

F.A.P. RTE.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
343	1453	2005-005BR	COOK/DUPAGE	14	1

+1  
= 15 Total Sheets

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FOR INDEX OF SHEETS, SEE SHEET NO. 2

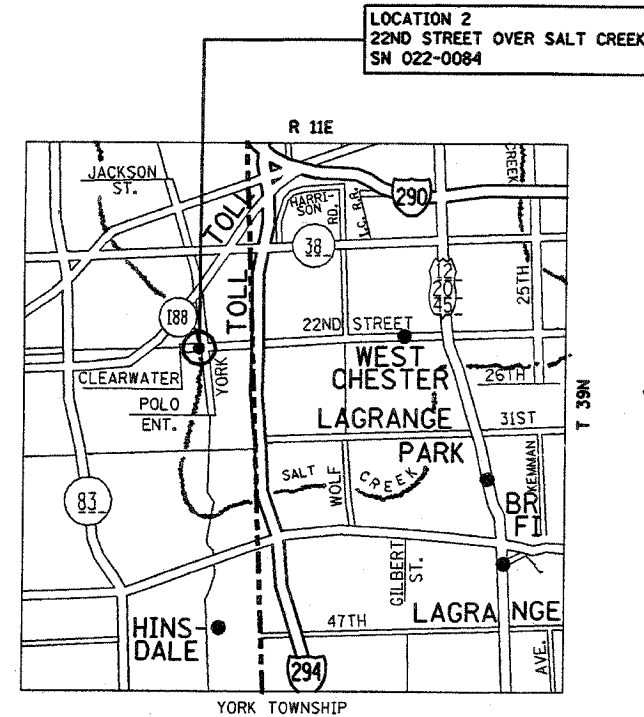
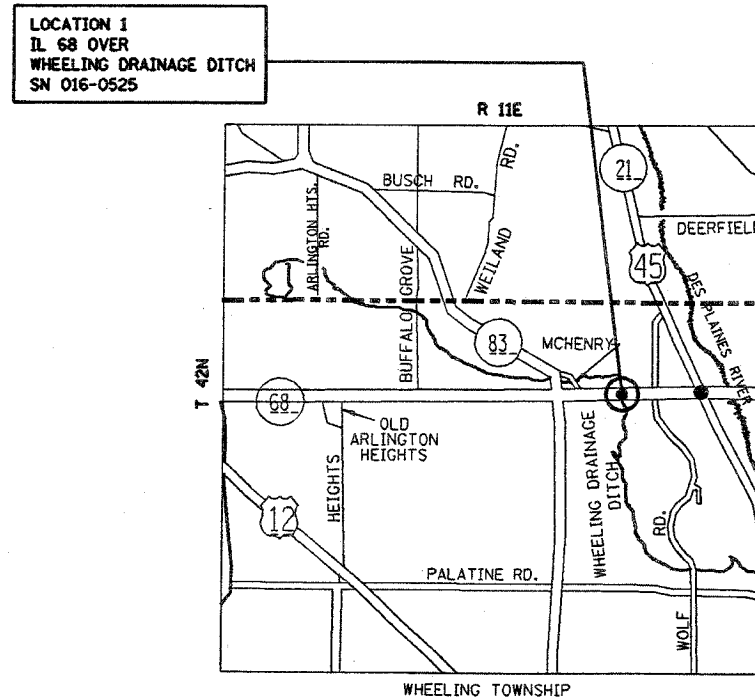
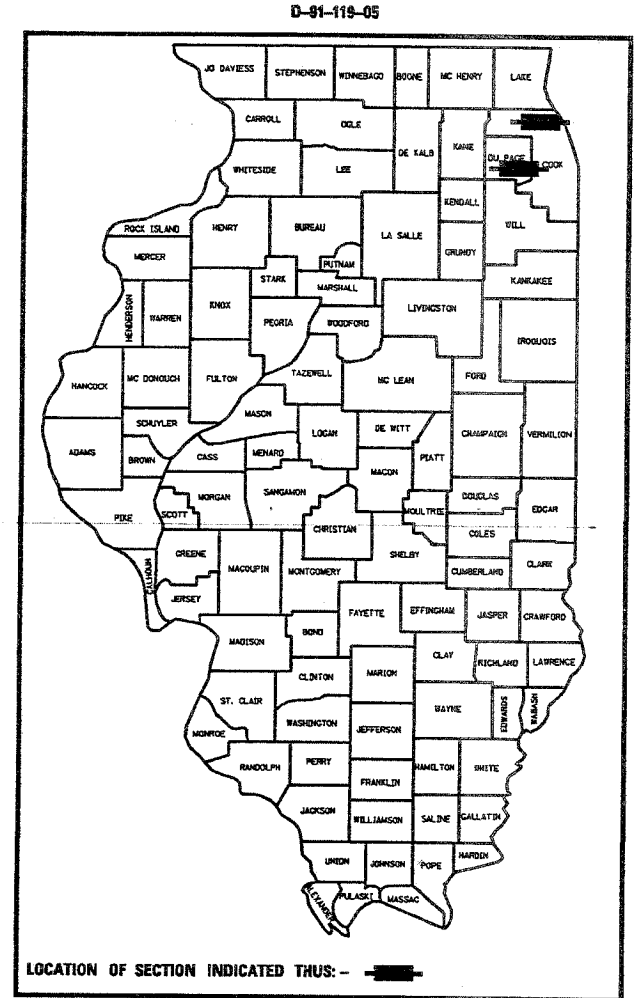
TRAFFIC DATA

LOCATION 1:  
ADT (2004) = 30400  
SPEED LIMIT = 35 MPH

LOCATION 2:  
ADT (2001) = 32200  
SPEED LIMIT = 25 MPH

IMPROVEMENTS LOCATED IN THE  
VILLAGES OF WHEELING AND OAK BROOK

LOCATION 1: FAP 343: IL 68 (DUNDEE RD.)  
OVER WHEELING DRAINAGE DITCH (SN 016-0525)  
LOCATION 2: FAU 1453: 22ND STREET  
OVER SALT CREEK (SN 022-0084)  
SECTION 2005-005BR  
PCC DECK BEAM REPLACEMENT  
COOK AND DUPAGE COUNTIES  
C-91-119-05



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED April 18, 2005  
Diane Okie  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 13, 2005  
Mike Sene  
ENGINEER OF DESIGN AND ENVIRONMENT

May 13, 2005  
Victor Moders  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

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



62912

F.A.P. FALL	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
RTE. 1453	2005-0058R	COOK/DUPAGE	14	3
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

SUMMARY OF QUANTITIES			URBAN X080-2A		CONSTRUCTION TYPE CODE SFTY-2A			
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	LOC. 1	LOC. 2			
				COOK	DUPAGE			
				016-0525	022-0084			
44001000	BITUMINOUS CONCRETE SURFACE REMOVAL	SQ YD	110.6	10.6	100			
50102400	CONCRETE REMOVAL	CU YD	22.7	5.9	16.8			
50300255	CONCRETE SUPERSTRUCTURE	CU YD	32.2	13.5	18.7			
50300300	PROTECTIVE COAT	SQ YD	117.3	44.7	72.6			
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	569	569				
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	2169		2169			
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1260		1260			
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3560	1410	2150			
50900905	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	78	78				
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	356.8	51.8	305			
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	1487	268	1219			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	1	0.5	0.5			
67100100	MOBILIZATION	L SUM	1	0.5	0.5			
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1		1			
70102632	TRAFFIC CONTROL AND PROTECTION, STANDARD 701602	L SUM	1	1				
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.5	0.5			
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	80		80			
70400100	TEMPORARY CONCRETE BARRIER	FOOT	760	120	640			
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	760	120	640			
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	100	100				
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1640	200	1440			
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	2796	575	2221			
X0322467	TEMPORARY INFORMATION SIGNING FOR LANE CLOSURE	SQ FT	96	48	48			
X4066424	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N50	TON	41.8	7.5	34.3			
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	30	2	28			

SUMMARY OF QUANTITIES			URBAN X080-2A		CONSTRUCTION TYPE CODE SFTY-2A			
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	LOC. 1	LOC. 2			
				COOK	DUPAGE			
				016-0525	022-0084			
Δ Z0030240	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 2	EACH	4	2	2			
Δ Z0030340	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 2	EACH	2	1	1			

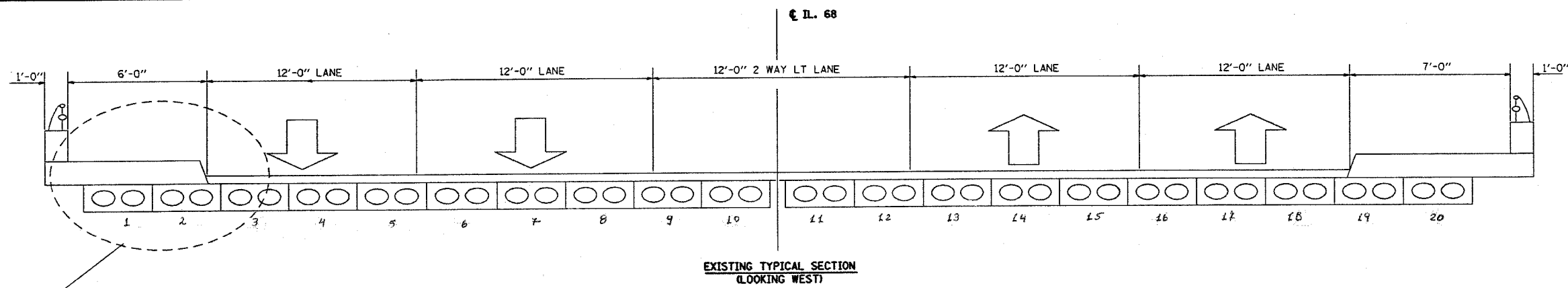
Δ SFTY-3N  
\* SPECIALTY ITEMS

REVISIONS	
NAME	DATE

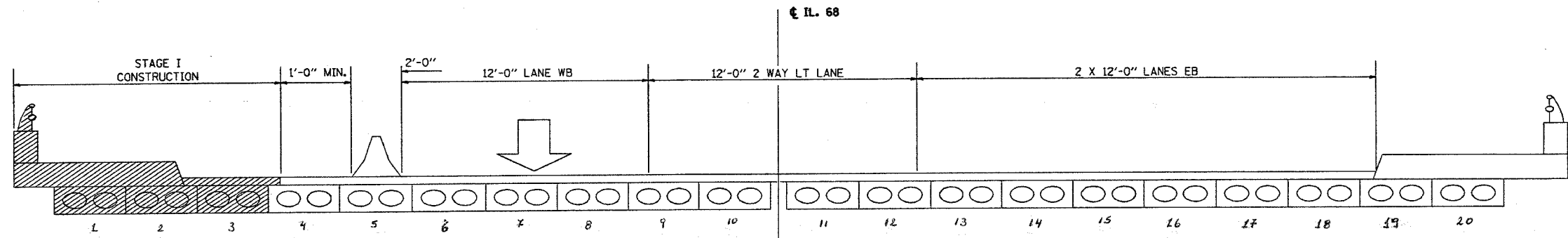
ILLINOIS DEPARTMENT OF TRANSPORTATION  
SUMMARY OF QUANTITIES

4/15/2005 11:00:00 AM

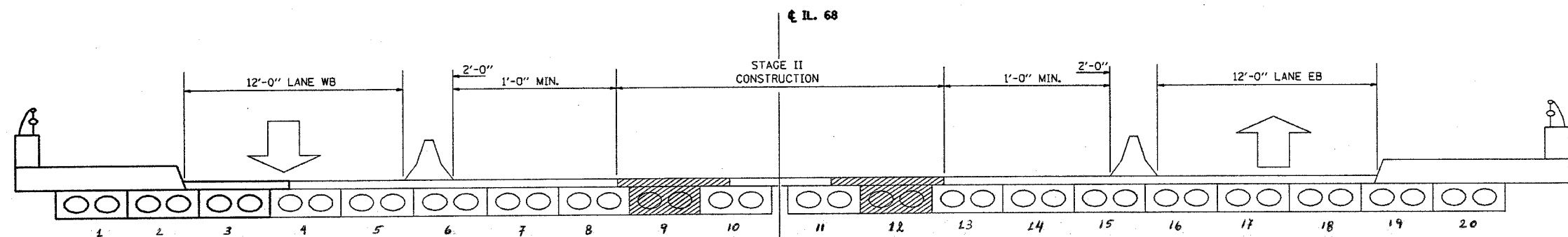
F.P./J.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
343 1453	2005-005BR	COOK/DUPAGE	14	4
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		



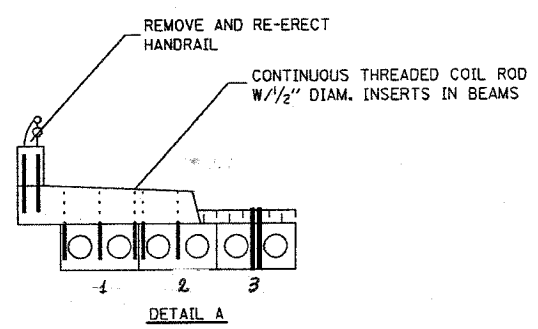
EXISTING TYPICAL SECTION  
(LOOKING WEST)



