

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	06-00085-00-BR	COLES	16	1

INDEX OF SHEETS

- 1 COVER SHEET
- 2 SUMMARY OF QUANTITIES /EARTHWORK SCHEDULE
- 3-4 TYPICAL CROSS SECTIONS
- 5 REMOVAL PLAN
- 6 PLAN AND PROFILE
- 7 SEGMENTAL BLOCK WALL PLAN AND PROFILE
- 8 STEEL RAILING DETAIL
- 9-14 BRIDGE PLANS
- 15-16 CROSS SECTIONS

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

# PLANS FOR PROPOSED BRIDGE HIGHWAY PROGRAM

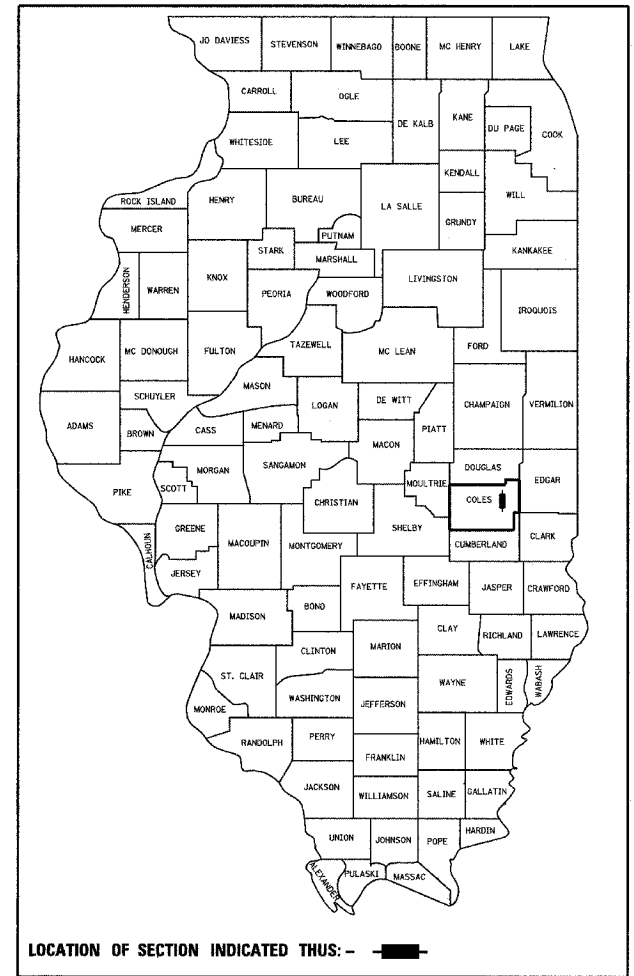
**SECTION 06-00085-00-BR  
CITY OF CHARLESTON  
FAU 7622 (JACKSON AVE.)  
COLES COUNTY**

JOB NO. C-97-075-07

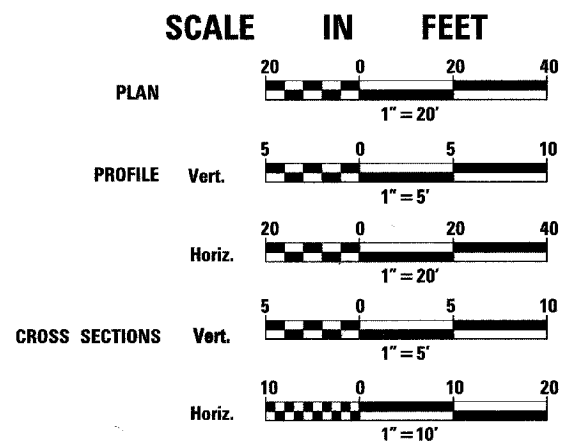
PROJECT NO. BRM-5013(15)

**STANDARDS**

- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 515001-02 NAME PLATE FOR BRIDGES
- 542301-01 PRECAST REINFORCED CONCRETE FLARED END SECTION
- 602301-01 INLET, TYPE A
- 602401-01 MANHOLE, TYPE A
- 602701-01 MANHOLE STEPS
- 604001-02 FRAME AND LIDS, TYPE 1
- 604051-02 FRAME AND GRATE TYPE 11
- 606001-03 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
- 701001-01 OFF-RD OPERATIONS, 2L, 2W, MORE THAN 4.5 M (15') AWAY
- 701006-02 OFF-RD OPERATIONS, 2L, 2W, 4.5 M (15'0 TO 600 MM (24") FROM PAVEMENT EDGE
- 701301-02 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701501-03 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
- 702001-06 TRAFFIC CONTROL DEVICES
- B.L.R. 21-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS



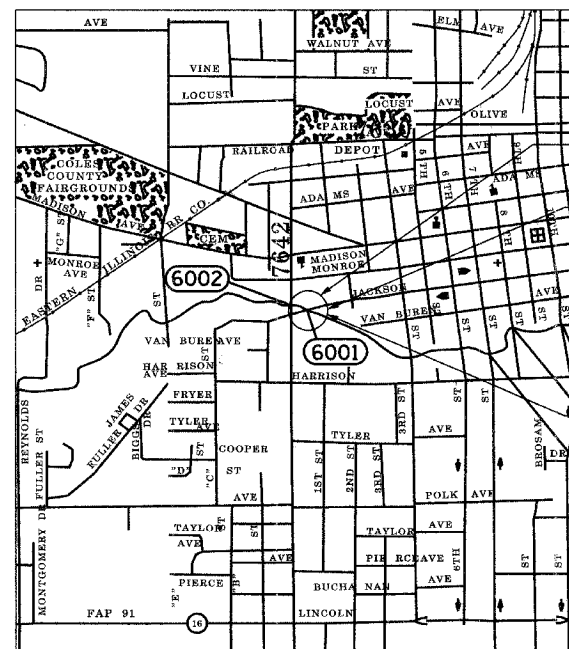
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.



ADT-CURRENT 650 DESIGN 800  
CLASS-URBAN COLLECTOR  
DESIGN SPEED-30 MPH

CONTRACT NO. 95522

R 9E , 3 P.M.



LOCATION MAP



TOTAL LENGTH OF PROJECT = 244 FT. = 0.046 MILES  
NET LENGTH OF PROJECT = 244 FT. = 0.046 MILES

END SECTION 06-00085-00-BR  
STA. 16+50  
PROPOSED STRUCTURE #015-6340  
STA. 15+02, 32'-0" WIDE x 10'-0"  
3 SIDED PRECAST CONCRETE  
STRUCTURE, 30 ° SKEW  
EXISTING STRUCTURE #015-6001

BEGIN SECTION 06-00085-00-BR  
STA. 14+06



Mark E. Dwiggins 6/28/07  
MARK DWIGGINS, P.E. LICENSE EXPIRATION DATE 11-30-07

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123

APPROVED 6/28 20 07  
*Cy Buecher*  
PUBLIC WORKS DIRECTOR

PASSED July 2 20 07  
*Mason Lantz*  
DISTRICT SEVEN ENGINEER OF  
LOCAL ROADS AND STREETS

Releasing For Bid Based on Limited Review July 2, 20 07  
*Christ H. Reed*  
DEPUTY DIRECTOR OF HIGHWAYS  
REGION FOUR ENGINEER  
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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OF THE STATE OF ILLINOIS

F.A.I.D. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	06-00085-00-BR	COLES	16	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

**SUMMARY OF QUANTITIES**

Item Number	Items	Unit	Quantity
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	237
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	50
20200100	EARTH EXCAVATION	CU. YD.	758
20201500	SUB-BASE GRANULAR MATERIAL, TYPE B	TON	20
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU. YD.	223
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ. YD.	153
25000920	SEEDING, CLASS 1A (SPECIAL)	ACRE	0.15
28500400	ARTICULATED BLOCK REVETMENT MAT	SQ. YD.	275
35300300	PORTLAND CEMENT CONCRETE BASE COURSE 8"	SQ. YD.	470
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	57
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	74
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ. FT.	1828
44000100	PAVEMENT REMOVAL	SQ. YD.	373
44000155	HOT MIX ASPHALT SURFACE REMOVAL, 1 1/2 "	SQ. YD.	91
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	407
44000600	SIDEWALK REMOVAL	SQ. FT.	1223
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU. YD.	399
50300225	CONCRETE STRUCTURES	CU. YD.	50.1
50300280	CONCRETE ENCASEMENT	CU. YD.	7.7
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5338
50901115	STEEL RAILING (SPECIAL)	FOOT	198
51201400	FURNISHING STEEL PILES HP 10X42	FEET	945
51202305	DRIVING PILES	FOOT	945
51203400	TEST PILE STEEL HP 10X42	EACH	1
51500100	NAME PLATES	EACH	1
54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	1
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	60
55100500	STORM SEWER REMOVAL 12"	FOOT	30
59100100	GEOCOMPOSITE WALL DRAIN	SQ. YD.	85
60107600	PIPE UNDERDRAINS 4"	FOOT	121
60218400	MANHOLES, TYPE A, 4' - DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1
60236800	INLETS, TYPE A, TYPE 11 FRAME AND GRATE	EACH	2
60500060	REMOVING INLETS	EACH	2
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FEET	488
67100100	MOBILIZATION	L SUM	1
70101830	TRAFFIC CONTROLL AND PROTECTION, STANDARD BLR 21	L SUM	1
70102620	TRAFFIC CONTROLL AND PROTECTION, STANDARD 701501	L SUM	1
X0324450	SEGMENTAL CONCRETE BLOCK WALL (SPECIAL)	SQ. FT.	2046
XX005320	TEXAS COMBINATION CONCRETE RAILING	FEET	78
XX007024	THREE-SIDED PRECAST CONCRETE STRUCTURE, 32X10	FOOT	46.8
X0323330	PRECAST CONCRETE SUBSTRUCTURE	L SUM	1
XX007025	COARSE AGGREGATE BACKFILL (SPECIAL)	CU. YD.	12

NOTE:

Because there is a possibility that the Kirtland's snakes could still inhabit the project area, a commitment should be placed in the appropriate location in the project plans or plan notes, as follows: the resident engineer, contractor, supervisors on the job, and each individual worker should be informed and educated that any snake encountered must not be killed or harmed. The Kirtland's snake is legally protected under the Illinois Endangered Species Protection Act, and a violation is a Class A misdemeanor. (Class A misdemeanors carry a fine of up to \$1,000 and up to 364 days in jail.) This information should be implemented into the plans in order to avoid adverse effects to the snakes.

**EARTHWORK SCHEDULE**

1 LOCATION	2 EARTH EXCAVATION	3 TOPSOIL	4 EARTH & CHANNEL EXCAVATION ADJUSTED FOR SHRINKAGE	5 EMBANKMENT	6 EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	Cubic Yard	Square Yard	Cubic Yard	Cubic Yard	Cubic Yard
Sta. 14+06 to Sta. 14+95	81	58	61	2	59
Sta. 14+95 to Sta. 16+75	677	95	508	24	484
Total	758*	153	569	26	543

\* All Excavation Material shall be Approved by the Engineer Before Being Used as Embankment.

Column 1, 2, & 5 - Location and Quantities from Cross Sections.  
Cut = Earth Excavation    Fill = Embankment

Column 3 - Topsoil, 4" shall be placed over the articulated concrete block mat.

Column 4 - Quantity of Earth Excavation (Cut) Adjusted for a shrinkage factor of 25%

Column 6 - Earthwork Balance (-) = Quantity of Furnished Excavation needed  
Earthwork Balance (+) = Quantity of Earth Excavation Adjusted for shrinkage to be wasted

Note: Sub-base Granular Material, Type B, shall be used as necessary to bring the subgrade up to grade after existing pavement is removed. A token quantity has been included to establish unit prices

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

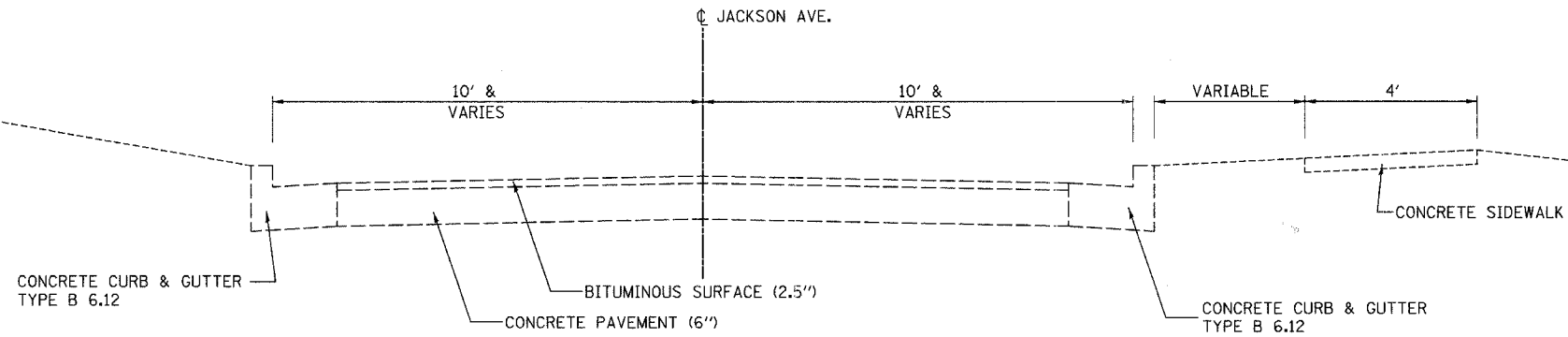
**SUMMARY OF QUANTITIES**

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HORIZ. \_\_\_\_\_

DATE \_\_\_\_\_

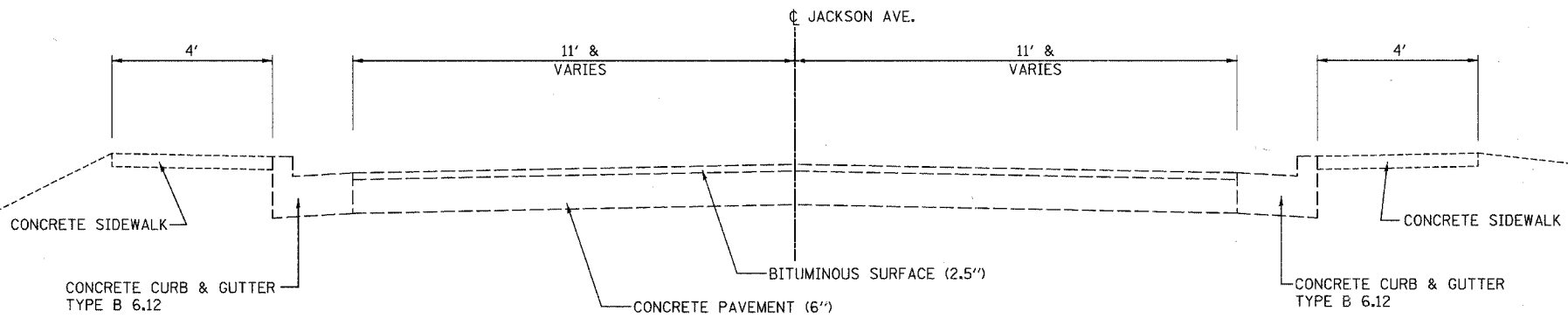
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CHECKED BY: MED ✓

