2948-II-6 (WB)

Sheet S-1 of S-65

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

*SECTION 99 (5,5-1;5VB) R-I & 99-4-1VB-1-BR-1

Note:
Conduit to be Provided for Future Lighting

Limits of Protective Shield During Deck Removal

Prop. W33 Curved Rolled Beams

Limits of Protective Shield During Deck Removal

Traffic Barrier Terminal (Typ.)

S.W. Abut. El. 636.5±
Existing 10 BP 42 Piles
Proposed Steel Piles
Existing 4" Concrete Slopewall
Proposed Drilled Shaft (Typ. at Piers)
Exp. 2:1 at Rt. L's
23'-10¼" Min. Vert. Cl.
Flx.
23'-2⅜" Min. Vert. Cl.
Top of Rails
26'-3¼" Clr.
Exp.
Flx.
Existing 6" Concrete Slopewall
Design H.W.E. 611.64 (50 Years)
3'-0"
Stream Bed El. 601.8±
Flx.
Exp.
2:1 at Rt. L's
Existing 6" Concrete Slopewall
N.W. Abut. El. 636.9±
Existing 10 BP 42 Piles
Proposed Steel Piles

Bott. Ftg. Pier 1W El. 611.0± or El. 607.0±
Bott. Ftg. Pier 2W El. 602.0±
Rock Line
Bott. Ftg. Pier 3W El. 605.5±
Bott. Ftg. Pier 4W El. 611.0±
Bott. Ftg. Pier 5W El. 593.0±
Bott. Ftg. Pier 6W El. 595.7±
Bott. Ftg. Pier 7W El. 595.8±
Bott. Ftg. Pier 8W El. 597.4±
Rock Line

US ROUTE 30
METRA/ROCK ISLAND DISTRICT LINE
HICKORY CREEK

ELEVATION

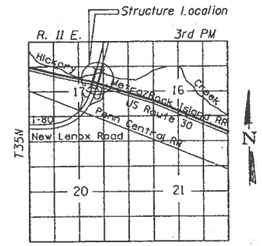
BENCH MARK:
Existing Benchmark removed and reploced during Construction of Eastbound FAI-80 Bridge.

Note:
No deck drains will be permitted in the span over tracks or within 10' of cross arms of a railroad pole line.

HORIZONTAL CURVE DATA

	FAI-80	CURVE DA-1
PI Sta.=	660+40.33	22+28.13
Δ=	76° 04'53"	10°19'12"
D=	1°30'00"	1°31'21"
R=	3819.72'	3763.0'
T=	2988.66'	339.81'
L=	5072.09'	677.78'
E=	1030.27'	15.31'
S.E.=	0.037'/'	■0.037'/'
PC Sta.=	630+51.67	18+88.32
PT Sta.=	681+23.76	25+66.10

■ Superelevation Constant on Structure



LOCATION SKETCH

EXISTING STRUCTURE
Sta. 673+37.46 FAI-80, Built under Section 99-4-1VB-1 in 1964. Structure No.: 099-0069 (Eastbound) & 099-0068 (Westbound).
Superstructure: Reinforced Concrete Deck Supported by Rolled Steel Beams. Substructure: Pile Bent Abutments & Multiple Column (3-Eastbound) & (2-Westbound) Piers Supported on Spread Footings & Piles. Length is 632'-11 11/16" (Eastbound) & 614'-5½" (Westbound) back to back of Abutments along the Existing P.G.L. Deck width varies from 38'-1¼" to 53'-8⅝" (Eastbound) & 36'-0" to 42'-4 7/16" (Westbound) out to out.
Existing Superstructure to be Removed and Substructure to be Repaired & Widened. Traffic to be Maintained on Eastbound FAI-80 while Constructing Westbound Structure. No Salvage.

STATION 673+37.46
REBUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 80 SEC.*
F.A. PROJ.
LOADING HS20 & ALT.
STR. NO. 099-0068

NAME PLATE
(1-required)

Location of New Name Plate Existing Name Plate to be Cleaned and Relocated next to the New Name Plate. (Cost Incidental to Name Plates)

Dimensions Measured along W.B. P.G.L.
℄ Brg. S.W. Abut.
Traffic Barrier Terminal Type 5 (Std. 2340) (Typ.)
Bk. to Bk. of Abut. 616'-10½" (Westbound)
1'-10⅝" | 60'-1¾" Span-1 | 91'-4" Span-2 | 91'-3⅞" Span-3 | 60'-6 3/16" Span-4 | 56'-11 7/16" Span-5 | 63'-3¾" Span-6 | 63'-3⅝" Span-7 | 63'-3⅝" Span-8 | 62'-10¾" Span-9 | 1'-10⅞"
10'-0" shldr. | 24'-0" pvt. | 18'-0" median | 24'-0 pvt. | 9'-0" | 10'-0" shldr.
℄ Pier 1W | ℄ Pier 2W | ℄ Metra/Rock Island District Line | ℄ Pier 4W | ℄ Pier 3W | ℄ Pier 5W | ℄ Pier 6W | ℄ Pier 7W | ℄ Pier 8W | ℄ Brg. N.W. Abut.
Drainage Scupper (Typ.) 15'-0" 10'-0"
130'-0" Channel
Traffic Barrier Terminal Type 6 (Std. 2341) (Typ.)
Drainage Scupper (Typ.) 15'-0" 10'-0"
14'-0"
30'-0" Appr. Pav't. Std. 2442 (Typ.)
Radial Dimensions
2:1 (Typ.)
8'-0" shldr.
10'-0"15'-0"15'-0"
Pt. of min. Vert. cl.
SB-102
SB-104
Curve DA-1
SB-106
Exist. B-5
Exist. B-9
Exist. B-13
SB-108
Exist. B-17
Exist. B-1
Bk. SW Abut. Sta. 672+22.05 El. 646.96
℄ Brg. SW Abut. Sta. 672+23.95 El. 646.97
℄ Pier 1W Sta. 672+84.60 El. 647.26
℄ Pier 2W Sta. 673+76.70 El. 647.60
℄ Pier 3W Sta. 674+68.80 El.647.84
℄ Pier 4W Sta. 675+29.83 El. 647.93
Limit of Exist. Structure
℄ Pier 6W Sta. 676+51.11 El. 647.97
℄ Pier 7W Sta. 677+14.95 El.647.92
℄ Pier 8W Sta. 677+78.78 El. 647.81
℄ Brg. NW Abut. Sta. 678+42.21 El. 647.65
Bk. NW Abut. Sta. 678+44.13 El. 647.64
Varies 12'-0" 8'-0" 24'-0" 32'-0"
Varies 42'-2" to 55'-8"
12'-0" shldr.
12'-0" lane
68'-0"
Exist. PGL Westbound Roadway
Prop. PGL Westbound Roadway
℄ FAI-80
SB-101
672+00
Exist. B-3
673+00
674+00
675+00
676+00
677+00
678+00
679+00
SB-110
Exist. B-19
Exist. B-15
Exist. B-11
Exist. B-7
Reference Chord
Sta. 673+37.46 FAI-80= Sta. 314+93.08 US Route 30
Sta 674+46.18= Sta. 10+00
℄ Pier 5W Sta. 675+87.26 El. 647.98
Exist. B-10
Exist. B-14
Exist. B-18
Exist. B-2
Exist. B-6
Exist. B-4
Exist. B-8
SB-103
SB-105
SB-107
SB-109
Exist. B-12
Exist. B-16
Exist. B-20
PGL Eastbound Roadway
℄ Ramp BD
Sta. 676+05.11 (Offset 57' Lt.) =Ramp DA P.C. Sta. 18+88.32
℄ Ramp DA
Exist. B-9
Hickory Creek
Varies
Sta. 673+43.52
314+00
315+00
316+00 Sta. Inc.
E.B. US Route 30
W.B. US Route 30
P.G.L. US Route 30
℄ US Route 30
Buried Tele. Cable
Above deck Power lines
Below deck Steel Cable
16'-0"
18'-0"
62'-0"
Buried Teppco Pipeline
**Gabions
**See General Note 16 on Sheet S-2 for Details
Mile Post #35 Sta. 30+00.00
Note: a = 8°47'56" b = 20°10'20"

PLAN

STATE OF ILLINOIS — JOHN K. HARMENING — 4913 — CHICAGO — REGISTERED STRUCTURAL ENGINEER
SEALED 5-7-96
EXPIRES 11-30-96

LEGEND:
Soil Boring Location
Existing Soil Boring Location

REVISIONS	
NAME	DATE

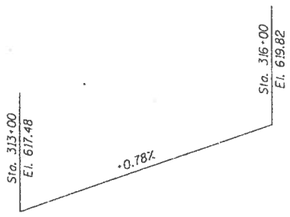
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
GENERAL PLAN & ELEVATION
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY
DESIGNED BY: LAS
DRAWN BY: TMG
CHECKED BY: GAE
SCALE: N.T.S.
DATE: MARCH 1996

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

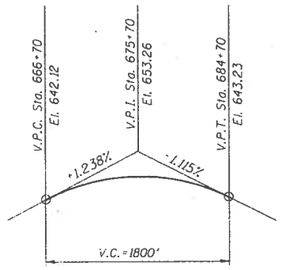
2948/US30/WESTBOUND/GENPLAN.DGN

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



PROFILE GRADE LINE US 30



PROFILE GRADE LINE FAI-80

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUB	TOTAL
Removal of Existing Superstructures	Each	1	—	1
Concrete Removal	Cu. Yd.	—	132.5	132.5
Slope Wall Removal	Sq. Yd.	—	15	15
Structure Excavation	Cu. Yd.	—	239	239
Neoprene Expansion Joint 2"	Foot	182	—	182
Concrete Structures	Cu. Yd.	—	407.4	407.4
Concrete Superstructures	Cu. Yd.	814.1	—	814.1
Bridge Deck Grooving	Sq. Yd.	2735	—	2735
Protective Coat	Sq. Yd.	502	—	502
Elastomeric Bearing Assembly, Type I	Each	36	—	36
Elastomeric Bearing Assembly, Type II	Each	8	—	8
Elastomeric Bearing Assembly, Type III	Each	8	—	8
Formed Concrete Repair (Depth < 5")	Sq. Ft.	—	348	348
Furnishing & Erecting Structural Steel	L.S.	1	—	1
Stud Shear Connectors	Each	13830	—	13830
Reinforcement Bars, Epoxy Coated	Pound	212430	81140	293570
Slopewall, 4"	Sq. Yd.	—	103	103
Slopewall, 6"	Sq. Yd.	—	55	55
Furnishing Steel Piles HP 10 x 42	Foot	—	350	350
Driving Steel Piles	Foot	—	350	350
Test Pile Steel HP 10 x 42	Each	—	2	2
Name Plates	Each	1	—	1
Bridge Seat Sealer	Sq. Ft.	—	424	424
Epoxy Crack Sealing	Foot	—	180	180
Caisson Shafts 30"	Cu. Ft.	—	143	143
Caisson Shafts 36"	Cu. Ft.	—	216	216
Drainage Scuppers	Each	13	—	13
Protective Shield	Sq. Yd.	—	—	2558
Metallizing Structural Steel	L.S.	1	—	1
Gabions	Cu. Yd.	—	47	47

**Quantity includes lap & inside face of parapets only.

GENERAL NOTES

1. Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$" ϕ, open holes $\frac{15}{16}$" ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel = 874950 Pounds.
3. The exterior face and the bottom of bottom flange of all the exterior girders shall receive the two field coats of Epoxy/Polyurethane paint system, except where otherwise noted. The color of the polyurethane finish coat shall be Interstate Green Munsell No. 7.5 G 4/8. See Special Provision for "Cleaning and Painting Metal Structures."
4. All structural steel shall be shop metallized with an 85% zinc/15% aluminum alloy utilizing arc thermal spray, except where otherwise noted. See Special Provision for "Metallizing Structural Steel."
5. 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 except at Pier 3 W and Pier 6 W. Field welding in the other areas will be permitted only when approved by the Engineer.
6. Anchor bolts shall be set before bolting diaphragms over supports.
7. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.
8. Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42, or M-53 Grade 60.
9. Slope wall shall be reinforced with welded wire fabric, 6" X 6" - W4.0x W4.0, weighing 58 lbs. per 100 sq. ft.
10. Plan dimensions and details relative to existing structures have been taken from existing plans and are subject to normal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
11. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{2}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$" 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.
12. The Contractor shall drive 1 steel HP10 x 42 test pile in a permanent location at each abutment as directed by the engineer before ordering the remainder of piles.
13. Bridge Seat Sealer shall be applied to the seat area of the Abutments, Pier 3 W and Pier 6 W.
14. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
15. For details of electric conduits see sheets S-13 through S-21 and Electrical Drawings. For Bill of Material, details and locations of under deck lighting see Electrical Drawings.
16. After the proposed drilled piers/shafts for the planned pier extensions have been completed, all loose gravel sediments shall be removed down to the top of the existing foolings; any part of an open scour hole below the top of a fooling should be backfilled with sand and gravel from the stream bed. The gabion mattress should be a minimum of 12" thick. These mattresses should extend outward for a distance of 6'-0" from either side of the pier stem and 6'-0" upstream from (a) the upstream end of the new drilled shaft/column at Piers 6E and 7E or (b) the upstream end of the existing crash walls of Piers 6W and 7W. The downstream ends of the mattresses should be at the centers of the existing piers.

DESIGN SPECIFICATIONS

1992 AASHTO and 1993 & 1994 Interim.
1993 AASHTO Guide Specifications for Horizontally Curved Highway Bridges.

LOADING HS20-44 & ALT.

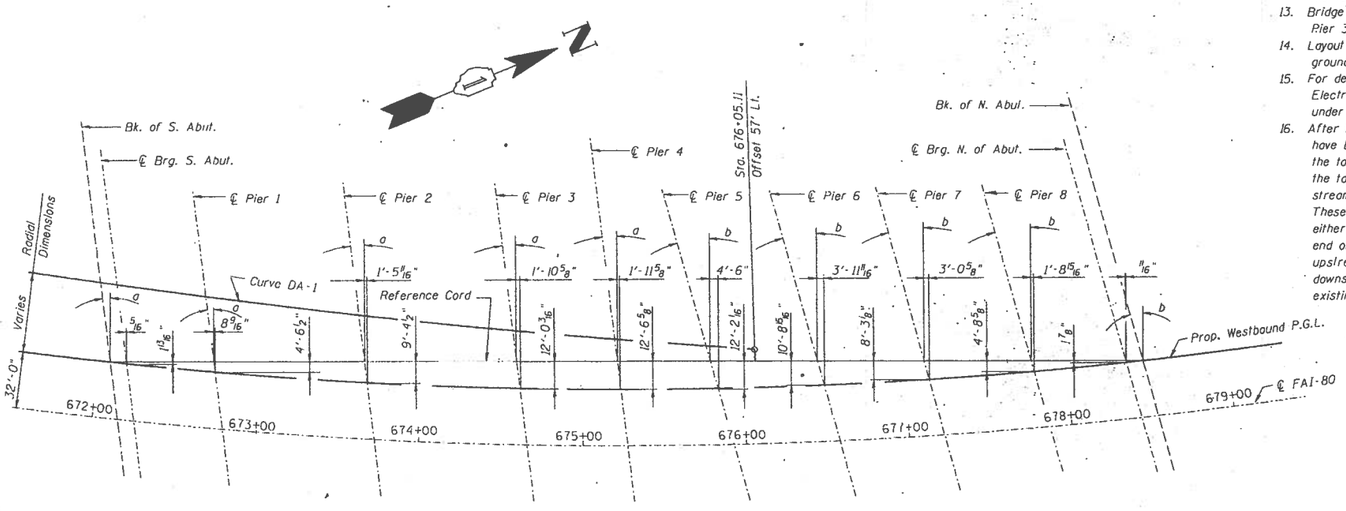
Allow 25 psf for future wearing surface.

DESIGN STRESSES

f'_c = 3,500 psi
f_y = 40,000 psi (Exist. Reinf. Steel)
f_y = 60,000 psi (Prop. Reinf. Steel)
f_y = 36,000 psi (Struct. Steel - M270 Grade 36)

SEISMIC DATA

S.P.C. = A
A = 0.04
S = 1.0



a=8°55'27"
b=20°17'51"

OFFSET SKETCH

TOP OF TRACK ELEVATIONS

STATION	NORTH TRACK		SOUTH TRACK	
	LEFT	RIGHT	LEFT	RIGHT
8+00	618.78	618.79	618.99	619.01
9+00	619.24	619.24	619.42	619.42
10+00	619.76	619.77	619.87	619.90
11+00	620.35	620.36	620.45	620.46
12+00	620.97	620.98	621.00	620.99

WATERWAY INFORMATION

Drainage Area = 78.77 Sq. Mile Low Grade Elev. 633.43 ℄ Sta. 658+39.74

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	7400	1414	1414	611.64	0	0	611.64	611.64
Base	100	8600	1494	1494	612.09	0	0	612.09	612.09
Overtopping									
Max. Calc.	500	11200	1652	1652	612.93	0.03	0.03	612.96	612.96

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
BILL OF MATERIAL & GENERAL NOTES
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

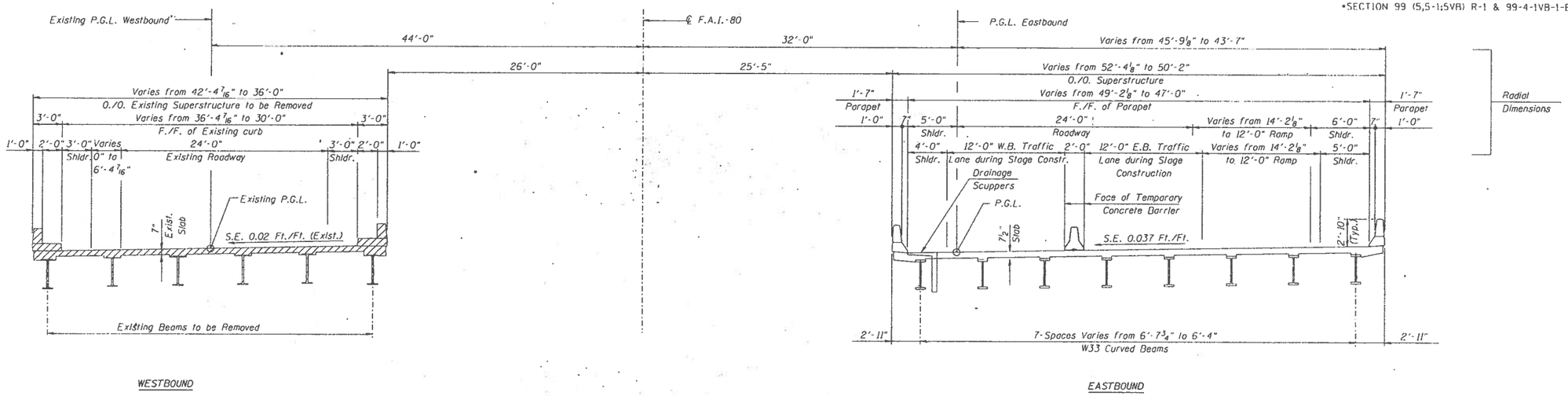
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

2948/US30/WESTBOUND/GENNOTES.DGN

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



WESTBOUND

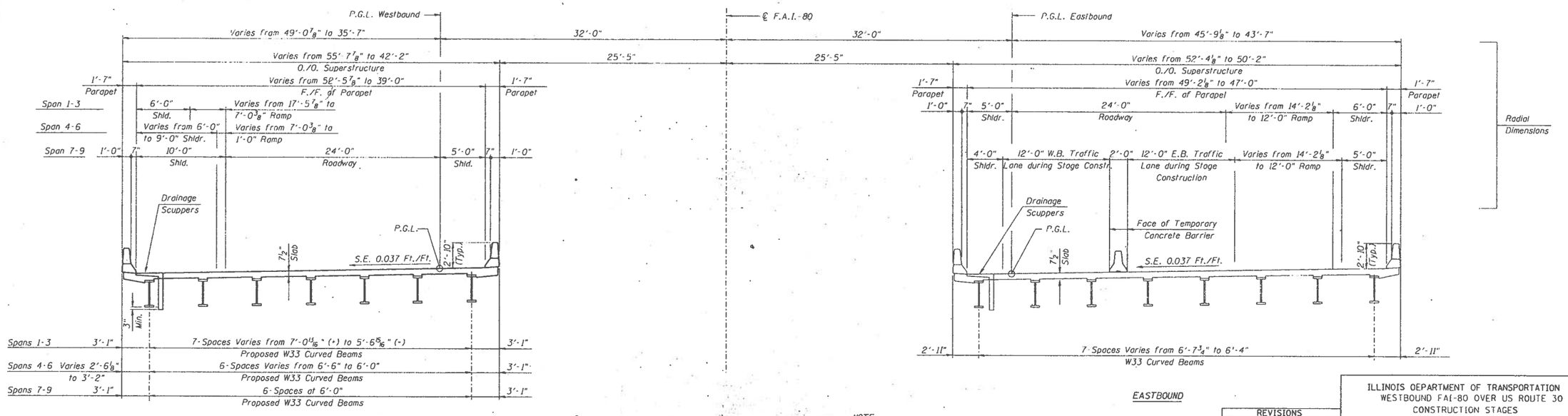
EASTBOUND

STAGE I REMOVAL

LOOKING UPSTATION

LEGEND:

Removal of Existing Superstructures



WESTBOUND

EASTBOUND

STAGE I CONSTRUCTION

LOOKING UPSTATION

NOTE:
Pay Item for temporary concrete barrier is Included in the Roadway Plans.
For details of the temporary concrete barrier See Sheet S-61.

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
CONSTRUCTION STAGES
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

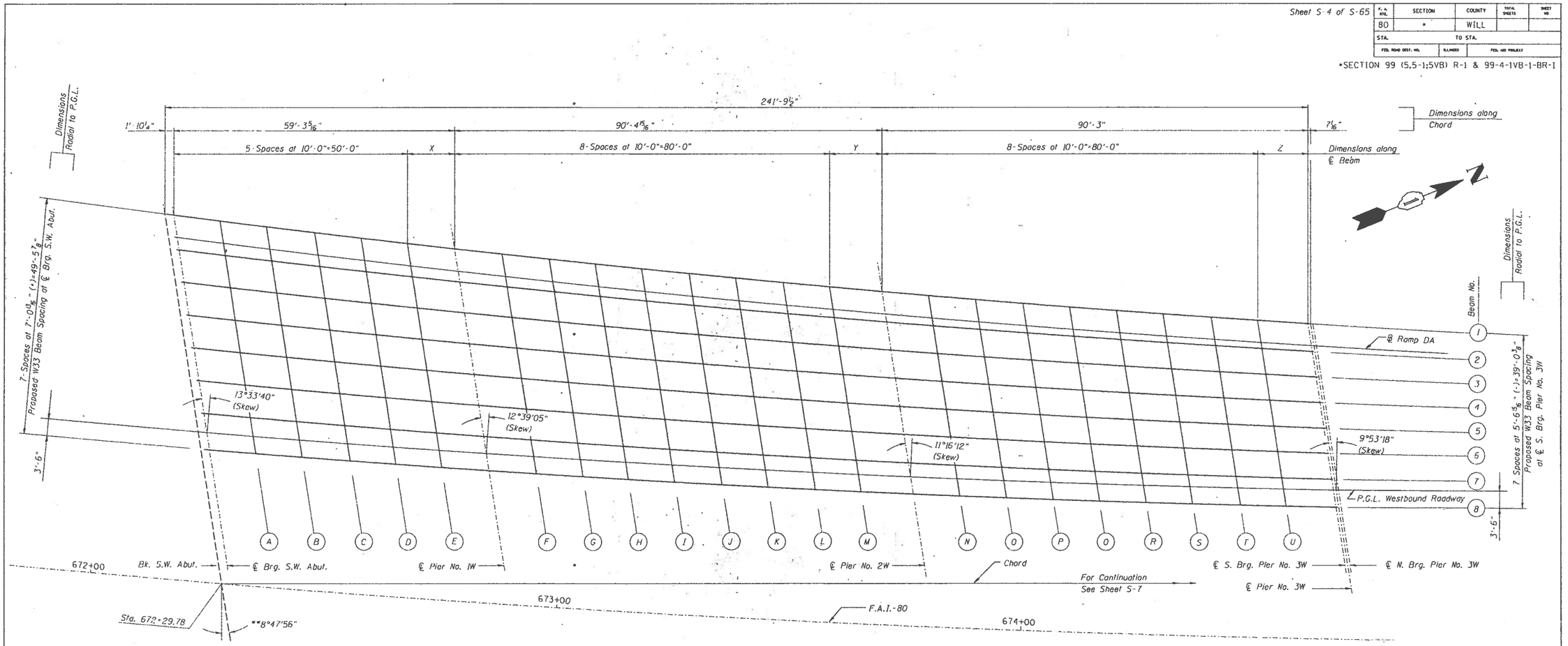
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

2948/US30/WESTBUOND/STAGES.DGN

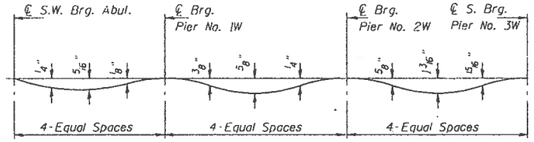
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-I



**Typical angle from South Abutment to Pier 5W at Chord.

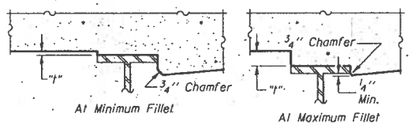
PLAN
SPAN 1 THRU SPAN 3



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete deck and all superimposed dead loads except future wearing surface).

Note: The above deflections are not to be used in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflections as shown on Sheet S-5 and S-6.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheet S-5 and S-6, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

X, Y & Z DIMENSIONS

Beam	X	Y	Z
1	10' 10 3/16"	12'-3 11/16"	11'-7 1/16"
2	10'-8 1/8"	12'-1 7/8"	11'-5 7/16"
3	10'-7 5/8"	12'-0 1/16"	11'-3 7/8"
4	10'-6 3/8"	11'-10 3/8"	11'-2 3/8"
5	10'-5 1/8"	11'-8 11/16"	11'-0 15/16"
6	10'-4"	11'-7 1/16"	10'-11 1/2"
7	10'-2 15/16"	11'-5 7/16"	10'-10 1/8"
8	10'-1 11/16"	11'-3 15/16"	10'-8 3/4"

NOTES:
For Top of Slab Elevations See Sheets S-5 and S-6.
All Elevations are at top of Concrete.

REVISIONS	
NAME	DATE

Clorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
ELEVATION LOCATIONS SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

2948/us30/westbound/elevloc1.dgn

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1

BEAM 1

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL DEFL.
BK. S. ABUT	67210.67	-78.069	645.198	645.198
CL. BRG. S. ABUT	67212.62	-77.988	645.211	645.211
A	67222.82	-77.562	645.280	645.297
B	67233.03	-77.135	645.348	645.375
C	67243.21	-76.709	645.414	645.440
D	67253.41	-76.282	645.479	645.496
E	67263.60	-75.855	645.543	645.548
PIER 1	67274.66	-75.392	645.610	645.610
F	67284.85	-74.965	645.671	645.682
G	67295.04	-74.538	645.730	645.758
H	67305.23	-74.111	645.788	645.832
I	67315.42	-73.684	645.845	645.897
J	67325.61	-73.257	645.900	645.950
K	67335.79	-72.830	645.954	645.992
L	67345.98	-72.402	646.007	646.028
M	67356.16	-71.975	646.058	646.063
PIER 2	67368.69	-71.449	646.119	646.119
N	67378.87	-71.022	646.167	646.183
O	67389.05	-70.594	646.214	646.257
P	67399.23	-70.167	646.259	646.330
Q	67409.41	-69.739	646.304	646.396
R	67419.58	-69.312	646.346	646.448
S	67429.76	-68.884	646.388	646.485
T	67439.93	-68.456	646.428	646.506
U	67450.10	-68.028	646.467	646.513
CL. BRG. PIER 3	67461.89	-67.533	646.510	646.510

BEAM 2

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL DEFL.
BK. S. ABUT	67212.44	-70.990	645.469	645.469
CL. BRG. S. ABUT	67214.38	-70.921	645.482	645.482
A	67224.56	-70.555	645.548	645.565
B	67234.74	-70.189	645.613	645.640
C	67244.92	-69.822	645.677	645.703
D	67255.10	-69.456	645.740	645.757
E	67265.28	-69.090	645.801	645.806
PIER 1	67276.21	-68.696	645.865	645.865
F	67286.39	-68.330	645.923	645.934
G	67296.56	-67.963	645.980	646.008
H	67306.74	-67.597	646.035	646.079
I	67316.91	-67.230	646.089	646.141
J	67327.08	-66.863	646.142	646.192
K	67337.25	-66.497	646.194	646.232
L	67347.42	-66.130	646.244	646.265
M	67357.59	-65.763	646.292	646.297
PIER 2	67369.95	-65.317	646.350	646.350
N	67380.11	-64.949	646.396	646.412
O	67390.28	-64.582	646.440	646.483
P	67400.45	-64.215	646.483	646.554
Q	67410.61	-63.848	646.525	646.617
R	67420.77	-63.481	646.565	646.667
S	67430.93	-63.113	646.604	646.701
T	67441.09	-62.746	646.642	646.720
U	67451.25	-62.378	646.678	646.724
CL. BRG. PIER 3	67462.89	-61.958	646.718	646.718

BEAM 3

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL DEFL.
BK. S. ABUT	67214.20	-63.910	645.740	645.740
CL. BRG. S. ABUT	67216.13	-63.852	645.753	645.753
A	67226.30	-63.547	645.816	645.833
B	67236.46	-63.241	645.879	645.906
C	67246.63	-62.936	645.940	645.966
D	67256.79	-62.630	646.000	646.017
E	67266.95	-62.325	646.059	646.064
PIER 1	67277.76	-61.999	646.119	646.119
F	67287.91	-61.693	646.175	646.186
G	67298.07	-61.387	646.229	646.257
H	67308.23	-61.081	646.282	646.326
I	67318.39	-60.775	646.334	646.386
J	67328.55	-60.469	646.384	646.434
K	67338.70	-60.163	646.433	646.471
L	67348.86	-59.857	646.481	646.502
M	67359.01	-59.550	646.527	646.532
PIER 2	67371.20	-59.183	646.581	646.581
N	67381.35	-58.876	646.624	646.640
O	67391.50	-58.570	646.666	646.709
P	67401.66	-58.263	646.707	646.778
Q	67411.80	-57.956	646.746	646.838
R	67421.95	-57.650	646.784	646.886
S	67432.10	-57.343	646.821	646.918
T	67442.25	-57.036	646.856	646.934
U	67452.40	-56.730	646.890	646.936
CL. BRG. PIER 3	67463.89	-56.382	646.926	646.926

BEAM 4

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL DEFL.
BK. S. ABUT	67215.95	-56.830	646.011	646.011
CL. BRG. S. ABUT	67217.88	-56.783	646.023	646.023
A	67228.03	-56.539	646.085	646.102
B	67238.17	-56.294	646.145	646.172
C	67248.32	-56.049	646.203	646.229
D	67258.47	-55.804	646.260	646.277
E	67268.61	-55.559	646.316	646.321
PIER 1	67279.29	-55.301	646.374	646.374
F	67289.44	-55.056	646.427	646.438
G	67299.58	-54.811	646.479	646.507
H	67309.72	-54.566	646.529	646.573
I	67319.86	-54.321	646.579	646.631
J	67330.00	-54.075	646.626	646.676
K	67340.14	-53.830	646.673	646.711
L	67350.28	-53.585	646.718	646.739
M	67360.42	-53.339	646.762	646.767
PIER 2	67372.45	-53.048	646.812	646.812
N	67382.59	-52.802	646.853	646.869
O	67392.72	-52.557	646.892	646.935
P	67402.86	-52.311	646.930	647.001
Q	67413.00	-52.065	646.967	647.059
R	67423.13	-51.819	647.003	647.105
S	67433.26	-51.573	647.037	647.134
T	67443.40	-51.328	647.070	647.148
U	67453.53	-51.082	647.101	647.147
CL. BRG. PIER 3	67464.88	-50.806	647.135	647.135

BEAM 5

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL DEFL.
BK. S. ABUT	67217.70	-49.748	646.283	646.283
CL. BRG. S. ABUT	67219.62	-49.713	646.294	646.294
A	67229.75	-49.530	646.353	646.370
B	67239.88	-49.346	646.410	646.437
C	67250.01	-49.162	646.466	646.492
D	67260.14	-48.978	646.521	646.538
E	67270.26	-48.794	646.574	646.579
PIER 1	67280.83	-48.602	646.629	646.629
F	67290.95	-48.418	646.679	646.690
G	67301.08	-48.234	646.728	646.756
H	67311.21	-48.050	646.776	646.820
I	67321.33	-47.866	646.823	646.875
J	67331.46	-47.682	646.868	646.918
K	67341.58	-47.497	646.912	646.950
L	67351.70	-47.313	646.955	646.976
M	67361.83	-47.129	646.996	647.001
PIER 2	67373.70	-46.912	647.043	647.043
N	67383.82	-46.728	647.081	647.097
O	67393.94	-46.543	647.118	647.161
P	67404.06	-46.359	647.154	647.225
Q	67414.18	-46.174	647.188	647.280
R	67424.30	-45.989	647.221	647.323
S	67434.42	-45.805	647.253	647.350
T	67444.54	-45.620	647.283	647.361
U	67454.66	-45.435	647.312	647.358
CL. BRG. PIER 3	67465.87	-45.230	647.343	647.343

Clarke Group, Inc.
CONSULTING ENGINEERS
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
TOP OF SLAB ELEVATIONS SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-IVB-1 BR-1

BEAM 6

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL DEFL.
BK. S. ABUT	67219.44	-42.667	646.554	646.554
CL. BRG. S. ABUT	67221.35	-42.644	646.564	646.564
A	67231.46	-42.521	646.621	646.638
B	67241.58	-42.398	646.675	646.702
C	67251.69	-42.276	646.729	646.755
D	67261.80	-42.153	646.781	646.798
E	67271.91	-42.030	646.832	646.837
PIER 1	67282.35	-41.903	646.883	646.883
F	67292.46	-41.780	646.931	646.942
G	67302.57	-41.657	646.978	647.006
H	67312.68	-41.534	647.023	647.067
I	67322.79	-41.411	647.068	647.120
J	67332.90	-41.288	647.110	647.160
K	67343.01	-41.165	647.152	647.190
L	67353.12	-41.042	647.192	647.213
M	67363.22	-40.919	647.231	647.236
PIER 2	67374.94	-40.776	647.274	647.274
N	67385.04	-40.653	647.310	647.326
O	67395.15	-40.529	647.344	647.387
P	67405.26	-40.406	647.378	647.449
Q	67415.36	-40.282	647.409	647.501
R	67425.47	-40.159	647.440	647.542
S	67435.57	-40.036	647.469	647.566
T	67445.68	-39.912	647.497	647.575
U	67455.78	-39.788	647.524	647.570
CL. BRG. PIER 3	67466.85	-39.653	647.551	647.551

BEAM 7

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL DEFL.
BK. S. ABUT	67221.17	-35.584	646.825	646.825
CL. BRG. S. ABUT	67223.08	-35.572	646.835	646.835
A	67233.17	-35.511	646.889	646.906
B	67243.27	-35.450	646.941	646.968
C	67253.36	-35.388	646.992	647.018
D	67263.45	-35.327	647.041	647.058
E	67273.55	-35.266	647.090	647.095
PIER 1	67283.88	-35.203	647.138	647.138
F	67293.97	-35.141	647.183	647.194
G	67304.06	-35.080	647.227	647.255
H	67314.15	-35.018	647.270	647.314
I	67324.25	-34.957	647.312	647.364
J	67334.34	-34.895	647.352	647.402
K	67344.43	-34.833	647.391	647.429
L	67354.52	-34.772	647.429	647.450
M	67364.61	-34.710	647.465	647.470
PIER 2	67376.17	-34.639	647.505	647.505
N	67386.26	-34.577	647.538	647.554
O	67396.36	-34.515	647.570	647.613
P	67406.45	-34.454	647.601	647.672
Q	67416.54	-34.392	647.630	647.722
R	67426.63	-34.330	647.659	647.761
S	67436.72	-34.268	647.685	647.782
T	67446.81	-34.206	647.711	647.789
U	67456.90	-34.144	647.735	647.781
CL. BRG. PIER 3	67467.84	-34.076	647.759	647.759

PGL WESTBOUND

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL DEFL.
BK. S. ABUT	67222.05	-32.000	646.962	646.962
CL. BRG. S. ABUT	67223.95	-32.000	646.972	646.972
A	67234.03	-32.000	647.023	647.040
B	67244.12	-32.000	647.073	647.100
C	67254.20	-32.000	647.121	647.147
D	67264.29	-32.000	647.168	647.185
E	67274.37	-32.000	647.214	647.219
PIER 1	67284.60	-32.000	647.259	647.259
F	67294.69	-32.000	647.302	647.313
G	67304.77	-32.000	647.344	647.372
H	67314.85	-32.000	647.385	647.429
I	67324.94	-32.000	647.424	647.476
J	67335.02	-32.000	647.462	647.512
K	67345.11	-32.000	647.498	647.536
L	67355.19	-32.000	647.534	647.555
M	67365.28	-32.000	647.567	647.572
PIER 2	67376.70	-32.000	647.604	647.604
N	67386.79	-32.000	647.635	647.651
O	67396.87	-32.000	647.665	647.708
P	67406.96	-32.000	647.693	647.764
Q	67417.04	-32.000	647.720	647.812
R	67427.13	-32.000	647.746	647.848
S	67437.21	-32.000	647.770	647.867
T	67447.30	-32.000	647.793	647.871
U	67457.38	-32.000	647.815	647.861
CL. BRG. PIER 3	67468.20	-32.000	647.837	647.837

BEAM 8

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO. GRADE ELEV. ADJ. FOR DL DEFL.
BK. S. ABUT	67222.90	-28.500	647.096	647.096
CL. BRG. S. ABUT	67224.80	-28.500	647.106	647.106
A	67234.87	-28.500	647.157	647.174
B	67244.95	-28.500	647.206	647.233
C	67255.02	-28.500	647.255	647.281
D	67265.10	-28.500	647.302	647.319
E	67275.18	-28.500	647.347	647.352
PIER 1	67285.38	-28.500	647.392	647.392
F	67295.47	-28.500	647.435	647.446
G	67305.54	-28.500	647.477	647.505
H	67315.62	-28.500	647.517	647.561
I	67325.69	-28.500	647.556	647.608
J	67335.77	-28.500	647.594	647.644
K	67345.84	-28.500	647.630	647.668
L	67355.92	-28.500	647.666	647.687
M	67365.99	-28.500	647.699	647.704
PIER 2	67377.41	-28.500	647.736	647.736
N	67387.48	-28.500	647.767	647.783
O	67397.56	-28.500	647.796	647.839
P	67407.63	-28.500	647.825	647.896
Q	67417.71	-28.500	647.852	647.944
R	67427.78	-28.500	647.877	647.979
S	67437.86	-28.500	647.901	647.998
T	67447.93	-28.500	647.924	648.002
U	67458.01	-28.500	647.946	647.992
CL. BRG. PIER 3	67468.82	-28.500	647.968	647.968

Ciorba Group, Inc.
CONSULTING ENGINEERS
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REVISIONS	
NAME	DATE

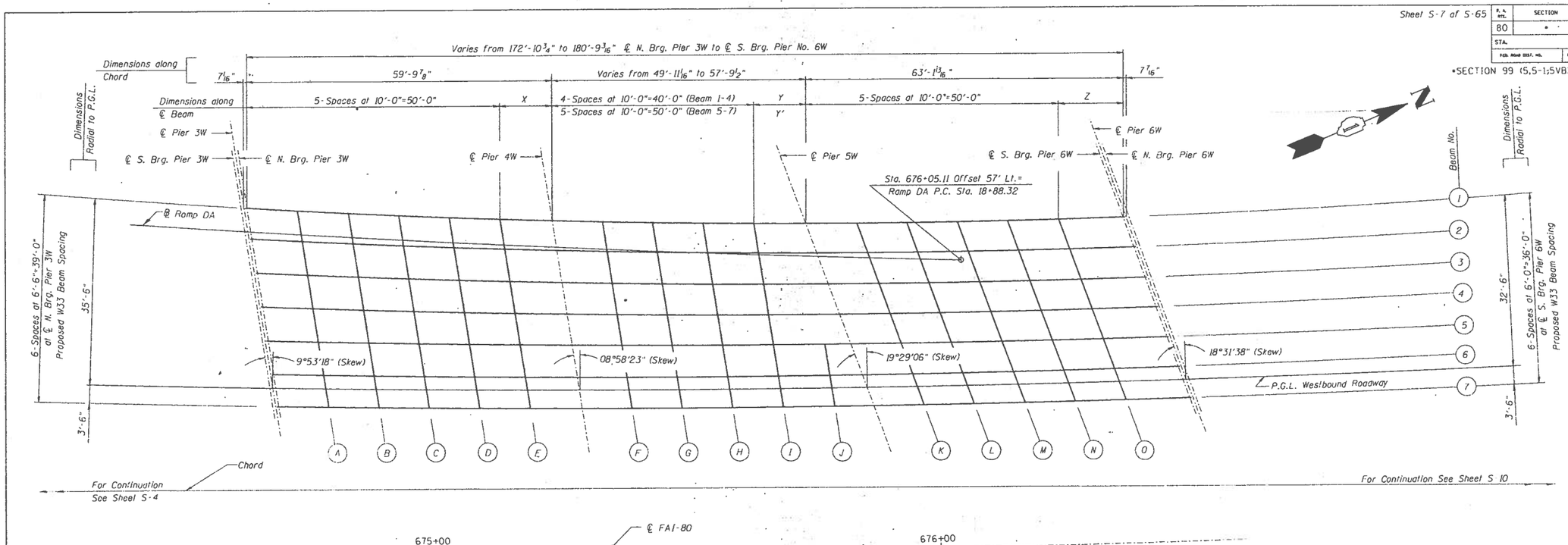
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
TOP OF SLAB ELEVATIONS SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

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

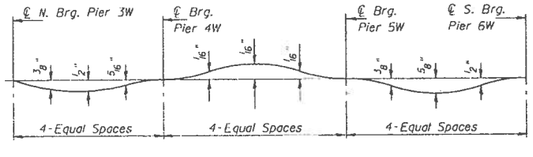
•SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



PLAN
SPAN-4 THRU SPAN-6

X, Y & Z DIMENSIONS

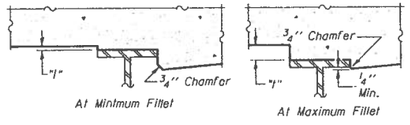
Beam	X	Y	Y'	Z
1	10'-3 3/4"	10'-2 9/16"	–	12'-9 9/16"
2	10'-2 7/8"	11'-5 9/16"	–	12'-9 5/16"
3	10'-2 1/16"	12'-8 1/2"	–	12'-9 1/8"
4	10'-1 1/4"	13'-11 1/2"	–	12'-8 7/8"
5	10'-0 1/2"	-	5'-2 7/16"	12'-8 11/16"
6	9'-11 13/16"	-	6'-5 3/8"	12'-8 7/16"
7	9'-11 1/16"	-	7'-8 5/16"	12'-8 1/4"



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete deck and all superimposed dead loads except future wearing surface).

Note: The above deflections are not to be used in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflections as shown on Sheet S-8 and S-9.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheet S-8 and S-9, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

NOTES:
For Top of Slab Elevations See Sheets S-8 and S-9.
All Elevations are at top of Concrete.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
ELEVATION LOCATIONS SPAN 4-6
FAI-80 STA. 673+37.46
•SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
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DESIGNED BY: GAE
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Clarke Group, Inc.
CONSULTING ENGINEERS
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2948/US30/WESTBOUND/ELEVLOC2.DGN

P. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1

BEAM 1

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 3	67463.11	-67.482	646.513	646.513
A	67473.28	-67.080	646.547	646.573
B	67483.45	-66.706	646.580	646.623
C	67493.62	-66.360	646.609	646.655
D	67503.79	-66.043	646.637	646.673
E	67513.96	-65.753	646.662	646.680
PIER 4	67524.45	-65.485	646.685	646.685
F	67534.62	-65.252	646.706	646.700
G	67544.79	-65.048	646.724	646.717
H	67554.96	-64.873	646.739	646.732
I	67565.14	-64.725	646.752	646.745
PIER 5	67575.52	-64.603	646.763	646.763
K	67585.69	-64.512	646.771	646.790
L	67595.87	-64.450	646.777	646.818
M	67606.04	-64.415	646.780	646.833
N	67616.21	-64.409	646.781	646.833
O	67626.38	-64.431	646.780	646.816
CL. BRG. PIER 6	67639.40	-64.500	646.775	646.775

BEAM 2

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 3	67464.27	-60.986	646.755	646.755
A	67474.42	-60.652	646.787	646.813
B	67484.58	-60.342	646.817	646.860
C	67494.74	-60.055	646.845	646.891
D	67504.89	-59.792	646.870	646.906
E	67515.05	-59.551	646.893	646.911
PIER 4	67525.45	-59.329	646.914	646.914
F	67535.60	-59.135	646.933	646.927
G	67545.76	-58.965	646.949	646.942
H	67555.91	-58.818	646.964	646.957
I	67566.07	-58.694	646.976	646.969
PIER 5	67577.71	-58.581	646.987	646.987
K	67587.86	-58.507	646.994	647.013
L	67598.02	-58.456	646.999	647.040
M	67608.17	-58.428	647.002	647.055
N	67618.33	-58.424	647.003	647.055
O	67628.48	-58.442	647.001	647.037
CL. BRG. PIER 6	67641.46	-58.500	646.996	646.996

BEAM 3

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 3	67465.42	-54.489	646.998	646.998
A	67475.57	-54.224	647.027	647.053
B	67485.71	-53.977	647.054	647.097
C	67495.85	-53.748	647.080	647.126
D	67505.99	-53.538	647.103	647.139
E	67516.13	-53.346	647.124	647.142
PIER 4	67526.44	-53.170	647.143	647.143
F	67536.58	-53.015	647.161	647.155
G	67546.72	-52.879	647.176	647.169
H	67556.86	-52.761	647.189	647.182
I	67567.00	-52.661	647.200	647.193
PIER 5	67579.88	-52.560	647.211	647.211
K	67590.02	-52.502	647.217	647.236
L	67600.16	-52.463	647.222	647.263
M	67610.30	-52.441	647.224	647.277
N	67620.44	-52.438	647.224	647.276
O	67630.58	-52.454	647.223	647.259
CL. BRG. PIER 6	67643.52	-52.500	647.218	647.218

BEAM 4

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 3	67466.58	-47.992	647.241	647.241
A	67476.70	-47.794	647.267	647.293
B	67486.83	-47.610	647.292	647.335
C	67496.95	-47.439	647.315	647.361
D	67507.08	-47.282	647.336	647.372
E	67517.20	-47.139	647.355	647.373
PIER 4	67527.43	-47.007	647.373	647.373
F	67537.55	-46.891	647.388	647.382
G	67547.68	-46.789	647.402	647.395
H	67557.80	-46.700	647.414	647.407
I	67567.92	-46.625	647.424	647.417
PIER 5	67582.05	-46.542	647.434	647.434
K	67592.18	-46.500	647.440	647.459
L	67602.30	-46.471	647.444	647.485
M	67612.42	-46.455	647.446	647.499
N	67622.55	-46.453	647.446	647.498
O	67632.67	-46.465	647.444	647.480
CL. BRG. PIER 6	67645.57	-46.500	647.439	647.439

BEAM 5

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 3	67467.73	-41.495	647.483	647.483
A	67477.83	-41.364	647.507	647.532
B	67487.94	-41.242	647.529	647.570
C	67498.05	-41.128	647.550	647.594
D	67508.16	-41.024	647.569	647.603
E	67518.27	-40.928	647.586	647.602
PIER 4	67528.42	-40.842	647.602	647.602
F	67538.53	-40.764	647.616	647.612
G	67548.63	-40.696	647.628	647.625
H	67558.74	-40.636	647.639	647.636
I	67568.85	-40.586	647.648	647.644
J	67578.96	-40.544	647.655	647.651
PIER 5	67584.21	-40.526	647.658	647.658
K	67594.32	-40.498	647.663	647.681
L	67604.43	-40.479	647.666	647.705
M	67614.53	-40.470	647.667	647.718
N	67624.64	-40.469	647.667	647.717
O	67634.75	-40.477	647.665	647.700
CL. BRG. PIER 6	67647.61	-40.500	647.660	647.660

Cierba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
TOP OF SLAB ELEVATIONS SPAN 1-6
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1

BEAM 6

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 3	67468.87	-34.998	647.726	647.726
A	67478.96	-34.932	647.747	647.772
B	67489.06	-34.872	647.767	647.808
C	67499.15	-34.815	647.785	647.829
D	67509.24	-34.763	647.802	647.836
E	67519.33	-34.715	647.818	647.834
PIER 4	67529.40	-34.672	647.831	647.831
F	67539.50	-34.634	647.844	647.840
G	67549.59	-34.599	647.855	647.852
H	67559.68	-34.570	647.864	647.861
I	67569.77	-34.544	647.872	647.868
J	67579.86	-34.523	647.878	647.874
PIER 5	67586.37	-34.512	647.881	647.881
K	67596.46	-34.498	647.885	647.903
L	67606.55	-34.489	647.888	647.927
M	67616.64	-34.485	647.889	647.940
N	67626.73	-34.484	647.888	647.938
O	67636.82	-34.488	647.886	647.921
CL. BRG. PIER 6	67649.64	-34.500	647.881	647.881

PGL

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 3	67469.40	-32.000	647.838	647.838
A	67479.48	-32.000	647.857	647.882
B	67489.57	-32.000	647.874	647.915
C	67499.65	-32.000	647.890	647.934
D	67509.74	-32.000	647.905	647.939
E	67519.82	-32.000	647.919	647.935
PIER 4	67529.83	-32.000	647.931	647.931
F	67539.91	-32.000	647.942	647.938
G	67550.00	-32.000	647.951	647.948
H	67560.08	-32.000	647.959	647.956
I	67570.17	-32.000	647.966	647.962
J	67580.25	-32.000	647.972	647.968
PIER 5	67587.26	-32.000	647.975	647.975
K	67597.35	-32.000	647.978	647.996
L	67607.43	-32.000	647.980	648.019
M	67617.52	-32.000	647.981	648.032
N	67627.60	-32.000	647.980	648.030
O	67637.69	-32.000	647.978	648.013
CL. BRG. PIER 6	67650.49	-32.000	647.973	647.973

BEAM 7

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 3	67470.01	-28.500	647.969	647.969
A	67480.09	-28.500	647.987	648.012
B	67490.16	-28.500	648.005	648.046
C	67500.24	-28.500	648.021	648.065
D	67510.31	-28.500	648.035	648.069
E	67520.39	-28.500	648.049	648.065
PIER 4	67530.39	-28.500	648.061	648.061
F	67540.46	-28.500	648.072	648.068
G	67550.54	-28.500	648.081	648.078
H	67560.61	-28.500	648.089	648.086
I	67570.69	-28.500	648.096	648.092
J	67580.76	-28.500	648.101	648.097
PIER 5	67588.51	-28.500	648.105	648.105
K	67598.59	-28.500	648.108	648.126
L	67608.66	-28.500	648.110	648.149
M	67618.74	-28.500	648.110	648.161
N	67628.81	-28.500	648.109	648.159
O	67638.89	-28.500	648.107	648.142
CL. BRG. PIER 6	67651.67	-28.500	648.102	648.102

Ciorba Group, Inc.
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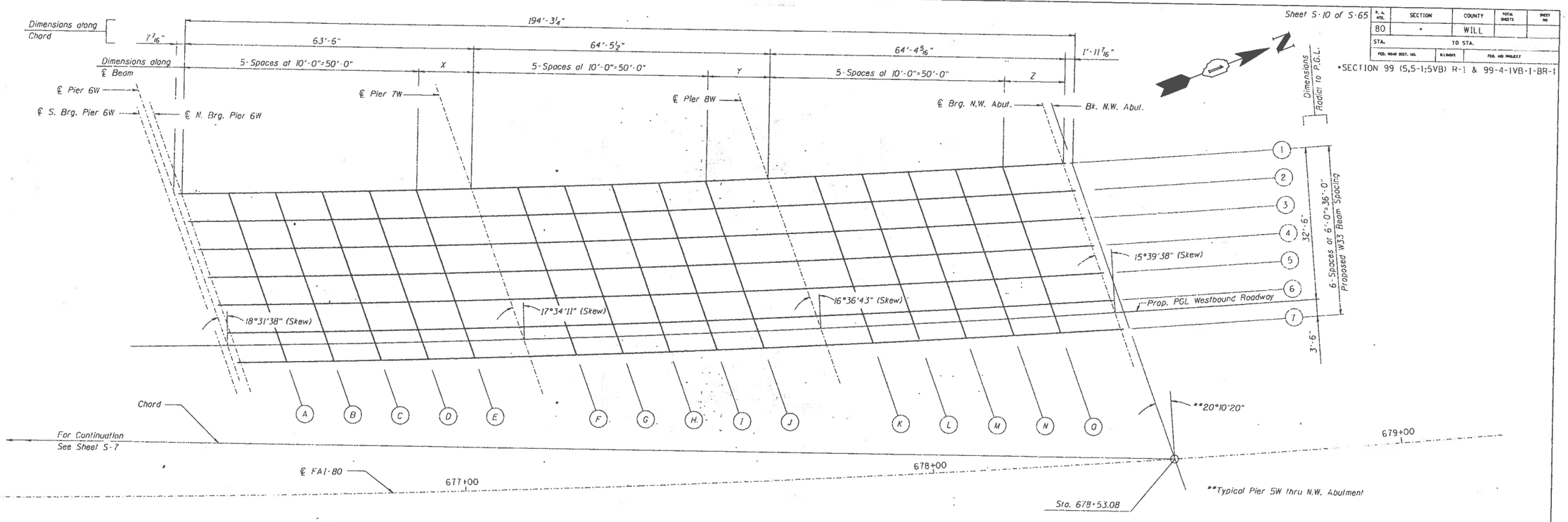
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
TOP OF SLAB ELEVATIONS SPAN 4-6
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS



Sheet S-10 of S-65

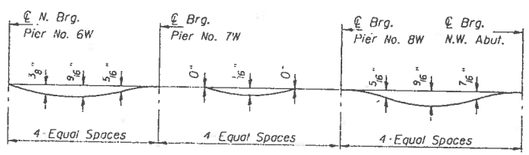
R.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO.		STATE	FED. AID PROJECT	

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1

PLAN
SPAN-7 THRU SPAN-9

X, Y & Z DIMENSIONS

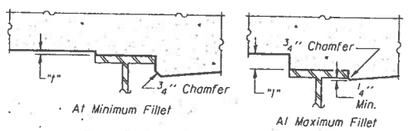
Beam	X	Y	Z
1	12'-8 5/16"	13'-4 1/4"	12'-11 5/16"
2	12'-8 3/16"	13'-4 1/8"	12'-11 3/16"
3	12'-8 1/16"	13'-4"	12'-11 1/8"
4	12'-8 9/16"	13'-3 7/8"	12'-11"
5	12'-8 1/16"	13'-3 13/16"	12'-10 7/8"
6	12'-8 5/16"	13'-3 11/16"	12'-10 13/16"
7	12'-8 3/16"	13'-3 9/16"	12'-10 11/16"



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete deck and all superimposed dead loads except future wearing surface).