REMOVAL AND RECONSTRUCTION  
STAGE I



REMOVAL AND RECONSTRUCTION  
STAGE II



DETAIL A

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

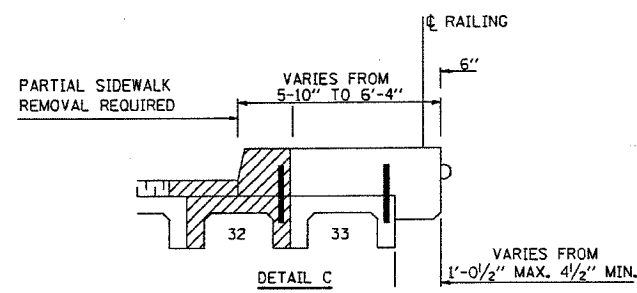
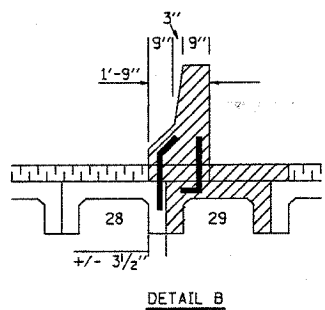
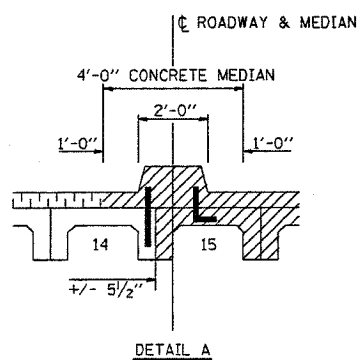
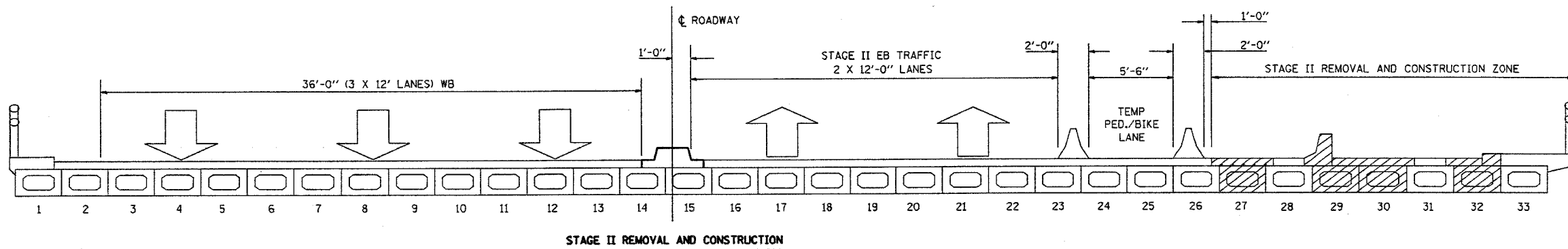
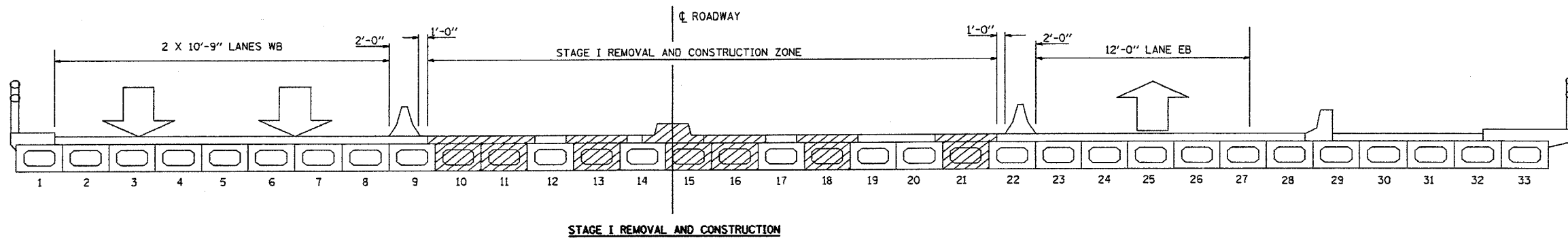
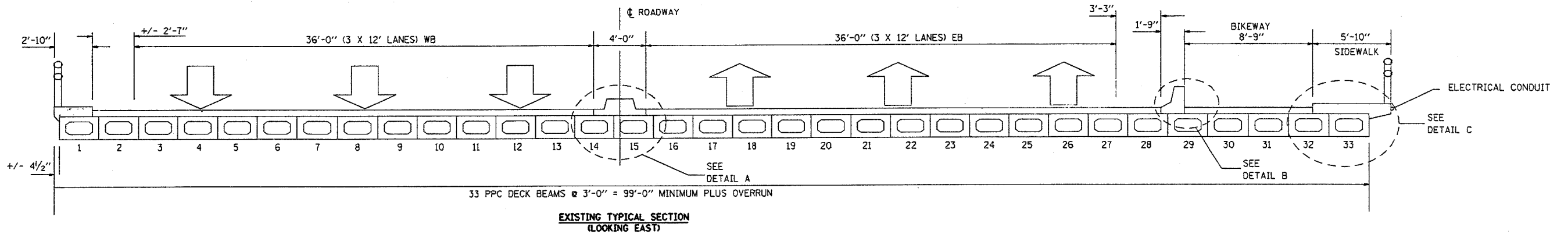
STAGING LAYOUT  
LOCATION 1  
SN: 016-0525

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

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

PLT DATE = 3/23/2005  
PLT TIME = 10:58:00 AM  
PLT USER = stanley  
REFERENCE = 08279

F.A.P. RTE.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
343	1453	2005-0058R	COOK/DUPAGE	14	5
STA.		TO STA.			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		



REVISIONS	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGING LAYOUT  
LOCATION 2  
SN: 022-0084

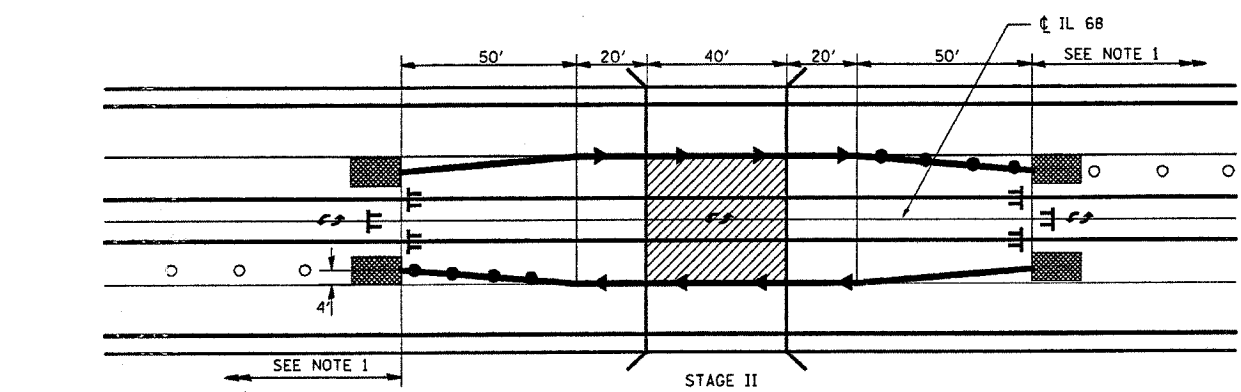
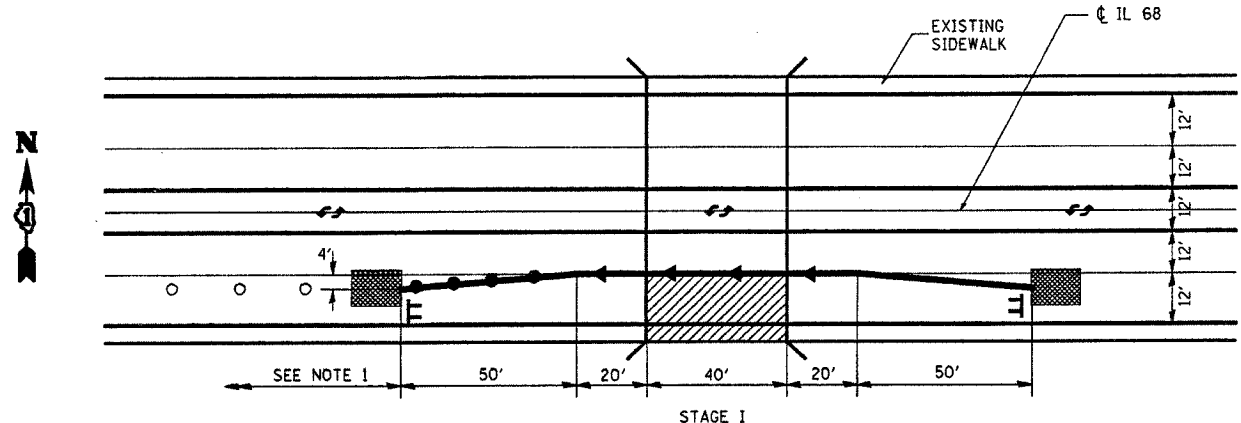
SCALE: VERT. \_\_\_\_\_  
HORIZ. \_\_\_\_\_

DATE \_\_\_\_\_

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

PLOT DATE = 3/31/2005  
FILE NAME = c:\projects\111700aa\111700aa.dwg  
PLOT SCALE = 1/8" = 1'-0"  
PLOT DEVICE = HPGL

F.A.P. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
343 1493	2005-0088R	COOK/DUPAGE	14	6
STA. TO STA.		ILLINOIS FED. AID PROJECT		

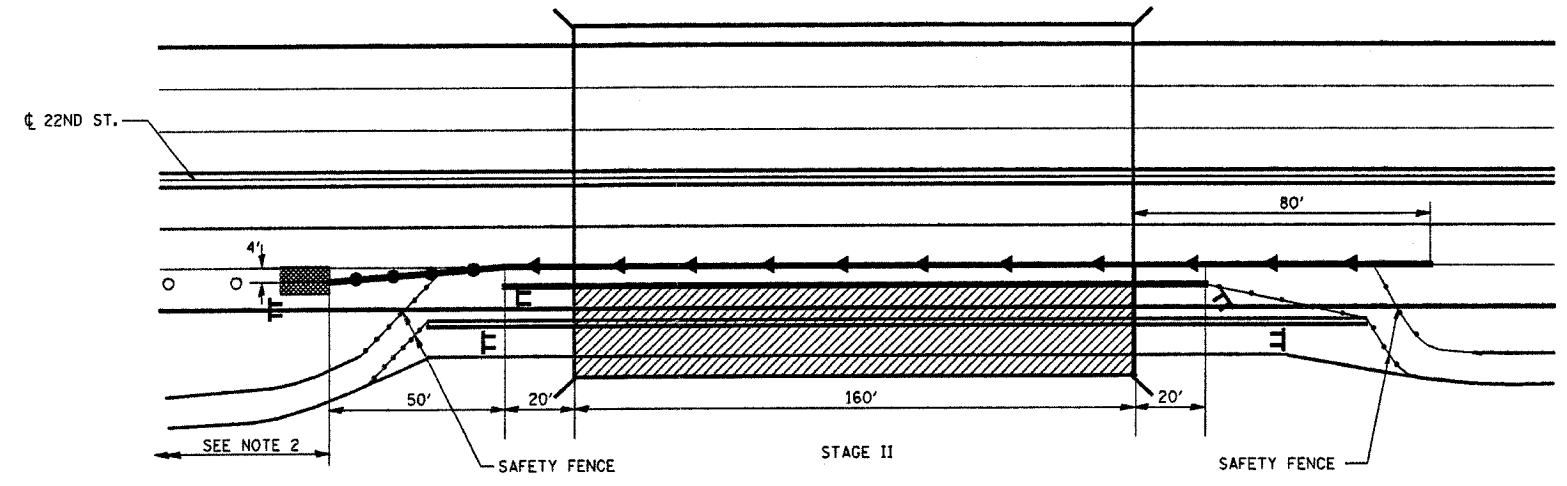
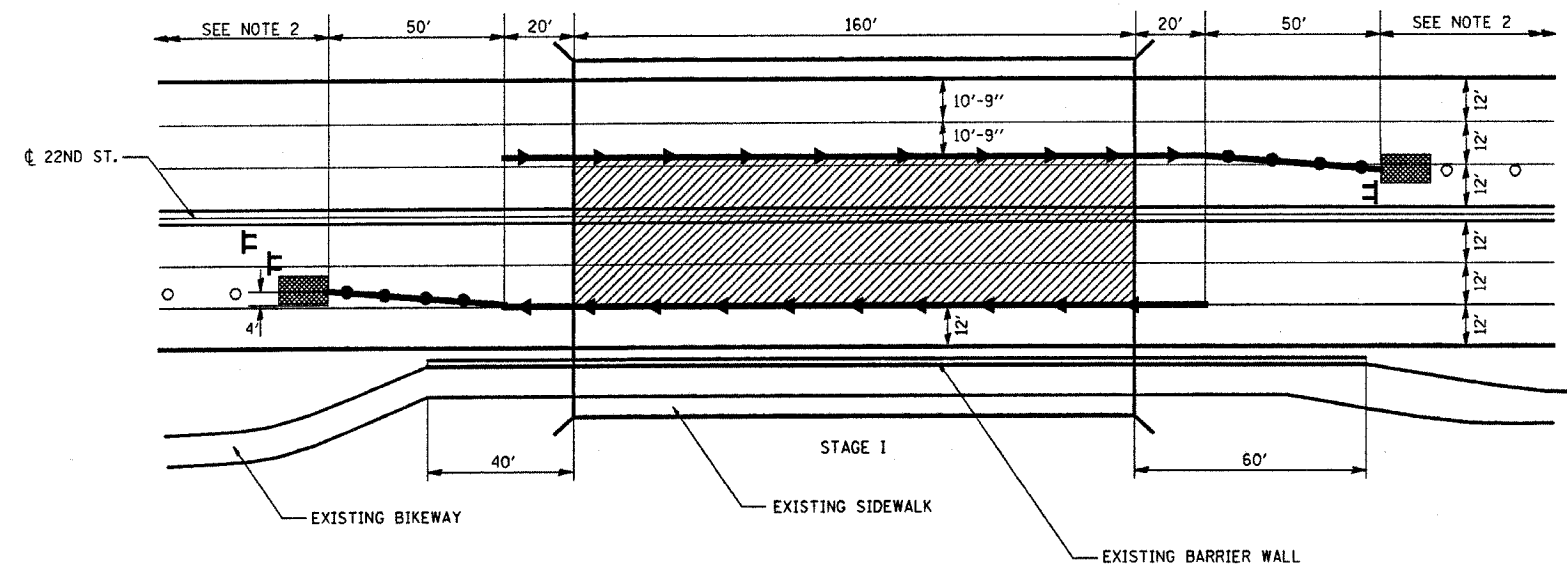


