

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 352	46-1SB-I-1	LAKE	11	1

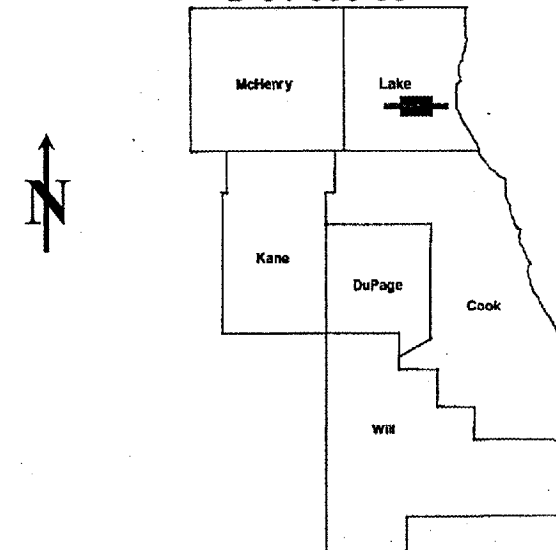
FOR INDEX OF SHEETS SEE SHEET 2

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**DISTRICT ONE**  
**PROPOSED HIGHWAY PLANS**

**CONTRACT NO. 62874**  
 D-91-058-05

**IMPROVEMENT IS  
 LOCATED IN FREMONT  
 TOWNSHIP**

FAP RTE 352: IL 137  
 OVER US 45 (SN 049-1070)  
 SECTION 46-1SB-I-1  
 BRIDGE BEAM REPLACEMENT  
 LAKE COUNTY  
 C-91-058-05



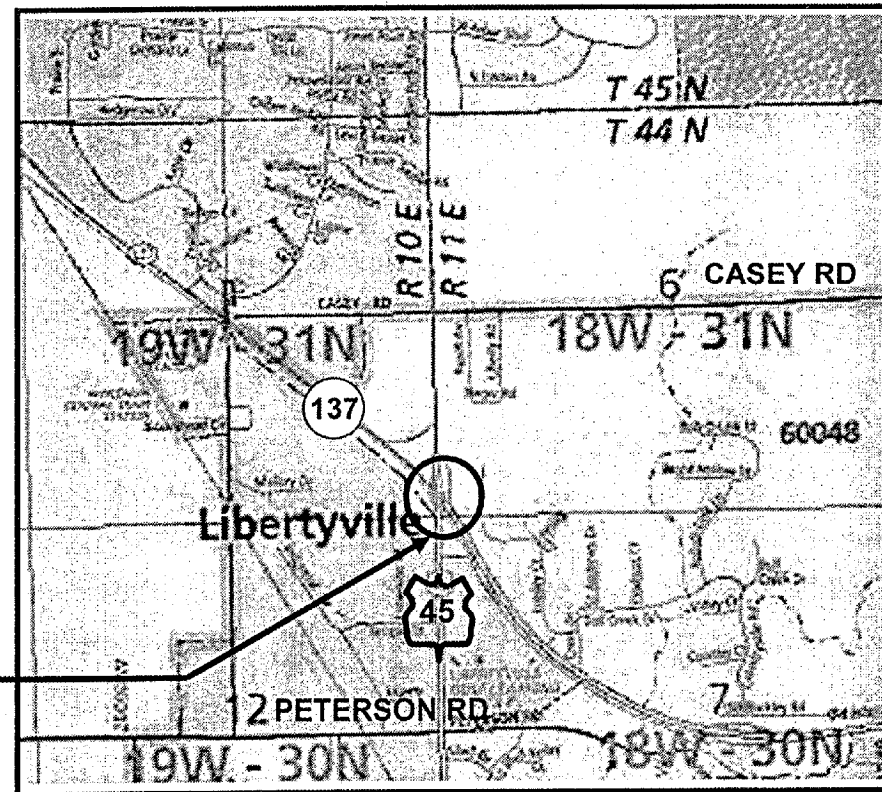
LOCATION OF IMPROVEMENT INDICATED THUS:

**TRAFFIC DATA**

ILL 137  
 SPEED LIMIT = 55 MPH  
 2001 ADT = 15,500

US 45  
 SPEED LIMIT = 50 MPH  
 2003 ADT = 28,000

**LOCATION OF  
 IMPROVEMENT**



FREMONT AND LIBERTYVILLE TOWNSHIPS

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
 SUBMITTED: February 24, 20 05  
*Dina O'Keefe*  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
March 25, 2005  
*Mike Hine*  
 ENGINEER OF DESIGN AND ENVIRONMENT  
March 25, 20 05  
*Victor Mader*  
 DIRECTOR, DIVISION OF HIGHWAYS

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

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

**CONTRACT NO. 62874**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 352	46-1SB-I-1	LAKE	11	2

## INDEX OF SHEETS

1	TITLE SHEET
2	INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES
3	SUMMARY OF QUANTITIES
4	TRAFFIC STAGING PLAN IL 137
5-10	BRIDGE PLANS (SN 049-0170)
11	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVE WAYS

## STATE STANDARDS

701101-01	Off Road Operations, Multilane, Less Than 15' Away
701301-02	Lane closure, 2L, 2W, Short Time Operations
701402-05	Lane Closure, Freeway/Expressway, With Barrier
701422-01	Lane Closure, Multilane, For Speeds >45 MPH TO 55 MPH
702001-05	Traffic Control Devices
704001-02	Temporary Concrete Barrier

## GENERAL NOTES

CONTRACT 62874

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION) AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. (48 HOUR NOTIFICATION IS REQUIRED).
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
- 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.
- 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 MR. CORY JUCIUS, THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM BRIDGE INSPECTORS.
- ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE REMOVAL LINE SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL COORDINATE SIGN REPLACEMENT WITH DEBBIE HANSON BUREAU OF TRAFFIC AT 847-438-2300.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
INDEX OF SHEETS  
STATE STANDARDS  
GENERAL NOTES

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 352	46-1SB-I-1	LAKE	11	3

CONTRACT 62874

**SUMMARY OF QUANTITIES**

URBAN  
100% MCHD

CODE NUMBER	DESCRIPTION	UNIT	CONSTRUCTION TYPE CODE SFTY-2A SN 049-0170
50102400	CONCRETE REMOVAL	CU YD	18
50300255	CONCRETE SUPERSTRUCTURE	CU YD	18
50300260	BRIDGE DECK GROOVING	SQ YD	26.5
50300300	PROTECTIVE COAT	SQ YD	61.1
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	10310
50500505	STUD SHEAR CONNECTORS	EACH	168
50501110	STRUCTURAL STEEL REMOVAL	POUND	10310
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4250
70100320	TRAFFIC CONTROL AND PROTECTION, STANDARD 701422	L SUM	1
70400100	TEMPORARY CONCRETE BARRIER	FOOT	220
X0322467	TEMPORARY INFORMATION SIGNING FOR LANE CLOSURE	SQ FT	96
Z0003600	BEAM STRAIGHTENING	L SUM	1
Δ Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0047300	PROTECTIVE SHIELD	SQ YD	94
Z0073300	TEMPORARY SHORING AND CRIBBING	L SUM	1

