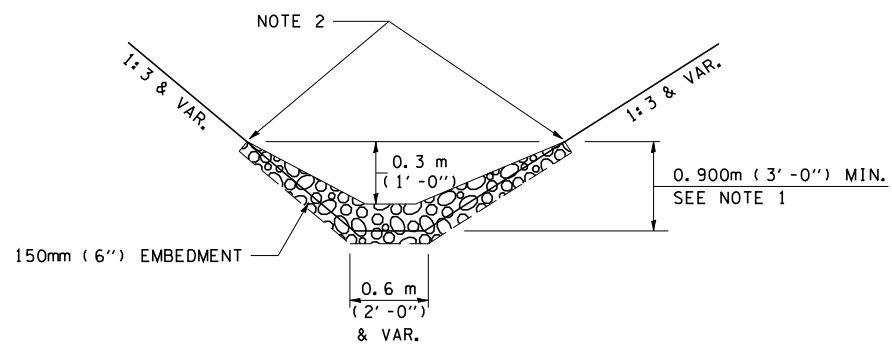


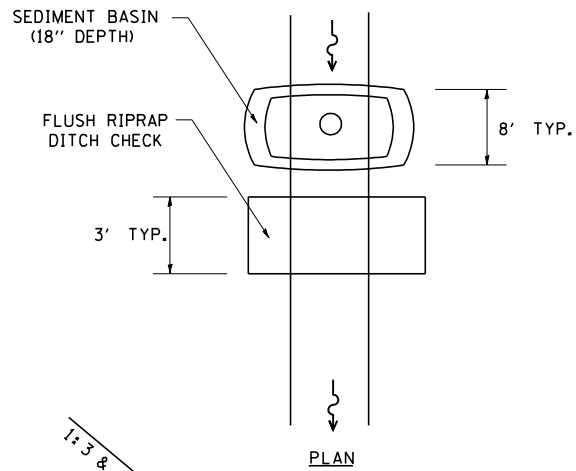
PLAN



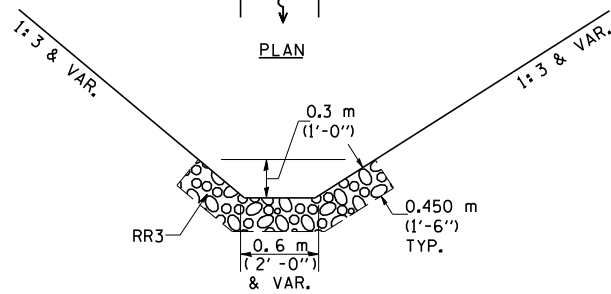
ELEVATION

OPTION 1

(EXTRUDING DITCH CHECK)
RECOMMENDED FOR AREAS
W/ RIPRAP DITCH LINING



PLAN



ELEVATION

OPTION 2

(FLUSH DITCH CHECK)
RECOMMENDED FOR AREAS
W/O RIPRAP DITCH LINING

STONE DUMPED RIPRAP DITCH CHECK
(TYPICAL & OPTIONS 1 & 2
AS DIRECTED BY THE ENGINEER)

NOTE 1: RIPRAP SHALL EXTEND FAR ENOUGH UP THE SLOPES TO ALLOW 0.3m (1') OVERTOPPING TO AVOID ERODING AROUND THE EDGES OF THE RIPRAP.

NOTE 2: ENDS SHALL BE TIED INTO SLOPES.

LEGEND FOR STORM WATER POLLUTION PREVENTION PLAN

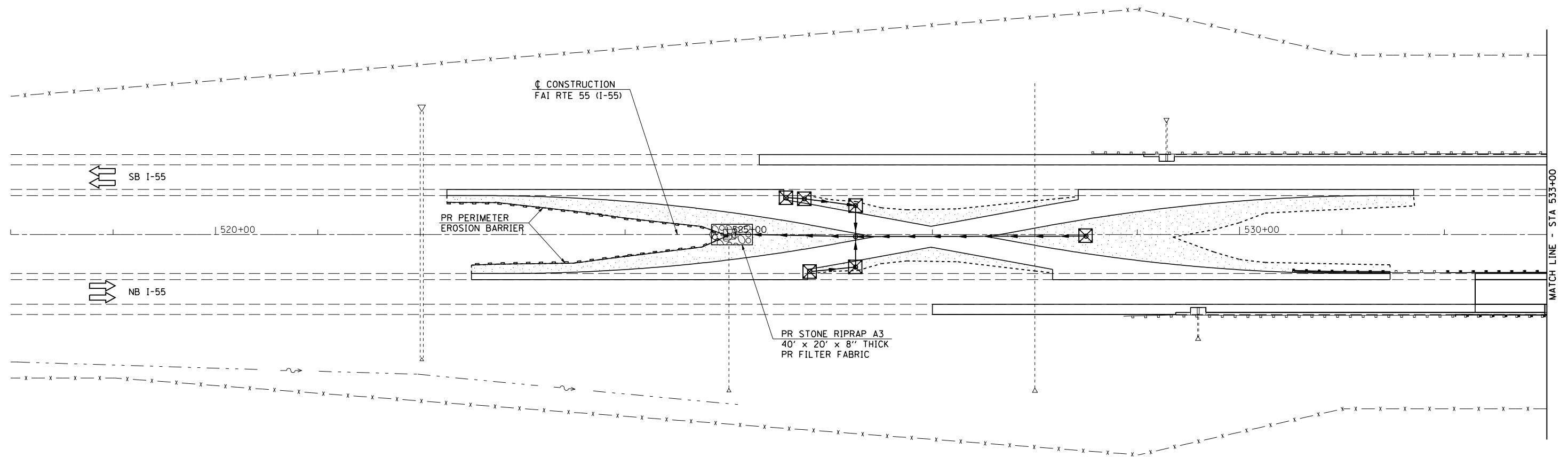
ITEM	SYMBOL
AGGREGATE (EROSION CONTROL) [STONE DUMPED RIPRAP DITCH CHECKS: Height = 0.6m (2')]]	
TEMPORARY DITCH CHECKS	
INLET PIPE PROTECTION (I&PP)	
PERIMETER EROSION BARRIER	
EARTH EXCAVATION FOR EROSION CONTROL (SEDIMENT BASINS)	
PRESERVE EXISTING TREES, WOODLANDS, AND UNDERSTORY (OUTSIDE CONSTRUCTION LIMITS)	
ITEM PLACED AT BEGINNING OF CONSTRUCTION (Requirement)	
ITEM PLACED AS DIRECTED BY ENGINEER (When required by situation)	
DIRECTION OF OVERLAND FLOW	

GENERAL NOTES:

All items shall be constructed as shown on this sheet, on Standard 280001, and as directed by the Engineer.

The symbology on the STORM WATER POLLUTION PREVENTION PLAN sheets does not represent the size or quantity of bales, for number of bales refer to details and notes shown on this sheet and/or as directed by the Engineer.

THE CONTRACTOR SHALL INSTALL DITCH CHECKS AS DIRECTED BY THE ENGINEER. IF THE ENGINEER ELECTS TO UTILIZE FLUSH RIPRAP DITCH CHECKS IN LIEU OF TEMPORARY DITCH CHECKS AS SHOWN ON THE FOLLOWING PLAN SHEETS, THE SPACING SHOULD BE DOUBLED.



MATCH LINE - STA 533+00

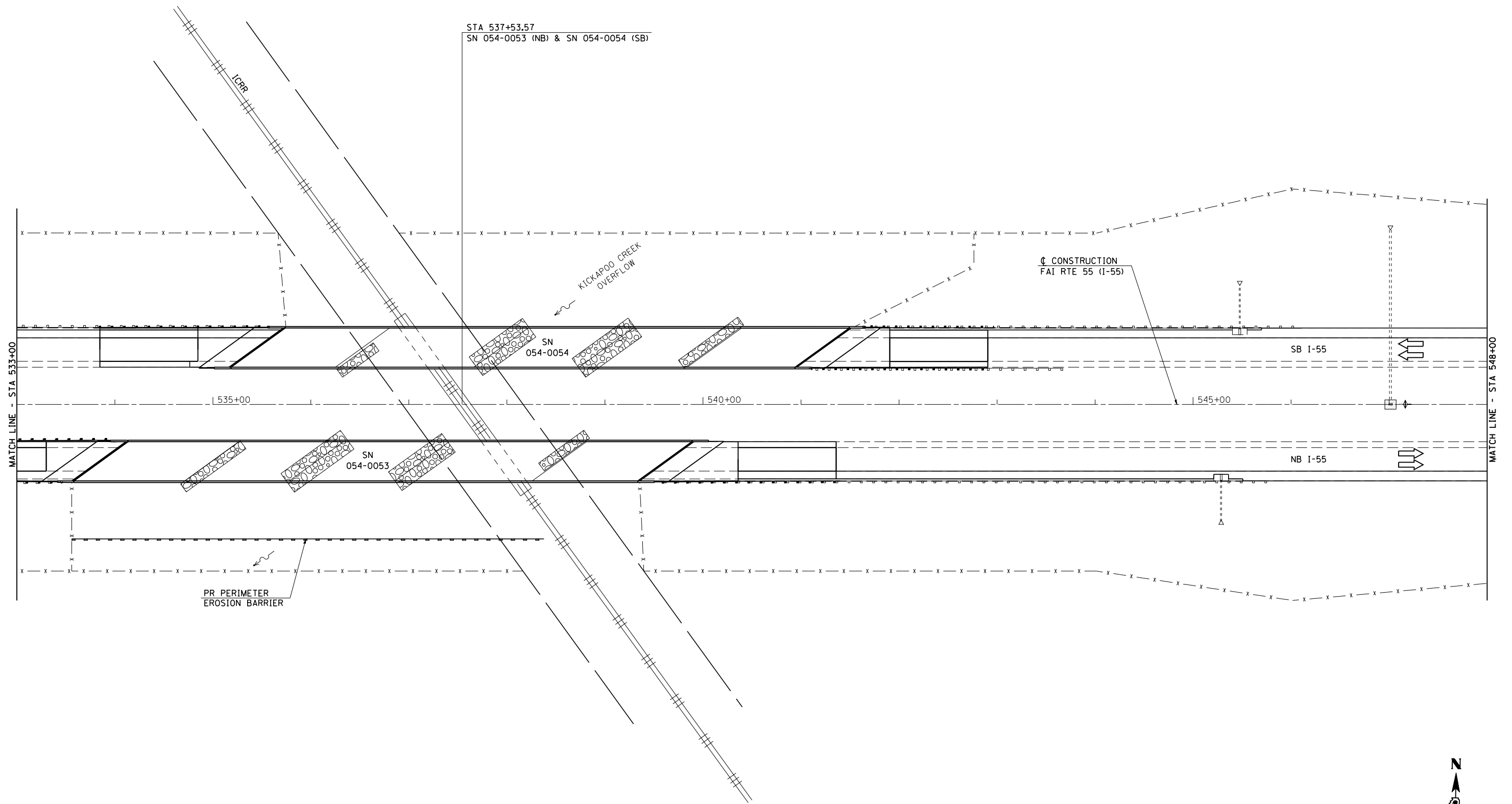


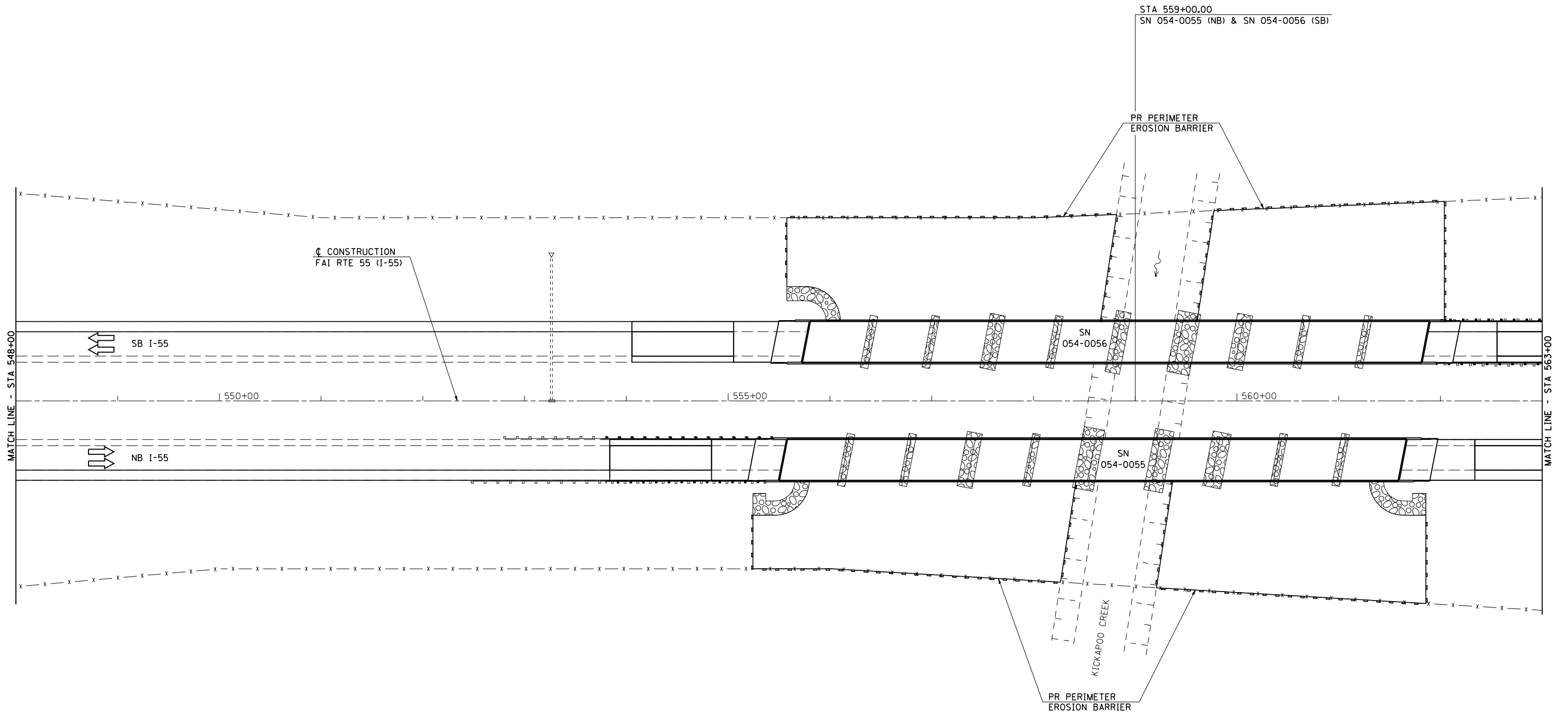
JOB = 2236.9	DESIGNED - NAK	REVISED -
FILE NAME = D672E10-shr-ero.dgn	DRAWN - TJD	REVISED -
PLOT SCALE = 100.0000 ' / IN.	CHECKED - NAK	REVISED -
PLOT DATE = 9/8/2011	DATE - 8/12/2011	REVISED -

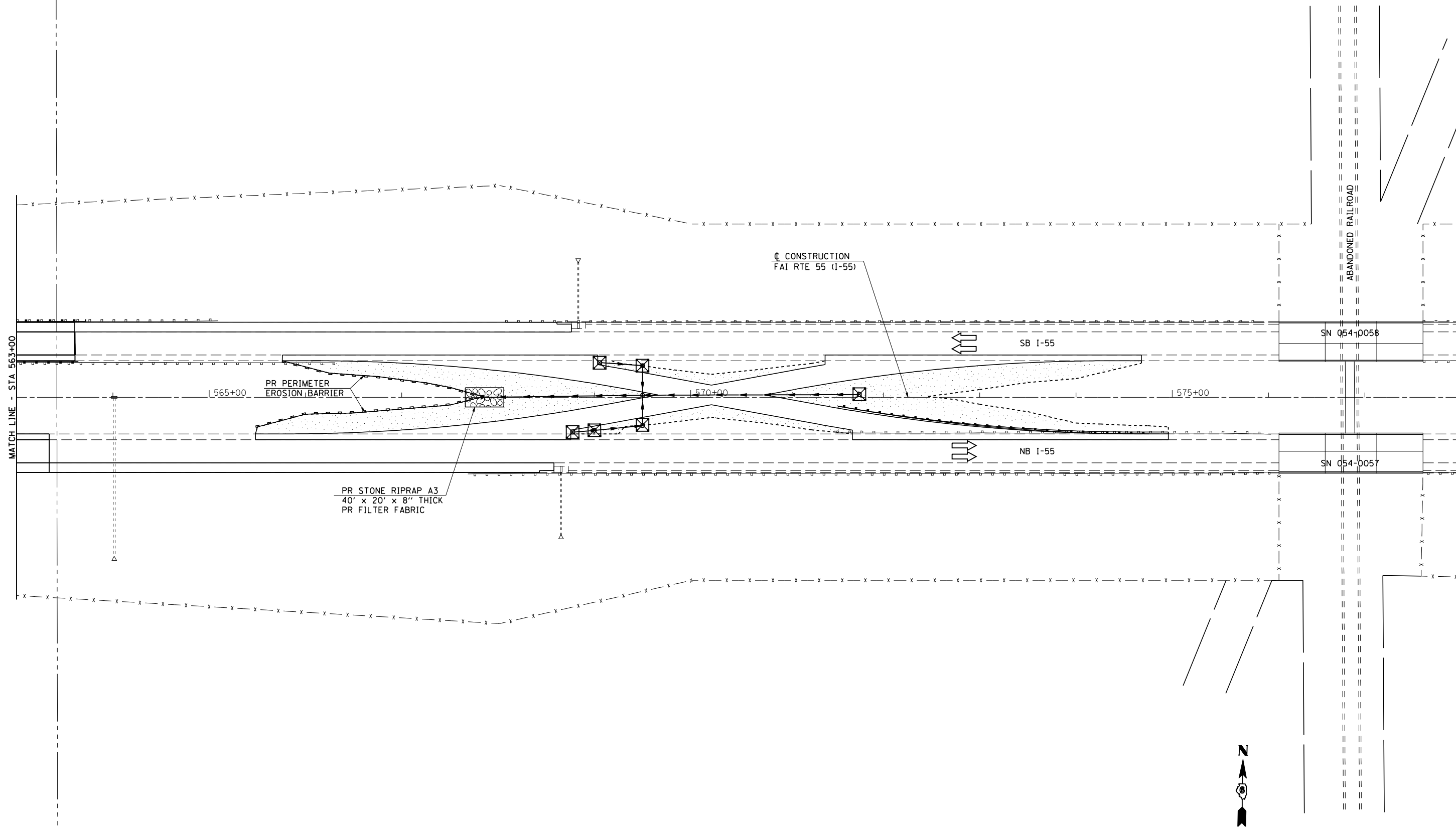
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

FAI ROUTE 55 STORMWATER POLLUTION PREVENTION PLAN			
SCALE:	SHEET NO. OF SHEETS	STA. 518+00 TO STA. 533+00	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	102
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 72E10	







Existing Structure: S.N. 054-0048 & 054-0049. The existing structure is a five span continuous welded I girder bridge with a 8" reinforced concrete deck with microsilica overlay. The original structure was built in 1973 as Section 54-4B. The expansion joints were replaced in 2003. Traffic will be maintained utilizing staged construction.

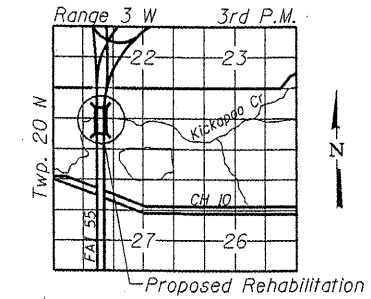
No salvage.

SCOPE OF WORK

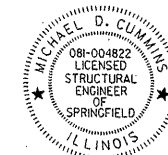
Remove and replace polymer concrete and silicone joint sealer at north abutment expansion joints.

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work. All work to be completed utilizing Traffic Control and Protection Standards 701400, 701401, 701411, and 701446 and the details included in the plans.

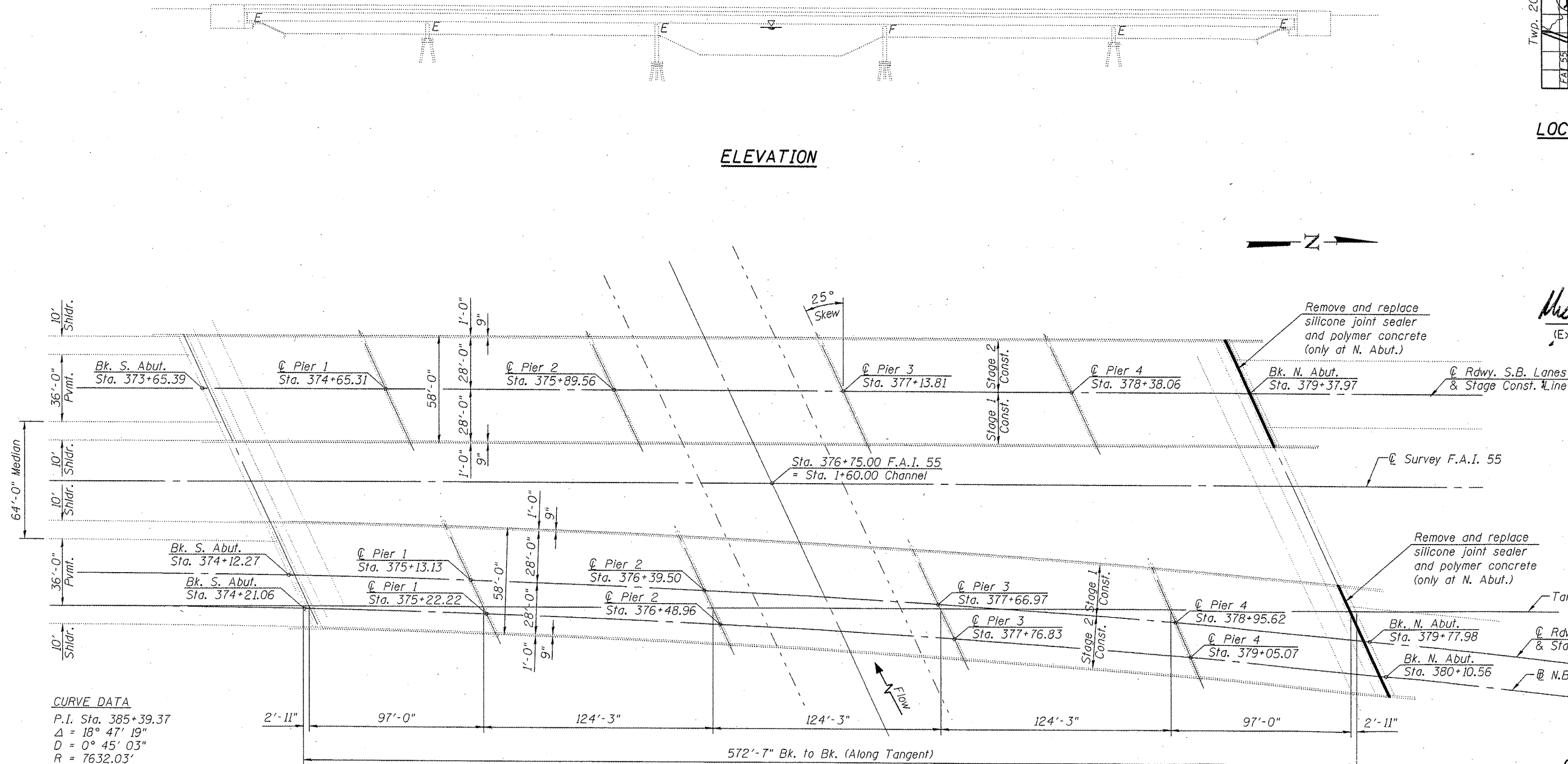


LOCATION SKETCH



Michael D. Cummins 10/3/11
(Expires 11/30/2012)

ELEVATION



PLAN

CURVE DATA
 P.I. Sta. 385+39.37
 $\Delta = 18^\circ 47' 19''$
 $D = 0^\circ 45' 03''$
 $R = 7632.03'$
 $T = 1262.70'$
 $L = 2502.73'$
 $E = 103.75'$
 $S.E. = 2.7\%$
 P.C. Sta. 372+76.67
 P.C.C. Sta. 397+79.40

GENERAL PLAN
I-55 OVER KICKAPOO CREEK
SECTION D6 LOGAN CO BR 2011
LOGAN COUNTY
STATION 376+75.00
STRUCTURE NO. 054-0048 (SB)
STRUCTURE NO. 054-0049 (NB)



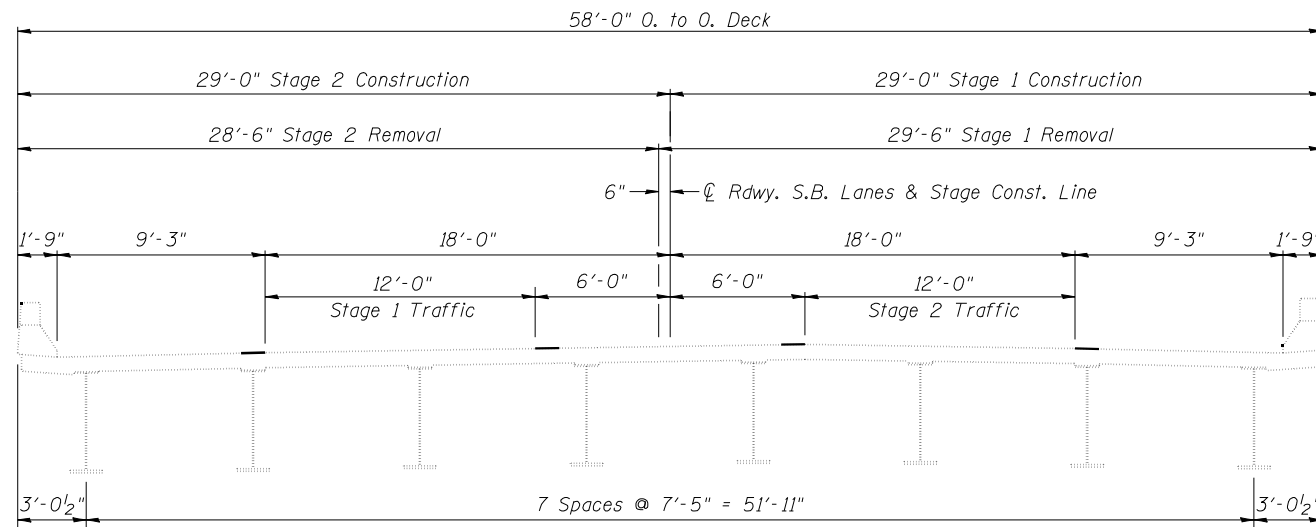
JOB	= 2236.09	DESIGNED	- AAN	REVISED	-
FILE	= 0540048_0049-72E10-001-CPE.dgn	CHECKED	- MFC	REVISED	-
DATE	= 10/3/2011	DRAWN	- TJD	REVISED	-
		CHECKED	- AAN	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

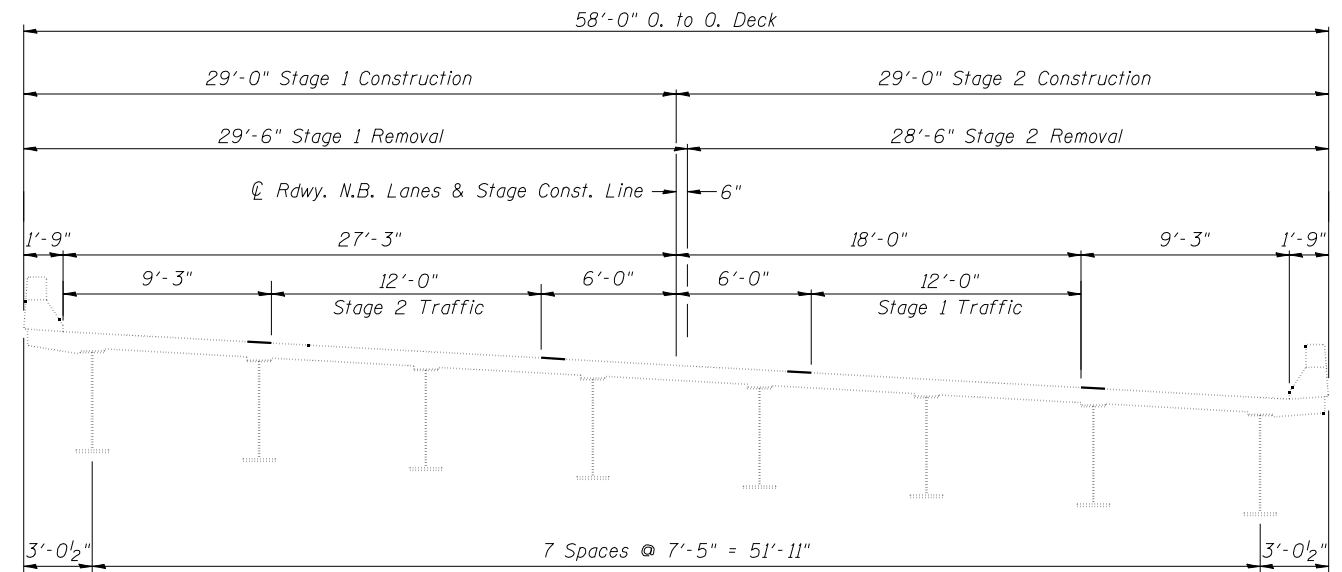
GENERAL PLAN
STRUCTURE NO. 054-0048 (SB) & STRUCTURE NO. 054-0049 (NB)

SHEET NO. 1 OF 3 SHEETS

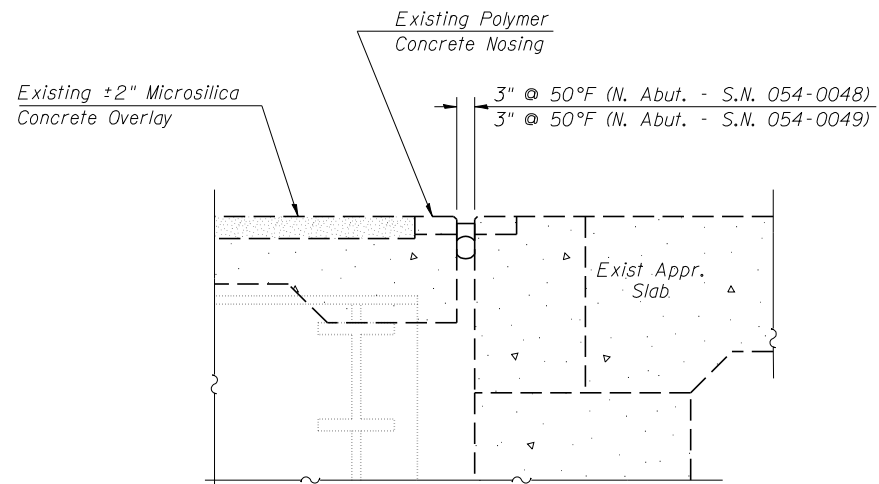
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	106
			CONTRACT NO. 72E10	
ILLINOIS FED. AID PROJECT				



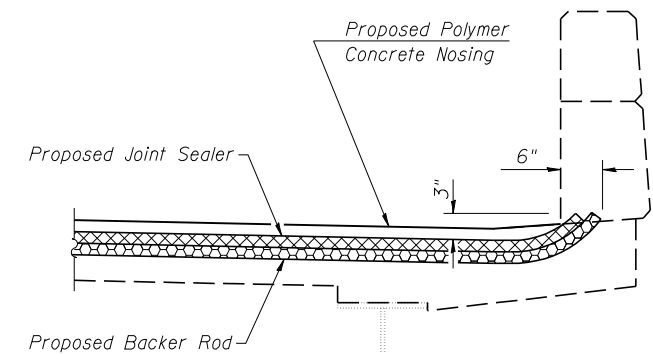
STAGE 1 & STAGE 2 CONSTRUCTION
 (Southbound Lanes)
 (Looking North)



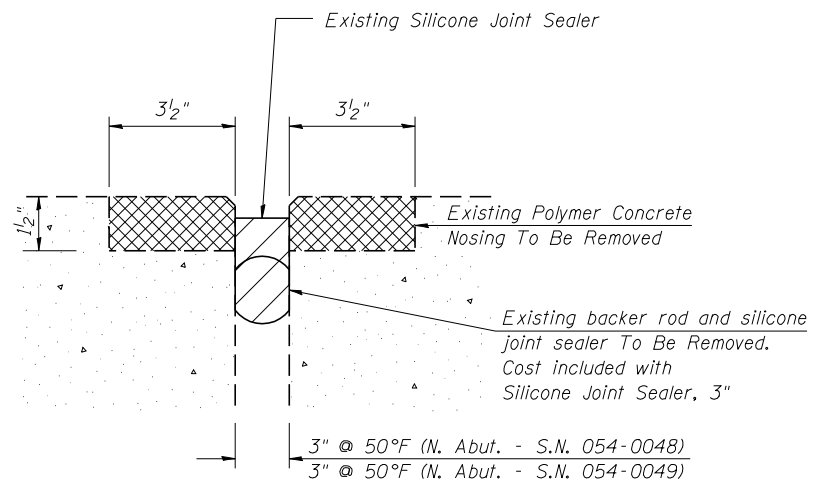
STAGE 1 & STAGE 2 CONSTRUCTION
 (Northbound Lanes)
 (Looking North)



EXISTING EXPANSION JOINT DETAIL
(North Abutment)

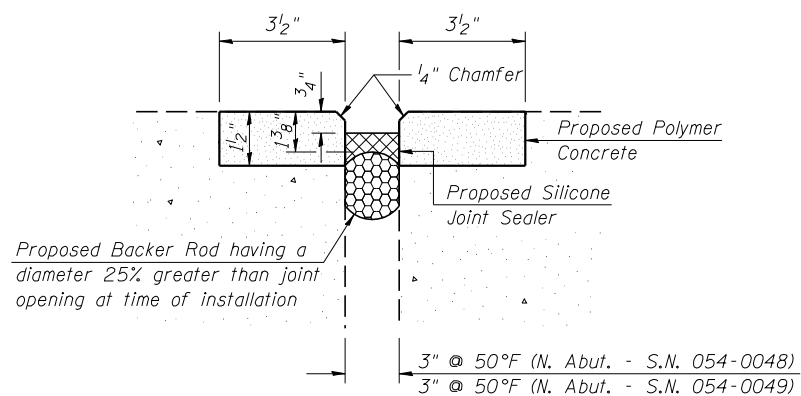


SECTION AT PARAPET



TYPICAL EXISTING JOINT CROSS SECTION
(North Abutment)

Note: Cross-hatched areas indicate limits of Concrete Removal



TYPICAL PROPOSED JOINT CROSS SECTION
(North Abutment)

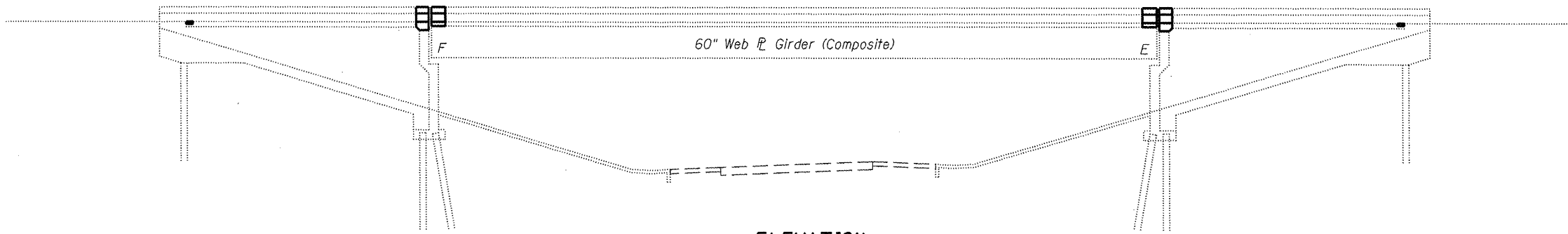
**BILL OF MATERIAL
TWO STRUCTURES**

Item	Unit	Total
Silicone Joint Sealer, 3"	Foot	133
Polymer Concrete	Cu. Ft.	9.4
Concrete Removal	Cu. Yd.	0.4

**SILICONE JOINT SEALER WITH
POLYMER CONCRETE NOSINGS
NORTH ABUTMENT
S.N. 054-0048 (SB)
S.N. 054-0049 (NB)**

Existing Structure: S.N. 054-0050. The existing structure is a 3-span vaulted abutment bridge, consisting of one welded steel I girder main span and two PPC-I Beam approach spans. The original deck has a microsilica overlay. The original structure was built in 1973 as Section 54-4HB. Both abutment joints were replaced with neoprene joints in 1999. Traffic will be maintained utilizing stage construction.

No salvage.



ELEVATION

SCOPE OF WORK

Remove & replace polymer concrete at ends of approach spans.

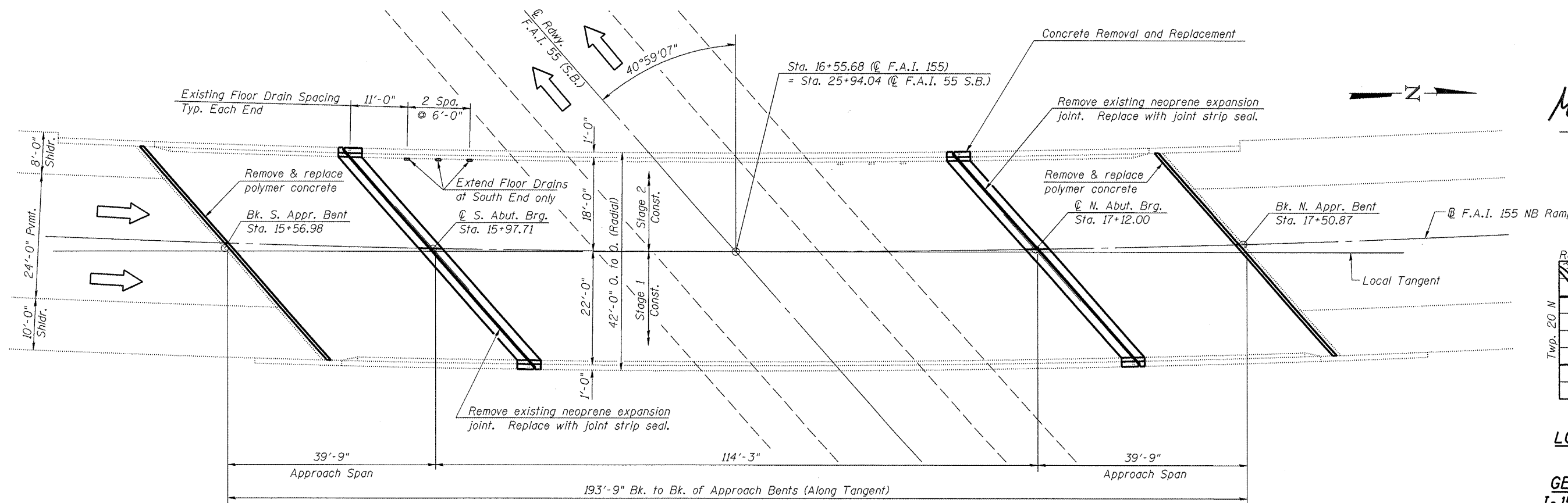
Remove neoprene expansion joint and concrete at both abutments.

Install new concrete and strip seal joint at both abutments.

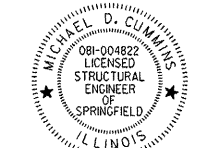
Extend existing floor drains near south abutment.

GENERAL NOTES

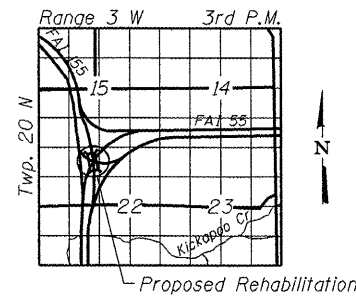
All work to be completed utilizing Traffic Control and Protection Standards 701400 and 701402 and the details included in the plans.



PLAN



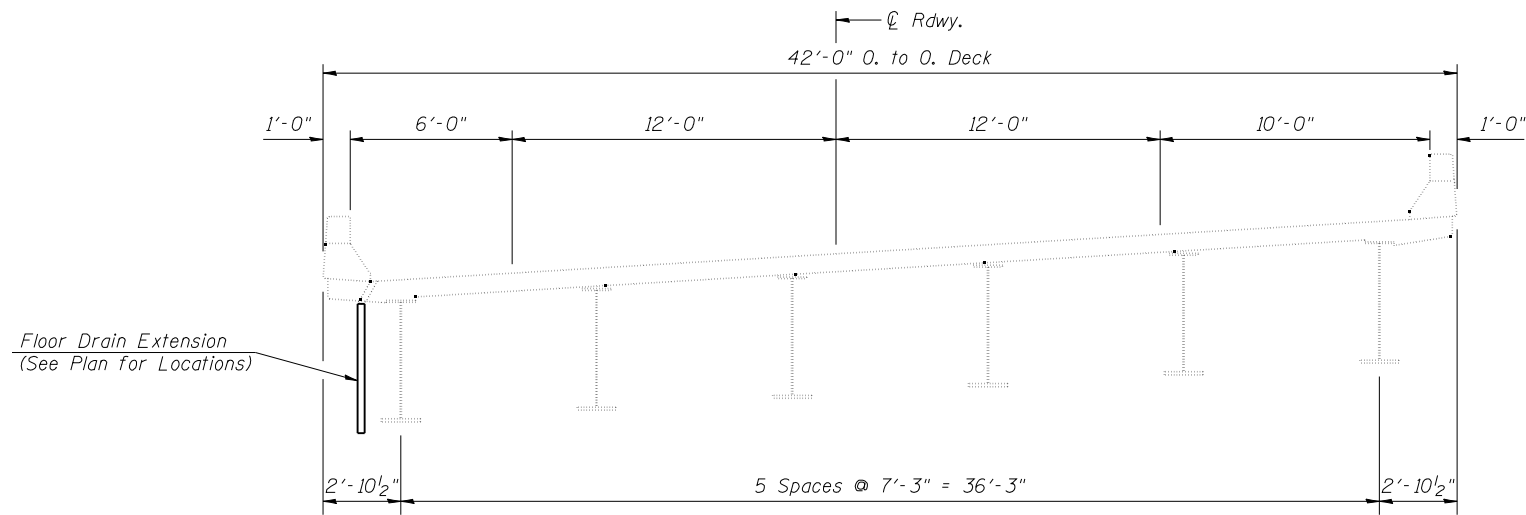
Michael D. Cummins
(Expires 11/30/2012)



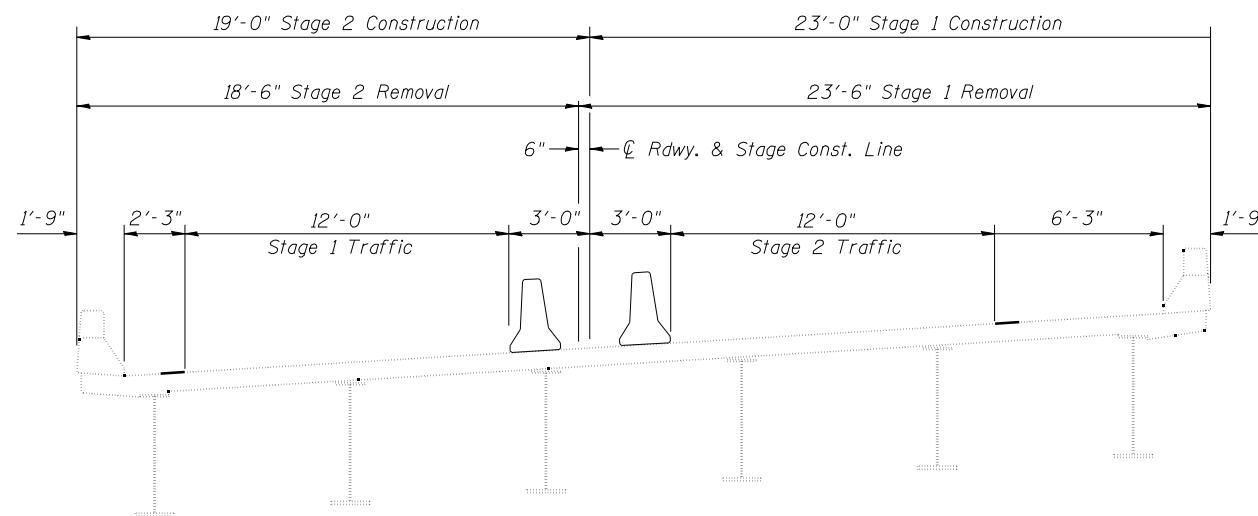
LOCATION SKETCH

**GENERAL PLAN
I-155 RAMP (N.B.)
OVER I-55 (S.B.)
SECTION D6 LOGAN CO BR 2011
LOGAN COUNTY
STATION 16+55.68
STRUCTURE NO. 054-0050**

CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2236.09	DESIGNED - MFC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN STRUCTURE NO. 054-0050	F.A.I. RTE. 55	SECTION D6 LOGAN CO BR 2011	COUNTY LOGAN	TOTAL SHEETS 224	SHEET NO. 109
	FILE = 0540050-72E10-001-GPE.dgn	CHECKED - AAN	REVISED -			CONTRACT NO. 72E10				
	DATE = 10/3/2011	DRAWN - TJD	REVISED -			[ILLINOIS] FED. AID PROJECT				
		CHECKED - MDC	REVISED -							



EXISTING TYPICAL CROSS SECTION THRU DECK
(Looking North)



STAGE 1 & STAGE 2 CONSTRUCTION
(Looking North)

Note:
All dimensions are radial.

GENERAL NOTES

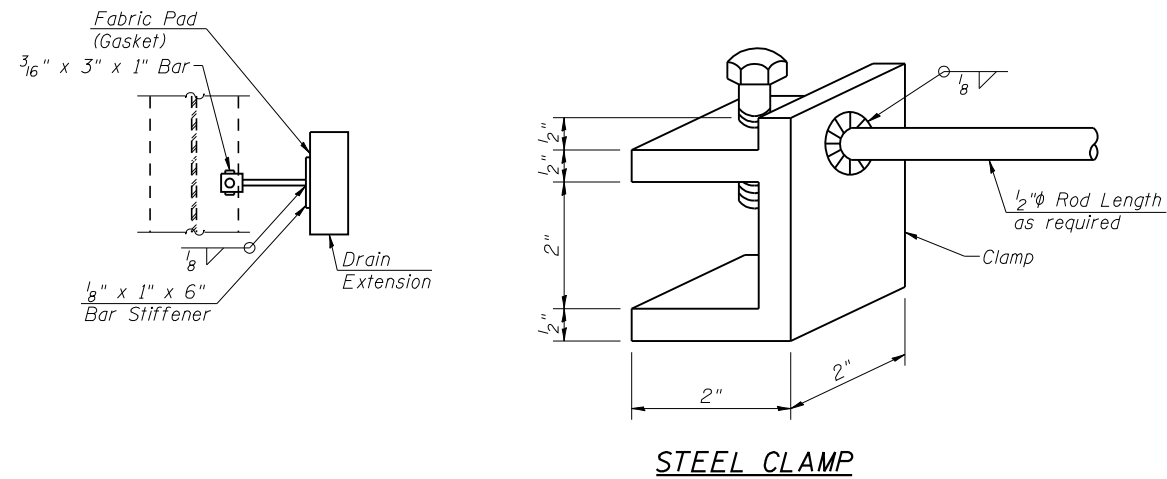
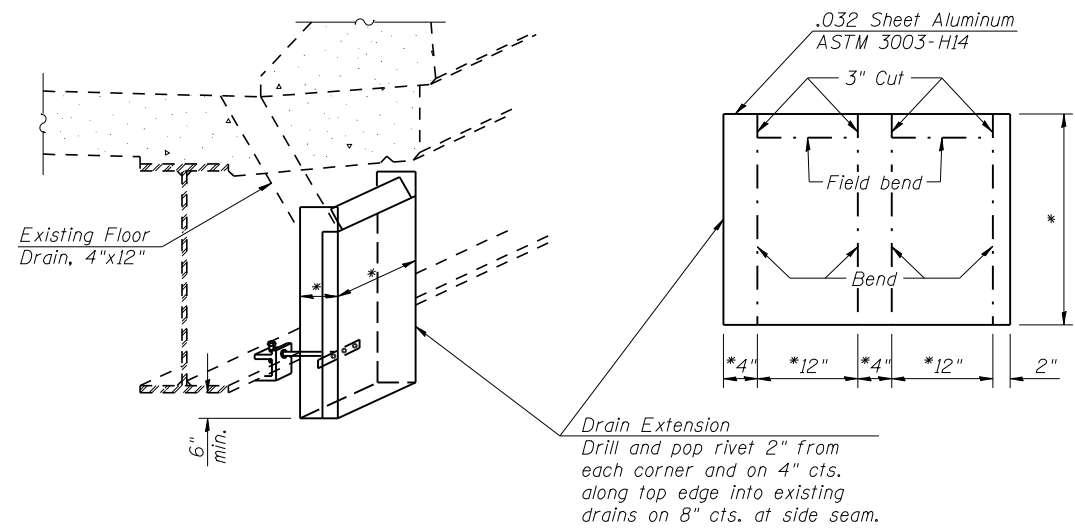
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

TOTAL BILL OF MATERIAL

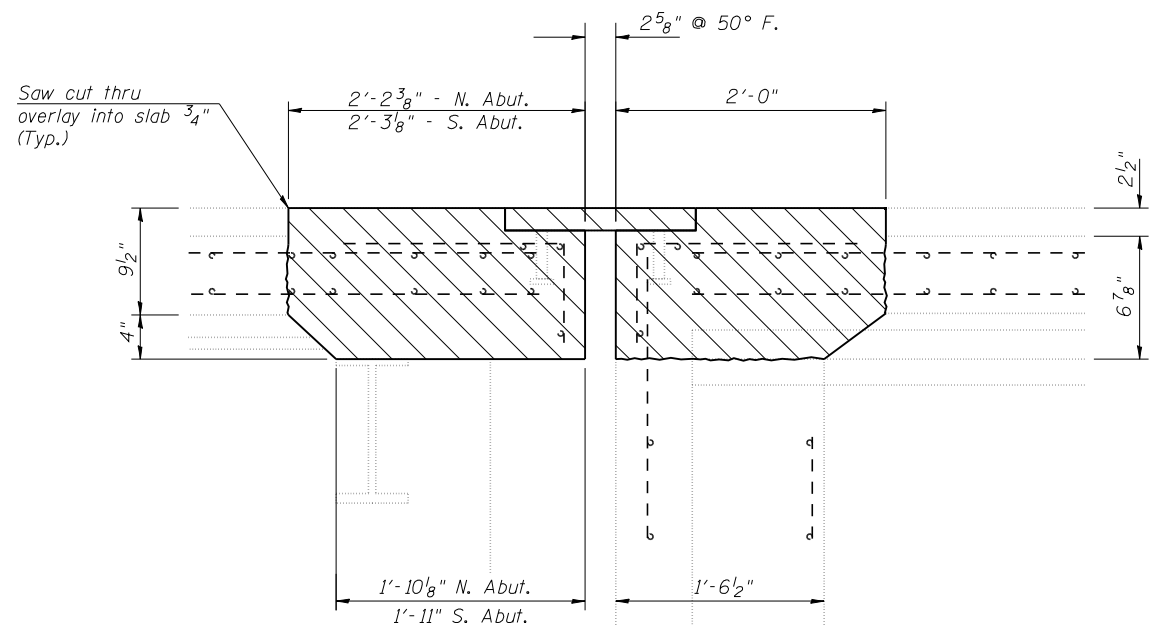
ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	14.6
Concrete Superstructure	Cu. Yd.	14.3
Reinforcement Bars, Epoxy Coated	Pound	3510
Protective Coat	Sq. Yd.	56
Bar Splicers	Each	36
Floor Drain Extensions	Each	3
Polymer Concrete	Cu. Ft.	7.7
Preformed Joint Strip Seal	Foot	106



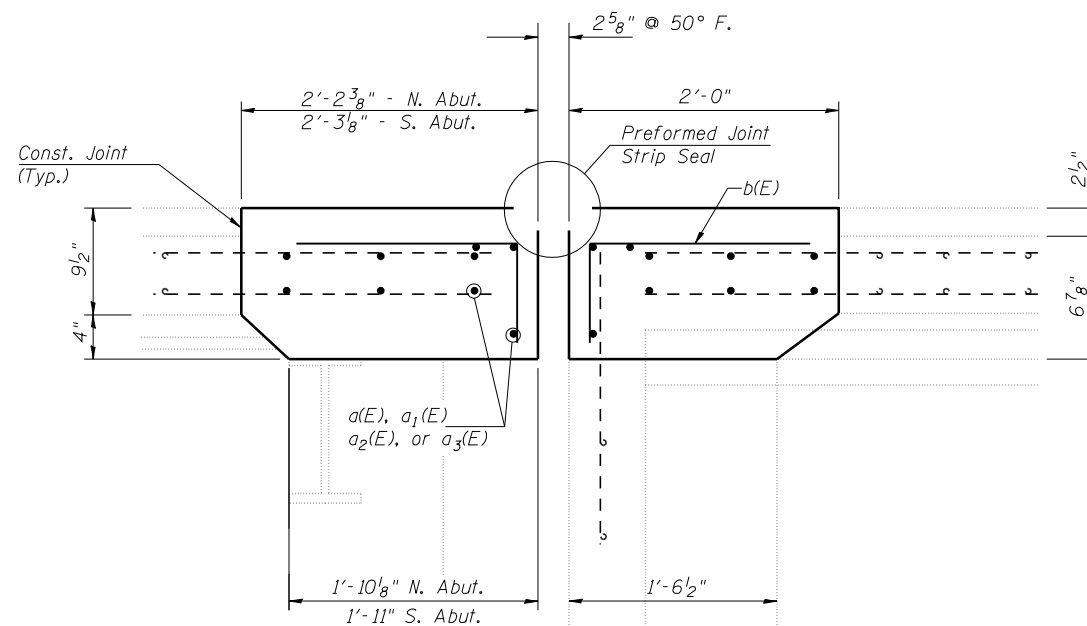
Notes: Pop rivet the 1/8" x 1" bar to Drain Extension. Weld or securely attach rod to both the clamp and bar stiffener. Use 3/16" stainless steel pop rivets of sufficient length. Clamp shown in approximate dimensions. Similar commercially available may be substituted.
 * Field measure cut to fit existing drain.
 An aluminum extrusion drain extension of similar dimensions may be substituted.

DRAIN EXTENSION DETAIL
 (3 Required)

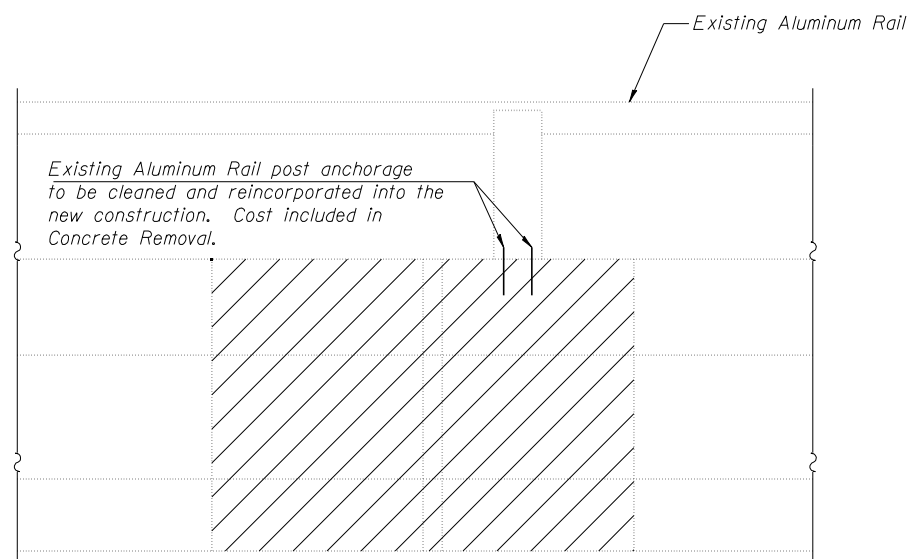
CEC Cummins Engineering Corporation <small>Civil and Structural Engineering</small>	JOB = 2236.09	DESIGNED - MFC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRAIN EXTENSION DETAIL STRUCTURE NO. 054-0050	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE = 0540050-72E10-003-Drain.dgn	CHECKED - AAN	REVISED -			55	D6 LOGAN CO BR 2011	LOGAN	224	111
	DATE = 10/3/2011	DRAWN - TJD	REVISED -			CONTRACT NO. 72E10				
	CHECKED - MDC	REVISED -		SHEET NO. 3 OF 8 SHEETS			ILLINOIS FED. AID PROJECT			



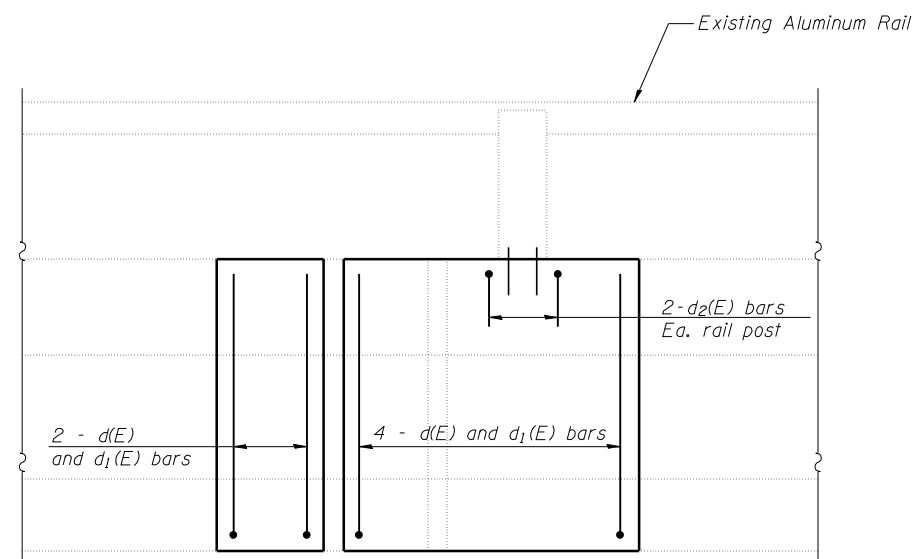
SECTION B-B
CONCRETE REMOVAL DETAIL



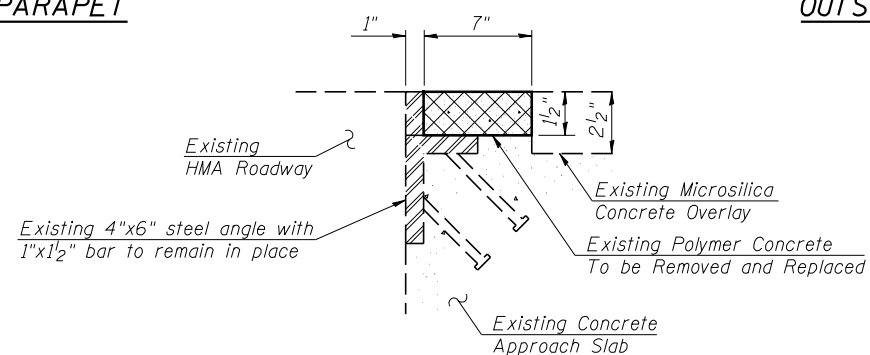
JOINT RECONSTRUCTION FOR STEEL BEAMS



OUTSIDE ELEVATION OF PARAPET



OUTSIDE ELEVATION OF PARAPET

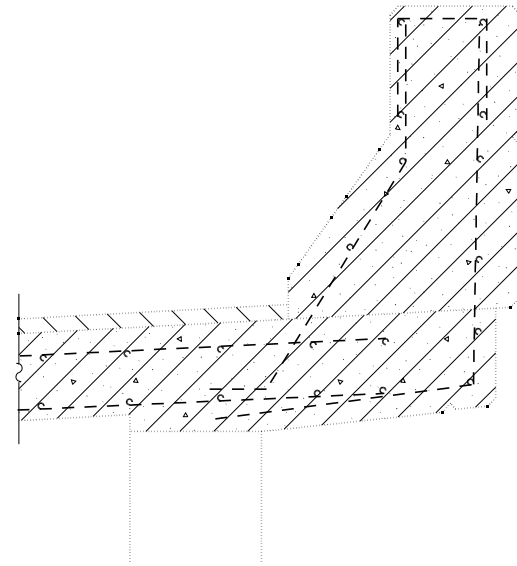


SECTION C-C
(North and South Approach Bents)

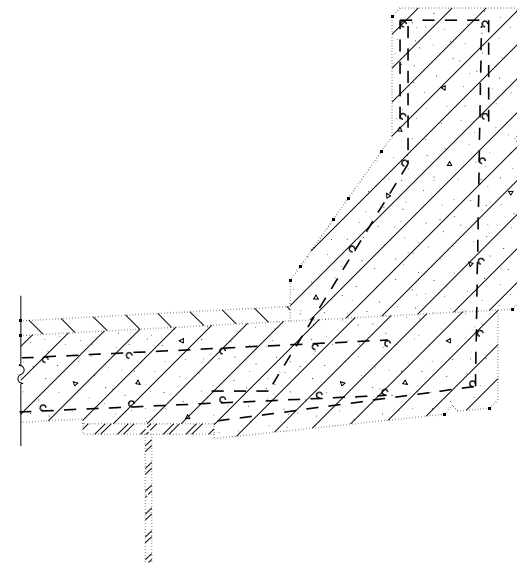
Note: Cross-hatched areas indicate limits of Concrete Removal.

Existing longitudinal reinforcement bars in the area of slab removal and existing transverse reinforcement bars projecting from the curb or parapet shall be cleaned and incorporated into the new construction.

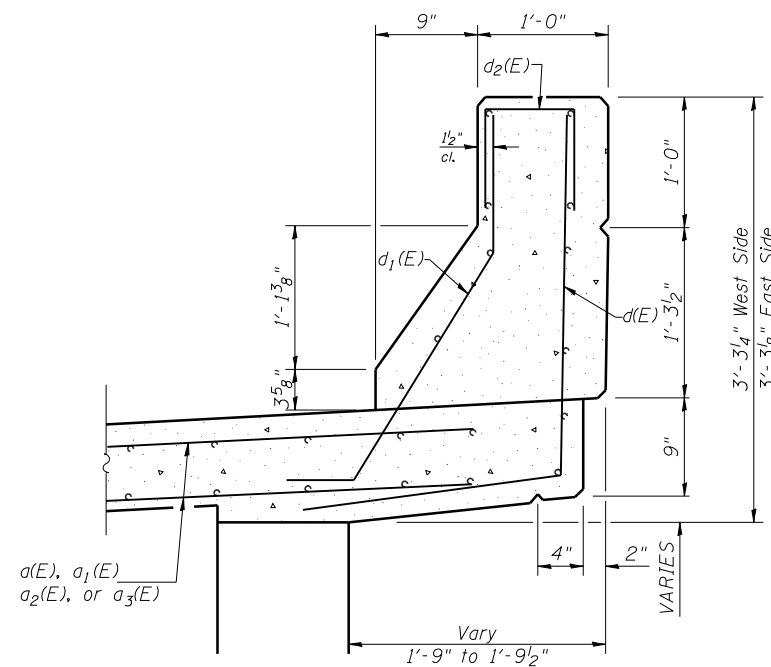
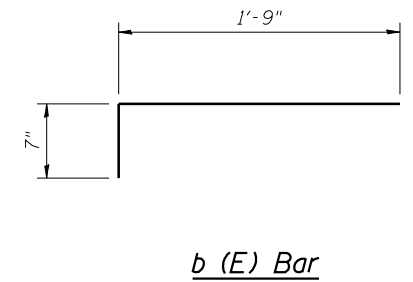
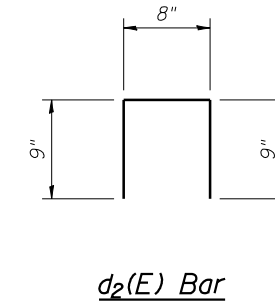
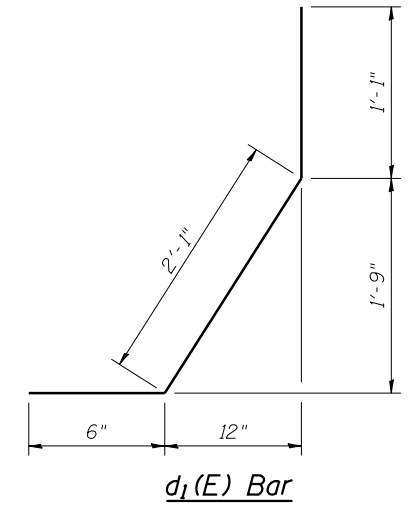
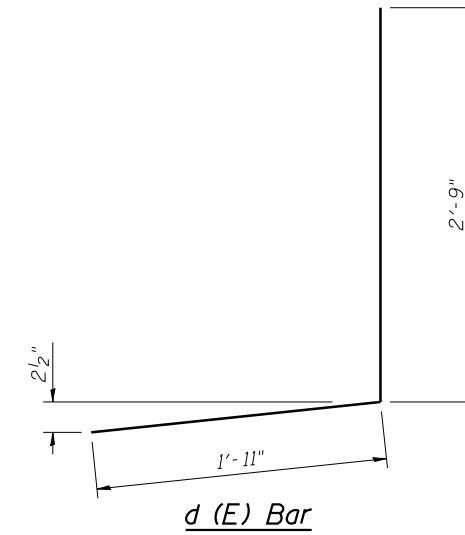
Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with CONCRETE REMOVAL.



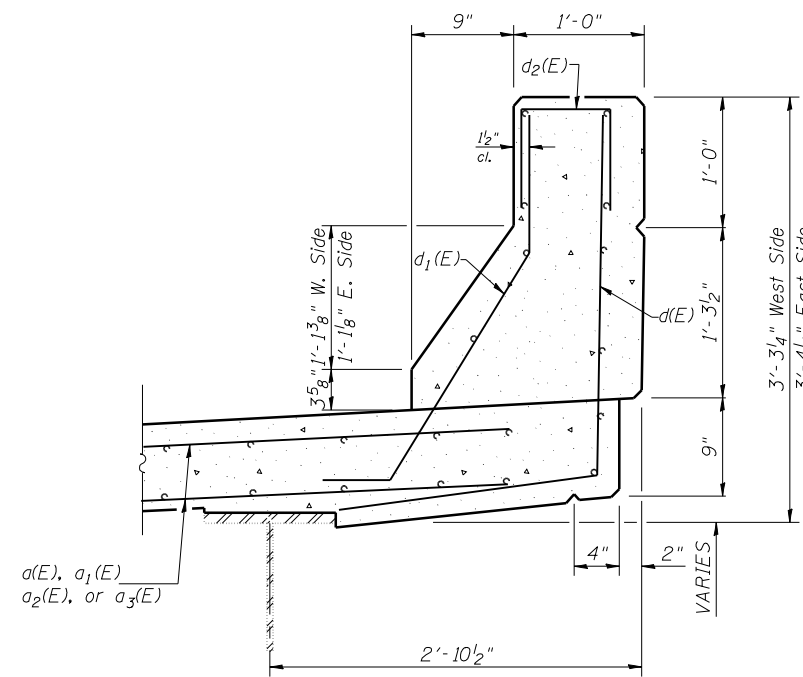
SECTION THROUGH PARAPET AND SOFFIT
APPROACH SPAN REMOVAL



SECTION THROUGH PARAPET AND SOFFIT
MAIN SPAN REMOVAL



SECTION THROUGH PARAPET AND SOFFIT
APPROACH SPAN CONSTRUCTION



SECTION THROUGH PARAPET AND SOFFIT
MAIN SPAN CONSTRUCTION

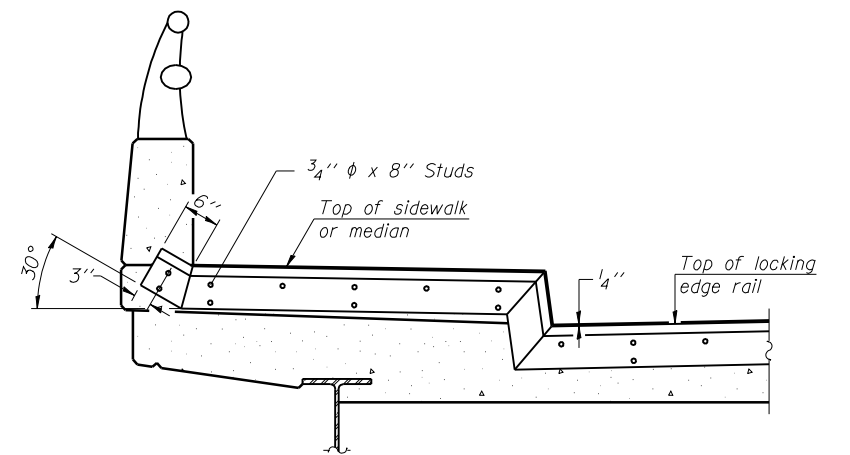
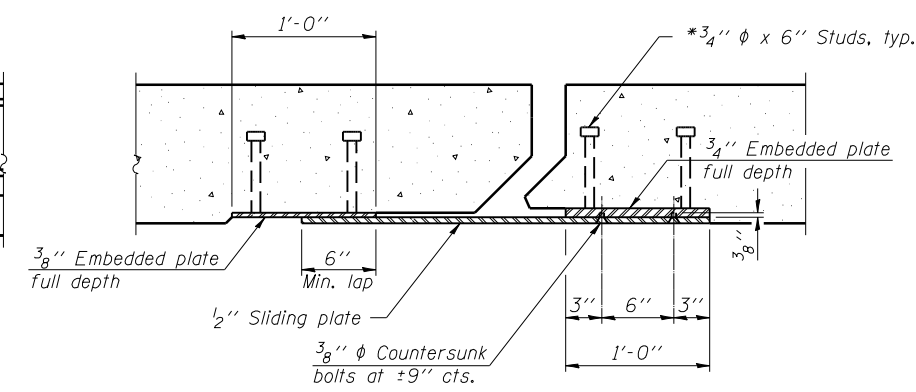
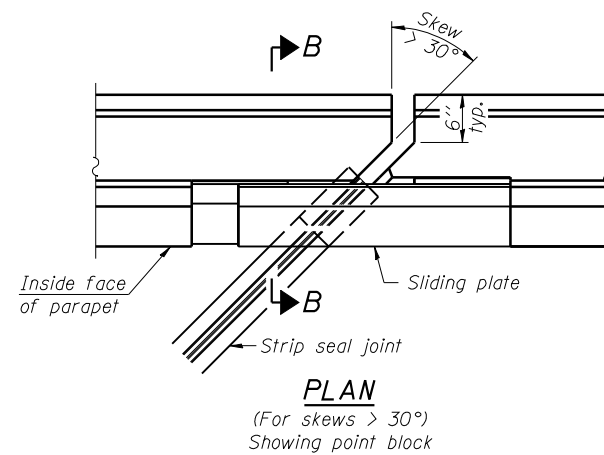
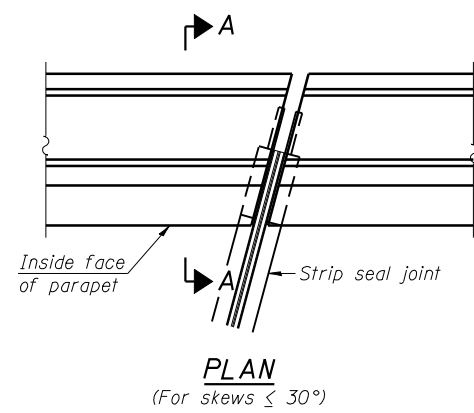
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	18	6	28'-3"	—
a1(E)	18	6	23'-1"	—
a2(E)	18	6	27'-3"	—
a3(E)	18	6	22'-3"	—
b(E)	80	6	2'-4"	┌
d(E)	24	5	4'-8"	J
d1(E)	24	5	3'-8"	J
d2(E)	8	5	2'-2"	Π
Reinforcement Bars, Epoxy Coated			Pound	3510
Concrete Removal			Cu. Yd.	14.6
Concrete Superstructure			Cu. Yd.	14.3
Bar Splicers			Each	36

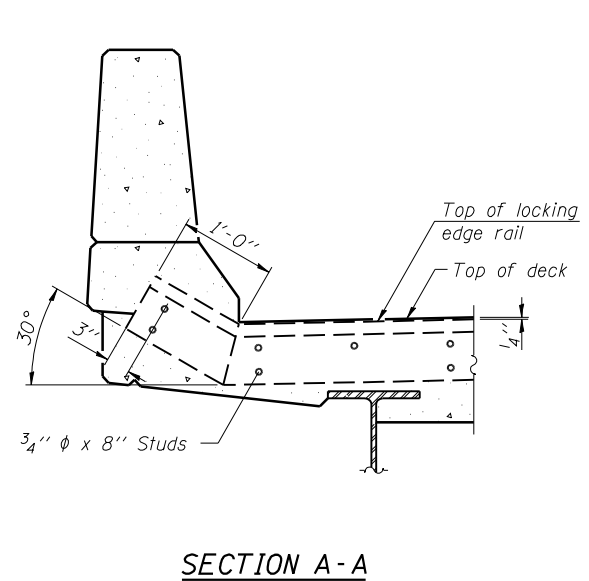
Reinforcement bars designated as (E) shall be epoxy coated.

Note: Existing longitudinal reinforcement bars in the area of slab removal and existing transverse reinforcement bars projecting from the curb or parapet shall be cleaned and incorporated into the new construction.

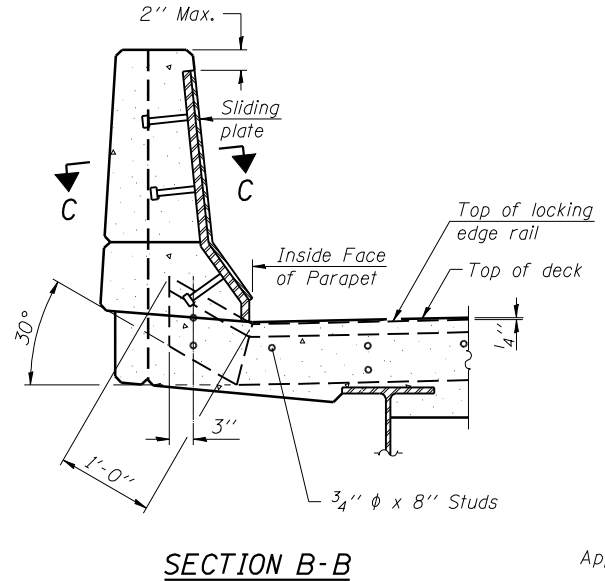
Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with CONCRETE REMOVAL.



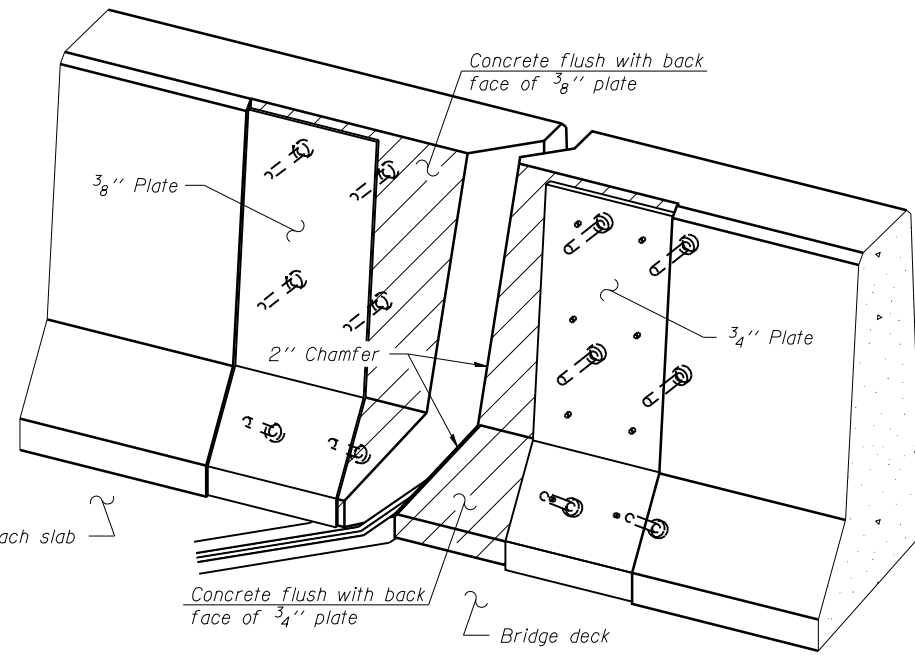
TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN
 Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



SECTION A-A

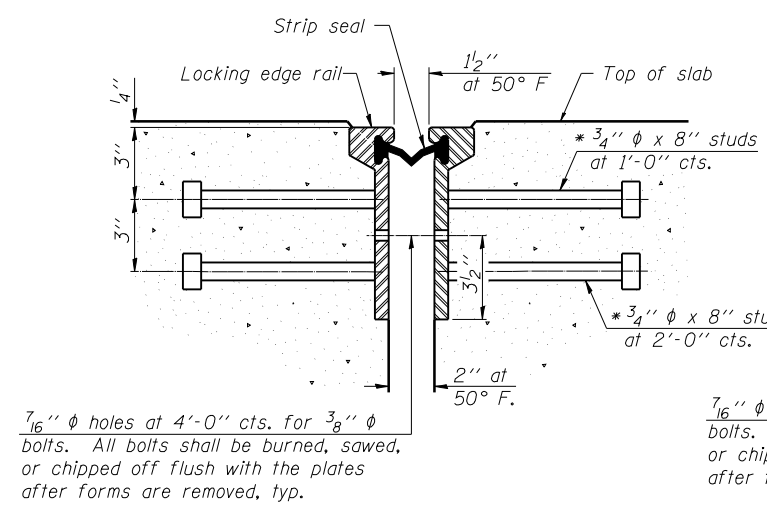


SECTION B-B

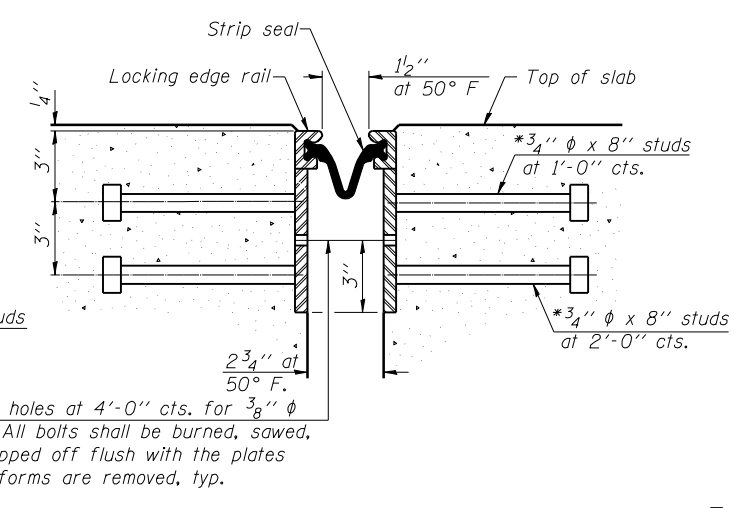


TRIMETRIC VIEW (Showing back plates only)

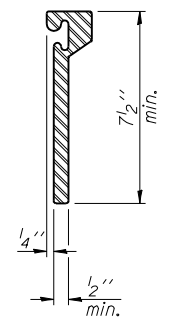
Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
 The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.
 The manufacturer's recommended installation methods shall be followed.
 The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
 All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
 Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.
 Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



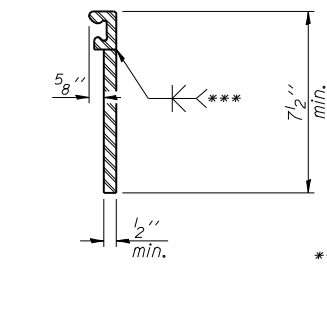
SECTION THRU ROLLED RAIL JOINT



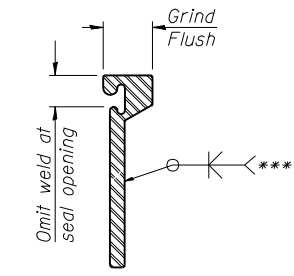
SECTION THRU WELDED RAIL JOINT



ROLLED EXTRUDED RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

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

The inside of the locking edge rail groove shall be free of weld residue.
 Rolled rail shown, welded rail similar.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	106

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

EJ-SSJ

7-1-10



Cummins Engineering Corporation
 JOB = 2236.09
 FILE = 0540050-72E10-007-JOINT.dgn
 DATE = 9/9/2011

DESIGNED - MFC
 CHECKED - AAN
 DRAWN - TJD
 CHECKED - MDC
 REVISED -
 REVISED -
 REVISED -
 REVISED -

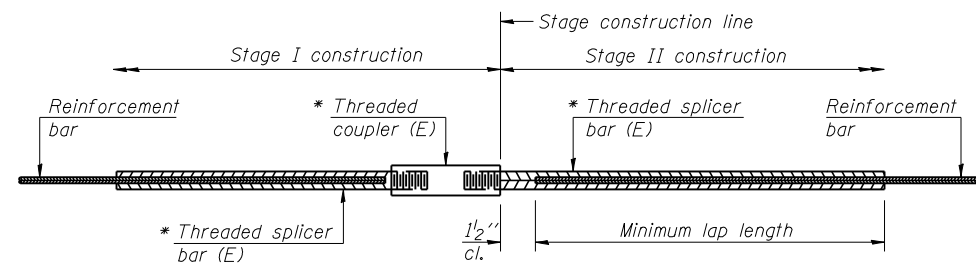
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
 STRUCTURE NO. 054-0050

SHEET NO. 7 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	115
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT



STANDARD BAR SPLICER ASSEMBLY

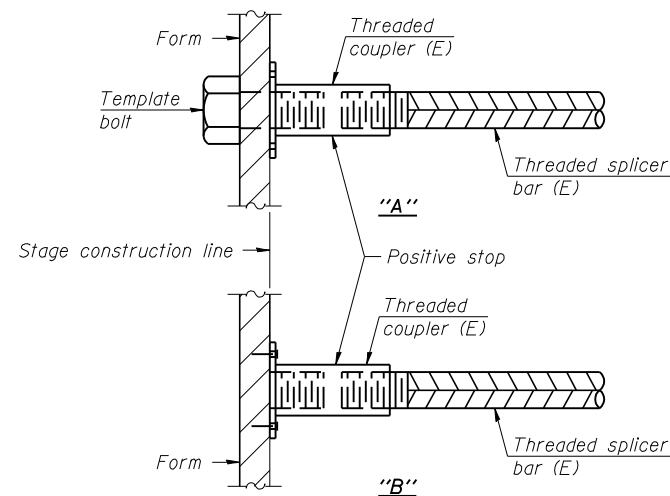
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1/2" + thread length

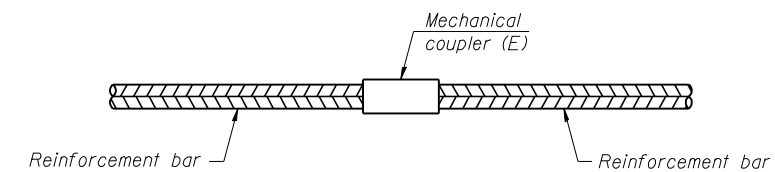
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
North Abut.	#6	18	Table 4
South Abut.	#6	18	Table 4



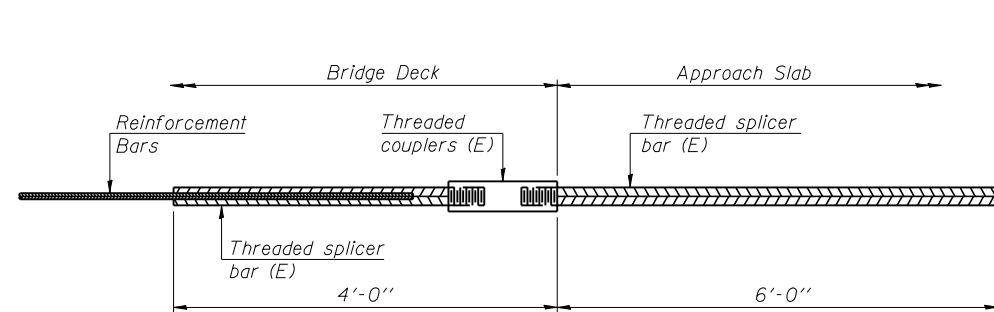
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



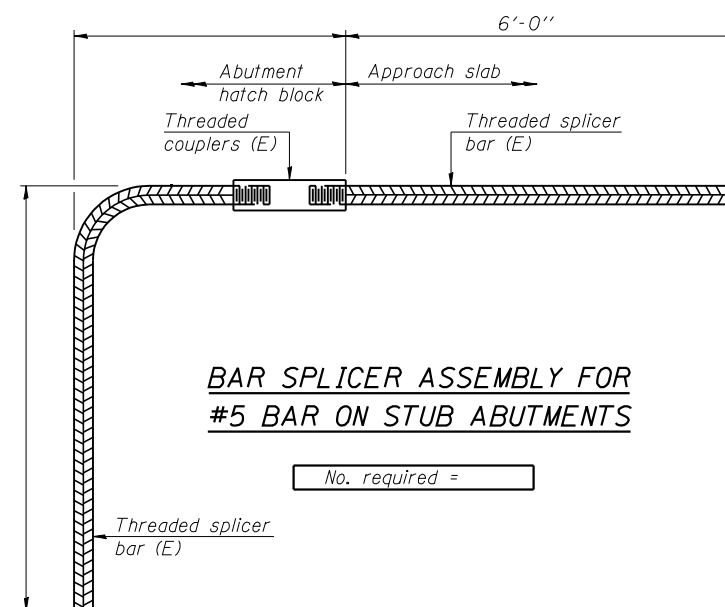
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See special provision for Mechanical Splicers.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

7-1-10



JOB = 2236.09
 FILE = 0540050-72E10-008-Splicer.dgn
 DATE = 9/9/2011

DESIGNED - MFC
 CHECKED - AAN
 DRAWN - TJD
 CHECKED - MDC

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 054-0050

SHEET NO. 8 OF 8 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	116
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT

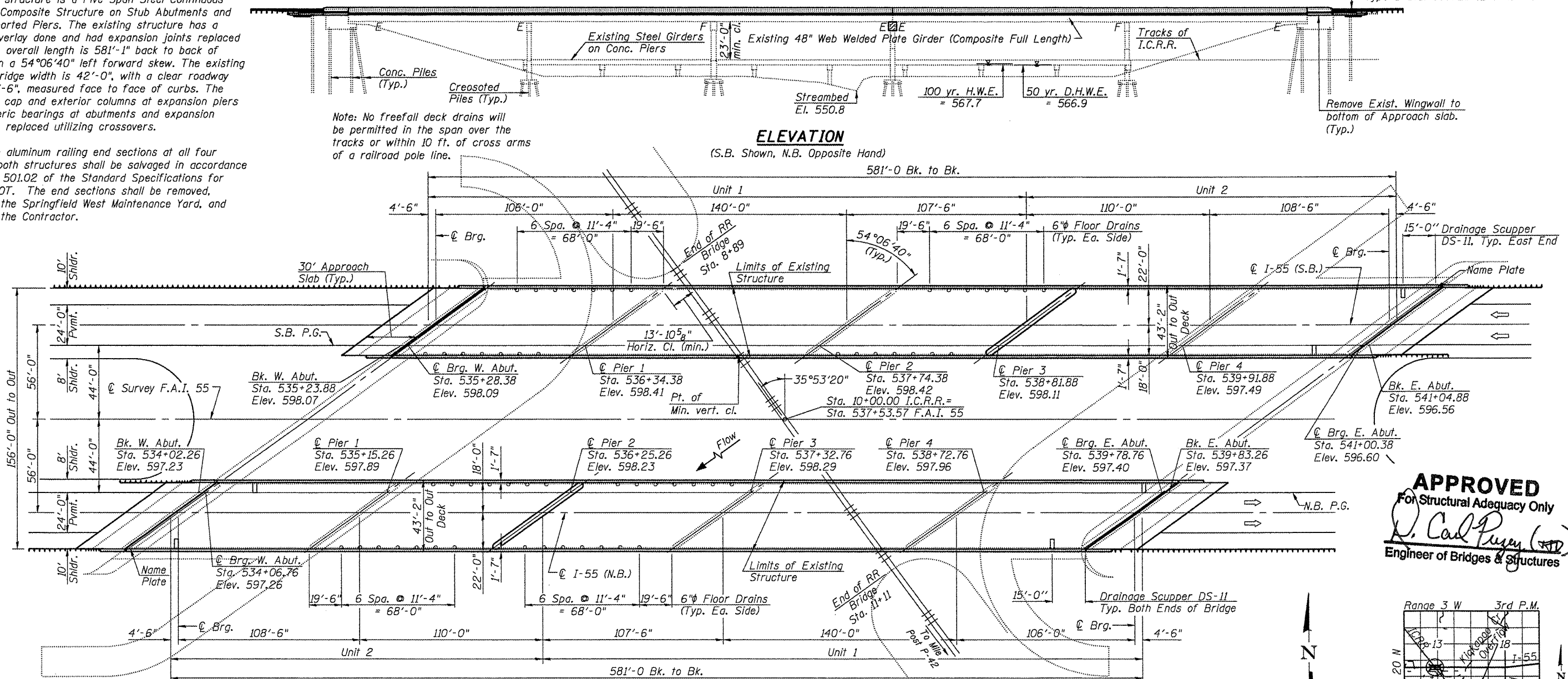
Benchmark: S.W. Corner of South Railroad Abutment Wingwall,
Sta. 538+08, 94' Rt., Elev. 568.32

Existing Structure: S.N. 054-0053 & 054-0054, originally built in 1974 as F.A.I. 55, Section 54-4BVB at Sta. 537+53.57. The existing structure is a Five Span Steel Continuous Multi-girder Composite Structure on Stub Abutments and Column Supported Piers. The existing structure has a Microsilica overlay done and had expansion joints replaced in 1999. The overall length is 581'-1" back to back of abutments on a 54°06'40" left forward skew. The existing out to out bridge width is 42'-0", with a clear roadway width of 38'-6", measured face to face of curbs. The bridge deck, cap and exterior columns at expansion piers and elastomeric bearings at abutments and expansion piers will be replaced utilizing crossovers.