LOCATION 1  
SN 016-0525

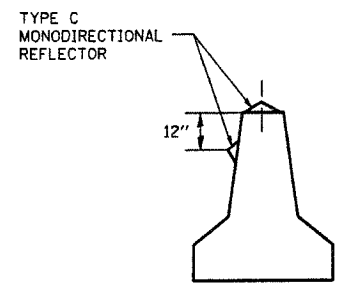
- TYPE III BARRICADE WITH STEADY BURNING LIGHTS
- WORK ZONE
- IMPACT ATTENUATORS
- TEMP. CONCRETE BARRIER WITH TYPE C MONODIRECTIONAL REFLECTOR ON TANGENT PORTION AT BARRIER AT 50' CENTERS (SEE DETAIL A)
- TEMP. CONCRETE BARRIER WITH VERTICAL PANELS AT 25' CENTERS WITH STEADY BURN MONODIRECTIONAL LIGHT

NOTE 1: LANE CLOSURE ACCORDING TO STANDARD 701602  
NOTE 2: LANE CLOSURE ACCORDING TO STANDARD 701601 COVER CONFLICTING EXISTING PAVEMENT MARKINGS WITH BLACK TYPE III TAPE

ADDITIONAL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET ARE INCLUDED IN THE COST OF THE APPLICABLE HIGHWAY STANDARDS



LOCATION 2  
SN 022-0084



DETAIL A  
(BARRIER WALL REFLECTORS)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGING LAYOUT FOR  
TEMPORARY CONCRETE BARRIER  
LOCATIONS 1 AND 2

SCALE: VERT. HORIZ.  
DATE

DRAWN BY  
CHECKED BY

PLOT DATE: 3/21/2005  
 FILE NAME: c:\projects\111700\111700a.mxd  
 PLOT SCALE: 1/8" = 1'-0"  
 PLOT NAME: Staging

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Cook	14	7
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1  
4 SHEETS

Contract Number: 62912

**GENERAL NOTES**

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.

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of "Removal of Existing P.P.C. Deck Beams".

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

The top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

Temporary concrete barrier shall only be anchored into the overlay and not the PPC Deck Beams.

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.

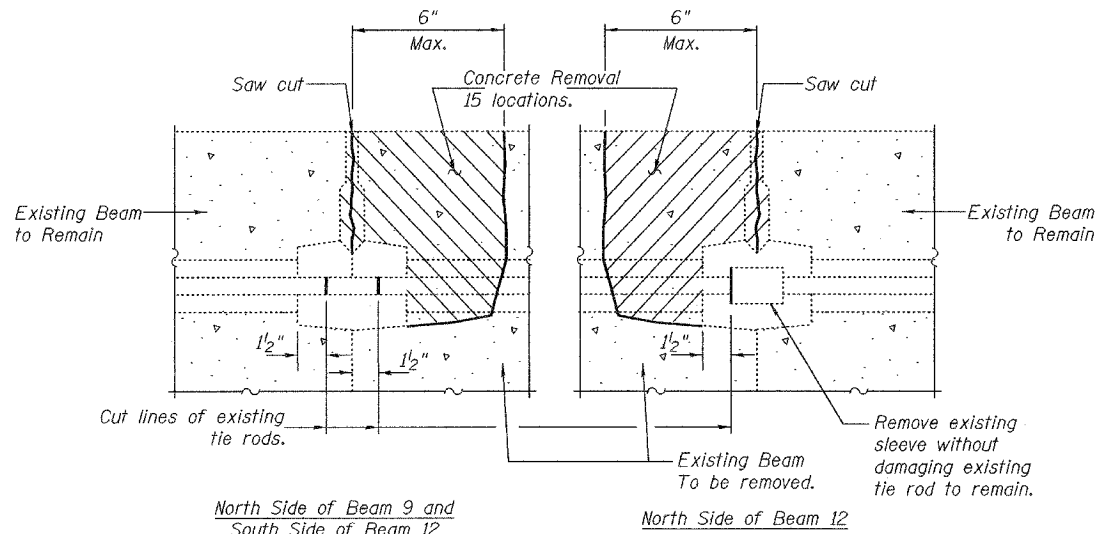
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Bituminous Concrete Surface Removal	Sq. Yd.	10.6
Waterproofing Membrane System	Sq. Yd.	51.8
Removal of Existing PPC Deck Beams	Sq. Ft.	575
Bituminous Concrete Surface Course, Superpave, Mix "D", N 50	Tons	7.5
PC Mortar Fairing Course	Foot	268
PPC Deck Beams (21" Depth)	Sq. Ft.	569
Concrete Superstructure	Cu. Yd.	13.5
Protective Coat	Sq. Yd.	44.7
Concrete Removal	Cu. Yd.	5.9
Reinforcement Bars, Epoxy Coated	Pound	1410
Asbestos Bearing Pad Removal	Each	2
Removing and Re-Erecting Existing Railing	Foot	78

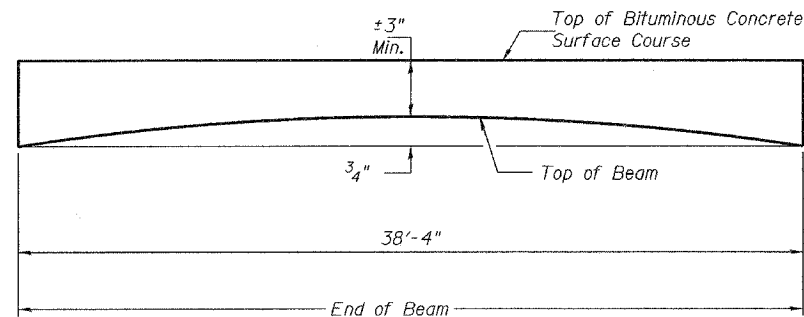
**DESIGN STRESSES  
PRESTRESS UNITS**

$f'_c = 5000$  psi  
 $f'_{ci} = 4000$  psi  
 $f'_s = 270000$  psi (1/2" low lax strands)  
 $f'_{si} = 201960$  psi (1/2" low lax strands)

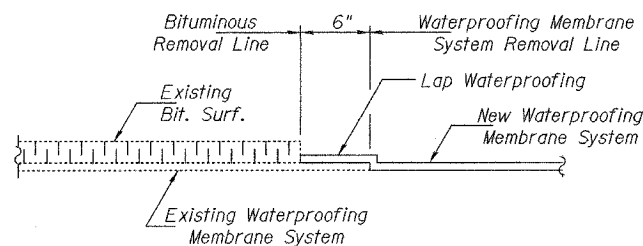
**PLAN AND ELEVATION**  
**F.A.P. RT. 343**  
**COOK COUNTY**  
**SN 016-0525**



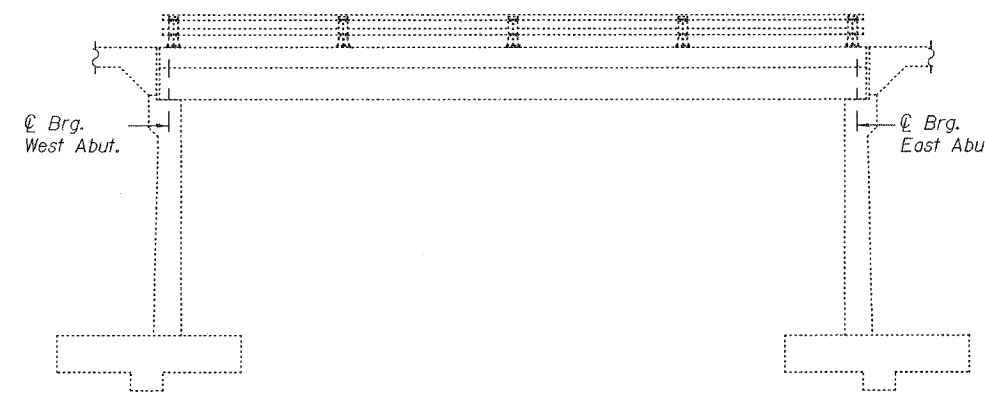
**BEAM REMOVAL DETAIL  
AT TRANSVERSE TIES**



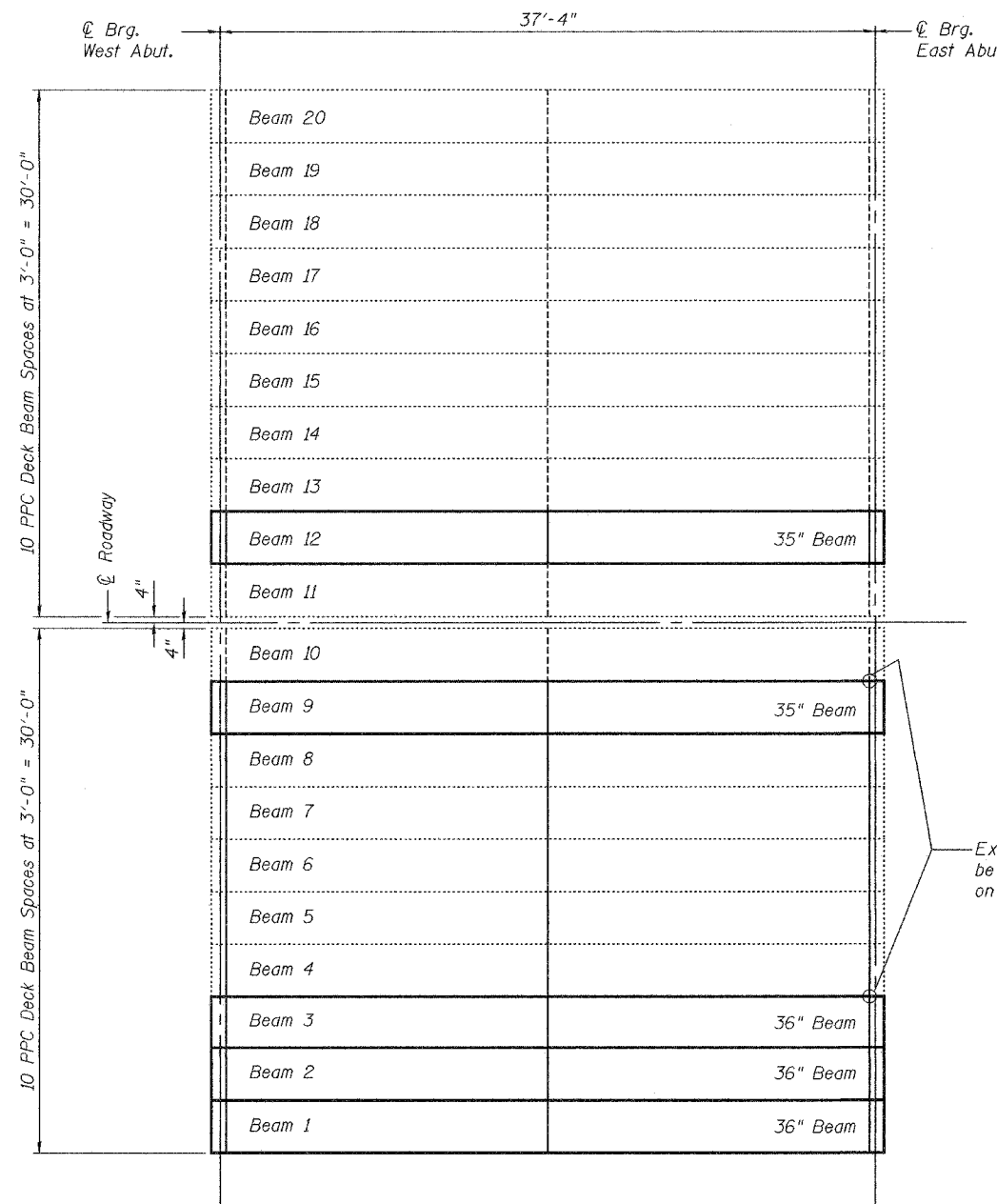
**ANTICIPATED INITIAL CAMBER DIAGRAM**



**WATERPROOFING TREATMENT**



**ELEVATION**



**PLAN**

DESIGNED	Vicor H. Veliz
CHECKED	[Signature]
DRAWN	[Signature]
CHECKED	VHV / S.J.B.