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	D6-00085-00-BR	COLES	16	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



### EXISTING TYPICAL SECTION

STA. 14+06 TO STA. 14+86.29



### EXISTING TYPICAL SECTION

STA. 15+20.60 TO STA. 16+75

REVISIONS	
NAME	DATE

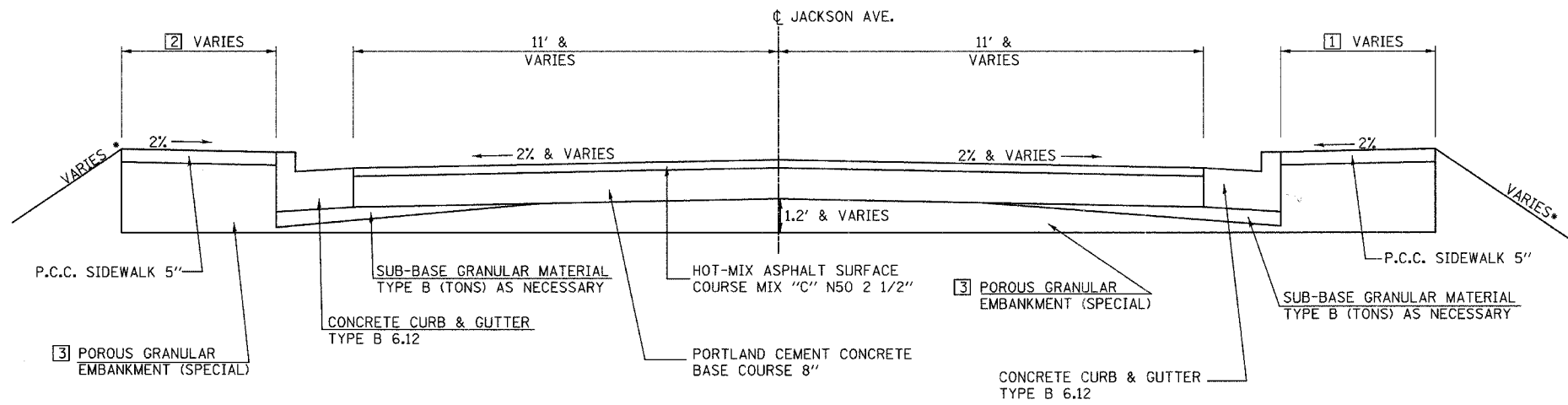
ILLINOIS DEPARTMENT OF TRANSPORTATION

### EXISTING TYPICALS

SCALE: VERT. HORIZ. DATE

DRAWN BY R.L.H. CHECKED BY MED

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	06-00085-00-BR	COLES	16	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

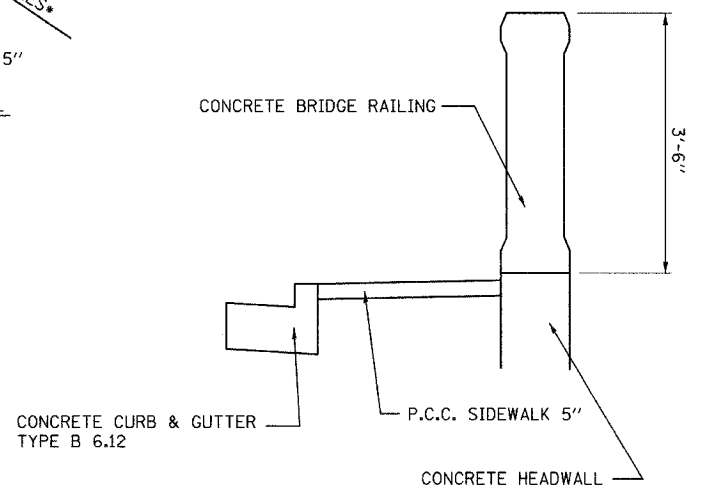


- 1 STA. 14+06 TO STA. 14+25.8 WIDTH VARIES FROM 4.5' TO 5.3'  
 STA. 14+25.8 TO STA. 14+75.8 WIDTH = 5.3'  
 STA. 14+75.8 TO STA. 14+80.8 WIDTH VARIES FROM 5.3' TO 5.0'  
 STA. 14+80.8 TO STA. 15+30.4 WIDTH = 5.0'  
 STA. 15+30.4 TO STA. 15+35.9 WIDTH VARIES FROM 5.0' TO 5.7'  
 STA. 15+35.9 TO STA. 15+50.1 WIDTH VARIES FROM 5.7' TO 6.7'  
 STA. 15+50.1 TO STA. 15+60 WIDTH = 4.3'
- 2 STA. 14+06 TO STA. 14+18.5 WIDTH VARIES FROM 4.5' TO 5.3'  
 STA. 14+18.5 TO STA. 14+54.5 WIDTH = 5.3'  
 STA. 14+54.5 TO STA. 14+59.5 WIDTH VARIES FROM 5.3' TO 5.0'  
 STA. 14+59.5 TO STA. 15+10 WIDTH = 5.0'
- 3 STA. 14+75.16 TO STA. 15+15.18, OVER PRECAST BRIDGE UNITS

\*NOTE: SEE PLANS FOR LOCATION OF SEGMENTAL CONCRETE BLOCK WALL, STEEL RAILING, AND TEXAS RAILING BEHIND SIDEWALK

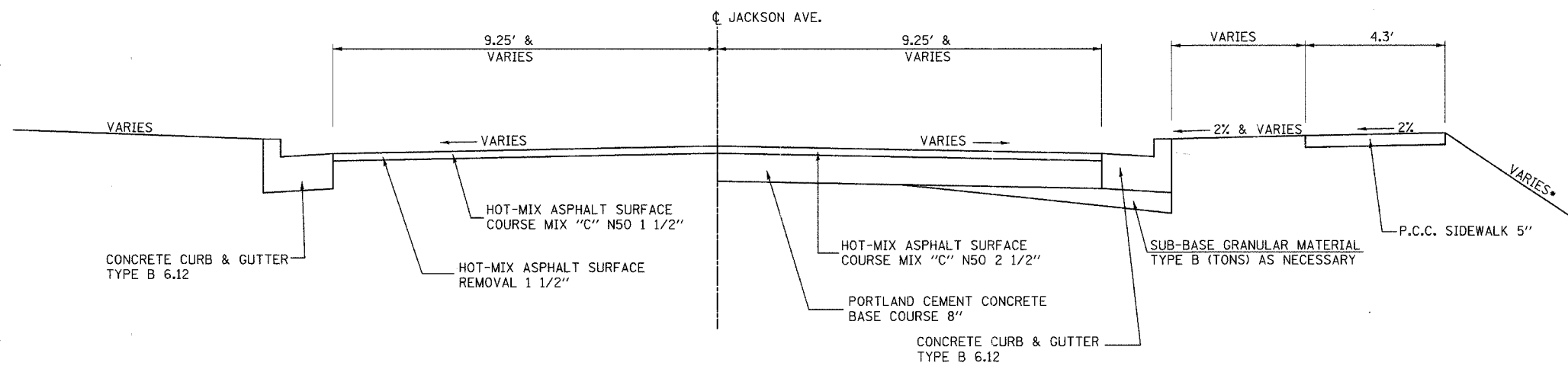
### PROPOSED TYPICAL SECTION

STA. 14+06 TO STA. 15+60



### TYPICAL SECTION FOR CONCRETE RAILING OVER STRUCTURE

SEE PLANS FOR LOCATION



\*NOTE: SEE PLANS FOR LOCATION OF SEGMENTAL CONCRETE BLOCK WALL BEHIND SIDEWALK

### PROPOSED TYPICAL SECTION

STA. 15+60 TO STA. 16+50

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

## PROPOSED TYPICALS

SCALE: VERT. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_  
 DATE \_\_\_\_\_

DRAWN BY RLH  
 CHECKED BY MED

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 USER NAME = USER

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	06-00085-00-BR	COLES	16	5
STA. 14+06.38 TO STA. 16+75				
FED. ROAD DIST. NO. ILLINOIS			FED. AID PROJECT	

HOT-MIX ASPHALT SURFACE REMOVAL 1 1/2"	SQ. YD.
15+60.00 RT TO 16+50.00 RT	91.0

PAVEMENT REMOVAL	SQ. YD.
14+06.38 TO 14+89.51	197.5
15+16.20 TO 15+60.00	82.3
15+60.00 RT TO 16+50.00 RT	93.2
<b>TOTAL</b>	<b>373.0</b>

SIDEWALK REMOVAL	SQ. FT.
14+06.38 LT TO 14+74.76 LT	278.3
14+06.38 RT TO 14+94.01 RT	356.7
15+32.75 RT TO 16+75.14 RT	587.8
<b>TOTAL</b>	<b>1222.8</b>

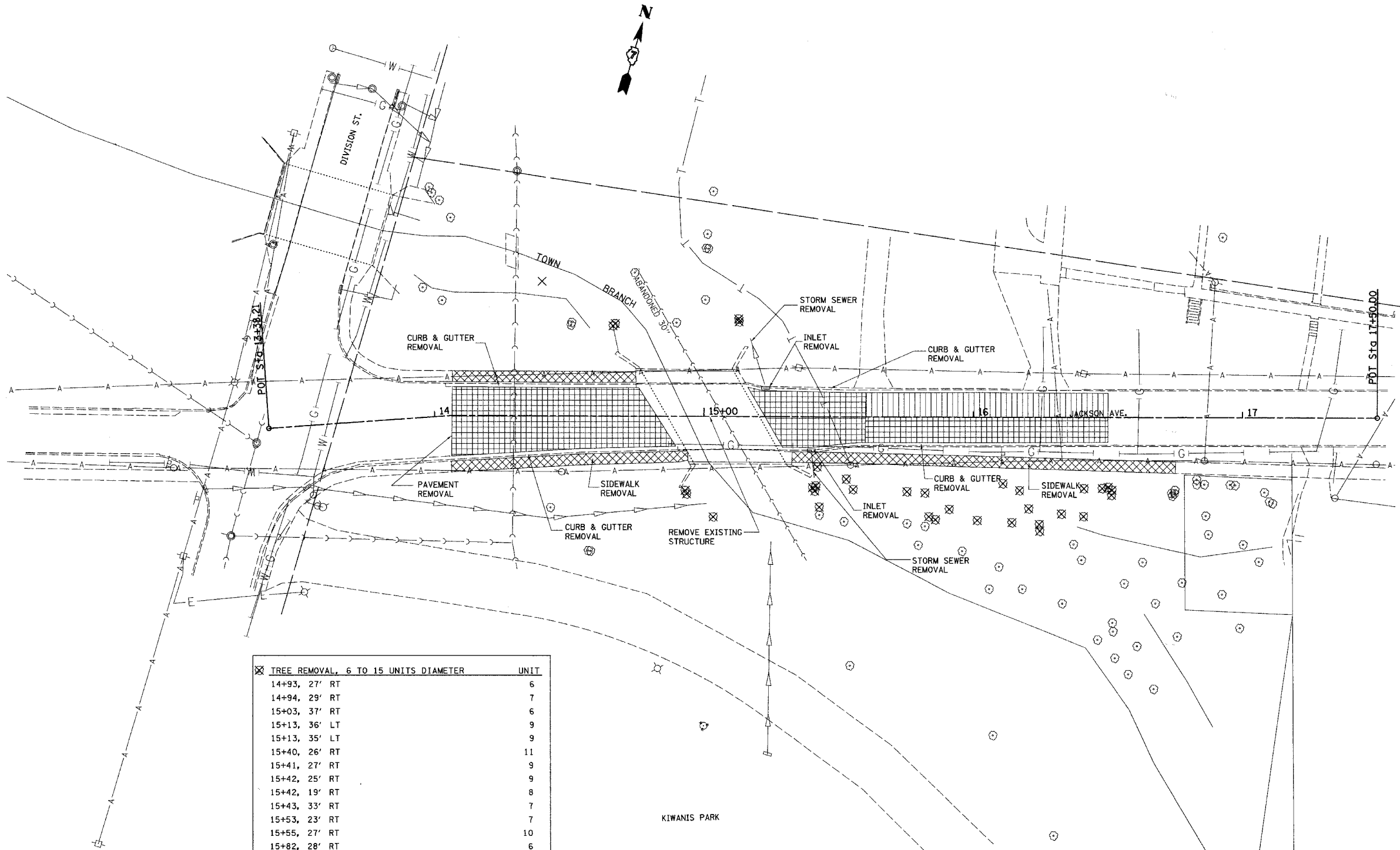
COMBINATION CURB AND GUTTER REMOVAL	FEET
14+06.38 LT TO 14+74.76 LT	68.4
14+06.38 RT TO 14+94.01 RT	87.6
15+32.75 RT TO 15+60.00 RT	27.3
15+16.20 LT TO 15+60.00 LT	44.0
15+60.00 LT TO 16+50.00 RT	90.0
15+60.00 RT TO 16+50.00 RT	90.0
<b>TOTAL</b>	<b>407.3</b>

STORM SEWER REMOVAL, 12"	FEET
TO 15+00.85, 32.1' RT	
15+22.84, 10.7' LT TO 15+17.12, 29.2' LT	19.4
15+39.90, 12.3' RT TO 15+40.97, 22.9' RT	10.7
<b>TOTAL</b>	<b>30.1</b>

INLET REMOVAL	EACH
15+22.84 LT	1
15+39.91 RT	1
<b>TOTAL</b>	<b>2</b>

TREE REMOVAL, 6 TO 15 UNITS DIAMETER	UNIT
14+93, 27' RT	6
14+94, 29' RT	7
15+03, 37' RT	6
15+13, 36' LT	9
15+13, 35' LT	9
15+40, 26' RT	11
15+41, 27' RT	9
15+42, 25' RT	9
15+42, 19' RT	8
15+43, 33' RT	7
15+53, 23' RT	7
15+55, 27' RT	10
15+82, 28' RT	6
15+84, 37' RT	12
15+86, 38' RT	6
16+02, 38' RT	6
16+11, 24' RT	12
16+14, 39' RT	9
16+17, 27' RT	10
16+21, 34' RT	7
16+25, 40' RT	7
16+25, 42' RT	6
16+33, 36' RT	8
16+41, 26' RT	11
16+41, 37' RT	7
16+48, 26' RT	7
16+50, 26' RT	8
16+51, 29' RT	8
16+52, 27' RT	9
<b>TOTAL</b>	<b>237</b>