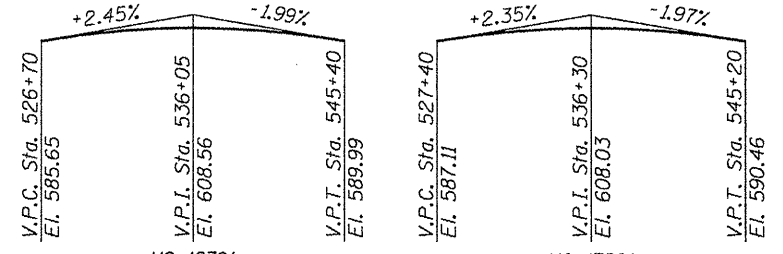
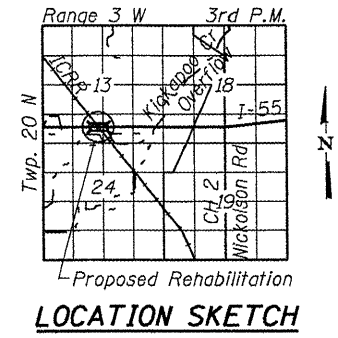
Salvage: The aluminum railing end sections at all four corners of both structures shall be salvaged in accordance with section 501.02 of the Standard Specifications for reuse by IDOT. The end sections shall be removed, delivered to the Springfield West Maintenance Yard, and unloaded by the Contractor.

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

Traffic Barrier Terminal
Type 6 Std. 631031 (Appr. Ends)
Type 5 Std. 631026 (Exit Ends)



APPROVED
For Structural Adequacy Only
J. Carl Pusey (SE)
Engineer of Bridges & Structures



DESIGN SPECIFICATIONS
2002 AASHTO (New Construction)
2010 AASHTO (Bridge Deck)
1995 FHWA Seismic Retrofit Manual
1969 AASHTO (Existing Construction)

LOADING HS20-44 & ALT
Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.046g
Site Coefficient (S) = 2.0

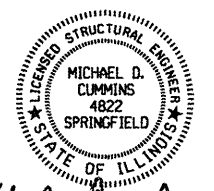
DESIGN STRESSES

FIELD UNITS (New Construction)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36)

FIELD UNITS (Existing Construction)
fc = 1,200 psi (Deck Slab)
fc = 1,400 psi (Curb, Parapet, Substructure)
fs = 20,000 psi (Reinforcement & Structural Steel)

SCOPE OF WORK

1. Remove and replace bridge deck.
2. Construct Temporary Support System at expansion piers.
3. Remove and replace pier cap and columns at expansion piers.
4. Concrete repair at abutments and piers.
5. Remove and replace end diaphragms at abutments and expansion piers.
6. Remove and replace bearings at expansion joints.
7. Remove and replace approach pavements.
8. Remove and replace abutment backwalls.
9. Place Scour Countermeasures.



Michael D. Cummins 9/9/11
(Expires 11/30/2012)

GENERAL PLAN
I-55 OVER I.C.R.R. & KICKAPOO CREEK OVERFLOW
F.A.I. RTE 55
SECTION D6 LOGAN CO BR 2011
LOGAN COUNTY
STATION 537+53.57
STRUCTURE NO. 054-0053 (NB)
STRUCTURE NO. 054-0054 (SB)



JOB	2265.1	DESIGNED	AAN	REVISED	-
FILE	0540053_0054-72E10-01-GPE.dgn	CHECKED	MDC	REVISED	-
DATE	9/9/2011	DRAWN	TJD	REVISED	-
		CHECKED	MDC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
STRUCTURE NO. 054-0053 & 054-0054
SHEET NO. 1 OF 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	117
CONTRACT NO. 72E10			ILLINOIS FED. AID PROJECT	

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 7/8 in. ϕ , holes 5/8 in. ϕ , unless otherwise noted.

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

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

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

Concrete Sealer shall be applied to the designated areas of the abutments and piers.

The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.

Slipforming of the parapets is not allowed.

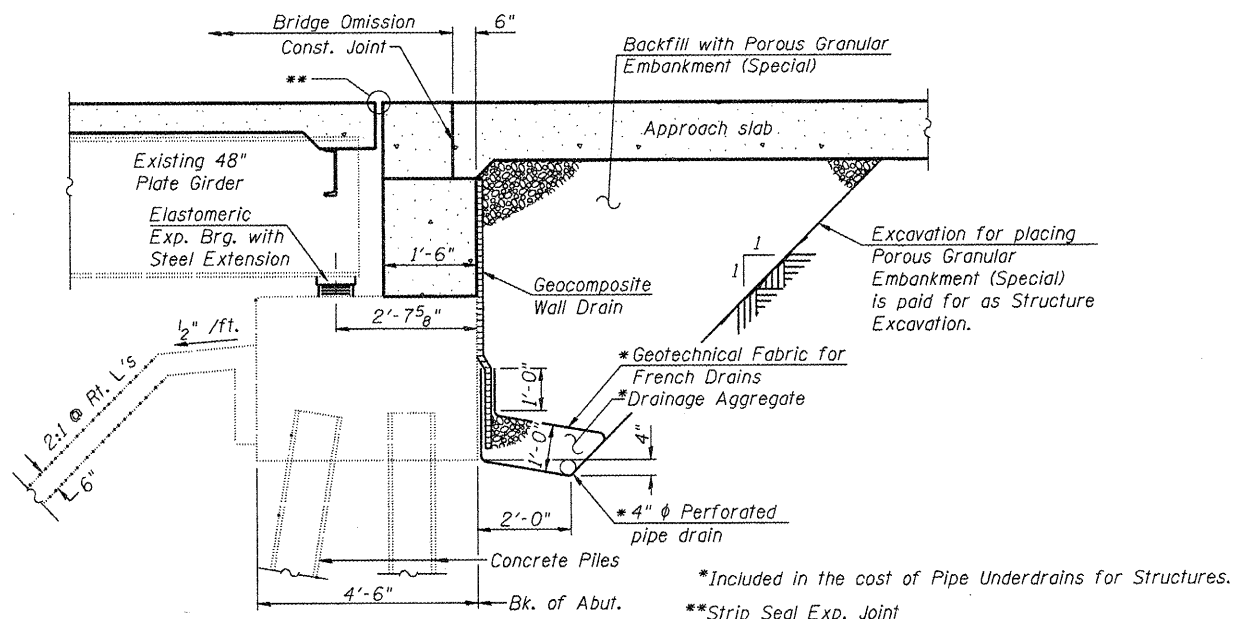
Cleaning and painting of the structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures".

All beams, bearings and other structural steel within 10 ft (measured along the beam) of either side of the deck joints shall be cleaned per Near White Blast Cleaning - SSPC-SP10

The designated areas cleaned per Near White Blast Cleaning and per Commercial Grade Power Tool Cleaning shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat for all surfaces shall be Interstate Green, Munsell No. 7.5G 4/8.

All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300, Type 1.

Location No. 1 = S.N. 054-0053
Location No. 2 = S.N. 054-0054



SECTION THRU PILE SUPPORTED STUB ABUTMENT

(Horiz. dim. @ Rt. L's)

STATION 537+53.57
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 55
SEC. D6 LOGAN CO BR 2011
LOADING HS 20-44
STRUCTURE NO. 054-0054

STATION 537+53.57
BUILT 20__ BY
STATE OF ILLINOIS
F.A.I. RT. 55
SEC. D6 LOGAN CO BR 2011
LOADING HS 20-44
STRUCTURE NO. 054-0053

Existing name plate shall be cleaned and placed next to the new name plate. Cost included in "Name Plates".

NAME PLATE

See Std. 515001

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Structure No.	W. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	E. Abut.
	054-0053	586.85	554.15	554.55	554.30	554.04	587.41
	054-0054	587.93	554.31	554.15	554.41	554.01	585.96

WATERWAY INFORMATION

Frequency Year	Structure	Discharge (cfs)		Waterway Opening (sq. ft.)		Natural H.W.E.	Head (ft.)		Headwater Elev.	
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
		Drainage Area = 310 Sq. Miles Existing Low Grade Elev. 573.95 ft @ Sta. 556+50 (SB Median EOP) Proposed Low Grade Elev. 574.16 ft @ Sta. 556+50 (SB Median EOP)								
10	Main Channel	6,160	6,160	1,546	1,546	565.5	1.0	1.0	566.5	566.5
	Overflow	3,940	3,940	1,147	1,147					
	Total	10,100	10,100	2,693	2,693					
50	Main Channel	10,937	10,937	2,313	2,313	566.9	1.4	1.4	568.3	568.3
	Overflow	7,463	7,463	1,168	1,168					
	Total	18,400	18,400	3,481	3,481					
100	Main Channel	14,728	14,728	2,765	2,765	567.7	1.6	1.6	569.3	569.3
	Overflow	8,072	8,072	1,214	1,214					
	Total	22,800	22,800	3,979	3,979					
Max.	Main Channel	21,447	22,712	3,501	4,070	570.0	3.2	2.7	573.2	572.7
	Overflow	14,453	13,188	1,503	1,503					
	Total	35,900	35,900	5,004	5,573					

10 Yr. Vel. thru Exist. Main Channel Bridges = 4.0 fps
10 Yr. Vel. thru Exist. Overflow Bridges = 3.4 fps
10 Yr. Vel. thru Prop. Main Channel Bridges = 4.0 fps
10 Yr. Vel. thru Prop. Overflow Bridges = 3.4 fps

INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 General Data
- 3-4 Scour Countermeasure Details
- 5-8 Top of Slab Elevations, NB
- 9-12 Top of Slab Elevations, SB
- 13-14 Top of Approach Slab Elevations, NB
- 15-16 Top of Approach Slab Elevations, SB
- 17-18 Superstructure
- 19-21 Superstructure Details
- 22-23 Bridge Approach Slab Details
- 24 Drainage Scupper, DS-11
- 25 Preformed Joint Strip Seal
- 26 Structural Steel Unit 1
- 27 Structural Steel Unit 2
- 28 Structural Steel Details
- 29-32 Bearing Details
- 33 Concrete Repairs at Abutments
- 34-37 Concrete Removal / Repairs at Piers
- 38-39 Abutment Concrete Removal
- 40-42 Abutment Details
- 43 Pier 3 SB
- 44 Pier 2 NB
- 45 Bar Splicer Details

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Ton		2,060	2,060
Filter Fabric	Sq. Yd.		512	512
Concrete Removal	Cu. Yd.		243.8	243.8
Removal of Existing Concrete Deck	Each	2		2
Protective Shield	Sq. Yd.	1,343		1,343
Structure Excavation	Cu. Yd.		1,063	1,063
Floor Drains	Each	56		56
Concrete Structures	Cu. Yd.		359.1	359.1
Concrete Superstructure	Cu. Yd.	2,111.6		2,111.6
Bridge Deck Grooving	Sq. Yd.	5,736		5,736
Protective Coat	Sq. Yd.	7,205		7,205
Furnishing and Erecting Structural Steel	Pound	36,995		36,995
Stud Shear Connectors	Each	18,612		18,612
Reinforcement Bars, Epoxy Coated	Pound	534,220	39,470	573,690
Bar Splicers	Each	280		280
Name Plates	Each	2		2
Preformed Joint Strip Seal	Foot	432		432
Elastomeric Bearing Assembly, Type I	Each	36		36
Elastomeric Bearing Assembly, Type II	Each	12		12
Anchor Bolts 5/8"	Each	24		24
Anchor Bolts 1"	Each	72		72
Concrete Sealer	Sq. Ft.		5,965	5,965
Geocomposite Wall Drain	Sq. Yd.		338	338
Porous Granular Embankment, Special	Cu. Yd.		1,063	1,063
Jack and Remove Existing Bearings	Each		24	24
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.		88	88
Drainage Scupper DS-11	Each	6		6
Pipe Underdrains for Structures 4"	Foot		410	410
Temporary Support System	L. Sum	1		1
Removal of Existing Bearings	Each		24	24
Diamond Grinding (Bridge Section)	Sq. Yd.	5,451		5,451
Cleaning and Painting Steel Bridge No. 1	L. Sum	1		1
Cleaning and Painting Steel Bridge No. 2	L. Sum	1		1
Containment and Disposal of Non-Lead Paint Cleaning Residues No. 1	L. Sum	1		1
Containment and Disposal of Non-Lead Paint Cleaning Residues No. 2	L. Sum	1		1

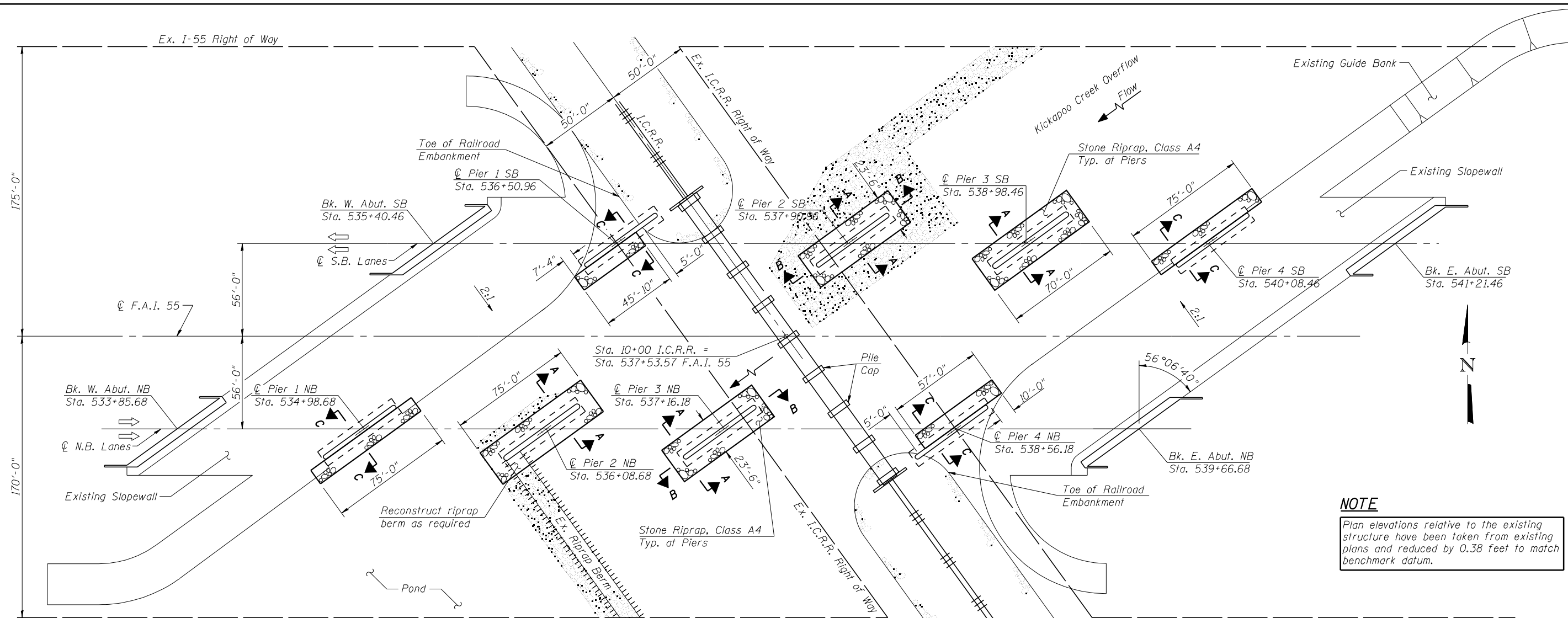


JOB = 2265.1	DESIGNED - AAN	REVISED -
FILE # FILES#	CHECKED - MDC	REVISED -
DATE = 10/14/2011	DRAWN - TJD	REVISED -
	CHECKED - MDC	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

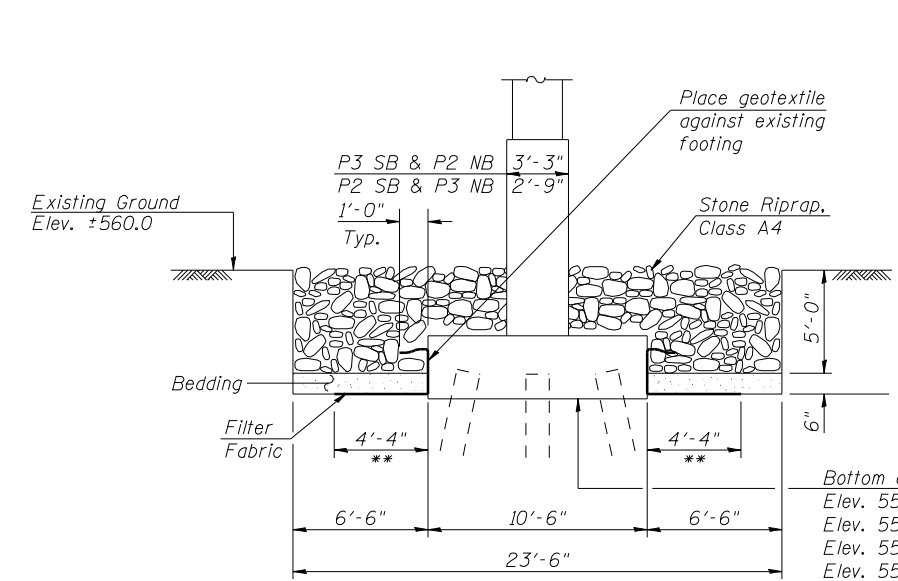
GENERAL DATA
STRUCTURE NO. 054-0053 (NB) & STRUCTURE NO. 054-0054 (SB)
SHEET NO. 2 OF 45 SHEETS

F.A.I. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	118
CONTRACT NO. 72E10				
ILLINOIS FED. AID PROJECT				



FOOTING PLAN

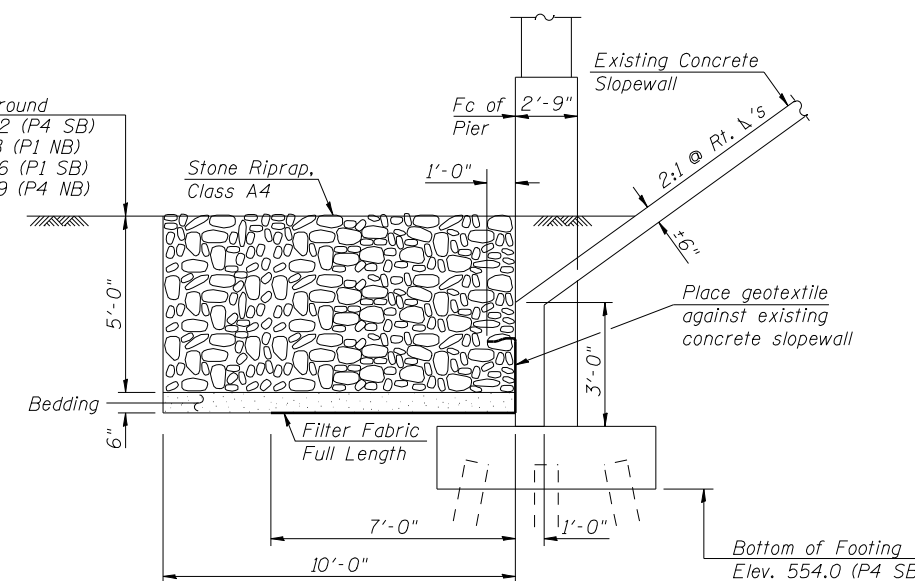
NOTE
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.



SECTION A-A
(Dimensions at Rt. Δ 's)
Pier 3 SB & Pier 2 NB
Pier 2 SB & Pier 3 NB

** Typ. All Sides, except at P2 SB & P3 NB as shown in View B-B.

* Excavation below existing pier footing will not be permitted. Excavate to bottom of footing and place riprap shown above this elevation.



SECTION C-C
(Dimensions at Rt. Δ 's)
Pier 4 SB & Pier 1 NB
Pier 1 SB & Pier 4 NB

Notes: Existing riprap installation shall be removed as required prior to installation of proposed countermeasure. Cost included with Stone Riprap, Class A4.
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

BILL OF MATERIAL

Item	Unit	Total
Stone Riprap, Class A4	Ton	2,060
Filter Fabric	Sq. Yd.	512



JOB = 2265.1
FILE = 0540053.0054-72E10-03-Scour.dgn
DATE = 9/9/2011

DESIGNED - TSH
CHECKED - MDC
DRAWN - TJD
CHECKED - TSH

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

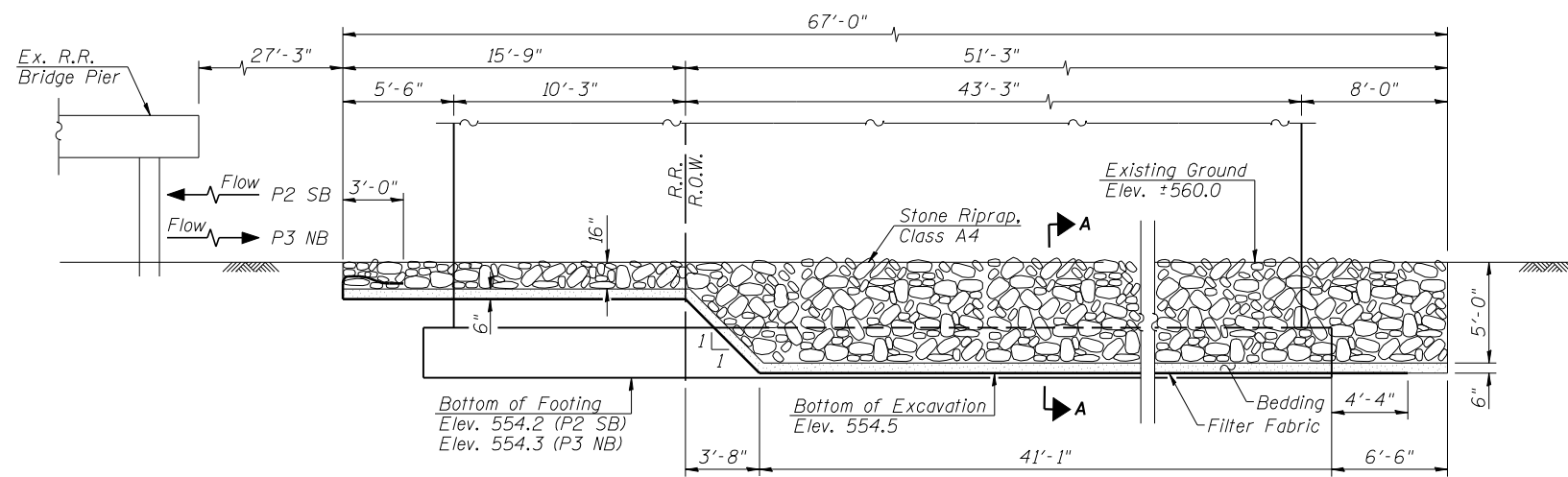
**SCOUR COUNTERMEASURE DETAILS
STRUCTURE NO. 054-0053 (NB) & STRUCTURE NO. 054-0054 (SB)**

SHEET NO. 3 OF 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	119

CONTRACT NO. 72E10

ILLINOIS FED. AID PROJECT

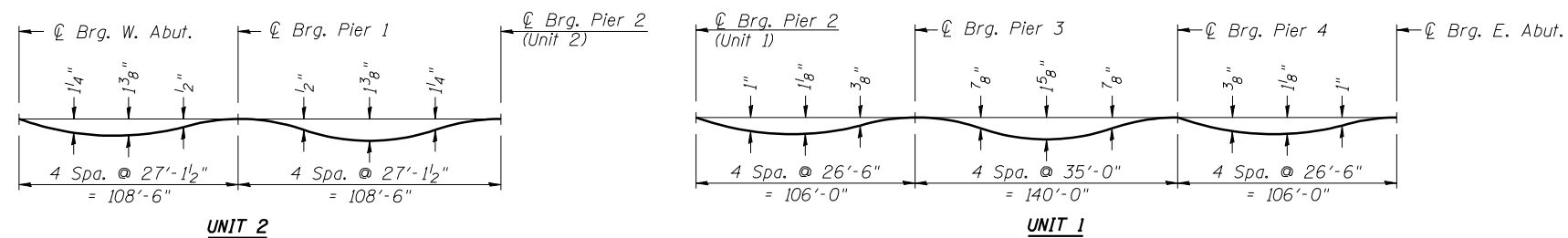


NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

VIEW B-B

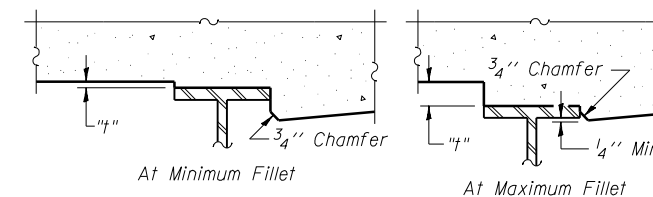
Pier 2 SB Looking West
 Pier 3 NB Looking East



DEAD LOAD DEFLECTION DIAGRAM

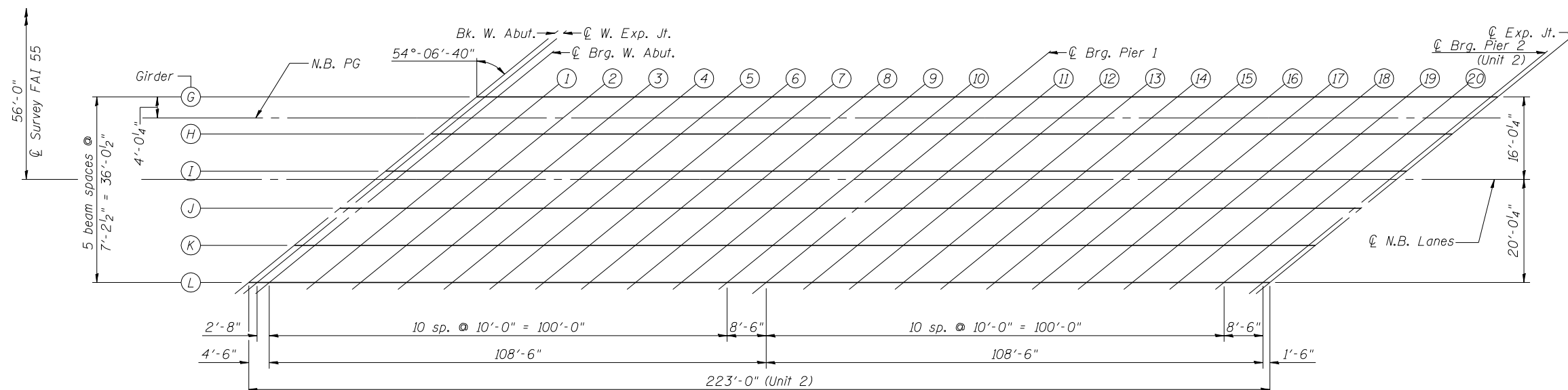
(Includes weight of concrete only.)

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

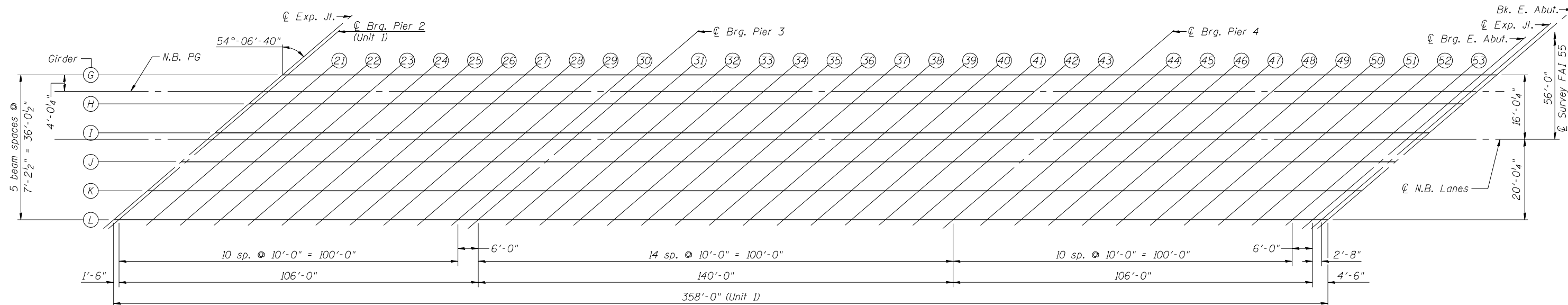


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams. The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown. For grinding the deck, see Special Provisions.

FILLET HEIGHTS



PLAN
(Unit 2)



PLAN
(Unit 1)

GIRDER G

PROFILE GRADE LINE F.A.I. 55

GIRDER H

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., and Brg. Pier 1-4.

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., and Brg. Pier 1-4.

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., and Brg. Pier 1-4.



Table with 4 columns: JOB, FILE, DATE, and design details. Includes job number 2265.1, file name 0540053.0054-72E10-06-ToS-NB.dgn, and date 9/9/2011.

Table with 4 columns: DESIGNER, CHECKER, DRAWN, and design details. Includes names AAN, MDC, and TJD.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS STRUCTURE NO. 054-0053 (NB)

Table with 5 columns: F.A.I. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO. Includes section D6 LOGAN CO BR 2011, county LOGAN, and sheet number 122.

GIRDER I

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1, Brg. Pier 2, Brg. Pier 3, Brg. Pier 4, Brg. E. Abut., and Exp. Jt.

CL ROADWAY

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1, Brg. Pier 2, Brg. Pier 3, Brg. Pier 4, Brg. E. Abut., and Exp. Jt.

GIRDER J

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1, Brg. Pier 2, Brg. Pier 3, Brg. Pier 4, Brg. E. Abut., and Exp. Jt.



JOB # 2265.1
FILE # 0540053.0054-72E10-07-ToS-NB.dgn
DATE # 9/9/2011
DESIGNED - AAN
CHECKED - MDC
DRAWN - TJD
CHECKED - MDC

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 054-0053 (NB)

SHEET NO. 7 OF 45 SHEETS

Table with 5 columns: F.A.I. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO. Values: 55, D6 LOGAN CO BR 2011, LOGAN, 224, 123

CONTRACT NO. 72E10
ILLINOIS FED. AID PROJECT

GIRDER K

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	533+67.97	24.81	596.96	596.98
⊕ Exp. Jt.	533+70.53	24.81	596.98	597.00
Brg. W. Abut.	533+72.47	24.81	596.99	597.01
1	533+82.47	24.81	597.07	597.12
2	533+92.47	24.81	597.14	597.23
3	534+02.47	24.81	597.22	597.33
4	534+12.47	24.81	597.29	597.41
5	534+22.47	24.81	597.35	597.48
6	534+32.47	24.81	597.42	597.53
7	534+42.47	24.81	597.48	597.57
8	534+52.47	24.81	597.54	597.61
9	534+62.47	24.81	597.60	597.65
10	534+72.47	24.81	597.66	597.69
Brg. Pier 1	534+80.97	24.81	597.70	597.72
11	534+90.97	24.81	597.75	597.79
12	535+00.97	24.81	597.80	597.85
13	535+10.97	24.81	597.85	597.92
14	535+20.97	24.81	597.89	597.99
15	535+30.97	24.81	597.94	598.05
16	535+40.97	24.81	597.98	598.10
17	535+50.97	24.81	598.01	598.13
18	535+60.97	24.81	598.05	598.16
19	535+70.97	24.81	598.08	598.16
20	535+80.97	24.81	598.11	598.16
Brg. Pier 2 (Unit 2)	535+89.47	24.81	598.13	598.15
⊕ Exp. Jt.	535+90.97	24.81	598.14	598.16
Brg. Pier 2 (Unit 1)	535+92.47	24.81	598.14	598.16
21	536+02.47	24.81	598.17	598.22
22	536+12.47	24.81	598.19	598.27
23	536+22.47	24.81	598.21	598.31
24	536+32.47	24.81	598.23	598.33
25	536+42.47	24.81	598.24	598.35
26	536+52.47	24.81	598.26	598.35
27	536+62.47	24.81	598.27	598.34
28	536+72.47	24.81	598.28	598.33
29	536+82.47	24.81	598.28	598.32
30	536+92.47	24.81	598.29	598.31
Brg. Pier 3	536+98.47	24.81	598.29	598.31
31	537+08.47	24.81	598.29	598.33
32	537+18.47	24.81	598.28	598.35
33	537+28.47	24.81	598.28	598.36
34	537+38.47	24.81	598.27	598.37
35	537+48.47	24.81	598.26	598.38
36	537+58.47	24.81	598.25	598.39
37	537+68.47	24.81	598.24	598.39
38	537+78.47	24.81	598.22	598.36
39	537+88.47	24.81	598.20	598.32
40	537+98.47	24.81	598.18	598.28
41	538+08.47	24.81	598.15	598.24
42	538+18.47	24.81	598.13	598.19
43	538+28.47	24.81	598.10	598.14
Brg. Pier 4	538+38.47	24.81	598.07	598.09
44	538+48.47	24.81	598.03	598.07
45	538+58.47	24.81	598.00	598.04
46	538+68.47	24.81	597.96	598.02
47	538+78.47	24.81	597.92	598.00
48	538+88.47	24.81	597.88	597.98
49	538+98.47	24.81	597.83	597.94
50	539+08.47	24.81	597.78	597.89
51	539+18.47	24.81	597.73	597.84
52	539+28.47	24.81	597.68	597.75
53	539+38.47	24.81	597.63	597.67
Brg. E. Abut.	539+44.47	24.81	597.59	597.61
⊕ Exp. Jt.	539+46.41	24.81	597.58	597.60
Bk. E. Abut.	539+48.97	24.81	597.57	597.59

GIRDER L

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	533+58.01	32.02	596.73	596.75
⊕ Exp. Jt.	533+60.57	32.02	596.75	596.77
Brg. W. Abut.	533+62.51	32.02	596.76	596.78
1	533+72.51	32.02	596.84	596.90
2	533+82.51	32.02	596.92	597.01
3	533+92.51	32.02	596.99	597.11
4	534+02.51	32.02	597.07	597.19
5	534+12.51	32.02	597.14	597.26
6	534+22.51	32.02	597.20	597.32
7	534+32.51	32.02	597.27	597.36
8	534+42.51	32.02	597.33	597.40
9	534+52.51	32.02	597.39	597.44
10	534+62.51	32.02	597.45	597.49
Brg. Pier 1	534+71.01	32.02	597.50	597.52
11	534+81.01	32.02	597.55	597.59
12	534+91.01	32.02	597.60	597.66
13	535+01.01	32.02	597.65	597.72
14	535+11.01	32.02	597.70	597.79
15	535+21.01	32.02	597.74	597.86
16	535+31.01	32.02	597.79	597.91
17	535+41.01	32.02	597.83	597.94
18	535+51.01	32.02	597.86	597.98
19	535+61.01	32.02	597.90	597.98
20	535+71.01	32.02	597.93	597.98
Brg. Pier 2 (Unit 2)	535+79.51	32.02	597.96	597.98
⊕ Exp. Jt.	535+81.01	32.02	597.96	597.98
Brg. Pier 2 (Unit 1)	535+82.51	32.02	597.97	597.99
21	535+92.51	32.02	597.99	598.04
22	536+02.51	32.02	598.02	598.10
23	536+12.51	32.02	598.04	598.14
24	536+22.51	32.02	598.06	598.16
25	536+32.51	32.02	598.08	598.18
26	536+42.51	32.02	598.09	598.18
27	536+52.51	32.02	598.11	598.18
28	536+62.51	32.02	598.12	598.17
29	536+72.51	32.02	598.13	598.16
30	536+82.51	32.02	598.13	598.16
Brg. Pier 3	536+88.51	32.02	598.13	598.15
31	536+98.51	32.02	598.14	598.18
32	537+08.51	32.02	598.14	598.20
33	537+18.51	32.02	598.13	598.22
34	537+28.51	32.02	598.13	598.23
35	537+38.51	32.02	598.12	598.24
36	537+48.51	32.02	598.11	598.25
37	537+58.51	32.02	598.10	598.26
38	537+68.51	32.02	598.09	598.22
39	537+78.51	32.02	598.07	598.19
40	537+88.51	32.02	598.05	598.15
41	537+98.51	32.02	598.03	598.11
42	538+08.51	32.02	598.00	598.07
43	538+18.51	32.02	597.98	598.02
Brg. Pier 4	538+28.51	32.02	597.95	597.97
44	538+38.51	32.02	597.92	597.95
45	538+48.51	32.02	597.88	597.93
46	538+58.51	32.02	597.85	597.91
47	538+68.51	32.02	597.81	597.89
48	538+78.51	32.02	597.77	597.87
49	538+88.51	32.02	597.73	597.83
50	538+98.51	32.02	597.68	597.79
51	539+08.51	32.02	597.63	597.74
52	539+18.51	32.02	597.58	597.65
53	539+28.51	32.02	597.53	597.57
Brg. E. Abut.	539+34.51	32.02	597.50	597.52
⊕ Exp. Jt.	539+36.45	32.02	597.49	597.51
Bk. E. Abut.	539+39.01	32.02	597.47	597.49



JOB = 2265.1
 FILE = 0540053.0054-72E10-08-ToS-NB.dgn
 DATE = 9/9/2011

DESIGNED - AAN
 CHECKED - MDC
 DRAWN - TJD
 CHECKED - MDC

REVISED -
 REVISED -
 REVISED -
 REVISED -

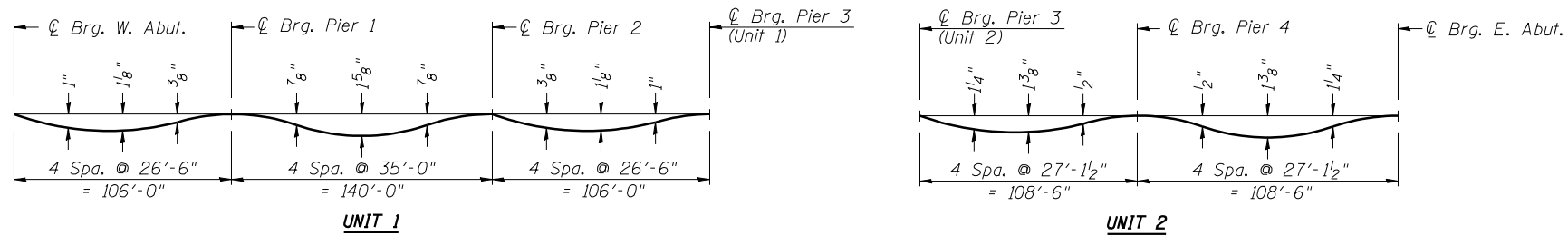
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 054-0053 (NB)**

SHEET NO. 8 OF 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	124
CONTRACT NO. 72E10				

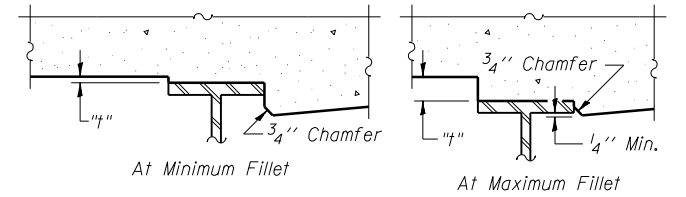
ILLINOIS FED. AID PROJECT



DEAD LOAD DEFLECTION DIAGRAM

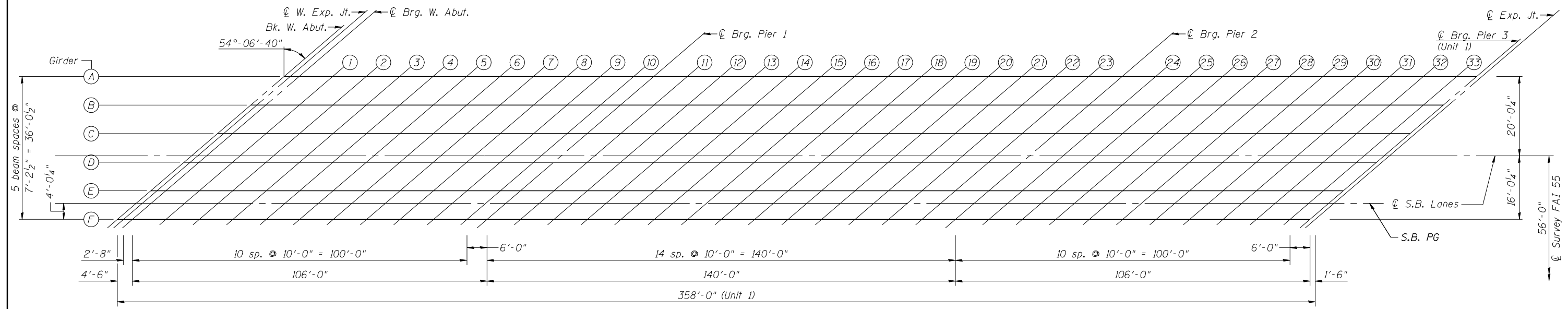
(Includes weight of concrete only.)

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

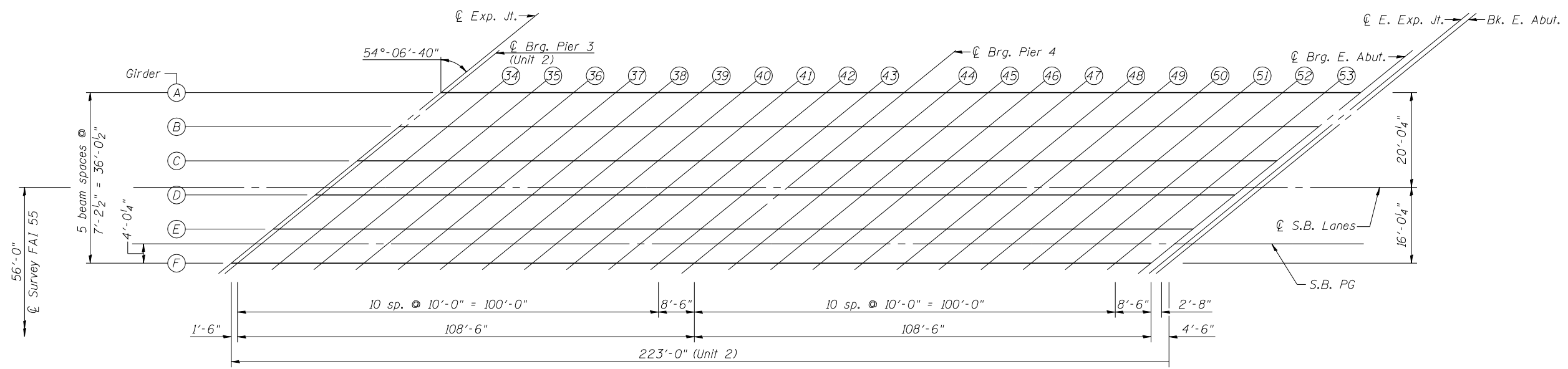


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams. The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown. For grinding the deck, see Special Provisions.

FILLET HEIGHTS



PLAN
(Unit 1)



PLAN
(Unit 2)



JOB = 2265.1
FILE = 0540053.0054-72E10-09-10S-SB.dgn
DATE = 9/9/2011

DESIGNED - AAN
CHECKED - MDC
DRAWN - TJD
CHECKED - MDC

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
STRUCTURE NO. 054-0054 (SB)**

SHEET NO. 9 OF 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	125
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT

GIRDER A

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	535+68.13	-32.02	598.08	598.10
┆ Exp. Jt.	535+70.69	-32.02	598.08	598.10
Brg. W. Abut.	535+72.63	-32.02	598.09	598.11
1	535+82.63	-32.02	598.12	598.17
2	535+92.63	-32.02	598.15	598.23
3	536+02.63	-32.02	598.18	598.28
4	536+12.63	-32.02	598.20	598.31
5	536+22.63	-32.02	598.22	598.33
6	536+32.63	-32.02	598.24	598.33
7	536+42.63	-32.02	598.26	598.33
8	536+52.63	-32.02	598.28	598.33
9	536+62.63	-32.02	598.29	598.33
10	536+72.63	-32.02	598.30	598.32
Brg. Pier 1	536+78.63	-32.02	598.30	598.32
11	536+88.63	-32.02	598.31	598.35
12	536+98.63	-32.02	598.31	598.37
13	537+08.63	-32.02	598.31	598.39
14	537+18.63	-32.02	598.31	598.41
15	537+28.63	-32.02	598.31	598.43
16	537+38.63	-32.02	598.30	598.44
17	537+48.63	-32.02	598.29	598.45
18	537+58.63	-32.02	598.28	598.42
19	537+68.63	-32.02	598.27	598.39
20	537+78.63	-32.02	598.25	598.35
21	537+88.63	-32.02	598.23	598.31
22	537+98.63	-32.02	598.21	598.27
23	538+08.63	-32.02	598.19	598.23
Brg. Pier 2	538+18.63	-32.02	598.16	598.18
24	538+28.63	-32.02	598.13	598.16
25	538+38.63	-32.02	598.10	598.15
26	538+48.63	-32.02	598.07	598.13
27	538+58.63	-32.02	598.03	598.11
28	538+68.63	-32.02	598.00	598.09
29	538+78.63	-32.02	597.95	598.06
30	538+88.63	-32.02	597.91	598.02
31	538+98.63	-32.02	597.87	597.97
32	539+08.63	-32.02	597.82	597.89
33	539+18.63	-32.02	597.77	597.81
Brg. Pier 3 (Unit 1)	539+24.63	-32.02	597.74	597.76
┆ Exp. Jt.	539+26.13	-32.02	597.73	597.75
Brg. Pier 3 (Unit 2)	539+27.63	-32.02	597.72	597.74
34	539+37.63	-32.02	597.67	597.72
35	539+47.63	-32.02	597.61	597.70
36	539+57.63	-32.02	597.55	597.66
37	539+67.63	-32.02	597.49	597.61
38	539+77.63	-32.02	597.42	597.55
39	539+87.63	-32.02	597.36	597.47
40	539+97.63	-32.02	597.29	597.38
41	540+07.63	-32.02	597.22	597.28
42	540+17.63	-32.02	597.14	597.19
43	540+27.63	-32.02	597.06	597.10
Brg. Pier 4	540+36.13	-32.02	597.00	597.02
44	540+46.13	-32.02	596.92	596.95
45	540+56.13	-32.02	596.83	596.88
46	540+66.13	-32.02	596.75	596.82
47	540+76.13	-32.02	596.66	596.75
48	540+86.13	-32.02	596.57	596.68
49	540+96.13	-32.02	596.47	596.60
50	541+06.13	-32.02	596.38	596.50
51	541+16.13	-32.02	596.28	596.39
52	541+26.13	-32.02	596.18	596.26
53	541+36.13	-32.02	596.08	596.13
Brg. E. Abut.	541+44.63	-32.02	595.99	596.01
┆ Exp. Jt.	541+46.57	-32.02	595.97	595.99
Bk. E. Abut.	541+49.13	-32.02	595.94	595.96

GIRDER B

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	535+58.17	-24.81	598.19	598.21
┆ Exp. Jt.	535+60.73	-24.81	598.20	598.22
Brg. W. Abut.	535+62.67	-24.81	598.21	598.23
1	535+72.67	-24.81	598.24	598.29
2	535+82.67	-24.81	598.27	598.36
3	535+92.67	-24.81	598.30	598.41
4	536+02.67	-24.81	598.33	598.43
5	536+12.67	-24.81	598.35	598.46
6	536+22.67	-24.81	598.37	598.46
7	536+32.67	-24.81	598.39	598.46
8	536+42.67	-24.81	598.41	598.46
9	536+52.67	-24.81	598.43	598.46
10	536+62.67	-24.81	598.44	598.46
Brg. Pier 1	536+68.67	-24.81	598.44	598.46
11	536+78.67	-24.81	598.45	598.49
12	536+88.67	-24.81	598.46	598.52
13	536+98.67	-24.81	598.46	598.54
14	537+08.67	-24.81	598.46	598.56
15	537+18.67	-24.81	598.46	598.58
16	537+28.67	-24.81	598.46	598.59
17	537+38.67	-24.81	598.45	598.60
18	537+48.67	-24.81	598.44	598.58
19	537+58.67	-24.81	598.43	598.55
20	537+68.67	-24.81	598.42	598.52
21	537+78.67	-24.81	598.40	598.48
22	537+88.67	-24.81	598.38	598.44
23	537+98.67	-24.81	598.36	598.40
Brg. Pier 2	538+08.67	-24.81	598.34	598.36
24	538+18.67	-24.81	598.31	598.34
25	538+28.67	-24.81	598.28	598.33
26	538+38.67	-24.81	598.25	598.31
27	538+48.67	-24.81	598.22	598.30
28	538+58.67	-24.81	598.18	598.28
29	538+68.67	-24.81	598.15	598.25
30	538+78.67	-24.81	598.10	598.21
31	538+88.67	-24.81	598.06	598.16
32	538+98.67	-24.81	598.02	598.09
33	539+08.67	-24.81	597.97	598.01
Brg. Pier 3 (Unit 1)	539+14.67	-24.81	597.94	597.96
┆ Exp. Jt.	539+16.17	-24.81	597.93	597.95
Brg. Pier 3 (Unit 2)	539+17.67	-24.81	597.92	597.94
34	539+27.67	-24.81	597.87	597.93
35	539+37.67	-24.81	597.82	597.91
36	539+47.67	-24.81	597.76	597.87
37	539+57.67	-24.81	597.70	597.82
38	539+67.67	-24.81	597.64	597.76
39	539+77.67	-24.81	597.57	597.68
40	539+87.67	-24.81	597.51	597.59
41	539+97.67	-24.81	597.44	597.50
42	540+07.67	-24.81	597.37	597.41
43	540+17.67	-24.81	597.29	597.32
Brg. Pier 4	540+26.17	-24.81	597.23	597.25
44	540+36.17	-24.81	597.15	597.18
45	540+46.17	-24.81	597.07	597.12
46	540+56.17	-24.81	596.98	597.05
47	540+66.17	-24.81	596.90	596.99
48	540+76.17	-24.81	596.81	596.92
49	540+86.17	-24.81	596.72	596.84
50	540+96.17	-24.81	596.62	596.74
51	541+06.17	-24.81	596.53	596.64
52	541+16.17	-24.81	596.43	596.51
53	541+26.17	-24.81	596.33	596.38
Brg. E. Abut.	541+34.67	-24.81	596.24	596.26
┆ Exp. Jt.	541+36.61	-24.81	596.22	596.24
Bk. E. Abut.	541+39.17	-24.81	596.20	596.22

GIRDER C

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	535+48.21	-17.60	598.27	598.29
┆ Exp. Jt.	535+50.77	-17.60	598.28	598.30
Brg. W. Abut.	535+52.71	-17.60	598.29	598.31
1	535+62.71	-17.60	598.32	598.38
2	535+72.71	-17.60	598.36	598.44
3	535+82.71	-17.60	598.39	598.49
4	535+92.71	-17.60	598.42	598.52
5	536+02.71	-17.60	598.45	598.55
6	536+12.71	-17.60	598.47	598.56
7	536+22.71	-17.60	598.49	598.56
8	536+32.71	-17.60	598.51	598.56
9	536+42.71	-17.60	598.53	598.57
10	536+52.71	-17.60	598.54	598.57
Brg. Pier 1	536+58.71	-17.60	598.55	598.57
11	536+68.71	-17.60	598.56	598.60
12	536+78.71	-17.60	598.57	598.63
13	536+88.71	-17.60	598.57	598.66
14	536+98.71	-17.60	598.58	598.68
15	537+08.71	-17.60	598.58	598.70
16	537+18.71	-17.60	598.58	598.71
17	537+28.71	-17.60	598.57	598.73
18	537+38.71	-17.60	598.57	598.70
19	537+48.71	-17.60	598.56	598.68
20	537+58.71	-17.60	598.55	598.65
21	537+68.71	-17.60	598.53	598.61
22	537+78.71	-17.60	598.52	598.58
23	537+88.71	-17.60	598.50	598.54
Brg. Pier 2	537+98.71	-17.60	598.48	598.50
24	538+08.71	-17.60	598.45	598.49
25	538+18.71	-17.60	598.43	598.47
26	538+28.71	-17.60	598.40	598.46
27	538+38.71	-17.60	598.37	598.45
28	538+48.71	-17.60	598.34	598.43
29	538+58.71	-17.60	598.30	598.40
30	538+68.71	-17.60	598.26	598.36
31	538+78.71	-17.60	598.22	598.32
32	538+88.71	-17.60	598.18	598.25
33	538+98.71	-17.60	598.13	598.17
Brg. Pier 3 (Unit 1)	539+04.71	-17.60	598.10	598.12
┆ Exp. Jt.	539+06.21	-17.60	598.10	598.12
Brg. Pier 3 (Unit 2)	539+07.71	-17.60	598.09	598.11
34	539+17.71	-17.60	598.04	598.09
35	539+27.71	-17.60	597.99	598.08
36	539+37.71	-17.60	597.93	598.05
37	539+47.71	-17.60	597.88	597.99
38	539+57.71	-17.60	597.82	597.94
39	539+67.71	-17.60	597.75	597.87
40	539+77.71	-17.60	597.69	597.78
41	539+87.71	-17.60	597.62	597.69
42	539+97.71	-17.60	597.55	597.60
43	540+07.71	-17.60	597.48	597.51
Brg. Pier 4	540+16.21	-17.60	597.42	597.44
44	540+26.21	-17.60	597.34	597.38
45	540+36.21	-17.60	597.26	597.31
46	540+46.21	-17.60	597.18	597.25
47	540+56.21	-17.60	597.10	597.19
48	540+66.21	-17.60	597.01	597.13
49	540+76.21	-17.60	596.92	597.05
50	540+86.21	-17.60	596.83	596.95
51	540+96.21	-17.60	596.74	596.85
52	541+06.21	-17.60	596.64	596.73
53	541+16.21	-17.60	596.55	596.60
Brg. E. Abut.	541+24.71	-17.60	596.46	596.48
┆ Exp. Jt.	541+26.65	-17.60	596.44	596.46
Bk. E. Abut.	541+29.21	-17.60	596.42	596.44



JOB	= 2265.1	DESIGNED	- AAN	REVISED	-
FILE	=				

CL ROADWAY

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1, Brg. Pier 2, Brg. Pier 3, Brg. Pier 4, Brg. E. Abut., and Bk. E. Abut.

GIRDER D

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1, Brg. Pier 2, Brg. Pier 3, Brg. Pier 4, Brg. E. Abut., and Bk. E. Abut.

GIRDER E

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1, Brg. Pier 2, Brg. Pier 3, Brg. Pier 4, Brg. E. Abut., and Bk. E. Abut.



Project information table with columns: JOB, FILE, DATE, DESIGNED, CHECKED, DRAWN, REVISED. Values include 2265.1, 0540053.0054-72E10-11-ToS-SB.dgn, 9/9/2011, AAN, MDC, TJD, MDC.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS STRUCTURE NO. 054-0054 (SB)

Summary table with columns: F.A.I. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO. Values include 55, D6 LOGAN CO BR 2011, LOGAN, 224, 127, 72E10.

PROFILE GRADE LINE F.A.I. 55

GIRDER F

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	535+23.88	0.00	598.07	598.09
@ Exp. Jt.	535+26.44	0.00	598.08	598.10
Brg. W. Abut.	535+28.38	0.00	598.09	598.11
1	535+38.38	0.00	598.13	598.18
2	535+48.38	0.00	598.17	598.25
3	535+58.38	0.00	598.21	598.31
4	535+68.38	0.00	598.24	598.35
5	535+78.38	0.00	598.28	598.38
6	535+88.38	0.00	598.31	598.40
7	535+98.38	0.00	598.33	598.40
8	536+08.38	0.00	598.36	598.41
9	536+18.38	0.00	598.38	598.42
10	536+28.38	0.00	598.40	598.43
Brg. Pier 1	536+34.38	0.00	598.41	598.43
11	536+44.38	0.00	598.43	598.47
12	536+54.38	0.00	598.44	598.51
13	536+64.38	0.00	598.46	598.54
14	536+74.38	0.00	598.47	598.57
15	536+84.38	0.00	598.47	598.59
16	536+94.38	0.00	598.48	598.61
17	537+04.38	0.00	598.48	598.63
18	537+14.38	0.00	598.48	598.62
19	537+24.38	0.00	598.47	598.59
20	537+34.38	0.00	598.47	598.57
21	537+44.38	0.00	598.46	598.54
22	537+54.38	0.00	598.45	598.51
23	537+64.38	0.00	598.44	598.48
Brg. Pier 2	537+74.38	0.00	598.42	598.44
24	537+84.38	0.00	598.41	598.44
25	537+94.38	0.00	598.39	598.43
26	538+04.38	0.00	598.36	598.42
27	538+14.38	0.00	598.34	598.42
28	538+24.38	0.00	598.31	598.41
29	538+34.38	0.00	598.28	598.39
30	538+44.38	0.00	598.25	598.35
31	538+54.38	0.00	598.22	598.32
32	538+64.38	0.00	598.18	598.25
33	538+74.38	0.00	598.14	598.18
Brg. Pier 3 (Unit 1)	538+80.38	0.00	598.11	598.13
@ Exp. Jt.	538+81.88	0.00	598.11	598.13
Brg. Pier 3 (Unit 2)	538+83.38	0.00	598.10	598.12
34	538+93.38	0.00	598.06	598.11
35	539+03.38	0.00	598.01	598.10
36	539+13.38	0.00	597.96	598.08
37	539+23.38	0.00	597.91	598.03
38	539+33.38	0.00	597.86	597.98
39	539+43.38	0.00	597.80	597.91
40	539+53.38	0.00	597.74	597.83
41	539+63.38	0.00	597.68	597.75
42	539+73.38	0.00	597.62	597.67
43	539+83.38	0.00	597.55	597.59
Brg. Pier 4	539+91.88	0.00	597.49	597.51
44	540+01.88	0.00	597.42	597.46
45	540+11.88	0.00	597.35	597.40
46	540+21.88	0.00	597.28	597.34
47	540+31.88	0.00	597.20	597.29
48	540+41.88	0.00	597.12	597.23
49	540+51.88	0.00	597.04	597.16
50	540+61.88	0.00	596.95	597.07
51	540+71.88	0.00	596.86	596.98
52	540+81.88	0.00	596.77	596.86
53	540+91.88	0.00	596.68	596.73
Brg. E. Abut.	541+00.38	0.00	596.60	596.62
@ Exp. Jt.	541+02.32	0.00	596.58	596.60
Bk. E. Abut.	541+04.88	0.00	596.56	596.58

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	535+18.32	4.02	597.96	597.98
@ Exp. Jt.	535+20.88	4.02	597.97	597.99
Brg. W. Abut.	535+22.82	4.02	597.98	598.00
1	535+32.82	4.02	598.02	598.08
2	535+42.82	4.02	598.07	598.15
3	535+52.82	4.02	598.10	598.21
4	535+62.82	4.02	598.14	598.24
5	535+72.82	4.02	598.18	598.28
6	535+82.82	4.02	598.21	598.30
7	535+92.82	4.02	598.24	598.31
8	536+02.82	4.02	598.26	598.31
9	536+12.82	4.02	598.29	598.33
10	536+22.82	4.02	598.31	598.34
Brg. Pier 1	536+28.82	4.02	598.32	598.34
11	536+38.82	4.02	598.34	598.38
12	536+48.82	4.02	598.35	598.41
13	536+58.82	4.02	598.37	598.45
14	536+68.82	4.02	598.38	598.48
15	536+78.82	4.02	598.38	598.50
16	536+88.82	4.02	598.39	598.53
17	536+98.82	4.02	598.39	598.55
18	537+08.82	4.02	598.39	598.53
19	537+18.82	4.02	598.39	598.51
20	537+28.82	4.02	598.39	598.49
21	537+38.82	4.02	598.38	598.47
22	537+48.82	4.02	598.37	598.44
23	537+58.82	4.02	598.36	598.40
Brg. Pier 2	537+68.82	4.02	598.35	598.37
24	537+78.82	4.02	598.33	598.36
25	537+88.82	4.02	598.31	598.36
26	537+98.82	4.02	598.29	598.35
27	538+08.82	4.02	598.27	598.35
28	538+18.82	4.02	598.24	598.34
29	538+28.82	4.02	598.22	598.32
30	538+38.82	4.02	598.18	598.29
31	538+48.82	4.02	598.15	598.25
32	538+58.82	4.02	598.12	598.19
33	538+68.82	4.02	598.08	598.12
Brg. Pier 3 (Unit 1)	538+74.82	4.02	598.05	598.07
@ Exp. Jt.	538+76.32	4.02	598.05	598.07
Brg. Pier 3 (Unit 2)	538+77.82	4.02	598.04	598.06
34	538+87.82	4.02	598.00	598.05
35	538+97.82	4.02	597.95	598.04
36	539+07.82	4.02	597.91	598.02
37	539+17.82	4.02	597.86	597.97
38	539+27.82	4.02	597.80	597.93
39	539+37.82	4.02	597.75	597.86
40	539+47.82	4.02	597.69	597.78
41	539+57.82	4.02	597.63	597.70
42	539+67.82	4.02	597.57	597.62
43	539+77.82	4.02	597.51	597.54
Brg. Pier 4	539+86.32	4.02	597.45	597.47
44	539+96.32	4.02	597.38	597.42
45	540+06.32	4.02	597.31	597.36
46	540+16.32	4.02	597.23	597.30
47	540+26.32	4.02	597.16	597.25
48	540+36.32	4.02	597.08	597.19
49	540+46.32	4.02	597.00	597.12
50	540+56.32	4.02	596.91	597.03
51	540+66.32	4.02	596.83	596.94
52	540+76.32	4.02	596.74	596.82
53	540+86.32	4.02	596.65	596.70
Brg. E. Abut.	540+94.82	4.02	596.57	596.59
@ Exp. Jt.	540+96.76	4.02	596.55	596.57
Bk. E. Abut.	540+99.32	4.02	596.53	596.55



JOB = 2265.1
 FILE = 0540053.0054-72E10-12-ToS-SB.dgn
 DATE = 9/9/2011

DESIGNED - AAN
 CHECKED - MDC
 DRAWN - TJD
 CHECKED - MDC

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 054-0054 (SB)

SHEET NO. 12 of 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	128
CONTRACT NO. 72E10				
ILLINOIS FED. AID PROJECT				

NORTH EDGE OF SHOULDER

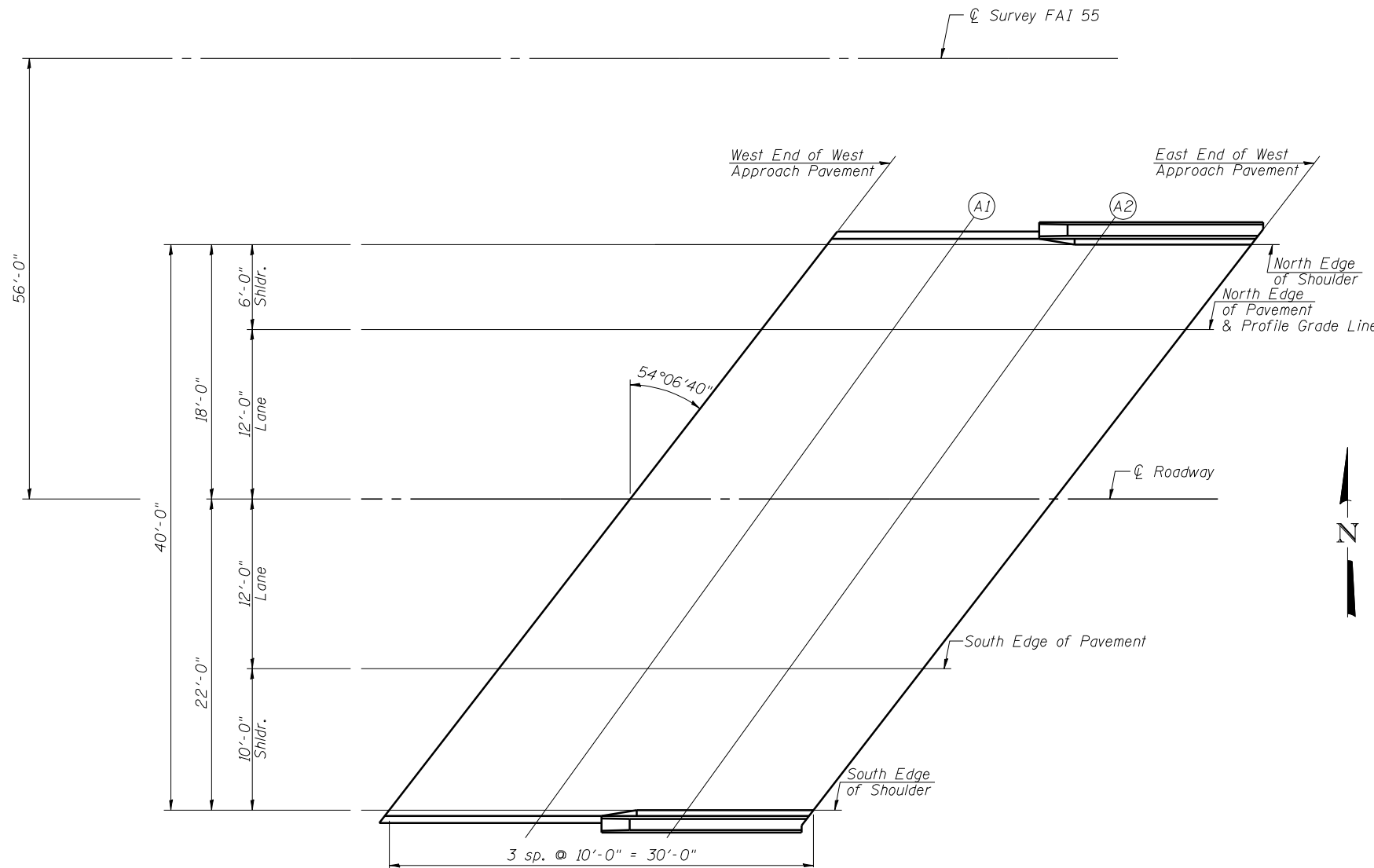
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	533+81.40	-6.00	596.95	596.97
A1	533+91.40	-6.00	597.03	597.05
A2	534+01.40	-6.00	597.10	597.12
E. End West Appr. Pav't.	534+11.40	-6.00	597.17	597.19

NORTH EDGE OF PAVEMENT & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	533+73.11	0.00	597.01	597.03
A1	533+83.11	0.00	597.09	597.11
A2	533+93.11	0.00	597.17	597.19
E. End West Appr. Pav't.	534+03.11	0.00	597.24	597.26

CL OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	533+56.53	12.00	597.07	597.09
A1	533+66.53	12.00	597.15	597.17
A2	533+76.53	12.00	597.23	597.25
E. End West Appr. Pav't.	533+86.53	12.00	597.30	597.32



PLAN

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	533+39.94	24.00	596.74	596.76
A1	533+49.94	24.00	596.83	596.85
A2	533+59.94	24.00	596.91	596.93
E. End West Appr. Pav't.	533+69.94	24.00	596.99	597.01

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	533+26.12	34.00	596.41	596.43
A1	533+36.12	34.00	596.50	596.52
A2	533+46.12	34.00	596.59	596.61
E. End West Appr. Pav't.	533+56.12	34.00	596.67	596.69

NORTH EDGE OF SHOULDER

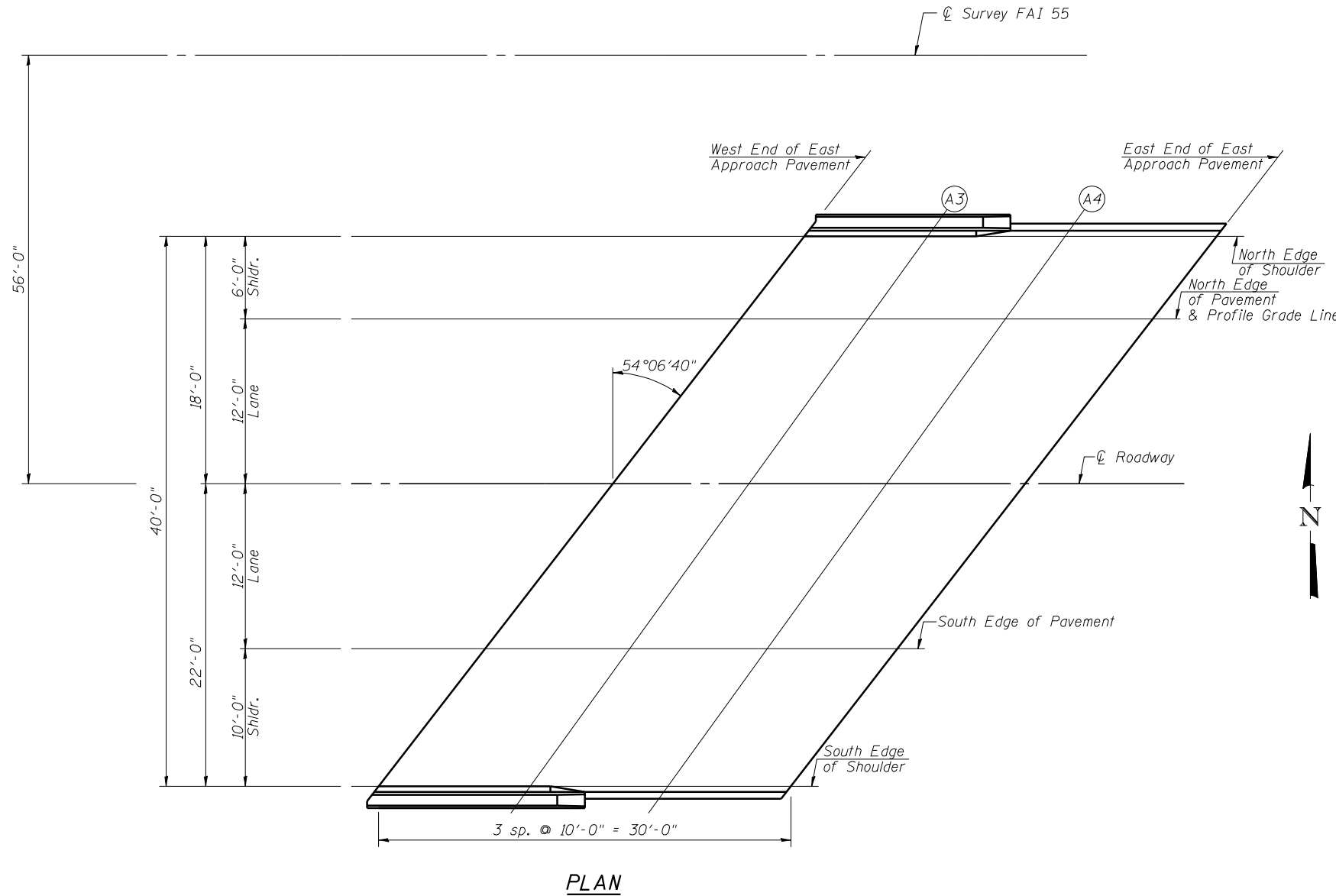
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	539+90.70	-6.00	597.20	597.22
A3	540+00.70	-6.00	597.13	597.15
A4	540+10.70	-6.00	597.05	597.07
E. End East Appr. Pav't.	540+20.70	-6.00	596.98	597.00

NORTH EDGE OF PAVEMENT & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	539+82.41	0.00	597.38	597.40
A3	539+92.41	0.00	597.31	597.33
A4	540+02.41	0.00	597.24	597.26
E. End East Appr. Pav't.	540+12.41	0.00	597.17	597.19

CL OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	539+65.83	12.00	597.67	597.69
A3	539+75.83	12.00	597.61	597.63
A4	539+85.83	12.00	597.54	597.56
E. End East Appr. Pav't.	539+95.83	12.00	597.47	597.49



SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	539+49.24	24.00	597.58	597.60
A3	539+59.24	24.00	597.52	597.54
A4	539+69.24	24.00	597.46	597.48
E. End East Appr. Pav't.	539+79.24	24.00	597.40	597.42

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	539+35.42	34.00	597.45	597.47
A3	539+45.42	34.00	597.40	597.42
A4	539+55.42	34.00	597.34	597.36
E. End East Appr. Pav't.	539+65.42	34.00	597.28	597.30

NORTH EDGE OF SHOULDER

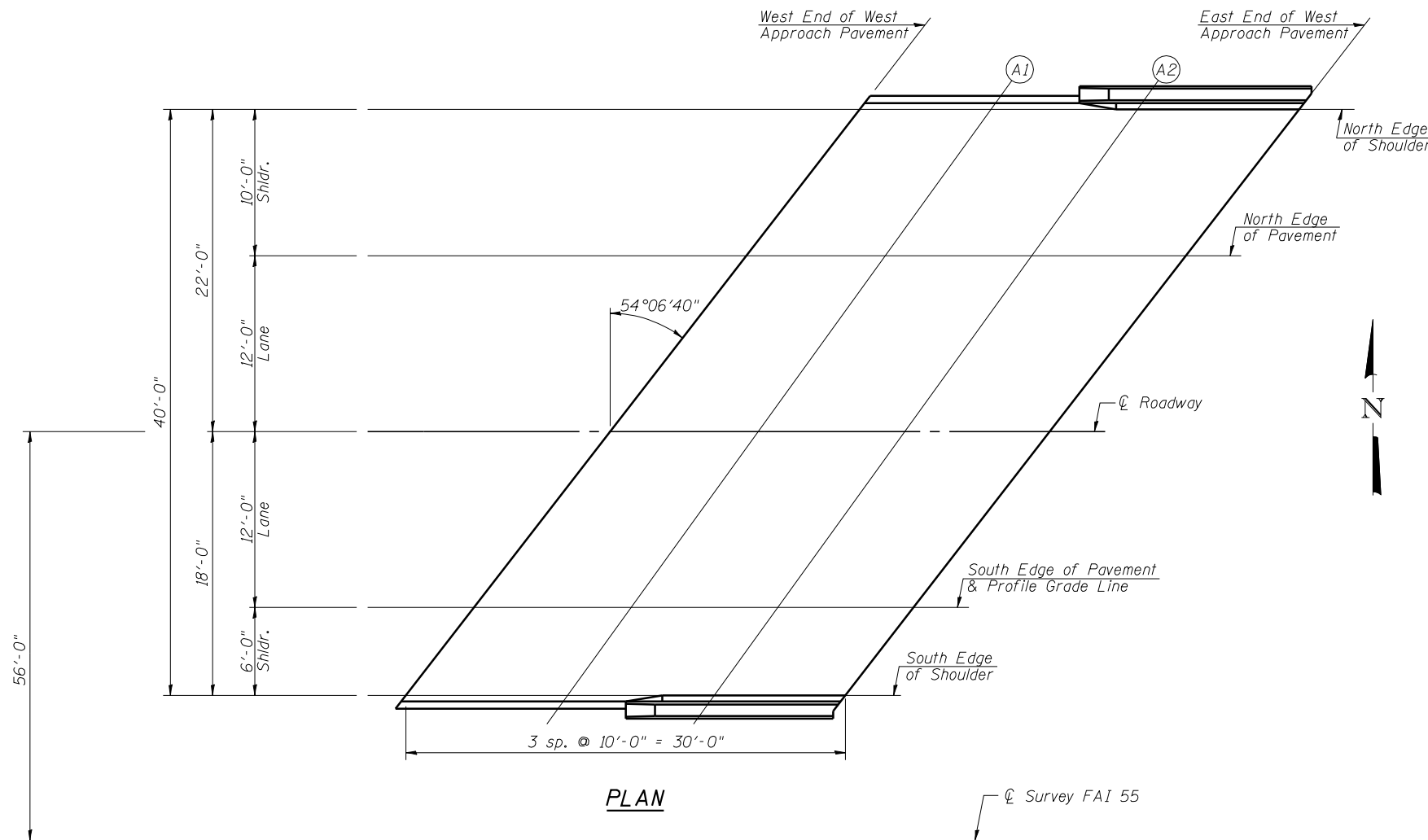
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	535+41.71	-34.00	597.94	597.96
A1	535+51.71	-34.00	597.98	598.00
A2	535+61.71	-34.00	598.01	598.03
E. End West Appr. Pav't.	535+71.71	-34.00	598.05	598.07

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	535+27.89	-24.00	598.09	598.11
A1	535+37.89	-24.00	598.13	598.15
A2	535+47.89	-24.00	598.17	598.19
E. End West Appr. Pav't.	535+57.89	-24.00	598.21	598.23

CL OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	535+11.30	-12.00	598.20	598.22
A1	535+21.30	-12.00	598.25	598.27
A2	535+31.30	-12.00	598.29	598.31
E. End West Appr. Pav't.	535+41.30	-12.00	598.33	598.35



SOUTH EDGE OF PAVEMENT & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	534+94.72	0.00	597.93	597.95
A1	535+04.72	0.00	597.98	598.00
A2	535+14.72	0.00	598.03	598.05
E. End West Appr. Pav't.	535+24.72	0.00	598.07	598.09

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	534+86.43	6.00	597.76	597.78
A1	534+96.43	6.00	597.81	597.83
A2	535+06.43	6.00	597.86	597.88
E. End West Appr. Pav't.	535+16.43	6.00	597.91	597.93

NORTH EDGE OF SHOULDER

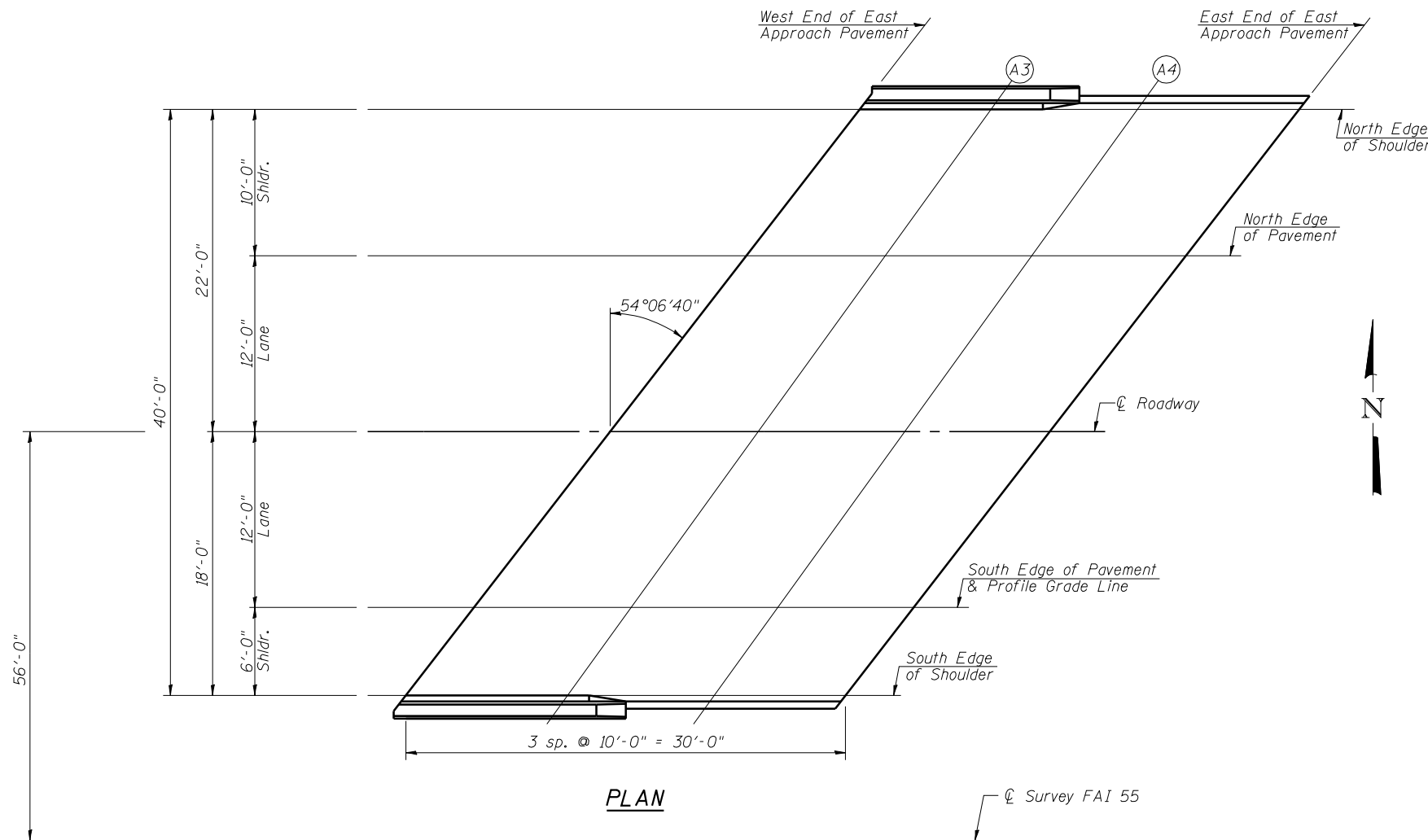
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	541+51.01	-34.00	595.88	595.90
A3	541+61.01	-34.00	595.77	595.79
A4	541+71.01	-34.00	595.66	595.68
E. End East Appr. Pav't.	541+81.01	-34.00	595.54	595.56

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	541+37.19	-24.00	596.23	596.25
A3	541+47.19	-24.00	596.13	596.15
A4	541+57.19	-24.00	596.02	596.04
E. End East Appr. Pav't.	541+67.19	-24.00	595.91	595.93

CL OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	541+20.60	-12.00	596.59	596.61
A3	541+30.60	-12.00	596.49	596.51
A4	541+40.60	-12.00	596.38	596.40
E. End East Appr. Pav't.	541+50.60	-12.00	596.28	596.30

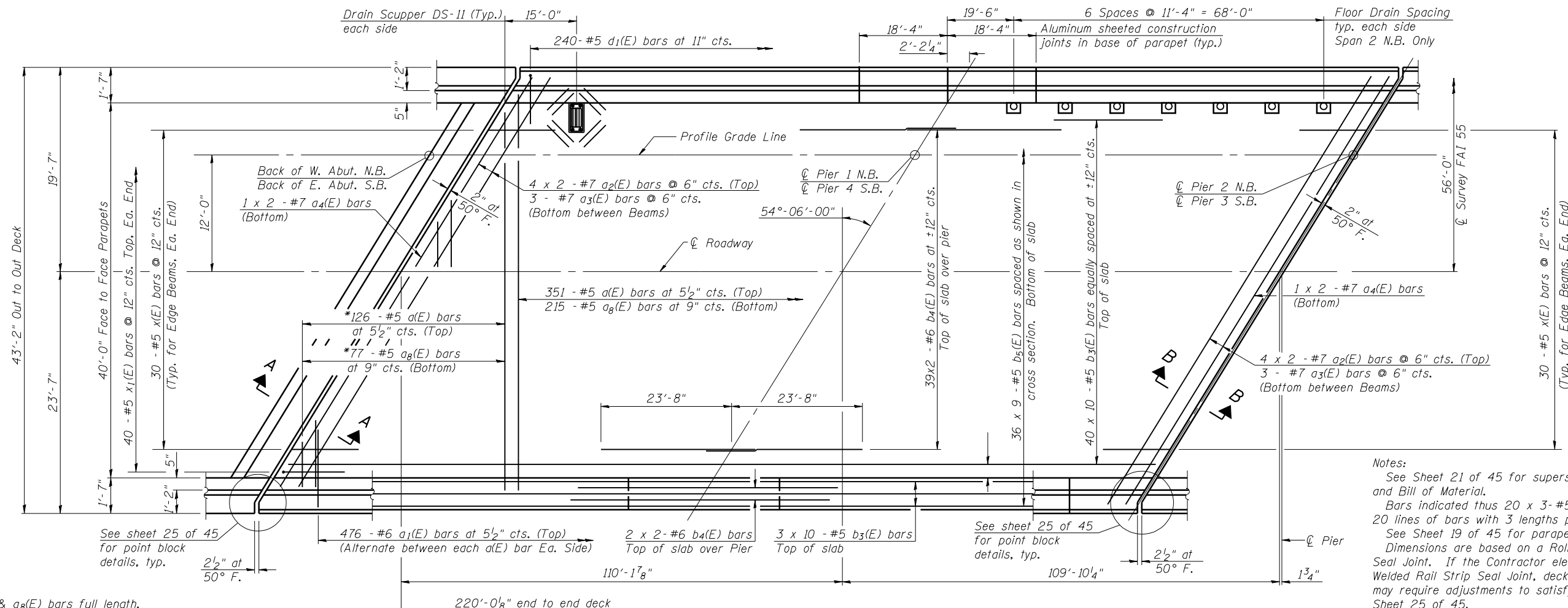


SOUTH EDGE OF PAVEMENT & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	541+04.02	0.00	596.57	596.59
A3	541+14.02	0.00	596.47	596.49
A4	541+24.02	0.00	596.37	596.39
E. End East Appr. Pav't.	541+34.02	0.00	596.27	596.29

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	540+95.73	6.00	596.52	596.54
A3	541+05.73	6.00	596.42	596.44
A4	541+15.73	6.00	596.33	596.35
E. End East Appr. Pav't.	541+25.73	6.00	596.23	596.25

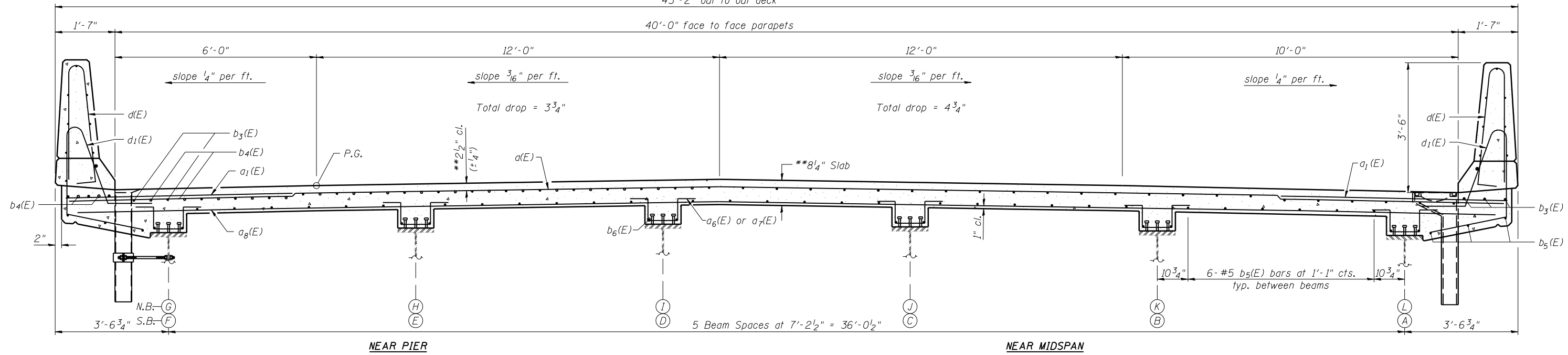


Notes:
See Sheet 21 of 45 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet 19 of 45 for parapet reinforcement. Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet 25 of 45.

