

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

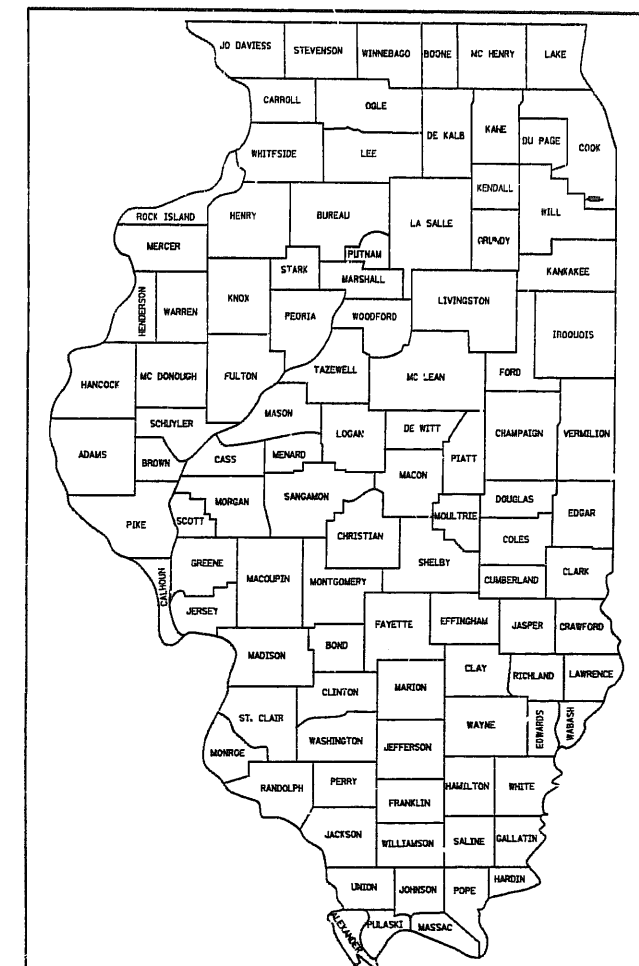
PROPOSED HIGHWAY PLANS

FAI ROUTE 57 AT 175th STREET THIN CONCRETE OVERLAY (STRUCTURE NO. 016-1095) SECTION: 0809-1014HB-1 COOK COUNTY C-91-280-97

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	COOK	24	1

* 0809-1014HB-1

D-91-280-97



LOCATION OF SECTION INDICATED THIS: - [shaded area] -

THIS IMPROVEMENT IS LOCATED
IN THE CITY OF COUNTRY CLUB HILLS



TRAFFIC DATA:

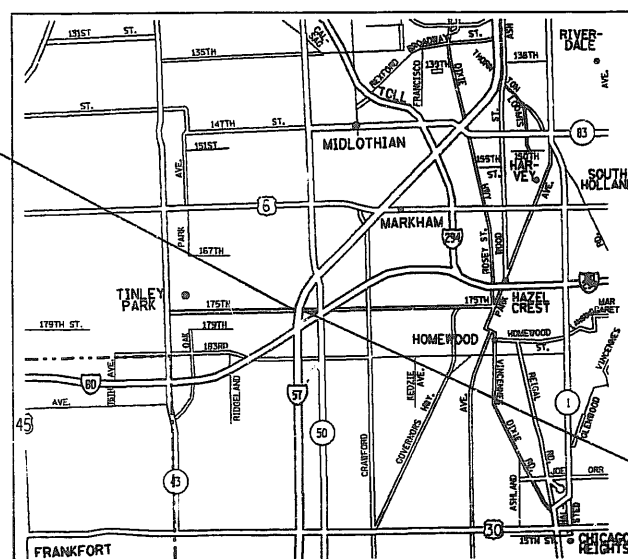
POSTED SPEED LIMIT = 45MPH
1995 ADT = 4,400

SCOPE OF WORK:

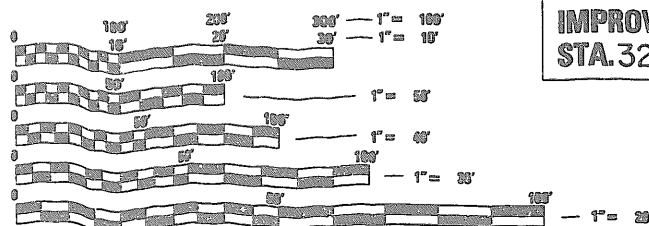
STRUCTURE NO. 016 - 1095

CONCRETE BRIDGE DECK SCARIFICATION,
BRIDGE DECK CONCRETE OVERLAY,
DECK SLAB REPAIR AND APPROACH SLAB
REPAIR, JACK AND REMOVE
EXISTING BEARINGS.

IMPROVEMENT ENDS
STA. 32+62



IMPROVEMENT BEGINS
STA. 21+56



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.

JULIE
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-832-9123

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Aug 9 1999
John P. Kowalski DISTRICT ENGINEER
December 3 1999
Bill Stender ENGINEER OF DESIGN AND ENVIRONMENT
December 3 1999
James P. Stief DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

NET LENGTH OF IMPROVEMENT = 1107 FEET = 0.210 MILES
GROSS LENGTH OF IMPROVEMENT: 1107 FEET = 0.210 MILES

CONTRACT NO. 68375

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	COOK	24	2
STA.		TO STA.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

* 0809-1014HB-1

D-91-280-97

INDEX OF SHEETS

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2	INDEX OF SHEETS, STATE STANDARD AND GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	DETOUR PLAN
5	ROADWAY AND PAVEMENT MARKING PLANS
6	COOK COUNTY HIGHWAY DEPARTMENT ROADWAY PLAN (FOR INFORMATION ONLY)
7-17	BRIDGE PLANS
18	DISTRICT ONE FREEWAY STANDARD ONE LANE CLOSURE
19	DISTRICT ONE FREEWAY STANDARD TWO LANE CLOSURE
20	TRAFFIC CONTROL AND PROTECTION FOR SIDEROADS, INTERSECTIONS, AND DRIVEWAYS
21	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
22	TYPICAL PAVEMENT MARKINGS
23	TRAFFIC DETAILS FOR FREEWAY SHOULDER CLOSURES
24	TEMPORARY INFORMATION SIGNING

STATE STANDARD

000001-03	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
420001-02	PAVEMENT JOINTS
420701	PAVEMENT FABRIC
442101-02	CLASS B PATCHES
701411	LANE CLOSURE MULTILANE, AT ENTRANCE, OR EXIT RAMP FOR SPEED > 45 MPH
702001-01	TRAFFIC CONTROL DEVICES
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS, RAISED REFLECTIVE PAVEMENT MARKERS

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED)

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND THE CITY OF CHICAGO

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

USE NO. 25 (#8) EPOXY-COATED TIE BARS CONFORMING TO ART. 1006.10(B)(2) OF THE STANDARD SPECIFICATIONS FOR LONGITUDINAL CONSTRUCTION JOINT GROUTED-IN-PLACE TIE BAR AS SHOWN ON STATE STANDARD 420001 AND FOR TIEING PC CONCRETE WIDENING TO EXISTING CONCRETE PAVEMENT AS SHOWN ON THE PLANS. THE TIE BARS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PAVEMENT ITEMS BEING CONSTRUCTED.

REVISIONS	
NAME	DATE

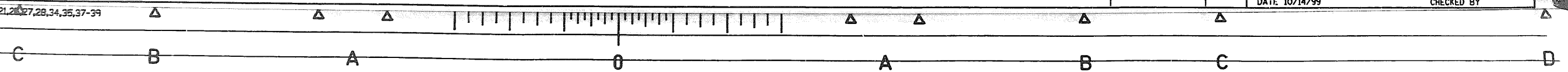
ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. ROUTE 57 AT 175 TH STREET
INDEX, STATE STANDARDS, & GENERAL NOTES

SCALE: VERT. _____
HORIZ. _____

DATE: 10/14/99

DRAWN BY _____
CHECKED BY _____



GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSION AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OF ORDERING OF MATERIALS. SUCH VARIATION SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT BID PRICE FOR THE WORK.

ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M-270, GRADE 36 UNLESS OTHERWISE SPECIFIED.

THE ENGINEER SHALL MARK THE ACTUAL DECK REPAIR LOCATIONS ON THE AS-BUILT PLANS.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

EXISTING REINFORCEMENT BARS EXTENDING INTO NEW CONSTRUCTION SHALL BE CLEANED, STRAIGHTENED, AND INCORPORATED INTO THE NEW CONCRETE. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN REMOVING EXISTING CONCRETE SO AS TO NOT DAMAGE EXISTING REINFORCEMENT. COST IS INCLUDED WITH "CONCRETE REMOVAL".

ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM. COST SHALL BE INCLUDED IN THE COST OF "CONCRETE REMOVAL".

THE PROTECTIVE SHIELD QUANTITY IS ESTIMATED. IT IS TO BE USED UNDERNEATH THE FULL DEPTH DECK PATCHING LOCATIONS AS DIRECTED BY THE ENGINEER.

THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHOULD TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.

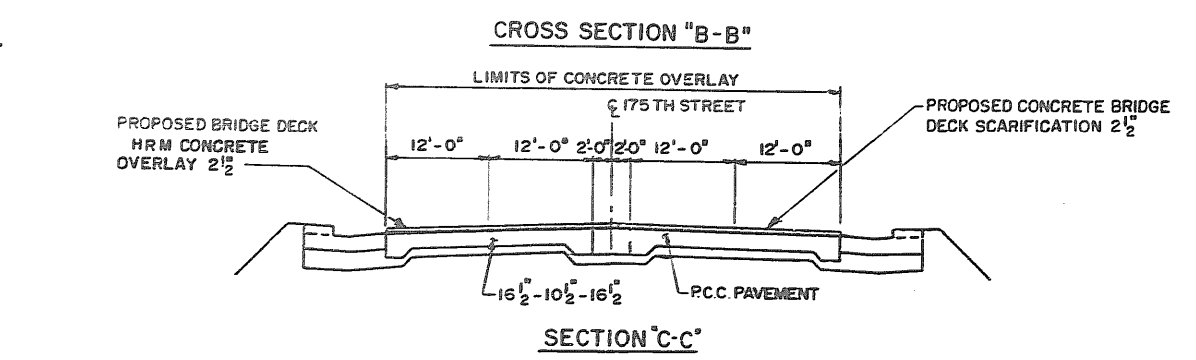
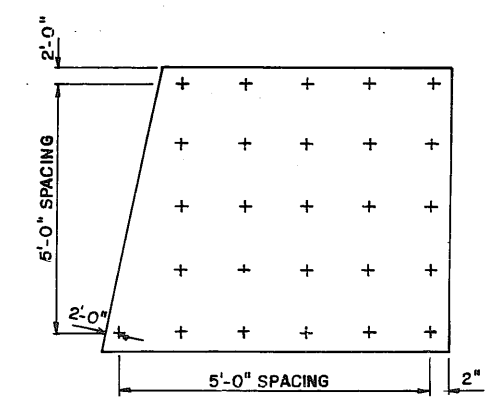
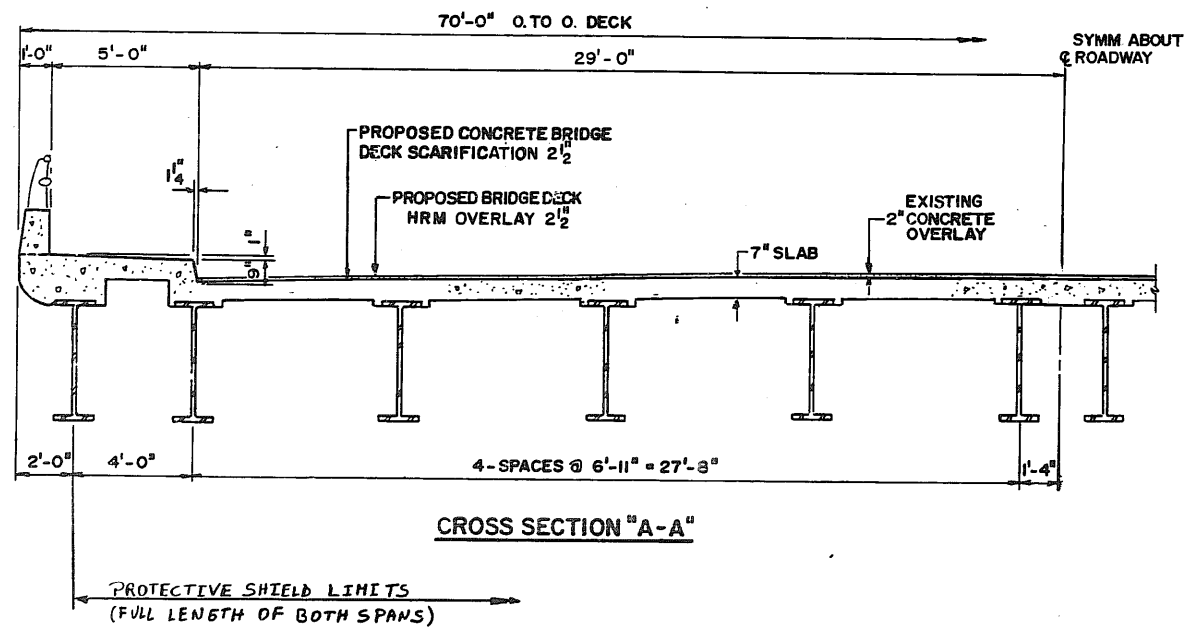
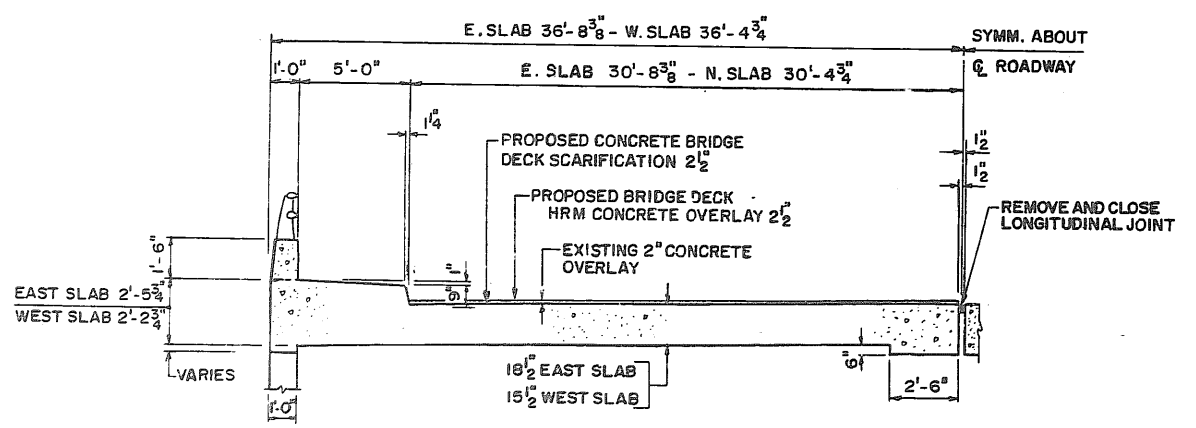
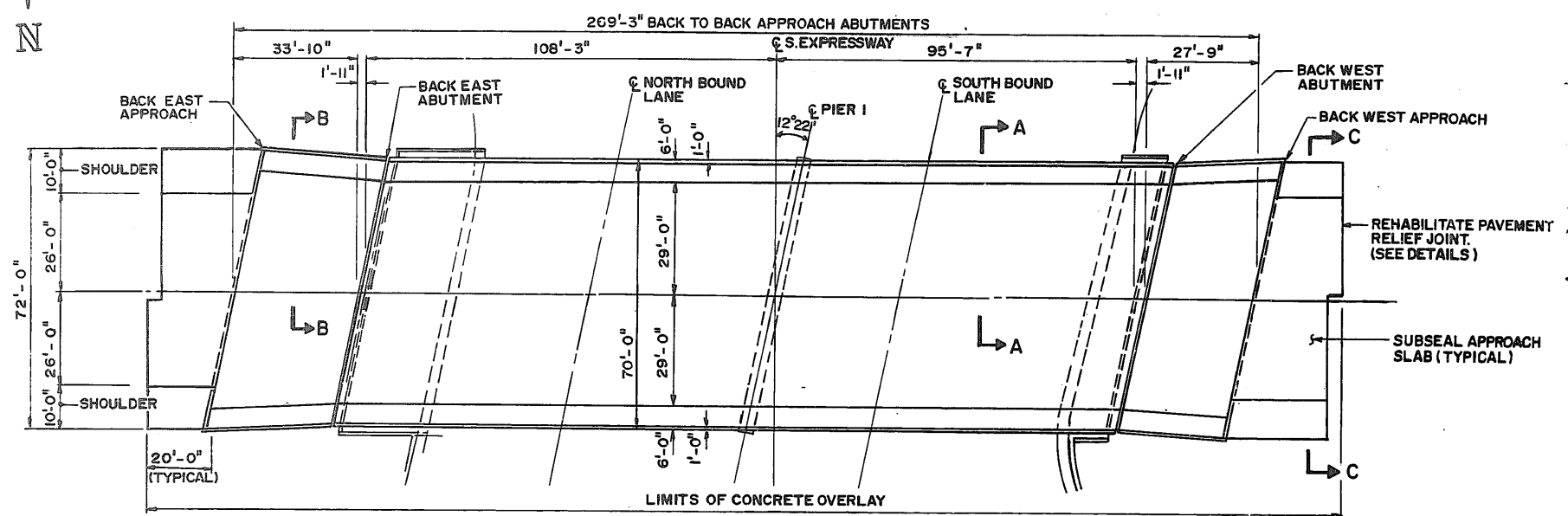
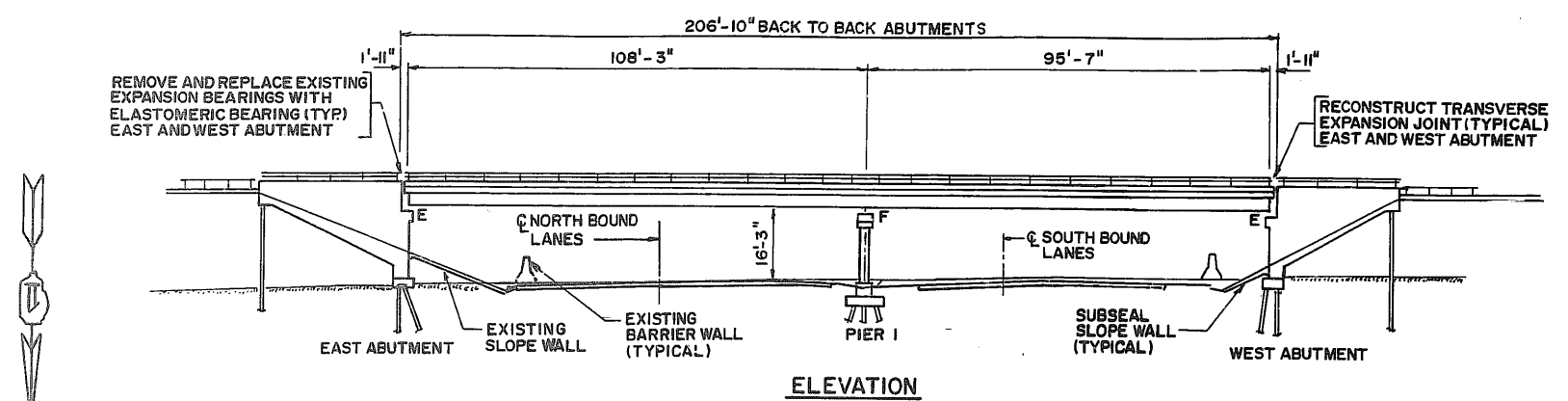
SUBSEALING OF CONCRETE SLOPEWALLS SHALL BE PERFORMED ACCORDING TO THE APPLICABLE REQUIREMENTS OF THE RECURRING SPECIAL PROVISION FOR "SUBSEALING OF CONCRETE PAVEMENTS."

