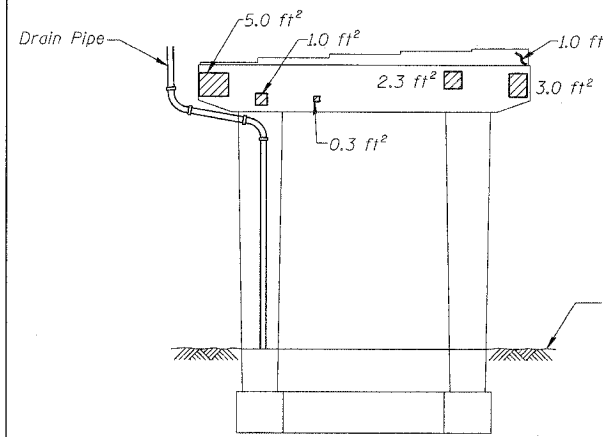
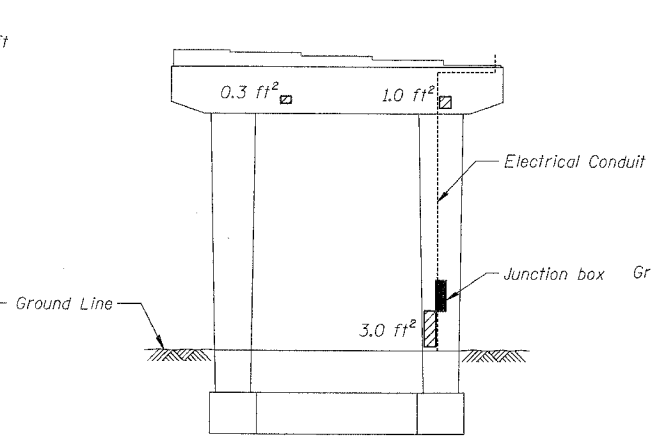


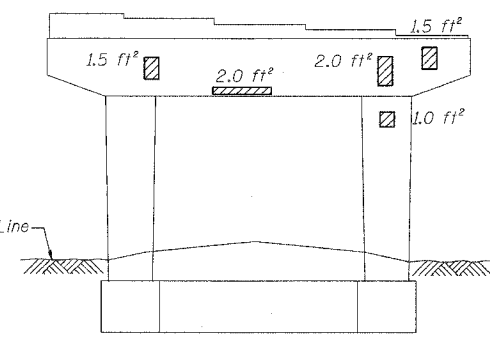
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	101
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



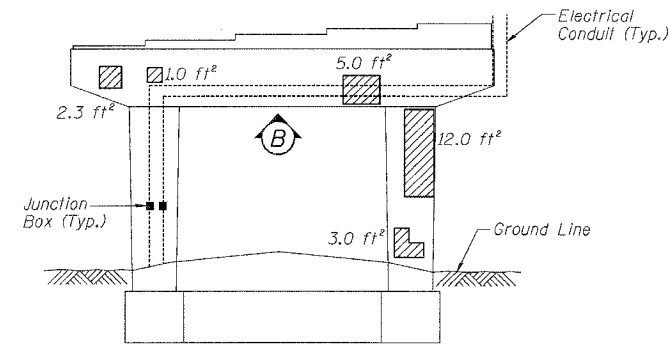
**PIER 33 - SOUTH ELEVATION**  
(Looking North)



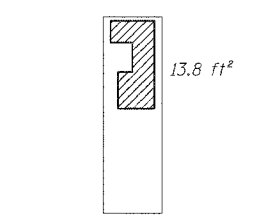
**PIER 33 - NORTH ELEVATION**  
(Looking South)



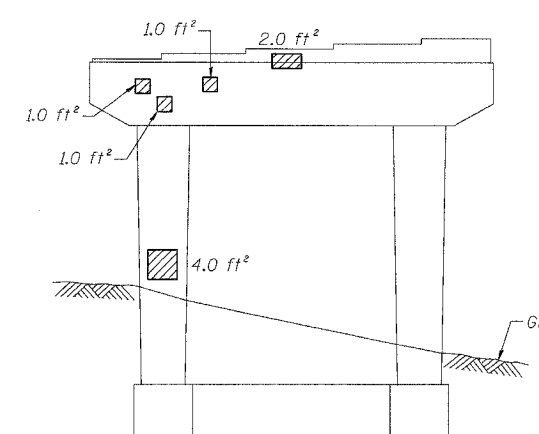
**PIER 37 - SOUTH ELEVATION**  
(Looking North)



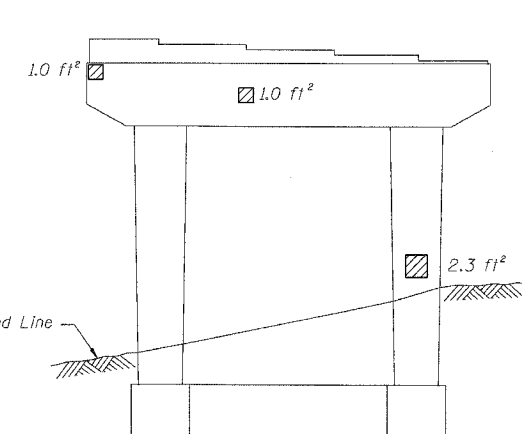
**PIER 37 - NORTH ELEVATION**  
(Looking South)



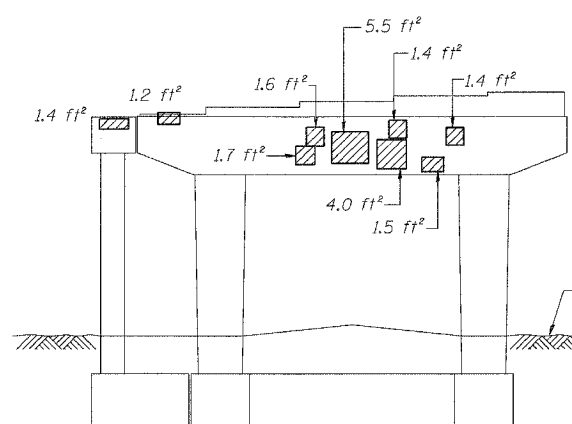
**PIER 35 - VIEW A**  
Looking East at side of column



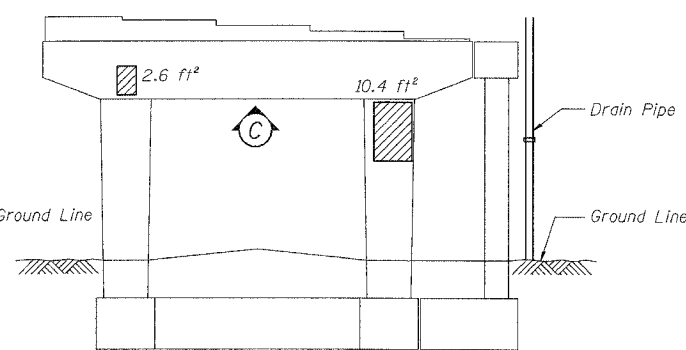
**PIER 34 - SOUTH ELEVATION**  
(Looking North)



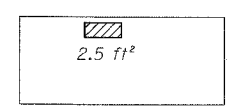
**PIER 34 - NORTH ELEVATION**  
(Looking South)



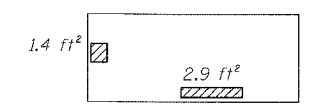
**PIER 38 - SOUTH ELEVATION**  
(Looking North)



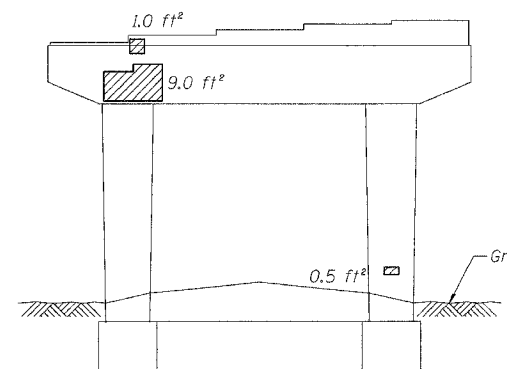
**PIER 38 - NORTH ELEVATION**  
(Looking South)



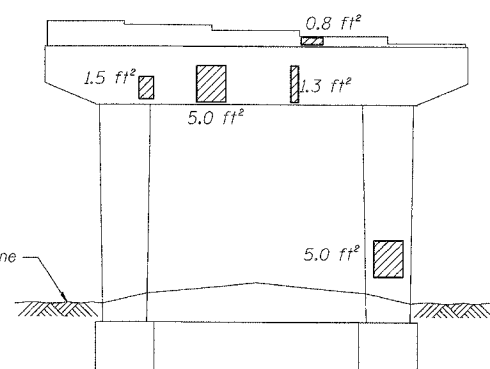
**PIER 37 - VIEW B**  
Looking up at bottom of cap



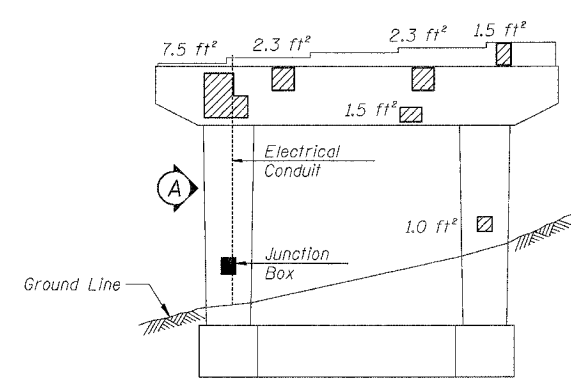
**PIER 38 - VIEW C**  
Looking up at bottom of cap



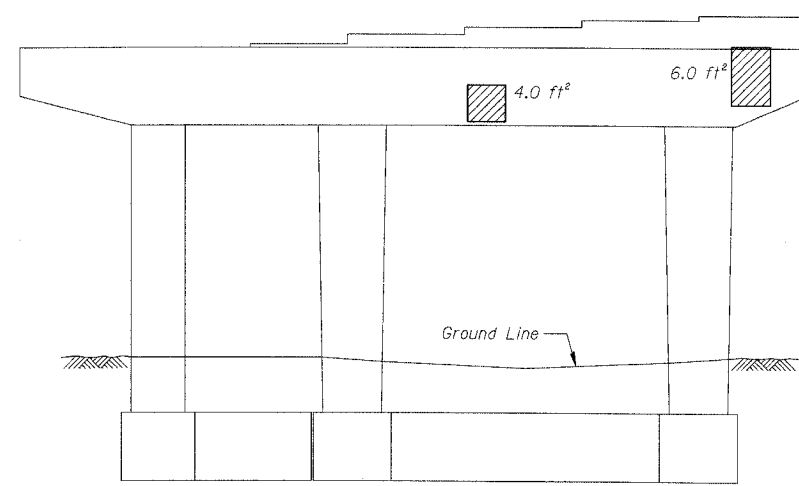
**PIER 36 - SOUTH ELEVATION**  
(Looking North)



**PIER 36 - NORTH ELEVATION**  
(Looking South)



**PIER 35 - SOUTH ELEVATION**  
(Looking North)



**PIER 40 - SOUTH ELEVATION**  
(Looking North)

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth equal to or less than 5")	SQ. FT.	164.0
Epoxy Crack Injection	FOOT	1.0

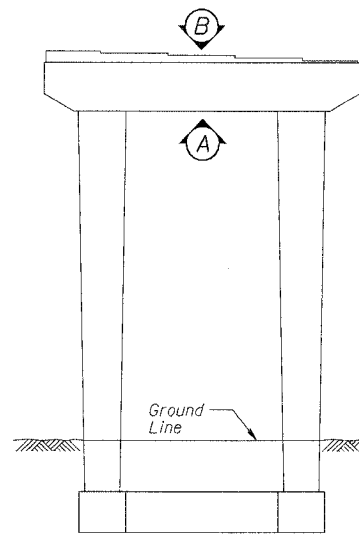
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 CONCRETE PIER REPAIRS  
 SN 016-1059, PIERS 33-38,40  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

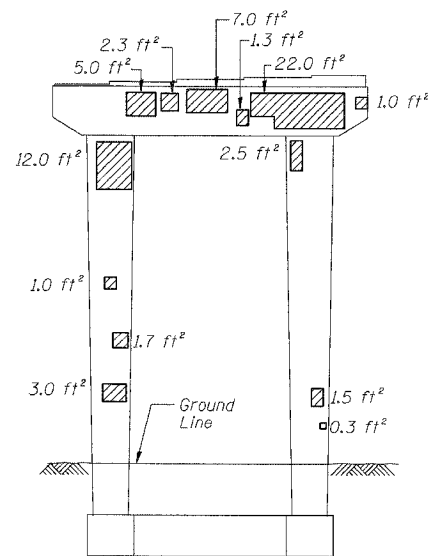
BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbancinc.com

For Notes and Legend See Sheet 6

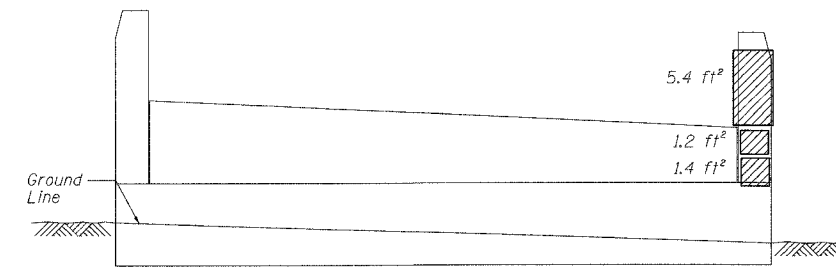
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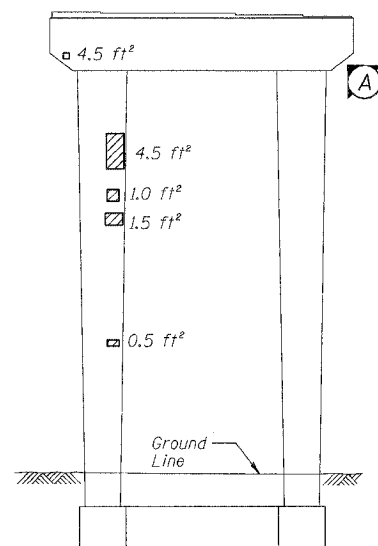
**PIER 78 - SOUTH ELEVATION**  
(Looking North)



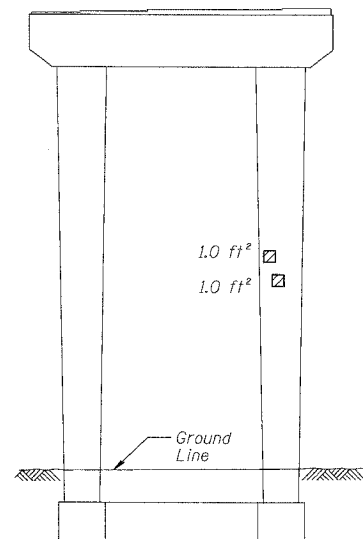
**PIER 78 - NORTH ELEVATION**  
(Looking South)



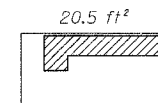
**ABUTMENT 73 - EAST ELEVATION**  
(Looking West)



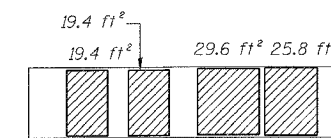
**PIER 77 - SOUTH ELEVATION**  
(Looking North)



**PIER 77 - NORTH ELEVATION**  
(Looking South)



**PIER 78 - VIEW A**  
Looking up at bottom of cap



**PIER 78 - VIEW B**  
Looking down at top of cap



**PIER 77 - VIEW A**  
Looking up at bottom of cap

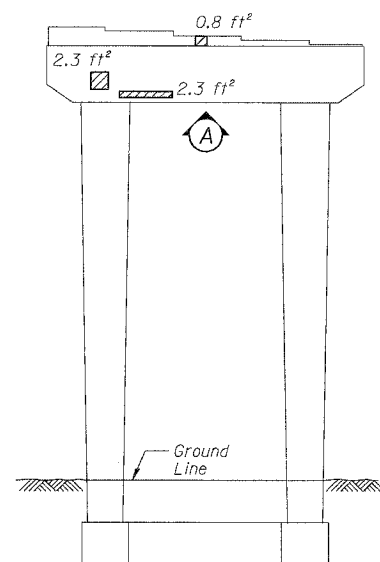
**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth equal to or less than 5")	SQ. FT.	197.8

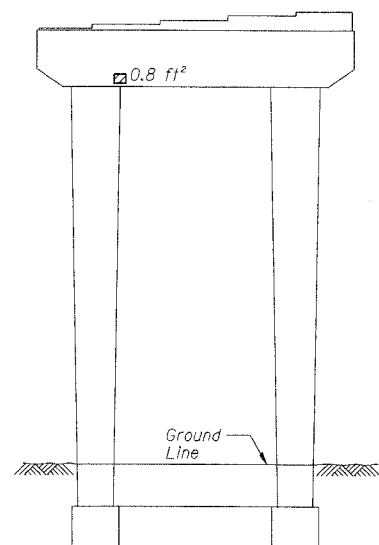
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
CONCRETE PIER REPAIRS  
SN 016-1050, PIERS 77,78, ABUT. 73  
SCALE: NTS  
DATE: 5/18/2007

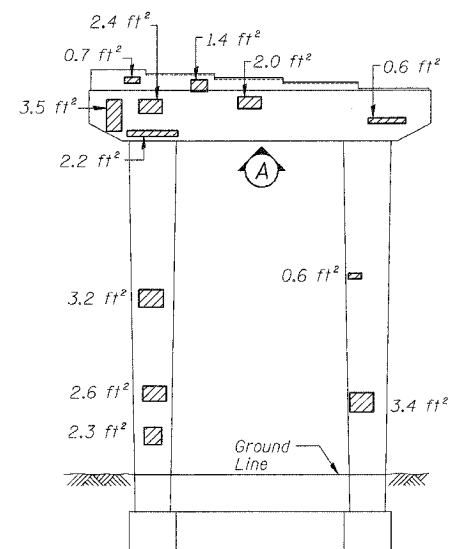
DRAWN BY: LAM  
CHECKED BY: BLU



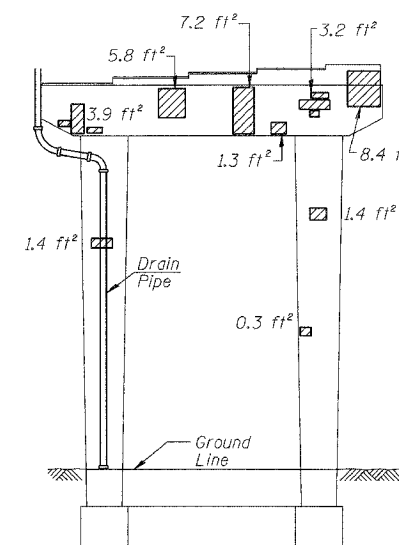
**PIER 81 - SOUTH ELEVATION**  
(Looking North)



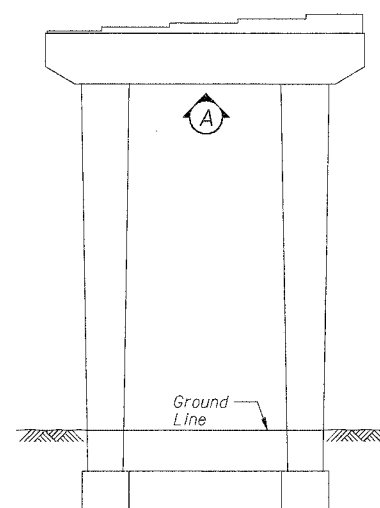
**PIER 81 - NORTH ELEVATION**  
(Looking South)



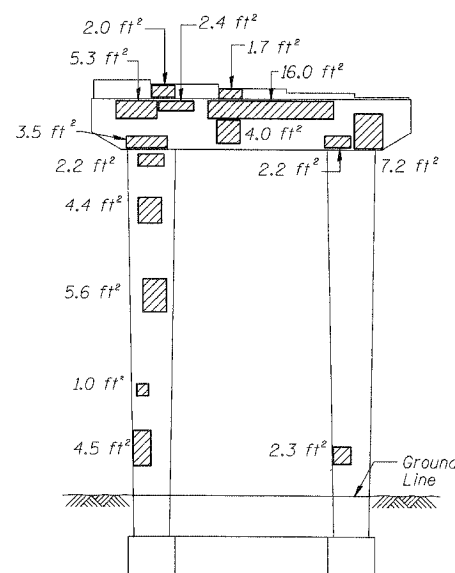
**PIER 79 - SOUTH ELEVATION**  
(Looking North)



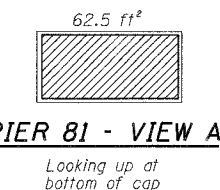
**PIER 79 - NORTH ELEVATION**  
(Looking South)



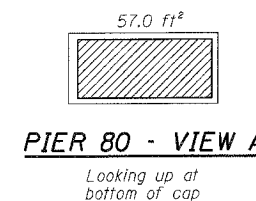
**PIER 80 - SOUTH ELEVATION**  
(Looking North)



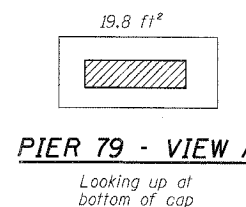
**PIER 80 - NORTH ELEVATION**  
(Looking South)



**PIER 81 - VIEW A**  
Looking up at bottom of cap



**PIER 80 - VIEW A**  
Looking up at bottom of cap



**PIER 79 - VIEW A**  
Looking up at bottom of cap

**BILL OF MATERIAL**

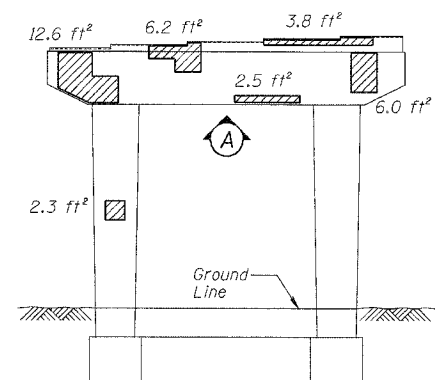
ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth equal to or less than 5")	SQ. FT.	267.6

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) DAN RYAN ELEVATED BRIDGE BEARING REPLACEMENT & STEEL REPAIR CONCRETE PIER REPAIRS SN 016-1050, PIERS 79,80,81
NAME	DATE	
		SCALE: NTS
		DATE: 5/18/2007
		DRAWN BY: LAM
		CHECKED BY: BLU

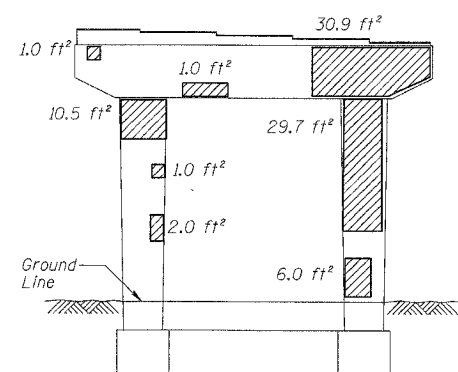
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com

For Notes and Legend See Sheet 6

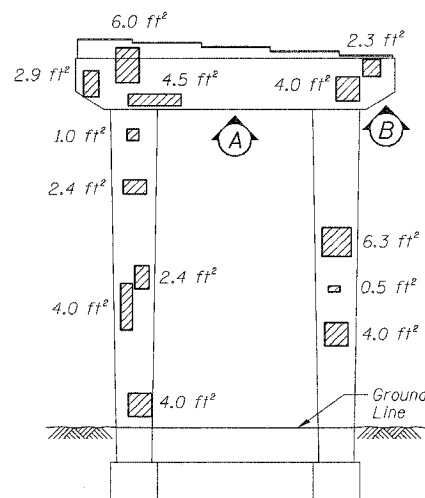
M:\600\6000\BRIDGE\94\90\086\I\60B07.DWG 5/18/2007 5:00:21 PM



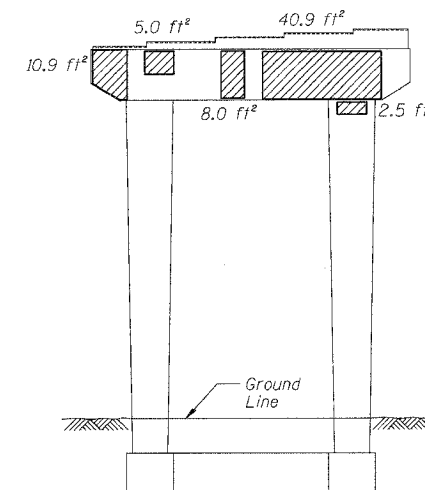
**PIER 86 - WEST ELEVATION**  
(Looking East)



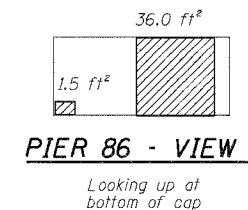
**PIER 86 - EAST ELEVATION**  
(Looking West)



**PIER 83 - SOUTH ELEVATION**  
(Looking North)



**PIER 83 - NORTH ELEVATION**  
(Looking South)



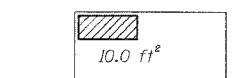
**PIER 86 - VIEW A**

Looking up at bottom of cap



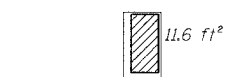
**PIER 85 - VIEW A**

Looking up at bottom of cap



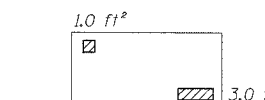
**PIER 83 - VIEW A**

Looking up at bottom of cap



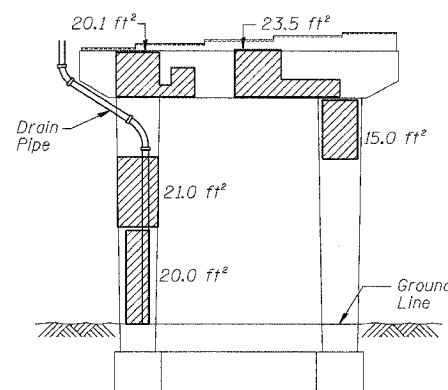
**PIER 83 - VIEW B**

Looking up at bottom of cap

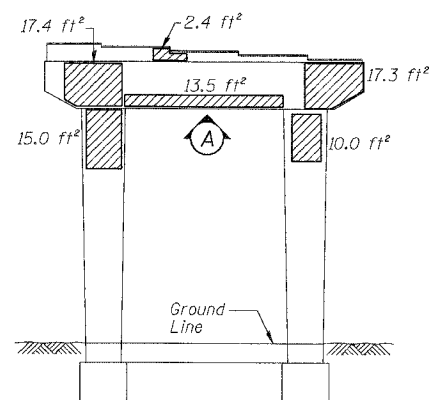


**PIER 82 - VIEW A**

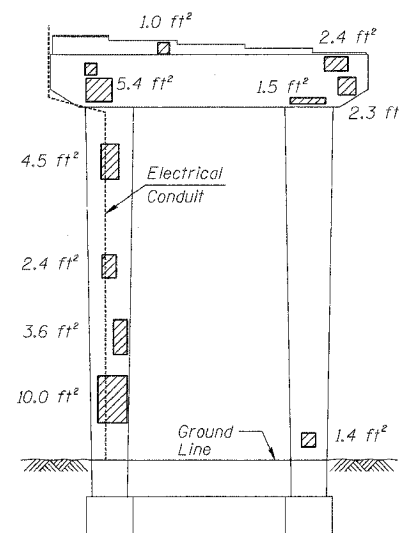
Looking up at bottom of cap



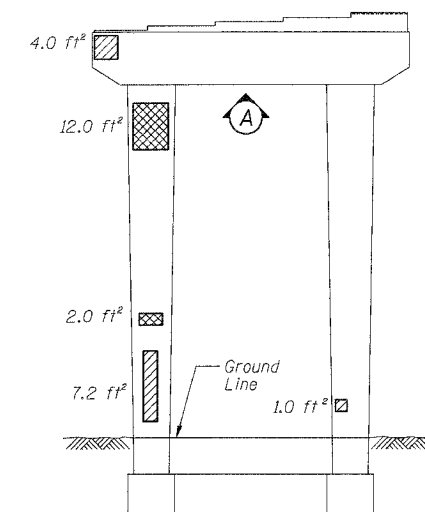
**PIER 85 - WEST ELEVATION**  
(Looking East)



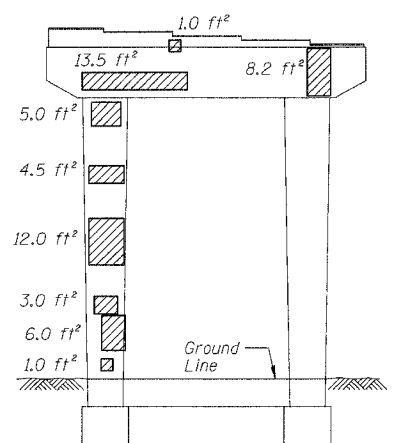
**PIER 85 - EAST ELEVATION**  
(Looking West)



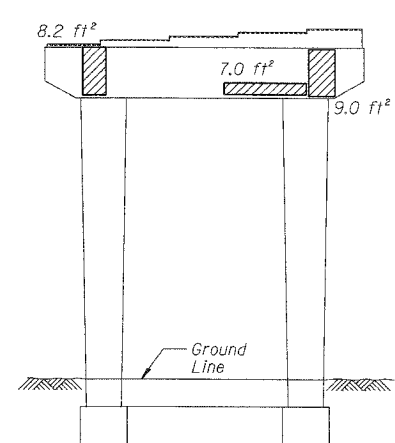
**PIER 82 - SOUTH ELEVATION**  
(Looking North)



**PIER 82 - NORTH ELEVATION**  
(Looking South)



**PIER 84 - SOUTH ELEVATION**  
(Looking North)



**PIER 84 - NORTH ELEVATION**  
(Looking South)

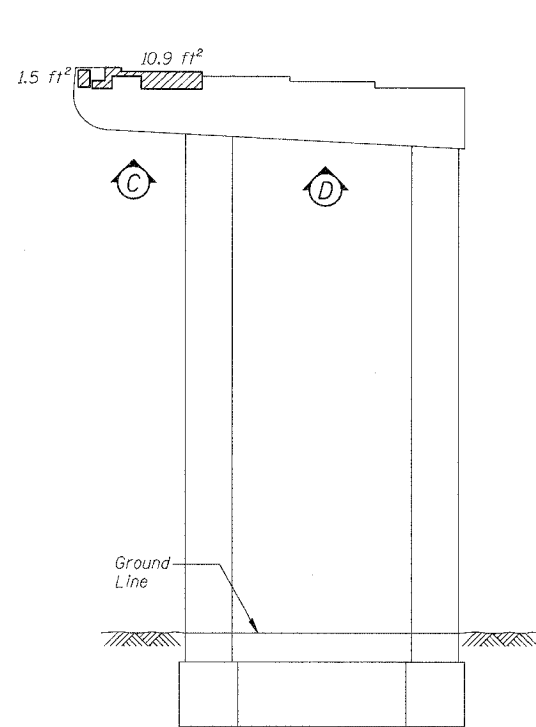
**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth equal to or less than 5")	SQ. FT.	665.2
Structural Repair of Concrete (Depth greater than 5")	SQ. FT.	14.0
Temporary Shoring and Crippling	EACH	1

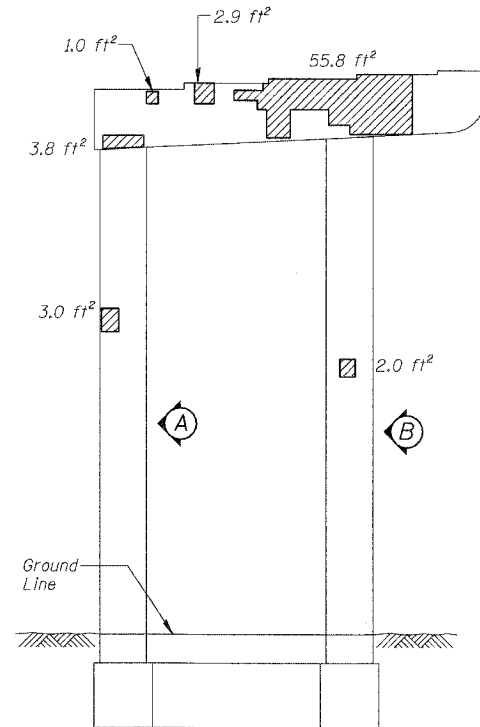
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) DAN RYAN ELEVATED BRIDGE BEARING REPLACEMENT & STEEL REPAIR CONCRETE PIER REPAIRS SN 016-1050, PIERS 82-86
NAME	DATE	

SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

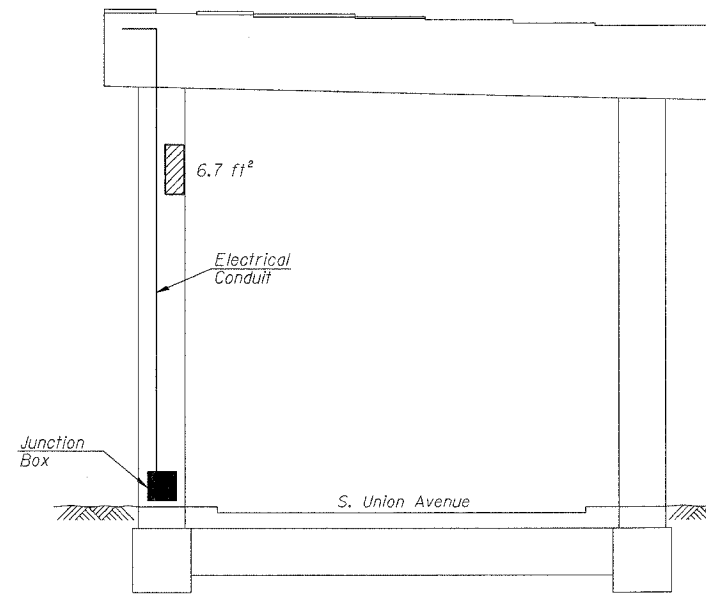
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	105
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				



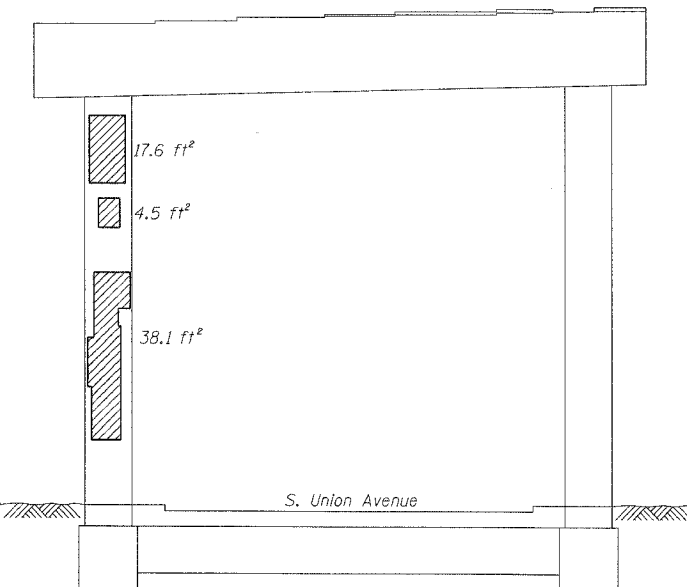
**PIER C-2 - SOUTH ELEVATION**  
(Looking North)



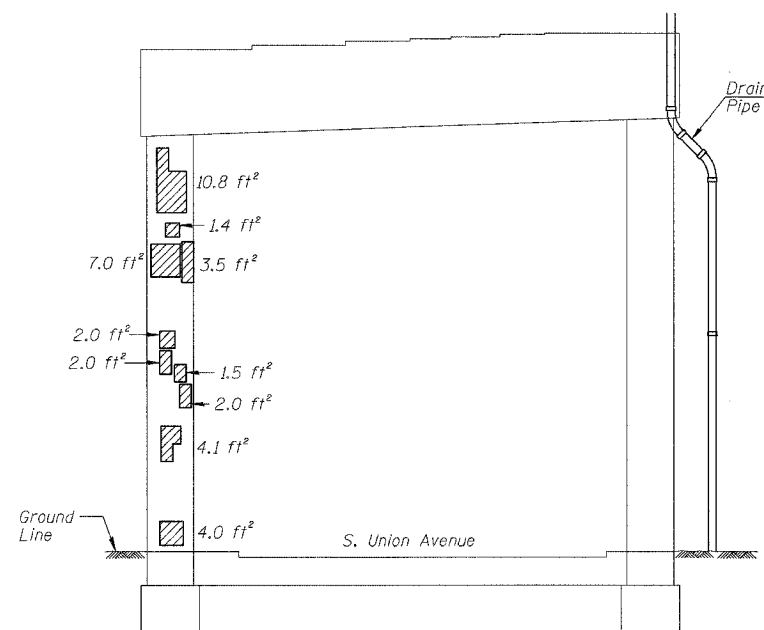
**PIER C-2 - NORTH ELEVATION**  
(Looking South)



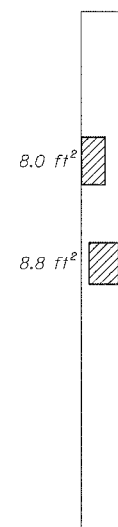
**PIER C-4 - SOUTH ELEVATION**  
(Looking North)



**PIER C-4 - NORTH ELEVATION**  
(Looking South)



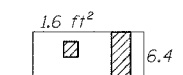
**PIER C-3 - NORTH ELEVATION**  
(Looking South)



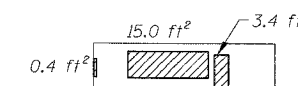
**PIER C-2 - VIEW A**  
Looking East at side of column



**PIER C-2 - VIEW B**  
Looking East at side of column



**PIER C-2 - VIEW C**  
Looking up at bottom of cap



**PIER C-2 - VIEW D**  
Looking up at bottom of cap

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth equal to or less than 5")	SQ. FT.	232.9

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
CONCRETE PIER REPAIRS  
SN 016-1046, PIERS C-2,C-3,C-4  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

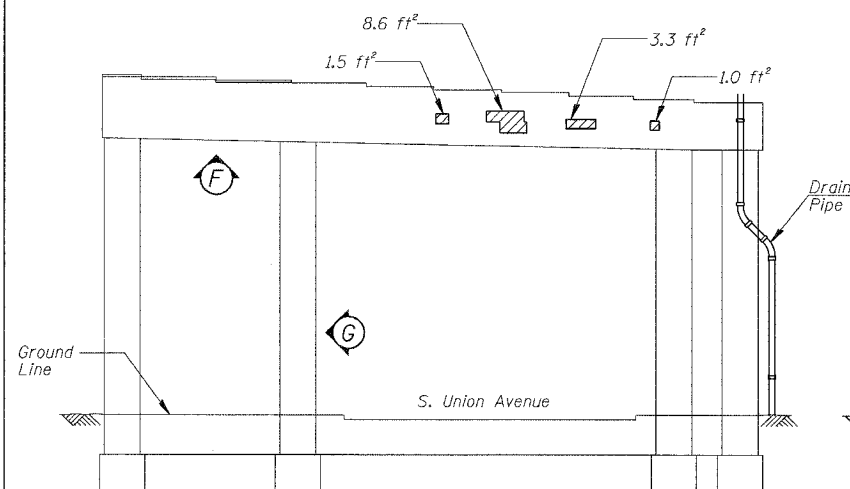
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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For Notes and Legend See Sheet 6

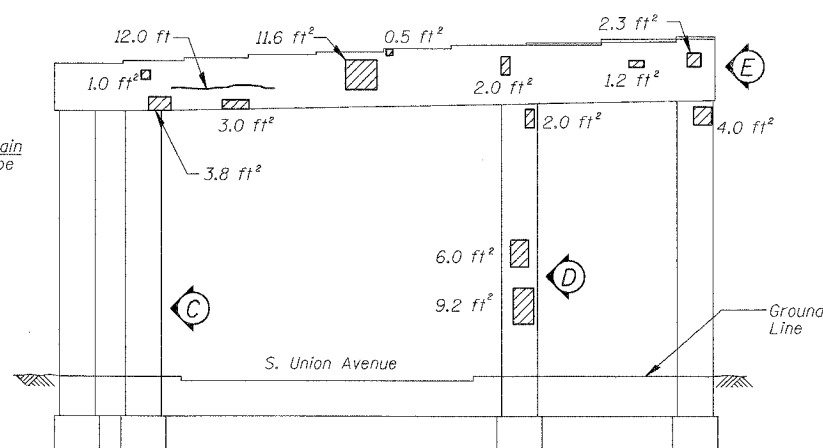
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	106
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

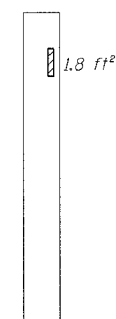
60B07



**PIER C-5 - SOUTH ELEVATION**  
(Looking North)



**PIER C-5 - NORTH ELEVATION**  
(Looking South)



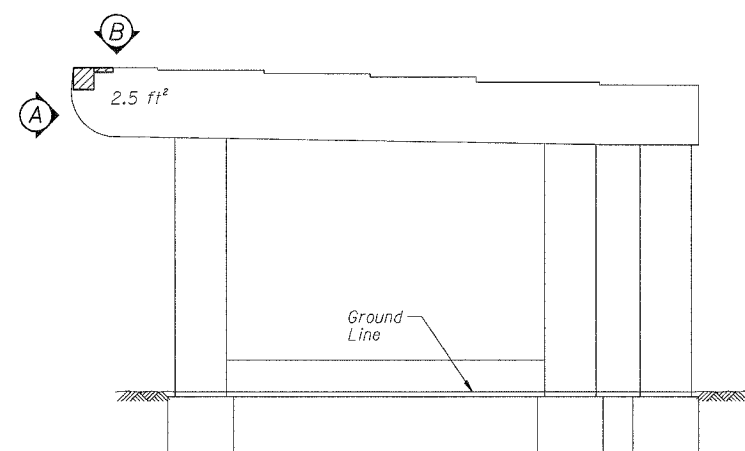
**PIER C-5 - VIEW C**  
Looking East at side of column



**PIER C-5 - VIEW D**  
Looking East at side of column



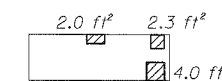
**PIER C-5 - VIEW G**  
Looking West at side of column



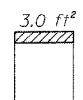
**PIER C-11 - SOUTH ELEVATION**  
(Looking North)



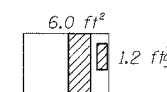
**PIER C-5 - VIEW E**  
Looking East at end of cap



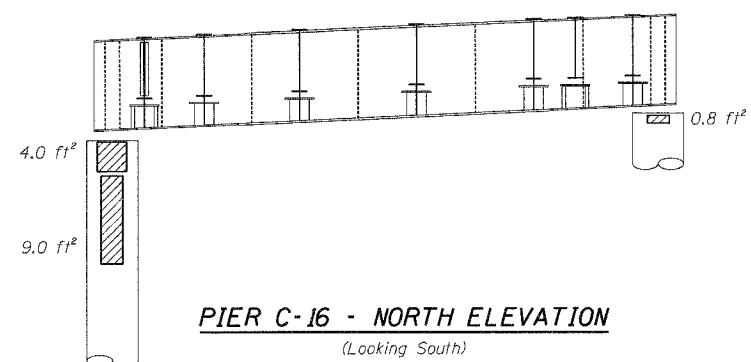
**PIER C-5 - VIEW F**  
Looking up at bottom of cap



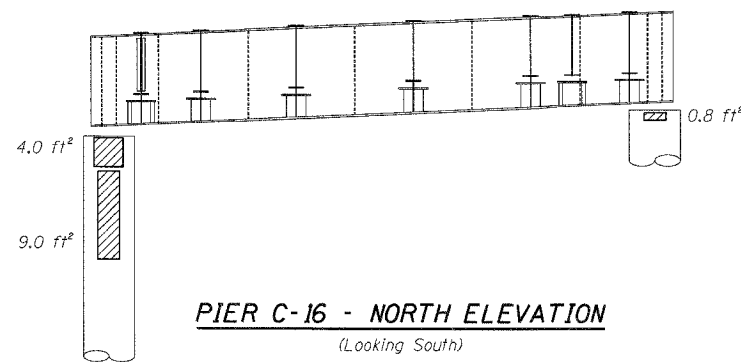
**PIER C-11 - VIEW A**  
Looking East at end of cap



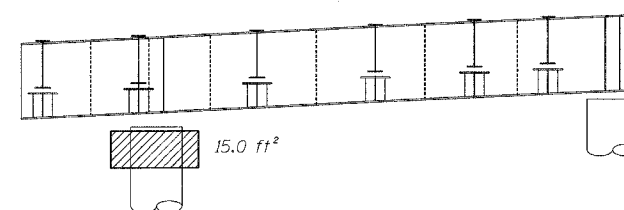
**PIER C-11 - VIEW B**  
Looking down at top of seat



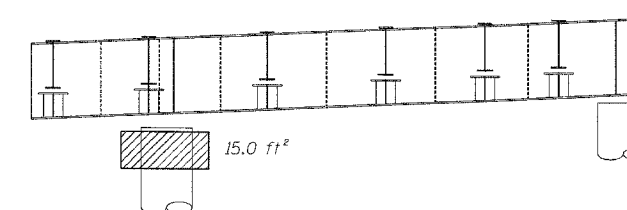
**PIER C-16 - NORTH ELEVATION**  
(Looking South)



**PIER C-16 - NORTH ELEVATION**  
(Looking South)



**PIER C-18 - NORTH ELEVATION**  
(Looking South)



**PIER C-18 - NORTH ELEVATION**  
(Looking South)

**BILL OF MATERIAL**

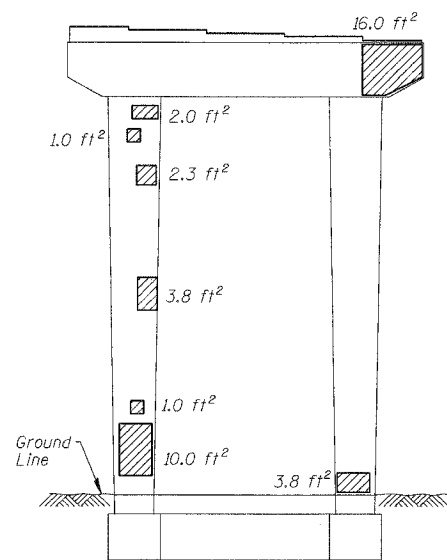
ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth equal to or less than 5")	SQ. FT.	160.6
Epoxy Crack Injection	FOOT	12.0

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) DAN RYAN ELEVATED BRIDGE BEARING REPLACEMENT & STEEL REPAIR CONCRETE PIER REPAIRS SN 016-1046, PIERS C-5,C-11,C-16,C-18 SCALE: NTS DATE: 5/18/2007
NAME	DATE	
		DRAWN BY: LAM CHECKED BY: BLU

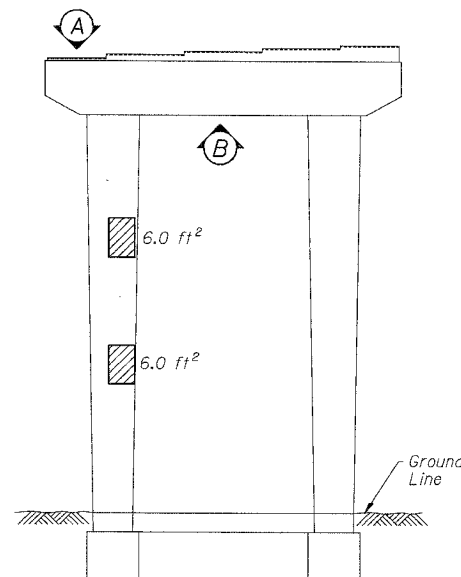
BOWMAN, BARRETT & ASSOCIATES INC.  
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For Notes and Legend See Sheet 6

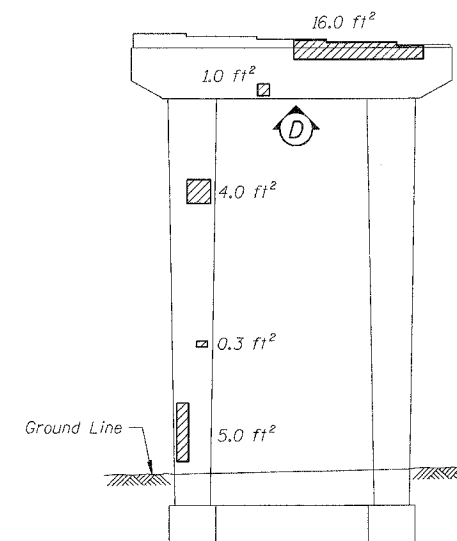
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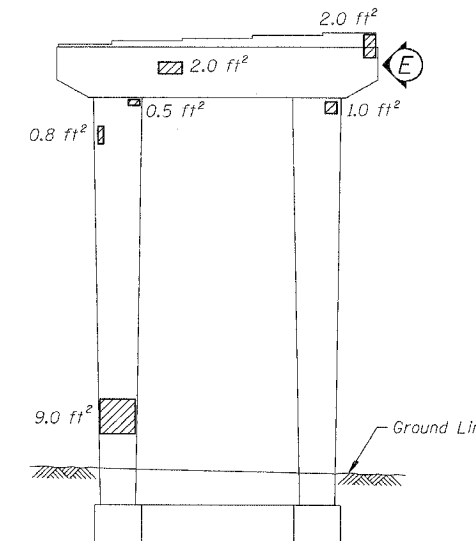
**PIER 53 - WEST ELEVATION**  
(Looking East)



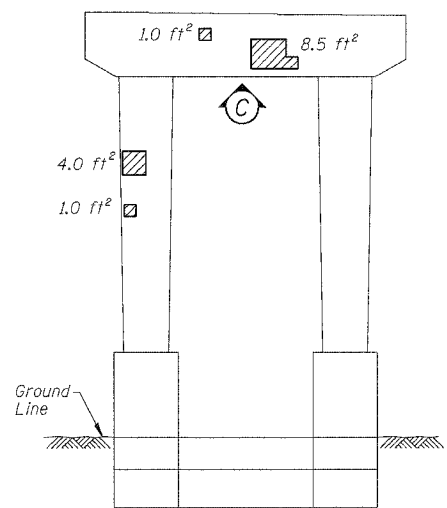
**PIER 53 - EAST ELEVATION**  
(Looking West)



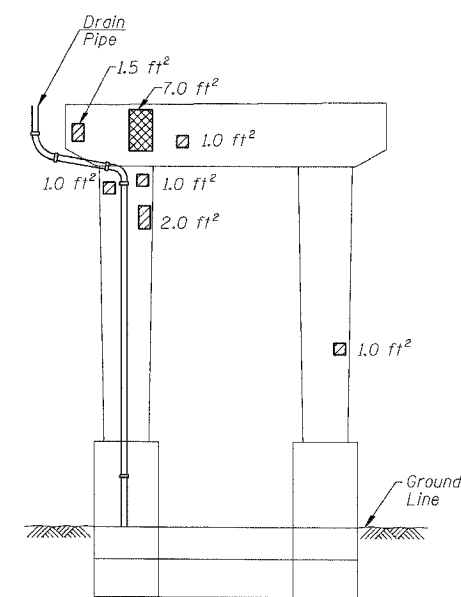
**PIER 51 - WEST ELEVATION**  
(Looking East)



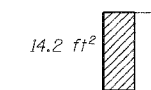
**PIER 51 - EAST ELEVATION**  
(Looking West)



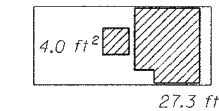
**PIER 52 - WEST ELEVATION**  
(Looking East)



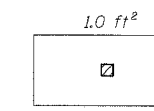
**PIER 52 - EAST ELEVATION**  
(Looking West)



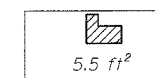
**PIER 53 - VIEW A**  
Looking down at top of cap



**PIER 53 - VIEW B**  
Looking up at bottom of cap



**PIER 52 - VIEW C**  
Looking up at bottom of cap



**PIER 51 - VIEW D**  
Looking up at bottom of cap



**PIER 51 - VIEW E**  
Looking south at end of cap

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth equal to or less than 5")	SQ. FT.	173.5
Structural Repair of Concrete (Depth greater than 5")	SQ. FT.	7.0

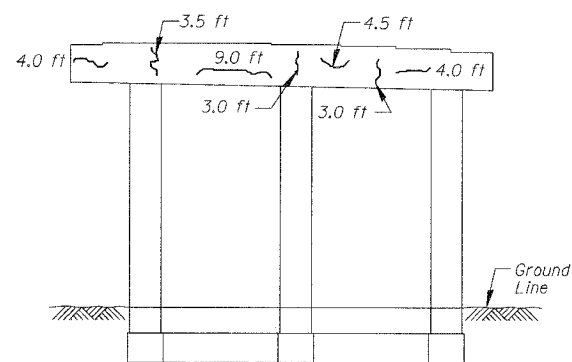
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
CONCRETE PIER REPAIRS  
SN 016-1046, PIERS 51,52,53

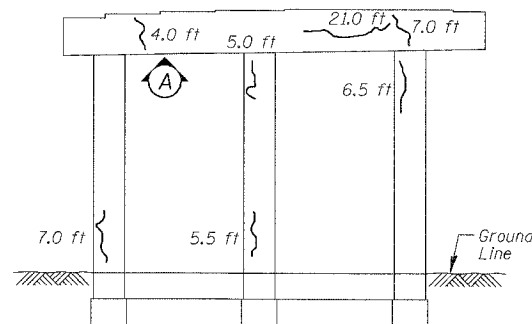
SCALE: NTS  
DATE: 5/18/2007

DRAWN BY: LAM  
CHECKED BY: BLU

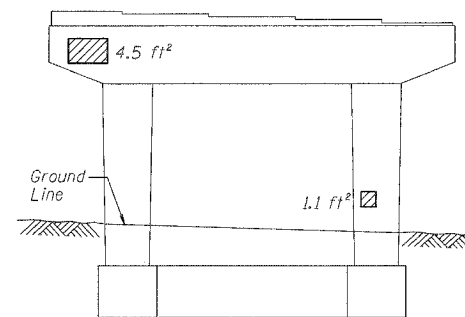
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	108
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



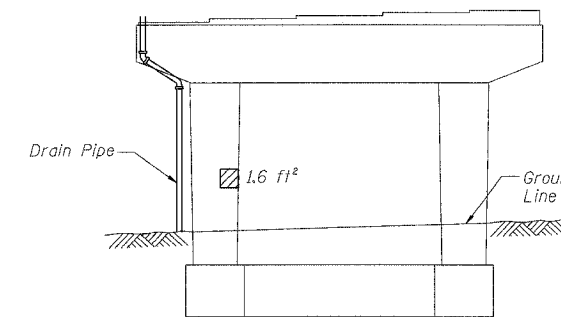
**PIER 22 - SOUTH ELEVATION**  
(Looking North)



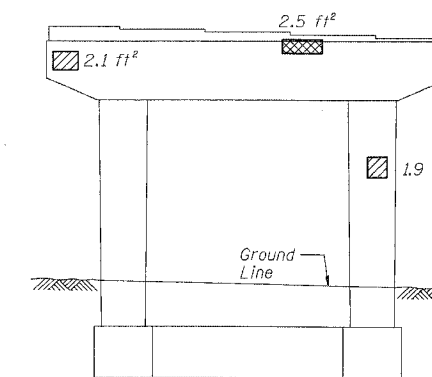
**PIER 22 - NORTH ELEVATION**  
(Looking South)



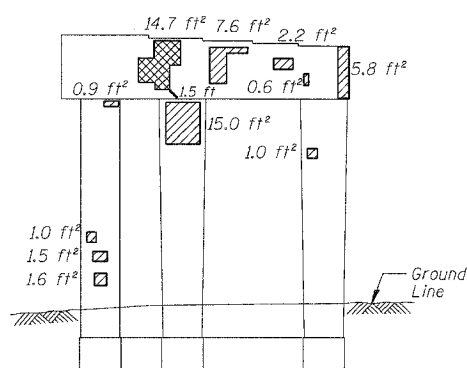
**PIER 27 - SOUTH ELEVATION**  
(Looking North)



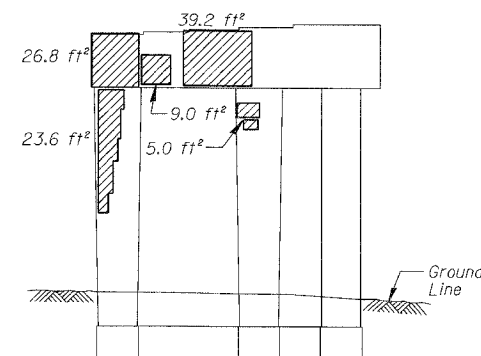
**PIER 27 - NORTH ELEVATION**  
(Looking South)



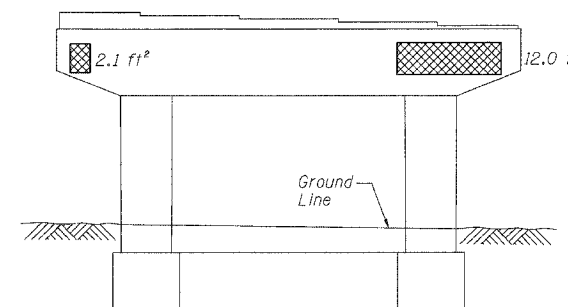
**PIER 26 - SOUTH ELEVATION**  
(Looking North)



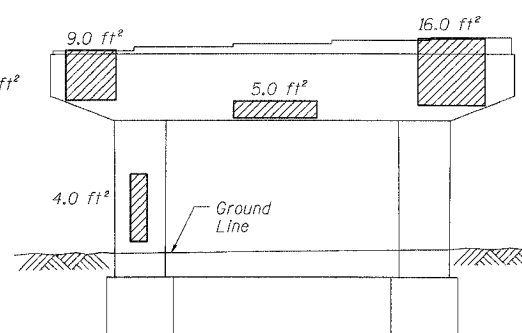
**PIER 23 - SOUTH ELEVATION**  
(Looking North)



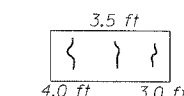
**PIER 23 - NORTH ELEVATION**  
(Looking South)



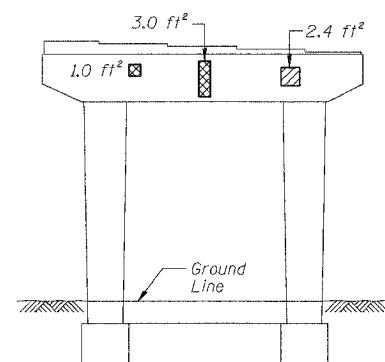
**PIER 28 - SOUTH ELEVATION**  
(Looking North)



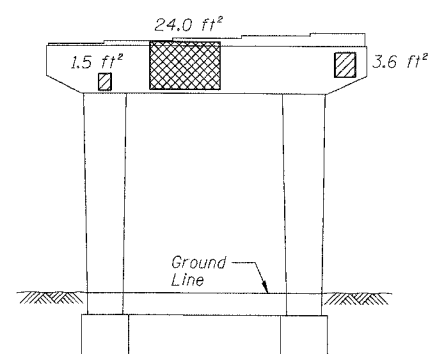
**PIER 28 - NORTH ELEVATION**  
(Looking South)



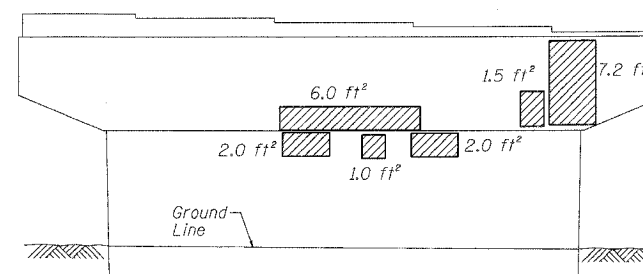
**PIER 22 - VIEW A**  
Looking up at bottom of cap



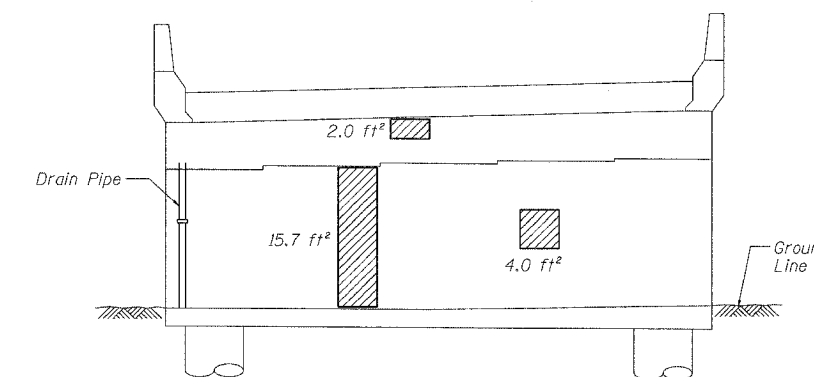
**PIER 25 - SOUTH ELEVATION**  
(Looking North)



**PIER 25 - NORTH ELEVATION**  
(Looking South)



**PIER 29 - SOUTH ELEVATION**  
(Looking North)



**ABUTMENT 30 - NORTH ELEVATION**  
(Looking South)

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth equal to or less than 5")	SQ. FT.	234.9
Structural Repair of Concrete (Depth greater than 5")	SQ. FT.	59.3
Epoxy Crack Injection	FOOT	97.5

REVISIONS	
NAME	DATE

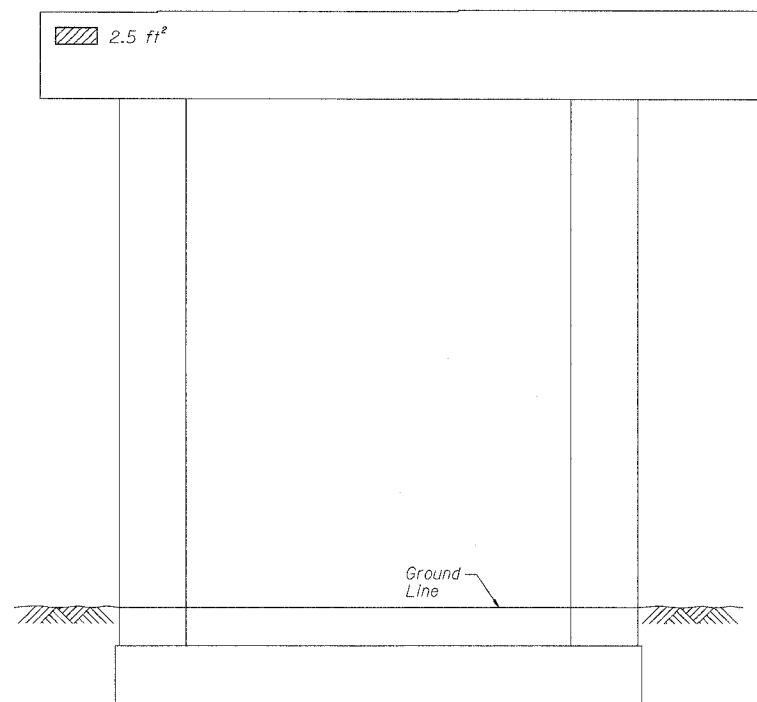
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
CONCRETE PIER REPAIRS  
SN 016-1047, PIERS 22,23,25-29, ABUT 30  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

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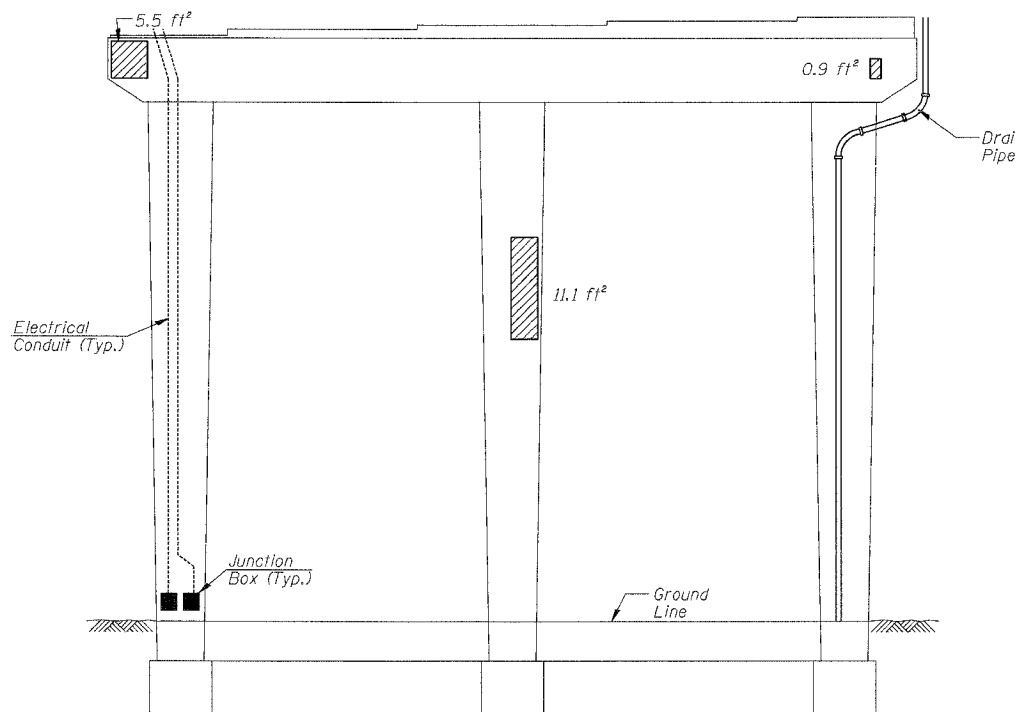
For Notes and Legend See Sheet 6

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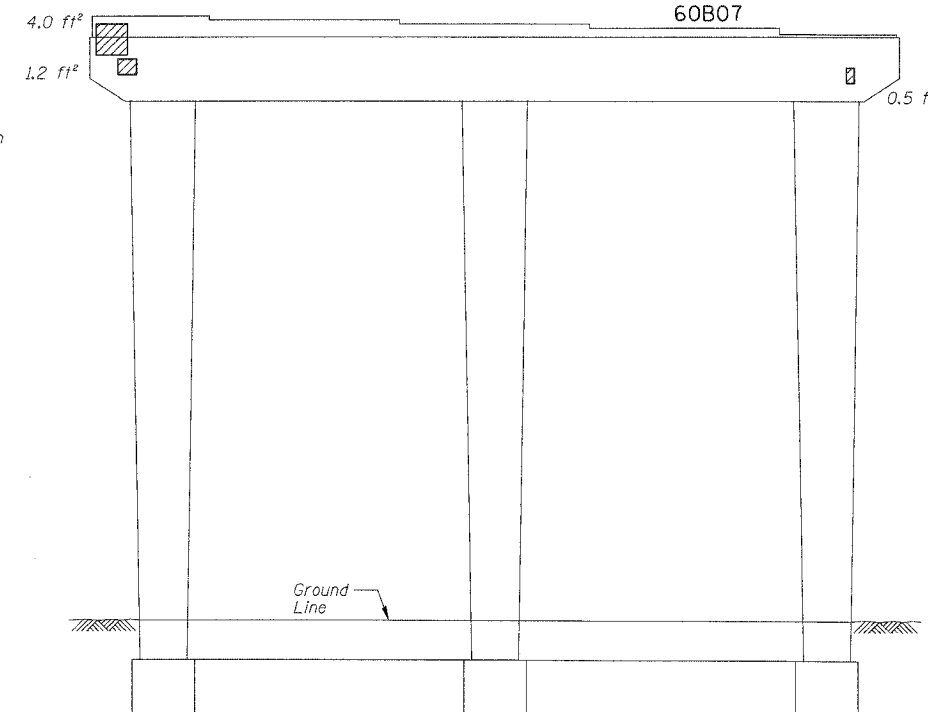




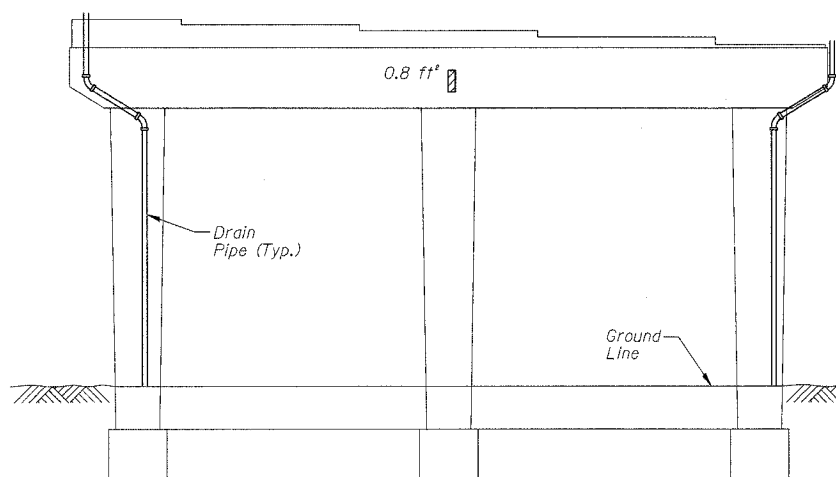
**PIER 11 - SOUTH ELEVATION**  
(Looking North)



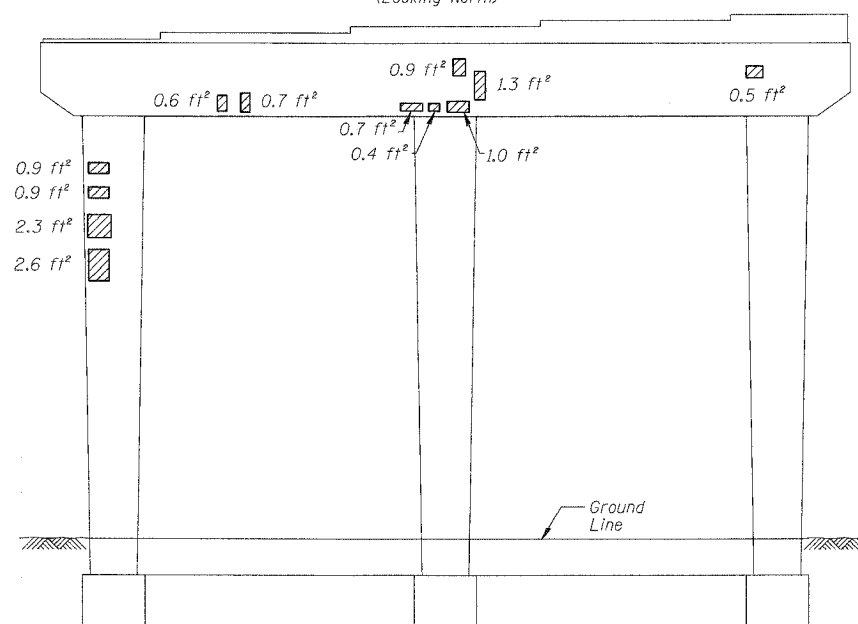
**PIER 12 - SOUTH ELEVATION**  
(Looking North)



**PIER 12 - NORTH ELEVATION**  
(Looking South)



**PIER 14 - NORTH ELEVATION**  
(Looking South)



**PIER 13 - SOUTH ELEVATION**  
(Looking North)

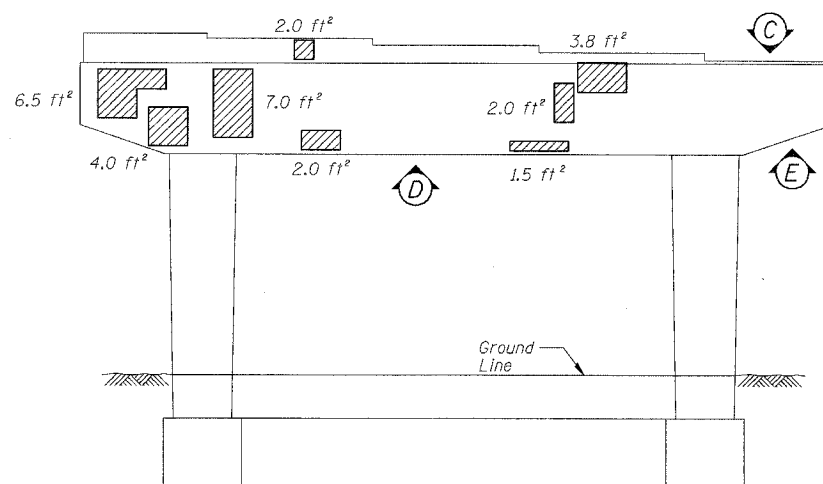
**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth equal to or less than 5")	SQ. FT.	39.3

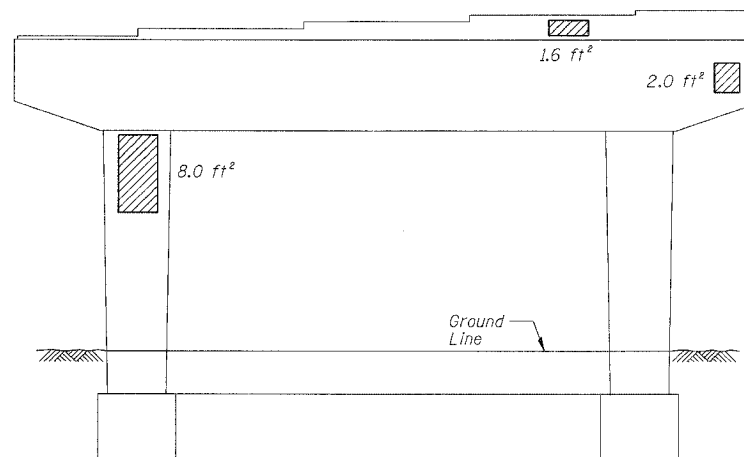
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 CONCRETE PIER REPAIRS  
 SN 016-1140, PIERS 11-14  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

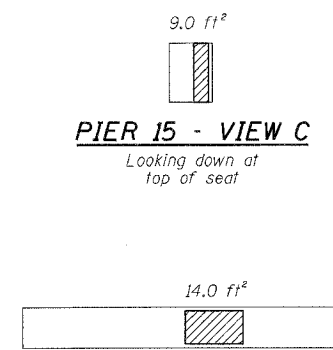
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



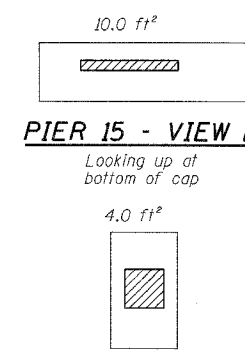
**PIER 15 - NORTH ELEVATION**  
(Looking South)



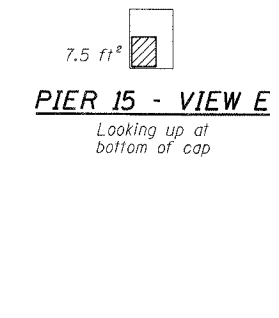
**PIER 15 - SOUTH ELEVATION**  
(Looking North)



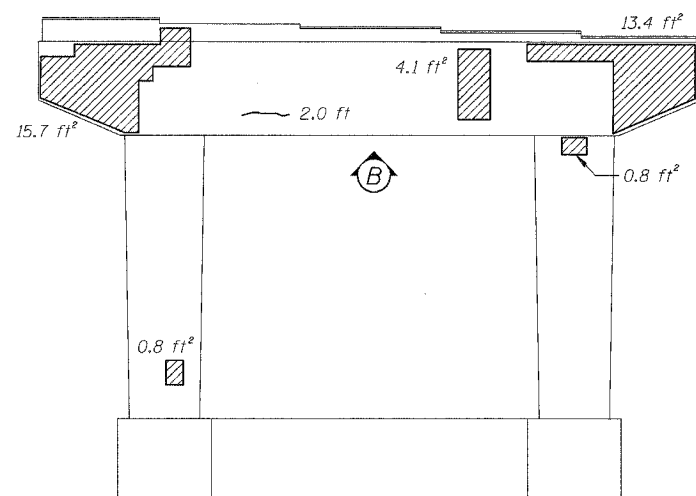
**PIER 15 - VIEW C**  
Looking down at top of seat



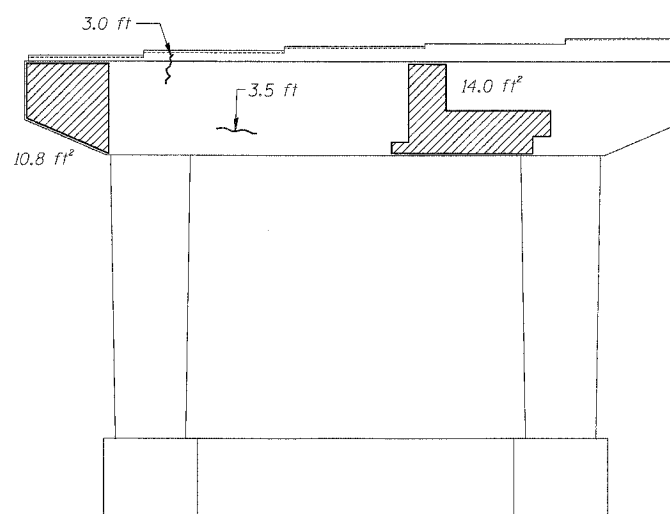
**PIER 15 - VIEW D**  
Looking up at bottom of cap



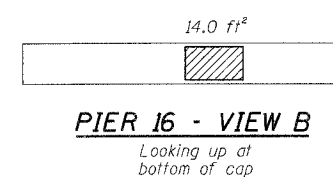
**PIER 15 - VIEW E**  
Looking up at bottom of cap



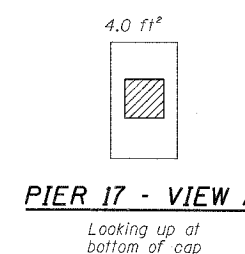
**PIER 16 - NORTH ELEVATION**  
(Looking South)



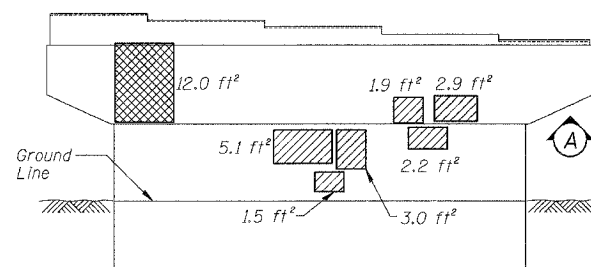
**PIER 16 - SOUTH ELEVATION**  
(Looking North)



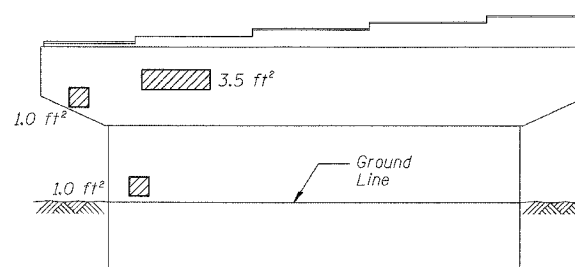
**PIER 16 - VIEW B**  
Looking up at bottom of cap



**PIER 17 - VIEW A**  
Looking up at bottom of cap



**PIER 17 - NORTH ELEVATION**  
(Looking South)



**PIER 17 - SOUTH ELEVATION**  
(Looking North)

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth equal to or less than 5")	SQ. FT.	166.6
Structural Repair of Concrete (Depth greater than 5")	SQ. FT.	12.0
Epoxy Crack Injection	FOOT	8.5

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) DAN RYAN ELEVATED BRIDGE BEARING REPLACEMENT & STEEL REPAIR CONCRETE PIER REPAIRS SN 016-1140, PIERS 15,16,17
NAME	DATE	
		SCALE: NTS
		DATE: 5/18/2007
		DRAWN BY: LAM
		CHECKED BY: BLU

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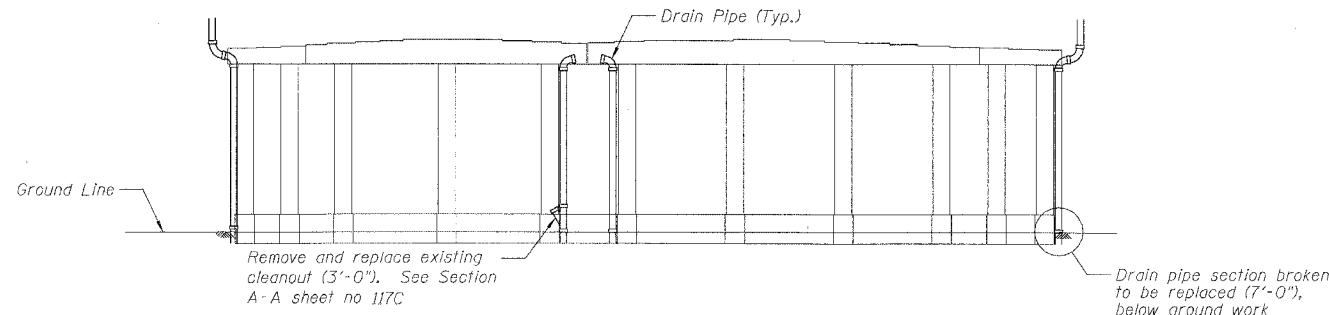
For Notes and Legend See Sheet 6

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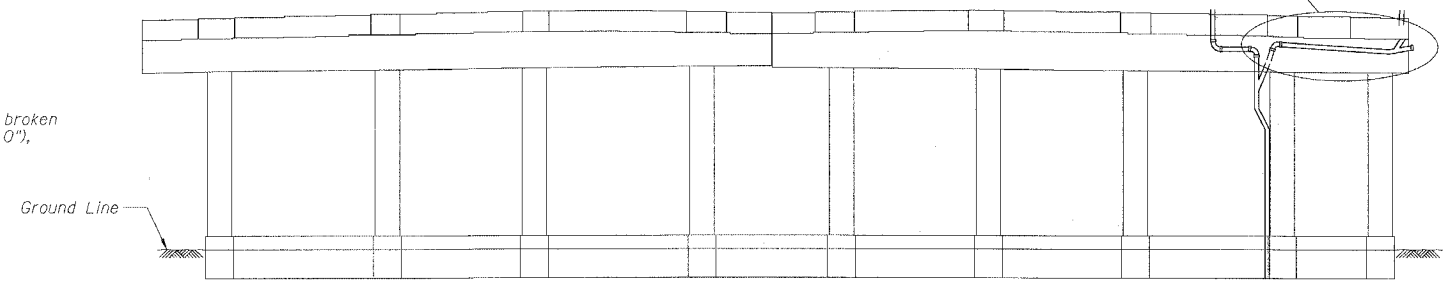
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	111
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

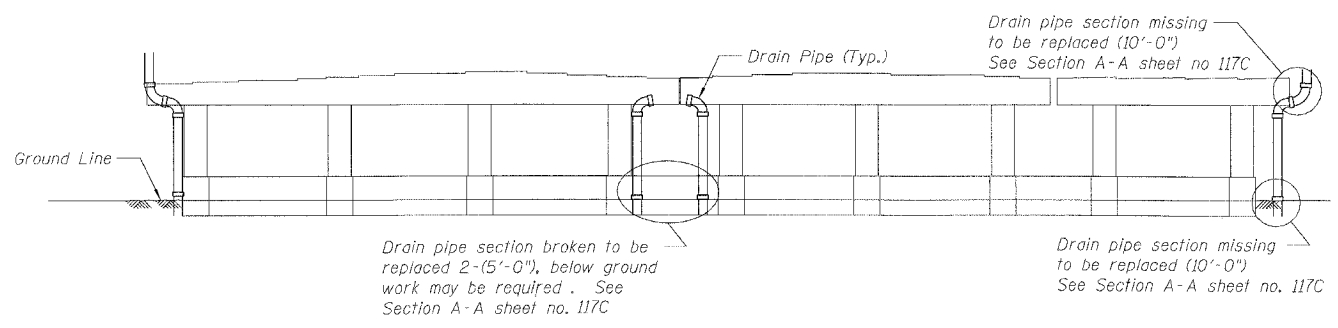
Reducer missing to be replaced (5'-0") and two elbows. Horizontal pitch to be reversed (20'-0").