Note: The above deflections are not to be used in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflections as shown on Sheet S-11 and S-12.



To determine "I": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheet S-11 and S-12, minus slab thickness, equals the fillet heights "I" above top flange of beams.

FILLET HEIGHTS

NOTES:
For Top of Slab Elevations See Sheet S-11 and S-12
All Elevations are at Top of Concrete.

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4000

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
ELEVATION LOCATIONS SPAN 7-9
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

2948/US30/Westbound/Elevloc3.dgn

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1

BEAM 1

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 6	67640.65	-64.500	646.774	646.774
A	67650.82	-64.500	646.771	646.796
B	67660.99	-64.500	646.766	646.808
C	67671.17	-64.500	646.759	646.805
O	67681.34	-64.500	646.751	646.788
E	67691.51	-64.500	646.742	646.762
PIER 7	67704.47	-64.500	646.728	646.728
F	67714.65	-64.500	646.716	646.715
G	67724.82	-64.500	646.702	646.706
H	67734.99	-64.500	646.687	646.694
I	67745.16	-64.500	646.671	646.676
J	67755.33	-64.500	646.653	646.653
PIER 8	67768.92	-64.500	646.628	646.628
K	67779.09	-64.500	646.607	646.622
L	67789.26	-64.500	646.585	646.618
M	67799.43	-64.500	646.561	646.606
N	67809.60	-64.500	646.536	646.581
O	67819.77	-64.500	646.510	646.541
CL. BRG. N. ABUT	67832.94	-64.500	646.474	646.474
BK. N. ABUT	67834.88	-64.500	646.469	646.469

BEAM 2

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 6	67642.71	-58.500	646.996	646.996
A	67652.87	-58.500	646.992	647.017
B	67663.02	-58.500	646.986	647.028
C	67673.18	-58.500	646.980	647.026
O	67683.33	-58.500	646.971	647.008
E	67693.49	-58.500	646.962	646.982
PIER 7	67706.42	-58.500	646.948	646.948
F	67716.58	-58.500	646.936	646.935
G	67726.73	-58.500	646.922	646.926
H	67736.89	-58.500	646.906	646.913
I	67747.04	-58.500	646.890	646.895
J	67757.20	-58.500	646.872	646.872
PIER 8	67770.75	-58.500	646.846	646.846
K	67780.91	58.500	646.825	646.840
L	67791.06	-58.500	646.803	646.836
M	67801.22	-58.500	646.779	646.824
N	67811.37	-58.500	646.754	646.799
O	67821.53	-58.500	646.727	646.758
CL. BRG. N. ABUT	67834.66	-58.500	646.691	646.691
BK. N. ABUT	67836.60	-58.500	646.686	646.686

BEAM 3

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL OEFL
CL. BRG. PIER 6	67644.76	-52.500	647.217	647.217
A	67654.90	-52.500	647.213	647.238
B	67665.04	-52.500	647.207	647.249
C	67675.18	-52.500	647.200	647.246
O	67685.32	-52.500	647.192	647.229
E	67695.46	-52.500	647.182	647.202
PIER 7	67708.36	-52.500	647.168	647.168
F	67718.50	-52.500	647.155	647.154
G	67728.64	-52.500	647.141	647.145
H	67738.78	-52.500	647.126	647.133
I	67748.92	-52.500	647.109	647.114
J	67759.06	-52.500	647.091	647.091
PIER 8	67772.58	-52.500	647.064	647.064
K	67782.72	-52.500	647.043	647.058
L	67792.86	-52.500	647.021	647.054
M	67803.00	-52.500	646.997	647.042
N	67813.14	-52.500	646.971	647.016
O	67823.28	-52.500	646.945	646.976
CL. BRG. N. ABUT	67836.38	-52.500	646.908	646.908
BK. N. ABUT	67838.31	-52.500	646.903	646.903

BEAM 4

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL OEFL
CL. BRG. PIER 6	67646.81	-46.500	647.438	647.438
A	67656.93	-46.500	647.434	647.459
B	67667.06	-46.500	647.428	647.470
C	67677.18	-46.500	647.421	647.467
D	67687.30	-46.500	647.412	647.449
E	67697.43	-46.500	647.402	647.422
PIER 7	67710.30	-46.500	647.387	647.387
F	67720.42	-46.500	647.374	647.373
G	67730.54	-46.500	647.360	647.364
H	67740.67	-46.500	647.344	647.351
I	67750.79	-46.500	647.327	647.332
J	67760.91	-46.500	647.309	647.309
PIER 8	67774.40	-46.500	647.283	647.283
K	67784.53	-46.500	647.261	647.276
L	67794.65	-46.500	647.238	647.271
M	67804.77	-46.500	647.214	647.259
N	67814.90	-46.500	647.189	647.234
O	67825.02	-46.500	647.162	647.193
CL. BRG. N. ABUT	67838.09	-46.500	647.125	647.125
BK. N. ABUT	67840.02	-46.500	647.120	647.120

BEAM 5

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 6	67648.85	-40.500	647.660	647.660
A	67658.96	-40.500	647.655	647.680
B	67669.07	-40.500	647.648	647.690
C	67679.17	-40.500	647.641	647.687
O	67689.28	-40.500	647.632	647.669
E	67699.39	-40.500	647.622	647.642
PIER 7	67712.22	-40.500	647.607	647.607
F	67722.33	-40.500	647.594	647.593
G	67732.44	-40.500	647.579	647.583
H	67742.55	-40.500	647.563	647.570
I	67752.65	-40.500	647.546	647.551
J	67762.76	-40.500	647.528	647.528
PIER 8	67776.22	-40.500	647.501	647.501
K	67786.33	-40.500	647.479	647.494
L	67796.43	-40.500	647.456	647.489
M	67806.54	-40.500	647.432	647.477
N	67816.65	-40.500	647.406	647.451
O	67826.75	-40.500	647.379	647.410
CL. BRG. N. ABUT	67839.80	-40.500	647.342	647.342
BK. N. ABUT	67841.73	-40.500	647.337	647.337

BEAM 6

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV AOJ FOR DL OEFL
CL. BRG. PIER 6	67650.88	-34.500	647.881	647.881
A	67660.97	-34.500	647.876	647.901
B	67671.07	-34.500	647.869	647.911
C	67681.16	-34.500	647.861	647.907
D	67691.25	-34.500	647.852	647.889
E	67701.34	-34.500	647.842	647.862
PIER 7	67714.15	-34.500	647.827	647.827
F	67724.24	-34.500	647.813	647.812
G	67734.33	-34.500	647.798	647.802
H	67744.42	-34.500	647.782	647.789
I	67754.51	-34.500	647.765	647.770
J	67764.60	-34.500	647.746	647.746
PIER 8	67778.03	-34.500	647.719	647.719
K	67788.12	-34.500	647.697	647.712
L	67798.21	-34.500	647.674	647.707
M	67808.30	-34.500	647.650	647.695
N	67818.39	-34.500	647.624	647.669
O	67828.49	-34.500	647.596	647.627
CL. BRG. N. ABUT	67841.50	-34.500	647.559	647.559
BK. N. ABUT	67843.42	-34.500	647.554	647.554

REVISIONS	
NAME	DATE

Cioria Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
TOP OF SLAB ELEVATIONS SPAN 7-9
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: GAE
DRAWN BY: JMG
CHECKED BY: LAS

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

*SECTION 99 (5.5-1:5VB) R-1 & 99-4-1VB-1-BR-1

PGL WESTBOUND

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 6	67651.73	-32.000	647.973	647.973
A	67661.81	-32.000	647.968	647.993
B	67671.90	-32.000	647.961	648.003
C	67681.98	-32.000	647.953	647.999
D	67692.07	-32.000	647.944	647.981
E	67702.15	-32.000	647.933	647.953
PIER 7	67714.95	-32.000	647.918	647.918
F	67725.03	-32.000	647.905	647.904
G	67735.11	-32.000	647.890	647.894
H	67745.20	-32.000	647.874	647.881
I	67755.28	-32.000	647.856	647.861
J	67765.37	-32.000	647.837	647.837
PIER 8	67778.78	-32.000	647.810	647.810
K	67788.87	-32.000	647.788	647.803
L	67798.95	-32.000	647.765	647.798
M	67809.04	-32.000	647.740	647.785
N	67819.12	-32.000	647.714	647.759
O	67829.20	-32.000	647.687	647.718
CL. BRG. N. ABUT	67842.21	-32.000	647.650	647.650
BK. N. ABUT	67844.13	-32.000	647.644	647.644

BEAM 7

LOCATION	STATION	OFFSET	THEO. GRADE ELEV.	THEO GRADE ELEV ADJ FOR DL DEFL
CL. BRG. PIER 6	67652.91	-28.500	648.102	648.102
A	67662.98	-28.500	648.096	648.121
B	67673.06	-28.500	648.090	648.132
C	67683.14	-28.500	648.082	648.128
D	67693.21	-28.500	648.072	648.109
E	67703.29	-28.500	648.062	648.082
PIER 7	67716.06	-28.500	648.046	648.046
F	67726.14	-28.500	648.033	648.032
G	67736.21	-28.500	648.018	648.022
H	67746.29	-28.500	648.001	648.008
I	67756.36	-28.500	647.984	647.989
J	67766.44	-28.500	647.965	647.965
PIER 8	67779.83	-28.500	647.937	647.937
K	67789.91	-28.500	647.915	647.930
L	67799.98	-28.500	647.892	647.925
M	67810.06	-28.500	647.867	647.912
N	67820.14	-28.500	647.841	647.886
O	67830.21	-28.500	647.814	647.845
CL. BRG. N. ABUT	67843.20	-28.500	647.776	647.776
BK. N. ABUT	67845.12	-28.500	647.771	647.771

Clarke Group, Inc.
CONSULTING ENGINEERS
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
TOP OF SLAB ELEVATIONS SPAN 7-9
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

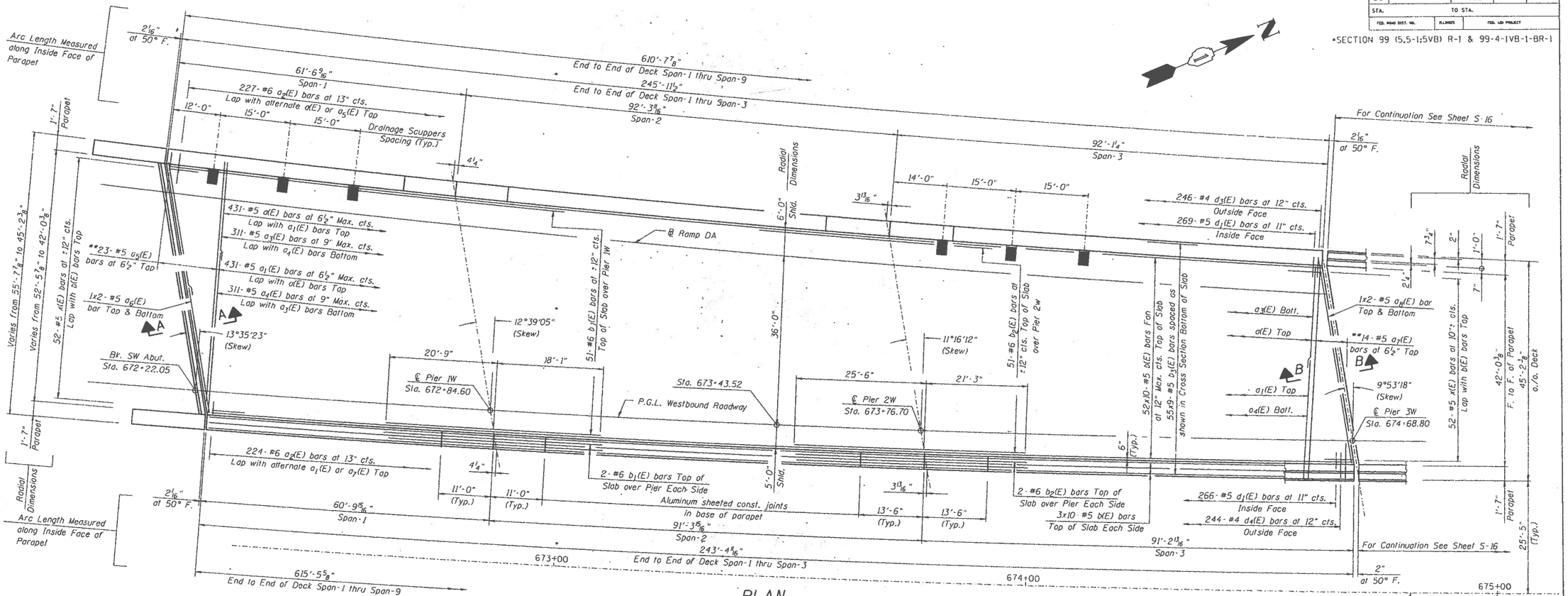
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: GAE
DRAWN BY: IWG
CHECKED BY: LAS

2948/US30/WESTBOUND/SLABEL3.DGN

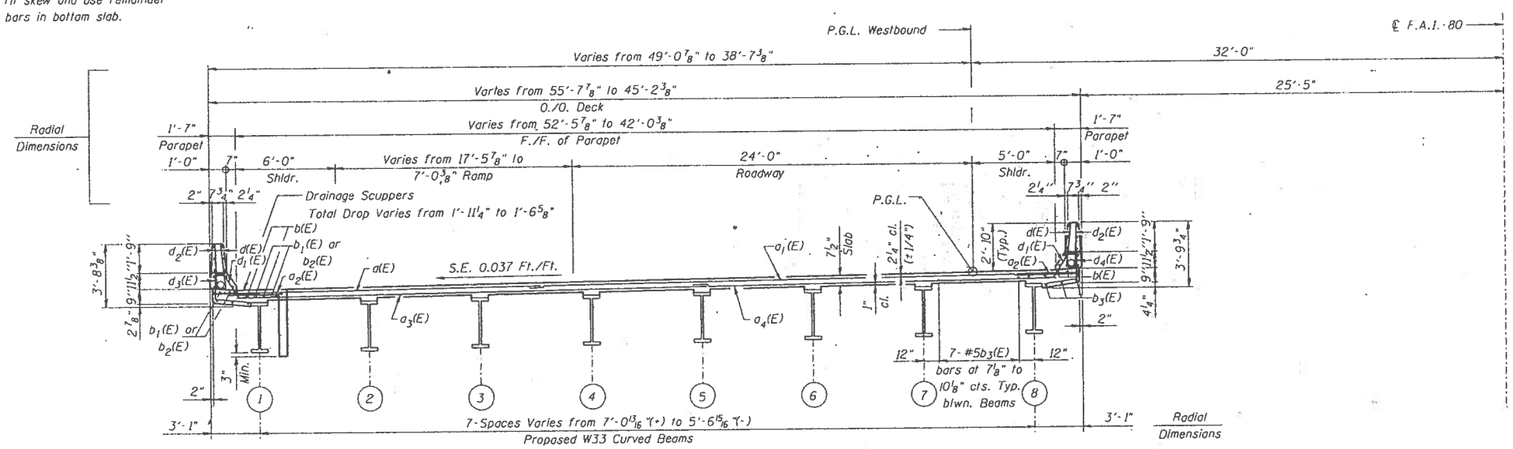
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



PLAN
SPAN-1 THRU SPAN-3

**Order $a_5(E)$ & $a_7(E)$ bars full length. Cut to fit skew and use remainder of top bars in bottom slab.



CROSS SECTION
SPAN 1 THRU SPAN 3 (LOOKING UPSTATION)

NOTES:
See Sheet S-15 for Superstructure Details .
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet S-14 for Parapet Elevation & Bill of Material.
The transverse reinforcement bars in the deck shall be adjusted to miss the Drainage Scuppers.
Minimum lap splicers shall be 2'-2" for #5 bars.
For Drainage Scupper Details See Sheet S-15, S-58 and S-59.
For Section A-A & Section B-B See Sheet S-15.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
DECK PLAN & CROSS SECTION SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

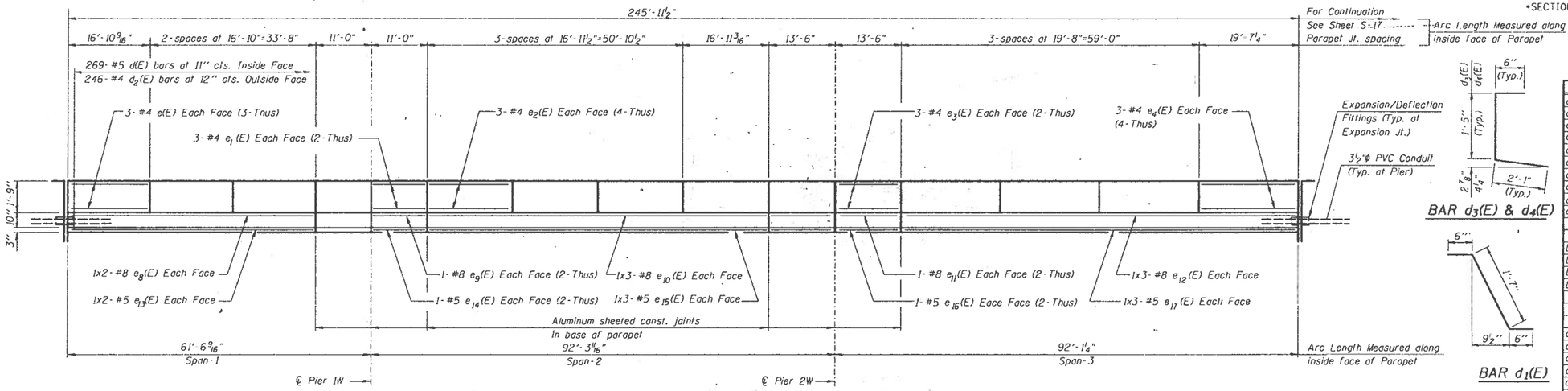
SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: LAS
DRAWN BY: JMG
CHECKED BY: GAE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/DECKDET1.DGN

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

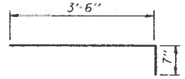
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-IVB-1-BR-1



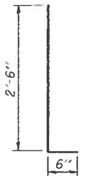
INSIDE ELEVATION OF WEST PARAPET

BAR $d_3(E)$ & $d_4(E)$

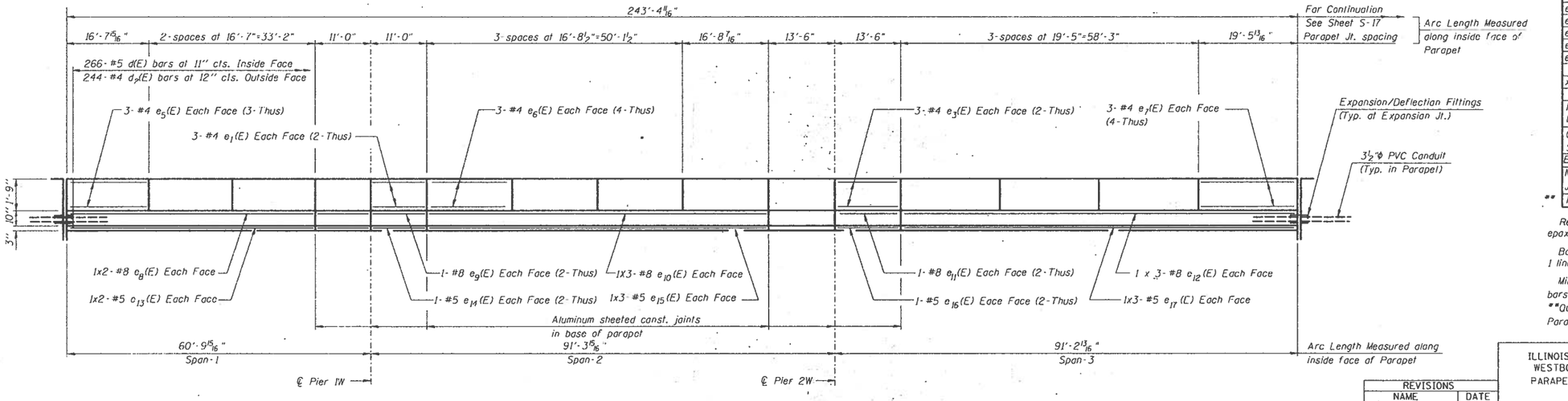
BAR $d_1(E)$



BARS x(E)



BARS d(E) & d_2(E)



INSIDE ELEVATION OF EAST PARAPET

SUPERSTRUCTURE SPAN 1-3

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	431	#5	20'-2"	
d_1(E)	431	#5	36'-2"	
d_2(E)	451	#6	4'-0"	
d_3(E)	311	#5	33'-0"	
d_4(E)	311	#5	23'-4"	
d_5(E)	23	#5	53'-6"	
d_6(E)	4	#5	28'-2"	
d_7(E)	14	#5	43'-0"	
d_8(E)	4	#5	22'-5"	
d_9(E)	48	#5	2'-0"	
b(E)	580	#5	26'-7"	
b_1(E)	55	#6	38'-10"	
b_2(E)	55	#6	46'-9"	
b_3(E)	495	#5	29'-3"	
d(E)	535	#5	3'-0"	
d_1(E)	535	#5	2'-7"	
d_2(E)	490	#4	3'-0"	
d_3(E)	246	#4	4'-0"	
d_4(E)	244	#4	4'-0"	
e(E)	18	#4	16'-7"	
e_1(E)	24	#4	10'-9"	
e_2(E)	24	#4	16'-8"	
e_3(E)	24	#4	13'-3"	
e_4(E)	24	#4	19'-4"	
e_5(E)	18	#4	16'-4"	
e_6(E)	24	#4	16'-5"	
e_7(E)	24	#4	19'-2"	
e_8(E)	8	#8	27'-6"	
e_9(E)	8	#8	10'-9"	
e_{10}(E)	12	#8	25'-6"	
e_{11}(E)	8	#8	13'-3"	
e_{12}(E)	12	#8	29'-3"	
e_{13}(E)	8	#5	26'-4"	
e_{14}(E)	8	#5	10'-9"	
e_{15}(E)	12	#5	24'-0"	
e_{16}(E)	8	#5	13'-3"	
e_{17}(E)	12	#5	27'-8"	
x(E)	104	#5	4'-1"	
Reinforcement Bars, Epoxy Coated			Lbs.	98480
Concrete Superstructures			Cu. Yds.	354.5
Bridge Deck Grooving			Sq. Yds.	1225
Neoprene Expansion Joint (2")			Foot	100
** Protective Coat			Sq. Yds.	200

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.

Minimum lap splices shall be 2'-2" for #5 bars and 4'-6" for #8 bars.

**Quantity includes top & insiae face of Parapet only.

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PARAPET ELEVATION & DETAILS SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

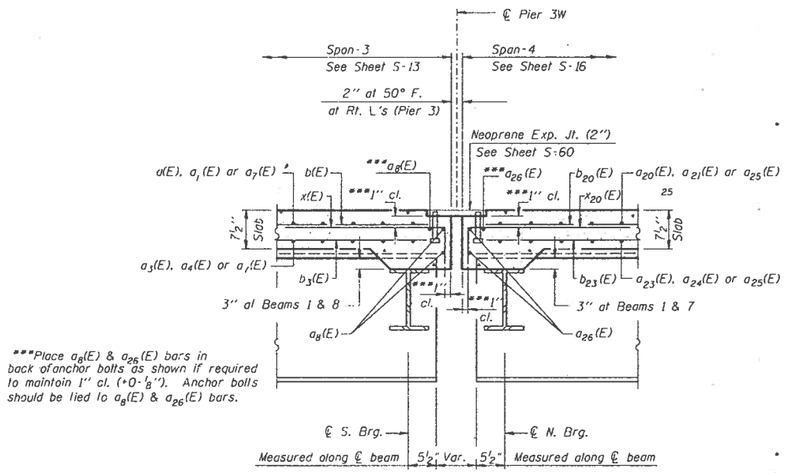
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

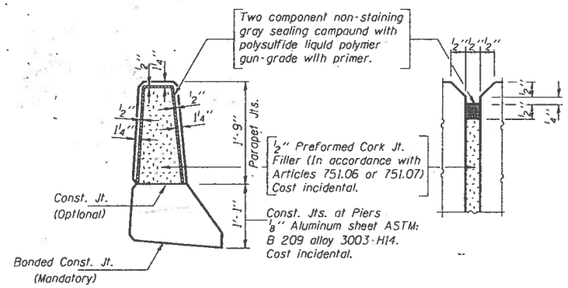
C:/2948/US30/WESTBOUN/PARAPET1.DGN

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

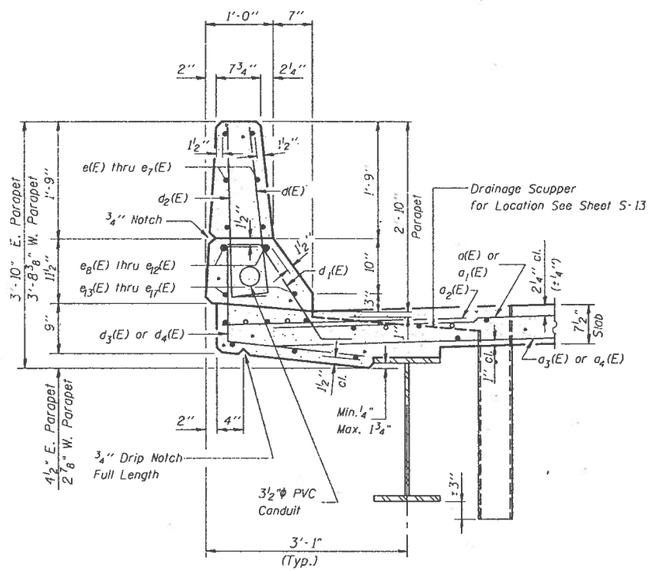
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-IVB-1-BR-1



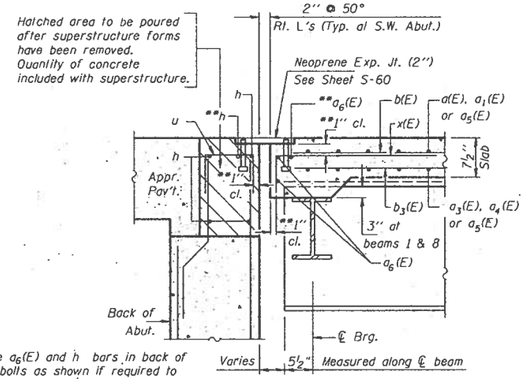
SECTION B-B



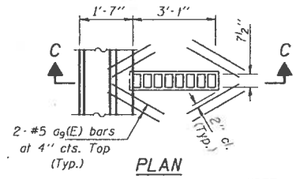
PARAPET JOINT DETAILS



SECTION THRU PARAPET

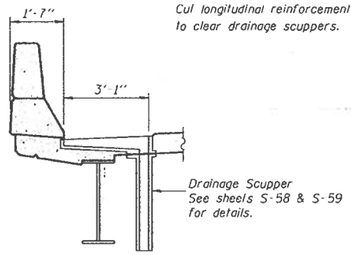


SECTION A-A



PLAN

NOTE:
Cul longitudinal reinforcement to clear drainage scuppers.



SECTION C-C

REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
SUPERSTRUCTURE DETAILS SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

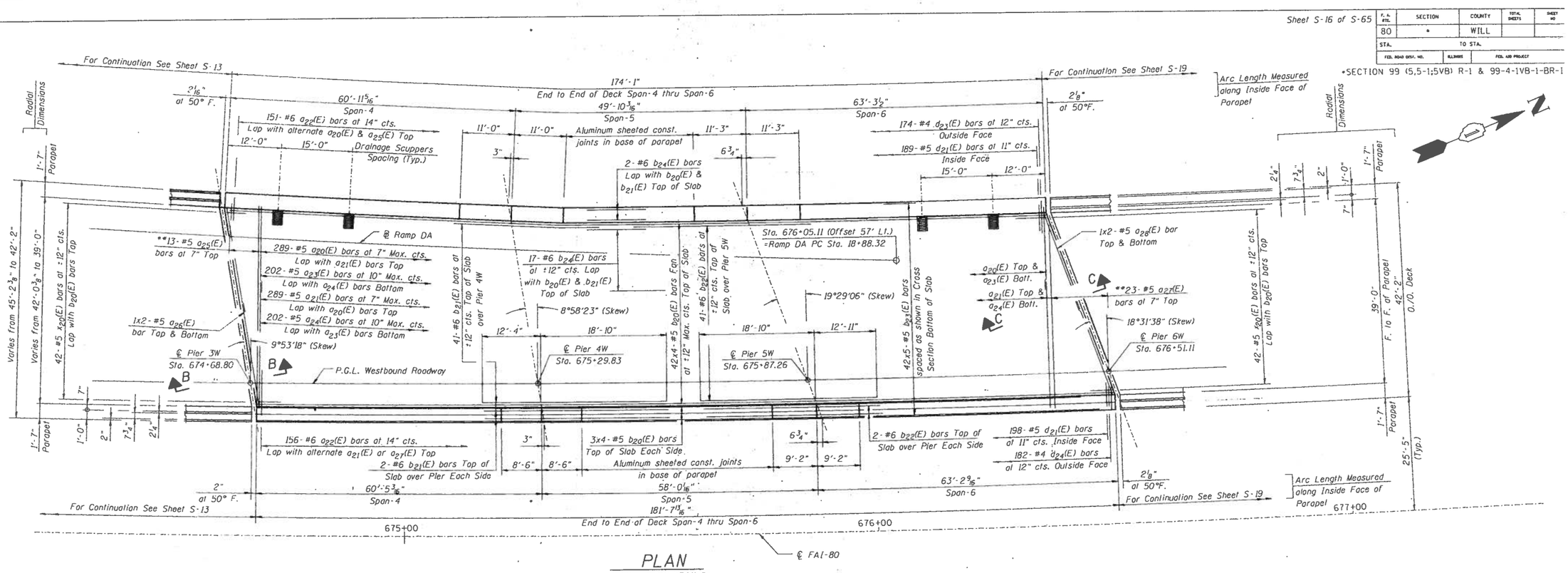
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

C:/2948/US30/WESTBOUN/PARAPET1.DGN

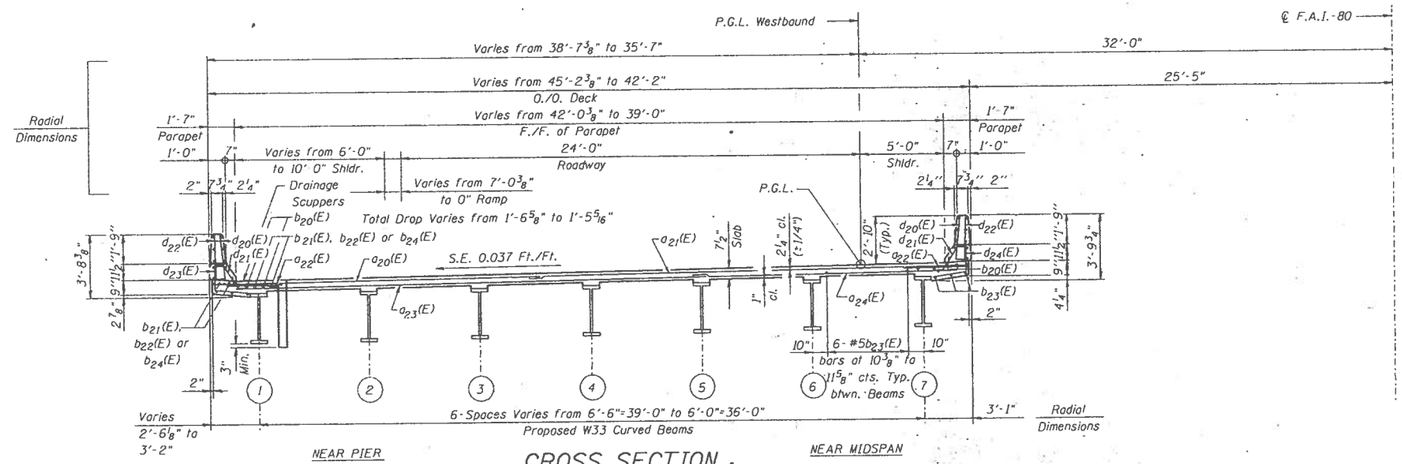
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



PLAN
SPAN-4 THRU SPAN-6

**Order $a_{25}(E)$ & $a_{27}(E)$ bars full length. Cut to fit skew and use remainder of top bars in bottom slab.



CROSS SECTION
SPAN-4 THRU SPAN-6 (LOOKING UPSTATION)

NOTES:
See Sheet S-18 for Superstructure Details.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet S-17 for Parapet Elevation & Bill of Material.
The transverse reinforcement bars in the deck shall be adjusted to miss the Drainage Scuppers.
Minimum lap splice shall be 2'-2" for #5 bars and 2'-7" for #6 bars.
For Drainage Scupper Details See Sheet S-18, S-58 and S-59.
For Section B-B & Section C-C See Sheet S-18.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
DECK PLAN & CROSS SECTION SPAN 4-6
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

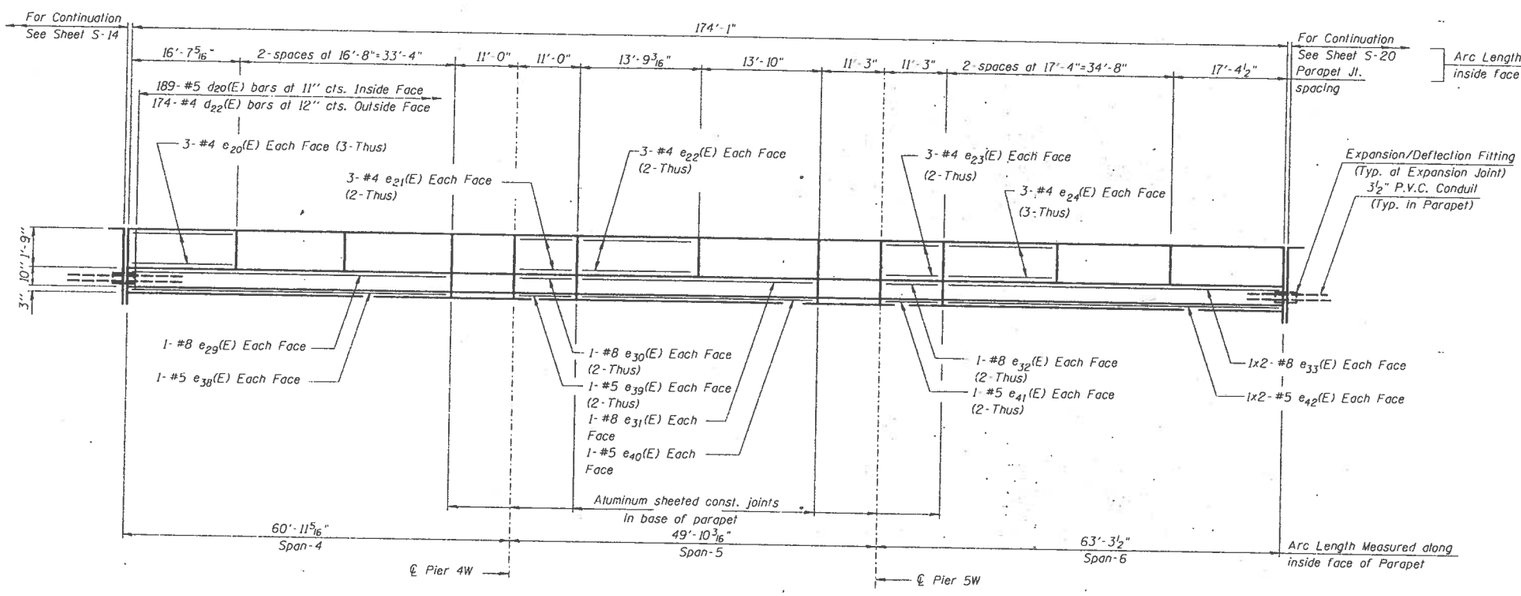
Clarke Group, Inc.
CONSULTING ENGINEERS
5501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/DECKDET2.DGN

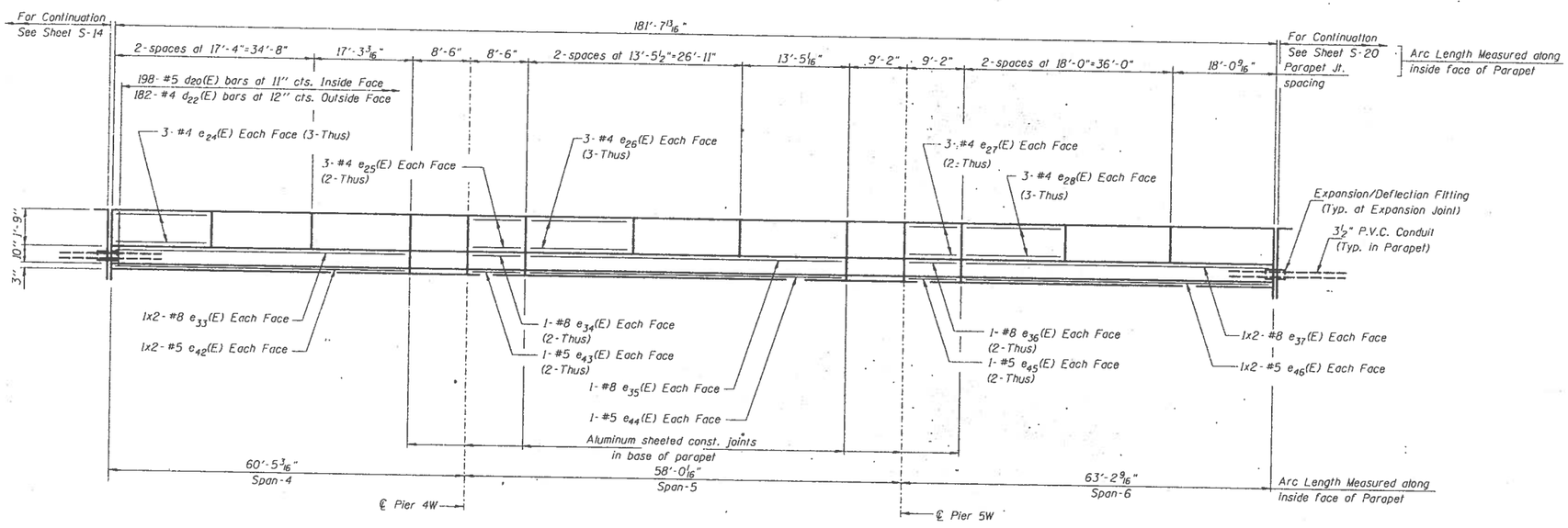
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8D	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1

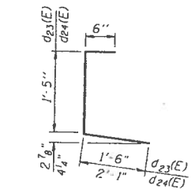
SUPERSTRUCTURE SPAN 4-6



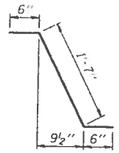
INSIDE ELEVATION OF WEST PARAPET
SPAN-4 THRU SPAN-6



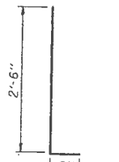
INSIDE ELEVATION OF EAST PARAPET
SPAN-4 THRU SPAN-6



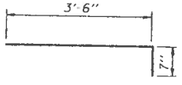
BARS $d_{23}(E)$ & $d_{24}(E)$



BAR $d_{21}(E)$



BARS $d_{20}(E)$ & $d_{22}(E)$



BARS $x_{20}(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_{20}(E)$	289	#5	20'-0"	
$d_{21}(E)$	289	#5	26'-7"	
$d_{22}(E)$	307	#6	4'-0"	
$d_{23}(E)$	202	#5	29'-10"	
$d_{24}(E)$	202	#5	15'-7"	
$d_{25}(E)$	13	#5	43'-5"	
$d_{26}(E)$	4	#5	23'-0"	
$d_{27}(E)$	23	#5	40'-4"	
$d_{28}(E)$	4	#5	22'-2"	
$d_{29}(E)$	32	#5	2'-0"	
$b_{20}(E)$	192	#5	46'-11"	
$b_{21}(E)$	45	#6	31'-2"	
$b_{22}(E)$	45	#6	31'-9"	
$b_{23}(E)$	210	#5	38'-0"	
$b_{24}(E)$	19	#6	21'-6"	
$d_{20}(E)$	387	#5	3'-0"	
$d_{21}(E)$	387	#5	2'-7"	
$d_{22}(E)$	356	#4	3'-0"	
$d_{23}(E)$	174	#4	3'-5"	
$d_{24}(E)$	182	#4	4'-0"	
$e_{20}(E)$	18	#4	16'-4"	
$e_{21}(E)$	12	#4	10'-9"	
$e_{22}(E)$	12	#4	13'-6"	
$e_{23}(E)$	12	#4	11'-0"	
$e_{24}(E)$	36	#4	17'-0"	
$e_{25}(E)$	12	#4	8'-3"	
$e_{26}(E)$	18	#4	13'-2"	
$e_{27}(E)$	12	#4	8'-11"	
$e_{28}(E)$	18	#4	17'-9"	
$e_{29}(E)$	2	#8	49'-8"	
$e_{30}(E)$	4	#8	10'-9"	
$e_{31}(E)$	2	#8	27'-4"	
$e_{32}(E)$	4	#8	11'-0"	
$e_{33}(E)$	8	#8	28'-2"	
$e_{34}(E)$	4	#8	8'-3"	
$e_{35}(E)$	2	#8	40'-1"	
$e_{36}(E)$	4	#8	8'-11"	
$e_{37}(E)$	4	#8	29'-2"	
$e_{38}(E)$	2	#5	49'-8"	
$e_{39}(E)$	4	#5	10'-9"	
$e_{40}(E)$	2	#5	27'-4"	
$e_{41}(E)$	4	#5	11'-0"	
$e_{42}(E)$	8	#5	27'-0"	
$e_{43}(E)$	4	#5	8'-3"	
$e_{44}(E)$	2	#5	40'-1"	
$e_{45}(E)$	4	#5	8'-11"	
$e_{46}(E)$	4	#5	28'-0"	
$x_{20}(E)$	84	#5	4'-1"	
Reinforcement Bars, Epoxy Coated			Lbs.	58160
Concrete Superstructures			Cu. Yds.	222.3
Bridge Deck Grooving			Sq. Yds.	735
Protective Coat			Sq. Yds.	146

** Quantity includes top & inside face of Parapet only.

Reinforcement bars designated (E) shall be epoxy coated.

Minimum lap splices shall be 2'-2" for #5 bars and 4'-6" for #8 bars.

Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PARAPET ELEVATION & DETAILS SPAN 4-6
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

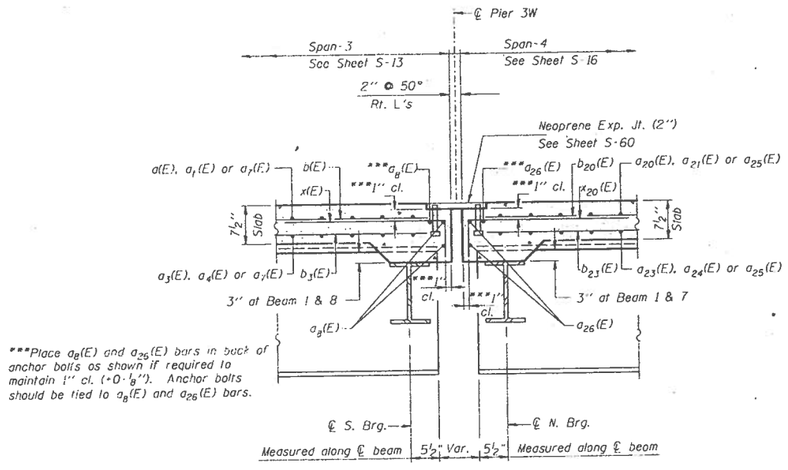
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

Clarke Group, Inc.
CONSULTING ENGINEERS
5501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

C:/2948/US30/WESTBOUND/PARAPET2.DGN

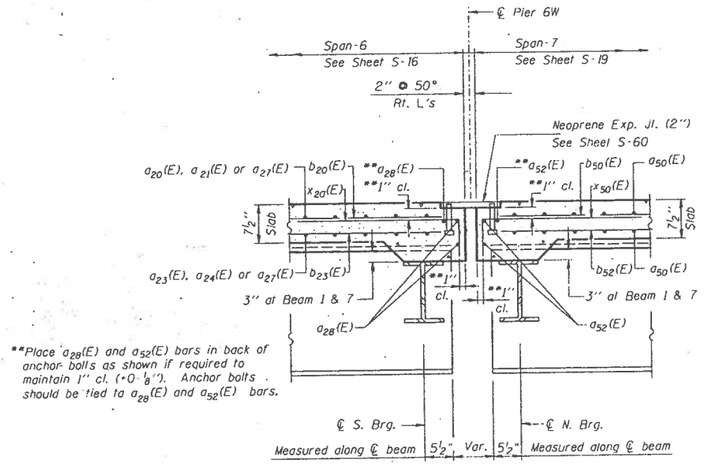
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1:5VB) R-1 & 99-4-1VB-1-BR-1



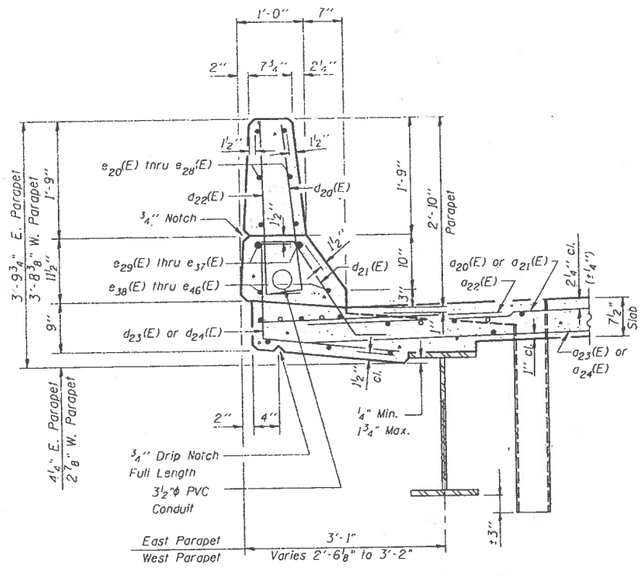
***Place $a_8(E)$ and $a_{26}(E)$ bars in back of anchor bolts as shown if required to maintain 1" cl. (+0-⅛"). Anchor bolts should be tied to $a_8(E)$ and $a_{26}(E)$ bars.