EXISTING STRUCTURAL STEEL SHALL ONLY BE CLEANED AND PAINTED AS REQUIRED BY THE SPECIAL PROVISION "CLEANING AND PAINTING ADJACENT AREAS OF EXISTING STEEL STRUCTURES".

THE INORGANIC ZINC RICH PRIMER / ACRYLIC / ACRYLIC PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED. THE COLOR OF THE ACRYLIC FINISH COAT SHALL BE GRAY, MUNSELL NO. 5B 7/1. SEE SPECIAL PROVISION "CLEANING AND PAINTING NEW METAL STRUCTURES".

TOTAL BILL OF MATERIALS - BRIDGE

ITEM	UNIT	QUANTITY
REINFORCEMENT BARS (EPOXY COATED)	POUND	4990
CONCRETE SUPERSTRUCTURE	CU. YD.	26.7
CONCRETE REMOVAL	CU. YD.	27.6
CONCRETE BRIDGE DECK SCARIFICATION 2 1/2"	SQ. YD.	1960
BRIDGE DECK HRM CONCRETE OVERLAY 2 1/2"	SQ. YD.	1960
BRIDGE SIDEWALK REPAIR (PARTIAL DEPTH)	SQ. FT.	134
EARTH EXCAVATION	CU. YD.	60
DECK SLAB REPAIR (PARTIAL)	SQ. YD.	600
DECK SLAB REPAIR (FULL DEPTH - TYPE I)	SQ. YD.	100
DECK SLAB REPAIR (FULL DEPTH - TYPE II)	SQ. YD.	100
POROUS GRANULAR EMBANKMENT	TON.	10
PROTECTIVE SHIELD	SQ. YD.	1500
BRIDGE DECK GROOVING	SQ. YD.	1850
EPOXY CRACK SEALING	FOOT	200
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	17970
JACK AND REMOVE EXISTING BEARINGS	EACH	24
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	24
SLOPEWALL REMOVAL	SQ. YD.	12
SLOPEWALL 4"	SQ. YD.	15
ACCESS DOOR	EACH	2
FORMED CONCRETE REPAIR (≤ 5")	SQ. FT.	271
PIPE UNDER DRAINS, FABRIC LINED TRENCH, 6"	FOOT	145
APPROACH SLAB REPAIR (FULL DEPTH)	SQ. YD.	18
APPROACH SLAB REPAIR (PARTIAL DEPTH)	SQ. YD.	30
CONCRETE STRUCTURES	CU. YD.	2.5
EXPANSION JOINT REHABILITATION	FOOT	104
STONE RIPRAP, CLASS A3	SQ. YD.	90
FILTER FABRIC FOR USE WITH RIPRAP	SQ. YD.	90
PREFORMED JOINT SEAL 4"	FOOT	145
DRY GROUT SOLIDS	CU. FT.	4000
HOLES DRILLED	EACH	150



REVISIONS	
NAME	DATE
Tom M. Slattery	8-1999
Tom M. Slattery	9-1999
TMS	10-1999

ILLINOIS DEPARTMENT OF TRANSPORTATION

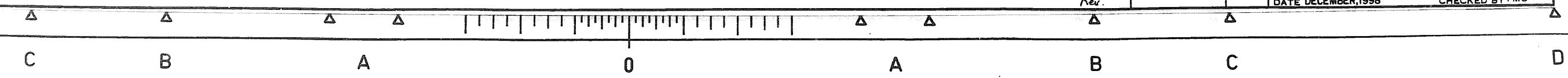
F.A.I. ROUTE 57 AT
175TH STREET

PLAN, ELEVATION AND CROSS SECTIONS
S.N. 016-1095

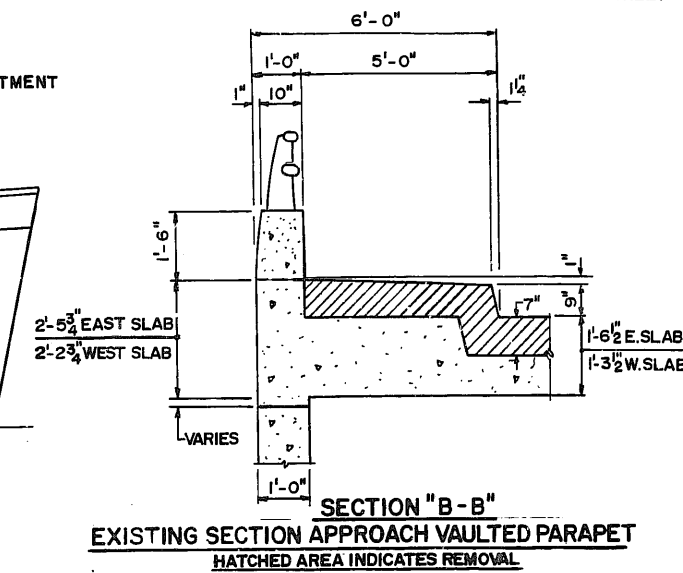
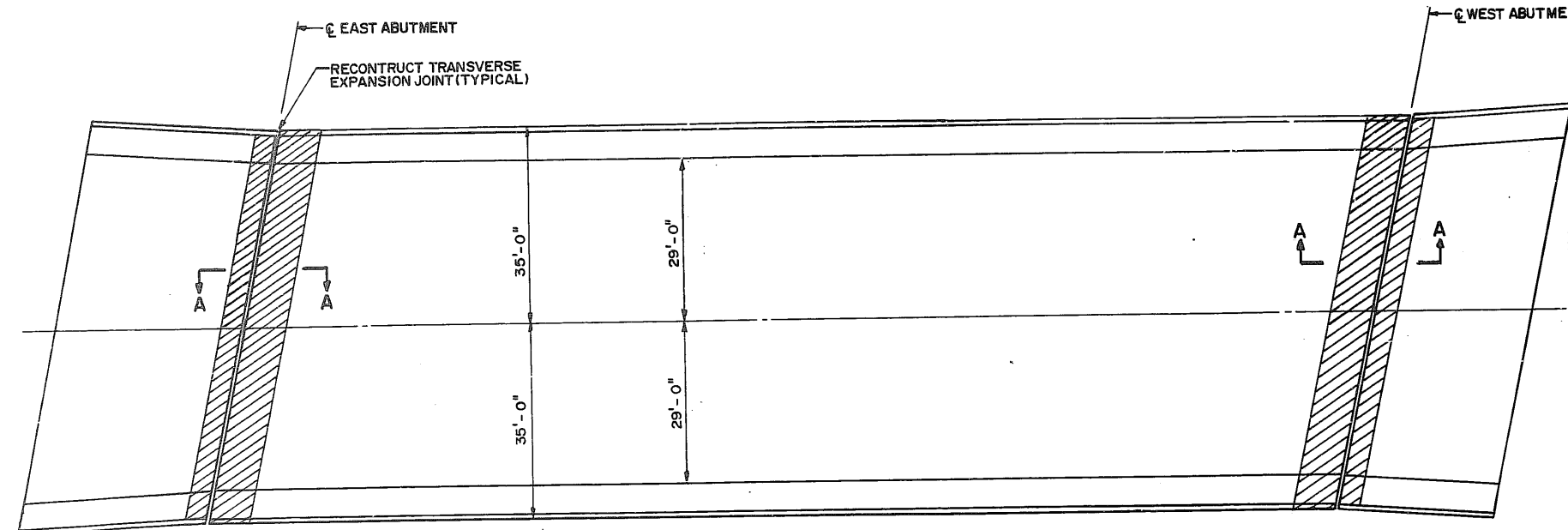
SCALE: VERT. _____
HORIZ. _____

DATE: DECEMBER, 1998

DRAWN BY: MVT
CHECKED BY: TMS



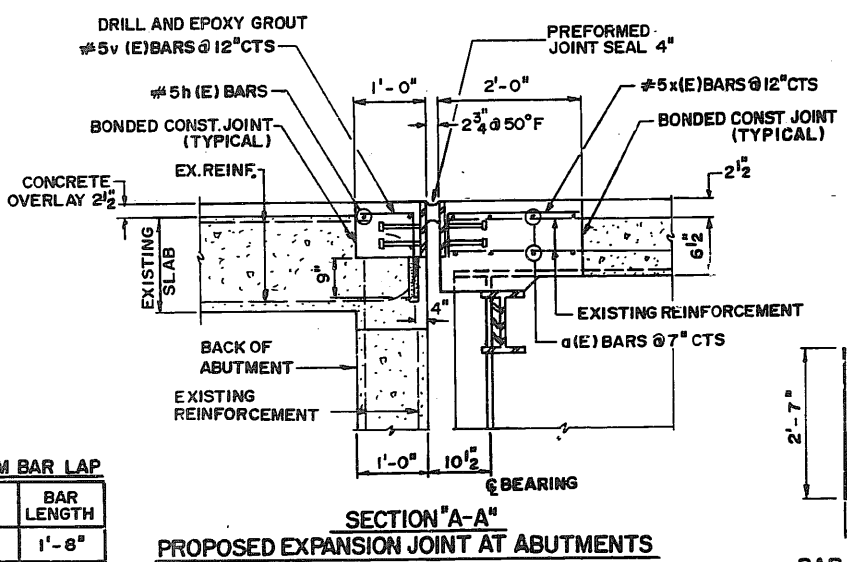
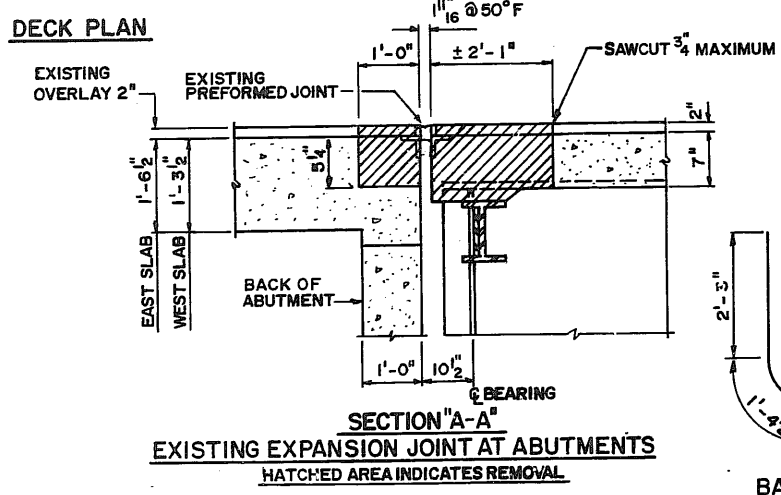
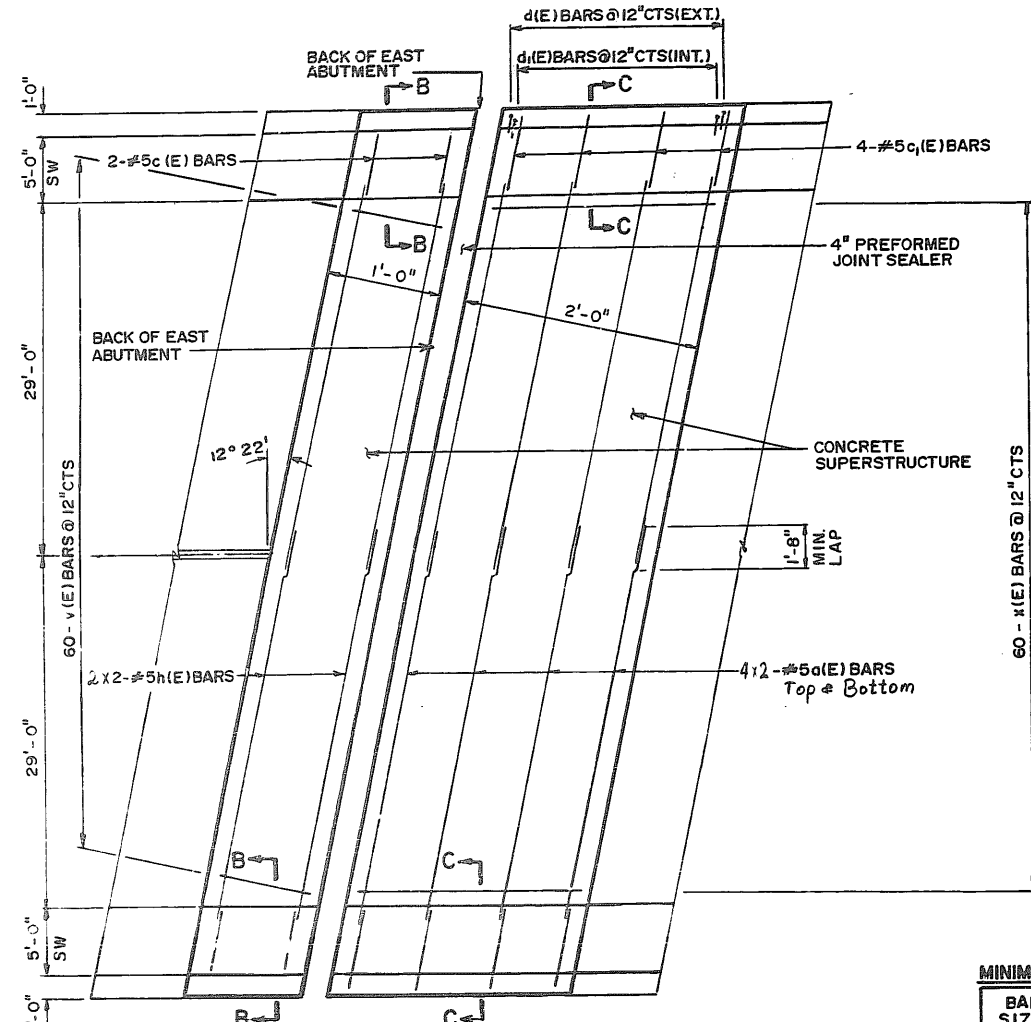
F.A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1618	*	COOK	24	8
STA.	TO STA.			
FED. ROAD DIST NO. 7	ILLINOIS	FED. AID PROJECT		
* 0809-1014HB-1				



