

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1313	0606.1 BR-2	COOK	10	1

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FOR INDEX OF SHEETS, SEE SHEET NO. 2

THIS IMPROVEMENT IS LOCATED IN  
THE VILLAGE OF SKOKIE

TRAFFIC DATA:

CHURCH ST.  
ADT (1998) = 10,900  
SPEED LIMIT = 35 MPH

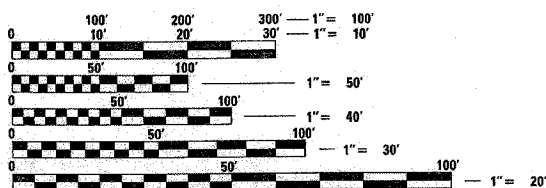
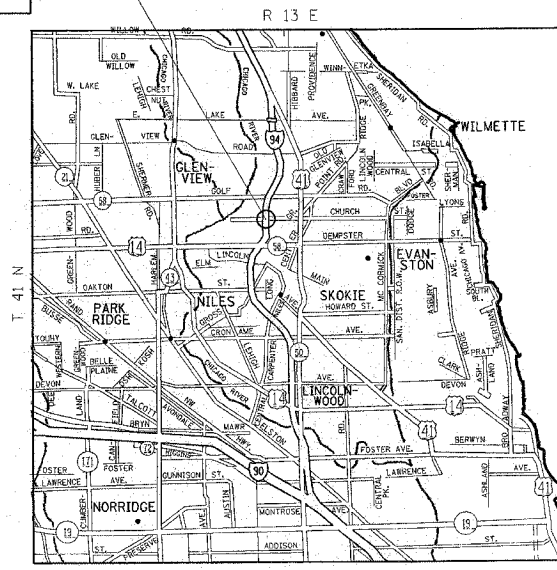
I-94  
ADT (2003) = 163,000  
SPEED LIMIT = 55 MPH

FAU ROUTE 1313: CHURCH ST.  
OVER I-94 (EDENS EXPRESSWAY)  
SN 016-0825  
SECTION 0606.1 BR-2  
BRIDGE BEAM REPAIR AND REPLACEMENT  
COOK COUNTY

C-91-210-05



LOCATION  
CHURCH ST. OVER I-94  
SN 016-0825



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

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED OCT. 27 2005

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

December 9, 20 05  
Mike Line / R  
ENGINEER OF DESIGN AND ENVIRONMENT

December 9, 20 05  
Eric Harn / B  
DEPUTY DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1313	0606.1 BR-2	COOK	10	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

INDEX OF SHEETS

1. TITLE SHEET
2. INDEX OF SHEETS, GENERAL NOTES, STATE STANDARDS
3. SUMMARY OF QUANTITIES
4. TYPICAL SECTION, TRAFFIC CONTROL DETAILS
- 5.-9. BRIDGE PLANS
10. PARTIAL RAMP AND SHOULDER CLOSURE DETAILS

STATE STANDARDS

- 701301-02 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701400-02 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701401-03 LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701446 TWO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701502-01 URBAN LANE CLOSURE, 2L, 2W WITH BIDIRECTIONAL LEFT TURN LANE
- 701606-04 URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
- 701801-03 LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 702001-05 TRAFFIC CONTROL DEVICES
- 704001-02 TEMPORARY CONCRETE BARRIER

GENERAL NOTES

BEFORE STARTING ANY WORK THE CONTRACTOR SHALL CALL "J.U.L.I.E" AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED

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

WHEN ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.

THE DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED RELFECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR ALL FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS FOR ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4151 FOR EXPRESSWAYS AND (847) 705-4470 FOR ARTERIALS A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM BRIDGE INSPECTORS.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTINO ACTIVITIES WITH UTILITY COMPANIES. THE "ADVANCED WARNING SIGN DETAIL FOR ARTERIAL TRAFFIC" LOCATED IN THE SPECIAL PROVISIONS FOR "TEMPORARY INFORMATION SIGNING FOR LANE CLOSURES" IS APPLICABLE ONLY TO ARTERIAL ROADS AND SHALL NOT BE APPLIED TO EXPRESSWAYS.

THE CONTRACTOR SHALL SALVAVE AND RETURN THE EXISTING STEEL CARRIER BEAM (W33 X 141, 61'-0") TO:  
 DISTRICT BRIDGE OFFICE  
 1101 BIESTERFIELD RD.  
 ELK GROVE VILLAGE, IL 60007  
 CONTACT SHAKER ASFOUR AT (847) 956-1501

THIS WORK SHALL BE INCLUDED IN THE COST OF "STRUCTURAL STEEL REMOVAL", WHICH COST SHALL INCLUDE REMOVING, TRANSPORTING AND UNLOADING THE EXISTING BEAM TO THE ABOVE YARD.

WHEN REMOVING THE EXISTING DAMAGED STEEL BEAM THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO ENSURE THAT THE DECK AND BEAM ARE PROPERLY SUPPORTED DURING THE ENTIRE TREAFFIC OPERATION SO AS TO PROTECT THE TRAFFIC AND PAVEMENT BELOW THE BRIDGE. THE CONTRACTOR SHALL SUBMIT THE REMOVAL SEQUENCE AND PROCEDURE TO THE ENGINEER FOR APPROVAL PRIOR TO ANY REMOVAL OF THE EXISTING CONCRETE DECK, STEEL CARRIER BEAM OR DAMAGED STEEL BEAM. COST IS INCLUDED IN THE COST OF "STRUCTURAL STEEL REMOVAL".

PLOT DATE = 10/27/2005  
 PLOT SCALE = 50.0000 / IN.  
 USER NAME = stanleja

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS  
STATE STANDARDS

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

Rev.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1313	0606.1 BR-2	COOK	10	3
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

MCHD CLAIM # 712697

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT	MCHD TOTAL QUANTITIES	SFTY-2A				
				URBAN				
				016-0825	SFTY-3N			
50102400	CONCRETE REMOVAL	CU YD	3.1	3.1				
50300255	CONCRETE SUPERSTRUCTURE	CU YD	3.1	3.1				
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	11290	11290				
50501110	STRUCTURAL STEEL REMOVAL	POUND	11290	11290				
50501130	STRUCTURAL STEEL REPAIR	POUND	2550	2550				
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	120	120				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	2	2				
67100100	MOBILIZATION	L SUM	1	1				
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	1				
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1				
70400100	TEMPORARY CONCRETE BARRIER	FOOT	160	160				
X0322467	TEMPORARY INFORMATION SIGNING FOR LANE CLOSURE	SQ FT	48	48				
X7011015	TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS)	L SUM	1	1				
Z0003600	BEAM STRAIGHTENING	L SUM	1	1				
Z0030240	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 2	EACH	2		2			
Z0073300	TEMPORARY SHORING AND CRIBBING	L SUM	1	1				
Z0073351	TEMPORARY SLAB SUPPORT SYSTEM	L SUM	1	1				
70102622	TRAFFIC CONTROL AND PROTECTION STANDARD 701502	L SUM	1	1				

① SFTY-3N

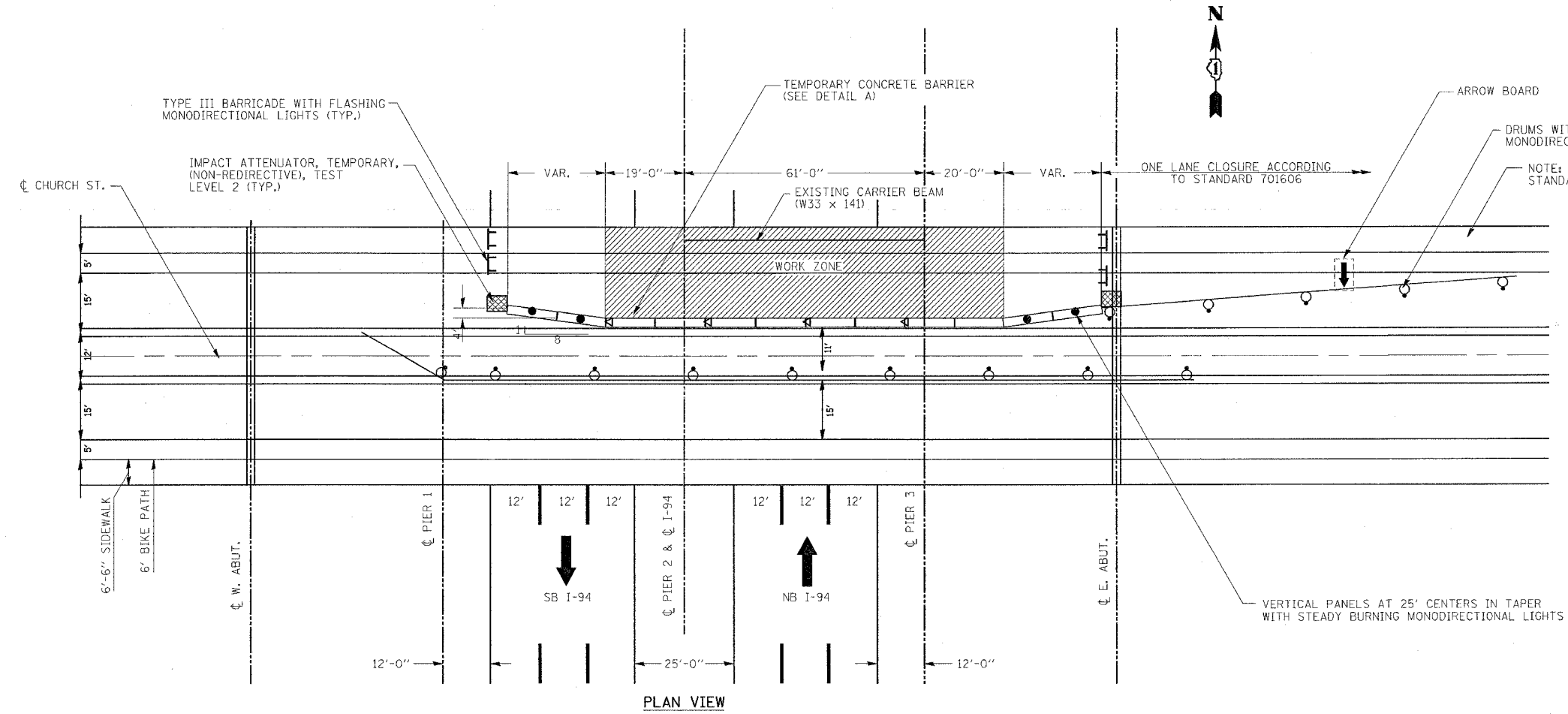
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
SUMMARY OF QUANTITIES

REV.

