

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

**PROPOSED  
 HIGHWAY PLANS**

FAI 70 (I 70)  
 D-7 WEIGH STATION REPAIRS 2009

**NEW SCALES, REPAIR SCALE PIT AND APPROACHES  
 FAYETTE COUNTY**

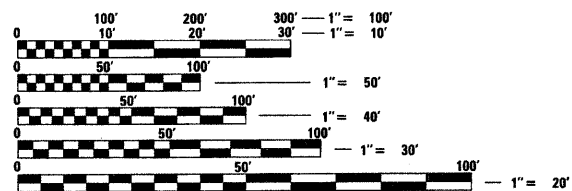
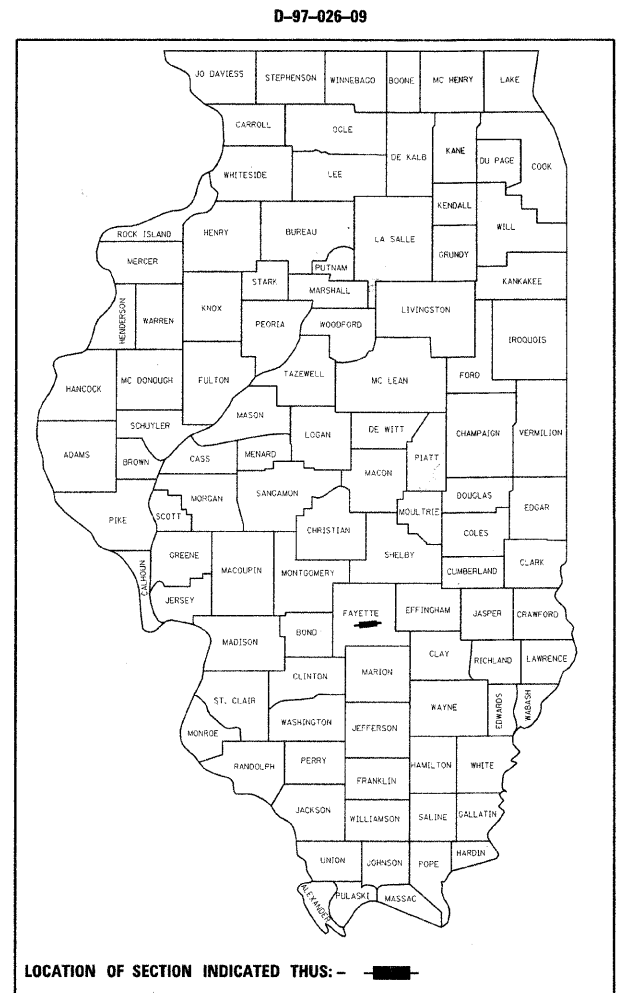
C-97-053-09

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70		Fayette	8	1
		ILLINOIS	CONTRACT NO. 74370	

