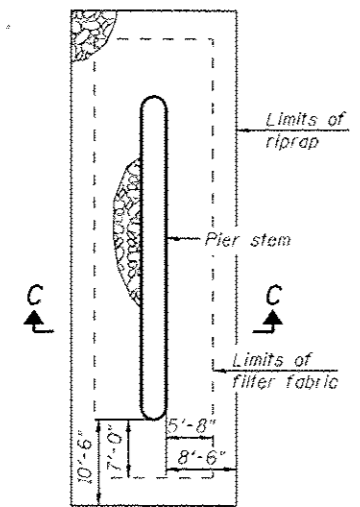


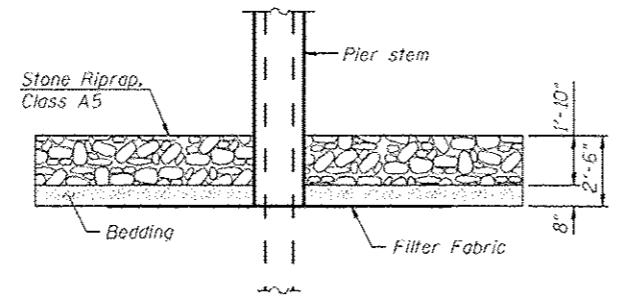
SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures.
(See Special Provisions)

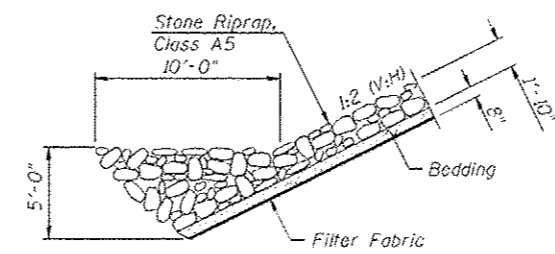
Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



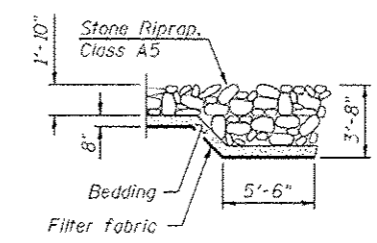
PIER 2 RIPRAP DETAIL



SECTION C-C



SECTION A-A



SECTION B-B

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts (in painted areas and ASTM A325 Type 3 in unpainted areas). Bolts 7/8-in. ϕ , holes 15/16-in. ϕ , unless otherwise noted.

Calculated weight of Structural Steel = 465,510 Pounds.

All structural steel shall be AASHTO M 270 Grade 50W (except approach expansion joints which shall be AASHTO M 270 Grade 36).

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 1'-6". Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

Seal coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.

Current Ratings on File for Existing Structure

S.N. 069-0520:
Inventory - HS 18.9
Operating - HS 31.6
Live Load Restrictions: No

Inventory and Operating Ratings and Live Load Restrictions are provided for information only. Inventory and Operating Ratings are based on HS Loading and configuration. Live Load Restrictions are based on Illinois legal loads and configurations. The Ratings and Live Load Restrictions are not necessarily representative of capacities to support the Contractor's equipment.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Granular Backfill for Structures	Cu. Yd.		178	178
Stone Riprap, Class A5	Sq. Yd.		1,342	1,342
Filter Fabric	Sq. Yd.		1,202	1,202
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		358	358
Cofferdam Excavation	Cu. Yd.		116	116
Cofferdam (Type 2) (Location-1)	Each		1	1
Concrete Structures	Cu. Yd.		219.4	219.4
Concrete Superstructure	Cu. Yd.	455.6		455.6
Bridge Deck Grooving	Sq. Yd.	1,434		1,434
Seal Coat Concrete	Cu. Yd.		32.3	32.3
Protective Coat	Sq. Yd.	1,820		1,820
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	4,662		4,662
Reinforcement Bars, Epoxy Coated	Pound	105,320	24,910	130,230
Bar Splitters	Each	1,014	182	1,196
Furnishing Steel Piles HPI2x63	Foot		660	660
Furnishing Steel Piles HPI4x89	Foot		680	680
Driving Piles	Foot		1,340	1,340
Test Pile Steel HPI2x63	Each		2	2
Test Pile Steel HPI4x89	Each		2	2
Name Plates	Each			1
Preformed Joint Strip Seal	Foot	76		76
Anchor Bolts, 1"	Each	56		56
Geocomposite Wall Drain	Sq. Yd.		88	88
Drainage Scuppers, DS-11	Each	2		2
Temporary Sheet Piling	Sq. Ft.		1,134	1,134
Pipe Underdrains for Structures 4"	Foot		166	166
Temporary Soil Retention System	Sq. Ft.		884	884
Concrete Wearing Surface, 5"	Sq. Yd.	252		252
Precast Bridge Approach Slab	Sq. Ft.	2,260		2,260

