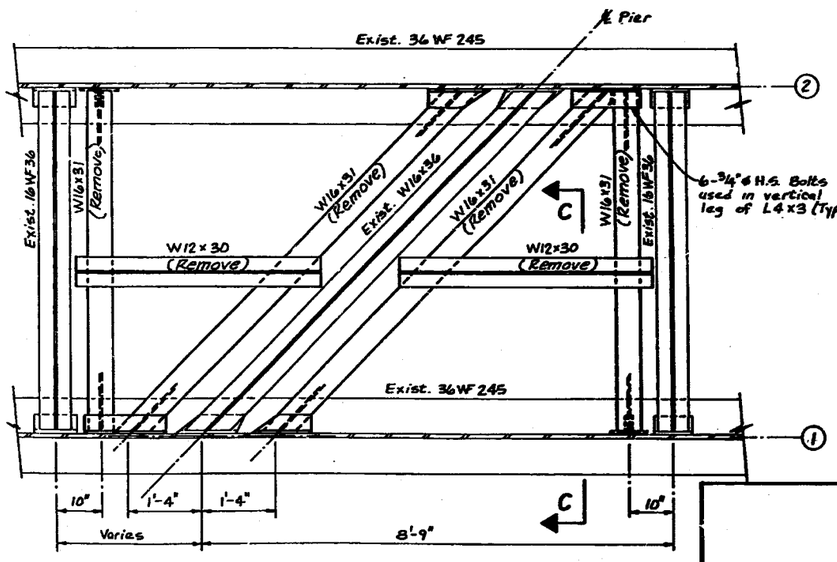
COST OF HIGH STRENGTH BOLTS TO BE INCIDENTAL TO "STRUCTURAL STEEL REMOVAL"

SECTION A
For location see sht. 8



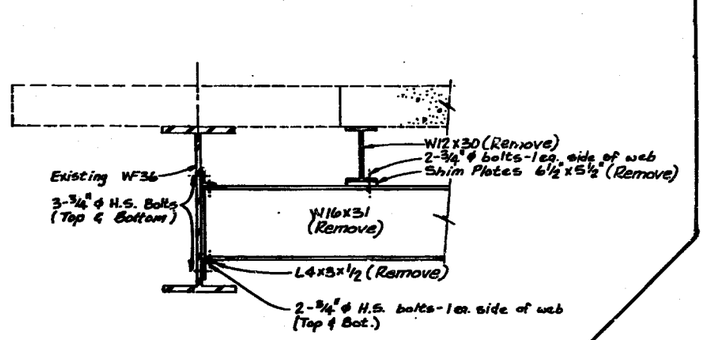
VIEW B-B

TEMPORARY SUPPORT STEEL
(TO BE REMOVED AS NOTED)



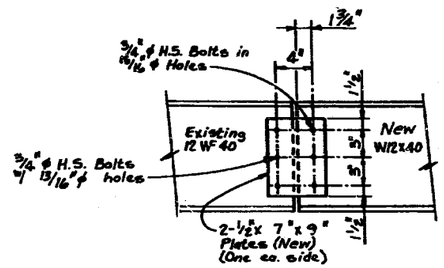
PARTIAL PLAN

TEMPORARY SUPPORT STEEL
(TO BE REMOVED AS NOTED)

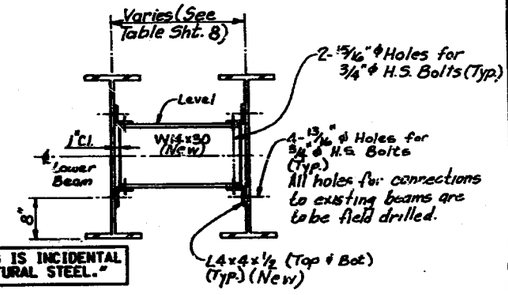


SECTION C-C

PARTIAL PLAN



SECTION E-E
Note: All holes in existing steel to be field drilled.



SECTION D-D

COST OF FIELD DRILLING IS INCIDENTAL TO "ERECTING STRUCTURAL STEEL."

NOTE: Two Hardened Washers shall be required over all oversized holes.

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+66.44

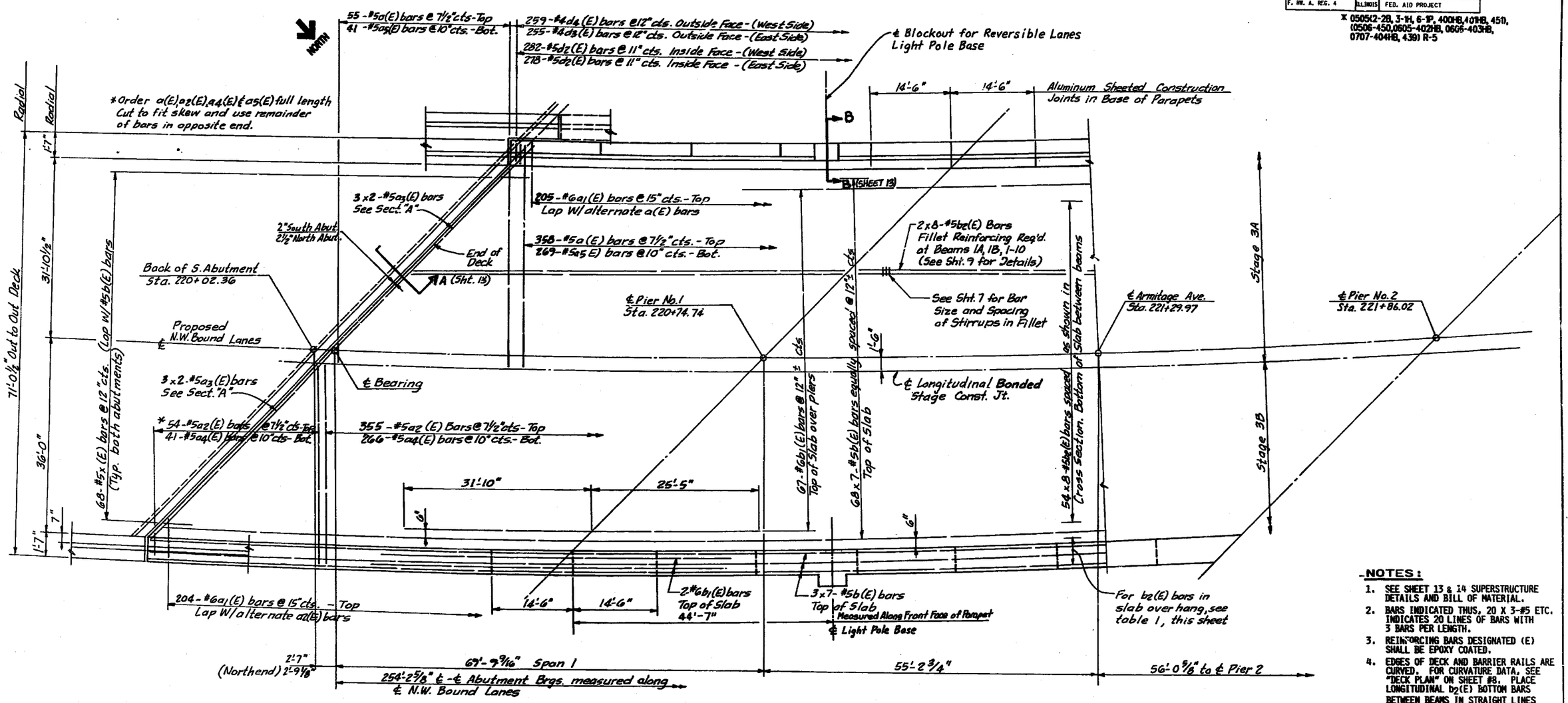
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	274
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11 OF 29 SHEETS

* 0505(2-28, 3-1H, 6-1P, 400HB, 401HB, 450, (0506-450, 0505-402HB, 0606-403HB, 0707-404HB, 439) R-5



PLAN

TABLE 1

	$b_2(E)$ BAR LOCATION **	NUMBER OF LINES	NUMBER OF $b_2(E)$ BARS/LINE
WEST SLAB OVERHANG	0'-2" TO 34'-4"	3	1
	32'-2" TO 98'-4"	2	2
	96'-2" TO 162'-4"	1	2
	160'-2" TO 226'-4"	2	2
	223'-10" TO 258'-0"	3	1
EAST SLAB OVERHANG	0'-2" TO 253'-11"	3	8

** DISTANCE FROM SOUTH END OF SLAB ALONG EDGE OF SLAB.

NOTES:

1. SEE SHEET 13 & 14 SUPERSTRUCTURE DETAILS AND BILL OF MATERIAL.
2. BARS INDICATED THUS, 20 X 3-#5 ETC. INDICATES 20 LINES OF BARS WITH 3 BARS PER LENGTH.
3. REINFORCING BARS DESIGNATED (E) SHALL BE EPOXY COATED.
4. EDGES OF DECK AND BARRIER RAILS ARE CURVED. FOR CURVATURE DATA, SEE "DECK PLAN" ON SHEET #8. PLACE LONGITUDINAL $b_2(E)$ BOTTOM BARS BETWEEN BEAMS IN STRAIGHT LINES PARALLELING BEAMS. PLACE TRANSVERSE BARS a(E), $a_1(E)$, $a_2(E)$ $a_4(E)$ & $a_5(E)$ PERPENDICULAR TO BEAMS. PLACE LONGITUDINAL b(E) TOP BARS ON CURVATURE PARALLELING CENTERLINE OF BRIDGE.
5. FOR ADDITIONAL REINFORCEMENT OF FILLETS NOT SHOWN ON THIS PLAN, SEE SHEET 7.

Size	Min. Bar Lap
#5	1'-8"
#8	3'-8"

