

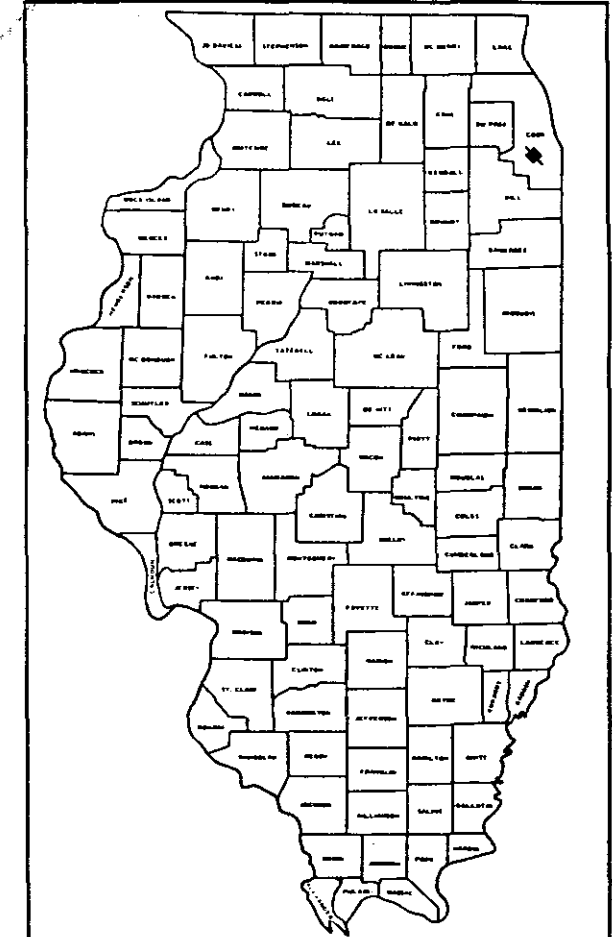
F.S. 031
File # 262
File # 262

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

F.A. DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	*	COOK	26	1
ILLINOIS PROJECT IX-29(64)				

P-91-539-79



LOCATION OF SECTION INDICATED THUS: —

INDEX OF SHEETS

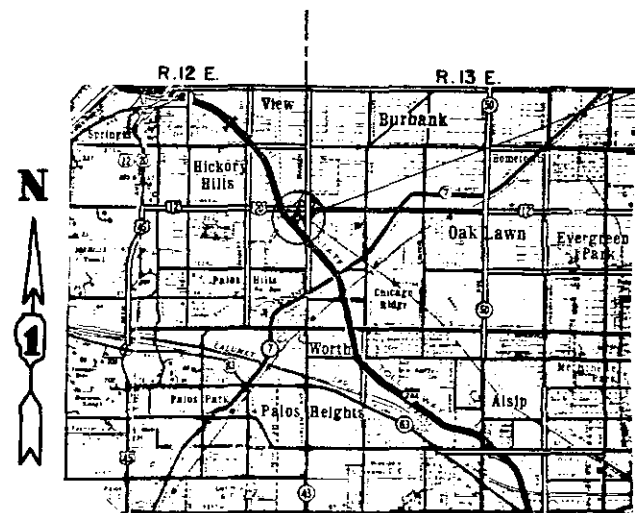
- 1 - TITLE SHEET
- 2 - TYPICAL CROSS SECTIONS & SPECIAL DETAILS.
- 3 - SUMMARY OF QUANTITIES
- 4 - PLAN & PROFILE
- 5 - DETOUR PLAN RAMP "A"
- 6 - LIGHTING RELOCATION PLAN
- 7-25 BRIDGE PLANS
- 26 - LIGHTING DETAILS

SCALES
 PLAN ——— 1"=40'
 PROFILE HORIZ. 1"=40'
 PROFILE VERT. 1"=5'
 CROSS SECTIONS ———

F.A. ROUTE 29 (U.S. ROUTE 12-20), 95 TH STREET
 SECTION 3128Z-HB-I-R(82) + RR 174
 COOK COUNTY
 (STRUCTURE REHABILITATION, RAMP "A")
 C-91-081-82
 PROJECT IX-29(64)

LIST OF STANDARDS

- 1686-4
- 2113-2
- 2298-6
- 2299-9
- 2300-2
- 2302-4
- 2324-5
- 2230-13
- 2341-1



LOCATION OF IMPROVEMENT

- ① DRAINAGE SCUPPERS
- ② JOINTS W/ RUBBER EPOXY INJECT IF NEEDED.
- would like copy of Special Provisions.
- ③ Do not cut much damage beams during deck removal
- ④ Epoxy coated base bottom

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

SUBMITTED: MAY 12 1983

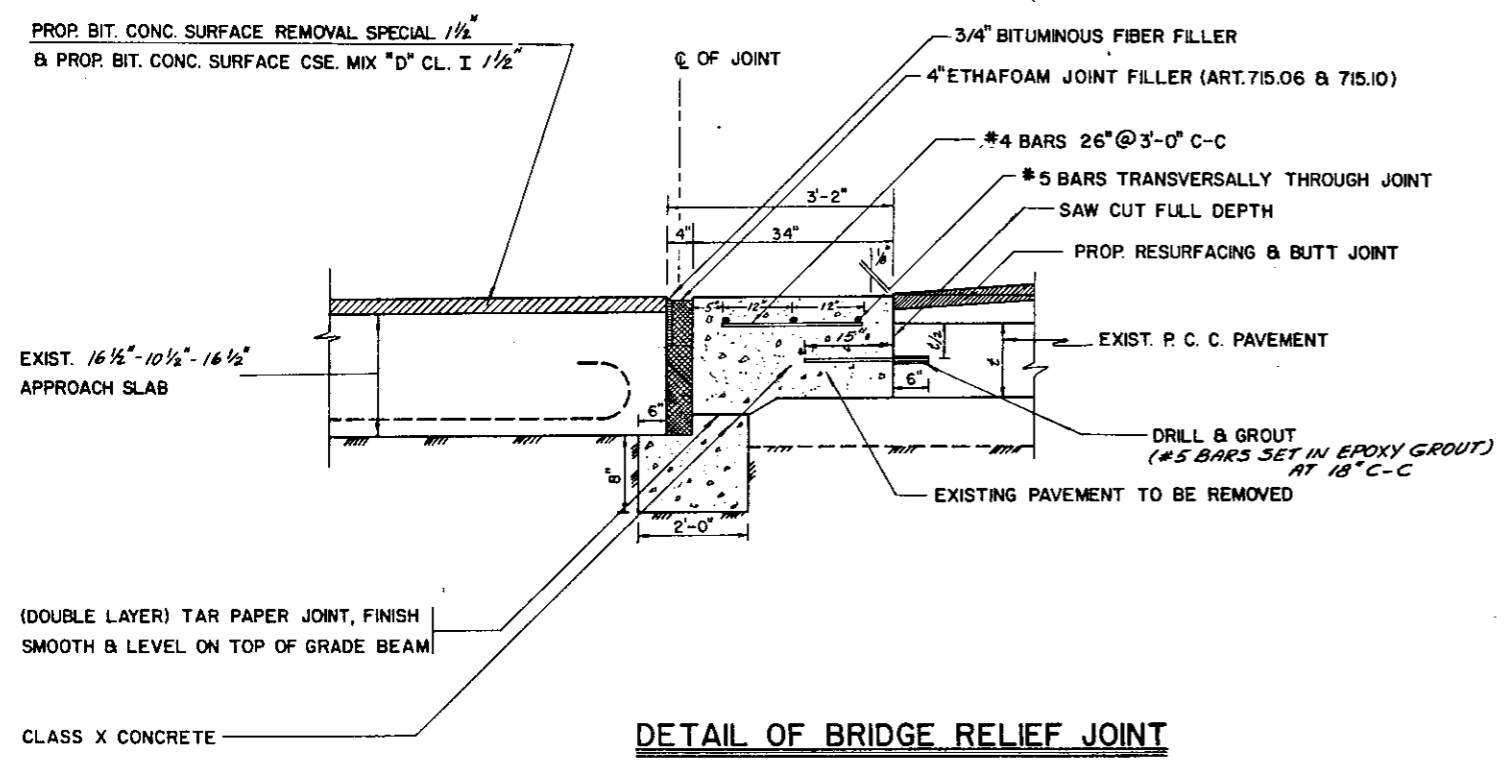
ENGINEER: Signature of District Engineer DISTRICT ENGINEER

PASSED: 6-3 1983 ENGINEER OF PLANS AND CONTRACTS

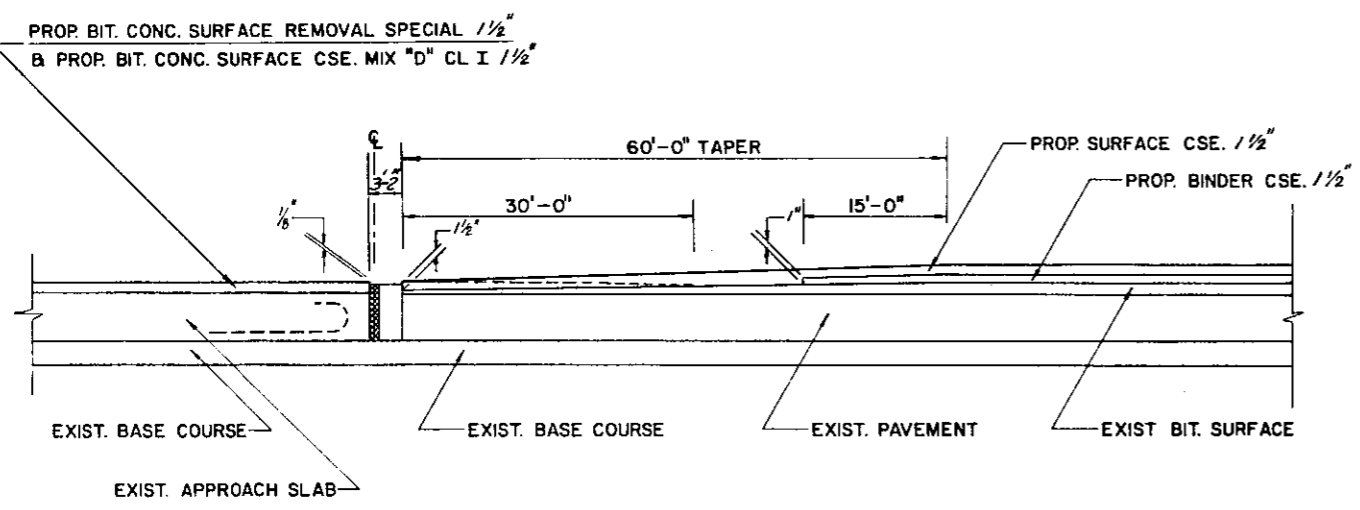
APPROVED: Signature of Engineer of Design ENGINEER OF DESIGN

DIRECTOR DIVISION OF HIGHWAYS

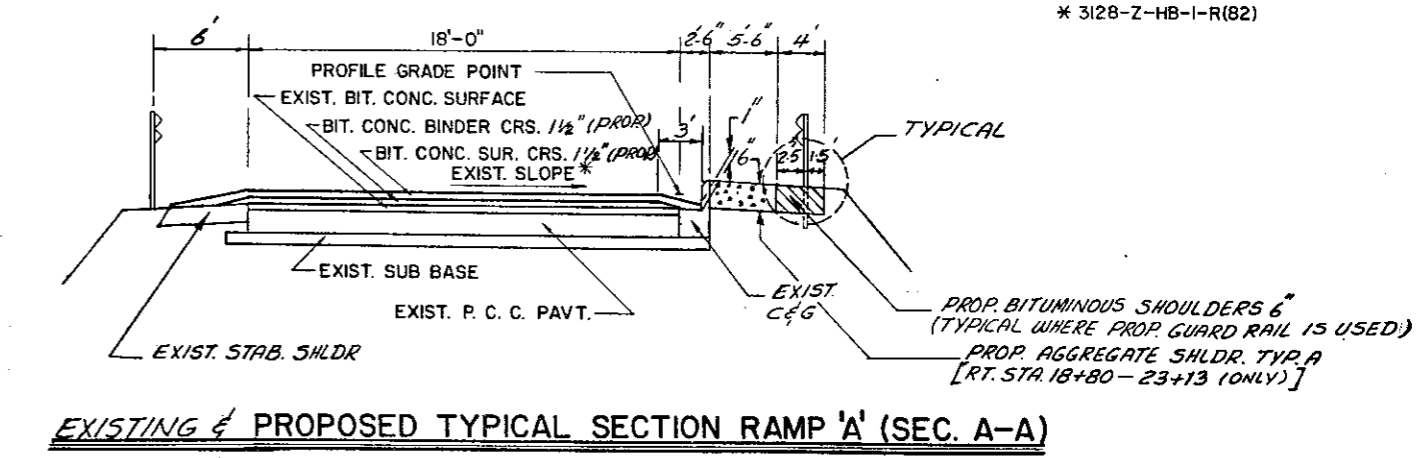
* 3128-Z-HB-1-R(82)



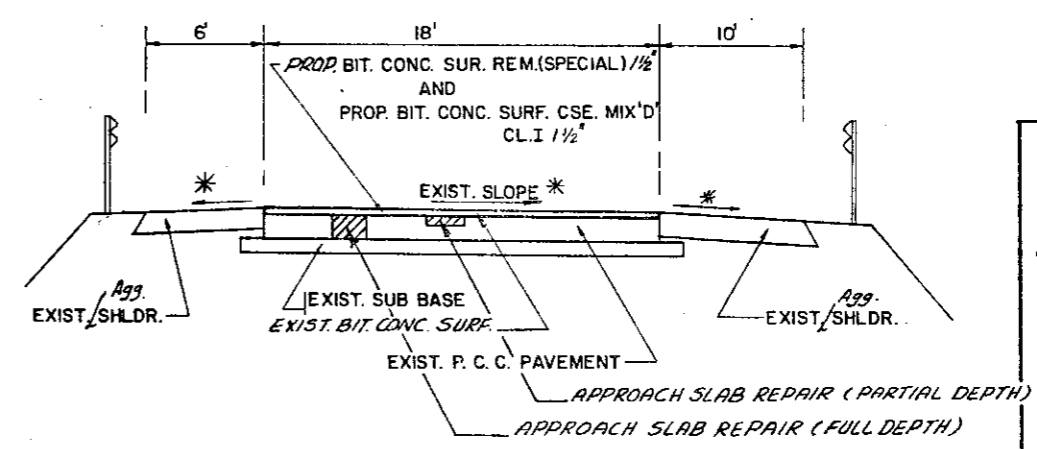
DETAIL OF BRIDGE RELIEF JOINT



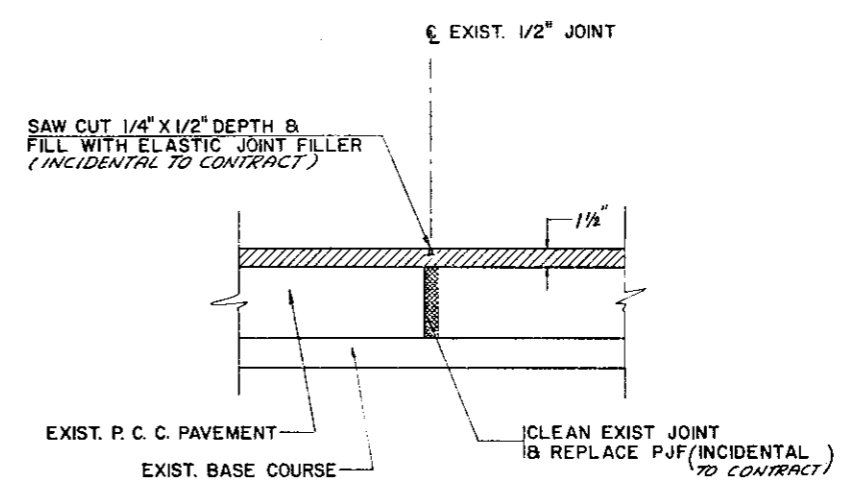
DETAIL 60' TAPER BUTT JOINT



EXISTING & PROPOSED TYPICAL SECTION RAMP 'A' (SEC. A-A)



EXISTING & PROPOSED TYPICAL SECTION APPROACH SLAB (SEC. B-B)



SECTION THRU EXPANSION JOINT (SEC. C-C) APPROACH SLAB

- NOTES**
- FOR SPBGR & TERM. SECTIONS & APPROACH SHLDR. PAVEMENT TREATMENT SEE PLAN SH. #4
 - ANY AREAS AT THE EDGE OF EMBANKMENT DISTURBED DUE TO GUARD RAIL REMOVAL & PROP. GUARD RAIL INSTALLATION SHALL BE RESTORED BY SEEDING OR SODDING AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
 - F.A. ROUTE 29 (U.S. ROUTE 12/20) 95th STREET SEC. (29R43239C)RS-82 IS UNDER CONTRACT. THE CONTRACTOR ON THIS PROJECT IS ADVISED TO COORDINATE HIS WORK WITH THE OTHER CONTRACTOR TO ECONOMIZE AND CAUSE LEAST INCONVENIENCE TO MOTORING PUBLIC.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL CROSS SECTIONS AND SPECIAL DETAILS

SCALE: VERT. NO SCALE
 HORIZ. 5'-4"=1'

DRAWN BY *M.S.*
 CHECKED BY *A.P.*

SUMMARY

OF

QUANTITIES

F.A.P. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	COOK	26	3

FED. ROAD DIST. # ILLINOIS FED. AID PROJECT

*31282-HB-1-R(82)

CODE NO.	ITEM	UNIT	QUANTITY
202001	EARTH EXCAVATION	CU YD	120
215001	AGGREGATE SHOULDERS, TYPE A	TON	115
219004	BITUMINOUS SHOULDERS 6"	SQ YD	300
406001	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	72
406003	AGGREGATE (PRIME COAT)	TON	3
406007	BITUMINOUS CONCRETE BINDER COURSE	TON	25
406013	BITUMINOUS CONCRETE SURFACE COURSE MIXTURE D, CLASS I	TON	74
503003	PROTECTIVE COAT	SQ YD	1,045
408015	P.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT	SQ YD	69
501024	CONCRETE REMOVAL	CU YD	17
X50107	REMOVAL OF EXISTING CONCRETE DECK	EACH	1
504003	CLASS X CONCRETE	CU YD	280.7
507004	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3,090
507005	STUD SHEAR CONNECTORS	EACH	1,926
509003	CLEANING AND PAINTING STEEL BRIDGE	L SUM	1
512001	REINFORCEMENT BARS	POUND	26,940
512002	REINFORCEMENT BARS (EPOXY COATED)	POUND	36,560
514001	NAME PLATES	EACH	1
617005	COMBINATION CURB AND GUTTER REMOVAL	LIN FT	40
617013	BITUMINOUS CONCRETE SURFACE REMOVAL (SPECIAL)	SQ YD	355
617050	STABILIZED SHOULDER REMOVAL	SQ YD	33
620008	PAVEMENT REMOVAL AND REPLACEMENT TYPE II 10 INCHES	SQ YD	22
633006	STEEL PLATE BEAM GUARD RAIL REMOVAL, SINGLE RAIL	LIN FT	798
646004	ENGINEER'S FIELD OFFICE TYPE A	CAL MO	5
647001	PAVEMENT MARKING TAPE	LIN FT	400
648017	TRAFFIC CONTROL AND PROTECTION	L SUM	1
L04300	TRENCH AND BACKFILL	LIN FT	156

CODE NO.	ITEM	UNIT	QUANTITY
T50102	THERMOPLASTIC PAVEMENT MARKING LINE 4"	LIN FT	659
X04748	MOBILIZATION	L. SUM	1
X61709	SLOPEWALL REMOVED AND REPLACED	SQ YD	70
X62837	STEEL PLATE BEAM GUARD RAIL TYPE A	LIN FT	643
X62844	TRAFFIC BARRIER TERMINAL TYPE 6	EACH	4
XZ1577	BRIDGE RELIEF JOINT	LIN FT	39
XZ1578	APPROACH SLAB REPAIR (FULL DEPTH)	SQ YD	5
XZ1579	APPROACH SLAB REPAIR (PARTIAL DEPTH)	SQ YD	20
XX1182	BITUMINOUS CONCRETE SURFACE REMOVAL BUTT JOINT	SQ YD	466
Z10193	DRAINAGE SCUPPERS	EACH	2
Z10279	NEOPRENE EXPANSION JOINT 2"	LIN FT	148
X50313	PREFORMED JOINT SEAL 2 1/2"	LIN FT	114
* Z10375	REPAIR CONCRETE STRUCTURES	SQ FT	533
XZ1361	EPOXY CRACK SEALING	LIN FT	101
L06336	RIGID PVC CONDUIT, 2-1/2" DIAMETER EMBEDDED IN STRUCTURE	LIN FT	282
L06337	ELECTRIC CABLE IN CONDUIT, 3-1/2 NO. 6 AWG, 600V, TYPE XHHW	LIN FT	296
L06141	ELECTRIC CABLE IN DUCT, 3-1/2 NO. 6 AWG, 600V, TYPE XHHW 1-1/4" DUCT	LIN FT	172
L06315	INSULATED GROUNDING WIRE, NO. 8 AWG, 600V, TYPE XHHW	LIN FT	296
XX0703	BARE GROUNDING WIRE, NO. 8 AWG	LIN FT	172
L06338	PULL BOX, 12" x 12" x 8" EMBEDDED IN STRUCTURE	EACH	2
L05148	RELOCATION OF EXISTING LIGHTING STANDARD	EACH	2

* NON-PARTICIPATING

REVISIONS	
NAME	DATE

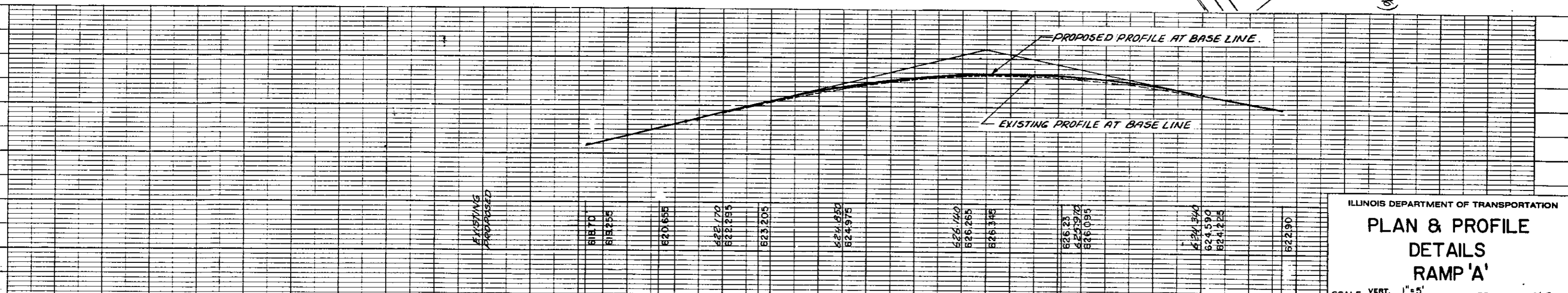
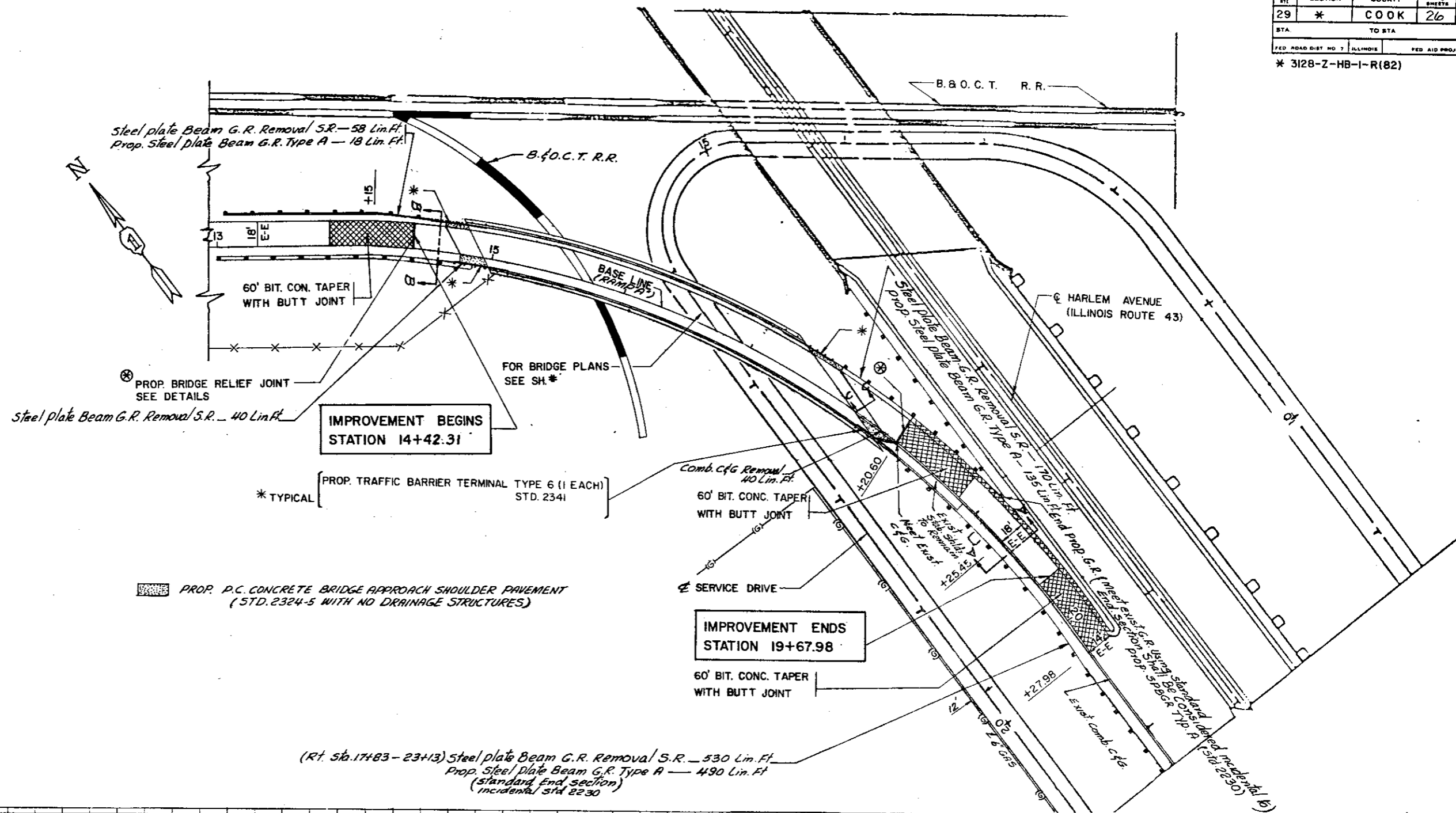
ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE VERT. NO SCALE DRAWN BY A. ABBAS

F.A.R. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	*	COOK	26	4
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

* 3128-Z-HB-1-R(82)



ILLINOIS DEPARTMENT OF TRANSPORTATION

**PLAN & PROFILE
DETAILS
RAMP 'A'**

SCALE: VERT. 1" = 5'

DRAWN BY M.S.

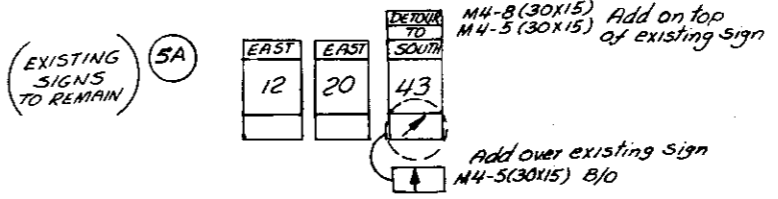
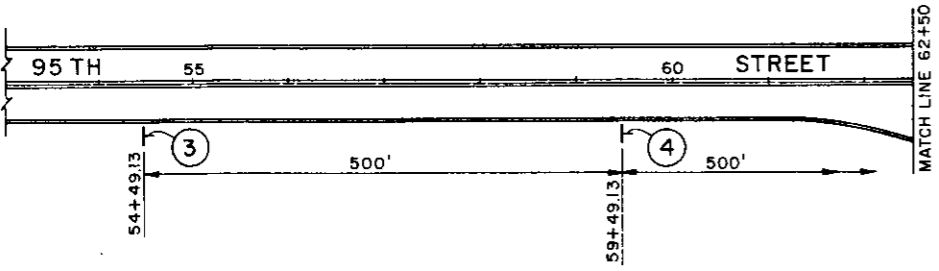
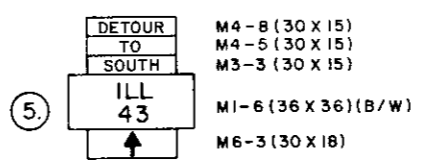
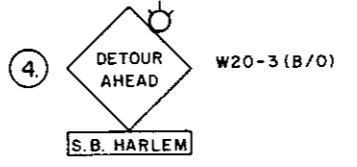
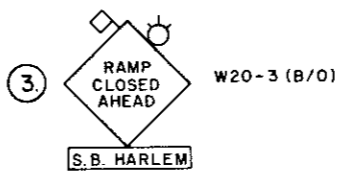
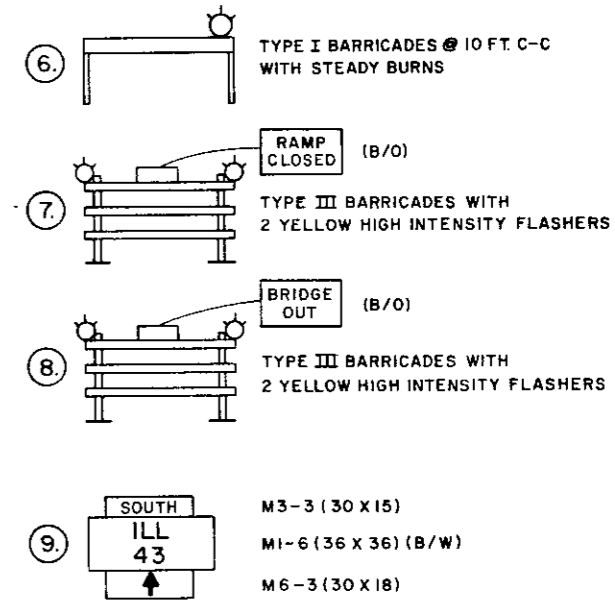
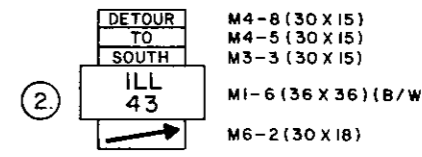
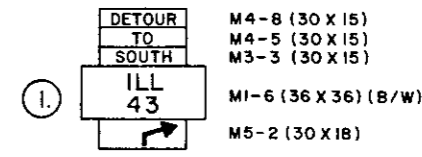
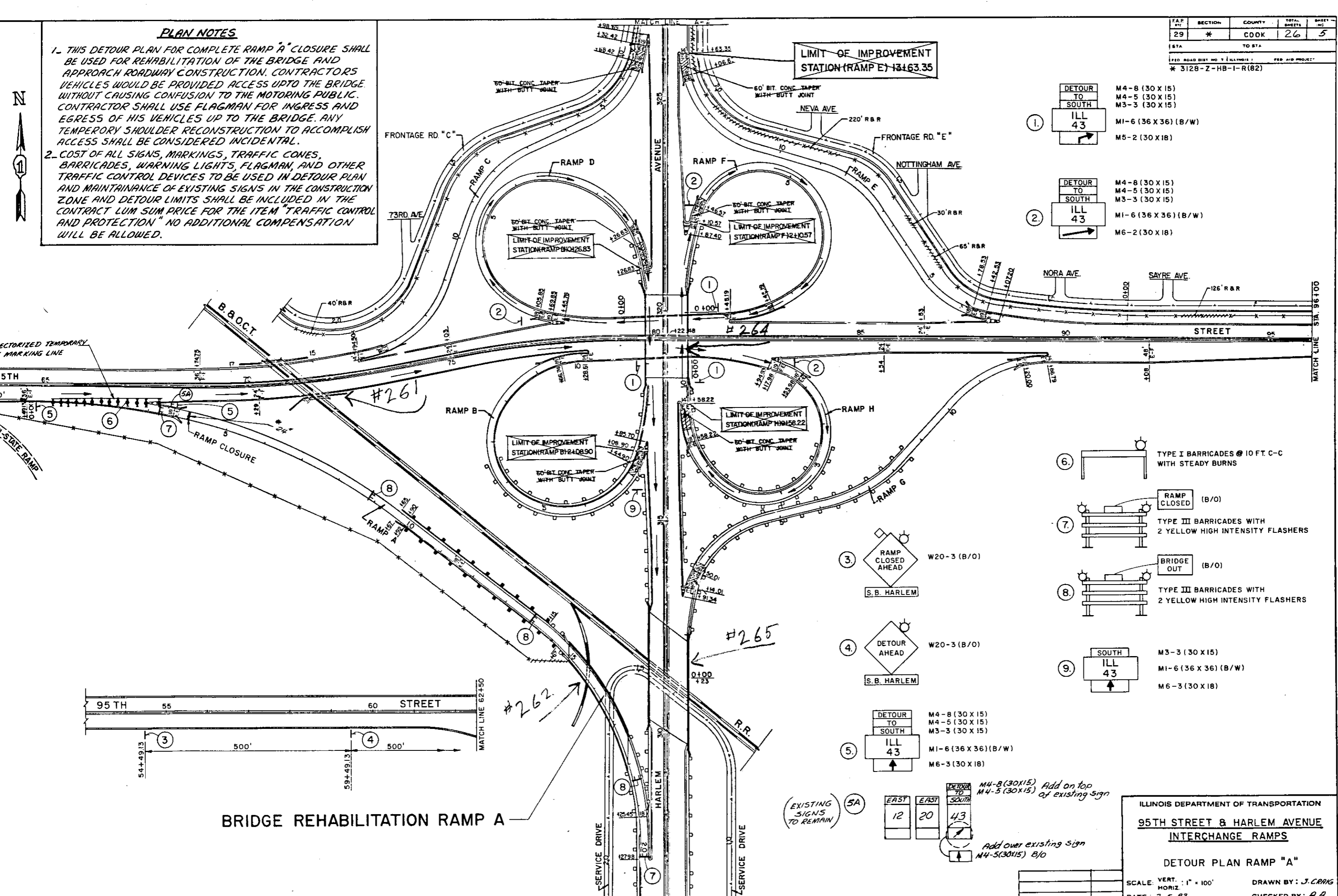
PLAN NOTES

- THIS DETOUR PLAN FOR COMPLETE RAMP "A" CLOSURE SHALL BE USED FOR REHABILITATION OF THE BRIDGE AND APPROACH ROADWAY CONSTRUCTION. CONTRACTORS VEHICLES WOULD BE PROVIDED ACCESS UP TO THE BRIDGE WITHOUT CAUSING CONFUSION TO THE MOTORING PUBLIC. CONTRACTOR SHALL USE FLAGMAN FOR INGRESS AND EGRESS OF HIS VEHICLES UP TO THE BRIDGE. ANY TEMPORARY SHOULDER RECONSTRUCTION TO ACCOMPLISH ACCESS SHALL BE CONSIDERED INCIDENTAL.
- COST OF ALL SIGNS, MARKINGS, TRAFFIC CONES, BARRICADES, WARNING LIGHTS, FLAGMAN, AND OTHER TRAFFIC CONTROL DEVICES TO BE USED IN DETOUR PLAN AND MAINTAINANCE OF EXISTING SIGNS IN THE CONSTRUCTION ZONE AND DETOUR LIMITS SHALL BE INCLUDED IN THE CONTRACT LUM SUM PRICE FOR THE ITEM "TRAFFIC CONTROL AND PROTECTION" NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

F.A.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	*	COOK	26	5

STA. TO STA.

FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT # 3128-Z-HB-1-R(82)

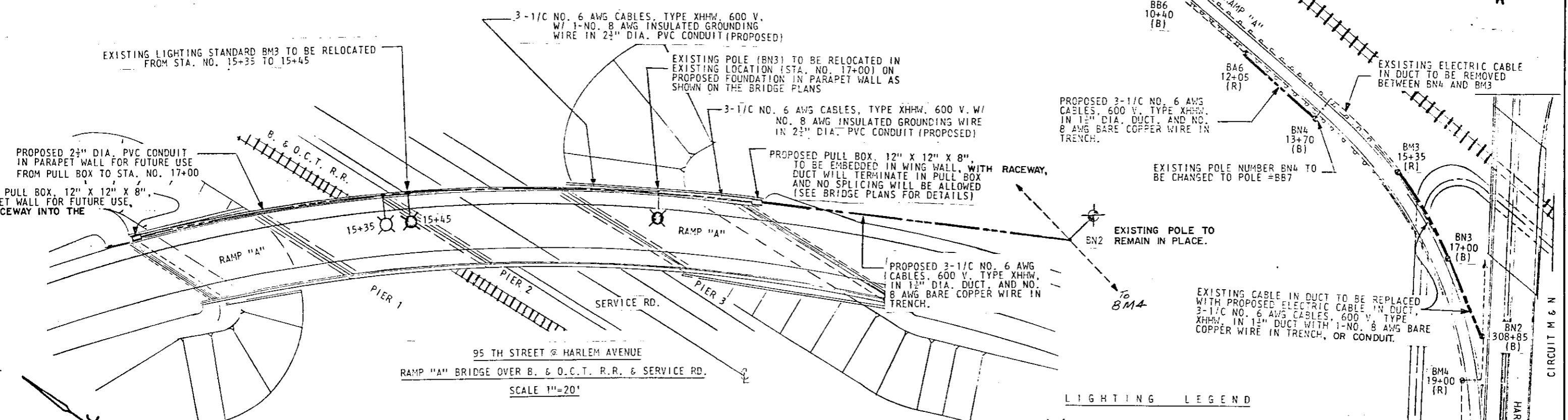
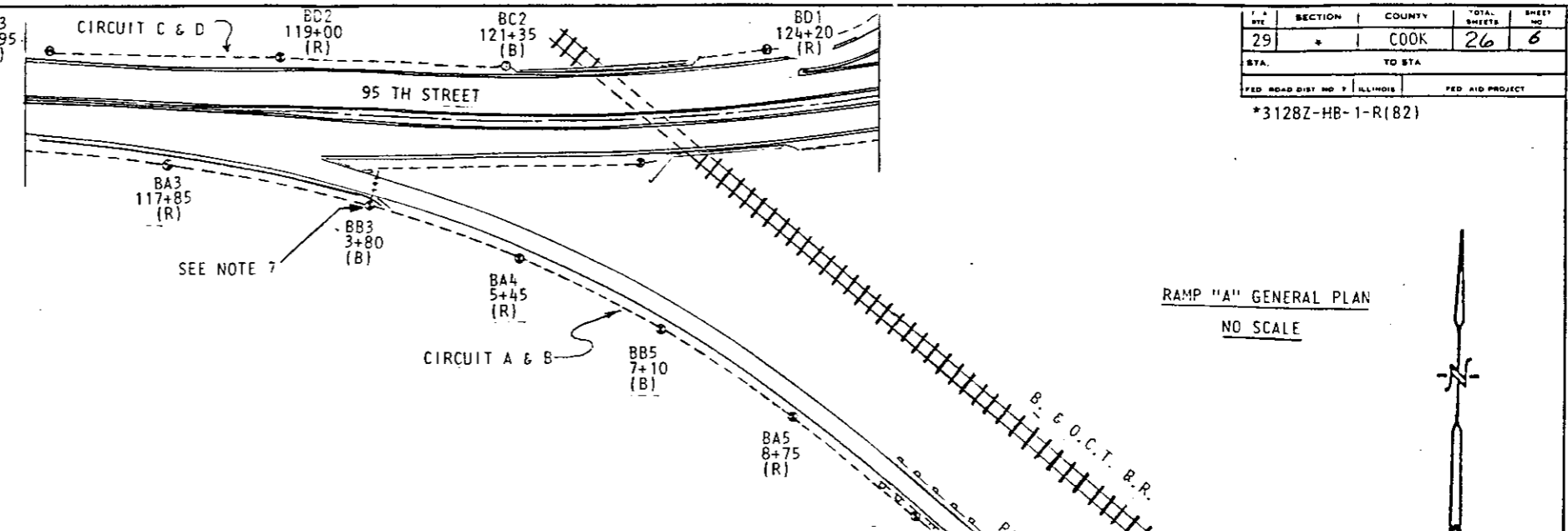
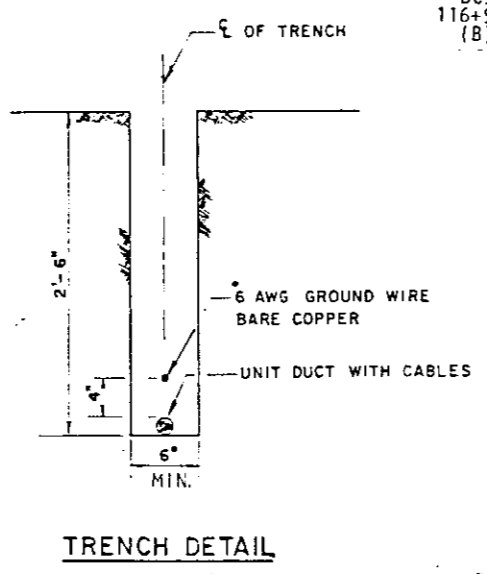
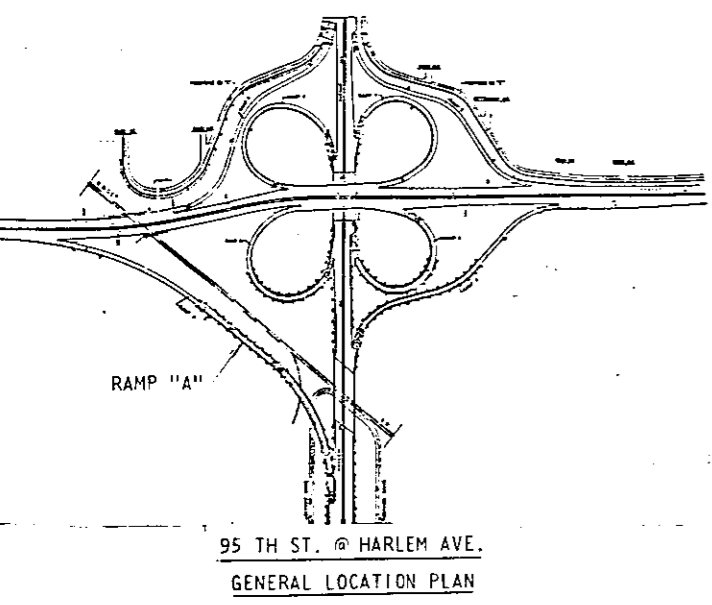


ILLINOIS DEPARTMENT OF TRANSPORTATION
95TH STREET & HARLEM AVENUE
INTERCHANGE RAMPS
DETOUR PLAN RAMP "A"

SCALE: VERT. : 1" = 100'
HORIZ : 1" = 100'

DRAWN BY: J. CRAIG
CHECKED BY: P.P.

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
29	COOK	26	6
STA. TO STA.		FED. ROAD DIST. NO. 7 ILLINOIS	
		FED. AID PROJECT	
*3128Z-HB-1-R(82)			



GENERAL NOTES

- ALL SPLICES SHALL BE IN POLE BASES. NO UNDERGROUND SPLICES SHALL BE PERMITTED
- DURING BRIDGE RECONSTRUCTION RELOCATED LIGHTING STANDARDS SHALL BE STORED WITHIN THE STATE RIGHT-OF-WAY, UNTIL SUCH TIME THAT THEY CAN BE ERECTED IN PLACE ON THE PROPOSED PARAPET WALL FOUNDATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE LIGHTING UNIT (POLE, MAST ARM, & LUMINAIRE) DURING THE REMOVAL, STORING, AND RELOCATING PROCESS. ANY DAMAGE SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.
- ALL ELECTRIC CABLE IN DUCT SHALL BE A MINIMUM OF 2 FEET BEHIND GUARDRAILS.
- CONSULT BRIDGE PLANS FOR DETAILS AND PLACEMENT OF CONDUIT AND PULL BOX IN PARAPET WALL, AND FOUNDATION DETAILS AND DRAWING FOR RELOCATED POLES.
- EXPANSION COUPLINGS FOR 2 1/2" DIA. PVC CONDUIT SHALL BE PLACED AT BRIDGE DECK JOINTS.
- DISCONNECT CIRCUIT A & B AT LIGHT POLE BB3 (STA. NO. 3+80) AND AT LIGHT POLE BN2 (STA. NO. 308+85) TO TURN OFF POWER TO LIGHTS TEMPORARILY DURING CONSTRUCTION OF THE PROJECT. THIS WORK SHALL BE CO-ORDINATED WITH RAMP "A" CLOSURE DURING CONSTRUCTION.

- LIGHTING LEGEND
- EXISTING LIGHT STANDARD TO REMAIN IN PLACE
 - EXISTING LIGHT STANDARD TO BE RELOCATED
 - RELOCATED LIGHT STANDARD
 - PROPOSED PULL BOX, 12" X 12" X 8", IN WING WALL
 - EXISTING ELECTRIC CABLE IN 1 1/2" DIA. DUCT TO REMAIN IN PLACE OR AS NOTED OTHERWISE, 3-1/2" NO. 6 AWG CABLES, 600 V. TYPE XHHW, AND NO. 8 AWG BARE COPPER GROUNDING WIRE IN TRENCH.
 - PROPOSED ELECTRIC CABLE IN 1 1/2" DIA. DUCT OR 2 1/2" DIA. PVC CONDUIT AS SHOWN AND SPECIFIED ON THE PLANS. CABLES SHALL BE NO. 6 AWG, 600 V. TYPE XHHW, THE NUMBER AS SPECIFIED AS SPECIFIED ON THE PLAN.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

95 TH STREET & HARLEM AVE.
RAMP "A"
LIGHTING RELOCATION PLAN

SCALE: VERT AS NOTED DRAWN BY *WR*

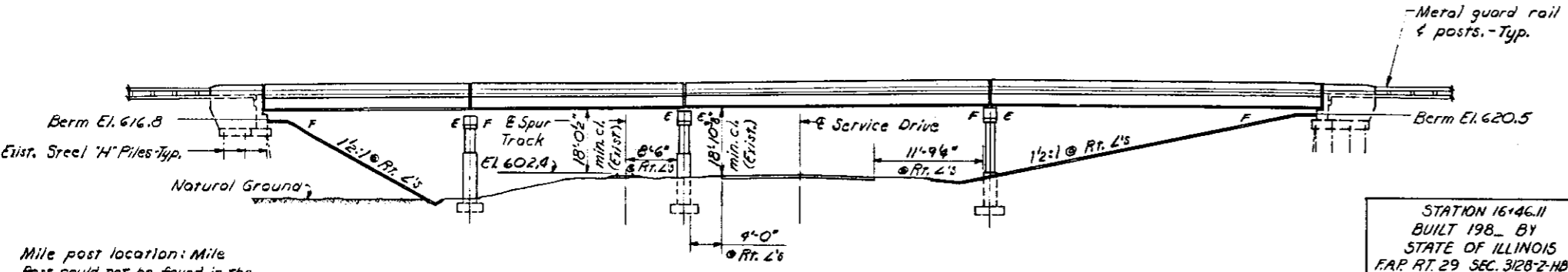
Bench Mark: No. 4, Brass plug at N.E. corner Section 12, Elev. 601.82
Existing Structure: Built in 1961 as part of F.A. 42, Sec. 3128-Z-HB-1
Structure #016-1010. The four simple span steel WF structure is 285'-0" back to back of abutments and 29'-8" water table to water table. The contractor shall remove the existing Reinforced Concrete deck and replace it with a new Reinforced Concrete deck. The top of the wingwalls shall be reconstructed to match the new conc. bridge parapet. Traffic to be detoured. No salvage

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7 26 SHEETS
R.R. 1 P.A. 29	*	Cook	26	7	
* 3128-Z-HB-1-R(82)					

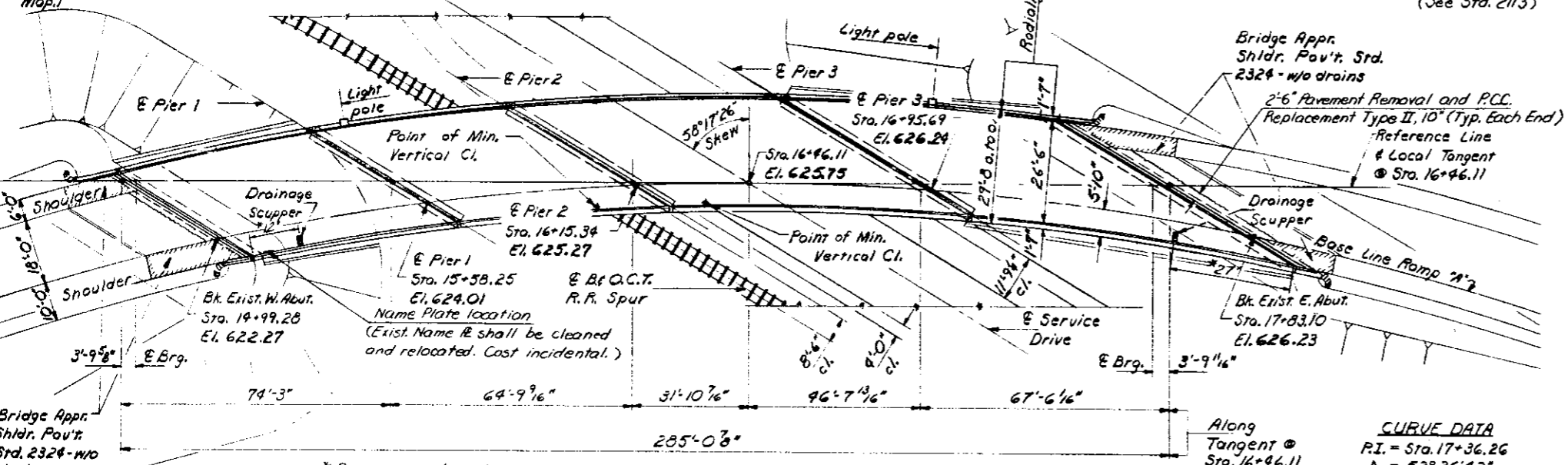
GENERAL NOTES

All new structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. Field welding of construction accessories will not be permitted to the bottom flange of beams. Field welding in other areas will be permitted only when approved by the Engineer. Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60. Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.



ELEVATION

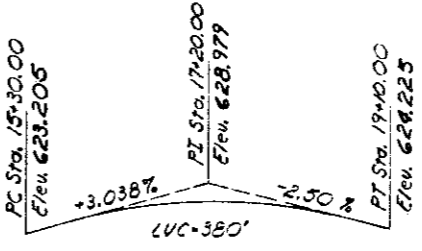
Mile post location: Mile Post could not be found in the field. Therefore the P.S. for future Spur Track is located from the intersection of E of Harlem Ave. and E of South B. & O.C.T. Track. (See Location Map.)



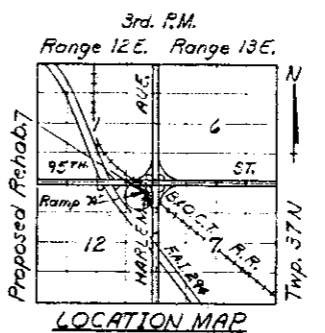
PLAN

CURVE DATA

PI. = Sta. 17+36.26
Δ = 52°26'42"
D = 8°18'13"
T = 339.86'
L = 631.58'
E = 79.16'
R = 690.00'
S.E. = 0.081/4 # Varies



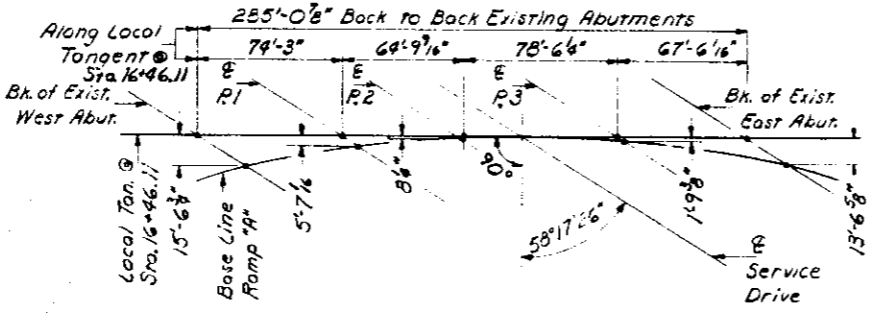
PROPOSED PROFILE GRADE (applied at base line)



** Removal of existing aluminum rail is to be included with Removal of Existing Concrete Deck.
 *** All existing structural steel within 5 feet of the ends of beams at the abutments and piers, including the complete bearing assemblies, shall be cleaned by Method I, painted with one complete coat of red lead paint and given two complete coats of aluminum paint. The remainder of the existing structural steel shall be cleaned by Method II, spot painted with red lead paint, spot painted with aluminum paint over the red lead paint and given one complete coat of aluminum paint.

GENERAL PLAN
 U.S. ROUTE 12/20 RAMP "A" OVER B. & O.C.T. R.R. SPUR & SERVICE DRIVE
 F.A.P. ROUTE 29 SEC. 3128-Z-HB-1-R(82)
 COOK COUNTY
 STA. 16+46.11

DESIGN STRESSES
 f_c = 3,500 p.s.i.
 f_y = 60,000 p.s.i. (Reinforcement)
 f_y = 36,000 p.s.i. (Structural Steel)



OFFSET SKETCH

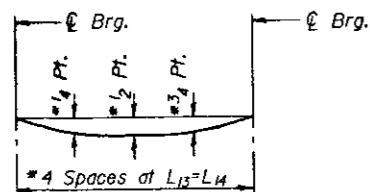
LOADING HS20-44
 Design Specifications 1977
 A.A.S.H.T.O. and 1978 thru 1982
 Interim specifications.

DESIGNED	Rick Brunette
CHECKED	L. A. Hunt
DRAWN	R.B.
CHECKED	L. A.

June 1, 1983
 EXAMINED *Jamie J. Kambur*
 PASSED *Carl E. Hummer*
 APPROVED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATION	SHEET	SHEET NO. 8
29	*	Cook	26	8	26 SHEETS
PROJECT NO. 3128Z-HB-1-R(B2)					

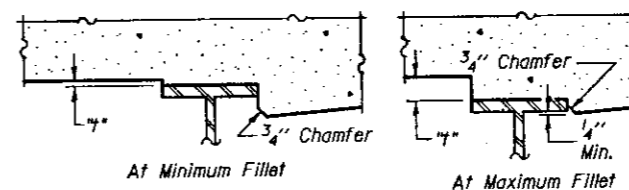


* For dimensions see table of Deflections for Adjusted Elevations.

DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

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

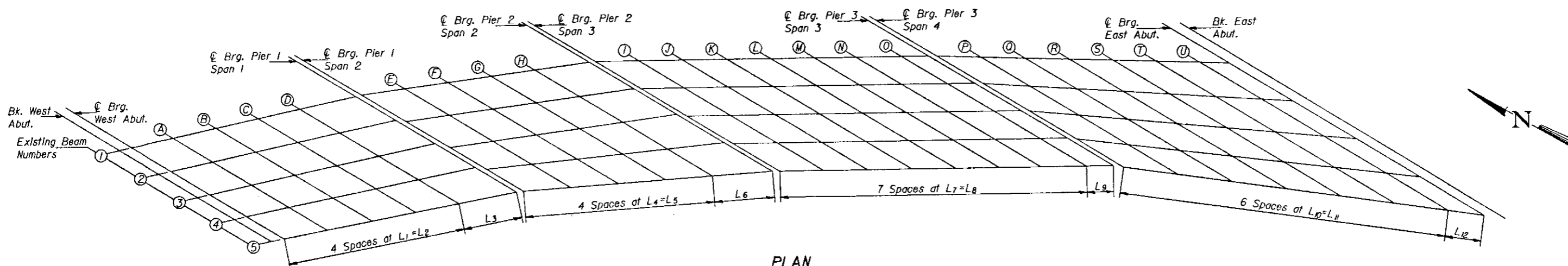


To determine "f": elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" on sheet 3, minus slab thickness, equals the fillet heights "f" above top flange of beams.

FILLET HEIGHTS

DEFLECTIONS FOR ADJUSTED ELEVATIONS

Location	Span 1				Span 2				Span 3				Span 4			
	L _B	L _M	1/4 & 3/4 Points	1/2 Point	L _B	L _M	1/4 & 3/4 Points	1/2 Point	L _B	L _M	1/4 & 3/4 Points	1/2 Point	L _B	L _M	1/4 & 3/4 Points	1/2 Point
Beam 1	±13'-3 5/8"	53'-2 3/8"	3/8"	1/2"	±13'-1 1/2"	52'-6 1/16"	5/16"	1/2"	±19'-0"	75'-11 1/8"	1 1/16"	1 1/2"	±16'-6 7/8"	66'-3 5/16"	5/8"	1/2"
Beam 2	±13'-3 5/8"	53'-2 3/8"	1/2"	1/16"	±13'-1 1/2"	52'-6 1/16"	1/2"	1/16"	±19'-0"	75'-11 1/8"	1"	1 3/8"	±17'-6 3/8"	70'-1 9/16"	1 1/8"	1 1/8"
Beam 3	±13'-3 5/8"	53'-2 3/8"	1/2"	1/16"	±13'-1 1/2"	52'-6 1/16"	1/2"	1/16"	±19'-0"	75'-11 1/8"	1"	1 3/8"	±18'-6 1/8"	74'-0 1/2"	1 1/8"	1 1/4"
Beam 4	±13'-5 3/4"	53'-11 1/4"	1/2"	3/4"	±13'-8 3/8"	54'-9 5/16"	9/16"	3/4"	±19'-0"	75'-11 1/8"	1"	1 3/8"	±19'-6"	78'-0 1/8"	1 1/8"	1 1/2"
Beam 5	±13'-8"	54'-8 3/8"	3/8"	1/2"	±14'-3 1/4"	57'-1 1/16"	3/8"	1/2"	±19'-0"	75'-11 1/8"	1 1/16"	1 1/2"	±20'-6"	82'-0 1/4"	1 3/8"	1 3/8"



PLAN

All lengths given along C of beams.

TABLE OF "L" DIMENSIONS FOR ELEVATIONS

Location	Span 1			Span 2			Span 3			Span 4		
	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	L ₇	L ₈	L ₉	L ₁₀	L ₁₁	L ₁₂
Beam 1	10'-0"	40'-0"	13'-2 3/8"	10'-0"	40'-0"	±12'-6 1/2"	10'-0"	70'-0"	5'-11 1/8"	10'-0"	60'-0"	±6'-3 3/8"
Beam 2	10'-0"	40'-0"	13'-2 3/8"	10'-0"	40'-0"	±12'-6 1/2"	10'-0"	70'-0"	5'-11 1/8"	10'-7"	63'-6"	±6'-7 5/8"
Beam 3	10'-0"	40'-0"	13'-2 3/8"	10'-0"	40'-0"	±12'-6 1/2"	10'-0"	70'-0"	5'-11 1/8"	11'-2"	67'-0"	7'-0 1/2"
Beam 4	10'-1 5/8"	40'-6 1/2"	13'-4 3/4"	10'-5 1/8"	41'-8 1/2"	±13'-0 5/8"	10'-0"	70'-0"	5'-11 1/8"	11'-9 1/4"	70'-7 1/2"	7'-4 5/8"
Beam 5	10'-3 3/8"	41'-1 1/2"	±13'-6 3/4"	10'-10 1/2"	43'-6"	±13'-7 1/4"	10'-0"	70'-0"	5'-11 1/8"	12'-4 1/2"	74'-3"	7'-9 1/4"

NOTE: Work this sheet with sheet #3.

DESIGNED	Rick Brunette
CHECKED	James Head
DRAWN	Joe Sutherland
CHECKED	L. J.

June 1, 1983
 EXAMINED *James J. Houbert*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Joe Sutherland*
 ENGINEER OF BRIDGES AND STRUCTURES
 APPROVED _____
 DIRECTOR OF HIGHWAYS

ELEVATIONS
 F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(B2)
 COOK COUNTY
 STATION 16+46.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 3128Z-HB-1-R(B2)

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BACK OF WEST ABUT	1476.822	-22.699	623.407	623.407
CL BRG WEST ABUT	1479.638	-22.583	623.483	623.483
A	1489.319	-22.275	623.753	623.777
B	1499.006	-22.107	624.033	624.070
C	1508.696	-22.080	624.326	624.365
D	1518.384	-22.193	624.629	624.660
CL BRG PIER 1 SPAN 1	1531.163	-22.557	625.046	625.046
CL BRG PIER 1 SPAN 2	1532.635	-22.555	625.090	625.090
E	1542.316	-22.256	625.350	625.370
F	1552.004	-22.098	625.608	625.642
G	1561.694	-22.080	625.862	625.899
H	1571.382	-22.202	626.115	626.140
CL BRG PIER 2 SPAN 2	1583.494	-22.552	626.427	626.427
CL BRG PIER 2 SPAN 3	1585.172	-22.504	626.461	626.461
I	1594.833	-21.743	626.609	626.645
J	1604.513	-21.121	626.755	626.824
K	1614.208	-20.640	626.899	626.982
L	1623.914	-20.299	627.041	627.132
M	1633.628	-20.099	627.180	627.257
N	1643.345	-20.039	627.317	627.374
O	1653.062	-20.121	627.452	627.473
CL BRG PIER 3 SPAN 3	1658.881	-20.237	627.531	627.531
CL BRG PIER 3 SPAN 4	1660.777	-20.246	627.554	627.554
P	1670.492	-20.203	627.653	627.684
Q	1680.207	-20.301	627.750	627.806
R	1689.917	-20.539	627.845	627.914
S	1699.618	-20.918	627.936	628.000
T	1709.307	-21.438	628.026	628.077
U	1718.981	-22.097	628.114	628.133
CL BRG EAST ABUT	1725.043	-22.583	628.167	628.167
BACK OF EAST ABUT	1726.923	-22.923	628.201	628.201

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BACK OF WEST ABUT	1483.580	-15.635	623.048	623.048
CL BRG WEST ABUT	1486.425	-15.548	623.127	623.127
A	1496.204	-15.338	623.407	623.437
B	1505.987	-15.271	623.699	623.749
C	1515.769	-15.345	624.001	624.054
D	1525.548	-15.562	624.317	624.358
CL BRG PIER 1 SPAN 1	1538.441	-16.064	624.743	624.743
CL BRG PIER 1 SPAN 2	1540.794	-15.321	624.751	624.751
E	1550.577	-15.141	625.012	625.044
F	1560.362	-15.103	625.270	625.320
G	1570.147	-15.206	625.525	625.578
H	1579.927	-15.452	625.778	625.818
CL BRG PIER 2 SPAN 2	1592.148	-15.958	626.090	626.090
CL BRG PIER 2 SPAN 3	1594.295	-15.595	626.106	626.106
I	1604.059	-14.966	626.254	626.298
J	1613.838	-14.479	626.400	626.485
K	1623.629	-14.133	626.543	626.644
L	1633.428	-13.929	626.683	626.794
M	1643.230	-13.868	626.821	626.916
N	1653.033	-13.948	626.958	627.028
O	1662.831	-14.170	627.090	627.115
CL BRG PIER 3 SPAN 3	1668.696	-14.372	627.169	627.169
CL BRG PIER 3 SPAN 4	1670.664	-14.375	627.188	627.188
P	1681.029	-14.156	627.265	627.306
Q	1691.398	-14.095	627.339	627.412
R	1701.766	-14.194	627.410	627.499
S	1712.129	-14.451	627.479	627.562
T	1722.483	-14.867	627.544	627.611
U	1732.821	-15.442	627.606	627.632
CL BRG EAST ABUT	1739.302	-15.884	627.644	627.644
BACK OF EAST ABUT	1743.450	-16.199	627.667	627.667

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BACK OF WEST ABUT	1490.473	-8.640	622.697	622.697
CL BRG WEST ABUT	1493.347	-8.582	622.780	622.780
A	1503.225	-8.474	623.071	623.102
B	1513.103	-8.509	623.374	623.424
C	1522.979	-8.687	623.688	623.741
D	1532.867	-9.008	624.013	624.054
CL BRG PIER 1 SPAN 1	1545.854	-9.651	624.442	624.442
CL BRG PIER 1 SPAN 2	1549.121	-8.187	624.416	624.416
E	1559.004	-8.128	624.677	624.709
F	1568.887	-8.213	624.935	624.985
G	1578.765	-8.441	625.190	625.243
H	1588.635	-8.812	625.443	625.483
CL BRG PIER 2 SPAN 2	1600.964	-9.477	625.754	625.754
CL BRG PIER 2 SPAN 3	1603.596	-8.811	625.753	625.753
I	1613.462	-8.317	625.900	625.944
J	1623.339	-7.967	626.045	626.130
K	1633.224	-7.760	626.187	626.287
L	1643.114	-7.696	626.326	626.437
M	1653.002	-7.775	626.463	626.558
N	1662.887	-7.998	626.597	626.667
O	1672.763	-8.363	626.728	626.754
CL BRG PIER 3 SPAN 3	1678.674	-8.651	626.805	626.805
CL BRG PIER 3 SPAN 4	1680.715	-8.652	626.822	626.822
P	1691.745	-8.276	626.876	626.920
Q	1702.785	-8.078	626.927	627.006
R	1713.828	-8.060	626.974	627.072
S	1724.868	-8.220	627.018	627.108
T	1735.901	-8.559	627.058	627.129
U	1746.920	-9.076	627.094	627.122
CL BRG EAST ABUT	1753.828	-9.492	627.115	627.115
BACK OF EAST ABUT	1758.249	-9.793	627.128	627.128

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BACK OF WEST ABUT	1497.100	-2.110	622.376	622.376
CL BRG WEST ABUT	1500.041	-2.041	622.460	622.460
A	1510.150	-1.901	622.756	622.787
B	1520.261	-1.910	623.063	623.115
C	1530.369	-2.068	623.383	623.440
D	1540.470	-2.374	623.707	623.748
CL BRG PIER 1 SPAN 1	1553.785	-3.004	624.128	624.128
CL BRG PIER 1 SPAN 2	1556.242	-2.279	624.136	624.136
E	1566.638	-1.984	624.381	624.417
F	1577.040	-1.846	624.623	624.677
G	1587.444	-1.866	624.860	624.918
H	1597.845	-2.043	625.096	625.141
CL BRG PIER 2 SPAN 2	1610.845	-2.485	625.386	625.386
CL BRG PIER 2 SPAN 3	1613.079	-2.156	625.400	625.400
I	1623.044	-1.801	625.547	625.591
J	1633.017	-1.590	625.690	625.775
K	1642.994	-1.524	625.831	625.932
L	1652.972	-1.602	625.969	626.080
M	1662.944	-1.825	626.104	626.199
N	1672.909	-2.192	626.235	626.305
O	1682.861	-2.704	626.364	626.390
CL BRG PIER 3 SPAN 3	1688.814	-3.079	626.440	626.440
CL BRG PIER 3 SPAN 4	1690.930	-3.079	626.455	626.455
P	1702.641	-2.567	626.485	626.538
Q	1714.366	-2.255	626.511	626.607
R	1726.099	-2.143	626.533	626.651
S	1737.832	-2.231	626.552	626.661
T	1749.558	-2.519	626.565	626.652
U	1761.272	-3.007	626.575	626.609
CL BRG EAST ABUT	1768.616	-3.415	626.580	626.580
BACK OF EAST ABUT	1773.315	-3.718	626.582	626.582

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BACK OF WEST ABUT	1503.852	4.356	622.063	622.063
CL BRG WEST ABUT	1506.862	4.433	622.149	622.149
A	1517.207	4.600	622.450	622.474
B	1527.555	4.612	622.764	622.801
C	1537.901	4.471	623.084	623.123
D	1548.241	4.175	623.403	623.434
CL BRG PIER 1 SPAN 1	1561.869	3.549	623.817	623.817
CL BRG PIER 1 SPAN 2	1563.485	3.554	623.858	623.858
E	1574.407	4.074	624.086	624.110
F	1585.343	4.422	624.311	624.350
G	1596.288	4.597	624.532	624.574
H	1607.235	4.600	624.751	624.781
CL BRG PIER 2 SPAN 2	1620.926	4.361	625.018	625.018
CL BRG PIER 2 SPAN 3	1622.743	4.365	625.049	625.049
I	1632.806	4.579	625.194	625.229
J	1642.873	4.648	625.336	625.405
K	1652.940	4.571	625.474	625.560
L	1663.003	4.348	625.610	625.706
M	1673.057	3.979	625.744	625.823
N	1683.098	3.465	625.873	625.929
O	1693.122	2.806	625.998	626.019
CL BRG PIER 3 SPAN 3	1699.116	2.341	626.073	626.073
CL BRG PIER 3 SPAN 4	1701.308	2.340	626.086	626.086
P	1713.715	2.967	626.092	626.132
Q	1726.141	3.371	626.092	626.166
R	1738.578	3.552	626.089	626.182
S	1751.017	3.510	626.081	626.167
T	1763.451	3.245	626.068	626.135
U	1775.871	2.757	626.050	626.076
CL BRG EAST ABUT	1783.657	2.337	626.037	626.037
BACK OF EAST ABUT	1788.640	2.022	626.028	626.028

Note: For Elevation Location Plan see sht. #2.

DESIGNED Rick Brunette
CHECKED Lense Field
DRAWN R. Doty
CHECKED L.H.

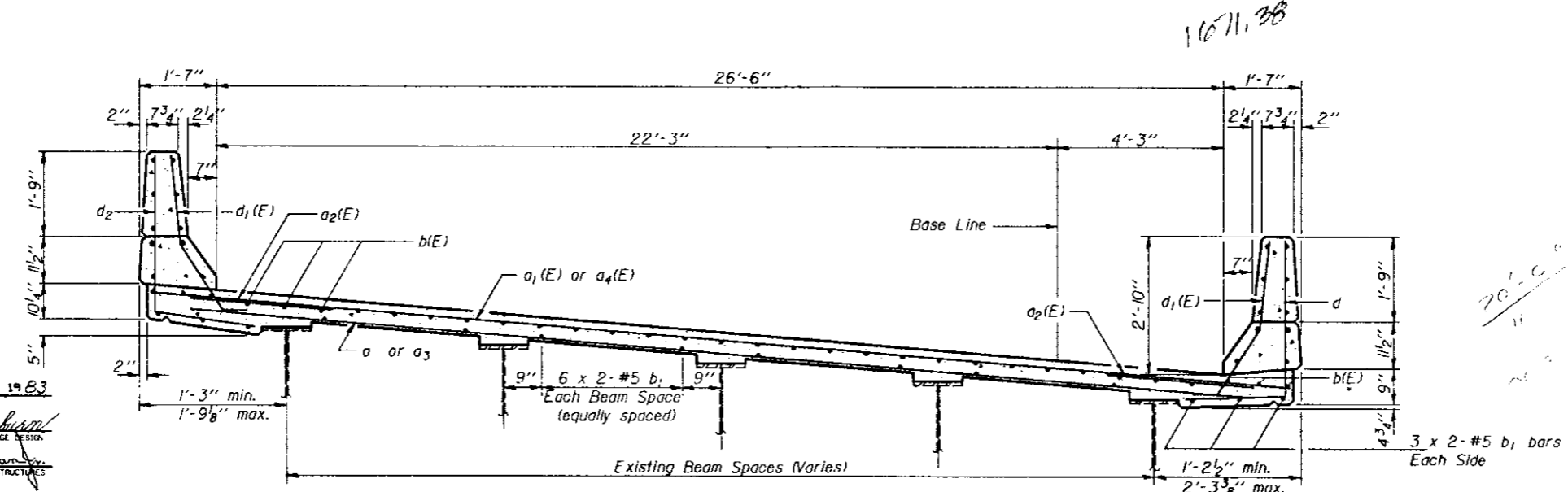
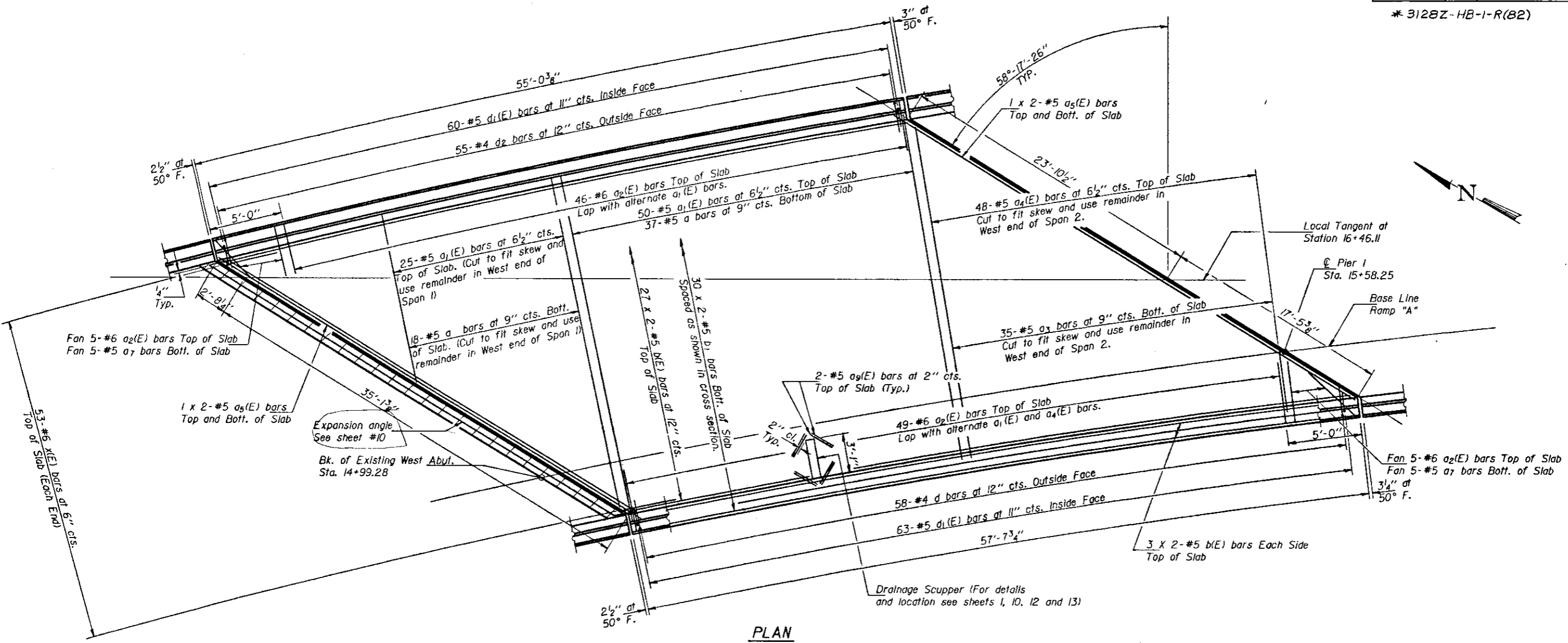
June 1 1983
EXAMINED James J. Harrison
PASSED C. E. Hammock
APPROVED [Signature]
DIRECTOR OF HIGHWAYS

TOP OF SLAB ELEVATIONS
E.A.P. RT. 29 SEC. 3128-Z-HB-1-R(B2)
COOK COUNTY
STA. 16+46.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	NO.	SHEET NO.
F.A. 29	*	Cook	26	10	26 SHEETS
FEDERAL DIST. NO. 7		BLANK		FED. PROJ. NO.	

* 3128Z-HB-1-R(82)



Notes: See sheet #10 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
All #5 bars shall have a min. lap of 1'-8".
All transverse bars shall be placed radially except as noted.
All longitudinal dimensions in the plan are along the toe of the parapets.
All transverse dimensions are radial.

