

* (1213-82SHBK, 1315-821, 1516-822, 1617-823, 1819-824)RS-1
& (1516-804HB, 1516-805HB, 1718-807)R

FAJ RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	COOK	359	1
I R W A. 805		SLIPNO	PROJECT 805-470150	

LOCATION OF SECTION INDICATED THUS: - 

OAK PARK AVE. BRIDGE OVER F.A.I.-80
STRUCTURE NO. 016-0927

F.A.I.-80 BRIDGE OVER CICERO AVE.
STRUCTURE NO. 016-0074(EB); NO. 016-0075(W.B.)

F.A.I.-80 BRIDGE OVER 175TH ST.
STRUCTURE NO. 016-0077(EB); NO. 016-0076(W.B.)

F.A.I.-80 BRIDGE OVER KEDZIE AVE.
STRUCTURE NO. 016-0078(EB); NO. 016-0079(W.B.)

SCOPE OF WORK:
BRIDGE DECK REMOVAL AND REPLACEMENT
BRIDGE DECK GROOVING AND SCARIFICATION
CONCRETE LATEX OVERLAY, CLEANING AND
PAINTING STEEL BRIDGE, AND BEARING REMOVAL
AND REPLACEMENT, APPROACH SLAB REMOVAL &
REPAIRS, SLOPE WALL REMOVAL & REPAIRS, FURNISHING
ERECTING STRUCTURAL STEEL, CONCRETE STRUCTURES
AND SUPERSTRUCTURES, LUG SYSTEM REMOVAL AND
REPLACEMENT, ETC.

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

SUBMITTED Sept 17 1996

James J. [Signature]

DIRECTOR, HIGHWAYS

EXAMINED _____ 19 ____

ENDORSE TO PLANS AND CONTRACTS

PASSED October 25 1996

DIRECTOR OF DESIGN

APPROVED October 25 1996

DISTRICT CHIEF OF ENGINEERS

PRINTED BY THE AUTHORITY OF THE
STATE OF ILLINOIS

FOR UTILITY INFORMATION
CALL J.U.L.I.E. 1-800-892-0123

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.

CONTRACT NO. 82277

GROSS AND NET LENGTH OF PROJECT= 31,025.646 LIN. FT. 5.876 MI.

TRAFFIC DATA
1994 ADT = 50,800
SPEED LIMIT = 65 MPH

Tue Sep 5 12:48:42 1995
 /usr/project/dl04193/dl04193pl.dyn LV-1-63
 LANS PREPARATION ENGINEER: M. DEYOUNG /8471 705-4432

* (1213-825HBK, 1315-821, 1516-822, 1216-823, 1819-824)RS-1 & (1516-804HB, 1516-805HB, 1718-807HR

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	COOK	359	2
STA		TO STA	
REV. ROAD DIST. NO. 1		REV. ROAD DIST. NO. 2	

LIST OF STATE STANDARDS

STANDARD #	DESCRIPTION
1538-6	CATCH BASIN, TYPE C
1686-5	SYMBOLS AND ABBREVIATIONS
1914-7	TYPE B GUTTER (INLET, OUTLET AND ENTRANCE)
2113-4	DETAIL OF NAME PLATE FOR BRIDGES
2149-12	DELINEATORS
2225-10	REINFORCEMENT FOR CONTINUOUSLY REINFORCED PCC PAVEMENT
2228-5	METAL END SECTION FOR PIPE CULVERTS
2230-18	STEEL PLATE BEAM GUARDRAIL
2237-12	BITUMINOUS SHOULDER DETAILS - ADJACENT TO RIGID PAVEMENT
2250-3	MEDIAN INLET FOR 600mm 24" R.C.P.
2251-2	MEDIAN INLET FOR 900mm 36" R.C.P.
2256-13	BREAK-AWAY SIGN POSTS
2262-6	REINFORCED CONCRETE PIPE ELBOW
2263-4	REINFORCED CONCRETE PIPE TEE
2298-12	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2314-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES MULTILANE DIV. AND UNDIV., RURAL, DAY OR NIGHT
2316-16	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES MULTILANE DIV. AND UNDIV., RURAL, OVER ONE DAY
2319-6	SIGN PANEL MOUNTING DETAILS
2320-5	SIGN PANEL ERECTION DETAILS
2323-14	PAVEMENT JOINTS
2324-10	BRIDGE APPROACH SHOULDER PAVEMENT AND DRAIN
2327-12	SUB-SURFACE DRAINS
2333-5	CONCRETE BARRIER
2337-3	TRAFFIC BARRIER TERMINAL, TYPE 2
2340-6	TRAFFIC BARRIER TERMINAL, TYPE 5 & 5A
2341-10	TRAFFIC BARRIER TERMINAL, TYPE 6
2350-4	METAL POSTS (SIGNS, MARKERS, AND DELINEATORS
2362-4	CONCRETE HEADWALL FOR PIPE DRAINS
2364-3	GRATING FOR CONCRETE FLARED END SECTION FOR 600mm, 750mm, & 900mm (24", 30", & 36") PIPE
2379-2	GRATING FOR CONCRETE FLARED END SECTION (FOR 1050mm (42"), 200mm (48", 54")
2381-2	TEMPORARY EROSION CONTROL SYSTEMS
2383-4	TEMPORARY CONCRETE BARRIER
2384-2	DRAINAGE STRUCTURES, TYPES 1, 2 & 3
2385-1	FRAME AND GRATE, TYPE 20
2409-4	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES TWO LANE, TWO-WAY, RURAL, ONE-LANE CLOSURE ON BRIDGE DECK, DAY OR NIGHT OPERATIONS
2419-2	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES MULTILANE DIVIDED AND UNDIVIDED RURAL, DAY OR NIGHT OPERATIONS
2424-1	FRAME AND GRATE, TYPE 24
2425-6	CLASS A PATCHES
2426-4	CLASS B PATCHES
2429-4	PCC SHOULDER
2438-1	RUMBLE STRIP FOR PCC OR BITUMINOUS SHOULDER
2441-1	PCC/BITUMINOUS STABILIZATION AT STEEL PLATE GUARDRAIL
2442-4	BRIDGE APPROACH PAVEMENT
2443-3	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
2446	10.8m (36) CONTINUOUSLY REINFORCED PCC PAVEMENT WITH LUG SYSTEM
2449-1	PRECAST REINFORCED CONCRETE FLARED END SECTION
TS-2341 -1	MAJOR GUIDE SIGN LAYOUT - ARROWS
TS-2147 -7	STANDARD EXTRUDED ALUMINUM SIGN PANELS

~~2314-9~~ RURAL MULTILANE, DIVIDED AND UNDIVIDED OFF-ROAD OPERATIONS LESS THAN 4.5 m (15') AWAY
2315-11 RURAL LANE CLOSURE MULTILANE, DIVIDED AND UNDIVIDED DAY OPERATIONS ONLY

PLAN NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 OR "CUAN" (CHICAGO UTILITY ALERT NETWORK), 312-744-7000 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED)

3 METER (10') TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB AND GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS & GUTTERS AND MEDIANS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.

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

BARRICADES: THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SANDBAGS ON EACH TYPE I OR TYPE II BARRICADE USED - ONE (1) WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL.

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

ALL STORM SEWER CONNECTIONS WITH PIPES 675 MM (27") DIAMETER AND SMALLER SHALL BE MADE WITH PRECAST "TEE" OR "WYE" PIPES. FOR PROPOSED STORM SEWER PIPES LARGER THAN 675 MM (27") DIAMETER, OPENINGS OF THE SPECIFIED DIAMETER SHALL BE MADE IN THE PIPE AT THE TIME IT IS MANUFACTURED. PRECAST "TEE" AND "WYE" PIPE CONNECTIONS FOR PROPOSED STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST FOR THE STORM SEWERS.

USE NO. 25 (#8) EPOXY-COATED TIE BARS CONFORMING TO ART. 706.10 (b) (2) OF THE STANDARD SPECIFICATIONS FOR LONGITUDINAL CONSTRUCTION JOINT GROUTED-IN-PLACE TIE BAR AS SHOWN ON STATE STANDARD 2323 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.

BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND BITUMINOUS TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.

TYPE II BARRICADES, WHEN USED FOR APPROACH TAPERS AS INDICATED ON THE STATE STANDARDS OR SHOWN ON THE PLANS, SHALL BE SAFETYCADE DIRECTION INDICATOR BARRICADES MANUFACTURED BY WLI INDUSTRIES, INC. 880 N. ADDISON, P.O. BOX 7050, VILLA PARK, IL 60181-7050 OR EQUIVALENT. THE CONTRACTORS BID PRICES FOR TRAFFIC CONTROL ITEMS SHALL INCLUDE THE COST OF THESE BARRICADES.

CORING OF APPROACH SHOULDERS OR PAVEMENT, IF REQUIRED, SHALL BE INCLUDED IN THE COST OF PROP. GUARD RAIL.

THE INSTALLATION OF PROP. PIPE UNDERDRAIN IN THE PAVEMENT WIDENING AREAS SHALL BE DONE AFTER THE PAVEMENT HAS BEEN PLACED.

THE REMOVAL OF EXIST. OR PROP. STABILIZED SUB-BASE FOR THE INSTALLATION OF PROP. PIPE UNDERDRAIN 4" SHALL BE INCLUDED IN THE COST FOR PIPE UNDERDRAIN, 4".

STATE STD. 2409 SHALL BE USED FOR INFORMATION ONLY. TO BE USED FOR TEMPORARY CONCRETE BARRIER, PAVEMENT MARKERS AND VERTICAL PANELS INSTALLATION DETAILS. THIS STATE STANDARD WILL NOT BE CONSIDERED AS PAY ITEM.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN TEMPORARY DRAINAGE DURING CONSTRUCTION. THIS WORK MAY INCLUDE, BUT SHALL NOT BE RESTRICTED TO, CONSTRUCTION OF TEMPORARY DITCHES, DRAINAGE STRUCTURES, PIPES AND PUMPING. NO EXTRA COMPENSATION WILL BE ALLOWED THE CONTRACTOR TO PERFORM THIS WORK.

Plan Notes (cont.)

Temporary bituminous tapers must be constructed and maintained at each structure in order to safely maintain traffic and provide transitions to all new approach pavement during Stage II construction. These tapers shall be constructed in accordance with "Butt Joint and Bituminous Taper Details" included in these plans. All labor, equipment and materials required to construct, maintain and remove these tapers will not be paid for separately but shall be included in the unit price bid for Bituminous Concrete Binder Course.

THE STATE STANDARDS 2314 AND 2315 SHALL BE INCLUDED IN THE COST FOR "TRAFFIC CONTROL AND PROTECTION, EXPRESSWAY" PAID FOR AS LUMP SUM. THESE STANDARDS WILL BE USED FOR LOCAL LANE CLOSURE FOR CICERO AVE., 175TH ST AND KEDZIE AVE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAI -80
INDEX OF SHEETS
STATE STANDARDS
PLAN NOTES

SCALE VERT NONE
HORIZ
DATE SEPT 1996
DRAWN BY
CHECKED BY

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS, STATE STANDARDS AND PLAN NOTES
3-9	SUMMARY OF QUANTITIES
10-11	TYPICAL SECTIONS
12	DETOUR - OAK PARK AVE. OVER FAI - 80
13-37	STAGES OF CONSTRUCTION
38-51	DRAINAGE PLANS
52-57	EXISTING TOPOGRAPHY
58-71	EXISTING AND PROPOSED PLANS AND PAVEMENT MARKINGS
72-74	PROFILES
75-91	OAK PARK AVENUE BRIDGE OVER FAI - 80
92-139	FAI. 80 OVER CICERO AVENUE BRIDGE
140-187	FAI. 80 OVER 175TH STREET BRIDGE
188-226	FAI. 80 OVER KEDZIE AVENUE BRIDGE
227-284	LIGHTING PLANS
285-304	SIGNING PLANS
305-330	SURVEILLANCE PLANS
331-332	EXISTING APPROACH SLAB DETAILS
333	FAI. 80 N.B. I-57 TO E.B. I-80 - CONCRETE BARRIER WALL DETAIL
334	PROP. LUG SYSTEM CONSTRUCTION @ EXIST. LUG SYSTEMS
335	CONCRETE BARRIER, PIER AND SLOPE WALL PROTECTION
336	DETAIL OF DITCH FILTER @ CULVERT
337	BUTT JOINT AND BITUMINOUS TAPER DETAILS
338	SHOULDER WIDENING FOR ET-2000
339	BENCHING DETAIL AND SAND MODULE IMPACT ATTENUATORS
340	DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER
341	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
342	ENTRANCE AND EXIT RAMP CLOSURE DETAILS
343	TRAFFIC CONTROL DETAILS FOR CENTER LANE CLOSURE, TWO LANE WEAVE SHOULDER LANE
344	TRAFFIC CONTROL DETAILS FOR SHOULDER CLOSURES, PARTIAL RAMP CLOSURE
345	DISTRICT ONE FREEWAY ONE LANE CLOSURE
346	TEMPORARY CONCRETE BARRIER DETAIL
347	SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENING
348-349	MULTI-LANE FREEWAY PAVEMENT MARKING DETAILS
350	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
351-359	CROSS SECTIONS

* INCLUDES 75A - 75D

PLAN NOTES (cont.)

