BRIDGE AND HYDRAULICS UNIT
FILE COPY

Illinois Department of Transportation

Memorandum

To:	Bruce Hucker	Attn.: C. McCarter
From:	Rick Powell	By: S. Ferguson SF
Subject:	Bridge Condition Report	
Date:	May 15, 2009	

FAI Route 57
Section 38-2HVBR & HVBR-1
Iroquois County
P93-041-00
File #1228-211
SN 038-0013

Enclosed is a copy of the Bridge Condition Report, as sent to the Bridge Office, completed for the above structure located on Interstate 57 that is tentatively scheduled for superstructure replacement in FY 2012. The twin of this set of dual structures was approved for superstructure replacement in 2003. If there are any questions or comments please contact Heather Leskanich at Ext.-8956 or Steve Ferguson at Ext.-8964.

HL:ct

FILE COPY

Illinois Department of Transportation

Memorandum

To:	Ralph E. Anderson	Attn.:	T. Ahrens
From:	George Ryan	By:	R. Powell RLP
Subject:	Bridge Condition Report		
Date:	May 15, 2009		

FAI Route 57
Section 38-2HVBR & HVBR-1
Iroquois County
P93-041-00
File #1228-211
SN 038-0013

Enclosed are two copies of the Bridge Condition Report completed for the above structure located on Interstate 57 that is tentatively scheduled for superstructure replacement in FY 2012 (November 2011 letting). The twin structure for this set of dual structures was approved for superstructure replacement in 2003. Please verify/approve the proposed scope of work for both structures. If there are any questions or comments please contact Heather Leskanich at (815) 434-8956 or Steve Ferguson at (815) 434-8964.

HL:ct

Ferguson, Steven P

From: Ferguson, Steven P
Sent: Wednesday, July 15, 2009 8:30 AM
To: Scott Sanford
Subject: FW: IL 57 over FAS 317 and CNRR
Attachments: SN 038-0013 abbreviated BCR sent to BO.pdf

Scott,

I'd say we prefer to raise the crashwalls adjacent to the roadway to 4'.

I'm attaching the abbreviated BCR we sent to Tim in May regarding -0013. Please note that I did not scan in all of the 11x17 bridge plan sheets.

I'll let you know as soon as possible when we receive the approval letter.

Steve

From: Broviak, David E
Sent: Monday, July 13, 2009 1:22 PM
To: Ferguson, Steven P
Subject: RE: IL 57 over FAS 317 and CNRR

Steve,

I checked the local roads manual and the piers are within their clear zone limits. This plus the fact that the pier/column walls are very high on the severity index for roadside hazards leads me to agree with you that the crashwalls adjacent to the roadway should be raised to 4'.

Dave

From: Ferguson, Steven P
Sent: Friday, July 10, 2009 3:01 PM
To: Broviak, David E
Subject: RE: IL 57 over FAS 317 and CNRR

Dave,

Wanted to get your opinion on this. I'd recommend that we increase the crashwall heights at the piers, not adjacent to the RR tracks, to 4' as mentioned below. We have been doing this on all of our interstate overheads. I realize that this is a state route underneath, but I'm thinking it follows the same safety aspect logic. I've attached a plan sheet of the bridge for you.

Any comment on whether we should raise the roadside crashwalls or not??

Steve

From: Scott Sanford [mailto:ssanford@whks.com]
Sent: Thursday, July 09, 2009 10:56 AM
To: Ferguson, Steven P

Cc: Frank Lowry
Subject: RE: IL 57 over FAS 317 and CNRR

Steve,

I spoke to Tim Craven about the RR crashwall issue and he made the same recommendation as you, except he said to follow the AREMA requirements and not the 10' requirement stated in the BCR. Since the piers are located between 12' and 25' from the centerline of tracks, the crashwalls only need to be 6' above top of rail to satisfy AREMA. My record of this conversation is attached for your information. If you take exception to Tim's recommendation, please let me know.

Also, the Bridge Manual requires multi-column pier crashwalls which are not adjacent to RR tracks to extend 4' above ground level. Piers 1 and 2 have very short crashwalls that do not extend above grade. Pier 2 is approximately 10' from the edge of pavement and has guardrail attached to the columns. Pier 1 is in the slopewall and little further away from the pavement, so it's somewhat protected. The 2002 ADT was 1800 with only 7% trucks. Do you recommend increasing the height of these crashwalls or leaving them as they are?

Scott

-----Original Message-----
From: Ferguson, Steven P [mailto:Steven.Ferguson@illinois.gov]
Sent: Wednesday, July 08, 2009 4:34 PM
To: Scott Sanford
Subject: RE: IL 57 over FAS 317 and CNRR

Haven't heard yet on the BCR approval. When I get the BCR approval, I'll attach the abbreviated report.

I'd say go ahead and raise the crashwall. I'm trying to find any structural design requirements for this RR, but nothing yet.

Steve

From: Scott Sanford [mailto:ssanford@whks.com]
Sent: Monday, July 06, 2009 1:55 PM
To: Ferguson, Steven P
Cc: Frank Lowry
Subject: RE: IL 57 over FAS 317 and CNRR

Steve,

Has the Bridge Office completed their review of the abbreviated BCR for the NB I-57 Bridge? If they have could you please send me a copy of the approval memo for our files. Also, I don't think I ever got a copy of the abbreviated BCR, so could you please send a copy of that as well.

Also, the original BCR mentions that the crashwalls of the existing piers adjacent to the tracks do not meet RR requirements, but the original BCR scope of work and approval memo are silent on the issue. This may become a problem when the RR reviews the TS&L. Do you recommend that we address this now or wait until after RR review to see if they permit the existing crashwall height?

Thanks Steve

Scott

-----Original Message-----
From: Ferguson, Steven P [mailto:Steven.Ferguson@illinois.gov]
Sent: Wednesday, May 13, 2009 1:56 PM
To: Scott Sanford
Subject: RE: IL 57 over FAS 317 and CNRR

Scott,

We have an e-mail from Craven that basically approves superstructure replacement for both bridges, and is attached. We are sending an abbreviated BCR for -0013 tomorrow, to make it formal. I'm hoping Tim can get a quick turnaround on this submittal. I don't believe this will cause a problem with the TS&L.

Steve

> **From:** Scott Sanford [mailto:ssanford@whks.com]
> **Sent:** Wednesday, May 13, 2009 11:49 AM
> **To:** Ferguson, Steven P
> **Subject:** IL 57 over FAS 317 and CNRR
>
> Steve,
>
> I remember you told me that the Bridge Office signed-off on deck replacement and widening for both structures, but I can't find a copy of the approval memorandum. I have the original memorandum for the SB bridge from 2003, but not the recent one. Can you please send me a copy, so I can incorporate the BCR review comments when we're preparing the TS&L.
>
> **Scott D. Sanford, P.E., S.E.**
> Office Manager/Senior Structural Engineer
> WHKS & Co.
> 7018 Kingsmill Court
> Springfield, IL 62711-7389
> (217) 483-WHKS (9457)
> (217) 638-6358 (cell)
> (217) 483-9458 (fax)
> general email: springfield@whks.com
> website: www.whks.com

ABBREVIATED BRIDGE CONDITION REPORT

FAI Route 57
Section 38-2HVBR & HVBR-1
Iroquois County
P93-041-00

I-57 over FAS 317 (Old Rte 45) and ICG RR

SN 038-0013

Prepared By

Illinois Department of Transportation

District 3
Bureau of Program Development
Bridge & Hydraulics Unit
Heather Leskanich

Final
Sent to BD.
May 15, 2009

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I. Geographical and Administrative Description
II. Physical Description of Existing Structure
III. Field Inspection and Physical Evaluation
IV. Summary Statement and Proposed Scope of Work
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I. Geographical and Administrative Description

Feature carried

Marked route designation: FAI 57
Common name: I-57
Functional classification: Interstate

Feature crossed: FAS 317 (Old Rte 45) & ICG RR

Location

County: Iroquois
Township: Chebanse
Municipality:
Location Map: See Exhibit 1 for details

Bridge

Structure Number:
Existing: SN 038-0013
Proposed: SN 038-0013
Section number: 38-2HVB
History: The structure was originally built in 1966 under federal aid project #I-IG0576039297 on I-57 at Sta 1037+61.38. The deck and slopewalls were widened and rehabilitated in 1986.

Speed

Posted: 65 mph
Design: 65 mph

Traffic

ADT: (Combined)
Existing: 16,500 (2007)
Proposed: 26,300 (2032)
Breakdown: SU 4.0% MU 17.0% PC 79.0%
DHV: (Combined)
Existing: 1160 (2007)
Proposed: 1850 (2032)

II. Physical Description of Existing Structure

Bridge

Type: Five span continuous steel beam superstructure with reinforced concrete deck on hammerhead piers with spread footings and open abutments on concrete piles

Length: 373' 10" back to back of abutments

Skew: Left forward 42°00'00"

Wearing surface:

Type: Thin polymer overlay

Thickness: 1 ¾"

Ratings

Sufficiency: 78.5

Inventory: HS 22.7

Operating: HS 37.9

Cross section

Structure: 34' face to face of parapet

Approach: 38'

Roadway Alignment

Profile: The existing structure is located on a vertical curve. See Exhibit 4 for plan details.

Horizontal: The existing structure is located in a tangent section of roadway. See Exhibit 4 for plan details.

Field Inspection and Physical Evaluation

Deck

The existing deck is a 7" reinforced concrete slab with a 1 ¾" thin polymer overlay placed on it. The original deck constructed in 1966 and widened and reconstructed in 1986. There are four longitudinal joints in the deck, two from original construction and two from the reconstruction. The deck is in poor condition with numerous areas of previous patching in addition to cracking, spalling and exposed deck reinforcement. The existing clear width of 34'0" does not meet the minimum policy to remain in place and the degree of deterioration warrants total deck replacement. Deck rehabilitation should not be considered as an option based on the existing conditions.

Superstructure

The existing superstructure is 43 years old and is in satisfactory condition with some minor areas of rusting and deterioration. It was last painted in 1999. The existing design configuration has cover plates that would require retrofitting and two additional beam lines would need to be added to accommodate the proposed cross section. The existing bearings are tilted excessively and show signs of rusting and deterioration. It is safe to assume that they are not properly functioning and would need to be replaced since deck replacement is warranted.

Substructure

The existing substructure is in satisfactory condition with minor deterioration noted. The expansion joints have been leaking onto the existing abutments and there are areas of cracking and previous repair. The existing slopewalls have cracked settled and separated from the existing abutments. The piers are is decent condition; however the crashwall heights do not meet current standards. The railroad requires a minimum of 10' above the top of rail elevation and the current elevation is approximately 6'. Also the grade separation piers should have a crashwall height of 2' 4" above ground elevation. The existing substructure would need to be widened to accommodate the proposed cross-section. The geometry of the existing substructure units meets all the minimum clearance requirements for both the ICG railroad and FAS 317 (Old Rte 45).

Waterway/General Hydraulics

The structure carries an interstate over a roadway and railroad, therefore waterway information is not applicable. No drainage problems are noted at this location.

Summary Statement and Proposed Scope of Work

Bridge Scope
This structure is a dual structure and the twin structure (SN 038-0014) was approved for superstructure replacement in July 2003. See Exhibit 6 for details. Based on the approved proposed scope of the dual structure and the physical conditions of the existing structure; superstructure replacement on a widened, semi-integral substructure is proposed.

Bridge Cross Section:
The existing bridge cross section will need to be revised to accommodate a 40'0" clear deck width to meet current 3R guidelines and include the standard F shape parapet.

Profile:
The existing profile will need to be raised to accommodate the required vertical clearance of 23' over the existing railroad.

Horizontal Alignment:
The existing horizontal alignment will not be affected by the proposed work. See Exhibit 4 for existing details.

V. Maintenance of Traffic

Final traffic management will be determined during the Phase I analysis and included in the Project Report; however stage construction should be considered as a feasible option at this time.

VI. Exhibits

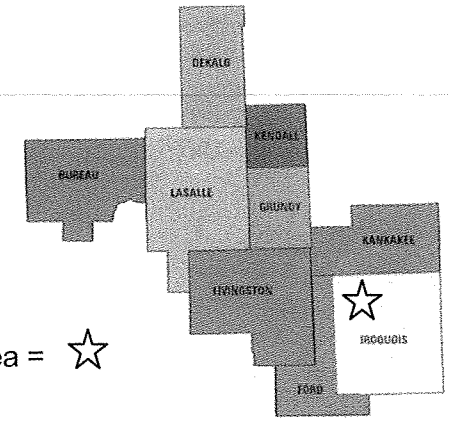
1. Location Map
2. Existing Photos
3. Bridge Inspections
4. Microfilm Plans
5. Cost Analysis (Taken from 2003 BCR for SN 038-0014, See attached email)
6. Correspondence for SN 038-0014

EXHIBIT 1:

LOCATION MAP

Project Location Map

FAI Route 57 (I-57)
Section (38-2) HVBR-1
Iroquois County
SN 038-0013 & 038-00014
P-93-041-00
D3#853 File No. 1228



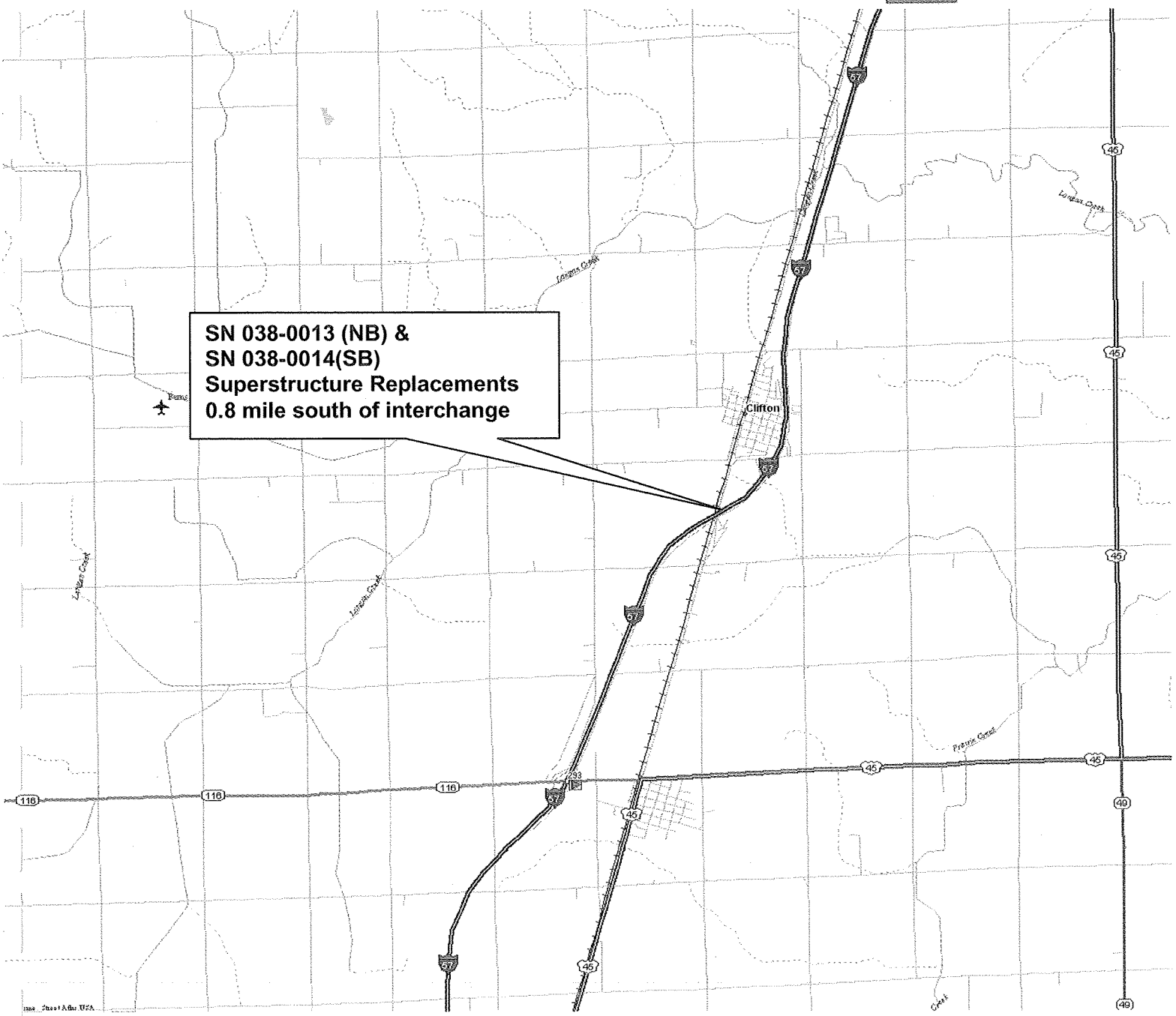


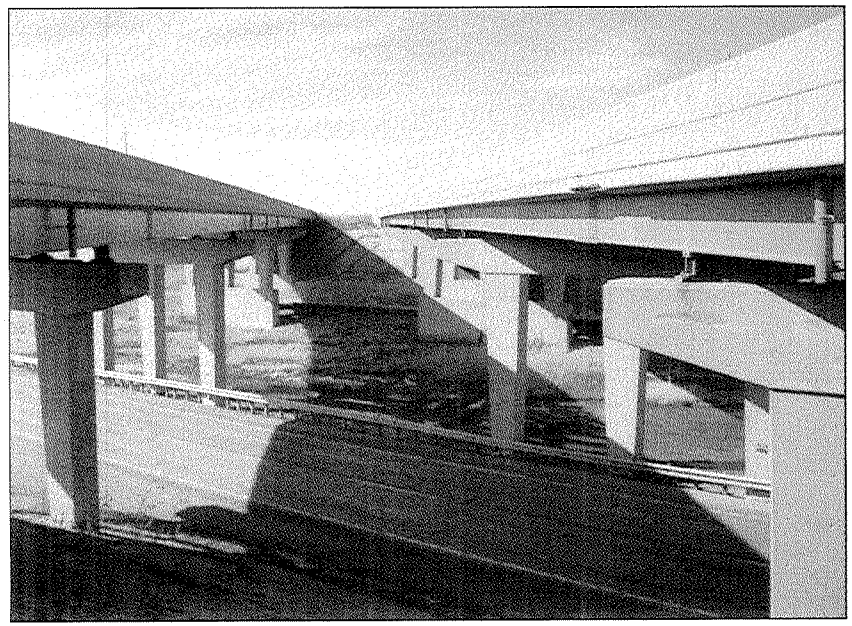
EXHIBIT 2:

EXISTING PHOTOS

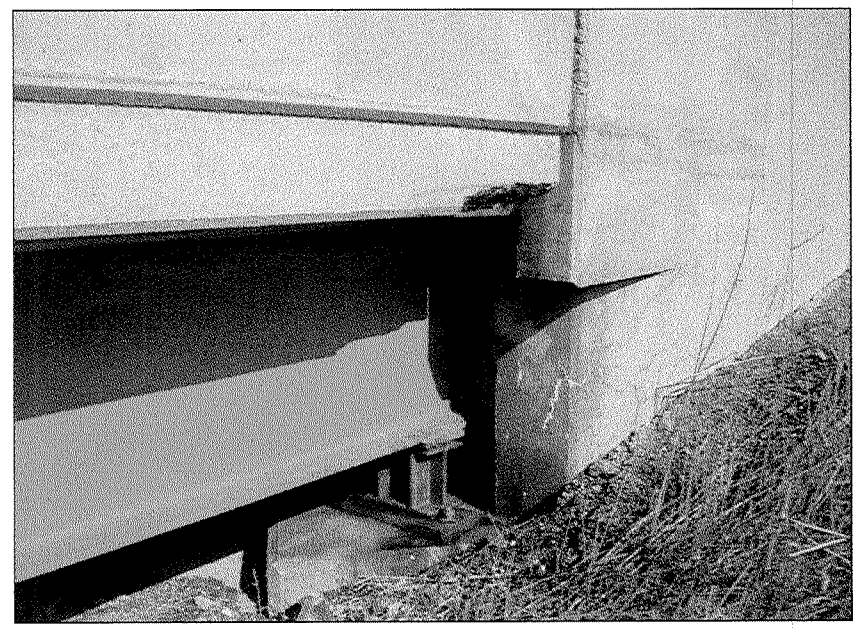
Name Plate for SN 038-0013

Bridge Typical looking North

South column on east pier



Center Median looking west



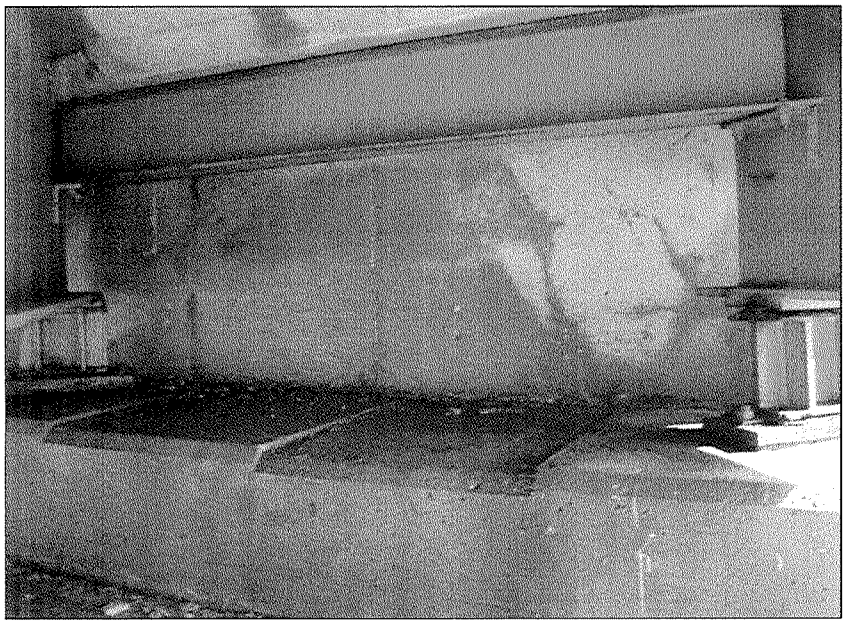
East Abutment Fascia

East Abutment backwall

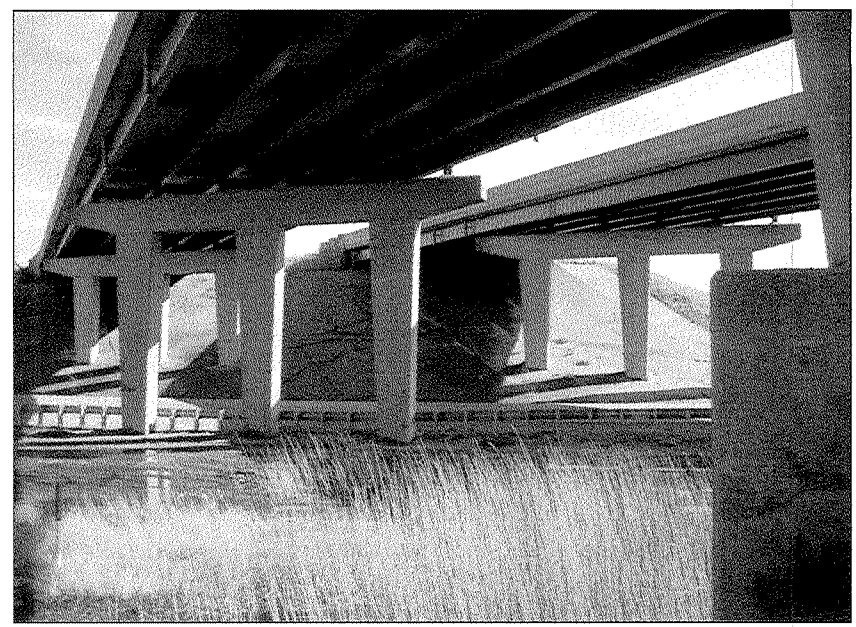
East Abutment backwall

East Abutment backwall

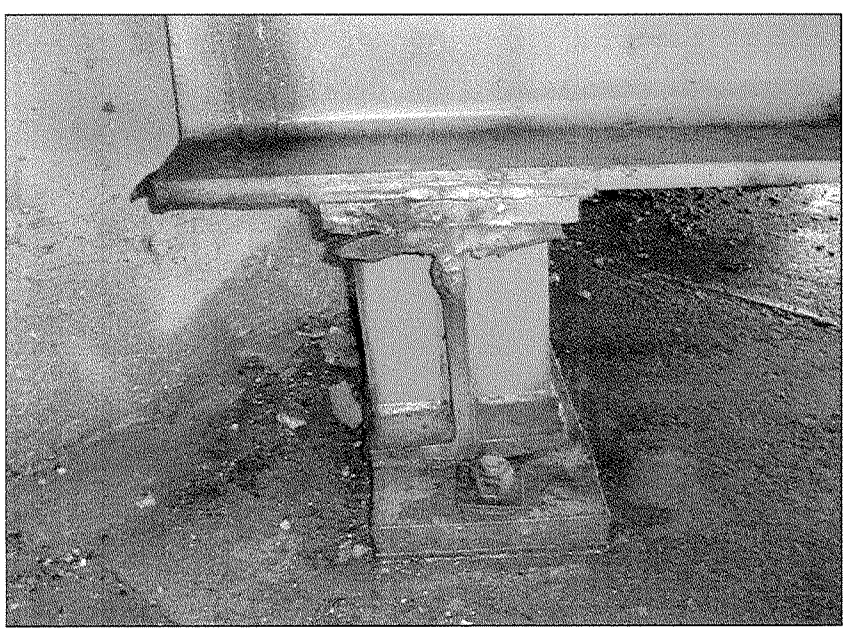
East Abutment backwall



East Abutment backwall

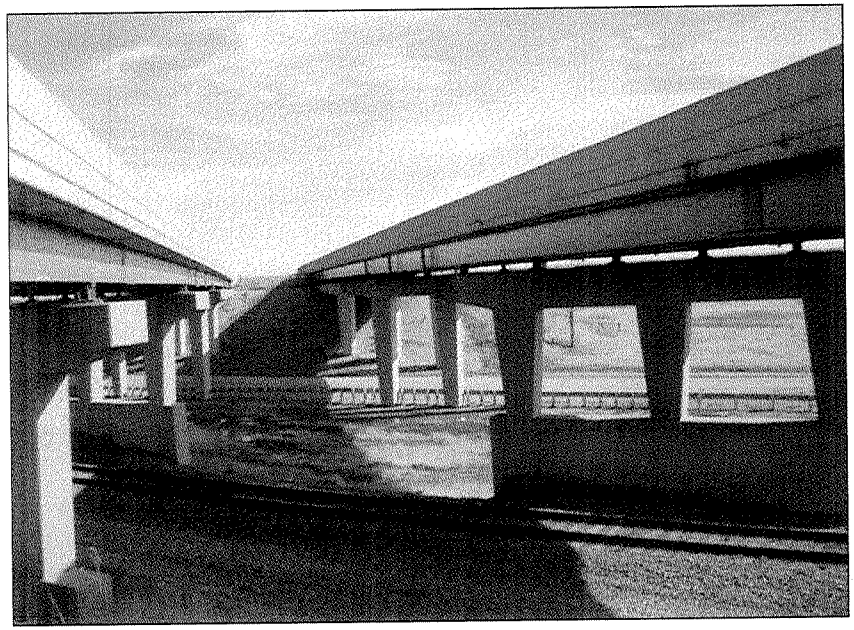


East Pier & Slopewall looking east



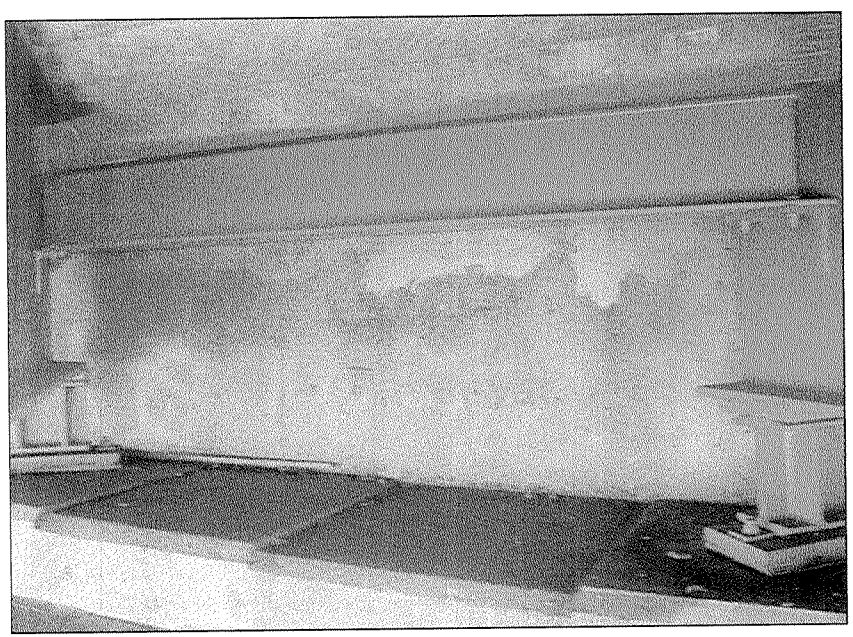
Bearing Typical

Bearing Typical



Center Median looking east

West Abutment backwall

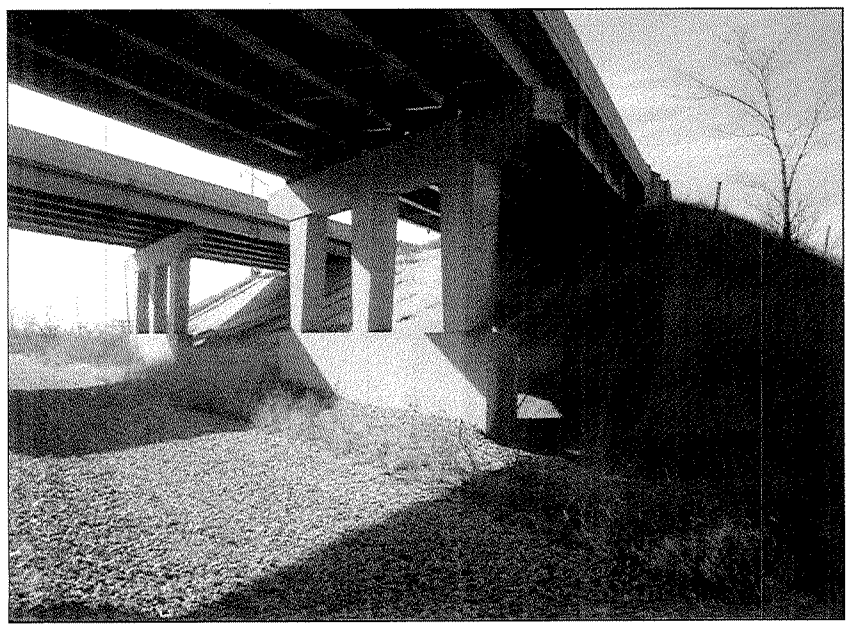


West Abutment backwall

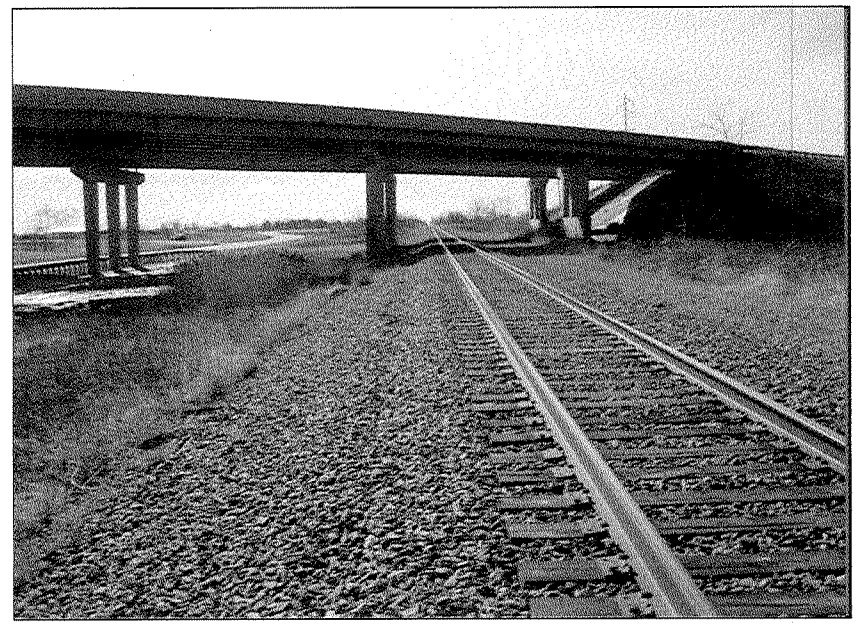
West Abutment backwall

West Abutment backwall

West Abutment backwall



West Piers & Slopewall looking west

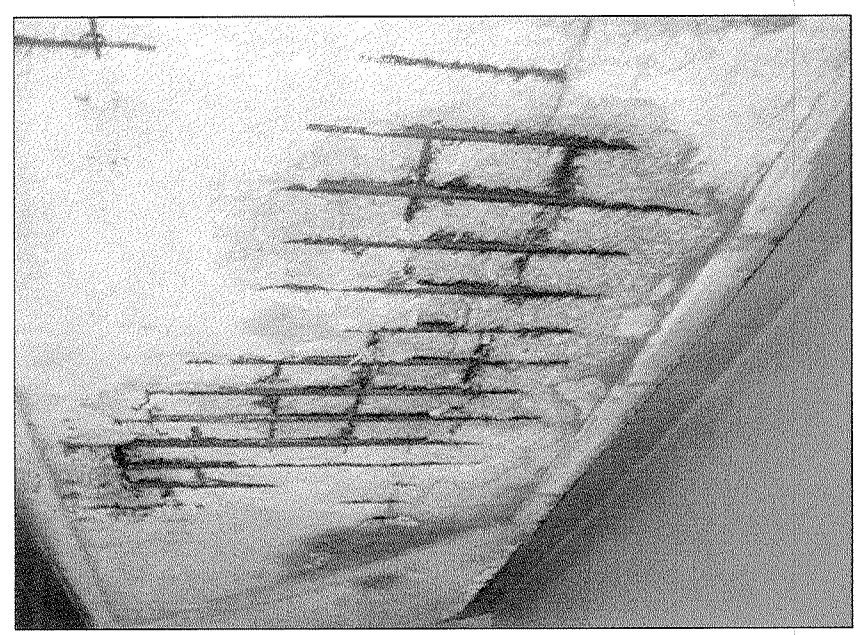


Railroad tracks looking south

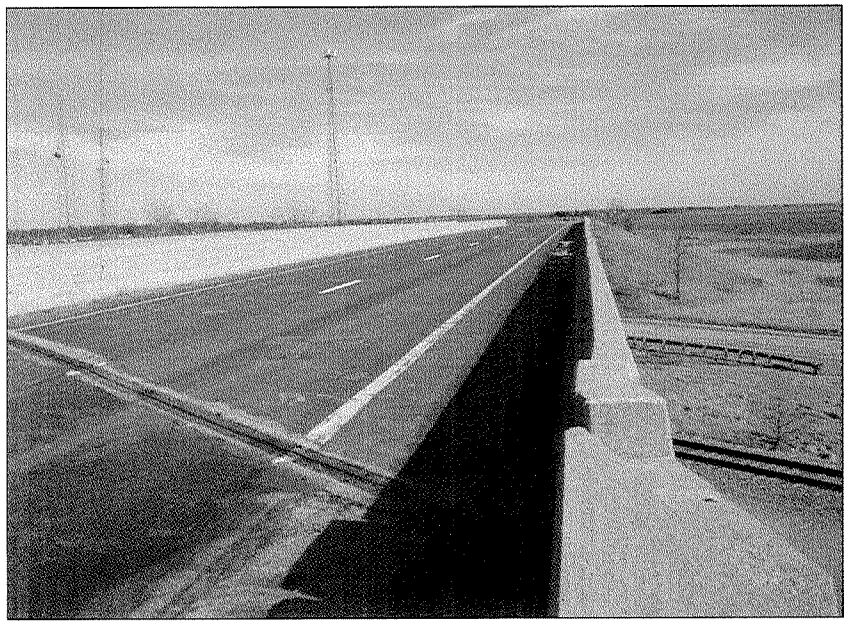
Under deck typical

Longitudinal joint typical

Under deck typical



Under deck typical

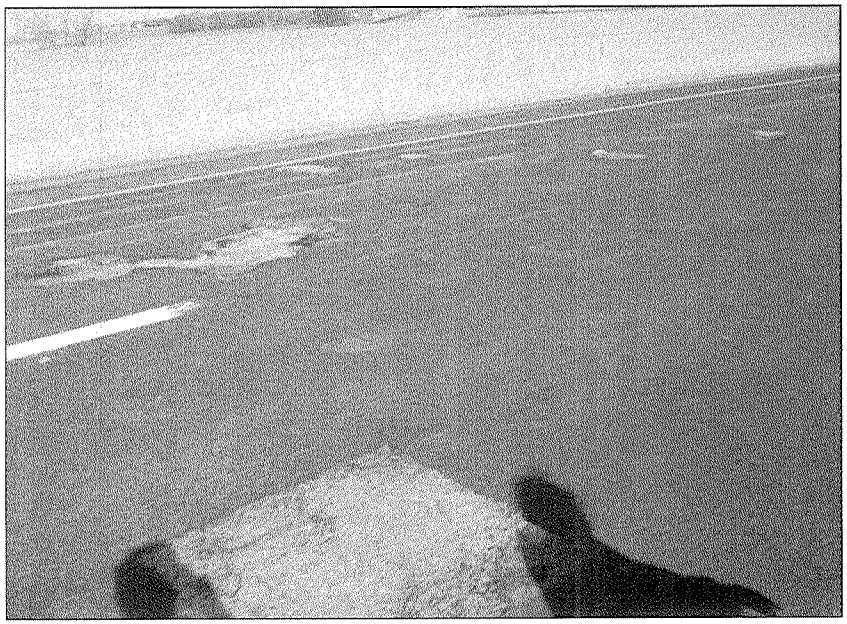


Bridge Deck looking northbound

Bridge deck

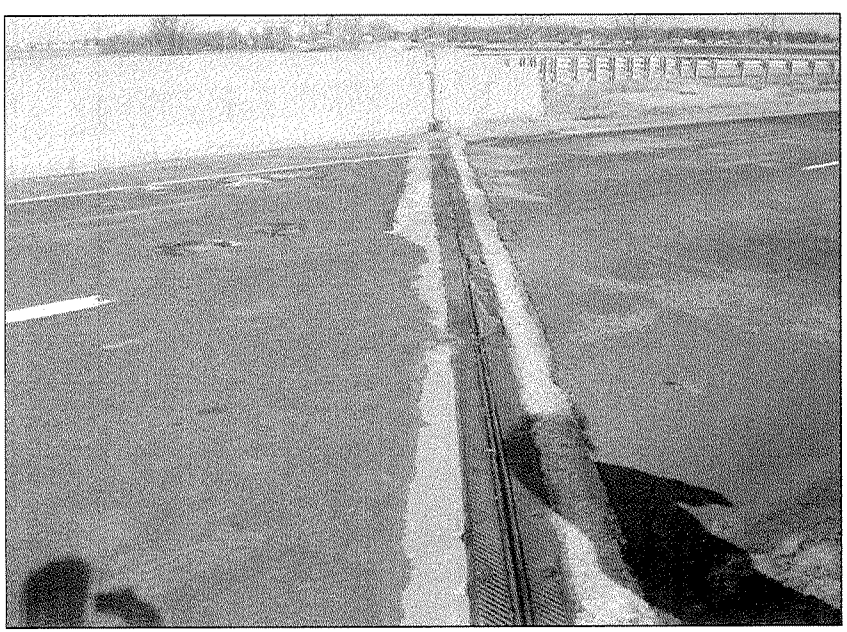
Bridge deck

Bridge deck



Bridge deck

Bridge deck



North expansion joint

Parapet/Wingwall detail

EXHIBIT 3:

BRIDGE INSPECTIONS

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS STRUCTURE INFORMATION SYSTEM
MASTER REPORT
INVENTORY DATA

STRUCTURE NUMBER: 038 - 0013 DIST: 3

FACILITY CARRIED: FAI-57 NB
FEATURE CROSSED: FAS 317 & ICG RR
BRIDGE REMARKS: SBI 25 IN THIS VICINITY IS NOW NAMED FAS 317.
BRIDGE STATUS: OPEN - NO RESTRICT
STATUS REMARKS:
MAINT COUNTY: IROQUOIS MAINT TOWNSHIP: CHEBANSE
MAINT RESPONSIBILITY: I.D.O.T.
SERVICE ON/UNDER: HIGHWAY / HIGHWAY-RAILROAD

REPORTING AGENCY: I.D.O.T. - BUREAU OF MAINTENANCE
MAIN SPAN MAT"L/TYPE: STEEL CONTINUOUS / STRINGER/MULTI-BEAM/GIRDER
NUMBER OF SPANS: (MAIN SPANS) - 05 (APPROACH SPANS) - 00
*** APPROACHES ***
NEAR #1 MAT"L/TYPE: /
NEAR #2 MAT"L/TYPE: /
FAR #1 MAT"L/TYPE: /
FAR #2 MAT"L/TYPE: /
MEDIAN WIDTH/TYPE: 00 FT. NONE RATED BY: IDOT RATING METHOD: LOAD FACTOR
GUARDRAILS L/R: NONE NONE INVENTORY RATING: HS 22.7 (241) RATING DATE: 05/18/2005
TOLL FACILITY: NO TOLL OPERATING RATING: HS 37.9 (268)
LATITUDE: 40 D 55 M 17.18 S LONGITUDE: 87 D 56 M 21.88 S DESIGN LOAD: HS20+MOD

BRIDGE NAME:
LOCATION: 0.78 MI S CLIFTON IN
BRIDGE STATUS DATE: 04 / 1988

SUFFICIENCY RATING: 078.5
HBRRP ELIGIBLE: NO
STRUCTURALLY DEFICIENT: N
FUNCTIONALLY OBSOLETE: N
REPLACED BY: 000 - 0000
REPLACES: 000 - 0000
LAST UPDATE DATE: 04/03/2009
PARALLEL STRUCTURE: RIGHT
MULTI-LEVEL STRUC NUMBER:
SKEW DIR: LEFT
SKEW ANGLE: 42 00 00
STRUCTURE FLARED: NO
HISTORICAL SIGNIFICANCE: NO
BORDER BRIDGE STATE:
BDR STATE SN:
BDR STATE % RESPONSIBILITY: 00

STRUCTURE LENGTH:	374.0	SIDEWALKS UNDER STRUCTURE: NONE			
AASHTO BRIDGE LENGTH:	99.9	SIDEWALK WIDTH RIGHT:	0.0	CULVERT FILL DEPTH:	0.0
LENGTH OF LONG SPAN:	96.0	SIDEWALK WIDTH LEFT:	0.0	CULVERT CELLS(COUNT):	0
BRIDGE ROADWAY WIDTH:	34.0	NAVIGATION CONTROL:	N/A	CULVERT OPENING AREA:	0.0
APPR ROADWAY WIDTH:	38.0	NAVIGATION HORZ CLEAR:	0000	CULVERT CELL HEIGHT:	0.00
DECK WIDTH:	36.9	NAVIGATION VERT CLEAR:	000	CULVERT CELL WIDTH:	0.00
DECK STRUCTURE TYPE: CIP CON NRMLLY FORM		DECK STRUCTURE THICKNESS:	0.0		

STRUCTURAL STEEL WT: 000415600
SUBSTRUCTURE MATERIAL:
*** RAILROAD CROSSING INFO ***
CROSSING 1 NBR: 288972S
CROSSING 2 NBR:
RR LATERAL UNDERCLEAR: 13.9
RR VERT UNDERCLEAR: 22 FT 07 IN

*** KEY ROUTE ON DATA ***

KEY ROUTE NBR: FEDERAL-AID INTERSTATE 0057 STATION: 32.34
APPURTENANCES: MAIN ROUTE 0.000 SEGMENT:
INVENTORY COUNTY: IROQUOIS LINKED: YES
TOWNSHIP/ROAD DIST: CHEBANSE
MUNICIPALITY:
URBAN AREA:
FUNCTIONAL CLASS: INTERSTATE, FAI
NATIONAL HWY SYSTEM: ON
INVENTORY DIRECTION: NORTH
ADT YR/COUNT: 2007 / 008250
TRUCK PERCENTAGE: 30
NUMBER OF LANES: 02
ONE OR TWO WAY: ONE-WAY
BYPASS LENGTH: 01
FUTURE ADT YR/COUNT: 2027 / 28500
DESIGNATED TRUCK ROUTE: CLASS 1
SPECIAL SYSTEMS: YES

** CLEARANCES **	SOUTH/EAST	NORTH/WEST
MAX. RDWY WIDTH:	34.0 FT	
HORIZONTAL:	35.5 FT	0.0 FT
MIN VERTICAL:	99 FT 11 IN	00 FT 00 IN
10 FT VERTICAL:	99 FT 11 IN	00 FT 00 IN
LATERAL:		

*** KEY ROUTE UNDER DATA ***

FEDERAL-AID SECONDARY 0317 STATION: 0.54
MAIN ROUTE 0.000 SEGMENT:
IROQUOIS LINKED: YES
CHEBANSE

MAJOR COLLECTOR (RURAL)
NATIONAL HWY SYSTEM: NOT ON
INVENTORY DIRECTION:
ADT YR/COUNT: 2008 / 002600
TRUCK PERCENTAGE: 12
NUMBER OF LANES: 02
ONE OR TWO WAY: TWO-WAY
BYPASS LENGTH: 01
FUTURE ADT YR/COUNT: 2027 / 4600
DESIGNATED TRUCK ROUTE: NO
SPECIAL SYSTEMS: NO

	SOUTH/EAST	NORTH/WEST
	0.0 FT	
	52.1 FT	53.0 FT
	25 FT 05 IN	00 FT 00 IN
	25 FT 05 IN	00 FT 00 IN
	10.8 FT	0.0 FT

*** MARKED ROUTE ON DATA ***

	DESIGNATION	KIND	NUMBER
ROUTE #1	MAINLINE	INTERSTATE	0057
ROUTE #2			
ROUTE #3			

*** MARKED ROUTE UNDER DATA ***

DESIGNATION	KIND	NUMBER
MAINLINE	FAS,COUNTY,OR TOWNSHIP	0317

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS STRUCTURE INFORMATION SYSTEM
MASTER REPORT
INSPECTION/IMPROVEMENT DATA

STRUCTURE NUMBER: 038 - 0013 DIST: 3

* * * D A T A R E L A T E D T O I N S P E C T I O N I N F O R M A T I O N * * *

*** INSPECTION INTERVALS ***
ROUTINE NBIS: 24 MOS UNDERWATER: 00 MOS
FRACTURE CRITICAL: 00 MOS

*** MAXIMUM ALLOWABLE POSTING LIMITS ***
ONE TRUCK AT A TIME:
SINGLE UNIT VEHICLES: TONS
BRIDGE POSTING LEVEL: NO POSTING REQUIRED
COMBINATION TYPE 3S-1: TONS
COMBINATION TYPE 3S-2: TONS

* * * I N S P E C T I O N / A P P R A I S A L I N F O R M A T I O N * * *

INSPECTION DATE 03/03/2009 SPEC FEAT INV TYPES:
INSPECTION TEMPERATURE: +25 DEG. F.
DECK: 5 FAIR CONDITION - MINOR SECTION LOSS, CRACKS
BRIDGE RAILING APPRAISAL: 3 MEETS STANDARDS
APPROACH GUARDRAIL: 3 3 2 ACCEPTABLE ACCEPTABLE NOT ACCEPTABLE
SUPERSTRUCTURE: 5 FAIR CONDITION - MINOR SECTION LOSS, CRACKS
SUBSTRUCTURE: 6 SATISFACTORY CONDITION - MINOR DETERIORATION
CHANNEL AND PROTECTION: N NOT APPLICABLE
CULVERT: N NOT APPLICABLE
STRUCTURAL EVALUATION: 5 BETTER THAN ADEQUATE TO BE LEFT IN PLACE
DECK GEOMETRY: 4 MINIMUM ADEQUACY TO BE LEFT IN PLACE
UNDERCLEARANCE-VERT,LAT: 6 EQUAL TO PRESENT MINIMUM CRITERIA
WATERWAY ADEQUACY: N NOT APPLICABLE
APPROACH RDWY ALIGN: 8 EQUAL TO PRESENT DESIRABLE CRITERIA
PIER NAVIG PROTECTION: N N/A

*** ACTUAL POSTED LIMITS ***
SINGLE UNIT VEHICLES: TONS
COMBINATION TYPE 3S-1: TONS
COMBINATION TYPE 3S-2: TONS
POSTED ONE TRUCK AT A TIME:

UTILITIES ATTACHED:

DECK WEARING SURFACE: EPOXY OVERLAY
DECK MEMBRANE: NONE
DECK PROTECTION: EPOXY COATED REINF
TOTAL DECK THICKNESS: 09.0 IN

LAST PAINT DATE 10/1999 LAST PAINT TYPE FLD AL EPY & ACRLC LD FLD GRN&AL FNL

INSPECTED BY (NAME1): KEENERDL INSPECTED BY (NAME2): PARSONSAD
INSPECTION REMARKS: 2008 MORE POTHOLES ON WEARING SURFACE. GUARDRAIL/CURB UPGRADES. 2009 DELAMS W/E EXP REBAR ALONG CONST JT NEW APPR PAVEMENT @ BOTH ENDS, DECK HAS POTHOLES IN WE ARING SURFACE. LIGHT RUST IN BEAM ENDS & BOTTOM FLANGE & BEARINGS.

* * * U N D E R W A T E R I N S P E C T I O N / A P P R A I S A L I N F O R M A T I O N * * *

INSPECTION DATE: 00/00/0000 INSPECTION CATEGORY:
TEMPERATURE: +0 F. INSPECTION METHOD:
INSPECTED BY (NAME1): INSPECTED BY (NAME2):
APPRAISAL RATING:
INSPECTION REMARKS:

* * * S C O U R C R I T I C A L I N F O R M A T I O N * * *

APPRAISAL RATING: EVALUATION METHOD:
ANALYSIS DATE: 00/00/0000 ANALYSIS BY (NAME):

* * * * * M I S C E L L A N E O U S * * * * *

FRAC CRIT: NO INSP. DATE: / / APPR:
MICROFILM: YES

*** C O N S T R U C T I O N I N F O R M A T I O N ***

YEAR: 1966 ORIGINAL 0000 RECONSTRUCTED
ROUTE: FAI-57 STA: 1037+61.38 STA:
SECTION NBR: 38-2HVB
CONTRACT NBR:
FED AID PR #: I-IG0576039297
BUILT BY: I.D.O.T.