• D-7 WEIGH STATION REPAIRS 2009

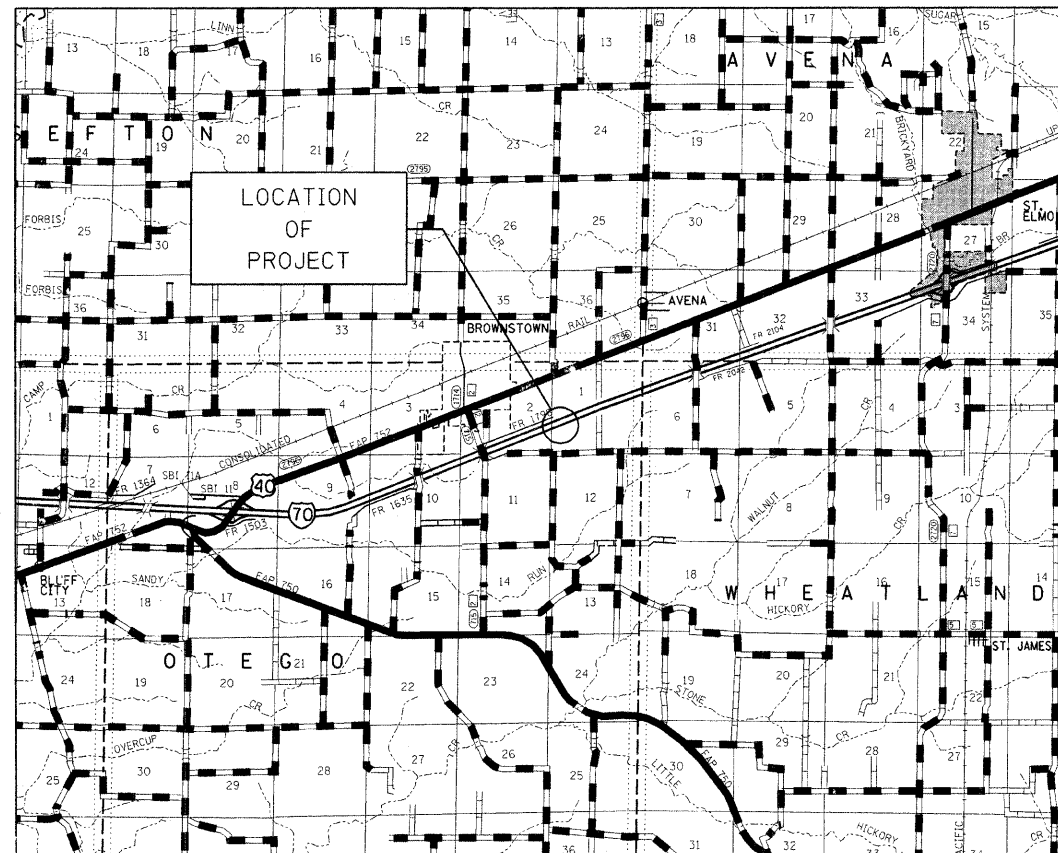
FOR INDEX OF SHEETS, SEE SHEET NO. 2

ADT = 21,600



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

J.U.L.I.E.  
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
 1-800-892-0123  
 OR 811



PROJECT ENGINEER: MARK DAUGHERTY  
 PROJECT MANAGER: JOYCE HEMMEN

CONTRACT NO. 74370

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED April 5 20 09

Raymond L. Sindell  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 8, 2009  
Charles G. Ingersoll  
 ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 2009  
Christine M. Reed  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS**

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" INDICATED ON THE CHECK SHEET, AND "THE SPECIAL PROVISIONS" INCLUDED IN THE PROPOSAL.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF REMOVING EXISTING CONCRETE DECK, STRUCTURAL STEEL BEAMS AND SCALES, REMOVE AND REPLACE BACK WALL, REMOVE AND REPLACE APPROACH PAVEMENTS, INSTALL NEW WEIGH-TRONIX SCALE AND ANY OTHER WORK NECESSARY TO COMPLETE THIS SECTION.

DURING THE REPAIR OF THE SCALE PIT, THE PIT SHALL BE CLEANED OUT BY THE CONTRACTOR AND APPROVED BY THE RESIDENT ENGINEER. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THIS WORK.

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>TITLE</u>
1	COVER SHEET AND INDEX OF SHEETS
2	INDEX OF SHEETS AND GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	GENERAL DATA
5	GENERAL PLAN AND ELEVATION
6	CONCRETE REMOVAL DETAILS
7	CONCRETE BACKWALL DETAILS
8	APPROACH PAVEMENT DETAILS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET OF THE PLANS.

000001-05	
001001-02	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	AREAS OF REINFORCEMENT BARS
701901-01	DECIMAL OF AN INCH AND OF A FOOT TRAFFIC CONTROL DEVICES

FILE NAME =	USER NAME = steffennk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES &amp; INDEX OF SHEETS</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pwwork\pwidot\STEFFENK\08130057\0	74370-shr-cover.dgn	DRAWN -	REVISED -			70		Fayette	8	2
PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -				CONTRACT NO. 74370				
PLOT DATE = 4/2/2009	DATE -	REVISED -				SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT	

SUMMARY OF QUANTITIES			100% STATE	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	Y222		
42001300	PROTECTIVE COAT	SQ YD	57	57		
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1		
50102400	CONCRETE REMOVAL	CU YD	27.1	27.1		
50200100	STRUCTURE EXCAVATION	CU YD	4.3	4.3		
50300225	CONCRETE STRUCTURES	CU YD	4.3	4.3		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	24.2	24.2		
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	460	460		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5740	5740		
70103800	TRAFFIC CONTROL (SPECIAL)	L SUM	1	1		
Z0025710	FURNISHING AND INSTALLING STATIC SCALE COMPONENTS	L SUM	1	1		
67100100	MOBILIZATION	L SUM	1	1		

FILE NAME =	USER NAME = steffenmk	DESIGNED -	REVISED -
es:\pw\work\NWIDOT\STEFFENMK\10130057\0	74370-shl-saq.dgn	DRAWN -	REVISED -
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 4/2/2009	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TO	•	Fayette	8	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74370	

Existing Structure: Weigh Station at Brownstown was originally built in 1969 as F.A.I. Route 70, Section (26-4)WS-1, Project I-70-3(69) 70 Fayette County. The existing weigh scales shall be removed and replaced. See Scope of Work. Traffic will be detoured.