* Order a(E) & a₈(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
** Prior to Grinding

MINIMUM BAR LAP

#7 bar	= 5'-2"
#6 bar	= 3'-10"
#5 bar	= 3'-3"
#4 bar	= 2'-0"



JOB	= 2265.1
FILE	= 0540053.0054-72E10-17-Super.dgn
DATE	= 9/9/2011

DESIGNED	- AAN
CHECKED	- MDC
DRAWN	- TJD
CHECKED	- MDC

REVISED	-
REVISED	-
REVISED	-
REVISED	-

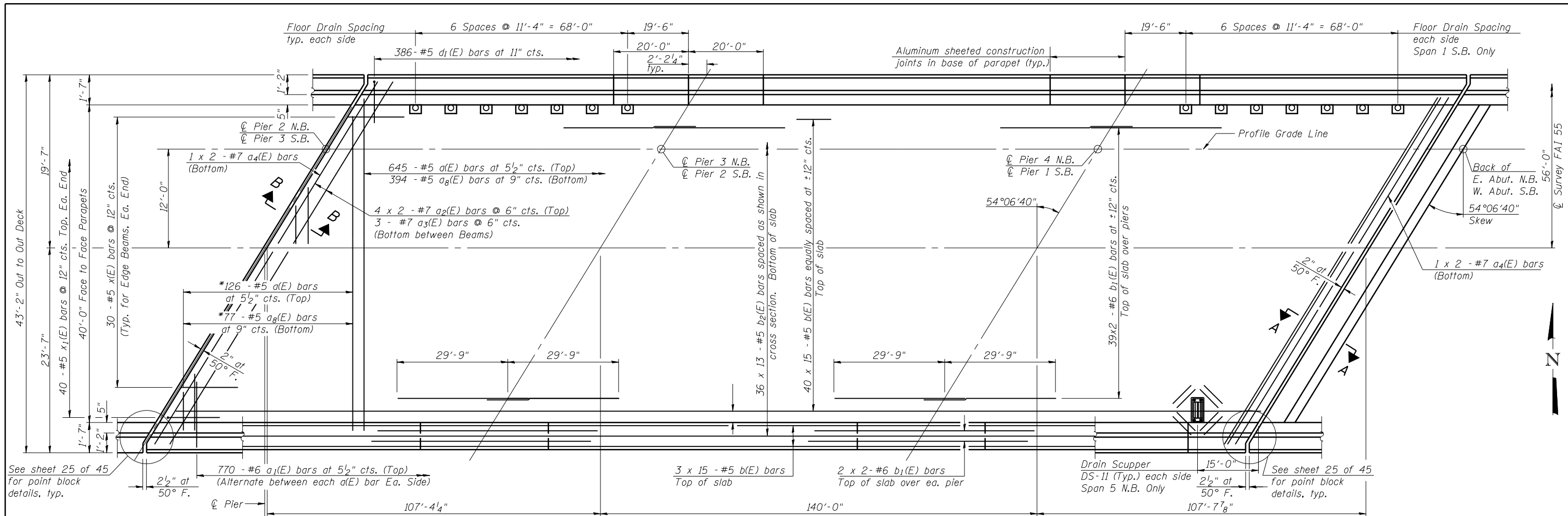
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 054-0053 (NB) & 054-0054 (SB)

SHEET NO. 17 of 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	133
				CONTRACT NO. 72E10

ILLINOIS FED. AID PROJECT



PLAN

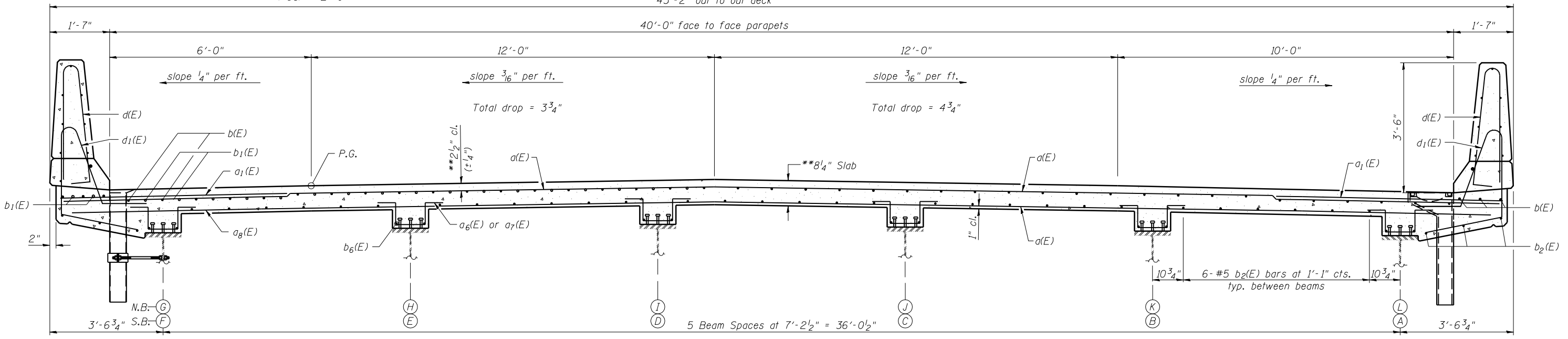
(Unit 1)
 (S.N. 054-0053 N.B. Shown)
 (S.N. 054-0054 S.B. similar by 180° rotation)

Notes:
 See Sheet 21 of 45 for superstructure details and Bill of Material.
 Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 See Sheet 19 of 45 for parapet reinforcement.

Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet 25 of 45.

*Order a(E) & a8(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.
 ** Prior to Grinding

MINIMUM BAR LAP
 #7 bar = 5'-2"
 #6 bar = 3'-10"
 #5 bar = 3'-3"
 #4 bar = 2'-0"



CROSS SECTION

(Looking in the direction of traffic)



JOB = 2265.1
 FILE = 0540053.0054-72E10-18-Super.dgn
 DATE = 9/9/2011

DESIGNED - AAN
 CHECKED - MDC
 DRAWN - TJD
 CHECKED - MDC

REVISED -
 REVISED -
 REVISED -
 REVISED -

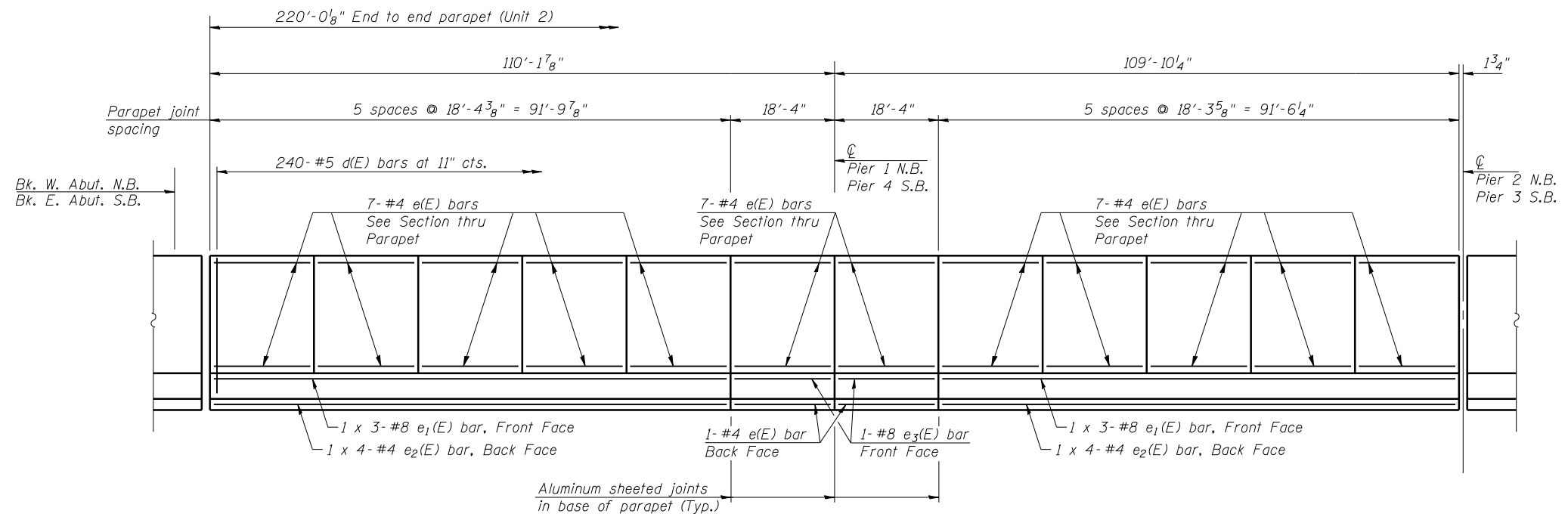
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE
 STRUCTURE NO. 054-0053 (NB) & 054-0054 (SB)**

SHEET NO. 18 of 45 SHEETS

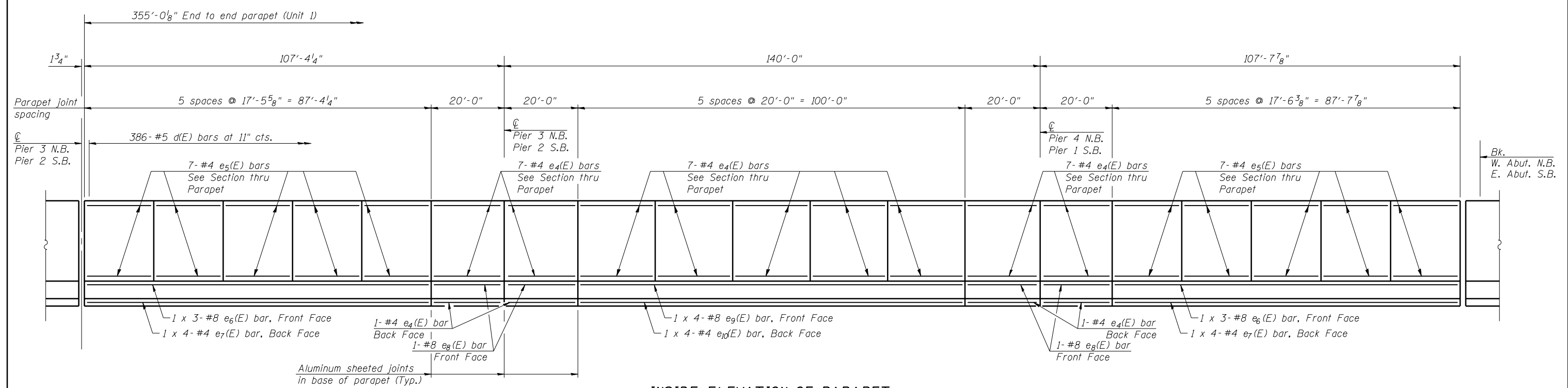
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	134
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT



INSIDE ELEVATION OF PARAPET

(Unit 2)
(North Bound Parapet shown - South Bound Parapet similar by 180° rotation)



INSIDE ELEVATION OF PARAPET

(Unit 1)
(North Bound Parapet shown - South Bound Parapet Similar by 180° rotation)

MINIMUM BAR LAP

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



JOB = 2265.1
FILE = 0540053.0054-72E10-19-Super-Def.dgn
DATE = 9/9/2011

DESIGNED - AAN
CHECKED - MDC
DRAWN - TJD
CHECKED - MDC

REVISED -
REVISED -
REVISED -
REVISED -

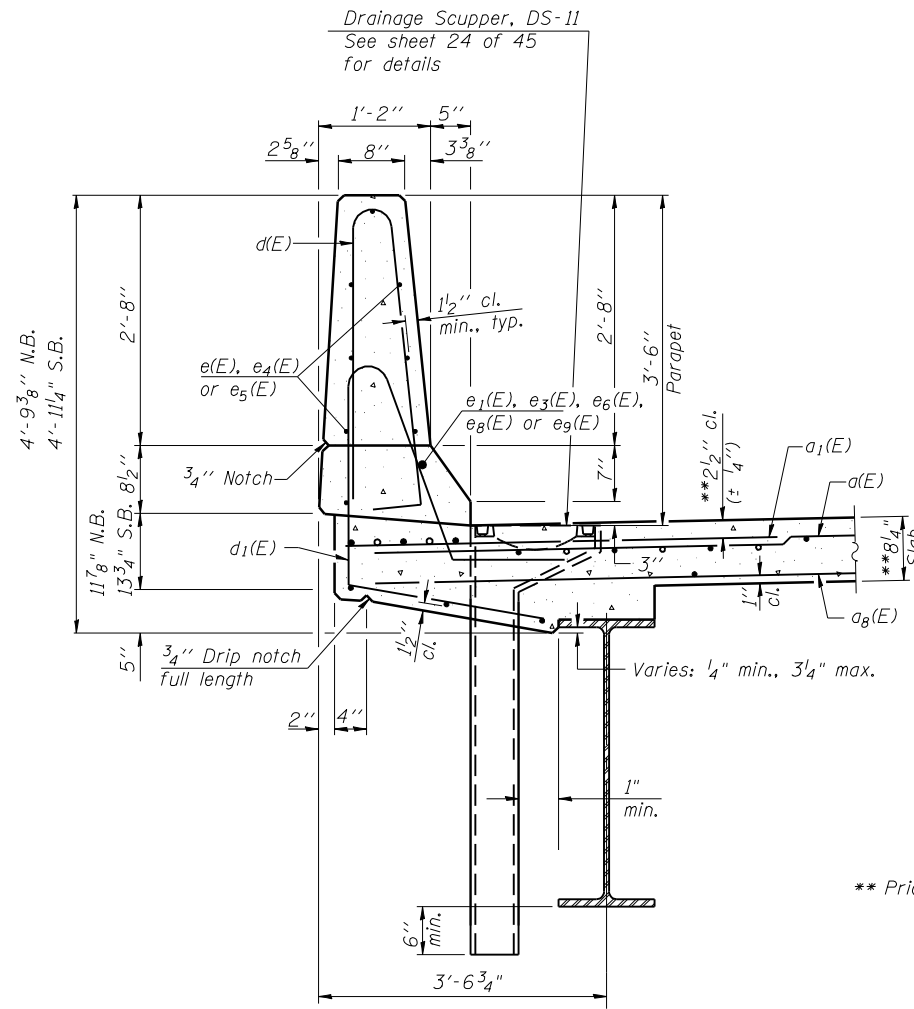
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS
STRUCTURE NO. 054-0053 (NB) & 054-0054 (SB)**

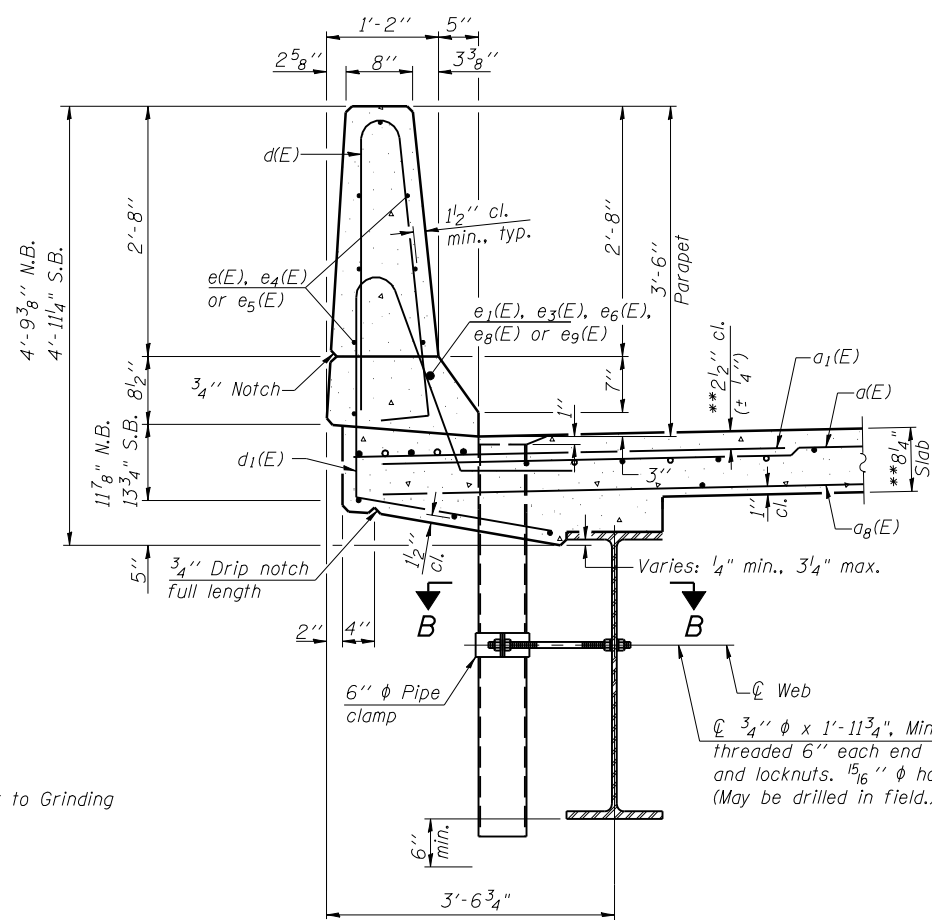
SHEET NO. 19 of 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	135
CONTRACT NO. 72E10				

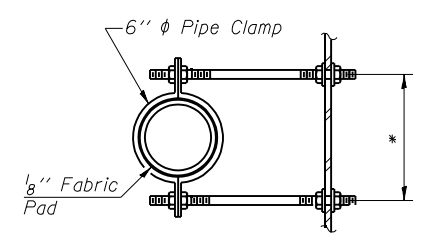
ILLINOIS FED. AID PROJECT



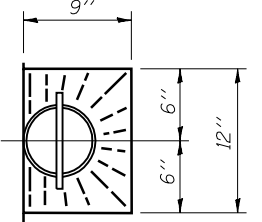
**SECTION A-A THRU PARAPET
SHOWING SCUPPER INSTALLATION**



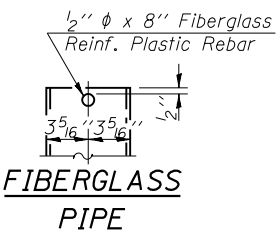
**SECTION THRU PARAPET
SHOWING FLOOR DRAIN INSTALLATION**



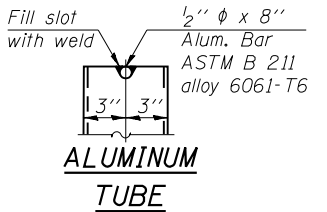
SECTION B-B
* Dimension as required by Pipe Clamp



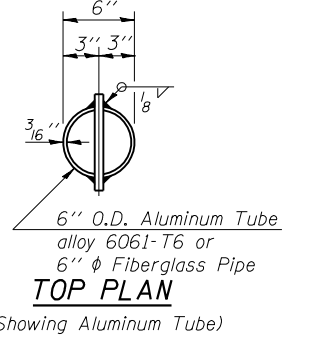
TOP PLAN



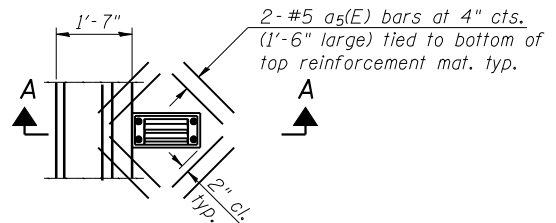
**FIBERGLASS
PIPE**



**ALUMINUM
TUBE**



TOP PLAN
(Showing Aluminum Tube)

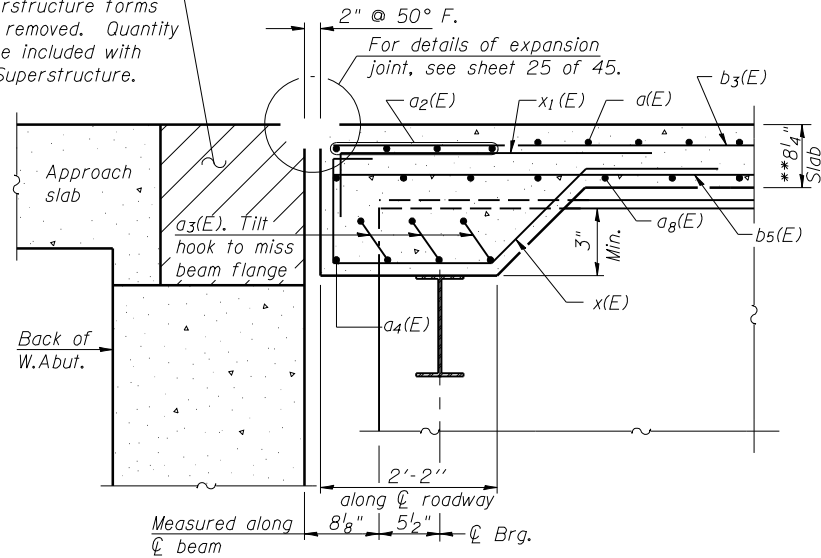


PLAN

Note:
Cut longitudinal reinforcement to clear drainage scuppers.

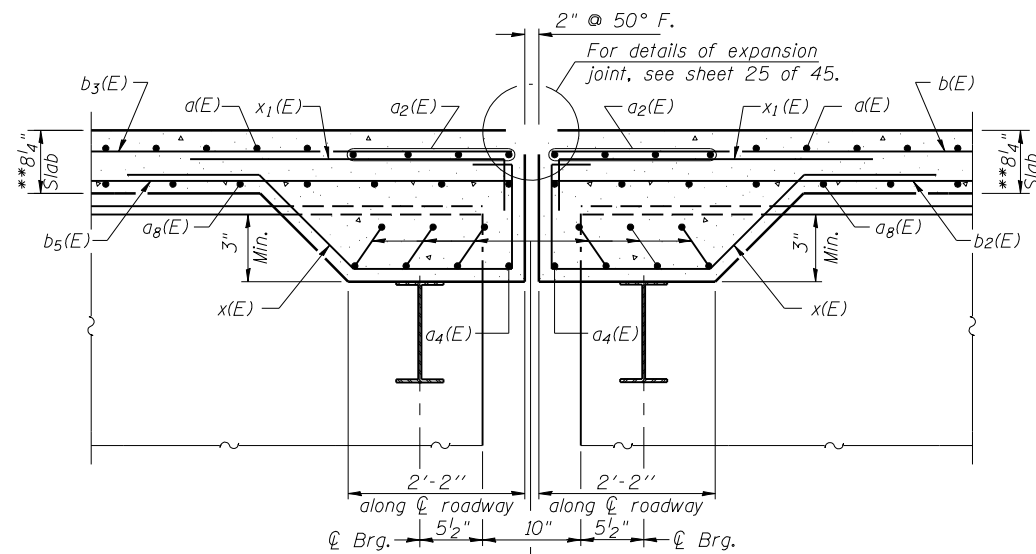
Notes:
Drains shall be located clear of all diaphragms.
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings' Spec. SSPC-SP1 prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

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

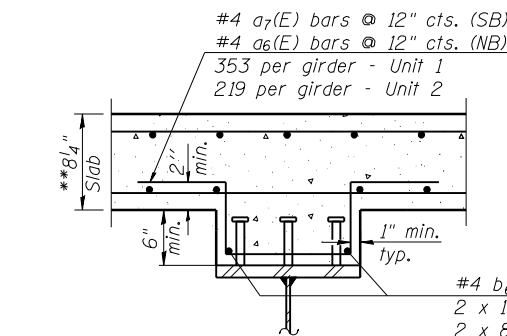


SECTION A-A

** Prior to Grinding

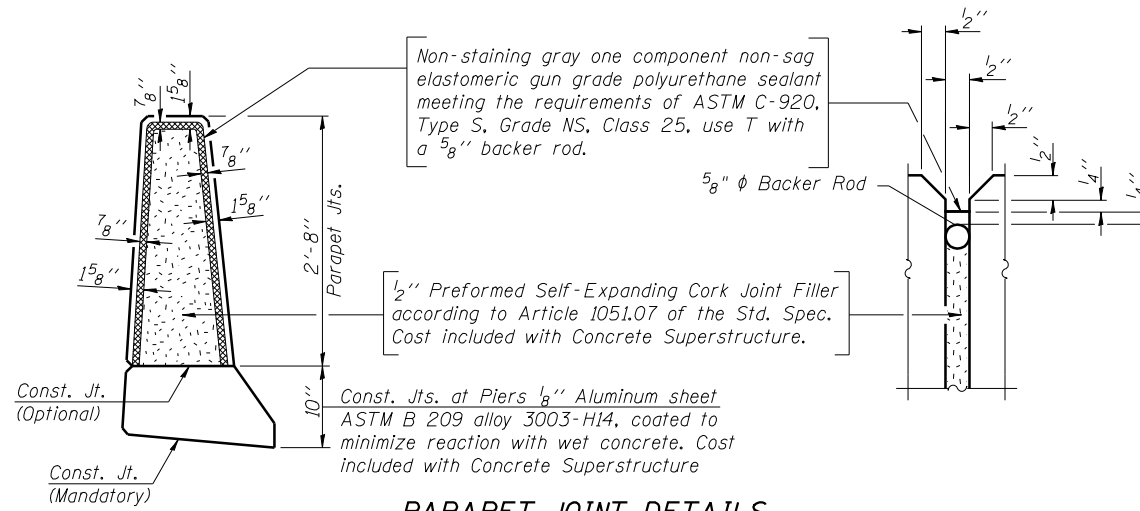


SECTION B-B THRU JOINT AT PIER

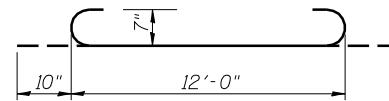


SECTION THRU FILLET

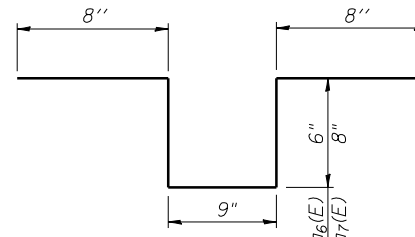
Non-staining gray one component non-sag elastomeric gun grade polyurethane sealant meeting the requirements of ASTM C-920, Type S, Grade NS, Class 25, use T with a 5/8" backer rod.



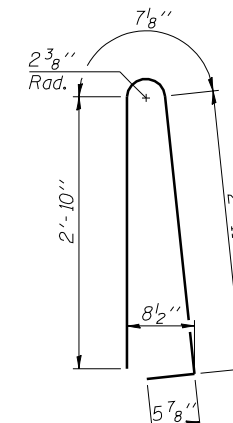
PARAPET JOINT DETAILS



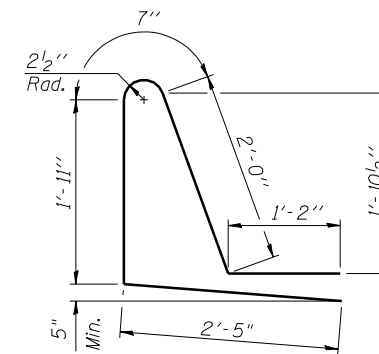
BAR a3(E)



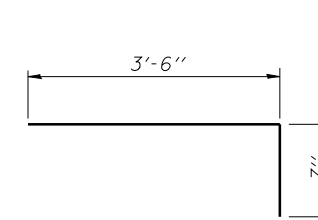
BAR a6(E), a7(E)



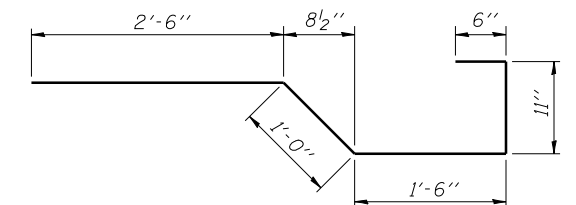
BAR d(E)



BAR d1(E)



BAR x1(E)



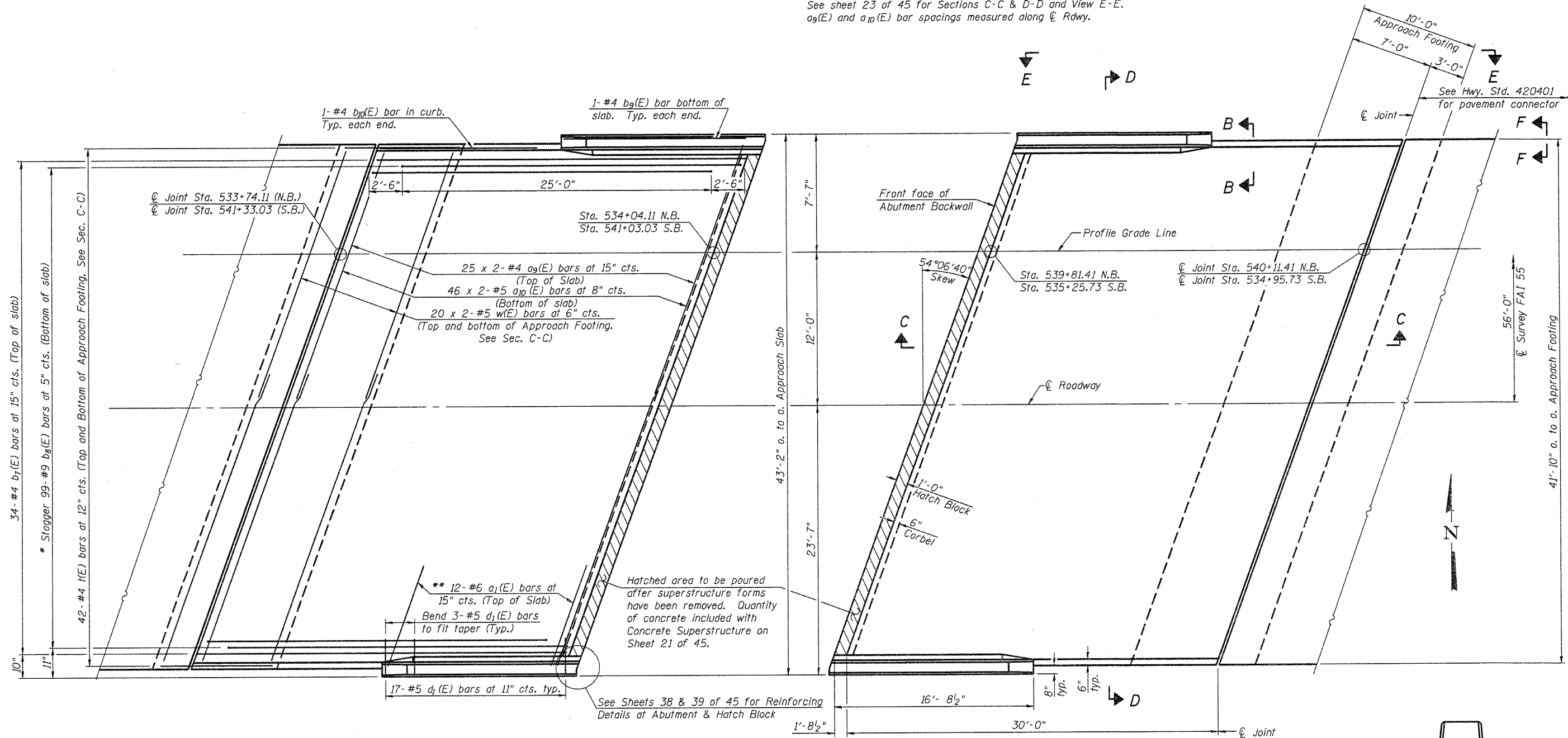
BAR x(E)

TWO (2) SUPERSTRUCTURES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	2496	#5	42'-6"	—
a1(E)	4984	#6	6'-6"	—
a2(E)	64	#7	38'-4"	—
a3(E)	120	#7	13'-8"	U
a4(E)	16	#7	33'-4"	—
a5(E)	48	#5	1'-6"	—
a6(E)	3432	#4	3'-1"	U
a7(E)	3432	#4	3'-5"	U
a8(E)	1526	#5	41'-6"	—
b(E)	1380	#5	26'-7"	—
b1(E)	344	#6	31'-8"	—
b2(E)	936	#5	30'-3"	—
b3(E)	920	#5	24'-11"	—
b4(E)	172	#6	25'-7"	—
b5(E)	648	#5	27'-4"	—
b6(E)	504	#4	29'-3"	—
d(E)	2504	#5	6'-10"	U
d1(E)	2504	#5	8'-1"	U
e(E)	344	#4	18'-0"	—
e1(E)	24	#8	33'-11"	—
e2(E)	32	#4	24'-5"	—
e3(E)	8	#8	18'-0"	—
e4(E)	268	#4	19'-8"	—
e5(E)	280	#4	17'-2"	—
e6(E)	24	#8	32'-6"	—
e7(E)	32	#4	23'-3"	—
e8(E)	16	#8	19'-8"	—
e9(E)	16	#8	28'-10"	—
e10(E)	16	#4	26'-6"	—
x(E)	240	#5	6'-5"	U
x1(E)	320	#5	4'-1"	U
Reinforcement Bars, Epoxy Coated			Pound	454,020
Concrete Superstructure			Cu. Yds.	1,806.6

Bars indicated thus 1 x 3 - #8 etc. indicates 1 line of bars with 3 lengths per line.

Notes:
See sheet 23 of 45 for Sections C-C & D-D and View E-E.
a₉(E) and a₁₀(E) bar spacings measured along \bar{C} Rdwy.

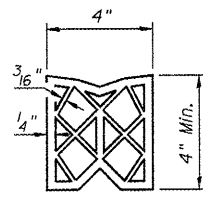


WEST APPROACH PLAN

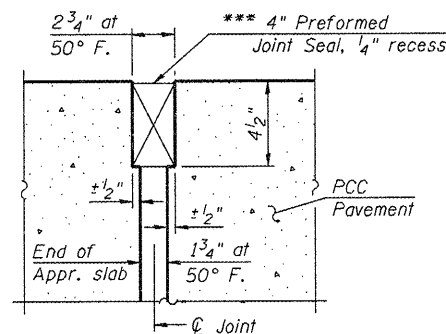
SHOWING REINFORCEMENT

(S.N. 054-0053 shown - S.N. 054-0054 similar by rotation of 180°)

- * Tilt #9 b₈(E) bars as required to maintain clearance.
- ** Space between a₁₀(E) bars, typ. each parapet.

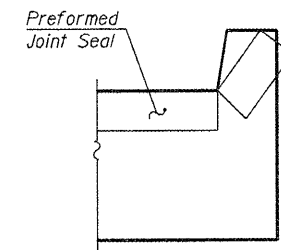


PREFORMED JOINT SEAL



DETAIL A

*** Cost included with Concrete Superstructure.



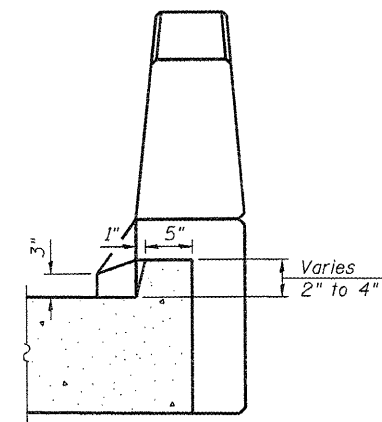
VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

EAST APPROACH PLAN

SHOWING DIMENSIONS

(S.N. 054-0053 shown - S.N. 054-0054 similar by rotation of 180°)



VIEW B-B

(Sheet 1 of 2)



JOB	= 2265.1
FILE	= 0540053_0054-72E10-22-AppDet.dgn
DATE	= 9/28/2011

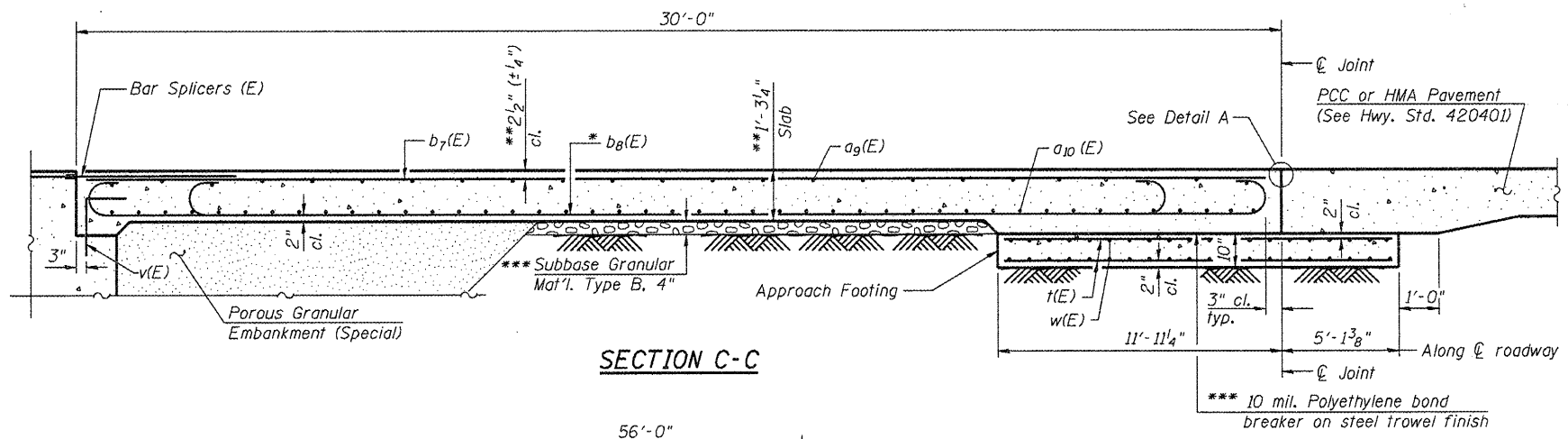
DESIGNED	- AAN	REVISED	-
CHECKED	- MDC	REVISED	-
DRAWN	- TJD	REVISED	-
CHECKED	- MDC	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 054-0053 (NB) & STRUCTURE NO. 054-0054 (SB)**

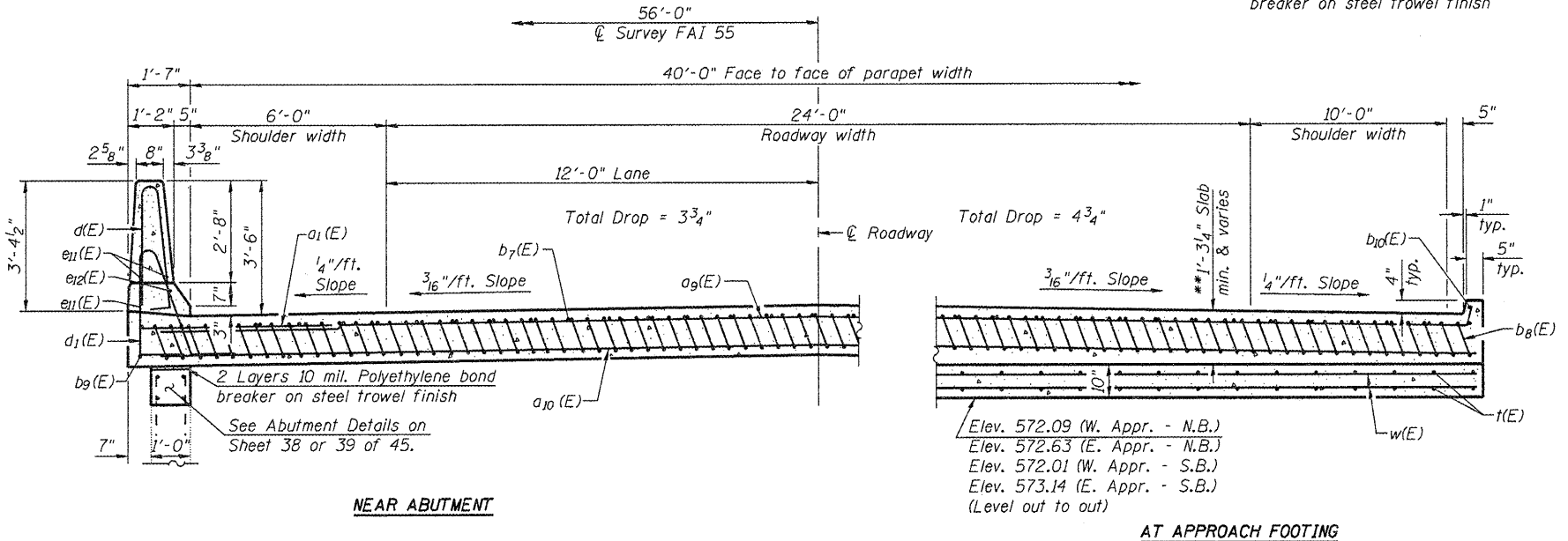
SHEET NO. 22 of 45 SHEETS

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	138
CONTRACT NO. T2E10				
ILLINOIS FED. AID PROJECT				

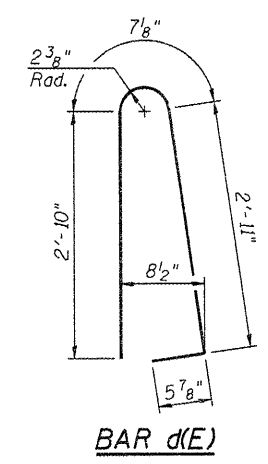


SECTION C-C

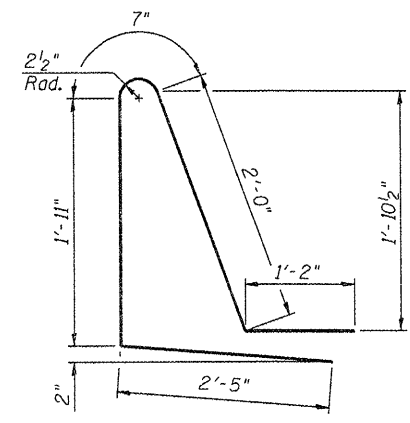
Notes:
 See sheet 22 of 45 for Detail A and View B-B.
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet 40 of 45.
 The approach footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
 For bar splicer details, see sheet 43 of 45.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 45.
 For additional parapet details, see sheet 20 of 45.



SECTION D-D
 (See Plan for dimensions not shown)
 (Looking in direction of traffic)

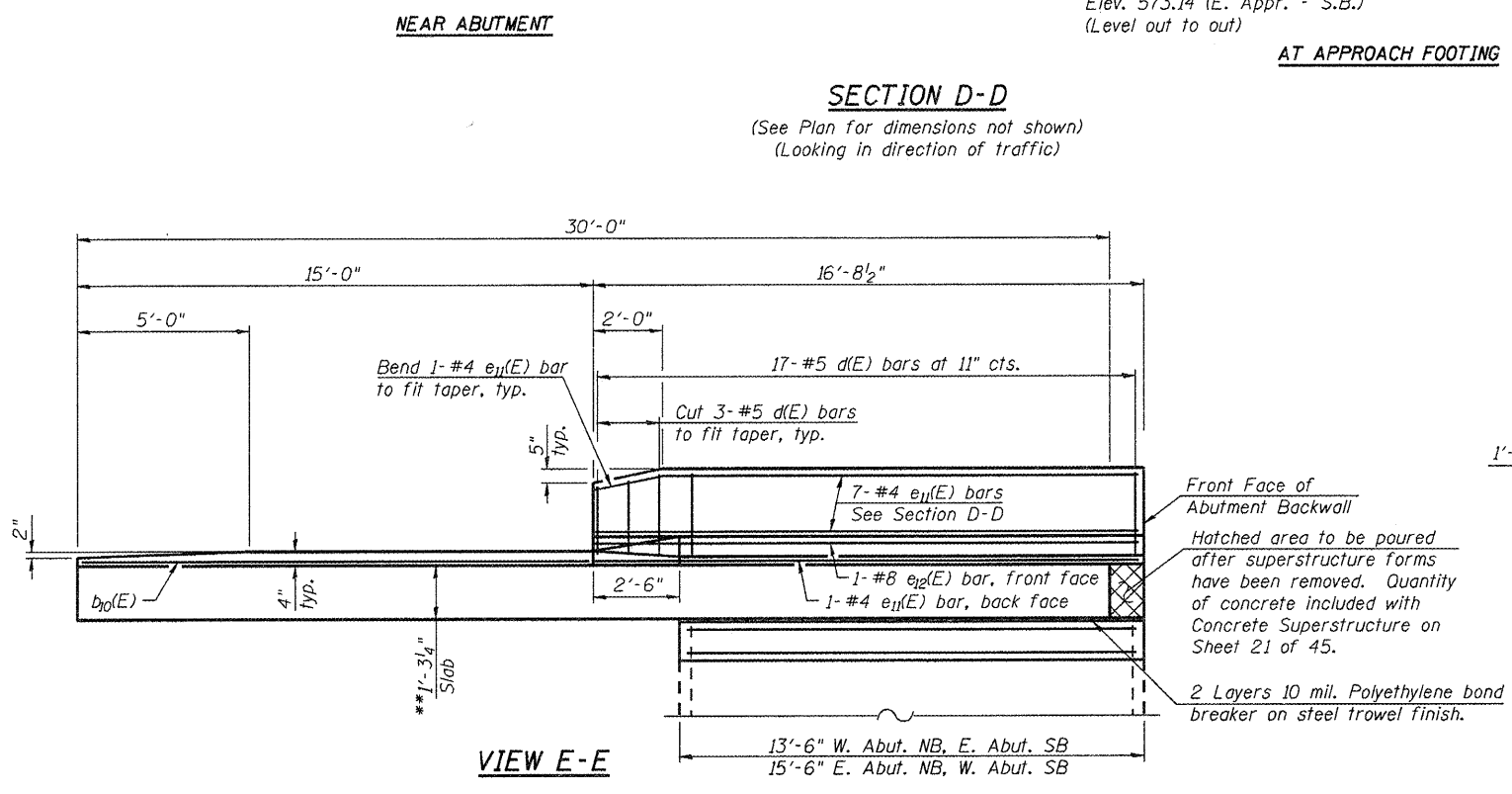


BAR d(E)

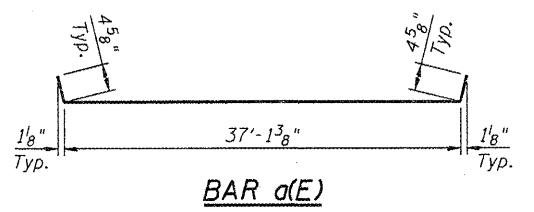


BAR d1(E)

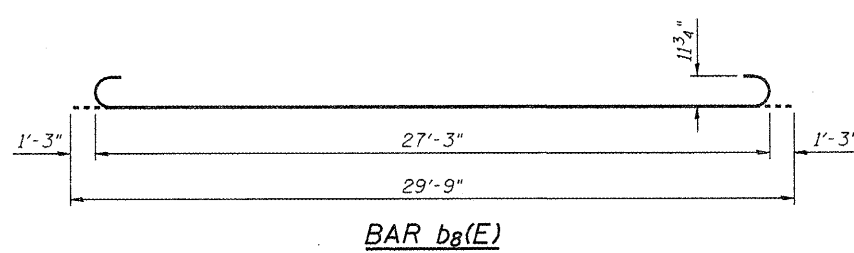
* Tilt #9 b8(E) bars as required to maintain clearance.
 *** Cost included with Concrete Superstructure.
 ** Prior to Grinding



VIEW E-E



BAR a(E)



BAR b8(E)

**FOUR APPROACHES
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a1(E)	96	#6	6'-6"	—
a9(E)	200	#4	37'-6"	—
a10(E)	368	#5	37'-7"	—
b7(E)	136	#4	29'-8"	—
b8(E)	396	#9	29'-9"	—
b9(E)	8	#4	14'-8"	—
b10(E)	8	#4	14'-4"	—
b11(E)	16	#4	12'-2"	—
d(E)	136	#5	6'-10"	—
d1(E)	136	#5	8'-3"	—
e11(E)	64	#4	15'-8"	—
e12(E)	8	#8	15'-8"	—
t(E)	168	#4	9'-10"	—
w(E)	320	#5	37'-7"	—
Concrete Superstructure			Cu. Yd.	305.0
Concrete Structures			Cu. Yd.	88.1
Reinforcement Bars, Epoxy Coated			Pound	80,200

(Sheet 2 of 2)

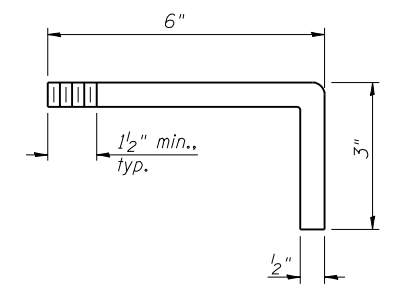
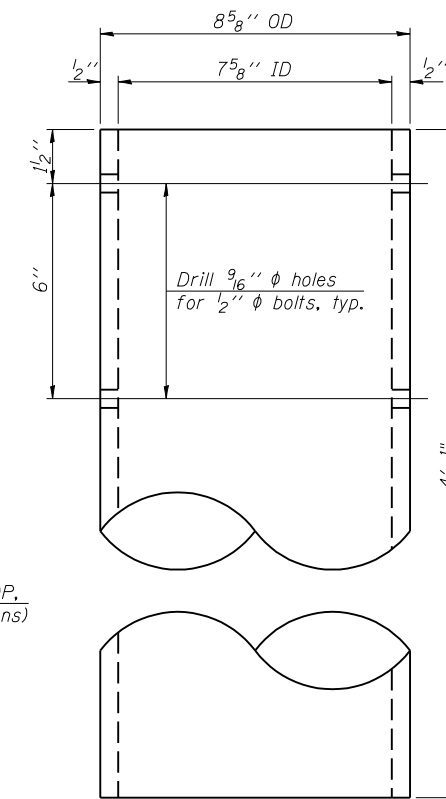
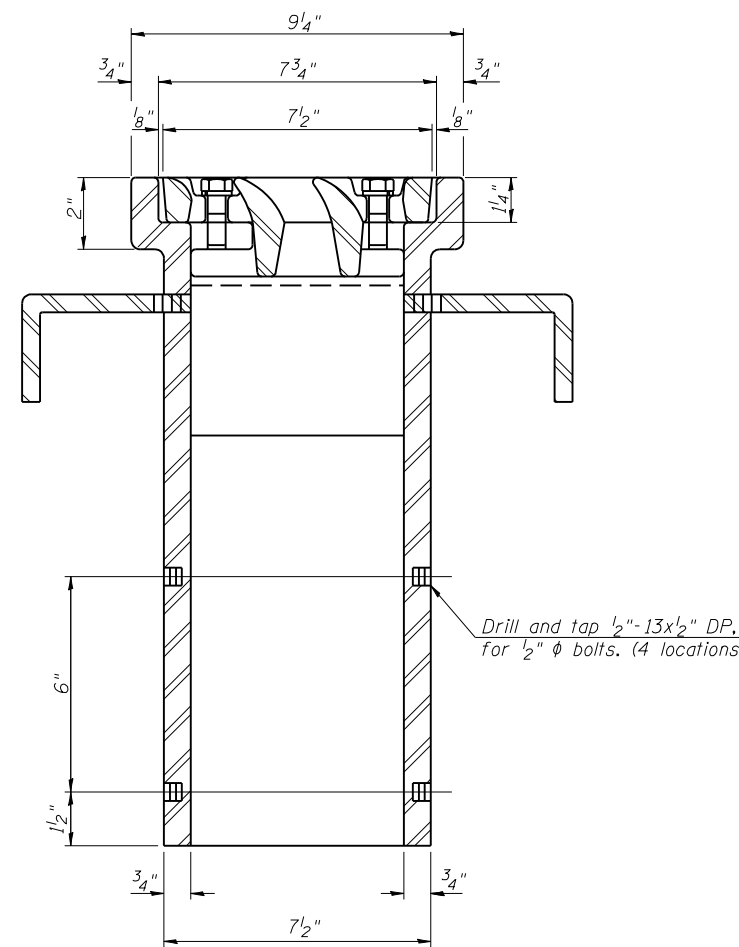
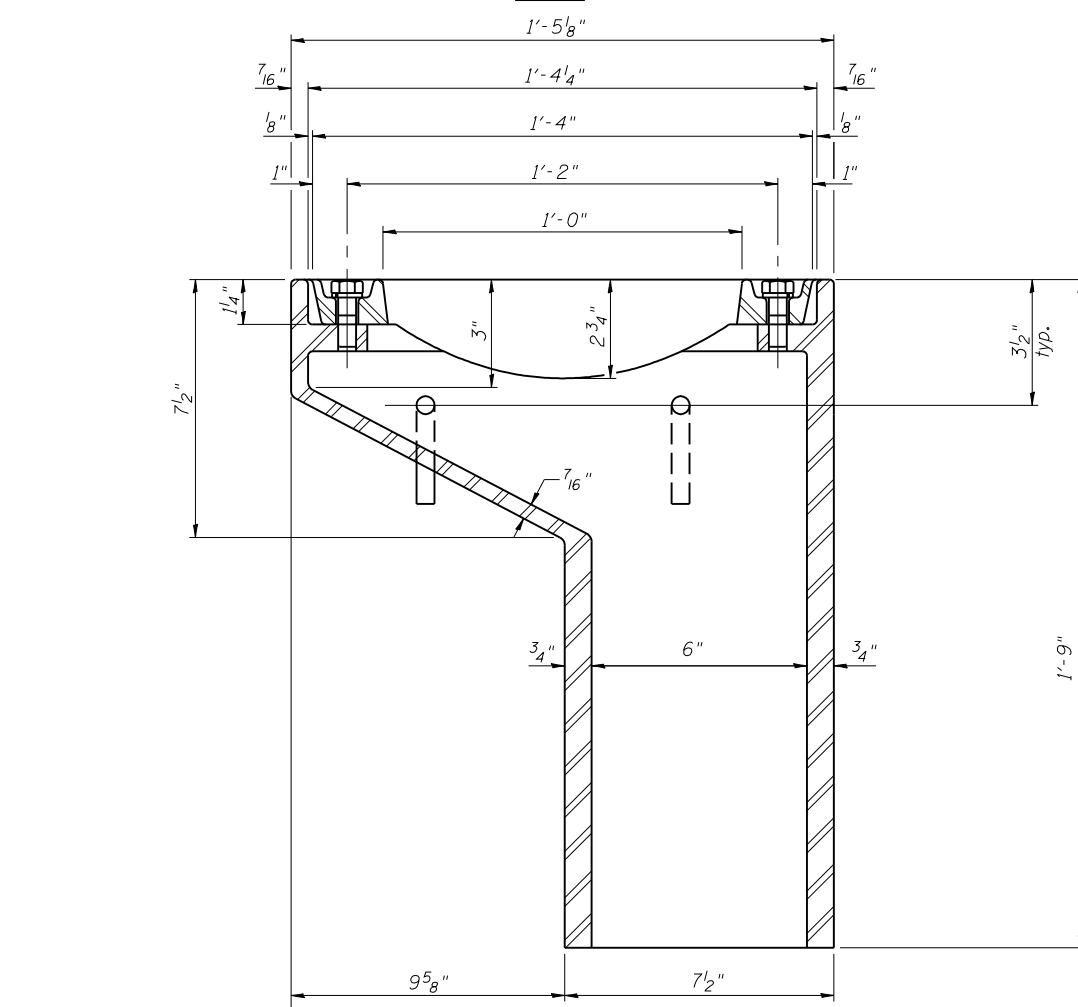
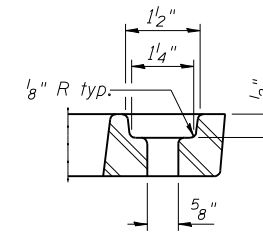
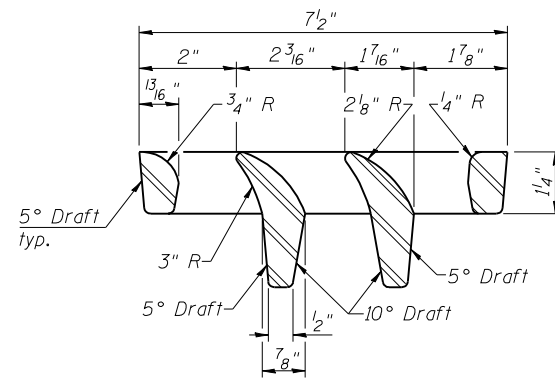
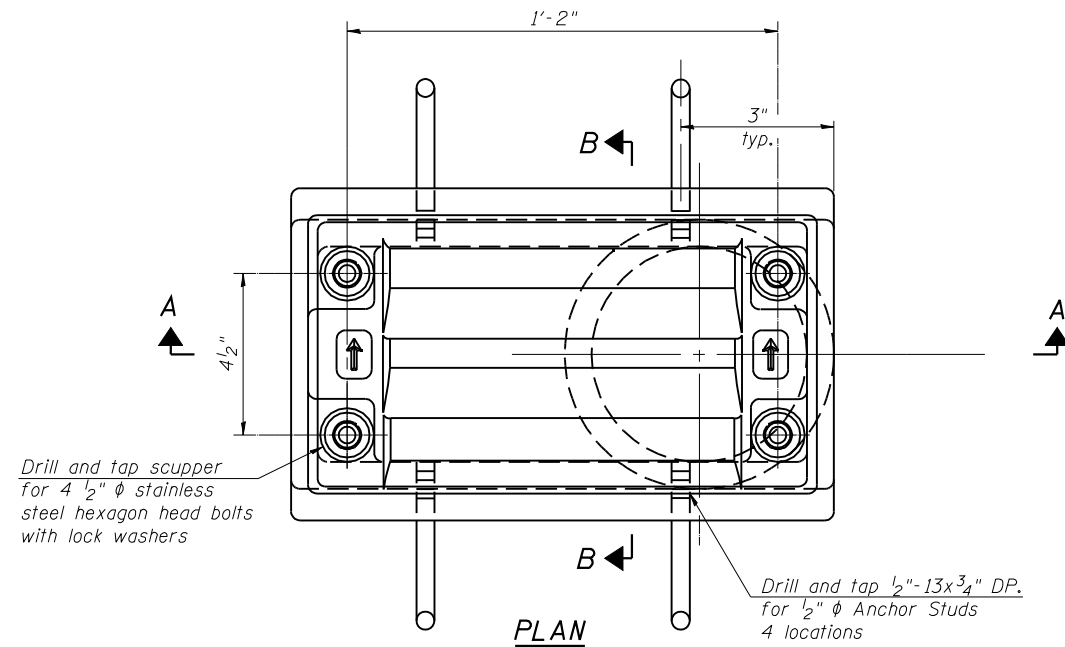


JOB	= 2265.1	DESIGNED	- AAN	REVISED	-
FILE	= 0540853.0854-72E10-23-AppDet.dgn	CHECKED	- MDC	REVISED	-
DATE	= 9/28/2011	DRAWN	- TJD	REVISED	-
		CHECKED	- MDC	REVISED	-

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS
 STRUCTURE NO. 054-0053 (NB) & STRUCTURE NO. 054-0054 (SB)**
 SHEET NO. 23 OF 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	139
				CONTRACT NO. T2E10
ILLINOIS FED. AID PROJECT				



See sheet 20 of 45 for scupper location relative to parapet.

DOWNSPOUT

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	6

DS-11 7-1-10



JOB = 2265.1
 FILE = 0540053.0054-72E10-24-SuperDet.dgn
 DATE = 9/9/2011

DESIGNED - AAN
 CHECKED - MDC
 DRAWN - MFC
 CHECKED - MDC

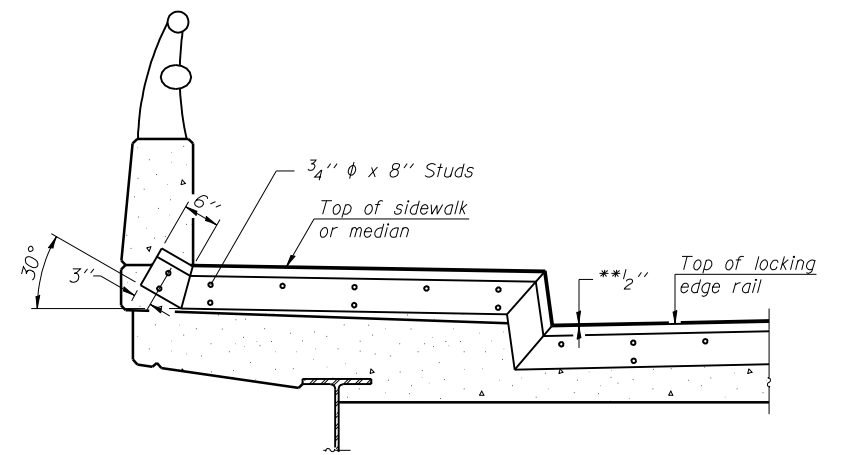
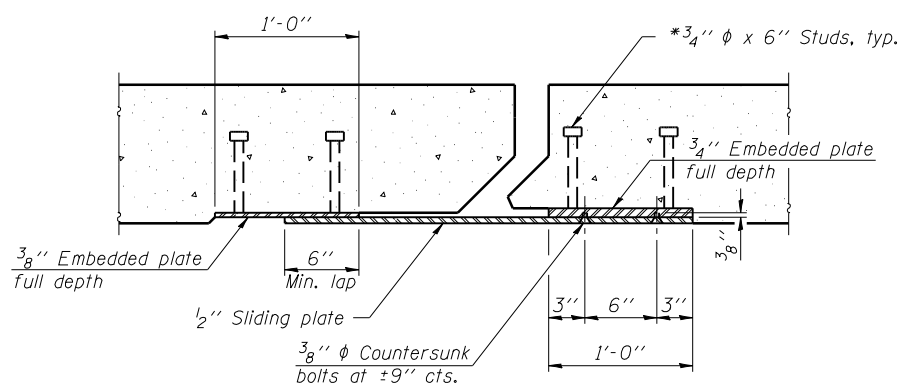
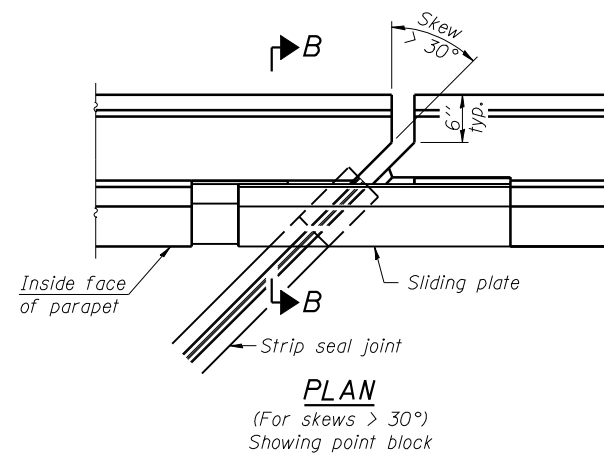
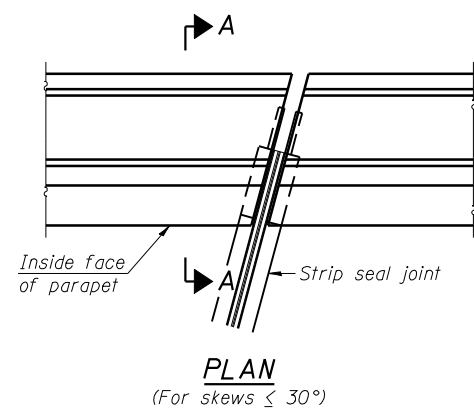
REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

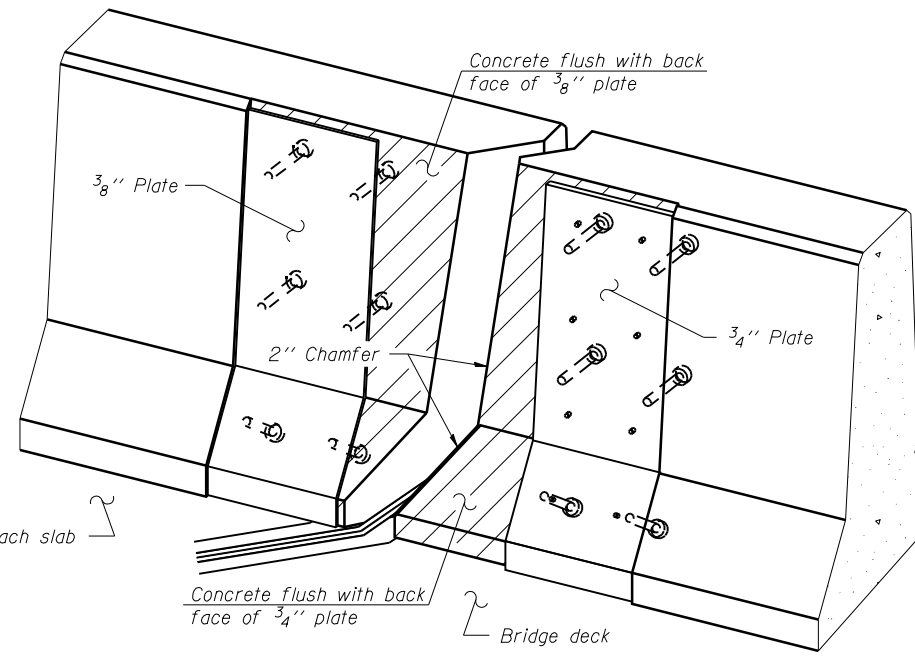
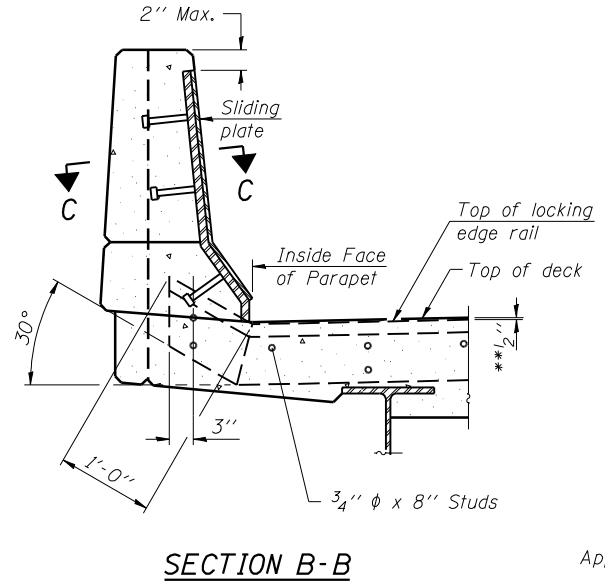
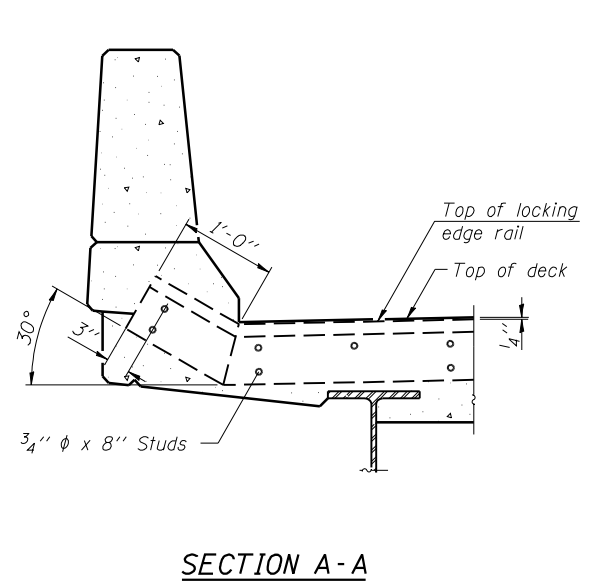
**DRAINAGE SCUPPER, DS-11
 STRUCTURE NO. 054-0053 (NB) & 054-0054 (SB)**

SHEET NO. 24 of 45 SHEETS

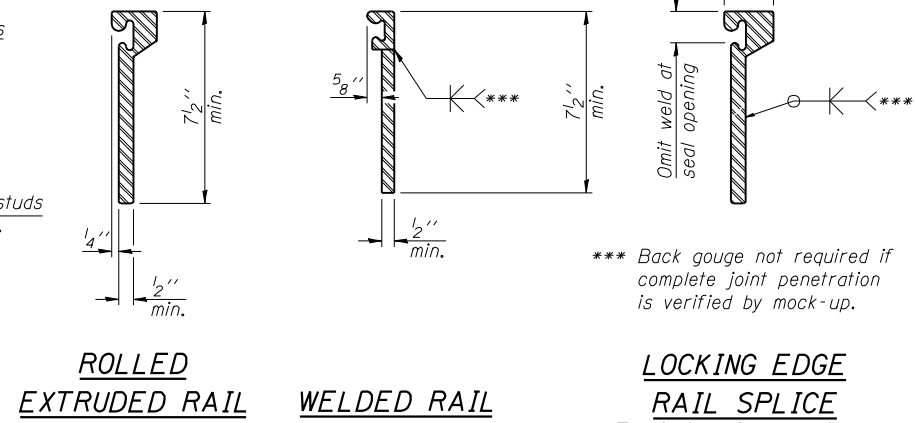
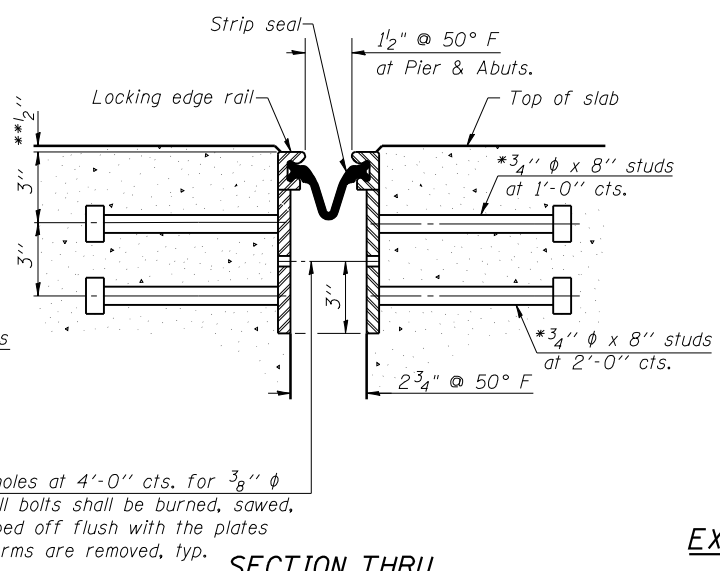
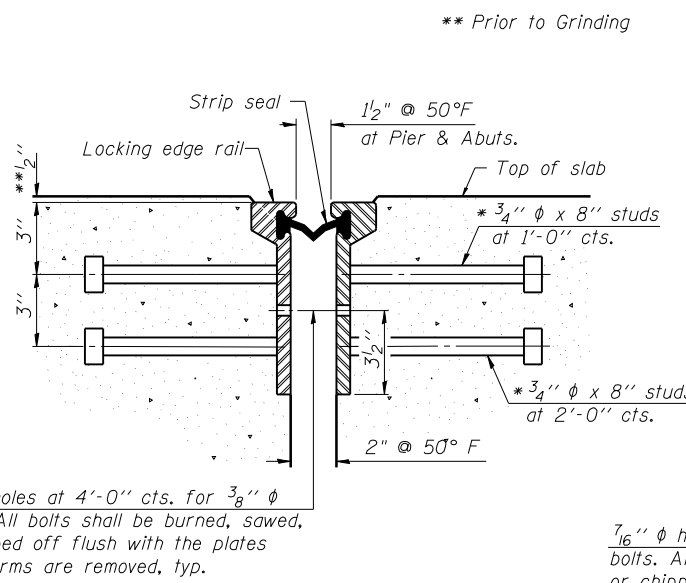
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	140
				CONTRACT NO. 72E10
ILLINOIS FED. AID PROJECT				



TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN
 Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
 The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.
 The manufacturer's recommended installation methods shall be followed.
 The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
 All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
 Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.
 Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



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

LOCKING EDGE RAIL SPLICE
 The inside of the locking edge rail groove shall be free of weld residue.
 Rolled rail shown, welded rail similar.