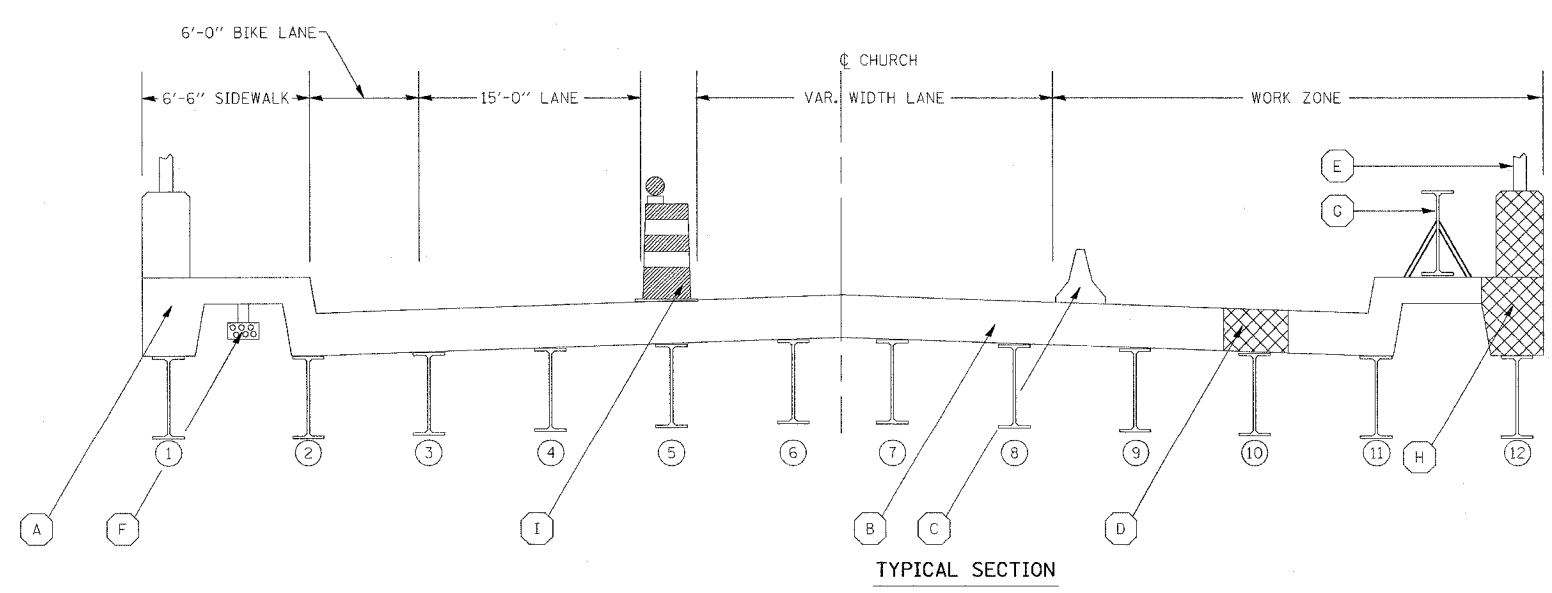
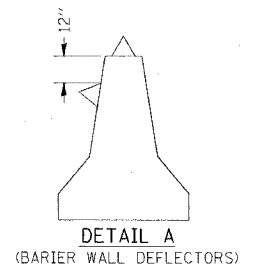
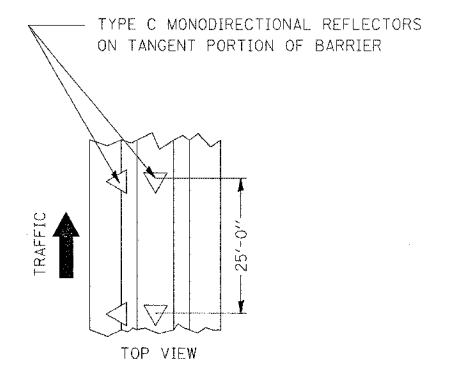
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F.A. RTE.:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1313	0606.1 BR-2	COOK	10	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



NOTE: BLACK PAVEMENT MARKING TAPE, TYPE III, SHALL BE USED TO COVER ALL CONFLICTING STRIPING. THE COST OF REMOVAL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701606.

NOTE: TRAFFIC CONTROL AND SIGNING SHOULD FOLLOW STANDARD 701502 WHEN NOT SPECIFIED HERE.



- (A) EXISTING SIDEWALK
- (B) EXISTING CONCRETE BRIDGE DECK
- (C) TEMPORARY CONCRETE BARRIER (SEE STD. 701401)
- (D) CONCRETE BRIDGE DECK TO BE REMOVED AND REPLACED
- (E) PEDESTRIAN RAILING TO BE REMOVED AND REINSTALLED
- (F) EXISTING UTILITY CONDUITS (UNDER SOUTH SIDEWALK ONLY)
- (G) EXISTING CARRIER BEAM TO BE SALVAGED
- (H) EXISTING SIDEWALK AND PARAPET TO BE REMOVED AND REPLACED
- (I) DRUM WITH STEADY BURNING MONODIRECTIONAL LIGHT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS

SCALE: VERT. DATE  
HORIZ. DRAWN BY  
CHECKED BY

PLOT DATE = 10/29/2005  
 PLOT SCALE = 1/8" = 1'-0"  
 USER NAME = stonlajger

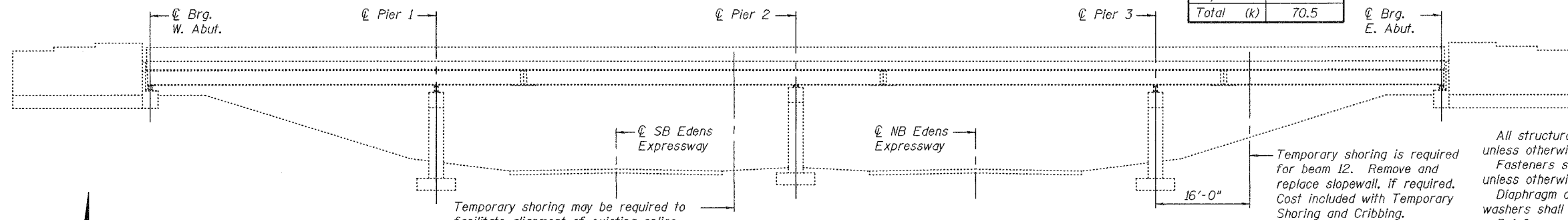
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

REACTION TABLE AT TEMPORARY SHORING		
Q	(k)	27.9
L	(k)	32.8
Imp.	(k)	9.8
Total	(k)	70.5