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

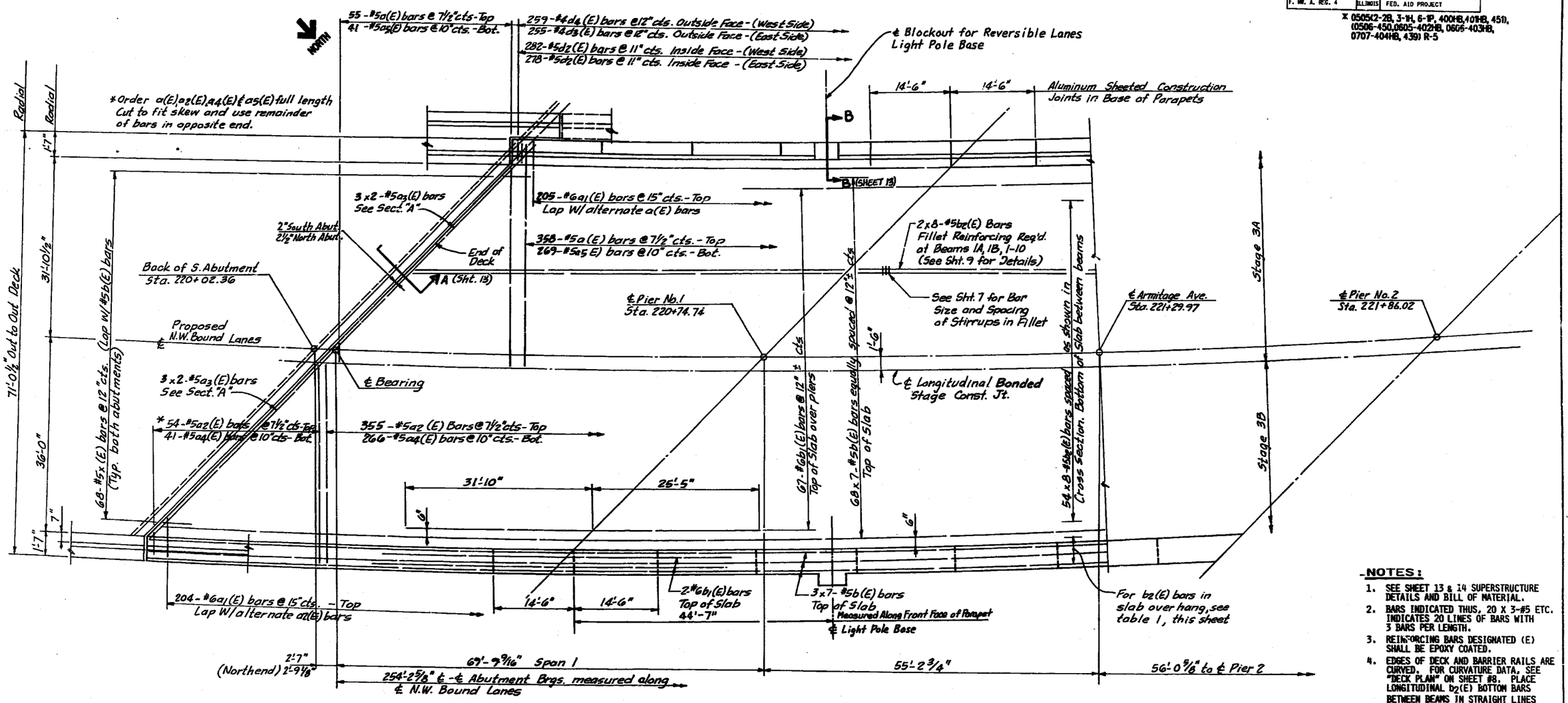
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+86.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	274
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11 of 29 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0605-403HB, 0707-404HB, 439) R-5



PLAN

TABLE 1

	$b_2(E)$ BAR LOCATION **	NUMBER OF LINES	NUMBER OF $b_2(E)$ BARS/LINE
WEST SLAB OVERHANG	0'-2" TO 34'-4"	3	1
	32'-2" TO 98'-4"	2	2
	96'-2" TO 162'-4"	1	2
	160'-2" TO 226'-4"	2	2
	223'-10" TO 258'-0"	3	1
EAST SLAB OVERHANG	0'-2" TO 253'-11"	3	8

** DISTANCE FROM SOUTH END OF SLAB ALONG EDGE OF SLAB.

NOTES:

1. SEE SHEET 13 & 14 SUPERSTRUCTURE DETAILS AND BILL OF MATERIAL.
2. BARS INDICATED THUS, 20 X 3-#5 ETC. INDICATES 20 LINES OF BARS WITH 3 BARS PER LENGTH.
3. REINFORCING BARS DESIGNATED (E) SHALL BE EPOXY COATED.
4. EDGES OF DECK AND BARRIER RAILS ARE CURVED. FOR CURVATURE DATA, SEE "DECK PLAN" ON SHEET #8. PLACE LONGITUDINAL $b_2(E)$ BOTTOM BARS BETWEEN BEAMS IN STRAIGHT LINES PARALLELING BEAMS. PLACE TRANSVERSE BARS a(E), $a_1(E)$, $a_2(E)$ $a_4(E)$ & $a_5(E)$ PERPENDICULAR TO BEAMS. PLACE LONGITUDINAL b(E) TOP BARS ON CURVATURE PARALLELING CENTERLINE OF BRIDGE.
5. FOR ADDITIONAL REINFORCEMENT OF FILLETS NOT SHOWN ON THIS PLAN, SEE SHEET 7.

Size	Min. Bar Lap
#5	1'-8"
#8	3'-8"

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

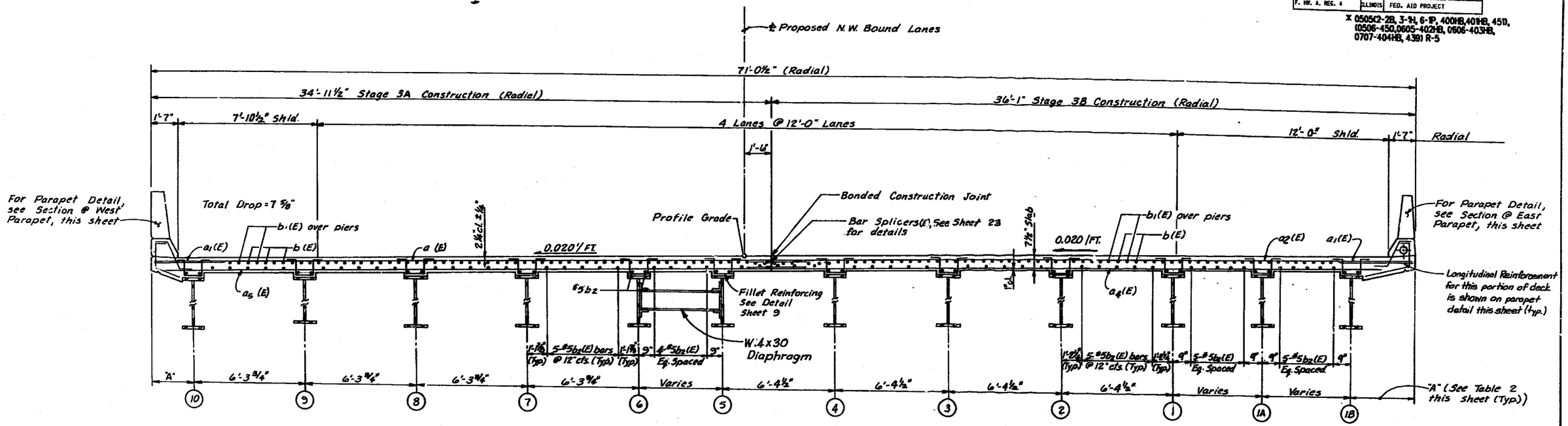
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 221+86.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

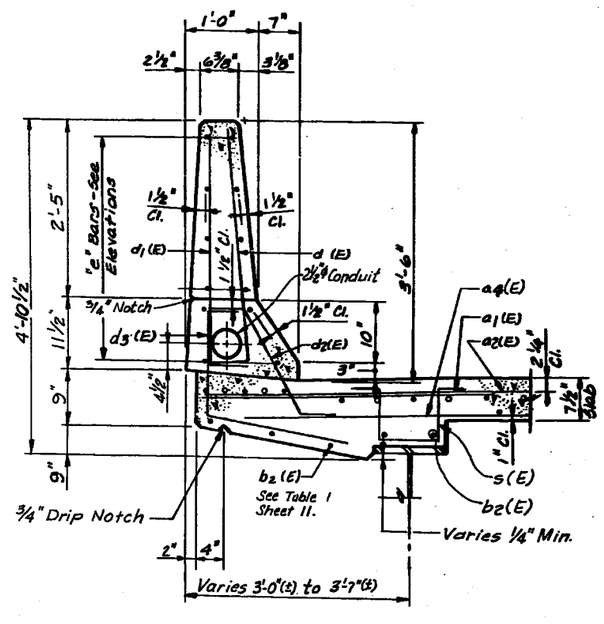
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	275
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 12 of 23 SHEETS

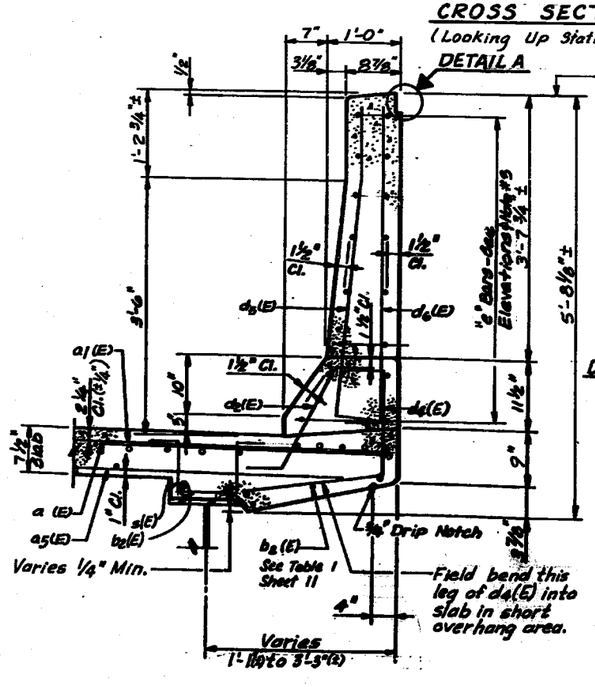
X 05052-2B, 3-94, 6-1P, 400HB, 401HB, 451, 05056-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



CROSS SECTION

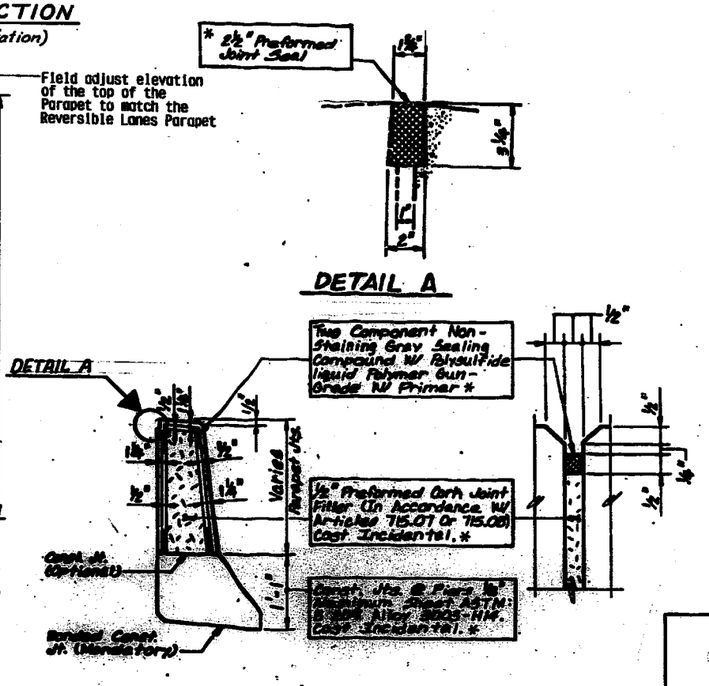


SECTION @ EAST PARAPET



Field adjust elevation of the top of the Parapet to match the Reversible Lanes Parapet

SECTION @ WEST PARAPET



PARAPET JOINT DETAILS

* Cost Incidental to Class X Concrete Superstructure

TABLE 2	"A" Dimension	
	East Side	West Side
℄ Brg. S. Abut.	3'-0"(±)	3'-1½"-(±)
℄ Pier 1	3'-2"(±)	1'-5½"-(±)
℄ Pier 2	3'-2⅛"(±)	1'-5½"-(±)
℄ Brg. N. Abut.	3'-0⅝"(±)	3'-2¾"(±)

Notes:
1. Reinforcing Bars Designated (E) shall be Epoxy coated.
2. See Sheet 24 for Superstructure Details and Bill of Materials.
3. Field cut "e" bars & "b" bars as required for blockout for light pole base located at west parapet.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

Rev.