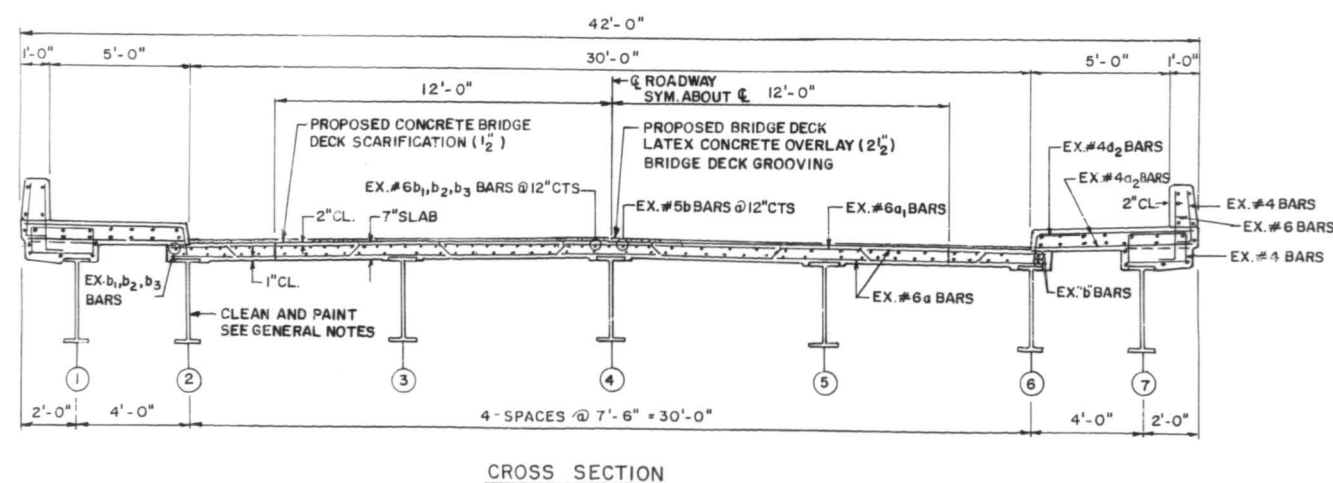
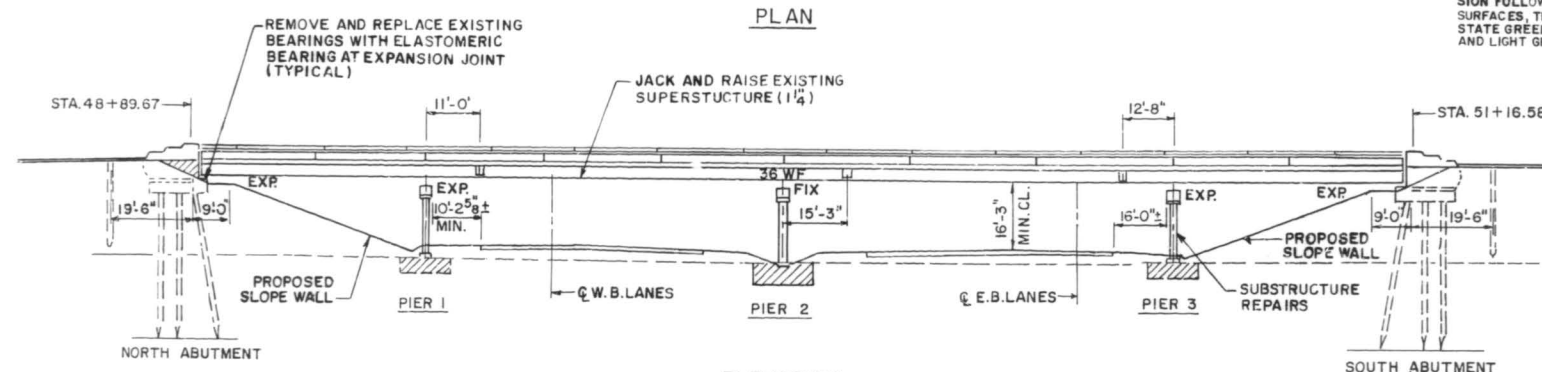
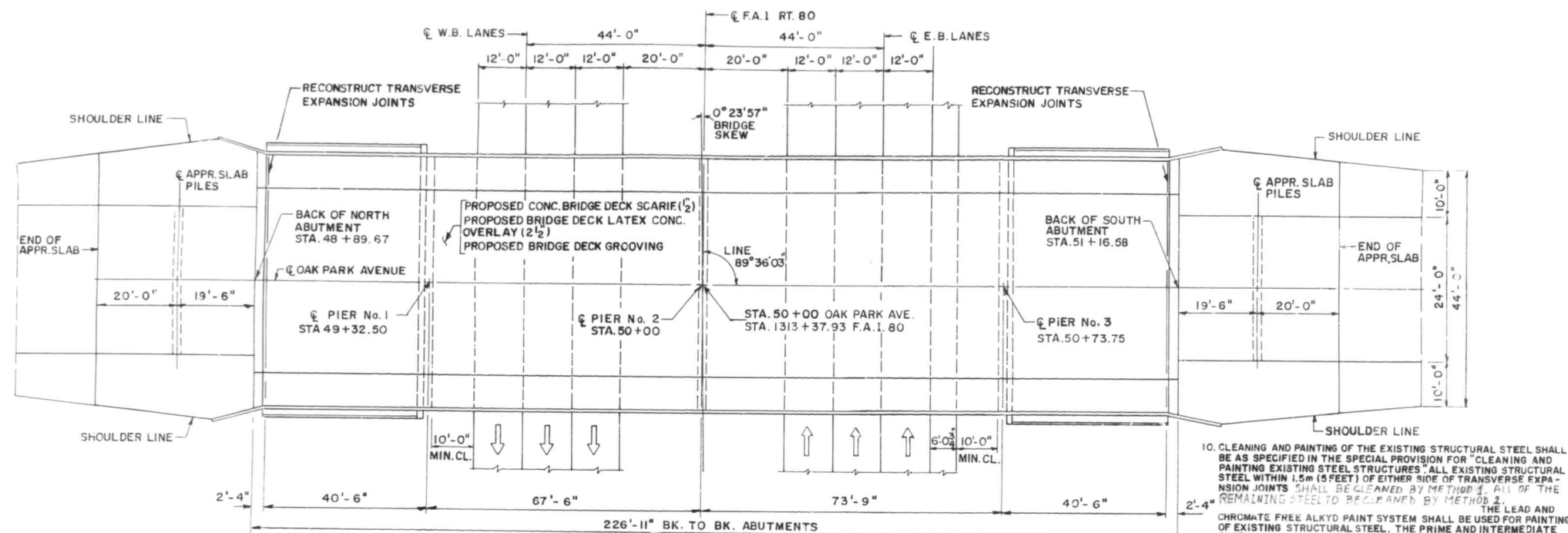
Rev.

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	COOK	359	75
STA.	TO STA.		
SEE ROAD DIST. NO. 2	ILLINOIS	FILE NO.	PROJECT

*11213-825HBK, 1315-821, 1516-822, 1216-823, 1819-824RS-1 & 1516-804HB, 1516-805HB, 1718-807P

GENERAL NOTES:

1. 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 OR 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.
2. THE CONTRACTOR MUST USE EXTREME CARE DURING CONCRETE REMOVALS AS NOT TO NICK, CUT, OR DAMAGE ANY OF THE STRUCTURAL STEEL AND NOT TO DAMAGE OR CUT ANY EXISTING REINFORCEMENT BARS THAT ARE TO BE INCORPORATED INTO THE NEW CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED AT CONTRACTORS EXPENSE.
3. ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH AN APPROVED BAR SPlicer OR ANCHORAGE SYSTEM. COST INCIDENTAL TO "CONCRETE REMOVAL".
4. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42, OR M-53 GRADE 60.
5. ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO M-270, GR.36 UNLESS OTHERWISE SPECIFIED.
6. ALL NEW FASTENERS SHALL BE HIGH STRENGTH BOLTS. HOLES SHALL BE SUBPUNCHED OR SUBDRILLED $\frac{1}{8}$ " DIA. AND REAMED IN THE FIELD TO $\frac{1}{4}$ " DIA. FOR $\frac{3}{4}$ " DIA. HIGH STRENGTH BOLTS (EXCEPT AS NOTED ON THE PLANS) AFTER NEW STRUCTURAL STEEL SECTIONS ARE PROPERLY FITTED INTO POSITION.
7. PRIOR TO POURING THE NEW CONCRETE FOR THE DECK, ALL LOOSE RUST, LOOSE MILL SCALE, AND ALL OTHER FOREIGN MATERIAL SHALL BE REMOVED FROM THE EMBEDDED PORTIONS OF FLANGES OF BEAMS. THE REMOVAL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SSPC SURFACE PREPARATION SPECIFICATIONS SP3 FOR POWER TOOL CLEANING OR SP2 FOR HAND TOOL CLEANING. COST SHALL BE INCIDENTAL TO CONCRETE REMOVAL.
8. 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 "LIGHT GREY". MUNSSELL NO. 10Y 7/1. SEE SPECIAL PROVISIONS.
9. THE PAINT ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD. PRECAUTIONS SHALL BE TAKEN TO PROTECT WORKERS AND THE ENVIRONMENT AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.



CONSTRUCTION SEQUENCE

1. TRAFFIC STAGING.
2. BEAM REPLACEMENT.
3. DECK SLAB REPAIRS.
4. CONCRETE BRIDGE DECK SCARIFICATION.
5. SUBSTRUCTURE REPAIRS / SLOPE WALL REPAIRS.
6. JACK EXISTING SUPERSTRUCTURE $1\frac{1}{4}$ " AND REPLACE BEARINGS AT ABUTMENT AND REPLACE TOP PLATE AT THE PIERS.
7. RECONSTRUCT TRANSVERSE JOINTS.
8. BRIDGE DECK LATEX CONCRETE OVERLAY ($2\frac{1}{2}$ ").
9. DECK DRAIN EXTENSION.
10. BRIDGE CLEANING AND PAINTING.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Johnson
ENGINEER OF BRIDGES AND STRUCTURES

TOTAL BILL OF MATERIALS - BRIDGE

Item	Unit	Quantity
Concrete Superstructure	Cu. Yd.	15.6
Reinforcement Bars (Epoxy Coated)	Pound	4020
Deck Slab Repair (Partial)	Sq. Yd.	7.0
Deck Slab Repair (Full Depth - Type I)	Sq. Yd.	2.0
Deck Slab Repair (Full Depth - Type II)	Sq. Yd.	1.0
Preformed Joint Seal 4"	Foot	9.0
Concrete Structures	Cu. Yd.	7.3
Bar Splitters	Each	32
Concrete Bridge Deck Scarification ($1\frac{1}{2}$ ")	Sq. Yd.	760
Bridge Deck Latex Concrete Overlay ($2\frac{1}{2}$ ")	Sq. Yd.	760
Protective Shield	Sq. Yd.	660
Concrete Removal	Cu. Yd.	70.2
Formed Concrete Repair ($\leq 5'$)	Sq. Ft.	45
Formed Concrete Repair ($> 5'$)	Sq. Ft.	15
Epoxy Crack Sealing	Foot	5
Furnishing And Erecting Of Structural Steel	Pound	15180
Jack Existing Superstructure	L. Sum	1
Elastomeric Bearing Assembly Type II	Each	14
SLOPE WALL REMOVAL	SQ.YD.	425
SLOPE WALL 4"	SQ.YD.	474
Cleaning and Painting Steel Bridge Structure I	L. Sum	1
Blasting Residue Containment Disposal	L. Sum	1
Power Tool Cleaning Residue Containment and Disp.	L. Sum	1
Floor Drain Extensions	Each	16
Temporary Slab Support System	L. Sum	1
Bridge Deck Grooving	Sq.Yd.	760

ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVENUE
OVER INTERSTATE ROUTE 80
PLAN, ELEVATION AND CROSS SECTION
S.N. 016-0927

SCALE: VERT. HORIZ.
DATE
DRAWN BY M.V.T.
CHECKED BY J.A.F.

REVISIONS	NAME	DATE

ROUTE NO.	DIRECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 02	N	COOK	304	517
FEELING UNIT NO. 1			FEELING PRODUCTION	

1. 1000-1213-027989-1319-001356-002.
 1216-001357-027495-131556-00246.
 1556-000708-01710-000794



Structural drawing of a bridge deck showing spans, piers, and splices. The drawing includes dimensions for spans (Span 1: 40'-6", Span 2: 67'-6", Span 3: 73'-9", Span 4: 40'-6") and piers (Pier 1, Pier 2, Pier 3). It also shows splice locations (Splice 1, Splice 2, Splice 3) and beam types (36WF135, 36WF150, W36x150). The total length is 222'-3".

(A) Existing Beam to be replaced.

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	7080
Temporary Slab Support System	L.S.	1
Concrete Removal	Cu. Yd.	2.9
Concrete Superstructure	Cu. Yd.	2.9

F.A.I. RT. 80 SEC. 1313-811 HB

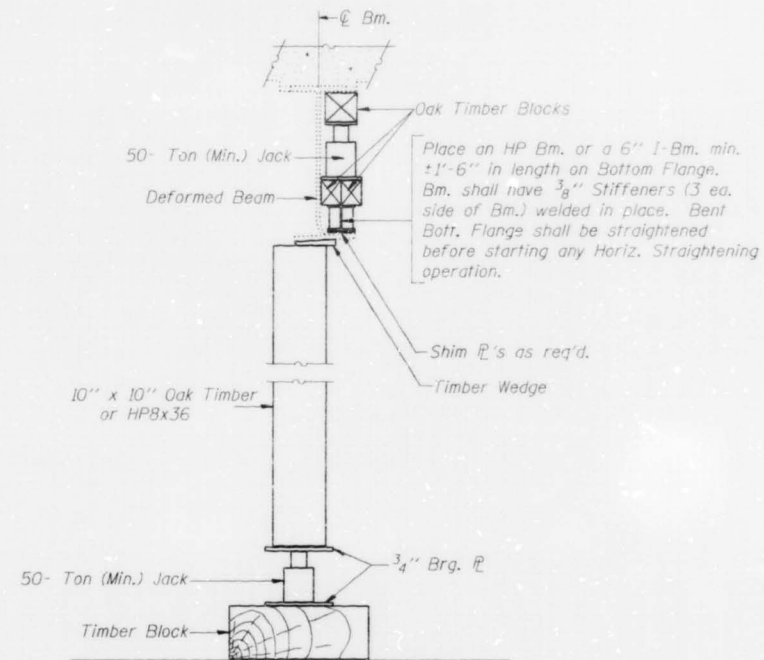
COOK COUNTY

STA. 1313+37.93

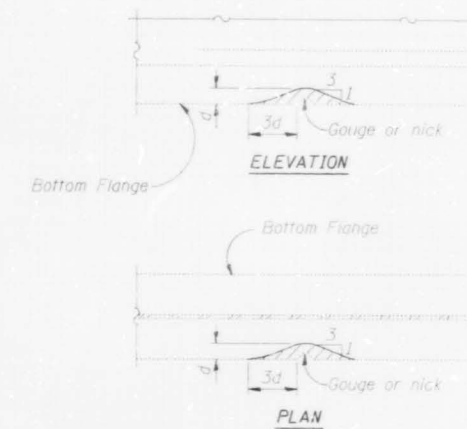
STR. No. 016-0927

DESIGNED	<i>Edwin T. Bell</i>	EXAMINED	<i>John E. Adams</i>
DRAWN	<i>J. March</i>	PASSED	
CHECKED	<i>GTB 1/4/</i>		

ROUTE NO.	SECTION	COUNTY	DATE MM/DD/YY	PAGE #
FAI 88	#	COOK	258	758
FED. ROAD DIST. NO. 7		SHEET NO. 57		
SHEET NO. 57		SHEETS		



VERTICAL STRAIGHTENING DETAIL

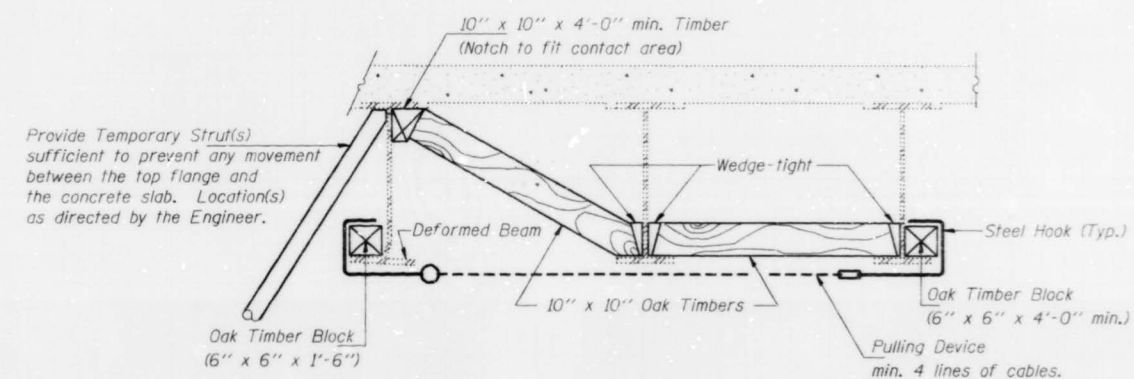


GRINDING DETAIL

Note: All beam straightening will be _____ as required by the Engineer. All work included will be paid for in accordance with Article 109.04 of Standard Specifications.