BILL OF MATERIAL

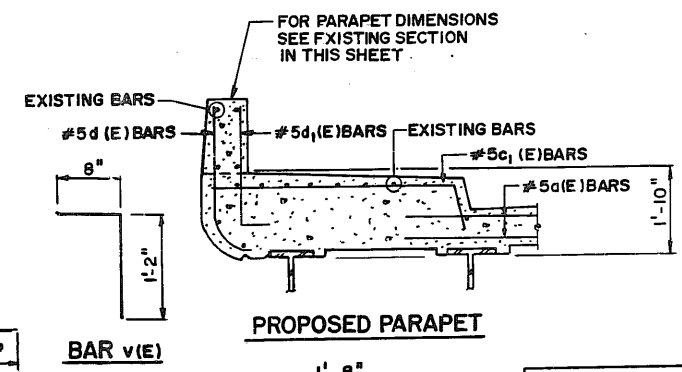
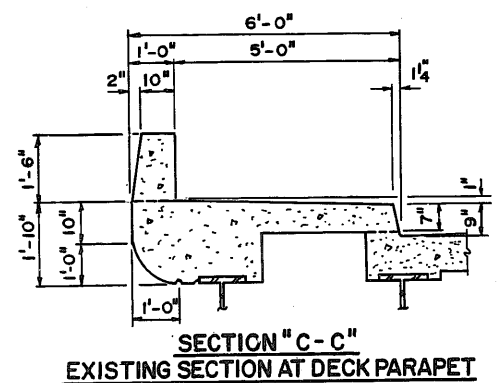
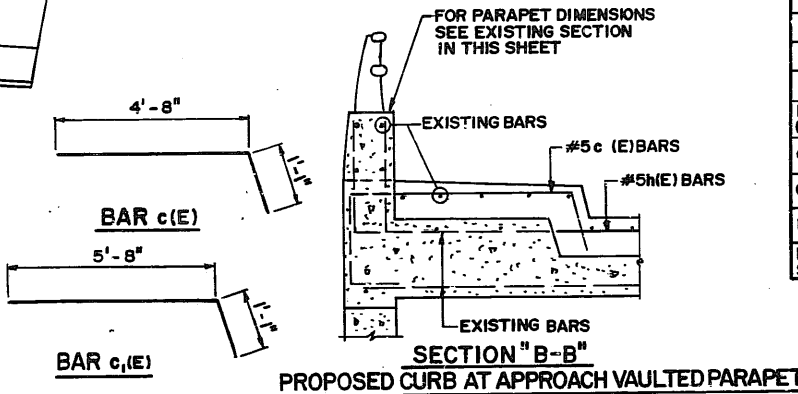
BAR	NO.	SIZE	LENGTH	SHAPE
a (E)	32	# 5	32'-0"	—
c (E)	8	# 5	5'-9"	┌
c ₁ (E)	16	# 5	6'-9"	┌
d (E)	16	# 5	3'-10"	┌
d ₁ (E)	16	# 5	3'-1"	┌
h (E)	8	# 5	32'-0"	—
x (E)	120	# 5	2'-1"	┌
v (E)	120	# 5	1'-10"	┌

REINFORCEMENT BARS (EPOXY COATED)	POUND	2100
CONCRETE REMOVAL	CU.YDS.	13.3
CONCRETE SUPERSTRUCTURE	CU.YDS.	17.1
PREFORMED JOINT SEAL 4"	FOOT	145
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	5490



MINIMUM BAR LAP

BAR SIZE	BAR LENGTH
# 4	1'-8"
# 5	2'-2"
# 6	2'-7"



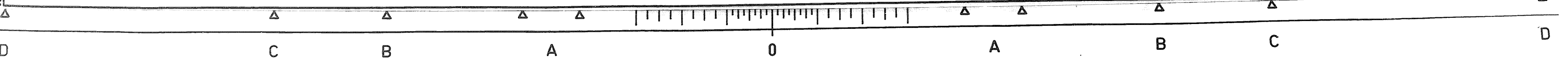
NOTE:
THE REINSTALLATION OF THE EXISTING HANDRAIL IN THE CONCRETE REMOVAL AREA IS INCLUDED IN THE COST OF CONCRETE SUPERSTRUCTURE.

BARS INDICATED THUS 2x2-#5 etc. INDICATES 2 LINES OF BARS WITH 2 LENGTHS PER LINE.

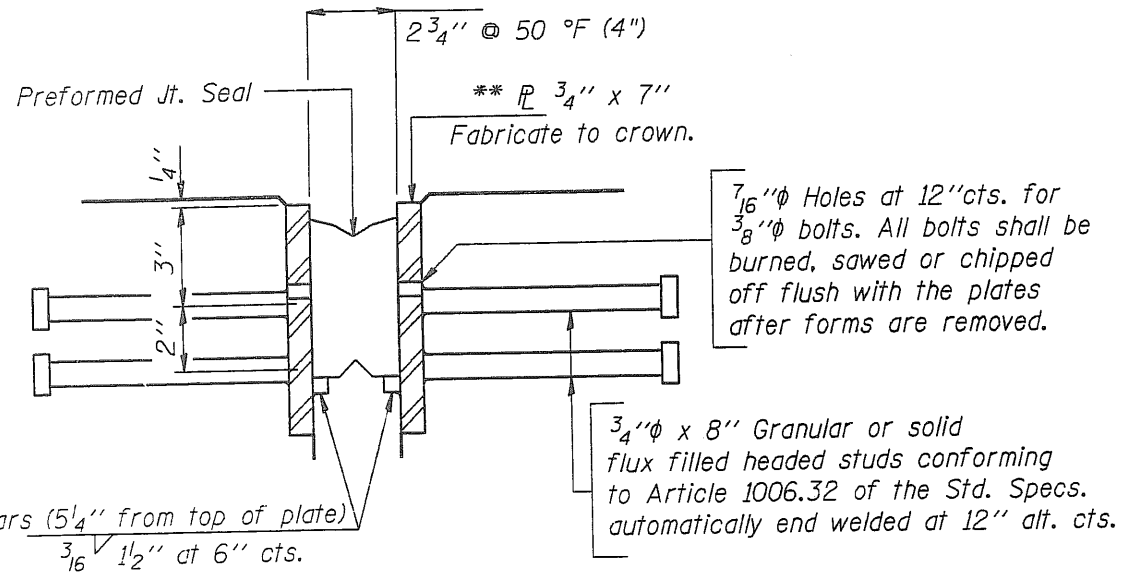
REVISIONS

NAME	DATE

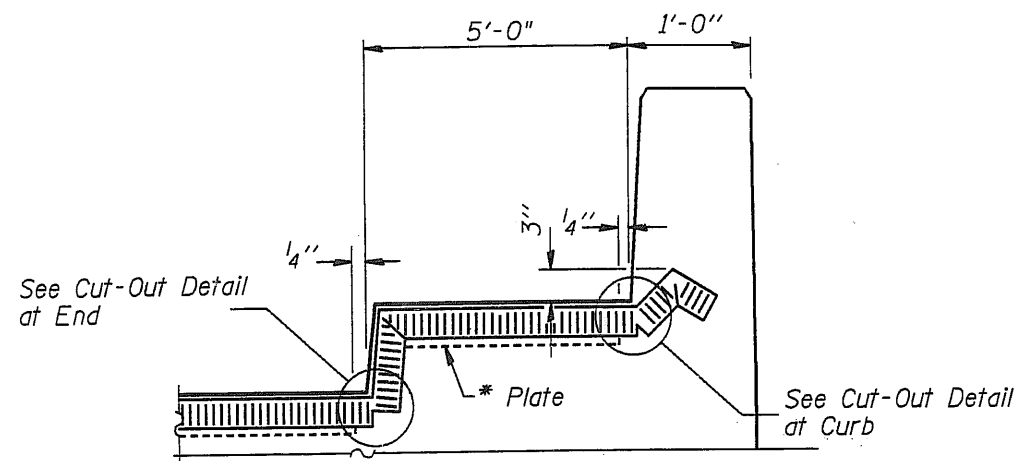
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 57 AT 175TH STREET
TRANSVERSE EXPANSION JOINT DETAIL AT EAST AND WEST ABUTMENT
 S.N.016-1095
 SCALE: VERT. HORIZ.
 DATE: DRAWN BY MVT CHECKED BY TMS



F. A. I. DIST.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1618	0809-1014HB-1	COOK	24	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ALLEYS	FED. AID PROJECT		



4" PREFORMED JOINT SEAL

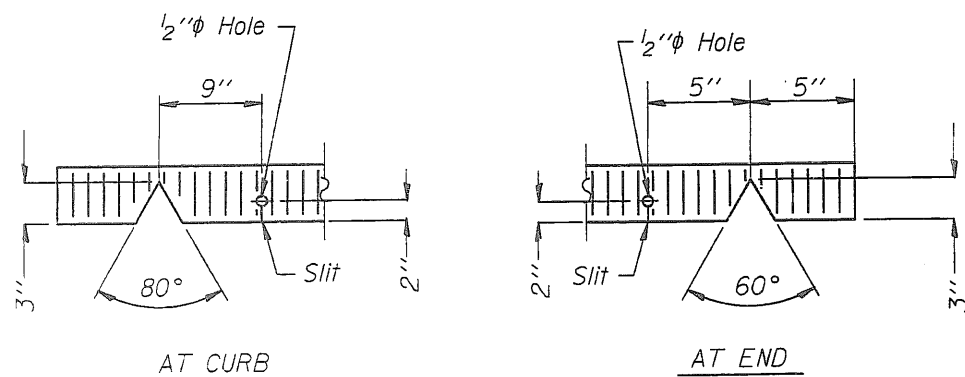


TYPICAL END OF SEAL TREATMENT

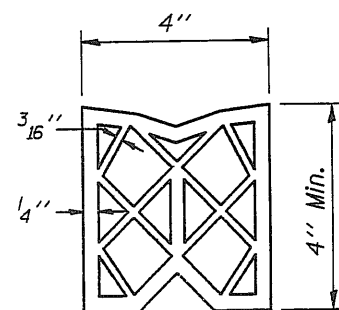
*Cut retainer bars in sidewalk 6" short of curb face

NOTES:

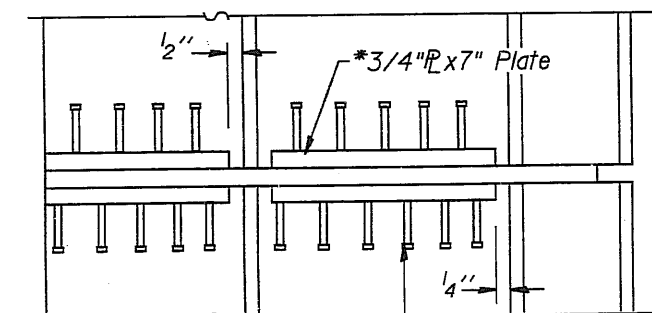
** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be $\frac{3}{16}$ ". Seal space with Silicone Sealant suitable for Structural Steel.
After fabrication all surface of the steel plates shall be given one shop coat of paint specified for structural steel. No field painting required.



SEAL CUT-OUT DETAIL



PREFORMED JOINT SEAL (4")

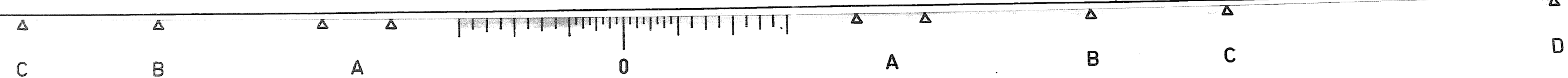


$\frac{3}{4}$ " ϕ x 8" Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs. automatically end welded at 12" alt. cts.

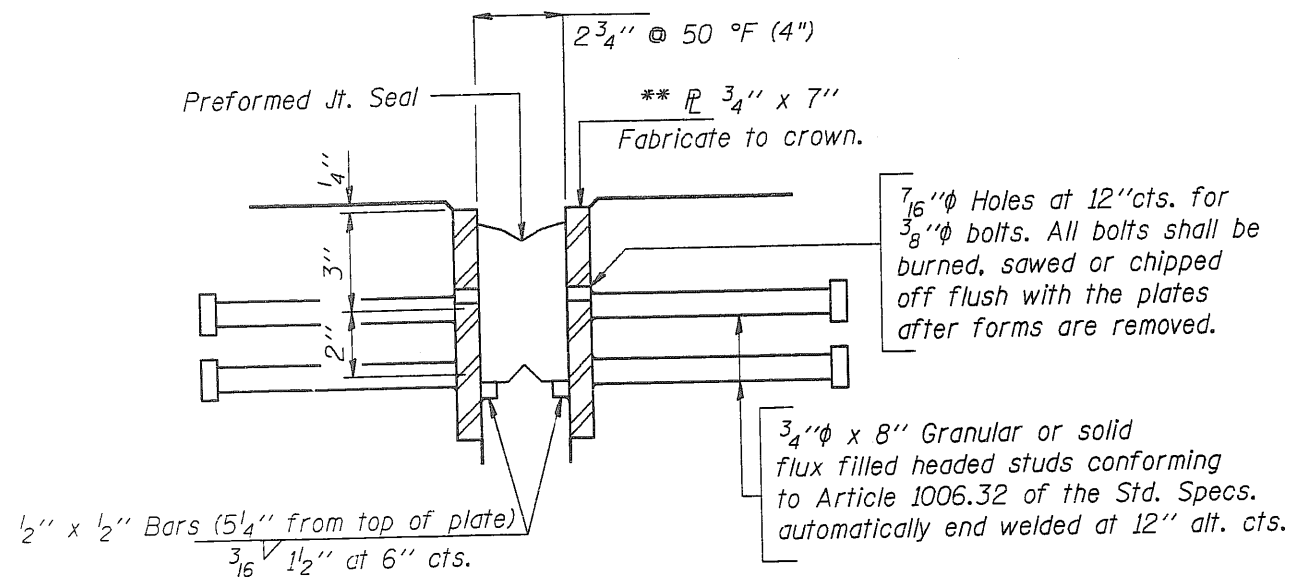
PLAN

REVISIONS	
NAME	DATE

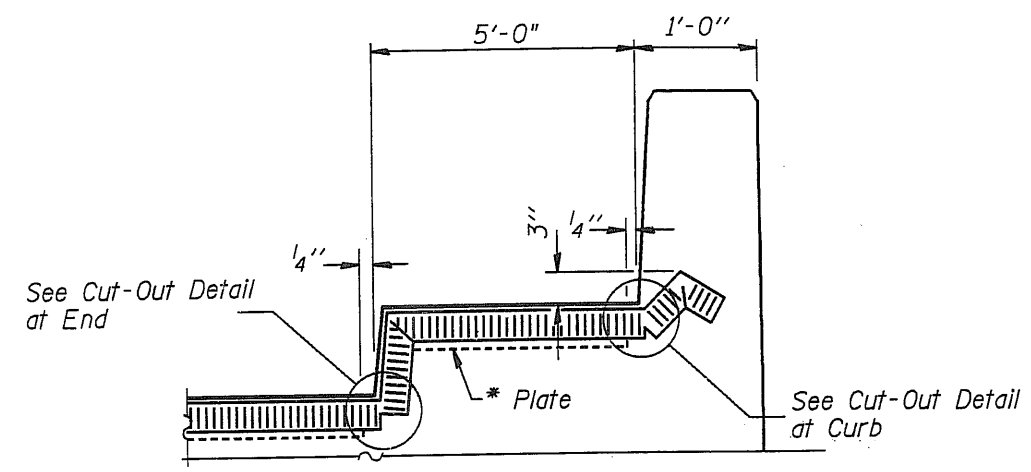
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 57 AT 175th ST.
PREFORMED JOINT SEAL
S.N. 016-1095
SCALE: NONE
DATE
DRAWN BY MYT
CHECKED BY TMS



P. A. I. DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1618	0809-1014HB-1	COOK	24	9
STA.	TO STA.			
FED. ROAD DIST. NO.	ALTERN.	FED. AID PROJECT		



