CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	1
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

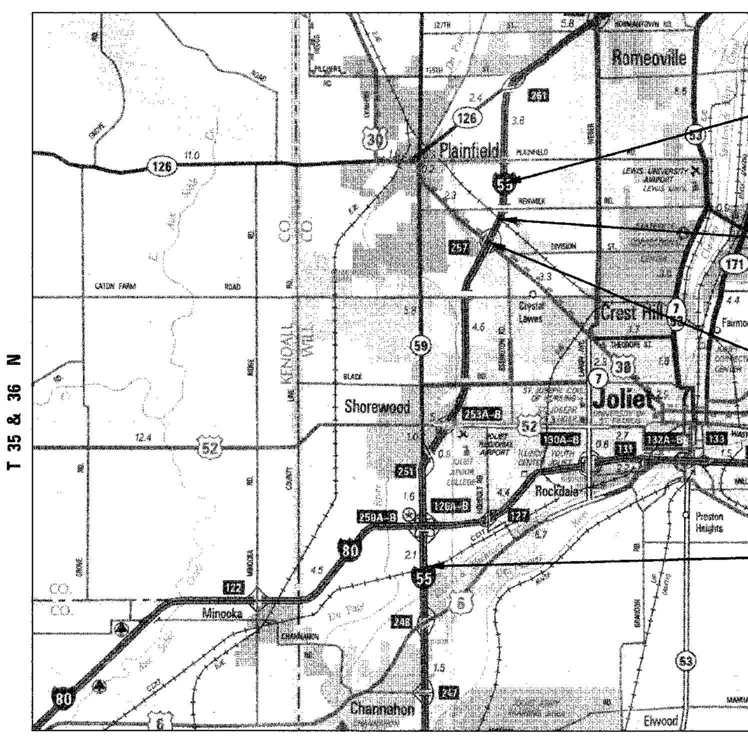
F.A.I. ROUTE 55 (INTERSTATE 55)
BEAM & BEARING FABRICATION

SECTION: 2005–063 I
PROJECT NO.: IM-055-6(222)250

WILL COUNTY
C91–095–06

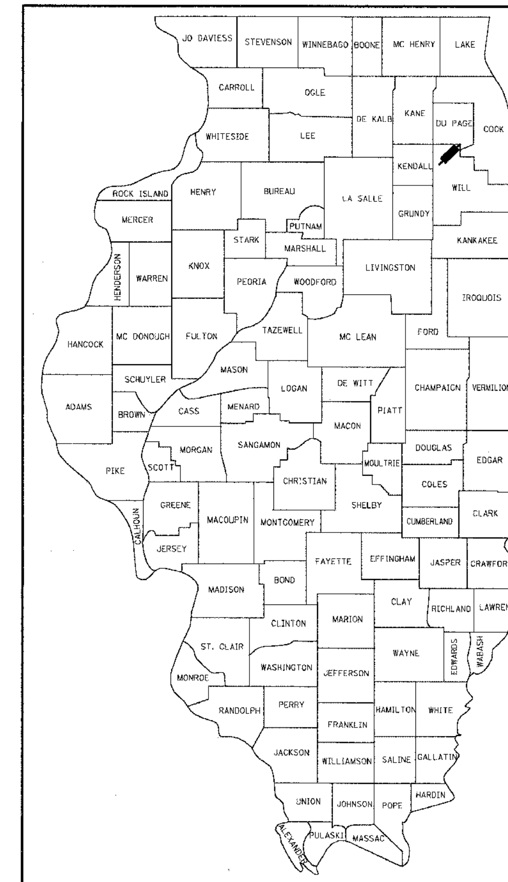
R 9 E

T 35 & 36 N



LOCATION MAP
NOT TO SCALE

D-91-093-05 D-91-094-05



LOCATION OF SECTION INDICATED THUSLY: –

MICROFILMED ______
REEL NUMBER ______
AWARDED ______
RESIDENT ENGINEER ______
AS BUILT CHANGES WERE MADE ON THE FOLLOWING SHEETS ______

0 10' 100' 20' 200' 30' 300' — 1" = 100' — 1" = 10'
0 50' 100' — 1" = 50'
0 50' 100' — 1" = 40'
0 50' 100' — 1" = 30'
0 50' 100' — 1" = 20'

N

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
(JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION)
(800) 892-0123

CONTRACT NO. 60A67

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED May 17 20 06

Diane M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

June 30, 20 06
Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT

June 30, 20 06
Milton R. Sees, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

STATE OF ILLINOIS — JAMAL I. GRAINAWI — 81-5161 — CHICAGO, IL — LICENSED STRUCTURAL ENGINEER

Jamal Grainawi
JAMAL I. GRAINAWI, S.E.
IL. LIC. NO. 081-005161
EXPIRES: 11/30/2006
DATE: 5/15/2006
SHEETS: 23 THROUGH 50

PARSONS BRINCKERHOFF — 230 WEST MONROE STREET, SUITE 900, CHICAGO, IL 60606

STATE OF ILLINOIS — BYRON T. DANLEY — 081-004737 — CHICAGO IL — LICENSED STRUCTURAL ENGINEER

Byron T. Danley
BYRON T. DANLEY, S.E.
IL. LIC. NO. 081-004737
EXPIRES: 11/30/2006
DATE: 5/15/06
SHEETS: 3 THROUGH 22

TENG — TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS 205 N. MICHIGAN AVE. CHICAGO, IL 60601

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

DISTRICT 1 - DESIGN / CONSULTANT SERVICES
PROJECT MANAGER: RAJENDRA SHAH 847-705-4555

CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

INDEX OF SHEETS

SUMMARY OF QUANTITIES

URBAN 90% FED./10% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SB I-55 OVER CSX RR	I-55 OVER US RTE 30	SB I-55 OVER EJ&E RR	NB I-55 OVER EJ&E RR	I-55 OVER MS RR
				CONSTRUCTION TYPE CODE				
				X171-5B	X271-5B	X171-5B	X131-5B	X131-5B
50300410	FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	23	-	8	5	6	4
50300420	FURNISHING ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	20	-	8	5	3	4
50500205	FURNISHING STRUCTURAL STEEL	L SUM	1.0	0.20	0.25	0.30	0.15	0.10
X0322388	STORAGE OF STRUCTURAL STEEL AND BEARINGS	UNIT	377	83	87	102	58	47

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PLOT SCALE = $SCALE$
USER NAME = $USER$

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION

INDEX OF SHEETS & SUMMARY OF QUANTITIES

SCALE: DRAWN BY MDB
DATE 05/19/06 CHECKED BY MJK

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BENCHMARK:

BM 3059: Square cut on top of 36 inch box culvert between I-55 and E. Frontage Road and about 100 feet north of a crossover and about 1200 feet north of CSXRR. El. 548.88

EXISTING STRUCTURE:

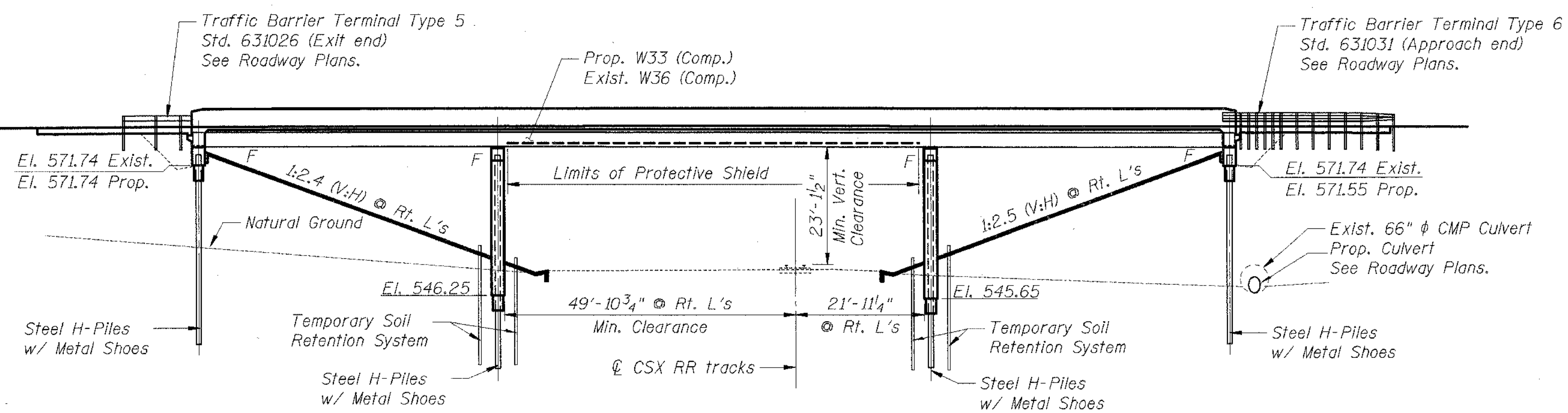
S.N. 099-0312 constructed in 1994. Three span, 202'-10" back to back of abutments, continuous steel multi-beam bridge on solid wall pile bent piers and integral abutments. Wide flange girders composite with deck. 40' between barriers.

SALVAGE:

None.

STAGING:

See Sheet SA-2.

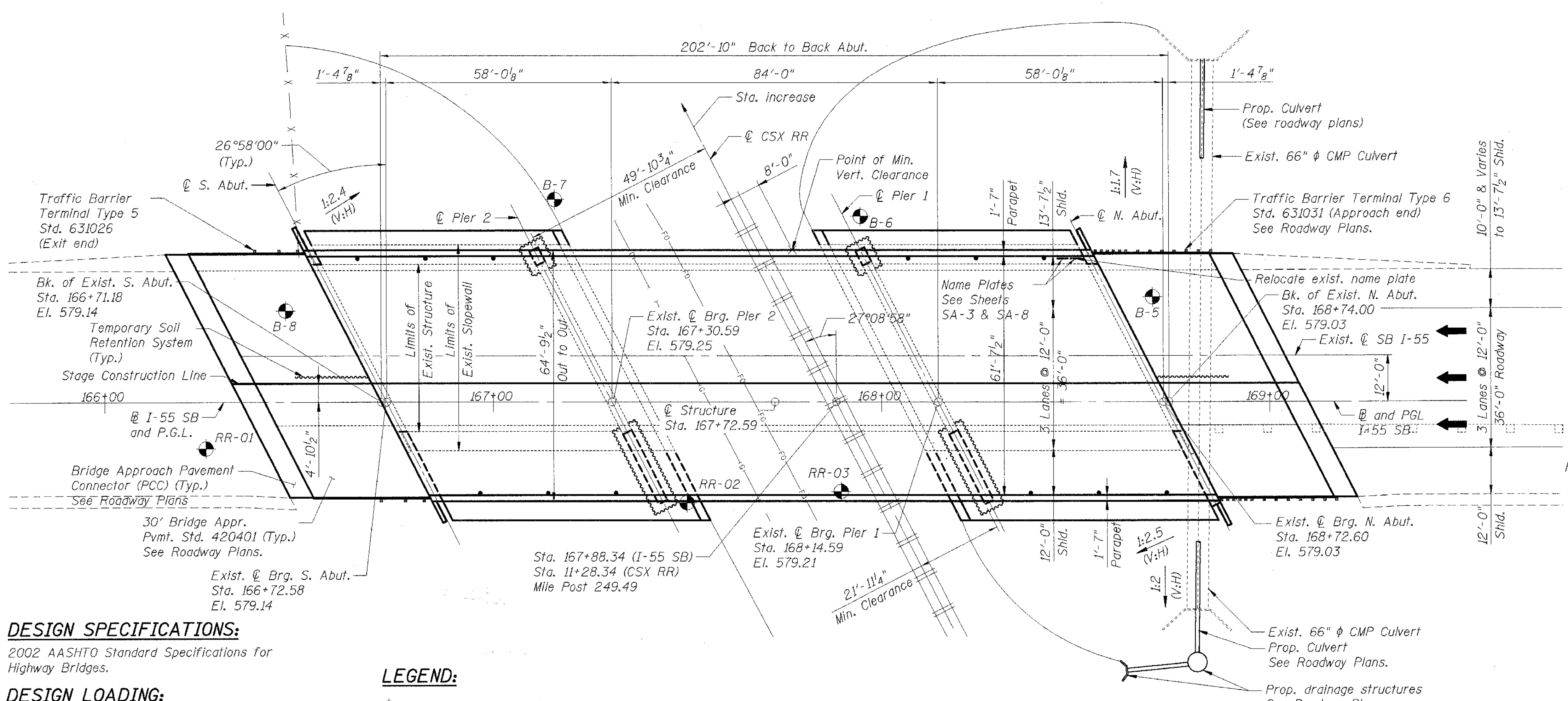


ELEVATION

TOTAL BILL OF MATERIAL

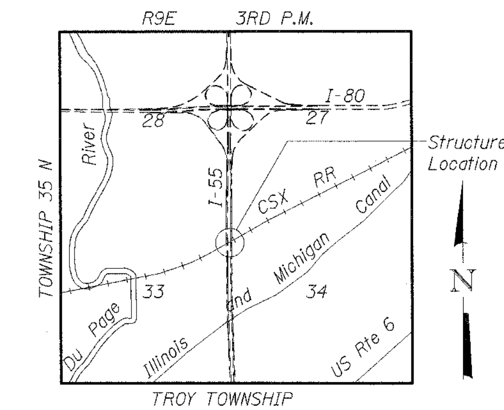
Item	Unit	Total	
Furnishing Structural Steel	L Sum	0.20	
Storage of Structural Steel and Bearings	Unit	83	***

*** Refer to Special Provisions Furnishing Structural Steel and Bearings for definition of Storage Unit. Quantity of Storage Units is based on storing 25% of the steel mass for 30 calender days.



PLAN

N



LOCATION SKETCH

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS — T. SHINLEY — 081-004737 — CHICAGO IL — LICENSED STRUCTURAL ENGINEER
6/9/06
expires 11/30/06

DESIGN SPECIFICATIONS:

2002 AASHTO Standard Specifications for Highway Bridges.

DESIGN LOADING:

Roadway Live Load: HS-20-44 & Military Alt.
Future Wearing Surface: 50 psf

DESIGN STRESSES:

Concrete, f'c = 3,500 psi
Reinforcement, fy = 60,000 psi
Structural Steel, fy = 50,000 psi (M 270 Grade 50)

SEISMIC DATA:

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coeficient (S) = 1.0

LEGEND:

B-5	Soil Boring (1991)
RR-01	Soil Boring (2006)
—G—	Gas
—FO—	Fiber Optic
X — X	Fence
•	Floor Drain
F	Fixed
~~	Temporary Soil Retention System

Notes:

For PGL of I-55 SB and CSXRR see Sht. SA-3.

SHT. SA-1 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB I-55 OVER CSX RAILROAD, S.N. 099-0312
STA. 167+72.58, SECTION 2005-063 I
WILL COUNTY

GENERAL PLAN & ELEVATION, TOTAL BILL OF MATERIAL

SCALE:
DRAWN BY MDB
DATE 06/08/06
CHECKED BY MJK

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

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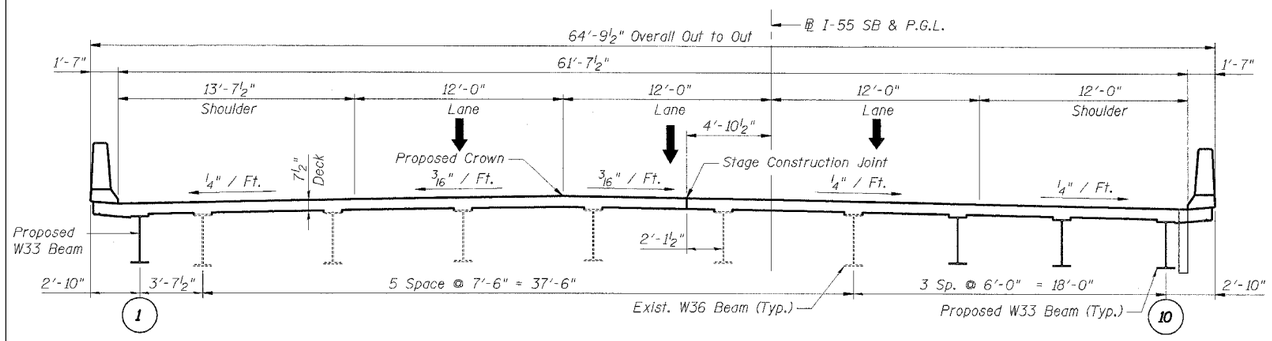
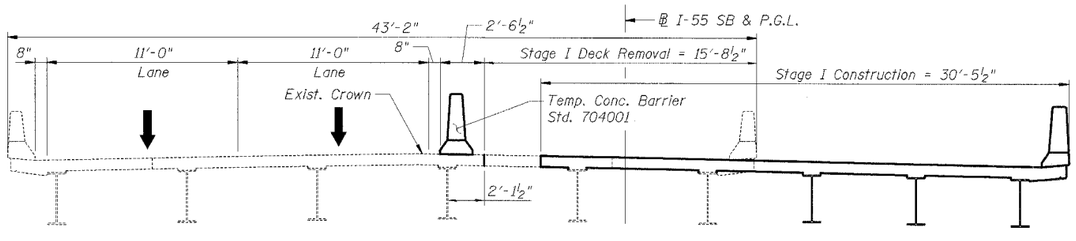
CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



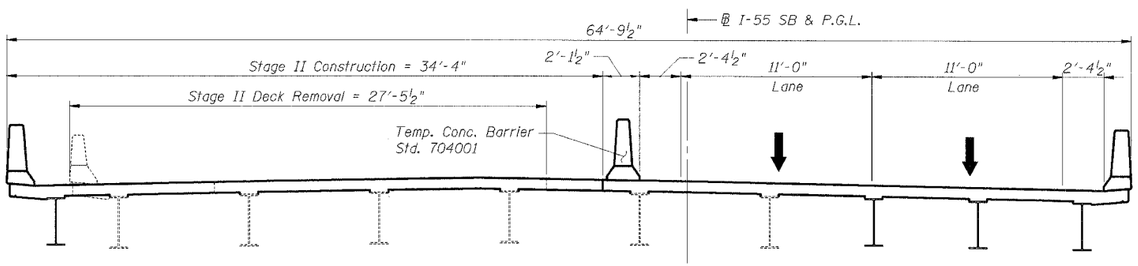
PROPOSED CROSS SECTION

(In direction of increasing station)



STAGE I REMOVAL AND CONSTRUCTION

(In direction of increasing station)



STAGE II REMOVAL AND CONSTRUCTION

(In direction of increasing station)

NOTES:

1. Fasteners shall be high strength bolts. Bolts $^{7}/_{8}$" ϕ, open holes $^{15}/_{16}$" ϕ, unless otherwise noted.
2. Calculated weight of Structural Steel: M 270 Grade 50 = 100,370 lbs.
   M 270 Grade 36 = 9,640 lbs.

   Structural Steel to be furnished under pay item Furnishing Structural Steel. The listed weight includes weight of structural framing, adjusting shim plates for bearings, fasteners, washers, and fixed bearings.

** Calculated weight of Anchor Bolts = 90 lbs.
   Anchor bolts will be provided by Erection Contractor.

3. All structural steel shall be AASHTO M 270 Grade 50, unless otherwise noted.

** 4. Field welding of construction accessories will not be permitted to beams or girders.

** 5. Anchor bolts shall be set before bolting diaphragms over supports.

6. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

** 7. 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 for the work.

** 8. Substructure elevations have been adjusted down 0.35 feet from 1994 plans to account for datum change.

9. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $^{1}/_{8}$". Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $^{1}/_{8}$" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided by the Fabrication Contractor for each bearing in addition to all other plates or shims.

10. The organic zinc rich primer/epoxy/urethane paint system shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field by the Erection Contractor. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish-Brown, Munsell No. 2.5YR 3/4. See Special Provision for Cleaning and Painting New Metal Structures.

** These notes included in Fabrication Contract for information only.

INDEX OF SHEETS

INDEX OF SHEETS (cont'd)

* Sheet not Applicable to this Contract and Not Included

SHT. SA-2 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB I-55 OVER CSX RAILROAD, S.N. 099-0312
STA. 167+72.58, SECTION 2005-063 I
WILL COUNTY

CONSTRUCTION STAGING SECTIONS, GENERAL NOTES INDEX OF SHEETS

SCALE: DRAWN BY MDB
DATE 05/19/06 CHECKED BY MJK

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

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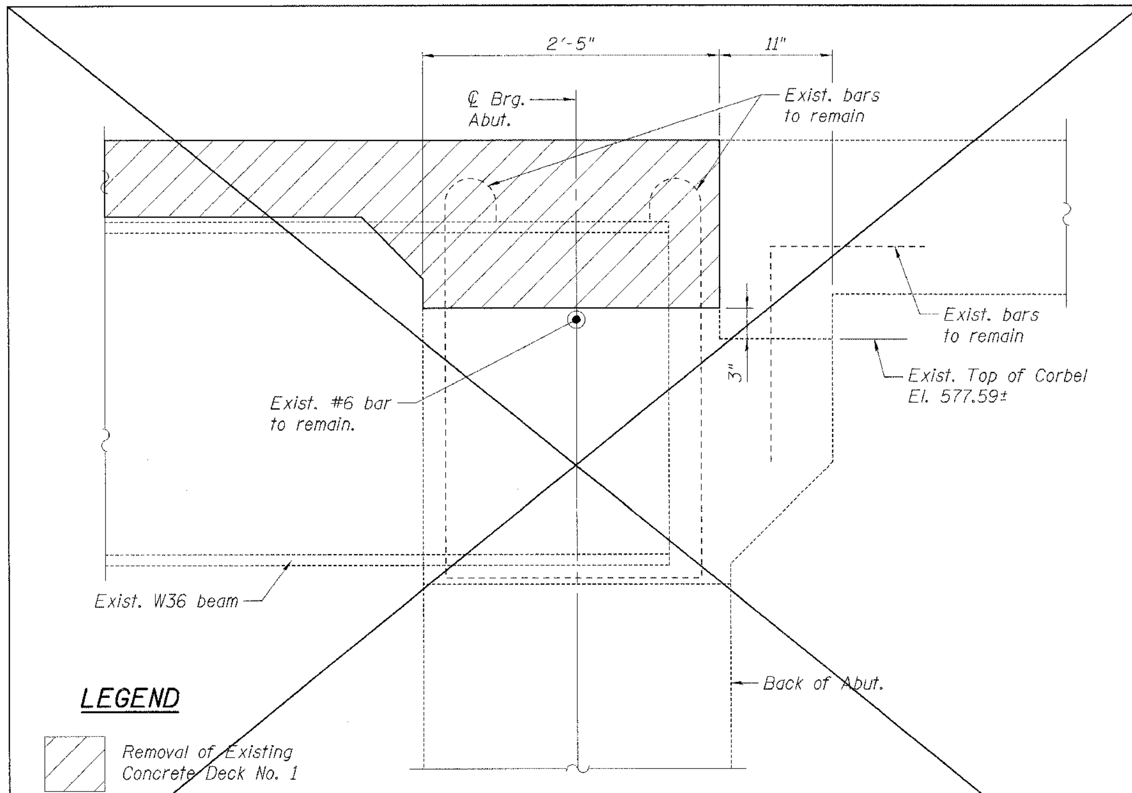
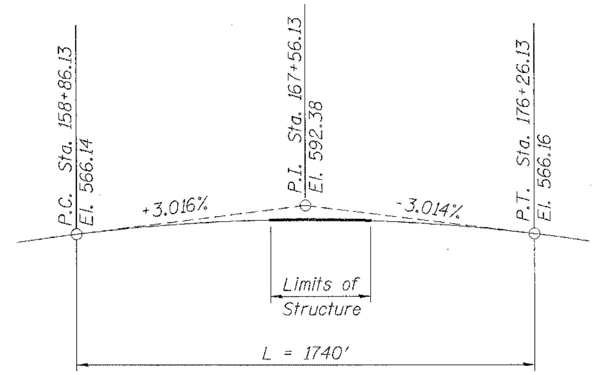
CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

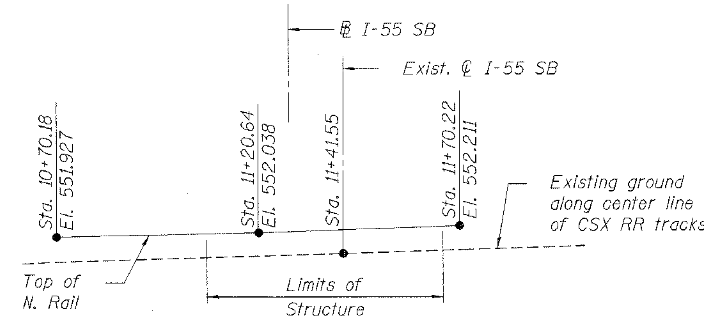


DECK REMOVAL LIMITS AT ABUTMENTS



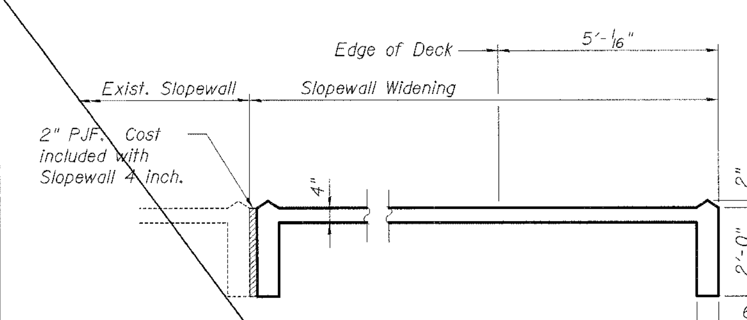
I-55 SB PGL

(developed from survey data)



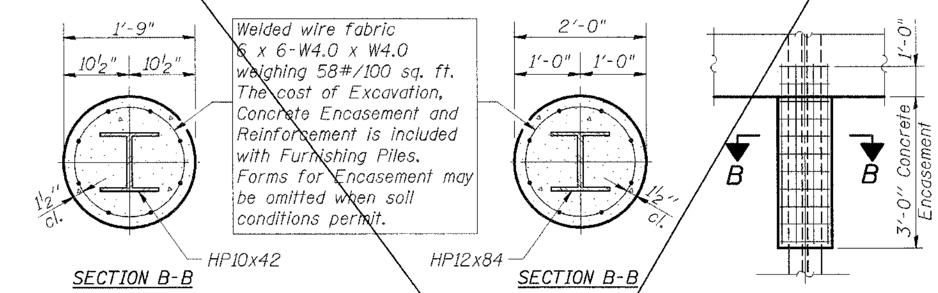
PROFILE GRADE CSX RR

(from survey)



SECTION A-A

(slopewall details)



PILE ENCASEMENT DETAIL

Notes:

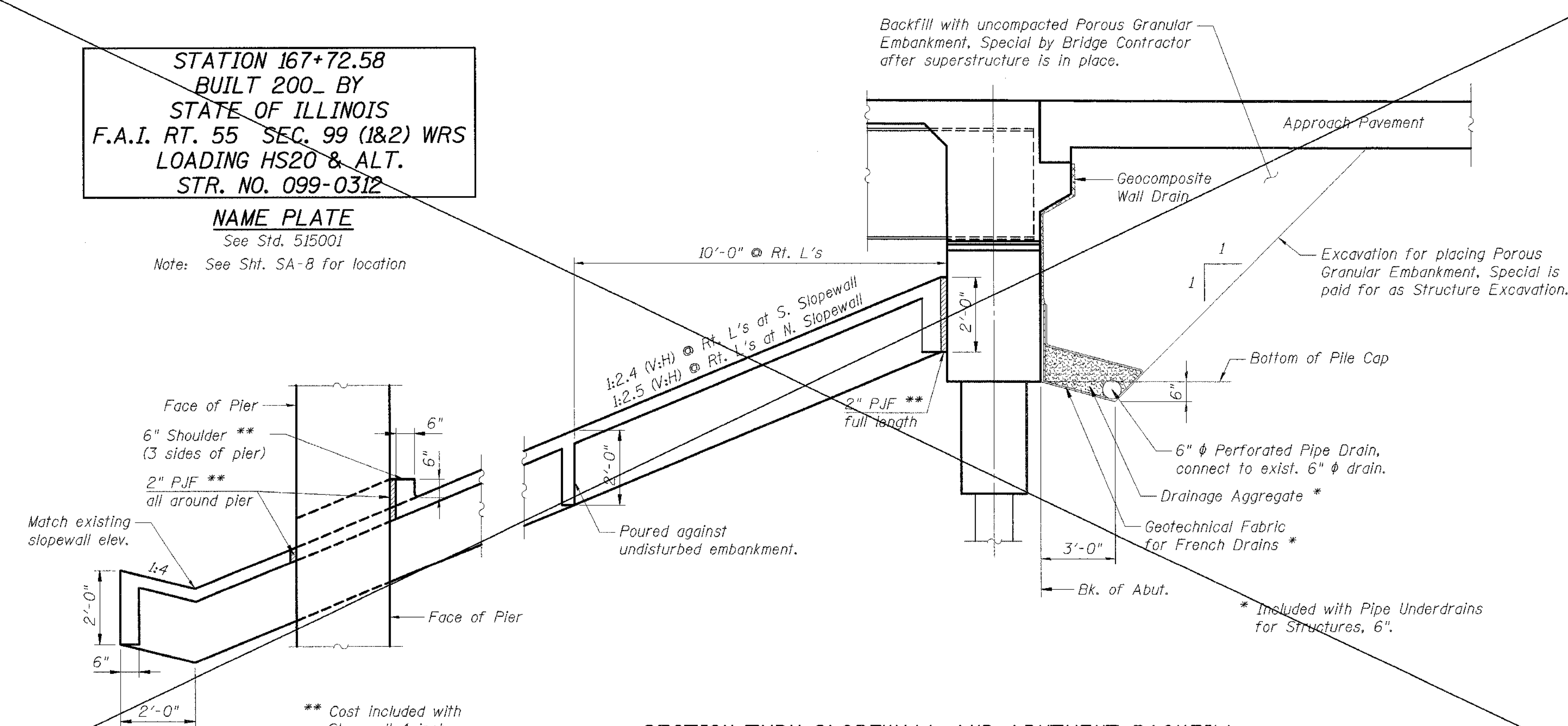
1. See Sheet SA-1 for location of Section A-A
2. All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)
3. Existing slopewall ditches shall be cleaned. Cost is included with Slope Wall 4 inch.

STATION 167+72.58
BUILT 200_ BY
STATE OF ILLINOIS
F.A.I. RT. 55 SEC. 99 (1&2) WRS
LOADING HS20 & ALT.
STR. NO. 099-0312

NAME PLATE

See Std. 515001

Note: See Sht. SA-8 for location



SECTION THRU SLOPEWALL AND ABUTMENT BACKFILL

SUGGESTED SEQUENCE OF CONSTRUCTION

(STAGE I, AT NORTH ABUTMENT ONLY)

1. Place proposed drainage pipe through existing CMP culvert and fill annular space per drainage plans.
2. Construct Temporary Soil Retention System at Stage Construction line north of abutment.
3. Construct drainage structure(s) and build embankment per roadway plans.
4. Remove existing deck and portion of abutment diaphragms east of stage construction line. Remove wingwalls on east side.
5. Drive test pile and production pile to clear existing culvert.
6. Drill and grout dowel bars into existing abutment.
7. Construct east abutment widening and east wingwall.
8. Place bearings and steel framing.
9. Construct the bridge deck and integral backwall to the stage construction line.
10. Backfill behind new abutments.
11. Remove temporary soil retention system and backfill.
12. Construct approach pavements to the stage construction line.
13. Groove the deck and apply the protective coat.

SHT. SA-3 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB I-55 OVER CSX RAILROAD, S.N. 099-0312
STA. 167+72.58, SECTION 2005-063 I
WILL COUNTY

SLOPEWALL & ABUTMENT BACKFILL DETAILS I-55 SB & CSX RR PROFILE GRADES

SCALE: DRAWN BY MDB

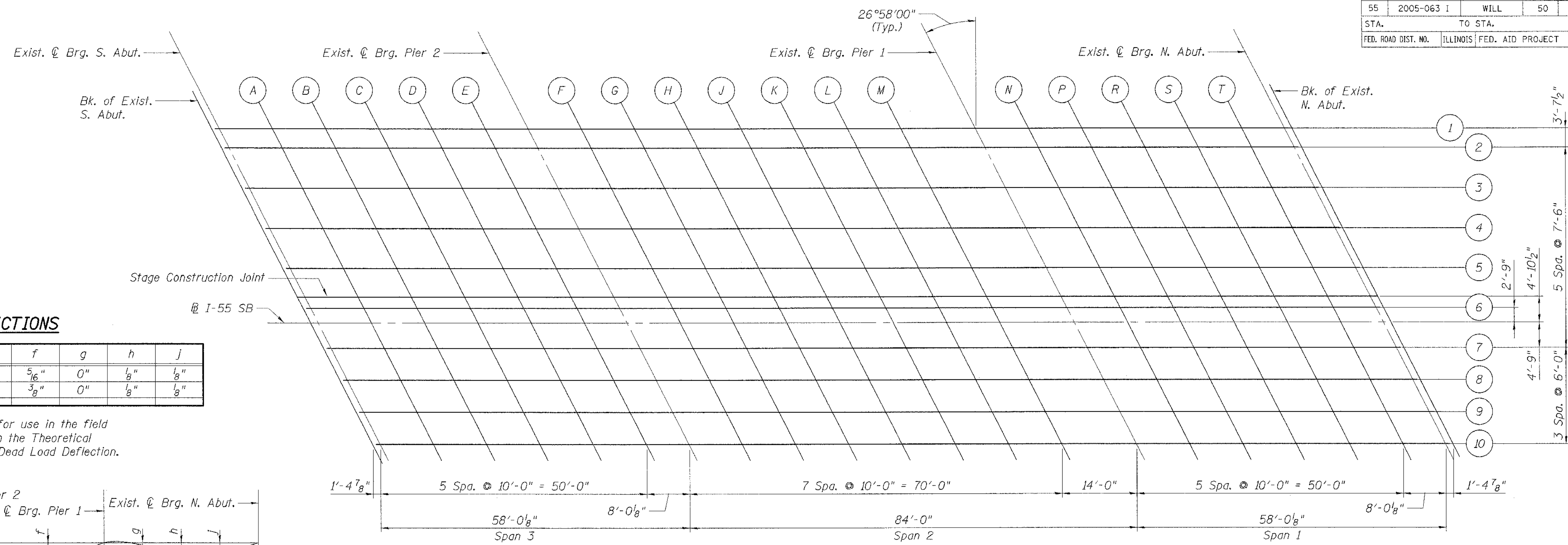
DATE 06/08/06 CHECKED BY MJK

TENG — TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



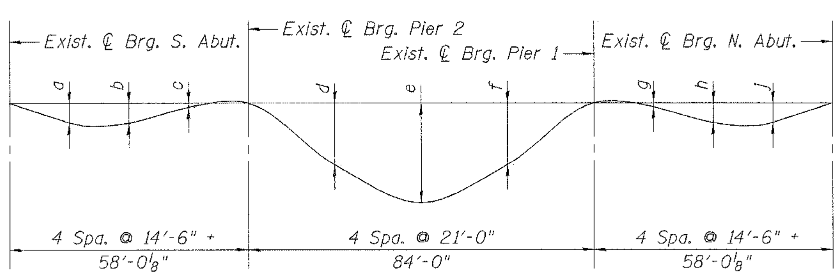
PLAN

N

BEAM DEFLECTIONS

BEAMS	a	b	c	d	e	f	g	h	j
1-2	1/8"	1/8"	0"	5/16"	1/2"	5/16"	0"	1/8"	1/8"
3-10	1/8"	1/8"	0"	3/8"	5/8"	3/8"	0"	1/8"	1/8"

* The above deflections are not for use in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflection.



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

THIS SHEET FOR INFORMATION ONLY

Notes:

1. Bk. S. Abut. denotes Back of Existing South Abutment
2. ℄ S. Abut. denotes Existing ℄ Bearing of South Abutment
3. ℄ Pier 2 denotes Existing ℄ Bearing of Pier 2
4. Work this sheet with Sht. SA-6.
5. D. L. Δ denotes Dead Load Deflection.