**Quantity Includes Textured Epoxy Coated Reinforcement bars. See Sheets 14 and 20 of 33.

STATION 194+27.00
BUILT 2011 BY
STATE OF ILLINOIS
F.A.P. RT. 614 SEC. 147B-3
LOADING HL-93
STRUCTURE NO. 069-0520

NAME PLATE
See Std. 515001

FILE NAME =	USER NAME = rjp	DESIGNED - RJP	REVISED - 01/09/2015 ADL
D:\107\105\100049\WD 1 - IL 78 Indian Creek Bridge Plans\GPE & Details.dgn	CHECKED - ADL	DRAWN - RJP	REVISED -
PLOT SCALE = 25.0000' / 1" IN.	CHECKED - ADL		
PLOT DATE = 1/9/2015			

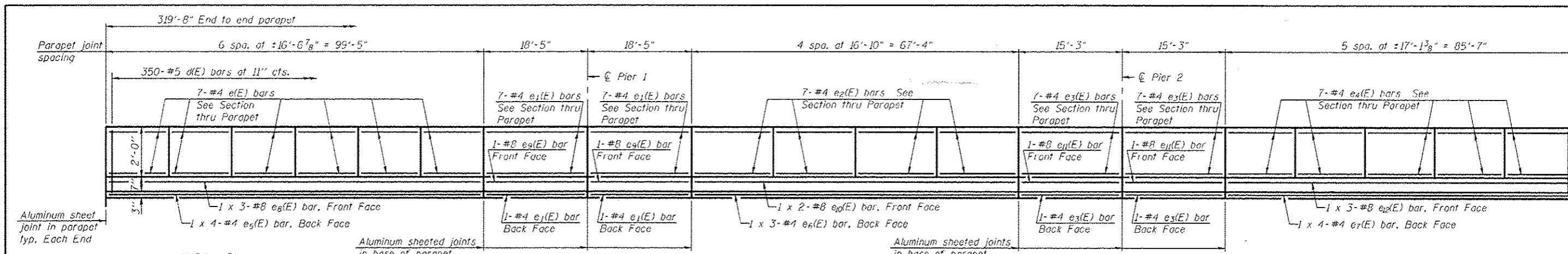
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 069-0520