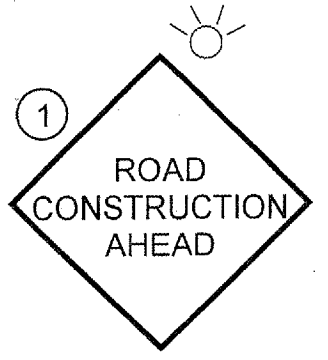
Δ - SFTY-3N

ILLINOIS DEPARTMENT OF TRANSPORTATION  
  
SUMMARY OF QUANTITIES

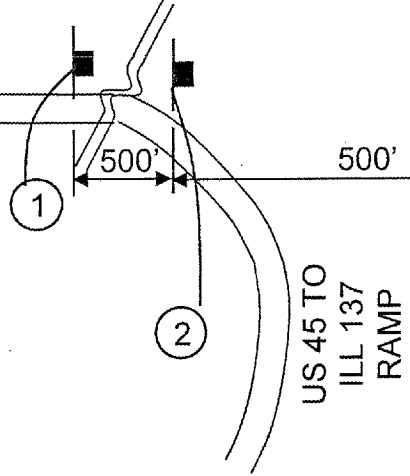
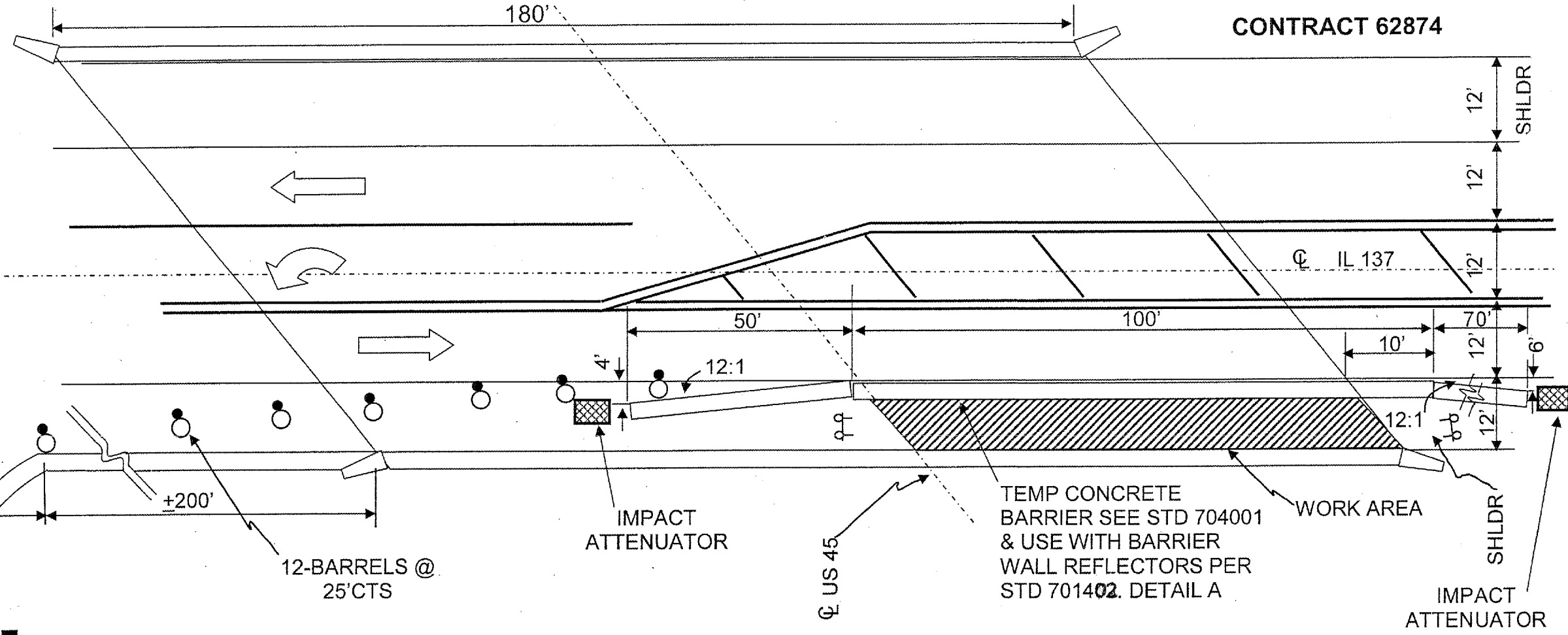
Rev.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAP 352	46-1SB-I-1	LAKE	11	4

CONTRACT 62874

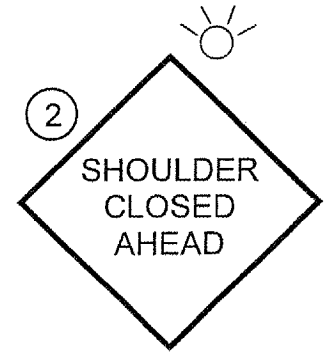


W20 - 1(0) - 48



**SYMBOLS**

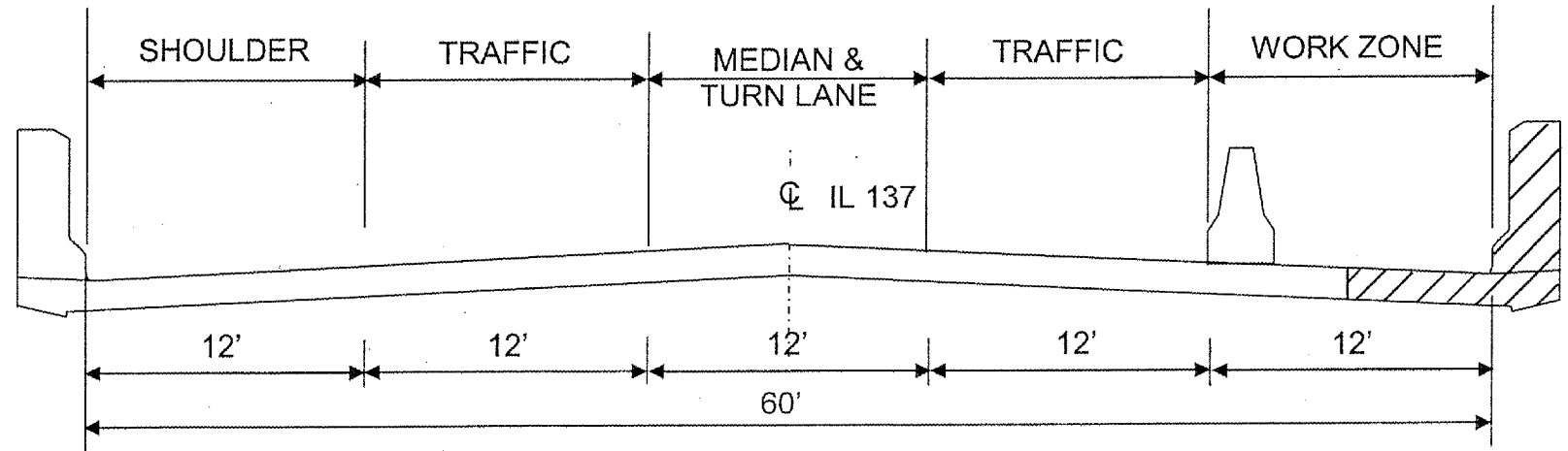
- TYPE III BARRICADE WITH FLASHING LIGHTS
- DIRECTION OF TRAFFIC
- DRUM WITH STEADY BURNING LIGHT
- IMPACT ATTENUATOR
- TEMP CONCRETE BARRIER