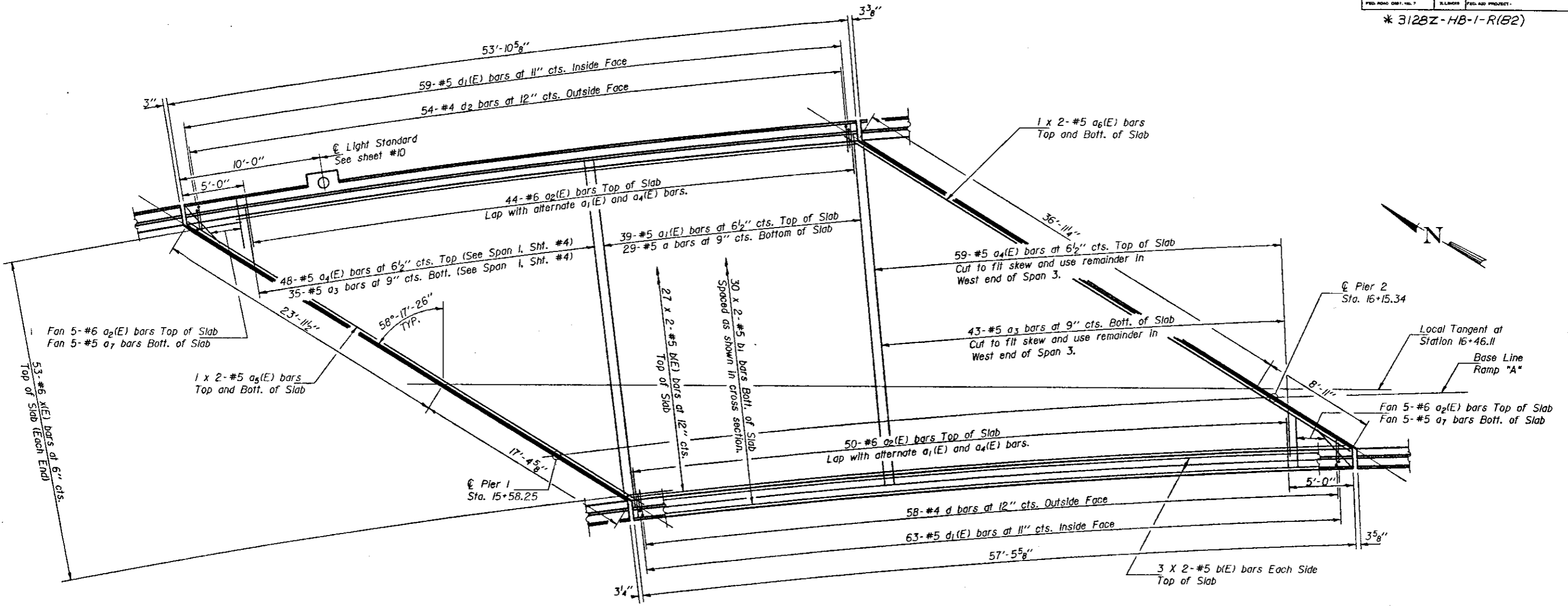
DESIGNED Rick Brunette
CHECKED Louise Seid
DRAWN Joe Sutherland
CHECKED L.S.

June 1 1983
EXAMINED James J. Robinson
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

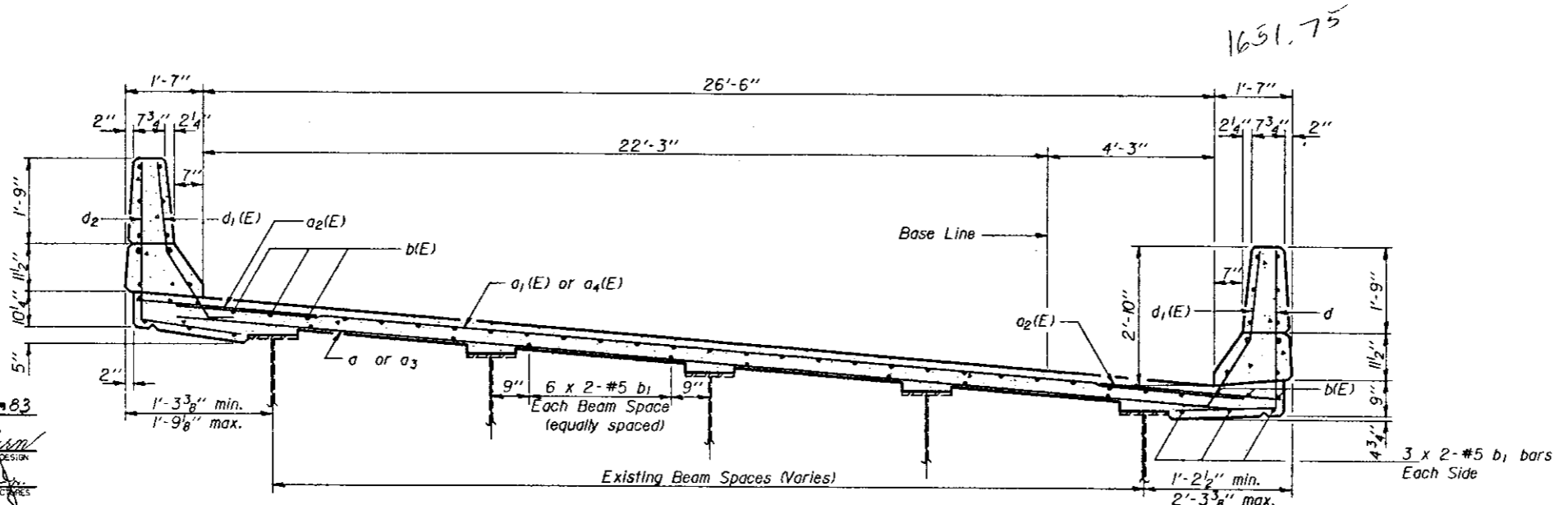
SUPERSTRUCTURE SPAN 1
F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
29	*	Cook	26	11
PROJECT NO.		* 3128-Z-HB-1-R(82)		



PLAN



CROSS SECTION
(Looking East)

Notes: See sheet #10 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
All #5 bars shall have a min. lap of 1'-8\"/>
All transverse bars shall be placed radially except as noted.
All longitudinal dimensions in the plan are along the toe of the parapets.
All transverse dimensions are radial.

DESIGNED	Rick Brunette
CHECKED	Joe Sutherland
DRAWN	Joe Sutherland
CHECKED	Joe Sutherland

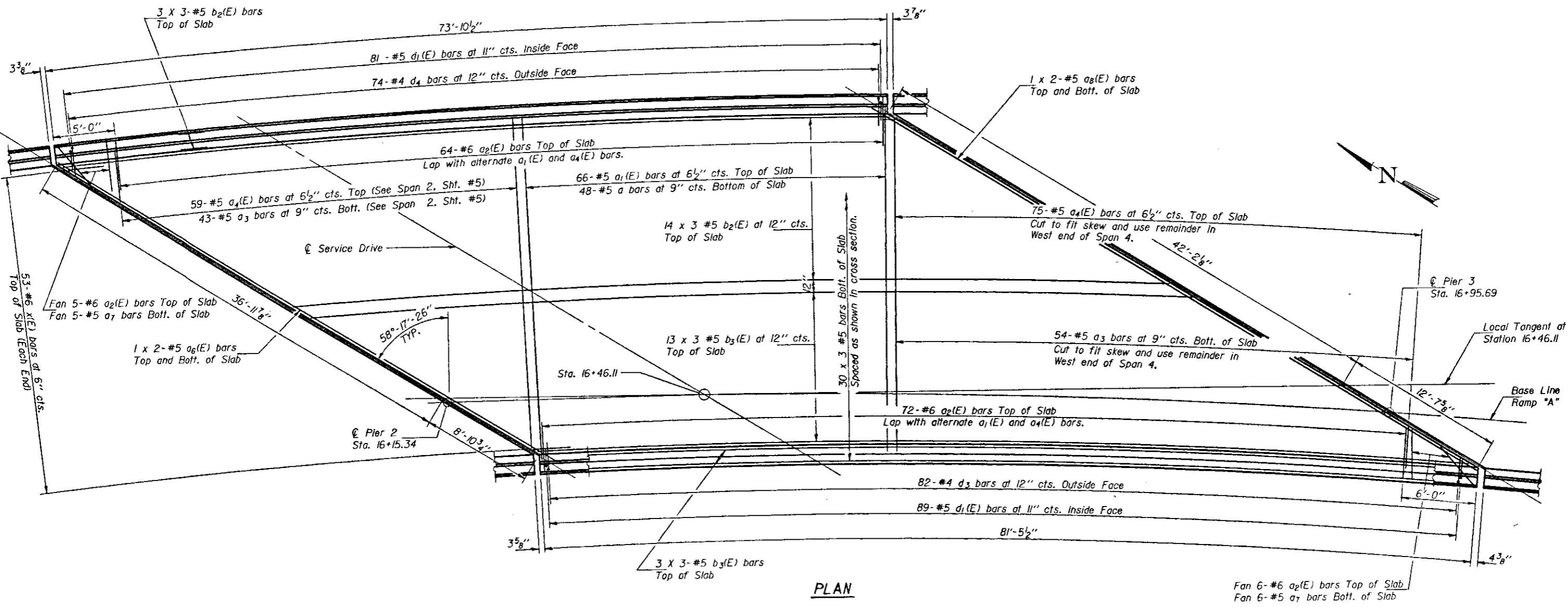
June 1 1983
EXAMINED James J. Robinson
PASSED [Signature]
APPROVED [Signature]
DIRECTOR OF HIGHWAYS

SUPERSTRUCTURE SPAN 2
F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

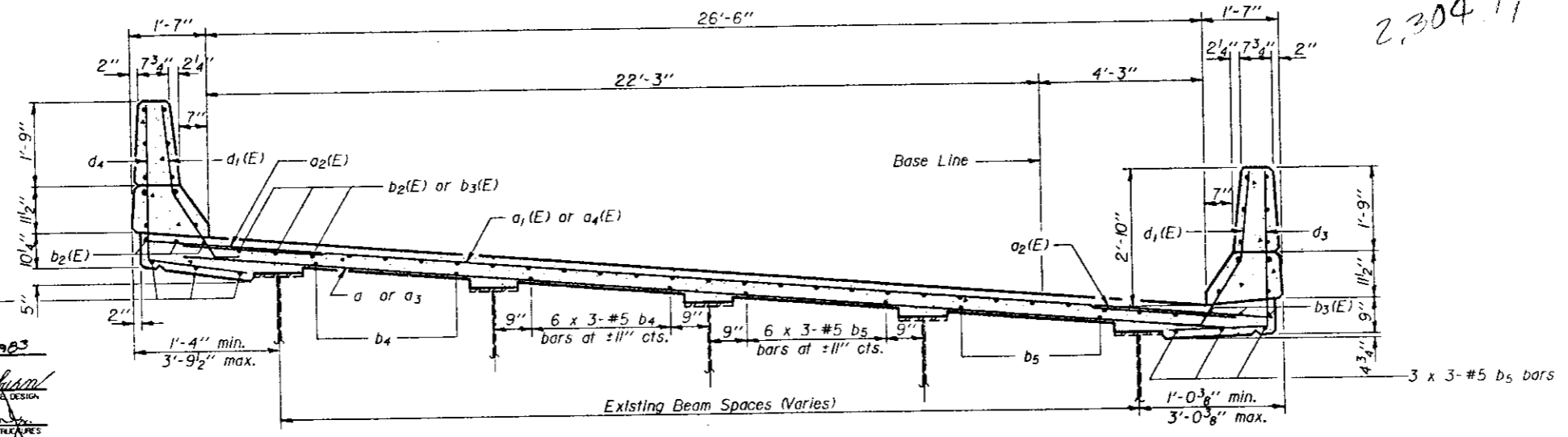
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	SECTION	QUANTITY	UNIT	PRICE	SHEET NO. 12 26 SHEETS
P.A. 29	*	Cook	26	12	
F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(B2)					

* 3128Z-HB-1-R(B2)



PLAN



CROSS SECTION
(Looking East)

Notes: See sheet #10 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
All #5 bars shall have a min. lap of 1'-8\"/>

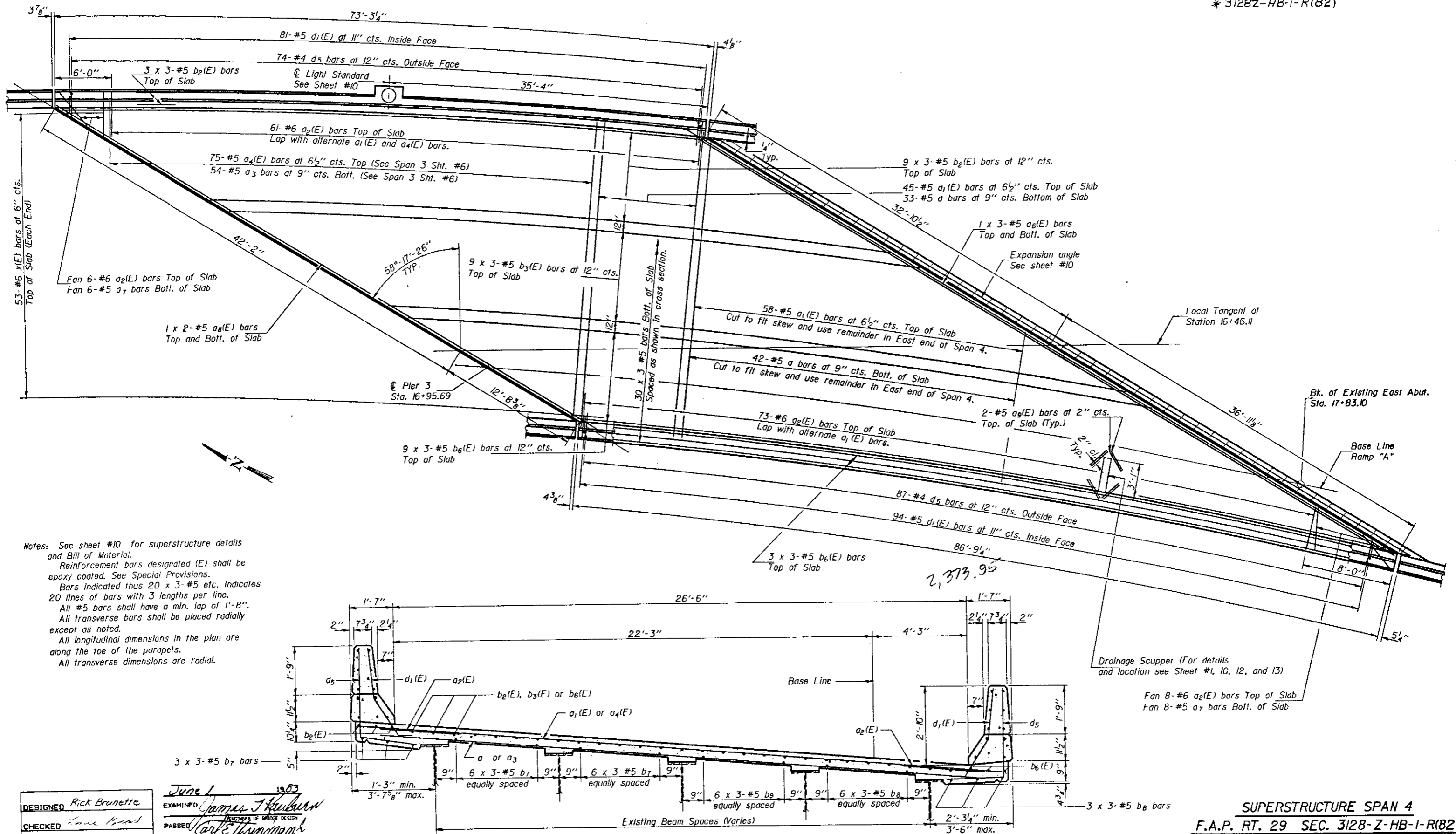
DESIGNED	Rick Brunette	DATE	June 1 1983
CHECKED	[Signature]	EXAMINED	[Signature]
DRAWN	Joe Sutherland	PASSED	[Signature]
CHECKED	[Signature]	APPROVED	[Signature]

SUPERSTRUCTURE SPAN 3
F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(B2)
COOK COUNTY
STATION 16+46.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	QUANTITY	DATE	SHEET	SHEET NO. 13 26 SHEETS
F.A.P. 29	*	Cook	26	13	
PROJECT NO. 3128-Z-HB-1-R(82)					

* 3128Z-HB-1-R(82)



Notes: See sheet #10 for superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
All #5 bars shall have a min. lap of 1'-8".
All transverse bars shall be placed radially except as noted.
All longitudinal dimensions in the plan are along the toe of the parapets.
All transverse dimensions are radial.

DESIGNED	Rick Brunette
CHECKED	Joe Sutherland
DRAWN	Joe Sutherland
CHECKED	Joe Sutherland

June 1 1983
EXAMINED James J. Huber
PASSED Carl E. Thompson
APPROVED [Signature]
DIRECTOR OF HIGHWAYS

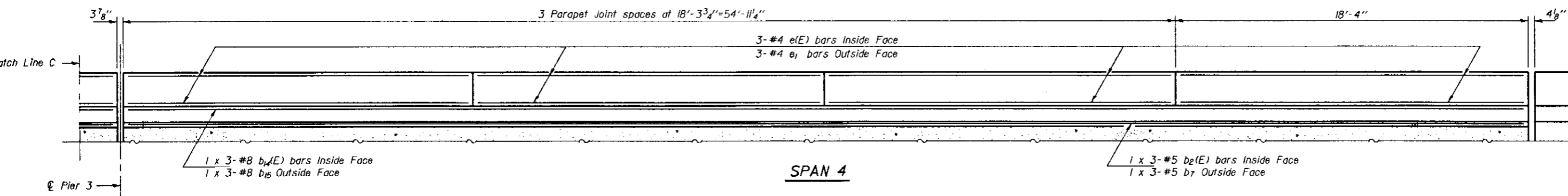
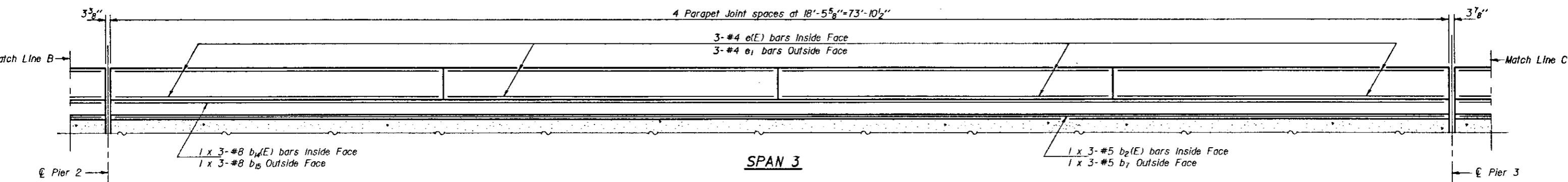
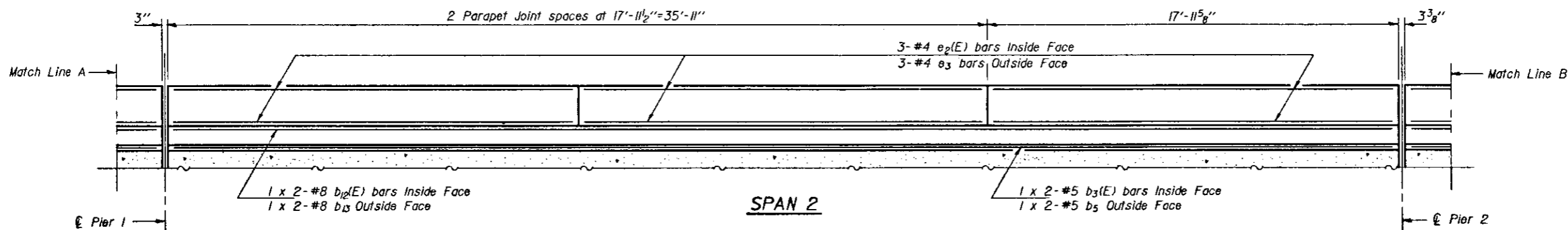
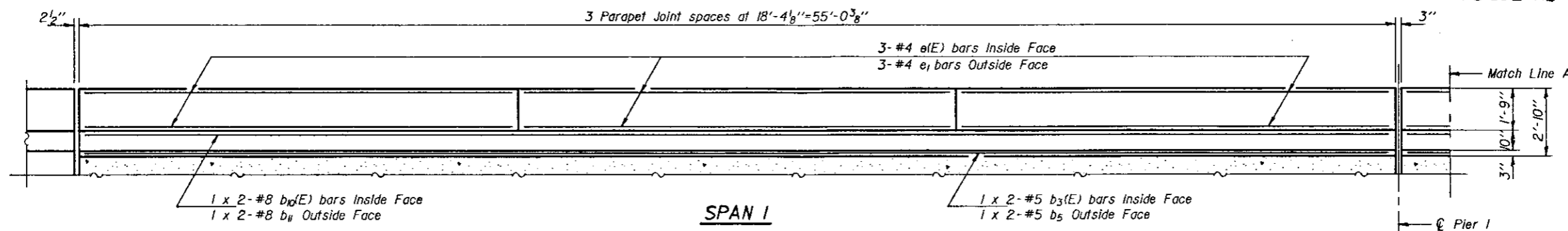
CROSS SECTION
(Looking East)

SUPERSTRUCTURE SPAN 4
F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTION	COUNTY	ROUTE	POST MILE	SHEET NO.
29 *	Cook	26	14	14
26 SHEETS				

* 3128Z-HB-1-R(82)



ELEVATIONS

(Looking North)

Min. bar laps: #5 bars=1'-8"
#8 bars=3'-8"

Notes: All horizontal dimensions are given radially along the toe of the parapet.
Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.
See sheet #10 for parapet details and Bill of Material.

DESIGNED	Rick Brunette
CHECKED	Joe Sutherland
DRAWN	Joe Sutherland
CHECKED	Joe Sutherland

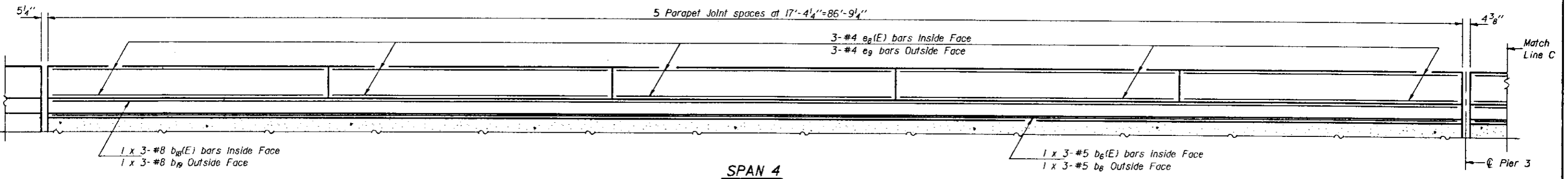
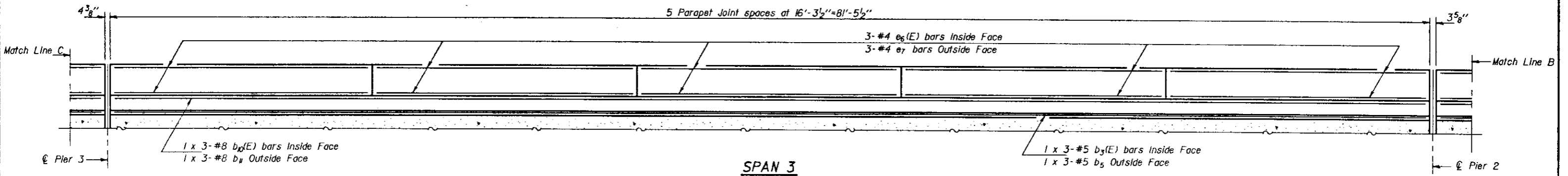
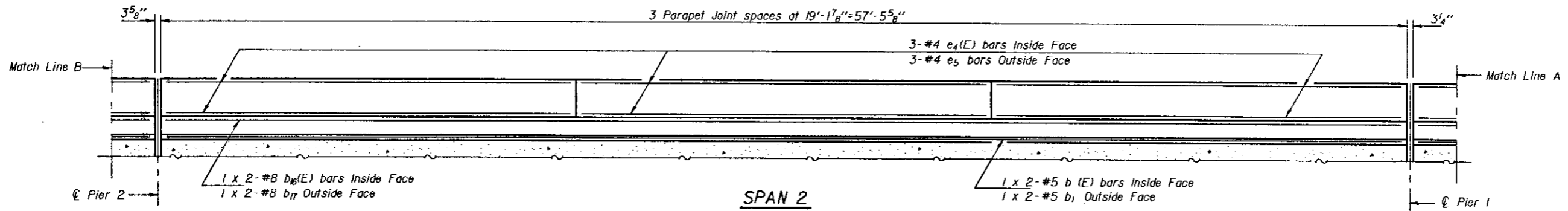
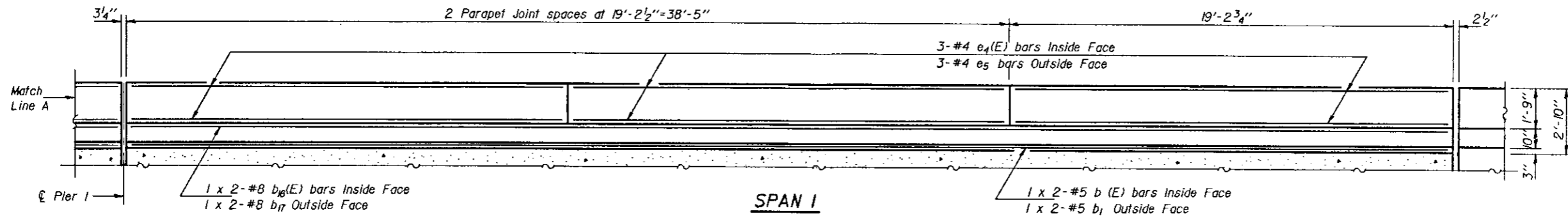
June 1983
EXAMINED James J. Kauburn
PASSED [Signature]
APPROVED [Signature]
DIRECTOR OF HIGHWAYS

NORTH PARAPET
F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. 15
F.A. 29	*	Cook	26	15	26 SHEETS
FED. ROAD DIST. NO. 7		ALLIANCE		FED. AID PROJECT	

* 3128Z-HB-1-R(B2)



DESIGNED Rick Brunette
 CHECKED Louise Reed
 DRAWN Joe Sutherland
 CHECKED [Signature]

June 1 1983
 EXAMINED James J. Halburn
 PASSED Carl Hummer
 APPROVED [Signature]

MEMBER OF BRIDGE DESIGN
 ENGINEER OF BRIDGES AND STRUCTURES
 DIRECTOR OF HIGHWAYS

Notes: All horizontal dimensions are given radially along the toe of the parapet.
 Reinforcement bars designated (E) shall be epoxy coated. See Special Provisions.
 Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.
 See sheet #10 for parapet details and Bill of Material.

ELEVATIONS

(Looking South)

Min. bar laps: #5 bars=1'-8"
 #8 bars=3'-8"

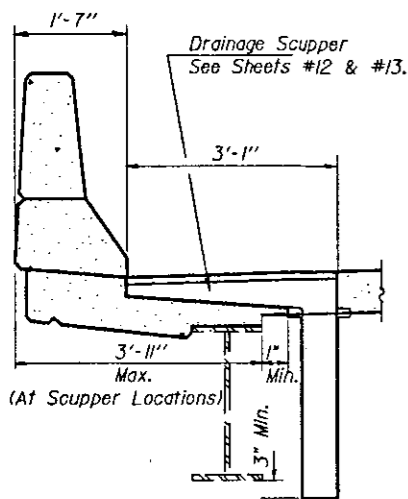
SOUTH PARAPET
 F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(B2)

COOK COUNTY
 STATION 16+46.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

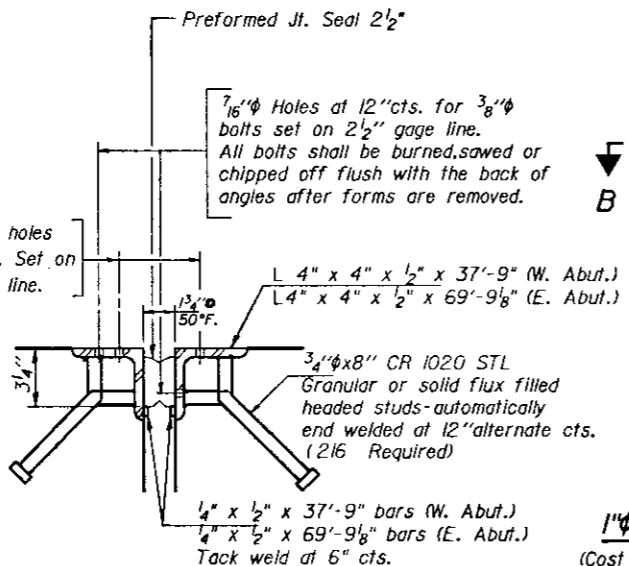
ROUTE NO.	SECTION	COUNTY	MILES	POST MILE	SHEET NO.
29	*	Cook	26	16	26 SHEETS

* 312BZ-HB-1-R(82)



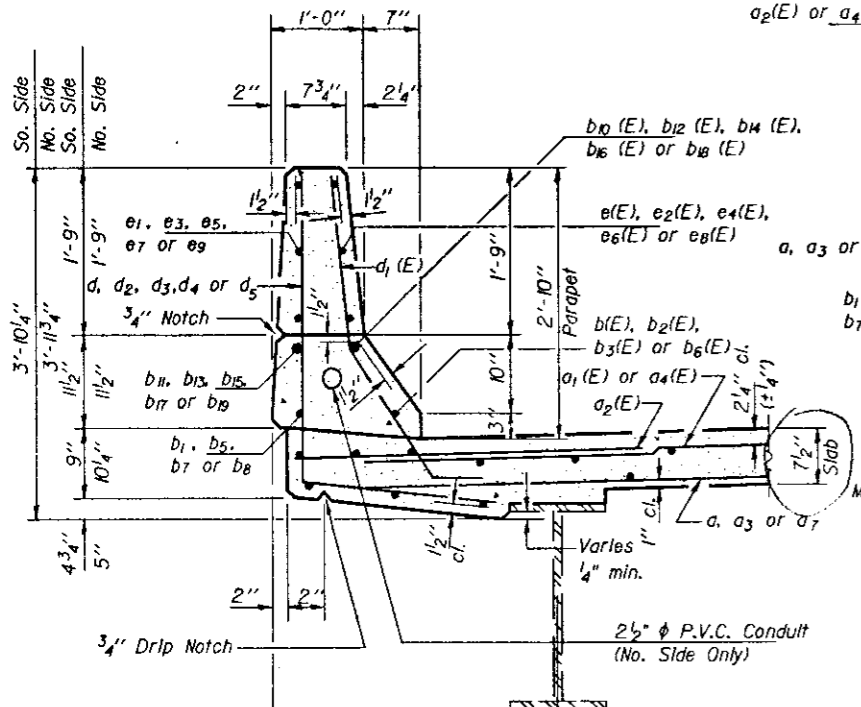
SECTION THRU PARAPET

(Showing Drainage Scupper)
(See Sheet #1 for locations)



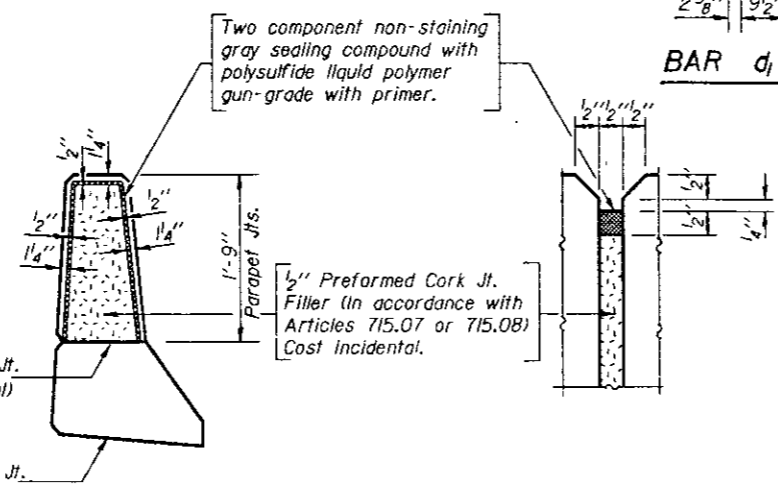
DETAIL "A"

(Dim. at Rt. Ls)



SECTION THRU PIERS

(Dim. at Rt. Ls except as shown)



PARAPET JOINT DETAILS

TYP. END OF SEAL TREATMENT

1" ANCHOR BOLT

(Cost incidental to PVC Conduit)

1" ANCHOR BOLT

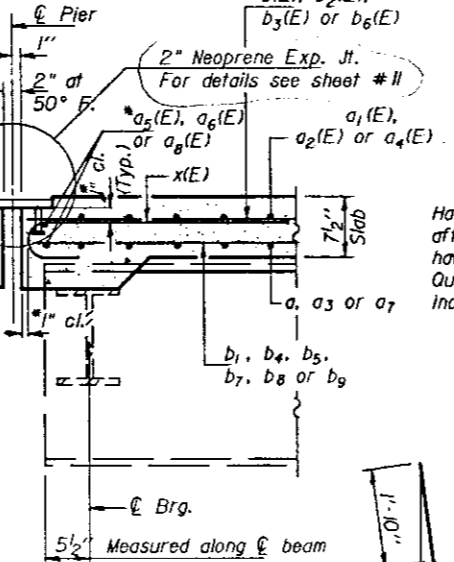
(Cost incidental to PVC Conduit)

LIGHT POLE DETAILS

(Std. exp. couplings at deck Jts. shall be incidental to PVC conduit)

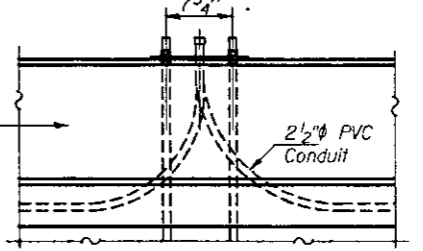
*Place bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-1/8"). Anchor bolts should be tied to these bars.

Hatched area to be poured after superstructure forms have been removed. Quantity of Class X Concrete included with superstructure.



PLAN

SECTION A-A



SECTION B-B

SECTION THRU ABUT.

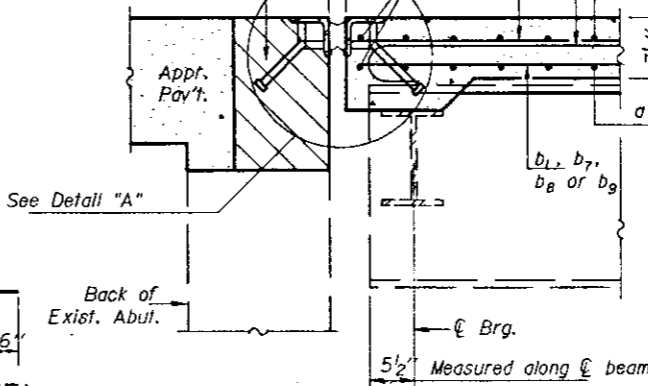


TABLE OF "A" DIMENSIONS

Bar	"A"
d	1'-4"
d ₂	10"
d ₃	2'-1"
d ₄	2'-10"
d ₅	2'-7"

** Bars shall be cut to fit curve and maintain 4 1/2" drop.

BAR d₇

BAR X(E)

BAR d₆

BARS d₁, d₂, d₃, d₄ & d₅

BILL OF MATERIAL

QTY	NO.	DESCRIPTION	LENGTH
a	207	#5	27'-8"
a ₁ (E)	283	#5	27'-8"
a ₂ (E)	504	#6	4'-0"
a ₃	132	#5	31'-8"
a ₄ (E)	182	#5	31'-8"
a ₅ (E)	12	#5	21'-6"
a ₆ (E)	14	#5	24'-5"
a ₇	45	#5	4'-0"
a ₈ (E)	8	#5	28'-6"
a ₉ (E)	16	#5	2'-0"
b(E)	136	#5	29'-6"
b ₁	124	#5	29'-6"
b ₂ (E)	93	#5	27'-0"
b ₃ (E)	82	#5	28'-6"
b ₄	45	#5	27'-0"
b ₅	52	#5	28'-3"
b ₆ (E)	39	#5	30'-0"
b ₇	51	#5	26'-2"
b ₈	30	#5	30'-0"
b ₉	18	#5	27'-6"
b ₁₀ (E)	5	#8	29'-6"
b ₁₁	5	#8	29'-6"
b ₁₂ (E)	2	#8	28'-8"
b ₁₃	2	#8	28'-8"
b ₁₄ (E)	6	#8	27'-0"
b ₁₅	6	#8	27'-0"
b ₁₆ (E)	4	#8	30'-6"
b ₁₇	4	#8	30'-6"
b ₁₈ (E)	3	#8	31'-4"
b ₁₉	3	#8	31'-4"
d	116	#4	4'-6"
d ₁ (E)	590	#5	3'-11"
d ₂	109	#4	4'-0"
d ₃	82	#4	5'-3"
d ₄	74	#4	6'-0"
d ₅	161	#4	5'-9"
d ₆	10	#6	8'-11"
d ₇	6	#6	4'-5"
e(E)	33	#4	18'-0"
e ₁	33	#4	18'-0"
e ₂ (E)	9	#4	17'-8"
e ₃	9	#4	17'-8"
e ₄ (E)	18	#4	18'-10"
e ₅	18	#4	18'-10"
e ₆ (E)	15	#4	16'-0"
e ₇	15	#4	16'-0"
e ₈ (E)	15	#4	17'-1"
e ₉	15	#4	17'-1"
x(E)	424	#6	4'-8"
Class X Concrete	Cu. Yd.	272.7	
Reinforcement Bars	Pound	24620	
Reinforcement Bars (Epoxy Coated)	Pound	36560	

Reinforcement Bars designated (E) shall be epoxy coated. See Special Provisions.
Work this sheet with sheets #4 thru #9.

