Bench Mark:
BM 204, Chiseled "□" on attractions sign Mari-Mann Herb Farm on north post of sign. Elev. 693.70
BM 204B, Chiseled "□" on top of crashwall of E.B. U.S. Rte. 36 pier. Elev. 671.705.

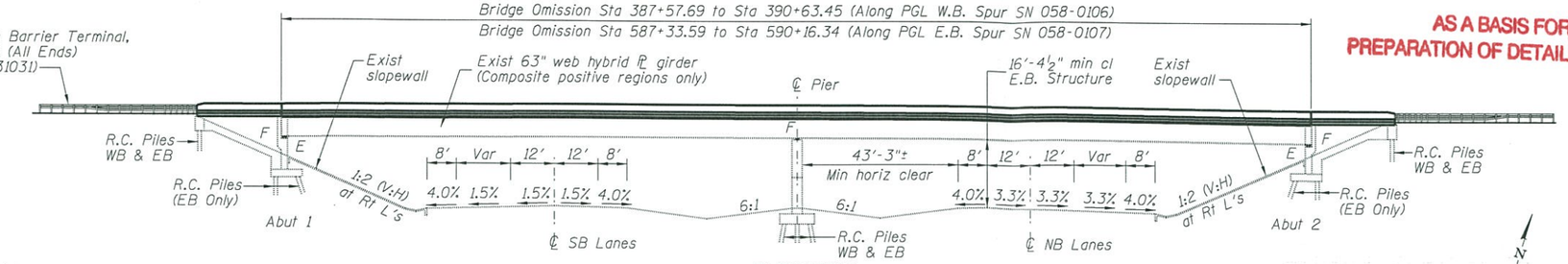
Existing Structure:
The existing structures were originally built in 1976 as F.A.I. 72, Section 58-62-HB-2. The existing structures are two span continuous plate girder structures on spread footing abutments and a multi-column pier on a pile supported footing for the westbound structure and pile bent abutments and a multi-column pier on a pile supported footing for the eastbound structure. The length and width of both structures vary. Traffic is to be maintained utilizing crossovers.

No salvage.