**GENERAL NOTES:**

TRAFFIC CONTROL ON US 45 WILL BE ACCORDING TO STANDARD 701422 AND AS SPECIFIED IN SPECIAL PROVISION "KEEPING ARTERIAL ROADWAYS OPEN TO TRAFFIC".

COST OF ADDITIONAL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET ARE INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION STANDARD 701422".



LOOKING NORTH

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 TRAFFIC STAGING  
 FOR IL 137  
 OVER US 45  
 (SN 049-0776)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. 1
		LAKE	11	5
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	6 SHEETS	

Contract No. 62874

**GENERAL NOTES**

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

After the 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 for the work.

Cost of removal and/or reinstallation 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 interior surfaces and the bottom of the bottom flange shall be Gray, Munsell No. 5B 7/1. The color of the finish coat for the exterior of the beam shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision "Cleaning and Painting New Metal Structures".

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".

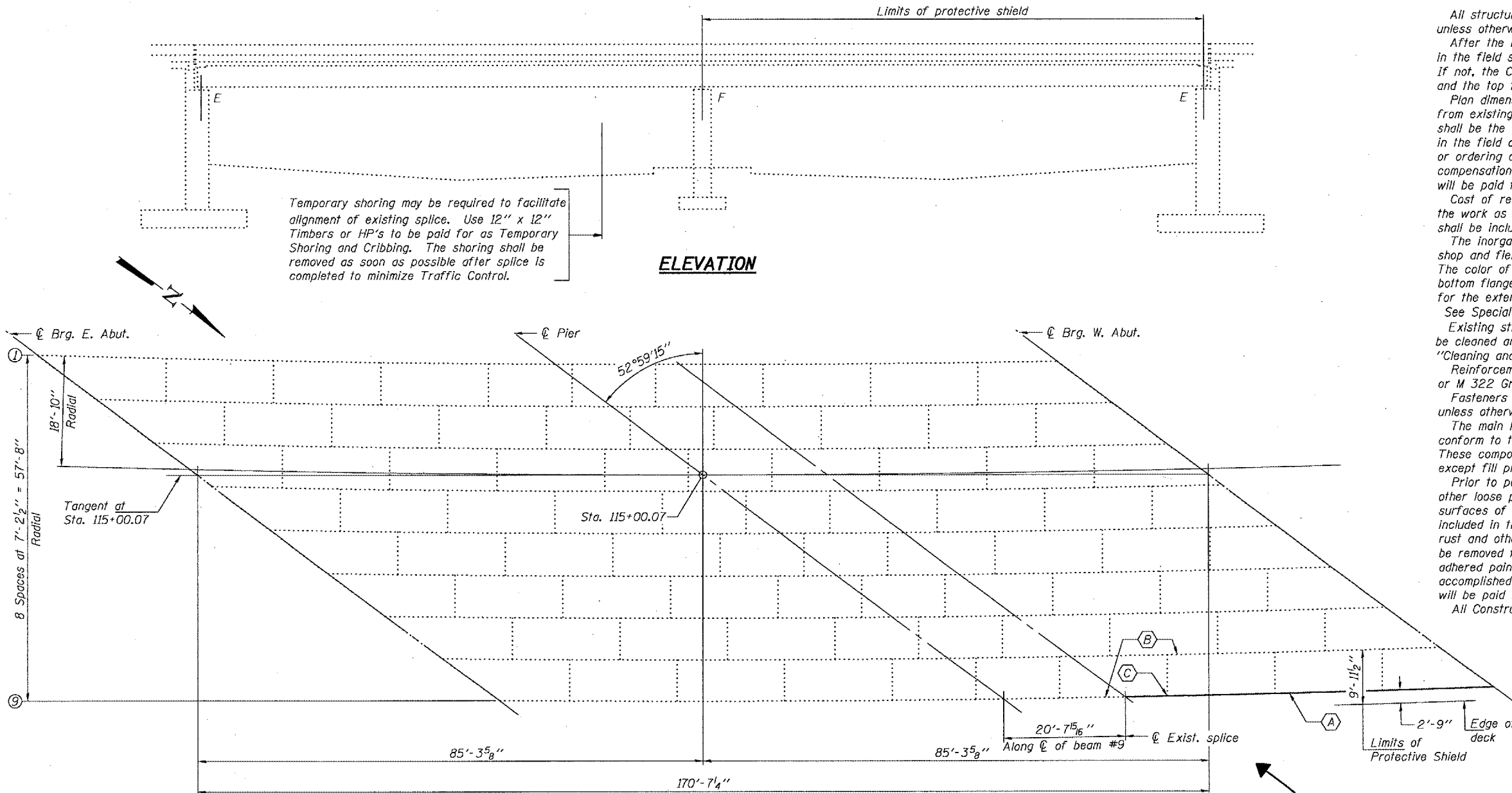
Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

Fasteners shall be high strength bolts. Bolts  $T_b \phi$ , field drill holes  $1\frac{1}{16} \phi$ , unless otherwise noted.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Match Toughness Zone 2. These components are the tension flanges, webs and all splice plate material except fill plates.

Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.

All Construction joints shall be bonded.