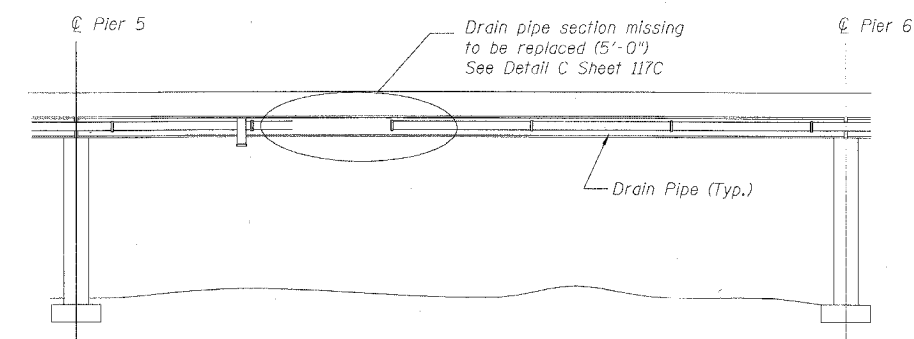
**SN 016-0137 - PIER 9 - SOUTH ELEVATION**  
(Looking North)



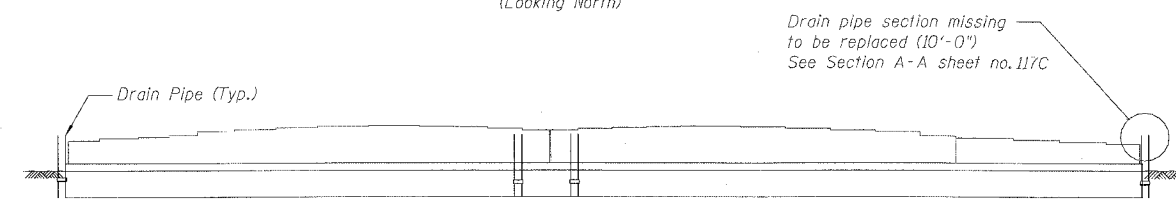
**SN 016-1110 - PIER 4 - SOUTH ELEVATION**  
(Looking North)



**SN 016-0137 - PIER 19 - SOUTH ELEVATION**  
(Looking North)



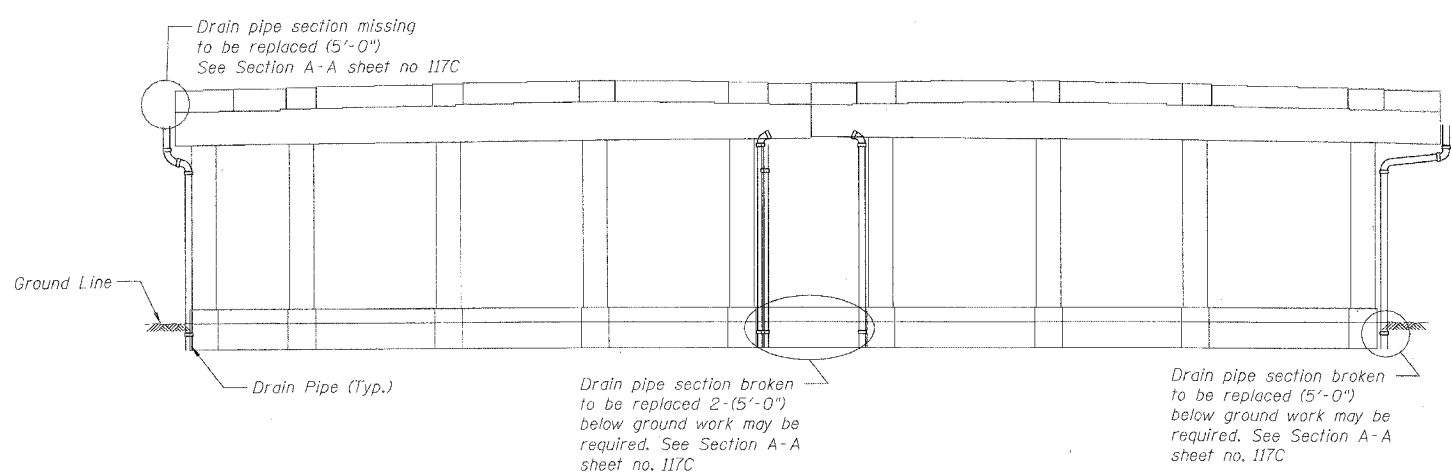
**SN 016-1110 - BETWEEN PIER 5 AND PIER 6**  
(East Fascia Beam)



**SN 016-0137 - PIER 23 - SOUTH ELEVATION**  
(Looking North)

**DRAINAGE REPAIR NOTES**

- The locations shown as requiring drainage repairs identify the general deficiency and provide an estimated length of new pipe required. The drainage system is shown schematically. It shall be the Contractor's responsibility to verify the locations, dimensions and details prior to ordering the material. Such variations shall not be cause for additional compensation for a change in the scope of work, however the contractor will be paid for the Quantity actually furnished at the unit price bid for the work.
- The Contractor shall provide all piping, brackets, hangers, fittings, hardware and other accessories required to return the existing drainage system to a fully functional leak free system. See Special Provisions.
- When existing drain pipes are wrapped with tape, the tape shall be removed if pipe is broken or missing connection. The pipe shall be replaced or otherwise new tape shall be provided. The type of the tape shall be approved by the Engineer. The cost shall be included in "Bridge Drainage System Repairs" and the length measured shall be length the of pipe replaced or the length of pipe re-taped.
- The Contractor shall wrap any joints that are leaking as directed by the Engineer. The cost shall be included in "Bridge Drainage System Repairs".
- For pier locations see General Plan & Elevation Sheets.
- SN 016-0137, Span 1  
Drain pipe section between beams 9S & 10S broken to be replaced (10'-0")



**SN 016-1110 - PIER 1 - NORTH ELEVATION**  
(Looking South)

**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY	
		SN 016-0137	SN 016-1110
Bridge Drainage System Repairs	FOOT	60	50

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
SN 016-0137 & 016-1110  
DRAINAGE REPAIRS

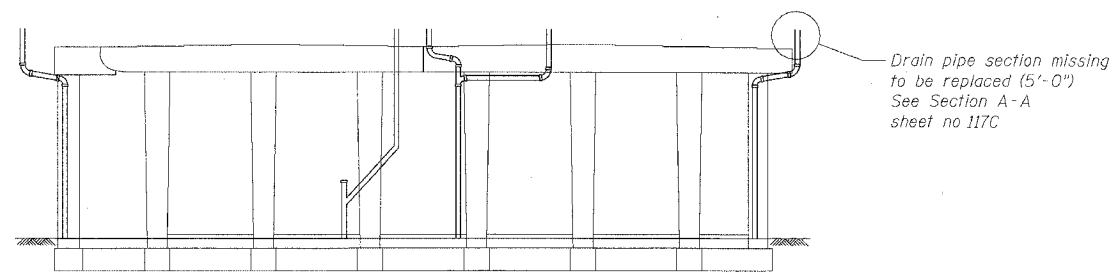
SCALE: NTS  
DATE: 3/7/2008

DRAWN BY: LAM  
CHECKED BY: BLU

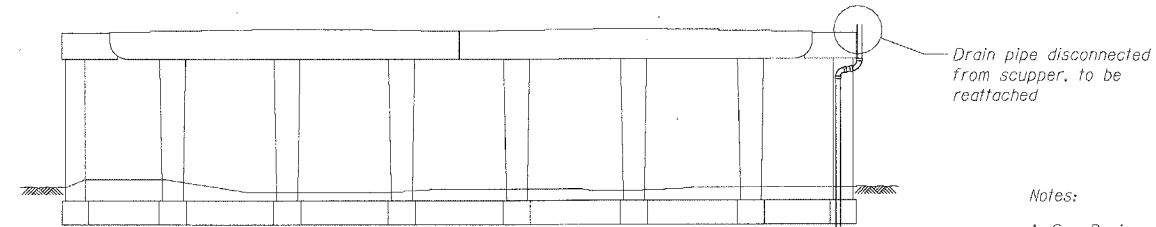
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N:\650\04\BRIDGE\21\AS\650\_21A\_DRAWING 6/4/05 AM 3/27/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 1	COOK	228	112
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				

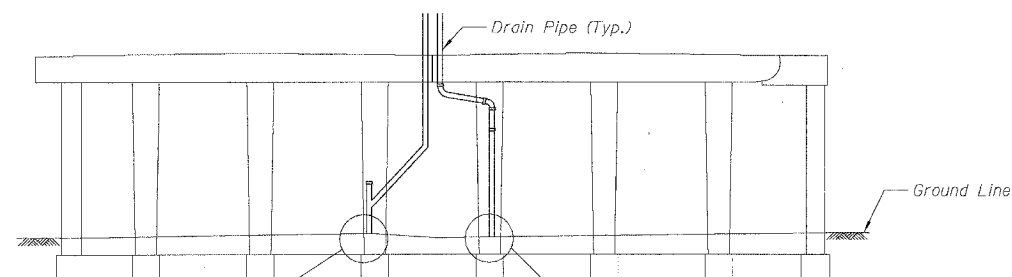


**SN 016-1111 - PIER 11 - SOUTH ELEVATION**  
(Looking North)

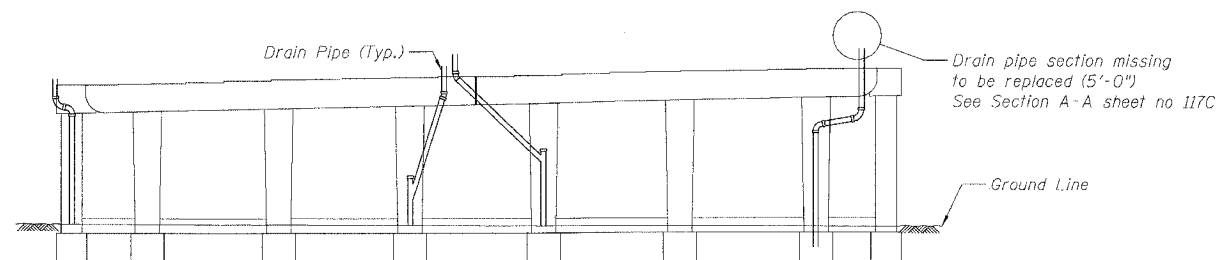


**SN 016-1111 - PIER 3 - SOUTH ELEVATION**  
(Looking North)

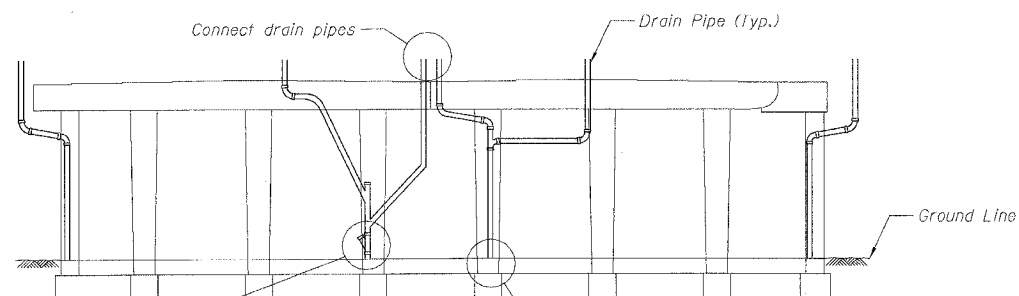
- Notes:
1. See Drainage Repair Notes on sheet 111
  2. For pier locations see General Plan & Elevation Sheets.



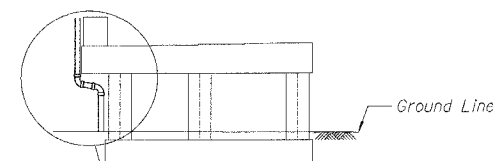
**SN 016-1111 - PIER 8 - NORTH ELEVATION**  
(Looking South)



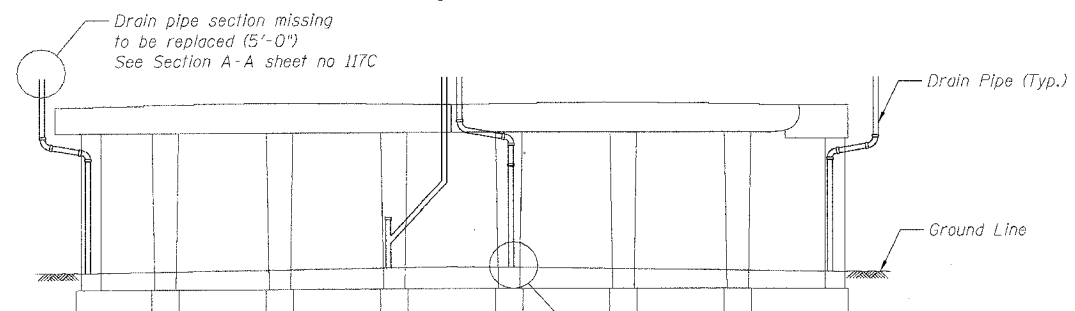
**SN 016-1111 - PIER 1 - SOUTH ELEVATION**  
(Looking North)



**SN 016-1111 - PIER 7 - NORTH ELEVATION**  
(Looking South)



**SN 016-1111 - PIER E8 - SOUTH ELEVATION**  
(Looking North)



**SN 016-1111 - PIER 6 - NORTH ELEVATION**

**BILL OF MATERIAL**

ITEM DESCRIPTION	QUANTITY
	SN 016-1111
Bridge Drainage System Repairs	FOOT 55

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
DRAINAGE REPAIRS  
SN 016-1111

SCALE: NTS  
DATE: 3/7/2008  
DRAWN BY: LAM  
CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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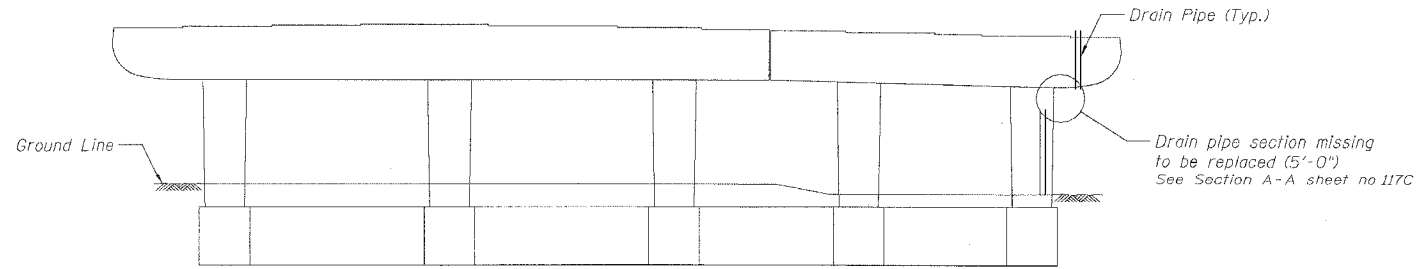


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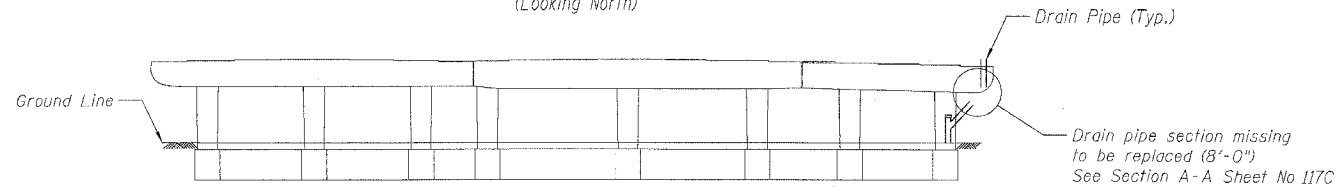
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	113
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07



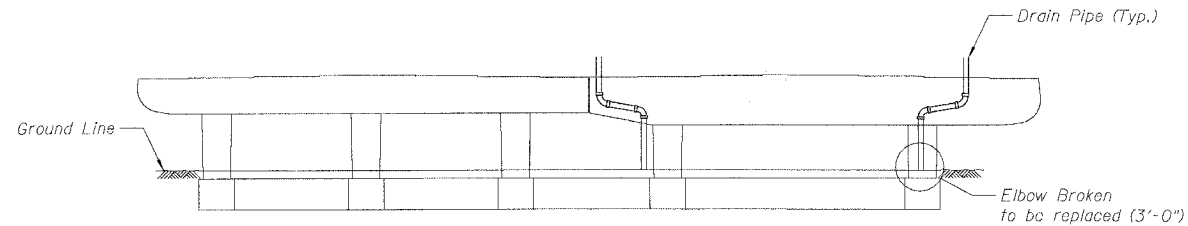
**SN 016-1112 - PIER 21 - SOUTH ELEVATION**

(Looking North)



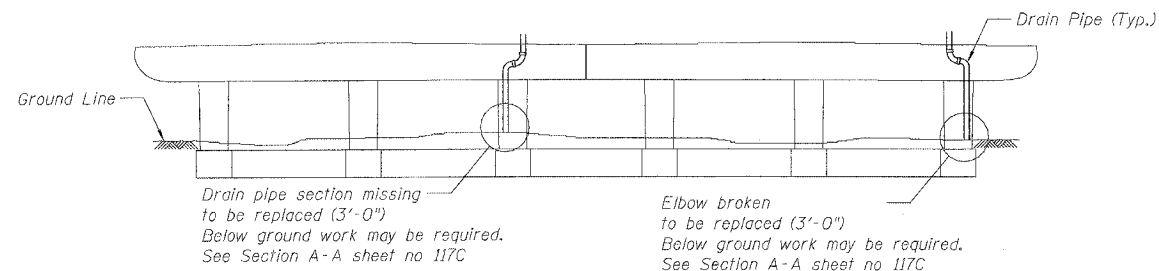
**SN 016-1112 - PIER 20 - SOUTH ELEVATION**

(Looking North)



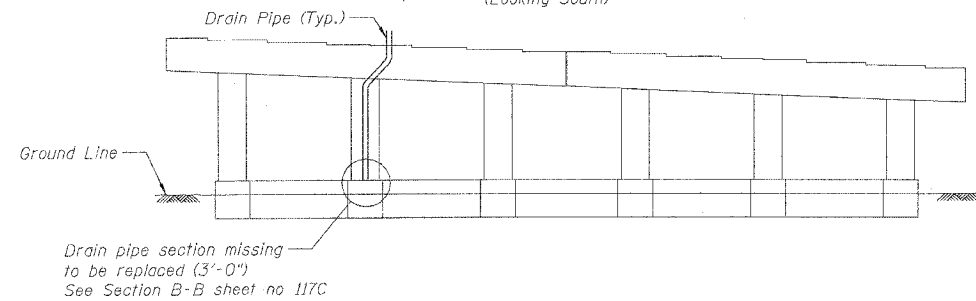
**SN 016-1112 - PIER 18 & PIER 19 - SOUTH ELEVATION**

(Looking North)



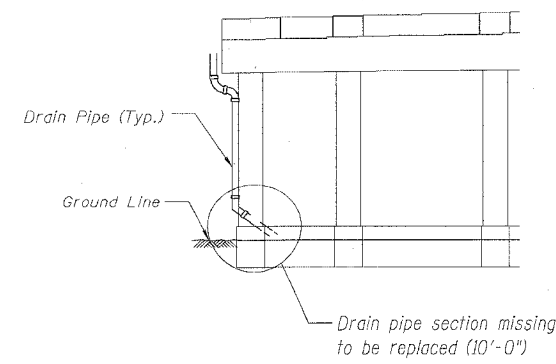
**SN 016-1112 - PIER 17 - NORTH ELEVATION**

(Looking South)

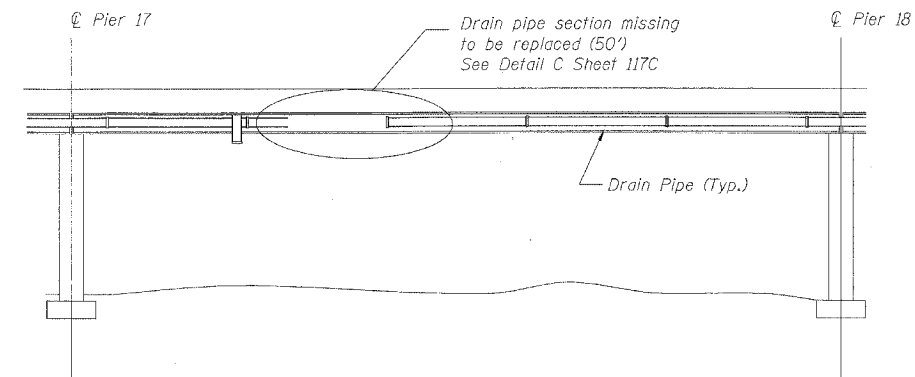


**SN 016-1112 - PIER 13 - SOUTH ELEVATION**

(Looking North)



**SN 016-1112 - PIER 14 RAMP B-EAST FASCIA BEAM**



**SN 016-1112 - SOUTHBOUND SIDE - WEST FASCIA BEAM**

Notes:

- See Drainage Repair Notes on sheet 111
- For pier locations see General Plan & Elevation Sheets.
- SN 016-1112, Span 17  
Drain pipe section outside of west beam missing to be replaced. Estimated Length of 50'-0".  
Exact length to be verified by Contractor.

**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY
Bridge Drainage System Repairs	FOOT	135

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
DRAINAGE REPAIRS  
SN 016-1112

SCALE: NTS  
DATE: 3/1/2008

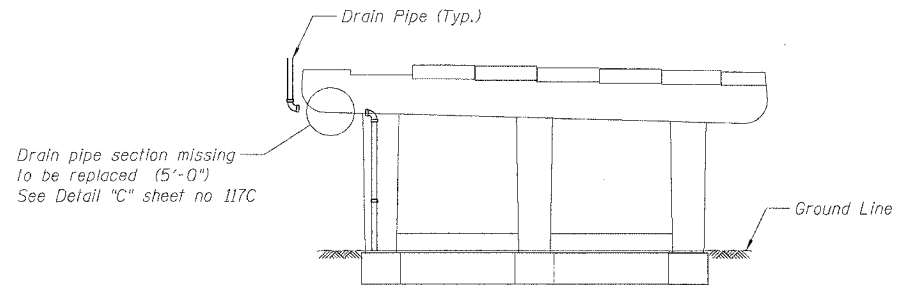
DRAWN BY: LAM  
CHECKED BY: BLU

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CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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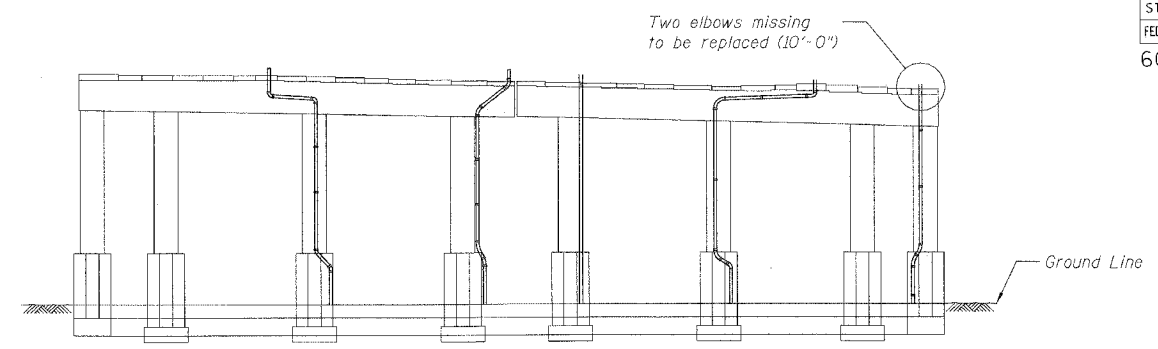


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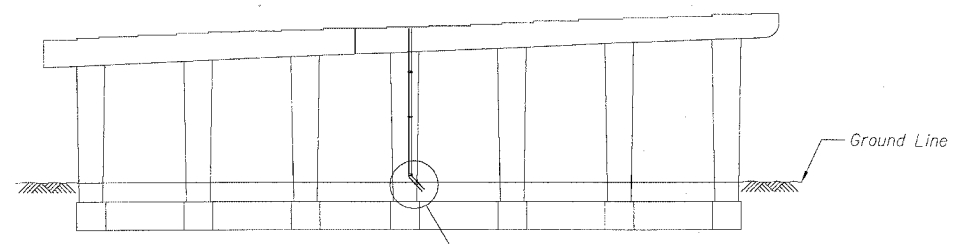
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



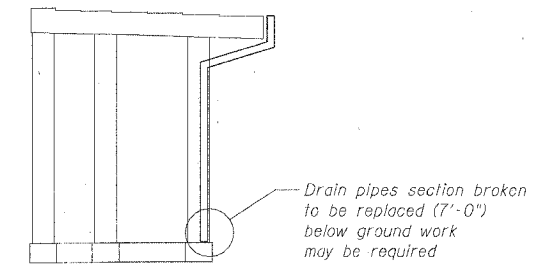
**SN 016-1113 - PIER D-10 - SOUTH ELEVATION**  
(Looking North)



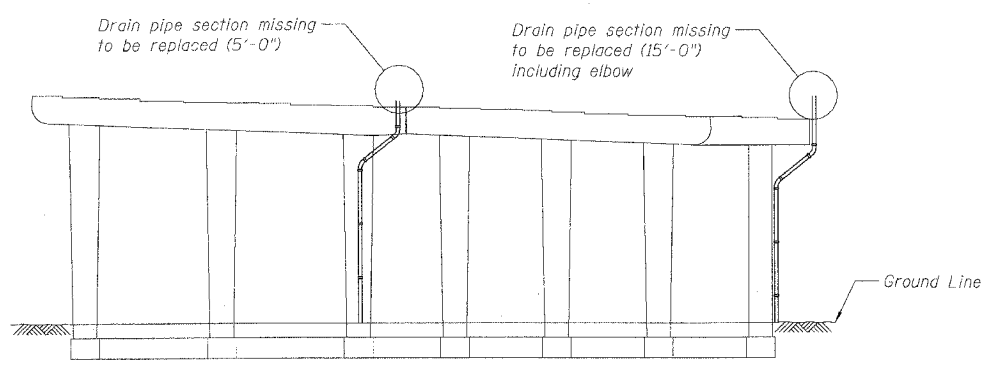
**SN 016-1113 - PIER 1 - SOUTH ELEVATION**  
(Looking North)



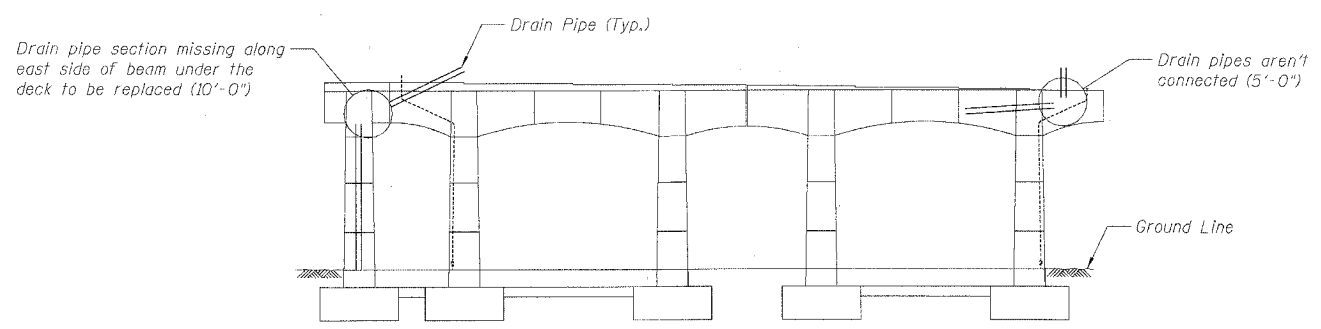
**SN 016-1113 - PIER 9 - NORTH ELEVATION**  
(Looking South)



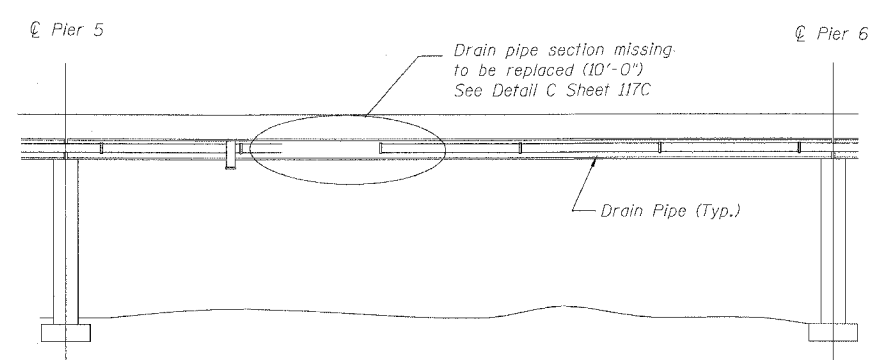
**SN 016-1113 - PIER A5 - SOUTH ELEVATION**  
(Looking North)



**SN 016-1113 - PIER 5 - SOUTH ELEVATION**  
(Looking North)



**SN 016-1114 - PIER 1 - SOUTH ELEVATION**  
(Looking North)



**SN 016-1113 - NB SIDE EAST FASCIA BEAM**

- Notes:
1. See Drainage Repair Notes on sheet 111
  2. For pier locations see General Plan & Elevation Sheets.

**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY	
		SN 016-1113	SN 016-1114
Bridge Drainage System Repairs	FOOT	55	15

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 DRAINAGE REPAIRS  
 SN 016-1113 & 016-1114

SCALE: NTS  
 DATE: 3/7/2008

DRAWN BY: LAM  
 CHECKED BY: BLU

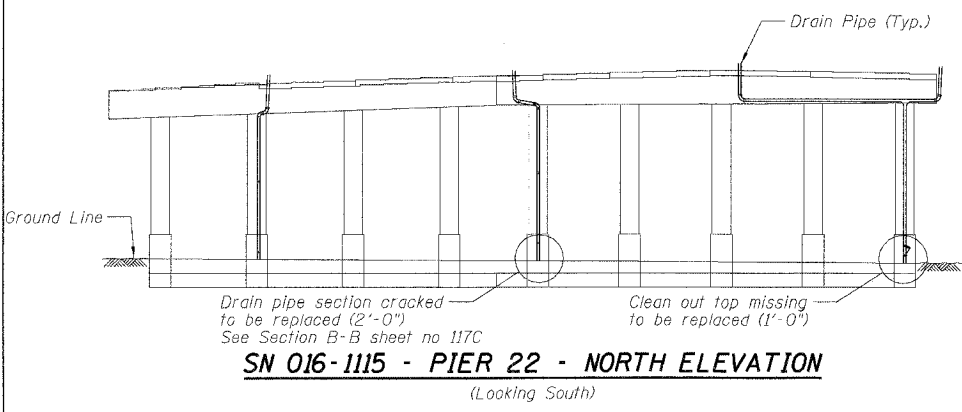
BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com



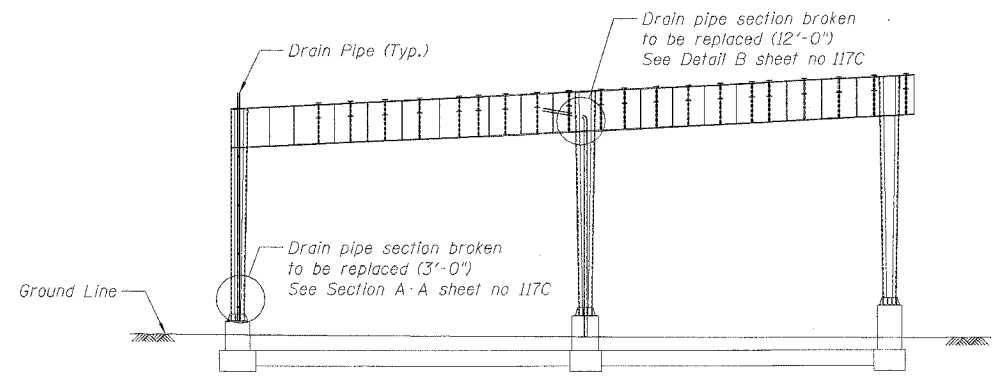
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

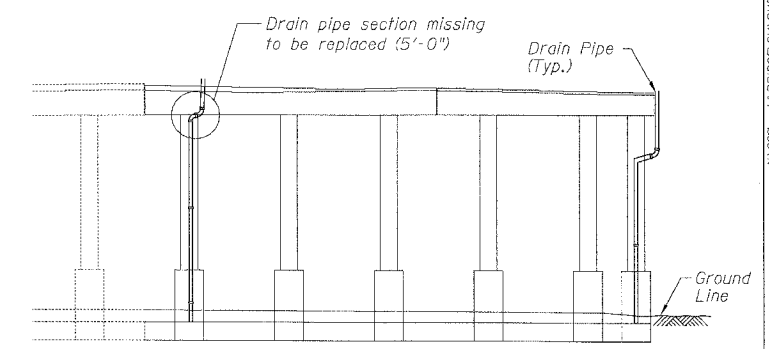
60B07



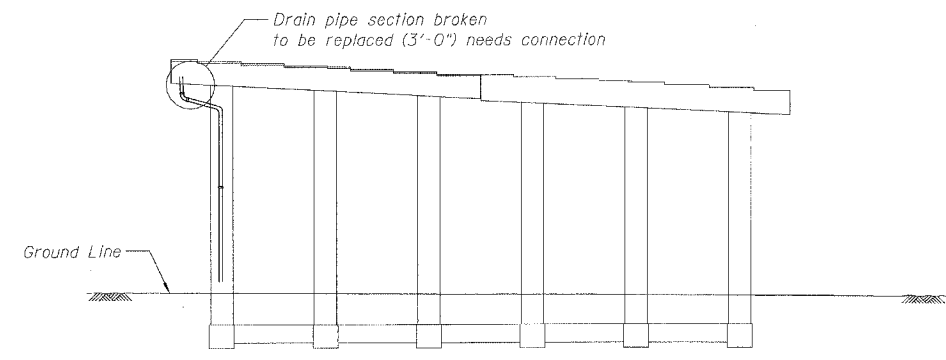
**SN 016-1115 - PIER 22 - NORTH ELEVATION**  
(Looking South)



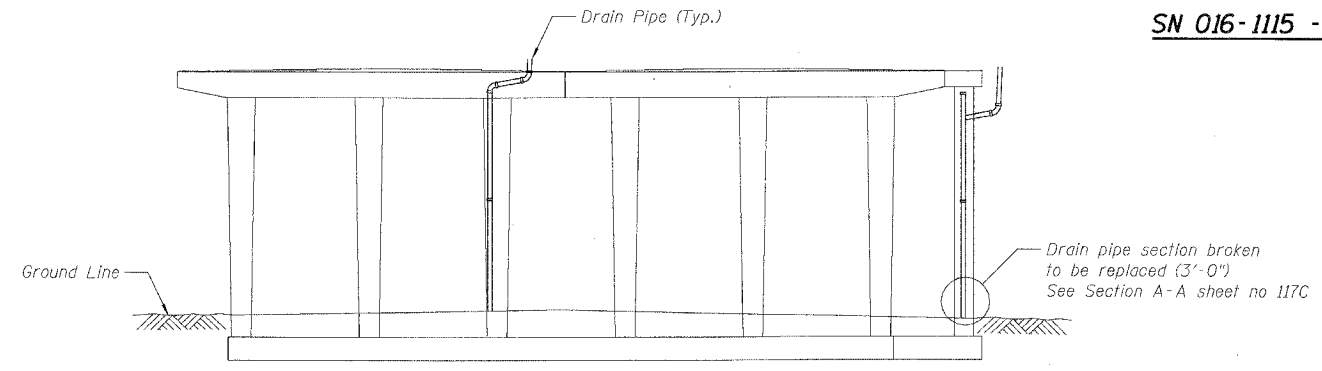
**SN 016-1115 - PIER 11 - NORTH ELEVATION**  
(Looking South)



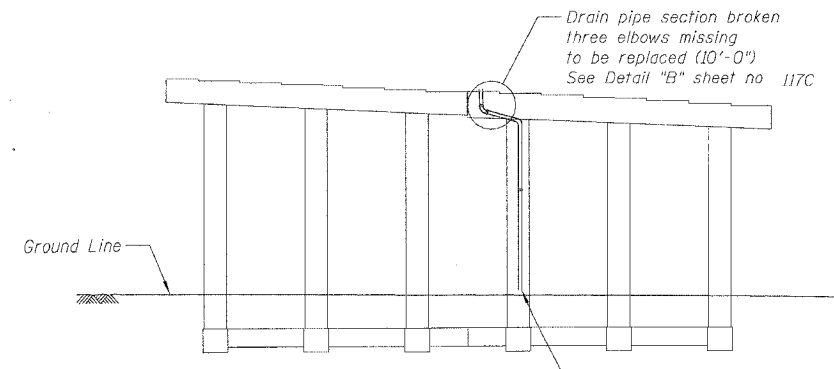
**SN 016-1115 - PIER 1 - NORTH ELEVATION**  
(Looking South)



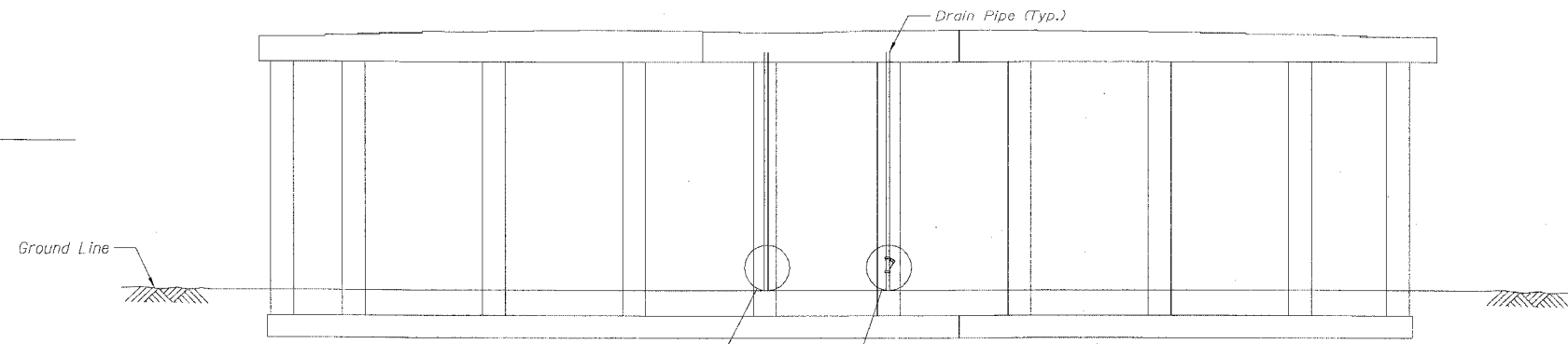
**SN 016-1115 - PIER 20 - SOUTH ELEVATION**  
(Looking North)



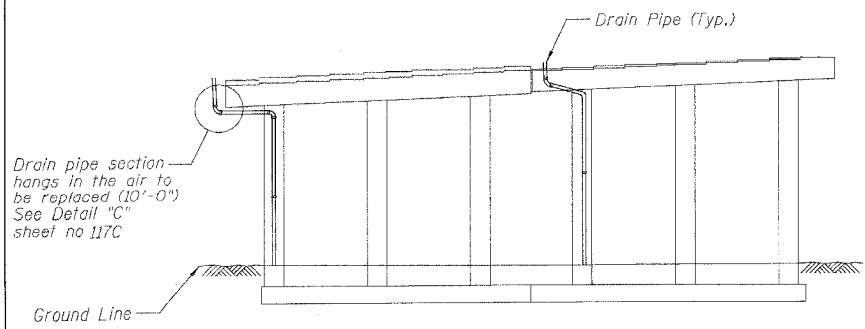
**SN 016-1115 - PIER 6 - SOUTH ELEVATION**  
(Looking North)



**SN 016-1115 - PIER 18 - SOUTH ELEVATION**  
(Looking North)



**SN 016-1115 - PIER 4 - SOUTH ELEVATION**  
(Looking North)



**SN 016-1115 - PIER 15 - NORTH ELEVATION**  
(Looking South)

- Notes:
1. See Drainage Repair Notes on sheet 111
  2. For pier locations see General Plan & Elevation Sheets.
  3. SN 016-1116, Span 2  
Drain pipe cleanout cap missing along the north face to be replaced (1'-0")

**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY
Bridge Drainage System Repairs	FOOT	56

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
DRAINAGE REPAIRS  
SN 016-1115

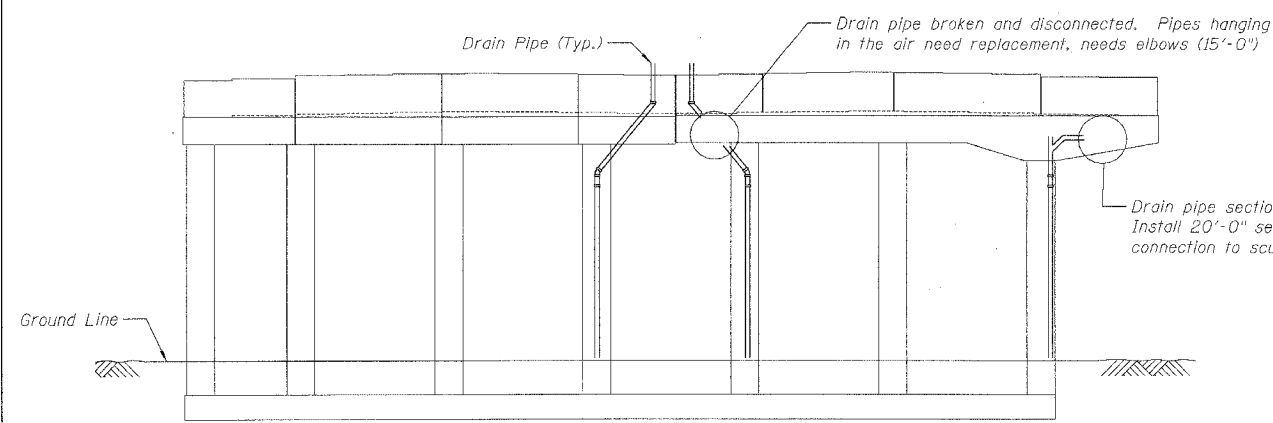
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DATE: 3/1/2008

DRAWN BY: LAM  
CHECKED BY: BLU

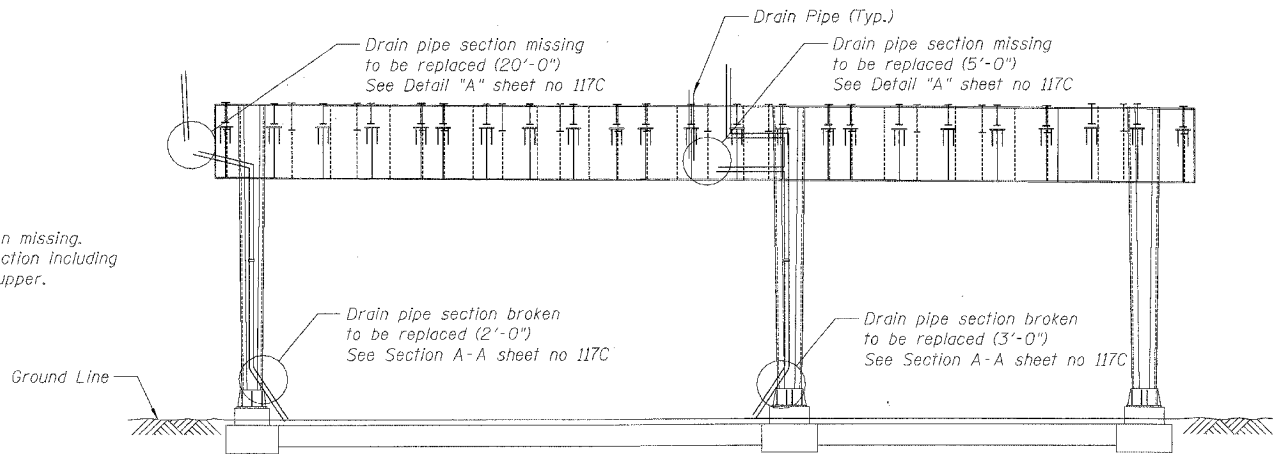
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbancinc.com

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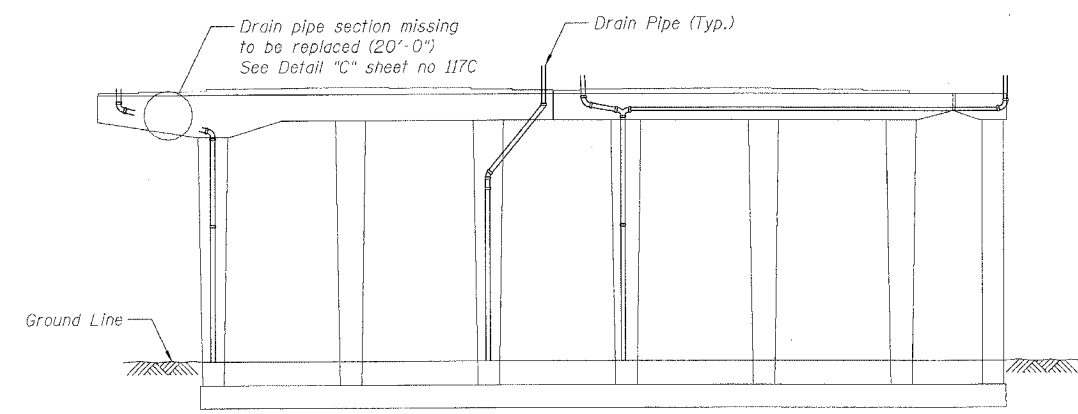
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	116
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



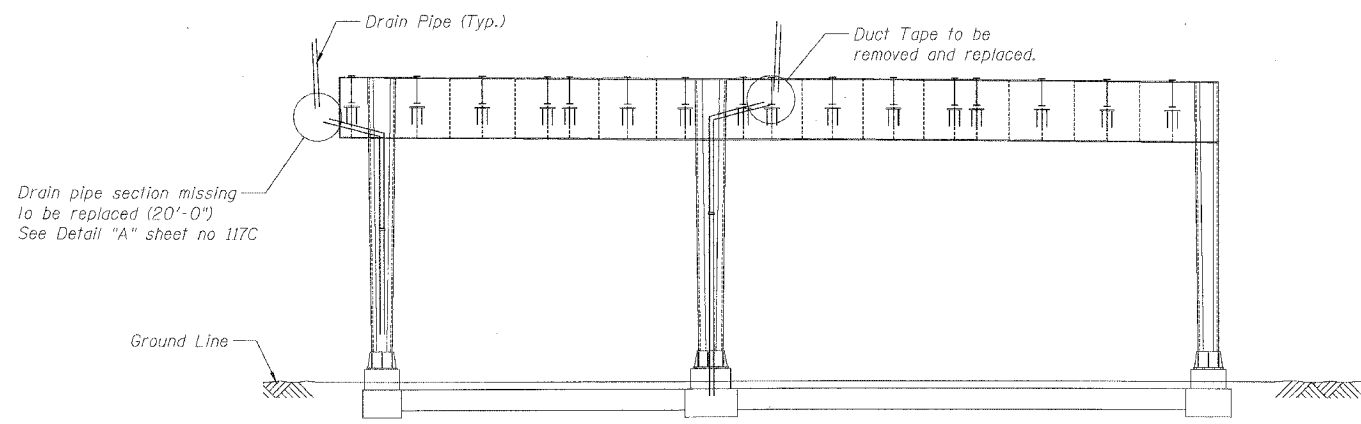
**SN 016-1117 - PIER 26 - SOUTH ELEVATION**  
(Looking North)



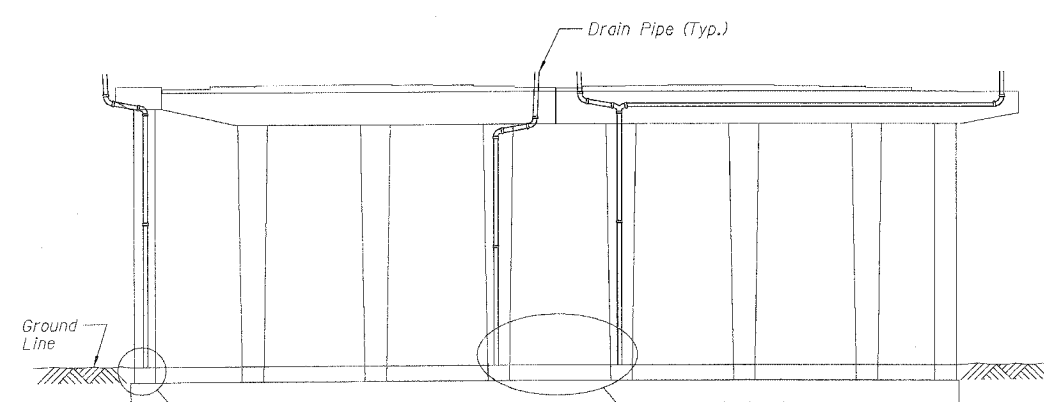
**SN 016-1117 - PIER 23 - NORTH ELEVATION**  
(Looking South)



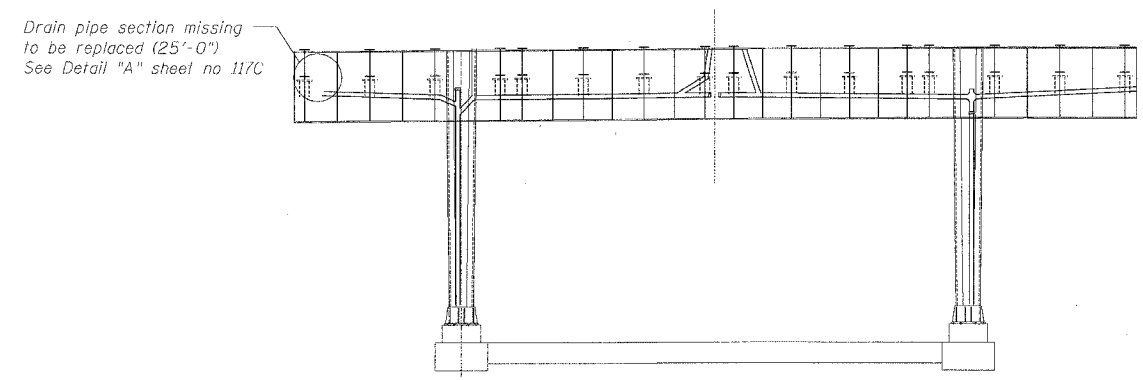
**SN 016-1117 - PIER 25 - NORTH ELEVATION**  
(Looking South)



**SN 016-1117 - PIER 22 - NORTH ELEVATION**  
(Looking South)



**SN 016-1117 - PIER 24 - NORTH ELEVATION**  
(Looking South)



**SN 016-1117 - PIER 21 - NORTH ELEVATION**  
(Looking South)

**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY
		SN 016-1117
Bridge Drainage System Repairs	FOOT	143

- Notes:
- See Drainage Repair Notes on sheet 111
  - For pier locations see General Plan & Elevation Sheets.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
DRAINAGE REPAIRS  
SN 016-1117

SCALE: NTS  
DATE: 3/7/2008  
DRAWN BY: LAM  
CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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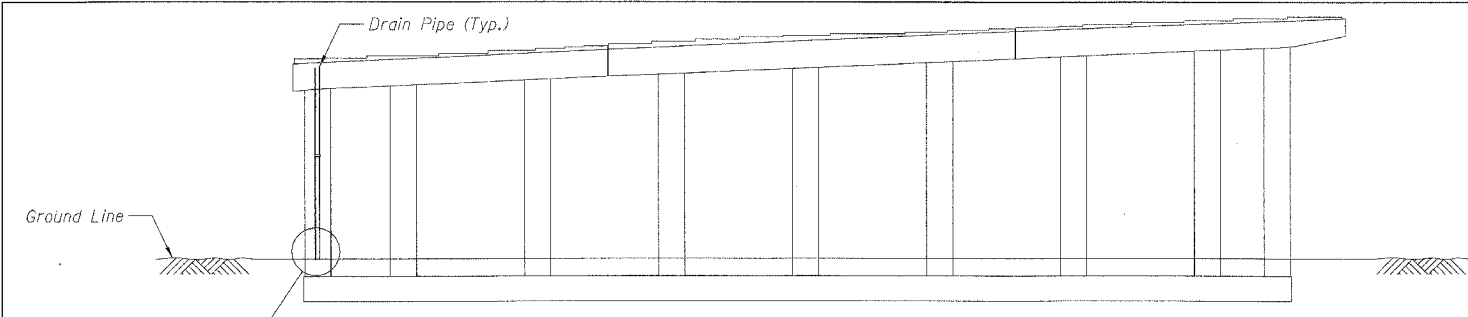


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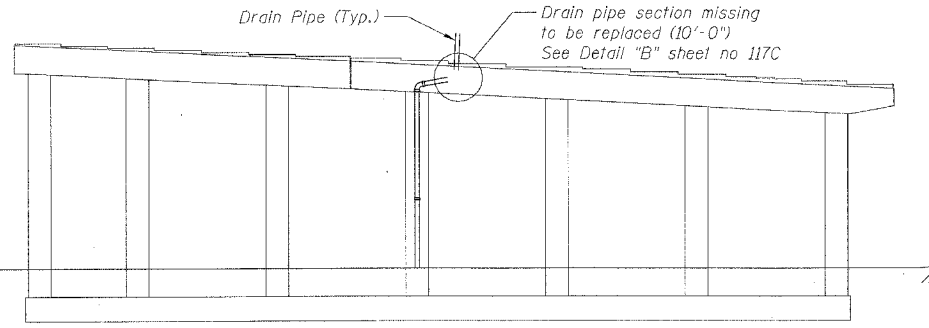
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STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07



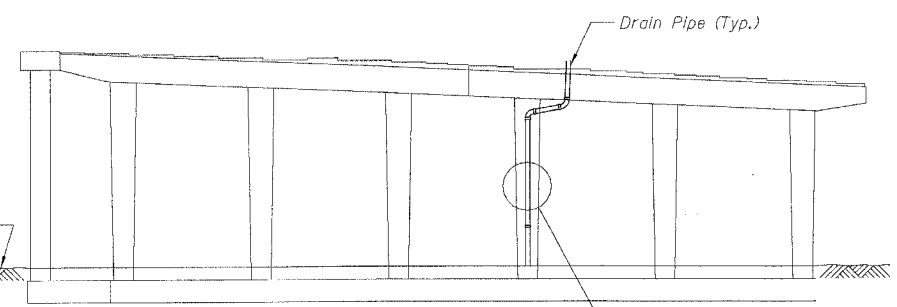
**SN 016-1117 - PIER 18 - SOUTH ELEVATION**  
(Looking North)

Drain pipe section broken to be replaced (3'-0")  
See Section A-A sheet no 117C



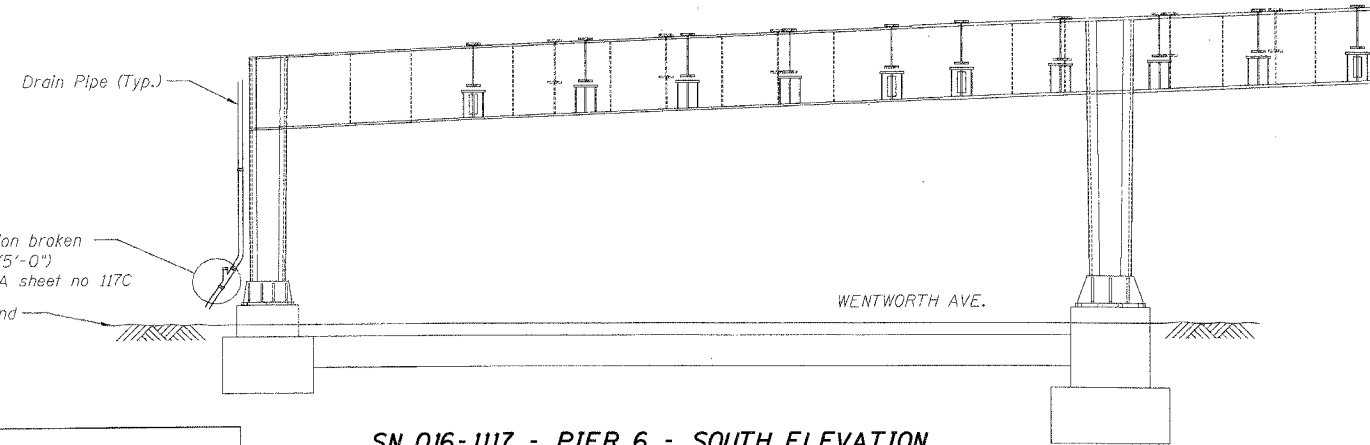
**SN 016-1117 - PIER 16 - NORTH ELEVATION**  
(Looking South)

Drain pipe section missing to be replaced (10'-0")  
See Detail "B" sheet no 117C



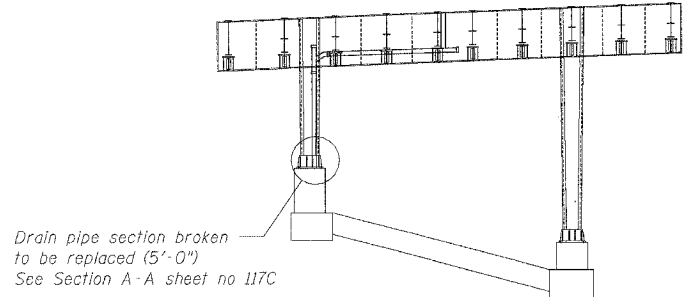
**SN 016-1117 - PIER 15 - NORTH ELEVATION**  
(Looking South)

Drain pipe section missing to be replaced (3'-0")  
See Section B-B sheet no 117C



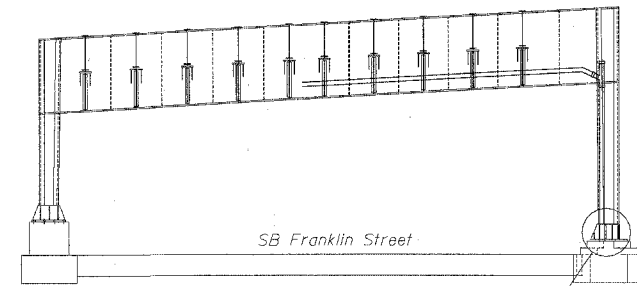
**SN 016-1117 - PIER 6 - SOUTH ELEVATION**  
(Looking North)

Drain pipe section broken to be replaced (5'-0")  
See Section A-A sheet no 117C



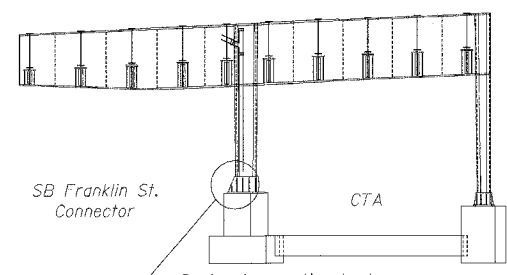
**SN 016-1117 - PIER 5 - SOUTH ELEVATION**  
(Looking North)

Drain pipe section broken to be replaced (5'-0")  
See Section A-A sheet no 117C



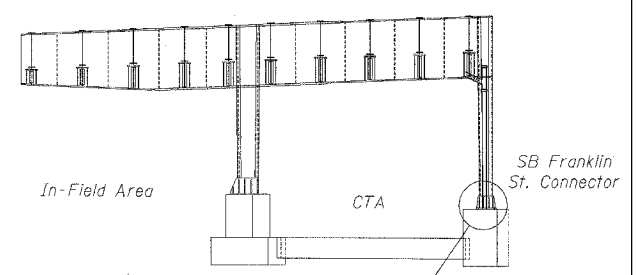
**SN 016-1117 - PIER 2 - SOUTH ELEVATION**  
(Looking North)

Drain pipe section broken to be replaced (5'-0"), groundwork may be required. See Section A-A sheet no 117C. See sheet no 117C for downspout protection



**SN 016-1117 - PIER 3 - SOUTH ELEVATION**  
(Looking North)

Drain pipe section broken to be replaced (5'-0"), groundwork may be required. See Section A-A sheet no 117C. See sheet no 117C for downspout protection



**SN 016-1117 - PIER 2 - SOUTH ELEVATION**  
(Looking North)

Drain pipe section broken to be replaced (7'-0"), groundwork may be required. See Section A-A sheet no 117C. See sheet no 117C for downspout protection

**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY
Bridge Drainage System Repairs	FOOT	43

- Notes:
- See Drainage Repair Notes on sheet 111
  - For pier locations see General Plan & Elevation Sheets.

REVISIONS	DATE

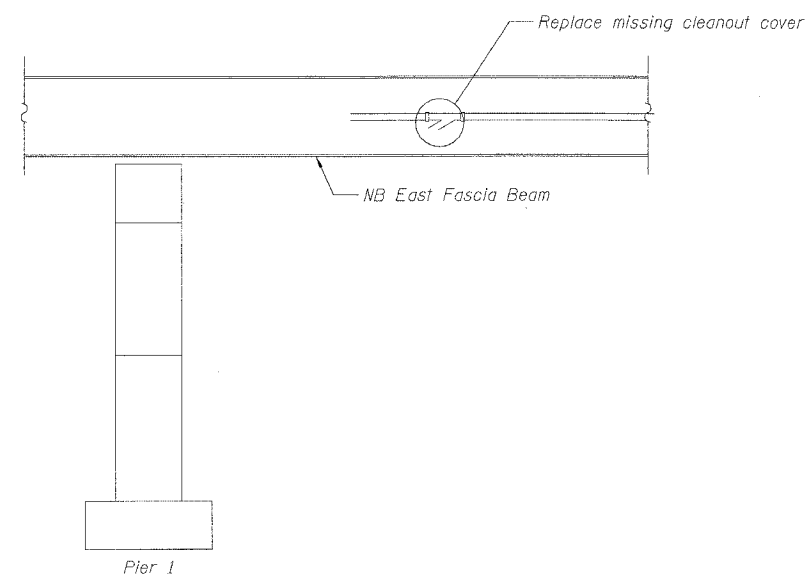
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
DRAINAGE REPAIRS  
SN 016-1117

SCALE: NTS  
DATE: 3/7/2008  
DRAWN BY: LAM  
CHECKED BY: BLU

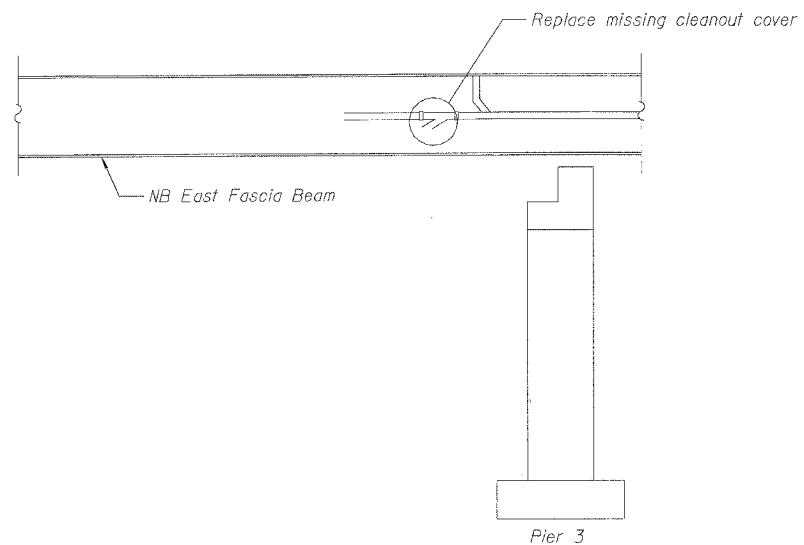
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
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W:\660\cadd\BRIDGE\21A\SHEETS\660\_21A\_117.dwg 3/27/2008 8:43:36 AM

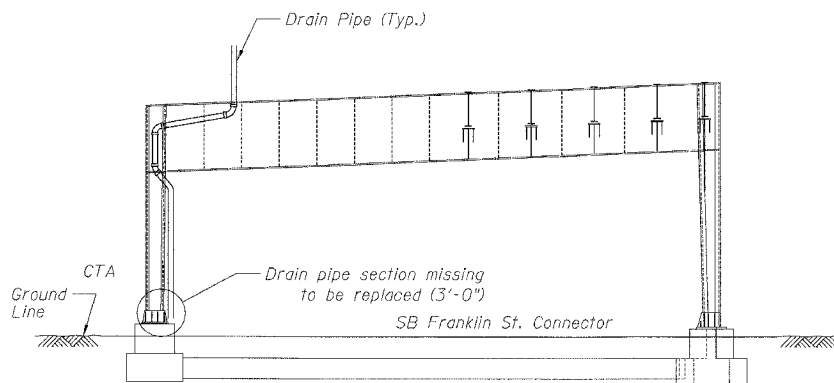
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
60B07				



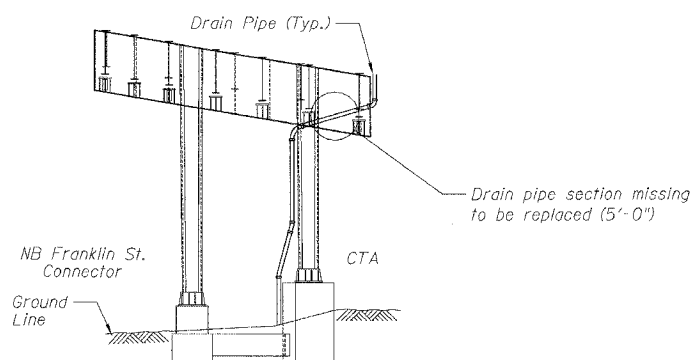
**SN 016-1116 - SPAN 2 - EAST ELEVATION**  
(Looking South)



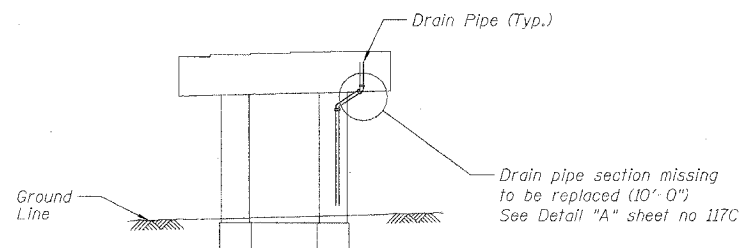
**SN 016-1116 - SPAN 3 - EAST ELEVATION**  
(Looking South)



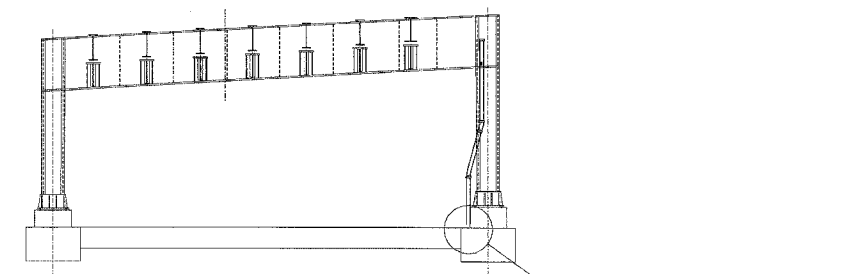
**SN 016-1118 - PIER H4 - NORTH ELEVATION**  
(Looking South)



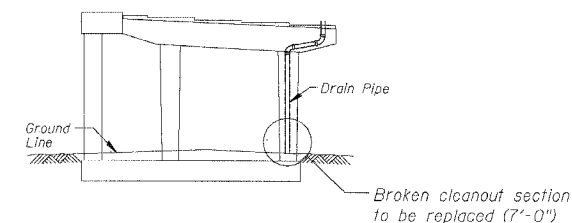
**SN 016-1118 - PIER H3 - NORTH ELEVATION**  
(Looking South)



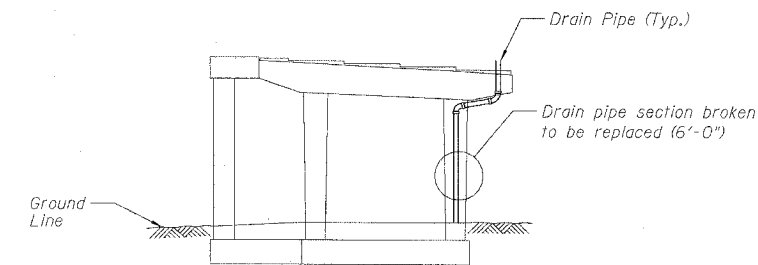
**SN 016-1047 - PIER 24 - NORTH ELEVATION**  
(Looking South)



**SN 016-1067 - PIER A5 - NORTH ELEVATION**  
(Looking South)



**SN 016-1067 - PIER A7 - NORTH ELEVATION**  
(Looking South)



**SN 016-1067 - PIER A8 - NORTH ELEVATION**  
(Looking South)

**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY			
		SN 016-1116	SN 016-1118	SN 016-1047	SN 016-1067
Bridge Drainage System Repairs	FOOT	8	8	10	18

- Notes:
- See Drainage Repair Notes on sheet 111
  - For pier locations see General Plan & Elevation Sheets.

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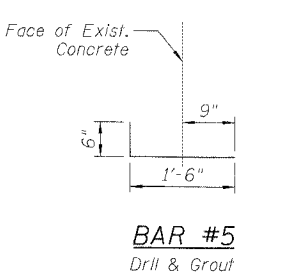
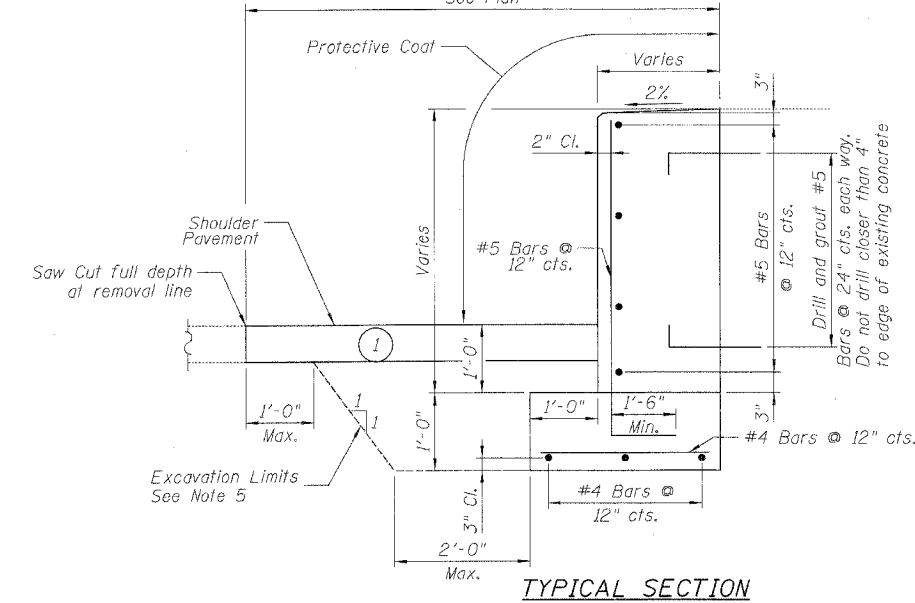
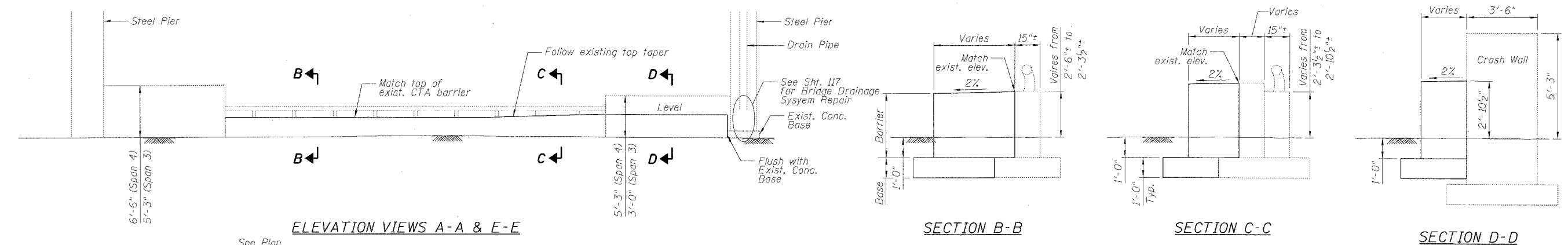
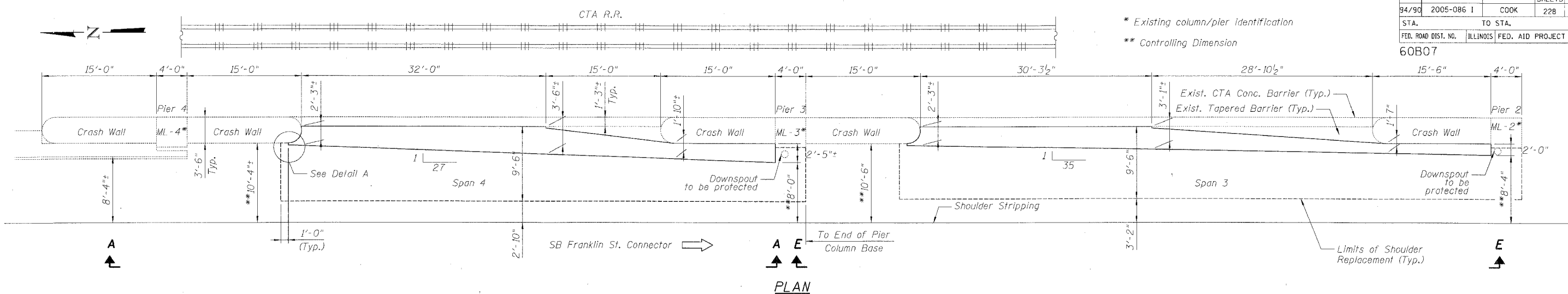
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) DAN RYAN ELEVATED BRIDGE BEARING REPLACEMENT & STEEL REPAIR DRAINAGE REPAIRS 016-1116, 016-1118, 016-1047 & 016-1067 SCALE: NTS DATE: 3/7/2008
NAME	DATE	
		DRAWN BY: LAM CHECKED BY: BLU

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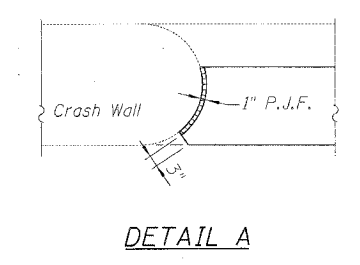
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 1	COOK	228	117B
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

\* Existing column/pier identification  
 \*\* Controlling Dimension



**MIN. BAR LAP**  
 #4 - 1'-8"  
 #5 - 2'-2"



- NOTES:**
- Proposed dimensions shall be field verified prior to ordering of materials. Costs shall be included in "Pier Protection System".
  - Controlling dimensions shown shall be used to control taper rates.
  - Provide 1" P.J.F. between new concrete and existing crash walls.
  - Remove any loose spalled concrete from existing barrier and clean reinforcement bars as required prior to capping with new concrete.
  - Excavation as required to install barrier and base. Backfill with Subbase Granular Material, Type C. Limits shall be minimized as practical.

**SN 016-1117 DOWNSPOUT-PROTECTIVE BARRIER**

Contractor shall provide Barrier Protection as shown, based on field conditions and as directed by the Engineer. See Special Provisions.

Hot-Mix Asphalt Shoulders, 10"  
 AC Type: PG 64-22/58-22  
 Percent Air Voids: 4% @ 70Gyr  
 Max Rap%: 15/25  
 Mix Type: HMA Shoulder (HMA Binder IL-19mm)  
 Contractor has option to vary RAP%.  
 When RAP exceeds 20%, the new asphalt binder in the mix shall be PG 58-22.

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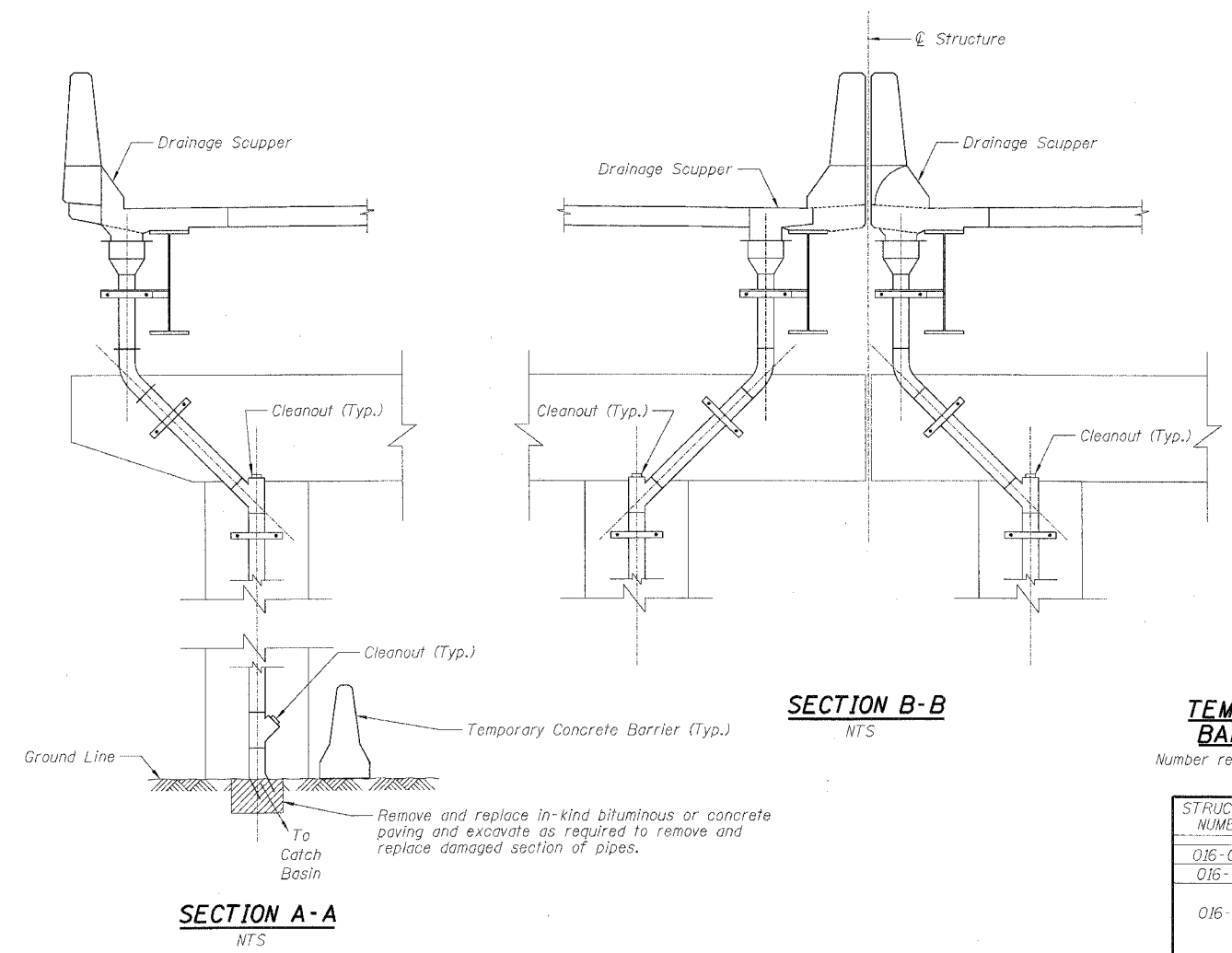
**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY
Pier Protection System	L. SUM	1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 S.N. 016-1117  
 DOWNSPOUT PROTECTION  
 SCALE: NTS  
 DATE: 3/7/2008  
 DRAWN BY: LAM  
 CHECKED BY: BLU

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 B:\117 3/21/2008



Remove and replace in-kind bituminous or concrete paving and excavate as required to remove and replace damaged section of pipes.

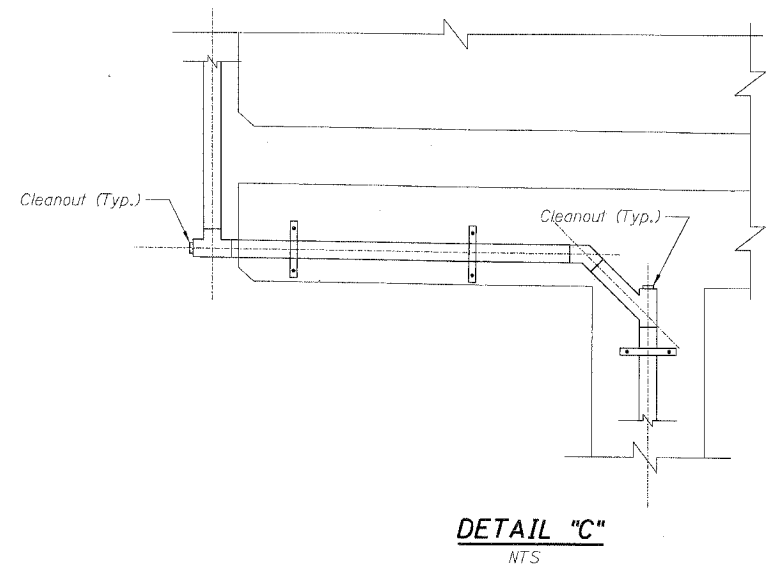
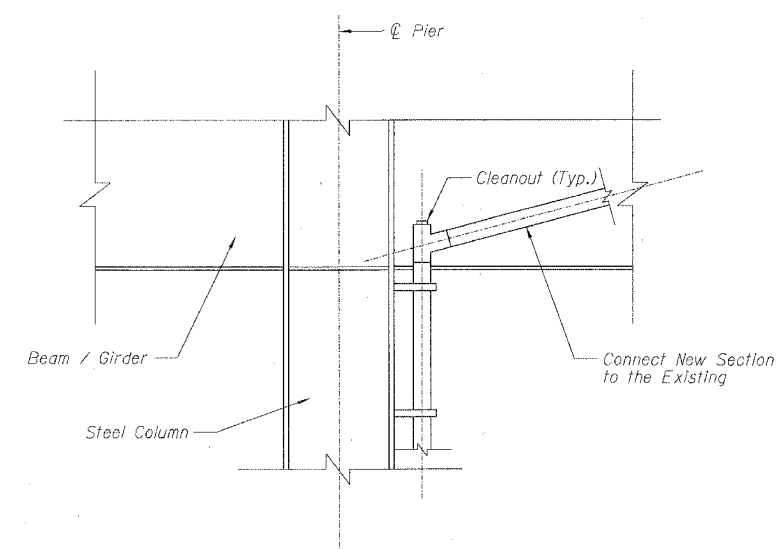
To Catch Basin

- Notes:
- The removal and in-kind replacement of areas of bituminous or concrete paving and necessary excavation required for the replacement of damaged pipes at ground level shall be included in "Bridge Drainage System Repairs".
  - An estimated quantity of 570 L.F. (57 - 10'-0" Segments) of temporary concrete barrier is provided. These barriers are required for the protection of the drain pipes from vehicles at locations under the structures used as parking lots or material storage areas (Locations shown in table).
  - The Contractor shall verify the exact locations where the temporary concrete barriers are required. Location of barrier shall be approved by the Engineer. Place barrier to ensure adequate access to clean-outs and catch basins. Barrier shall be F or New Jersey shape. The work and the material (furnishing and placing) will be paid at the contract unit price for "Furnishing Temporary Concrete Barrier". Quality of provided Temporary Concrete Barrier shall be measured based on 10-foot segments and approved by the Engineer, and the Engineer shall have the authority to reject barrier determined to not be in good condition.
  - See Drainage Repair Notes on sheet 111
  - The details provided on this sheet show a schematic representation of the Existing Drainage System. Contractor shall provide all elbows, tees, couplings and cleanouts necessary to complete the work.

**TEMPORARY CONCRETE BARRIER LOCATIONS**

Number required for downspout protection (10'-0" Segments)

STRUCTURE NUMBER	PIER	NUMBER REQUIRED	
016-0137	9	4	
016-1110	1	3	
016-1111	7	3	
	2	2	
	3	2	
	4	2	
	5	2	
	6	2	
	7	2	
	8	2	
016-1112	9	2	
	EB	1	
	12	1	
	13	3	
	14	2	
	15	1	
	B14	1	
016-1113	10	2	
	9	2	
	5	2	
	3	3	
	1	1	
	016-1117	8	2
		9	1
		10	2
		11	1
		12	1
		13	2
		24	2
		016-1067	A12
A7	1		
A5	1		
11	1		
10	1		
8	1		
7	1		
6	1		
Misc	6		
<b>TOTAL</b>		<b>73</b>	



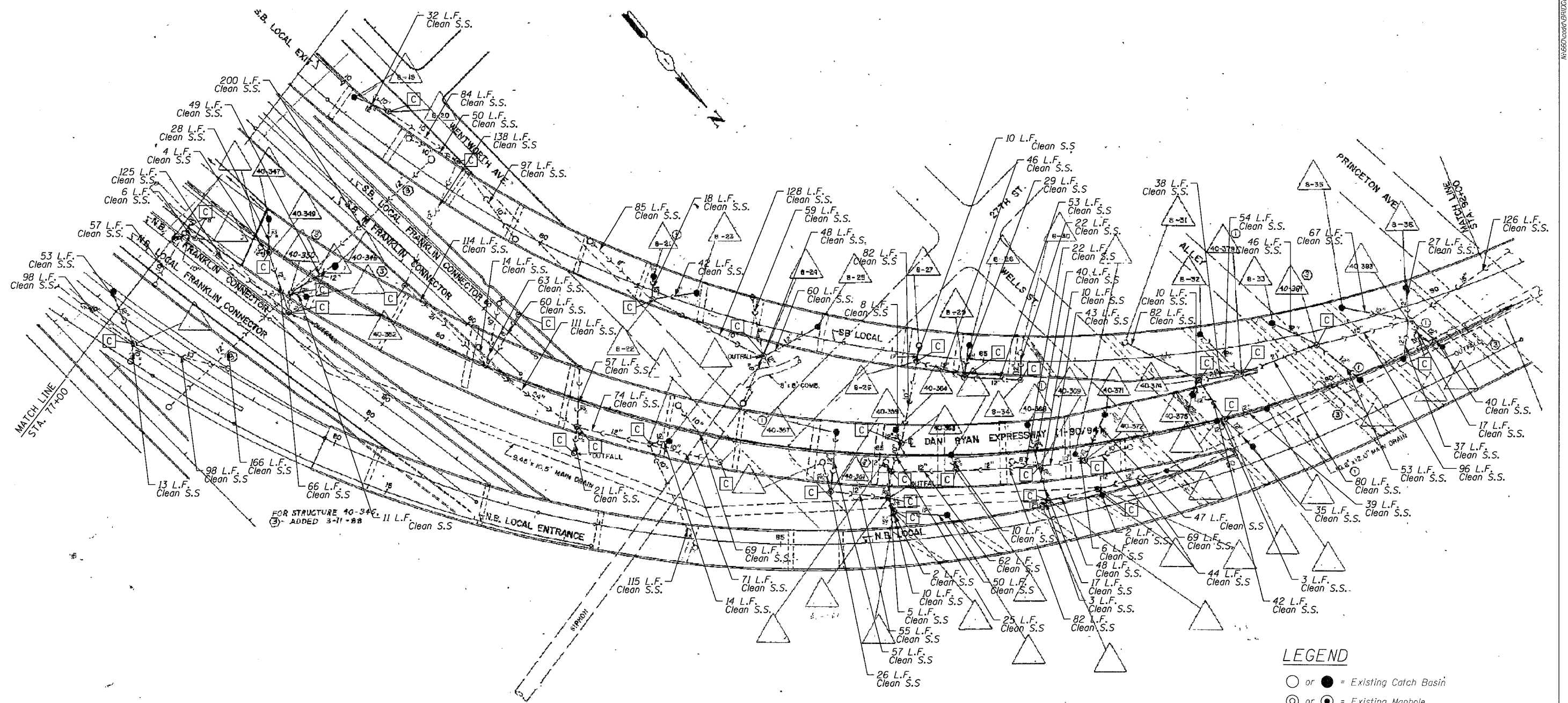
**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY
Temporary Concrete Barrier (To Remain Permanently)	FOOT	730

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 DRAINAGE REPAIRS  
 DETAILS AND TYPICAL SECTIONS  
 SCALE: NTS  
 DATE: 3/7/2008  
 DRAWN BY: LAM  
 CHECKED BY: BLU

8/4/14/AM  
 8/20/12/1/1



MATCH LINE  
STA. 71+00

**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY		
		SN 016-1117	SN 016-1067	SN 016-1118
Drainage Structures to be Cleaned	EACH	19	9	5
Storm Sewers to be Cleaned	FOOT	2951	1140	384
Video Taping of Main Drain	FOOT	*	*	*
Main Drain Cleaning	FOOT	*	*	*

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**NOTE:**  
Information from 1988-89 As-Builts to show probable location of existing drainage pipes and structures collecting bridge drainage. Field verify locations with Engineer. Clean all drainage pipes and structures downstream of catch basins cleaned under contracts 62580 and 62581 as shown in the plans and directed by the Engineer. Quantities estimated from As-builts.