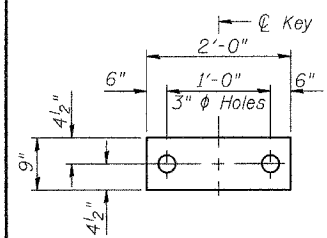
EXAMINED	John A. Morias ENGINEER OF STRUCTURAL SERVICES
PASSED	Ralph E. Adams ENGINEER OF BRIDGES AND STRUCTURES



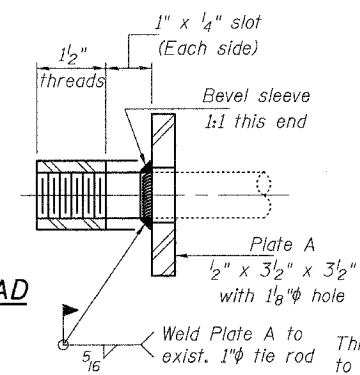
Expires: November 30, 2006

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

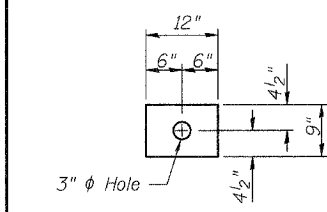
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
		Cook	14	8
Contract Number: 62912				
SHEET NO. 2 4 SHEETS				



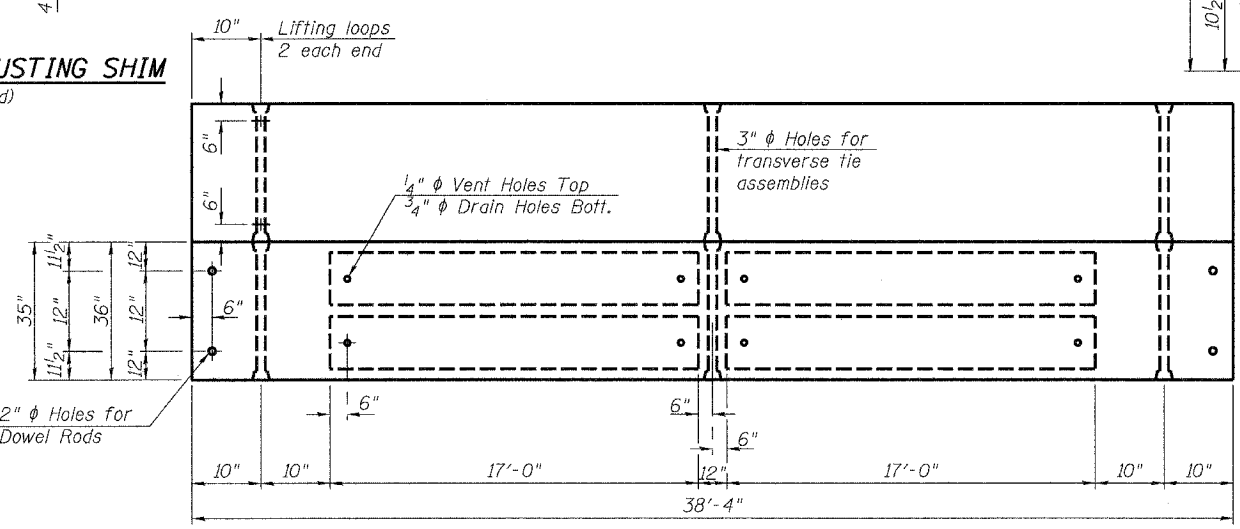
**FABRIC BEARING PAD**  
(Interior)  
**FIXED**



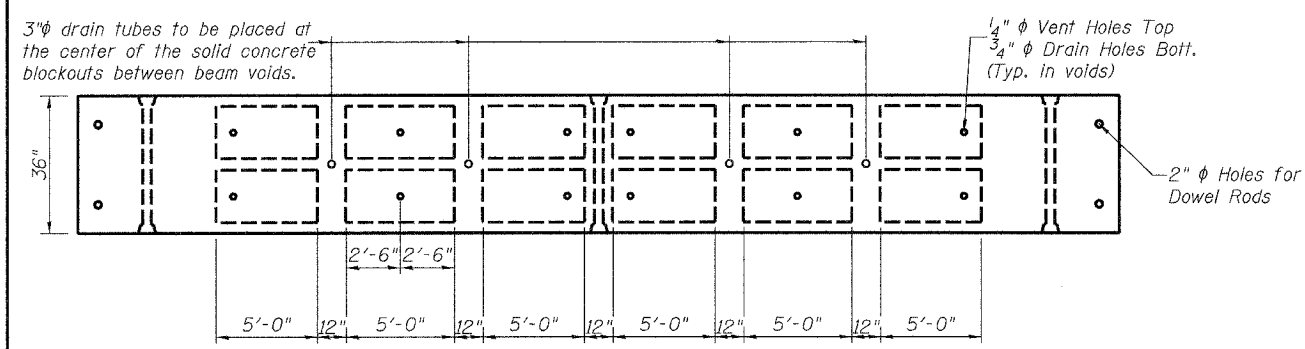
**SECTION A-A**  
(9 Required)



**FABRIC ADJUSTING SHIM**  
(Fixed)

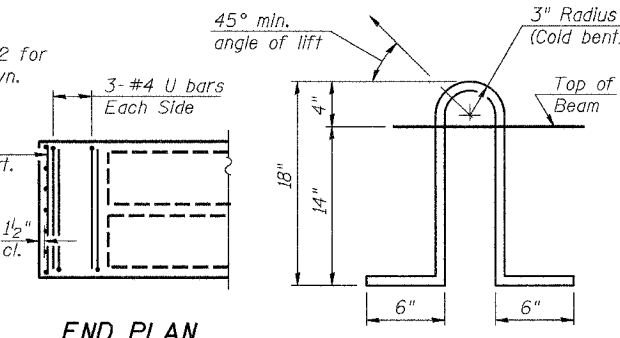


**PLAN BEAMS 1, 2, 9 OR 12**



**PLAN BEAM 3**

See Plan for Beams 1, 2, 9 or 12 for dimensions and notes not shown.



**LIFTING LOOP DETAIL**

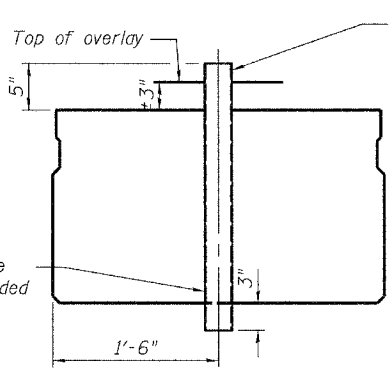
DESIGNED	V.H.V.
CHECKED	S.J.B.
DRAWN	Drew Christopher
CHECKED	V.H.V. S.J.B.

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

May 3, 2005

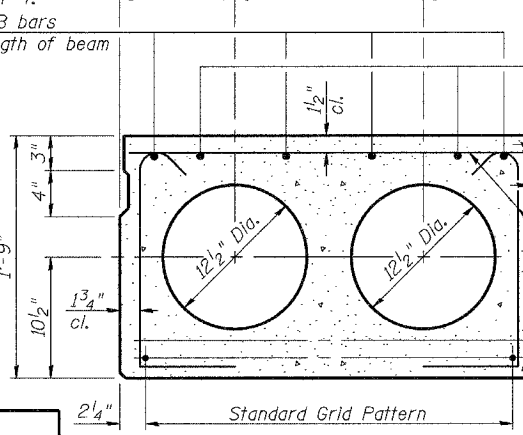
10-22-04

PD-3-S



**TYPICAL DRAIN SECTION**  
(Beam 3)

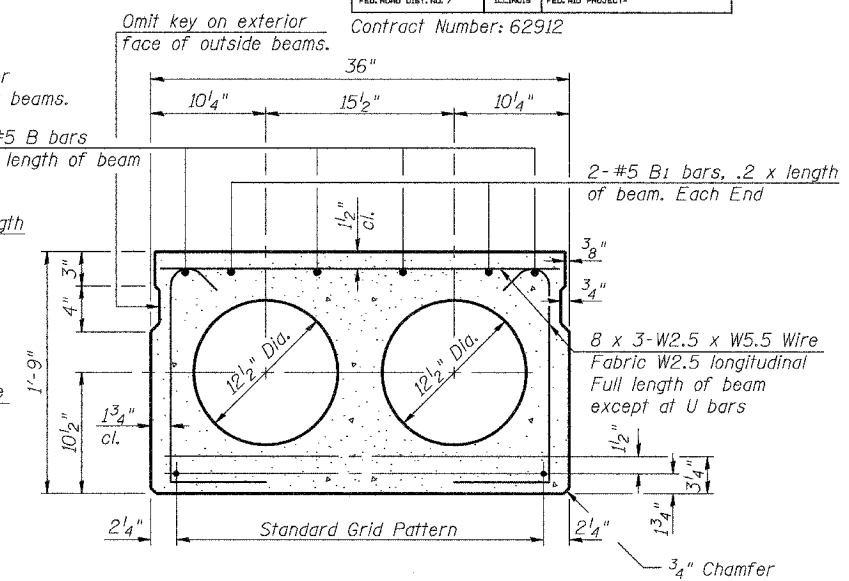
3"  $\phi$  x 2'-2" x 1/4" XS Pipe. Cut off flush with top of overlay and grind smooth to just below top of overlay surface. For longitudinal spacing see sheet 3 of 4.



**TYPICAL 35" SECTION**

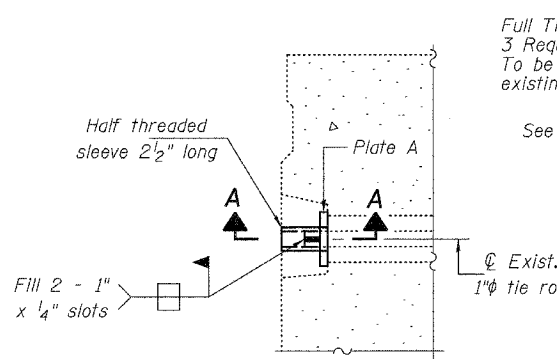
1/2"  $\phi$  Strands, Each Strand Stressed to 30,900 Lbs.  
6-Strands 1 3/4" up, 4-Strands 3/4" up  
(2 Required)

Notes:  
Place strands symmetrically about  $\phi$  of beam.  
See deck cross-sections for additional bars cast with deck beams.



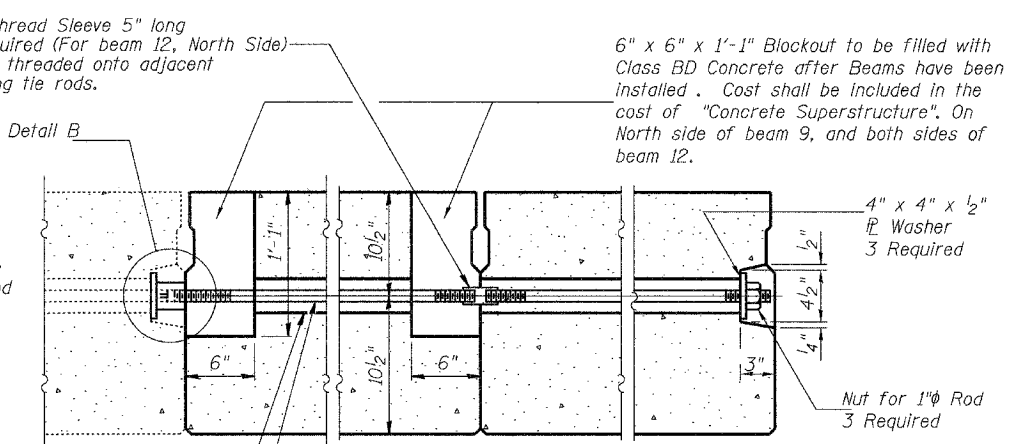
**TYPICAL 36" SECTION**

1/2"  $\phi$  Strands, Each Strand Stressed to 30,900 Lbs.  
6-Strands 1 3/4" up, 4-Strands 3/4" up  
(3 Required)



**DETAIL B**

Full Thread Sleeve 5" long  
3 Required (For beam 12, North Side)  
To be threaded onto adjacent existing tie rods.