**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Superstructure	Cu. Yd.	18.0
Concrete Removal	Cu. Yd.	18.0
Furnishing and Erecting Structural Steel	Pound	10310
Structural Steel Removal	Pound	10310
Beam Straightening	L.S.	1
Stud Shear Connectors	Each	168
Temporary Shoring and Cribbing	L.S.	1
Reinforcement Bars, Epoxy Coated	Pound	4250
Protective Shield	Sq. Yd.	94
Bridge Deck Grooving	Sq. Yd.	26.5
Protective Coat	Sq. Yd.	61.1

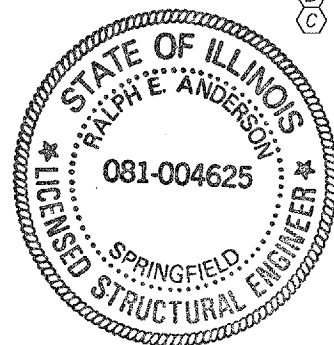
**PLAN AND ELEVATION**  
**IL RTE 137 OVER US RTE 45**  
**LAKE COUNTY**  
**SN 049-0170**

DESIGNED *Henry S. Burke*  
 CHECKED *Paul J. Johnson*  
 DRAWN *baliva*  
 CHECKED *LSB/PST*

MARCH 15, 2005

EXAMINED *John A. Morris*  
 ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*  
 ENGINEER OF BRIDGES AND STRUCTURES

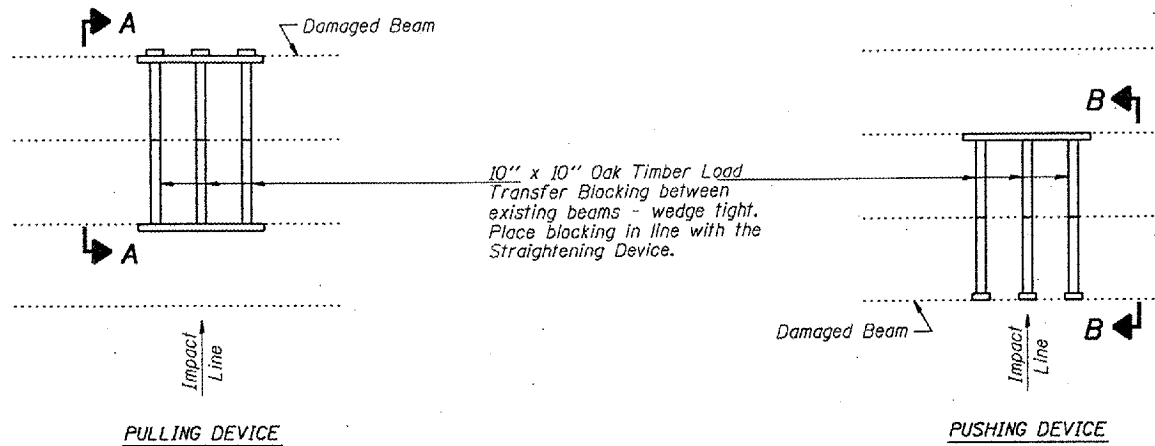


EXPIRES 11-30-2006

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

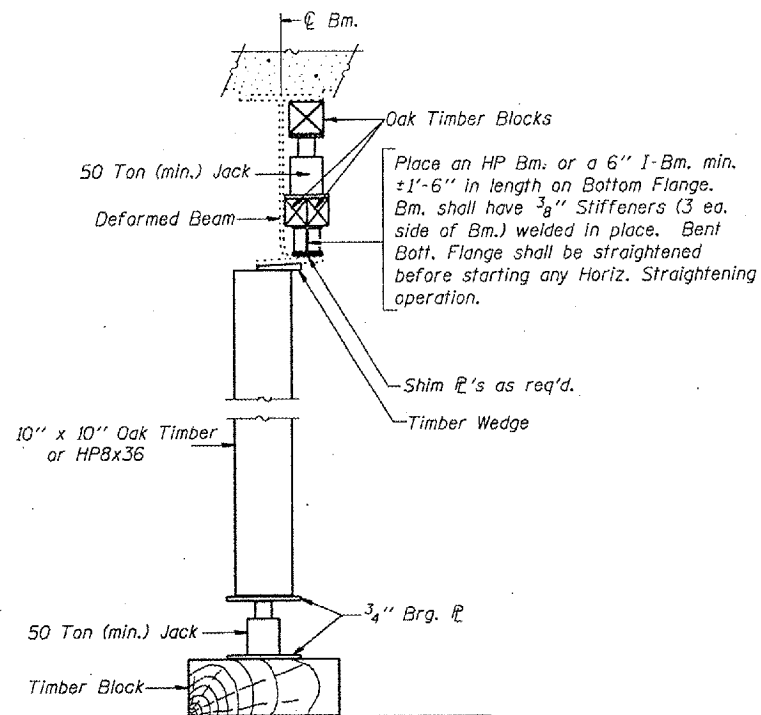
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET	SHEET NO. 2
		LAKE	11	6	6 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract No. 62874

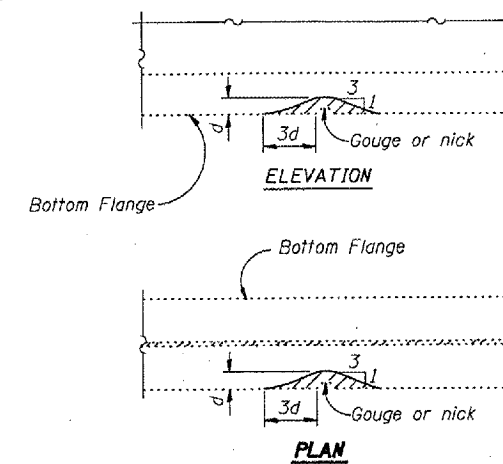


**PARTIAL PLANS**  
**SUGGESTED BEAM STRAIGHTENING METHODS**

Straightening Force shall be maintained on all load transfer blocking during beam straightening.