\* Previously completed under Contract 62300

**LEGEND**

- or ● = Existing Catch Basin
- ⊙ or ⊛ = Existing Manhole
- — — = Existing Storm Sewer
- ⓐ = Drainage Structures to be Cleaned

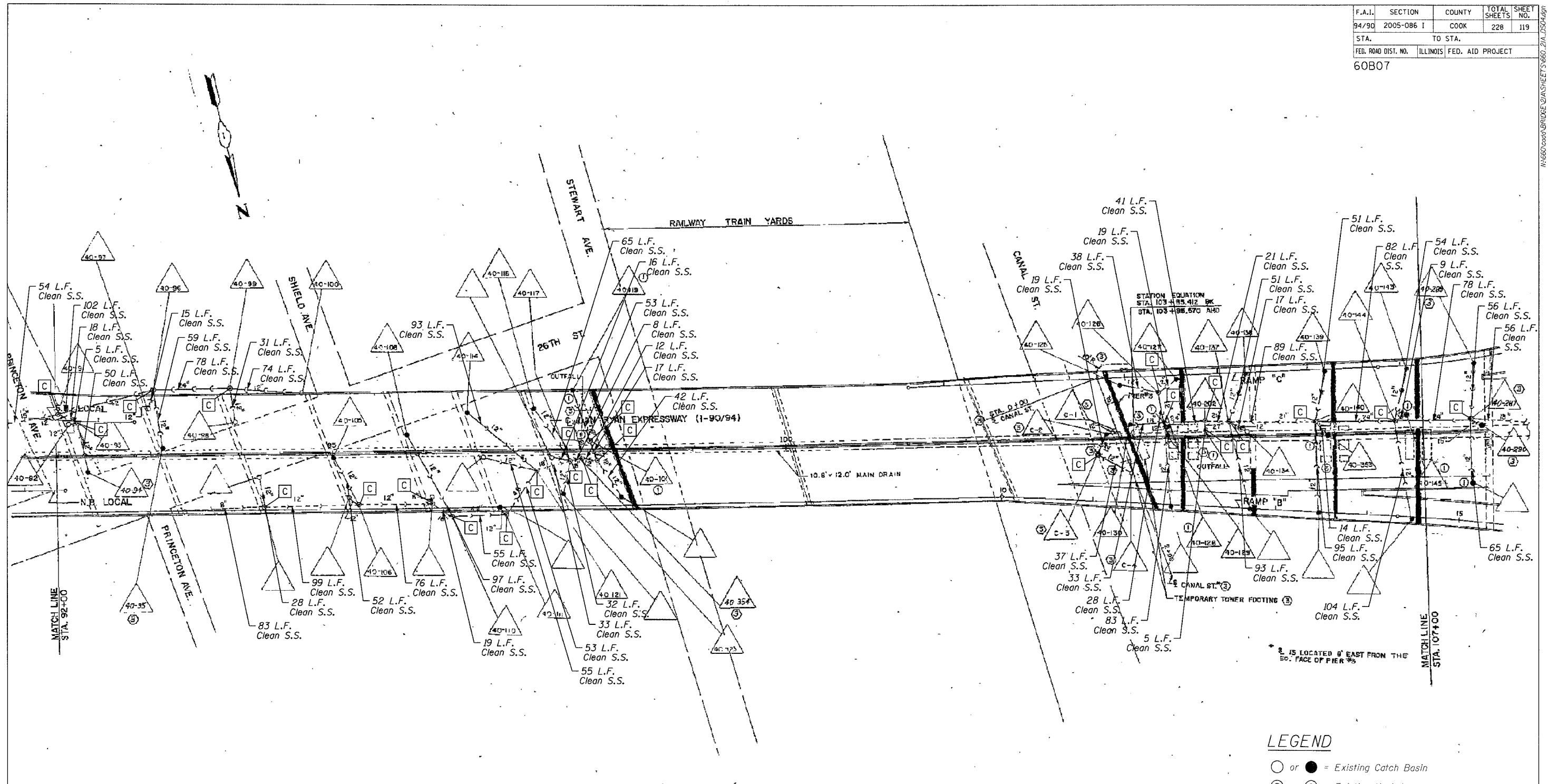
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING DRAINAGE SYSTEM  
DETAILS

SCALE: NTS  
DATE: 8/21/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

NO. 660700000 BRIDGE DETAILS SHEETS 660\_21A\_0503.dwg 8/21/2007 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	119
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY		
		SN 016-1115	SN 016-1116	SN 016-1117
Drainage Structures to be Cleaned	EACH	8	1	15
Storm Sewers to be Cleaned	FOOT	1184	55	1473
Video Taping of Main Drain	FOOT	*	*	*
Main Drain Cleaning	FOOT	*	*	*

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**NOTE:**  
Information from 1988-89 As-Builts to show probable location of existing drainage pipes and structures collecting bridge drainage. Field verify locations with Engineer. Clean all drainage pipes and structures downstream of catch basins cleaned under contracts 62580 and 62581 as shown in the plans and directed by the Engineer. Quantities estimated from As-builts.  
\*Previously completed under Contract 62300

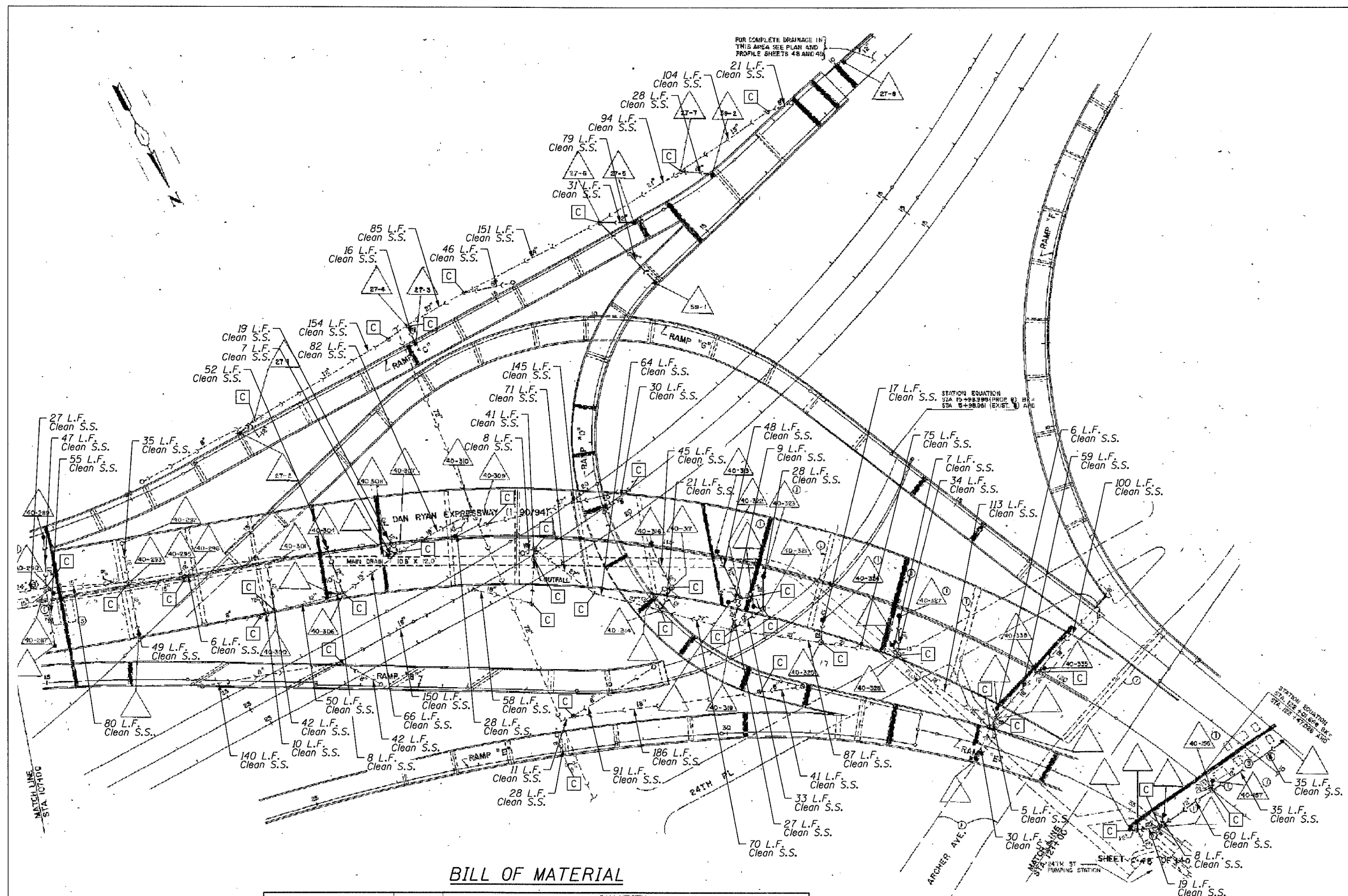
- LEGEND**
- or ● = Existing Catch Basin
  - ⊙ or ⊚ = Existing Manhole
  - = Existing Storm Sewer
  - [C] = Drainage Structures to be Cleaned

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) DAN RYAN ELEVATED BRIDGE BEARING REPLACEMENT & STEEL REPAIR EXISTING DRAINAGE SYSTEM DETAILS
NAME	DATE	

SCALE: NTS  
DATE: 8/21/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	120
STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
		60B07		



### BILL OF MATERIAL

ITEM DESCRIPTION	UNIT	QUANTITY				
		SN 016-1115	SN 016-1059	SN 016-1046	SN 016-1047	SN 016-1140
Drainage Structures to be Cleaned	EACH	25	2	7	2	1
Storm Sewers to be Cleaned	FOOT	2586	278	950	28	283
Video Taping of Main Drain	FOOT	*	*	*	*	*
Main Drain Cleaning	FOOT	*	*	*	*	*

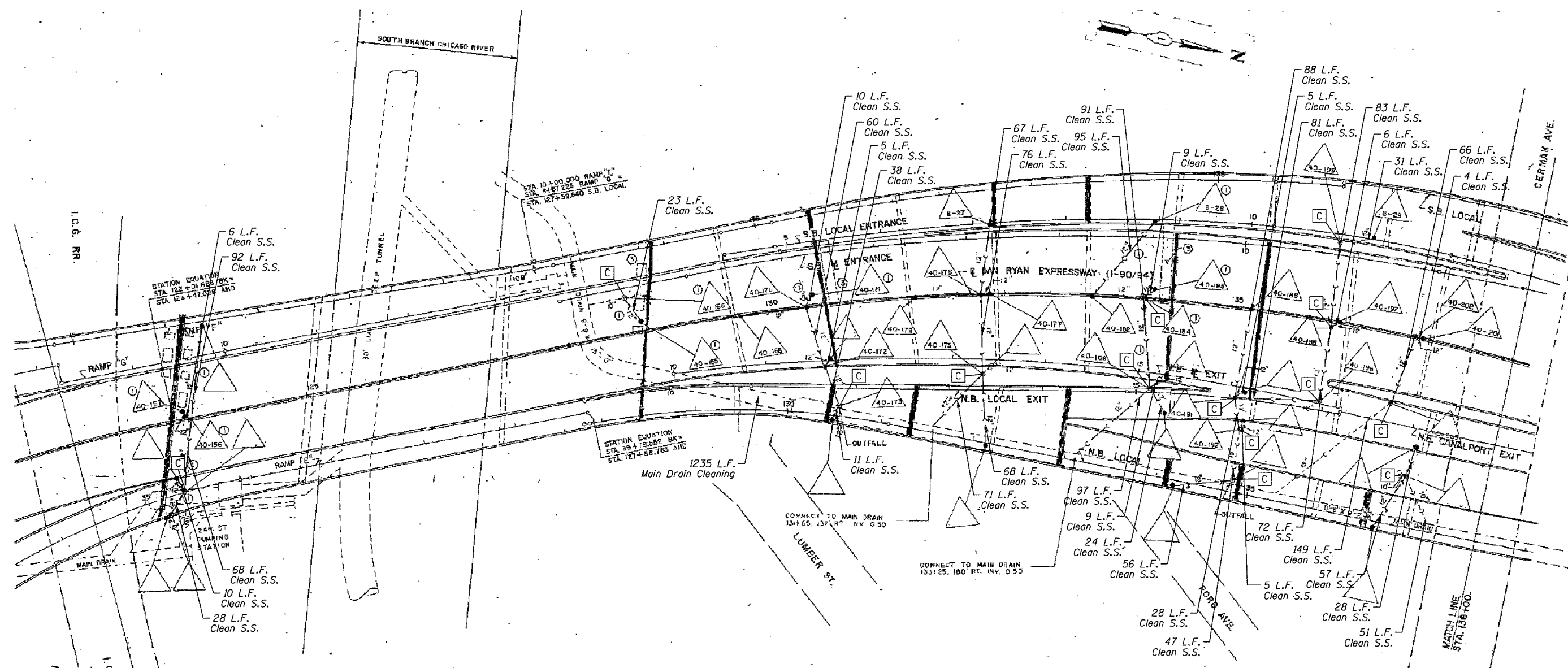
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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NOTE:  
Information from 1988-89 As-Builts to show probable location of existing drainage pipes and structures collecting bridge drainage. Field verify locations with Engineer. Clean all drainage pipes and structures downstream of catch basins cleaned under contracts 62580 and 62581 as shown in the plans and directed by the Engineer. Quantities estimated from As-builts.  
\*Previously completed under Contract 62300

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	F.A.I. 94/90 (DAN RYAN EXPRESSWAY)	
		DAN RYAN ELEVATED BRIDGE	
		BEARING REPLACEMENT & STEEL REPAIR	
		EXISTING DRAINAGE SYSTEM	
		DETAILS	
		SCALE: NTS	DRAWN BY: LAM
		DATE: 8/21/2007	CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	121
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY	
		SN 016-1113	SN 016-1114
Drainage Structures to be Cleaned	EACH	12	2
Storm Sewers to be Cleaned	FOOT	1588	227
Video Taping of Main Drain	FOOT	963	272
Main Drain Cleaning	FOOT	963	272

- LEGEND**
- or ● = Existing Catch Basin
  - ⊙ or ⊚ = Existing Manhole
  - ←←← = Existing Storm Sewer
  - [C] = Drainage Structures to be Cleaned

**NOTE:**  
 Information from 1988-89 As-Builts to show probable location of existing drainage pipes and structures collecting bridge drainage. Field verify locations with Engineer. Clean all drainage pipes and structures downstream of catch basins cleaned under contracts 62580 and 62581 as shown in the plans and directed by the Engineer. Quantities estimated from As-builts.

REVISIONS		DATE
NAME		

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING DRAINAGE SYSTEM  
 DETAILS

SCALE: NTS  
 DATE: 8/21/2007

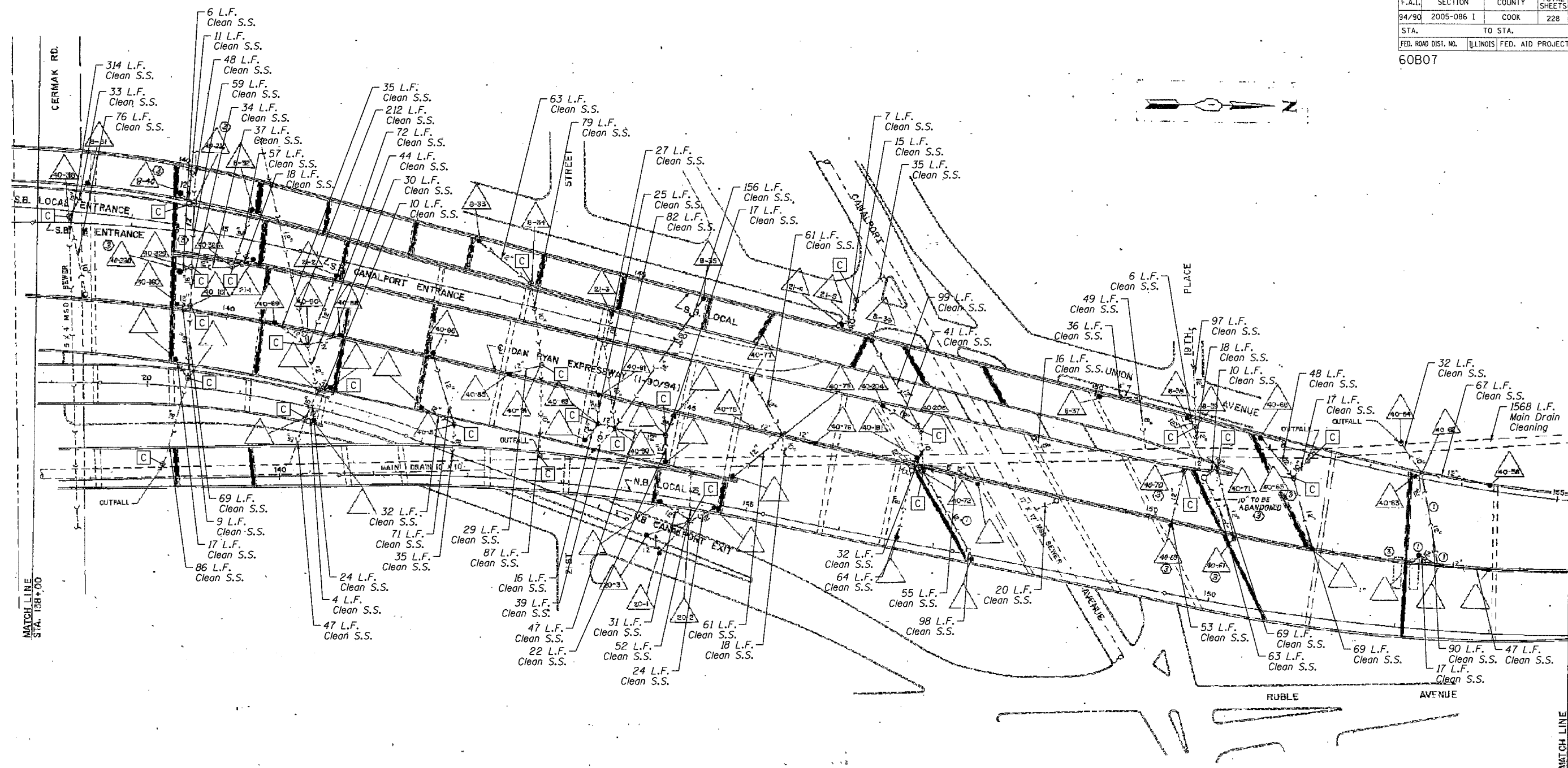
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	122
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				



**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY	
		SN 016-1112	SN 016-1113
Drainage Structures to be Cleaned	EACH	25	1
Storm Sewers to be Cleaned	FOOT	3273	423
Video Taping of Main Drain	FOOT	1510	58
Main Drain Cleaning	FOOT	1510	58

- LEGEND**
- or ● = Existing Catch Basin
  - ⊙ or ⊛ = Existing Manhole
  - — — = Existing Storm Sewer
  - [C] = Drainage Structures to be Cleaned

**NOTE:**  
 Information from 1988-89 As-Builts to show probable location of existing drainage pipes and structures collecting bridge drainage. Field verify locations with Engineer. Clean all drainage pipes and structures downstream of catch basins cleaned under contracts 62580 and 62581 as shown in the plans and directed by the Engineer. Quantities estimated from As-builts.

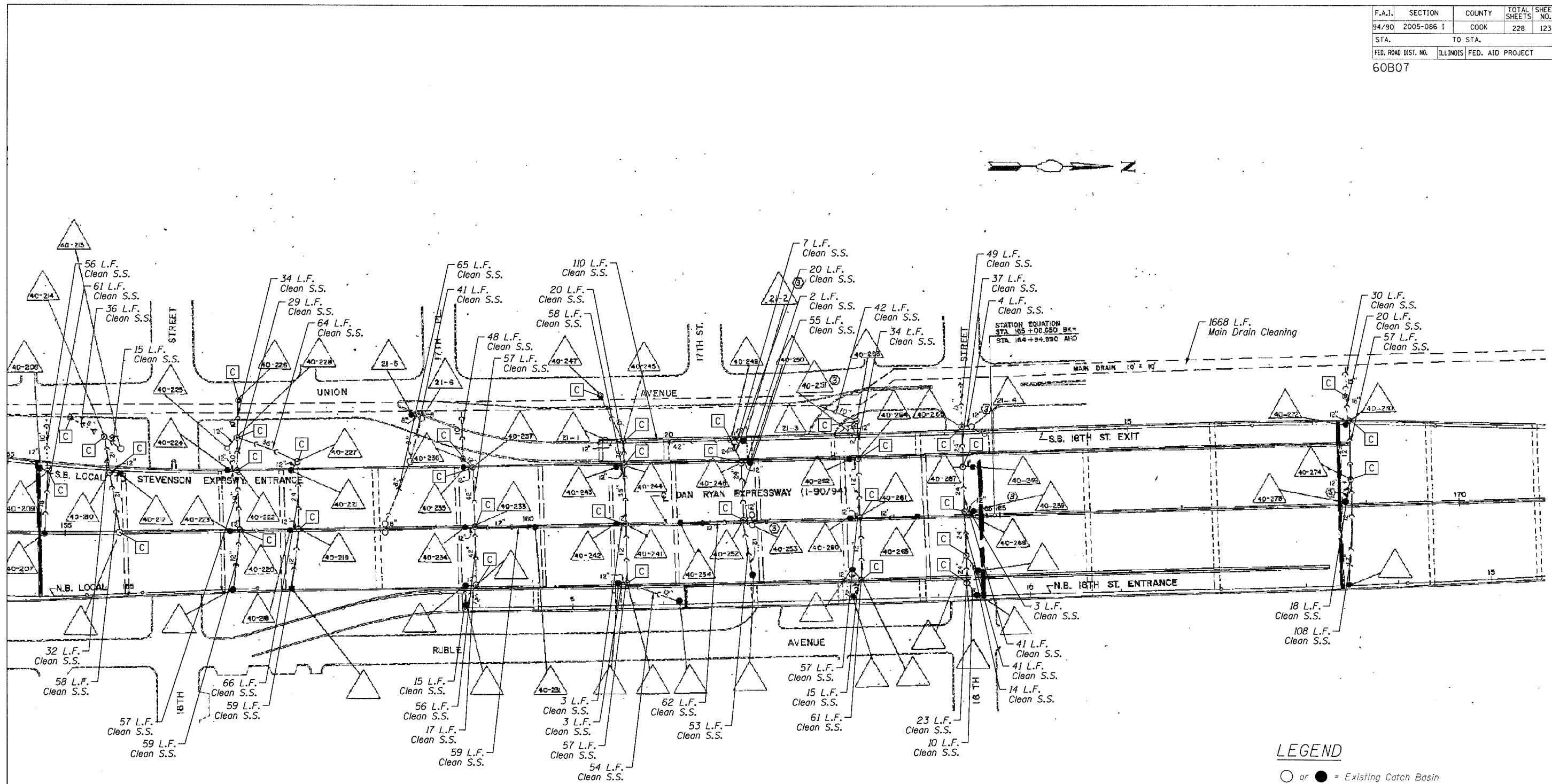
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) DAN RYAN ELEVATED BRIDGE BEARING REPLACEMENT & STEEL REPAIR EXISTING DRAINAGE SYSTEM DETAILS
NAME	DATE	

SCALE: NTS  
 DATE: 8/21/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

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12-2408 PM 8/21/2007

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	123
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY		
		SN 016-1110	SN 016-1111	SN 016-1112
Drainage Structures to be Cleaned	EACH	3	27	5
Storm Sewers to be Cleaned	FOOT	233	1661	258
Video Taping of Main Drain	FOOT	598	929	141
Main Drain Cleaning	FOOT	598	929	141

- LEGEND**
- or ● = Existing Catch Basin
  - ⊙ or ⊛ = Existing Manhole
  - — — = Existing Storm Sewer
  - = Drainage Structures to be Cleaned

**NOTE:**  
 Information from 1988-89 As-Builts to show probable location of existing drainage pipes and structures collecting bridge drainage. Field verify locations with Engineer. Clean all drainage pipes and structures downstream of catch basins cleaned under contracts 62580 and 62581 as shown in the plans and directed by the Engineer. Quantities estimated from As-builts.

REVISIONS		NAME	DATE
NO.	DESCRIPTION		

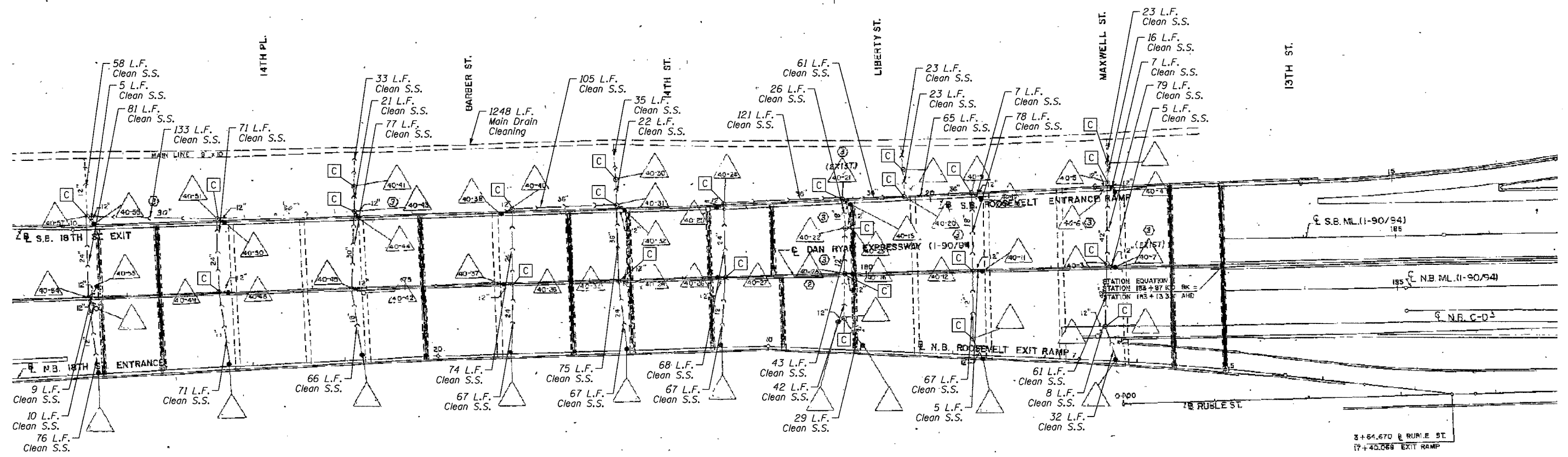
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING DRAINAGE SYSTEM  
 DETAILS

SCALE: NTS  
 DATE: 8/21/2007

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
84/90	2005-086 1	COOK	228	124
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



**BILL OF MATERIAL**

ITEM DESCRIPTION	UNIT	QUANTITY	
		SN 016-0137	SN 016-1110
Drainage Structures to be Cleaned	EACH	24	1
Storm Sewers to be Cleaned	FOOT	1796	316
Video Taping of Main Drain	FOOT	1091	157
Main Drain Cleaning	FOOT	1091	157

**LEGEND**

- or ● = Existing Catch Basin
- ⊙ or ⊛ = Existing Manhole
- ←←← = Existing Storm Sewer
- = Drainage Structures to be Cleaned

**NOTE:**

Information from 1988-89 As-Builts to show probable location of existing drainage pipes and structures collecting bridge drainage. Field verify locations with Engineer. Clean all drainage pipes and structures downstream of catch basins cleaned under contracts 62580 and 62581 as shown in the plans and directed by the Engineer. Quantities estimated from As-builts.

REVISIONS	
NAME	DATE

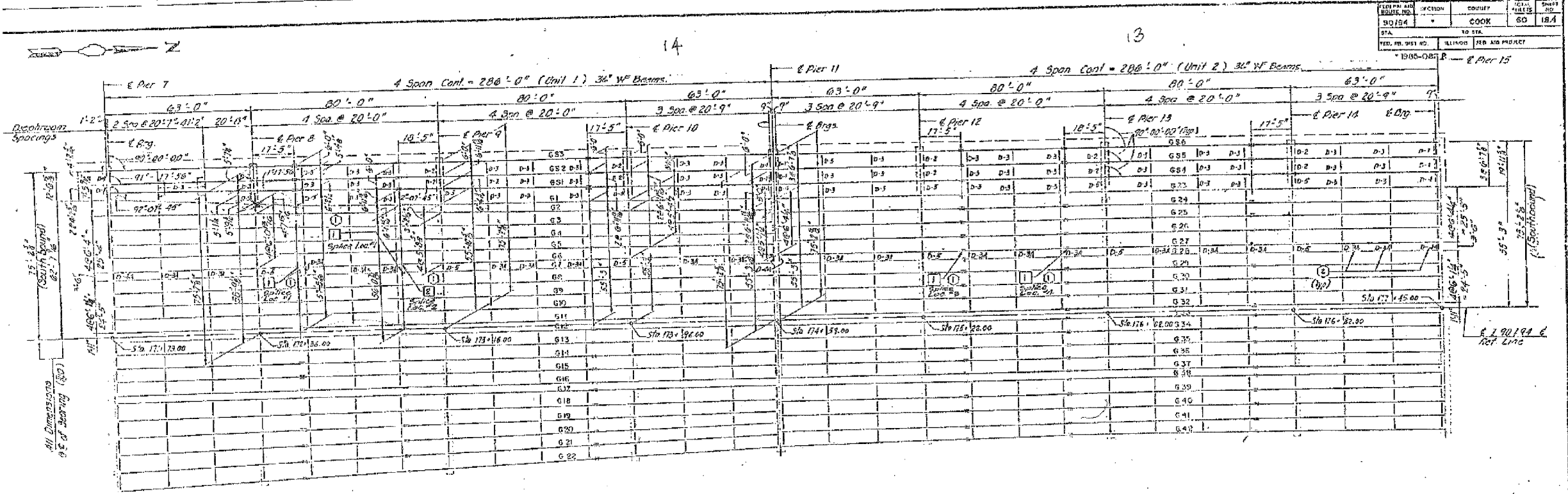
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING DRAINAGE SYSTEM  
 DETAILS

SCALE: NTS  
 DATE: 8/21/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

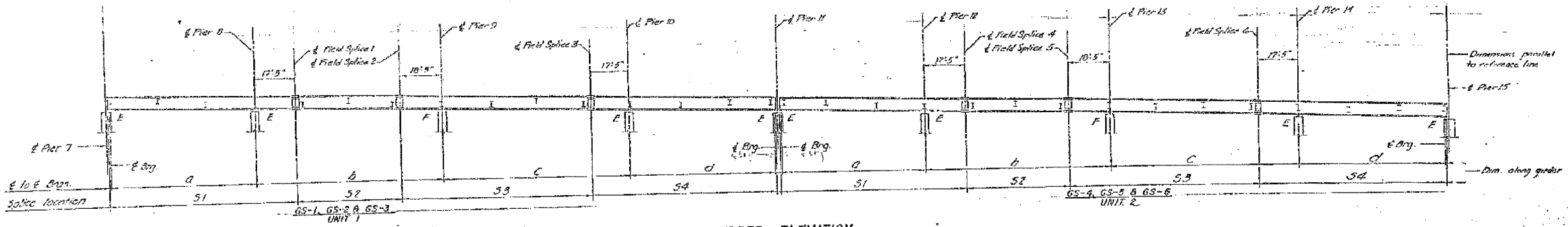
BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
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AN 6600000 BRIDGE 21A SHEET 124 OF 228 8/21/2007

60B07



FRAMING PLAN



GIRDER ELEVATION

Splice	a	b	c	d	e	f	g	h
G51	61'-10"	80'-0"	80'-0"	62'-3"	80'-2"	44'-2"	81'-0"	80'-2"
G52	61'-10"	80'-0"	80'-0"	62'-3"	80'-2"	44'-2"	81'-0"	80'-2"
G53	61'-10"	80'-0"	80'-0"	62'-3"	80'-2"	44'-2"	81'-0"	80'-2"
G54	62'-3"	80'-0"	80'-0"	62'-3"	80'-2"	44'-2"	81'-0"	80'-2"
G55	62'-3"	80'-0"	80'-0"	62'-3"	80'-2"	44'-2"	81'-0"	80'-2"
G56	62'-3"	80'-0"	80'-0"	62'-3"	80'-2"	44'-2"	81'-0"	80'-2"

Note: Dimensions are not in straight lines between bearing, but are along d of girder.

- LEGEND
- ① Replace Splice Plates (Type 1), Top and Bottom See Sheet SR2, Vol. 13 for Detail
  - ② Replace Splice Plates (Type 2), Top and Bottom See Sheet SR2, Vol. 13 for Detail

AS REVISED

SHEET A18 OF A60

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
STRUCTURE DIS-037  
FRAMING PLAN - UNITS 1 & 2

Scale: NONE  
Date: AUG 14, 2007  
Checked By: J.S.  
DRAWN BY: J.S.  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

Name	Date
(C) Boudreau	1/24/08
(E)	1/24/08

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-0137

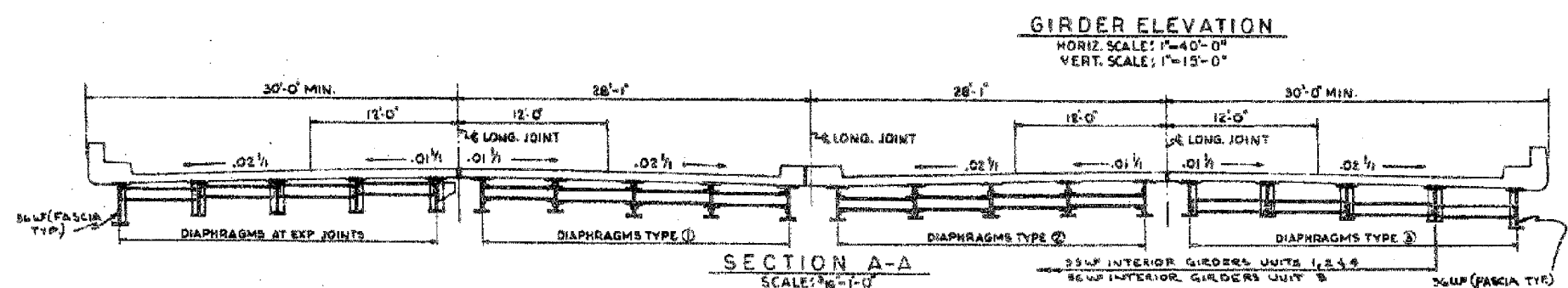
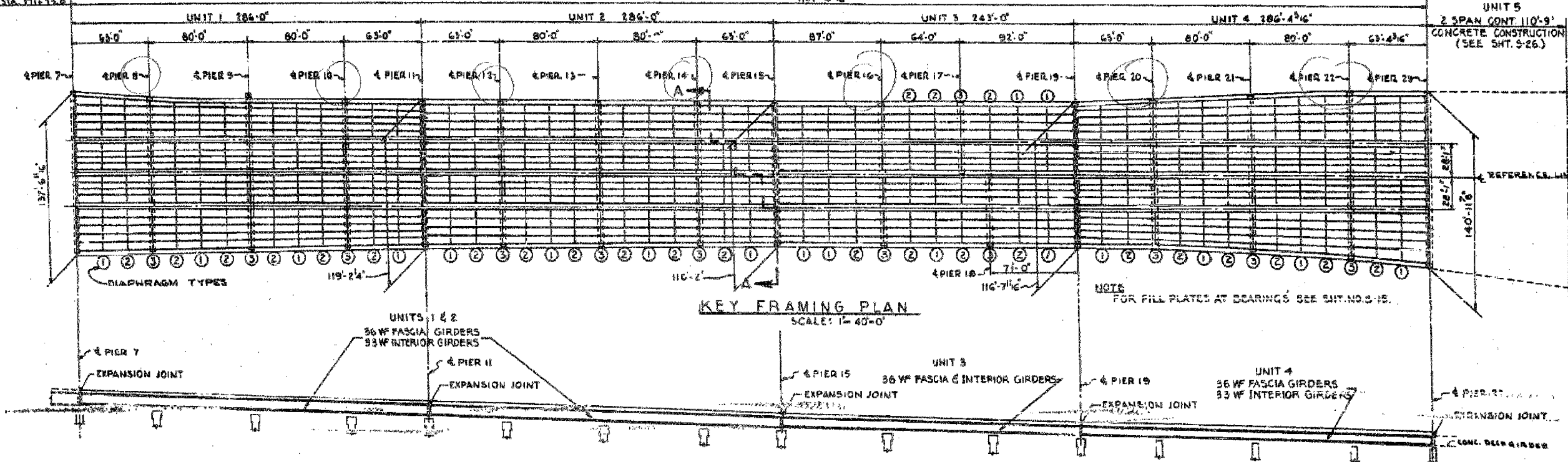
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

FOR INFORMATION ONLY

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CONTRACT 52525.3-2M  
 CONTRACT 52525.3-1M  
 STA. 111+13.0

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
84/90	2005-086 1	COOK	228	126
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**STRUCTURAL STEEL NOTES**

ALL FURNISHING, FABRICATING, TRANSPORTING, ERECTING AND PAINTING OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH SECTION 04 AND 05 OF THE STANDARD SPECIFICATIONS.

EXCEPT WHERE OTHERWISE NOTED, ALL STRUCTURAL STEEL SHALL CONFORM TO SPECIFICATIONS FOR STEEL FOR BRIDGES AND BUILDINGS WITH DESIGNATIONS A-7 AND ASTM DESIGNATION 57-303 AND WHERE APPLICABLE, TO THE REQUIREMENTS OF ARTICLE 124.2, AND 124.3 (a) OF THE STANDARD SPECIFICATIONS.

**BEARING AND SPLICE NOTES:-**

ALL GIRDER FIELD SPLICES SHALL BE SHIP-PURCHASED, BEAMED AND MATCHMARKED FOR SHIPMENT WHILE THE MEMBERS ARE SHOP ASSEMBLED IN PROPER ALIGNMENT, WITH OR WITHOUT DIAPHRAGMS. ALL GIRDER FIELD SPLICES SHALL BE SHIP-PURCHASED 1 1/16" Ø, BEAMED TO 13/16" Ø FOR 3/4" Ø BOLTS AND BEAMED TO 15/16" Ø FOR 7/8" BOLTS.

ALL GIRDERS SHALL BE ERECTED FULL LENGTH IN THE SHOP BEFORE BEAMING AND INSPECTION.

STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT. PARTS INACCESSIBLE AFTER ERECTION SHALL HAVE TWO SHOP COATS OF RED LEAD PAINT. FOR ADDITIONAL SHOP AND FIELD PAINT COATS, SEE THE SPECIAL PROVISIONS.

ALL ROLLERS, ROCKERS, BOLSTERS, BEARING PLATES, LEAD PLATES, PINTLES, ANCHOR BOLTS AND SPLICES SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLES 04.4 OF THE STANDARD SPECIFICATIONS AND SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 04.5 (c). THESE ITEMS ARE INCLUDED IN THE WEIGHT OF STRUCTURAL STEEL.

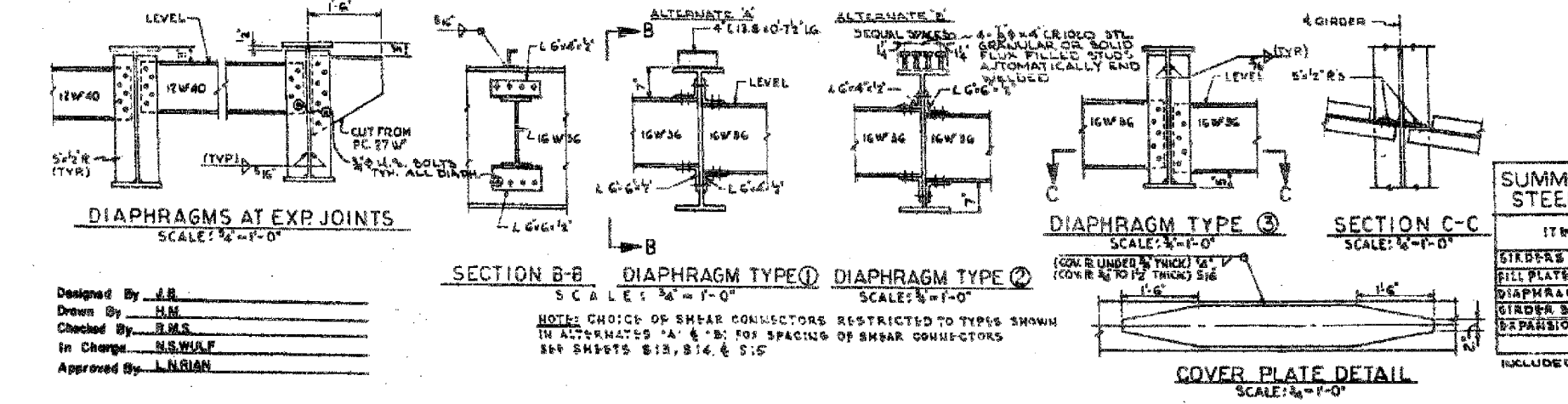
SPLICE PLATES TO BE MATCH-MARKED FOR SHIPMENT.

ANCHOR BOLTS SHALL BE SET BEFORE ROLLING DIAPHRAGMS OVER PIERS AND ABUTMENTS.

FINISHED SURFACES OF BEARINGS AND ROLLERS SHALL BE TREATED WITH ANTI-RUST COMPOUND BEFORE SHIPMENT AS STATED IN ARTICLE 04.4 OF THE STANDARD SPECIFICATIONS.

ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/8" Ø OR 7/8" Ø HIGH STRENGTH BOLTS AS INDICATED.

ALL RIVETS, UNLESS OTHERWISE SHOWN OR NOTED, SHALL BE 3/8" Ø, OPEN HOLES 13/16" Ø.



**SUMMARY OF STRUCTURAL STEEL UNITS 1, 2, 3, 4 & 5**

ITEM	UNIT	QUANTITY
GIRDERS	POUND	3,724,415 83160
FILL PLATES & SPLICE PLATES	POUND	128,355
DIAPHRAGMS	POUND	284,235
GIRDER BEARINGS	POUND	190,315
EXPANSION GUARD	POUND	155,750
TOTAL	POUND	4,483,065 83160

INCLUDED IN SUMMARY ON SMT 32

Designed By: J.R.  
 Drawn By: H.M.  
 Checked By: B.M.S.  
 In Charge: N.S.WULF  
 Approved By: L.N.RIAN

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
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Sheet S12 of 64

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-0137

SCALE: NTS  
 DATE: 5/18/2007

DRAWN BY: LAM  
 CHECKED BY: BLU

5/24/2007 5:46:40 PM  
 N:\600\BRIDGE\2\ASHEETS\660\_21A\_016-0137-EP10.dwg

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	127
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 2525.3-2M CONTRACT 2525.3-1M  
BY OTHERS

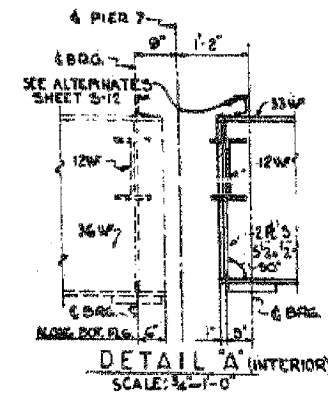
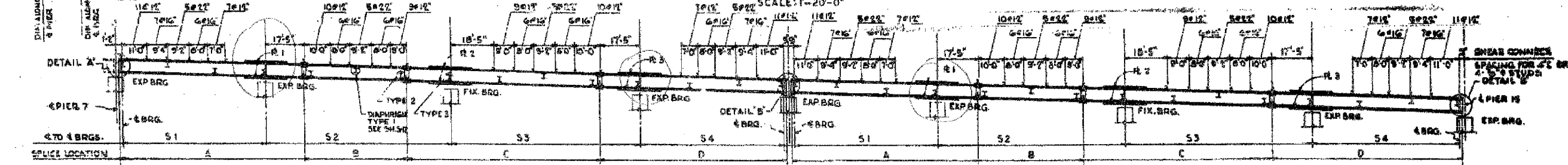
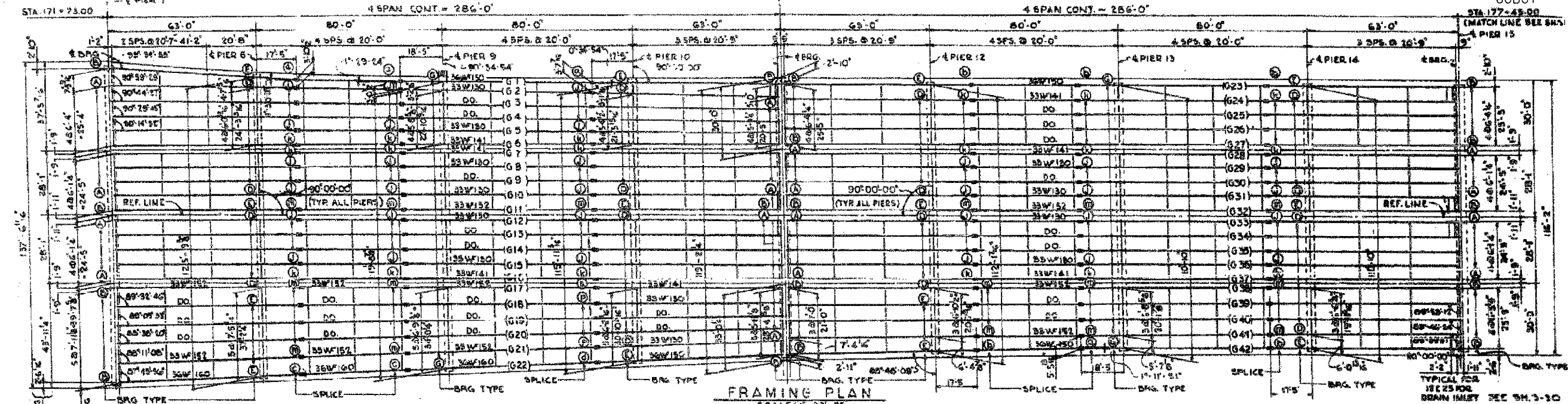
UNIT 1

PIER 11  
STA. 174+59.00

UNIT 2

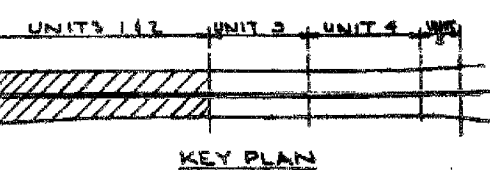
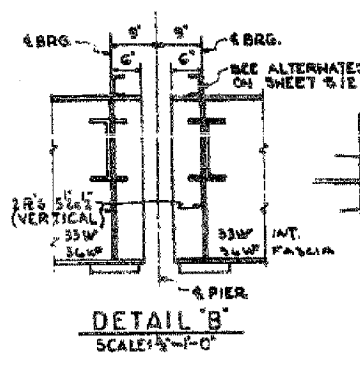
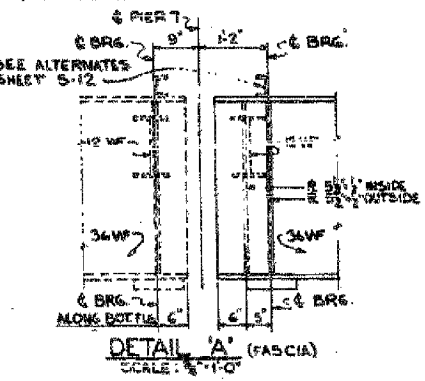
60B07

STA. 177+45.00  
(MATCH LINE SEE SHEET 60B08)



NOTE: ALL DIMENSIONS ARE IN THE HORIZONTAL PLANE AND ALONG THE  $\phi$  OF THE GIRDER WEB.

GIRDER	A	B	C	D	S-1	S-2	S-3	S-4	R-1	R-2	R-3
1	80'-3"	44'-2"	81'-0"	80'-2"	61'-11"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
2	79'-8"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
3	79'-9"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
4	79'-9"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
5	78'-9"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
6											
7	78'-9"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
8											
9	79'-9"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
10											
11											
12											
13											
14											
15											
16											
17											
18	79'-9"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
19	79'-9"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
20	78'-9"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
21	78'-9"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
22	80'-2"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
23	80'-2"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
24, 25, 26											
27											
28, 37											
30, 31, 32, 33											
32											
33											
35											
39											
40											
41	80'-2"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"
42	80'-2"	44'-2"	81'-0"	80'-2"	61'-10"	80'-0"	80'-0"	62'-3"	10'-5"	10'-5"	10'-5"



CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
ELEVATED HIGHWAY  
W. 15TH ST. TO W. MAXWELL ST.  
SECTION 2-2525.3-1H  
STEEL FRAMING PLAN  
UNITS 1&2  
DE LUIGI, CATHNER & COMPANY  
CONSULTING ENGINEERS CHICAGO  
SCALE: AS NOTED SHEET 512 OF 64 SHEETS

NOTE: ALL DIMENSIONS ARE IN THE HORIZONTAL PLANE AND ALONG THE  $\phi$  OF THE GIRDER WEB. DIMENSIONS MARKED THUS (S) ARE NOT STRAIGHT LINES BETWEEN DRAWINGS.

INCLUDED IN WEIGHT ON SHEET 512

ITEM	UNIT	QUANTITY
GIRDERS	POUND	124,373
DIAPHRAGMS	POUND	148,823
ASTM A7		

Sheet S13 of 64

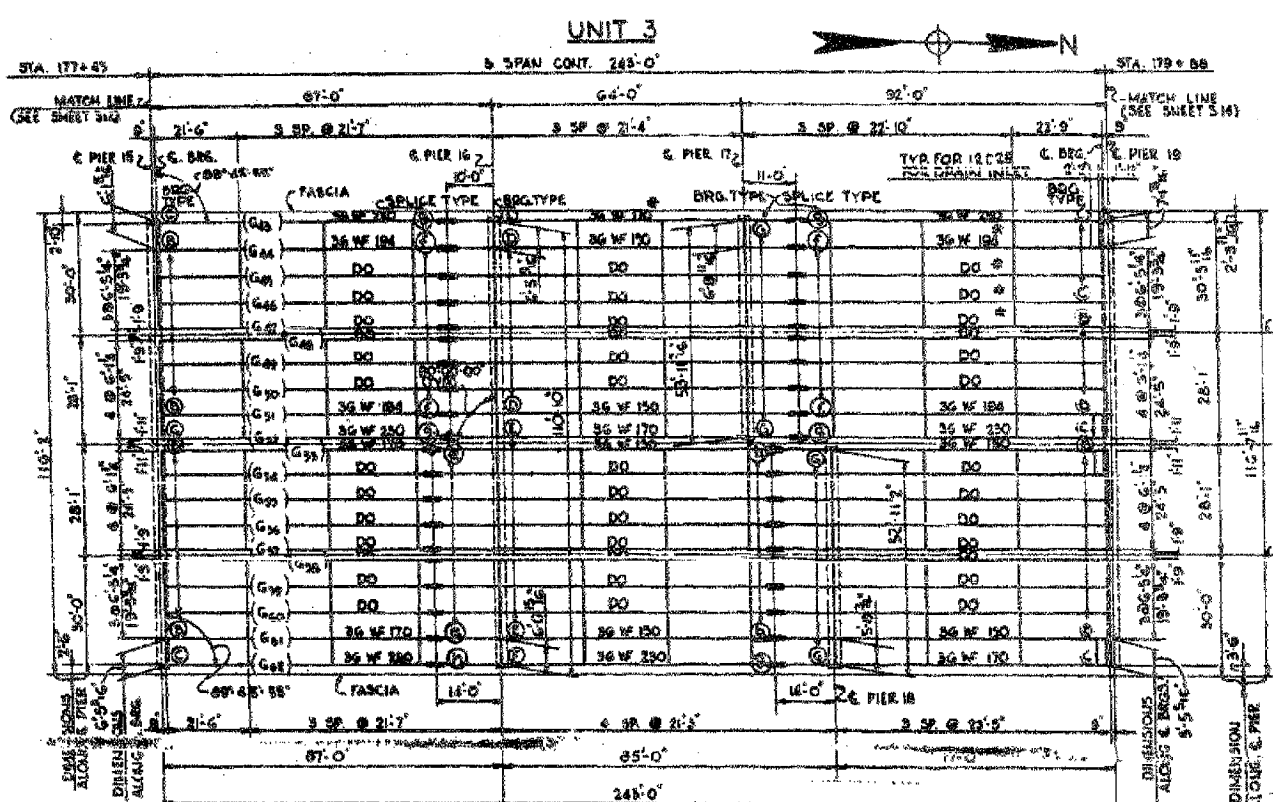
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-0137  
SCALE: NTS DATE: 5/18/2007 DRAWN BY: LAM CHECKED BY: BLU

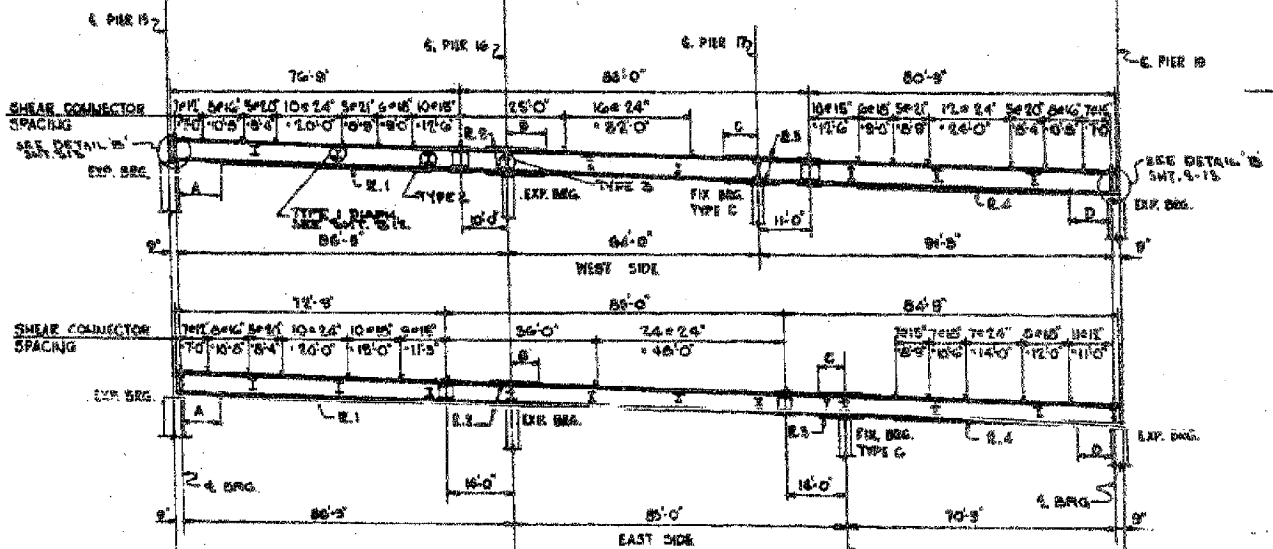
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CONSULTING ENGINEERS  
Chicago, Illinois  
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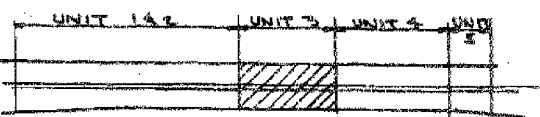
5/24/2007 5:42:28 PM



**FRAMING PLAN**  
SCALE: 1"=20'-0"

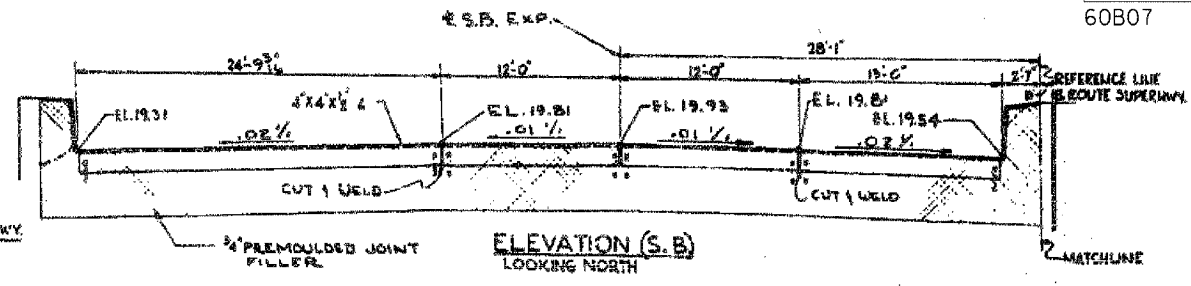


**GIRDER ELEVATION**  
HOR. SCALE: 1"=20'-0"  
VER. SCALE: 1"=10'-0"

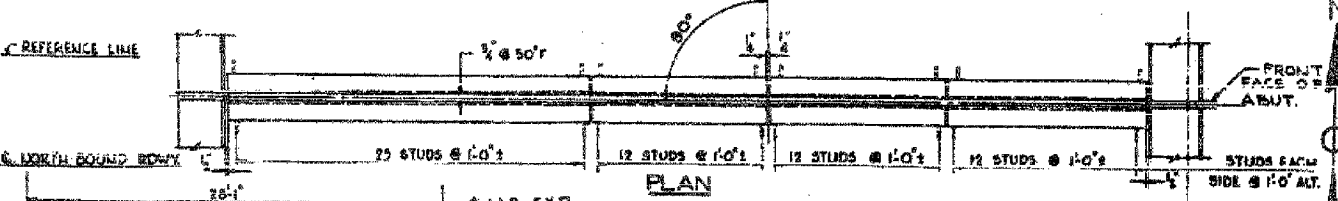


**KEY PLAN**

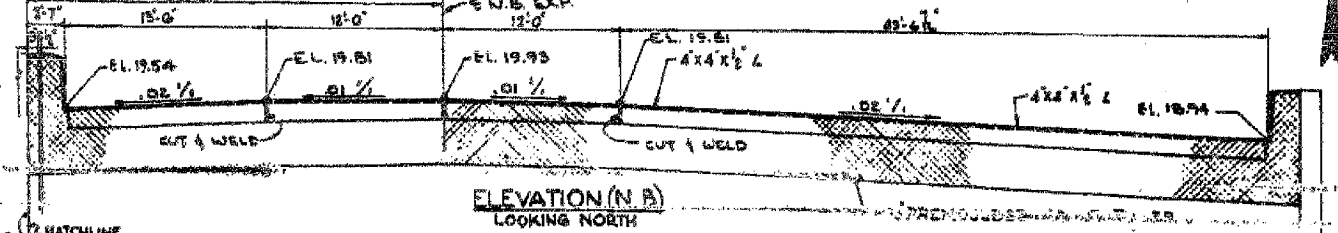
Designed By: J.S.  
 Drawn By: P.R.T.  
 Checked By: R.H.S.  
 In Charge: N.S. WILF  
 Approved By: L.N. RIAK



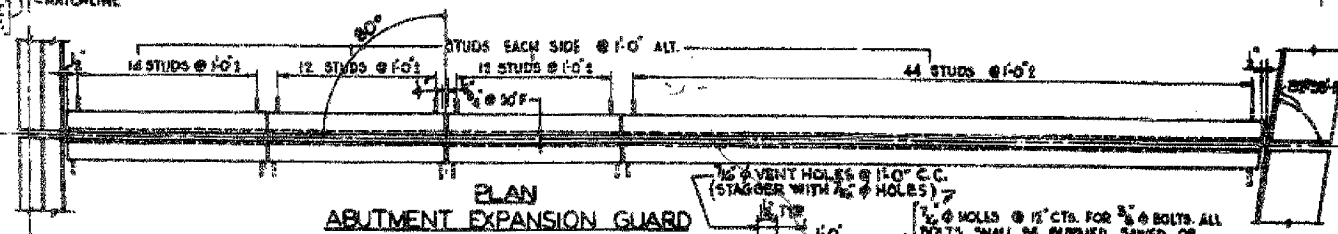
**ELEVATION (S.B.)**  
LOOKING NORTH



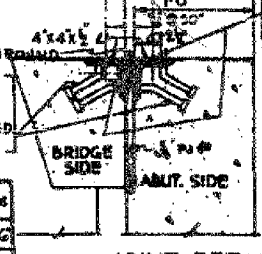
**PLAN**



**ELEVATION (N.B.)**  
LOOKING NORTH



**PLAN**  
**ABUTMENT EXPANSION GUARD**  
SCALE: HOR. 1/2"=1'-0"  
VER. 1/4"=1'-0"



**JOINT DETAIL**  
SCALE: 1/2"=1'-0"

BILL OF MATERIAL			
ITEM	UNIT	A7	A578
GIRDERS	POUND	590,800	88,120
DIAPHRAGMS	POUND	54,945	
ABUT. EXP. GUARD	POUND	5,885	

SPlice PLATES & BEARINGS BILLED ON SHEET S-15, FILL PLATES & BEARINGS ON S-15, INCLUDED IN WEIGHT ON SHT S-12

GIRDER	COVER PLATE OFFSETS				COVER R. 1	2-PLATES COVER R. 2	2-PLATES COVER R. 3	COVER R. 4
	A	B	C	D				
43	8'-6"	8'-6"	11'-6"	8'-0"	10X1/2x16	10X1/2x16	10X1/2x16	10X1/2x16
44 TO 46	8'-6"	7'-6"	8'-6"	8'-0"	10X1/2x16	10X1/2x16	10X1/2x16	10X1/2x16
47	8'-6"	7'-6"	8'-6"	8'-0"	10X1/2x16	10X1/2x16	10X1/2x16	10X1/2x16
48 TO 51	8'-6"	7'-6"	8'-6"	8'-0"	10X1/2x16	10X1/2x16	10X1/2x16	10X1/2x16
52	8'-6"	8'-6"	11'-6"	8'-0"	10X1/2x16	10X1/2x16	10X1/2x16	10X1/2x16
53 TO 57	7'-6"	11'-0"	7'-6"	7'-6"	10X1/2x16	10X1/2x16	10X1/2x16	10X1/2x16
58 TO 61	7'-6"	11'-0"	7'-6"	7'-6"	10X1/2x16	10X1/2x16	10X1/2x16	10X1/2x16
62	7'-6"	8'-6"	8'-6"	7'-6"	15X1/2x20	15X1/2x20	10X1/2x16	10X1/2x16

\*NOTE: ALL COVER PLATES OVER 1" THICK & ALL W/ BEAMS WITH COVER PLATES OVER 1" THICK ARE TO BE TYPE-A578 STRUCTURAL STEEL, ALL OTHERS TO BE TYPE-A7 STRUCTURAL STEEL.

CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
**SOUTH ROUTE SUPERHIGHWAY**  
 ELEVATED HIGHWAY  
 W. 15 TH ST. TO W. MAXWELL ST.  
 SECTION 8-888.3 - 11

**STEEL FRAMING PLAN UNIT 3**  
**B ABUTMENT EXPANSION GUARD**

DE LEW, GATHER & COMPANY  
 CONSULTING ENGINEERS CHICAGO  
 SCALE: AS NOTED SHEET S-14 OF 64 SHEETS

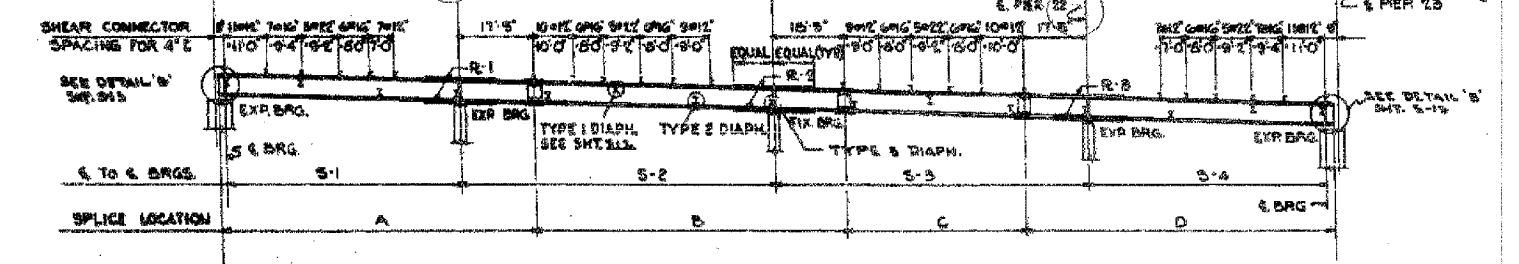
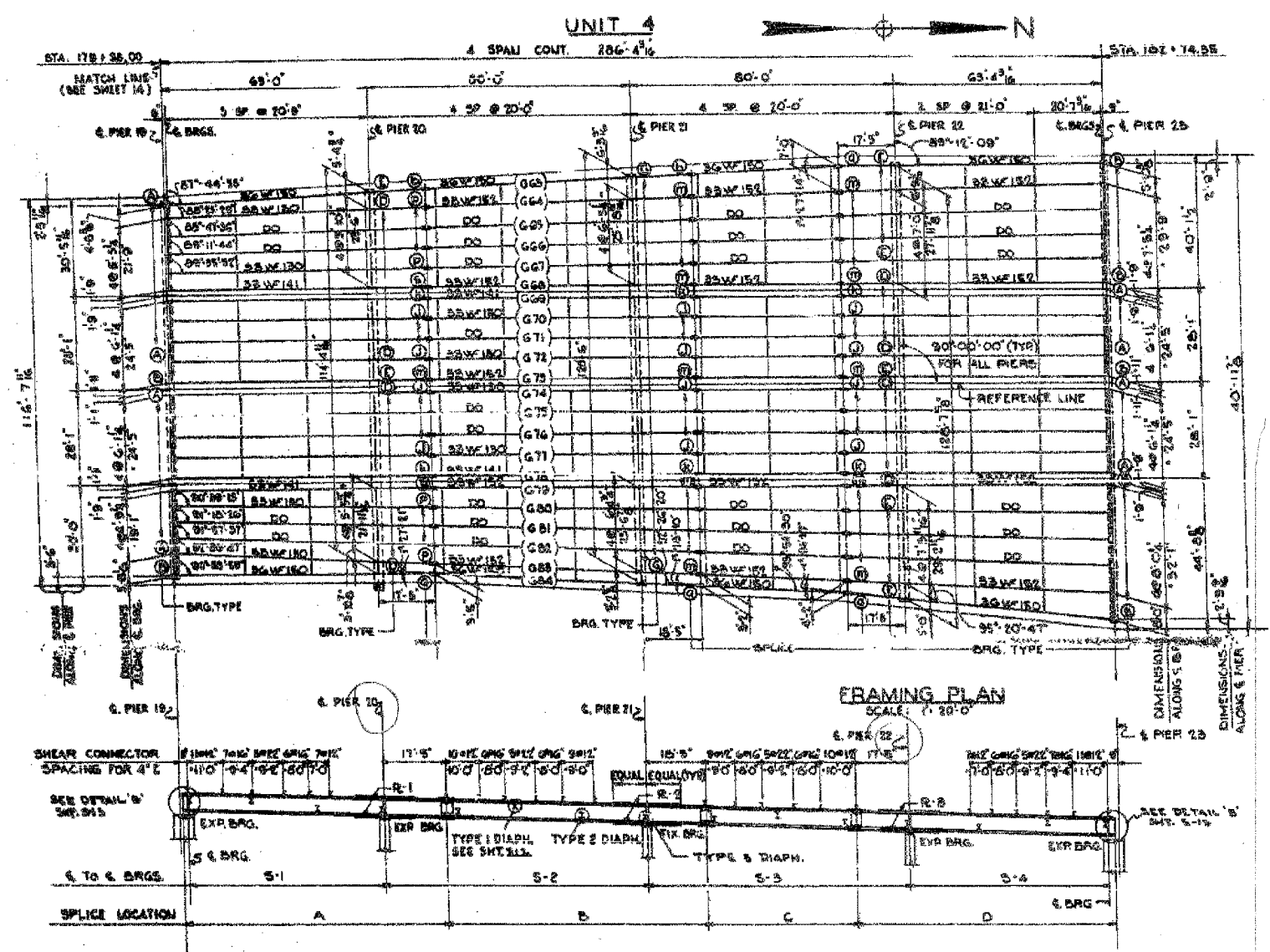
Sheet S14 of 64

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-0137  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

FOR INFORMATION ONLY

60B07



GIRDER	A	B	C	D	5-1	5-2	5-3	5-4	COVER #1	COVER #2	COVER #3
G8	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
G4	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
G5	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
G6	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
G7	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
G8	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
G9, 78	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
10, 11, 15, 16, 17	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
75	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
74	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
19	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
80	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
81	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
82	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
83	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"
84	80'-2"	81'-0"	44'-2"	80'-6"	62'-3"	80'-0"	80'-0"	62'-7"	10'-2"	10'-2"	10'-2"

NOTE: ALL DIMENSIONS ARE IN THE HORIZONTAL PLANE AND ALONG THE C OF THE GIRDER WEB. DIMENSIONS MARKED THIS (O) ARE NOT STRAIGHT LINES BETWEEN BEARINGS.

**TABLE OF FILL PLATES AT BEARINGS**

UNIT 1							
LOCATION	G4	G5	G6	G7	G10	G16	G17
PIER 7	-	-	14'-2" x 11'-0"	14'-2" x 11'-0"	-	14'-2" x 11'-0"	14'-2" x 11'-0"
PIER 8	-	-	9'-2" x 9'-0"	9'-2" x 9'-0"	-	9'-2" x 9'-0"	9'-2" x 9'-0"
PIER 9	-	-	11'-2" x 11'-0"	11'-2" x 11'-0"	11'-2" x 11'-0"	11'-2" x 11'-0"	-
PIER 10	9'-2" x 9'-0"	9'-2" x 9'-0"	9'-2" x 9'-0"	9'-2" x 9'-0"	9'-2" x 9'-0"	9'-2" x 9'-0"	-
PIER 11	G1	G2	G3	G4	G5	G6	G7
	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"
	G9	G10	G11	G12	G13	G14	G15
	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"
	G17	G18	G19	G20	G21	G22	-
14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	-	

**UNIT 2**

LOCATION	G23	G28	G29	G30	G37	G42
PIER 11	-	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	-
PIER 12	-	9'-2" x 9'-0"	9'-2" x 9'-0"	9'-2" x 9'-0"	9'-2" x 9'-0"	-
PIER 14	-	9'-2" x 9'-0"	9'-2" x 9'-0"	9'-2" x 9'-0"	9'-2" x 9'-0"	-
PIER 15	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	-

**UNIT 3**

LOCATION	G45	G46	G55	G56	G57	G58	G59
PIER 15	-	-	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	-
PIER 16	-	-	-	11'-2" x 11'-0"	11'-2" x 11'-0"	-	-
PIER 17	11'-2" x 11'-0"	11'-2" x 11'-0"	-	-	-	-	-
PIER 18	-	-	-	11'-2" x 11'-0"	11'-2" x 11'-0"	-	-
PIER 19	-	-	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	-	14'-2" x 11'-0"

**UNIT 4**

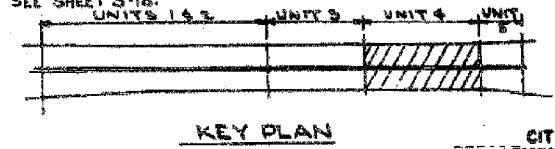
LOCATION	G67	G68	G70	G75	G77	G78	G80
PIER 19	14'-2" x 11'-0"	-	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	-	14'-2" x 11'-0"
PIER 20	-	9'-2" x 9'-0"	-	-	-	9'-2" x 9'-0"	-
PIER 21	-	-	-	-	-	11'-2" x 11'-0"	-
PIER 22	11'-2" x 11'-0"	9'-2" x 9'-0"	-	-	-	9'-2" x 9'-0"	11'-2" x 11'-0"
PIER 23	G68	G70	G71	G75	G76	G77	G78
14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"	14'-2" x 11'-0"

TOTAL WEIGHT OF FILL PLATES = 2,685 POUNDS.

**TABLE OF BEVELS OF SOLE PLATES**

	UNIT #1	UNIT #2	UNIT #3	UNIT #4
	PIER 7	PIER 11	PIER 15	PIER 19
G1 TO G22	7/8"	3/8"	-	-
G23 TO G42	-	-	5/8"	1/2"
G45 TO G62	-	-	-	1/2"
G64 TO G66	-	-	-	1/2"
G65 TO G84	-	-	-	1/2"

NOTE: FOR BEARINGS SEE SHEETS 60B09 & 60B10. FOR LOCATION OF BEVELS SEE SHEETS 5-15 & 5-16.



**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
GIRDERS	POUND	988,205
DIAPHRAGMS	POUND	78,465
FILL PLATES	POUND	2,685

ASTM TYPE A7  
INCLUDED IN WEIGHT ON SHEET 512.

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
ELEVATED HIGHWAY  
W. 15 TH ST. TO W. MAXWELL ST.  
SECTION 2-888.3-1H

**STEEL FRAMING PLAN**  
UNIT 4

DE LEUW, CATHEN & COMPANY  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS  
DATE: JUNE 1991  
SHEET 515 OF 64 SHEETS

Sheet 515 of 64

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-0137

SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

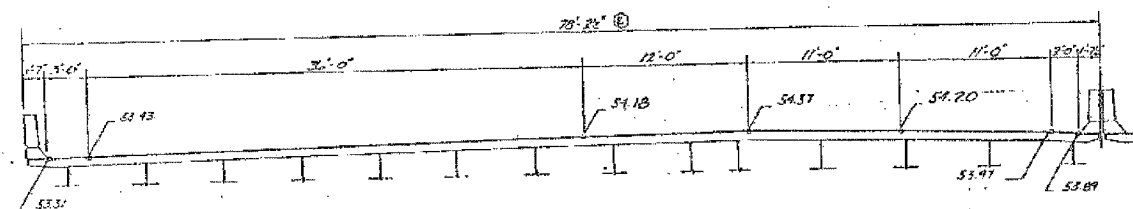
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
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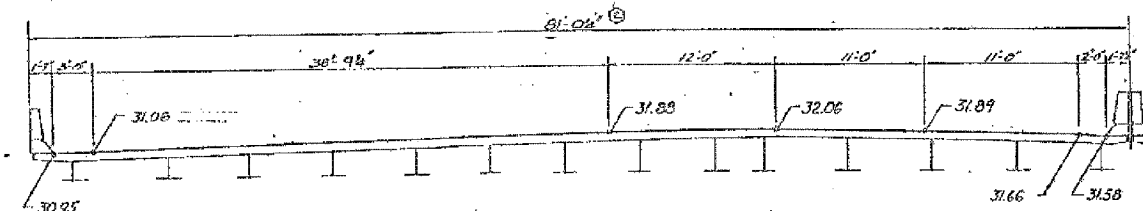


F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	130
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				

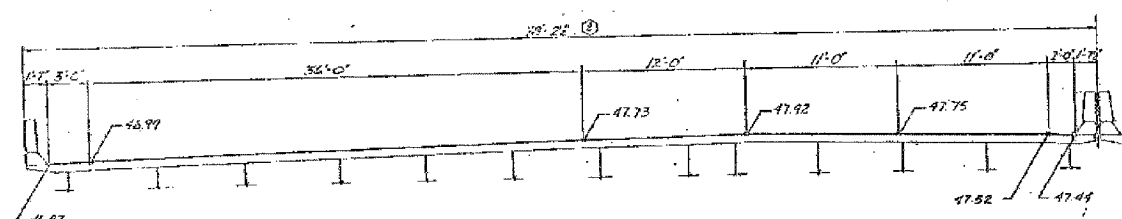
FEDERAL AID ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
90/94	92	COOK	31	31
TO STA.				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* 1985-082 R				



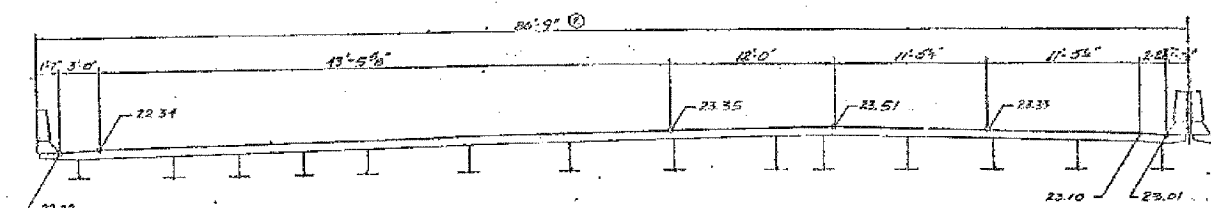
⑦ EXPANSION JOINT AT PIER No. 7  
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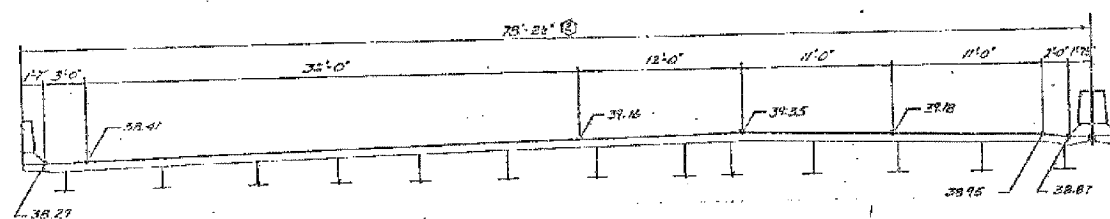
⑩ EXPANSION JOINT AT PIER No. 19  
4 in. NEOPRENE



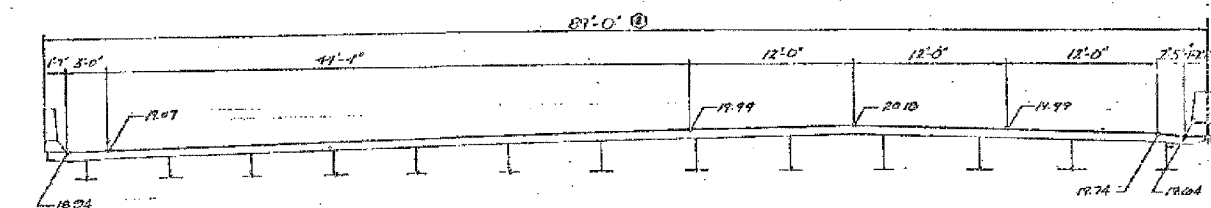
⑪ EXPANSION JOINT AT PIER No. 11  
4 in. NEOPRENE



⑬ EXPANSION JOINT AT PIER No. 23  
2 1/2 in. NEOPRENE



⑭ EXPANSION JOINT AT PIER No. 15  
4 in. NEOPRENE



⑮ EXPANSION JOINT AT NORTH ABUTMENT  
2 1/2 in. PREFORMED JOINT SEAL

SHEET A31 OF A60

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY) SECTION 1985 - COOK COUNTY S.B. MARSH RECONSTRUCTION STRUCTURE DIS-0137 TRANSVERSE DECK JOINT ELEVATIONS	
Scale: NONE Date: AUG 14, 1997	Drawn By: A.V. Checked By: NEM
ENVIROLYNE ENGINEERS INC. Chicago, Illinois	

REVISIONS	
Name	Date
(B) Revision	2-5-88

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-0137

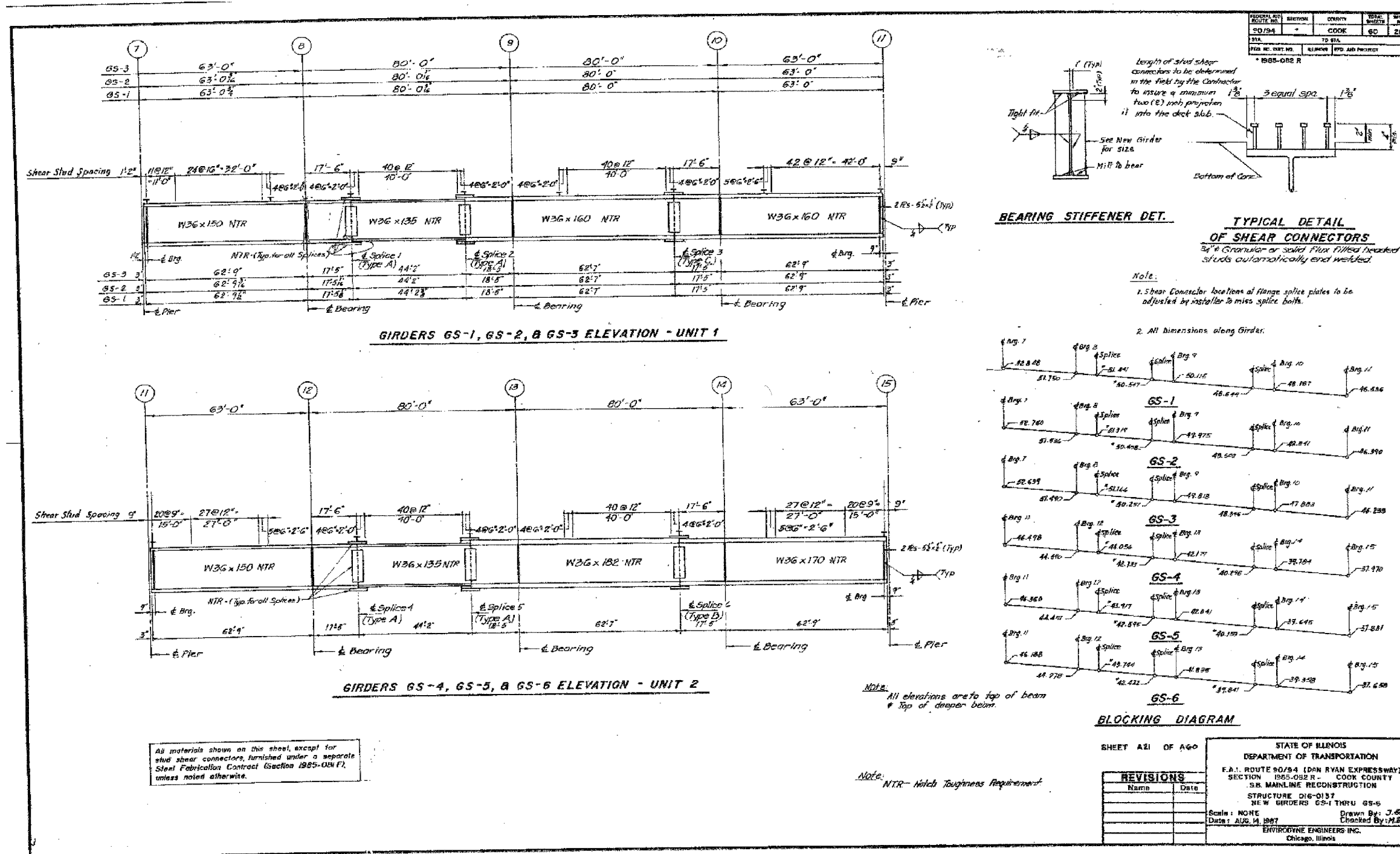
SCALE: NTS  
DATE: 5/18/2007

DRAWN BY: LAM  
CHECKED BY: BLU

FOR INFORMATION ONLY

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CONSULTING ENGINEERS  
Chicago, Illinois  
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5/24/2007 5:44:47 PM



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 Chicago, Illinois  
 312.228.0100  
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-0137

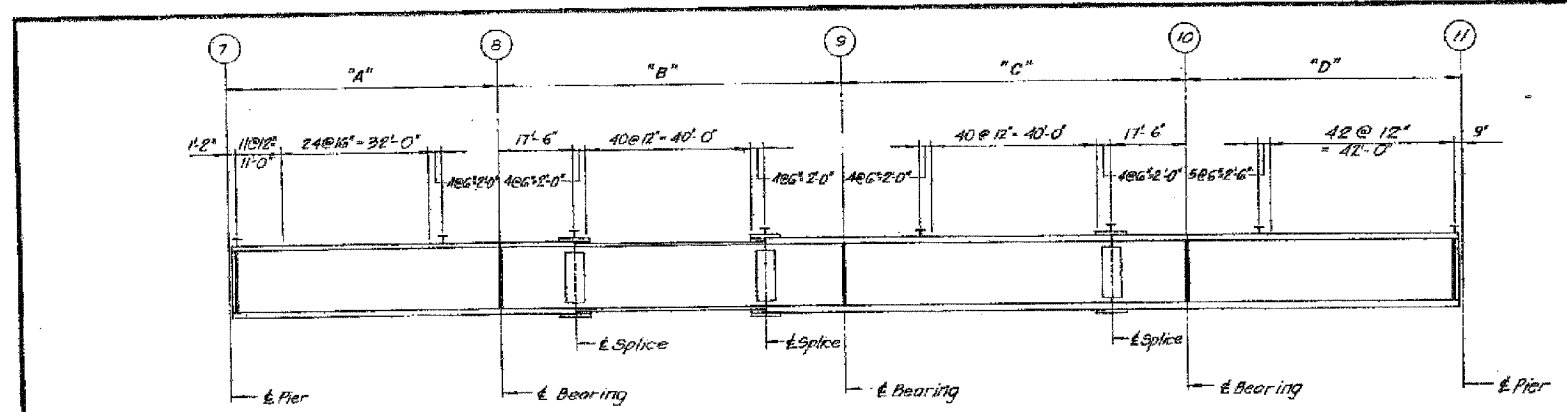
SCALE: NTS  
 DATE: 5/18/2007

DRAWN BY: LAM  
 CHECKED BY: BLU

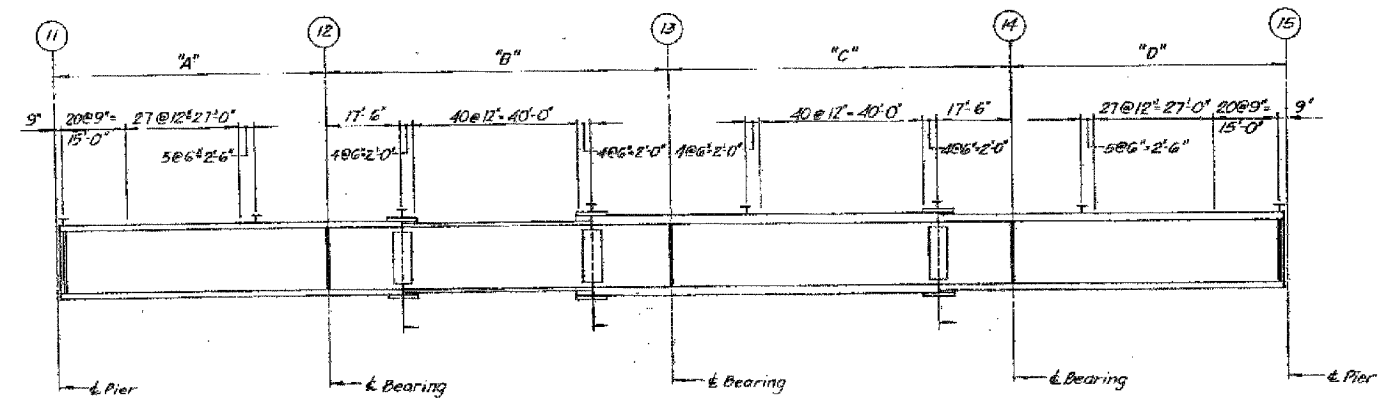
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PROJECT AND ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	"	COOK	60	25
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• 1985-082 R

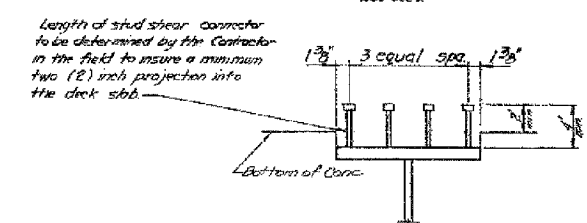


GIRDERS 61 THRU 611 ELEVATION - UNIT 1



GIRDERS 623 THRU 632 ELEVATION - UNIT 2

GIRDER	"A"	"B"	"C"	"D"
61	63'-1 1/2"	80'-0 3/4"	80'-0 1/2"	63'-0"
62	63'-0 1/2"	80'-0 1/2"	80'-0 1/2"	63'-0 1/2"
63	63'-0 1/2"	80'-0 1/2"	80'-0 1/2"	63'-0 1/2"
64	63'-0"	80'-0 1/2"	80'-0 1/2"	63'-0"
65, 66, 67	63'-0"	80'-0"	80'-0"	63'-0"
68, 69	63'-0"	80'-0"	80'-0"	63'-0"
610, 611	63'-0"	80'-0"	80'-0"	63'-0"
623, 624	63'-0"	80'-0"	80'-0"	63'-0"
625, 626, 627				
628, 629, 630				
631, 632	63'-0"	80'-0"	80'-0"	63'-0"



TYPICAL DETAIL OF SHEAR CONNECTORS

Note:  
Shear Connector locations of flange splice plates to be adjusted by installer to miss splice bolts.