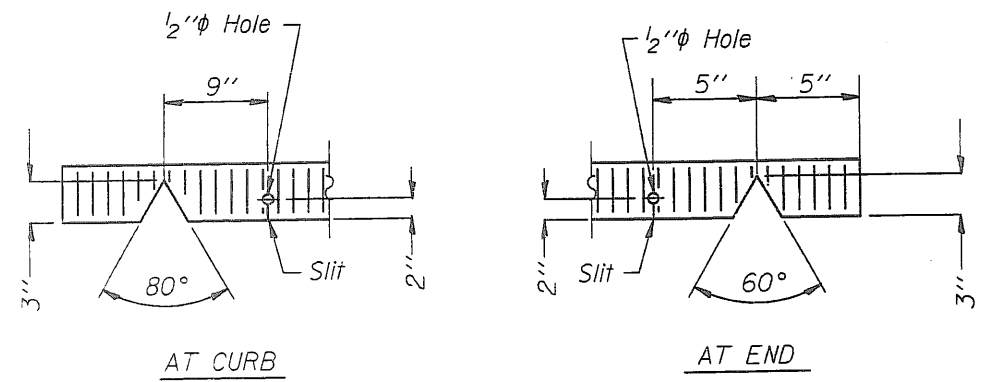
4" PREFORMED JOINT SEAL



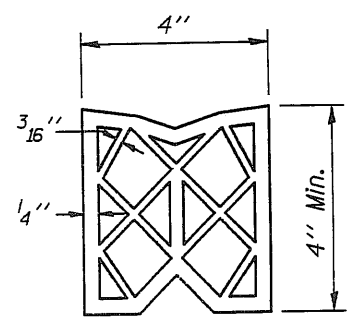
TYPICAL END OF SEAL TREATMENT

*Cut retainer bars in sidewalk 6" short of curb face

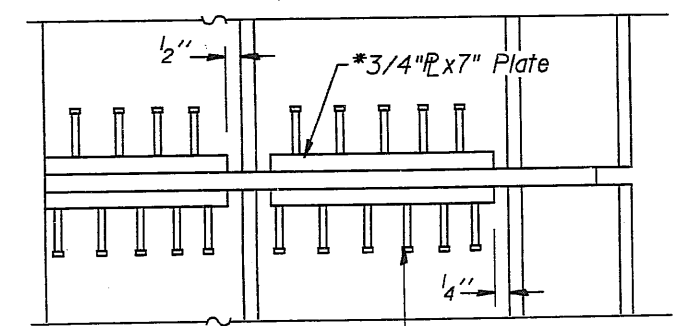
NOTES:
 ** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.
 After fabrication all surface of the steel plates shall be given one shop coat of paint specified for structural steel. No field painting required.



SEAL CUT-OUT DETAIL



PREFORMED JOINT SEAL (4")



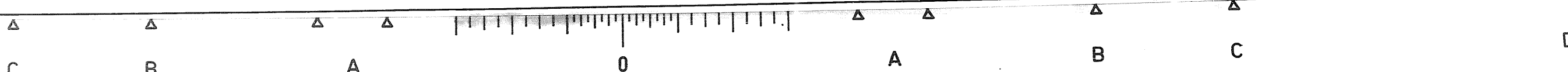
PLAN

3/4" φ x 8" Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs. automatically end welded at 12" alt. cts.

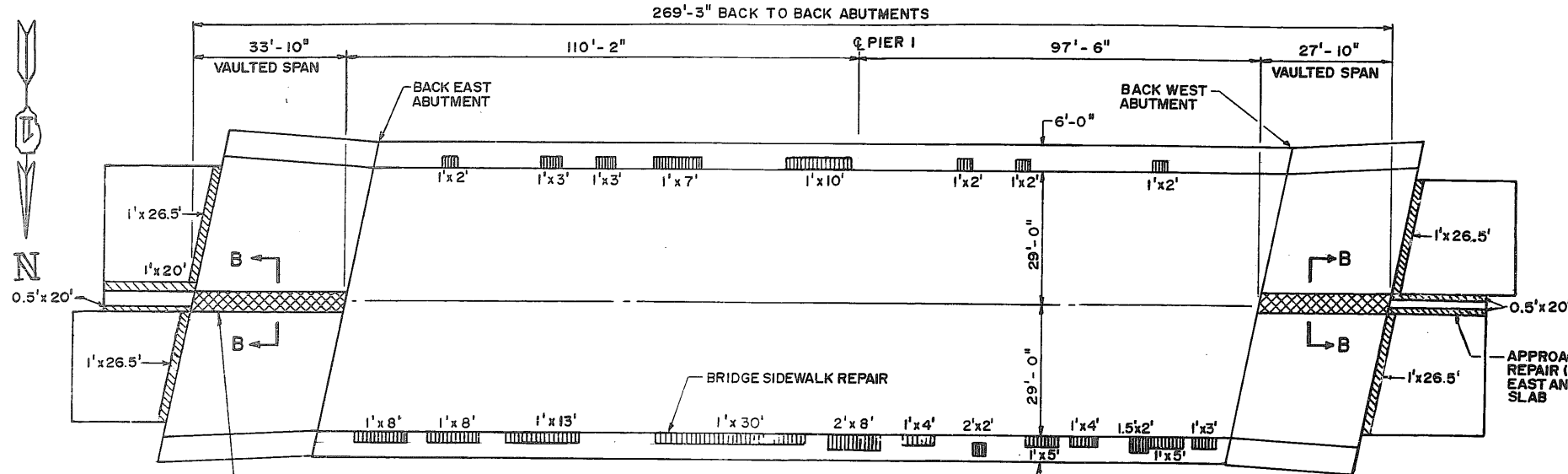
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 57 AT 175th ST.
 PREFORMED JOINT SEAL
 S.N. 016-1095
 SCALE: NONE
 DATE
 DRAWN BY MVT
 CHECKED BY TMS

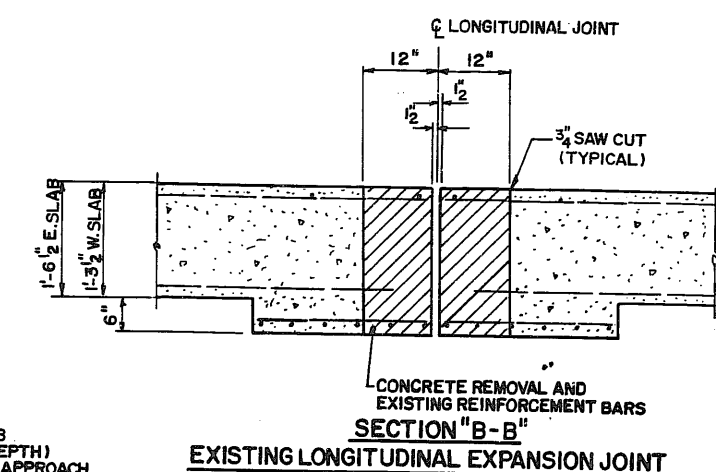
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F.A. FILE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1618	*	COOK	24	10
STA.	TO STA.			
FED. ROAD DIST NO 7	ILLINOIS	FED AID PROJECT		
*0809-1014HB-1				



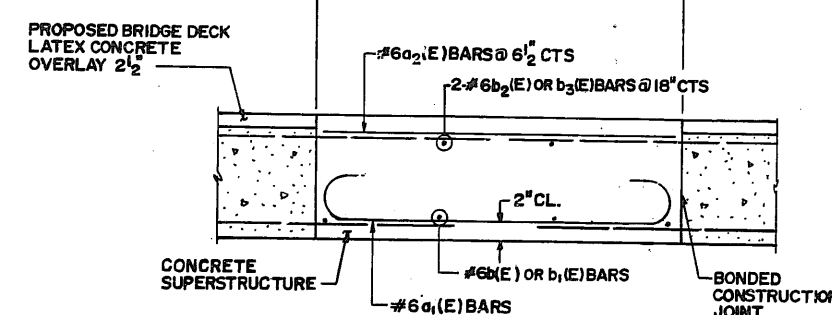
DECK REPAIRS



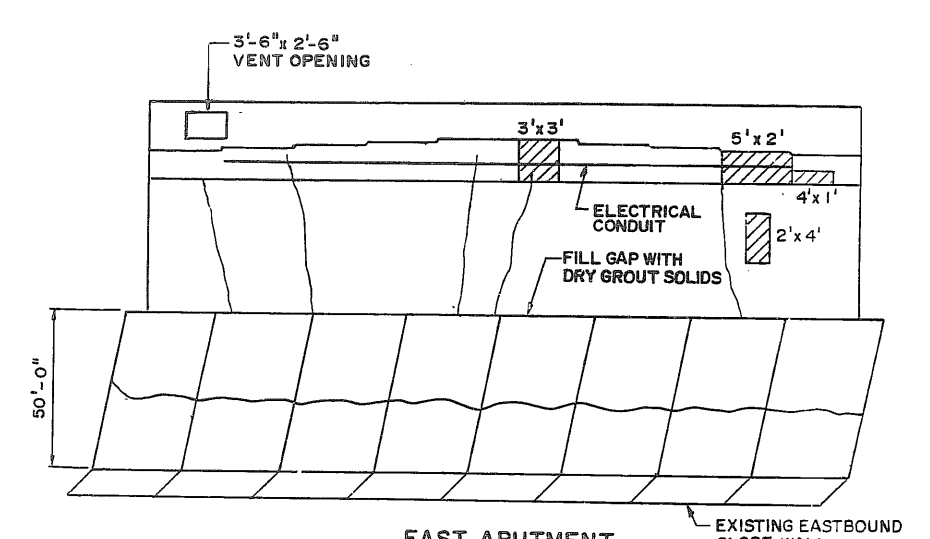
EXISTING LONGITUDINAL EXPANSION JOINT

BILL OF MATERIAL

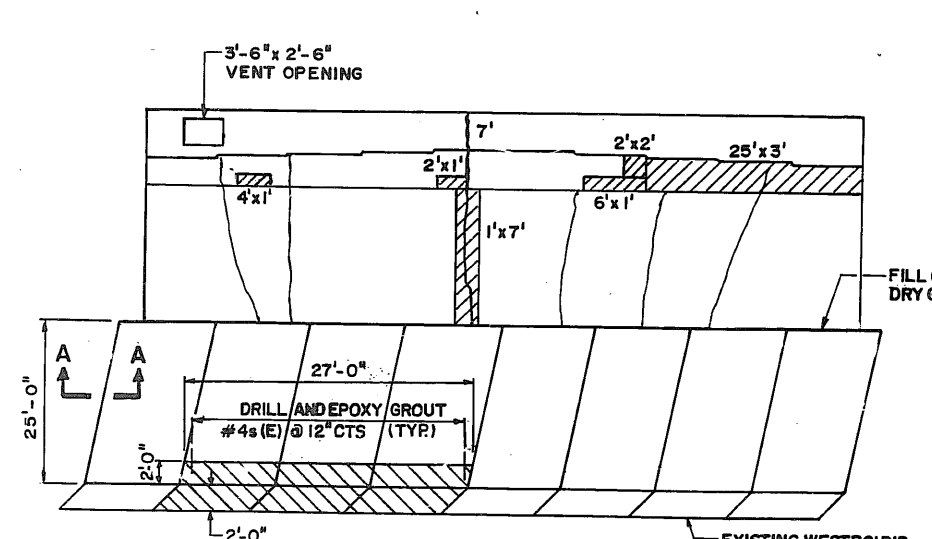
BAR	NO.	SIZE	LENGTH	SHAPE
a ₁ (E)	115	#6	3'-1"	
a ₂ (E)	115	#6	1'-9"	
b(E)	4	#11	37'-3"	
b ₁ (E)	4	#10	30'-10"	
b ₂ (E)	2	#6	33'-7"	
b ₃ (E)	2	#6	27'-7"	
S(E)	35	#4	1'-6"	
SLOPE WALL 4"			SQ.YDS	12
REINFORCEMENT BARS (EPOXY COATED)			POUND	2390
CONCRETE SUPERSTRUCTURE			CU.YDS.	9.6
CONCRETE REMOVAL			CU.YDS.	8.5
BRIDGE SIDEWALK REPAIR (PARTIAL DEPTH)			SQ.FT.	134
EPOXY CRACK SEALING			FOOT	200
FORMED CONCRETE REPAIR (1/2")			SQ.FT.	131
SLOPE WALL REMOVAL			SQ.YDS	12
DRY GROUT SOLIDS			CU.FT.	2080
HOLES DRILLED			EACH	86
APPROACH SLAB REPAIR (FULL DEPTH)			SQ.YDS	17.5



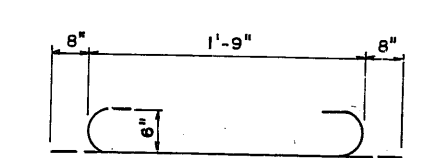
PROPOSED LONGITUDINAL EXPANSION JOINT CLOSURE



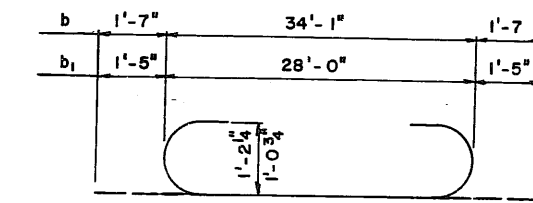
EAST ABUTMENT



WEST ABUTMENT



BAR a₁(E)



BAR b(E) & b₁(E)

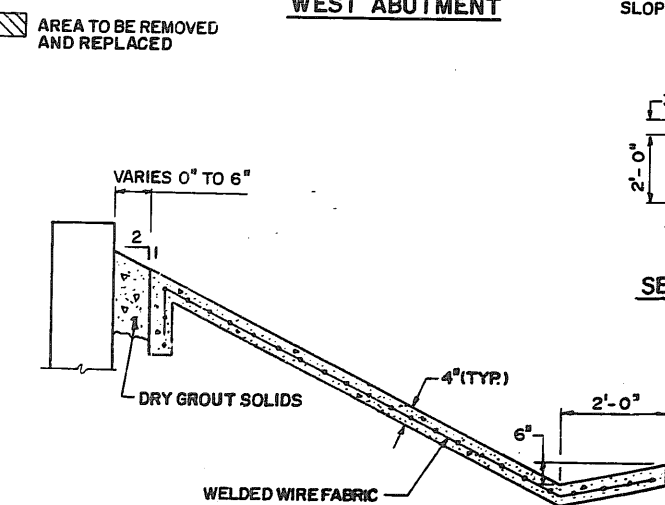
LEGEND:

- FORMED CONCRETE REPAIR
- BRIDGE SIDEWALK REPAIR PARTIAL
- EPOXY CRACK SEALING

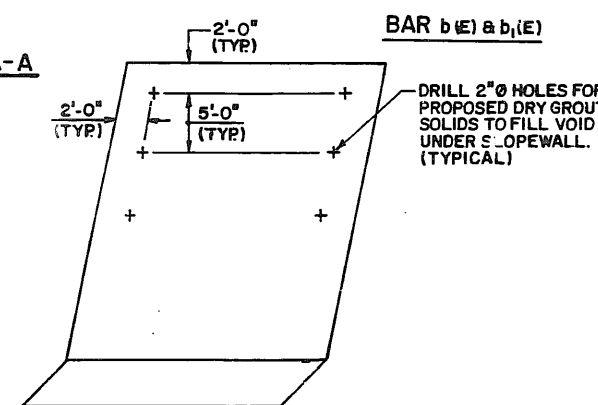
NOTES:

EXISTING REINFORCEMENT BARS EXTENDING INTO NEW CONSTRUCTION SHALL BE CLEANED, STRAIGHTENED, AND INCORPORATED INTO THE NEW CONCRETE. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN REMOVING EXISTING CONCRETE SO AS TO NOT DAMAGE EXISTING REINFORCEMENT. COST IS INCLUDED WITH "CONCRETE REMOVAL". THE ENGINEER SHOULD MARK THE ACTUAL REPAIR IN THE AS BUILT PLANS.