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	432



JOB = 2265.1
 FILE = 0540053.0054-72E10-25-Expansion.dgn
 DATE = 9/9/2011

DESIGNED - AAN
 CHECKED - MDC
 DRAWN - TJD
 CHECKED - MDC

REVISED -
 REVISED -
 REVISED -
 REVISED -

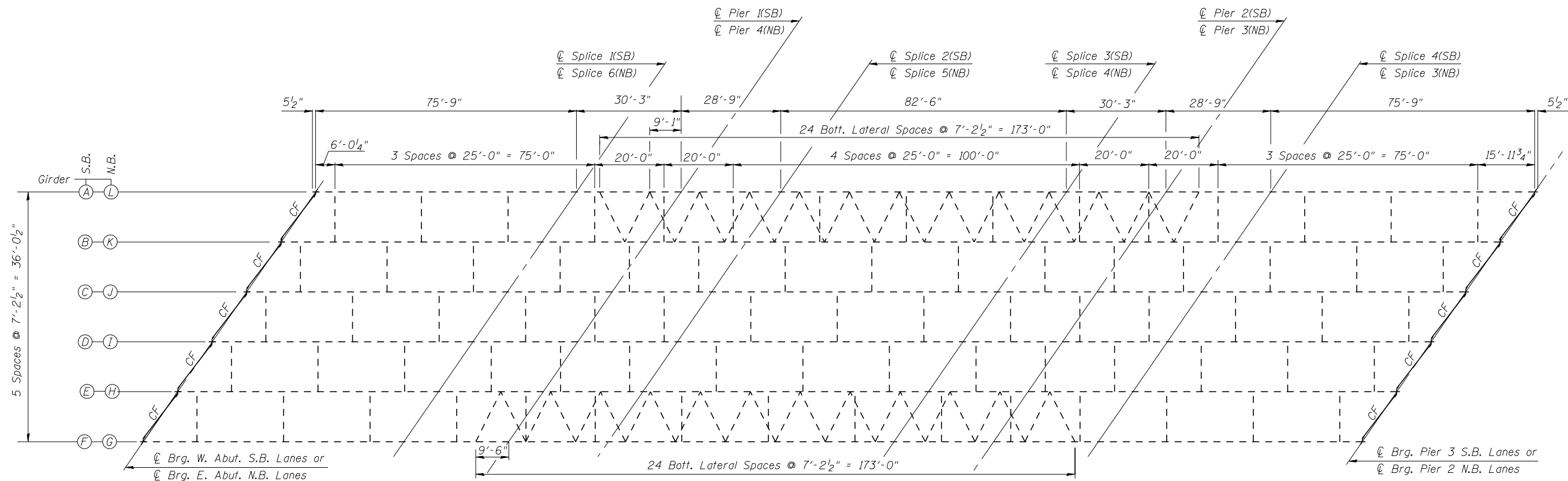
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**MODIFIED PREFORMED JOINT STRIP SEAL
 STRUCTURE NO. 054-0053 (NB) & 054-0054 (SB)**

SHEET NO. 25 of 45 SHEETS

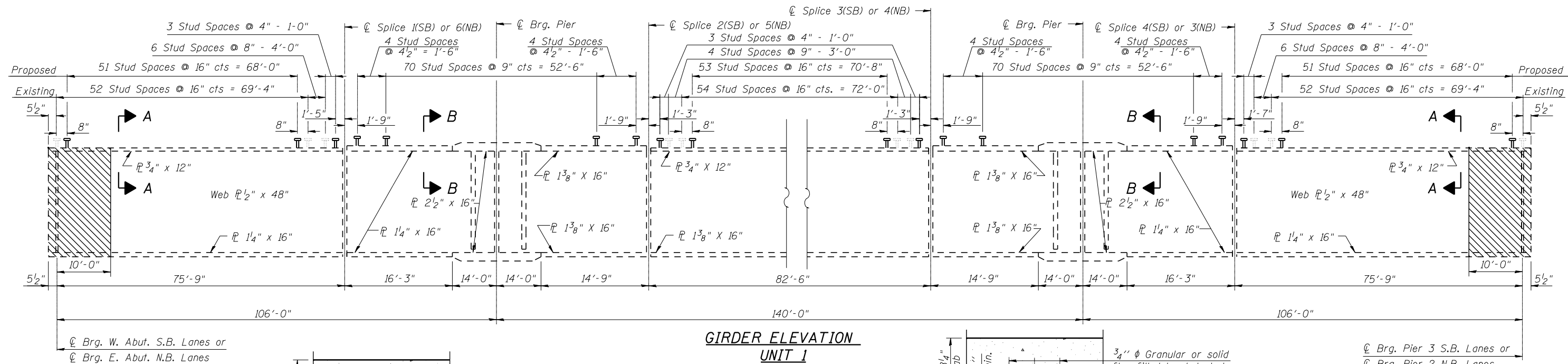
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	141
				CONTRACT NO. 72E10

ILLINOIS FED. AID PROJECT

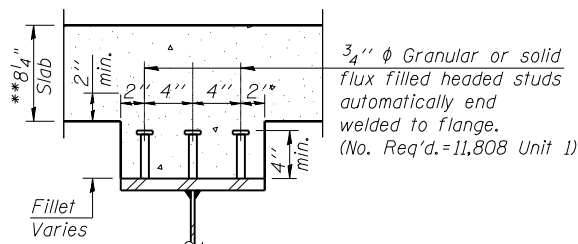


FRAMING LAYOUT UNIT 1

S.B. SHOWN (N.B. SIMILAR BY 180° ROTATION)

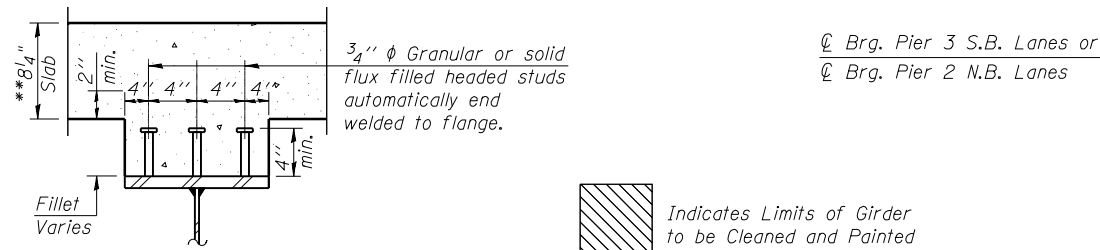


GIRDER ELEVATION UNIT 1



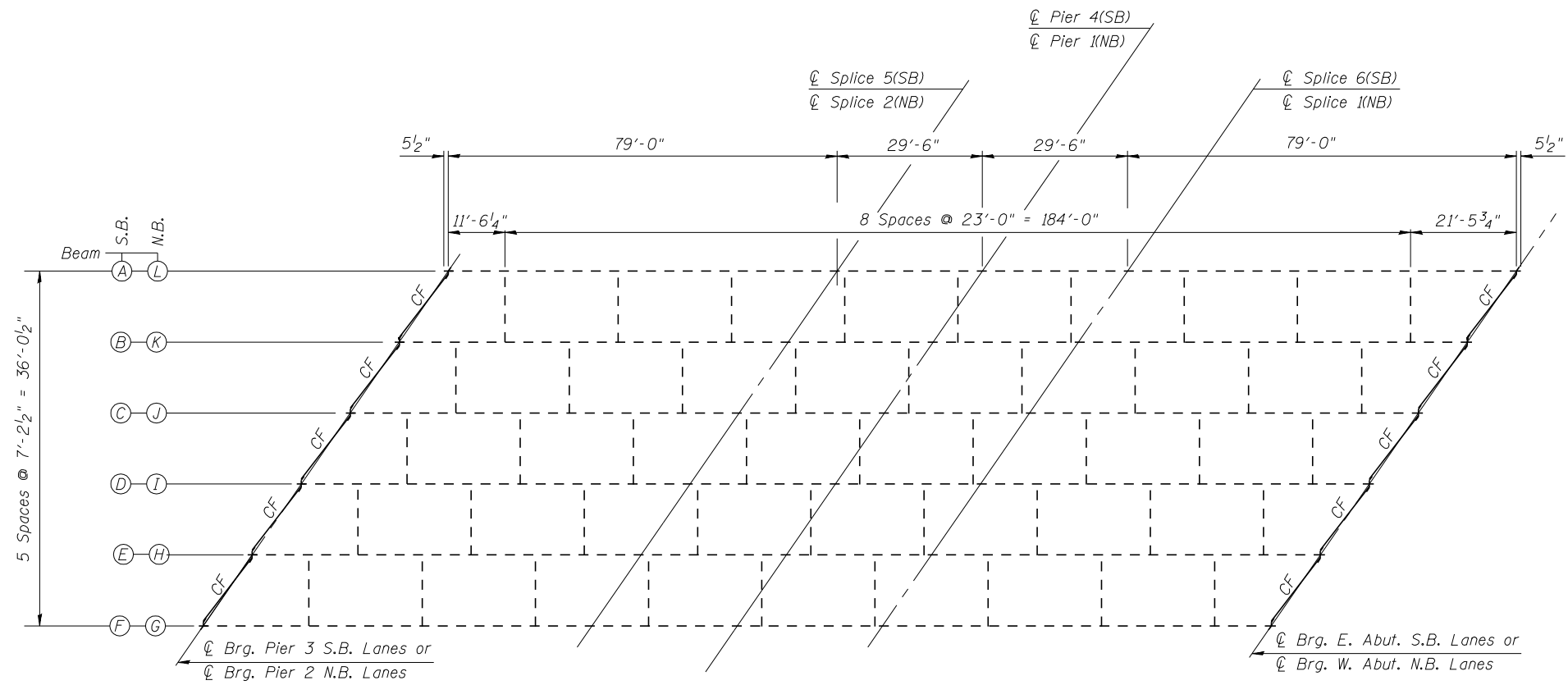
SECTION A-A

** Prior to Grinding

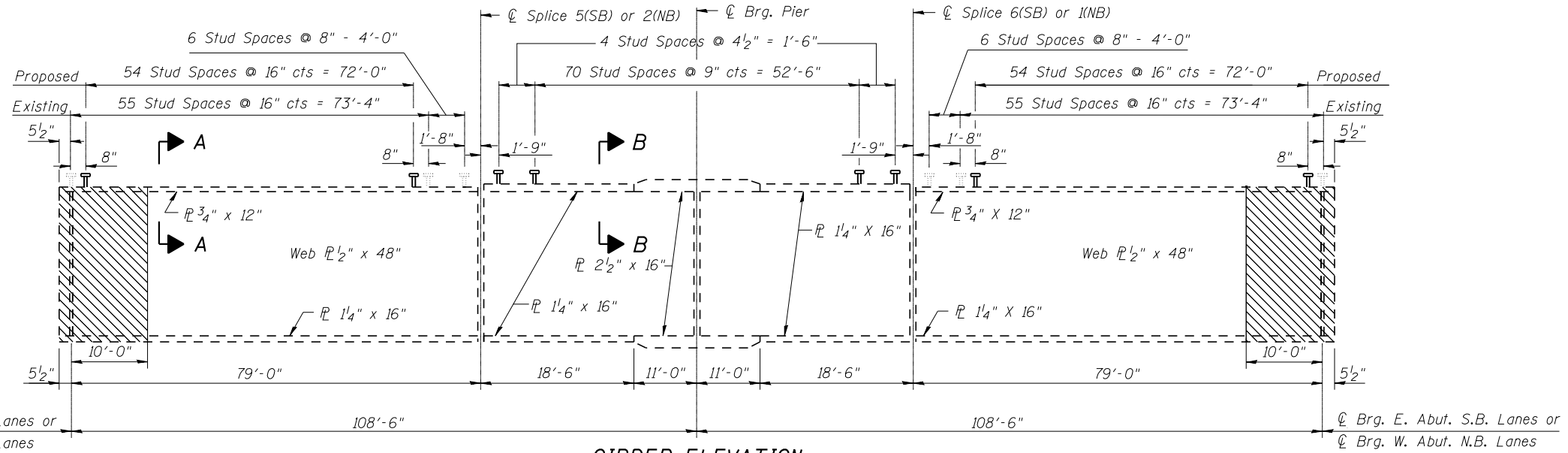


SECTION B-B

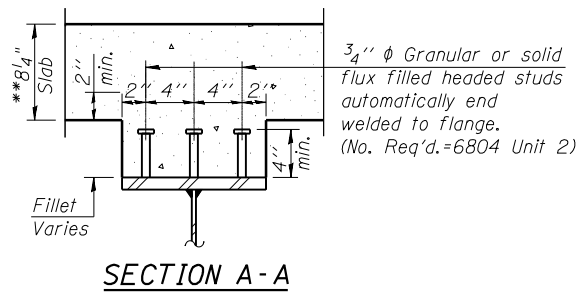
Indicates Limits of Girder to be Cleaned and Painted



FRAMING LAYOUT UNIT 2
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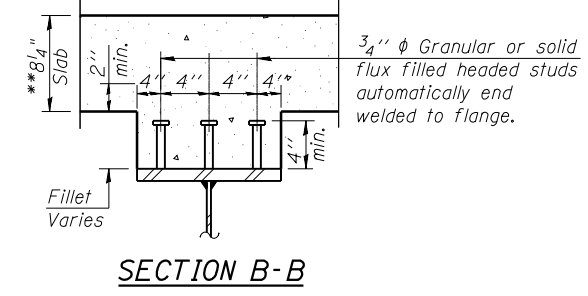


GIRDER ELEVATION UNIT 2



SECTION A-A

** Prior to Grinding



SECTION B-B

Indicates Limits of Girder to be Cleaned and Painted



JOB = 2265.1
FILE = 0540053.0054-72E10-27-Steel.dgn
DATE = 9/9/2011

DESIGNED - AAN
CHECKED - MDC
DRAWN - MFC
CHECKED - MDC

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL UNIT 2
STRUCTURE NO. 054-0053 (NB) & STRUCTURE NO. 054-0054 (SB)**

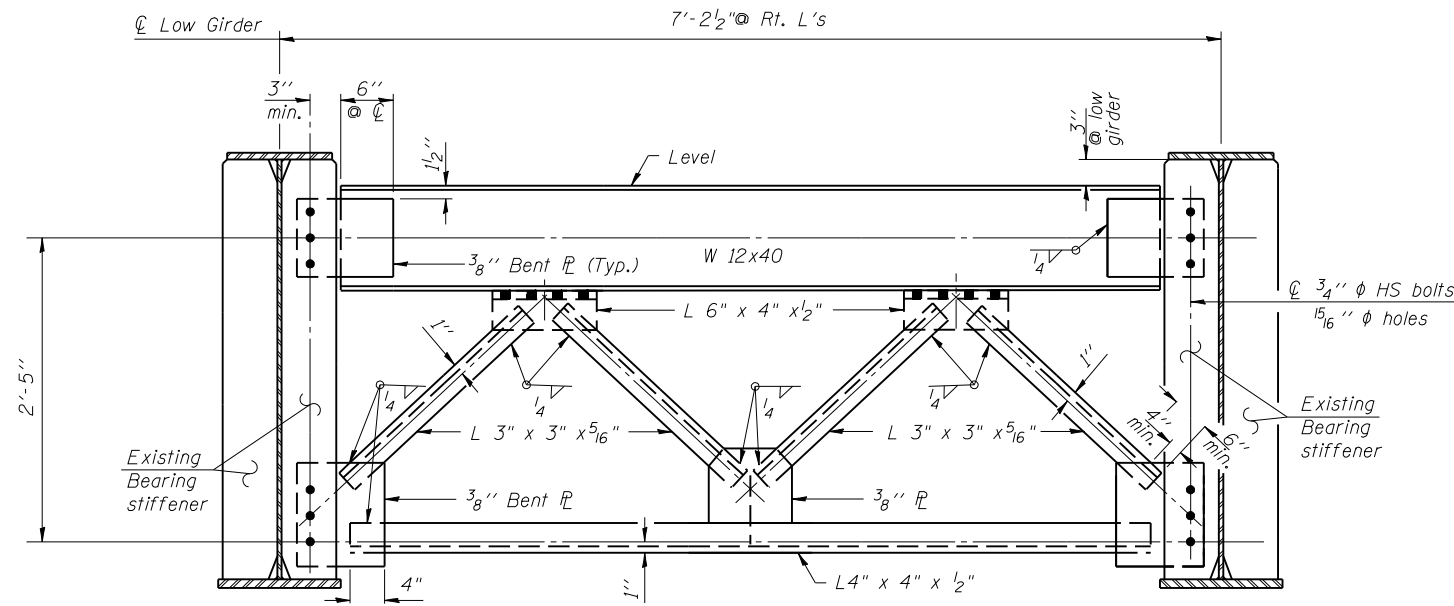
SHEET NO. 27 of 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	143
				CONTRACT NO. 72E10

ILLINOIS FED. AID PROJECT

TOP OF EXISTING WEB ELEVATIONS

(For Information Only)



TYPICAL END CROSS FRAME

Note: Two hardened washers required for each set of oversized holes.
(40 Required)

- I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.⁴ and in.³).
- $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in.⁴ and in.³).
- $I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in.⁴ and in.³).
- ϕ : Un-factored non-composite dead load (kips/ft.).
- $M\phi$: Un-factored moment due to non-composite dead load (kip-ft.).
- $s\phi$: Un-factored long-term composite (superimposed) dead load (kips/ft.).
- $M_s\phi$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- M_L : Un-factored live load moment (kip-ft.).
- M_I : Un-factored moment due to impact (kip-ft.).
- M_a : Factored design moment (kip-ft.).
 $1.3 [M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)]$
- M_u : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
- f_s (Overload): Sum of stresses as computed from the moments below (ksi).
 $M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)$
- f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.3 [M\phi + M_s\phi + \frac{5}{3} (M_L + M_I)]$
- VR: Maximum \pm impact shear range within the composite portion of the span for stud shear connector design (kips).

S.B. LANES

UNIT 1

N.B. LANES

Location	Girder A	Girder B	Girder C	Girder D	Girder E	Girder F
Br. W. Abut	596.79	596.91	596.99	597.02	596.87	596.69
Splice 1	596.91	597.04	597.15	597.19	597.05	596.90
Br. Pier 1	596.85	597.19	597.10	597.15	597.02	596.87
Splice 2	596.96	597.11	597.22	597.28	597.16	597.01
Splice 3	596.87	597.04	597.17	597.24	597.17	597.03
Br. Pier 2	596.70	596.88	597.02	597.10	597.01	596.89
Splice 4	596.70	596.89	597.04	597.13	597.04	596.92
Br. Pier 3	596.42	596.62	596.79	596.89	596.83	596.73

Location	Girder L	Girder K	Girder J	Girder I	Girder H	Girder G
Br. E. Abut	596.38	596.48	596.54	596.54	596.37	596.17
Splice 4	596.67	596.78	596.86	596.88	596.73	596.54
Br. Pier 4	596.67	596.79	596.88	596.91	596.76	596.58
Splice 3	596.84	596.97	597.07	597.11	596.96	596.79
Splice 2	596.95	597.10	597.21	597.27	597.13	596.99
Br. Pier 3	596.85	597.00	597.12	597.18	597.06	596.92
Splice 1	596.92	597.07	597.20	597.26	597.16	597.02
Br. Pier 2	596.81	596.99	597.14	597.22	597.13	597.02

S.B. LANES

UNIT 2

N.B. LANES

Location	Girder A	Girder B	Girder C	Girder D	Girder E	Girder F
Br. Pier 3	596.42	596.62	596.79	596.89	596.83	596.73
Splice 5	595.89	596.11	596.30	596.42	596.37	596.29
Br. Pier 4	595.56	595.79	595.98	596.11	596.07	596.00
Splice 6	595.44	595.68	595.87	596.01	595.98	595.92
Br. E. Abut.	594.72	594.97	595.19	595.35	595.33	595.29

Location	Girder L	Girder K	Girder J	Girder I	Girder H	Girder G
Br. Pier 2	596.81	596.99	597.14	597.22	597.13	597.02
Splice 5	596.46	596.67	596.83	596.93	597.46	596.76
Br. Pier 1	596.20	596.41	596.58	596.69	596.62	596.53
Splice 6	596.15	596.36	596.54	596.66	596.59	596.51
Br. W. Abut.	595.61	595.84	596.03	596.17	596.13	596.07

Note: Elevations have been taken from the existing plans and reduced by 0.38' to match the new bench mark datum.

UNIT 1

UNIT 2

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or 2 (SB) Pier 3 or 4 (NB)	0.5 Sp. 2
I_s	(in ⁴) 20,679	55,655	21,462
$I_c(n)$	(in ⁴) 58,764	62,195	62,022
$I_c(3n)$	(in ⁴) 41,561	-	43,490
S_s	(in ³) 1,029	2,100	1,101
$S_c(n)$	(in ³) 1,447	2,183	1,545
$S_c(3n)$	(in ³) 1,323	-	1,414
ϕ	(k/ft) 1.026	1.225	1.033
$M\phi$	(k) 643	1,890	687
$s\phi$	(k/ft) 0.534	0.534	0.534
$M_s\phi$	(k) 357	904	404
M_L	(k) 864	1,063	870
M_{IM}	(k) 182	223	182
$^{5/3}[M_L + I]$	(k) 1,743	2,143	1,753
M_a	(k) 3,566	6,418	3,697
M_u	(k) 5,318	6,459	5,821
$f_s \phi$ non-comp	(ksi) 7.50	10.80	7.49
$f_s \phi$ (comp)	(ksi) 3.24	4.97	3.43
$f_s \ ^{5/3}[M_L + M_I]$	(ksi) 14.45	11.78	13.62
f_s (Overload)	(ksi) 25.19	27.55	24.54
f_s (Total)	(ksi) 32.75	35.82	31.90
VR	(k) 59.10	59.40	59.03

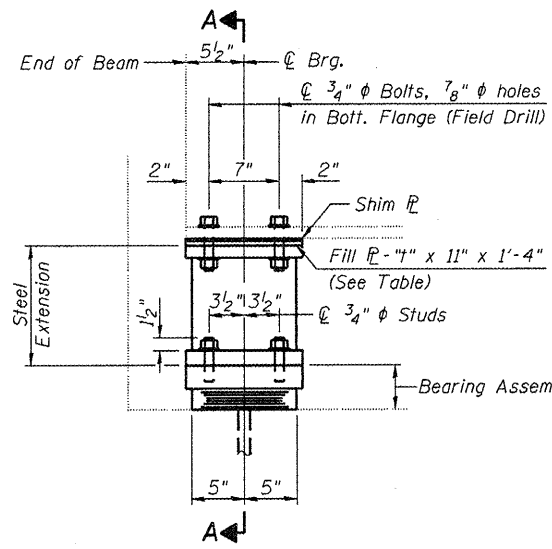
INTERIOR GIRDER MOMENT TABLE		
	0.4 Sp. 1 or 0.6 Sp. 2	Pier 1 (NB) Pier 4 (SB)
I_s	(in ⁴) 20,679	55,655
$I_c(n)$	(in ⁴) 58,764	62,195
$I_c(3n)$	(in ⁴) 41,561	-
S_s	(in ³) 1,029	2,100
$S_c(n)$	(in ³) 1,447	2,183
$S_c(3n)$	(in ³) 1,323	-
ϕ	(k/ft) 1.026	1.225
$M\phi$	(k) 725	1,852
$s\phi$	(k/ft) 0.534	0.534
$M_s\phi$	(k) 405	870
M_L	(k) 877	940
M_{IM}	(k) 184	198
$^{5/3}[M_L + I]$	(k) 1,768	1,896
M_a	(k) 3,767	6,003
M_u	(k) 5,069	6,454
$f_s \phi$ non-comp	(ksi) 8.45	10.58
$f_s \phi$ (comp)	(ksi) 3.67	4.78
$f_s \ ^{5/3}[M_L + M_I]$	(ksi) 14.66	10.43
f_s (Overload)	(ksi) 26.78	25.79
f_s (Total)	(ksi) 34.81	33.53
VR	(k) 57.85	55.16

INTERIOR GIRDER REACTION TABLE			
	W. Abut. SB E. Abut. NB	Pier 1 or 2 (SB) Pier 3 or 4 (NB)	Pier 3 (SB) Pier 2 (NB)
$R\phi$	(k) 57.57	225.45	57.62
R_L	(k) 41.84	78.34	41.82
R_I	(k) 9.21	16.45	9.21
R_{Total}	(k) 108.62	320.24	108.65

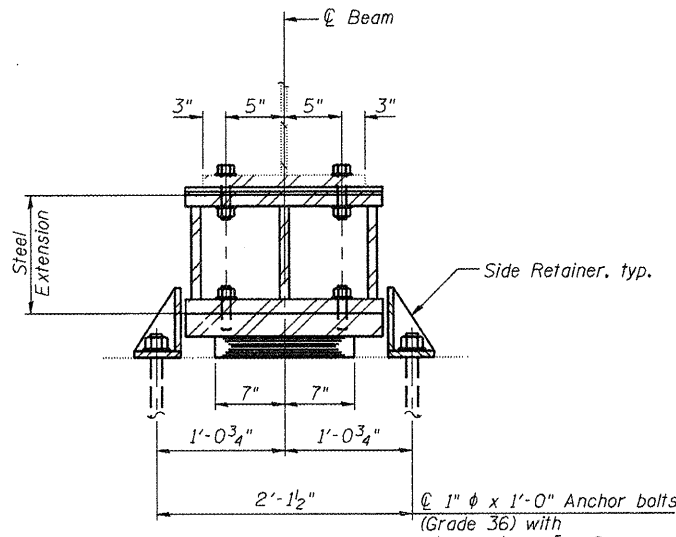
INTERIOR GIRDER REACTION TABLE			
	E. Abut. SB W. Abut. NB	Pier 1 (NB) Pier 4 (SB)	Pier 2 (SB) Pier 3 (NB)
$R\phi$	(k) 60.78	226.4	60.78
R_L	(k) 42.21	75.22	42.21
R_I	(k) 8.86	15.80	8.79
R_{Total}	(k) 111.85	318.00	111.78

* Compact section
** Braced non-compact and partially braced section

* Compact section
** Braced non-compact and partially braced section



ELEVATION AT ABUT

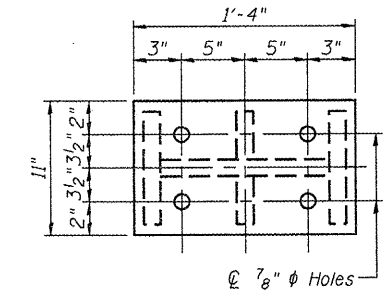


SECTION A-A

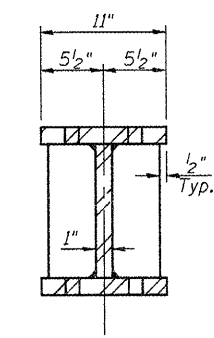
**TYPE I ELASTOMERIC EXP. BRG.
AT E. ABUT. S.B. & W. ABUT. N.B.**

FILL "I" DIMENSIONS

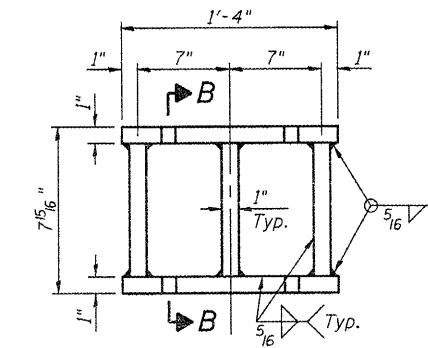
S.B. Lanes	A	B	C	D	E	F	N.B. Lanes	G	H	I	J	K	L
Centerline	—	—	—	3/4"	1/2"	—	Centerline	—	—	1/2"	—	—	—



PLAN - TOP & BOTTOM

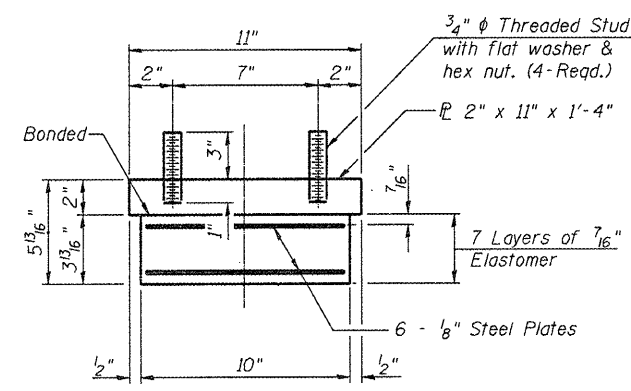


SECTION B-B



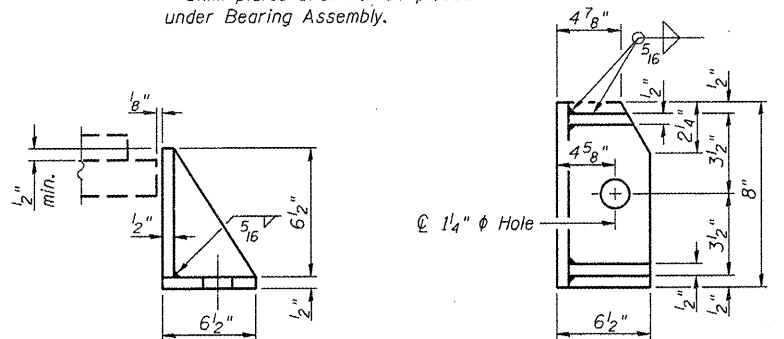
ELEVATION

**STEEL EXTENSION
AT E. ABUT. S.B. & W. ABUT. N.B.**



BEARING ASSEMBLY

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



ABUTMENT SIDE RETAINER - E. ABUT. S.B. & W. ABUT. N.B.

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12
Anchor Bolts 1"	Each	24

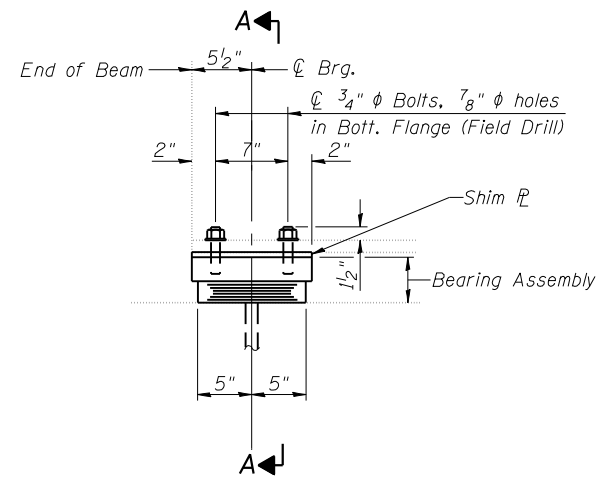


JOB	= 2265.1	DESIGNED	- AAN	REVISED	-
FILE	= 0540053.0054-72E10-29-Bearing.dgn	CHECKED	- MDC	REVISED	-
DATE	= 10/14/2011	DRAWN	- TJD	REVISED	-
		CHECKED	- MDC	REVISED	-

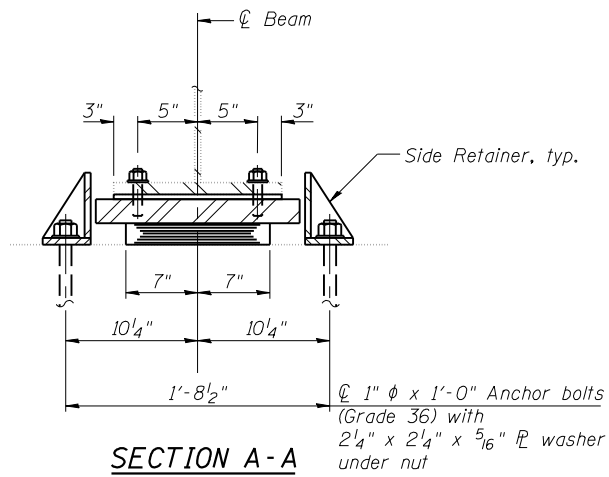
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS TYPE I AT ABUTS
STRUCTURE NO. 054-0053 (NB) & STRUCTURE NO. 054-0054 (SB)**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	145
CONTRACT NO. 72E10				
ILLINOIS FED. AID PROJECT				

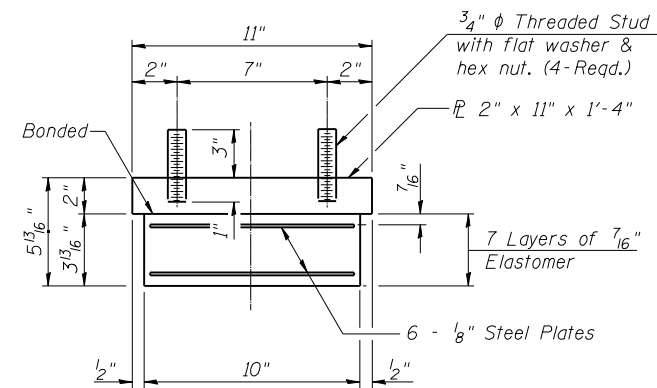


ELEVATION AT PIER



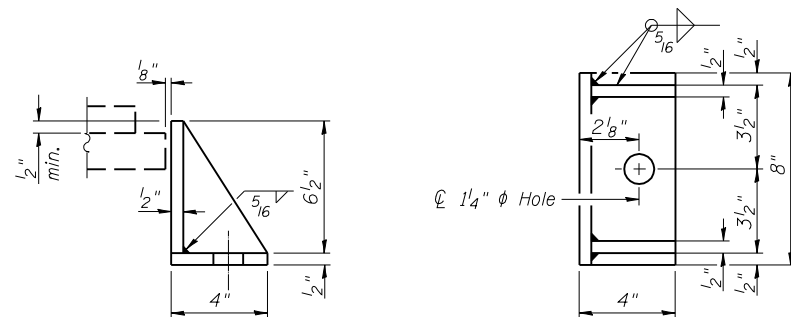
SECTION A-A

**TYPE I ELASTOMERIC EXP. BRG.
AT PIER 3 S.B. & PIER 2 N.B.**



BEARING ASSEMBLY

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



PIER SIDE RETAINER - PIER 3 S.B. & PIER 2 N.B.

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

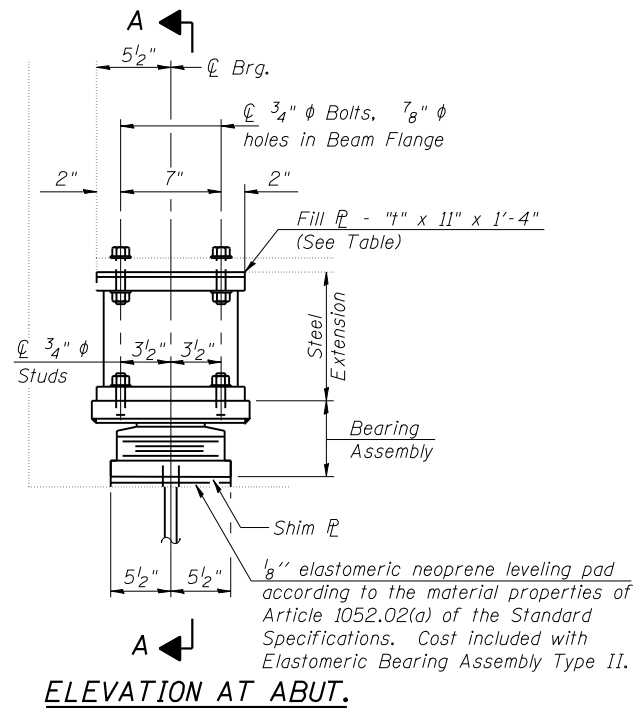
Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

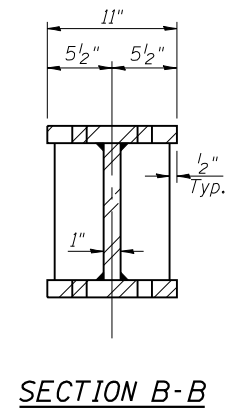
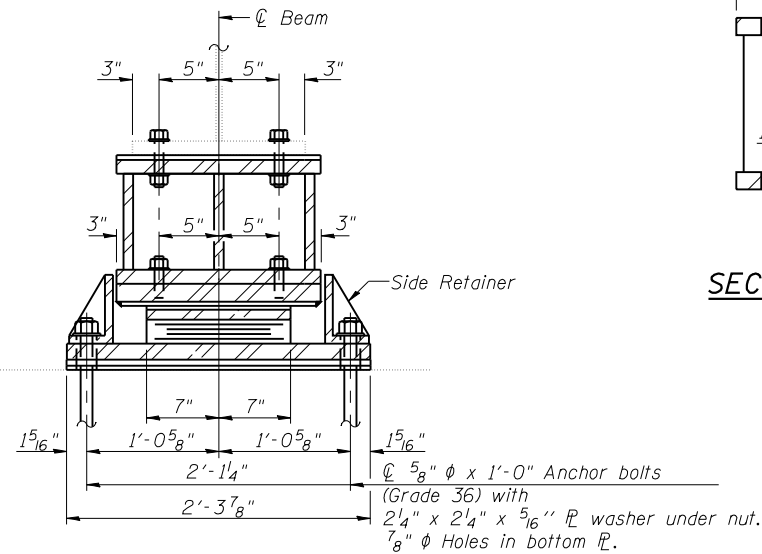
New shim plates and connection bolts are included with Furnishing and Erecting Structural Steel. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

BILL OF MATERIAL

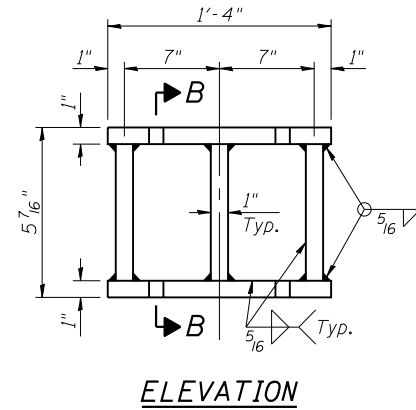
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	24
Anchor Bolts 1"	Each	48



**TYPE II ELASTOMERIC EXP. BRG.
AT W. ABUT. S.B. & E. ABUT. N.B.**

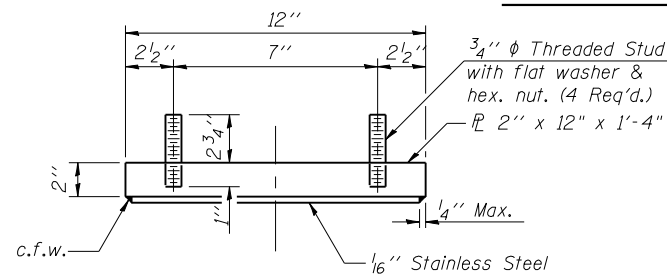
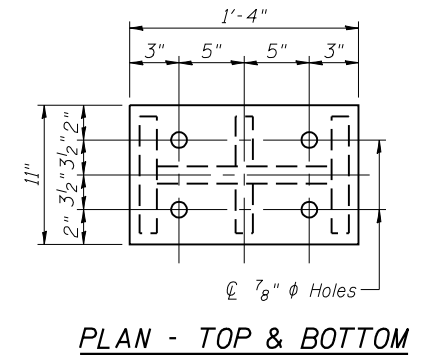


STEEL EXTENSION

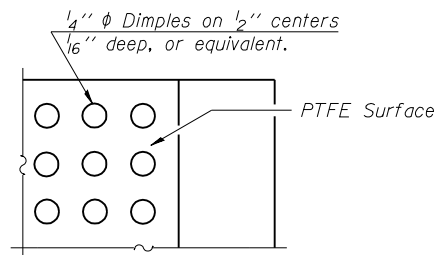


FILL "I" DIMENSIONS

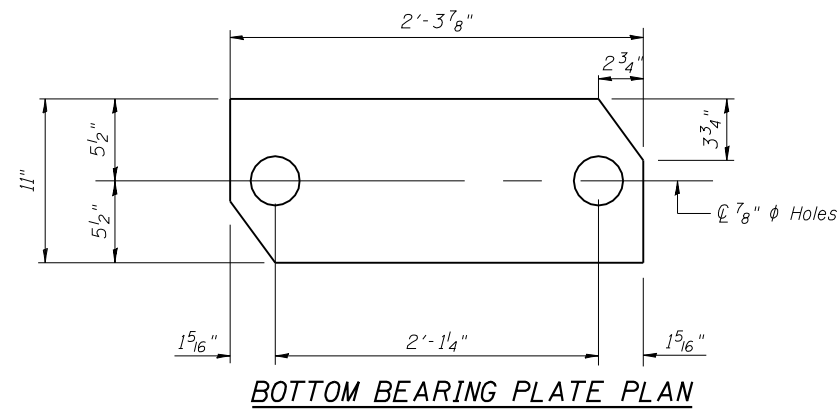
S.B. Lanes	A	B	C	D	E	F
∅ Brg. W. Abut.	—	—	—	3/8"	—	—



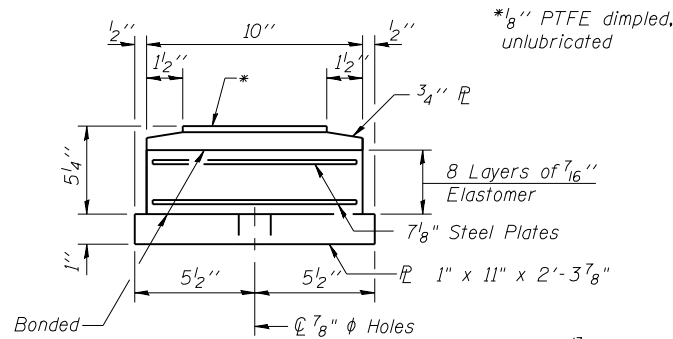
TOP BEARING ASSEMBLY



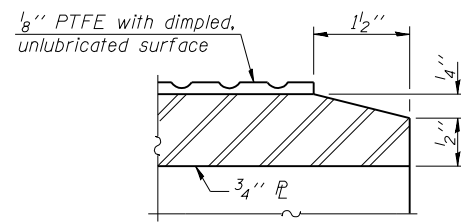
PLAN-PTFE SURFACE



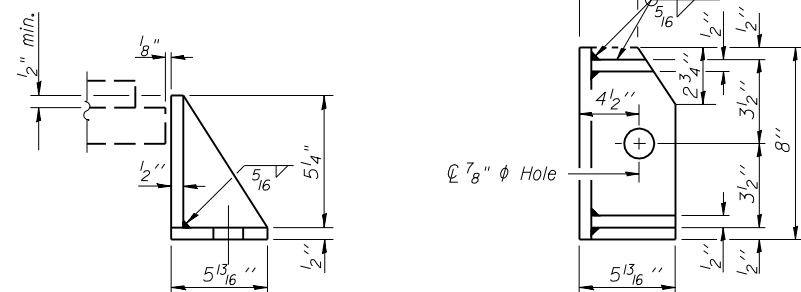
BOTTOM BEARING PLATE PLAN



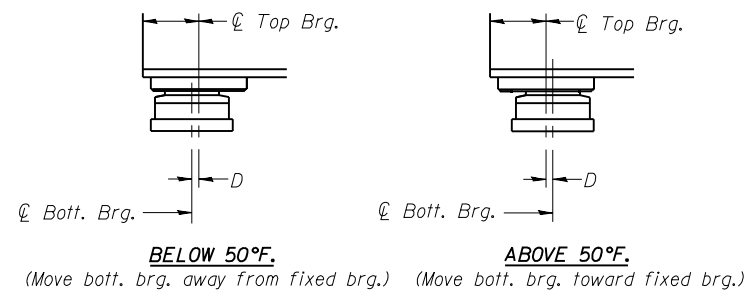
BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE



SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



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.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

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

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

BILL OF MATERIAL

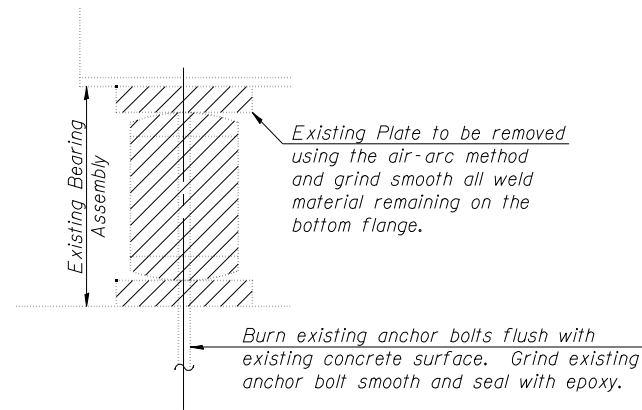
Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12
Anchor Bolts 5/8"	Each	24

INTERIOR GIRDER REACTION TABLE

Location	R _Q
E. Abut. S.B., W. Abut. N.B.	61 k
Pier 3 S.B., Pier 2 N.B.	61 k
Minimum Jack Capacity	50 Tons

INTERIOR GIRDER REACTION TABLE

Location	R _Q
W. Abut. S.B., E. Abut. N.B.	58 k
Minimum Jack Capacity	45 Tons

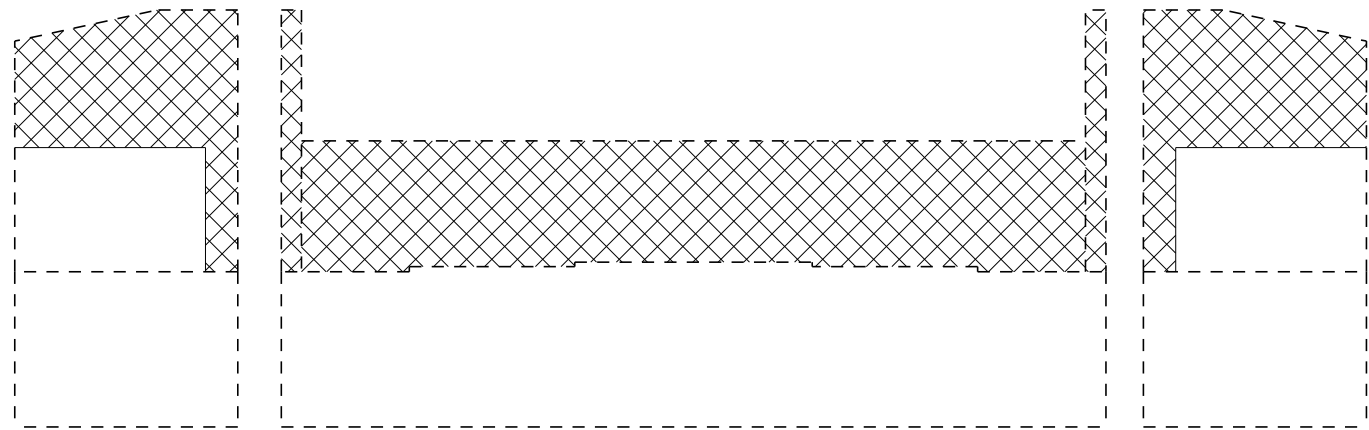


EXISTING BEARING REMOVAL DETAIL

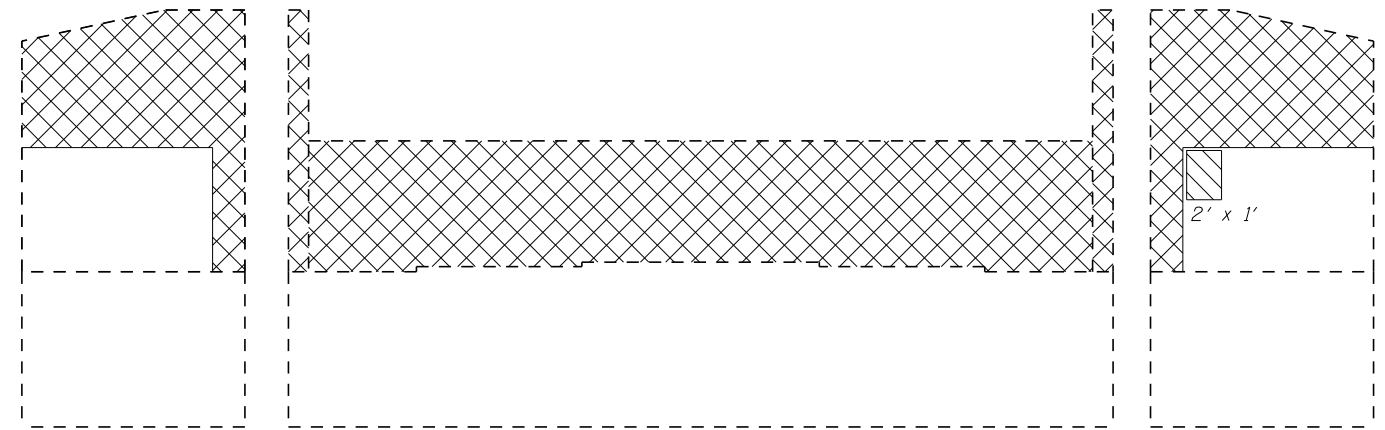
Cost Included with "Jack and Remove Existing Bearings" at Abutment bearing removal locations and with "Removal of Existing Bearings" at Pier bearing removal locations.

BILL OF MATERIAL

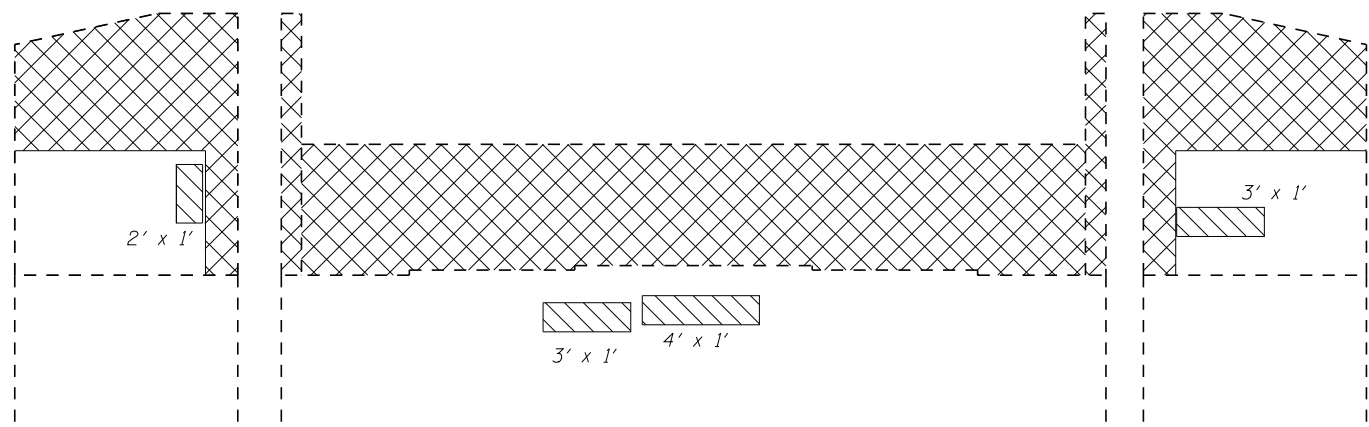
Item	Unit	Total
Jack and Remove Existing Bearings	Each	24
Removal of Existing Bearings	Each	24



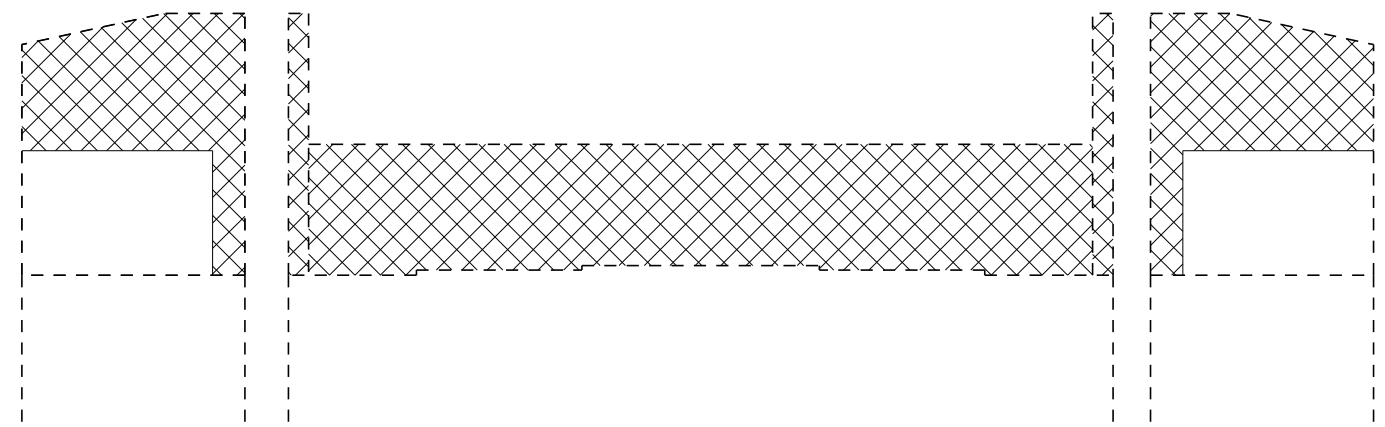
WEST ABUT. NB LANES



WEST ABUT. SB LANES



EAST ABUT. NB LANES



EAST ABUT. SB LANES

LEGEND



Denotes Structural Repair of Concrete
(Depth Equal to or Less Than 5")



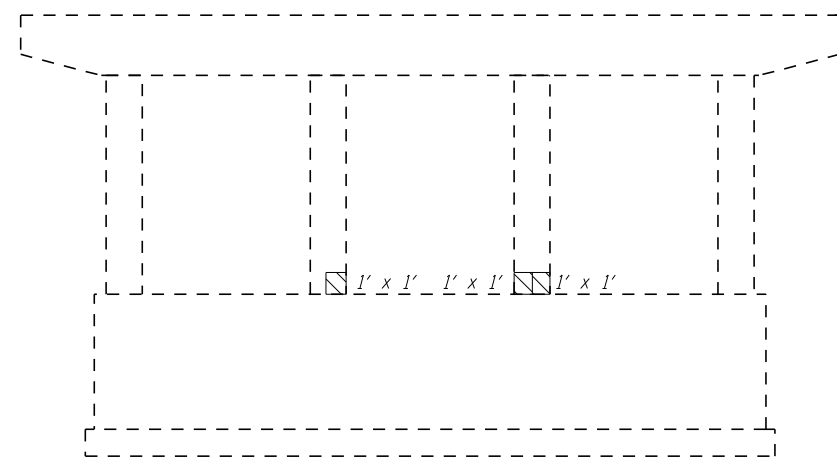
Denotes Concrete Removal

NOTES

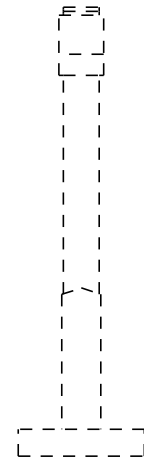
1. Cross hatched area indicates Concrete Removal. See Sheet 38 of 45 for concrete removal details.
2. Existing Reinforcement which extends into the removal areas is to be preserved, cleaned and incorporated into the new construction in accordance with Section 501.03 of the Standard Specifications. Cost included in CONCRETE REMOVAL.

BILL OF MATERIAL

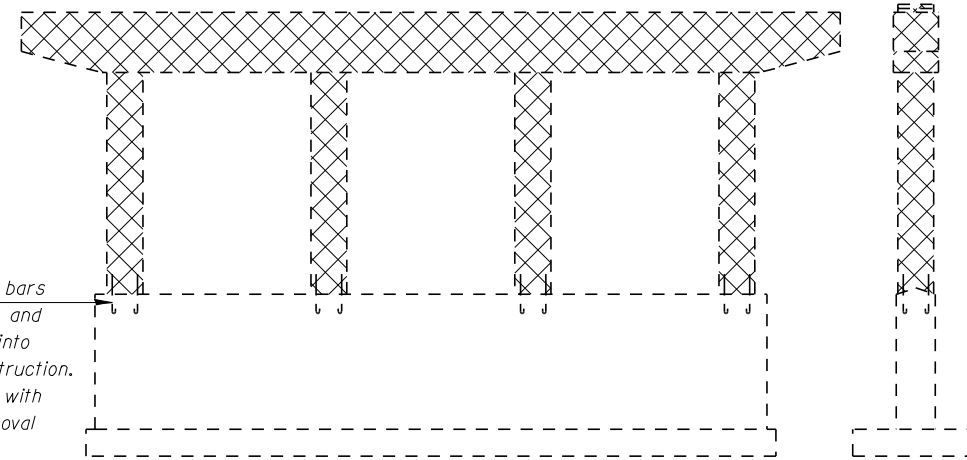
Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	14



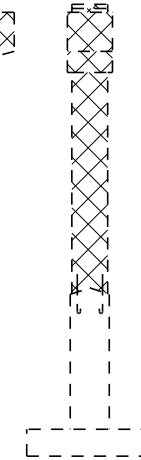
Pier 1 N.B. WEST FACE



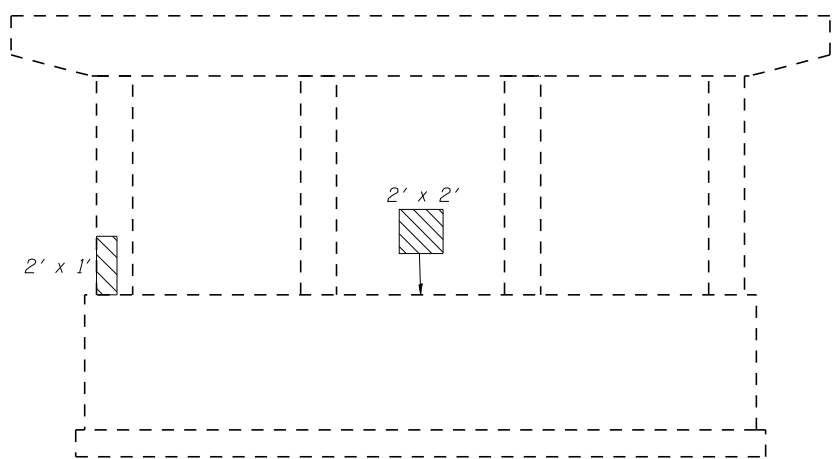
Pier 1 N.B. SOUTH END



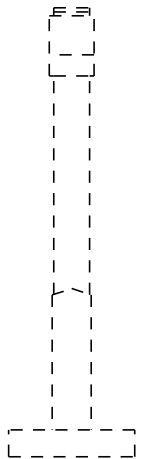
Pier 2 N.B. WEST FACE



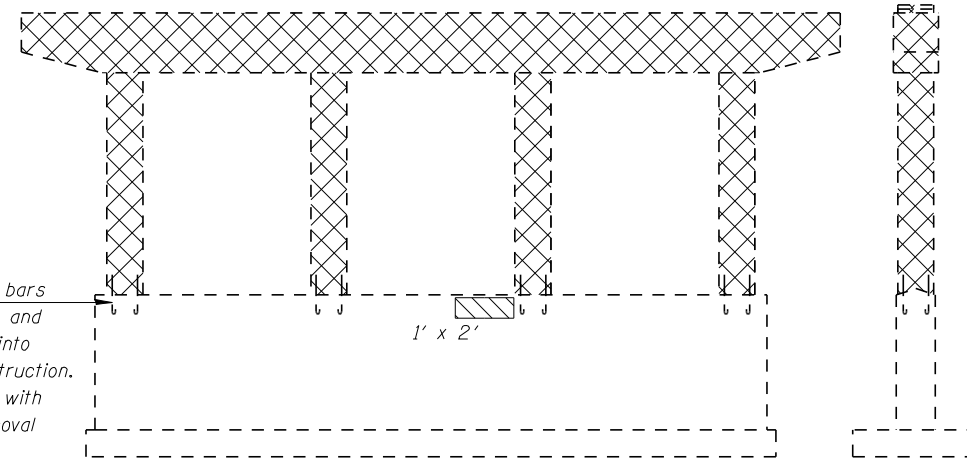
Pier 2 N.B. SOUTH END



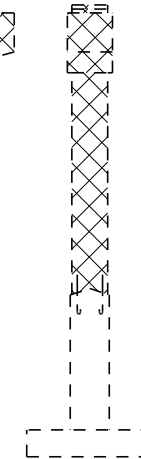
Pier 1 N.B. EAST FACE



Pier 1 N.B. NORTH END



Pier 2 N.B. EAST FACE



Pier 2 N.B. NORTH END

LEGEND



Denotes Structural Repair of Concrete
(Depth Equal to or Less Than 5")



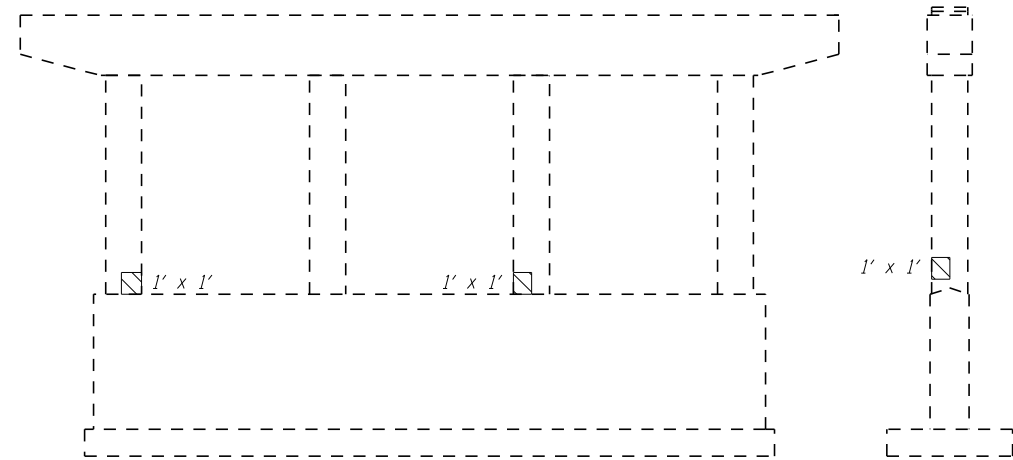
Denotes Concrete Removal

NOTES

- Existing Reinforcement which extends into the removal areas is to be preserved, cleaned and incorporated into the new construction in accordance with Section 501.03 of the Standard Specifications. Cost included in CONCRETE REMOVAL.
- Existing Girders to be supported during the removal and reconstruction of Pier 2. See Special Provision for Temporary Support System.

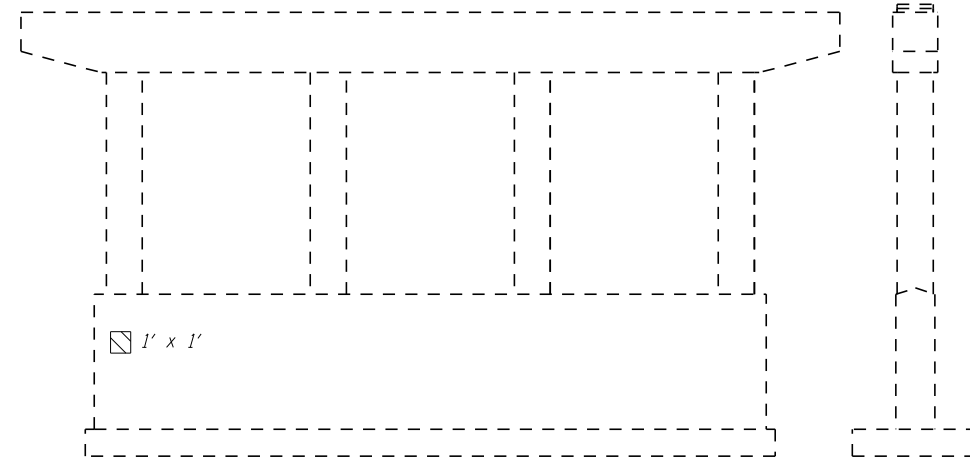
BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	11
Concrete Removal	Cu. Yd.	65.7
Temporary Support System	L. Sum	0.5



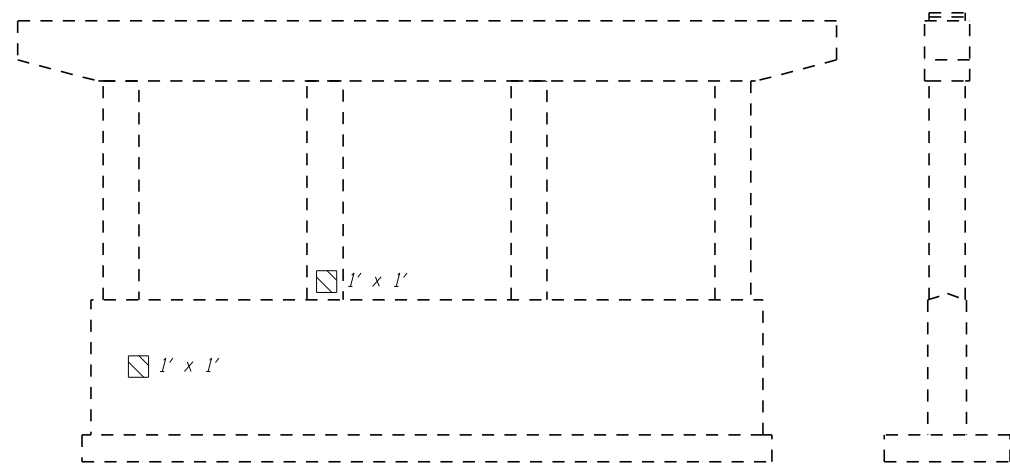
Pier 3 N.B. WEST FACE

Pier 3 N.B. SOUTH END



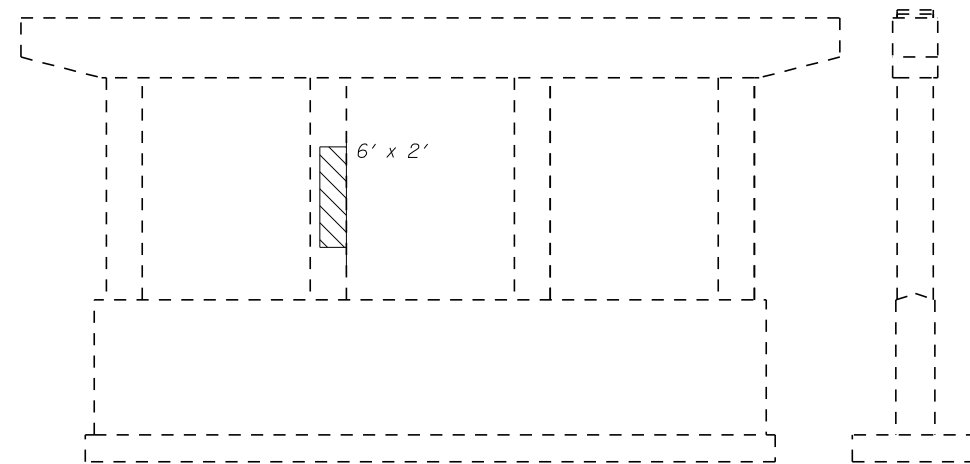
Pier 4 N.B. WEST FACE

Pier 4 N.B. SOUTH END



Pier 3 N.B. EAST FACE

Pier 3 N.B. NORTH END



Pier 4 N.B. EAST FACE

Pier 4 N.B. NORTH END

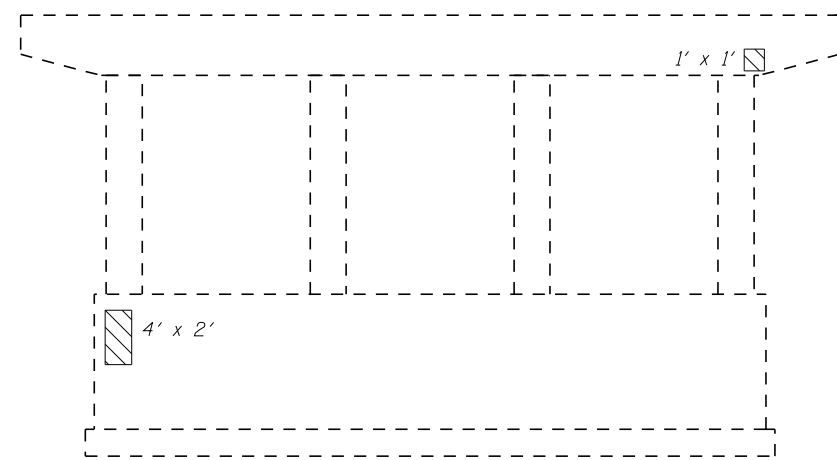
LEGEND



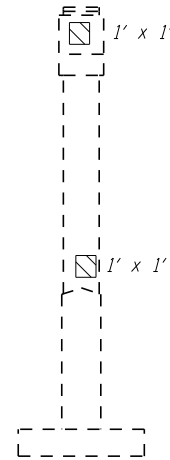
Denotes Structural Repair of Concrete
(Depth Equal to or Less Than 5")

BILL OF MATERIAL

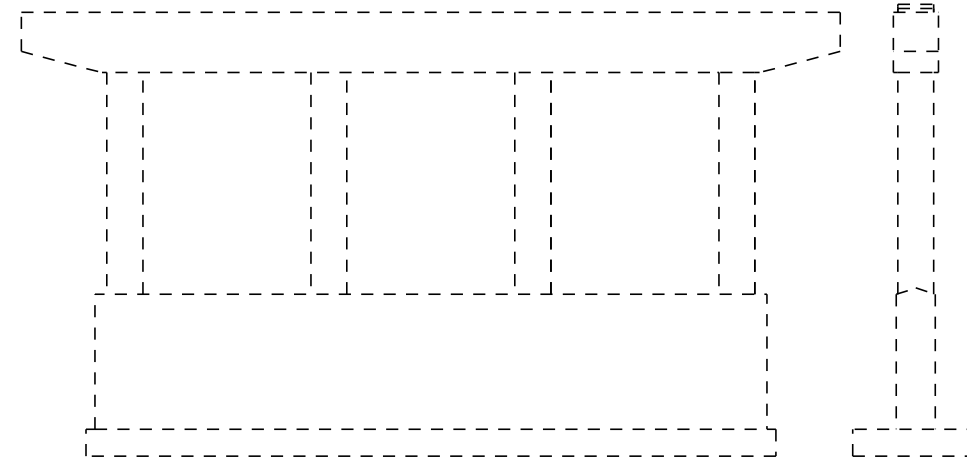
Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	18



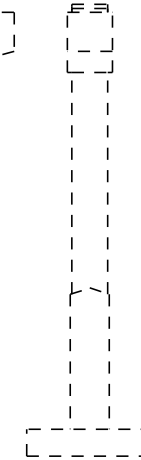
Pier 1 S.B. WEST FACE



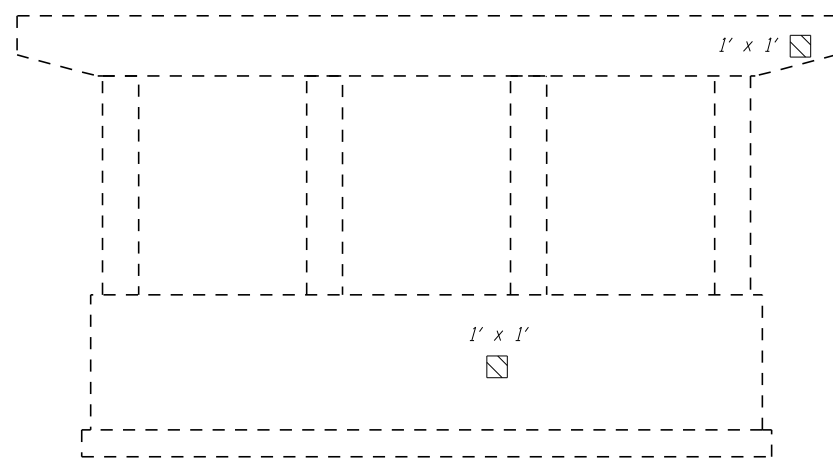
Pier 1 S.B. SOUTH END



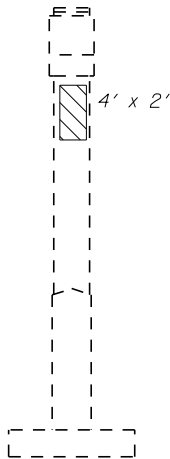
Pier 2 S.B. WEST FACE



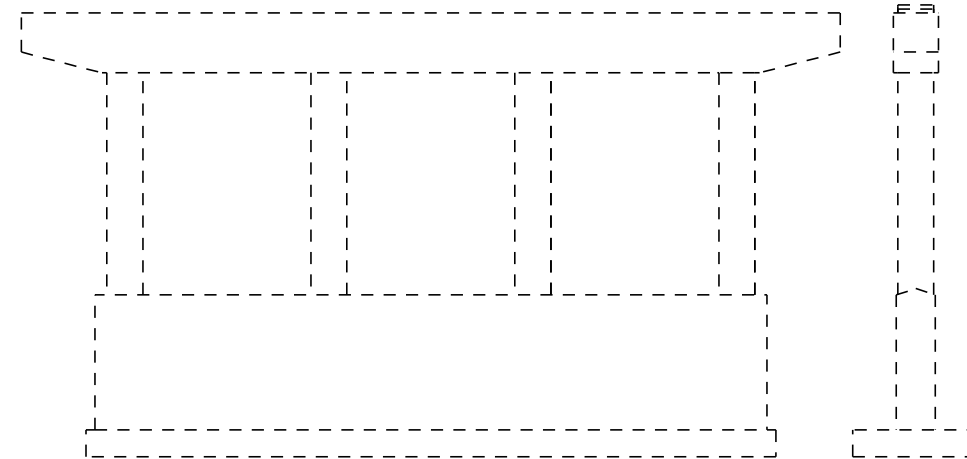
Pier 2 S.B. SOUTH END



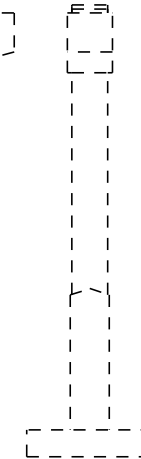
Pier 1 S.B. EAST FACE



Pier 1 S.B. NORTH END



Pier 2 S.B. EAST FACE



Pier 2 S.B. NORTH END

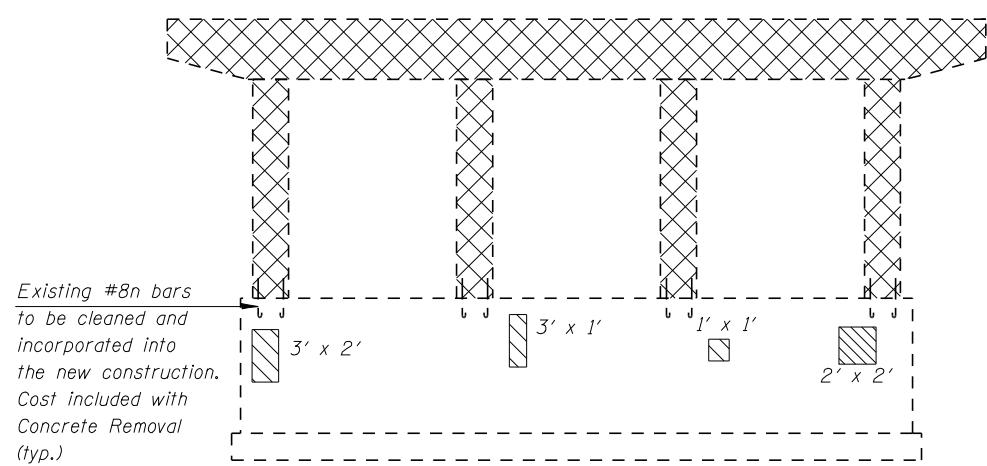
LEGEND



Denotes Structural Repair of Concrete
(Depth Equal to or Less Than 5")

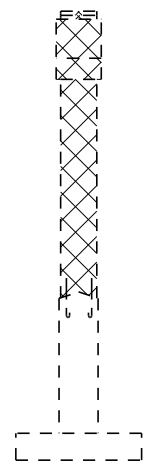
BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	21

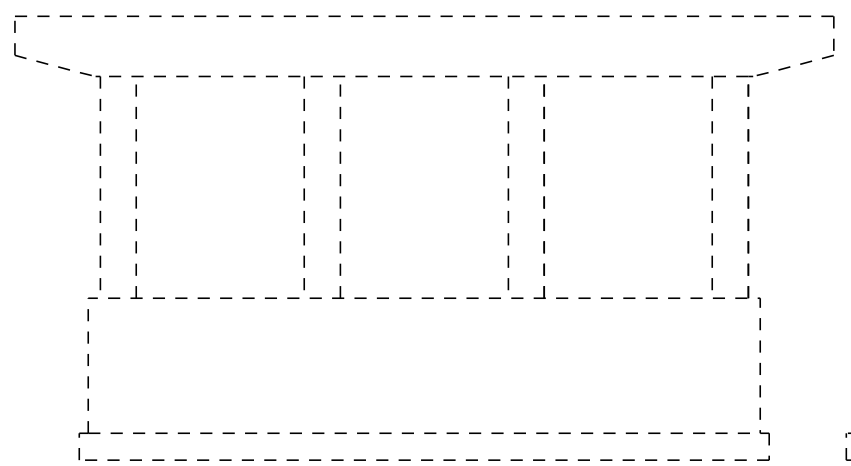


Existing #8n bars to be cleaned and incorporated into the new construction. Cost included with Concrete Removal (typ.)

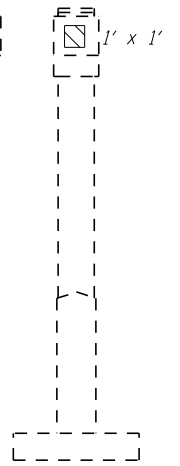
Pier 3 S.B. WEST FACE



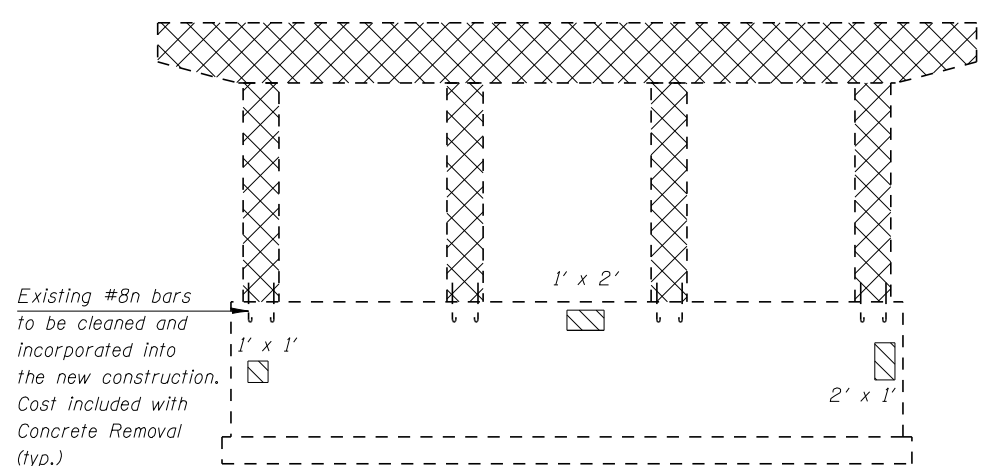
Pier 3 S.B. SOUTH END



Pier 4 S.B. WEST FACE

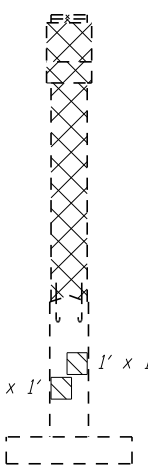


Pier 4 S.B. SOUTH END

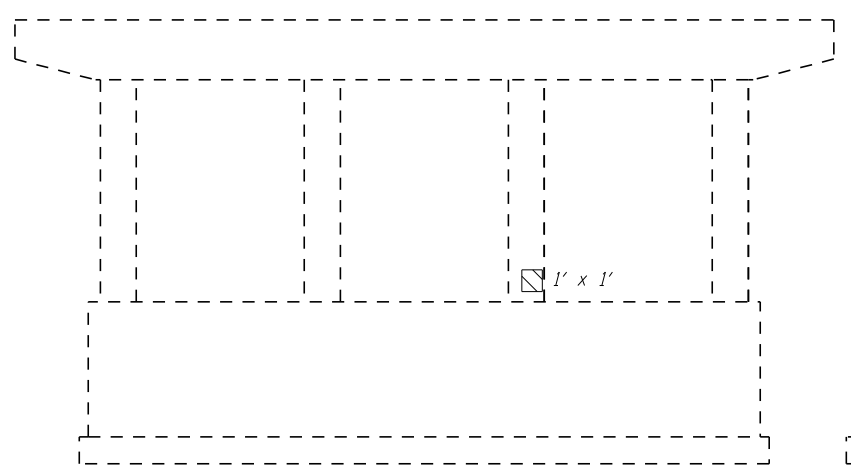


Existing #8n bars to be cleaned and incorporated into the new construction. Cost included with Concrete Removal (typ.)

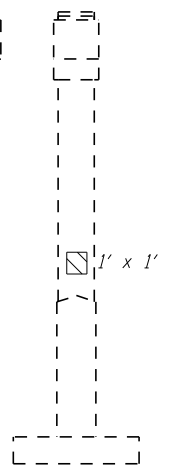
Pier 3 S.B. EAST FACE



Pier 3 S.B. NORTH END



Pier 4 S.B. EAST FACE



Pier 4 S.B. NORTH END

LEGEND

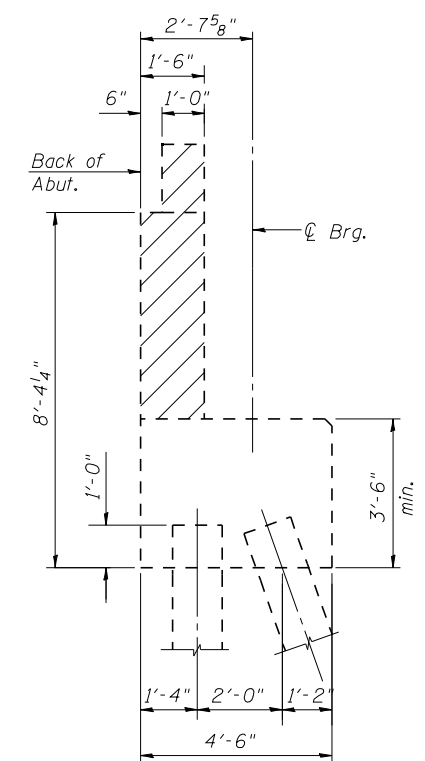
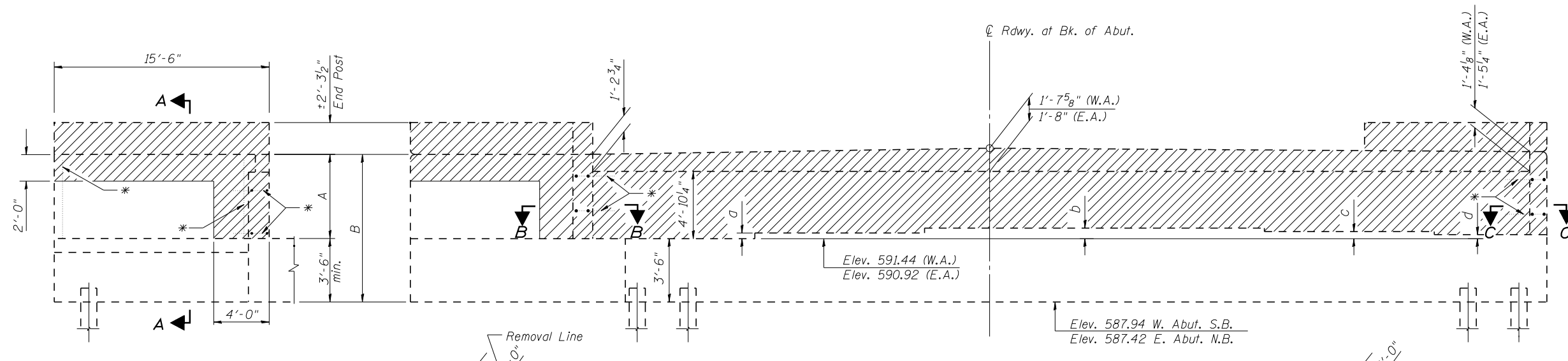
- Denotes Structural Repair of Concrete (Depth Equal to or Less Than 5")
- Denotes Concrete Removal

NOTES

1. Existing Reinforcement which extends into the removal areas is to be preserved, cleaned and incorporated into the new construction in accordance with Section 501.03 of the Standard Specifications. Cost included in CONCRETE REMOVAL.
2. Existing Girders to be supported during the removal and reconstruction of Pier 3. See Special Provision for Temporary Support System.