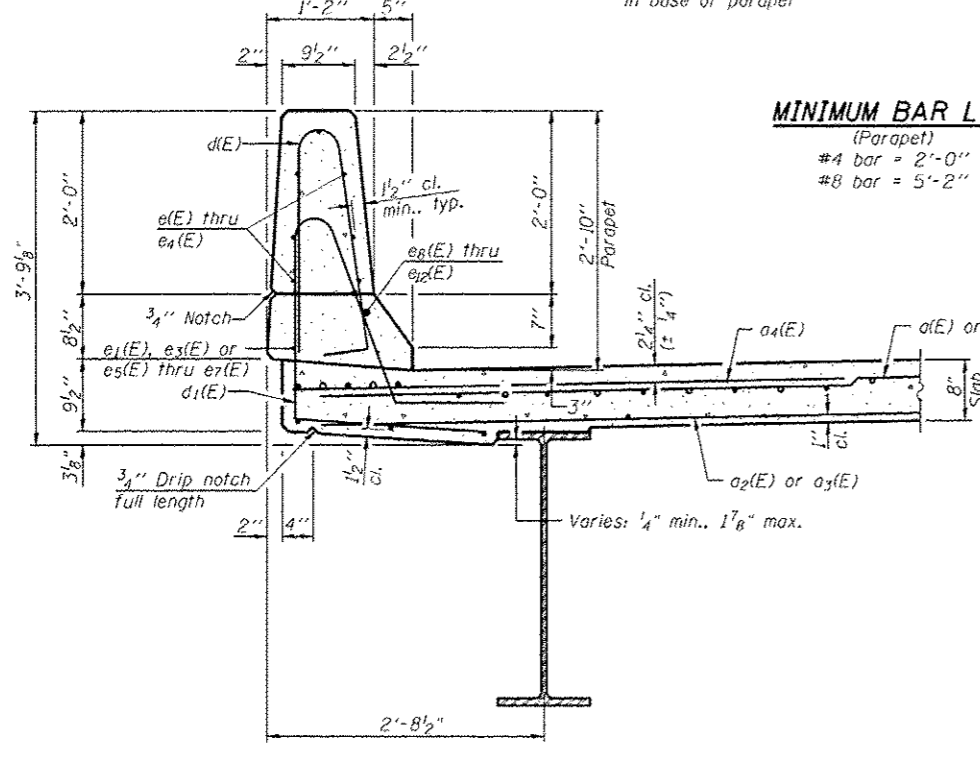
SHEET NO. 2 OF 33 SHEETS

F.A.P. RTE. = 614	SECTION = 147B-3	COUNTY = MORGAN	TOTAL SHEETS = 93	SHEET NO. = 42
			CONTRACT NO. 72A97	

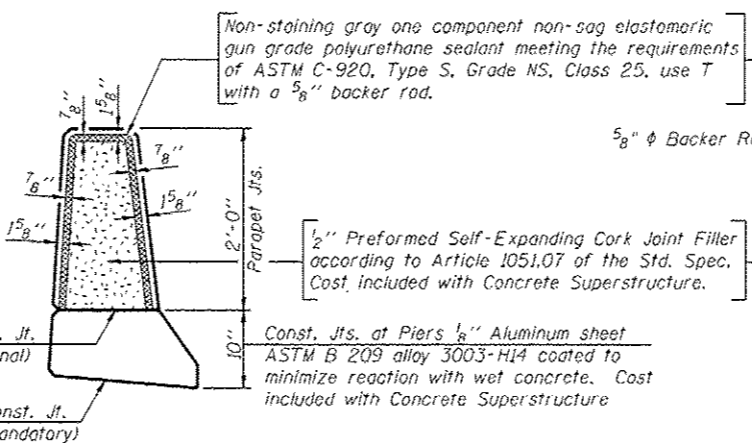
ILLINOIS FED. AID PROJECT
Klingner & Associates P.C.



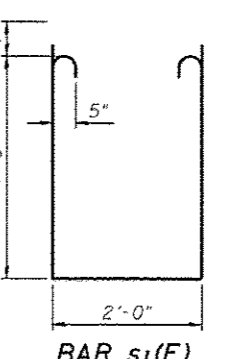
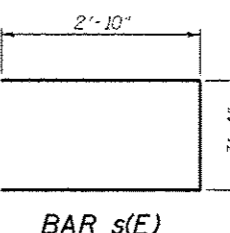
INSIDE ELEVATION OF PARAPET
(East Parapet shown - West Parapet opposite hand)



MINIMUM BAR LAP
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"