BEAM 1

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+52.67	-36.38	578.82	578.82
CL S. Abut.	166+54.07	-36.38	578.83	578.83
A	166+64.07	-36.38	578.86	578.87
B	166+74.07	-36.38	578.89	578.91
C	166+84.07	-36.38	578.92	578.93
D	166+94.07	-36.38	578.94	578.95
E	167+04.07	-36.38	578.96	578.96
CL Pier 2	167+12.08	-36.38	578.97	578.97
F	167+22.08	-36.38	578.99	579.01
G	167+32.08	-36.38	579.00	579.04
H	167+42.08	-36.38	579.00	579.07
J	167+52.08	-36.38	579.01	579.09
K	167+62.08	-36.38	579.01	579.08
L	167+72.08	-36.38	579.00	579.06
M	167+82.08	-36.38	579.00	579.03
CL Pier 1	167+96.08	-36.38	578.98	578.98
N	168+06.08	-36.38	578.96	578.96
P	168+16.08	-36.38	578.95	578.95
R	168+26.08	-36.38	578.92	578.94
S	168+36.08	-36.38	578.90	578.91
T	168+46.08	-36.38	578.87	578.88
CL N. Abut.	168+54.09	-36.38	578.84	578.84
Bk. N. Abut.	168+55.49	-36.38	578.84	578.84

BEAM 2

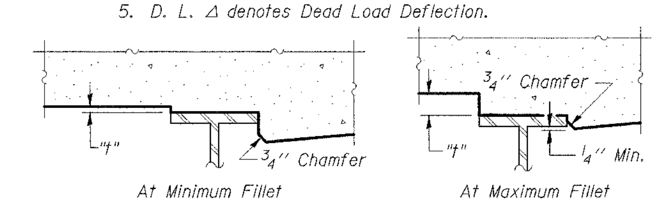
Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+54.51	-32.75	578.90	578.90
CL S. Abut.	166+55.92	-32.75	578.91	578.91
A	166+65.92	-32.75	578.94	578.95
B	166+75.92	-32.75	578.97	578.99
C	166+85.92	-32.75	579.00	579.01
D	166+95.92	-32.75	579.02	579.02
E	167+05.92	-32.75	579.04	579.04
CL Pier 2	167+13.93	-32.75	579.05	579.05
F	167+23.93	-32.75	579.06	579.08
G	167+33.93	-32.75	579.07	579.12
H	167+43.93	-32.75	579.08	579.14
J	167+53.93	-32.75	579.08	579.15
K	167+63.93	-32.75	579.08	579.15
L	167+73.93	-32.75	579.08	579.13
M	167+83.93	-32.75	579.07	579.10
CL Pier 1	167+97.93	-32.75	579.05	579.05
N	168+07.93	-32.75	579.04	579.04
P	168+17.93	-32.75	579.02	579.02
R	168+27.93	-32.75	578.99	579.01
S	168+37.93	-32.75	578.97	578.98
T	168+47.93	-32.75	578.94	578.95
CL N. Abut.	168+55.94	-32.75	578.91	578.91
Bk. N. Abut.	168+57.34	-32.75	578.91	578.91

BEAM 3

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+58.33	-25.25	579.07	579.07
CL S. Abut.	166+59.73	-25.25	579.08	579.08
A	166+69.73	-25.25	579.11	579.12
B	166+79.73	-25.25	579.14	579.16
C	166+89.73	-25.25	579.16	579.18
D	166+99.73	-25.25	579.18	579.19
E	167+09.73	-25.25	579.20	579.20
CL Pier 2	167+17.74	-25.25	579.21	579.21
F	167+27.74	-25.25	579.22	579.25
G	167+37.74	-25.25	579.23	579.29
H	167+47.74	-25.25	579.24	579.32
J	167+57.74	-25.25	579.24	579.33
K	167+67.74	-25.25	579.24	579.32
L	167+77.74	-25.25	579.23	579.30
M	167+87.74	-25.25	579.22	579.26
CL Pier 1	168+01.74	-25.25	579.20	579.20
N	168+11.74	-25.25	579.19	579.19
P	168+21.74	-25.25	579.17	579.17
R	168+31.74	-25.25	579.14	579.16
S	168+41.74	-25.25	579.11	579.13
T	168+51.74	-25.25	579.08	579.09
CL N. Abut.	168+59.75	-25.25	579.05	579.05
Bk. N. Abut.	168+61.16	-25.25	579.05	579.05

BEAM 4

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+62.15	-17.75	579.21	579.21
CL S. Abut.	166+63.55	-17.75	579.21	579.21
A	166+73.55	-17.75	579.24	579.26
B	166+83.55	-17.75	579.27	579.29
C	166+93.55	-17.75	579.29	579.31
D	167+03.55	-17.75	579.31	579.32
E	167+13.55	-17.75	579.33	579.33
CL Pier 2	167+21.56	-17.75	579.34	579.34
F	167+31.56	-17.75	579.35	579.37
G	167+41.56	-17.75	579.36	579.41
H	167+51.56	-17.75	579.36	579.44
J	167+61.56	-17.75	579.36	579.45
K	167+71.56	-17.75	579.36	579.44
L	167+81.56	-17.75	579.35	579.42
M	167+91.56	-17.75	579.34	579.38
CL Pier 1	168+05.56	-17.75	579.32	579.32
N	168+15.56	-17.75	579.30	579.30
P	168+25.56	-17.75	579.28	579.29
R	168+35.56	-17.75	579.25	579.27
S	168+45.56	-17.75	579.23	579.24
T	168+55.56	-17.75	579.19	579.20
CL N. Abut.	168+63.57	-17.75	579.16	579.16
Bk. N. Abut.	168+64.97	-17.75	579.16	579.16



At Minimum Fillet

At Maximum Fillet

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

FILLET HEIGHTS

SHT. SA-5 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB I-55 OVER CSX RAILROAD, S.N. 099-0312
STA. 167+72.58, SECTION 2005-063 I
WILL COUNTY

SCREED PLAN, TOP OF SLAB ELEVATIONS, DEADLOAD DEFLECTION DIAGRAM

SCALE: DRAWN BY MDB
DATE 06/08/06 CHECKED BY MJK

TENG — TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS

CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BEAM 5

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+65.96	-10.25	579.28	579.28
CL S. Abut.	166+67.36	-10.25	579.29	579.29
A	166+77.36	-10.25	579.32	579.33
B	166+87.36	-10.25	579.34	579.36
C	166+97.36	-10.25	579.36	579.38
D	167+07.36	-10.25	579.38	579.39
E	167+17.36	-10.25	579.40	579.40
CL Pier 2	167+25.37	-10.25	579.41	579.41
F	167+35.37	-10.25	579.42	579.44
G	167+45.37	-10.25	579.42	579.48
H	167+55.37	-10.25	579.43	579.50
J	167+65.37	-10.25	579.42	579.51
K	167+75.37	-10.25	579.42	579.50
L	167+85.37	-10.25	579.41	579.47
M	167+95.37	-10.25	579.40	579.43
CL Pier 1	168+09.37	-10.25	579.38	579.38
N	168+19.37	-10.25	579.36	579.36
P	168+29.37	-10.25	579.33	579.34
R	168+39.37	-10.25	579.31	579.32
S	168+49.37	-10.25	579.28	579.30
T	168+59.37	-10.25	579.24	579.25
CL N. Abut.	168+67.38	-10.25	579.21	579.21
Bk. N. Abut.	168+68.79	-10.25	579.21	579.21

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+68.70	-4.88	579.21	579.21
CL S. Abut.	166+70.10	-4.88	579.21	579.21
A	166+80.10	-4.88	579.24	579.25
B	166+90.10	-4.88	579.26	579.28
C	167+00.10	-4.88	579.29	579.30
D	167+10.10	-4.88	579.30	579.31
E	167+20.10	-4.88	579.32	579.32
CL Pier 2	167+28.11	-4.88	579.33	579.33
F	167+38.11	-4.88	579.34	579.36
G	167+48.11	-4.88	579.34	579.39
H	167+58.11	-4.88	579.34	579.42
J	167+68.11	-4.88	579.34	579.43
K	167+78.11	-4.88	579.33	579.42
L	167+88.11	-4.88	579.32	579.39
M	167+98.11	-4.88	579.31	579.35
CL Pier 1	168+12.11	-4.88	579.29	579.29
N	168+22.11	-4.88	579.27	579.27
P	168+32.11	-4.88	579.24	579.25
R	168+42.11	-4.88	579.21	579.23
S	168+52.11	-4.88	579.18	579.20
T	168+62.11	-4.88	579.15	579.16
CL N. Abut.	168+70.12	-4.88	579.12	579.12
Bk. N. Abut.	168+71.52	-4.88	579.11	579.11

BEAM 6

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+69.78	-2.75	579.18	579.18
CL S. Abut.	166+71.18	-2.75	579.18	579.18
A	166+81.18	-2.75	579.21	579.22
B	166+91.18	-2.75	579.23	579.25
C	167+01.18	-2.75	579.26	579.27
D	167+11.18	-2.75	579.27	579.28
E	167+21.18	-2.75	579.29	579.28
CL Pier 2	167+29.19	-2.75	579.30	579.30
F	167+39.19	-2.75	579.30	579.33
G	167+49.19	-2.75	579.31	579.36
H	167+59.19	-2.75	579.31	579.39
J	167+69.19	-2.75	579.31	579.40
K	167+79.19	-2.75	579.30	579.38
L	167+89.19	-2.75	579.29	579.35
M	167+99.19	-2.75	579.28	579.31
CL Pier 1	168+13.19	-2.75	579.25	579.25
N	168+23.19	-2.75	579.23	579.23
P	168+33.19	-2.75	579.21	579.22
R	168+43.19	-2.75	579.18	579.20
S	168+53.19	-2.75	579.15	579.17
T	168+63.19	-2.75	579.11	579.12
CL N. Abut.	168+71.20	-2.75	579.08	579.08
Bk. N. Abut.	168+72.60	-2.75	579.07	579.07

PGL I-55 SB

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+71.18	0.00	579.14	579.14
CL S. Abut.	166+72.58	0.00	579.14	579.14
A	166+82.58	0.00	579.17	579.18
B	166+92.58	0.00	579.19	579.21
C	167+02.58	0.00	579.21	579.23
D	167+12.58	0.00	579.23	579.24
E	167+22.58	0.00	579.25	579.24
CL Pier 2	167+30.59	0.00	579.25	579.25
F	167+40.59	0.00	579.26	579.28
G	167+50.59	0.00	579.26	579.32
H	167+60.59	0.00	579.26	579.34
J	167+70.59	0.00	579.26	579.35
K	167+80.59	0.00	579.25	579.34
L	167+90.59	0.00	579.24	579.31
M	168+00.59	0.00	579.23	579.27
CL Pier 1	168+14.59	0.00	579.21	579.21
N	168+24.59	0.00	579.18	579.18
P	168+34.59	0.00	579.16	579.17
R	168+44.59	0.00	579.13	579.15
S	168+54.59	0.00	579.10	579.12
T	168+64.59	0.00	579.06	579.07
CL N. Abut.	168+72.60	0.00	579.03	579.03
Bk. N. Abut.	168+74.00	0.00	579.03	579.03

BEAM 7

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+73.59	4.75	579.05	579.05
CL S. Abut.	166+75.00	4.75	579.05	579.05
A	166+85.00	4.75	579.08	579.09
B	166+95.00	4.75	579.10	579.12
C	167+05.00	4.75	579.12	579.14
D	167+15.00	4.75	579.14	579.14
E	167+25.00	4.75	579.15	579.15
CL Pier 2	167+33.01	4.75	579.16	579.16
F	167+43.01	4.75	579.16	579.19
G	167+53.01	4.75	579.17	579.22
H	167+63.01	4.75	579.17	579.24
J	167+73.01	4.75	579.16	579.25
K	167+83.01	4.75	579.15	579.24
L	167+93.01	4.75	579.14	579.21
M	168+03.01	4.75	579.13	579.16
CL Pier 1	168+17.01	4.75	579.10	579.10
N	168+27.01	4.75	579.08	579.08
P	168+37.01	4.75	579.05	579.06
R	168+47.01	4.75	579.02	579.04
S	168+57.01	4.75	578.99	579.01
T	168+67.01	4.75	578.95	578.97
CL N. Abut.	168+75.02	4.75	578.92	578.92
Bk. N. Abut.	168+76.42	4.75	578.92	578.92

BEAM 8

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+76.65	10.75	578.93	578.93
CL S. Abut.	166+78.05	10.75	578.93	578.93
A	166+88.05	10.75	578.96	578.97
B	166+98.05	10.75	578.98	579.00
C	167+08.05	10.75	579.00	579.02
D	167+18.05	10.75	579.02	579.02
E	167+28.05	10.75	579.03	579.03
CL Pier 2	167+36.06	10.75	579.03	579.03
F	167+46.06	10.75	579.04	579.06
G	167+56.06	10.75	579.04	579.10
H	167+66.06	10.75	579.04	579.12
J	167+76.06	10.75	579.03	579.13
K	167+86.06	10.75	579.03	579.12
L	167+96.06	10.75	579.01	579.08
M	168+06.06	10.75	579.00	579.04
CL Pier 1	168+20.06	10.75	578.97	578.97
N	168+30.06	10.75	578.95	578.95
P	168+40.06	10.75	578.92	578.93
R	168+50.06	10.75	578.89	578.91
S	168+60.06	10.75	578.86	578.88
T	168+70.06	10.75	578.82	578.83
CL N. Abut.	168+78.07	10.75	578.78	578.78
Bk. N. Abut.	168+79.47	10.75	578.78	578.78

BEAM 9

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+79.70	16.75	578.81	578.81
CL S. Abut.	166+81.10	16.75	578.82	578.82
A	166+91.10	16.75	578.84	578.86
B	167+01.10	16.75	578.86	578.88
C	167+11.10	16.75	578.88	578.90
D	167+21.10	16.75	578.89	578.90
E	167+31.10	16.75	578.90	578.90
CL Pier 2	167+39.11	16.75	578.91	578.91
F	167+49.11	16.75	578.92	578.94
G	167+59.11	16.75	578.92	578.97
H	167+69.11	16.75	578.91	579.00
J	167+79.11	16.75	578.91	579.01
K	167+89.11	16.75	578.90	578.99
L	167+99.11	16.75	578.88	578.95
M	168+09.11	16.75	578.87	578.91
CL Pier 1	168+23.11	16.75	578.84	578.84
N	168+33.11	16.75	578.81	578.81
P	168+43.11	16.75	578.79	578.80
R	168+53.11	16.75	578.75	578.77
S	168+63.11	16.75	578.72	578.74
T	168+73.11	16.75	578.68	578.69
CL N. Abut.	168+81.12	16.75	578.65	578.65
Bk. N. Abut.	168+82.52	16.75	578.64	578.64

BEAM 10

Location	Station	Offset	Theoretical Grade Elevation	Elevation Adjusted for D. L. Δ
Bk. S. Abut.	166+82.75	22.75	578.70	578.70
CL S. Abut.	166+84.15	22.75	578.70	578.70
A	166+94.15	22.75	578.72	578.74
B	167+04.15	22.75	578.74	578.76
C	167+14.15	22.75	578.76	578.78
D	167+24.15	22.75	578.77	578.78
E	167+34.15	22.75	578.78	578.78
CL Pier 2	167+42.16	22.75	578.79	578.79
F	167+52.16	22.75	578.79	578.81
G	167+62.16	22.75	578.79	578.85
H	167+72.16	22.75	578.79	578.87
J	167+82.16	22.75	578.78	578.88
K	167+92.16	22.75	578.77	578.86
L	168+02.16	22.75	578.75	578.82
M	168+12.16	22.75	578.74	578.77
CL Pier 1	168+26.16	22.75	578.71	578.71
N	168+36.16	22.75	578.68	578.68
P	168+46.16	22.75	578.65	578.66
R	168+56.16	22.75	578.62	578.64
S	168+66.16	22.75	578.58	578.60
T	168+76.16	22.75	578.54	578.55
CL N. Abut.	168+84.17	22.75	578.51	578.51
Bk. N. Abut.	168+85.58	22.75	578.50	578.50

Notes:

1. Work this sheet with Sht. SA-5.
2. D. L. Δ denotes Dead Load Deflection.

THIS SHEET FOR INFORMATION ONLY

SHT. SA-6 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB I-55 OVER CSX RAILROAD, S.N. 099-0312
STA. 167+72.58, SECTION 2005-063 I
WILL COUNTY

TOP OF SLAB ELEVATIONS

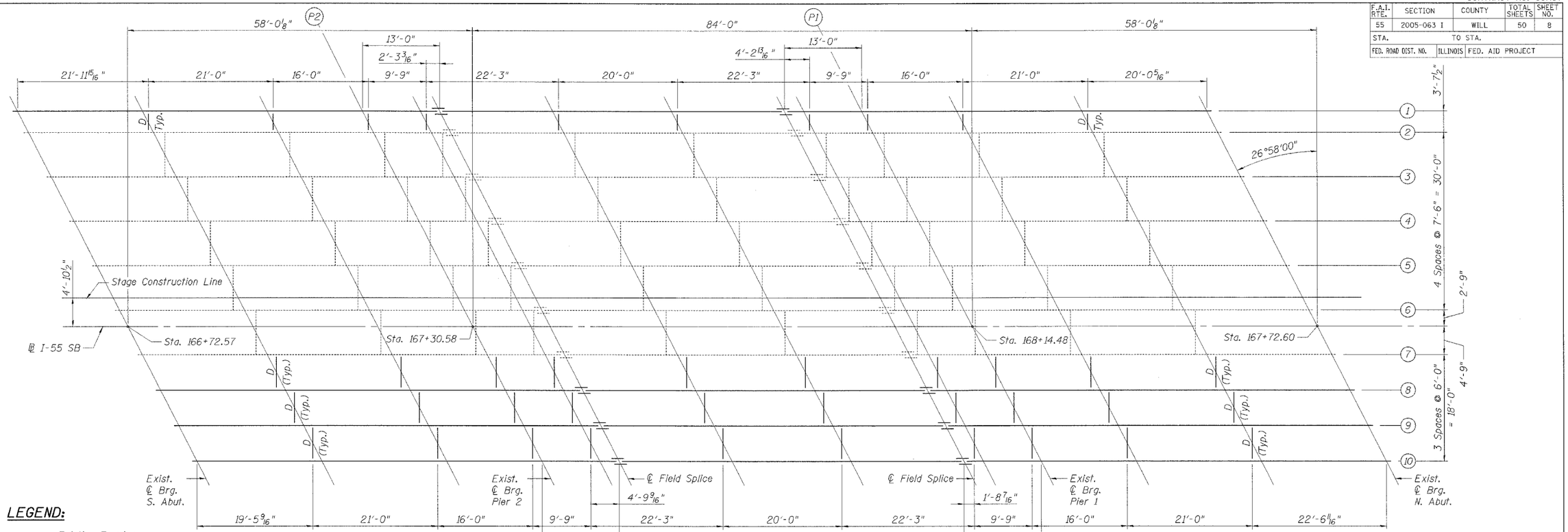
SCALE: DRAWN BY MDB
DATE 06/08/06 CHECKED BY MJK

TENG — TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS

PLOT DATE = $DATE$
FILE NAME = $FILEL$
PLOT SCALE = $SCALE$
USER NAME = $USER$

CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

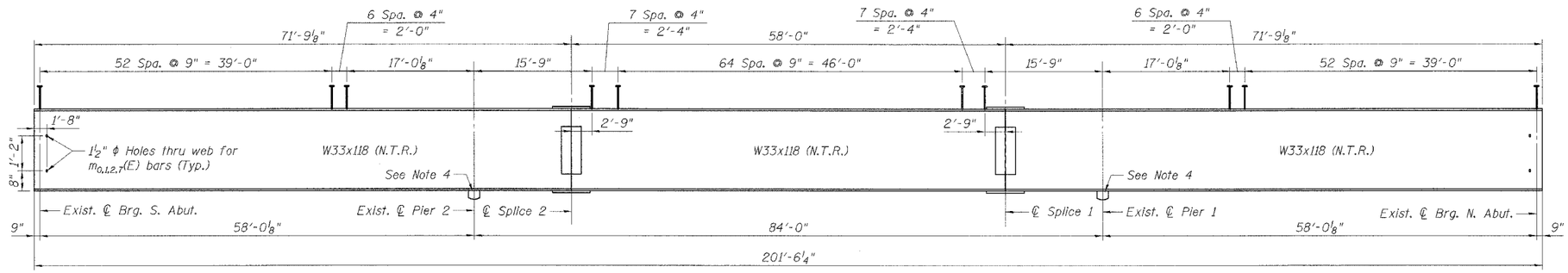


FRAMING PLAN

LEGEND:

..... Existing Framing

——— Proposed Framing



BEAM ELEVATION

TOP OF BEAM ELEVATIONS

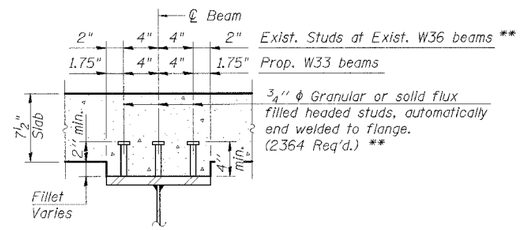
(for fabrication use only)

Beam	Exist. ℄ Brg. S. Abut.	Exist. ℄ Pier 2	℄ Field Splice	℄ Field Splice	Exist. ℄ Pier 1	Exist. ℄ Brg. N. Abut.
1	578.15	578.21	578.23	578.23	578.22	578.15
8	578.24	578.27	578.28	578.23	578.21	578.08
9	578.12	578.15	578.15	578.10	578.07	577.94
10	578.00	578.02	578.02	577.97	577.94	577.80

BEARING SEAT ELEVATIONS

(For Information Only)

Beam	S. Abut.	Pier 2	Pier 1	N. Abut.
1	575.39	575.19	575.20	575.39
8	575.48	575.25	575.18	575.33
9	575.37	575.12	575.05	575.19
10	575.25	575.00	574.92	575.05



Exist. Studs at Exist. W36 beams **

Prop. W33 beams

3/4" ϕ Granular or solid flux filled headed studs, automatically end welded to flange. (2364 Req'd.) **

SHEAR CONNECTOR DETAIL

(Proposed W33 beams & existing W36 beams)

Notes:

1. N.T.R. denotes steel is subject to Supplemental Requirements for Notch Toughness. (Zone 2)
2. For field splice details, see Sht. SA-12.
3. For diaphragm details, see Sht. SA-12.
4. Rocker plates to be shop welded to bottom flange at Pier 1 and 2 locations. See Sht. SA-12 for details.

** 5. Exist. studs that are damaged during removal of exist. deck are to be removed. remaining welds ground smooth, and new studs welded to replace the damaged studs. The cost for such work shall be included in the cost for Removal of Existing Concrete Deck No. 1.

** These notes included in Fabrication Contract For Information Only.

SHT. SA-11 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB I-55 OVER CSX RAILROAD, S.N. 099-0312
STA. 167+72.58, SECTION 2005-063 I
WILL COUNTY

FRAMING PLAN, TOP OF BEAM ELEVATIONS, SHEAR STUD DETAILS

SCALE:

DRAWN BY MDB

DATE 05/19/06

CHECKED BY MJK

TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

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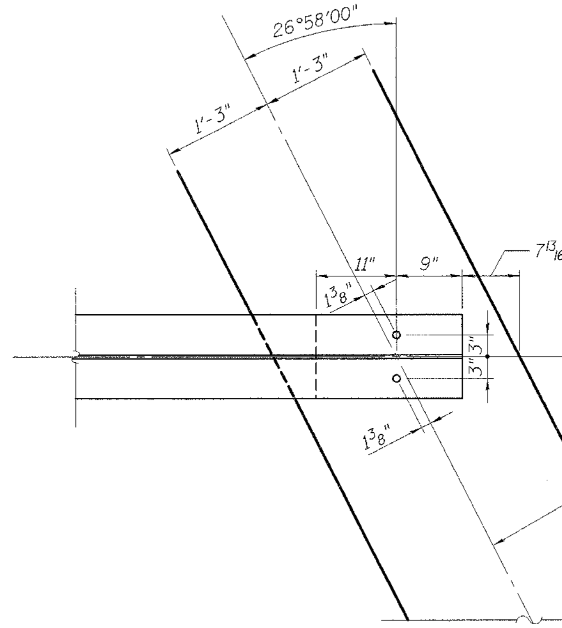
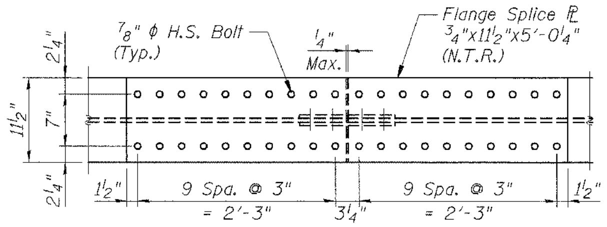
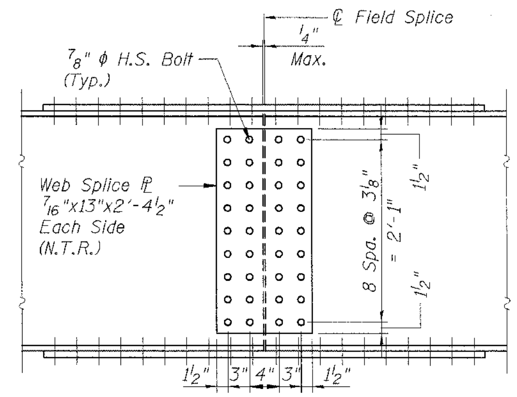
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	9
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN AT ABUTMENT



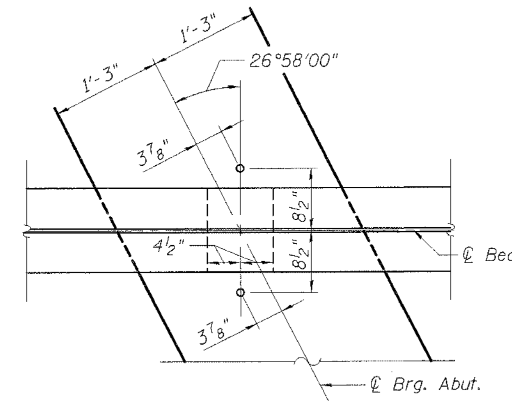
TOP & BOTTOM FLANGE



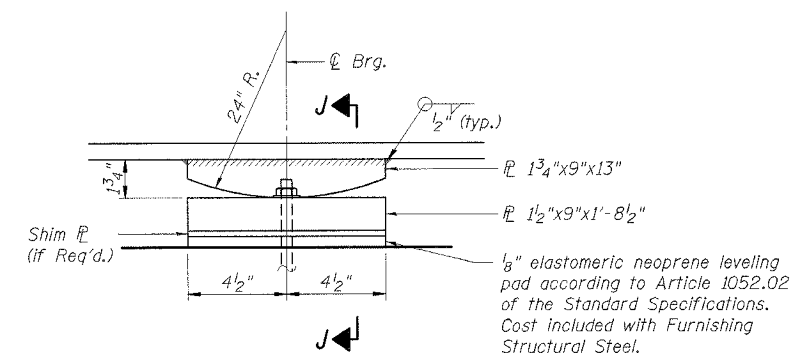
ELEVATION

SPLICE DETAILS

All bolts in splices shall be AASHTO M164 (ASTM A325) with Class A contact surfaces and standard holes.



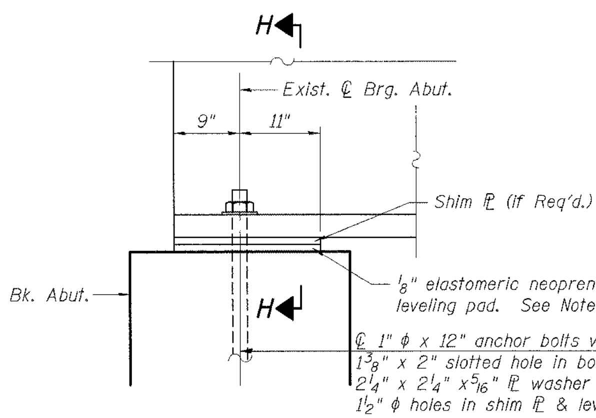
PLAN AT PIER



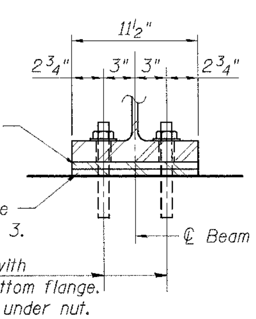
ELEVATION AT PIER

INTERIOR GIRDER MOMENT TABLE (PROPOSED BEAMS 8 AND 9)		0.4 Sp. 1	Pier	0.5 Sp. 2
Is	(in⁴)	5,900	5,900	5,900
Ic (n)	(in⁴)	14,919	- - -	14,919
Ic (3n)	(in⁴)	11,031	- - -	11,031
Ss	(in³)	359	359	359
Sc (n)	(in³)	514	- - -	514
Sc (3n)	(in³)	465	- - -	465
Z	(in³)	- - -	415	- - -
D℄	(k/ft.)	0.699	1.099	0.699
M℄	('k)	132.5	557.5	242.2
s℄	(k/ft.)	0.400	- - -	0.400
Ms℄	('k)	89.1	- - -	171.3
M℄ (LL)	('k)	359.5	251.8	483.9
M (Imp)	('k)	98.2	64.3	115.8
$^5/_3$[M(LL)+M(Imp)]	('k)	763	528	1,000
Ma	('k)	1,280	1,411	1,837
Mu	('k)	2,598	1,701	2,598
fs℄ non-comp	(k.s.i.)	4.43	18.64	8.10
fs℄ (comp)	(k.s.i.)	2.30	- - -	4.42
fs $^5/_3$(LL+Imp)	(k.s.i.)	17.81	17.64	23.34
fs (Overload)	(k.s.i.)	24.54	36.28	35.85
fs (Total)	(k.s.i.)	- - -	- - -	- - -
VR	(k)	50.0	- - -	51.0

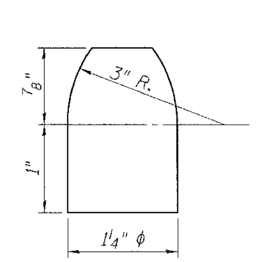
INTERIOR GIRDER REACTION TABLE (PROPOSED BEAMS 8 AND 9)		Abut.	Pier
R℄	(k)	22.32	87.79
R(LL)	(k)	35.92	42.46
Imp.	(k)	9.81	10.88
R (Total)	(k)	68.05	141.13



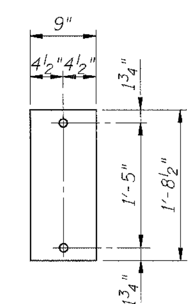
SECTION AT ABUTMENTS



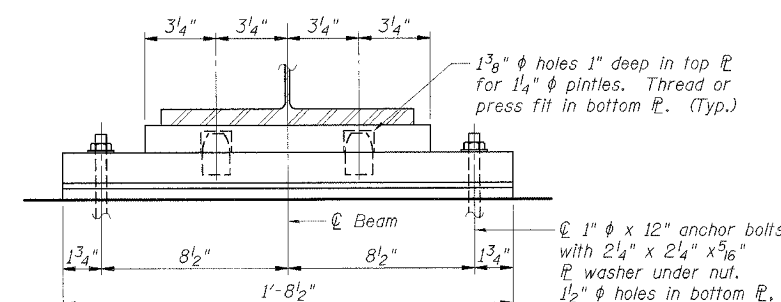
SECTION H-H



PINTLE



PLAN



SECTION J-J

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

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

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

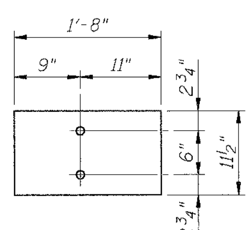
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[M℄ + Ms℄ + $^5/_3$(M(LL) + M(Imp))].

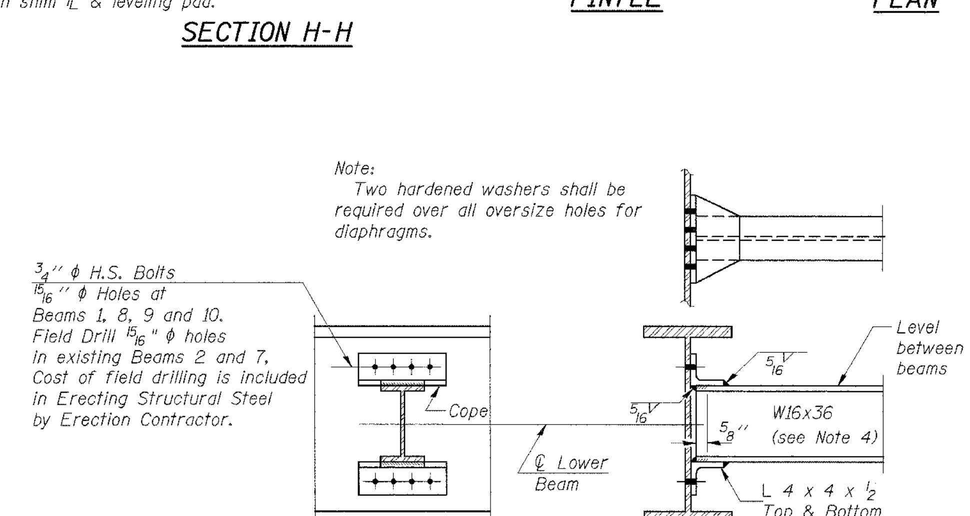
The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + $^5/_3$(M(LL) + M(Imp)).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℄ + Ms℄ + $^5/_3$(M(LL) + M(Imp))].



PLAN



DIAPHRAGM D

(40 Required)

Notes:

1. Work this sheet with Sht. SA-11.
2. N.T.R. denotes steel is subject to Supplemental Requirements for Notch Toughness (Zone 2).
3. $^1/_8$" elastomeric neoprene leveling pad according to Article 1052.02 of the Standard Specifications. Cost included with Furnishing Structural Steel.
4. All steel shown on this sheet shall be AASHTO M270 Grade 50 except diaphragms and shim plates may be AASHTO M 270 Grade 36.

SHT. SA-12 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB I-55 OVER CSX RAILROAD, S.N. 099-0312
STA. 167+72.58, SECTION 2005-063 I
WILL COUNTY

BEARING DETAILS, MOMENT & REACTION TABLES SPLICE & DIAPHRAGM DETAILS

SCALE: DRAWN BY MDB
DATE 06/08/06 CHECKED BY MJK

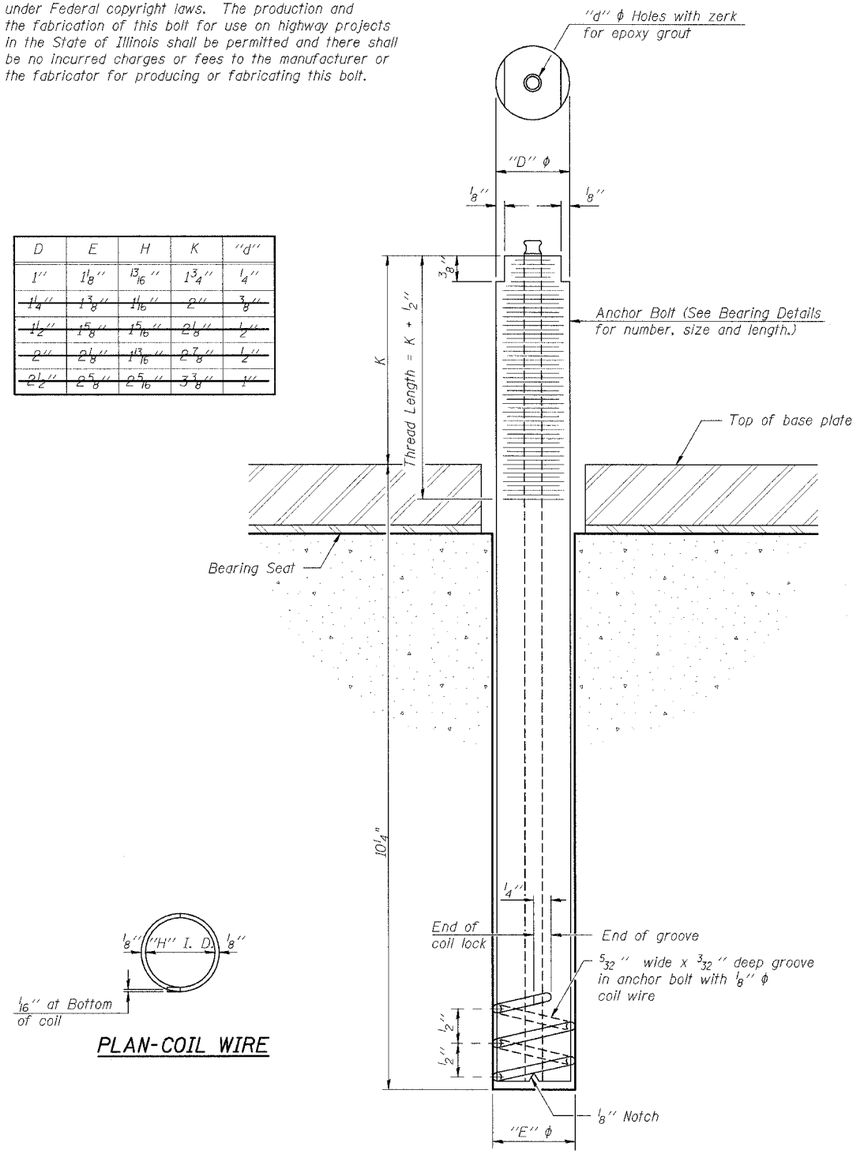
TENG — TENG & ASSOCIATES, INC. ENGINEERS/ARCHITECTS/PLANNERS CHICAGO, ILLINOIS

PLOT DATE = $DATE$ FILE NAME = $FILE$ PLOT SCALE = $SCALE$ USER NAME = $USER$

CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	10
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

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

Location	Type
All	ASTM A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

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

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

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

THIS SHEET FOR INFORMATION ONLY

SHT. SA-13 OF 21

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB I-55 OVER CSX RAILROAD, S.N. 099-0312
STA. 167+72.58, SECTION 2005-063 I
WILL COUNTY

ANCHOR BOLT DETAILS

SCALE:
DRAWN BY MDB
DATE 05/19/06
CHECKED BY MJK

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

PLOT DATE = #DATE#
FILE NAME = #FILE1#
PLOT SCALE = #SCALE#
USER NAME = #USER#

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BENCHMARKS:

BM 3191 Square cut on northwest edge of 2 foot diameter concrete light pole base #MC2 on south side Route 30 and about 400 feet northwest of I-55. El. 607.08

EXISTING STRUCTURES:

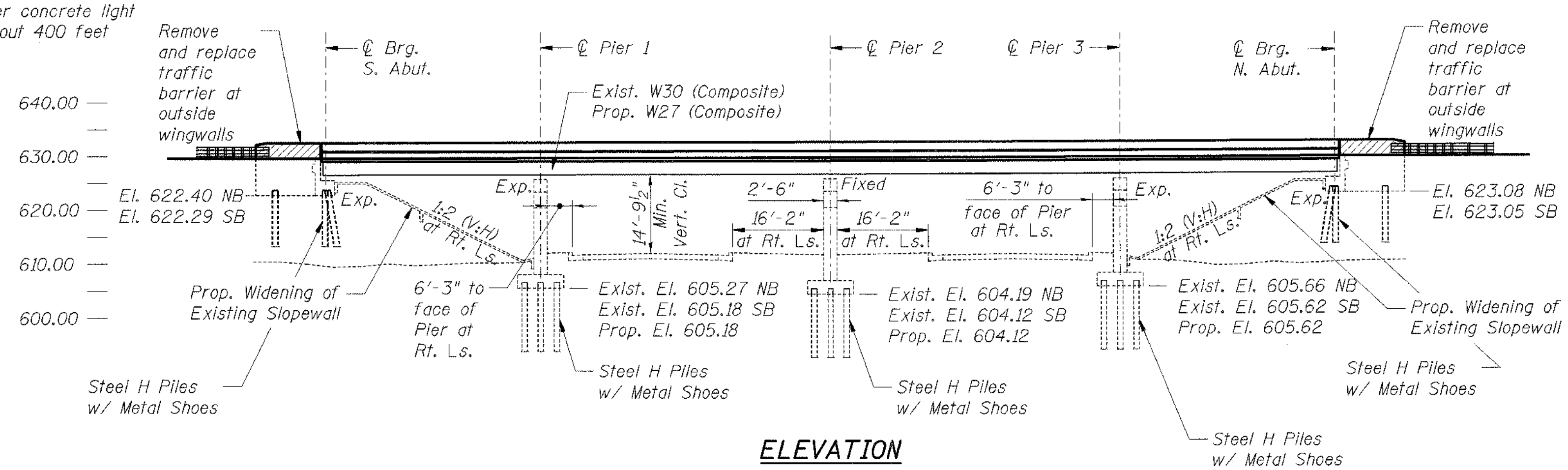
Existing Bridges No. 099-0016 Southbound Bridge at Sta. 587+71.51 (℄ SB Exist.) and No. 099-0017 Northbound Bridge at Sta. 587+90.13 (℄ NB Exist.) F.A.I.-55 were built in 1955 as F.A. Route 34 - Project IN-187(9), Section 27HB, widened in 1977 as U.S.30 - Project I-55-6 I-55-6(123)246 Section (99-1&2)R-5. In 1994, the concrete deck was scarified ¼" and resurfaced and the superstructure was rehabilitated as F.A.I. Section 27HB-BR(89). They are 4-span continuous non-composite wide flange beam bridges with a 6¾" concrete deck slab and 2" overlay, 41'-10" out-to-out of structure and 191'-0" Back-to-Back Abutments.