SECTION B-B

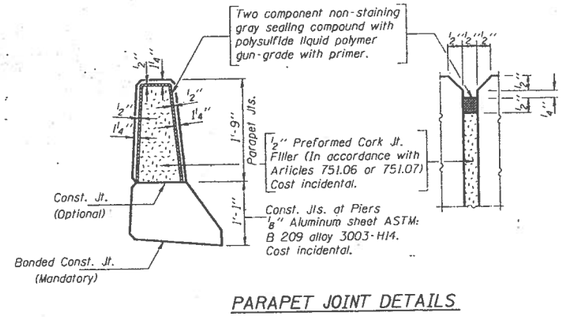


**Place $a_{28}(E)$ and $a_{52}(E)$ bars in back of anchor bolts as shown if required to maintain 1" cl. (+0-⅛"). Anchor bolts should be tied to $a_{28}(E)$ and $a_{52}(E)$ bars.

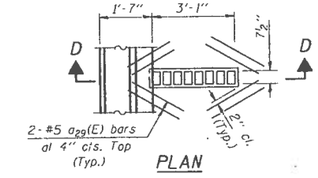
SECTION C-C



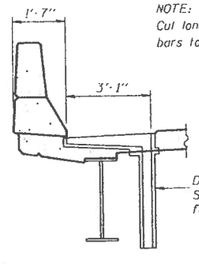
SECTION THRU PARAPET



PARAPET JOINT DETAILS



PLAN



NOTE:
Cut longitudinal reinforcement bars to clear Drainage Scuppers.

SECTION D-D

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
SUPERSTRUCTURE DETAILS SPAN 4-6
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

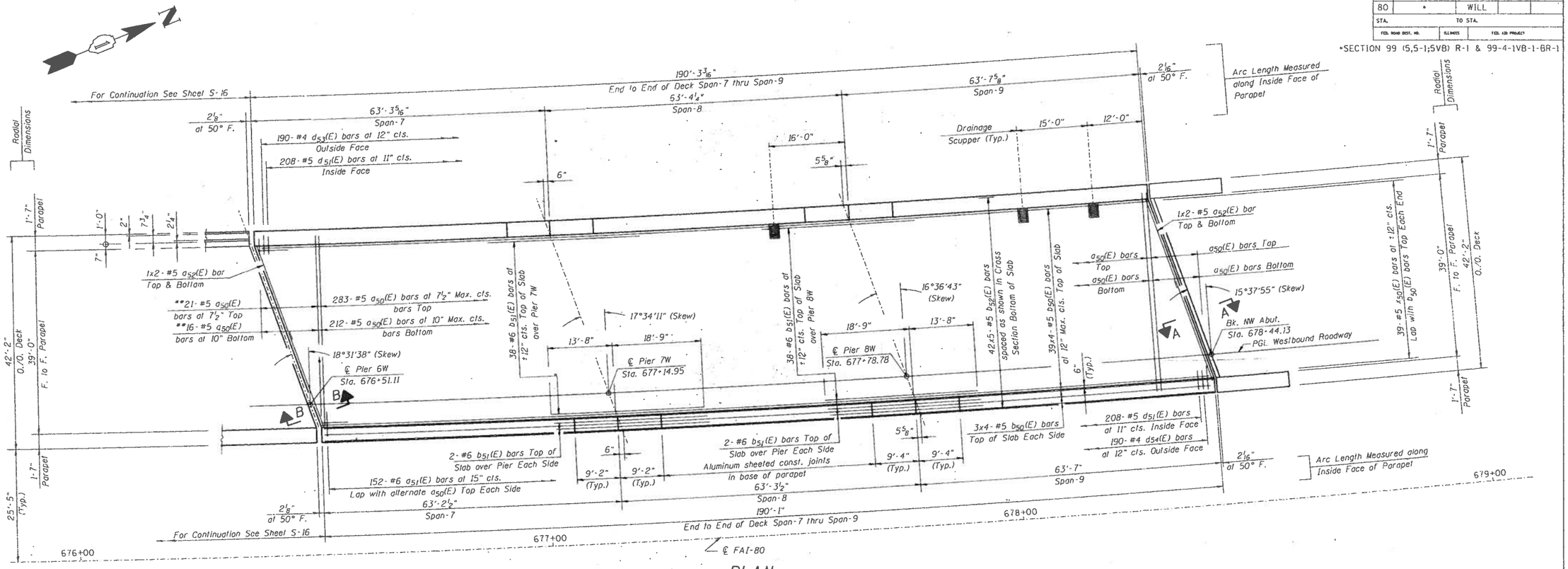
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

Ciorba Group, Inc.
CONSULTING ENGINEERS
3501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/PARAPET2.DGN

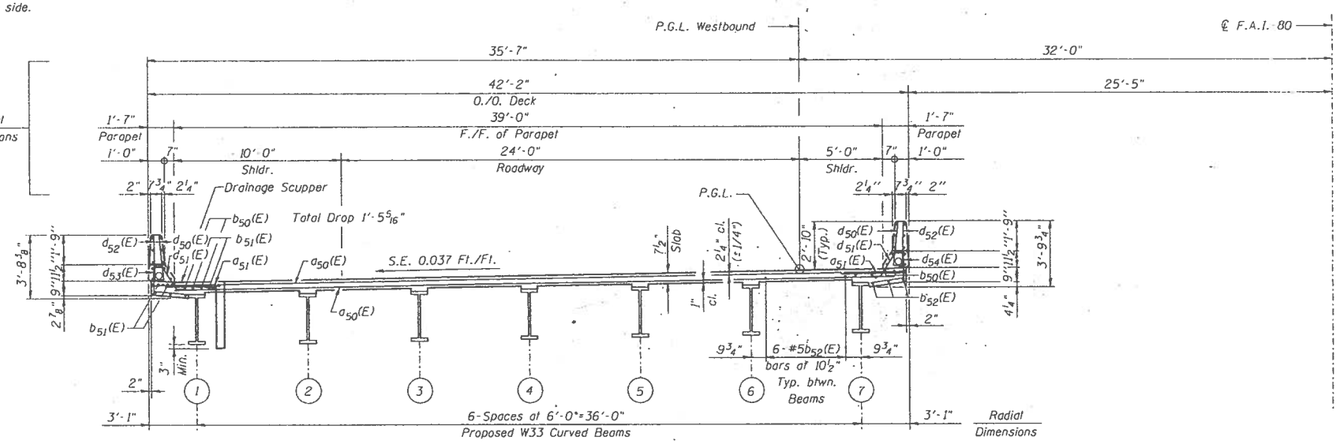
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,S-1;SVB) R-1 & 99-4-1VB-1-BR-1



PLAN
SPAN-7 THRU SPAN-9

**Order $a_{50}(E)$ bars full length. Cut to fit skew and use remainder of bars in opposite side.



CROSS SECTION
SPAN-7 THRU SPAN-9 (LOOKING UPSTATION)

NOTES:
See Sheet S-21 for Superstructure Details.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20x3 #5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet S-20 for Parapet Elevation & Bill of Material.
The transverse reinforcement bars in the deck shall be adjusted to miss the Drainage Scuppers.
Minimum lap splice shall be 2'-2" for #5 bars.
For Drainage Scupper Details See Sheet S-21, S-58 and S-59.
For Section A-A & Section B-B See Sheet S-21.

REVISIONS	
NAME	DATE

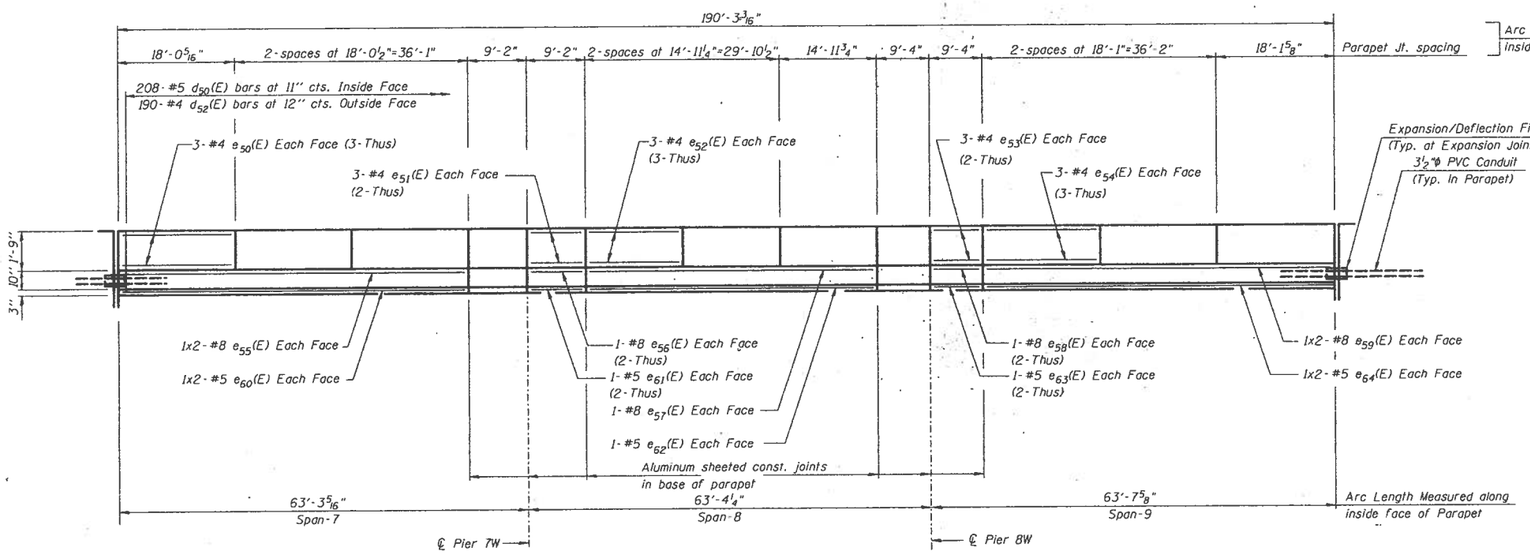
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
DECK PLAN & CROSS SECTION SPAN 7-9
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

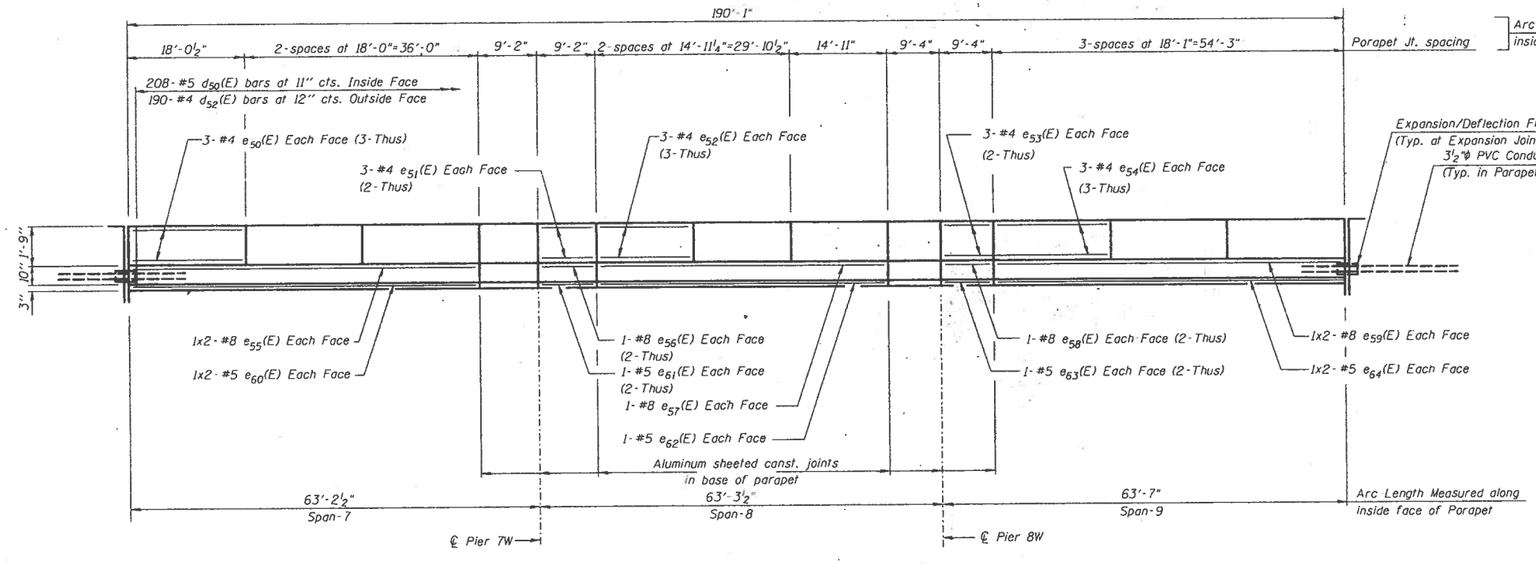
Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

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

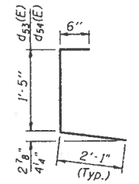
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-I-BR-1



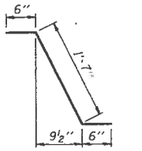
INSIDE ELEVATION OF WEST PARAPET
SPAN-7 THRU SPAN-9



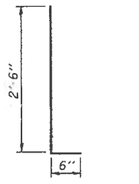
INSIDE ELEVATION OF EAST PARAPET
SPAN-7 THRU SPAN-9



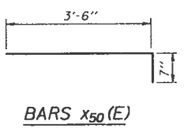
BAR $d_{53}(E)$ & $d_{54}(E)$



BAR $d_{51}(E)$



BARS $d_{50}(E)$ & $d_{52}(E)$



BARS $x_{50}(E)$

SUPERSTRUCTURE
SPAN 7-9
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_{50}(E)$	532	#5	41'-0"	
$d_{51}(E)$	304	#6	4'-0"	
$d_{52}(E)$	8	#5	22'-7"	
$d_{53}(E)$	24	#5	2'-0"	
$b_{50}(E)$	180	#5	49'-2"	
$b_{51}(E)$	84	#6	32'-5"	
$b_{52}(E)$	210	#5	39'-9"	
$d_{50}(E)$	416	#5	3'-0"	
$d_{51}(E)$	416	#5	2'-7"	
$d_{52}(E)$	380	#4	3'-0"	
$d_{53}(E)$	190	#4	4'-0"	
$d_{54}(E)$	190	#4	4'-0"	
$e_{50}(E)$	36	#4	17'-9"	
$e_{51}(E)$	24	#4	8'-11"	
$e_{52}(E)$	36	#4	14'-8"	
$e_{53}(E)$	24	#4	9'-1"	
$e_{54}(E)$	36	#4	17'-10"	
$e_{55}(E)$	8	#8	29'-2"	
$e_{56}(E)$	8	#8	8'-11"	
$e_{57}(E)$	4	#8	44'-7"	
$e_{58}(E)$	8	#8	9'-1"	
$e_{59}(E)$	8	#8	29'-3"	
$e_{60}(E)$	8	#5	28'-1"	
$e_{61}(E)$	8	#5	8'-11"	
$e_{62}(E)$	4	#5	44'-7"	
$e_{63}(E)$	8	#5	9'-1"	
$e_{64}(E)$	8	#5	28'-2"	
$x_{50}(E)$	78	#5	4'-1"	
Reinforcement Bars, Epoxy Coated		Lbs.	55790	
Concrete Superstructures		Cu. Yds.	237.3	
Bridge Deck Grooving		Sq. Yds.	775	
Neoprene Expansion Joint (2")		Foot	82	
** Protective Coat		Sq. Yds.	156	

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.

Minimum lap splices shall be 2'-2" for #5 bars and 4'-6" for #8 bars.

**Quantity includes top & inside face of parapet only.

REVISIONS	
NAME	DATE

Cleiba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4005

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PARAPET ELEVATION & DETAILS SPAN 7-9
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

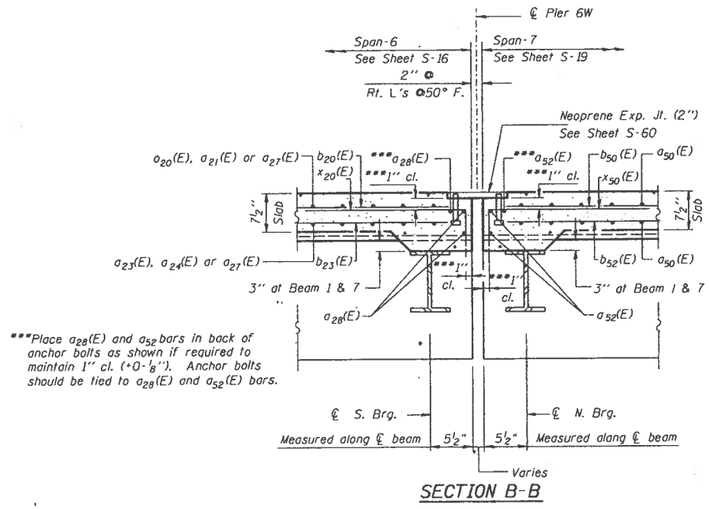
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

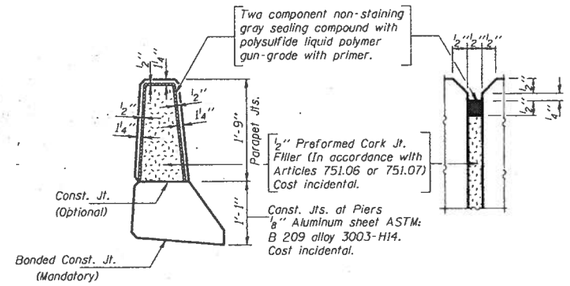
2948/US30/WESTBOUND/PARAPET3.DGN

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

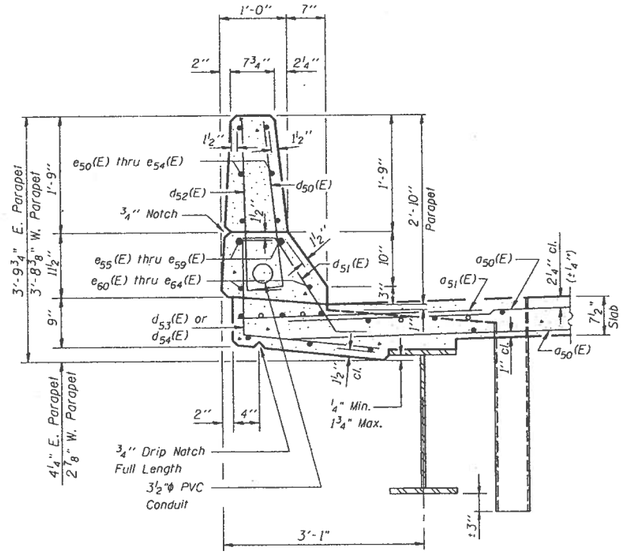
-SECTION 99 (5,S-1;5VB) R-1 & 99-4-1VB-1-BR-1



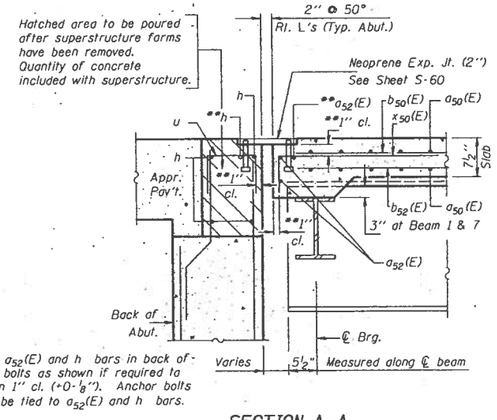
SECTION B-B



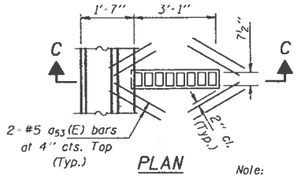
PARAPET JOINT DETAILS



SECTION THRU PARAPET

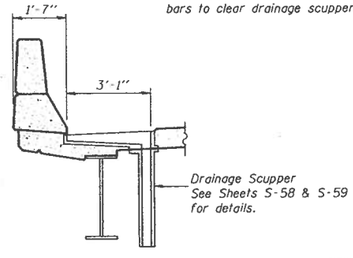


SECTION A-A



PLAN

Note:
Cut longitudinal reinforcement bars to clear drainage scuppers.



SECTION C-C

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
SUPERSTRUCTURE DETAILS SPAN 7-9
FAI-80 STA. 673+37.46
•SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

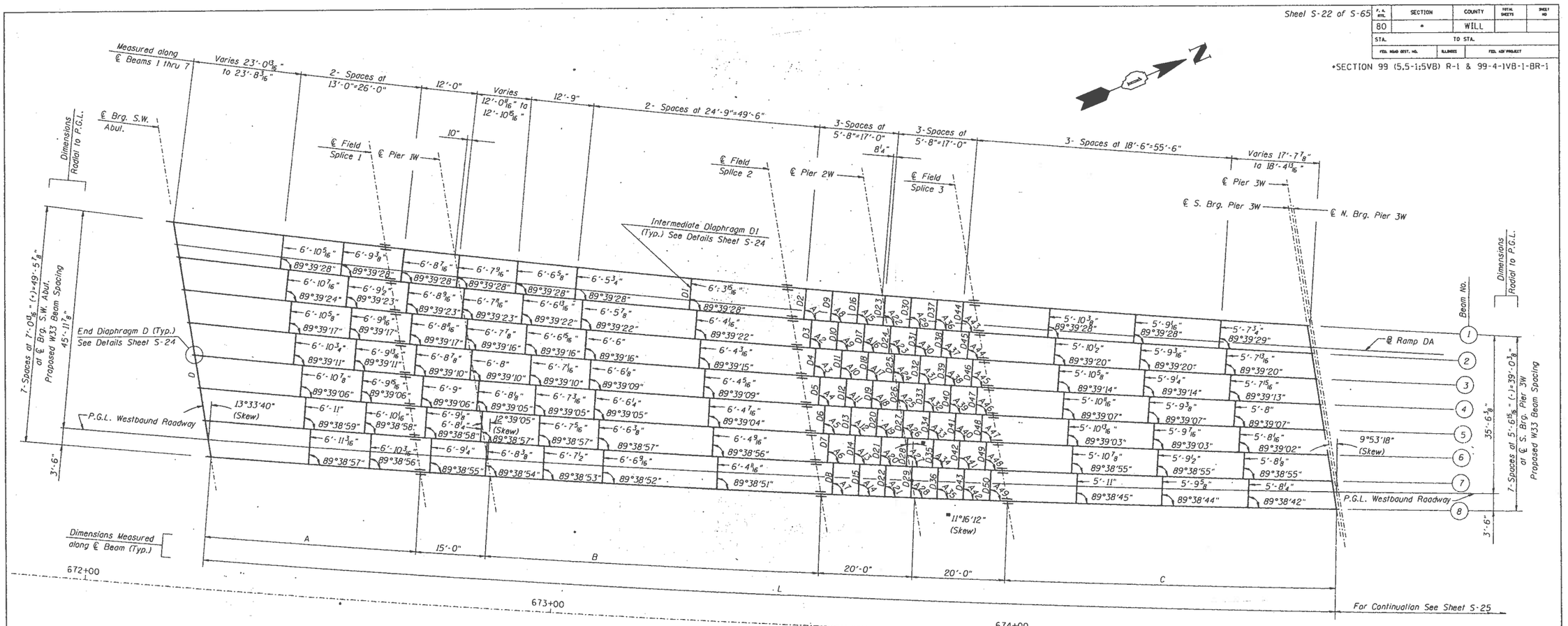
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

Sheet S-22 of S-65

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1V8-1-BR-1



INTERMEDIATE DIAPHRAGMS LENGTH AND ANGLE

DIA. LENGTH	ANGLE	DIA. LENGTH	ANGLE	DIA. LENGTH	ANGLE	DIA. LENGTH	ANGLE
D2=6'-2 3/16"	A1=89°39'28"	D16=6'-1 3/8"	A15=89°39'28"	D30=6'-0 9/16"	A29=89°39;28"	D44=5'-11 3/4"	A43=89°39'28"
D3=6'-2 5/16"	A2=89°39'21"	D17=6'-1 1/2"	A16=89°39'21"	D31=6'-0 1/16"	A30=89°39'21"	D45=5'-11 7/8"	A44=89°39'21"
D4=6'-2 7/16"	A3=89°39'15"	D18=6'-1 5/8"	A17=89°39'14"	D32=6'-0 3/4"	A31=89°39'14"	D46=5'-11 15/16"	A45=89°39'14"
D5=6'-2 9/16"	A4=89°39'08"	D19=6'-1 11/16"	A18=89°39'08"	D33=6'-0 7/8"	A32=89°39'08"	D47=6'-0 1/16"	A46=89°39'08"
D6=6'-2 5/8"	A5=89°39'04"	D20=6'-1 13/16"	A19=89°39'03"	D34=6'-1"	A33=89°39'03"	D48=6'-0 1/8"	A47=89°39'03"
D7=6'-2 3/4"	A6=89°38'56"	D21=6'-1 15/16"	A20=89°38'56"	D35=6'-1 1/16"	A34=89°38'55"	D49=6'-0 1/4"	A48=89°38'55"
D8=6'-2 7/8"	A7=89°38'49"	D22=6'-2 1/16"	A21=89°38'48"	D36=6'-1 3/16"	A35=89°38'47"	D50=6'-0 3/8"	A49=89°38'46"
D9=6'-3 1/4"	A8=89°39'28"	D23=6'-0 15/16"	A22=89°39'28"	D37=6'-0 1/8"	A36=89°39'28"		
D10=6'-1 7/8"	A9=89°39'21"	D24=6'-1 1/16"	A23=89°39'21"	D38=6'-0 1/4"	A37=89°39'21"		
D11=6'-2"	A10=89°39'14"	D25=6'-1 3/16"	A24=89°39'14"	D39=6'-0 3/8"	A38=89°39'14"		
D12=6'-2 1/8"	A11=89°39'08"	D26=6'-1 5/16"	A25=89°39'08"	D40=6'-0 7/16"	A39=89°39'08"		
D13=6'-2 1/4"	A12=89°39'04"	D27=6'-1 3/8"	A26=89°39'03"	D41=6'-0 9/16"	A40=89°39'03"		
D14=6'-2 5/16"	A13=89°38'56"	D28=6'-1 1/2"	A27=89°38'56"	D42=6'-0 11/16"	A41=89°38'55"		
D15=6'-2 7/8"	A14=89°38'48"	D29=6'-1 5/8"	A28=89°38'47"	D43=6'-0 3/4"	A42=89°38'47"		

FRAMING PLAN

SPAN 1 THRU SPAN 3

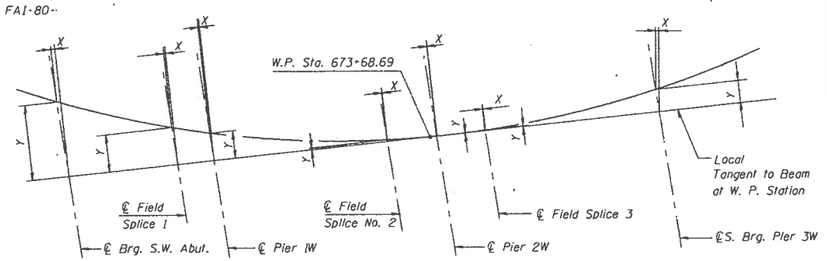
NOTES:
All intermediate diaphragms shall be placed at right angles to the beam with the smallest radius.
For end and intermediate diaphragms details See Sheet S-24
For Beam Elevation See Sheet S-23
Radius 1 extends from the end of the beam at the S.W. Abutment to the end of the beam at Pier 3W.
All dimensions are horizontal. End of beams shall be vertical.

LAYOUT DIMENSIONS (in feet)

BEAM	℄ Brg. S.W. Abut.		Field Splice #1		Pier 1W		Field Splice #2		Pier 2W		Field Splice #3		℄ S. Brg. Pier 3W	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	9 3/16"	3'-1 7/16"	4 7/16"	1'-6 3/8"	3 5/16"	1'-1 5/8"	1/8"	5/8"	0	0	1/8"	5/8"	3 5/16"	1'-1 3/8"
2	8 13/16"	3'-0 5/8"	4 1/4"	1'-5 7/8"	3 1/8"	1'-1 13/16"	1/8"	9/16"	0	0	1/8"	3/4"	3 1/4"	1'-1 11/16"
3	8 3/8"	2'-11 7/8"	4"	1'-5 3/8"	2 15/16"	1'-0 3/4"	1/8"	1/2"	0	0	1/8"	13/16"	3 1/4"	1'-2"
4	7 15/16"	2'-11 3/8"	3 13/16"	1'-4 15/16"	2 13/16"	1'-0 3/8"	1/8"	7/16"	0	0	1/8"	7/8"	3 1/4"	1'-2 5/16"
5	7 7/16"	2'-10 3/8"	3 5/8"	1'-4 7/16"	2 5/8"	11 15/16"	1/8"	3/8"	0	1/16"	1/8"	1"	3 3/16"	1'-2 5/8"
6	7 1/16"	2'-9 15/16"	3 3/8"	1'-4"	2 1/2"	11 9/16"	1/8"	5/16"	0	1/16"	3/16"	1 1/16"	3 3/16"	1'-2 15/16"
7	6 13/16"	2'-8 15/16"	3 3/16"	1'-3 1/2"	2 5/16"	11 3/16"	1/16"	1/4"	0	1/16"	3/16"	1 3/16"	3 3/16"	1'-3 5/16"
8	6 1/2"	2'-8 1/4"	3"	1'-3 1/8"	2 3/16"	10 13/16"	0	3/16"	0	1/8"	1/4"	1 5/16"	3 1/8"	1'-3 5/8"

BEAM DIMENSIONS (in feet)

BEAM	A	B	C	L	RADIUS 1
1	45'-10 3/16"	72'-3 1/16"	71'-7 1/16"	244'-8 15/16"	3758.50
2	45'-8 7/8"	72'-1 7/8"	71'-5 7/16"	244'-4 7/16"	3765.0
3	45'-7 5/8"	72'-0 1/16"	71'-3 7/8"	243'-11 9/16"	3770.0
4	45'-6 3/8"	71'-10 3/8"	71'-2 3/8"	243'-7 1/8"	3775.0
5	45'-5 1/8"	71'-8 11/16"	71'-0 15/16"	243'-2 3/4"	3780.0
6	45'-4"	71'-7 1/16"	70'-11 1/2"	242'-10 9/16"	3785.0
7	45'-2 13/16"	71'-5 1/16"	70'-10 1/8"	242'-6 3/8"	3790.0
8	45'-1 11/16"	71'-3 5/16"	70'-8 3/4"	242'-2 3/8"	3791.22



BEAM LAYOUT DIAGRAM

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
3507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

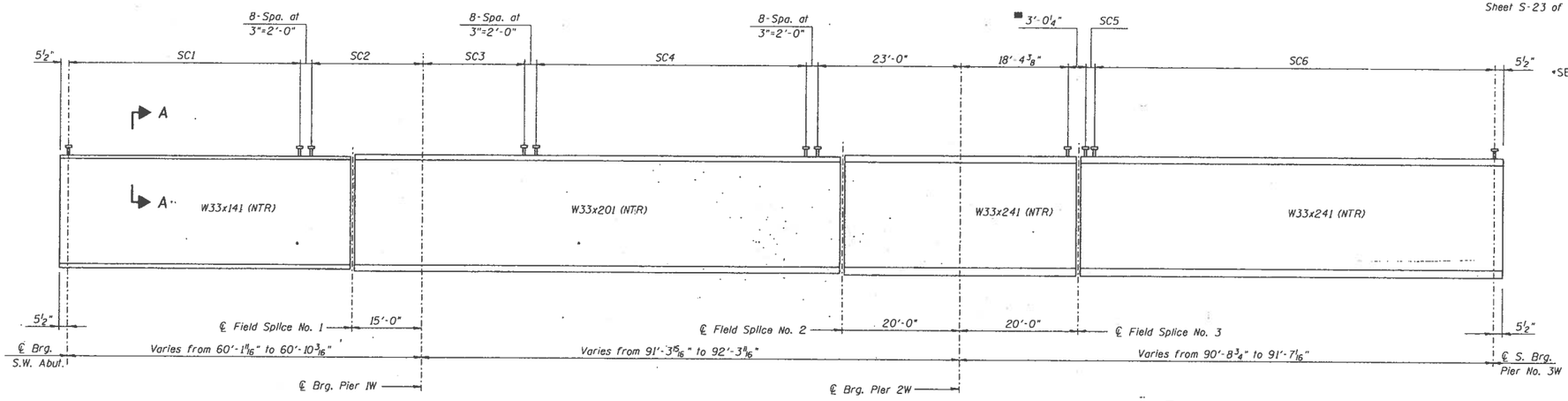
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
FRAMING PLAN SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



GIRDER ELEVATION

"NTR" denotes beams to which notch toughness requirements are applicable.

■ For Stud Shear Connector Spacing See Field Splice No. 3 Detail below.

INTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 1	Pier No. 1	0.5 Sp. 2	Pier No. 2	0.6 Sp. 3
Is	(in⁴)	7450	11500	11500	14200	14200
Ic (n)	(in⁴)	20922		27838		31653
Ic (3n)	(in⁴)	15109		19876		22581
Ss	(in³)	448	683	683	831	831
Sc (n)	(in³)	680		965		1143
Sc (3n)	(in³)	610		863		1017
Sbi	(in³)	21.3	47.5	47.5	58.7	58.7
D	(K/ft.)	0.844	1.143	0.885	1.126	0.880
MD	('K)	185	636	287	1032	549
sD	(K/ft.)	.266		0.258		0.246
MsD	('K)	65		106		163
ML	('K)	413	337	622	422	746
M (Imp)	('K)	111	84	143	97	172
S3(ML+I)	('K)	873	702	1275	865	1530
Ma	('K)	1460	1739	2168	2466	2915
Mbi	('K)	7	2	11	1	8
fsD non-comp	(k.s.i.)	5.0	11.2	5.0	14.9	7.9
fsD (comp)	(k.s.i.)	1.3		1.5		1.9
fsS3(ML+M(Imp)	(k.s.i.)	15.4	12.3	15.9	12.5	16.1
fw	(k.s.i.)	3.7	0.6	2.7	0.1	1.6
fs+fw(Overload)	(k.s.i.)	24.5	24.0	24.5	27.5	27.1
fs (Total)	(k.s.i.)	28.2	30.6	29.1	35.6	33.7
fs (Total)+fw	(k.s.i.)					
VR	(K)	51.9		44.4		50.6
Fb	(k.s.i.)	36.0	34.7	36.0	35.8	36.0

INTERIOR GIRDER REACTION TABLE					
		S.W. Abut.	Pier No.1	Pier No.2	Pier No. 3
RD	(K)	23.6	94.1	120.8	40.3
RL	(K)	36.3	51.8	55.3	38.0
Imp.	(K)	9.8	12.8	12.7	8.8
R (Total)	(K)	69.7	158.7	188.8	87.1

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic (n) and Sc (n) are the moment of inertia and section modulus of the composite section used in computing stresses due to liveload.

Ic (3n) and Sc (3n) are the moment of inertia and and section modulus of the composite section used in computing the stresses due to superimposed dead load.

VR is the maximum Live Load + Impact shear range in span.

Ma (Applied Moment)=1.3(MD + MsD + S3(ML + I)).

fs+fw (Overload) is the sum of the stresses due to MD + MsD + S3(ML + I). + Mbi/1.3.

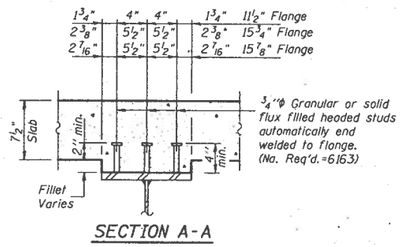
fs (Total) is the sum of the stresses due to 1.3(MD + MsD + S3(ML + I)).

Sbi is the section modulus for one flange plate for lateral flange bending .

Mbi is the lateral bending moment for the flange plate (factored).

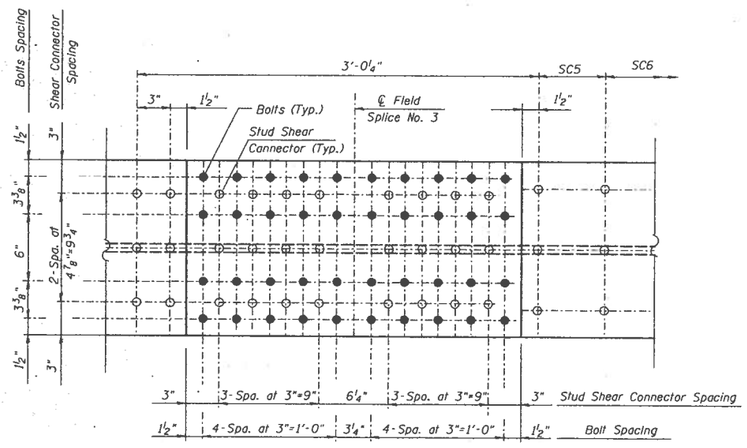
fw is the calculated normal stress at the edge of the flange due to lateral bending (factored)

Fb is the maximum allowable stress Fbu or Fby computed according to AASHTO Guide Specifications for Horizontally Curved Highway Bridges.



SECTION A-A

STUD SHEAR CONNECTOR SPACING FOR FIELD SPLICE NO.3 DETAIL



STUD SHEAR CONNECTOR SPACING

BEAM	SC1	SC2	SC3	SC4	SC5	SC6
1	61-Sp. at 8"=40'-8"	18'-2 3/16"	15'-0 11/16"	67-Sp. at 9"=50'-3"	5 7/16"	93-Sp. at 9"=69'-9"
2	61-Sp. at 8"=40'-8"	18'-0 7/8"	14'-10 7/8"	67-Sp. at 9"=50'-3"	3 13/16"	93-Sp. at 9"=69'-9"
3	61-Sp. at 8"=40'-8"	17'-11 5/8"	15'-6 1/16"	66-Sp. at 9"=49'-6"	11¼"	92-Sp. at 9"=69'-0"
4	61-Sp. at 8"=40'-8"	17'-10 3/8"	15'-4 3/8"	66-Sp. at 9"=49'-6"	9 3/4"	92-Sp. at 9"=69'-0"
5	61-Sp. at 8"=40'-8"	17'-9⅛"	15'-2 11/16"	66-Sp. at 9"=49'-6"	8 5/16"	92-Sp. at 9"=69'-0"
6	61-Sp. at 8"=40'-8"	17'-8"	15'-1 1/16"	66-Sp. at 9"=49'-6"	6 7/8"	92-Sp. at 9"=69'-0"
7	60-Sp. at 8"=40'-0"	18'-2 13/16"	14'-11 7/16"	66-Sp. at 9"=49'-6"	5½"	92-Sp. at 9"=69'-0"
8	60-Sp. at 8"=40'-0"	18'-1 1/16"	15'-6 5/16"	65-Sp. at 9"=48'-9"	4⅛"	92-Sp. at 9"=69'-0"

**TOP OF BEAM ELEVATIONS

BEAM	S.W. ABUT.	***SPLICE 1	PIER 1	****SPLICE 2	PIER 2	SPLICE 3	PIER 3
1	644.544	644.786	644.874	645.317	645.423	645.528	645.843
2	644.815	645.045	645.129	645.553	645.654	645.754	646.051
3	645.086	645.303	645.384	645.789	645.885	645.980	646.259
4	645.356	645.562	645.639	646.025	646.116	646.206	646.468
5	645.627	645.820	645.893	646.261	646.347	646.432	646.676
6	645.897	646.078	646.147	646.497	646.578	646.658	646.884
7	646.168	646.337	646.402	646.733	646.809	646.884	647.092
8	646.439	646.595	646.657	646.969	647.040	647.110	647.301

**For fabrication only

***Elevations at top of W33x201

****Elevations at top of W33x241

BILL OF MATERIAL SPAN-1 THRU SPAN-3

Item	Unit	Total
Stud Shear Connectors	Each	6147

NOTE:
For Field Splice & Diaphragm Details See Sheet S-24

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
BEAM ELEVATION & DETAILS SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

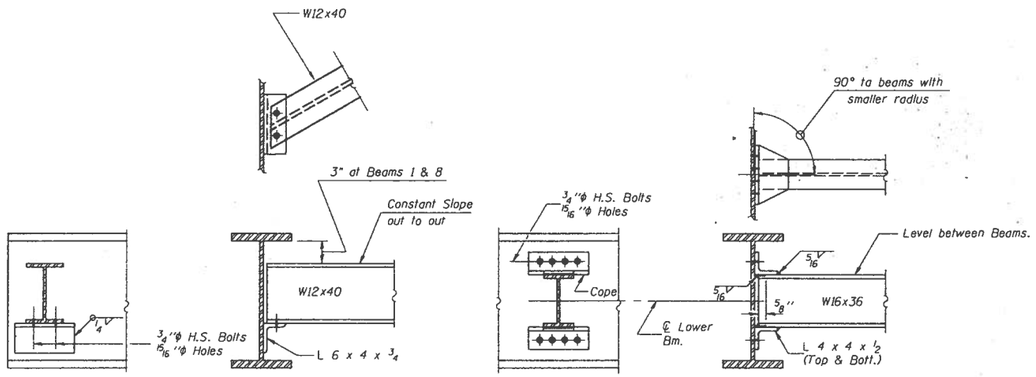
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Clarke Group, Inc.
CONSULTING ENGINEERS
5501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/BEAM1.DGN

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

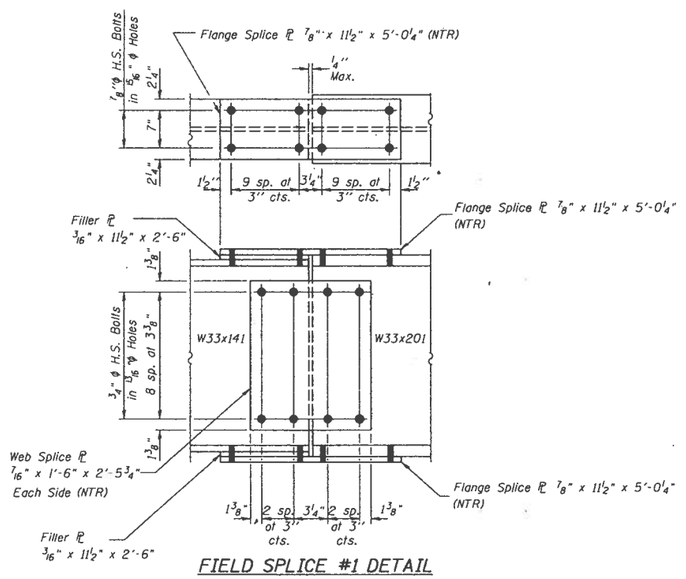
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



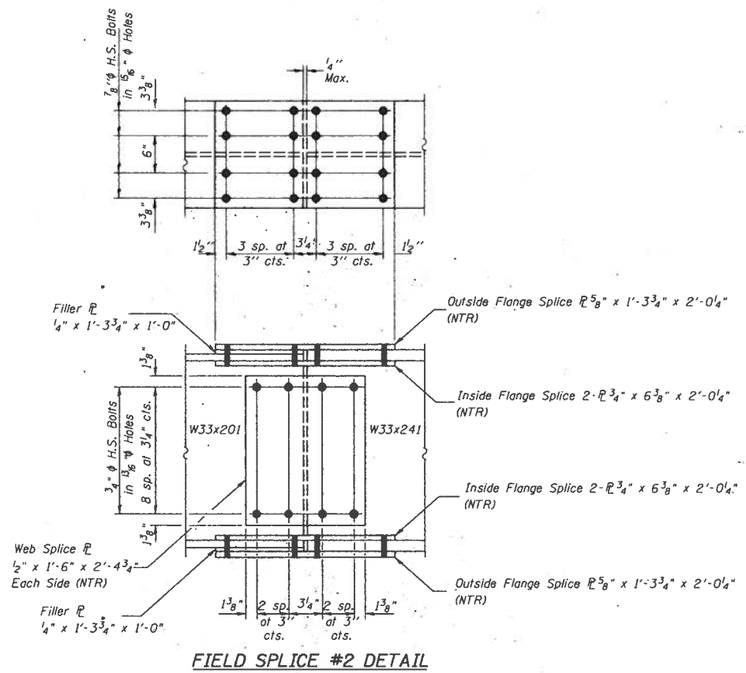
END DIAPHRAGM D
14 Required

INTERMEDIATE DIAPHRAGM D1
119 Required

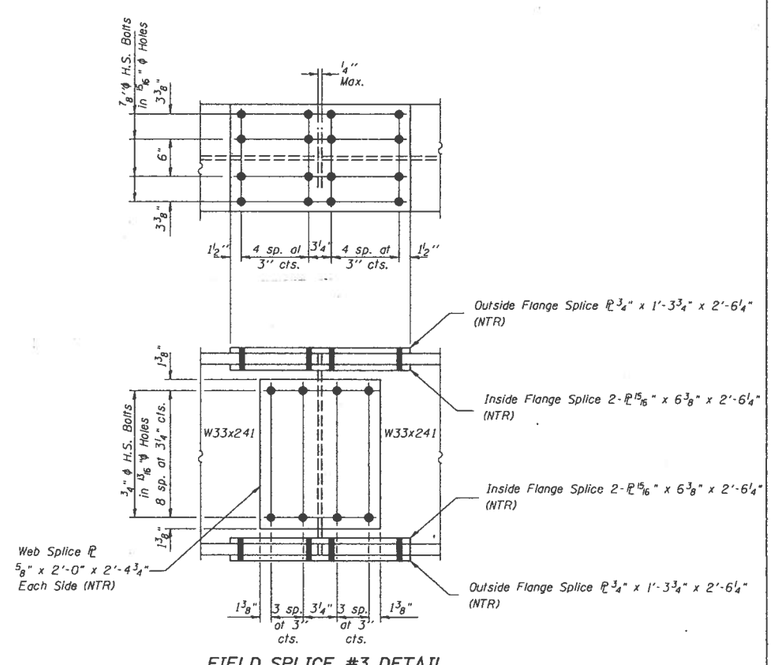
Note: Two hardened washers shall be required over all oversize holes for diaphragms.



FIELD SPLICE #1 DETAIL



FIELD SPLICE #2 DETAIL



FIELD SPLICE #3 DETAIL

Note:
"NTR" denotes plates to which notch toughness requirements are applicable.