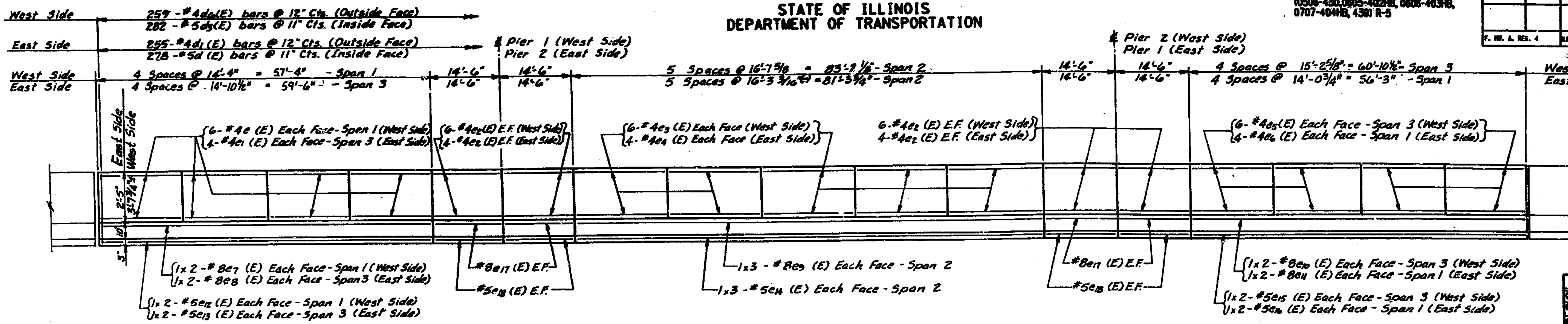
ARTIST REPRODUCTION, INC.

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

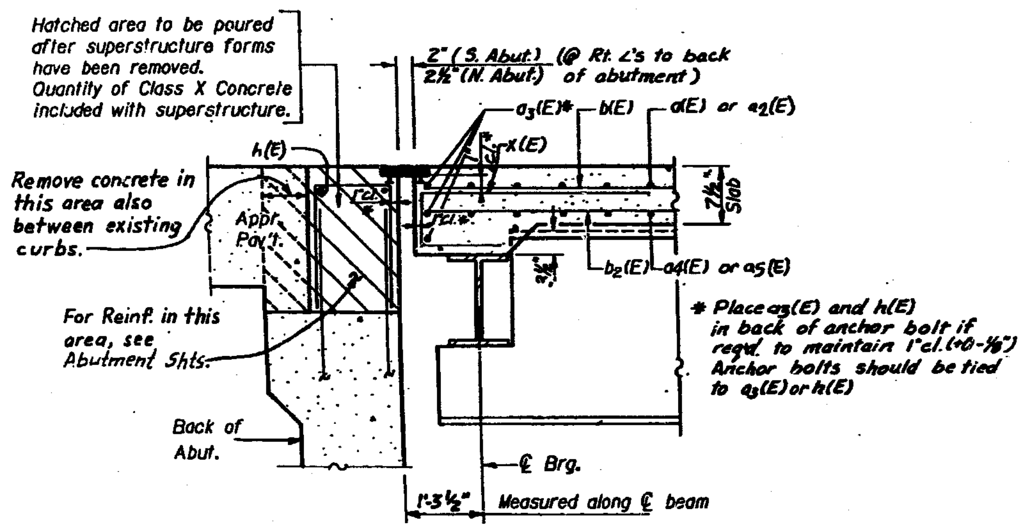
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
			443	276
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 13 of 23 SHEETS

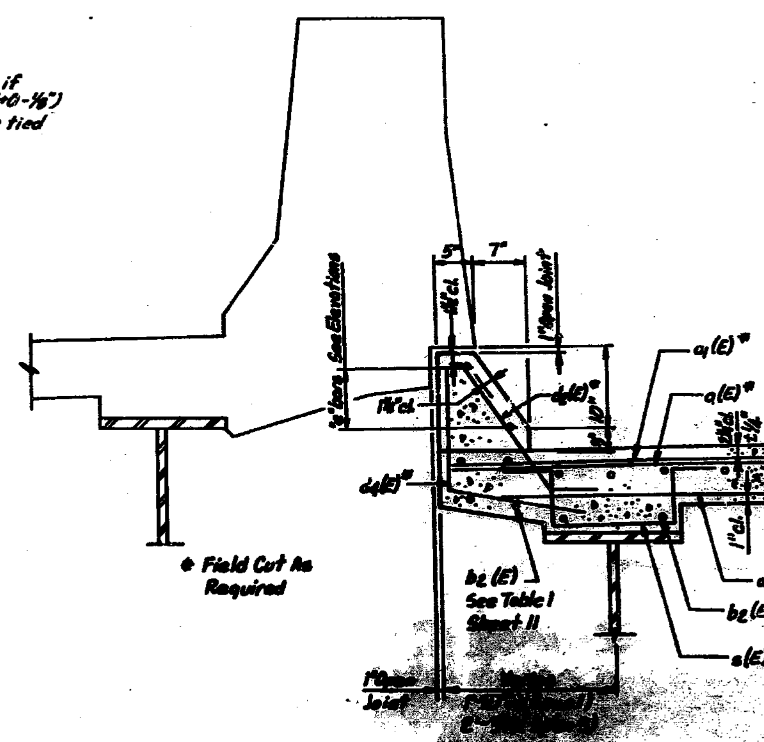


INSIDE ELEVATION OF PARAPET

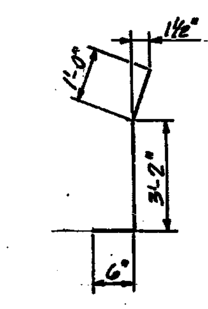
Min. Bar Laps:
#5 = 1'-8"
#8 = 3'-8"



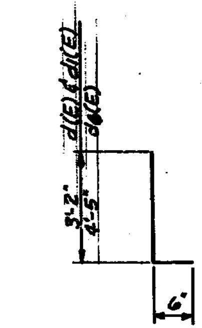
SECTION A-A
For Location, see Sht. 11



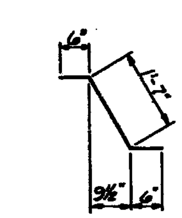
SECTION B-B
For Location, see Sheet II



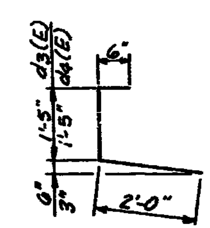
BAR d5(E)



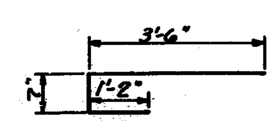
BARS d(E), d1(E) & d6(E)



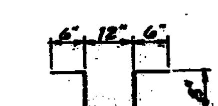
BAR d2(E)



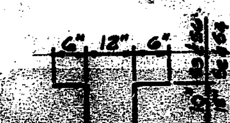
BAR d3(E) & d4(E)



BAR x (E)



BAR s(E) & s1(E)



NOTE:
All bar dimensions are out-to-out.
Reinforcing bars designated (E) to be epoxy coated.

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	413	#5	34'-3"	——
a1(E)	409	#6	4'-0"	——
a2(E)	409	#5	35'-9"	——
a3(E)	24	#5	26'-1"	——
a4(E)	307	#5	34'-9"	——
a5(E)	310	#5	33'-3"	——
b(E)	518	#5	38'-9'	——
b1(E)	142	#6	57'-3"	——
b2(E)	682	#5	34'-2"	——
d(E)	278	#5	3'-8"	L
d1(E)	255	#4	3'-8"	┘
d2(E)	560	#5	2'-7"	⌐
d3(E)	255	#4	3'-11"	⊏
d4(E)	259	#4	3'-11"	⊏
d5(E)	282	#5	4'-8"	L
d6(E)	259	#4	4'-11"	L
e(E)	48	#4	14'-0"	——
e1(E)	32	#4	14'-6"	——
e2(E)	80	#4	14'-2"	——
e3(E)	60	#4	16'-3"	——
e4(E)	40	#4	15'-11"	——
e5(E)	48	#4	14'-10"	——
e6(E)	32	#4	13'-8"	——
e7(E)	4	#8	30'-9"	——
e8(E)	4	#8	31'-10"	——
e9(E)	12	#8	30'-8"	——
e10(E)	4	#8	32'-6"	——
e11(E)	4	#8	30'-2"	——
e12(E)	4	#5	29'-7"	——
e13(E)	4	#5	30'-8"	——
e14(E)	12	#5	29'-1"	——
e15(E)	4	#5	31'-4"	——
e16(E)	4	#5	29'-0"	——
e17(E)	16	#8	14'-2"	——
e18(E)	16	#5	14'-2"	——
s(E)	2123	#5	3'-4"	⊔
s1(E)	715	#4	3'-4"	⊔
s2(E)	827	#5	4'-0"	⊔
s3(E)	684	#5	3'-8"	⊔
s5(E)	253	#4	4'-0"	⊔
s6(E)	200	#4	3'-8"	⊔
x(E)	136	#5	5'-3"	⊏
REINFORCEMENT BARS (EPOXY COATED)			LBS.	143,580
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	558.8

SUPERSTRUCTURE DETAILS
SECTION
F.A.I. ROUTE [illegible] AVENUE
COOK COUNTY
STATION [illegible]

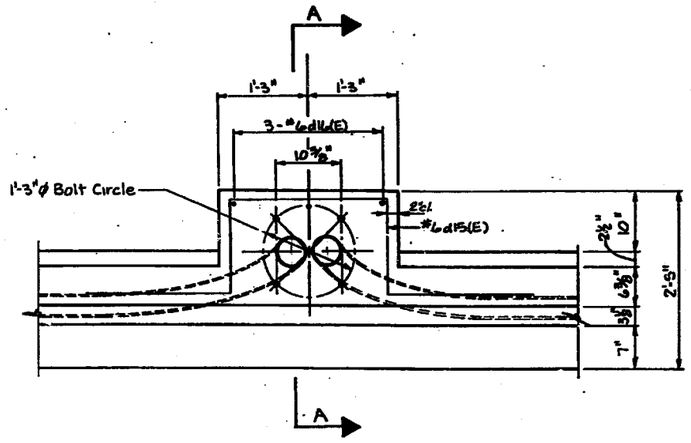
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

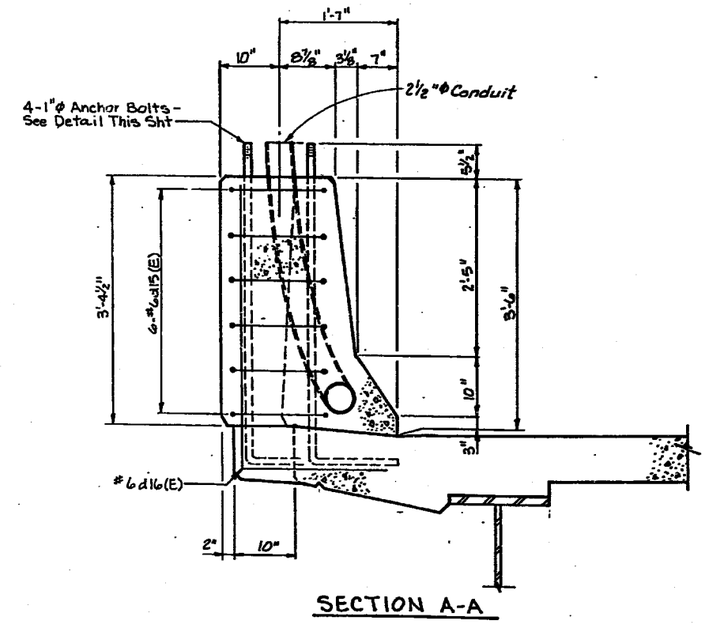
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	X		443	277
F. AI. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14 of 25 SHEETS