SHEET A25 OF A25

REVISIONS	
Name	Date

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
STRUCTURE 016-0137  
EXISTING GIRDER SHEAR CONNECTOR SPACING  
Scale: NONE  
Date: AUG 14, 1987  
Checked By: M.E.M.  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

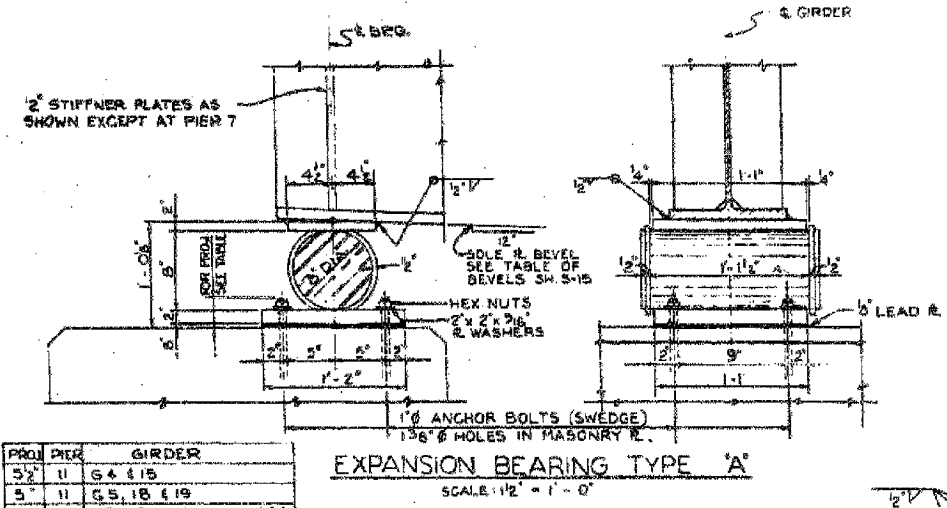
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CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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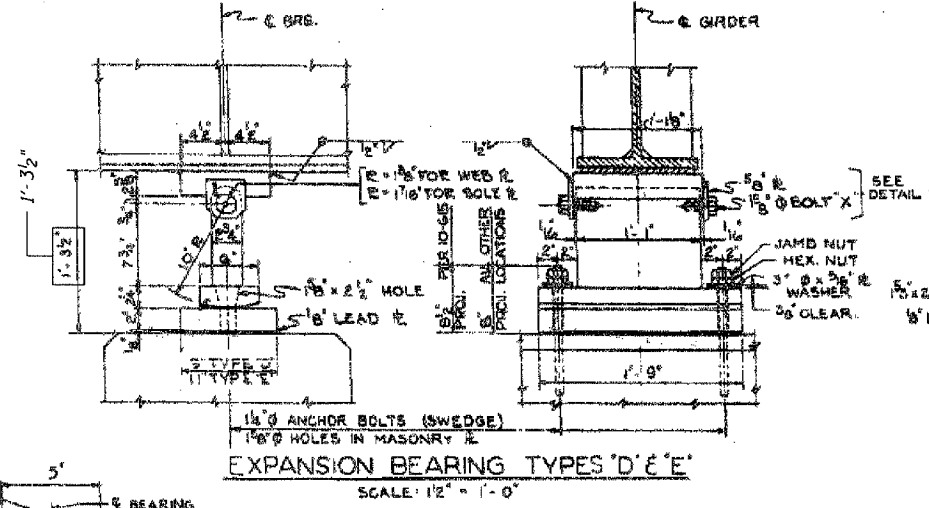
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-0137  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

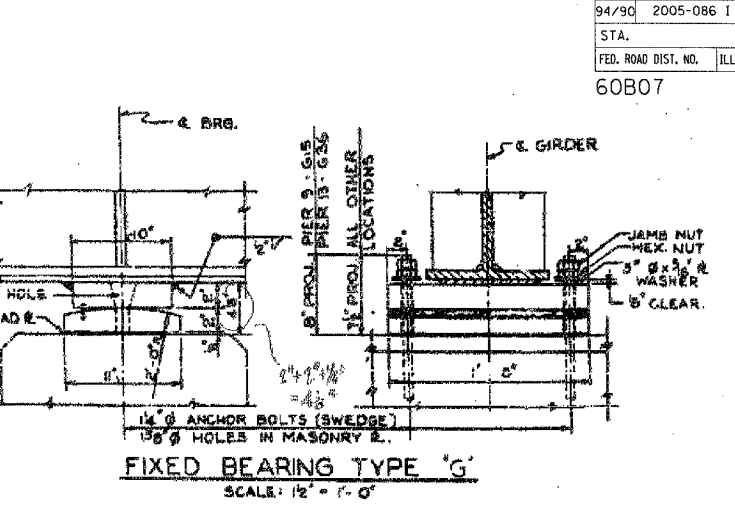
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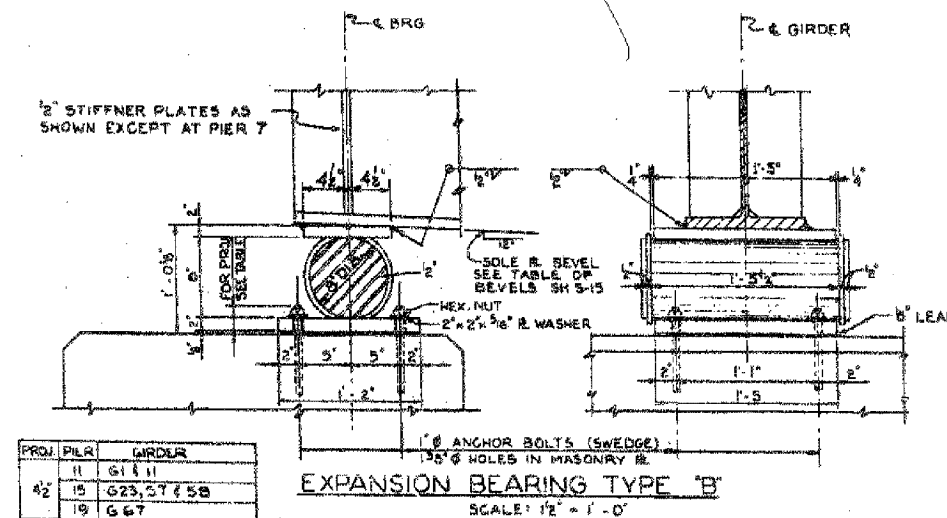
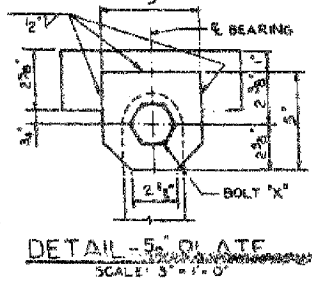
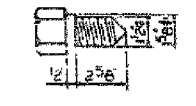
PROJ. PIER	GIRDER
5 1/2	11 G 4 I 15
5	11 G 5, 18 4 19
4 1/2	11 G 2, 6, 8, 10, 12, 14, 16, 17 1 3/6
15	G 29 & 36
4	ALL OTHER LOCATIONS



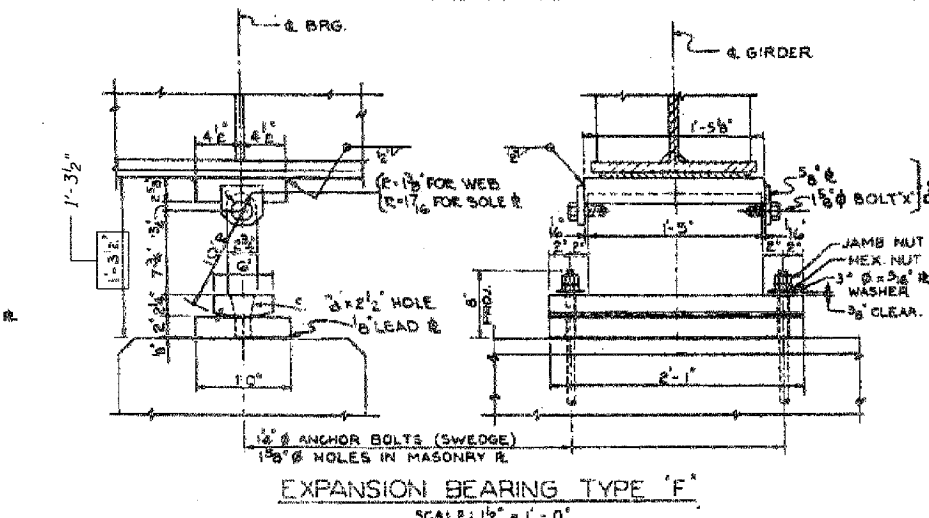
MATERIAL	TYPE 'D' (104 REQ'D)	TYPE 'E' (43 REQ'D)
SOLE PL.	9" x 2 3/8" x 1'-11"	9" x 2 3/8" x 1'-11"
MASONRY R.	9" x 2" x 1'-8"	11" x 2" x 1'-9"
ROLLER	8" x 2 3/4" x 1'-1"	9" x 2 3/4" x 1'-1"
WEB R.	6" x 2 1/2" x 1'-9"	6" x 2 1/2" x 1'-9"
ROCKER R.	9" x 2 1/2" x 1'-9"	11" x 2 1/2" x 1'-9"
2-ANCHOR BOLTS	1 1/2" x 1'-9"	1 1/2" x 1'-9"
2-R WASHERS	3" x 3" x 3/16"	3" x 3" x 3/16"
2-BOLTS 'X'	1 1/2" x 3 1/2"	1 1/2" x 3 1/2"
2-3/8" R.	5" x 3/8" x 0'-5"	5" x 3/8" x 0'-5"



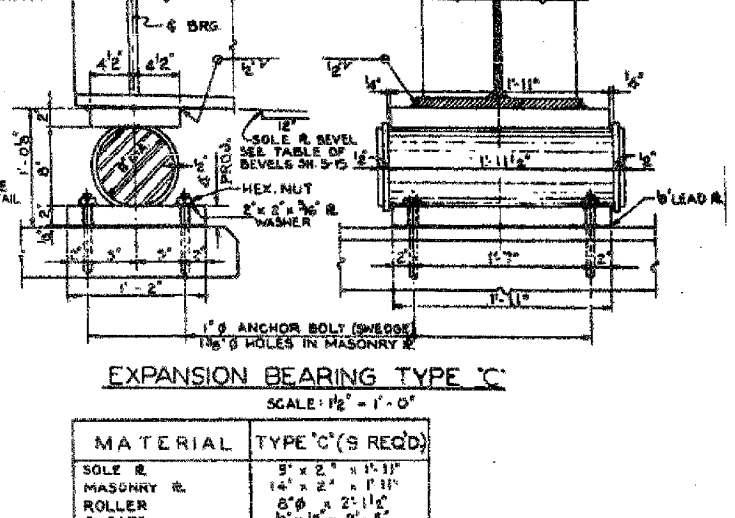
MATERIAL	TYPE 'G' (84 REQ'D)
SOLE PL.	10" x 2" x 1'-8"
MASONRY R.	11" x 2" x 1'-8"
1" LEAD R.	11" x 10" x 1'-8"
2-ANCHOR BOLTS	1 1/2" x 1'-8"
2-R WASHERS	3" x 3" x 3/16"



MATERIAL	TYPE 'B' (79 REQ'D)
SOLE PL.	9" x 2" x 1'-5"
MASONRY R.	14" x 2" x 1'-5"
ROLLER	8" x 1'-7 1/2"
2-BARS	2" x 2" x 2'-5"
1" LEAD R.	14" x 10" x 1'-5"
4-ANCHOR BOLTS	1" x 1'-6"
4-R WASHERS	2" x 2" x 3/16"



MATERIAL	TYPE 'F' (1 REQ'D)
SOLE PL.	9" x 2 3/8" x 1'-5 1/2"
MASONRY R.	12" x 2" x 2'-1"
WEB R.	9" x 2 3/4" x 1'-5"
ROCKER R.	6" x 2 1/2" x 2'-1"
1" LEAD R.	12" x 10" x 2'-1"
2-ANCHOR BOLTS	1 1/2" x 1'-9"
2-R WASHERS	3" x 3" x 3/16"
2-BOLTS 'X'	1 1/2" x 3 1/2"
2-3/8" R.	5" x 3/8" x 0'-5"



MATERIAL	TYPE 'C' (9 REQ'D)
SOLE PL.	9" x 2" x 1'-11"
MASONRY R.	14" x 2" x 1'-11"
ROLLER	8" x 2 1/2" x 1'-11"
2-BARS	2" x 2" x 2'-5"
1" LEAD R.	14" x 10" x 1'-11"
4-ANCHOR BOLTS	1" x 1'-6"
4-R WASHERS	2" x 2" x 3/16"

Designed By N. S. W.  
 Drawn By M. M. M.  
 Checked By W. J. C.  
 In Charge H. S. WULF  
 Approved By L. H. RIAN

FOR LOCATION OF BEARINGS SEE FRAMING PLANS SH. 5-13, 5-14 & 5-15.



NOTE: ROCKER R. AND WEB R. FOR EXPANSION BRG. TYPES 'D' & 'F' CAN BE GRADE 85-33 CARBON STEEL CASTING. QUANTITIES INCLUDED IN BILL OF MATERIAL SHEET 5-19 FOR FILL PLATES AT BEARINGS, SEE SHEET 5-15. FOR ADDITIONAL DETAILS SEE SHEET 5-19.

Sheet 518 of 64

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-0137

SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

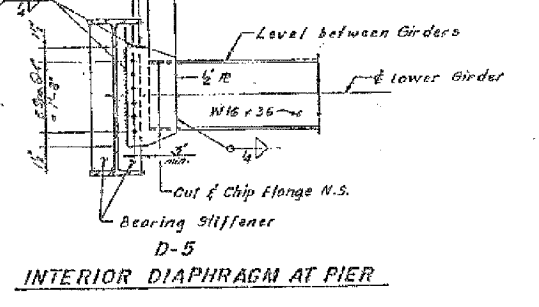
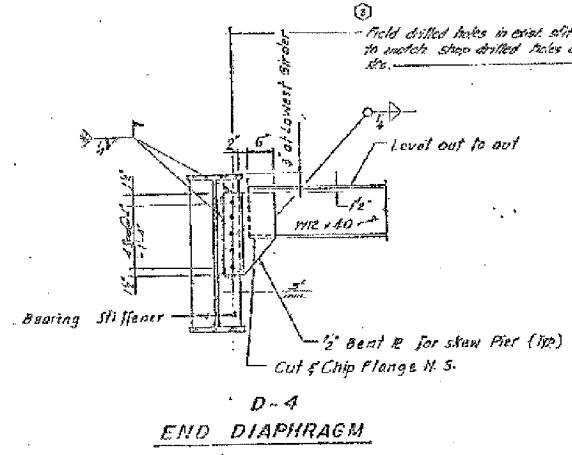
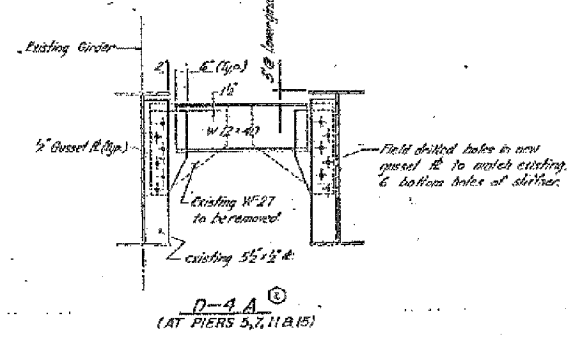
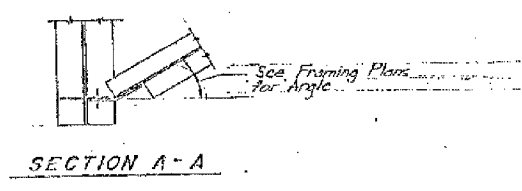
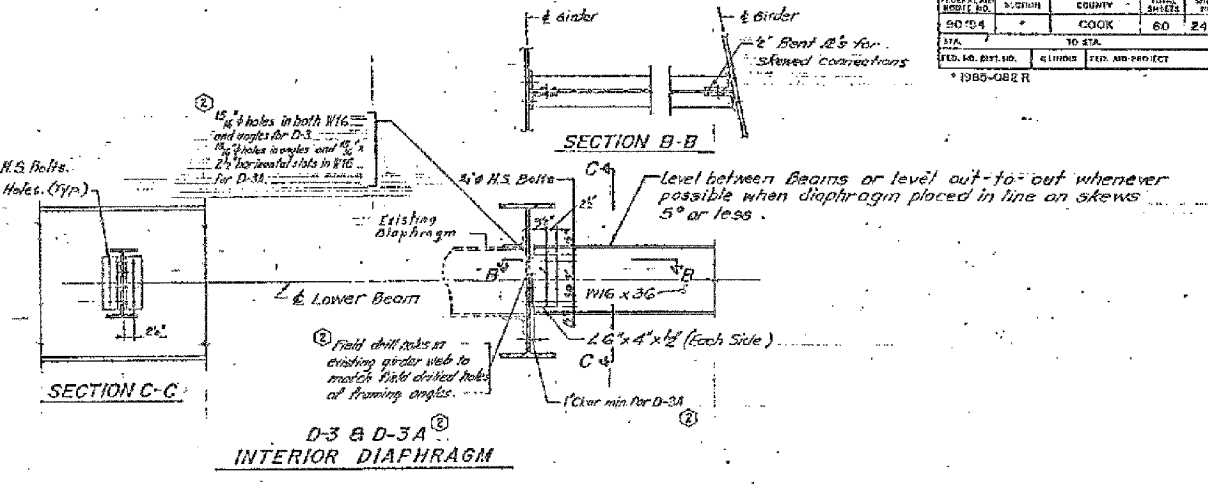
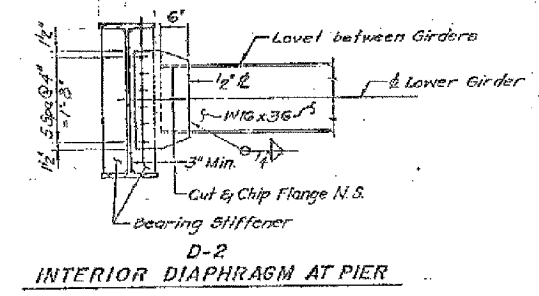
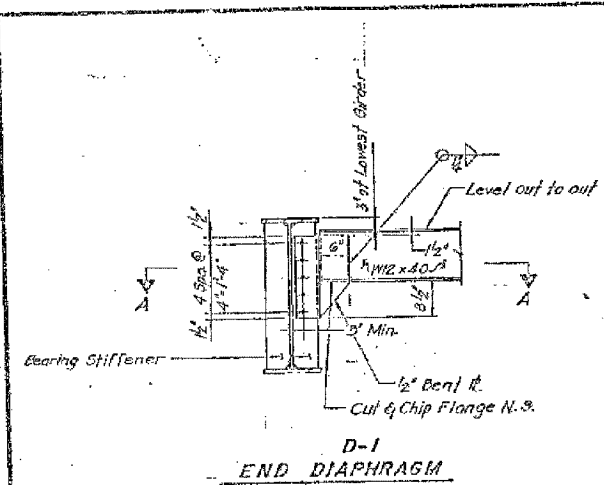
FOR INFORMATION ONLY

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	134
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94-04		COOK	60	24
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



All materials shown on this sheet furnished under a separate Steel Fabrication Contract (Section 1985-081F), unless noted otherwise.

\* NOTE:  
Optional weld may be used in the event that bolting of the connection is not feasible as determined in the field by the engineer. Modification of the gusset plates may be required to provide adequate clearance for welding. - Cost incidental to erecting structural steel.

A24, N-9  
SHEET A24 OF A60

REVISIONS	NAME	DATE
(B)		FEB 3, 88

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R - COOK COUNTY  
S.B. MAINTENANCE RECONSTRUCTION  
STRUCTURE 016-0137  
DIAPHRAGM DETAILS  
Scale: NONE  
Date: AUG. 14, 1987  
Checked By: J.L.E.M.  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

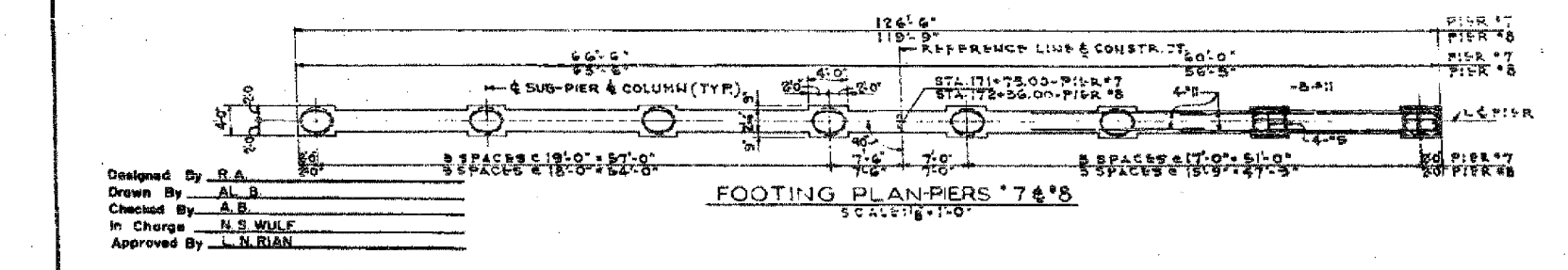
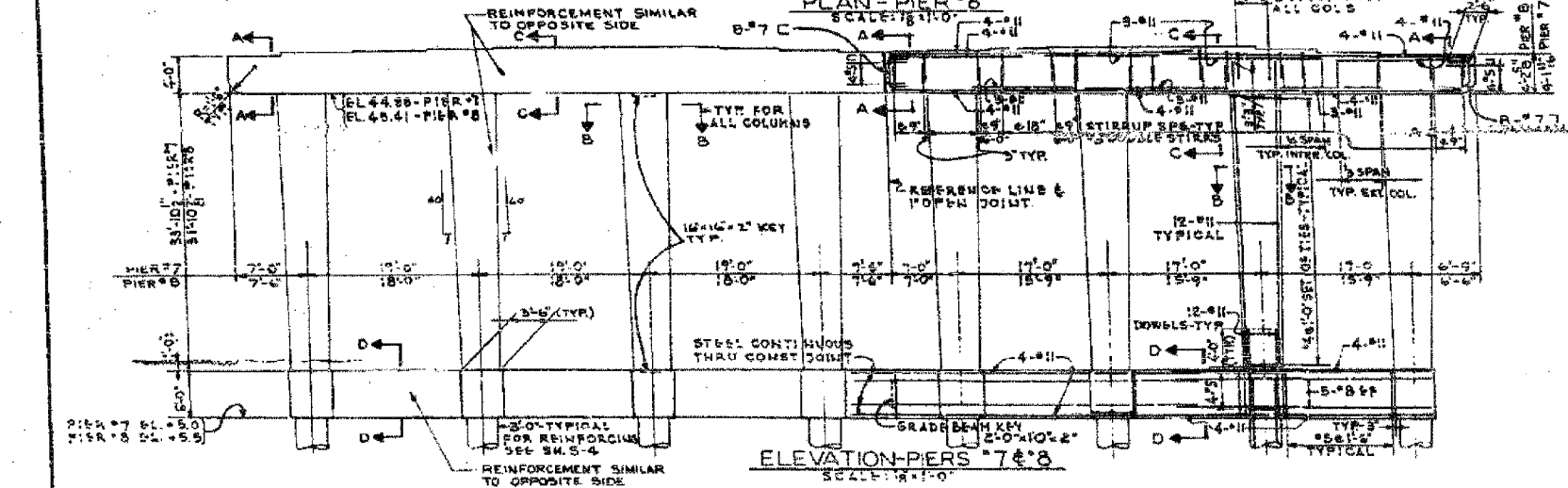
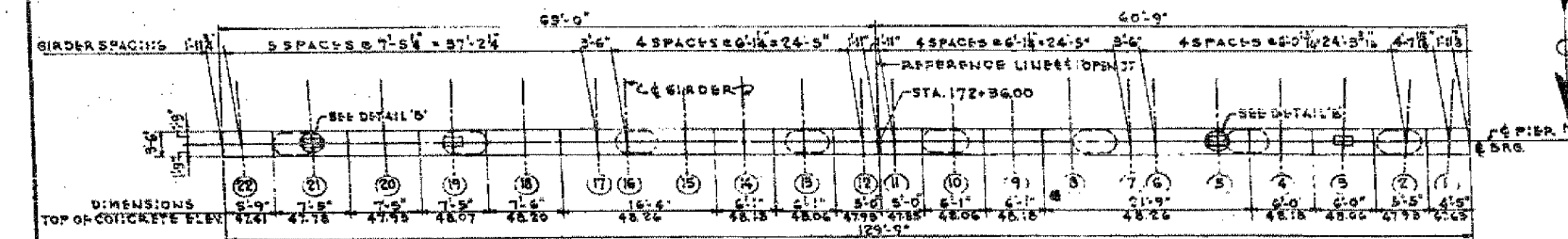
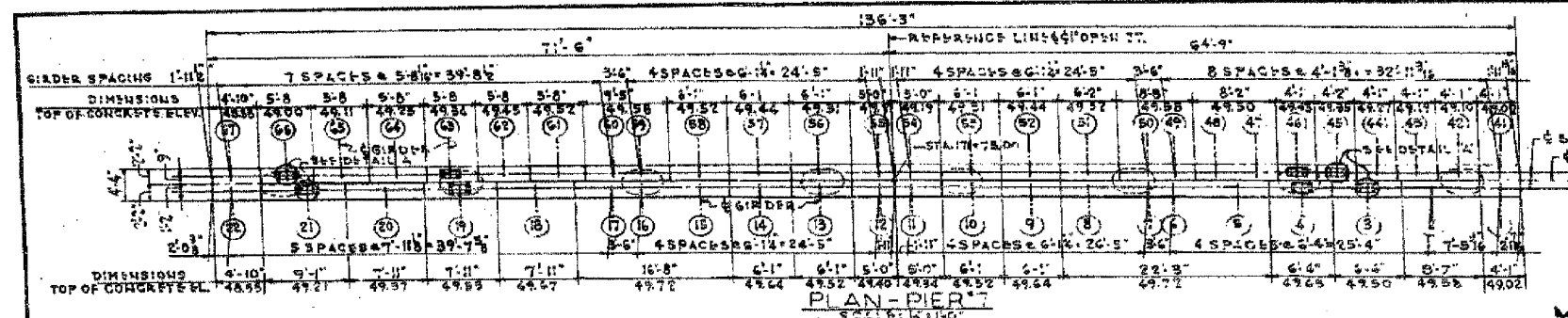
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-0137  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

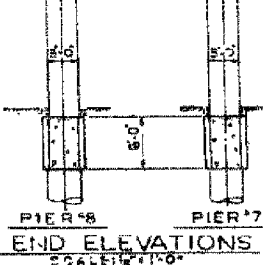
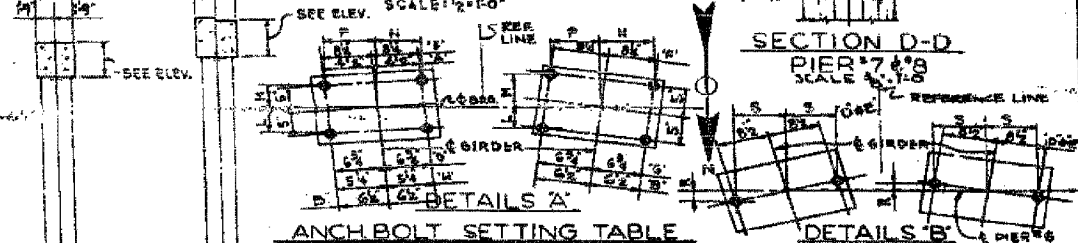
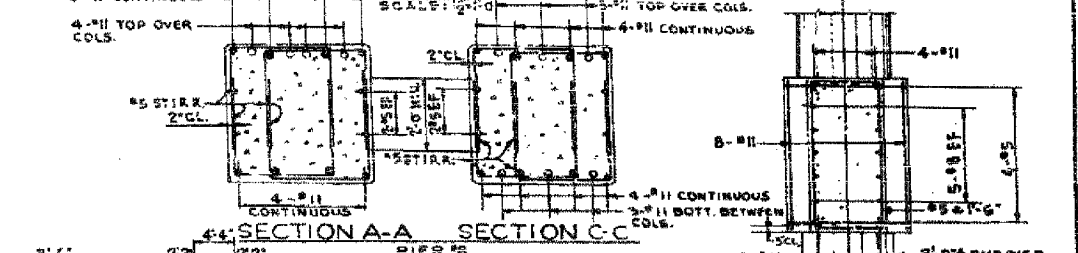
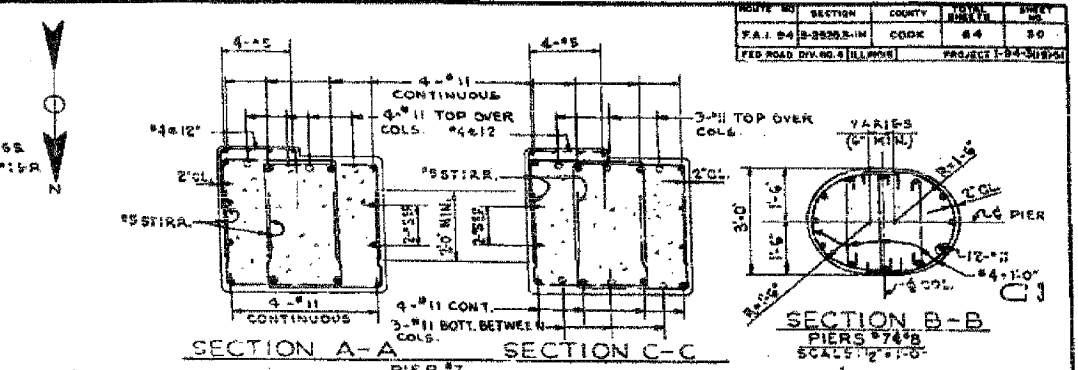
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Designed By RA  
 Drawn By ALB  
 Checked By AB  
 In Charge N.S. WULF  
 Approved By L.N. RIAN



ANCH BOLT SETTING TABLE

PIER #	DIR.	GIRDERS																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
PIER #7	SOUTH	TYP. A	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
		TYP. B	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
		TYP. C	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
		TYP. D	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
PIER #8	NORTH	TYP. A	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
		TYP. B	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
		TYP. C	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
		TYP. D	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
POROUS GRANULAR EMBANKMENT	CU. YD.	70
CLASS 'A' EXCAVATION FOR STRUCTS.	CU. YD.	196
CLASS 'A' CONCRETE	CU. YD.	261.0
REINFORCEMENT BARS	POUND	63,130

INCLUDED IN SUMMARY ON SH. S-2  
 SEE SH. S-3 FOR LIMITS OF EXCAVATION/BACKFILL

CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
**SOUTH ROUTE SUPERHIGHWAY**  
 ELEVATED HIGHWAY  
 W. 15 TH ST. TO W. MAXWELL ST.  
 SECTION 5-2525.3-1H

DE LEUW, CATHY & COMPANY  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS  
 SCALE: AS NOTED  
 SHEET 55 OF 64 SHEETS

REVISIONS	
NAME	DATE

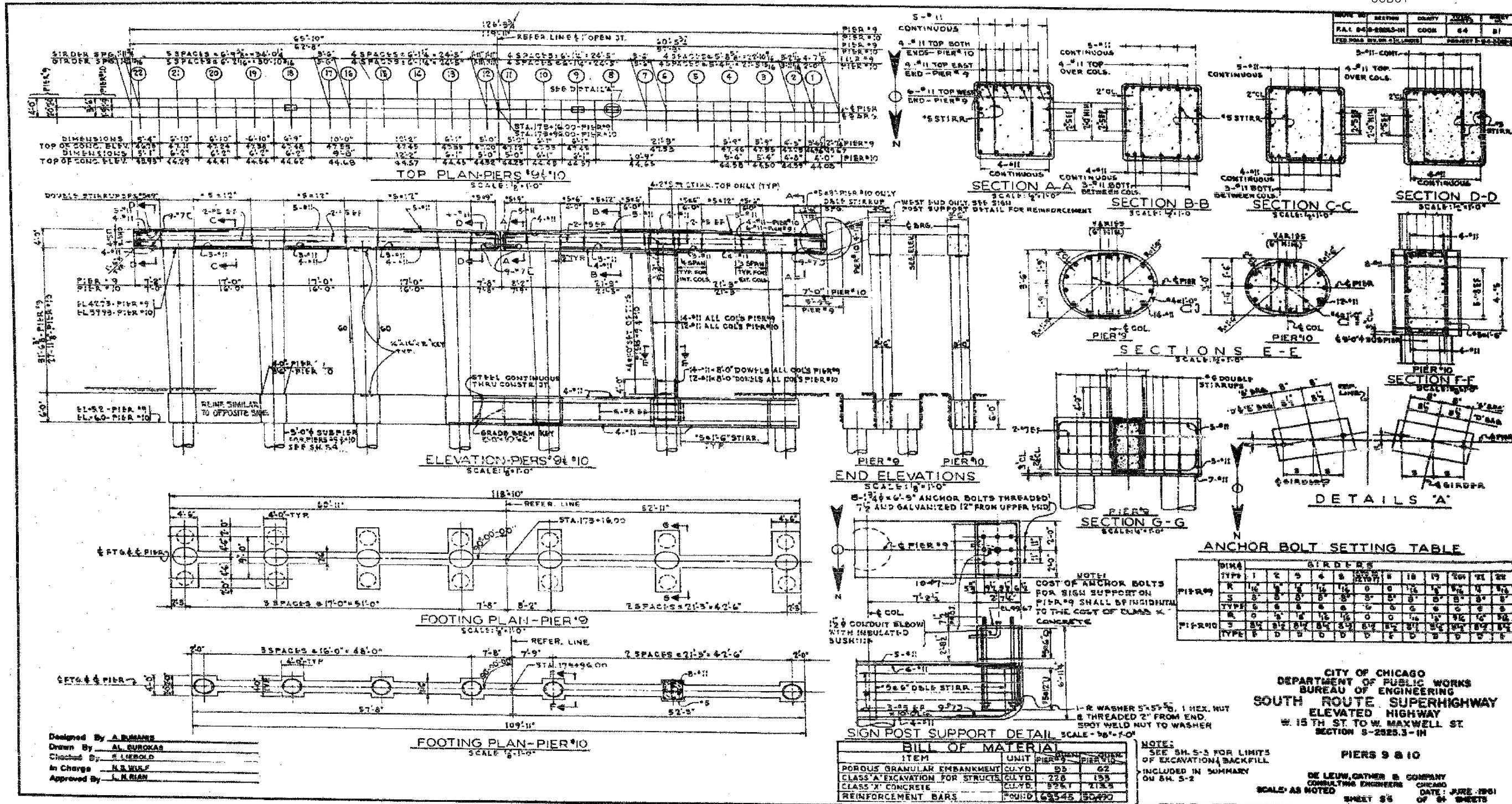
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-0137

SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

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BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

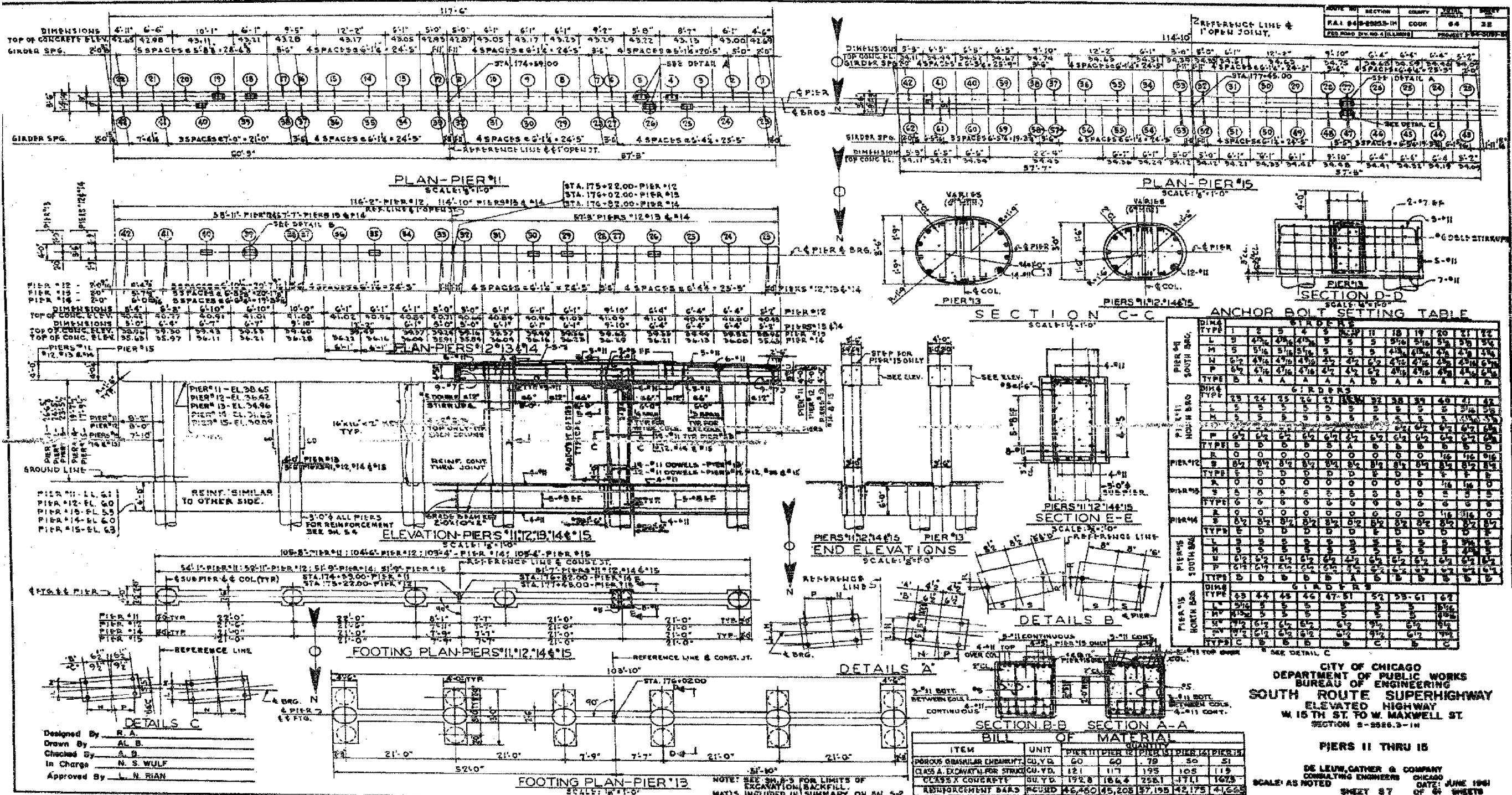
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-0137  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU



### ANCHOR BOLT SETTING TABLE

PIER NO.	TYPE	GIRDERS											
		1	2	3	4	5	6	7	8	9	10	11	12
PIER #11	L	4	5	6	7	8	9	10	11	12	13	14	15
	M	5	6	7	8	9	10	11	12	13	14	15	16
	N	6	7	8	9	10	11	12	13	14	15	16	17
	P	7	8	9	10	11	12	13	14	15	16	17	18
PIER #12	L	4	5	6	7	8	9	10	11	12	13	14	15
	M	5	6	7	8	9	10	11	12	13	14	15	16
	N	6	7	8	9	10	11	12	13	14	15	16	17
	P	7	8	9	10	11	12	13	14	15	16	17	18
PIER #13	L	4	5	6	7	8	9	10	11	12	13	14	15
	M	5	6	7	8	9	10	11	12	13	14	15	16
	N	6	7	8	9	10	11	12	13	14	15	16	17
	P	7	8	9	10	11	12	13	14	15	16	17	18
PIER #14	L	4	5	6	7	8	9	10	11	12	13	14	15
	M	5	6	7	8	9	10	11	12	13	14	15	16
	N	6	7	8	9	10	11	12	13	14	15	16	17
	P	7	8	9	10	11	12	13	14	15	16	17	18
PIER #15	L	4	5	6	7	8	9	10	11	12	13	14	15
	M	5	6	7	8	9	10	11	12	13	14	15	16
	N	6	7	8	9	10	11	12	13	14	15	16	17
	P	7	8	9	10	11	12	13	14	15	16	17	18

### BILL OF MATERIAL

ITEM	UNIT	PIER #11	PIER #12	PIER #13	PIER #14	PIER #15
POROUS GRANULAR FILL	CU. YD.	60	60	79	50	51
CLASS A EXCAVATION FOR STRUCTURE	CU. YD.	121	117	195	105	115
CLASS X CONCRETE	CU. YD.	192.8	184.4	258.1	171.1	167.5
REINFORCEMENT BARS	LB	46,460	45,205	57,195	42,175	41,625

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
ELEVATED HIGHWAY  
W 15 TH ST. TO W. MAXWELL ST.  
SECTION S-5226.3-1H

PIERS 11 THRU 15

DE LEUN, CATHEN & COMPANY  
CONSULTING ENGINEERS CHICAGO  
SCALE: AS NOTED  
DATE: JUNE 1981  
SHEET 87 OF 88 SHEETS

Designed By: R. A.  
Drawn By: A. B.  
Checked By: A. B.  
In Charge: N. S. WULF  
Approved By: L. N. RIAN

FOR INFORMATION ONLY

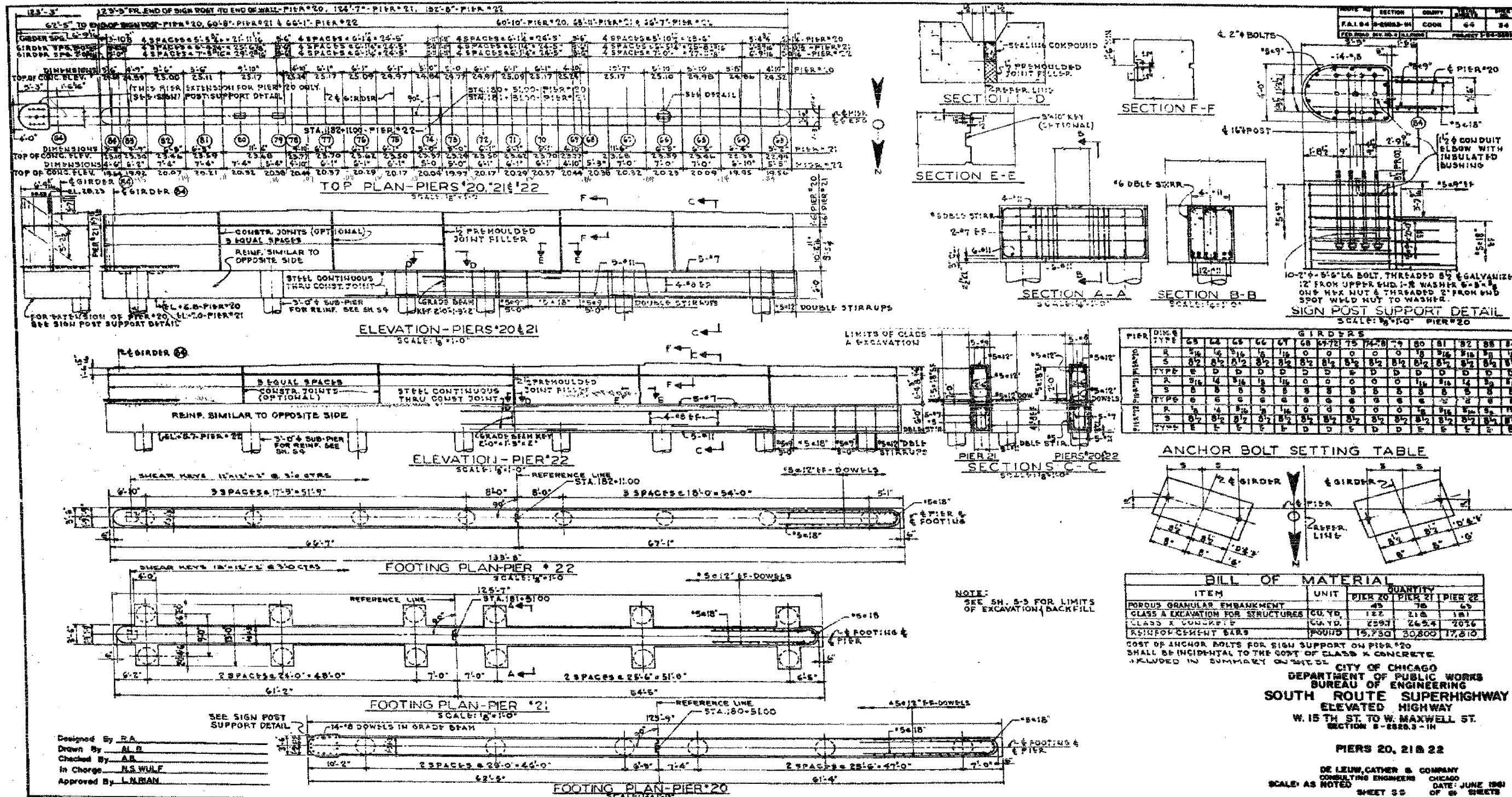
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-0137

SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

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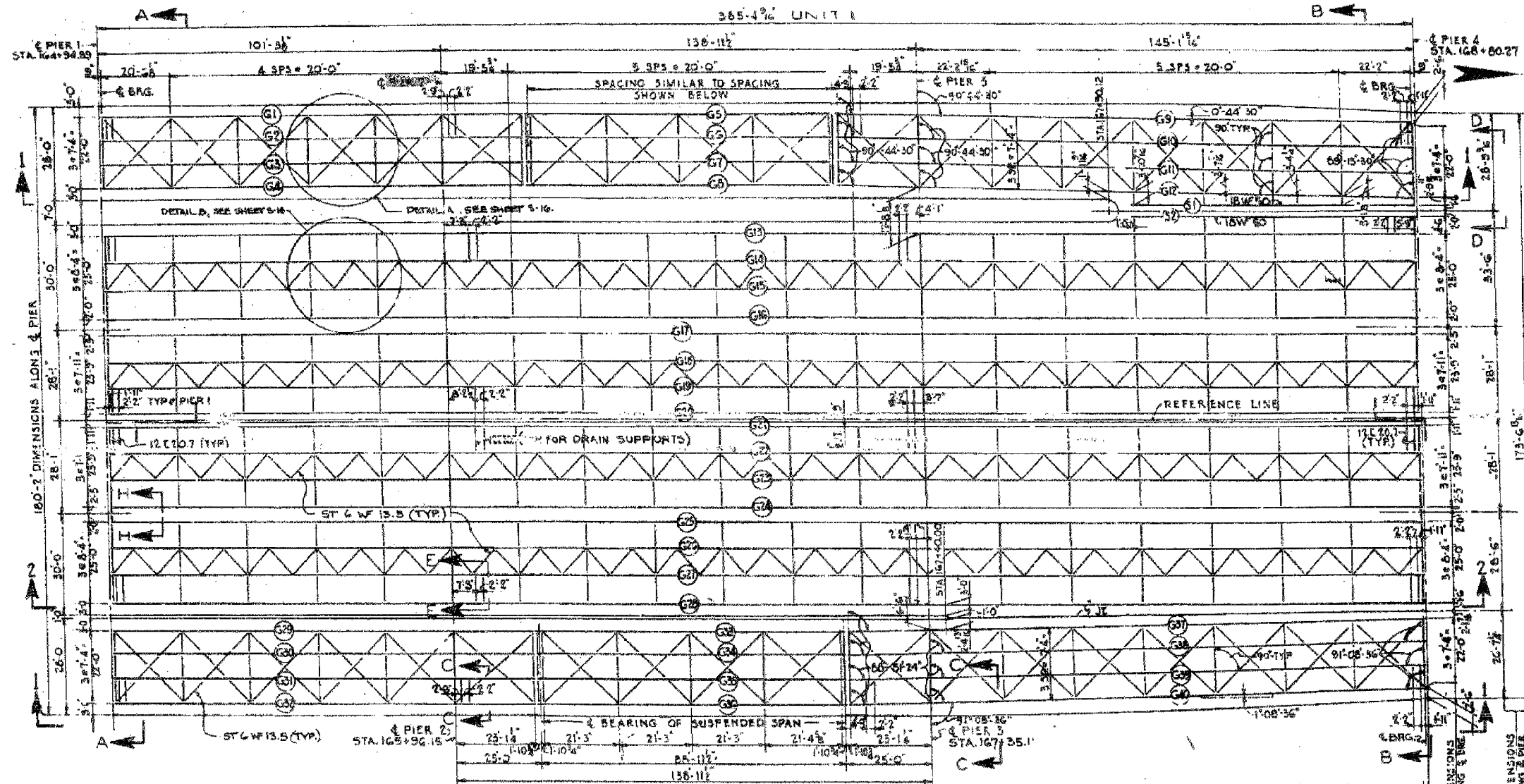




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DATE: 5/18/2007  
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**STRUCTURAL STEEL NOTES**

ALL FURNISHING, FABRICATING, TRANSPORTING, ERECTING AND PAINTING OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH SECTION 54 AND 55 OF THE STANDARD SPECIFICATIONS.

EXCEPT WHERE OTHERWISE NOTED, ALL STRUCTURAL STEEL SHALL CONFORM TO SPECIFICATIONS FOR STEEL FOR BRIDGES AND BUILDINGS ASTM DESIGNATION A-7 AND ASTM DESIGNATION A-372 AND WHERE APPLICABLE, TO THE REQUIREMENTS OF ARTICLE 124.2, AND 124.3 (a) OF THE STANDARD SPECIFICATIONS.

**BEARING AND SPLICE NOTES:-**

ALL GIRDER FIELD SPLICES SHALL BE SUB-PUNCHED, REAMED AND MATCH-MARKED FOR SHIPMENT WHILE THE MEMBERS ARE SHOP ASSEMBLED IN PROPER ALIGNMENT WITH OR WITHOUT DIAPHRAGMS. ALL GIRDER FIELD SPLICES SHALL BE SUB-PUNCHED 1/16" Ø BEHIND TO 13/16" Ø FOR 3/4" Ø BOLTS AND REAMED TO 15/16" Ø FOR 7/8" Ø BOLTS.

ALL GIRDERS SHALL BE ERECTED FULL LENGTH IN THE SHOP BEFORE REAMING AND INSPECTION.

STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT, PARTS UNACCESSIBLE AFTER ERECTION SHALL HAVE TWO SHOP COATS OF RED LEAD PAINT. FOR ADDITIONAL SHOP AND FIELD PAINT COATS, SEE THE SPECIAL PROVISIONS.

ALL ROLLERS, ROCKERS, BOLSTERS, BEARING PLATES, LEAD PLATES, PINTLES, ANCHOR BOLTS AND SPLICES SHALL BE FABRICATED AND SET IN ACCORDANCE WITH ARTICLES 54.9 OF THE STANDARD SPECIFICATIONS AND SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 54.6. THESE ITEMS ARE INCLUDED IN THE WEIGHT OF STRUCTURAL STEEL.

SPLICE PLATES TO BE MATCH-MARKED FOR SHIPMENT.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER PIERS AND ABUTMENTS.

FINISHED SURFACES OF BEARINGS AND ROLLERS SHALL BE TREATED WITH ANTI-RUST COMPOUND BEFORE SHIPMENT AS STATED IN ARTICLE 54.4 OF THE STANDARD SPECIFICATIONS.

ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" Ø OR 7/8" Ø HIGH STRENGTH BOLTS AS INDICATED.

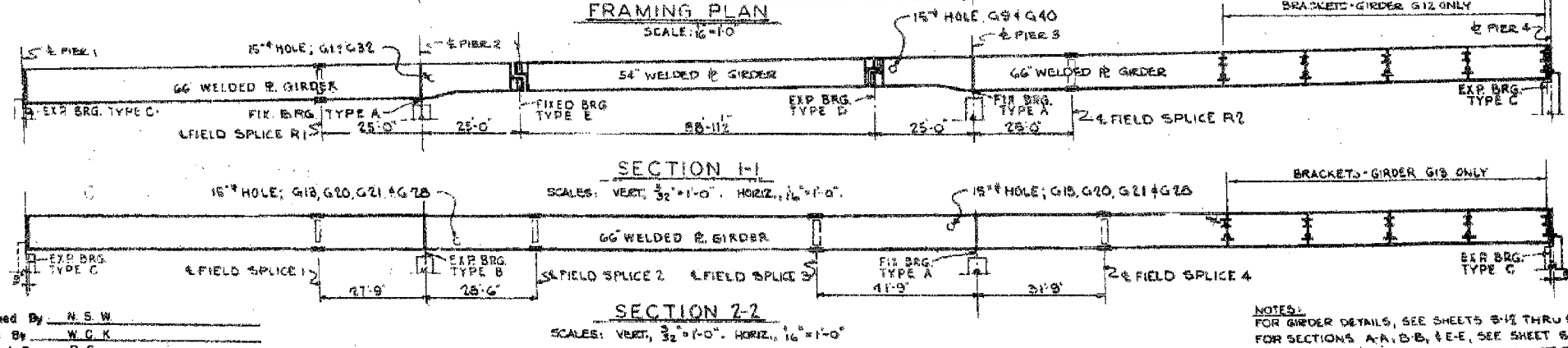
ALL RIVETS, UNLESS OTHERWISE SHOWN OR NOTED, SHALL BE 3/4" Ø, OPEN HOLES 13/16" Ø.



**SUMMARY OF STRUCTURAL STEEL UNIT 1**

ITEM	UNIT	QUANTITY	ASTM	ASTM	WEIGHT
GIRDERS	POUND				2,634,387
CROSS FRAMES	POUND	16,894			
LATERAL BRACING	POUND	105,325			
GIRDER BEARINGS	POUND	87,800			
EXPANSION GUARDS	POUND	81,032			
<b>TOTAL</b>	<b>POUND</b>	<b>599,011</b>			<b>2,694,644</b>

INCLUDED IN SUMMARY ON SHEET 91



Designed By: N. S. W.  
 Drawn By: W. C. K.  
 Checked By: R. S.  
 In Charge: N. S. WULF  
 Approved By: L. N. RIAN

**NOTES:**  
 FOR GIRDER DETAILS, SEE SHEETS 5-12 THRU 5-16  
 FOR SECTIONS A-A, B-B, & E-E, SEE SHEET 5-15  
 FOR SECTIONS C-C, D-D, & H-H, SEE SHEET 5-16

CITY OF CHICAGO  
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 BUREAU OF ENGINEERING  
**SOUTH ROUTE SUPERHIGHWAY**  
 ELEVATED HIGHWAY  
 W. 16TH ST. TO W. 15TH ST.  
 8" CONC. S-2522.5 - 2H  
**STEEL FRAMING PLAN**  
 UNIT 1  
 DE LEUW, CATHNER & COMPANY  
 CONSULTING ENGINEERS CHICAGO  
 SCALE: AS NOTED SHEET B H  
 DATE: AUGUST 1991  
 OF 56 SHEETS

Sheet S11 of 56

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1110

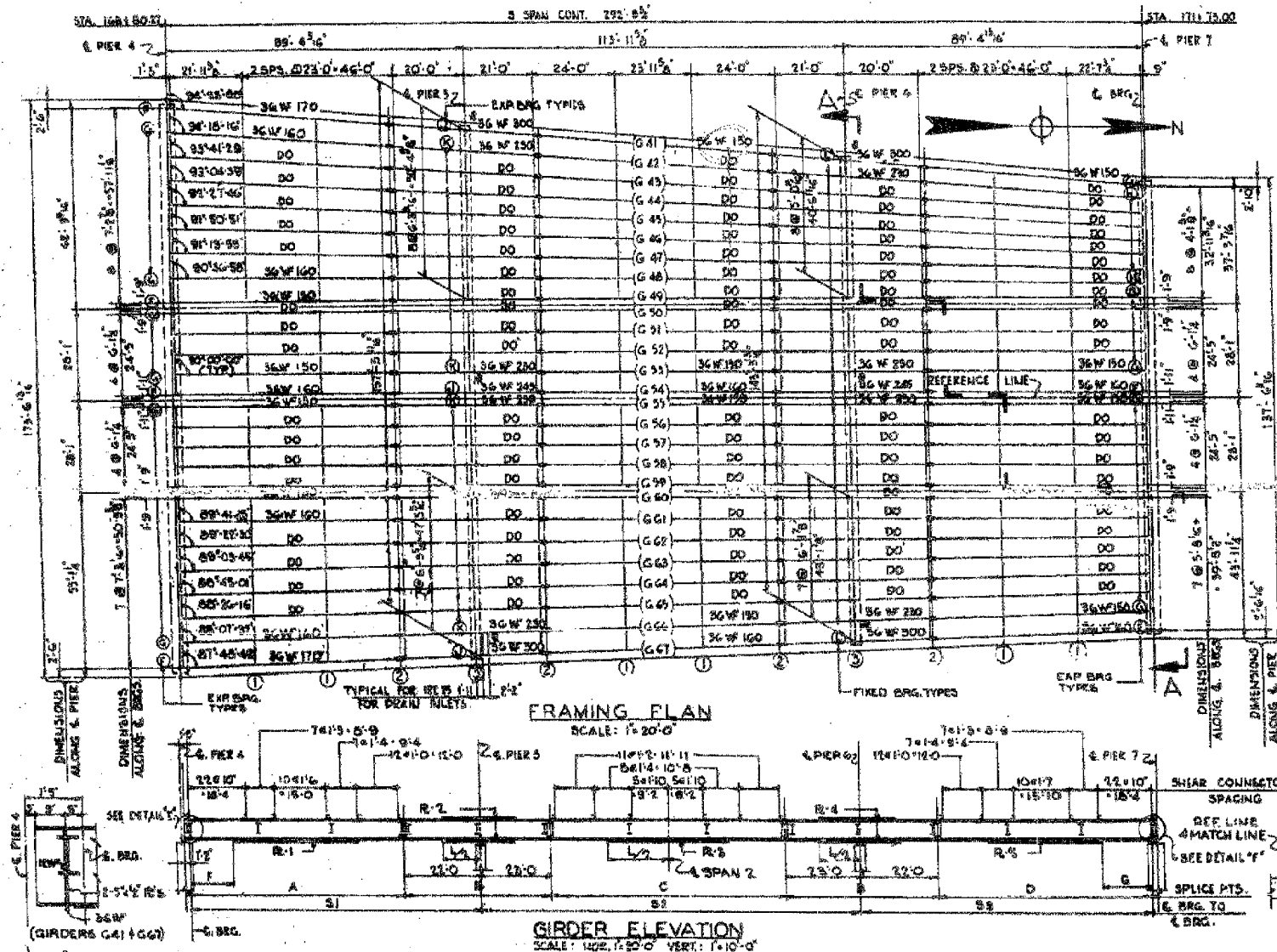
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 DATE: 5/18/2007

DRAWN BY: LAM  
 CHECKED BY: BLU

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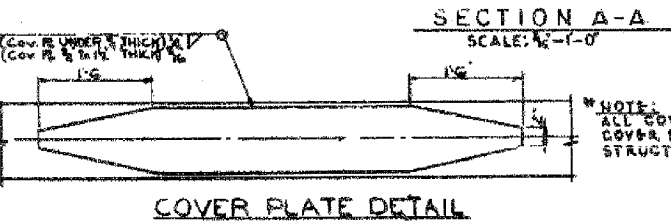
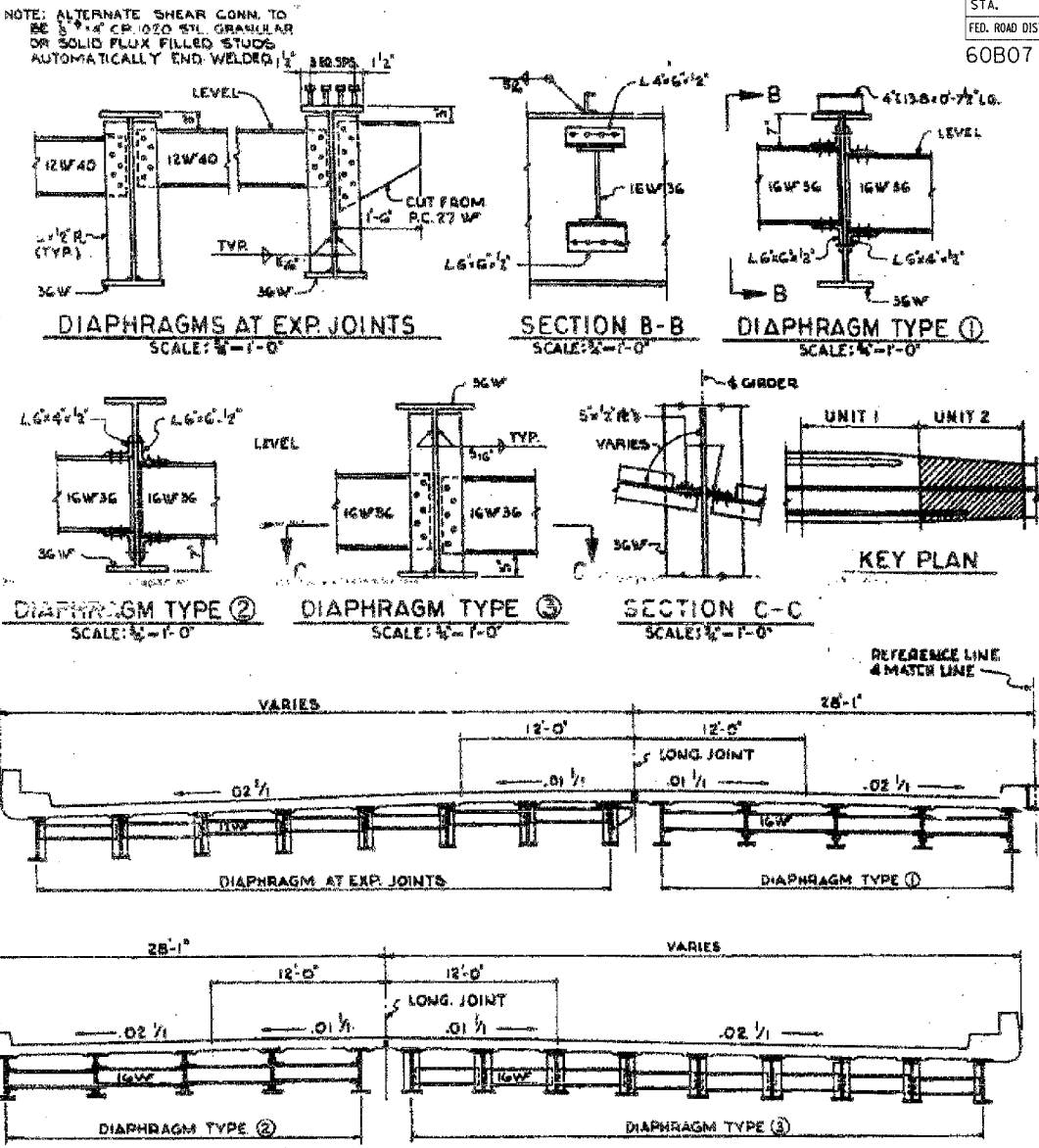
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60B07



NOTE: ALL DIMENSIONS ARE HORIZONTAL AND ALONG THE CENTERLINE OF BEAM.

GIRDER	A	B	C	D	S1	S2	S3	F	G	R-1	R-2	R-3	R-4
41	67'-4"	45'-2"	66'-2"	67'-4"	66'-2"	114'-3"	88'-11"	11'-0"	12'-0"	10'-1'-4 1/2"	15'-1'-2 1/2"	10'-1'-4 1/2"	15'-1'-2 1/2"
42	66'-7"	45'-1 1/2"	65'-11"	67'-4"	66'-2"	114'-3"	88'-10"	12'-6"	14'-6"	10'-1'-4 1/2"	15'-1'-2 1/2"	10'-1'-4 1/2"	15'-1'-2 1/2"
43	66'-6"	45'-1 1/2"	65'-11"	67'-8"	65'-11"	114'-3"	88'-10"	DO	DO	DO	DO	DO	DO
44	66'-6"	45'-0"	65'-0"	67'-2"	65'-0"	114'-1 1/2"	88'-9"	DO	DO	DO	DO	DO	DO
45	66'-6"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	DO	DO	DO	DO	DO	DO
46	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	DO	DO	DO	DO	DO	DO
47	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	DO	DO	DO	DO	DO	DO
48	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	DO	DO	DO	DO	DO	DO
49	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	DO	DO	DO	DO	DO	DO
50	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO
51	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO
52	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO
53	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO
54	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO
55	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO
56	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO
57	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO
58	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO
59	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO	DO
60	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	13'-0"	15'-0"	10'-1'-4 1/2"	15'-1'-2 1/2"	10'-1'-4 1/2"	15'-1'-2 1/2"
61	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	12'-6"	14'-6"	10'-1'-4 1/2"	15'-1'-2 1/2"	10'-1'-4 1/2"	15'-1'-2 1/2"
62	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	DO	DO	DO	DO	DO	DO
63	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	DO	DO	DO	DO	DO	DO
64	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	DO	DO	DO	DO	DO	DO
65	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	DO	DO	DO	DO	DO	DO
66	66'-5"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	DO	DO	DO	DO	DO	DO
67	67'-1"	45'-0"	65'-0"	67'-2"	65'-0"	114'-0"	88'-8"	11'-0"	12'-0"	10'-1'-4 1/2"	15'-1'-2 1/2"	10'-1'-4 1/2"	15'-1'-2 1/2"



**GENERAL NOTES**

- SEE SHEETS 5-8 FOR BEARING DETAILS & SPLICE DETAILS, DEAD LOAD DEFLECTIONS AND CAMBER DIAGRAM. SEE SHEET 5-24.
- USE HIGH STRENGTH BOLTS FOR ALL DIAPHRAGM CONNECTIONS.
- ALL COVER PLATES OVER 1" THICK & ALL W/ BEAMS WITH COVER PLATES OVER 1" THICK ARE TO BE TYPE-A325 STRUCTURAL STEEL, ALL OTHERS A-7.

**SUMMARY OF STRUCTURAL STEEL UNIT 2**

ITEM	UNIT	QUANTITY	QUANTITY
		ASTM A 325	ASTM A 325
BEAMS	POUND	1,559,324	96,513
FILL PLATES & SPLICE PLATES	POUND	10,270	
DIAPHRAGMS	POUND	54,241	
STEEL BEARINGS	POUND	20,782	
TOTAL		1,644,617	96,513

Sheet S22 of 56

**REVISIONS**

NAME	DATE

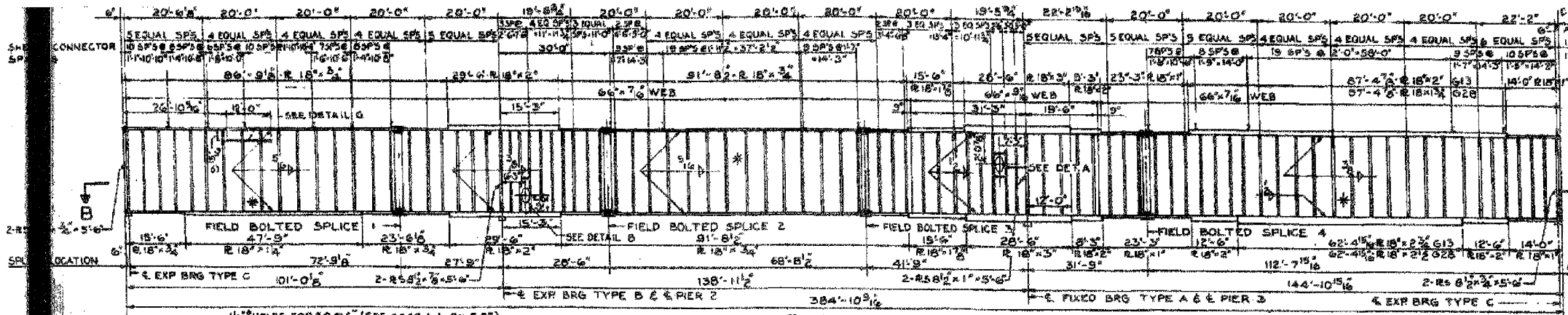
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1110  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

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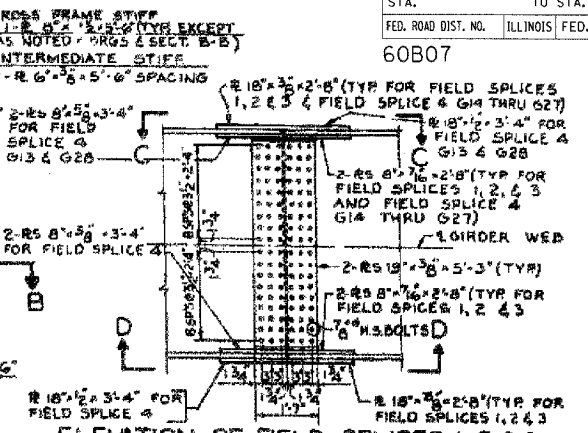
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60B07



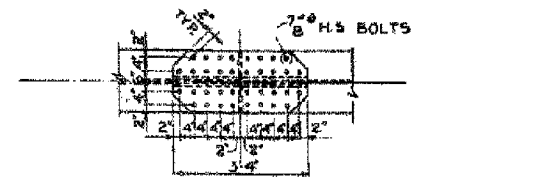
**ELEVATION OF GIRDER G13**  
(GIRDER G28 SIMILAR EXCEPT AS NOTED)  
SCALE: HORIZ: 1/8"=1'-0"  
VERT: 1/4"=1'-0"



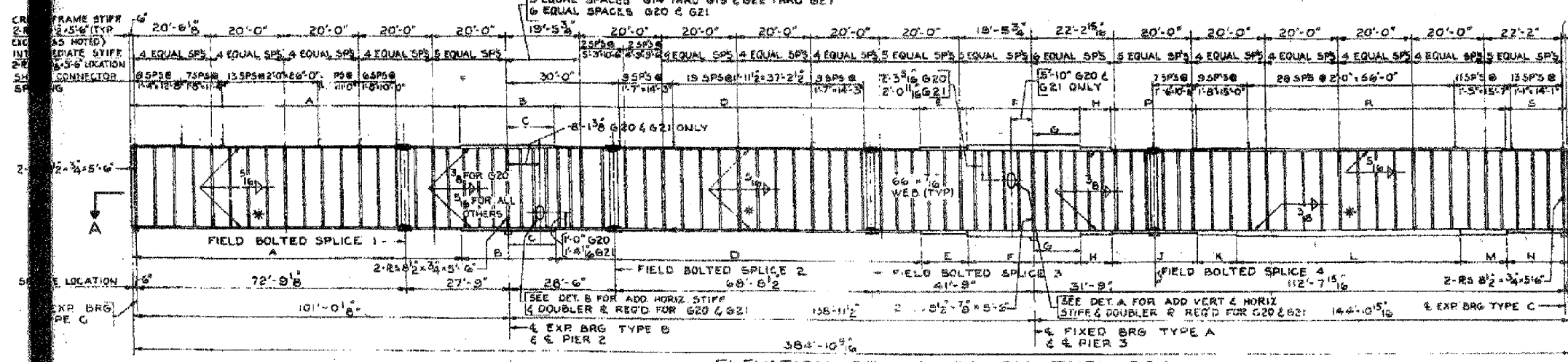
**ELEVATION OF FIELD SPLICES 1, 2, 3 & 4**  
(SPLICE DETAILS APPLY TO ROWNY GIRDERS G13 THRU G28 ONLY)  
SCALE: 1/2"=1'-0"



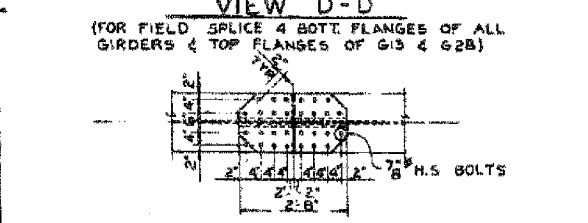
**SECTION B-B**



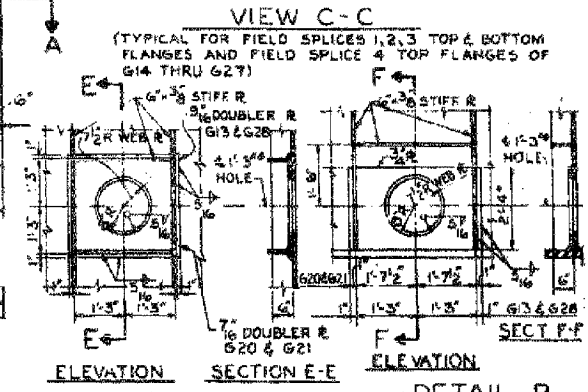
**VIEW D-D**  
(FOR FIELD SPLICE 4 BOTT. FLANGES OF ALL GIRDERS & TOP FLANGES OF G13 & G28)



**ELEVATION OF GIRDERS G14 THRU G27**  
SCALE: HORIZ: 1/8"=1'-0"  
VERT: 1/4"=1'-0"



**VIEW C-C**  
(TYPICAL FOR FIELD SPLICES 1, 2, 3 TOP & BOTTOM FLANGES AND FIELD SPLICE 4 TOP FLANGES OF G14 THRU G27)



**DETAIL A**  
(G13 & G21 AS SHOWN G20 & G28 SIMILAR)  
SCALE: 1/2"=1'-0"

**DETAIL B**  
(G13 & G21 AS SHOWN G20 & G28 SIMILAR)  
SCALE: 1/2"=1'-0"

**NOTE:**  
FOR GIRDERS G16, G17, G20, G21, G24 & G25  
USE 1'-0" x 12'-5'-6" STIFFENER R AT CROSSFRAME CONNECTIONS AND 1'-0" x 2'-5'-6" STIFFENER R WHERE NO CROSSFRAME CONNECTIONS ARE MADE.

GIRDER	WELDED PLATE GIRDER SCHEDULE														
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	S
G15, G26 & G27	18" x 3/4" x 89" x 10" x 23" x 3" R	11'-6"	18" x 3/4" x 104" x 10" x 23" x 3" R	11'-0"	18" x 3/4" x 104" x 10" x 23" x 3" R	11'-0"	18" x 3/4" x 104" x 10" x 23" x 3" R	11'-0"	18" x 3/4" x 104" x 10" x 23" x 3" R	11'-0"	18" x 3/4" x 104" x 10" x 23" x 3" R	11'-0"	18" x 3/4" x 104" x 10" x 23" x 3" R	11'-0"	18" x 3/4" x 104" x 10" x 23" x 3" R
G17, G18 & G19	18" x 3/4" x 80" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R
G22, G23, G24 & G25	18" x 3/4" x 87" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R	10'-6"	18" x 3/4" x 103" x 10" x 21" x 3" R

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SOUTH ROUTE SUPERHIGHWAY  
ELEVATED HIGHWAY  
W 16TH ST TO W 15TH ST.

Sheet S12 of 56

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1110

SCALE: NTS  
DATE: 5/18/2007

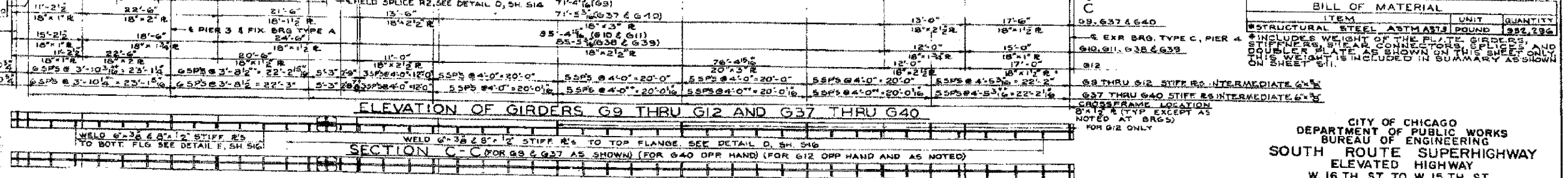
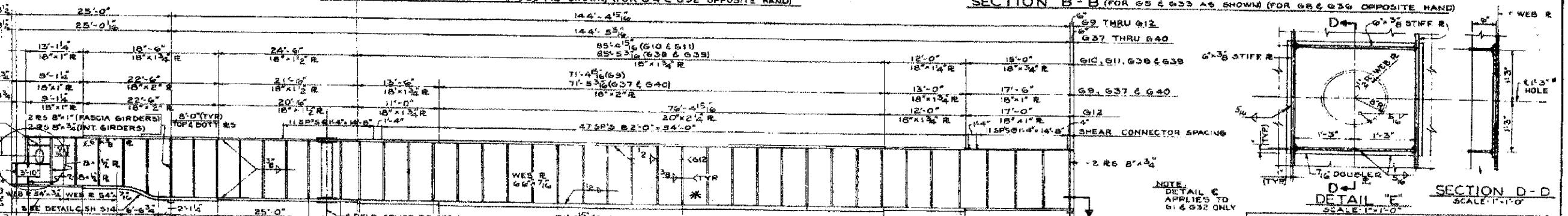
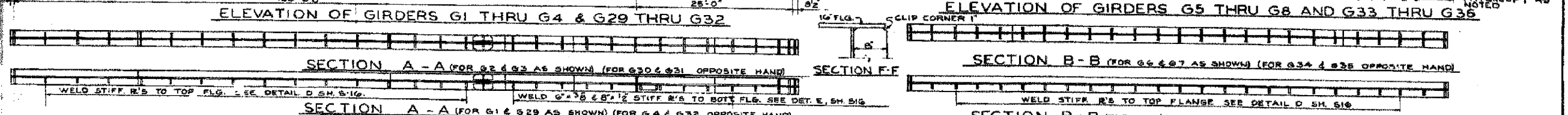
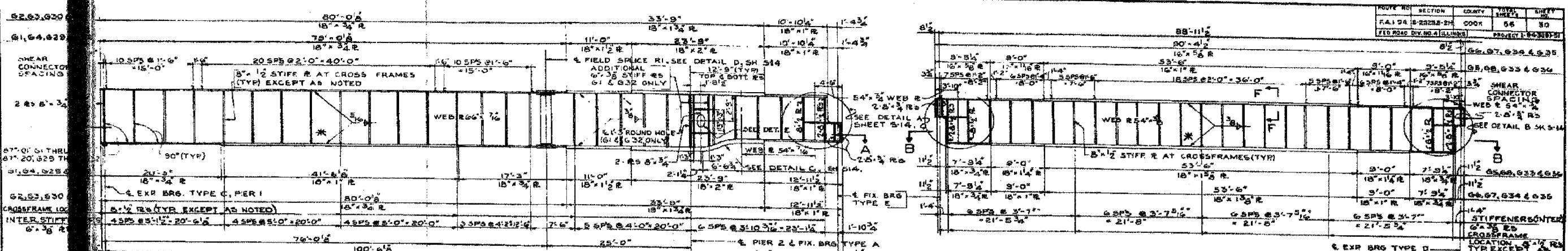
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5/24/2007 5:50:06 PM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 94-2005-086 I	COOK	66	228	142
FED. ROAD DIV. NO. 4 ILLINOIS		PROJECT E-633(8)97		



NOTE: DETAIL C APPLIES TO G1 & G32 ONLY

SCALE: 1/4" = 1'-0"

SCALE: 1/4" = 1'-0"

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
STRUCTURAL STEEL ASTM A36	POUND	982,296
* INCLUDES WEIGHT OF THE PLATE, GIRDERS, STIFFENERS, SHEAR CONNECTORS, SPLICES AND DOUBLER PLATE AS SHOWN ON THIS SHEET ONLY. THIS WEIGHT IS INCLUDED IN SUMMARY AS SHOWN ON SHEET S11.		

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 SOUTH ROUTE SUPERHIGHWAY  
 ELEVATED HIGHWAY  
 W. 16TH ST TO W. 15TH ST  
 SECTION 3-2525.3-2H  
 RAMP GIRDER DETAILS  
 G1 THRU G12 & G29 THRU G40

Designer: P.J.V.  
 Drawn: O.M.  
 Checked: E.L.