APPROVED

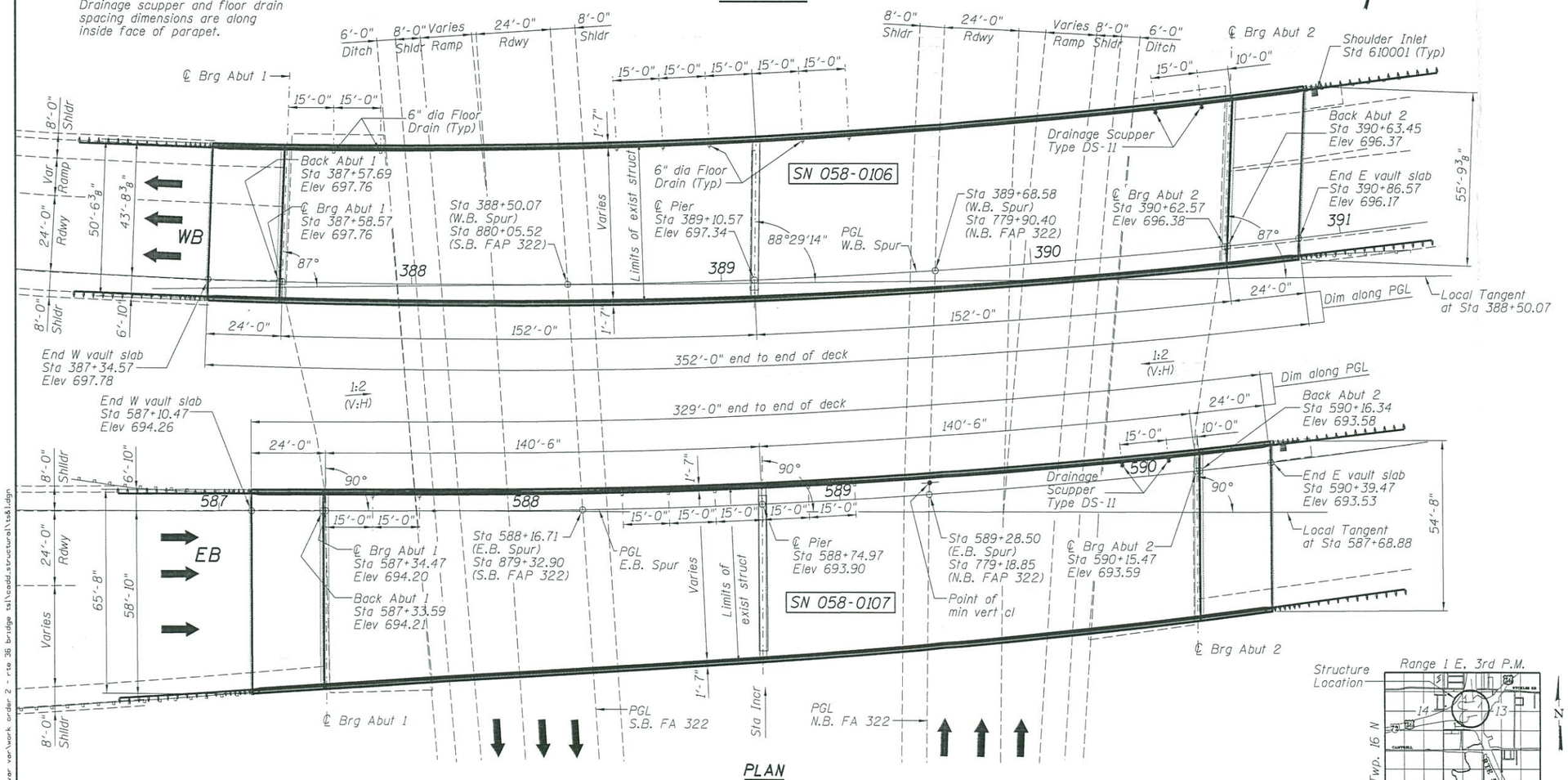
JUL 28 2016

AS A BASIS FOR PREPARATION OF DETAILED PLANS



ELEVATION

Note:
Drainage scupper and floor drain spacing dimensions are along inside face of parapet.



PLAN

SCOPE OF WORK

1. Remove and replace the existing reinforced concrete deck of both structures.
2. Remove and replace the vaulted slabs and expansion joints at both abutments of each structure.
3. Remove and replace the high profile rocker bearings with low profile expansion bearings at each abutment of each structure.
4. The height of the existing crashwalls at piers will be raised to 5'-0" above ground line.
5. Repair abutments, piers and slopewall as required.

LOADING HS-20 (NEW CONST)

Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition

SEISMIC DATA

Seismic Performance Category (SPC) = A
Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.5

DESIGN STRESSES

FIELD UNITS

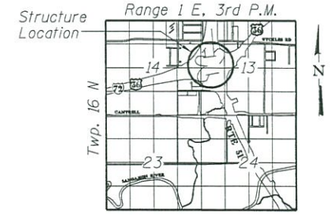
NEW CONSTRUCTION
f'c = 3,500 psi
f'c = 4,000 psi (Deck)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (Structural Steel) (M270 Grade 50)

EXISTING CONSTRUCTION
f'c = 3,500 psi (Substructure, curb & parapet)
f'c = 3,000 psi (Superstructure slab)
fy = 36,000 psi (Reinforcement)
fy = 36,000 & 50,000 psi (Structural steel)

HIGHWAY CLASSIFICATION

F.A.P. Rte. 323 over F.A.P. Rte. 322
Functional Class: Other Principal Arterial
ADT: 3300 (2018); 4100 (2038)
ADTT: 420 (2018); 520 (2038)
DHV: 363 (2018); 451 (2038)
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.
One-Way Traffic

F.A.P. Rte. 322
Functional Class: Freeway and Expressway
ADT: 2270 (2018); 2882 (2038)
ADTT: 515 (2018); 654 (2038)
DHV: 249 (2018); 317 (2038)
Design Speed: 70 m.p.h.
Posted Speed: 65 m.p.h.
One-Way Traffic



LOCATION SKETCH

GENERAL PLAN
FAP 323 (US 36) OVER FAP 322 (US 51)
SECTION (58-62HB-2)BR
MACON COUNTY
STATION 389+10.57 (WB)
STATION 588+74.97 (EB)
STRUCTURE NO. 058-0106 (WB)
STRUCTURE NO. 058-0107 (EB)

FILE NAME = i:\idot\6008 - d7 var\work order 2 - rte 36 bridge tsl\cadd\structural\ts&l.dgn