SALVAGE:

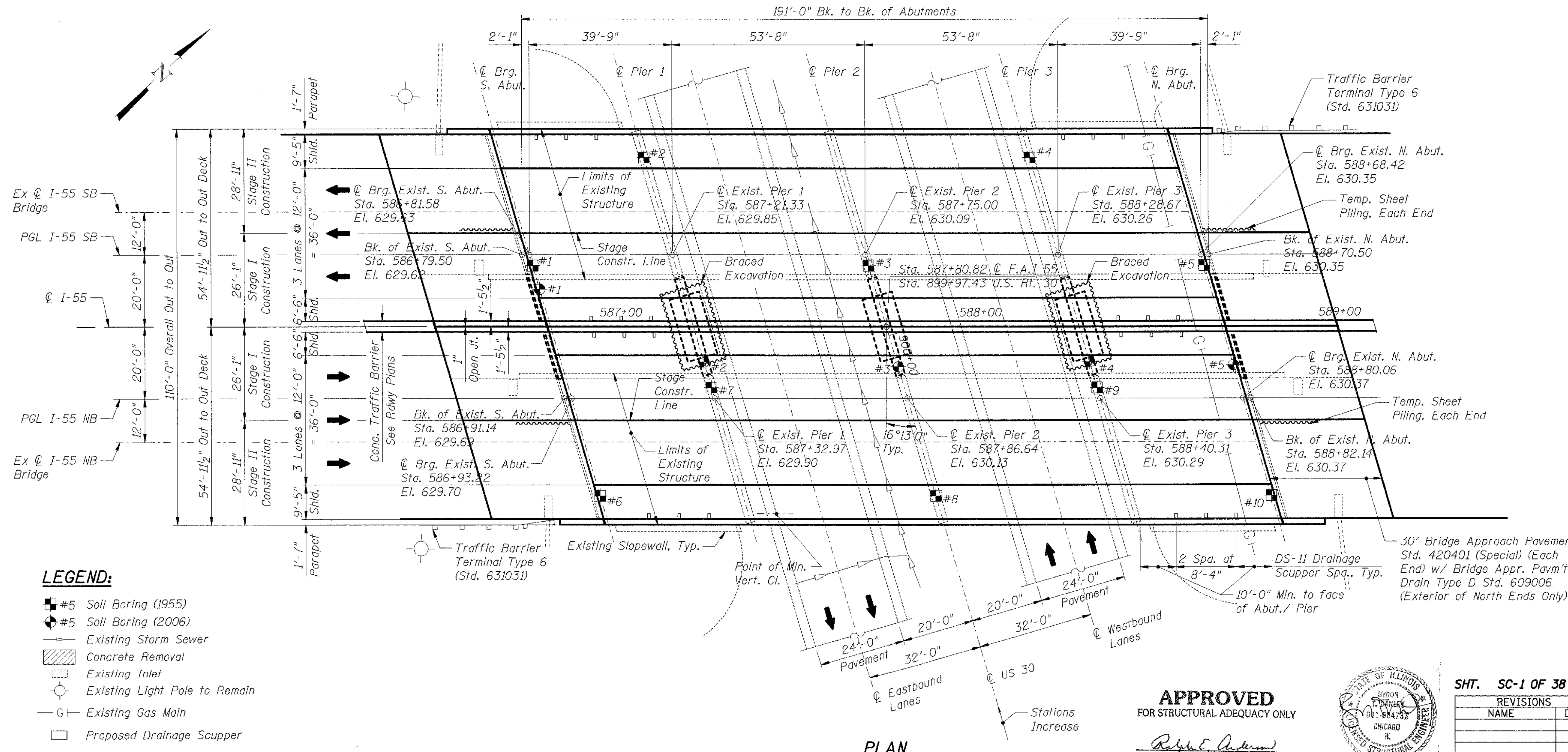
None.

STAGING:

Traffic to be maintained utilizing stage construction.



ELEVATION



PLAN

LEGEND:

- #5 Soil Boring (1955)
- #5 Soil Boring (2006)
- Existing Storm Sewer
- Concrete Removal
- Existing Inlet
- Existing Light Pole to Remain
- —G— Existing Gas Main
- Proposed Drainage Scupper

DESIGN SPECIFICATIONS:

AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002

DESIGN LOADING:

HS20-44 and Alt. Military Loading
Future Wearing Surface = 50 psf

DESIGN STRESSES:

New Construction:

Concrete - f'c = 3,500 psi
Reinforcement - fy = 60,000 psi
Structural Steel - fy = 50,000 psi (M270, Gr 50)

Existing Construction:

1955 Construction (Original):

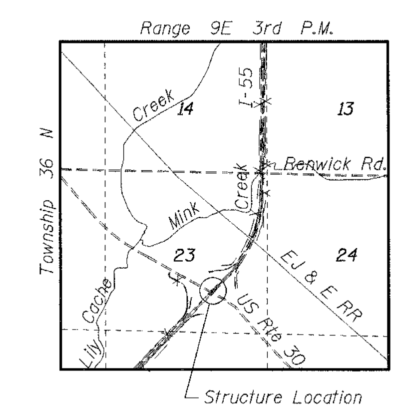
fs Structural Steel = 18,000 psi
fs Reinforcing Steel = 20,000 psi
fc Concrete = 800 psi (Abutments)
fc Concrete = 1200 psi (Piers)

1977 Construction (Widening):

fs Structural Steel = 20,000 psi
fs Reinforcing Steel = 20,000 psi
fc Concrete = 1400 psi (Substructure)

SEISMIC DATA:

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0



LOCATION MAP

Notes:

1. For PGL of US 30 and I-55, See Sht. SC-2.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
[signature]
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS LICENSED STRUCTURAL ENGINEER, CHICAGO, IL — 5/17/06 — EXPIRES 11/30/07

SHT. SC-1 OF 38

REVISIONS	
NAME	DATE

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

GENERAL PLAN & ELEVATION

SCALE:
DATE 05/19/2006
DRAWN BY PA
CHECKED BY MJK

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

INDEX OF SHEETS

* Sheet not Applicable to this Contract and Not Included

GENERAL NOTES

1. Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$" ϕ, open holes $\frac{15}{16}$" ϕ unless otherwise noted.

2. Calculated weight of Structural Steel: M 270 Grade 50 = 103,270 lbs.
   M 270 Grade 36 = 12,220 lbs.
   Structural Steel to be furnished under pay item Furnishing Structural Steel. The listed weight includes weight of structural framing, side retainers, adjusting shim plates for bearings, fasteners, washers and fixed bearings.

** Calculated weight of Anchor Bolts = 340 lbs.
Anchor bolts will be provided by Erection Contractor.

3. All structural steel shall be AASHTO M 270 Grade 50 unless otherwise noted.

** 4. Field welding of construction accessories will not be permitted to beams or girders.

** 5. Anchor bolts shall be set before bolting diaphragms over supports.

6. The main load carrying member components subjects to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

** 7. 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 for the work.

8. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided by the Fabrication Contractor for each bearing in addition to all other plates or shims. For Type 1 Elastomeric Bearings, two $\frac{1}{8}$" adjusting shims shall be provided by the Fabrication Contractor for each bearing and placed as detailed.

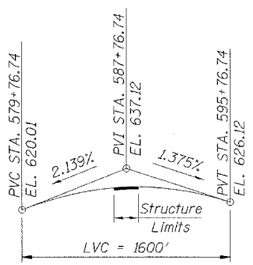
9. The organic zinc rich primer/epoxy/urethane paint system shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field by the Erection Contractor. The color of the final finish coat for all steel surfaces shall be gray, Munsell No. 5B 7/1. See Special Provision for Cleaning and Painting New Metal Structures.

** These notes included in Fabrication Contract for information only.

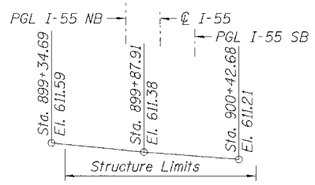
TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL	
Furnishing Elastomeric Bearing Assembly, Type I	Each	8	
Furnishing Elastomeric Bearing Assembly, Type II	Each	8	
Furnishing Structural Steel	L Sum	0.25	
Storage of Structural Steel and Bearings	Unit	87	***

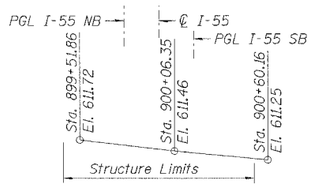
*** Refer to Special Provision Furnishing Structural Steel and Bearings for definition of Storage Unit. Quantity for Storage Unit is based on storing 25% of the steel weight for 30 calendar days.



PROFILE OF
PGL I-55 NB & SB
(Developed from Survey Data)



PROFILE OF U.S. ROUTE 30 WB
(From Survey)



PROFILE OF U.S. ROUTE 30 EB
(From Survey)

SHT. SC-2 OF 38

REVISIONS	
NAME	DATE

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

GENERAL NOTES,
INDEX OF SHEETS
& TOTAL BILL OF MATERIAL

SCALE: DRAWN BY PA
DATE 05/19/06 CHECKED BY MJK

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

PLOT DATE = $DATE$
FILE NAME = $FILEL$
PLOT SCALE = $SCALE$
USER NAME = $USER$

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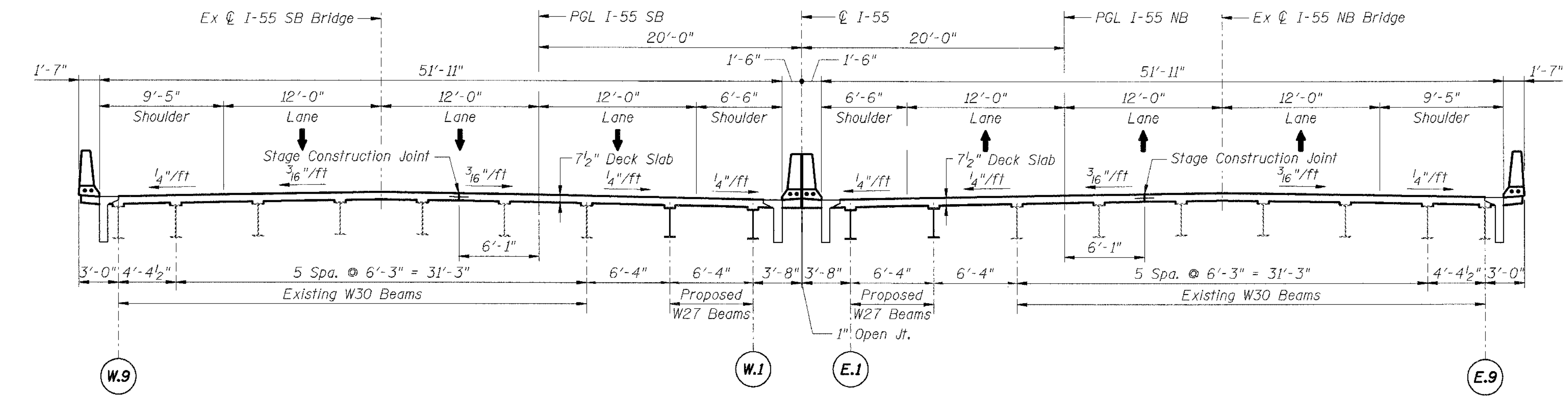
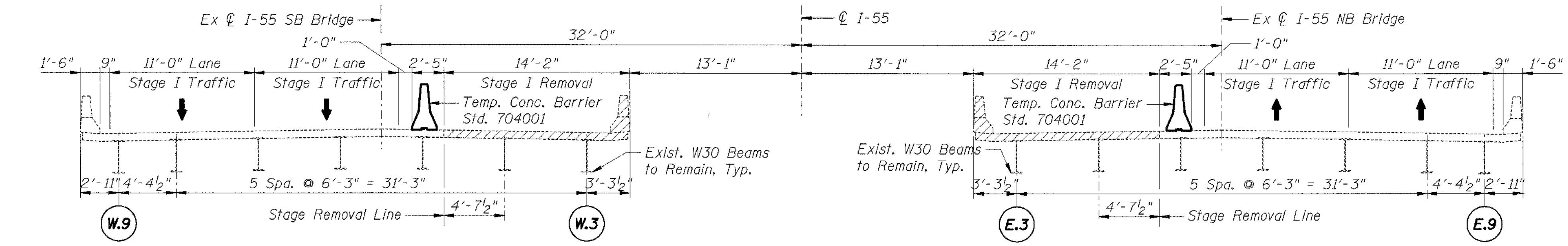
CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	13
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



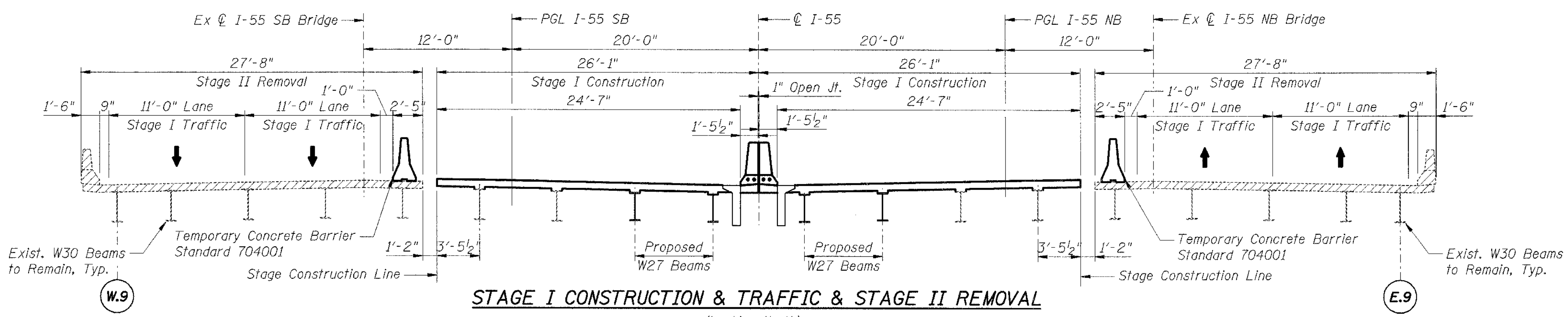
PROPOSED CROSS SECTION

(Looking North)



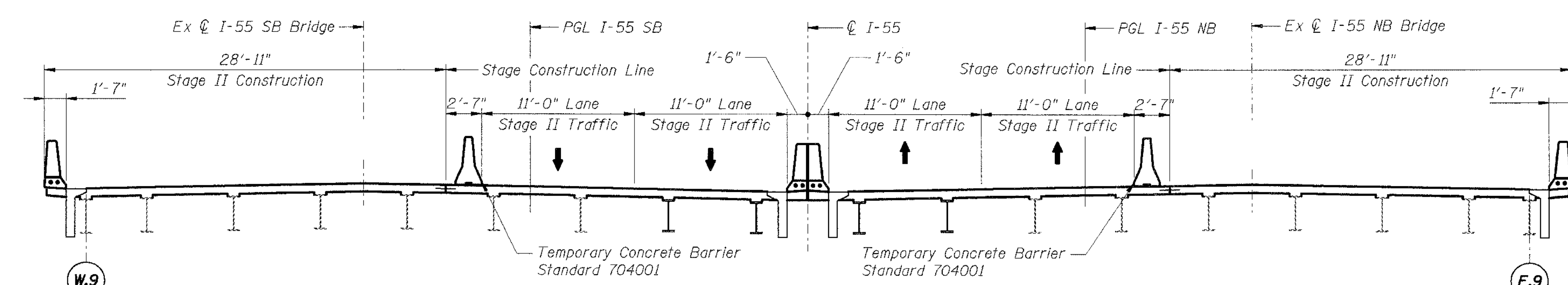
EXISTING STRUCTURES - STAGE I REMOVAL & TRAFFIC

(Looking North)



STAGE I CONSTRUCTION & TRAFFIC & STAGE II REMOVAL

(Looking North)



STAGE II CONSTRUCTION & TRAFFIC

(Looking North)

LEGEND:

▨ Concrete Removal

SHT. SC-3 OF 38

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

CONSTRUCTION STAGING

SCALE: DRAWN BY PA
DATE 05/19/06 CHECKED BY MJK

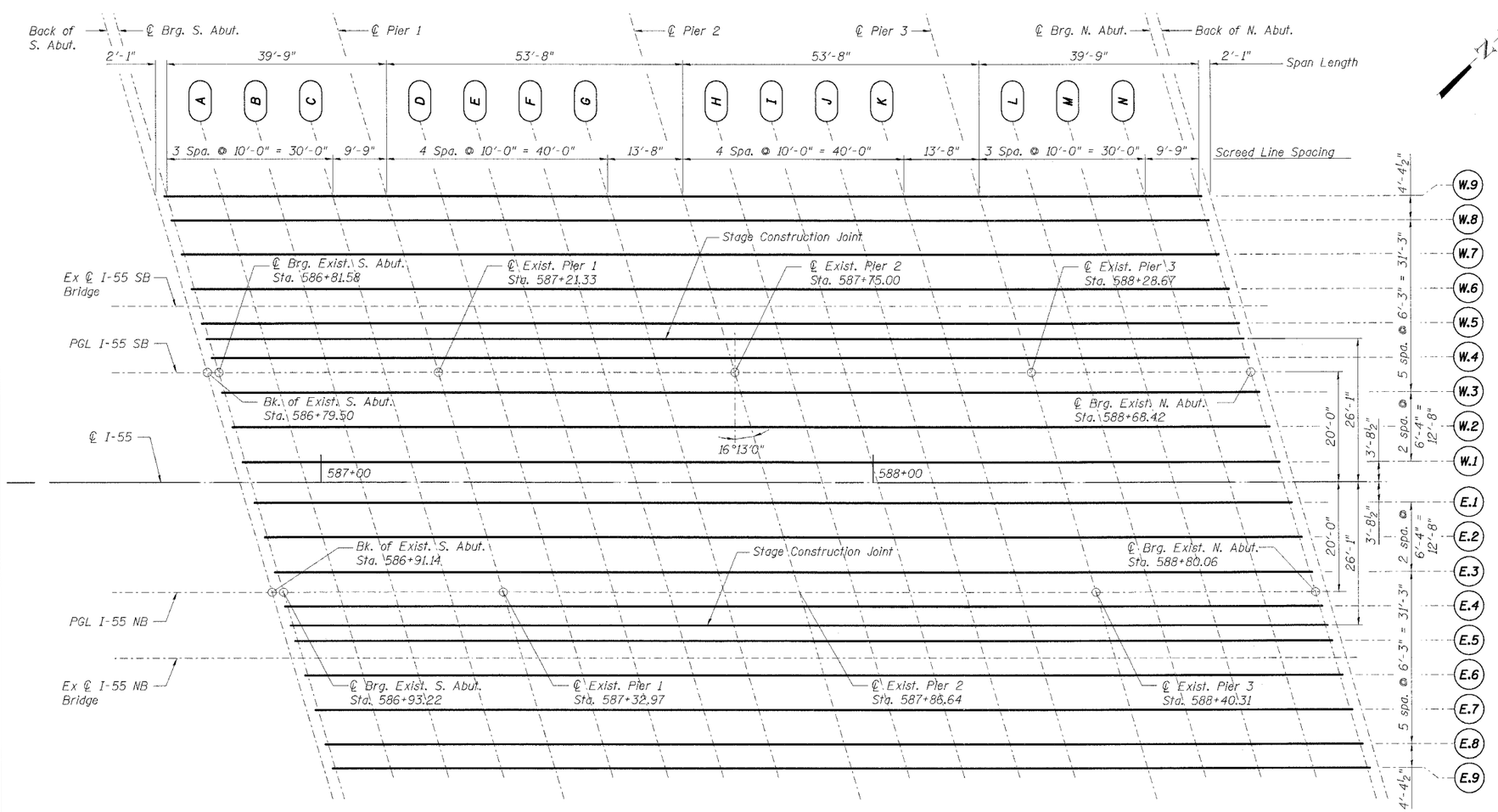
MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

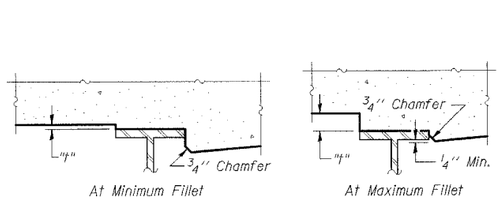
PLOT DATE = $DATE$
FILE NAME = $FILEL$
PLOT SCALE = $SCALE$
USER NAME = $USER$

CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SCREED PLAN

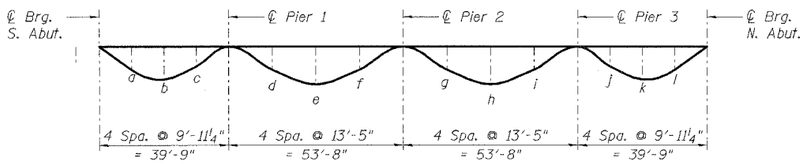


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown above, minus slab thickness, equals the fillet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

Notes:

1. Work this Sheet with Shts. SC-9 to SC-11.

THIS SHEET FOR INFORMATION ONLY



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of deck 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.

DEAD LOAD DEFLECTION TABLE

(Positive deflections are downward)

BEAMS	DEAD LOAD DEFLECTIONS (in)											
	a	b	c	d	e	f	g	h	i	j	k	l
E.1, E.3 thru E.7 & W.1, W.3 thru W.7	1/16	1/8	1/16	1/8	3/16	1/8	1/8	3/16	1/8	1/16	1/8	1/16
E.2, E.8, E.9 & W.2, W.8, W.9	1/16	1/16	1/16	1/8	3/16	1/8	1/8	3/16	1/8	1/16	1/16	1/16

SHT. SC-8 OF 38

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

SCREED PLAN & DEAD LOAD DEFLECTIONS

SCALE: DRAWN BY PA
DATE 05/19/06 CHECKED BY MJK

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

\\FP9010A02.DGN ..\BB9910A002.DGN ..\AL9910A001.DGN
5-17-2006 13:47:11 ANANTH#2 S:\DOCUMENT\B236150BN\STRUCT\DGN\SP6210A03.SHT

CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	15
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GIRDER W.9

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+70.20	-52.00	629.39	629.39
CL Brg S Abut	586+72.28	-52.00	629.41	629.41
A	586+82.28	-52.00	629.47	629.47
B	586+92.28	-52.00	629.52	629.52
C	587+02.28	-52.00	629.58	629.58
CL Brg Pier 1	587+12.03	-52.00	629.63	629.63
D	587+22.03	-52.00	629.68	629.68
E	587+32.03	-52.00	629.73	629.73
F	587+42.03	-52.00	629.78	629.78
G	587+52.03	-52.00	629.82	629.82
CL Brg Pier 2	587+65.70	-52.00	629.88	629.88
H	587+75.70	-52.00	629.92	629.92
I	587+85.70	-52.00	629.96	629.96
J	587+95.70	-52.00	629.99	629.99
K	588+05.70	-52.00	630.03	630.03
CL Brg Pier 3	588+19.36	-52.00	630.07	630.07
L	588+29.36	-52.00	630.10	630.10
M	588+39.36	-52.00	630.12	630.12
N	588+49.36	-52.00	630.15	630.15
CL Brg N Abut	588+59.11	-52.00	630.17	630.17
Bk N Abut	588+61.20	-52.00	630.17	630.17

GIRDER W.8

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+71.47	-47.63	629.49	629.49
CL Brg S Abut	586+73.55	-47.63	629.51	629.51
A	586+83.55	-47.63	629.57	629.57
B	586+93.55	-47.63	629.62	629.63
C	587+03.55	-47.63	629.68	629.68
CL Brg Pier 1	587+13.30	-47.63	629.73	629.73
D	587+23.30	-47.63	629.78	629.79
E	587+33.30	-47.63	629.83	629.84
F	587+43.30	-47.63	629.88	629.89
G	587+53.30	-47.63	629.92	629.93
CL Brg Pier 2	587+66.97	-47.63	629.98	629.98
H	587+76.97	-47.63	630.02	630.02
I	587+86.97	-47.63	630.05	630.07
J	587+96.97	-47.63	630.09	630.10
K	588+06.97	-47.63	630.12	630.13
CL Brg Pier 3	588+20.64	-47.63	630.16	630.16
L	588+30.64	-47.63	630.19	630.19
M	588+40.64	-47.63	630.22	630.22
N	588+50.64	-47.63	630.24	630.25
CL Brg N Abut	588+60.39	-47.63	630.26	630.26
Bk N Abut	588+62.47	-47.63	630.26	630.26

GIRDER W.7

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+73.29	-41.38	629.62	629.62
CL Brg S Abut	586+75.37	-41.38	629.63	629.63
A	586+85.37	-41.38	629.69	629.70
B	586+95.37	-41.38	629.75	629.76
C	587+05.37	-41.38	629.81	629.81
CL Brg Pier 1	587+15.12	-41.38	629.86	629.86
D	587+25.12	-41.38	629.91	629.91
E	587+35.12	-41.38	629.96	629.97
F	587+45.12	-41.38	630.00	630.02
G	587+55.12	-41.38	630.05	630.06
CL Brg Pier 2	587+68.79	-41.38	630.10	630.10
H	587+78.79	-41.38	630.14	630.15
I	587+88.79	-41.38	630.18	630.19
J	587+98.79	-41.38	630.21	630.23
K	588+08.79	-41.38	630.24	630.26
CL Brg Pier 3	588+22.45	-41.38	630.29	630.29
L	588+32.45	-41.38	630.31	630.32
M	588+42.45	-41.38	630.34	630.35
N	588+52.45	-41.38	630.36	630.37
CL Brg N Abut	588+62.20	-41.38	630.38	630.38
Bk N Abut	588+64.29	-41.38	630.38	630.38

GIRDER W.6

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+75.10	-35.13	629.73	629.73
CL Brg S Abut	586+77.19	-35.13	629.74	629.74
A	586+87.19	-35.13	629.80	629.81
B	586+97.19	-35.13	629.86	629.87
C	587+07.19	-35.13	629.91	629.92
CL Brg Pier 1	587+16.94	-35.13	629.96	629.96
D	587+26.94	-35.13	630.01	630.02
E	587+36.94	-35.13	630.06	630.08
F	587+46.94	-35.13	630.11	630.12
G	587+56.94	-35.13	630.15	630.16
CL Brg Pier 2	587+70.60	-35.13	630.21	630.21
H	587+80.60	-35.13	630.25	630.25
I	587+90.60	-35.13	630.28	630.30
J	588+00.60	-35.13	630.32	630.33
K	588+10.60	-35.13	630.35	630.36
CL Brg Pier 3	588+24.27	-35.13	630.39	630.39
L	588+34.27	-35.13	630.41	630.42
M	588+44.27	-35.13	630.44	630.45
N	588+54.27	-35.13	630.46	630.47
CL Brg N Abut	588+64.02	-35.13	630.48	630.48
Bk N Abut	588+66.10	-35.13	630.48	630.48

GIRDER W.5

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+76.92	-28.88	629.74	629.74
CL Brg S Abut	586+79.01	-28.88	629.75	629.75
A	586+89.01	-28.88	629.81	629.82
B	586+99.01	-28.88	629.87	629.88
C	587+09.01	-28.88	629.92	629.93
CL Brg Pier 1	587+18.76	-28.88	629.97	629.97
D	587+28.76	-28.88	630.02	630.03
E	587+38.76	-28.88	630.07	630.09
F	587+48.76	-28.88	630.12	630.13
G	587+58.76	-28.88	630.16	630.17
CL Brg Pier 2	587+72.42	-28.88	630.21	630.21
H	587+82.42	-28.88	630.25	630.26
I	587+92.42	-28.88	630.29	630.30
J	588+02.42	-28.88	630.32	630.34
K	588+12.42	-28.88	630.35	630.36
CL Brg Pier 3	588+26.09	-28.88	630.39	630.39
L	588+36.09	-28.88	630.42	630.42
M	588+46.09	-28.88	630.44	630.45
N	588+56.09	-28.88	630.47	630.47
CL Brg N Abut	588+65.84	-28.88	630.48	630.48
Bk N Abut	588+67.92	-28.88	630.49	630.49

STAGE CONSTRUCTION JOINT

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+77.73	-26.08	629.70	629.70
CL Brg S Abut	586+79.82	-26.08	629.71	629.71
A	586+89.82	-26.08	629.77	629.78
B	586+99.82	-26.08	629.83	629.84
C	587+09.82	-26.08	629.88	629.89
CL Brg Pier 1	587+19.57	-26.08	629.93	629.93
D	587+29.57	-26.08	629.98	629.99
E	587+39.57	-26.08	630.03	630.05
F	587+49.57	-26.08	630.08	630.09
G	587+59.57	-26.08	630.12	630.13
CL Brg Pier 2	587+73.23	-26.08	630.17	630.17
H	587+83.23	-26.08	630.21	630.22
I	587+93.23	-26.08	630.25	630.26
J	588+03.23	-26.08	630.28	630.30
K	588+13.23	-26.08	630.31	630.32
CL Brg Pier 3	588+26.90	-26.08	630.35	630.35
L	588+36.90	-26.08	630.38	630.38
M	588+46.90	-26.08	630.40	630.41
N	588+56.90	-26.08	630.42	630.43
CL Brg N Abut	588+66.65	-26.08	630.44	630.44
Bk N Abut	588+68.73	-26.08	630.45	630.45

GIRDER W.4

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+78.74	-22.63	629.65	629.65
CL Brg S Abut	586+80.82	-22.63	629.67	629.67
A	586+90.82	-22.63	629.72	629.73
B	587+00.82	-22.63	629.78	629.79
C	587+10.82	-22.63	629.83	629.84
CL Brg Pier 1	587+20.57	-22.63	629.88	629.88
D	587+30.57	-22.63	629.93	629.94
E	587+40.57	-22.63	629.98	630.00
F	587+50.57	-22.63	630.03	630.04
G	587+60.57	-22.63	630.07	630.08
CL Brg Pier 2	587+74.24	-22.63	630.12	630.12
H	587+84.24	-22.63	630.16	630.17
I	587+94.24	-22.63	630.20	630.21
J	588+04.24	-22.63	630.23	630.25
K	588+14.24	-22.63	630.26	630.27
CL Brg Pier 3	588+27.91	-22.63	630.30	630.30
L	588+37.91	-22.63	630.33	630.33
M	588+47.91	-22.63	630.35	630.36
N	588+57.91	-22.63	630.37	630.38
CL Brg N Abut	588+67.66	-22.63	630.39	630.39
Bk N Abut	588+69.74	-22.63	630.39	630.39

PGL I-55 SB

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+79.50	-20.00	629.62	629.62
CL Brg S Abut	586+81.59	-20.00	629.63	629.63
A	586+91.59	-20.00	629.69	629.69
B	587+01.59	-20.00	629.74	629.75
C	587+11.59	-20.00	629.80	629.80
CL Brg Pier 1	587+21.34	-20.00	629.85	629.85
D	587+31.34	-20.00	629.90	629.90
E	587+41.34	-20.00	629.94	629.96
F	587+51.34	-20.00	629.99	630.01
G	587+61.34	-20.00	630.03	630.04
CL Brg Pier 2	587+75.00	-20.00	630.09	630.09
H	587+85.00	-20.00	630.12	630.13
I	587+95.00	-20.00	630.16	630.17
J	588+05.00	-20.00	630.19	630.21
K	588+15.00	-20.00	630.22	630.23
CL Brg Pier 3	588+28.67	-20.00	630.26	630.26
L	588+38.67	-20.00	630.29	630.29
M	588+48.67	-20.00	630.31	630.32
N	588+58.67	-20.00	630.33	630.34
CL Brg N Abut	588+68.42	-20.00	630.35	630.35
Bk N Abut	588+70.50	-20.00	630.35	630.35

Note:

1. Work this Sheet with Sht. SC-8.

THIS SHEET FOR INFORMATION ONLY

SHT. SC-9 OF 38

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

TOP OF SLAB ELEVATIONS - I

SCALE: DRAWN BY PA
DATE 05/19/06 CHECKED BY MJK

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
USER NAME = $USER$

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GIRDER W.3

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+80.56	-16.38	629.55	629.55
CL Brg S Abut	586+82.64	-16.38	629.56	629.56
A	586+92.64	-16.38	629.62	629.63
B	587+02.64	-16.38	629.67	629.68
C	587+12.64	-16.38	629.73	629.73
CL Brg Pier 1	587+22.39	-16.38	629.78	629.78
D	587+32.39	-16.38	629.83	629.83
E	587+42.39	-16.38	629.87	629.89
F	587+52.39	-16.38	629.92	629.93
G	587+62.39	-16.38	629.96	629.97
CL Brg Pier 2	587+76.06	-16.38	630.01	630.01
H	587+86.06	-16.38	630.05	630.06
I	587+96.06	-16.38	630.09	630.10
J	588+06.06	-16.38	630.12	630.14
K	588+16.06	-16.38	630.15	630.16
CL Brg Pier 3	588+29.72	-16.38	630.19	630.19
L	588+39.72	-16.38	630.21	630.22
M	588+49.72	-16.38	630.24	630.25
N	588+59.72	-16.38	630.26	630.27
CL Brg N Abut	588+69.47	-16.38	630.28	630.28
Bk N Abut	588+71.56	-16.38	630.28	630.28

GIRDER W.2

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+82.40	-10.04	629.43	629.43
CL Brg S Abut	586+84.48	-10.04	629.44	629.44
A	586+94.48	-10.04	629.50	629.50
B	587+04.48	-10.04	629.55	629.56
C	587+14.48	-10.04	629.60	629.61
CL Brg Pier 1	587+24.23	-10.04	629.65	629.65
D	587+34.23	-10.04	629.70	629.71
E	587+44.23	-10.04	629.75	629.76
F	587+54.23	-10.04	629.79	629.81
G	587+64.23	-10.04	629.84	629.85
CL Brg Pier 2	587+77.90	-10.04	629.89	629.89
H	587+87.90	-10.04	629.93	629.93
I	587+97.90	-10.04	629.96	629.98
J	588+07.90	-10.04	629.99	630.01
K	588+17.90	-10.04	630.02	630.03
CL Brg Pier 3	588+31.57	-10.04	630.06	630.06
L	588+41.57	-10.04	630.09	630.09
M	588+51.57	-10.04	630.11	630.12
N	588+61.57	-10.04	630.13	630.14
CL Brg N Abut	588+71.32	-10.04	630.15	630.15
Bk N Abut	588+73.40	-10.04	630.15	630.15

GIRDER W.1

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+84.24	-3.71	629.31	629.31
CL Brg S Abut	586+86.32	-3.71	629.32	629.32
A	586+96.32	-3.71	629.37	629.38
B	587+06.32	-3.71	629.43	629.44
C	587+16.32	-3.71	629.48	629.49
CL Brg Pier 1	587+26.07	-3.71	629.53	629.53
D	587+36.07	-3.71	629.58	629.59
E	587+46.07	-3.71	629.63	629.64
F	587+56.07	-3.71	629.67	629.69
G	587+66.07	-3.71	629.71	629.72
CL Brg Pier 2	587+79.74	-3.71	629.76	629.76
H	587+89.74	-3.71	629.80	629.81
I	587+99.74	-3.71	629.84	629.85
J	588+09.74	-3.71	629.87	629.88
K	588+19.74	-3.71	629.90	629.91
CL Brg Pier 3	588+33.41	-3.71	629.93	629.93
L	588+43.41	-3.71	629.96	629.96
M	588+53.41	-3.71	629.98	629.99
N	588+63.41	-3.71	630.00	630.01
CL Brg N Abut	588+73.16	-3.71	630.02	630.02
Bk N Abut	588+75.24	-3.71	630.02	630.02

GIRDER E.1

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+86.40	3.71	629.32	629.32
CL Brg S Abut	586+88.48	3.71	629.33	629.33
A	586+98.48	3.71	629.39	629.39
B	587+08.48	3.71	629.44	629.45
C	587+18.48	3.71	629.49	629.50
CL Brg Pier 1	587+28.23	3.71	629.54	629.54
D	587+38.23	3.71	629.59	629.60
E	587+48.23	3.71	629.64	629.65
F	587+58.23	3.71	629.68	629.70
G	587+68.23	3.71	629.72	629.73
CL Brg Pier 2	587+81.90	3.71	629.77	629.77
H	587+91.90	3.71	629.81	629.82
I	588+01.90	3.71	629.84	629.86
J	588+11.90	3.71	629.87	629.89
K	588+21.90	3.71	629.90	629.91
CL Brg Pier 3	588+35.57	3.71	629.94	629.94
L	588+45.57	3.71	629.96	629.97
M	588+55.57	3.71	629.99	629.99
N	588+65.57	3.71	630.01	630.01
CL Brg N Abut	588+75.32	3.71	630.02	630.02
Bk N Abut	588+77.40	3.71	630.03	630.03

GIRDER E.2

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+88.24	10.04	629.46	629.46
CL Brg S Abut	586+90.32	10.04	629.47	629.47
A	587+00.32	10.04	629.53	629.54
B	587+10.32	10.04	629.58	629.59
C	587+20.32	10.04	629.63	629.64
CL Brg Pier 1	587+30.07	10.04	629.68	629.68
D	587+40.07	10.04	629.73	629.74
E	587+50.07	10.04	629.78	629.79
F	587+60.07	10.04	629.82	629.83
G	587+70.07	10.04	629.86	629.87
CL Brg Pier 2	587+83.74	10.04	629.91	629.91
H	587+93.74	10.04	629.95	629.95
I	588+03.74	10.04	629.98	629.99
J	588+13.74	10.04	630.01	630.03
K	588+23.74	10.04	630.04	630.05
CL Brg Pier 3	588+37.41	10.04	630.08	630.08
L	588+47.41	10.04	630.10	630.10
M	588+57.41	10.04	630.12	630.13
N	588+67.41	10.04	630.14	630.15
CL Brg N Abut	588+77.16	10.04	630.16	630.16
Bk N Abut	588+79.24	10.04	630.16	630.16

GIRDER E.3

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+90.08	16.38	629.60	629.60
CL Brg S Abut	586+92.17	16.38	629.62	629.62
A	587+02.17	16.38	629.67	629.68
B	587+12.17	16.38	629.72	629.73
C	587+22.17	16.38	629.78	629.78
CL Brg Pier 1	587+31.92	16.38	629.82	629.82
D	587+41.92	16.38	629.87	629.88
E	587+51.92	16.38	629.92	629.93
F	587+61.92	16.38	629.96	629.98
G	587+71.92	16.38	630.00	630.01
CL Brg Pier 2	587+85.58	16.38	630.05	630.05
H	587+95.58	16.38	630.09	630.09
I	588+05.58	16.38	630.12	630.13
J	588+15.58	16.38	630.15	630.17
K	588+25.58	16.38	630.18	630.19
CL Brg Pier 3	588+39.25	16.38	630.21	630.21
L	588+49.25	16.38	630.24	630.24
M	588+59.25	16.38	630.26	630.27
N	588+69.25	16.38	630.28	630.28
CL Brg N Abut	588+79.00	16.38	630.29	630.29
Bk N Abut	588+81.08	16.38	630.30	630.30

PGL I-55 NB

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+91.14	20.00	629.69	629.69
CL Brg S Abut	586+93.22	20.00	629.70	629.70
A	587+03.22	20.00	629.75	629.76
B	587+13.22	20.00	629.81	629.81
C	587+23.22	20.00	629.86	629.86
CL Brg Pier 1	587+32.97	20.00	629.90	629.90
D	587+42.97	20.00	629.95	629.96
E	587+52.97	20.00	630.00	630.01
F	587+62.97	20.00	630.04	630.06
G	587+72.97	20.00	630.08	630.09
CL Brg Pier 2	587+86.64	20.00	630.13	630.13
H	587+96.64	20.00	630.16	630.17
I	588+06.64	20.00	630.20	630.21
J	588+16.64	20.00	630.23	630.24
K	588+26.64	20.00	630.26	630.27
CL Brg Pier 3	588+40.30	20.00	630.29	630.29
L	588+50.30	20.00	630.31	630.32
M	588+60.30	20.00	630.33	630.34
N	588+70.30	20.00	630.35	630.36
CL Brg N Abut	588+80.05	20.00	630.37	630.37
Bk N Abut	588+82.14	20.00	630.37	630.37