SUPERSTRUCTURE DETAILS
F.A.P. RT. 29 SEC. 312B-Z-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

DESIGNED Rick Brunette
CHECKED Lorne Bead
DRAWN R. Doty
CHECKED

EXAMINED James J. Rayburn
PASSED
APPROVED

June 1 1983

DIRECTOR OF HIGHWAYS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 17
29	*	Cook	26	17	26 SHEETS
PREPARED BY		ILLINOIS	PER. AIR PROJECT		

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

INSTALLATION NOTES

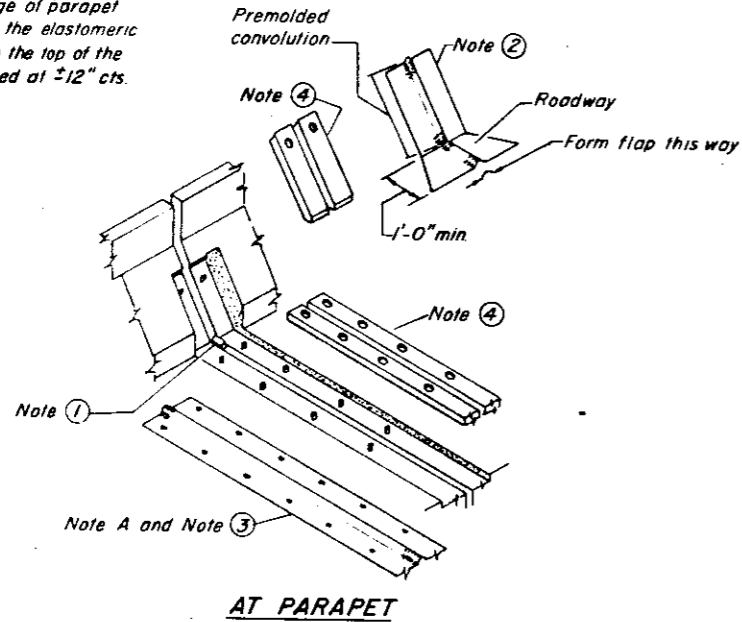
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

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

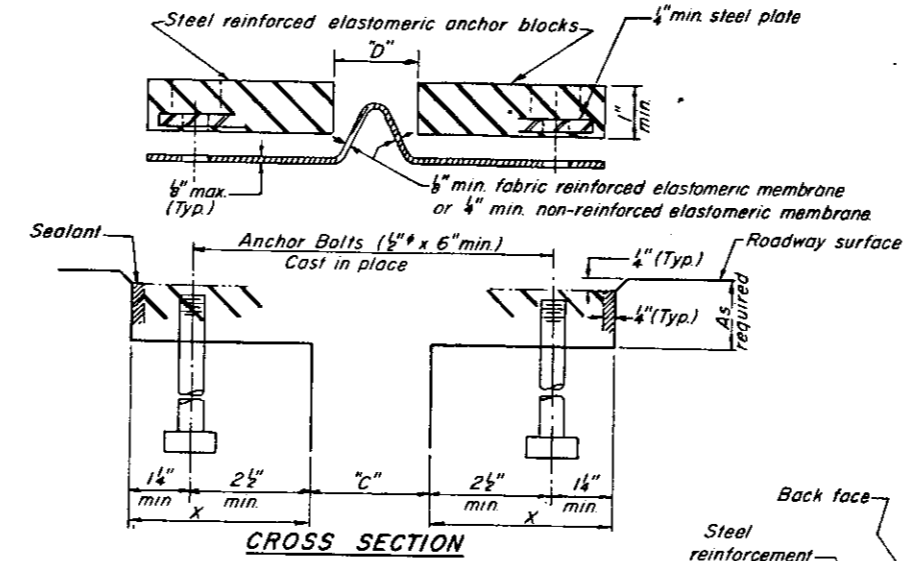
SKEW LIMITATIONS

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

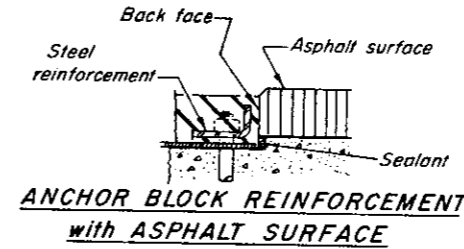
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also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



AT PARAPET



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. See Special Provisions.

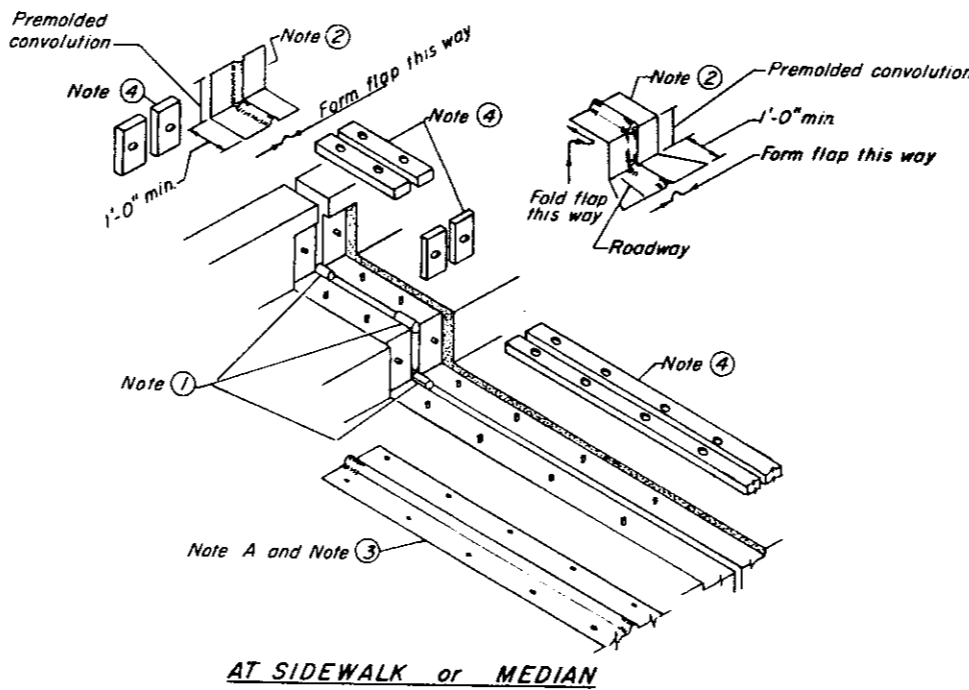
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

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

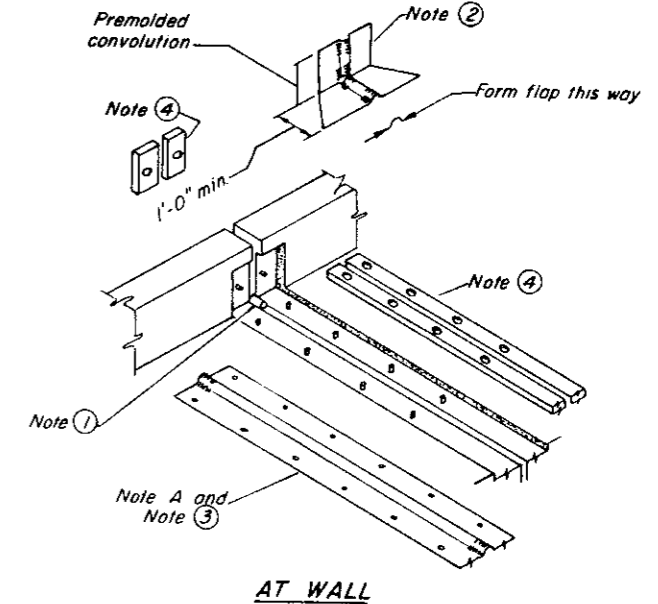
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 50307(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

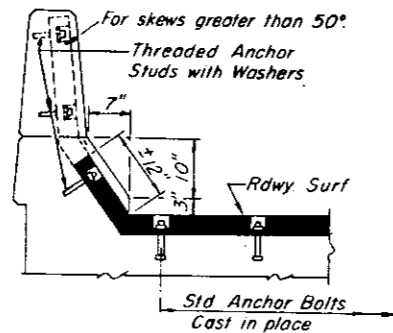
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



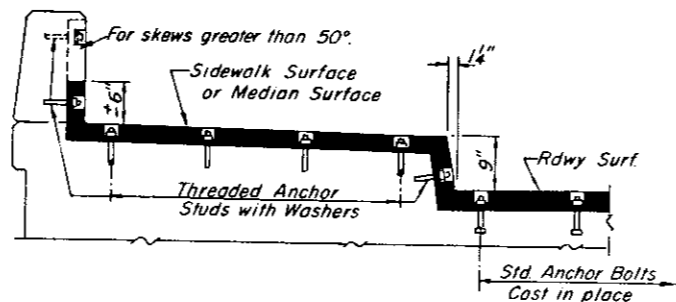
AT SIDEWALK or MEDIAN



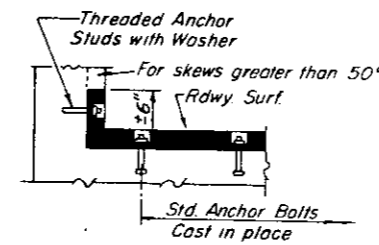
AT WALL



AT PARAPET



AT SIDEWALK or MEDIAN



AT WALL

TYPICAL END TREATMENTS

CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS
For 2", 2½" and 4" Movement

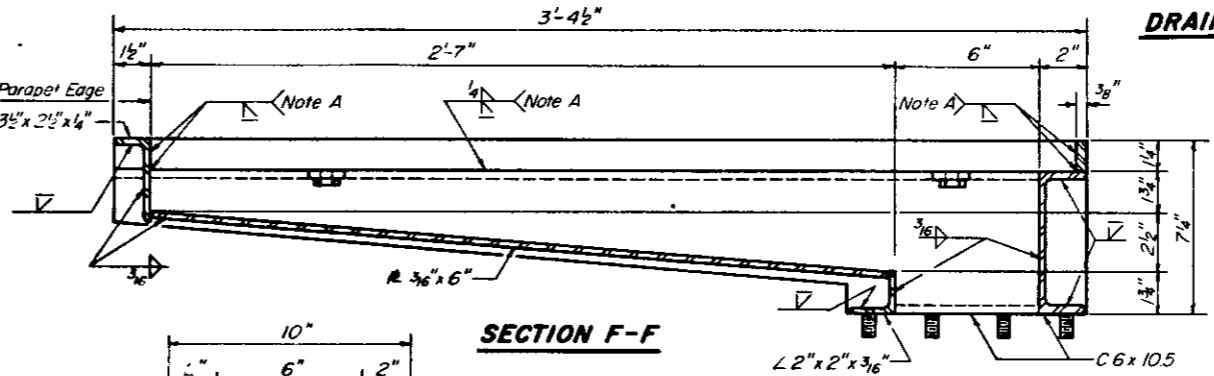
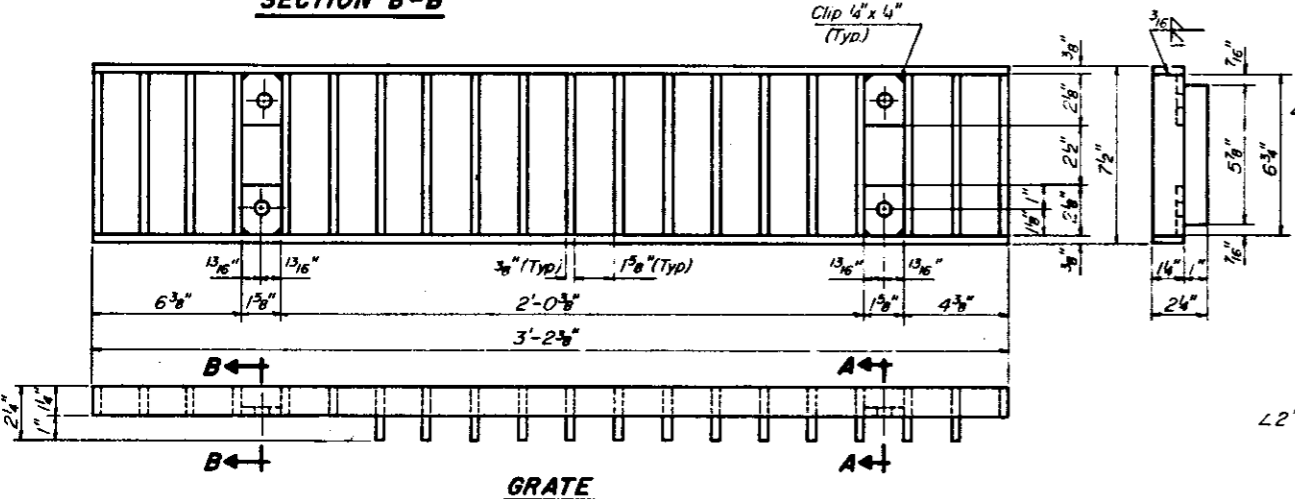
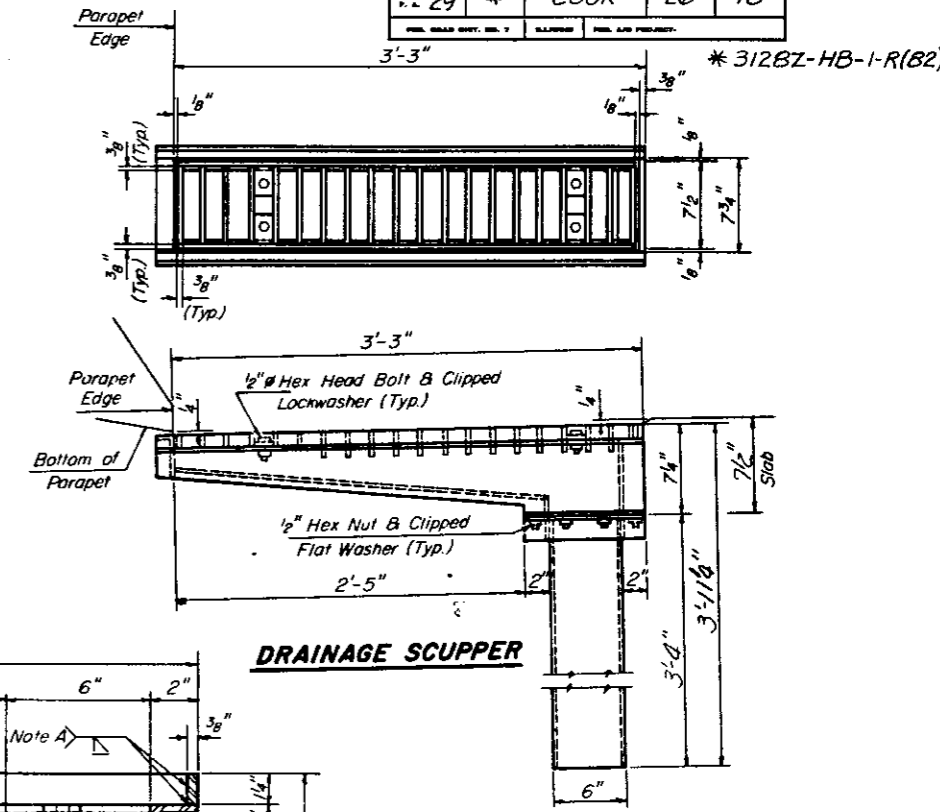
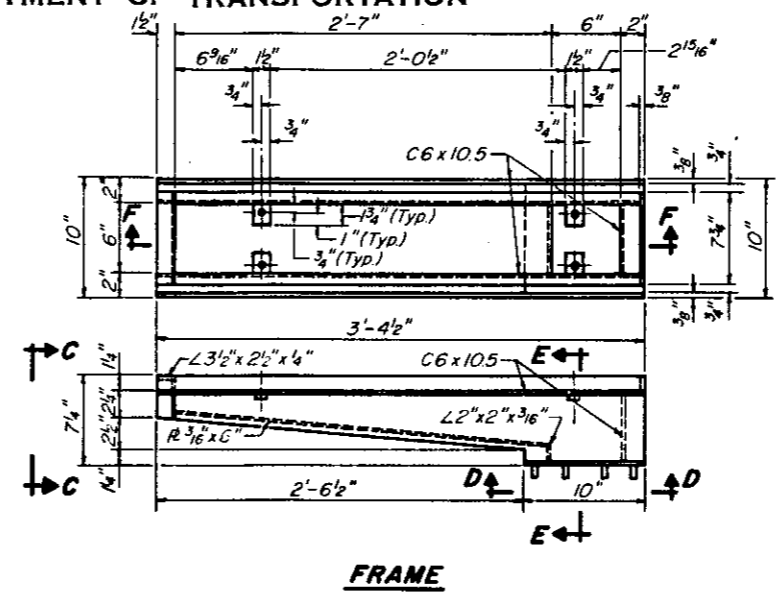
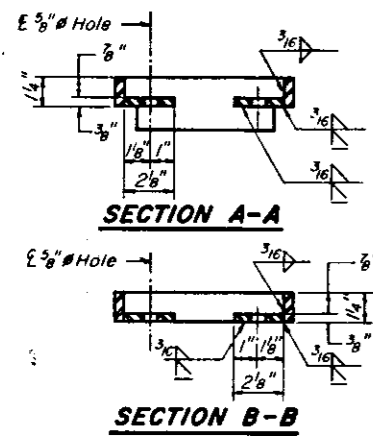
F.A.P. RT. 29 SEC. 3128-2-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

DESIGNED	Rick Brunette
CHECKED	Laura Heid
DRAWN	Joe Sutherland
CHECKED	L.A.

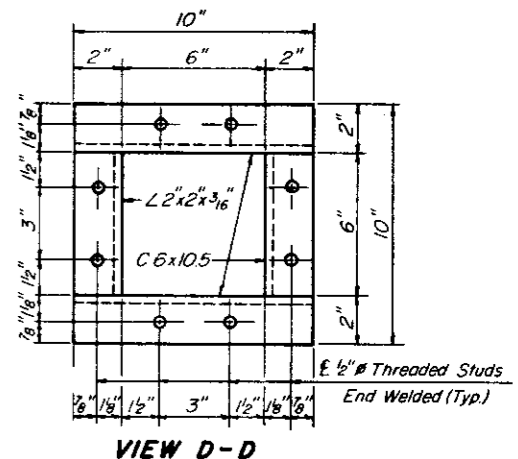
EXAMINED	James J. Kamborn	1983
PASSED	Carl E. Hummer	
APPROVED		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

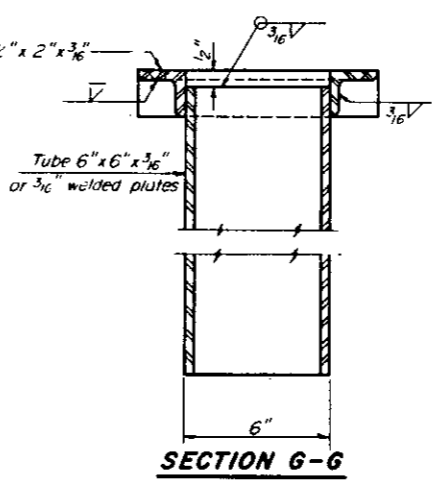
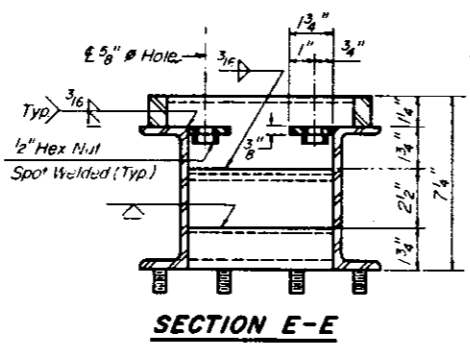
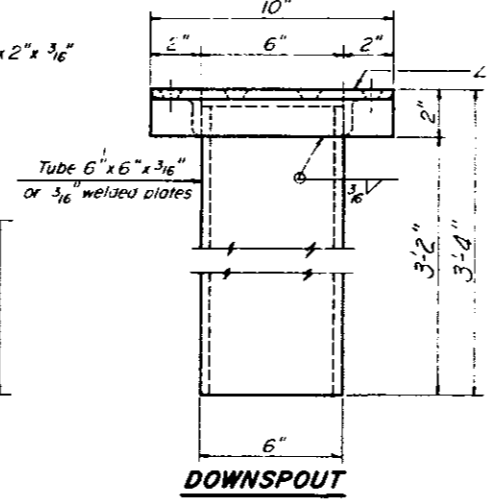
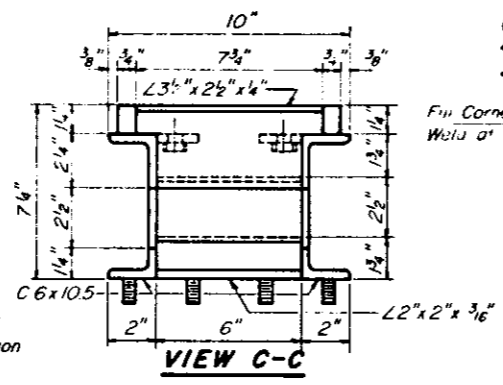
ROUTE NO.	SECTION	QUANTITY	TOTAL SHEETS	SHEET NO.
29	*	Cook	26	18
SHEET NO. 18		26 SHEETS		



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



Notes:
Hollow structural steel tubing shall conform to the requirements of A.S.T.M. designation A-500 Grade B, or A-501 Structural Steel Tubing.
All other shapes, plates and bars shall conform to the requirements of A.A.S.H.T.O. M 183.
Bolts, studs, washers and nuts shall conform to the requirements of A.S.T.M. A-307.
The Grate, Frame, and Downspout shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 & A.S.T.M. A-385.
All bolts, washers and nuts shall be galvanized in accordance with A.A.S.H.T.O. M232.
Cost of the Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS".



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper	Each	2

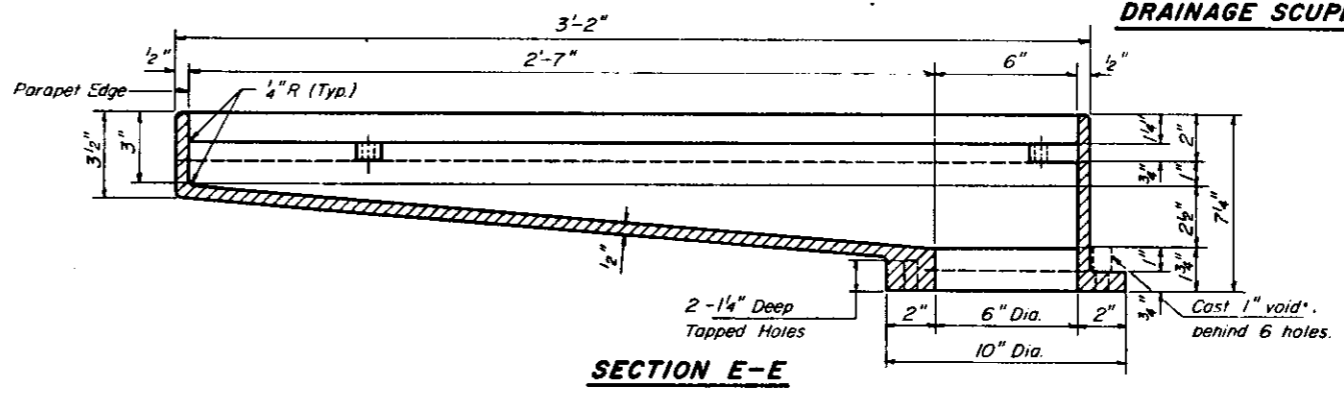
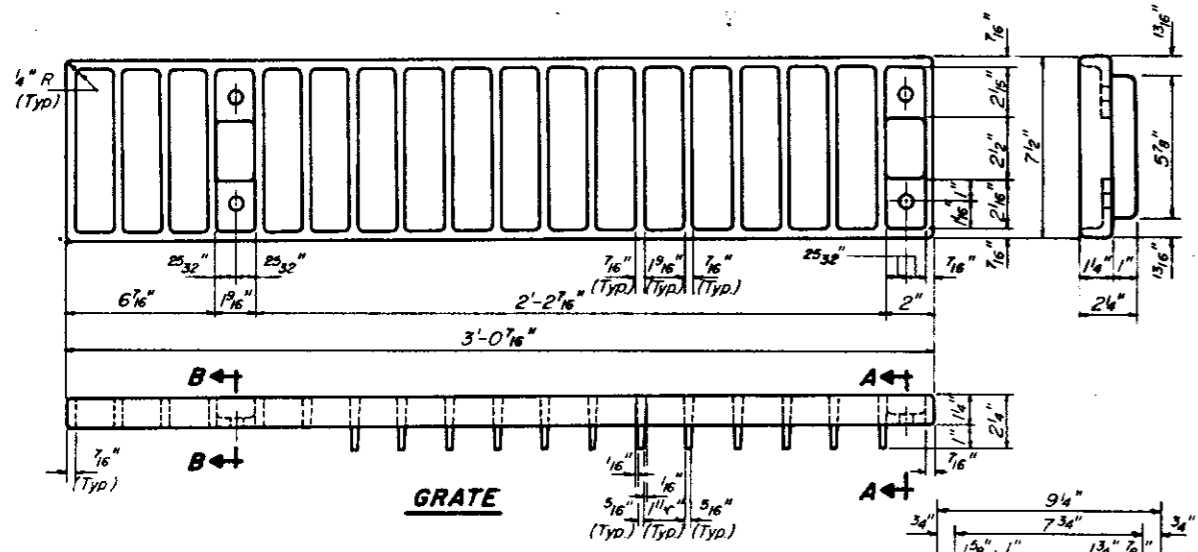
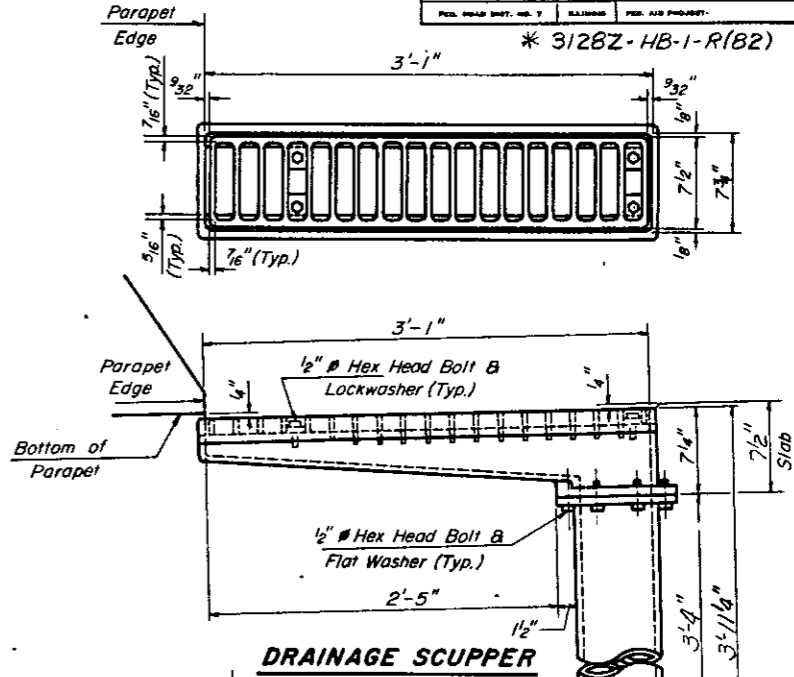
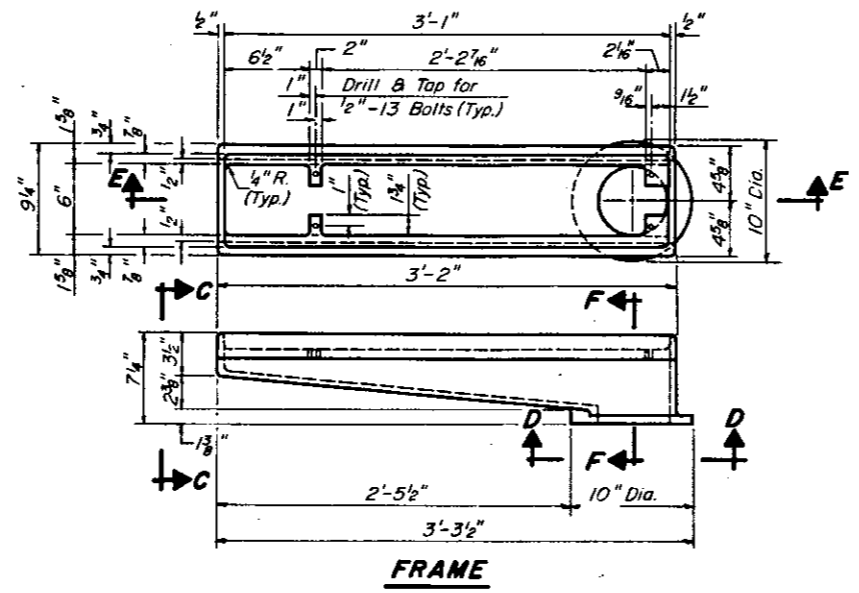
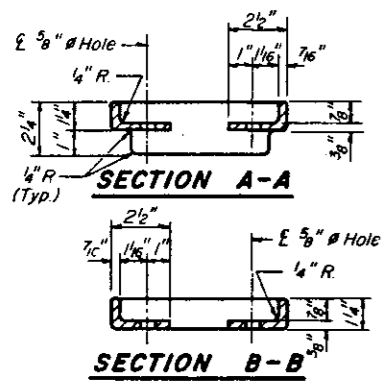
(Sheet 1 of 2)
STEEL DRAINAGE SCUPPER
F.A.P. RT. 29 SEC. 3128-2-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

DESIGNED Rick Brunette
CHECKED Lince Reid
DRAWN Jbe Sutherland
CHECKED L.K.
EXAMINED [Signature]
PASSED [Signature]
APPROVED [Signature]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

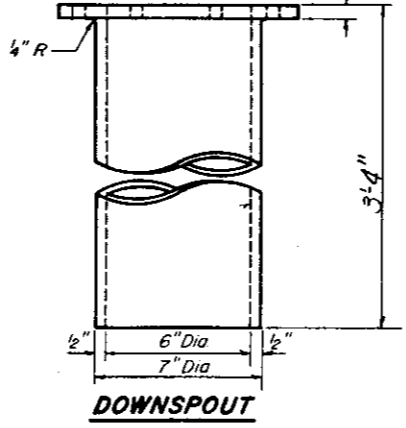
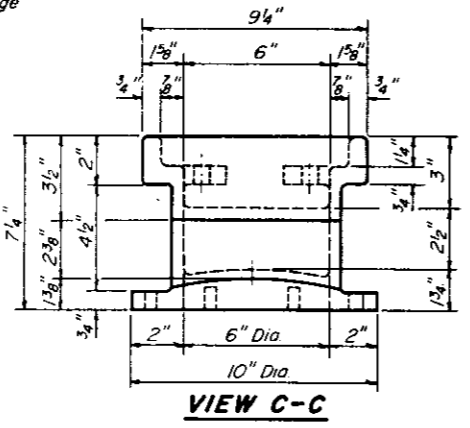
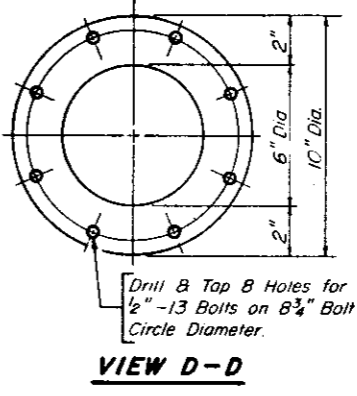
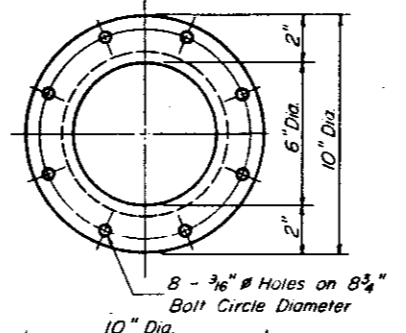
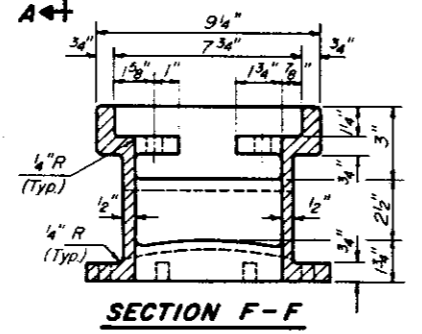
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 19 26 SHEETS
29	*	COOK	26	19	
FED. ROAD DIST. NO. 7		ILLINOIS	FOR AID PROJECT		

* 3128Z-HB-1-R(82)



Notes

- All cast iron parts shall be gray iron conforming to the requirements of AASHTO M-105, Class 30.
- Bolts and washers shall conform to the requirements of A.S.T.M.: A-307.
- All bolts and washers shall be galvanized in accordance with A.A.S.H.T.O. M-232.
- As an alternate bolts and washers may be stainless steel conforming to the requirements of A.S.T.M.: A-193 Type 304.
- Cost of the Grate, Frame, Downspout, bolts and washers including complete installation of Scupper shall be paid for at the unit bid price for "DRAINAGE SCUPPERS".
- The Contractor may use at his option steel drainage scuppers or cast iron drainage scuppers.



DESIGNED	Rick Brunette
CHECKED	Lincoln
FB	
DRAWN	Joe Sutherland
CHECKED	L.K.

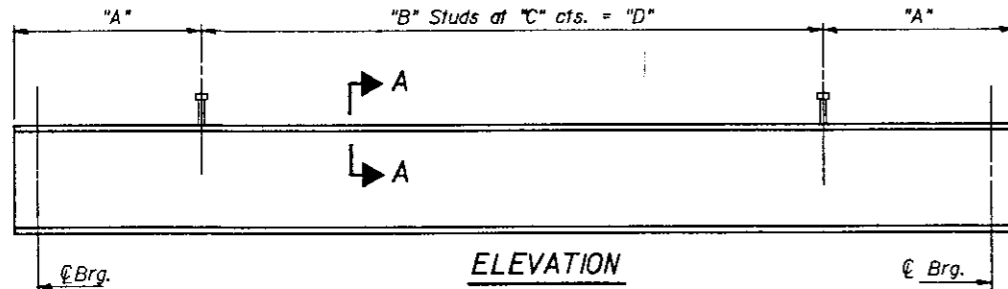
June 1 1983
EXAMINED James J. Karbow
PASSED [Signature]
APPROVED [Signature]
DIRECTOR OF HIGHWAYS

(Sheet 2 of 2)
**ALTERNATE - CAST IRON
DRAINAGE SCUPPER**
F.A.P. RT. 29 SEC. 3128-2-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	DISTRICT	COUNTY	SECTION	SHEET NO.
29	*	Cook	26	20
PROJECT NO. 29		SHEET NO. 20		

* 3128Z-HB-1-R(82)



NOTE: Top Flanges shall be cleaned prior to welding the shear studs.

SPACING FOR LONGER STUDS

SPAN	BEAM	"A"	"B"	"C"	"D"	COMMENTS
1	1					Ex. Studs OK
	2&3	±10'-1 3/4"	29	14 1/2"	33'-10"	Longer Studs
	4	9'-3 5/8"	31	14 1/2"	36'-3"	Longer Studs
	5					Ex. Studs OK
2	1					Ex. Studs OK
	2&3	±10'-5 1/2"	27	15"	32'-6"	Longer Studs
	4	±9'-8 5/8"	30	15"	36'-3"	Longer Studs
3	1					Ex. Studs OK
	2,3&4	±6'-9 1/8"	47	16 1/2"	63'-3"	Longer Studs
	5	±7'-9 7/8"	43	17 1/2"	61'-3"	Longer Studs
4	1	±9'-6 1/8"	35	17"	48'-2"	Longer Studs
	2	±7'-2 1/4"	41	17"	56'-8"	Longer Studs
	3	7'-0 1/4"	44	17"	60'-11"	Longer Studs
	4	±6'-2"	48	17"	66'-7"	Longer Studs
	5	7'-5 5/8"	49	17"	68'-0"	Longer Studs

* Spacings may be varied to miss existing shear studs where necessary.

BEAM SECTIONS FROM EXISTING PLANS
(For Information Only)

SPAN	BEAM #	WF SECTION	BOTTOM COVER PLATE
1	1	36 WF 150	
	2 & 3	30 WF 116	9 1/2" x 3/4" x 39'-10"
	4	30 WF 116	9 1/2" x 3/4" x 40'-7"
	5	36 WF 150	11" x 1/2" x 30'-4"
2	1	36 WF 150	
	2 & 3	30 WF 116	9 1/2" x 3/4" x 39'-1"
	4	30 WF 116	9 1/2" x 3/4" x 41'-5"
3	1	36 WF 150	
	2,3 & 4	36 WF 160	11" x 7/8" x 56'-3"
	5	36 WF 194	11" x 7/8" x 53'-2"
4	1	36 WF 160	11" x 13/16" x 48'-1"
	2	36 WF 160	11" x 9/16" x 47'-11"
	3	36 WF 160	11" x 7/8" x 52'-1"
	4	36 WF 160	11" x 7/8" x 56'-1"
	5	36 WF 194	11" x 1 1/4" x 62'-1" **

** Also 11" x 3/4" x 47'-4" Top Cover Plate.

BEAM MOMENT TABLE				
	.5 Sp. 1, Bm. 4	.5 Sp. 2, Bm. 1	.5 Sp. 3, Bm. 4	.5 Sp. 4, Bm. 2
I_s (in. ⁴)	6312.8	9012.1	12456.1	11566.7
I_c (in. ⁴)	20059.9	23850.3	33311.7	30759.6
S_s (in. ³)	482.1	502.9	791.1	703.6
S_c (in. ³)	734.5	742.9	1129.5	1011.4
Z (in. ³)				
R (K/I)	.805	.846	.814	.835
M_R (K)	292.7	291.5	587.5	513.3
s_R (K/I)	.333	.338	.318	.327
M_{sR} (K)	121.1	116.5	229.5	201.0
M_L (K)	405.3	472.9	579.5	618.8
$M_{Imp.}$ (K)	119.6	120.2	152.7	150.2
S_y (M ₁ +I) (K)	876.6	990.5	1222.8	1284.2
M_a (K)	1677.5	1818.1	2651.7	2598.1
M_u (K)	2763.1	2977.1	4129.1	3796.0
VR (K)	45.0	52.2	42.3	48.5

BEAM REACTION TABLE						
	SPAN 1		SPAN 2		SPAN 3	
	W. Abut or Pier 1	Bm. Pier 1 or Pier 2	Bm. Pier 2 or Pier 3	Bm. Pier 3 or E. Abut.	Bm.	
R_R (K)	32.1	31.2	45.1	47.1	5	
R_L (K)	36.5	37.5	35.4	33.1	5	
$Imp.$ (K)	10.1	10.6	8.8	8.0	5	
R (Total) (K)	78.7	79.3	89.3	88.2	5	

I_s and S_s are the moment of inertia and section modulus of the steel section.