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

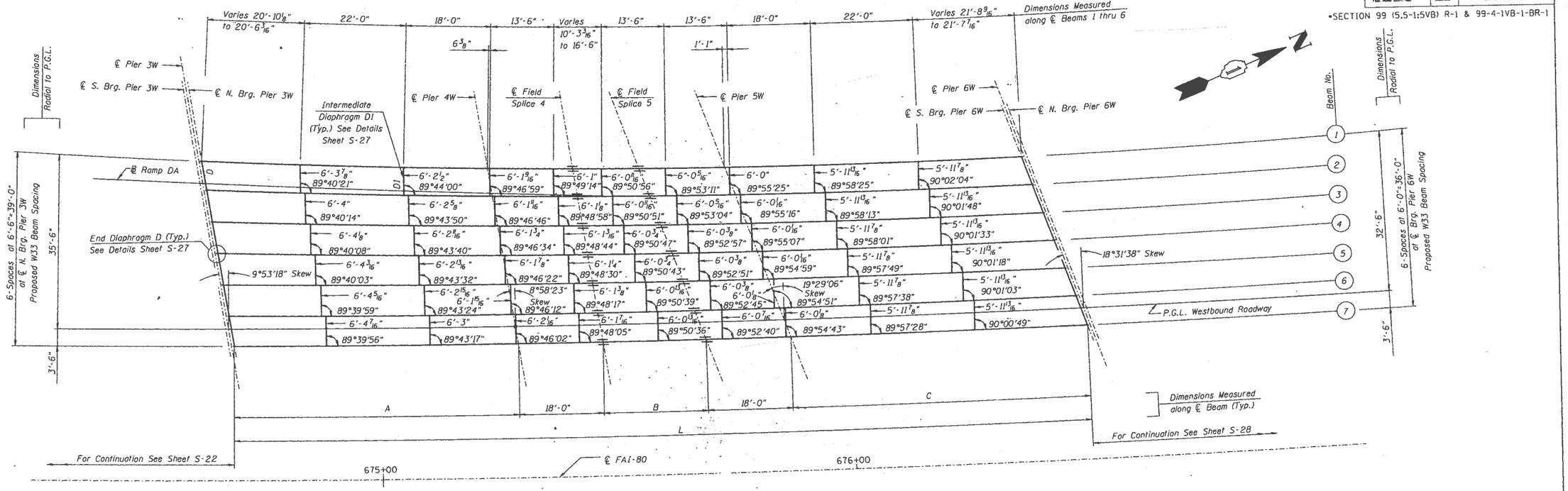
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
STEEL DIAPHRAGM & DETAILS SPAN 1-3
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

2948/US30/WESTBOUND/BEAM1.DGN

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

*SECTION 99 (5.5-1:5VB) R-1 & 99-4-1VB-1-BR-1



FRAMING PLAN

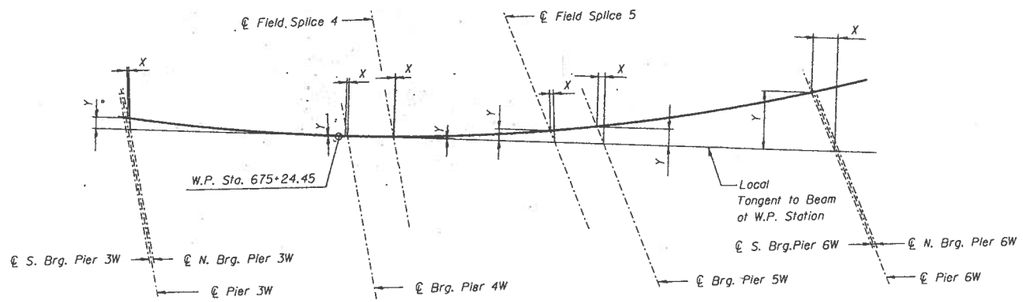
SPAN-4 THRU SPAN-6

BEAM DIMENSIONS (in feet)

BEAM	A	B	C	L	RADIUS
1	60'-3 3/4"	14'-2 9/16"	62'-9 9/16"	173'-3 7/8"	1825.000
2	60'-2 7/8"	15'-5 9/16"	62'-9 5/16"	174'-5 3/4"	2008.193
3	60'-2 1/16"	16'-8 1/2"	62'-9 1/8"	175'-7 11/16"	2226.863
4	60'-1 1/4"	17'-11 1/2"	62'-8 7/8"	176'-9 5/8"	2492.388
5	60'-0 1/2"	19'-2 7/16"	62'-8 5/16"	177'-11 1/8"	2821.588
6	59'-11 13/16"	20'-5 3/8"	62'-8 7/16"	179'-1 5/8"	3240.430
7	59'-11 1/16"	21'-8 5/16"	62'-8 1/4"	180'-3 5/8"	3791.220

LAYOUT DIMENSIONS (in feet)

BEAM	℄ N. Brg. Pier 3W X	℄ N. Brg. Pier 3W Y	Pier 4W X	Pier 4W Y	Field Splice #4 X	Field Splice #4 Y	Field Splice #5 X	Field Splice #5 Y	Pier 5W X	Pier 5W Y	℄ S. Brg. Pier 6W X	℄ S. Brg. Pier 6W Y
1	2 3/16"	11 5/16"	0	0	3/16"	1 1/16"	1 3/8"	3 1/16"	3 5/16"	8 5/16"	1'-4 5/16"	3'-6"
2	1 7/8"	10 7/16"	0	0	3/16"	1 1/16"	1 7/16"	3 9/16"	3 1/4"	8 1/4"	1'-3 3/4"	3'-3 3/4"
3	1 9/16"	9 1/16"	0	0	3/16"	1 1/8"	1 7/16"	3 11/16"	3 3/16"	8 1/8"	1'-2 5/8"	3'-1 5/16"
4	1 5/16"	7 3/4"	0	0	3/16"	1 1/8"	1 7/16"	3 3/4"	3 1/16"	7 15/16"	1'-1 7/16"	2'-10 7/16"
5	1 1/16"	6 9/16"	0	1/16"	1/8"	1 1/16"	1 7/16"	3 11/16"	2 7/8"	7 3/16"	1'-0 1/16"	2'-7 7/8"
6	7/8"	5 7/16"	0	1/16"	1/8"	1 1/16"	1 3/8"	3 5/8"	2 11/16"	7/8"	10 7/8"	2'-4 7/8"
7	11/16"	4 7/16"	0	1/16"	1/8"	1"	1 1/4"	3 7/16"	2 7/16"	6 9/16"	9 1/2"	2'-1 5/8"



BEAM LAYOUT DIAGRAM

NOTES:
All intermediate diaphragms shall be placed at right angles to the beam with the smaller radius.
For end and intermediate diaphragms details See Sheet S-27
For Beam Elevation & Details See Sheet S-26
All dimensions are horizontal. End of beams shall be vertical.

REVISIONS NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
FRAMING PLAN SPAN 4-6
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

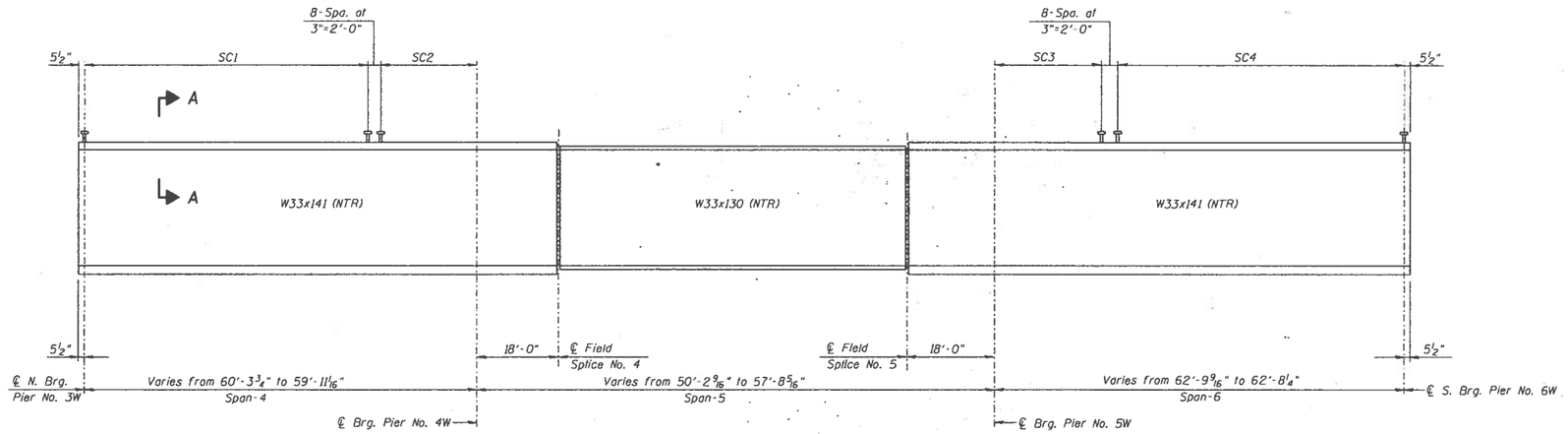
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

2948/US30/WESTBOUND/FRAMING2.DGN

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

*SECTION 99 (5,5-1:SVB) R-1 & 99-4-IVB-1-BR-1



BEAM ELEVATION

"NTR" denotes beams to which notch toughness requirements are applicable.

INTERIOR BEAM MOMENT TABLE						
		0.4 Sp. 4	Pier No. 4	0.5 Sp. 5	Pier No. 5	0.6 Sp. 6
Is	(in⁴)	7450	7450	6710	7450	7450
Ic (n)	(in⁴)	20454				20454
Ic (3n)	(in⁴)	14684				14684
Ss	(in³)	448	448	406	448	448
Sc (n)	(in³)	676				676
Sc (3n)	(in³)	605				605
Sbi	(in³)	21.3	21.3	18.9	21.3	21.3
wℓ	(K/ft.)	0.803	1.076	1.063	1.076	0.803
Mℓ	('K)	241	356	71	388	259
sℓ	(K/ft.)	0.273				0.273
Msℓ	('K)	88				95
Mℓ	('K)	417	219	253	225	437
M (Imp)	('K)	119	62	72	64	125
½[Mℓ+M(Imp)]	('K)	893	468	542	482	937
Ma	('K)	1589	1071	797	1131	1678
Mbi	('K)	13	6	5	6	13
fsℓ non-comp	(k.s.i.)	6.5	9.5	2.1	10.4	6.9
fsℓ (comp)	(k.s.i.)	1.7				1.9
fs½(Mℓ+M(Imp))	(k.s.i.)	15.9	12.5	16.0	12.9	16.6
fw	(k.s.i.)	7.1	3.2	3.2	3.4	7.5
fs+fw (Overload)	(k.s.i.)	29.6	24.5	20.6	25.9	31.2
fs (Total)	(k.s.i.)	31.3	28.6	23.5	30.3	33.0
fs (Total)+fw	(k.s.i.)					
VR	(K)	47.7				49.4
Fb	(k.s.i.)	36.0	31.2	36.0	31.2	36.0

INTERIOR BEAM REACTION TABLE					
		Pier No. 3	Pier No. 4	Pier No. 5	Pier No. 6
Rℓ	(K)	27.1	68.6	71.4	28.2
Rℓ	(K)	33.5	40.9	41.5	35.2
Imp.	(K)	9.5	11.7	11.8	10.0
R (Total)	(K)	70.1	121.2	124.7	73.4

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic (n) and Sc (n) are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.

Ic (3n) and Sc (3n) are the moment of inertia and and section modulus of the composite section used in computing the stresses due to superimposed dead load.

VR is the maximum Live Load + Impact shear range in span.

Ma (Applied Moment)=1.3[Mℓ + Msℓ + ½(Mℓ + I)].

fs+fw (Overload) is the sum of the stresses due to Mℓ + Msℓ + ½(Mℓ + I) + Mbi/1.3.

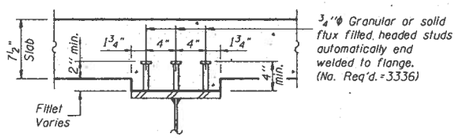
fs (Total) is the sum of the stresses due to 1.3[Mℓ + Msℓ + ½(Mℓ + I)].

Sbi is the section modulus for one flange plate for lateral flonge bending .

Mbi is the lateral bending moment for the flange plate (factored).

fw is the calculated normal stress at the edge of the flange due to lateral bending (factored)

Fb is the maximum allowable stress Fbu or Fby computed according to AASHTO Guide Specifications for Horizontally Curved Highway Bridges.



¾"ϕ Granular or solid flux filled headed studs automatically end welded to flange. (No. Req'd.=3336)

SECTION A-A

SHEAR CONNECTOR SPACING

BEAM	SC1	SC2	SC3	SC4
1	70-Spa. at 8½"=49'-7"	8'-8¾"	9'-1 1/16"	73-Spa. at 8½"=51'-8½"
2	70-Spa. at 8½"=49'-7"	8'-7 7/8"	9'-9 5/16"	72-Spa. at 8½"=51'-0"
3	69-Spa. at 8½"=48'-10½"	9'-3 9/16"	9'-9 1/8"	72-Spa. at 8½"=51'-0"
4	69-Spa. at 8½"=48'-10½"	9'-2 3/4"	9'-8 7/8"	72-Spa. at 8½"=51'-0"
5	69-Spa. at 8½"=48'-10½"	9'-2"	9'-8 7/16"	72-Spa. at 8½"=51'-0"
6	68-Spa. at 8½"=48'-2"	9'-9 13/16"	10'-4 5/16"	71-Spa. at 8½"=50'-3½"
7	68-Spa. at 8½"=48'-2"	9'-9 1/16"	10'-4 3/4"	71-Spa. at 8½"=50'-3½"

**TOP OF BEAM ELEVATIONS

BEAM	PIER 3	PIER 4	***SPLICE 4	***SPLICE 5	PIER 5	PIER 6
1	645.846	645.948	645.978	646.000	646.024	646.108
2	646.088	646.178	646.204	646.226	646.249	646.329
3	646.331	646.408	646.431	646.452	646.474	646.551
4	646.574	646.638	646.657	646.678	646.699	646.772
5	646.816	646.871	646.888	646.906	646.926	646.993
6	647.059	647.101	647.114	647.132	647.151	647.214
7	647.302	647.332	647.341	647.357	647.375	647.435

**For fabrication only

***Elevations at top of W33x141

BILL OF MATERIAL
SPAN 4 THRU 6

Item	Unit	Total
Stud Shear Connectors	Each	3336

NOTES:
For Field Splice & Diaphragm Details See Sheet S-27

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5107 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

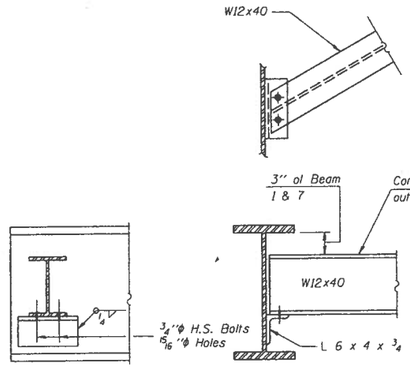
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
BEAM ELEVATION & DETAILS SPAN 4-6
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

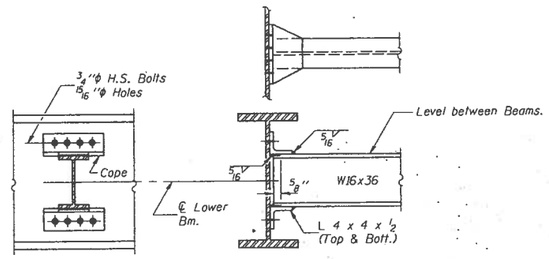
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1

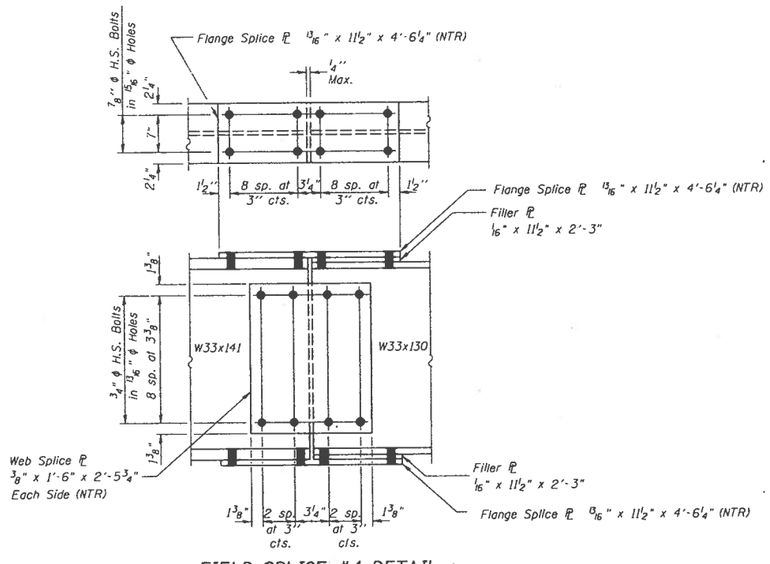


END DIAPHRAGM D
12 Required

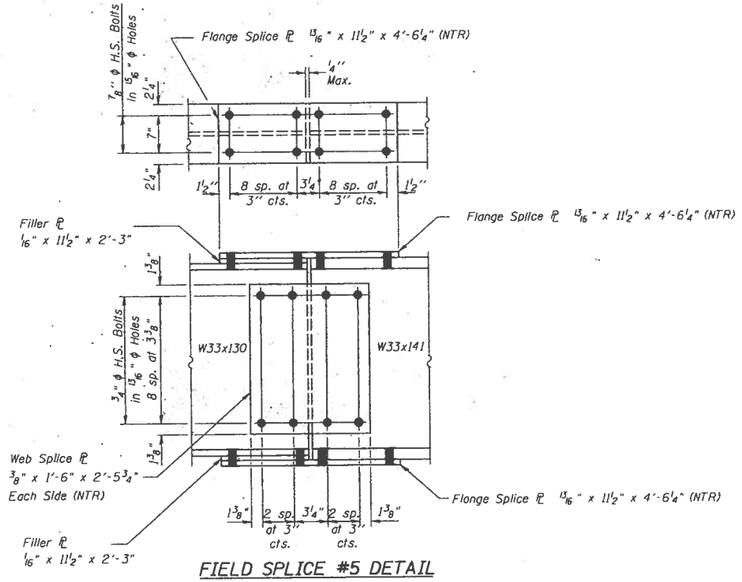


INTERMEDIATE DIAPHRAGM D1
54 Required

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



FIELD SPLICE #4 DETAIL



FIELD SPLICE #5 DETAIL

NOTE:
"NTR" denotes plates to which notch toughness requirements are applicable.

REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

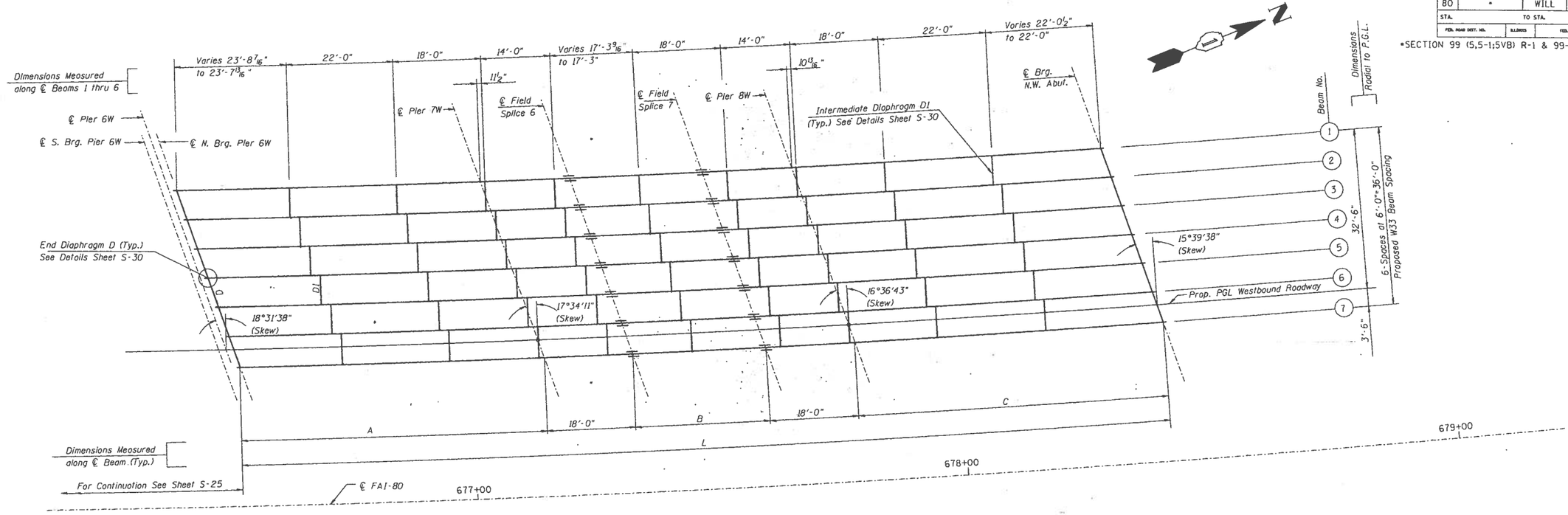
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
STEEL DIAPHRAGM & DETAILS SPAN 4-6
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

2948/US30/WESTBOUND/BEAM2.DGN

R.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



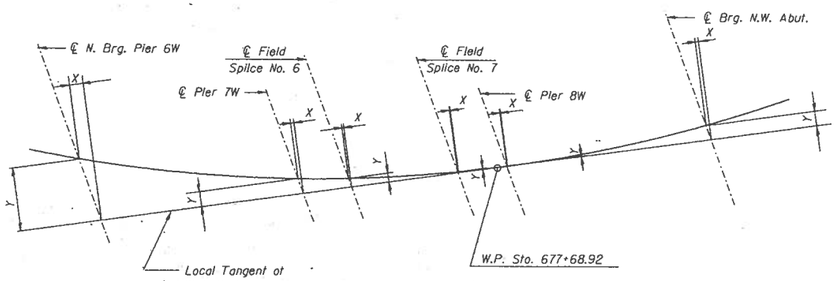
PLAN
SPAN-7 THRU SPAN-9

BEAM DIMENSIONS (In feet)

BEAM	A	B	C	L	RADIUS
1	62'-8 5/16"	27'-4 1/4"	62'-11 5/16"	189'-0 1/2"	3755.22
2	62'-8 13/16"	27'-4 1/8"	62'-11 3/16"	189'-0 1/8"	3761.22
3	62'-8 11/16"	27'-4"	62'-11 1/8"	188'-11 13/16"	3767.22
4	62'-8 9/16"	27'-3 7/8"	62'-11"	188'-11 7/16"	3773.22
5	62'-8 7/16"	27'-3 13/16"	62'-10 7/8"	188'-11 1/8"	3779.22
6	62'-8 5/16"	27'-3 11/16"	62'-10 13/16"	188'-10 13/16"	3785.22
7	62'-8 3/16"	27'-3 9/16"	62'-10 11/16"	188'-10 7/16"	3791.22

LAYOUT DIMENSIONS (in feet)

	℄ N. Brg. Pier 6W		Pier 7W		Field Splice #6		Field Splice #7		Pier 8W		℄ Brg. N.W. Abut.	
BEAM	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
1	7 5/8"	2'-1 3/8"	11 5/16"	6 7/16"	1"	3 5/16"	1/8"	1/2"	0	0	1' 1/8"	6 5/16"
2	7 3/8"	2'-0 5/8"	11 1/16"	6 1/16"	7/8"	3"	1/8"	7/16"	0	0	2"	6 1/16"
3	7 3/16"	1'-11 7/8"	11 1/16"	5 11/16"	13/16"	2 3/4"	1/16"	5/16"	0	0	2 1/8"	7 1/16"
4	6 15/16"	1'-11 1/8"	10 7/8"	5 5/16"	3/4"	2 9/16"	1/16"	1/4"	0	1/16"	2 1/4"	7 1/16"
5	6 3/4"	1'-10 3/8"	10 1/2"	5"	11/16"	2 5/16"	1/16"	3/16"	0	1/16"	2 5/16"	7 1/16"
6	6 1/2"	1'-9 11/16"	10 3/8"	4 11/16"	5/8"	2 1/16"	0	1/8"	0	1/16"	2 7/16"	8 1/16"
7	6 5/16"	1'-9"	10 5/16"	4 3/8"	9/16"	1 7/8"	0	1/16"	1/16"	3/16"	2 9/16"	8 3/8"



BEAM LAYOUT DIAGRAM

NOTES:
All intermediate diophragms to be normal to center of beams.
For end ond intermediate diophrogms details See Sheet S-30
For Beom Elevotion & Detoils See Sheet S-29
All dimensions are horizontal. End of beams shall be vertical.

REVISIONS	
NAME	DATE

Cloriba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
FRAMING PLAN 7-9
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

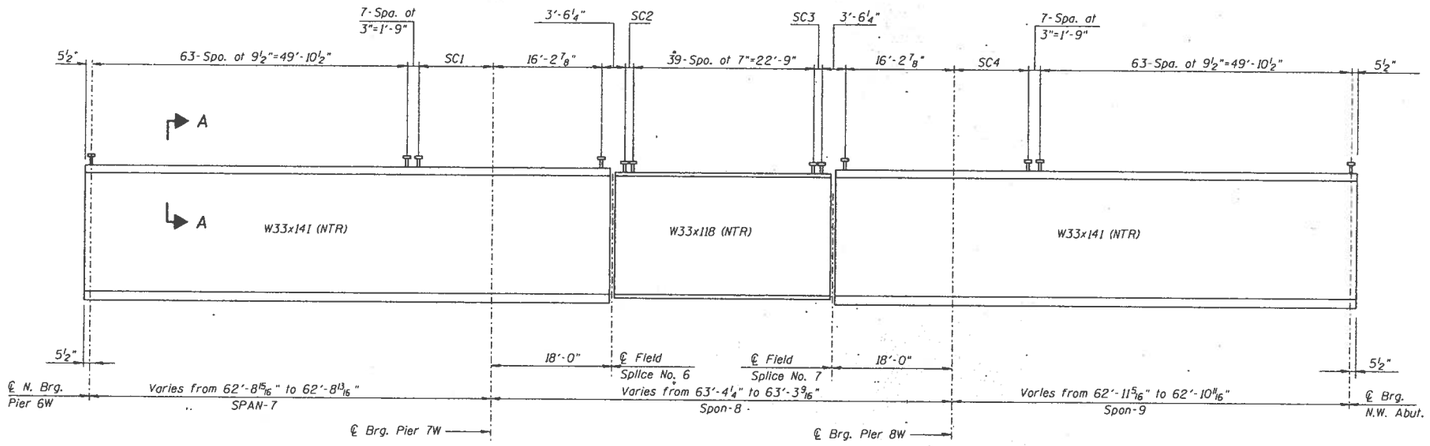
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

2948/US30/WESTBOUND/FRAMING3.DGN

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



BEAM ELEVATION

"NTR" Denotes Beams to which notch toughness requirements are applicable.

INTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 7	Pier No. 7	0.5 Sp. 8	Pier No. 8	0.6 Sp. 9
Is	(in⁴)	7450	7450	5900	7450	7450
Ic (n)	(in⁴)	20031		17005		20031
Ic (3n)	(in⁴)	14306		12240		14306
Ss	(in³)	448	448	359	448	448
Sc (n)	(in³)	671		558		671
Sc (3n)	(in³)	599		499		599
Sbi	(in³)	21.3	21.3	16.3	21.3	21.3
wℓ	(K/ft.)	0.757	1.013	0.730	1.013	0.757
Mℓ	('K)	228	387	68	389	233
sℓ	(K/ft.)	0.256		0.256		0.256
Msℓ	('K)	83		41		85
Mℓ	('K)	398	201	315	202	401
M (Imp)	('K)	106	53	84	54	107
$S_3(M_\ell + M(Imp))$	('K)	840	423	665	427	847
Mo	('K)	1496	1053	1006	1061	1515
Mbl	('K)	7	3	3	3	7
fsℓ non-comp	(k.s.i.)	6.1	10.4	2.3	10.4	6.2
fsℓ (comp)	(k.s.i.)	1.7		1.0		1.7
$fs^{S_3}(M_\ell + M(Imp))$	(k.s.i.)	15.0	11.3	14.3	11.4	15.1
fw	(k.s.i.)	3.9	1.7	2.2	1.7	3.9
fs (Overload)	(k.s.i.)	25.8	23.0	19.3	23.1	26.0
fs (Total)	(k.s.i.)	29.6	28.2	22.9	28.3	29.9
fs (Total)+fw	(k.s.i.)					
VR	(K)	43.5		33.2		42.5
Fb	(k.s.i.)	36.0	31.2	36.0	31.2	36.0

INTERIOR GIRDER REACTION TABLE					
		Pier No. 6	Pier No.7	Pier No.8	N.W. Abut.
Rℓ	(K)	25.6	69.7	69.8	25.7
Rℓ	(K)	31.2	39.2	39.3	29.8
Imp.	(K)	8.3	10.4	10.5	7.9
R (Total)	(K)	65.1	119.3	119.6	63.4

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.

Ic (3n) and Sc (3n) are the moment of inertia and and section modulus of the composite section used in computing the stresses due to superimposed deod load.

VR is the maximum Live Load + Impact sheor range in span.

Mo (Applied Moment)=1.3[Mℓ + Msℓ + S_3(Mℓ + I)].

fs+fw (Overload) is the sum of the stresses due to Mℓ + Msℓ + S_3(Mℓ + I) +Mbi/1.3.

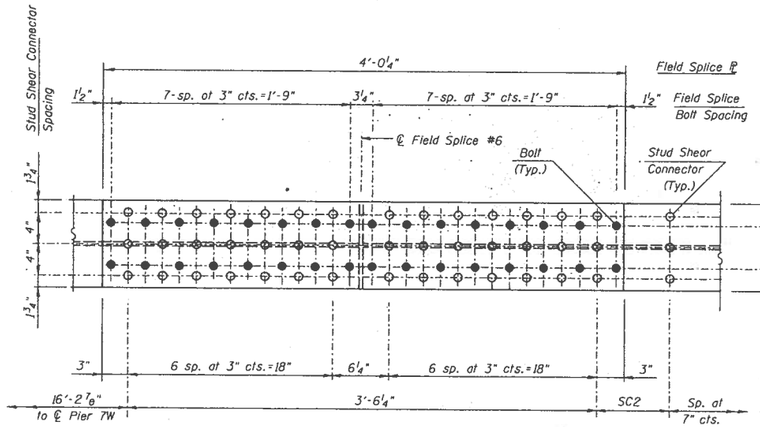
fs (Total) is the sum of the stresses due to 1.3[Mℓ + Msℓ + S_3(Mℓ + I)].

Sbi is the section modulus for one flonge plate for lateral flange bending .

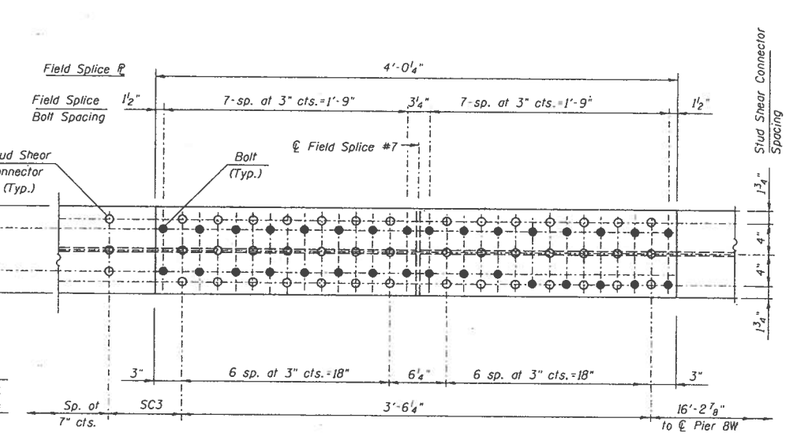
Mbl is the lateral bending moment for the flonge plate (factored).

fw is the calculated normal stress at the edge of the flonge due to lateral bending (factored)

Fb is the maximum allowable stress Fbu or Fby computed according to AASHTO Guide Specifications for Horizontally Curved Highway Bridges.



STUD SHEAR CONNECTOR SPACING FOR FIELD SPLICE #6 DETAIL



STUD SHEAR CONNECTOR SPACING FOR FIELD SPLICE #7 DETAIL

STUD SHEAR CONNECTOR SPACING

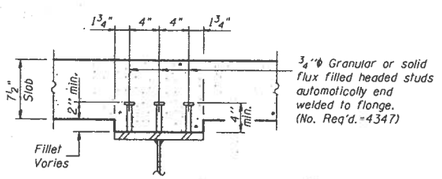
BEAM	SC1	SC2	SC3	SC4
1	11'-1⁷/₁₆"	6½"	6½"	11'-3¹³/₁₆"
2	11'-1⁵/₁₆"	6⁷/₁₆"	6⁷/₁₆"	11'-3¹¹/₁₆"
3	11'-1³/₁₆"	6³/₈"	6³/₈"	11'-3⁵/₈"
4	11'-1¹/₁₆"	6⁵/₁₆"	6⁵/₁₆"	11'-3½"
5	11'-0¹⁵/₁₆"	6¼"	6⁵/₁₆"	11'-3³/₈"
6	11'-0¹³/₁₆"	6¼"	6³/₁₆"	11'-3⁵/₁₆"
7	11'-0¹/₁₆"	6⅛"	6³/₁₆"	11'-3³/₁₆"

**TOP OF BEAM ELEVATIONS

BEAM	PIER 6W	PIER 7W	***SPLICE 6	***SPLICE 7	PIER 8W	N.W. ABUTMENT
1	646.107	646.011	645.984	645.941	645.911	645.807
2	646.329	646.232	646.204	646.160	646.130	646.024
3	646.550	646.451	646.423	646.378	646.347	646.241
4	646.771	646.671	646.642	646.597	646.566	646.458
5	646.993	646.890	646.861	646.816	646.784	646.675
6	647.214	647.111	647.081	647.034	647.002	646.892
7	647.435	647.330	647.300	647.253	647.221	647.109

**For fabrication only

***Elevations of top of W33x141



¾"ϕ Granular or solid flux filled headed studs automatically end welded to flonge. (No. Req'd.=4347)

SECTION A-A

BILL OF MATERIAL SPAN-7 THRU SPAN-9

Item	Unit	Total
Stud Shear Connectors	Each	4347

NOTES:
For Field Splice & Diophragm Details See Sheet S-30

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
350 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
BEAM ELEVATION & DETAILS SPAN 7-9
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

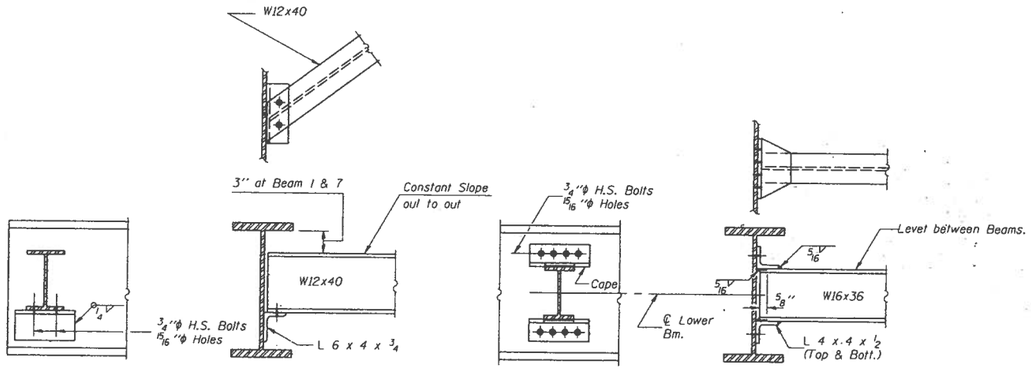
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

SCALE: N.T.S.
DATE: MARCH 1996

2948/US30/WESTBOUND/BEAM3.DGN

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

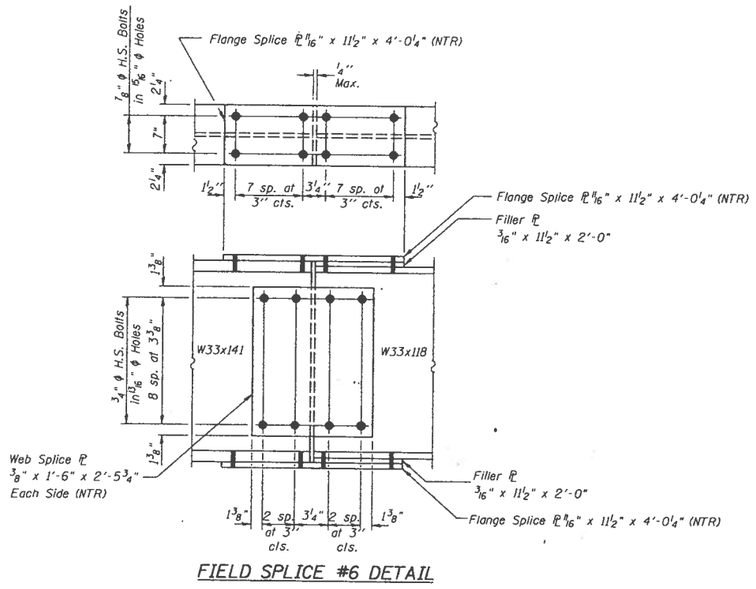
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



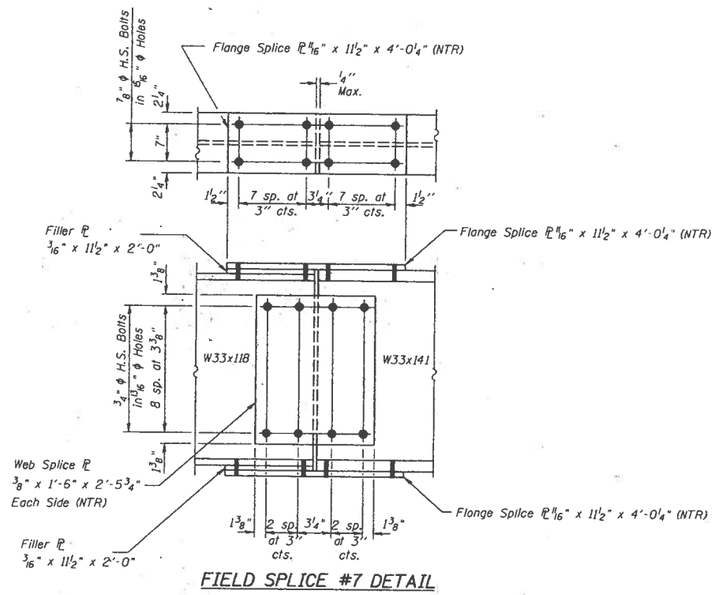
END DIAPHRAGM D
12 Required

INTERMEDIATE DIAPHRAGM D1
54 Required

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



FIELD SPLICE #6 DETAIL



FIELD SPLICE #7 DETAIL

Note:
(NTR) denotes plates to which notch toughness requirements are applicable.

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
3307 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4300

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
STEEL DIAPHRAGM & DETAILS SPAN 7-9
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

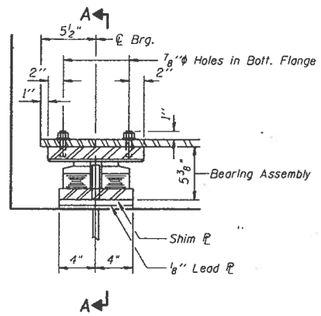
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

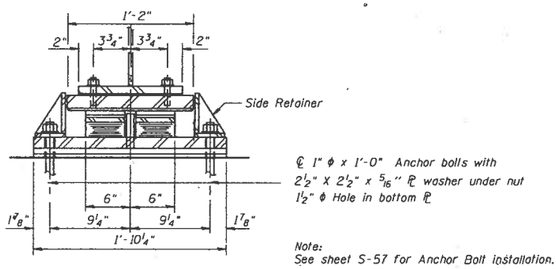
2948/US30/WESTBOUND/BEAM3.DGN

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



ELEVATION AT S.W. ABUT.

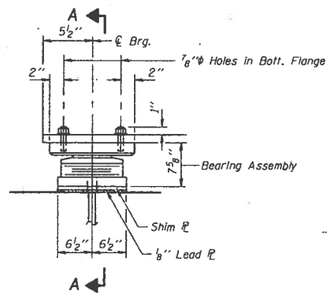


℄ 1" ϕ x 1'-0" Anchor bolts with
2½" X 2½" x 5/16" ℙ washer under nut
1½" ϕ Hole in bottom ℙ

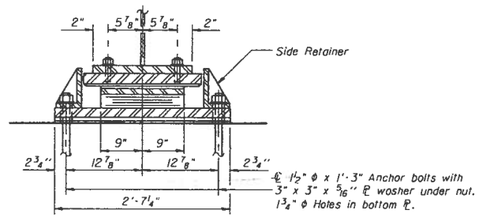
Note:
See sheet S-57 for Anchor Bolt installation.

SECTION A-A

TYPE III ELASTOMERIC EXP. BRG.



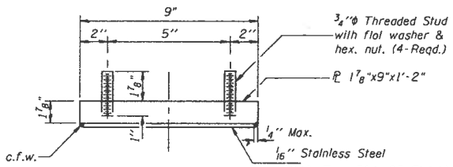
ELEVATION AT PIER 1W



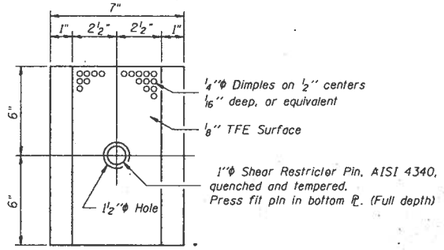
℄ 1½" ϕ x 1'-3" Anchor bolts with
3" x 3" x 5/16" ℙ washer under nut.
1¾" ϕ Holes in bottom ℙ.

SECTION A-A

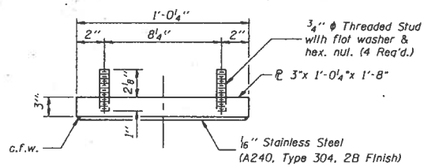
TYPE II TFE ELASTOMERIC EXP. BRG.



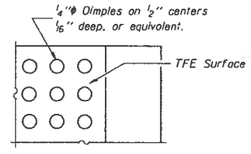
TOP BEARING ASSEMBLY



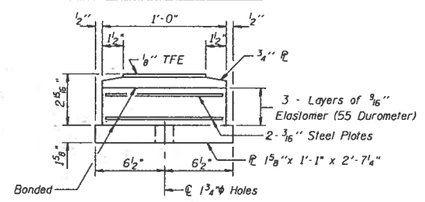
PLAN-TFE ELASTOMERIC BRG.



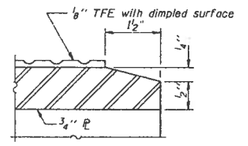
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



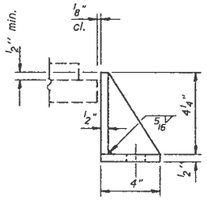
BOTTOM BEARING ASSEMBLY

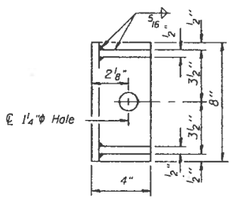


SECTION THRU TFE

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.

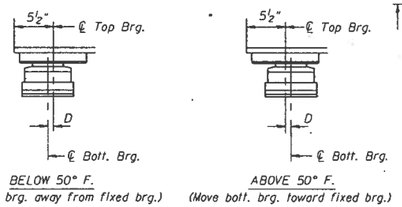
Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.





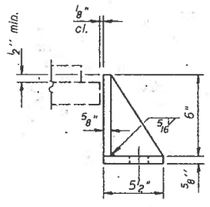
SIDE RETAINER

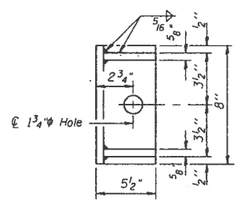
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.



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.





SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	8
Elastomeric Bearing Assembly Type III	Each	8

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
BEARING ASSEMBLY
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

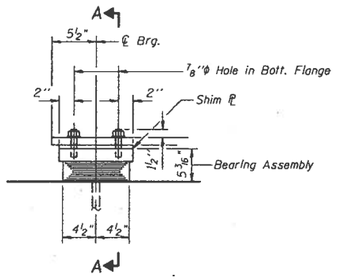
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Cloriba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

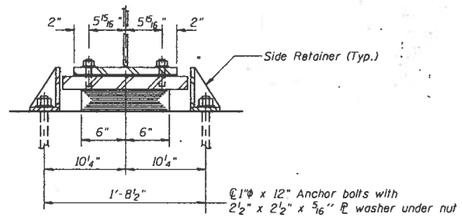
2948/US30/WESTBOUND/BEARING1.DGN

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

•SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



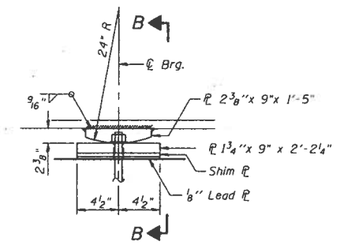
ELEVATION AT PIER 3W (SPAN-3)



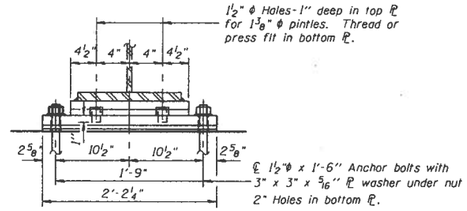
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet S-57 for Anchor Bolt installation.

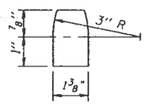


ELEVATION AT PIER 2W

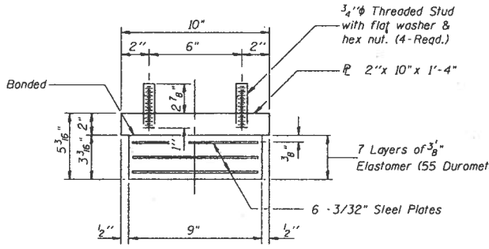


SECTION B-B

FIXED BEARING

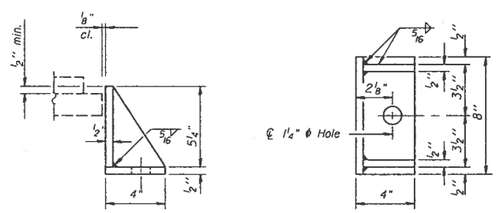


PINTLE



BEARING ASSEMBLY

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



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
Weight included with Structural Steel.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	8

REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
BEARING ASSEMBLY
FAI-80 STA. 673+37.46
•SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

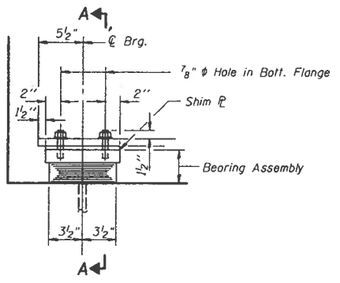
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

2948/US30/WESTBOUN/BEARING1.DGN

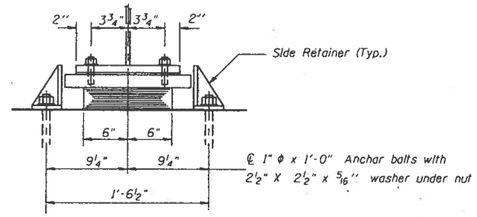
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



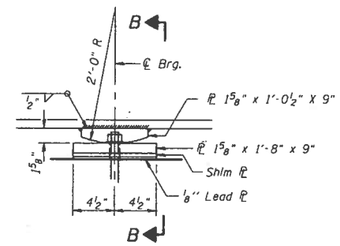
ELEVATION AT N.W. ABUT. PIER 3W (Span 4) AND PIER 6W (SPAN 6 & 7)

(Elevation shown at N.W. Abut. Piers are similar)

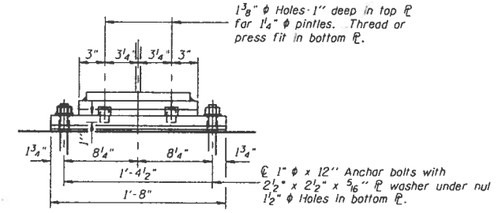


SECTION A-A

Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet S-57 for Anchor Bolt installation.



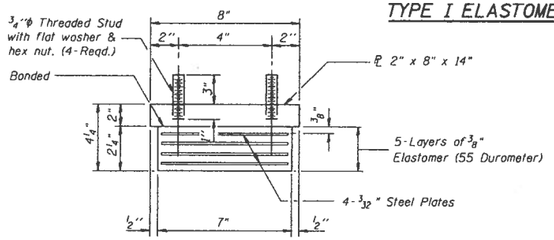
ELEVATION AT PIER 4W, 5W, 7W AND 8W



SECTION B-B

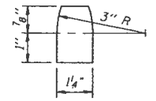
FIXED BEARING

TYPE I ELASTOMERIC EXP. BRG.

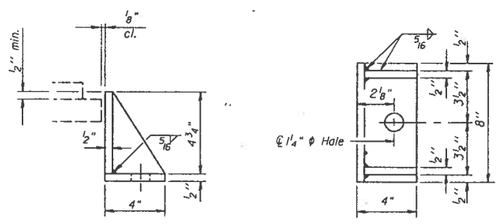


BEARING ASSEMBLY

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



PINTLE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
Weight included with Structural Steel.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	28

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

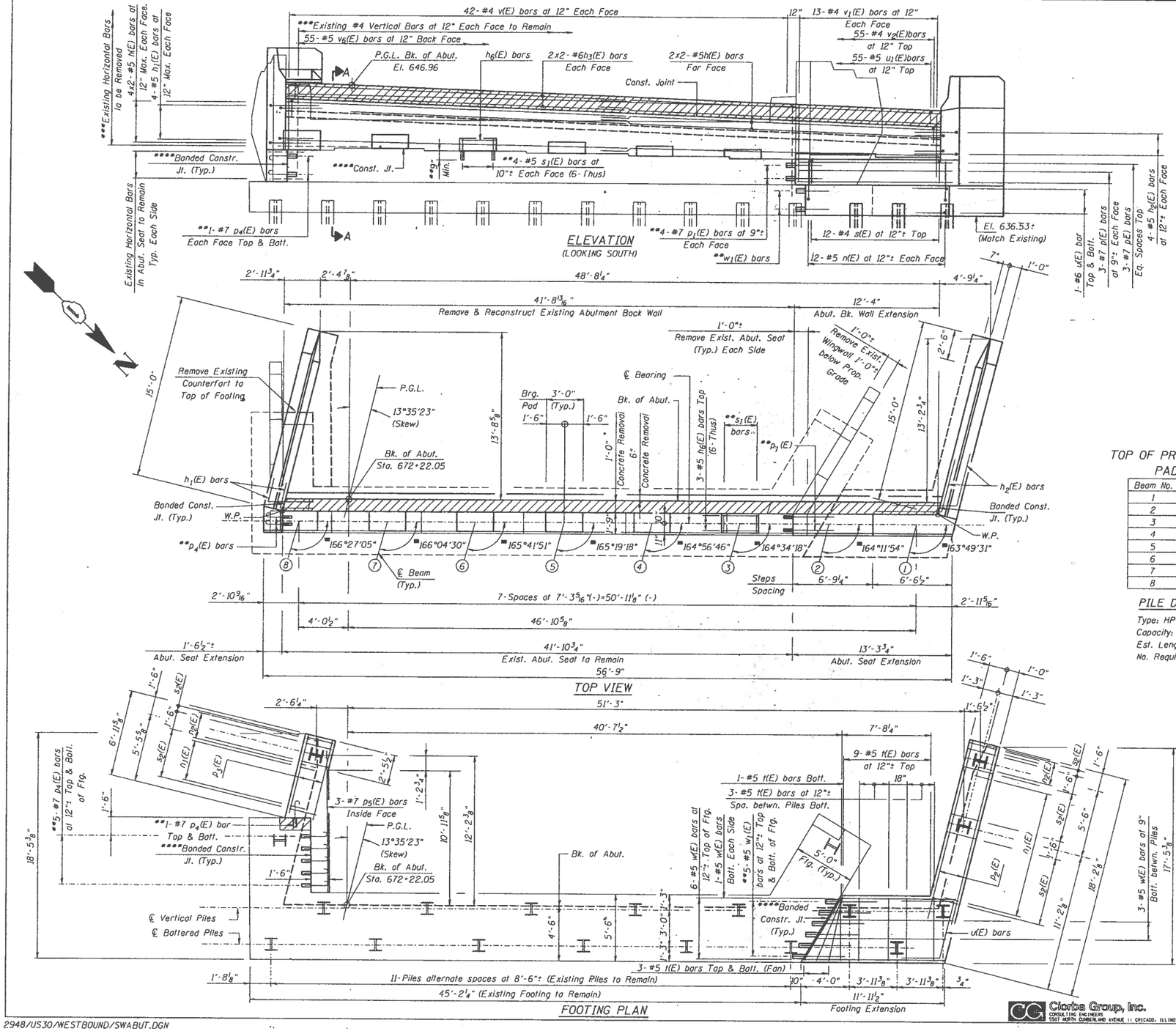
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
BEARING ASSEMBLY
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

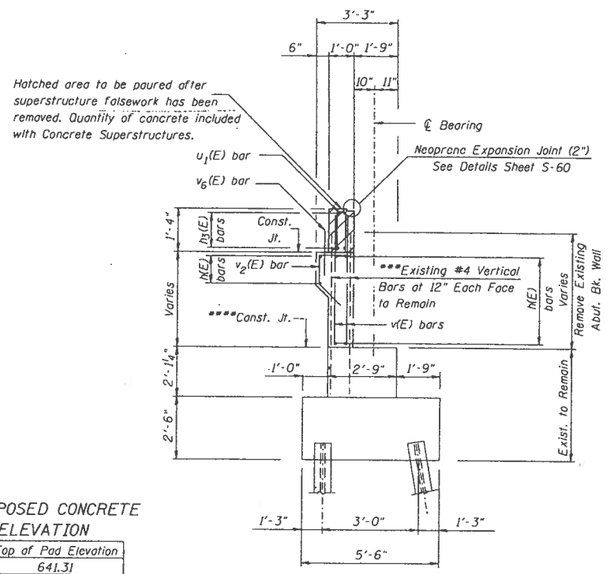
SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

2948/US30/WESTBOUND/BEARING2.DGN

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1





SECTION A-E

TOP OF PROPOSED CONCRETE PAD ELEVATION

Beam No.	Top of Pad Elevation
1	641.31
2	641.58
3	641.85
4	642.12
5	642.39
6	642.66
7	642.93
8	643.21

PILE DATA

Type: HP 10x42 Steel Piles
Capacity: Driven to Refusal
Est. Length: 30'
No. Required: 6 (Includes 1 Test Pile)

NOTES:

**Epoxy grout $s_1(E)$ & $w_1(E)$ bars in a $\frac{7}{8}$"ϕ hole, $p_1(E)$ & $p_4(E)$ bar in a $1\frac{1}{8}$"ϕ hole. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584.