*** W A T E R W A Y I N F O R M A T I O N ***

FLOOD DESIGN FREQUENCY: 000 YRS DRAINAGE AREA: 00000000.0 ACRE
FLOOD DESIGN Q (CFS): 0000000
FLOOD DESIGN NAT H W E: 0.00 FLOOD BASE Q (C F S): 0000000
FLOOD DES OPEN PROP: 0000000 SF FLOOD BASE NAT H W E: 0.00

* * * P R O P O S E D I M P R O V E M E N T S * * *

COST ESTIMATE YEAR: 0000 LENGTH: 000000
TYPE OF WORK:
DONE BY:
REMARKS:

*** COSTS IN DOLLARS ***
BRIDGE IMPROVEMENT COST: $ 0
ROADWAY IMPROVEMENT COST: $ 0
TOTAL PROJECT COST: $ 0

Illinois Department of Transportation

Printed 03/28/2008

Element Level Field Inspection Report

SN: 0380013 **District:** 3 **Spans:** 5 **Appr. Spans:** 0 **Skew:** 42 **ADT:** 16500 **Truck Pct:** 30 **ADT Un:** 11

Facility Carried: FAI-57 NB **Name:**

Feature Crossed: FAS 317 & ICG RR **Location:** 0.78 MI S CLIFTON IN

Inspection Date: 03/04/2008 3/3/09 **Inspection Notes:**

Inspector 1: KEENERDL KEENER

Inspector 2: RUTLEDGEKS PRESINS **Temp:** 25 25°

Resources

Time to Insp:	1:30	Trffc Ctrl:		Boat:		Waders:		Snooper:	
		Ladder:		Manlift:		Other:			

Inspector's Appraisals

Elem	Element Desc	Env	Quantity	Un	CS1	CS2	CS3	CS4	CS5
18	Concrete Deck Protected w/ Thin Overlay	4	13300	SF	11800 11800	100 100	650 650	550 550	200 200
	Remarks:								
107	Lead Painted Steel Open Girder	4	23367	SF	22067 22067	700 700	600 600	0	0
	Remarks:								
172	Lead Painted Steel Closed Web/Box Girder and Open	4	12	EA	7 7	5 5	0	0	0
	Remarks:								
205	Reinforced Conc Column or Pile Extension	1	2855	SF	2855 2855	0	0	0	0
	Remarks:								
210	Reinforced Conc Pier Wall	1	5602	SF	5597 5597	5 5	0	0	0
	Remarks:								
215	Reinforced Conc Abutment	1	1121	SF	1049 1049	72 72	0	0	0
	Remarks:								

Illinois Department of Transportation

Printed 03/28/2008

Element Level Field Inspection Report

SN: 0380013 **District:** 3 **Spans:** 5 **Appr. Spans:** 0 **Skew:** 42 **ADT:** 16500 **Truck Pct:** 30 **ADT Un:** 11

234	Reinforced Conc Pier or Abutment Cap	1	294	LF	279 314	15 15	0	0	0
	Remarks:								
307	Neoprene Expansion Joint	3	96	LF	0	88 88	8 8	0	0
	Remarks:								
311	Moveable Steel Bearings below discontinuous deck j	4	12	EA	0	7 7	5 5	0	0
	Remarks:								
313	Fixed Bearing	4	6	EA	5 5	1 1	0	0	0
	Remarks:								
316	Moveable Steel Bearings below continuous decks	4	18	EA	4 4	14 14	0	0	0
	Remarks:								
323	Approach Pavement	3	2	EA	0 2	0	2	0	0
	Remarks: OVERLAY 2006								
331	Concrete Bridge Railing	3	739	LF	714 714	25 25	0	0	0
	Remarks:								
406	Steel Open Girder	4	4	LF	4 4	0	0	0	0
	Remarks:								

Inspected By: KLEENER & DARSINS

of Transportation

Bridge Inspection Report (MI)

Structure Number: 038-0013 Maintenance County: Iroquois

90 – Insp. Date	90A – Insp. Team Leader/Qualification		Temp.
3/4/2008	KEENER + RUTLEDGE	1	28°
3/3/2009	KEENER + PARSONS	1	
/ /		1	
/ /		1	
/ /		1	

Township:
Municipality:
Fac Carried: FAI 57 NB
Feat Crossed: SBS-25 + ICG RR
Location: 0.78 mi S. Clifton IN
Mat/Type/# Span: 5

Bridge Inspection Year: 08 09

Team Sect. – Sub-Sect: –

	Appraisals		Comments (All comments must be dated.)
Deck			
58 - Deck Condition:	6	5	
Wearing Surface	2	2	
Parapets / Bridge Railings:	3	3	
Curbs:	–	–	
Median:	–	–	
Sidewalks:	–	–	
Drain System:	4	4	
Light Standards:	–	–	
Expansion Joints:	2	2	Openings (In.):
Superstructure			
59 - Superstructure Cond:	6	5	
Bearing Devices:	3	3-	08' Rusty
Girders / Beams / Stringers:	3	3	
Diaphragms / Braces:	4	4	
Trusses / Portals / Bracing:	–	–	
Rivets / Bolts:	3	3	
Paint:	3	3	
Substructure			
60 - Substructure Cond:	6	6	
Abutments: Stem / Columns / Piles:	–	–	
Abutments: Caps:	–	–	
Abutments: Bearing Seats:	3+	3+	
Abutments: Backwalls:	3	3	
Abutments: Wingwalls:	3	3	
Piers: Stem / Columns / Piles:	4	4	
Piers: Caps:	4	4	
Piers: Bearing Seats:	3	3	
Piers: Crash Walls:	4	4	
Fender Systems:	–	–	
Paint:	–	–	

Bridge Inspection Report

Structure Number: 038-0013

Bridge Inspection Year: 08 | 09

	Appraisals		Comments (All comments must be dated.)
Culvert			
62 – Culvert Condition	N	N	
Top Slab / Soffit:			
Side Walls / Arch:			
Bottom:			
Headwalls:			
Wingwalls:			
Waterway and Channel			
61 - Channel Condition:	N	N	
Streambed:	–	–	
Slope Walls & Rip-Rap:	3	3	08' N. BROKE PUMPING WATER
Stream Banks:	–	–	
Spur Dykes & Jetties:	–	–	
71 – Waterway Adequacy:	N	N	
Approach Roadway			
72 – Appr. Rdwy Alignment:	8	8	
Riding Quality:	2	4	09' NEW APPROACHES IN 08
Structural Condition:	3	3	
Relief Joints:	2+	2+	
Navigable Waterways			
111 – Pier Navig. Protect'n:	N	N	

Inspection Remarks

Year	Item 90B – Inspection Remarks (237 characters maximum.)
2008	SAME AS PREVIOUS., MORE potholes ON WEARING SURFACE,
2009	DELAMS & EXPOSED REBAR ALONG CONST. JOINTS, NEW APPROACH PAINT AT BOTH ENDS, PAINT RIGHT RUSTING, DECK HAS POTHOLES IN WEAR SURFACE REST SAME
20	
20	
20	

Structure Number: 038-0013

Additional Inspection Data

36A – Bridge Railing Adequacy: 3 | Rail Types: 5 7

Approach Guardrail Adequacy: 36B – Transitions: 3 | 36C – Guardrail: 3 | 36D – Ends: 2

108A – Wearing Surface Type: M | 108B – Type of Membrane: F | 108C – Deck Protection: A

108D – Total Deck Thickness (In.): (7"+2") 9"

59A – Paint Date (Mo/Yr): 10/99 CODE U OVER CODE E

59B – Paint Systems: U - - - Color: Fascia – GRN Inter. – ALM Railing – ___.

59C – Utilities Attached: N - N - N

Weight Limit Posting

70A2 – Single Unit Vehicles: T. Combinations: 70B2 – 3 or 4 Axle: T. 70C2 – 5 or More Axle: T.

70D2 – One Truck at a Time:

Inspection Resource Needs	Time to Inspect (H:M): 1:30	Traffic Control: Y	W2-B2		
Equipment:	Boat–	Waders–	Snooper–	Manlift–	
	Ladder–	Short	Medium	Tall	Other–

93C – Special Inspection Date:	/ /	/ /	/ /	/ /	/ /

Signature Block

	Signature	Date	Unit Supervisor Initials - Date
Inspection Team Leader	[signature]	3-4-08	
	[signature]	3/3/09	

Additional Comments:

08' 06-07' GUARDRAIL/CURB SAFETY UPGRADES.

(Continue comments on page 4)

EXHIBIT 4:

MICROFILM PLANS

FEDERAL AID ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-57	38-2HVB	IROQUOIS	31	1

I-IG-57-6(39)297

P-93-009-00

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY

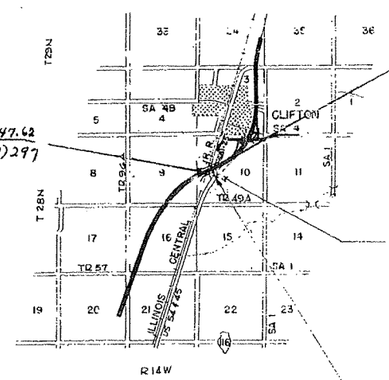
SCALES

PLAN	1 INCH	100 FT
PROFILE HOR.	1 INCH	100 FT
PROFILE, VERT	1 INCH	10 FT
CROSS SECTIONS	1 INCH	5 FT

F.A.I. ROUTE 57 SECTION 38-2HVB IROQUOIS COUNTY
PROJECT I-IG-57-6(39) 297
C-93-197-64

LOCATION OF SECTION INDICATED THUS:—

HIGHWAY CLASSIFICATION:
C.H. RT 4 - DHV 363-M-50-1985
FAI RT 57 - DHV 1800-T-70-1985



STATION 1035+75.13
PROJECT I-57-6(39)297
BEGINS

STATION 1039+47.62
PROJECT I-57-6(39)297
ENDS

SECTION 38-2HVB: INCLUDES A DUAL 5-SPAN WF-BEAM RAILROAD GRADE SEPARATION STRUCTURE CARRYING FAI ROUTE 57 OVER TWO TRACKS OF THE I.C.R.R. AND S.B.I. RT. 25 SPANS, 2 @ 62'-2", 2 @ 73'-5", AND 1 @ 95'-10" (2 ROADWAYS @ 30'-0" AND 4 S.W. @ 2'-0" EA.) SUPPORTED BY R.C. PIERS AND OPEN R.C. ABUTMENTS. BACK TO BACK OF ABUTMENTS - 373'-10". ALSO INCLUDES EMBANKMENT CONES WITH CONC SLOPEWALLS AND A R.C. RETAINING WALL.

SIGN STD. 2153-4

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

SUBMITTED 3-24 ,65
Emily G. Lewis
DISTRICT ENGINEER

EXAMINED May 14 ,65
A. U. Von Nida
ENGINEER OF BRIDGES AND STRUCTURES

PASSED May 14 ,65
H. C. Allen
ENGINEER OF DESIGN

APPROVED May 14 ,65
CHIEF HIGHWAY ENGINEER

APPROVED May 14 ,65
Francis D. Barry
DIRECTOR

NET LENGTH OF IMPROVEMENT = 372.49 FT. = 0.0718 MILE
NET LENGTH OF PROJECT = 372.49 FT. = 0.0718 MILE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

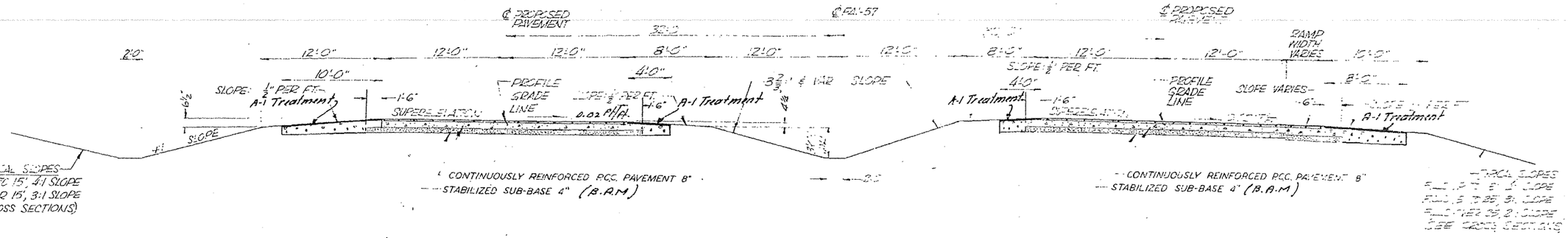
DIVISION ENGINEER DATE

CONTRACT NO. 24195

IROQUOIS COUNTY SECTION 38-2HVB F. A. ROUTE 57

FAI-57	38-2HVB	IROQUOIS	31	2

SECTION (7)



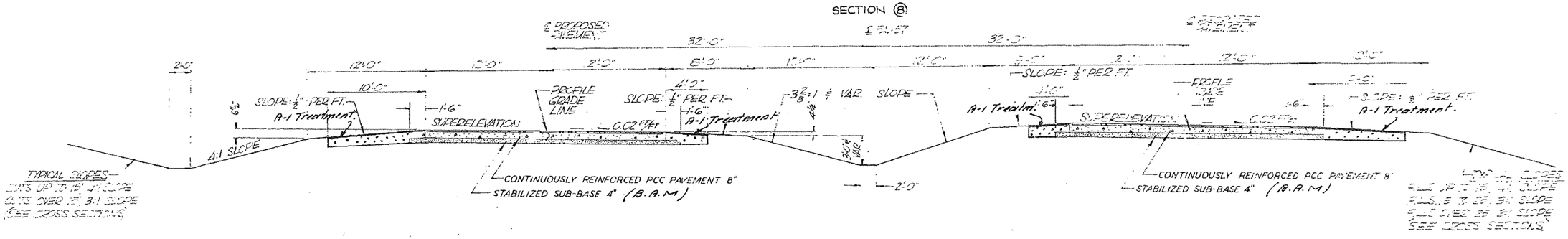
TYPICAL SECTION FAI-57
SUPERELEVATED TO RIGHT

SCALE: 1" = 5'

STA. 1016 + 19.44 TO STA. 1020 + 69.00

(FOR INFORMATION ONLY)

SECTION (8)



TYPICAL SECTION FAI-57
SUPERELEVATED TO RIGHT

SCALE: 1" = 5'

STA. 1020 + 69.00 TO STA. 1033 + 17.77

TRANSITION FROM SECTION (8) AT STA. 1033 + 17.77 TO SECTION (10) AT STA. 1035 + 17.77

(FOR INFORMATION ONLY)

PROPOSED TYPICAL SECTIONS
FAI-57

FAI-57
SECTION 38-2HVB IROQUOIS CO.

FILAN	SURVEYED		DATE
	PLOTTED		
	ALIGNMENT CHECKED		
NOTE BOOK	RT. OF WAY CHECKED		
NO.			

FOR INFORMATION ONLY

ROUTE NO.	SHEET NO.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-57	38-2H/B	IROQUOIS	31	4
STA. 1031+00		TO STA. 1062+00		

REF. ℄ STA. 1036+85.34
30" ASH
51.88
1037 ℄ FAI-57
1036
71.48
NAIL & BOTTLE CAP

REF. ℄ P.O.T. STA. 1038+19.00
86.05'
1039
℄ FAI-57
CIRBAPPLE

REF. ℄ P.O.T. STA. 1039+31.00
℄ FAI-57
1039
1040
HUB W/TACK

STEEL PL. BEAM GD RAIL
STA. 1035+38 TO STA. 1035+56
25 LIN. FT.

HARLAND F. BEARDSLEE,
EMMA J. BOOI,
MARIE R. BEARDSLEE &
HENRY W. BEARDSLEE

BRIDGE APPROACH SLABS STD 2138-2 METHOD II
N.B. LANE STA 1035+53.00 TO STA 1036+03.67
AND STA 1039+76.00 TO STA 1040+26.67
S.B. LANE STA 1034+96.10 TO 1035+46.77
AND STA 1039+19.10 TO 1039+69.77
CLASS "X" CONCRETE = 9.0 CU. YDS.
REINF. BARS = 34,632 LBS.
P.C.C. PAVEMENT 16½"-12"-16½" = 540.48 SQ. YDS.

EXIST. RTS 45 & 54
18" CMP
GRAVEL DRIVE
ASPHALT
BELL TELE CO.
W.U.T. CO.
(REMOVE & RELAY) 15" X 24' C.M.P. FROM STA. 50+25
Project I-IG-57-6(39)297
Begin: Sta. 1035+15.13
End: Sta. 1039+47.62
NOTE: FOR CURVE DATA SEE SHEET 23
EXIST. FIELD ENTR. (REMOVE ENTR.) 15" C.M.P.
EX. R.O.W.
ILLINOIS CENTRAL
PUBLIC SERVICE CO.
FOR PLAN & PROFILE OF SBI-25 RELOCATION SEE SHEET NO. 33
NOTE: FOR CURVE DATA SEE SHEET 25
SOD. MED. STA. 1042+20.00 TO STA. 1054+00.00
1627 SQ. YDS.
CULTIVATED FIELD
SECTION LINE
P.C. STA. 1043+84.28
STEEL PL. BEAM GD RAIL
L.T. STA. 1040+00 TO STA. 1050+00
1,000 LIN. FT.
418' W.W.F.
R.O.W. & A.C. LINE
P.O.T. STA. 1038+28.9 ℄ N.B. TRACK
STEEL PL. BEAM GD RAIL
STA. 1039+66 TO STA. 1039+84
25 LIN. FT.
885' W.W.F.
INV. 659.80
102' W.W.F.
R.O.W. & A.C. LINE
1090' W.W.F.
INV. 663.60
INV. 663.80
INV. 664.30
INV. 664.10
1120' W.W.F. 55
℄ R.O.W. & A.C. LINE
INV. 663.10
INV. 659.70
1130' W.W.F.
CULTIVATED FIELD
(BY OTHERS) FIELD INSPECTION TILE SEE DETAIL SHEET NO. 48 (SEE SPECIAL PROVISIONS)
BEGIN 40' TO 64' MEDIAN TRANSITION AT STA. 1043+84.28 - FOR CURVE DATA, SEE SHEET 25
70' W.W.F.
CULTIVATED FIELD
250' W.W.F.
R.O.W. & A.C. LINE
U.E. GLEASON, JOHN H. GLEASON, EVELYN JACKSON, CURTIS GLEASON, JO ANN GLEASON, BARBARA GLEASON HILL
EX. R.O.W.
P.O.T. STA. 1036+86.74 ℄ FAI-57
P.O.T. STA. 1037+00 ℄ SBI-25
P.O.T. STA. 1036+32.5 ℄ N.B. TRACK
℄ R.R. STA. 15565+35.7
R.R. MILEPOST 70
R.R. STA. 15564+03.3
R.R. ROW.
ILLINOIS CENTRAL R.R.
EXIST. SBI-25
CONC. SAVT.
P.C. STA. 1033+84.28
EDITH A. HARGREAVES, A SPINSTER
NOTE: Quantities for Sect. 38-2H/B are based in.
SODDING LT. & RT. STA. 1029+00.00 TO STA. 1048+00.00
1,941 SQ. YDS.
SEC 10 T28N R14W 2PM
ANCHORED ENDS SEE STANDARD NO. 2224 FOR DETAILS
SEC 9 T28N R14W 2PM
(BY OTHERS) PIPE CULVERT (267.54) TYPE 1A RCCP STA 1056+00 — 2 HDWLS STD. 1976 D-24-2
CLASS "X" CONC. = 2.0 CU. YDS.
REINF. BARS = 70 LBS.
SOD = 4 SQ. YDS.
(BY OTHERS) INLET STD 125BR ℄ STA 1050+00 R = 672.91 INV = 666.00
(BY OTHERS) STEEL PL. BEAM GD RAIL R.T. STA. 1039+11 TO STA. 1050+11
1,100 LIN. FT.
(BY OTHERS) PIPE CULVERT (363.216) TYPE 5A RCCP STA 1047+00 — 2 HDWLS STD. 1976 D-36-2
CLASS "X" CONC. = 3.5 CU. YDS.
REINF. BARS = 100 LBS.
SOD = 6 SQ. YDS.
(BY OTHERS) PIPE CULVERT (265.100) TYPE 2A RCCP STA 1050+00 — 1 HDWL STD. 1976 D-24-2
CLASS "X" CONC. = 1.0 CU. YDS.
REINF. BARS = 35 LBS.
SOD = 2 SQ. YDS.
ESTELLA E. STEVENS IN TESTATE
(BY OTHERS) PIPE CULVERT (267.52) TYPE 1A RCCP STA 1056+00 — 2 HDWLS STD. 1976 D-24-2
CLASS "X" CONC. = 2.0 CU. YDS.
REINF. BARS = 70 LBS.
SOD = 4 SQ. YDS.
PERMANENT SURVEY MARKERS (BY OTHERS)
STA 1033+84.44 ON ℄
STA 1043+84.28 ON ℄
STA 1060+00 ON ℄

PROFILE

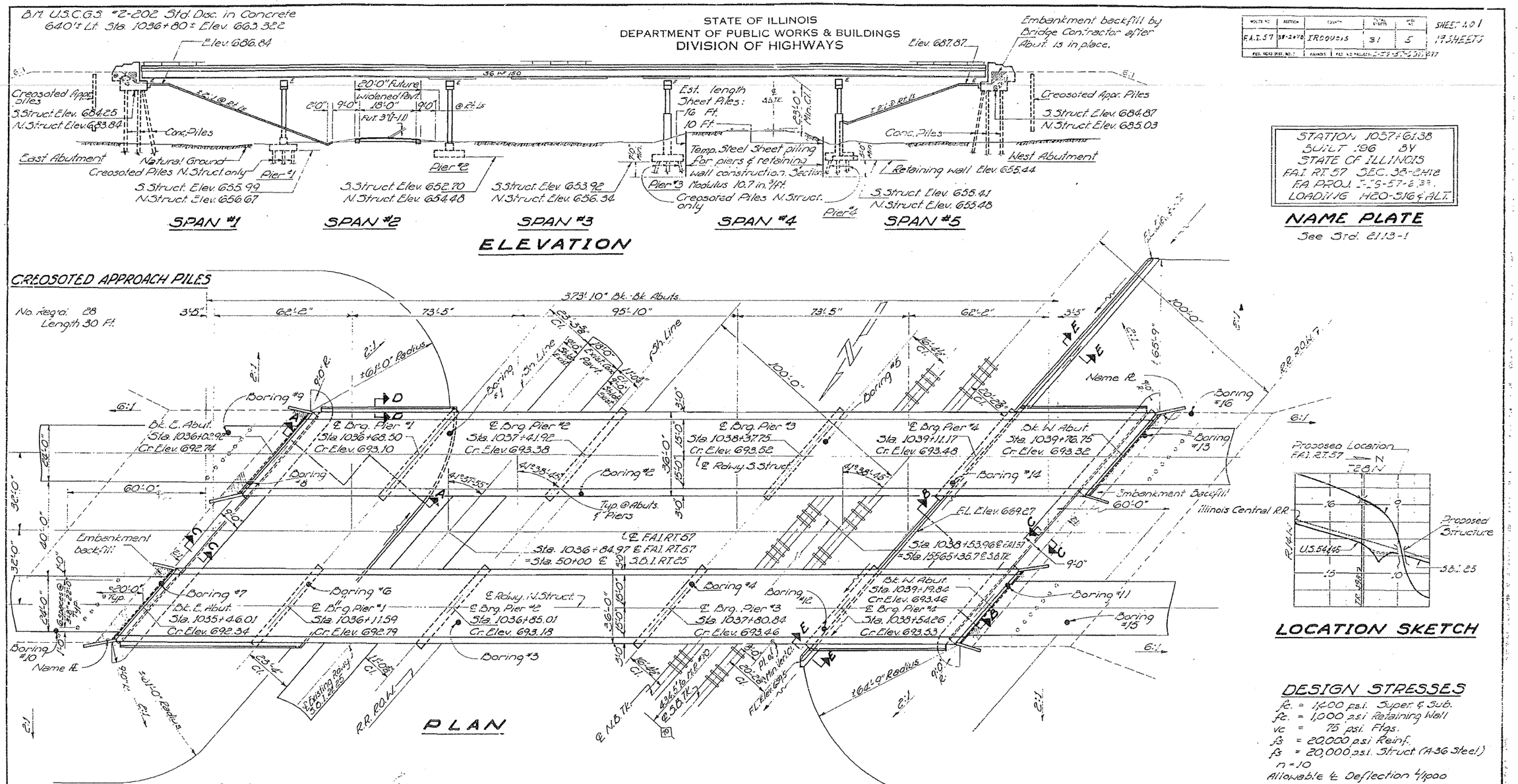
BM #16 RR SPIKE IN 36" ASH TREE 20'LT. STA. 1035+62 ELEV. 662.77
PVT STA. 1033+50.00 ELEV. 711.00 M.C. 1.48
15C68 BM. 2-202 STD. DISC IN CONC. 640' LT. STA. 1036+80 ELEV. 662.322
PROFILE TOP OF RAILS (NB TRACK)
666.20 (E. RAIL)
666.59 (W. RAIL)
PROFILE TOP OF RAILS (SB TRACK)
666.20 (E. RAIL)
666.21 (W. RAIL)
STA. 1038+53.96 ℄ FAI-57 = RR STA. 15565+35.7 (℄ SOUTHBOUND TRACK)
666.60 (E & W. RAIL)
660
15563 15564 15565 15566 15567 15568
PROFILE TOP OF RAIL
+3.00%
2330' V.C.
-3.00%
PROFILE GRADE LINE
BY OTHERS
PVC STA. 1050+28.13
PVT STA. 1055+73.13
PVT STA. 1050+15.00
530' V.C.
+0.20%
-0.47%
-0.22%
-1.00%
-0.01%
TOP OF RAIL END = 662.5
CUT = 0 CU. YD.
FILL = 38,788 CU. YD.
BORROW = 46,933 CU. YD.
CUT = 0 CU. YD.
FILL = 38,411 CU. YD.
BORROW = 47,687 CU. YD.
APPROXIMATE EXISTING SURFACE
EARTH EXCAVATION = 823 CU. YDS.
EMBANKMENT = 227,345 CU. YDS.
BORROW = 269,424 CU. YDS.
PROFILE SB DITCH (RT.)
PROFILE MEDIAN DITCH
PROFILE SB DITCH (LT.)
PVT STA. 1059+03.13 ELEV. 667.41 M.C. = 2.20'
710 700 690 680 670 660 650
1035 6 7 8 9 1040 1 2 3 4 1045 6 7 8 9 1050 1 2 3 4 1055 6 7 8 9 1060 1 2

PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD
201 FM-3 ALLFROOF FILM MADE AND PRINTED IN U. S. A.
EUGENE DIETZGEN CO., CHICAGO

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB	IROQUOIS	31	5
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET 1 of 19 SHEETS



DESIGNED	P.J. Sandor	EXAMINED	Aug 29 1963 W.E. Baumann ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
CHECKED	R.M. Gerard	PASSED	H.J. Allen ENGINEER OF DESIGN
DRAWN	A. Barraza	APPROVED	CHIEF HIGHWAY ENGINEER
CHECKED	J.M.G.		

GENERAL PLAN & ELEVATION
PROJ. I-IG-57-6(39) 297
F.A.I. RT. 57 OVER S.B.I. RT. 25 & I.C.R.R.
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

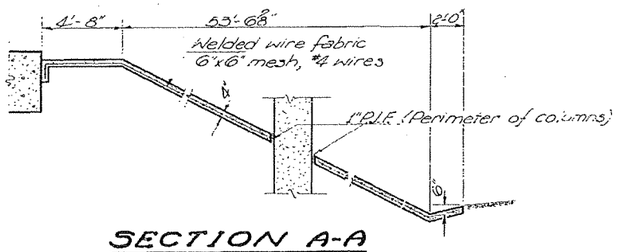
Revised 3/29/65 Sections for slope wall. Added toe wall at the Abuts., added Item Bridge Seat Sealent. In the Abut. Title & Name Plate Sec. 38-2VB chgd. to Sec. 38-2HVB.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

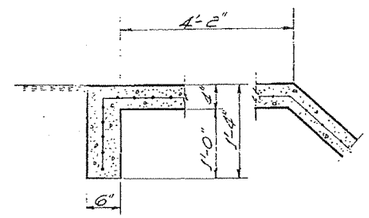
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB	IROQUOIS	21	6
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT-		

SHEET No 2 OF 3 SHEETS

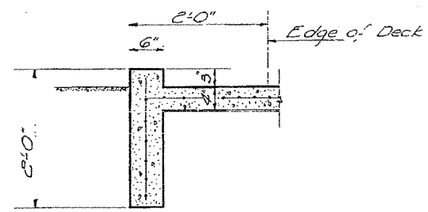
All structural steel shall comply with the specification for structural steel ASTM Designation A-36.