I_c and S_c are the moment of inertia and section modulus of the composite section.

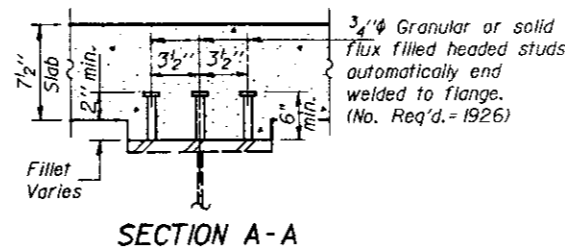
VR is the maximum ℓ + impact shear range in span.

*** M_u = Fully Plastic Moment Capacity for Compact, Braced section.

The Fully Plastic Moment Capacity (M_u) is computed according to AASHTO 1.7.59(A) & 1.7.62(A).

**** M_L includes curvature effects due to centrifugal force and superelevation.

M_a (Applied Moment) = $1.3[M_R + M_{sR} + M_L + I]$.



DESIGNED	Rick Brunette
CHECKED	Tom Hunt
DRAWN	R. Doty
CHECKED	L.H.




June 1, 1983
 EXAMINED James J. Rayburn
 PASSED [Signature]
 APPROVED [Signature]
 DIRECTOR OF HIGHWAYS

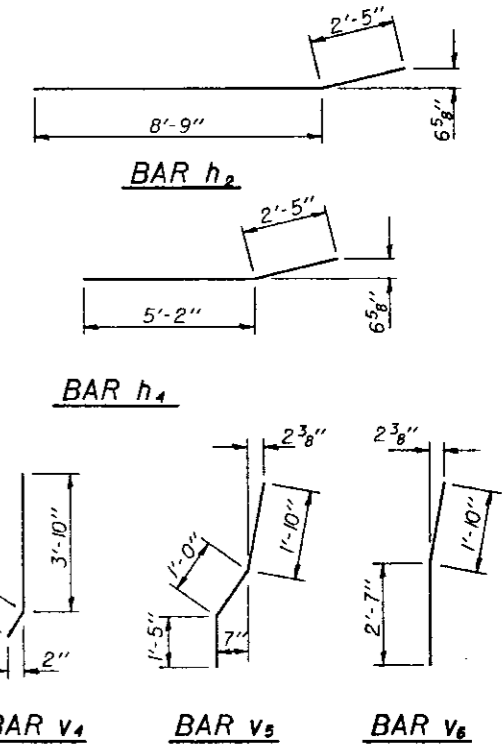
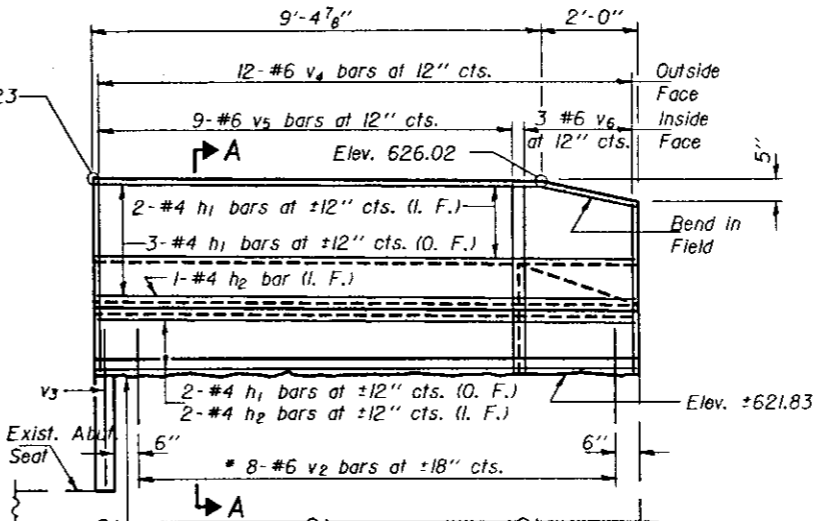
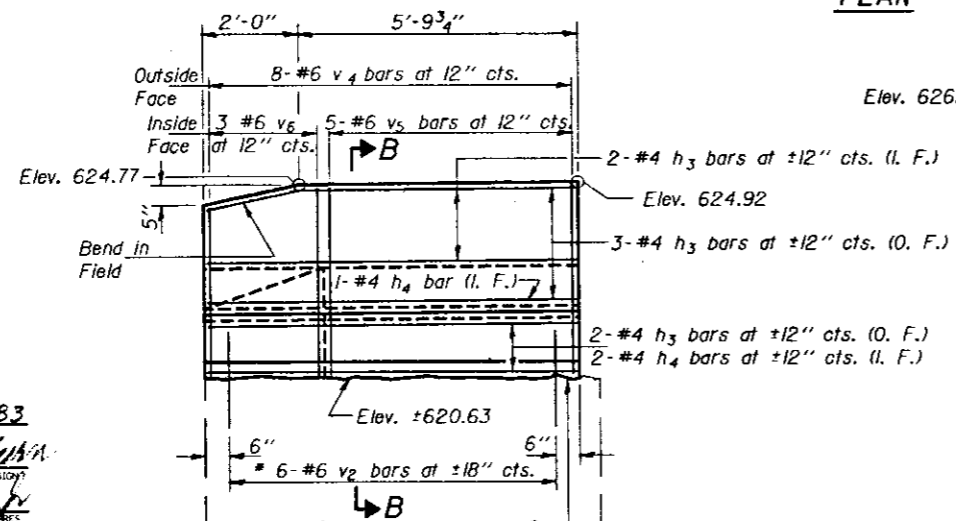
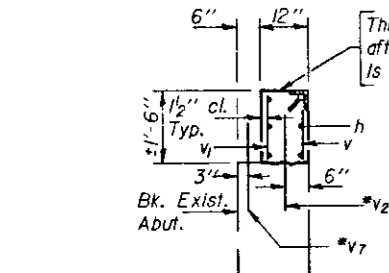
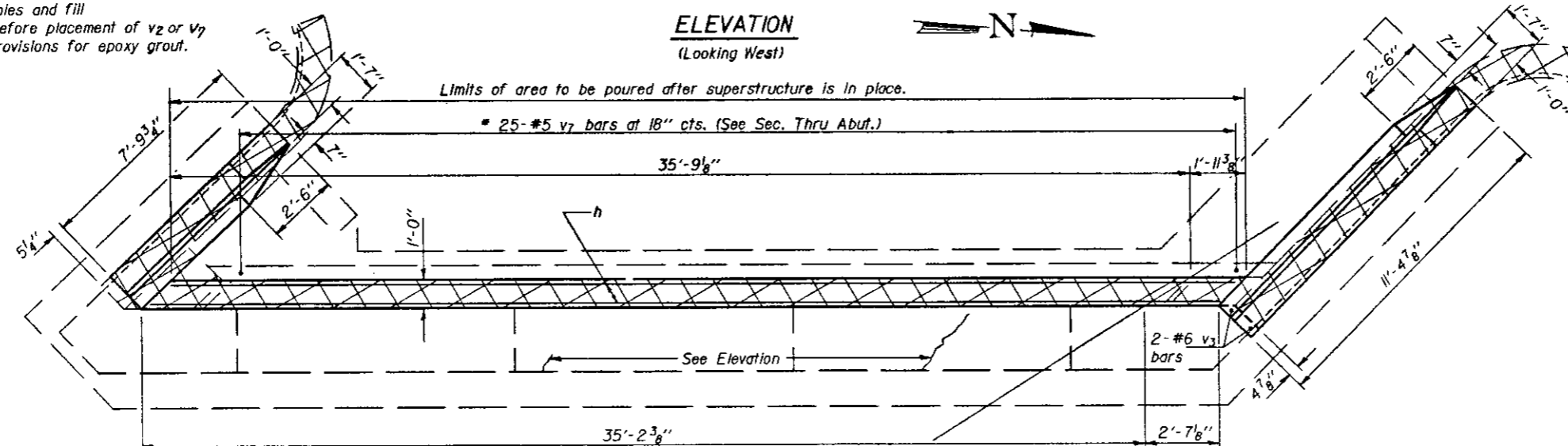
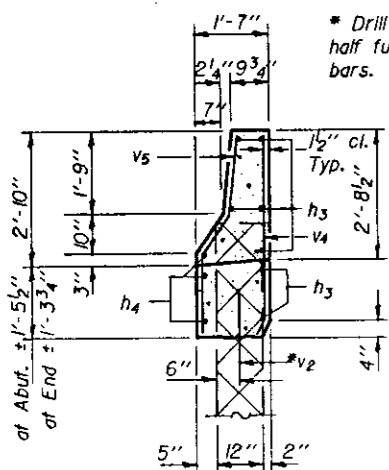
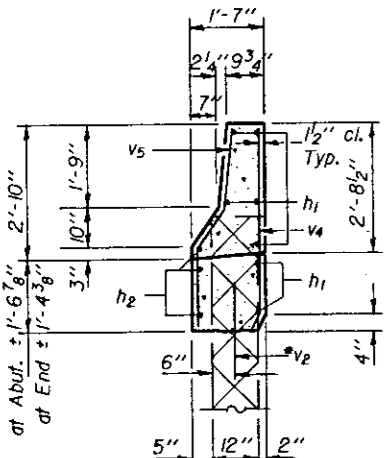
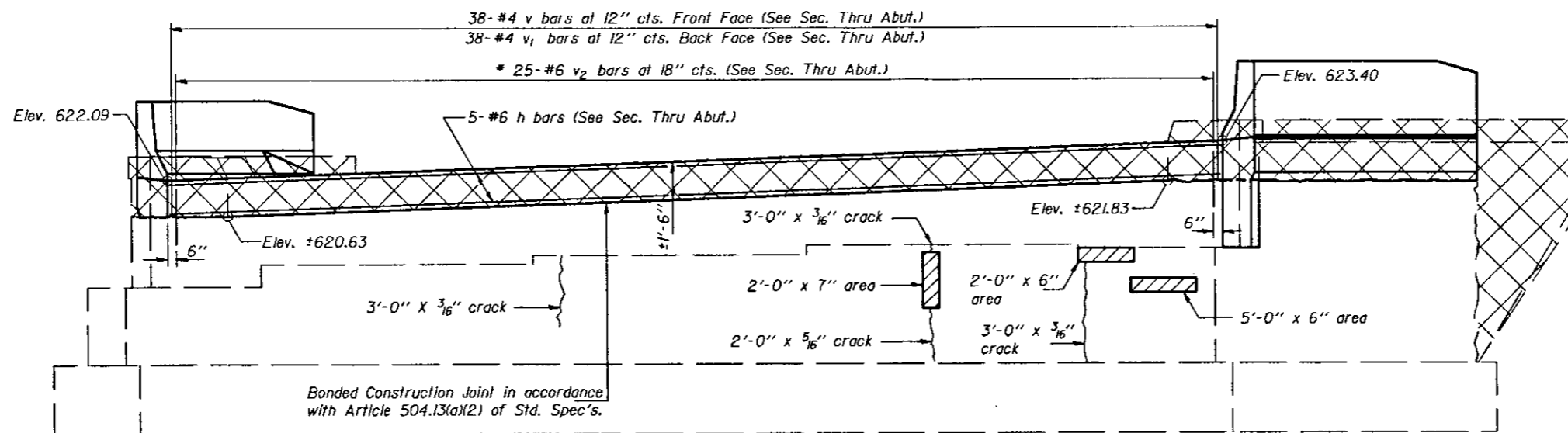
STRUCTURAL STEEL DETAILS
 F.A.P. RT. 29 SEC. 3128-Z-HB-1-R (82)
 COOK COUNTY
 STA. 16 + 46.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
29	*	Cook	26 21	21
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		26 SHEETS

* 312BZ-HB-1-R(82)

-  Indicates Concrete Removal.
-  Indicates Repair Concrete Structures.
-  Indicates Epoxy Crack Sealing.



Note: Cut v₄, v₅ and v₆ bars to fit.

BILL OF MATERIAL

Bars	No.	Size	Length	Shape
h	5	#6	37'-6"	—
h ₁	7	#4	11'-1"	—
h ₂	3	#4	11'-2"	—
h ₃	7	#4	7'-6"	—
h ₄	3	#4	7'-7"	—
v	38	#4	1'-2"	—
v ₁	38	#4	1'-4"	—
v ₂	39	#6	2'-0"	—
v ₃	2	#6	3'-6"	—
v ₄	20	#6	4'-3"	—
v ₅	14	#6	4'-3"	—
v ₆	6	#6	4'-5"	—
v ₇	25	#5	2'-0"	—
Class X Concrete		Cu. Yd.	3.6	
Reinforcement Bars		Pound	910	
Concrete Removal		Cu. Yd.	7	
Repair Concrete Structures		Sq. Ft.	5	
Epoxy Crack Sealing		Ln. Ft.	11	

DESIGNED Rick Brunette
CHECKED [Signature]
DRAWN Joe Sutherland
CHECKED [Signature]

EXAMINED James J. [Signature]
PASSED [Signature]
APPROVED [Signature]

JUNE 1 1983
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES
DIRECTOR OF HIGHWAYS

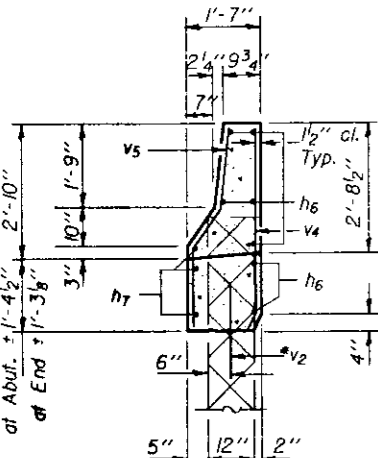
WEST ABUTMENT REPAIRS
F.A.P. RT. 29 SEC. 312B-Z-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

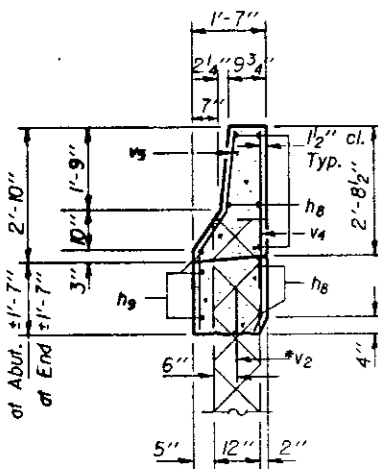
PROJECT NO.	SECTION	QUANTITY	DATE	SHEET NO.
29	*	Cook	26	22
SHEET NO. 22				
26 SHEETS				

* 3128Z-HB-1-R(82)

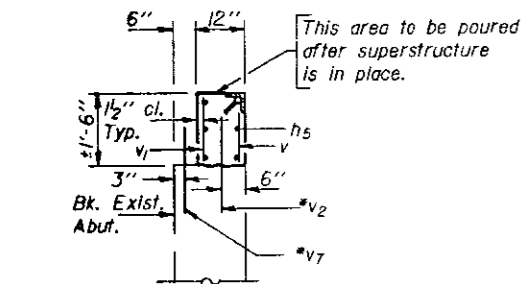
- Indicates Concrete Removal.
- Indicates Repair Concrete Structures.
- Indicates Epoxy Crack Sealing.



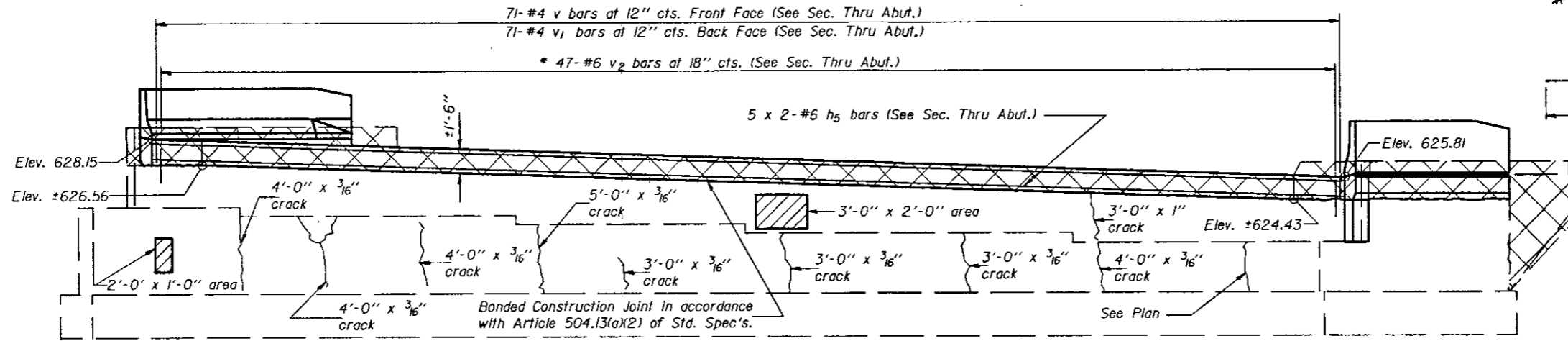
SECTION A-A



SECTION B-B

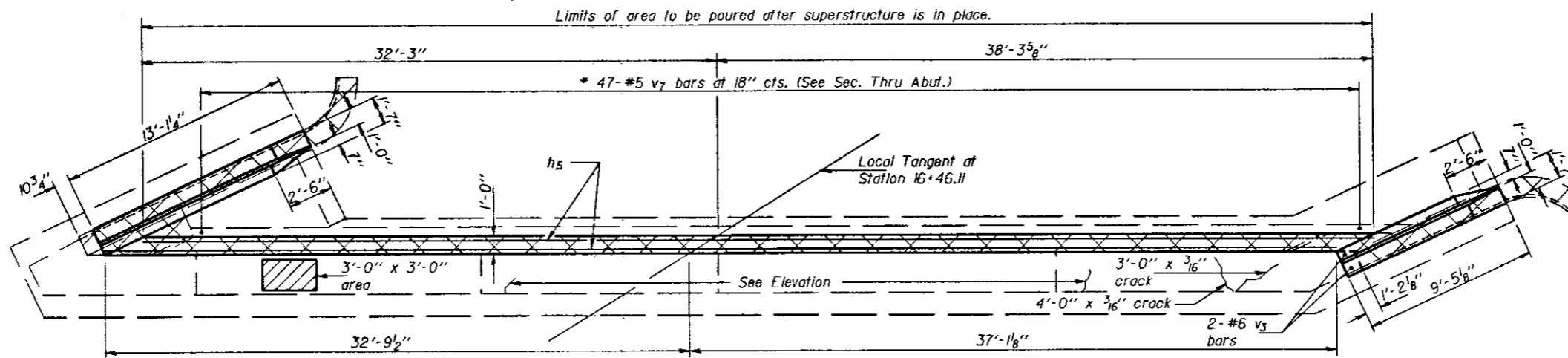


SEC. THRU ABUT.

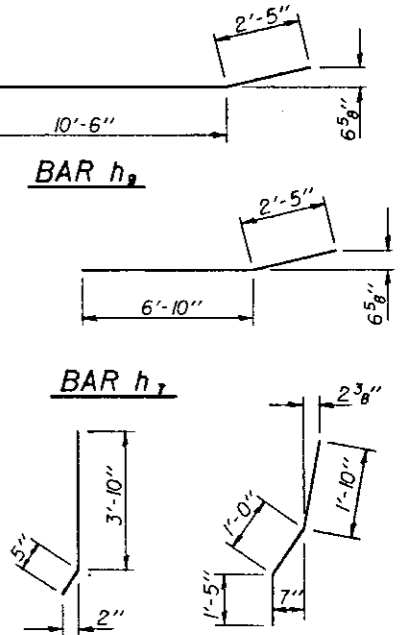


ELEVATION
(Looking East)

* Drill 1" x 1'-0" holes and fill half full with epoxy before placement of v₂ or v₇ bars. See Special Provisions for epoxy grout.



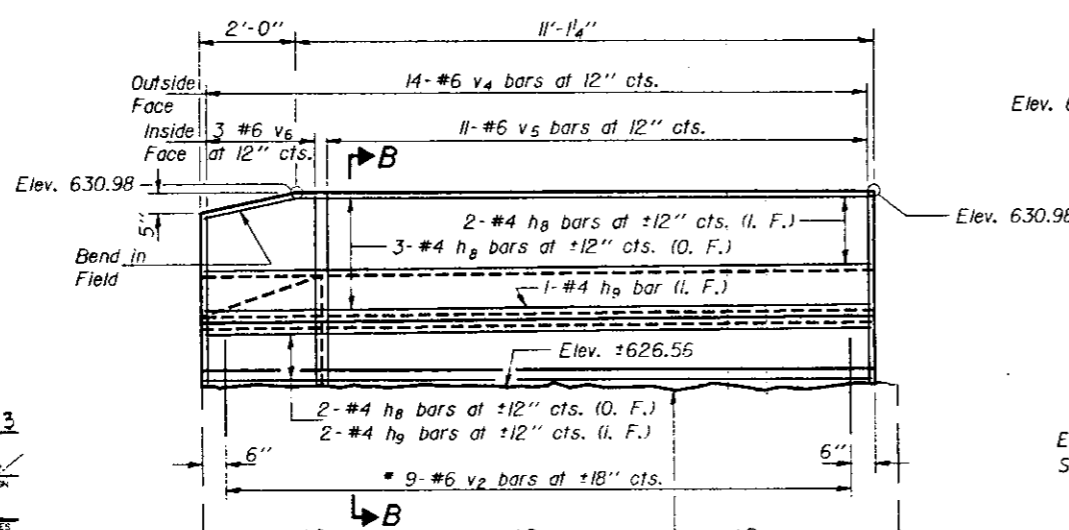
PLAN



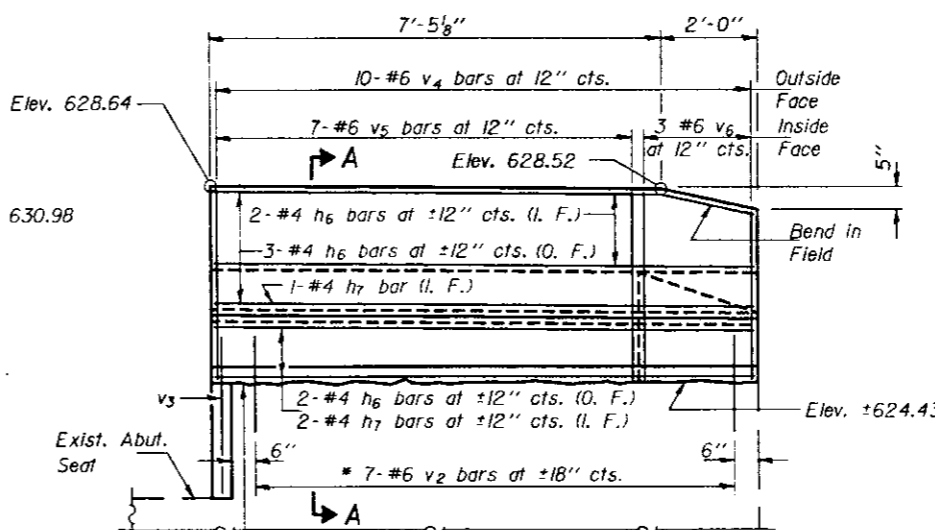
Note: Cut v₄, v₅ and v₆ bars to fit.

BILL OF MATERIAL

Bars	No.	Size	Length	Shape
h ₅	10	#6	36'-2"	
h ₆	7	#4	9'-2"	
h ₇	3	#4	9'-3"	
h ₈	7	#4	12'-10"	
h ₉	3	#4	12'-11"	
v	71	#4	1'-2"	
v ₁	71	#4	1'-4"	
v ₂	63	#6	2'-0"	
v ₃	2	#6	3'-6"	
v ₄	24	#6	4'-3"	
v ₅	18	#6	4'-3"	
v ₆	6	#6	4'-5"	
v ₇	47	#5	2'-0"	
Class X Concrete			Cu. Yd.	4.4
Reinforcement Bars			Pound	1410
Concrete Removal			Cu. Yd.	10
Repair Concrete Structures			Sq. Ft.	17
Epoxy Crack Sealing			Lin. Ft.	40



NORTH WING WALL ELEVATION



SOUTH WING WALL ELEVATION

Bonded Construction Joint in accordance with Article 504.13(a)(2) of Std. Spec's.

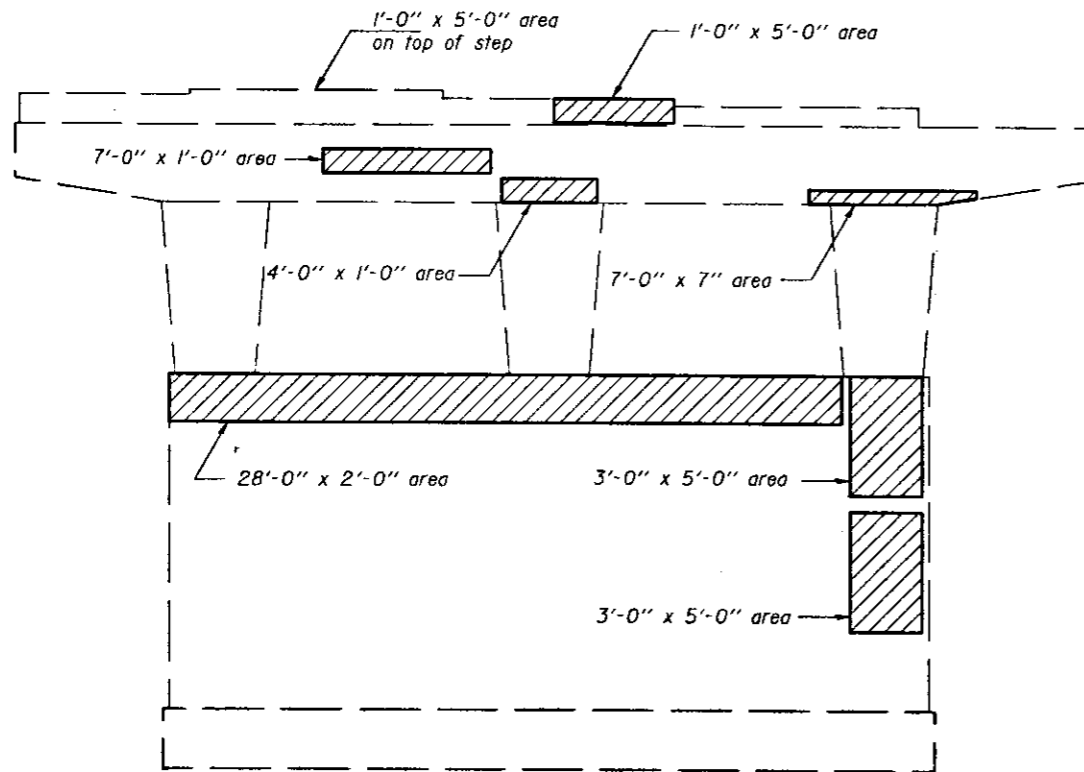
EAST ABUTMENT REPAIRS
F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

DESIGNED	Rick Brunette	EXAMINED	June 1 1983
CHECKED	Joe Sutherland	PASSED	
DRAWN	Joe Sutherland	APPROVED	
CHECKED			

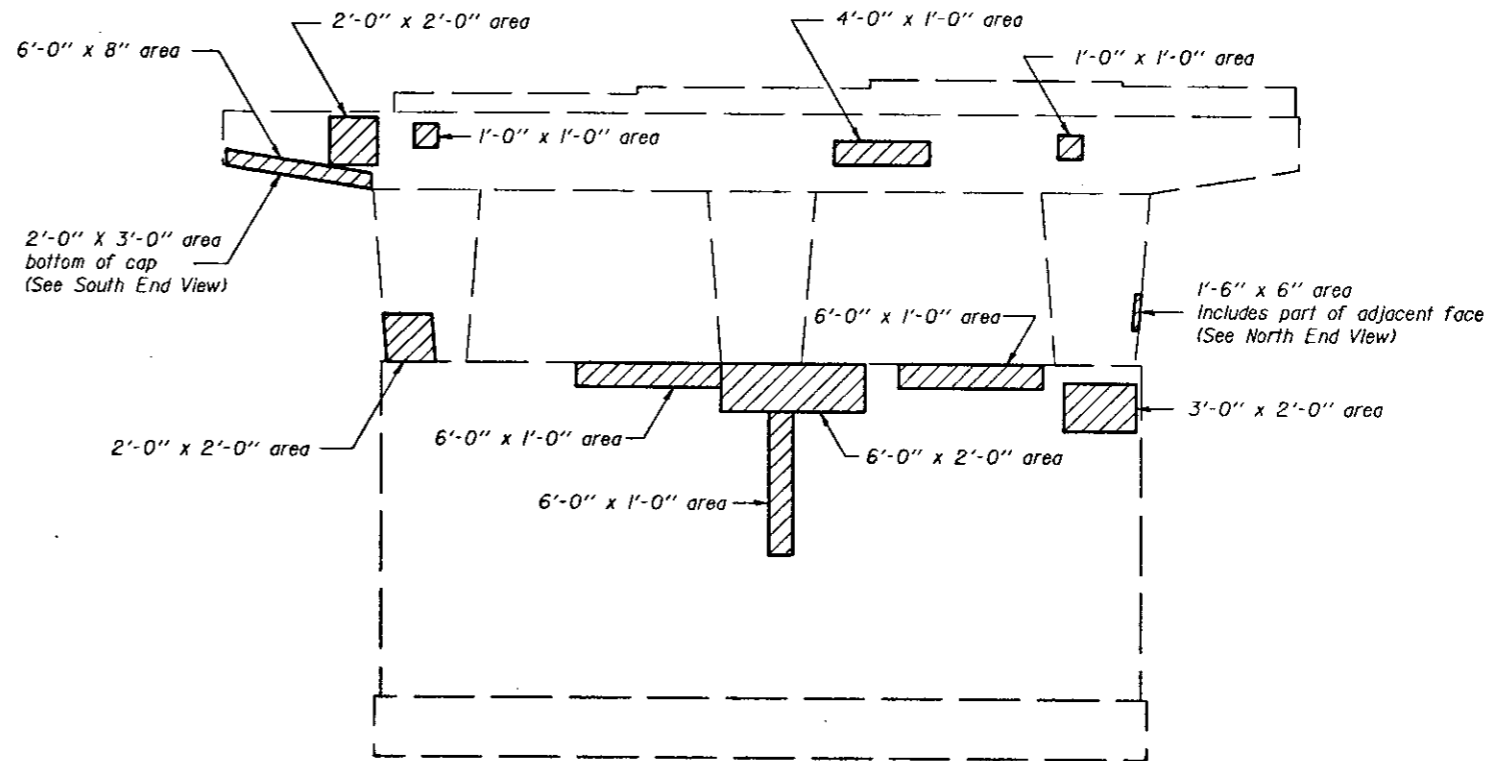
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	MILE	POST	SHEET NO. 23
29	*	Cook	26	23	26 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

* 3128Z-HB-1-R(82)

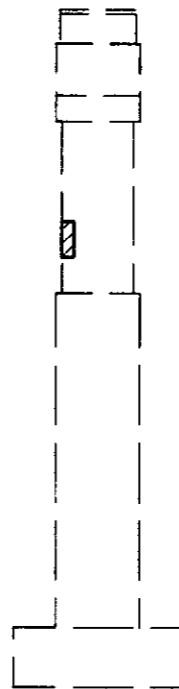


ELEVATION
(Looking East)

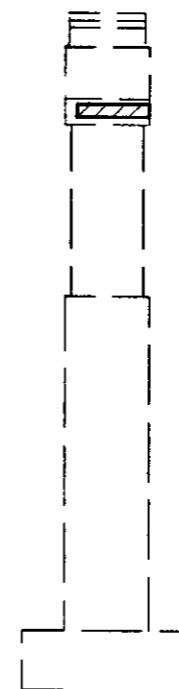


ELEVATION
(Looking West)

Note: Hatched area Indicates Concrete Repair.



END VIEW
(North End)



END VIEW
(South End)

BILL OF MATERIAL

Item	Unit	Total
Repair Concrete Structures	Sq. Ft.	172

DESIGNED	Rick Brunette
CHECKED	Joe Sutherland
DRAWN	Joe Sutherland
CHECKED	F.A.

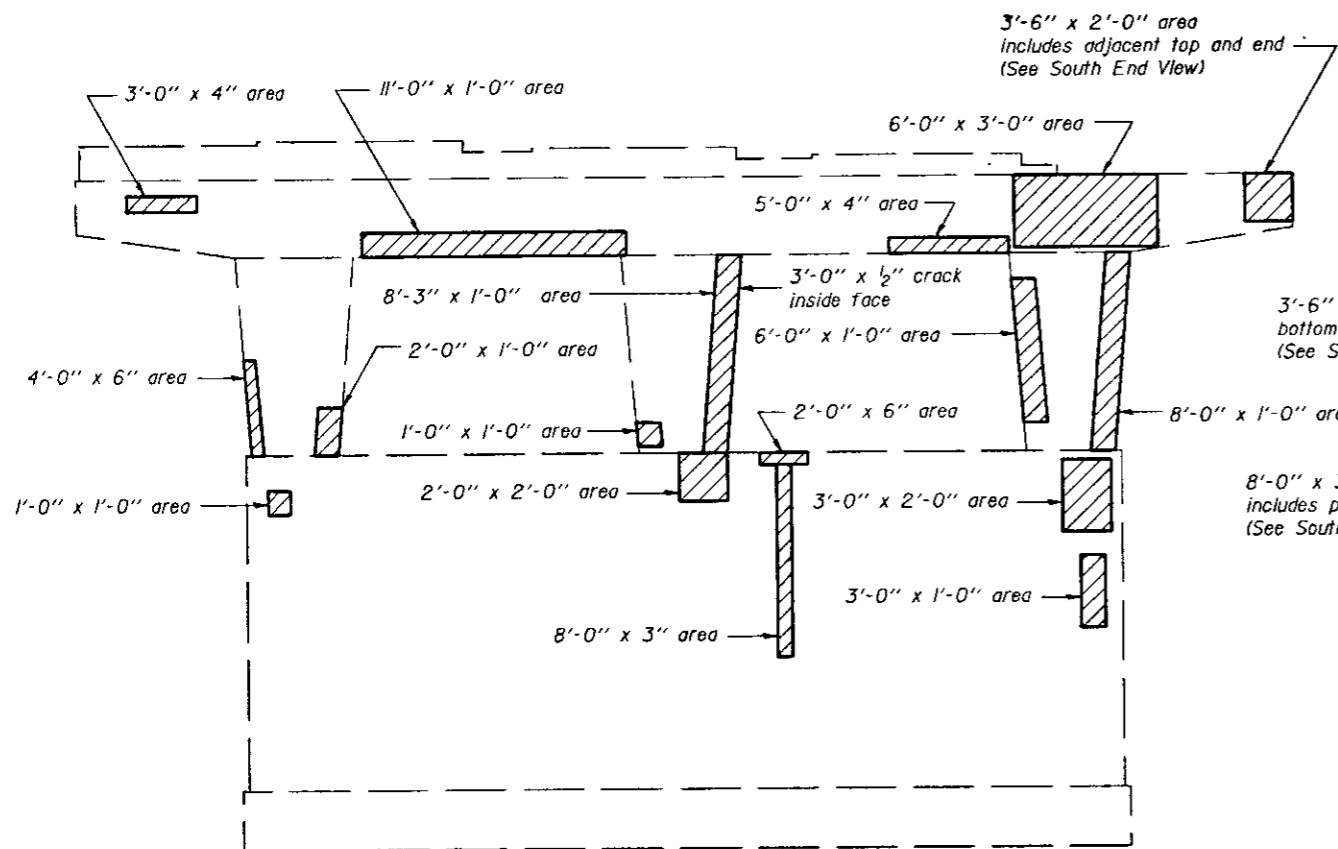
June 1 1983
 EXAMINED *James J. K...
 PASSED *Carl E. ...
 APPROVED *...
 DIRECTOR OF HIGHWAYS***

PIER 1 REPAIR
 F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(82)
 COOK COUNTY
 STATION 16+46.11

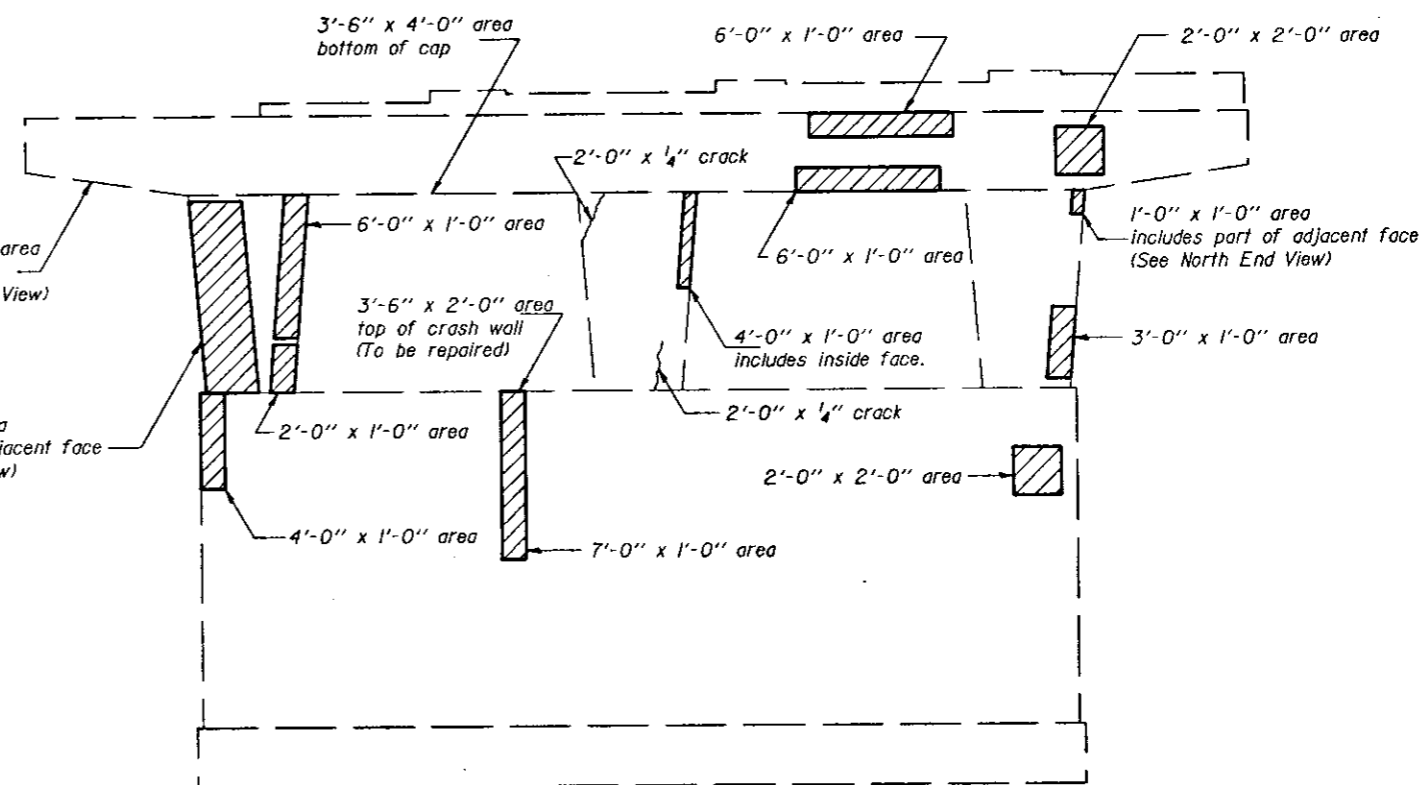
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	TOTAL SHEETS
29	*	Cook	26	24
FED. AID DIST. NO. 7		FED. AID PROJECT		

* 3128Z-HB-1-R(82)



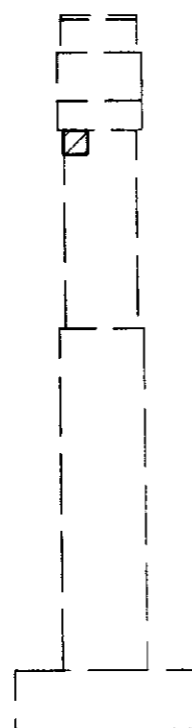
ELEVATION
(Looking East)



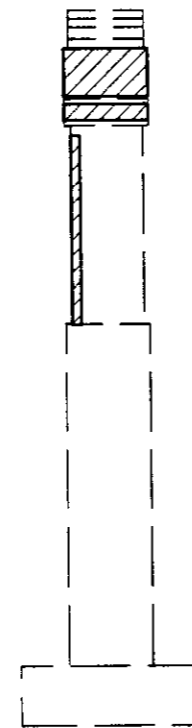
ELEVATION
(Looking West)

Indicates Repair Concrete Structures.