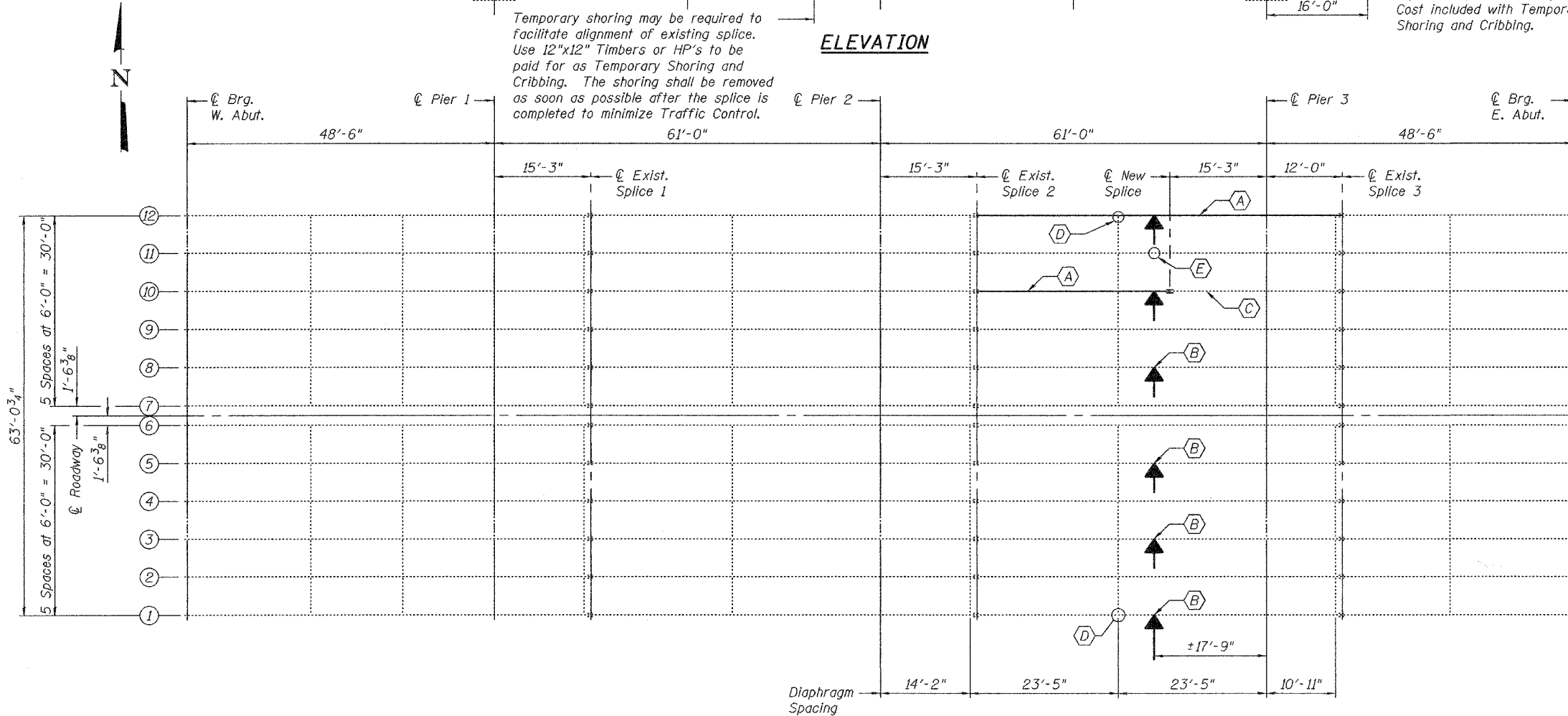
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		Cook	10	5

5 SHEETS

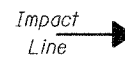
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-  
Contract Number: 62957



ELEVATION



PLAN



- (A) Remove and replace beam section.
- (B) Beam straightening and strengthening.
- (C) Beam straightening only.
- (D) Remove and replace lower clip angle.
- (E) Replace sheared off splice bolts.

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Fasteners shall be high strength bolts. Bolts  $7/8"$   $\phi$ , open holes  $15/16"$   $\phi$ , unless otherwise noted.

Diaphragm connection holes shall be  $15/16"$   $\phi$  for  $3/4"$   $\phi$  bolts. Two hardened washers shall be required at diaphragm connections.

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal. See Special Provisions "Temporary Shoring and Cribbing" and "Temporary Slab Support System."

After the new beam is in its final position and/or beam straightening operations have been completed, the Engineer in the field shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam. See Special Provision "Epoxy Injection."

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Cost of removal and/or re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of Furnishing and Erecting Structural Steel.

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 for the exterior and bottom flange of the fascia beam shall be Reddish Brown, Munsell No. 2.5 YR 3/4. The color of the acrylic finish coat for interior surfaces shall be Gray, Munsell No. 5B 7/1. See Special Provision "Cleaning and Painting New Metal Structures".

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

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

All construction joints shall be bonded.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams, cover  $\ell$ 's, strengthening  $\ell$ 's and all splice plate material except fill plates.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	3.1
Concrete Superstructure	Cu. Yd.	3.1
Furnishing and Erecting Structural Steel	Pound	11,290
Structural Steel Removal	Pound	11,290
Structural Steel Repair	Pound	2,550
Reinforcement Bars, Epoxy Coated	Pound	120
Temporary Slab Support System	L.S.	1
Beam Straightening	L.S.	1
Temporary Shoring and Cribbing	L.S.	1

DESIGNED	<i>Paul H. Johnson</i>
CHECKED	<i>Adrian I. Holloway</i>
DRAWN	<i>[Signature]</i>
CHECKED	<i>PBJ A-T-H</i>

November 10, 2005  
EXAMINED *John A. Morris*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES



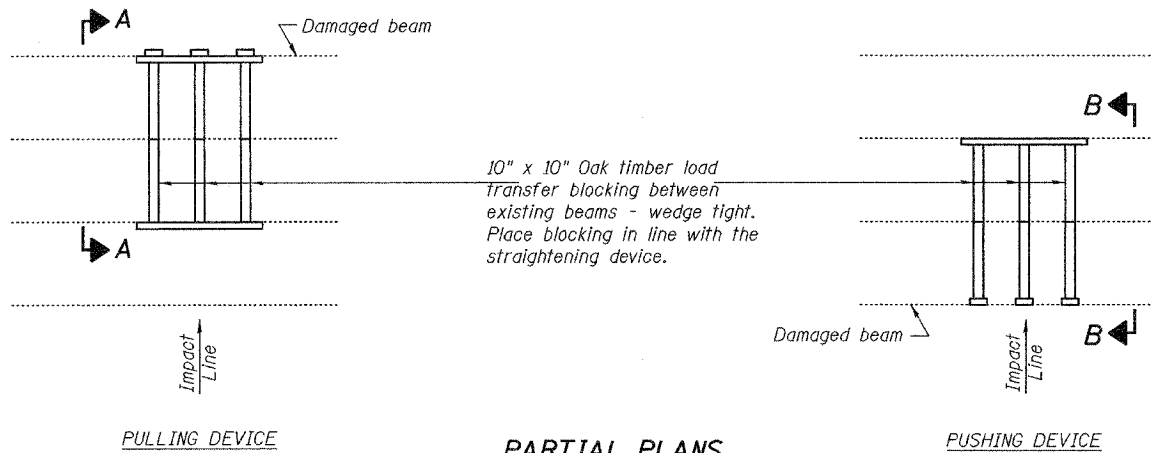
Expires: November 30, 2006

PLAN AND ELEVATION  
CHURCH STREET / I-94  
COOK COUNTY  
SN 016-0825

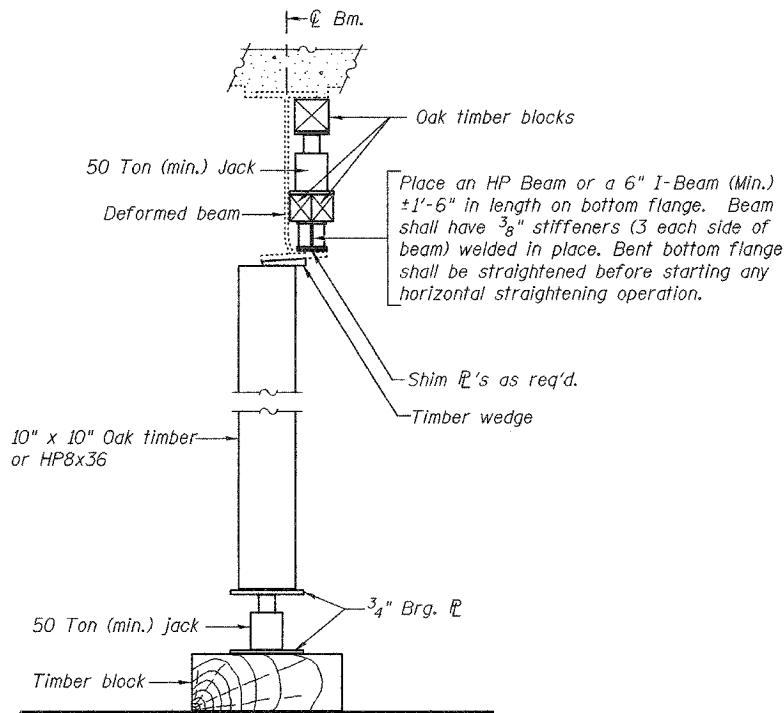
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Cook	10	6
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT-		

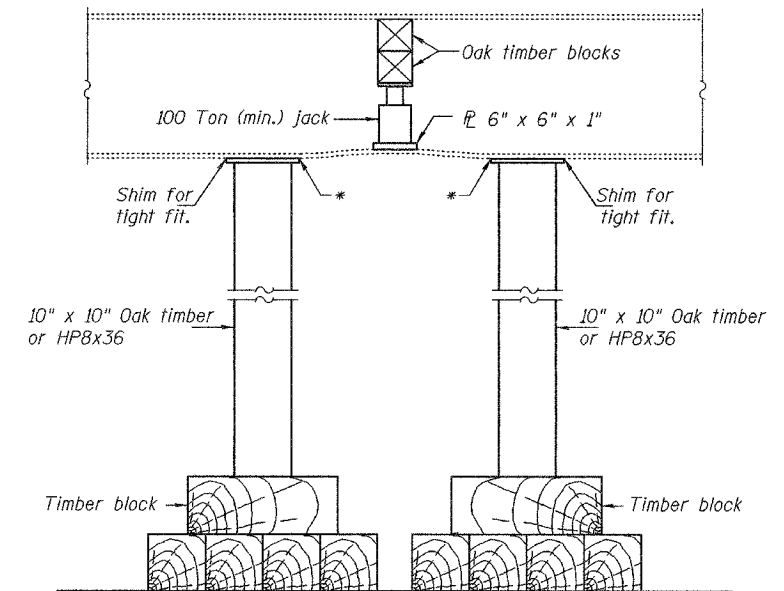
SHEET NO. 2  
5 SHEETS  
Contract Number: 62957



**PARTIAL PLANS**  
**SUGGESTED BEAM STRAIGHTENING METHODS**  
Straightening force shall be maintained on all load transfer blocking during beam straightening.