STATE OF ILLINOIS  
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**GENERAL NOTES**

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

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.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

Reinforcement Bars designated (E) shall be epoxy coated.

**INDEX OF SHEETS**

1. General Data
2. General Plan and Elevation
3. Concrete Removal Details
4. Concrete Backwall Details
5. Approach Pavement Details

**SCOPE OF WORK**

1. Remove existing concrete deck, structural steel beams, and scales.
2. Remove and replace 4'-6" depth of East Approach back wall and 3'-0" depth of West Approach back wall.
3. Remove and replace 30'-0" length of East and West Approach pavements.
4. Install new Weigh-Tronix Scales.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.		4.3	4.3
Concrete Structures	Cu. Yd.		4.3	4.3
Furnishing and Erecting Structural Steel	Pound		460	460
Protective Coat	Sq. Yd.		57	57
Reinforcement Bars, Epoxy Coated	Pound		5740	5740
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		27.1	27.1
Furnishing and Installing Static Scale Components	L.Sum	1.0		1.0
Concrete Superstructure	Cu. Yd.	24.2		24.2

**LOADING HS20-44**

No future wearing surface allowed

**DESIGN SPECIFICATIONS**

2002 AASHTO

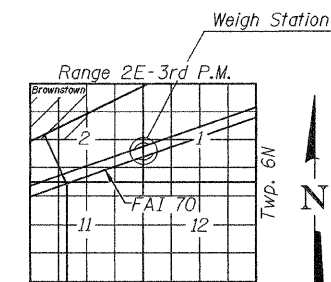
**DESIGN STRESSES**

NEW CONSTRUCTION

- $f'_c = 3,500$  psi (Deck and Pit)
- $f_y = 60,000$  psi (Reinforcement)
- $f_y = 36,000$  psi (Structural Steel AASHTO M270 Grade 36)

**FIELD UNITS (WORKING STRESSES)**

- $f_c = 1,000$  psi (Pit)
- $f_s = 20,000$  psi (Reinforcement)
- $f_s = 20,000$  psi (Structural Steel)



**LOCATION SKETCH**

**GENERAL DATA**  
**STA. 905+34.94 (E.B.)**  
**BROWNSTOWN WEIGH STATION**

SHEET NO. 1	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	70	D-7 WEIGH STATION	FAYETTE	8	4
5 SHEETS		CONTRACT NO. 74370			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

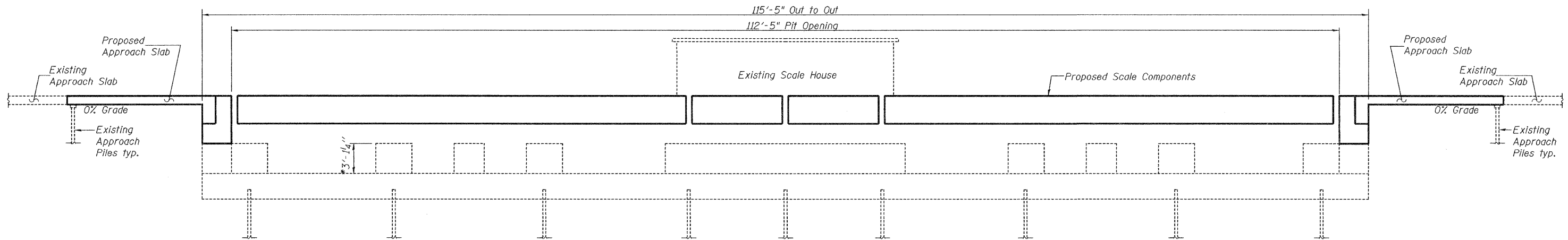
DESIGNED	<i>Patrick M. Johnson</i>
CHECKED	<i>Jay D. Edwards</i>
DRAWN	BECKY M. LEACH
CHECKED	<i>pmp JDE</i>

EXAMINED	<i>William J. Sullivan</i>	MAY 4, 2009
PASSED	<i>Robert S. Johnson</i>	ENGINEER OF BRIDGES AND STRUCTURES