THIS SHEET FOR INFORMATION ONLY

Note:

1. Work this Sheet with Sht. SC-8.

SHT. SC-10 OF 38

REVISIONS	
NAME	DATE

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

TOP OF SLAB ELEVATIONS - II

SCALE: DRAWN BY PA
DATE 05/19/06 CHECKED BY MJK

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

GIRDER E.4

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+91.90	22.63	629.73	629.73
CL Brg S Abut	586+93.98	22.63	629.74	629.74
A	587+03.98	22.63	629.80	629.80
B	587+13.98	22.63	629.85	629.86
C	587+23.98	22.63	629.90	629.90
CL Brg Pier 1	587+33.73	22.63	629.95	629.95
D	587+43.73	22.63	630.00	630.00
E	587+53.73	22.63	630.04	630.06
F	587+63.73	22.63	630.08	630.10
G	587+73.73	22.63	630.12	630.13
CL Brg Pier 2	587+87.40	22.63	630.17	630.17
H	587+97.40	22.63	630.21	630.21
I	588+07.40	22.63	630.24	630.26
J	588+17.40	22.63	630.27	630.29
K	588+27.40	22.63	630.30	630.31
CL Brg Pier 3	588+41.07	22.63	630.33	630.33
L	588+51.07	22.63	630.36	630.36
M	588+61.07	22.63	630.38	630.39
N	588+71.07	22.63	630.40	630.40
CL Brg N Abut	588+80.82	22.63	630.41	630.41
Bk N Abut	588+82.90	22.63	630.42	630.42

STAGE CONSTRUCTION JOINT

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+92.91	26.08	629.79	629.79
CL Brg S Abut	586+94.99	26.08	629.80	629.80
A	587+04.99	26.08	629.86	629.86
B	587+14.99	26.08	629.91	629.92
C	587+24.99	26.08	629.96	629.96
CL Brg Pier 1	587+34.74	26.08	630.01	630.01
D	587+44.74	26.08	630.05	630.06
E	587+54.74	26.08	630.10	630.11
F	587+64.74	26.08	630.14	630.16
G	587+74.74	26.08	630.18	630.19
CL Brg Pier 2	587+88.41	26.08	630.23	630.23
H	587+98.41	26.08	630.27	630.27
I	588+08.41	26.08	630.30	630.31
J	588+18.41	26.08	630.33	630.35
K	588+28.41	26.08	630.36	630.37
CL Brg Pier 3	588+42.07	26.08	630.39	630.39
L	588+52.07	26.08	630.41	630.42
M	588+62.07	26.08	630.43	630.44
N	588+72.07	26.08	630.45	630.46
CL Brg N Abut	588+81.82	26.08	630.47	630.47
Bk N Abut	588+83.91	26.08	630.47	630.47

GIRDER E.5

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+93.72	28.88	629.84	629.84
CL Brg S Abut	586+95.80	28.88	629.85	629.85
A	587+05.80	28.88	629.91	629.91
B	587+15.80	28.88	629.96	629.97
C	587+25.80	28.88	630.01	630.01
CL Brg Pier 1	587+35.55	28.88	630.06	630.06
D	587+45.55	28.88	630.10	630.11
E	587+55.55	28.88	630.15	630.16
F	587+65.55	28.88	630.19	630.20
G	587+75.55	28.88	630.23	630.24
CL Brg Pier 2	587+89.22	28.88	630.28	630.28
H	587+99.22	28.88	630.31	630.32
I	588+09.22	28.88	630.34	630.36
J	588+19.22	28.88	630.37	630.39
K	588+29.22	28.88	630.40	630.41
CL Brg Pier 3	588+42.88	28.88	630.44	630.44
L	588+52.88	28.88	630.46	630.46
M	588+62.88	28.88	630.48	630.49
N	588+72.88	28.88	630.50	630.50
CL Brg N Abut	588+82.63	28.88	630.51	630.51
Bk N Abut	588+84.72	28.88	630.52	630.52

GIRDER E.6

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+95.54	35.13	629.85	629.85
CL Brg S Abut	586+97.62	35.13	629.86	629.86
A	587+07.62	35.13	629.91	629.92
B	587+17.62	35.13	629.97	629.98
C	587+27.62	35.13	630.02	630.02
CL Brg Pier 1	587+37.37	35.13	630.06	630.06
D	587+47.37	35.13	630.11	630.12
E	587+57.37	35.13	630.15	630.17
F	587+67.37	35.13	630.19	630.21
G	587+77.37	35.13	630.23	630.24
CL Brg Pier 2	587+91.04	35.13	630.28	630.28
H	588+01.04	35.13	630.32	630.32
I	588+11.04	35.13	630.35	630.36
J	588+21.04	35.13	630.38	630.40
K	588+31.04	35.13	630.41	630.42
CL Brg Pier 3	588+44.70	35.13	630.44	630.44
L	588+54.70	35.13	630.46	630.47
M	588+64.70	35.13	630.48	630.49
N	588+74.70	35.13	630.50	630.51
CL Brg N Abut	588+84.45	35.13	630.52	630.52
Bk N Abut	588+86.54	35.13	630.52	630.52

GIRDER E.7

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+97.35	41.38	629.76	629.76
CL Brg S Abut	586+99.44	41.38	629.77	629.77
A	587+09.44	41.38	629.83	629.83
B	587+19.44	41.38	629.88	629.89
C	587+29.44	41.38	629.93	629.93
CL Brg Pier 1	587+39.19	41.38	629.97	629.97
D	587+49.19	41.38	630.02	630.03
E	587+59.19	41.38	630.06	630.08
F	587+69.19	41.38	630.10	630.12
G	587+79.19	41.38	630.14	630.15
CL Brg Pier 2	587+92.85	41.38	630.19	630.19
H	588+02.85	41.38	630.23	630.23
I	588+12.85	41.38	630.26	630.27
J	588+22.85	41.38	630.29	630.30
K	588+32.85	41.38	630.31	630.32
CL Brg Pier 3	588+46.52	41.38	630.35	630.35
L	588+56.52	41.38	630.37	630.37
M	588+66.52	41.38	630.39	630.40
N	588+76.52	41.38	630.41	630.41
CL Brg N Abut	588+86.27	41.38	630.42	630.42
Bk N Abut	588+88.35	41.38	630.42	630.42

GIRDER E.8

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	586+99.17	47.63	629.65	629.65
CL Brg S Abut	587+01.25	47.63	629.67	629.67
A	587+11.25	47.63	629.72	629.73
B	587+21.25	47.63	629.77	629.78
C	587+31.25	47.63	629.82	629.82
CL Brg Pier 1	587+41.00	47.63	629.87	629.87
D	587+51.00	47.63	629.91	629.92
E	587+61.00	47.63	629.95	629.97
F	587+71.00	47.63	629.99	630.01
G	587+81.00	47.63	630.03	630.04
CL Brg Pier 2	587+94.67	47.63	630.08	630.08
H	588+04.67	47.63	630.12	630.12
I	588+14.67	47.63	630.15	630.16
J	588+24.67	47.63	630.17	630.19
K	588+34.67	47.63	630.20	630.21
CL Brg Pier 3	588+48.34	47.63	630.23	630.23
L	588+58.34	47.63	630.26	630.26
M	588+68.34	47.63	630.27	630.28
N	588+78.34	47.63	630.29	630.30
CL Brg N Abut	588+88.09	47.63	630.31	630.31
Bk N Abut	588+90.17	47.63	630.31	630.31

GIRDER E.9

LINE	℄ I-55 STATION	℄ I-55 OFFSET (ft)	THEORETICAL GRADE ELEVATIONS (ft)	ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS (ft)
Bk S Abut	587+00.44	52.00	629.57	629.57
CL Brg S Abut	587+02.53	52.00	629.58	629.58
A	587+12.53	52.00	629.64	629.64
B	587+22.53	52.00	629.69	629.69
C	587+32.53	52.00	629.74	629.74
CL Brg Pier 1	587+42.28	52.00	629.78	629.78
D	587+52.28	52.00	629.83	629.83
E	587+62.28	52.00	629.87	629.88
F	587+72.28	52.00	629.91	629.92
G	587+82.28	52.00	629.95	629.96
CL Brg Pier 2	587+95.94	52.00	630.00	630.00
H	588+05.94	52.00	630.03	630.03
I	588+15.94	52.00	630.06	630.07
J	588+25.94	52.00	630.09	630.10
K	588+35.94	52.00	630.11	630.12
CL Brg Pier 3	588+49.61	52.00	630.15	630.15
L	588+59.61	52.00	630.17	630.17
M	588+69.61	52.00	630.19	630.19
N	588+79.61	52.00	630.20	630.21
CL Brg N Abut	588+89.36	52.00	630.22	630.22
Bk N Abut	588+91.44	52.00	630.22	630.22

THIS SHEET FOR INFORMATION ONLY

Note:

1. Work this Sheet with Sht. SC-8.

SHT. SC-11 OF 38

REVISIONS	
NAME	DATE

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

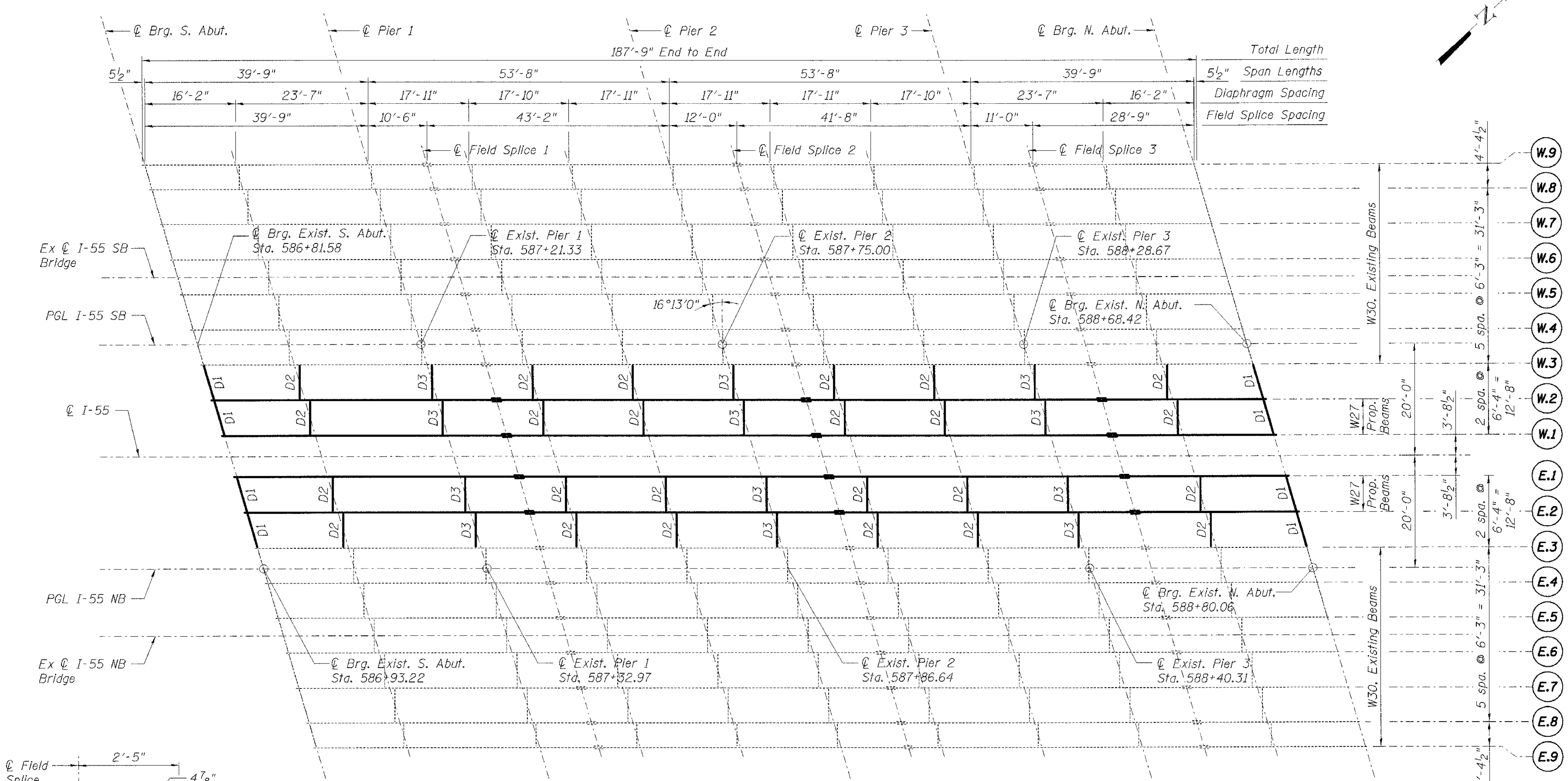
TOP OF SLAB ELEVATIONS - III

SCALE:
DRAWN BY PA
DATE 05/19/06
CHECKED BY MJK

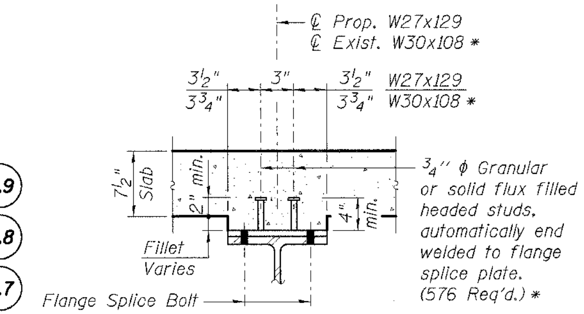
TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

CONTRACT NO. 60A67

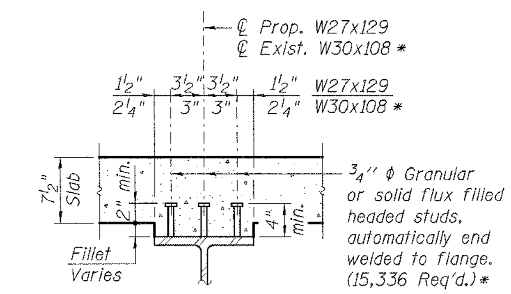
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	18
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FRAMING PLAN



SHEAR CONNECTOR DETAIL AT FIELD SPLICE

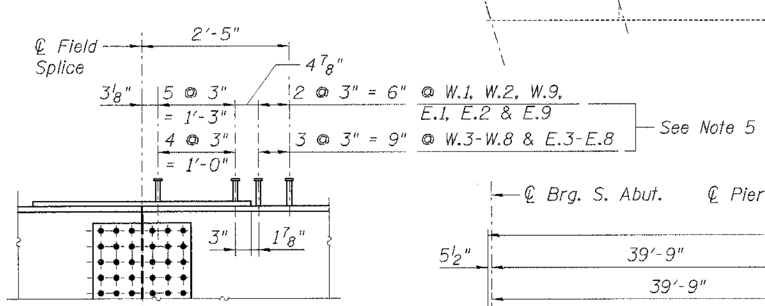


SHEAR CONNECTOR DETAIL

BILL OF MATERIAL

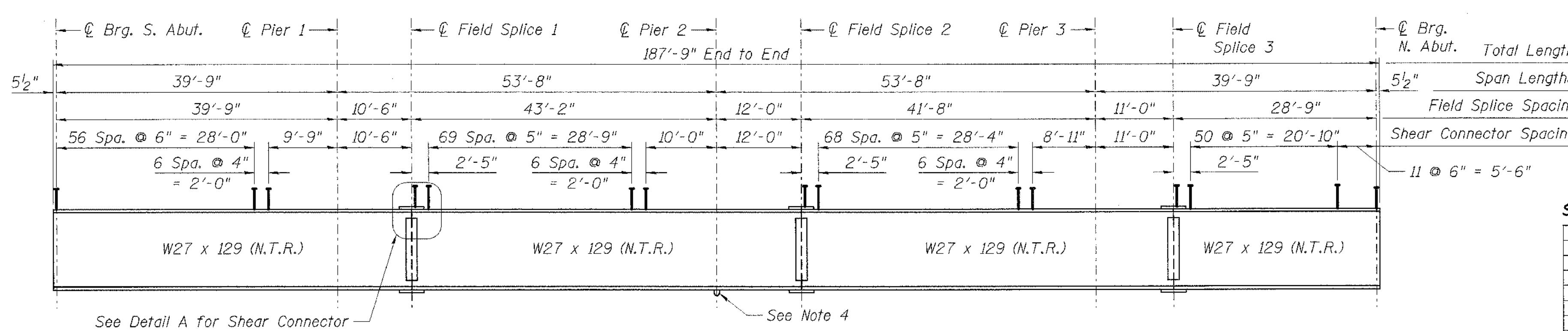
Item	Unit	Total
Shear Stud Connector	Each	15,912 *

* For Information Only



DETAIL A

(Flange Splice Bolts not shown for Clarity)



BEAM ELEVATION

Notes:

1. N.T.R. denotes steel is subject to Supplemental Requirements for Notch Toughness (Zone 2).
2. For field splice details, see Sht. SC-20.
3. For diaphragm details, see Sht. SC-21.
4. Rocker plate of fixed bearing to be shop welded at Pier 2 location on beams. See Sht. SC-22 for this detail.
5. Shear Connector Spacing at Existing Beams W.3 to W.9 and E.3 to E.9 shown For Information Only.

SHT. SC-19 OF 38

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

FRAMING PLAN & BEAM ELEVATION

SCALE: DRAWN BY PA
DATE 05/19/06 CHECKED BY MJK

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

PLOT DATE = $DATE$
FILE NAME = $FILE$
PLOT SCALE = $SCALE$
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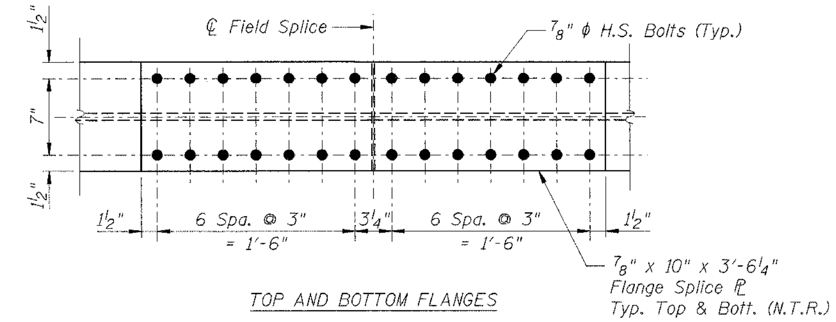
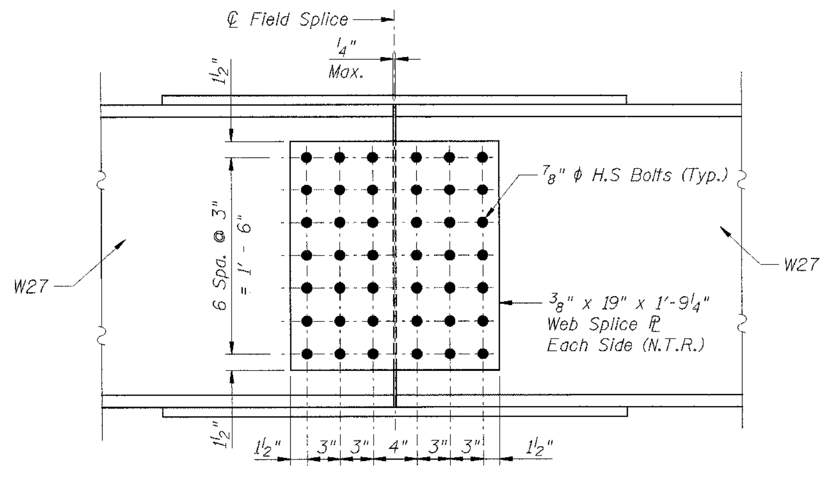


TOP AND BOTTOM FLANGES



ELEVATION

SPLICE DETAILS

asdf
asdf

GIRDER E.2 & W.2 MOMENT TABLE

(Composite in Positive Moment Areas Only)

	0.4 Span 1 & 4	Pier 1 & 3	0.5 Span 2 & 3	Pier 2
Is (in⁴)	4,760	4,760	4,760	4,760
Ic (n) (in⁴)	12,620	-	12,620	-
Ic (3n) (in⁴)	9,317	-	9,317	-
Ss (in³)	345	345	345	345
Sc (n) (in³)	500	-	500	-
Sc (3n) (in³)	453	-	453	-
Z (in³)	-	395	-	395
DL (k/ft.)	0.75	1.17	0.75	1.17
MDL ('k)	76	241	94	279
sDL (k/ft.)	0.42	-	0.42	-
MsDL ('k)	49	-	67	-
MLL ('k)	218	135	281	153
M (Imp) ('k)	66	39	79	43
5/3[MLL+M(Imp)] ('k)	474	292	601	328
Ma ('k)	778	693	990	789
Mu ('k)	2,459	-	2,688	-
fsDL non-comp (k.s.i.)	2.7	8.4	3.3	9.7
fsDL (comp) (k.s.i.)	1.3	-	1.8	-
fs5/3(LL+Imp) (k.s.i.)	11.4	10.2	14.4	11.4
fs (Overload) (k.s.i.)	15.4	18.6	19.5	21.1
fs (Total) (k.s.i.)	-	24.2	-	27.4
VR (k)	50.0	-	51.0	-

GIRDER E.2 & W.2 REACTION TABLE

	Abut.	Pier 1 & 3	Pier 2
RDL (k)	17.1	59.9	64.1
RLL (k)	34.8	41.1	42.1
Imp. (k)	10.4	12.0	11.8
R (Total) (k)	62.4	113.0	117.9

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

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

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

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[MDL + MsDL + 5/3(MLL + M(Imp))].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to MDL + MsDL + 5/3(MLL + M(Imp)).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[MDL + MsDL + 5/3(MLL + M(Imp))].

TOP OF BEAM ELEVATIONS

(for fabrication use only)

Beam	℄ Brg. S. Abut.	℄ Pier 1	℄ Field Splice 1	℄ Pier 2	℄ Field Splice 2	℄ Pier 3	℄ Field Splice 3	℄ Brg. N. Abut.
W.2	628.81	629.03	629.09	629.26	629.32	629.44	629.47	629.52
W.1	628.69	628.91	628.97	629.14	629.19	629.31	629.34	629.39
E.1	628.71	628.92	628.98	629.15	629.20	629.31	629.35	629.40
E.2	628.85	629.06	629.12	629.29	629.34	629.45	629.48	629.53

BEARING SEAT ELEVATIONS

(For Information Only)

Beam	S. Abut.	Pier 1	Pier 2	Pier 3	N. Abut.
W.2	626.06	626.33	626.75	626.73	626.77
W.1	625.94	626.20	626.63	626.61	626.64
E.1	625.95	626.21	626.64	626.61	626.64
E.2	626.09	626.35	626.78	626.75	626.78

Notes:

1. Work this Sheet with Sht. SC-19.
2. N.T.R. denotes steel is subject to Supplemental Requirements for Notch Toughness (Zone 2).
3. H.S. bolts shall be AASHTO M 164 (ASTM A 325).

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

SPLICE DETAILS,
MOMENT & REACTION TABLES,
TOP OF BEAM ELEVATIONS

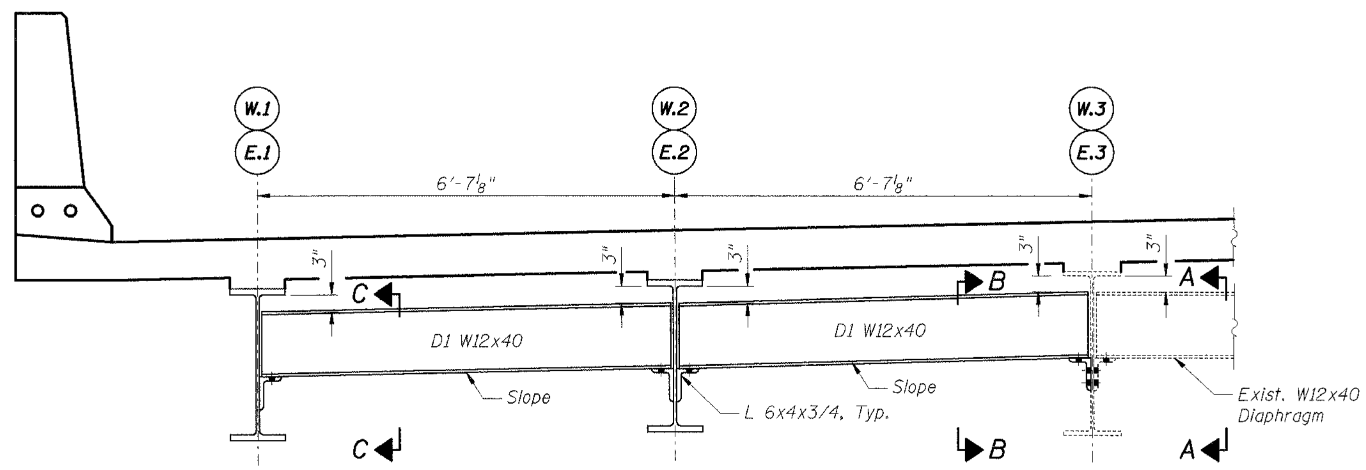
SCALE: DRAWN BY PA
DATE 05/19/06 CHECKED BY MJK

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

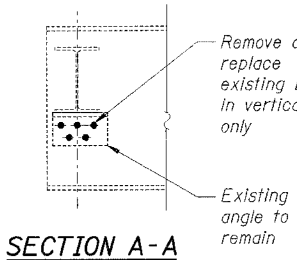
TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

CONTRACT NO. 60A67

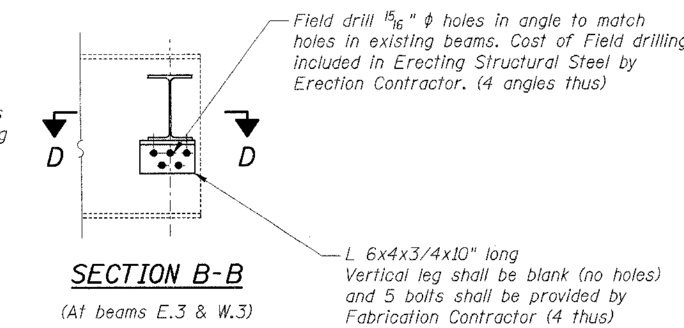
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	20
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



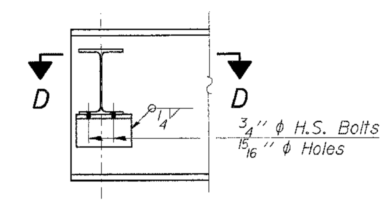
END DIAPHRAGM D1
(8 Required)



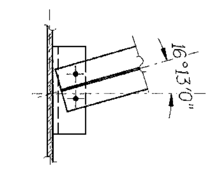
SECTION A-A
(At beams E.3 & W.3)



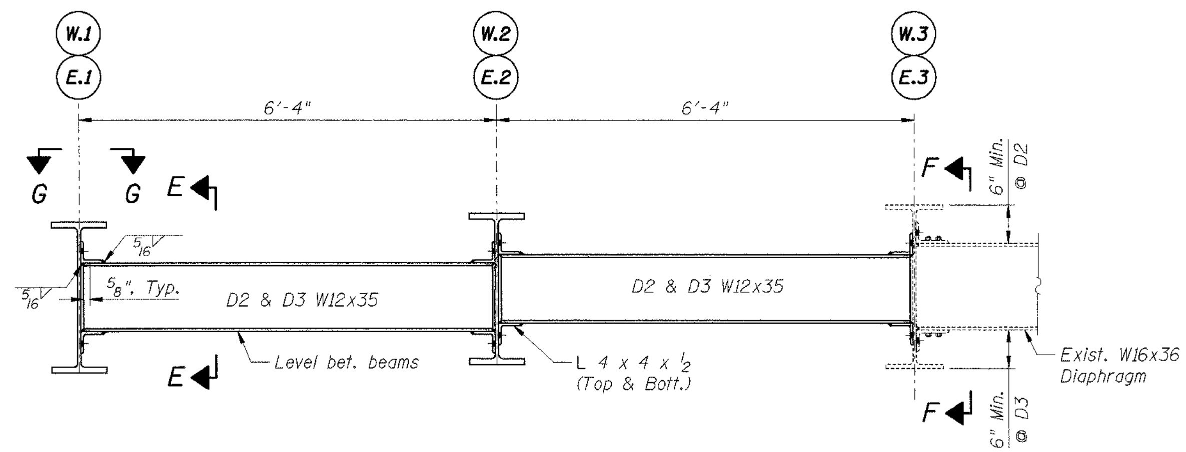
SECTION B-B
(At beams E.3 & W.3)



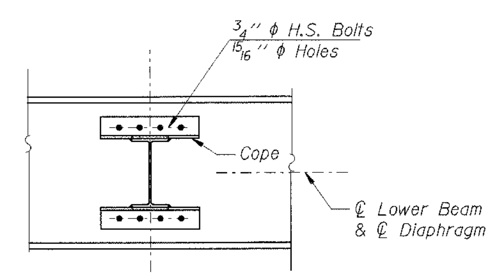
SECTION C-C
(At beams E.1, E.2, W.1 & W.2)



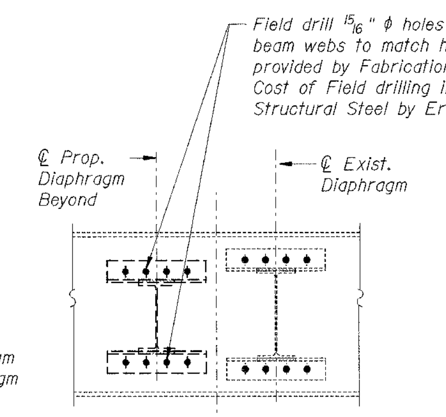
SECTION D-D



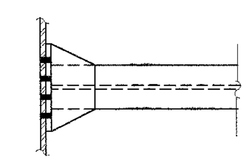
INTERIOR DIAPHRAGM D2 & D3
(D2 - 24 Required)
(D3 - 12 Required)



SECTION E-E



SECTION F-F



SECTION G-G

Note:

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

SHT. SC-21 OF 38

REVISIONS	
NAME	DATE

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

DIAPHRAGM DETAILS

SCALE: DRAWN BY PA
DATE 05/19/06 CHECKED BY MJK

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

PLOT DATE = $DATE$ 5-17-2006, 13:07:22
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USER NAME = $USER$ ANANTHPZ
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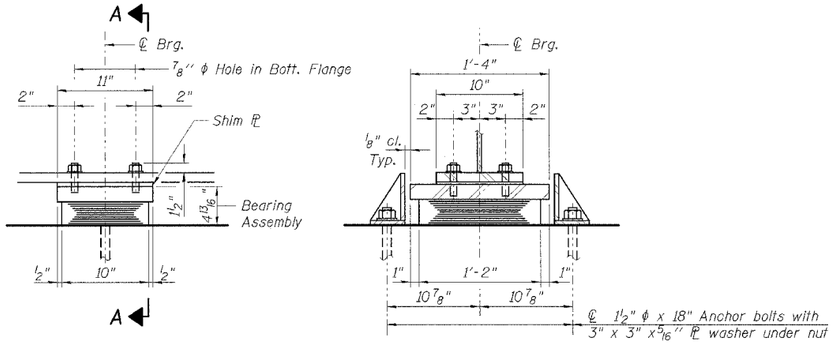
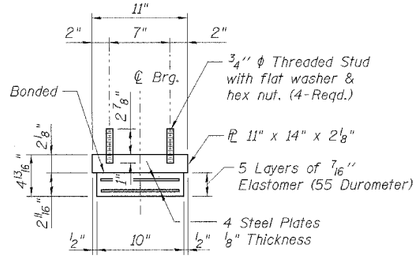
CONTRACT NO. 60A67

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	2005-063 I	WILL	50	21
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



ELEVATION **SECTION A-A**

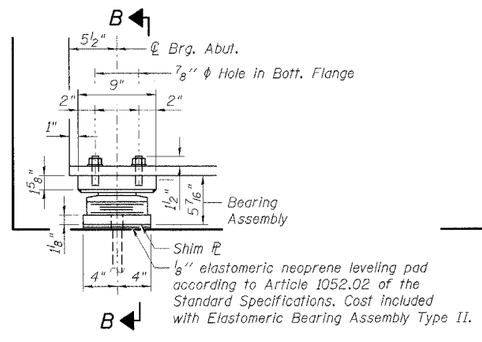


BEARING ASSEMBLY

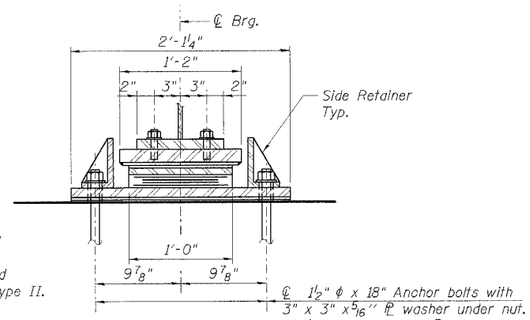
Note: Shim plates shall not be placed under Bearing Assembly.

TYPE I ELASTOMERIC EXP. BRG. AT PIERS 1 & 3

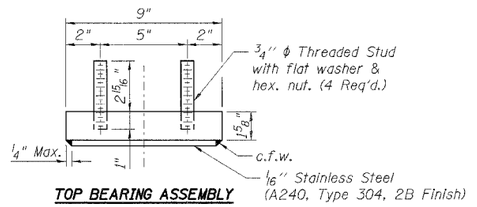
(8 Thus)



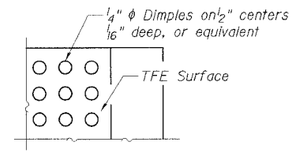
ELEVATION



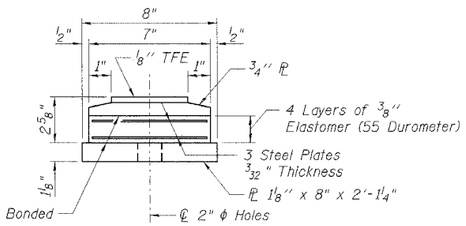
SECTION B-B



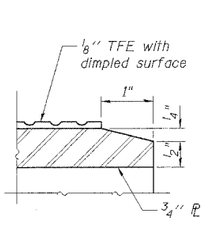
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



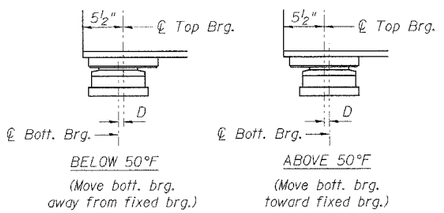
BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

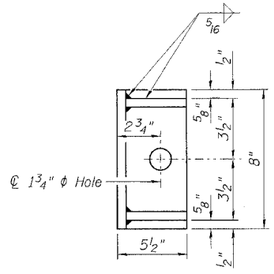


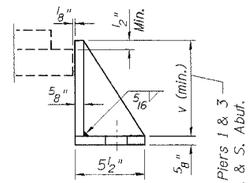
SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100° of expansion for every 15° temp. change from the normal temp. of 50°F.

TYPE II ELASTOMERIC EXP. BRG. AT S. & N. ABUT.

(8 Thus)





SIDE RETAINER

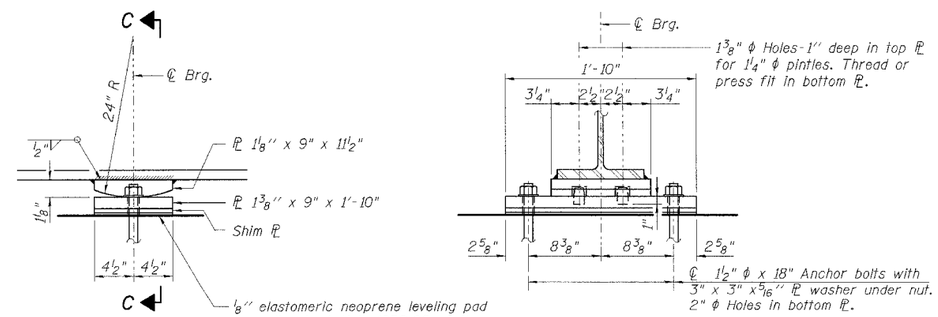
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

BILL OF MATERIAL

Item	Unit	Total
Furnishing Elastomeric Bearing Assembly, Type I	Each	8
Furnishing Elastomeric Bearing Assembly, Type II	Each	8

Notes:

1. Anchor bolts shall be furnished and installed by others in a Future Contract.
2. All steel bearing plates shall conform to the requirements of AASHTO M270 Grade 50, unless otherwise noted.
3. Fixed bearing assemblies including pintles, shim plates, adjusting shims, and elastomeric neoprene leveling pads shall be furnished by the Fabrication Contractor.
4. Anchor bolts at fixed bearings may be built into the masonry.
5. See Sht. SC-20 for Bearing Seat elevations.
6. See Sht. SC-23 for Anchor Bolt installation.