DECK SURVEY DATE, JULY, 1999



SECTION A-A



SUBSEALING APPROACH S' AB
DETAIL FOR HOLE DRILLING

SECTION THRU EXISTING SLOPEWALL

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. ROUTE 57 AT
175TH STREET

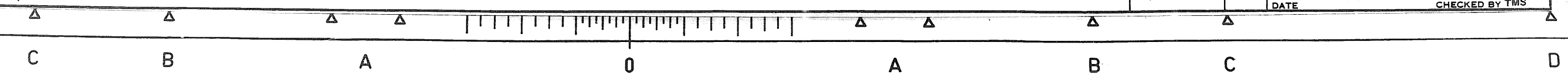
LONGITUDINAL JOINT REMOVAL
SLOPE WALLS AND ABUTMENTS DETAILS
S.N.016-1095

SCALE: VERT. HORIZ.
DATE

DRAWN BY MVT
CHECKED BY TMS

REVISIONS	
NAME	DATE

PLAN
LONGITUDINAL JOINT DETAIL

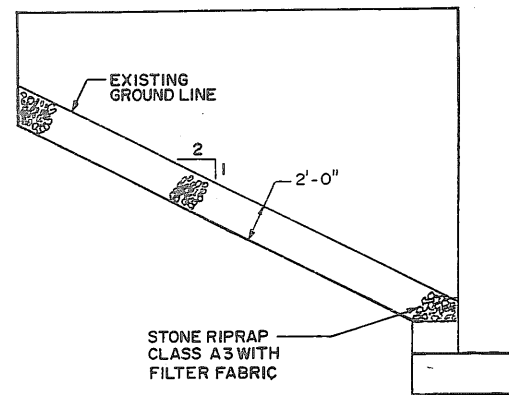


F.A. SITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
618	*	COOK	24	11
STA.	TO STA.			
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
* 0809-1014 HB-1				

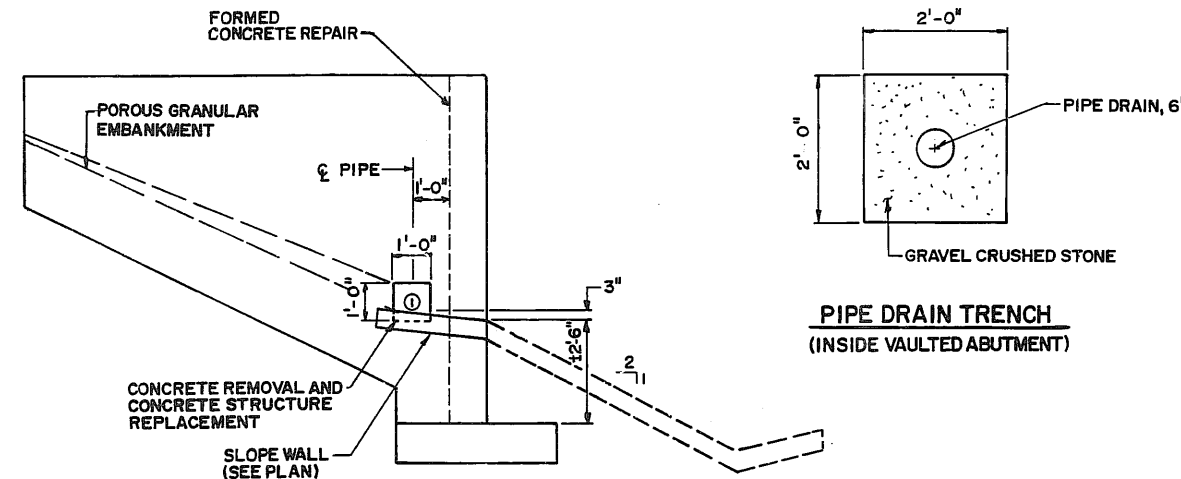
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
EARTH EXCAVATION	CU. YDS	60
STONE RIPRAP, CLASS A3	SQ. YDS	90
FILTER FABRIC FOR USE WITH RIPRAP	SQ. YDS	90
CONCRETE REMOVAL	CU. YDS	0.5
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	210
PIPE UNDER DRAINS, FABRIC LINED TRENCH, 6"	FOOT	145
CONCRETE STRUCTURES	CU. YDS	0.5
POROUS GRANULAR EMBANKMENT	TON.	10
FORMED CONCRETE REPAIR (≤ 5")	SQ. FT.	140
REINFORCEMENT BARS (EPOXY COATED)	POUND	15
SLOPEWALL, 4"	SQ. YDS	3

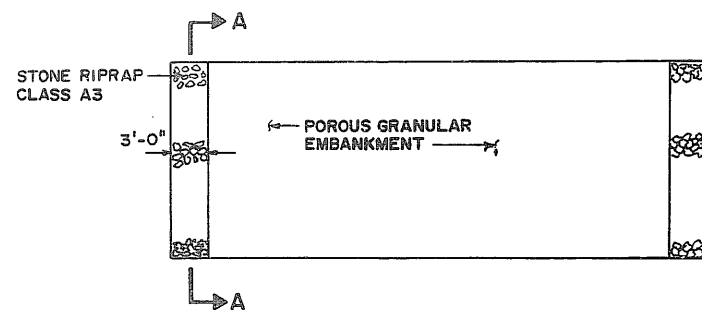
BAR	NO.	SIZE	LENGTH	SHAPE
h ₁ (E)	20	#4	1'-0"	—



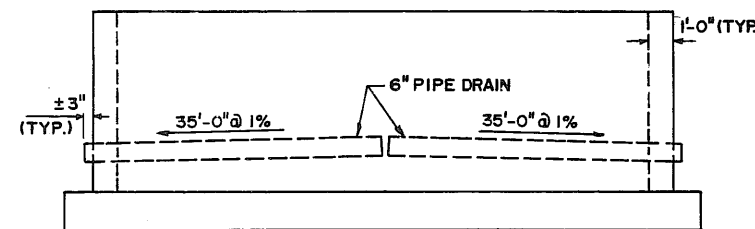
SECTION A-A



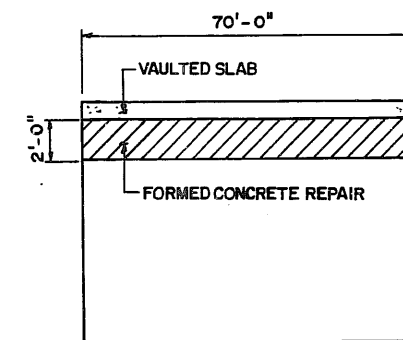
SECTION AT VAULTED ABUTMENT



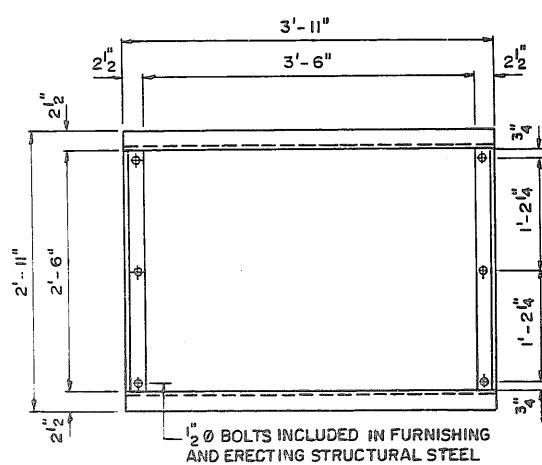
PLAN VAULTED ABUTMENT



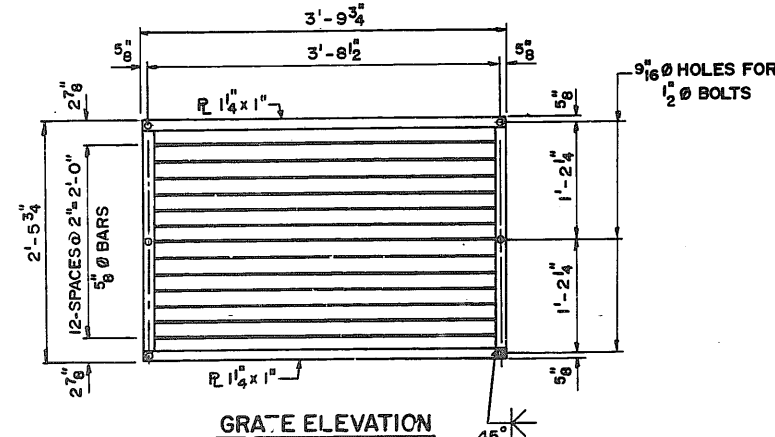
ELEVATION



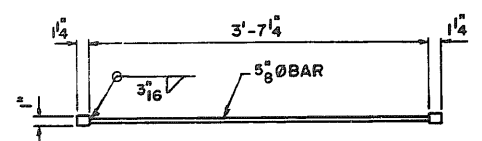
EAST ABUTMENT BACKWALL (INSIDE VAULTED SPAN)



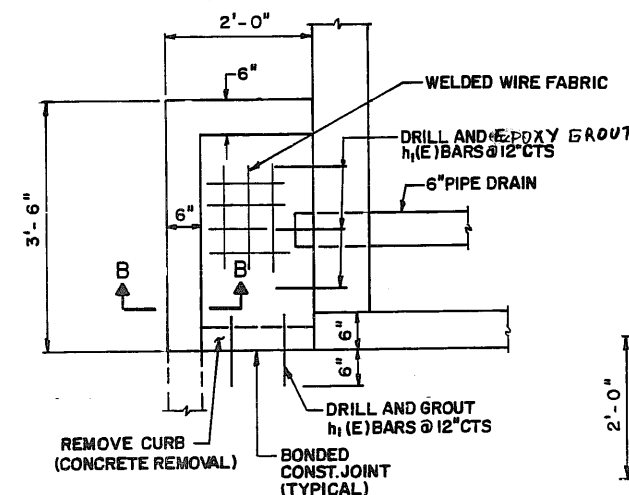
EXISTING FRAME



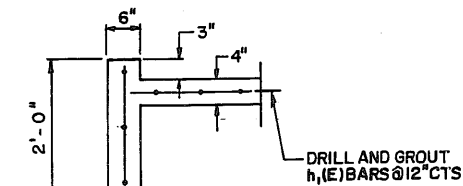
GRATE ELEVATION



PLAN PROPOSED GRATE



SLOPEWALL PLAN



SECTION "B-B"

NOTES:

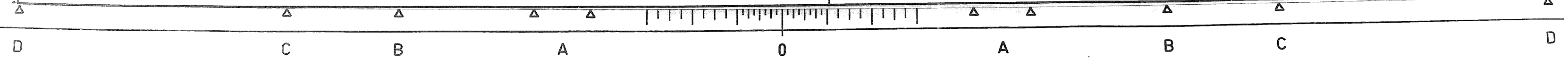
- PLACE GRATE IN PROPER LOCATION IN EXISTING FRAME AT VENT OPENINGS IN THE BACKWALL OF BOTH ABUTMENTS.
- THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE PROPOSED GRATE BEFORE ORDERING MATERIALS.
- POROUS GRANULAR EMBANKMENT IS TO BE USED ON THE INSIDE OF THE VAULTED ABUTMENTS TO REPLACE ERODED MATERIALS.
- REMOVAL AND DISPOSAL OF THE EXISTING GRATE AND FURNISHING AND ERECTING OF THE NEW GRATE IS INCLUDED IN THE COST OF "FURNISHING AND ERECTING STRUCTURAL STEEL."