NOTES:  
 SEE SHEET S-16 FOR WELDING, LATERAL BRACING, AND SHEAR CONNECTOR DETAILS

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1110

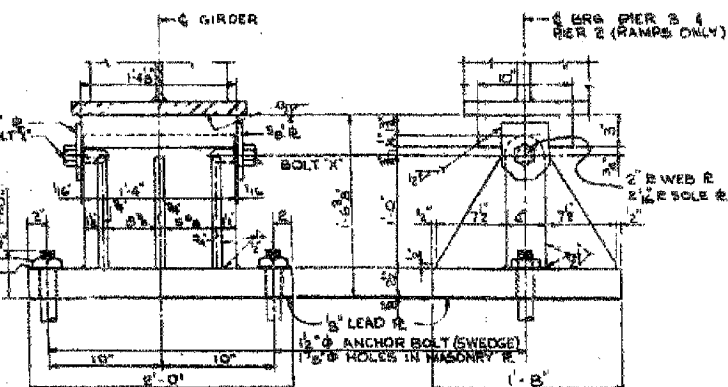
SCALE: NTS  
 DATE: 5/18/2007

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**MATERIAL - TYPE 'A'**

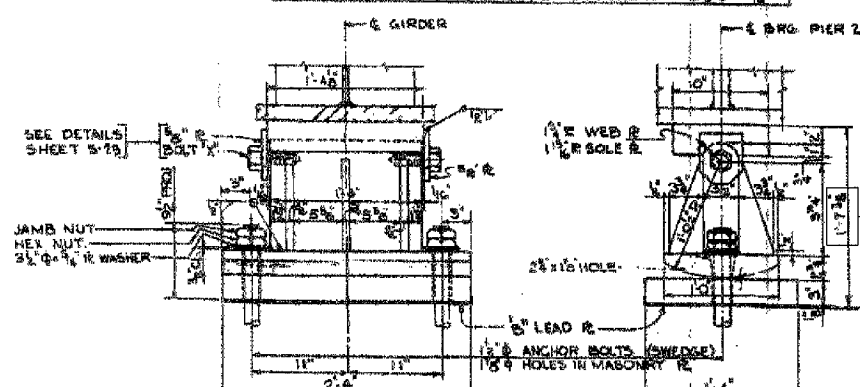
SOLE R	10' - 3" x 14"	2 - 5/8" R	5' - 6" x 5"
MASONRY R	20' - 2" x 2'-0"	2 - BOLT "A"	1 1/2" x 3"
WEB R	14" x 2" x 1/4"	2 - ANCHOR BOLTS	1 1/2" x 2'-0"
ROCKER R	7 1/2" x 3" x 1/4"	2 - R WASHERS	3 1/2" x 5"
1" LEAD R	20' - 2" x 2'-0"		



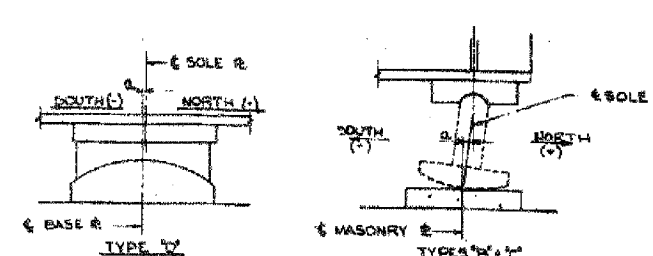
**FIXED BRG. TYPE 'A' (32 REQ.)**  
SCALE: 1/2" = 1'-0"

**MATERIAL - TYPE 'B'**

SOLE R	10' - 3" x 14"	1 LEAD R	14" x 2" x 1/4"
MASONRY R	16' - 3" x 2'-4"	2 - 5/8" R	5' - 6" x 5"
WEB R	14" x 2" x 1/4"	2 - BOLT "A"	1 1/2" x 3"
ROCKER R	12" x 2 1/2" x 2'-0"	2 - ANCHOR BOLTS	1 1/2" x 2'-0"
6" STIFFENER R	24" x 3" x 1/4"	2 - R WASHERS	3 1/2" x 5"



**EXPANSION BEARING TYPE 'B' (16 REQ.)**  
SCALE: 1/2" = 1'-0"



**SOLE R SETTING DIAGRAM**

**TABLE OF SETTINGS (d)**

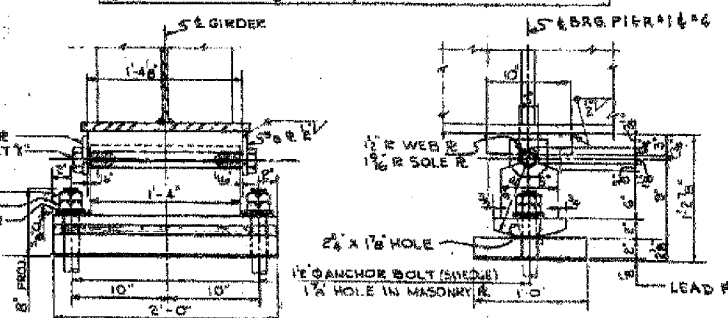
TEMPERATURE	110°	90°	70°	50°	30°	10°
LOCATION OF BEARINGS	ROADWAY					
PIER #1 (NORTH)	C	-1 1/2"	-3 1/2"	-5 1/2"	0	-1 1/2"
PIER #2	B	-5 1/2"	-7 1/2"	-5 1/2"	0	-1 1/2"
PIER #3 (FIXED)	A	0	0	0	0	0
PIER #4 (SOUTH)	C	-1 1/2"	-3 1/2"	-5 1/2"	0	-1 1/2"
LOCATION OF BEARINGS	RAMPS					
PIER #1 (NORTH)	C	-1 1/2"	-3 1/2"	-5 1/2"	0	-1 1/2"
PIER #2 (FIXED)	A	0	0	0	0	0
SUSPENDED SPAL	A	0	0	0	0	0
SOUTH END (FIXED)	E	0	0	0	0	0
NORTH END	D	-2 1/2"	-1 1/2"	-3 1/2"	0	-1 1/2"
PIER #3 (FIXED)	A	0	0	0	0	0
PIER #4 (SOUTH)	C	-1 1/2"	-3 1/2"	-5 1/2"	0	-1 1/2"

**SCHEDULE OF BEARINGS**

BEARING TYPE	NUMBER REQUIRED	WEIGHT OF STEEL PER BRG. (LBS)	TOTAL STEEL (LBS)
A	32	871	27,872
B	16	1,070	17,120
C	48	546	26,208
D	8	703	5,624
E	8	172	1,376
	<b>TOTAL</b>		<b>87,800</b>

**MATERIAL - TYPE 'C'**

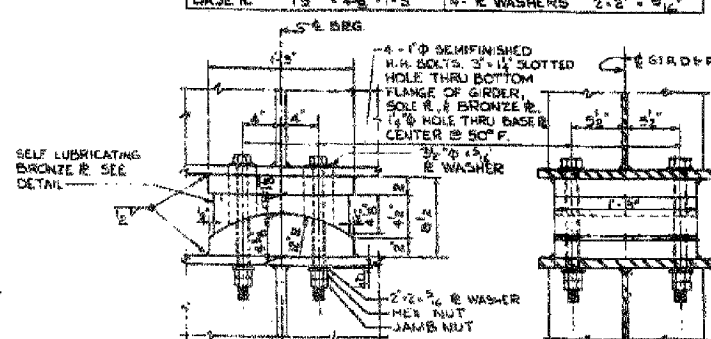
SOLE R	10' - 3" x 14"	2 - 5/8" R	5' - 6" x 5"
MASONRY R	12' - 2" x 2'-0"	2 - BOLT "A"	1 1/2" x 3"
WEB R	8 1/2" x 5" x 1/4"	2 - ANCHOR BOLTS	1 1/2" x 2'-0"
ROCKER R	8 1/2" x 2" x 2'-0"	2 - R WASHERS	3 1/2" x 5"
1" LEAD R	12' - 4" x 2'-0"		



**EXPANSION BRG. TYPE 'C' (48 REQ.)**  
SCALE: 1/2" = 1'-0"

**MATERIAL - TYPE 'D'**

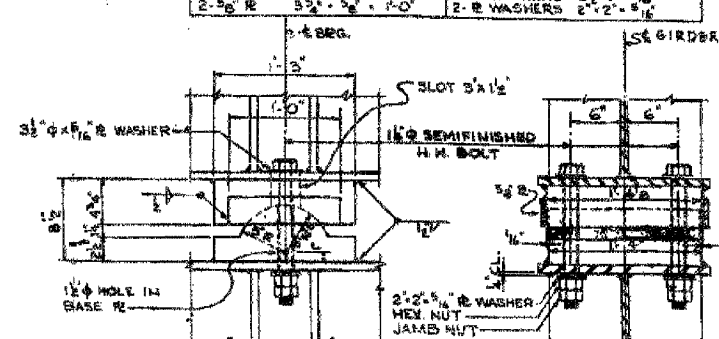
SOLE R	15' - 2" x 1'-3"	4 - BOLTS	1" x 1'-3"
BRONZE R	14" x 4 1/2" x 1'-3"	4 - R WASHERS	3 1/2" x 5"
BASE R	15' - 4 1/2" x 1'-2"	4 - R WASHERS	2' - 2" x 5"



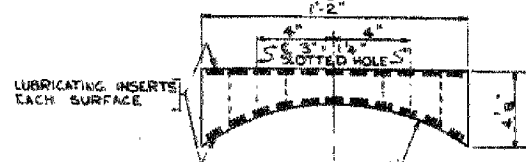
**EXPANSION BRG. TYPE 'D' (8 REQ.)**  
SCALE: 1/2" = 1'-0"

**MATERIAL - TYPE 'E'**

SOLE R	15' - 4 1/2" x 1'-3"	2 - BOLTS	1" x 1'-3"
BASE R	15' - 4 1/2" x 1'-4"	2 - R WASHERS	3 1/2" x 5"
2 - 5/8" R	5 1/2" x 5" x 1'-0"	2 - R WASHERS	2' - 2" x 5"



**FIXED BRG. TYPE 'E' (8 REQ.)**  
SCALE: 1/2" = 1'-0"



**DETAIL OF SELF LUBRICATING BRONZE R**  
SCALE: 3" = 1'-0"

NOTE: SEE ANCHOR BOLT SETTING DETAIL SHY. 523  
\* ALL WELDED PLATES TO BE A-7 STEEL  
ROCKER R & WEB R FOR EXPANSION BRG. TYPES  
B & C CAN BE GRADE 60-80 CARBON STEEL  
CASTING

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
STRUCTURAL STEEL	LBS.	87,800

INCLUDED IN W.T. OF SHY. 511

SCALE OF TRACING



Designed: N.S.W.  
Drawn: M.M.M.  
Checked: R.J.V.  
In Charge: N.S. WULF  
Approved: L.N. RIAN

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
ELEVATED HIGHWAY

W. 16 TH. ST. TO W. 15 TH. ST.

SECTION 3-2522.3-2H

BEARINGS UNIT I

DE LEUW, CATHER & COMPANY  
CONSULTING ENGINEERS CHICAGO  
SCALE: AS NOTED DATE: AUGUST, 1961

Sheet S17 of 56

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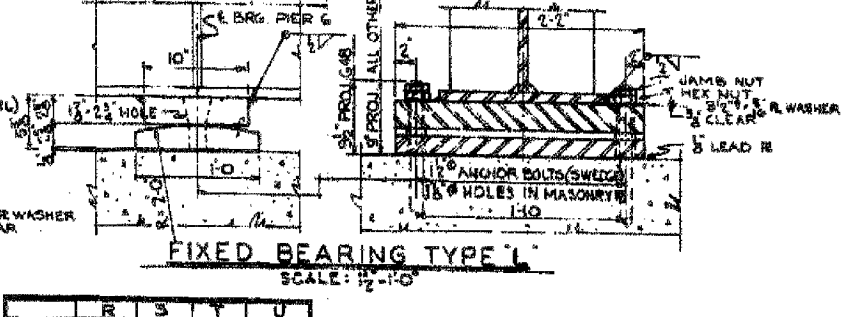
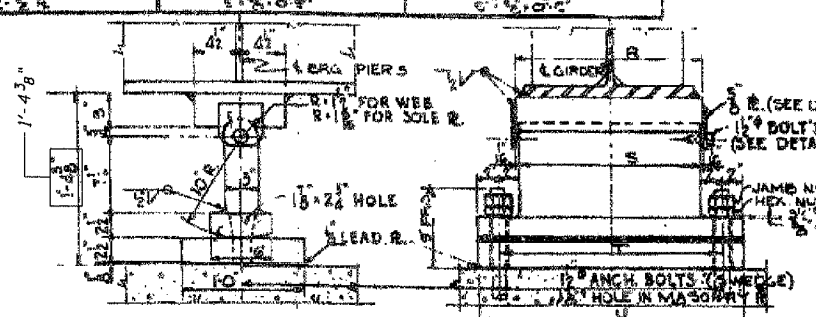
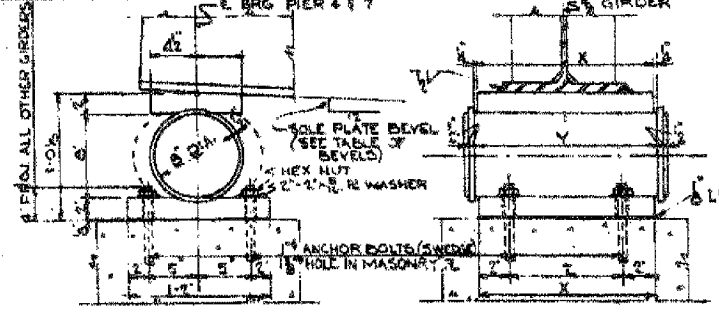
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1110

SCALE: NTS  
DATE: 5/18/2007

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CHECKED BY: BLU

MATERIAL	TYPE F (6 RECD)	TYPE G (4 RECD)	TYPE H (7 RECD)	MATERIAL	TYPE J (3 RECD)	TYPE K (24 RECD)	MATERIAL	TYPE L (27 RECD)
SOLE PLATE MASONRY R LEAD R ANCHOR BOLTS WASHERS BOLTS	5" x 2 1/2" x 1/2" 14" x 1 1/2" x 1/2" 14" x 1 1/2" x 1/2" 14" x 1 1/2" x 1/2" 14" x 1 1/2" x 1/2"	3" x 2 1/2" x 1/2" 14" x 1 1/2" x 1/2" 14" x 1 1/2" x 1/2" 14" x 1 1/2" x 1/2" 14" x 1 1/2" x 1/2"	9" x 2 1/2" x 1/2" 14" x 1 1/2" x 1/2" 14" x 1 1/2" x 1/2" 14" x 1 1/2" x 1/2" 14" x 1 1/2" x 1/2"	SOLE PLATE MASONRY R ROCKER R LEAD R ANCHOR BOLTS WASHERS BOLTS	9" x 2 1/2" x 1/2" 12" x 1 1/2" x 1/2" 12" x 1 1/2" x 1/2" 12" x 1 1/2" x 1/2" 12" x 1 1/2" x 1/2"	9" x 2 1/2" x 1/2" 12" x 1 1/2" x 1/2" 12" x 1 1/2" x 1/2" 12" x 1 1/2" x 1/2" 12" x 1 1/2" x 1/2"	SOLE PLATE MASONRY R LEAD R ANCHOR BOLTS WASHERS	10" x 2 1/2" x 1/2" 12" x 1 1/2" x 1/2" 12" x 1 1/2" x 1/2" 12" x 1 1/2" x 1/2" 12" x 1 1/2" x 1/2"



TYPE	Y	Z
TYPE F	1'0"	1'0"
TYPE G	1'0"	1'0"
TYPE H	1'0"	1'0"

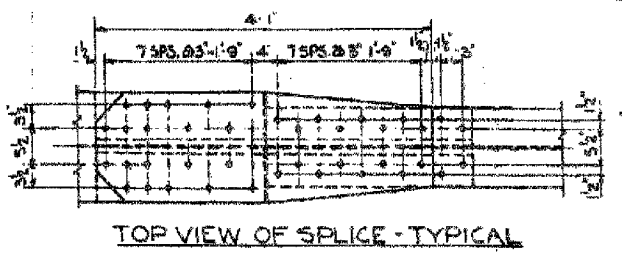
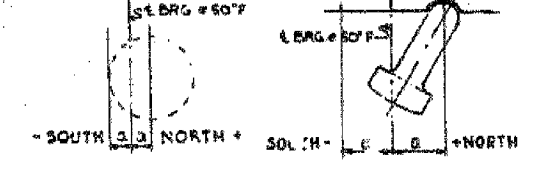
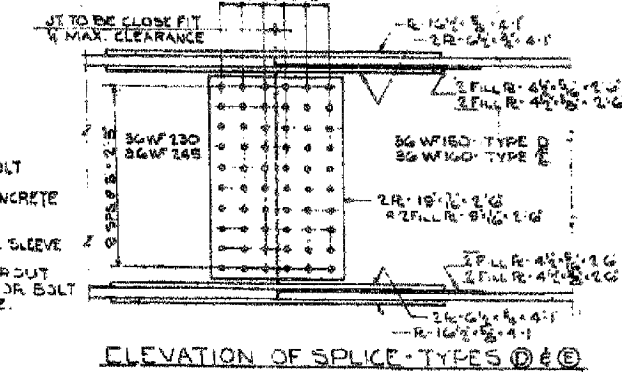
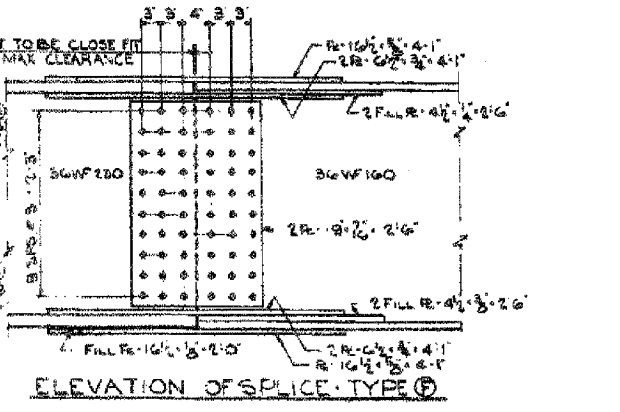
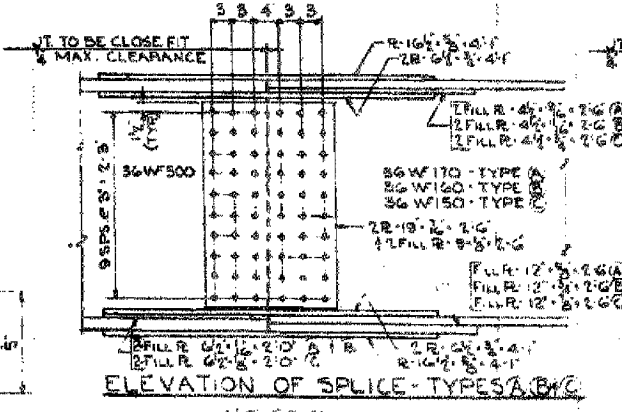
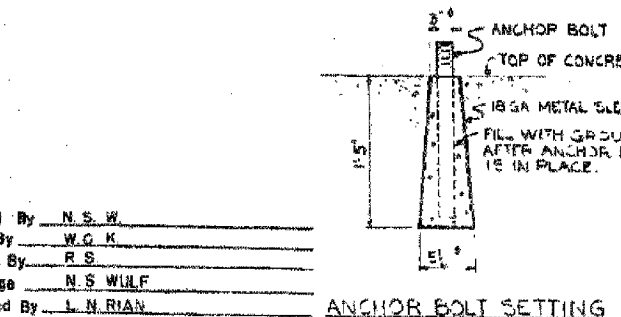
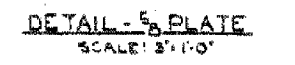
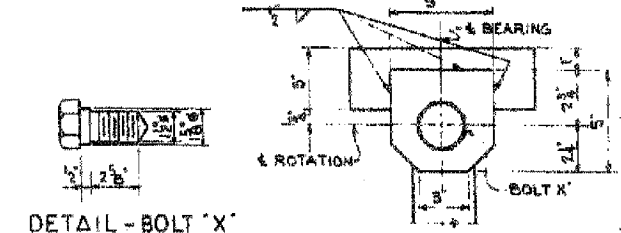


TABLE OF SETTINGS (a)

TEMPERATURE	110°	90°	70°	50°	30°	10°
EXP BRG TYPE F, G & H	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
EXP BRG TYPE J & K	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"



SCHEDULE OF SPLICES

SPLICE TYPE	NUMBER REQUIRED	WT. OF STEEL PER SPLICE, LBS.	TOTAL STEEL LBS.
A	2	997	1,994
B	3	1,020	3,060
C	3	1,043	3,129
D	83	922	76,526
E	4	931	3,724
F	13	926	12,038
TOTAL WEIGHT OF SPLICES			100,471 LBS.

TABLE OF FILL PLATES (AT BEARINGS)

LOCATION	GIRDER NUMBER				
	41	48	50	55	67
PIER NO. 4					
PIER NO. 6					
PIER NO. 7					
TOTAL WEIGHT OF FILL PLATES = 234 LBS.					

TABLE OF BEVELS

LOCATION	GIRDER NUMBER				
	41	42 to 58	64	55 to 66	67
PIER NO. 4					
PIER NO. 7					

SCHEDULE OF BEARINGS

BEARING TYPE	NUMBER REQUIRED	WT. OF STEEL PER BEARING, LBS.	TOTAL STEEL LBS.
F	6	648	3,888
G	41	560	22,960
H	7	475	3,325
J	3	790	2,370
K	24	676	16,224
L	27	465	12,555
LESS ANCHOR BOLTS AT PIER 7 =			- 540 LBS.
TOTAL WEIGHT OF BEARINGS			60,782 LBS.

NOTE:  
 MATERIAL INCLUDED IN WEIGHT ON SHT. 52Z  
 ROCKER R AND WEB R FOR EXPANSION BRG TYPES J & K CAN BE  
 GRADE 60-35 CARBON STEEL CASTING.  
 FLANGE SPLICES — 1/2" HIGH STRENGTH BOLTS.  
 WEB SPLICES — 3/8" HIGH STRENGTH BOLTS.  
 ANCHOR BOLTS AT PIER 7 PROVIDED IN CONTRACT 52225-B-1-H.

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 BUREAU OF ENGINEERING  
 SOUTH ROUTE SUPERHIGHWAY  
 ELEVATED HIGHWAY  
 W. 16TH ST. TO W. 15TH ST.  
 SECTION 3-2025-3-2H  
 BEARINGS & SPLICE DETAILS  
 UNIT 2

DE LEUW, GATNER & COMPANY  
 CONSULTING ENGINEERS

SHEET S23 OF 56

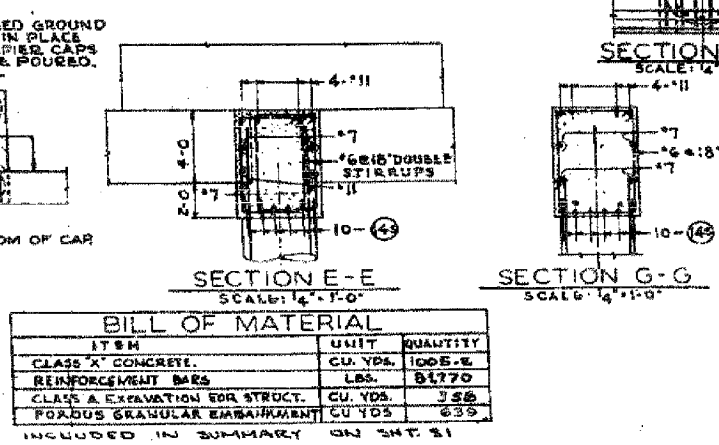
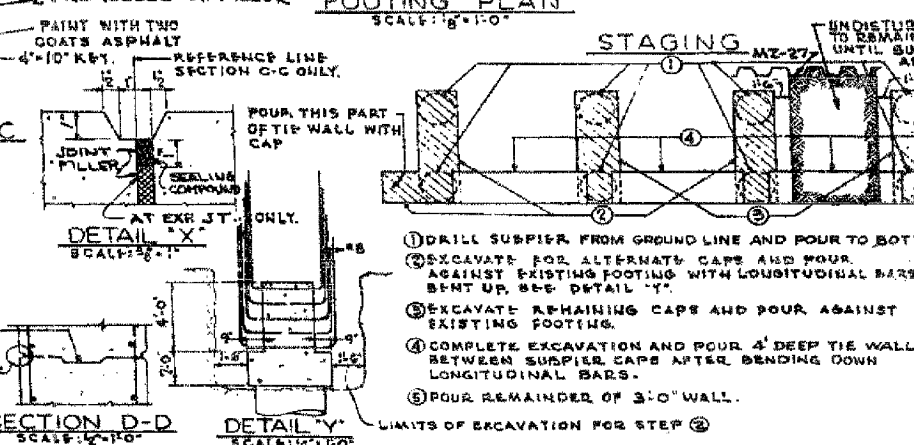
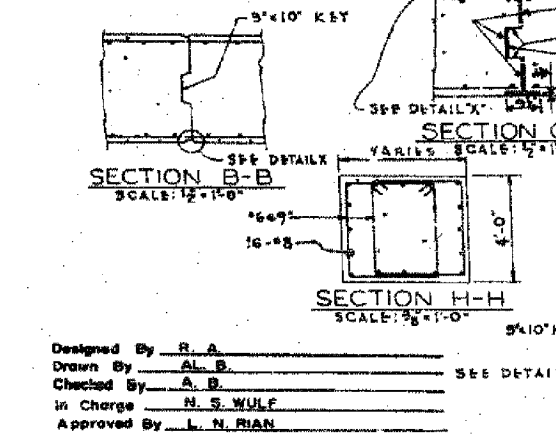
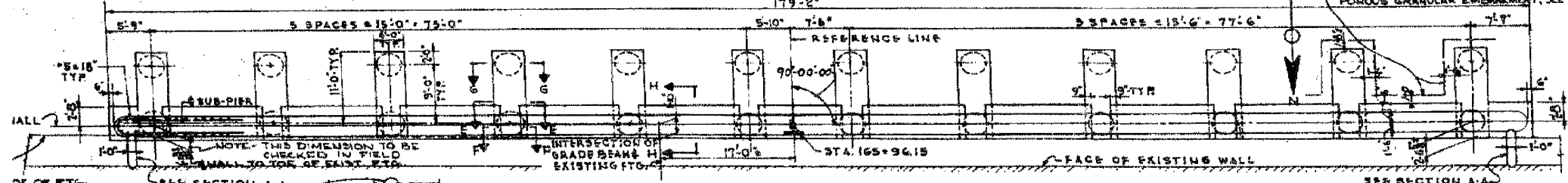
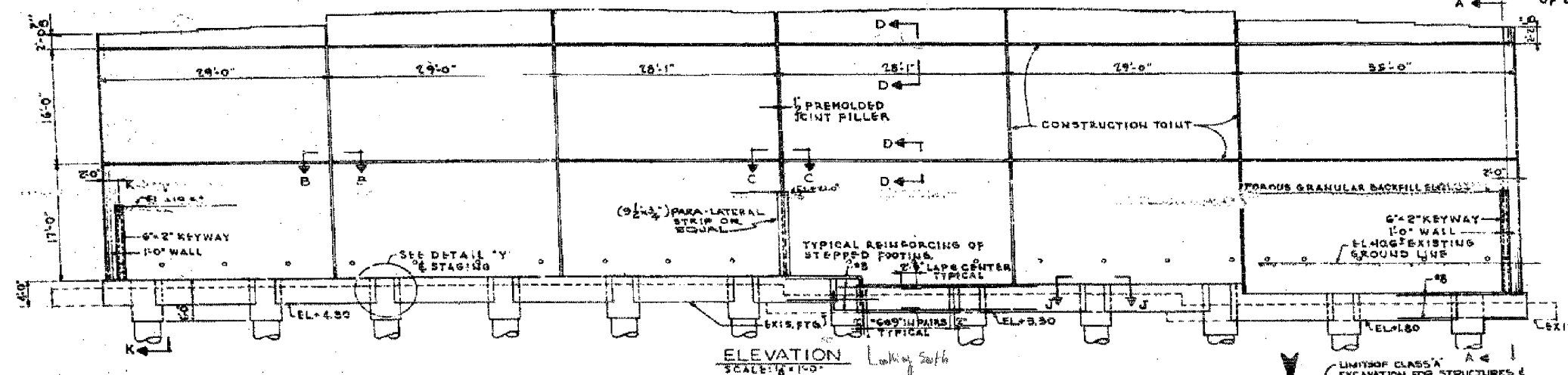
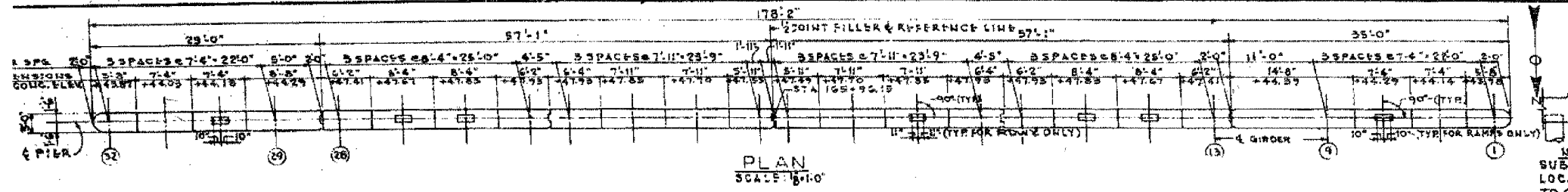
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NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1110  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
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60B07



NOTE: SUB-PIERS TO BE LOCATED IN FIELD TO CLEAR THE TOE OF EXISTING FOOTING

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SOUTH ROUTE SUPERHIGHWAY  
ELEVATED HIGHWAY  
W. 16TH ST. TO W. 15TH ST.  
SECTION 5-2225.3-2H

PIER 2

DE LIEW, GATHER & COMPANY  
CONSULTING ENGINEERS  
CHICAGO  
SCALE: AS NOTED  
DATE: AUGUST, 1961  
SHEET 37  
OF 56 SHEETS

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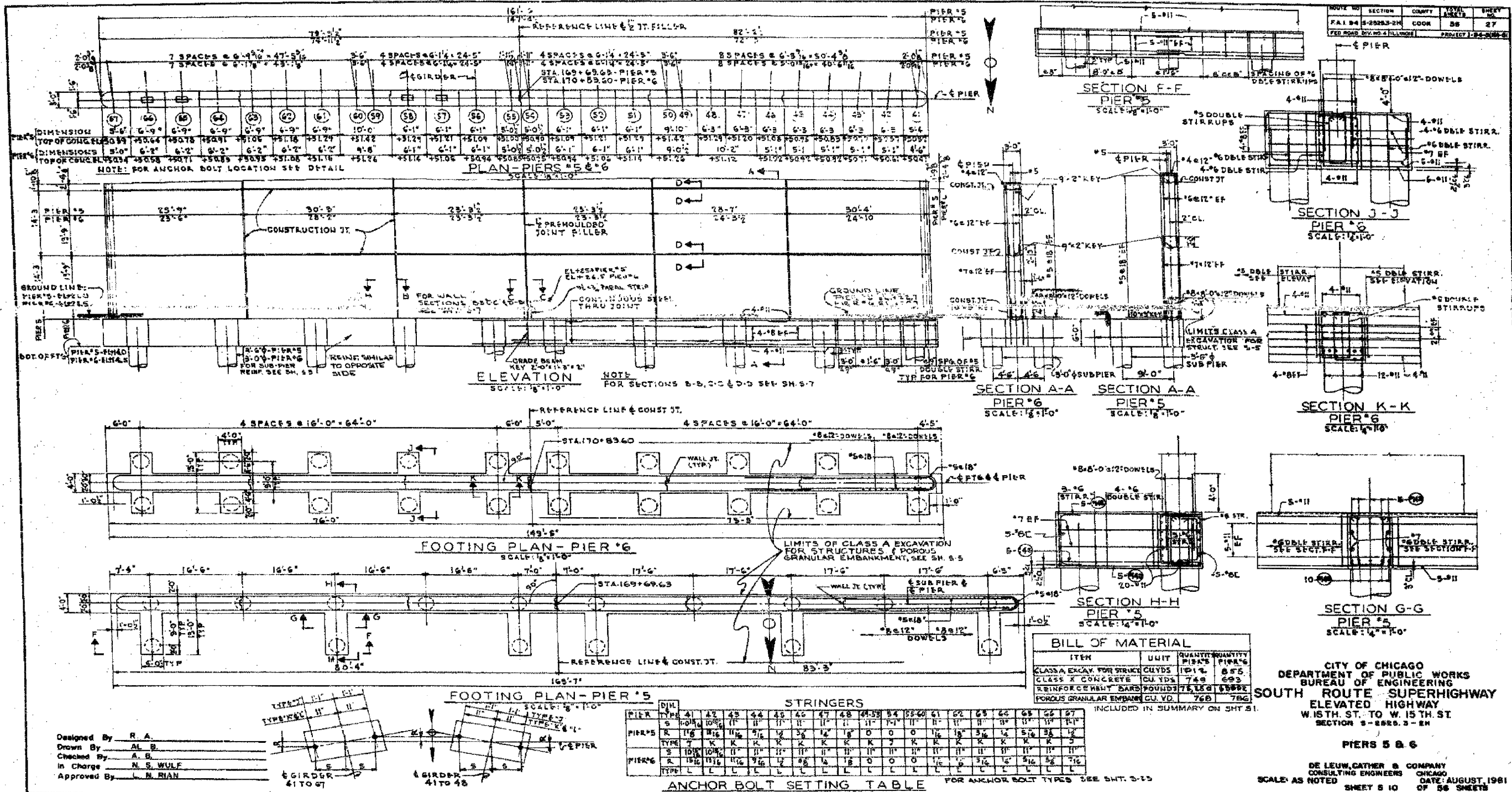
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
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ANSI Z39-18 BRIDGE SHEETS 660-DIA. 06/110-E-PROB07





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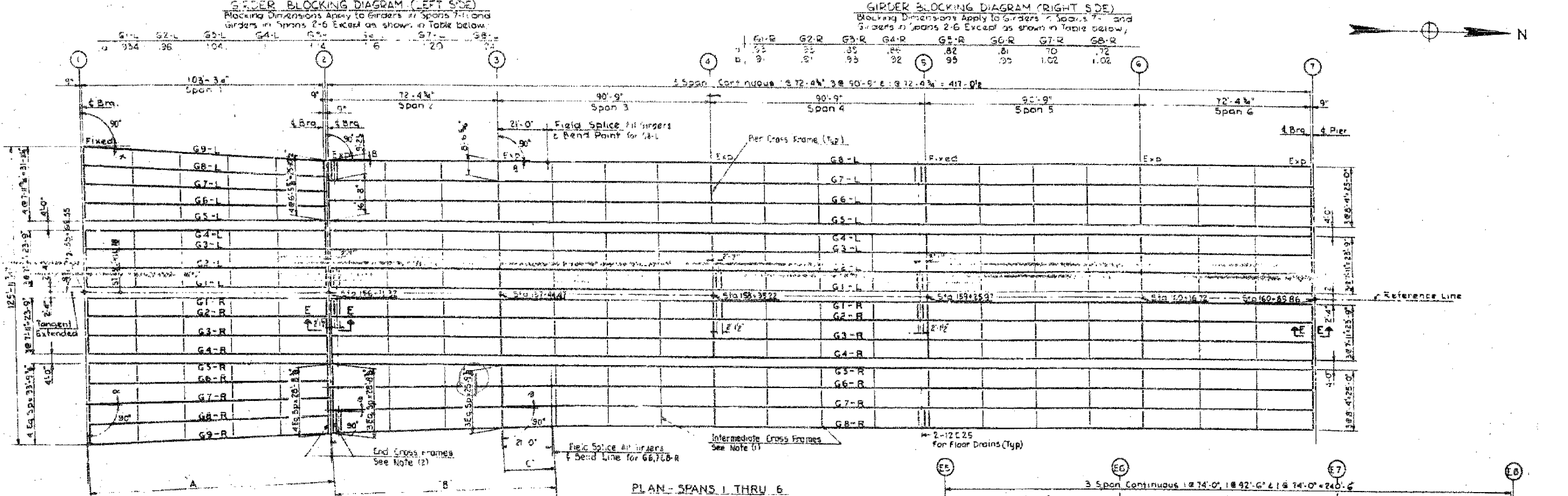
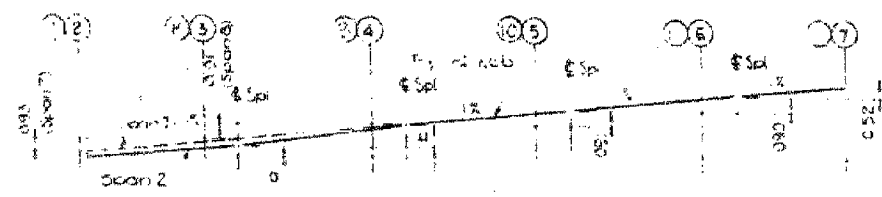
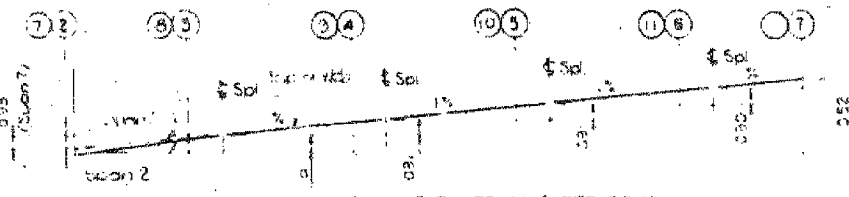
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DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
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SCALE: NTS  
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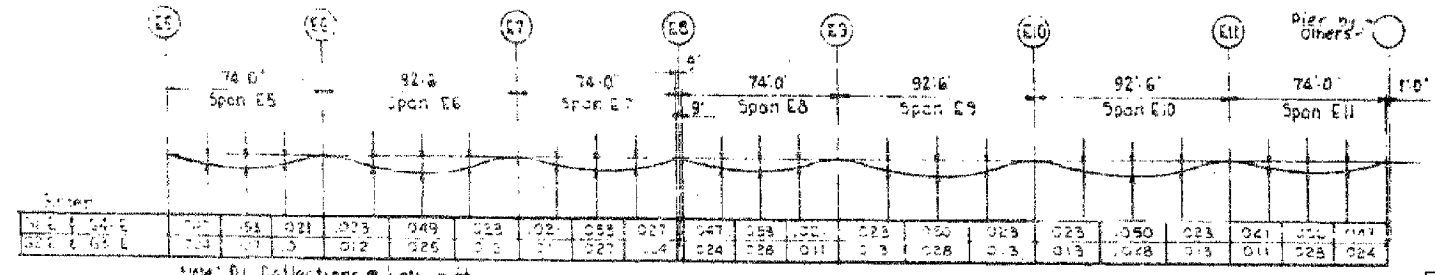
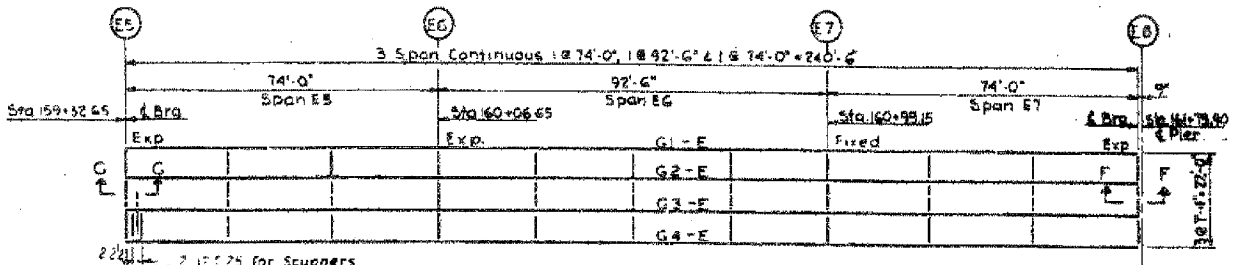
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- NOTES**
- Intermediate cross frames to be located above Piers for continuous spans & between piers of all spans of approximate 3, 4 or 5 points as indicated in plan. Maximum spacing to be 24' 0". See 51.11ener spacing dimensions.
  - End cross frames to be located at free ends of all girders, simple & continuous spans.
- See Expansion Guard Details Sheets for Sections E, F & G

Girder	SPAN 1		SPANS 2 & 3			
	Distance A	Angle P	Girder	Distance B	Distance C	Angle B
G5-L	104-9 1/2	0°-00'-00"	G7-L	94-1 1/2	21'-0"	0°-00'-00"
G6-L	104-9 1/2	0°-49'-42"	G8-L	94-1 1/2	21'-0"	0°-32'-01"
G7-L	104-9 1/2	1°-39'-24"	G5-R	94-1 1/2	21'-0"	0°-00'-00"
G8-L	104-10 1/2	2°-29'-02"	G6-R	94-1 1/2	21'-0"	0°-24'-59"
G9-L	104-11 1/2	3°-18'-37"	G7-R	94-1 1/2	21'-0"	0°-21'-57"
G5-R	104-9 1/2	0°-00'-00"	G8-R	94-1 1/2	21'-0"	0°-14'-53"
G6-R	104-9 1/2	0°-42'-05"				
G7-R	104-9 1/2	1°-24'-10"				
G8-R	104-10 1/2	2°-36'-12"				
G9-R	104-10 1/2	2°-48'-13"				



SPANS E5 THRU E11  
RAMP E DEAD LOAD DEFLECTIONS

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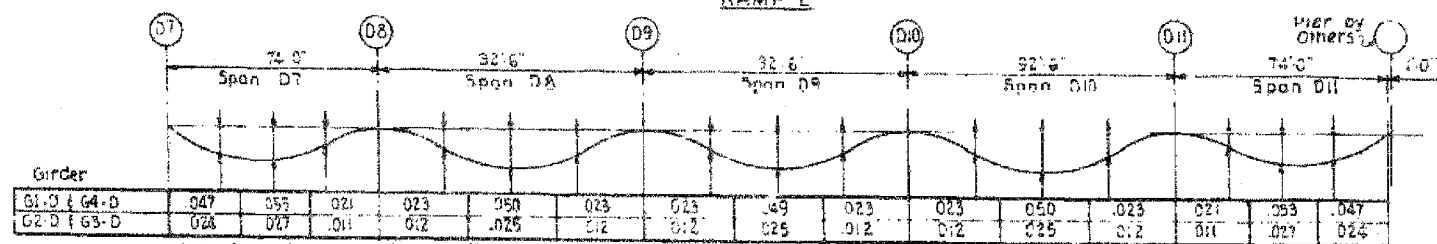
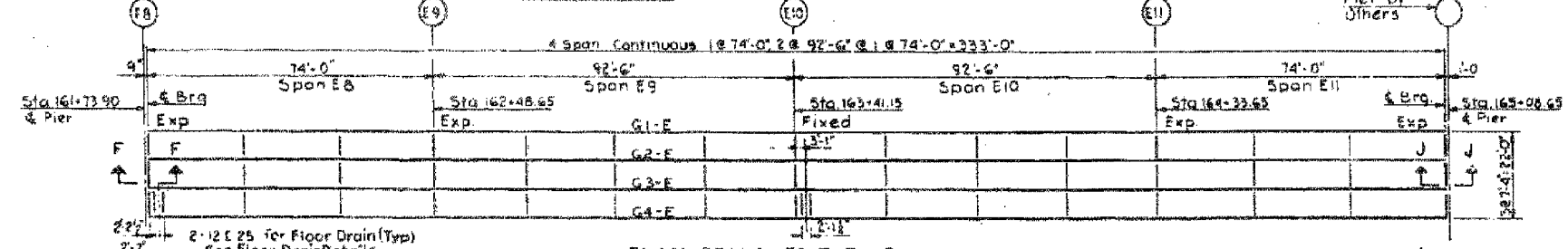
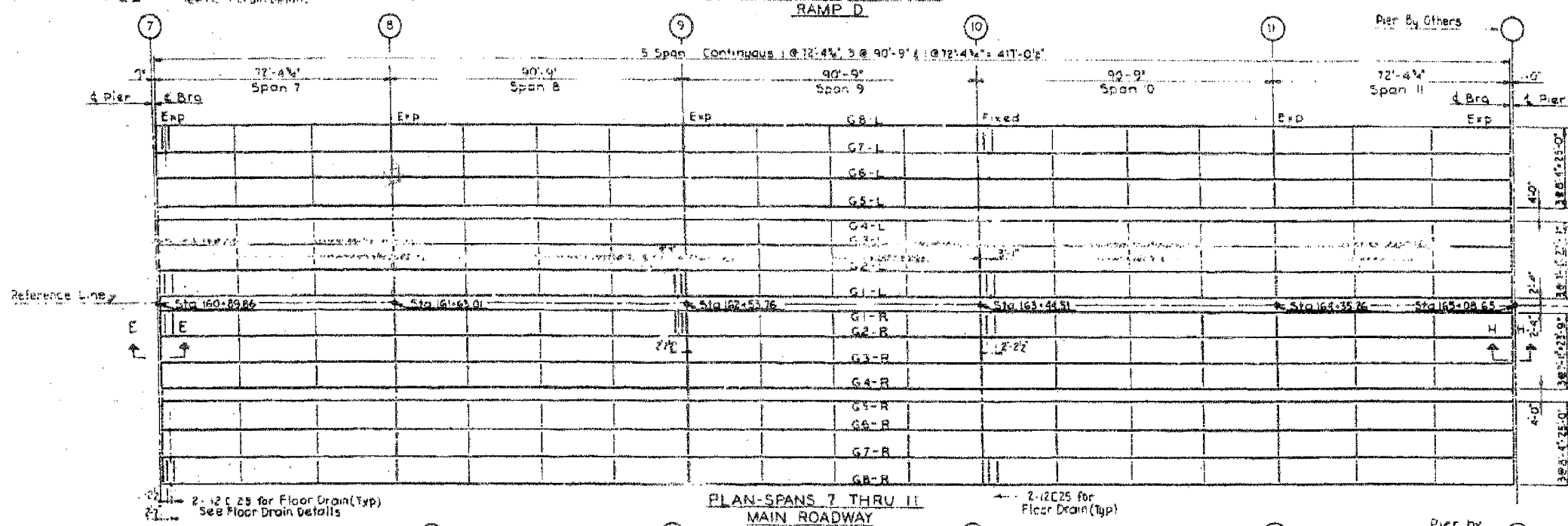
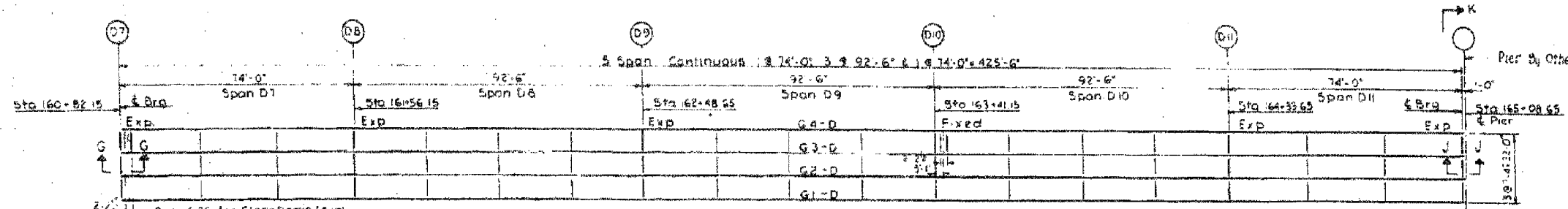
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F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1111

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	148
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
60B07				



**SPANS D7 THRU D11 RAMP D DEAD LOAD DEFLECTIONS**  
Includes Weight of Concrete only

**STRUCTURAL STEEL NOTES**

- STEEL**  
Structural Steel A572M Designation A-373 shall be used throughout except as noted below.
- A572M Designation A-7 steel to be used for cross frames, masonry plates, anchor bolts, field splice plates, expansion guards, channel shear connectors, and scupper channels.
- FIELD CONNECTIONS**  
Cross Frames - 2 @ High-Strength Bolts A572M A-325  
Girder Splices 2 @ High-Strength Bolts A572M A-325  
Expansion Guard Brackets - 2 @ Ribbed Bolts  
Scupper Channels - 2" MS P.L. See Sheet S-30
- FIELD WELDS**  
Flanges to web with longitudinal fillet welds. In the web, use 1/2" fillet welds for flange plates up to and including 1/2" thickness. Use 3/8" fillet welds for flange plates up to and including 1 1/2" thickness. Use 1/2" fillet welds for flange plates up to and including 2" thickness.
- SPICES**  
Field splices may be vertical or normal to the girders at the option of the fabricator. Holes for field splices shall be reamed with the girders assembled in position in accordance with the Blocking Diagrams.  
Shop web splices shall be made vertical.
- PAINTING**  
The Contractor for Section S-2523-3HP shall furnish and apply 1 shop coat of red lead paint and 2 field coats of paint to all structural steel except as noted below. The tops of girder top flanges will not be painted except for a distance of 5 feet each way from interior piers & abutments.

See Expansion Guard Detail Sheets S-25, S-26, S-27 for Sections E, F, G, H, J & K

CITY OF CHICAGO  
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BUREAU OF ENGINEERING  
**SOUTH ROUTE SUPERHIGHWAY**  
SECTION NO. 18-1885.3-3H  
W 186 STREET TO W 186 STREET  
**FRAMING PLAN**  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS  
DESIGNED BY R.L.P. CHECKED BY H.S.M.  
DRAWN BY H.L.L. IN CHARGE OF H.S.M.  
SCALE: SHEET NO. S-21 OF 82

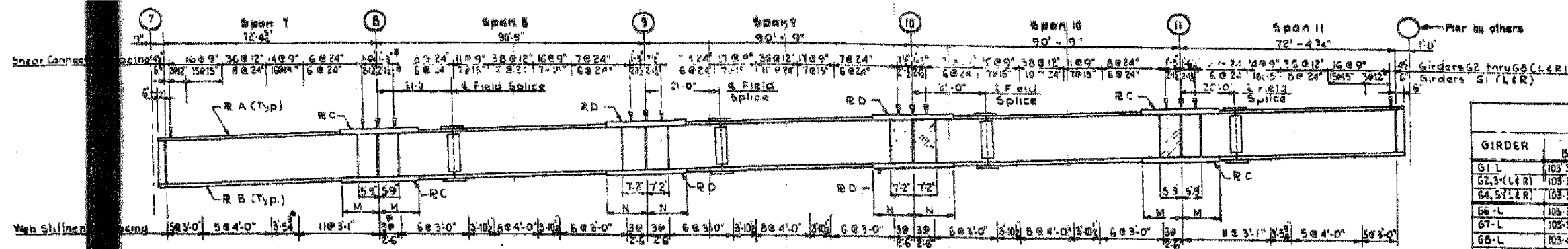
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
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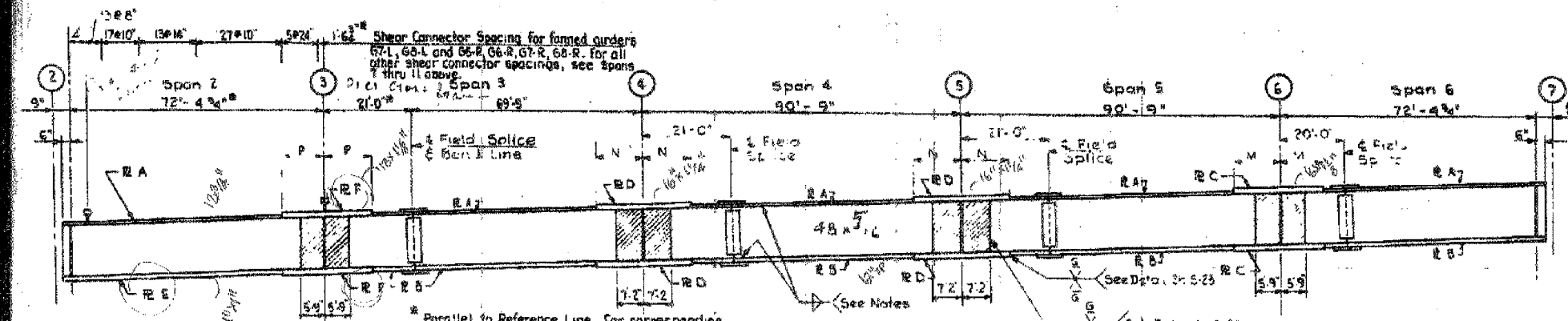
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SPANS 7 THRU 11

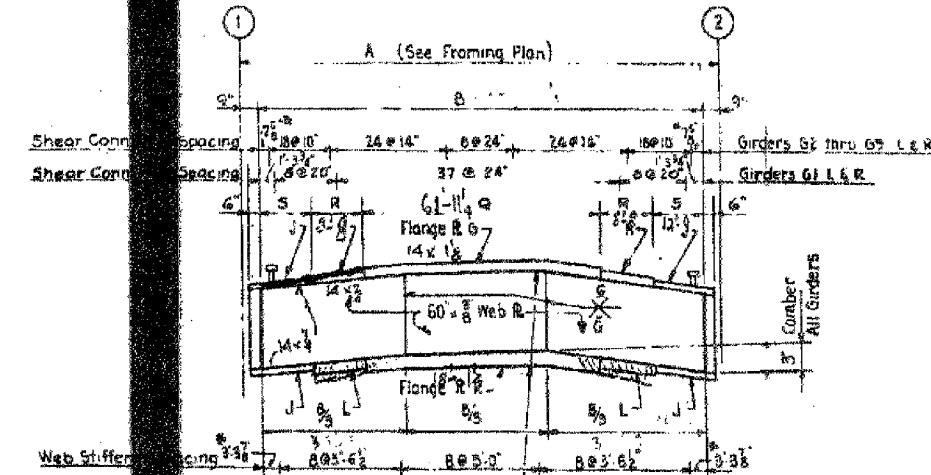
GIRDER	B	DIMENSION				PLATE SIZE			
		Q	R	S	G	H	J	K	L
G1-L	103.3	61.1	8.8	12.0	14.1	14.1	14.1	14.1	14.1
G2.3-(L&R)	103.3	63.1	10.5	9.3	14.1	14.1	14.1	14.1	14.1
G4.5-(L&R)	103.3	61.1	10.5	10.5	14.1	14.1	14.1	14.1	14.1
G6-L	103.3	63.1	10.4	9.4	14.1	14.1	14.1	14.1	14.1
G7-L	103.3	63.1	10.4	9.4	14.1	14.1	14.1	14.1	14.1
G8-L	103.3	64.0	10.4	9.4	14.1	14.1	14.1	14.1	14.1
G9-L	103.3	64.1	9.8	10.0	14.1	14.1	14.1	14.1	14.1
G6-R	103.3	63.1	11.0	8.8	14.1	14.1	14.1	14.1	14.1
G7-R	103.3	63.1	11.0	8.8	14.1	14.1	14.1	14.1	14.1
G8-R	103.3	64.0	11.0	8.8	14.1	14.1	14.1	14.1	14.1
G9-R	103.3	64.0	9.8	10.0	14.1	14.1	14.1	14.1	14.1
G1-R	103.3	61.1	7.8	13.0	14.1	14.1	14.1	14.1	14.1



SPANS 2 THRU 6

UNIT	GIRDER	PLATE		PLATE C		PLATE D		PLATE E		PLATE F	
		A	B	SIZE	M	SIZE	N	SIZE	P	SIZE	Q
SPANS 7 THRU 11	G1-L	10.3	12.2	16.1	10.2	16.1	11.2				
	G2.3-(L&R)	12.2	12.2	16.1	10.8	16.1	12.0				
	G4.5-(L&R)	12.2	12.2	16.1	9.9	16.1	11.2				
	G6.7.8-(L&R)	12.2	12.2	16.1	11.4	16.1	12.6				
SPANS 2 THRU 6	G1-R	10.3	12.2	16.1	8.9	16.1	10.0	12.2	16.1	8.9	
	G1-L	10.3	12.2	16.1	10.2	16.1	11.2	12.2	16.1	10.2	
	G2.3-(R&L)	12.2	12.2	16.1	10.8	16.1	12.0	12.2	16.1	10.8	
	G4.5-(R&L)	12.2	12.2	16.1	9.9	16.1	11.2	12.2	16.1	9.9	
	G6-L	12.2	12.2	16.1	11.4	16.1	12.6	12.2	16.1	11.4	
	G6.7.8-R	12.2	12.2	16.1	11.4	16.1	12.6	12.2	16.1	11.4	

Continuous Span Web Plates - Spans (2 thru 11)  
 Positive Moment Areas all Girders 48 x 5/8"  
 Negative Moment Areas (Shown Cross-Hatched)  
 Girders G2 thru G6 (L&R) 48 x 5/8"  
 Girders G1-(L&R) 48 x 3/8"



STUD SHEAR CONNECTORS

CHANNEL SHEAR CONNECTORS

3 or 4 Stud Equally spaced See Notes 2 & 3  
 (1) Studs or channels may be used at the option of the contractor.  
 (4) Shear Connector locations at flange splice plates

Sheet S22 of 82

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1111

SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

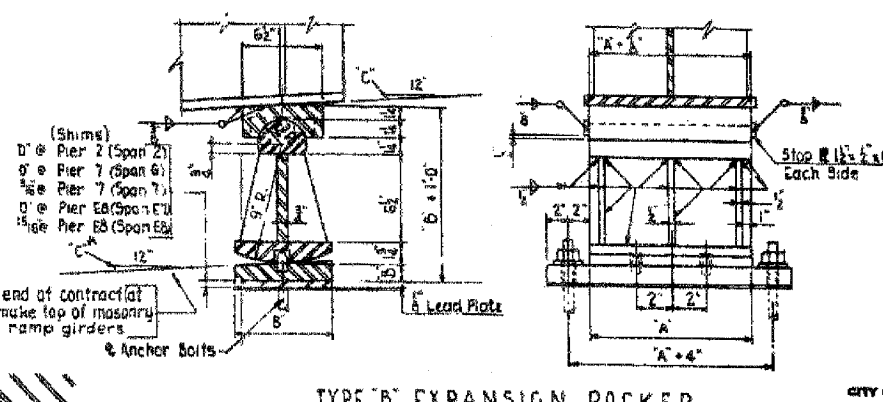
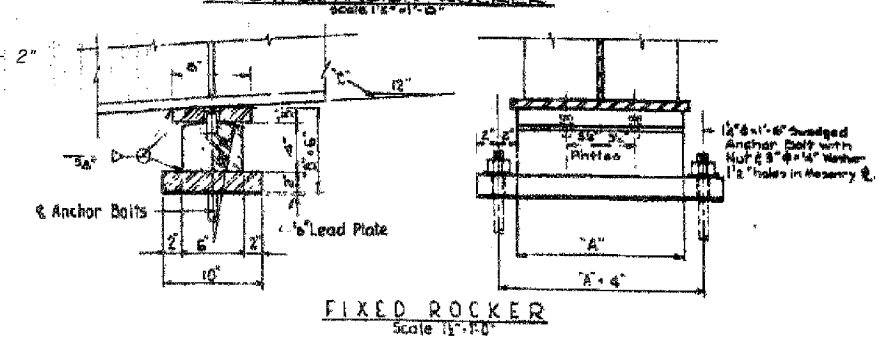
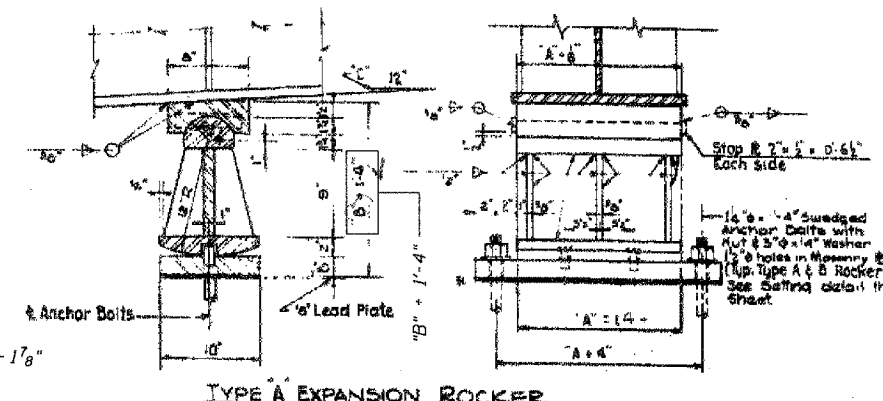
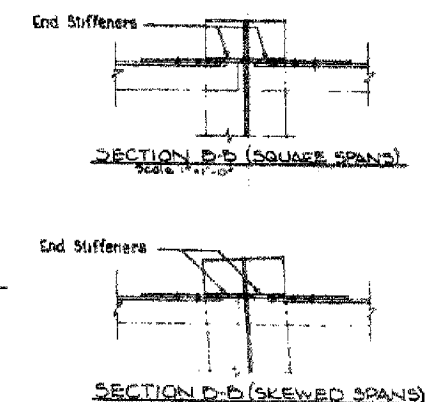
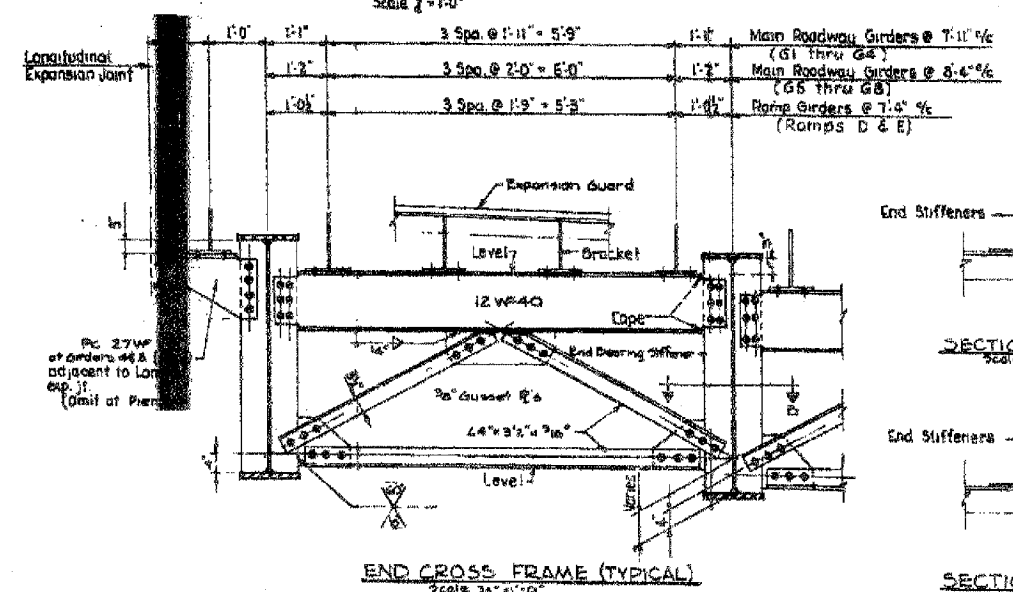
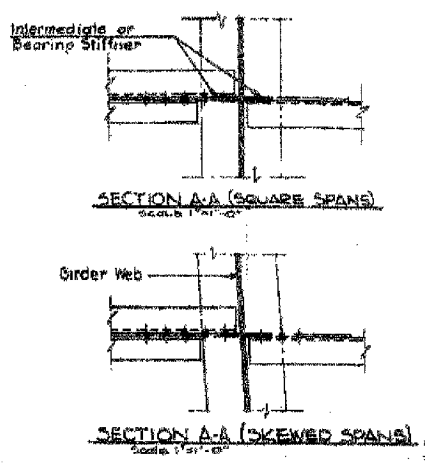
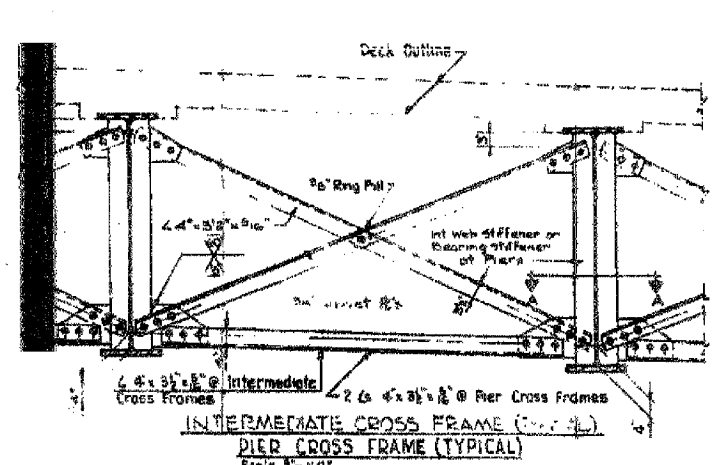
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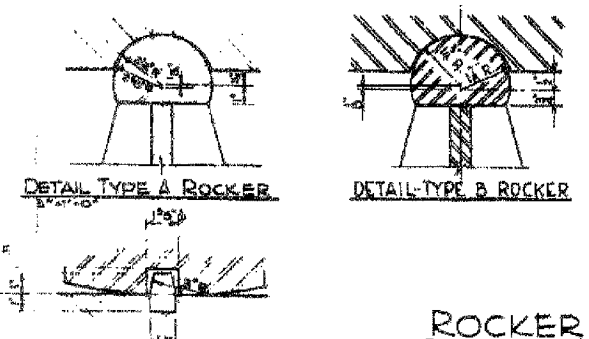
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**ROCKER SCHEDULE**

Girder	Type	A'	B'	C'
<b>PIER 1- SPAN 1</b>				
G1 - L&R	Fixed	10'	11 1/2'	16'
G2,3 - L&R	Fixed	10'	11 1/2'	16'
G4,5 - L&R	Fixed	10'	11 1/2'	16'
G6-9 - L&R	Fixed	10'	11 1/2'	16'
<b>PIER 2- SPAN 1</b>				
G1 - L&R	B	11'	12'	16'
G2,3 - L&R	B	11'	12'	16'
G4,5 - L&R	B	11'	12'	16'
G6-9 - L&R	B	11'	12'	16'
<b>PIER 2 SPAN 2</b>				
G1 - L&R	B	10'	11 1/2'	16'
G2,3 - L&R	B	10'	11 1/2'	16'
G4,5 - L&R	B	10'	11 1/2'	16'
G6-9 - L&R	B	10'	11 1/2'	16'
<b>PIERS 3,4,6,8,9 &amp; 11</b>				
G1 - L&R	A	11'	12'	16'
G2,3 - L&R	A	15'	16'	16'
G4,5 - L&R	A	12'	13'	16'
G6-9 - L&R	A	14'	15'	16'
<b>PIER 7 &amp; PIER BY OTHERS</b>				
G1 - L&R	B	10'	11 1/2'	16'
G2,3 - L&R	B	10'	11 1/2'	16'
G4,5 - L&R	B	10'	11 1/2'	16'
G6-9 - L&R	B	10'	11 1/2'	16'
<b>RAMP E</b>				
<b>ABUTMENT E5 &amp; PIER BY OTHERS</b>				
All Girders	B	10'	11 1/2'	16'
<b>PIERS E6,9 &amp; E11</b>				
All Girders	A	14'	15'	16'
<b>PIERS E7 &amp; E10</b>				
All Girders	Fixed	14'	15'	16'
<b>PIER E8</b>				
All Girders	B	10'	11 1/2'	16'
<b>RAMP D</b>				
<b>ABUTMENT D7 &amp; PIER BY OTHERS</b>				
All Girders	B	10'	11 1/2'	16'
<b>PIER D8, D9, &amp; D11</b>				
All Girders	A	14'	15'	16'
<b>PIER D10</b>				
All Girders	Fixed	14'	15'	16'



Note: At North end of contract (at Pier by Others) make top of masonry plate level, all ramp girders



**ROCKER DETAILS**

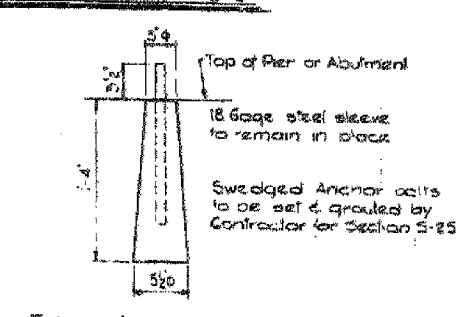
**NOTES**

Expansion Guard bracket spacings shown are typical at locations where girders are parallel.

Dimensions to be adjusted by detailer where girders are fanned. Hold bracket spacings to 2'-3" max. See Framing Plans for 1/4" dimensions of fanned girders.

Special bracket spacing dimensions to be used at north end of contract to meet expansion guard supplied by others. See Expansion Guard Details Sheet S-27

Intermediate Cross Frames and End Cross Frames shown are typical for simple spans & continuous spans. Pier cross frames typical are at interior piers of continuous spans. See Framing Plans & Girder Details for girder dimensions & spacings.



CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
**SOUTH ROUTE SUPERHIGHWAY**  
SECTION NO. 15-1552.2-SH  
W. 166 STREET TO W. 168 STREET  
**CROSS FRAMES & ROCKERS**  
CONORR, TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS  
DESIGNED BY RLF  
DRAWN BY  
CHECKED BY H5M

Sheet S24 of 82

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1111  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

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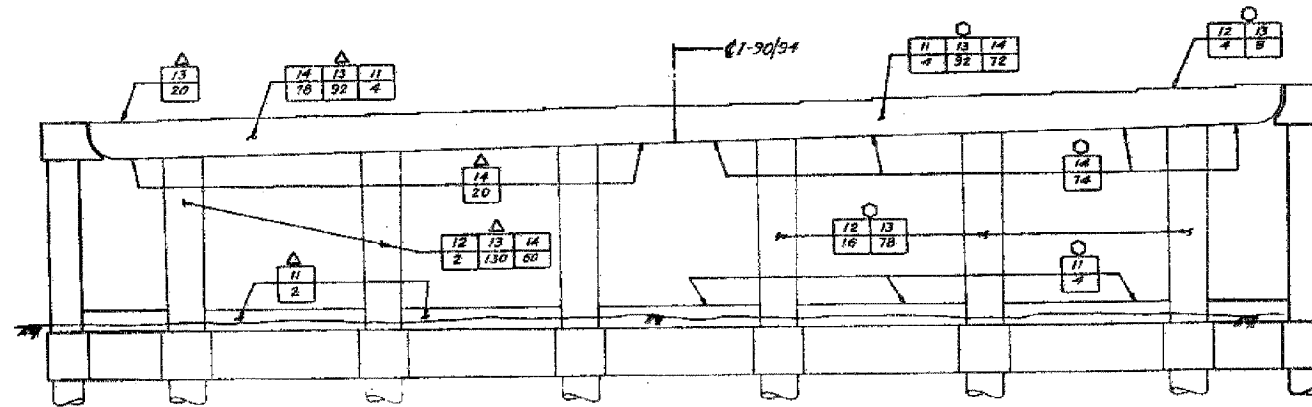
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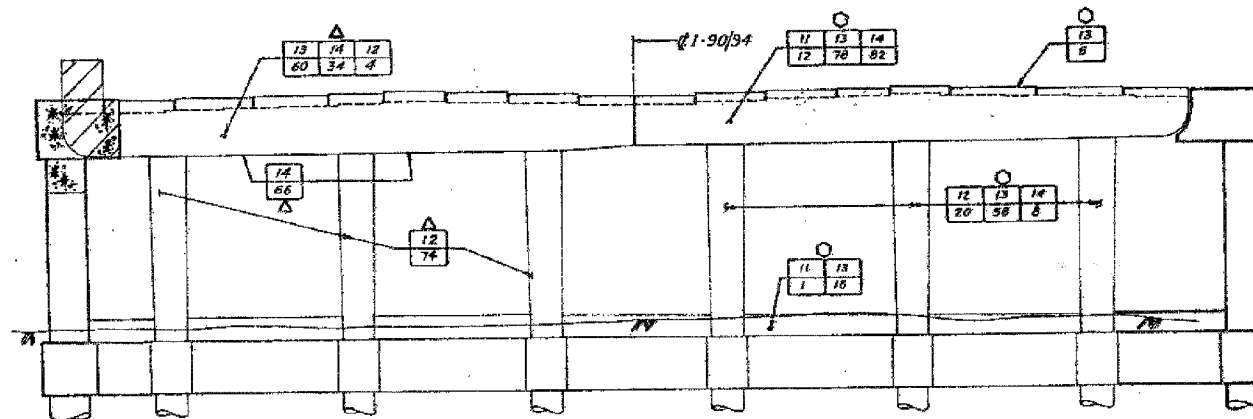
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94/90	2005-086 I	COOK	228	151
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

FED. ROAD DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	I	COOK	228	151
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**PIER 1**  
(Looking North)



**PIER 2**  
(Looking North)

**LEGEND**

**INITIAL CONSTRUCTION**

EXISTING PIER

**ADVANCE WORK**

SUBSTRUCTURE WIDENING  
SUBSTRUCTURE REMOVAL

**S.B. MAINLINE RECONSTRUCTION**

PIER REMOVAL  
PIER REPLACEMENT  
PIER REHABILITATION (SEE NOTE 'A')

**N.B. MAINLINE RECONSTRUCTION**

PIER REMOVAL  
PIER REPLACEMENT  
PIER REHABILITATION (SEE NOTE 'A')

**NOTE 'A'**

INDICATES TYPE OF REPAIR (FOR DETAILS SEE SHT. PR 1)  
INDICATES AREA OF DISTRESS (EXPRESSED IN SQ. FT. OR LIN. FT.)

SHEET C32 OF C36

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 94/90 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
SUBSTRUCTURE WIDENING REHABILITATION & REPLACEMENT  
STRUCTURE 016-111 (MAINLINE)  
PIERS 1B.2

Scale: NONE  
Date: AUGUST, 1987  
Checked By: RJ  
Drawn By: SAF  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

REVISIONS	
Name	Date

FOR INFORMATION ONLY

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1111

SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
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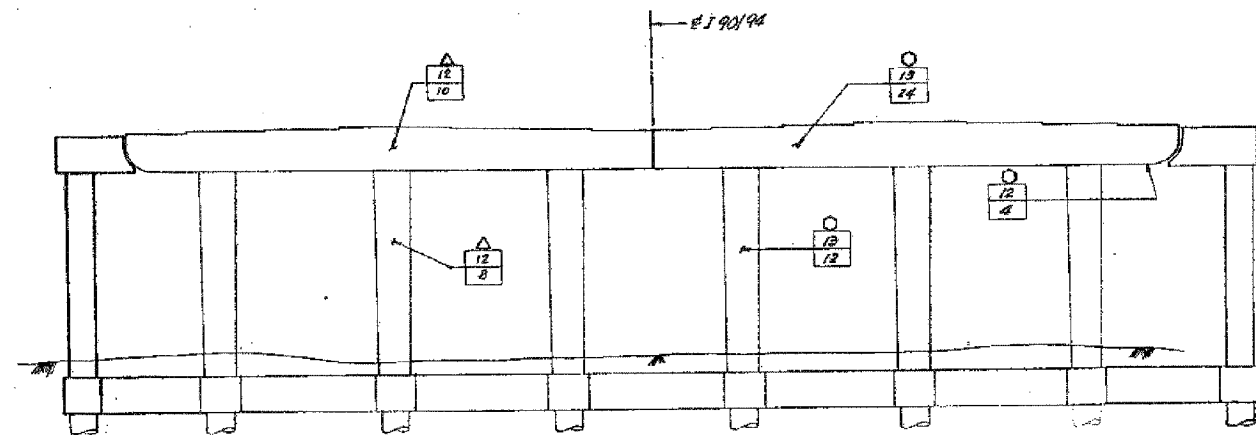
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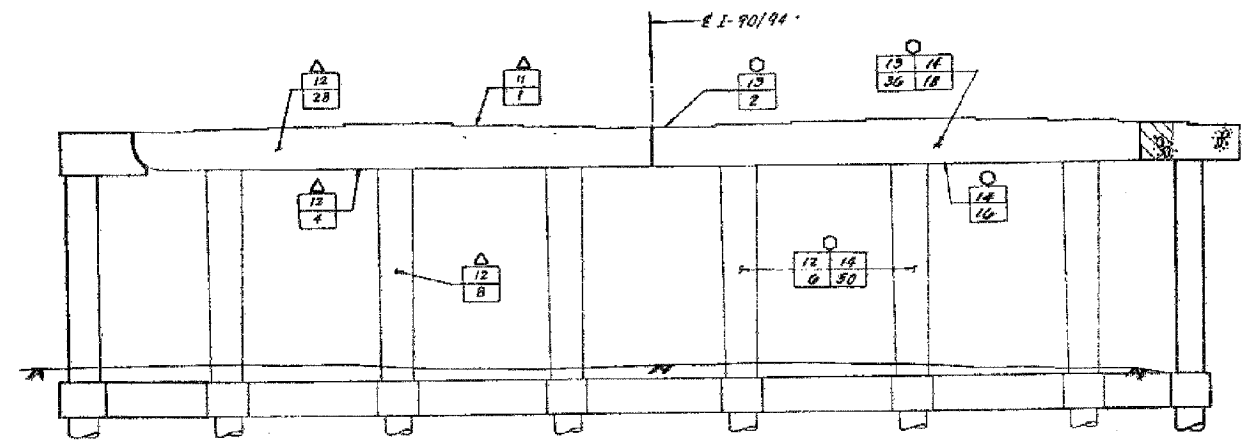
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	152
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

FEDERAL AID DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	I	COOK	228	152
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**PIER 3**  
(Looking North)



**PIER 4**  
(Looking North)

- LEGEND**
- INITIAL CONSTRUCTION**
  - EXISTING PIER
  - ADVANCE WORK**
  - SUBSTRUCTURE WIDENING
  - SUBSTRUCTURE REMOVAL
  - S.B. MAINLINE RECONSTRUCTION**
  - PIER REMOVAL
  - PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")
  - N.B. MAINLINE RECONSTRUCTION**
  - PIER REMOVAL
  - PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")

**NOTE "A"**

- INDICATES TYPE OF REPAIR (FOR DETAILS SEE SHY. PR 1)
- INDICATES AREA OF DISTRESS (EXPRESSED IN SQ. FT. OR LIN. FT.)

SHEET C 33 OF C 38

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 94/90 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 W - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
SUBSTRUCTURE WIDENING, REHABILITATION & REPLACEMENT  
STRUCTURE 016-111 (MAINLINE)  
PERS 3 & 4  
Scale: NONE  
Date: AUGUST, 1987  
Drawn By: SAF  
Checked By: RJ  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

REVISIONS	
Name	Date

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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1111  
SCALE: NTS  
DATE: 5/18/2007  
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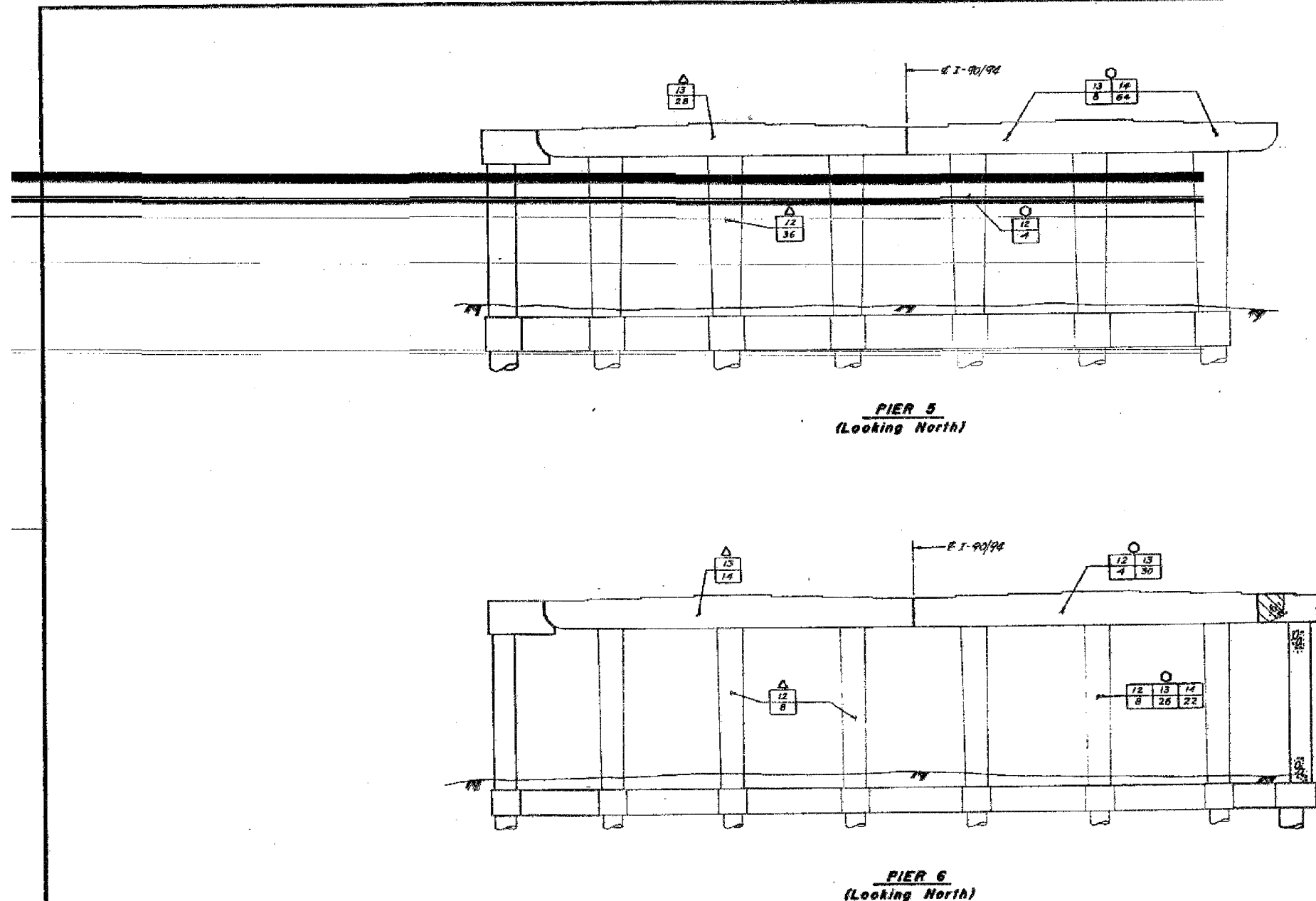
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	153
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

60B07

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/94	1	COOK	38	34
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

1985 - 082 R



- LEGEND**
- INITIAL CONSTRUCTION
  - EXISTING PIER
  - ADVANCE WORK
  - SUBSTRUCTURE WIDENING
  - SUBSTRUCTURE REMOVAL
  - S.S. MAINLINE RECONSTRUCTION
  - PIER REMOVAL
  - PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")
  - N.B. MAINLINE RECONSTRUCTION
  - PIER REMOVAL
  - PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")
- NOTE "A"**
- INDICATES TYPE OF REPAIR (FOR DETAILS SEE SHY PR 1)
  - INDICATES AREA OF DISTRESS (EXPRESSED IN SQ. FT. OR L.W. FT.)

SHEET C34 OF C38

REVISIONS	
NO.	DATE

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 94/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-082 R - COOK COUNTY  
 S.S. MAINLINE RECONSTRUCTION  
 SUBSTRUCTURE WIDENING REHABILITATION & REPLACEMENT  
 STRUCTURE 016-1111 (MAINLINE)  
 PIERS 5 & 6  
 Scale: NONE  
 Date: AUGUST, 1987  
 Drawn By: SAF  
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REVISIONS		DATE	
NAME			

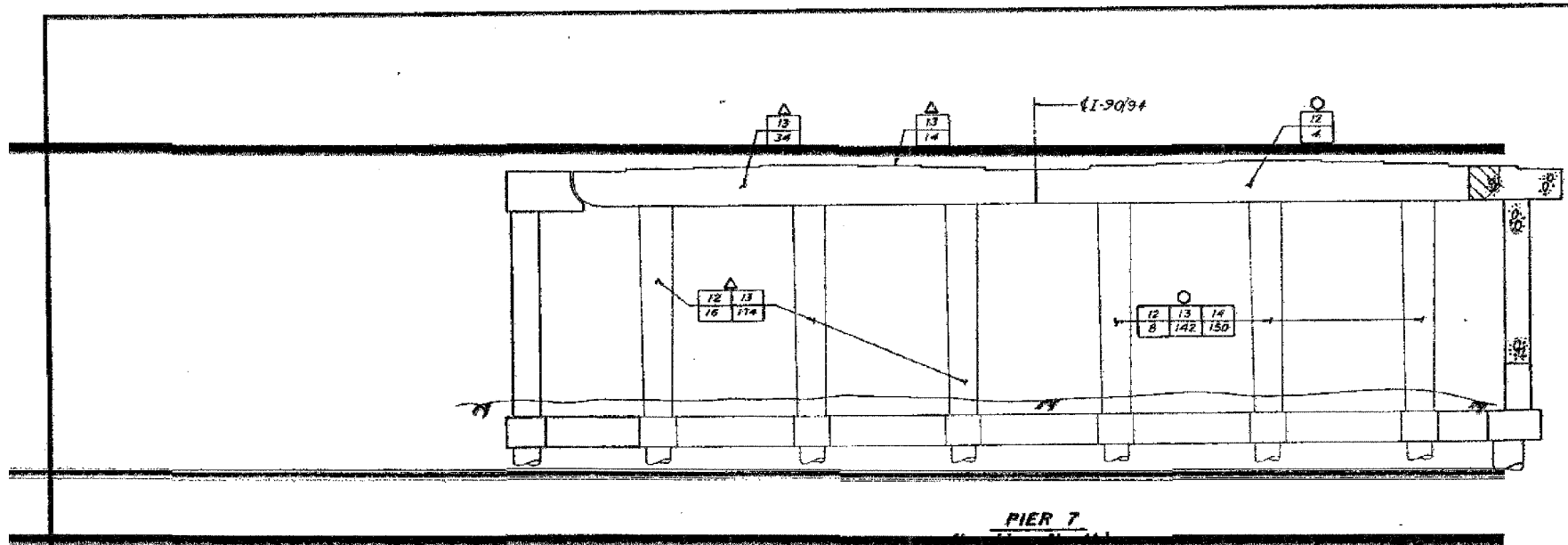
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 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1111  
 SCALE: NTS  
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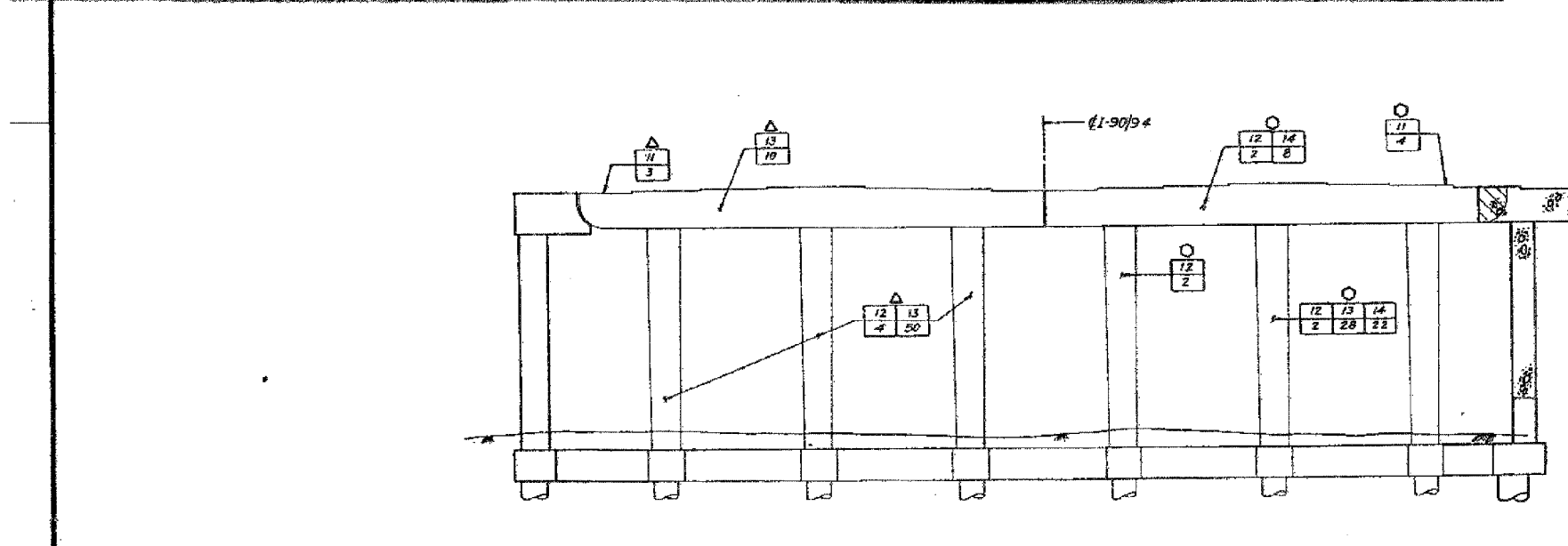


F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	154
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				

FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT
94/90	R	COOK
TOTAL SHEETS		SHEET NO.
228		154
STA. TO STA.		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		
60B07		



PIER 7



PIER 8  
(Looking North)

- LEGEND**
- INITIAL CONSTRUCTION**
- EXISTING PIER
- ADVANCE WORK**
- SUBSTRUCTURE WIDENING
  - SUBSTRUCTURE REMOVAL
- S.B. MAINLINE RECONSTRUCTION**
- PIER REMOVAL
  - PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")
- N.B. MAINLINE RECONSTRUCTION**
- PIER REMOVAL
  - PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")
- NOTE "A"**
- INDICATES TYPE OF REPAIR (FOR DETAILS SEE SHEET R1)
  - INDICATES AREA OF DISTRESS (EXPRESSED IN SQ. FT. OR LIN. FT.)