ELEVATION **SECTION C-C** **PINTLE**

FIXED BEARING AT PIER 2

(4 Thus)

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

BEARING DETAILS

SHT. SC-22 OF 38

REVISIONS NAME	DATE

SCALE: DRAWN BY PA
DATE 05/19/06 CHECKED BY MJK

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

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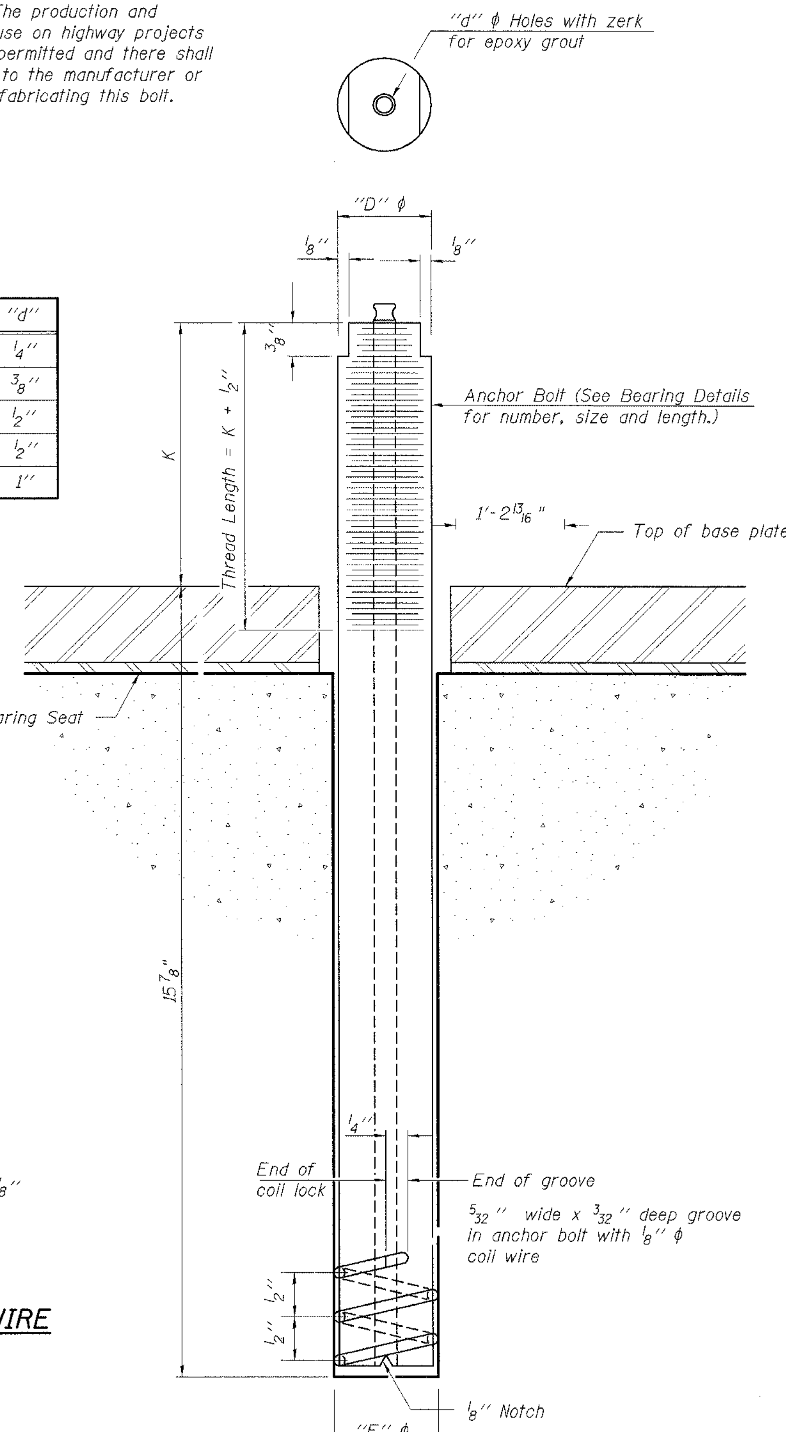
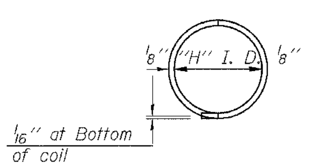
D	E	H	K	"d"
1"	1⅛"	13/16"	1¾"	¼"
1¼"	1⅜"	1 1/16"	2"	⅜"
1½"	1⅝"	1 5/16"	2⅛"	½"
2"	2⅛"	1 13/16"	2⅞"	½"
2½"	2⅝"	2 5/16"	3⅜"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

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

Location	Type
All	ASTM A 307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

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

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

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

THIS SHEET FOR INFORMATION ONLY

SHT. SC-23 OF 38

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI ROUTE 55 (I-80 TO WEBER ROAD)
BEAM AND BEARING FABRICATION
SB & NB I-55 OVER US RTE. 30, S.N. 099-0016 & 099-0017
STA. 587+80.82, SECTION 2005-063 I
WILL COUNTY

ANCHOR BOLT DETAILS

SCALE:
DATE 05/19/06
DRAWN BY PA
CHECKED BY MJK

MORCOM, N.V., INC.
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

TENG
TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
CHICAGO, ILLINOIS

B.M. 3206 -
Cut on top SE wingwall of bridge over Mink Creek and 200' S. of Renwick Rd.
Elev. 606.27

Existing Structure -
S.N. 099-0018 (NB) & S.N. 099-0019 (SB) were both built in 1955 as part of the state of Illinois F.A. Route 34, Section 27-VB and project F.G.I. 187B, Will County. Both the superstructure and substructure were widened in 1977. Also, additional rehabilitation work was performed in 1994. Both structures consist of R.C. deck supported on three-span continuous steel beams. The abutments are supported on concrete piles and/or HP steel piles. The piers are supported on timber piles and/or HP steel piles. The bridge length is 161'-0" bk. to bk. abutments. The northbound width is 52'-5" o. to o. of deck. The southbound deck width varies from 44'-2" to 44'-9". The NB existing concrete deck shall be partially removed and widened. The SB existing concrete deck shall be replaced and widened. The road shall be kept open with two lanes of traffic at all times by utilizing staged construction.

Salvage -
Salvage and reuse 13 - 6'-0" Existing Gravity Crib Wall Units to buildup exisitng retaining wall sections designated on Sheet 3 of 3.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

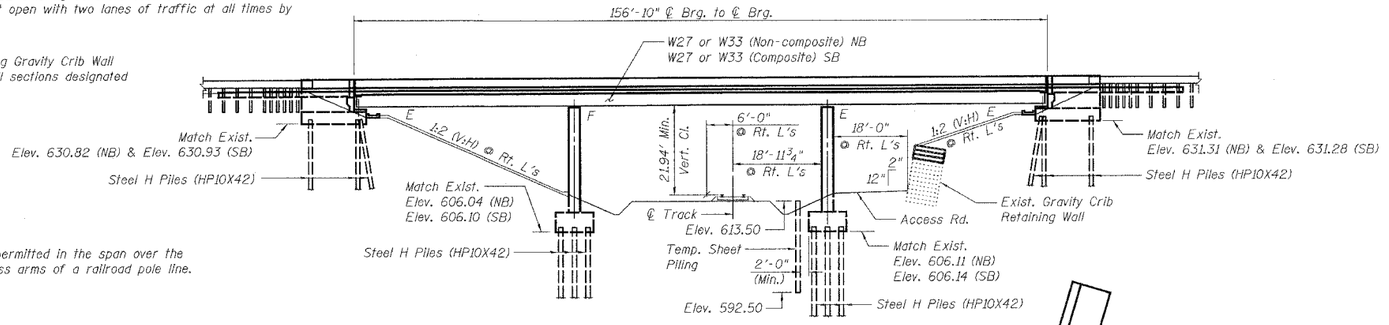
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	23
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

SCOPE OF WORK

1. Remove and replace both the northbound and southbound approach pavements.
2. Remove the existing northbound deck inside shoulder. Widen northbound deck with a new cast-in-place reinforced concrete deck supported by a new shallower steel superstructure.
3. Remove the existing southbound deck and maintain existing steel superstructure. Replace and widen southbound deck with a new cip reinforced concrete deck supported by a new shallower steel superstructure.
4. Remove and replace all expansion joints.
5. Widen the existing substructure elements. Remove the existing northbound and southbound inside and southbound outside wingwalls in accordance with Standard Specifications. Add new outside southbound wingwalls to accommodate widening.
6. Widen the aggregate slope walls at both the north and south abutments. Widen the gravity crib retaining wall at the north abutment.
7. Repair substructure defects with formed concrete repair and/or epoxy crack seal.
8. New girder lines will utilize steel rocker bearings at southbound pier 2 to match existing.
9. Utilize stage construction as noted herein.

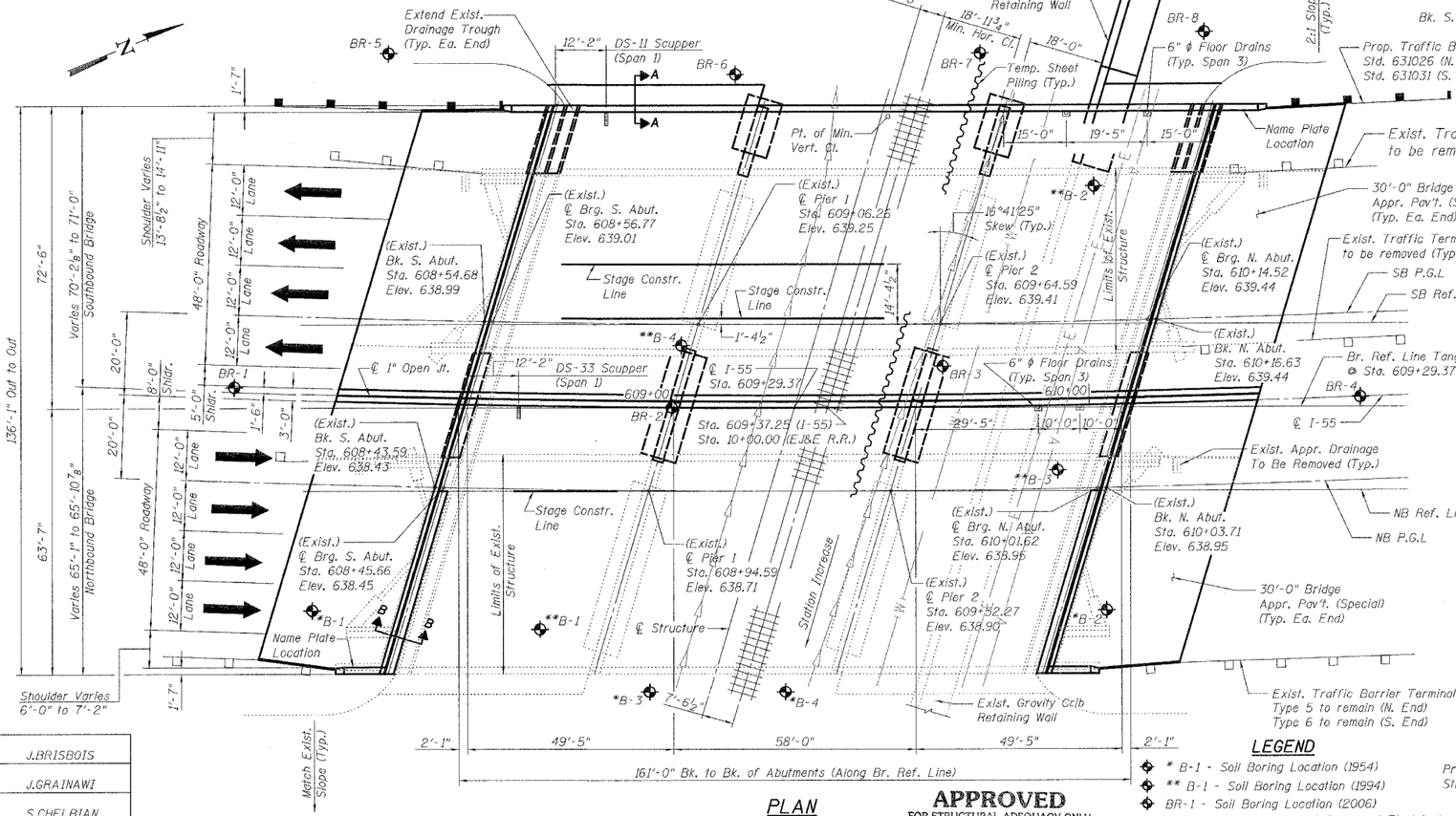


Note:

1. No deck drainage will be permitted in the span over the track or within 10' of cross arms of a railroad pole line.

ELEVATION VIEW

(Looking West)



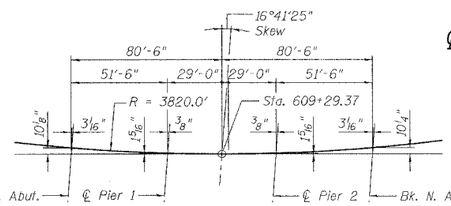
PLAN

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

DESIGNED	J.BRISBOIS
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

LEGEND

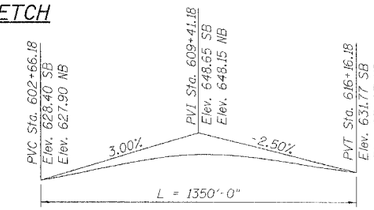
- * B-1 - Soil Boring Location (1954)
- ** B-1 - Soil Boring Location (1994)
- BR-1 - Soil Boring Location (2006)
- Underground Electrical
- A — Aerial Lines
- W — Water
- E — Conductor Underground Cable



℄ I-55 CURVE DATA

Prop. Curve C19
Δ = 43° 22' 01" (LT)
T = 1,518.89'
L = 2,891.35'
E = 290.89'
R = 3,820.00'
SE = 2.0%
PC = 595+59.70
PT = 624+51.05
PI = 610+78.59

OFFSET SKETCH



NB & SB PROFILE GRADE OF I-55

Note:

Mile post 7 is approximately 30' west of station 10+00.00 along EJ&E Railroad.

DESIGN STRESSES

FIELD UNITS

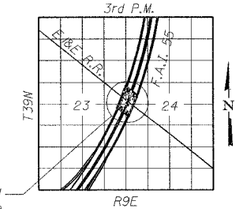
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_s = 20,000 psi (exist. structural steel)
f_y = 36,000 psi (new structural steel)

DESIGN SPECIFICATIONS

2002 AASHTO

LOADING HS20-44 & ALT.

Allow 50#/sq. ft. for future wearing surface.



LOCATION SKETCH

PB PARSONS BRINCKERHOFF

TOP OF RAIL ELEVATIONS EJ&E RAILROAD

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

STATE OF ILLINOIS
JAMAL I. GRAINAWI
081-5161
CHICAGO, IL
LICENSED STRUCTURAL ENGINEER

Signed Jamal Grainawi
Jamal I. Grainawi, S.E. IL. Lic. No. 081-005161
Expires 11-30-2006

Date 5/15/2006

GENERAL PLAN & ELEVATION
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STATION 609+29.37
STRUCTURE NO. 099-0018 (NB)
STRUCTURE NO. 099-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	24
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

GENERAL NOTES:

1. Fasteners shall be high strength bolts. Bolts $^{7}/_{8}$" ϕ. open holes $^{15}/_{16}$" ϕ. unless otherwise noted.
2. Calculated weight of structural steel = 212,840 Pounds.
* 3. Field welding of construction accessories will not be permitted to beams.
* 4. Anchor bolts shall be set before bolting diaphragms over supports.
5. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.
* 6. 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 for the work.
7. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $^{1}/_{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $^{1}/_{8}$ inch adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two $^{1}/_{8}$ inch adjusting shims shall be provided for each bearing and placed as detailed.
* 8. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
9. The Organic Zinc-Rich/Epoxy/Urethane Paint System shall be used for full shop painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched in the field. The color of the final finish coat for all new interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of final finish coat for the exterior and bottom flange of the new fascia (out) beams shall be reddish brown, Munsell No. 2.5 Yr. 3/4. See Special Provision for "Cleaning and Painting New Metal Structures".
* 10. All Construction joints shall be bonded.

* These notes included in Fabrication Contract for information only.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL	
Furnishing Elastomeric Bearing Assembly, Type I	Each	11		11	
Furnishing Elastomeric Bearing Assembly, Type II	Each	8		8	
Furnishing Structural Steel	L. Sum	0.45		0.45	
Storage of Structural Steel and Bearings	Unit	160		160	**

** Refer to Special Provision Furnishing Structural Steel and Bearings for definition of Storage Unit. Quantity for Storage Unit is based on storing 25% of the steel weight for 30 calendar days.

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

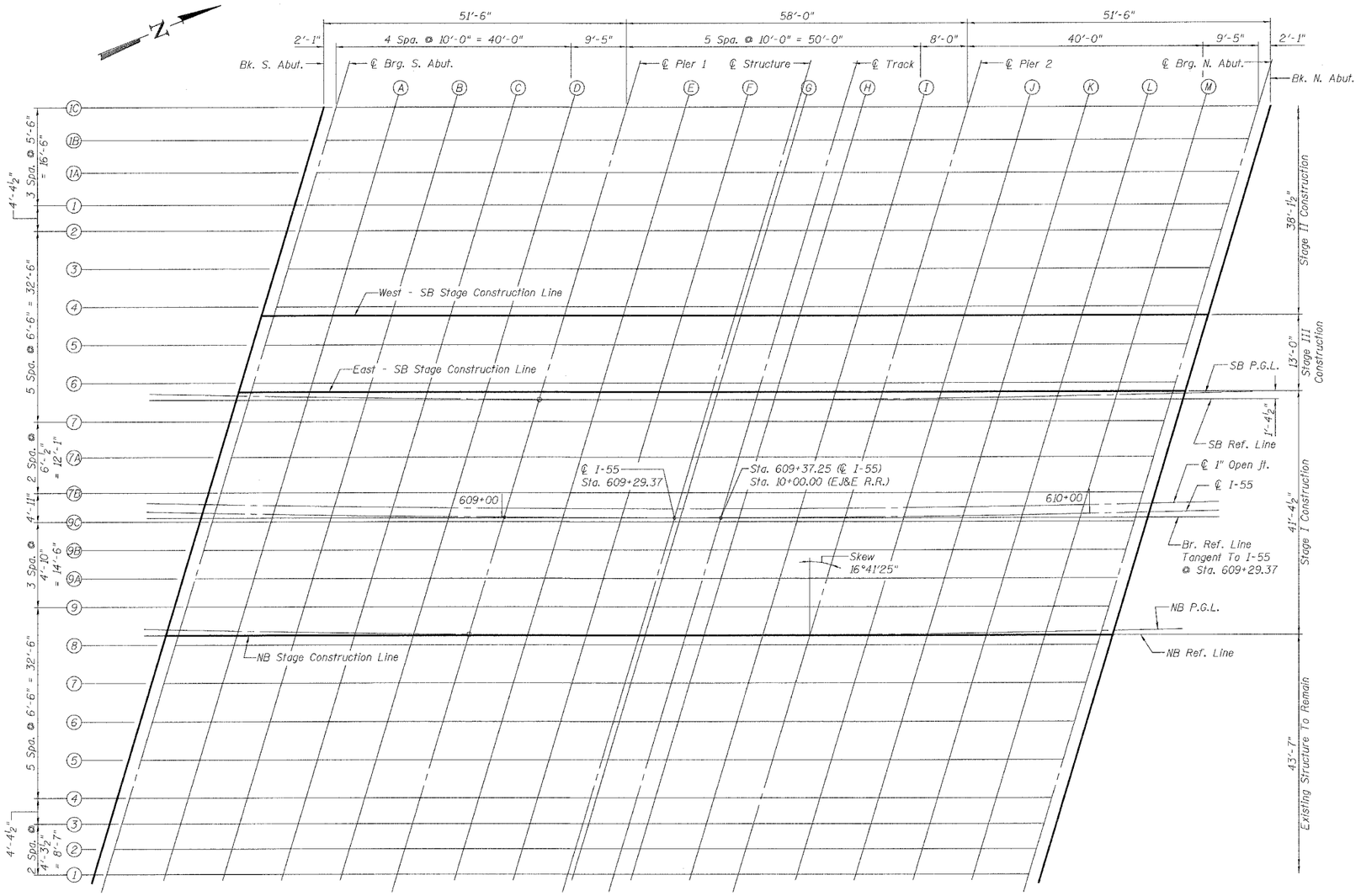
GENERAL NOTES &
BILL OF MATERIAL
I-55 OVER EJ&E RR
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 099-0018 (NB)
STRUCTURE NO. 099-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

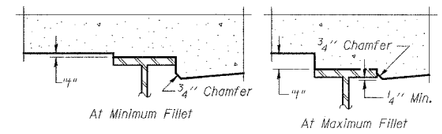
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	25
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

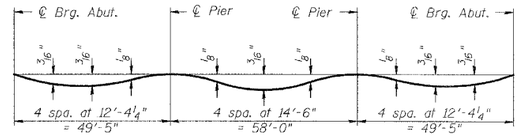


PLAN



To determine "t": After all structural steel has been erected, 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" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Notes:

1. *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.*
2. *Work this Sheet with Sheet Nos. 4, 5, & 6.*

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

PARSONS BRINCKERHOFF

TOP OF SLAB ELEVATION LAYOUT
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 099-0018 (NB)
STRUCTURE NO. 099-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	26
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

BEAM 1C (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+68.672	-49.277	638.092	638.092
CL. S. Abut.	608+70.799	-49.309	638.103	638.103
A	608+80.983	-49.449	638.152	638.165
B	608+91.167	-49.562	638.198	638.217
C	609+01.353	-49.649	638.241	638.256
D	609+11.538	-49.709	638.279	638.286
CL. Pier 1	609+21.130	-49.741	638.312	638.312
E	609+31.316	-49.750	638.344	638.348
F	609+41.502	-49.731	638.372	638.383
G	609+51.688	-49.686	638.396	638.410
H	609+61.873	-49.614	638.416	638.426
I	609+72.058	-49.516	638.433	638.436
CL. Pier 2	609+80.206	-49.418	638.444	638.444
J	609+90.389	-49.271	638.454	638.460
K	610+00.572	-49.098	638.460	638.475
L	610+10.754	-48.899	638.463	638.481
M	610+20.935	-48.672	638.462	638.474
CL. N. Abut.	610+30.521	-48.435	638.457	638.457
Bk. N. Abut.	610+32.646	-48.379	638.456	638.456

BEAM 1B (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+67.085	-43.751	638.194	638.194
CL. S. Abut.	608+69.208	-43.784	638.205	638.205
A	608+79.377	-43.928	638.255	638.267
B	608+89.546	-44.046	638.301	638.320
C	608+99.716	-44.137	638.344	638.359
D	609+09.887	-44.201	638.383	638.390
CL. Pier 1	609+19.465	-44.237	638.417	638.417
E	609+29.636	-44.250	638.449	638.453
F	609+39.807	-44.236	638.477	638.489
G	609+49.978	-44.195	638.502	638.516
H	609+60.148	-44.128	638.523	638.533
I	609+70.319	-44.034	638.540	638.543
CL. Pier 2	609+78.454	-43.940	638.551	638.551
J	609+88.623	-43.798	638.562	638.569
K	609+98.791	-43.630	638.569	638.585
L	610+08.959	-43.435	638.572	638.591
M	610+19.125	-43.213	638.572	638.584
CL. N. Abut.	610+28.697	-42.980	638.568	638.568
Bk. N. Abut.	610+30.819	-42.925	638.567	638.567

BEAM 1A (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+65.501	-38.224	638.295	638.295
CL. S. Abut.	608+67.621	-38.259	638.306	638.306
A	608+77.775	-38.407	638.357	638.370
B	608+87.930	-38.529	638.404	638.423
C	608+98.085	-38.624	638.448	638.463
D	609+08.241	-38.692	638.487	638.493
CL. Pier 1	609+17.804	-38.733	638.521	638.521
E	609+27.961	-38.750	638.554	638.558
F	609+38.117	-38.740	638.583	638.594
G	609+48.273	-38.704	638.608	638.622
H	609+58.429	-38.641	638.630	638.640
I	609+68.584	-38.552	638.648	638.651
CL. Pier 2	609+76.708	-38.461	638.659	638.659
J	609+86.862	-38.324	638.671	638.677
K	609+97.016	-38.160	638.678	638.694
L	610+07.168	-37.970	638.682	638.700
M	610+17.320	-37.753	638.682	638.694
CL. N. Abut.	610+26.878	-37.524	638.679	638.679
Bk. N. Abut.	610+28.997	-37.470	638.678	638.678

BEAM 1 (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+63.923	-32.697	638.397	638.397
CL. S. Abut.	608+66.039	-32.732	638.408	638.408
A	608+76.178	-32.885	638.459	638.472
B	608+86.318	-33.011	638.507	638.525
C	608+96.459	-33.110	638.551	638.566
D	609+06.599	-33.183	638.591	638.597
CL. Pier 1	609+16.149	-33.227	638.626	638.626
E	609+26.290	-33.249	638.659	638.663
F	609+36.432	-33.244	638.688	638.699
G	609+46.573	-33.212	638.714	638.728
H	609+56.714	-33.153	638.736	638.746
I	609+66.855	-33.069	638.755	638.758
CL. Pier 2	609+74.967	-32.982	638.767	638.767
J	609+85.106	-32.849	638.779	638.785
K	609+95.245	-32.690	638.787	638.802
L	610+05.383	-32.504	638.792	638.809
M	610+15.520	-32.292	638.793	638.804
CL. N. Abut.	610+25.064	-32.068	638.790	638.790
Bk. N. Abut.	610+27.180	-32.015	638.789	638.789

BEAM 2 (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+62.670	-28.300	638.478	638.478
CL. S. Abut.	608+64.784	-28.336	638.489	638.489
A	608+74.912	-28.492	638.541	638.553
B	608+85.040	-28.621	638.589	638.606
C	608+95.168	-28.724	638.633	638.648
D	609+05.297	-28.800	638.674	638.680
CL. Pier 1	609+14.836	-28.848	638.709	638.709
E	609+24.965	-28.872	638.742	638.746
F	609+35.095	-28.871	638.772	638.783
G	609+45.224	-28.843	638.798	638.812
H	609+55.353	-28.788	638.821	638.831
I	609+65.482	-28.706	638.840	638.843
CL. Pier 2	609+73.585	-28.622	638.853	638.853
J	609+83.713	-28.493	638.865	638.871
K	609+93.840	-28.338	638.874	638.889
L	610+03.966	-28.156	638.879	638.896
M	610+14.092	-27.947	638.880	638.892
CL. N. Abut.	610+23.625	-27.727	638.878	638.878
Bk. N. Abut.	610+25.739	-27.675	638.877	638.877

BEAM 3 (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+60.815	-21.767	638.598	638.598
CL. S. Abut.	608+62.925	-21.804	638.609	638.609
A	608+73.035	-21.964	638.662	638.674
B	608+83.145	-22.098	638.710	638.728
C	608+93.256	-22.206	638.755	638.770
D	609+03.368	-22.288	638.796	638.802
CL. Pier 1	609+12.890	-22.340	638.832	638.832
E	609+23.002	-22.370	638.866	638.870
F	609+33.114	-22.373	638.897	638.907
G	609+43.226	-22.350	638.924	638.937
H	609+53.338	-22.301	638.947	638.957
I	609+63.450	-22.225	638.966	638.969
CL. Pier 2	609+71.539	-22.145	638.980	638.980
J	609+81.649	-22.021	638.993	638.999
K	609+91.759	-21.871	639.002	639.017
L	610+01.868	-21.695	639.008	639.026
M	610+11.976	-21.492	639.010	639.022
CL. N. Abut.	610+21.493	-21.276	639.009	639.009
Bk. N. Abut.	610+23.604	-21.225	639.008	639.008

BEAM 4 (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+58.996	-15.232	638.718	638.718
CL. S. Abut.	608+61.073	-15.270	638.729	638.729
A	608+71.165	-15.436	638.782	638.794
B	608+81.258	-15.575	638.831	638.849
C	608+91.351	-15.688	638.877	638.891
D	609+01.445	-15.774	638.919	638.925
CL. Pier 1	609+10.951	-15.831	638.955	638.955
E	609+21.045	-15.866	638.990	638.994
F	609+31.140	-15.875	639.021	639.032
G	609+41.235	-15.857	639.048	639.062
H	609+51.330	-15.812	639.072	639.082
I	609+61.424	-15.742	639.093	639.096
CL. Pier 2	609+69.499	-15.666	639.107	639.107
J	609+79.592	-15.548	639.120	639.127
K	609+89.685	-15.403	639.131	639.146
L	609+99.777	-15.232	639.137	639.155
M	610+09.868	-15.035	639.140	639.152
CL. N. Abut.	610+19.369	-14.824	639.140	639.140
Bk. N. Abut.	610+21.476	-14.775	639.139	639.139

WEST - S.B. STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+58.540	-13.724	638.746	638.746
CL. S. Abut.	608+60.646	-13.762	638.757	638.757
A	608+70.734	-13.929	638.810	638.822
B	608+80.823	-14.069	638.859	638.877
C	608+90.912	-14.183	638.905	638.919
D	609+01.002	-14.271	638.947	638.953
CL. Pier 1	609+10.504	-14.329	638.983	638.983
E	609+20.595	-14.365	639.018	639.022
F	609+30.686	-14.375	639.050	639.060
G	609+40.776	-14.358	639.077	639.091
H	609+50.867	-14.315	639.101	639.111
I	609+60.957	-14.246	639.122	639.125
CL. Pier 2	609+69.029	-14.171	639.136	639.136
J	609+79.119	-14.054	639.150	639.156
K	609+89.207	-13.910	639.160	639.175
L	609+99.295	-13.741	639.167	639.185
M	610+09.382	-13.544	639.170	639.182
CL. N. Abut.	610+18.880	-13.335	639.170	639.170
Bk. N. Abut.	610+20.986	-13.286	639.169	639.169

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

Note:

1. Work this Sheet with Sheet Nos. 3, 5, & 6.

PB PARSONS BRINCKERHOFF

TOP OF SLAB ELEVATION I
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 099-0018 (NB)
STRUCTURE NO. 099-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	27
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

BEAM 5 (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+57.123	-8.697	638.838	638.838
CL. S. Abut.	608+59.226	-8.736	638.849	638.849
A	608+69.301	-8.906	638.903	638.915
B	608+79.376	-9.050	638.952	638.970
C	608+89.453	-9.168	638.999	639.013
D	608+99.529	-9.259	639.041	639.047
CL. Pier 1	609+09.018	-9.321	639.078	639.078
E	609+19.096	-9.361	639.113	639.117
F	609+29.173	-9.375	639.145	639.156
G	609+39.251	-9.362	639.173	639.187
H	609+49.328	-9.323	639.198	639.208
I	609+59.405	-9.258	639.219	639.222
CL. Pier 2	609+67.466	-9.186	639.233	639.233
J	609+77.543	-9.074	639.248	639.254
K	609+87.618	-8.934	639.259	639.274
L	609+97.693	-8.769	639.266	639.284
M	610+07.767	-8.577	639.270	639.281
CL. N. Abut.	610+07.767	-8.577	639.270	639.281
Bk. N. Abut.	610+17.252	-8.372	639.270	639.270

BEAM 6 (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+55.287	-2.161	638.958	638.958
CL. S. Abut.	608+57.387	-2.201	638.969	638.969
A	608+67.444	-2.376	639.023	639.035
B	608+77.502	-2.525	639.073	639.091
C	608+87.560	-2.648	639.120	639.135
D	608+97.620	-2.744	639.163	639.169
CL. Pier 1	609+07.093	-2.810	639.201	639.201
E	609+17.153	-2.856	639.237	639.241
F	609+27.213	-2.874	639.269	639.280
G	609+37.273	-2.867	639.298	639.312
H	609+47.333	-2.833	639.323	639.333
I	609+57.393	-2.773	639.345	639.348
CL. Pier 2	609+65.441	-2.706	639.360	639.360
J	609+75.500	-2.598	639.375	639.382
K	609+85.558	-2.464	639.387	639.402
L	609+95.616	-2.304	639.395	639.413
M	610+05.673	-2.117	639.399	639.411
CL. N. Abut.	610+15.142	-1.918	639.400	639.400
Bk. N. Abut.	610+17.241	-1.870	639.400	639.400

EAST - S.B. STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+54.864	-0.652	638.985	638.985
CL. S. Abut.	608+56.963	-0.693	638.997	638.997
A	608+67.016	-0.869	639.051	639.063
B	608+77.070	-1.019	639.101	639.119
C	608+87.125	-1.143	639.148	639.163
D	608+97.180	-1.240	639.191	639.197
CL. Pier 1	609+06.649	-1.308	639.229	639.229
E	609+16.705	-1.354	639.265	639.269
F	609+26.761	-1.374	639.298	639.309
G	609+36.818	-1.368	639.327	639.340
H	609+46.874	-1.335	639.352	639.362
I	609+56.930	-1.276	639.374	639.377
CL. Pier 2	609+64.974	-1.210	639.389	639.389
J	609+75.029	-1.104	639.405	639.411
K	609+85.084	-0.971	639.416	639.431
L	609+95.138	-0.812	639.425	639.442
M	610+05.190	-0.627	639.429	639.441
CL. N. Abut.	610+14.656	-0.428	639.430	639.430
Bk. N. Abut.	610+16.755	-0.381	639.430	639.430

S.B. PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+54.687	0.000	638.997	638.997
CL. S. Abut.	608+56.768	0.000	639.010	639.010
A	608+66.770	0.000	639.067	639.079
B	608+76.778	0.000	639.120	639.138
C	608+86.799	0.000	639.169	639.184
D	608+96.818	0.000	639.215	639.221
CL. Pier 1	609+06.264	0.000	639.254	639.254
E	609+16.302	0.000	639.291	639.295
F	609+26.348	0.000	639.324	639.335
G	609+36.403	0.000	639.353	639.367
H	609+46.465	0.000	639.378	639.388
I	609+56.535	0.000	639.399	639.402
CL. Pier 2	609+64.597	0.000	639.413	639.413
J	609+74.682	0.000	639.426	639.433
K	609+84.776	0.000	639.436	639.451
L	609+94.878	0.000	639.441	639.458
M	610+04.988	0.000	639.442	639.453
CL. N. Abut.	610+14.516	0.000	639.439	639.439
Bk. N. Abut.	610+16.630	0.000	639.438	639.438

BEAM 7 (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+53.457	4.376	639.077	639.077
CL. S. Abut.	608+55.553	4.335	639.089	639.089
A	608+65.593	4.155	639.144	639.156
B	608+75.633	4.001	639.194	639.212
C	608+85.675	3.874	639.242	639.256
D	608+95.717	3.773	639.285	639.291
CL. Pier 1	609+05.174	3.701	639.323	639.323
E	609+15.216	3.651	639.360	639.364
F	609+25.259	3.627	639.393	639.404
G	609+35.302	3.630	639.423	639.436
H	609+45.345	3.658	639.449	639.459
I	609+55.388	3.713	639.471	639.474
CL. Pier 2	609+63.422	3.776	639.486	639.486
J	609+73.464	3.878	639.502	639.509
K	609+83.505	4.007	639.515	639.530
L	609+93.546	4.162	639.524	639.541
M	610+03.586	4.343	639.529	639.540
CL. N. Abut.	610+13.039	4.538	639.530	639.530
Bk. N. Abut.	610+15.135	4.584	639.530	639.530

BEAM 7A (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+51.761	10.453	639.188	639.188
CL. S. Abut.	608+53.854	10.411	639.200	639.200
A	608+63.878	10.227	639.255	639.268
B	608+73.903	10.068	639.307	639.324
C	608+83.928	9.936	639.355	639.369
D	608+93.954	9.830	639.399	639.405
CL. Pier 1	609+03.396	9.755	639.437	639.437
E	609+13.422	9.700	639.475	639.479
F	609+23.449	9.671	639.508	639.519
G	609+33.477	9.669	639.538	639.552
H	609+43.504	9.693	639.565	639.575
I	609+53.530	9.743	639.588	639.591
CL. Pier 2	609+61.552	9.802	639.604	639.604
J	609+71.578	9.899	639.621	639.627
K	609+81.604	10.023	639.634	639.649
L	609+91.628	10.173	639.643	639.661
M	610+01.652	10.349	639.649	639.661
CL. N. Abut.	610+11.091	10.539	639.651	639.651
Bk. N. Abut.	610+13.183	10.584	639.651	639.651

BEAM 7B (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+50.072	16.531	639.300	639.300
CL. S. Abut.	608+52.161	16.488	639.312	639.312
A	608+62.169	16.299	639.367	639.379
B	608+72.177	16.136	639.419	639.437
C	608+82.187	15.999	639.467	639.482
D	608+92.197	15.889	639.512	639.518
CL. Pier 1	609+01.623	15.809	639.551	639.551
E	609+11.634	15.749	639.589	639.593
F	609+21.645	15.716	639.623	639.634
G	609+31.657	15.709	639.654	639.668
H	609+41.668	15.728	639.681	639.691
I	609+51.679	15.773	639.705	639.708
CL. Pier 2	609+59.687	15.829	639.721	639.721
J	609+69.698	15.921	639.739	639.745
K	609+79.708	16.040	639.752	639.767
L	609+89.717	16.185	639.762	639.780
M	609+99.725	16.356	639.769	639.781
CL. N. Abut.	610+09.149	16.541	639.772	639.772
Bk. N. Abut.	610+11.238	16.585	639.772	639.772

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

Note:

1. Work this Sheet with Sheet Nos. 3, 4, & 6.

PB PARSONS BRINCKERHOFF

TOP OF SLAB ELEVATION II
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 099-0018 (NB)
STRUCTURE NO. 099-0019 (SB)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	28
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 6
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 9C (NB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+48.700	-18.523	638.095	638.095
CL. S. Abut.	608+50.787	-18.567	638.107	638.107
A	608+60.782	-18.759	638.163	638.175
B	608+70.777	-18.926	638.215	638.233
C	608+80.774	-19.066	638.264	638.279
D	608+90.771	-19.180	638.309	638.315
CL. Pier 1	609+00.185	-19.264	638.349	638.349
E	609+10.183	-19.327	638.387	638.391
F	609+20.181	-19.364	638.422	638.432
G	609+30.180	-19.375	638.453	638.466
H	609+40.178	-19.360	638.481	638.490
I	609+50.176	-19.318	638.505	638.508
CL. Pier 2	609+58.175	-19.266	638.522	638.522
J	609+68.172	-19.178	638.539	638.546
K	609+78.169	-19.063	638.554	638.569
L	609+88.166	-18.922	638.564	638.582
M	609+98.161	-18.755	638.571	638.583
CL. N. Abut.	610+07.573	-18.574	638.575	638.575
Bk. N. Abut.	610+09.659	-18.531	638.575	638.575

BEAM 9B (NB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+47.356	-13.660	638.184	638.184
CL. S. Abut.	608+49.440	-13.704	638.196	638.196
A	608+59.422	-13.900	638.252	638.265
B	608+69.405	-14.070	638.305	638.323
C	608+79.388	-14.214	638.354	638.369
D	608+89.373	-14.332	638.400	638.406
CL. Pier 1	608+98.775	-14.419	638.440	638.440
E	609+08.760	-14.486	638.478	638.482
F	609+18.746	-14.527	638.514	638.524
G	609+28.732	-14.542	638.545	638.559
H	609+38.717	-14.530	638.574	638.583
I	609+48.703	-14.493	638.598	638.601
CL. Pier 2	609+56.691	-14.444	638.615	638.615
J	609+66.676	-14.359	638.634	638.640
K	609+76.661	-14.248	638.648	638.664
L	609+86.644	-14.112	638.660	638.677
M	609+96.628	-13.949	638.667	638.679
CL. N. Abut.	610+06.027	-13.771	638.671	638.671
Bk. N. Abut.	610+08.112	-13.729	638.672	638.672

BEAM 9A (NB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+46.015	-8.796	638.273	638.273
CL. S. Abut.	608+48.096	-8.841	638.285	638.285
A	608+58.065	-9.041	638.341	638.354
B	608+68.035	-9.215	638.395	638.412
C	608+78.006	-9.362	638.444	638.459
D	608+87.978	-9.483	638.490	638.496
CL. Pier 1	608+97.368	-9.574	638.531	638.531
E	609+07.341	-9.645	638.570	638.574
F	609+17.314	-9.689	638.606	638.616
G	609+27.287	-9.708	638.638	638.651
H	609+37.260	-9.700	638.666	638.676
I	609+47.233	-9.666	638.692	638.694
CL. Pier 2	609+55.211	-9.621	638.709	638.709
J	609+65.184	-9.540	638.728	638.734
K	609+75.156	-9.433	638.743	638.758
L	609+85.127	-9.300	638.755	638.773
M	609+95.098	-9.141	638.763	638.775
CL. N. Abut.	610+04.486	-8.968	638.768	638.768
Bk. N. Abut.	610+06.568	-8.926	638.768	638.768

BEAM 9 (NB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+44.677	-3.932	638.361	638.361
CL. S. Abut.	608+46.756	-3.978	638.374	638.374
A	608+56.712	-4.181	638.431	638.444
B	608+66.670	-4.358	638.484	638.503
C	608+76.628	-4.509	638.534	638.550
D	608+86.587	-4.634	638.581	638.587
CL. Pier 1	608+95.965	-4.728	638.621	638.621
E	609+05.925	-4.803	638.661	638.665
F	609+15.886	-4.851	638.697	638.708
G	609+25.846	-4.873	638.730	638.744
H	609+35.807	-4.870	638.759	638.769
I	609+45.767	-4.840	638.785	638.788
CL. Pier 2	609+53.735	-4.797	638.803	638.803
J	609+63.695	-4.720	638.822	638.829
K	609+73.655	-4.617	638.838	638.854
L	609+83.614	-4.488	638.850	638.869
M	609+93.572	-4.333	638.859	638.871
CL. N. Abut.	610+02.948	-4.163	638.864	638.864
Bk. N. Abut.	610+05.027	-4.123	638.864	638.864