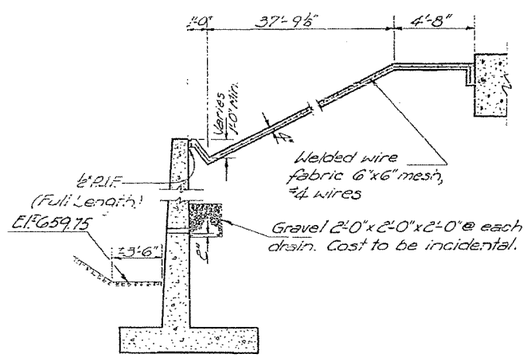
SECTION A-A



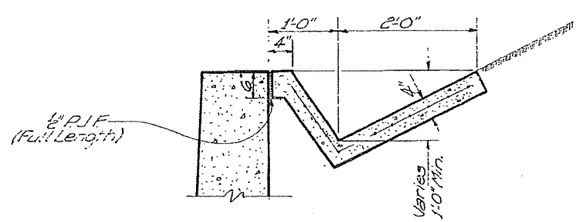
SECTION C-C



SECTION D-D



SECTION B-B



SECTION E-E

GENERAL NOTES

Class X Concrete shall be used throughout.

Coarse aggregate to be used in parapet handrails and end post must be absolutely free of chert, flint, limonite lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 51.19 of the Standard Specifications.

The curb and slab outside of longitudinal tooled construction joints, shown on Cross Section, shall be poured monolithically.

Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, #4 wires, weighing 58# per 100 sq. ft.

Rivets ¾" ⌀ open holes 13/16", unless otherwise noted.

All rockers, bolsters, bearing plates, lead plates, pintle and anchor bolts shall be fabricated and set in accordance with Art. 51.15 of the Standard Specifications and are included in quantity of Structural Steel. Estimated weight of this steel is 21,790 Lbs.

Anchor bolts shall be set before riveting diaphragms over supports.

Expansion guards are included in quantity of Structural Steel. Estimated weight of this steel is 6,450 Lbs.

The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Art. 56.1 to 56.5 inclusive of the Standard Specifications.

The Contractor shall drive 3 test piles; one concrete pile at South Structure-East Abutment, one concrete pile at North Structure-West Abutment in permanent location and one timber pile near North Structure-Pier #3, as directed by the Engineer before ordering the remaining piles.

Concrete piles at abutments shall be driven in holes precored through the embankment in accordance with Art. 60.9(c) of the Standard Specifications.

The following surfaces shall be waterproofed: North Structure-Pier #4, South Structure-Pier #4 and Retaining walls from the top of the embankment to the top of the footings.

Permanent forms will not be permitted in forming the concrete deck.

Excavation for portions of structures in the embankments shall not be classified.

TOTAL BILL OF MATERIAL

Item		Super.	Sub.	Tot.
Class "A" Excav. for Struct.	Cu. Yds.			1,200
Class X Concrete	Cu. Yds.	826.3	1,093.5	1,919.8
Structural Steel	Lbs.	830,890		830,890
Aluminum Handrail	Lin. Ft.	1,478		1,478
Reinforcement Bars	Lbs.	180,560	150,000	330,560
Creosoted Piles	Lin. Ft.		3,410	3,410
Test Pile (Timber)	Ea.		1	1
Concrete Piles	Lin. Ft.		2,924	2,924
Test Piles (Concrete)	Ea.		2	2
Temporary Steel Sheet Piling	Sq. Ft.			3,886
Name Plates	Ea.	2		2
Slope wall	Sq. Yds.			18.0
Protective Coat	Sq. Yds.			2,356
Bridge Seat Seal	Lin. Ft.			

TABLE OF MOMENTS AND REACTIONS - INTERIOR BEAM

	Moments - Ft. Kips					Reactions - Kips		
	0.4 span 1	Pier #1	0.5 span 2	Pier #2	0.5 span 3	Abut.	Pier #1	Pier #2
D.L.	288.4	383.8	130.4	638.1	454.1	23.5	67.3	84.0
L.L.	396.1	330.7	382.9	458.2	520.3	34.3	45.6	51.5
Imp.	107.0	86.0	95.7	110.0	119.7			
Total	791.5	800.5	609.0	1,206.2	1,094.1	57.8	112.9	135.6

D.L. = Dead Load L.L. = Live Load Imp. = Impact

DESIGNED	P. Sander
CHECKED	R.M. Garrard
DRAWN	A. Barreza
CHECKED	R.M.G.

Aug 28 1963

EXAMINED W.G. Bruemmer — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED H. Paul — ENGINEER OF DESIGN

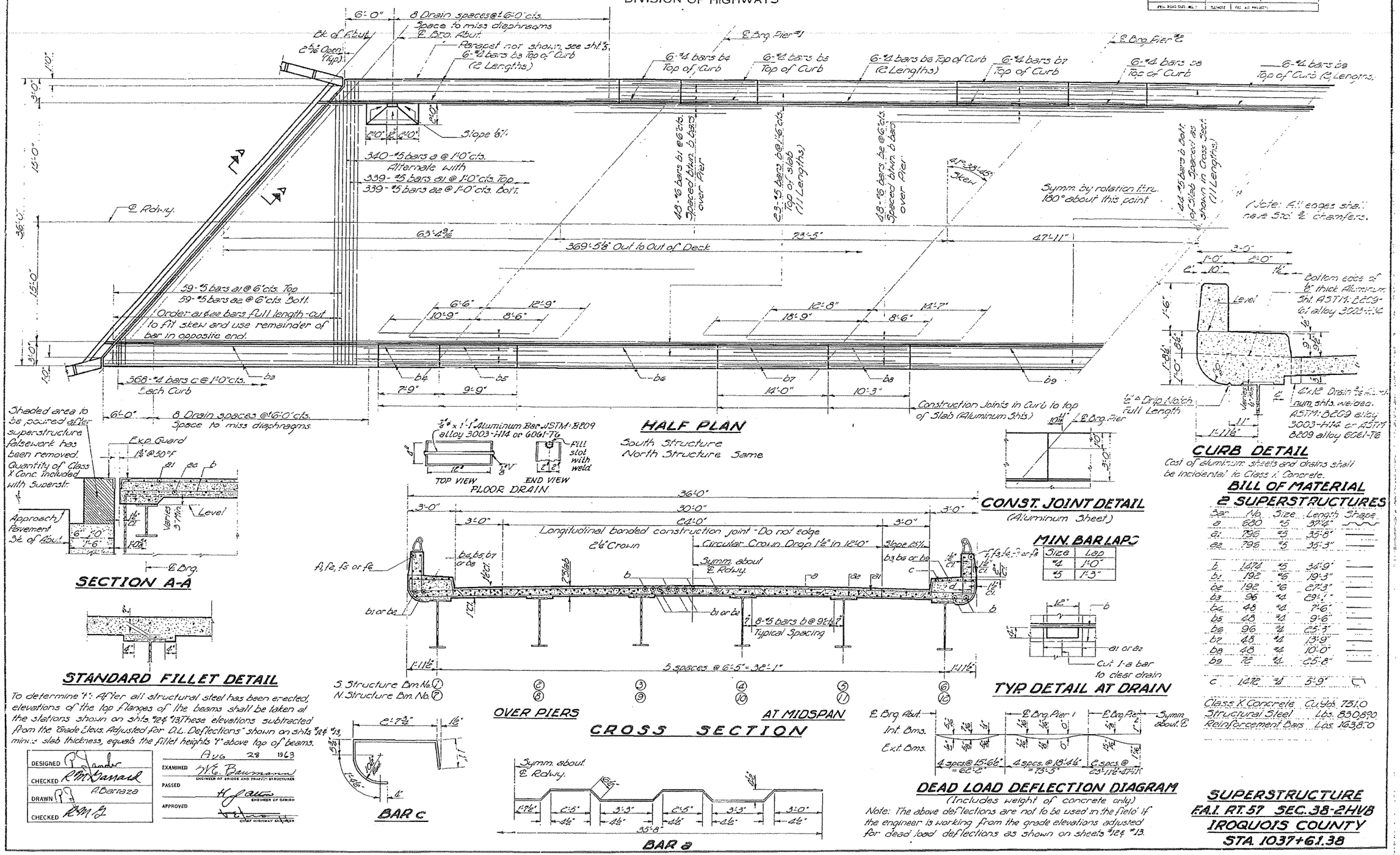
APPROVED — CHIEF HIGHWAY ENGINEER

MISCELLANEOUS
PROJ.
F.A.I. RT. 57 OVER S.B.I. RT. 25 & I.C.R.R.
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	38-2HB	IROQUOIS	31	7
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
19 SHEETS



BILL OF MATERIAL
2 SUPERSTRUCTURES

Bar	No.	Size	Length	Shape
a	680	#5	37'-4"	
a1	796	#5	35'-8"	
a2	796	#5	35'-3"	
b	1424	#5	34'-9"	
b1	192	#6	19'-3"	
b2	192	#6	27'-3"	
b3	96	#4	29'-1"	
b4	48	#4	7'-6"	
b5	48	#4	9'-6"	
b6	96	#4	25'-7"	
b7	48	#4	13'-9"	
b8	48	#4	10'-0"	
b9	96	#4	25'-8"	
c	1272	#4	5'-9"	

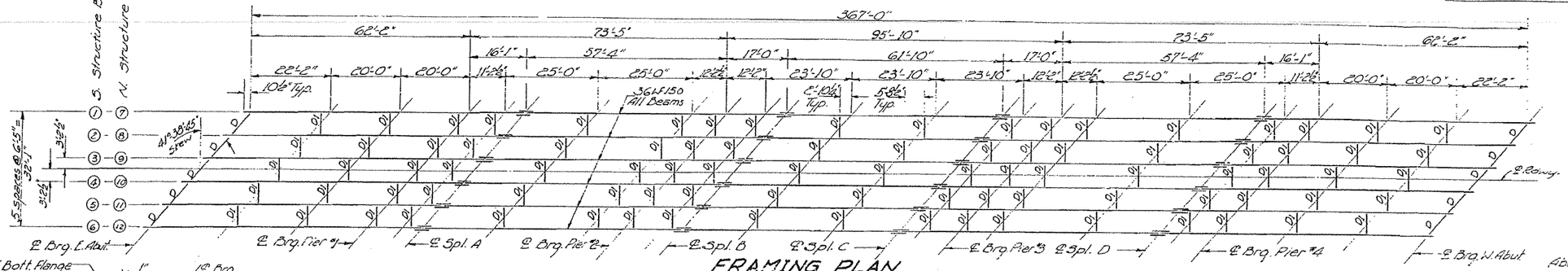
Class X Concrete	Cu. Yds.	751.0
Structural Steel	Lbs.	830890
Reinforcement Bars	Lbs.	163870

SUPERSTRUCTURE
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB	IROQUOIS	31	5
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4
19 SHEETS



FRAMING PLAN

7/16" ϕ holes for ⅜" ϕ bolts. All bolts shall be burned sawed or clipped off flush with back of angle after forms are removed.

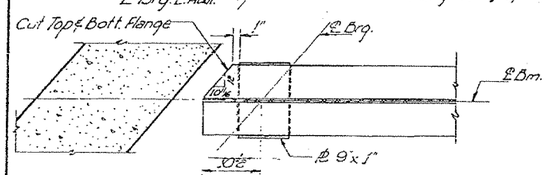
ELEVATION TOP OF 36 WF 150 BEAMS

SOUTH STRUCTURE

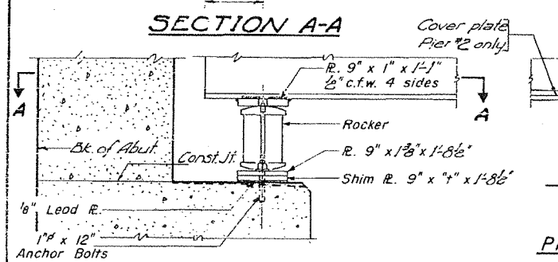
Bm. No.	Loc. ℄ Brg. E. Abut.	℄ Brg. Pier #1	℄ Spl. A	℄ Brg. Pier #2	℄ Spl. B	℄ Spl. C	℄ Brg. Pier #3	℄ Spl. D	℄ Brg. Pier #4	℄ Brg. W. Abut.
1	692.055	692.323	692.392	692.560	692.610	692.683	692.673	692.640	692.609	692.489
2	692.150	692.426	692.498	692.675	692.727	692.809	692.800	692.778	692.749	692.638
3	692.196	692.472	692.546	692.731	692.786	692.877	692.872	692.856	692.830	692.728
4	692.151	692.446	692.522	692.715	692.772	692.873	692.871	692.863	692.839	692.746
5	692.042	692.346	692.425	692.627	692.687	692.796	692.796	692.797	692.775	692.692
6	691.876	692.189	692.270	692.481	692.543	692.661	692.664	692.674	692.655	692.580

NORTH STRUCTURE

Bm. No.	Loc. ℄ Brg. E. Abut.	℄ Brg. Pier #1	℄ Spl. A	℄ Brg. Pier #2	℄ Spl. B	℄ Spl. C	℄ Brg. Pier #3	℄ Spl. D	℄ Brg. Pier #4	℄ Brg. W. Abut.
7	691.677	692.035	692.128	692.381	692.456	692.619	692.634	692.686	692.678	692.649
8	691.764	692.131	692.226	692.487	692.564	692.737	692.755	692.814	692.809	692.789
9	691.792	692.169	692.266	692.535	692.615	692.797	692.817	692.885	692.882	692.871
10	691.748	692.133	692.233	692.511	692.593	692.784	692.807	692.883	692.883	692.881
11	691.631	692.026	692.128	692.418	692.499	692.699	692.724	692.809	692.811	692.818
12	691.457	691.861	691.965	692.260	692.347	692.556	692.584	692.677	692.681	692.698



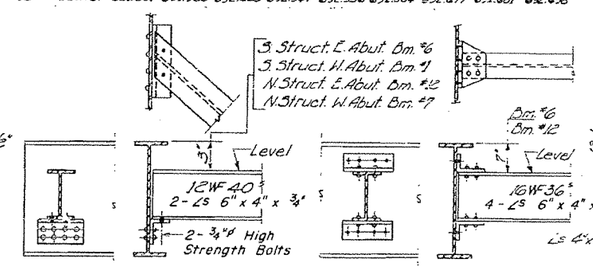
SECTION A-A



SECTION AT ABUTMENTS

PIERS #1, #2 & #4

PIER #3

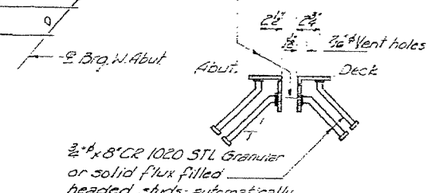


DIAPHRAGM D

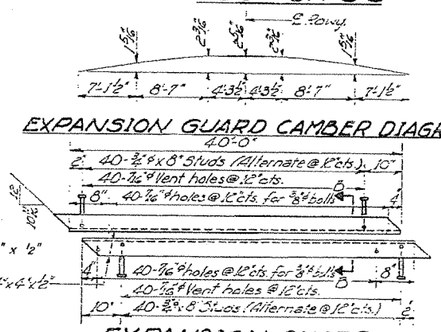
20 Required

DIAPHRAGM D1

180 Required

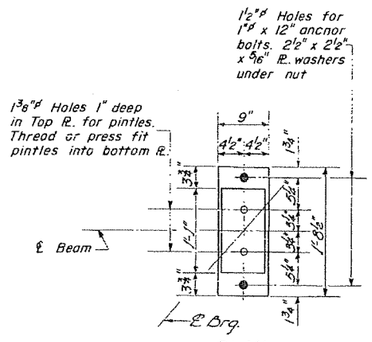


SECTION B-B

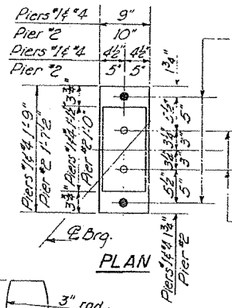


EXPANSION GUARD CAMBER DIAGRAM

EXPANSION GUARD



PLAN



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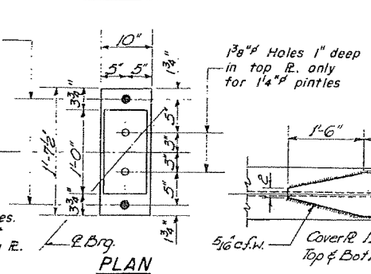

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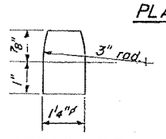
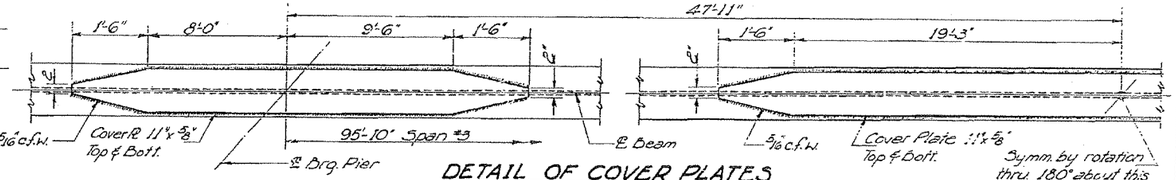
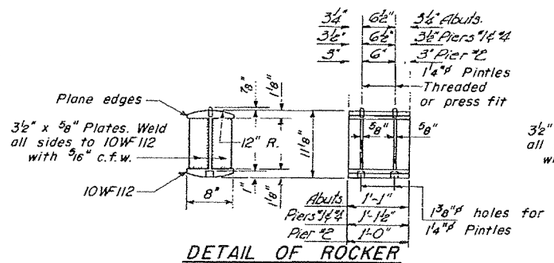


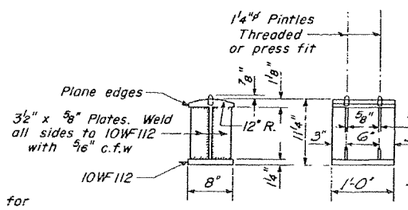
DETAIL OF PINTLE



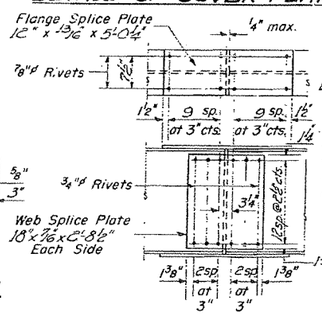
DETAIL OF COVER PLATES



DETAIL OF ROCKER AT PIERS #1, #2, #4 & ABUTMENTS



DETAIL OF BOLSTER AT PIER #3



DETAIL OF SPLICE

SHIM "t" DIMENSIONS

S. STRUCTURE

Bm. No.	Loc. East Abut.	Pier #1	Pier #2	Pier #3	Pier #4	West Abut.
1	0"	0"	5/16"	⅛"	0"	0"
2	5/16"	5/16"	5/16"	0"	7/16"	5/16"
3	0"	0"	0"	0"	⅛"	¼"
4	5/16"	7/16"	9/16"	0"	0"	7/16"
5	0"	0"	¼"	5/16"	0"	9/16"
6	0"	0"	0"	0"	7/16"	5/16"

N. STRUCTURE

Bm. No.	Loc. East Abut.	Pier #1	Pier #2	Pier #3	Pier #4	West Abut.
7	0"	0"	5/16"	½"	0"	0"
8	7/16"	0"	½"	7/16"	5/16"	5/16"
9	0"	0"	7/16"	¼"	0"	7/16"
10	½"	0"	0"	5/16"	5/16"	7/16"
11	5/16"	0"	0"	5/16"	¼"	⅛"
12	0"	0"	0"	0"	0"	5/16"

DESIGNED	P.S. Jander	
CHECKED	R.M. Gunard	
DRAWN	A. Barraza, W.A. Sousoman Jr.	
CHECKED	R.M.G.	

AUG 28 1963

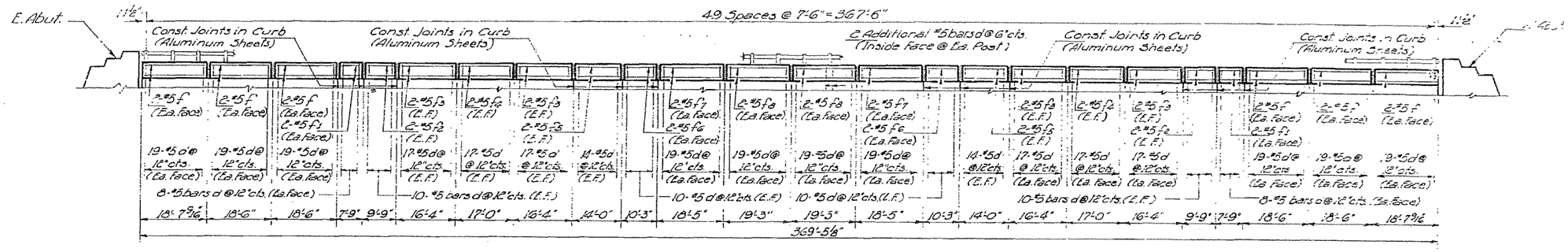
EXAMINED	W.E. Baumann	ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED	H.J. Ellis	ENGINEER OF DESIGN
APPROVED		CHIEF HIGHWAY ENGINEER

STRUCTURAL STEEL
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

I-2-C 7-2-62

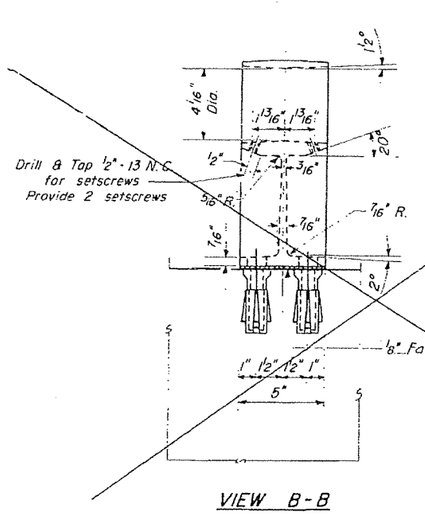
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

FAI 57 38-2HVB	IROQUOIS	3.	9	SHEET No. 5 OF 19 SHEETS

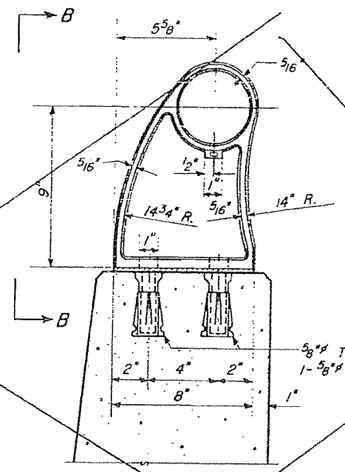


ELEVATION

For Railing Details see Sheet #9A

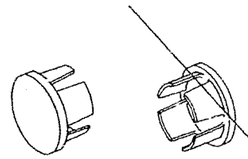


VIEW B-B

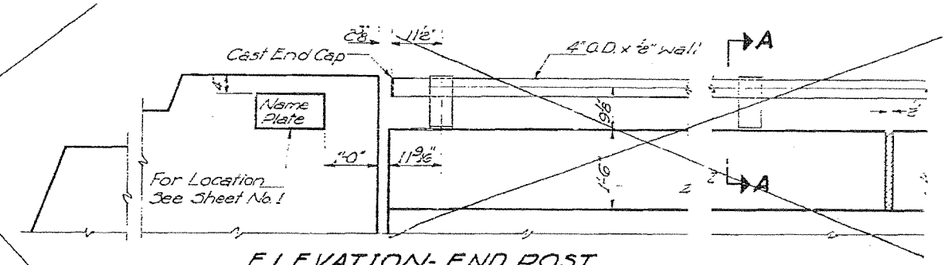


SECTION A-A

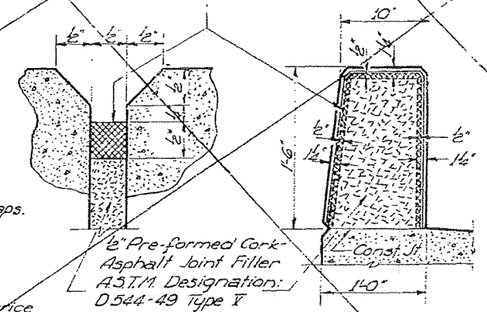
RAIL POST DETAILS



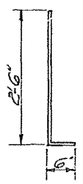
CAST END CAP
DRIVE FIT TYPE
8 - Required
Incidental to item "Aluminum Handrail"



ELEVATION- END POST



DETAIL OF JOINT



BAR d

NOTES
All Posts shall be placed normal to parapet
All Posts shall be of Aluminum conforming to ASTM Specification B-108 alloy 5G-70B-T6.
All Rail Tubing shall be of Aluminum conforming to ASTM Specification B-235 alloy 6061-T6.
Aluminum handrail shall be measured in lineal feet.
The length paid for shall be the overall length along the top longitudinal railing member through all post & gaps.
Rail Tubing may be cut to random lengths.
Fabric Bearing Pad.
Set Screws shall be of Aluminum conforming to ASTM Specification B-211 alloy 2024-T4.
Aluminum handrail will be paid for at the contractor unit price per lineal foot for Aluminum Handrail, measured as specified, which price shall be payment in full for all materials, fabrication, transportation and erection.

BILL OF MATERIAL
4 HANDRAILS

Bar	No.	Size	Length	Shape
f	96	#5	18'-2"	—
f1	32	#5	7'-5"	—
f2	32	#5	9'-5"	—
f3	64	#5	15'-0"	—
f4	32	#5	16'-8"	—
f5	32	#5	13'-8"	—
f6	32	#5	9'-11"	—
f7	32	#5	18'-11"	—
f8	32	#5	18'-11"	—
d	3408	#5	3'-0"	L
Class X Concrete Cu. Yds.				75.3
Reinforcement Bars Lbs.				7,669.0
Aluminum Handrail Lin. Ft.				1,478

DESIGNED	P. Sander	EXAMINED	Aug 28 1963 H. E. Baumann, Engineer of Bridge and Traffic Structures
CHECKED	R. M. Jarand	PASSED	H. Allen, Engineer of Design
DRAWN	A. Barraza, W. A. Sausaman	APPROVED	Chief Highway Engineer
CHECKED	R. M. J.		