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

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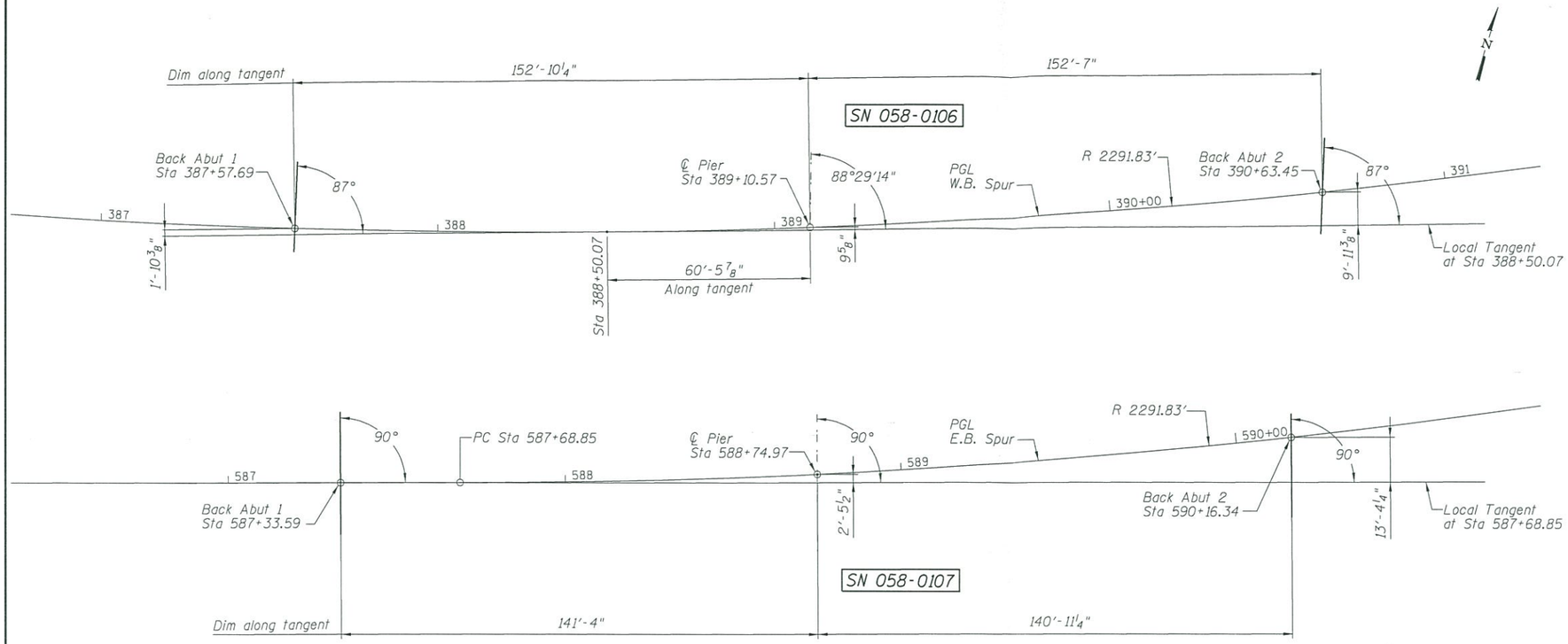
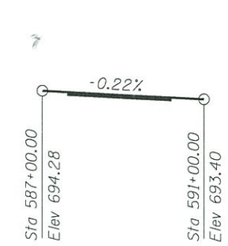
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

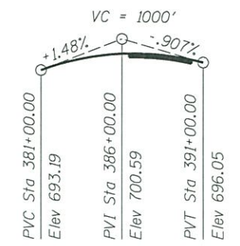
GENERAL PLAN AND ELEVATION
STRUCTURE NO. 058-0106 (WB) & 058-0107 (EB)
SHEET NO. 1 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(58-62-HB-2) BR	MACON		
	SN. 058-0106 (WB) & 0107 (EB)	CONTRACT NO.		
STA.	ILLINOIS	FED. AID PROJECT		

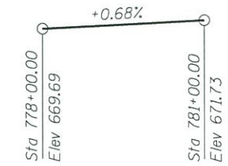




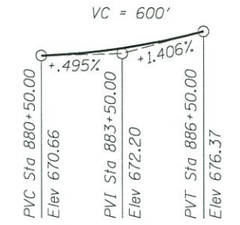
PROFILE GRADE
E.B. SPUR



PROFILE GRADE
W.B. SPUR



PROFILE GRADE
FAP 322 (N.B. LANES)