TREE REMOVAL, OVER 15 UNITS DIAMETER	UNIT
14+67, 34' LT	18
15+75, 28' RT	16
15+91, 34' RT	16
<b>TOTAL</b>	<b>50</b>



PLOT DATE = 6/28/2007  
 PLOT SCALE = 1/4" = 20'-0"  
 USER NAME = JUSER

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

## REMOVAL PLAN

SCALE: VERT. 1" = 20'  
 HORIZ. 1" = 20'  
 DATE 4-24-07

DRAWN BY RLH  
 CHECKED BY MED

BITUMINOUS MATERIALS, PRIME COAT		GALLONS
14+06.38 TO 15+60.00	38	
15+60 RT TO 16+50.00 RT	10	
15+60 LT TO 16+50.00 LT	9	
<b>TOTAL</b>	<b>57</b>	

PORTLAND CEMENT CONCRETE BASE COURSE 8"		SQ. YD.
14+06.38 TO 15+60.00	376.4	
15+60 RT TO 16+50.00 RT	93.2	
<b>TOTAL</b>	<b>469.6</b>	

HOT-MIX ASPHALT SURFACE COURSE MIX "C" N50		TONS
14+06.38 TO 15+60.00	53	
15+60 RT TO 16+50.00 RT	13	
15+60 LT TO 16+50.00 LT	8	
<b>TOTAL</b>	<b>74</b>	

STORM SEWERS CLASS A TYPE 1 12"		FEET
STRUCT. #1 TO STRUCT #2	21.8	
STRUCT. #2 TO STRUCT #3	8.2	
STRUCT. #3 TO STRUCT #4	30.3	
<b>TOTAL</b>	<b>60.3</b>	

PIPE UNDERDRAINS 4"		FEET
14+66 TO STRUCT #2	65.4	
14+85 TO STRUCT #1	55.2	
<b>TOTAL</b>	<b>120.6</b>	

PRC FLARED END SECTION EACH		STATION, OFFSET, & INVERT AT END OF STORM SEWER
14+98.36, 22.55' LT (*4)	1	INVERT=630.50

MANHOLES, TYPE A, 4'-DIAMETER TYPE 1 FRAME, CLOSED LID EACH		STATION, OFFSET, & RIM AT CENTER OF STRUCTURE
15+30.70, 12.55' LT (*3)	1	RIM=644.55, S. INVERT=641.55, W. INVERT=630.64

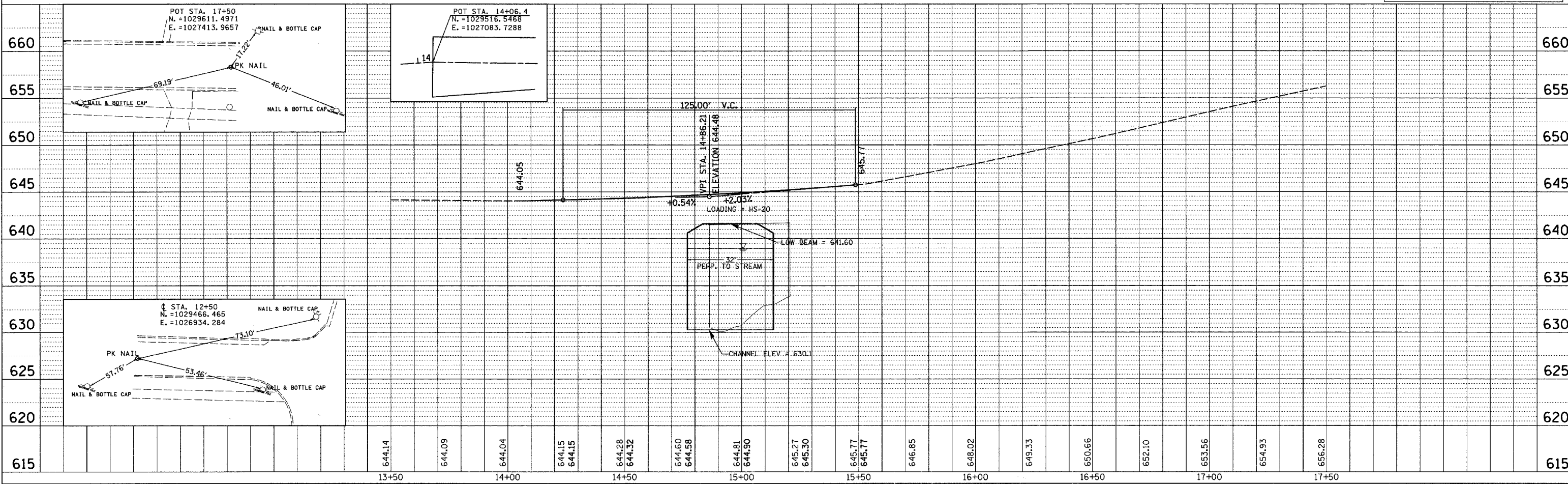
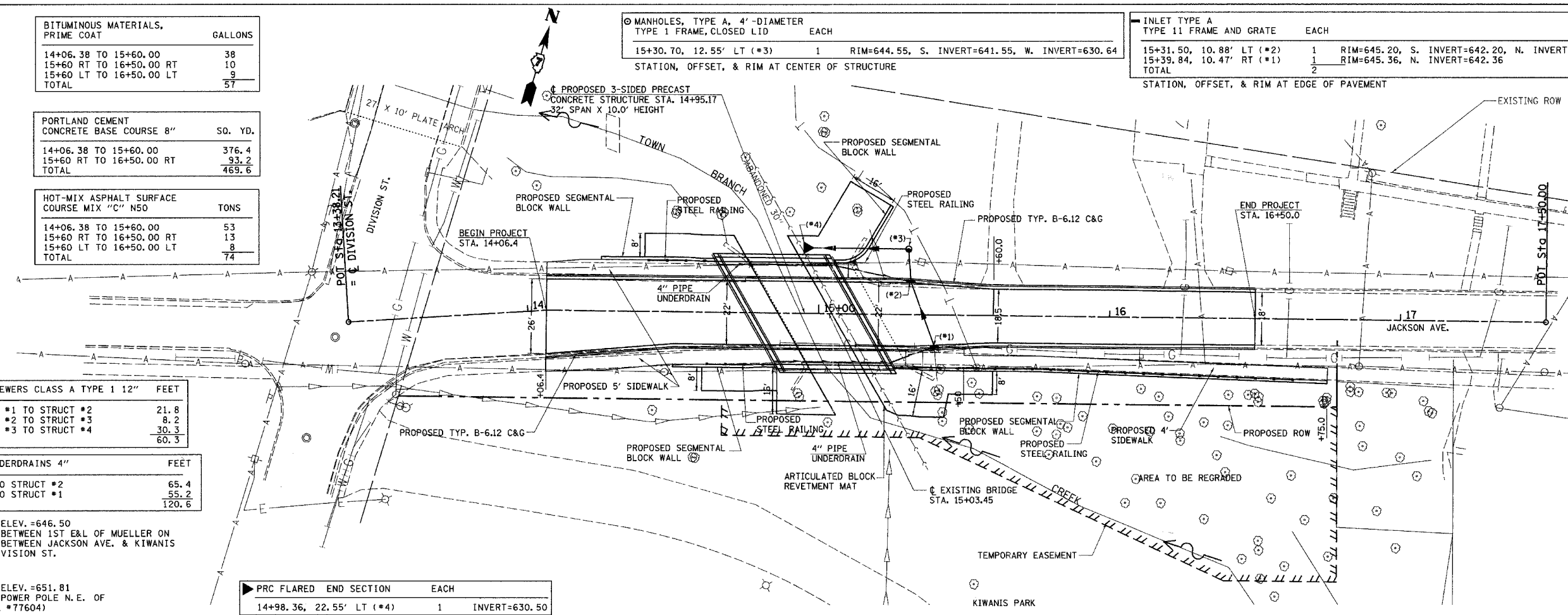
INLET TYPE A TYPE 11 FRAME AND GRATE EACH		STATION, OFFSET, & RIM AT EDGE OF PAVEMENT
15+31.50, 10.88' LT (*2)	1	RIM=645.20, S. INVERT=642.20, N. INVERT=641.70
15+39.84, 10.47' RT (*1)	1	RIM=645.36, N. INVERT=642.36
<b>TOTAL</b>	<b>2</b>	

ARTICULATED BLOCK REVETMENT MAT		SQ. YD.
14+40.0 LT TO 14+86.0 LT	48.7	
14+60.0 RT TO 14+86.0 RT	74.7	
15+04.5 LT TO 15+10.5 LT	74.0	
15+04.5 RT TO 15+60.0 RT	79.5	
<b>TOTAL</b>	<b>276.9</b>	

COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12		FEET
14+06.4 LT TO 14+50.0 LT	43.7	
14+06.4 RT TO 14+50.0 RT	43.7	
14+50.0 LT TO 15+30.0 LT	80.0	
14+50.0 RT TO 15+30.0 RT	80.0	
15+30.0 LT TO 15+60.0 LT	30.2	
15+30.0 RT TO 15+60.0 RT	30.0	
15+60.0 RT TO 15+60.0 RT	90.0	
15+60.0 LT TO 16+50.0 LT	90.0	
<b>TOTAL</b>	<b>487.6</b>	

PORTLAND CEMENT CONCRETE SIDEWALK 5"		SQ. FT.
14+06.4 RT TO 14+26.3 RT	98.6	
14+06.4 LT TO 14+18.4 LT	58.5	
14+18.4 LT TO 14+50.0 LT	168.5	
14+26.3 LT TO 14+50.0 LT	129.8	
14+50.0 LT TO 15+10.0 LT	302.1	
14+50.0 RT TO 15+50.0 RT	529.1	
15+50.0 RT TO 16+75.0 RT	541.2	
<b>TOTAL</b>	<b>1827.8</b>	

STEEL RAILING		FEET
14+41.0 LT TO 14+65.0 LT	24.0	
14+61.4 RT TO 14+85.4 RT	24.0	
15+05.0 LT TO 15+17.0 LT	12.0	
15+25.6 RT TO 16+63.6 RT	138.0	
<b>TOTAL</b>	<b>198.0</b>	