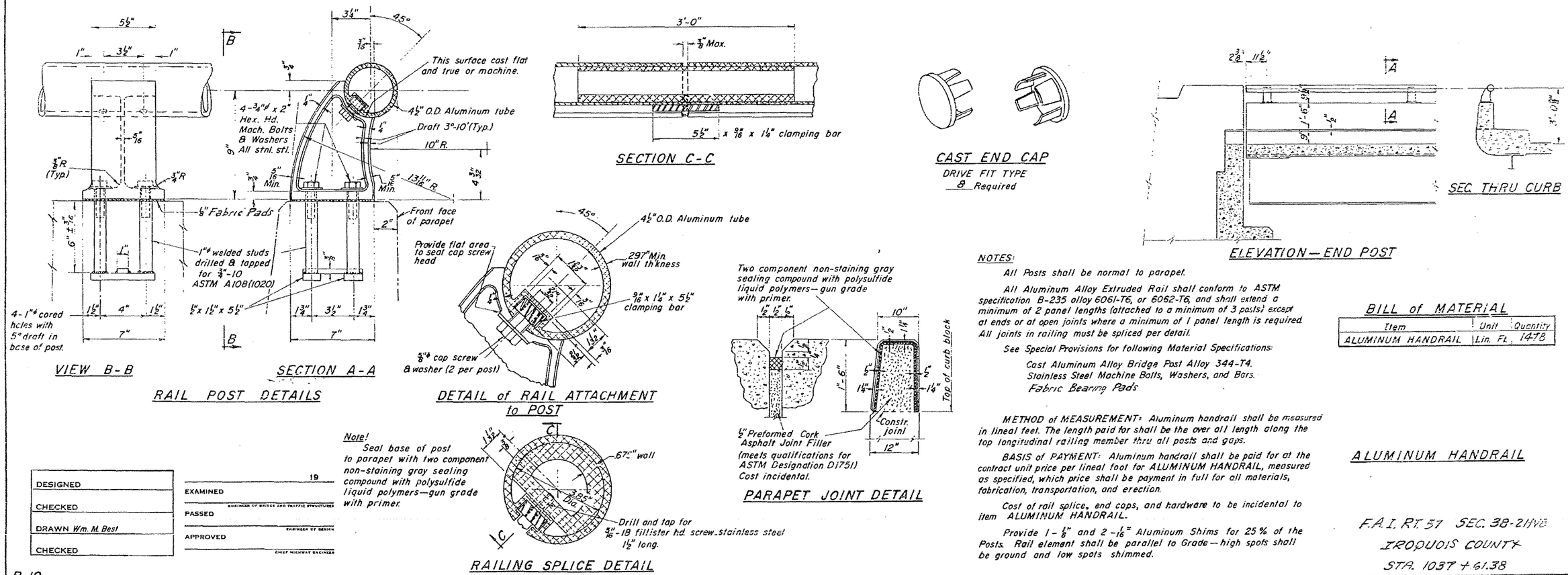
R-10 Drawn 2-16-60 Rev. 9-17-62

ALUMINUM HANDRAIL
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2H,VB	IROQUOIS	21	9A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 51
19 SHEETS



NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-235 alloy 6061-T6, or 6062-T6, and shall extend a minimum of 2 panel lengths (attached to a minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.

See Special Provisions for following Material Specifications:

Cast Aluminum Alloy Bridge Post Alloy 344-T4.
Stainless Steel Machine Bolts, Washers, and Bars.
Fabric Bearing Pads

METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.

BASIS of PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.

Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.

Provide 1 - 1/8" and 2 - 1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade—high spots shall be ground and low spots shimmed.

BILL of MATERIAL

Item	Unit	Quantity
ALUMINUM HANDRAIL	Lin. Ft.	1478

ALUMINUM HANDRAIL

F.A.I. RT. 57 SEC. 38-2H,VB
IROQUOIS COUNTY
STA. 1037 + 61.38

DESIGNED	
CHECKED	
DRAWN Wm. M. Best	
CHECKED	

19
EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

R-19 Dwn. 6-26-64 Rev. 8-26-64 9-2-64

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

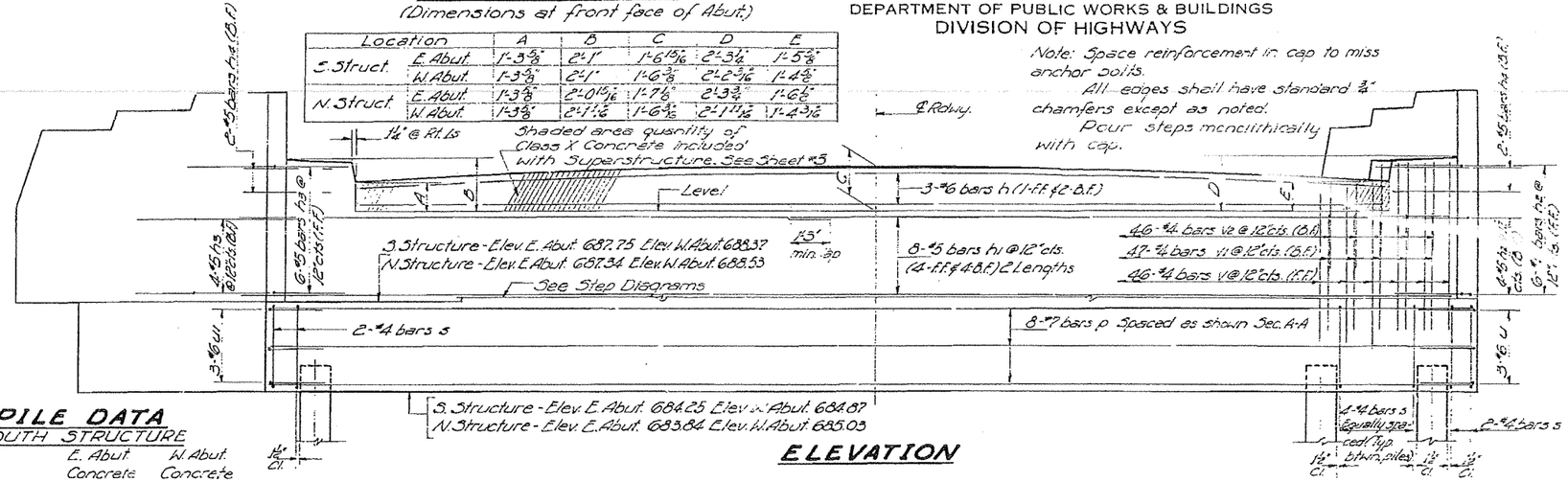
SHEET No. 6
19 SHEETS

F.A.I. 57 38-2HVB

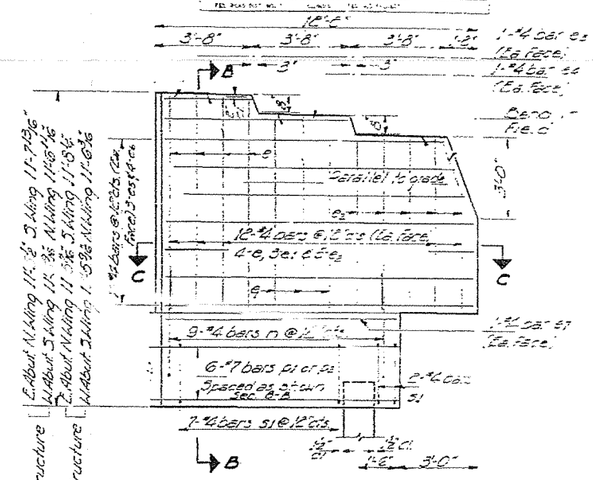
TABLE OF DIMENSIONS
(Dimensions at front face of Abut.)

Location		A	B	C	D	E
S. Struct.	E. Abut.	1'-3 5/8"	2'-1"	1'-6 15/16"	2'-3 1/4"	1'-5 3/8"
	W. Abut.	1'-3 3/8"	2'-1"	1'-6 3/8"	2'-2 5/16"	1'-4 3/8"
N. Struct.	E. Abut.	1'-3 3/8"	2'-0 15/16"	1'-7 1/8"	2'-3 3/8"	1'-6 5/8"
	W. Abut.	1'-3 3/8"	2'-1 1/16"	1'-6 9/16"	2'-1 11/16"	1'-4 3/16"

Note: Space reinforcement in cap to miss anchor bolts.
All edges shall have standard 3/4" chamfers except as noted.
Pour steps monolithically with cap.



ELEVATION



VIEW D-D VIEW E-E (OPP. HAND)

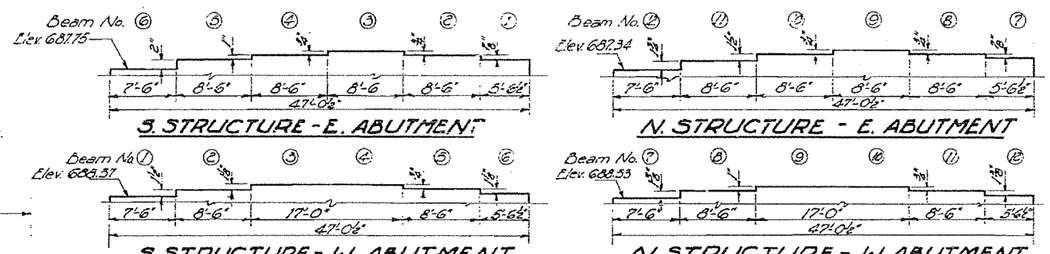
PILE DATA

SOUTH STRUCTURE

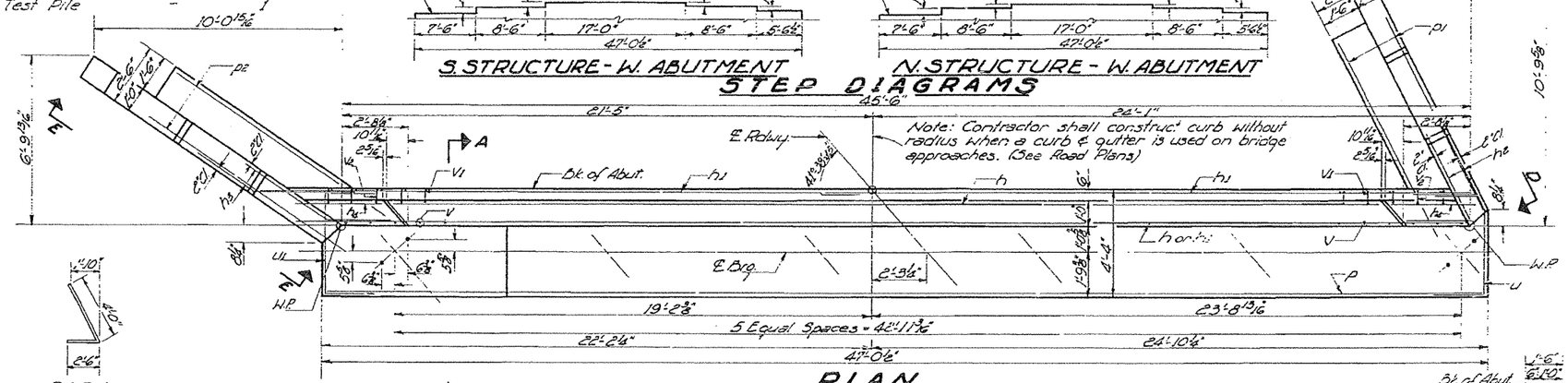
	E. Abut.	W. Abut.
Type	Concrete	Concrete
Capacity	41 Tons	41 Tons
Est. Length	60 Ft.	58 Ft.
No. Required	12	13
Test Pile	1	—

NORTH STRUCTURE

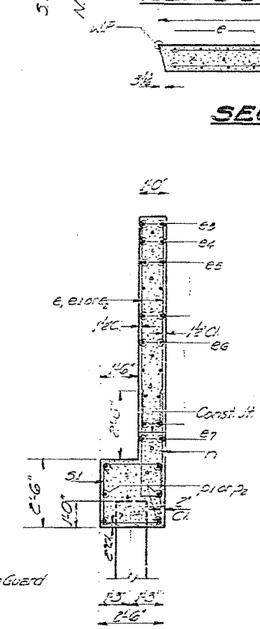
	E. Abut.	W. Abut.
Type	Concrete	Concrete
Capacity	41 Tons	41 Tons
Est. Length	58 Ft.	58 Ft.
No. Required	13	12
Test Pile	—	1



STEP DIAGRAMS



PLAN

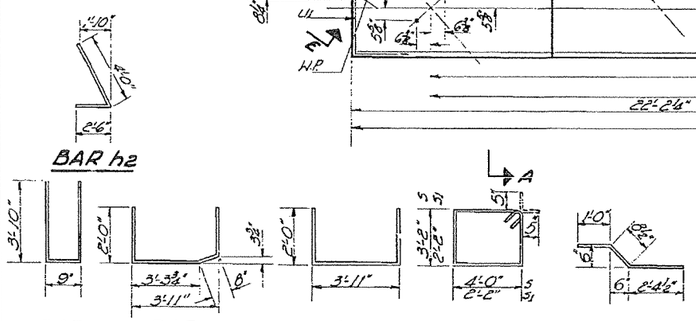


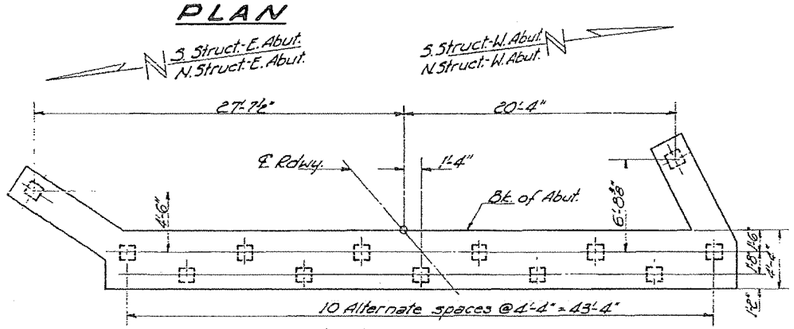
SECTION B-B

SECTION C-C

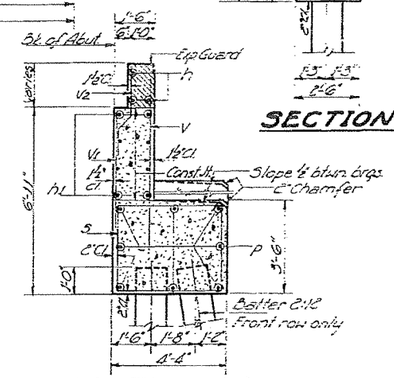
BILL OF MATERIAL
4 ABUTMENTS

Bar	No.	Size	Length	Shape
e	64	#4	7'-9"	
e1	48	#4	7'-1"	
e2	80	#4	6'-5"	
e3	16	#4	3'-2"	
e4	16	#4	6'-10"	
e5	48	#4	10'-6"	
e6	64	#4	11'-8"	
e7	16	#4	8'-8"	
h	12	#6	39'-9"	
h1	64	#5	25'-0"	
h2	40	#5	6'-6"	
h3	40	#5	6'-9"	
h4	16	#5	3'-6"	
n	72	#4	8'-5"	
p	32	#7	46'-6"	
p1	24	#7	8'-9"	
p2	24	#7	10'-6"	
s	176	#4	15'-6"	
s1	72	#4	9'-6"	
u	12	#6	7'-8"	
u1	12	#6	7'-11"	
v	184	#4	6'-6"	
v1	188	#4	4'-3"	
v2	184	#4	4'-1"	
Class X Concrete			Cu. Yds.	186.6
Reinforcement Bars			Lbs.	13,680
Concrete Piles			Lin. Ft.	2,924
Test Piles, Concrete			Ea.	2





PILE LAYOUT



SECTION A-A

DESIGNED	P. Sander	
CHECKED	R. M. Barnard	
DRAWN	A. Barraza	
CHECKED	R. M. G.	

Aug. 28 1963

EXAMINED W. E. Baumann — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H. J. Allen — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

BAR h3

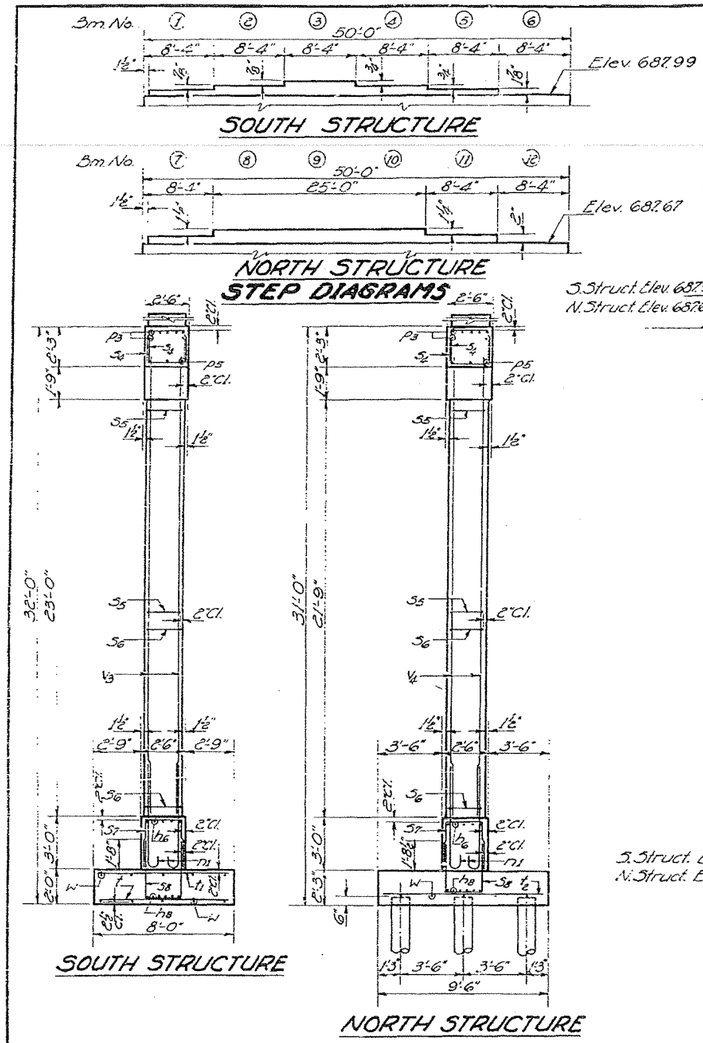
ABUTMENT
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

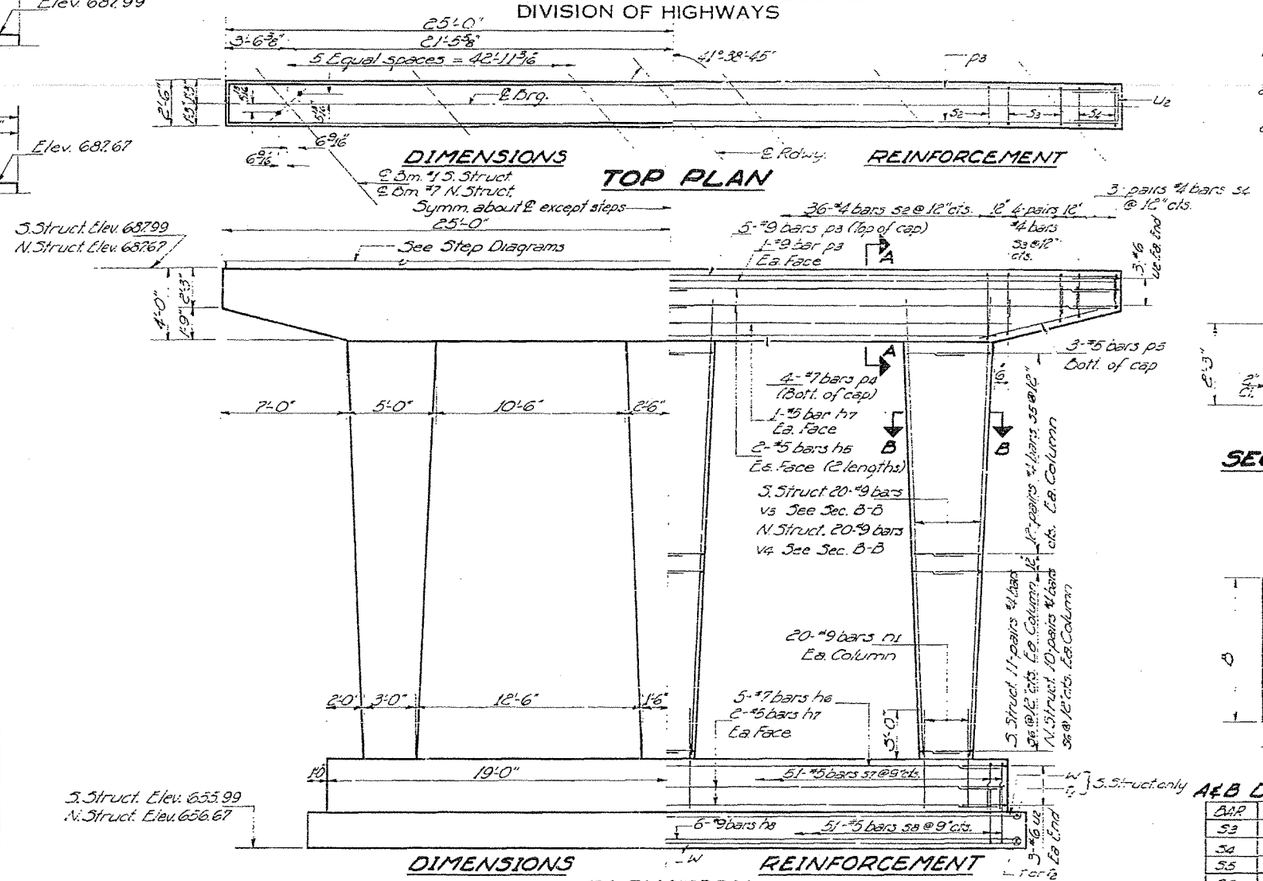
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

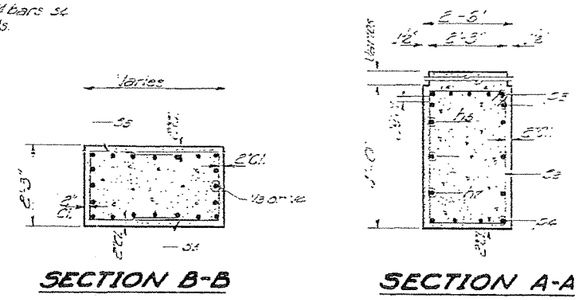
F.A.I. 57	38-2HVB	12024	1513	B1	K

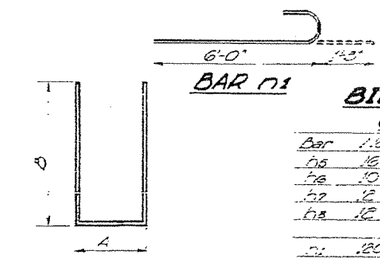
SHEET NO. 7
19 SHEETS

Note:
Space reinforcement in cap to miss anchor bolts.
All edges shall be given standard ¾ chamfers except footings.
Pour steps monolithically with cap.



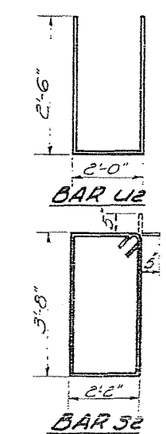






A&B DIMENSIONS

BAR	A	B
s3	2'-2"	2'-4"
s4	2'-2"	1'-10"
s5	1'-11"	2'-10"
s6	1'-11"	2'-4"
s7	2'-2"	2'-9"
s8	2'-2"	3'-5"



BILL OF MATERIAL
2 PIERS

Bar	No.	Size	Length	Shape
n5	16	#5	25'-6"	
n6	10	#7	37'-6"	
n7	12	#5	37'-6"	
n8	12	#9	39'-6"	
n1	120	#9	7'-3"	
n3	12	#9	49'-6"	
n4	8	#7	38'-0"	
n2	12	#5	7'-9"	
s2	72	#4	12'-6"	
s3	32	#4	6'-10"	
s4	24	#4	5'-10"	
s5	144	#4	7'-7"	
s6	126	#4	6'-7"	
s7	102	#5	7'-8"	
s8	102	#5	9'-0"	
t	40	#5	7'-6"	
t1	40	#4	7'-6"	
t2	60	#5	9'-0"	
u2	64	#6	7'-0"	
u3	60	#9	25'-4"	
u4	60	#9	24'-1"	
w	30	#4	20'-3"	

Class X Concrete Cu. Yds. 15.7
Reinforcement Bars Lbs. 2,020
Creosoted Piles Lin. Ft. 564

FOOTING PRESSURE
SOUTH STRUCTURE
Max. 21 Tons/Sq. Ft.

PILE DATA
NORTH STRUCTURE

Type	Creosoted
Capacity	24 Tons
Est. Length	32 Ft.
No. Required	27

DESIGNED	
CHECKED	R.M. Gerard
DRAWN	A. Barraza
CHECKED	R.M.G.

AUG 28 1963
EXAMINED H.E. Baumann — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

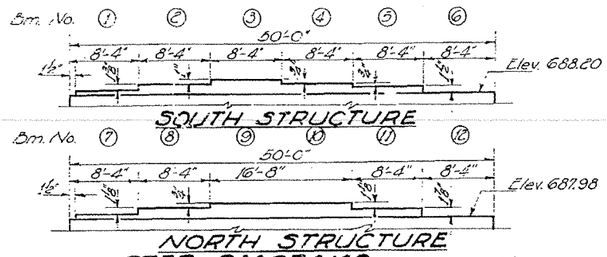
PIER #1
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

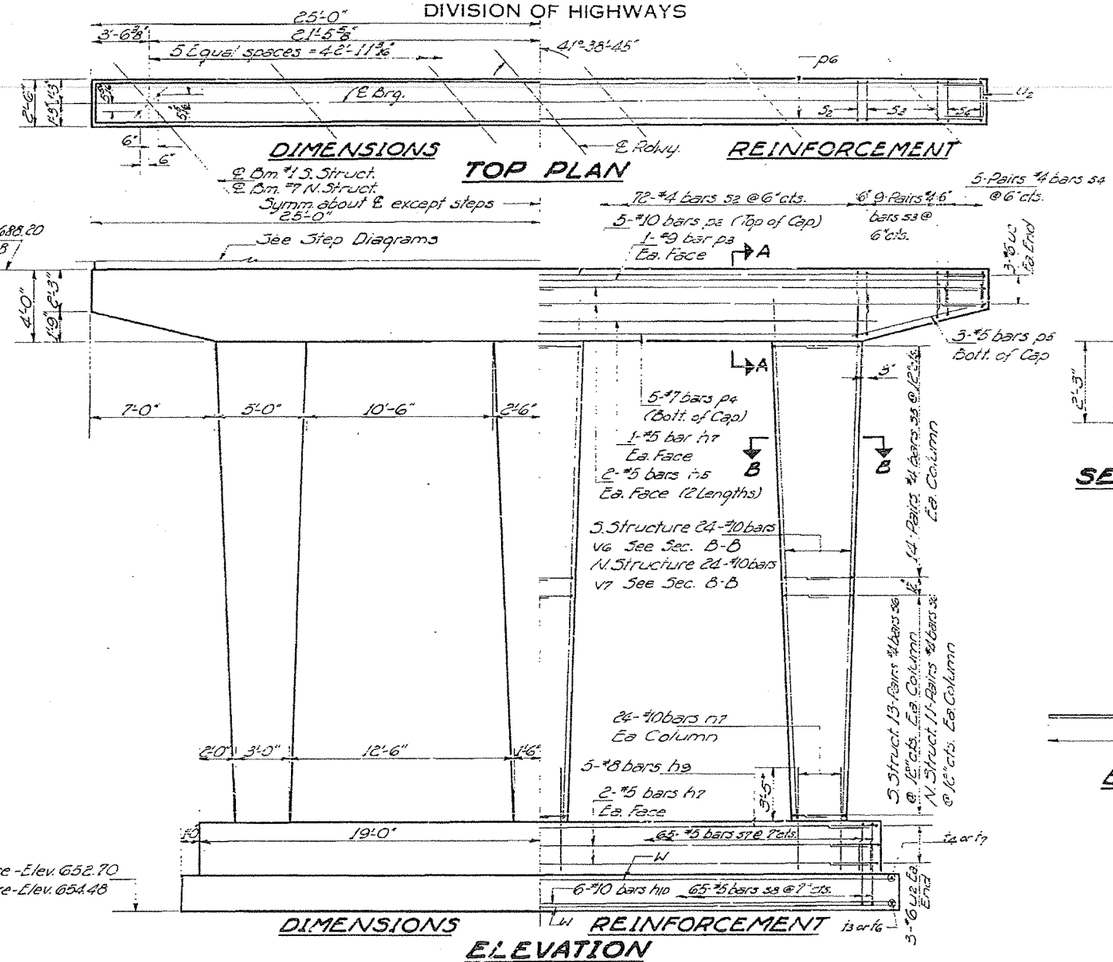
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT
F.A.I. 57	38-2HVB-2R(2)2013	31 12

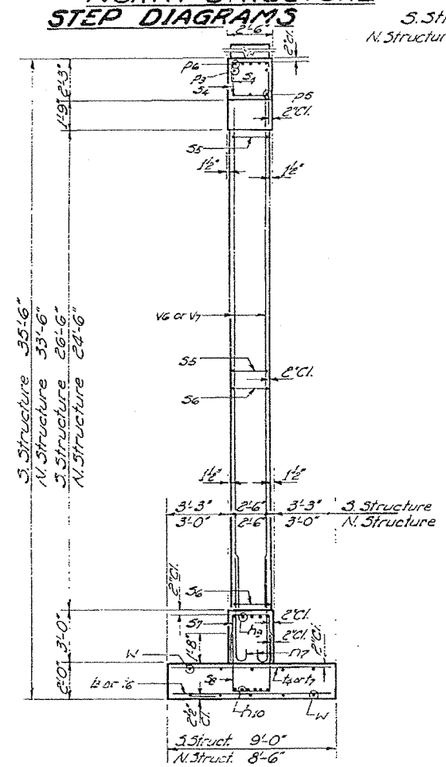
SHEET NO. 8
19 SHEETS

Note:
Space reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfers except footings.
Pour steps monolithically with cap.
For bar details (s2, s3, s4, s5, s6, s7, s8 & u2) see sheet #7.