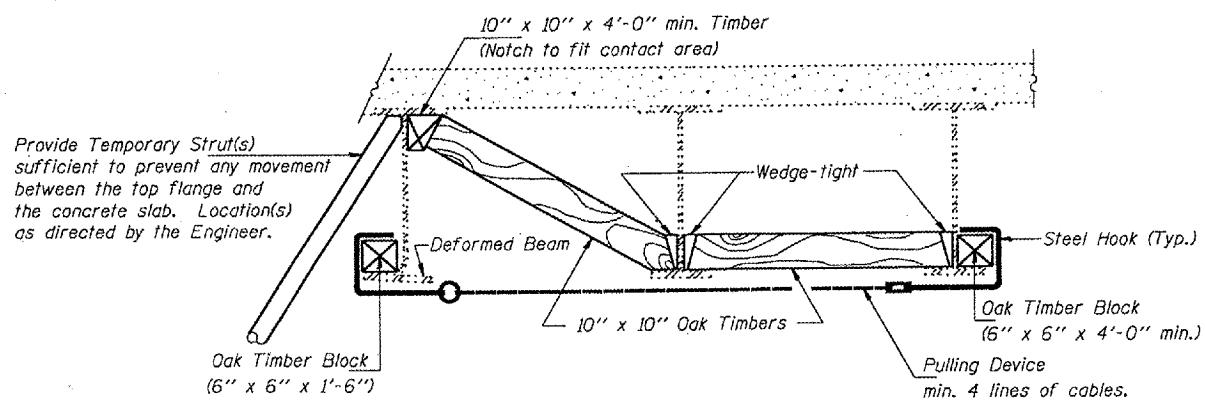


**SUGGESTED VERTICAL STRAIGHTENING DETAIL**

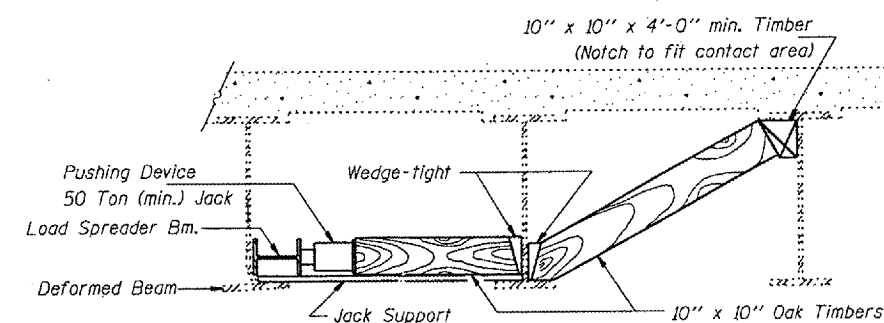


**GRINDING DETAIL**

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.



**SECTION A-A**



**SECTION B-B**

DESIGNED	JSB
CHECKED	PSJ
DRAWN	baliva
CHECKED	JSB PSJ

MARCH 15, 2005

EXAMINED *John A. Morris*  
ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

REP-1 1-27-2000

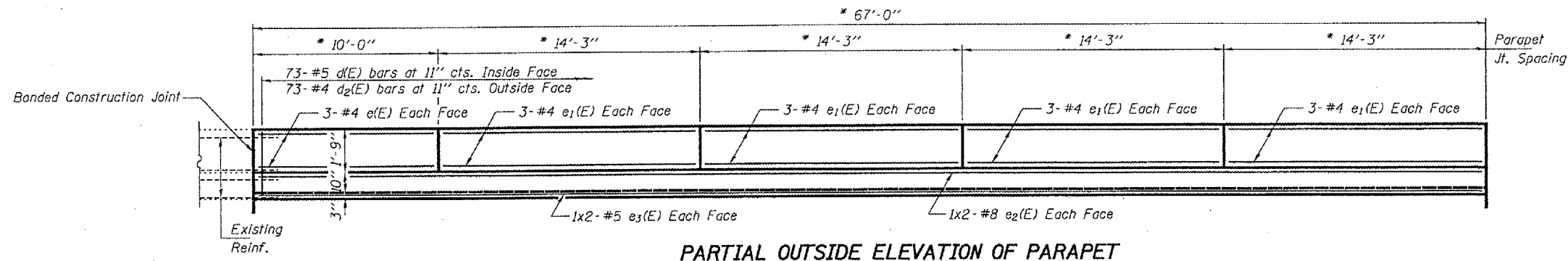
**BEAM STRAIGHTENING DETAILS**  
**IL RTE 137 OVER US RTE 45**  
**LAKE COUNTY**  
**SN 049-0170**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		LAKE	11	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

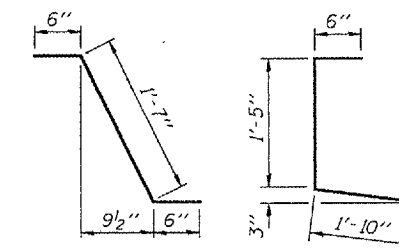
SHEET NO. 3  
6 SHEETS

Contract No. 62874.

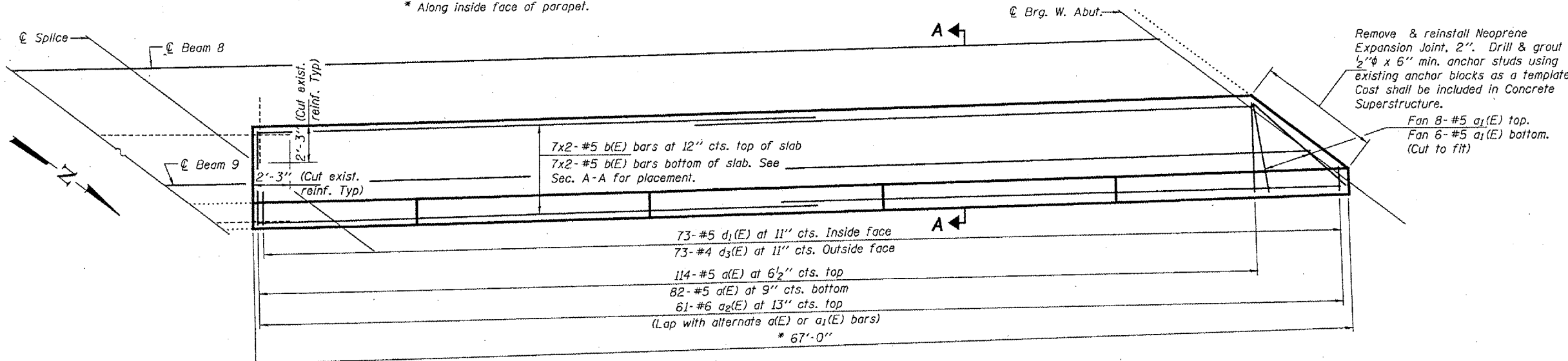


**PARTIAL OUTSIDE ELEVATION OF PARAPET**

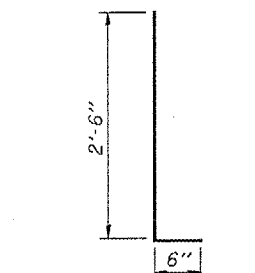
\* Along inside face of parapet.