REVISIONS	
NAME	DATE

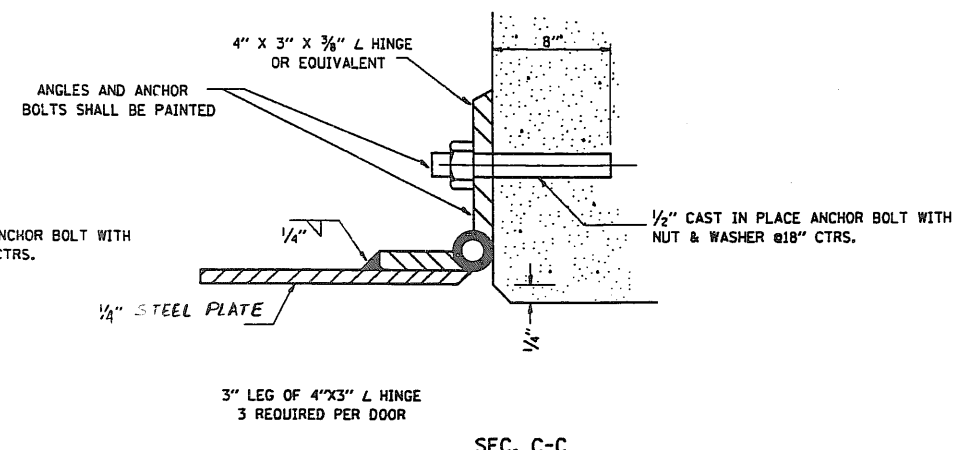
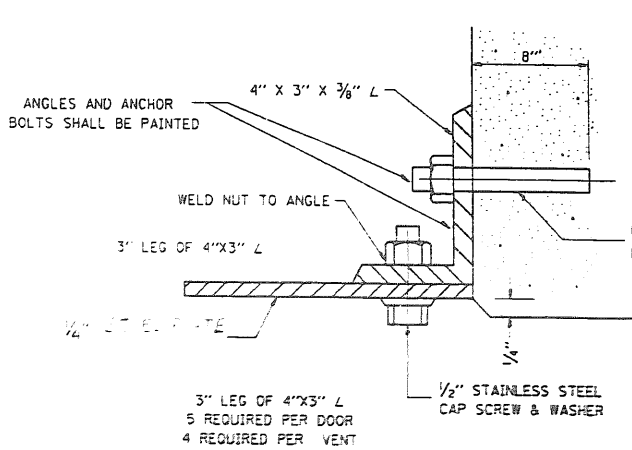
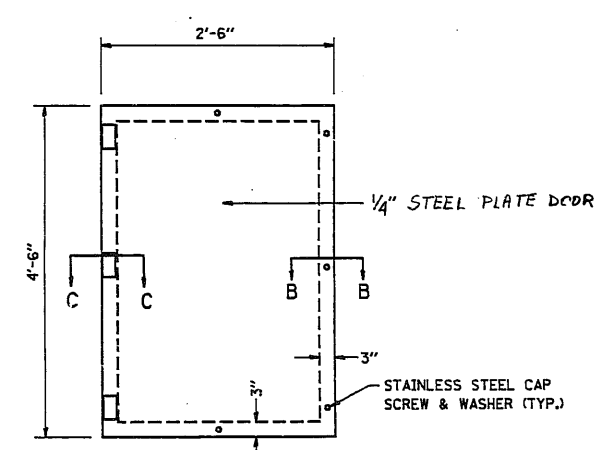
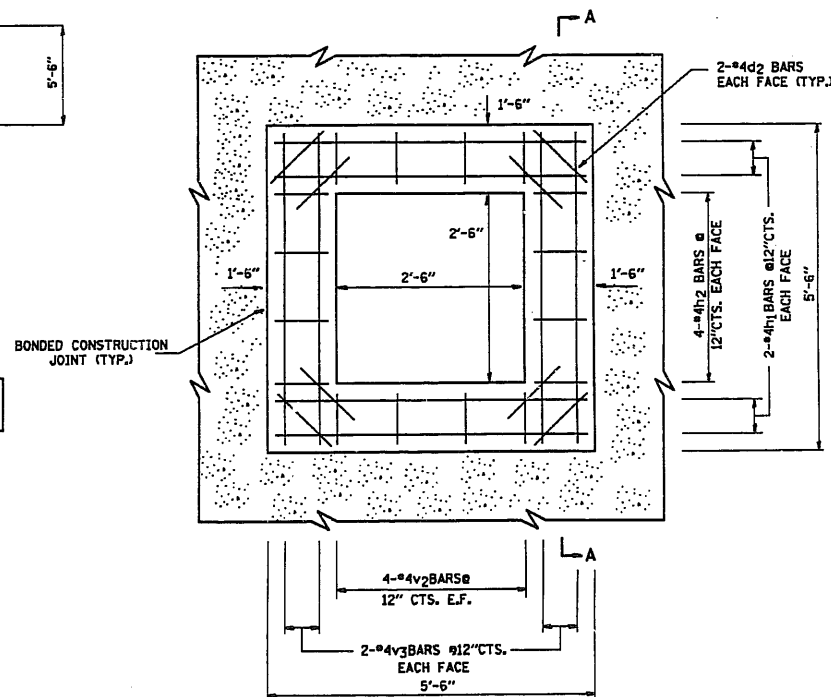
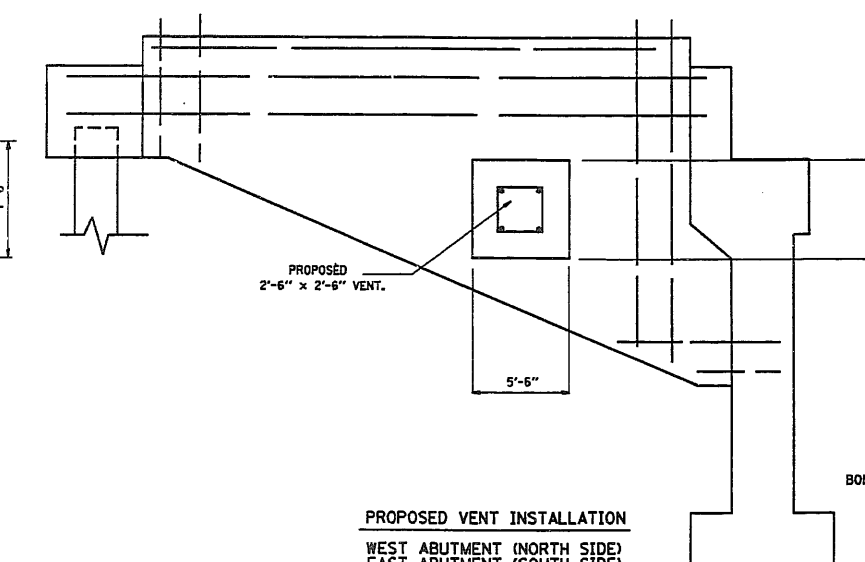
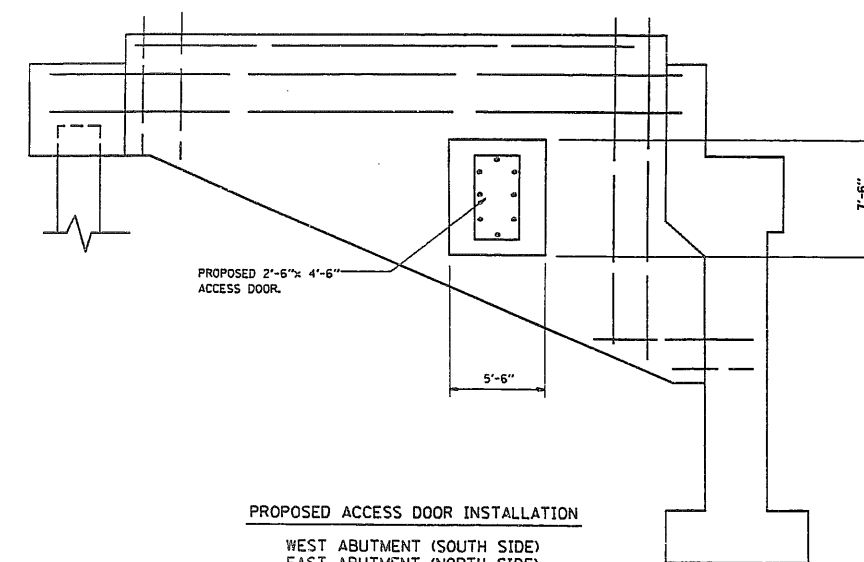
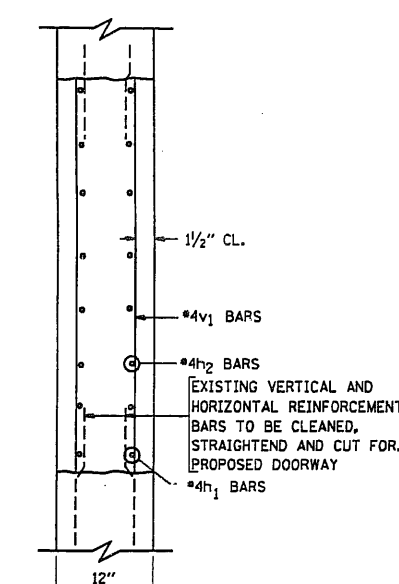
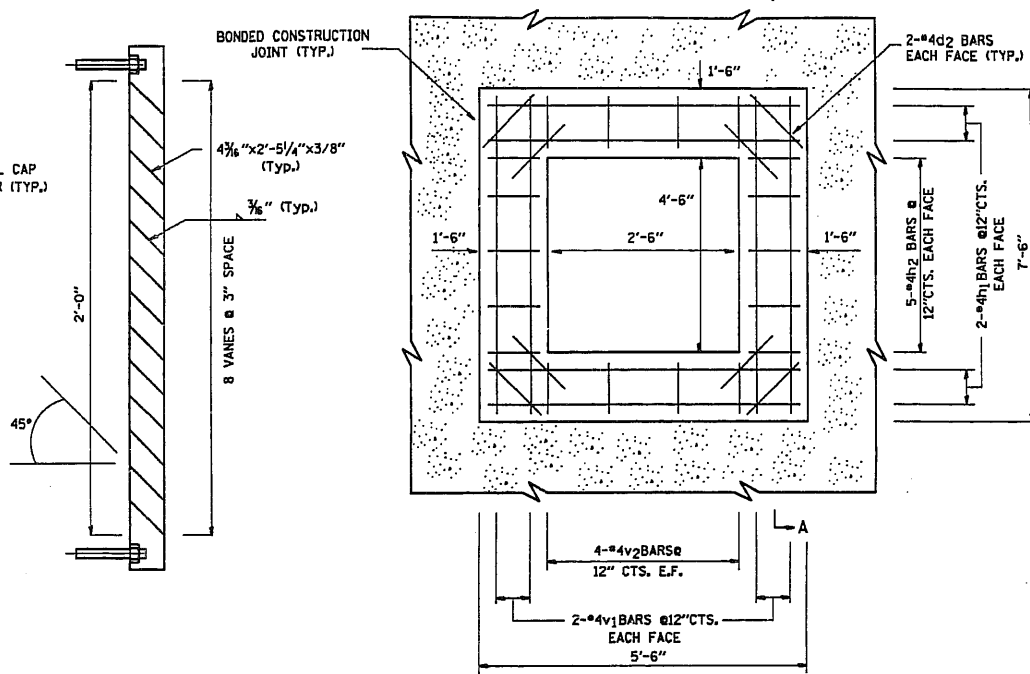
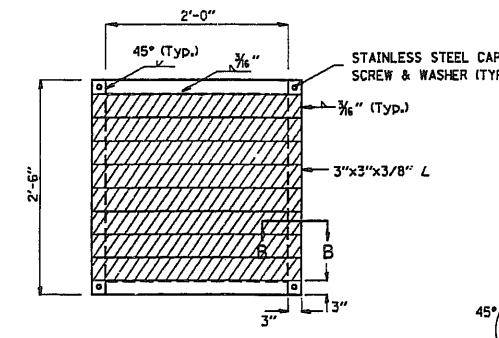
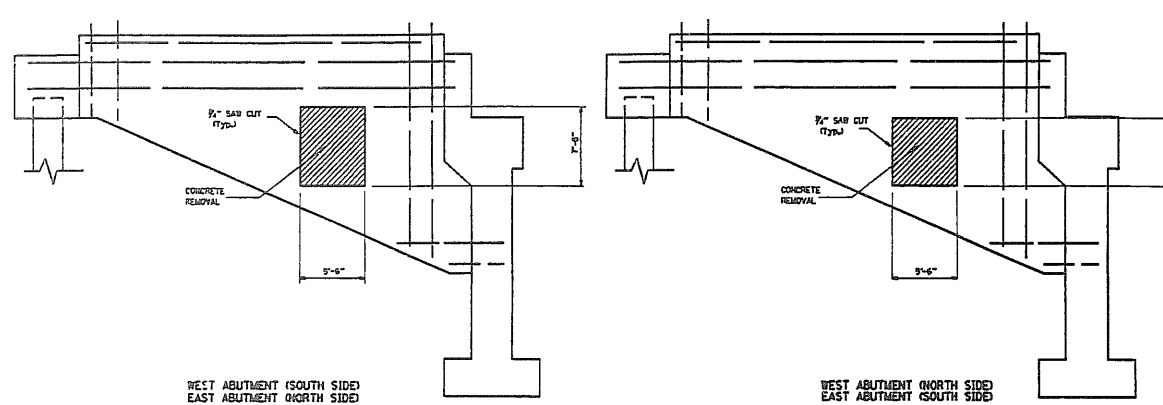
ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. ROUTE 57 AT
175TH STREET
GRATE AND PIPE DRAIN
S.N. 016-1095

SCALE: VERT. DRAWN BY MVT
 HORIZ. CHECKED BY TMS
DATE



F. A. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1618	0809-1014HB-1	COOK	24	12
STA.	TO STA.			
	ILLINOIS		FED. AID PROJECT	



NOTE:
ALL ANCHOR BOLTS, 1/2" STAINLESS STEEL CAP SCREW AND WASHERS AND 4"x3"x3/8" ANGLES AND HINGES FOR THE ACCESS DOOR ARE INCLUDED IN THE COST OF "ACCESS DOOR".

ALL REINFORCEMENT BARS SHOULD BE EPOXY COATED.
ACCESS DOOR WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH ACCORDING TO THE DETAILS SHOWN ON THE PLANS.

VENT DOOR WILL BE PAID FOR AS FURNISH AND ERECT STRUCTURAL STEEL.

ALL ANCHOR BOLTS, 1/2" STAINLESS STEEL CAP SCREW AND WASHERS AND 4"x3"x3/8" ANGLES FOR THE VENTS ARE INCLUDED IN THE COST OF FURNISH AND ERECT STRUCTURAL STEEL.

Bar	No.	Size	Length	Shape
h1(E)	32	#4	5'-4"	
h2(E)	72	#4	1'-4"	
v1(E)	16	#4	7'-4"	
v2(E)	64	#4	1'-4"	
v3(E)	16	#4	5'-4"	
d2(E)	32	#4	2'-0"	
Item	Unit	Quantity		
Concrete Removal	Cu. Yds.	5.3		
Concrete Structures	Cu. Yds.	2.0		
Reinforcement Bars (Epoxy Coated)	Pound	420		
Furnish and Erect Structural Steel	Pound	360		
Access Door	Each	2		

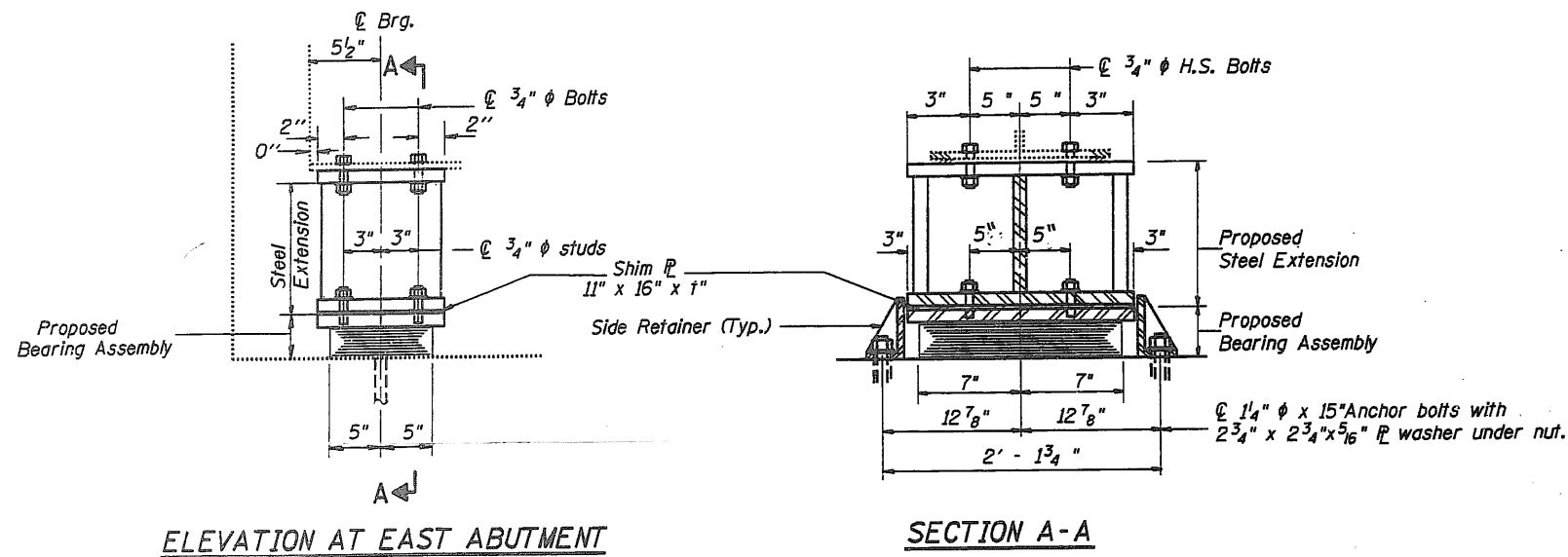
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 57 AT 175th ST.
ABUTMENT ACCESS DOOR
AND VENT DETAIL
S.N. 016-1095

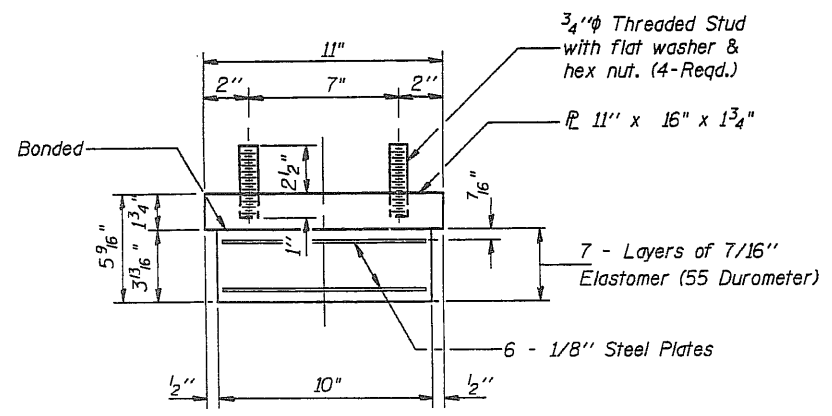
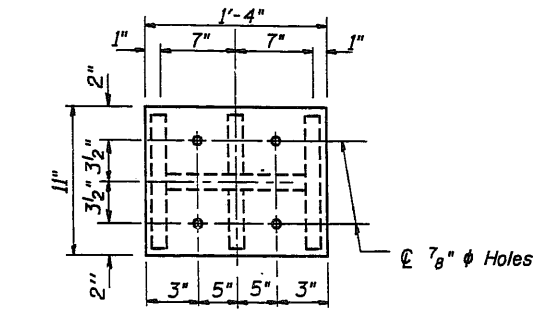
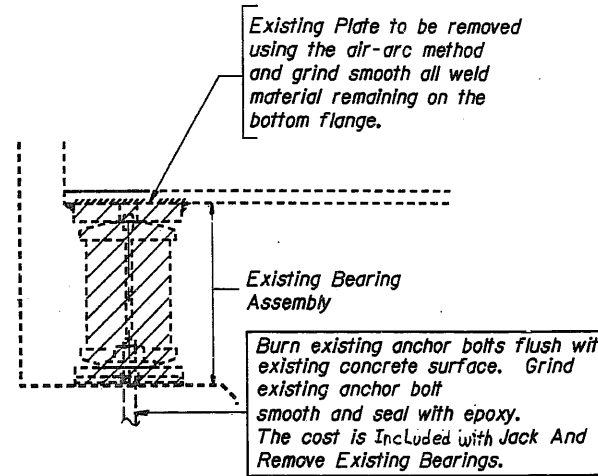
SCALE: 50'=1"
DATE 08/17/99

DRAWN BY CADD
CHECKED BY TMS

P. A. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1618	0809-1014HB-1	COOK	24	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPE I ELASTOMERIC EXP. BRG.



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

NOTES:

New side retainers, shim plates, connection bolts, Steel extension and anchor bolts are included in Furnishing and Erecting Structural Steel.

$5/16''$ diameter holes are to be drilled in the field in the bottom of existing beams. Cost included with Furnishing and Erecting Structural Steel.

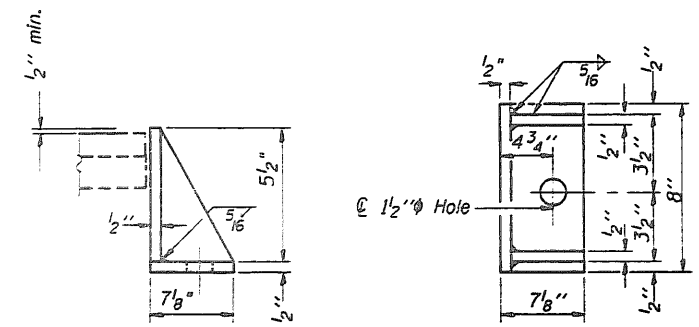
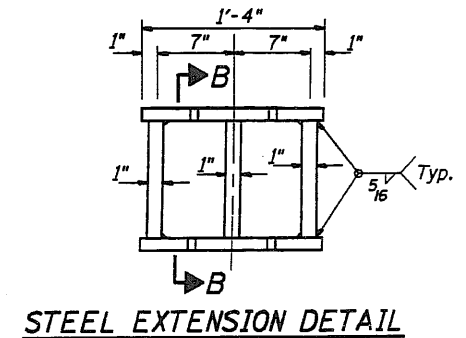
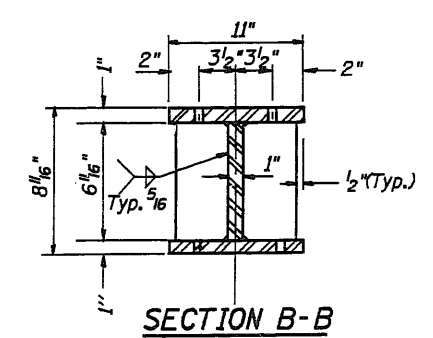
See sheet S9 for Anchor Bolt Installation.