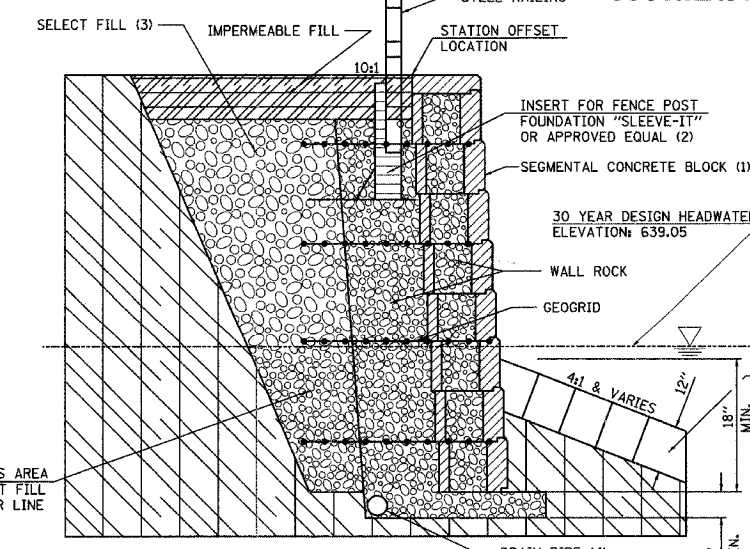
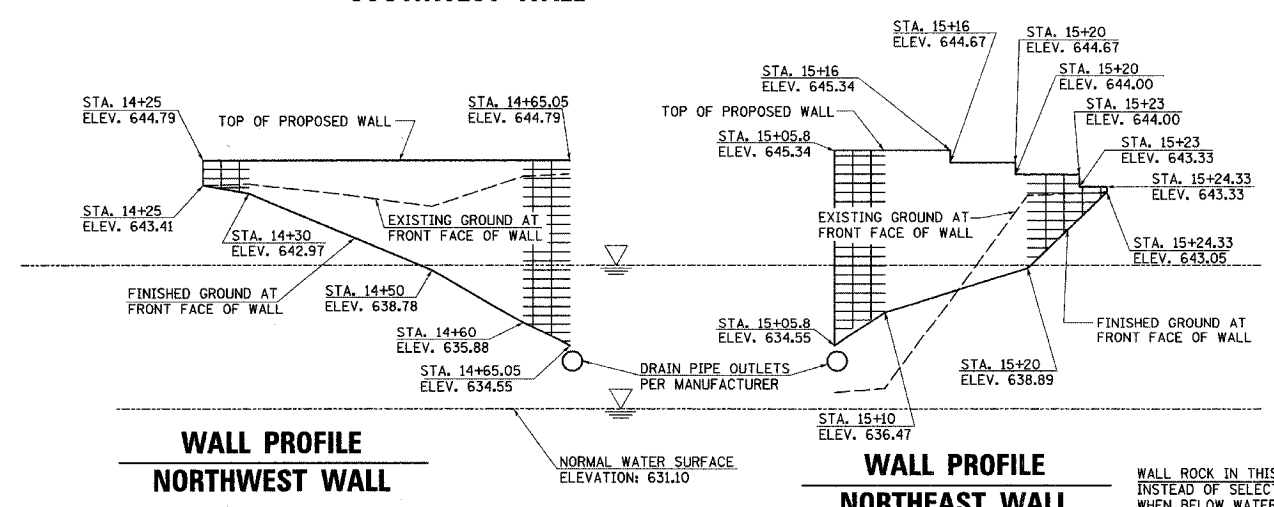
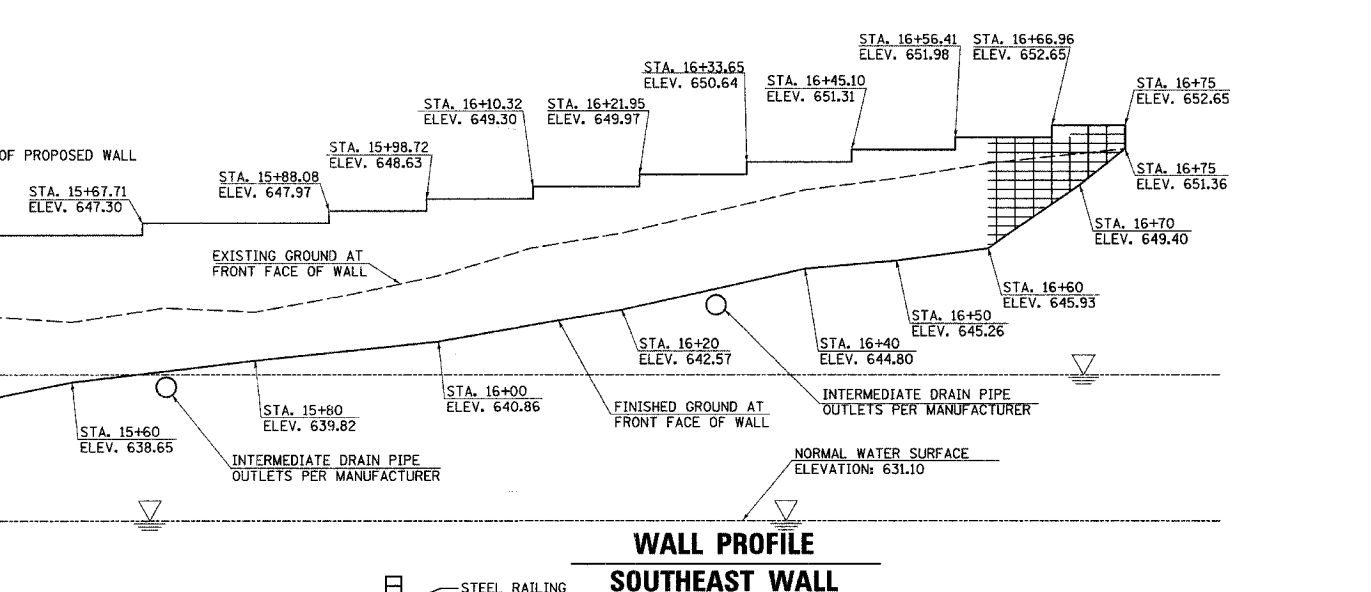
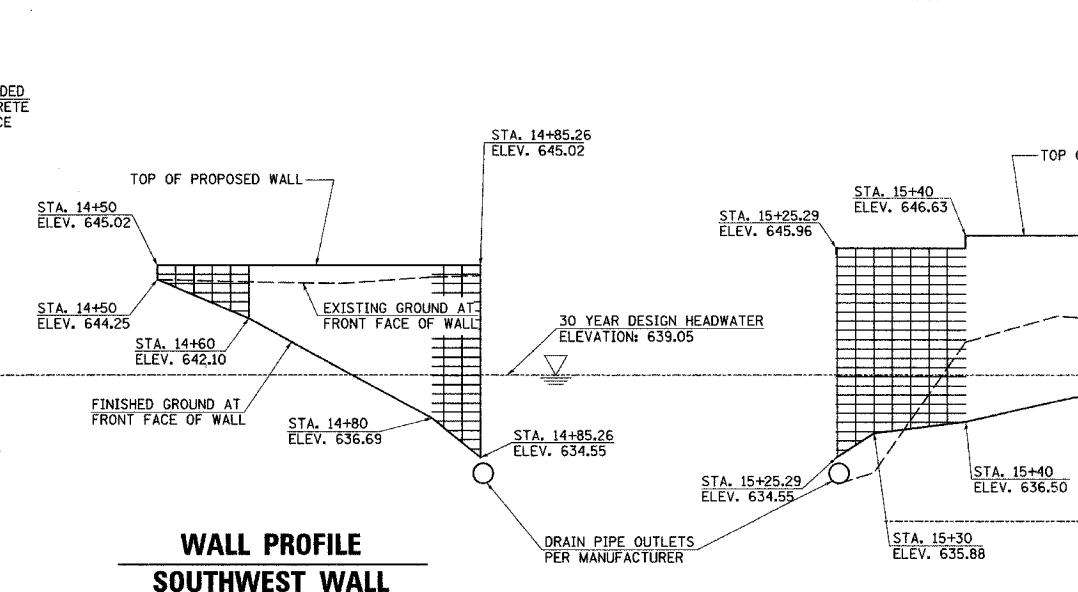
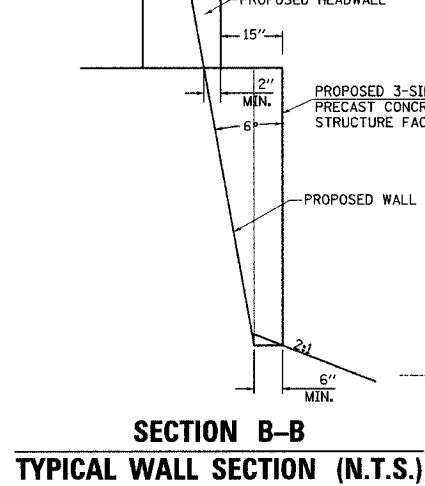
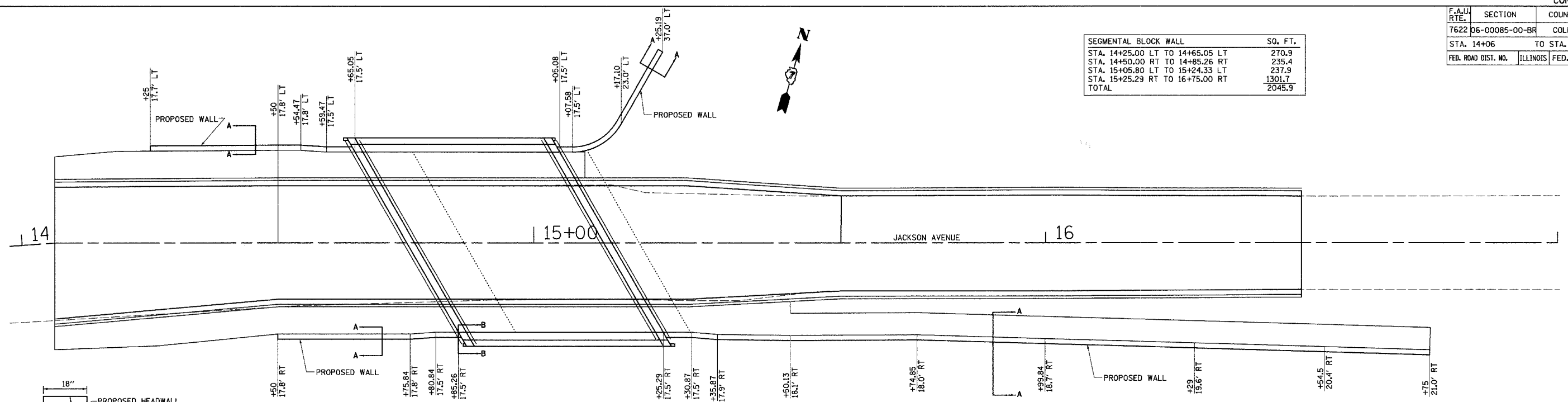
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PLOT DATE = 6/28/2007  
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 USER NAME = jusepl

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	06-00085-00-BR	COLES	16	7
STA. 14+06		TO STA. 16+75		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SEGMENTAL BLOCK WALL	SQ. FT.
STA. 14+25.00 LT TO 14+65.05 LT	270.9
STA. 14+50.00 RT TO 14+85.26 RT	235.4
STA. 15+05.80 LT TO 15+24.33 LT	237.9
STA. 15+25.29 RT TO 16+75.00 RT	1301.7
<b>TOTAL</b>	<b>2045.9</b>



- NOTE:
- SEGMENTAL CONCRETE BLOCK SHALL BE ALLAN BLOCK CLASSIC, OR EQUAL, PRAIRE TAN COLOR WITH 6° SETBACK TO MATCH RECENTLY CONSTRUCTED RETAINING WALL ON DIVISION STREET. (SEE SPECIAL PROVISIONS)
  - CUT OUT BACK OF SEGMENTAL CONCRETE BLOCK WHERE NECESSARY TO MAINTAIN PLAN LINE OF STEEL RAILING.
  - INFILL WITH MATERIAL MEETING THE REQUIREMENTS OF TRENCH BACKFILL, INCLUDED IN THE COST OF THE BLOCK WALL SYSTEM.
  - DRAIN PIPES TO BE INCLUDED IN COST OF BLOCK WALL SYSTEM.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**SEGMENTAL CONCRETE BLOCK WALL (SPECIAL)**

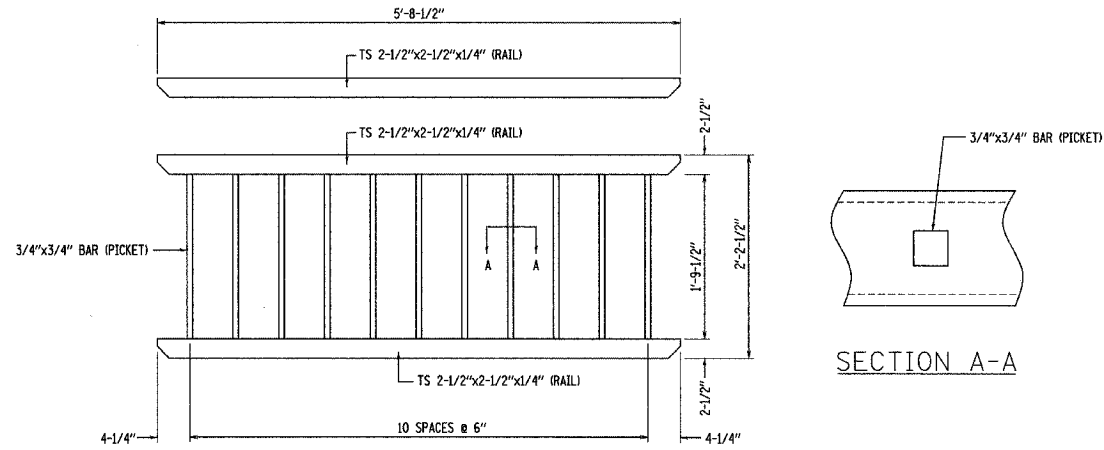
SCALE: VERT. 1" = 5'  
HORIZ. 1" = 10'

DATE: 4-27-07

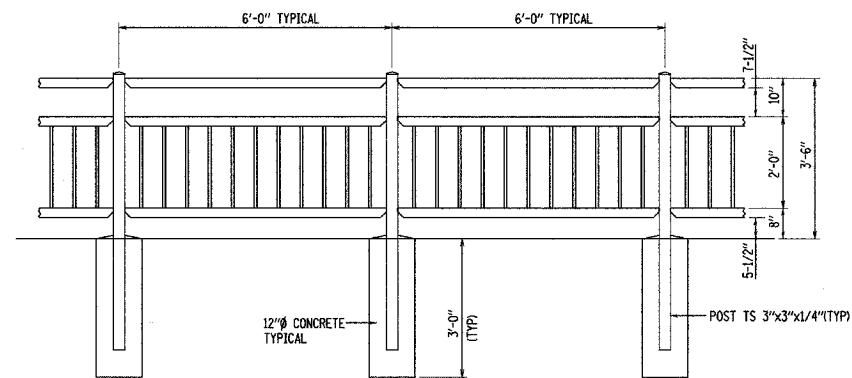
DRAWN BY: RLH  
CHECKED BY: MED

PLOT DATE = 6/25/2007  
 PLOT SCALE = 10.0000  
 USER NAME = JUSER

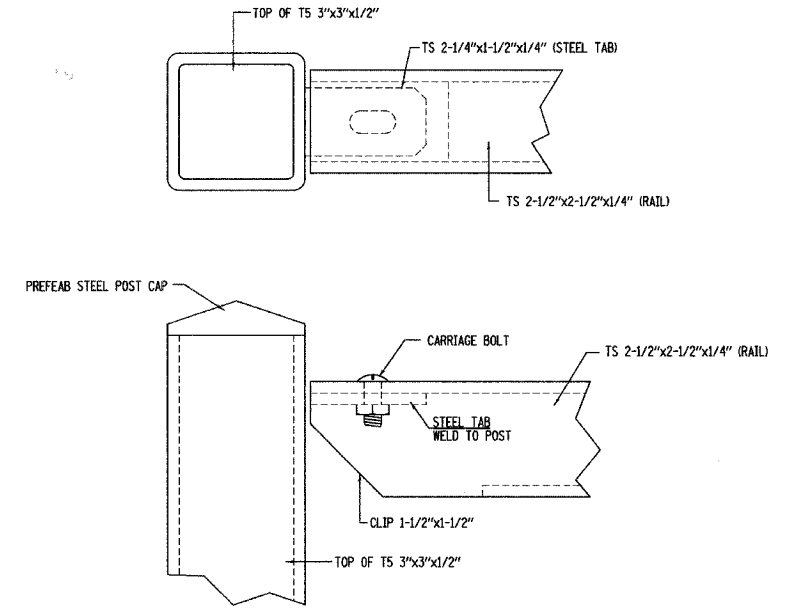
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622 06-00085-00-BR		COLES	16	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



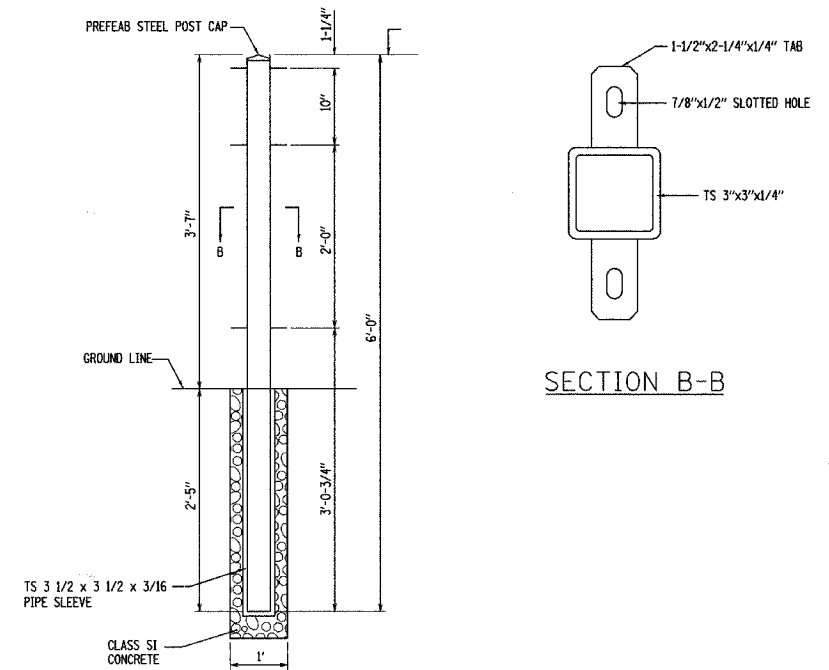
TYPICAL PANEL



TYPICAL RAIL ELEVATION



TYPICAL PANEL TO POST CONNECTION



SECTION B-B

NOTE: STEEL RAILING SHALL BE POWDER COATED. (SEE SPECIAL PROVISIONS)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**STEEL RAILING (SPECIAL)  
DETAIL**

SCALE: VERT.  
HORIZ.  
DATE

DRAWN BY TG  
CHECKED BY MED



Benchmark: Spike in 2nd power pole northeast of bridge (Pole #772604). Elevation 651.81

Existing Structure: S.N. 015-6001 to be removed. The existing structure was built under 4CS in 1937 as a single span, concrete T-beam bridge with closed concrete abutments. The existing structure is 35'-0" out to out and 30'-0" face to face of abutments.