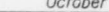
Diagram illustrating the timber wedge-tight method for beam repair. The diagram shows a cross-section of a beam with a central gap. A "Pushing Device" is applied to the left end of the beam, connected to a "50-Ton (Min.) Jack" and a "Load Spreader Bm.". The beam is supported by a "Jack Support" at the bottom. A "Wedge-tight" assembly is used to close the gap, consisting of a "10'' x 10'' x 4'-0'' min. Timber" (notch to fit contact area) and "10'' x 10'' Oak Timbers" at the bottom. The beam is labeled "Deformed Beam".

SECTION B-B



SECTION A-A

BEAM REPLACEMENT
F.A.I. RT. 80 SEC. 1313-811 HB
COOK COUNTY
STA. 1313+37.93
STR. No. 016-0927

DESIGNED	G.T.B.	EXAMINED	October 11, 1996 
CHECKED	V.H.V.	PASSED	
DRAWN	J. March		
CHECKED	G.T.B. V.H.V.		

October 11, 1996

EXAMINED Todd E. Ahrens
ENGINEER OF STRUCTURAL SERVICES

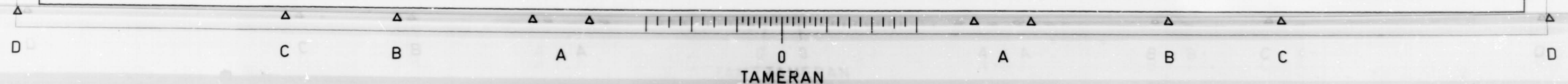
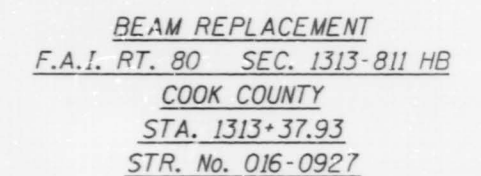
PASSED

ENGINEER OF BRIDGES AND STRUCTURES

ENGINEER OF BRIDGES AND STRUCTURES

ROUTE NO.	TOWNSHIP	COUNTY	SECTION	RANGE
FAR 02	N	COOK	35N	7E
E-1/4 SEC. 35N-7E-02 E-1/4 SEC. 36N-7E-02				

SHEET NO. 57-0
57 SHEETS



ROUTE NO.	SECTION	COUNTY	SECTION NUMBER	SHEET
FAI 68	#	COOK	354	753
		E.L. BAKER FRED. AND PHILIPET		

SHEET NO. 51-0
57 SHEETS

* SEC. 1213-8020-8121-8021-7516-8022-
1216-8023-8184-8248-8185-8249-
7516-8025-8177-8077

75'-9" a.-a. Temporary Slab Support System

Side Elevation Dimensions:
 Total length: 75'-9"
 End offsets: ±41'-3" and ±34'-6"
 Hanger spacing: 10 hanger spaces at 7'-0" = 70'-0"
 End offsets from hanger line: ±2'-0"
 Beam: W36x150 or equivalent
 Note: Optional Splice See Optional Splice Detail

Plan View Dimensions:
 Pier 2 to Pier 3: 73'-9"
 Pier 2 to Splice 2: 15'-3"
 Splice 2 to Splice 3: 45'-10"
 Splice 3 to Pier 3: 12'-8"
 Notes:
 - Drill 1½" Ø holes in slab for hanger rods. Holes shall be patched with epoxy grout after support beam has been removed. (Typ.)
 - Existing splices: Existing Splice 2 and Existing Splice 3

Technical drawing of a composite beam cross-section, labeled "New Beam 7". The drawing shows a cross-section of a beam with a total width of 1'-0" and a total height of 1'-6". The beam is composed of a top flange, a web, and a bottom flange. The top flange has a thickness of 2 1/8" and a width of 2'-6". The web has a height of 8 1/2" and a width of 4". The bottom flange has a thickness of 2 1/8" and a width of 9". The beam is shown with a "Bonded Construction Joint" at the top and bottom. The drawing includes dimensions for the beam's geometry and a label "New Beam 7" at the bottom right.

Hatched areas indicate concrete sections to be removed and replaced. Perimeters of concrete removal areas shall be saw cut $\frac{3}{4}$ " prior to the removal of concrete. Reinforcement shall be cut only if required for fitting bolts. Cut reinforcement shall be spliced as directed by the engineer. Cost incidental to "Concrete Removal".

Technical drawing illustrating a Temporary Slab Support System, showing a cross-section and a longitudinal section.

Labels and Dimensions:

- Temporary Slab Support System** (W36x150 (or equivalent))
- 1" ϕ ASTM A307 Threaded Rods with hex nuts and washers. For Hanger Spacing see longitudinal section.**
- 12" Threads ea. end. (typ.)**
- 14"**
- 1" ϕ 1' x 6" x 1'-6" Top & Bottom (Typ.)**
- Drill 1/4" ϕ hole on ϕ of 1/2" ϕ for hanger rod. (typ.)**
- Oak Timber (Typ.)**
- Oak Timber**
- Oak Block**
- Drill nail holes in ϕ . Nail ϕ to oak block. before erection**
- 2'-6"**

Flange Splice $\mathbb{E}$
 $7/8 \times 1'-0 \frac{1}{4} \times 5'-0 \frac{1}{4}$
 (Top and Bottom)

$7/8" \phi$
 H.S. Bolts
 3"
 6"
 3"
 1 1/2"
 9 sp. at 3/4" 9 sp. at 3/4"
 $3'' = 2' - 3''$ $3'' = 2' - 3''$

1/4" Max.

Web Splice $\mathbb{E}$
 $3/8 \times 1'-6 \times 2'-8$
 Each Side

$3/4" \phi$ H.S. Bolts
 1 3/8"
 9 spaces at 3/4"
 $3/4'' = 2' - 5/4''$
 1 3/8"
 2 sp. at 3" 2 sp. at 3"
 cts. cts.

BEAM REPLACEMENT
F.A.I. RT. 80 SEC. 1313-811 HB
COOK COUNTY
STA. 1313+37.93
STR. No. 016-0927

DESIGNED	G.T.B.
CHECKED	V.H.V.
DRAWN	J. March
CHECKED	G.T.B. V.H.V.

October 11, 1996

EXAMINED *Todd E. Ahern*

PASSED

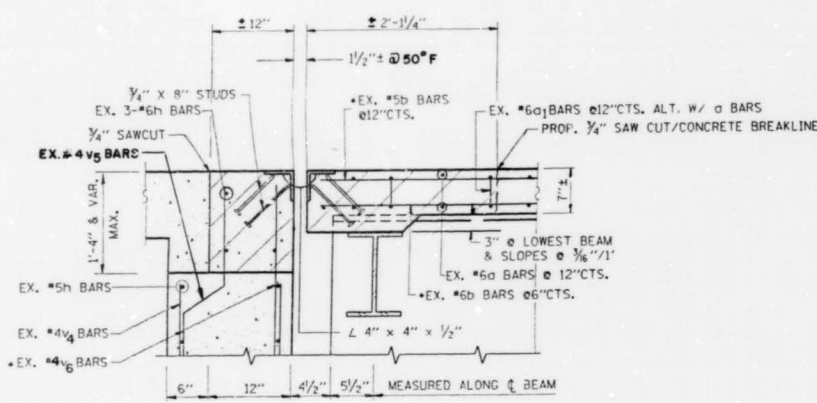
ENGINEER OF STRUCTURAL SERVICES

ENGINEER OF BRIDGES AND STRUCTURES

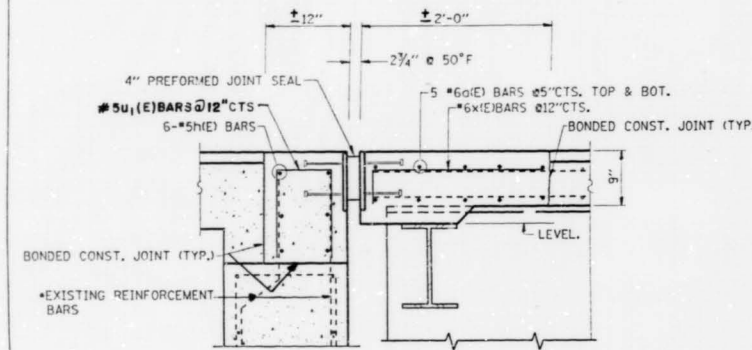
TAMERAN

F. A. L. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	COOK	359	76
STA.		TO STA.		
FED. ROAD DIST. NO.	SIGNED		FED. AID PROJECT	

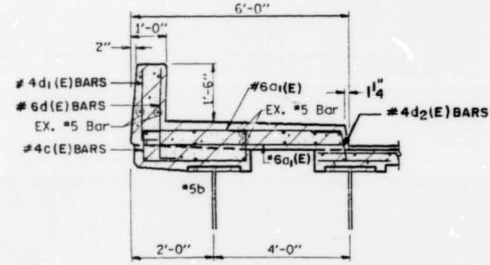
* (1213-825HBK, 1315-821, 1516-822, 1216-823, 1819-824RS-1 & 1516-804HB, 1516-805HB, 1718-807HR



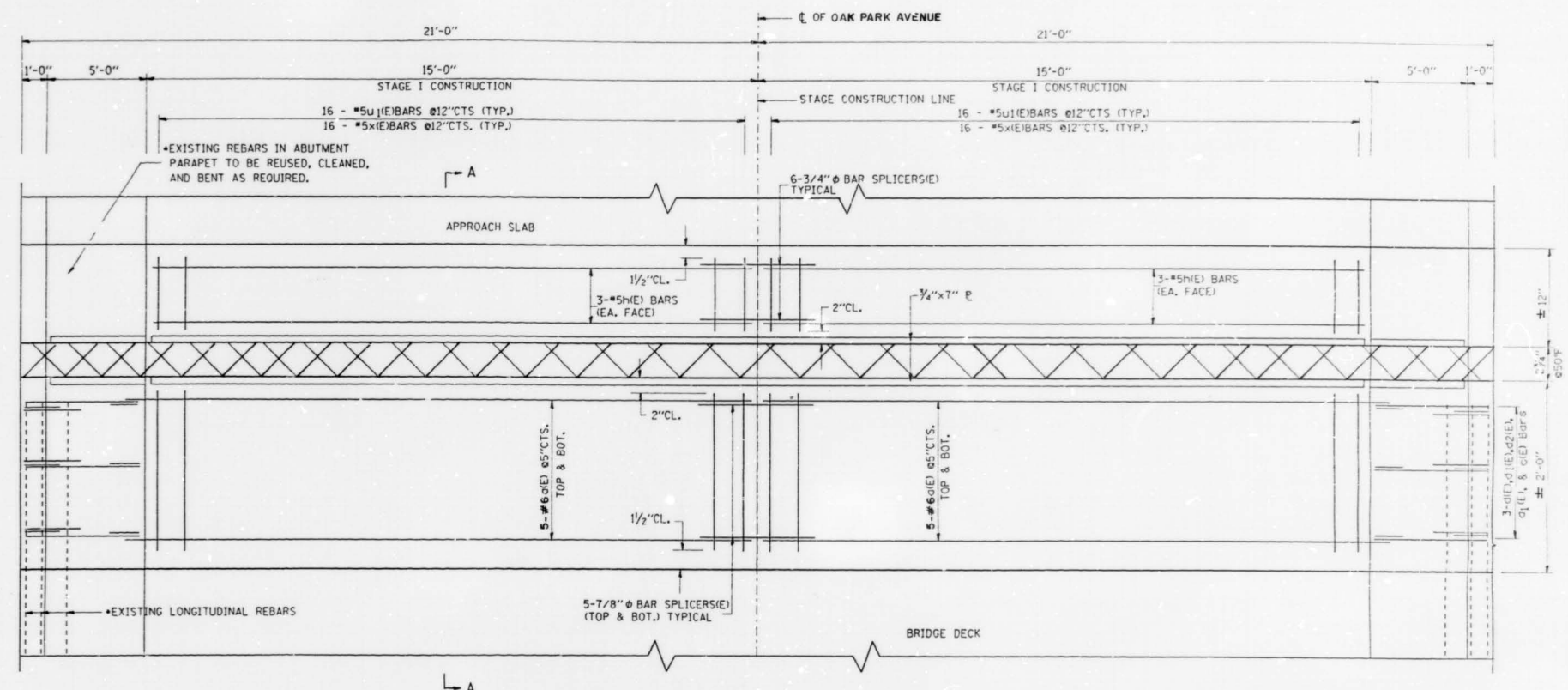
EXISTING EXPANSION JOINT



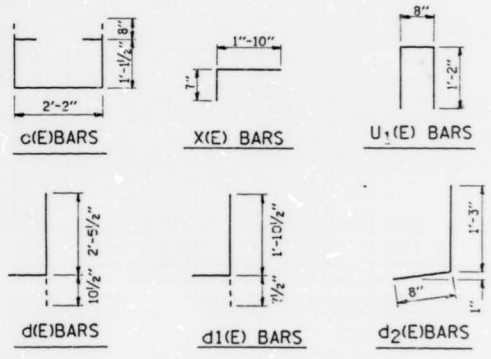
SECTION A-A
PROPOSED EXPANSION JOINT



EXISTING/PROPOSED PARAPET
AT EXPANSION JOINT



BRIDGE DECK EXPANSION JOINT @ ABUTMENT
PLAN



- LEGEND
- CONCRETE REMOVAL
 - 4" PREFORMED JOINT SEAL

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.
FIELD CUTS OF PROPOSED REINFORCEMENT BARS TO FIT FIELD CONDITIONS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF REINFORCEMENT BARS (EPOXY COATED).
BONDED CONSTRUCTION JOINT SHALL BE CONSTRUCTED IN ACCORDANCE WITH ARTICLE 503.09(a)(2) OF THE STANDARD SPECIFICATIONS.
SEE SHEET FOR BAR SPLICER DETAILS.