Contractor shall submit jacking details for approval by the Engineer.

Minimum Jacking Capacity = 52 Tons.

Prior to ordering any material, the contractor shall verify in the field all bearing heights and shim plate thickness dimensions.

Diaphragm removal and replacement may be required to facilitate drilling holes in the bottom flange for bearing attachment. Cost incidental to Furnishing and Erecting Structural Steel.



SHIM PLATE "+" DIMENSIONS

GIRDER	1	2	3	4	5	6	7	8	9	10	11	12
"+"	0	0	1/16"	5/16"	5/16"	1/16"	1/16"	5/16"	3/8"	1/16"	0	0

See sheet S10 for girders.

GIRDER REACTIONS

RDL (K)	48.3
RLL (K)	40.4
Imp. (K)	8.6
R (Total) (K)	97.3

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12
Furnishing And Erecting Structural Steel	lbs.	2870
Jack And Remove Existing Bearings	Each	12

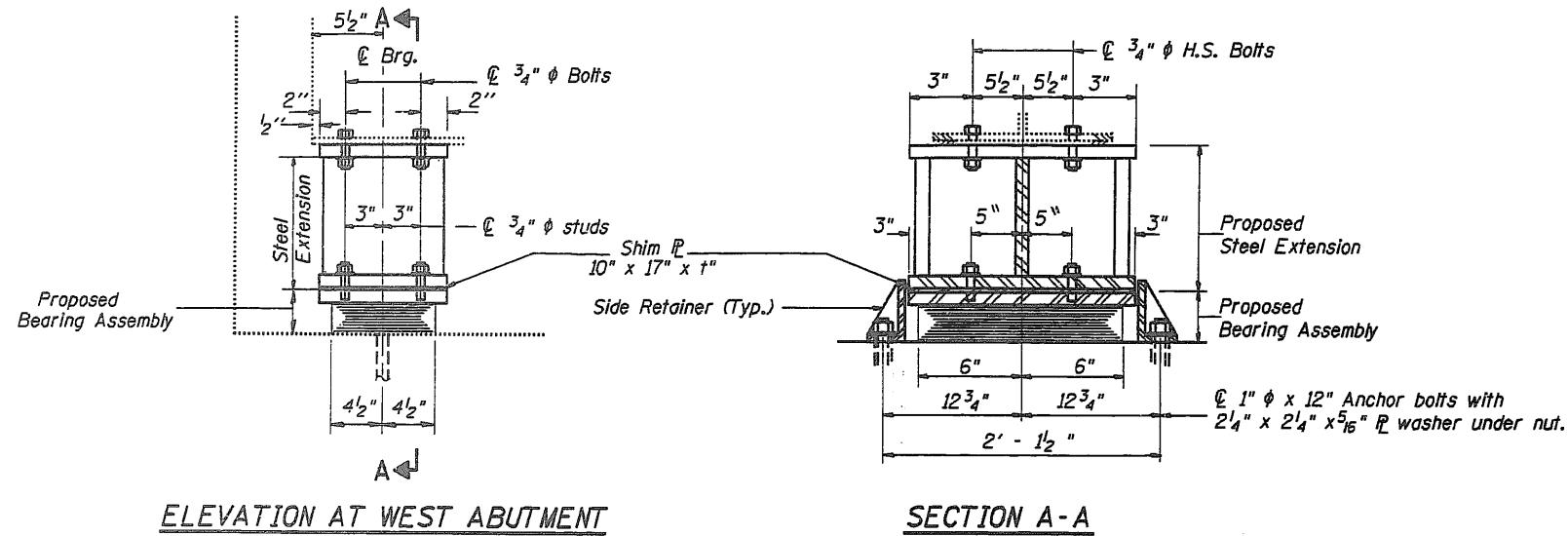
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 57 AT 175th ST.
 ELASTOMERIC BEARING DETAIL
 EAST ABUTMENT
 S.N. 016-1095

SCALE: 50'=1"
 DATE 09/13/99
 DRAWN BY CADD
 CHECKED BY TMS

Mon Sep 13 15:00:45 1999
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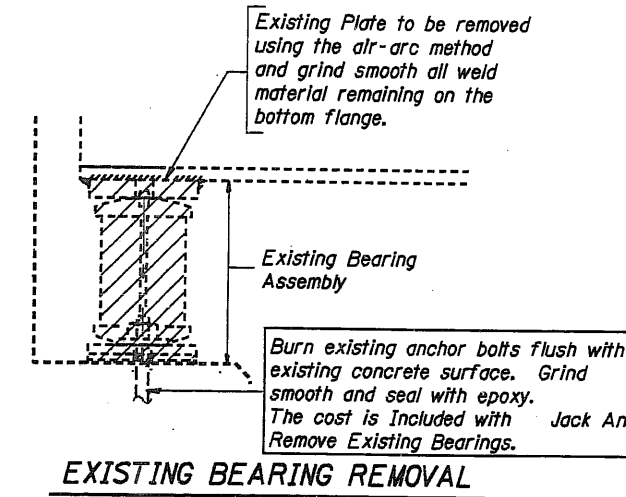
F.A. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1618	0809-1014HB-1	COOK	24	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



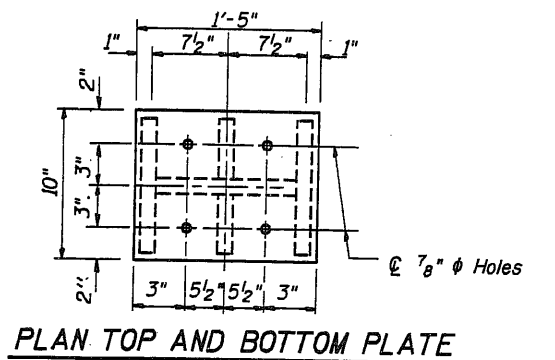
ELEVATION AT WEST ABUTMENT

SECTION A-A

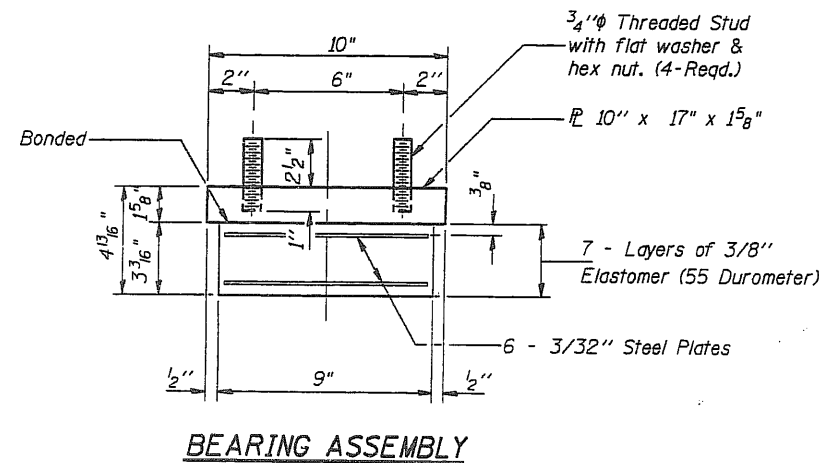
TYPE I ELASTOMERIC EXP. BRG.



EXISTING BEARING REMOVAL



PLAN TOP AND BOTTOM PLATE



BEARING ASSEMBLY

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

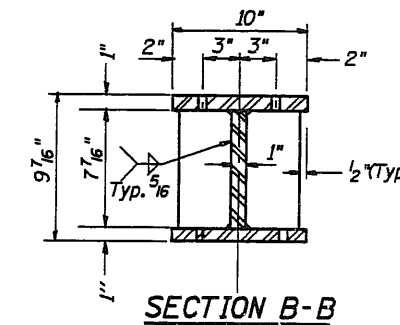
NOTES:

New side retainers, shim plates, connection bolts, Steel extensions and anchor bolts are Included in Furnishing and Erecting Structural Steel.

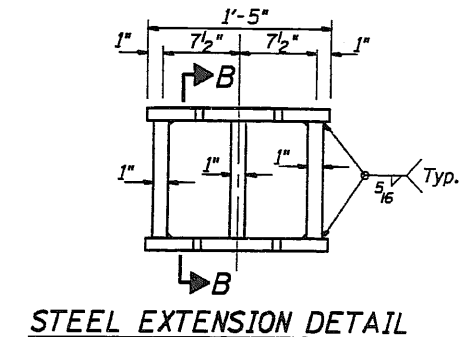
5/16" diameter holes are to be drilled in the field to the bottom of existing beams. Cost included with Furnishing and Erecting Structural Steel.

See sheet S9 for Anchor Bolt Installation.
Contractor shall submit jacking details for approval by the Engineer.
Minimum Jacking Capacity = 45 Tons.
Prior to ordering any material, the contractor shall verify in the field all bearing heights and shim plate thickness dimensions

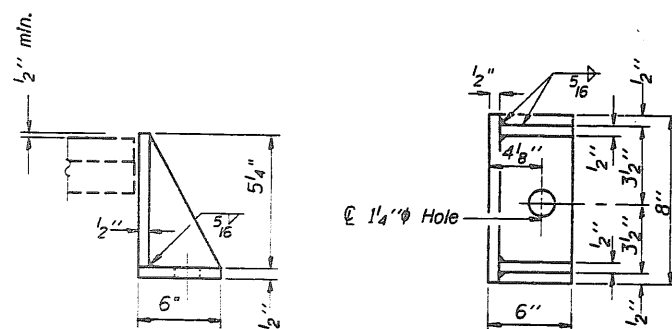
Diaphragm removal and replacement may be required to facilitate drilling holes in the bottom flange for bearing attachment. Cost incidental to "Furnishing and Erecting Structural Steel".



SECTION B-B



STEEL EXTENSION DETAIL



SIDE RETAINER

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

SHIM PLATE "+" DIMENSIONS

GIRDER	1	2	3	4	5	6	7	8	9	10	11	12
"+"	0	0	1/16"	3/16"	5/16"	7/16"	1/2"	5/8"	3/4"	7/8"	0	0

See sheet S10 for girders.

GIRDER REACTIONS

RDL	(K)	39.2
RLI	(K)	39.9
Imp.	(K)	9.0
R (Total)	(K)	88.1

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12
Furnishing And Erecting Structural Steel	lbs.	2840
Jack And Remove Existing Bearings	Each	12

REVISIONS	
NAME	DATE

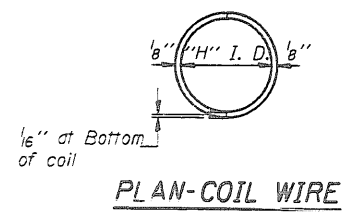
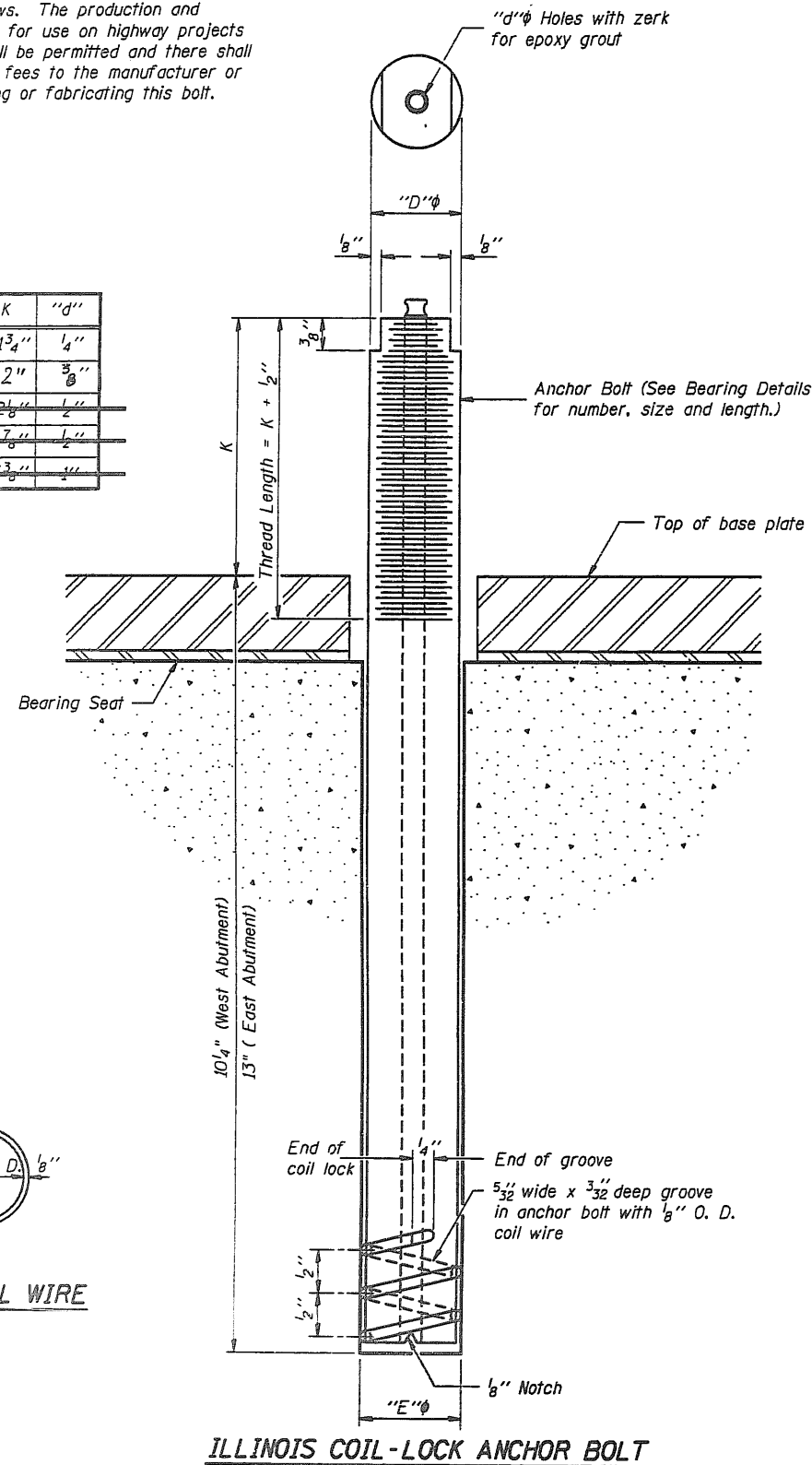
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 57 AT 175th ST.
ELASTOMERIC BEARING DETAIL
WEST ABUTMENT
S.N. 016-1095

SCALE: 50'=1"
DATE 09/13/99

DRAWN BY CADD
CHECKED BY TMS

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/8"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/10"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
 The coil wire shall be made of any suitable soft steel wire.
 The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
 The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.
 The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
 1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