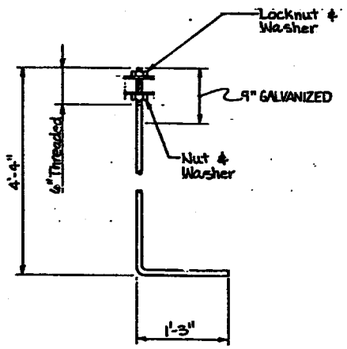
X 0505(2-2B, 3-9), 6-P, 400HB, 401HB, 450, 0505-450, 0605-402HB, 0606-403HB, 0707-404HB, 439 R-5



PLAN

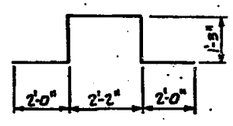


SECTION A-A

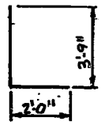


1"ϕ ANCHOR BOLT DETAIL: (ASTM A687)

COST OF 1" ϕ ANCHOR BOLTS TO BE INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE



BAR d15 (E)



BAR d16 (E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d15(E)	6	#6	8'-8"	
d16(E)	3	#6	5'-9	
REINFORCING BARS (EPOXY COATED)			LBS.	100
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	0.3

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

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PARAPET MOUNTED LIGHT POLES

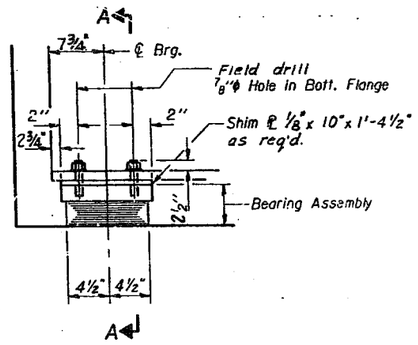
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+56.44

215

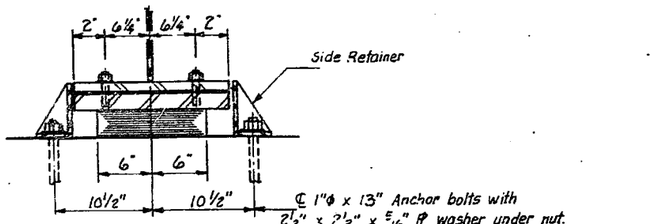
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

					SHEET NO. 15 OF 23 SHEETS
				443	278

X-0505(2-29, 3-1H, 5-1P, 400HB-401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



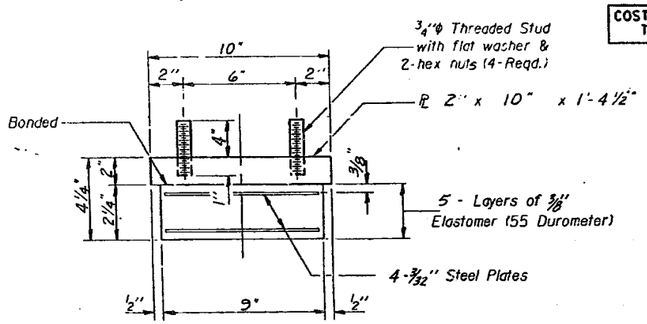
ELEVATION AT SOUTH ABUT.



SECTION A-A

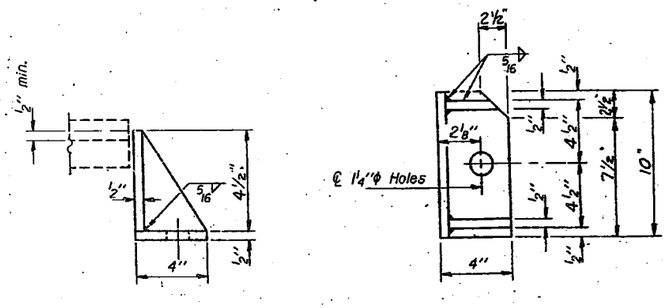
TYPE I ELASTOMERIC EXP. BRG.

COST OF FIELD DRILLING IS INCIDENTAL TO "ERECTING STRUCTURAL STEEL."



BEARING ASSEMBLY
(6 Req'd.)

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



SIDE RETAINER (12 Req'd.)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Location	Item	Unit	Total
Sheet 3, 2-4, 7-9	Install Elastomeric Bearing Assembly, Type I	Each	6

[redacted]

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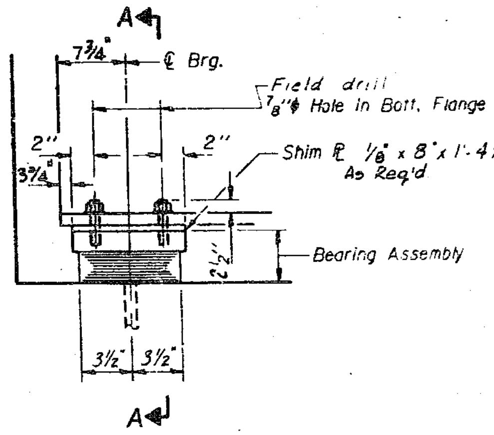
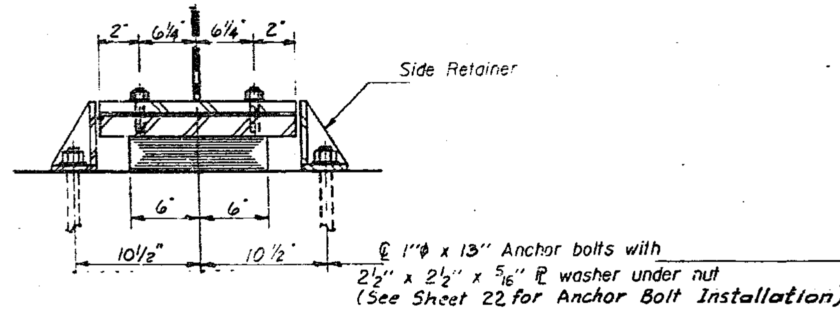
I-2-EI 12-1-83

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

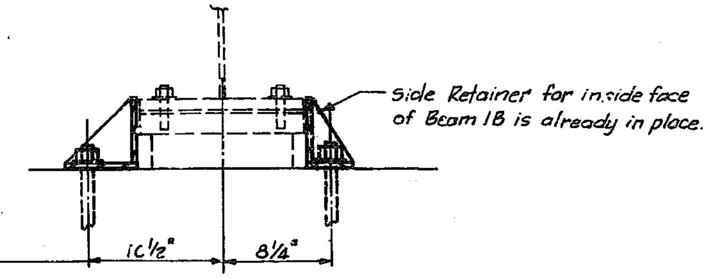
E 0505(2-2B, 3-21, 6-1P, 400HB, 401HB, 439), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



ELEVATION AT SOUTH ABUT.



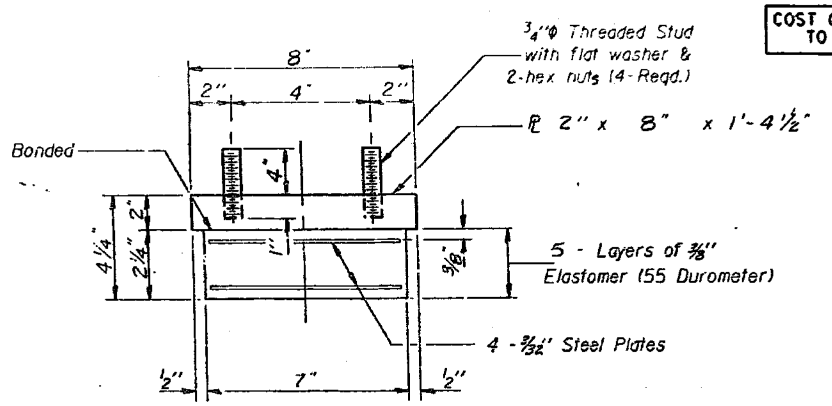
SECTION A-A
Beams 1,5,6 & 10



SECTION A-A
Beams 1A & 1B

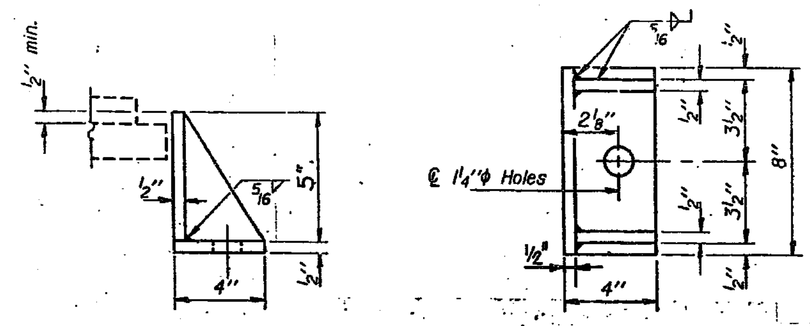
TYPE I ELASTOMERIC EXP. BRG.

COST OF FIELD DRILLING IS INCIDENTAL TO "ERECTING STRUCTURAL STEEL."

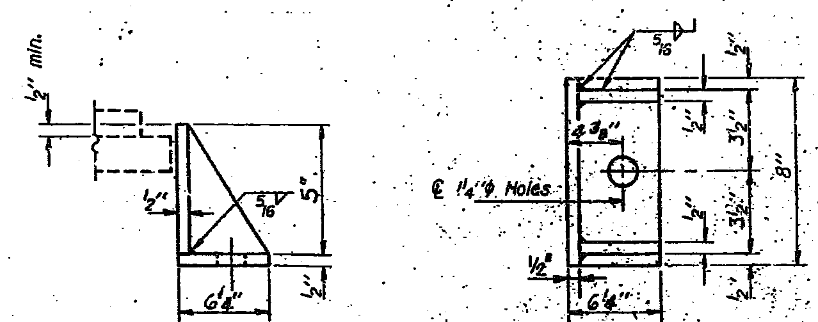


BEARING ASSEMBLY
(4 Req'd.)