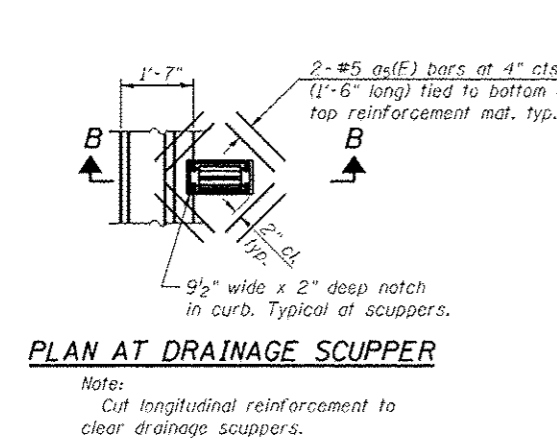


PARAPET JOINT DETAILS



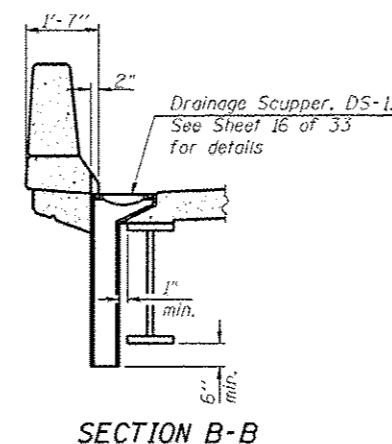
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	549	#5	16'-1"	—
a1(E)	549	#5	22'-0"	—
a2(E)	385	#5	15'-8"	—
a3(E)	385	#5	21'-7"	—
a4(E)	1,098	#6	6'-6"	—
a5(E)	16	#5	1'-6"	—
b(E)	378	#5	37'-10"	—
b1(E)	360	#5	34'-4"	—
b2(E)	114	#6	25'-4"	—
b3(E)	114	#6	20'-10"	—
d(E)	700	#5	5'-7"	—
d1(E)	700	#5	7'-4"	—
e(E)	84	#4	16'-3"	—
e1(E)	32	#4	16'-2"	—
e2(E)	56	#4	16'-7"	—
e3(E)	32	#4	15'-0"	—
e4(E)	70	#4	16'-10"	—
e5(E)	8	#4	26'-4"	—
e6(E)	6	#4	23'-9"	—
e7(E)	8	#4	22'-10"	—
ea(E)	6	#8	36'-6"	—
eb(E)	4	#8	18'-2"	—
ec(E)	4	#8	36'-2"	—
ed(E)	4	#8	15'-0"	—
ee(E)	6	#8	31'-11"	—
m(E)	10	#6	16'-4"	—
m1(E)	10	#6	22'-3"	—
m2(E)	40	#6	5'-2"	—
m3(E)	32	#6	2'-1"	—
m4(E)	42	#5	4'-0"	—
s(E)	74	#5	9'-0"	—
s1(E)	74	#5	12'-6"	—
Reinforcement Bars, Epoxy Coated		Pound	100,660	
Concrete Superstructure		Cu. Yds.	448.8	
Bar Splacers		Each	952	

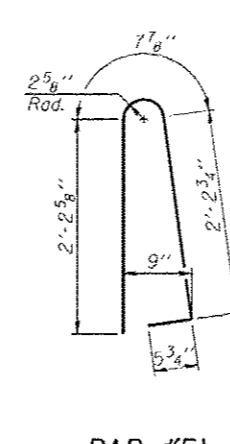


PLAN AT DRAINAGE SCUPPER

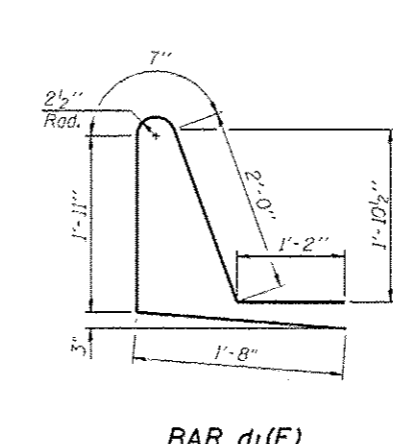
Note: Cut longitudinal reinforcement to clear drainage scuppers.