PROFILE GRADE
FAP 322 (S.B. LANES)

BRIDGE OFFSET SKETCH

EASTBOUND SPUR SUPERELEVATION TRANSITIONS	
EASTBOUND LANES	
CROSS-SLOPE	LOCATION
5.6% 0.0%	586+95
5.6%	588+68.85

LOOKING WEST
○ = PGL LOCATION

HORIZONTAL CURVE DATA

WESTBOUND SPUR

P.I. Sta. 394+33.68
Δ = 55°32'44"
D = 2°30'00"
R = 2291.83'
T = 1215.48'
L = 2235.16'
E = 302.37'
S.E. Run 0.056'/ft
P.C. Sta. 382+20.20
P.T. Sta. 404+55.35

EASTBOUND SPUR

P.I. Sta. 596+17.31
Δ = 40°37'44"
D = 2°30'00"
R = 2291.83'
T = 848.43'
L = 1625.16'
E = 152.00'
S.E. Run 0.056'/ft
P.C. Sta. 587+68.88
P.T. Sta. 603+94.03

F.A. 322 (SB Lanes)

None - On Tangent

F.A. 322 (NB Lanes)

P.I. Sta. 778+03.72
Δ = 23°59'45"
D = 1°00'00"
R = 5729.58'
T = 1217.64'
L = 2399.58'
E = 127.96'
S.E. Run 0.033'/ft
P.C. Sta. 765+86.08
P.T. Sta. 789+85.66

APPROVED
JUL 28 2016
AS A BASIS FOR
PREPARATION OF DETAILED PLANS

FILE NAME = s:\idot\6008 - d7 var var\work order 2 - rte 36 bridge tal\oadd.structural\ts&l2.dgn

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
184-001397

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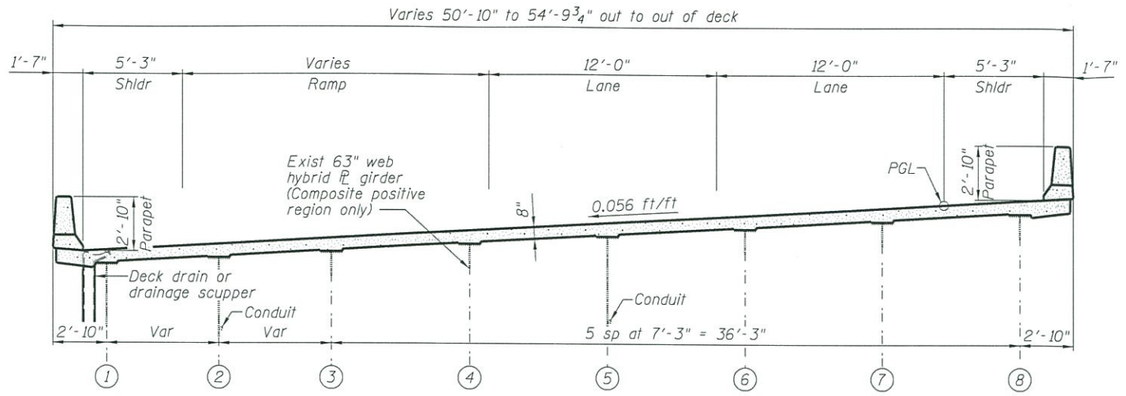
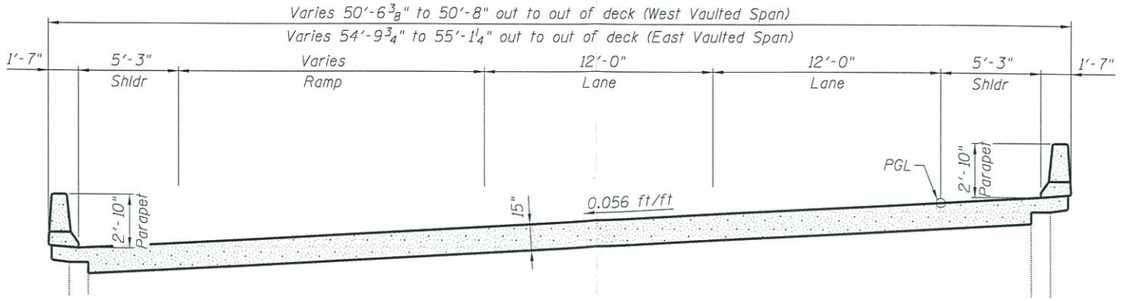
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