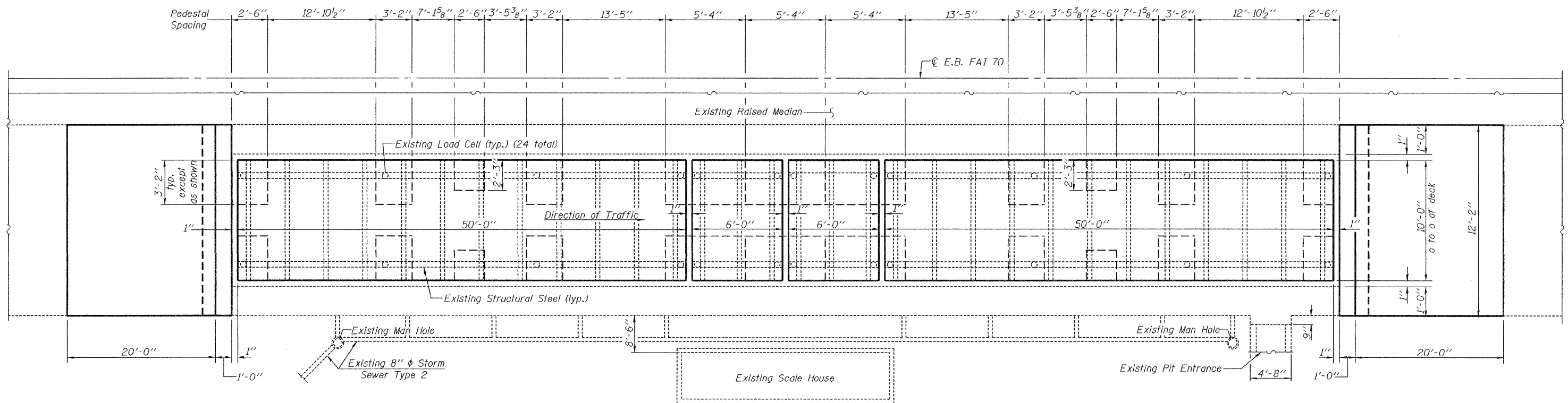


EXPIRES 11-30-2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**ELEVATION VIEW**



**PLAN**  
(E.B. Structure)

**GENERAL PLAN AND ELEVATION**  
**STA. 905+34.94 (E.B.)**


DESIGNED	Patrick M. Petrone
CHECKED	Jay D. Edwards
DRAWN	DECKY M. LEACH
CHECKED	PMP/JDE


EXAMINED	Thomas J. Domagala	MAY 4, 2009
PASSED	Ralph E. Anderson	

\*Height of Pedestals shall be field verified by Contractor prior to ordering of new scales.

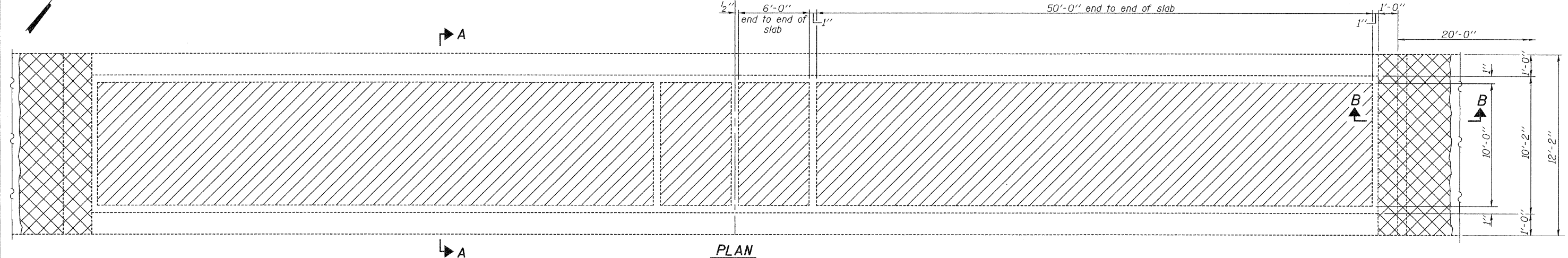
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	70	D-7 WEIGH STATION	FAYETTE	8	5
5 SHEETS	CONTRACT NO. 74370				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS  
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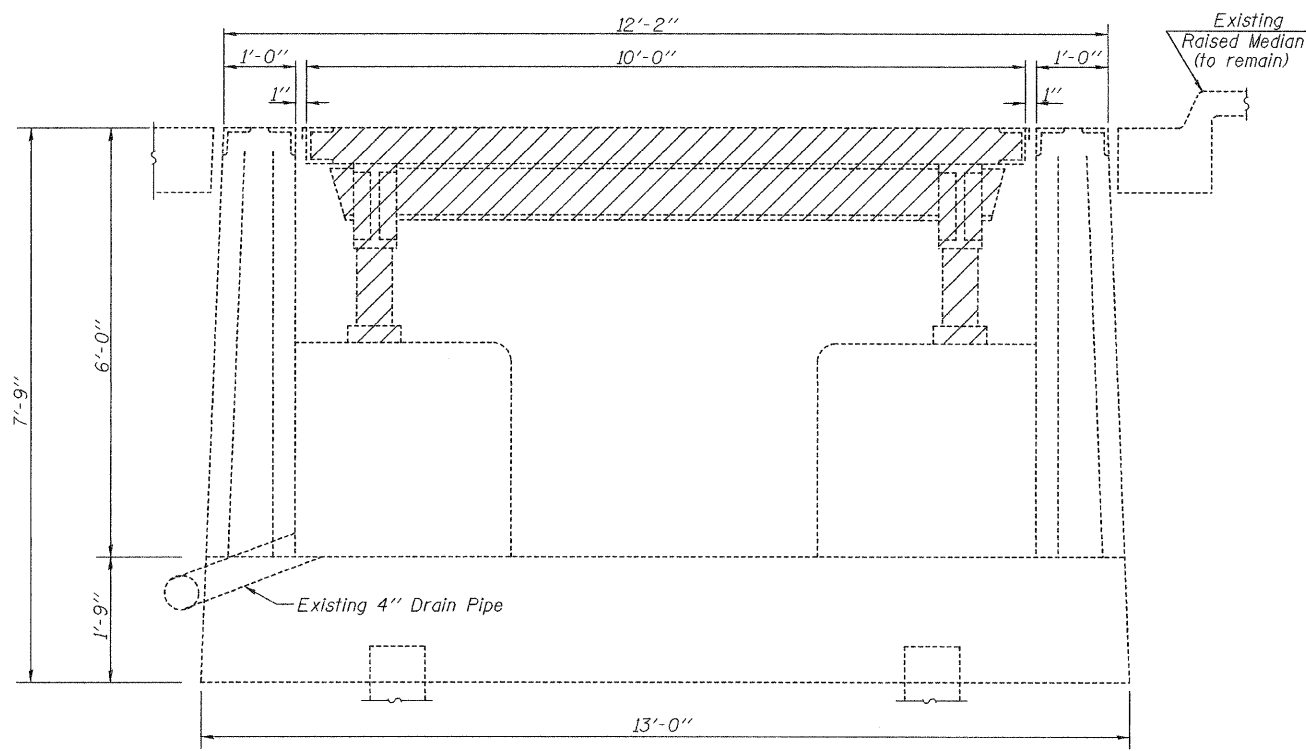
 Indicates limits to be removed as Removal of Existing Superstructures