SECTION B-B



BAR d(E)



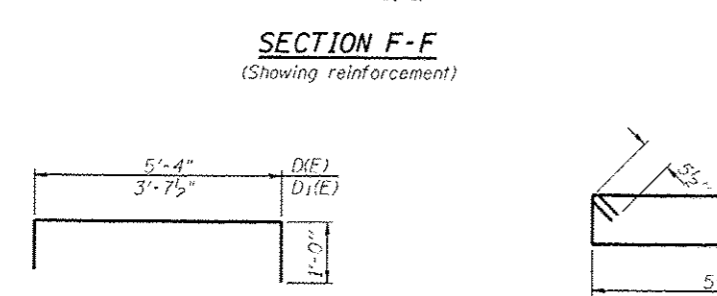
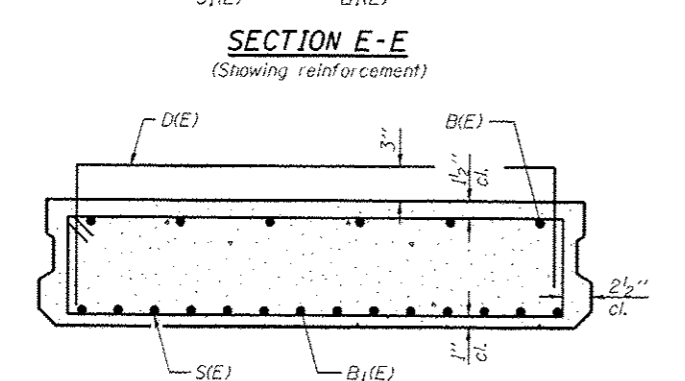
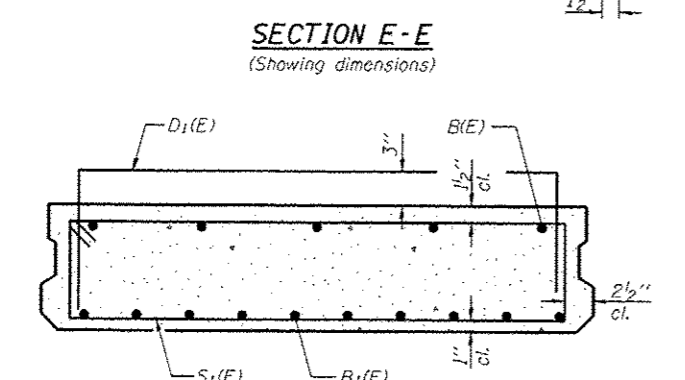
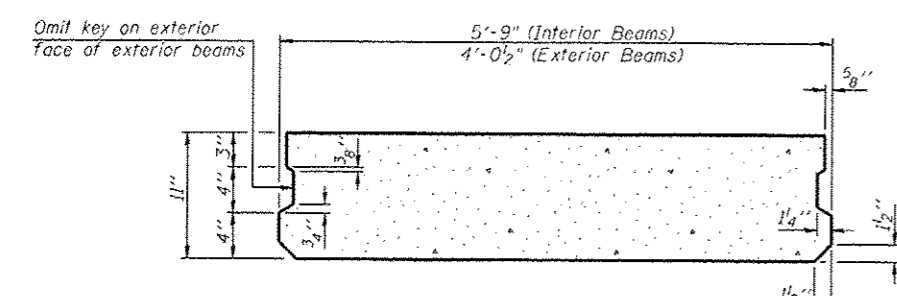
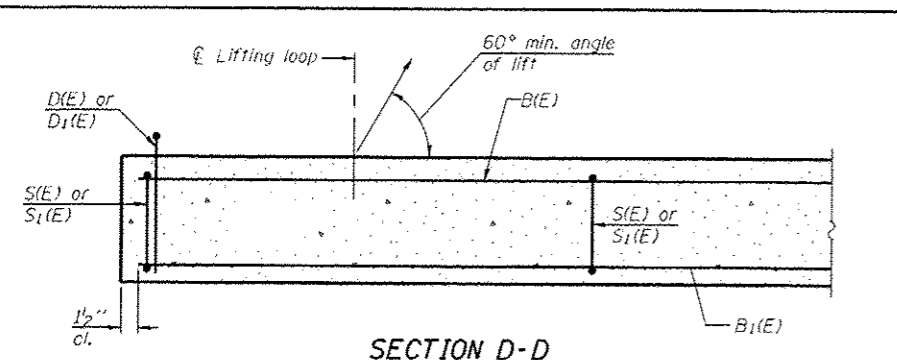
BAR d1(E)