BILL OF MATERIALS

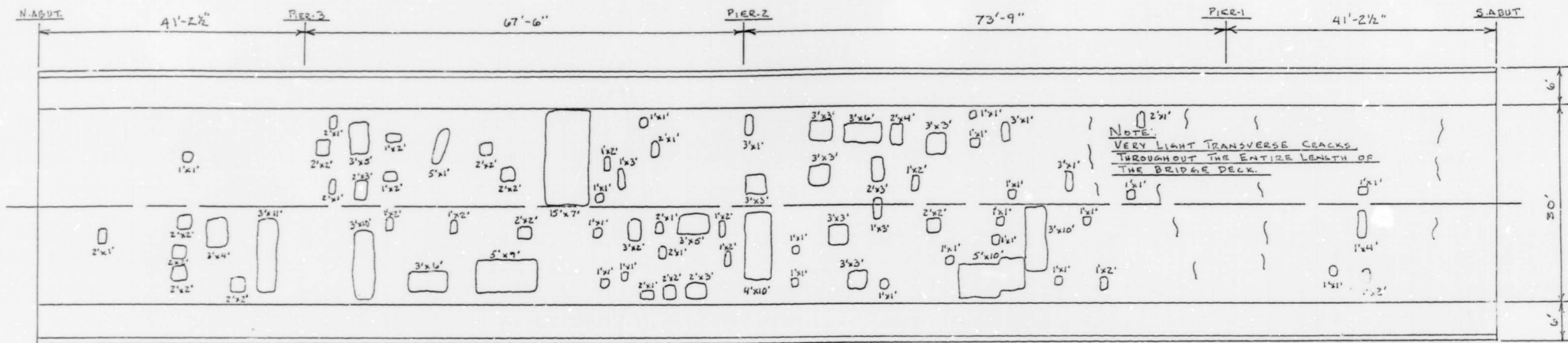
Bar	No.	Size	Length	Shape
c(E)	40	#6	15'-8"	
d1(E)	24	#6	5'-6"	
d(E)	12	#6	3'-4"	
d1(E)	12	#4	2'-6"	
d2(E)	12	#4	1'-11"	
c(E)	12	#4	5'-9"	
U1(E)	64	#5	3'-0"	
h(E)	24	#5	14'-10"	
x(E)	64	#6	2'-5"	
Item		Unit	Quantity	
Reinforcement Bars (Epoxy Coated)		Pound	3050	
Concrete Removal		Cu. Yds.	14.6	
Concrete Superstructure		Cu. Yds.	12.7	
Preformed Joint Seal (4")		Foot	90	
Furn. And Erect. Structural Steel		Pound	3200	
Bar Splicers		Each	32	

ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVENUE
OVER INTERSTATE ROUTE 80
TRANSVERSE EXPANSION JOINT DETAIL
S.N.016-0927

SCALE: NONE
DATE 11/17/95
DRAWN BY JAF
CHECKED BY MVT

FILE NO.	SECTION	COUNTY	SHEET NO.
80	*	COOK	359 77
STA.	TO STA.		
FED. ROAD DIST. NO.	BRIDGE	FED. AID PROJECT	

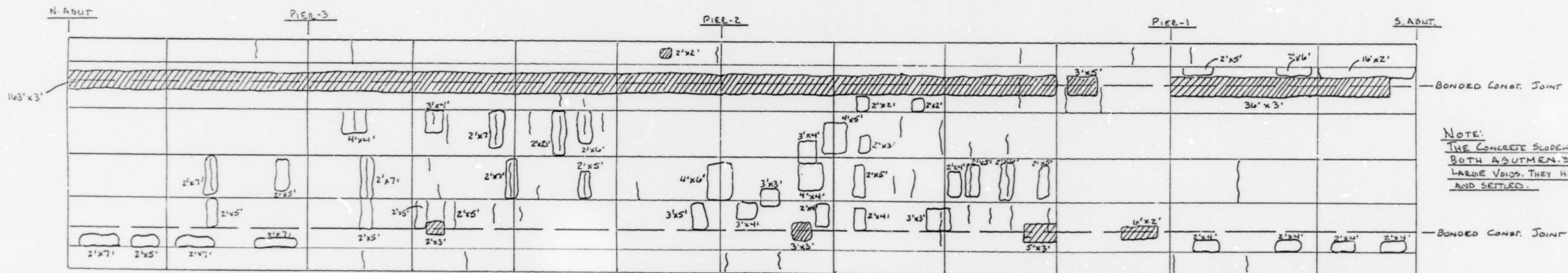
*1213-825HBK, 1315-821, 1516-822, 1216-823, 1819-824RS-1 & 1516-804HB, 1516-805HB, 1718-807HR



NOTE:
THE LAST SECTIONS OF
THE APPROACH SLABS AND
THE PAVEMENT HAVE
SETTLED AT BOTH THE
NORTH AND SOUTH APPROACH

NOTE:
PARTIAL DEPTH AREAS = 617 SQ. FT. = 69 SQ. YD.
TRANVERSE CRACKS

TOP DECK SURVEY
OAK PARK AVE/I-80
BRIDGE NO. 016-0927
UPDATED ON 11/9/95
BY: LME



NOTE:
THE CONCRETE SLOPEWALLS AT
BOTH ABUTMENTS HAVE
LARGE VOIDS. THEY HAVE BROKEN
AND SETTLED.

NOTE:
SPALL AREAS = 458 SQ. FT. = 51 SQ. YD.
LEACHING AREAS = 507 SQ. FT. = 56 SQ. YD.
LEACHING CRACKS

NOTE:
IMPACT DAMAGE TO WEST FASCIA
BEAM OVER LANE #3

NOTE:
FILLETS ALONG FASCIA BEAMS
AND FIRST BEAM IN FROM FASCIA
ARE IN DANGER OF SPALLING.
MOST OF THESE IN SPANS
1 AND 4 HAVE ALREADY
FALLEN.

BOTTOM DECK SURVEY
OAK PARK AVE/I-80
BRIDGE NO. 016-0927
UPDATED ON 11/9/95
BY: LME

BILL OF MATERIALS

Item	Unit	Total
Deck Slab Repair (Partial)	Sq. Yds.	70
Deck Slab Repair (Full Depth, Type I)	Sq. Yds.	20
Deck Slab Repair (Full Depth, Type II)	Sq. Yds.	10

NOTE:
DECK SLAB REPAIRS SHALL BE DETERMINED IN THE FIELD
AT THE RESIDENT ENGINEER'S DISCRETION.

ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVENUE OVER
INTERSTATE ROUTE 80
S.N.016-0927
DECK REPAIR PLAN

SCALE: NONE
DATE 10-13-95

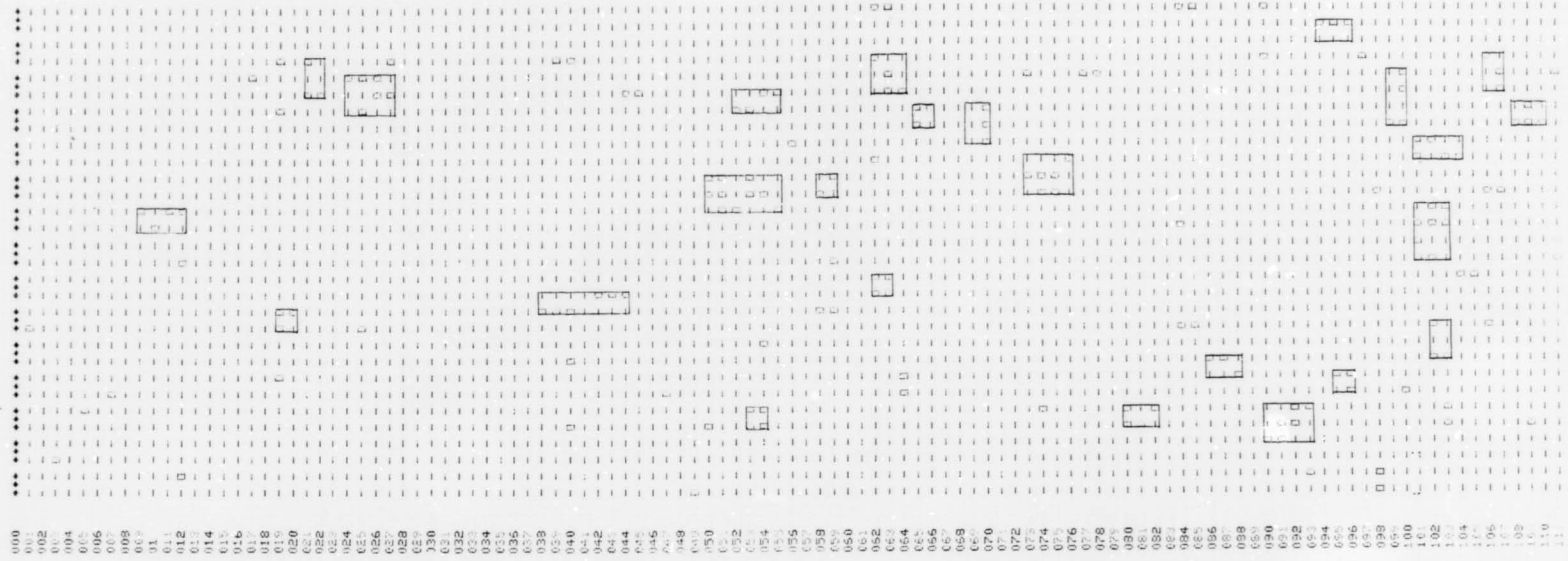
DRAWN BY JAF
CHECKED BY MVT

REVISIONS	
NAME	DATE

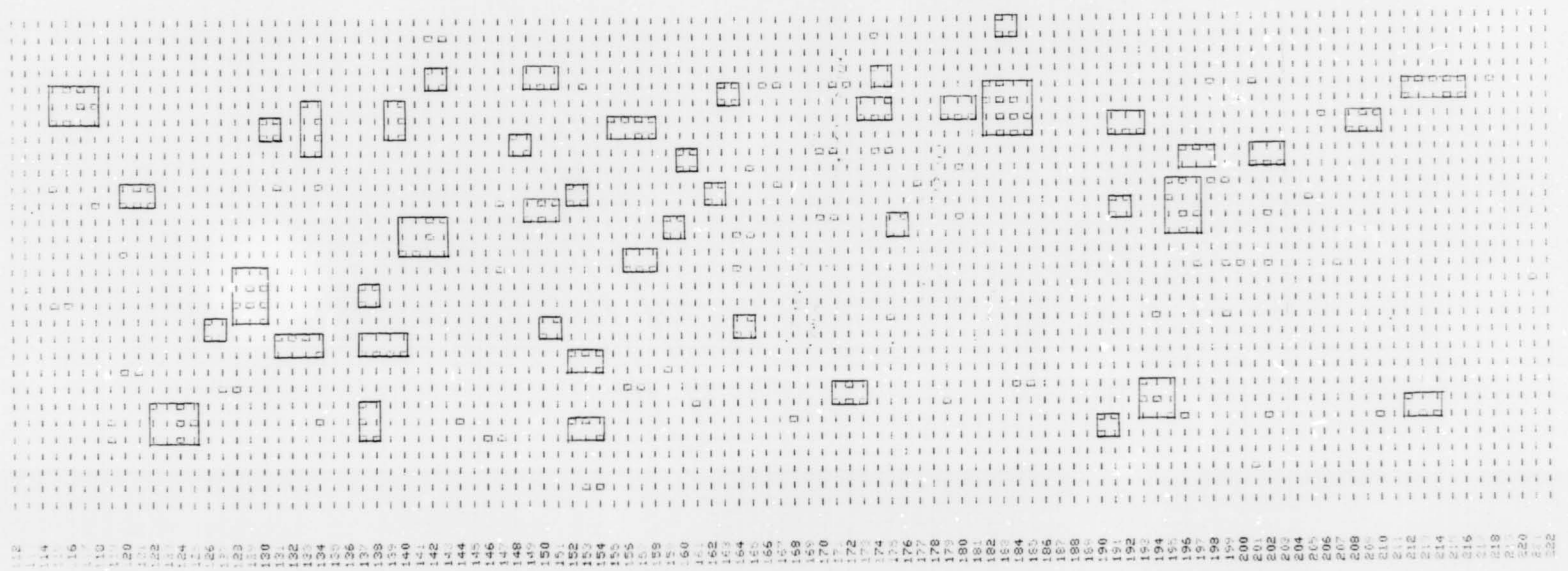
FILE NO.	SECTION	COUNT	SHEET NO.	SHEET
80	*	COOK	359	78
STA.	TO STA.			
FED. ROAD DIST. NO.	ELLIPSE	FED. AID PROJECT		

* (1213-825HBK, 1315-821, 1516-822, 1216-823, 1819-824JRS-1 & (1516-804HB, 1516-805HB, 1718-807R

845
T-SPCL VER 3.1
BRIDGE NO: 016-0927
DATE: 10-17-95
OPERATOR: M-FH
CONTENTS: OAK PARK AVENUE OVER I-80 S. RIGHT HAND SIDE
TOTAL DELAMINATION: 545 S.F. = 6.2%



DELAMINATION PLAN



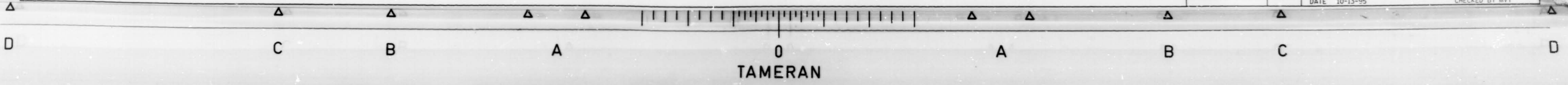
NOTE:
DELAMINATION PLAN HAS BEEN INCLUDED FOR
INFORMATION ONLY.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVENUE OVER
INTERSTATE ROUTE 80
S.N.016-0927
DELAMINATION PLAN

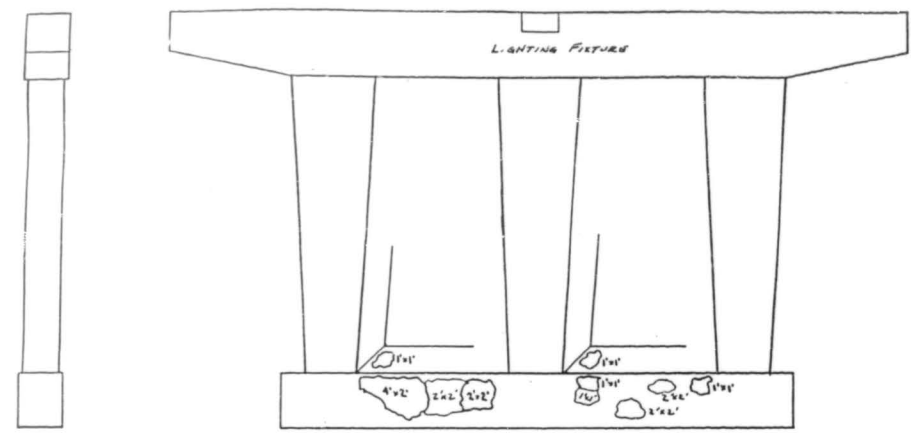
SCALE: NONE
DATE 10-13-95

DRAWN BY JAF
CHECKED BY MVT



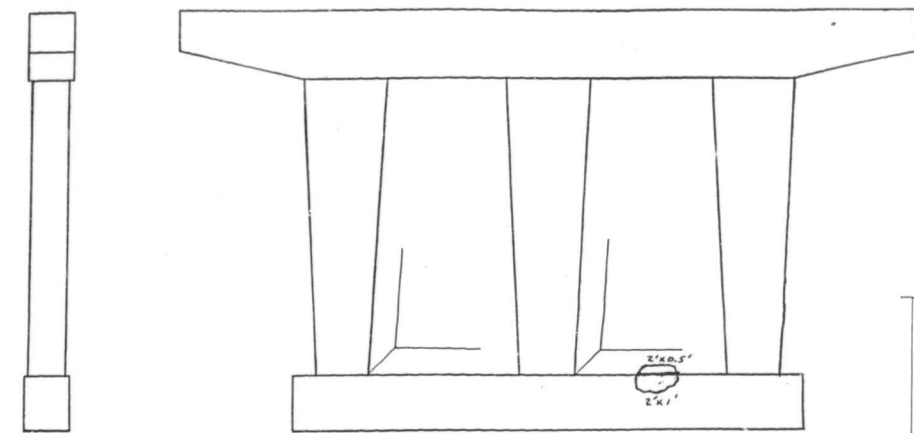
F.A. PTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	*	COOK	359	79
TO STA.				
FED. ROAD DIST. NO.				
ILLINOIS				
FED. AID PROJECT				

*1213-825HBK, 1315-821, 1516-822, 1216-823, 1819-824RS-1 & 1516-804HB, 1516-805HB, 1718-807IR



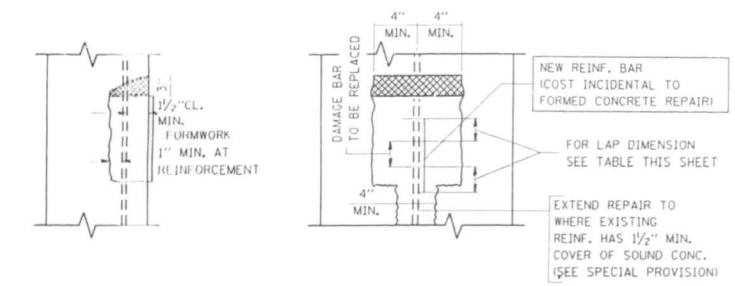
NOTE:
○ - SPALL AREAS = 29 SQ.FT.