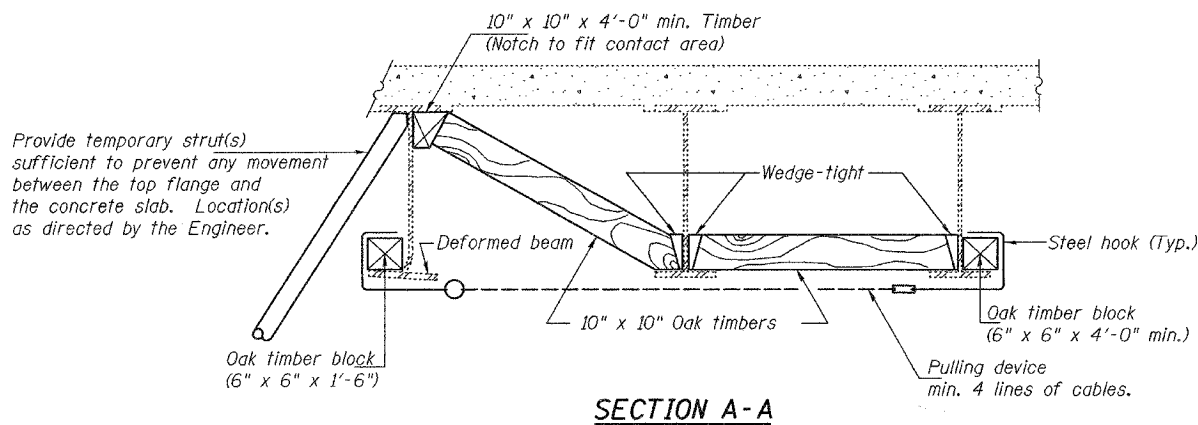


**SUGGESTED VERTICAL STRAIGHTENING DETAIL**  
(To correct flange rotation.)

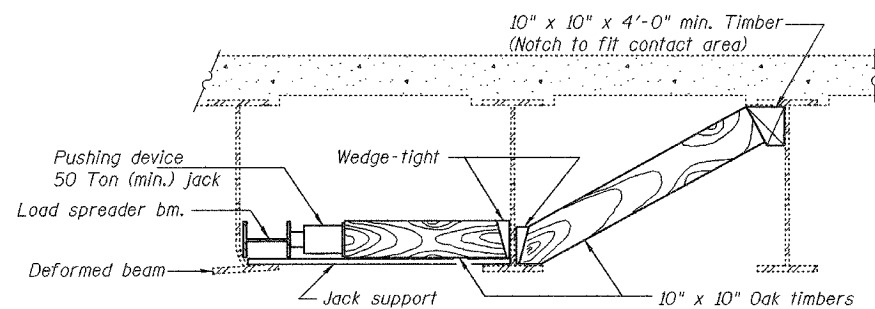


**SUGGESTED VERTICAL STRAIGHTENING DETAIL**  
(To correct localized vertical flange deformations.)

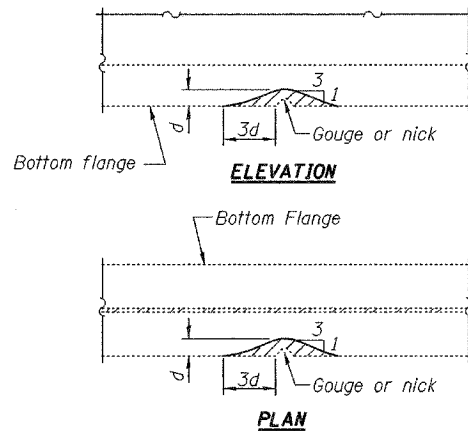
\* Edge of plate shall line up with edge of deformation.  
Note:  
Braces and Jack assembly shall be placed on same side of web.  
Bent bottom flange shall be straightened before starting any horizontal straightening operations.



**SECTION A-A**



**SECTION B-B**



**GRINDING DETAIL**

Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Ground surfaces shall be inspected for cracks using magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Ground surfaces shall be spot cleaned and painted with an aluminum epoxy mastic primer followed by a finish coat to match the color of the existing beam. Cost of grinding, testing and spot painting included with Beam Straightening.

**EXISTING DEFORMATION TO BE STRAIGHTENED**  
(Looking West)  
(Approximate max. deflections)  
Deflected length of beam to be straightened is approximately "L".

**DEFORMATION TABLE**

Beam Number	Dimensions		
	V	H	L
1	1"	2 3/4"	28'-0"
3	2"	1 1/4"	10'-0"
5	1 1/8"	5/8"	4'-0"
8	1 7/8"	5/8"	10'-0"
10	1/4"	3/4"	3'-0"

**BEAM STRAIGHTENING DETAILS**  
**CHURCH STREET / I-94**  
**COOK COUNTY**  
**SN 016-0825**

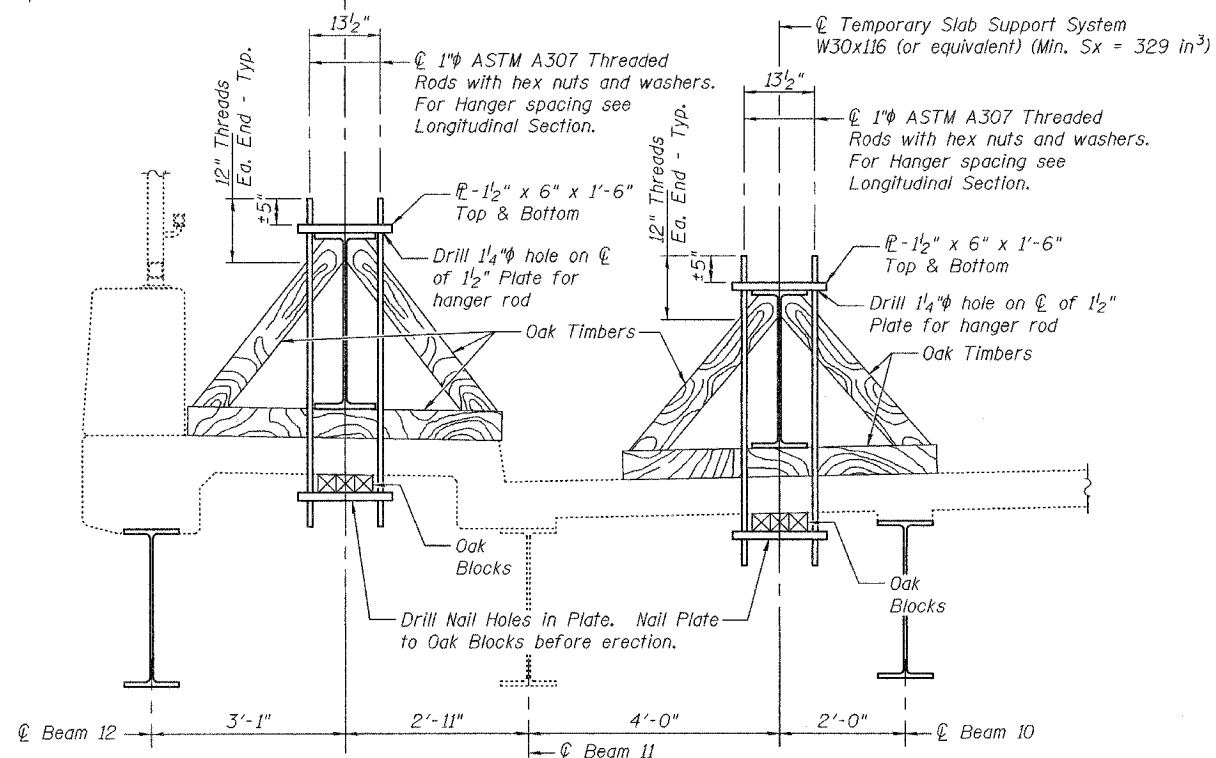
DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	P.S.J. / A.T.H.