FILE NAME	USER NAME	DESIGNED	REVISED
Q:\101\files\100219\WD 1 - IL 78 Indian Creek Bridge Plans\Superstructure Details.dgn	rjp	RJP	01/09/2015 ADL
PLOT SCALE	DRAWN	CHECKED	REVISED
1/8" = 1'-0"	RJP	ADL	
PLOT DATE	CHECKED	REVISED	
1/9/2015	ADL		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

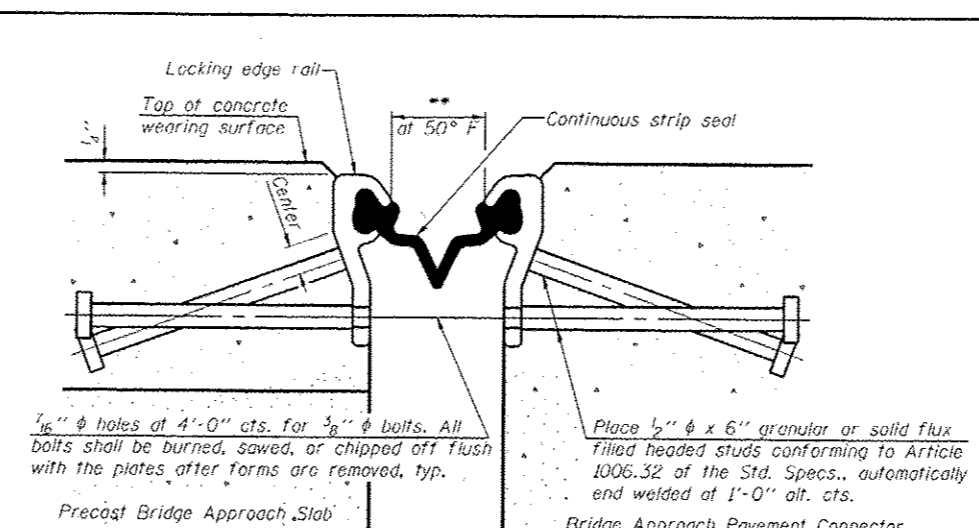
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 069-0520
SHEET NO. 14 OF 33 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
614	1478-3	MORGAN	93	54
				CONTRACT NO. 72A97
ILLINOIS FED. AID PROJECT				

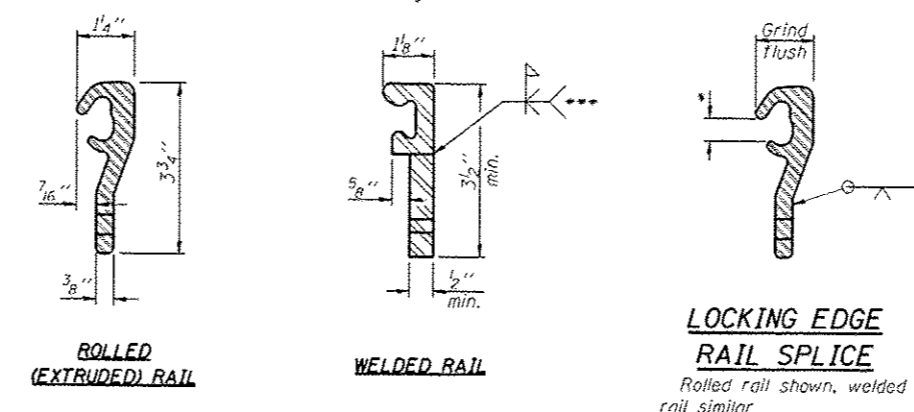


BARS D(E) & D1(E)