 Indicates concrete to be removed as Concrete Removal.

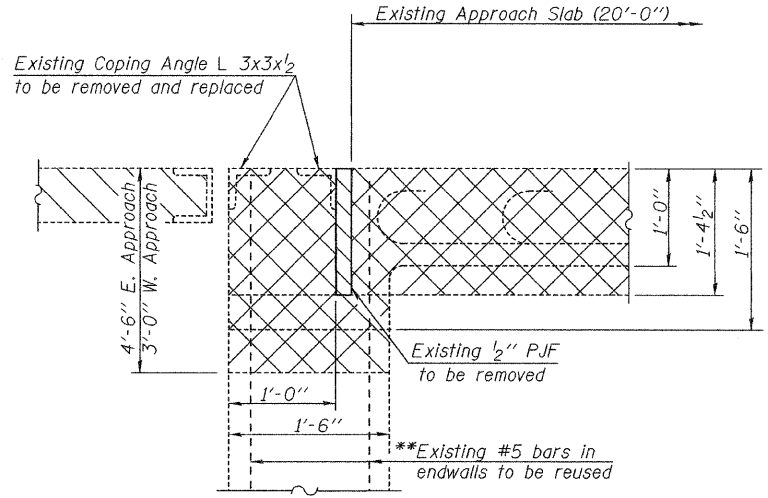
Symm. about  $\bar{C}$  (except for concrete pit entrance)



PLAN



SECTION A-A



SECTION B-B

\*\*Existing reinforcement extending into removed areas shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.

Note: Cost of removal of coping angles (L3x3x1/2) and P.J.F. included in Concrete Removal.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	4.4
Removal of Existing Superstructures	Each	1.0