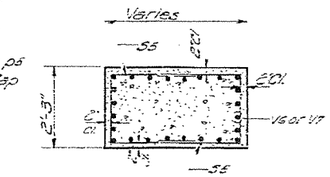


STEP DIAGRAMS

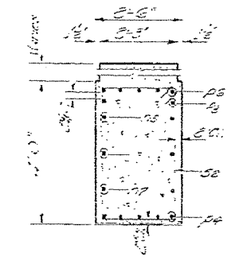




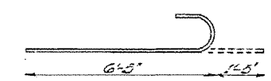
END VIEW



SECTION B-B



SECTION A-A



BAR n7

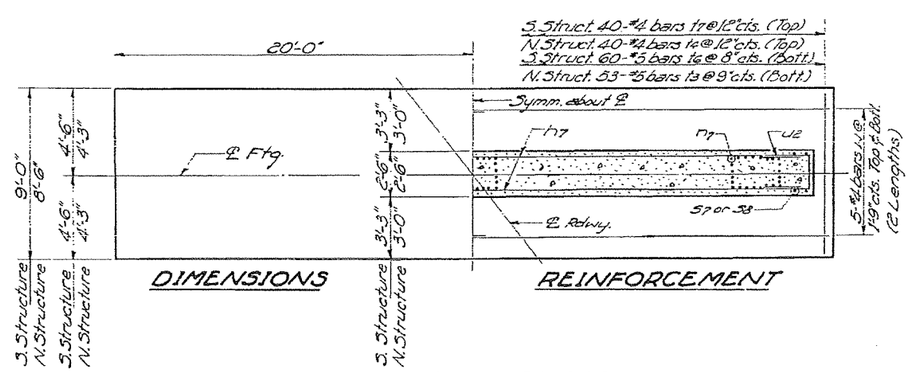
BILL OF MATERIAL
2 PIERS

Bar	No.	Size	Length	Shape
h2	6	#5	25'-6"	
h7	12	#5	37'-6"	
h8	10	#8	37'-6"	
h10	12	#10	39'-6"	
n7	142	#5	7'-10"	
p3	4	#9	49'-6"	
p4	10	#7	36'-0"	
p5	12	#5	7'-9"	
p6	10	#10	49'-6"	
s2	144	#4	12'-6"	
s3	72	#4	6'-10"	
s4	40	#4	5'-10"	
s5	168	#4	7'-7"	
s6	124	#4	8'-7"	
s7	130	#5	7'-8"	
s8	130	#5	9'-0"	
t3	55	#5	8'-0"	
t4	40	#4	8'-0"	
t6	60	#5	8'-6"	
t7	40	#4	8'-6"	
u2	24	#6	7'-0"	
v6	72	#10	24'-1"	
v7	72	#10	27'-1"	
w	40	#4	20'-3"	

Class X Concrete Cu. Yds. 159.0
Reinforcement Bars Lbs. 37,760

FOOTING PRESSURE
SOUTH STRUCTURE
Max. 2.1 Tons/Sq. Ft.

NORTH STRUCTURE
Max. 2.0 Tons/Sq. Ft.



DESIGNED	P. Sander
CHECKED	E.M. Gerard
DRAWN	A. Barraza
CHECKED	R.M.L.

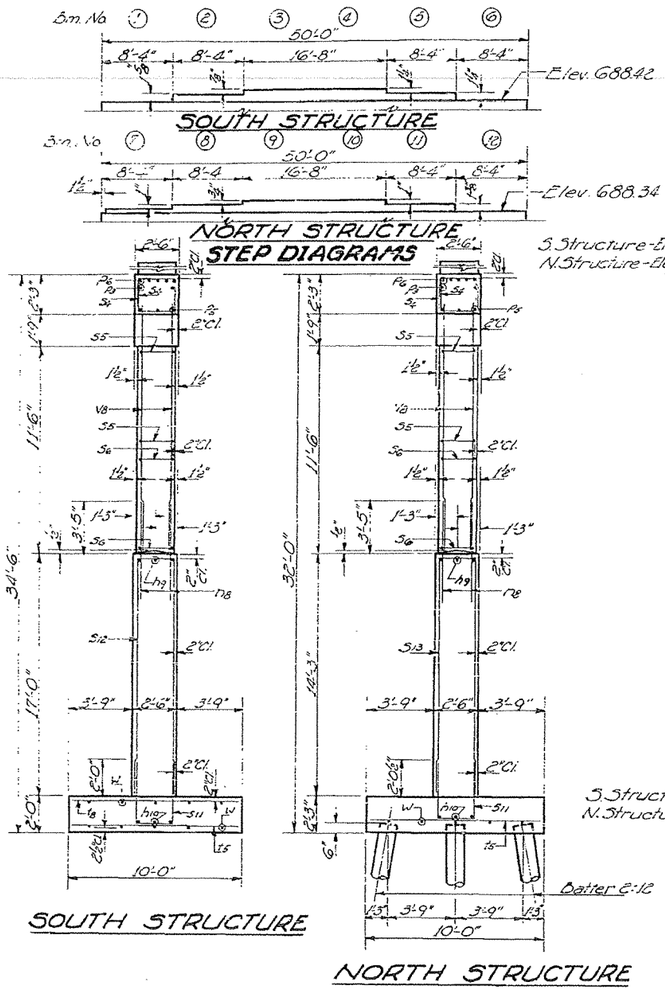
EXAMINED Aug 28 1963 W.E. Baumann ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
APPROVED H. E. Allen ENGINEER OF DESIGN
CHIEF HIGHWAY ENGINEER

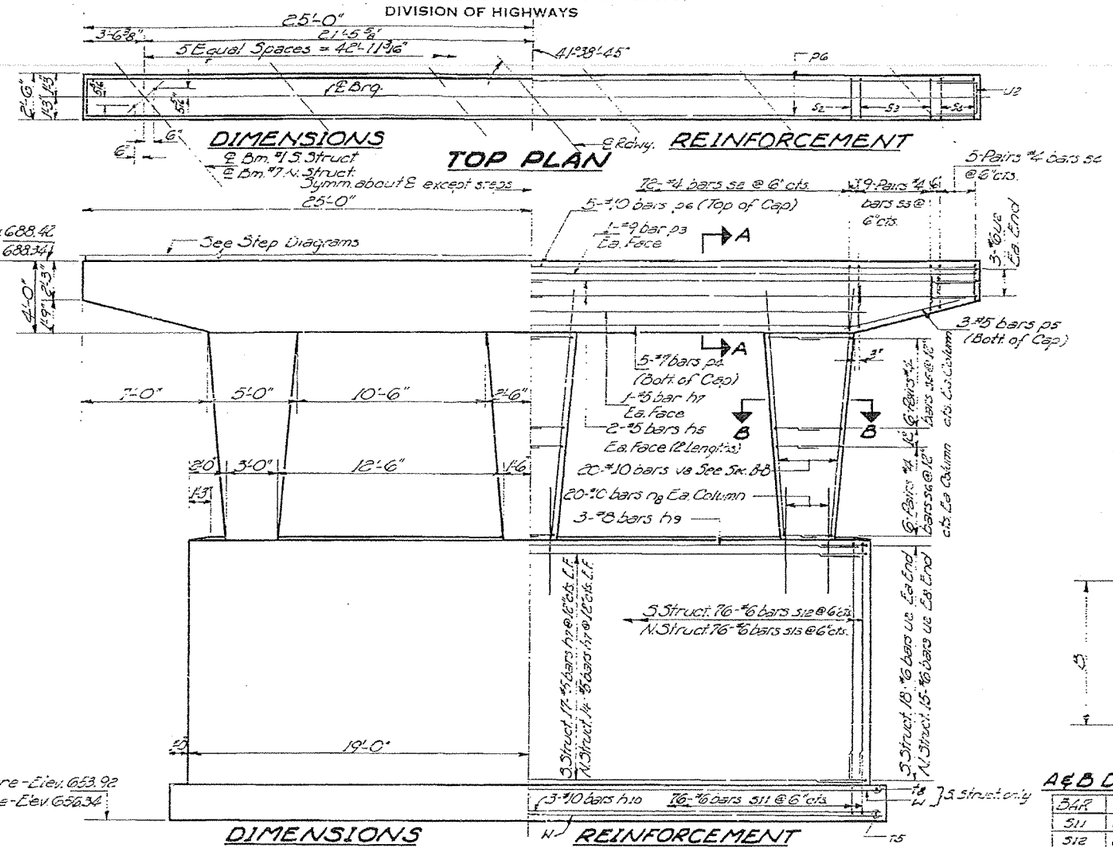
PIER #2
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

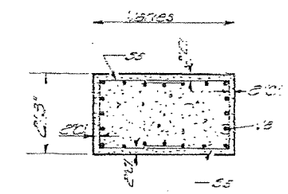
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB	IROQUOIS	31	13

SHEET NO. 9
17 SHEETS

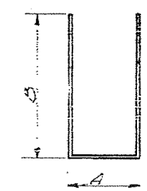




Note:
Space reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾ chamfer except footings.
Pour steps monolithically with cap.
For Section A-A see sheet #8.
For bar details s2, s3, s4, s5, s6 & v8 see sheet #7.



SECTION B-B



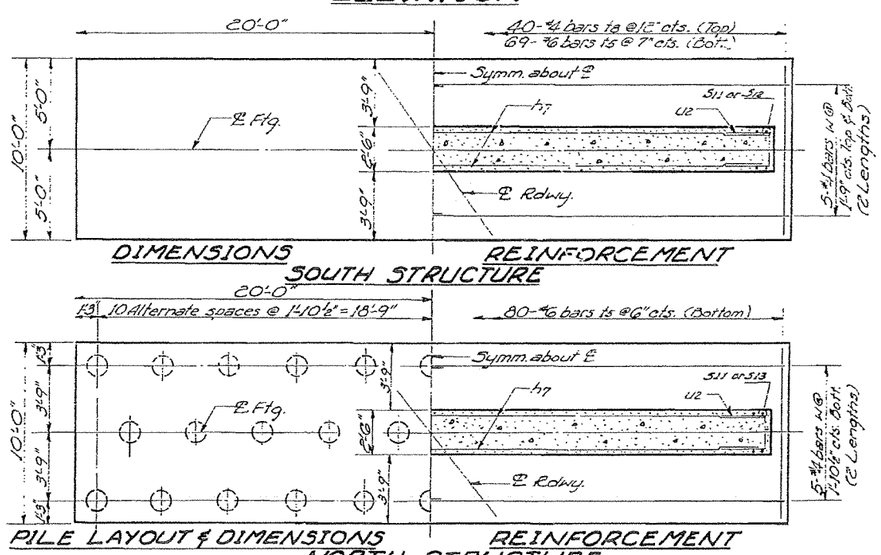
A&B DIMENSIONS

BAR	A	B
s11	2'-2"	3'-9"
s12	2'-2"	16'-9"
s13	2'-2"	14'-0"

BILL OF MATERIAL
2 PIERS

Bar	No.	Size	Length	Shape
n5	16	#5	29'-6"	
n7	66	#5	29'-6"	
n9	6	#9	29'-0"	
n10	6	#10	29'-6"	
n8	120	#10	6'-0"	
s3	2	#10	42'-6"	
s4	10	#4	26'-0"	
s5	12	#5	7'-9"	
s6	10	#10	29'-6"	
s2	144	#6	12'-6"	
s3	72	#4	6'-10"	
s4	40	#4	6'-10"	
s5	72	#5	7'-9"	
s6	72	#4	6'-7"	
s11	152	#6	21'-8"	
s12	76	#6	36'-8"	
s13	76	#6	30'-8"	
s7	189	#6	21'-6"	
s8	40	#4	9'-6"	
v2	78	#6	7'-0"	
v8	120	#10	14'-0"	
w	30	#4	20'-3"	

Class X Concrete Cu. Yd. 225.0
Reinforcement Bars Lbs. 34,760
Creosoted Piles Lin. Ft. 896
Test Pile (Timber) Ea. 1



FOOTING PRESSURE
SOUTH STRUCTURE
Max. 3.0 Tons/Sq. Ft.

PILE DATA
NORTH STRUCTURE
Type - Creosoted
Capacity - 24 Tons
Est. Length - 28 Ft.
No. Required - 32
Test Pile - 1

DESIGNED	P. Rands
CHECKED	R. M. Garnard
DRAWN	A. Barraza
CHECKED	R.M.G.

AUG 28 1963

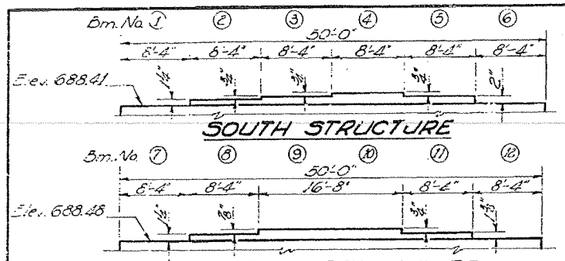
EXAMINED H. E. Baumann — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H. J. Allen — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

PIER #3
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

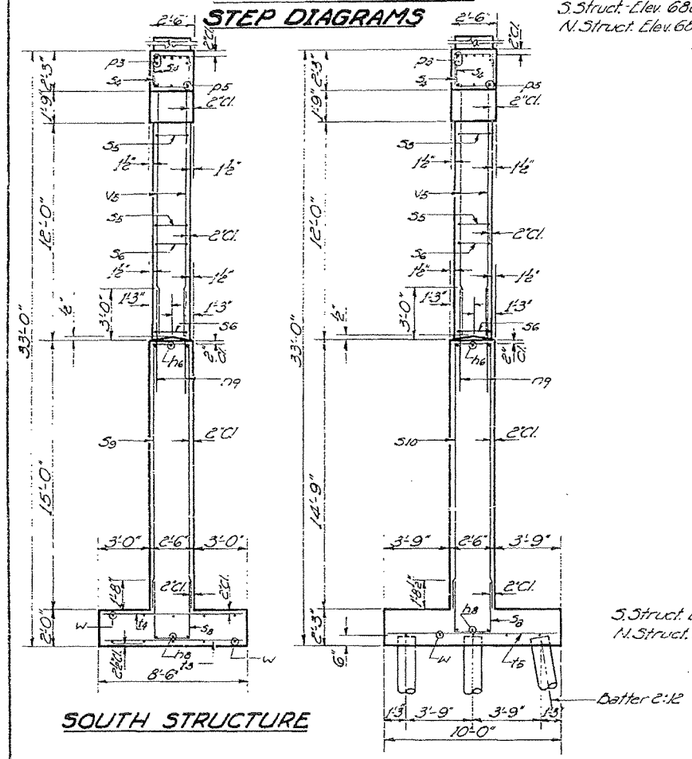
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB	IROQUOIS	31	14

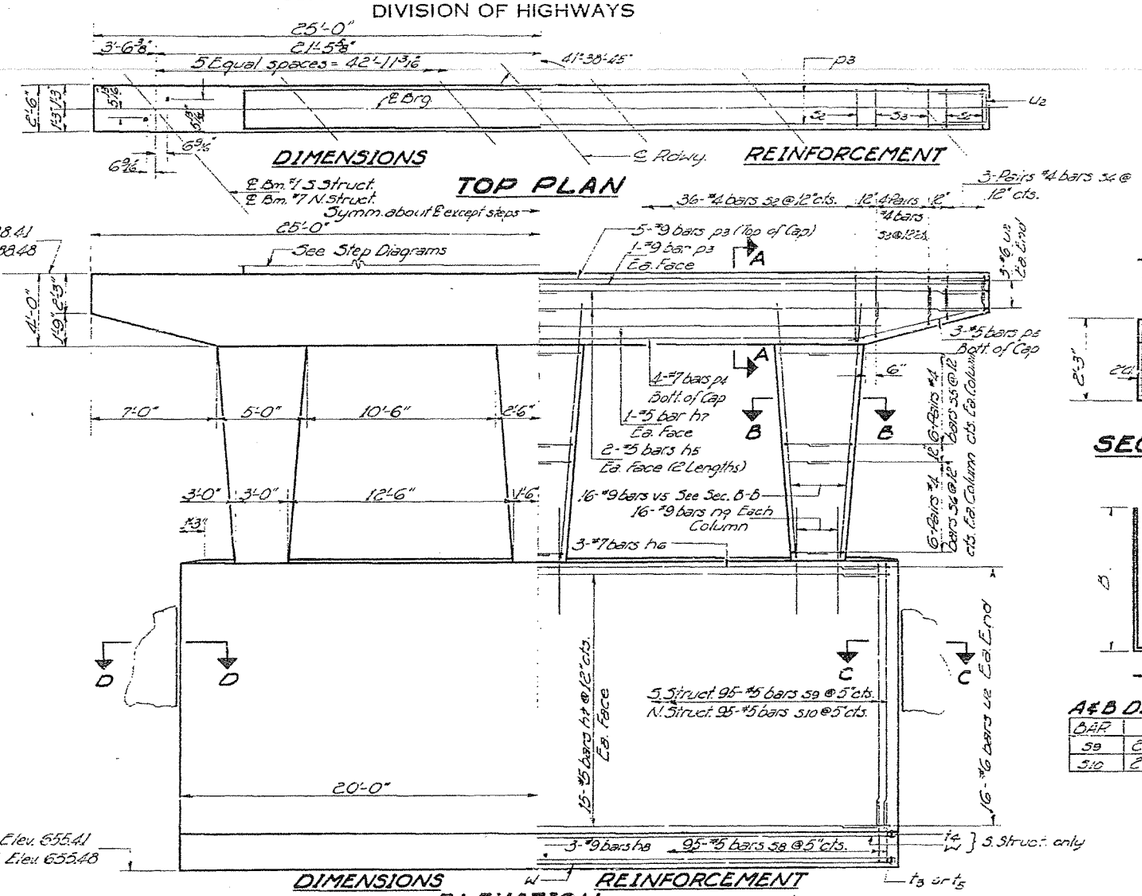
SHEET 4.1.1
17 SHEETS

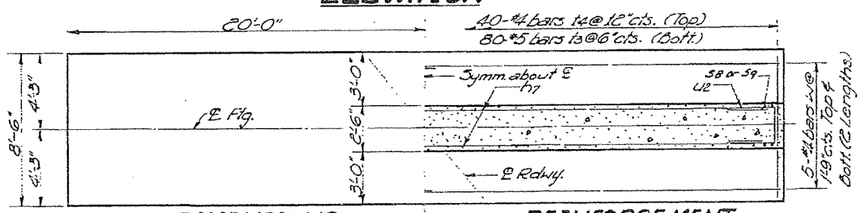


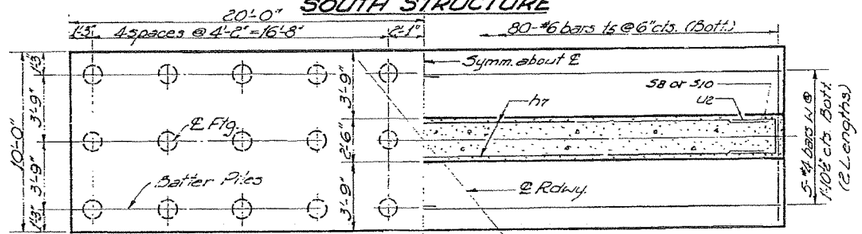
STEP DIAGRAMS



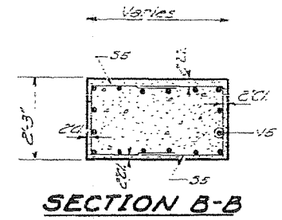
END VIEWS



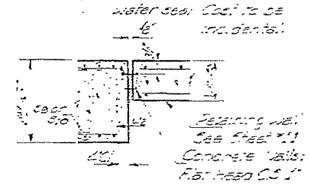




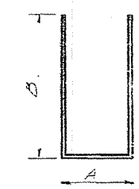
Note:
Space reinforcement in cap to miss anchor bolts.
All edges shall have standard ¾" chamfers except footings.
Pour steps monolithically with cap.
For Section A-A and bar details (s2, s3, s4, s5, s6, s8 and u2) see Sheet #7.



SECTION B-B



SECTION C-C
SECTION D-D (OPP. HAND)



A & B DIMENSIONS

BAR	A	B
s9	2'-2"	14'-9"
s10	2'-2"	14'-6"

BILL OF MATERIAL
2 PIERS

Bar	No.	Size	Length	Shape
h5	16	#5	26'-6"	
h6	6	#7	37'-6"	
h7	64	#5	37'-6"	
h8	6	#9	39'-6"	
n9	96	#9	6'-6"	
p3	14	#9	49'-6"	
p4	8	#7	36'-0"	
p5	12	#5	7'-9"	
s2	72	#4	12'-6"	
s3	32	#4	6'-10"	
s4	24	#4	5'-10"	
s5	72	#4	7'-7"	
s6	72	#4	6'-7"	
s8	190	#5	9'-0"	
s9	95	#5	31'-6"	
s10	95	#5	31'-2"	
t3	80	#5	8'-0"	
t4	40	#4	8'-0"	
t5	80	#6	9'-6"	
u2	76	#6	7'-0"	
v5	96	#9	14'-4"	
v6	30	#4	20'-3"	

Class X Concrete	Cu. Yds.	228.0
Reinforcement Bars	Lbs.	26,630
Creosoted Piles	Lin. Ft.	810

FOOTING PRESSURE
SOUTH STRUCTURE
Max. 3.1 Tons/Sq. Ft.

PILE DATA
NORTH STRUCTURE
Type Creosoted
Capacity 24 Tons.
Est. Length 27 Ft.
No. Required 30

DESIGNED	
CHECKED	R.M. Gerard
DRAWN	A. Barraza
CHECKED	R.M.G.