BARS S(E) & S1(E)



SECTION THRU STRIP SEAL JOINT (at 1:1 angles)



LOCKING EDGE RAIL

* Omit weld at seal opening.

** The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be 1 1/2" for installation purposes.

*** Back gouge not required if complete joint penetration is verified by mock-up.

BAR LIST EACH INTERIOR BEAM (For information only)

Bar	No.	Size	Length	Shape
B1(E)	6	#5	29'-8"	—
B1(E)	14	#9	29'-8"	—
D1(E)	22	#4	7'-4"	□
S1(E)	58	#5	13'-0"	□

BAR LIST EACH EXTERIOR BEAM (For information only)

Bar	No.	Size	Length	Shape
B1(E)	5	#5	29'-8"	—
B1(E)	10	#9	29'-8"	—
D1(E)	31	#4	5'-8"	□
S1(E)	58	#5	9'-7"	□

Notes:
 The precast bridge approach slab shall be according to Section 504 of the Standard Specifications and shall be paid for at the contract unit price per square foot for Precast Bridge Approach Slab.
 Cast-in-place substitution of Precast Bridge Approach Slab is not allowed.
 Parapet concrete shall be paid for as Concrete Superstructure.
 Parapet and wearing surface reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 Approach footing concrete shall be paid for as Concrete Structures.
 The top surface of precast bridge approach slabs shall be roughened to a depth of 1/4" according to the IDOT "Manual for Fabrication of Precast Prestressed Concrete Products."
 After precast bridge approach slab has been erected, holes shall be drilled into abutment and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of precast slab and allowed to cure fully prior to grouting the longitudinal shear keys.
 Two 3/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. Cost included with Precast Bridge Approach Slab.
 A minimum 2 1/2" diameter lifting pins shall be used to engage the lifting loops during handling.
 Compressive strength of precast concrete, f'c shall be 6,000 psi.
 For additional parapet details, see sheet 18 of 33.
 Any concrete poured monolithically with the wearing surface, such as curbs, will not be paid for separately, but will be included in the cost of Concrete Wearing Surface, 5".
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The strip seal shall extend 6" beyond the edge of the approach slab on each end. The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
 The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
 The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
 The manufacturer's recommended installation methods shall be followed. All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
 Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

TWO APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a6(E)	60	#4	7'-5"	□
a7(E)	62	#4	16'-0"	□
a8(E)	62	#4	21'-11"	□
b4(E)	8	#4	14'-8"	□
b5(E)	72	#4	29'-8"	□
d(E)	68	#5	5'-7"	□
d2(E)	68	#5	5'-11"	□
e13(E)	32	#4	14'-8"	□
e14(E)	4	#6	14'-8"	□
f(E)	160	#4	9'-8"	□
w(E)	80	#5	15'-8"	□
w1(E)	80	#5	21'-7"	□
Concrete Superstructure			Cu. Yd.	6.8
Concrete Structures			Cu. Yd.	28.2
Reinforcement Bars, Epoxy Coated			Pound	8,800
Precast Bridge Approach Slab			Sq. Ft.	2,260
Concrete Wearing Surface, 5"			Sq. Yd.	252
Preformed Joint Strip Seal			Foot	76
Bar Splicers			Each	142

□ Textured Epoxy Coated Reinforcement bars. See Special Provision.

(Sheet 4 of 4)