Road shall be closed during construction.  
No salvage.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yds.	65	158	223
Articulated Block Revetment Mat	Sq. Yds.		275	275
Removal of Existing Structure	Each	1		1
Structure Excavation	Cu. Yds.		400	400
Concrete Structures	Cu. Yds.		49.5	49.5
Reinforcement Bars (Epoxy Coated)	Lbs.		5320	5320
Name Plates	Each	1		1
Furnishing Steel Piles HP10x42	Lin. Ft.		945	945
Driving Piles	Lin. Ft.		945	945
Test Pile Steel HP10x42	Each		1	1
Concrete Encasement	Cu. Yds.		7.7	7.7
Three Sided Precast Concrete Structure 32'x10'	Feet	46.8		46.8
Precast Concrete Headwalls	L. Sum	1		1
Course Aggregate Backfill, (Special)	Cu. Yds.		12	12
Texas Combination Concrete Railing	Lin. Ft.	78		78
Geocomposite Wall Drain	Sq. Yd.		95	95

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	06-00085-00-BR	COLES	16	9
STA. 14+00		TO STA. 15+80		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

Sheet 1 of 6 Sheets

**GENERAL NOTES**

- The contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the engineer before ordering the remainder of the piles.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (II Modified).
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the engineer.
- The ends of the three-sided Precast Structure shall be oriented parallel with the roadway.
- The footing design is based on the following maximum reactions applied at the top of the footing/pedestal wall:  
11.6 k/ft Dead (vert.) 5.0 k/ft Dead (horiz.)  
4.5 k/ft Live (vert.) 2.1 k/ft Live (horiz.)  
The contractor shall verify that the selected structure meets these design parameters. If the design parameters are exceeded, a complete footing design with calculations, details, and the required seals shall be submitted for review and approval.
- Dimensions of three sided structure and substructure are based from Hy-Span structure alternative. Substructure shall be revised as necessary per chosen alternative and be reviewed and approved by Engineer prior to construction.

**INDEX OF SHEETS**

- General Plan and Elevation
- Structure Details
- Concrete Bridge Railing
- Abutment Details
- Pile Details
- Soil Boring Logs

This structure has been designed to be stable for scour conditions in accordance with the FHWA Technical Advisory - T 5140.23, "Evaluating scour at Bridges" and hydraulic engineering circular 18 - EVALUATING SCOUR AT BRIDGES

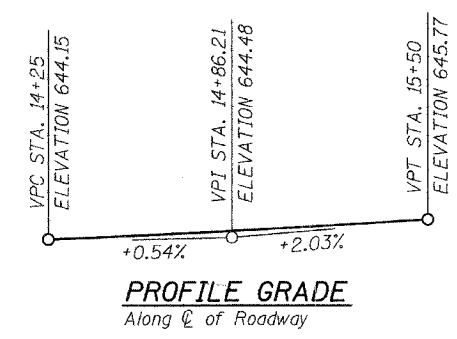
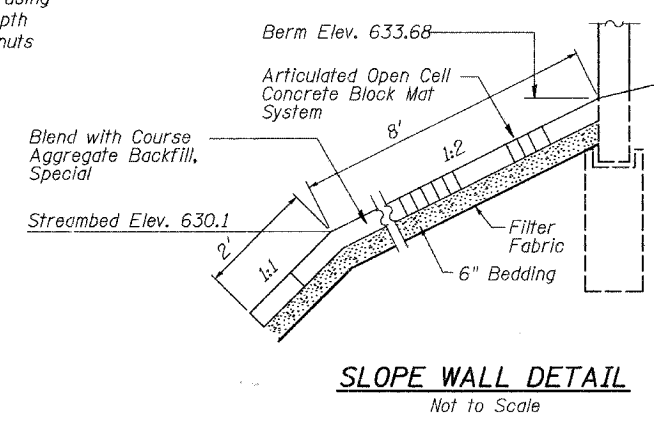
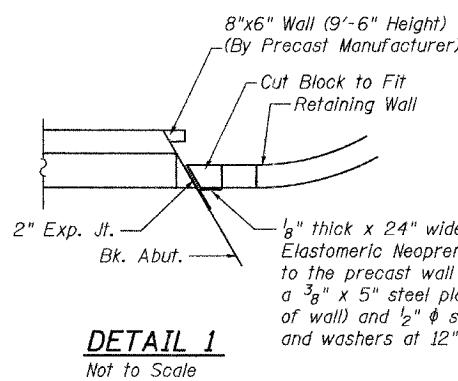
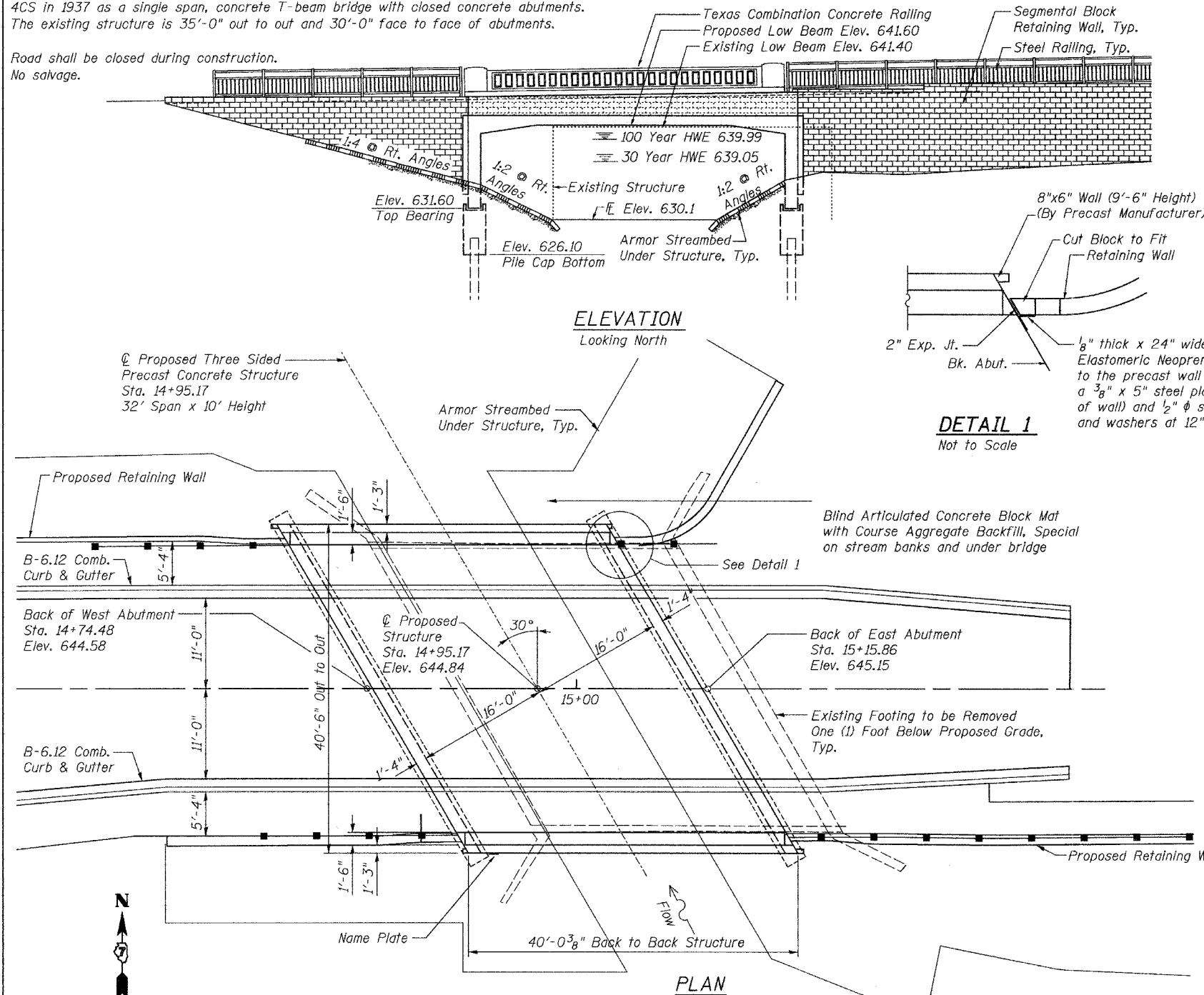
I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES

MARTIN J. SILVESTER  
081-004873  
LICENSED  
STRUCTURAL  
ENGINEER  
OF  
CHICAGO, ILLINOIS  
M. Silvester 06-27-07  
MARTIN J. SILVESTER  
STRUCTURAL ENGINEER  
LICENSE EXP. DATE: 11-30-08

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL PLAN AND ELEVATION**  
JACKSON AVE. OVER TOWN BRANCH CREEK  
SECTION 06-00085-00-BR  
CITY OF CHARLESTON STA. 14+95.17  
STRUCTURE NO. 015-6340

SCALE: VERT. \_\_\_\_\_  
HORIZ. \_\_\_\_\_  
DATE \_\_\_\_\_

DRAWN BY SAE  
CHECKED BY BJF



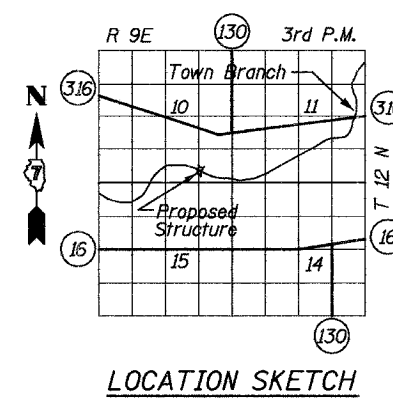
**WATERWAY INFORMATION**

Drainage Area = 5.65 Sq. Mi. Low Grade Elev. 644.04 ft @ Sta. 14+00

Flood	Freq. Yr.	Q cfs	Opening Sq. Ft.		Nat. H.W.E.		Head - ft.		Headwater Elev. - ft.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	30	1606	264.7	286.4	638.65	0.82	0.40	639.47	639.05	
Base	100	1950	297.0	316.5	639.39	1.02	0.60	640.41	639.99	
Max. Calc.	500	2502	338.7	360.6	640.47	1.33	0.90	641.80	641.37	

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	626.10	626.10



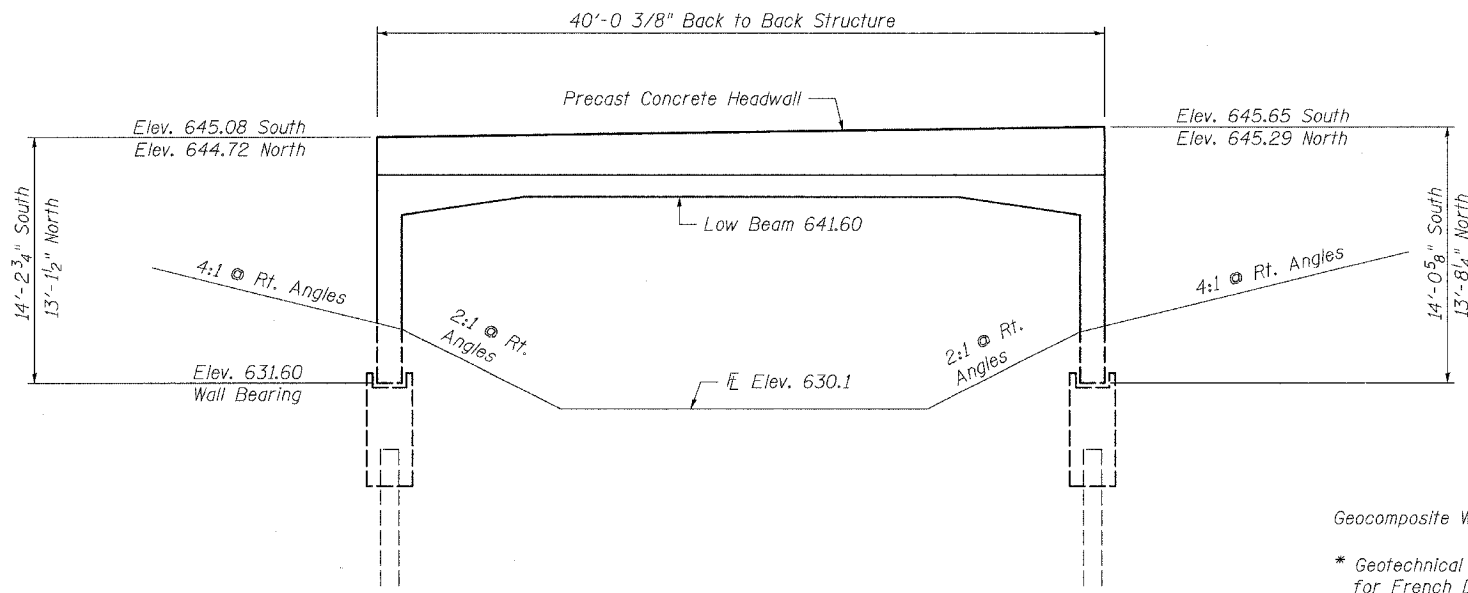
TOWN BRANCH CREEK  
BUILT 20\_\_ BY  
CITY OF CHARLESTON  
SEC. 06-00085-00-BR  
STATION 14+95.17  
STR. NO. 015-6340 LOADING HS20  
PROJ. NO. BRM-5013(15)

**LETTERING FOR NAME PLATE**  
(SEE STD 515001)

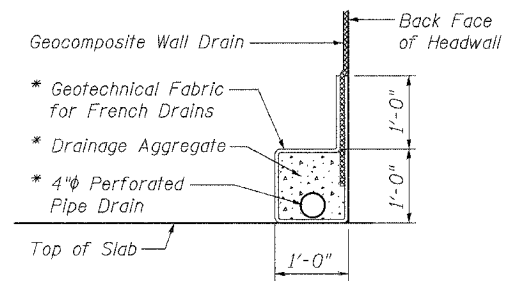
**THE UPCHURCH GROUP**  
architects engineers surveyors  
HILLSIDE, IL. (708) 449-2321  
MATTOON, IL. (217) 236-3177

PLOT DATE = #DATES  
FILE NAME = #FILES  
PLOT SCALE = #SCALES  
USER NAME = #USERS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622 06-00085-00-BR		COLES	16	10
STA. 14+00	TO STA. 15+80			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