EXAMINED	November 9, 2005
PASSED	John A. Morris ENGINEER OF STRUCTURAL SERVICES Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

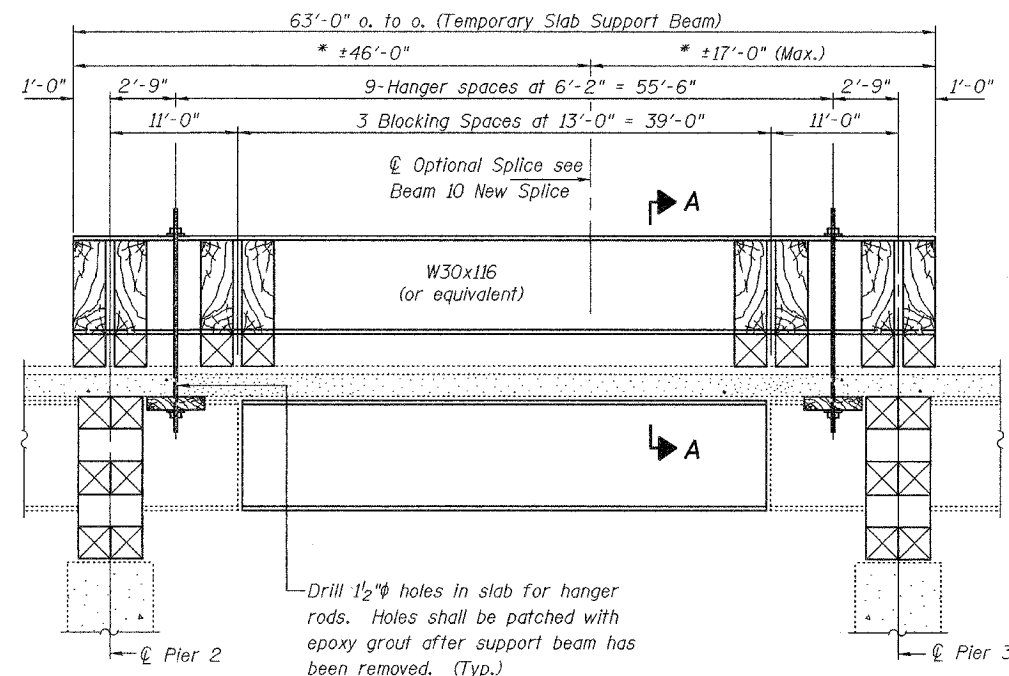
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		Cook	10	7	
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT			
Contract Number: 62957					

Temporary Slab Support System  
W30x116 (or equivalent) (Min. Sx = 329 in<sup>3</sup>)

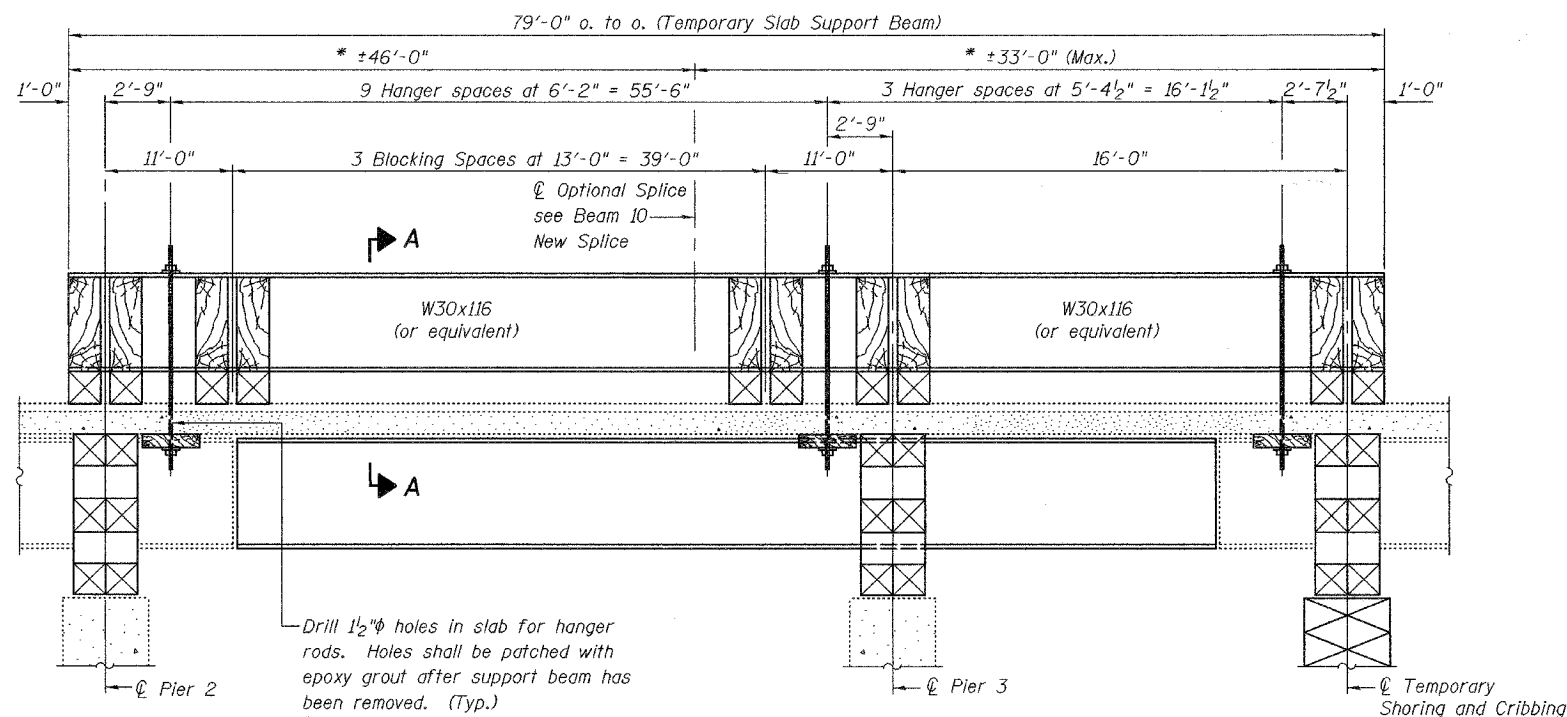


SECTION A-A

\* These dimensions may vary for available beams in stock.