*** Existing vertical bars to remain in place, blast cleaned, straightened and lapped with new vertical bars. Horizontal bars shall be removed.

****Banded Construction Joint in accordance with Article 503.09 (a) (2) of of Standard Specifications.

Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 2x2 - #5 etc. Indicates 2 lines of bars with 2 lengths per line.

Space reinforcement in concrete pad to miss anchor bolts.

All exposed edges shall have standard $\frac{3}{4}$" chamfer except as noted.

For Bill of Material, Sections and Details See Sheet S-35.

For Existing Abutment Repair See Sheet S-38.

■ Angle shown is angle between the ℄ of beam and the ℄ of bearing along the abutment.

For the angle and details used to place the Bearing Anchor Bolts See Sheet S-35.

Minimum lap splices shall be 2'-2" for #5 bars, 2'-7" for #6 bars & 3'-5" for #7 bars.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
SOUTHWEST ABUTMENT PLAN & ELEVATION
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

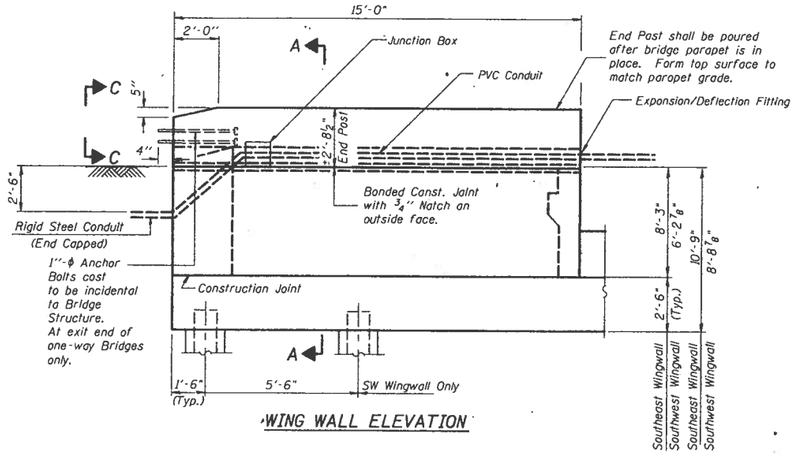
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Clarke Group, Inc.
CONSULTING ENGINEERS
5501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

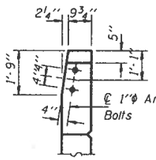
2948/US30/WESTBOUND/SWABUT.DGN

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

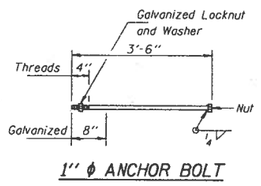
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-IVB-1-BR-1



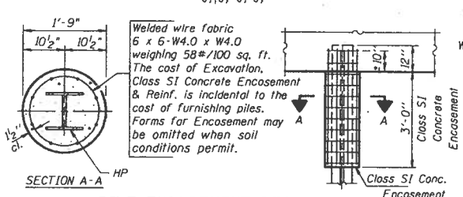
WING WALL ELEVATION



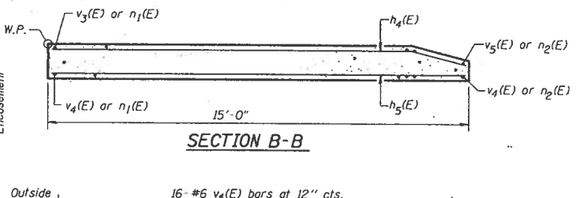
VIEW C-C



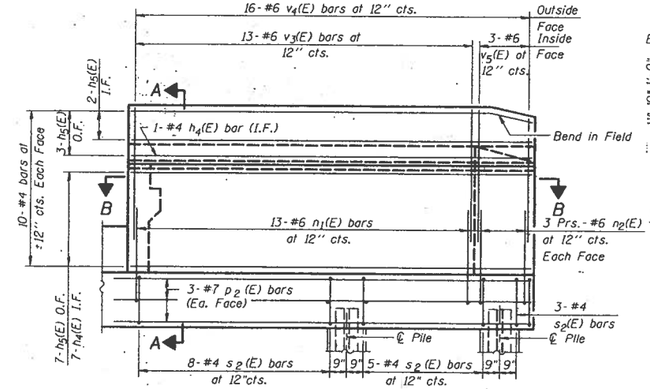
1" ϕ ANCHOR BOLT



PILE ENCASEMENT DETAIL

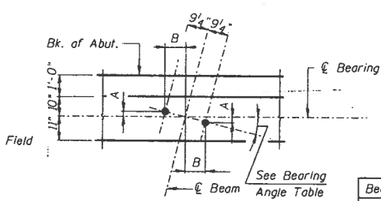


SECTION B-B



SOUTHWEST WING WALL ELEVATION

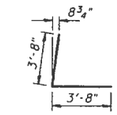
Reinforcement



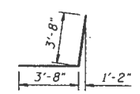
BEARING ANCHOR BOLTS LAYOUT

BEARING ANGLE TABLE

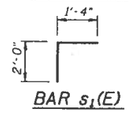
Beam	Angle	A	B	Beam	Angle	A	B
1	15°00'26"	2 3/8"	8 5/16"	5	13°31'21"	2 3/16"	9"
2	14°38'18"	2 5/16"	8 5/16"	6	13°09'10"	2 1/8"	9"
3	14°16'06"	2 1/4"	8 5/16"	7	12°46'43"	2 1/16"	9"
4	13°53'51"	2 1/4"	9"	8	12°24'14"	2"	9 1/16"



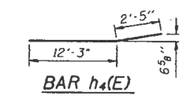
BAR h_1(E)



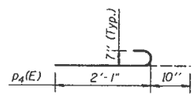
BAR h_2(E)



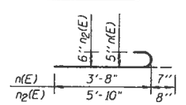
BAR s_1(E)



BAR h_4(E)



BAR p_4(E)

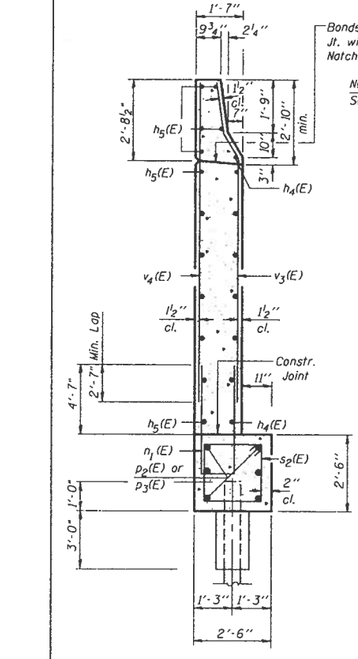


BAR n(E) & n_2(E)

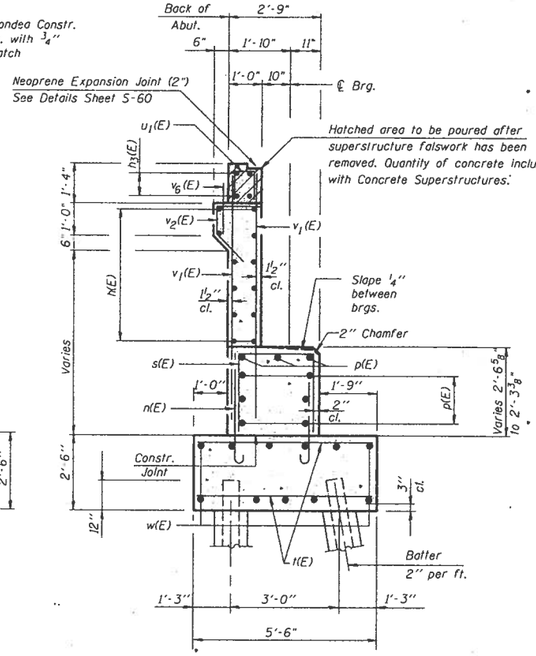
SOUTHWEST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	20	#5	28'-0"	
h_1(E)	8	#5	7'-4"	
h_2(E)	8	#5	7'-4"	
h_3(E)	8	#6	28'-5"	
h_4(E)	18	#4	14'-8"	
h_5(E)	26	#4	14'-8"	
h_6(E)	18	#5	2'-9"	
n(E)	24	#5	4'-3"	
n_1(E)	18	#6	13'-0"	
n_2(E)	12	#6	6'-6"	
n_3(E)	16	#6	5'-4"	
p(E)	9	#7	13'-0"	
p_1(E)	8	#7	4'-4"	
p_2(E)	6	#7	16'-0"	
p_3(E)	6	#7	6'-8"	
p_4(E)	16	#7	2'-11"	
p_5(E)	3	#7	12'-0"	
s(E)	12	#4	6'-3"	
s_1(E)	48	#5	3'-4"	
s_2(E)	24	#4	9'-5"	
t(E)	22	#5	5'-2"	
u(E)	2	#6	10'-7"	
u_1(E)	55	#5	2'-9"	
v(E)	84	#4	7'-6"	
v_1(E)	26	#4	6'-0"	
v_2(E)	55	#4	3'-3"	
v_3(E)	26	#6	8'-10"	
v_4(E)	32	#6	8'-8"	
v_5(E)	6	#6	8'-3"	
v_6(E)	55	#5	2'-6"	
w(E)	11	#5	11'-8"	
w_1(E)	10	#5	3'-1"	
Structure Excavation	Cu. Yd.		127	
Concrete Structures	Cu. Yd.		39.4	
Reinforcement Bars (Epoxy Coated)	Lbs.		5460	
Furnishing Steel Piles HP 10x42	Foot		150	
Driving Steel Piles	Foot		150	
Test Pile Steel HP 10x42	Each		1	

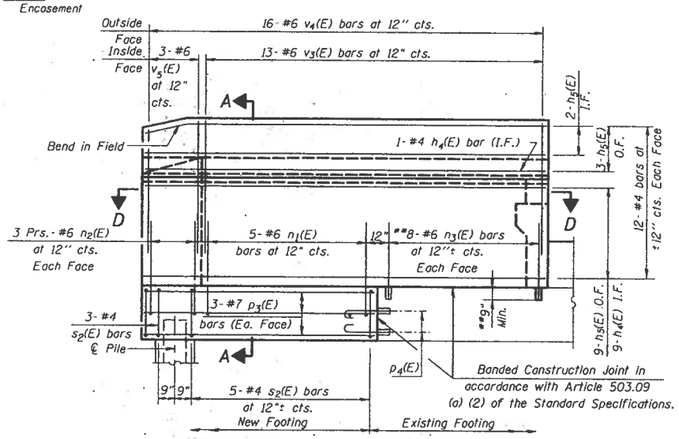
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 2x2-#5 etc. indicates 2 lines of bars with 2 length per line.



SECTION A-A



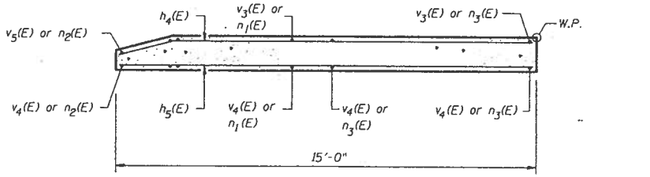
SECTION THRU ABUTMENT EXTENSION



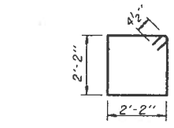
SOUTHEAST WING WALL ELEVATION

Reinforcement

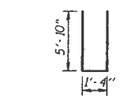
**Epoxy grout n_3(E) bars in a 1" ϕ holes. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584.



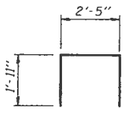
SECTION D-D



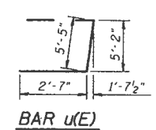
BARS s_2(E)



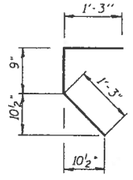
BAR n_1(E)



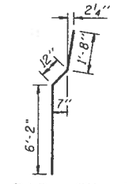
BAR s(E)



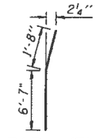
BAR u(E)



BAR v_2(E)



BAR v_3(E)



BAR v_5(E)

BAR u_1(E)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
SOUTHWEST ABUTMENT SECTIONS & DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

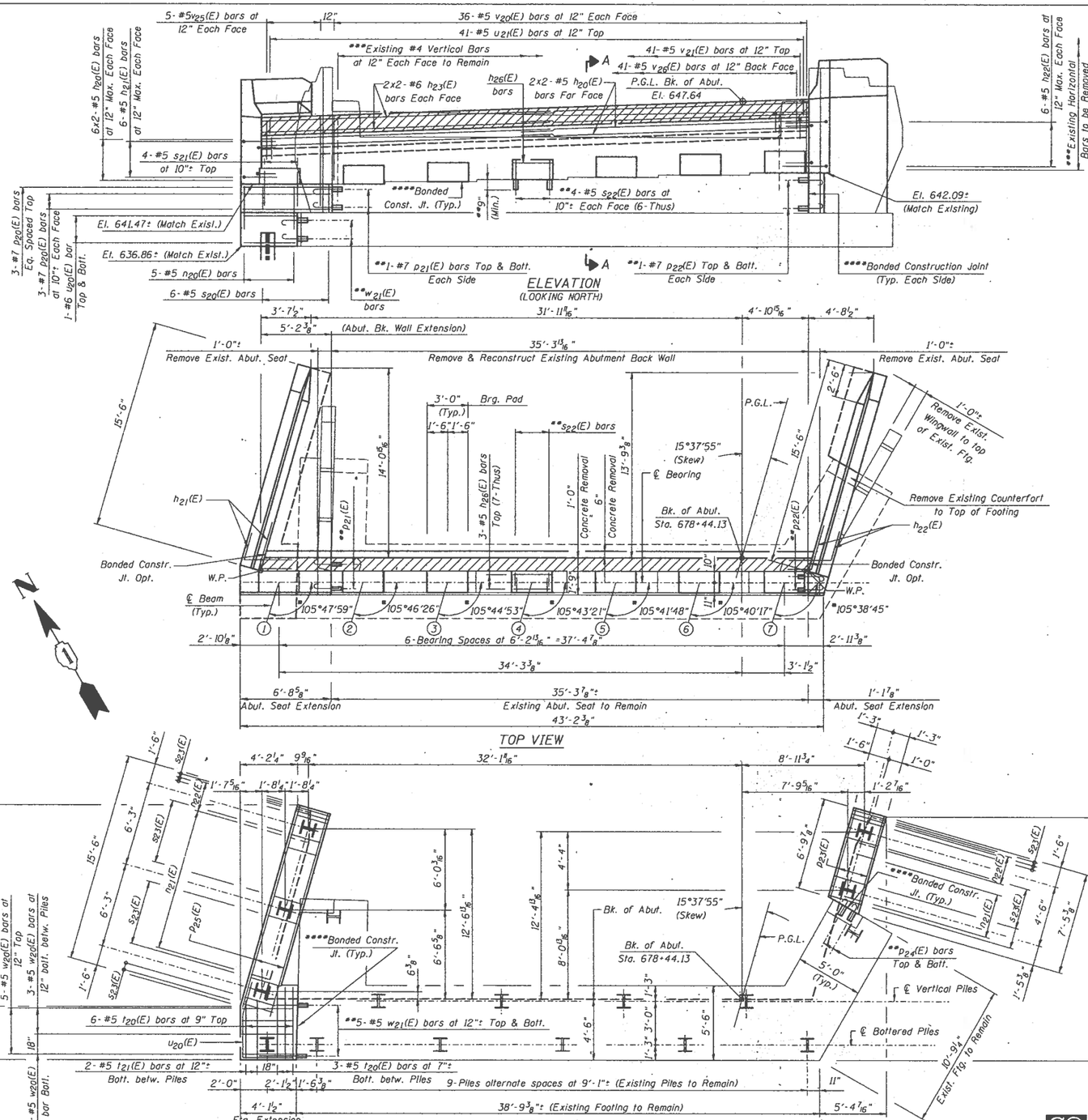
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

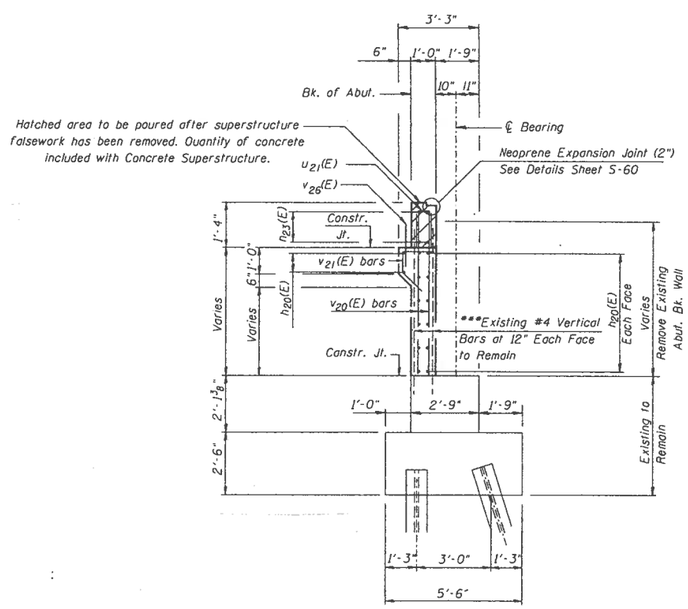
Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/SWWING.DGN

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

•SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1





SECTION A-A

TOP OF PROPOSED CONCRETE PAD ELEVATION

Beam No.	Top of Pad Elevation
1	642.67
2	642.89
3	643.11
4	643.32
5	643.54
6	643.76
7	643.97

PILE DATA

Type: HP 10x42 Steel Piles
Capacity: Driven to Refusal
Est. Length: 40'
No. Required: 6 (Includes 1 Test Pile)

NOTES:

**Epoxy grout, $s_{22}(E)$ & $w_{21}(E)$ bars in a $^{7}/_{8}$"ϕ hole. $p_{21}(E)$, $p_{22}(E)$ & $p_{24}(E)$ bar in a $1^{1}/_{8}$"ϕ hole. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584.

*** Existing vertical bars to remain in place, blast cleaned, straightened and lapped with new vertical bars. Horizontal bars shall be removed.

****Bonded Construction Joint in accordance with Article 503.09 (a) (2) of Standard Specifications.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 2x2 - #5 etc. indicates 2 lines of bars with 2 length per line

Space reinforcement in beam pad to miss anchor bolts.

All exposed edges shall have ¾" chamfer except as noted.

For Bill of Material, Sections and Details See Sheet S-37

For Existing Abutment Repair & Concrete Removal See Sheet S-39.

•Angle shown is angle between the ℄ of beam and the ℄ of bearing along abutment.

For the angle and details used to place the Bearing Anchor Bolts, See Sheet S-37.

Minimum lap 2'-2" for #5 bars & 2'-7" for #6 bars.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
NORTHWEST ABUTMENT PLAN & DETAILS
FAI-80 STA. 673+37.46
•SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

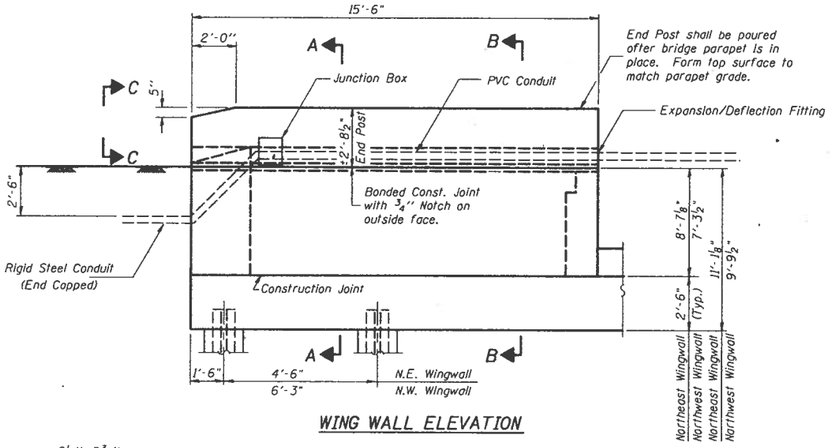
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

Clarke Group, Inc.
CONSULTING ENGINEERS
5501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

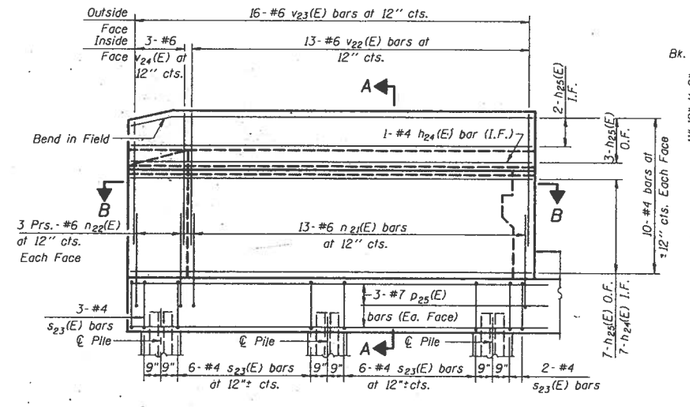
2948/US30/WESTBOUND/NWABUT.DGN

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1

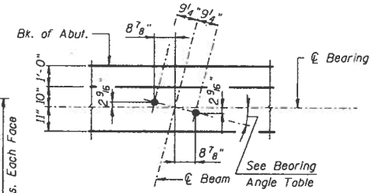


WING WALL ELEVATION



NORTHWEST WING WALL ELEVATION

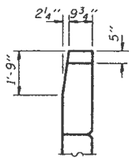
Reinforcement



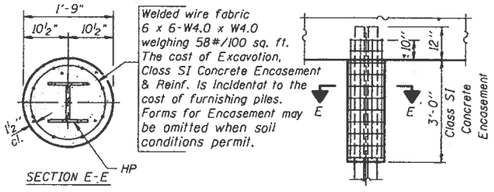
BEARING ANCHOR BOLTS LAYOUT

BEARING ANGLE TABLE

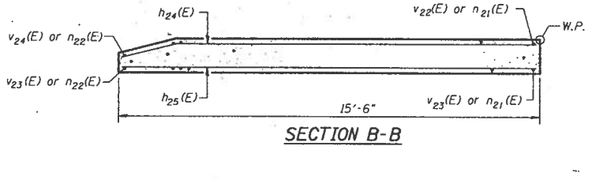
Beam	Angle	Beam	Angle
1	16°16'48"	5	16°10'25"
2	16°15'12"	6	16°08'50"
3	16°13'36"	7	16°07'16"
4	16°12'00"		



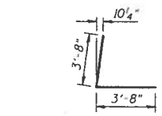
VIEW C-C



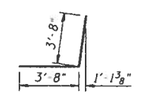
PILE ENCASEMENT DETAIL



SECTION B-B



BAR $h_{21}(E)$



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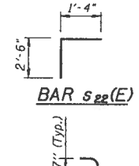
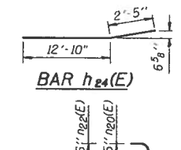
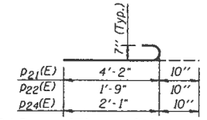


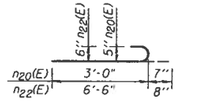
BAR $s_{22}(E)$



BAR $h_{24}(E)$



BAR $p_{21}(E)$, $p_{22}(E)$ & $p_{24}(E)$

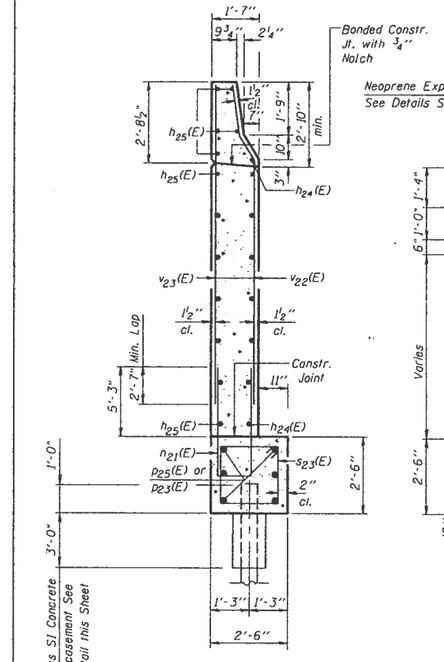


BAR $n_{20}(E)$ & $n_{22}(E)$

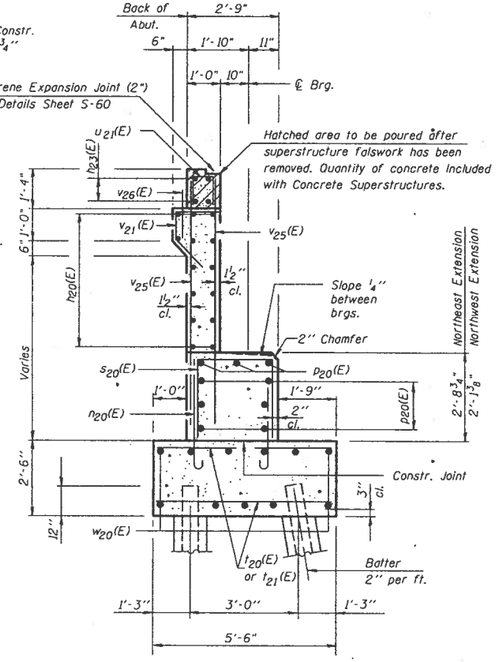
NORTHWEST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{26}(E)$	28	#5	21'-8"	
$h_{21}(E)$	12	#5	7'-4"	
$h_{22}(E)$	12	#5	7'-4"	
$h_{23}(E)$	8	#6	21'-11"	
$h_{24}(E)$	17	#4	15'-3"	
$h_{25}(E)$	25	#4	15'-3"	
$h_{26}(E)$	21	#5	2'-9"	
$n_{20}(E)$	10	#5	3'-7"	
$n_{21}(E)$	18	#6	14'-4"	
$n_{22}(E)$	12	#6	7'-2"	
$n_{23}(E)$	18	#6	6'-0"	
$p_{20}(E)$	9	#7	6'-6"	
$p_{21}(E)$	4	#7	5'-0"	
$p_{22}(E)$	4	#7	2'-7"	
$p_{23}(E)$	6	#7	6'-6"	
$p_{24}(E)$	4	#7	2'-11"	
$p_{25}(E)$	6	#7	15'-3"	
$s_{20}(E)$	6	#5	6'-1"	
$s_{21}(E)$	4	#5	6'-10"	
$s_{22}(E)$	48	#5	3'-10"	
$s_{23}(E)$	26	#4	9'-5"	
$t_{20}(E)$	9	#5	5'-3"	
$t_{21}(E)$	2	#5	3'-9"	
$u_{20}(E)$	2	#6	8'-10"	
$u_{21}(E)$	41	#5	2'-9"	
$v_{20}(E)$	72	#5	4'-0"	
$v_{21}(E)$	41	#5	3'-3"	
$v_{22}(E)$	26	#6	8'-8"	
$v_{23}(E)$	32	#6	8'-5"	
$v_{24}(E)$	6	#6	8'-5"	
$v_{25}(E)$	10	#5	6'-10"	
$v_{26}(E)$	41	#5	2'-6"	
$w_{20}(E)$	9	#5	3'-10"	
$w_{21}(E)$	10	#5	3'-0"	
Structure Excavation		Cu. Yd.	75	
Concrete Structures		Cu. Yd.	34.3	
Reinforcement Bars (Epoxy Coated)		Lbs.	4890	
Furnishing Steel Piles HP 10x42		Foot	200	
Driving Steel Piles		Foot	200	
Test Pile Steel HP 10x42		Each	1	

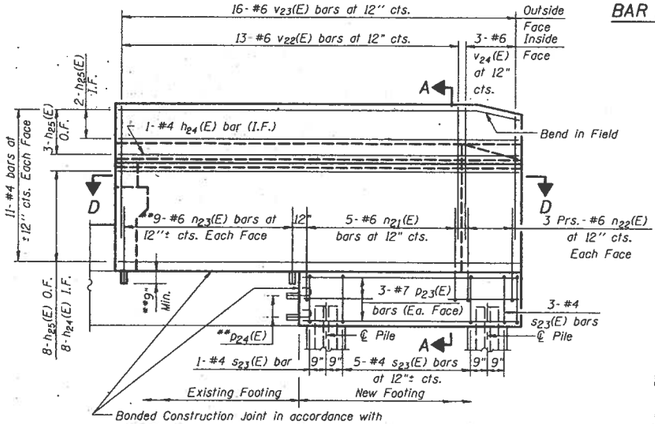
Reinforcement bars designated (E) shall be epoxy coated.



SECTION A-A



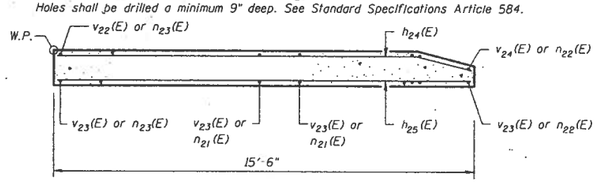
SECTION THRU ABUTMENT EXTENSION



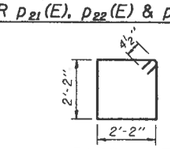
NORTHEAST WING WALL ELEVATION

Reinforcement

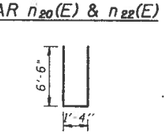
**Epoxy grout $n_{23}(E)$ bars in 1" ϕ holes and $p_{24}(E)$ bars in 1⅛" ϕ holes. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584.



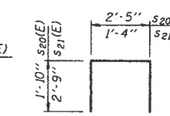
SECTION D-D



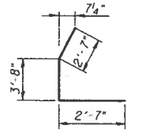
BARS $s_{23}(E)$



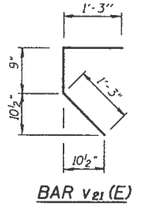
BAR $n_{21}(E)$



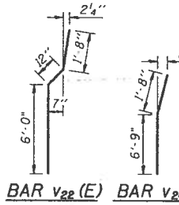
BARS $s_{20}(E)$ & $s_{21}(E)$



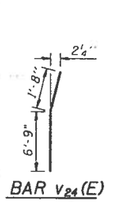
BAR $u_{20}(E)$



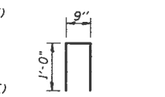
BAR $v_{21}(E)$



BAR $v_{22}(E)$



BAR $v_{24}(E)$



BAR $u_{21}(E)$

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
NORTHWEST ABUTMENT SECTIONS & DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

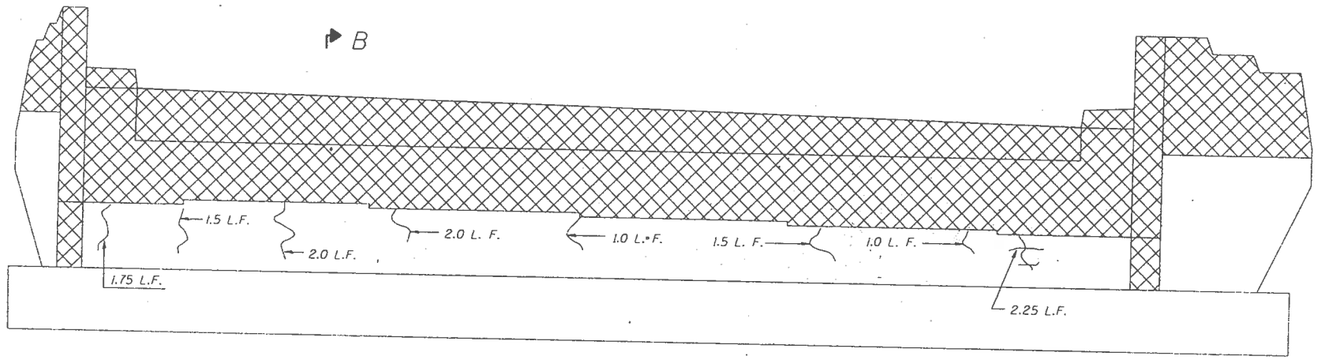
DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

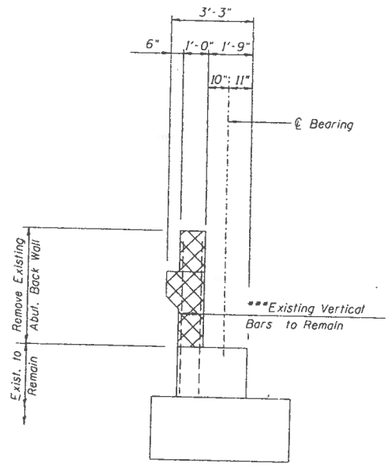
2948/US30/WESTBOUND/NWWING.DGN

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

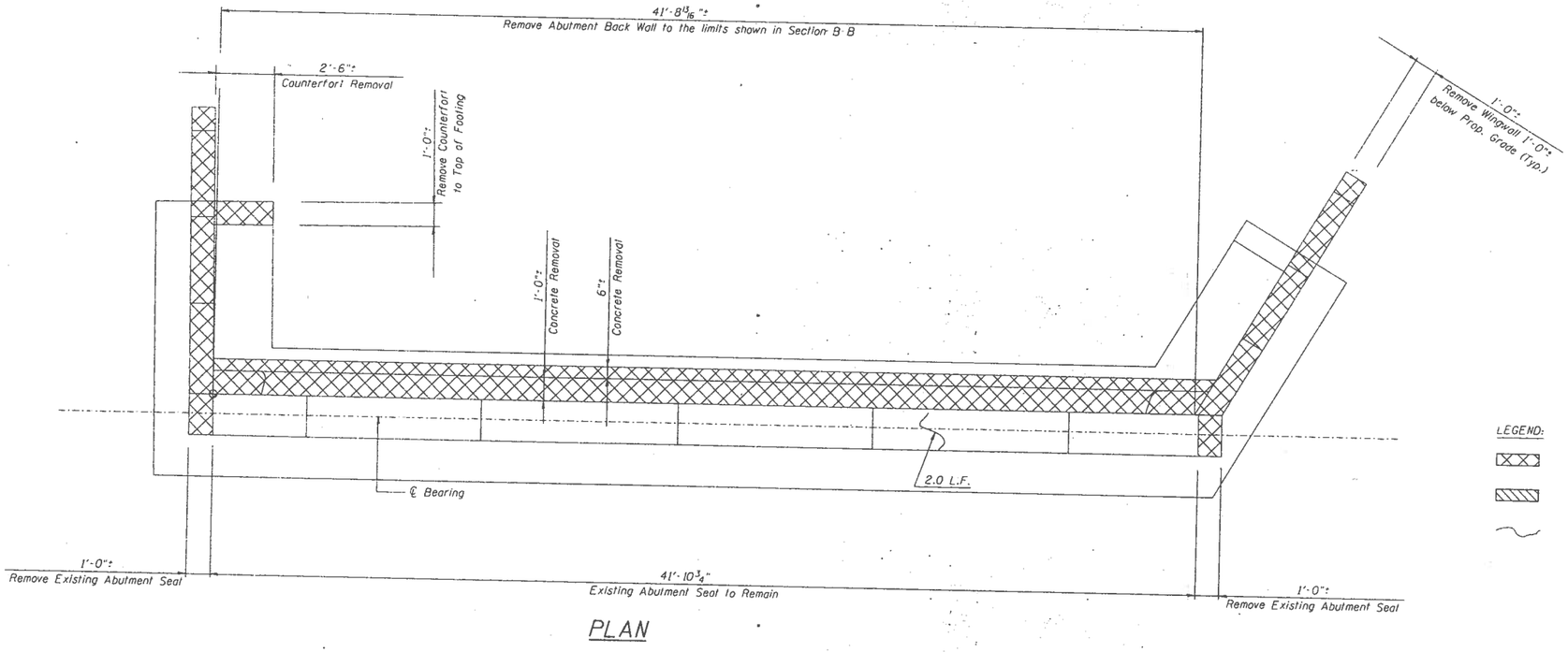
*SECTION 99 (5.5-1:5VB) R-1 & 99-4-1VB-1-BR-1



ELEVATION
(LOOKING SOUTH)



SECTION B-B



PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Epoxy Crack Sealing	Foot	15
Concrete Removal	Cu. Yd.	11.3

Note: Epoxy Crack Sealing Quantities are approximate and must be verified in the field.

***Existing vertical bars to remain in place, blast clean, straightened and lapped with new vertical bars. Horizontal bars shall be removed.

LEGEND:

- Concrete Removal
- Formed Concrete Repair (Depth ≤ 5")
- Epoxy Crack Sealing

REVISIONS	
NAME	DATE

Cloroba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
SOUTHWEST ABUTMENT REPAIR
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

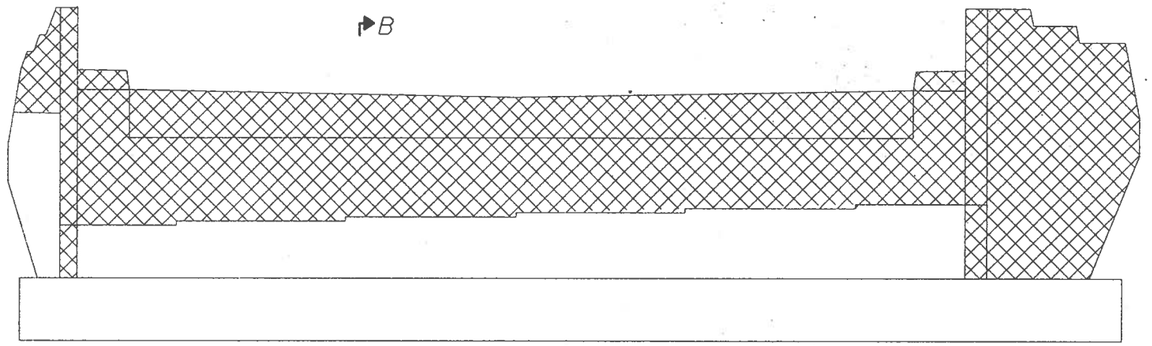
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMC
CHECKED BY: GAE

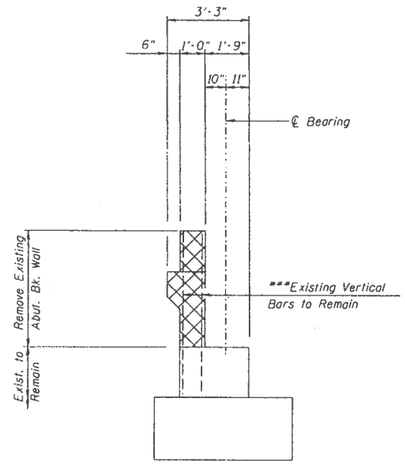
2948/US30/WESTBOUND/SWABRE.DGN

I. R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO. _		ILLINOIS	FED. AID PROJECT	

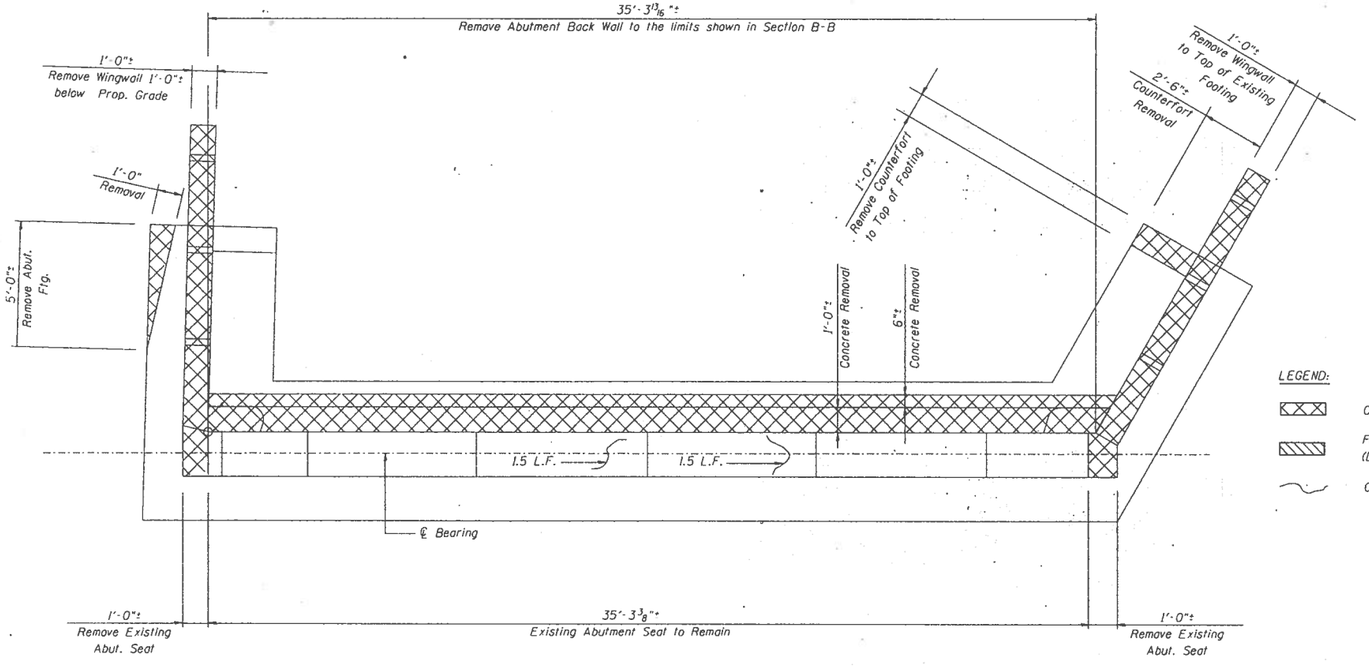
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



ELEVATION
(LOOKING NORTH)



SECTION B-B



PLAN

LEGEND:

- Concrete Removal
- Formed Concrete Repair (Depth ≤ 5")
- Open Crack

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Epoxy Crack Sealing	Foot	3
Concrete Removal	Cu. Yd.	13.5

Note: Formed Concrete Repair (Depth ≤ 5") and Epoxy Crack Sealing Quantities are approximate and must be verified in the field. *** Existing Vertical Bars to Remain in place, blast cleaned, straightened and lapped with new Vertical bars. Horizontal bars shall be removed.

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
NORTHWEST ABUTMENT REPAIR
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

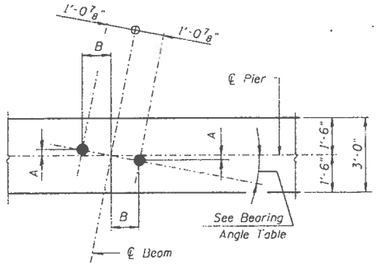
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

2948/US30/WESTBOUND/NWABUTRE.dgn

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

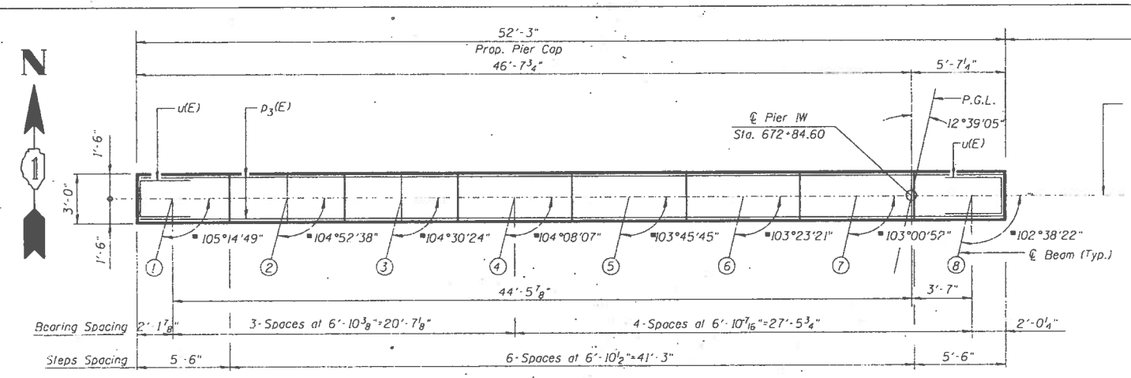
*SECTION 99 (5.5-1;5VB) R-1 & 99-4-1VB-1-BR-1



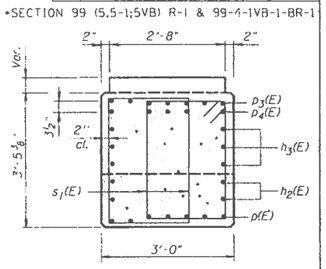
BEARING ANCHOR BOLTS LAYOUT

BEARING ANGLE TABLE

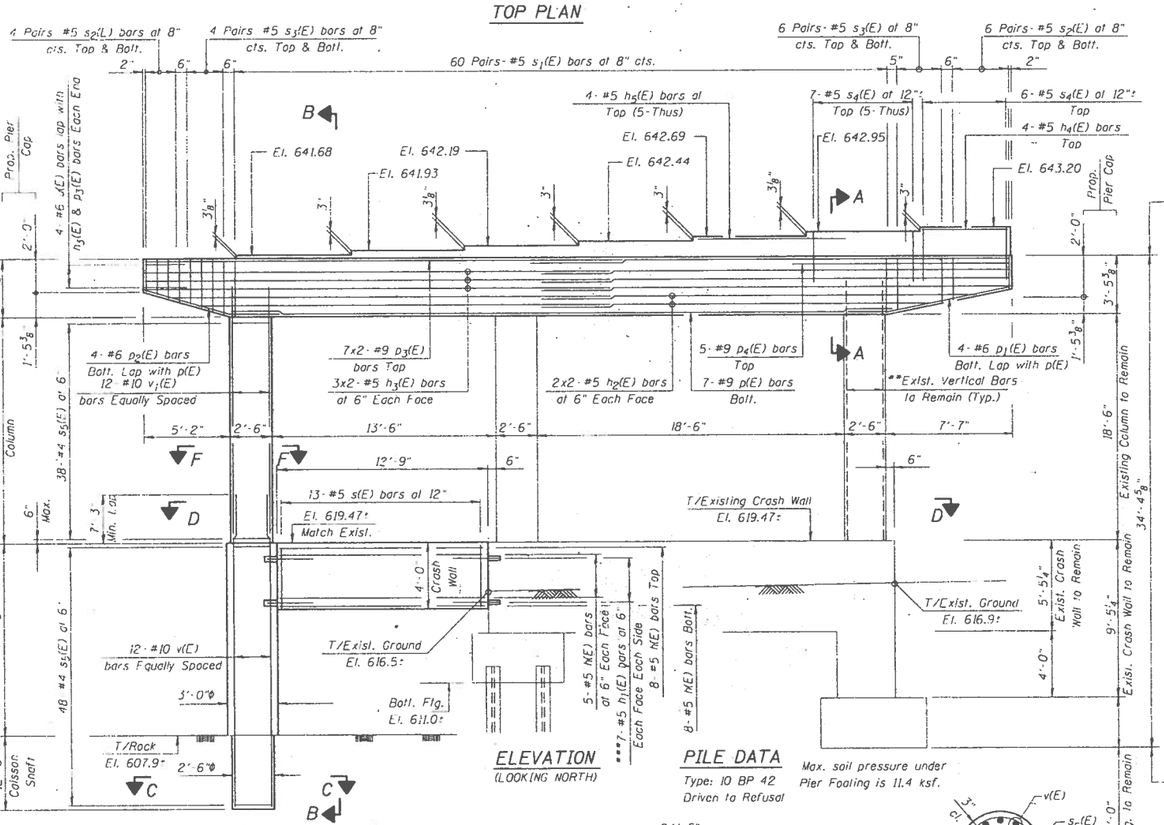
Beam No.	Bearing Angle	A	B
1	14°32'36"	3 1/4"	1'-0 7/16"
2	14°10'34"	3 1/8"	1'-0 1/2"
3	13°48'27"	3 1/16"	1'-0 1/2"
4	13°26'17"	3"	1'-0 1/2"
5	13°04'02"	2 15/16"	1'-0 9/16"
6	12°41'46"	2 13/16"	1'-0 9/16"
7	12°19'24"	2 3/4"	1'-0 9/16"
8	11°56'58"	2 11/16"	1'-0 5/8"



TOP PLAN



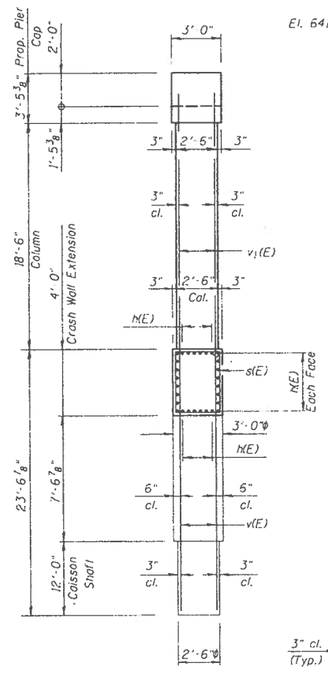
SECTION A-A



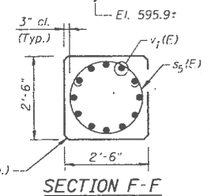
ELEVATION (LOOKING NORTH)

PILE DATA

Type: 10 BP 42
Driven to Refusal



SECTION B-B



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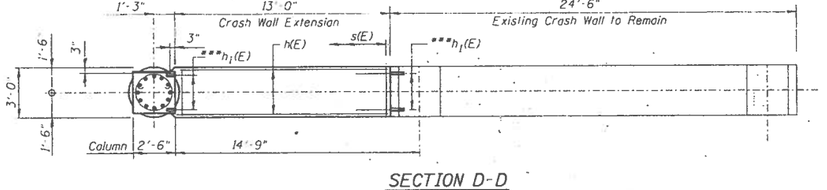

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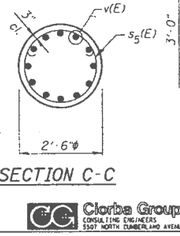
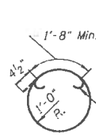
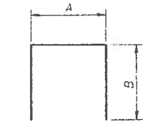


SECTION C-C



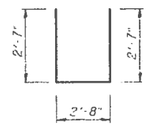
BAR s5(E)



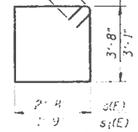
BARS s2(E), s3(E), s4(E),

A & B DIMENSIONS

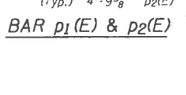
Bar	A	B
s2(E)	1'-9"	1'-8"
s3(E)	1'-9"	2'-4"
s4(E)	2'-4"	3'-7"



BAR u(E)



BARS s(E) & s1(E)



BAR p1(E) & p2(E)

PIER IW BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	26	#5	12'-5"	
h3(E)	28	#5	3'-0"	
h2(E)	8	#5	25'-1"	
h3(E)	12	#5	27'-1"	
h4(E)	4	#5	5'-2"	
h5(E)	20	#5	8'-11"	
p(E)	7	#9	39'-2"	
p1(E)	4	#6	10'-1"	
p2(E)	4	#6	7'-7"	
p3(E)	14	#9	28'-10"	
p4(E)	5	#9	13'-0"	
s(E)	13	#5	13'-7"	
s1(E)	120	#5	10'-7"	
s2(E)	40	#5	5'-1"	
s3(E)	40	#5	6'-5"	
s4(E)	41	#5	9'-6"	
s5(E)	86	#4	8'-10"	
u(E)	8	#6	7'-10"	
v(E)	12	#10	31'-10"	
v1(E)	12	#10	21'-0"	
Structure Excavation		Cu. Yd.		4
Concrete Structures		Cu. Yd.		36.7
Reinforcement Bars, Epoxy Coated		Lbs.		9540
Caisson Shafts 30"		Cu. Ft.		59

Reinforcement Bars designated (E) shall be epoxy coated.