N.B. PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	608+43.598	0.000	638.433	638.433
CL. S. Abut.	608+45.662	0.000	638.446	638.446
A	608+55.551	0.000	638.507	638.520
B	608+65.447	0.000	638.565	638.584
C	608+75.350	0.000	638.618	638.633
D	608+85.261	0.000	638.667	638.673
CL. Pier 1	608+94.600	0.000	638.710	638.710
E	609+04.525	0.000	638.752	638.756
F	609+14.457	0.000	638.789	638.800
G	609+24.398	0.000	638.823	638.837
H	609+34.346	0.000	638.852	638.863
I	609+44.301	0.000	638.878	638.881
CL. Pier 2	609+52.271	0.000	638.896	638.896
J	609+62.242	0.000	638.914	638.921
K	609+72.220	0.000	638.928	638.944
L	609+82.206	0.000	638.939	638.957
M	609+92.200	0.000	638.945	638.957
CL. N. Abut.	610+01.619	0.000	638.947	638.947
Bk. N. Abut.	610+03.709	0.000	638.947	638.947

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

Note:

1. Work this Sheet with Sheet Nos. 3, 4, & 5

PB PARSONS BRINCKERHOFF

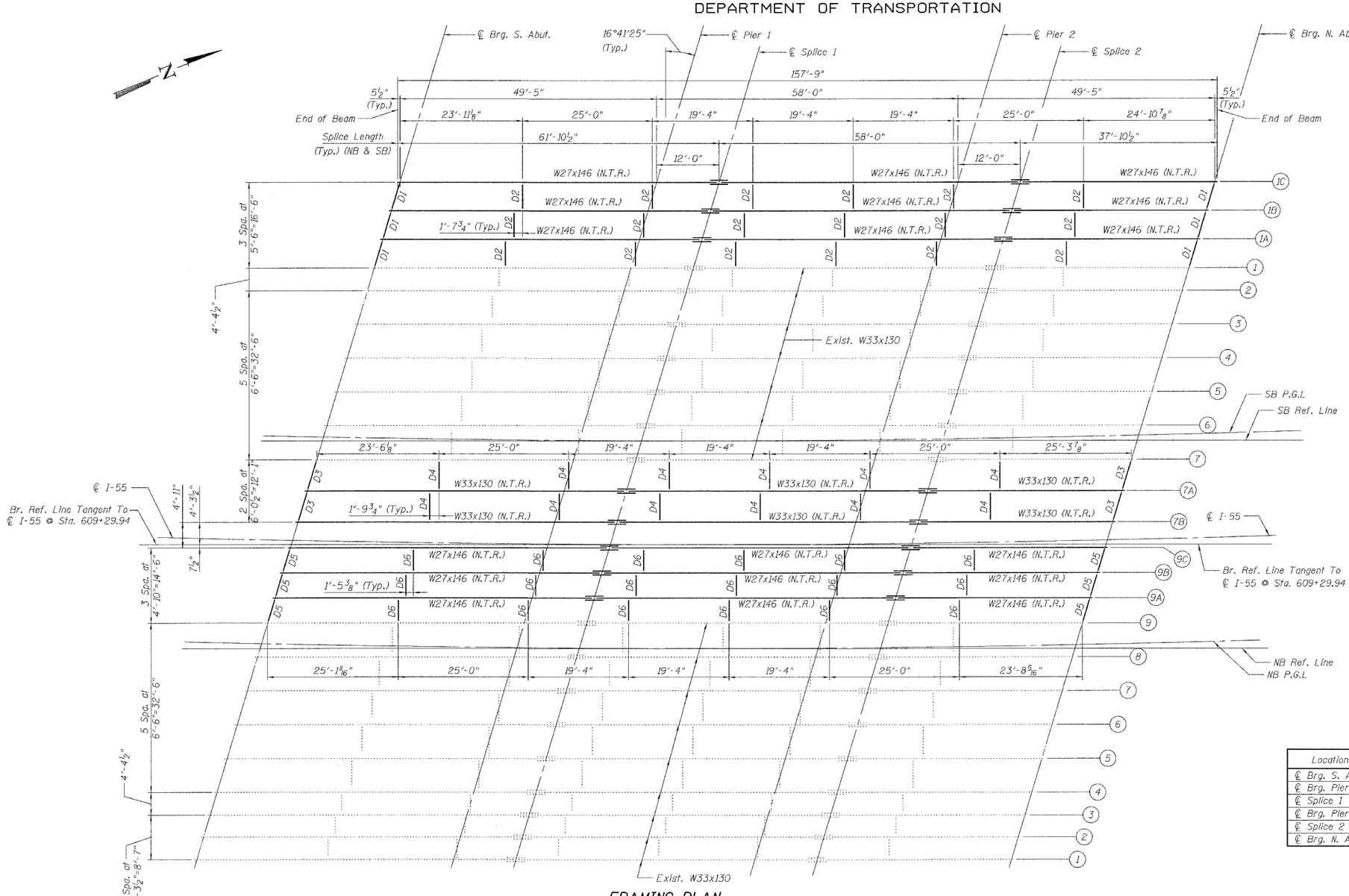
TOP OF SLAB ELEVATION III
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 099-0018 (NB)
STRUCTURE NO. 099-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	29
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT -	

SHEET NO. 7
15 SHEETS

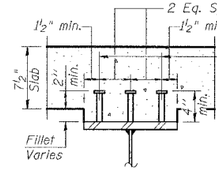
** SECTION 2005-063 I
CONTRACT NO. 60A67



FRAMING PLAN

Notes:

1. All plates except for fill plates shall conform to N.T.R..
2. N.T.R. denotes members subject to the supplemental requirements for notch toughness (Zone 2).
3. All work shall be performed after existing concrete has been removed.
4. See Sheets 8 & 9 for Beam Elevations, Sections and Details.



¾"ϕ Granular or solid flux filled headed studs automatically end welded to flange.

(1494 Req'd. for W27x146) (SB)
(1008 Req'd. for W33x130) (SB)
(3528 Req'd. for Exist. W33x130) (SB)
(Total Req'd.= 6030) (SB)

(990 Req'd. for W27x146) (NB)
(393 Req'd. for Exist. W33x130) (NB)
(Total Req'd.= 1383) (NB)

SECTION A-A
(For Information Only)

TOP OF BEAM ELEVATIONS (N.B.)
(FOR FABRICATION ONLY)

Location	Beam 9A	Beam 9B	Beam 9C
℄ Brg. S. Abut.	637.618	637.529	637.440
℄ Brg. Pier 1	637.786	637.695	637.604
℄ Splice 1	637.827	637.736	637.644
℄ Brg. Pier 2	637.949	637.856	637.762
℄ Splice 2	637.981	637.887	637.793
℄ Brg. N. Abut.	638.101	638.005	637.908

TOP OF BEAM ELEVATIONS (S.B.)
(FOR FABRICATION ONLY)

Location	Beam 1A	Beam 1B	Beam 1C	Beam 7A	Beam 7B
℄ Brg. S. Abut.	637.640	637.538	637.436	638.534	638.645
℄ Brg. Pier 1	637.777	637.673	637.568	638.668	638.782
℄ Splice 1	637.810	637.705	637.600	638.701	638.815
℄ Brg. Pier 2	637.899	637.792	637.684	638.813	638.931
℄ Splice 2	637.922	637.814	637.705	638.842	638.961
℄ Brg. N. Abut.	638.013	637.902	637.791	638.985	639.105

BEAM SEAT ELEVATIONS (NB)
(FOR INFORMATION ONLY)

Location	Beam 9A	Beam 9B	Beam 9C
℄ Brg. S. Abut.	635.00	634.91	634.83
℄ Brg. Pier 1	635.21	635.12	635.03
℄ Brg. Pier 2	635.24	635.14	635.05
℄ Brg. N. Abut.	635.29	635.20	635.10

BEAM SEAT ELEVATIONS (SB)
(FOR INFORMATION ONLY)

Location	Beam 1A	Beam 1B	Beam 1C	Beam 7A	Beam 7B
℄ Brg. S. Abut.	635.02	634.92	634.82	635.44	635.55
℄ Brg. Pier 1	635.19	635.09	634.98	635.61	635.72
℄ Brg. Pier 2	634.36	634.25	634.14	634.84	634.95
℄ Brg. N. Abut.	635.20	635.09	634.98	635.70	635.82

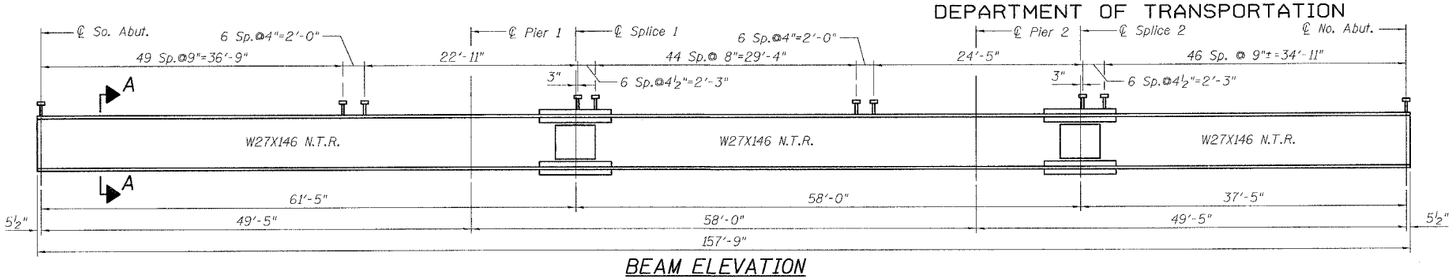
DESIGNED	J.ZUO
CHECKED	A.HAMMAD
DRAWN	Z.MORILLO
CHECKED	J.GRAINAWI

Date: 5/15/2006

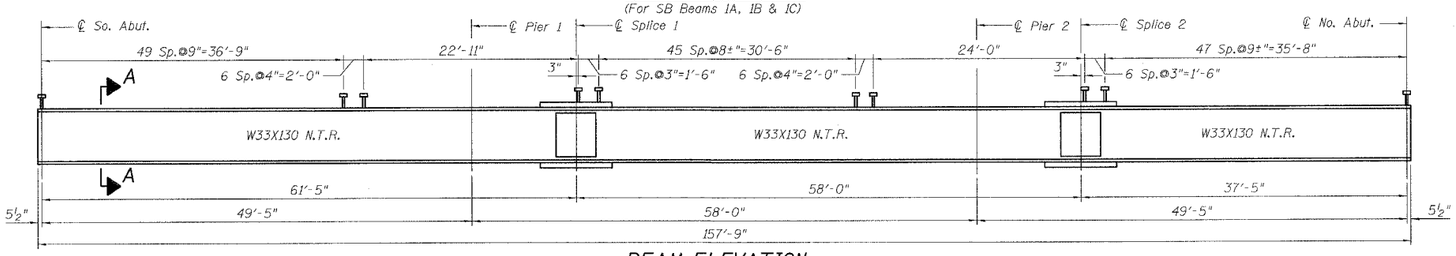
PB PARSONS BRINCKERHOFF

FRAMING PLAN
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 099-0018 (NB)
STRUCTURE NO. 099-0019 (SB)

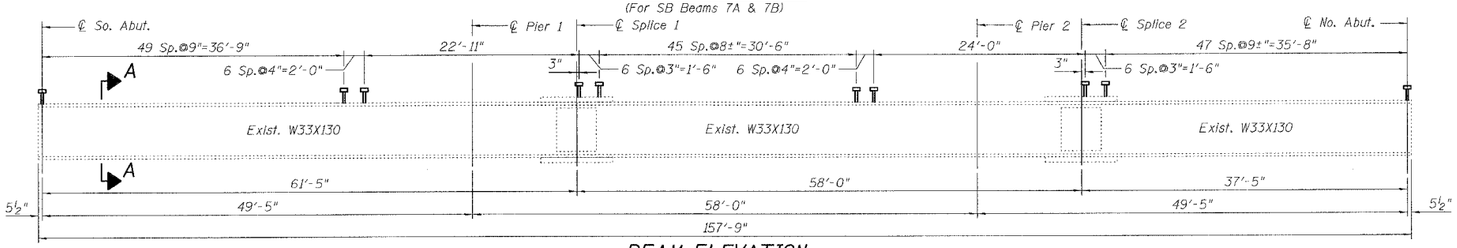
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



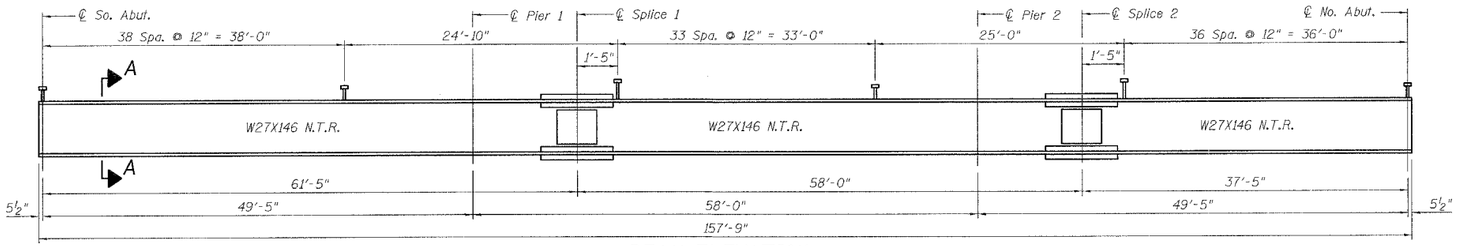
BEAM ELEVATION
(For SB Beams 1A, 1B & 1C)



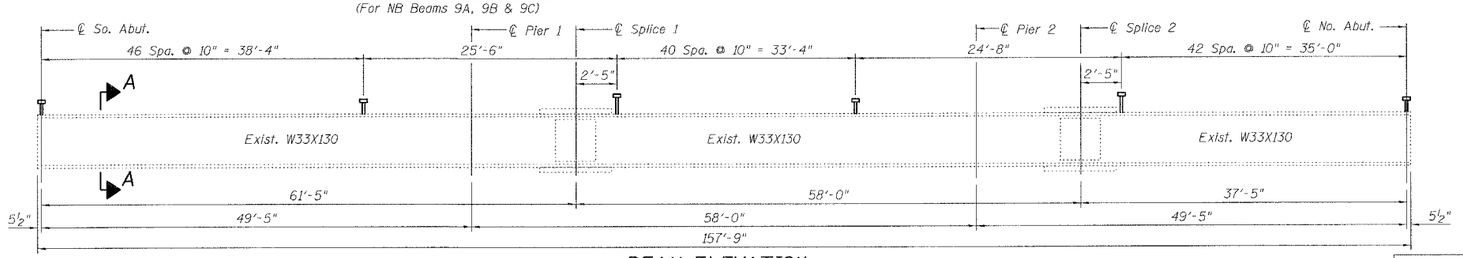
BEAM ELEVATION
(For SB Beams 7A & 7B)



BEAM ELEVATION
(For SB Existing Beams 1 thru 7)



BEAM ELEVATION
(For NB Beams 9A, 9B & 9C)



BEAM ELEVATION
(For NB Existing Beam 9)

DESIGNED	J. ZUO
CHECKED	A.HAMMAD
DRAWN	J. ZUO
CHECKED	J.GRAINAWI

Date: 5/15/2006

INTERIOR GIRDER MOMENT TABLE
(SB PROPOSED BEAMS 1A & 1B, COMPOSITE)

		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
Is	(in^4)	5630	5630	5630
Ic (n)	(in^4)	14996		14996
Ic (3n)	(in^4)	10570		10570
Ss	(in^3)	411	411	411
Sc (n)	(in^3)	609		609
Sc (3n)	(in^3)	542		542
Z	(in^3)			
℘	(k/ft.)	0.710	1.090	0.710
M℘	('k)	128	299	96
s℘	(k/ft.)	0.380		0.380
Ms℘	('k)	73		65
M℄	('k)	264	145	269
M (Imp)	('k)	76	41	73
$5/3[M℄+M(Imp)]$	('k)	567	309	571
Ma	('k)	998	790	951
Mu	('k)	1901		2193
fs℘ non-comp	(k.s.i.)	3.7	8.7	2.8
fs℘ (comp)	(k.s.i.)	1.6		1.4
$fs5/3(℄+Imp)$	(k.s.i.)	11.2	9.0	11.3
fs (Overload)	(k.s.i.)	16.5	17.8	15.5
fs (Total)	(k.s.i.)		23.1	
VR	(k)	45.5		34.2

INTERIOR GIRDER REACTION TABLE
(SB PROPOSED BEAMS 1A & 1B, COMPOSITE)

		Abut.	Pier
R℘	(k)	21.0	64.8
R℄	(k)	32.6	37.9
Imp.	(k)	9.4	10.5
R (Total)	(k)	63.0	113.2

INTERIOR GIRDER MOMENT TABLE
(SB EXISTING BEAMS, COMPOSITE)

		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
Is	(in^4)	6710	6710	6710
Ic (n)	(in^4)	18994		18994
Ic (3n)	(in^4)	13690		13690
Ss	(in^3)	406	406	406
Sc (n)	(in^3)	621		621
Sc (3n)	(in^3)	557		557
Z	(in^3)			
℘	(k/ft.)	0.790	1.170	0.790
M℘	('k)	140	318	105
s℘	(k/ft.)	0.380		0.380
Ms℘	('k)	74		67
M℄	('k)	313	168	319
M (Imp)	('k)	90	47	87
$5/3[M℄+M(Imp)]$	('k)	671	359	677
Ma	('k)	1151	881	1104
Mu	('k)	1854		2038
fs℘ non-comp	(k.s.i.)	4.2	9.4	3.1
fs℘ (comp)	(k.s.i.)	1.6		1.4
$fs5/3(℄+Imp)$	(k.s.i.)	13.0	10.6	13.1
fs (Overload)	(k.s.i.)	18.7	20.0	17.7
fs (Total)	(k.s.i.)		26.0	
VR	(k)	52.9		39.3

INTERIOR GIRDER REACTION TABLE
(SB EXISTING BEAMS, COMPOSITE)

		Abut.	Pier
R℘	(k)	22.4	69.0
R℄	(k)	37.9	44.1
Imp.	(k)	10.9	12.3
R (Total)	(k)	71.1	125.4

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	30
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 8
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

INTERIOR GIRDER MOMENT TABLE
(SB PROPOSED BEAM 7A, COMPOSITE)

		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
Is	(in^4)	6710	6710	6710
Ic (n)	(in^4)	18645		18645
Ic (3n)	(in^4)	13365		13365
Ss	(in^3)	406	406	406
Sc (n)	(in^3)	617		617
Sc (3n)	(in^3)	552		552
Z	(in^3)			
℘	(k/ft.)	0.740	1.120	0.740
M℘	('k)	133	306	100
s℘	(k/ft.)	0.380		0.380
Ms℘	('k)	74		66
M℄	('k)	291	158	297
M (Imp)	('k)	84	44	81
$5/3[M℄+M(Imp)]$	('k)	625	336	630
Ma	('k)	1081	835	1035
Mu	('k)	1903		2169
fs℘ non-comp	(k.s.i.)	3.9	9.0	3.0
fs℘ (comp)	(k.s.i.)	1.6		1.4
$fs5/3(℄+Imp)$	(k.s.i.)	12.2	10.0	12.3
fs (Overload)	(k.s.i.)	17.7	19.0	16.7
fs (Total)	(k.s.i.)		24.7	
VR	(k)	48.9		37.7

INTERIOR GIRDER REACTION TABLE
(SB PROPOSED BEAMS 7A, COMPOSITE)

		Abut.	Pier
R℘	(k)	21.5	66.5
R℄	(k)	35.0	40.8
Imp.	(k)	10.0	11.3
R (Total)	(k)	66.6	118.6

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

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

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

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[M℘ + Ms℘ + $5/3$(M℄ + M(Imp))].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to M℘ + Ms℘ + $5/3$(M℄ + M(Imp)).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℘ + Ms℘ + $5/3$(M℄ + M(Imp))].

Notes:

1. N.T.R. denotes members subject to the supplemental requirements for notch toughness (Zone 2).
2. Verify all existing dimensions in field prior to fabrication.
3. Work this Sheet with Sheet Nos. 7 & 9.
4. For section A-A, See Sheet No. 7.

PB PARSONS BRINCKERHOFF

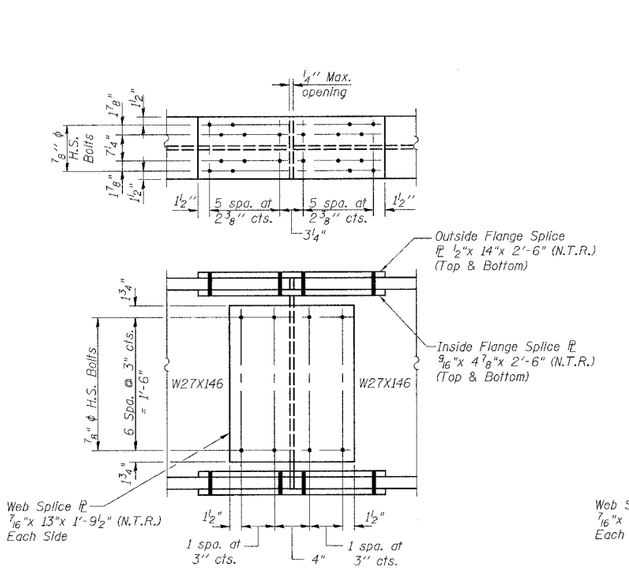
STRUCTURAL STEEL DETAILS I
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 009-0018 (NB)
STRUCTURE NO. 009-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	31
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

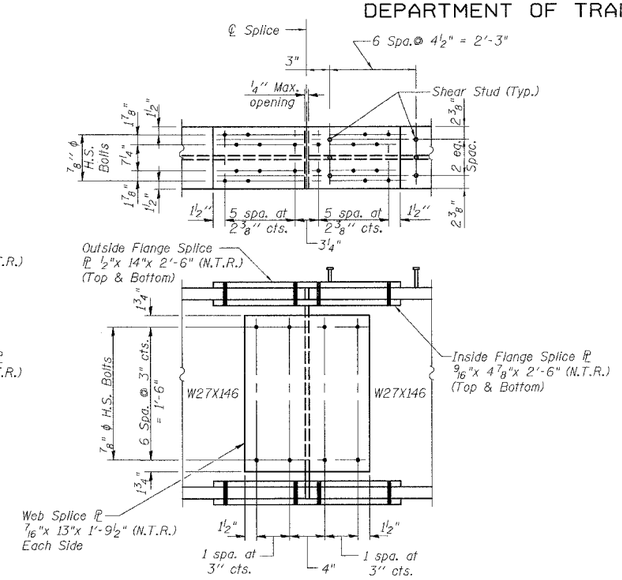
SHEET NO. 9
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67



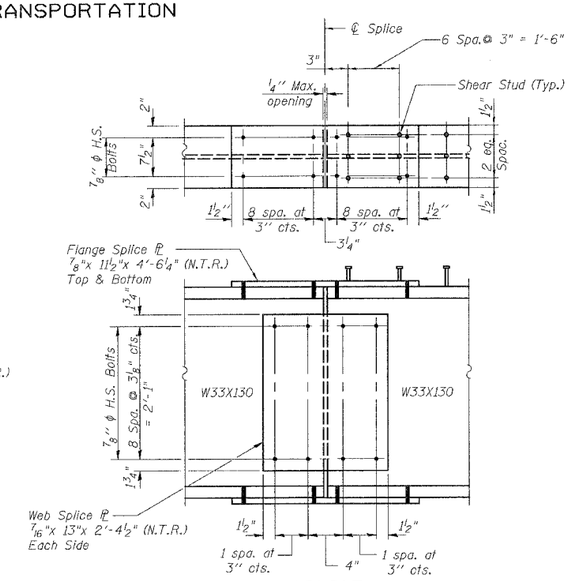
SPLICE

Splice 1 shown, Splice 2 similar.
(For NB W27X146, Non-Composite)
(6 Locations)



SPLICE

Splice 1 shown, Splice 2 similar.
(For SB W27X146, Composite)
(6 Locations)



SPLICE

Splice 1 shown, Splice 2 similar.
(For W33X130, Composite)
(4 Locations SB)

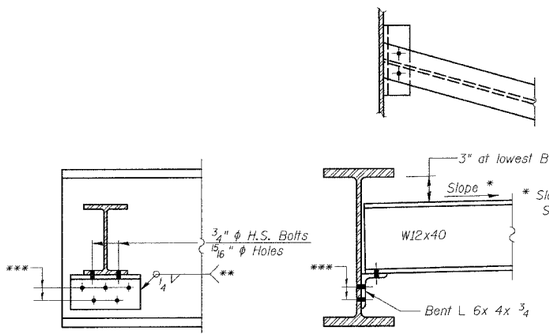
Note:
All bolts in splices are AASHTO M 164 (ASTM 325)
7/8" ϕ with Class A Contact Surfaces and Standard Holes.

INTERIOR GIRDER MOMENT TABLE
(NB PROPOSED BEAMS 9A & 9B, NON-COMPOSITE)

		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I	(in)4	5630	5630	5630
S	(in)3	411	411	411
wD	(k/ft.)	1.020	1.020	1.020
MD	('k)	183	293	137
ML	('k)	217	168	209
M (Imp)	('k)	62	47	57
5/3[ML+M(Imp)]	('k)	465	359	444
Ma	('k)	842	849	757
fsD	(k.s.i.)	5.3	8.6	4.0
fs5/3(L+Imp)	(k.s.i.)	13.6	10.5	13.0
fs (Overload)	(k.s.i.)	18.9	19.1	17.0
fs (Total)	(k.s.i.)	24.6	24.8	22.1

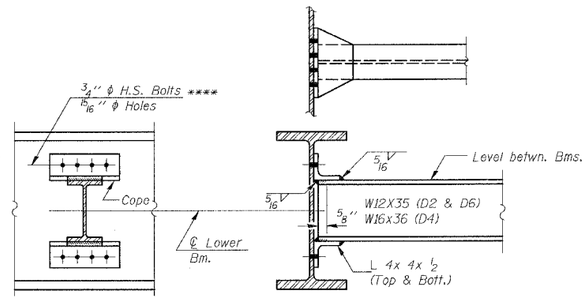
INTERIOR GIRDER REACTION TABLE
(NB PROPOSED BEAMS 9A & 9B)

		Abut.	Pier
RD	(k)	19.4	61.0
RL	(k)	29.1	34.6
Imp.	(k)	8.4	9.6
R (Total)	(k)	56.8	105.2



END DIAPHRAGMS D1, D3 & D5

(6 D1 Required SB)
(4 D3 Required SB)
(6 D5 Required NB)



INTERIOR DIAPHRAGMS D2, D4 & D6

(18 D2 Required SB)
(12 D4 Required SB)
(18 D6 Required NB)

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

** Field weld angle to existing Beam 1.

*** At existing Beams 7 and 9, remove existing bolts. Drill 15/16" ϕ holes in new seat angle L 6x 4 x 3/4" and reconnect with new 3/4" ϕ H.S. bolts. Support existing diaphragm as required while bolts are removed.

**** Drill 15/16" ϕ holes for 3/4" ϕ H.S. bolts in existing Beams 1, 7 and 9. Use new seat angle as template.

Notes:

1. N.T.R. denotes members subject to the supplemental requirements for notch toughness (Zone 2).
2. Work this Sheet with Sheet Nos. 7 & 8.

DESIGNED	J. ZUO
CHECKED	A. HAMMAD
DRAWN	J. ZUO
CHECKED	J.GRAINAWI

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

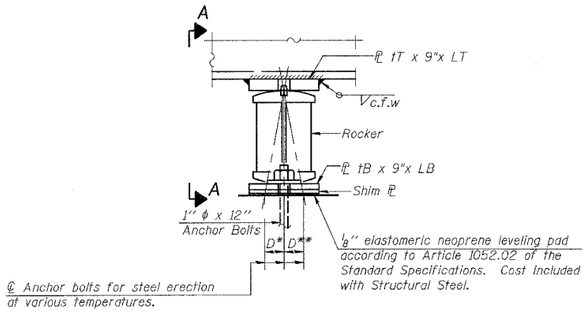
STRUCTURAL STEEL DETAILS II
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 009-0018 (NB)
STRUCTURE NO. 009-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	32
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 10
15 SHEETS

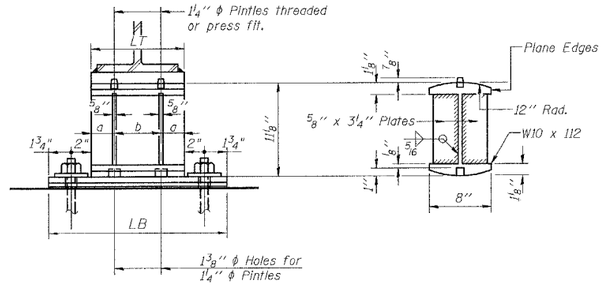
** SECTION 2005-063 I
CONTRACT NO. 60A67



ELEVATION AT PIER 2 (SB)
(5 Req'd)

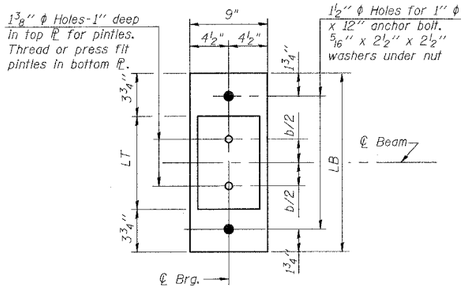
* D=⅛"/100 ft. of exp. for every 15° below the normal temp. of 50°F.

** D=⅛"/100 ft. of exp. for every 15° above the normal temp. of 50°F.

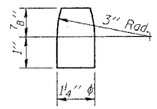


SECTION A-A

DETAIL OF ROCKER



PLAN



DETAIL OF PINTLE

BEAM	LT	LB	tT	tB	a	b	c.f.w.	Total No. Req'd
W33X130	12½"	20"	1⅜"	1¾"	3"	6½"	½"	2
W27X146	15½"	24"	1¾"	1⅞"	2¼"	2@ 5½"	⅝"	3

Note:

1. See sheet 13 for anchor bolt installation. Anchor bolts at fixed bearings may be built into the masonry.

DESIGNED	J. ZUO
CHECKED	J.GRAINAWI
DRAWN	J. ZUO
CHECKED	J.GRAINAWI

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

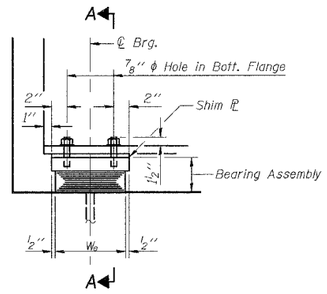
STRUCTURAL STEEL DETAILS III
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 009-0018 (NB)
STRUCTURE NO. 009-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

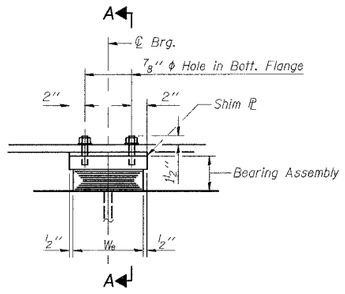
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	33
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT -	

SHEET NO. 11
15 SHEETS

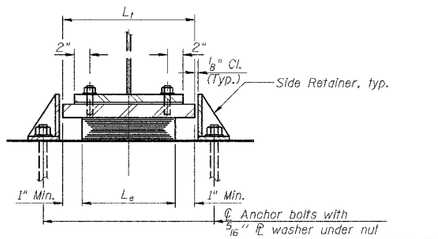
** SECTION 2005-063 I
CONTRACT NO. 60A67



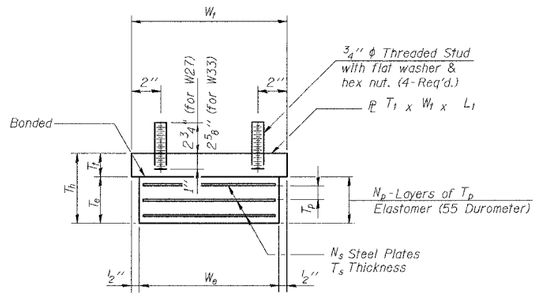
ELEVATION AT S. ABUT. (NB & SB)
(8 required)



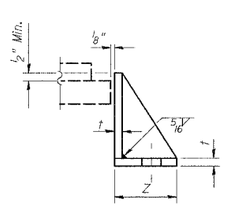
ELEVATION AT PIER 2 (NB)
(3 required)

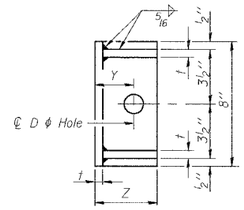


SECTION A-A



BEARING ASSEMBLY
(Shim plates shall not be placed under Bearing Assembly)





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

SIDE RETAINER SCHEDULE

Location	Beam	Anchor Bolt Dia. x Length (in.)	Plate Washer (in.)	Side Retainer (in.)			
				Y	Z	t	D (ϕ Hole)
NB S. Abut.	W27	1 x 12	2 1/4 x 2 1/4 x 5/16	2 1/8	4	1/2	1 1/4
NB Pier 2	W27	1 1/4 x 15	2 3/4 x 2 3/4 x 5/16	2 3/8	4 3/4	1/2	1 1/2
SB S. Abut.	All	1 x 12	2 1/4 x 2 1/4 x 5/16	2 1/8	4	1/2	1 1/4

TYPE I ELASTOMERIC EXP. BRG.

BEARING DIMENSION SCHEDULE

Location	Beam	Bearing							Top Plate			T_h
		W_e	L_e	T_p	N_p	T_s	N_s	T_e	W_t	L_t	T_t	
NB S. Abut.	W27	7"	12"	3/8"	4	3/32"	3	1 3/4"	8"	14"	2"	3 3/4"
NB Pier 2	W27	10"	14"	7/16"	5	1/8"	4	2 11/16"	11"	16"	2 1/4"	4 15/16"
SB S. Abut.	All	7"	12"	3/8"	4	3/32"	3	1 3/4"	8"	14"	2"	3 3/4"

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	11

Notes:

1. See Sheet No. 13 for Anchor Bolt Installation.

DESIGNED	J.ZUO
CHECKED	J.GRAINAWI
DRAWN	Z.MORILLO
CHECKED	J.GRAINAWI

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

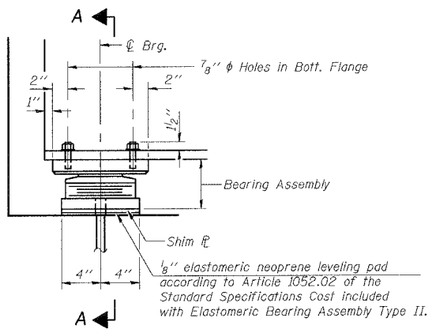
ELASTOMERIC BEARING
ASSEMBLY TYPE I
I-55 OVER EJ&E R.R.
FAI ROUTE 55 SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 099-0018 (NB)
STRUCTURE NO. 099-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

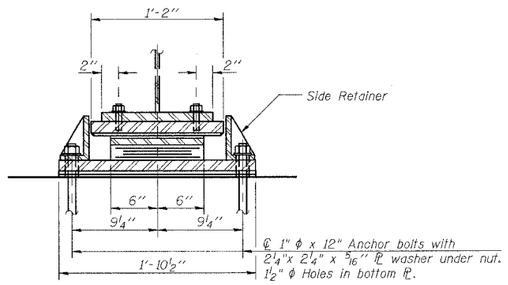
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	34
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 12
15 SHEETS

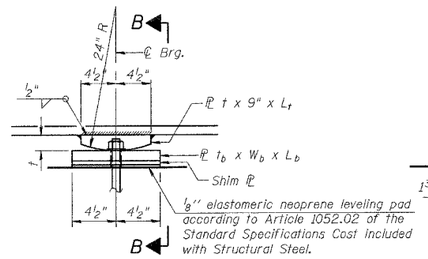
** SECTION 2005-063 I
CONTRACT NO. 60A67



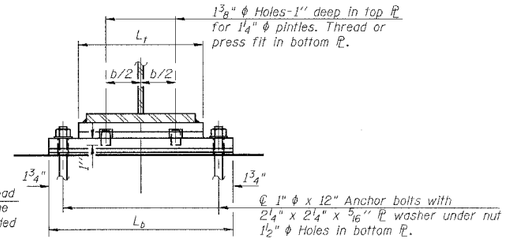
ELEVATION AT N. ABUT. (NB & SB)



SECTION A-A



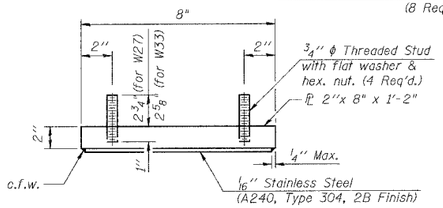
ELEVATION AT PIER 1 (NB & SB)



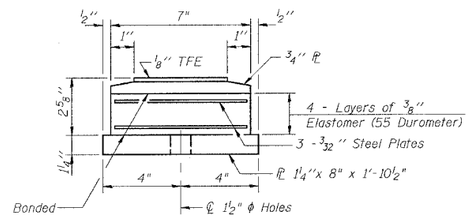
SECTION B-B

TYPE II ELASTOMERIC EXP. BRG.

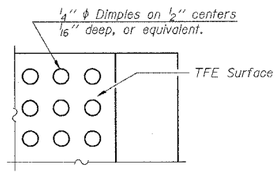
(8 Required)



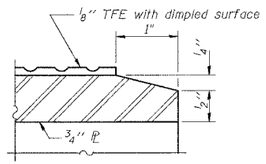
TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY



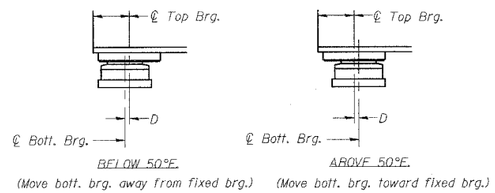
PLAN-TFE SURFACE



SECTION THRU TFE

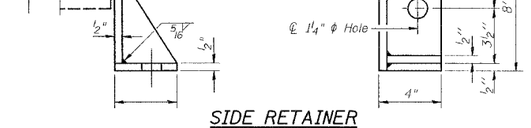
FIXED BEARING

(At Pier 1)
(8 Required)



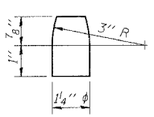
SETTING ANCHOR BOLTS AT EXP. BRG.