Indicates Epoxy Crack Sealing.



END VIEW
(North End)



END VIEW
(South End)

BILL OF MATERIAL

Item	Unit	Total
Repair Concrete Structures	Sq. Ft.	185
Epoxy Crack Sealing	Lin. Ft.	7

DESIGNED	Rick Brunette
CHECKED	Joe Sutherland
DRAWN	Joe Sutherland
CHECKED	L.K.

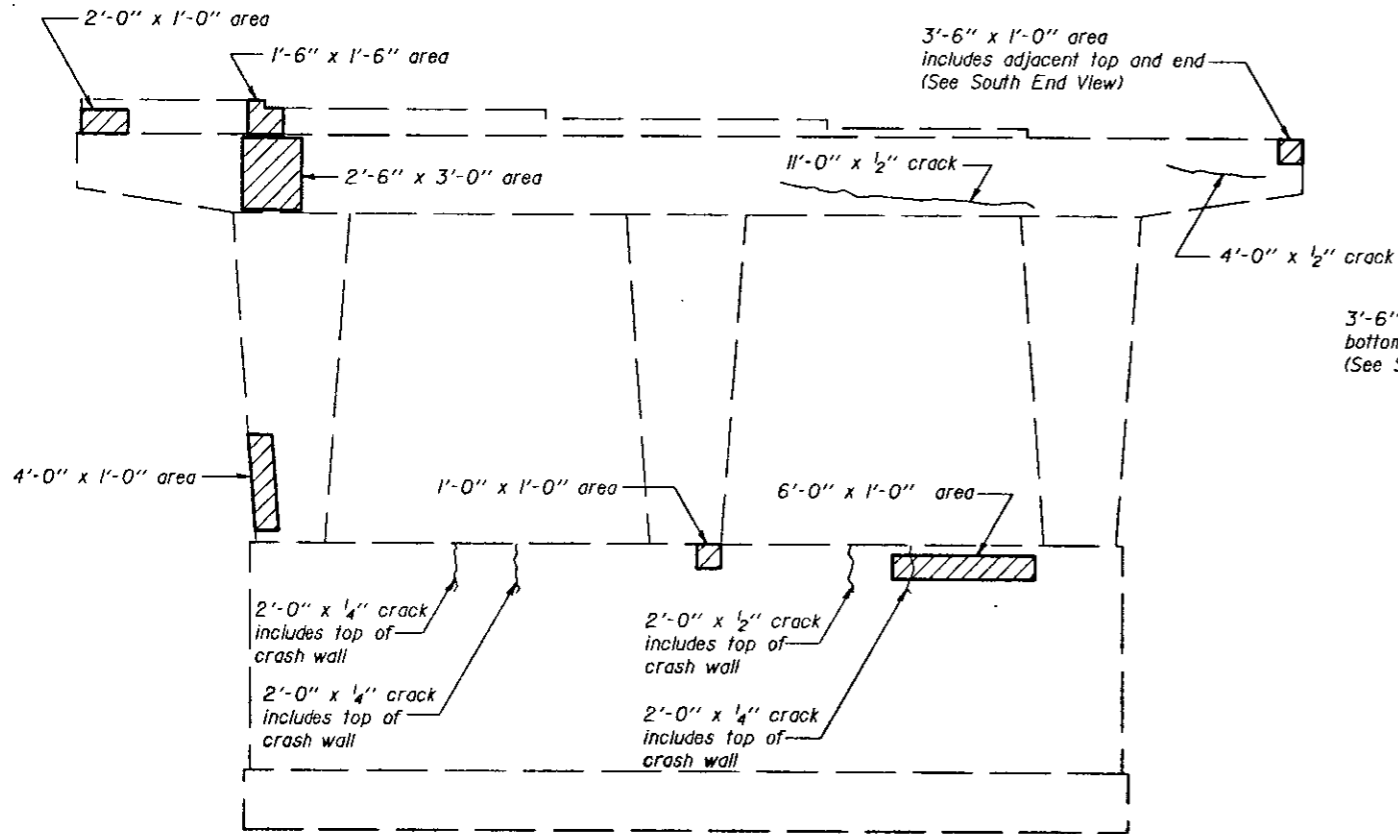
June 1, 1983
 EXAMINED *James J. Kavanagh*
 ENGINEER OF BRIDGE AND STRUCTURES
 PASSED *Carl Thompson*
 ENGINEER OF BRIDGES AND STRUCTURES
 APPROVED _____
 DIRECTOR OF HIGHWAYS

PIER 2 REPAIR
 F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(82)
 COOK COUNTY
 STATION 16+46.11

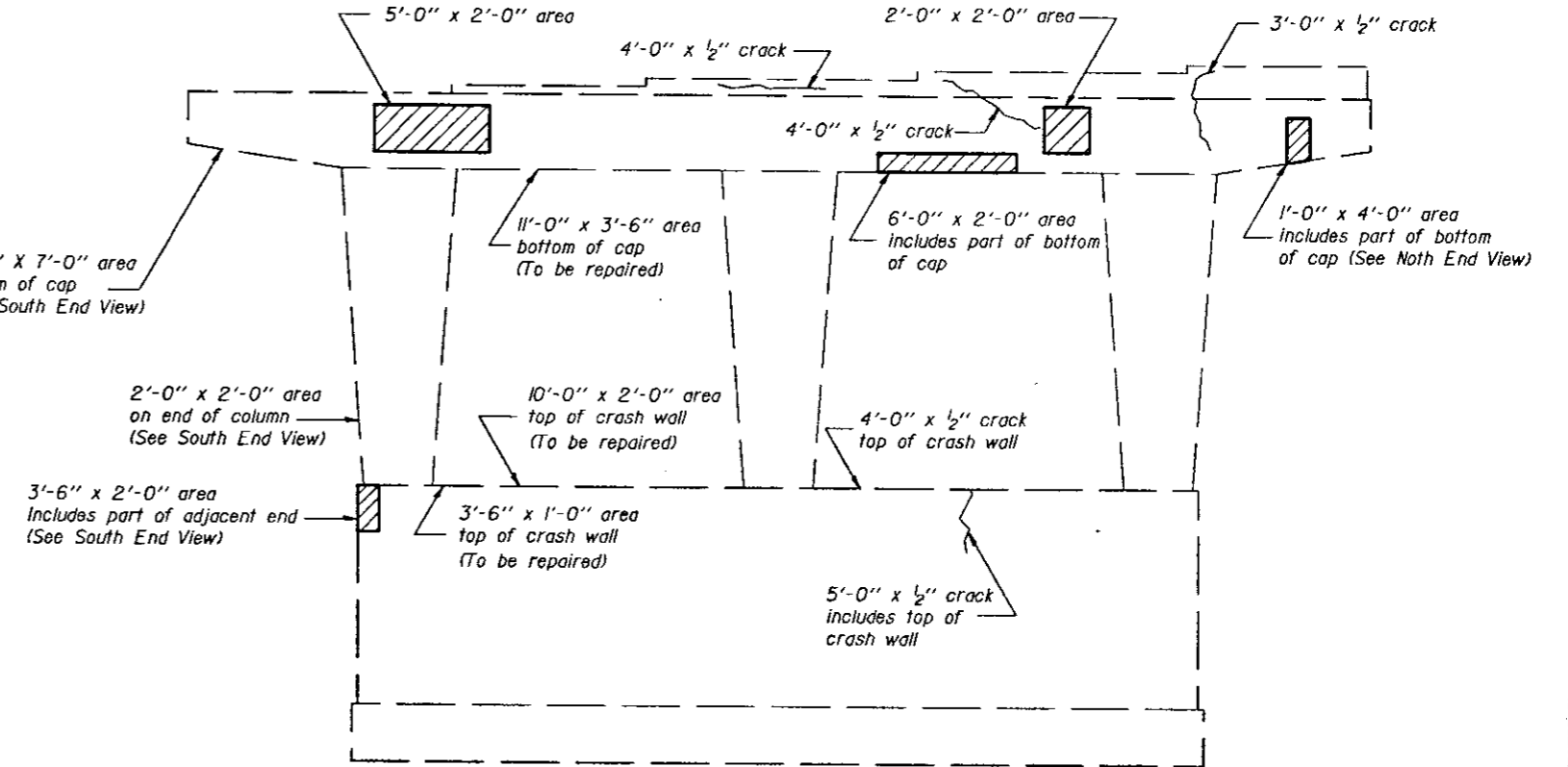
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	BRIDGE	SPAN	PIER	SHEET NO. 25 26 SHEETS
29	*	Cook	26	25	
FED. ROAD DIST. NO. 7		ILLINOIS RELIABLE PROJECT			


* 3128Z-HB-1-R(82)




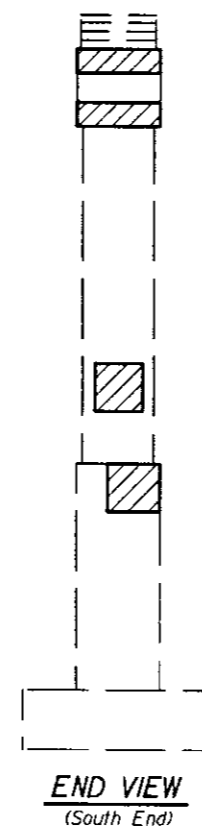
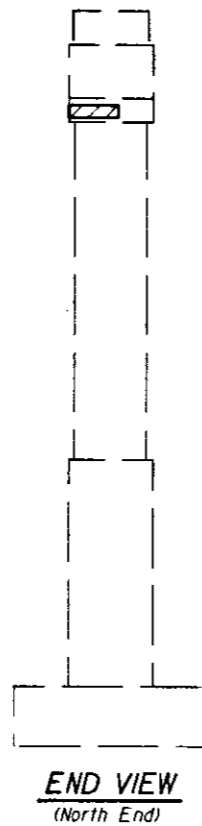
ELEVATION
(Looking East)



ELEVATION
(Looking West)

 Indicates Repair Concrete Structures.

 Indicates Epoxy Crack Sealing.



BILL OF MATERIAL

Item	Unit	Total
Repair Concrete Structures	Sq. Ft.	154
Epoxy Crack Sealing	Lin. Ft.	43

DESIGNED Rick Brunette

CHECKED [Signature]

DRAWN Joe Sutherland

CHECKED [Signature]

EXAMINED [Signature] 1983

PASSED [Signature]

APPROVED [Signature]

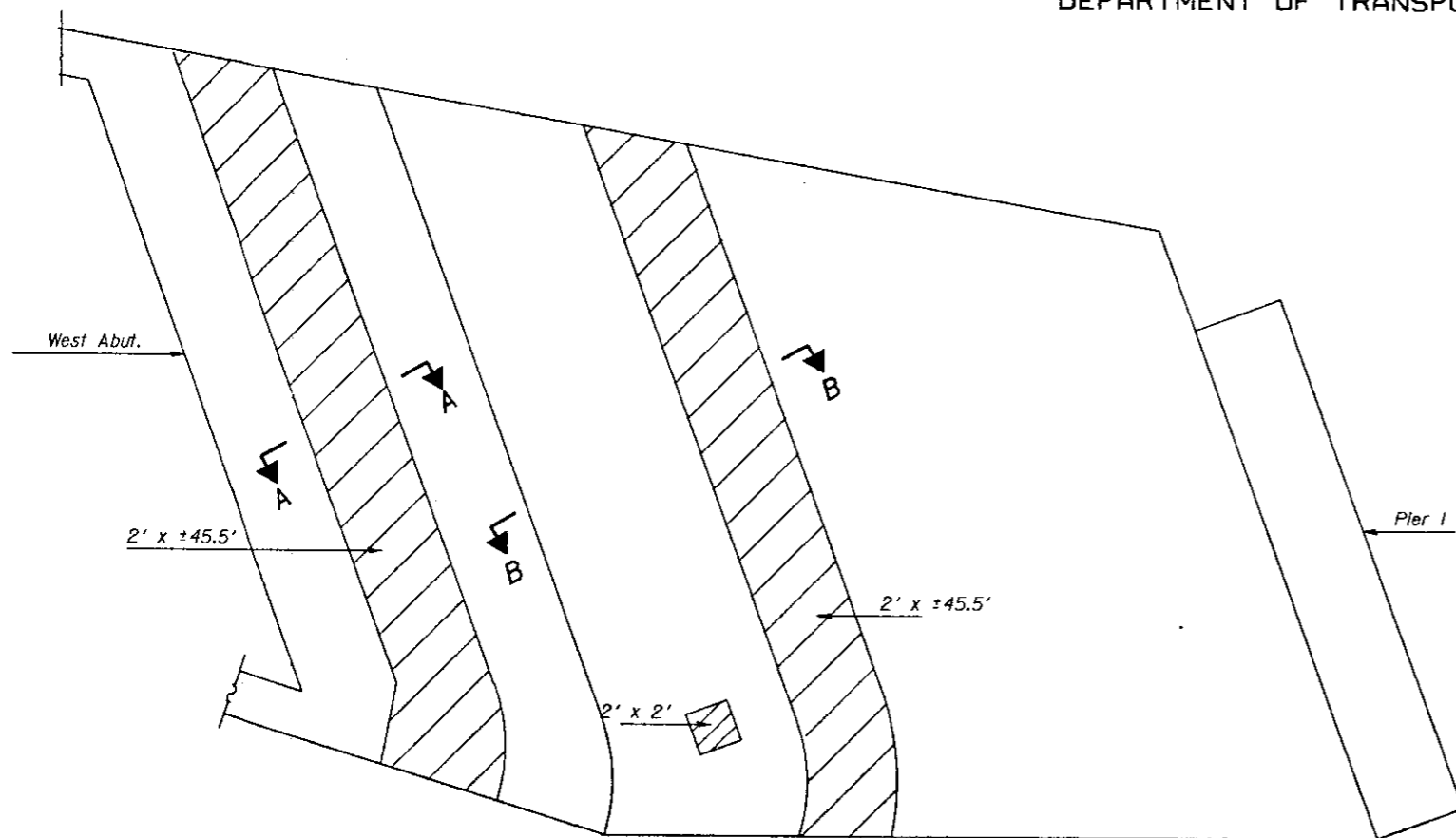
DIRECTOR OF HIGHWAYS

PIER 3 REPAIR
F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

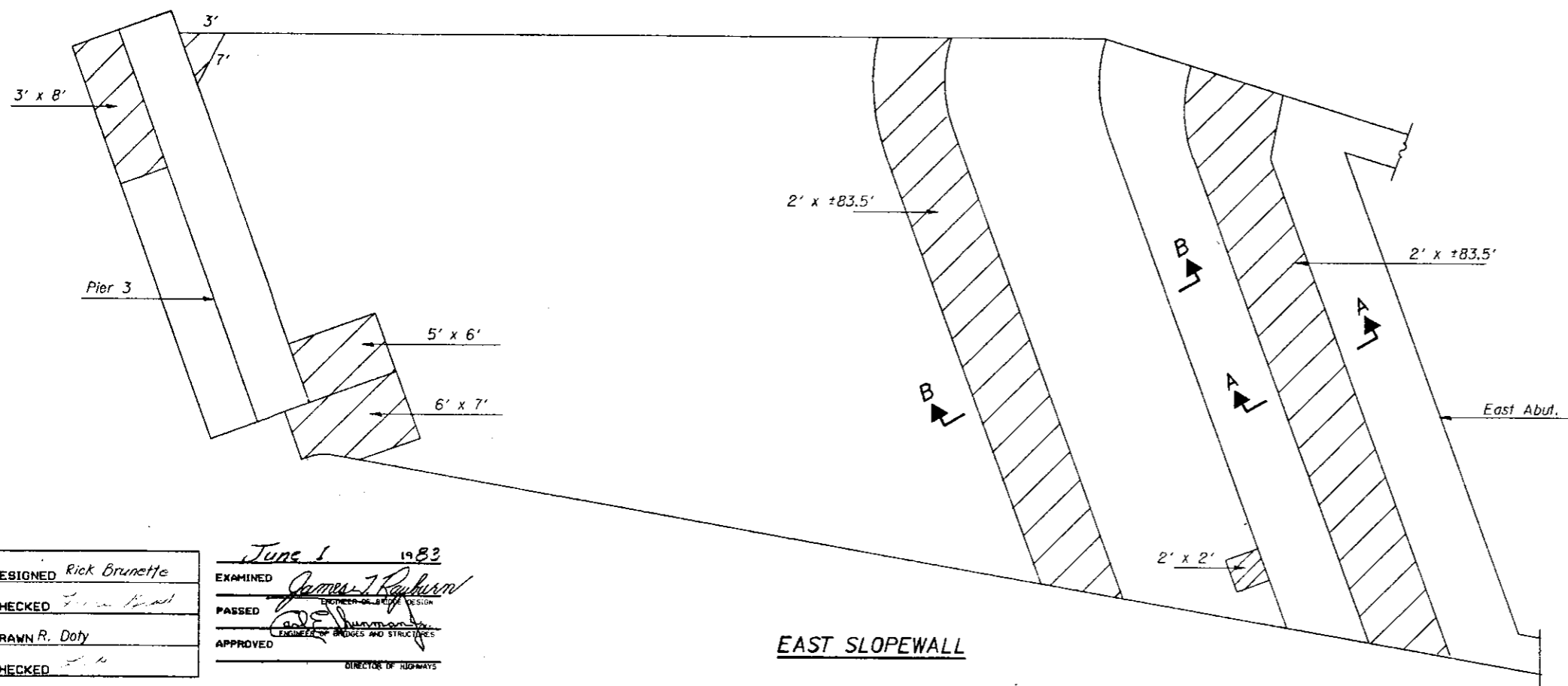
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 26
29	*	Cook	26	26	26 SHEETS
F.A.P. NO. 29		ILLINOIS		FED. AID PROJECT NO.	

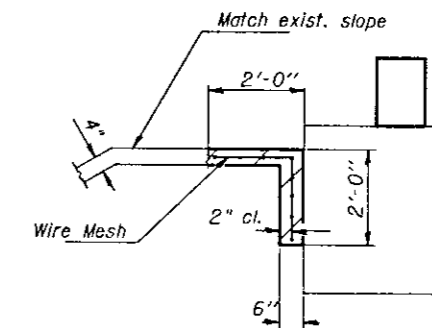
* 3128Z-HB-1-R(82)



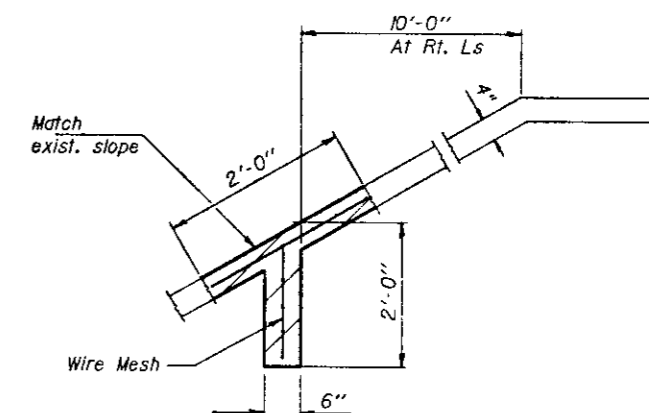
WEST SLOPEWALL



EAST SLOPEWALL



SECTION A-A



SECTION B-B

NOTES:

Sloped wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.
Existing wire mesh shall be cleaned and incorporated into the new sloped wall sections.
Cracks in sloped wall are to be grouted with an approved grout mixture. See Special Provisions. (Cost incidental to "Sloped Wall Removal and Replacement").
Hatched areas indicate "Sloped Wall Removal and Replacement".

BILL OF MATERIAL

Item	Unit	Total
Sloped Wall Removal and Replacement	Sq. Yd.	70

SLOPEWALL DETAILS
F.A.P. RT. 29 SEC. 3128-Z-HB-1-R(82)
COOK COUNTY
STATION 16+46.11

DESIGNED	Rick Brunette
CHECKED	James Brunette
DRAWN	R. Doty
CHECKED	

June 1, 1982

EXAMINED *James J. Rayburn*
PASSED *[Signature]*
APPROVED *[Signature]*
DIRECTOR OF HIGHWAYS

STANDARD SYMBOLS AND ABBREVIATIONS

THESE SYMBOLS AND ABBREVIATIONS ARE USED THROUGHOUT THESE PLANS UNLESS OTHERWISE NOTED

<p>North Arrow</p> <p>State Line</p> <p>County Line</p> <p>Township Line</p> <p>City, Village or Town Limits</p> <p>Section or Grant Line</p> <p>Section Corner</p> <p>Quarter Corner</p> <p>Same Ownership</p> <p>Unfenced Property Line</p> <p>Fenced Property Line</p> <p>Fence Line</p> <p>Construction Identification Sign</p> <p>Right of Way Marker</p> <p>Existing Right of Way Line</p> <p>Existing Fenced Right of Way Line</p> <p>Proposed Right of Way Line</p> <p>Proposed Right of Way Line coincident with access control line</p> <p>Access Control Line (Not coincident with Right of Way Line)</p> <p>Proposed Right of Way Dimension</p> <p>Construction Limits</p> <p>Base or Survey Line</p> <p>Channel Change Easement</p> <p>Temporary Easement (Detour, Grading etc.)</p> <p>Stream</p> <p>Lake or Pond</p> <p>Marsh</p> <p>Levee</p> <p>Summit</p> <p>Deciduous Trees</p> <p>Evergreen Trees</p> <p>Hedge</p> <p>Centerline</p>	<p>SS or SAN.S Existing Storm or Sanitary Sewer</p> <p>Railroad or Utility Tracks</p> <p>Curb Wall</p> <p>Retaining Wall</p> <p>Existing Drive or Traveled Way</p> <p>Pipe Lines Gas Water Oil</p> <p>Longitudinal Joint with Tie Bars (Sawed or Poly.)</p> <p>Longitudinal Joint with Tie Bars and Keyway</p> <p>Longitudinal Joint with Keyway only</p> <p>Contraction Joint with Dowels</p> <p>Contraction Joint without Dowels</p> <p>Expansion Joint with capped Dowels</p> <p>Expansion Joint without Dowels</p> <p>Wide Flange Beam Terminal Joint</p> <p>Guard Rail</p> <p>Existing Pavement, Curb & Gutter, Driveway Pavement & Sidewalk to be removed</p> <p>Existing Culvert</p> <p>Culvert to be Constructed</p> <p>Culvert with Drop Inlet</p> <p>Elevation of Surface of Finished Pavement at Point Indicated</p> <p>Elevation of Top of Curb at Point Indicated</p> <p>Elevation of Flow Line of Gutter at Point Indicated</p> <p>Storm Sewer (Direction of Flow & Invert Elevation Indicated)</p> <p>Tile Drain (Direction of Flow & Invert Elevation Indicated)</p> <p>Existing Inlet, Inlet to be Adjusted, or Inlet to be Reconstructed</p> <p>Inlet to be Constructed</p> <p>Inlet to be filled with Sand & Connection Sealed</p> <p>Existing Catch Basin, Catch Basin to be Adjusted, or Catch Basin to be Reconstructed</p> <p>Catch Basin to be Constructed</p> <p>Underground Electric Cable</p> <p>Underground Telephone Cable</p>	<p>Catch Basin to be filled with Sand & Connection Sealed</p> <p>Existing Manhole to be Adjusted, or Manhole to be Reconstructed</p> <p>Manhole to be Constructed</p> <p>Manhole to be filled with Sand & Connection Sealed</p> <p>Existing Valve Vault, Valve Vault to be Adjusted, or Valve Vault to be Reconstructed</p> <p>Valve Vault to be Constructed</p> <p>Valve Vault to be filled with Sand & Connection Sealed</p> <p>Existing Fire Hydrant, or Fire Hydrant to be Adjusted</p> <p>Fire Hydrant & Auxiliary Valve to be Moved (Symbol with Letter Indicates New Location)</p> <p>Existing Light Standard, or Light Standard to be Adjusted</p> <p>Light Standard to be Moved (Symbol with Letter Indicates New Location)</p> <p>Existing Traffic Signal, or Traffic Signal to be Adjusted</p> <p>Traffic Signal to be Moved (Symbol with Letter Indicates New Location)</p> <p>Existing House Service Box or House Meter Vault, or House Service Box or House Meter Vault to be Adjusted</p> <p>House Service Box or House Meter Vault to be Moved (Symbol with Letter Indicates New Location)</p> <p>Existing Main Service Box or Main Meter Vault, or Main Service Box or Main Meter Vault to be Adjusted</p> <p>Main Service Box or Main Meter Vault to be Moved (Symbol with Letter Indicates New Location)</p> <p>Trolley Pole</p> <p>Telephone or Telegraph Pole</p> <p>Power Line Pole</p> <p>House</p> <p>Church</p> <p>Shed</p> <p>Commercial Building</p> <p>Barn</p> <p>School</p> <p>Town Hall</p> <p>Roadway</p> <p>Traffic Direction Arrow</p>
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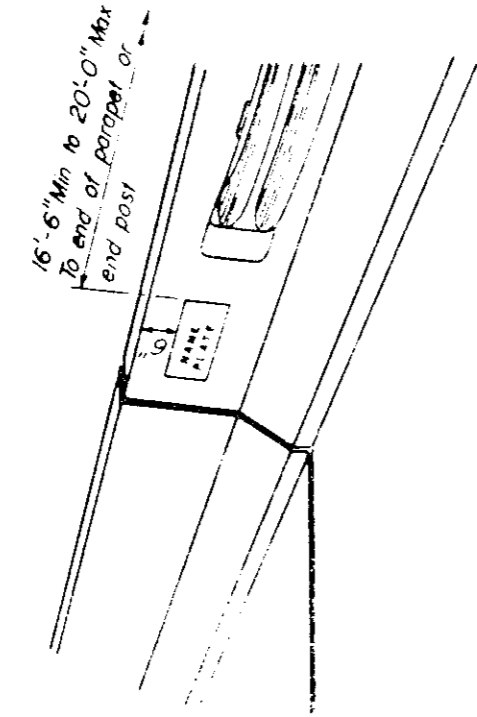
ABBREVIATIONS

<p>T.D. Tile Drain</p> <p>S.S. Storm Sewer (Existing)</p> <p>S.S. 18"x24" (Size, Length and Type) TYPE I</p> <p>S.S. 18"x24" (Size, Length, Type and Material) RCP</p> <p>C.M.P. Corrugated Metal Pipe</p> <p>C.I.P. Cast Iron Pipe</p> <p>P.C. Pipe Culvert (Existing)</p> <p>P. Pipe Culvert</p> <p>P. 18"x24" (Size, Length and Type) TYPE I</p> <p>P. Pipe Culvert</p> <p>P. 18"x24" (Size, Length, Type and Material) CMCP</p> <p>P.C.C. Portland Cement Concrete</p> <p>F-F. Face to Face of Curb</p> <p>B-B. Back to Back of Curb</p> <p>Centerline to Face of Curb</p>	<p>Centerline to Back of Curb</p> <p>Central Angle</p> <p>Degree of Curve</p> <p>Tangent Length</p> <p>Curve Length</p> <p>Radius of Curve</p> <p>External Distance</p> <p>Superelevation (ft. per ft. of width)</p> <p>Point of Curvature</p> <p>Point of Intersection</p> <p>Point of Tangency</p> <p>Point on Tangent</p> <p>Point of Compound Curvature</p> <p>Point of Reverse Curvature</p> <p>Vertical Curve</p> <p>External Distance of Vertical Curve</p> <p>Sanitary Sewer</p>	<p>Reference Point Stake</p> <p>Iron Pipe</p> <p>Nail & Washer</p> <p>Telephone Pole</p> <p>Power Pole</p> <p>Fence Post</p> <p>Fire Hydrant</p> <p>Bench Mark</p> <p>Railroad Spike</p> <p>Right of Way</p> <p>Invert</p> <p>Flow Line</p> <p>State of Illinois Survey Marker</p> <p>U.S. Coast & Geodetic Survey</p> <p>U.S. Geological Survey</p> <p>Elevation</p> <p>Route</p>	<p>Section</p> <p>Station</p> <p>Property Line</p> <p>Field Entrance</p> <p>Private Entrance</p> <p>Federal-aid Interstate</p> <p>Federal-aid</p> <p>Federal-aid Secondary</p> <p>State Bond Issue</p> <p>Motor Fuel Tax</p> <p>State-Route</p> <p>County Highway</p> <p>Township Road</p> <p>City Street</p> <p>Project</p> <p>Access Control</p> <p>Federal-aid Urban System</p>
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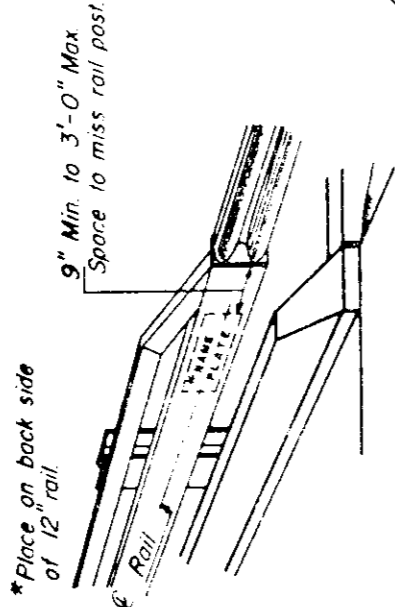
<p>Illinois Department of Transportation</p> <p>PASSED July 15, 1977</p> <p>W.F. 9-9-59</p> <p>W.F. 11-19-62</p> <p>W.F. 5-12-66</p> <p>D.W.W. 7-15-77</p> <p>APPROVED July 15, 1977</p> <p>Engineer of Design</p>	<p>REVISIONS</p> <p>BY DATE</p>
	<p>BY DATE</p> <p>J.F.L. 11-18-58</p> <p>W.F. 9-9-59</p> <p>W.F. 11-19-62</p> <p>W.F. 5-12-66</p> <p>D.W.W. 7-15-77</p>

• If it is definitely known that adjustment or reconstruction is required, place A or R inside the symbol. If a new casting is required, show the casting number. Use P for open, C for closed lid. Example - Catch Basin to be reconstructed with new type 5 frame, open lid = (R) 5P.
 • First character denotes type of structure. Use Sp for special design. Second character denotes number of frame or grate. Example - Type A manhole with type I frame and closed lid = (R) A-1C

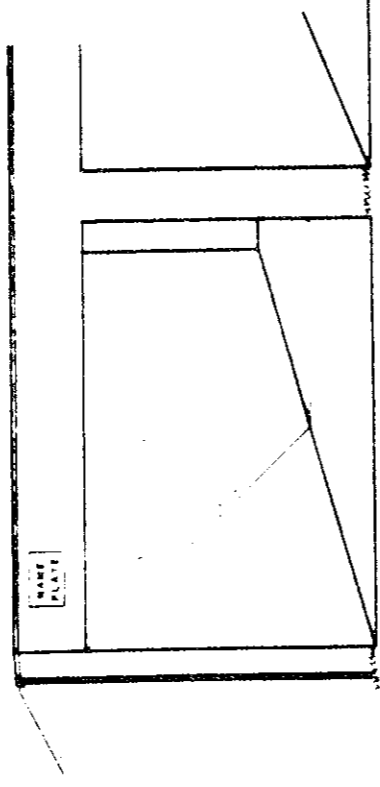
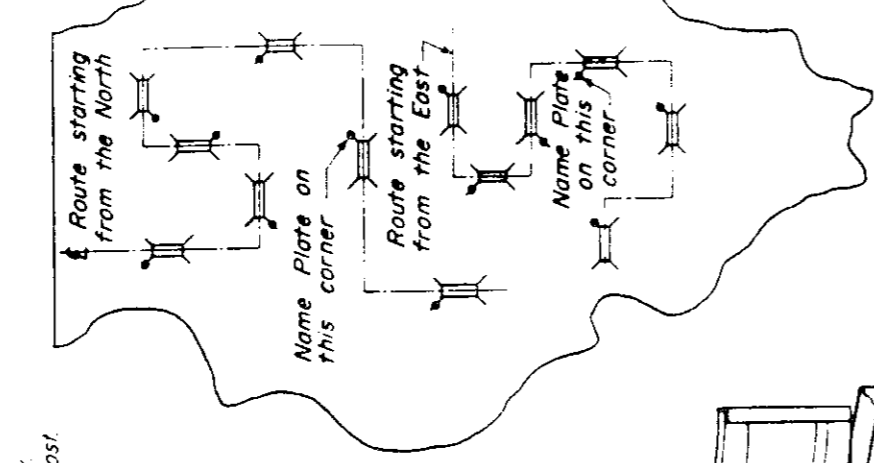
H-4.00 a



FOR PARAPET AND END POST MOUNTED



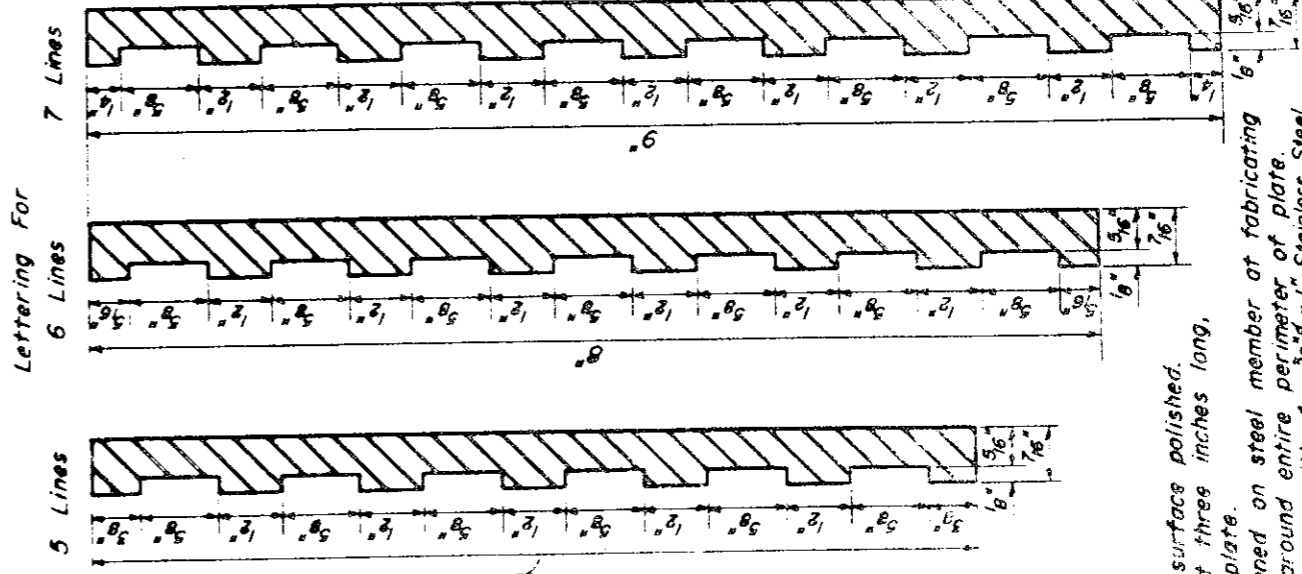
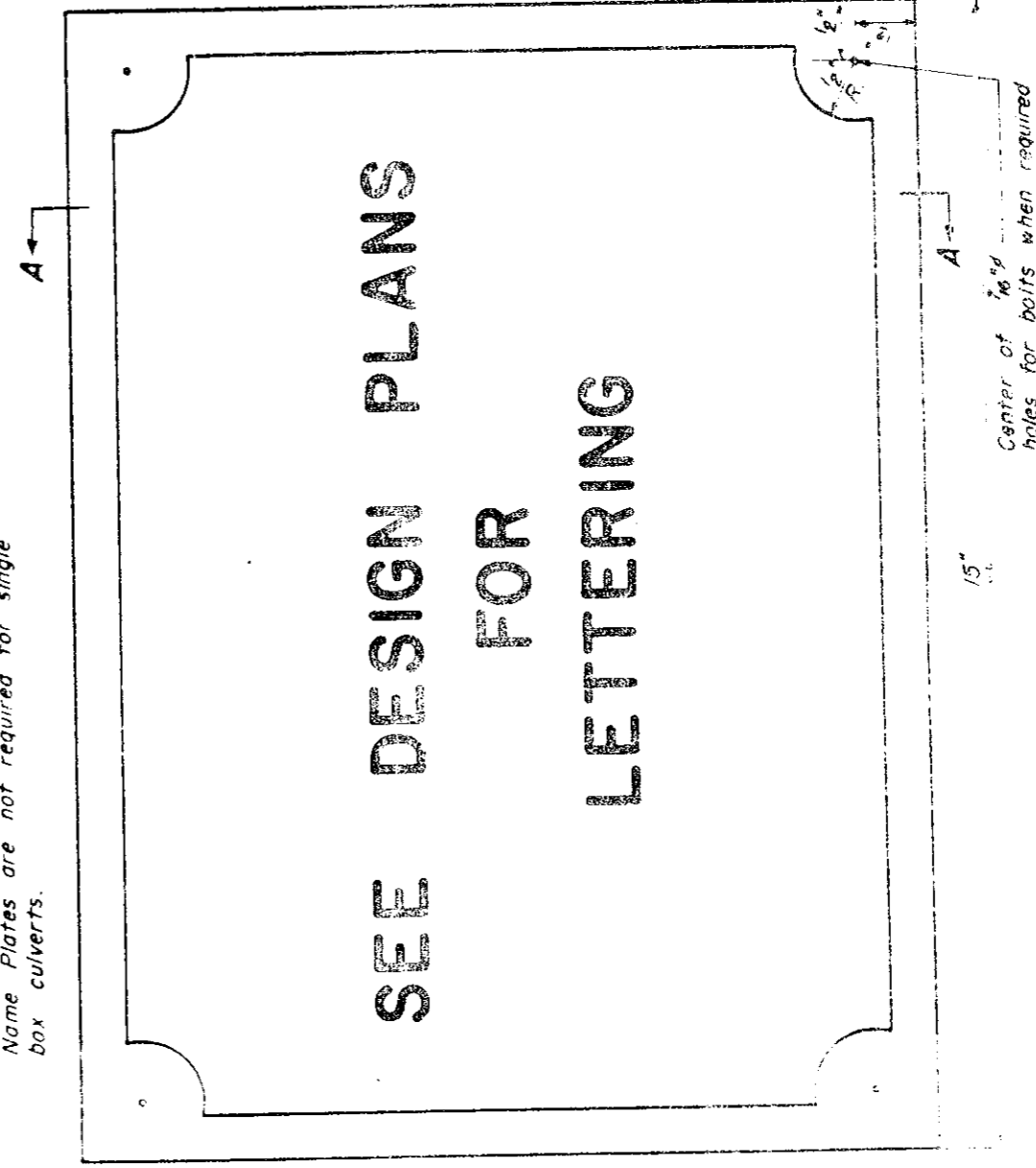
FOR STEEL RAILS



FOR MULTI-SPAN CULVERTS

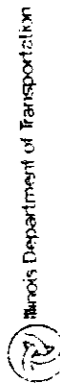
Note: Unless otherwise noted on the plans, Name Plates are not required for single box culverts.