NOTES:

Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard 3/4" chamfer except as noted.
Pour steps monolithically with cap.
** Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
* Angle shown is angle between the ℄ of beam and the ℄ of the pier. For the angle and details used to place the Bearing Anchor Bolts See Anchor Bolts Layout this Sheet.
Minimum Lap 2'-2" for #5 bars, 2'-7" for #6 bars, 5'-9" for #9 bars & 7'-3" for #10 bars.
Bars indicated thus 2x2-#5 etc. Indicates 2 lines of bars with 2 lengths per lines.
*** Epoxy grout h1(E) in a 7/8"ϕ hole. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584.
For Pier Repair & Cap Removal Details see Sheet S-48.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER IW DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

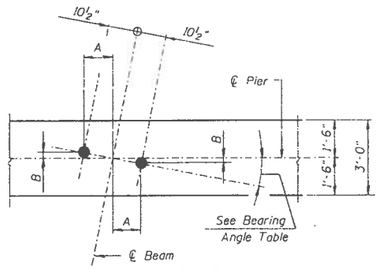
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Clarke Group, Inc.
CONSULTING ENGINEERS
3507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/PIERIW.DGN

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

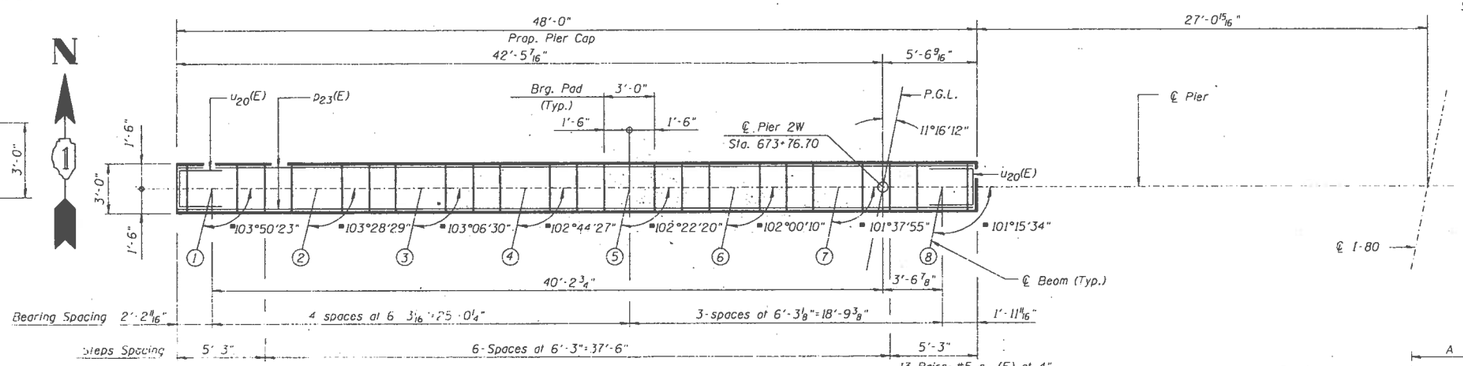
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



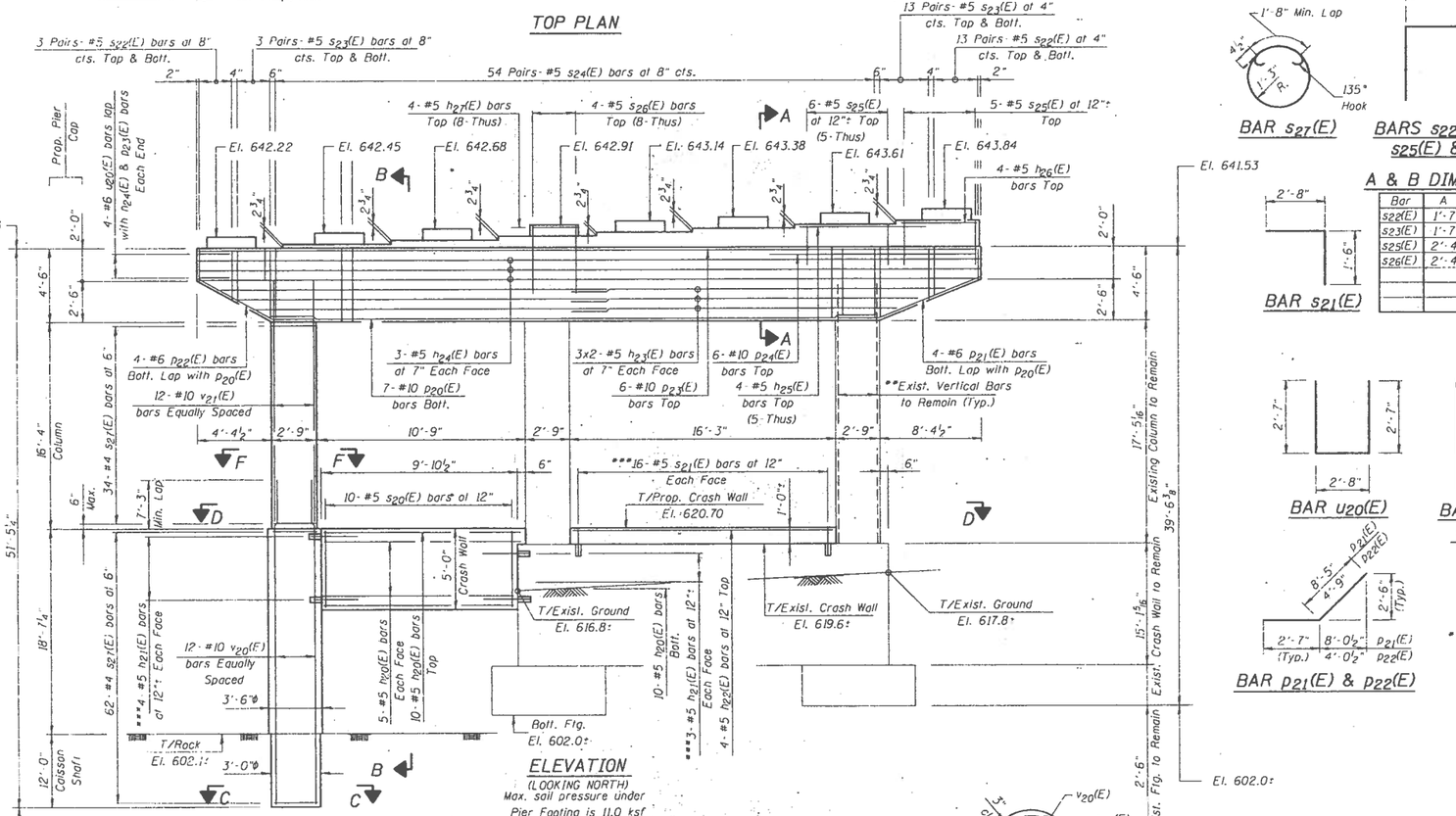
BEARING ANCHOR BOLTS LAYOUT

BEARING ANGLE TABLE

Beam No.	Bearing Angle	A	B
1	13°50'23"	$10\frac{3}{16}$"	$2\frac{1}{2}$"
2	13°28'29"	$10\frac{3}{16}$"	$2\frac{1}{16}$"
3	13°06'30"	$10\frac{1}{4}$"	$2\frac{3}{8}$"
4	12°44'27"	$10\frac{1}{4}$"	$2\frac{5}{16}$"
5	12°22'20"	$10\frac{1}{4}$"	$2\frac{1}{4}$"
6	12°00'10"	$10\frac{1}{4}$"	$2\frac{3}{16}$"
7	11°37'55"	$10\frac{5}{16}$"	$2\frac{1}{8}$"
8	11°15'34"	$10\frac{5}{16}$"	$2\frac{1}{16}$"



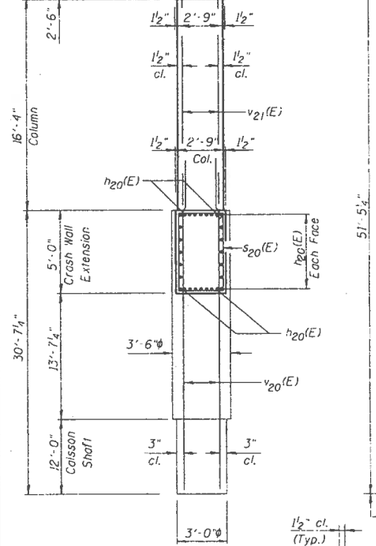
TOP PLAN



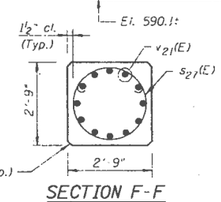
ELEVATION

(LOOKING NORTH)

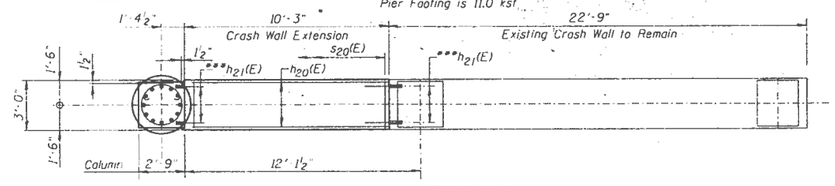
Max. soil pressure under Pier Footing is 11.0 ksf



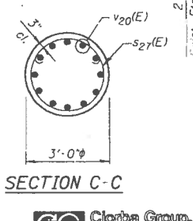
SECTION B-B



SECTION F-F



SECTION D-D



SECTION C-C

BAR $s_{27}(E)$

BARS $s_{22}(E)$, $s_{23}(E)$, $s_{25}(E)$ & $s_{26}(E)$

A & B DIMENSIONS

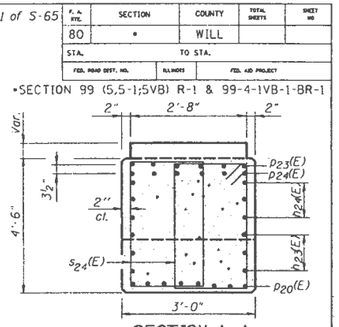
Bar	A	B
s22(E)	1'-7"	1'-8"
s23(E)	1'-7"	2'-11"
s25(E)	2'-4"	3'-10"
s26(E)	2'-4"	2'-10"

BAR $s_{21}(E)$

BAR $u_{20}(E)$

BARS $s_{20}(E)$ & $s_{24}(E)$

BAR $p_{21}(E)$ & $p_{22}(E)$



SECTION A-A

PIER 2W BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	30	#5	9'-6"	
h21(E)	14	#5	3'-0"	
h22(E)	4	#5	16'-0"	
h23(E)	12	#5	23'-6"	
h24(E)	6	#5	47'-8"	
h25(E)	20	#5	8'-6"	
h26(E)	4	#5	5'-0"	
h27(E)	32	#5	2'-8"	
p20(E)	7	#10	34'-11"	
p21(E)	4	#6	11'-0"	
p22(E)	4	#6	7'-4"	
p23(E)	6	#10	47'-8"	
p24(E)	6	#10	15'-2"	
s20(E)	10	#5	15'-7"	
s21(E)	32	#5	4'-2"	
s22(E)	64	#5	4'-11"	
s23(E)	64	#5	7'-5"	
s24(E)	108	#5	12'-5"	
s25(E)	35	#5	10'-0"	
s26(E)	32	#5	8'-0"	
s27(E)	96	#4	10'-4"	
u20(E)	8	#6	7'-10"	
v20(E)	12	#10	38'-10"	
v21(E)	12	#10	18'-10"	
Structure Excavation			Cu. Yd.	3
Concrete Structures			Cu. Yd.	46.2
Reinforcement Bars, Epoxy Coated			Lbs.	10970
Caisson Shafts 36"			Cu. Ft.	59

Reinforcement Bars designated (E) shall be epoxy coated.

NOTES:

Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfer except as noted.
Pour steps monolithically with cap.
**Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
*Angle shown is angle between the ℄ of beam and the ℄ of the pier. For the angle and details used to place the Bearing Anchor Bolts See Anchor Bolts Layout this Sheet.
Minimum Lap 2'-2" for #5 bars, 2'-7" for #6 bars & 7'-3" for #10 bars.
Bars indicated thus 2x2 - #5 etc. Indicates 2 lines of bars with 2 lengths per lines.
***Epoxy grout $h_{21}(E)$ & $s_{21}(E)$ in a $7\frac{7}{8}$"ϕ hole. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584.
For Pier Repair & Cap Removal Details see Sheet S-49.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER 2W DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

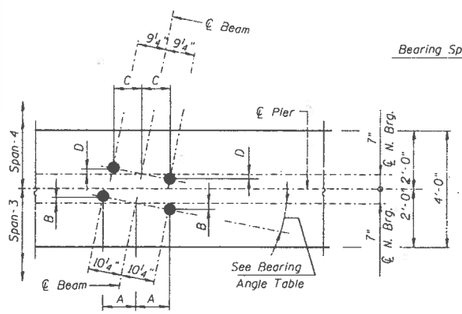
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Cloroba Group, Inc.
CONSULTING ENGINEERS
5501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/PIER2w.DGN

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

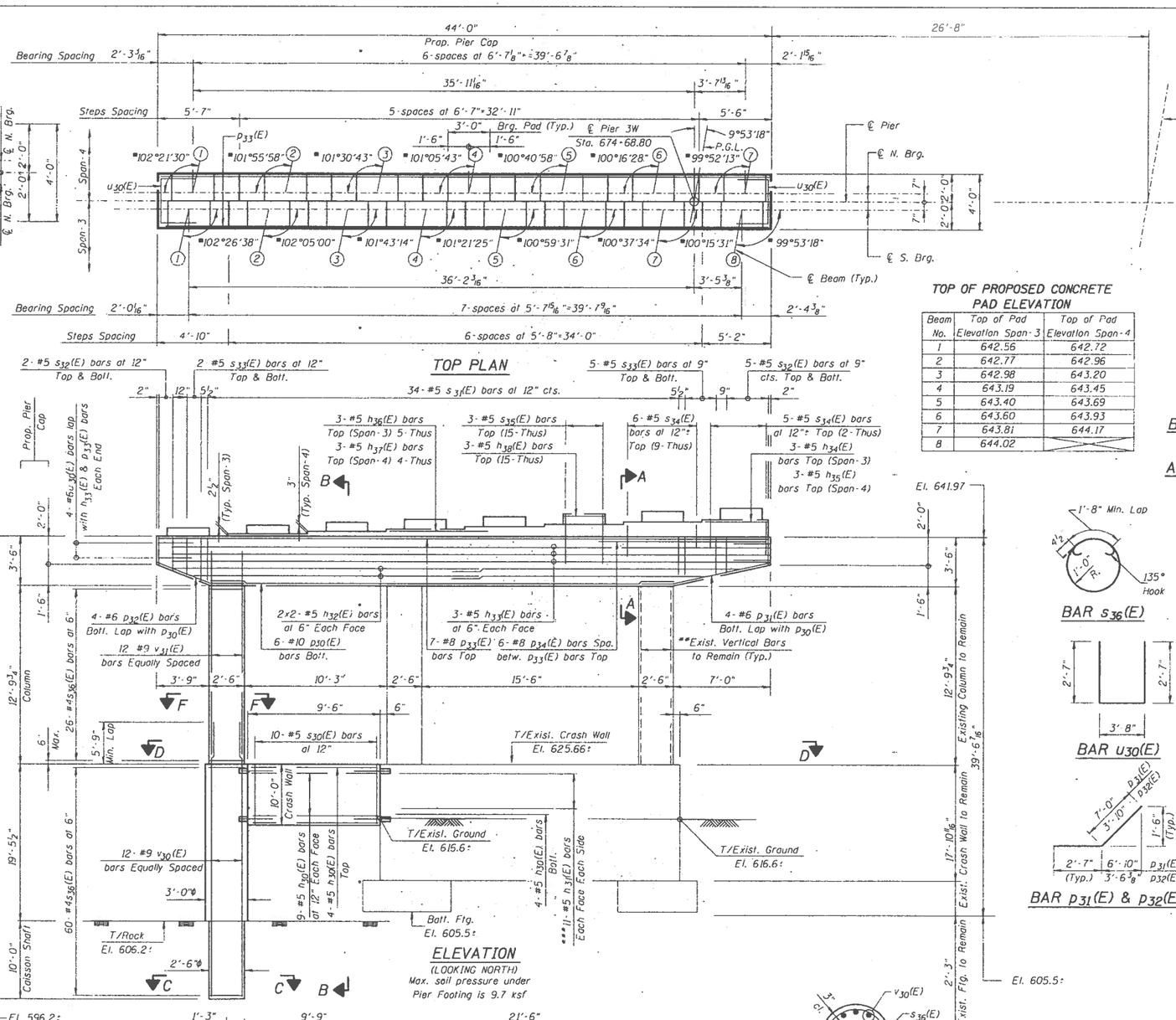
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1

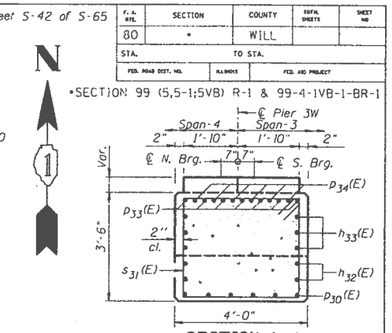


BEARING ANCHOR BOLTS LAYOUT

BEARING ANGLE TABLE

Beam No.	Bearing Angle Span-3	A	B	Bearing Angle Span-4	C	D
1	13°08'31"	10"	2 5/16"	11°24'41"	9 1/16"	1 13/16"
2	12°46'45"	10"	2 1/4"	11°04'25"	9 1/16"	1 3/4"
3	12°24'53"	10"	2 3/16"	10°44'16"	9 1/16"	1 3/4"
4	12°02'56"	10"	2 1/8"	10°24'16"	9 1/8"	1 11/16"
5	11°40'55"	10 1/16"	2 1/16"	10°04'23"	9 1/8"	1 5/8"
6	11°18'52"	10 1/16"	2"	9°44'39"	9 1/8"	1 9/16"
7	10°56'43"	10 1/16"	1 15/16"	9°25'03"	9 1/8"	1 1/2"
8	10°34'26"	10 1/16"	1 1/8"			





SECTION A-A
PIER 3W
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h30(E)	26	#5	9'-2"	
h31(E)	44	#5	3'-0"	
h32(E)	8	#5	21'-10"	
h33(E)	6	#5	43'-8"	
h34(E)	3	#5	4'-10"	
h35(E)	3	#5	5'-2"	
h36(E)	15	#5	7'-10"	
h37(E)	12	#5	8'-9"	
h38(E)	45	#5	2'-8"	
p30(E)	6	#10	33'-0"	
p31(E)	4	#6	9'-7"	
p32(E)	4	#6	6'-5"	
p33(E)	7	#8	43'-8"	
p34(E)	6	#8	12'-3"	
s30(E)	10	#5	25'-7"	
s31(E)	34	#5	14'-7"	
s32(E)	14	#5	7'-0"	
s33(E)	14	#5	8'-2"	
s34(E)	64	#5	7'-6"	
s35(E)	45	#5	6'-8"	
s36(E)	86	#4	8'-10"	
u30(E)	8	#6	8'-10"	
v30(E)	12	#9	36'-3"	
v31(E)	12	#9	14'-9"	
Structure Excavation			Cu. Yd.	3
Concrete Structures			Cu. Yd.	47.0
Reinforcement Bars, Epoxy Coated			Lbs.	7710
Caisson Shafts 30"			Cu. Ft.	49

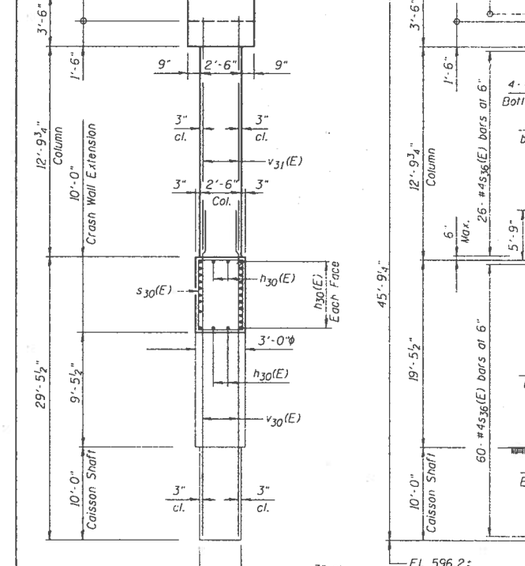
Reinforcement Bars designated (E) shall be epoxy coated.

TOP OF PROPOSED CONCRETE PAD ELEVATION

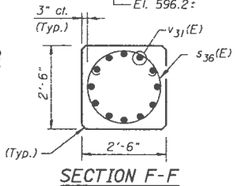
Beam No.	Top of Pad Elevation Span-3	Top of Pad Elevation Span-4
1	642.56	642.72
2	642.77	642.96
3	642.98	643.20
4	643.19	643.45
5	643.40	643.69
6	643.60	643.93
7	643.81	644.17
8	644.02	

TOP PLAN

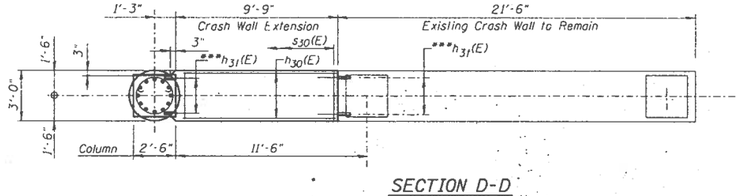
ELEVATION
(LOOKING NORTH)
Max. soil pressure under Pier Footing is 9.7 ksf



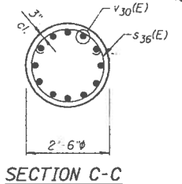
SECTION B-B



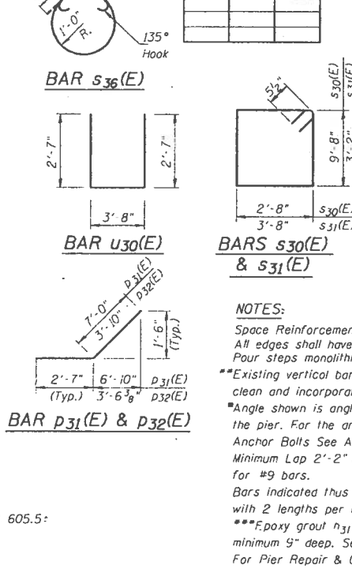
SECTION F-F

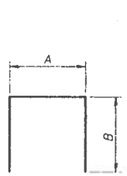


SECTION D-D



SECTION C-C





BARS s32(E), s33(E), s34(E) & s35(E)
A & B DIMENSIONS

Bar	A	B
s32(E)	3'-8"	1'-8"
s33(E)	3'-8"	2'-3"
s34(E)	1'-6"	3'-0"
s35(E)	1'-6"	2'-7"

BAR s36(E)

BAR u30(E)

BARS s30(E) & s31(E)

BAR p31(E) & p32(E)

NOTES:

Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfer except as noted.
Pour steps monolithically with cap.
**Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
*Angle shown is angle between the ℄ of beam and the ℄ of the pier. For the angle and details used to place the Bearing Anchor Bolts See Anchor Bolts Layout this Sheet.
Minimum Lap 2'-2" for #5 bars, 2'-7" for #6 bars & 5'-9" for #9 bars.
Bars indicated thus 2x2-#5 etc. Indicates 2 lines of bars with 2 lengths per line.
***Epoxy grout h31(E) in a 1⅞"ø hole. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584.
For Pier Repair & Cap Removal Details see Sheet S-50.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER 3W DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

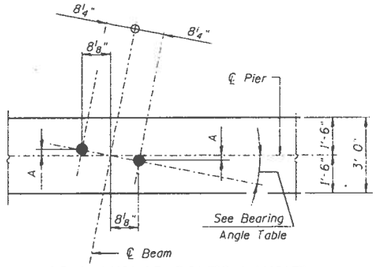
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Ciorba Group, Inc.
CONSULTING ENGINEERS
2001 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/PIER3W.DGN

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

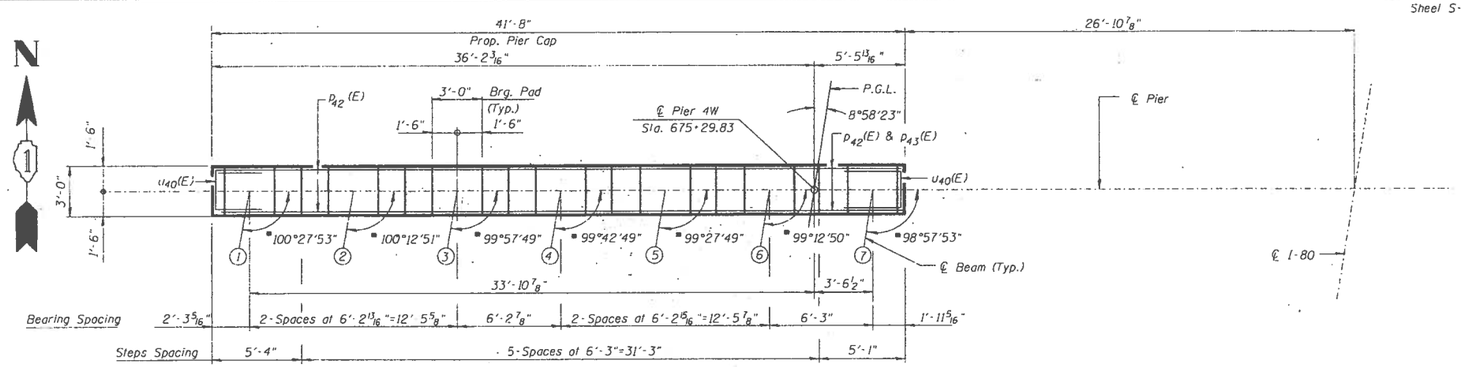
*SECTION 99 (5.5-1:5VB) R-1 & 99-4-1VB-1-BR-1



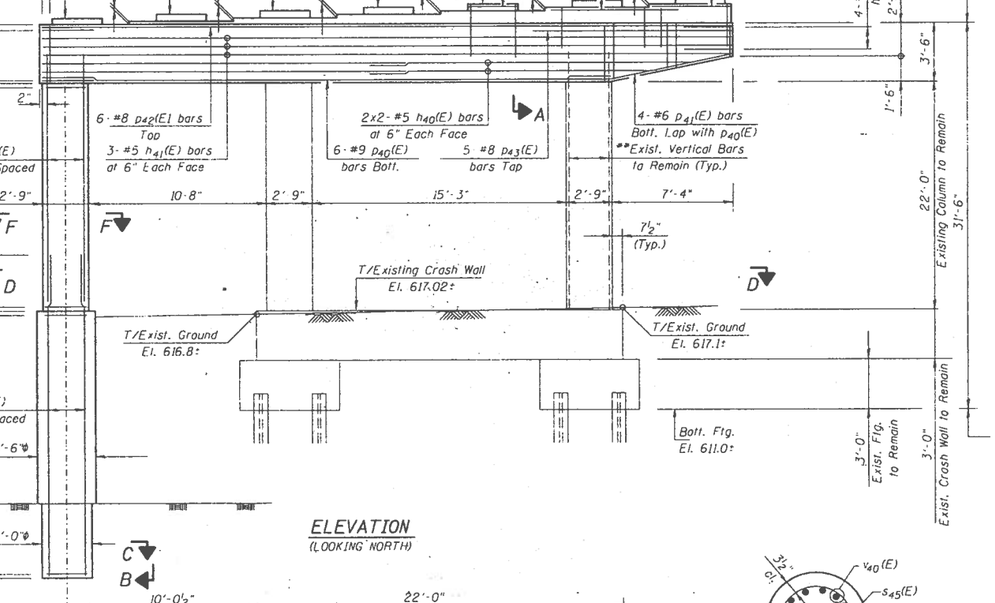
BEARING ANCHOR BOLTS LAYOUT

BEARING ANGLE TABLE

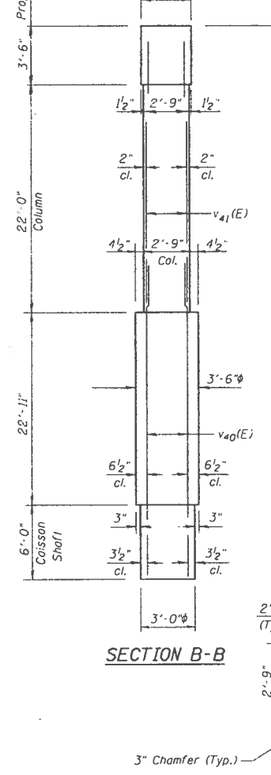
Beam No.	Bearing Angle	A
1	10°27'53"	1 1/2"
2	10°12'51"	1 1/16"
3	9°57'49"	1 1/16"
4	9°42'49"	1 3/8"
5	9°27'49"	1 3/8"
6	9°12'50"	1 5/16"
7	8°57'53"	1 5/16"



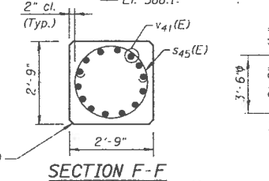
TOP PLAN



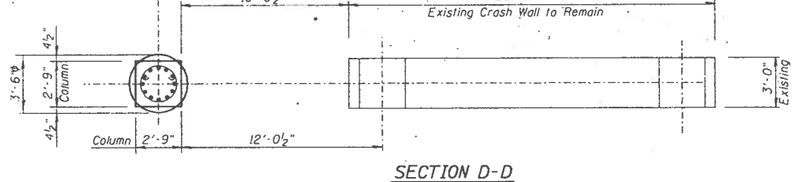
ELEVATION
(LOOKING NORTH)



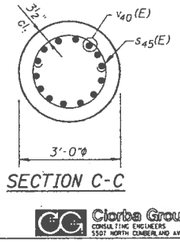
SECTION B-B



SECTION F-F



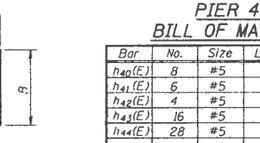
SECTION D-D



SECTION C-C

PILE DATA

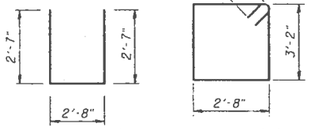
Type: 10 BP 42
Driven to Refusal



BAR s45(E) BARS s41(E), s42(E), s43(E), & s44(E)

A & B DIMENSIONS

Bar	A	B
s41(E)	2'-8"	1'-8"
s42(E)	2'-8"	2'-6"
s43(E)	2'-4"	3'-2"
s44(E)	2'-4"	2'-7"



PIER 4W
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h40(E)	8	#5	20'-9"	
h41(E)	6	#5	41'-4"	
h42(E)	4	#5	4'-9"	
h43(E)	16	#5	8'-5"	
h44(E)	28	#5	2'-8"	
p40(E)	6	#9	34'-0"	
p41(E)	4	#6	9'-9"	
p42(E)	6	#8	41'-4"	
p43(E)	5	#8	13'-6"	
s40(E)	49	#5	12'-7"	
s41(E)	14	#5	6'-0"	
s42(E)	14	#5	7'-8"	
s43(E)	29	#5	8'-8"	
s44(E)	28	#5	7'-6"	
s45(E)	106	#4	10'-0"	
u40(E)	11	#6	7'-10"	
v40(E)	14	#9	35'-8"	
v41(E)	14	#9	24'-0"	
Concrete Structures		Cu. Yd.	33.7	
Reinforcement Bars, Epoxy Coated		Lbs.	7270	
Caisson Shafts 36"		Cu. Ft.	43	

Reinforcement Bars designated (E) shall be epoxy coated.

NOTES:

Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard 3/4" chamfer except as noted.
Paur steps monolithically with cap.
** Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
* Angle shown is angle between the ℄ of beam and the ℄ of the pier. For the angle and details used to place the Bearing Anchor Bolts See Anchor Bolts Layout this Sheet.
Minimum Lap 2'-2" for #5 bars, 2'-7" for #6 bars & 5'-9" for #9 bars.
Bars indicated thus 2x2-#5 etc. Indicates 2 lines of bars with 2 lengths per lines.
For Pier Repair & Cap Removal Details see Sheet S-51.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER 4W DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

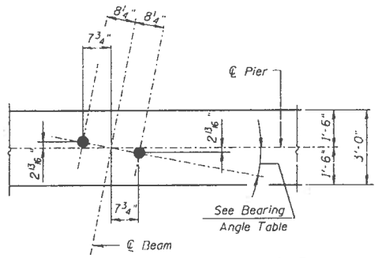
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Clarke Group, Inc.
CONSULTING ENGINEERS
5501 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

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

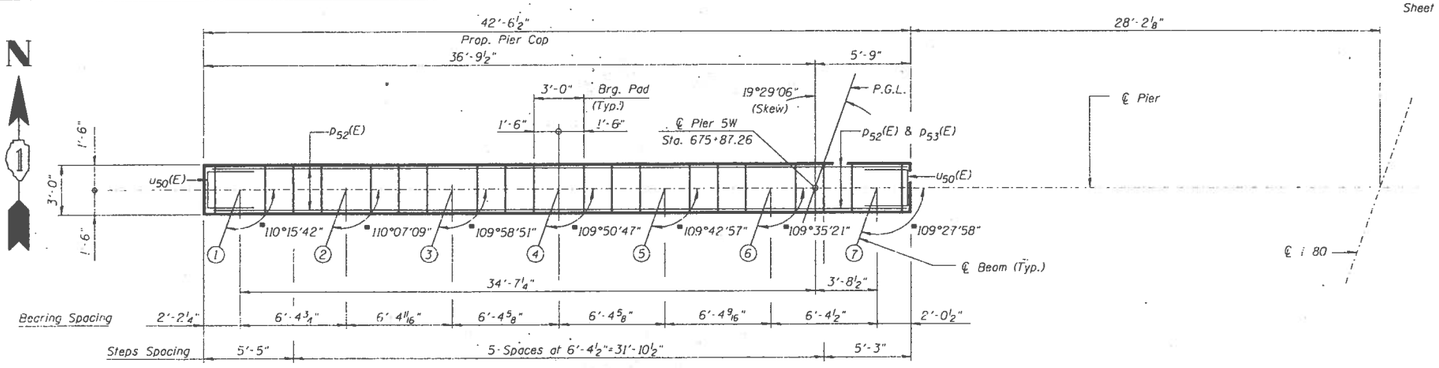
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-I



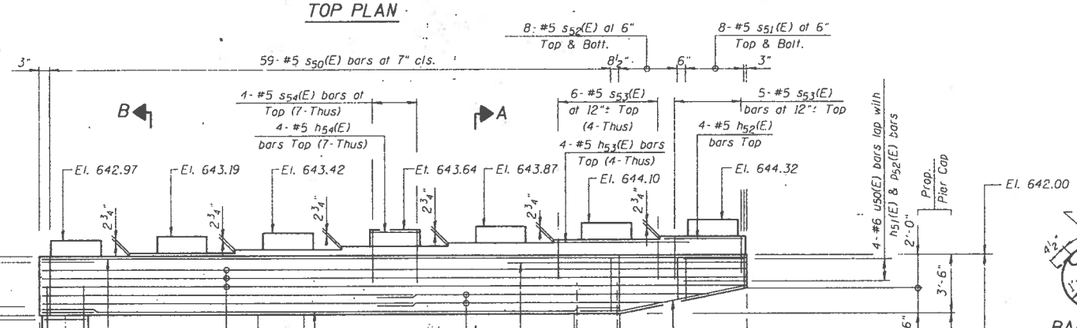
BEARING ANCHOR BOLTS LAYOUT

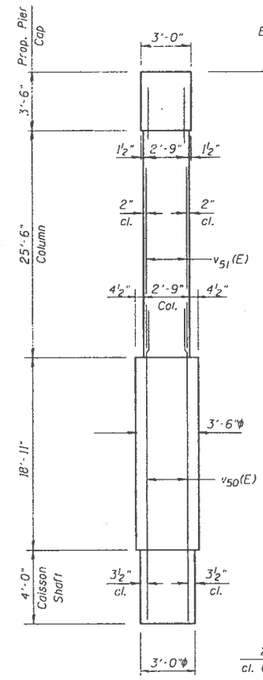
BEARING ANGLE TABLE

Beam No.	Bearing Angle
1	20°15'42"
2	20°07'09"
3	19°58'51"
4	19°50'47"
5	19°42'57"
6	19°35'21"
7	19°27'58"

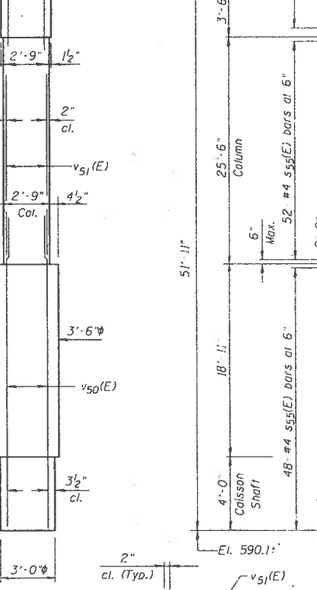


TOP PLAN



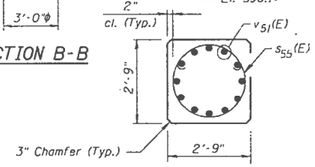


SECTION B-B

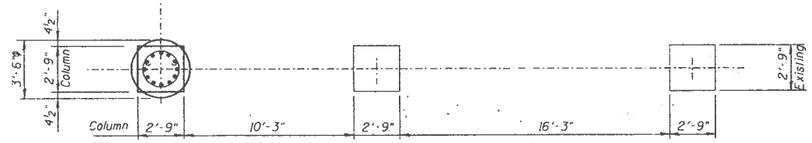


ELEVATION

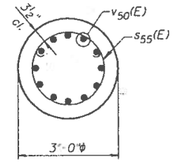
(LOOKING NORTH)
Max. soil pressure under Pier Footing 12.5 ksf



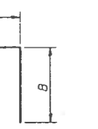
SECTION F-F



SECTION D-D

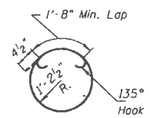


SECTION C-C

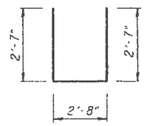


BARS $s_{51}(E)$, $s_{52}(E)$, $s_{53}(E)$, & $s_{54}(E)$ A & B DIMENSIONS

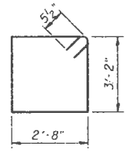
Bar	A	B
$s_{51}(E)$	2'-8"	1'-8"
$s_{52}(E)$	2'-8"	2'-5"
$s_{53}(E)$	2'-4"	3'-0"
$s_{54}(E)$	2'-4"	3'-2"



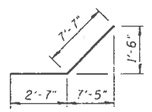
BAR $s_{55}(E)$



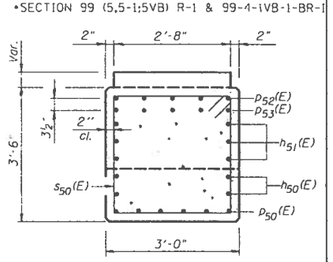
BAR $u_{50}(E)$



BAR $s_{50}(E)$



BAR $p_{51}(E)$



SECTION A-A

PIER 5W BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{50}(E)$	8	#5	21'-0"	
$h_{51}(E)$	6	#5	42'-2"	
$h_{52}(E)$	4	#5	4'-11"	
$h_{53}(E)$	16	#5	8'-6"	
$h_{54}(E)$	28	#5	2'-8"	
$p_{50}(E)$	7	#9	34'-7"	
$p_{51}(E)$	4	#6	10'-2"	
$p_{52}(E)$	5	#9	42'-2"	
$p_{53}(E)$	5	#9	14'-0"	
$s_{50}(E)$	59	#5	12'-7"	
$s_{51}(E)$	16	#5	6'-0"	
$s_{52}(E)$	16	#5	7'-6"	
$s_{53}(E)$	29	#5	8'-4"	
$s_{54}(E)$	28	#5	8'-8"	
$s_{55}(E)$	100	#4	10'-0"	
$u_{50}(E)$	11	#6	7'-10"	
$v_{50}(E)$	12	#11	33'-0"	
$v_{51}(E)$	12	#11	27'-0"	

Concrete Structures	Cu. Yd.	34.7
Reinforcement Bars, Epoxy Coated	Lbs.	8650
Caisson Shafts 36"	Cu. Ft.	29

Reinforcement Bars designated (E) shall be epoxy coated.

NOTES:

Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfer except as noted.
Pour steps monolithically with cap.
**Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
*Angle shown is angle between the ℄ of beam and the ℄ of the pier. For the angle and details used to place the Bearing Anchor Bolts See Anchor Bolts Layout this Sheet.
Minimum Lap 2'-2" for #5 bars, 2'-7" for #6 bars & 9'-0" for #11 bars.
Bars indicated thus 2x2-#5 etc. indicates 2 lines of bars with 2 lengths per lines.
For Pier Repair & Cap Removal Details see Sheet S-52.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER 5W DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

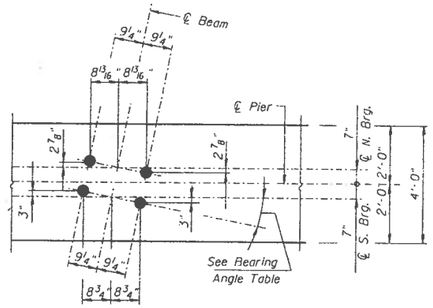
SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/PIER5W.DGN

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

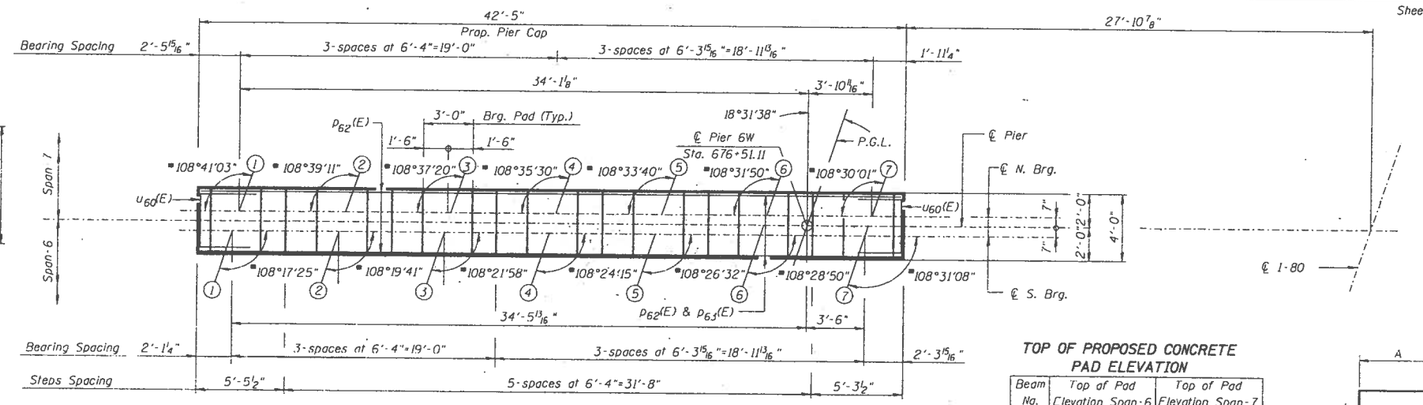
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



BEARING ANCHOR BOLTS LAYOUT

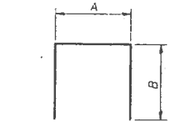
BEARING ANGLE TABLE

Beam No.	Bearing Angle Span-6	Bearing Angle Span-7
1	19°16'33"	18°12'19"
2	19°13'25"	18°10'31"
3	19°10'25"	18°08'43"
4	19°07'31"	18°06'56"
5	19°04'45"	18°05'09"
6	19°02'05"	18°03'22"
7	18°59'33"	18°01'35"



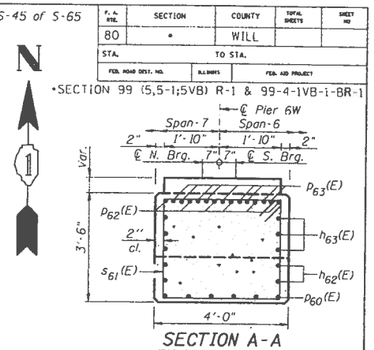
TOP OF PROPOSED CONCRETE PAD ELEVATION

Beam No.	Top of Pad Elevation Span-6	Top of Pad Elevation Span-7
1	642.98	642.98
2	643.20	643.20
3	643.42	643.42
4	643.64	643.64
5	643.86	643.86
6	644.09	644.09
7	644.31	644.31



BARS $s_{62}(E)$, $s_{63}(E)$, $s_{64}(E)$ & $s_{65}(E)$ A & B DIMENSIONS

Bar	A	B
$s_{62}(E)$	3'-8"	1'-8"
$s_{63}(E)$	3'-8"	2'-5"
$s_{64}(E)$	3'-4"	3'-2"
$s_{65}(E)$	3'-4"	2'-11"

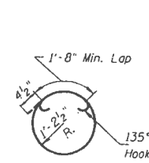


SECTION A-A

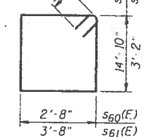
PIER 6W BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{60}(E)$	50	#5	8'-7"	
$h_{61}(E)$	64	#5	3'-0"	
$h_{62}(E)$	8	#5	21'-0"	
$h_{63}(E)$	6	#5	42'-1"	
$h_{64}(E)$	4	#5	4'-11"	
$h_{65}(E)$	16	#5	8'-6"	
$h_{66}(E)$	28	#5	2'-8"	
$p_{60}(E)$	6	#10	34'-2"	
$p_{61}(E)$	4	#6	10'-6"	
$p_{62}(E)$	6	#7	42'-1"	
$p_{63}(E)$	9	#7	15'-0"	
$s_{60}(E)$	9	#5	35'-11"	
$s_{61}(E)$	38	#5	14'-7"	
$s_{62}(E)$	10	#5	7'-0"	
$s_{63}(E)$	8	#5	8'-6"	
$s_{64}(E)$	30	#5	9'-8"	
$s_{65}(E)$	28	#5	9'-2"	
$s_{66}(E)$	102	#4	10'-0"	
$u_{60}(E)$	11	#6	8'-10"	
$v_{60}(E)$	16	#11	34'-4"	
$v_{61}(E)$	16	#11	27'-10"	
Structure Excavation			Cu. Yd.	10
Concrete Structures			Cu. Yd.	56.1
Reinforcement Bars, Epoxy Coated			Lbs.	10810
Caissan Shafts 36"			Cu. Ft.	50

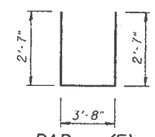
Reinforcement Bars designated (E) shall be epoxy coated.