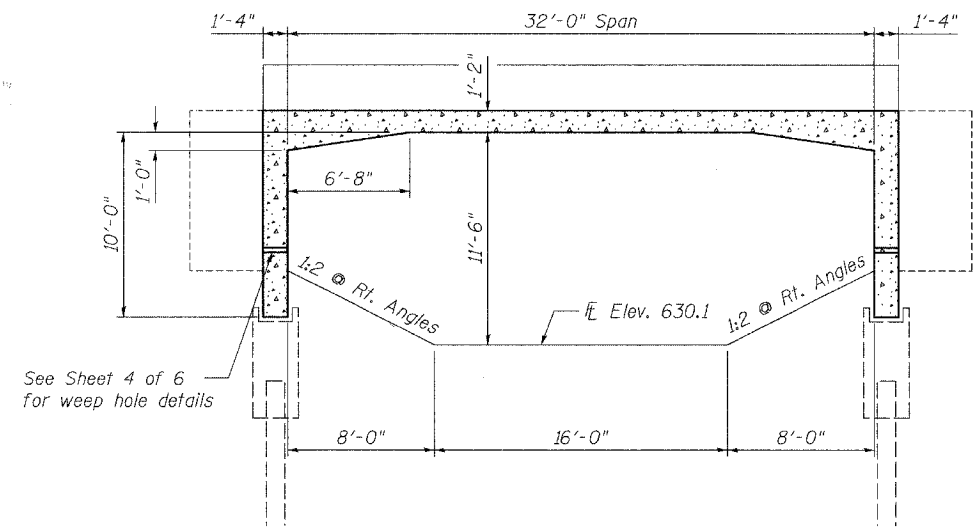


**END ELEVATION**  
(Looking North)

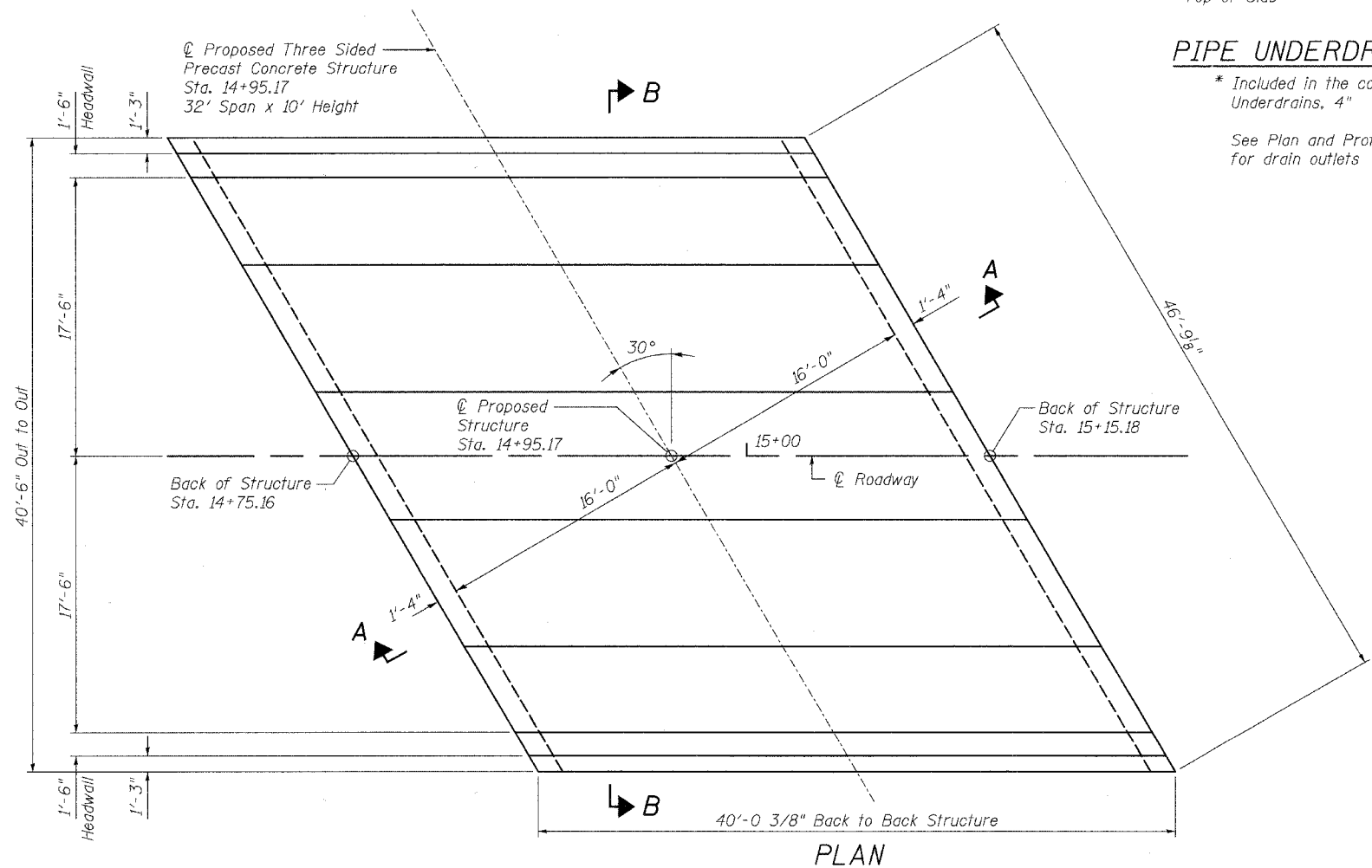


**PIPE UNDERDRAIN DETAIL**

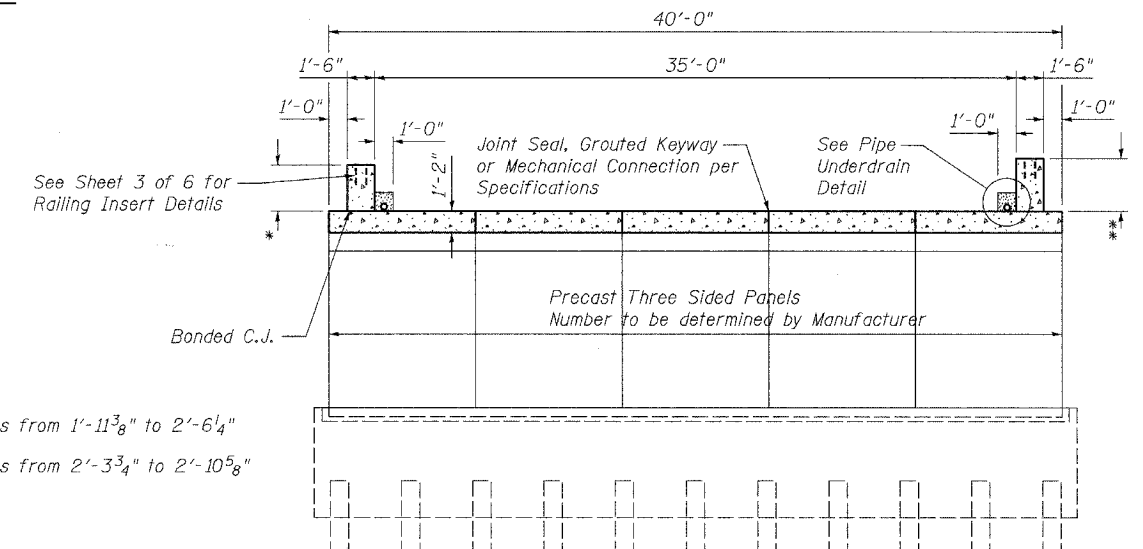
\* Included in the cost of "Pipe Underdrains, 4"  
See Plan and Profile sheet for drain outlets



**SECTION A-A**



**PLAN**



**SECTION B-B**

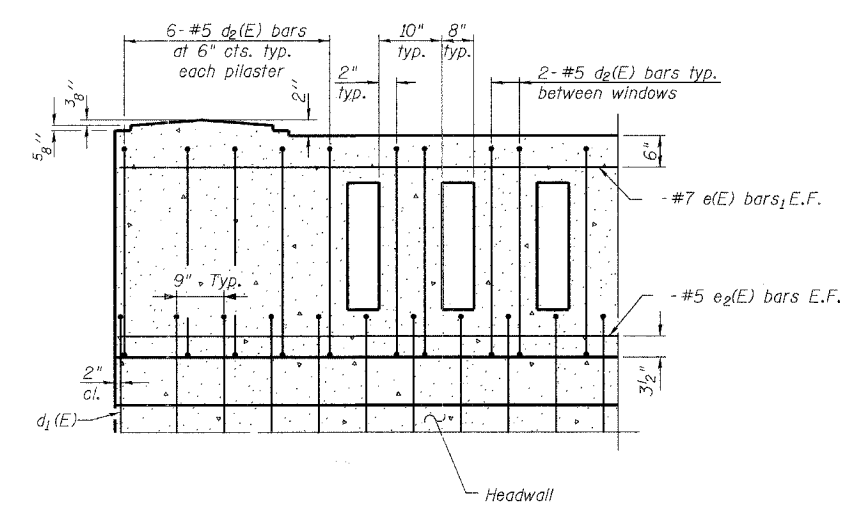
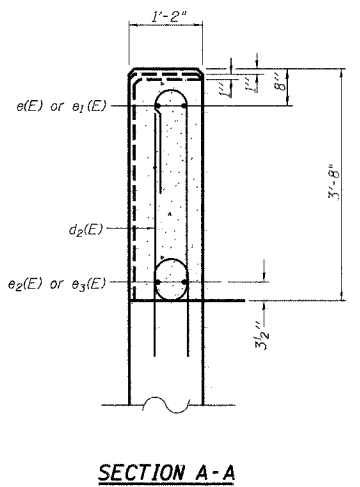
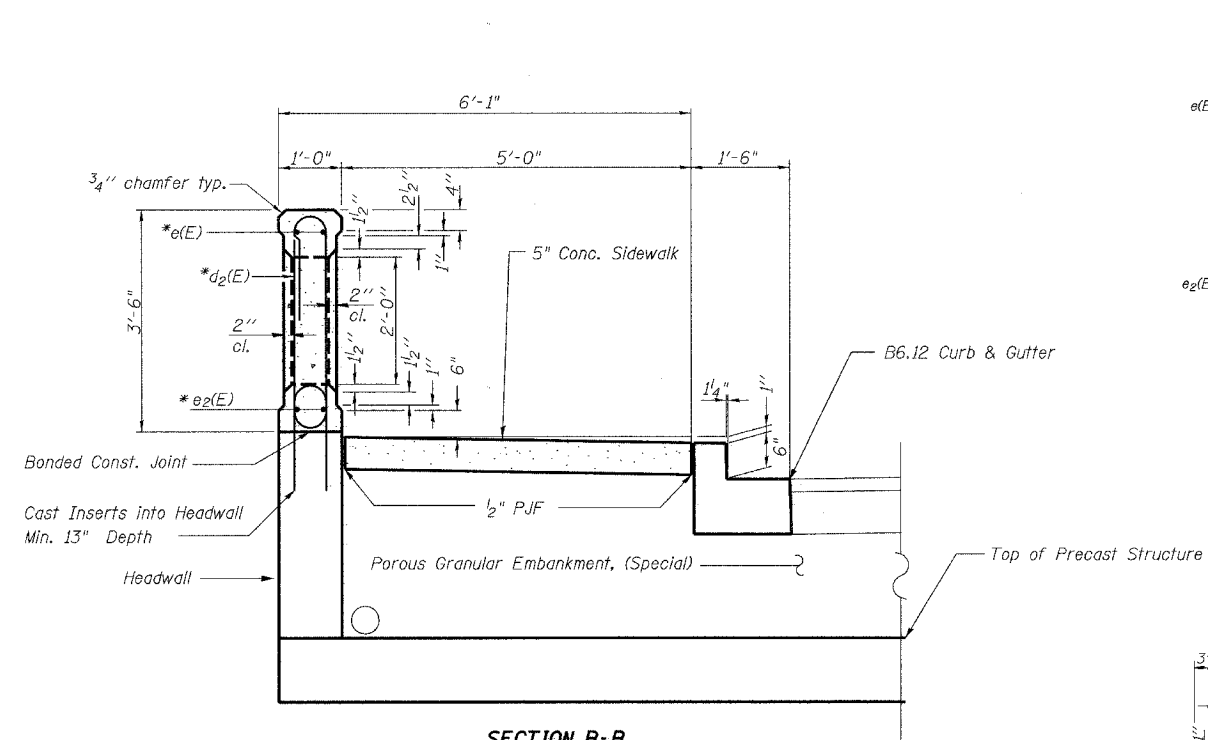
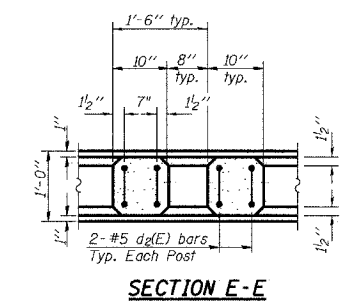
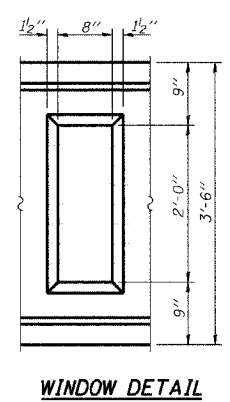
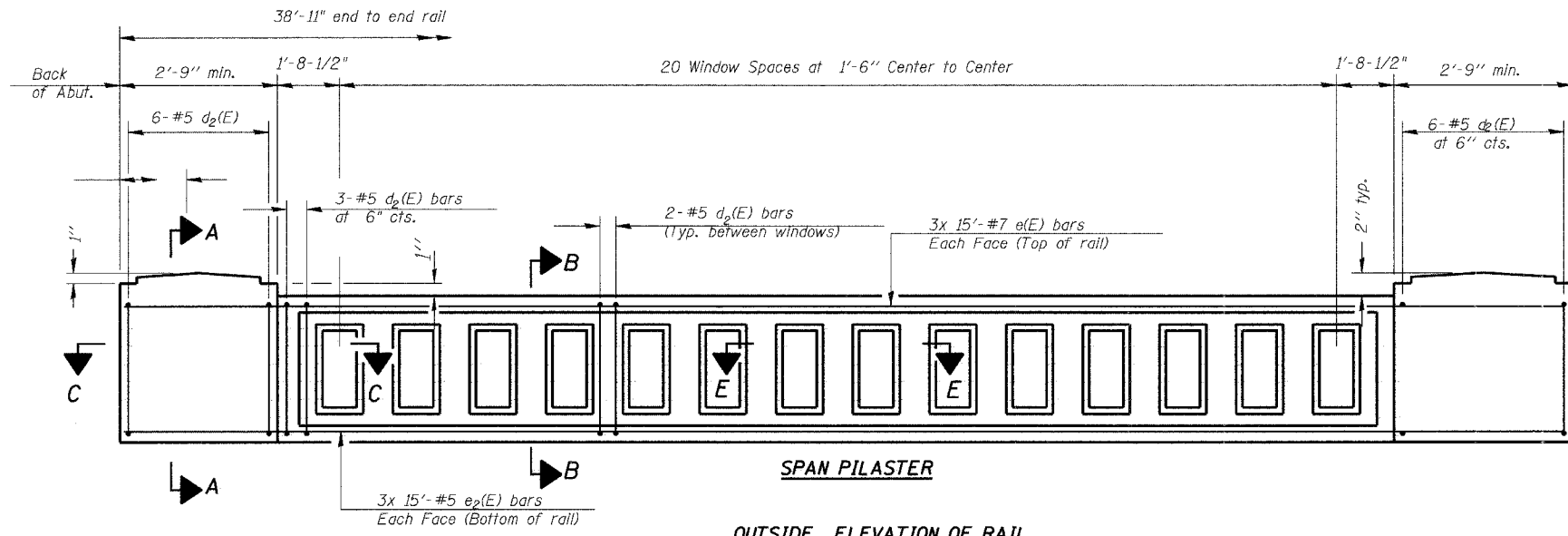
**NOTES**