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	24
Concrete Removal	Cu. Yd.	65.9
Temporary Support System	L. Sum	0.5



WINGWALL ELEVATION

ELEVATION

VALUES OF A & B

	West Abut.		East Abut.	
	Inside Wing	Outside Wing	Inside Wing	Outside Wing
A	6'-0 3/4"	6'-0 7/8"	6'-0 3/4"	6'-0 3/4"
B	9'-6 3/4"	9'-8 1/8"	9'-6 3/4"	9'-9 1/4"

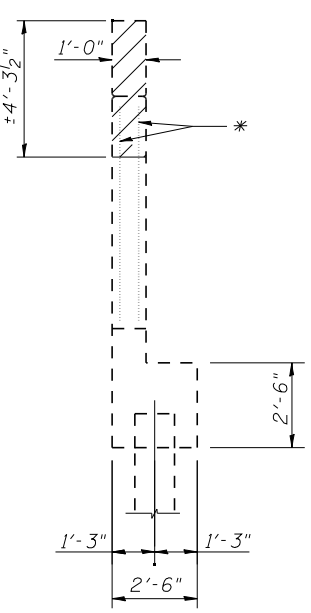
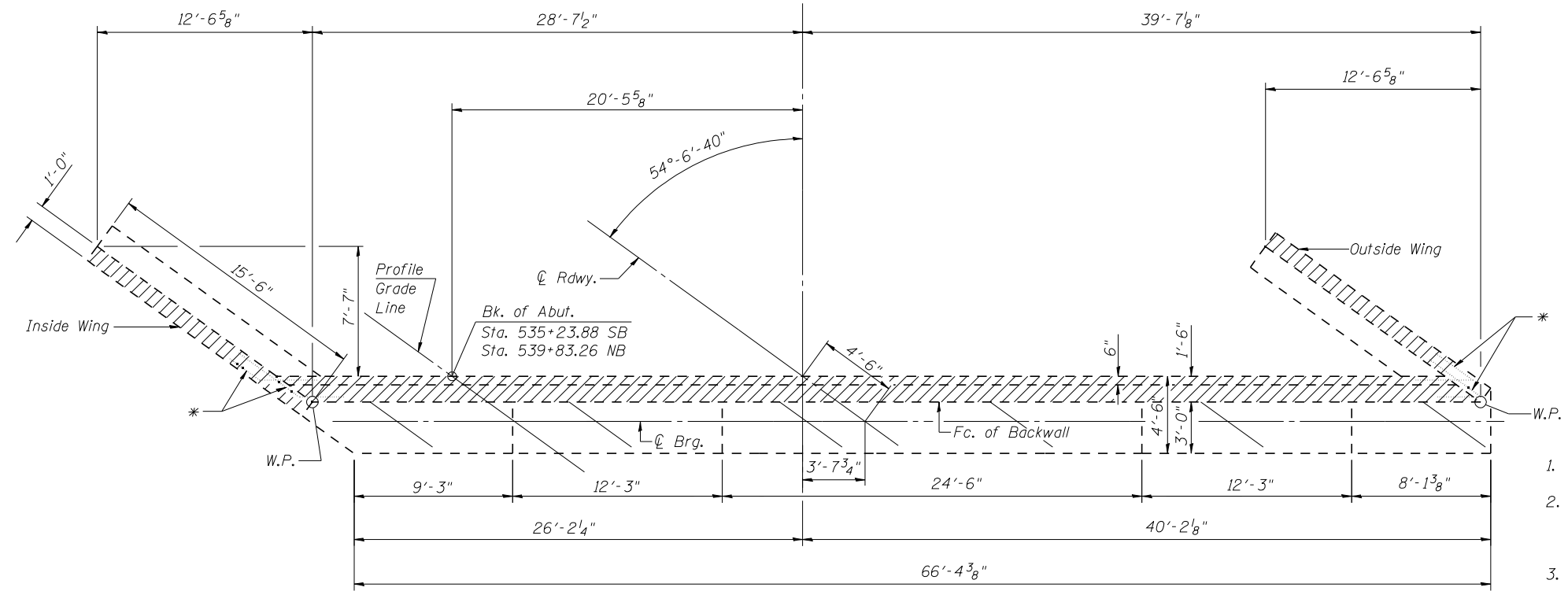
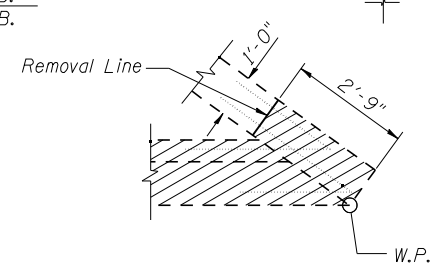
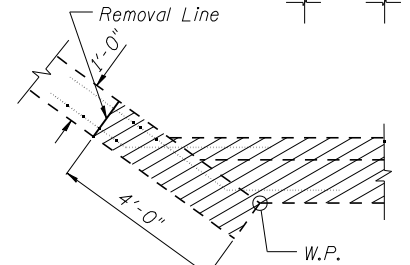


TABLE OF STEP HEIGHTS

	a	b	c	d
W. Abut. S.B.	2 1/8"	3 5/8"	2 5/8"	1 1/4"
E. Abut. N.B.	2 1/4"	4 1/2"	3 3/4"	2 1/2"

* Existing Reinforcement To Remain (Ea. Wing)

NOTES

- Hatched area indicates Concrete Removal
- Existing wingwall reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
- Existing vertical bars in backwall shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

**TWO (2) ABUTMENTS
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	56.2



JOB = 2265.1
 FILE = 0540053.0054-72E10-38-AbutRem.dgn
 DATE = 9/9/2011

DESIGNED - AAN
 CHECKED - MDC
 DRAWN - TSH
 CHECKED - MDC

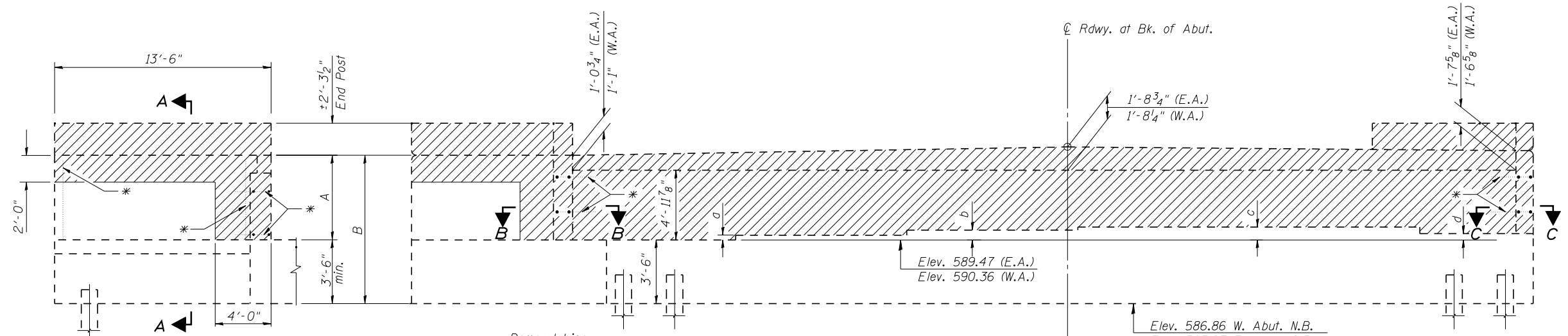
REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ABUTMENT CONCRETE REMOVAL
STRUCTURE NO. 054-0053 (NB) & 054-0054 (SB)**

SHEET NO. 38 of 45 SHEETS

F.A.I. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
 55 D6 LOGAN CO BR 2011 LOGAN 224 154
 CONTRACT NO. 72E10
 ILLINOIS FED. AID PROJECT



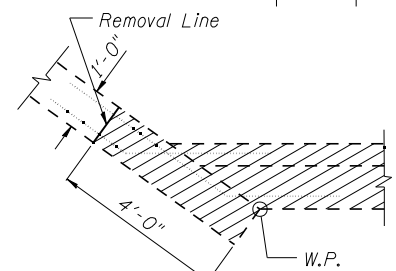
WINGWALL ELEVATION

ELEVATION

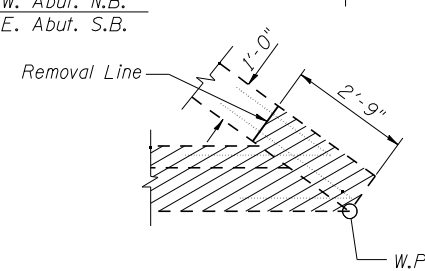
(Looking West - W. Abut. - N.B.)
(Looking East - E. Abut. - S.B.)

VALUES OF A & B

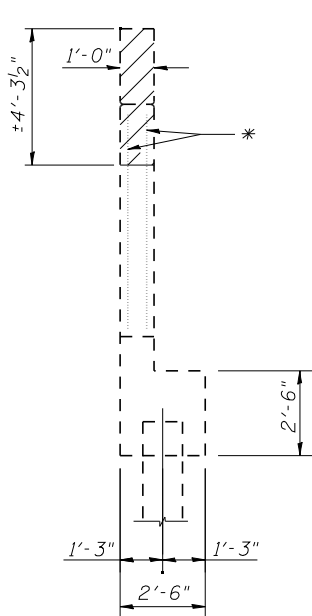
	East Abut.		West Abut.	
	Outside Wing	Inside Wing	Outside Wing	Inside Wing
A	6'-0 3/8"	6'-0 3/8"	6'-0 5/8"	6'-0 3/4"
B	9'-6 3/8"	10'-1 1/4"	9'-6 5/8"	10'-0 1/4"



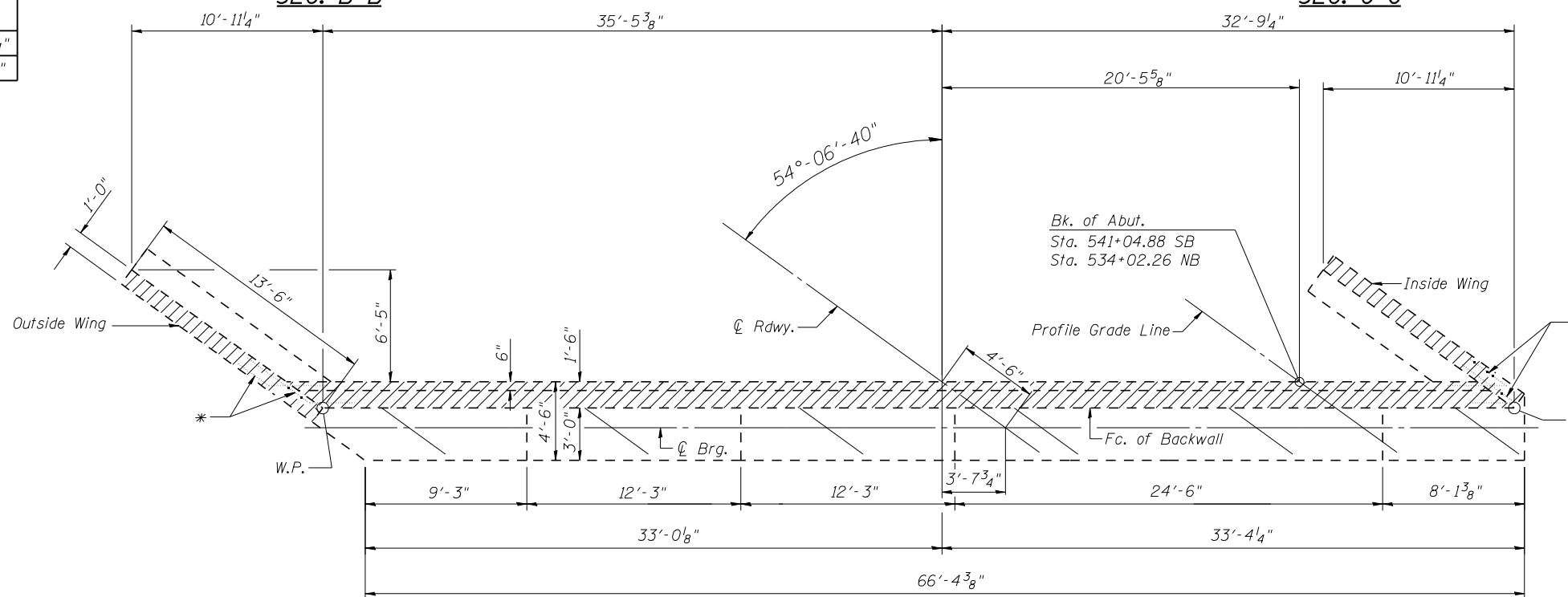
SEC. B-B



SEC. C-C



SEC. A-A

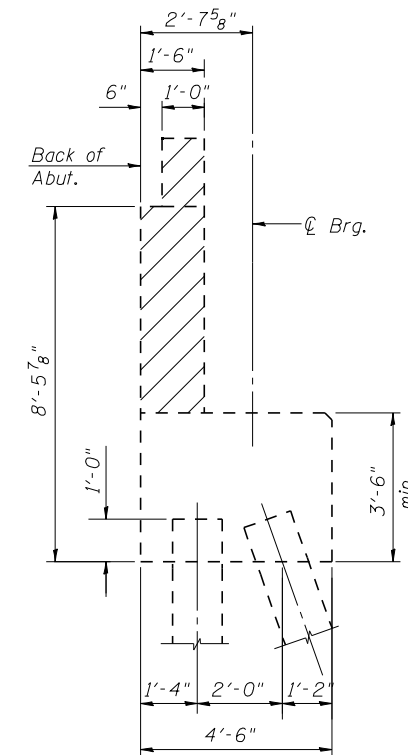


PLAN

(West Abutment - N.B.)
(East Abutment - S.B.)

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.



SEC. THRU ABUT.

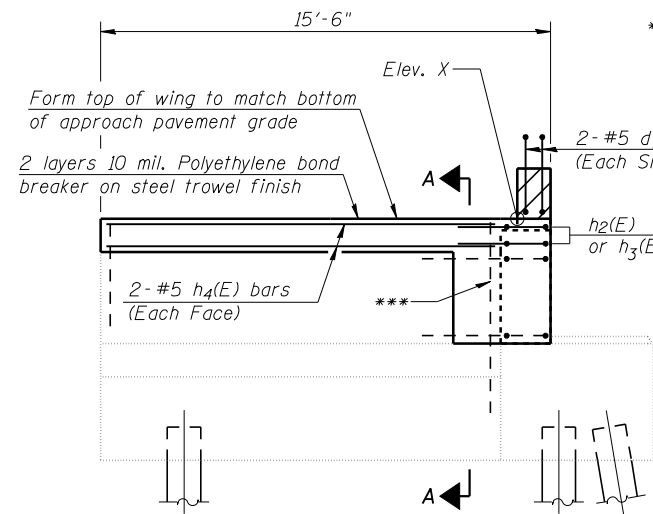
* Existing Reinforcement To Remain (Ea. Wing)

NOTES

- Hatched area indicates Concrete Removal
- Existing wingwall reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
- Existing vertical bars in backwall shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

**TWO (2) ABUTMENTS
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	56.1

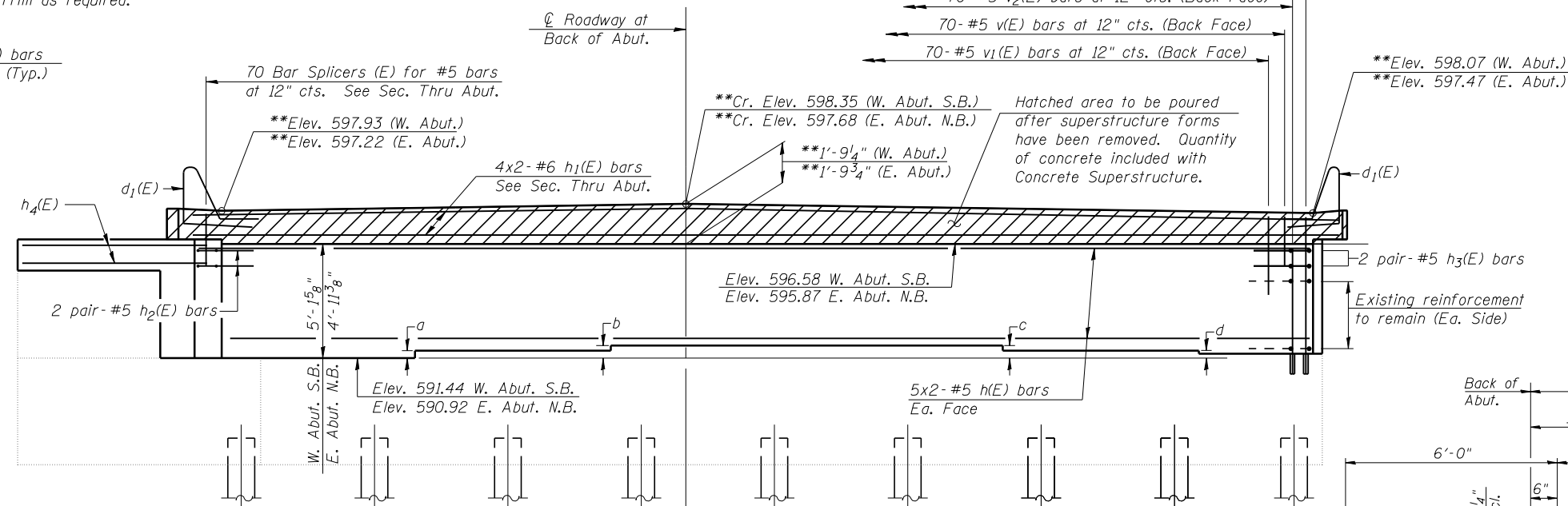


WINGWALL ELEVATION

Elev.	West Abut. - S.B.		East Abut. - N.B.	
	Outside Wing	Inside Wing	Inside Wing	Outside Wing
X	596.80	596.66	595.95	596.20

Notes:
 All bars designated with an asterisk (ex: v₂^{*}(E)) shall be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Locate bars to miss existing reinforcement.
 Existing wingwall reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
 Existing vertical bars in backwall shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.
 Concrete Sealer shall be applied to the front face of the backwall.
 Bars indicated thus 5x2-#6 etc. indicates 5 lines of bars with 2 lengths per line.

***Clean and incorporate existing vertical bars into new construction. Trim as required.

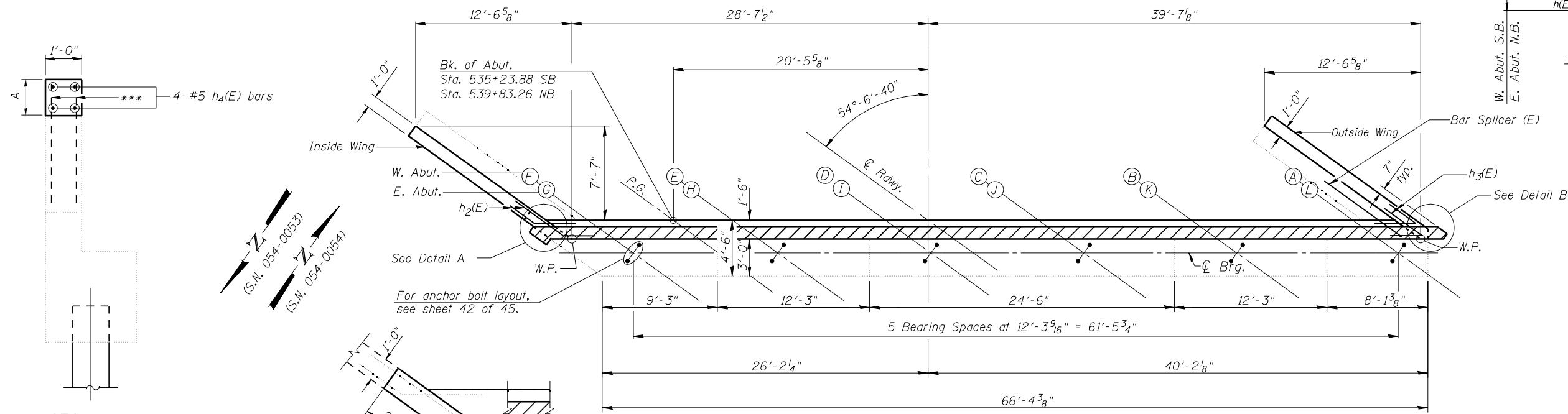


ELEVATION

(Looking West - W. Abut. - S.B.)
 (Looking East - E. Abut. - N.B.)

TABLE OF EXISTING STEP HEIGHTS

	a	b	c	d
West Abutment (S.B.)	2 1/8"	3 5/8"	2 5/8"	1 1/4"
East Abutment (N.B.)	2 1/4"	4 1/2"	3 3/4"	2 1/2"

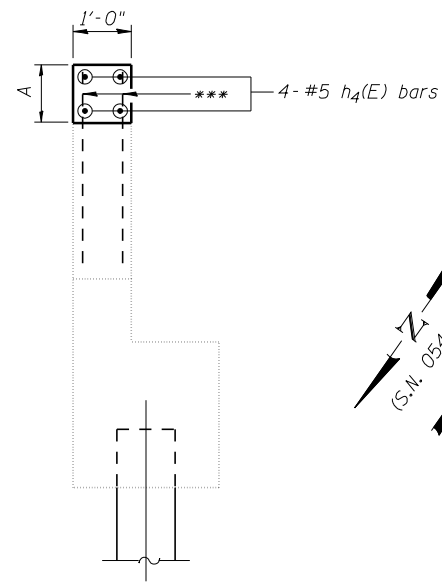


PLAN

(West Abutment - S.B.)
 (East Abutment - N.B.)

MINIMUM BAR LAP

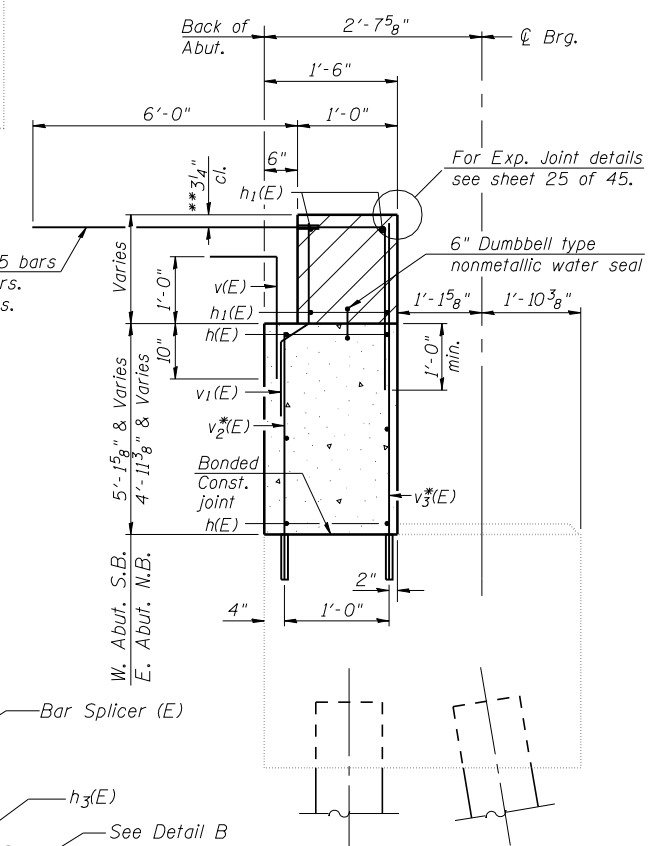
#5 bar = 3'-3"
 #6 bar = 3'-10"



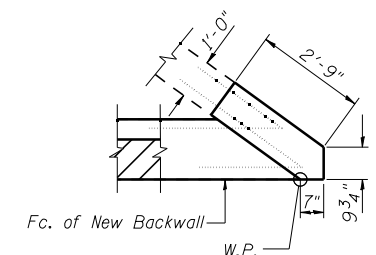
SEC. A-A

Dim.	West Abut. - S.B.		East Abut. - N.B.	
	Outside Wing	Inside Wing	Inside Wing	Outside Wing
A	1'-2 1/4"	1'-2"	11 5/8"	1'-0 8/8"

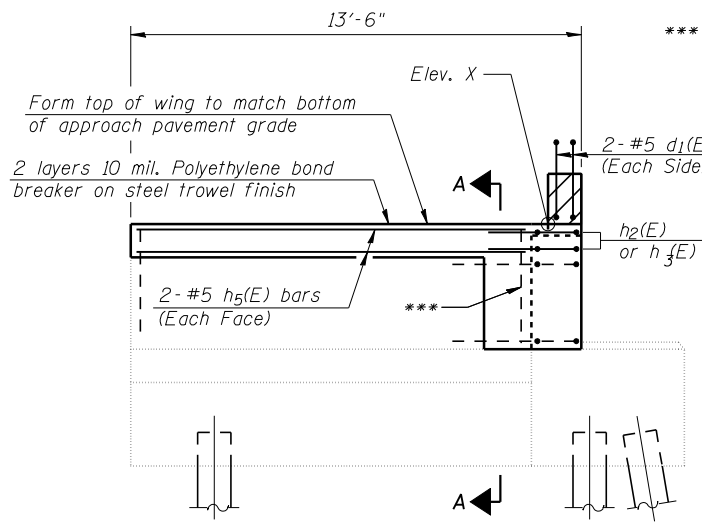
DETAIL A



SEC. THRU ABUT.
 (Dimensions at Rt. L's)



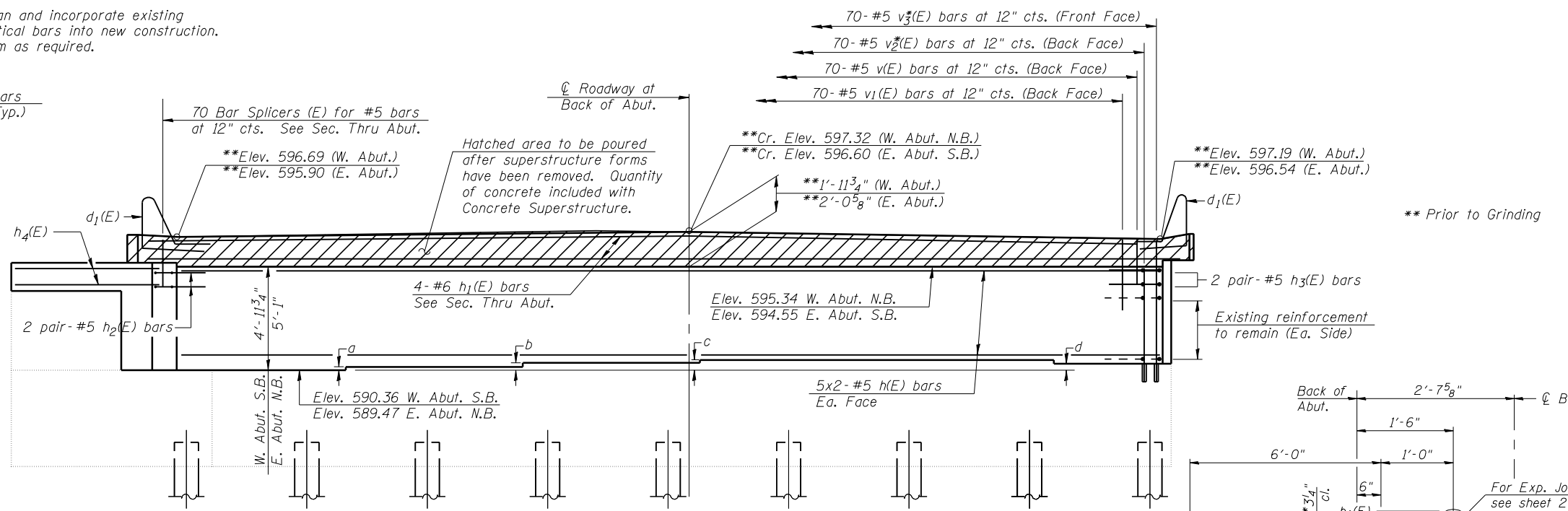
DETAIL B



WINGWALL ELEVATION

Elev.	West Abut. - N.B.		East Abut. - S.B.	
	Inside Wing	Outside Wing	Outside Wing	Inside Wing
X	596.80	596.66	595.95	596.20

***Clean and incorporate existing vertical bars into new construction. Trim as required.



ELEVATION

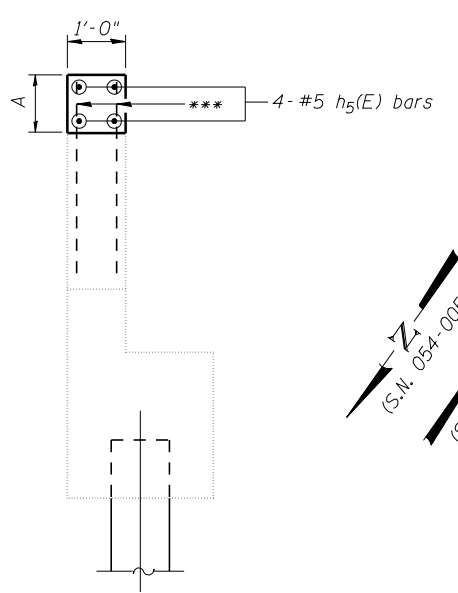
(Looking West - W. Abut. - N.B.)
(Looking East - E. Abut. - S.B.)

TABLE OF EXISTING STEP HEIGHTS

	a	b	c	d
West Abutment (N.B.)	2 3/4"	5"	6 1/2"	5 1/2"
East Abutment (S.B.)	3"	5 5/8"	6 7/8"	6 7/8"

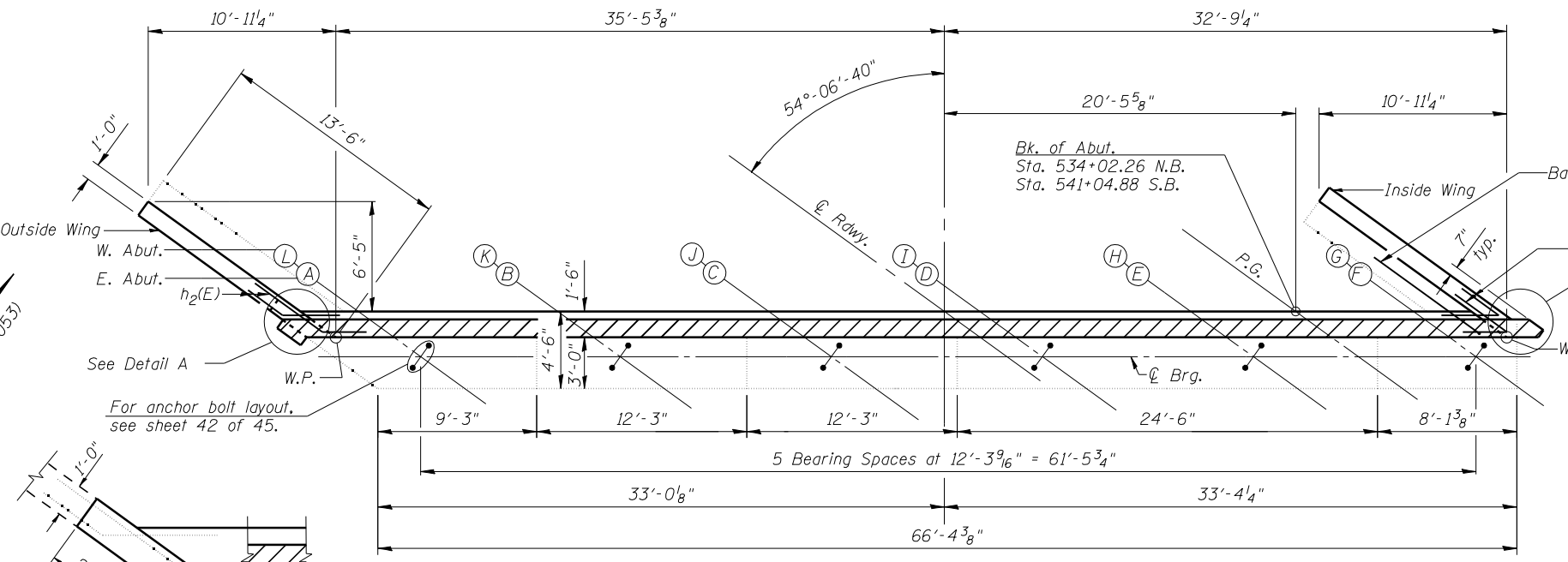
Notes:
All bars designated with an asterisk (ex: v₂(E)) shall be epoxy grouted in accordance with Section 584 of The Standard Specifications. Minimum embedment = 9". Locate bars to miss existing reinforcement.
Existing wingwall reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Existing vertical bars in backwall shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.
Concrete Sealer shall be applied to the front face of the backwall.
Bars indicated thus 5x2-#6 etc. indicates 5 lines of bars with 2 lengths per line.

Bar splicer (E) for #5 bars
Alternate with v(E) bars.
Place parallel to beams.



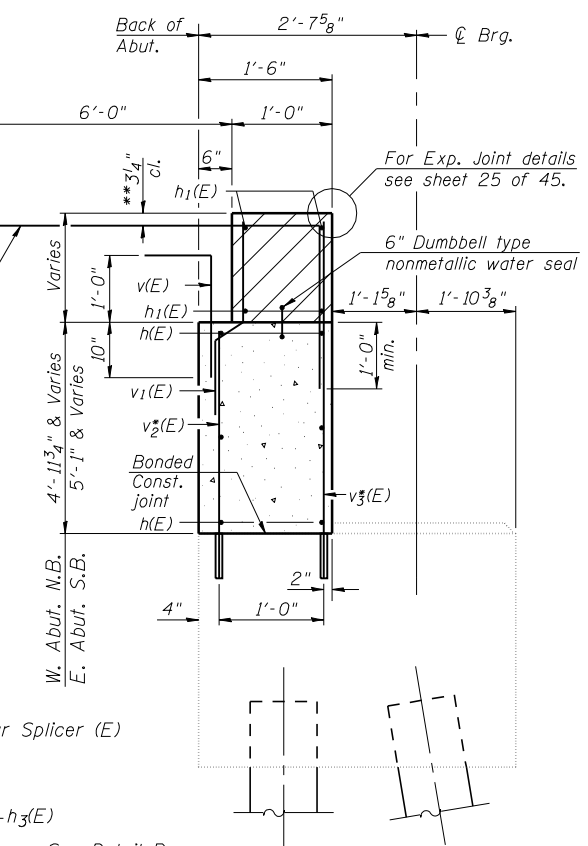
SEC. A-A

Dim.	West Abut. - N.B.		East Abut. - S.B.	
	Inside Wing	Outside Wing	Outside Wing	Inside Wing
A	1'-0 1/2"	1'-0 8/8"	1'-1 1/2"	1'-2 1/2"

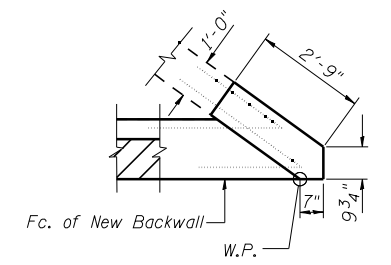


PLAN

(West Abutment - N.B.)
(East Abutment - S.B.)



SEC. THRU ABUT.
(Dimensions at Rt. L's)



DETAIL B



JOB = 2265.1
FILE = 0540053.0054-72E10-41-AbutDet.dgn
DATE = 9/9/2011

DESIGNED - AAN
CHECKED - MDC
DRAWN - TSH
CHECKED - MDC

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ABUTMENT DETAILS
STRUCTURE NO. 054-0053 (NB) & 054-0054 (SB)**

SHEET NO. 41 of 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	157

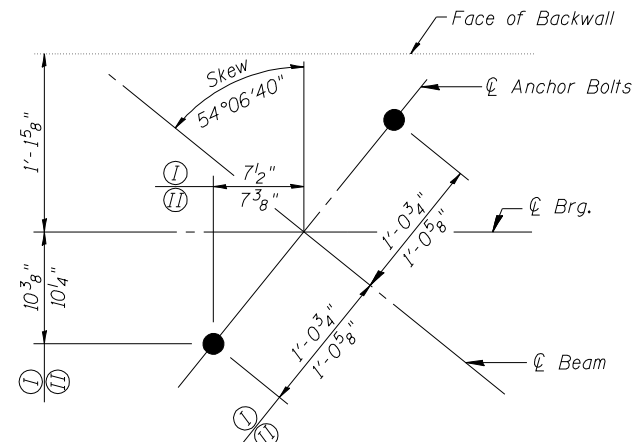
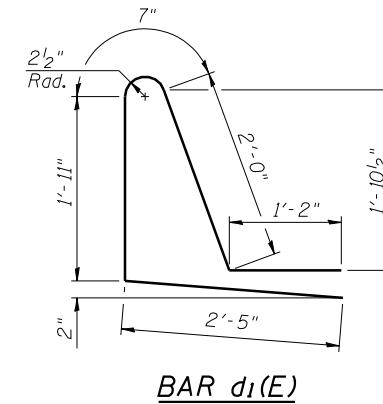
CONTRACT NO. 72E10
ILLINOIS FED. AID PROJECT

**EXISTING BEARING SEAT ELEVATIONS
S.N. 054-0053 (NB)**

	G	H	I	J	K	L
West Abutment	590.82	590.88	590.88	590.78	590.59	590.36
East Abutment	590.92	591.11	591.30	591.30	591.23	591.13

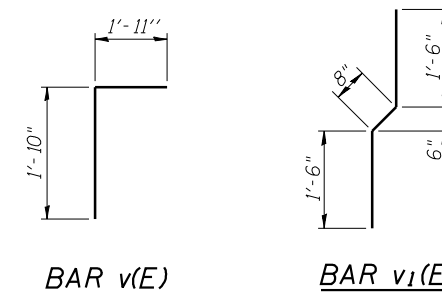
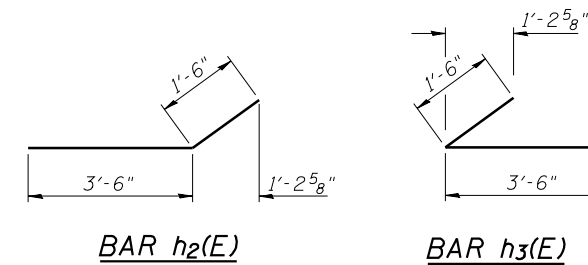
**EXISTING BEARING SEAT ELEVATIONS
S.N. 054-0054 (SB)**

	A	B	C	D	E	F
West Abutment	591.54	591.66	591.74	591.74	591.62	591.44
East Abutment	589.47	589.72	589.94	590.04	590.04	589.04



ANCHOR BOLT LAYOUT

- Ⓡ E. ABUT. S.B. & W. ABUT. N.B.
- Ⓢ W. ABUT. S.B. & E. ABUT. N.B.



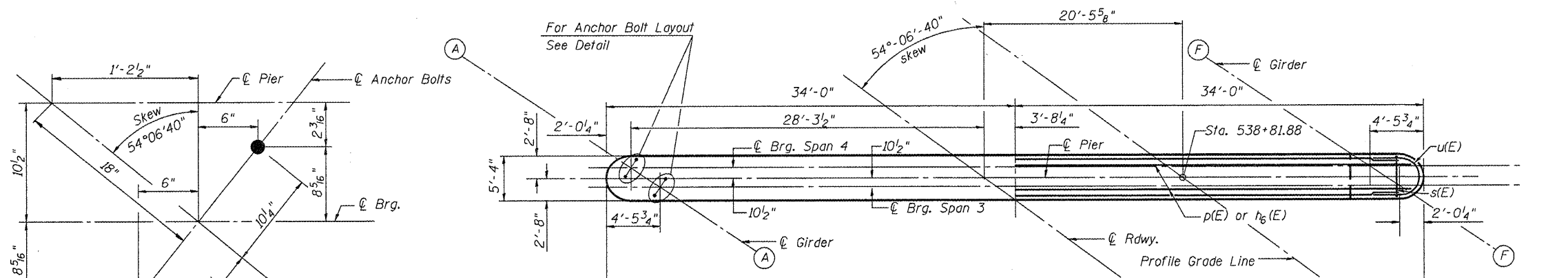
**FOUR (4) ABUTMENTS
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d ₁ (E)	16	#5	8'-1"	
h(E)	80	#5	38'-1"	—
h ₁ (E)	32	#6	40'-6"	—
h ₂ (E)	16	#5	5'-0"	
h ₃ (E)	16	#5	5'-0"	
h ₄ (E)	32	#5	15'-3"	—
h ₅ (E)	32	#5	13'-3"	—
v(E)	280	#5	3'-9"	
v ₁ (E)	280	#5	3'-8"	
v ₂ *(E)	280	#5	5'-6"	—
v ₃ *(E)	280	#5	6'-10"	—
Concrete Structures			Cu. Yd.	82.6
Reinforcement Bars, Epoxy Coated			Pound	11,940
Concrete Sealer			Sq. Ft.	2,015

All bars designated with an asterisk (ex: v₂*(E)) shall be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Locate bars to miss existing reinforcement.

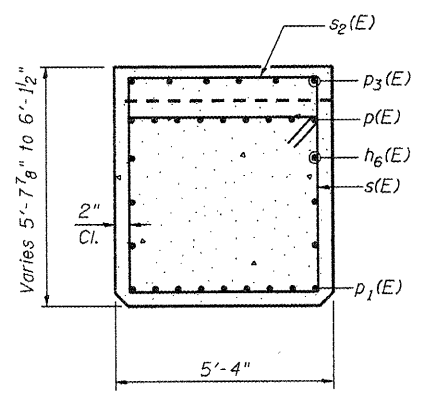
NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

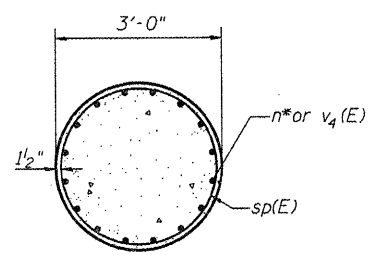


ANCHOR BOLT LAYOUT AT PIER
Dimensions similar about \varnothing Pier

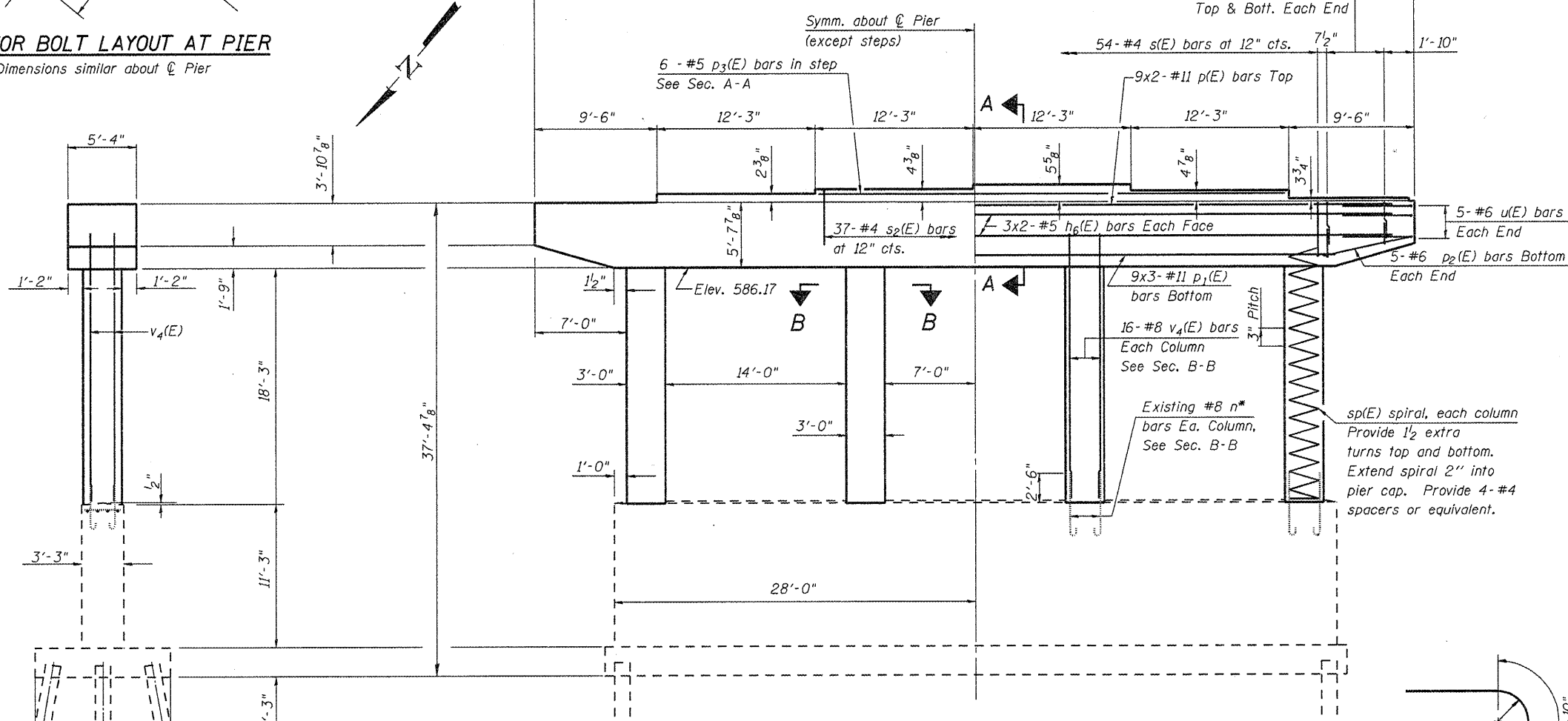
TOP PLAN



SEC. A-A



SEC. B-B



ELEVATION
(Looking East)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_6(E)$	12	#5	32'-9"	—
$p(E)$	18	#11	34'-9"	—
$p_1(E)$	27	#11	20'-0"	—
$p_2(E)$	10	#6	7'-0"	—
$p_3(E)$	6	#5	36'-5"	—
$s(E)$	54	#4	21'-5"	□
$s_1(E)$	24	#4	12'-0"	U
$s_2(E)$	37	#4	7'-0"	□
** $sp(E)$	4	#4	18'-5"	⋈
$u(E)$	10	#6	14'-2"	U
$v_4(E)$	64	#8	22'-0"	—
Concrete Structures	Cu. Yd.	94.4		
Reinforcement Bars, Epoxy Coated	Pound	13,820		
Concrete Sealer	Sq. Ft.	1,966		

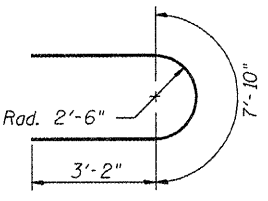
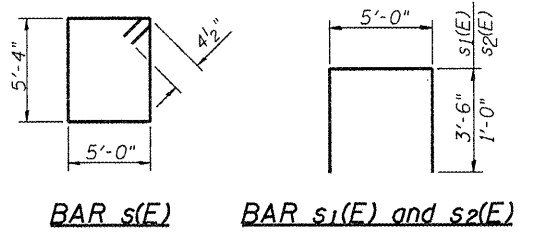
** Length is height of spiral.

END VIEW

BEARING SEAT ELEVATIONS

A	B	C	D	E	F
591.83	592.03	592.19	592.30	592.24	592.14

Notes:
Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
*Existing Reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Concrete Sealer shall be applied to the top and sides of the pier cap and the pier columns.



BARS u(E)

NOTE
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

PIER 3 S.B. LANES
STRUCTURE NO. 054-0054



JOB	= 2265.1	DESIGNED	- AAN	REVISED	-
FILE	= 0540053_0054-72E10-43-Piers.dgn	CHECKED	- MDC	REVISED	-
DATE	= 10/14/2011	DRAWN	- MFC	REVISED	-
		CHECKED	- MDC	REVISED	-

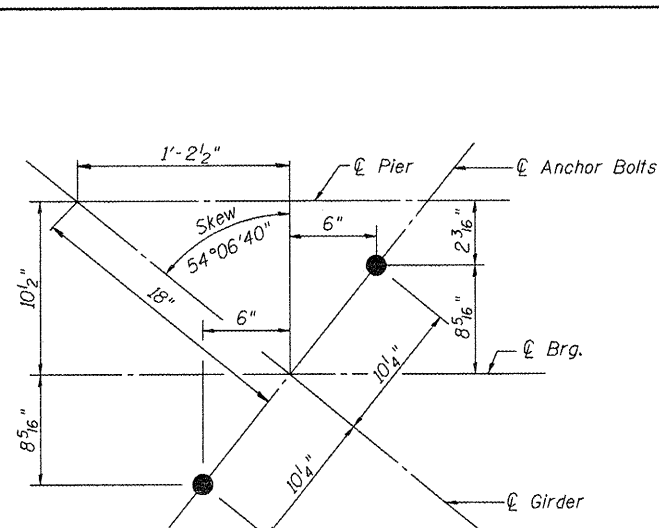
DESIGNED	- AAN	REVISED	-
CHECKED	- MDC	REVISED	-
DRAWN	- MFC	REVISED	-
CHECKED	- MDC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

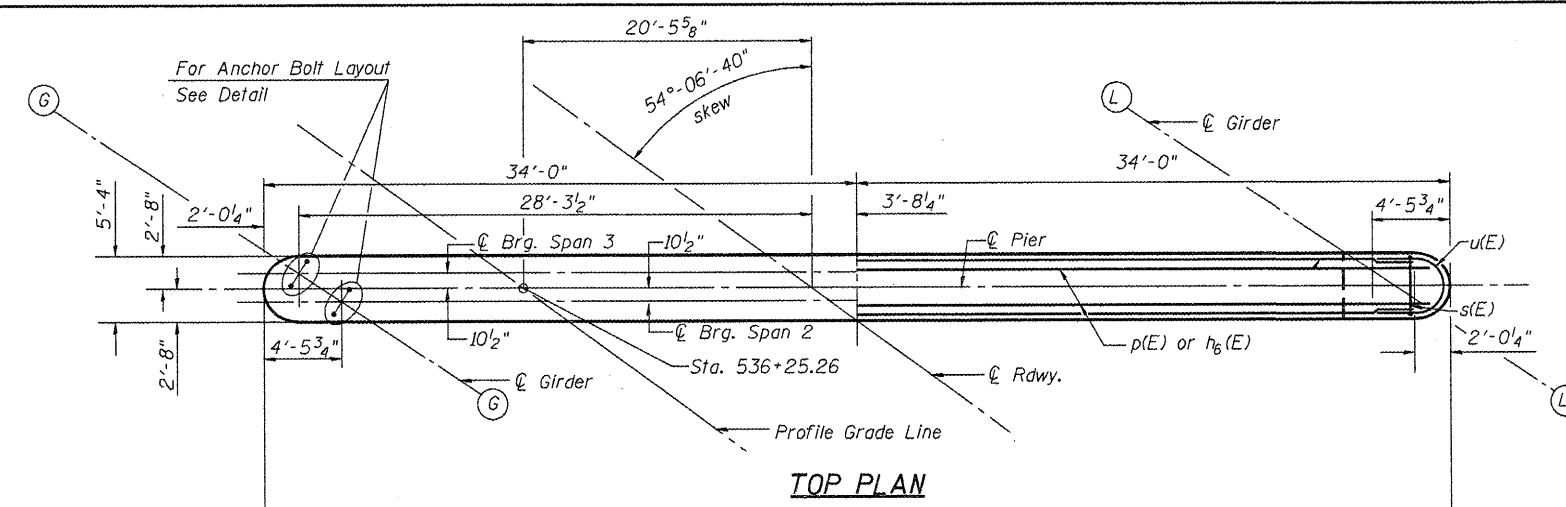
PIER 3 SB
STRUCTURE NO. 054-0054 (SB)

SHEET NO. 43 OF 45 SHEETS

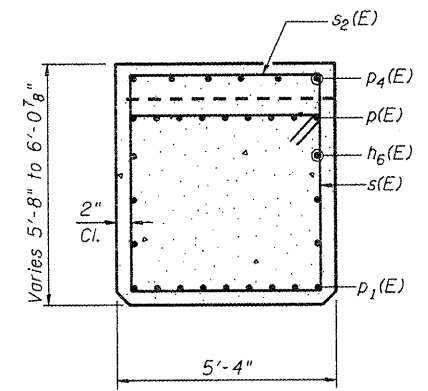
F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	159
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72E10	



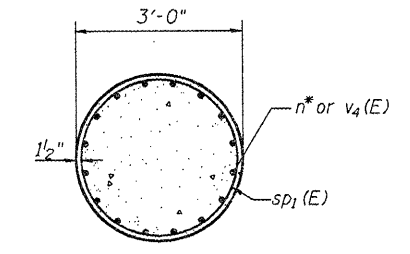
ANCHOR BOLT LAYOUT AT PIER
Dimensions similar about C/Pier



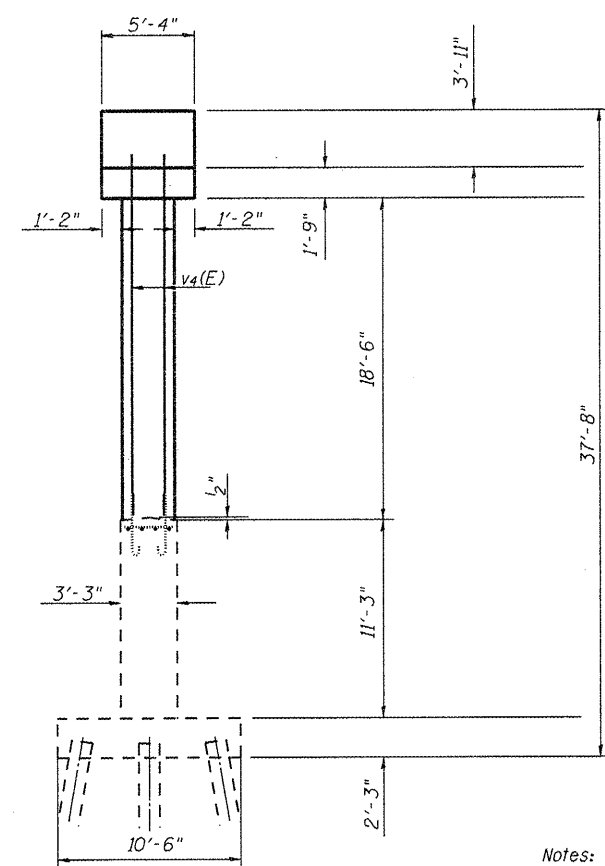
TOP PLAN



SEC. A-A



SEC. B-B

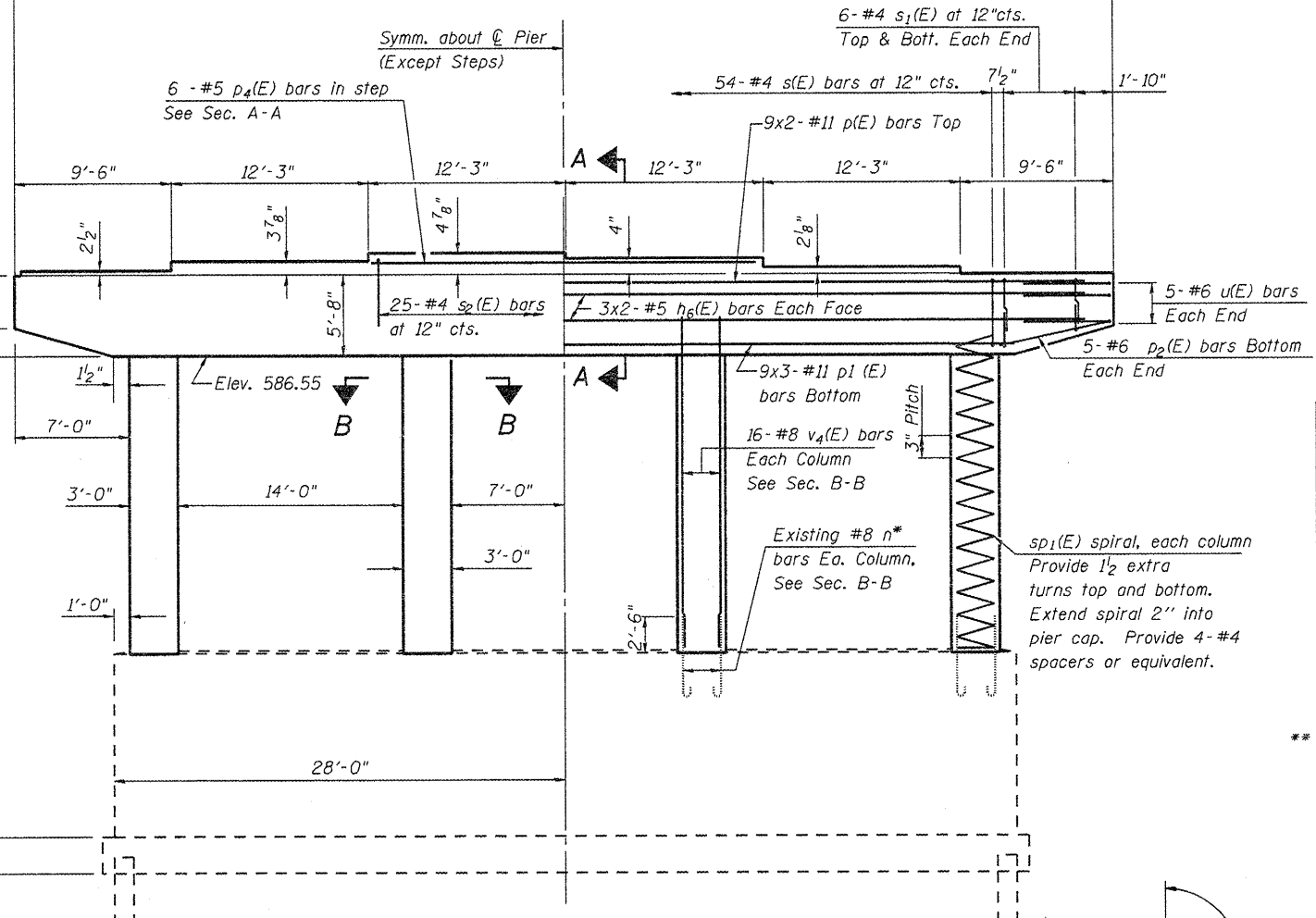


END VIEW

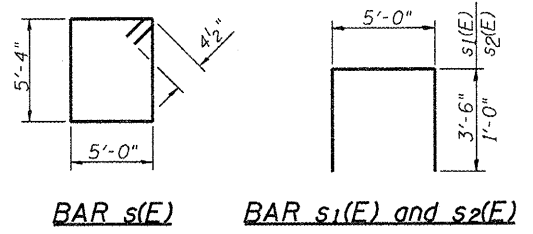
BEARING SEAT ELEVATIONS

G	H	I	J	K	L
592.43	592.54	592.63	592.55	592.40	592.22

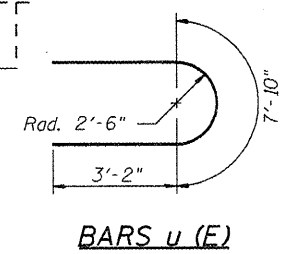
Notes:
Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
*Existing Reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Concrete Sealer shall be applied to the top and sides of the pier cap and the pier columns.



ELEVATION
(Looking East)



BAR s(E) BAR s_1(E) and s_2(E)



BARS u(E)

NOTE
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
h_b(E)	12	#5	32'-9"	—	
p(E)	18	#11	34'-9"	—	
p_1(E)	27	#11	20'-0"	—	
p_2(E)	10	#6	7'-0"	—	
p_4(E)	6	#5	24'-2"	—	
s(E)	54	#4	21'-5"	□	
s_1(E)	24	#4	12'-0"	U	
s_2(E)	25	#4	7'-0"	□	
** s_p1(E)	4	#4	18'-8"	~	
u(E)	10	#6	14'-2"	U	
v_4(E)	64	#8	22'-0"	—	
Concrete Structures				Cu. Yd.	94.0
Reinforcement Bars, Epoxy Coated				Pound	13,710
Concrete Sealer				Sq. Ft.	1,984

** Length is height of spiral.

PIER 2 N.B. LANES
STRUCTURE NO. 054-0053



JOB = 2265.1
FILE = 0540053_0054-72E10-44-Piers.dgn
DATE = 10/14/2011

DESIGNED - AAN
CHECKED - MDC
DRAWN - MFC
CHECKED - MDC

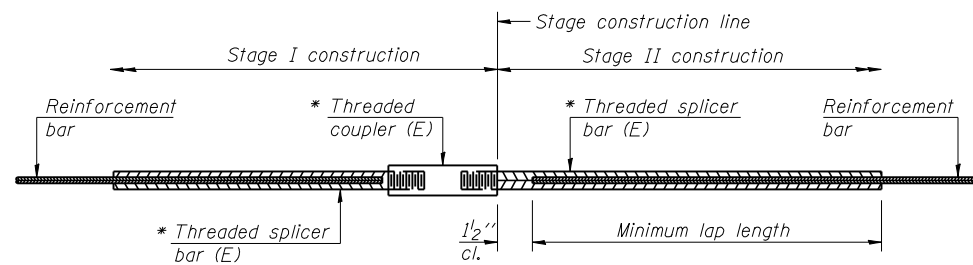
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 NB
STRUCTURE NO. 054-0053 (NB)

SHEET NO. 44 of 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	160
CONTRACT NO. 72E10				
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

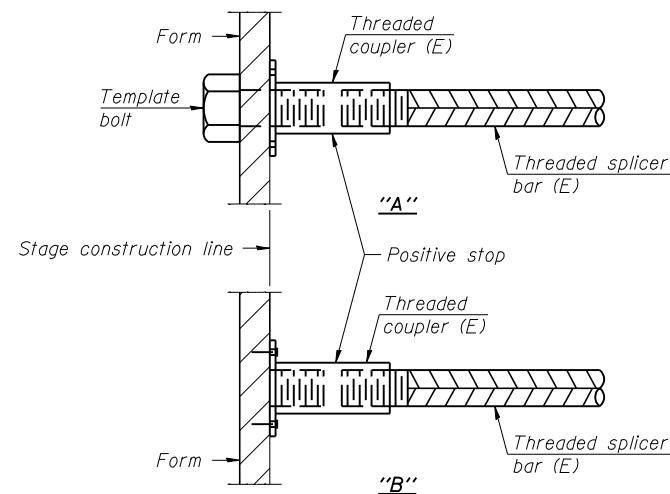
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1/2" + thread length

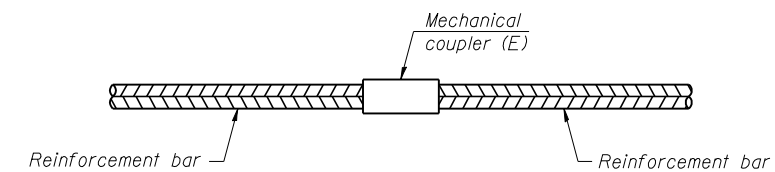
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



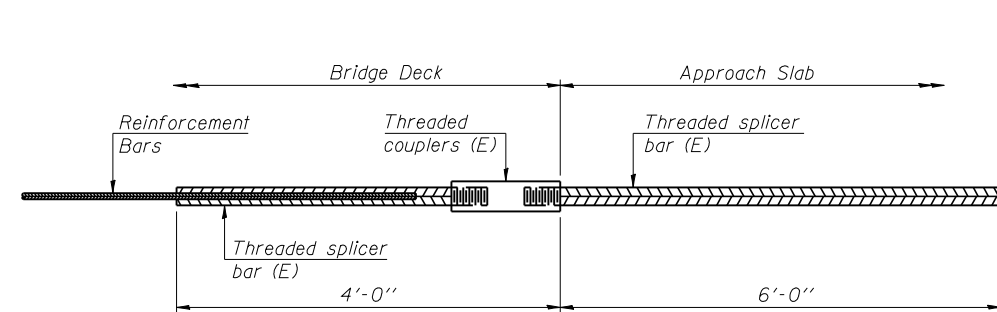
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



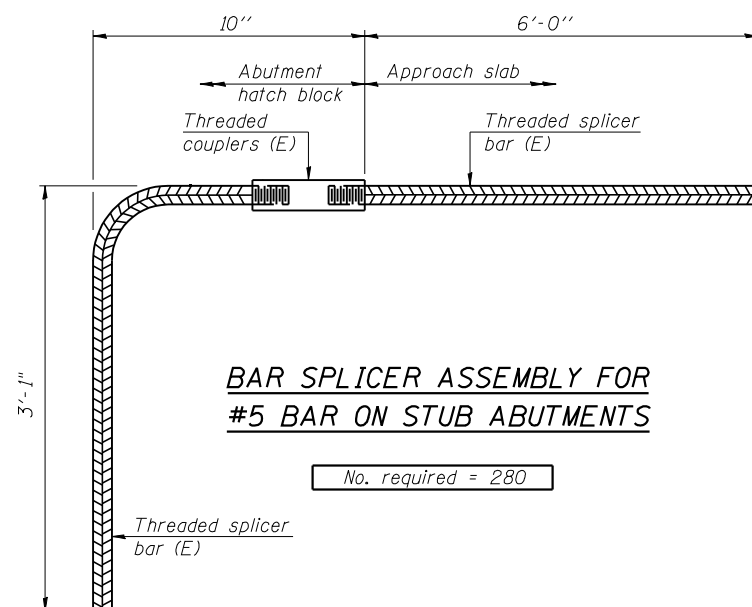
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 280

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See special provision for Mechanical Splicers.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

7-1-10



JOB = 2265.1
 FILE = 0540053.0054-72E10-45-Splicer.dgn
 DATE = 9/9/2011

DESIGNED - AAN
 CHECKED - MDC
 DRAWN - TJD
 CHECKED - MDC

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 054-0053 (NB) & STRUCTURE NO. 054-0054 (SB)**

SHEET NO. 45 of 45 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	161
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT

GENERAL NOTES

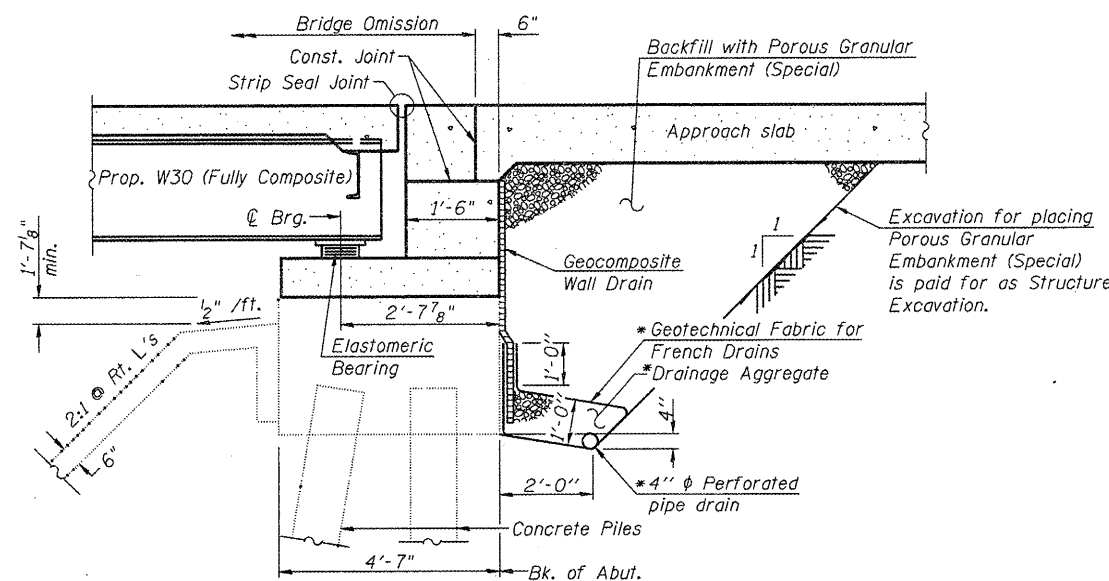
- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts $\frac{7}{8}$ in. ϕ , holes $\frac{15}{16}$ in. ϕ , unless otherwise noted.
- Calculated weight of Structural Steel = 971,060 pounds.
- All structural steel shall be AASHTO M 270 Grade 50W except expansion joints which shall be AASHTO M 270 Grade 50. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.
- Reinforcement bars designated (E) shall be epoxy coated.
- If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
- Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
- Concrete Sealer shall be applied to the designated areas of the abutments and piers 5.
- All structural steel and exposed surfaces of bearings within a distance of 8 ft. each way from the deck joints shall be painted as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
- Slipforming of parapet is not allowed.
- Quantities for Bridge Deck Grooving, Protective Coat, & Diamond Grinding (Bridge Section) include the bridge approach connector pavement.

WATERWAY INFORMATION

		Discharge (cfs)		Waterway Opening (sq. ft.)		Natural H.W.E.	Head (ft.)		Headwater Elev.	
Frequency Year	Structure	Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	Main Channel	6,160	6,160	1,546	1,546	565.5	1.0	1.0	566.5	566.5
	Overflow	3,940	3,940	1,147	1,147					
	Total	10,100	10,100	2,693	2,693					
50	Main Channel	10,937	10,937	2,313	2,313	566.9	1.4	1.4	568.3	568.3
	Overflow	7,463	7,463	1,168	1,168					
	Total	18,400	18,400	3,481	3,481					
Base	Main Channel	14,728	14,728	2,765	2,765	567.7	1.6	1.6	569.3	569.3
	Overflow	8,072	8,072	1,214	1,214					
	Total	22,800	22,800	3,979	3,979					
Max.	Main Channel	21,447	22,712	3,501	4,070	570.0	3.2	2.7	573.2	572.7
	Overflow	14,453	13,188	1,503	1,503					
	Total	35,900	35,900	5,004	5,573					

Existing Low Grade Elev. 573.95 ft @ Sta. 556+50 (SB Median EOP)
 Proposed Low Grade Elev. 574.16 ft @ Sta. 556+50 (SB Median EOP)
 Drainage Area = 310 Sq. Miles

10 Yr. Vel. thru Exist. Main Channel Bridges = 4.0 fps 10 Yr. Vel. thru Prop. Main Channel Bridges = 4.0 fps
 10 Yr. Vel. thru Exist. Overflow Bridges = 3.4 fps 10 Yr. Vel. thru Prop. Overflow Bridges = 3.4 fps



SECTION THRU PILE SUPPORTED STUB ABUTMENT
 (Horiz. dim. @ Rt. L's)

Note:
 *Included in the cost of Pipe Underdrains for Structures.
 All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Ton		1,180	1,180
Filter Fabric	Sq. Yd.		1,331	1,331
Removal of Existing Superstructures	Each	2		2
Concrete Removal	Cu. Yd.	96.0		96.0
Structure Excavation	Cu. Yd.		301	301
Floor Drains	Each	160		160
Concrete Structures	Cu. Yd.		253.7	253.7
Concrete Superstructure	Cu. Yd.	2,015.6		2,015.6
Bridge Deck Grooving	Sq. Yd.	6,385		6,385
Protective Coat	Sq. Yd.	7,925		7,925
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	39,456		39,456
Reinforcement Bars, Epoxy Coated	Pound	530,370	22,780	553,150
Bar Splicers	Each	172		172
Name Plates	Each	2		2
Preformed Joint Strip Seal	Foot	256.5		256.5
Elastomeric Bearing Assembly, Type II	Each	120		120
Anchor Bolts, $\frac{5}{8}$ "	Each	96		96
Anchor Bolts, $\frac{3}{4}$ "	Each	48		48
Anchor Bolts, 1"	Each	144		144
Concrete Sealer	Sq. Ft.		2,407	2,407
Geocomposite Wall Drain	Sq. Yd.		215	215
Porous Granular Embankment, Special	Cu. Yd.		301	301
Diamond Grinding (Bridge Section)	Sq. Yd.	6,082		6,082
Pipe Underdrains for Structures 4"	Foot		326	326

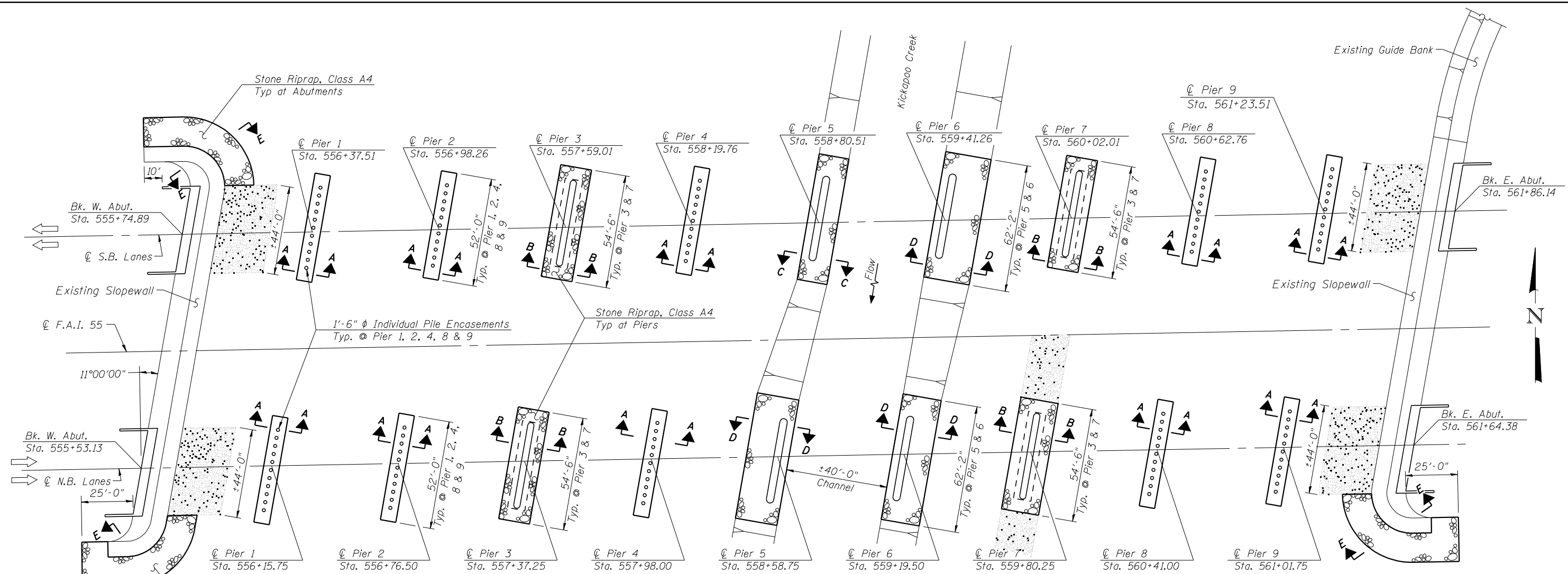


JOB	= 2265.1	DESIGNED	- ZTB	REVISED	-
FILE	= 0540055_0056-72E10-02-GenData.dgn	CHECKED	- MDC	REVISED	-
DATE	= 9/29/2011	DRAWN	- TJD	REVISED	-
		CHECKED	- ZTB	REVISED	-

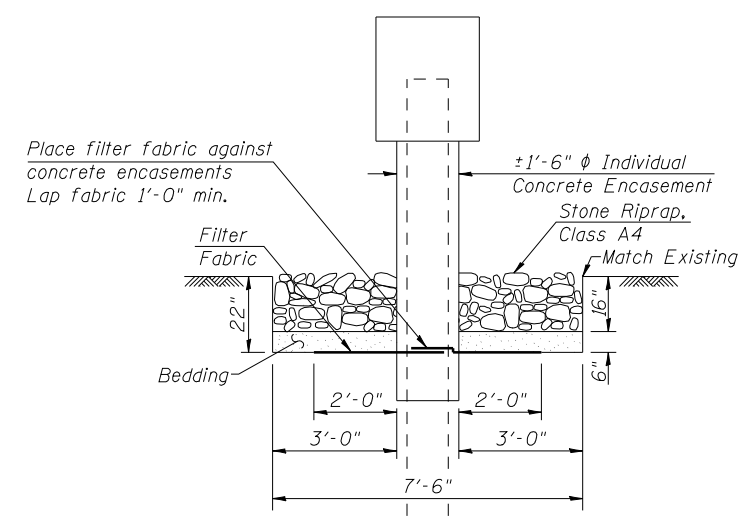
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL DATA
STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)

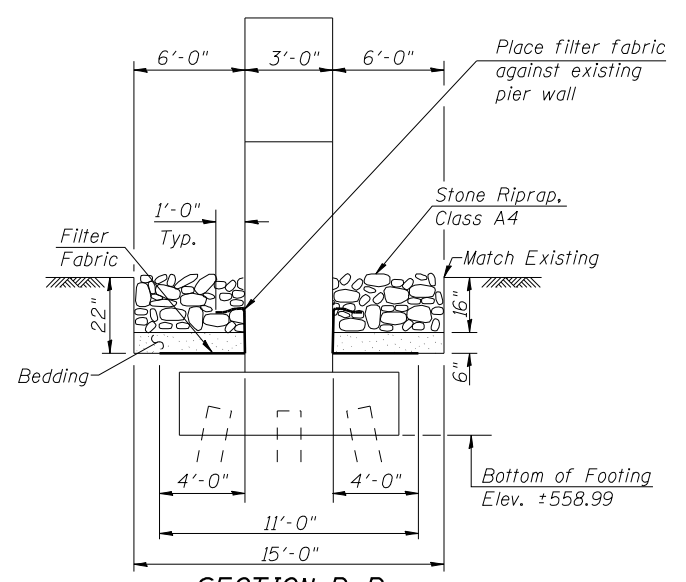
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	163
			CONTRACT NO. T2E10	
ILLINOIS FED. AID PROJECT				



FOOTING PLAN



SECTION A-A
(Dimensions at Rt. & S)



SECTION B-B
(Dimensions at Rt. & S)



BILL OF MATERIAL

Item	Unit	Total
Stone Riprap, Class A4	Ton	1,180
Filter Fabric	Sq. Yd.	1,331



JOB = 2265.1
 FILE = 0540055.0056-72E10-03-Scour.dgn
 DATE = 9/9/2011

DESIGNED - TSH
 CHECKED - MDC
 DRAWN - TJD
 CHECKED - TSH

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

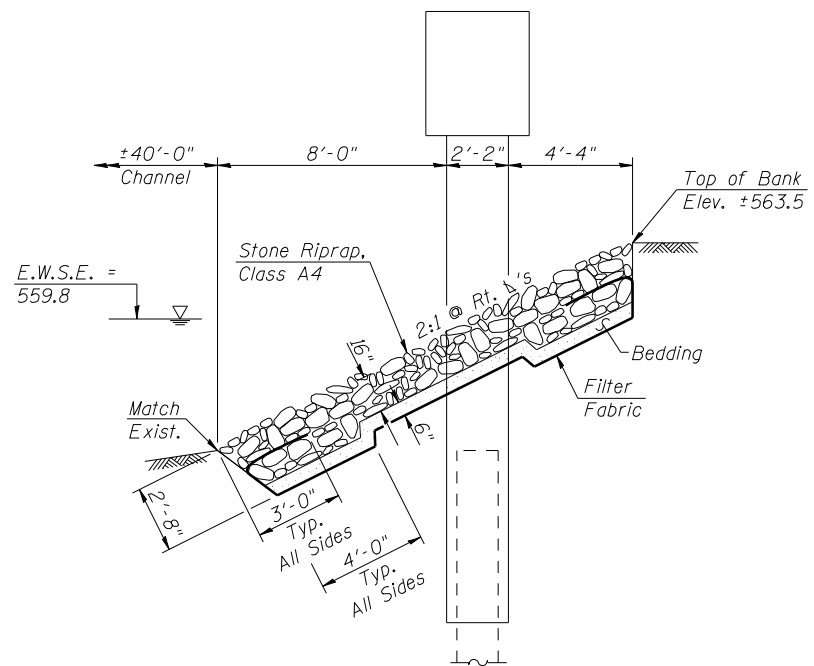
**SCOUR COUNTERMEASURE DETAILS
 STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)**

SHEET NO. 3 OF 39 SHEETS

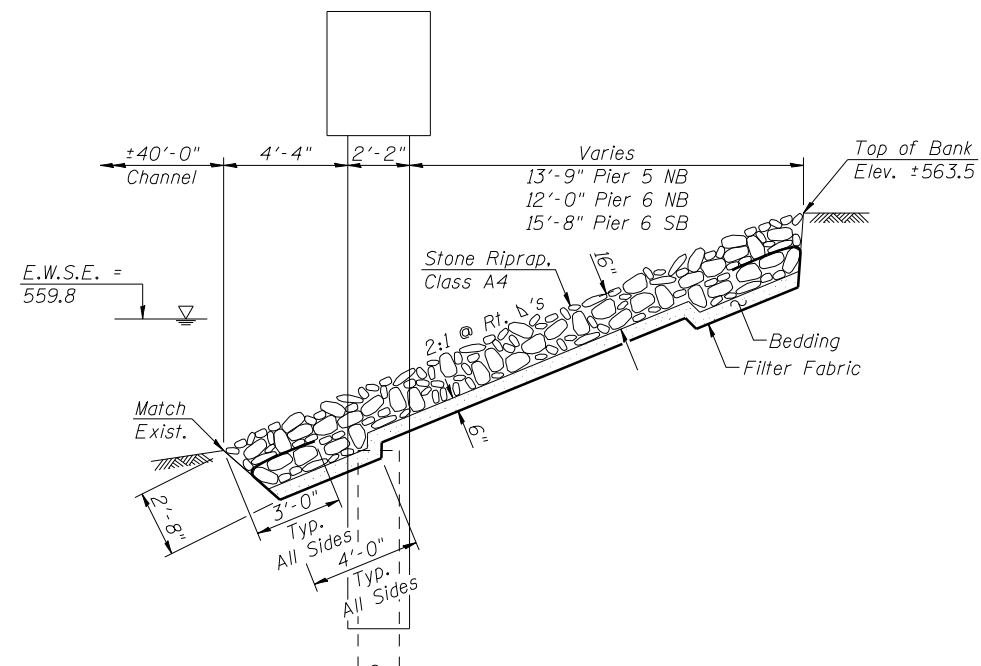
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	164

CONTRACT NO. 72E10

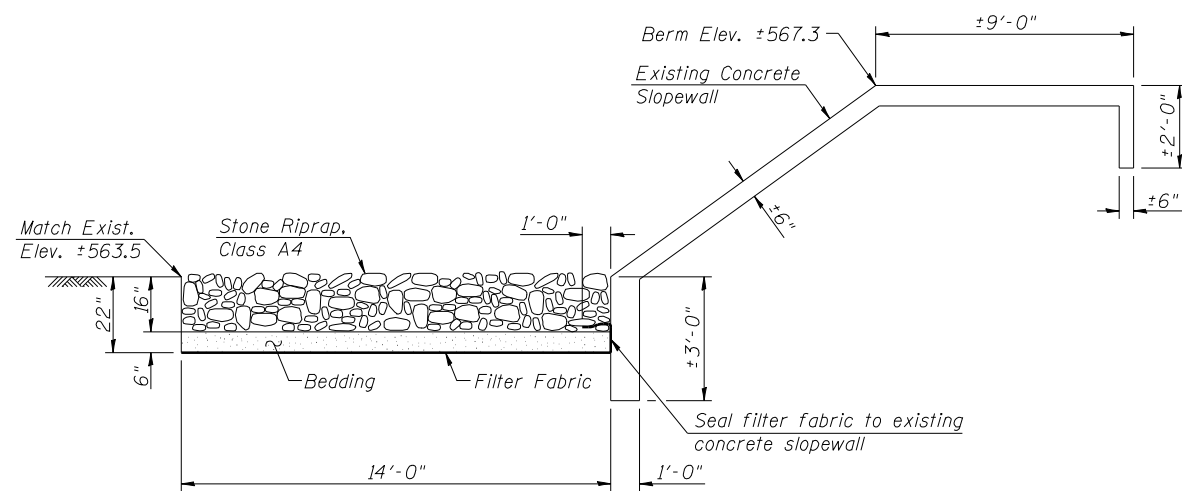
ILLINOIS FED. AID PROJECT



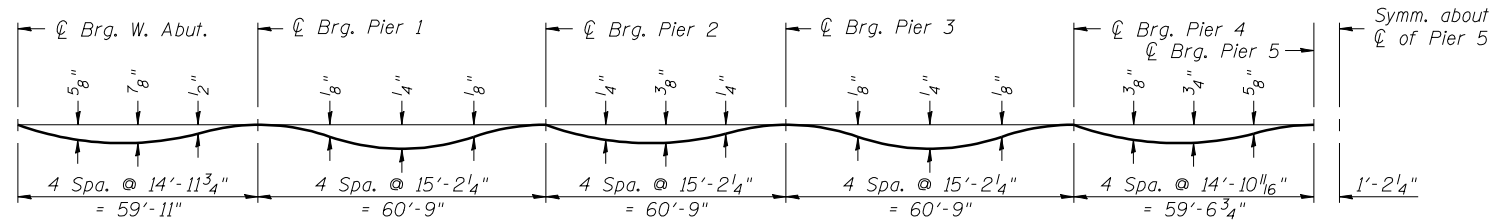
SECTION C-C
(Dimensions at Rt. Δ 's)
Pier 5 SB



SECTION D-D
(Dimensions at Rt. Δ 's)
Pier 5 & 6 NB
Pier 6 SB



SECTION E-E
(Dimensions at Rt. Δ 's)

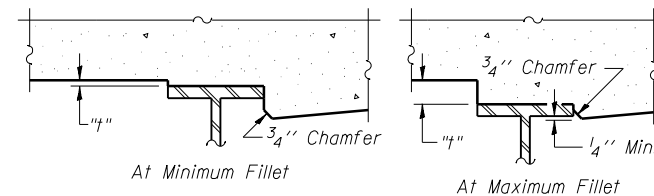


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

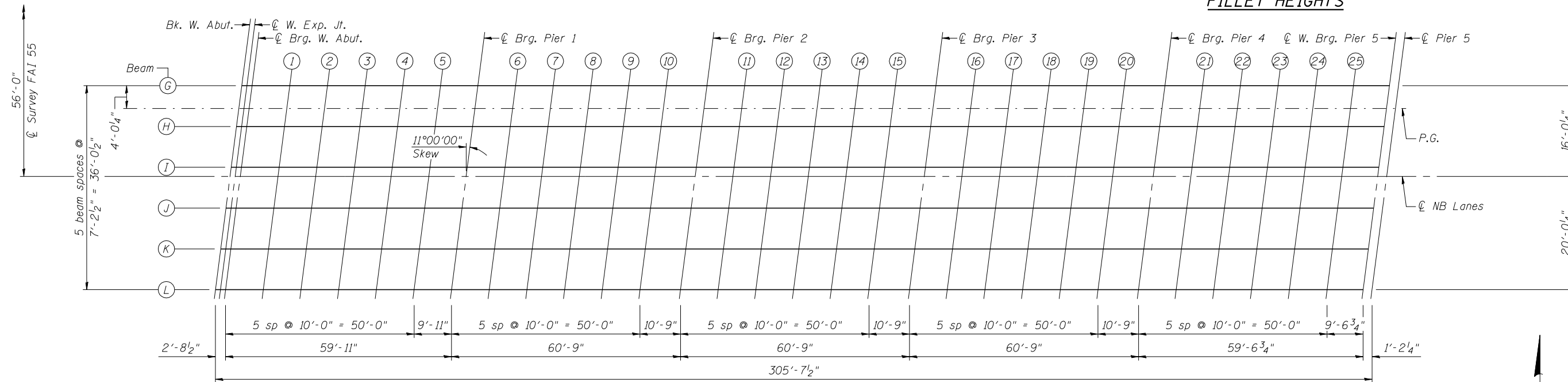
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on sheets 6-8 of 39.