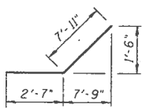
BAR $s_{66}(E)$



BARS $s_{60}(E)$ & $s_{61}(E)$



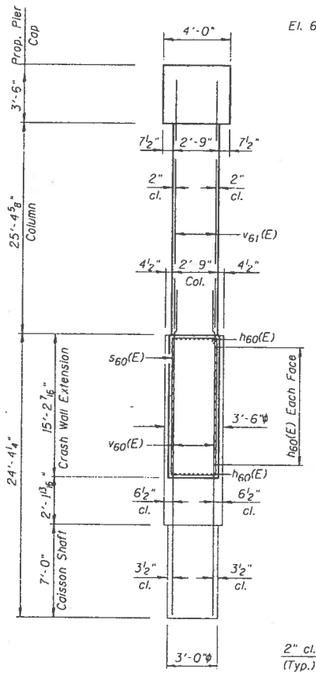
BAR $u_{60}(E)$



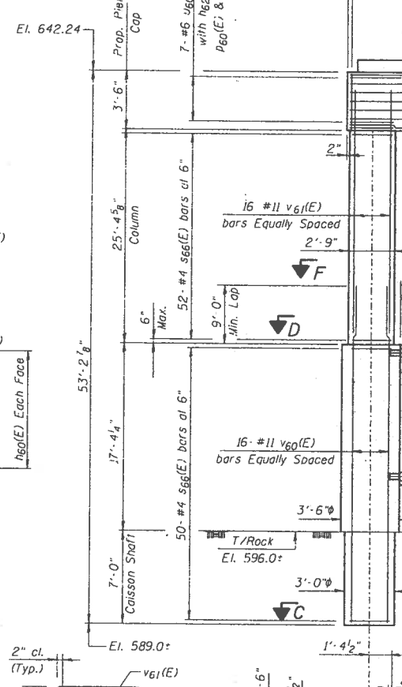
BAR $p_{61}(E)$

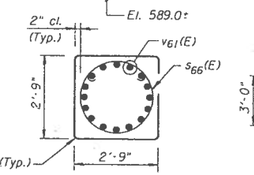
NOTES:

Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfer except as noted.
Pour steps monolithically with cap.
** Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
* Angle shown is angle between the ℄ of beam and the ℄ of the pier. For the angle and details used to place the Bearing Anchor Bolts See Anchor Bolts Layout this Sheet.
Minimum Lap 2'-2" for #5 bars, 2'-7" for #6 bars & 9'-0" for #11 bars.
Bars indicated thus 2x2 #5 etc. Indicates 2 lines of bars with 2 lengths per line.
*** Epoxy grout $h_{61}(E)$ in a $2\frac{7}{8}$"ϕ hole. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584 For Pier Repair & Cap Removal Details see Sheet S-53.

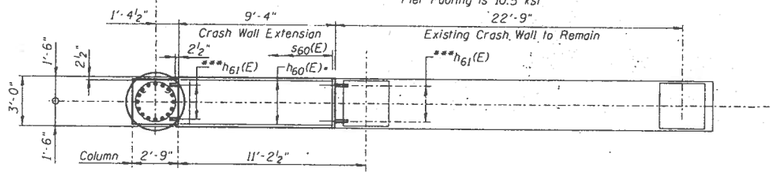


SECTION B-B

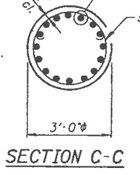




SECTION F-F



SECTION D-D



SECTION C-C

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER 6W DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

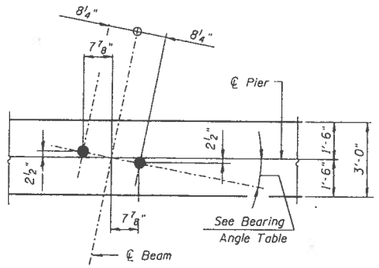
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/PIER6W.DGN

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

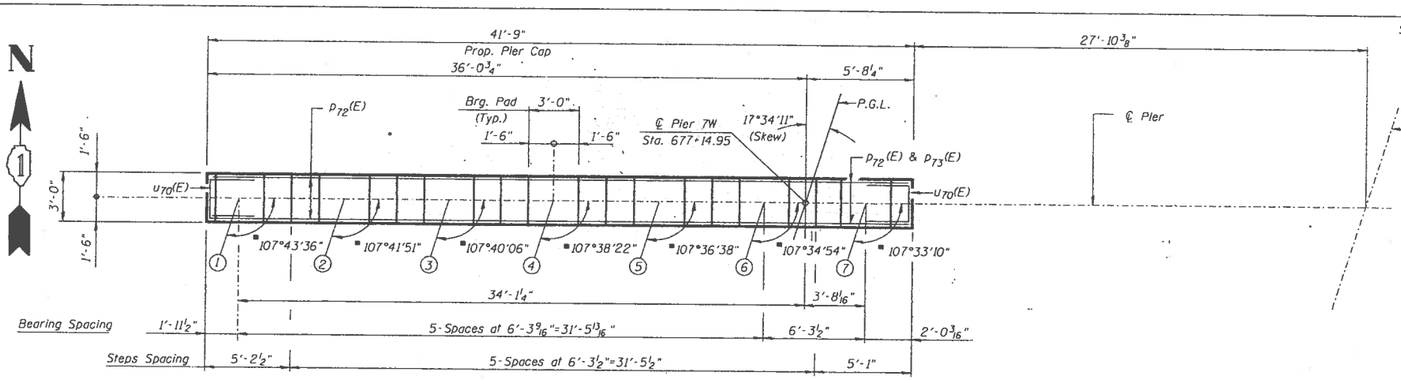
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



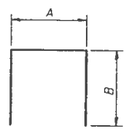
BEARING ANCHOR BOLTS LAYOUT

BEARING ANGLE TABLE

Beam No.	Bearing Angle
1	17°43'36"
2	17°41'51"
3	17°40'06"
4	17°38'22"
5	17°36'38"
6	17°34'54"
7	17°33'10"



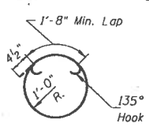
TOP PLAN



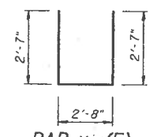
BARS $s_{72}(E)$, $s_{73}(E)$, $s_{74}(E)$ & $s_{75}(E)$

A & B DIMENSIONS

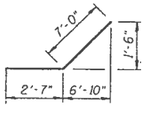
Bar	A	B
$s_{72}(E)$	2'-8"	1'-8"
$s_{73}(E)$	2'-8"	2'-3"
$s_{74}(E)$	2'-4"	2'-8"
$s_{75}(E)$	2'-4"	3'-0"



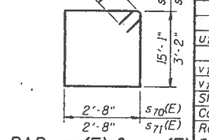
BAR $s_{76}(E)$



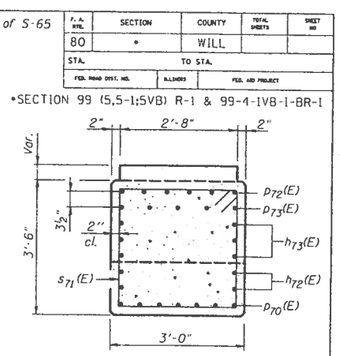
BAR $u_{70}(E)$



BAR $p_{71}(E)$



BAR $s_{70}(E)$ & $s_{71}(E)$



SECTION A-A

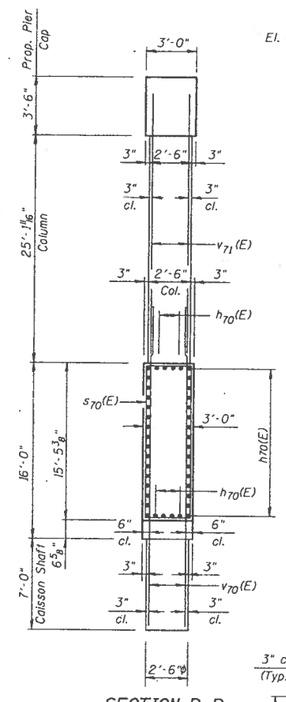
PIER 7W BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{70}(E)$	40	#5	9'-5"	
$h_{71}(E)$	64	#5	2'-11"	
$h_{72}(E)$	8	#5	21'-0"	
$h_{73}(E)$	6	#5	41'-5"	
$h_{74}(E)$	4	#5	4'-9"	
$h_{75}(E)$	16	#5	8'-2"	
$h_{76}(E)$	28	#5	2'-8"	
$p_{70}(E)$	7	#9	34'-5"	
$p_{71}(E)$	4	#6	9'-7"	
$p_{72}(E)$	6	#8	41'-5"	
$p_{73}(E)$	5	#8	13'-6"	
$s_{70}(E)$	10	#5	36'-5"	
$s_{71}(E)$	44	#5	12'-7"	
$s_{72}(E)$	14	#5	6'-0"	
$s_{73}(E)$	14	#5	7'-2"	
$s_{74}(E)$	29	#5	7'-8"	
$s_{75}(E)$	28	#5	8'-4"	
$s_{76}(E)$	100	#4	8'-10"	
$u_{70}(E)$	11	#6	7'-10"	
$v_{70}(E)$	16	#11	33'-0"	
$v_{71}(E)$	16	#11	27'-6"	
Structure Excavation			Cu. Yd.	17
Concrete Structures			Cu. Yd.	47.2
Reinforcement Bars, Epoxy Coated			Lbs.	10470
Caisson Shafts 30"			Cu. Ft.	35

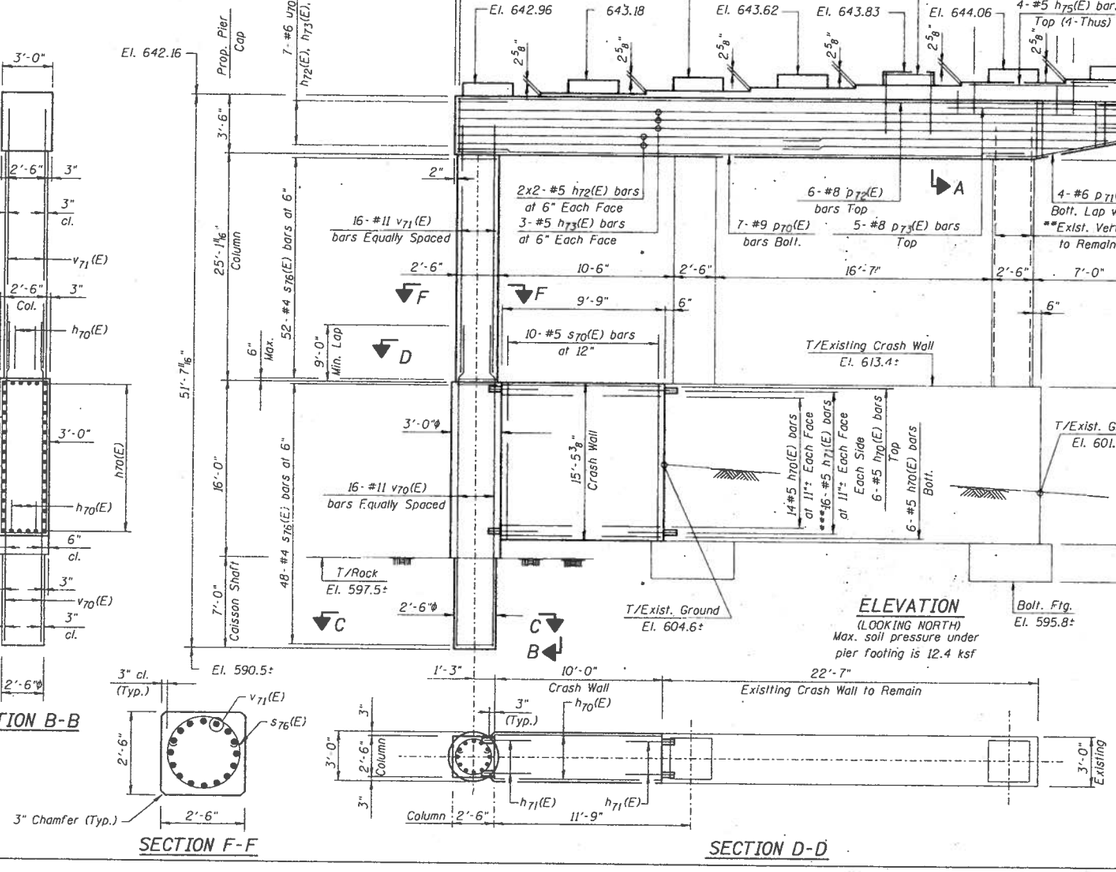
Reinforcement Bars designated (E) shall be epoxy coated.

NOTES:

Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfer except as noted.
Pour steps monolithically with cap.
** Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
* Angle shown is angle between the ℄ of beam and the ℄ of the pier. For the angle and details used to place the Bearing Anchor Bolts See Anchor Bolts Layout this Sheet.
Minimum Lap 2'-2" for #5 bars, 2'-7" for #6 bars & 9'-0" for #11 bars.
Bars indicated thus 2x2-#5 etc. Indicates 2 lines of bars with 2 lengths per lines.
*** Epoxy grout $h_{71}(E)$ in a $7\frac{7}{8}$"ϕ hole. Holes shall be drilled a minimum 9" deep. See Standard Specifications Article 584. For Pier Repair & Cap Removal Details see Sheet S-54.



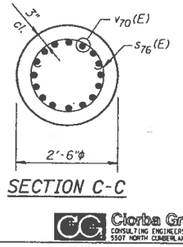
SECTION B-B



ELEVATION
(LOOKING NORTH)
Max. soil pressure under pier footing is 12.4 ksf

SECTION F-F

SECTION D-D



SECTION C-C

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

REVISIONS	
NAME	DATE

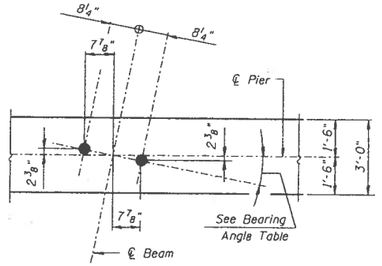
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER 7W DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: GAE
DRAWN BY: IMG
CHECKED BY: LAS

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

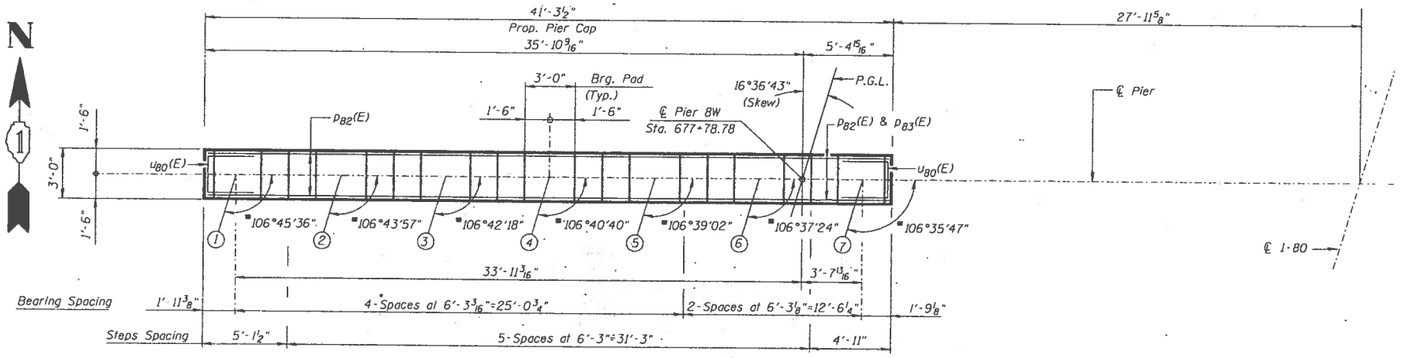
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



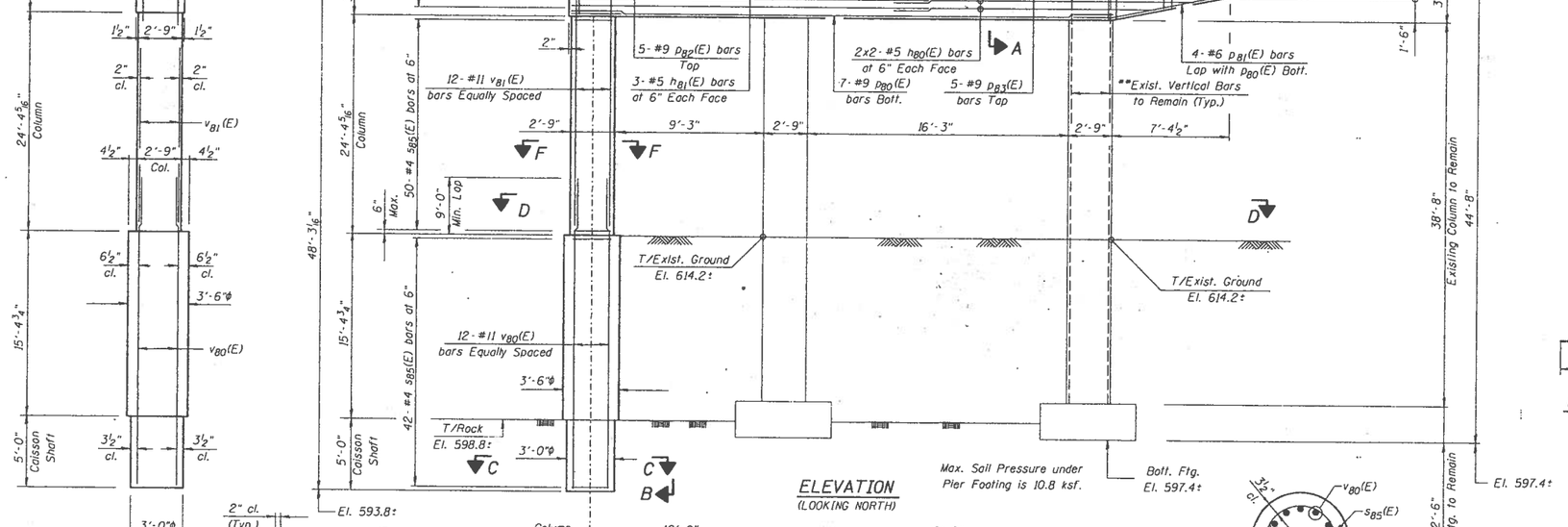
BEARING ANCHOR BOLTS LAYOUT

BEARING ANGLE TABLE

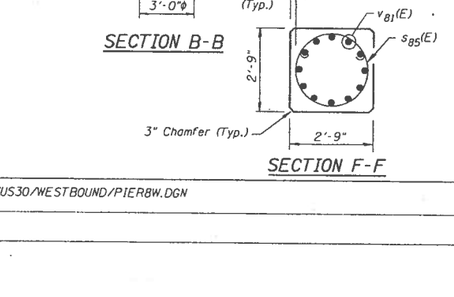
Beam No.	Bearing Angle
1	16°45'36"
2	16°43'57"
3	16°42'18"
4	16°40'40"
5	16°39'02"
6	16°37'24"
7	16°35'47"



TOP PLAN



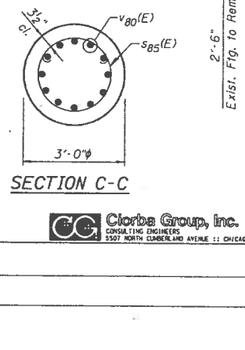
ELEVATION (LOOKING NORTH)



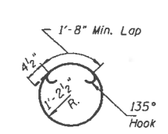
SECTION B-B

SECTION F-F

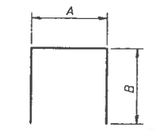
SECTION D-D



SECTION C-C



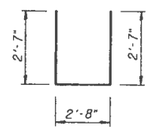
BAR $s_{B5}(E)$



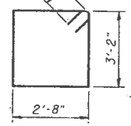
BARS $s_{B1}(E)$, $s_{B2}(E)$, $s_{B3}(E)$ & $s_{B4}(E)$

A & B DIMENSIONS

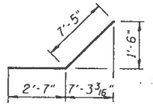
Bar	A	B
$s_{B1}(E)$	2'-8"	1'-8"
$s_{B2}(E)$	2'-8"	2'-6"
$s_{B3}(E)$	2'-4"	2'-8"
$s_{B4}(E)$	2'-4"	3'-0"



BAR $u_{B0}(E)$



BAR $s_{B0}(E)$



BAR $p_{B1}(E)$

SECTION A-A

PIER 8W BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_{B0}(E)$	8	#5	20'-8"	
$h_{B1}(E)$	6	#5	41'-0"	
$h_{B2}(E)$	4	#5	4'-8"	
$h_{B3}(E)$	16	#5	8'-2"	
$h_{B4}(E)$	28	#5	2'-8"	
$p_{B0}(E)$	7	#9	33'-7"	
$p_{B1}(E)$	4	#6	10'-0"	
$p_{B2}(E)$	5	#9	41'-0"	
$p_{B3}(E)$	5	#9	14'-0"	
$s_{B0}(E)$	58	#5	12'-7"	
$s_{B1}(E)$	16	#5	6'-0"	
$s_{B2}(E)$	14	#5	7'-8"	
$s_{B3}(E)$	29	#5	7'-8"	
$s_{B4}(E)$	28	#5	8'-4"	
$s_{B5}(E)$	92	#4	10'-0"	
$u_{B0}(E)$	11	#6	7'-10"	
$v_{B0}(E)$	12	#11	30'-5"	
$v_{B1}(E)$	12	#11	26'-4"	

Concrete Structures	Cu. Yd.	32.1
Reinforcement Bars, Epoxy Coated	Lbs.	8270
Caisson Shafts 36"	Cu. Ft.	35

Reinforcement Bars designated (E) shall be epoxy coated.

NOTES:

Space Reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfer except as noted.
Pour steps monolithically with cap.
**Existing vertical bars in column to remain in place, blast clean and incorporate into new concrete.
*Angle shown is angle between the ℄ of beam and the ℄ of the pier. For the angle and details used to place the Bearing Anchor Bolts See Anchor Bolts Layout this Sheet.
Minimum Lap 2'-2" for #5 bars, 2'-7" for #6 bars & 9'-0" for #11 bars.
Bars indicated thus 2x2-#5 etc. Indicates 2 lines of bars with 2 lengths per lines.
For Pier Repair & Cap Removal Details see Sheet S-55.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER 8W DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

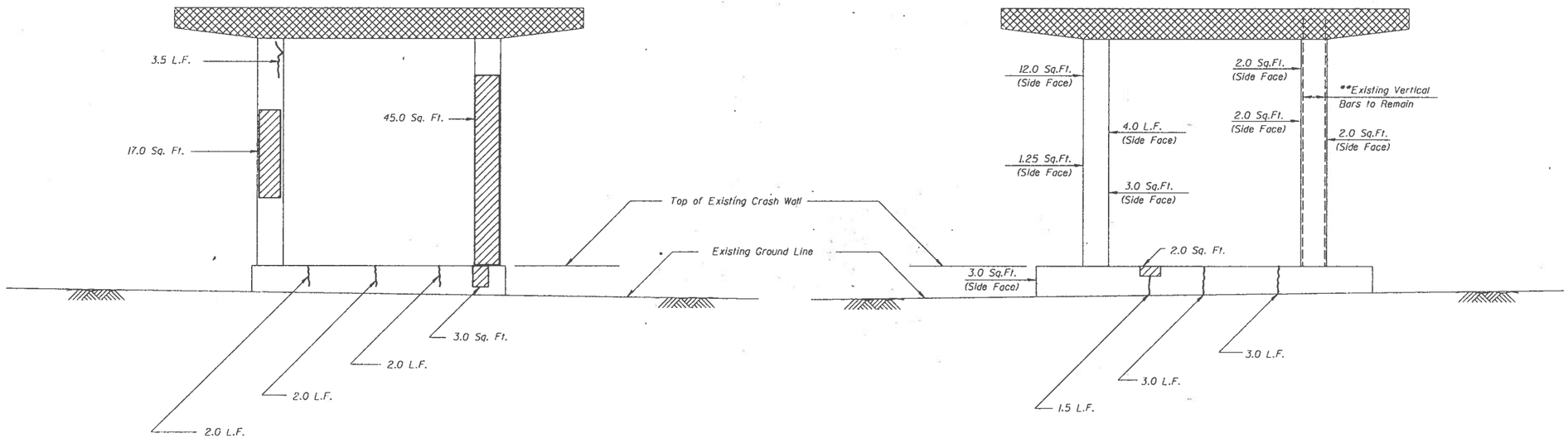
DESIGNED BY: GAE
DRAWN BY: JMG
CHECKED BY: LAS

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/PIER8W.DGN

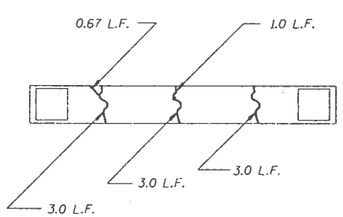
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	*	WILL		
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1; 5VB) R-I & 99-4-1VB-1-BR-1



ELEVATION
(LOOKING DOWNSTATION)

ELEVATION
(LOOKING UPSTATION)



TOP OF CRASH WALL

LEGEND:

- Epoxy Crack Sealing
- Formed Concrete Repair (Depth ≤ 5")
- Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth ≤ 5")	Sq. Ft.	92
Epoxy Crack Sealing	Foot	32
Concrete Removal	Cu. Yd.	14.0

Note: Formed Concrete Repair (Depth ≤ 5") and Epoxy Crack Sealing Quantities are approximate and must be verified in the field. **Existing Vertical Bars in Column to Remain in place, blast clean & incorporate into new Concrete.

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

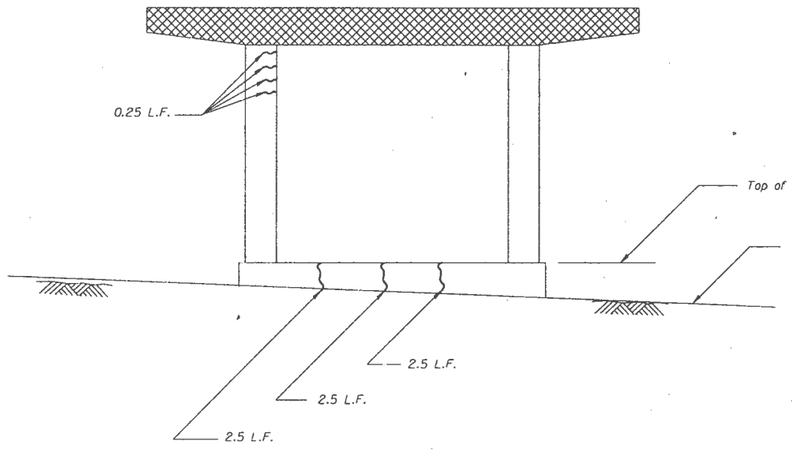
ILLINOIS DEPARTMENT OF TRANSPORTATION
.WESTBOUND FAI-80 OVER US ROUTE 30
PIER NO. 1W REPAIR
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

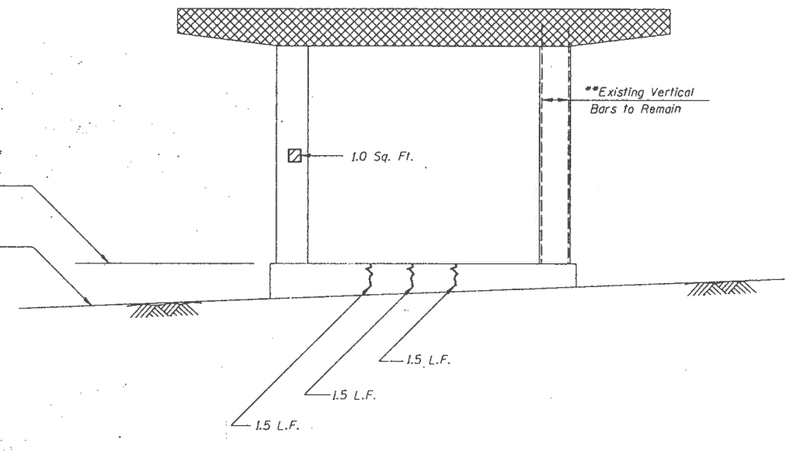
2948/US30/WESTBOUND/PIER1WRE.DGN

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1; SVB) R-1 & 99-4-IVB-1-BR-1



ELEVATION
(LOOKING DOWNSTATION)



ELEVATION
(LOOKING UPSTATION)

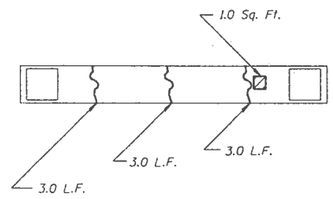
LEGEND:

- Epoxy Crack Sealing
- Formed Concrete Repair (Depth ≤ 5")
- Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth ≤ 5")	Sq. Ft.	2
Epoxy Crack Sealing	Foot	22
Concrete Removal	Cu. Yd.	16.5

Note: Formed Concrete Repair (Depth ≤ 5") and Epoxy Crack Sealing Quantities are appraximate and must be verified in the field. **Existing Vertical Bars in Column to Remain in place, blast clean & incorporate into new Concrete.



TOP OF CRASH WALL

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-1009

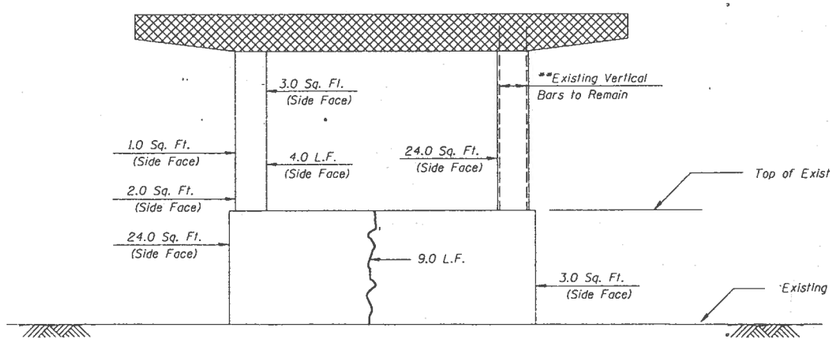
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER NO. 2W REPAIR
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

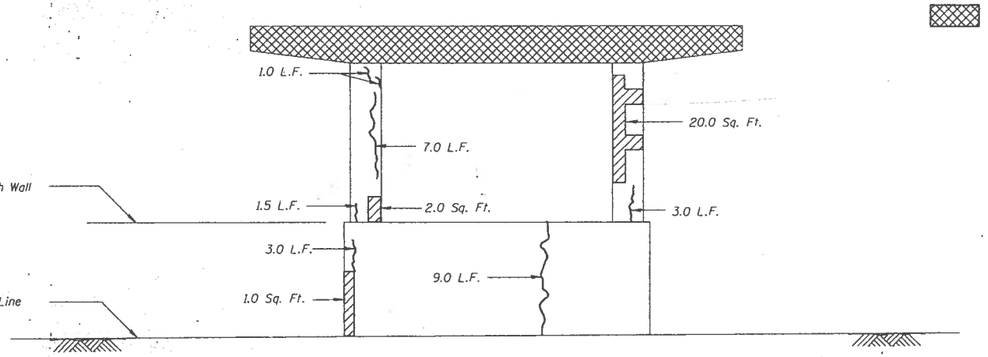
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

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

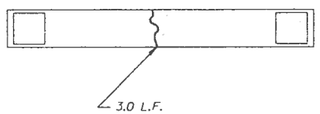
*SECTION 99 (5,5-1; 5VB) R-1 & 99-4-1VB-1-BR-1



ELEVATION
(LOOKING DOWNSTATION)



ELEVATION
(LOOKING UPSTATION)



TOP OF CRASH WALL

LEGEND:

- Epoxy Crack Sealing
- Formed Concrete Repair (Depth ≤ 5")
- Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth ≤ 5")	Sq. Ft.	80
Epoxy Crack Sealing	Foot	42
Concrete Removal	Cu. Yd.	12.6

Note: Formed Concrete Repair (Depth ≤ 5") and Epoxy Crack Sealing Quantities are approximate and must be verified in the field. **Existing Vertical Bars in Column to Remain in place, blast clean & incarporate into new Concrete.

REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER NO. 3W REPAIR
FAI-80 STA. 673+37.46
*SECTION
STRUCTURE NO. 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

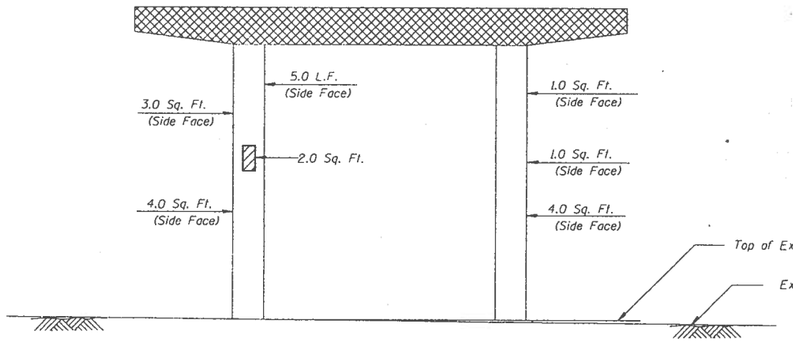
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

2948/US30/WESTBOUND/PIER3WRE.DGN

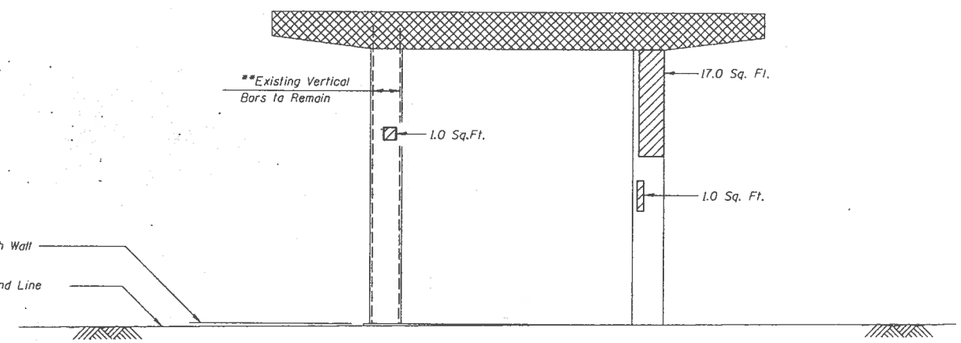
Sheet S-51 of S-65

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	TCH. AID PROJECT		

*SECTION 99 (5,5-1; 5VB) R-1 & 99-4-1VB-1-BR-1



ELEVATION
(LOOKING DOWNSTATION)



ELEVATION
(LOOKING UPSTATION)

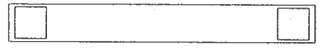
LEGEND:

- Epoxy Crack Sealing
- Formed Concrete Repair (Depth ≤ 5")
- Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth ≤ 5")	Sq. Ft.	34
Epoxy Crack Sealing	Foot	5
Concrete Removal	Cu. Yd.	12.4

Note: Formed Concrete Repair (Depth ≤ 5") and Epoxy Crack Sealing Quantities are approximate and must be verified in the field. **Existing Vertical Bars in Column to Remain in place, blast clean & incorporate into new Concrete.



TOP OF CRASH WALL

REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER NO. 4W REPAIR
FAI-80 STA. 673+35.88
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

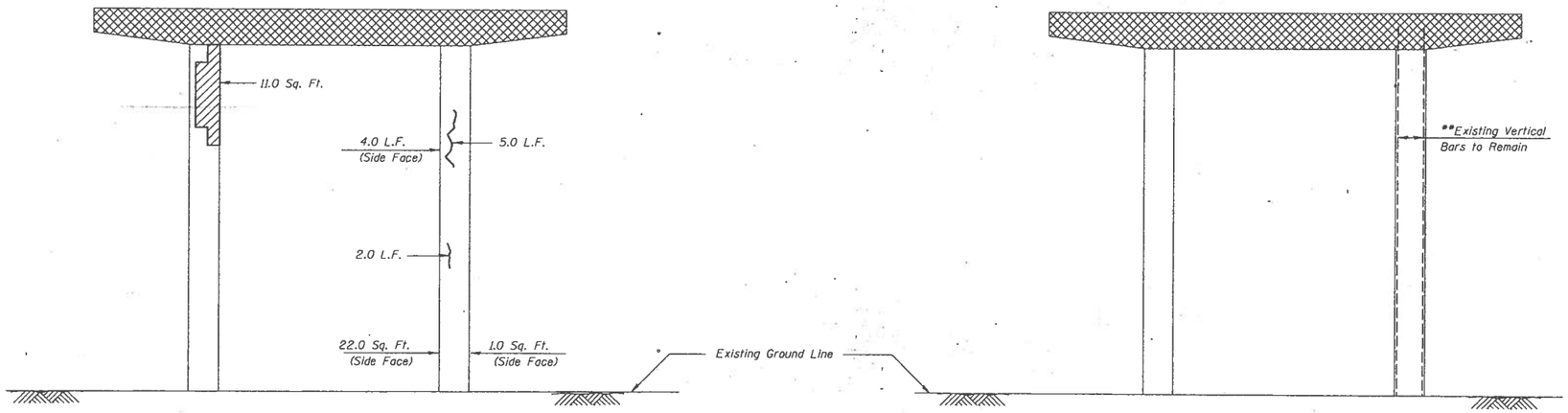
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

2948/US30/WESTBOUND/PIER4WRE.DGN

Sheet S-52 of S-65

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

*SECTION 99 (5,5-1; 5VB) R-1 & 99-4-1VB-1-BR-1



ELEVATION
(LOOKING DOWNSTATION)

ELEVATION
(LOOKING UPSTATION)

LEGEND:

- Epoxy Crack Sealing
- Formed Concrete Repair (Depth ≤ 5")
- Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth ≤ 5")	Sq. Ft.	34
Epoxy Crack Sealing	Foot	11
Concrete Removal	Cu. Yd.	13.1

Note: Formed Concrete Repair (Depth ≤ 5") and Epoxy Crack Sealing Quantities are approximate and must be verified in the field. **Existing Vertical Bars in Column to Remain in place, blast clean & incorporate into new Concrete.

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

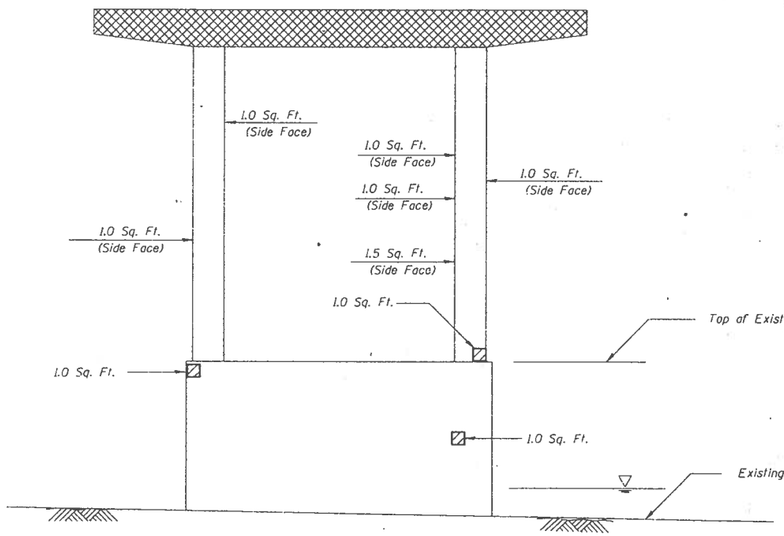
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 US ROUTE 30
PIER NO. 5W REPAIR
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY DESIGNED BY: LAS

SCALE: N.T.S. DRAWN BY: IMG
DATE: MARCH 1996 CHECKED BY: GAE

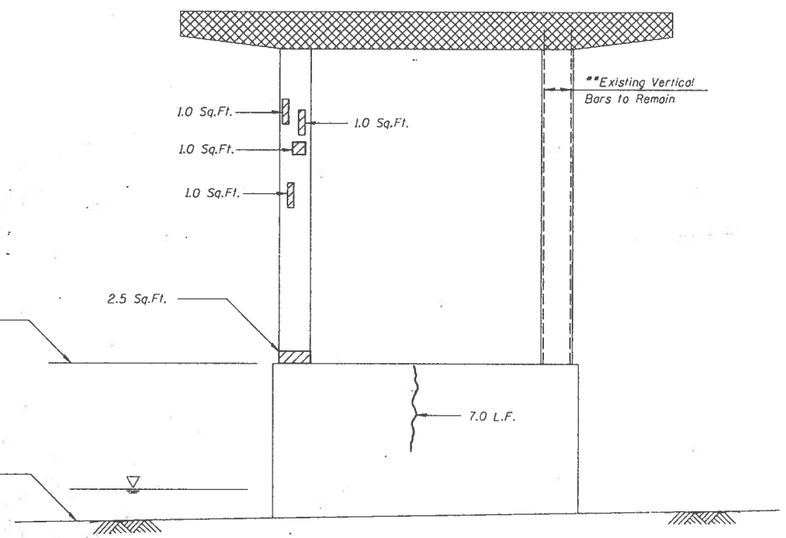
2948/US30/WESTBOUND/PIER5WRE.DGN

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

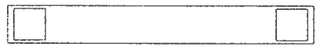
*SECTION 99 (5.5-1; 5VB) R-1 & 99-4-1VB-1-BR-1



ELEVATION
(LOOKING DOWNSTATION)



ELEVATION
(LOOKING UPSTATION)



TOP OF CRASH WALL

LEGEND:

- Epoxy Crack Sealing
- Formed Concrete Repair (Depth ≤ 5")
- Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth ≤ 5")	Sq. Ft.	16
Epoxy Crack Sealing	Foot	7
Concrete Removal	Cu. Yd.	13.0

Note: Formed Concrete Repair (Depth ≤ 5") and Epoxy Crack Sealing Quantities are approximate and must be verified in the field. **Existing Vertical Bars in Column to Remain in place, blast clean & incorporate into new Concrete.

REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER NO. 6W REPAIR
FAI 80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

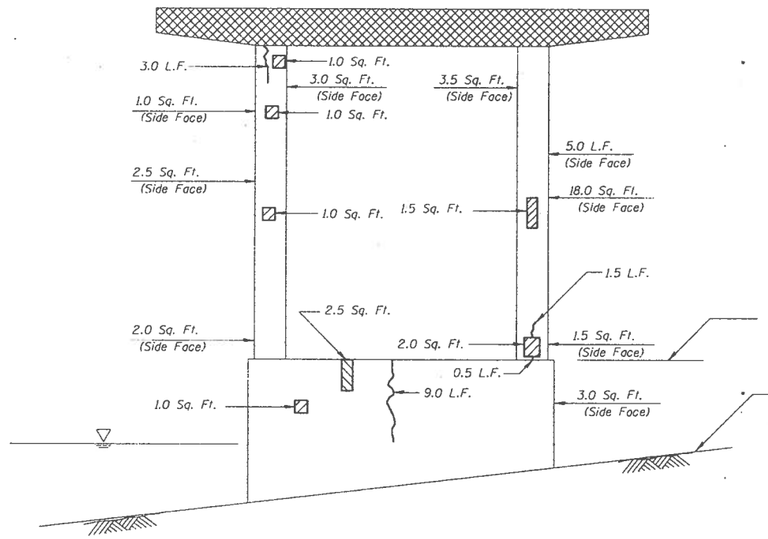
2948/US30/WESTBUOND/PIER6WRE.dgn

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

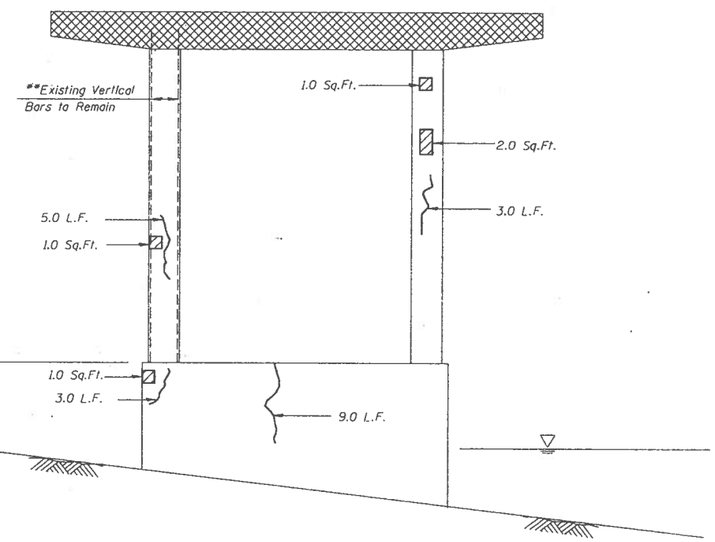
*SECTION 99 (5,5-1; 5VB) R-1 & 99-4-1VB-1-BR

LEGEND:

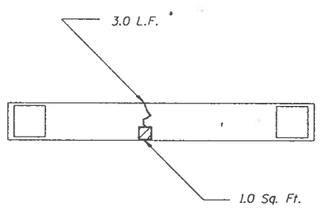
- Epoxy Crack Sealing
- Formed Concrete Repair (Depth ≤ 5")
- Concrete Removal



ELEVATION
(LOOKING DOWNSTATION)



ELEVATION
(LOOKING UPSTATION)



TOP OF CRASH WALL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth ≤ 5")	Sq. Ft.	51
Epoxy Crack Sealing	Foot	42
Concrete Removal	Cu. Yd.	13.1

Note: Formed Concrete Repair (Depth ≤ 5") and Epoxy Crack Sealing Quantities are approximate and must be verified in the field. **Existing Vertical Bars in Column to Remain in place, blast clean & incorporate into new Concrete.

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 275-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER NO. 7W REPAIR
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

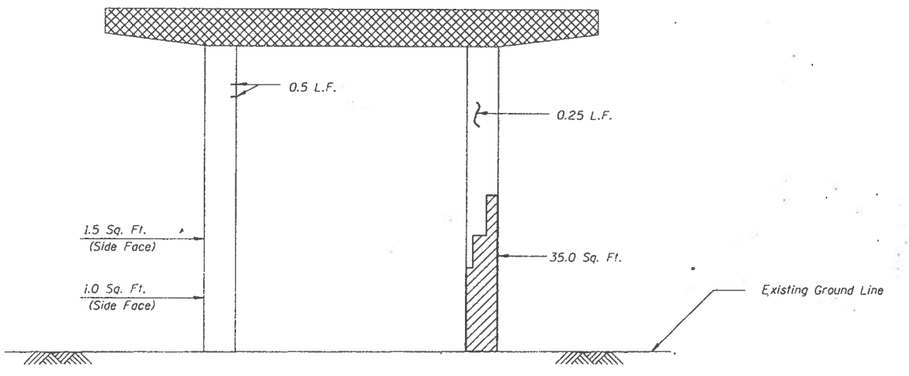
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

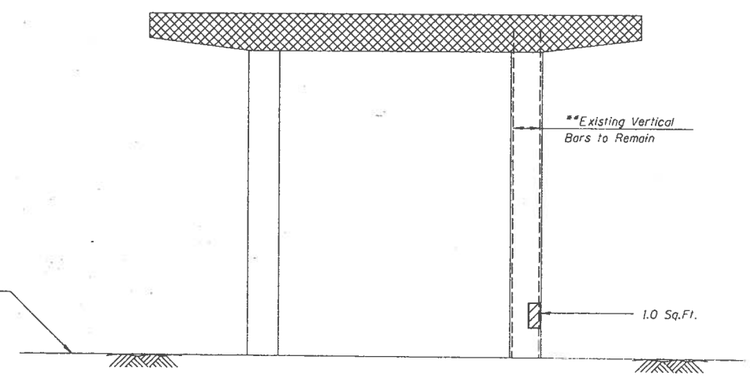
2948/US30/WESTBOUND/PIER7WRE.dgn

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

*SECTION 99 (5,5-1; 5VB) R-1 & 99-4-1VB-I-BR-1



ELEVATION
(LOOKING DOWNSTATION)



ELEVATION
(LOOKING UPSTATION)

LEGEND:

- Epoxy Crack Sealing
- Formed Concrete Repair (Depth ≤ 5")
- Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Formed Concrete Repair (Depth ≤ 5")	Sq. Ft.	39
Epoxy Crack Sealing	Foot	1
Concrete Removal	Cu. Yd.	13.0

Note: Formed Concrete Repair (Depth ≤ 5") and Epoxy Crack Sealing Quantities are approximate and must be verified in the field.
**Existing Vertical Bars in Column to Remain in place, blast clean & incorporate into new Concrete.

REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
PIER NO. 8W REPAIR
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

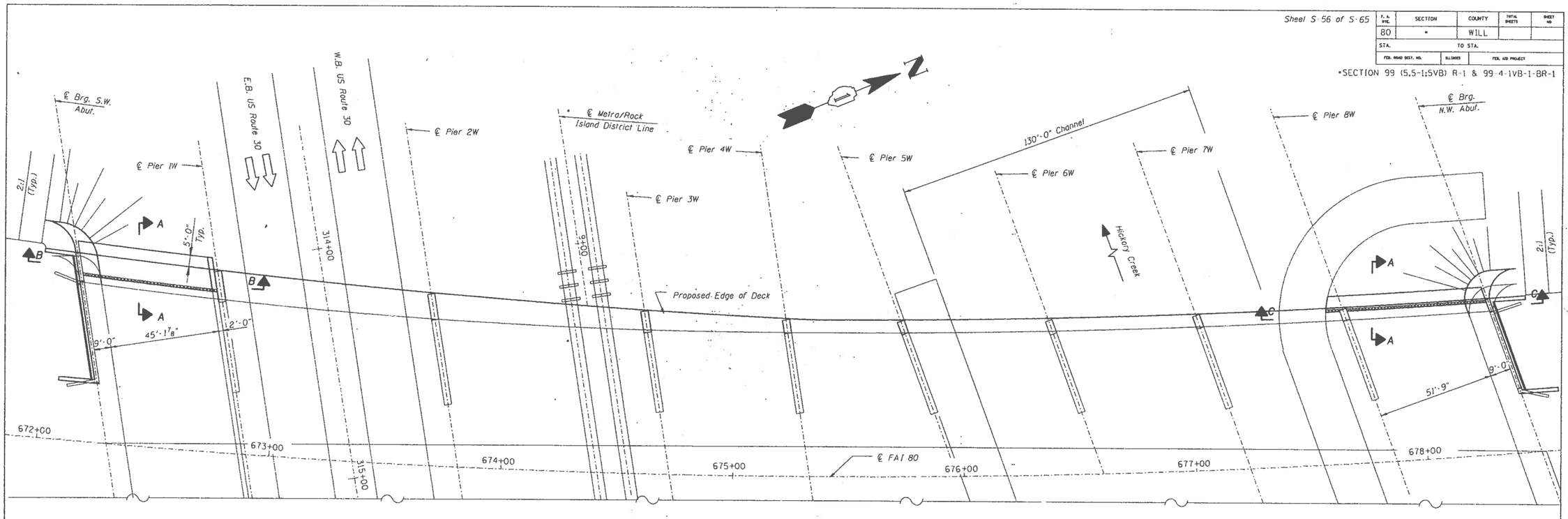
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

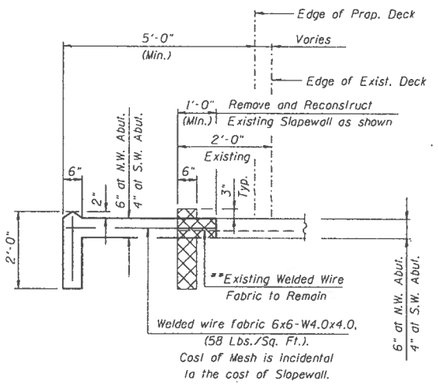
2948/US30/WESTBOUND/PIER8WRE.DGN

Sheet S-56 of S-65

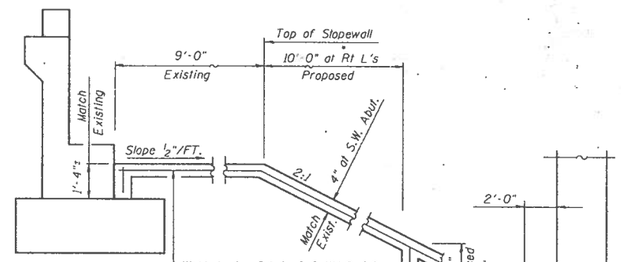
F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	-	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

•SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



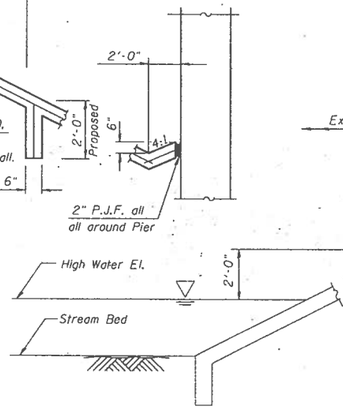


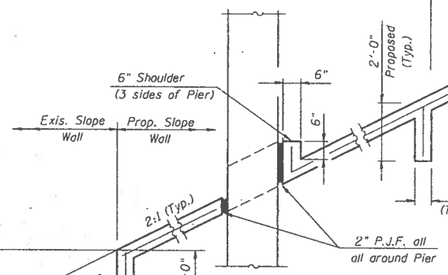
SECTION A-A



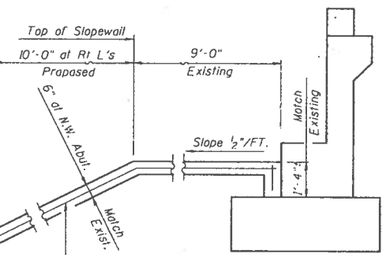
SECTION B-B

**Existing wire mesh extending into removed areas shall be cleaned, straightened and incorporated into the new construction. Cost incidental to Slopewall





SECTION C-C



LEGEND:

Slopewall Removal

BILL OF MATERIAL

Item	Unit	Total
Slope Wall Removal	Sq. Yd.	15
Slope Wall (4")	Sq. Yd.	103
Slope Wall (6")	Sq. Yd.	55

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4006

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
SLOPEWALL REPAIR DETAILS
FAI-80 STA. 673+37.46
•SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

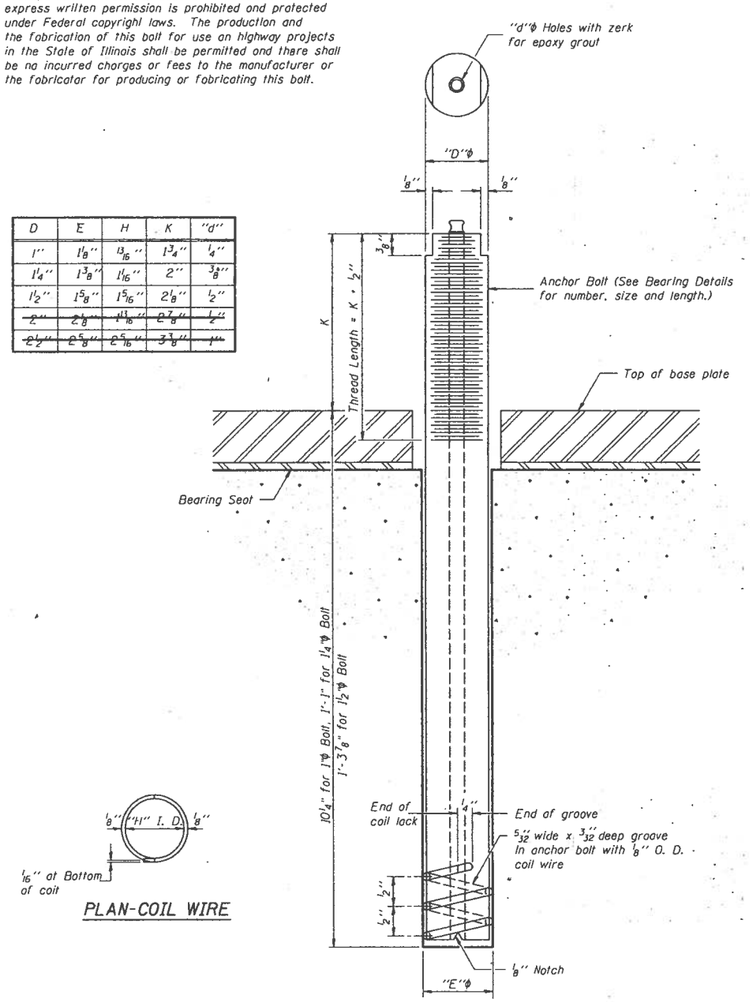
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

2948/US30/WESTBOUND/SLOPEWAL.DGN

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1

D	E	H	K	"d"
1"	$1\frac{1}{8}$"	$\frac{13}{16}$"	$1\frac{3}{4}$"	$\frac{1}{4}$"
$1\frac{1}{4}$"	$1\frac{3}{8}$"	$1\frac{1}{16}$"	2"	$\frac{3}{8}$"
$1\frac{1}{2}$"	$1\frac{5}{8}$"	$1\frac{5}{16}$"	$2\frac{1}{8}$"	$\frac{1}{2}$"
~~2"~~	~~$2\frac{1}{8}$~~	~~$1\frac{11}{16}$"~~	~~$2\frac{7}{8}$"~~	~~$\frac{1}{2}$"~~
~~$2\frac{1}{2}$"~~	~~$2\frac{5}{8}$"~~	~~$2\frac{5}{16}$"~~	~~$3\frac{1}{8}$"~~	~~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 1 and of a Class suitable for the temperature of installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

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

GENERAL NOTES

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

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

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

ANCHOR BOLT DETAILS FOR BEARINGS

ABB-1 7-1-91

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
ANCHOR BOLT DETAILS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

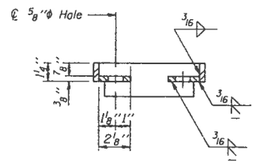
SCALE: N.T.S.
DATE: MARCH 1996

DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

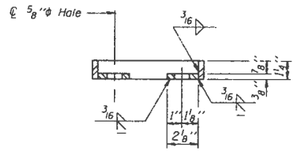
2948/US30/WESTBOUND/STOBOLT.DGN

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

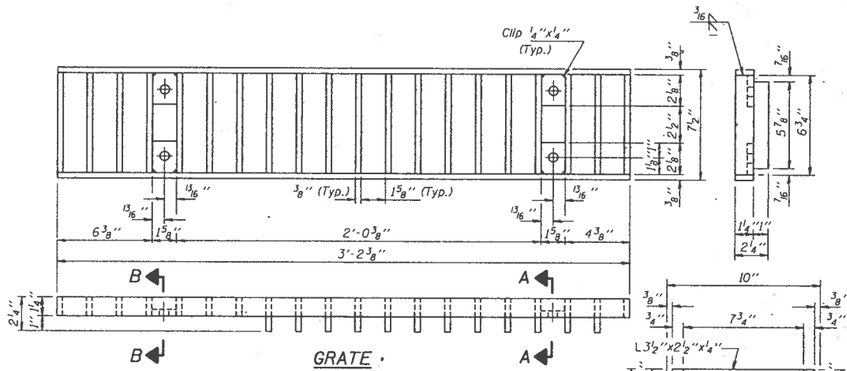
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



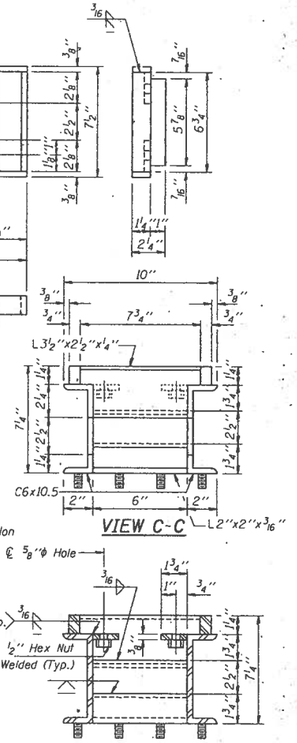
SECTION A-A



SECTION B-B



GRATE

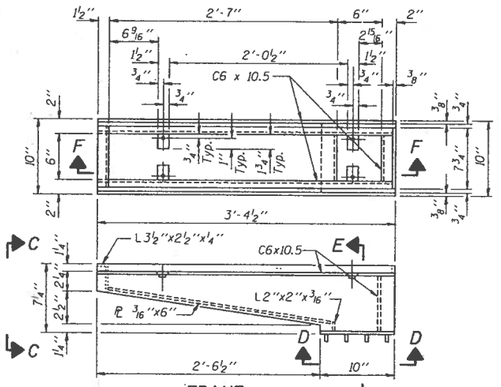


VIEW C-C

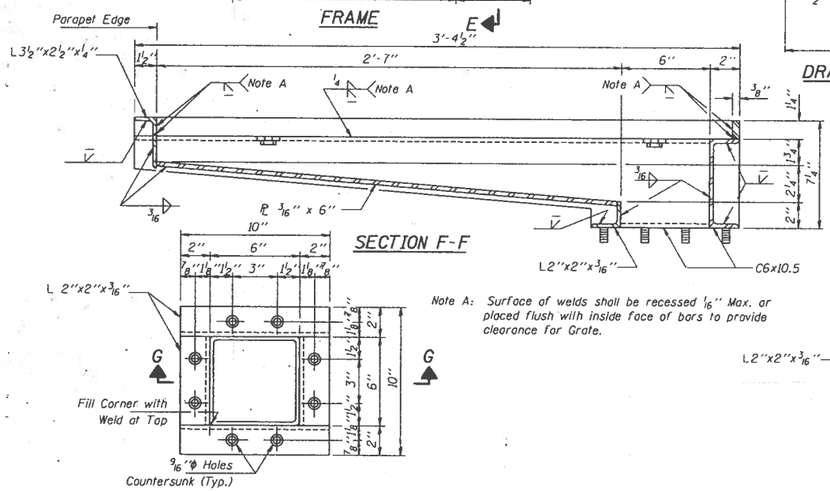
SECTION E-E

Notes: Hollow structural steel tubing shall conform to the requirements of ASTM designation A500 Grade B. or A501 Structural Steel Tubing.
All other shapes, plates and bars shall conform to the requirements of AASHTO M183.
Bolts, studs, washers and nuts shall conform to the requirements of ASTM A307.
The Grate, Frame and Downspout shall be galvanized after shop fabrication in accordance with AASHTO M111 & ASTM A385.
All bolts, washers and nuts shall be galvanized in accordance with AASHTO M232.
Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPERS."

DS-3 2-26-93 (W.T. to inside of exterior stringer flange shall not be >3'-11")

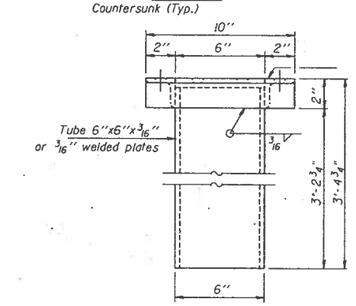


FRAME

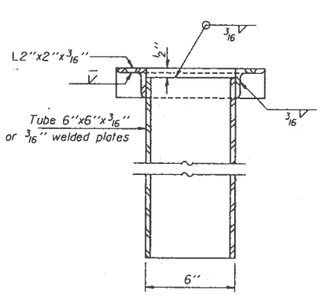


SECTION F-F

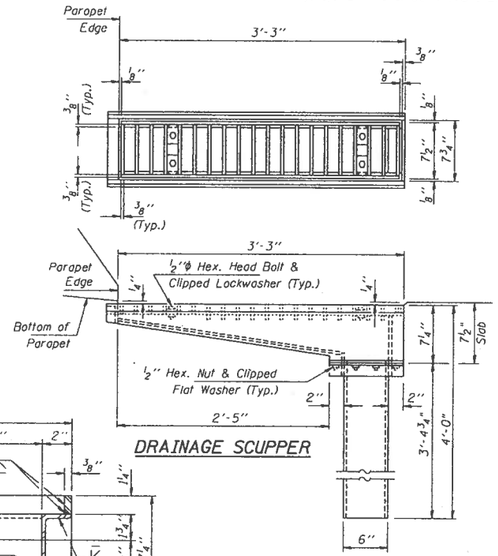
Note A: Surface of welds shall be recessed 1/16" Max. or placed flush with inside face of bars to provide clearance for Grate.



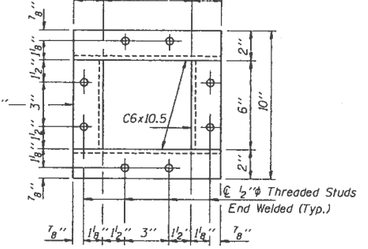
DOWNSPOUT



SECTION G-G



DRAINAGE SCUPPER



VIEW D-D

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper	Each	13

(Sheet 1 of 2)

STEEL DRAINAGE SCUPPER

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

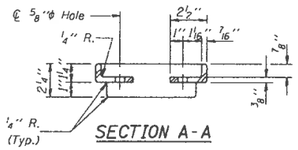
ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
STEEL DRAINAGE SCUPPER
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

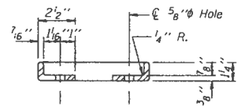
2948/US30/WESTBOUND/SCUPPERS.DGN

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

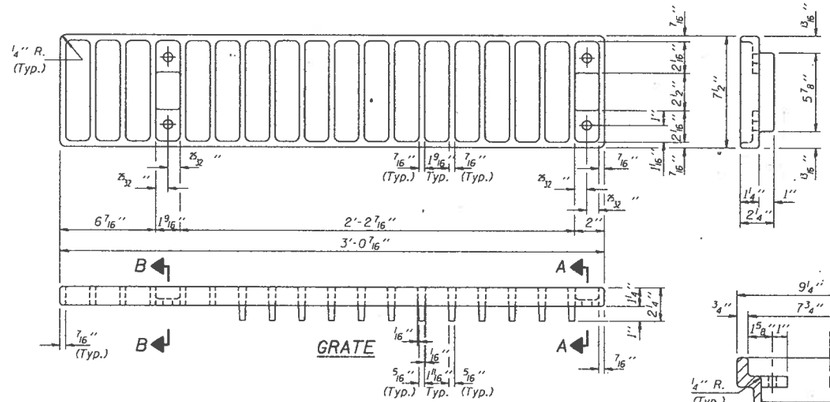
*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



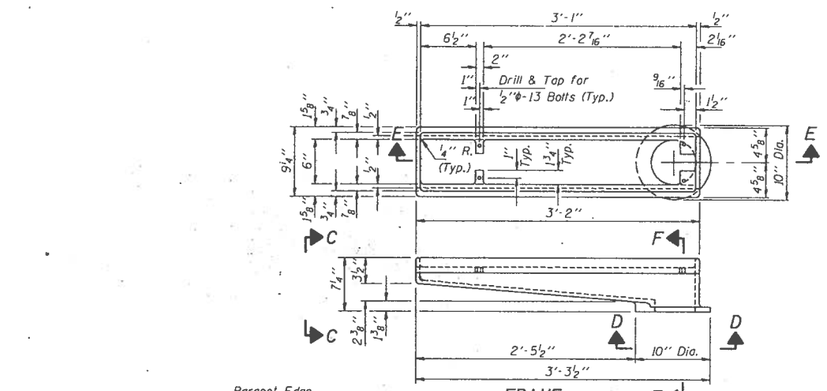
SECTION A-A



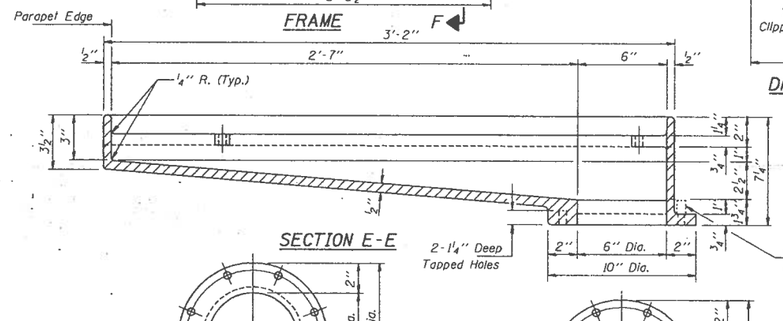
SECTION B-B



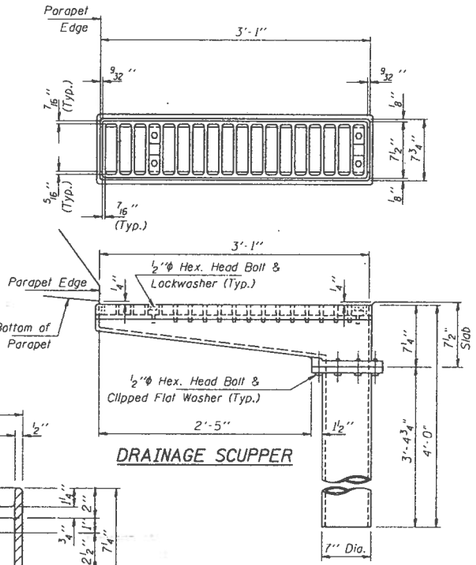
GRATE



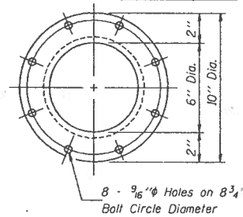
FRAME

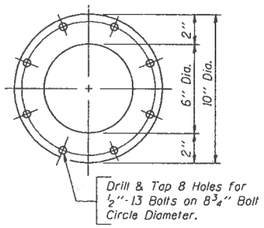


SECTION E-E

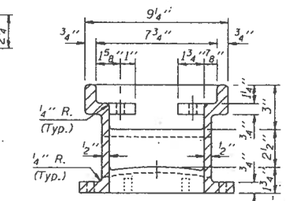


DRAINAGE SCUPPER

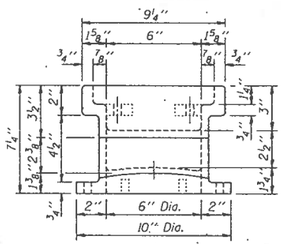




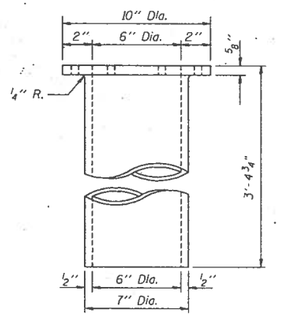
VIEW D-D



SECTION F-F



VIEW C-C



DOWNSPOUT

Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M105, Class 30.
Bolts and washers shall conform to the requirements of ASTM A307.
All bolts and washers shall be galvanized in accordance with AASHTO M232.
As an alternate bolts and washers may be stainless steel conforming to the requirements of ASTM A193, Type 304.
Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPERS."
The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.

DS-4 2-26-93 (W.T. to inside of exterior stringer flange shall not be >3'-11")

(Sheet 2 of 2)

ALTERNATE - CAST IRON DRAINAGE SCUPPER

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
ALTERNATE-CAST IRON DRAINAGE SCUPPER
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/SCUPPERS.DGN

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	*	WILL		
STA.	TO STA.			
FED. ROAD INST. NO.	ILLINOIS	FED. AID PROJECT		

*SECTION 99 (5,5-1;5V8) R-1 & 99-4-1V8-1-8R-1

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

INSTALLATION NOTES

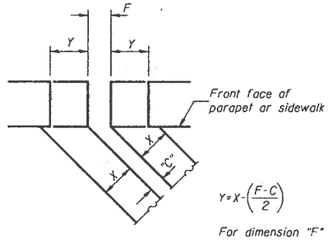
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

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

SKEW LIMITATIONS

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

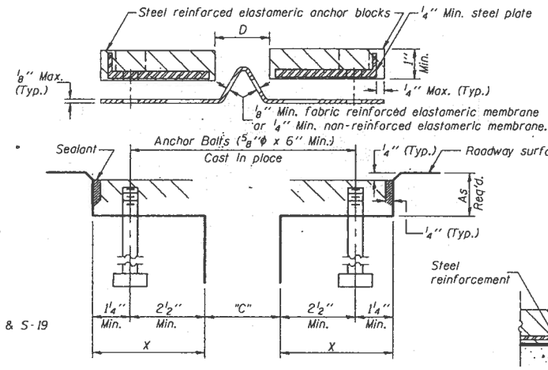
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also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



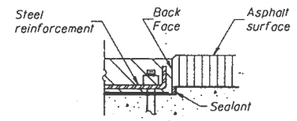
$Y = X - \left(\frac{F-C}{2}\right)$

For dimension "F" see sheets S-13, S-16 & S-19

FORMING BLOCKOUT SKETCH



CROSS SECTION



ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

GENERAL NOTES

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

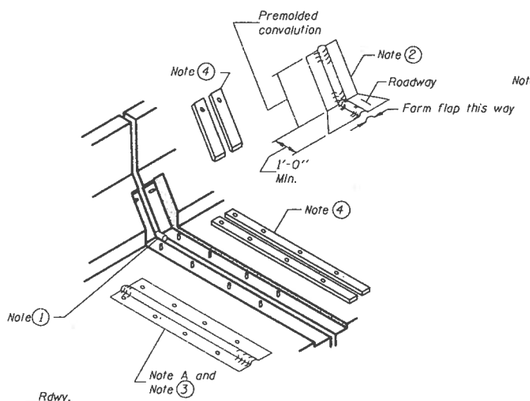
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The 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.

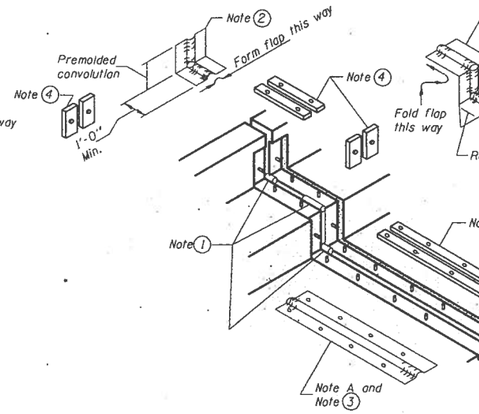
Joint openings shall be adjusted in accordance with Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

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

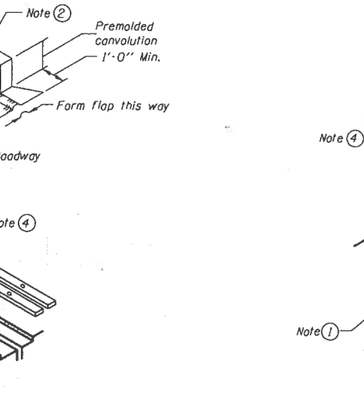


AT PARAPET

AT CURB

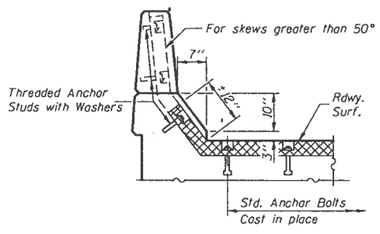


AT SIDEWALK OR MEDIAN

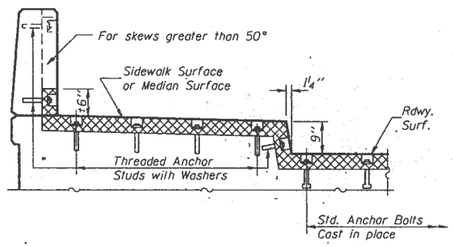


AT WALL

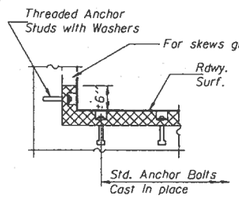
AT WALL



AT PARAPET



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS



AT WALL

EJ-CS 2-26-93

CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS

For 2", 2½" and 4" Movement

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
NEOPRENE EXPANSION JOINTS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996

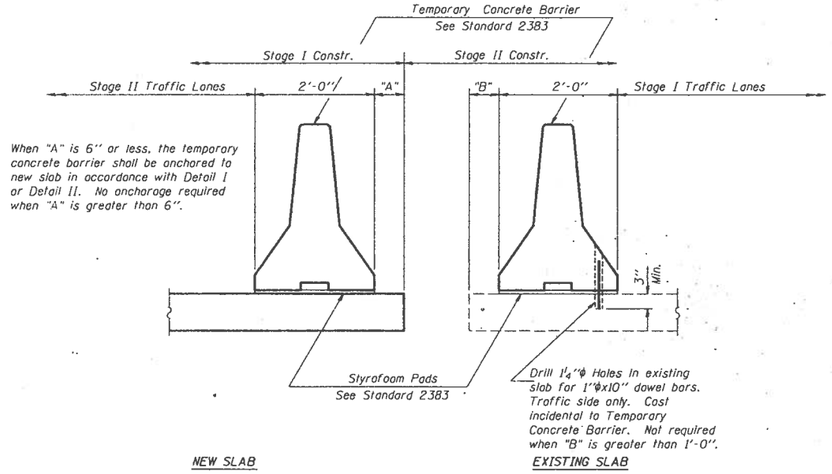
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

Cloiba Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

2948/US30/WESTBOUND/NEOEXPJT.DGN

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

*SECTION 99 (5,5-1;5VB) R-1 & 99-4-1VB-1-BR-1



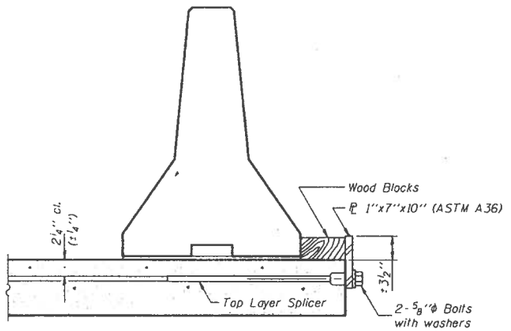
SECTIONS THRU SLAB

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8"ϕ bolts screwed to coupler at approximate ℄ of each 10'-0" barrier panel.

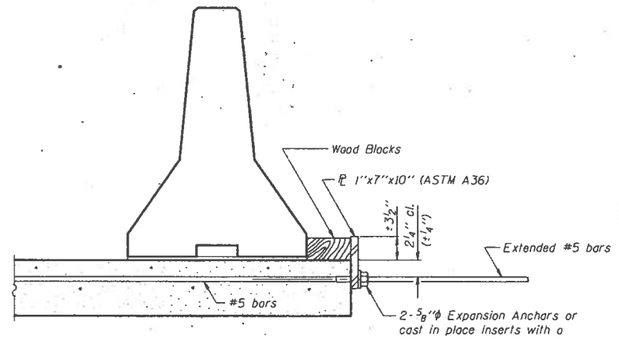
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel PL to the concrete slab with 2-5/8"ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each 10'-0" barrier panel.

Cost of anchorage is incidental to Temporary Concrete Barrier.



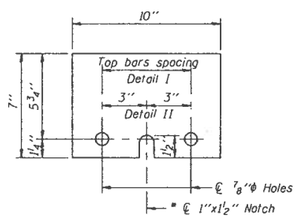
DETAIL I

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



DETAIL II

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



PL 1"x7"x10"

* Required only with Detail II

REVISIONS	
NAME	DATE

Clarke Group, Inc.
CONSULTING ENGINEERS
5507 NORTH CUMBERLAND AVENUE :: CHICAGO, ILLINOIS 60656 :: (312) 775-4009

ILLINOIS DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
TEMPORARY CONCRETE BARRIER
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE: N.T.S.
DATE: MARCH 1996
DESIGNED BY: LAS
DRAWN BY: IMG
CHECKED BY: GAE

2948/US30/WESTBOUND/TEMPBARR.DGN

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
DIST.		ILLINOIS	FEDERAL AID PROJECT	

* SECTION 99 (5,5-1,5VB) R-1,99-4-1VB-1-BR-1

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
CLIENT Illinois Department of Transporation, Schaumburg, Illinois
BORING SB-101 DATE STARTED 12-15-94 DATE COMPLETED 12-15-94 JOB L-36,554
ELEVATIONS
GROUND SURFACE 646.2
END OF BORING 606.2
Sta. 672+18 at Centerline
WATER TABLE
▼ WHILE DRILLING DRY
▽ AT END OF BORING DRY
▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.4	645.8	FILL - Black clayey TOPSOIL
	1	SS	5-7-9	15.9	2.2 B				FILL - Brown CLAY, trace gravel, moist A-6/A-7-6
	2	SS	4-7-12	21.9	2.8 B				
							5.5	640.7	
	3	SS	6-8-10	20.2	2.6 B				FILL - Dark gray and brown CLAY, moist A-7-6
							6.0	638.2	
	4	SS	6-9-10	19.5	2.2 B				FILL - Brown to brown and gray CLAY, trace gravel, moist A-7-6
	5	SS	5-9-9	24.4	2.7 B				
	6	SS	3-6-8	24.2	1.8 B				
									B = Bulge failure @ 15% strain
	7	SS	8-8-10	27.5	3.2 B				
	8	SS	8-10-11	20.9	3.4 B		20.5	625.7	
	9	SS	14-19-15	16.2	4.0 B				FILL - Gray and brown CLAY, damp A-6
							23.0	623.2	
	10	SS	4-8-9	20.9	2.3 B				FILL - Brown and gray CLAY, moist A-6/A-7-6
							25.5	620.7	
	11	SS	22-20-12						Dense brown GRAVEL, some sand and very silty clay, damp A-1
	12	SS	20-16-26						
	13	SS	17-29-19						
							33.0	613.2	
	14	SS	21-11-17						Firm to very dense brown and gray SAND and GRAVEL, damp A-1
	15	SS	50-27-30						
							38.0	608.2	Fractured and Weathered DOLOMITE, Hard Drilling to 40 ft.
	16	SS	100/0"						End of Boring at 40.0'

DISTANCE BELOW SURFACE IN FEET: 0, 5, 10, 15, 20, 25, 30, 35, 40

DRILL RIG NO. 144

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
CLIENT Illinois Department of Transporation, Schaumburg, Illinois
BORING SB-102 DATE STARTED 12-16-94 DATE COMPLETED 12-16-94 JOB L-36,554
ELEVATIONS
GROUND SURFACE 617.4
END OF BORING 588.4
Sta. 672+84, 76 FT. LT.
WATER TABLE
▼ WHILE DRILLING 10.0'
▽ AT END OF BORING Rotary Wash Drill
▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.2	617.2	2" Bituminous Concrete Pavement
	1	SS	7-11-13	18.8	0.5*		1.3	616.1	FILL - Dark brown SAND and GRAVEL, possibly stabilized base course
							2.5	614.9	FILL - Brown SANDY LOAM, trace gravel, very moist A-4
	A 2 B	SS	3-3-3	24.2	1.0 B				FILL - Dark brown CLAY LOAM, moist A-6
				20.8	0.7 B		4.5	612.9	
	A 3 B	SS	2-2-2	18.4	0.6 S@	10%	6.5	610.9	FILL - Brown SANDY CLAY, moist A-4/A-6
							8.0	609.4	Very loose brown fine SAND, trace clay, damp A-3
	4	SS	13-50/5"				9.5	607.9	Very dense brown SAND and GRAVEL, occasional silt seams, damp A-1
	5	RC	Core Run Recovery RQD	11' to 14' = 100% = 40%					Heavily fractured from 11' to 12'
									Light gray DOLOMITE, weathered to tan/buff color to 17' Moderately fractured with occasional clay partings and vertical fractures from 12' to 17'
	6	RC	Core Run Recovery RQD	14' to 24' = 100% = 48%					Moderately fractured from 17' to 26.5'
	7	RC	Core Run Recovery RQD	24' to 29' = 100% = 68%					Lightly to moderately fractured from 26.5' to 29'
									End of Boring at 29.0'
									* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. B = Bulge failure at 15% strain S = Shear failure

DISTANCE BELOW SURFACE IN FEET: 0, 5, 10, 15, 20, 25, 30, 35, 40

DRILL RIG NO. 144

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
CLIENT Illinois Department of Transporation, Schaumburg, Illinois
BORING SB-103 DATE STARTED 12-14-94 DATE COMPLETED 12-14-94 JOB L-36,554
ELEVATIONS
GROUND SURFACE 619.1
END OF BORING 584.6
Sta. 673+91, 90 FT. RT.
WATER TABLE
▼ WHILE DRILLING 13.0'
▽ AT END OF BORING Rotary Wash Drill
▼ 24 HOURS

LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.2	618.9	2" Bituminous Concrete Pavement
	1	SS	4-6-7	15.6	1.5 B		0.9	618.2	FILL - Brown SAND and GRAVEL, possibly stabilized base course
	2	SS	7-7-12	20.2	2.2 B				FILL - Brown and dark gray CLAY LOAM, occasional sand seams, trace organic, moist A-6
	3	SS	3-5-8	16.8	0.6 B		8.0	613.1	
	4	SS	3-2-3	14.8	0.9 2.0*	S@10%			FILL - Brown SANDY LOAM, trace gravel, very moist to moist A-4
	5	SS	3-5-5	22.7	0.3	S@5%	10.5	608.6	Firm brown SANDY LOAM, little gravel, very moist A-2-4
	8	SS	65/5"				13.0	606.1	Dense brown silty SAND and GRAVEL, wet A-1
	7	SS	15-19 50/3"				14.0	605.1	Dense GRAVEL, COBBLES and BOULDERS, occasional very silty layer, wet A-1
	9	RC	Core Run Recovery RQD	18' to 21' = 100% = 0%			17.0	602.1	Light gray DOLOMITE, weathered to tan/buff below 23.5 feet, mottled dark gray from 31.2 to 31.9 feet. Heavily fractured from 18' to 24.5'
	9	RC	Core Run Recovery RQD	21' to 31' = 100% = 51%					Moderately fractured below 24.5'
	10	RC	Core Run Recovery RQD	31' to 34.5' = 100% = 50%					End of Boring at 34.5 Feet
									* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. B = Bulge failure at 15% strain S = Shear failure

DISTANCE BELOW SURFACE IN FEET: 0, 5, 10, 15, 20, 25, 30, 35, 40

DRILL RIG NO. 144

ROCKER VALLEY REPRO 985415

REVISIONS	
NAME	DATE

Ciorba Group, Inc. CONSULTING ENGINEERS Chicago, Illinois

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
SOIL BORINGS
FAI-80, STA. 673+37.46
*SECTION
SN D99-0068 (WESTBOUND)
WILL COUNTY

SCALE N.T.S.
DATE MARCH 1995
DRAWN BY GET
DESIGNED BY LAS
CHECKED BY GAE

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO. 3	ILLINOIS	CONTRACT NO. PROJECT		

* SECTION 99 (5.5-1.5VB)R-(1&99-4-1VB-1-BR-1)

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
CLIENT Illinois Department of Transporation, Schaumburg, Illinois
BORING SB-104 DATE STARTED 1-17-95 DATE COMPLETED 1-17-95 JOB L-36,554
ELEVATIONS
GROUND SURFACE 616.7
END OF BORING 586.7
WATER TABLE
▼ WHILE DRILLING Dry to 10.5'
▽ AT END OF BORING Rotary Wash Drill
▼ 24 HOURS
Sta. 674+75, 73' LT

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
0								0.5	616.2	FILL - Crushed Stone
		1	SS	5-7-11	21.1	1.2 B		3.0	613.7	FILL - Brown CLAY LOAM, moist A-6
5		2	SS	4-4-6	18.4	1.1 B		5.5	611.2	Tough brown SANDY LOAM, moist A-4/A-6
		3	SS	7-9-11						Firm brown SAND, little gravel, damp A-3
10		4	SS	7-9-9				10.5	606.2	
15		5	RC	Core Run 11' to 17.5' Recovery = 94% RQD = 17%						Light gray DOLOMITE frequently weathered to tan/buff color to 27.5'
20		6	RC	Core Run 17.5' to 24' Recovery = 100% RQD = 14%						Moderate to heavily fractured from 10.5' to 22.9'
25		7	RC	Core Run 24' to 30' Recovery = 100% RQD = 67%						Moderate to lightly fractured from 22.9' to 30' Fractures frequently contain some silt/clay from 10.5' to 23.0' Fragmented zones: 17' to 17.5' 22.1 to 22.9' 3" silt/clay layer at 28.1'
30										End of Boring at 30.0'
35										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. B = Bulge failure at 15% strain
40										

DRILL RIG NO. 144

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
CLIENT Illinois Department of Transporation, Schaumburg, Illinois
BORING SB-105 DATE STARTED 12-12-94 DATE COMPLETED 12-12-94 JOB L-36,554
ELEVATIONS
GROUND SURFACE 619.2
END OF BORING 589.2
WATER TABLE
▼ WHILE DRILLING Dry to 11.0'
▽ AT END OF BORING Rotary Wash Drill
▼ 24 HOURS
Sta. 675+54, 86 FT. RT.

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
0		1	SS	12-12-7	19.1	1.0 B 3.0"		3.5	615.7	FILL - Dark brown CLAY, some gravel, trace organic, moist A-6
5		2	SS	7-11-14				5.5	613.7	Firm brown SAND and GRAVEL, damp A-1
		3	SS	19-23-25						Dense to very dense brown SAND and GRAVEL with some Cobbles and Boulders, damp A-1
10		4	SS	12-32 50/3"						
		5	SS	50/3"				10.8	608.4	
15		6	RC	Core Run 11.3' to 14' Recovery = 100% RQD = 0%						Light gray DOLOMITE mostly weathered to tan/buff color, heavily fractured, some fractures filled with silt, occasional clay partings.
20		7	RC	Core Run 14' to 22' Recovery = 100% RQD = 0%						
25		8	RC	Core Run 22' to 30' Recovery = 100% RQD = 0%						
30										End of Boring at 30.0'
35										* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer. B=Bulge failure at 15% strain
40										

DRILL RIG NO. 144

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
CLIENT Illinois Department of Transporation, Schaumburg, Illinois
BORING SB-106 DATE STARTED 12-13-94 DATE COMPLETED 12-13-94 JOB L-36,554
ELEVATIONS
GROUND SURFACE 614.6
END OF BORING 575.9
WATER TABLE
▼ WHILE DRILLING 13.0'
▽ AT END OF BORING Rotary Wash Drill
▼ 24 HOURS
Sta. 675+79, 78 FT. LT.

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
0		1	SS	3-3-8	12.2					FILL - Brown SANDY LOAM with gravel, moist A-1
		2	SS	6-5-7	13.1			5.5	609.1	
5		3	SS	3-6-7	16.3	0.9 B				FILL - Brown and gray CLAY LOAM, occasional very sandy layer, very moist to moist A-4
		4	SS	4-2-5	15.4	0.7 S @ 10% 3.0"				
10		5	SS	1-1-2	21.7	1.0 B		10.5	604.1	Stiff to tough gray CLAY LOAM, moist A-6
		6	SS	4-3-3				13.0	601.6	
15		7	SS	2-2-3						Loose to firm brown SAND and GRAVEL, wet A-1
		8	SS	4-6-9						(occasional silt seam below 18')
20		9	RC	Core Run 21' to 24' Recovery = 72% RQD = 72%				20.5	594.1	
		10	RC	Core Run 24' to 30.2' Recovery = 100% RQD = 74%						Light gray to gray DOLOMITE, upper zone weathered to tan/buff color along bedding planes and joints, lightly fractured.
30										
35		11	RC	Core Run 30.2' to 38.7' Recovery = 100% RQD = 96%						B=Bulge failure @ 15% strain S=Shear failure
40										End of Boring at 38.7'

DRILL RIG NO. 144

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Cierba Group, Inc.
CONSULTING ENGINEERS
Chicago, Illinois

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
SOIL BORINGS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068 (WESTBOUND)
WILL COUNTY

SCALE N.T.S. DRAWN BY GET
DATE MARCH 1995 DESIGNED BY LAS
CHECKED BY GAE

ROCK VALLEY PRINTING 332443

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.		TO STA.		
I.D.O.T. ROAD DIST. NO. 1	ILLINOIS	FEDERAL AID PROJECT		

* SECTION 99 (5,5-1,5VB) R-1 & 99-4-1VB-1-BR-1

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
CLIENT Illinois Department of Transporation, Schaumburg, Illinois
BORING SB-107 DATE STARTED 12-20-94 DATE COMPLETED 12-20-94 JOB L-36,554
ELEVATIONS
GROUND SURFACE 605.7
END OF BORING 583.2
WATER TABLE
▼ WHILE DRILLING Dry to 4.0'
▽ AT END OF BORING Rotary Wash Drill
▼ 24 HOURS
Sta. 676+85, 85 FT. RT.

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
1	SS		1-1-2	33.3	0.5*				Soft dark brown and black silty CLAY (topsoil), occasional sand seams, very moist A-6
2	SS		2-50/3"	33.0	0.5*		4.0	601.7	
3	RC	Core Run Recovery = 100% RQD = 0%			4.5' to 5.5'		4.5	601.2	Brown GRAVEL, COBBLES and fractured DOLOMITE
4	RC	Core Run Recovery = 100% RQD = 0%			6.5' to 8.5'				Heavily fractured from 4.5' to 10'
5	RC	Core Run Recovery = 100% RQD = 67%			8.5' to 17.5'				Light gray DOLOMITE, weathered to tan/buff color to 17', some fractures filled with silt between 4.5 and 7.5 feet, occasional clay partings between 10' and 17' Moderately fractured from 10' to 12'
6	RC	Core Run Recovery = 100% RQD = 100%			17.5' to 22.5'				Lightly fractured from 12' to 22.5'
									End of Boring at 22.5'

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

DISTANCE BELOW SURFACE IN FEET
DRILL RIG NO. 127

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
CLIENT Illinois Department of Transporation, Schaumburg, Illinois
BORING SB-108 DATE STARTED 12-21-94 DATE COMPLETED 12-21-94 JOB L-36,554
ELEVATIONS
GROUND SURFACE 604.4
END OF BORING 579.9
WATER TABLE
▼ WHILE DRILLING 4.0'
▽ AT END OF BORING Rotary Wash Drill
▼ 24 HOURS
Sta. 677+04, 72 FT. LT.

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
1	SS		2-3-4	14.3					▼ Loose brown silty SAND and GRAVEL, some silt layers, moist to wet A-1
2	SS		3-5-1				5.5	598.9	Very tough gray CLAY, moist A-6
3	SS		4-50/5"	20.0	2.5 B		6.9	597.5	
4	RC	Core Run Recovery = 100% RQD = 58%			7.5' to 10.5'				Moderately fractured from 7.5' to 13'
5	RC	Core Run Recovery = 100% RQD = 61%			10.5' to 16.5'				Light gray DOLOMITE, weathered to tan/buff color to 11' Lightly fractured below 13'
6	RC	Core Run Recovery = 100% RQD = 86%			16.5' to 24.5'				Vertical fracture from 22.3' to 23.5'
									End of Boring at 24.5'

B= Bulge failure at 15% strain

DISTANCE BELOW SURFACE IN FEET
DRILL RIG NO. 127

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL
CLIENT Illinois Department of Transporation, Schaumburg, Illinois
BORING SB-109 DATE STARTED 12-21-94 DATE COMPLETED 12-21-94 JOB L-36,554
ELEVATIONS
GROUND SURFACE 603.3
END OF BORING 581.3
WATER TABLE
▼ WHILE DRILLING 0.9'
▽ AT END OF BORING Rotary Wash Drill
▼ 24 HOURS
Sta. 677+63, 35 FT. RT.

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
1	SS		8-10-25						▼ Dense brown and gray silty SAND and GRAVEL, occasional cobbles and silt layers, wet A-1
2	SS		4-5-50/1"	20.9	1.6 B		3.0	600.3	Tough gray CLAY, moist A-6
3	RC	Core Run Recovery = 100% RQD = 21%			5' to 7'		4.5	598.8	
4	RC	Core Run Recovery = 100% RQD = 33%			7' to 9'				Light gray DOLOMITE, weathered to tan/buff color to 8.5', Heavily fractured from 5' to 12'
5	RC	Core Run Recovery = 100% RQD = 43%			9' to 17'				Moderate to lightly fractured below 12'
6	RC	Core Run Recovery = 100% RQD = 100%			17' to 22'				
									End of Boring at 22.0'

B=Bulge failure at 15% strain

DISTANCE BELOW SURFACE IN FEET
DRILL RIG NO. 127

REVISIONS	
NAME	DATE

Ciorba Group, Inc. CONSULTING ENGINEERS Chicago, Illinois

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
WESTBOUND FAI-80 OVER US ROUTE 30
SOIL BORINGS
FAI-80 STA. 673+37.46
*SECTION
SN 099-0068(WESTBOUND)
WILL COUNTY

SCALE N.T.S.
DATE MARCH 1995
DRAWN BY GET
DESIGNED BY LAS
CHECKED BY GAE

ECKER VALLEY REPRO 563-5

F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	WILL		
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS	FEDERAL PROJECT		

* SECTION 99 (5,5-1;5VB) R-1&99-4-IVB-1-BR-1

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL

CLIENT Illinois Department of Transporation, Schaumburg, Illinois

BORING SB-110 DATE STARTED 12-15-94 DATE COMPLETED 12-15-94 JOB L-36,554

ELEVATIONS

GROUND SURFACE 646.2

END OF BORING 596.2

WATER TABLE

▼ WHILE DRILLING 43.0'

▽ AT END OF BORING 43.0'

▼ 24 HOURS

Sta. 678+62 at Centerline

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
0								0.8	645.4	Black clayey TOPSOIL
		1	SS	4-4-6	19.7	1.3 B				FILL - Brown CLAY, trace gravel, moist A-6
5		2	SS	4-8-9	20.9	1.5 B				
		3	SS	7-8-11	20.4	2.3 B				
		4 A	SS	7-8-9	19.6	2.1 B		8.0	638.2	
		B			17.1	2.4 B		9.5	636.7	FILL - Dark gray and gray CLAY, trace organic, moist A-7-6
10		5	SS	6-9-11	17.7	2.5 B				FILL - Brown CLAY, trace gravel, moist A-6/A-7-6
		6	SS	11-12-13	20.8	2.2 B				
15		7	SS	11-13-23	20.4	2.0 B		18.0	628.2	
		8	SS	7-8-7	15.5	1.2 B				FILL - Dark gray and brown CLAY LOAM, trace organic, moist A-6
20		9	SS	7-11-13	20.0	2.4 B		20.5	625.7	FILL - Brown and gray CLAY, trace gravel, moist A-6
		10	SS	7-9-15	19.4	1.8 B				
25		11	SS	7-9-11	18.9	2.0 B				
		12	SS	20-23-25				28.0	818.2	FILL - Brown SAND and GRAVEL, occasional cobbles, damp A-1
30		13	SS	16-18-15	15.0	1.9 B		30.5	615.7	FILL - Brown CLAY, trace gravel, moist A-6
		14	SS	8-11-14	20.3	2.3 B		33.0	613.2	FILL - Dark gray and black silty CLAY, trace organic, trace gravel, moist A-7-6
35		15	SS	8-11-12	21.0	3.4 B		35.5	610.7	FILL - Brown and gray CLAY, moist A-7-6
		16	SS	8-9-13	24.7	2.0 B		38.0	608.2	Tough to very tough brown CLAY, moist A-7-6
40										

DRILL RIG NO. 144

Page 1 of 2

PROJECT I-80 over US Route 30, Metra R.R. and Hickory Creek, Will County, IL

CLIENT Illinois Department of Transporation, Schaumburg, Illinois

BORING SB-110 DATE STARTED 12-15-94 DATE COMPLETED 12-15-94 JOB L-36,554

ELEVATIONS

GROUND SURFACE 646.2

END OF BORING 596.2

WATER TABLE

▼ WHILE DRILLING 43.0'

▽ AT END OF BORING 43.0'

▼ 24 HOURS

Sta. 678+62 at Centerline

DISTANCE BELOW SURFACE IN FEET	LENGTH RECOVERY	SAMPLE NO.	SAMPLE TYPE	N	WC	Q_u	δ DRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
40		17	SS	11-8-10	22.3	2.1 B				Very tough brown CLAY, moist A-6/A-7-6
								43.0	603.2	
45		18	SS	2-3-4						Loose brown silty SAND, trace gravel, wet A-2-4
								45.5	600.7	
		19	SS	11-13-15						Firm brown silty SAND and GRAVEL, wet A-1
50		20	SS	100/3"				48.0	598.2	Fractured and Weathered DOLOMITE, hard drilling to 50 feet
										End of Boring at 50.0'
55										B=Bulge failure at 15% strain
60										
65										
70										
75										
80										

DRILL RIG NO. 144

Page 2 of 2

BECKER VALLEY REPRO 382448

REVISIONS	
NAME	DATE

Ciorba Group, Inc.
CONSULTING ENGINEERS
Chicago, Illinois

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WESTBOUND FAI-80 OVER US ROUTE 30
SOIL BORINGS
FAI-80 STA. 673+37.46
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