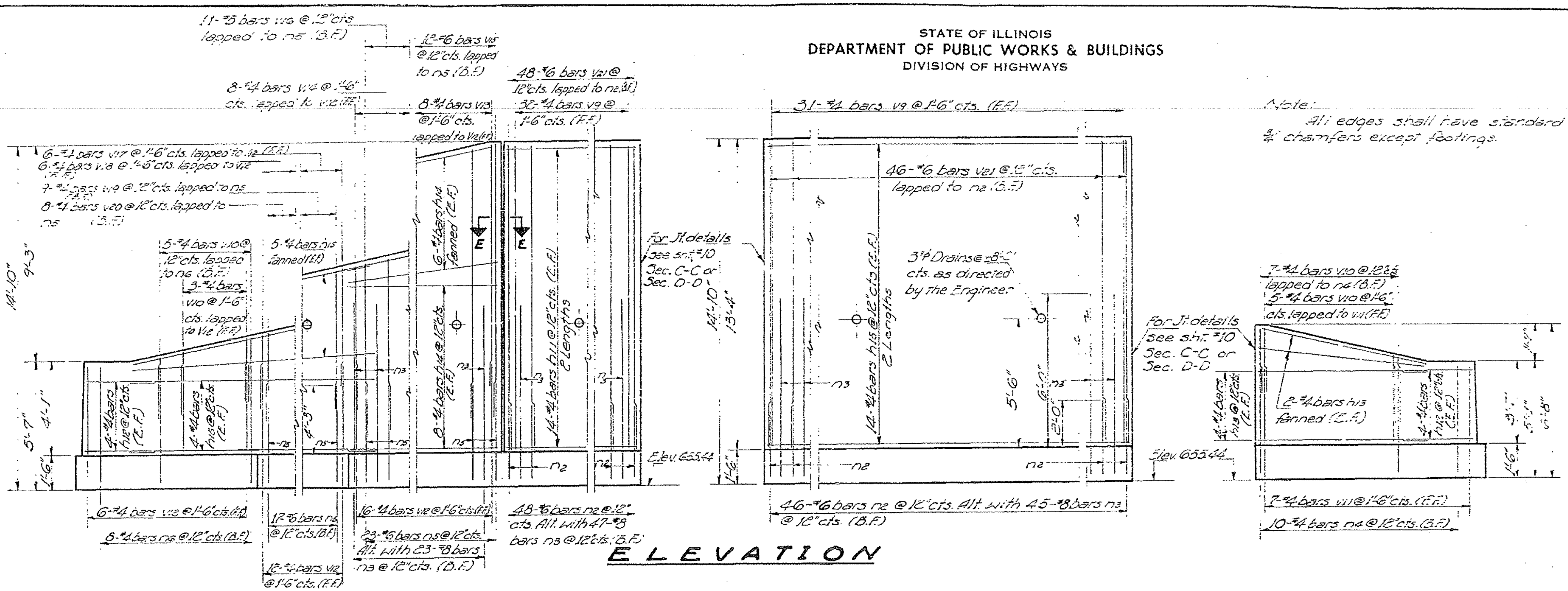
AUG. 28 1963
EXAMINED W.E. Baumann — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H.J. Allen — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

PIER #4
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

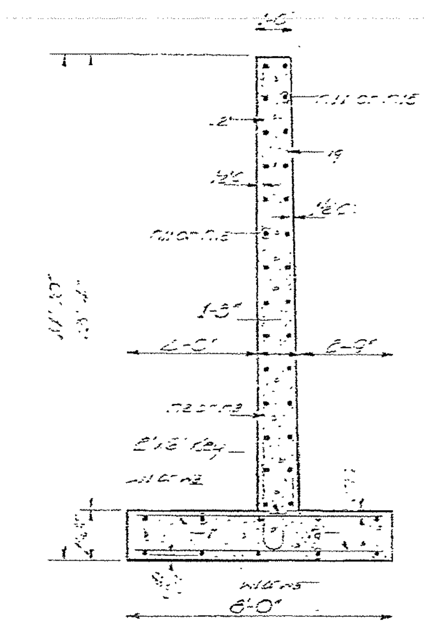
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

F.A.I. 57	38-2HVB	IROQUOIS	3.	15	SHEET NO. 1

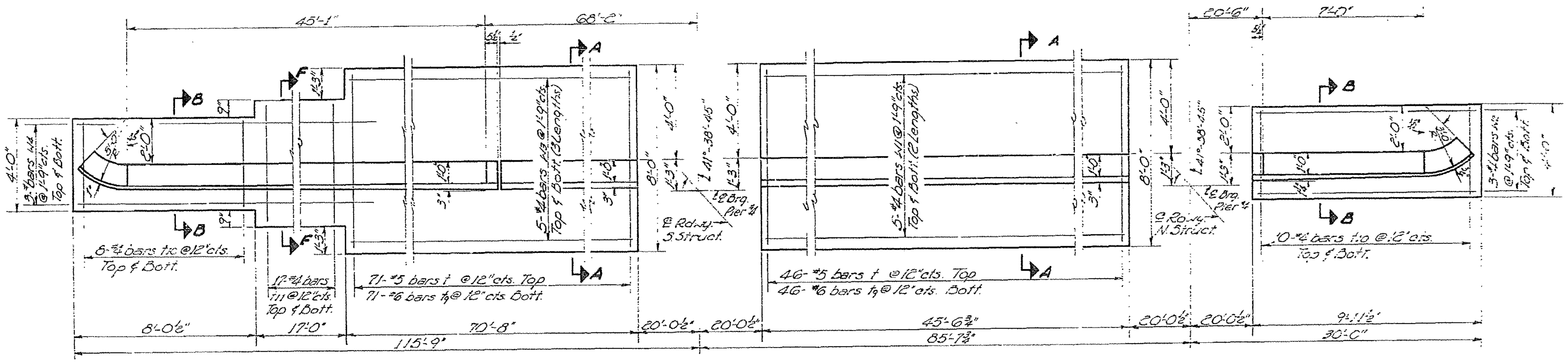
Note:
All edges shall have standard ¾" chamfers except footings.



ELEVATION



SECTION A-A



PLAN

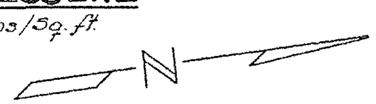
BILL OF MATERIAL

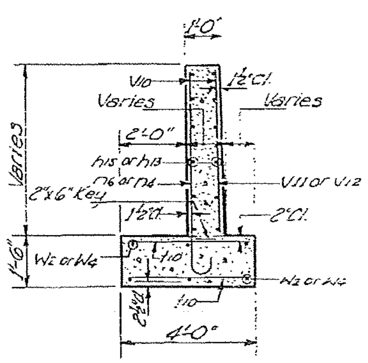
Bar	No.	Size	Length	Shape
[illegible]	66	#4	24'-1"	
n2	16	#4	5'-0"	
n3	12	#4	7'-3"	
n4	22	#4	23'-0"	
n5	74	#4	23'-3"	
n2	91	#6	3'-11"	
n3	115	#8	6'-4"	
n4	10	#4	5'-1"	
n5	40	#5	5'-2"	
n6	8	#4	5'-7"	
t	117	#5	7'-5"	
t1	117	#6	7'-6"	
t10	33	#4	3'-6"	
t11	34	#4	3'-0"	
[illegible]	63	#4	13'-1"	
[illegible]	20	#4	2'-7"	
[illegible]	[illegible]	#4	3'-4"	
[illegible]	34	#4	3'-0"	
[illegible]	6	#4	10'-3"	
[illegible]	8	#4	7'-11"	
[illegible]	12	#6	10'-4"	
[illegible]	11	#5	7'-9"	
[illegible]	6	#4	5'-7"	
[illegible]	8	#4	4'-7"	
[illegible]	9	#4	5'-2"	
v20	8	#4	4'-2"	
v21	94	#6	13'-11"	
w1	20	#4	23'-0"	
w2	6	#4	9'-6"	
w3	30	#4	24'-0"	
w4	6	#4	26'-0"	

Class X Concrete Cu. Yd. 180.5
Reinforcement Bars Lbs. 13,490

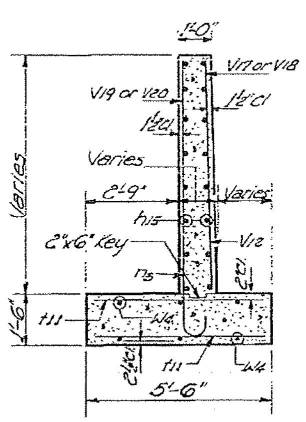
FOOTING PRESSURE

Max. 1.6 Tons/Sq. Ft.





SECTION B-B

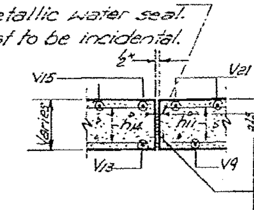


SECTION F-F

MIN. BAR LAPS

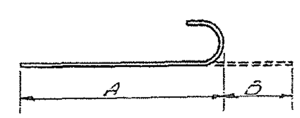
Size	Lap
#4	1'-0"
#5	1'-3"
#6	1'-6"

½" P.J.F. with 6" non-metallic water seal. Cost to be incidental.



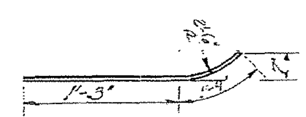
Concrete nails: Flat head C.S. 1" long @ 12" cts. vertical.

SECTION E-E



A & B DIMENSIONS

Bar	A	B
n2	3'-3"	8"
n3	7'-3"	1'-1"
n4	4'-7"	6"
n5	5'-6"	8"
n6	5'-1"	6"



BAR h12

DESIGNED	P. Bender
CHECKED	R.M. Garrard
DRAWN	A. Barraza
CHECKED	R.M.G.

Aug 28 1963
EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

RETAINING WALL
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB	IROQUOIS	37	16

SHEET NO. 12 — 17 SHEETS

INTERIOR BEAMS

LOC.	BM. No.	STATION	OFFSET	COLUMN A	COLUMN B
Bk. of E. Abut. 1 Sp. @ 3'-5"	5	103594.361	9.625	692.603	692.603
	4	103600.067	3.208	692.712	692.712
	℄ Rdwy.	103602.920	.000	692.739	692.739
	3	103605.773	- 3.208	692.748	692.748
	2	103611.479	- 9.625	692.712	692.712
℄ Brg. E. Abut.		103597.777	9.625	692.625	692.625
		103603.484	3.208	692.734	692.734
		103606.337	.000	692.761	692.761
		103609.190	- 3.208	692.769	692.769
		103614.896	- 9.625	692.733	692.733
		103607.777	9.625	692.689	692.706
		103613.484	3.208	692.795	692.813
		103616.337	.000	692.822	692.839
		103619.190	- 3.208	692.830	692.847
		103624.896	- 9.625	692.792	692.809
		103617.777	9.625	692.750	692.779
		103623.484	3.208	692.855	692.884
		103626.337	.000	692.881	692.910
		103629.190	- 3.208	692.888	692.917
		103634.896	- 9.625	692.849	692.878
		103627.777	9.625	692.809	692.845
		103633.484	3.208	692.912	692.948
		103636.337	.000	692.937	692.973
		103639.190	- 3.208	692.944	692.980
6 Sps. @ 10'-0" = 60'-0"		103644.896	- 9.625	692.903	692.939
		103637.777	9.625	692.865	692.892
		103643.484	3.208	692.967	692.994
		103646.337	.000	692.991	693.018
		103649.190	- 3.208	692.997	693.024
		103654.896	- 9.625	692.954	692.982
		103647.777	9.625	692.918	692.934
		103653.484	3.208	693.019	693.035
		103656.337	.000	693.042	693.058
		103659.190	- 3.208	693.047	693.064
		103664.896	- 9.625	693.003	693.020
		103657.777	9.625	692.969	692.972
		103663.484	3.208	693.068	693.071
		103666.337	.000	693.091	693.094
		103669.190	- 3.208	693.095	693.098
		103674.896	- 9.625	693.050	693.059
1 Sp. @ 2'-2"					
℄ Brg. Pier #1		103659.944	9.625	692.980	692.980
		103665.650	3.208	693.078	693.079
		103668.503	.000	693.101	693.101
		103671.356	- 3.208	693.105	693.105
		103677.063	- 9.625	693.060	693.060
		103669.944	9.625	693.027	693.030
		103675.650	3.208	693.125	693.128
		103678.503	.000	693.146	693.149
		103681.356	- 3.208	693.150	693.153
		103687.063	- 9.625	693.103	693.106
		103679.944	9.625	693.072	693.077
		103685.650	3.208	693.168	693.173
		103688.503	.000	693.189	693.194
		103691.356	- 3.208	693.192	693.197
		103697.063	- 9.625	693.143	693.149
		103689.944	9.625	693.115	693.120
		103695.650	3.208	693.209	693.215
		103698.503	.000	693.229	693.235
		103701.356	- 3.208	693.232	693.237
		103707.063	- 9.625	693.182	693.187
7 Sps. @ 10'-0" = 70'-0"		103699.944	9.625	693.155	693.159
		103705.650	3.208	693.248	693.252
		103708.503	.000	693.267	693.271
		103711.356	- 3.208	693.269	693.273
		103717.063	- 9.625	693.217	693.221
		103709.944	9.625	693.192	693.193
		103715.650	3.208	693.284	693.285
		103718.503	.000	693.302	693.304
		103721.356	- 3.208	693.303	693.304
		103727.063	- 9.625	693.250	693.251
		103719.944	9.625	693.227	693.227
		103725.650	3.208	693.317	693.317
		103728.503	.000	693.335	693.335
		103731.356	- 3.208	693.335	693.335
		103737.063	- 9.625	693.280	693.280
		103729.944	9.625	693.259	693.259
		103735.650	3.208	693.348	693.348
		103738.503	.000	693.365	693.365
		103741.356	- 3.208	693.364	693.364
		103747.063	- 9.625	693.308	693.308

LOC.	BM. No.	STATION	OFFSET	COLUMN A	COLUMN B
1 Sp. @ 3'-5" ℄ Brg. Pier #2	5	103733.361	9.625	693.269	693.269
	4	103739.067	3.208	693.358	693.358
	℄ Rdwy.	103741.920	.000	693.375	693.375
	3	103744.773	- 3.208	693.373	693.373
	2	103750.479	- 9.625	693.317	693.317
		103743.361	9.625	693.296	693.320
		103749.067	3.208	693.385	693.407
		103751.920	.000	693.401	693.423
		103754.773	- 3.208	693.399	693.421
		103760.479	- 9.625	693.341	693.363
		103753.361	9.625	693.324	693.366
		103759.067	3.208	693.410	693.453
		103761.920	.000	693.425	693.469
		103764.773	- 3.208	693.423	693.466
		103770.479	- 9.625	693.363	693.407
		103763.361	9.625	693.349	693.408
		103769.067	3.208	693.432	693.492
		103771.920	.000	693.447	693.506
		103774.773	- 3.208	693.443	693.503
		103780.479	- 9.625	693.382	693.442
		103773.361	9.625	693.369	693.442
		103779.067	3.208	693.451	693.524
		103781.920	.000	693.465	693.538
		103784.773	- 3.208	693.461	693.534
		103790.479	- 9.625	693.399	693.472
9 Sps. @ 10'-0" = 90'-0"		103783.361	9.625	693.387	693.468
		103789.067	3.208	693.468	693.549
		103791.920	.000	693.482	693.562
		103794.773	- 3.208	693.477	693.557
		103800.479	- 9.625	693.413	693.494
		103793.361	9.625	693.403	693.471
		103799.067	3.208	693.483	693.550
		103801.920	.000	693.496	693.563
		103804.773	- 3.208	693.490	693.557
		103810.479	- 9.625	693.424	693.492
		103803.361	9.625	693.417	693.471
		103809.067	3.208	693.494	693.549
		103811.920	.000	693.506	693.561
		103814.773	- 3.208	693.500	693.555
		103820.479	- 9.625	693.433	693.488
		103813.361	9.625	693.427	693.462
		103819.067	3.208	693.504	693.539
		103821.920	.000	693.515	693.549
		103824.773	- 3.208	693.508	693.542
		103830.479	- 9.625	693.440	693.474
		103823.361	9.625	693.435	693.448
		103829.067	3.208	693.510	693.523
		103831.920	.000	693.521	693.534
		103834.773	- 3.208	693.513	693.526
		103840.479	- 9.625	693.443	693.456
1 Sp. @ 5'-10"					
℄ Brg. Pier #3		103829.194	9.625	693.439	693.439
		103834.900	3.208	693.513	693.513
		103837.753	.000	693.523	693.523
		103840.606	- 3.208	693.515	693.515
		103846.313	- 9.625	693.444	693.444
		103839.194	9.625	693.443	693.443
		103844.900	3.208	693.515	693.516
		103847.753	.000	693.525	693.525
		103850.606	- 3.208	693.516	693.516
		103856.313	- 9.625	693.444	693.444
		103849.194	9.625	693.445	693.445
		103854.900	3.208	693.516	693.516
		103857.753	.000	693.524	693.525
		103860.606	- 3.208	693.515	693.515
		103866.313	- 9.625	693.441	693.442
		103859.194	9.625	693.443	693.447
		103864.900	3.208	693.513	693.516
		103867.753	.000	693.521	693.524
		103870.606	- 3.208	693.511	693.514
		103876.313	- 9.625	693.436	693.439
7 Sps. @ 10'-0" = 70'-0"		103869.194	9.625	693.440	693.445
		103874.900	3.208	693.508	693.513
		103877.753	.000	693.515	693.520
		103880.606	- 3.208	693.504	693.509
		103886.313	- 9.625	693.428	693.433
		103879.194	9.625	693.434	693.439
		103884.900	3.208	693.500	693.506
		103887.753	.000	693.507	693.512
		103890.606	- 3.208	693.495	693.500
		103896.313	- 9.625	693.417	693.422
		103889.194	9.625	693.425	693.429
		103894.900	3.208	693.490	693.494
		103897.753	.000	693.496	693.499
		103900.606	- 3.208	693.483	693.487
		103906.313	- 9.625	693.404	693.408
		103899.194	9.625	693.413	693.414
		103904.900	3.208	693.477	693.478
		103907.753	.000	693.482	693.483
		103910.606	- 3.208	693.469	693.470
		103916.313	- 9.625	693.388	693.389

LOC.	BM. No.	STATION	OFFSET	COLUMN A	COLUMN B
1 Sp. @ 3'-5" ℄ Brg. Pier #4	5	103902.611	9.625	693.409	693.409
	4	103908.317	3.208	693.472	693.472
	℄ Rdwy.	103911.170	.000	693.477	693.477
	3	103914.023	- 3.208	693.463	693.463
	2	103919.729	- 9.625	693.382	693.382
		103912.611	9.625	693.394	693.407
		103918.317	3.208	693.456	693.469
		103921.170	.000	693.460	693.473
		103924.023	- 3.208	693.446	693.459
		103929.729	- 9.625	693.363	693.375
		103922.611	9.625	693.377	693.402
		103928.317	3.208	693.437	693.462
		103931.170	.000	693.440	693.465
		103934.023	- 3.208	693.425	693.450
		103939.729	- 9.625	693.341	693.366
6 Sps. @ 10'-0" = 60'-0"		103932.611	9.625	693.357	693.392
		103938.317	3.208	693.416	693.451
		103941.170	.000	693.418	693.453
		103944.023	- 3.208	693.402	693.438
		103949.729	- 9.625	693.317	693.352
		103942.611	9.625	693.334	693.365
		103948.317	3.208	693.392	693.422
		103951.170	.000	693.393	693.424
		103954.023	- 3.208	693.377	693.407
		103959.729	- 9.625	693.290	693.320
		103952.611	9.625	693.309	693.329
		103958.317	3.208	693.365	693.385
		103961.170	.000	693.366	693.386
		103964.023	- 3.208	693.349	693.369
		103969.729	- 9.625	693.260	693.280
		103962.611	9.625	693.261	693.285
		103968.317	3.208	693.335	693.340
		103971.170	.000	693.336	693.340
		103974.023	- 3.208	693.318	693.322
		103979.729	- 9.625	693.228	693.232
1 Sp. @ 2'-2"					
℄ Brg. W. Abut.		103964.778	9.625	693.275	693.275
		103970.484	3.208	693.329	693.329
		103973.337	.000	693.329	693.329
		103976.190	- 3.208	693.311	693.311
		103981.896	- 9.625	693.221	693.221
1 Sp. @ 3'-5"					
Bk. of W. Abut.		103968.194	9.625	693.265	693.265
		103973.900	3.208	693.318	693.318
		103976.754	.000	693.318	693.318
		103979.607	- 3.208	693.300	693.300
		103985.313	- 9.625	693.209	693.209

EXTERIOR BEAMS

LOC.	BM. No.	STATION	OFFSET	COLUMN A	COLUMN B
Bk. of E. Abut. 1 Sp. @ 3'-5" ℄ Brg. E. Abut.	6	103588.655	16.041	692.436	692.436
	1	103617.185	- 16.041	692.618	692.618
		103592.071	16.041	692.459	692.459
		103620.602	- 16.041	692.638	692.638
		103602.071	16.041	692.524	692.551
		103630.602	- 16.041	692.696	692.723
		103612.071	16.041	692.587	692.632
		103640.602	- 16.041	692.751	692.796
6 Sps. @ 10'-0" = 60'-0"		103622.071	16.041	692.647	692.698
		103650.602	- 16.041	692.804	692.855
		103632.071	16.041	692.704	692.741
		103660.602	- 16.041	692.854	692.891
		103642.071	16.041	692.759	692.780
		103670.602	- 16.041	692.901	692.922
		103652.071	16.041	692.811	692.815
		103680.602	- 16.041	692.946	692.950
1 Sp. @ 2'-2" ℄ Brg. Pier #1		103654.238	16.041	692.822	692.822
		103682.769	- 16.041	692.956	692.956
		103664.238	16.041	692.871	692.874
		103692.769	- 16.041	692.997	693.000
		103674.238	16.041	692.918	692.924
		103702.769	- 16.041	693.037	693.042
		103684.238	16.041	692.962	692.971
		103712.769	- 16.041	693.073	693.082
7 Sps. @ 10'-0" = 70'-0"		103694.238	16.041	693.003	693.012
		103722.769	- 16.041	693.107	693.116
		103704.238	16.041	693.042	693.045
		103732.769	- 16.041	693.139	693.142
		103714.238	16.041	693.078	693.078
		103742.769	- 16.041	693.168	693.168
		103724.238	16.041	693.112	693.112
		103752.769	- 16.041	693.194	693.194
1 Sp. @ 3'-5" ℄ Brg. Pier #2		103727.655	16.041	693.123	693.123
		103756.185	- 16.041	693.202	693.202
		103737.655	16.041	693.153	693.186
		103766.185	- 16.041	693.225	693.258
		103747.655	16.041	693.181	693.246
		103776.185	- 16.041	693.246	693.311
		103757.655	16.041	693.206	693.295
		103786.185	- 16.041	693.263	693.352
		103767.655	16.041	693.228	693.334
		103796.185	- 16.041	693.279	693.384
9 Sps. @ 10'-0" = 90'-0"		103777.655	16.041	693.248	693.365
		103806.185	- 16.041	693.291	693.407
		103787.655	16.041	693.266	693.385
		103816.185	- 16.041	693.301	693.400
		103797.655	16.041	693.281	693.362
		103826.185	- 16.041	693.308	693.390
		103807.655	16.041	693.293	693.344
		103836.185	- 16.041	693.313	693.365
		103817.655	16.041	693.302	693.321
		103846.185	- 16.041	693.316	693.335

LOC.	BM. No.	STATION	OFFSET	COLUMN A	COLUMN B
1 Sp. @ 5'-10" ℄ Brg. Pier #3	6	103823.488	16.041	693.307	693.307
	1	103852.019	- 16.041	693.316	693.316
		103833.488	16.041	693.313	693.312
		103862.019	- 16.041	693.314	693.314
		103843.488	16.041	693.315	693.315
		103872.019	- 16.041	693.310	693.310
		103853.488	16.041	693.316	693.322
		103882.019	- 16.041	693.303	693.309
7 Sps. @ 10'-0" = 70'-0"		103863.488	16.041	693.312	693.323
		103892.019	- 16.041	693.293	693.303
		103873.488	16.041	693.309	693.315
		103902.019	- 16.041	693.281	693.288
		103883.488	16.041	693.301	693.308
		103912.019	- 16.041	693.266	693.270
		103893.488	16.041	693.291	693.292
		103922.019	- 16.041	693.249	693.250
1 Sp. @ 3'-5" ℄ Brg. Pier #4		103896.905	16.041	693.287	693.287
		103925.435	- 16.041	693.243	693.243
		103906.905	16.041	693.274	693.281
		103935.435	- 16.041	693.222	693.236
		103916.905	16.041	693.258	693.292
		103945.435	- 16.041	693.199	693.232
6 Sps. @ 10'-0" = 60'-0"		103926.905	16.041	693.240	693.290
		103955.435	- 16.041	693.173	693.223
		103936.905	16.041	693.219	693.265
		103965.435	- 16.041	693.144	693.190
		103946.905	16.041	693.195	693.228
		103975.435	- 16.041	693.113	693.146
		103956.905	16.041	693.169	693.175
		103985.435	- 16.041	693.080	693.086
1 Sp. @ 2'-2" ℄ Brg. W. Abut.		103959.071	16.041	693.153	693.153
		103987.602	- 16.041	693.072	693.072
1 Sp. @ 3'-5" Bk. of W. Abut.		103962.488	16.041	693.153	693.153
		103991.019	- 16.041	693.060	693.060

COLUMN A - GRADE ELEVATIONS
COLUMN B - GRADE ELEVATIONS ADJUSTED FOR D.L. DEFLECTIONS

DESIGNED	R. Sander
CHECKED	R. M. Gunead
DRAWN	R. S.
CHECKED	R. M. G.