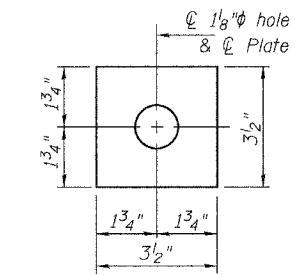
**TYPICAL TRANSVERSE TIE ASSEMBLY**

6" x 6" x 1'-1" Blockout to be filled with Class BD Concrete after Beams have been installed. Cost shall be included in the cost of "Concrete Superstructure". On North side of beam 9, and both sides of beam 12.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
PPC Deck Beams (21" Depth)		Sq. Ft.	569	

**BAR U**



**PLATE A**  
(9 Required)

**NOTES**

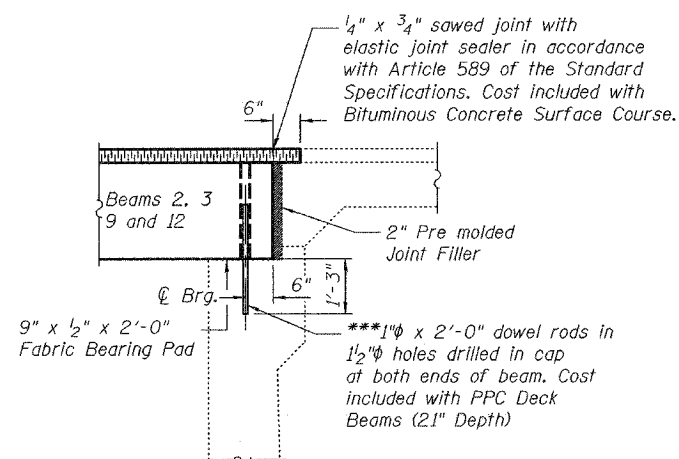
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2-1/2"  $\phi$ -270 ksi strands, as shown.  
The 1"  $\phi$  rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.  
Non prestressing steel shall conform to AASHTO M-31 or M322 Grade 60.  
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions shown shall be provided for each bearing.  
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.  
Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.  
Required Release Strength, f'ci, shall be 4000 p.s.i.

**BEAM DETAILS**  
**F.A.P. RT. 343**  
**COOK COUNTY**  
**SN 016-0525**

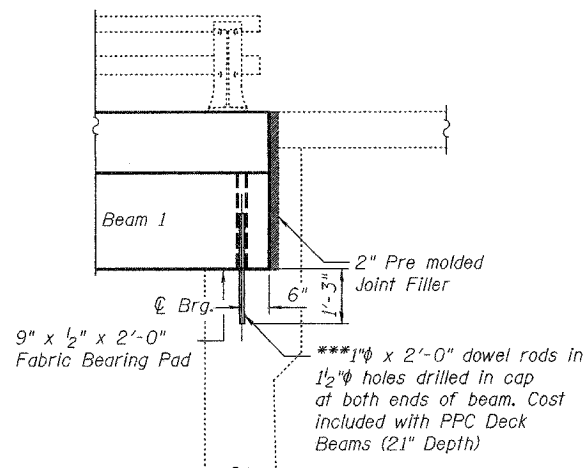


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
		Cook	14	9	4 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract Number: 62912		



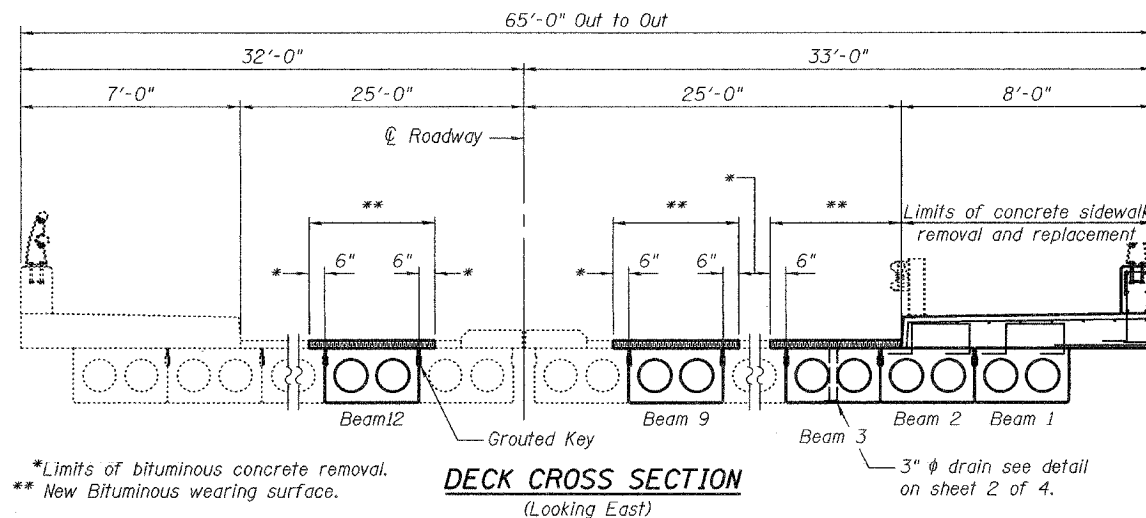
TYPICAL ABUTMENT SECTION



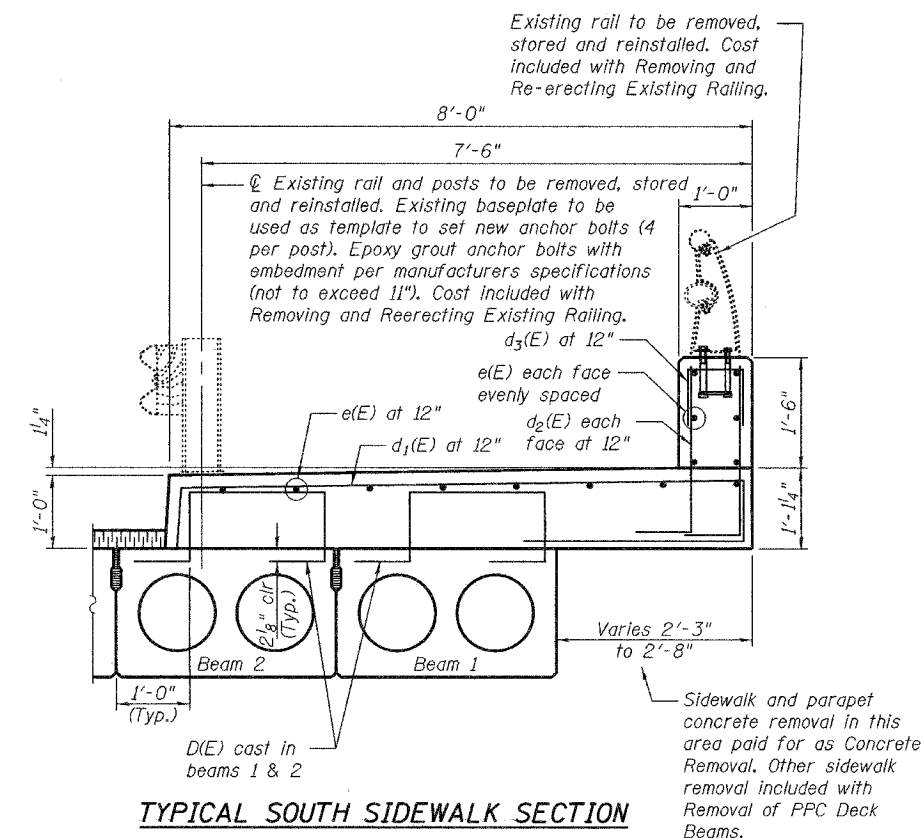
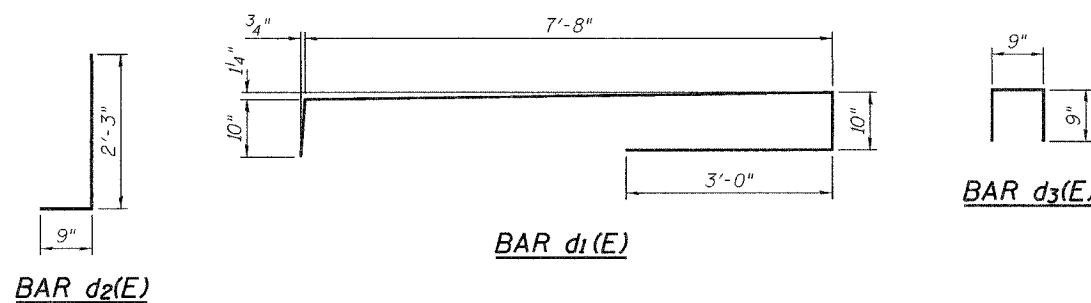
ABUTMENT SECTION AT SOUTH SIDEWALK

Notes:  
Cut existing dowel rods at Beam 1 flush with the abutment cap.

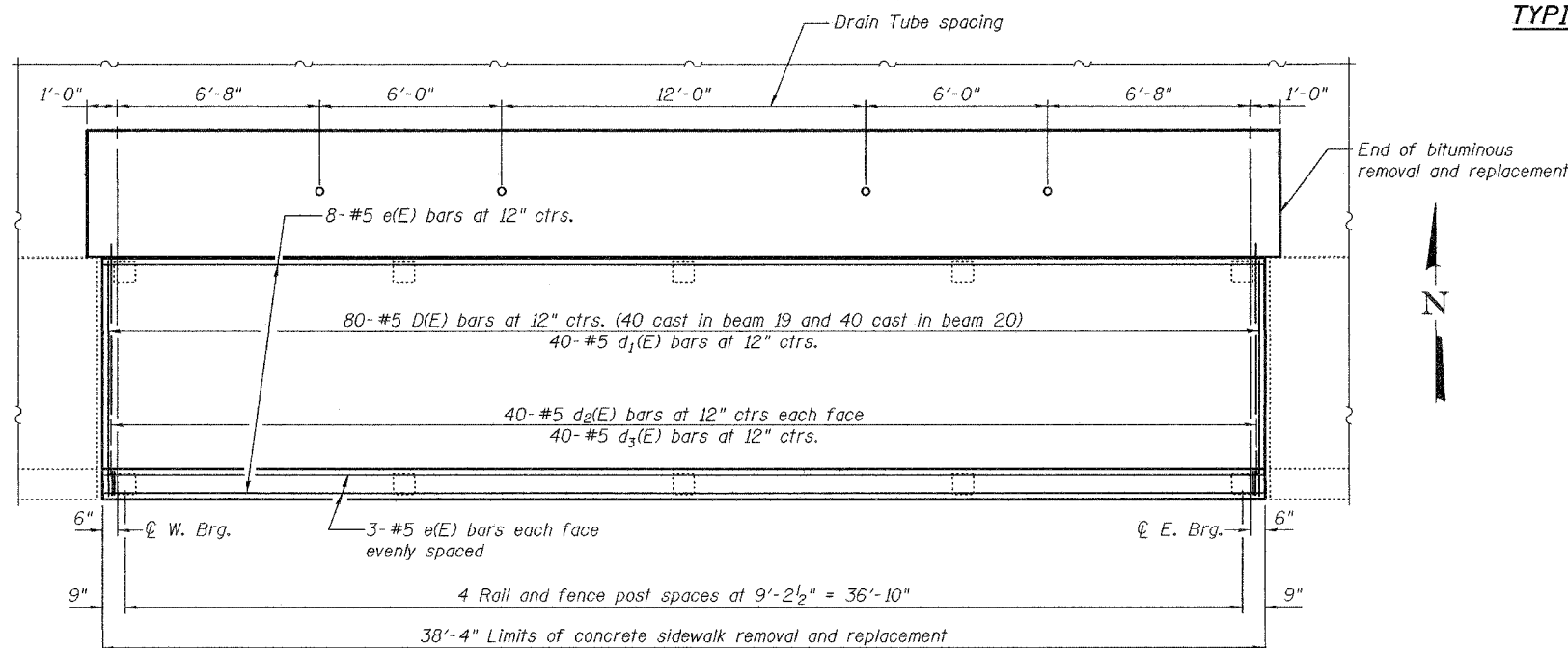
\*\*\*Dowel rods to be grouted after beams are in place and allowed to cure for a minimum of 24 hours prior to grouting shear keys.



DECK CROSS SECTION  
(Looking East)



TYPICAL SOUTH SIDEWALK SECTION



PARTIAL DECK AND SIDEWALK PLAN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d <sub>1</sub> (E)	40	#5	12'-4"	
d <sub>2</sub> (E)	80	#5	3'-0"	
d <sub>3</sub> (E)	40	#5	2'-3"	
e(E)	14	#5	38'-0"	
Concrete Removal			Cu. Yd.	5.9
Concrete Superstructure			Cu. Yd.	13.5
Reinforcement Bars, Epoxy Coated			Lbs.	1410

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	V.H.V.
CHECKED	S.J.B.
DRAWN	Drew Christopher
CHECKED	V.H.V. S.J.B.

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

May 3, 2005

DECK DETAILS  
F.A.P. RT. 343  
COOK COUNTY  
SN 016-0525



**GENERAL NOTES**

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.

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of "Removal of Existing P.P.C. Deck Beams".