FOR TRUSSES



SEE DESIGN PLANS FOR LETTERING

- Material: Best quality brass or bronze. Top surface polished.
- Border & Lettering: Raised 1/8 inch. Square cut and not tapered.
- For Concrete Flapjacks, Culverts: Four lugs of least three inches long, cast on back of plate.
 - For Headwalls & Subways: Plate to be fastened on steel member at fabricating shop by brazing around entire perimeter of plate.
 - For Steel Truss Span: Plate to be bolted on with 4 - 3/8" x 1" Stainless Steel or Brass Cap Screws, self tapping or drill and tap in field.
 - For Steel Rails: Plate to be placed 16'-6" min. to 20'-0" max. to end of parapet.
 - For Concrete Parapets: Parapet.
 - For Steel Truss Span: Braze to end post about five feet above roadway.
 - For Steel Rails: Place on back side of 12" rail.
 - For Subways: See design plans for location.



Illinois Department of Transportation

ISSUED II - 15 - 63

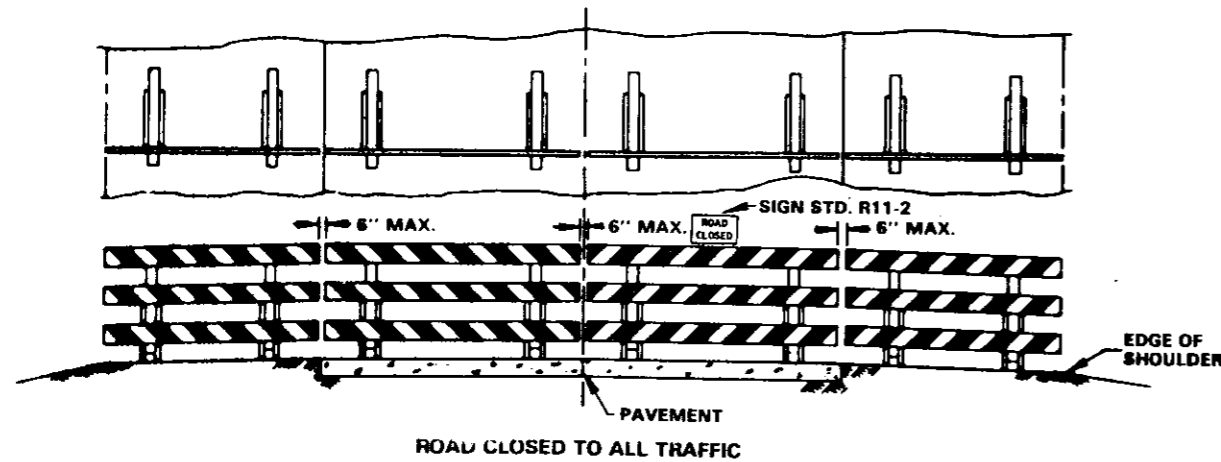
DATE: FEBRUARY 15, 1980

APPROVED: FEBRUARY 15, 1980

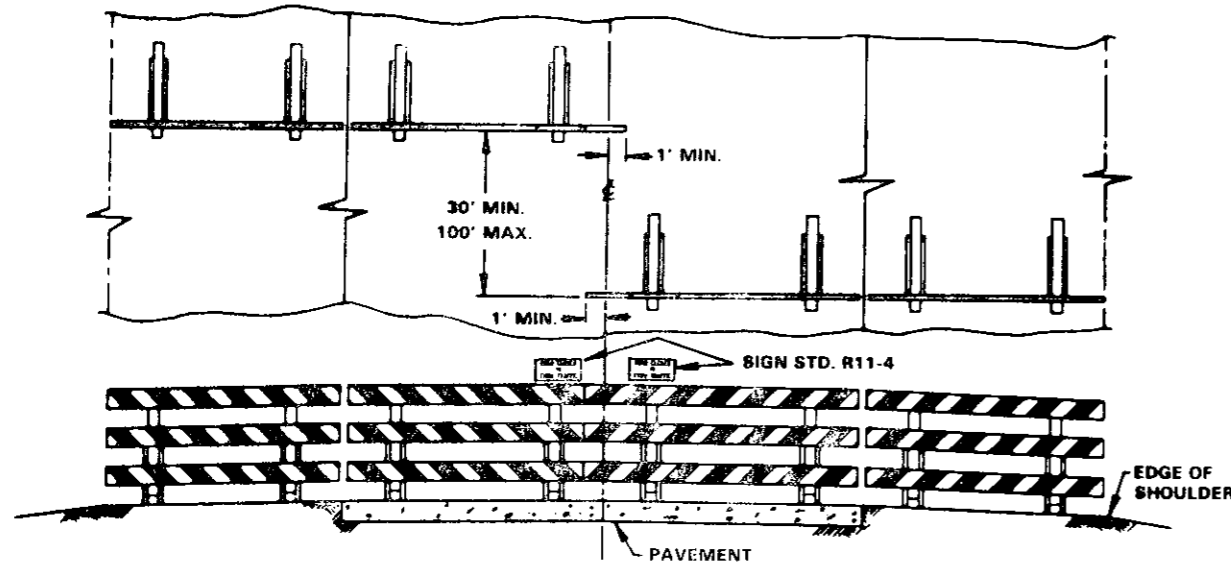
Engineer of Design

DETAIL OF NAME PLATE FOR BRIDGES
STD 2113-2

TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD

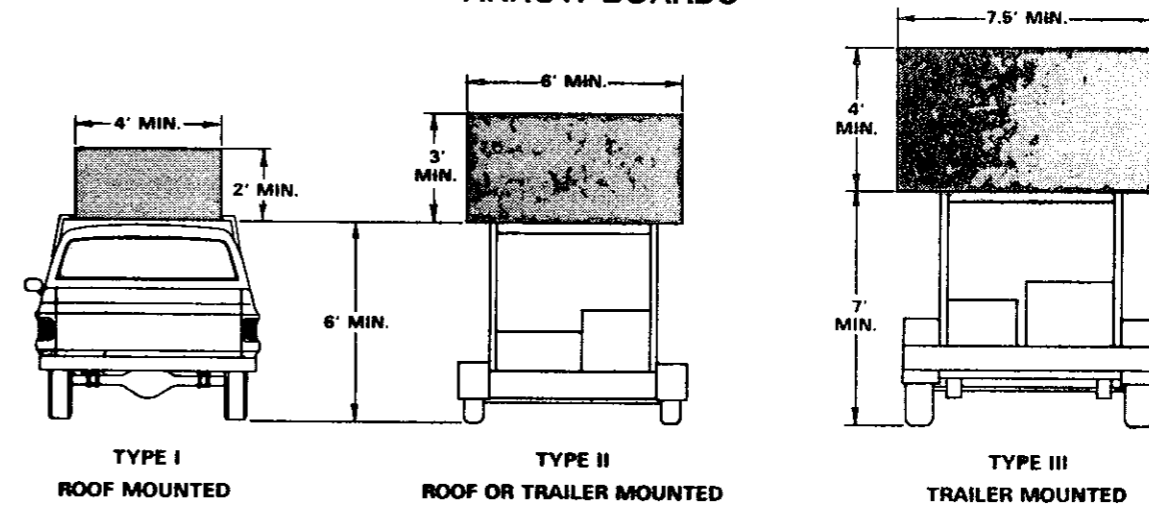


Reflectorized striping may be omitted on the back side of the barricades. The barricades shall be to the edge of the shoulders except when otherwise directed by the Engineer or shown on the detailed construction plans.



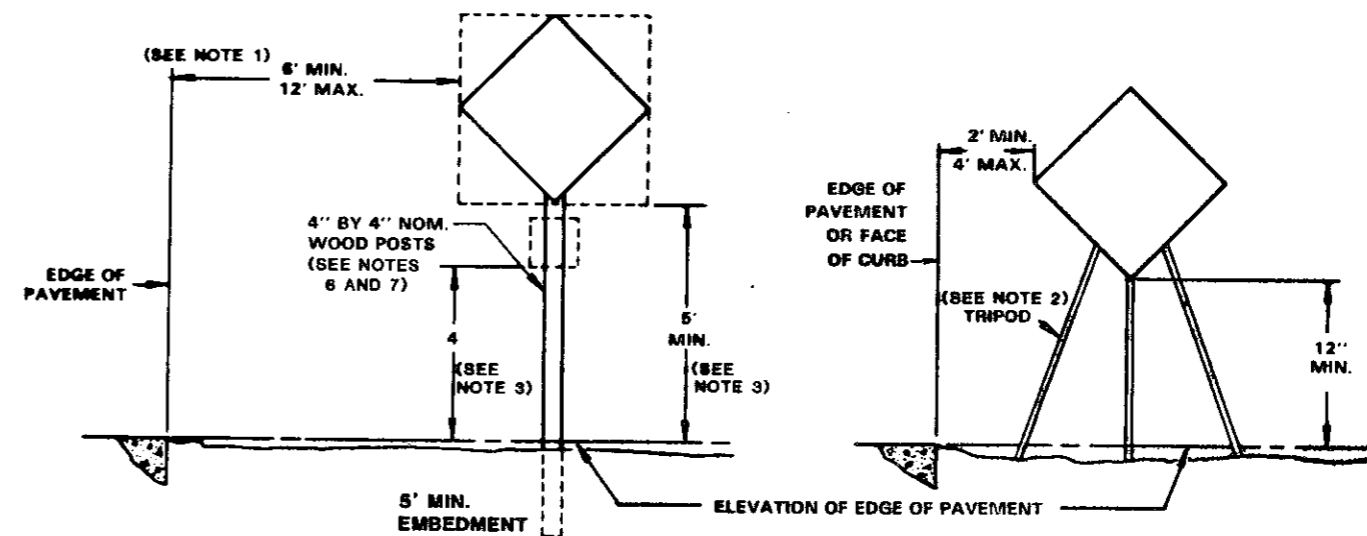
Reflectorized striping shall appear on both sides of barricades. The barricades shall be to the edge of the shoulders, except when otherwise directed by the Engineer or shown on the detailed construction plans.

ARROW BOARDS



Arrow boards shall conform to Article 718.22 of the Standard Specifications. On roads with speeds of 45 miles per hour and above, Type III units are to be used for all operations 24 hours or more in duration and Type II units may be used for operations less than 24 hours in duration. Type I, II or III units may be used for all operations on roads with speeds less than 45 miles per hour. Arrow boards shall not be used to direct passing moves into lanes used by opposing traffic.

TYPICAL SIGN INSTALLATIONS



- 2 ft. minimum to face of curb.
- Alternate designs and or materials may be permitted when authorized by the Engineer. All materials shall be substantial and durable.
- Add 2 ft. if parking exists within 200 ft. in advance of the sign location at any time during the project.
- Signs on temporary supports shall be within 20° of a vertical position.
- Weights of concrete, stone, or brick will not be allowed and all weights used to stabilize signs other than sand-bags must be rigidly attached to the sign support as close to the ground as possible.
- Two posts shall be used for signs greater than 16 sq. ft. in area or where the height between the sign and the ground exceeds 7 ft. Bracing no heavier than 2" x 4" wood may be used for added support. Any brace placed parallel to the road shall be sloped down toward approaching traffic.
- If approved by the Engineer, skids may be used to support signs where posts are impractical. If used, they shall not exceed the structural design of Type III barricades and shall be no greater than 4 ft. in length.

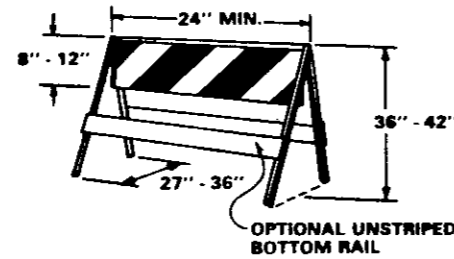
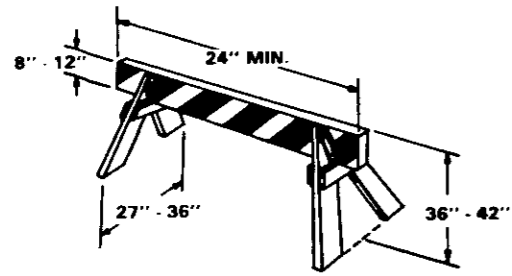
Illinois Department of Transportation
 Approved: AUGUST 5, 1982
 L. E. Mohr
 Engineer of Traffic
 Issued 4-3-69

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
 HIGHWAY CONSTRUCTION AND CONTRACT MAINTENANCE
STANDARD 2298-6

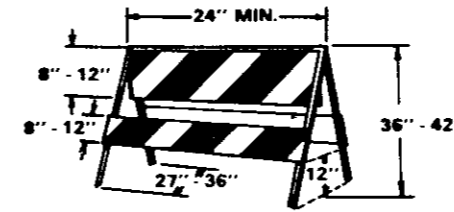
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GENERAL NOTES

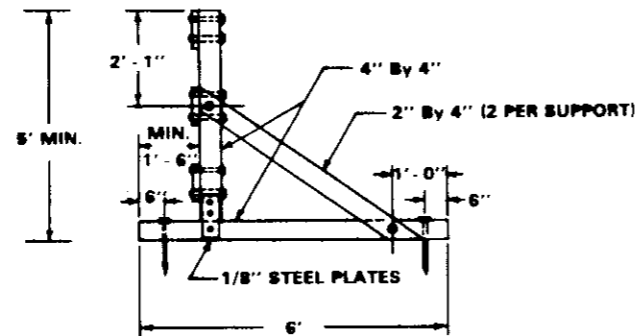
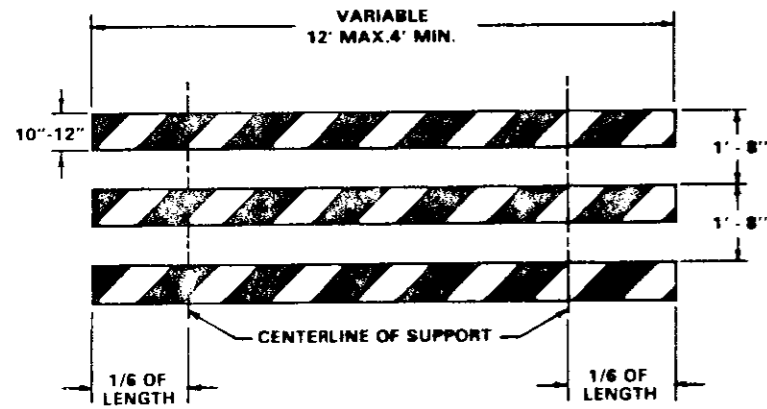
TYPE I BARRICADES



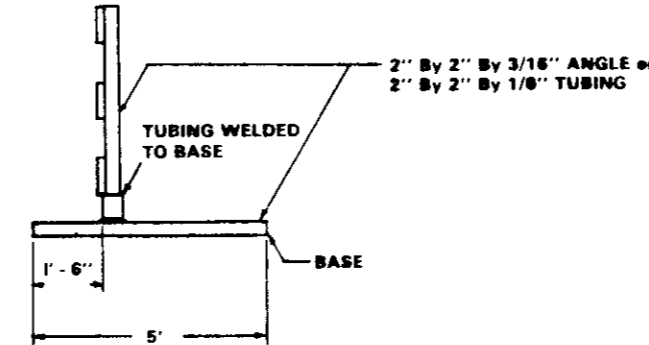
TYPE II BARRICADES



TYPE III BARRICADES



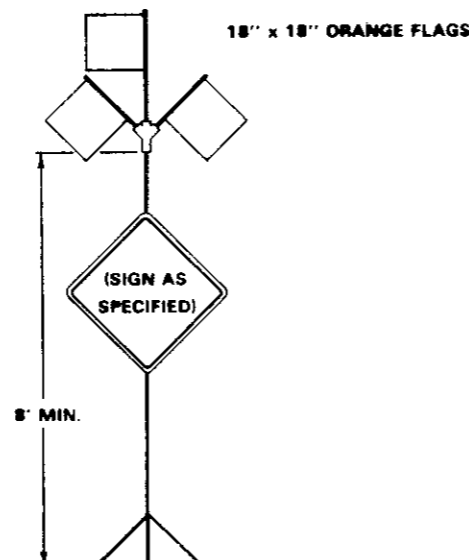
TYPICAL WOOD SUPPORT



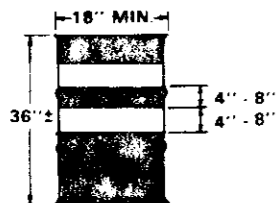
TYPICAL STEEL SUPPORT

- Type I Barricades are intended for use on lower speed roads and shall not be used where normal posted speeds are greater than 40 MPH unless the upper rail is at least 12 inches deep.
- Type I and Type II Barricades shall not be intermixed within an individual string of barricades.
- Type III Barricades are intended for road and lane closures and shall not be used for channelization or delineation.
- All heights shown shall be measured above the pavement surface.
- The reflective sheeting used for barricades, drums, and vertical panels shall meet the requirements of Article 718.17 and 718.18 of the Standard Specifications for Road and Bridge Construction.
- All barricades and vertical panels shall have alternating reflectorized white and reflectorized orange stripes sloping downward at 45° toward the side on which traffic will pass. Barricade stripes shall be 6 inches in width on barricades 36 inches or greater in length and 4 inches in width on barricades less than 36 inches in length. Type I and Type II Barricades shall be striped on both sides. Type III Barricades shall be striped on both sides where traffic approaches from either direction. Vertical panels placed on the outside of curves shall be striped on both sides.
- Drums shall have alternating reflectorized orange and reflectorized white horizontal, circumferential stripes 4 inches to 8 inches in width. There shall be at least two orange and at least two white stripes on each drum. If nonreflective spaces are left between the orange and white stripes, they shall be no more than 2 inches in width. All non-reflectorized portions of the drums shall be painted orange or white. Drums may be slightly conical in shape and may have one or more flat surfaces to minimize rolling when hit.
- Frames for Type I and Type II Barricades shall be designed so as to provide a stable support and should be constructed of light weight steel or aluminum angles or tubing, wood, plastic, or rubber and have no rigid stay bracing for "A" frame designs. As Type III Barricades are only used at closures, they may be constructed of heavier materials than Type I or Type II Barricades. However, they should not have any vertical or sloping supports heavier than 4-inch by 4-inch lumber, 2-inch by 2-inch by 1/8-inch steel tubing, or 2-inch by 2-inch by 3-1/16-inch steel angles.
- Barricade rails shall be no heavier than 1-inch thick lumber or plywood except for the "sawhorse" design Type I Barricade which may have a rail no heavier than 2-inch thick lumber. Other light weight weather resistant materials such as plastic, fiberglass or sheet aluminum may be used. Barricade rails may be sloping or vertical.
- The name of the agency, contractor, or supplier shall not be shown on the face parts of any barricades, whether such parts are striped or not. Identification markings may be placed only on the back side of the barricade rails.
- When used, warning lights on barricades, drums, or vertical panels shall be mounted above the top of the device to the side on which traffic will pass and shall not obscure any reflectorized portion of the device.
- Weights of concrete, stone, or brick will not be allowed and all weights used to stabilize barricades other than sandbags must be rigidly attached to the legs of the barricades as close to the ground as possible. No sandbags will be allowed on the top rail of barricades. Sandbags may be placed on barricade legs, over striped bottom rails not facing traffic, over unstriped bottom rails, or suspended from the barricade rail or frame in such a manner so that the bulk of the sand is at least 18 inches below the top of the barricade. Drums may be weighted internally with just enough sand, water, or other material to provide stability.

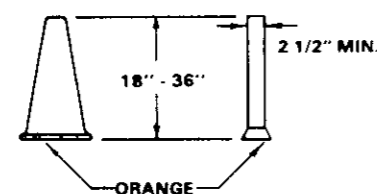
HIGH LEVEL WARNING DEVICE



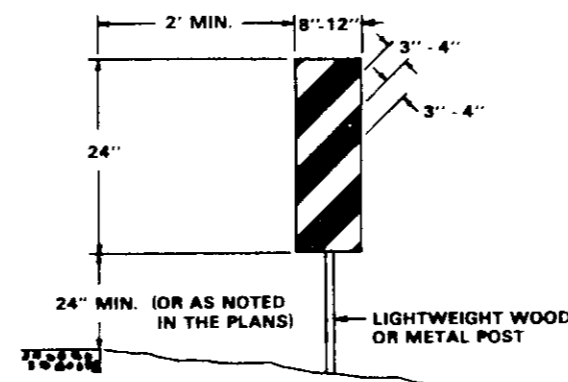
DRUMS

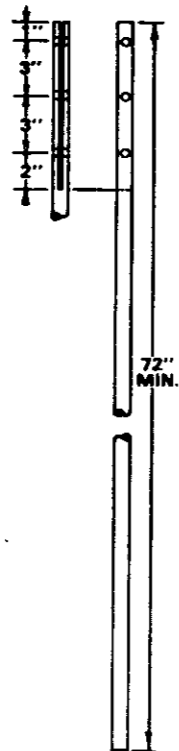


CONES

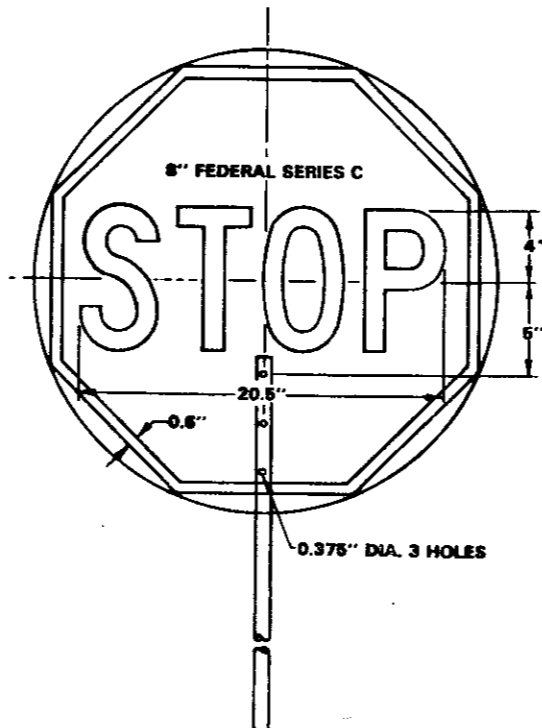


VERTICAL PANELS

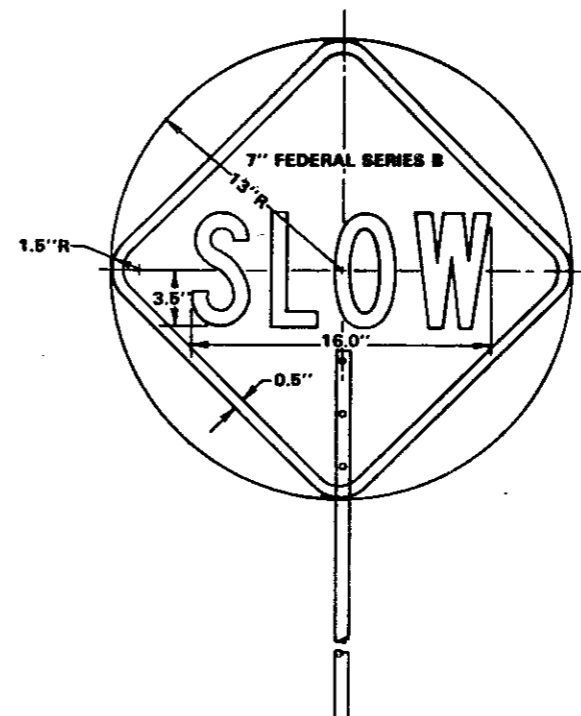




STAFF



FRONT SIDE



REVERSE SIDE

GENERAL NOTES

1. The "STOP" face shall consist of white letters and border on a red reflectorized background.
2. The "SLOW" face shall consist of black letters and border on an orange reflectorized background.
3. Areas outside sign borders shall be light blue or black.
4. The sign blank may be octagonal in shape in lieu of circular.
5. The portion of the staff within the sign face shall match the sign colors.
6. All colors and letters shall meet applicable federal standards.
7. The staff shall consist of two sections joined by a coupling located 60 in. from the bottom of the staff. Alternate designs may be used when approved by the Engineer. All materials shall be substantial and durable.
8. This sign shall be furnished by the contractor and shall be used by the flagger in lieu of flags or other signaling devices. The cost of furnishing and maintaining the sign shall be considered incidental to the contract and no additional compensation will be allowed.

Illinois Department of Transportation

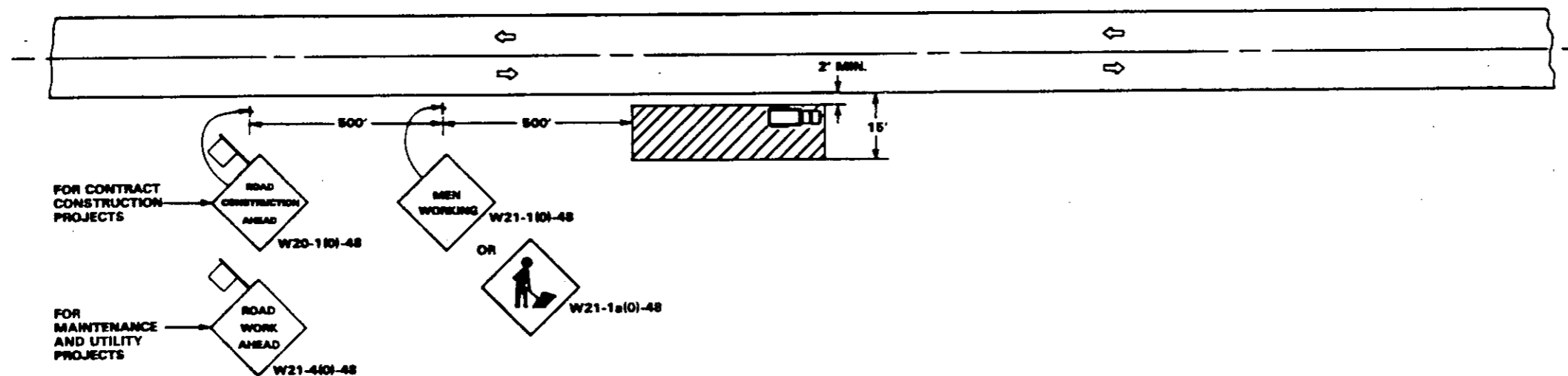
Approved MAY 1 1980

L. E. Moberly
Engineer of Traffic

69-3-1 permit

FLAGGER TRAFFIC CONTROL SIGN




STANDARD 2300-2



GENERAL NOTES

1. If the work operation does not exceed 60 minutes, traffic control may be in conformance with STANDARD 2307.
2. Worker signs are to be removed when no work is being performed. Any unattended obstacle or excavation in the work area which in the opinion of the Engineer constitutes a hazard shall be protected by barricades at 50 ft. centers, with flashing lights at night. If the hazard exceeds 100 ft. in length, steady burning lights shall be substituted for flashing lights. When the distance is greater than 250 ft., barricade spacing may be increased to 100 ft.
3. If the work operation requires that four or more work vehicles enter through traffic lanes in a one hour period, a flagger shall be provided and a Flagger sign shall be substituted for the Worker sign.
4. Longitudinal dimensions may be adjusted to fit field conditions.
5. All vehicles, equipment, workers and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.

SYMBOLS

-  Work Area
-  18 in. X 18 in. (minimum) Orange Flag
-  Sign on Portable or Permanent Support

TYPICAL APPLICATIONS

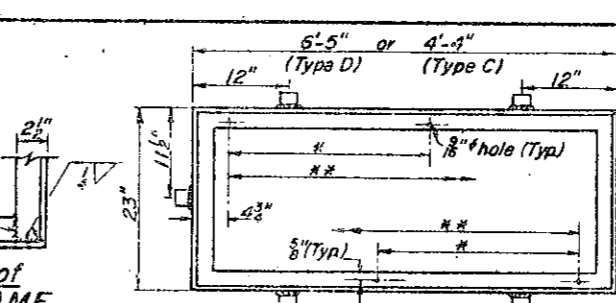
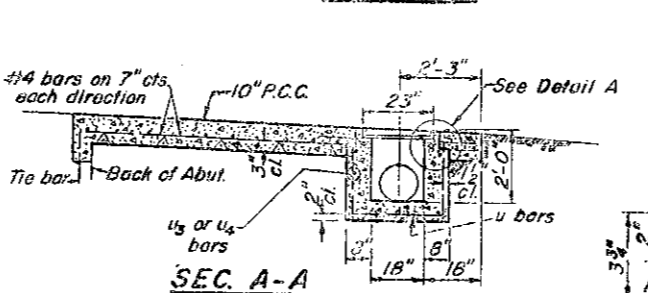
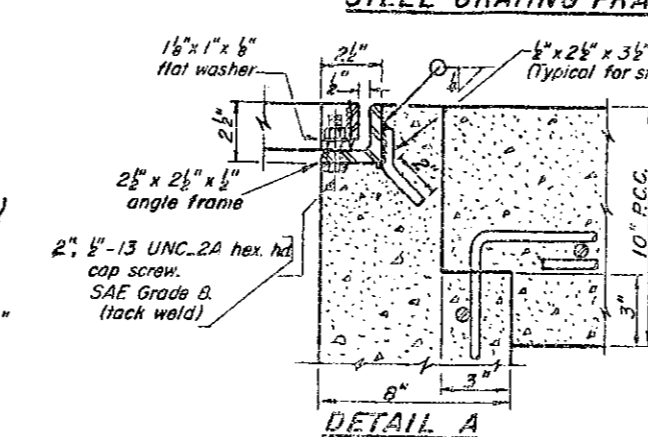
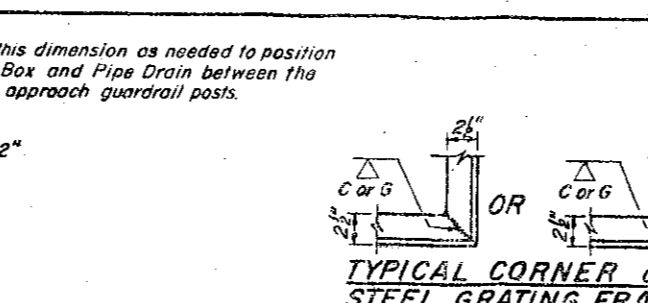
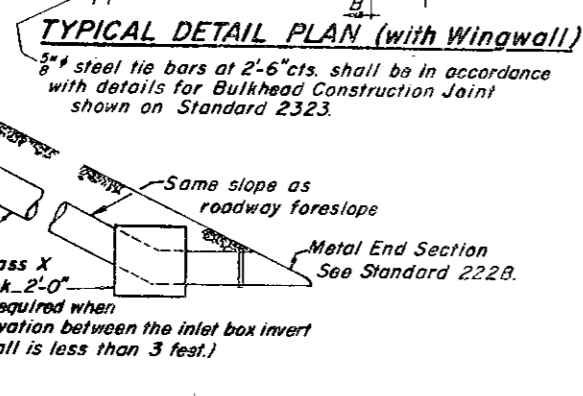
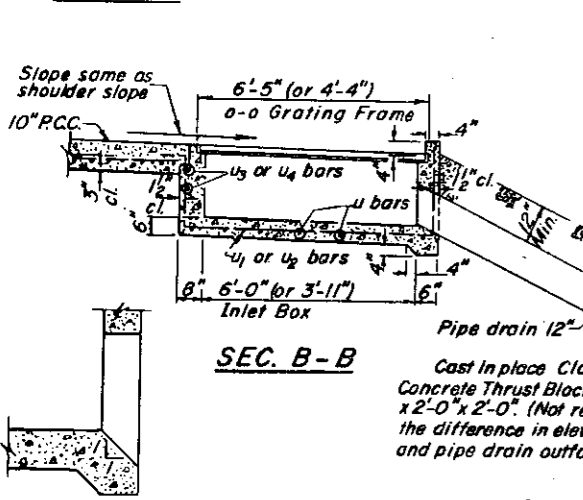
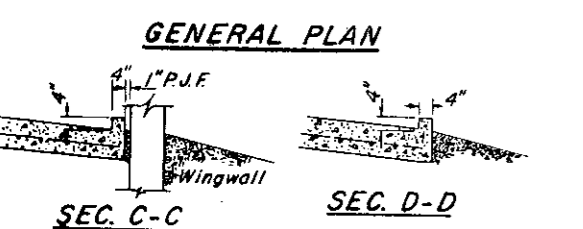
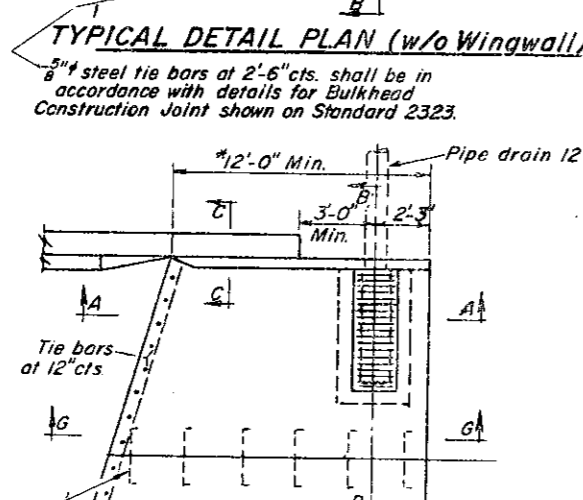
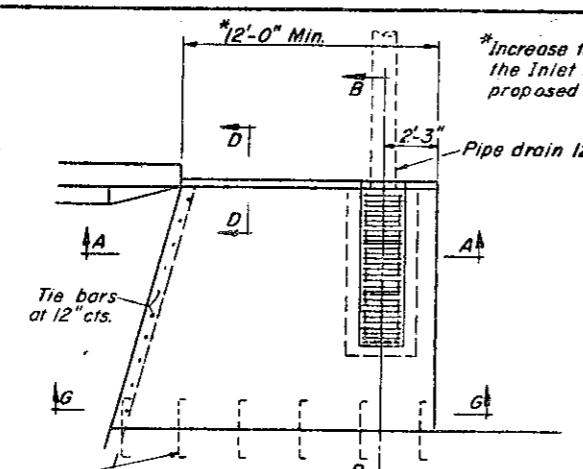
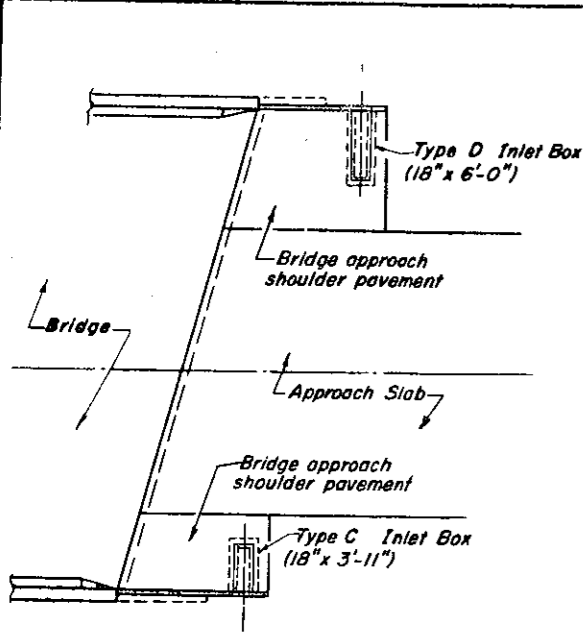
- Utility Operations
- Culvert Extensions
- Side Slope Changes
- Guard Rail Installation and Maintenance
- Delineator Installation and Maintenance
- Landscaping Operations
- Cleaning Ditches and Drainage Structures
- Sign Installation and Maintenance
- Shoulder Repair

**TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
HIGHWAY CONSTRUCTION AND MAINTENANCE**

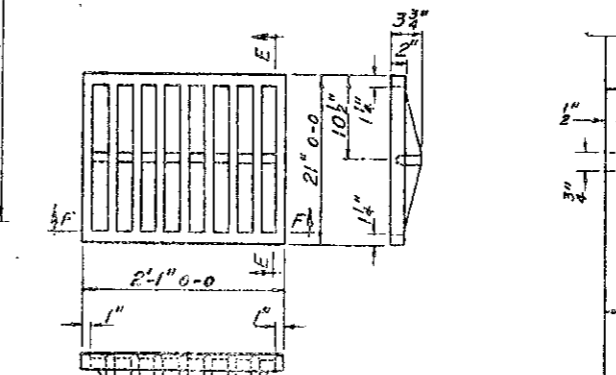
**TWO-LANE, TWO-WAY TRAFFIC,
RURAL DAY OR NIGHT OPERATIONS**

Where at any time, any vehicle, equipment, workers or their activities will encroach in the area closer than 15 ft. but not closer than 2 ft. to the edge of pavement.