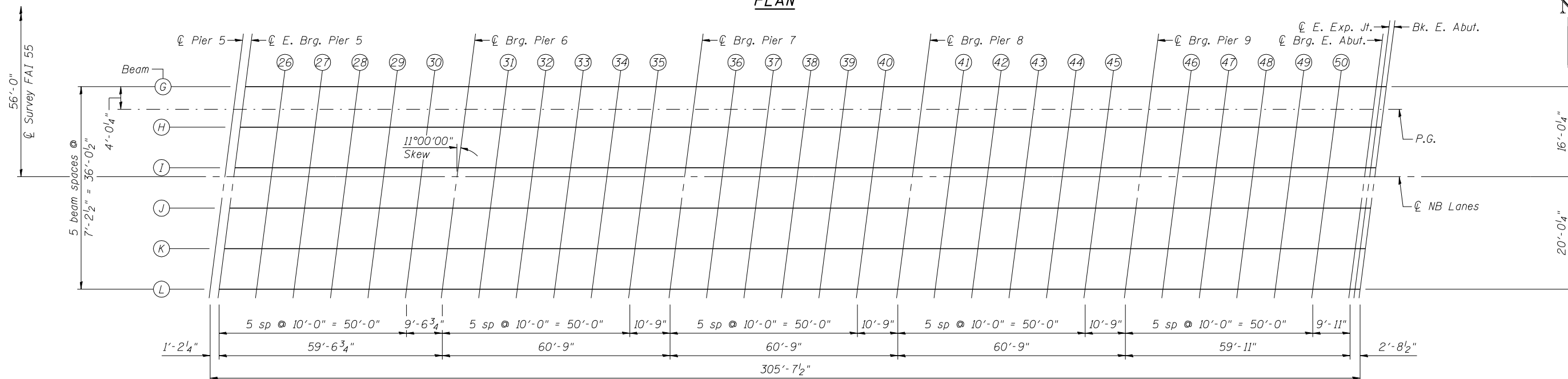
To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on sheets 6-8 of 39, minus slab thickness, equals the fillet heights "t" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown below. For grinding the deck, see Special Provisions.

FILLET HEIGHTS



PLAN



PLAN



JOB = 2265.1
 FILE = 0540055.0056-72E10-05-TO5-NB.dgn
 DATE = 9/9/2011

DESIGNED - ZTB
 CHECKED - MDC
 DRAWN - TJD
 CHECKED - ZTB

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 054-0055 (NB)**

SHEET NO. 5 OF 39 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	166
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT

BEAM G

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1-9, E. Brg. Pier 5, and Bk. E. Abut.

PROFILE GRADE LINE F.A.I. 55

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1-9, E. Brg. Pier 5, and Bk. E. Abut.

BEAM H

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1-9, E. Brg. Pier 5, and Bk. E. Abut.



Table with 4 columns: JOB (2265.1), FILE (0540055.0056-72E10-06-TO5-NB.dgn), DATE (9/9/2011), DESIGNED (ZTB), CHECKED (MDC), DRAWN (TJD), CHECKED (ZTB), REVISED (-), REVISED (-), REVISED (-), REVISED (-)

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS STRUCTURE NO. 054-0055 (NB)

SHEET NO. 6 OF 39 SHEETS

Table with 5 columns: F.A.I. RTE. (55), SECTION (D6 LOGAN CO BR 2011), COUNTY (LOGAN), TOTAL SHEETS (224), SHEET NO. (167), CONTRACT NO. (72E10), ILLINOIS FED. AID PROJECT

BEAM I

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	555+53.44	10.40	574.47	574.49
└─ Exp. Jt.	555+55.04	10.40	574.47	574.49
└─ Brg. W. Abut.	555+56.15	10.40	574.47	574.49
1	555+66.15	10.40	574.44	574.50
2	555+76.15	10.40	574.42	574.50
3	555+86.15	10.40	574.40	574.49
4	555+96.15	10.40	574.39	574.46
5	556+06.15	10.40	574.38	574.42
└─ Brg. Pier 1	556+16.06	10.40	574.37	574.39
6	556+26.06	10.40	574.36	574.38
7	556+36.06	10.40	574.36	574.39
8	556+46.06	10.40	574.36	574.40
9	556+56.06	10.40	574.36	574.39
10	556+66.06	10.40	574.36	574.39
└─ Brg. Pier 2	556+76.81	10.40	574.36	574.38
11	556+86.81	10.40	574.36	574.39
12	556+96.81	10.40	574.36	574.41
13	557+06.81	10.40	574.36	574.41
14	557+16.81	10.40	574.36	574.41
15	557+26.81	10.40	574.36	574.39
└─ Brg. Pier 3	557+37.56	10.40	574.36	574.38
16	557+47.56	10.40	574.36	574.38
17	557+57.56	10.40	574.36	574.39
18	557+67.56	10.40	574.36	574.40
19	557+77.56	10.40	574.36	574.39
20	557+87.56	10.40	574.36	574.39
└─ Brg. Pier 4	557+98.31	10.40	574.36	574.38
21	558+08.31	10.40	574.36	574.40
22	558+18.31	10.40	574.36	574.43
23	558+28.31	10.40	574.36	574.44
24	558+38.31	10.40	574.36	574.44
25	558+48.31	10.40	574.36	574.42
└─ W. Brg. Pier 5	558+57.88	10.40	574.36	574.38
└─ Pier 5	558+59.06	10.40	574.36	574.38
└─ E. Brg. Pier 5	558+60.25	10.40	574.36	574.38
26	558+70.25	10.40	574.36	574.42
27	558+80.25	10.40	574.36	574.44
28	558+90.25	10.40	574.36	574.44
29	559+00.25	10.40	574.36	574.43
30	559+10.25	10.40	574.36	574.40
└─ Brg. Pier 6	559+19.81	10.40	574.36	574.38
31	559+29.81	10.40	574.36	574.38
32	559+39.81	10.40	574.36	574.39
33	559+49.81	10.40	574.36	574.40
34	559+59.81	10.40	574.36	574.39
35	559+69.81	10.40	574.36	574.38
└─ Brg. Pier 7	559+80.56	10.40	574.36	574.38
36	559+90.56	10.40	574.36	574.39
37	560+00.56	10.40	574.36	574.41
38	560+10.56	10.40	574.36	574.41
39	560+20.56	10.40	574.36	574.41
40	560+30.56	10.40	574.36	574.39
└─ Brg. Pier 8	560+41.31	10.40	574.36	574.38
41	560+51.31	10.40	574.37	574.40
42	560+61.31	10.40	574.38	574.41
43	560+71.31	10.40	574.40	574.44
44	560+81.31	10.40	574.43	574.46
45	560+91.31	10.40	574.46	574.48
└─ Brg. Pier 9	561+02.06	10.40	574.50	574.52
46	561+12.06	10.40	574.54	574.58
47	561+22.06	10.40	574.59	574.66
48	561+32.06	10.40	574.64	574.73
49	561+42.06	10.40	574.70	574.78
50	561+52.06	10.40	574.77	574.83
└─ Brg. E. Abut.	561+61.98	10.40	574.84	574.86
└─ Exp. Jt.	561+63.09	10.40	574.85	574.87
└─ Bk. E. Abut.	561+64.69	10.40	574.86	574.88

ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	555+53.13	12.00	574.50	574.52
└─ Exp. Jt.	555+54.72	12.00	574.49	574.51
└─ Brg. W. Abut.	555+55.84	12.00	574.49	574.51
1	555+65.84	12.00	574.47	574.53
2	555+75.84	12.00	574.45	574.53
3	555+85.84	12.00	574.43	574.52
4	555+95.84	12.00	574.41	574.48
5	556+05.84	12.00	574.40	574.44
└─ Brg. Pier 1	556+15.75	12.00	574.39	574.41
6	556+25.75	12.00	574.39	574.41
7	556+35.75	12.00	574.39	574.42
8	556+45.75	12.00	574.39	574.43
9	556+55.75	12.00	574.39	574.42
10	556+65.75	12.00	574.39	574.42
└─ Brg. Pier 2	556+76.50	12.00	574.39	574.41
11	556+86.50	12.00	574.39	574.42
12	556+96.50	12.00	574.39	574.44
13	557+06.50	12.00	574.39	574.44
14	557+16.50	12.00	574.39	574.44
15	557+26.50	12.00	574.39	574.42
└─ Brg. Pier 3	557+37.25	12.00	574.39	574.41
16	557+47.25	12.00	574.39	574.41
17	557+57.25	12.00	574.39	574.42
18	557+67.25	12.00	574.39	574.43
19	557+77.25	12.00	574.39	574.42
20	557+87.25	12.00	574.39	574.41
└─ Brg. Pier 4	557+98.00	12.00	574.39	574.41
21	558+08.00	12.00	574.39	574.43
22	558+18.00	12.00	574.39	574.46
23	558+28.00	12.00	574.39	574.47
24	558+38.00	12.00	574.39	574.47
25	558+48.00	12.00	574.39	574.45
└─ W. Brg. Pier 5	558+57.56	12.00	574.39	574.41
└─ Pier 5	558+58.75	12.00	574.39	574.41
└─ E. Brg. Pier 5	558+59.94	12.00	574.39	574.41
26	558+69.94	12.00	574.39	574.45
27	558+79.94	12.00	574.39	574.47
28	558+89.94	12.00	574.39	574.47
29	558+99.94	12.00	574.39	574.46
30	559+09.94	12.00	574.39	574.43
└─ Brg. Pier 6	559+19.50	12.00	574.39	574.41
31	559+29.50	12.00	574.39	574.41
32	559+39.50	12.00	574.39	574.42
33	559+49.50	12.00	574.39	574.43
34	559+59.50	12.00	574.39	574.42
35	559+69.50	12.00	574.39	574.41
└─ Brg. Pier 7	559+80.25	12.00	574.39	574.41
36	559+90.25	12.00	574.39	574.42
37	560+00.25	12.00	574.39	574.44
38	560+10.25	12.00	574.39	574.44
39	560+20.25	12.00	574.39	574.44
40	560+30.25	12.00	574.39	574.42
└─ Brg. Pier 8	560+41.00	12.00	574.39	574.41
41	560+51.00	12.00	574.40	574.43
42	560+61.00	12.00	574.41	574.44
43	560+71.00	12.00	574.43	574.47
44	560+81.00	12.00	574.45	574.48
45	560+91.00	12.00	574.48	574.50
└─ Brg. Pier 9	561+01.75	12.00	574.52	574.54
46	561+11.75	12.00	574.56	574.60
47	561+21.75	12.00	574.61	574.68
48	561+31.75	12.00	574.66	574.76
49	561+41.75	12.00	574.72	574.81
50	561+51.75	12.00	574.79	574.85
└─ Brg. E. Abut.	561+61.67	12.00	574.86	574.88
└─ Exp. Jt.	561+62.78	12.00	574.87	574.89
└─ Bk. E. Abut.	561+64.38	12.00	574.88	574.90

BEAM J

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	555+52.04	17.60	574.41	574.43
└─ Exp. Jt.	555+53.64	17.60	574.41	574.43
└─ Brg. W. Abut.	555+54.75	17.60	574.41	574.43
1	555+64.75	17.60	574.38	574.44
2	555+74.75	17.60	574.36	574.44
3	555+84.75	17.60	574.34	574.43
4	555+94.75	17.60	574.33	574.40
5	556+04.75	17.60	574.32	574.36
└─ Brg. Pier 1	556+14.66	17.60	574.31	574.33
6	556+24.66	17.60	574.30	574.32
7	556+34.66	17.60	574.30	574.33
8	556+44.66	17.60	574.30	574.34
9	556+54.66	17.60	574.30	574.33
10	556+64.66	17.60	574.30	574.33
└─ Brg. Pier 2	556+75.41	17.60	574.30	574.32
11	556+85.41	17.60	574.30	574.33
12	556+95.41	17.60	574.30	574.35
13	557+05.41	17.60	574.30	574.35
14	557+15.41	17.60	574.30	574.35
15	557+25.41	17.60	574.30	574.33
└─ Brg. Pier 3	557+36.16	17.60	574.30	574.32
16	557+46.16	17.60	574.30	574.32
17	557+56.16	17.60	574.30	574.33
18	557+66.16	17.60	574.30	574.34
19	557+76.16	17.60	574.30	574.33
20	557+86.16	17.60	574.30	574.32
└─ Brg. Pier 4	557+96.91	17.60	574.30	574.32
21	558+06.91	17.60	574.30	574.34
22	558+16.91	17.60	574.30	574.37
23	558+26.91	17.60	574.30	574.38
24	558+36.91	17.60	574.30	574.38
25	558+46.91	17.60	574.30	574.36
└─ W. Brg. Pier 5	558+56.47	17.60	574.30	574.32
└─ Pier 5	558+57.66	17.60	574.30	574.32
└─ E. Brg. Pier 5	558+58.85	17.60	574.30	574.32
26	558+68.85	17.60	574.30	574.36
27	558+78.85	17.60	574.30	574.38
28	558+88.85	17.60	574.30	574.38
29	558+98.85	17.60	574.30	574.37
30	559+08.85	17.60	574.30	574.34
└─ Brg. Pier 6	559+18.41	17.60	574.30	574.32
31	559+28.41	17.60	574.30	574.32
32	559+38.41	17.60	574.30	574.33
33	559+48.41	17.60	574.30	574.34
34	559+58.41	17.60	574.30	574.33
35	559+68.41	17.60	574.30	574.32
└─ Brg. Pier 7	559+79.16	17.60	574.30	574.32
36	559+89.16	17.60	574.30	574.33
37	559+99.16	17.60	574.30	574.35
38	560+09.16	17.60	574.30	574.35
39	560+19.16	17.60	574.30	574.35
40	560+29.16	17.60	574.30	574.33
└─ Brg. Pier 8	560+39.91	17.60	574.30	574.32
41	560+49.91	17.60	574.31	574.34
42	560+59.91	17.60	574.32	574.35
43	560+69.91	17.60	574.34	574.38
44	560+79.91	17.60	574.36	574.39
45	560+89.91	17.60	574.39	574.41
└─ Brg. Pier 9	561+00.66	17.60	574.43	574.45
46	561+10.66	17.60	574.47	574.51</

BEAM K

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	555+50.64	24.81	574.30	574.32
⊘ Exp. Jt.	555+52.23	24.81	574.30	574.32
⊘ Brg. W. Abut.	555+53.35	24.81	574.29	574.31
1	555+63.35	24.81	574.27	574.33
2	555+73.35	24.81	574.25	574.33
3	555+83.35	24.81	574.23	574.32
4	555+93.35	24.81	574.21	574.28
5	556+03.35	24.81	574.20	574.24
⊘ Brg. Pier 1	556+13.26	24.81	574.19	574.21
6	556+23.26	24.81	574.19	574.21
7	556+33.26	24.81	574.18	574.21
8	556+43.26	24.81	574.18	574.22
9	556+53.26	24.81	574.18	574.21
10	556+63.26	24.81	574.18	574.21
⊘ Brg. Pier 2	556+74.01	24.81	574.18	574.20
11	556+84.01	24.81	574.18	574.21
12	556+94.01	24.81	574.18	574.23
13	557+04.01	24.81	574.18	574.23
14	557+14.01	24.81	574.18	574.23
15	557+24.01	24.81	574.18	574.21
⊘ Brg. Pier 3	557+34.76	24.81	574.18	574.20
16	557+44.76	24.81	574.18	574.20
17	557+54.76	24.81	574.18	574.21
18	557+64.76	24.81	574.18	574.22
19	557+74.76	24.81	574.18	574.21
20	557+84.76	24.81	574.18	574.20
⊘ Brg. Pier 4	557+95.51	24.81	574.18	574.20
21	558+05.51	24.81	574.18	574.22
22	558+15.51	24.81	574.18	574.26
23	558+25.51	24.81	574.18	574.27
24	558+35.51	24.81	574.18	574.27
25	558+45.51	24.81	574.18	574.24
⊘ W. Brg. Pier 5	558+55.07	24.81	574.18	574.20
⊘ Pier 5	558+56.26	24.81	574.18	574.20
⊘ E. Brg. Pier 5	558+57.45	24.81	574.18	574.20
26	558+67.45	24.81	574.18	574.24
27	558+77.45	24.81	574.18	574.27
28	558+87.45	24.81	574.18	574.27
29	558+97.45	24.81	574.18	574.26
30	559+07.45	24.81	574.18	574.22
⊘ Brg. Pier 6	559+17.01	24.81	574.18	574.20
31	559+27.01	24.81	574.18	574.20
32	559+37.01	24.81	574.18	574.21
33	559+47.01	24.81	574.18	574.22
34	559+57.01	24.81	574.18	574.22
35	559+67.01	24.81	574.18	574.20
⊘ Brg. Pier 7	559+77.76	24.81	574.18	574.20
36	559+87.76	24.81	574.18	574.21
37	559+97.76	24.81	574.18	574.23
38	560+07.76	24.81	574.18	574.23
39	560+17.76	24.81	574.18	574.23
40	560+27.76	24.81	574.18	574.21
⊘ Brg. Pier 8	560+38.51	24.81	574.18	574.20
41	560+48.51	24.81	574.19	574.22
42	560+58.51	24.81	574.20	574.23
43	560+68.51	24.81	574.22	574.26
44	560+78.51	24.81	574.24	574.27
45	560+88.51	24.81	574.27	574.29
⊘ Brg. Pier 9	560+99.26	24.81	574.30	574.32
46	561+09.26	24.81	574.35	574.39
47	561+19.26	24.81	574.39	574.46
48	561+29.26	24.81	574.45	574.54
49	561+39.26	24.81	574.50	574.59
50	561+49.26	24.81	574.57	574.63
⊘ Brg. E. Abut.	561+59.18	24.81	574.64	574.66
⊘ Exp. Jt.	561+60.29	24.81	574.65	574.67
Bk. E. Abut.	561+61.89	24.81	574.66	574.68

BEAM L

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	555+49.24	32.02	574.15	574.17
⊘ Exp. Jt.	555+50.83	32.02	574.15	574.17
⊘ Brg. W. Abut.	555+51.94	32.02	574.15	574.17
1	555+61.94	32.02	574.12	574.18
2	555+71.94	32.02	574.10	574.18
3	555+81.94	32.02	574.08	574.17
4	555+91.94	32.02	574.06	574.14
5	556+01.94	32.02	574.05	574.09
⊘ Brg. Pier 1	556+11.86	32.02	574.04	574.06
6	556+21.86	32.02	574.04	574.06
7	556+31.86	32.02	574.03	574.06
8	556+41.86	32.02	574.03	574.07
9	556+51.86	32.02	574.03	574.06
10	556+61.86	32.02	574.03	574.06
⊘ Brg. Pier 2	556+72.61	32.02	574.03	574.05
11	556+82.61	32.02	574.03	574.06
12	556+92.61	32.02	574.03	574.08
13	557+02.61	32.02	574.03	574.08
14	557+12.61	32.02	574.03	574.08
15	557+22.61	32.02	574.03	574.06
⊘ Brg. Pier 3	557+33.36	32.02	574.03	574.05
16	557+43.36	32.02	574.03	574.05
17	557+53.36	32.02	574.03	574.06
18	557+63.36	32.02	574.03	574.07
19	557+73.36	32.02	574.03	574.06
20	557+83.36	32.02	574.03	574.05
⊘ Brg. Pier 4	557+94.11	32.02	574.03	574.05
21	558+04.11	32.02	574.03	574.07
22	558+14.11	32.02	574.03	574.10
23	558+24.11	32.02	574.03	574.12
24	558+34.11	32.02	574.03	574.12
25	558+44.11	32.02	574.03	574.09
⊘ W. Brg. Pier 5	558+53.67	32.02	574.03	574.05
⊘ Pier 5	558+54.86	32.02	574.03	574.05
⊘ E. Brg. Pier 5	558+56.05	32.02	574.03	574.05
26	558+66.05	32.02	574.03	574.09
27	558+76.05	32.02	574.03	574.12
28	558+86.05	32.02	574.03	574.12
29	558+96.05	32.02	574.03	574.10
30	559+06.05	32.02	574.03	574.07
⊘ Brg. Pier 6	559+15.61	32.02	574.03	574.05
31	559+25.61	32.02	574.03	574.05
32	559+35.61	32.02	574.03	574.06
33	559+45.61	32.02	574.03	574.07
34	559+55.61	32.02	574.03	574.06
35	559+65.61	32.02	574.03	574.05
⊘ Brg. Pier 7	559+76.36	32.02	574.03	574.05
36	559+86.36	32.02	574.03	574.06
37	559+96.36	32.02	574.03	574.08
38	560+06.36	32.02	574.03	574.08
39	560+16.36	32.02	574.03	574.08
40	560+26.36	32.02	574.03	574.06
⊘ Brg. Pier 8	560+37.11	32.02	574.03	574.05
41	560+47.11	32.02	574.04	574.07
42	560+57.11	32.02	574.05	574.08
43	560+67.11	32.02	574.06	574.10
44	560+77.11	32.02	574.09	574.12
45	560+87.11	32.02	574.11	574.13
⊘ Brg. Pier 9	560+97.86	32.02	574.15	574.17
46	561+07.86	32.02	574.19	574.23
47	561+17.86	32.02	574.24	574.31
48	561+27.86	32.02	574.29	574.38
49	561+37.86	32.02	574.34	574.43
50	561+47.86	32.02	574.41	574.47
⊘ Brg. E. Abut.	561+57.78	32.02	574.48	574.50
⊘ Exp. Jt.	561+58.89	32.02	574.49	574.51
Bk. E. Abut.	561+60.49	32.02	574.50	574.52



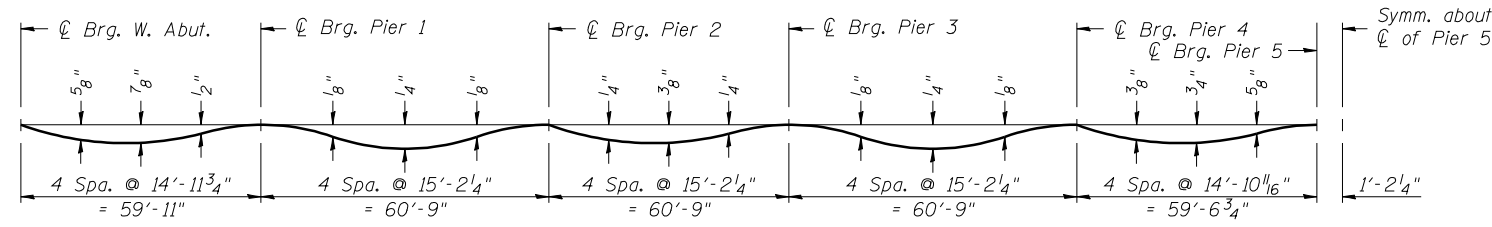
JOB	= 2265.1	DESIGNED	- ZTB	REVISED	-
FILE	= 0540055.0056-72E10-08-ToS-NB.dgn	CHECKED	- MDC	REVISED	-
DATE	= 9/9/2011	DRAWN	- TJD	REVISED	-
		CHECKED	- ZTB	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
STRUCTURE NO. 054-0055 (NB)**

SHEET NO. 8 OF 39 SHEETS

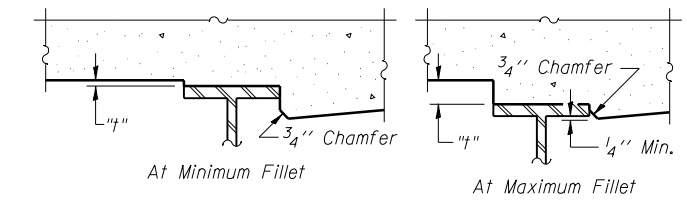
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	169
			CONTRACT NO. 72E10	
ILLINOIS FED. AID PROJECT				



DEAD LOAD DEFLECTION DIAGRAM

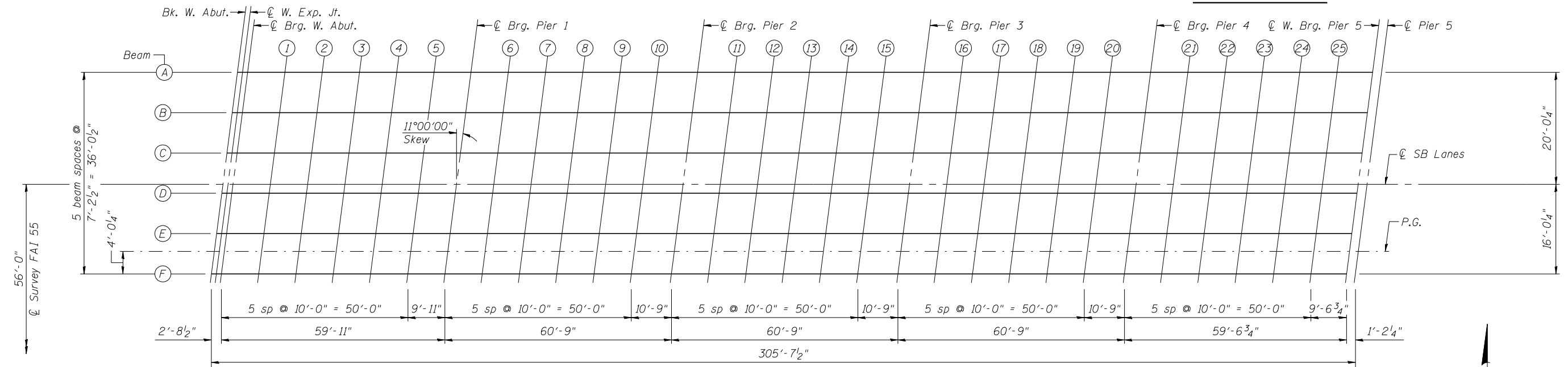
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on sheets 10-12 of 39.

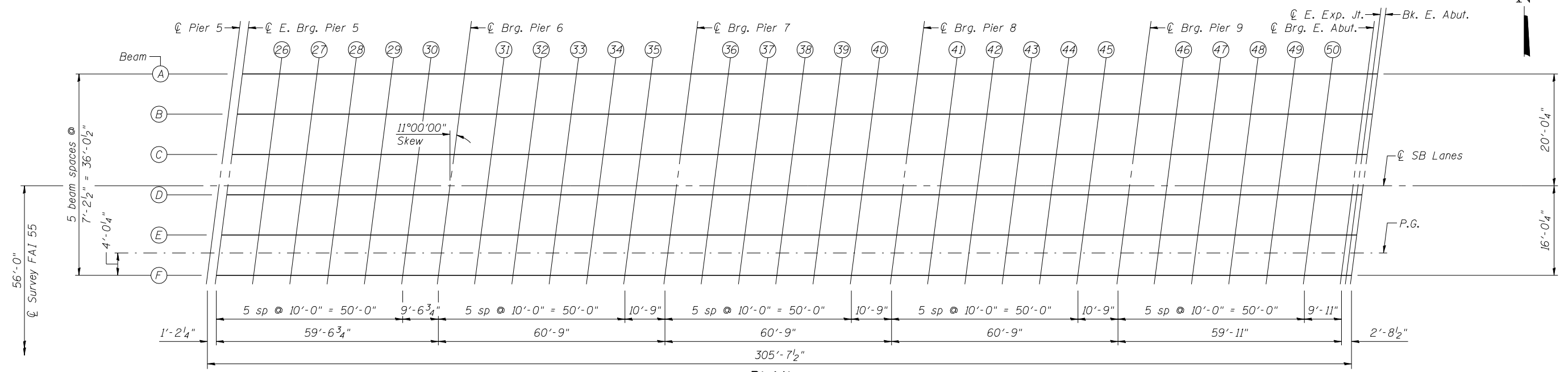


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on sheets 10-12 of 39, minus slab thickness, equals the fillet heights "t" above top flange of beams.
The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown below. For grinding the deck, see Special Provisions.

FILLET HEIGHTS



PLAN



PLAN



JOB = 2265.1	DESIGNED - ZTB	REVISED -
FILE = 0540055.0056-72E10-09-ToS-SB.dgn	CHECKED - MDC	REVISED -
DATE = 9/9/2011	DRAWN - TJD	REVISED -
	CHECKED - ZTB	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
STRUCTURE NO. 054-0056 (SB)**

SHEET NO. 9 OF 39 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	170
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT

BEAM A

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1-9, E. Brg. Pier 5, and Bk. E. Abut.

BEAM B

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1-9, W. Brg. Pier 5, E. Brg. Pier 5, Brg. Pier 6-9, and Bk. E. Abut.

BEAM C

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1-9, W. Brg. Pier 5, E. Brg. Pier 5, Brg. Pier 6-9, and Bk. E. Abut.



Table with 4 columns: JOB, FILE, DATE, and design/revision status (DESIGNED, CHECKED, DRAWN, REVISIONS).

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS STRUCTURE NO. 054-0056 (SB)

SHEET NO. 10 OF 39 SHEETS

Table with 6 columns: F.A.I. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., CONTRACT NO.

ILLINOIS FED. AID PROJECT

ROADWAY

BEAM D

BEAM E

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1-9, E. Brg. Pier 5, and Bk. E. Abut.

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1-9, W. Brg. Pier 5, E. Brg. Pier 5, Brg. Pier 6-9, and Bk. E. Abut.

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding. Rows include Bk. W. Abut., Exp. Jt., Brg. W. Abut., Brg. Pier 1-9, W. Brg. Pier 5, E. Brg. Pier 5, Brg. Pier 6-9, and Bk. E. Abut.



Table with 4 columns: JOB, FILE, DATE, and design details. Includes job number 2265.1, file name 0540055_0056-72E10-11-ToS-SB.dgn, and date 9/9/2011.

Table with 4 columns: DESIGNED, CHECKED, DRAWN, and REVISIONS. Lists designers ZTB, MDC, TJD and revision dates.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS STRUCTURE NO. 054-0056 (SB)

SHEET NO. 11 OF 39 SHEETS

Table with 5 columns: F.A.I. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO. Includes section D6 LOGAN CO BR 2011, county LOGAN, and sheet number 172.

ILLINOIS FED. AID PROJECT CONTRACT NO. 72E10

PROFILE GRADE LINE F.A.I. 55

BEAM F

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	555+72.56	0.00	574.25	574.27
⊕ Exp. Jt.	555+74.16	0.00	574.24	574.26
⊕ Brg. W. Abut.	555+75.27	0.00	574.24	574.26
1	555+85.27	0.00	574.22	574.28
2	555+95.27	0.00	574.20	574.28
3	556+05.27	0.00	574.19	574.28
4	556+15.27	0.00	574.17	574.25
5	556+25.27	0.00	574.17	574.21
⊕ Brg. Pier 1	556+35.18	0.00	574.16	574.18
6	556+45.18	0.00	574.16	574.18
7	556+55.18	0.00	574.16	574.19
8	556+65.18	0.00	574.16	574.20
9	556+75.18	0.00	574.16	574.19
10	556+85.18	0.00	574.16	574.19
⊕ Brg. Pier 2	556+95.93	0.00	574.16	574.18
11	557+05.93	0.00	574.16	574.19
12	557+15.93	0.00	574.16	574.21
13	557+25.93	0.00	574.16	574.21
14	557+35.93	0.00	574.16	574.21
15	557+45.93	0.00	574.16	574.19
⊕ Brg. Pier 3	557+56.68	0.00	574.16	574.18
16	557+66.68	0.00	574.16	574.18
17	557+76.68	0.00	574.16	574.19
18	557+86.68	0.00	574.16	574.20
19	557+96.68	0.00	574.16	574.19
20	558+06.68	0.00	574.16	574.18
⊕ Brg. Pier 4	558+17.43	0.00	574.16	574.18
21	558+27.43	0.00	574.16	574.20
22	558+37.43	0.00	574.16	574.23
23	558+47.43	0.00	574.16	574.24
24	558+57.43	0.00	574.16	574.24
25	558+67.43	0.00	574.16	574.22
⊕ W. Brg. Pier 5	558+76.99	0.00	574.16	574.18
⊕ Pier 5	558+78.18	0.00	574.16	574.18
⊕ E. Brg. Pier 5	558+79.37	0.00	574.16	574.18
26	558+89.37	0.00	574.16	574.22
27	558+99.37	0.00	574.16	574.24
28	559+09.37	0.00	574.16	574.24
29	559+19.37	0.00	574.16	574.23
30	559+29.37	0.00	574.16	574.20
⊕ Brg. Pier 6	559+38.93	0.00	574.16	574.18
31	559+48.93	0.00	574.16	574.18
32	559+58.93	0.00	574.16	574.19
33	559+68.93	0.00	574.16	574.20
34	559+78.93	0.00	574.16	574.19
35	559+88.93	0.00	574.16	574.18
⊕ Brg. Pier 7	559+99.68	0.00	574.16	574.18
36	560+09.68	0.00	574.17	574.20
37	560+19.68	0.00	574.18	574.23
38	560+29.68	0.00	574.20	574.25
39	560+39.68	0.00	574.22	574.27
40	560+49.68	0.00	574.25	574.28
⊕ Brg. Pier 8	560+60.43	0.00	574.29	574.31
41	560+70.43	0.00	574.32	574.35
42	560+80.43	0.00	574.37	574.40
43	560+90.43	0.00	574.42	574.46
44	561+00.43	0.00	574.47	574.50
45	561+10.43	0.00	574.53	574.55
⊕ Brg. Pier 9	561+21.18	0.00	574.60	574.62
46	561+31.18	0.00	574.67	574.71
47	561+41.18	0.00	574.74	574.81
48	561+51.18	0.00	574.82	574.91
49	561+61.18	0.00	574.90	574.99
50	561+71.18	0.00	574.99	575.05
⊕ Brg. E. Abut.	561+81.10	0.00	575.09	575.11
⊕ Exp. Jt.	561+82.21	0.00	575.10	575.12
Bk. E. Abut.	561+83.81	0.00	575.11	575.13

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	555+71.78	4.02	574.16	574.18
⊕ Exp. Jt.	555+73.38	4.02	574.16	574.18
⊕ Brg. W. Abut.	555+74.49	4.02	574.16	574.18
1	555+84.49	4.02	574.14	574.20
2	555+94.49	4.02	574.12	574.20
3	556+04.49	4.02	574.10	574.20
4	556+14.49	4.02	574.09	574.16
5	556+24.49	4.02	574.08	574.12
⊕ Brg. Pier 1	556+34.40	4.02	574.08	574.10
6	556+44.40	4.02	574.08	574.10
7	556+54.40	4.02	574.08	574.11
8	556+64.40	4.02	574.08	574.12
9	556+74.40	4.02	574.08	574.11
10	556+84.40	4.02	574.08	574.11
⊕ Brg. Pier 2	556+95.15	4.02	574.08	574.10
11	557+05.15	4.02	574.08	574.11
12	557+15.15	4.02	574.08	574.13
13	557+25.15	4.02	574.08	574.13
14	557+35.15	4.02	574.08	574.13
15	557+45.15	4.02	574.08	574.11
⊕ Brg. Pier 3	557+55.90	4.02	574.08	574.10
16	557+65.90	4.02	574.08	574.10
17	557+75.90	4.02	574.08	574.11
18	557+85.90	4.02	574.08	574.12
19	557+95.90	4.02	574.08	574.11
20	558+05.90	4.02	574.08	574.10
⊕ Brg. Pier 4	558+16.65	4.02	574.08	574.10
21	558+26.65	4.02	574.08	574.12
22	558+36.65	4.02	574.08	574.15
23	558+46.65	4.02	574.08	574.16
24	558+56.65	4.02	574.08	574.16
25	558+66.65	4.02	574.08	574.14
⊕ W. Brg. Pier 5	558+76.21	4.02	574.08	574.10
⊕ Pier 5	558+77.40	4.02	574.08	574.10
⊕ E. Brg. Pier 5	558+78.59	4.02	574.08	574.10
26	558+88.59	4.02	574.08	574.14
27	558+98.59	4.02	574.08	574.16
28	559+08.59	4.02	574.08	574.16
29	559+18.59	4.02	574.08	574.15
30	559+28.59	4.02	574.08	574.12
⊕ Brg. Pier 6	559+38.15	4.02	574.08	574.10
31	559+48.15	4.02	574.08	574.10
32	559+58.15	4.02	574.08	574.11
33	559+68.15	4.02	574.08	574.12
34	559+78.15	4.02	574.08	574.11
35	559+88.15	4.02	574.08	574.10
⊕ Brg. Pier 7	559+98.90	4.02	574.08	574.10
36	560+08.90	4.02	574.09	574.12
37	560+18.90	4.02	574.10	574.15
38	560+28.90	4.02	574.11	574.17
39	560+38.90	4.02	574.14	574.19
40	560+48.90	4.02	574.16	574.19
⊕ Brg. Pier 8	560+59.65	4.02	574.20	574.22
41	560+69.65	4.02	574.24	574.27
42	560+79.65	4.02	574.28	574.31
43	560+89.65	4.02	574.33	574.37
44	560+99.65	4.02	574.38	574.41
45	561+09.65	4.02	574.44	574.46
⊕ Brg. Pier 9	561+20.40	4.02	574.51	574.53
46	561+30.40	4.02	574.58	574.62
47	561+40.40	4.02	574.65	574.72
48	561+50.40	4.02	574.73	574.82
49	561+60.40	4.02	574.81	574.90
50	561+70.40	4.02	574.90	574.96
⊕ Brg. E. Abut.	561+80.32	4.02	575.00	575.02
⊕ Exp. Jt.	561+81.43	4.02	575.01	575.03
Bk. E. Abut.	561+83.03	4.02	575.02	575.04



JOB	= 2265.1	DESIGNED	- ZTB	REVISED	-
FILE	= 0540055.0056-72E10-12-ToS-SB.dgn	CHECKED	- MDC	REVISED	-
DATE	= 9/9/2011	DRAWN	- TJD	REVISED	-
		CHECKED	- ZTB	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS
STRUCTURE NO. 054-0056 (SB)**

SHEET NO. 12 OF 39 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	173
			CONTRACT NO. 72E10	
ILLINOIS FED. AID PROJECT				

NORTH EDGE OF SHOULDER

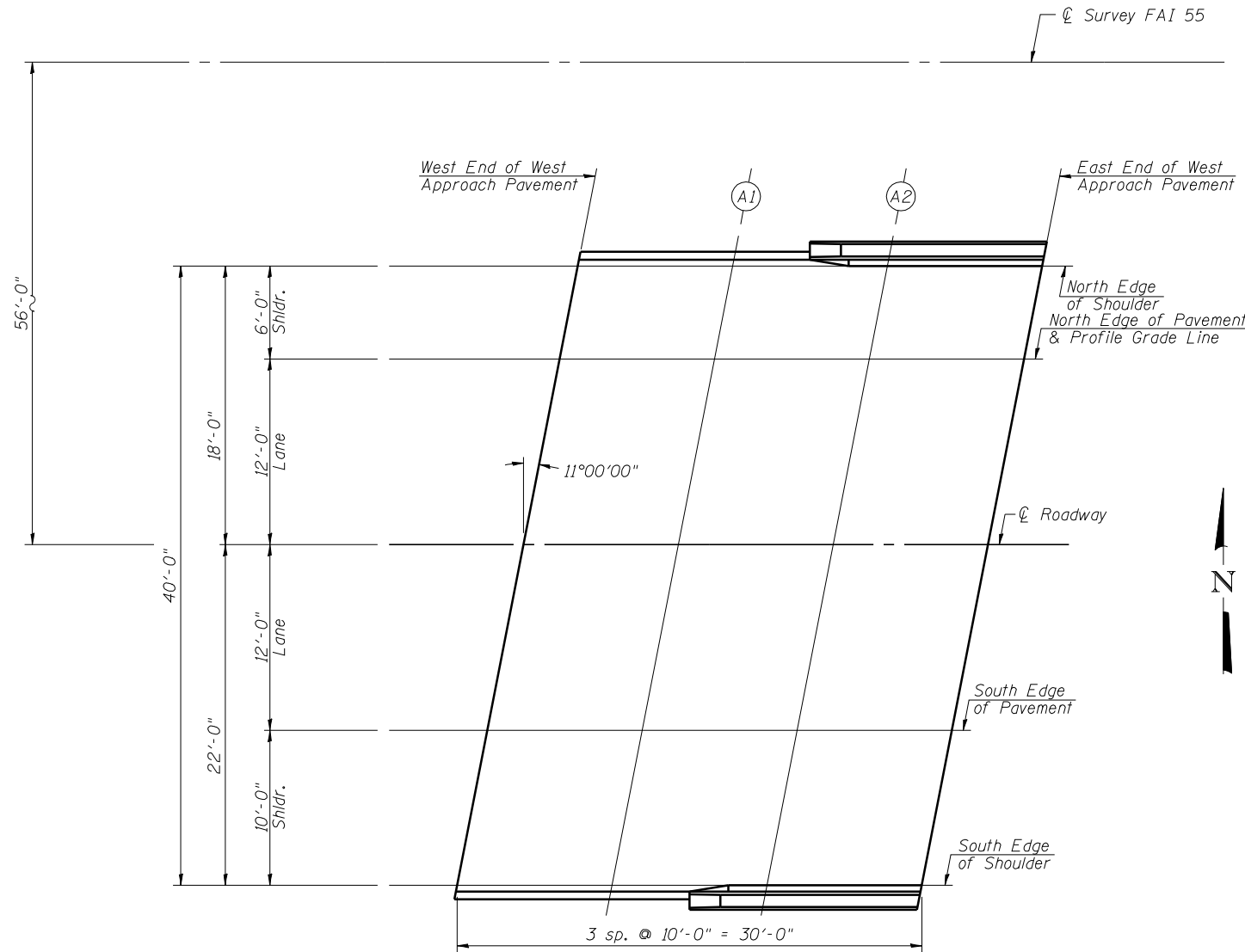
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	555+27.14	-6.00	574.27	574.29
A1	555+37.14	-6.00	574.23	574.25
A2	555+47.14	-6.00	574.20	574.22
E. End West Appr. Pav't.	555+57.14	-6.00	574.18	574.20

NORTH EDGE OF PAVEMENT & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	555+25.97	0.00	574.40	574.42
A1	555+35.97	0.00	574.36	574.38
A2	555+45.97	0.00	574.33	574.35
E. End West Appr. Pav't.	555+55.97	0.00	574.30	574.32

CL OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	555+23.64	12.00	574.59	574.61
A1	555+33.64	12.00	574.56	574.58
A2	555+43.64	12.00	574.53	574.55
E. End West Appr. Pav't.	555+53.64	12.00	574.50	574.52



PLAN

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	555+21.30	24.00	574.41	574.43
A1	555+31.30	24.00	574.38	574.40
A2	555+41.30	24.00	574.35	574.37
E. End West Appr. Pav't.	555+51.30	24.00	574.32	574.34

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	555+19.36	34.00	574.21	574.23
A1	555+29.36	34.00	574.18	574.20
A2	555+39.36	34.00	574.14	574.16
E. End West Appr. Pav't.	555+49.36	34.00	574.11	574.13

NORTH EDGE OF SHOULDER

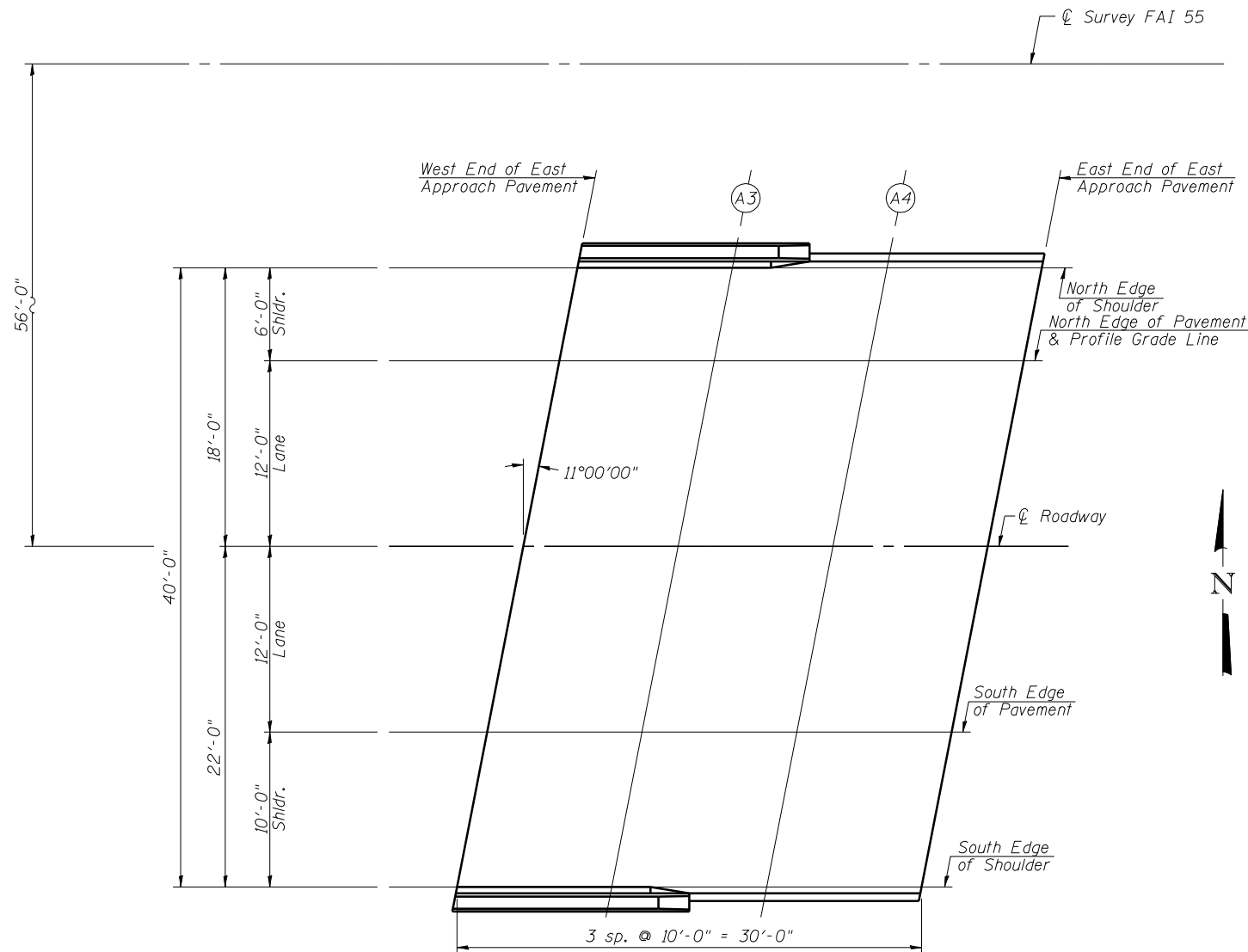
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	561+67.37	-6.00	574.59	574.61
A3	561+77.37	-6.00	574.67	574.69
A4	561+87.37	-6.00	574.76	574.78
E. End East Appr. Pav't.	561+97.37	-6.00	574.85	574.87

NORTH EDGE OF PAVEMENT & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	561+66.20	0.00	574.71	574.73
A3	561+76.20	0.00	574.79	574.81
A4	561+86.20	0.00	574.87	574.89
E. End East Appr. Pav't.	561+96.20	0.00	574.97	574.99

CL OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	561+63.87	12.00	574.88	574.90
A3	561+73.87	12.00	574.96	574.98
A4	561+83.87	12.00	575.04	575.06
E. End East Appr. Pav't.	561+93.87	12.00	575.13	575.15



PLAN

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	561+61.54	24.00	574.67	574.69
A3	561+71.54	24.00	574.75	574.77
A4	561+81.54	24.00	574.83	574.85
E. End East Appr. Pav't.	561+91.54	24.00	574.92	574.94

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	561+59.59	34.00	574.45	574.47
A3	561+69.59	34.00	574.53	574.55
A4	561+79.59	34.00	574.61	574.63
E. End East Appr. Pav't.	561+89.59	34.00	574.70	574.72

NORTH EDGE OF SHOULDER

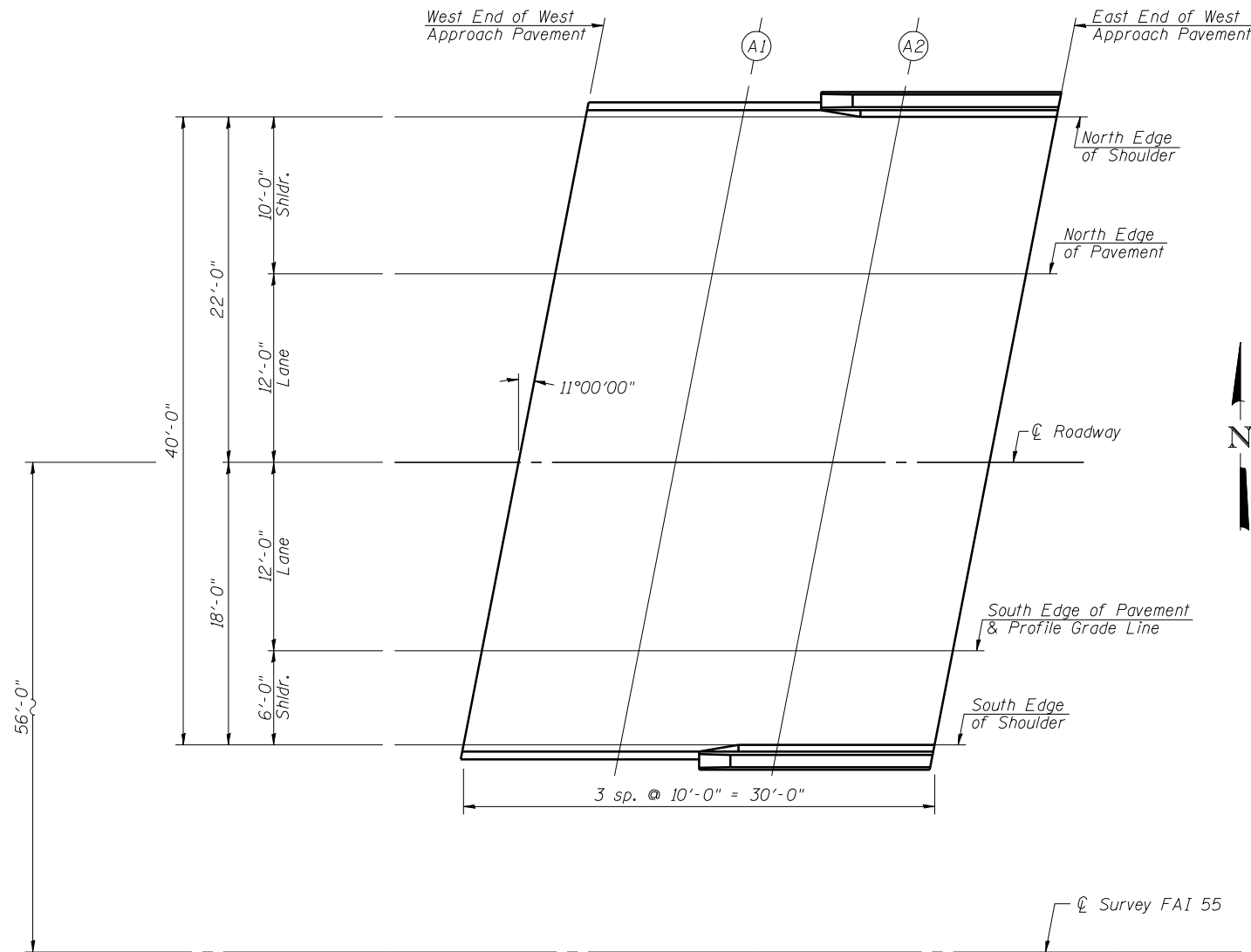
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	555+49.68	-34.00	574.10	574.12
A1	555+59.68	-34.00	574.07	574.09
A2	555+69.68	-34.00	574.05	574.07
E. End West Appr. Pav't.	555+79.68	-34.00	574.02	574.04

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	555+47.73	-24.00	574.32	574.34
A1	555+57.73	-24.00	574.29	574.31
A2	555+67.73	-24.00	574.26	574.28
E. End West Appr. Pav't.	555+77.73	-24.00	574.23	574.25

CL OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	555+45.40	-12.00	574.51	574.53
A1	555+55.40	-12.00	574.48	574.50
A2	555+65.40	-12.00	574.45	574.47
E. End West Appr. Pav't.	555+75.40	-12.00	574.43	574.45



PLAN

SOUTH EDGE OF PAVEMENT & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	555+43.07	0.00	574.33	574.35
A1	555+53.07	0.00	574.30	574.32
A2	555+63.07	0.00	574.27	574.29
E. End West Appr. Pav't.	555+73.07	0.00	574.25	574.27

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End West Appr. Pav't.	555+41.90	6.00	574.21	574.23
A1	555+51.90	6.00	574.18	574.20
A2	555+61.90	6.00	574.15	574.17
E. End West Appr. Pav't.	555+71.90	6.00	574.12	574.14

NORTH EDGE OF SHOULDER

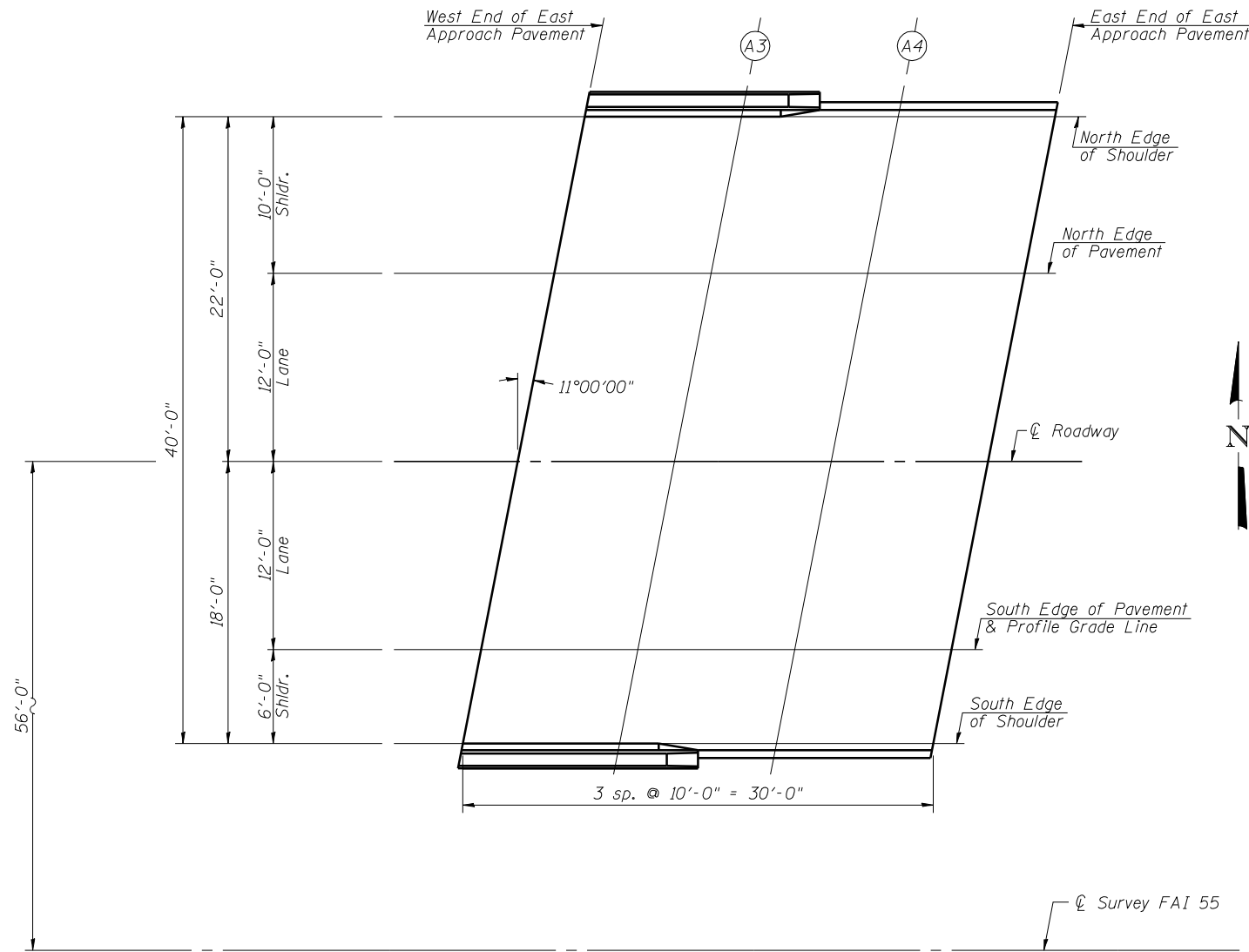
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	561+89.91	-34.00	574.97	574.99
A3	561+99.91	-34.00	575.07	575.09
A4	562+09.91	-34.00	575.18	575.20
E. End East Appr. Pav't.	562+19.91	-34.00	575.29	575.31

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	561+87.97	-24.00	575.15	575.17
A3	561+97.97	-24.00	575.26	575.28
A4	562+07.97	-24.00	575.37	575.39
E. End East Appr. Pav't.	562+17.97	-24.00	575.48	575.50

☐ OF ROADWAY

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	561+85.63	-12.00	575.32	575.34
A3	561+95.63	-12.00	575.42	575.44
A4	562+05.63	-12.00	575.53	575.55
E. End East Appr. Pav't.	562+15.63	-12.00	575.64	575.66



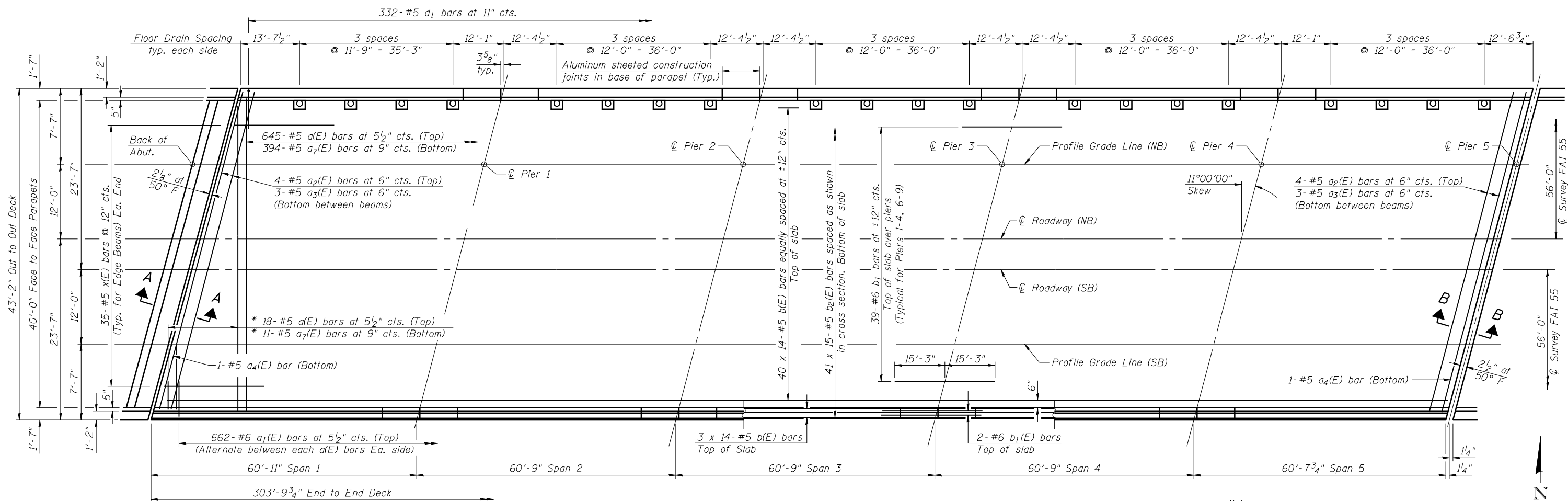
PLAN

SOUTH EDGE OF PAVEMENT & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	561+83.30	0.00	575.11	575.13
A3	561+93.30	0.00	575.21	575.23
A4	562+03.30	0.00	575.31	575.33
E. End East Appr. Pav't.	562+13.30	0.00	575.43	575.45

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End East Appr. Pav't.	561+82.13	6.00	574.97	574.99
A3	561+92.13	6.00	575.07	575.09
A4	562+02.13	6.00	575.18	575.20
E. End East Appr. Pav't.	562+12.13	6.00	575.29	575.31

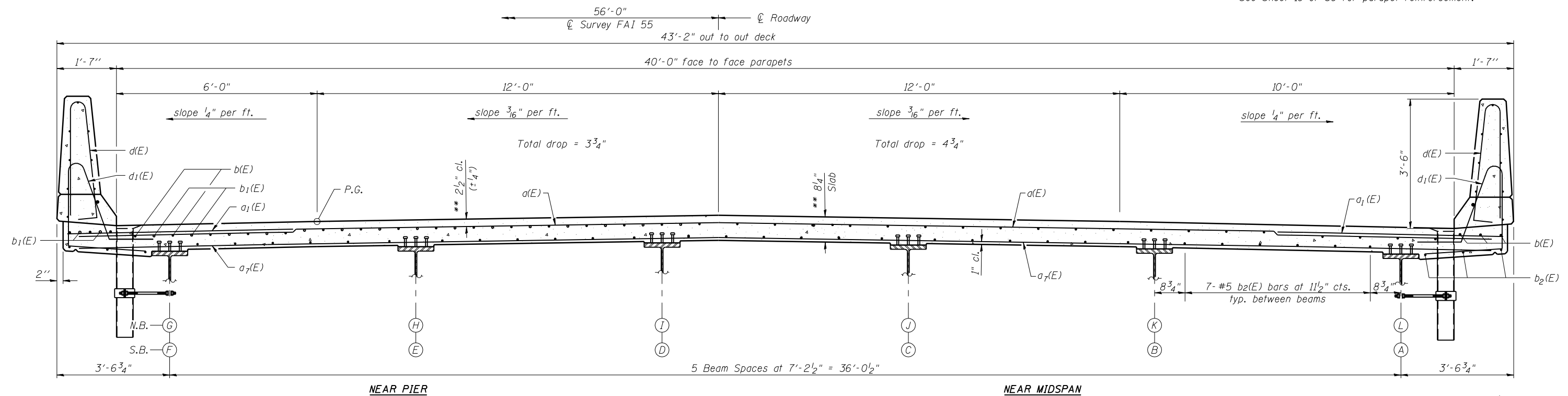


HALF PLAN
(Showing Spans 1-5)

Notes:
See Sheet 20 of 39 for Section A-A, Section B-B, superstructure details and Bill of Material.
Bars indicated thus 41 x 15-#5 etc. indicates 41 lines of bars with 15 lengths per line.
See Sheet 19 of 39 for parapet reinforcement.

* Order a(E) bars full length.
Cut to fit skew and use remainder of bars in opposite end.

MINIMUM BAR LAP
#5 bar = 3'-3"



CROSS SECTION
(Looking in the direction of traffic)



JOB = 2265.1
FILE = 0540055.0056-72E10-17-Super.dgn
DATE = 9/9/2011

DESIGNED - ZTB
CHECKED - MDC
DRAWN - TJD
CHECKED - ZTB

REVISED -
REVISED -
REVISED -
REVISED -

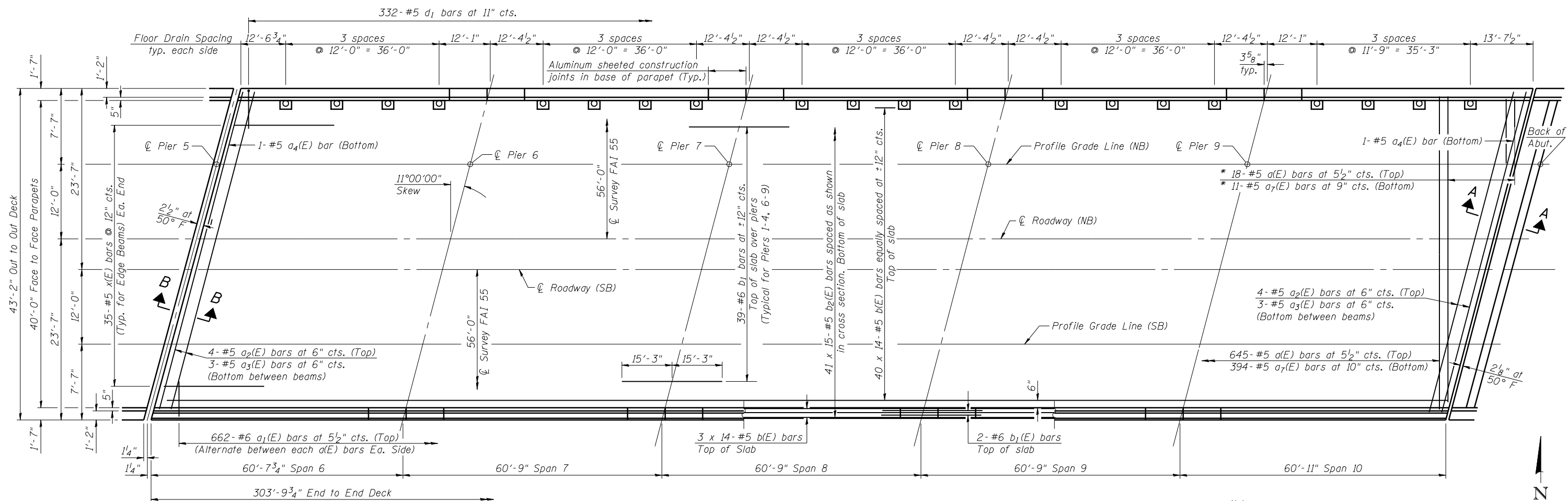
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)

SHEET NO. 17 OF 39 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	178
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT

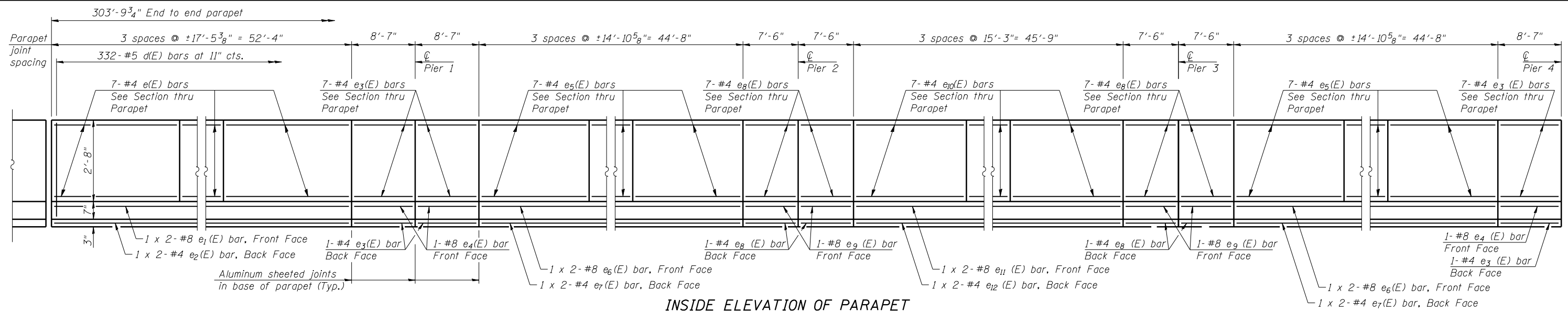


HALF PLAN
(Showing Spans 6-10)

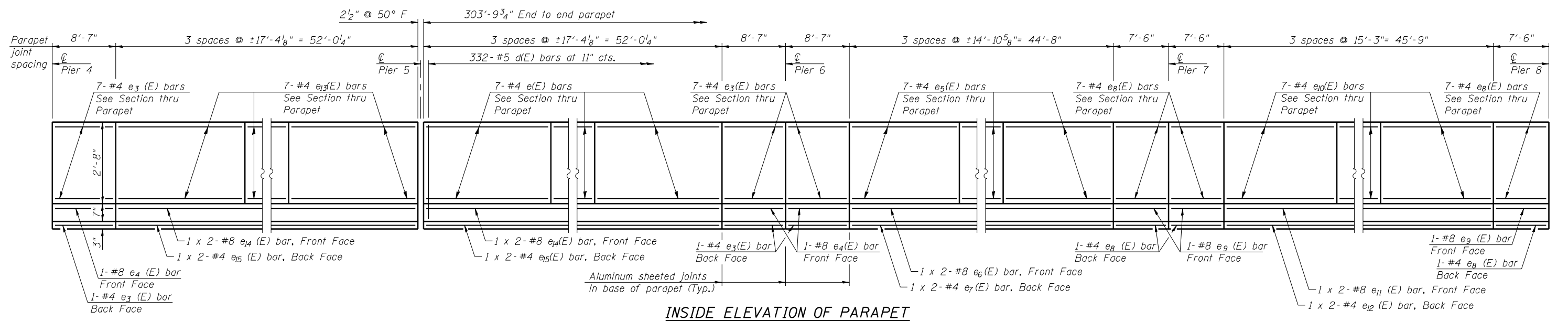
* Order a(E) bars full length.
Cut to fit skew and use remainder
of bars in opposite end.

MINIMUM BAR LAP
#5 bar = 3'-3"

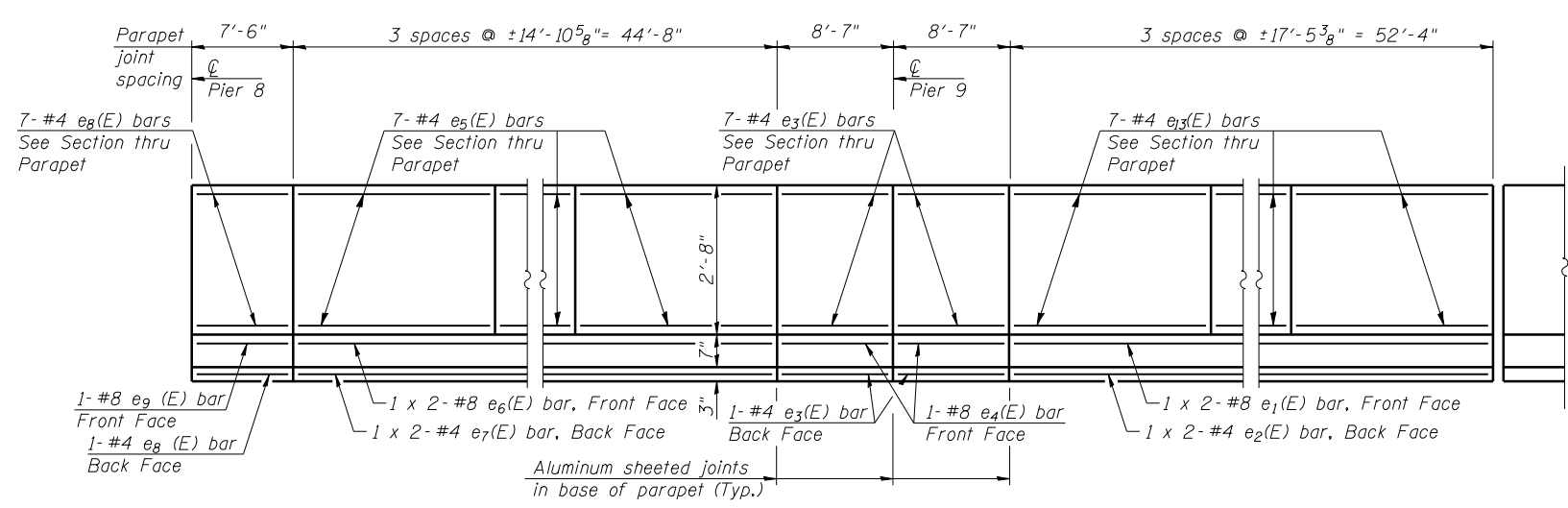
Notes:
See Sheet 20 of 39 for Section A-A, Section B-B,
superstructure details and Bill of Material.
Bars indicated thus 41 x 15-#5 etc. indicates
41 lines of bars with 15 lengths per line.
See Sheet 19 of 39 for parapet reinforcement.



INSIDE ELEVATION OF PARAPET
(North Parapet shown - South Parapet similar by rotation of 180°)



INSIDE ELEVATION OF PARAPET
(North Parapet shown - South Parapet similar by rotation of 180°)



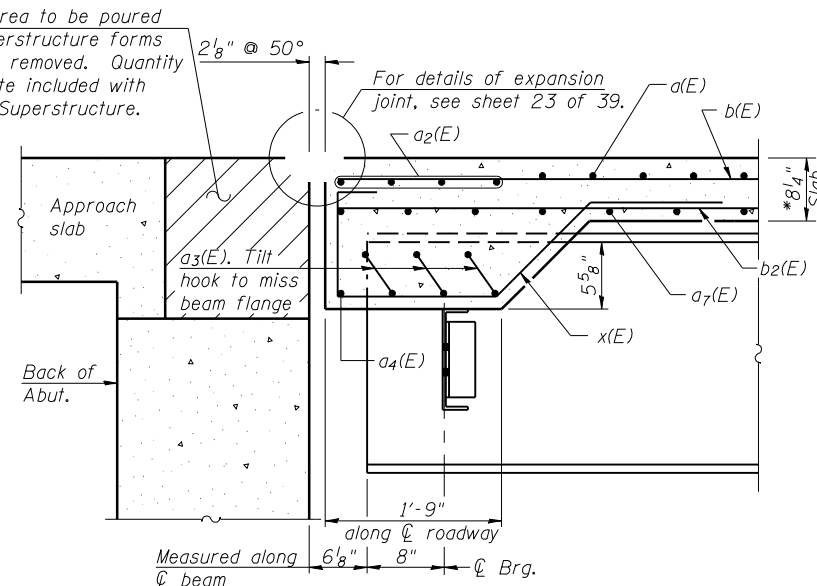
INSIDE ELEVATION OF PARAPET
(North Parapet shown - South Parapet similar by rotation of 180°)

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

Note:
Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

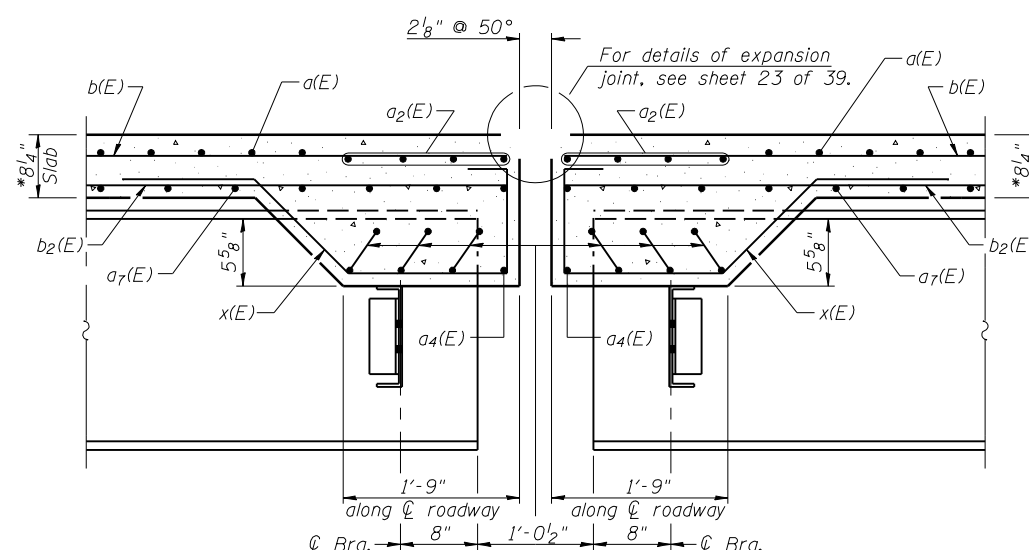
CEC Cummins Engineering Corporation Civil and Structural Engineering	JOB = 2265.1	DESIGNED - ZTB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUPERSTRUCTURE DETAILS STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)	F.A.I. SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	DATE = 9/9/2011	DRAWN - TJD	REVISED -			CONTRACT NO. 72E10				
	CHECKED - ZTB	REVISED -		SHEET NO. 19 OF 39 SHEETS		ILLINOIS FED. AID PROJECT				

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

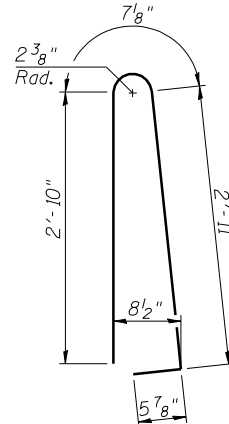


SECTION A-A

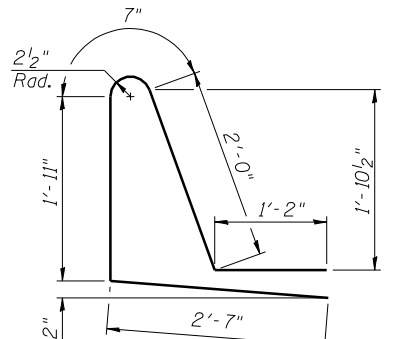
*Prior to Grinding, Max 1/4"



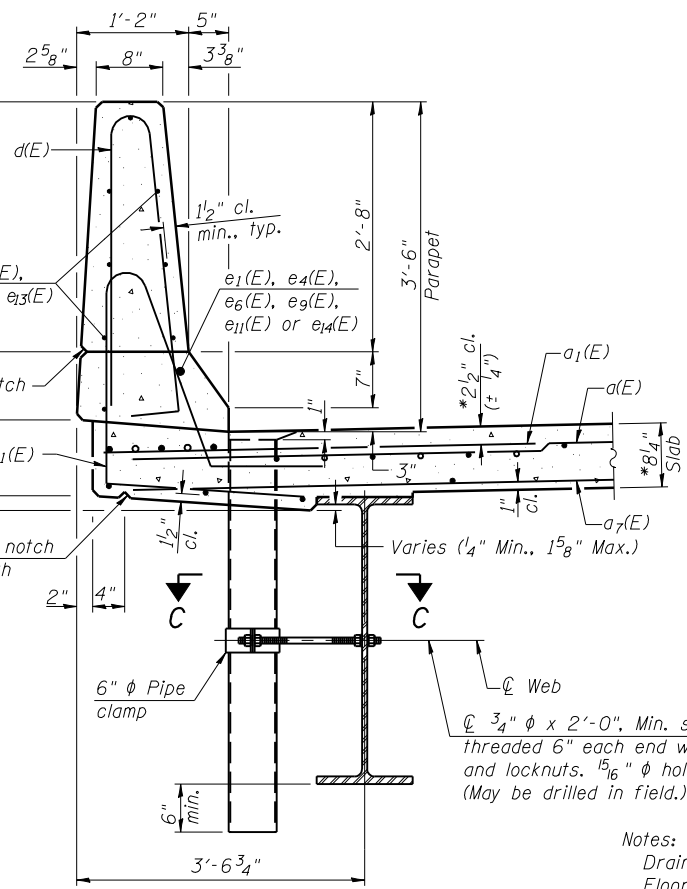
SECTION B-B



BAR d(E)

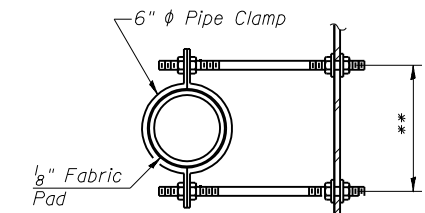


BAR d1(E)



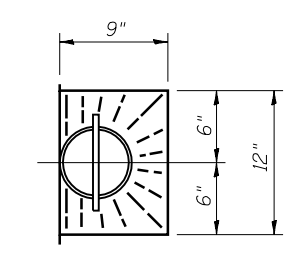
SECTION THRU PARAPET

Notes:
 Drains shall be located clear of all diaphragms.
 Floor drains need not be painted.
 Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
 Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

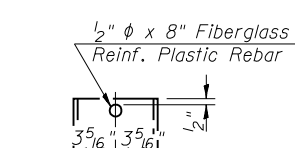


SECTION C-C

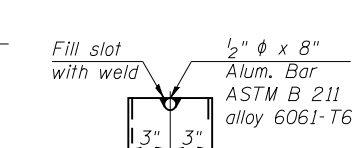
**Dimension as required by Pipe Clamp



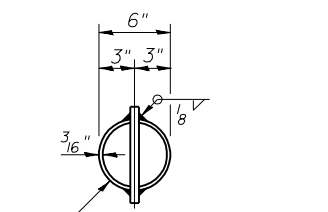
TOP PLAN



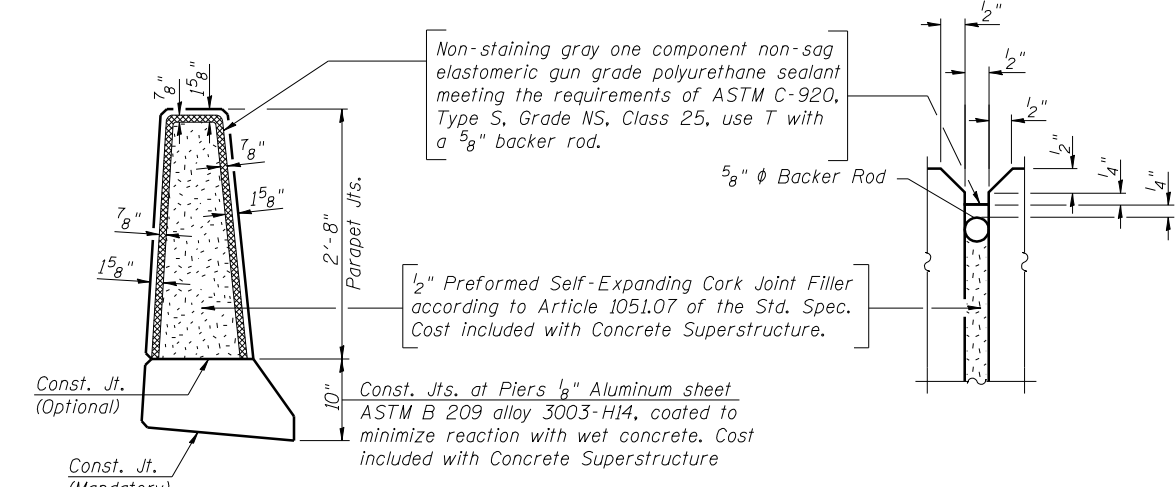
FIBERGLASS PIPE



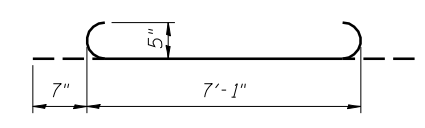
ALUMINUM TUBE



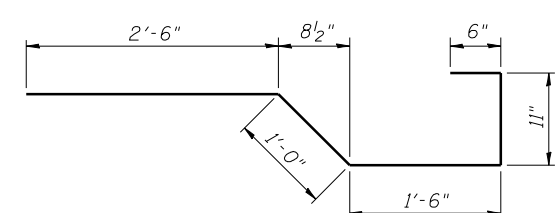
TOP PLAN (Showing Aluminum Tube)



PARAPET JOINT DETAILS



a3(E) BAR



BAR x(E)

TWO (2) SUPERSTRUCTURES
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	2652	#5	42'-6"	—	
a1(E)	5296	#6	6'-6"	—	
a2(E)	32	#5	43'-0"	—	
a3(E)	120	#5	8'-3"	—	
a4(E)	8	#5	36'-4"	—	
a7(E)	1620	#5	31'-6"	—	
b(E)	2576	#5	24'-9"	—	
b1(E)	688	#6	30'-6"	—	
b2(E)	2460	#5	23'-3"	—	
d(E)	2656	#5	6'-10"	—	
d1(E)	2656	#5	8'-3"	—	
e(E)	168	#4	16'-10"	—	
e1(E)	16	#8	28'-9"	—	
e2(E)	16	#4	27'-2"	—	
e3(E)	256	#4	8'-3"	—	
e4(E)	32	#8	8'-3"	—	
e5(E)	336	#4	14'-6"	—	
e6(E)	32	#8	24'-9"	—	
e7(E)	32	#4	23'-2"	—	
e8(E)	256	#4	7'-2"	—	
e9(E)	32	#8	7'-2"	—	
e10(E)	168	#4	14'-11"	—	
e11(E)	16	#8	25'-4"	—	
e12(E)	16	#4	23'-9"	—	
e13(E)	168	#4	17'-1"	—	
e14(E)	16	#8	28'-7"	—	
e15(E)	16	#4	27'-0"	—	
x(E)	280	#5	6'-5"	—	
Reinforcement Bars, Epoxy Coated				Pound	463,150
Concrete Superstructure				Cu. Yds.	1718.3



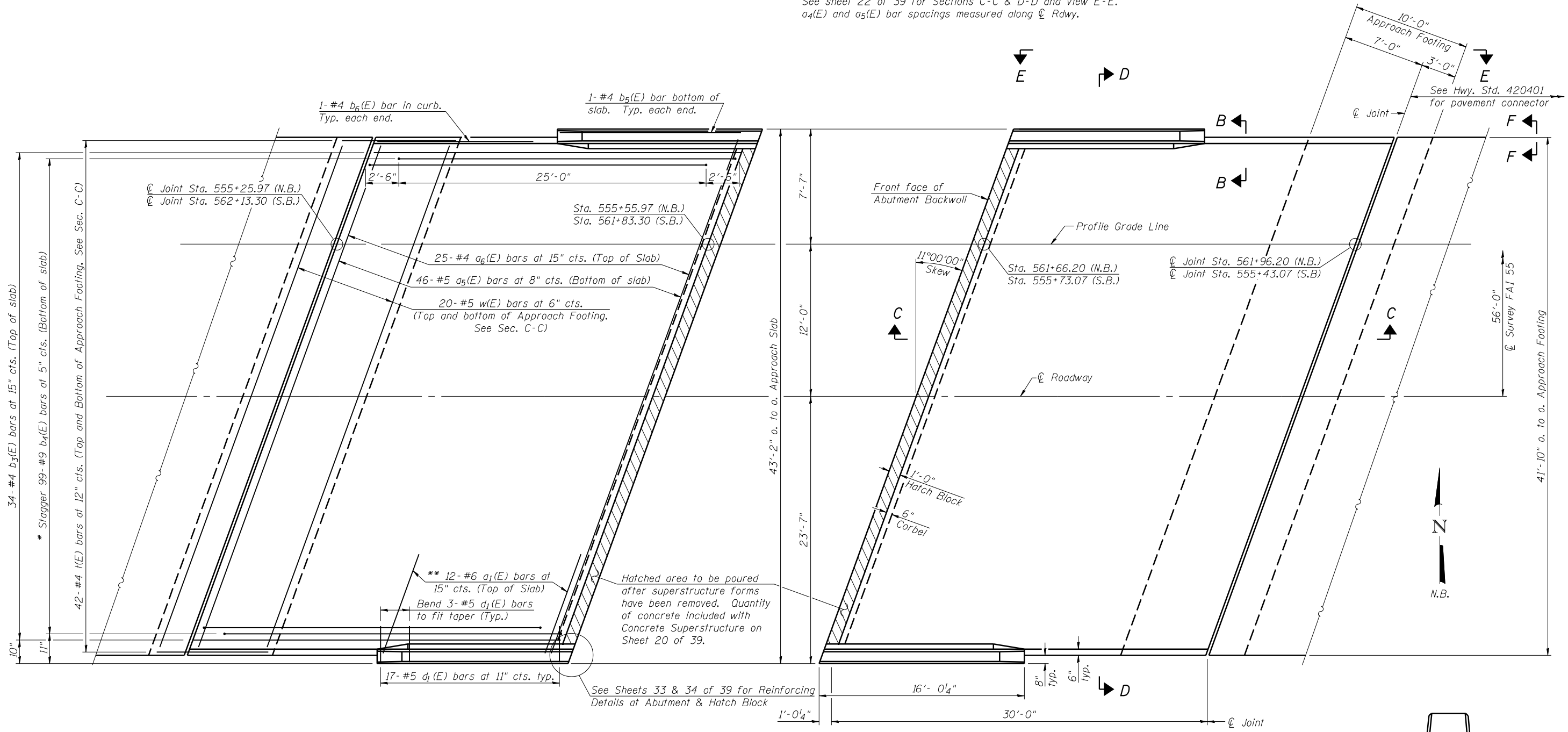
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FILE	= 0540055.0056-72E10-20-SuperDet.dgn	CHECKED	- MDC	REVISED	-
DATE	= 9/9/2011	DRAWN	- TJD	REVISED	-
		CHECKED	- ZTB	REVISED	-

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
 STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)
 SHEET NO. 20 OF 39 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	181
				CONTRACT NO. 72E10
ILLINOIS FED. AID PROJECT				

Notes:
See sheet 22 of 39 for Sections C-C & D-D and View E-E.
a₄(E) and a₅(E) bar spacings measured along ϕ Rdwy.