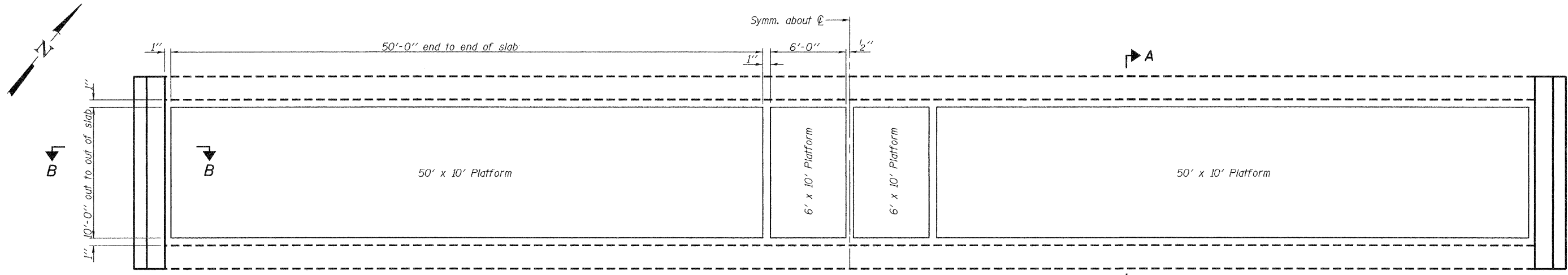
CONCRETE REMOVAL DETAILS  
STA. 905+34.94 (E.B.)

DESIGNED Patrick M. Petrone  
CHECKED Jay D. Edwards  
DRAWN BECKY M. LEACH  
CHECKED PMP/JDE

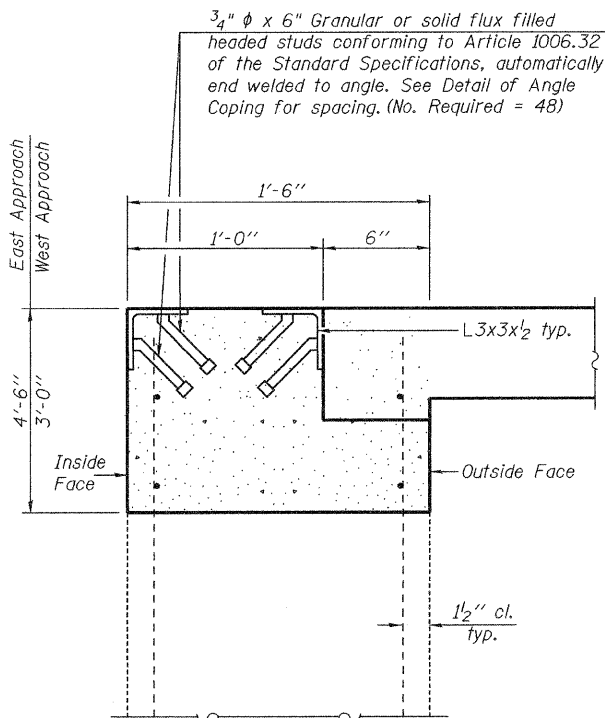
MAY 4, 2009  
EXAMINED *Thomas J. Domagalaki*  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. 3 5 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	70	D-7 WEIGH STATION	FAYETTE	8	6
FED. ROAD DIST. NO.			ILLINOIS	CONTRACT NO. 74370	
			FED. AID PROJECT		

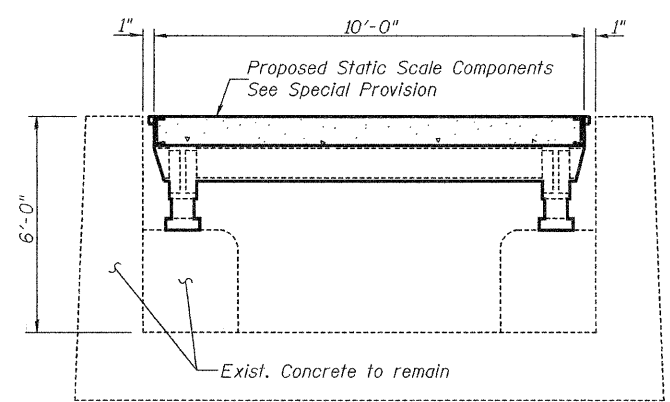
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



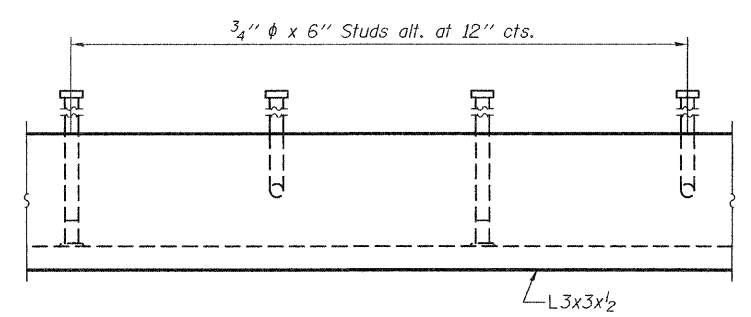
**PLAN**  
**STATIC SCALE COMPONENTS**  
(Pit entrance not shown)