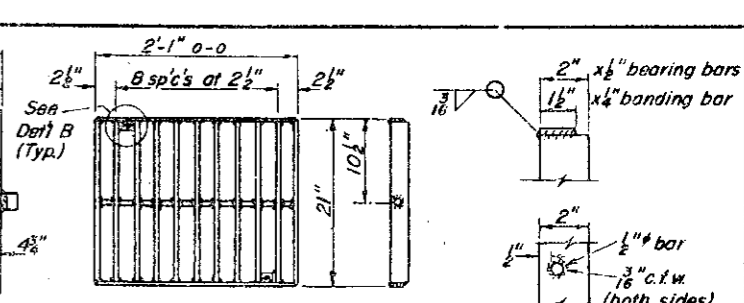
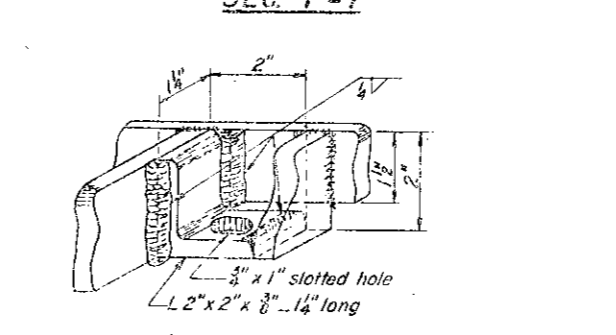
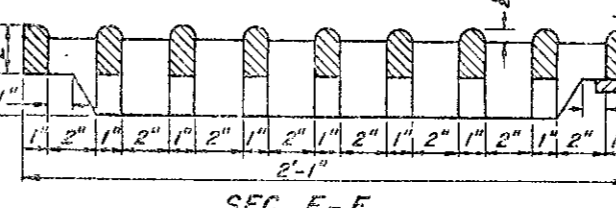
STANDARD 2302-4



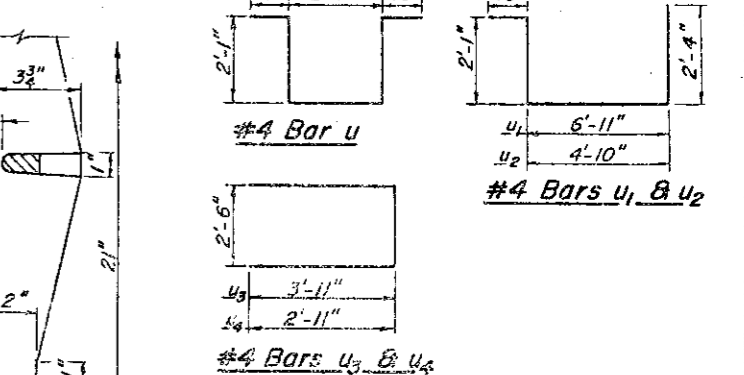
DETAIL of STEEL FRAME
Cast frame to have same basic dimensions.
* 1 space at 2'-1" for Type C
** 2 spaces at 2'-1" for Type D



DETAIL of CAST GRATING
Type C requires 2 grates
Type D requires 3 grates



DETAIL of STEEL GRATING
Type C requires 2 grates
Type D requires 3 grates



Material Required for One Type D Inlet Box

Bar	No.	Size	Length
u	6	#4	8'-5"
u1	3	#4	12'-2"
u3	4	#4	10'-4"
Concrete - Class X or Precast		Cu. Yds.	1.2
Reinf. Bars		Lbs.	100
Grating		Sq. Ft.	11.0

Material Required for One Type C Inlet Box

Bar	No.	Size	Length
u	6	#4	8'-5"
u2	3	#4	10'-1"
u4	4	#4	8'-4"
Concrete - Class X or Precast		Cu. Yds.	0.9
Reinf. Bars		Lbs.	80
Grating		Sq. Ft.	7.3

GENERAL NOTES

When Inlet Box or Boxes are not required, surface of the shoulder pavement shall be finished to provide a smooth transition from back of the abutment to normal approach roadway shoulder.

See plans for location of bridge approach shoulder pavement.

Use Type C Inlet Box for 4' thru 6' shoulder widths; use Type D Inlet Box for 7' and wider shoulder widths.

For placement of approach shoulder pavement on existing construction substitute expansion anchor ties for tie bars. For non-rigid approaches, shoulder pavement will be as shown except omit tie bars in approach pavement.

The material for Pipe Drains-12" shall be either corrugated steel or aluminum alloy pipe.

The P.C. Concrete used in the shoulder slab shall meet the requirements of Section 40B of the Standard Specifications.

The lengths of #4 bars used in the approach shoulder pavement shall be as required to accommodate the length, width and skew of the slab.

Class X concrete or precast concrete shall be used for the inlet. Precast concrete shall be in accordance with Sections 505.01 thru 505.05 of the Standard Specifications except that the concrete strength shall be 4000 p.s.i. after 28 days.

All exposed edges of the inlet, except the upper perimeter, shall be beveled 1/4".

Shop drawings will not be required for precast Inlet Boxes.

A 3" deep sand bedding conforming to Article 703.01 (FA 1 or FA 2) shall be provided under full length and width of precast units, and all voids around the pipe drain entrance, both inside and outside, shall be sealed with mortar.

The grating shall seat firmly in the frame and steel grates shall be secured to the frame with a locking device as shown. Cast grates will not require the locking device.

Steel grating and frames shall conform to Article 710.04 of the Standard Specifications and shall be galvanized to AASHTO Specification M111 after fabrication.

Cast grating and frames shall conform to Article 710.17 of the Standard Specifications. Cast grating and frames shall not be galvanized.

Pipe drains shall be installed, measured and paid for in accordance with Section 607 of the Standard Specifications.

Metal End Sections shall be installed, measured and paid for in accordance with Section 511 of the Standard Specifications.

Bridge approach shoulder pavement will be measured in place and paid for in square yards as P.C. CONCRETE BRIDGE APPROACH SHOULDER PAVEMENT which shall include the cost of subgrade preparation, expansion anchor ties, reinforcement and joint fillers. In computing the area for payment, a deduction will be made for the area displaced by the inlet. (1.2 Sq. Yds. Type C; 1.7 Sq. Yds. Type D)

The contract unit price "Each" for TYPE D INLET BOX STANDARD 2324 or TYPE C INLET BOX STANDARD 2324, in place, shall include the frames and grating, class X or precast concrete, reinforcement bars, excavation, bedding when required, and compacted backfilling.

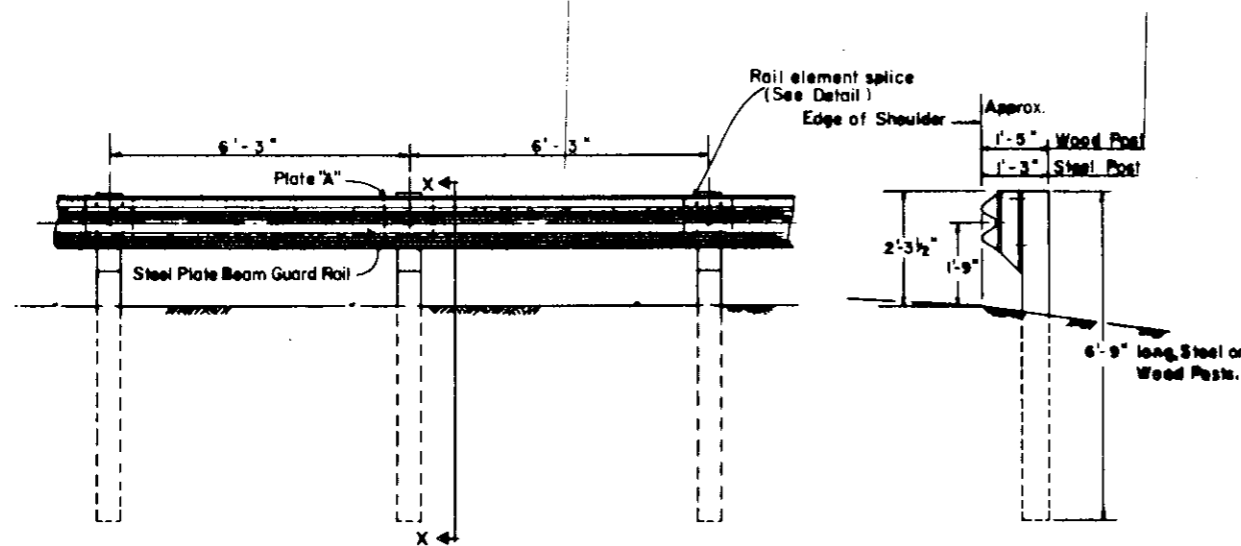
The contract unit price "Each" for CONCRETE THRUST BLOCKS, in place, shall include excavation and compacted backfilling.

BRIDGE APPROACH SHOULDER PAVEMENT

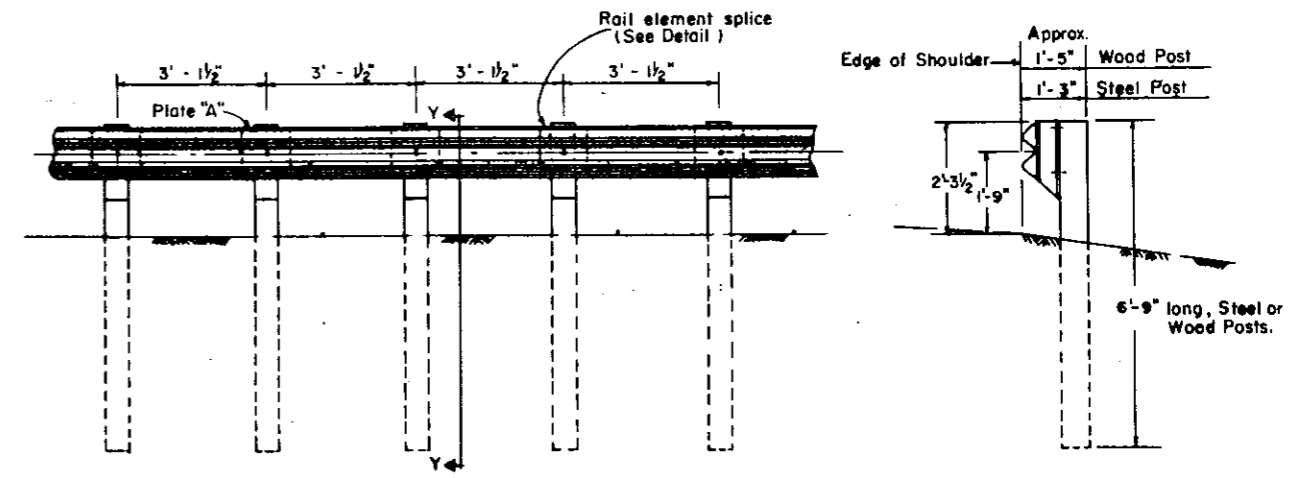
Illinois Department of Transportation

APPROVED June 18, 1980

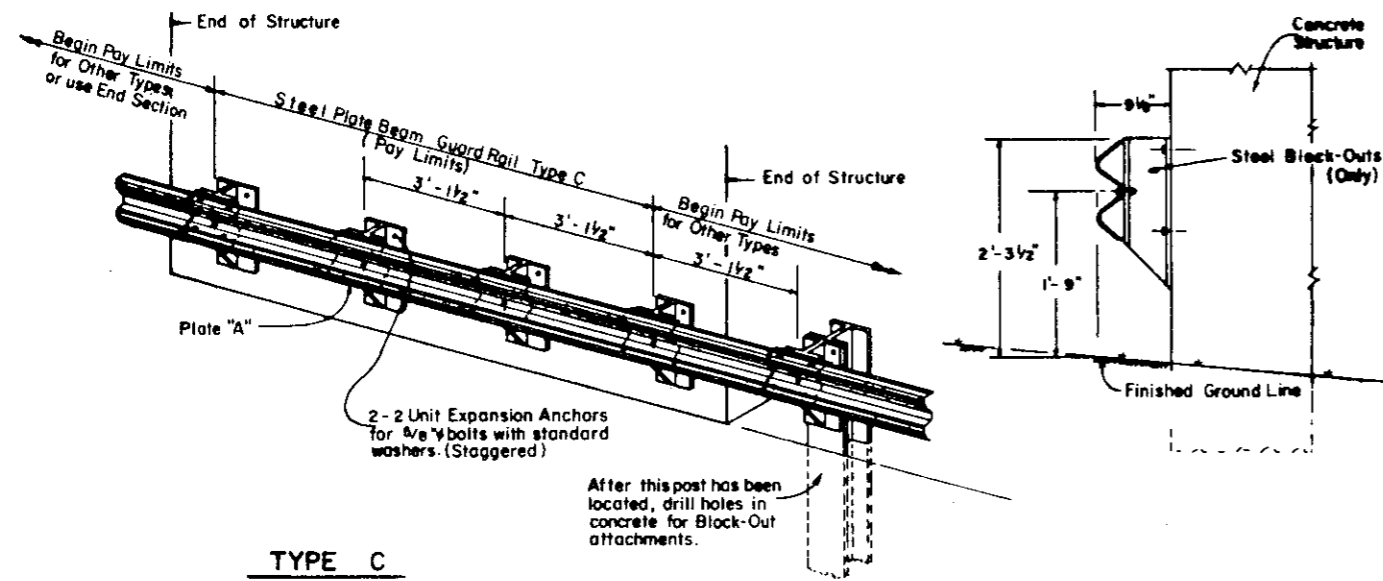
ISSUED 12-1-69



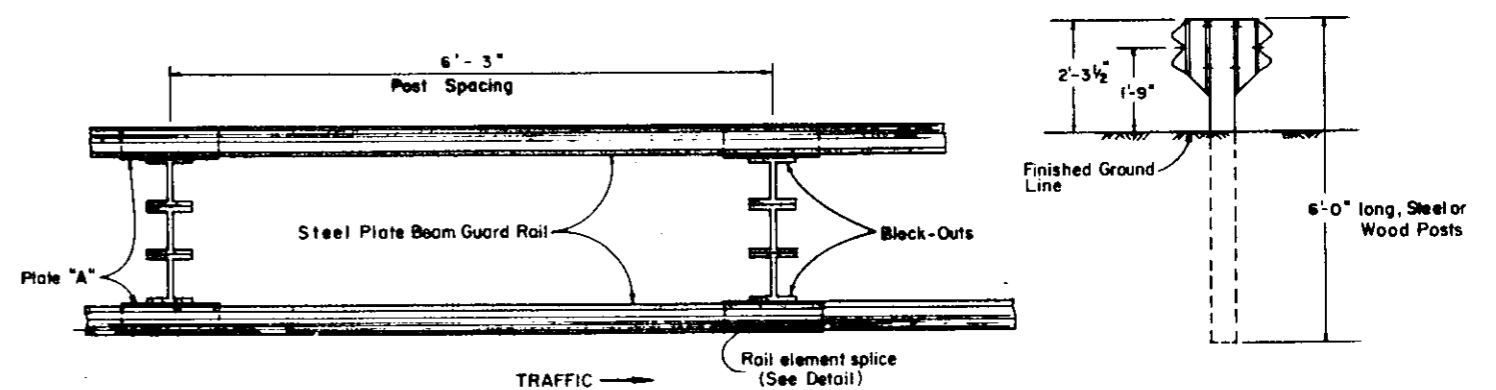
TYPE A
(6'-3" Typical Post Spacing)



TYPE B
(3'-1 1/2" Closed Post Spacing)



TYPE C
(3'-1 1/2" Block-Out Spacing)

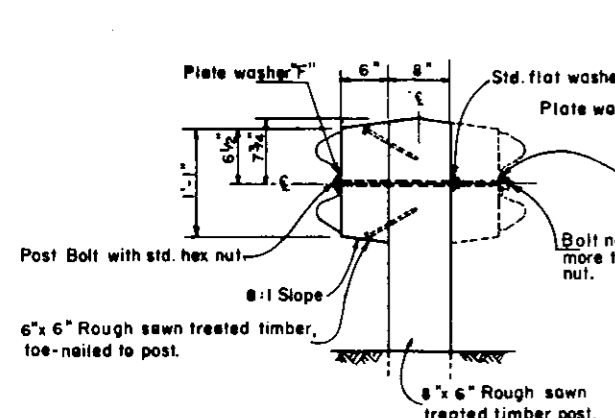


TYPE D
(Double Steel Plate Beam Guard Rail,
with 6'-3" Typical Post Spacing)

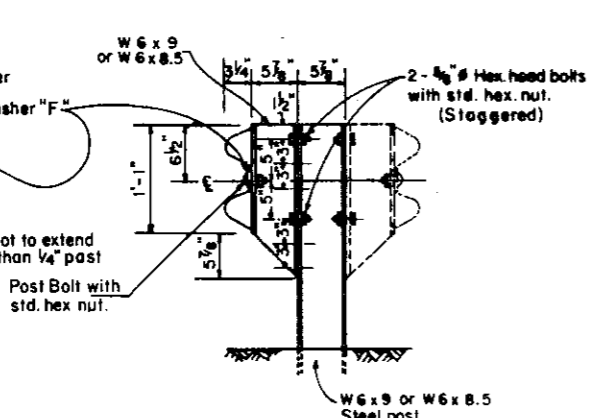
Illinois Department of Transportation
 PASSED July 25 1979
 APPROVED July 25 1979
 ISSUED 2-11-80

STEEL PLATE BEAM GUARD RAIL
 TYPES A, B, C & D
 Sheet 1 of 2 Sheets
 STANDARD 2230-13

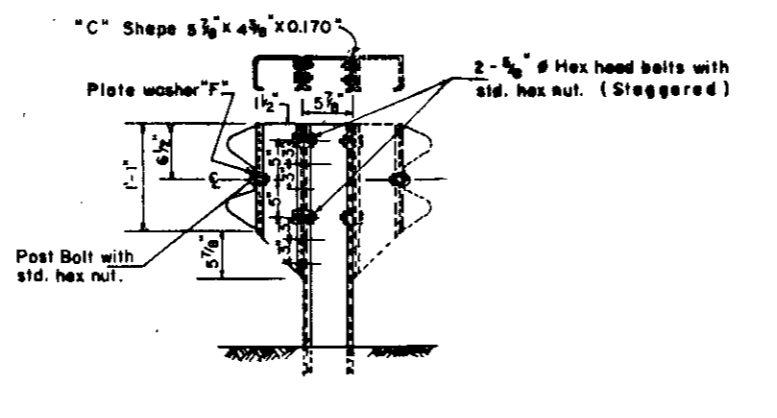
E-31K



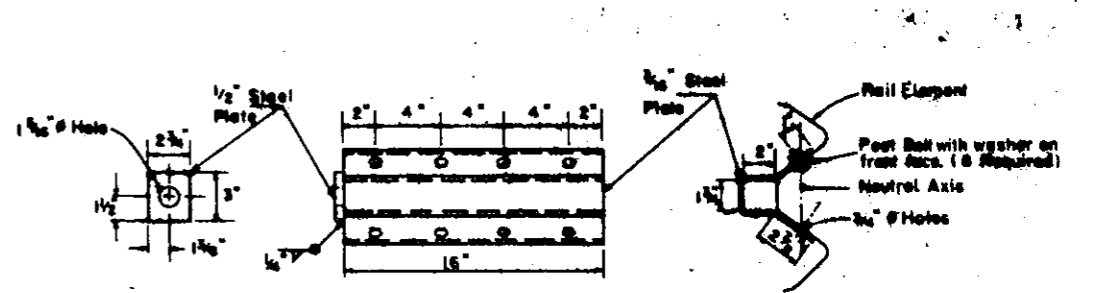
TYPICAL DETAIL OF WOOD POST CONSTRUCTION



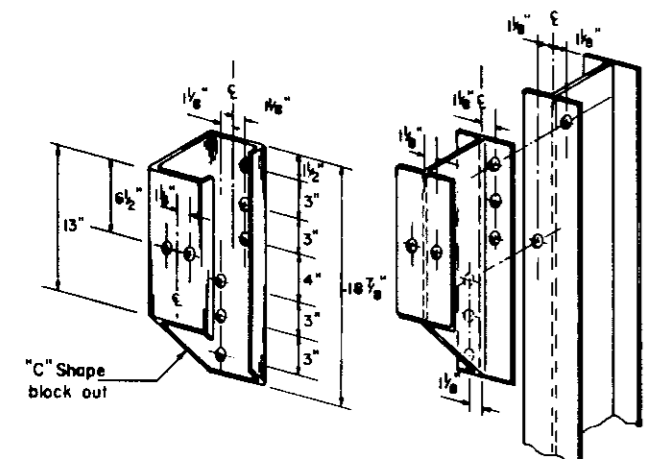
TYPICAL DETAIL OF STEEL POST CONSTRUCTION



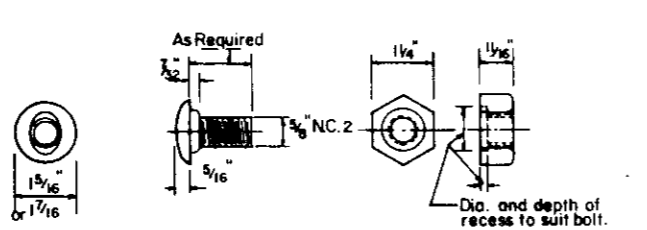
TYPICAL DETAIL OF STEEL POST CONSTRUCTION (ALTERNATE "C" SHAPE)



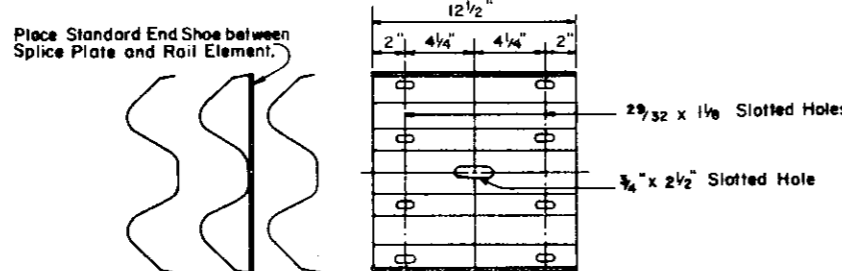
ANCHOR PLATE "T" DETAILS
Anchor Plate "T" shall be used to attach cable assembly to guard rail when required on Traffic Barrier Terminals.



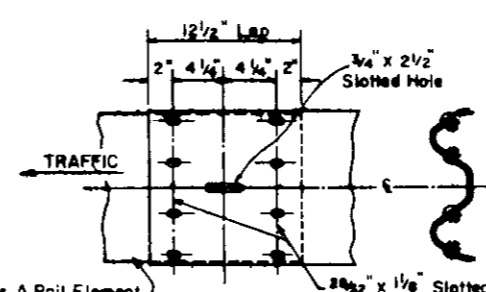
BLOCK-OUT DETAILS



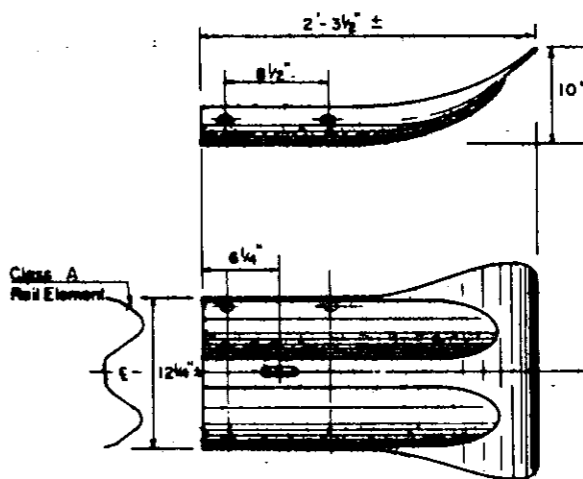
POST OR SPLICE BOLT & NUT



SPLICE PLATE



RAIL ELEMENT SPLICE



END SECTION

NOTE:
End Section shall be used only when specified on the contract plans.
Cost included in the bid unit price for Guard Rail.

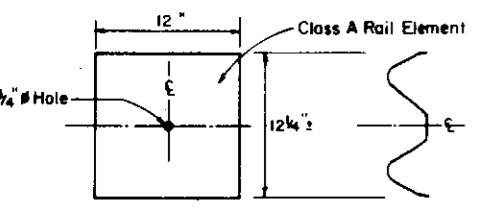


PLATE "A"

NOTE:
"Plate A" shall be placed between rail element and block-out at all non-splice mounting points.

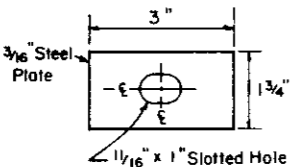
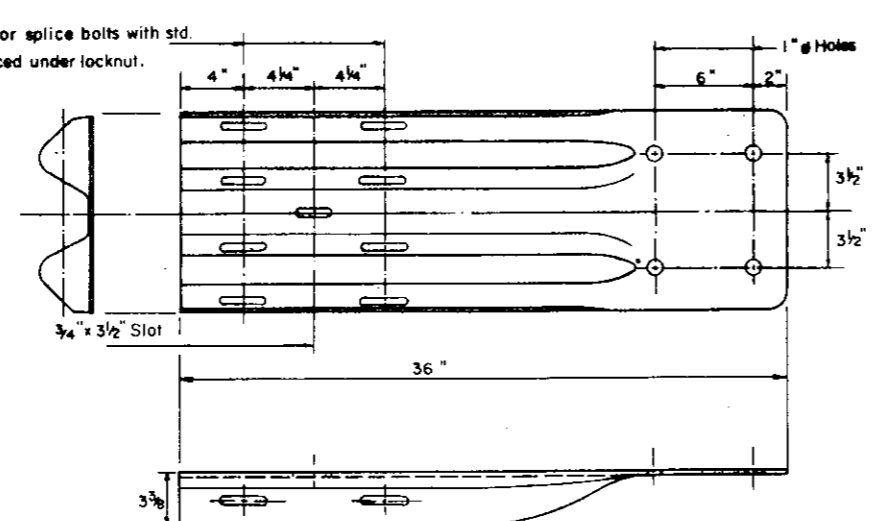


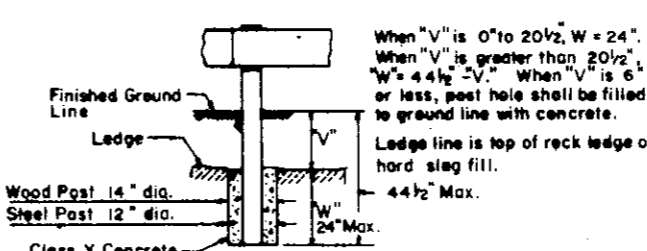
PLATE WASHER "F"

Plate Washer "F" shall be used at all locations where rail element is bolted to a block-out unless otherwise noted.



STANDARD END SHOE

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guard rail movement.
The Standard End Shoe shall be attached to the concrete with Pre-drilled or Self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.



FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

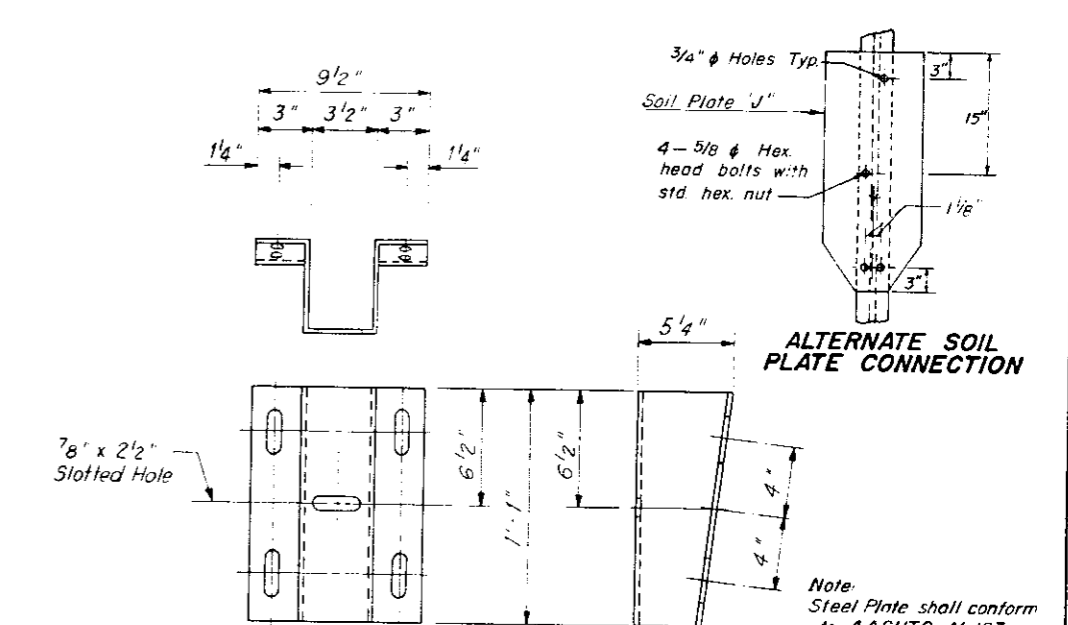
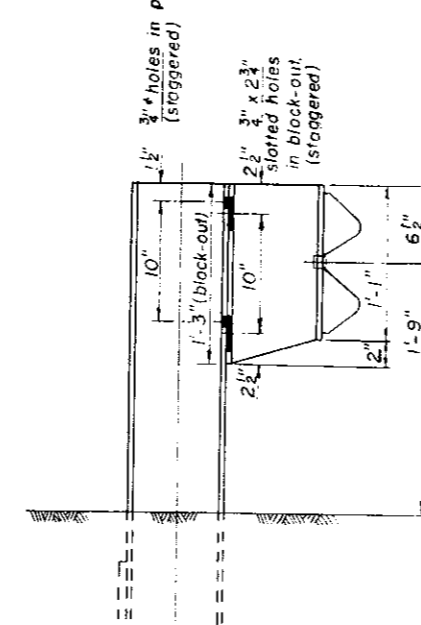
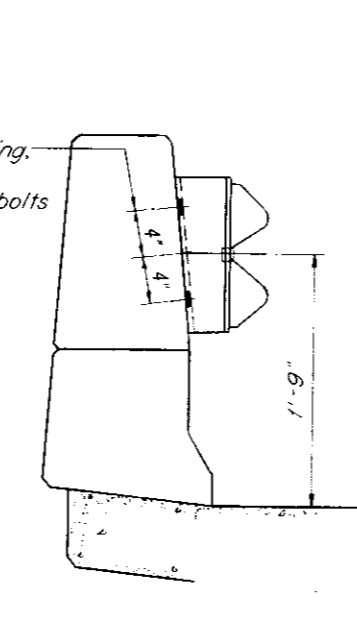
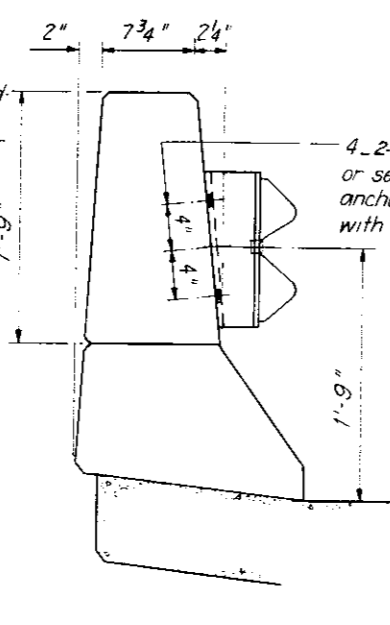
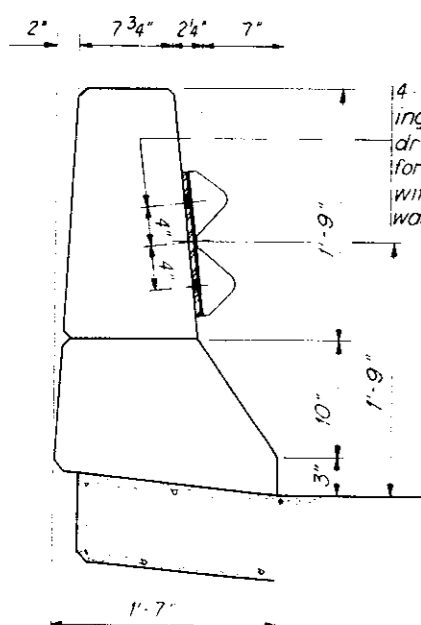
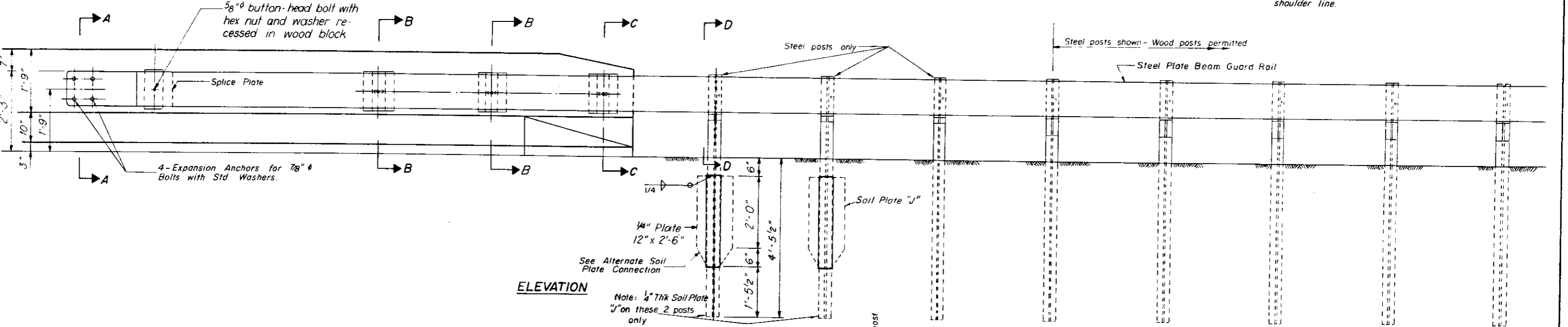
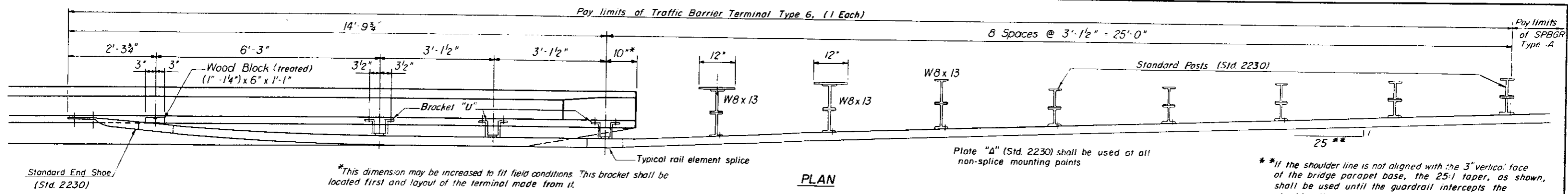
When "V" is 0" to 20 1/2", W = 24".
When "V" is greater than 20 1/2", W = 4 1/2" - "V". When "V" is 6" or less, post hole shall be filled to ground line with concrete.
Ledge line is top of rock ledge or hard slag fill.
4 1/2" Max.
24" Max.

GENERAL NOTES

All rail element shall be Class A unless otherwise noted.
All holes in posts and block-outs shall be 3/4 inch.
All concrete, and accessories used in the placing of the guard rail shall be included in the bid unit price for guard rail.
Rail element may be furnished in nominal lengths of either 12'-6" or 25'-0".
All rail elements and accessories shall conform to AASHTO M-180 unless otherwise noted.
For steel block-outs attached to wood posts, use 2-3/8 inch lag bolts (staggered) in pre-drilled post holes.
The Contractor shall load test 10% of all expansion anchor bolts in guard rail installations in the presence of the Engineer. The equipment and method used shall meet the approval of the Engineer. The minimum test load shall be 8,000 pounds for 7/8 inch bolts and 3,000 pounds for 3/4 inch bolts in direct pull. For each anchor that fails the test requirements, two (2) more anchor bolts, picked by the Engineer shall be tested. Each anchor bolt that fails to meet the test requirement shall be reset or removed and the hole drilled deeper. All reset anchor bolts shall meet minimum test requirements.

Illinois Department of Transportation
ED July 25 1979
Engineer of Design Operations
APPROVED July 25 1979

**STEEL PLATE BEAM
GUARD RAIL**
(Sheet 2 of 2 Sheets)
STANDARD 2230-13



GENERAL NOTES:

For details of guardrail not shown see Standard 2230

When a bridge expansion joint exists between the End Shoe and the first post, all splice bolts at the End Shoe and post bolts at the brackets shall be fitted with a locknut or double nuts tightened only to a point that will allow guardrail movement.

Illinois Department of Transportation

PASSED Aug 31, 1979

Engineer of Bridge and Traffic Structures

APPROVED Aug 31, 1979

Engineer of Design

ISSUED 8-1-77

**TRAFFIC BARRIER
TERMINAL TYPE 6**

STANDARD 2341.1

F-3.300