**BAR d<sub>1</sub>(E) BAR d<sub>3</sub>(E)**

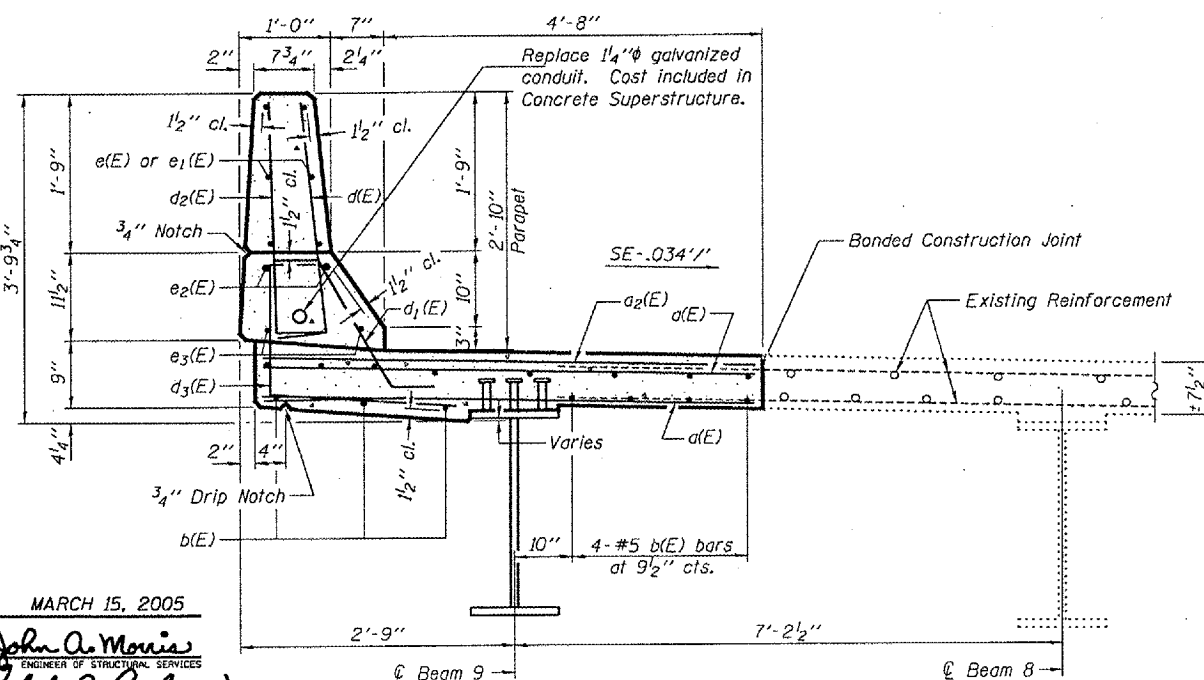


**PARTIAL PLAN**

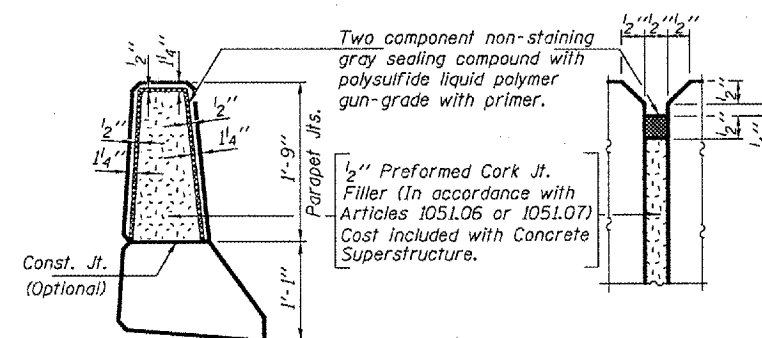


**BARS d(E) & d<sub>2</sub>(E)**

**MIN. BAR LAPS**  
#5 bar = 2'-2"  
#8 bar = 4'-6"



**SECTION A-A**



**PARAPET JOINT DETAILS**

**Notes:**  
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.  
Reinforcement Bars designated (E) shall be epoxy coated.  
Bars indicated thus 7 x 2-#5 etc. indicates 7 lines of bars with 2 lengths per line.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	196	#5	5'-9"	—
a1(E)	14	#5	8'-0"	—
a2(E)	61	#6	4'-6"	—
b(E)	28	#5	34'-6"	—
d(E)	73	#5	3'-0"	┌
d1(E)	73	#5	2'-7"	┌
d2(E)	73	#4	3'-0"	┌
d3(E)	73	#4	3'-9"	┌
e(E)	6	#4	9'-8"	—
e1(E)	24	#4	13'-11"	—
e2(E)	4	#8	35'-9"	—
e3(E)	4	#5	34'-6"	—
Concrete Removal			Cu. Yd.	18.0
Concrete Superstructure			Cu. Yd.	18.0
Reinforcement Bars, Epoxy Coated			Pound	4250

**SUPERSTRUCTURE DETAILS**  
**IL RTE 137 OVER US RTE 45**  
**LAKE COUNTY**  
**SN 049-0170**

DESIGNED	JSB
CHECKED	PSJ
DRAWN	baliva
CHECKED	JSB PSJ

MARCH 15, 2005  
EXAMINED *John A. Morris*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES





STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5
		LAKE	11	9	6 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

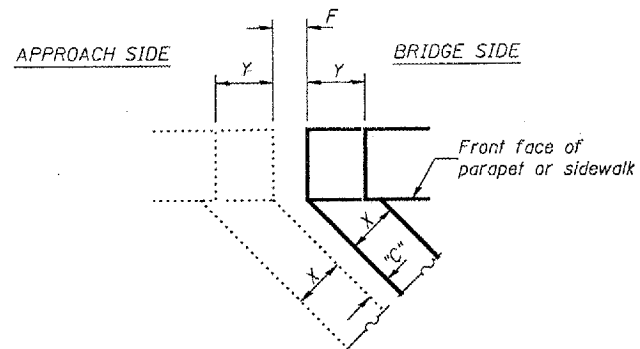
Contract No. 62874

**INSTALLATION NOTES**

- ① Reinstall existing continuous seal in roadway, parapet, curb, and sidewalk.
- ② Reinstall anchor blocks as indicated.

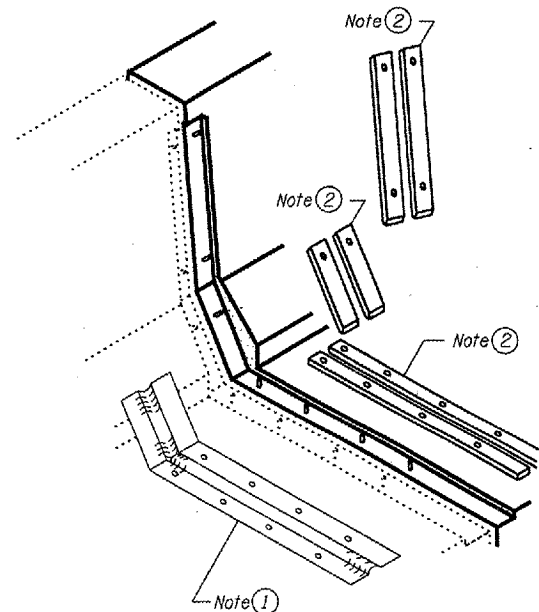
**SKEW LIMITATIONS**

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed according to dimension "D", might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.