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

The top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

Temporary concrete barrier shall only be anchored into the overlay and not the PPC Deck Beams.

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

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.

For stage construction details see Roadway Plans.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Bituminous Concrete Surface Removal	Sq. Yd.	100
Waterproofing Membrane System	Sq. Yd.	305
Removal of Existing PPC Deck Beams	Sq. Ft.	2221
Bituminous Concrete Surface Course, Superpave Mix "D", N 50	Tons	34.3
PC Mortar Fairing Course	Foot	1219
PPC Deck Beams (27" Depth)	Sq. Ft.	2169
Concrete Removal	Cu. Yd.	16.8
Concrete Superstructure	Cu. Yd.	18.7
Protective Coat	Sq. Yd.	72.6
Furnishing and Erecting Structural Steel	Pound	1260
Asbestos Bearing Pad Removal	Each	28
Reinforcement Bars, Epoxy Coated	Pound	2150

**DESIGN STRESSES**

**PRESTRESS UNITS**

(New Construction)

f'c=5000 psi

f'ci=4000 psi

f's=270,000 (1/2"φ low relaxation strands)

f'si=201,960 (1/2"φ low relaxation strands)



Expires: November 30, 2006

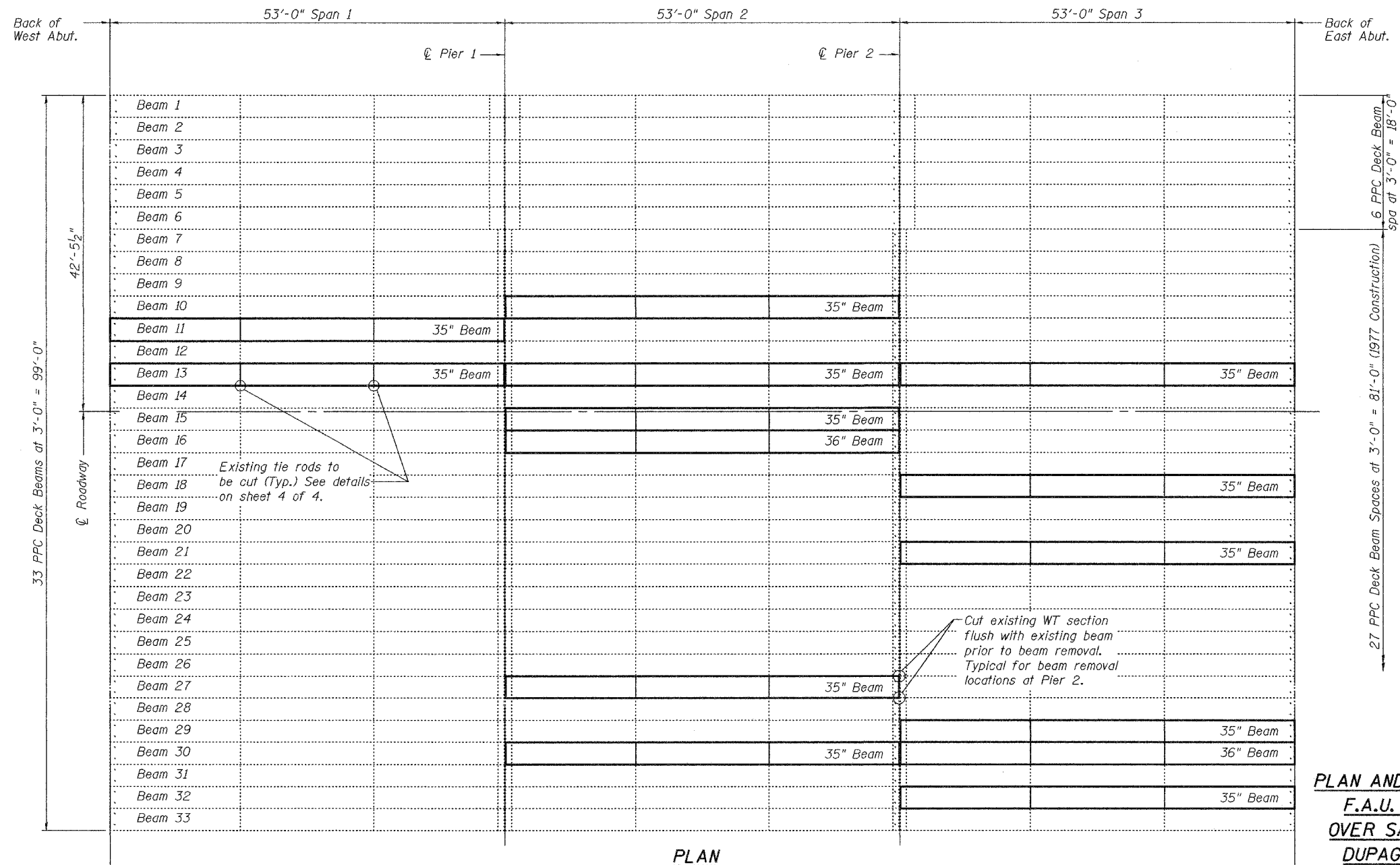
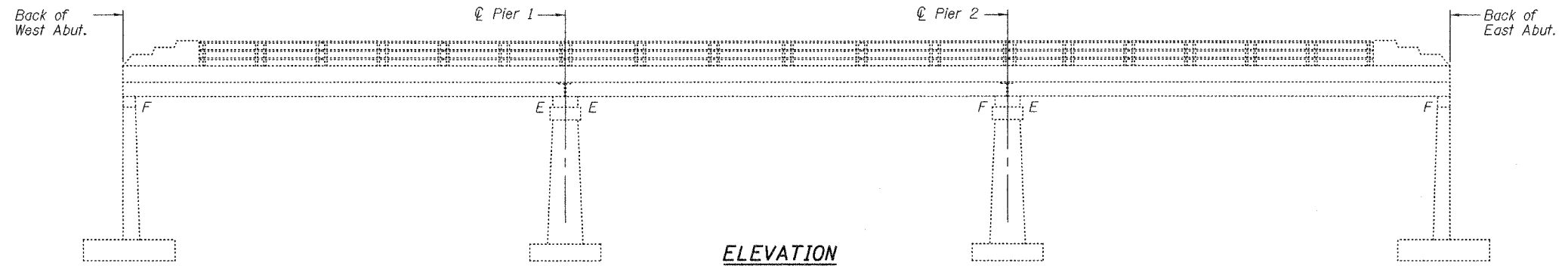
DESIGNED	Victor H. Velje
CHECKED	Adrian T. Hallberg
DRAWN	[Signature]
CHECKED	VHV ATH

EXAMINED	John A. Morris
PASSED	Robert C. Adams

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATE	SHEET NO.
		DuPage		//
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract Number: 62912



6 PPC Deck Beam Spacing at 3'-0" = 18'-0" (1962 Construction)

27 PPC Deck Beam Spacing at 3'-0" = 81'-0" (1977 Construction)

**PLAN AND ELEVATION**  
**F.A.U. RT. 9877**  
**OVER SALT CREEK**  
**DUPAGE COUNTY**  
**SN 022-0084**



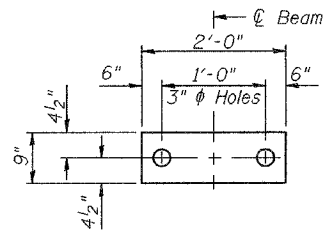


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

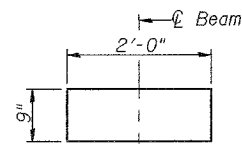
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DuPage	14	13
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-				

Contract Number: 62912

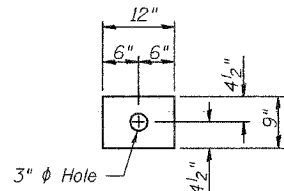
SHEET NO. 3  
4 SHEETS



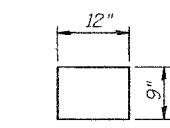
**FABRIC BEARING PAD**  
(Interior)  
**FIXED**



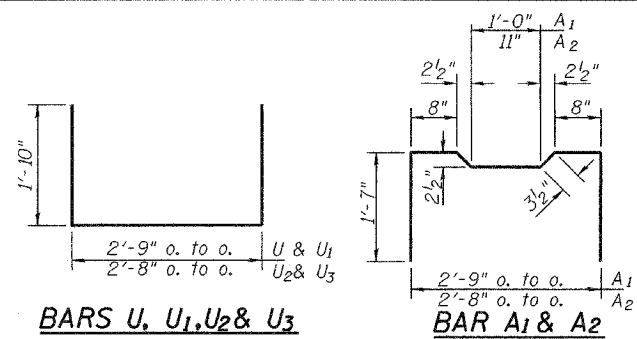
**FABRIC BEARING PAD**  
(Interior)  
**EXPANSION**



**FABRIC ADJUSTING SHIM**  
(Fixed)

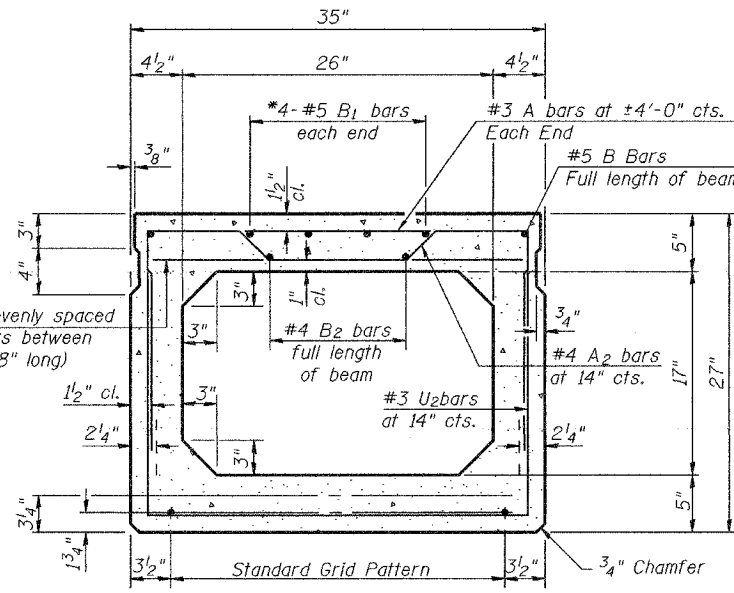


**FABRIC ADJUSTING SHIM**  
(Expansion)



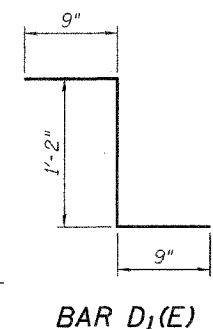
**BARS U, U<sub>1</sub>, U<sub>2</sub> & U<sub>3</sub>**

**BAR A<sub>1</sub> & A<sub>2</sub>**



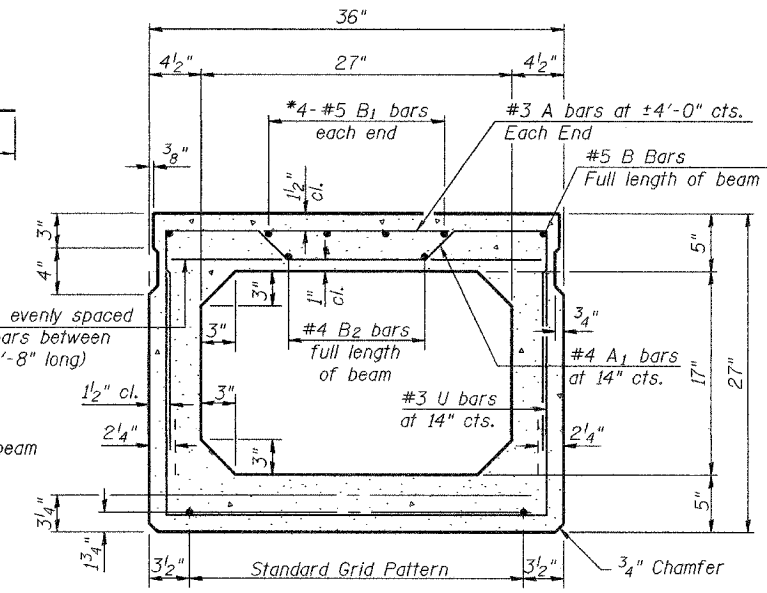
**TYPICAL 35" SECTION**

1/2" φ Strands, Each Strand Stressed to 30,900 Lbs.  
8-Strands 1 3/4" up, 4-Strands 3/4" up  
(12 Required)



**BAR D<sub>1</sub>(E)**

2-#3 A bars evenly spaced between A<sub>1</sub> bars between end blocks (2'-8" long)  
#0.2 x Length of beam



**TYPICAL 36" SECTION**

1/2" φ Strands, Each Strand Stressed to 30,900 Lbs.  
8-Strands 1 3/4" up, 4-Strands 3/4" up  
(2 Required)

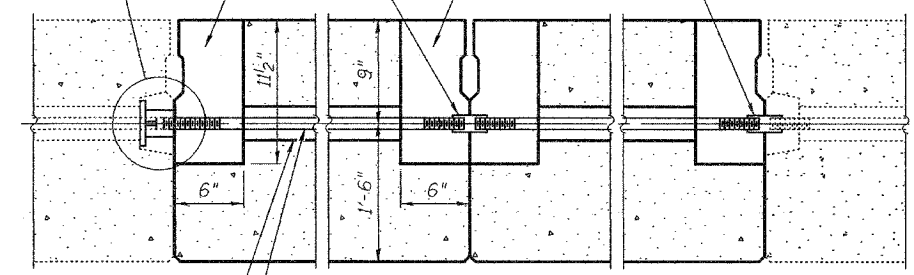
Note:  
Place strands symmetrically about C of beam.