PIER #1 - NORTH SIDE



NOTE:
○ - SPALL AREAS = 3 SQ.FT.

PIER #1 - SOUTH SIDE



NOTE:
EXISTING REINFORCEMENT HAVING 10% OR MORE OF CROSS SECTIONAL AREA LOST DUE TO CORROSION OR DAMAGED DURING CONC. REMOVAL SHALL BE REPLACED BY NEW REINFORCEMENT LAPPED AS SHOWN OR NOTED.

LAP DIMENSIONS	
BAR SIZE	LAP LENGTH
#4	1'-8"
#5	2'-2"
#6	2'-7"
#7	3'-5"
#8	4'-6"

FORMED CONCRETE REPAIR DETAIL WITH REINFORCEMENT

LEGEND

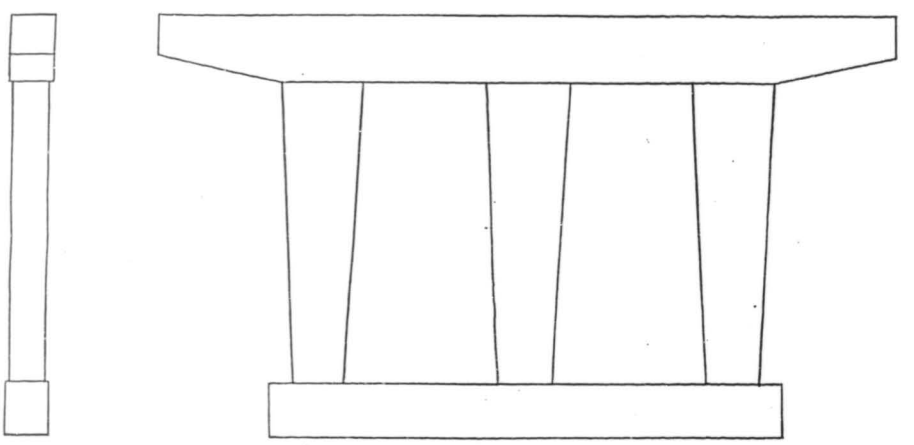
INDICATES FORMED CONCRETE REPAIR

SUBSTRUCTURE SURVEY
OAK PARK AVE./I-80
BRIDGE NO. 016-0927

BILL OF MATERIALS

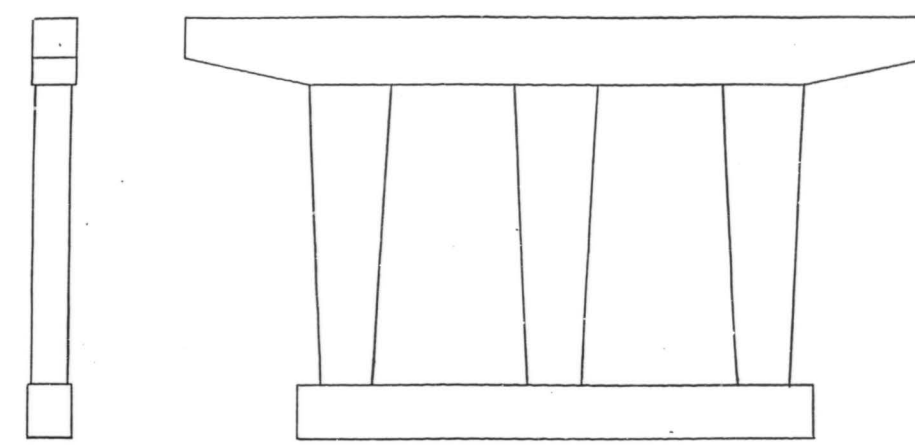
Item	Unit	Total
Formed Concrete Repair ≤ 5" Depth	Sq. Ft.	45
Formed Concrete Repair > 5" Depth	Sq. Ft.	15
Epoxy Crack Sealing	Foot	5

NOTE:
FORMED CONCRETE REPAIR < 5" OR > 5" IS TO BE DETERMINE IN THE FIELD AT THE RESIDENT ENGINEER'S DISCRETION.
FIELD DATA BY M.J.J.



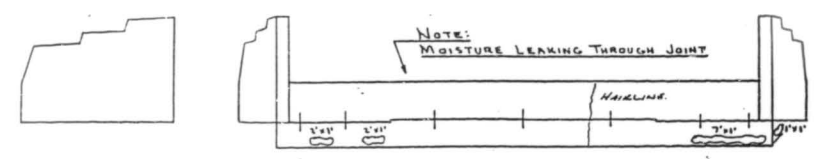
NOTE:
NO VISIBLE SPALLS OR CRACKS.

PIER #2 - NORTH SIDE

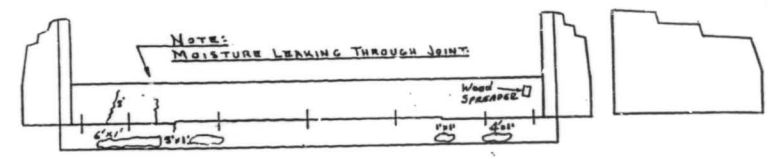


NOTE:
NO VISIBLE SPALLS OR CRACKS.

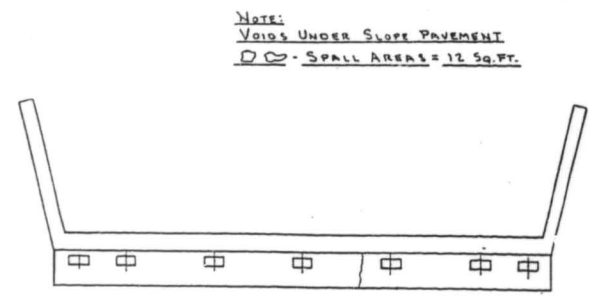
PIER #2 - SOUTH SIDE



NOTE:
MOISTURE LEAKING THROUGH JOINT
HAIRLINE

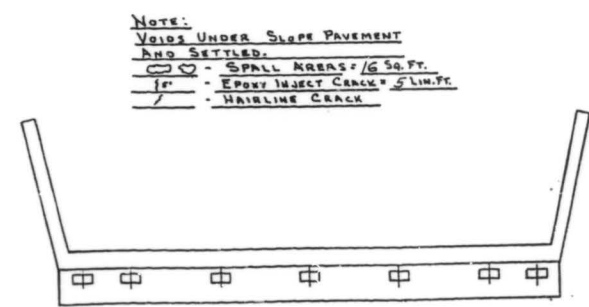


NOTE:
MOISTURE LEAKING THROUGH JOINT
WOOD SPACERS
HAIRLINE



NOTE:
VOIDS UNDER SLOPE PAVEMENT
AND SETTLED.
○ - SPALL AREAS = 12 SQ.FT.

SOUTH ABUTMENT



NOTE:
VOIDS UNDER SLOPE PAVEMENT
AND SETTLED.
○ - SPALL AREAS = 16 SQ.FT.
1" - EPOXY INJECT CRACK 5 LINE FT.
1" - HAIRLINE CRACK

NORTH ABUTMENT

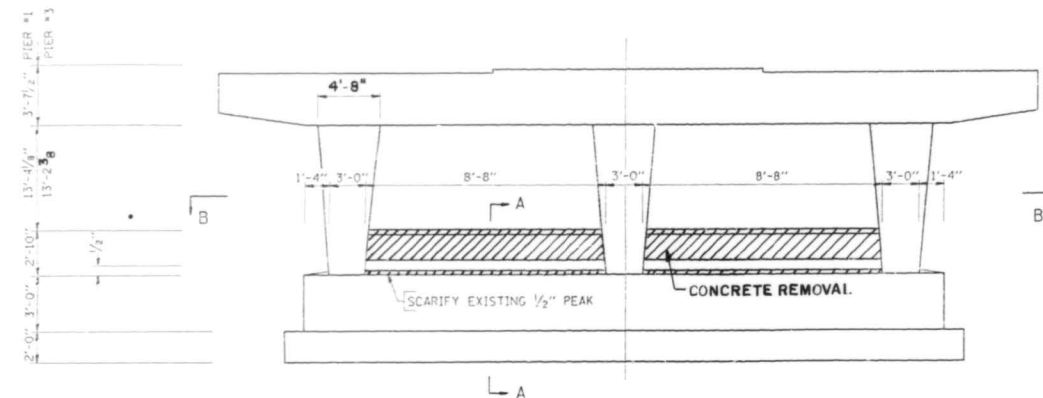
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVE. OVER
INTERSTATE ROUTE 80
S.N.016-00927
SUBSTRUCTURE REPAIR PLANS
SCALE: VERT. HORIZ.
DATE
DRAWN BY CADD
CHECKED BY JAF

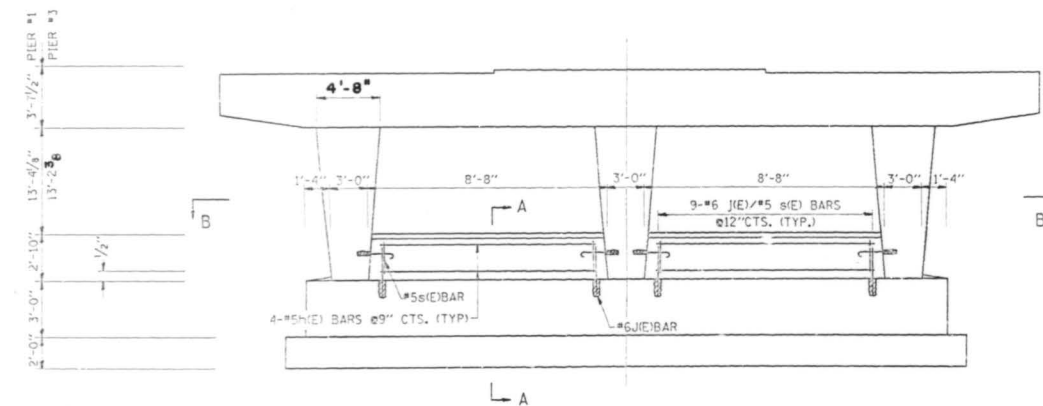


SECTION	COUNT	TOTAL SHEETS	SHEET NO.
80	359	80	
STA.	TO STA.		
FED. ROAD DIST. NO.	BLK.	FED. AID PROJECT	

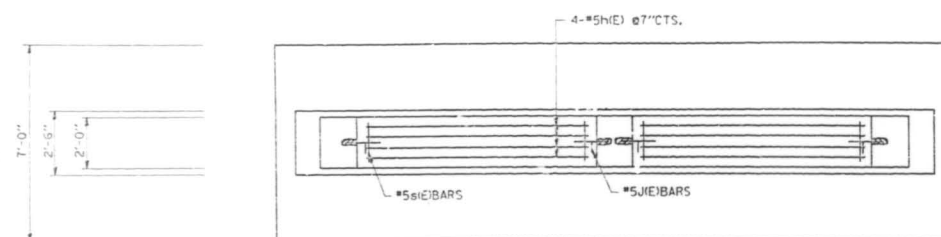
*1213-825HBK, 1315-821, 1516-822, 1216-823, 1819-824RS-1 & 1516-804HB, 1516-805HB, 1718-807HR



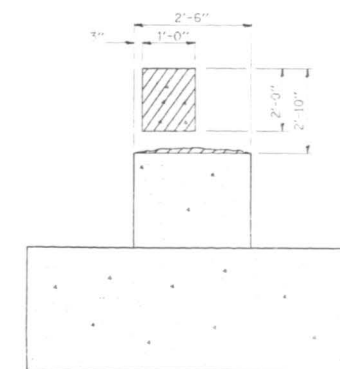
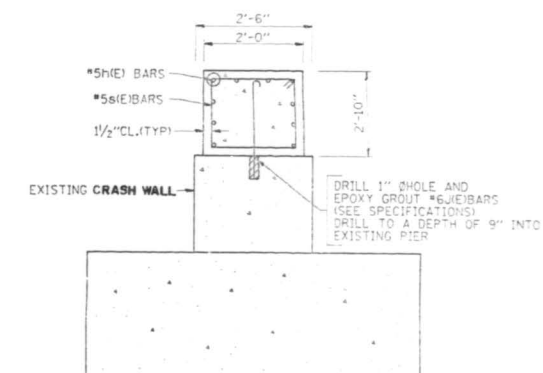
EXISTING PIER #1 ELEVATION (LOOKING NORTH)
EXISTING PIER #3 ELEVATION (LOOKING SOUTH)
(HATCHED AREA INDICATES CONCRETE REMOVAL.)



PROPOSED PIER #1 ELEVATION (LOOKING NORTH)
PROPOSED PIER #3 ELEVATION (LOOKING SOUTH)



SECTION B-B

SECTION A-A
(EXISTING)SECTION A-A
(PROPOSED)

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
(E)	44	#5	4'-1"	
(E)	40	#5	8'-0"	
(E)	36	#5	9'-7"	
Item		Unit	Quantity	
Concrete Removal		Cu. Yds.	2.7	
Reinforcement Bars (Epoxy Coated)		Pound	372	
Concrete Structures		Cu. Yds.	3.2	

NOTES:
DRILLING AND EPOXY GROUTING OF THE #6 J BARS IS TO BE CONSIDERED INCIDENTAL TO THE COST OF REINFORCEMENT BARS (EPOXY COATED).
THE SCARIFICATION OF THE 1/2" PEAK ON THE EXISTING PIER BASE WALL SHALL BE PAID FOR AS CONCRETE REMOVAL.
ALL EDGES SHALL HAVE 3/4" CHAMFER.