OFFSET SKETCH AND DETAILS
STRUCTURE NO. 058-0106 (WB) & 058-0107 (EB)
SHEET NO. 2 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(58-62-HB-2) BR	MACON		
SN. 058-0106 (WB) & 0107 (EB)		CONTRACT NO.		
STA.	ILLINOIS FED. AID PROJECT			

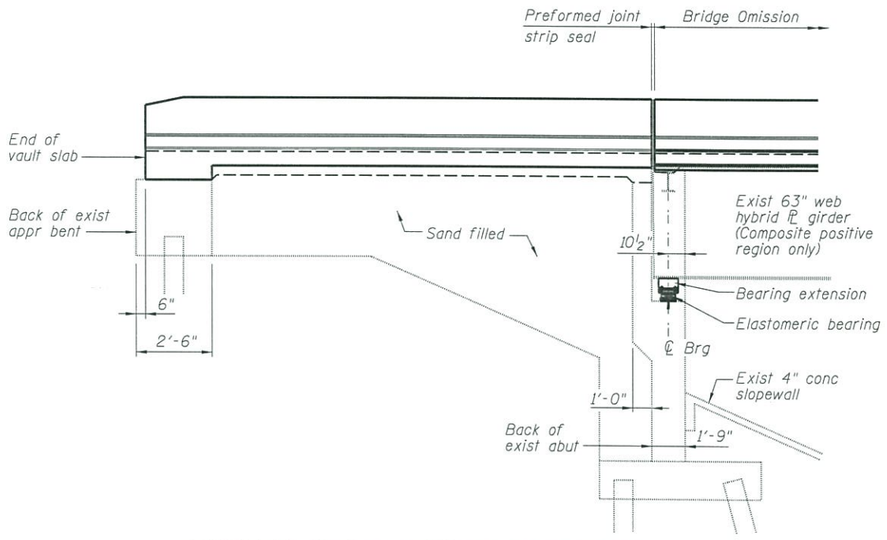


WESTBOUND SPUR CROSS SECTION THRU DECK

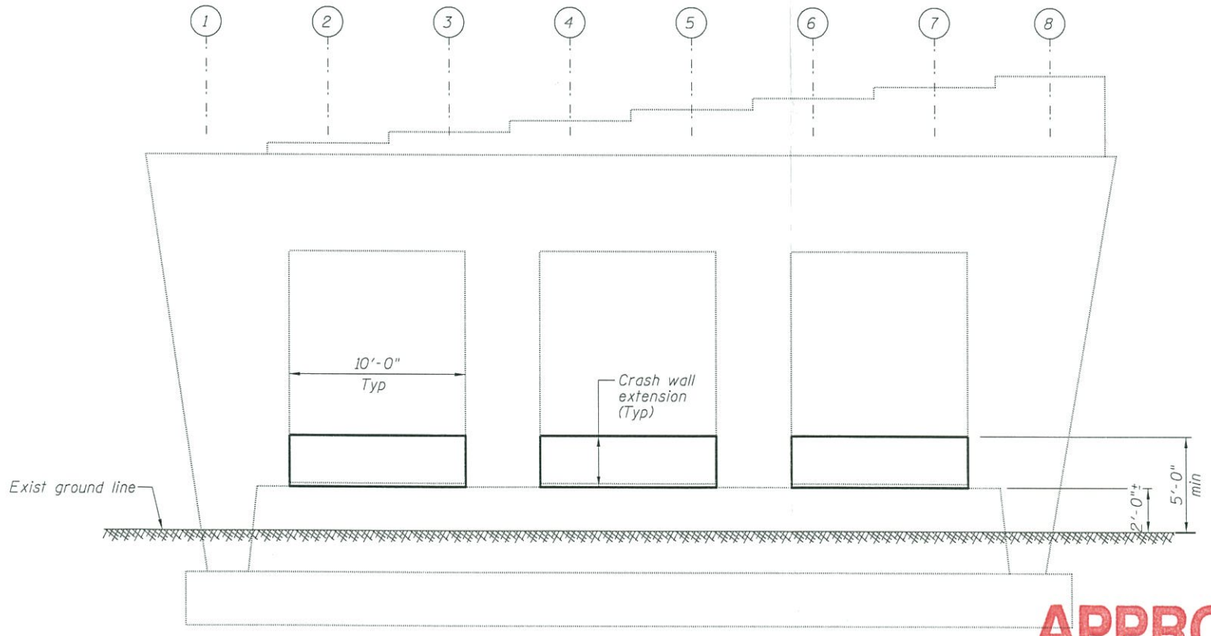


WESTBOUND SPUR CROSS SECTION THRU VAULT SLAB

Note:
Horizontal dimensions shown in cross sections are radial.