Expansion joint notch at Piers only. See typical Pier sections.

Full Thread Sleeve 5" long  
28 Required

6" x 6" x 11 1/2" Blockout to be filled with Class BD Concrete after Beams have been installed. Quantity included with "Concrete Superstructure". (56 Required)

See Detail B on Sheet 4 of 4.



**TYPICAL TRANSVERSE TIE ASSEMBLY**

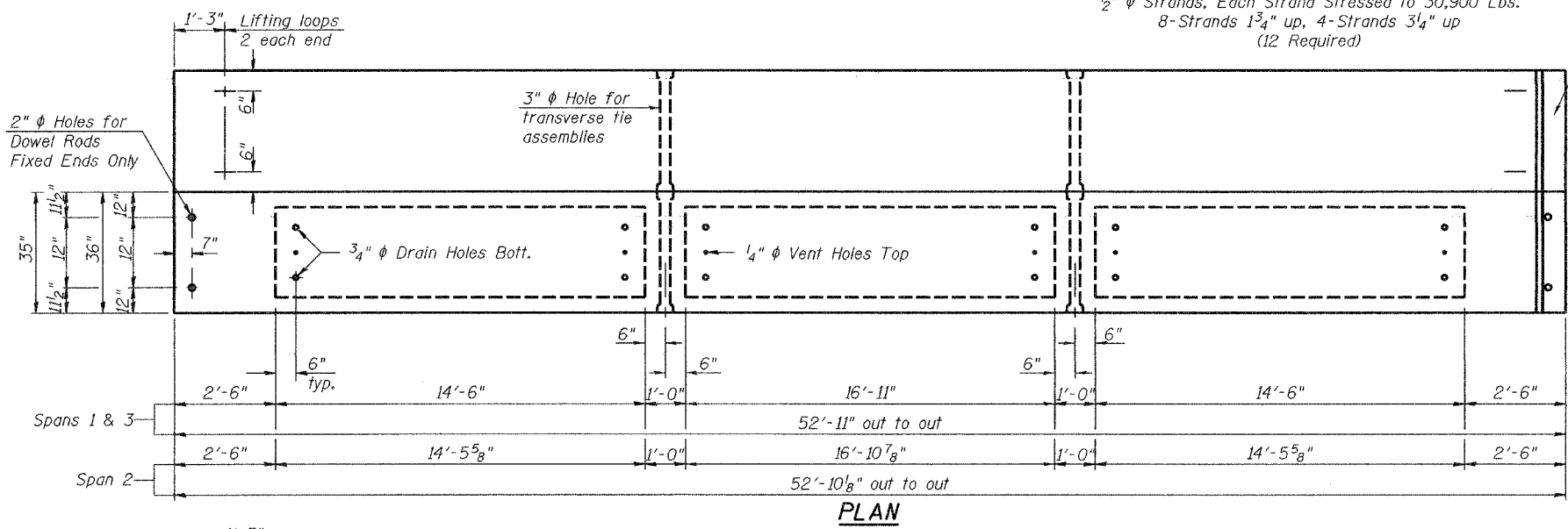
**BAR D<sub>4</sub>(E)**

**NOTES**

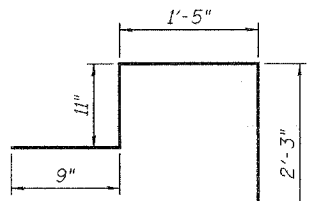
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2-1/2" φ-270 ksi strands, as shown. The 1" φ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Non prestressing steel shall conform to AASHTO M-31 or M322 Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions shown shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4000 p.s.i.

**BILL OF MATERIAL**

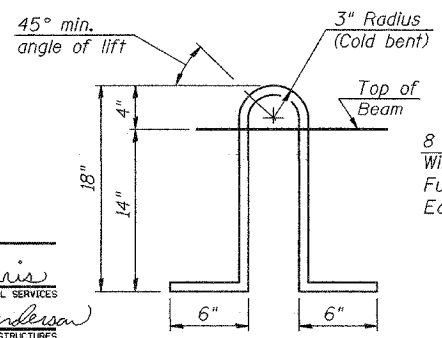
Bar	No.	Size	Length	Shape
a(E)	42	#5	2'-11"	—
a <sub>1</sub> (E)	9	#5	5'-11"	—
Precast Prestressed Conc. Deck Bms.		Sq. Ft.	2169	
Reinforcing Bars, Epoxy Coated		Pound	180	



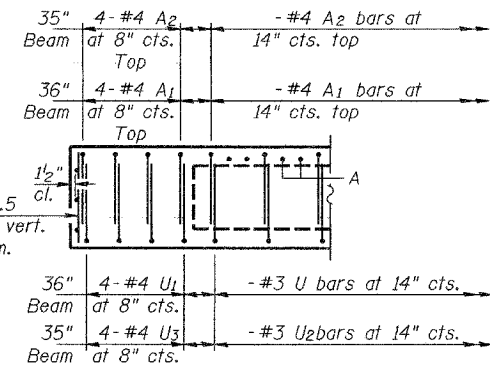
**PLAN**



**BAR D<sub>6</sub>(E)**



**LIFTING LOOP DETAIL**



**END ELEVATION  
FIXED END**

DESIGNED	V.H.V.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	V.H.V. A.T.H.

EXAMINED	May 3, 2005
John A. Morris	
ENGINEER OF STRUCTURAL SERVICES	
PASSED	Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES	