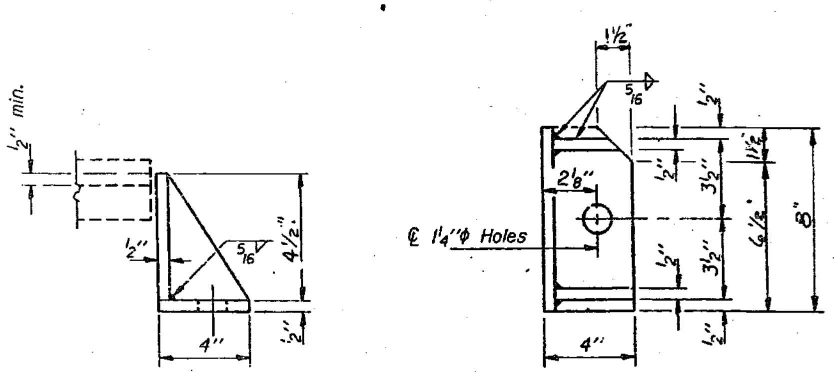
Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER (1 REQ'D) (Inside Face of Beam 1A)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SIDE RETAINER (2 REQ'D) (Outside Face of Beam 1A & 1B)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SIDE RETAINER (8 Req'd.) (Each Side of Beams 1,5,6 & 10)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Location	Item	Unit	Total
Beam 1,5,6,10	Install Elastomeric Bearing Assembly-Type I	Each	4

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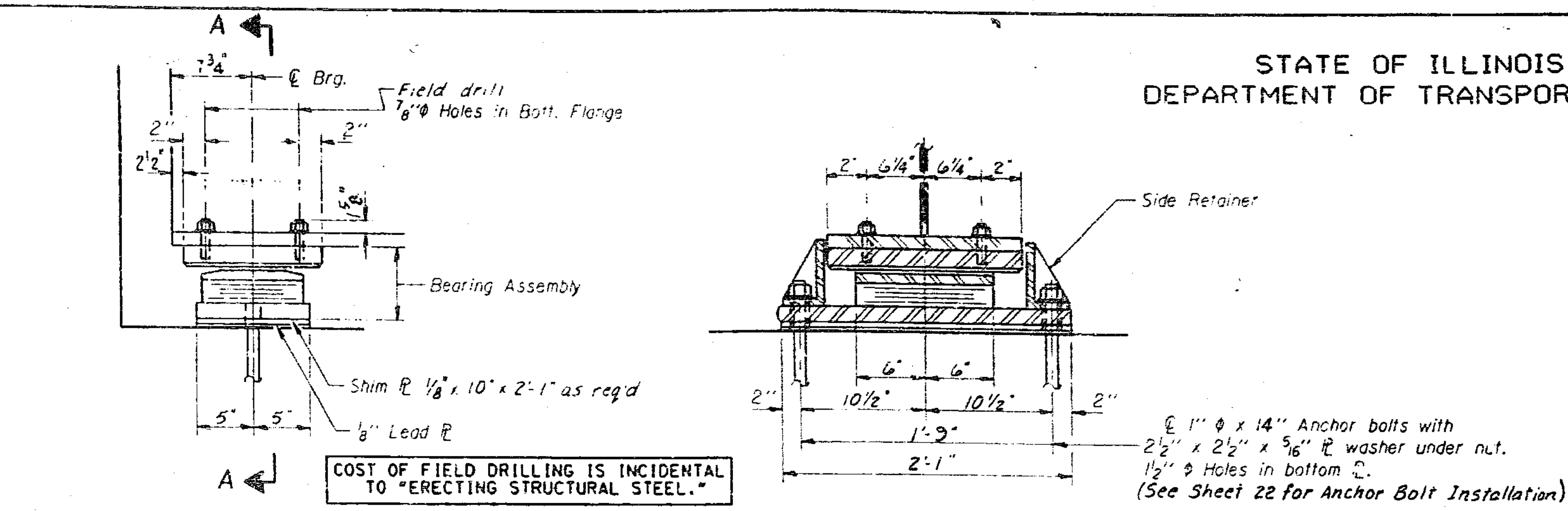
I-2-E1 12-1-83

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	S		443	280

SHEET NO. 7 of 23 SHEETS

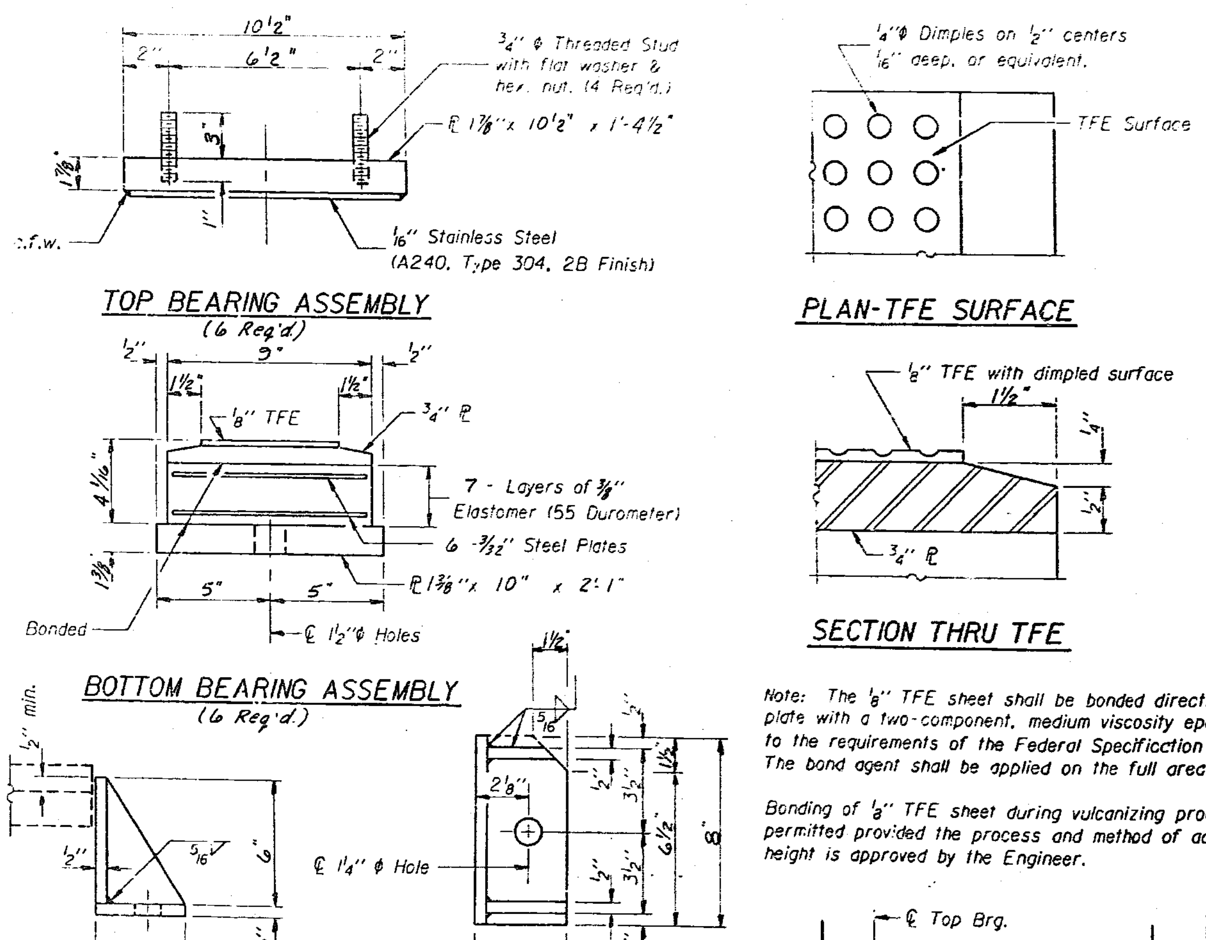
0505(2-26, J-1R, 8-1P, 400HB, 401HB, 450, (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



ELEVATION AT NORTH ABUT.

SECTION A-A

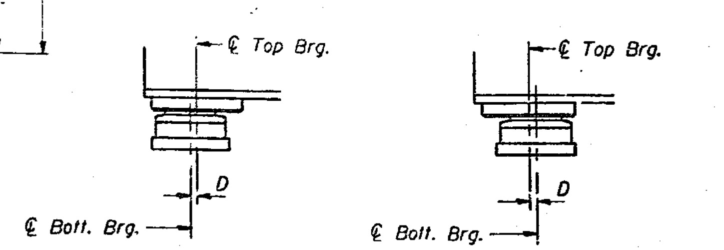
TYPE II TFE ELASTOMERIC EXP. BRG.



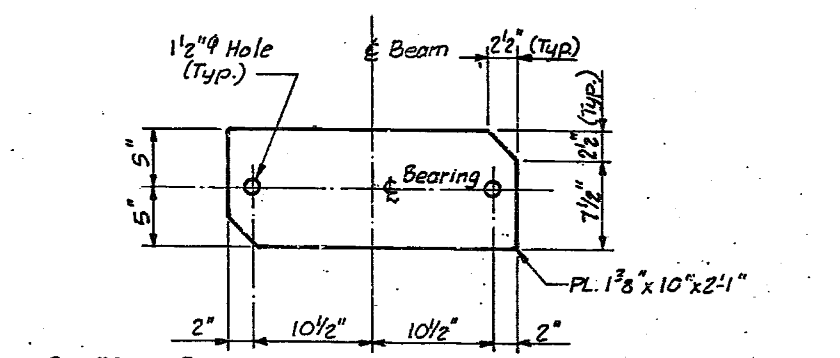
SIDE RETAINER (12 Req'd.)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Note: The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.
D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



BOTTOM BEARING PLATE DETAIL AT NORTH ABUTMENT

BILL OF MATERIAL

Location	Item	Unit	Total
Beams 2-4, 7-9	Install Elastomeric Bearing Assembly Type II	Each	6

STANLEY CONSULTANTS

I-2-E2 12-1-83

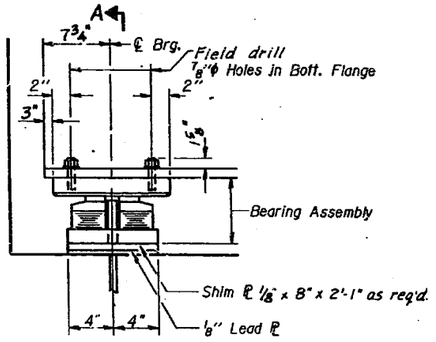
BEARING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 821+65.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

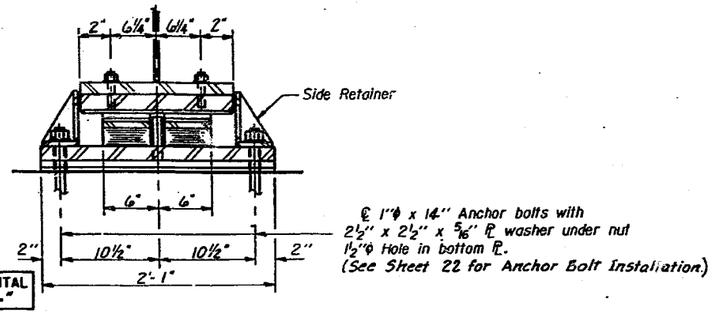
					SHEET NO. 18
S.N.A.	X		443	281	OF 13 SHEETS
F.A.					
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT-			

* 8505(2-2S, 3-1H, 6-1P, 400HB,401HB, 451), 0505-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



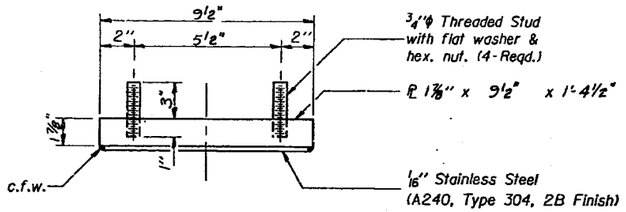
COST OF FIELD DRILLING IS INCIDENTAL TO "ERECTING STRUCTURAL STEEL."

ELEVATION AT NORTH ABUT.

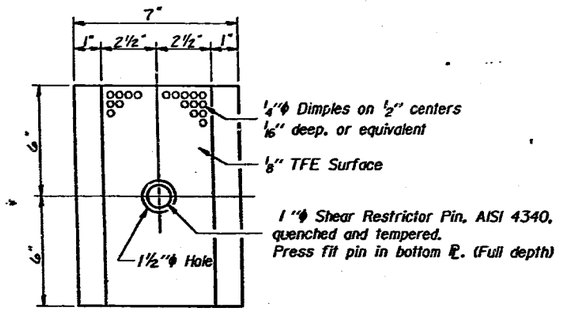


SECTION A-A

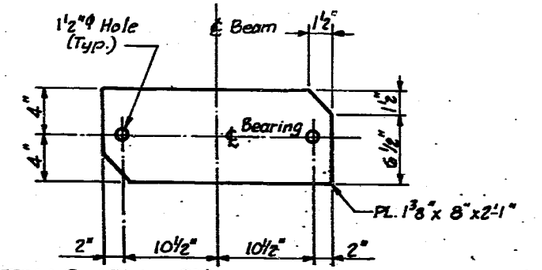
TYPE III ELASTOMERIC EXP. BRG.