SHEET 035 OF 038

REVISIONS	
Name	Date

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
SUBSTRUCTURE WIDENING, REHABILITATION & REPLACEMENT  
STRUCTURE 016-1111 (MAINLINE)  
PIER 7 & 8  
Scale: NONE  
Date: AUGUST, 1987  
Drawn By: SAF  
Checked By: RJ  
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Chicago, Illinois

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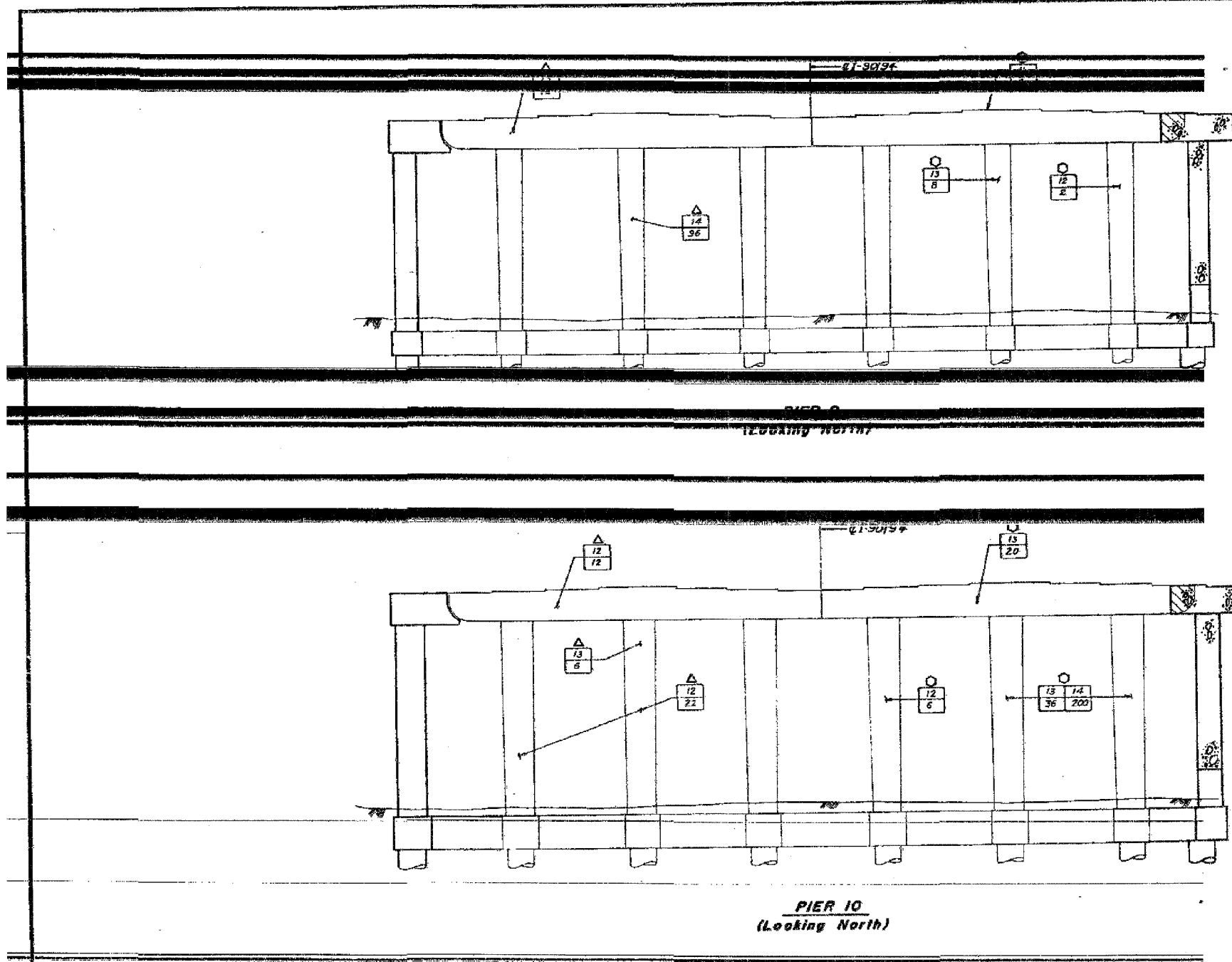
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1111  
SCALE: NTS  
DATE: 5/18/2007  
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	155
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

SECTION AND SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	H	COOK	38	38
STA.	TO STA.			
FED. RD. DIST. NO.	ILLINOIS	FED. AID PROJECT		



- LEGEND**
- INITIAL CONSTRUCTION**
- EXISTING PIER
- ADVANCE WORK**
- ▨ SUBSTRUCTURE WIDENING
  - ▩ SUBSTRUCTURE REMOVAL
- S.B. MAINLINE RECONSTRUCTION**
- ▨ PIER REMOVAL
  - ▩ PIER REPLACEMENT
  - △ PIER REHABILITATION (SEE NOTE "A")
- N.B. MAINLINE RECONSTRUCTION**
- ▨ PIER REMOVAL
  - ▩ PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")
- NOTE "A"**
- INDICATES TYPE OF REPAIR (FOR DETAILS SEE SMT. PR 1)
  - INDICATES AREA OF DISTRESS (EXPRESSED IN SQ. FT. OR LIN. FT.)

SHEET C36 OF C38

REVISIONS	
Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-082 R - COOK COUNTY  
 S.B. MAINLINE RECONSTRUCTION  
 SUBSTRUCTURE WIDENING REHABILITATION & REPLACEMENT  
 STRUCTURE 016-1111 (MAINLINE)  
 PIERS 9 & 10  
 Scale: NONE  
 Date: AUGUST, 1987  
 Drawn By: SAF  
 Checked By: RJ  
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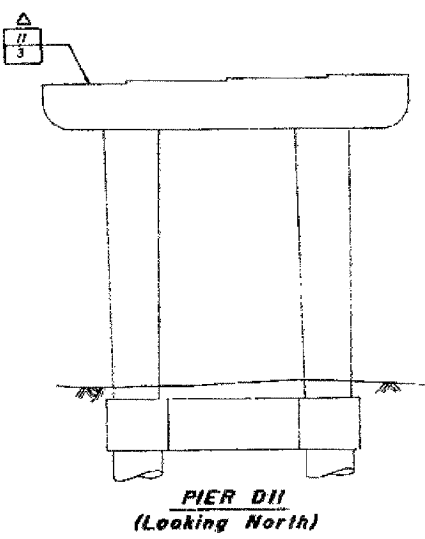
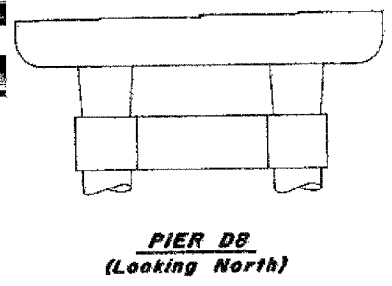
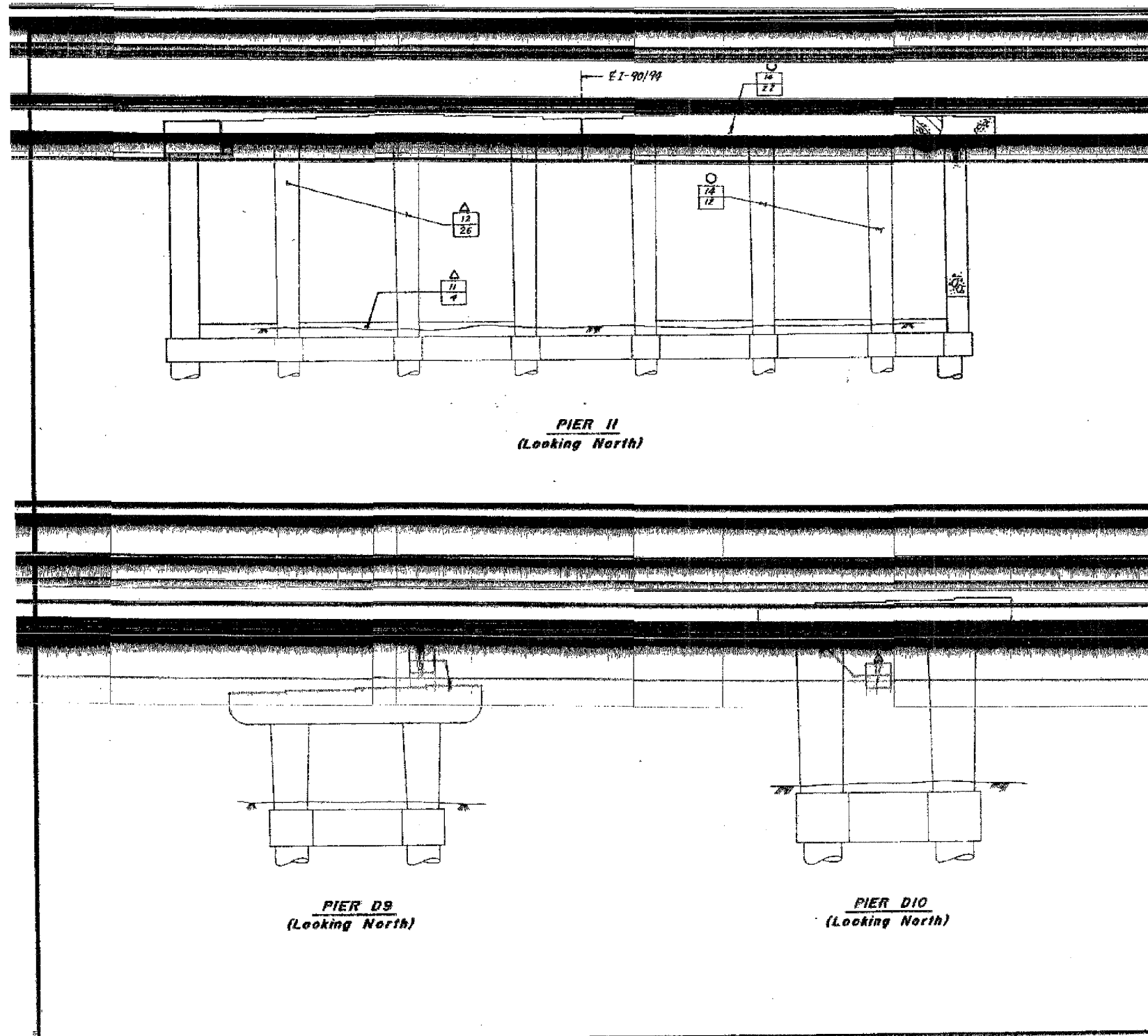
REVISIONS	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1111  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

5/24/2007 5:45:31 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	156
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				

FED. ROAD DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/94	*	COOK	38	37
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* 1985-082 R				



- LEGEND**
- INITIAL CONSTRUCTION**
  - EXISTING PIER
  - ADVANCE WORK**
  - SUBSTRUCTURE WIDENING
  - SUBSTRUCTURE REMOVAL
  - S.B. MAINLINE RECONSTRUCTION**
  - PIER REMOVAL
  - PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")
  - N.B. MAINLINE RECONSTRUCTION**
  - PIER REMOVAL
  - PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")
  - NOTE "A"**
  - INDICATES TYPE OF REPAIR (FOR DETAILS SEE SHT. PR1)
  - INDICATES AREA OF DISTRESS (EXPRESSED IN SQ. FT. OR L.W. FT.)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
SUBSTRUCTURE WIDENING REHABILITATION & REPLACEMENT  
STRUCTURE 016-111 (MAINLINE)  
PIERS II, D8 THRU D11  
Scale: NONE  
Date: AUGUST, 1997  
Drawn By: SAF  
Checked By: RJ  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

SHEET 037 OF 038

REVISIONS	
Name	Date

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Chicago, Illinois  
312.228.0100  
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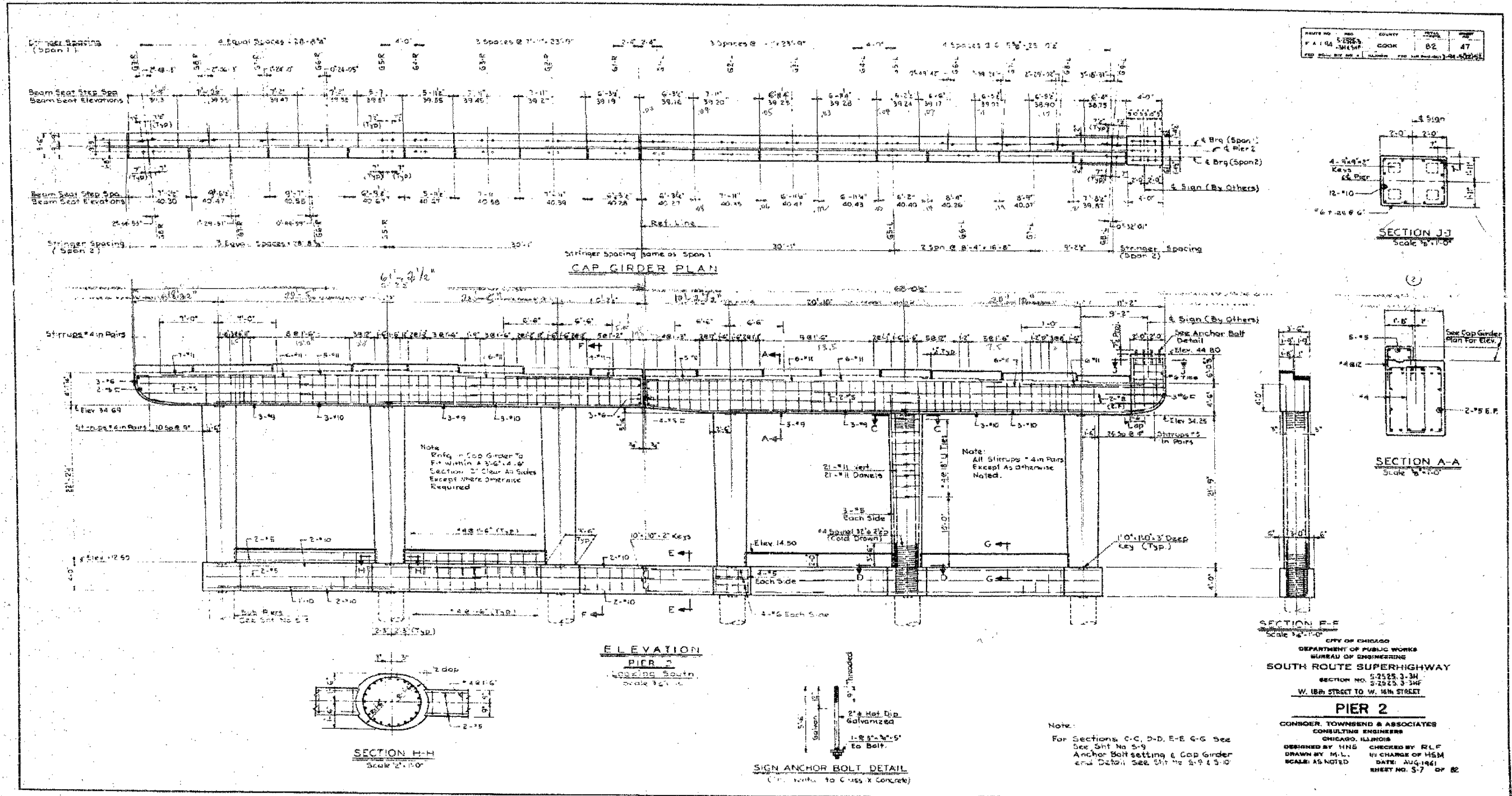
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1111  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

5/24/2007 5:05:32 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	157
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07



CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
**SOUTH ROUTE SUPERHIGHWAY**  
 SECTION NO. S-2525.3-3H  
 S-2023.3-SHF  
 W. 18th STREET TO W. 16th STREET  
**PIER 2**  
 CONSOER, TOWNSEND & ASSOCIATES  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS  
 DESIGNED BY HNS CHECKED BY RLF  
 DRAWN BY M.L. IN CHARGE OF HSM  
 SCALE: AS NOTED DATE: AUG 1961  
 SHEET NO. S-7 OF 82

REVISIONS		DATE
NAME		

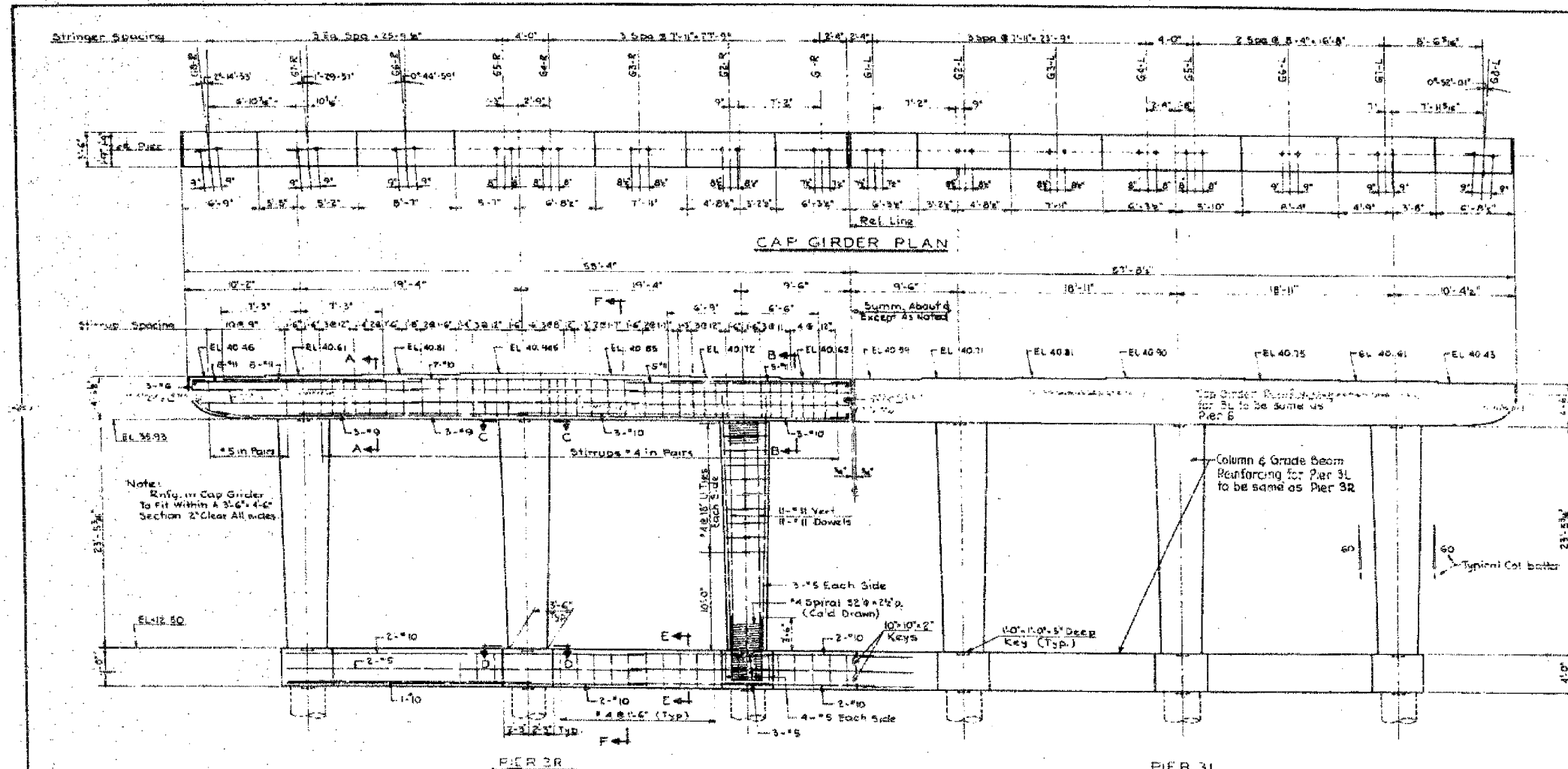
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1111  
 SCALE: NTS DRAWN BY: LAM  
 DATE: 5/18/2007 CHECKED BY: BLU

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5/24/2007 5:56:35 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	158
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



DATE	BY	CHECKED	DATE
5/18/07	HNS	RLP	5/18/07
F.A.I. 94/90		COOK	
SECTION 2005-086 I		BL	
SHEET 158		48	

Note:  
Reinfg. in Cap Girder  
to fit within A 3'-6" x 4'-6"  
Section 2" Clear All Sides

Column & Grade Beam  
Reinforcing for Pier 3L  
to be same as Pier 3R

Note:  
Sections A-A, B-B, C-C, D-D, E-E & F-F  
Similar to those shown on Sht. S-9  
for Anchor Bolt Setting & Cap Girder  
and detail see Sht. No S-9

Note:  
Columns bars + spiral may be erected in  
one unit from top of pier to cap girder  
at option of Contractor. (Typ All Piers)

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
SECTION NO. S-1525.3-3H  
S-1525.3-3H7  
W. 180 STREET TO W. 160 STREET  
**PIER 3**  
CONSECO, TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS  
DESIGNED BY HNS  
DRAWN BY M.L.  
SCALE: 3/8" = 1'-0"  
CHECKED BY RLP  
IN CHARGE OF HSM  
DATE: AUG. 1991  
SHEET NO. 5-8 OF 82

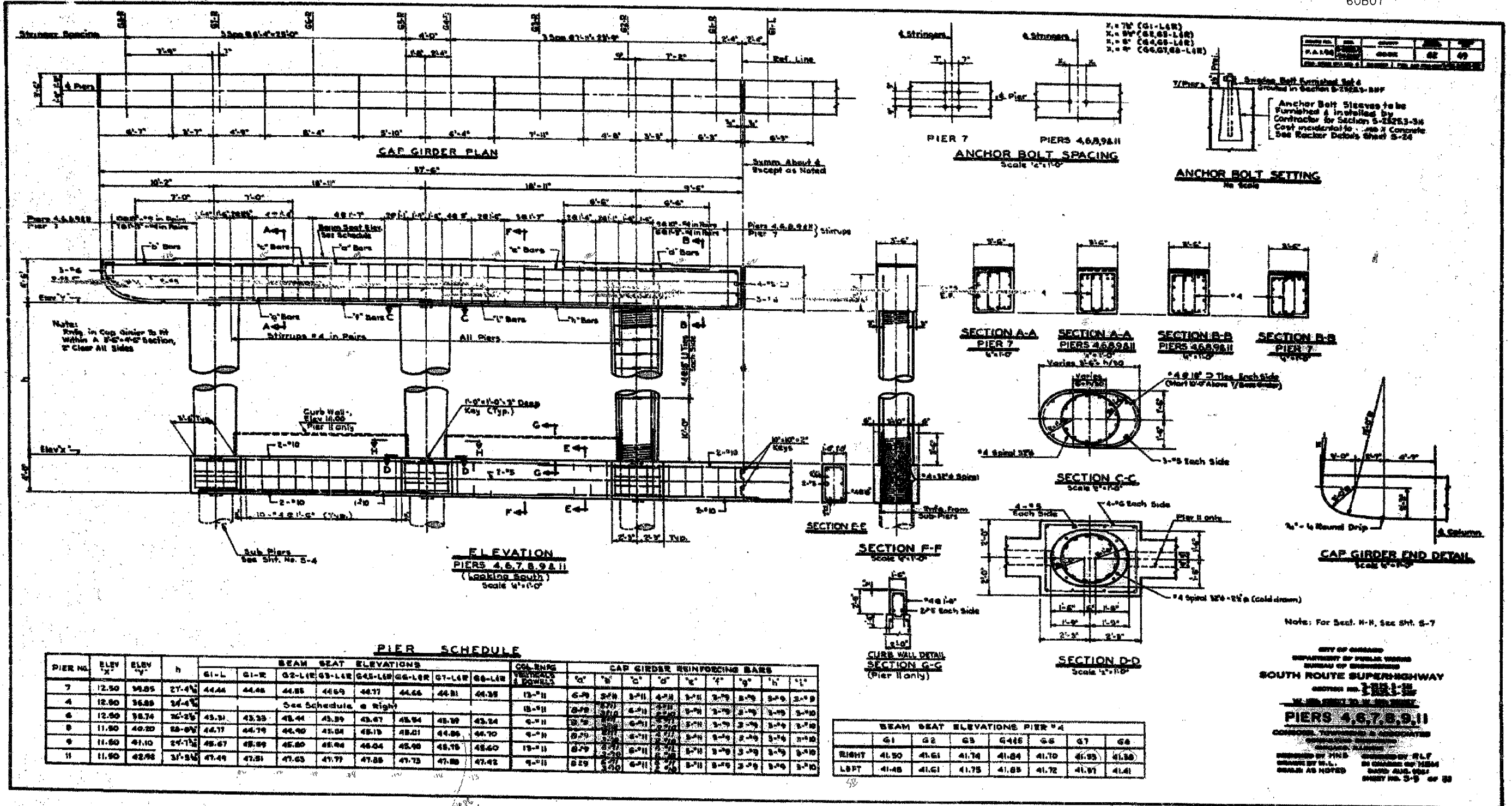
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1111  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1111

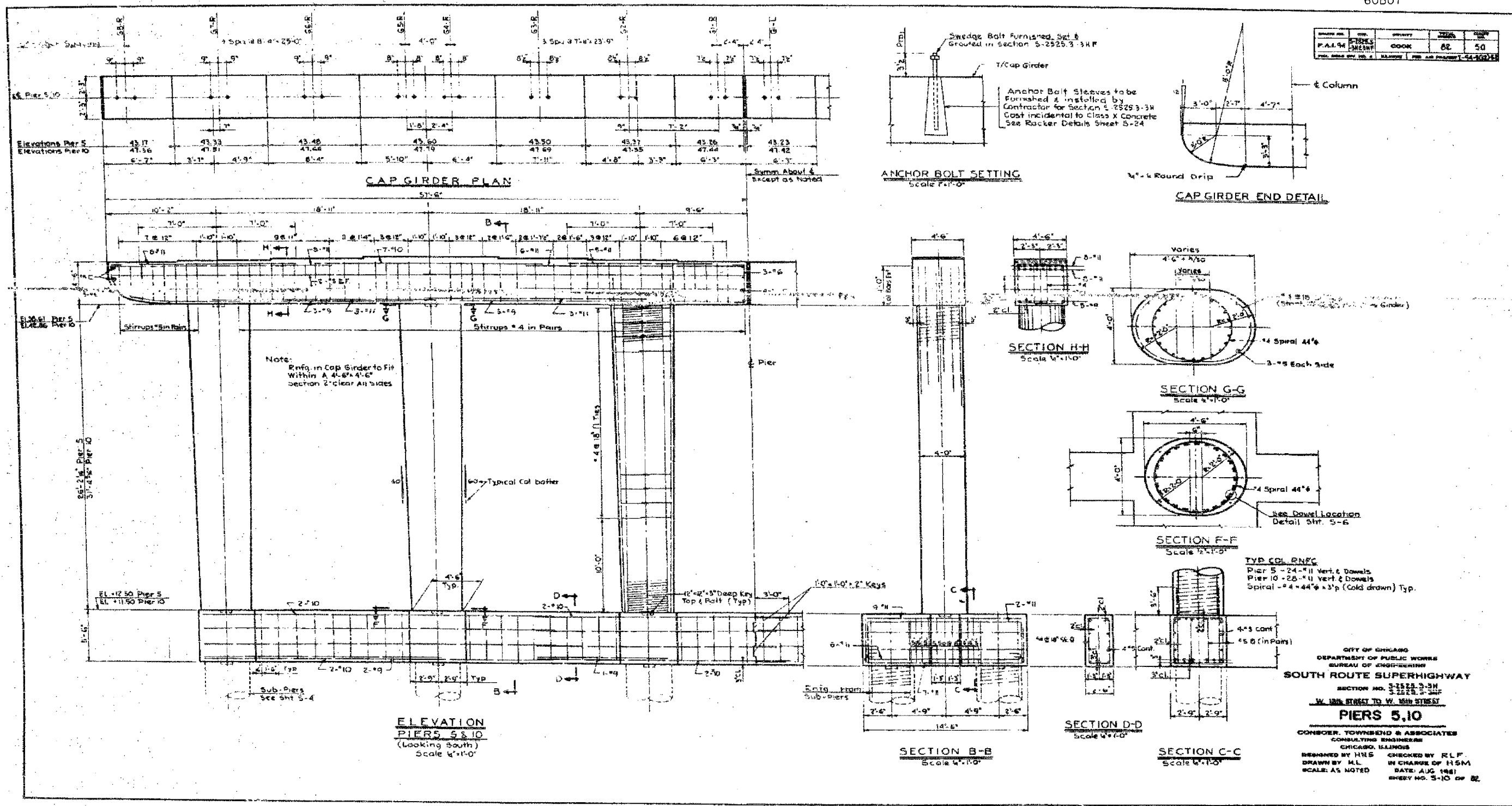
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DATE: 5/18/2007

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	160
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
60B07				

DESIGNED BY	CHECKED BY	DATE
P.A.L. 94	COOK	82 50



CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
**SOUTH ROUTE SUPERHIGHWAY**  
 SECTION NO. 3-1525.3-3H  
 3-1525.3-3HF  
 W. 14th STREET TO W. 15th STREET  
**PIERS 5,10**  
 CONSULTING ENGINEERS  
 CONSER, TOWNSEND & ASSOCIATES  
 CHICAGO, ILLINOIS  
 DESIGNED BY HRS CHECKED BY R.L.F.  
 DRAWN BY M.L. IN CHARGE OF H.S.M.  
 SCALE AS NOTED DATE: AUG 1981  
 SHEET NO. 5-10 OF 82

FOR INFORMATION ONLY

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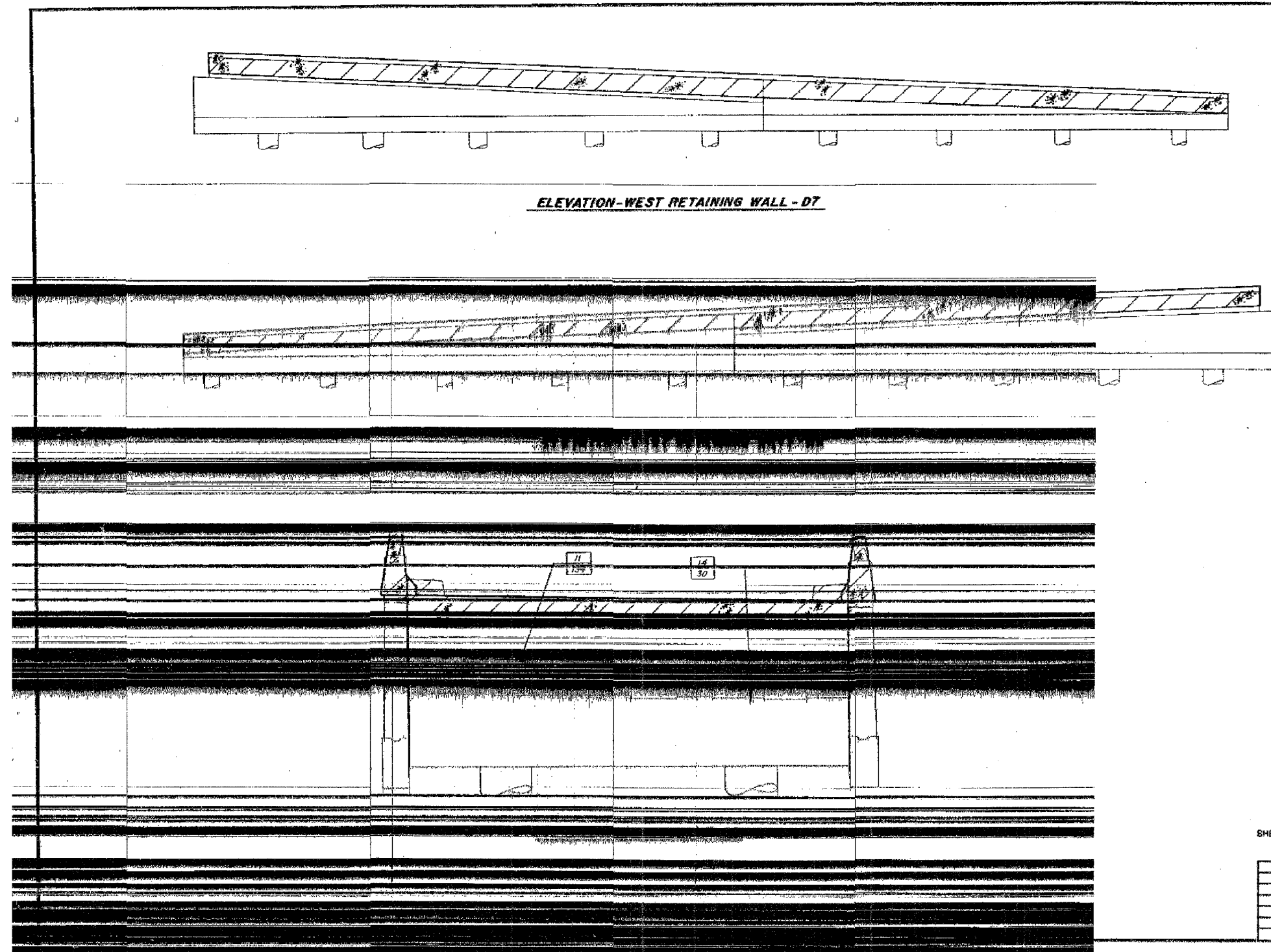
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1111  
 SCALE: NTS DRAWN BY: LAM  
 DATE: 5/18/2007 CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	161
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	2005-086 I	COOK	38	38
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
# 1985 - 082				



**ELEVATION-WEST RETAINING WALL - D7**

- LEGEND**
- INITIAL CONSTRUCTION**
- EXISTING PIER
- ADVANCE WORK**
- ▨ SUBSTRUCTURE WIDENING
  - ▩ SUBSTRUCTURE REMOVAL
- S.B. MAINLINE RECONSTRUCTION**
- ▨ PIER REMOVAL
  - ▩ PIER REPLACEMENT
  - ▧ PIER REHABILITATION (SEE NOTE 'A')
- N.B. MAINLINE RECONSTRUCTION**
- ▨ PIER REMOVAL
  - ▩ PIER REPLACEMENT
  - ▧ PIER REHABILITATION (SEE NOTE 'A')
- NOTE 'A'**
- ▧ - INDICATES TYPE OF REPAIR (FOR DETAILS SEE SHT. PR 1)
  - ▧ - INDICATES AREA OF DISTRESS (EXPRESSED IN SQ. FT. OR L.H. FT.)

SHEET C 58 OF C 58

REVISIONS	
Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-082 R - COOK COUNTY  
 S.B. MAINLINE RECONSTRUCTION  
 SUBSTRUCTURE WIDENING & REPLACEMENT  
 STRUCTURE 016-1111 (RAMP 0)  
 ABUTMENT & RETAINING WALL  
 Scale: NONE  
 Date: AUGUST, 1987  
 Drawn By: SAF  
 Checked By: RJ  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

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 CONSULTING ENGINEERS  
 Chicago, Illinois  
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REVISIONS	
NAME	DATE

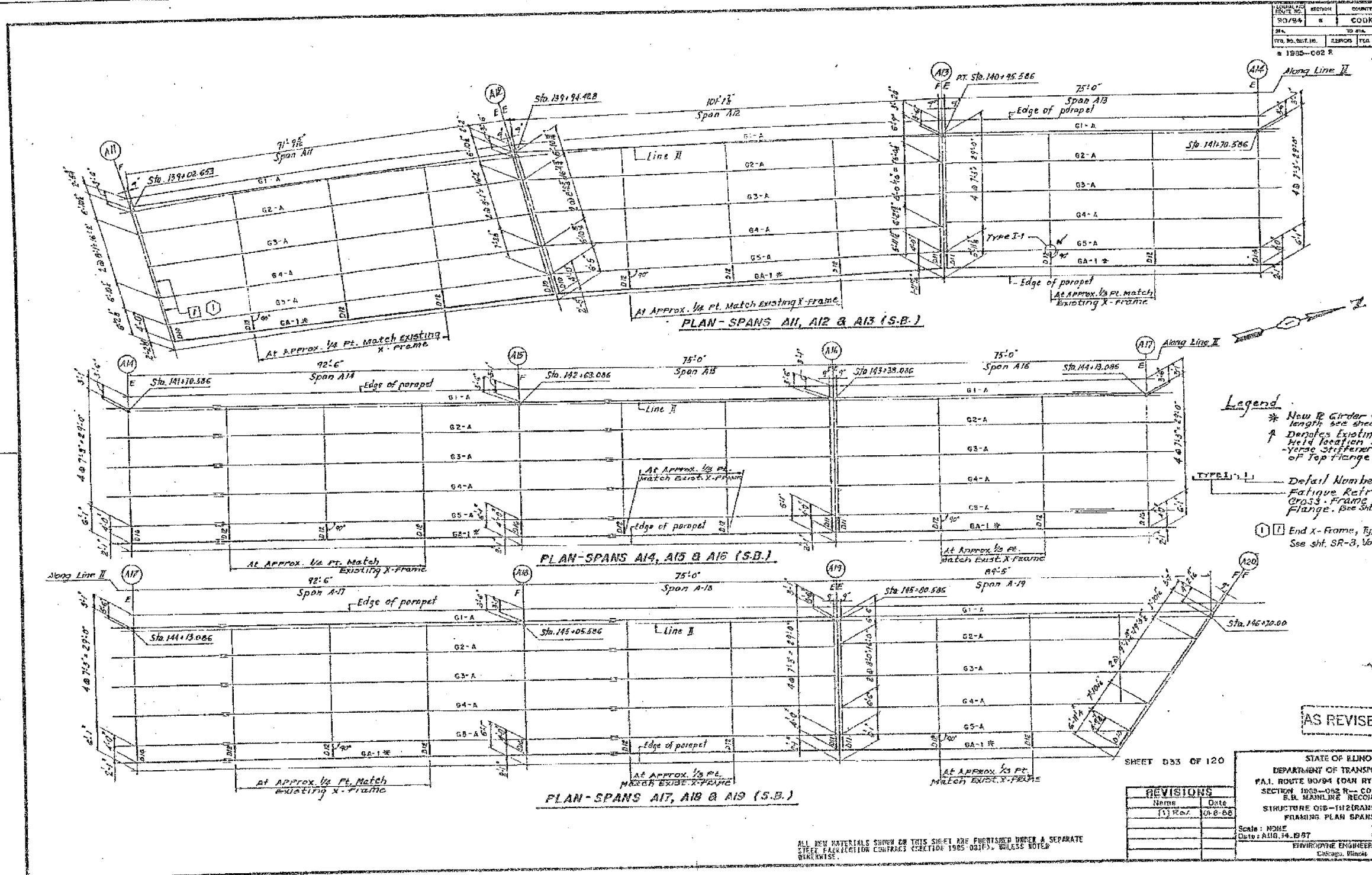
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1111  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

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60B07

PROJECT NO.	SECTION	COUNTY	DATE
94/90	2005-086 I	COOK	120
TO STA.		DATE	
120		5/18/2007	



**Legend:**

- \* New R Girder (For size and length see sheet D40)
- ↑ Denotes Existing Cracked Weld Location at Transverse Stiffener to Underside of Top Flange (TYP)
- ① Defect Number
- ② Fatigue Retrofit Repair Cross-Frame at Top Flange. (See Sht D48)
- ③ End X-Frame, Type 2. See sht. SR-3, Vol # 13 for details

REVISIONS	NAME	DATE
1	Rev.	08-08

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
STRUCTURE 016-112 (RAMP A & MAINLINE)  
FRAMING PLAN SPANS A11 TO A19  
Scale: NONE  
Date: AUG. 14, 1987  
Drawn By: J.G.  
Checked By: M.M.  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

AS REVISED

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1905-001F), UNLESS NOTED OTHERWISE.

SHEET D33 OF 120

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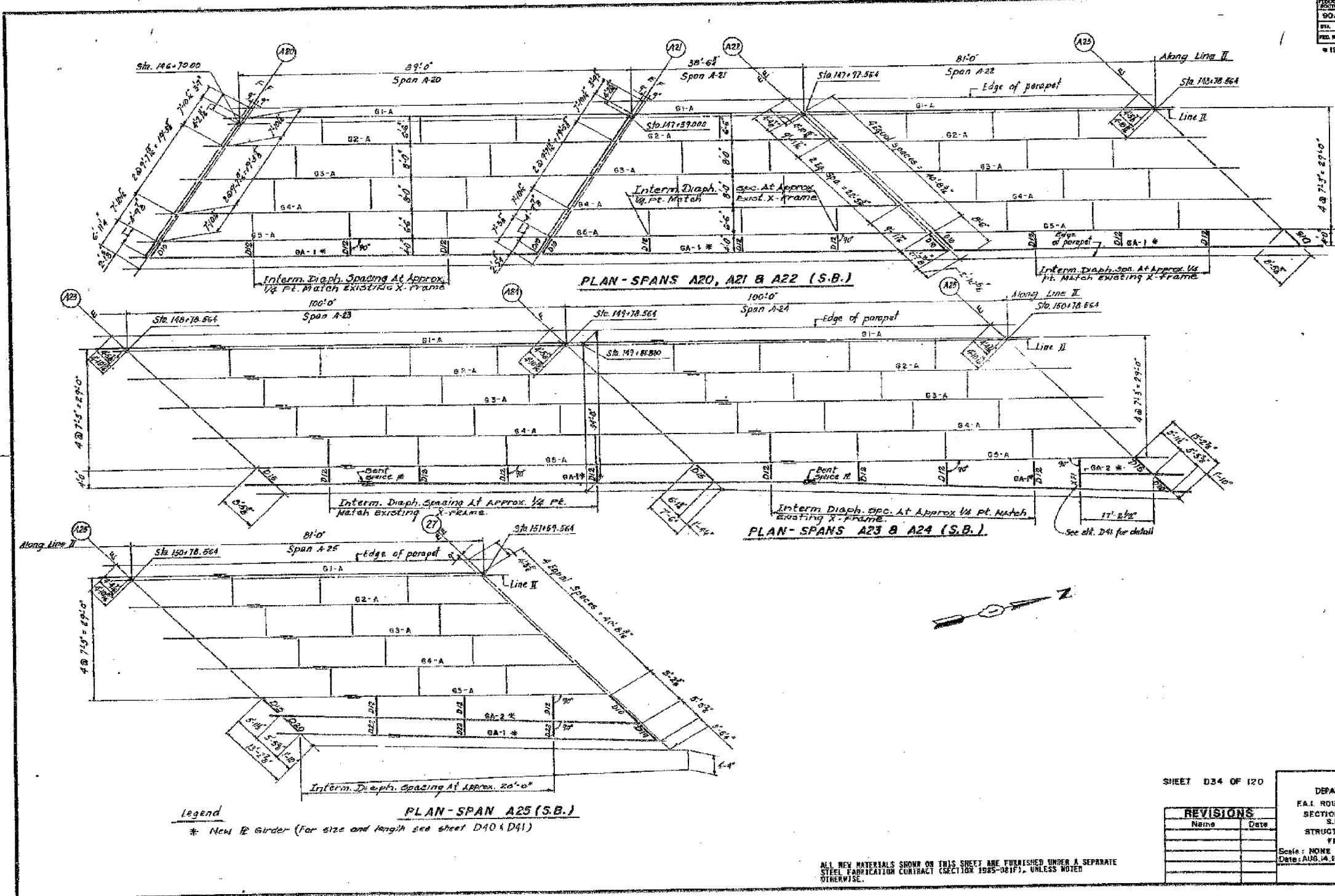
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	163
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	#	COOK	LRD	34
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
1995-C82 R				



**Legend**  
 \* New R Girder (for size and length see sheet D40 & D41)

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1995-081F), UNLESS NOTED OTHERWISE.

SHEET D34 OF 120

REVISIONS	
Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1995-D32 R-COOK COUNTY  
 S.S. MAINTENANCE RECONSTRUCTION  
 STRUCTURE 016-HIGHWAY RAMP B MAINLINE  
 FRANKS PLAN SPANS A20 TO A25  
 Scale: NONE  
 Date: AUG. 14, 1997  
 Drawn By: J.G.  
 Checked By: M.J.M.  
 ENVIRONMENTAL ENGINEERS, INC.  
 Chicago, Illinois

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1112  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

FOR INFORMATION ONLY

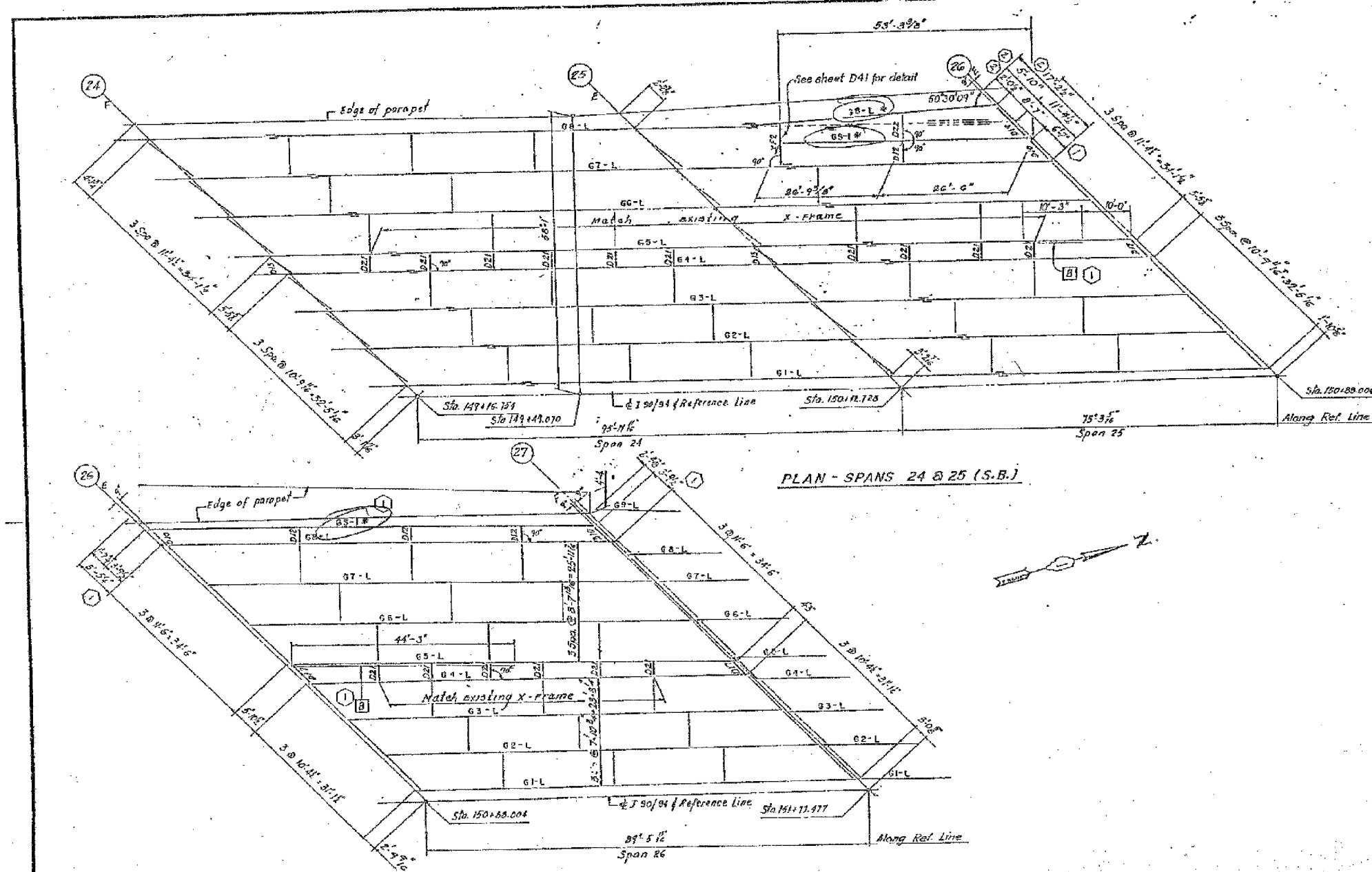
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 Chicago, Illinois  
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	164
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	1	COOK	120	38
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN - SPANS 24 & 25 (S.B.)

PLAN - SPAN 26 (S.B.)

- Legend**
- to be removed
  - \* New R Girder (For size and length see sheet D40)
  - ⓑ Longitudinal Reinforcing Repair (side indicated) See Sht SR-5 Vol "13 for detail.

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATOR CONTRACT (SECTION 1905-051P), UNLESS NOTED OTHERWISE.

AS REVISED

SHEET 036 OF 120

REVISIONS	NAME	DATE
(1) Rev		01-8-88
(2) Rev		2-5-88

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 E.A.J. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1811 - 082 R - COOK COUNTY  
 S.H. MAINLINE RECONSTRUCTION  
 STRUCTURE 016-1112 - (MAINLINE)  
 FRAMING PLAN SPANS 24 TO 26  
 Scale: NONE  
 Date: AUG. 14, 1987  
 Drawn By: J.G.  
 Checked By: R.M.  
 ENVIRODYNE ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1112

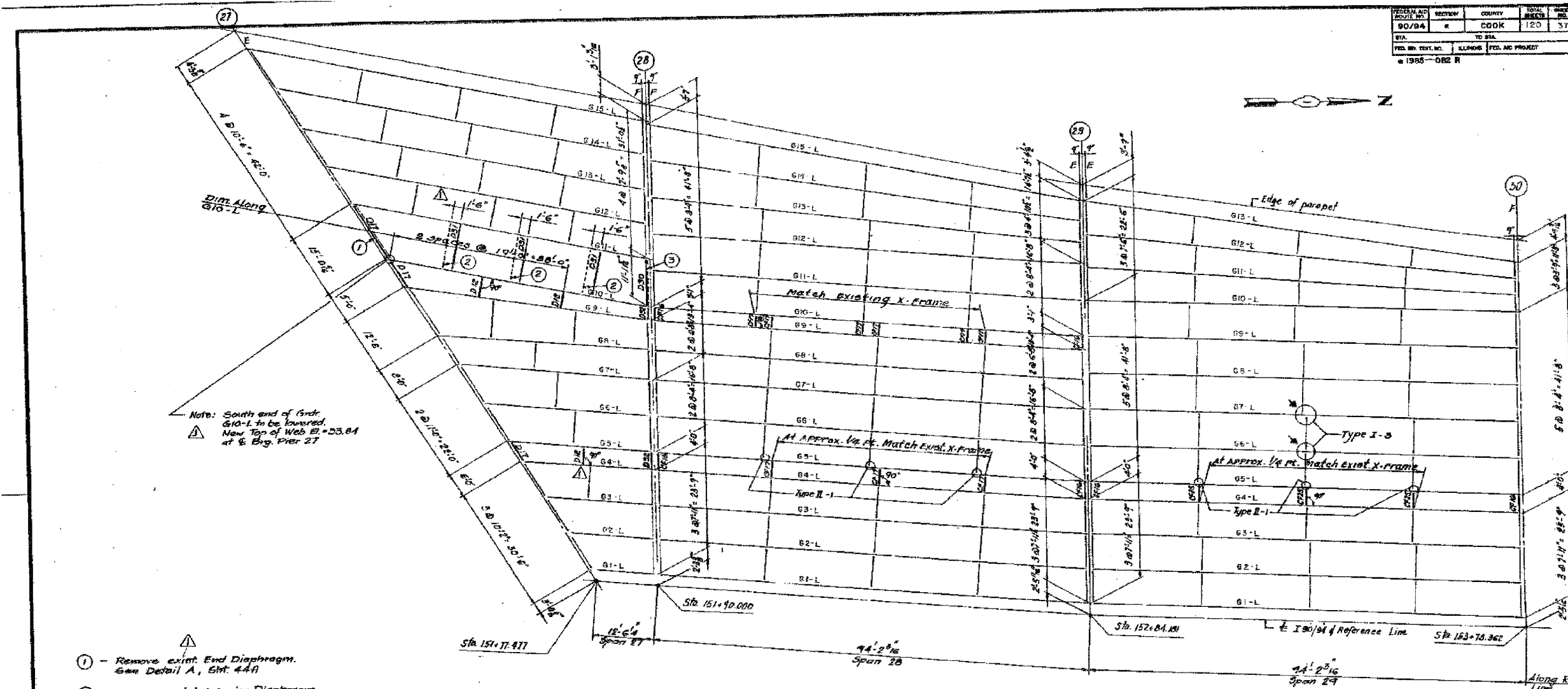
SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

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5/24/2007 5:05:49 PM

FED. ROAD DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	e	COOK	120	37
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
e 1985-082 R				



- ① - Remove exist. End Diaphragm. See Detail A, Sht. 44A
- ② - Remove exist. Interior Diaphragm. See Detail B, Sht. 44A
- ③ - Remove exist. End Diaphragm. See Detail C, Sht. 44A.

Contractor to furnish End Diaphragm D17 & D30, intermediate Diaphragm D31 between Girders G10-L & G11-L.

**Legend**

▲ Denotes Existing Cracked. Field location at transverse stiffener to underside of Top Flange (Typ)

TYPE I-1 Detail Number Fatigue Retrofit Repair Cross-Frame at Top Flange (See Sht. D48)

PLAN - SPANS 27, 28 & 29 (S.B.)

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1985-0817), UNLESS NOTED OTHERWISE. Revision 12-7-87

SHEET D37 OF 120		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. ROUTE 94/94 (DAN RYAN EXPRESSWAY) SECTION 1985-082 R - COOK COUNTY S.B. MAINLINE RECONSTRUCTION STRUCTURE 018 - 112 (MAINLINE) FRAMING PLAN SPANS 27 TO 29											
<table border="1"> <tr><th colspan="2">REVISIONS</th></tr> <tr><th>Name</th><th>Date</th></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>		REVISIONS		Name	Date							Scale: NONE Date: AUG. 14, 1987 Drawn By: J.G. Checked By: M.M. ENVIRONMENTAL ENGINEERS INC. Chicago, Illinois	
REVISIONS													
Name	Date												

REVISIONS		DATE
NAME		

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112

SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

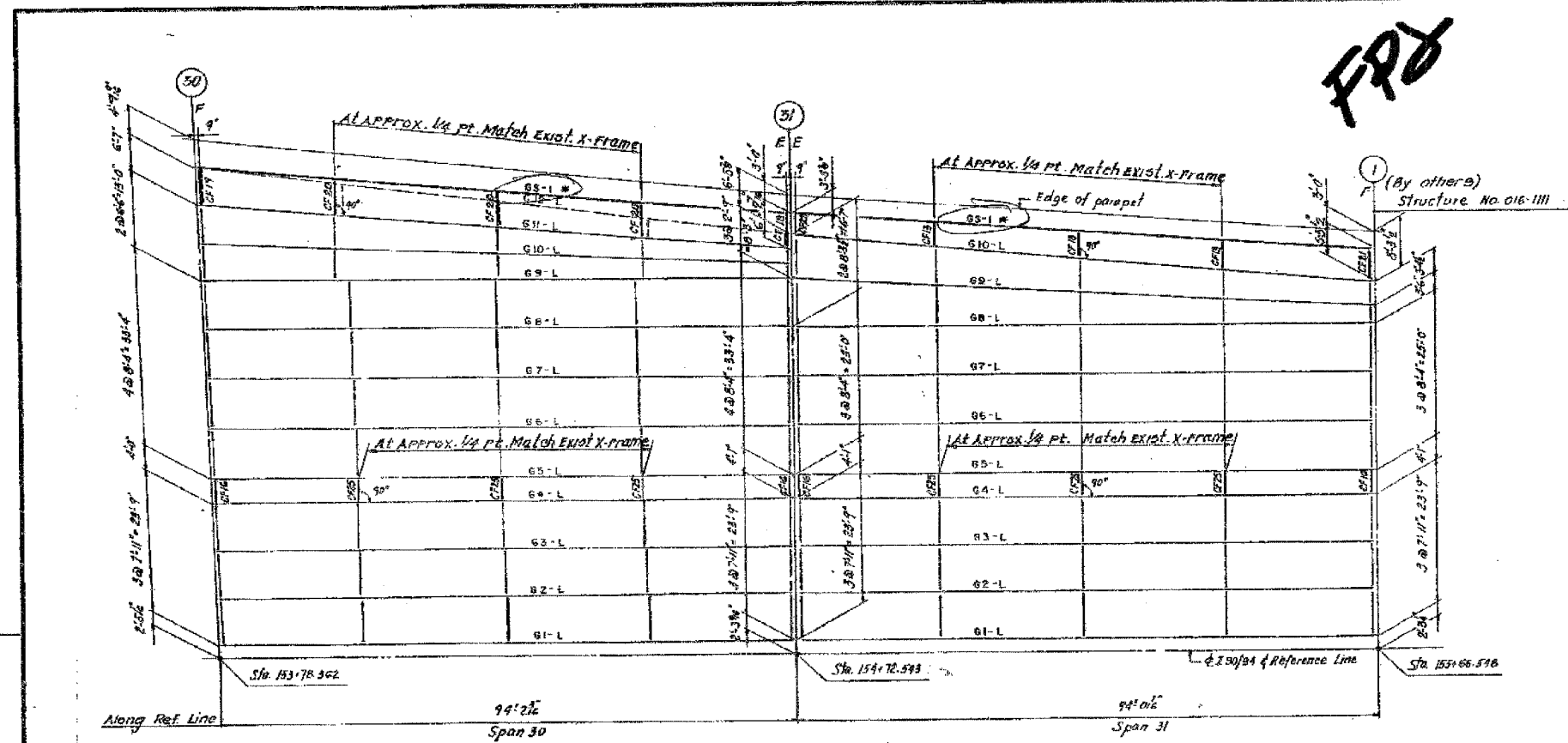
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	166
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

DESIGN NO.	SECTION	EXPIRE	TOTAL SHEETS	TOTAL NO.
90/94	#	COOK	120	38
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

1985-082 R



**FRD**



**PLAN - SPANS 30 & 31 (S.B.)**

**Legend**  
 ----- to be removed  
 \* Next 2 Girders (for size and length see sheet D10)

SHEET D38 OF 120

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-082 R - COOK COUNTY  
 S.B. MAINLINE RECONSTRUCTION  
 STRUCTURE 016-1112 (MAINLINE)  
 FRAMING PLAN SPANS 30 & 31

Scale: NONE  
 Date: AUG. 14, 1987  
 Drawn By: J.G.  
 Checked By: M.M.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	
Name	Date

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1985-0817), UNLESS NOTED OTHERWISE.

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1112

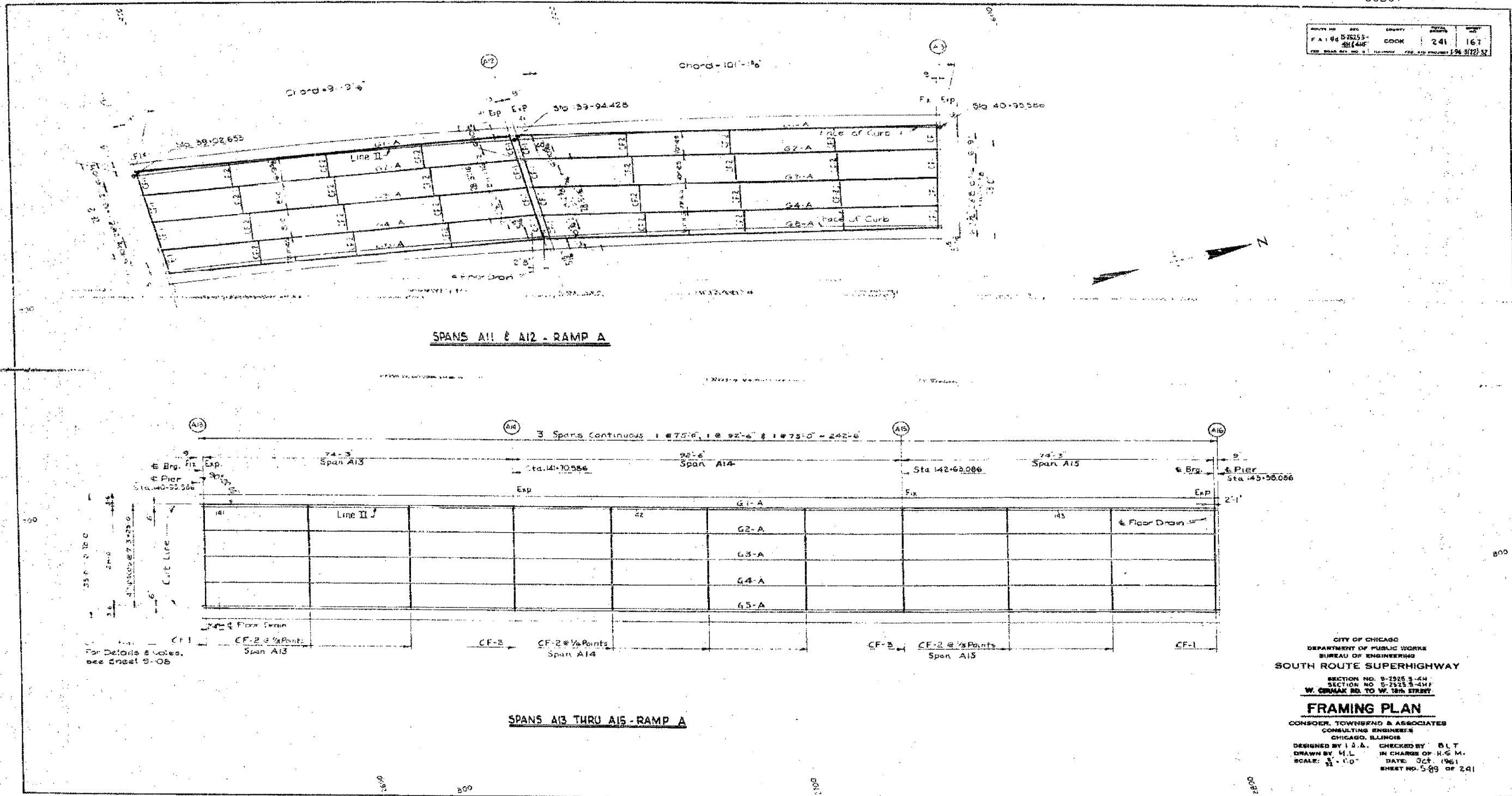
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 DRAWN BY: LAM  
 CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	167
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F A I 94	2005-086 I	COOK	241	167
FED. ROAD DIST. NO. 111				



For Details & Notes, see sheet S-05

CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
**SOUTH ROUTE SUPERHIGHWAY**  
 SECTION NO. S-2525 3-4H  
 SECTION NO. S-2525 3-4H1  
 W. CORKLAKE RD. TO W. 126th STREET  
**FRAMING PLAN**  
 CONSOER, TOWNSEND & ASSOCIATES  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS  
 DESIGNED BY I.S.A. CHECKED BY B.L.T.  
 DRAWN BY H.L. IN CHARGE OF H.G.M.  
 SCALE: 1/8" = 1'-0" DATE: OCT. 1961  
 SHEET NO. 589 OF 241

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

REVISIONS	
NAME	DATE

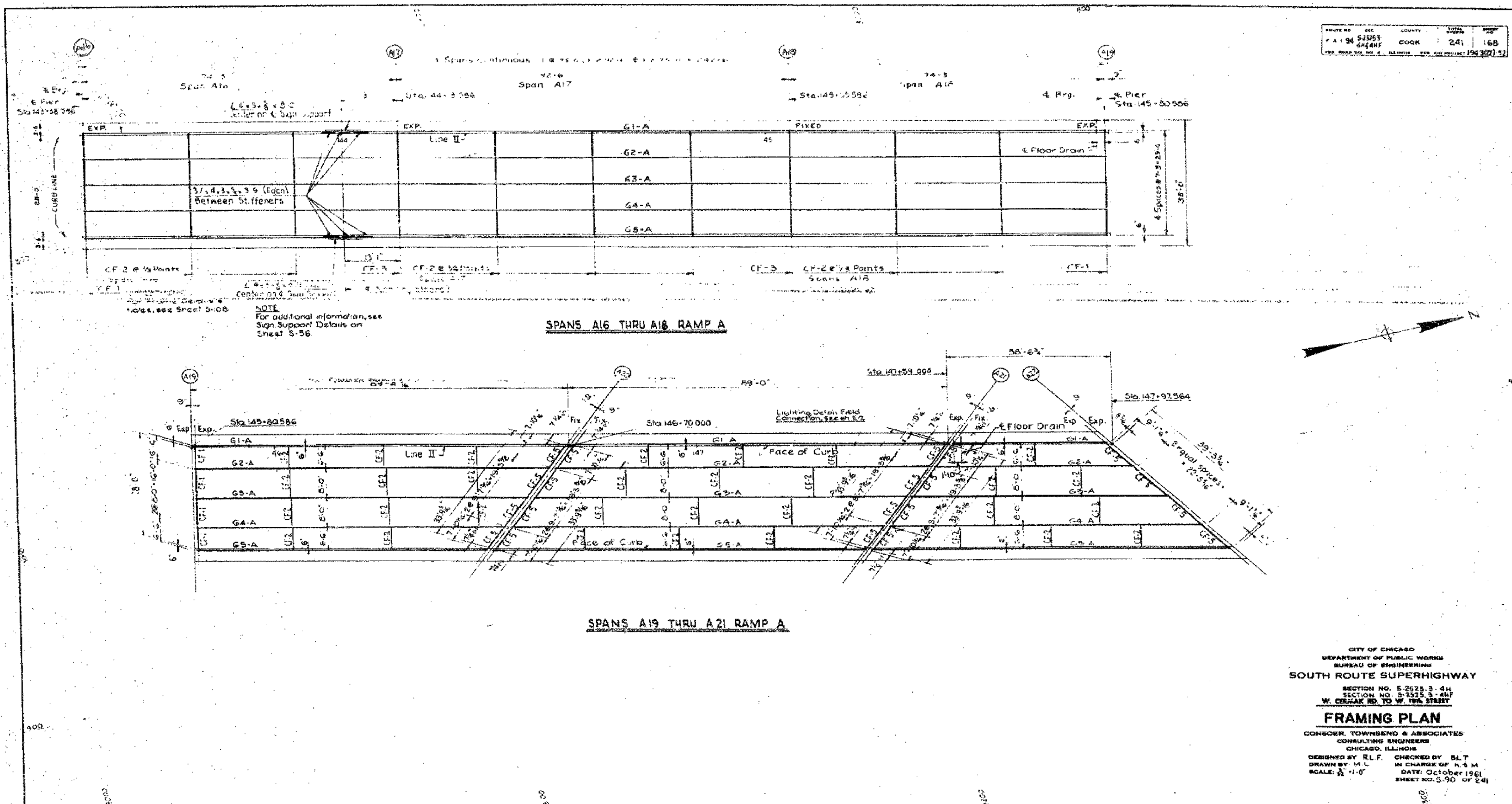
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1112  
 SCALE: NTS DRAWN BY: LAM  
 DATE: 5/18/2007 CHECKED BY: BLU

S:\24\2007\51854\FM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 1	COOK	228	168
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 94	52553	COOK	241	168
FED. ROAD DIST. NO. 2, ILLINOIS, FED. AID PROJECT 194 307 32				



NOTE:  
For additional information, see  
Sign Support Details on  
Sheet S-58.

SPANS A16 THRU A18 RAMP A

SPANS A19 THRU A21 RAMP A

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
SECTION NO. S-2525.3-4H  
SECTION NO. S-2525.3-4HF  
W. CERMAK RD. TO W. 18th STREET  
**FRAMING PLAN**  
CONSEER, TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS  
DESIGNED BY R.L.F. CHECKED BY B.L.T.  
DRAWN BY M.L. IN CHARGE OF R.S.M.  
SCALE: 1/4" = 1'-0" DATE: October 1961  
SHEET NO. S-90 OF 24

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

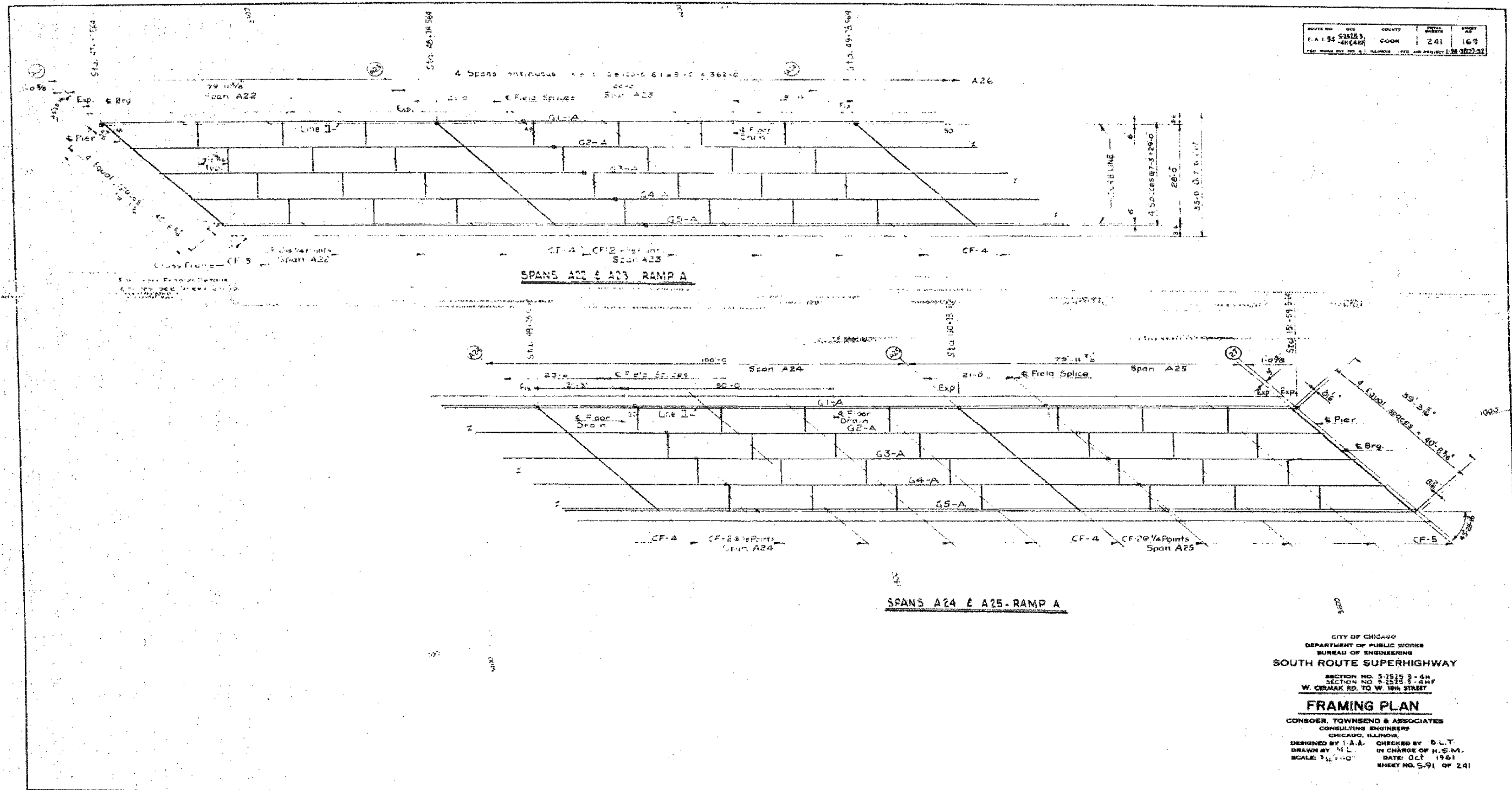
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112  
SCALE: NTS DATE: 5/18/2007 DRAWN BY: LAM CHECKED BY: BLU

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CONSULTING ENGINEERS  
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	169
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 94	51513	COOK	241	169
FED. ROAD DIST. NO. & ILLINOIS		FED. AID PROJECT (SEE SHEET 51)		



**SPANS A22 & A23 RAMP A**

**SPANS A24 & A25 RAMP A**

CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
**SOUTH ROUTE SUPERHIGHWAY**  
 SECTION NO. 5-2523 3-4H  
 SECTION NO. 5-2523 3-4HF  
 W. CENNAK RD. TO W. 18th STREET  
**FRAMING PLAN**  
 CONSOER, TOWNSEND & ASSOCIATES  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS  
 DESIGNED BY I.A.A. CHECKED BY D.L.T.  
 DRAWN BY M.L. IN CHARGE OF H.S.M.  
 SCALE: 3/8"=1'-0" DATE: Oct 1961  
 SHEET NO. 5-91 OF 241

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1112  
 SCALE: NTS DRAWN BY: LAM  
 DATE: 5/18/2007 CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
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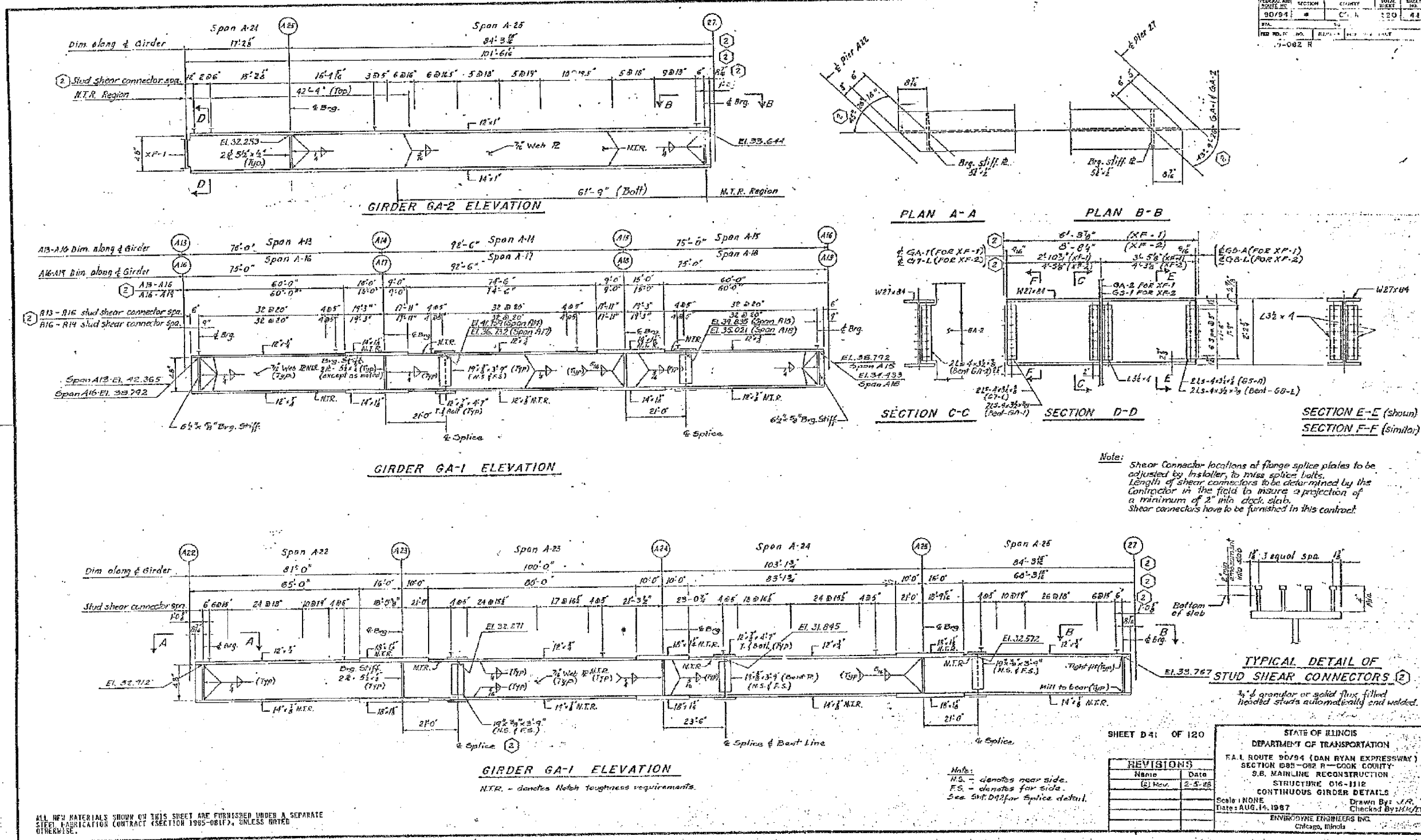
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	170
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

60B07

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	C-1	COOK	120	44
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



Note: Shear Connector locations at flange splice plates to be adjusted by installer, to miss splice bolts. Length of shear connectors to be determined by the Contractor in the field to insure a projection of a minimum of 2" into deck slab. Shear connectors have to be furnished in this contract.

SHEET D41 OF 120

REVISIONS	
Name	Date
(S) Rev.	2-5-86

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 94/94 (DAN RYAN EXPRESSWAY)  
 SECTION 085-082 R-COOK COUNTY  
 S.B. MAINLINE RECONSTRUCTION  
 STRUCTURE 016-1112  
 CONTINUOUS GIRDER DETAILS  
 Scale: NONE  
 Date: AUG. 14, 1987  
 Drawn By: J.P.R.  
 Checked By: M.K.V.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

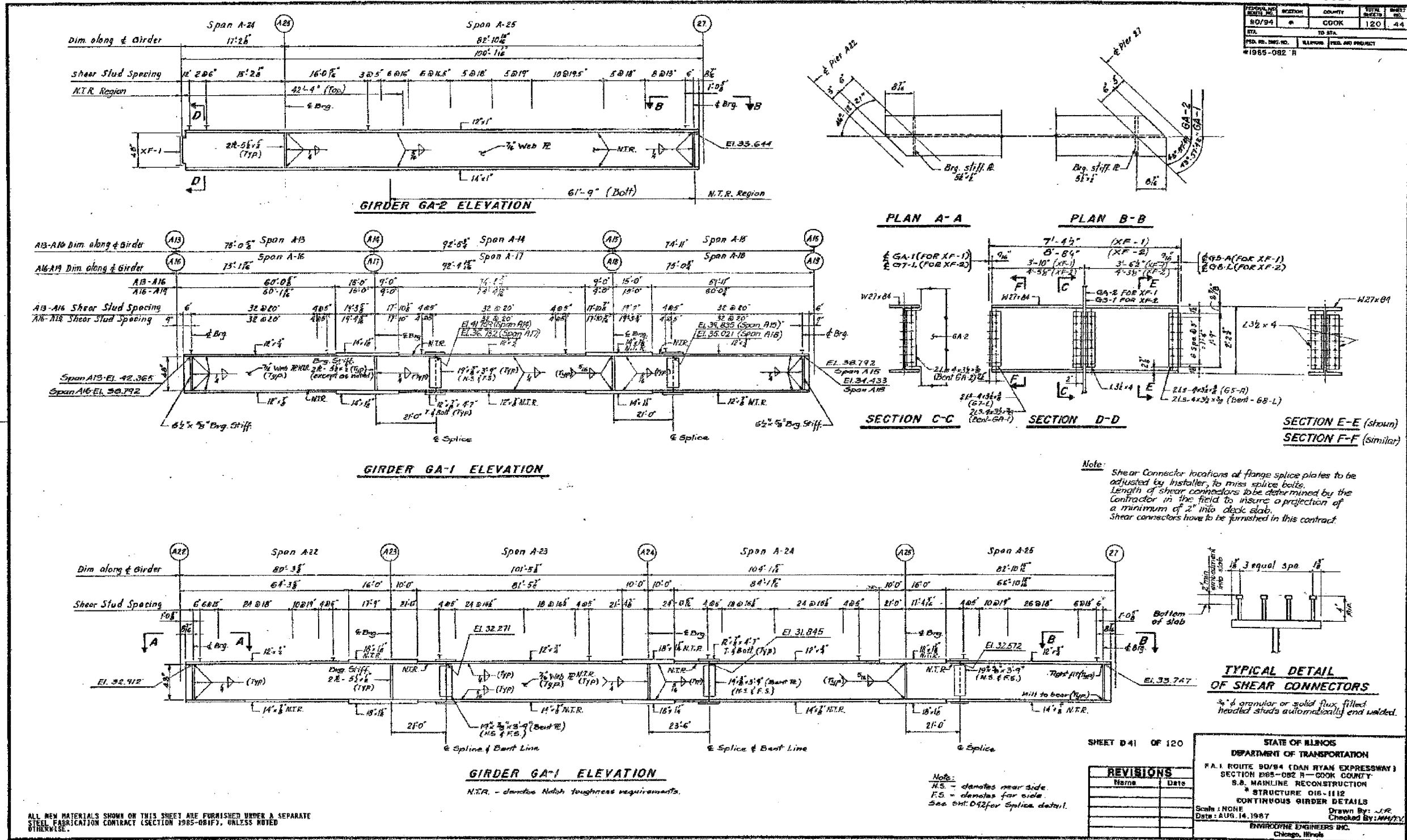
ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1905-081F), UNLESS NOTED OTHERWISE.