WESTBOUND SPUR VAULTED ABUTMENT DETAIL
(Horizontal dimensions at Rt L's except as noted)



ELEVATION
(Looking East)

APPROVED
JUL 28 2016
AS A BASIS FOR PREPARATION OF DETAILED PLANS

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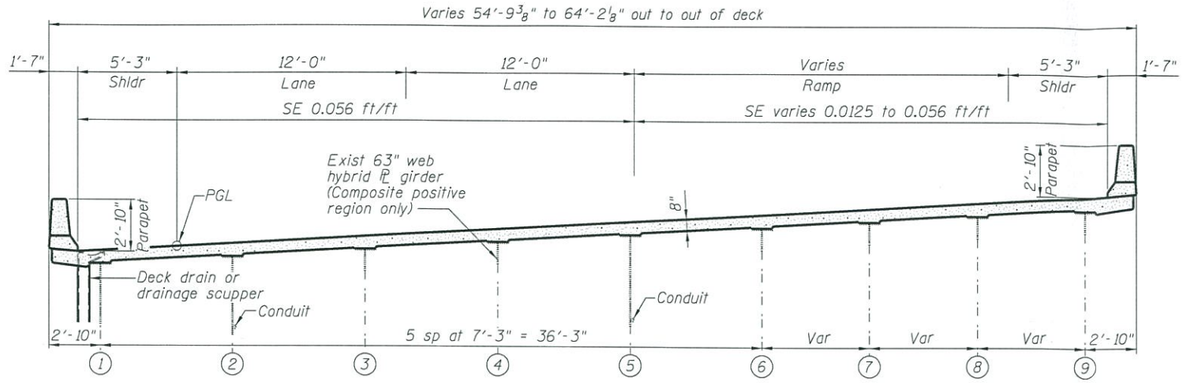
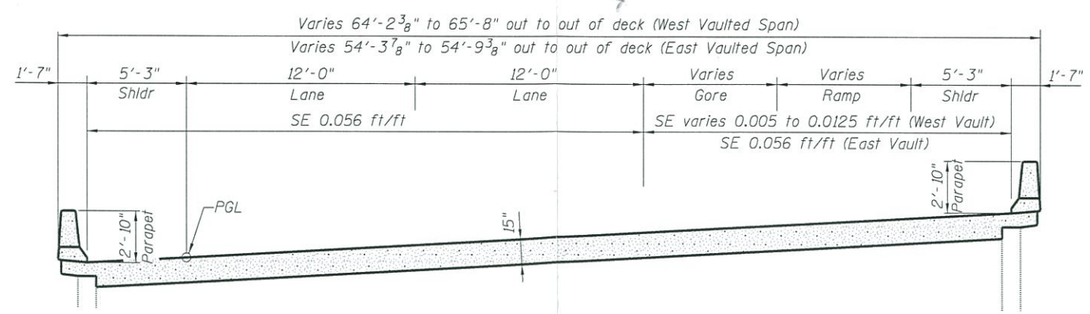
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTIONS AND DETAILS
STRUCTURE NO. 058-0106 (WB)
SHEET NO. 3 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(58-62-HB-2) BR	MACON		
	SN. 058-0106 (WB) & 0107 (EB)	CONTRACT NO.		
STA.	ILLINOIS FED. AID PROJECT			