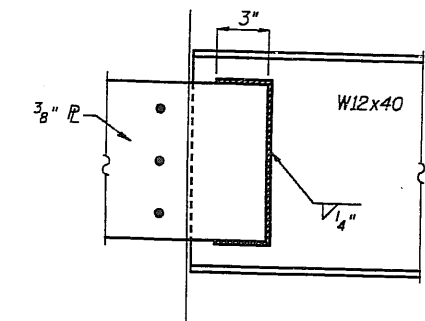
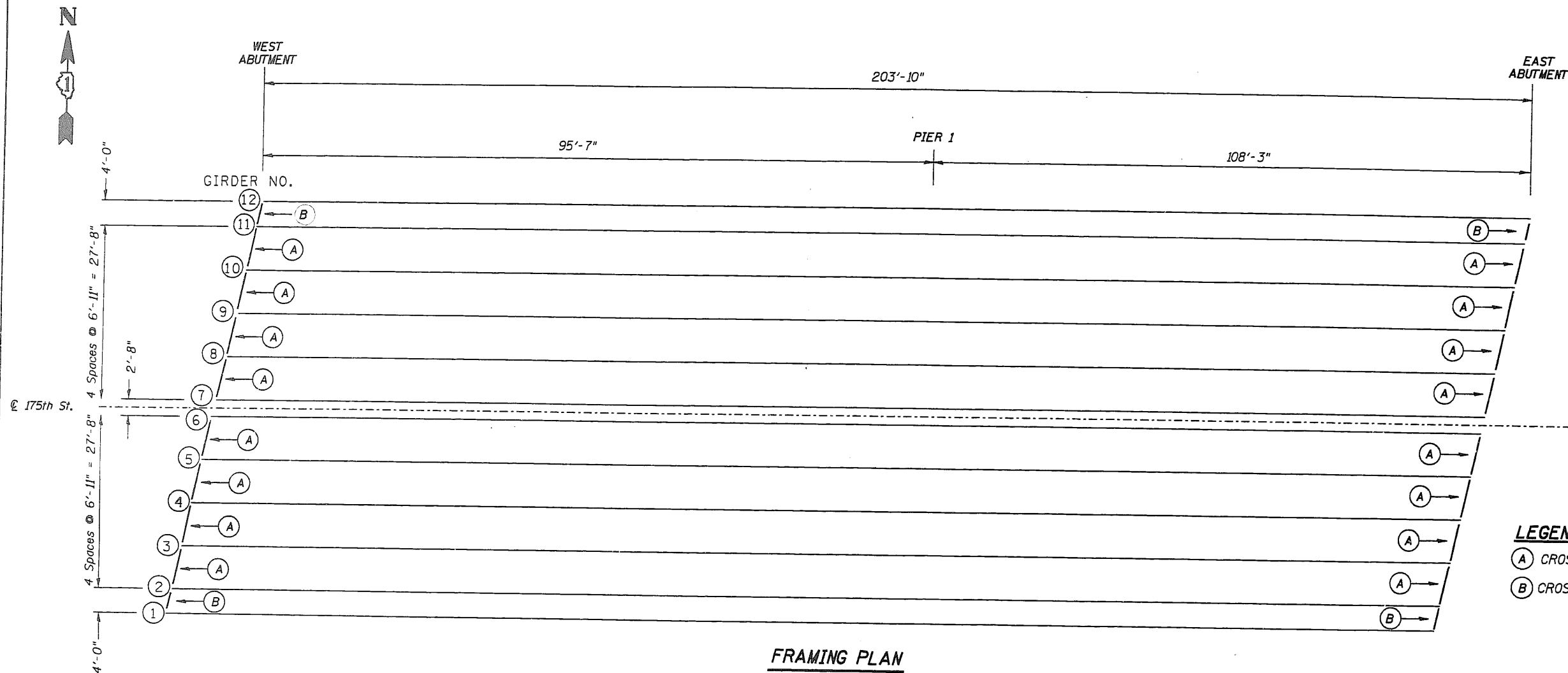
Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
 Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
 The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

Location	Type
EAST ABUTMENT	A307
WEST ABUTMENT	A307

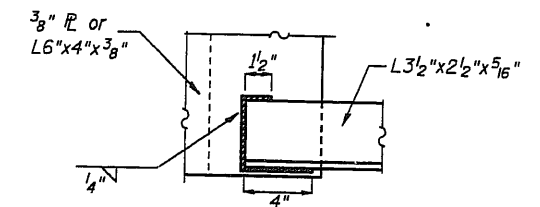
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. ROUTE 57 AT 175th ST.
 ANCHOR BOLTS FOR
 ELASTOMERIC BEARINGS DETAIL
 S.N. 016-1095
 SCALE: NONE
 DATE 09/13/99
 DRAWN BY CADD
 CHECKED BY TMS

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1618 0809-1014-1B-1	COOK	24	16
STA.	TO STA.		
FED. ROAD DIST. NO.	BLDG. NO.	FED. AID PROJECT	



DETAIL A



DETAIL B

LEGEND

- (A) CROSSFRAME A
- (B) CROSSFRAME B

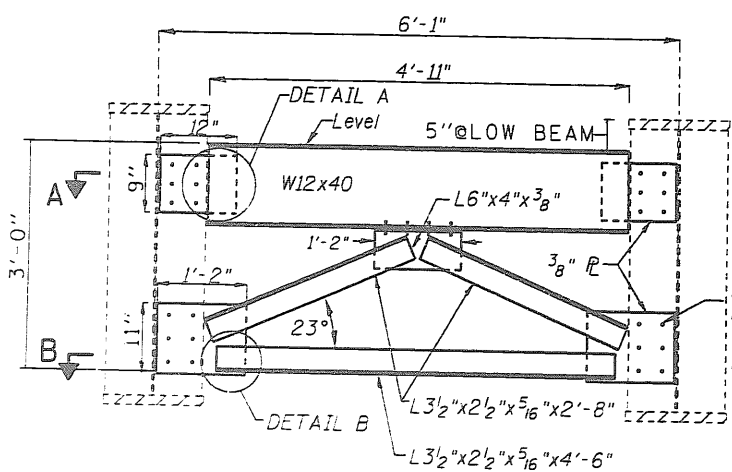
NOTES:

Holes in connecting plates shall be field drilled using existing hole pattern in bearing stiffener plates as a template. Cost included in the cost of "FURNISHING AND ERECTING OF STRUCTURAL STEEL".

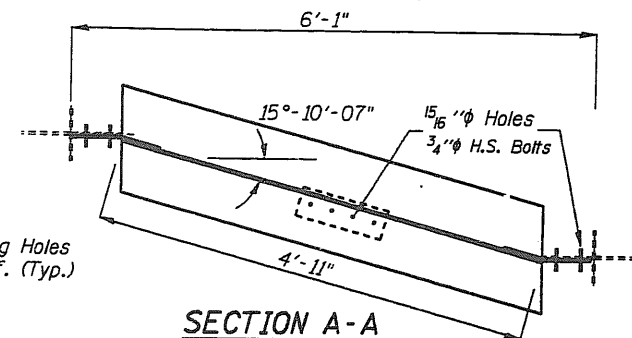
Cross frame connection holes shall be 5/16" for 3/4" bolts. Two hardened washers shall be required at crossframe connections.

PRIOR TO ORDERING CROSS FRAMES, THE CONTRACTOR SHALL VERIFY IN THE FIELD THE PROPOSED CROSS FRAME DIMENSIONS.

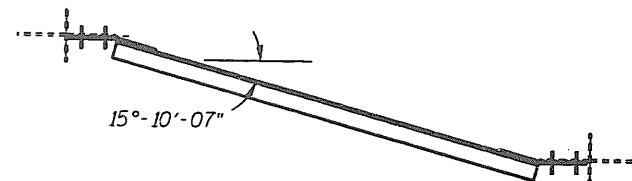
Removal and Disposal of the existing cross frames is included in the cost of "FURNISHING AND ERECTING STRUCTURAL STEEL".



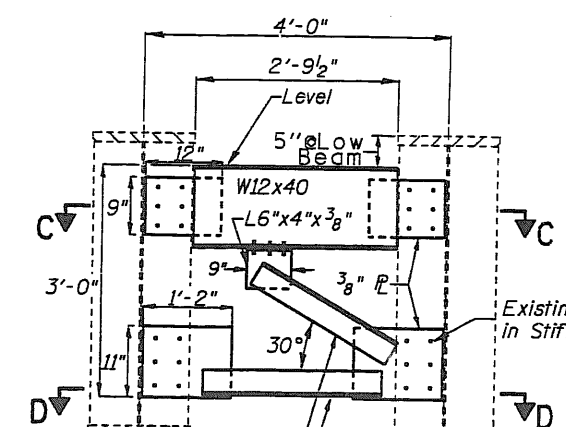
CROSS FRAME A



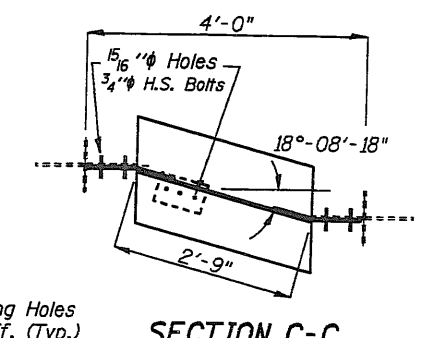
SECTION A-A



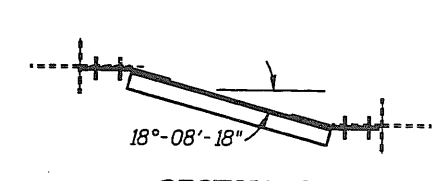
SECTION B-B



CROSS FRAME B



SECTION C-C



SECTION D-D

BILL OF MATERIAL

Item	Unit	Total
Furnishing And Erecting Structural Steel	Pound	6200

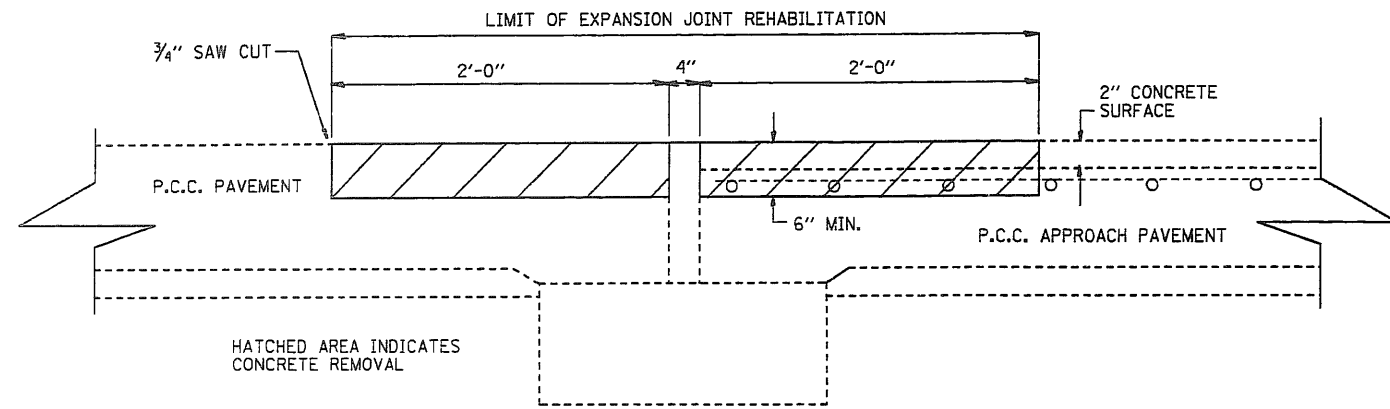
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**F.A.I. ROUTE 57 AT 175th ST.
 CROSS FRAME REPLACEMENT
 S.N. 016-1095**

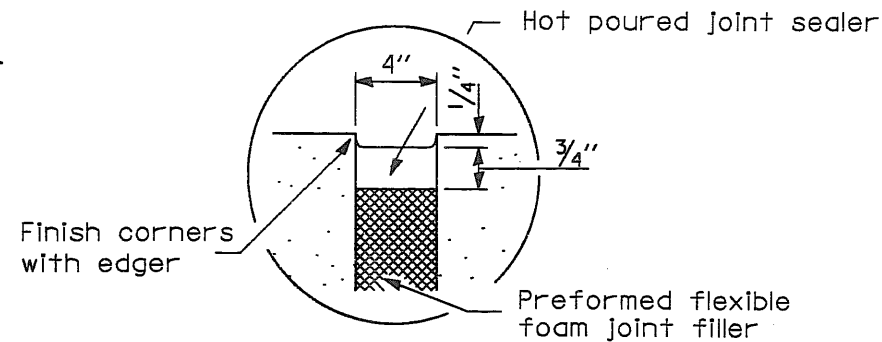
SCALE: NONE
 DATE: 09/13/99

DRAWN BY TMS
 CHECKED BY MVT

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0809-1014HB-1	COOK	24	17
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			



EXISTING EXPANSION JOINT AT BRIDGE APPROACH SLAB

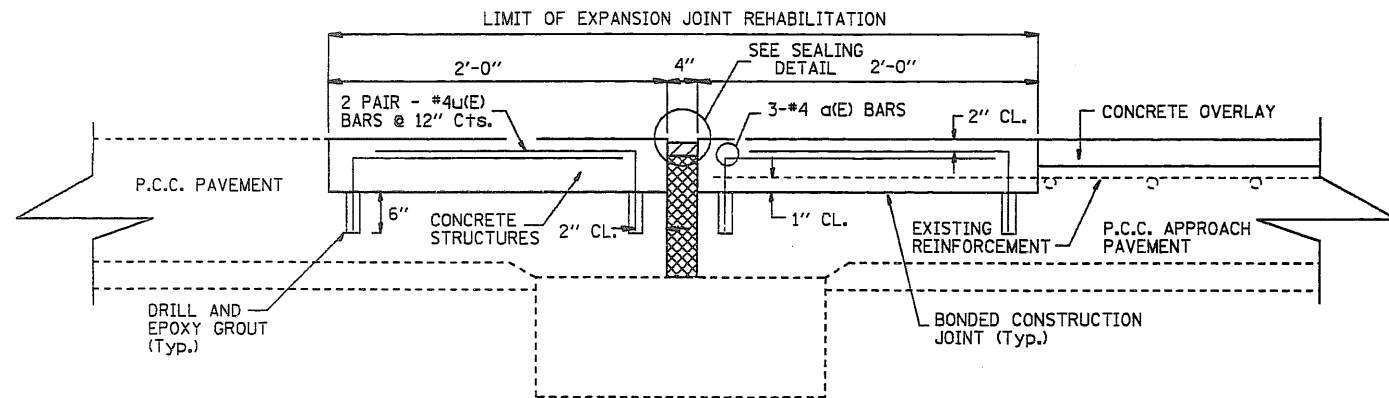


EXPANSION JOINT SEALING DETAIL

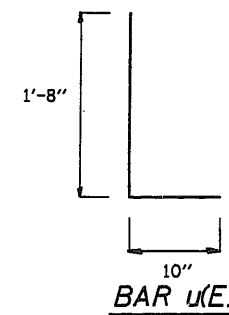
BILL OF MATERIAL
(FOR INFORMATION ONLY)

Bar	No.	Size	Length	Shape
a(E)	12	#4	27'-0"	—
u(E)	416	#4	2'-6"	└
Conc. Structures			Cu. Yd.	7.7
Reinforcement Bars, (Epoxy Coated)			Pound	910

Reinforcement bars designated (E) shall be epoxy coated.



PROPOSED EXPANSION JOINT AT BRIDGE APPROACH SLAB SECTION A-A



NOTES

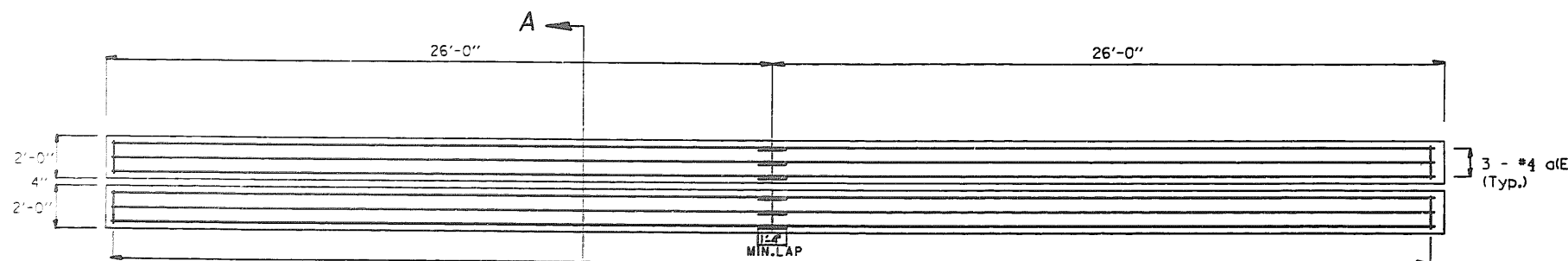
THE REMOVAL OF THE EXISTING EXPANSION JOINT SHALL BE PERFORMED IN A MANNER SO AS NOT TO DAMAGE THE EXISTING STEEL BARS OR ADJACENT CONCRETE OR CONCRETE SLAB, ANY DAMAGE DONE BY THE CONTRACTOR SHALL BE REPAIRED AT HIS EXPENSE.

THIS WORK SHALL ALSO INCLUDE CLEANING AND STRAIGHTENING OF EXISTING STEEL BARS. ANY BARS IN NEED OF REPLACEMENT SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE 'STANDARD SPECIFICATIONS'.

REMOVAL OF THE EXISTING CONCRETE SHALL BE IN ACCORDANCE OF THE APPLICABLE PORTIONS OF SECTION 501, THE NEW CONCRETE, REINFORCEMENT AND PREFORMED EXPANSION JOINT SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 503 OF THE 'STANDARD SPECIFICATIONS'. THIS WORK SHALL BE PAID PER FOOT FOR 'EXPANSION JOINT REHABILITATION' MEASURED ALONG THE CENTER OF THE JOINT.

BILL OF MATERIAL

EXPANSION JOINT REHABILITATION	FOOT	104
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PLAN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. ROUTE 57 AT
175TH STREET
PAVEMENT EXPANSION
JOINT REHABILITATION
SCALE: VERT. HORIZ.
DATE 09/13/99
DRAWN BY TMS
CHECKED BY