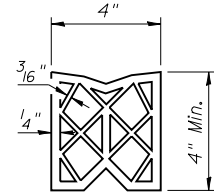


WEST APPROACH PLAN

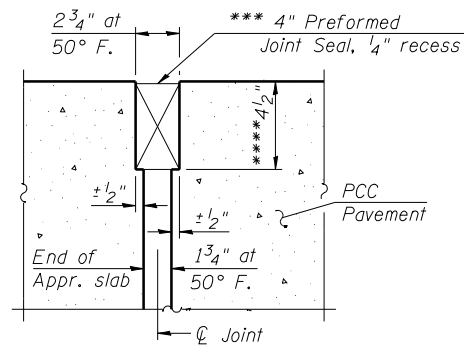
SHOWING REINFORCEMENT

(S.N. 054-0055 shown - S.N. 054-0056 similar by rotation of 180°)

- * Tilt #9 b₄(E) bars as required to maintain clearance.
- ** Space between a₄(E) bars, typ. each parapet.
- **** Prior to Grinding, Max 1/4"



PREFORMED JOINT SEAL



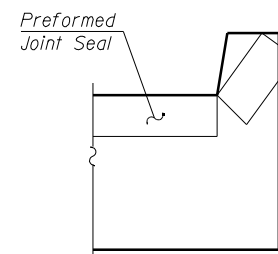
DETAIL A

*** Cost included with Concrete Superstructure.

EAST APPROACH PLAN

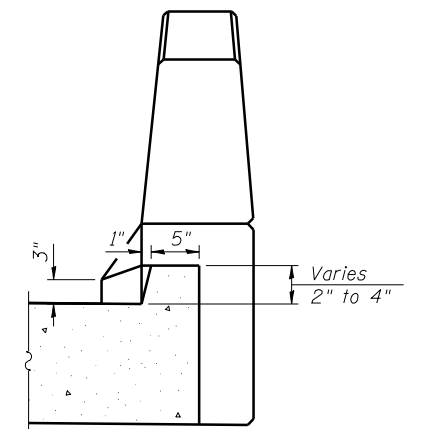
SHOWING DIMENSIONS

(S.N. 054-0055 shown - S.N. 054-0056 similar by rotation of 180°)



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



VIEW B-B

(Sheet 1 of 2)



JOB = 2265.1
FILE = 0540055.0056-72E10-21-AppDet.dgn
DATE = 9/9/2011

DESIGNED - ZTB
CHECKED - MDC
DRAWN - TJD
CHECKED - ZTB

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

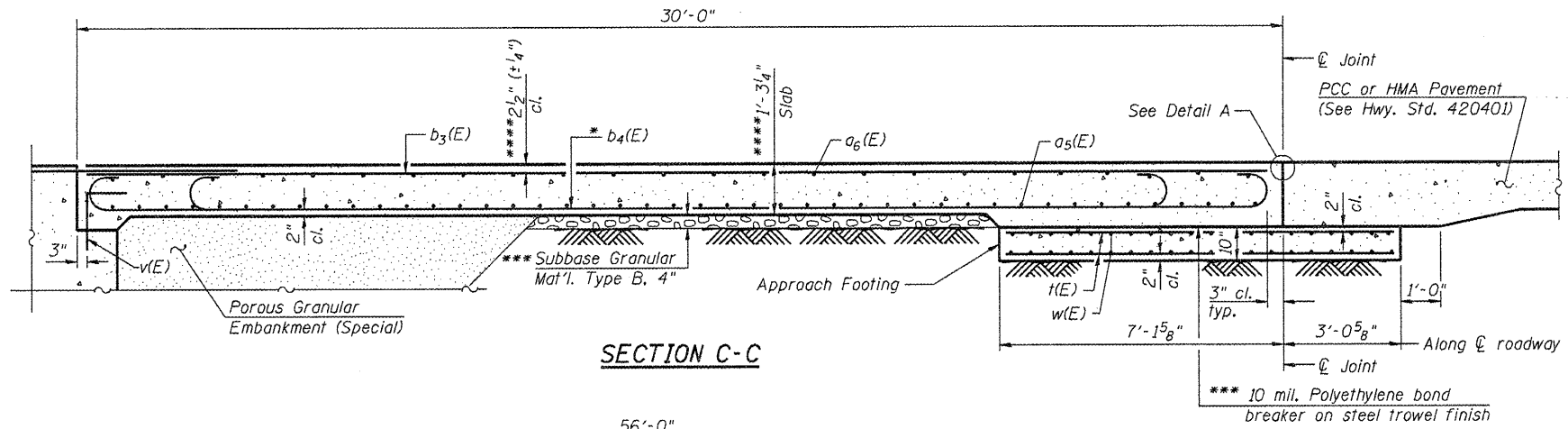
**BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)**

SHEET NO. 21 OF 39 SHEETS

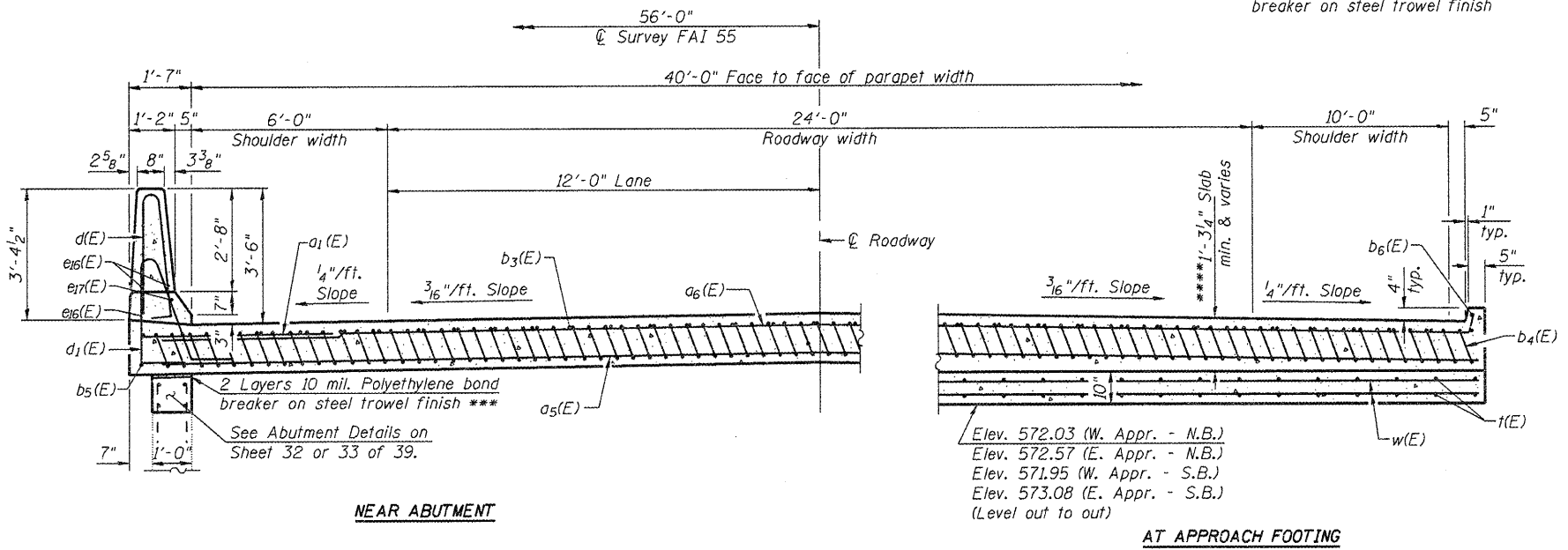
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	182
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT

Notes:
 See sheet 21 of 39 for Detail A and View B-B.
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet 34 of 39.
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
 For bar splicer details, see sheet 39 of 39.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 39.
 For additional parapet details, see sheet 19 of 39.

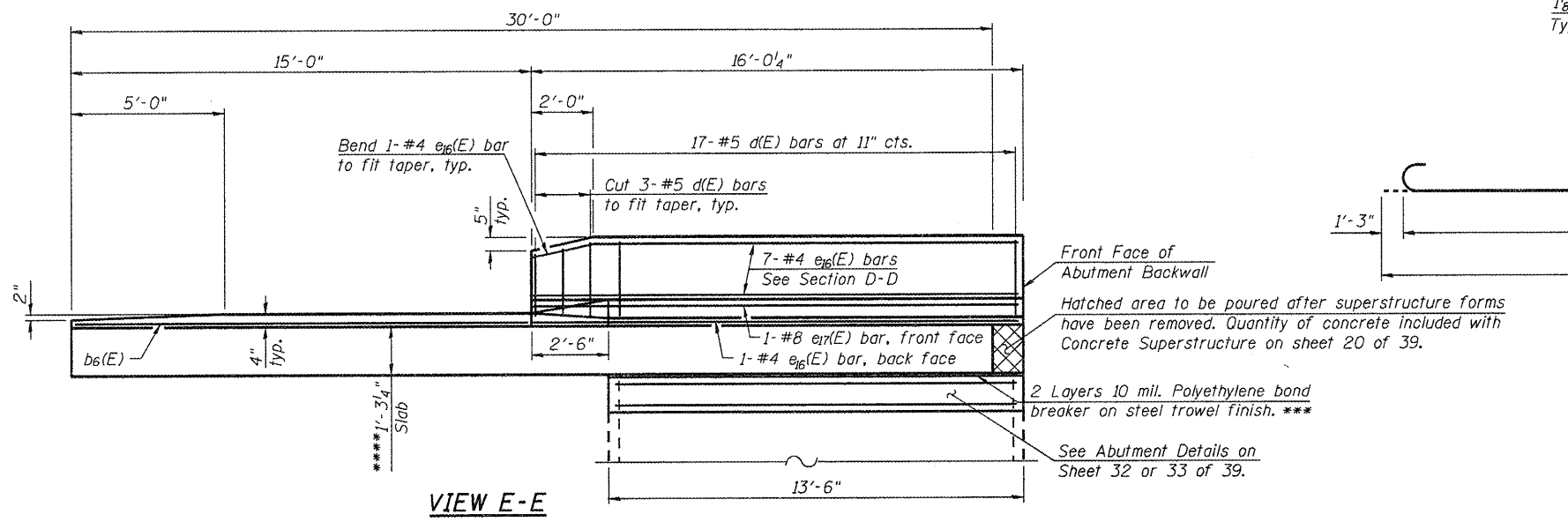


SECTION C-C

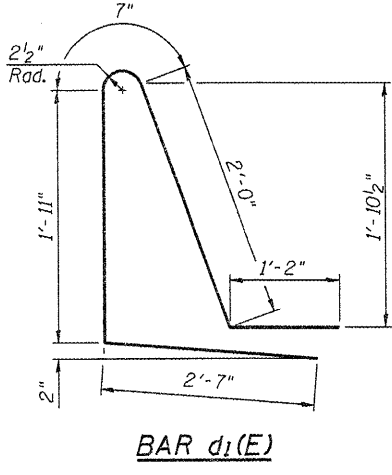
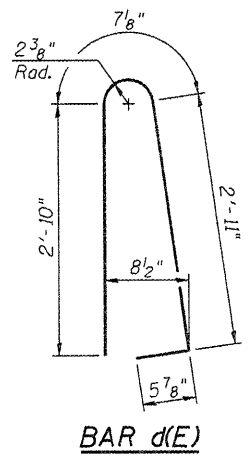


SECTION D-D

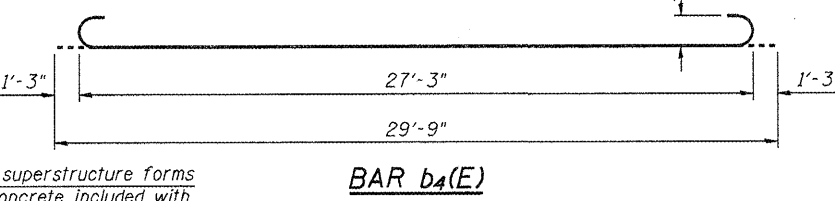
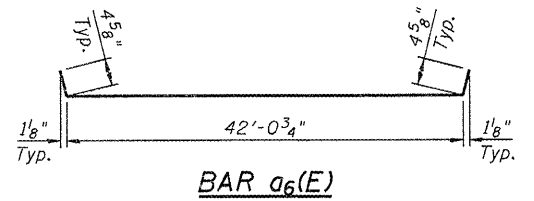
(See Plan for dimensions not shown)
 (Looking in direction of traffic)



VIEW E-E



* Till #9 b4(E) bars as required to maintain clearance.
 *** Cost included with Concrete Superstructure.
 **** Prior to Grinding, Max 1/4"



**FOUR (4) APPROACHES
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a1(E)	96	#6	6'-6"	—
a5(E)	184	#5	42'-3"	—
a6(E)	100	#4	42'-10"	—
b3(E)	136	#4	29'-8"	—
b4(E)	396	#9	29'-9"	U
b5(E)	8	#4	14'-8"	—
b6(E)	8	#4	14'-4"	—
d(E)	136	#5	6'-10"	U
d1(E)	136	#5	8'-3"	U
e16(E)	64	#4	15'-8"	—
e17(E)	8	#8	15'-8"	—
t(E)	336	#4	9'-10"	—
w(E)	160	#5	42'-3"	—
Concrete Superstructure		Cu. Yd.	297.3	
Concrete Structures		Cu. Yd.	52.7	
Reinforcement Bars, Epoxy Coated		Pound	67,220	

(Sheet 2 of 2)

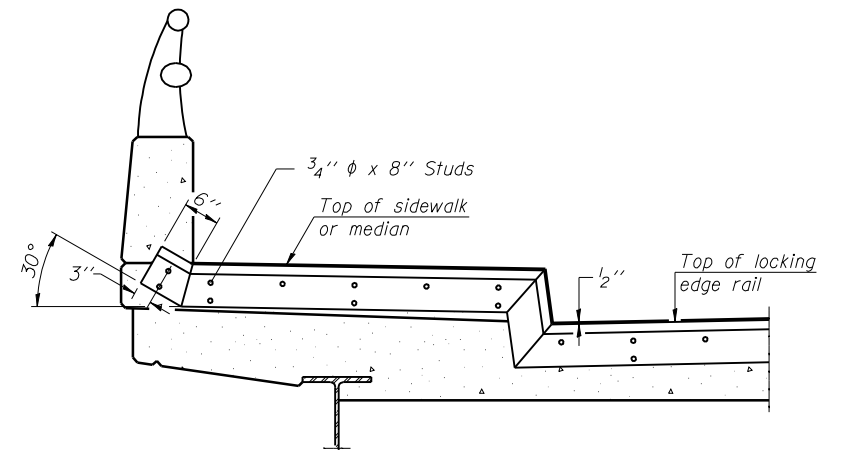
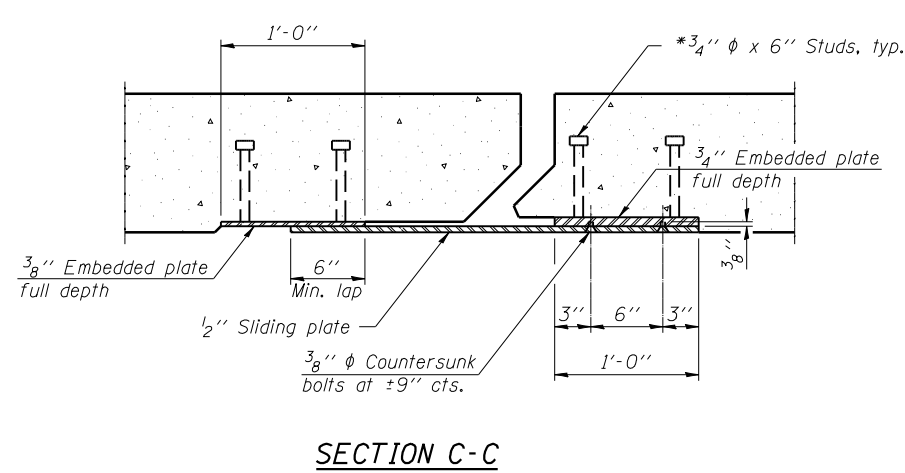
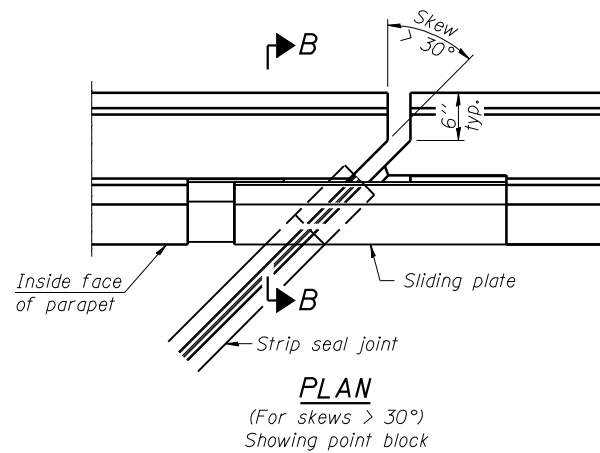
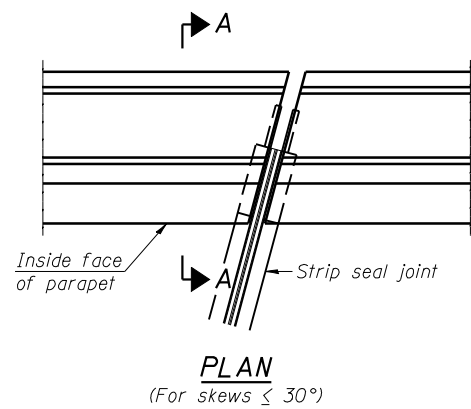


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FILE	= 0540055_0056-72E10-22-AppDet.dgn	CHECKED	- MDC	REVISED	-
DATE	= 9/29/2011	DRAWN	- TJD	REVISED	-
		CHECKED	- ZTB	REVISED	-

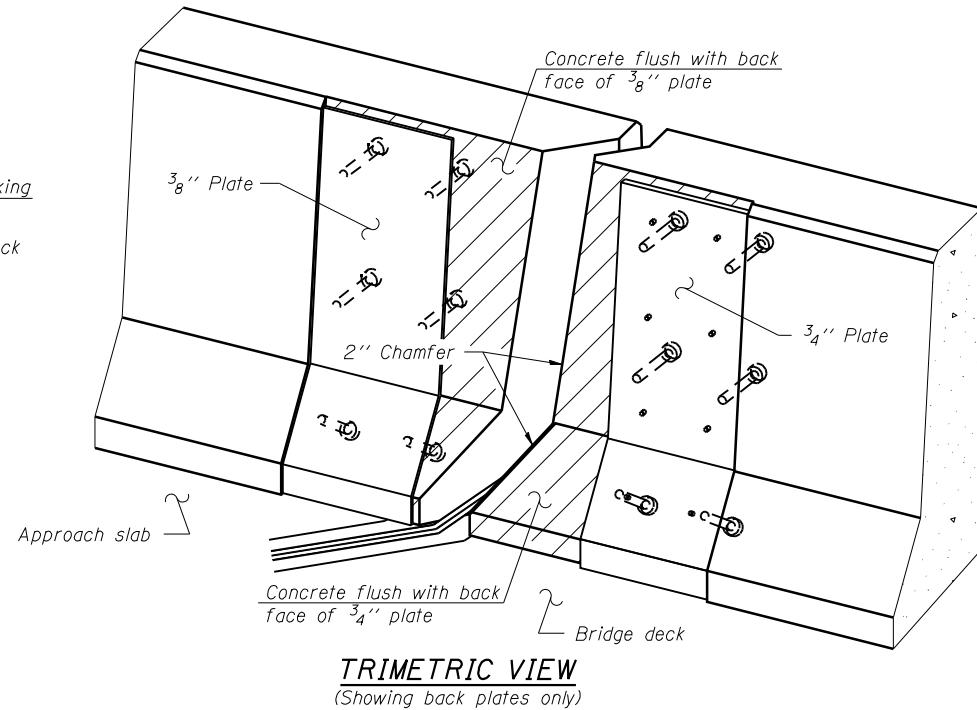
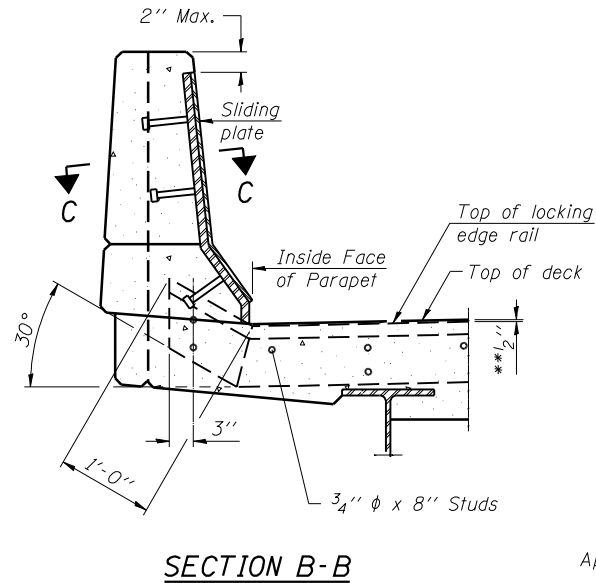
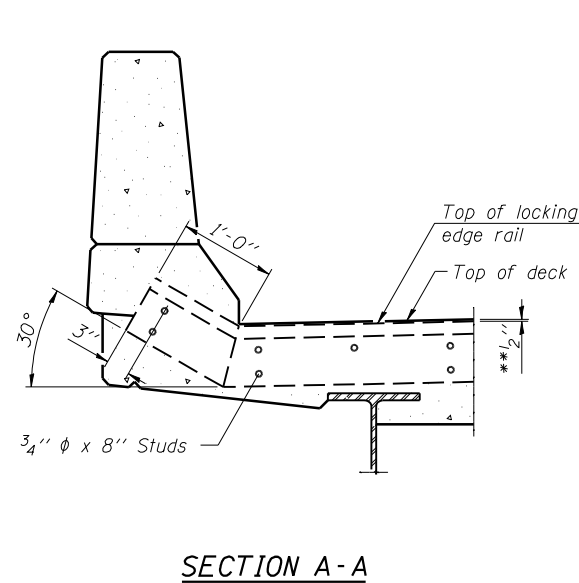
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	183
CONTRACT NO. 72E10				
ILLINOIS FED. AID PROJECT				

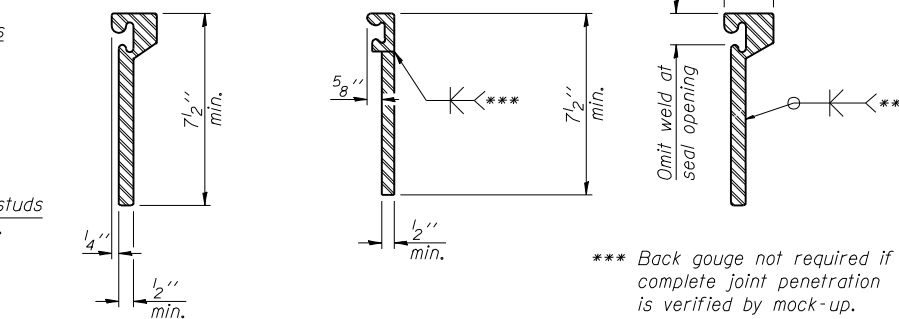
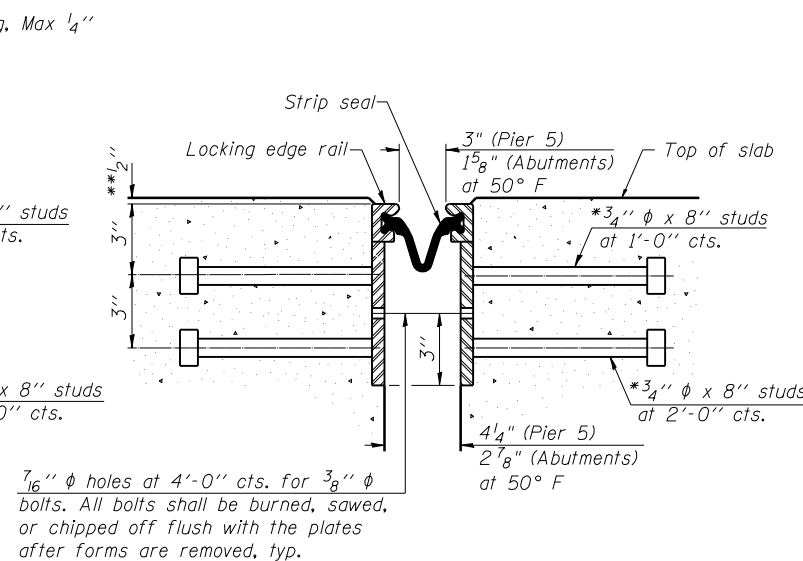
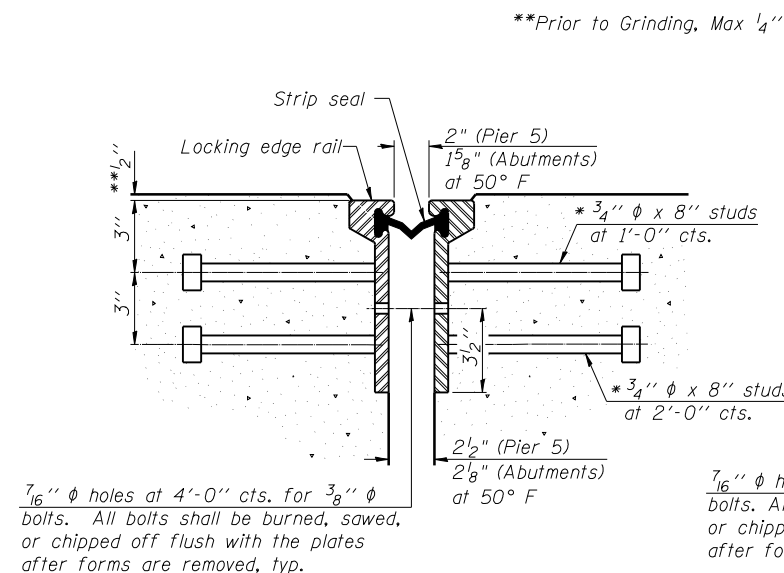


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

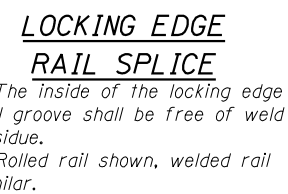


Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.
Parapet plates and anchorage studs for skews $> 30^\circ$ included in the cost of Preformed Joint Strip Seal.



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



BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	256.5

**Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



JOB = 2265.1
FILE = 0540055.0056-72E10-23-Expansion.dgn
DATE = 9/9/2011

DESIGNED - ZTB
CHECKED - MDC
DRAWN - TJD
CHECKED - ZTB

REVISED -
REVISED -
REVISED -
REVISED -

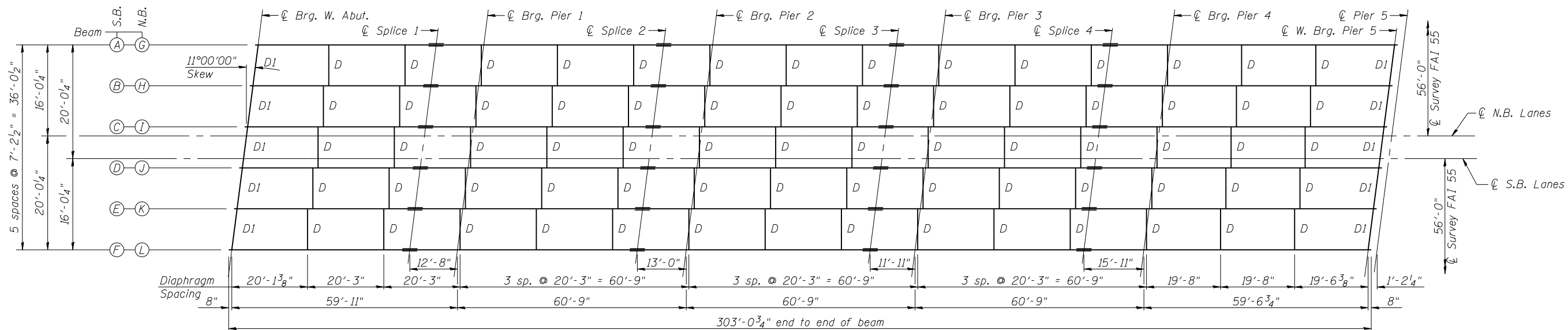
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MODIFIED PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)**

SHEET NO. 23 OF 39 SHEETS

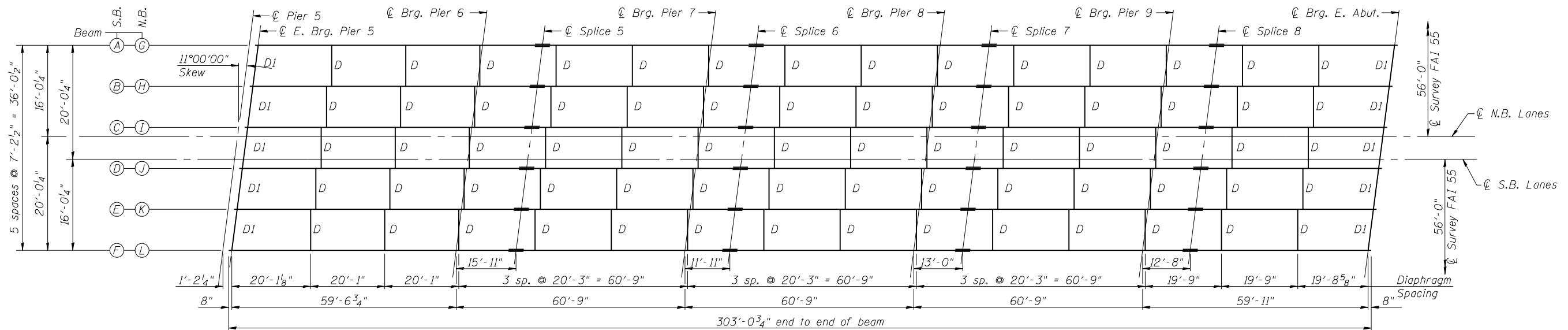
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	184
				CONTRACT NO. 72E10

ILLINOIS FED. AID PROJECT



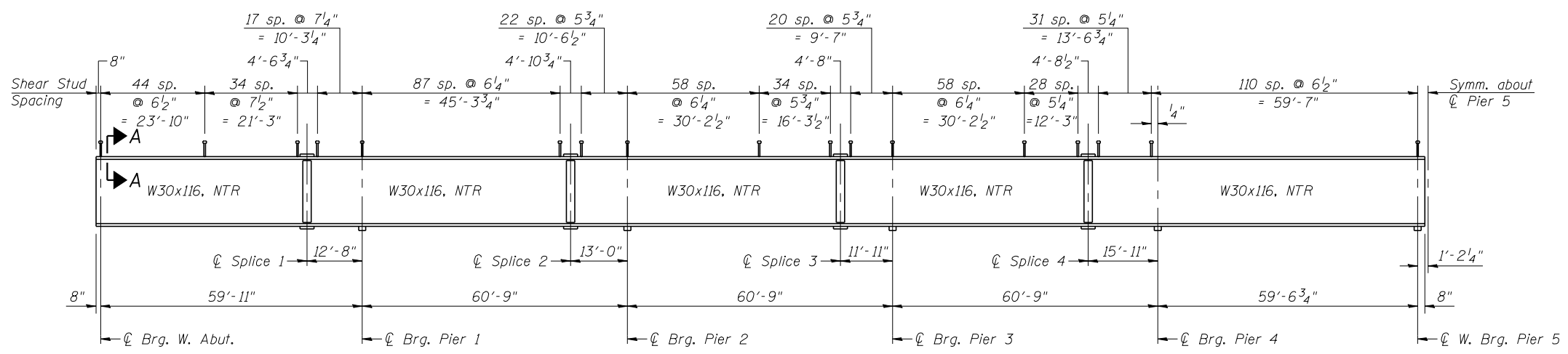
FRAMING PLAN

All beams are W30x116 NTR

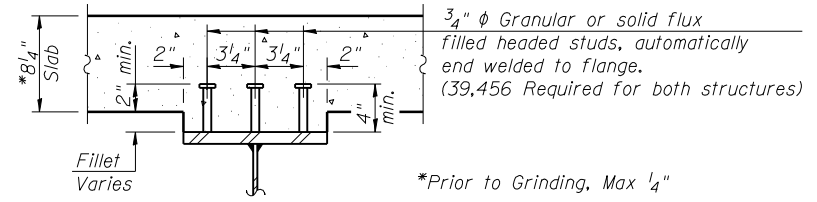


FRAMING PLAN

All beams are W30x116 NTR



BEAM ELEVATION



SECTION A-A

NOTES

All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



JOB = 2265.1
FILE = 0540055.0056-72E10-24-Steel.dgn
DATE = 9/9/2011

DESIGNED - ZTB
CHECKED - MDC
DRAWN - TJD
CHECKED - ZTB

REVISED -
REVISED -
REVISED -
REVISED -

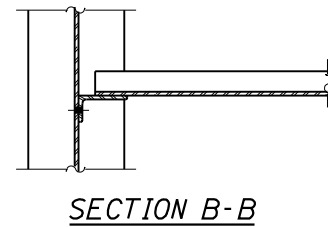
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL
STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)**

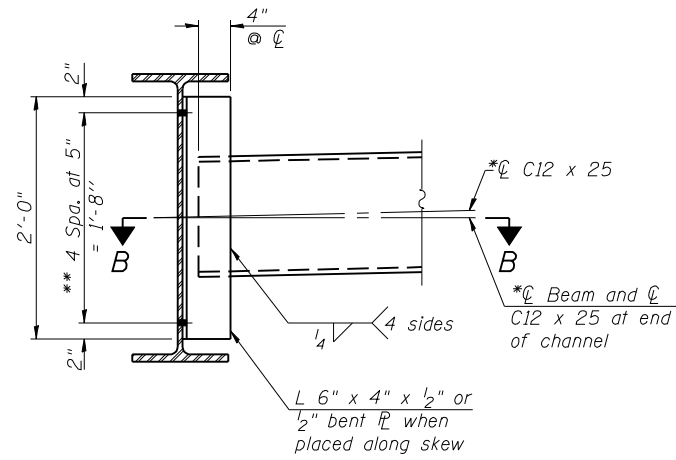
SHEET NO. 24 OF 39 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	185
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT

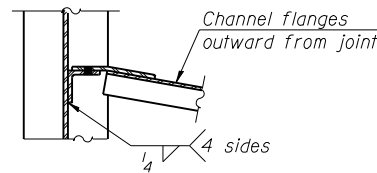


SECTION B-B

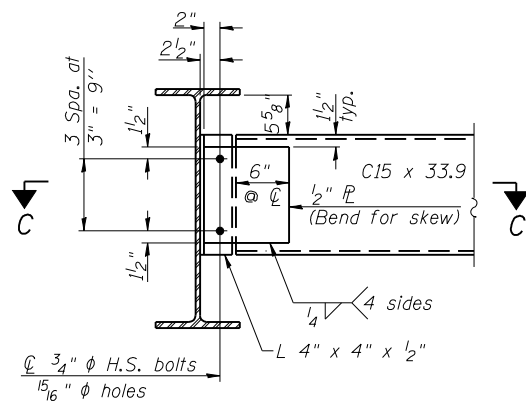


INTERIOR DIAPHRAGM D
(280 Required)

Notes:
Two hardened washers required for each set of oversized holes.
*Alternate C12 x 30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
**3/4" φ HS bolts, 15/16" φ holes

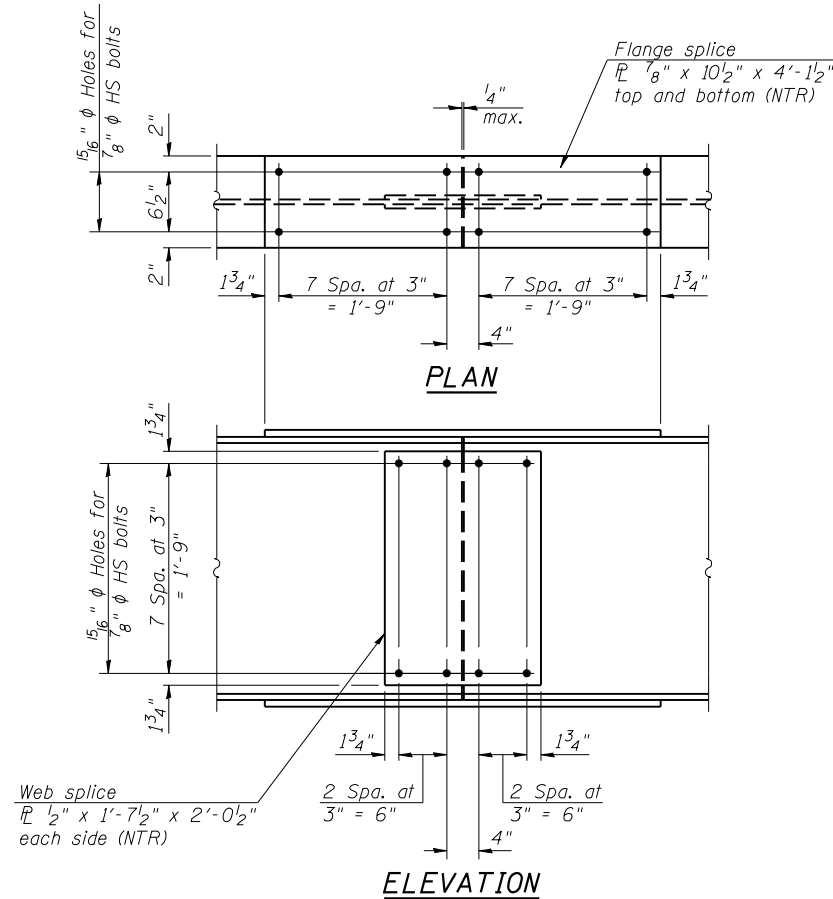


SECTION C-C



END DIAPHRAGM D1
(40 Required)

Note:
Two hardened washers required for each set of oversized holes.



SPLICE DETAIL
(96 Required)

Note:
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

TOP OF BEAM ELEVATIONS - S.N. 054-0056 (SB)

(For fabrication only)

Location	Beam A	Beam B	Beam C	Beam D	Beam E	Beam F
⊕ Brq. West Abutment	573.35	573.50	573.62	573.69	573.58	573.45
⊕ Splice 1	573.22	573.37	573.49	573.55	573.44	573.30
⊕ Brq. Pier 1	573.22	573.37	573.49	573.55	573.44	573.30
⊕ Splice 2	573.22	573.37	573.49	573.55	573.44	573.30
⊕ Brq. Pier 2	573.22	573.37	573.49	573.55	573.44	573.30
⊕ Splice 3	573.22	573.37	573.49	573.55	573.44	573.30
⊕ Brq. Pier 3	573.22	573.37	573.49	573.55	573.44	573.30
⊕ Splice 4	573.22	573.37	573.49	573.55	573.44	573.30
⊕ Brq. Pier 4	573.23	573.38	573.50	573.56	573.45	573.31
⊕ W. Brq. Pier 5	573.28	573.43	573.55	573.61	573.50	573.36
⊕ E. Brq. Pier 5	573.28	573.43	573.55	573.61	573.50	573.36
⊕ Brq. Pier 6	573.23	573.38	573.50	573.56	573.45	573.31
⊕ Splice 5	573.22	573.37	573.49	573.55	573.44	573.30
⊕ Brq. Pier 7	573.22	573.37	573.49	573.55	573.44	573.30
⊕ Splice 6	573.22	573.37	573.49	573.55	573.44	573.30
⊕ Brq. Pier 8	573.38	573.53	573.64	573.70	573.58	573.44
⊕ Splice 7	573.42	573.57	573.68	573.73	573.62	573.48
⊕ Brq. Pier 9	573.73	573.87	573.98	574.03	573.91	573.77
⊕ Splice 8	573.81	573.95	574.06	574.11	573.99	573.84
⊕ Brq. East Abutment	574.27	574.41	574.51	574.56	574.43	574.28

TOP OF BEAM ELEVATIONS - S.N. 054-0055 (NB)

(For fabrication only)

Location	Beam G	Beam H	Beam I	Beam J	Beam K	Beam L
⊕ Brq. West Abutment	573.50	573.64	573.76	573.70	573.58	573.44
⊕ Splice 1	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Brq. Pier 1	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Splice 2	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Brq. Pier 2	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Splice 3	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Brq. Pier 3	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Splice 4	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Brq. Pier 4	573.35	573.49	573.60	573.54	573.42	573.27
⊕ W. Brq. Pier 5	573.40	573.54	573.65	573.59	573.47	573.32
⊕ E. Brq. Pier 5	573.40	573.54	573.65	573.59	573.47	573.32
⊕ Brq. Pier 6	573.35	573.49	573.60	573.54	573.42	573.27
⊕ Splice 5	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Brq. Pier 7	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Splice 6	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Brq. Pier 8	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Splice 7	573.34	573.48	573.59	573.53	573.41	573.26
⊕ Brq. Pier 9	573.52	573.65	573.76	573.69	573.57	573.41
⊕ Splice 8	573.57	573.69	573.80	573.73	573.61	573.45
⊕ Brq. East Abutment	573.90	574.02	574.13	574.05	573.93	573.77

INTERIOR GIRDER MOMENT TABLE										
	0.4 Sp. 1 or 0.6 Sp. 10	Pier 1 or Pier 9	0.5 Sp. 2 or Sp. 9	Pier 2 or Pier 8	0.5 Sp. 3 or Sp. 8	Pier 3 or Pier 7	0.5 Sp. 4 or Sp. 7	Pier 4 or Pier 6	0.6 Sp. 5 or 0.4 Sp. 6	
I_s	(in ⁴)	4,930	4,930	4,930	4,930	4,930	4,930	4,930	4,930	4,930
$I_c(n)$	(in ⁴)	14,582	14,582	14,582	14,582	14,582	14,582	14,582	14,582	14,582
$I_c(3n)$	(in ⁴)	10,822	---	10,822	---	10,822	---	10,822	---	10,822
$I_c(cr)$	(in ⁴)	---	7,293	---	7,293	---	7,293	---	7,293	---
S_s	(in ³)	329	329	329	329	329	329	329	329	329
$S_c(n)$	(in ³)	508	---	508	---	508	---	508	---	508
$S_c(3n)$	(in ³)	459	---	459	---	459	---	459	---	459
$S_c(cr)$	(in ³)	---	397	---	397	---	397	---	397	---
DC1	(k/')	0.902	0.902	0.902	0.902	0.902	0.902	0.902	0.902	0.902
M _{DC1}	(k)	247	333	113	256	151	256	114	330	243
DC2	(k/')	0.174	0.174	0.174	0.174	0.174	0.174	0.174	0.174	0.174
M _{DC2}	(k)	48	66	22	51	29	51	22	66	48
DW	(k/')	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361
M _{DW}	(k)	100	138	45	106	61	106	45	137	99
M _{ℓ + IM}	(k)	625	527	507	477	510	477	507	525	621
M _u (Strength I)	(k)	1613	1628	1124	1378	1209	1378	1125	1619	1599
Φ _r M _n	(k)	2,504	1,741	2,639	1,770	2,600	1,802	2,638	1,775	2,508
f _s DC1	(ksi)	9.01	12.15	4.12	9.34	5.51	9.34	4.16	12.04	8.86
f _s DC2	(ksi)	1.25	1.99	0.57	1.54	0.76	1.54	0.57	1.99	1.25
f _s DW	(ksi)	2.61	4.17	1.18	3.20	1.59	3.20	1.18	4.14	2.59
f _s (ℓ + IM)	(ksi)	14.77	15.93	11.98	14.42	12.05	14.42	11.98	15.87	14.68
f _s (Service II)	(ksi)	32.08	39.02	21.45	32.83	23.53	32.83	21.48	38.80	31.78
0.95R _h F _{yf}	(ksi)	47.50	47.50	47.50	47.50	47.50	47.50	47.50	47.50	47.50
f _s (Total)(Strength I)	(ksi)	---	---	---	---	---	---	---	---	---
Φ _r F _n	(ksi)	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
V _r	(k)	42.88	50.93	45.90	52.34	44.64	51.12	45.80	50.75	43.96

INTERIOR GIRDER REACTION TABLE						
	W. Abut. or E. Abut.	Pier 1 or Pier 9	Pier 2 or Pier 8	Pier 3 or Pier 7	Pier 4 or Pier 6	Pier 5 W. Brg. or Pier 5 E. Brg.
R _{DC1}	(k)	21.7	60.1	52.3	52.4	59.8
R _{DC2}	(k)	4.1	11.9	10.3	10.3	11.8
R _{DW}	(k)	8.5	24.6	21.4	21.4	24.5
R _{ℓ + IM}	(k)	71.7	105.6	103.5	103.5	105.4
R _{Total}	(k)	106.1	202.1	187.5	187.6	201.6

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).

$I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to short-term composite live loads (in⁴ and in³).

$I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).

$I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite dead loads (in⁴ and in³).

DC1: Un-factored non-composite dead load (kips/ft.).

M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M_{ℓ + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{ℓ + IM}

Φ_rM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.) or Negative Moment Capacity computed according to Appendix A6.

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
M_{DC2} / S_{c(3n)} or M_{DC2} / S_{c(cr)} at piers.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
M_{DW} / S_{c(3n)} or M_{DW} / S_{c(cr)} at piers.

f_s (ℓ + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
M_{ℓ + IM} / S_{c(3n)} or M_{ℓ + IM} / S_{c(cr)} at piers.

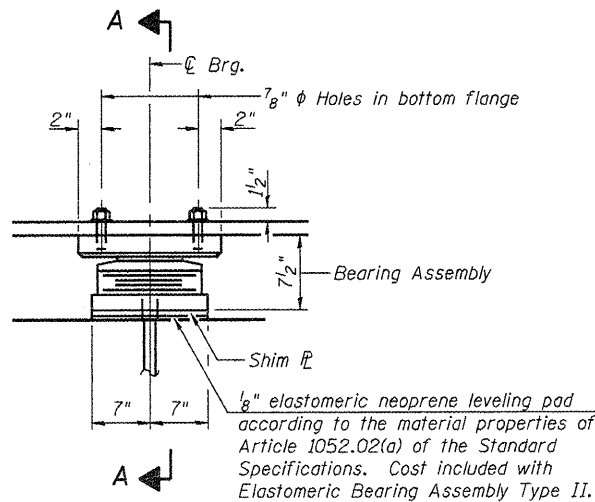
f_s (Service II): Sum of stresses as computed below (ksi).
f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s(ℓ + IM)

0.95R_hF_{yf}: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

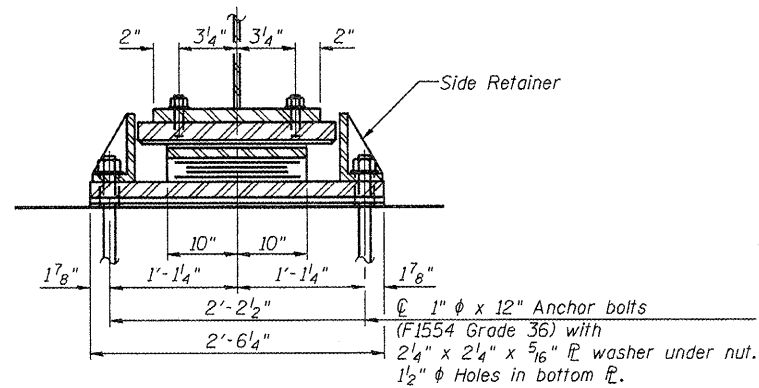
f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s(ℓ + IM)

Φ_rF_n: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 (ksi).

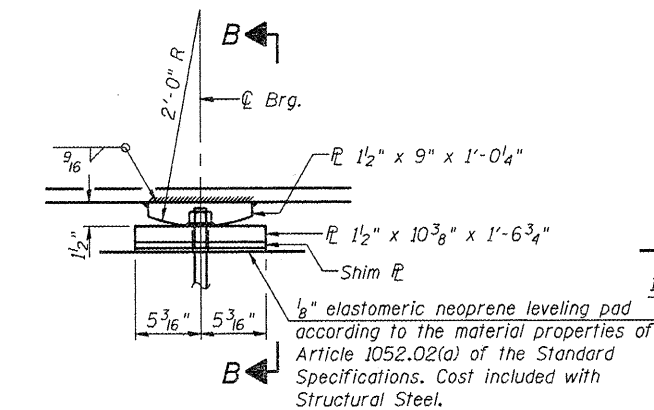
V_r: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



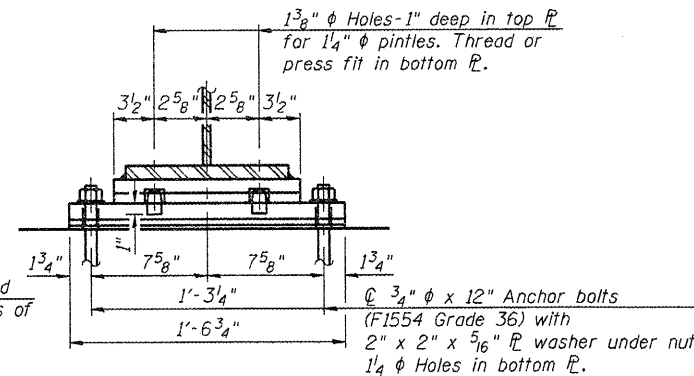
ELEVATION AT PIERS



SECTION A-A



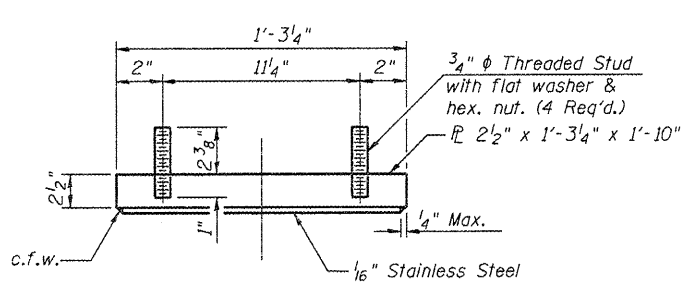
ELEVATION AT PIERS 3 & 7



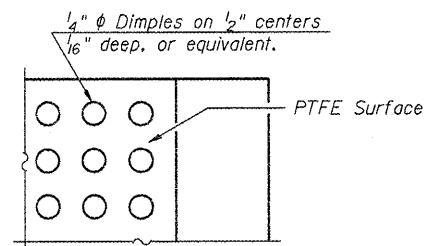
SECTION B-B

TYPE II ELASTOMERIC EXP. BRG. - PIERS 1, 2, 4, 6, 8 & 9

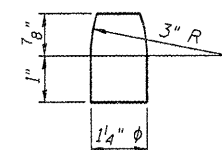
FIXED BEARING - PIERS 3 & 7



TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE



PINTLE

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

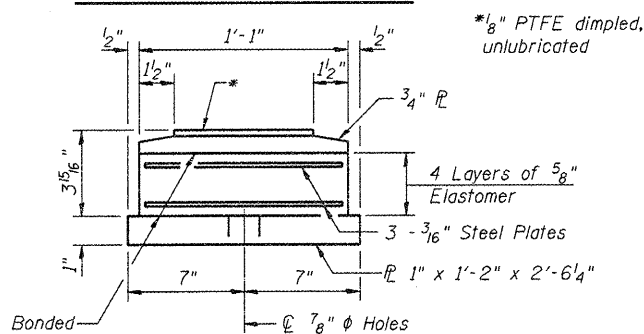
The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

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

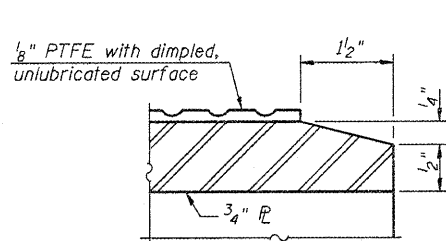
The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

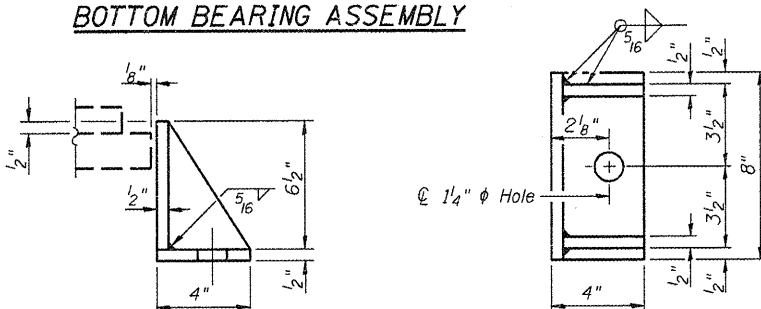
The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.



BOTTOM BEARING ASSEMBLY

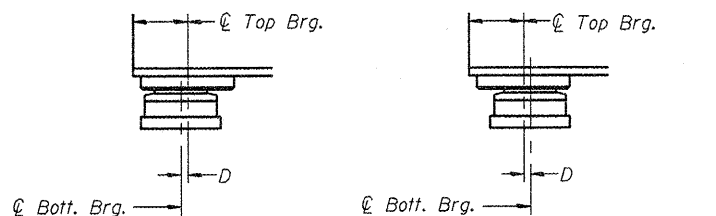


SECTION THRU PTFE



SIDE RETAINER - PIER 5 & ABUTMENTS

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50°F.

ABOVE 50°F.

(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

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.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	72
Anchor Bolts, 3/4"	Each	48
Anchor Bolts, 1"	Each	144

I-2E-1

7-1-10

(Sheet 1 of 2)

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2265.1
FILE = 0548055_0056-72E10-27-Bearing.dgn
DATE = 9/29/2011

DESIGNED - ZTB
CHECKED - MDC
DRAWN - TJD
CHECKED - ZTB

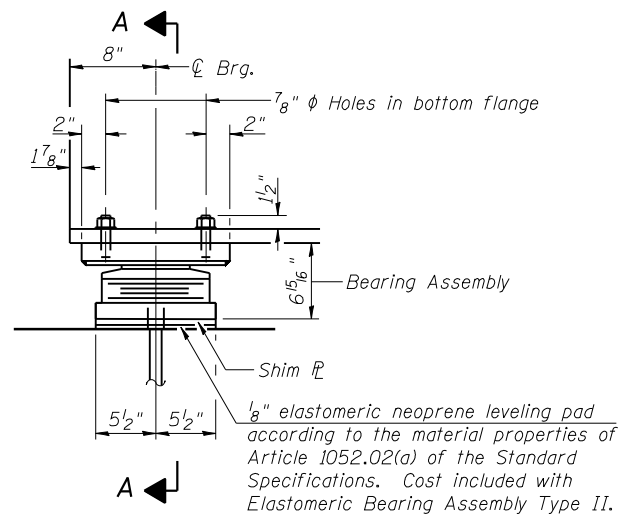
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

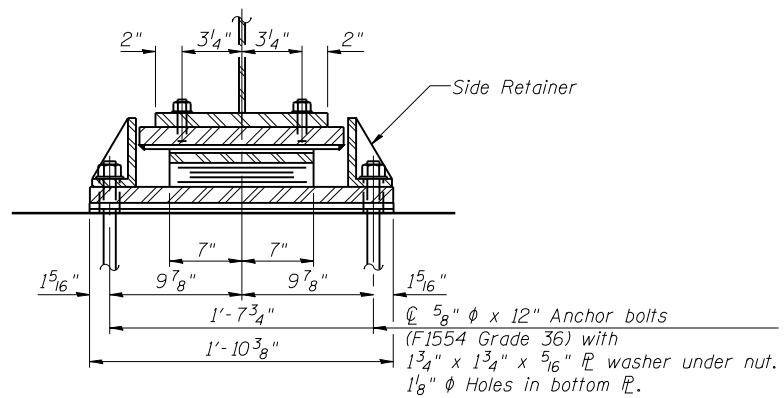
BEARING DETAILS
STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)

SHEET NO. 27 OF 39 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	188
			CONTRACT NO. 72E10	
ILLINOIS FED. AID PROJECT				

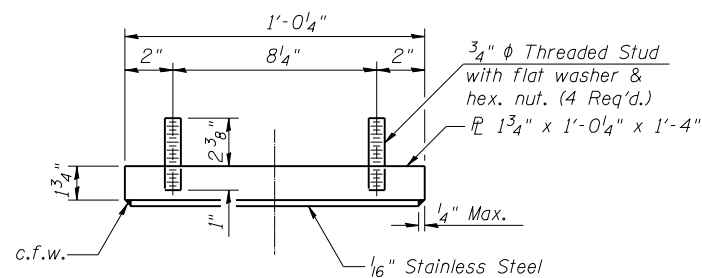


ELEVATION AT ABUT. & PIER 5

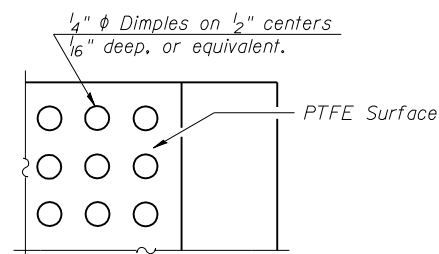


SECTION A-A

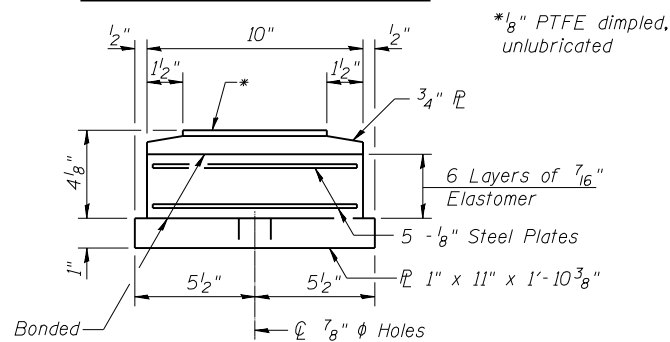
TYPE II ELASTOMERIC EXP. BRG. - PIER 5 & ABUTMENTS



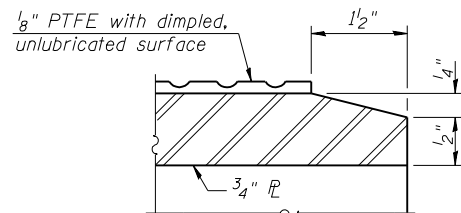
TOP BEARING ASSEMBLY



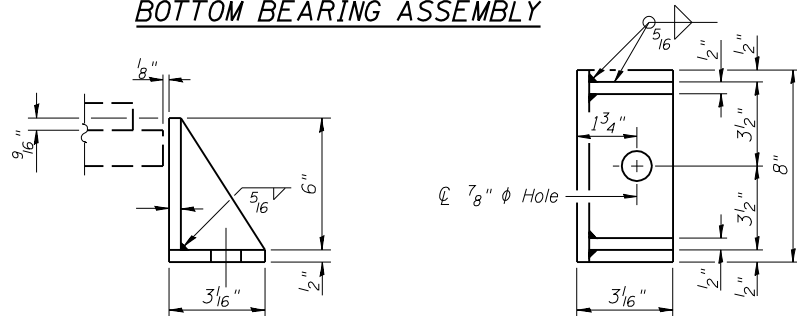
PLAN-PTFE SURFACE



BOTTOM BEARING ASSEMBLY

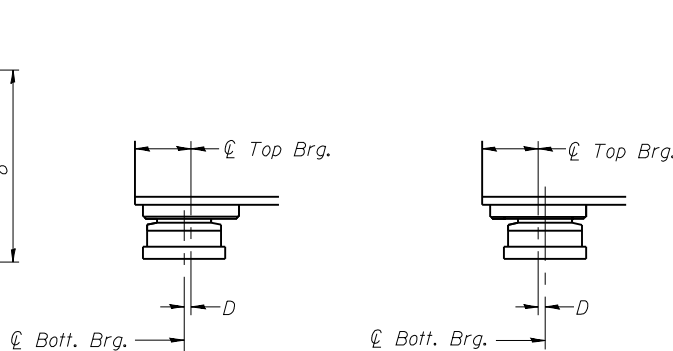


SECTION THRU PTFE



SIDE RETAINER - PIER 5 & ABUTMENTS

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50°F.

ABOVE 50°F.

(Move bott. brg. away from fixed brg.) (Move bott. brg. toward fixed brg.)

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.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

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

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	120
Anchor Bolts, 5/8"	Each	96

I-2E-2

7-1-10

(Sheet 2 of 2)



Cummins Engineering Corporation
 JOB = 2265.1
 FILE = 0540055.0056-72E10-28-Bearings.dgn
 DATE = 9/9/2011

DESIGNED - ZTB
 CHECKED - MDC
 DRAWN - TJD
 CHECKED - ZTB

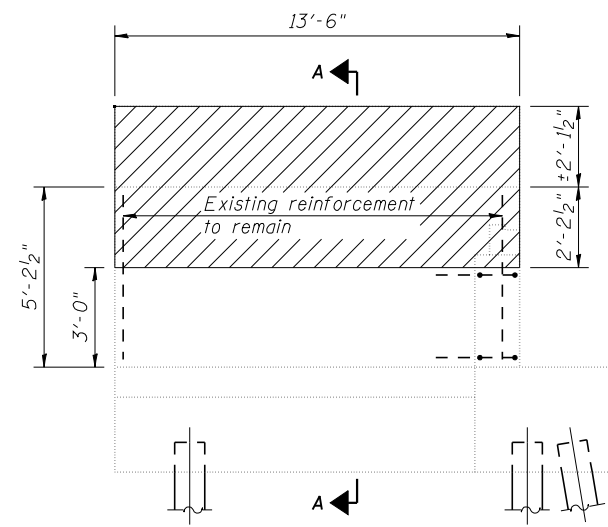
REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

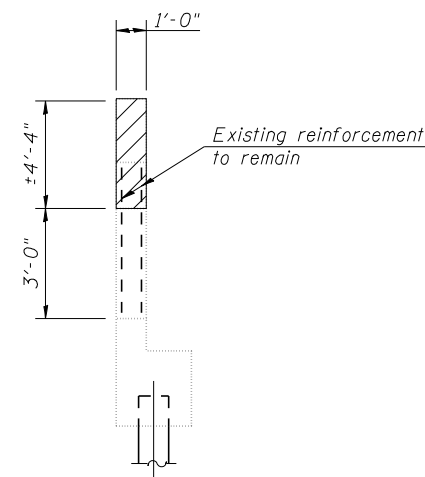
BEARING DETAILS
 STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)

SHEET NO. 28 OF 39 SHEETS

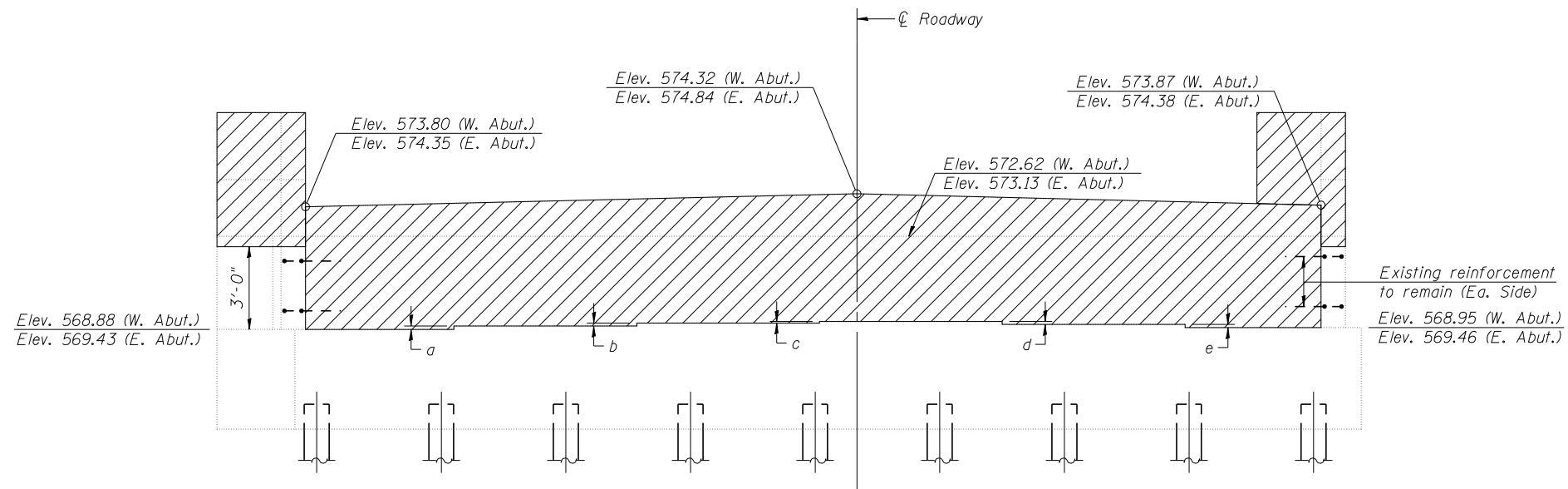
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	189
				CONTRACT NO. 72E10
ILLINOIS FED. AID PROJECT				



WINGWALL ELEVATION



SECTION A-A

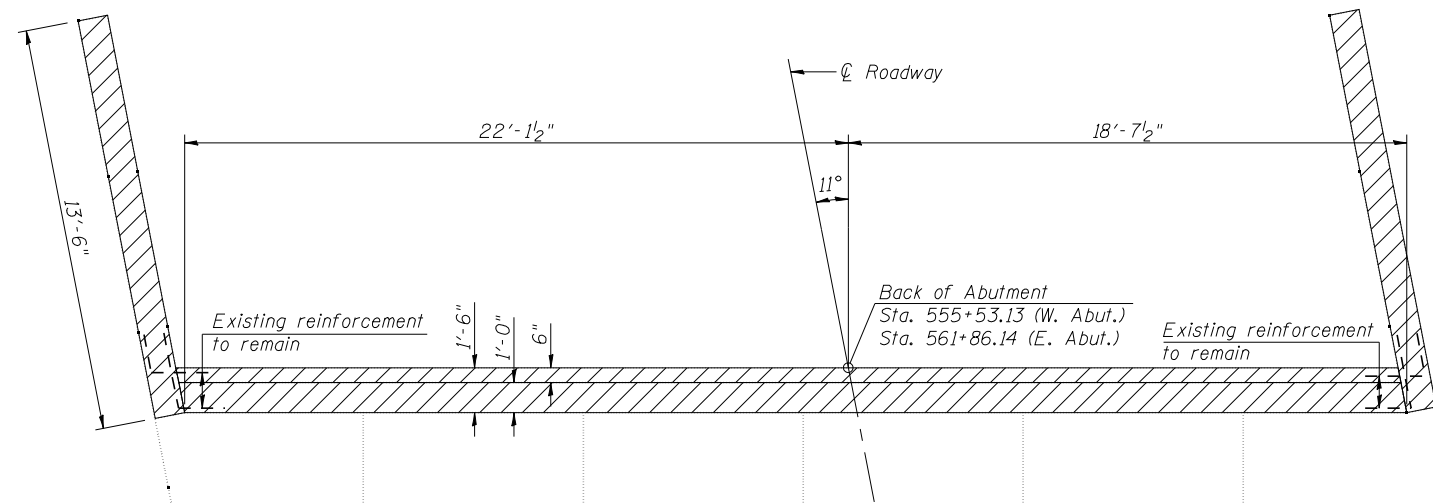


ELEVATION

(Looking West - W. Abut. N.B.)
(Looking East - E. Abut. S.B.)

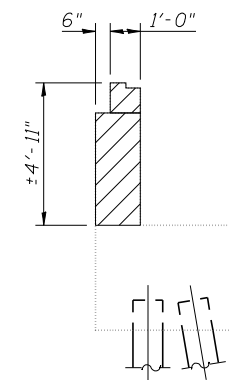
N.B. (S.N. 054-0055)

S.B. (S.N. 054-0056)



PLAN

(West Abutment - N.B.)
(East Abutment - S.B.)



SEC. THRU ABUT.

TABLE OF STEP HEIGHTS

	a	b	c	d	e
West Abutment (N.B.)	1 ³ / ₄ "	1 ³ / ₈ "	3 ⁴ / ₈ "	1 ³ / ₈ "	1 ⁵ / ₈ "
East Abutment (S.B.)	1 ⁵ / ₈ "	1 ³ / ₈ "	5 ⁸ / ₈ "	1 ¹ / ₂ "	1 ³ / ₄ "

NOTE

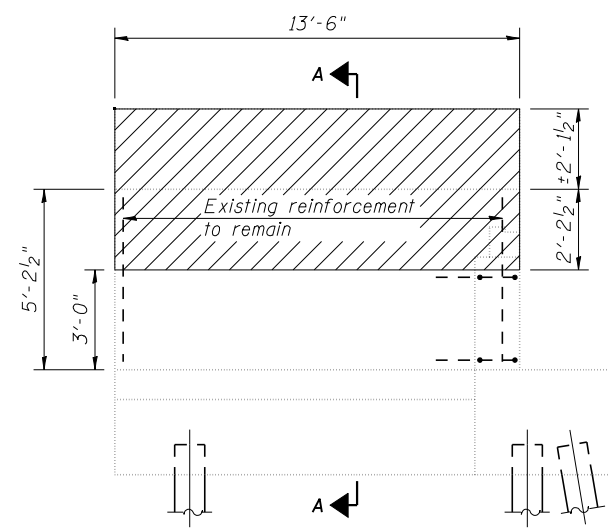
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

Notes:

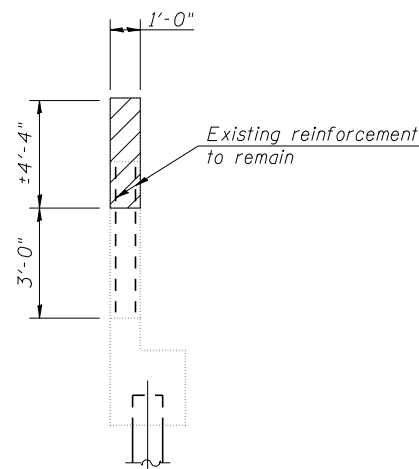
Hatched areas indicate Concrete Removal.
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Existing reinforcement bars not extending into the new construction shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

**TWO (2) ABUTMENTS
BILL OF MATERIAL**

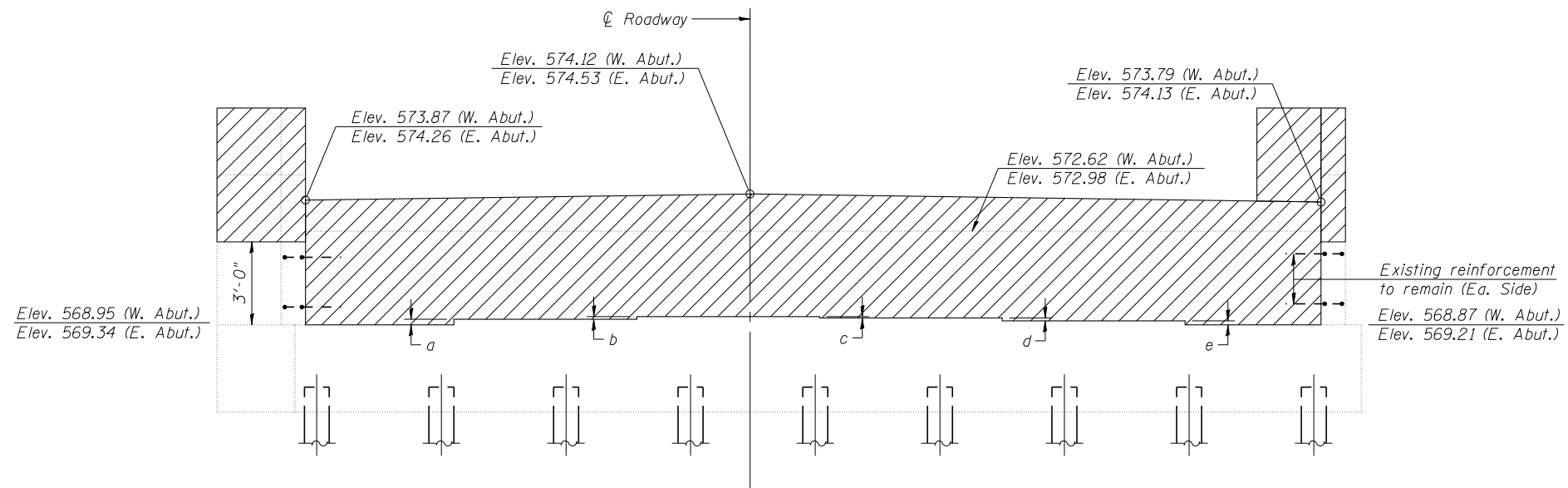
Item	Unit	Total
Concrete Removal	Cu. Yd.	30.0



WINGWALL ELEVATION



SECTION A-A

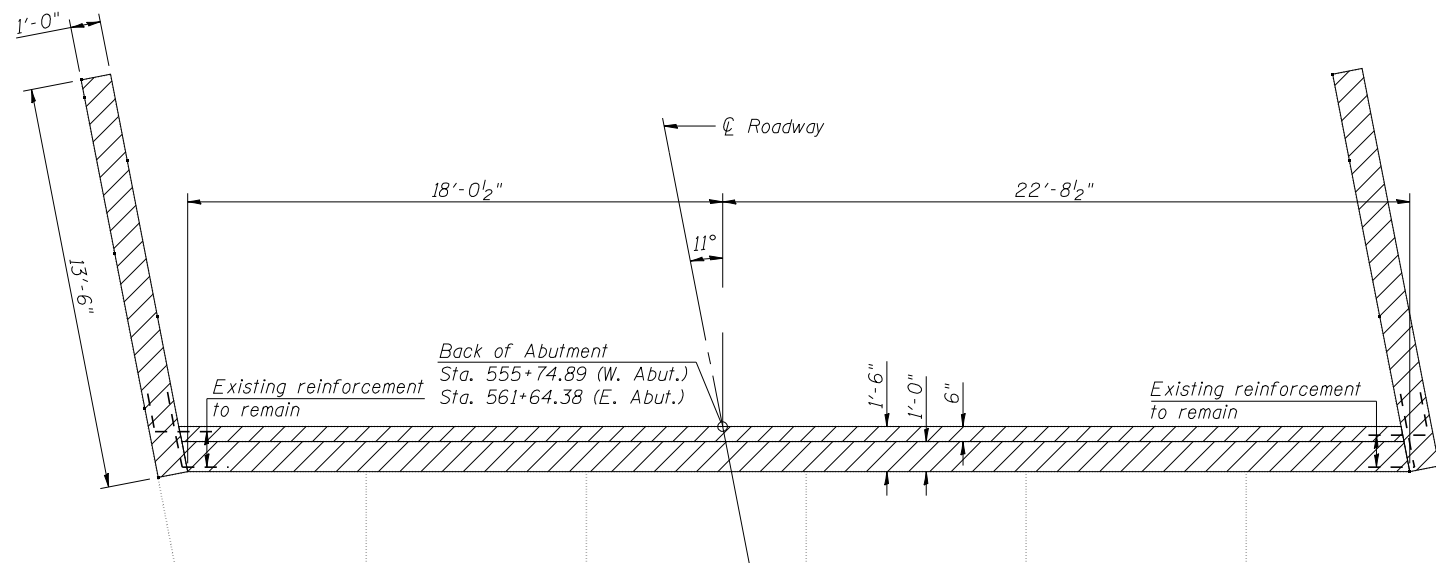


ELEVATION

(Looking West - W. Abut. S.B.)
(Looking East - E. Abut. N.B.)

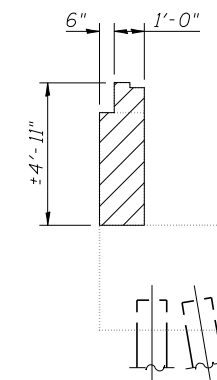
S.B. (S.N. 054-0056)

N.B. (S.N. 054-0055)



PLAN

(West Abutment - S.B.)
(East Abutment - N.B.)



SEC. THRU ABUT.