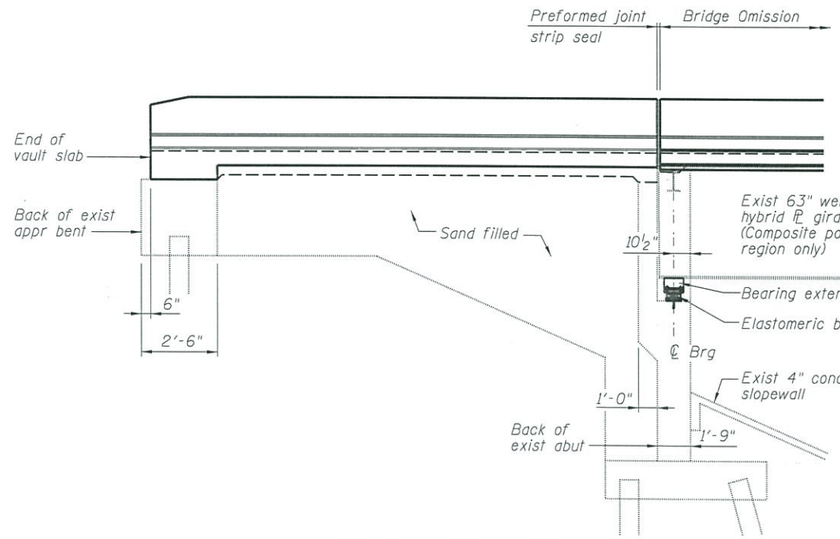


EASTBOUND SPUR CROSS SECTION



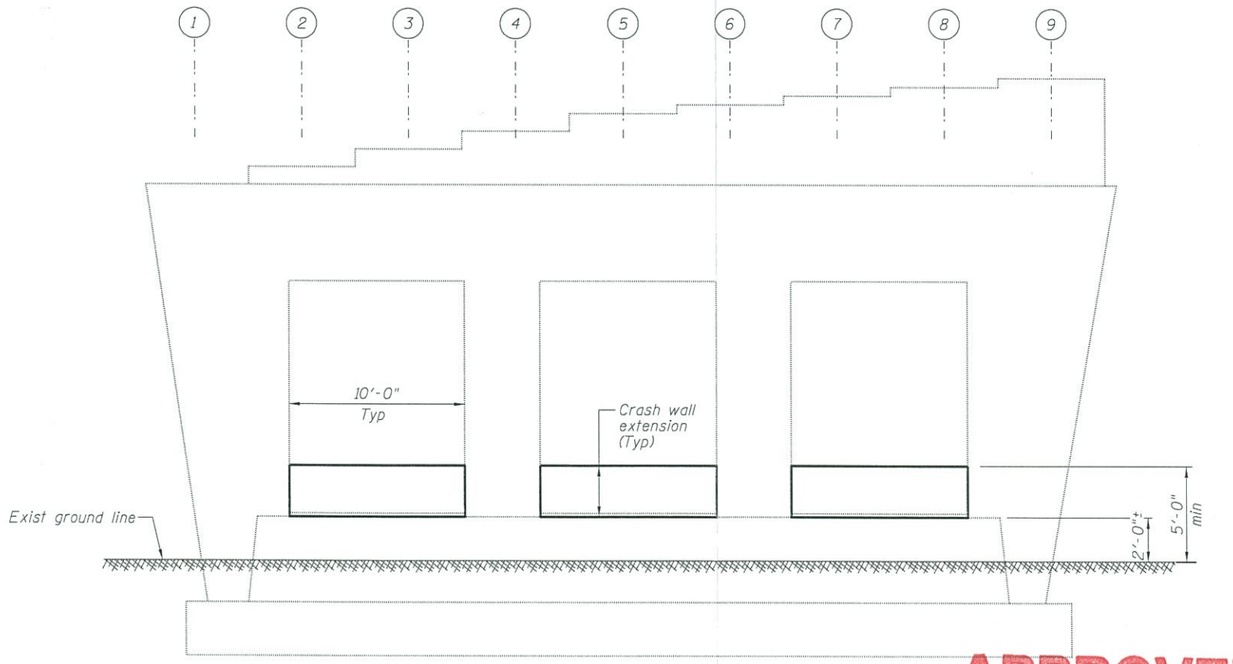
EASTBOUND SPUR CROSS SECTION THRU VAULT SLAB

Note:
Horizontal dimensions shown in cross sections are radial.



EASTBOUND SPUR VAULTED ABUTMENT DETAIL

(Horizontal dimensions at Rt L's except as noted)



ELEVATION

(Looking East)

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JUL 28 2016

AS A BASIS FOR PREPARATION OF DETAILED PLANS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTIONS AND DETAILS
STRUCTURE NO. 058-0107 (EB)
SHEET NO. 4 OF 4 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
323	(58-62-HB-2) BR	MACON		
	SN. 058-0106 (WB) & 0107 (EB)	CONTRACT NO.		
STA.	ILLINOIS FED. AID PROJECT			