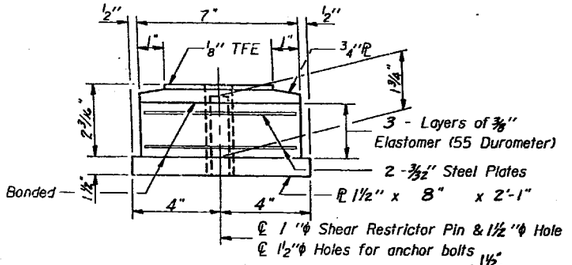
TOP BEARING ASSEMBLY
(4 Req'd.)



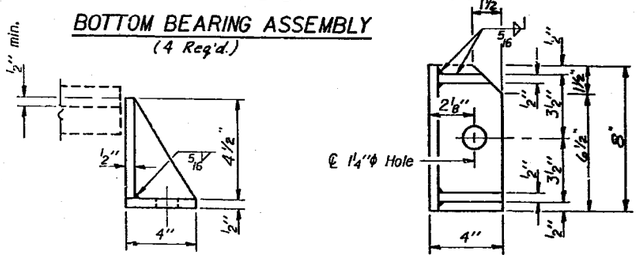
PLAN-TFE ELASTOMERIC BRG.



BOTTOM BEARING PLATE DETAIL AT NORTH ABUTMENT

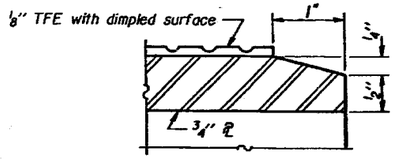


BOTTOM BEARING ASSEMBLY
(4 Req'd.)



SIDE RETAINER (8-Req'd.)

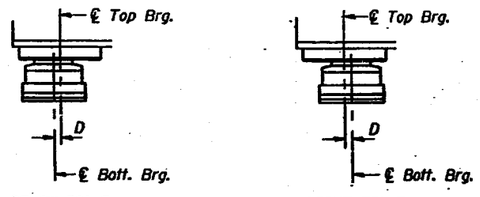
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SECTION THRU TFE

Note: The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F.

BILL OF MATERIAL

Location	Item	Unit	Total
Beams 1, 5, 6, 10	Install Elastomeric Bearing Assembly Type III	Each	4

BEARING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

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I-2-E3 12-1-83

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

INSTALLATION NOTES

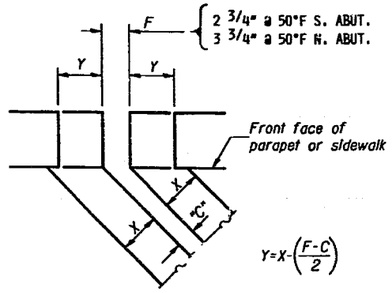
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

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

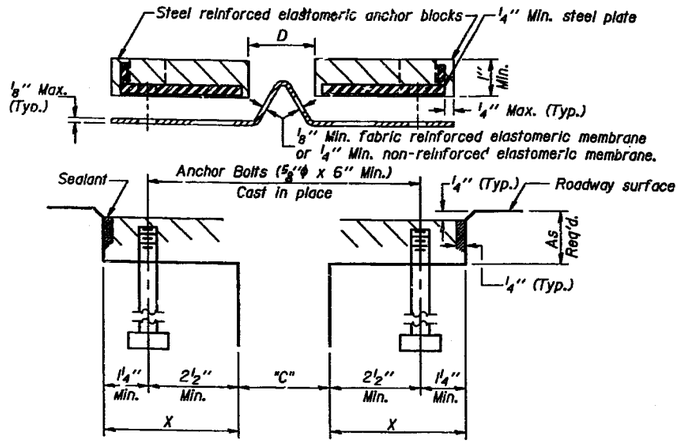
SKEW LIMITATIONS

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.

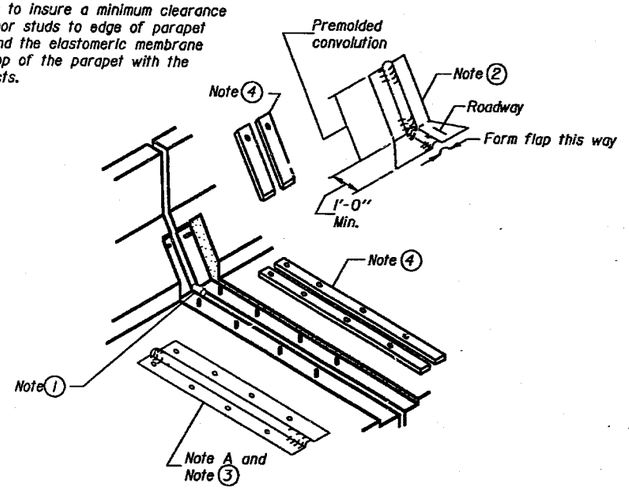
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

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.

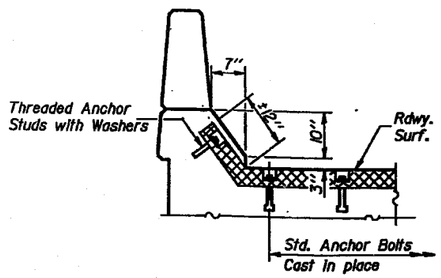
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

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.

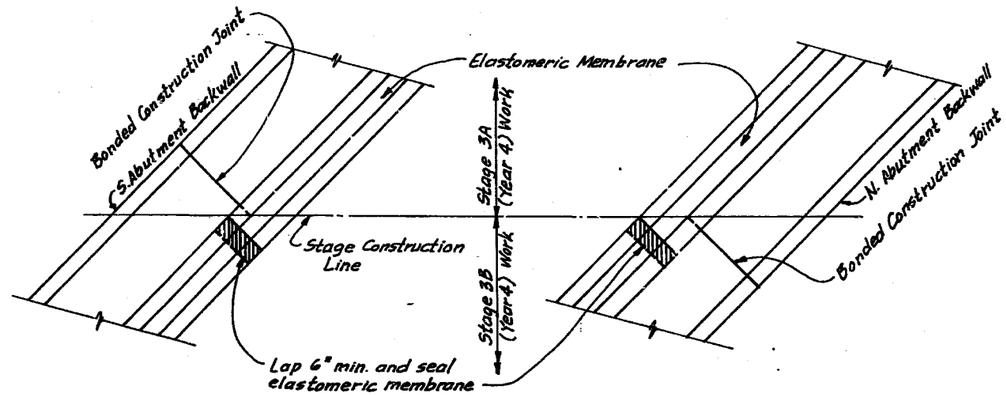
All anchor bolts for expansion joint shall be cast-in-place and tied to transverse reinforcing bars in deck.



AT PARAPET



AT PARAPET



ELASTOMERIC MEMBRANE SPLICE LOCATIONS

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING/ARCHITECTURE/PLANNING AND MANAGEMENT

EJ-CS 12-31-87

EXPANSION JOINT DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

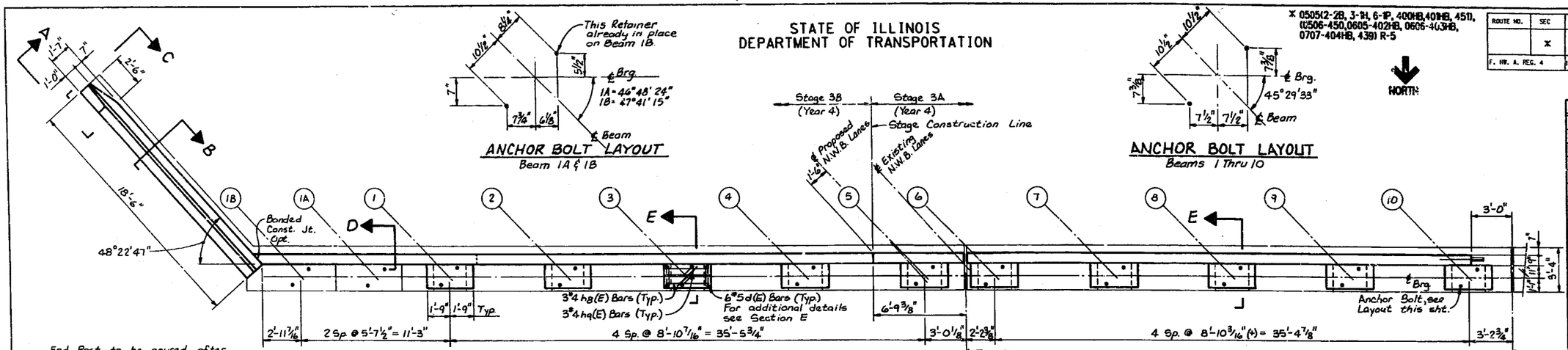
* 0505(2-2B, 3-3H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

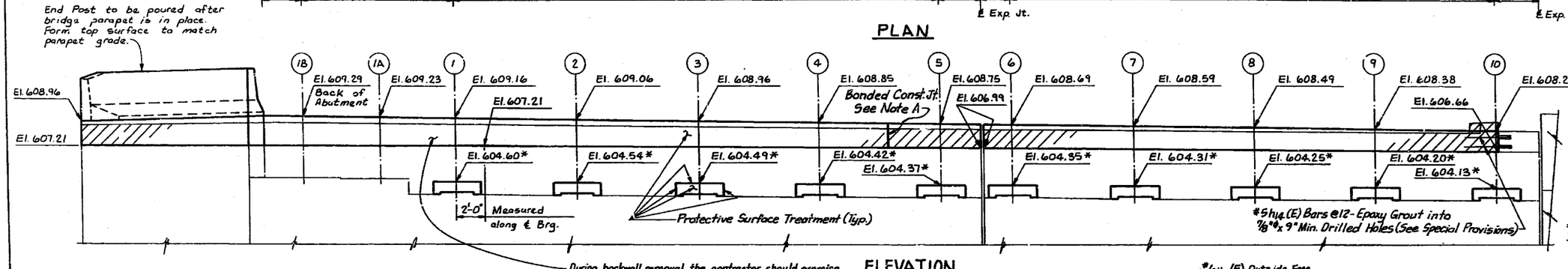
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	283
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