TABLE OF STEP HEIGHTS

	a	b	c	d	e
West Abutment (S.B.)	1 ⁵ / ₈ "	1 ³ / ₈ "	3 ⁴ / ₄ "	1 ³ / ₈ "	1 ⁷ / ₈ "
East Abutment (N.B.)	1 ¹ / ₂ "	1 ¹ / ₄ "	7 ⁶ / ₈ "	1 ¹ / ₂ "	1 ⁷ / ₈ "

NOTE

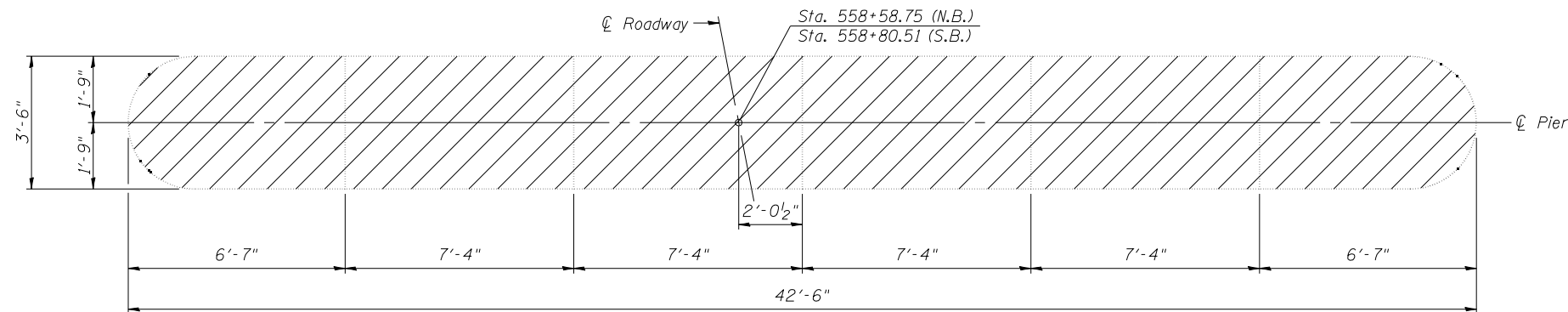
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

Notes:

Hatched areas indicate Concrete Removal.
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Existing reinforcement bars not extending into the new construction shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

**TWO (2) ABUTMENTS
BILL OF MATERIAL**

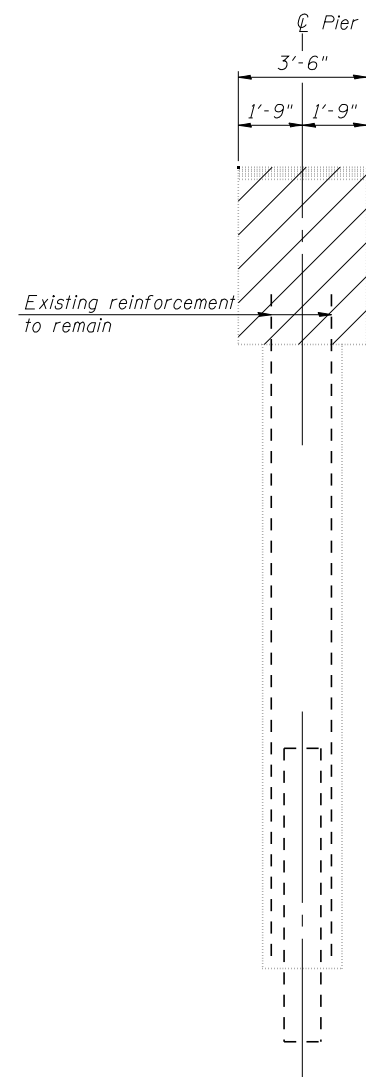
Item	Unit	Total
Concrete Removal	Cu. Yd.	30.0



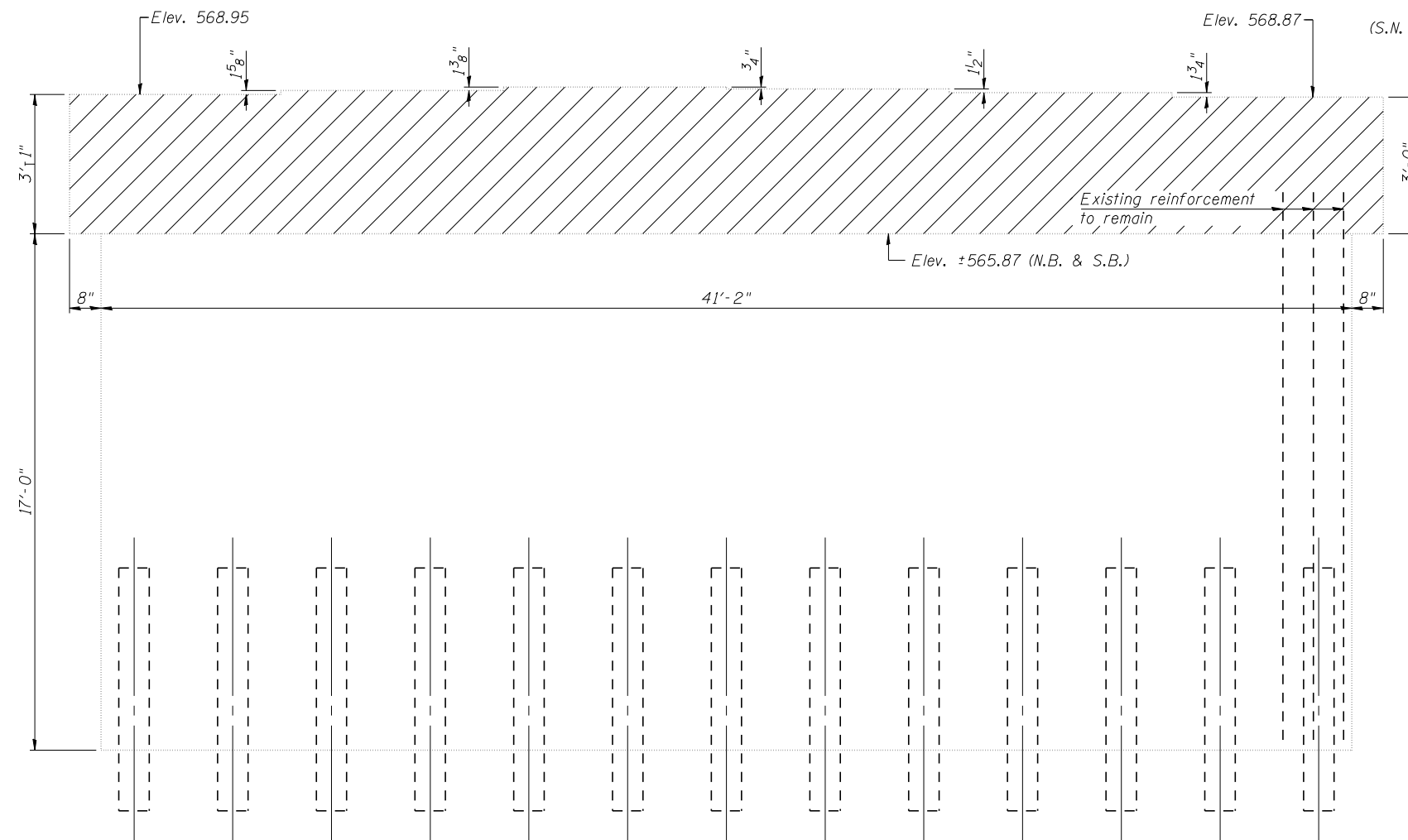
TOP PLAN

(S.N. 054-0055)

(S.N. 054-0056)



END VIEW



ELEVATION

(Looking in the direction of Traffic)

NOTE

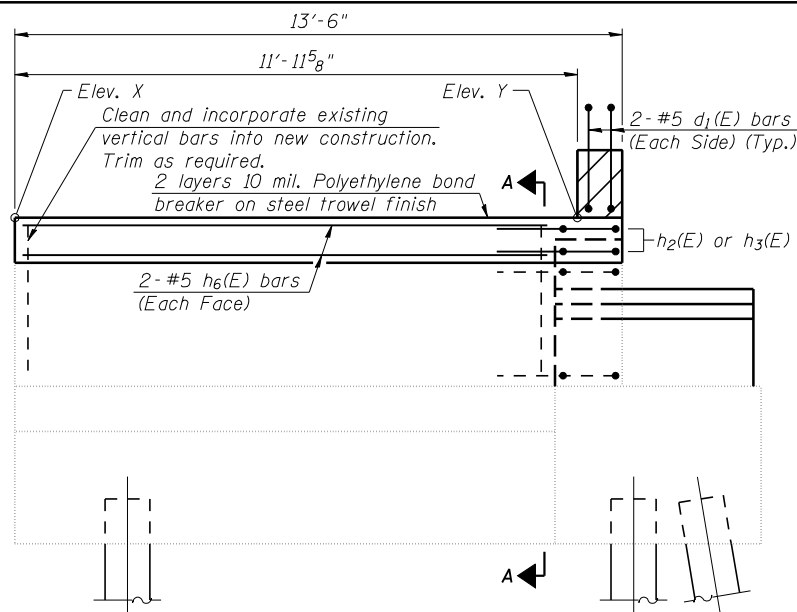
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

Notes:

Hatched areas indicate Concrete Removal.
Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.
Existing reinforcement bars not extending into the new construction shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.

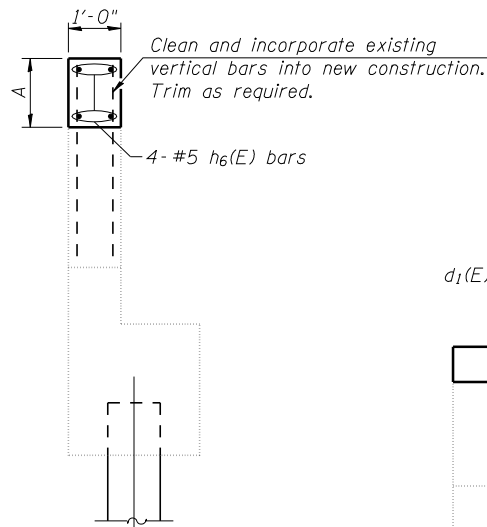
**TWO (2) PIERS
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	36.0



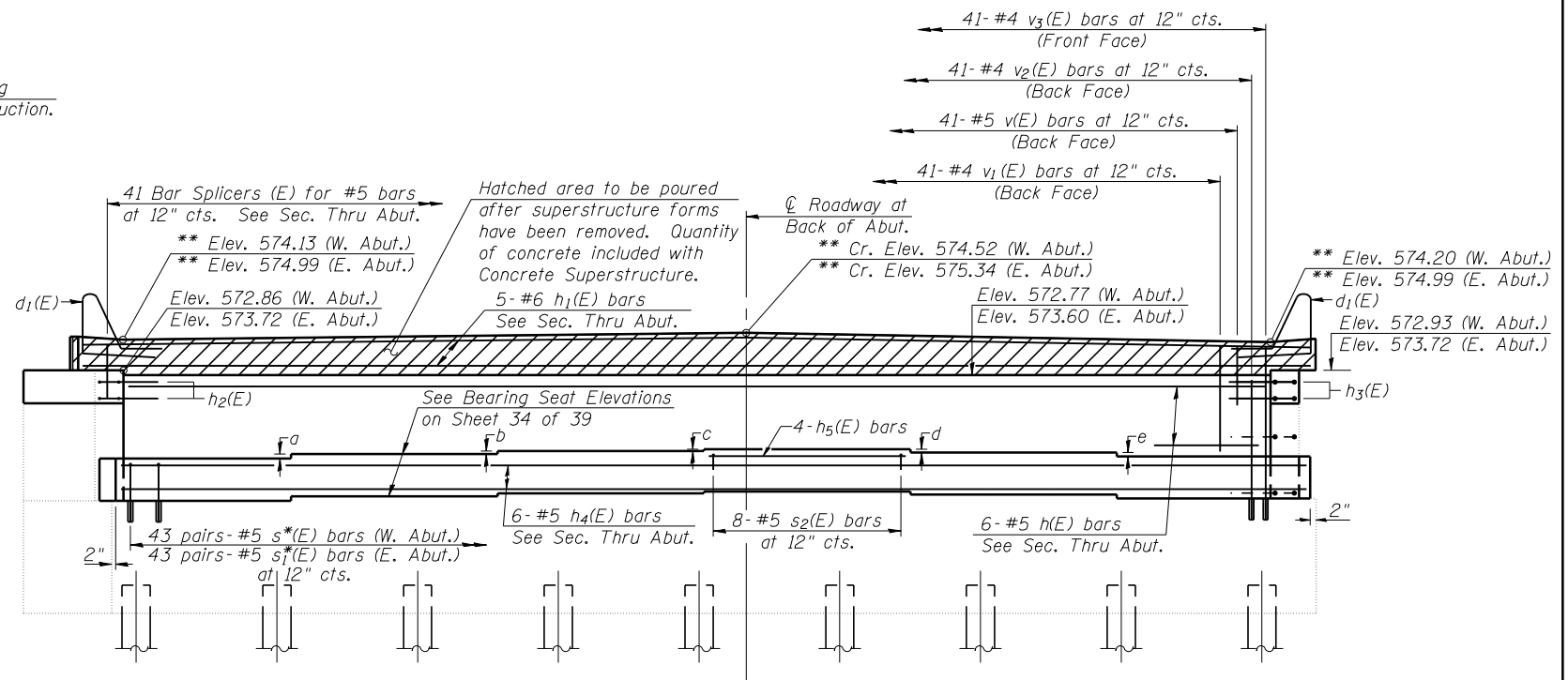
WINGWALL ELEVATION

Elev.	West Abut. - N.B.		East Abut. - S.B.	
	N. Wing	S. Wing	N. Wing	S. Wing
X	572.96	572.90	573.86	573.86
Y	572.93	572.86	573.72	573.72



SEC. A-A

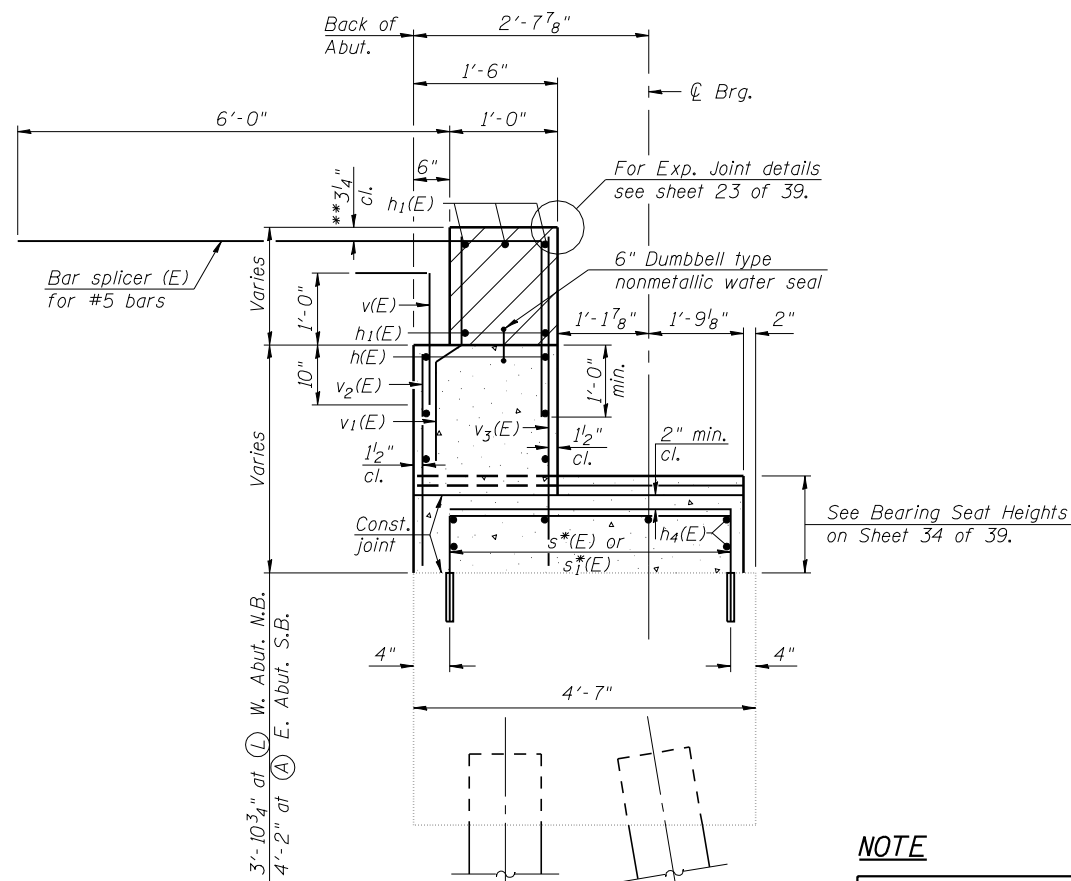
Dim.	West Abut. - N.B.		East Abut. - S.B.	
	N. Wing	S. Wing	N. Wing	S. Wing
A	11 ³ / ₄ "	11 ³ / ₄ "	1'-3 ¹ / ₂ "	1'-3"



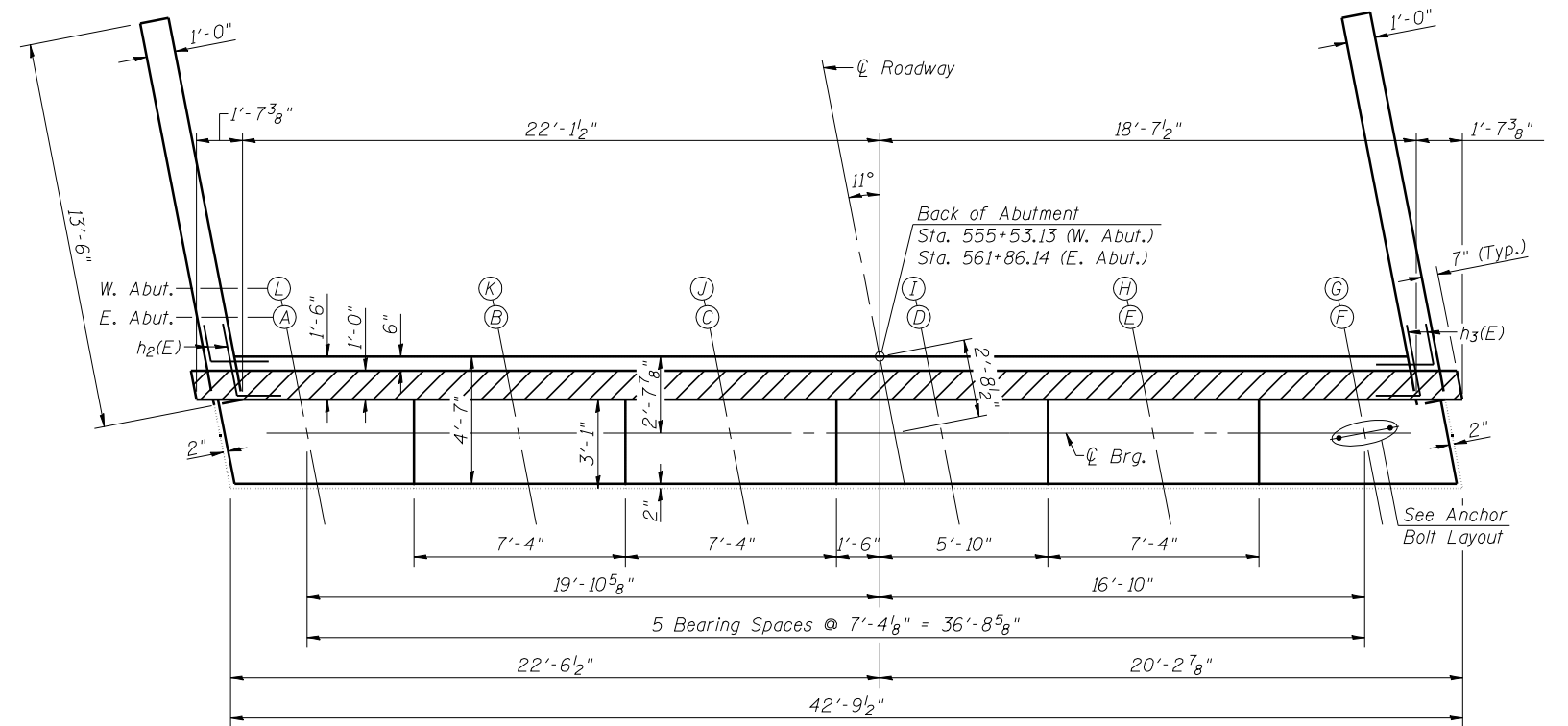
ELEVATION

(Looking West - W. Abut. N.B.)
(Looking East - E. Abut. S.B.)

** Prior to Grinding, Max 1/4"



SEC. THRU ABUT.
(Dimensions at Rt. b's)

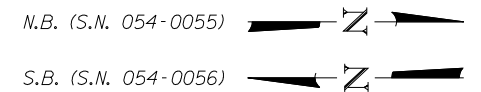


PLAN

(West Abutment - N.B.)
(East Abutment - S.B.)

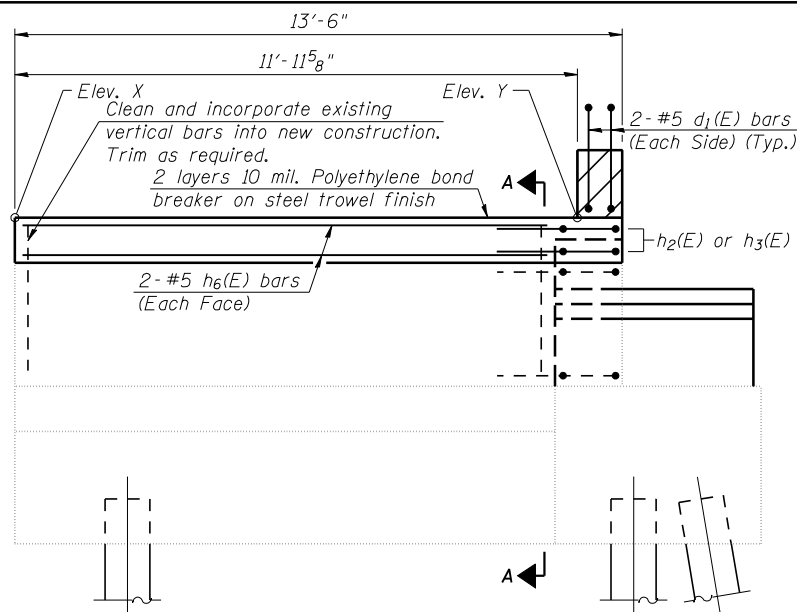
TABLE OF STEP HEIGHTS

	a	b	c	d	e
West Abutment (N.B.)	1 ³ / ₄ "	1 ³ / ₈ "	3/4"	1 ³ / ₈ "	1 ⁵ / ₈ "
East Abutment (S.B.)	1 ⁵ / ₈ "	1 ¹ / ₄ "	3/4"	1 ¹ / ₂ "	1 ³ / ₄ "



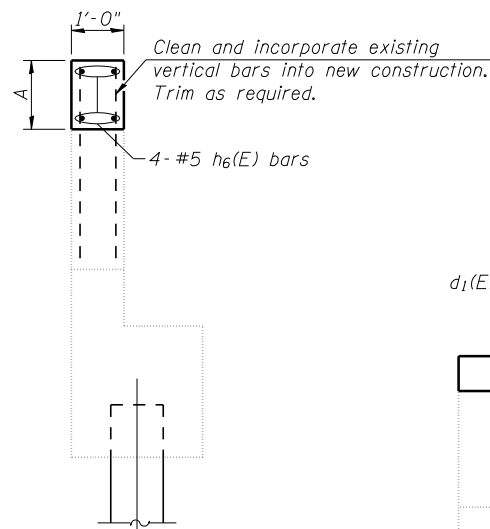
NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.



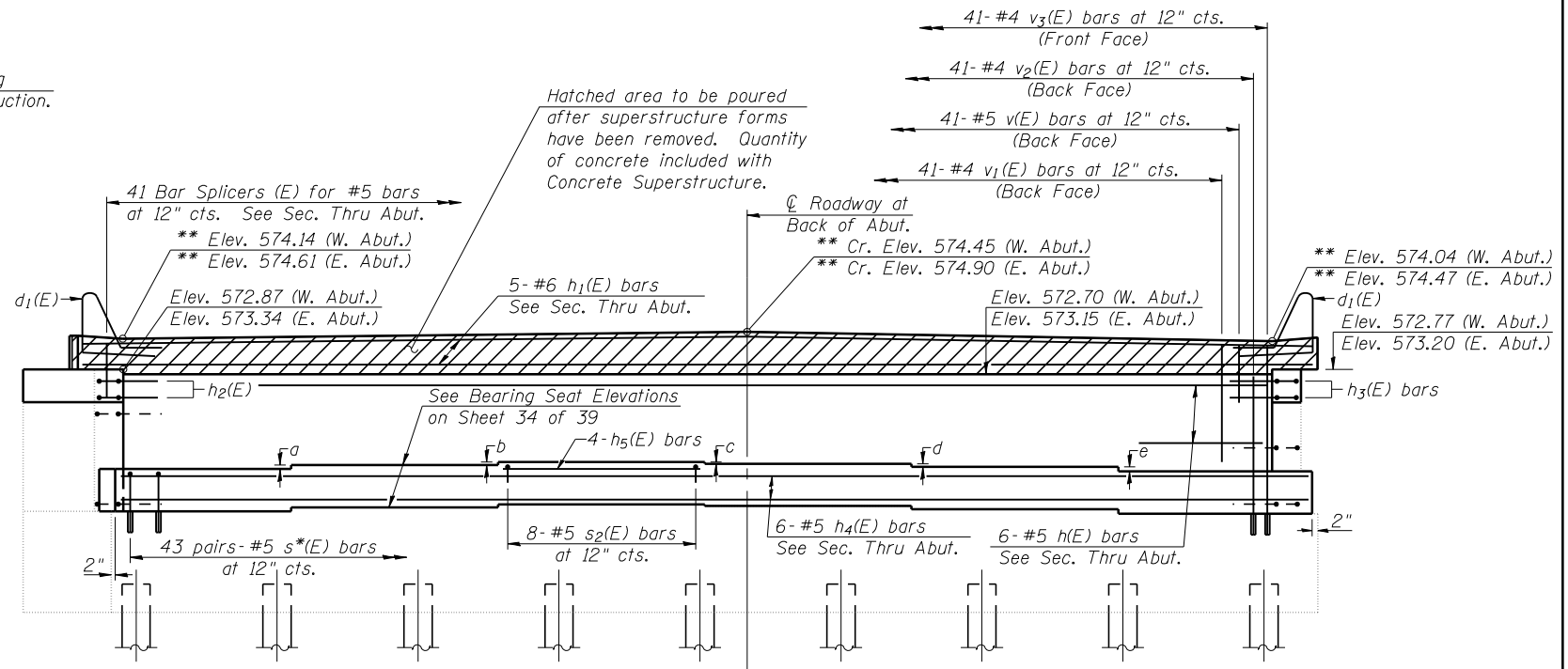
WINGWALL ELEVATION

Elev.	West Abut. - S.B.		East Abut. - N.B.	
	N. Wing	S. Wing	N. Wing	S. Wing
X	572.81	572.91	573.45	573.31
Y	572.77	572.87	573.34	573.20



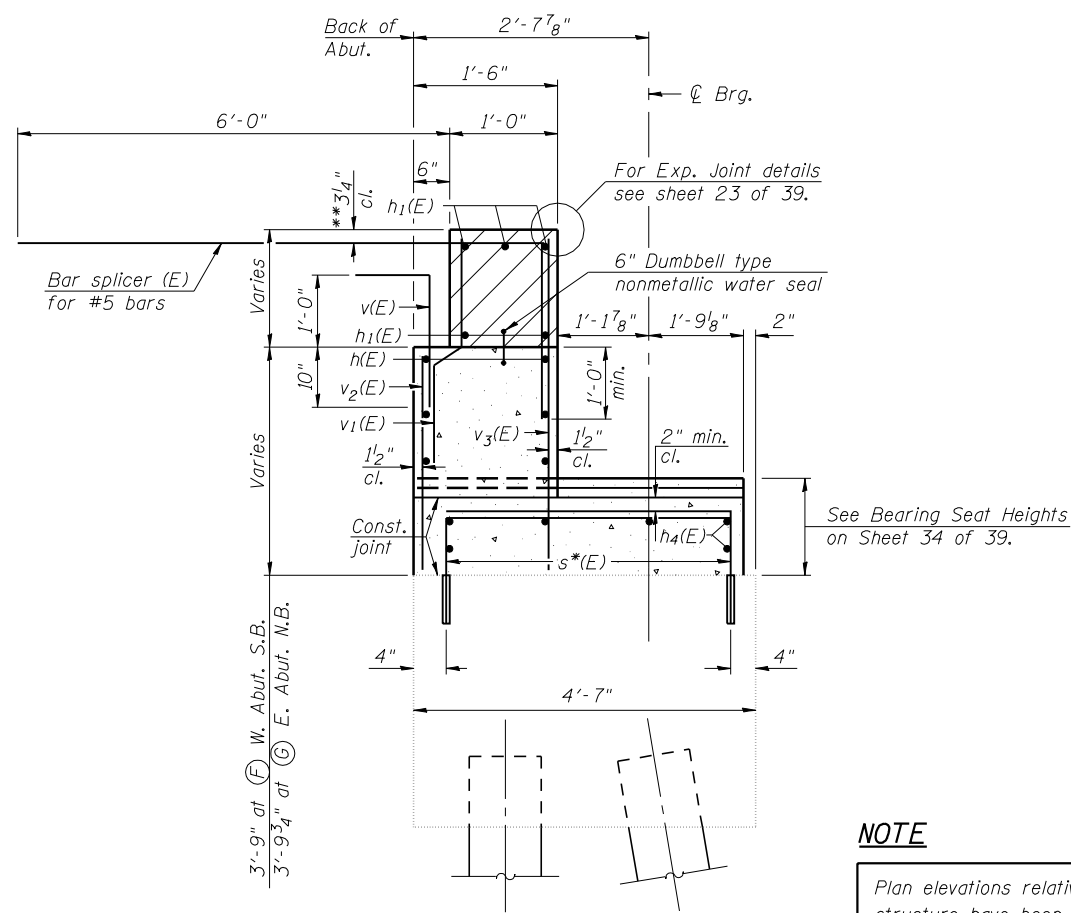
SEC. A-A

Dim.	West Abut. - S.B.		East Abut. - N.B.	
	N. Wing	S. Wing	N. Wing	S. Wing
A	10 3/4"	11"	1'-0"	1'-0"



ELEVATION

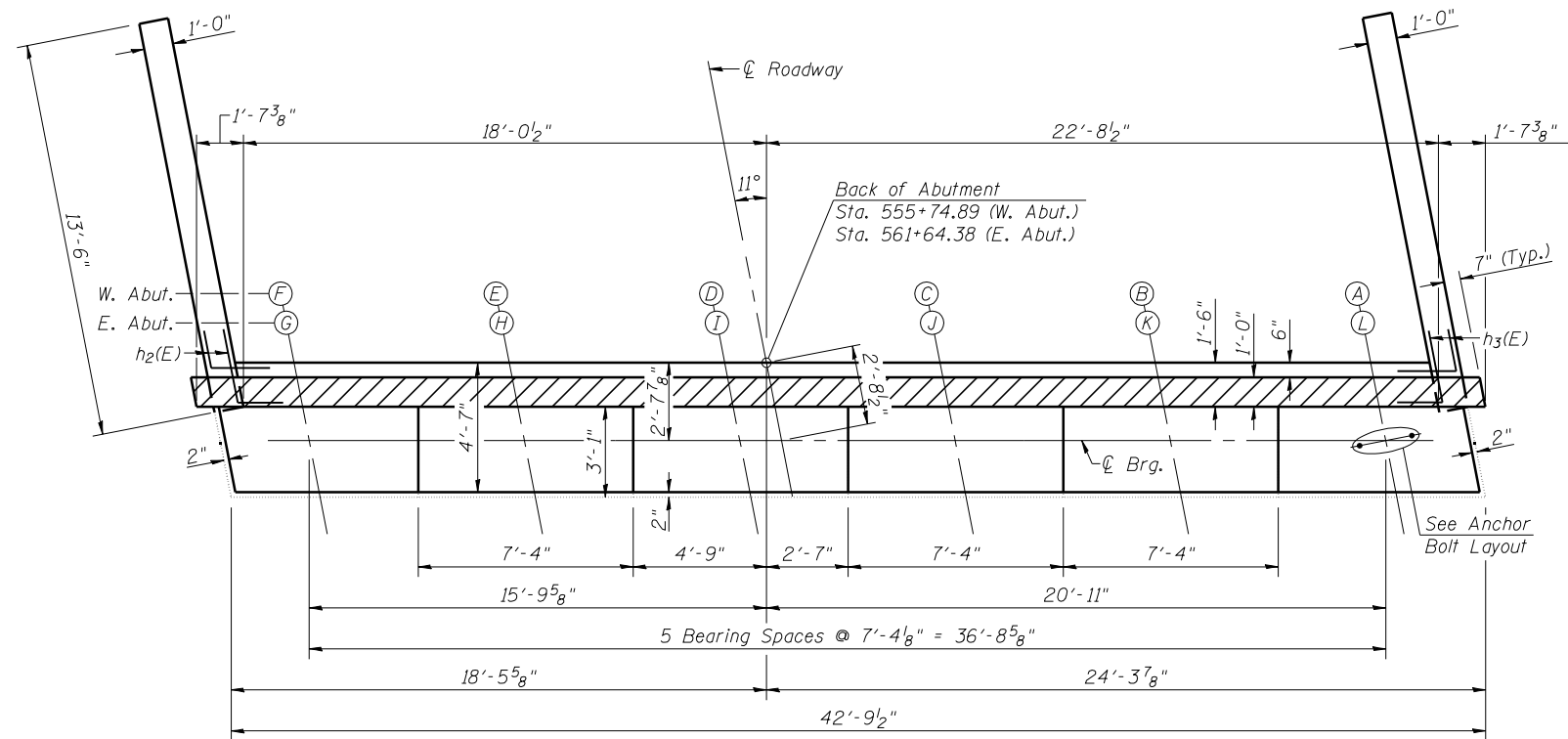
** Prior to Grinding
(Looking West - W. Abut. S.B.)
(Looking East - E. Abut. N.B.)



SEC. THRU ABUT.
(Dimensions at Rt. b's)

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

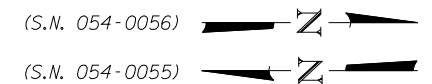


PLAN

(West Abutment - S.B.)
(East Abutment - N.B.)

TABLE OF STEP HEIGHTS

	a	b	c	d	e
West Abutment (S.B.)	1 5/8"	1 3/8"	3/4"	1 3/8"	1 7/8"
East Abutment (N.B.)	1 1/2"	1 1/4"	7/8"	1 1/2"	1 7/8"



**EXISTING BEARING SEAT ELEVATIONS
S.N. 054-0055 (NB)**

	G	H	I	J	K	L
West Abutment	568.95	569.09	569.20	569.14	569.02	568.88
East Abutment	569.34	569.47	569.57	569.50	569.37	569.21

**PROPOSED BEARING SEAT ELEVATIONS
S.N. 054-0055 (NB)**

	G	H	I	J	K	L
West Abutment	570.41	570.55	570.67	570.61	570.49	570.35
East Abutment	570.81	570.93	571.04	570.96	570.84	570.68

**EXISTING BEARING SEAT ELEVATIONS
S.N. 054-0056 (SB)**

	A	B	C	D	E	F
West Abutment	568.87	569.03	569.14	569.20	569.09	568.95
East Abutment	569.43	569.57	569.68	569.73	569.61	569.46

**PROPOSED BEARING SEAT ELEVATIONS
S.N. 054-0056 (SB)**

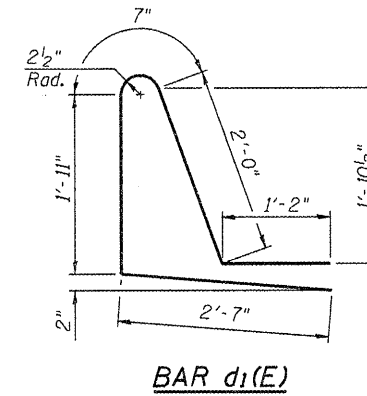
	A	B	C	D	E	F
West Abutment	570.26	570.41	570.53	570.60	570.49	570.36
East Abutment	571.18	571.32	571.42	571.47	571.34	571.19

**BEARING SEAT HEIGHTS
S.N. 054-0055 (NB)**

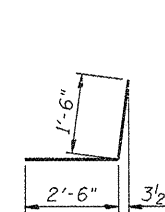
	Beam G	Beam H	Beam I	Beam J	Beam K	Beam L
West Abut.	1'-5 1/2"	1'-5 5/8"	1'-5 5/8"	1'-5 5/8"	1'-5 5/8"	1'-5 5/8"
East Abut.	1'-5 5/8"	1'-5 5/8"	1'-5 5/8"	1'-5 5/8"	1'-5 5/8"	1'-5 5/8"

**BEARING SEAT HEIGHTS
S.N. 054-0056 (SB)**

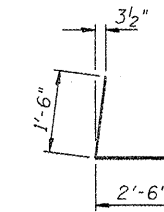
	Beam A	Beam B	Beam C	Beam D	Beam E	Beam F
West Abut.	1'-4 5/8"	1'-4 1/2"	1'-4 5/8"	1'-4 3/4"	1'-4 3/4"	1'-4 7/8"
East Abut.	1'-9"	1'-9 1/8"	1'-8 7/8"	1'-8 1/8"	1'-8 3/4"	1'-8 3/4"



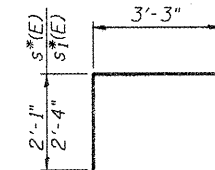
BAR d1(E)



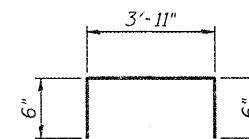
BAR h2(E)



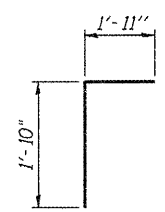
BAR h3(E)



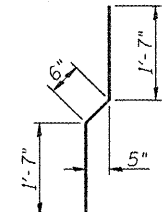
BAR s*(E) & s†(E)



BAR s2(E)



BAR v(E)

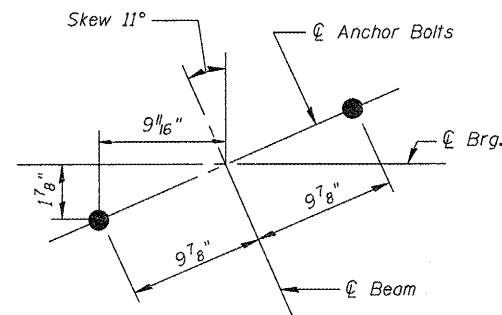


BAR v1(E)

**FOUR (4) ABUTMENTS
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d1(E)	16	#5	8'-3"	L
h(E)	24	#5	40'-3"	—
h1(E)	20	#6	43'-7"	—
h2(E)	16	#5	4'-0"	J
h3(E)	16	#5	4'-0"	L
h4(E)	24	#5	42'-1"	—
h5(E)	16	#5	7'-0"	—
h6(E)	32	#5	11'-8"	—
s*(E)	258	#5	5'-4"	Γ
s†(E)	86	#5	5'-7"	Γ
s2(E)	32	#5	4'-11"	Γ
v(E)	164	#5	3'-9"	Γ
v1(E)	164	#4	3'-8"	Γ
v2(E)	164	#4	3'-2"	—
v3(E)	164	#4	4'-10"	—
Concrete Structures		Cu. Yd.	50.0	
Reinforcement Bars, Epoxy Coated		Pound	8,170	
Concrete Sealer		Sq. Ft.	1,183	

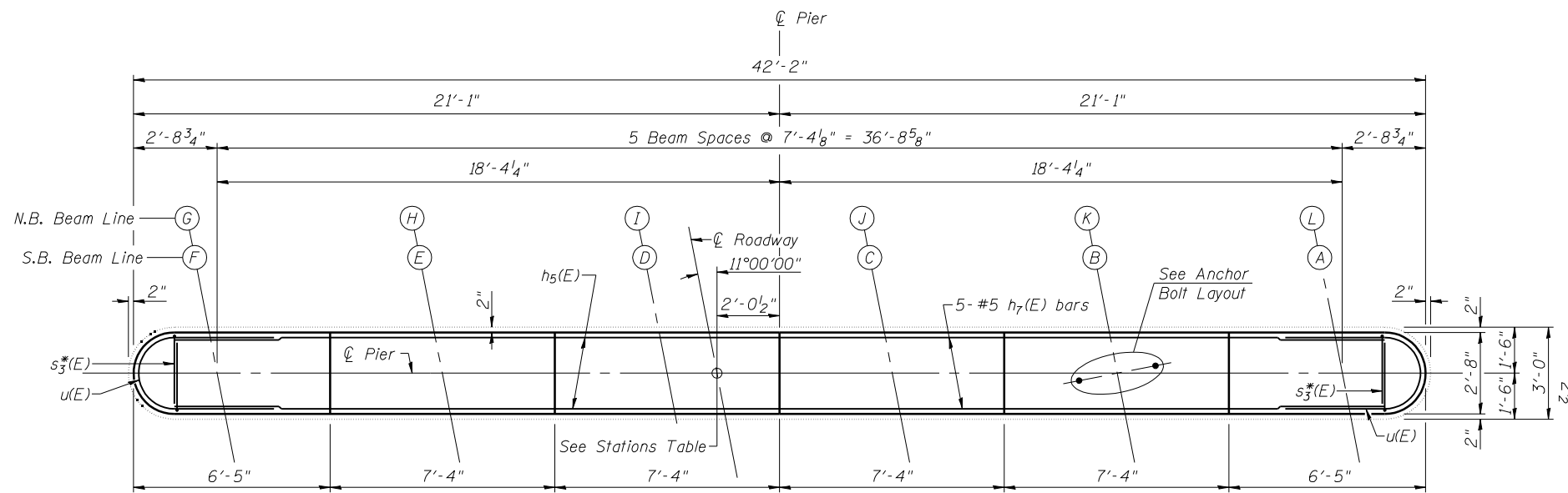
Notes:
Reinforcement Bars designated (E) shall be epoxy coated.
s*(E) & s†(E) shall be grouted into drilled holes in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9".
All edges of proposed concrete shall have standard 3/4" chamfers unless noted otherwise.
Concrete Sealer shall be applied to the exposed faces of the backwall and top and sides of the new concrete pedestals.



**ANCHOR BOLT LAYOUT
AT ABUTMENTS**

NOTE

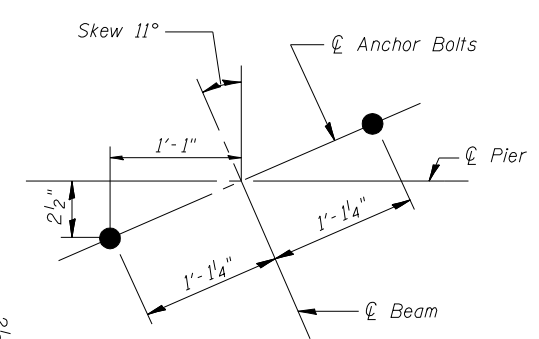
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.



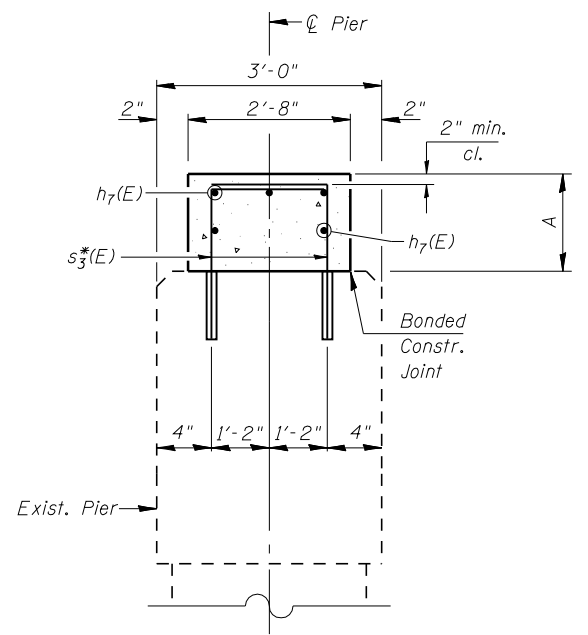
PLAN

STATIONS

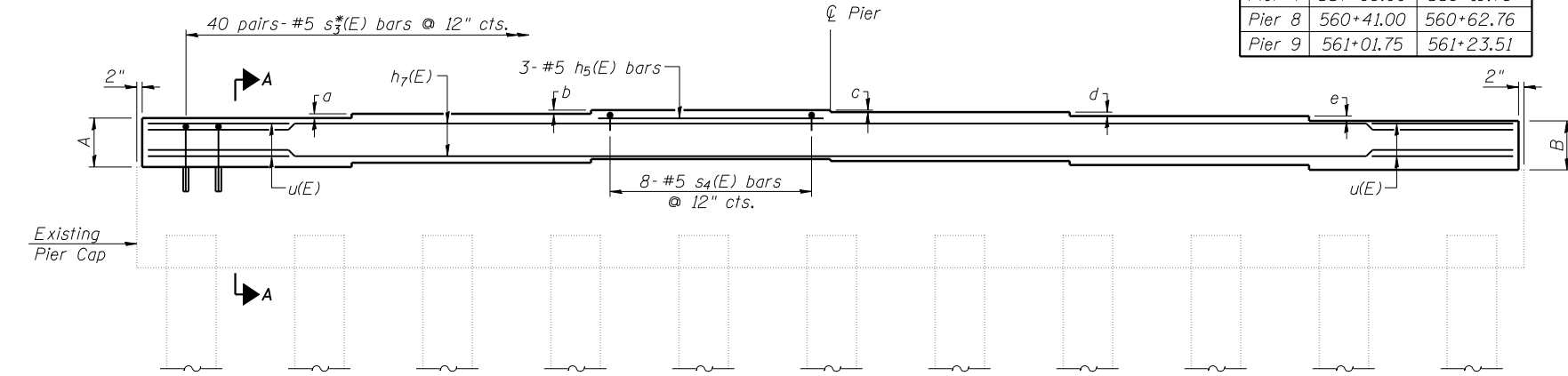
	N.B.	S.B.
Pier 1	556+15.75	556+37.51
Pier 2	556+76.50	556+98.26
Pier 4	557+98.00	558+19.76
Pier 8	560+41.00	560+62.76
Pier 9	561+01.75	561+23.51



ANCHOR BOLT LAYOUT AT PIERS 1, 2, 4, 8 & 9

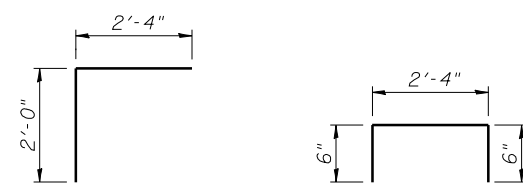


SECTION A-A



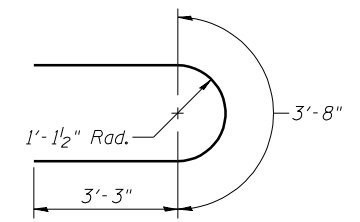
ELEVATION

(Looking in the direction of Traffic)



BAR s3(E)

BAR s4(E)



BAR u(E)

TEN (10) PIERS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h5(E)	30	#5	7'-0"	—
h7(E)	50	#5	39'-2"	—
s3(E)	800	#5	4'-4"	┌
s4(E)	80	#5	3'-4"	┐
u(E)	40	#5	10'-2"	U
Concrete Structures			Cu. Yd.	56.0
Reinforcement Bars, Epoxy Coated			Pound	6,580

Notes:
 Reinforcement Bars designated (E) shall be epoxy coated.
 s3(E) bars shall be grouted into drilled holes in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9".
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 All edges of proposed concrete shall have standard 3/4" chamfers unless noted otherwise.

STEP HEIGHTS - S.N. 054-0055 (N.B.)

	a	b	c	d	e
Pier 1	1 5/8"	1 3/8"	3/4"	1 3/8"	1 7/8"
Pier 2	1 5/8"	1 3/8"	3/4"	1 3/8"	1 7/8"
Pier 4	1 5/8"	1 3/8"	3/4"	1 3/8"	1 7/8"
Pier 8	1 5/8"	1 3/8"	3/4"	1 3/8"	1 7/8"
Pier 9	1 1/2"	1 3/8"	7/8"	1 1/2"	1 7/8"

BEARING SEAT ELEVATIONS S.N. 054-0055 (N.B.)

		G	H	I	J	K	L
Pier 1	Existing	568.86	569.00	569.10	569.04	568.92	568.78
	Proposed	570.20	570.34	570.45	570.39	570.27	570.12
Pier 2	Existing	568.90	569.04	569.15	569.09	568.97	568.82
	Proposed	570.20	570.34	570.45	570.39	570.27	570.12
Pier 4	Existing	568.90	569.04	569.15	569.09	568.97	568.82
	Proposed	570.20	570.35	570.46	570.40	570.28	570.13
Pier 8	Existing	568.90	569.04	569.15	569.09	568.97	568.82
	Proposed	570.20	570.34	570.45	570.39	570.27	570.12
Pier 9	Existing	568.95	569.08	569.19	569.12	568.99	568.84
	Proposed	570.38	570.51	570.62	570.55	570.43	570.27

BEARING SEAT ELEVATIONS S.N. 054-0056 (S.B.)

		A	B	C	D	E	F
Pier 1	Existing	568.78	568.94	569.05	569.11	569.00	568.86
	Proposed	570.08	570.23	570.35	570.41	570.30	570.17
Pier 2	Existing	568.82	568.98	569.09	569.15	569.04	568.90
	Proposed	570.08	570.23	570.35	570.41	570.30	570.17
Pier 4	Existing	568.82	568.98	569.09	569.15	569.04	568.90
	Proposed	570.09	570.24	570.36	570.42	570.31	570.18
Pier 8	Existing	568.82	568.98	569.09	569.15	569.04	568.90
	Proposed	570.24	570.39	570.50	570.56	570.44	570.30
Pier 9	Existing	568.95	569.10	569.20	569.26	569.15	569.01
	Proposed	570.59	570.74	570.84	570.90	570.77	570.63

STEP HEIGHTS - S.N. 054-0056 (S.B.)

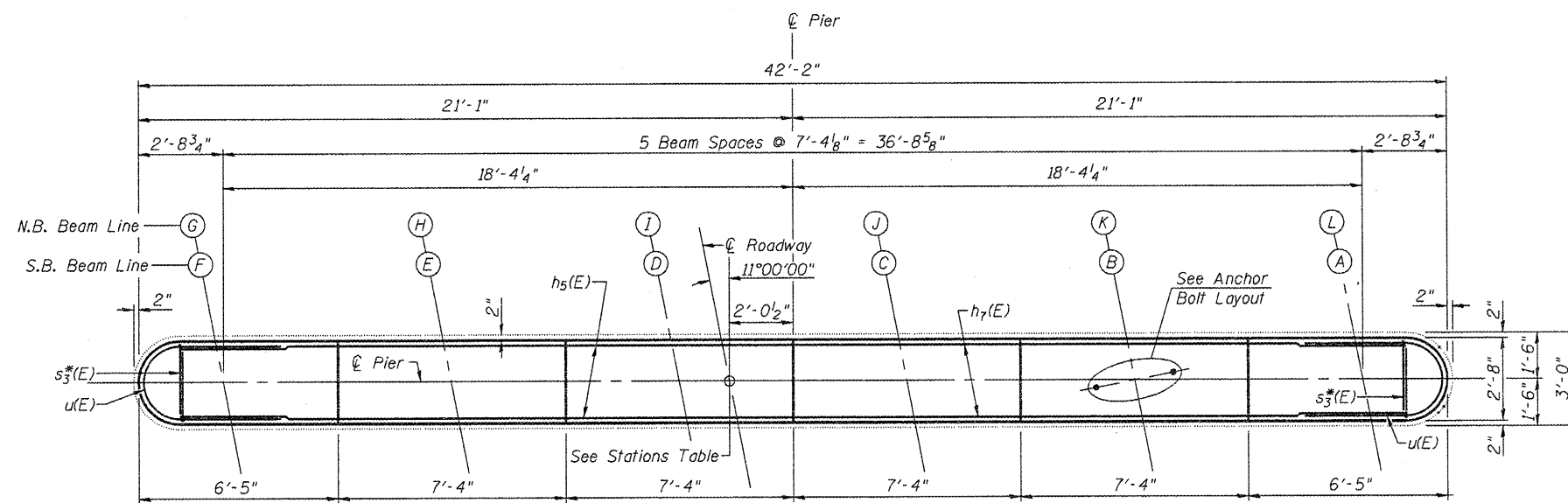
	a	b	c	d	e
Pier 1	1 5/8"	1 3/8"	3/4"	1 3/8"	1 7/8"
Pier 2	1 5/8"	1 3/8"	3/4"	1 3/8"	1 7/8"
Pier 4	1 5/8"	1 3/8"	3/4"	1 3/8"	1 7/8"
Pier 8	1 5/8"	1 3/8"	3/4"	1 3/8"	1 7/8"
Pier 9	1 5/8"	1 1/2"	3/4"	1 1/4"	1 7/8"

VALUES OF A & B

	S.N. 054-0055		S.N. 054-0056	
	A	B	A	B
Pier 1	1'-4 1/8"	1'-4 1/8"	1'-3 5/8"	1'-3 5/8"
Pier 2	1'-3 5/8"	1'-3 3/4"	1'-3 1/8"	1'-3 1/8"
Pier 4	1'-3 3/4"	1'-3 7/8"	1'-3 1/4"	1'-3 1/4"
Pier 8	1'-3 5/8"	1'-3 3/4"	1'-4 3/4"	1'-5"
Pier 9	1'-5 1/4"	1'-5 1/4"	1'-7 1/2"	1'-7 3/4"

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.



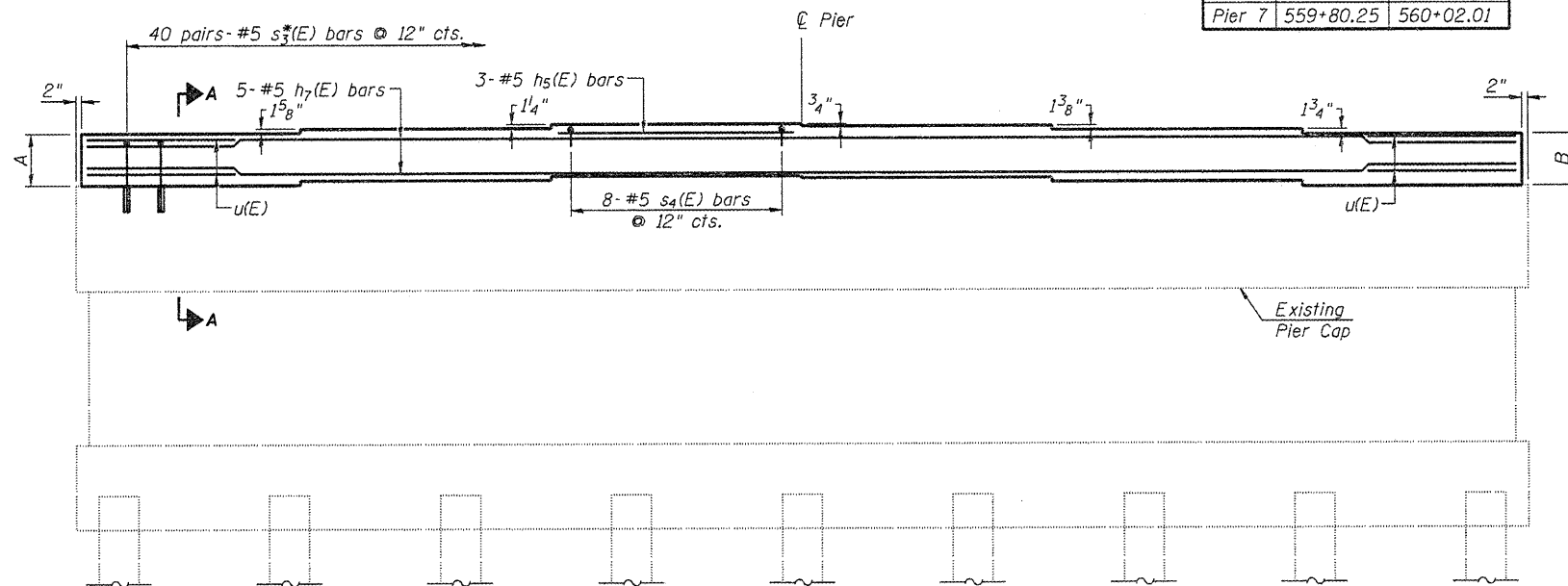
(S.N. 054-0055)

(S.N. 054-0056)

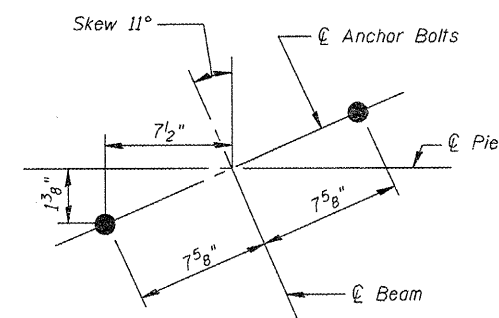
PLAN

STATIONS

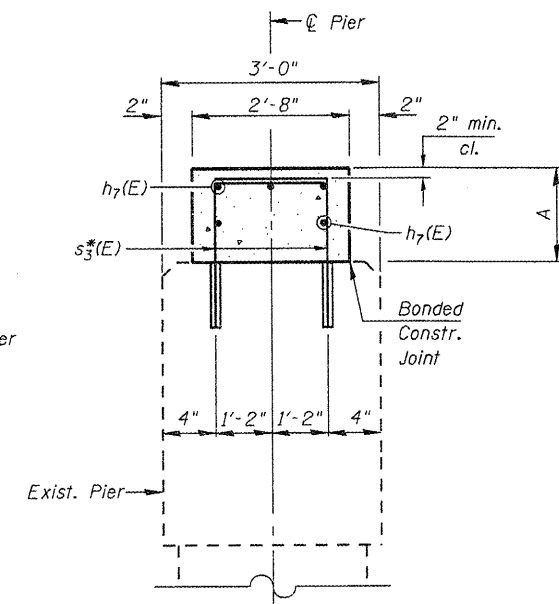
	N.B.	S.B.
Pier 3	557+37.25	557+59.01
Pier 7	559+80.25	560+02.01



ELEVATION
(Looking in the direction of Traffic)



ANCHOR BOLT LAYOUT AT PIERS 3 & 7

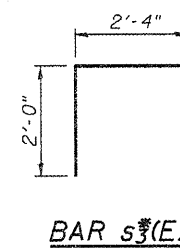


SECTION A-A

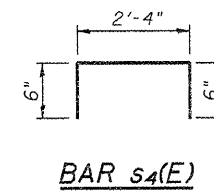
**FOUR (4) PIERS
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h ₅ (E)	12	#5	7'-0"	
h ₇ (E)	20	#5	39'-2"	
s ₃ [#] (E)	320	#5	4'-4"	
s ₄ (E)	32	#5	3'-4"	
u(E)	16	#5	10'-2"	
Concrete Structures		Cu. Yd.		25.0
Reinforcement Bars, Epoxy Coated		Pound		2,640

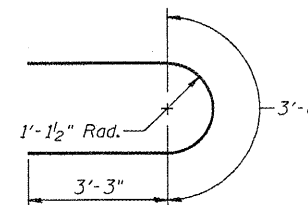
Notes:
 Reinforcement Bars designated (E) shall be epoxy coated.
 s₃[#](E) bars shall be grouted into drilled holes in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9".
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 All edges of proposed concrete shall have standard 3/4" chamfers unless noted otherwise.



BAR s₃(E)



BAR s₄(E)



BAR u(E)

**BEARING SEAT ELEVATIONS
S.N. 054-0055 (N.B.)**

	G	H	I	J	K	L	
Pier 3	Existing	569.08	569.22	569.32	569.26	569.14	569.00
	Proposed	570.58	570.72	570.83	570.77	570.65	570.50
Pier 7	Existing	569.08	569.22	569.32	569.26	569.14	569.00
	Proposed	570.58	570.72	570.83	570.77	570.65	570.50

**BEARING SEAT ELEVATIONS
S.N. 054-0056 (S.B.)**

	A	B	C	D	E	F	
Pier 3	Existing	569.00	569.15	569.26	569.32	569.22	569.08
	Proposed	570.46	570.61	570.73	570.79	570.68	570.54
Pier 7	Existing	569.00	569.15	569.26	569.32	569.22	569.08
	Proposed	570.46	570.61	570.73	570.79	570.68	570.54

VALUES OF A & B

	S.N. 054-0055		S.N. 054-0056	
	A	B	A	B
Pier 3	1'-6"	1'-6"	1'-5 1/2"	1'-5 1/2"
Pier 7	1'-6"	1'-6"	1'-5 1/2"	1'-5 1/2"

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.



JOB = 2265.1
 FILE = 0540055_0056-72E10-36-Piers.dgn
 DATE = 9/29/2011

DESIGNED - ZTB
 CHECKED - MDC
 DRAWN - TJD
 CHECKED - ZTB

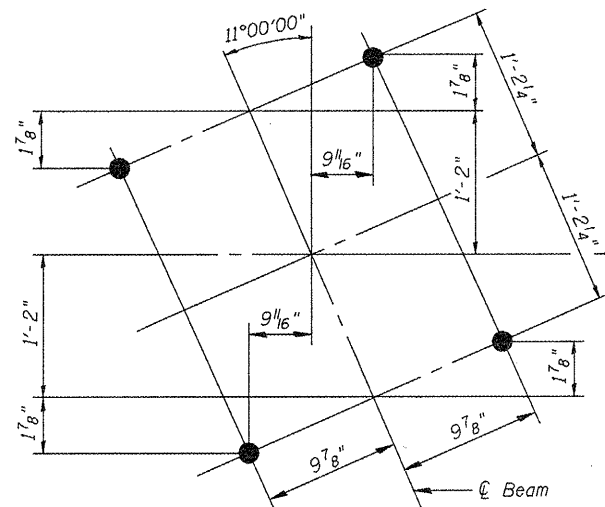
REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

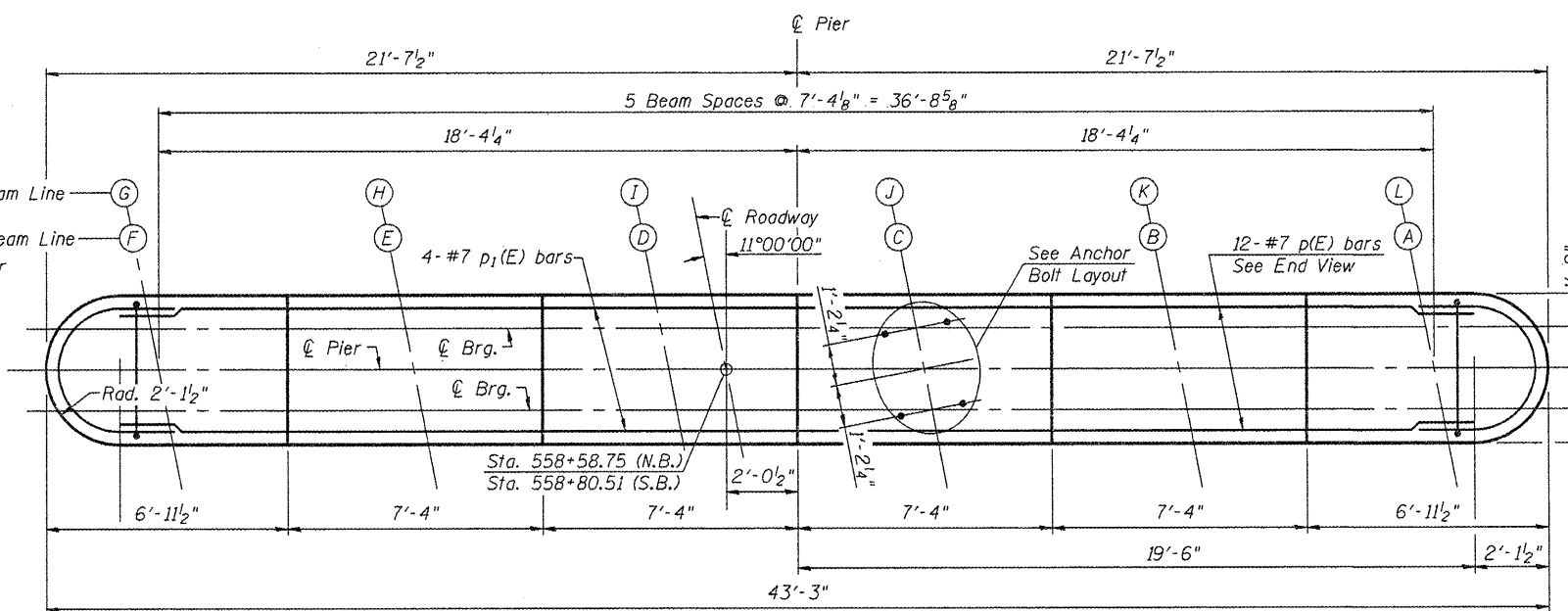
PIERS 3 & 7
 STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)

SHEET NO. 36 OF 39 SHEETS

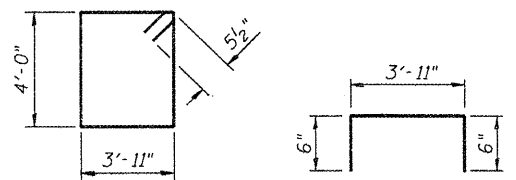
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	197
			CONTRACT NO. 72E10	
ILLINOIS FED. AID PROJECT				



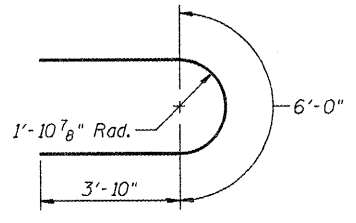
ANCHOR BOLT LAYOUT AT PIER 5



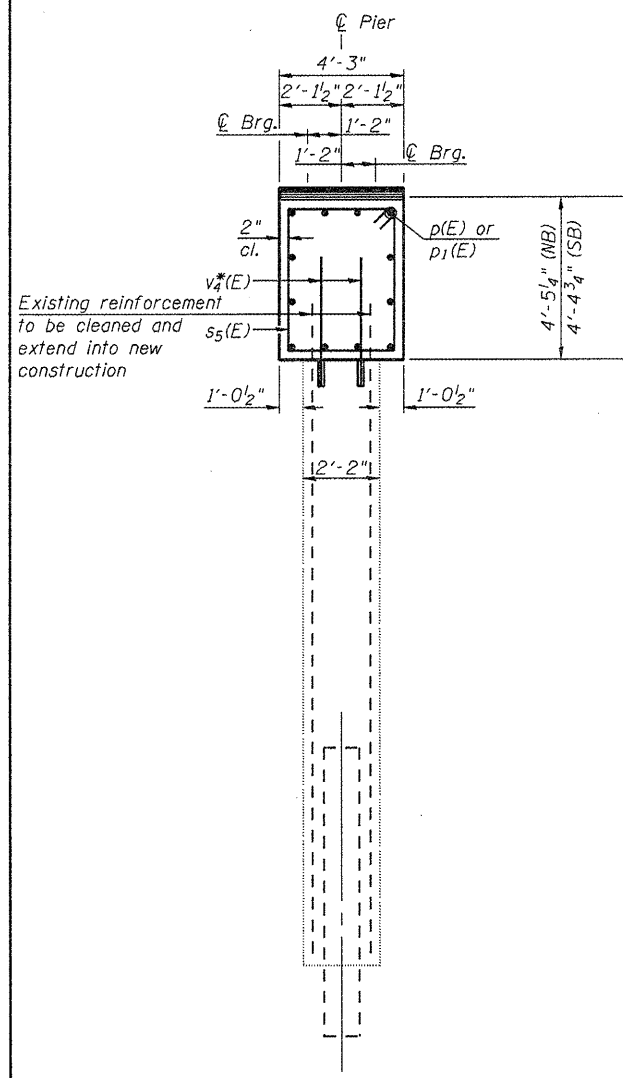
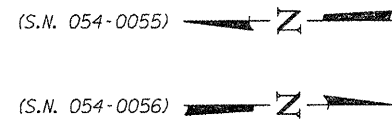
PLAN



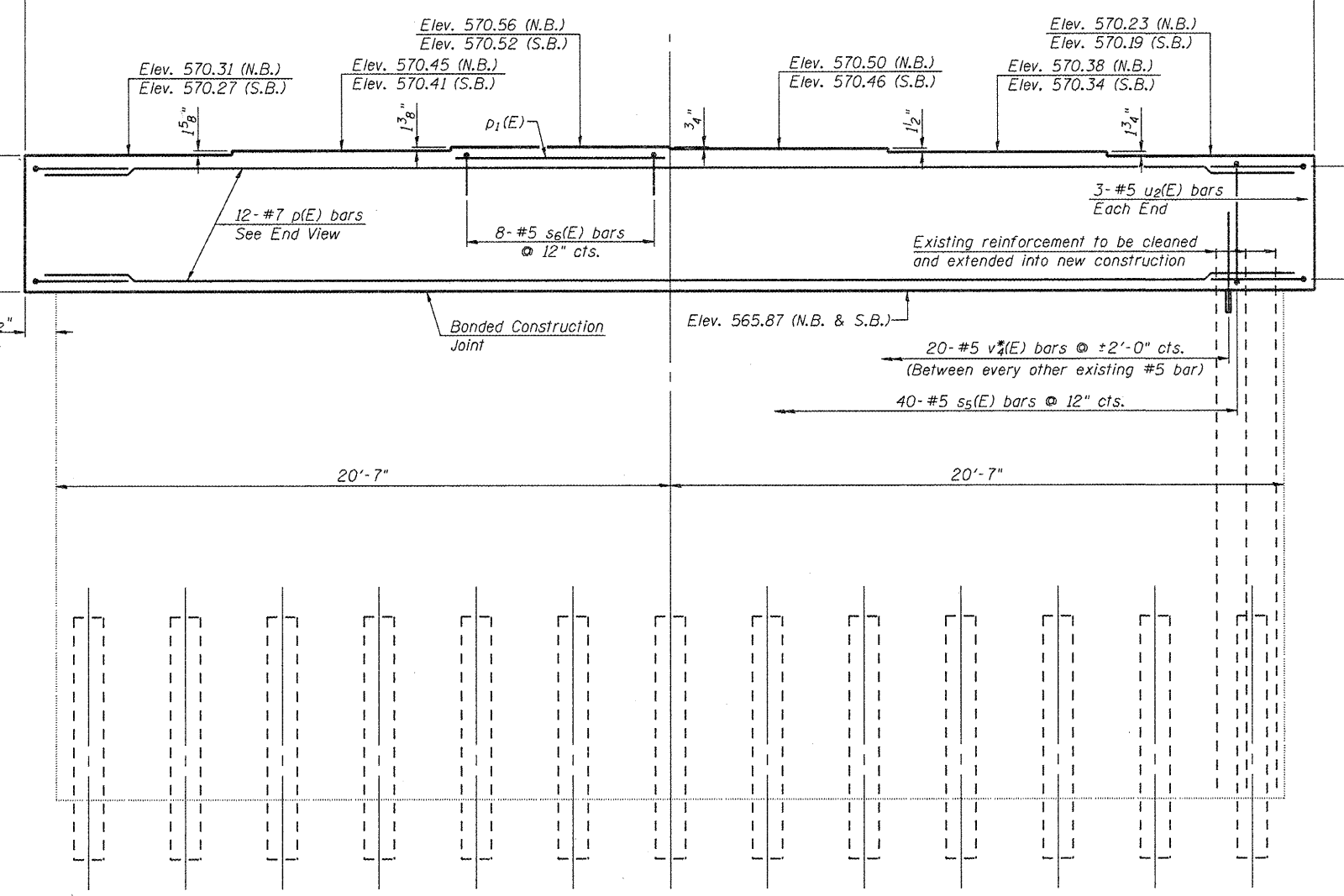
BAR s5(E) BAR s6(E)



BAR u1(E)



END VIEW



ELEVATION

(Looking in the direction of Traffic)

**TWO (2) PIERS
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
p(E)	24	#7	38'-8"	—
p1(E)	8	#7	7'-0"	—
s5(E)	80	#5	16'-9"	□
s6(E)	16	#5	4'-11"	U
u1(E)	16	#6	13'-8"	U
v4(E)	80	#5	3'-0"	—
Concrete Structures		Cu. Yd.	59.0	
Reinforcement Bars, Epoxy Coated		Pound	4,070	
Concrete Sealer		Sq. Ft.	1,224	

Notes:
 Reinforcement Bars designated (E) shall be epoxy coated.
 v4(E) bars shall be grouted into drilled holes in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9".
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 All edges of proposed concrete shall have standard 3/4" chamfers unless noted otherwise.
 Concrete Sealer shall be applied to the top and sides of the pier cap.

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.



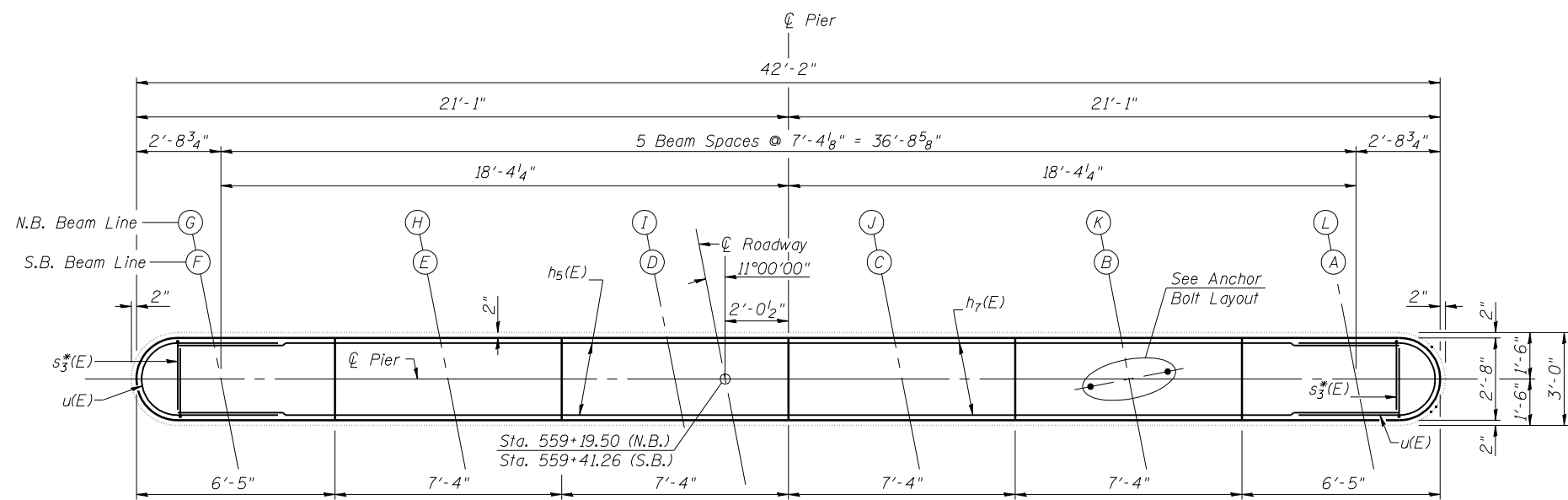
JOB	= 2265.1	DESIGNED	- ZTB	REVISED	-
FILE	= 0540055.0056-72E10-37-Piers.dgn	CHECKED	- MDC	REVISED	-
DATE	= 10/14/2011	DRAWN	- TJD	REVISED	-
		CHECKED	- ZTB	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIER 5
STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	198
			CONTRACT NO.	72E10
ILLINOIS FED. AID PROJECT				

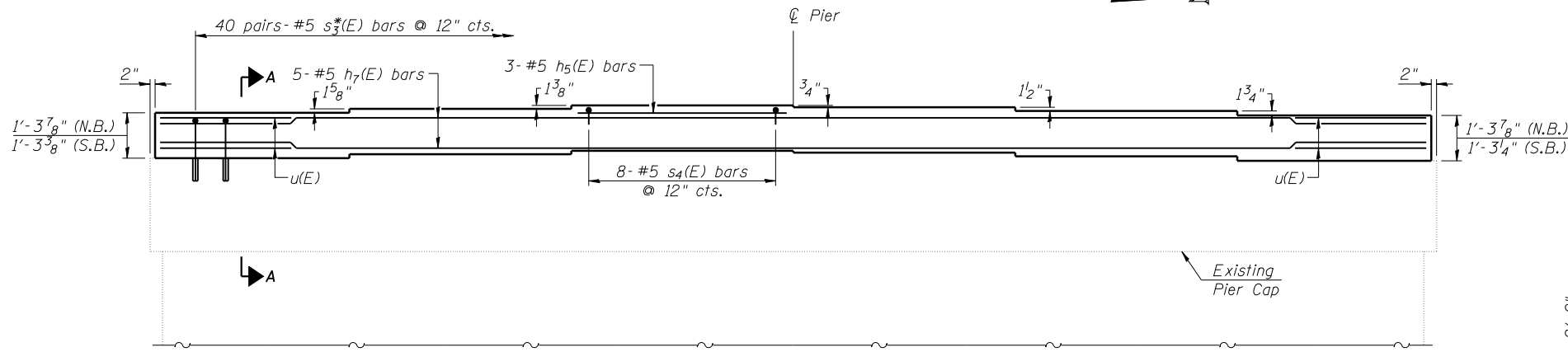
SHEET NO. 37 OF 39 SHEETS



PLAN

(S.N. 054-0055)

(S.N. 054-0056)



ELEVATION

(Looking in the direction of Traffic)

BEARING SEAT ELEVATIONS

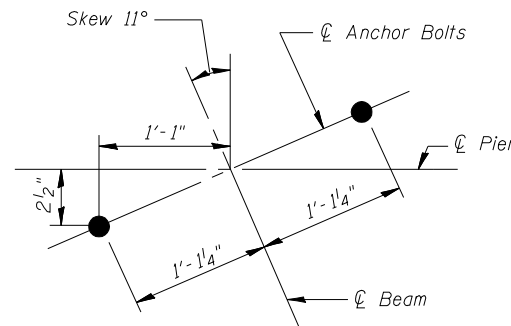
S.N. 054-0055 (N.B.)

	G	H	I	J	K	L
Existing	568.90	569.04	569.15	569.09	568.96	568.82
Proposed	570.22	570.35	570.47	570.40	570.29	570.14

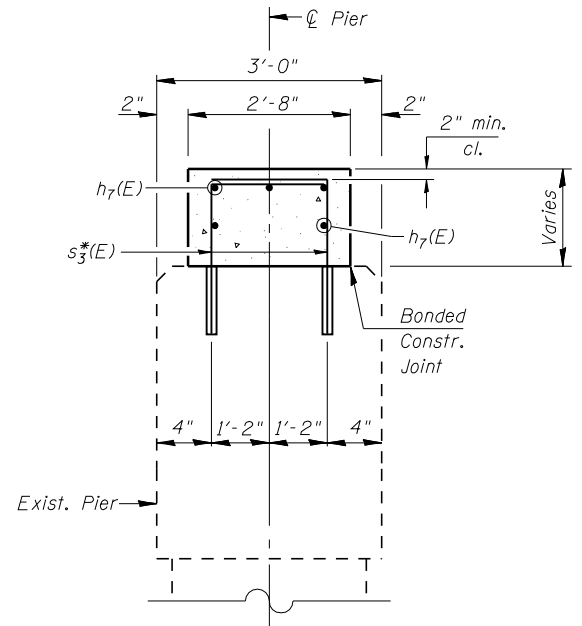
BEARING SEAT ELEVATIONS

S.N. 054-0056 (S.B.)

	A	B	C	D	E	F
Existing	568.82	568.97	569.09	569.15	569.04	568.90
Proposed	570.09	570.25	570.36	570.43	570.31	570.18



ANCHOR BOLT LAYOUT AT PIER 6

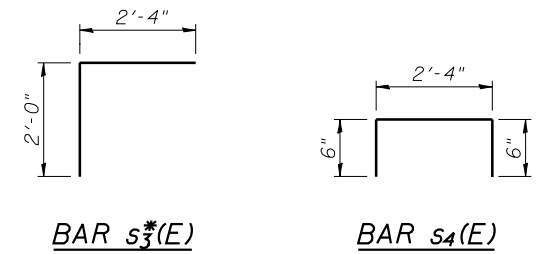


SECTION A-A

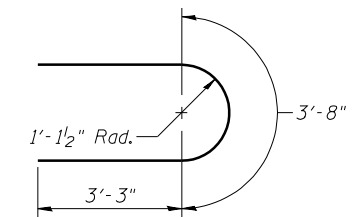
TWO (2) PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h5(E)	6	#5	7'-0"	—
h7(E)	10	#5	39'-2"	—
s3(E)	160	#5	4'-4"	┌
s4(E)	16	#5	3'-4"	┐
u(E)	8	#5	10'-2"	⌋
Concrete Structures			Cu. Yd.	11.0
Reinforcement Bars, Epoxy Coated			Pound	1,320

Notes:
 Reinforcement Bars designated (E) shall be epoxy coated.
 s3(E) bars shall be grouted into drilled holes in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9".
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 All edges of proposed concrete shall have standard 3/4" chamfers unless noted otherwise.



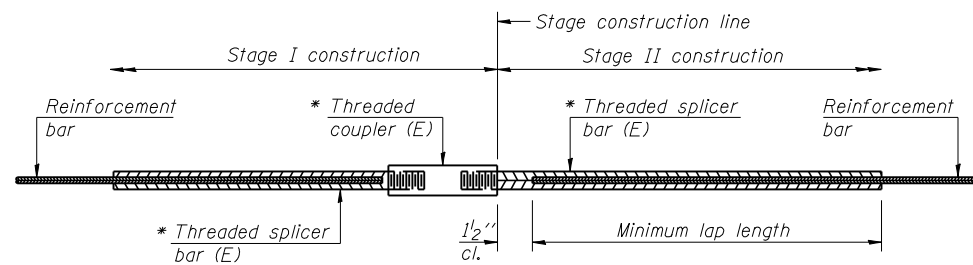
BAR s3(E) **BAR s4(E)**



BAR u(E)

NOTE

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.



STANDARD BAR SPLICER ASSEMBLY

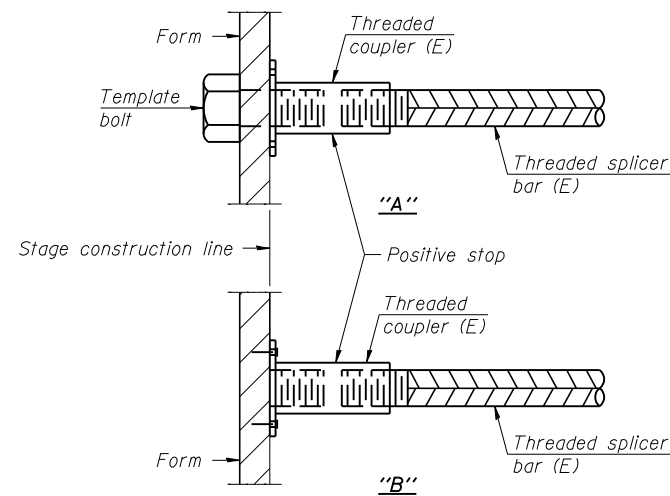
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

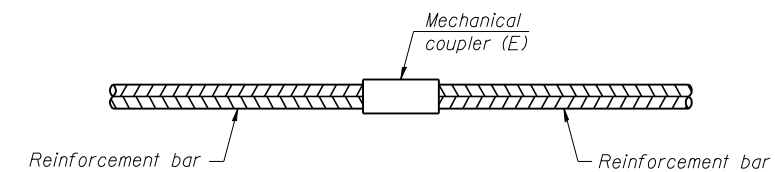
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



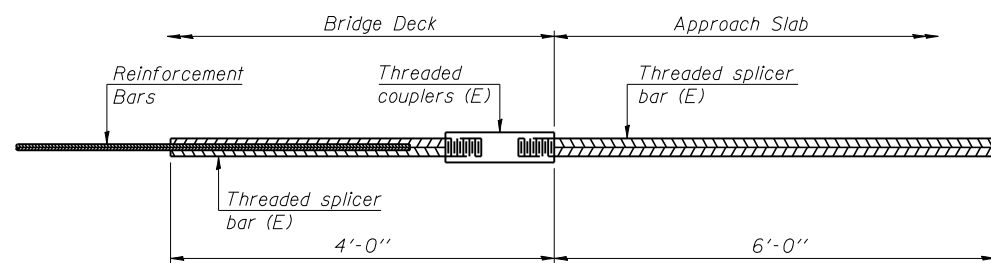
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



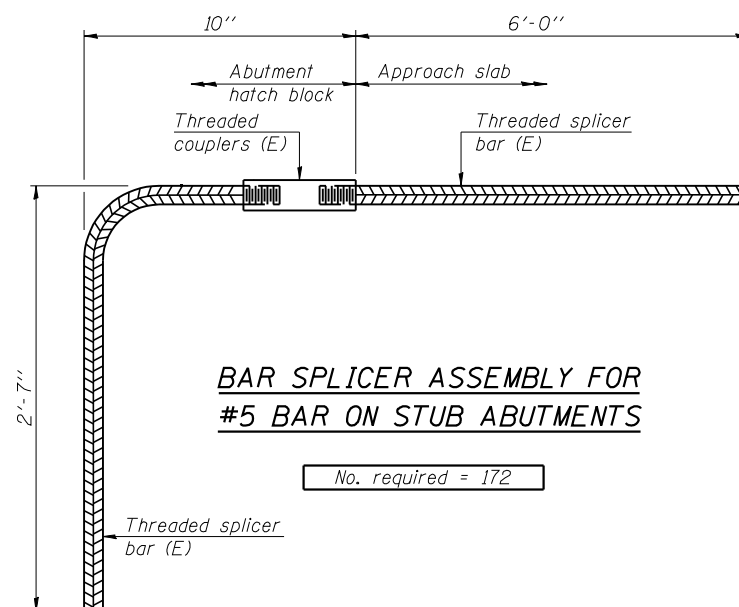
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 0



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 172

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See special provision for Mechanical Splicers.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

7-1-10



JOB = 2265.1
 FILE = 0540055.0056-72E10-39-Splicer.dgn
 DATE = 9/9/2011

DESIGNED - ZTB
 CHECKED - MDC
 DRAWN - TJD
 CHECKED - ZTB

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 054-0055 (NB) & STRUCTURE NO. 054-0056 (SB)**

SHEET NO. 39 OF 39 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011	LOGAN	224	200
CONTRACT NO. 72E10				

ILLINOIS FED. AID PROJECT