3/4"  $\phi$  x 6" Granular or solid flux filled headed studs conforming to Article 1006.32 of the Standard Specifications, automatically end welded to angle. See Detail of Angle Coping for spacing. (No. Required = 48)



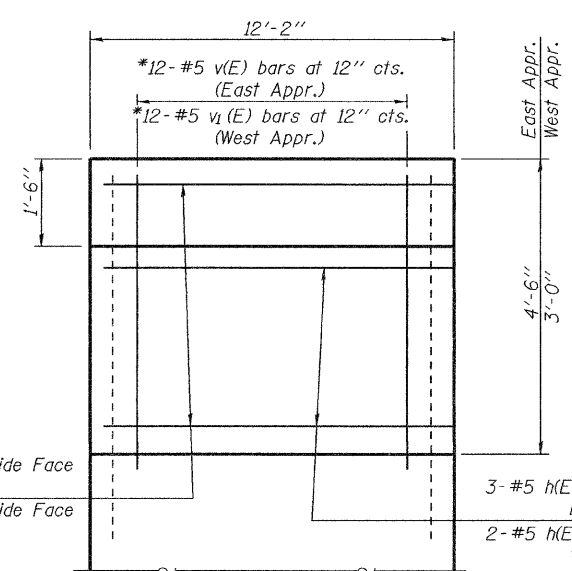
**SECTION A-A**



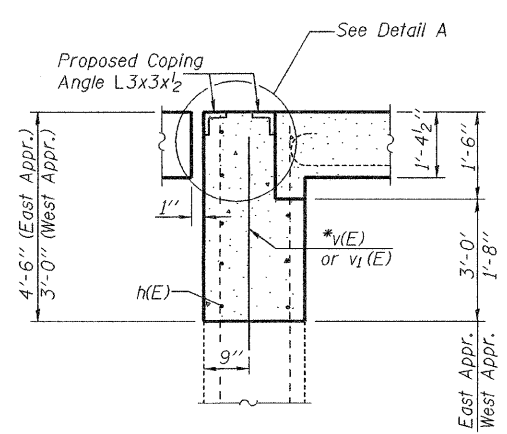
**DETAIL OF COPING ANGLE**

**MIN. BAR LAP**  
#5 Bar = 1'-8"

**DETAIL A**  
(Side walls shown, End walls similar.)  
After welding, angles and studs shall be galvanized according to AASHTO M111. No field painting required. Angle coping and studs paid for as Furnishing and Erecting Structural Steel. (44'-8" length of Angle Coping required)



**ELEVATION**  
(End View)



**SECTION B-B**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	14	#5	11'-11"	—
v(E)	12	#5	5'-1"	—
v1(E)	12	#5	3'-7"	—
Reinforcement Bars, Epoxy Coated			Pound	280
Concrete Structures			Cu. Yd.	4.3
Furnishing and Erecting Structural Steel			Pound	460

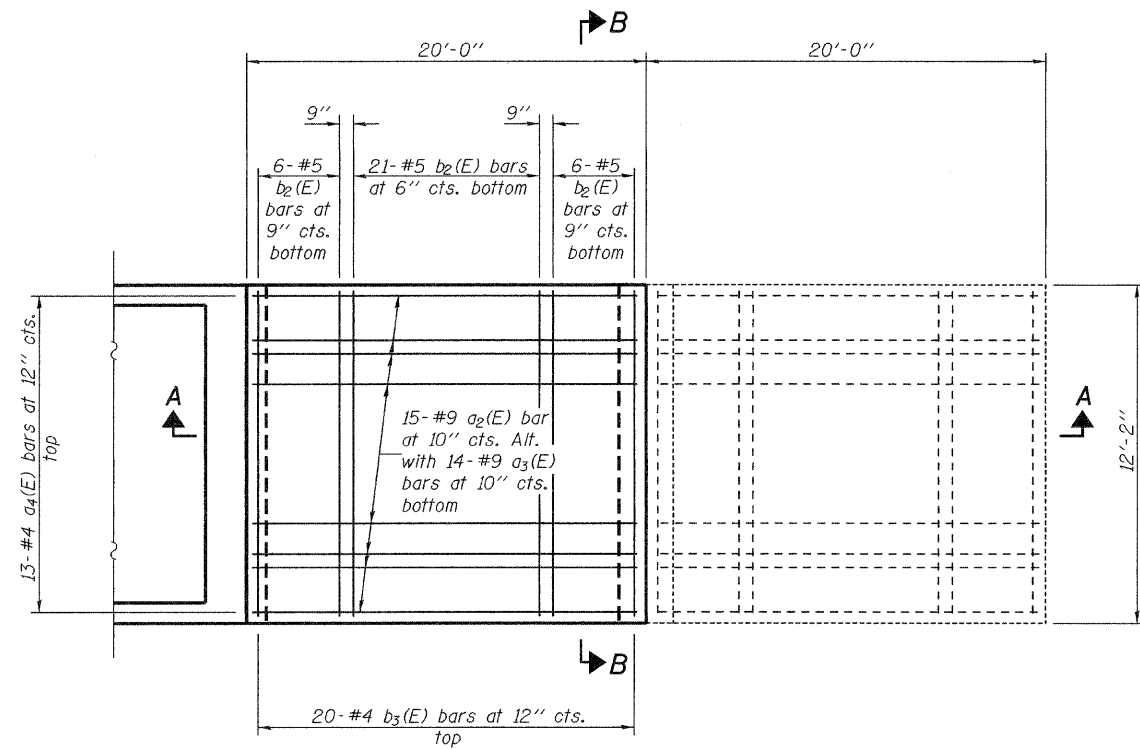
\*Drill 7/8"  $\phi$  x 9" hole and epoxy grout #5 v(E) and v1(E) bars as per Article 584 of the Standard Specifications.