(D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F)



SIDE RETAINER

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



PINTLE

FIXED BEARING DIMENSION SCHEDULE

Location	Beam	b	Top Plate L_t	Top Plate t	Bottom Plate W_b	Bottom Plate L_b	Bottom Plate t_b	Brg. Ht.	No. Req'd
NB Pier 1	W27	7"	15"	1 5/8"	9"	22 1/2"	1 1/2"	3 1/4"	3
SB Pier 1	W27	7"	15"	1 3/4"	9"	22 1/2"	1 1/2"	3 3/8"	3
SB Pier 1	W33	6"	12 1/2"	1 5/8"	9"	20"	1 5/8"	3 3/8"	2

Notes:

1. The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

2. Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

3. See Sheet No. 13 for Anchor Bolt Installation.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	8

DESIGNED	J.ZUO
CHECKED	J.GRAINAWI
DRAWN	Z.MORILLO
CHECKED	J.GRAINAWI

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

ELASTOMERIC BEARING
ASSEMBLY TYPE II
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 099-0018 (NB)
STRUCTURE NO. 099-0019 (SB)

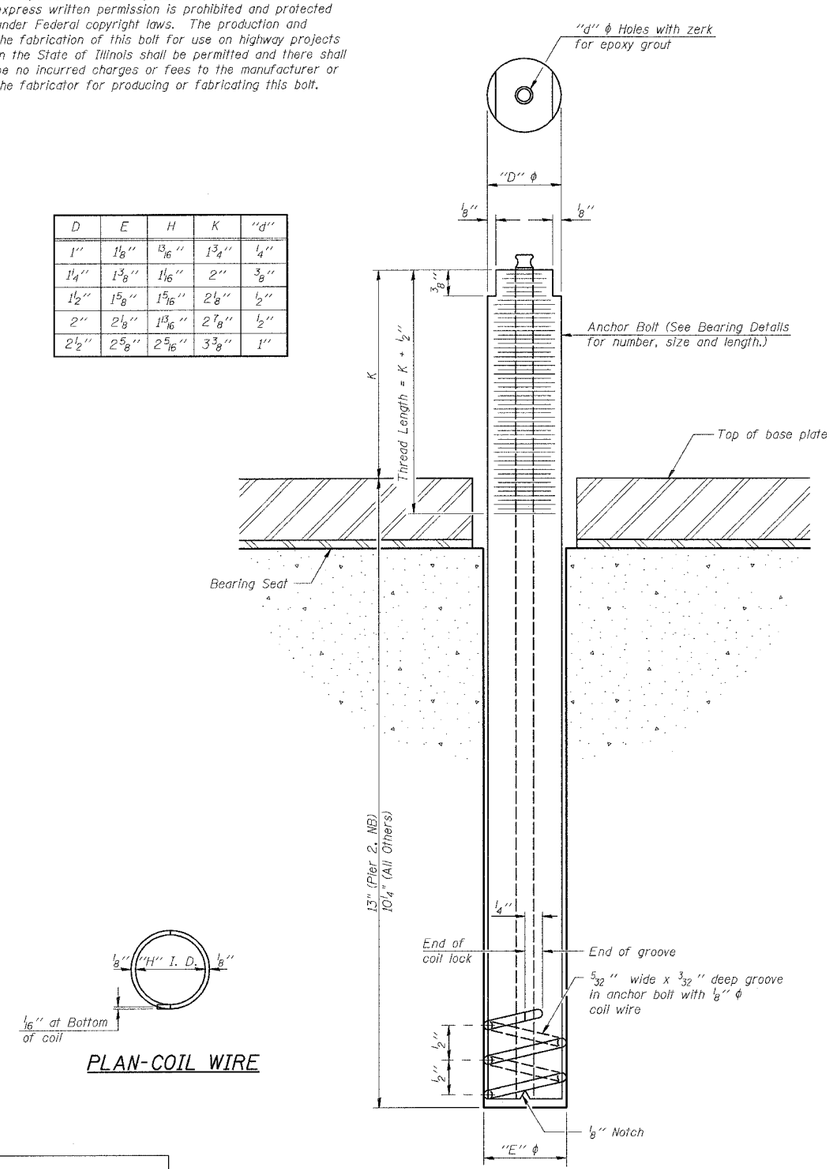
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	35
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 13
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

D	E	H	K	"d"
1"	$1\frac{1}{8}$"	$\frac{13}{16}$"	$1\frac{3}{4}$"	$\frac{1}{4}$"
$1\frac{1}{4}$"	$1\frac{3}{8}$"	$1\frac{1}{16}$"	2"	$\frac{3}{8}$"
$1\frac{1}{2}$"	$1\frac{5}{8}$"	$1\frac{5}{16}$"	$2\frac{1}{8}$"	$\frac{1}{2}$"
2"	$2\frac{1}{8}$"	$1\frac{13}{16}$"	$2\frac{7}{8}$"	$\frac{1}{2}$"
$2\frac{1}{2}$"	$2\frac{5}{8}$"	$2\frac{5}{16}$"	$3\frac{3}{8}$"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

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

Location	Type	Bolt ϕ	Total Number
S. Abut., NB	A307	1"	6
Pier 1, NB	A307	1"	6
Pier 2, NB	A307	$1\frac{1}{4}$"	6
N. Abut., NB	A307	1"	6
S. Abut., SB	A307	1"	10
Pier 1, SB	A307	1"	10
Pier 2, SB	A307	1"	10
N. Abut., SB	A307	1"	10

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

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

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

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

DESIGNED	J. ZUO
CHECKED	J.GRAINAWI
DRAWN	J. ZUO
CHECKED	J.GRAINAWI

Date: 5/15/2006

FOR INFORMATION ONLY

PB PARSONS BRINCKERHOFF

ANCHOR BOLT DETAILS
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 009-0018 (NB)
STRUCTURE NO. 009-0019 (SB)

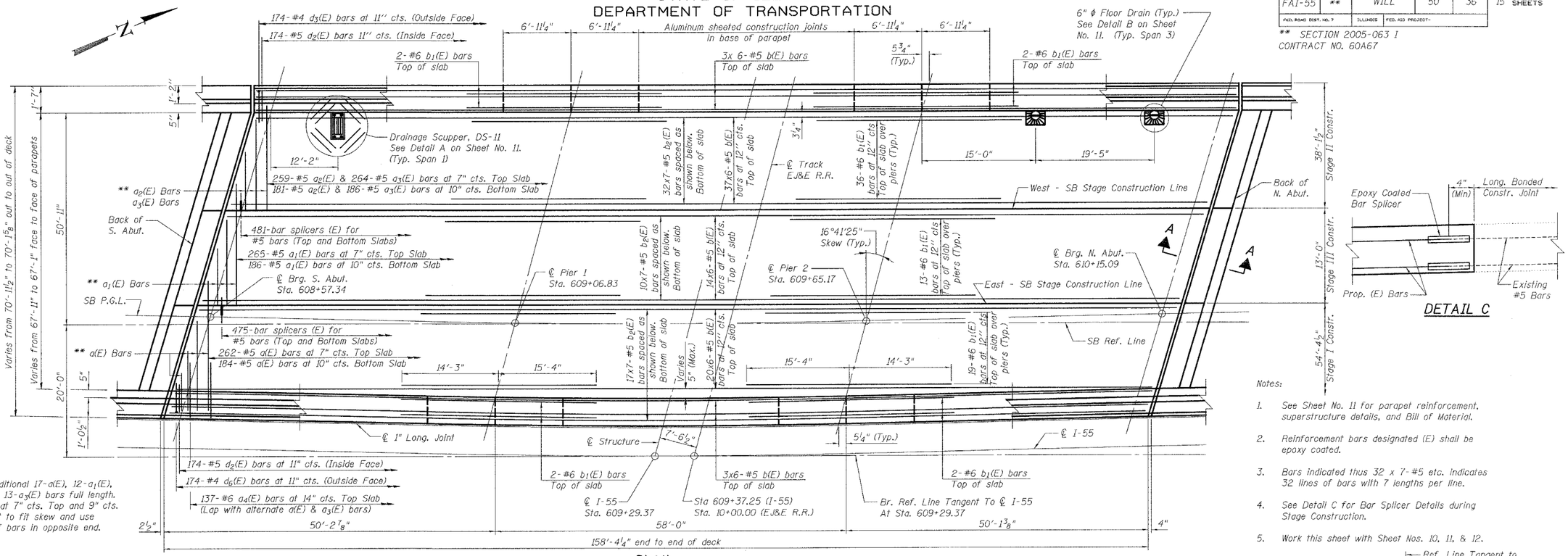
ABB-1 10-22-04

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	36
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 14
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67



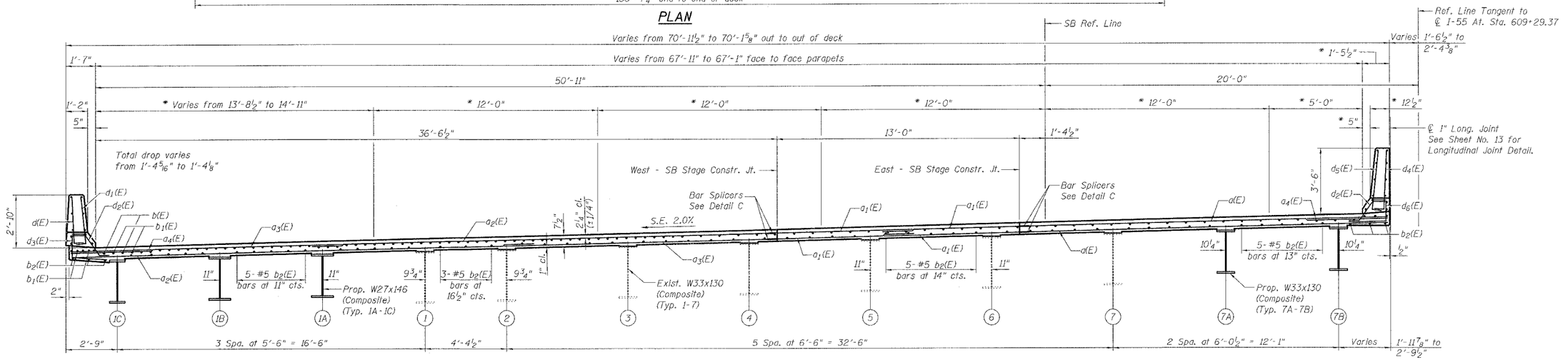
DETAIL C

Notes:

1. See Sheet No. 11 for parapet reinforcement, superstructure details, and Bill of Material.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Bars indicated thus 32 x 7-#5 etc. indicates 32 lines of bars with 7 lengths per line.
4. See Detail C for Bar Splicer Details during Stage Construction.
5. Work this sheet with Sheet Nos. 10, 11, & 12.

** Order an additional 17-a(E), 12-a_1(E), 23-a_2(E), & 13-a_3(E) bars full length. Space bars at 7" cts. Top and 9" cts. Bottom. Cut to fit skew and use remainder of bars in opposite end.

PLAN



NEAR PIER

NEAR MIDSPAN

CROSS SECTION
(Looking North)

* Designates radial dimensions normal to ℄ I-55.

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

FOR INFORMATION ONLY

PB PARSONS BRINCKERHOFF

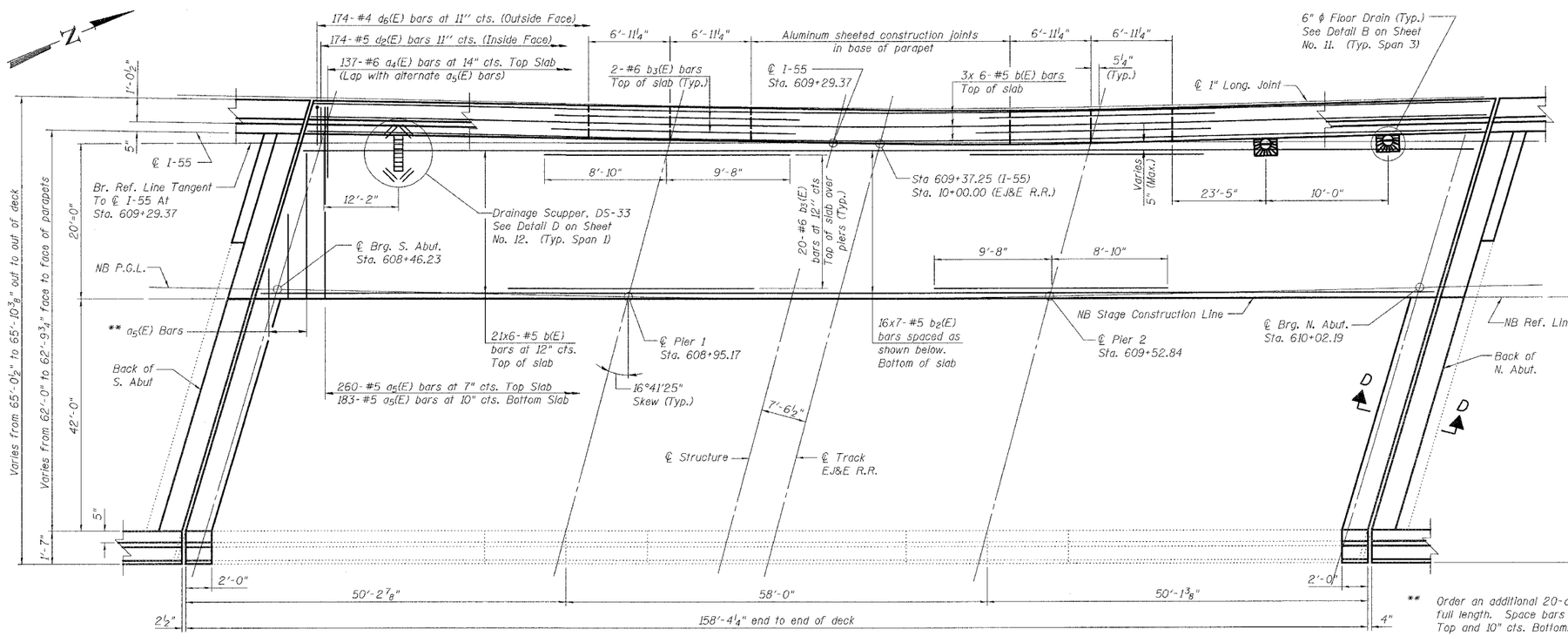
SB DECK PLAN AND SECTION
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 099-0019 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

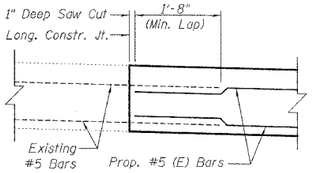
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	37
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 15
15 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67



PLAN

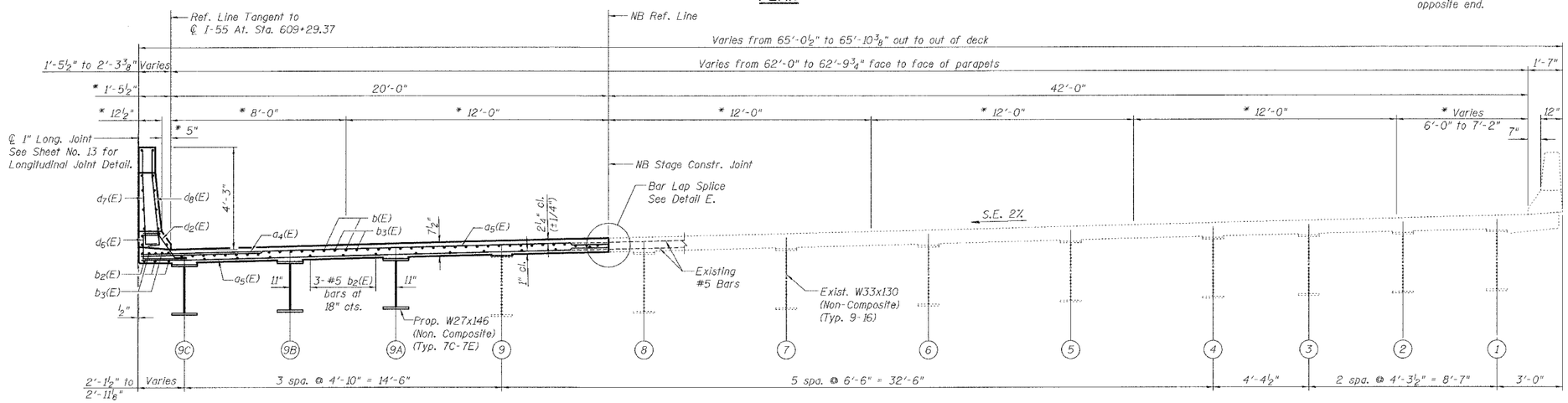


DETAIL E

Note:

Remove existing concrete to expose a minimum of 1'-8" of the existing top and bottom bars.

** Order an additional 20-a(E) bars full length. Space bars at 7" cts. Top and 10" cts. Bottom. Cut to fit skew and use remainder of bars in opposite end.



CROSS SECTION
(Looking North)

Notes:

1. See Sheet No. 12 for superstructure details, parapet reinforcement, and Bill of Material.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Bars indicated thus 16 x 7-#5 etc. indicates 16 lines of bars with 7 lengths per line.
4. Work this sheet with Sheet Nos. 9, 11 & 12.

* Designates radial dimensions normal to ℄ I-55.

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

FOR INFORMATION ONLY

PB PARSONS BRINCKERHOFF

NB DECK PLAN AND SECTION
I-55 OVER EJ&E R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 609+29.37
STRUCTURE NO. 099-0018 (NB)

B.M. 3225 -
Cut in the SE corner of tri-angular conc. slab, 2' high on the W. side of the W. Frontage Rd. and on the N. side of the graval rd. running W.

Existing Structure -
Both the northbound structure 099-0022 and southbound structure 099-0023 over Material Service Railroad (abandoned) were originally built in 1956. The superstructure and substructure was widened in 1977. Also, additional rehabilitation work was performed in 1994. The structures are 122'-3" long from bk. to bk. of abutments and 41'-10" wide. Both superstructures consist of three continuous multi-beam spans. The existing concrete deck shall be partially removed and widened. The road shall be kept open with two lanes of traffic at all times by utilizing stages construction.

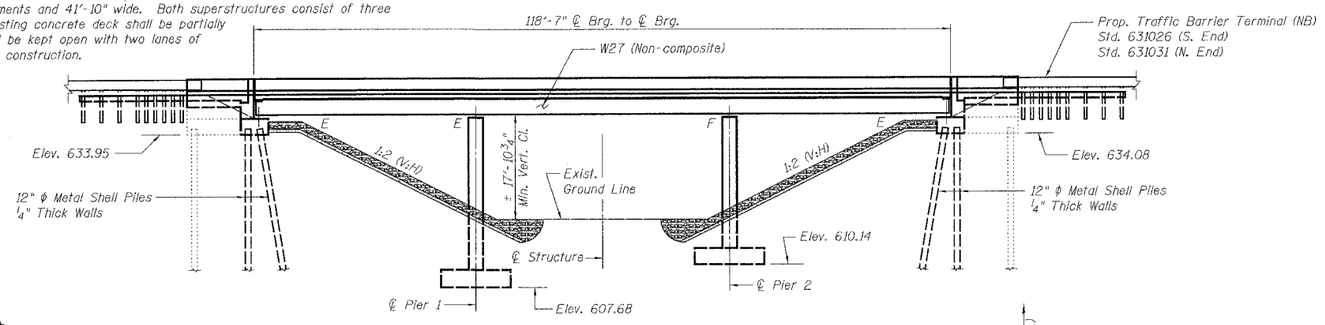
Salvage -
None

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	38
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
13 SHEETS

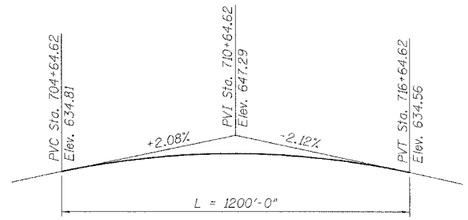
** SECTION 2005-063 I
CONTRACT NO. 60A67



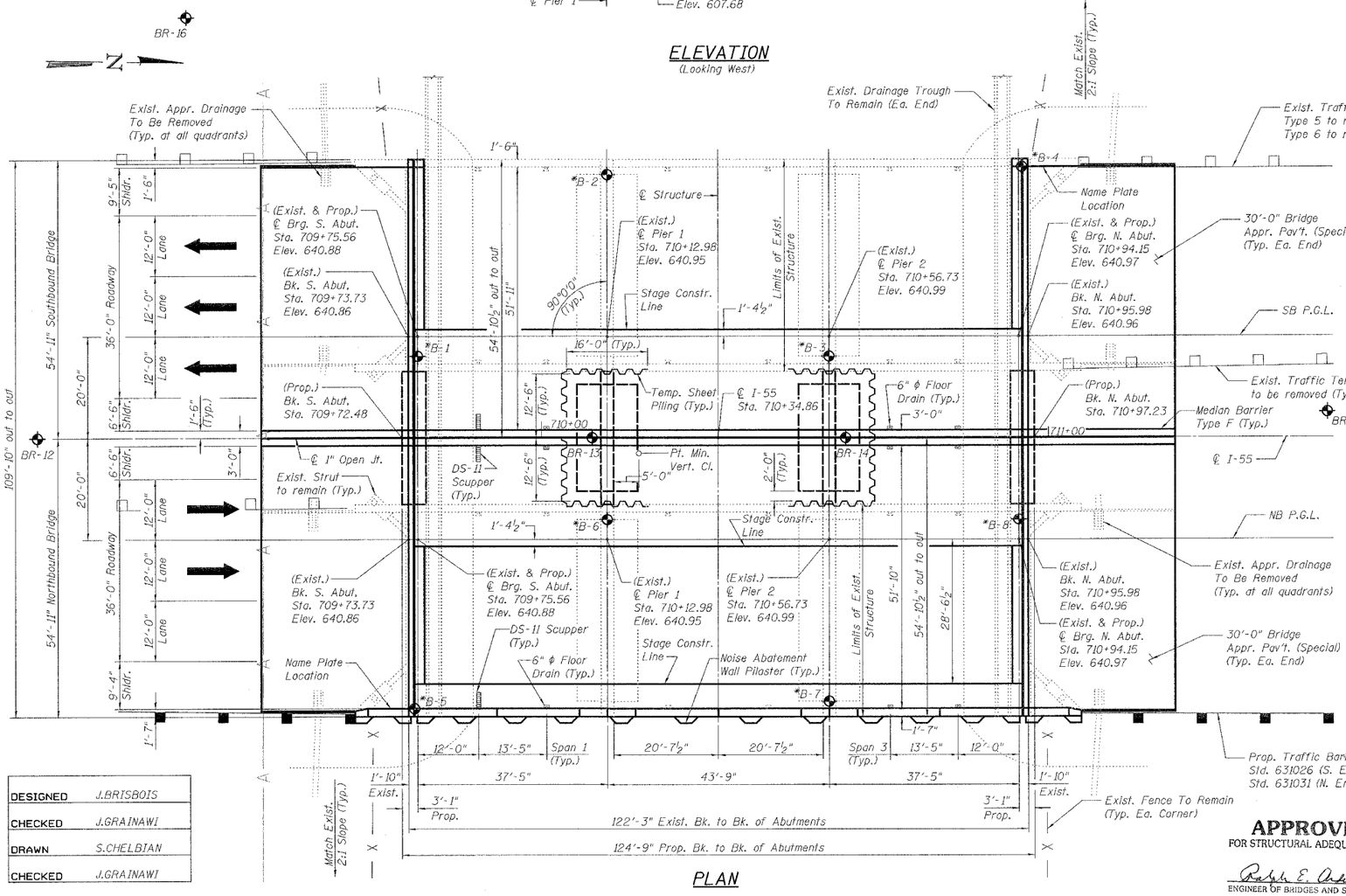
ELEVATION
(Looking West)

SCOPE OF WORK

1. Remove and replace the northbound and southbound approach pavements.
2. Widen the northbound and southbound bridges to the inside median with new cast-in-place reinforced concrete decks supported by a new steel superstructure.
3. Remove and replace the existing outside northbound barrier and overhang, add structural steel brackets at 10' spacing to accommodate a proposed noise abatement wall.
4. Remove and replace expansion joints.
5. Widen the existing substructure elements. Remove the existing northbound and southbound inside wingwalls in accordance with Standard Specifications.
6. Repair all substructure defects with formed concrete repair and/or epoxy crack seal.
7. New girder lines will utilize steel rocker bearings at pier 1 to match existing.
8. Utilize stage construction as noted herein.



NB & SB PROFILE GRADE OF I-55



PLAN

DESIGNED	J.BRISBOIS
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

LOADING HS20-44 & ALT.

Allow 50#/sq. ft. for future wearing surface.
Wind Load on Noise Abatement Wall = 35#/sq. ft.
Allowable Noise Abatement Wall Weight = 30#/sq. ft.

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_s = 18,000 psi (exist. structural steel)
f_y = 36,000 psi (new structural steel)

SEISMIC DATA

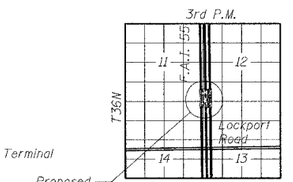
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

LEGEND

* B-1 - Soil Boring Location (1954)
BR-1 - Soil Boring Location (2006)
A — Aerial Lines

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PB PARSONS BRINCKERHOFF



LOCATION SKETCH

STATE OF ILLINOIS
JAMAL I. GRAINAWI
81-5161
CHICAGO, IL
REGISTERED STRUCTURAL ENGINEER

Signed Jamal Grainawi
Jamal I. Grainawi, S.E. IL. Lic. No. 081-005161
Expires 11-30-2006
Date 5/15/2006

GENERAL PLAN & ELEVATION
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STATION 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	39
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
13 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

GENERAL NOTES:

1. Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$" ϕ, open holes $\frac{15}{16}$" ϕ, unless otherwise noted.
2. Calculated weight of structural steel =62,180 Pounds.
* 3. Field welding of construction accessories will not be permitted to beams.
* 4. Anchor bolts shall be set before bolting diaphragms over supports.
5. The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.
* 6. 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 for the work.
7. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{2}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ inch adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type 1 Elastomeric Bearings, two $\frac{1}{8}$ inch adjusting shims shall be provided for each bearing and placed as detailed.
* 8. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
9. The Organic Zinc-Rich/Epoxy/Urethane Paint System shall be used for full shop painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched in the field. The color of the final finish coat for all new interior steel surfaces shall be gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures".
* 10. All Construction joints shall be bonded.

* These notes included in Fabrication Contract for information only.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL	
Furnishing Elastomeric Bearing Assembly, Type I	Each	4		4	
Furnishing Elastomeric Bearing Assembly, Type II	Each	4		4	
Furnishing Structural Steel	L. Sum	0.10		0.10	
Storage of Structural Steel and Bearings	Unit	47		47	**

** Refer to Special Provision Furnishing Structural Steel and Bearings for definition of Storage Unit. Quantity for Storage Unit is based on storing 25% of the steel weight for 30 calendar days.

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

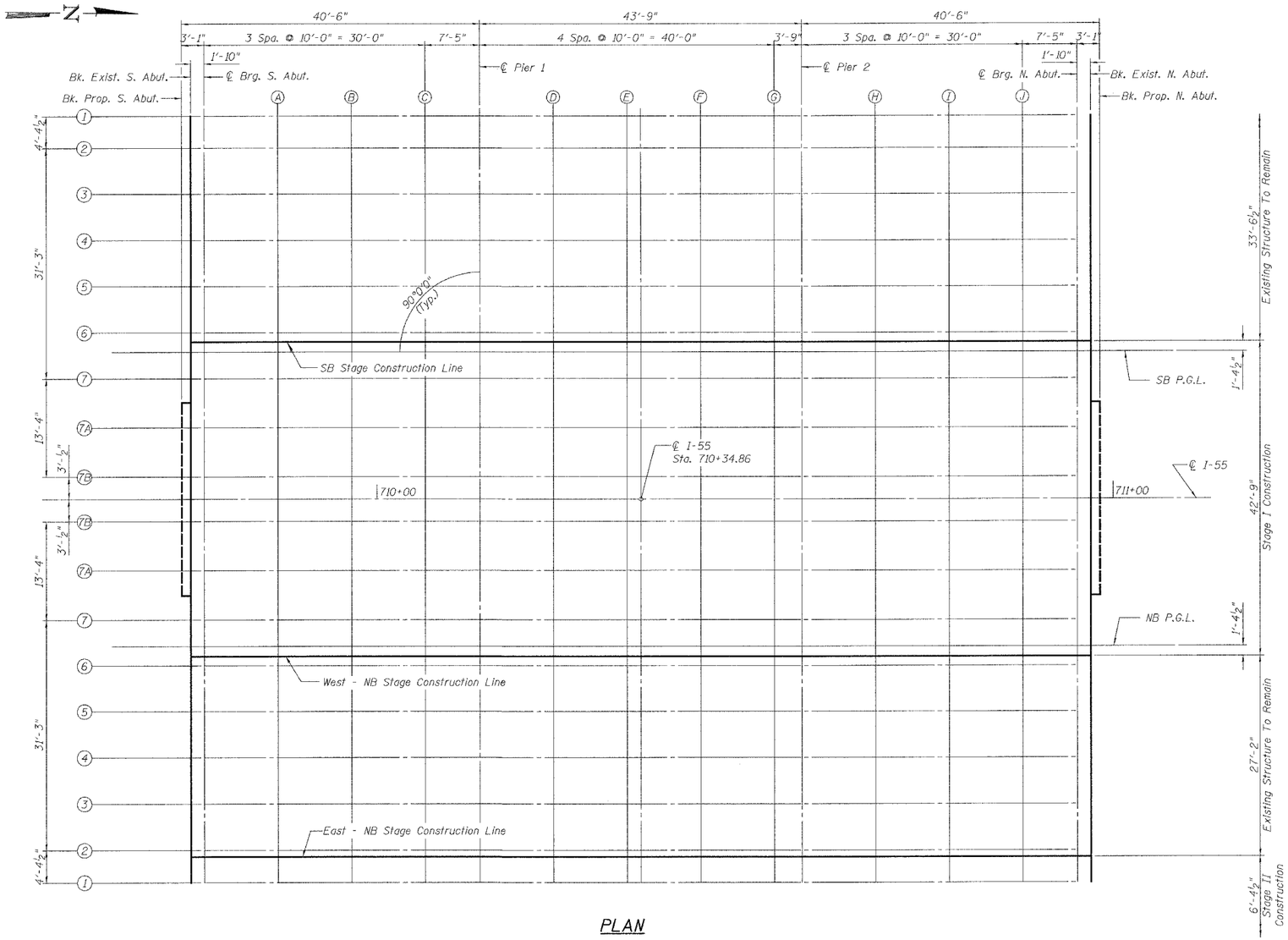
GENERAL NOTES &
BILL OF MATERIAL
I-55 OVER MS (ABANDONED) RR
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

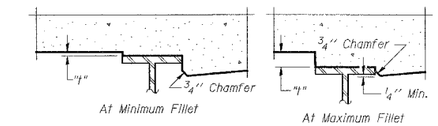
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	40
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3
13 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

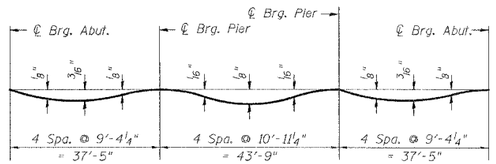


PLAN



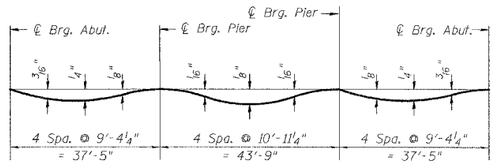
To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet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

FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

(Beams 7 thru 7B, SB & NB)
(Includes weight of concrete only.)



DEAD LOAD DEFLECTION DIAGRAM

(Existing Beam 1)
(Includes weight of concrete only.)

Notes:

1. 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.
2. Work this Sheet with Sheet Nos. 4 & 5.

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

TOP OF SLAB LAYOUT
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	41
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
13 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SB PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	709+73.731	0.000	640.857	640.857
CL. S. Abut.	709+75.564	0.000	640.862	640.862
A	709+85.564	0.000	640.890	640.901
B	709+95.564	0.000	640.913	640.926
C	710+05.564	0.000	640.934	640.939
CL. Pier 1	710+12.981	0.000	640.947	640.947
D	710+22.981	0.000	640.961	640.965
E	710+32.981	0.000	640.972	640.981
F	710+42.981	0.000	640.979	640.986
G	710+52.981	0.000	640.983	640.983
CL. Pier 2	710+56.731	0.000	640.983	640.983
H	710+66.731	0.000	640.982	640.989
I	710+76.731	0.000	640.977	640.991
J	710+86.731	0.000	640.969	640.979
CL. N. Abut.	710+94.148	0.000	640.961	640.961
Bk. N. Abut.	710+95.981	0.000	640.959	640.959

BEAM 7 (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	709+73.731	3.625	640.784	640.784
CL. S. Abut.	709+75.564	3.625	640.790	640.790
A	709+85.564	3.625	640.817	640.828
B	709+95.564	3.625	640.841	640.853
C	710+05.564	3.625	640.861	640.866
CL. Pier 1	710+12.981	3.625	640.874	640.874
D	710+22.981	3.625	640.888	640.893
E	710+32.981	3.625	640.899	640.909
F	710+42.981	3.625	640.906	640.913
G	710+52.981	3.625	640.910	640.911
CL. Pier 2	710+56.731	3.625	640.911	640.911
H	710+66.731	3.625	640.909	640.917
I	710+76.731	3.625	640.905	640.918
J	710+86.731	3.625	640.897	640.906
CL. N. Abut.	710+94.148	3.625	640.889	640.889
Bk. N. Abut.	710+95.981	3.625	640.886	640.886

BEAM 7A (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	709+72.481	10.292	640.647	640.647
CL. S. Abut.	709+75.564	10.292	640.656	640.656
A	709+85.564	10.292	640.684	640.695
B	709+95.564	10.292	640.708	640.720
C	710+05.564	10.292	640.728	640.733
CL. Pier 1	710+12.981	10.292	640.741	640.741
D	710+22.981	10.292	640.755	640.760
E	710+32.981	10.292	640.766	640.775
F	710+42.981	10.292	640.773	640.780
G	710+52.981	10.292	640.777	640.777
CL. Pier 2	710+56.731	10.292	640.777	640.777
H	710+66.731	10.292	640.776	640.784
I	710+76.731	10.292	640.772	640.785
J	710+86.731	10.292	640.764	640.773
CL. N. Abut.	710+94.148	10.292	640.755	640.755
Bk. N. Abut.	710+97.231	10.292	640.751	640.751

BEAM 7B (SB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	709+72.481	16.958	640.514	640.514
CL. S. Abut.	709+75.564	16.958	640.523	640.523
A	709+85.564	16.958	640.550	640.562
B	709+95.564	16.958	640.574	640.587
C	710+05.564	16.958	640.595	640.599
CL. Pier 1	710+12.981	16.958	640.607	640.607
D	710+22.981	16.958	640.622	640.626
E	710+32.981	16.958	640.632	640.642
F	710+42.981	16.958	640.640	640.647
G	710+52.981	16.958	640.643	640.644
CL. Pier 2	710+56.731	16.958	640.644	640.644
H	710+66.731	16.958	640.643	640.650
I	710+76.731	16.958	640.638	640.652
J	710+86.731	16.958	640.630	640.640
CL. N. Abut.	710+94.148	16.958	640.622	640.622
Bk. N. Abut.	710+97.231	16.958	640.618	640.618

DESIGNED	S.CHELBIAN
CHECKED	J. ZUO
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

Note:

1. Work this Sheet with Sheet Nos. 3 & 5.

PB PARSONS BRINCKERHOFF

TOP OF SLAB ELEVATION I
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	42
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
13 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 7B (NB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	709+72.481	-16.958	640.514	640.514
CL. S. Abut.	709+75.564	-16.958	640.523	640.523
A	709+85.564	-16.958	640.550	640.562
B	709+95.564	-16.958	640.574	640.587
C	710+05.564	-16.958	640.595	640.599
CL. Pier 1	710+12.981	-16.958	640.607	640.607
D	710+22.981	-16.958	640.622	640.626
E	710+32.981	-16.958	640.632	640.642
F	710+42.981	-16.958	640.640	640.647
G	710+52.981	-16.958	640.643	640.644
CL. Pier 2	710+56.731	-16.958	640.644	640.644
H	710+66.731	-16.958	640.643	640.650
I	710+76.731	-16.958	640.638	640.652
J	710+86.731	-16.958	640.630	640.640
CL. N. Abut.	710+94.148	-16.958	640.622	640.622
Bk. N. Abut.	710+97.231	-16.958	640.618	640.618

BEAM 7A (NB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	709+72.481	-10.292	640.647	640.647
CL. S. Abut.	709+75.564	-10.292	640.656	640.656
A	709+85.564	-10.292	640.684	640.695
B	709+95.564	-10.292	640.708	640.720
C	710+05.564	-10.292	640.728	640.733
CL. Pier 1	710+12.981	-10.292	640.741	640.741
D	710+22.981	-10.292	640.755	640.760
E	710+32.981	-10.292	640.766	640.775
F	710+42.981	-10.292	640.773	640.780
G	710+52.981	-10.292	640.777	640.777
CL. Pier 2	710+56.731	-10.292	640.777	640.777
H	710+66.731	-10.292	640.776	640.784
I	710+76.731	-10.292	640.772	640.785
J	710+86.731	-10.292	640.764	640.773
CL. N. Abut.	710+94.148	-10.292	640.755	640.755
Bk. N. Abut.	710+97.231	-10.292	640.751	640.751

BEAM 7 (NB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	709+73.731	-3.625	640.784	640.784
CL. S. Abut.	709+75.564	-3.625	640.790	640.790
A	709+85.564	-3.625	640.817	640.828
B	709+95.564	-3.625	640.841	640.853
C	710+05.564	-3.625	640.861	640.866
CL. Pier 1	710+12.981	-3.625	640.874	640.874
D	710+22.981	-3.625	640.888	640.893
E	710+32.981	-3.625	640.899	640.909
F	710+42.981	-3.625	640.906	640.913
G	710+52.981	-3.625	640.910	640.911
CL. Pier 2	710+56.731	-3.625	640.911	640.911
H	710+66.731	-3.625	640.909	640.917
I	710+76.731	-3.625	640.905	640.918
J	710+86.731	-3.625	640.897	640.906
CL. N. Abut.	710+94.148	-3.625	640.889	640.889
Bk. N. Abut.	710+95.981	-3.625	640.886	640.886

NB PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	709+73.731	0.000	640.857	640.857
CL. S. Abut.	709+75.564	0.000	640.862	640.862
A	709+85.564	0.000	640.890	640.901
B	709+95.564	0.000	640.913	640.926
C	710+05.564	0.000	640.934	640.939
CL. Pier 1	710+12.981	0.000	640.947	640.947
D	710+22.981	0.000	640.961	640.965
E	710+32.981	0.000	640.972	640.981
F	710+42.981	0.000	640.979	640.986
G	710+52.981	0.000	640.983	640.983
CL. Pier 2	710+56.731	0.000	640.983	640.983
H	710+66.731	0.000	640.982	640.989
I	710+76.731	0.000	640.977	640.991
J	710+86.731	0.000	640.969	640.979
CL. N. Abut.	710+94.148	0.000	640.961	640.961
Bk. N. Abut.	710+95.981	0.000	640.959	640.959

BEAM 1 (NB)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	709+73.731	32.000	640.697	640.697
CL. S. Abut.	709+75.564	32.000	640.702	640.702
A	709+85.564	32.000	640.730	640.745
B	709+95.564	32.000	640.753	640.771
C	710+05.564	32.000	640.774	640.781
CL. Pier 1	710+12.981	32.000	640.787	640.787
D	710+22.981	32.000	640.801	640.804
E	710+32.981	32.000	640.812	640.821
F	710+42.981	32.000	640.819	640.826
G	710+52.981	32.000	640.823	640.823
CL. Pier 2	710+56.731	32.000	640.823	640.823
H	710+66.731	32.000	640.822	640.832
I	710+76.731	32.000	640.817	640.835
J	710+86.731	32.000	640.809	640.821
CL. N. Abut.	710+94.148	32.000	640.801	640.801
Bk. N. Abut.	710+95.981	32.000	640.799	640.799

DESIGNED	S.CHELBIAN
CHECKED	J. ZUO
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

Note:

1. Work this Sheet with Sheet Nos. 3 & 4.

PB PARSONS BRINCKERHOFF

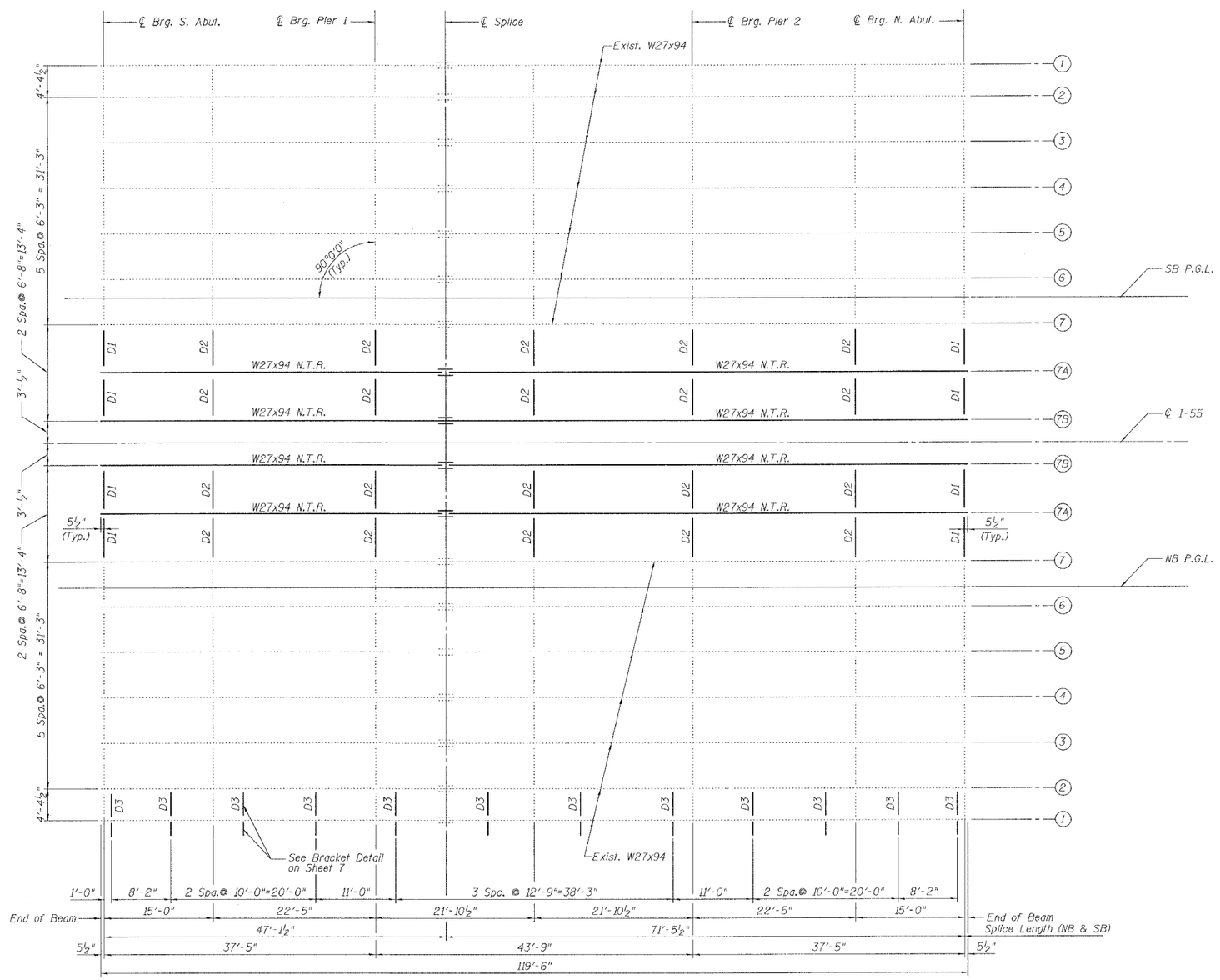
TOP OF SLAB ELEVATION II
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	43
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 6
13 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67



FRAMING PLAN

TOP OF BEAM ELEVATIONS

(FOR FABRICATION ONLY)

Location	Southbound		Northbound	
	Beam 7A	Beam 7B	Beam 7A	Beam 7B
℄ Brg. S. Abut.	639.990	639.856	639.990	639.856
℄ Brg. Pier 1	639.985	639.852	639.985	639.852
℄ Splice 1	639.984	639.850	639.984	639.850
℄ Brg. Pier 2	640.034	639.900	640.034	639.900
℄ Brg. N. Abut.	640.089	639.955	640.089	639.955

BEAM SEAT ELEVATIONS

(FOR INFORMATION ONLY)

Location	Southbound		Northbound	
	Beam 7A	Beam 7B	Beam 7A	Beam 7B
℄ Brg. S. Abut.	637.26	637.12	637.26	637.12
℄ Brg. Pier 1	636.53	636.40	636.53	636.40
℄ Brg. Pier 2	637.49	637.35	637.49	637.35
℄ Brg. N. Abut.	637.55	637.42	637.55	637.42

Notes:

1. All plates except for fill plates shall conform to N.T.R..
2. N.T.R. denotes members subject to the supplemental requirments for notch toughness (Zone 2).
3. All work shall be performed after existing concrete has been removed.
4. See Sheet No. 7 for Sections and Details.