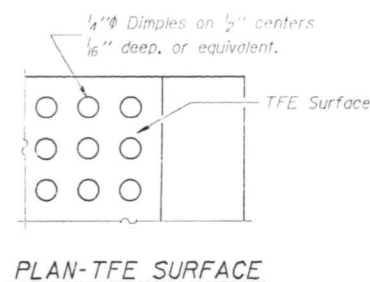
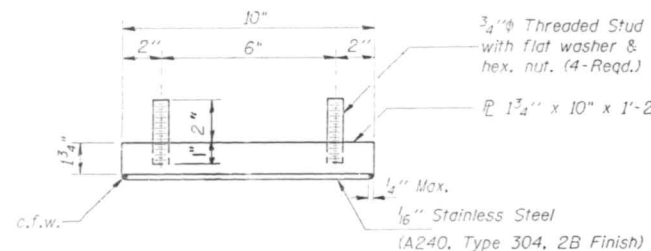
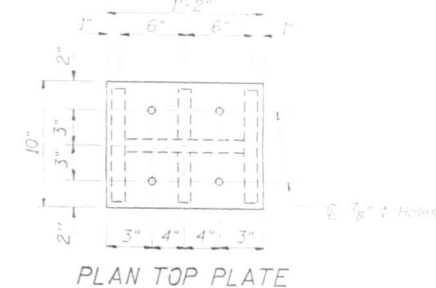
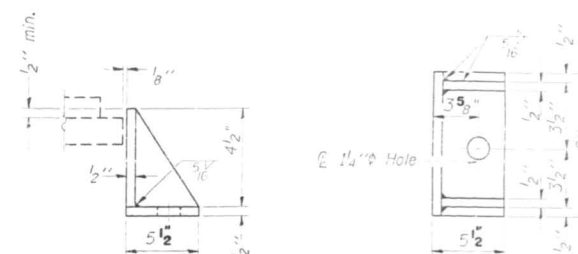
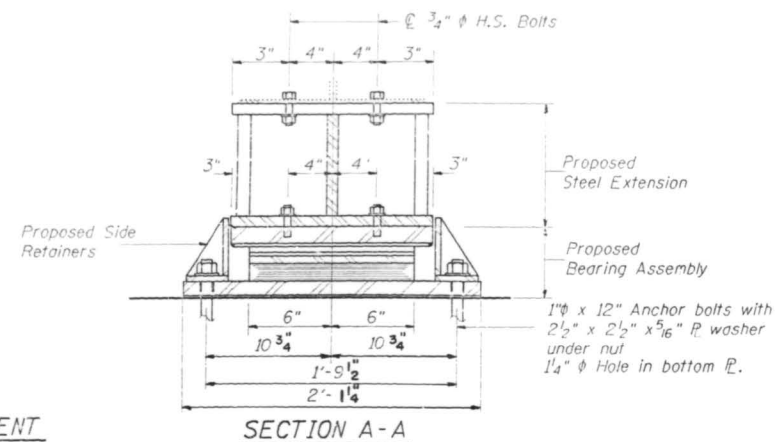
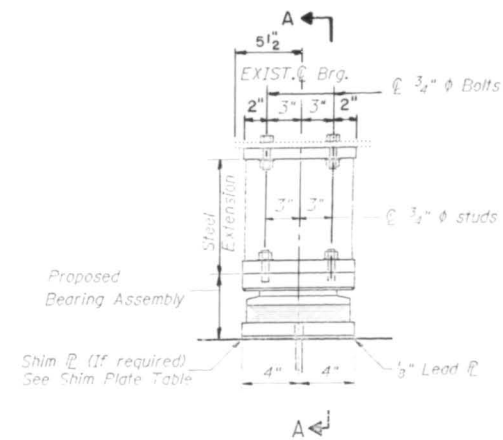
DESIGN STRESSES
 $f'_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi}$

REVISIONS	
NAME	DATE

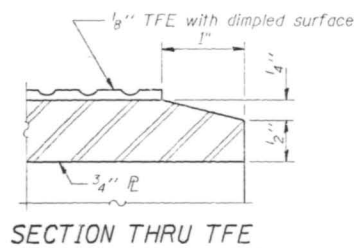
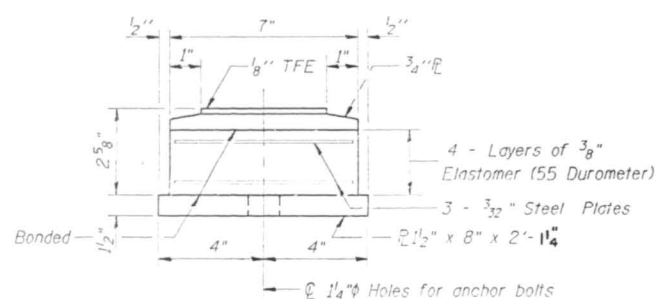
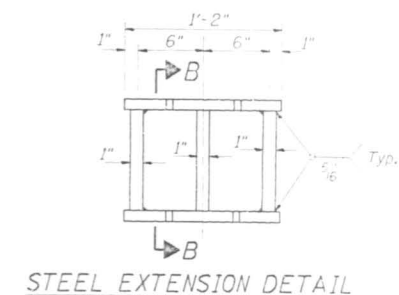
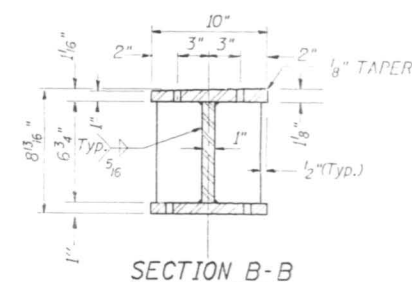
ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVENUE OVER
INTERSTATE ROUTE 80
PIER #1 & #3-BASE WALL EXTENSION
S.N. 016-0927

SCALE: NONE
DATE: 11/28/95

DRAWN BY CAI
CHECKED BY JAF

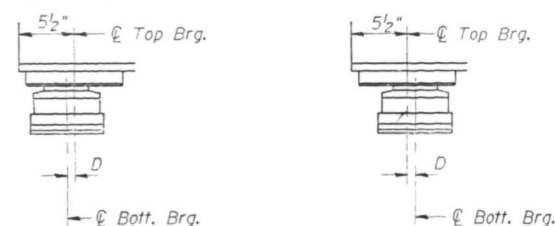


GIRDER REACTIONS		
	NO.ABUT.	SO.ABUT.
R _{DL} (K)	15.3	12.7
R _{LL} (K)	36.0	35.8
R _{IMP} (K)	10.8	10.8
R _{TOTAL} (K)	62.1	59.3



Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of $\frac{1}{8}$ " TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



<u>BELOW 50° F.</u> (Move bott. brg. away from fixed brg.)	<u>ABOVE 50° F.</u> (Move bott. brg. toward fixed brg.)
---	--

SETTING ANCHOR BOLTS AT EXP. BRG.

NOTES:

Before installing the new bearing, remove the top plate of the existing bearing assembly from the bottom flange using the air-arc method and grind smooth all weld material remaining on the existing bottom flange. Burn existing anchor bolts flush with existing concrete surface. Grind smooth and seal with epoxy. The cost is included with F&E Structural Steel. See Existing Bearing Removal Detail.

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

For the details of existing bearings see sheet S10 thru S12
Contractor shall submit jacking details for approval by the
bridge office.

For anchor bolt details see sheet S 16.

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.

Beam No.	1	2	3	4	5	6	7
So. Abutment	0	0	0	5 $\frac{1}{2}$ "	0	0	0
No. Abutment	0	0	0	5 $\frac{1}{2}$ "	0	0	0

[illegible]

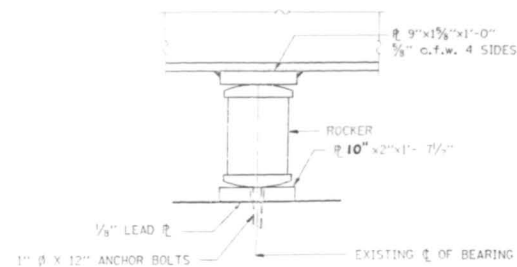
BILL OF MATERIAL

Item	Unit	Price
Elastomeric Bearing	Each	14
Assembly Type II		
Furnishing And Erecting Structural Steel	Pound	296

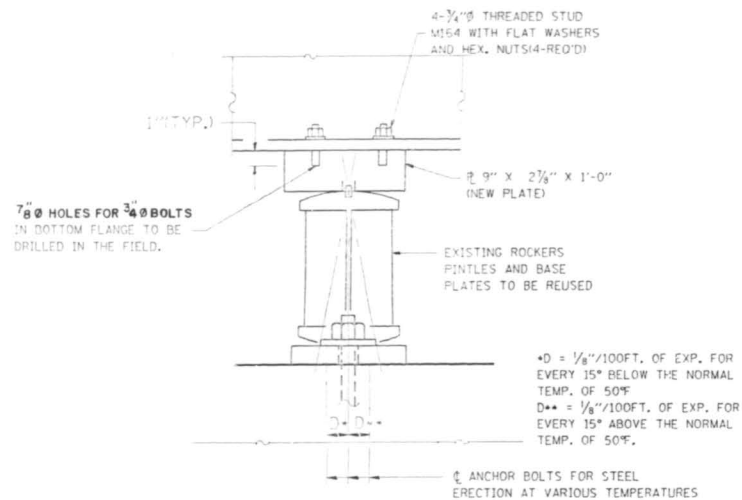
ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVENUE OVER
INTERSTATE ROUTE 80
NORTH / SOUTH ABUTMENTS
ELASTOMERIC BEARING DETAIL
S.N. 016-0927

SCALE: NONE
DATE 11/15/95

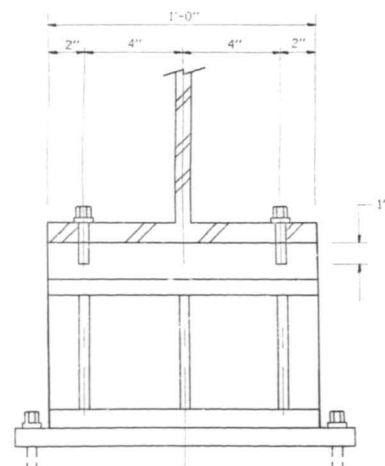
DRAWN BY CADD
CHECKED BY JAF



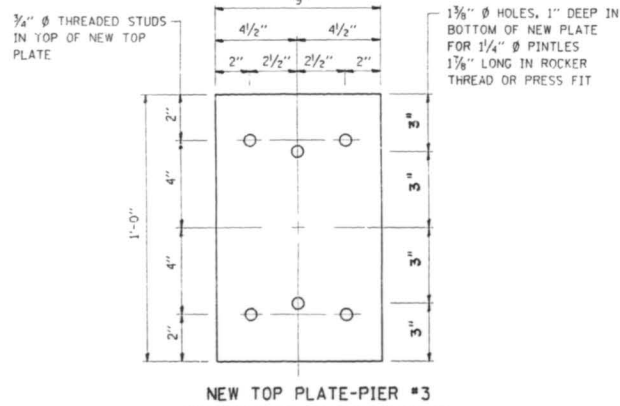
EXISTING SECTION AT PIER #3



PROPOSED SECTION AT PIER #3



PROPOSED SECTION AT PIER #3



GIRDER REACTIONS	
	PIER 3
R _{DL} (K)	75.1
R _{LL} (K)	49.3
R _{IMP} (K)	13.5
R _{TOTAL} (K)	138

BILL OF MATERIALS	
Quantity	
Furnishing and Erecting	
Structural Steel	Pound 600

NOTES:
PROPOSED PLATES TO BE ALIGNED ABOVE EXISTING C/L OF BEARING.
PROPOSED PLATE SHALL BE AASHTO, M-270, GR-36.
FOR JACKING INFORMATION, SEE SHEETS S10 - S12
CONTRACTORS SHALL SUBMIT JACKING DETAILS FOR APPROVAL BY THE BRIDGE OFFICE.
BROKEN, RUSTED OUT OR MISALIGNED BOLTS, PINTLES AND ANCHOR BOLTS WHICH NEED TO BE REPLACED OR REALIGNED, THE COST SHALL BE CONSIDERED AND PAID FOR AS FURNISHING AND ERECTING STRUCTURAL STEEL.
EXISTING ROCKERS AND BASE PLATES TO BE CLEANED AND PAINTED AND REUSED, SEE SPECIAL PROVISIONS.

USE THE AIR-ARC METHOD TO CUT EXISTING SOLE PLATES FROM THE BOTTOM FLANGE, GRIND SMOOTH ALL WELD MATERIAL REMAINING ON THE BOTTOM FLANGE, COST INCIDENTAL TO FURNISHING & ERECTING STRUCTURAL STEEL.
DRILLING TO BE DONE IN THE FIELD IS INCIDENTAL TO THE COST OF FURNISHING AND ERECTING STRUCTURAL STEEL.

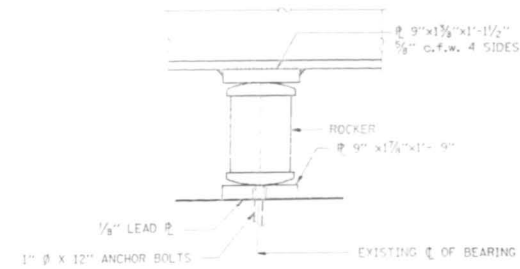
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVENUE
OVER INTERSTATE ROUTE 80
BEARING DETAILS
S.N. 016-0927
SCALE: 50'-1"
DATE: 11/17/95
DRAWN BY: CADD
CHECKED BY: JAF

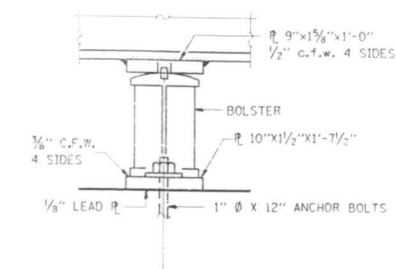
Nov 17 1995 14:45
F:\projects\016-0927\016-0927.dwg

SECTION	COUNT	DATE
80	COOK	359 83
STA.	TO STA.	
REV. NO.	BY	DATE

*1213-825HBK, 1315-821, 1516-822, 1216-823, 1819-824RS-1 & 1516-804HB, 1516-805HB, 1718-807IR



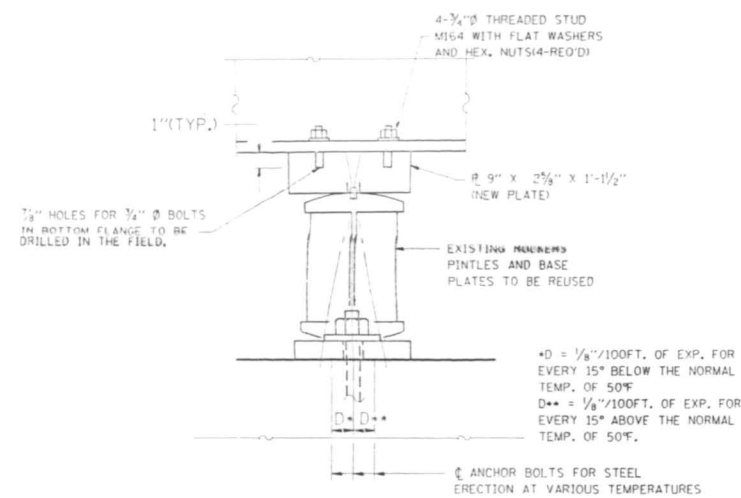
EXISTING SECTION AT PIER #1



EXISTING SECTION AT PIER #2

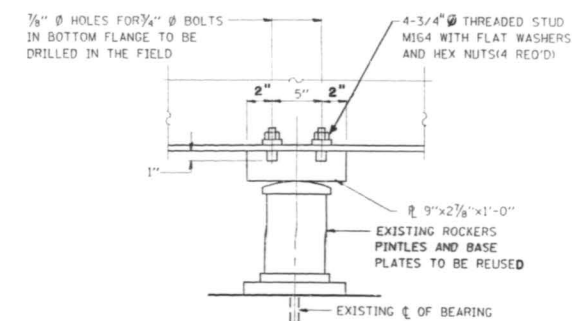
BILL OF MATERIALS

ITEM	QUANTITY	UNIT
STRUCTURAL STEEL		Pound



PROPOSED SECTION AT PIER #1

GIRDER REACTIONS		
	PIER 1	PIER 2
R _{DL} (K)	66.5	87.3
R _{LL} (K)	47.5	52.4
R _{IMP} (K)	13.3	13.4
R (K)	127.3	153.1



PROPOSED SECTION AT PIER #2

NOTES:

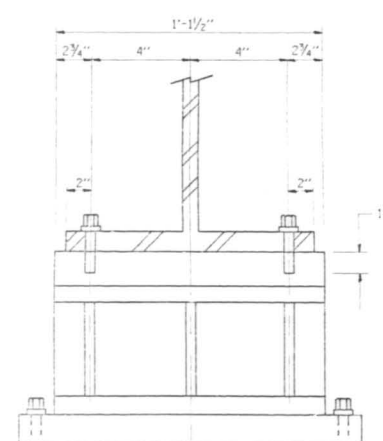
PROPOSED PLATES TO BE ALIGNED ABOVE EXISTING CENTER OF BEARING. PROPOSED PLATE SHALL BE AASHTO, M-270, GR-35. FOR JACKING INFORMATION, SEE SHEETS S. CONTRACTORS SHALL SUBMIT JACKING DETAILS FOR APPROVAL BY THE BRIDGE OFFICE.