**CONCRETE BACKWALL DETAILS**  
**STA. 905+34.94 (E.B.)**

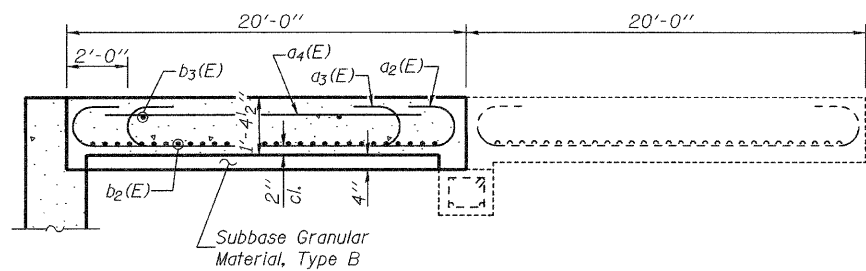
DESIGNED Patrick M. Petrone	MAY 4, 2009
CHECKED Jay D. Edwards	EXAMINED <i>Thomas J. Damagala</i>
DRAWN BECKY M. LEACH	PASSED <i>Ralph E. Anderson</i>
CHECKED PMP/JDE	

SHEET NO. 4 5 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	70	D-7 WEIGH STATION	FAYETTE	8	7
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
			CONTRACT NO. 74370		

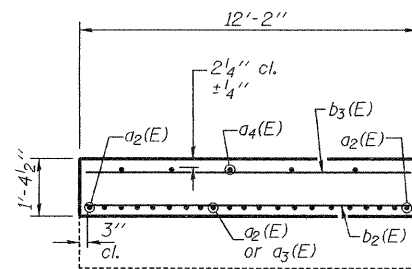
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



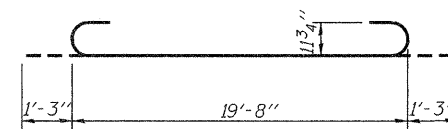
PLAN OF APPROACH SLAB



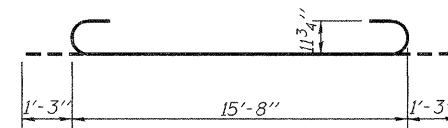
SECTION A-A



SECTION B-B



BAR a2(E)



BAR a3(E)

Note:  
Cost of Subbase Granular Material, Type B  
is included with Concrete Superstructures.

TWO APPROACH SLAB  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2(E)	30	#9	22'-2"	
a3(E)	28	#9	18'-2"	
a4(E)	26	#4	19'-9"	—
b2(E)	66	#5	11'-10"	—
b3(E)	40	#4	11'-10"	—
Reinforcement Bars, Epoxy Coated			Pound	5460
Concrete Superstructures			Cu. Yd.	24.2
Concrete Removal			Cu. Yd.	22.7

APPROACH SLAB  
STA. 905+34.94 (E.B.)

DESIGNED	Patrick M. Petrone
CHECKED	Jay D. Edwards
DRAWN	BECKY M. LEACH
CHECKED	PMP/JDE

EXAMINED	Thomas J. Demagala ENGINEER OF PUBLIC DESIGN
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

MAY 4, 2009

SHEET NO. 5 5 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	70	D-7 WEIGH STATION	FAYETTE	8	8
FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT	
			CONTRACT NO. 74370		