LONGITUDINAL SECTION BEAM 10  
SUGGESTED TEMPORARY SLAB SUPPORT SYSTEM



LONGITUDINAL SECTION BEAM 12  
SUGGESTED TEMPORARY SLAB SUPPORT SYSTEM

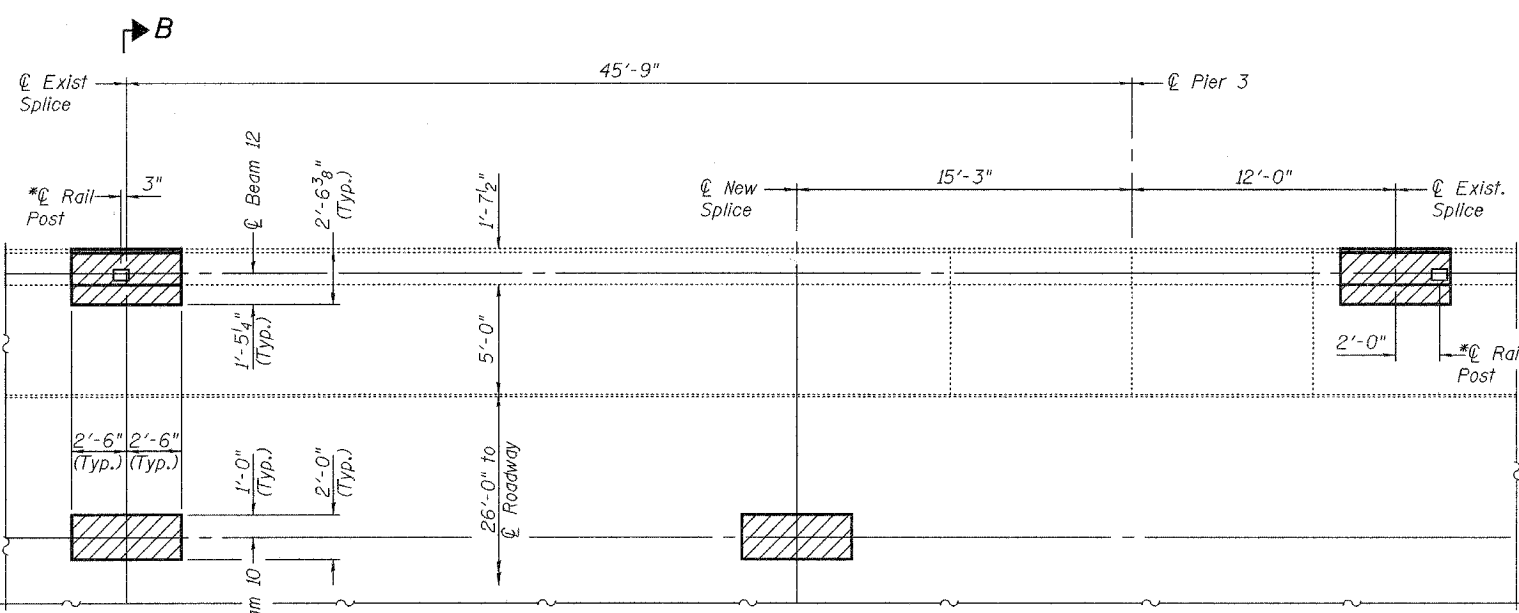
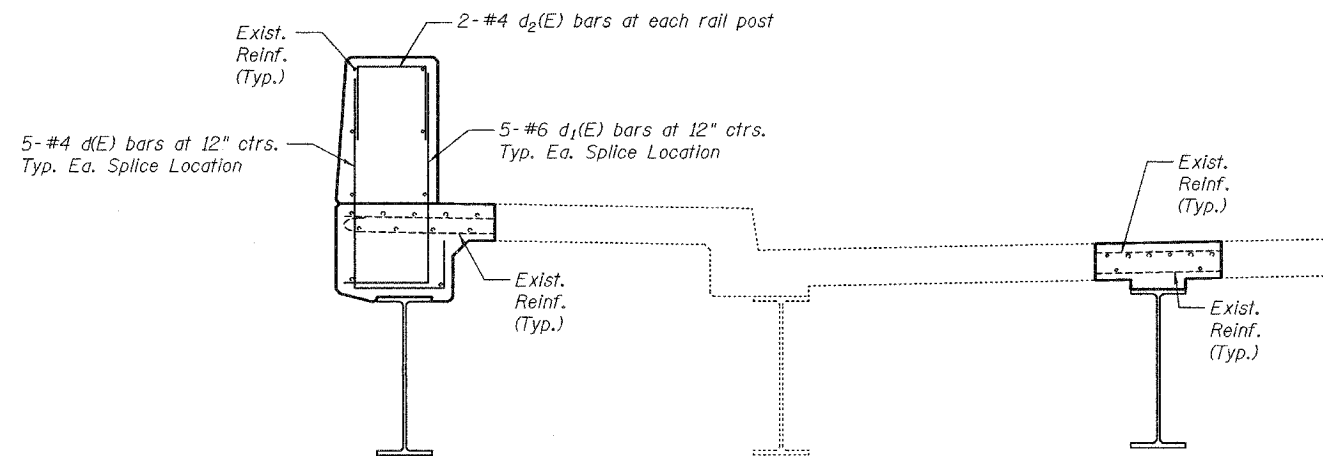
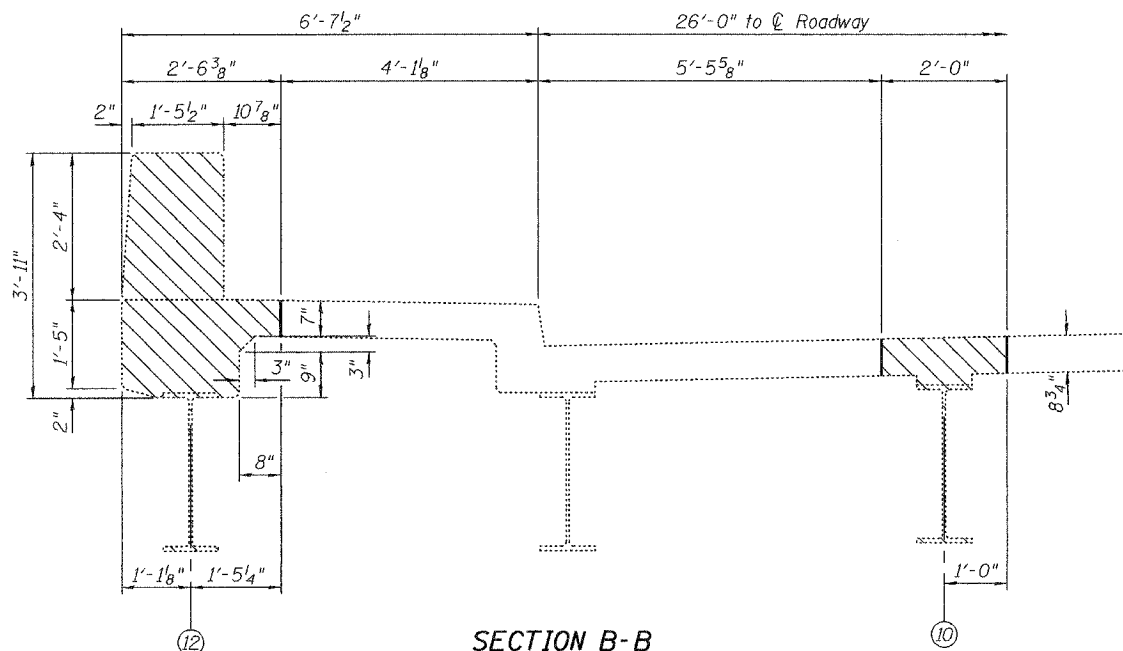
DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	P.S.J. / A.T.H.

November 9, 2005  
EXAMINED *John A. Morris*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

TEMPORARY SUPPORT DETAILS  
CHURCH STREET / I-94  
COOK COUNTY  
SN 016-0825

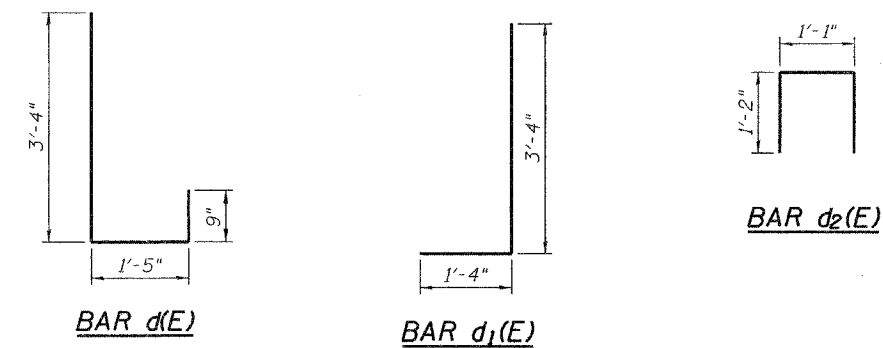
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	ISSUE SHEETS	SHEET NO.
		Cook	10	8
SHEET NO. 4 5 SHEETS				
Contract Number: 62957				



Hatched areas indicate concrete sections to be removed and replaced. Perimeters of concrete removal area shall be sawcut.

\*Remove, store and re-install existing post and railing, if necessary. Replace existing rail post anchors. Cost included with Concrete Removal.



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d(E)	10	#4	5'-6"	L
d <sub>1</sub> (E)	10	#6	4'-8"	J
d <sub>2</sub> (E)	4	#4	3'-5"	□
Concrete Removal			Cu. Yd.	3.1
Concrete Superstructure			Cu. Yd.	3.1
Reinforcement Bars, Epoxy Coated			Lbs.	120

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	P.S.J.	November 9, 2005
CHECKED	A.T.H.	EXAMINED <i>John A. Morris</i> ENGINEER OF STRUCTURAL SERVICES
DRAWN	Drew Christopher	PASSED <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	P.S.J. / A.T.H.	

Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.