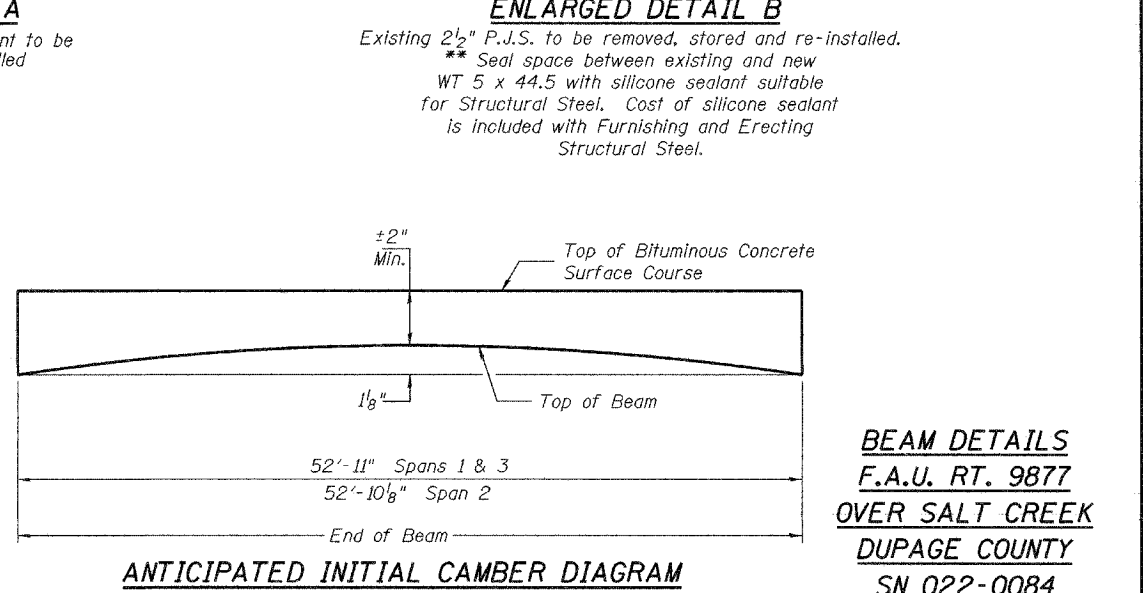
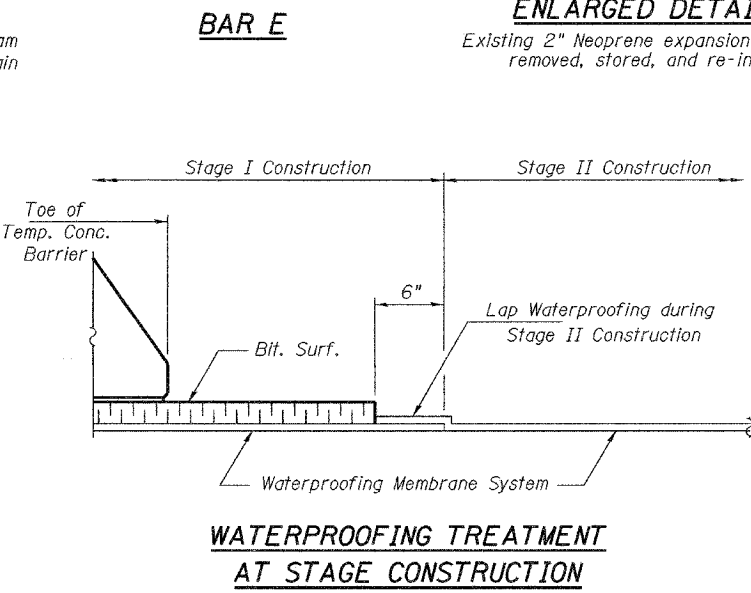
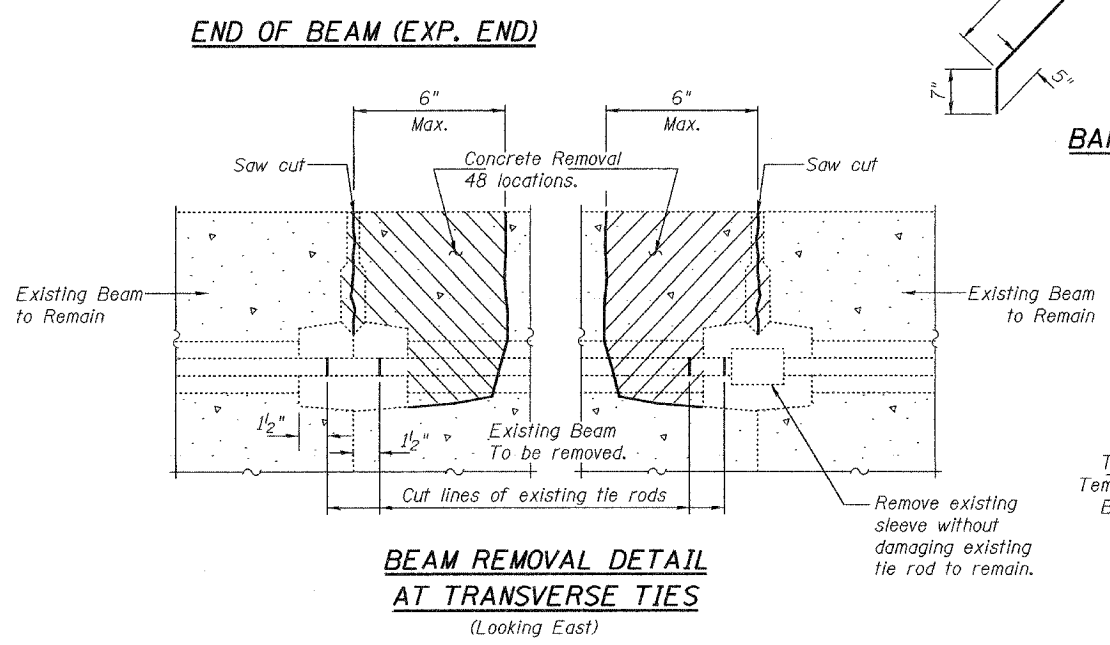
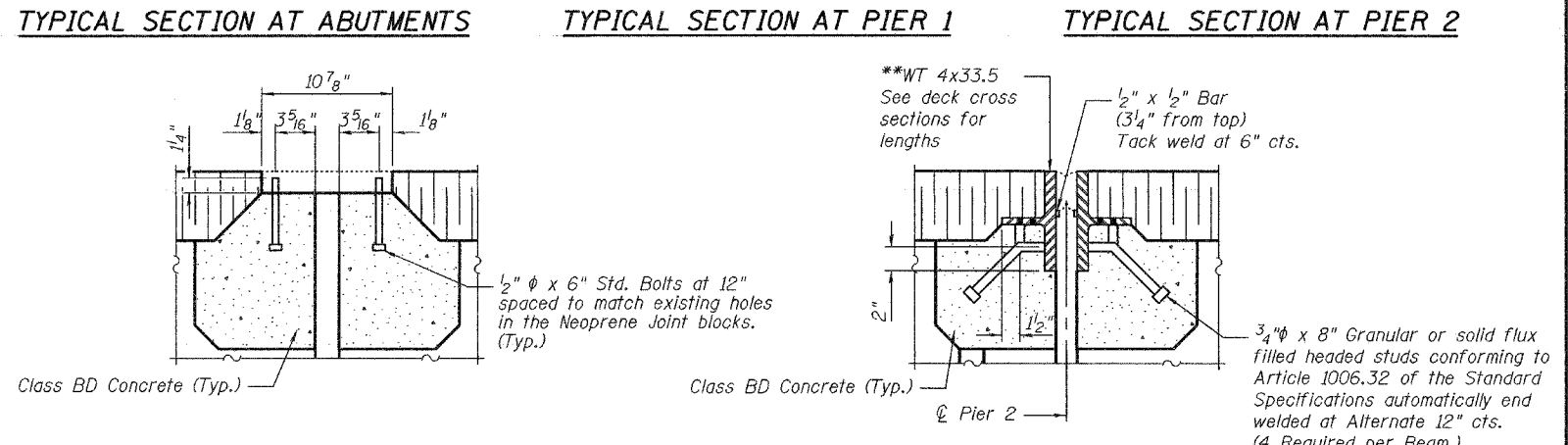
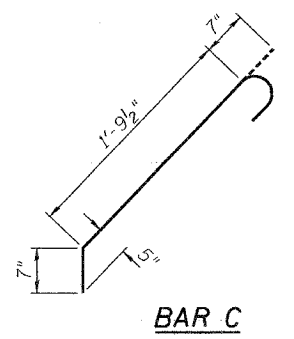
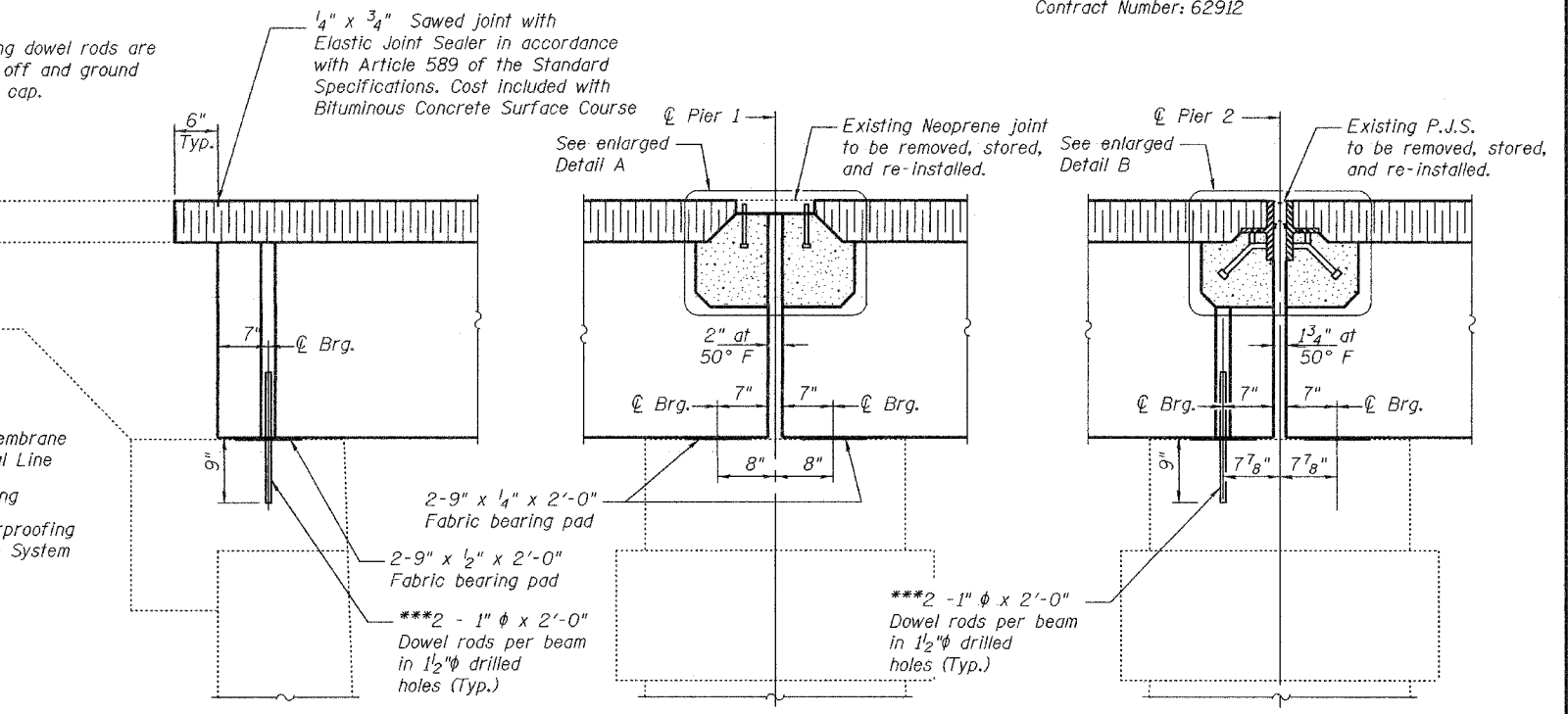
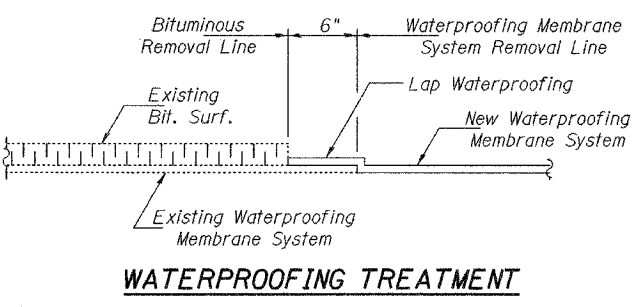
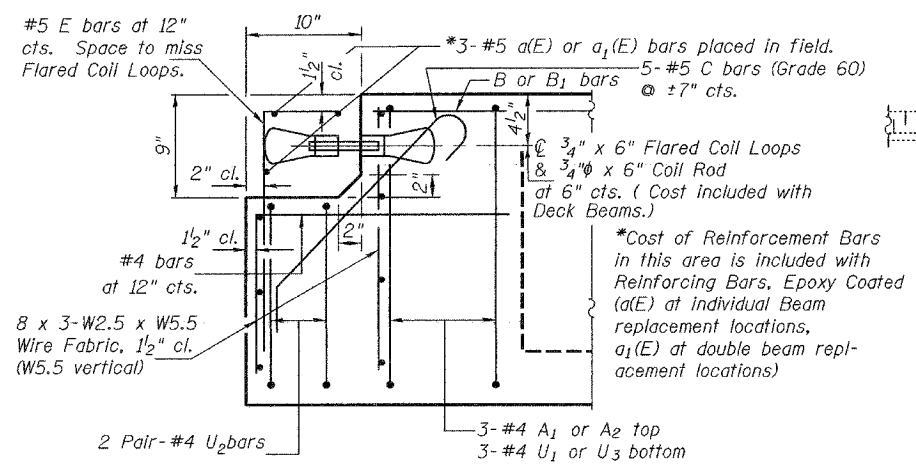
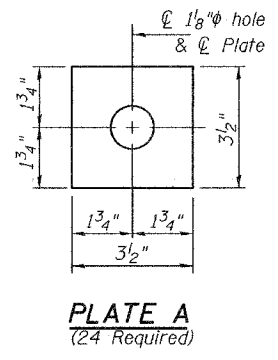
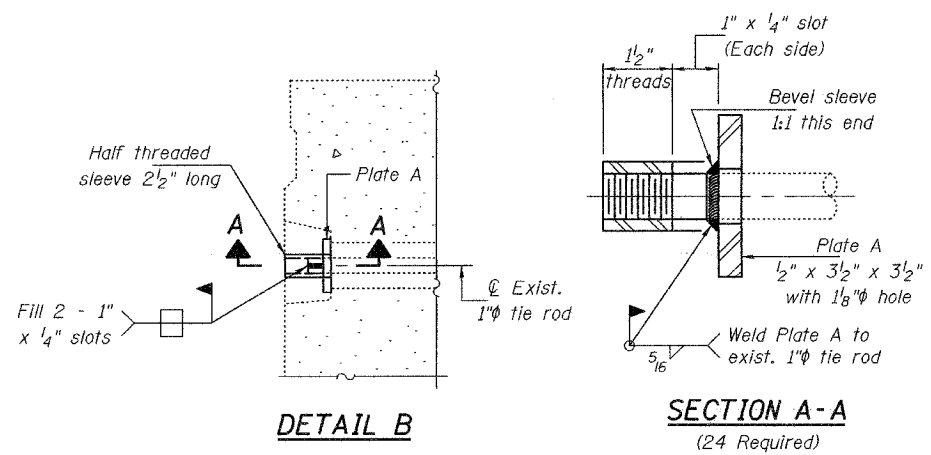
PD-5-S 10-22-04

**BEAM DETAILS**  
**F.A.U. RT. 9877**  
**OVER SALT CREEK**  
**DUPAGE COUNTY**  
**SN 022-0084**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DuPage	14	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		4 SHEETS

Contract Number: 62912



DESIGNED	V.H.V.
CHECKED	A.T.H.
DRAWN	Drew Christopher
CHECKED	V.H.V. A.T.H.

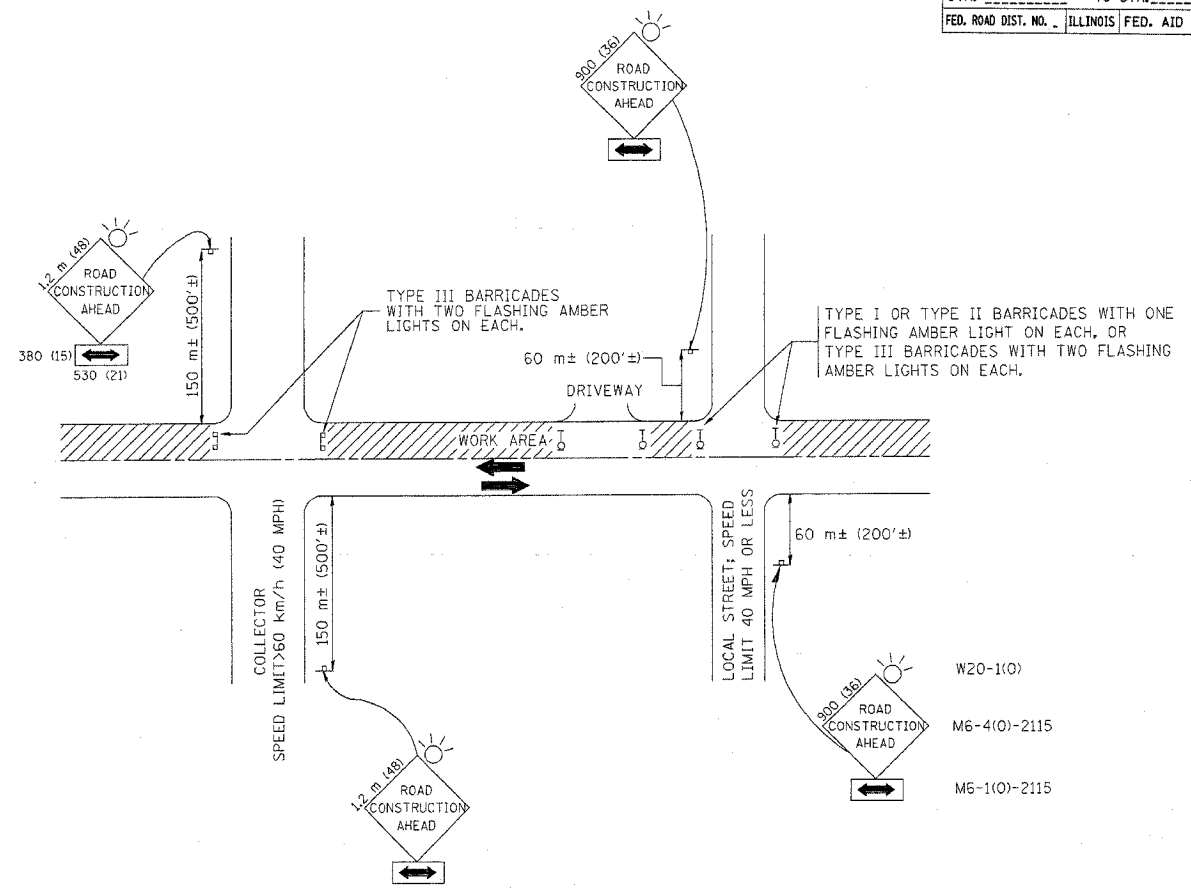
May 3, 2005

EXAMINED *John A. Morris*  
ENGINEER OF STRUCTURAL SERVICES

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

**BEAM DETAILS**  
**F.A.U. RT. 9877**  
**DUPAGE COUNTY**  
**SN 022-0084**

F.A.P. NO.	F.A.U. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
343	1453	2005-005BR	COOK/DUPAGE	14	14A
STA. _____		TO STA. _____			
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT			



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:
    - 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.
    - 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:
    - 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.
    - 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. OBERLE	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. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_  
 DATE 10/18/2002

DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 TC-10  
 REVISION DATE: 01/06/00