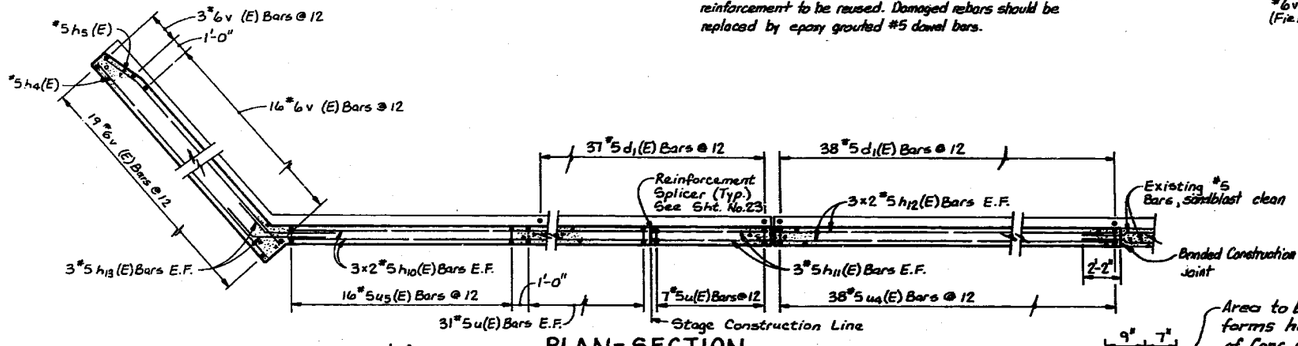
SHEET NO. 20 of 23 SHEETS

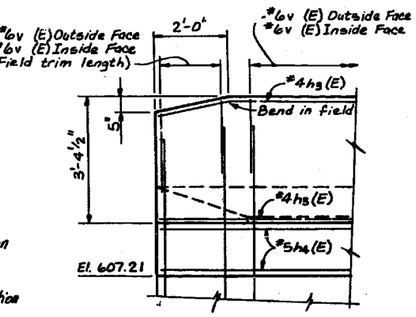
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	60	#5	2'-3"	
d_1(E)	75	#5	2'-0"	
h_3(E)	8	#4	18'-2"	
h_4(E)	3	#5	18'-2"	
h_5(E)	3	#5	18'-3"	
h_8(E)	30	#4	3'-2"	
h_9(E)	30	#4	1'-6"	
h_{10}(E)	12	#5	23'-11"	
h_{11}(E)	6	#5	6'-6"	
h_{12}(E)	12	#5	19'-10"	
h_{13}(E)	6	#5	6'-2"	
h_{14}(E)	2	#5	3'-3"	
u(E)	38	#5	3'-7"	
u_4(E)	38	#5	3'-1"	
u_5(E)	16	#5	3'-9"	
v (E)	38	#6	2'-0"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	1680
CLASS X CONCRETE			CU.YDS.	6.4
CONCRETE REMOVAL			CU.YDS.	9.4



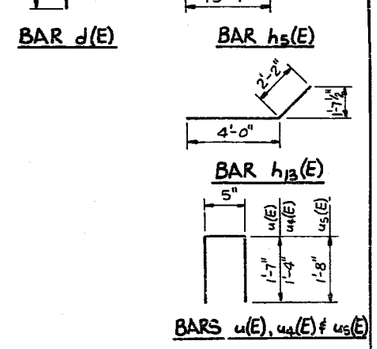


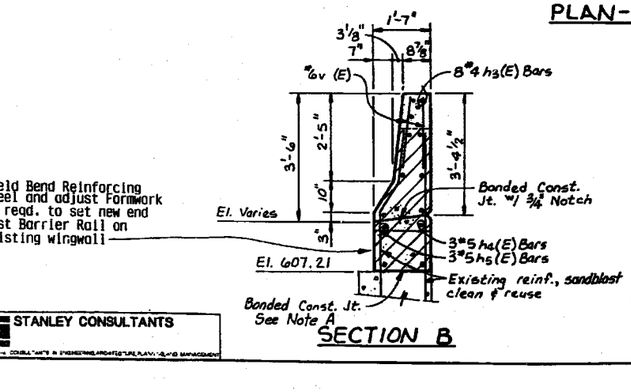


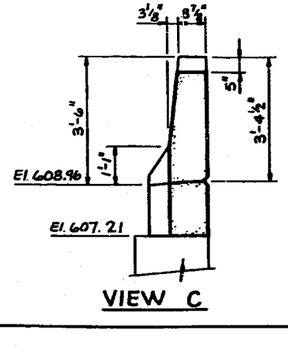


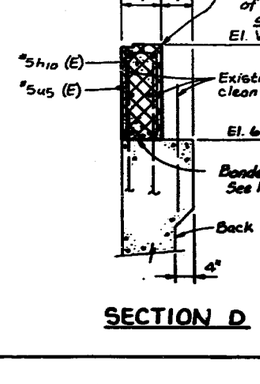
* Elevation of Bearing Seat to be verified in field before placing concrete. Beam elevation to remain at existing elevation after new bearings are installed.

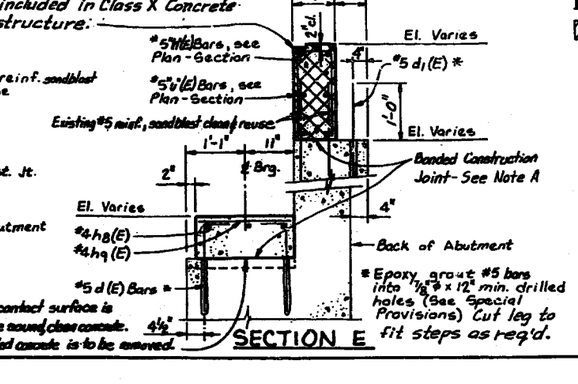
NOTE A: Bonded Const. Jt. in accordance with Article 504.13(a)(2) of the Standard Specs.











NOTES:

▨ INDICATES CONCRETE REMOVAL

(E) INDICATES EPOXY COATED REINFORCEMENT BARS.

ALL EDGES SHALL HAVE STANDARD ¾" CHAMFER EXCEPT AS NOTED.

SPACE REINFORCEMENT IN BEAM SEAT TO MISS ANCHOR BOLTS.

ALL BAR DIMENSIONS ARE OUT TO OUT.

MIN. BAR LAP #5 = 2'-2"

SOUTH ABUTMENT - EAST END

SECTION

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

COOK COUNTY

STATION 421+55.44

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

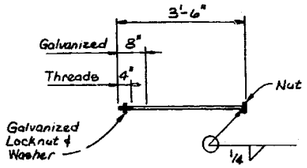
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		443	28-A
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 21 of 23 SHEETS

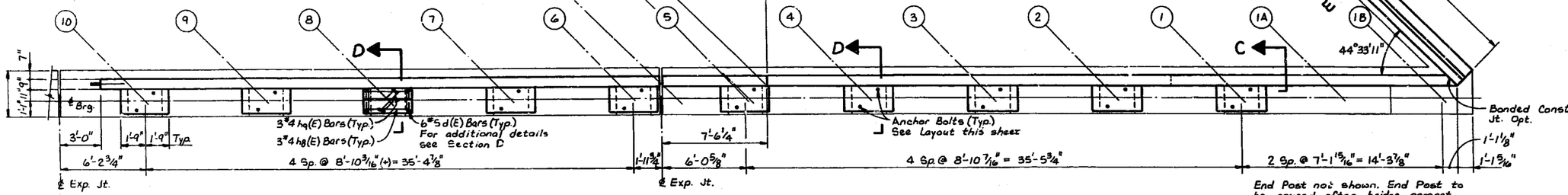
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), (0506-450, 0605-402HB, 0606-403HB, 0707-404HB, 439) R-5

BILL OF MATERIAL

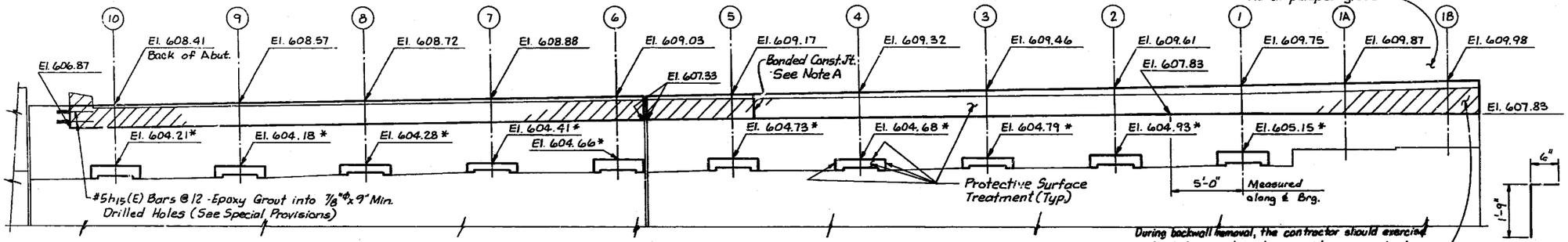
BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	60	#5	2'-3"	
d_1(E)	78	#5	2'-0"	
h(E)	12	#5	25'-7"	
h_1(E)	6	#5	7'-3"	
h_2(E)	6	#5	40'-4"	
h_3(E)	8	#4	18'-2"	
h_4(E)	3	#5	18'-2"	
h_5(E)	3	#5	18'-3"	
h_6(E)	3	#5	4'-4"	
h_7(E)	3	#5	5'-8"	
h_8(E)	30	#4	3'-2"	
h_9(E)	30	#4	1'-6"	
h_{15}(E)	2	#5	3'-3"	
u(E)	8	#5	3'-7"	
u_1(E)	42	#5	3'-3"	
u_2(E)	41	#5	2'-9"	
u_3(E)	8	#5	3'-11"	
v (E)	38	#6	2'-0"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	1700
CLASS X CONCRETE			CU.YDS.	6.3
CONCRETE REMOVAL			CU.YDS.	9.8



1" ϕ ANCHOR BOLT



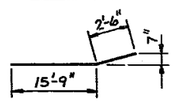
PLAN



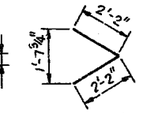
ELEVATION

During backwall removal, the contractor should exercise methods to prevent any damage, nicking or gouging to existing reinforcement to be reused. Damaged rebars should be replaced by epoxy grouted #5 dowel bars.

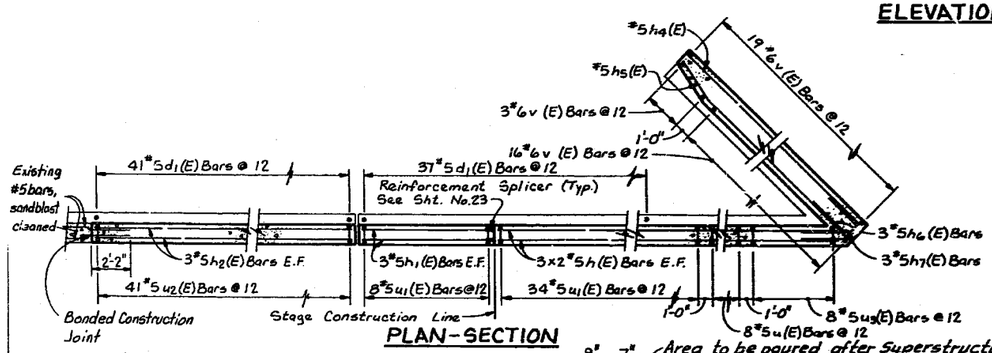
BAR d(E)



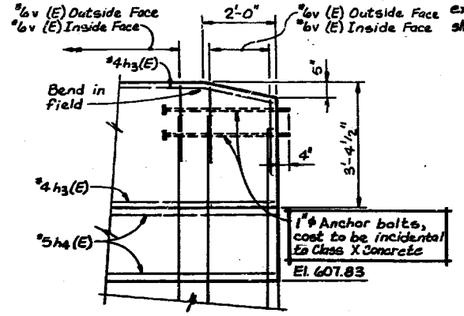
BAR h_5(E)



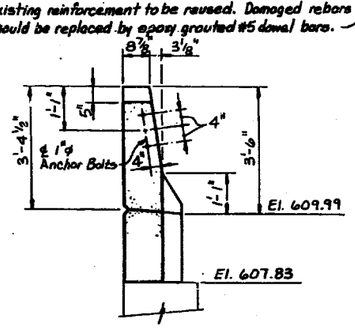
BAR h_6(E)



PLAN-SECTION



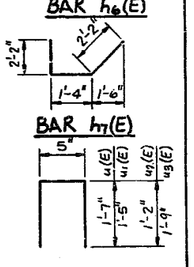
VIEW A



VIEW B

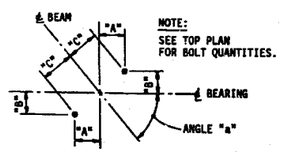
* Elevation of Bearing Seat to be verified in field before placing concrete. Beam elevation to remain at existing elevation after new bearings are installed.