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1112  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
84/90	2005-086 I	COOK	228	171
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



SHEET 041 OF 120

REVISIONS	
NAME	DATE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (DAN RYAN EXPRESSWAY)  
SECTION 085-082 R - COOK COUNTY  
S.S. MAINLINE RECONSTRUCTION  
\* STRUCTURE 016-1112  
CONTINUOUS GIRDER DETAILS

Scale: NONE  
Date: AUG. 14, 1987  
Checked By: JLR  
ENVIROTYPE ENGINEERS INC.  
Chicago, Illinois

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112

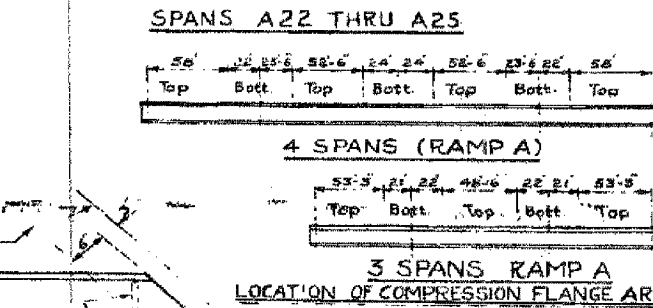
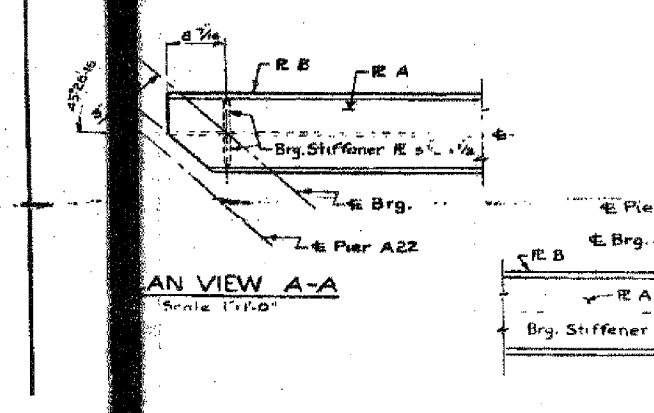
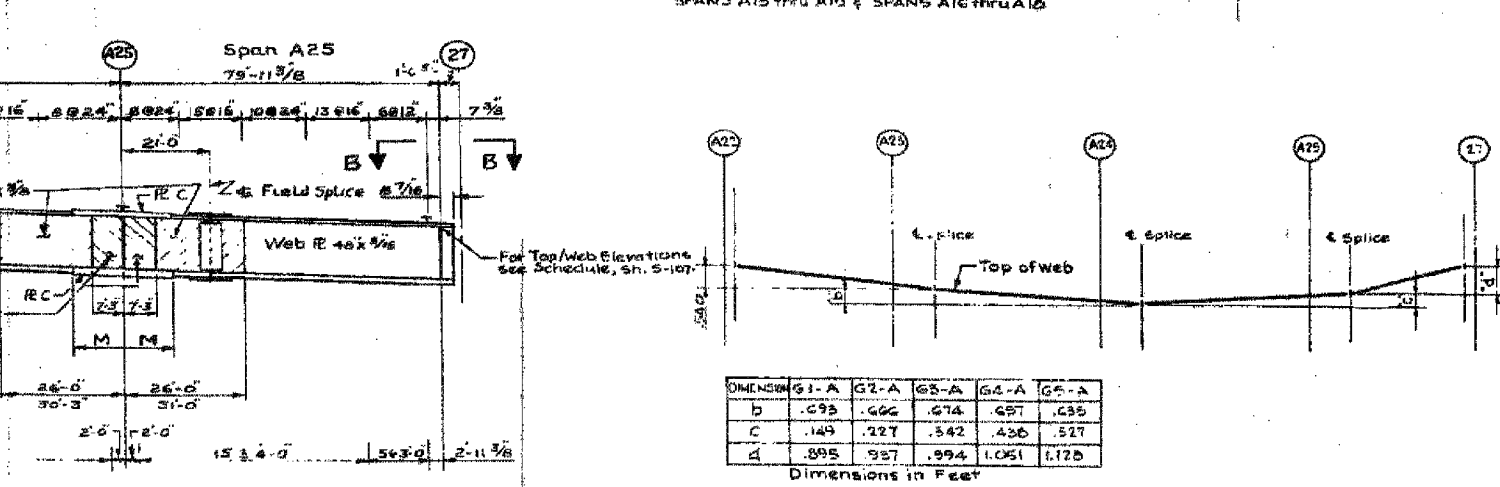
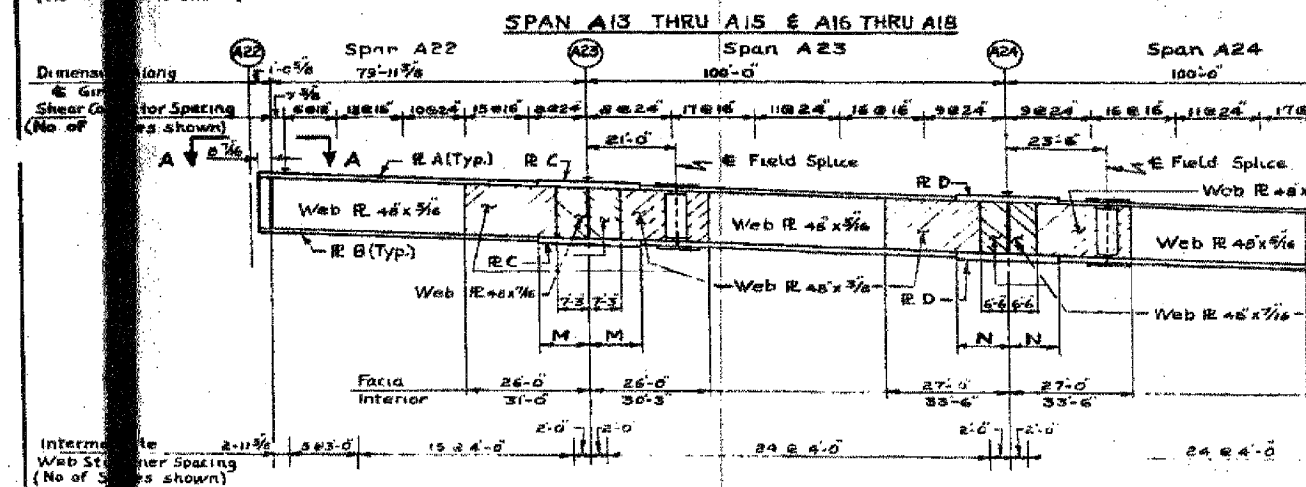
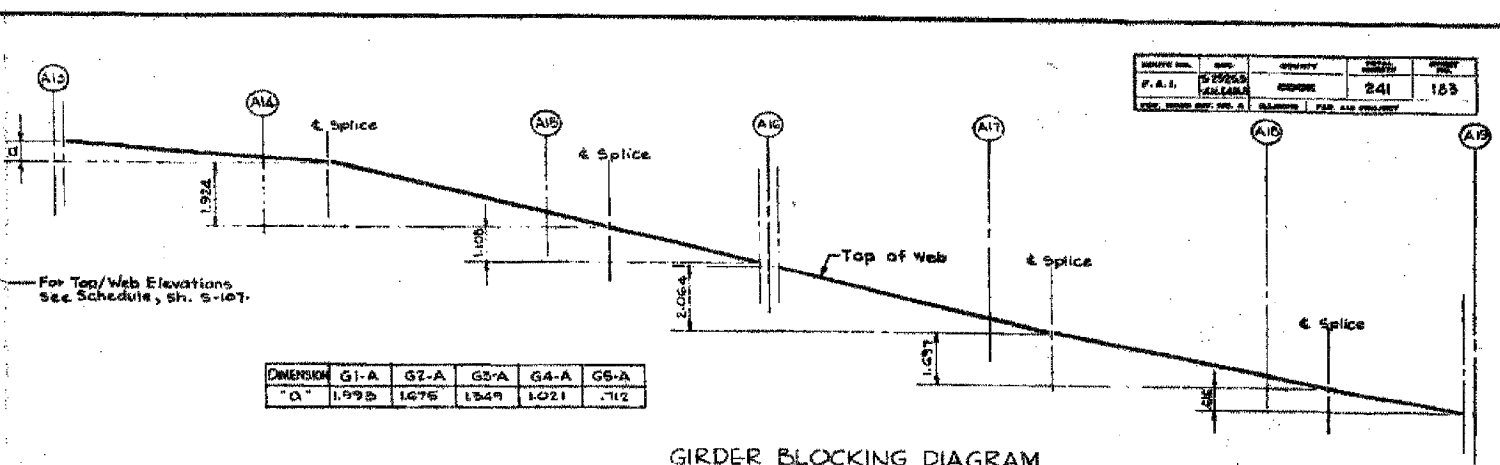
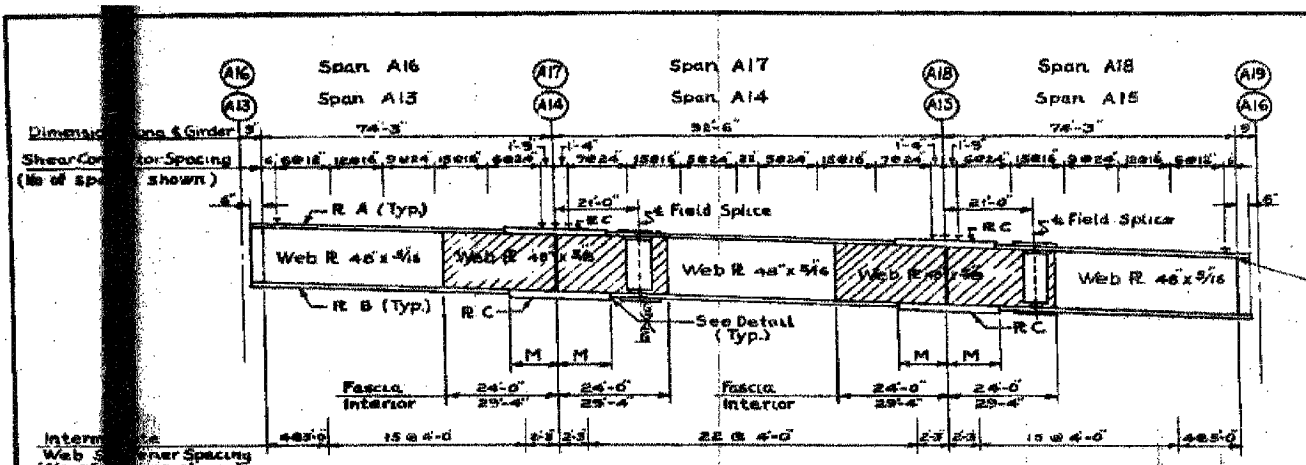
SCALE: NTS  
DATE: 5/18/2007

DRAWN BY: LAM  
CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	172
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				

REVISED BY	DATE	REASON
F.A.I.	5/25/07	ISSUE
DATE	241	183



UNIT	GIRDER	PLATE		PLATE C		PLATE D	
		A	B	SIZE	M	SIZE	N
SPANS A13 THRU A18	G1-A, G5-A	12x3/4	12x1"	10x1 1/2	11'-9"		
SPANS A22	G1-A, G5-A	12x3/4	4x1"	15x1 1/2	13'-5"	15x1 1/2	14'-3"

CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
SECTION NO. S-2525.3-4 H,  
SECTION NO. S-2525.3-4 H, F  
W. CERMAK RD. TO W. 15TH STREET  
**CONTINUOUS GIRDER DETAILS**  
CONSOER. TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS

REVISIONS		DATE
NAME		

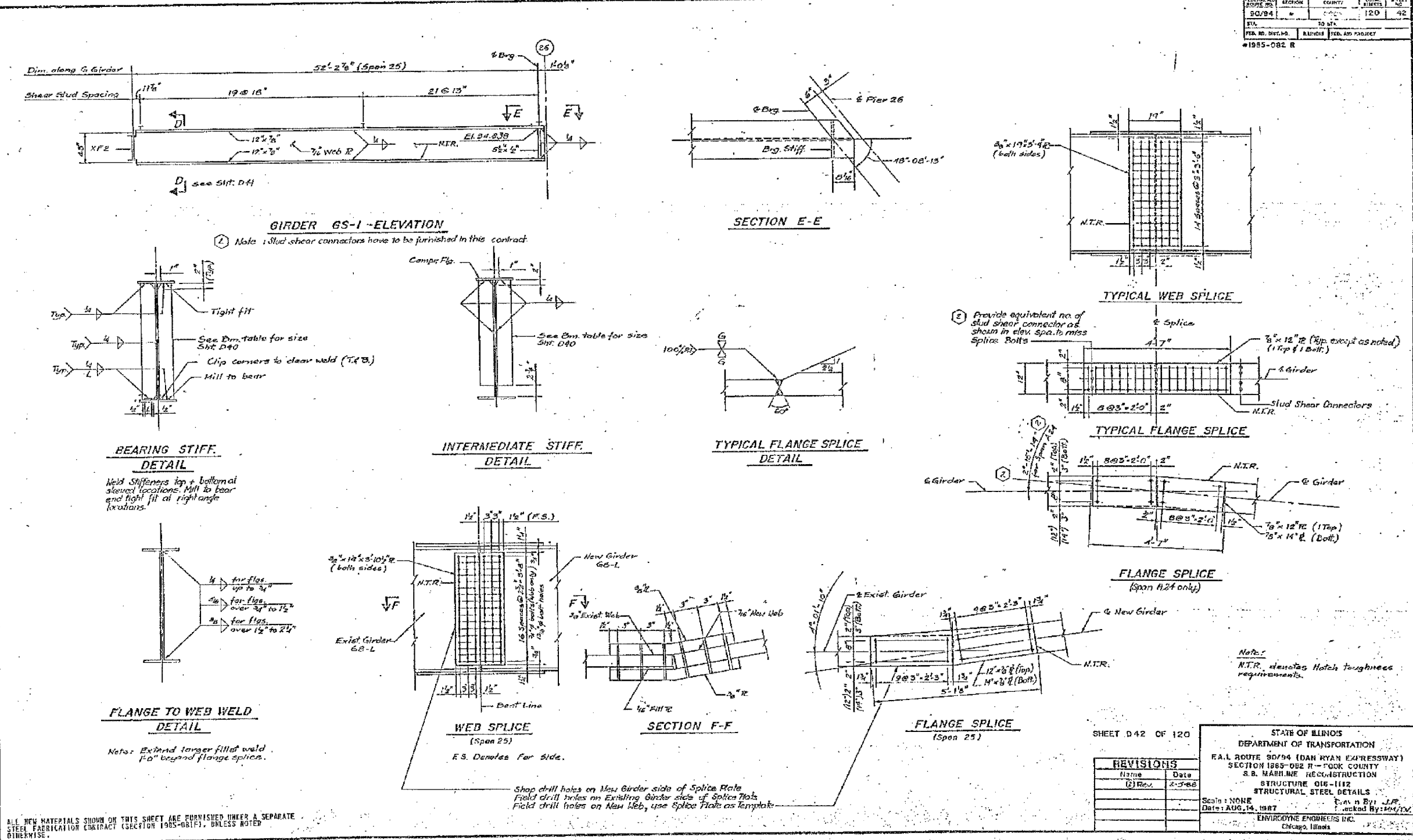
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

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BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
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N:\60B07\BRIDGE\DWG\SHEETS\60B\_21A.DWG 11/21/07 5:16:05 PM

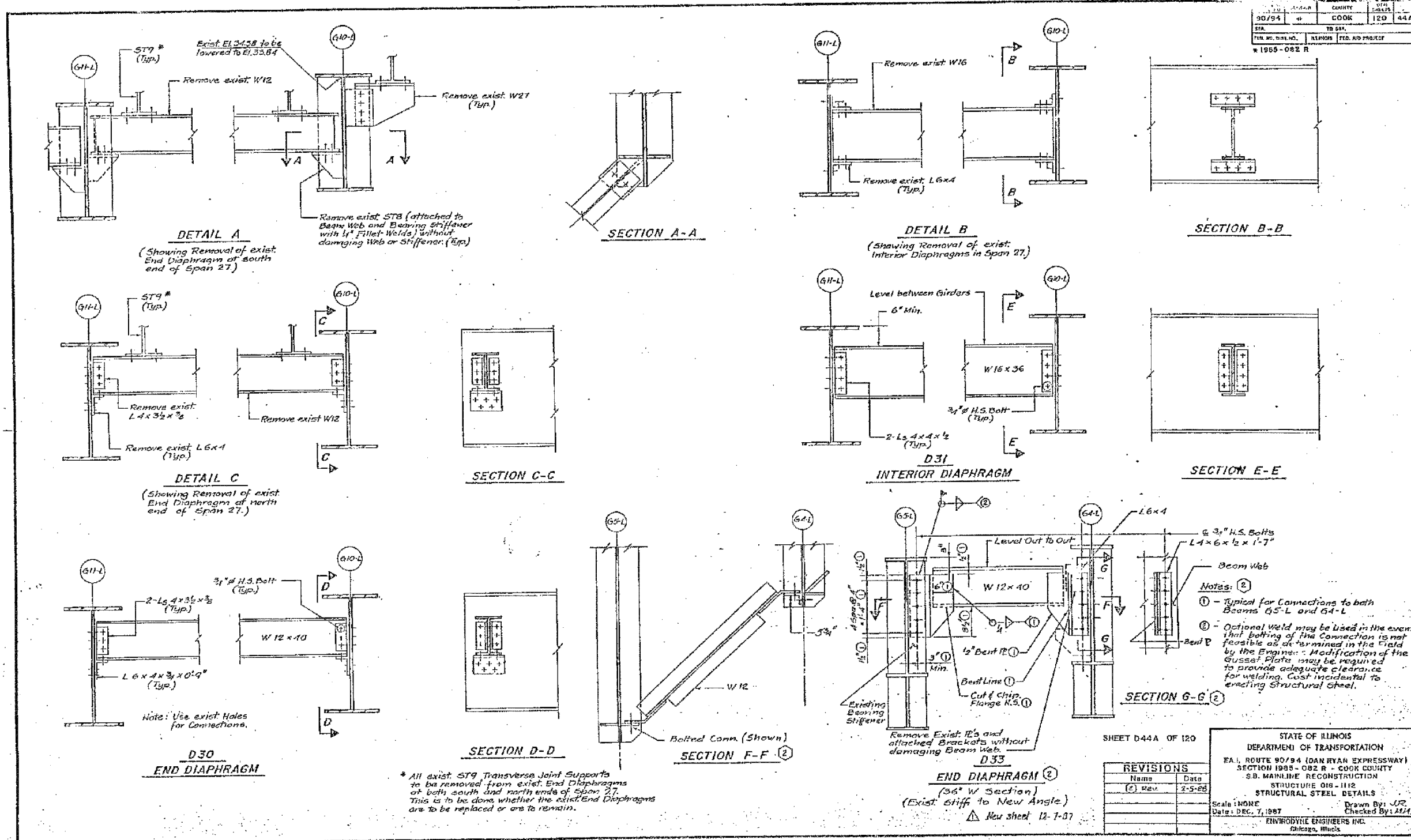
FEDERAL AID DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	173
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
#1955-082 R				



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ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1112  
 SCALE: NTS DRAWN BY: LAM  
 DATE: 5/18/2007 CHECKED BY: BLU



\* All exist. ST9 Transverse Joint Supports to be removed from exist. End Diaphragms at both south and north ends of Span 27. This is to be done whether the exist. End Diaphragms are to be replaced or are to remain.

SHEET D44A OF 120

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
STRUCTURE 016-1112  
STRUCTURAL STEEL DETAILS

Scale: NONE  
Date: DEC. 7, 1987  
Drawn By: JZ  
Checked By: MJA  
ENVIRODYNE ENGINEERS INC.  
Chicago, Illinois

REVISIONS	NAME	DATE
(2)	Rev	2-5-88

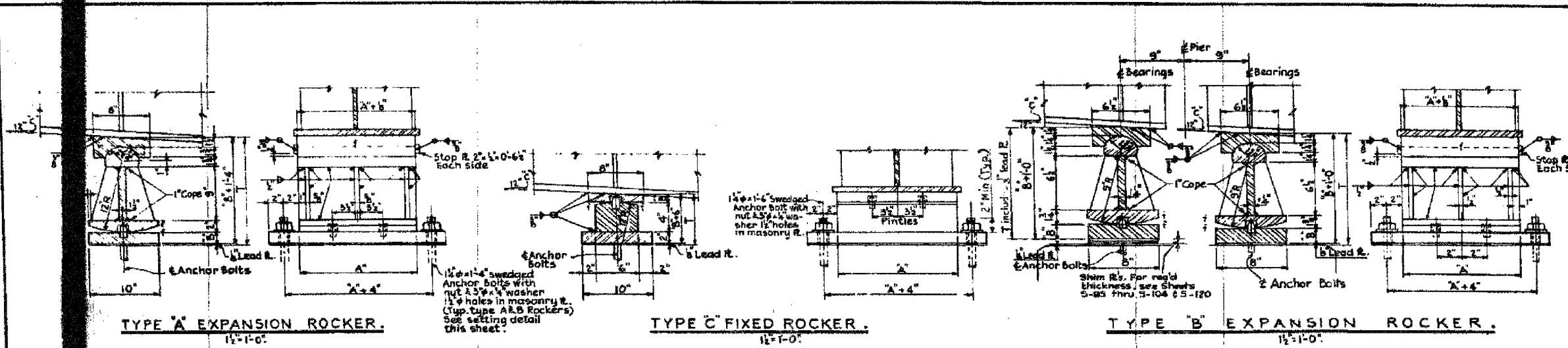
FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112

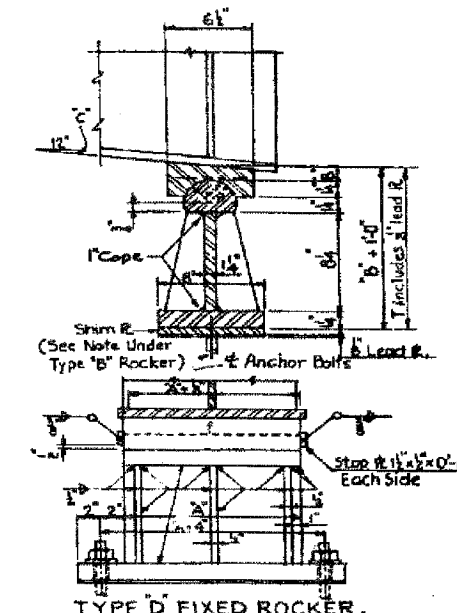
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DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

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**ROCKER SCHEDULE**

SPAN	GIRDER	SOUTH END				NORTH END				PIER	GIRDER	SOUTH END				NORTH END				SPAN	GIRDER	SOUTH END				NORTH END				
		ROCKER TYPE	A	B	C	T	ROCKER TYPE	A	B			C	T	ROCKER TYPE	A	B	C	T	ROCKER TYPE			A	B	C	T	ROCKER TYPE	A	B	C	T
11	GR-1	C	13	1 1/2	3/8	0-7 3/4	B	13	1 1/2	3/8	1-1 1/2	22, 26	GL-1, GR-1	B	11	1 1/2	3/8	1-1 1/2	29	GL-2 to 5 & 10	B	13	1 1/2	3/8	1-1 1/2	C	13	1 1/2	3/8	0-7 3/4
	GR-2 to 10, 11, 12	"	"	"	"	"	"	"	"	"	"		GL-1, GR-1	"	"	"	"	"		"	GL-1, 6 to 9 & 13	"	"	"	"	"	"	"	"	"
12	GR-1	B	"	"	"	0-8	C	"	"	"	0-7 3/4	23, 25	GL-1, GR-1	A	15	1 1/2	3/8	1-6	30	GR-2 to 5 & 9 to 11	"	"	"	"	"	"	"	"	"	"
	GR-2 to 5	"	"	"	"	"	"	"	"	"	"		GL-2 to 5, GR-2 to 5	"	"	"	"	"		"	GR-6 to 8	"	"	"	"	"	"	"	"	"
13	GR-1	C	"	"	"	0-7 3/4	B	"	"	"	1-1 1/2	24	GL-6 to 8, GR-6 to 9	"	"	"	1-6 1/2	31	GR-10, 11, 12	"	"	"	"	"	"	"	"	"	"	
	GR-2 to 5	"	"	"	"	"	"	"	"	"	"		GL-1, GR-1, 10, 11	C	15	2 1/2	3/8		0-8 1/4	GR-1	"	"	"	"	"	"	"	"	"	"
14	GR-1	B	"	"	"	1-1 1/2	C	"	"	"	0-7 3/4	26	GR-12	"	"	"	0-8 3/8	31	GR-2 to 5 & 9, 11	"	"	"	"	"	"	"	"	"	"	
	GR-2 to 5	"	"	"	"	"	"	"	"	"	"		GL-2 to 5, GR-2 to 5	"	"	"	"		"	"	GR-6 to 8	"	"	"	"	"	"	"	"	"
15, 19	GR-1	B	11	1 1/2	3/8	1-1 1/2	"	"	"	"	0-7 3/4	27	GL-6 to 8, GR-6 to 9	"	"	"	0-8 3/8	31	GL-2 to 5 & 9, 11	"	"	"	"	"	"	"	"	"	"	
	GR-2 to 5, GR-2 to 8	"	"	"	"	"	"	"	"	"	"		GL-1, 6, 7, 8	"	"	"	1-1 1/2		"	"	GL-2 to 5 & 9, 11	"	"	"	"	"	"	"	"	"
16, 18	GR-1	A	15	1 1/2	3/8	1-6	"	"	"	"	1-6	27	GR-9, 10	"	"	"	0-7 3/4	31	GR-12, 15	"	"	"	"	"	"	"	"	"		
	GR-2 to 5, GR-2 to 8	"	"	"	"	"	"	"	"	"	"		GR-11	"	"	"	1-1 1/2		"	"	GL-14, 15	"	"	"	"	"	"	"	"	"
17	GR-1	C	15	2 1/2	3/8	0-8 1/4	"	"	"	"	0-8 1/4	28	GL-1, 10, 11	"	"	"	1-1 1/2	31	GL-1, 6, 7, 8, 10, 11, 12, 13	C	13	1 1/2	3/8	1-1 1/2	B	"	"	"	"	
	GR-2 to 5, GR-2 to 8	"	"	"	"	"	"	"	"	"	"		GL-9	"	"	"	1-1 1/2		"	"	GL-2 to 5, 8, 13, 14	"	"	"	"	"	"	"	"	"
19	GR-1	B	13	1 1/2	3/8	1-1 1/2	C	13	1 1/2	3/8	0-7 3/4	28	GL-10, 11	"	"	"	1-1 1/2	31	GR-1	"	"	"	"	"	"	"	"			
	GR-2 to 5, GR-2 to 8	"	"	"	"	"	"	"	"	"	"		GR-2 to 5, 10, 11	"	"	"	0-7 3/4		"	"	GR-6 to 9	"	"	"	"	"	"	"	"	"
20	GR-1	C	"	"	"	0-7 3/4	B	"	"	"	1-1 1/2	28	GR-1	"	"	"	0-7 3/4	31	GR-2 to 5, 10, 11	"	"	"	"	"	"	"	"			
	GR-2 to 5, 9 to 14	"	"	"	"	"	"	"	"	"	"		GR-6 to 9	"	"	"	0-8		"	"										



CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
SECTION NO. 52523-3-4H  
SECTION NO. 52523-3-4HF  
W. CERMAK RD. TO W. IQUIN ST.  
**ROCKER DETAILS**  
CONSOER, TOWNSEND & ASSOCIATES  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbanc.com

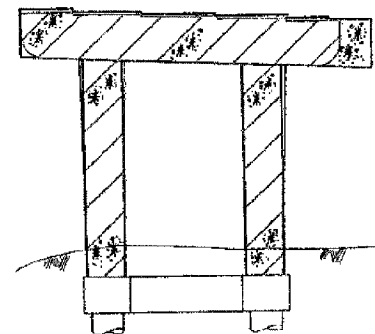
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

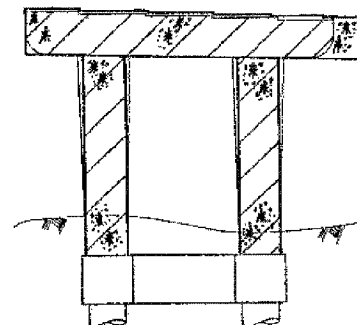


F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	177
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				

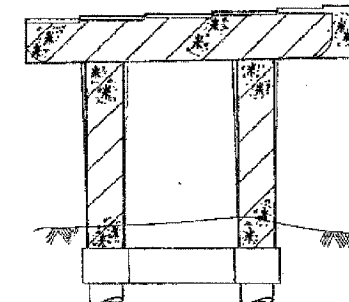
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	I	COOK	120	116
STA.		TO STA.		
FED. RD. DIST. NO.		ILLINOIS	FED. AID PROJECT	
# 1985-082 R				



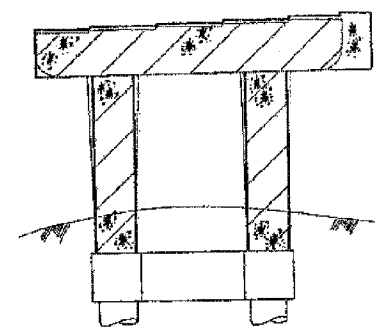
**PIER A12**  
(Looking North)



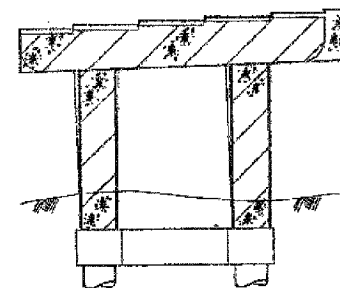
**PIER A13**  
(Looking North)



**PIER A14**  
(Looking North)



**PIER A15**  
(Looking North)



**PIER A16**  
(Looking North)

**LEGEND**

**INITIAL CONSTRUCTION**

EXISTING PIER

**ADVANCE WORK**

SUBSTRUCTURE WIDENING  
SUBSTRUCTURE REMOVAL

**S.B. MAINLINE RECONSTRUCTION**

PIER REMOVAL  
PIER REPLACEMENT  
PIER REHABILITATION  
(SEE NOTE 'A')

**N.B. MAINLINE RECONSTRUCTION**

PIER REMOVAL  
PIER REPLACEMENT  
PIER REHABILITATION  
(SEE NOTE 'A')

**NOTE 'A'**

INDICATES TYPE OF REPAIR  
(FOR DETAILS SEE DET-PR 1)  
INDICATES AREA OF DISTRESS  
(EXPRESSED IN SQ. FT. OR L.M. FT.)

SHEET D116 OF 120

<b>REVISIONS</b>		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY) SECTION 1985-082 R — COOK COUNTY S.B. MAINLINE RECONSTRUCTION SUBSTRUCTURE WIDENING REHABILITATION & REPLACEMENT STRUCTURE D15-112 PIERS A-12 THRU A-16 Scale: NONE Date: AUGUST, 1987 ENVIRODYNE ENGINEERS INC. Chicago, Illinois
Name	Date	
		Drawn By: SAF Checked By: RJ

<b>REVISIONS</b>	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

FOR INFORMATION ONLY

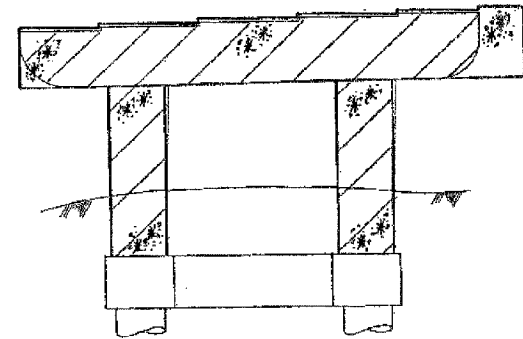
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com

N:\660\0000\BRIDGE\21A\SHEETS\660\_21A\_1016-112-EP114.dwg 5/24/2007 5:16:18 PM

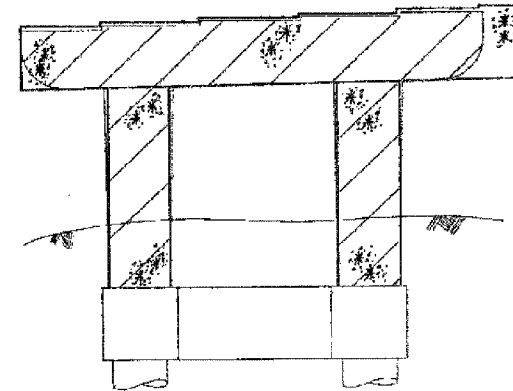


F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	178
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				

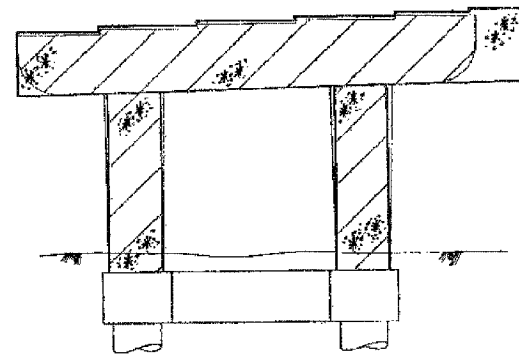
FEDERAL AID DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	R	COOK	120	117
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
1985-082 R				



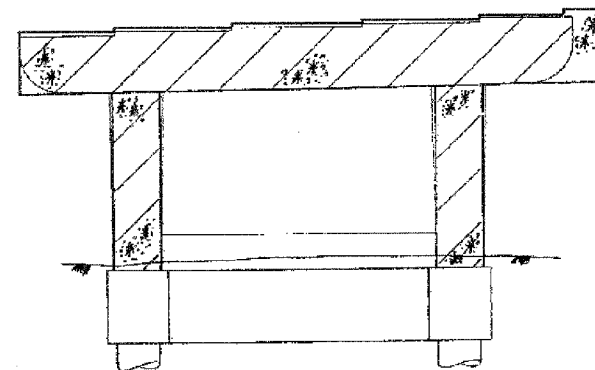
**PIER A17**  
(Looking North)



**PIER A18**  
(Looking North)



**PIER A19**  
(Looking North)



**PIER A20**  
(Looking North)

- LEGEND**
- INITIAL CONSTRUCTION**
- EXISTING PIER
- ADVANCE WORK**
- SUBSTRUCTURE WIDENING
  - SUBSTRUCTURE REMOVAL
- S.B. MAINLINE RECONSTRUCTION**
- PIER REMOVAL
  - PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")
- N.B. MAINLINE RECONSTRUCTION**
- PIER REMOVAL
  - PIER REPLACEMENT
  - PIER REHABILITATION (SEE NOTE "A")
- NOTE "A"**
- INDICATES TYPE OF REPAIR (FOR DETAILS SEE SHT. PR11)
  - INDICATES AREA OF DISTRESS (EXPRESSED IN SQ. FT. OR L/S, FT.)

SHEET D117 OF 120

REVISIONS	
Name	Date

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 94/90 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R—COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
SUBSTRUCTURE WIDENING, REHABILITATION & REPLACEMENT  
STRUCTURE 016-1112  
PIERS A-17 THRU A-20  
Scale: NONE  
Date: AUGUST, 1987  
Drawn By: SAF  
Checked By: RJ  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

FOR INFORMATION ONLY

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CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com

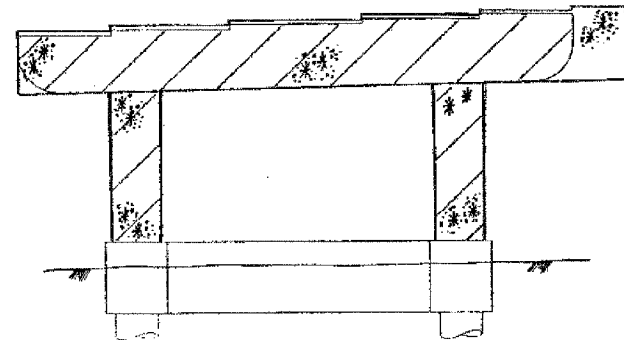
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 1	COOK	228	179
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

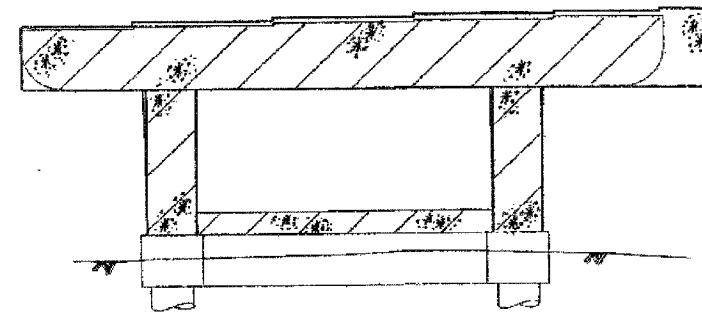
60B07

DESIGN NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/94	X	COOK	120	116
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

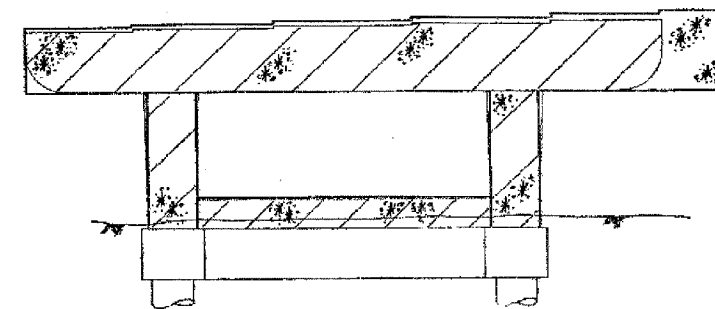
\* 1985-082 R



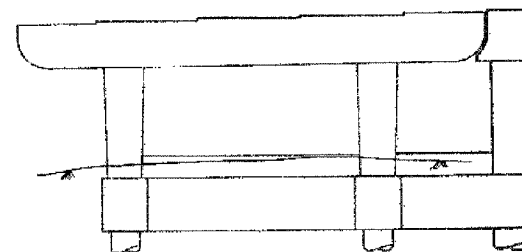
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(Looking North)



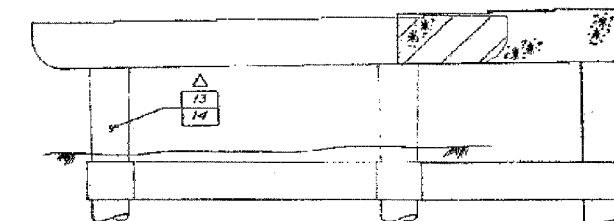
**PIER A22**  
(Looking North)



**PIER A23**  
(Looking North)



**PIER A24**  
(Looking North)



**PIER A25**  
(Looking North)

**LEGEND**

**INITIAL CONSTRUCTION**

- EXISTING PIER
- ADVANCE WORK
- SUBSTRUCTURE WIDENING
- SUBSTRUCTURE REMOVAL

**S.B. MAINLINE RECONSTRUCTION**

- PIER REMOVAL
- PIER REPLACEMENT
- PIER REHABILITATION (SEE NOTE "A")

**N.B. MAINLINE RECONSTRUCTION**

- PIER REMOVAL
- PIER REPLACEMENT
- PIER REHABILITATION (SEE NOTE "A")

**NOTE "A"**

- INDICATES TYPE OF REPAIR (FOR DETAILS SEE SHT. PR. 1)
- INDICATES AREA OF DISTRESS (EXPRESSED IN SQ. FT. OR LAM. FT.)

SHEET 0118 OF 120

REVISIONS	
Name	Date

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 80/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
SUBSTRUCTURE WIDENING REHABILITATION & REPLACEMENT  
STRUCTURE 016-1112  
PIERS A-21 THRU A-25  
Scale: NONE  
Date: AUGUST, 1987  
Drawn By: SAF  
Checked By: RJJ  
EMVIRODYNE ENGINEERS INC.  
Chicago, Illinois

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

FOR INFORMATION ONLY

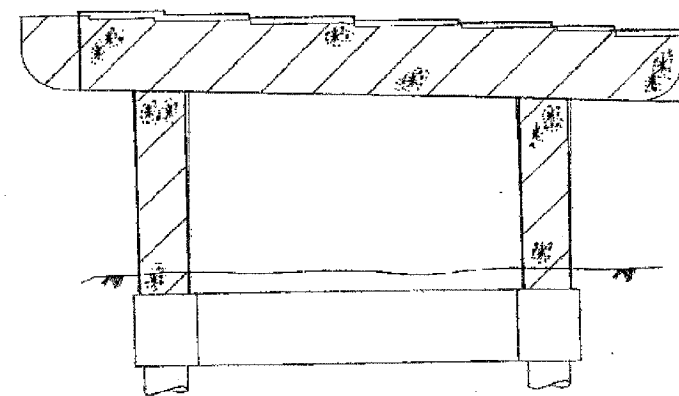
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com



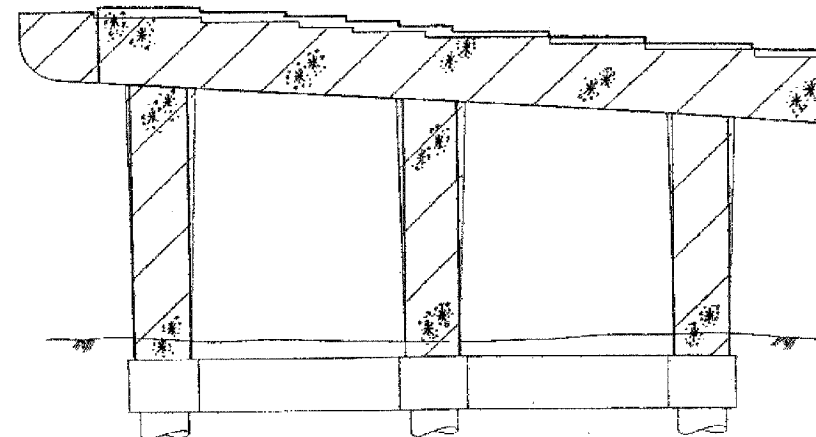
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	180
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
60B07				

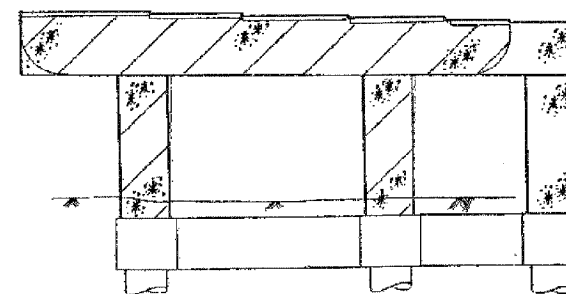
FED. ROAD DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
60B07	R	COOK	120	119
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
#1985-082 R				



**PIER B13**  
(Looking North)



**PIER B12**  
(Looking North)



**PIER B14**  
(Looking North)

**LEGEND**

**INITIAL CONSTRUCTION**

EXISTING PIER

**ADVANCE WORK**

SUBSTRUCTURE WIDENING

SUBSTRUCTURE REMOVAL

**S.B. MAINLINE RECONSTRUCTION**

PIER REMOVAL

PIER REPLACEMENT

PIER REHABILITATION (SEE NOTE "A")

**N.B. MAINLINE RECONSTRUCTION**

PIER REMOVAL

PIER REPLACEMENT

PIER REHABILITATION (SEE NOTE "A")

**NOTE "A"**

INDICATES TYPE OF REPAIR (FOR DETAILS SEE SHEET PR 11)

INDICATES AREA OF DISTRESS (EXPRESSED IN SQ. FT. OR LBS. FT.)

SHEET D119 OF 120

**REVISIONS**

Name	Date

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 085-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
SUBSTRUCTURE WIDENING, REHABILITATION & REPLACEMENT  
STRUCTURE 016-112  
PIERS B-12, B-13 & B-14  
Scale: NONE  
Date: AUGUST, 1987  
Drawn By: SAF  
Checked By: RJ  
ENVIRODYNE ENGINEERS, INC.  
Chicago, Illinois

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1112  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

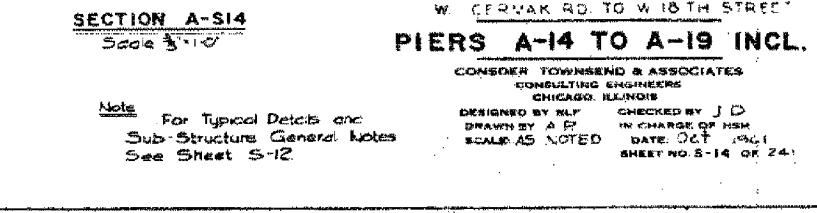
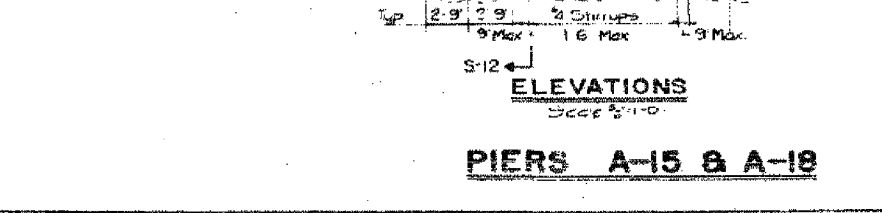
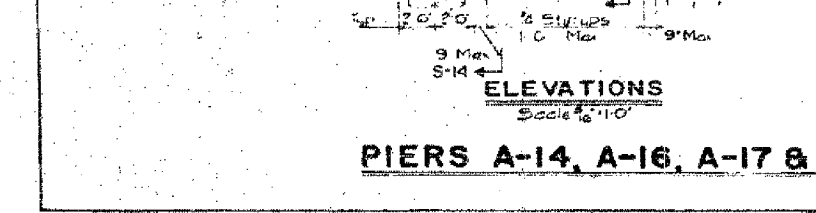
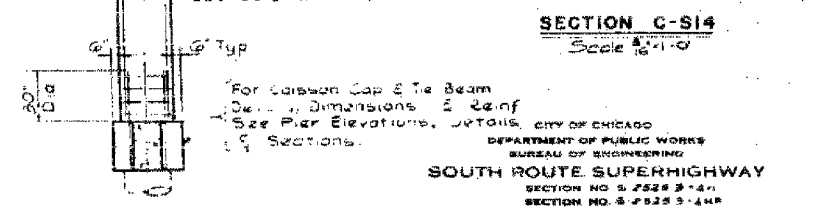
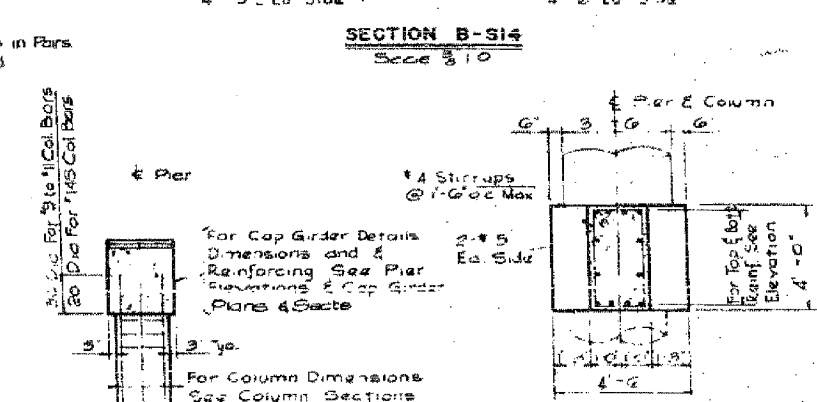
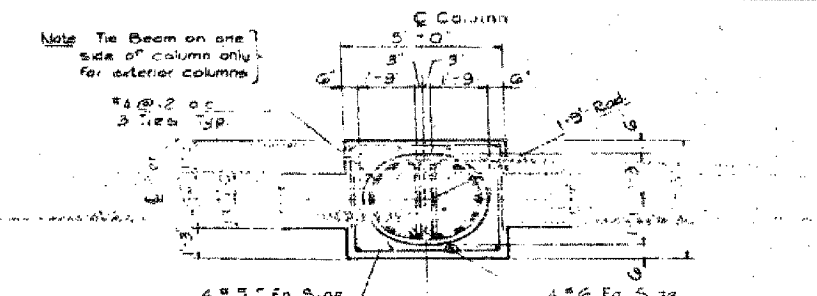
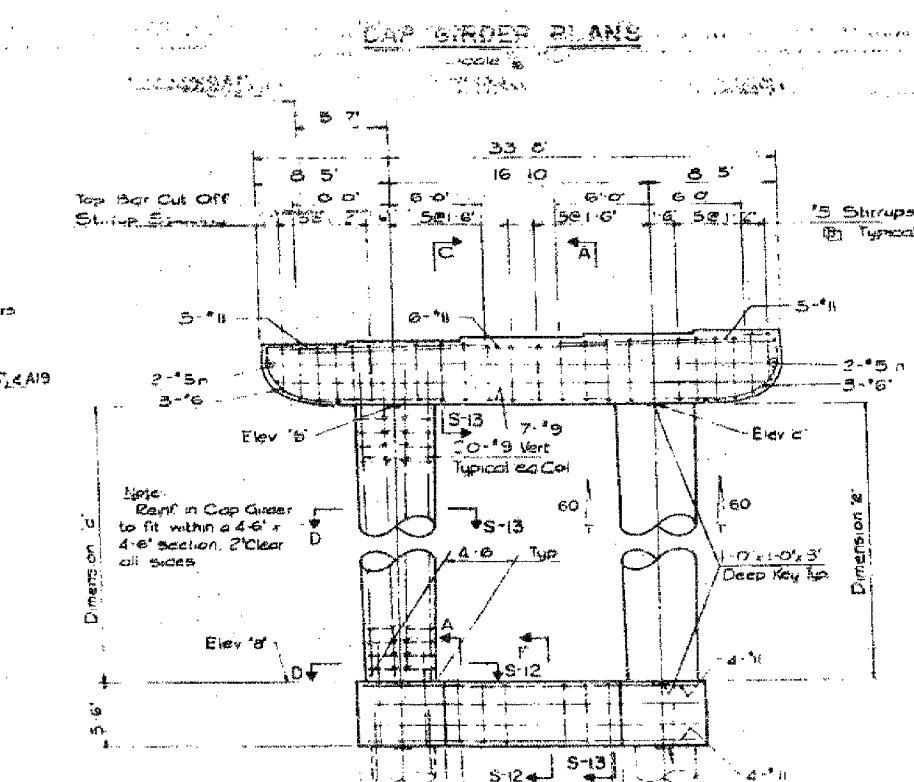
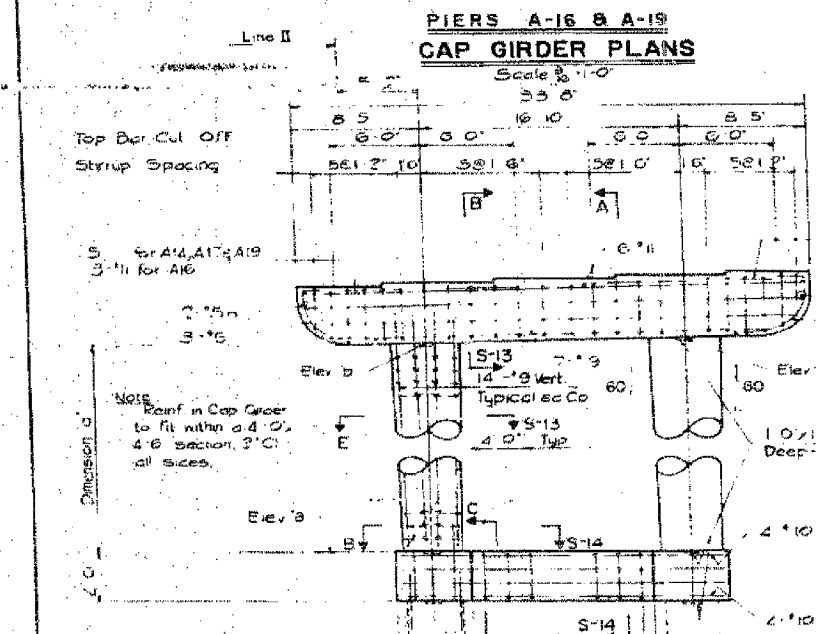
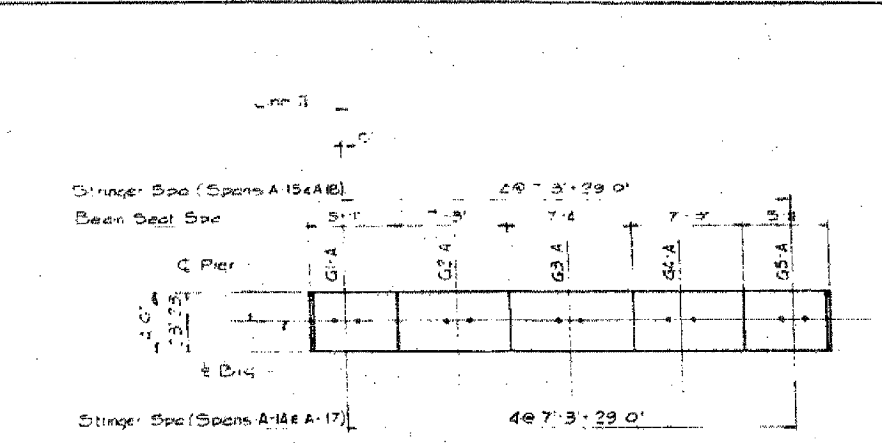
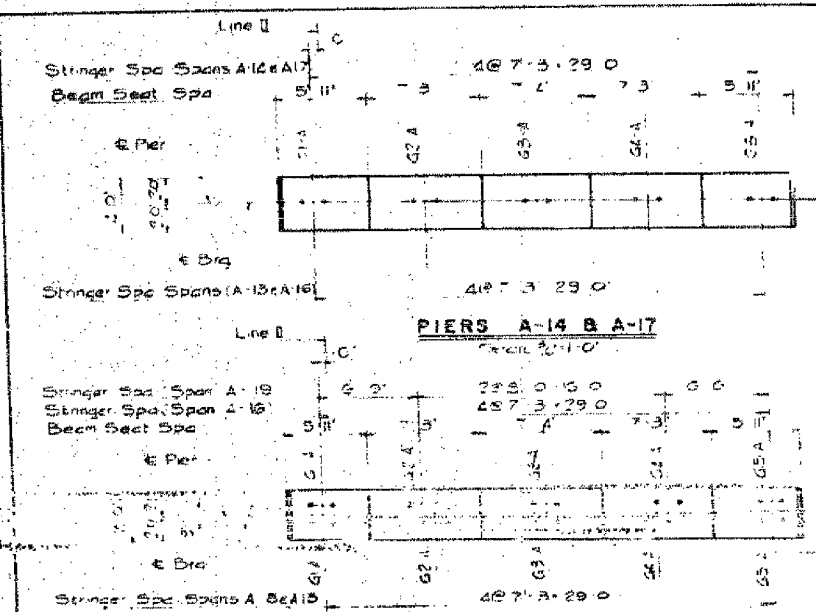
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CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 84	2005-086 I	COOK	228	181
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

PIER No.	Elev. A	Elev. D	Elev. F	Elev. G	Elev. H	BEAM ELEVATIONS				
						G1-A	G2-A	G3-A	G4-A	G5-A
A14	110.00	31.52	31.71	21.62	21.82	36.06	36.2	36.19	36.26	36.34
A15	100.00	30.73	30.78	20.58	20.92	34.95	35.07	35.22	35.36	35.51
A16	100.00	28.45	28.80	18.53	18.93	32.99	33.10	33.25	33.39	33.53
A17	100.00	26.44	26.80	16.5	16.93	30.96	31.08	31.23	31.38	31.53
A18	100.00	25.45	25.83	15.52	15.10	30.01	30.13	30.28	30.42	30.57
A19	100.00	23.91	24.41	13.103	14.43	28.51	28.67	28.84	29.01	29.14



CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
 SOUTH ROUTE SUPERHIGHWAY  
 SECTION NO. 5-2223-41  
 SECTION NO. 5-2223-41A  
 W. CERVAK RD. TO W 18TH STREET  
**PIERS A-14 TO A-19 INCL.**  
 CONSIDER TOWNSEND & ASSOCIATES  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS  
 DESIGNED BY RLF IN CHARGE OF ISS  
 DRAWN BY A.P. DATE: 02/19/01  
 SCALE AS NOTED SHEET NO. 5-14 OF 24

Note: For Typical Details and Sub-Structures General Notes See Sheet 5-12.

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

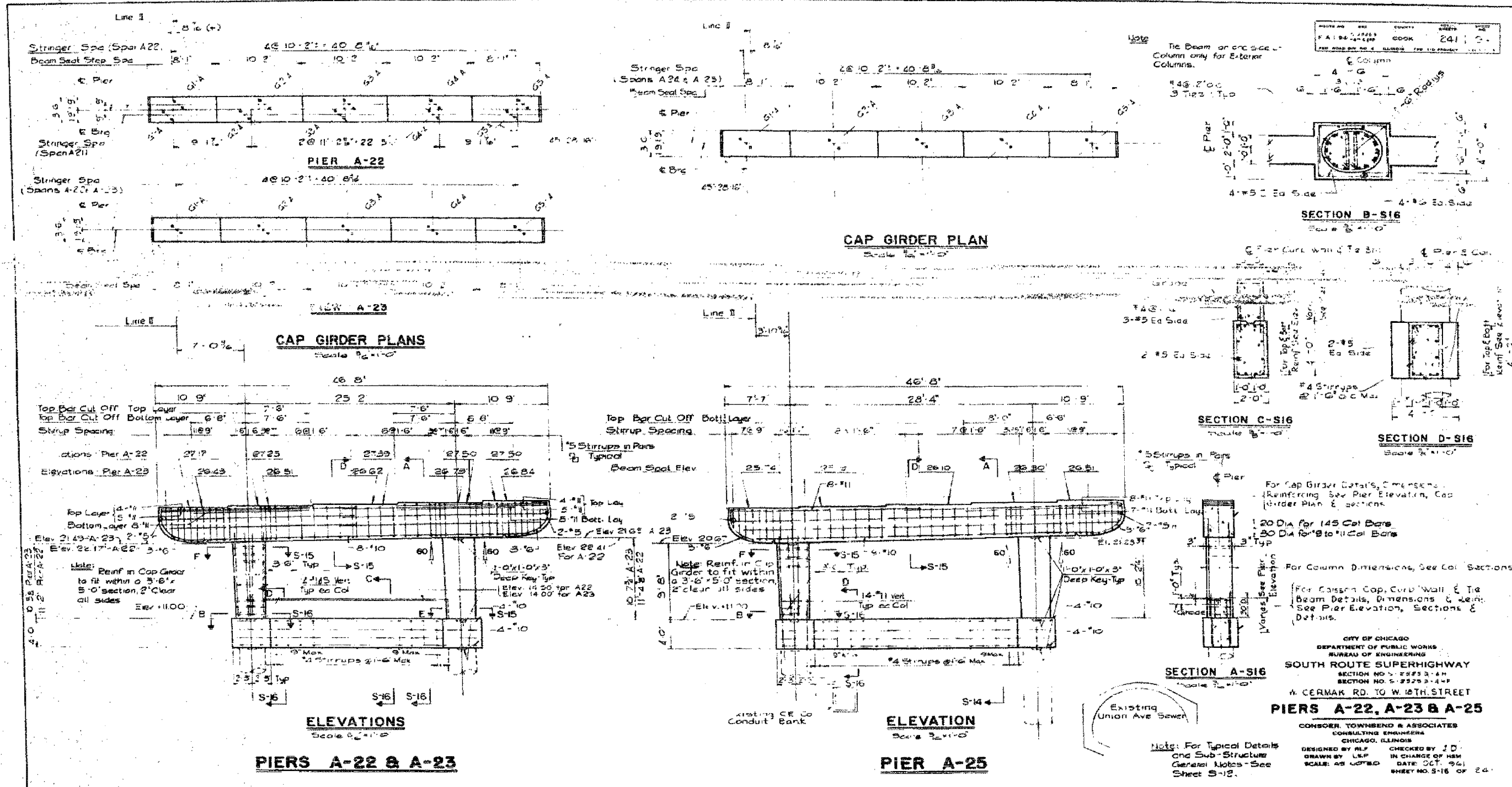
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1112  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
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5/24/2007 9:06:25 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	182
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07



CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
 SOUTH ROUTE SUPERHIGHWAY  
 SECTION NO. 5-2523-4-4  
 SECTION NO. 5-2523-4-4  
 W. CERMAR RD. TO W. 118TH STREET  
**PIERS A-22, A-23 & A-25**  
 CONSOR. TOWNBEND & ASSOCIATES  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS  
 DESIGNED BY RLF IN CHARGE OF HEM  
 DRAWN BY LRP  
 SCALE: AS NOTED  
 CHECKED BY J.D.  
 DATE OCT. 1961  
 SHEET NO. S-18 OF 24

REVISIONS	
NAME	DATE

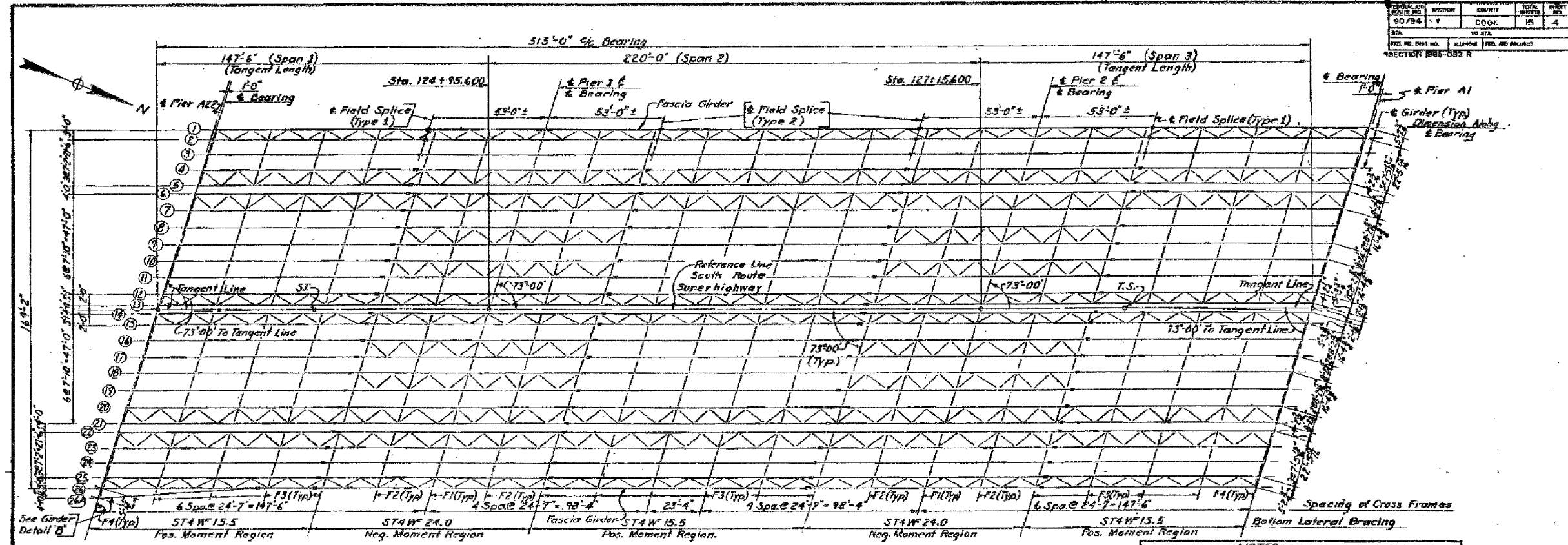
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1112  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
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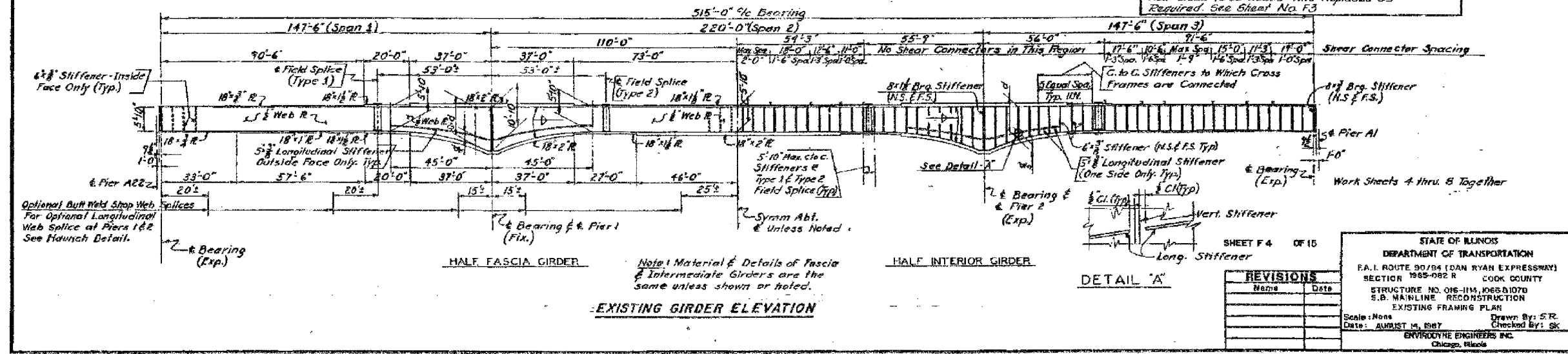
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	183
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
60B07				



Note: There shall be no Cross Frames between Girders 5 & 6, 13 & 14, 21 & 22.

**EXISTING FRAMING PLAN**

**NOTES**  
 This Sheet is Furnished For Reference Only.  
 No New Steel Plate Girders or Crossframes are Req'd.  
 New Steels to be Added And Replaced as Required See Sheet No. F3



**EXISTING GIRDER ELEVATION**

REVISIONS	
Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-082 R COOK COUNTY  
 STRUCTURE NO. 016-114, 1065-D1070  
 S.B. MAINLINE RECONSTRUCTION  
 EXISTING FRAMING PLAN  
 Scale: None  
 Date: AUGUST 14, 1987  
 Drawn By: S.R.  
 Checked By: SK  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

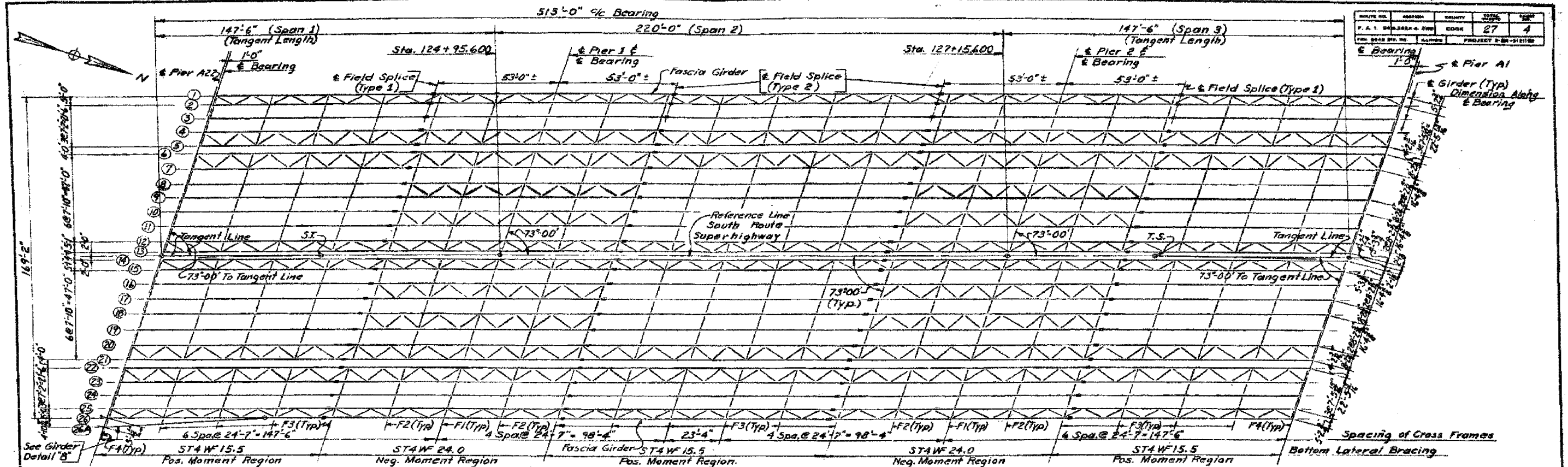
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 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
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REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) DAN RYAN ELEVATED BRIDGE BEARING REPLACEMENT & STEEL REPAIR EXISTING PLAN INFORMATION SN 016-1114, SN 016-1067, SN 016-1070 SCALE: NTS DATE: 5/18/2007
NAME	DATE	
		DRAWN BY: LAM CHECKED BY: BLU

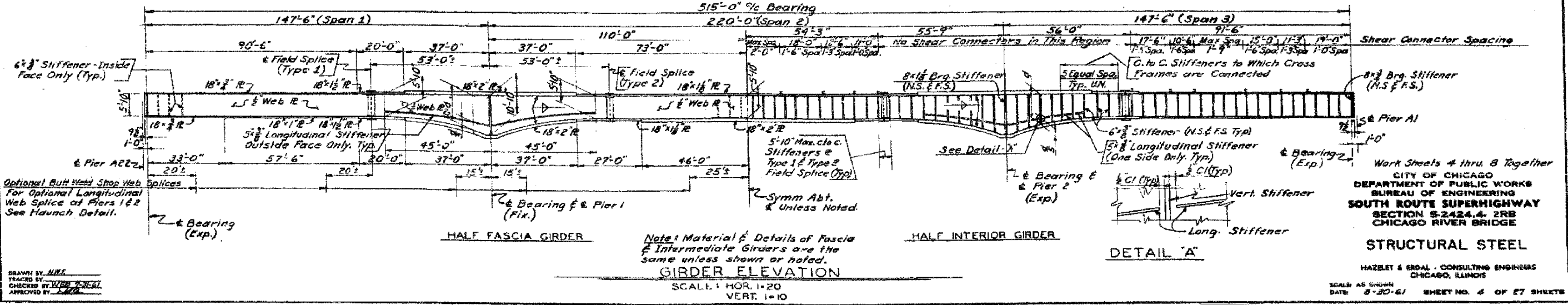
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	184
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				



**FRAMING PLAN**  
SCALE: 1"=20'

Note: There shall be no Cross Frames between Girders 5 & 6, 13 & 14, 21 & 22.



**GIRDER ELEVATION**  
SCALE: HOR. 1"=20' VERT. 1"=10'

**DETAIL 'A'**

**STRUCTURAL STEEL**  
HAZLET & BRAD - CONSULTING ENGINEERS  
CHICAGO, ILLINOIS  
SCALE AS SHOWN  
DATE: 8-30-61  
SHEET NO. 4 OF 27 SHEETS

Work Sheets 4 thru 8 Together  
CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING  
SOUTH ROUTE SUPERHIGHWAY  
SECTION 5-2424.4 2RB  
CHICAGO RIVER BRIDGE

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1114, SN 016-1067, SN 016-1070  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

FOR INFORMATION ONLY

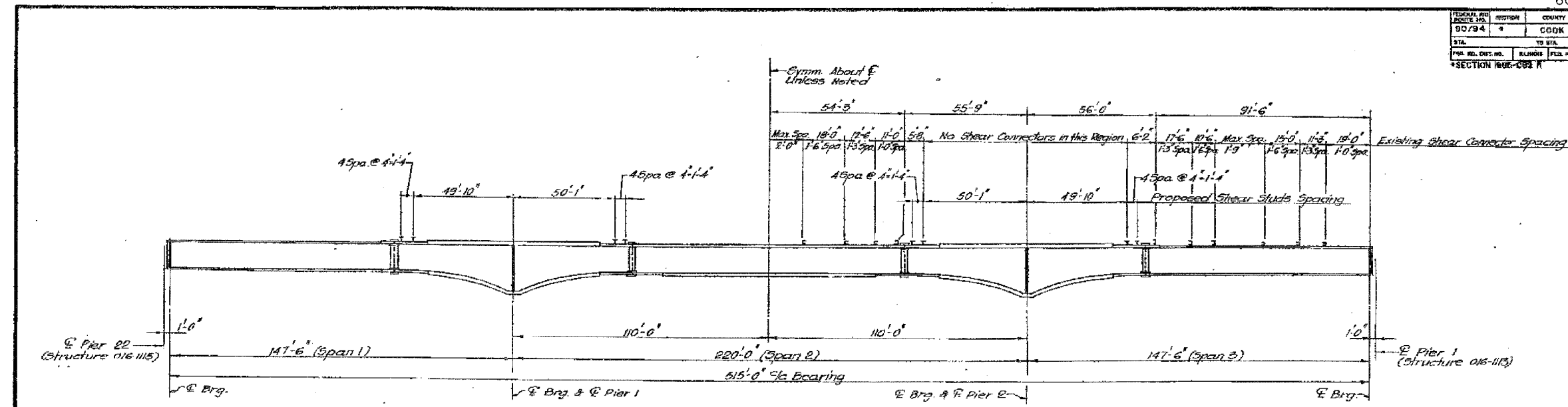
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5/24/2007 5:46:34 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	185
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

60B07

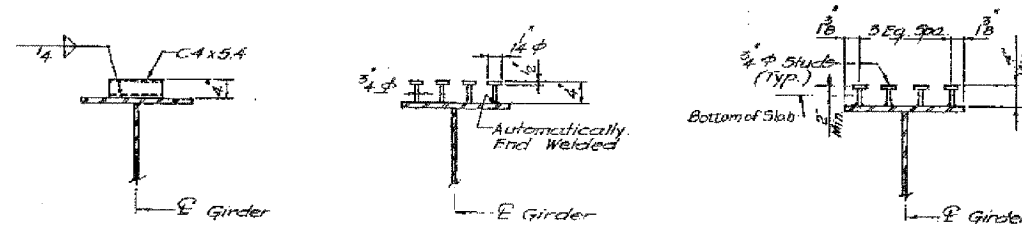
FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	4	COOK	15	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



**EXISTING GIRDER ELEVATION  
(SHEAR STUDS PLACEMENT)**

**SHEAR CONNECTORS NOTES:**

Damaged Existing Shear Connectors during slab removal operations are to be replaced by  $\frac{3}{4}$ "  $\phi$  Studs (See Proposed Shear Studs Detail). Rows of Replacement Studs are to be located a Minimum of 3" away from the rows of the existing damaged Existing Connectors.



**CHANNEL  
EXISTING SHEAR CONNECTORS DETAILS**

**STUD (ALTERNATE)  
PROPOSED SHEAR STUDS DETAIL  
(FOR NEW ADDITIONAL & REPLACEMENT STUDS)**

TOTAL NUMBERS OF  $\frac{3}{4}$ "  $\phi$   
SHEAR CONNECTORS = 7808  
(Assuming Complete Replacement)

SHEET F5 OF 15

REVISIONS	
Name	Date

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R COOK COUNTY  
STRUCTURE NO. 016-1114, 1066 & 1070  
S.B. MAINLINE RECONSTRUCTION  
SHEAR CONNECTORS DETAILS  
Scale: NONE Drawn By: J.C.  
Date: AUGUST 14, 1987 Checked By: SK  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1114, SN 016-1067, SN 016-1070  
SCALE: NTS DRAWN BY: LAM  
DATE: 5/18/2007 CHECKED BY: BLU

FOR INFORMATION ONLY

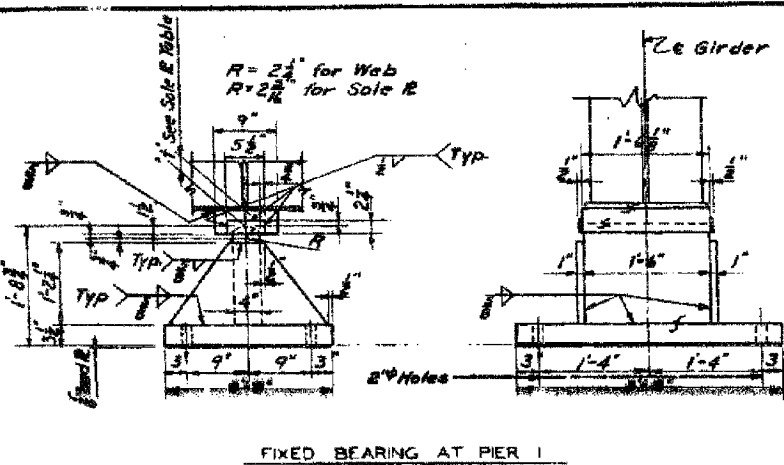
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com



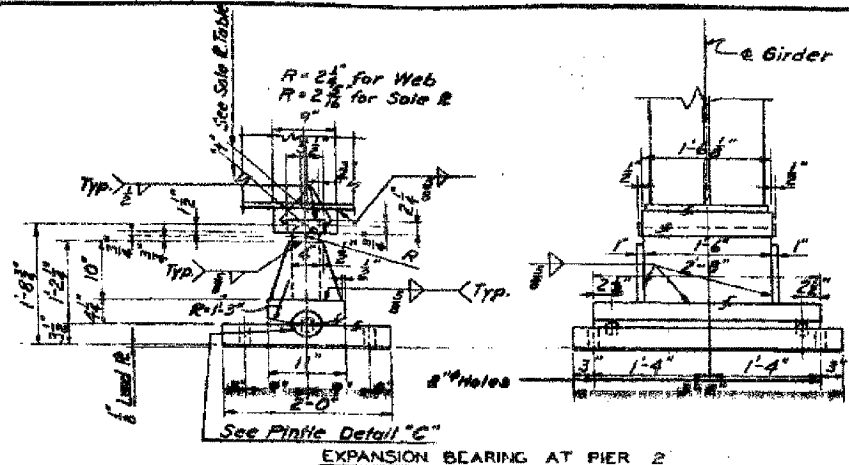
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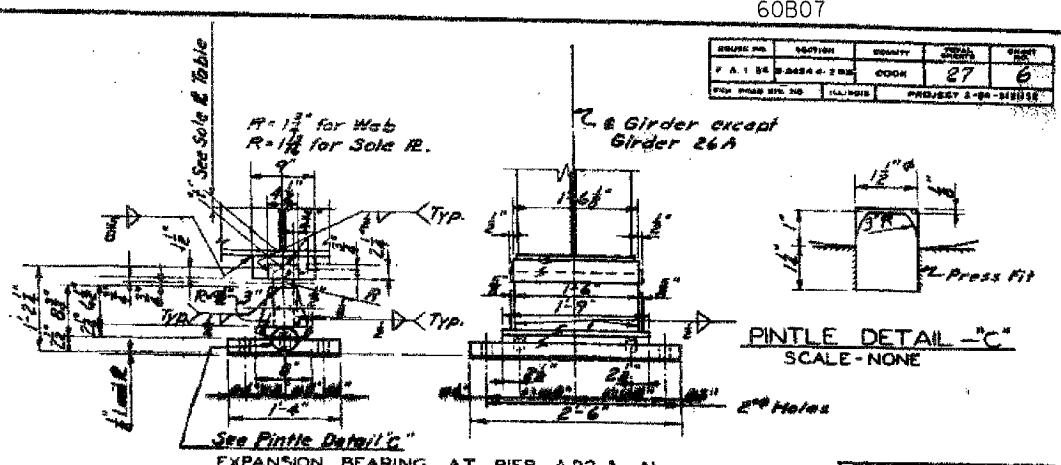
DESIGN NO.	SECTION	COUNT	DATE	BY
F.A.I. 84-2RB	2RB	27	07	6
PROJECT NO.	PROJECT 2-04-2005			



FIXED BEARING AT PIER 1

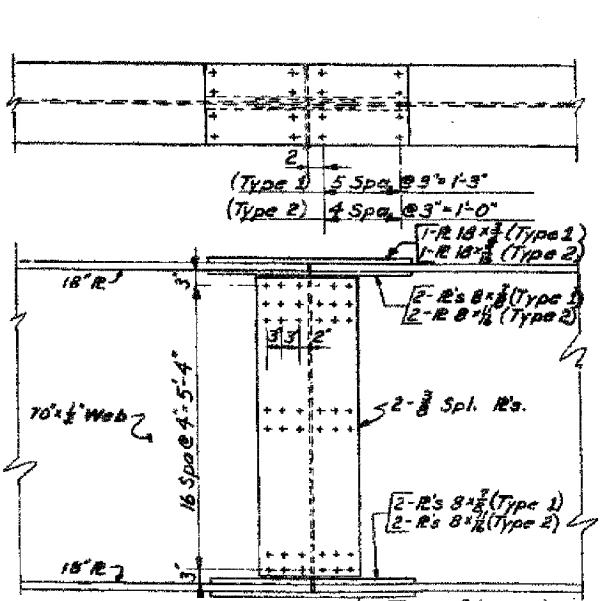


EXPANSION BEARING AT PIER 2

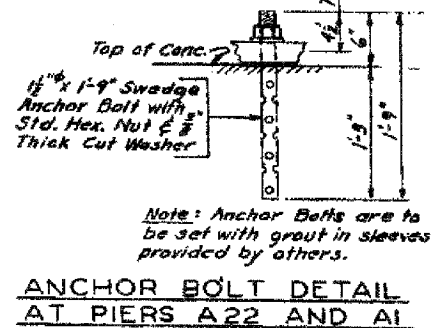


EXPANSION BEARING AT PIER A22 & A1

**BEARING DETAILS**  
SCALE: 1 1/2\"/>



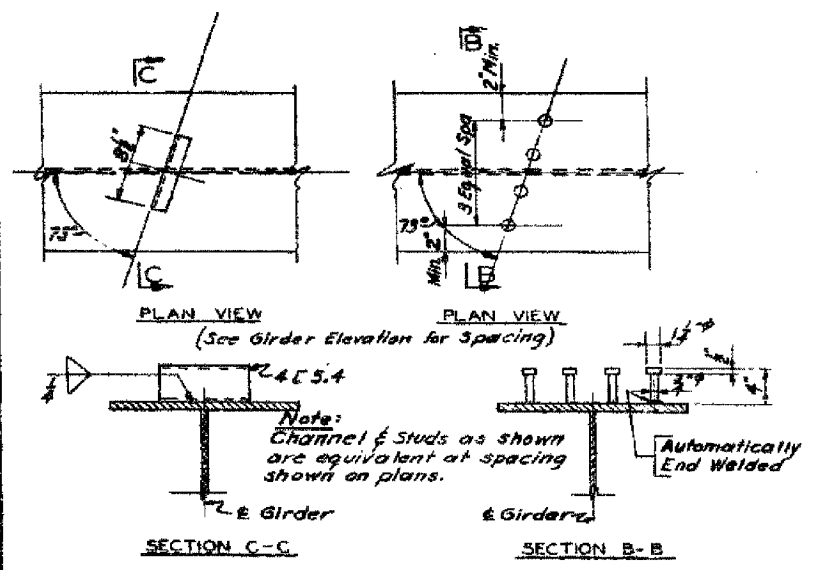
ANCHOR BOLT SPACING AT PIERS A22 AND A1



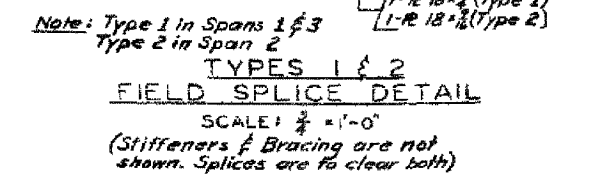
ANCHOR BOLT DETAIL AT PIERS A22 AND A1

**SOLE PLATE TABLE**

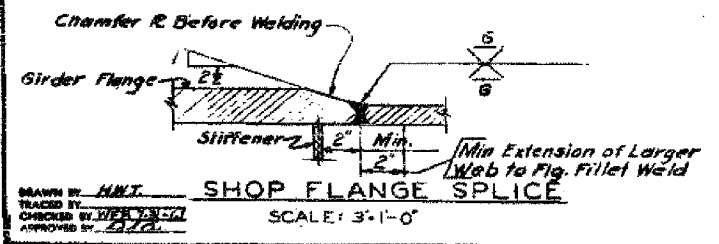
Str	Pier A22	Pier 1	Pier E	Pier A1
1	1 1/2	4 1/2	3 1/2	2 1/2
2	1 1/2	3 1/2	3 1/2	2
3	1 1/2	2 1/2	2 1/2	1 1/2
4	1 1/2	4 1/2	4 1/2	2
5	1 1/2	3 1/2	3 1/2	1 1/2
6	2 1/2	3 1/2	3 1/2	1 1/2
7	1 1/2	2 1/2	2 1/2	1 1/2
8	1 1/2	4 1/2	4 1/2	1 1/2
9	1 1/2	3 1/2	3 1/2	1 1/2
10	1 1/2	2 1/2	2 1/2	1 1/2
11	1 1/2	4 1/2	4 1/2	1 1/2
12	1 1/2	3 1/2	3 1/2	1 1/2
13	1 1/2	2 1/2	2 1/2	1 1/2
14	1 1/2	3 1/2	3 1/2	1 1/2
15	1 1/2	2 1/2	2 1/2	1 1/2
16	1 1/2	3 1/2	3 1/2	1 1/2
17	1 1/2	2 1/2	2 1/2	1 1/2
18	1 1/2	3 1/2	3 1/2	1 1/2
19	1 1/2	4 1/2	4 1/2	1 1/2
20	1 1/2	2 1/2	2 1/2	1 1/2
21	1 1/2	4 1/2	4 1/2	1 1/2
22	1 1/2	4 1/2	3 1/2	1 1/2
23	1 1/2	2 1/2	2 1/2	1 1/2
24	1 1/2	5 1/2	3 1/2	1 1/2
25	1 1/2	4 1/2	3 1/2	1 1/2
26	1 1/2	2 1/2	2 1/2	1 1/2
26A	1 1/2	-	-	-



**SHEAR CONNECTOR DETAILS**  
SCALE: 1 1/2\"/>



**TYPES 1 & 2 FIELD SPLICE DETAIL**  
SCALE: 1 1/2\"/>



**SHOP FLANGE SPLICE**  
SCALE: 3\"/>

Note: Bearing elevations for Pier A1 shown on contract plans for Section S-2424.3-1H  
 Bearing elevations for Pier A22 shown on contract plans for Section S-2424.3-2H  
 Bearing elevations for Pier 1 & E shown on contract plans for Section S-2424.4-1RB  
 Sole R's are to be beveled if the slope of the girder flange is 1/8\"/>

Work Sheets 4 thru 8 Together  
 CITY OF CHICAGO  
 DEPARTMENT OF PUBLIC WORKS  
 BUREAU OF ENGINEERING  
 SOUTH ROUTE SUPERHIGHWAY  
 SECTION S-2424.4-2RB  
 CHICAGO RIVER BRIDGE

**STRUCTURAL STEEL**  
 HAZLET & EDAL - CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS  
 SCALE AS SHOWN  
 DATE: 8/20/07  
 SHEET NO. 6 OF 27 SHEETS

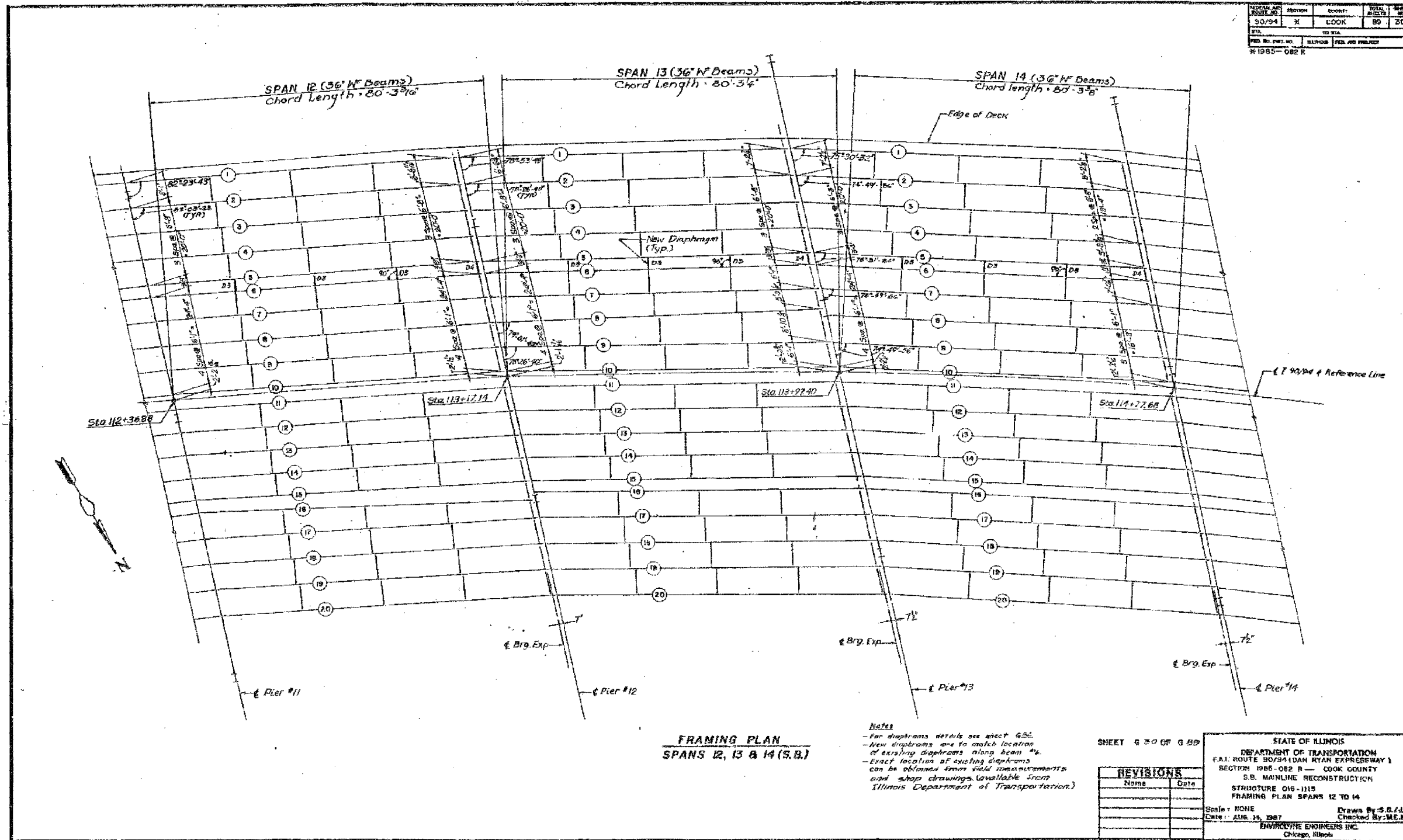
REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1114, SN 016-1067, SN 016-1070  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

FOR INFORMATION ONLY

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 1	COOK	228	187
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
60B07				

FED. ROAD DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1085-082 R	COOK	CO	228	187



**FRAMING PLAN**  
SPANS 12, 13 & 14 (S.B.)

**Notes**  
 - For diaphragm details see sheet G2C.  
 - New diaphragms are to match location of existing diaphragms along beam #s.  
 - Exact location of existing diaphragms can be obtained from field measurements and shop drawings (available from Illinois Department of Transportation).