1. Outside face of headwalls shall be textured with Symons '8"x16" Rock Face Block' or Scotts #127A 'Split Faced Block' form liner, or approved equal. See Special Provisions.
2. See sheet 4 of 6 for abutment details.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION STRUCTURE DETAILS JACKSON AVE. OVER TOWN BRANCH CREEK SECTION 06-00085-00-BR CITY OF CHARLESTON STA. 14+95.17 STRUCTURE NO. 015-6340
NAME	DATE	
		SCALE: VERT. HORIZ. DATE DRAWN BY SAE CHECKED BY BJF

PLOT DATE = 6/28/2007  
 PLOT SCALE = 1/8" = 1'-0"  
 USER NAME = JUSER

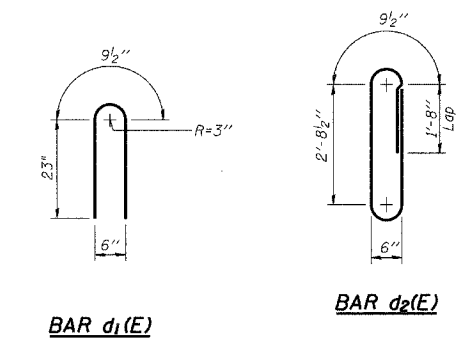
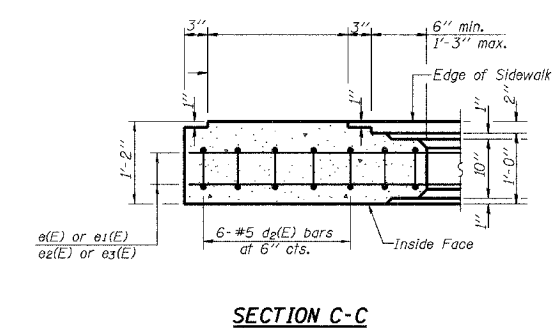
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	06-00085-00-BR	COLES	16	11
STA. 14+00	TO STA. 15+80			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**CONCRETE HANDRAIL  
BILL OF MATERIAL**

Bar No.	Size	Length	Shape
d1(E)	#5	3'-7 1/2"	U
d2(E)	#5	8'-8"	U
e(E)	#7	15'-0"	—
e2(E)	#5	15'-0"	—
Reinforcement Bars, Epoxy Coated	Pound	1926 *	
Texas Combination Concrete Rolling	Foot	77'-10"	
Porous Granular Embankment (Special)	Cu. Yd.	65	

\* Reinforcement Bar quantities for information only



**MIN. BAR LAP**  
#5 bars = 1'-8"  
#7 bars = 2'-8"

**Notes:**  
All concrete for railing wall shall be Class BS according to Article 1020.04 of the Standard Specifications. Surface of railing shall receive a rubbed finish according to Article 503.15(b) of the Standard Specifications.  
All parts of the railing including concrete and reinforcing will be paid for at the contract unit price per foot for Texas Combination Concrete Railing.

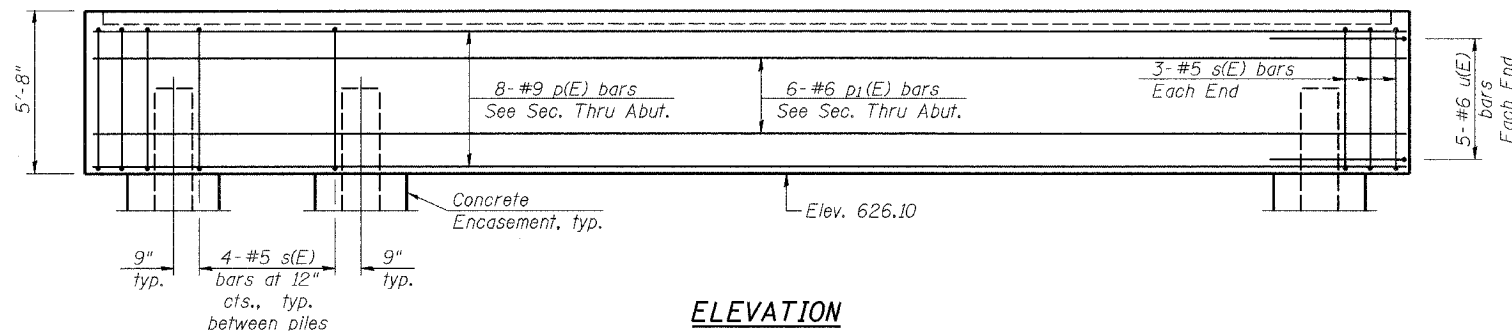
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONCRETE BRIDGE RAILING**  
JACKSON AVE. OVER TOWN BRANCH CREEK  
SECTION 06-00085-00-BR  
CITY OF CHARLESTON STA. 14+95.17  
STRUCTURE NO. 015-6340

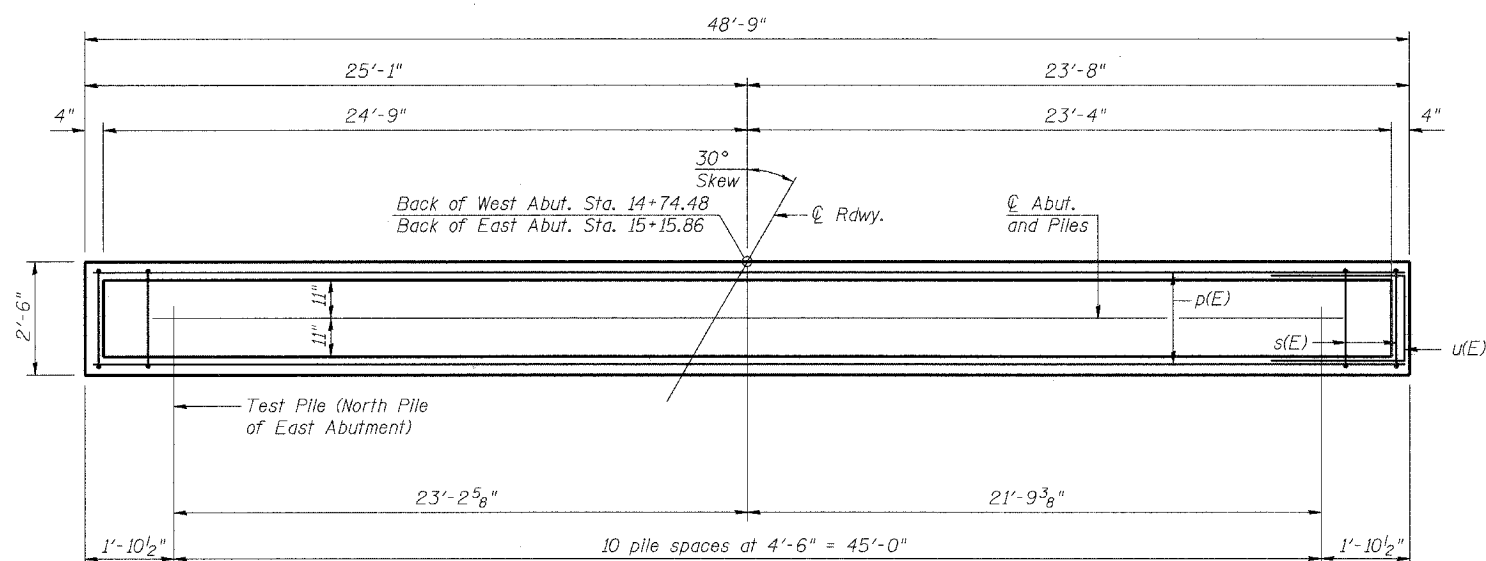
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DRAWN BY A.Baker  
CHECKED BY MED

PLOT DATE = 6/29/2007  
 PLOT SCALE = 1/8"=1'-0"  
 USER NAME = USER

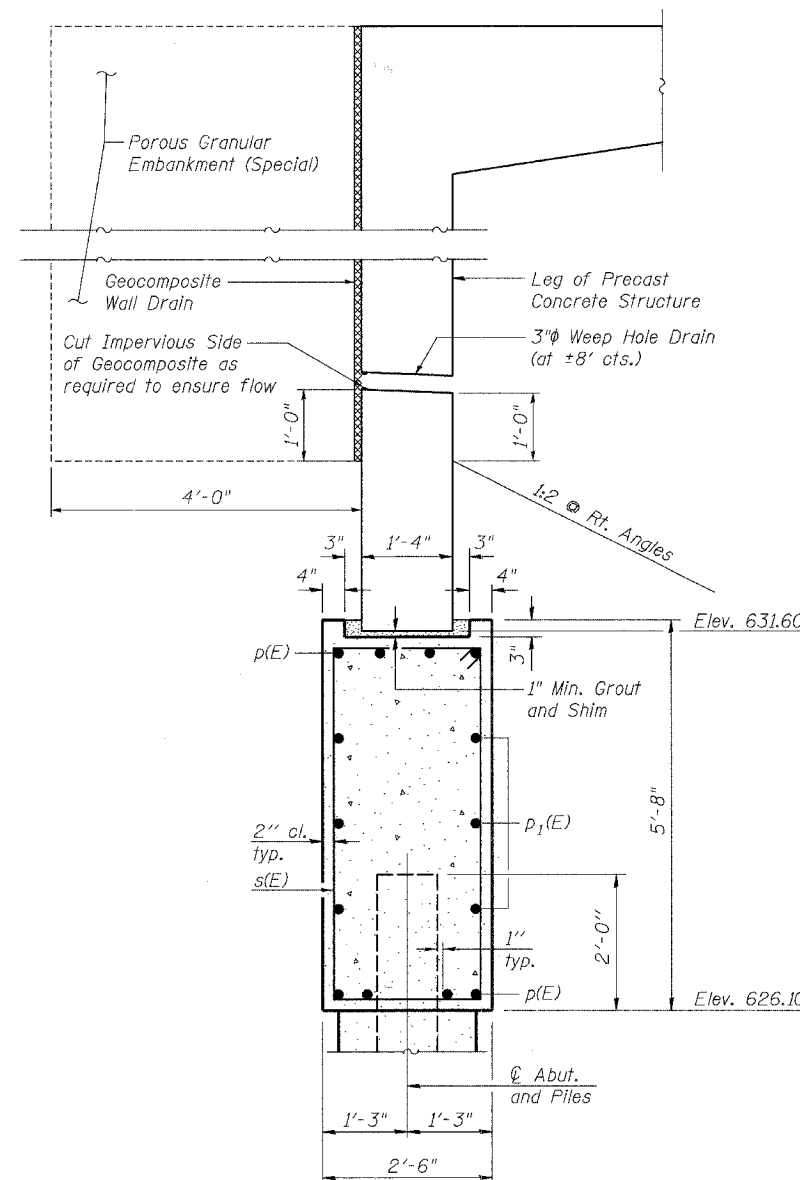
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7622 06-00085-00-BR		COLES	16	12
STA. 14+00		TO STA. 15+80		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**ELEVATION**



**PLAN**



**SECTION THRU ABUTMENT**

**BILL OF MATERIAL**  
(Both Abutments)

Bar	No.	Size	Length	Shape
p(E)	16	#9	48'-5"	—
p1(E)	12	#6	48'-5"	—
s(E)	92	#5	15'-5"	□
u(E)	20	#6	11'-1"	┌
Item	Unit	Quantity		
Structure Excavation	Cu. Yd.	400		
Concrete Structures	Cu. Yd.	49.5		
Reinforcement Bars, Epoxy Coated	Pound	5320		
Furnishing Steel Piles, HP 10x42	Foot	945		
Driving Piles	Foot	945		
Test Pile, Steel HP 10x42	Each	1		
Concrete Encasement	Cu. Yd.	7.7		
Geocomposite Wall Drain	Sq. Yd.	95		
Porous Granular Embankment (Special)	Cu. Yd.	158		

**NOTES**

The Steel H-piles shall be according to AASHTO M270 Grade 50.

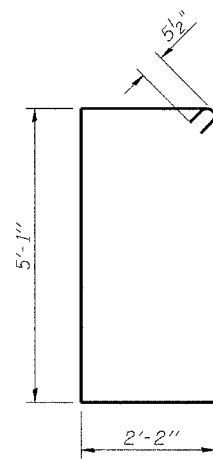
The test pile(s) shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

For details of piles and Concrete Encasement, see sheet 5 of 6.

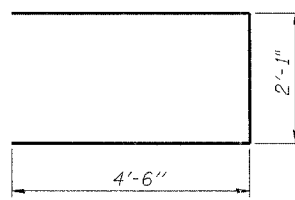
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.