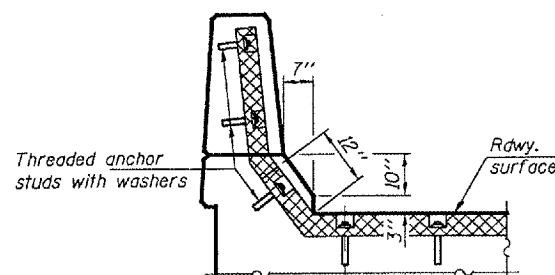


**FORMING BLOCKOUT SKETCH**

Note: For dimensions C, D, F, X & Y, match existing

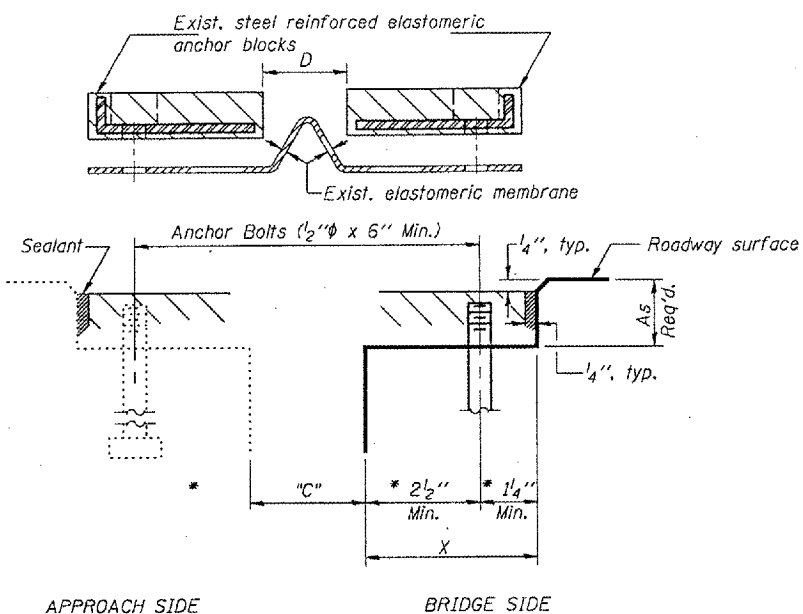


**AT PARAPET**



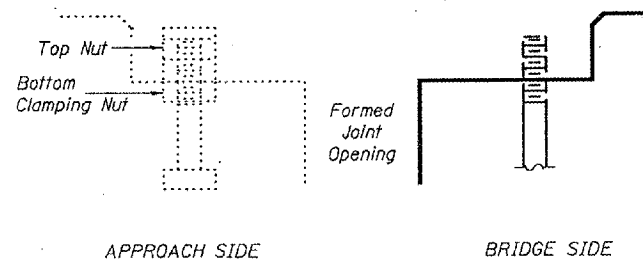
**AT PARAPET**

Drill & grout threaded rods using existing anchor blocks as a template.



**CROSS SECTION**

\* Match existing



**RECOMMENDED BLOCKOUT DETAIL**

Anchor studs should be stainless

DESIGNED	JSB
CHECKED	PSJ
DRAWN	baliva
CHECKED	JSB PSJ

MARCH 15, 2005  
EXAMINED *John A. Morris*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

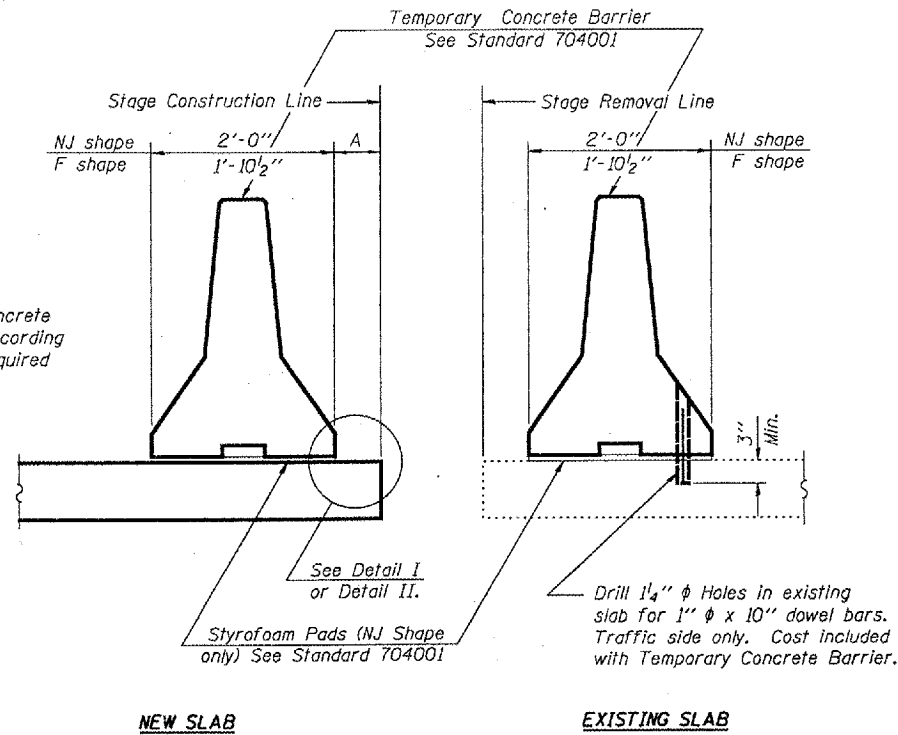
**NEOPRENE EXPANSION JOINT DETAILS**  
**IL RTE 137 OVER US RTE 45**  
**LAKE COUNTY**  
**SN 049-0170**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DIST. SHEETS	SHEET NO.
		LAKE	11	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