SHEET G 30 OF G 80

REVISIONS	
Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 80/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-082 R - COOK COUNTY  
 S.B. MAINLINE RECONSTRUCTION  
 STRUCTURE 016-1115  
 FRAMING PLAN SPANS 12 TO 14  
 Scale: NONE  
 Date: AUG. 14, 1987  
 Drawn By: S.B./J.B.  
 Checked By: M.E.M.  
 HARRISON ENGINEERS INC.  
 Chicago, Illinois

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbadainc.com

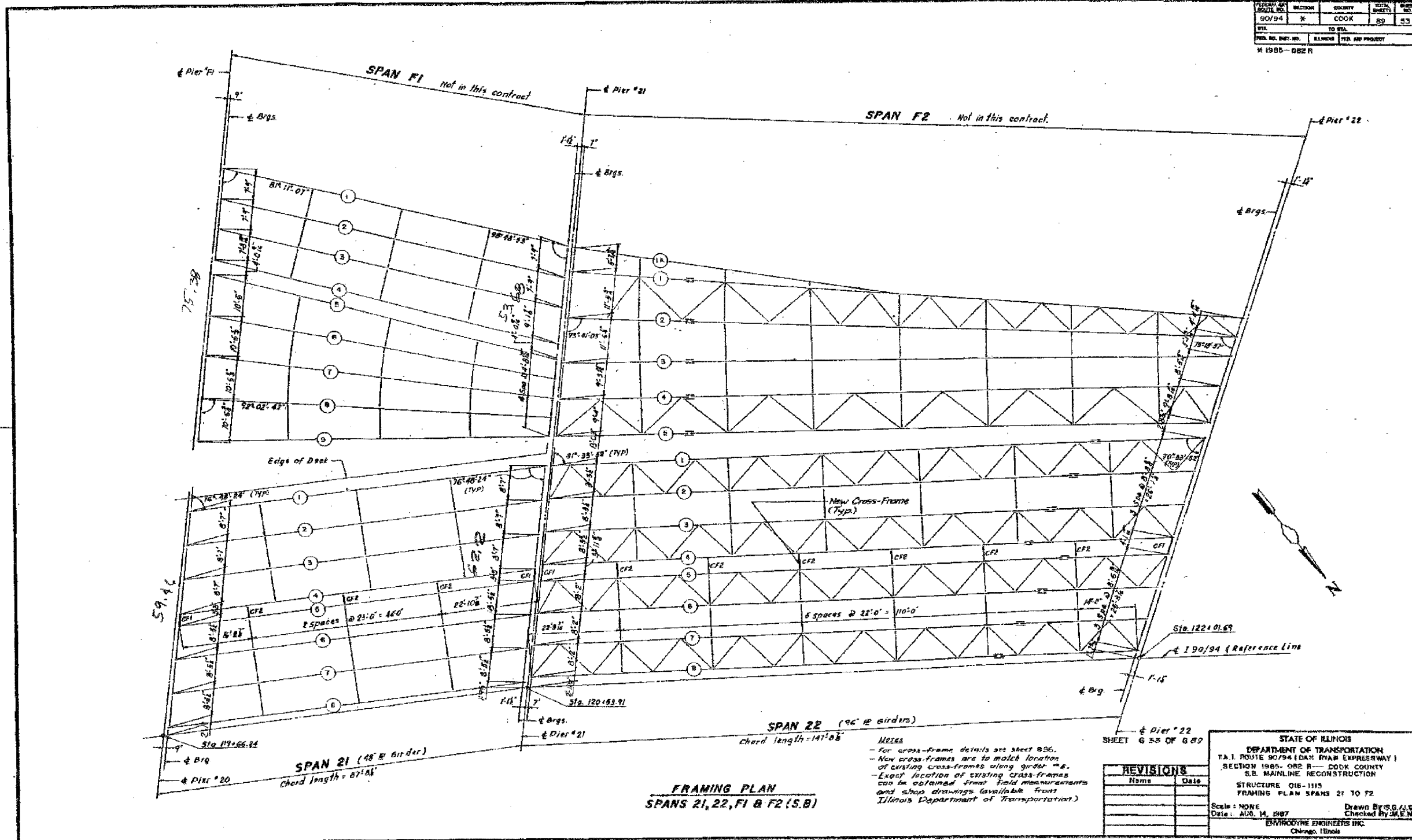
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1115  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

I:\94\90\BRIDGE\21A\SHEET\1560\_21A\_016-1115-EP102.dwg  
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	188
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
60B07				

SECTION NO.	SHEET NO.	COUNTY	TOTAL SHEETS
50/94	89	COOK	93
STA.		TO STA.	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	
M 1985 - 082 R			



**FRAMING PLAN**  
SPANS 21, 22, F1 & F2 (S.B.)

**NOTES**  
 - For cross-frame details see sheet 836.  
 - New cross-frames are to match location of existing cross-frames along girder - e.g.  
 - Exact location of existing cross-frames can be obtained from field measurements and shop drawings (available from Illinois Department of Transportation.)

REVISIONS	
Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-082 R - COOK COUNTY  
 S.B. MAINLINE RECONSTRUCTION  
 STRUCTURE 016-1115  
 FRAMING PLAN SPANS 21 TO F2  
 Scale: NONE  
 Date: AUG. 14, 1997  
 Drawn By: S.G.A.J.C.  
 Checked By: M.E.M.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

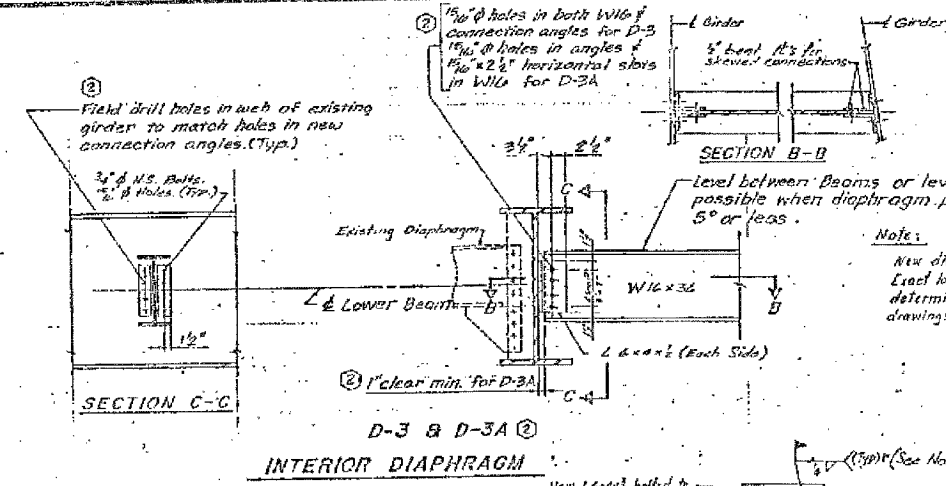
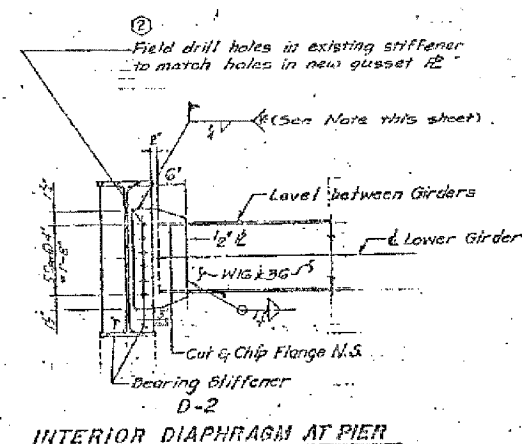
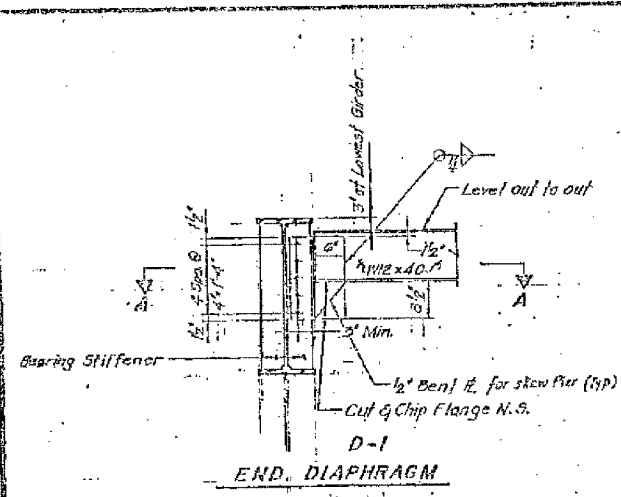
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1115  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

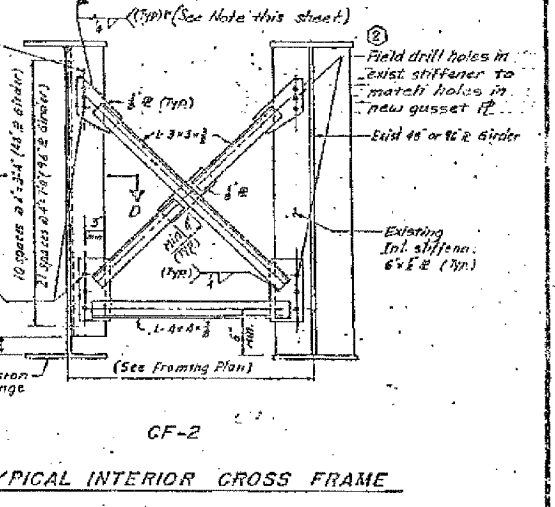
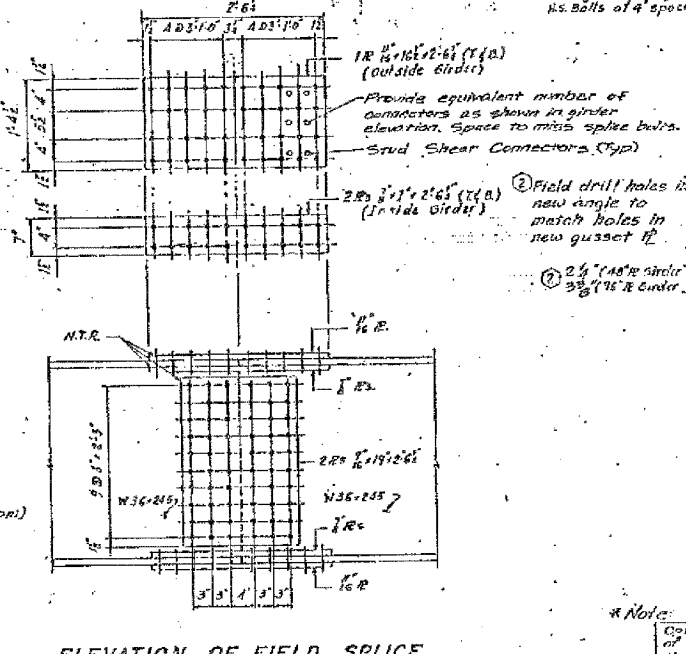
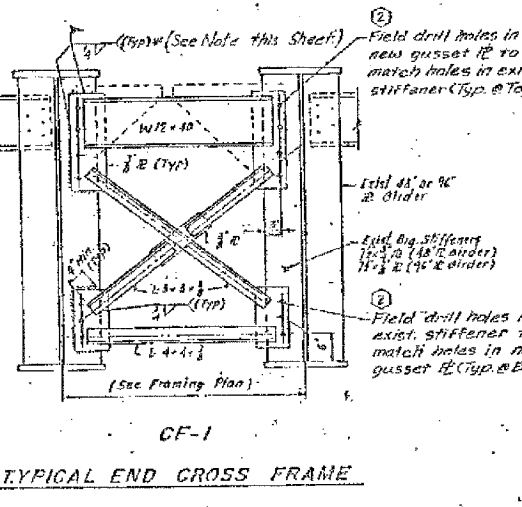
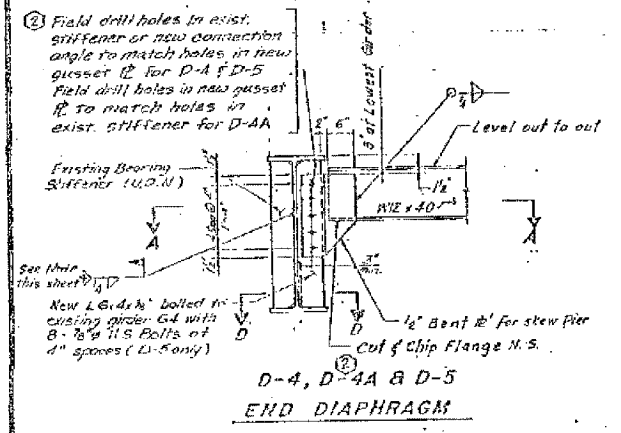
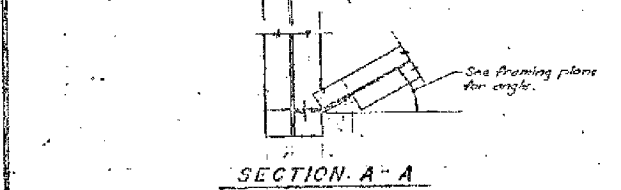
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60B07

PROJECT NO.	SECTION	COUNTY	DATE
2005-086 I	20	COOK	09 26
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		



**Notes:**  
New diaphragm to match existing diaphragm. Exact location of existing diaphragm to be determined in the field or from shop drawings (Available from Illinois Dept of Transportation).



**\*Note:**  
Optional weld may be used in the event that bolting of the connection is not feasible as determined in the field by the engineer. Modification of the gusset plates may be required to provide adequate clearance for welding (Cost Incidental to Erecting Structural Steel).

All materials shown on this sheet furnished under a separate Steel Fabrication Contract (Section 1985-001 F), unless noted otherwise.

**Notes:**  
N.T.R. - Notch Toughness Requirement.  
Reason Dec 7, 87

36  
SHEET 626 OF 689

REVISIONS	NAME	DATE
1	Revision	2-5-89

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1985-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
STRUCTURE 016-1115  
DIAPHRAGM, CROSS FRAME AND  
FIELD SPLICE DETAILS  
Scale: NONE  
Date: APR 14, 1987  
Checked By: M.E.M.  
ENGINEERS INC.  
Chicago, Illinois

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1115  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

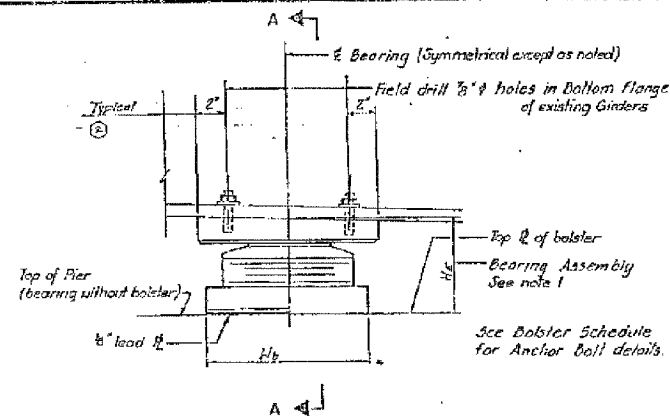
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CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbainc.com

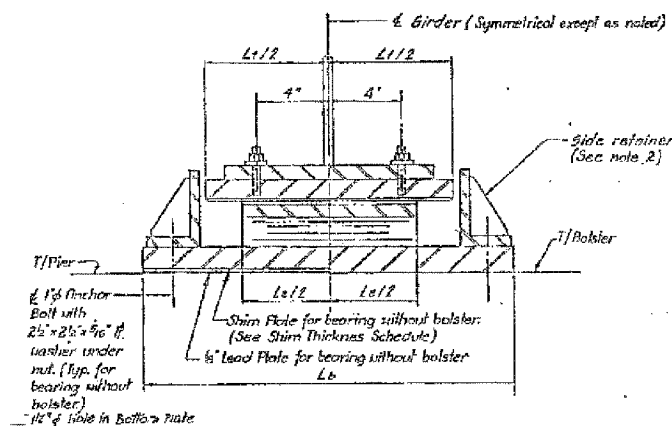
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60B07

FED. ROAD DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	8	COOK	83	38
FED. ROAD DIST. NO.		ILLINOIS		
FED. ROAD DIST. NO.		FED. AID PROJECT		

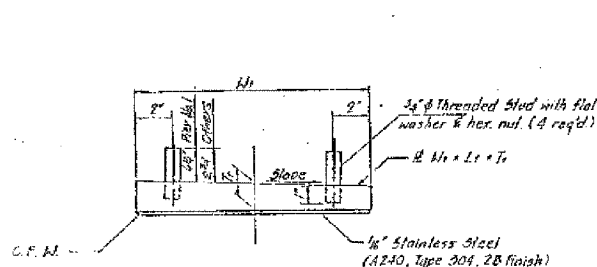


TYPICAL ELEVATION

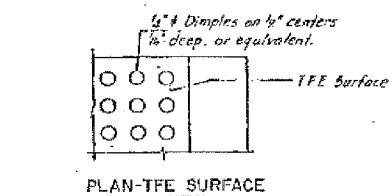


SECTION A-A

TYPE II TFE ELASTOMERIC EXPANSION BEARING



TOP BEARING ASSEMBLY



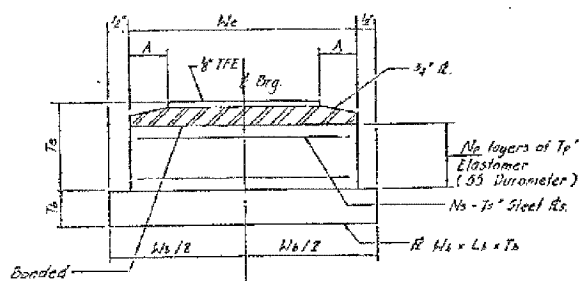
PLAN-TFE SURFACE



SECTION THRU TFE

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 surface.

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



BOTTOM BEARING ASSEMBLY

He	6"	7"	9"	10"	11"	12"	20"
A	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

Notes:

- Height of bearing assembly, He, includes top plate, elastomeric assembly, bottom plate, and 1/2" load plate for bearings without bolster. He does not include shim plate.
- Side retainer details for bearings located on top of pier are shown on this sheet. For bearings requiring a bolster, see bolster details for side retainer details.
- For bearings without bolster, the side retainer shall be fastened as shown after the girder and bearing assembly have been set into their final position.

ALL MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE SUPPLY CONTRACT (SECTION 195-031), UNLESS NOTED OTHERWISE.

SHEET BRGS OF 48

REVISIONS	
Name	Date
(2) Revisited	2-5-88

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
EAL ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 195-082 R - COOK COUNTY  
S.B. MAINLINE RECONSTRUCTION  
BEARINGS - STRUCTURE NOS. 016-115 AND 117  
TYPE II ELASTOMERIC EXPANSION BEARINGS

Scale: None  
Date: AUGUST 14, 1987  
Drawn By: D.C.  
Checked By: S.B.  
ENVIROTYPE ENGINEERS INC.  
Chicago, Illinois

REVISIONS	
NAME	DATE

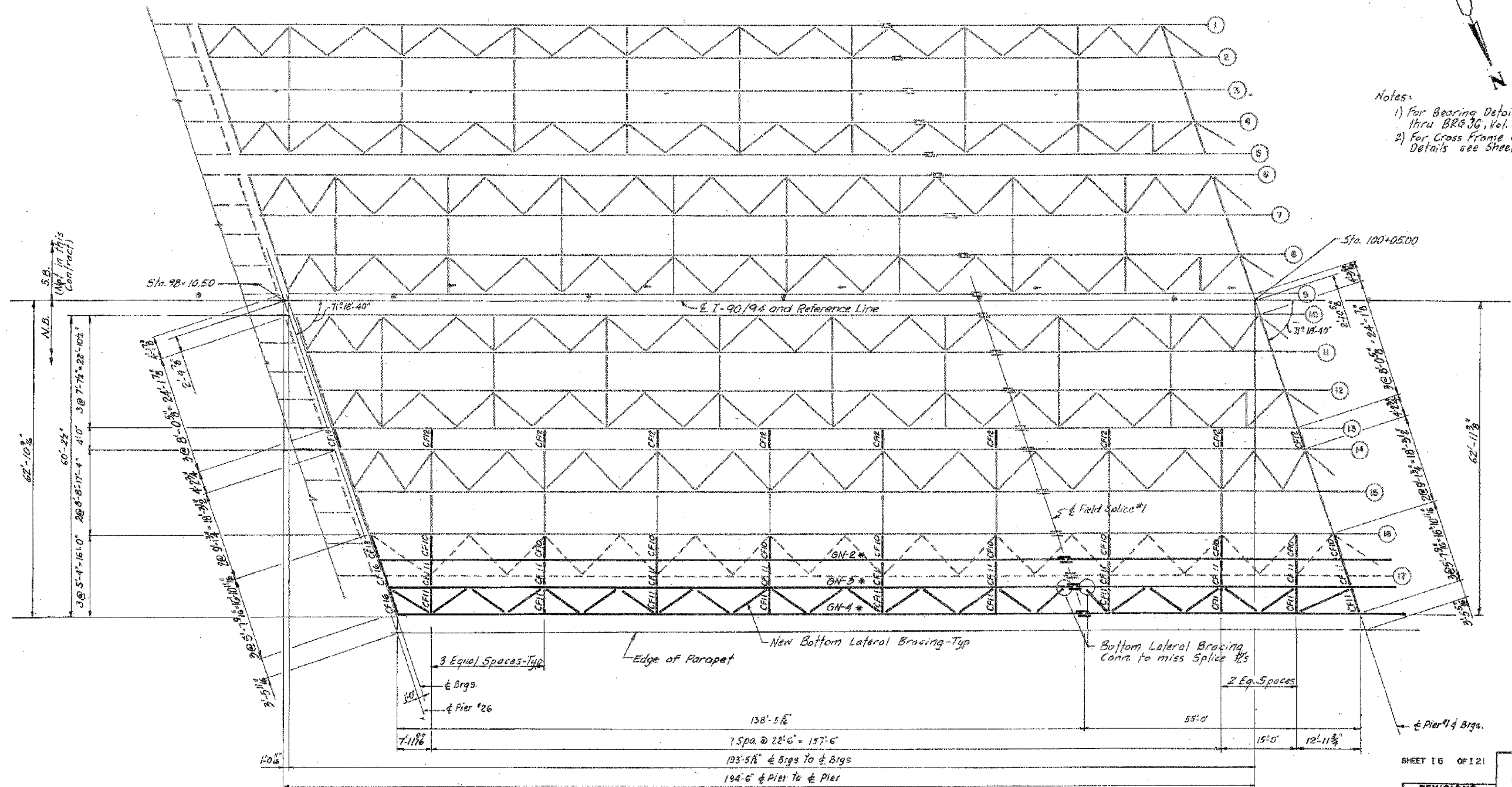
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1115 & SN 016-1117  
SCALE: NTS  
DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

FOR INFORMATION ONLY

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	191
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

- Notes:
- 1) For Bearing Details see Sheets BRG 32 thru BRG 36, Vol. #13
  - 2) For Cross Frame and Bottom Lateral Bracing Details see Sheet 11.



ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1988-003F), UNLESS NOTED OTHERWISE.

**PLAN - SPAN - 1 (N.B.)**

**LEGEND**  
 \* To be removed (N.B. only)  
 \* New Plate girder (for size & length See Sheet 19)

SHEET 16 OF 121

REVISIONS	
Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 985-078-COOK COUNTY  
 N.B. MAINLINE RECONSTRUCTION  
 STRUCTURE DIS-116  
 FRAMING PLAN SPAN 1  
 Date: AUG 1999  
 Drawn By: AVP  
 Checked By: JAW  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1116  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

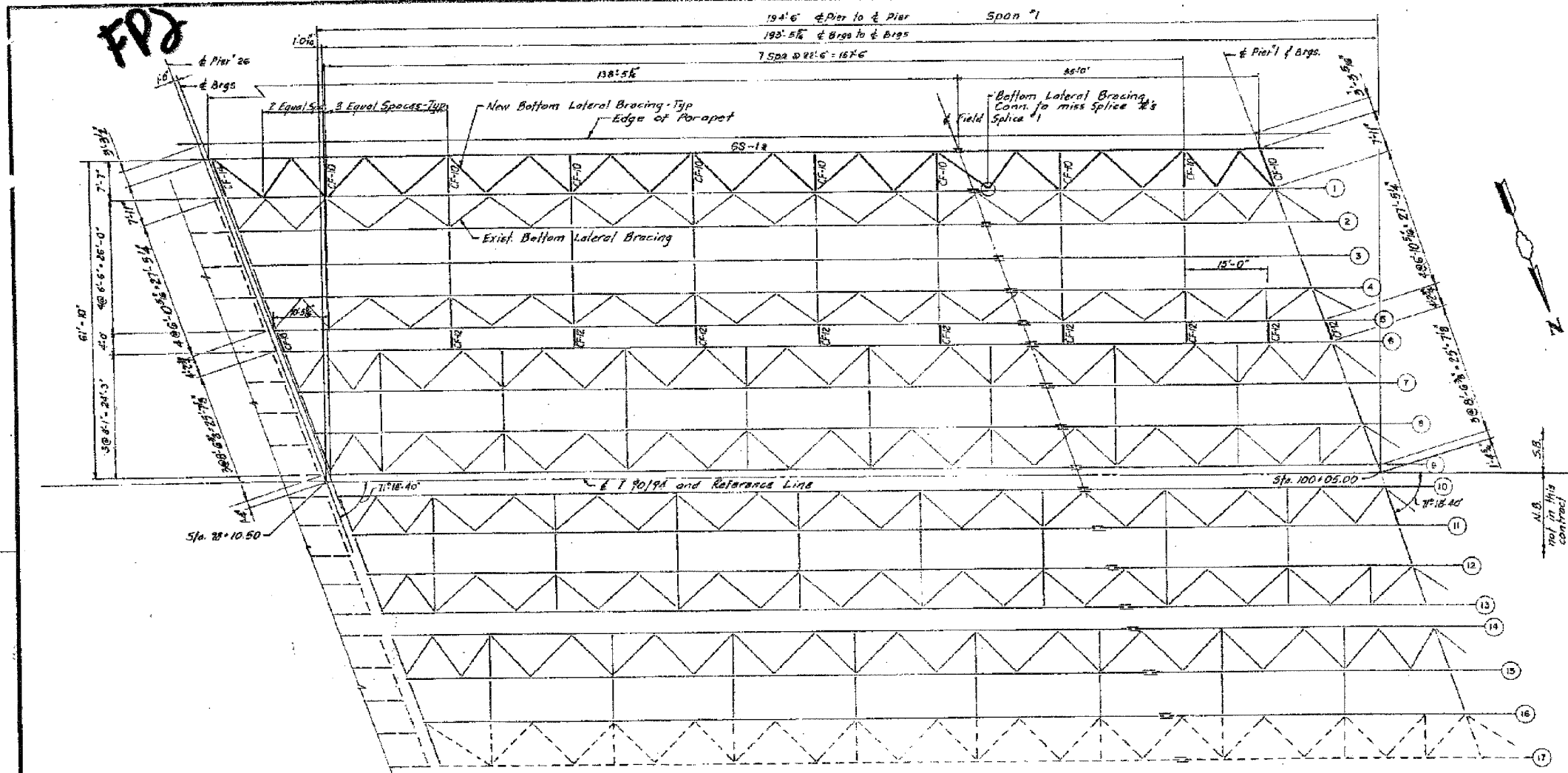
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	192
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

60B07

FEDERAL AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	1	COOK	20	8
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
# 1985 - 082 R				



- Notes:
- 1) For Bearing Details, see Sheets BRG 34 thru BRG 40, Vol. #3
  - 2) For Cross Frame and Bottom Lateral Bracing Details see Sheet 110

LEGEND  
 \* new plate girder (for size and length see Sheet I-8)

PLAN - SPAN 1 (S.B)

SHEET 15 OF 120

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-086R - COOK COUNTY  
 S.B. MAINLINE RECONSTRUCTION  
 STRUCTURE 018-1116  
 FRAMING PLAN SPAN 1  
 Scale: NONE  
 Date: AUG. 14, 1987  
 Drawn By: A.V.P.  
 Checked By: A.W.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	
Name	Date

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1985-081F), UNLESS NOTED OTHERWISE.

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

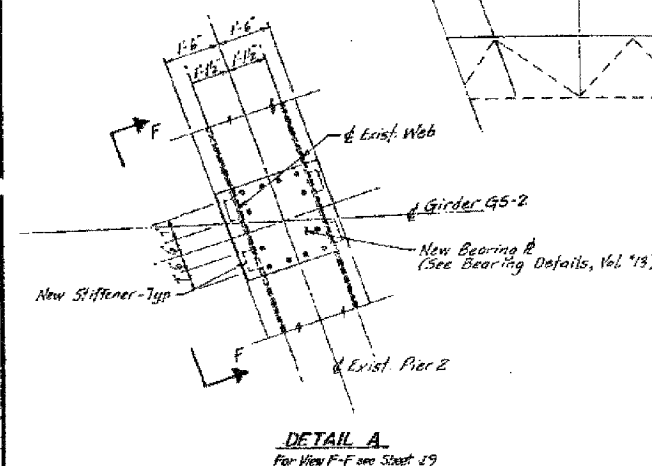
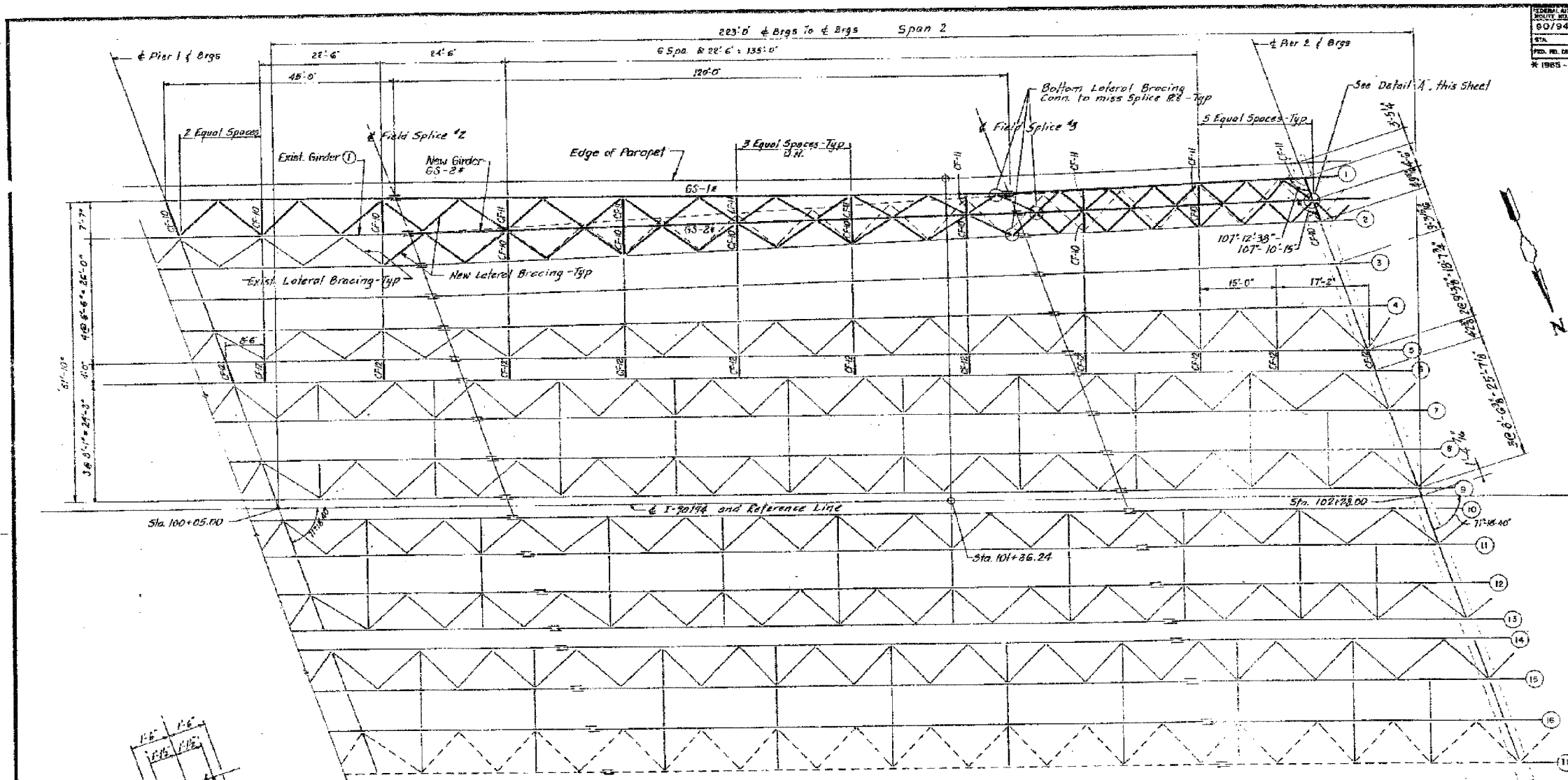
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1116  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2005-086 I	COOK	228	193
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
60B07				

FEDERAL AID PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	1	COOK	20	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
* 1985 - DB2 R				



**LEGEND**  
 - - - - - to be removed (S.B. only)  
 \* new plate girder (For size and length see Sheet I-8)

PLAN-SPAN 2 (S.B.)

SHEET 6 OF 20

REVISIONS	
Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 865-DB2R - COOK COUNTY  
 S.B. MAINLINE RECONSTRUCTION  
 STRUCTURE 016-1116  
 FRAMING PLAN SPAN 2  
 Scale: NONE  
 Date: AUG. 14, 1987  
 Drawn By: A.V.P.  
 Checked By: A.W.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1805-DB1F). UNLESS NOTED OTHERWISE.

REVISIONS	
NAME	DATE

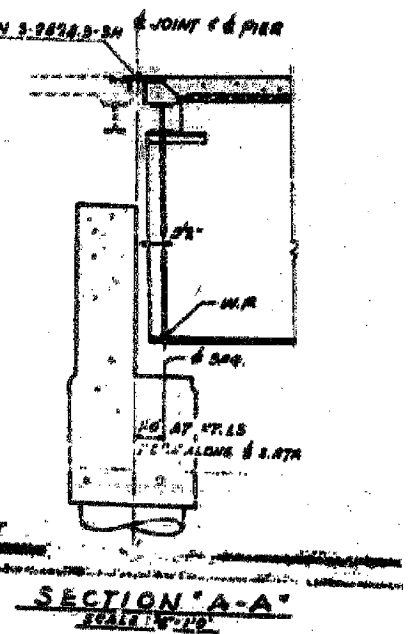
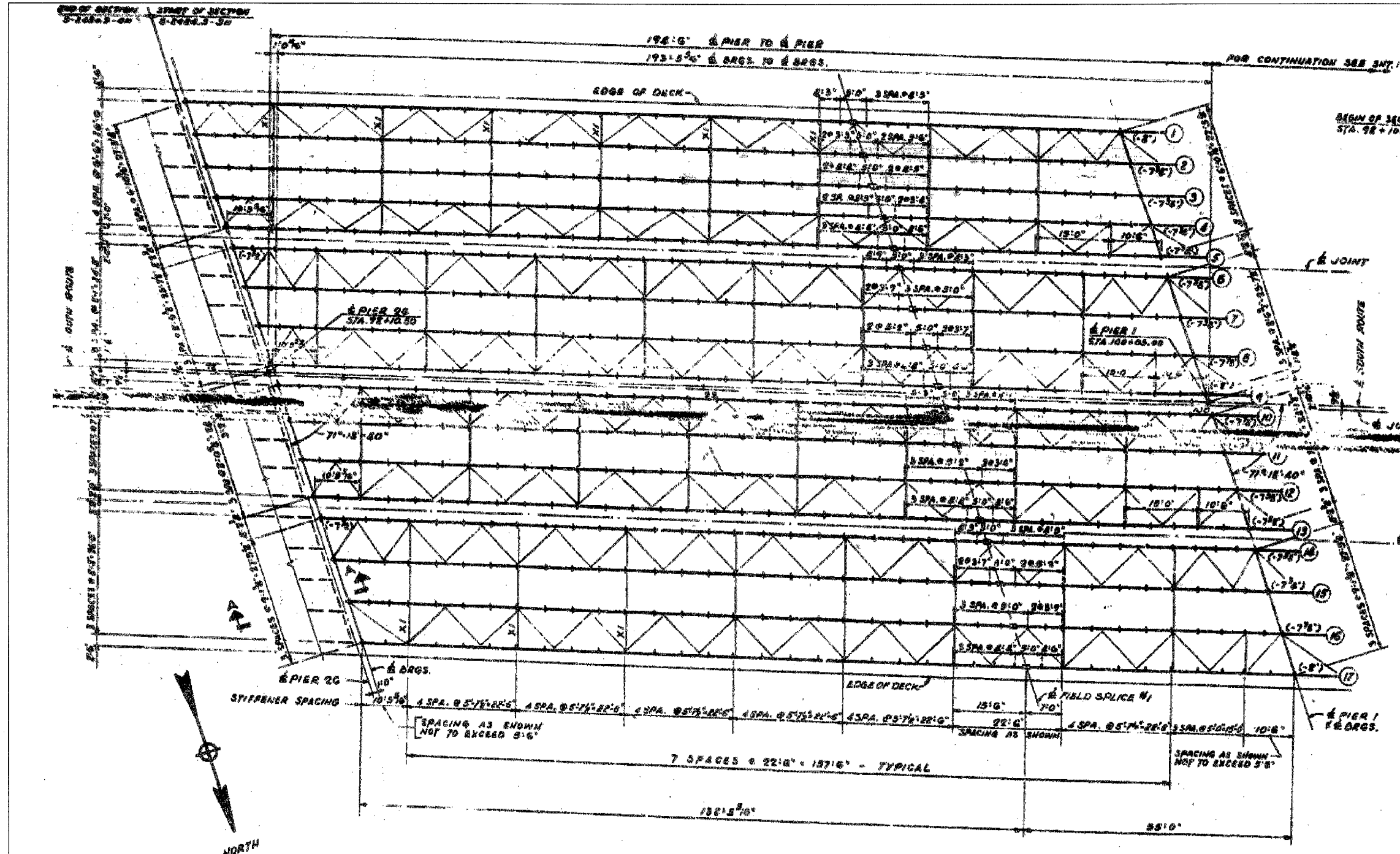
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1116  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

FOR INFORMATION ONLY

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

5/24/2007 5:46:35 PM





**NOTES FOR FRAMING PLAN**

ALL DIMENSIONS SHOWN ON PLANS ARE HORIZONTAL AND TAKEN ALONG BOTTOM OF WEB PLATE FOR WELDED PLATE BEAM CONNECTIONS AND DETAILS. TYPICAL ELEVATION AND PLATE CONNECTION SPACING SEE SHEET 14.

FOR BEARING DETAILS AT PIERS 26, 1 & 2 AND DETAIL OF FIELD SPICE SEE SHEET 14.

FOR BEARING DETAILS AT PIER 3 SEE SHEET 21.

FOR DEAD LOAD DISTRIBUTION AND CAMBER DIAGRAM SEE SHEET 14.

ALL INTERMEDIATE CROSS FRAMES ARE TYPICAL AS SHOWN ON SHEETS 17 & 18 EXCEPT CROSS FRAMES MARKED "X1" ON FRAMING PLANS. FOR DETAILS OF CROSS FRAMES MARKED "X1" SEE SHEET 21.

FOR END CROSS FRAMES AND LATERAL BRACING CONNECTIONS SEE SHEETS 17 & 18.

FOR EXPANSION GUARD AND DETAILS SEE SHEETS 18 THROUGH 21.

CUT WEB PLATE OF CHANNEL # 8 IN EACH SECTION OF BEAM PIER AS SHOWN ON BEARING DETAILS, SHEETS 20 & 21. DIMENSIONS IN BRACKETS ( ) INDICATE ELEVATION OF TOP OF BEAM WITH REFERENCE TO TOP OF SLAB AT CENTERLINE BEARING. TOP OF ALL BEAMS NOT NOTED SHALL BE 7' 0" BELOW TOP OF SLAB AT CENTERLINE BEARING.

**FRAMING PLAN - SPAN 1**  
SCALE: 1" = 10 FT.

BEAM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
TOP OF FLANGE ELEVATIONS AT BEAM																	
BEAM PIER 26	59.908	60.000	60.208	60.327	60.413	60.416	60.370	60.283	60.179	60.162	60.236	60.276	60.276	60.277	60.267	60.240	60.260
BEAM PIER 1	61.172	61.326	61.463	61.573	61.640	61.681	61.571	61.430	61.261	61.206	61.470	61.613	61.678	61.678	61.61	61.467	61.261
BEAM PIER 3	59.681	59.799	59.712	60.060	60.114	60.110	60.00	59.882	59.637	59.687	59.764	59.849	59.877	59.877	59.777	59.877	59.844

**BILL OF MATERIAL**

DESCRIPTION	UNIT	QUANTITY
FURNISHING ERECTING STRUCTURAL STEEL	SPANS 1, 2 & 3	4,282,000

\* INCLUDES WEIGHT OF BEARINGS & EXPANSION GUARDS

ALFRED BENECH & ASSOCIATES CONSULTING ENGINEERS  
10 SOUTH WABASH AVENUE CHICAGO, ILLINOIS

FOR INFORMATION ONLY

Sheet 11 of 45

REVISIONS

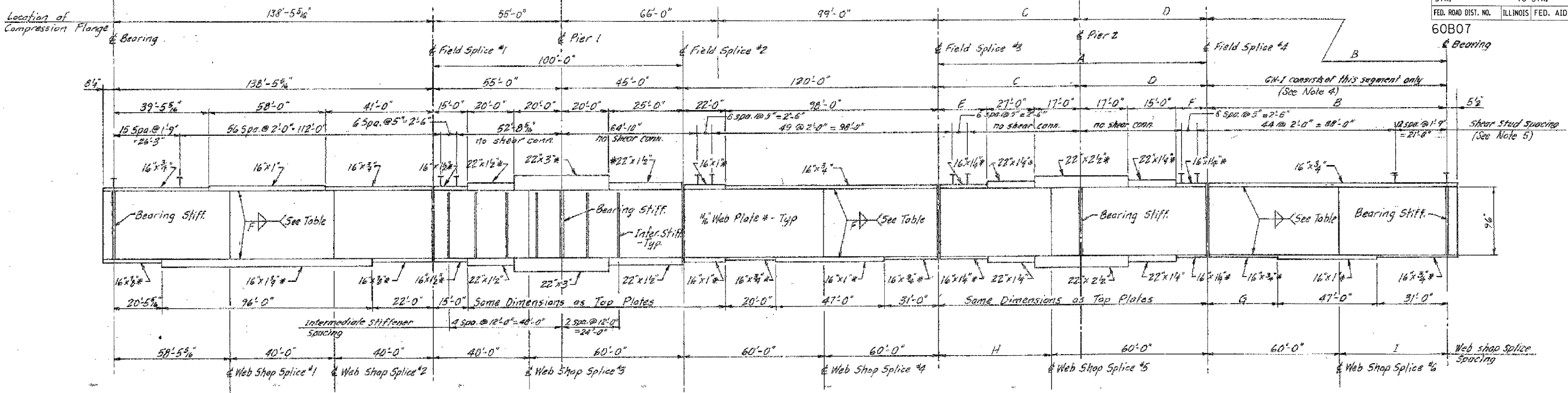
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1116

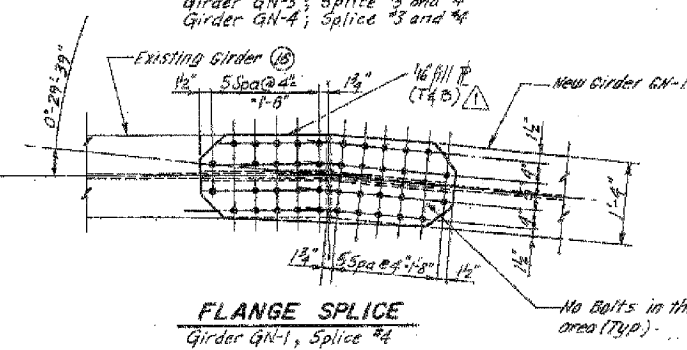
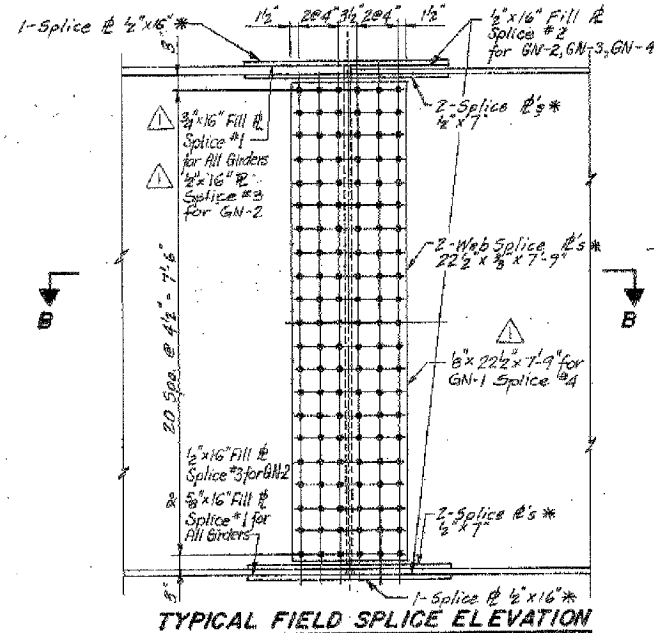
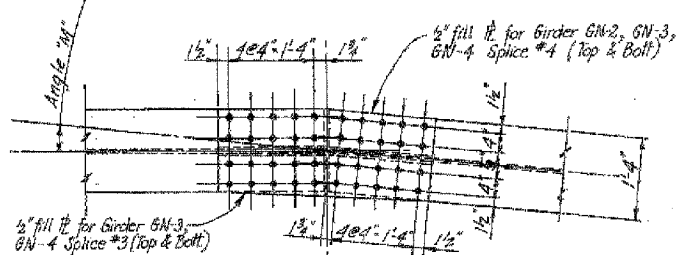
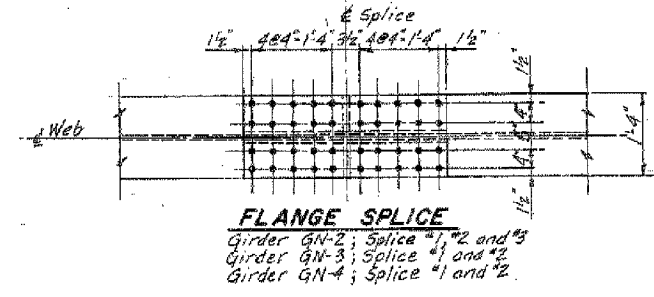
SCALE: NTS  
DATE: 5/18/2007

DRAWN BY: LAM  
CHECKED BY: BLU

BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
www.bbanc.com



**GIRDER ELEVATION - GN-1, GN-2, GN-3 & GN-4**



GIRDER	SPICE	ANGLE 'M'
GN-2	#1	2°-43'-59"
GN-3	#3	1°-20'-15"
	#4	2°-20'-40"
GN-4	#3	2°-37'-38"
	#4	1°-56'-09"

FLANGER THICKNESS	WELD SIZE 'F'
1/2" Thru 3/8"	1/4"
3/8" Thru 1/2"	5/16"
1/2" Thru 2 1/2"	3/8"
2 1/2" Thru 3"	1/2"

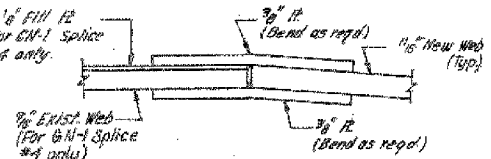
NOTE: Extend larger fillet weld 1'-0" beyond flange splice.

GIRDER	A	B	C	D	E	F	G	H	I
GN-1	—	106'-0 1/8"	—	—	—	—	28'-0 1/8"	—	46'-0 1/8"
GN-2	109'-0"	107'-7 3/16"	57'-11 1/2"	51'-0 1/8"	13'-11 1/2"	19'-0"	29'-7 3/16"	49'-0"	47'-7 3/16"
GN-3	109'-10"	108'-3 3/16"	58'-4 1/8"	51'-5 1/8"	14'-4 1/8"	19'-5 1/8"	30'-3 3/16"	49'-10"	48'-3 3/16"
GN-4	110'-7 3/8"	108'-11 1/8"	58'-10 1/8"	51'-11 1/8"	14'-10 1/8"	19'-11 1/8"	30'-11 1/8"	50'-7 3/8"	48'-11 1/8"

ALL NEW MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE STEEL FABRICATION CONTRACT (SECTION 1988-003F), UNLESS NOTED OTHERWISE.

- NOTES:**
- \* N.T.R.
  - N.T.R. denotes Match Toughness Requirements.
  - See sheet I-11 for structural steel details.
  - Holes in web and flange splice plates for Girders GN-1, splice #4 to be shop drilled for connection to new material (Girder GN-1) and field drilled for connection to existing material (Girder (B)).
  - Shear connectors have to be furnished in this contract.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
SECTION 1885-011 2-R COOK COUNTY  
N.S. MAJOR RECONSTRUCTION  
STRUCTURE 016-1116  
NEW GIRDERS GN-1, GN-2, GN-3 & GN-4  
Scale: NONE  
Date: 5/18/2007  
Drawn By: AVF  
Checked By: AVF  
ENVIRONMENTAL ENGINEERS INC.  
Chicago, Illinois



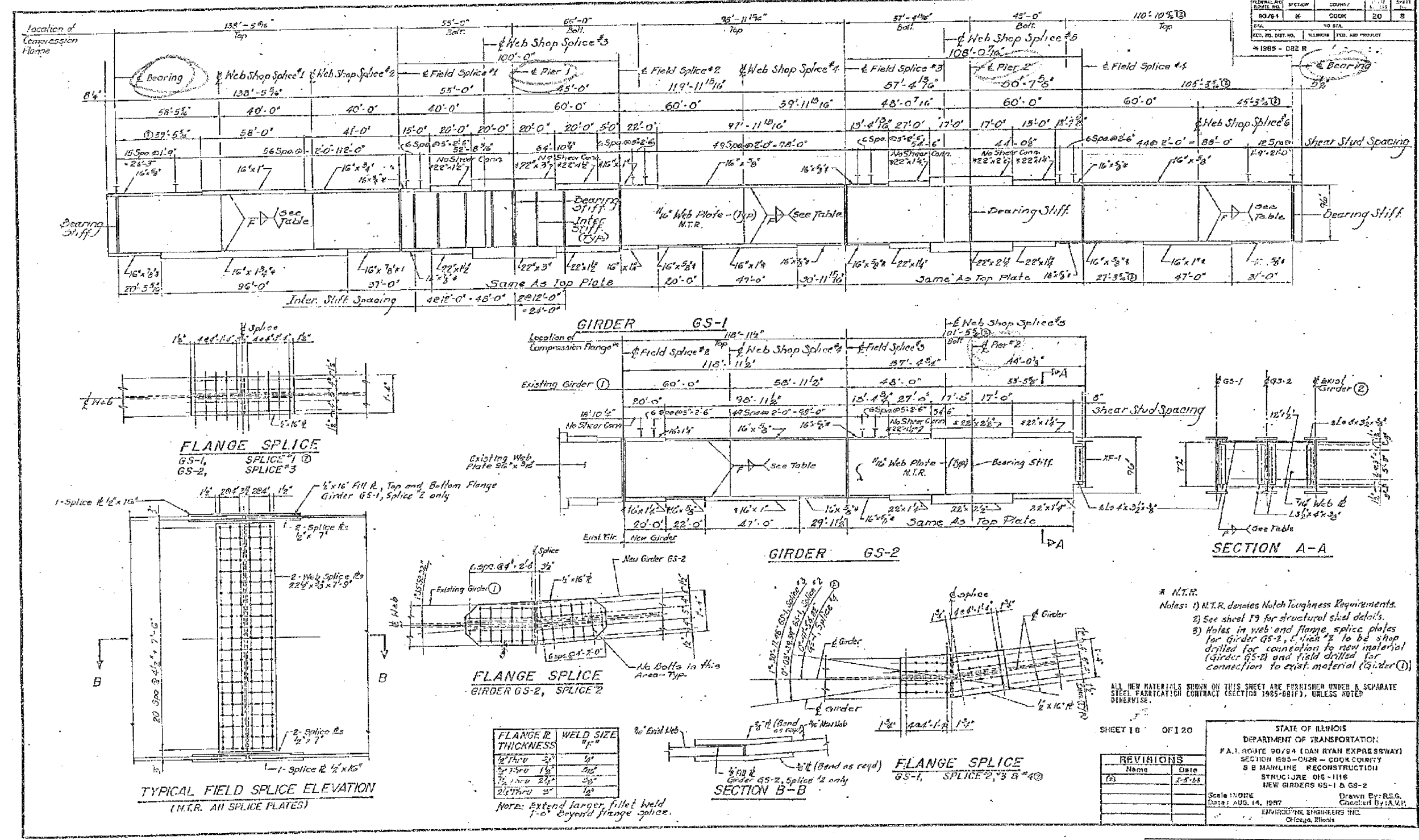
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1116

SCALE: NTS  
DATE: 5/18/2007

DRAWN BY: LAM  
CHECKED BY: BLU

FOR INFORMATION ONLY

5/24/2007 5:46:59 PM



REVISIONS	
Name	Date
(1)	7-5-05

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1905-082R - COOK COUNTY  
 S B MAINLINE RECONSTRUCTION  
 STRUCTURE 016-1116  
 NEW GIRDERS GS-1 & GS-2

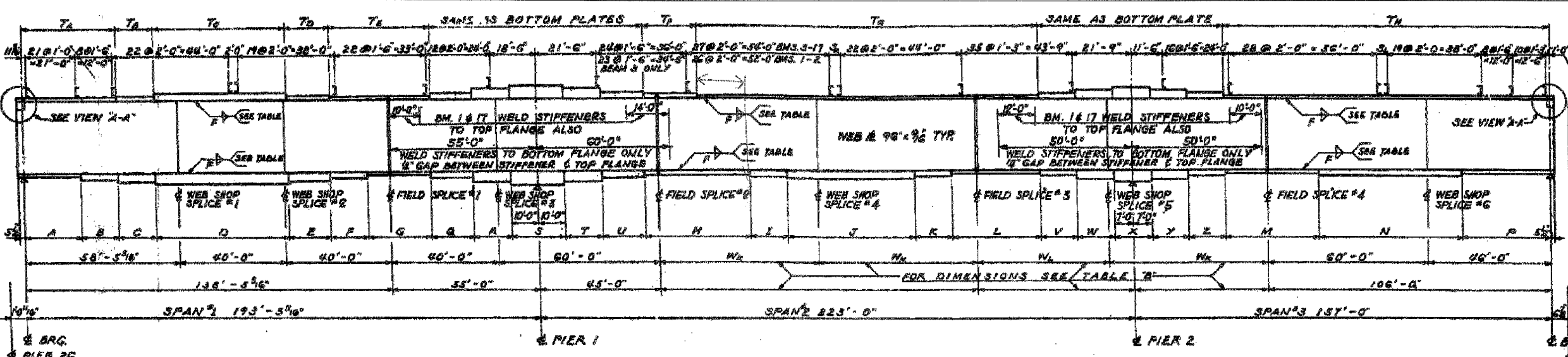
Scale: 1/8"=1'-0"  
 Date: AUG. 14, 1997  
 Drawn By: R.S.G.  
 Checked By: A.V.P.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1116

SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

FOR INFORMATION ONLY



**ELEVATION OF 3 SPAN CONTINUOUS BEAM**

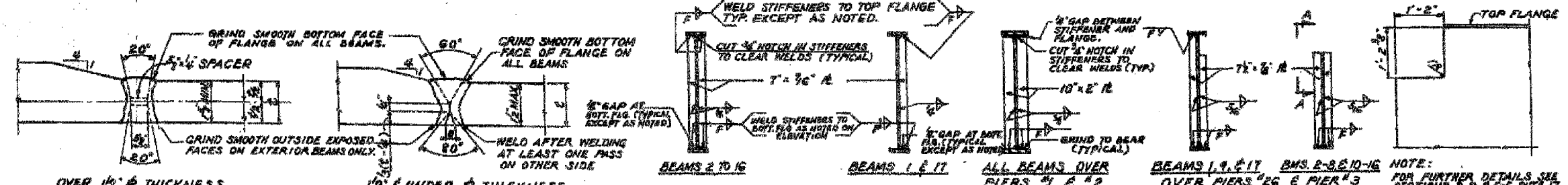
**TABLE FOR 3 SPAN CONTINUOUS BEAMS**

BEAM NUMBER	BOTTOM FLANGE PLATES													TOP AND BOTTOM FLANGE PLATES												TOP FLANGE PLATES											TABLE "B"				BEAM NUMBER
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	T <sub>A</sub>	T <sub>B</sub>	T <sub>C</sub>	T <sub>D</sub>	T <sub>E</sub>	T <sub>F</sub>	T <sub>G</sub>	T <sub>H</sub>							
1, 9, 17	SIZE 16x1/2													SIZE 16x1/2												SIZE 16x1/2											SIZE 1/2				1, 9, 17
7, 8, 10, 15, 16	SIZE 16x1/2													SIZE 16x1/2												SIZE 16x1/2											SIZE 1/2				7, 8, 10, 15, 16
6, 11, 12, 13, 14	SIZE 16x1/2													SIZE 16x1/2												SIZE 16x1/2											SIZE 1/2				6, 11, 12, 13, 14
3, 4, 5	SIZE 16x1/2													SIZE 16x1/2												SIZE 16x1/2											SIZE 1/2				3, 4, 5

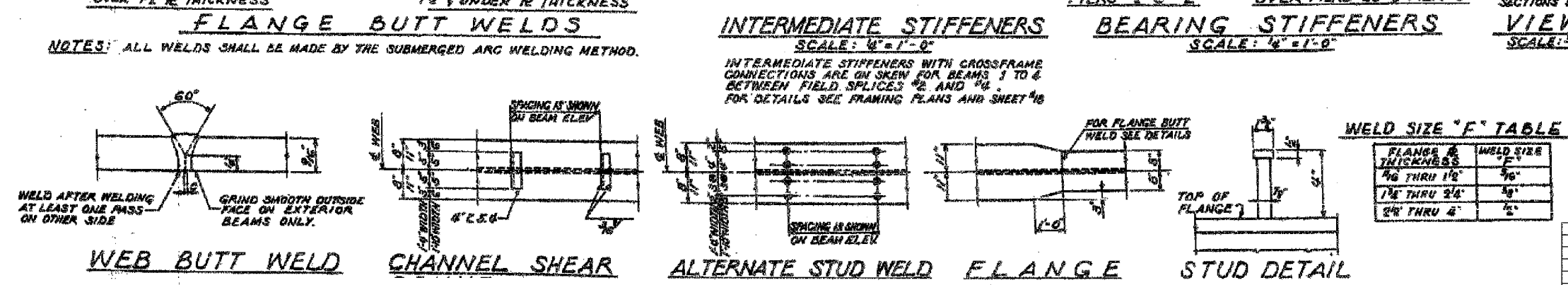
**60B07 SHEAR CONNECTOR SPACING**

ITEM	1	2	3	4	5-17
S <sub>1</sub>	1'-1 1/2"	1'-9 1/2"	1'-11 1/2"	1'-11 1/2"	2'-0"
S <sub>2</sub>	1'-1"	1'-6 1/2"	1'-6 1/2"	1'-9 1/2"	2'-0"

**NOTES:**  
SHEAR CONNECTORS AT FIELD SPLICES CAN BE ADJUSTED TO AVOID INTERFERENCE WITH WASHERS ON HIGH STRENGTH BOLTS.



**NOTES:**  
ALL LONGITUDINAL DIMENSIONS ARE HORIZONTAL AND TAKEN ALONG THE BOTTOM OF WEB PLATE.  
FOR STIFFENER SPACING SEE FRAMING PLANS.  
FOR CAMBER DIAGRAM SEE SHEET #16 FOR SPLICE DETAILS SEE SHEET #15 FOR CROSSFRAME DETAILS AND ADDITIONAL DETAILS SEE SHTS. #17 & #18  
ALL STIFFENERS TO CONFORM TO A.S.T.M. A373 STEEL.



**WELD SIZE "F" TABLE**

FLANGE THICKNESS	WELD SIZE F
1/2" THRU 1 1/2"	5/8"
1 1/2" THRU 2 1/4"	3/4"
2 1/4" THRU 4"	7/8"

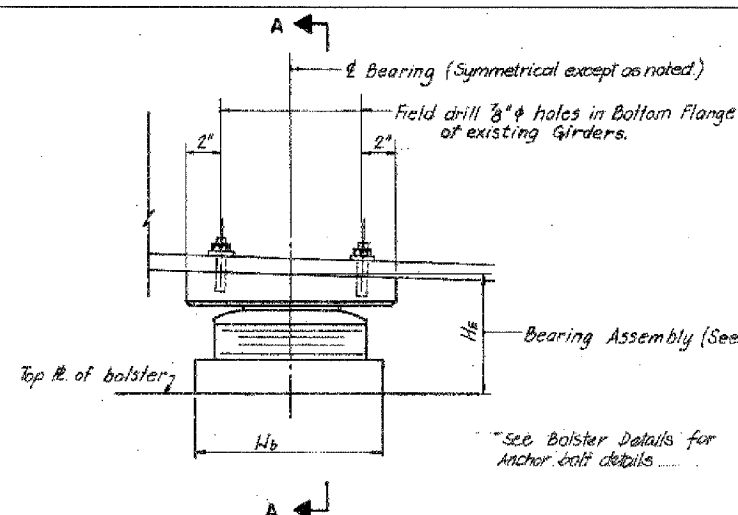
**CITY OF CHICAGO  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF ENGINEERING**

**SOUTH ROUTE SUPERHIGHWAY  
ELEVATED HIGHWAY  
STEWART AVE. TO CANAL ST.  
SECTION 9-2424.5-3H**

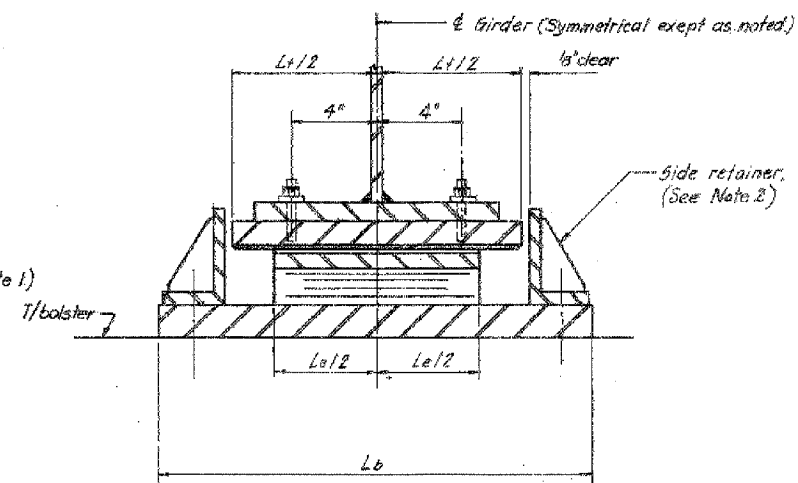
BOWMAN, BARRETT & ASSOCIATES INC.  
CONSULTING ENGINEERS  
Chicago, Illinois  
312.228.0100  
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Sheet 14 of 45  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
DAN RYAN ELEVATED BRIDGE  
BEARING REPLACEMENT & STEEL REPAIR  
EXISTING PLAN INFORMATION  
SN 016-1116  
SCALE: NTS DATE: 5/18/2007  
DRAWN BY: LAM  
CHECKED BY: BLU

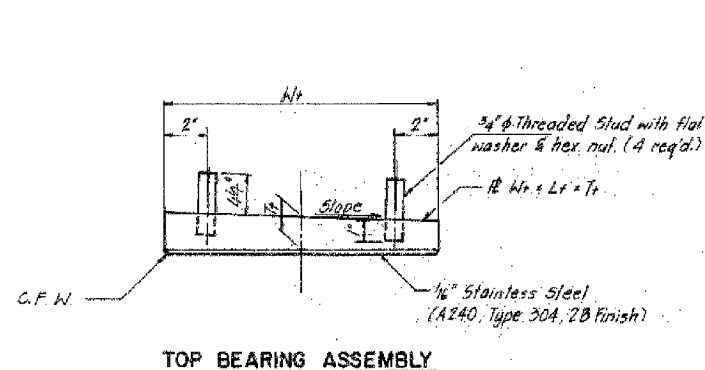


TYPICAL ELEVATION

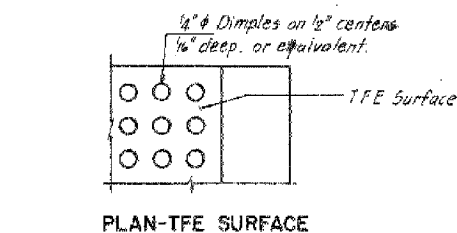


SECTION A-A

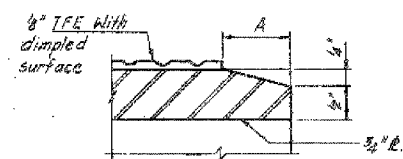
**TYPE II TFE ELASTOMERIC EXPANSION BEARING**



TOP BEARING ASSEMBLY



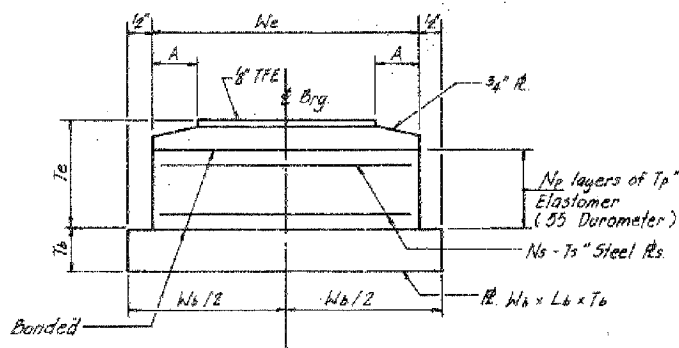
PLAN-TFE SURFACE



SECTION THRU TFE

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 surface.

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



BOTTOM BEARING ASSEMBLY

We	6"	7"	9"	10"	11"	12"
A	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

**NOTES:**

- Height of bearing assembly, H<sub>E</sub>, includes top plate, elastomeric assy. and bottom plate. H<sub>E</sub> does not include shim plate.
- Side retainer details for bearings located on top of pier are shown on this sheet. For bearings requiring a bolster, see bolster details for side retainer details.
- See Shim thickness schedule for required shims.

**TYPE II ELASTOMERIC EXPANSION BEARING SCHEDULE**

STRUCTURE NO.	PIER LOCATION	GIRDER NO.	W <sub>e</sub>	L <sub>e</sub>	SERIES	TOP PLATE			BOTTOM PLATE			NO. REQ'D.	H <sub>E</sub>	REMARKS
						T <sub>1</sub>	W <sub>1</sub>	L <sub>1</sub>	SLOPE	T <sub>B</sub>	W <sub>B</sub>			
016-1116	1	GN-2 thru GN-4	20	30	2	4 1/2	22	32	0.0	1	21	40 1/2	3	- N, B, ●

**Remarks:**

- B - Bolster required - See bolster details.
- N - New bearings for roadway widening.
- - See bolster schedule for H<sub>E</sub> dimension.

**TABLE OF DIMENSIONS - TYPE II ELASTOMERIC EXPANSION BEARINGS**

W <sub>e</sub>	L <sub>e</sub>	Series	T <sub>p</sub>	N <sub>p</sub>	T <sub>s</sub>	N <sub>s</sub>	T <sub>e</sub>
20"	30"	2	3/4"	4"	1/4"	3"	1 1/2"

T<sub>p</sub> - denotes thickness of each elastomeric layer  
 N<sub>p</sub> - denotes number of elastomeric layers  
 T<sub>s</sub> - denotes thickness of each steel plate  
 N<sub>s</sub> - denotes number of steel plates

ALL MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE SUPPLY CONTRACT (SECTION 1988-004 I), UNLESS NOTED OTHERWISE.

SHEET BRG 32 OF 51

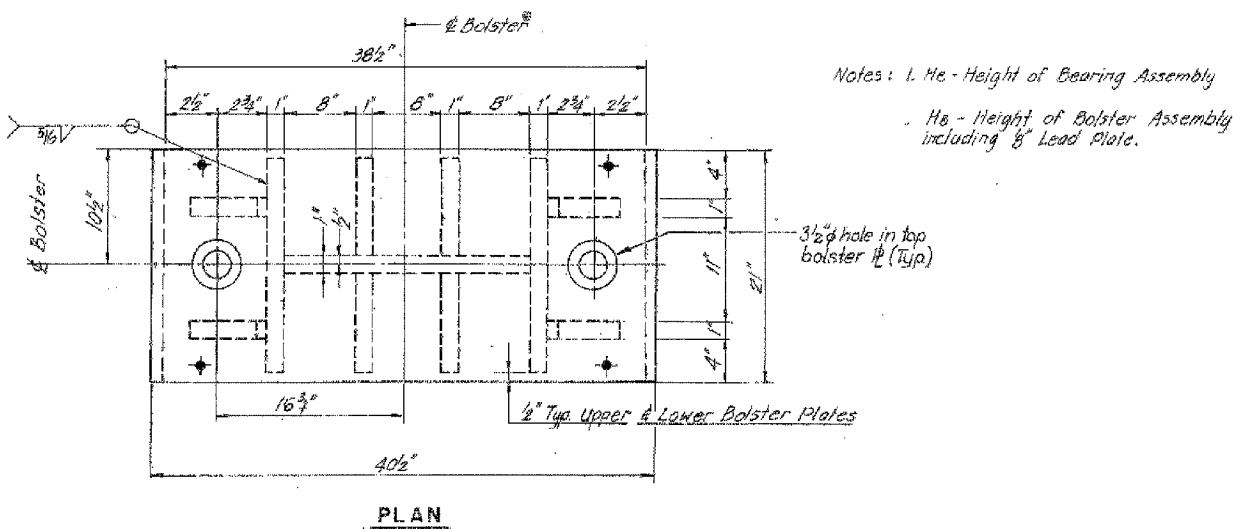
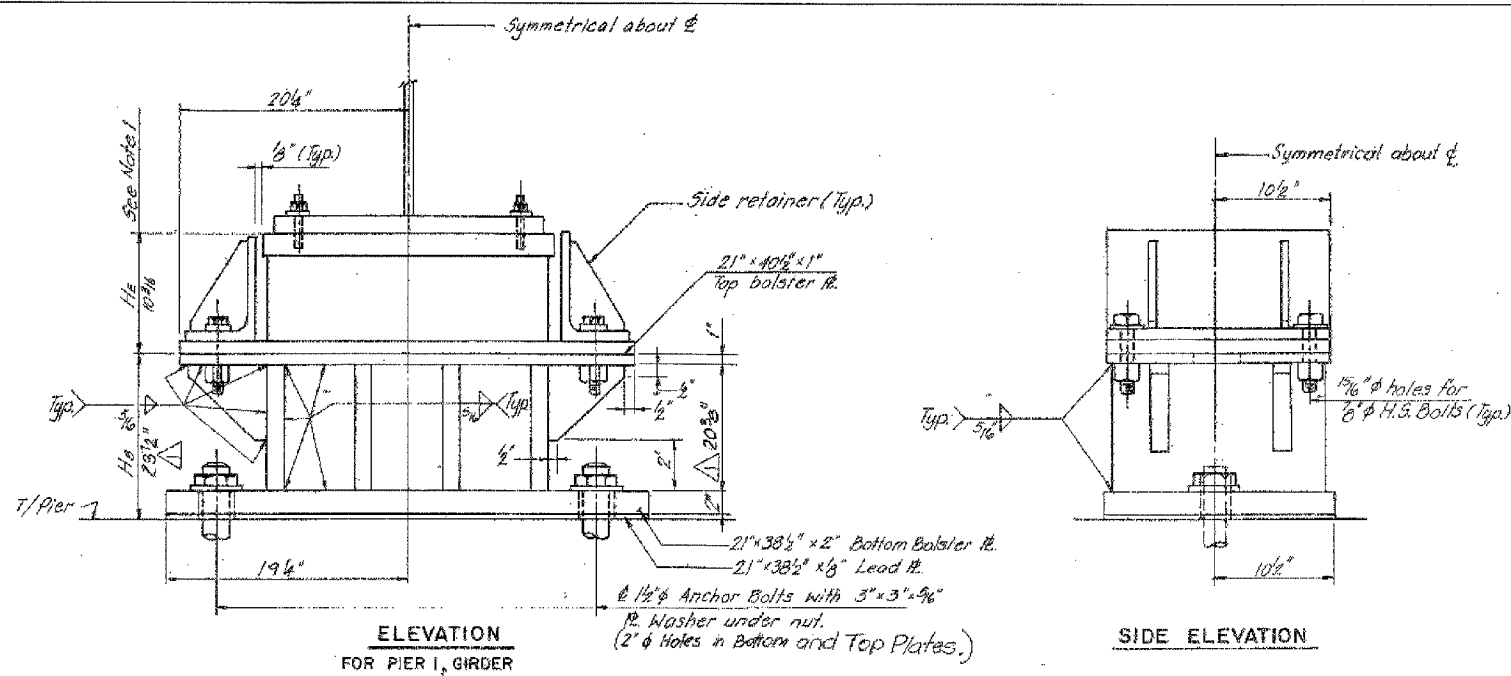
REVISIONS	
Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1988-004 I - COOK COUNTY  
 I.R. MAINLINE RECONSTRUCTION  
 BEARINGS - STRUCTURE NO. 016-1116  
 TYPE II ELASTOMERIC EXPANSION BEARING  
 Scale: NONE  
 Date: AUGUST, 1998  
 Drawn By: A.C.  
 Checked By: A.C.B.  
 FARRINGTON ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1116  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

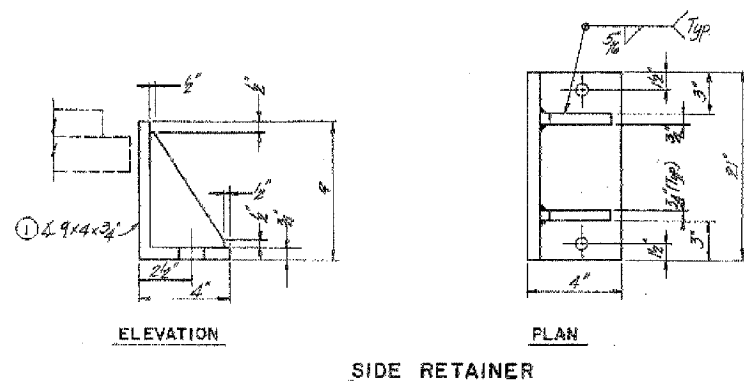
FOR INFORMATION ONLY



BOLSTER SCHEDULE

STRUCTURE NO.	PIER LOCATION	GIRDER NO.	NO. REQ'D	BRG. TYPE	REMARKS
016-1116	1	AN-2, AN-3, AN-4	3	II	

ALL MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE SUPPLY CONTRACT (SECTION 1988-004 I), UNLESS NOTED OTHERWISE.



SHEET BRG 35 OF 51

REVISIONS	Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 F.A.I. ROUTE 90 / 94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-0775-R - COOK COUNTY  
 N.B. MAINLINE RECONSTRUCTION  
 BEARINGS-STRUCTURE NO. 016-1116  
 BOLSTER DETAILS  
 Scale: None  
 Date: AUGUST, 1968  
 Drawn By: E.C.  
 Checked By: H.S.  
 ENVIRODYNE ENGINEERS INC.  
 Chicago, Illinois

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1116  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

FOR INFORMATION ONLY

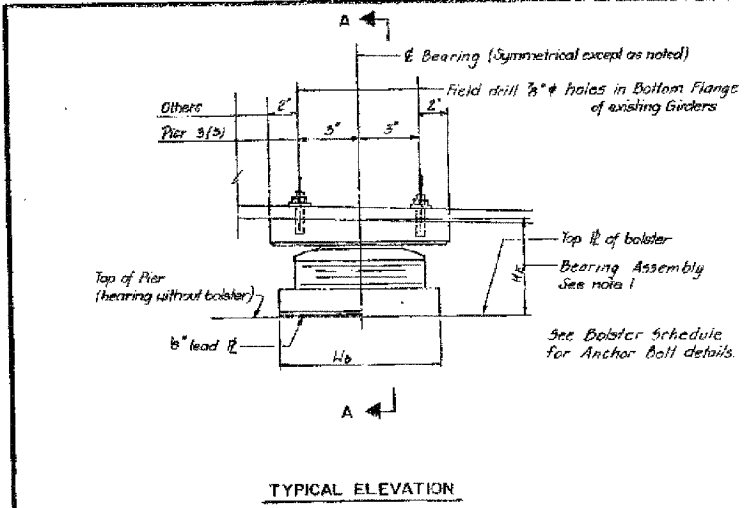
12-1-BB

BOWMAN, BARRETT & ASSOCIATES INC.  
 CONSULTING ENGINEERS  
 Chicago, Illinois  
 312.228.0100  
 www.bbainc.com

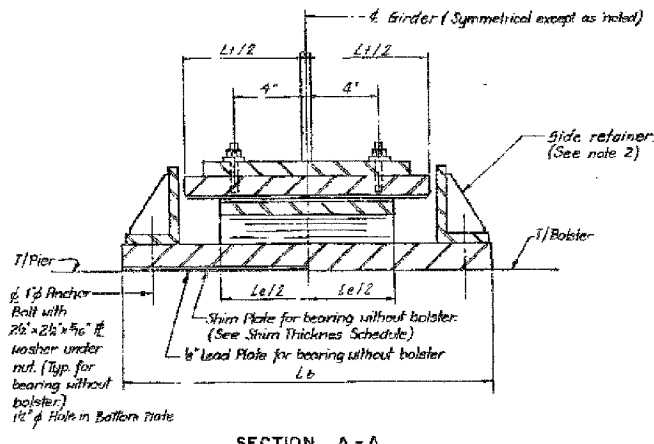
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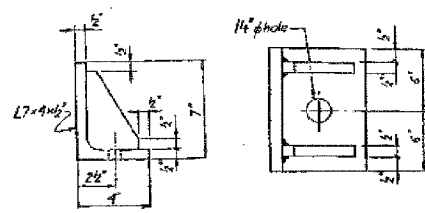
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	W	COOK	93	38
STA.	TO STA.			
FED. DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL ELEVATION



SECTION A-A



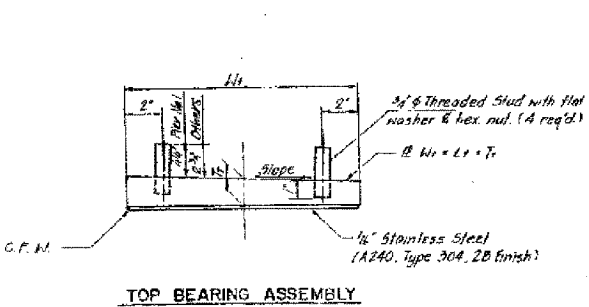
SIDE RETAINER DETAILS  
(Bearings without bolsters)

TABLE OF DIMENSIONS-TYPE II ELASTOMERIC EXPANSION BEARINGS

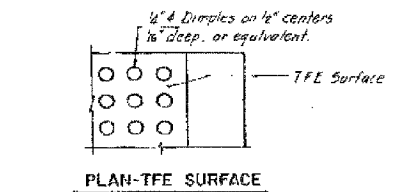
We	Le	Series	Tp	Np	Ts	Ns	Te
10	14	a	3/8	5	3/8	7	3 3/8
20	30	a	3/4	4	3/4	8	4 3/4

Tp - denotes thickness of each elastomeric layer  
 Np - denotes number of elastomeric layers  
 Ts - denotes thickness of each steel plate  
 Ns - denotes number of steel plates

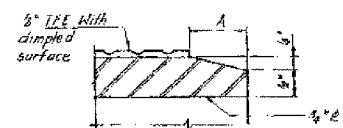
TYPE II TFE ELASTOMERIC EXPANSION BEARING



TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



SECTION THRU TFE

Note: The 6" 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-124, Type 1. The bond agent shall be applied on the full area of the contact surface.

Bonding of 1/2" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

He	6"	7"	9"	10"	11"	12"	20"
A	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

Notes:

- Height of bearing assembly, He, includes top plate, elastomeric assembly, bottom plate, and 1/2" lead plate for bearings without bolster. He does not include shim plate.
- Side retainer details for bearings located on top of pier are shown on this sheet. For bearings requiring a bolster. See bolster details for side retainer details.
- For bearings without bolster, the side retainer shall be tack welded as shown after the girder and bearing assembly have been set into their final position.

TYPE II ELASTOMERIC EXPANSION BEARING SCHEDULE

STRUCTURE	PIER LOCATION	GIRDER	We	Le	SERIES	TOP PLATE			BOTTOM PLATE			NO. REQUIRED	He	REMARKS
						Tp	Wl	Lt	SLOPE %	Ts	Wb			
016-1116	Pier 1	GS-1	20	30		4 1/2	22	32	0.0	1	21	40 1/2	1	⊗ B, N
016-1117	Pier 26(S)	GS-1	10	14	a	2	11	16	1.2	1	11	29 1/2	1	⊗ B, N

Remarks: B - Bolster required, see Bolster Details.  
 C - Special Detail required, see Clipping Schedule.  
 N - New bearings, roadway widening.

⊗ - See bolster schedule for He dimension.

ALL MATERIALS SHOWN ON THIS SHEET ARE FURNISHED UNDER A SEPARATE SUPPLY CONTRACT (SECTION 1985-0831), UNLESS NOTED OTHERWISE.

SHEET 0635 OF 48

REVISIONS

Name	Date

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 EAL ROUTE 90/94 (DAN RYAN EXPRESSWAY)  
 SECTION 1985-082 R - COOK COUNTY  
 S.B. MAINLINE RECONSTRUCTION  
 BEARINGS - STRUCTURE NOS. 016-1116 AND 1117  
 TYPE II ELASTOMERIC EXPANSION BEARINGS  
 Scale: None  
 Date: AUGUST 14, 1987  
 Drawn By: D.C.  
 Checked By: U.B.  
 ENVIRONMENTAL ENGINEERS INC.  
 Chicago, Illinois

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)  
 DAN RYAN ELEVATED BRIDGE  
 BEARING REPLACEMENT & STEEL REPAIR  
 EXISTING PLAN INFORMATION  
 SN 016-1116 & SN 016-1117  
 SCALE: NTS  
 DATE: 5/18/2007  
 DRAWN BY: LAM  
 CHECKED BY: BLU

FOR INFORMATION ONLY