BROKEN, RUSTED OUT OR MISALIGNED BOLTS, PINTLES AND ANCHOR BOLTS WHICH NEED TO BE REPLACED OR REALIGNED, THE COST SHALL BE CONSIDERED AND PAID FOR AS FURNISHING AND ERECTING STRUCTURAL STEEL.

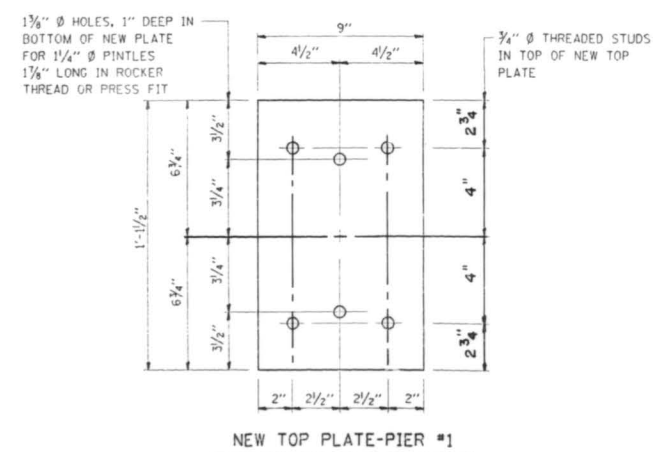
EXISTING ROCKERS AND BASE PLATES TO BE CLEANED AND PAINTED AND REUSED, SEE SPECIAL PROVISIONS.

USE THE AIR-ARC METHOD TO CUT EXISTING SOLE PLATES FROM THE BOTTOM FLANGE, GRIND SMOOTH ALL WELD MATERIAL REMAINING ON THE BOTTOM FLANGE, COST INCIDENTAL TO FURNISHING & ERECTING STRUCTURAL STEEL.

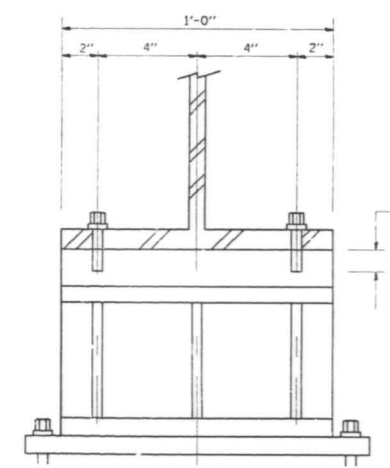
DRILLING TO BE DONE IN THE FIELD IS INCIDENTAL TO THE COST OF FURNISHING AND ERECTING STRUCTURAL STEEL.



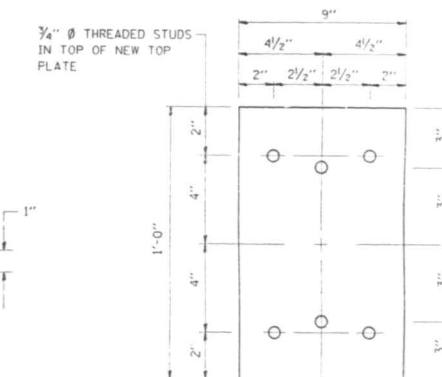
PROPOSED SECTION AT PIER #1



NEW TOP PLATE-PIER #1



PROPOSED FRONT FACE AT PIER #2



NEW TOP PLATE AT PIER #2

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

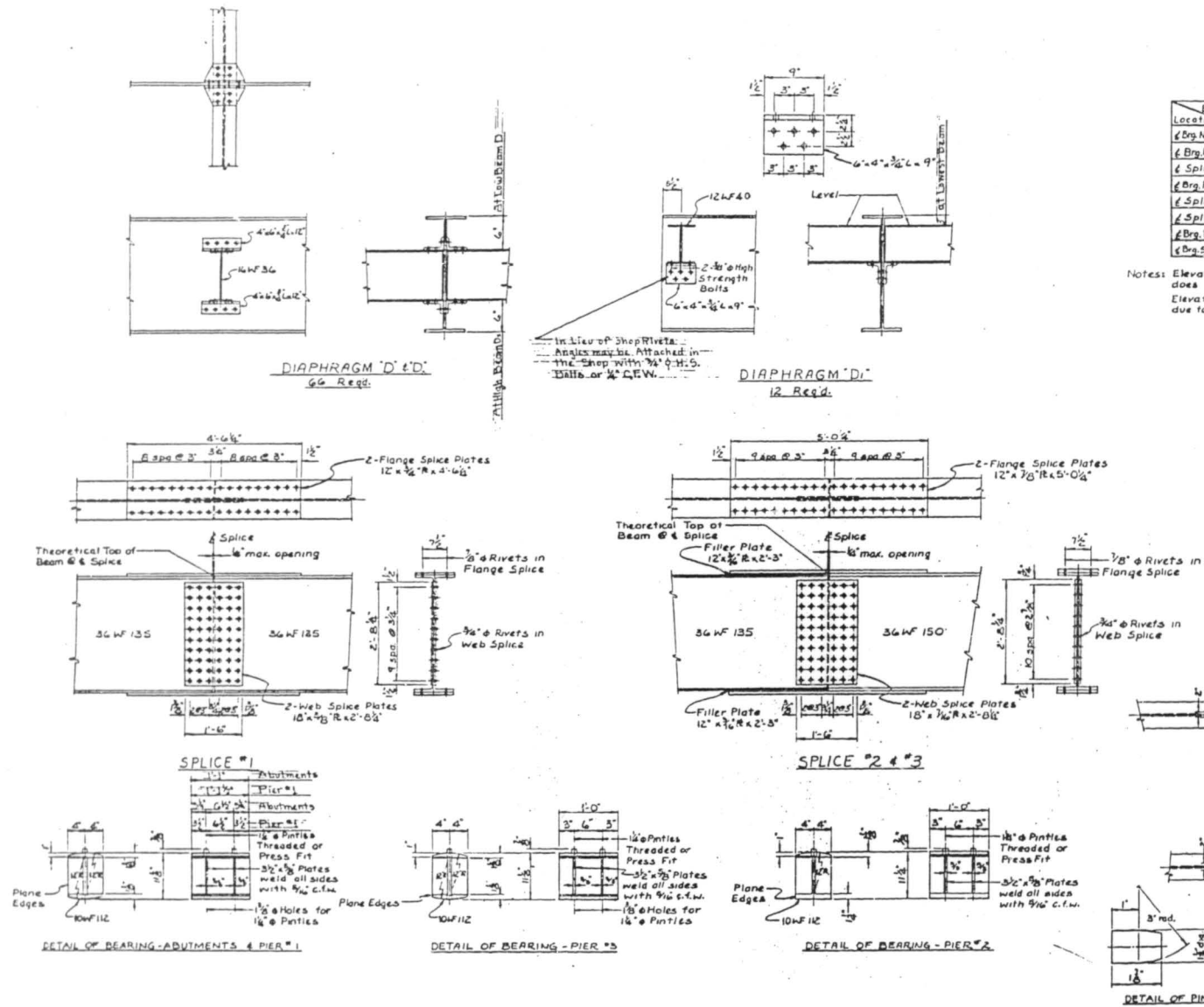
OAK PARK AVENUE
OVER INTERSTATE ROUTE 80
BEARING DETAILS
S.N. 016-0927

SCALE: 50'-1" = 1'
DATE: 11/17/95

DRAWN BY: CADD
CHECKED BY: JAF

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	COOK	359	35
STA. TO STA.			
FED. ROAD DIST. NO.			
FED. AID PROJECT			

* 1213-825 H8K, 1315-821, 15



(For Fabrication)
THEORETICAL ELEVATION TOP OF BEAMS

Beam Location	#1	#2	#3	#4	#5	#6	#7
Brig. No. 1	718.522	718.522	718.457	718.709	718.457	718.522	718.522
Brig. Pier #1	718.966	718.966	719.101	719.153	719.101	718.966	718.966
Splice #1	719.086	719.086	719.222	719.274	719.222	719.086	719.086
Brig. Pier #2	719.234	719.234	719.369	719.421	719.369	719.234	719.234
Splice #2	719.284	719.284	719.419	719.471	719.419	719.284	719.284
Splice #3	719.050	719.050	719.186	719.238	719.186	719.050	719.050
Brig. Pier #3	718.896	718.896	719.030	719.082	719.030	718.896	718.896
Brig. No. 2	718.429	718.429	718.564	718.617	718.564	718.429	718.429

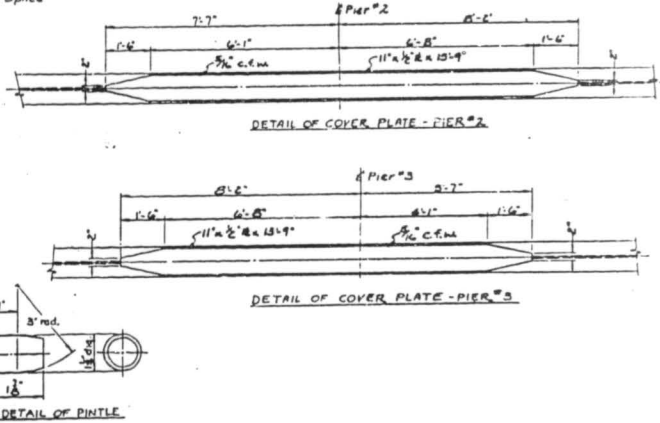
Notes: Elevation Top of Beam is Always Top of Beam Flange, does not include Top Cover or Top Flange Splice Plates if any.
Elevation Top of Beam does not include Dead Load Deflection due to the Weight of the Structural Steel or the Concrete Deck.

TABLE OF MOMENTS (INTERIOR BEAMS)

	Dead Load	Live Load	Impact	Total Load
M ₁ Sp. 1	74.7	26.9	78.1	419.2
M ₂ Pier 1	-16.3	-29.7	-76.4	-655.4
M ₃ Sp. 2	17.6	38.8	101.0	466.3
M ₄ Pier 2	-42.0	-34.5	-93.8	-859.4
M ₅ Sp. 3	23.0	62.5	107.2	780.6
M ₆ Pier 3	-23.7	-38.6	-88.3	-749.6
M ₇ Sp. 4	47.6	26.2	78.8	381.0

TABLE OF REACTIONS

	Dead Load	Live Load	Impact	Total Load
R ₁ Abut. 1	12.01	40.86	12.26	65.13
R ₂ Pier 1	55.47	32.39	13.62	119.48
R ₃ Pier 2	48.20	35.88	14.31	138.39
R ₄ Pier 3	59.11	35.42	13.97	128.75
R ₅ Abut. 2	10.35	40.98	12.28	63.57

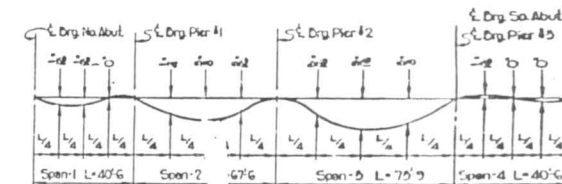
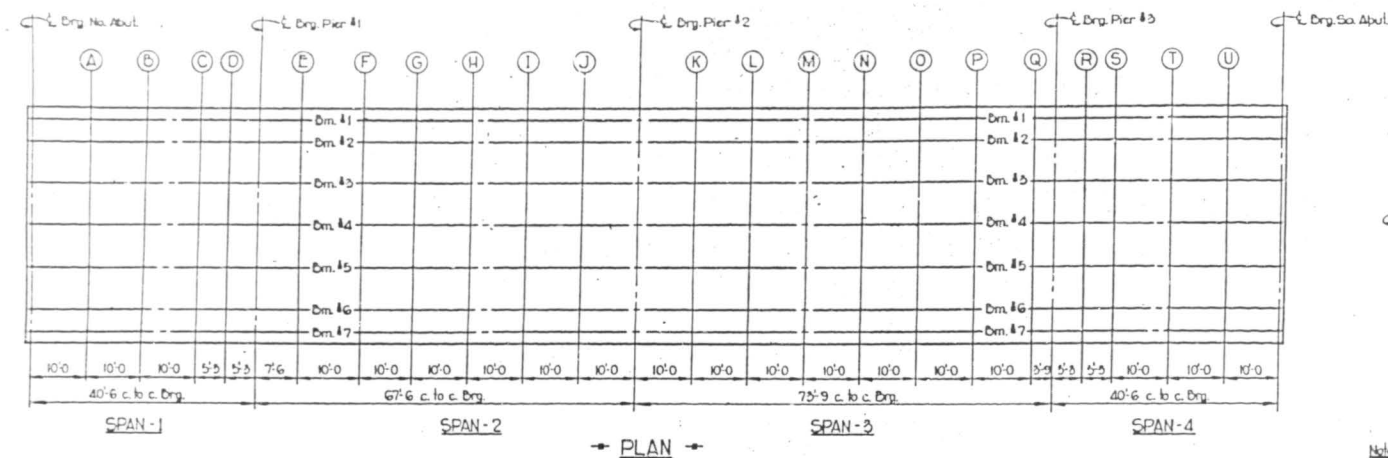


FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVE. OVER
INTERSTATE ROUTE 80
S.N.016-0927
EXISTING STRUCTURAL DETAILS

SCALE: VERT. 1"=10'
HORIZ. 1"=10'
DATE
DRAWN BY CADD
CHECKED BY JAF



Note: The above deflections are not for use in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflection.