**CONCRETE DETAILS**  
CHURCH STREET / I-94  
COOK COUNTY  
SN 016-0825

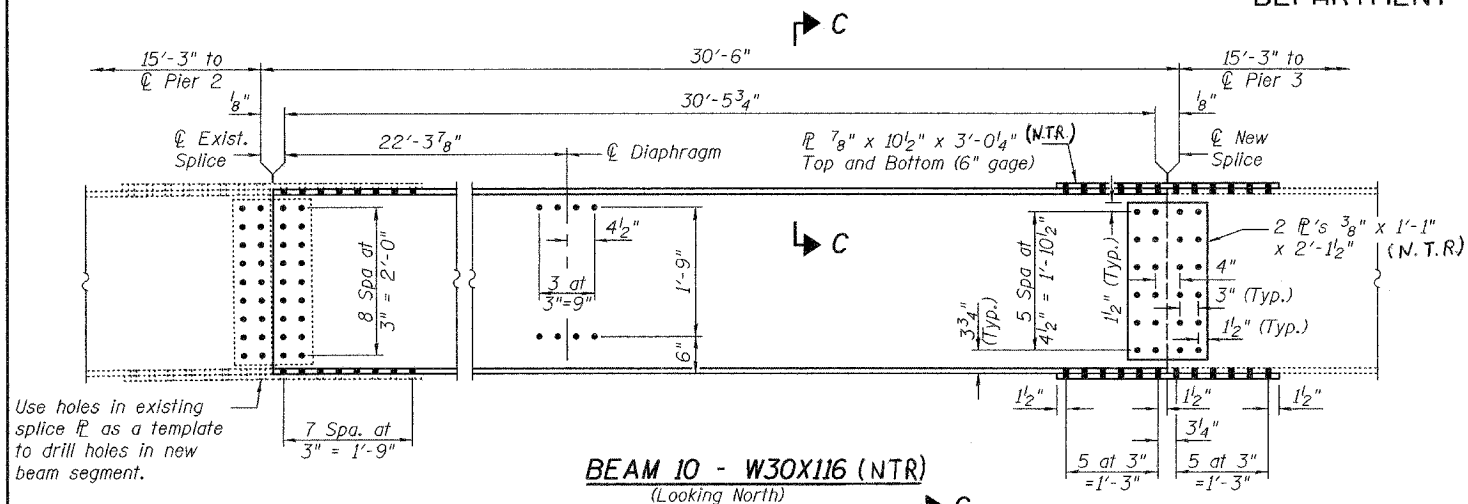


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

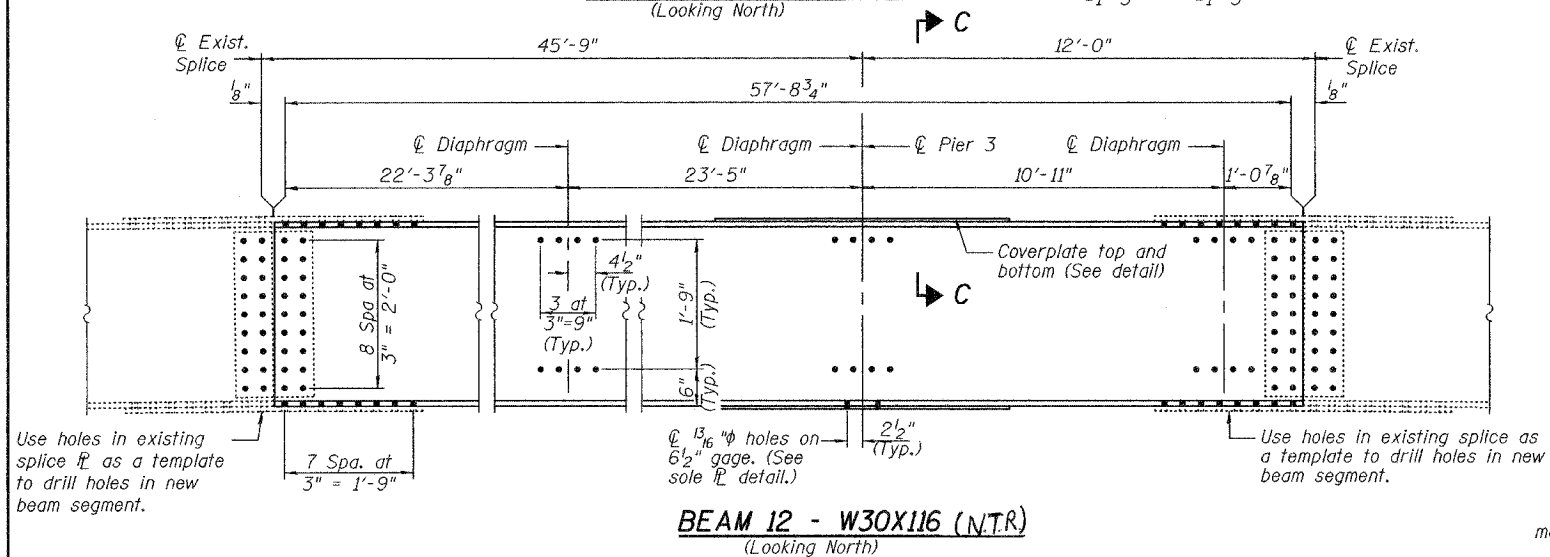
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
		Cook	10	9

SHEET NO. 5  
5 SHEETS

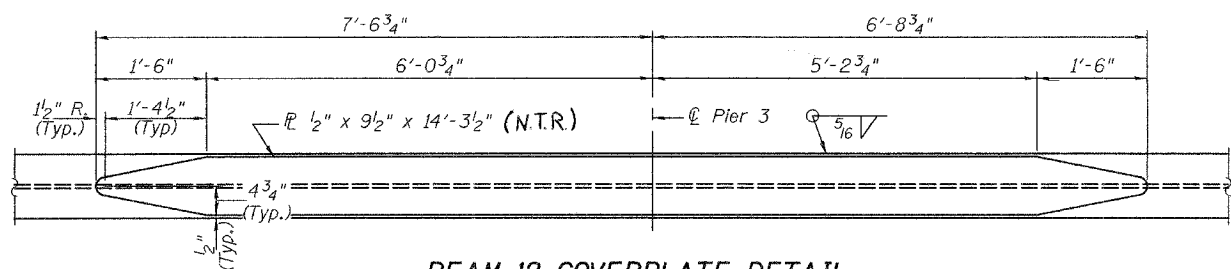
Contract Number: 62957



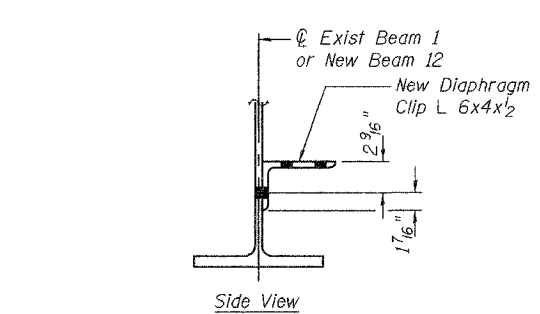
**BEAM 10 - W30X116 (NTR)**  
(Looking North)



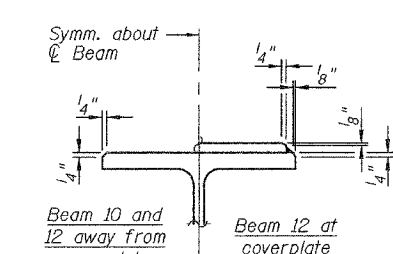
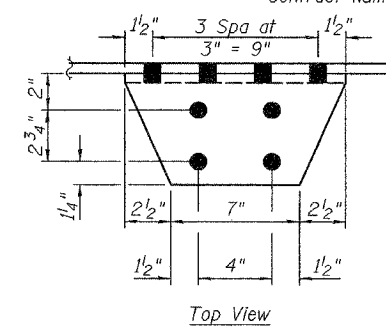
**BEAM 12 - W30X116 (NTR)**  
(Looking North)