**PILE DATA**

Type: Steel HP 10x42  
 Nominal Required Bearing: 270 kips  
 Factored Resistance Available: 90 kips  
 Est. Length: 45 ft.  
 No. Production Piles: 21  
 No. Test Piles: 1



**BARS s(E)**



**BAR u(E)**

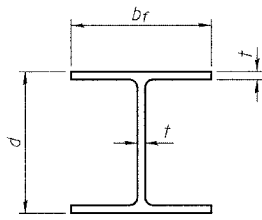
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 USER NAME = USER

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**ABUTMENT DETAILS**  
 JACKSON AVE. OVER TOWN BRANCH CREEK  
 SECTION 06-00085-00-BR  
 CITY OF CHARLESTON STA. 14+95.17  
 STRUCTURE NO. 015-6340

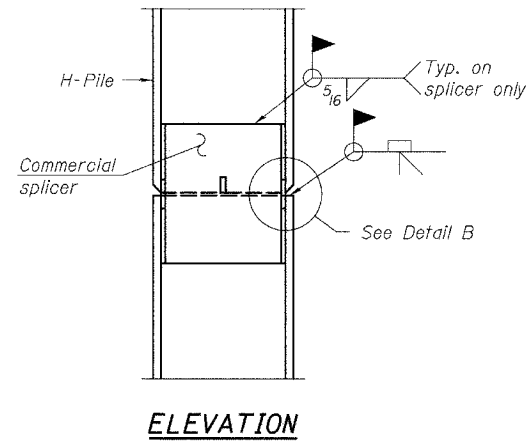
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 DATE \_\_\_\_\_ DRAWN BY SAE  
 CHECKED BY BJF

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622 06-00085-00-BR		COLES	16	13
STA. 14+00	TO STA. 15+80			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

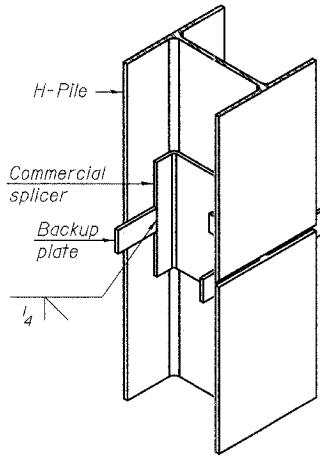


**STEEL PILE TABLE**

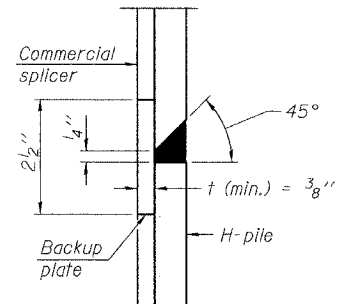
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	3/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 3/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 3/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



**ELEVATION**

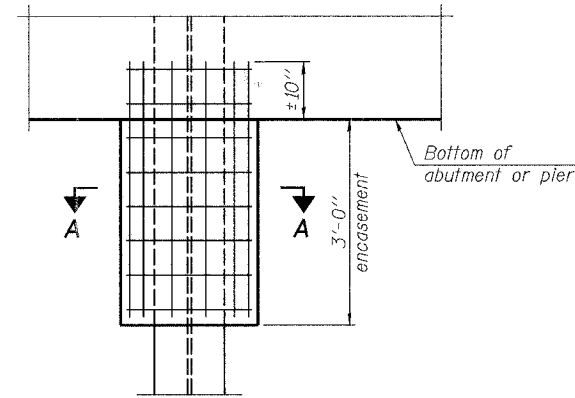


**ISOMETRIC VIEW**



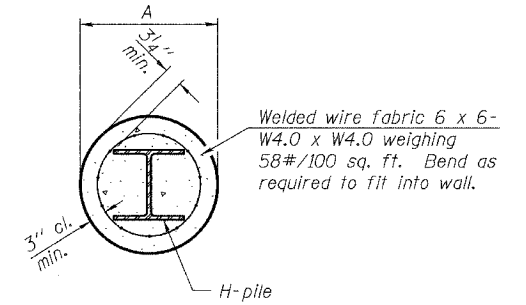
**DETAIL "B"**

**WELDED COMMERCIAL SPLICE**



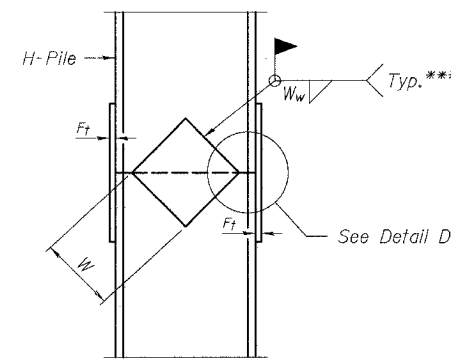
**ELEVATION**

**PILE ENCASEMENT**

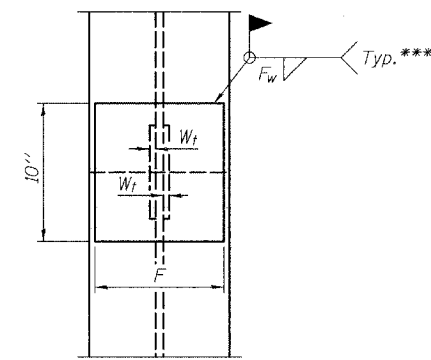


**SECTION A-A**

Note: Forms for encasement may be omitted when soil conditions permit.

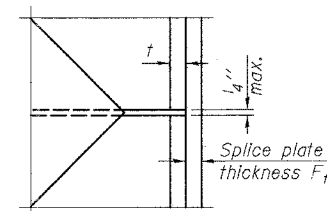


**ELEVATION**



**END VIEW**

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/2"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/2"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/2"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"



**DETAIL D**

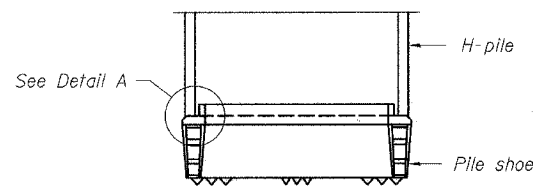
**WELDED PLATE FIELD SPLICE**

Note: The steel H-piles shall be according to AASHTO M270 Grade 50.

REVISIONS	
NAME	DATE

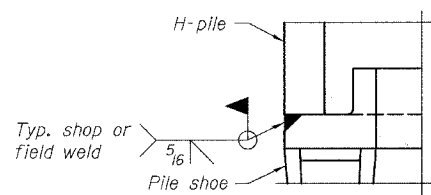
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**PILE DETAILS**  
 JACKSON AVE. OVER TOWN BRANCH CREEK  
 SECTION 06-00085-00-BR  
 CITY OF CHARLESTON STA. 14+95.17  
 STRUCTURE NO. 015-6340

SCALE: VERT. HORIZ.  
 DATE: DRAWN BY SAE  
 CHECKED BY BJF

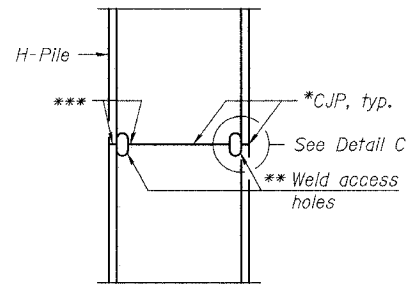


**ELEVATION**

**H-PILE SHOE ATTACHMENT**

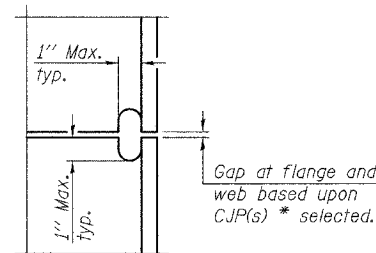


**DETAIL A**



**ELEVATION**

**COMPLETE PENETRATION WELD SPLICE**



**DETAIL C**

- \* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- \*\* Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- \*\*\* Interrupt welds 1/4" from end of each pile.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	06-00085-00-BR	COLES	16	14
STA. 14+00		TO STA. 15+80		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

**HOLCOMB FOUNDATION ENGINEERING INC.**  
P.O. Box 88 618-529-5262  
Carbondale, Il. 62903 618-457-8991 fax

Page 1 of 2

**Bridge Foundation Boring Log**

Project: H-06298 Bridge Jackson Avenue Bridge Date: 12/07/06  
Section: \_\_\_\_\_ Station \_\_\_\_\_  
Route: \_\_\_\_\_ Bored by: D. Russell  
County: Coles Checked By: J. Holcomb

Boring No: <u>1</u>	Station: _____	Offset: _____	Elevation			Qu tsf			w %			Surface Water Elev. _____	Ground Water Elev. During Drilling <u>630.4</u>	Upon Completion <u>plugged</u>	
			N	Q	U	N	Q	U	N	Q	U				
Ground Surface <u>636.4</u>			0												
Dark Brown LOAM (Topsoil)															
<u>634.9</u>															
Gray Sandy CLAY (A-6)				4	0.65	16									
<u>630.4</u>				2	--	17									
Gray Silty CLAY to Sandy CLAY (A-6)				21	6.18	10									
<u>627.4</u>															
Gray Fine SAND (A-2-4)				23	--	18									
<u>625.4</u>				14	2.48	17									
Gray CLAY (A-6) with sand				9	1.95	20									
<u>619.9</u>				10	1.78	17									
Gray Sandy CLAY (A-6) with pebbles				22	4.35	12									
<u>602.9</u>				44	2.88	12									
Brown Mottled Gray Silty CLAY (A-6) w/ sand															
<u>597.9</u>															
Brown to Gray Weathered SHALE															
<u>592.9</u>															
Gray SHALE															
<u>586.9</u>															
Gray SHALE with limestone fragments															
<u>582.4</u>															
End of Boring @ -54.0'															

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"  
Qu-Unconfined Compressive Strength in tons/sq.ft.  
w-Water Content-percentage of oven dry weight-%  
B = Bulge Failure  
S = Shear Failure  
E = Estimated Value  
P = Penetrometer

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Page 2 of 2

**Bridge Foundation Boring Log**

Project: H-06298 Bridge Jackson Avenue Bridge Date: 12/07/06  
Section: \_\_\_\_\_ Station \_\_\_\_\_  
Route: \_\_\_\_\_ Bored by: D. Russell  
County: Coles Checked By: J. Holcomb

Boring No: <u>7</u>	Station: _____	Offset: _____	Elevation			Qu tsf			w %			Surface Water Elev. _____	Ground Water Elev. During Drilling <u>630.4</u>	Upon Completion <u>plugged</u>	
			N	Q	U	N	Q	U	N	Q	U				
shale (continued)															
<u>586.9</u>															
Gray SHALE with limestone fragments				144	2.25	13									
<u>582.4</u>															
End of Boring @ -54.0'															

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"  
Qu-Unconfined Compressive Strength in tons/sq.ft.  
w-Water Content-percentage of oven dry weight-%  
B = Bulge Failure  
S = Shear Failure  
E = Estimated Value  
P = Penetrometer

PLOT DATE = 8/25/2007  
PLOT SCALE = 20:000  
USER NAME = USER  
C:\Users\jackson\Documents\Jackson Ave Bridge\Drawings\SOIL BORINGS.dwg

**THE UPCHURCH GROUP**  
architects engineers surveyors  
HILLSIDE, IL. (708) 449-2321  
MATTOON, IL. (217) 236-3177

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION SOIL BORINGS JACKSON AVE. OVER TOWN BRANCH CREEK SECTION 06-00085-00-BR CITY OF CHARLESTON STA. 14+95.17 STRUCTURE NO. 015-6340
NAME	DATE	

SCALE: VERT. \_\_\_\_\_  
HORIZ. \_\_\_\_\_  
DATE \_\_\_\_\_

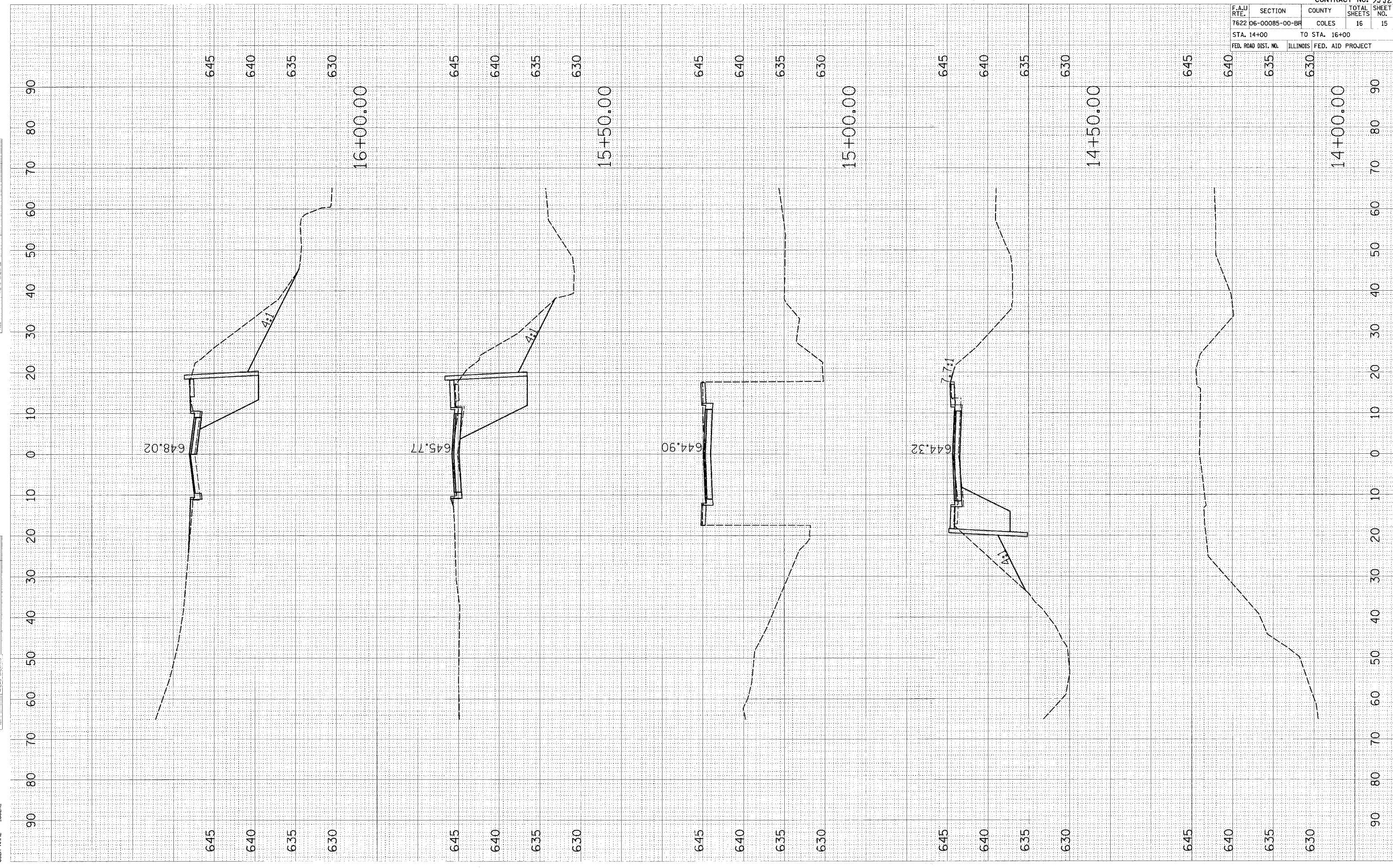
DRAWN BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622	06-00085-00-BR	COLES	16	15
STA. 14+00		TO STA. 16+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL		SUPERVISED	
SURVEY	NO.	PLOTTED	AREAS CHECKED
NOTE BOOK		DATE	

ORIGINAL		REVISED	
SURVEY	NO.	PLOTTED	AREAS CHECKED
DATE		DATE	

PLOT DATE = 6/26/2007  
 PLOT SCALE = 1/8"=1'-0"  
 USER NAME = JUSER



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7622 06-00085-00-BR	COLES		16	16
STA. 16+50		TO STA. 17+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

DATE	BY	DESCRIPTION

FINAL SURVEY	SURVEYED
NOTICE BOOK	PLOTTED
NO.	AREAS CHECKED

DATE	BY	DESCRIPTION

ORIGINAL SURVEY	SURVEYED
NOTICE BOOK	PLOTTED
NO.	AREAS CHECKED

PLOT DATE = 6/25/2007  
 PLOT SCALE = 1/8"=1'-0"  
 USER NAME = JUSER