NOTE A: Bonded Const. Jt. in accordance with Article 504.13(a)(2) of the Standard Specs.



BAR h_7(E)

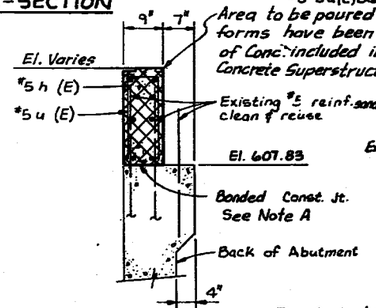
BARS u(E)-u_3(E)



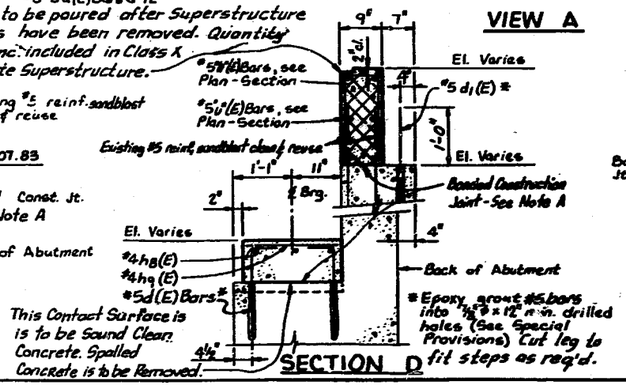
NOTE: SEE TOP PLAN FOR BOLT QUANTITIES.

ANCHOR BOLT LAYOUT

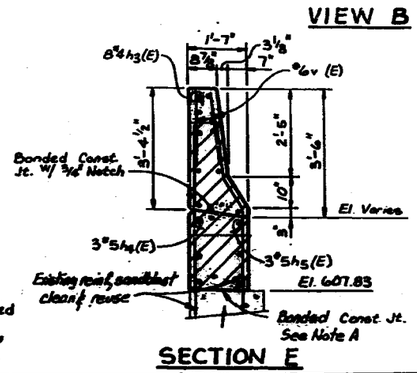
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
1-5	45°57'02"	7 9/16"	7 5/16"	10 1/2"
6-10	45°29'33"	7 1/2"	7 3/8"	10 1/2"



SECTION C



SECTION D



SECTION E

NOTES:

▨ INDICATES CONCRETE REMOVAL

(E) INDICATES EPOXY COATED REINFORCEMENT BARS.

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

SPACE REINFORCEMENT IN BEAM SEAT TO MISS ANCHOR BOLTS.

ALL BAR DIMENSIONS ARE OUT TO OUT.

MIN. BAR LAP #5 = 2'-2"

NORTH ABUTMENT - EAST END

SECTION

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

COOK COUNTY

STATION 421+55.44

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

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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.

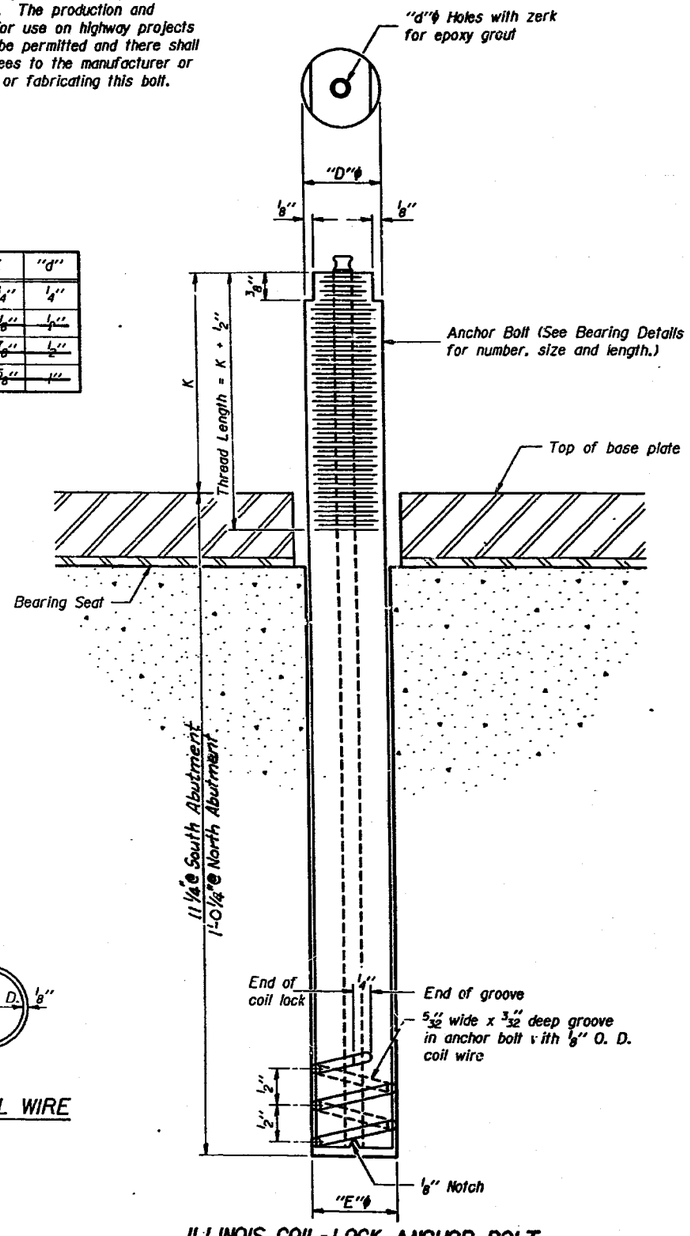
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	X		443	285

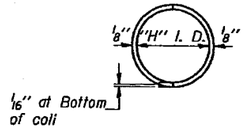
SHEET NO. 22 of 13 SHEETS

X 05052-2B, 3-IH, 6-IP, 400HB,401HB, 451I, 0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439I R-5

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
~~1 1/2"~~	~~1 5/8"~~	~~15/16"~~	~~2 1/8"~~	~~1/2"~~
~~2"~~	~~2 1/8"~~	~~1 3/16"~~	~~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 "Erecting Structural Steel."

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ABB-1 12-1-83

ANCHOR BOLT DETAILS

SECTION

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

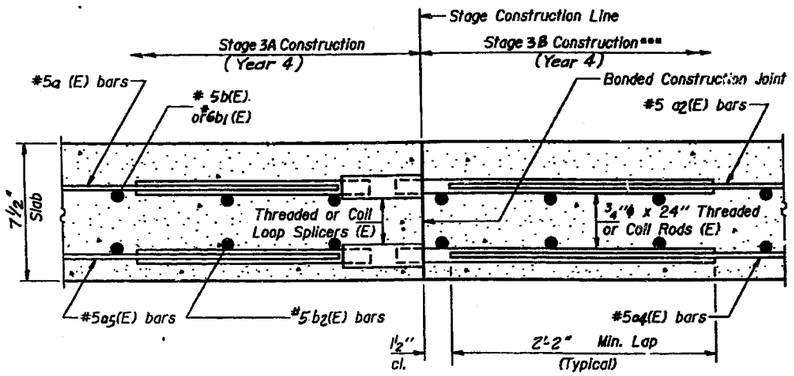
COOK COUNTY

STATION 421+58.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

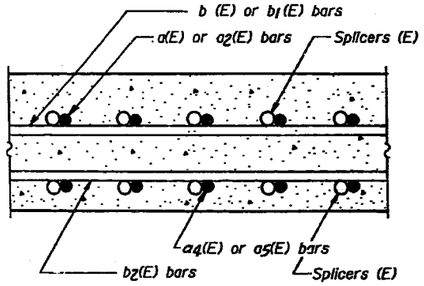
				SHEET NO. 23
	X		443	286 of 18 SHEETS

X 0505(2-2B, 3-1H, 6-1P, 400HB,401HB, 450, 0506-450,0605-402HB, 0606-403HB, 0707-404HB, 439) R-5



*** Provide double ties for Stage 3B Construction to account for live load vibrations.

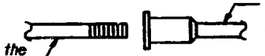
SECTION THRU SLAB



SECTION A-A

SPLICER DETAILS
(No. Req'd. 815)

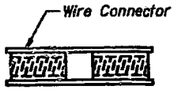
The diameter of this part of Splicer is the same as the diameter of the bar spliced.



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

ROLLED THREAD DOWEL BAR (E)

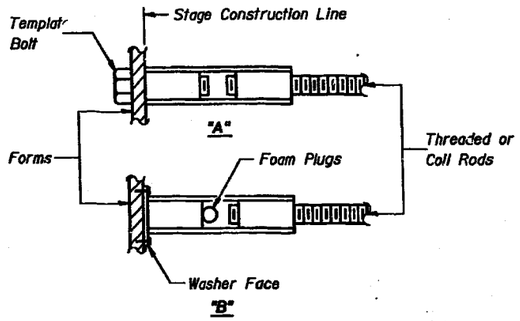
** ONE PIECE (E)



WELDED SECTIONS (E)

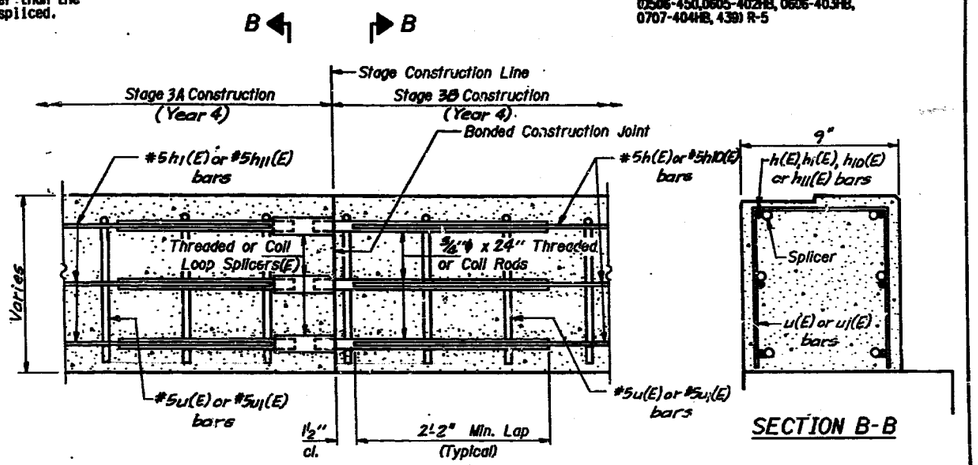
SPLICER ALTERNATIVES

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



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.



SECTION THRU ABUTMENTS

SECTION B-B

SPLICER DETAILS
(No. Req'd. 12)

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 x fy x A_f

② Minimum *Pull-out Strength (Tension in kips) = 1.25 x fs_{allow} x A_f

Where fy = Yield strength of lapped reinforcement bars in ksi.

fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

A_f = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

#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

Bar splicers shall be in accordance with Section 512 of the Standard Specifications, except as noted, and will be paid for at the contract unit price each for "BAR SPLICERS."

STANLEY CONSULTANTS

BSD-1 12-31-87

STAGE CONSTRUCTION BAR SPLICER

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+68.44