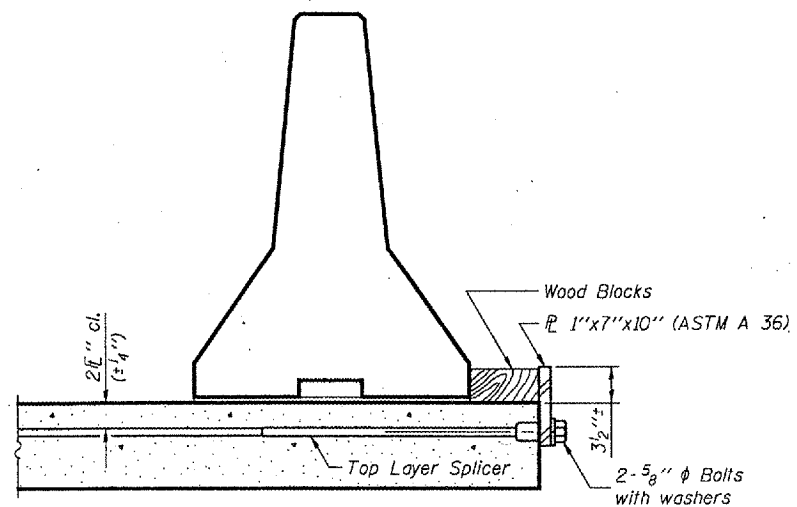
SHEET NO. 6  
6 SHEETS

Contract No. 62874



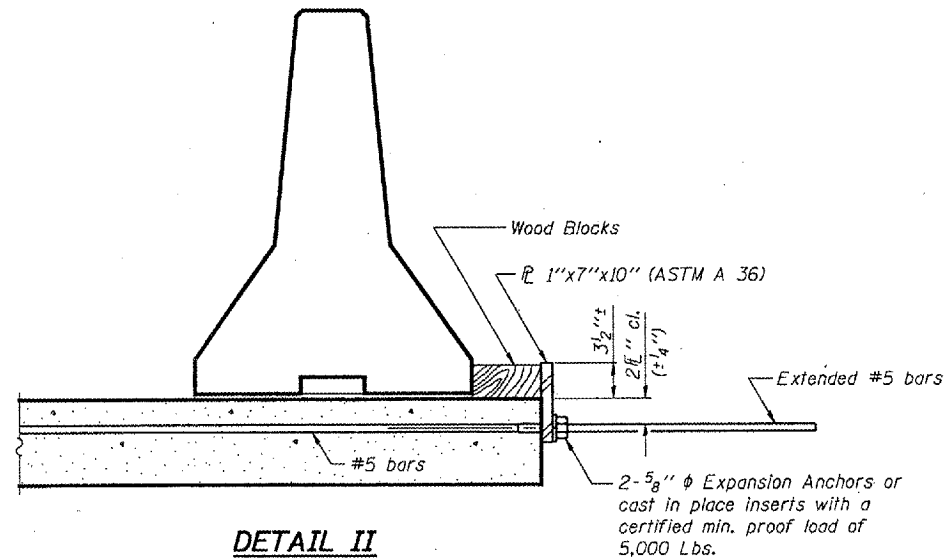
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".

SECTIONS THRU SLAB



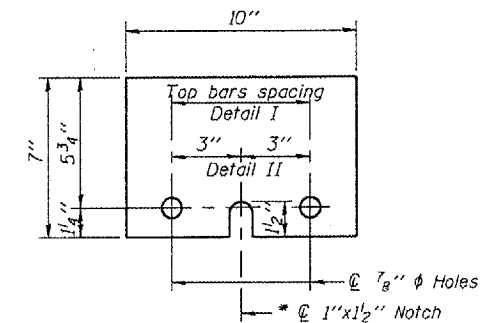
DETAIL I

The 1" x 7" x 10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1" x 7" x 10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



1" x 7" x 10"

\* Required only with Detail II

NOTES

- Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7" x 10" steel plate to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate center of each barrier panel.
- Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1" x 7" x 10" steel plate to the concrete slab with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate center of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier.

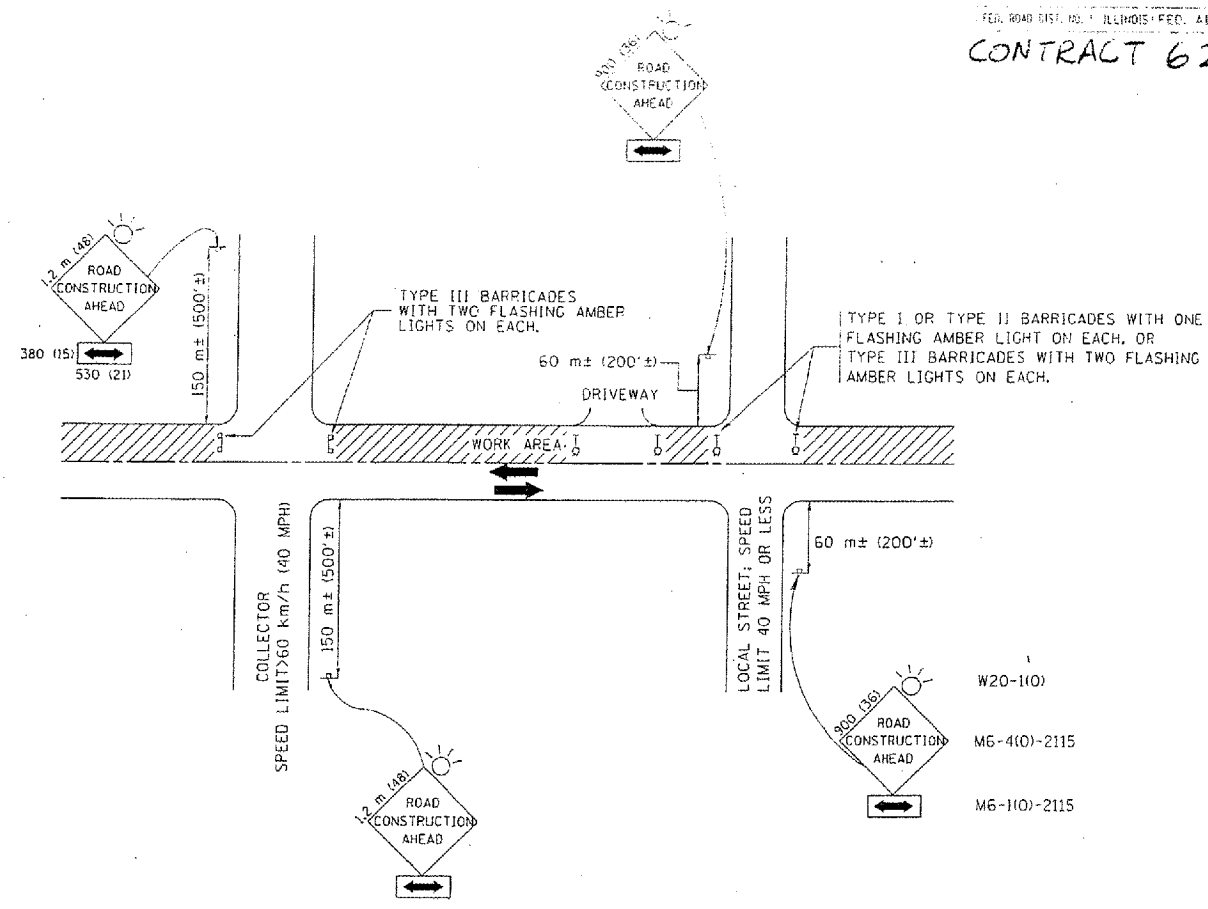
DESIGNED	JSB
CHECKED	PSJ
DRAWN	ballva
CHECKED	JSB PSJ

MARCH 15, 2005

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

R-27 9-01-03

TEMPORARY CONCRETE BARRIER  
IL RTE 137 OVER US RTE 45  
LAKE COUNTY  
SN 049-0170



**TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS**

**NOTES:**

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS**
- SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 900x900 (36x36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
  - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 1.2 m x 1.2 m (48x48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
  - WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:**
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.**
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.**

REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. CBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL AND PROTECTION**  
 FOR  
**SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS**

SCALE: VERT. DRAWN BY  
 HORIZ. CHECKED BY  
 DATE 10/18/2002 TC-10