SPAN-1

Beam	Station	Offset	Theoretical Grade Elevation	Theor. Grade El. Adjusted for Dead Load Deflection
147	48 + 92.00	19.000	719.105	719.105
246	48 + 91.00	15.000	719.105	719.105
545	48 + 91.00	7.500	719.240	719.240
147	49 + 2.00	19.000	719.242	719.246
246	49 + 2.00	15.000	719.242	719.246
545	49 + 2.00	7.500	719.378	719.381
147	49 + 2.00	.000	719.430	719.433
147	49 + 12.00	19.000	719.366	719.369
246	49 + 12.00	15.000	719.366	719.369
545	49 + 12.00	7.500	719.502	719.505
147	49 + 12.00	.000	719.554	719.557
147	49 + 22.00	19.000	719.477	719.476
246	49 + 22.00	15.000	719.477	719.476
545	49 + 22.00	7.500	719.612	719.612
147	49 + 22.00	.000	719.664	719.664
147	49 + 27.25	19.000	719.530	719.528
246	49 + 27.25	15.000	719.530	719.528
545	49 + 27.25	7.500	719.665	719.664
147	49 + 27.25	.000	719.717	719.716
147	49 + 32.50	19.000	719.579	719.579
246	49 + 32.50	15.000	719.579	719.579
545	49 + 32.50	7.500	719.718	719.714
147	49 + 32.50	.000	719.766	719.766

SPAN-2

Beam	Station	Offset	Theoretical Grade Elevation	Theor. Grade El. Adjusted for Dead Load Deflection
147	49 + 40.00	19.000	719.642	719.651
246	49 + 40.00	15.000	719.642	719.651
545	49 + 40.00	7.500	719.778	719.786
147	49 + 40.00	.000	719.830	719.838
147	49 + 50.00	19.000	719.716	719.738
246	49 + 50.00	15.000	719.716	719.738
545	49 + 50.00	7.500	719.851	719.874
147	49 + 50.00	.000	719.903	719.926
147	49 + 60.00	19.000	719.776	719.807
246	49 + 60.00	15.000	719.776	719.807
545	49 + 60.00	7.500	719.911	719.942
147	49 + 60.00	.000	719.963	719.995
147	49 + 70.00	19.000	719.823	719.852
246	49 + 70.00	15.000	719.823	719.852
545	49 + 70.00	7.500	719.958	719.988
147	49 + 70.00	.000	720.013	720.040
147	49 + 80.00	19.000	719.856	719.875
246	49 + 80.00	15.000	719.856	719.875
545	49 + 80.00	7.500	719.991	720.011
147	49 + 80.00	.000	720.043	720.063
147	49 + 90.00	19.000	719.876	719.882
246	49 + 90.00	15.000	719.876	719.882
545	49 + 90.00	7.500	720.011	720.017
147	49 + 90.00	.000	720.063	720.070
147	50 + 0.00	19.000	719.882	719.882
246	50 + 0.00	15.000	719.882	719.882
545	50 + 0.00	7.500	720.018	720.018
147	50 + 0.00	.000	720.070	720.070

SPAN-3

Beam	Station	Offset	Theoretical Grade Elevation	Theor. Grade El. Adjusted for Dead Load Deflection
147	50 + 10.00	19.000	719.876	719.888
246	50 + 10.00	15.000	719.876	719.888
545	50 + 10.00	7.500	720.011	720.024
147	50 + 10.00	.000	720.063	720.076
147	50 + 20.00	19.000	719.856	719.887
246	50 + 20.00	15.000	719.856	719.887
545	50 + 20.00	7.500	719.958	720.023
147	50 + 20.00	.000	720.043	720.075
147	50 + 30.00	19.000	719.823	719.869
246	50 + 30.00	15.000	719.823	719.869
545	50 + 30.00	7.500	719.958	720.004
147	50 + 30.00	.000	720.010	720.056
147	50 + 40.00	19.000	719.776	719.826
246	50 + 40.00	15.000	719.776	719.826
545	50 + 40.00	7.500	719.911	719.961
147	50 + 40.00	.000	719.963	720.014
147	50 + 50.00	19.000	719.716	719.757
246	50 + 50.00	15.000	719.716	719.757
545	50 + 50.00	7.500	719.851	719.893
147	50 + 50.00	.000	719.903	719.945
147	50 + 60.00	19.000	719.642	719.666
246	50 + 60.00	15.000	719.642	719.666
545	50 + 60.00	7.500	719.778	719.802
147	50 + 60.00	.000	719.830	719.854
147	50 + 70.00	19.000	719.556	719.561
246	50 + 70.00	15.000	719.556	719.561
545	50 + 70.00	7.500	719.691	719.696
147	50 + 70.00	.000	719.743	719.749
147	50 + 73.75	19.000	719.520	719.520
246	50 + 73.75	15.000	719.520	719.520
545	50 + 73.75	7.500	719.655	719.655
147	50 + 73.75	.000	719.707	719.707

SPAN-4

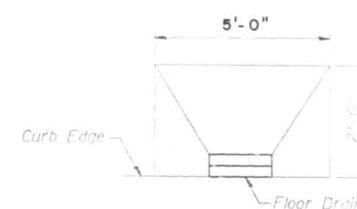
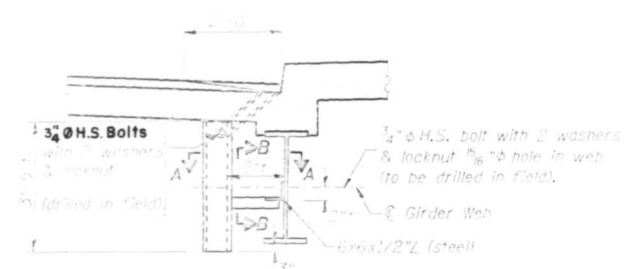
Beam	Station	Offset	Theoretical Grade Elevation	Theor. Grade El. Adjusted for Dead Load Deflection
147	50 + 78.00	19.000	719.466	719.463
246	50 + 78.00	15.000	719.466	719.463
545	50 + 78.00	7.500	719.602	719.598
147	50 + 78.00	.000	719.654	719.651
147	50 + 84.25	19.000	719.409	719.406
246	50 + 84.25	15.000	719.409	719.406
545	50 + 84.25	7.500	719.545	719.541
147	50 + 84.25	.000	719.597	719.593
147	50 + 94.25	19.000	719.290	719.289
246	50 + 94.25	15.000	719.290	719.289
545	50 + 94.25	7.500	719.426	719.425
147	50 + 94.25	.000	719.478	719.477
147	51 + 4.25	19.000	719.158	719.159
246	51 + 4.25	15.000	719.158	719.159
545	51 + 4.25	7.500	719.293	719.294
147	51 + 4.25	.000	719.345	719.347
147	51 + 14.25	19.000	719.012	719.012
246	51 + 14.25	15.000	719.012	719.012
545	51 + 14.25	7.500	719.148	719.148
147	51 + 14.25	.000	719.200	719.200

FOR INFORMATION ONLY

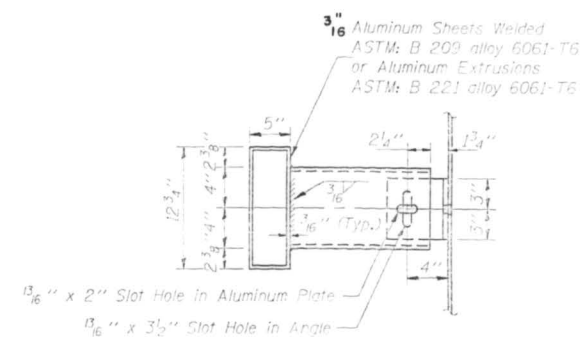
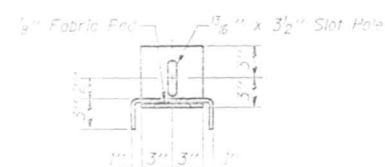
REVISIONS	
NAME	DATE

 ILLINOIS DEPARTMENT OF TRANSPORTATION
 OAK PARK AVE. OVER
 INTERSTATE ROUTE 80
 S.N.016-0927
 EXISTING STRUCTURAL DETAILS

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



PLAN
EXISTING FLGR DRN TAPER



NOTES:

THE EXTERIOR SURFACES OF THE FLOOR DRAINS SHALL BE PAINTED WITH THE FINISH COAT AS SPECIFIED IN THE SPECIAL PROVISIONS FOR CLEANING AND PAINTING METAL STRUCTURES.

THE EXTERIOR SURFACES OF THE DRAIN SHALL BE CLEANED AND GIVEN A WASHCOAT PRETREATMENT IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL'S SPEC. SSPC-SPI AND SSPC PAINT 27 PRIOR TO PAINTING.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVENUE
OVER INTERSTATE ROUTE 80
BRIDGE DECK DRAIN EXTENSION
DETAIL
S.N. 016-0927

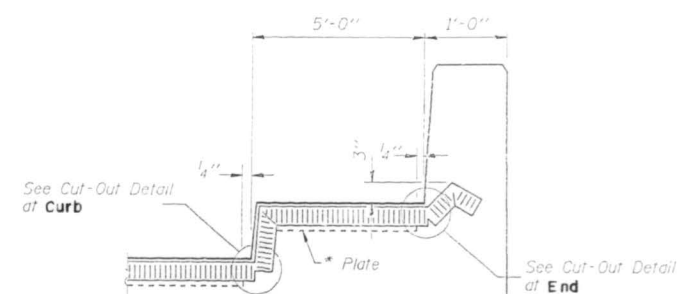
SCALE: 50'=1"
DATE 11/28/95

DATE 11/28/9

DRAWN BY CADD
CHECKED BY JAF

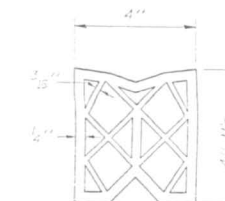
TAMERAN

* (1213-825HBK, 1315-821, 1516-822, 1216-823, 1819-824)RS-1 & (1516-804HB, 1516-805HB, 1718-807)R

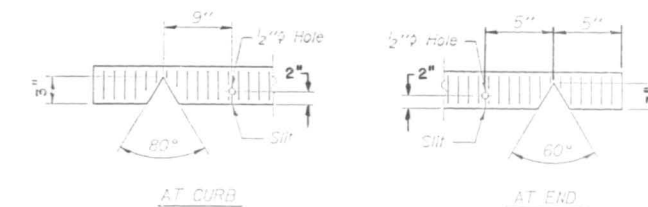


TYPICAL END OF SEAL TREATMENT

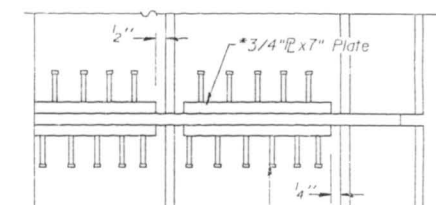
*Cut rebar bars in sidewalk
6" short of curb face



PREFORMED JOINT SEAL (4'')



SEAL CUT-OUT DETAIL



3/4"φ x 8" Granular or solid
flux filled headed studs conforming
to Article 706.32 of the Std. Specs.
automatically end welded at 12" alt. cts.

PLAN

NOTES:

** Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be $\frac{1}{16}$ ". 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.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVENUE
OVER INTERSTATE ROUTE 80
PERFORMED JOINT SEAL DETAIL
S.N. 016-0927

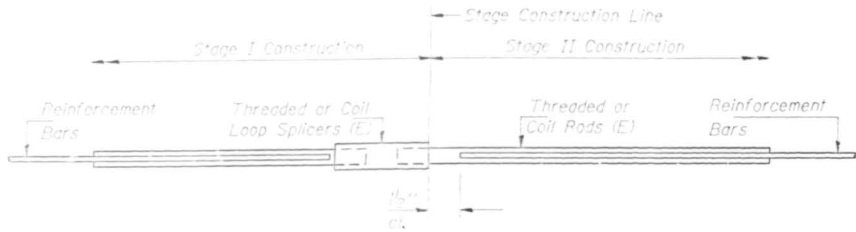
SCALE: 50'=1"
DATE 11/28/95

DRAWN BY CADD
CHECKED BY JAF

TAMERAN

SECTION	DATE	REV	BY
80	COOK	3-59	89
STA.	TO STA.		
FED. ROAD DIST. NO.	ROUTE	FED. AID PROJECT	

* (1213-825HBK, 1315-821, 1516-822, 1216-823, 1819-824RS-1 & 1516-804HB, 1516-805HB, 1718-807R

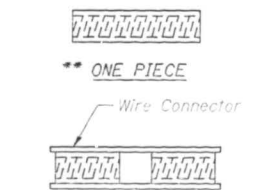


SPLICER DETAIL

Bar Size	No. Req'd. (Splicers)	Location
#6	10	N. Abut. Tr. Exp. Jt.
#5	6	N. Abut. Tr. Exp. Jt.
#6	10	S. Abut. Tr. Exp. Jt.
#5	6	S. Abut. Tr. Exp. Jt.

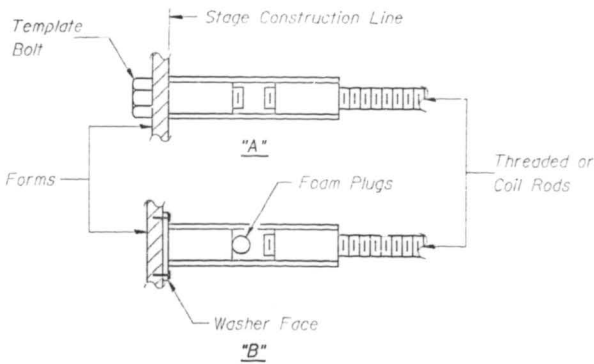
The diameter of this part of Splicer is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



SPLICER ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set splicer by means of a template bolt.
"B" : Set splicer by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Steel Splicer (Coupler) assembly shall be of approved type and shall develop on the bars at least 125 percent of the yield strength of the lapped reinforcement bars.
Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or rolled full length. All reinforcement bars shall be lapped and tied to the splicer rods.
Splicer (coupler) assembly shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

- Minimum Capacity = $1.25 \times f_y \times A_s$
(Tension in kips)
- Minimum Pull-out Strength = $1.25 \times f_{sallow} \times A_s$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (See Table 10.10.1)
 A_s = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

#5 bar lap with 3/4" Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension Minimum Pull-out Strength = 9.2 kips-tension
#6 bar lap with 7/8" Splicer (Coupler) x 2'-7" Splicer Rods	Minimum Capacity = 33.1 kips-tension Minimum Pull-out Strength = 13.3 kips-tension
#7 bar lap with 1" Splicer (Coupler) x 3'-5" Splicer Rods	Minimum Capacity = 45.1 kips-tension Minimum Pull-out Strength = 18.0 kips-tension
#8 bar lap with 1 1/4" Splicer (Coupler) x 4'-6" Splicer Rods	Minimum Capacity = 58.9 kips-tension Minimum Pull-out Strength = 23.6 kips-tension

Bar splicer assemblies shall be in accordance with Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

3-31-95

ILLINOIS DEPARTMENT OF TRANSPORTATION
OAK PARK AVENUE
OVER INTERSTATE ROUTE 80
BAR SPLICER (COUPLER) DETAILS

S.N. 016-0927

SCALE: NONE
DATE: 11/28/95
DRAWN BY: CDD
CHECKED BY: JAF

BSD-1 3-31-95

TAMERAN