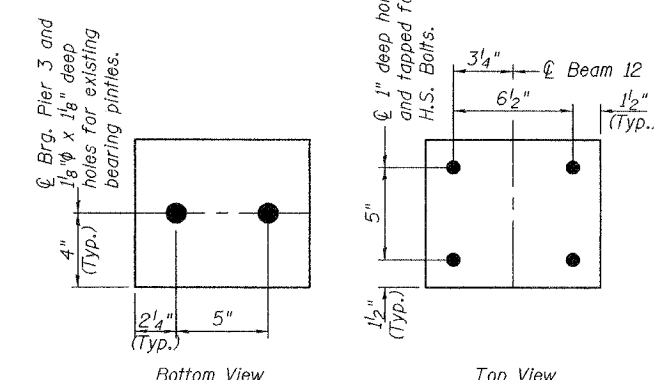
**BEAM 12 COVERPLATE DETAIL**



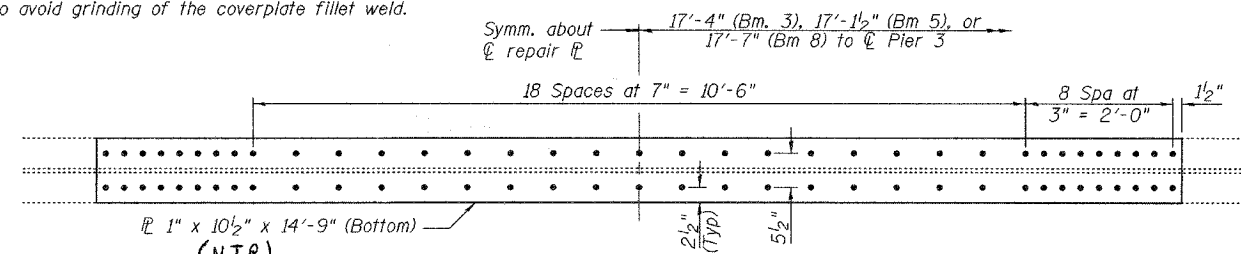
**DIAPHRAGM CLIP ANGLE**



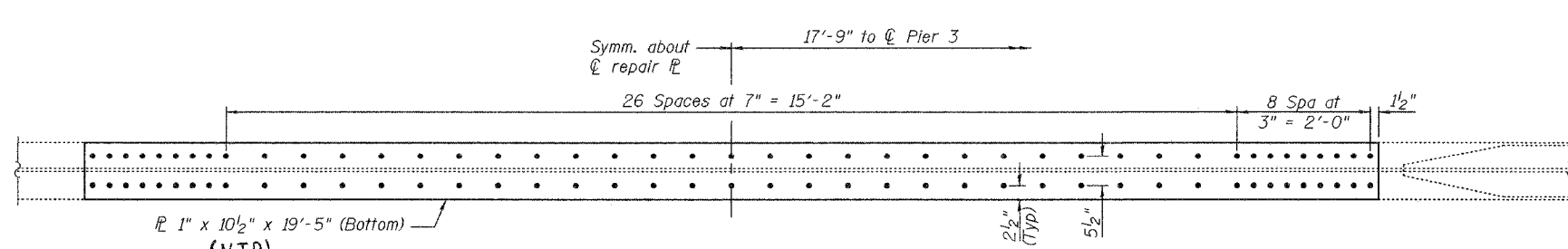
**SECTION C-C**



**SOLE PLATE 2 1/4" x 8" x 9 1/2"**



**BEAMS 3, 5 AND 8 STRENGTHENING PLATE**



**BEAM 1 STRENGTHENING PLATE**

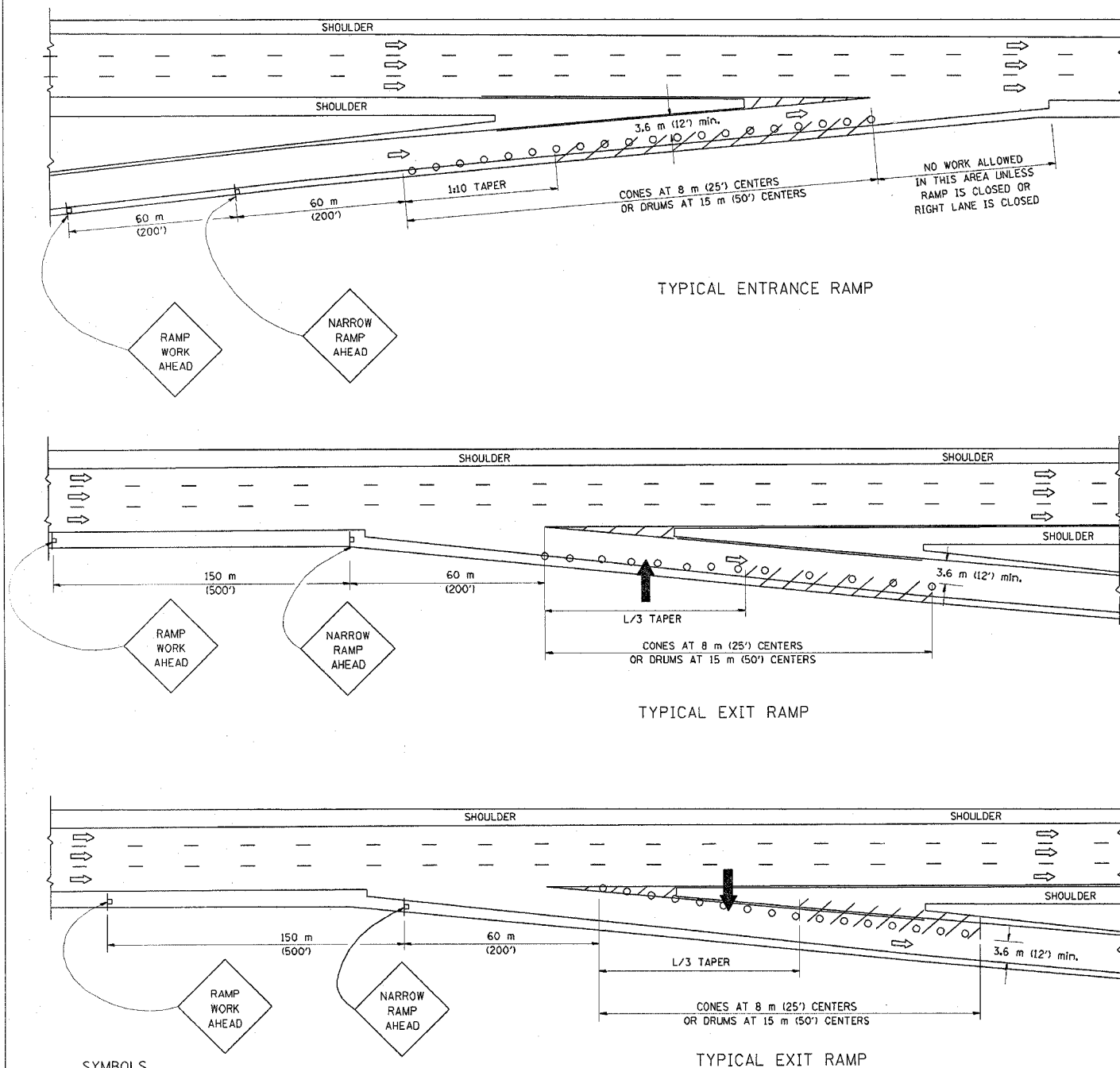
DESIGNED	P.S.J.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	P.S.J. / A.T.H.

November 9, 2005  
EXAMINED *John A. Morris*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

Notes:  
Strengthening PL's and associated hardware is included in Structural Steel Repair. All remaining steel is included with Furnishing and Erecting Structural Steel.  
The cost of all field drilling required for installation of the steel members is included with the appropriate steel pay item.

**STEEL REPAIR DETAILS**  
**CHURCH STREET / I-94**  
**COOK COUNTY**  
**SN 016-0825**

### PARTIAL RAMP CLOSURE DETAILS



**SYMBOLS**

- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- CONES - 700 (28) IN HEIGHT

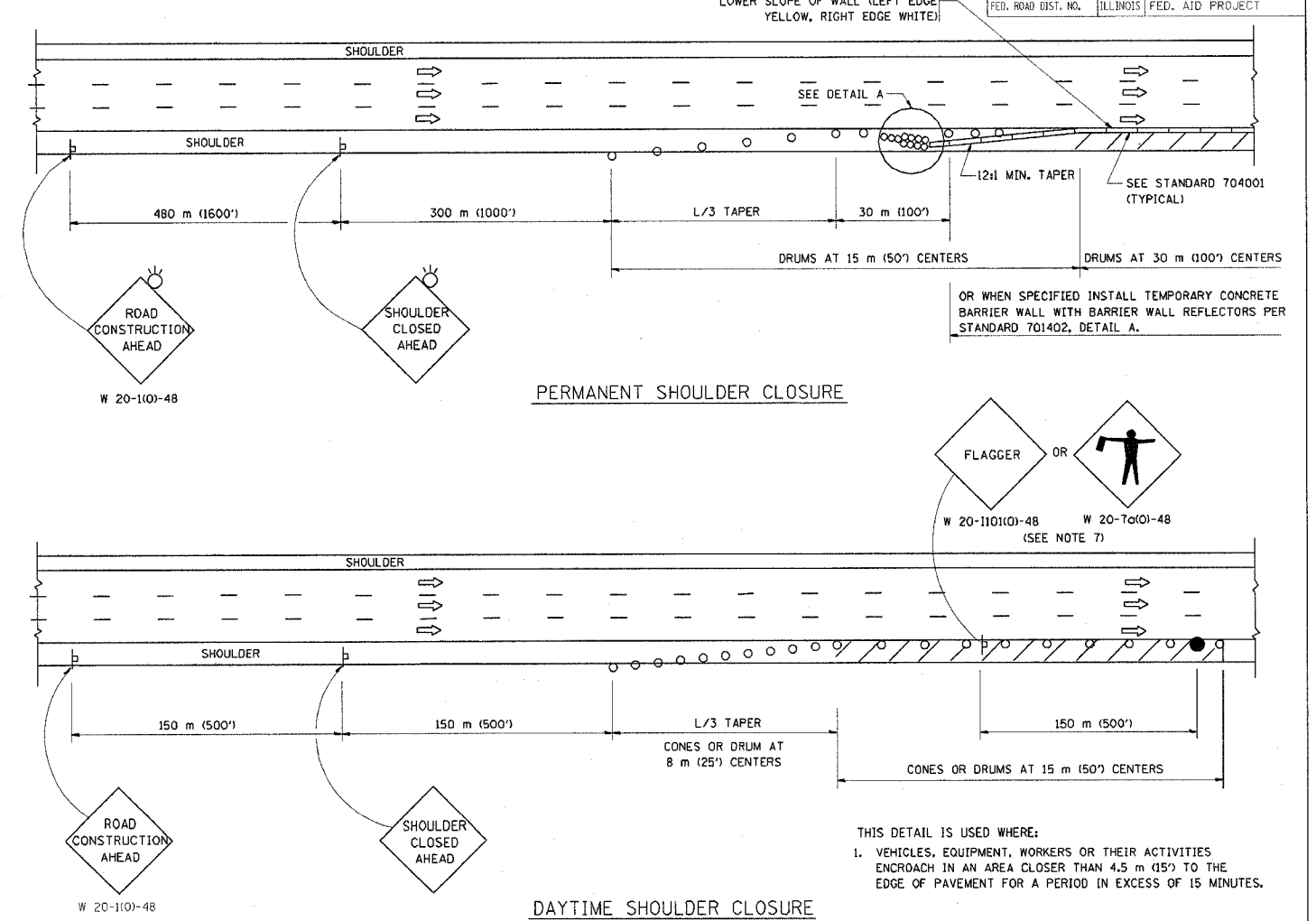
**GENERAL NOTES**

1. THE "L" DISTANCE EQUALS:
 

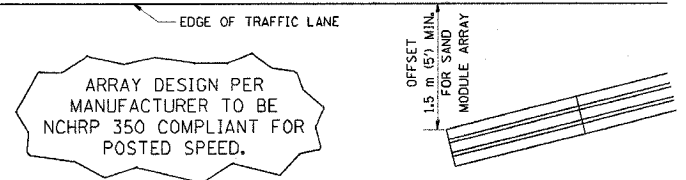
SPEED LIMIT	FORMULAS
80 km/h (45 mph) OR GREATER:	METRIC ENGLISH
	$L=0.65(W)(S)$ $L=(W)(S)$

W = WIDTH OF OFFSET IN METERS (FEET)  
S = NORMAL POSTED SPEED KM/H (MPH)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

### SHOULDER CLOSURE DETAILS



- THIS DETAIL IS USED WHERE:
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH IN AN AREA CLOSER THAN 4.5 m (15') TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



**DETAIL "A"**  
IMPACT ATTENUATOR, TEMPORARY (SEE NOTE 5)

5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS OUTSIDE THE CLEAR ZONE OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE "TRAFFIC BARRIER TERMINAL, TYPE III, TEMPORARY" DEVICE TO MEET NCHRP350 FOR POSTED SPEED.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - b. THE WORK ACTIVITY REQUIRES FREQUENT ENCR OACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 30 m (100') TO 60 m (200') IN ADVANCE OF THE WORKERS.

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.  
ILLINOIS DEPARTMENT OF TRANSPORTATION

**TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES**

REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 350	04/03

SCALE: NONE  
DATE: 05/06/2003  
DRAWN BY: DWS  
DESIGNED BY: DWS  
CHECKED BY: [ ]  
TC-17