DESIGNED	J. ZUO
CHECKED	A. HAMMAD
DRAWN	J. ZUO
CHECKED	A. HAMMAD

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

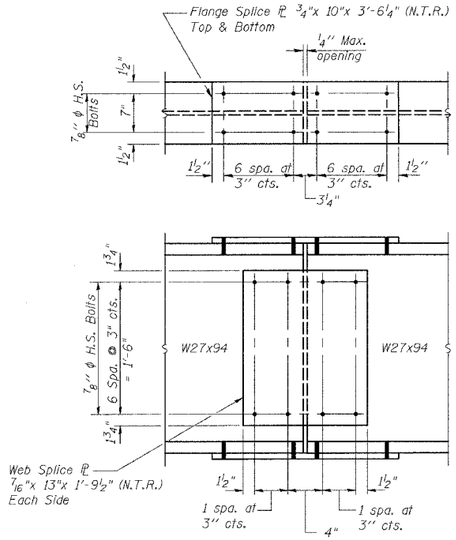
FRAMING PLAN
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	44
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 7
13 SHEETS

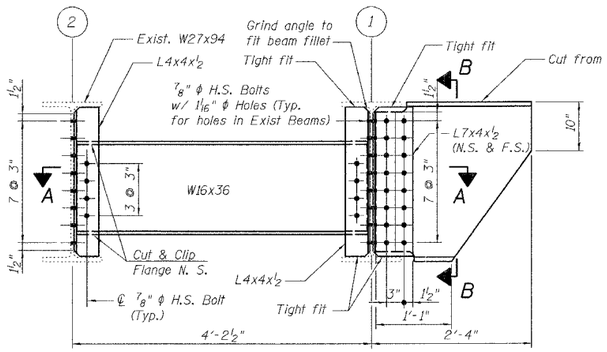
** SECTION 2005-063 I
CONTRACT NO. 60A67



SPLICE

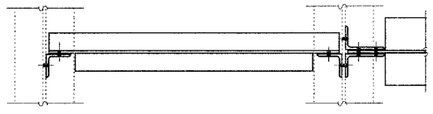
(For W27X94)
(2 Locations NB, 2 Locations SB)

Note:
All bolts in splices are AASHTO M 164 (ASTM 325) 7⁄8" ϕ with Class A Contact Surfaces and Standard Holes.

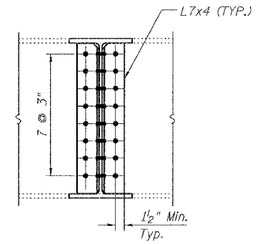


INTERIOR DIAPHRAGM D3 AND BRACKET DETAIL

(NB ONLY - 12 REQUIRED)



SECTION A-A

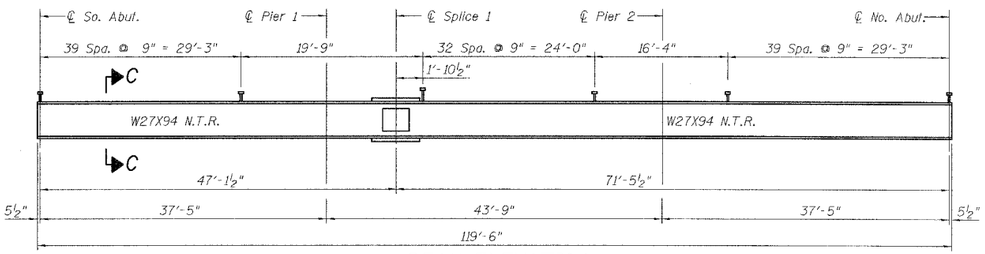


SECTION B-B

INTERIOR GIRDER MOMENT TABLE (NB PROPOSED BEAMS 7A & 7B, NON-COMPOSITE)				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I	(in)4	3270	3270	3270
S	(in)3	243	243	243
℄	(k/ft.)	1.230	1.230	1.230
M℄	('k)	127	202	93
M℄	('k)	196	153	191
M (Imp)	('k)	59	46	57
5⁄3[M℄+M(Imp)]	('k)	424	331	412
Ma	('k)	717	693	659
fs℄	(k.s.i.)	6.3	10.0	4.6
fs5⁄3(℄+Imp)	(k.s.i.)	21.0	16.3	20.4
fs (Overload)	(k.s.i.)	27.2	26.3	25.0
fs (Total)	(k.s.i.)	35.4	34.2	32.5

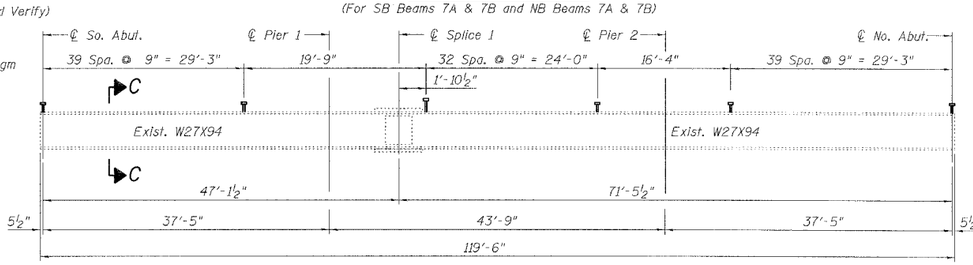
INTERIOR GIRDER REACTION TABLE (NB PROPOSED BEAMS 7A & 7B)			
		Abut.	Pier
R℄	(k)	17.7	55.5
R℄	(k)	35.4	44.1
Imp.	(k)	10.6	13.2
R (Total)	(k)	63.7	112.8

I and S are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ma (Applied Moment)=1.3[M℄ + 5⁄3(M℄ + M(Imp))].
fs (Overload) is the sum of the stresses due to M℄ + 5⁄3(M℄ + M(Imp)).
fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℄ + 5⁄3(M℄ + M(Imp))].



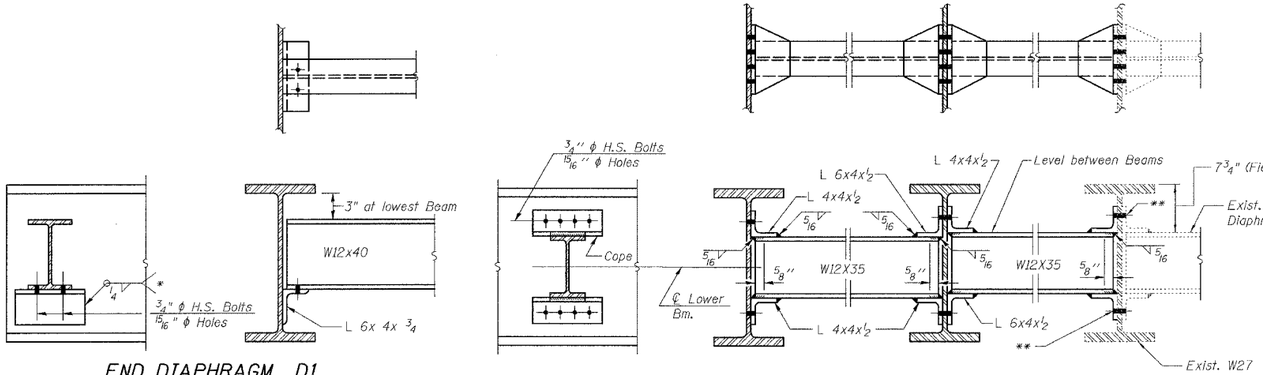
BEAM ELEVATION

(For SB Beams 7A & 7B and NB Beams 7A & 7B)



BEAM ELEVATION

(For Existing SB Beam 7 and NB Beams 1 & 7)



END DIAPHRAGM D1

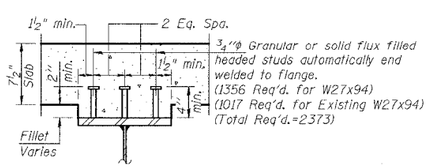
(4 D1 Required NB)
(4 D1 Required SB)

INTERIOR DIAPHRAGM D2

(10 D2 Required NB)
(10 D2 Required SB)

* Field weld angles to existing NB & SB Beams 7.

** At existing NB & SB Beams 7, remove existing bolts. Drill 15⁄16" ϕ holes in new connector angle L 6x4x½" (cut vertical leg as required) and reconnect with new ¾" ϕ H.S. Bolts.



SECTION C-C

(For Information Only)

Notes:

1. N.T.R. denotes members subject to the supplemental requirements for notch toughness (Zone 2).
2. Two hardened washers shall be required over all oversize holes for diaphragms.
3. Work this Sheet with Sheet No. 6.

DESIGNED	J. ZUO
CHECKED	A. HAMMAD
DRAWN	J. ZUO
CHECKED	J.GRAINAWI

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

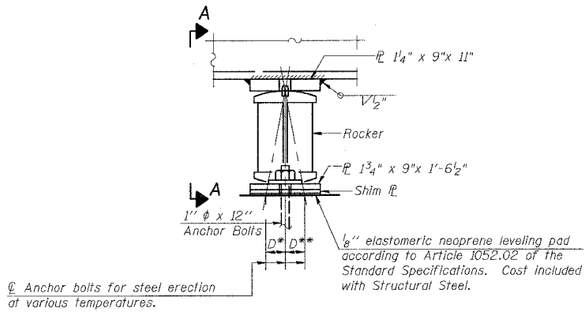
STRUCTURAL STEEL DETAILS I
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	45
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 8
13 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

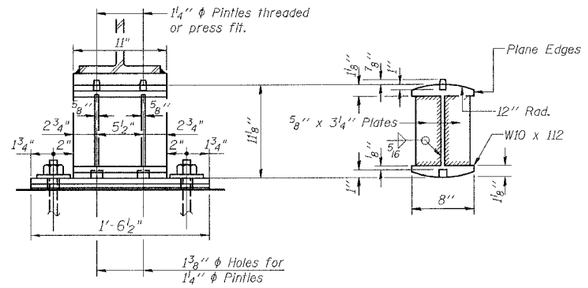


ELEVATION AT PIER 1 (NB & SB)

(2 Req'd NB, 2 Req'd SB)

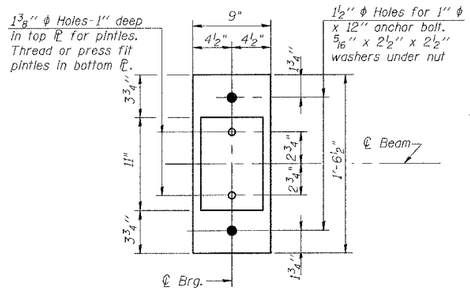
* D=⅛"/100 ft. of exp. for every 15° below the normal temp. of 50°F.

** D=⅛"/100 ft. of exp. for every 15° above the normal temp. of 50°F.

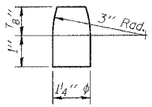


SECTION A-A

DETAIL OF ROCKER



PLAN



DETAIL OF PINTLE

Note:

1. See Sheet No. 11 for Anchor Bolt Installation.

DESIGNED	J. ZUO
CHECKED	J. GRAINAWI
DRAWN	J. ZUO
CHECKED	J. GRAINAWI

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

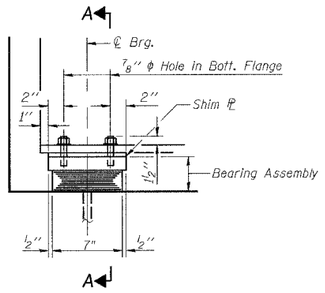
STRUCTURAL STEEL DETAILS II
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

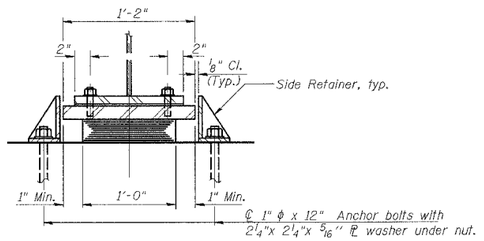
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	46
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT -	

SHEET NO. 9
13 SHEETS

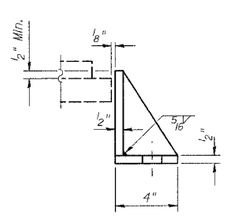
** SECTION 2005-063 I
CONTRACT NO. 60A67

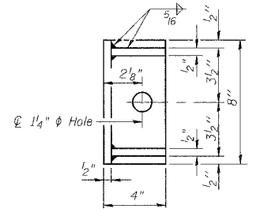


ELEVATION AT N. ABUT. (NB & SB)



SECTION A-A



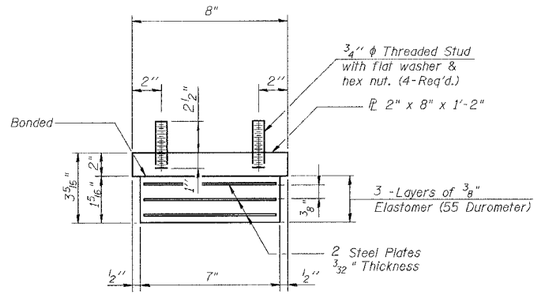


TYPE I ELASTOMERIC EXP. BRG.

(2 Req'd NB, 2 Req'd SB)

SIDE RETAINER

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



BEARING ASSEMBLY

(Shim plates shall not be placed under Bearing Assembly)

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	4

Notes:

1. See Sheet No. 11 for Anchor Bolt Installation.

DESIGNED	J.ZUO
CHECKED	J.GRAINAWI
DRAWN	Z.MORILLO
CHECKED	J.GRAINAWI

Date: 5/15/2006

PARSONS BRINCKERHOFF

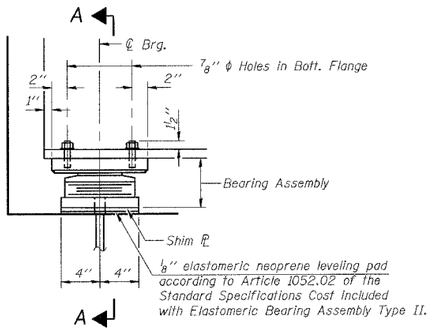
ELASTOMERIC BEARING
ASSEMBLY TYPE I
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

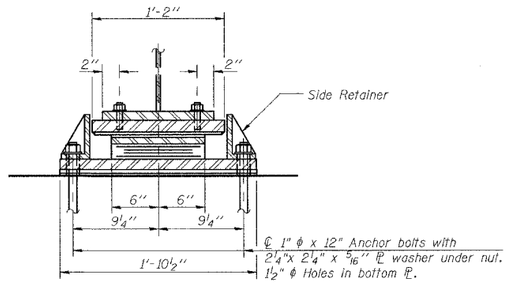
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	47
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 10
13 SHEETS

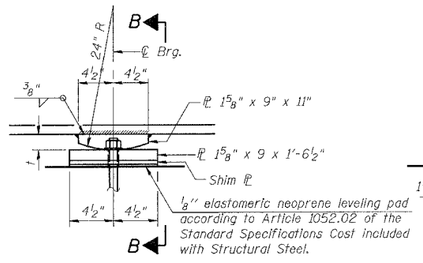
** SECTION 2005-063 I
CONTRACT NO. 60A67



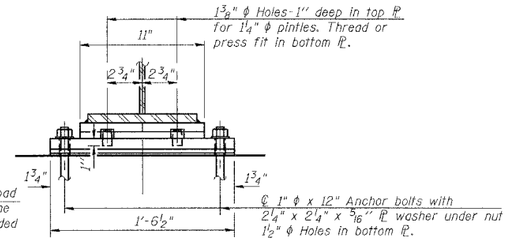
ELEVATION AT S. ABUT. (NB & SB)



SECTION A-A



ELEVATION AT PIER 2 (NB & SB)



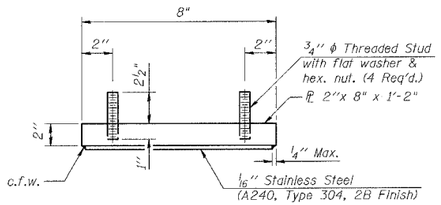
SECTION B-B

TYPE II ELASTOMERIC EXP. BRG.

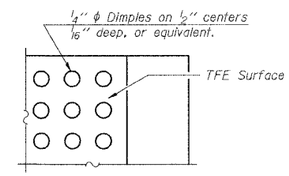
(2 Req'd NB, 2 Req'd SB)

FIXED BEARING

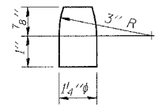
(2 Req'd NB, 2 Req'd SB)



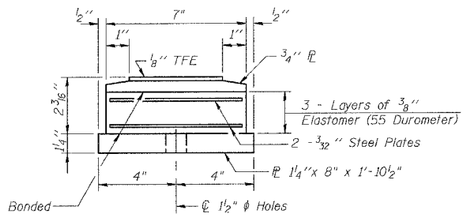
TOP BEARING ASSEMBLY



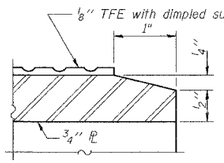
PLAN-TFE SURFACE



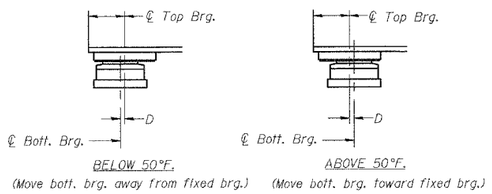
PINTLE



BOTTOM BEARING ASSEMBLY

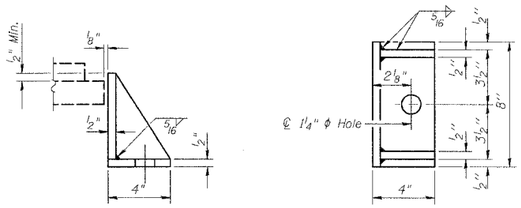


SECTION THRU TFE



SETTING ANCHOR BOLTS AT EXP. BRG.

(D=1/8" per each 100° of expansion for every 15° temp. change from the normal temp. of 50°F)



SIDE RETAINER

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

Notes:

1. The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

2. Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

3. See Sheet No. 11 for Anchor Bolt installation.

4. Anchor bolts at fixed bearings may be built into the masonry.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	4

DESIGNED	J.ZUO
CHECKED	J.GRAINAWI
DRAWN	Z.MORILLO
CHECKED	J.GRAINAWI

Date: 5/15/2006

PB PARSONS BRINCKERHOFF

LOW-PROFILE FIXED AND ELASTOMERIC BEARING ASSEMBLY TYPE II
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

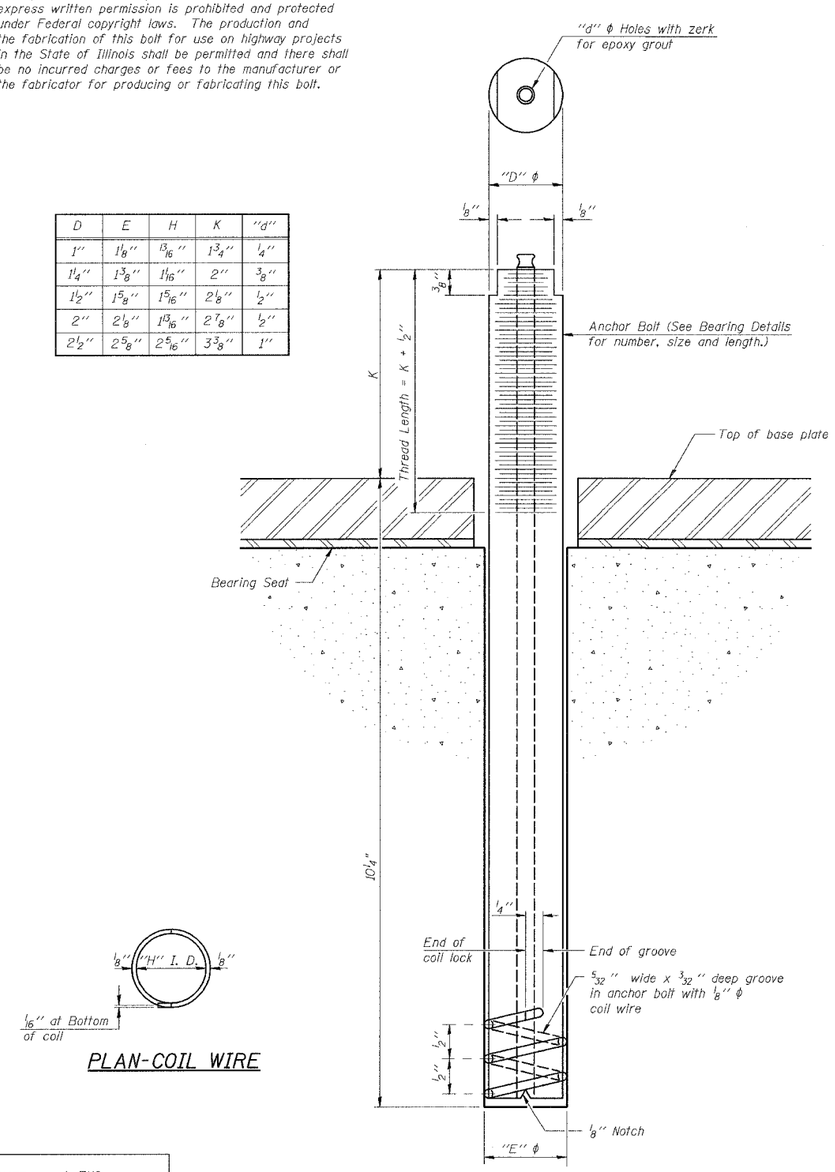
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	48
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 11
13 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

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

Location	Type	Bolt ϕ	Total Number
S. Abut., NB	A307	1"	4
Pier 1, NB	A307	1"	4
Pier 2, NB	A307	1"	4
N. Abut., NB	A307	1"	4
S. Abut., SB	A307	1"	4
Pier 1, SB	A307	1"	4
Pier 2, SB	A307	1"	4
N. Abut., SB	A307	1"	4

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

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

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

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

DESIGNED	J. ZUO
CHECKED	J.GRAINAWI
DRAWN	J. ZUO
CHECKED	J.GRAINAWI

Date: 5/15/2006

FOR INFORMATION ONLY

PB PARSONS BRINCKERHOFF

ANCHOR BOLT DETAILS
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)
STRUCTURE NO. 099-0023 (SB)

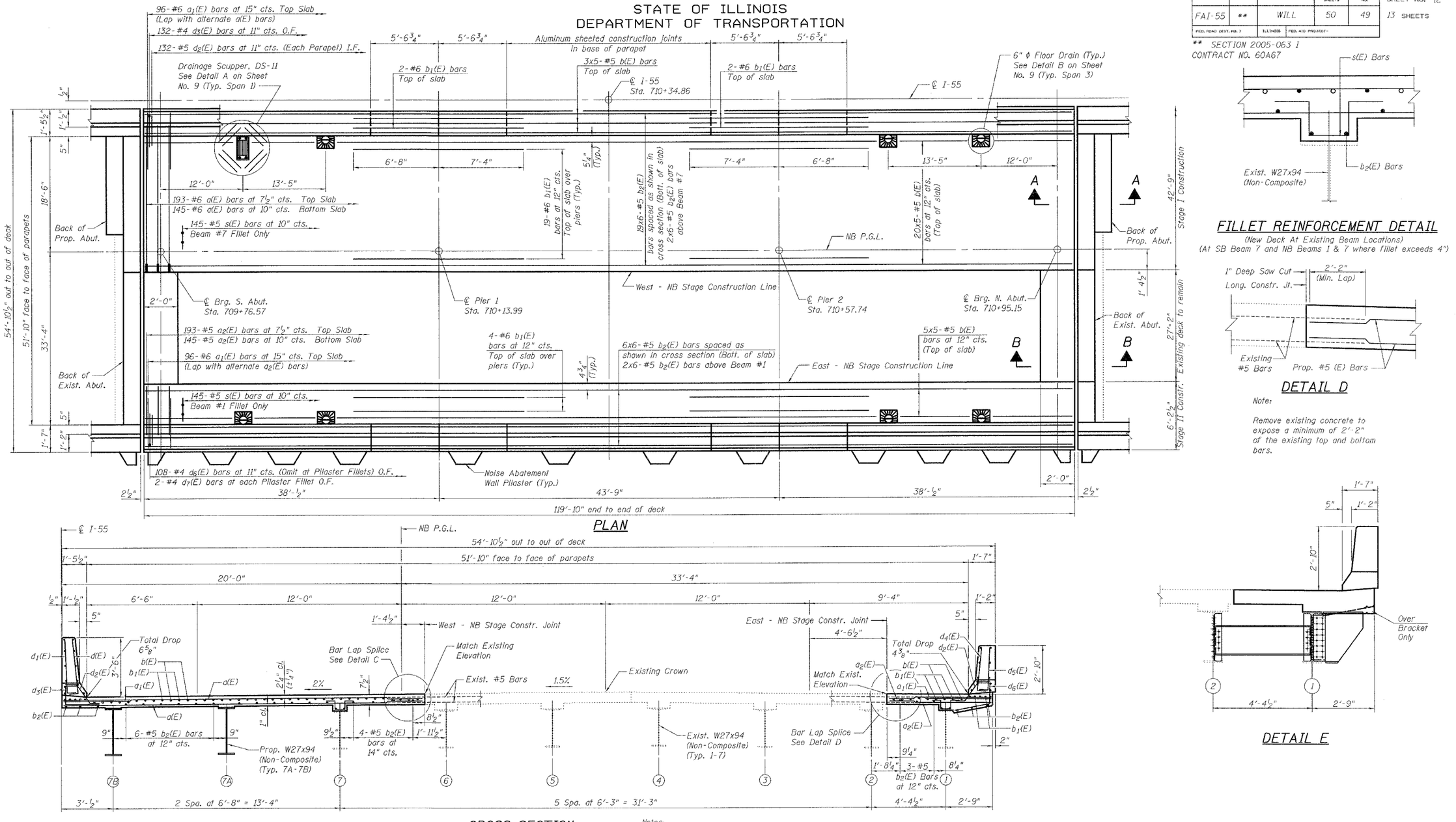
ABB-1 10-22-04

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	49
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 12
13 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67



PLAN

CROSS SECTION

(Looking North)

FILLET REINFORCEMENT DETAIL

(New Deck At Existing Beam Locations)
(At SB Beam 7 and NB Beams 1 & 7 where fillet exceeds 4")

DETAIL D

Note:

Remove existing concrete to expose a minimum of 2'-2" of the existing top and bottom bars.

DETAIL E

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

Notes:

1. See Sheet No. 10 for superstructure details and Bill of Material.
2. See Sheet Nos. 9 & 10 for parapet reinforcement.
3. Reinforcement bars designated (E) shall be epoxy coated.
4. Bars indicated thus 19 x 6-#5 etc. indicates 19 lines of bars with 6 lengths per line.
5. Work this sheet with Sheet Nos. 8, 9 & 10.

FOR INFORMATION ONLY

PB PARSONS BRINCKERHOFF

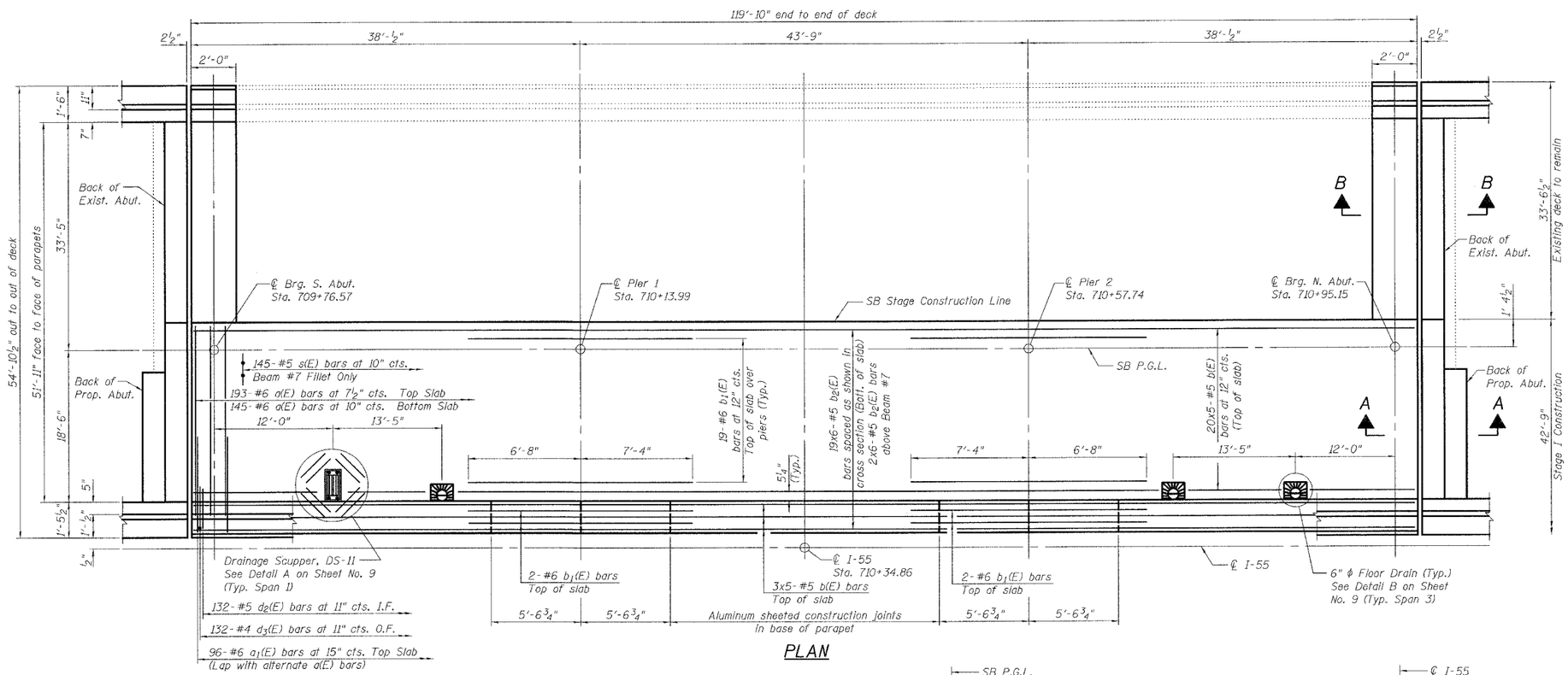
NB DECK PLAN & SECTION
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0022 (NB)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	**	WILL	50	50
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

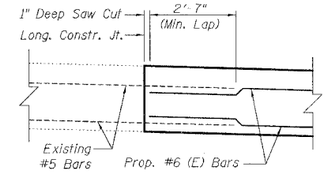
SHEET NO. 13
13 SHEETS

** SECTION 2005-063 I
CONTRACT NO. 60A67

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



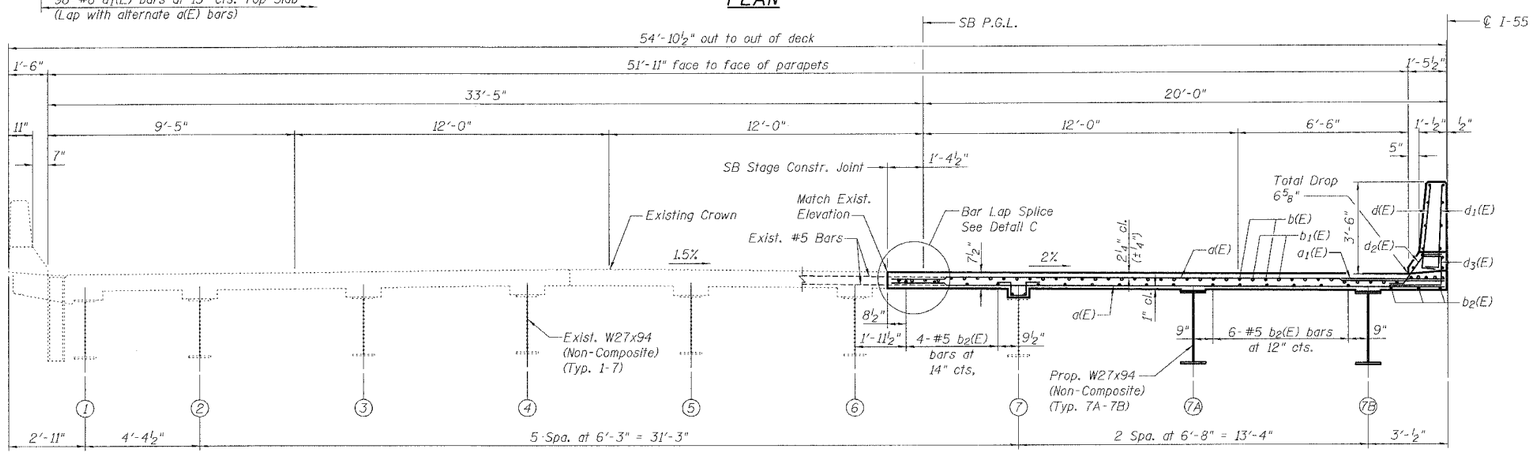
PLAN



DETAIL C

Note:

Remove existing concrete to expose a minimum of 2'-7" of the existing top and bottom bars.



CROSS SECTION
(Looking North)

Notes:

1. See Sheet No. 10 for superstructure details and Bill of Material.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Bars indicated thus 19 x 6-#5 etc. indicates 19 lines of bars with 6 lengths per line.
4. See Sheet No. 9 for parapet reinforcement.
5. Work this sheet with Sheet Nos. 7, 9 & 10.

DESIGNED	S.CHELBIAN
CHECKED	J.GRAINAWI
DRAWN	S.CHELBIAN
CHECKED	J.GRAINAWI

Date: 5/15/2006

FOR INFORMATION ONLY

PB PARSONS BRINCKERHOFF

SB DECK PLAN & SECTION
I-55 OVER MS (ABANDONED) R.R.
FAI ROUTE 55-SEC. 2005-063 I
WILL COUNTY
STA. 710+34.86
STRUCTURE NO. 099-0023 (SB)