AUG 28 1963

EXAMINED: W. E. Baumann — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED: H. J. Allen — ENGINEER OF DESIGN
APPROVED: [signature] — CHIEF HIGHWAY ENGINEER

ELEVATIONS
SOUTH STRUCTURE
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB	IROQUOIS	31	17
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 13
19 SHEETS

INTERIOR BEAMS

LOC.	BM. No.	STATION	OFFSET	COLUMN A	COLUMN B
	11	103537.451	9.625	692.187	892.187
Bk. of	10	103543.157	3.208	692.304	692.304
E. Abut.	℄ Rdwy.	103546.010	.000	692.335	692.335
1 Sp. @	9	103548.863 -	3.208	692.348	692.348
3'-5"	8	103554.569 -	9.625	692.321	692.321
		103540.867	9.625	692.214	692.214
℄ Brg.		103546.574	3.208	692.331	692.331
E. Abut.		103549.427	.000	692.362	692.362
		103552.280 -	3.208	692.375	692.375
		103557.986 -	9.625	692.347	692.347
		103550.867	9.625	692.292	692.309
		103556.574	3.208	692.407	692.424
		103559.427	.000	692.438	692.455
		103562.280 -	3.208	692.450	692.467
		103567.986 -	9.625	692.421	692.437
		103560.867	9.625	692.368	692.397
		103566.574	3.208	692.482	692.511
		103569.427	.000	692.511	692.540
		103572.280 -	3.208	692.523	692.552
		103577.986 -	9.625	692.492	692.521
		103570.867	9.625	692.441	692.477
		103576.574	3.208	692.553	692.589
		103579.427	.000	692.582	692.618
		103582.280 -	3.208	692.593	692.629
6 Sps. @		103587.986 -	9.625	692.561	692.596
10'-0" =		103580.867	9.625	692.512	692.539
60'-0"		103586.574	3.208	692.623	692.650
		103589.427	.000	692.651	692.678
		103592.280 -	3.208	692.661	692.688
		103597.986 -	9.625	692.627	692.654
		103590.867	9.625	692.580	692.596
		103596.574	3.208	692.689	692.705
		103599.427	.000	692.717	692.733
		103602.280 -	3.208	692.726	692.742
		103607.986 -	9.625	692.690	692.707
		103600.867	9.625	692.645	692.648
		103606.574	3.208	692.753	692.756
		103609.427	.000	692.780	692.783
		103612.280 -	3.208	692.788	692.791
		103617.986 -	9.625	692.751	692.754
1 Sp. @ 2'-2"					
		103603.034	9.625	692.659	692.659
℄ Brg.		103608.740	3.208	692.767	692.767
Pier #1		103611.593	.000	692.793	692.793
		103614.446 -	3.208	692.802	692.802
		103620.153 -	9.625	692.764	692.764
		103613.034	9.625	692.722	692.724
		103618.740	3.208	692.827	692.830
		103621.593	.000	692.853	692.856
		103624.446 -	3.208	692.861	692.864
		103630.153 -	9.625	692.822	692.825
		103623.034	9.625	692.781	692.787
		103628.740	3.208	692.886	692.891
		103631.593	.000	692.911	692.916
		103634.446 -	3.208	692.918	692.923
		103640.153 -	9.625	692.878	692.883
		103633.034	9.625	692.838	692.844
		103638.740	3.208	692.941	692.947
		103641.593	.000	692.966	692.971
		103644.446 -	3.208	692.972	692.977
		103650.153 -	9.625	692.930	692.936
7 Sps. @		103643.034	9.625	692.893	692.897
10'-0" =		103648.740	3.208	692.995	692.999
70'-0"		103651.593	.000	693.018	693.022
		103654.446 -	3.208	693.024	693.028
		103660.153 -	9.625	692.981	692.985
		103653.034	9.625	692.945	692.947
		103658.740	3.208	693.045	693.047
		103661.593	.000	693.068	693.069
		103664.446 -	3.208	693.073	693.074
		103670.153 -	9.625	693.028	693.030
		103663.034	9.625	692.995	692.995
		103668.740	3.208	693.093	693.093
		103671.593	.000	693.115	693.115
		103674.446 -	3.208	693.119	693.119
		103680.153 -	9.625	693.073	693.073
		103673.034	9.625	693.041	693.041
		103678.740	3.208	693.138	693.138
		103681.593	.000	693.160	693.160
		103684.446 -	3.208	693.163	693.163
		103690.153 -	9.625	693.116	693.116

LOC.	BM. No.	STATION	OFFSET	COLUMN A	COLUMN B
1 Sp. @ 3'-5"					
	11	103676.451	9.625	693.057	693.057
℄ Brg.	10	103682.157	3.208	693.153	693.153
Pier #2	℄ Rdwy.	103685.010	.000	693.175	693.175
	9	103687.863 -	3.208	693.178	693.178
	8	103693.569 -	9.625	693.130	693.130
		103686.451	9.625	693.100	693.122
		103692.157	3.208	693.195	693.217
		103695.010	.000	693.216	693.237
		103697.863 -	3.208	693.213	693.240
		103703.569 -	9.625	693.169	693.190
		103696.451	9.625	693.141	693.184
		103702.157	3.208	693.235	693.278
		103705.010	.000	693.254	693.298
		103707.863 -	3.208	693.256	693.299
		103713.569 -	9.625	693.205	693.248
		103706.451	9.625	693.179	693.239
		103712.157	3.208	693.271	693.331
		103715.010	.000	693.290	693.350
		103717.863 -	3.208	693.291	693.351
		103723.569 -	9.625	693.239	693.299
		103716.451	9.625	693.215	693.288
		103722.157	3.208	693.306	693.379
		103725.010	.000	693.324	693.397
		103727.863 -	3.208	693.324	693.397
		103733.569 -	9.625	693.270	693.343
		103726.451	9.625	693.248	693.329
9 Sps. @		103732.157	3.208	693.337	693.418
10'-0" =		103735.010	.000	693.355	693.435
90'-0"		103737.863 -	3.208	693.354	693.435
		103743.569 -	9.625	693.299	693.379
		103736.451	9.625	693.279	693.346
		103742.157	3.208	693.366	693.434
		103745.010	.000	693.383	693.451
		103747.863 -	3.208	693.382	693.449
		103753.569 -	9.625	693.325	693.392
		103746.451	9.625	693.307	693.361
		103752.157	3.208	693.393	693.447
		103755.010	.000	693.409	693.463
		103757.863 -	3.208	693.407	693.461
		103763.569 -	9.625	693.348	693.403
		103756.451	9.625	693.332	693.366
		103762.157	3.208	693.417	693.451
		103765.010	.000	693.432	693.466
		103767.863 -	3.208	693.429	693.464
		103773.569 -	9.625	693.369	693.404
		103766.451	9.625	693.355	693.367
		103772.157	3.208	693.438	693.451
		103775.010	.000	693.453	693.465
		103777.863 -	3.208	693.449	693.462
		103783.569 -	9.625	693.388	693.401
1 Sp. @ 5'-10"					
		103772.284	9.625	693.367	693.367
℄ Brg.		103777.990	3.208	693.449	693.449
Pier #3		103780.843	.000	693.463	693.463
		103783.696 -	3.208	693.459	693.460
		103789.403 -	9.625	693.397	693.397
		103782.284	9.625	693.386	693.386
		103787.990	3.208	693.467	693.467
		103790.843	.000	693.480	693.480
		103793.696 -	3.208	693.475	693.475
		103799.403 -	9.625	693.412	693.412
		103792.284	9.625	693.402	693.402
		103797.990	3.208	693.481	693.482
		103800.843	.000	693.494	693.494
		103803.696 -	3.208	693.488	693.489
		103809.403 -	9.625	693.423	693.424
		103802.284	9.625	693.415	693.419
		103807.990	3.208	693.493	693.497
		103810.843	.000	693.505	693.509
		103813.696 -	3.208	693.499	693.502
		103819.403 -	9.625	693.433	693.436
		103812.284	9.625	693.426	693.431
7 Sps. @		103817.990	3.208	693.503	693.508
10'-0" =		103820.843	.000	693.514	693.519
70'-0"		103823.696 -	3.208	693.507	693.512
		103829.403 -	9.625	693.439	693.444
		103822.284	9.625	693.435	693.440
		103827.990	3.208	693.510	693.515
		103830.843	.000	693.520	693.525
		103833.696 -	3.208	693.513	693.518
		103839.403 -	9.625	693.443	693.448
		103832.284	9.625	693.441	693.444
		103837.990	3.208	693.514	693.518
		103840.843	.000	693.524	693.528
		103843.696 -	3.208	693.516	693.519
		103849.403 -	9.625	693.445	693.448
		103842.284	9.625	693.444	693.445
		103847.990	3.208	693.516	693.517
		103850.843	.000	693.525	693.526
		103853.696 -	3.208	693.516	693.517
		103859.403 -	9.625	693.443	693.444

LOC.	BM. No.	STATION	OFFSET	COLUMN A	COLUMN B
1 Sp. @ 3'-5"					
	11	103845.701	9.625	693.444	693.444
℄ Brg.	10	103851.407	3.208	693.516	693.515
Pier #4	℄ Rdwy.	103854.260	.000	693.525	693.525
	9	103857.113 -	3.208	693.515	693.515
	8	103862.819 -	9.625	693.442	693.442
		103855.701	9.625	693.444	693.457
		103861.407	3.208	693.514	693.528
		103864.260	.000	693.522	693.536
		103867.113 -	3.208	693.512	693.526
		103872.819 -	9.625	693.438	693.451
		103865.701	9.625	693.441	693.467
		103871.407	3.208	693.510	693.535
		103874.260	.000	693.517	693.543
		103877.113 -	3.208	693.507	693.532
		103882.819 -	9.625	693.431	693.456
		103875.701	9.625	693.436	693.471
		103881.407	3.208	693.503	693.539
6 Sps. @		103884.260	.000	693.510	693.545
10'-0" =		103887.113 -	3.208	693.498	693.534
60'-0"		103892.819 -	9.625	693.421	693.456
		103885.701	9.625	693.428	693.459
		103891.407	3.208	693.494	693.525
		103894.260	.000	693.500	693.530
		103897.113 -	3.208	693.487	693.518
		103902.819 -	9.625	693.409	693.439
		103895.701	9.625	693.416	693.438
		103901.407	3.208	693.482	693.502
		103904.260	.000	693.487	693.508
		103907.113 -	3.208	693.474	693.495
		103912.819 -	9.625	693.394	693.414
		103905.701	9.625	693.405	693.408
		103911.407	3.208	693.468	693.471
		103914.260	.000	693.472	693.476
		103917.113 -	3.208	693.458	693.462
		103922.819 -	9.625	693.376	693.380
1 Sp. @ 2'-2"					
		103907.868	9.625	693.401	693.402
℄ Brg.		103913.574	3.208	693.464	693.464
W. Abut.		103916.427	.000	693.468	693.468
		103919.280 -	3.208	693.454	693.454
		103924.986 -	9.625	693.372	693.372
1 Sp. @ 3'-5"					
		103911.284	9.625	693.396	693.396
Bk. of		103916.990	3.208	693.458	693.458
W. Abut.		103919.844	.000	693.462	693.462
		103922.697 -	3.208	693.448	693.440
		103928.403 -	9.625	693.365	693.365

EXTERIOR BEAMS

LOC.	BM. No.	STATION	OFFSET	COLUMN A	COLUMN B
Bk. of E. Abut.	12	103531.745	16.041	692.012	692.012
1 Sp. @ 3'-5"	7	103560.275 -	16.041	692.235	692.235
℄ Brg.		103535.161	16.041	692.040	692.040
E. Abut.		103563.692 -	16.041	692.260	692.260
		103545.161	16.041	692.119	692.146
		103573.692 -	16.041	692.333	692.360
		103555.161	16.041	692.197	692.241
		103583.692 -	16.041	692.403	692.447
6 Sps. @		103565.161	16.041	692.271	692.323
10'-0" =		103593.692 -	16.041	692.470	692.521
60'-0"		103575.161	16.041	692.343	692.380
		103603.692 -	16.041	692.535	692.572
		103585.161	16.041	692.413	692.433
		103613.692 -	16.041	692.597	692.617
		103595.161	16.041	692.480	692.463
		103623.692 -	16.041	692.656	692.660
1 Sp. @ 2'-2"					
℄ Brg.		103597.328	16.041	692.494	692.494
Pier #1		103625.859 -	16.041	692.669	692.669
		103607.328	16.041	692.558	692.550
		103635.859 -	16.041	692.725	692.726
		103617.328	16.041	692.619	692.624
		103645.859 -	16.041	692.779	692.785
		103627.328	16.041	692.677	692.686
		103655.859 -	16.041	692.831	692.839
7 Sps. @		103637.328	16.041	692.733	692.742
10'-0" =		103665.859 -	16.041	692.879	692.888
70'-0"		103647.328	16.041	692.787	692.790
		103675.859 -	16.041	692.925	692.928
		103657.328	16.041	692.838	692.838
		103685.859 -	16.041	692.969	692.959
		103667.328	16.041	692.886	692.886
		103695.859 -	16.041	693.010	693.010
1 Sp. @ 3'-5"					
℄ Brg.		103670.745	16.041	692.902	692.902
Pier #2		103699.275 -	16.041	693.023	693.023
		103680.745	16.041	692.947	692.979
		103709.275 -	16.041	693.061	693.093
		103690.745	16.041	692.989	693.054
		103719.275 -	16.041	693.096	693.161
		103700.745	16.041	693.029	693.118
		103729.275 -	16.041	693.128	693.217
		103710.745	16.041	693.066	693.172
		103739.275 -	16.041	693.158	693.264
9 Sps. @		103720.745	16.041	693.101	693.217
10'-0" =		103749.275 -	16.041	693.165	693.301
90'-0"		103730.745	16.041	693.133	693.232
		103759.275 -	16.041	693.210	693.309
		103740.745	16.041	693.162	693.244
		103769.275 -	16.041	693.232	693.313
		103750.745	16.041	693.189	693.241
		103779.275 -	16.041	693.251	693.303
		103760.745	16.041	693.213	693.232
		103789.275 -	16.041	693.268	693.287

LOC.	BM. No.	STATION	OFFSET	COLUMN A	COLUMN B
1 Sp. @ 5'-10"					
℄ Brg.	12	103766.578	16.041	693.226	693.226
Pier #3	7	103795.109 -	16.041	693.277	693.277
		103776.578	16.041	693.246	693.248
		103805.109 -	16.041	693.290	693.290
		103786.578	16.041	693.264	693.265
		103815.109 -	16.041	693.300	693.301
7 Sps. @		103796.578	16.041	693.279	693.286
10'-0" =		103825.109 -	16.041	693.302	693.314
70'-0"		103806.578	16.041	693.292	693.301
		103835.109 -	16.041	693.313	693.322
		103816.578	16.041	693.301	693.308
		103845.109 -	16.041	693.315	693.322
		103826.578	16.041	693.309	693.313
		103855.109 -	16.041	693.315	693.319
		103836.578	16.041	693.313	693.314
		103865.109 -	16.041	693.313	693.314
1 Sp. @ 3'-5"					
℄ Brg.		10[illegible]39.995	16.041	693.315	693.315
Pier #4		1038[illegible].525 -	16.041	693.311	693.311
		103849.995	16.041	693.319	693.332
		103878.525 -	16.041	693.305	693.322
		103859.995	16.041	693.315	693.348
		103888.525 -	16.041	693.297	693.330
6 Sps. @		103869.995	16.041	693.311	693.341
10'-0" =		103898.525 -	16.041	693.245	693.336
60'-0"		103879.995	16.041	693.304	693.350
		103908.525 -	16.041	693.272	693.316
		103889.995	16.041	693.295	693.328
		103918.525 -	16.041	693.255	693.288
		103899.995	16.041	693.284	693.290
		103928.525 -	16.041	693.236	693.242
1 Sp. @ 2'-2"					
℄ Brg.		103902.161	16.041	693.281	693.231
W. Abut.		103930.692 -	16.041	693.232	693.232
1 Sp. @ 3'-5"					
Bk. of		103905.578	16.041	693.276	693.275
W. Abut.		103934.109 -	16.041	693.225	693.225

DESIGNED	[illegible]
CHECKED	R. M. Garrard
DRAWN	[illegible]
CHECKED	[illegible]

AUG 28 1963

EXAMINED W. E. Baumann
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES

PASSED [illegible] Allen
ENGINEER OF DESIGN

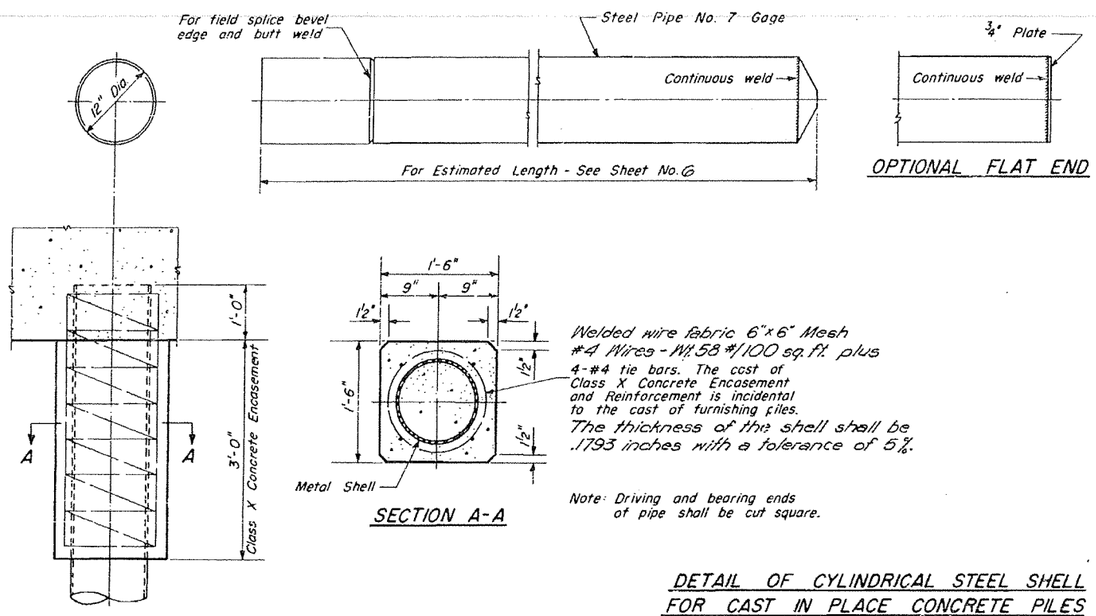
APPROVED [illegible]
CHIEF HIGHWAY ENGINEER

ELEVATIONS
NORTH STRUCTURE
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

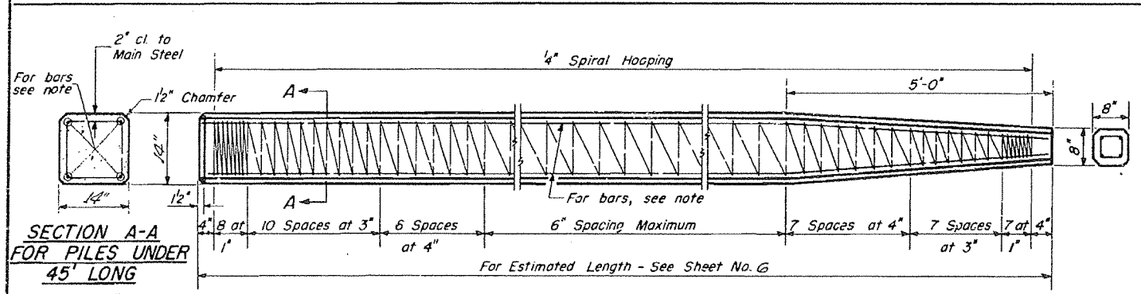
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2&VB	IROQUOIS	31	18
FED. ROAD DIST. NO. 3	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14
19 SHEETS



SECTION A-A

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



SPLICE TO BE USED AS REQUIRED

SECTION A-A

ALLOWABLE TAPERS

1-Taper 1"/2'-6" for 10' + 12" Cylindrical Section Extension
2-Taper 1"/4'-0" for 17' + 12" Cylindrical Section Extension
3-Taper 1"/7'-0" for 30' + 12" Cylindrical Section Extension

Welded wire fabric 6"x6" Mesh #4 Wires - Wt. 58 #/100 sq. ft. plus 4-#4 tie bars. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.
The thickness of the shell shall be .1793 inches with a tolerance of 5%.

DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES

SECTION A-A FOR PILES UNDER 45' LONG

SECTION A-A FOR PILES 45' OR MORE

Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel.
For 14" Piles under 45' long use 4-#9 bars the full length.

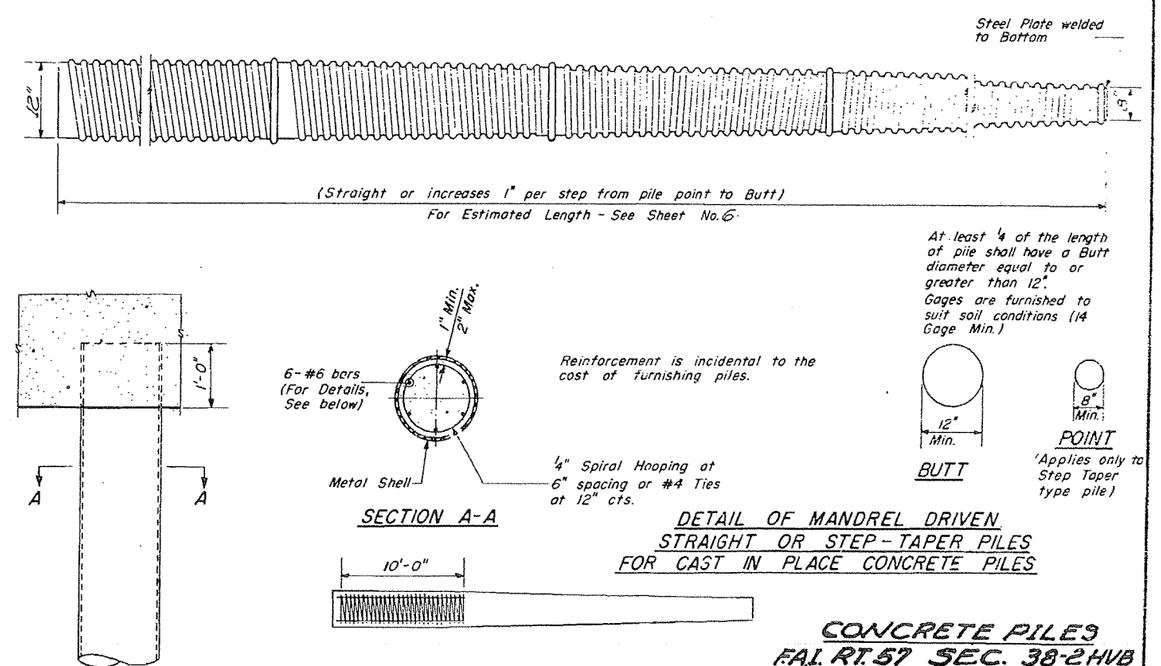
Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L* from each end.
For Piles longer than 45', use three slings placed at a distance of 0.12 L* from each end and at mid-point of pile.

*L = Over all length of pile to be handled.

DESIGNED	R. Sander	AUG 28 1963
CHECKED	R.M. Sparrod	EXAMINED H.E. Baumann, ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN	W. A. Sausaman	PASSED H.J. Allen, ENGINEER OF DESIGN
CHECKED	R.M.G.	APPROVED, CHIEF HIGHWAY ENGINEER

X-1 Rev. 5-12-61 9-27-62

DETAIL OF PRECAST CONCRETE PILES



At least ¼ of the length of pile shall have a Butt diameter equal to or greater than 12".
Gages are furnished to suit soil conditions (14 Gage Min.)

Reinforcement is incidental to the cost of furnishing piles.

SECTION A-A

BUTT

POINT
(Applies only to Step Taper type pile)

DETAIL OF MANDREL DRIVEN STRAIGHT OR STEP-TAPER PILES FOR CAST IN PLACE CONCRETE PILES

CONCRETE PILES
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

Boring No. 1
Station 1036+86.00
Offset 43.5' Lt ℄

Description	Elevation	Depth	N	Type	w (%)
Ground Surface	660.68	0			
Stiff Brownish Black & Yellowish Brown CLAY	657.18		8	1.0 E	17
Hard Brown & Grey CLAY (Till)	652.18	-5	13	6.2 S	18
			21	6.5 S	17
Hard Gray CLAY (Till)	646.68	-10	14	5.6 B	16
			14	5.2 B	18
		-15	11	4.5 S	18
Very Stiff Gray CLAY (Till)	642.18		11	3.3 B	19
Stiff Gray CLAY (Till)	639.68	-20	9	1.6 B	20
Very Stiff Gray CLAY (Till)			10	2.3 B	19
Medium Angular Gray SAND (Saturated)	637.18				
Medium Gray SILT (Saturated)	635.68	-25	13	3.9 S	20
Very Stiff Gray CLAY (Till)	633.68		11		23
Medium Gray SILT (Saturated)		-30	16		23
	627.18		13		19
Very Stiff Gray CLAY (Till)		-35	13	3.1 B	21
			11	3.1 B	19
		-40	11	2.8 B	18

Boring No. 2
Station 103[illegible]+46
Offset 16.5' Lt ℄

Description	Elevation	Depth	N	Type	w (%)
Ground Surface	660.68	0			
Very Stiff Gray CLAY (Till)	617.18		13	3.8 B	17
Medium Gray SILT with Sand Seams (Saturated)	614.68	-45	15		19
Very Stiff Gray CLAY (Till)	612.18		11	2.3 B	23
Very Stiff Gray CLAY (Till) (Lacustrine)	609.68	-50	12	3.3 S	23
Lost Sample	607.18		35	--	--
Very Stiff Gray CLAY LOAM (Till)	604.68	-55	24	2.8 S	16
Yellowish Brown Angular SAND	603.66				
Hard Gray CLAY LOAM (Till)			42	--	13
		-60	100 5/8"	---	12
	597.68				
Medium Bedded, Dense Light Gray LIMESTONE (Cored)		-65			
	592.68				

Surface Water El. None
Groundwater El. at Completion None
After 24 Hours None

Boring No. 2
Station 103[illegible]+46
Offset 16.5' Lt ℄

Description	Elevation	Depth	N	Type	w (%)
Ground Surface	660.00	0			
Very Stiff Yellowish Brown & Gray CLAY	656.50		8	2.5 S	23
Medium Yellowish Brown & Gray CLAY	654.00	-5	2	0.6 B	32
Hard Brown CLAY (Till)	651.50		19	5.9 S	18
Hard Gray CLAY (Till)	646.50	-10	14	6.6 B	16
			13	5.2 B	17
Very Stiff Gray CLAY (Till)		-15	10	3.5 B	20
			10	2.9 B	20
		-20	8	2.0 S	21
			11	2.9 S	19
Very Stiff Gray CLAY (Till)		-25	10	3.1 B	19
			12	2.[illegible] B	19
		-30	11	2.5 B	19
	626.50		11	2.3 B	20
Gray SANDY LOAM	625.00	-35	9	1.0 E	18
Stiff Gray CLAY (Till)	624.0				
Medium Gray SILT	621.50		14	----	20
Medium Gray SANDY LOAM	620.50				
Very Stiff Gray CLAY (Till)		-40	13	2.1 B	19

Boring No. 3
Station 1036+89
Offset 19.5' Rt ℄

Description	Elevation	Depth	N	Type	w (%)
Ground Surface	660.00	0			
Very Stiff Gray CLAY (Till)	657.00		11	2.9 B	21
	654.00	-5	8	2.1 B	2[illegible]
Very Stiff Gray CLAY (Lacustrine)	651.00	-10	10	2.4 S	26
	648.00	-15	10	2.5 B	25
Hard Gray CLAY (Lacustrine)	645.00		32	5.2 S	20
Very Stiff Gray SILTY CLAY (Till)	642.00	-25	12	3.1 S	20
Hard Gray CLAY LOAM (Till)	639.00		300 9"	---	
LIMESTONE	638.50				
		-30			

Surface Water El. None
Groundwater El. at Completion None
After 24 Hours None

Boring No. 3
Station 1036+89
Offset 19.5' Rt ℄

Description	Elevation	Depth	N	Type	w (%)
Ground Surface	659.51	0			
Very Stiff Yellowish Brown & Gray CLAY (Till)	656.01		9	3.5 B	18
Hard Yellowish Brown & Gray CLAY (Till)	654.01	-5	13	4.3 S	16
	651.01		13	4.3 B	16
Hard Gray Clay (Till)	646.01	-10	11	4.1 B	18
			10	4.7 B	19
Very Stiff Gray CLAY (Till)		-15	10	3.5 B	19
			9	3.3 B	20
		-20	9	3.9 B	20
			6	2.3 S	19
Very Stiff Gray CLAY (Till)		-25	12	2.[illegible] B	18
			9	2.9 B	20
		-30	11	2.6 B	19
	627.51				
Medium Gray Angular SAND	626.01		12	----	20
Very Stiff Gray CLAY (Till)		-35	17	3.0 B	16
			11	1.9 B	19
		-40	14	2.8 S	19

Boring No. [illegible]
Station [illegible]
Offset [illegible]

Description	Elevation	Depth	N	Type	w (%)
Ground Surface	659.51	0			
			13	3.1 B	21
Medium Gray SILT	646.01	-5	14		18
Very Stiff Gray CLAY (Till)	643.51		13	2.9 B	23
Very Stiff Gray CLAY (Lacustrine)	641.01	-10	15	2.0 S	26
Hard Gray CLAY (Lacustrine)	638.51		30	6.6 S	20
Very Stiff Gray CLAY LOAM (Till)	636.01	-15	23	3.3 S	16
Limestone	632.51		300		11
		-20			

Surface Water El. None
Groundwater El. at Completion 635.51
After 24 Hours 656.43

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu - Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight - %.

Type failure
B - Bulge Failure
S - Shear Failure
E - Estimated Value

P. Sander
R. M. Barnard
R. M. L.

AUG 28 1963
K. E. Baumann
H. J. Allen

BORING DATA
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 57	38-2HVB	IROQUOIS	31	20

SHEET NO. 16
19 SHEETS

Boring No. 4
Station 1037+83.5
Offset 22' Rt ℄

Elevation	Z	q t/s.f.	w (%)
Ground Surface 661.79	0		
R. R. Embankment 659.29			
Stiff Brownish Black CLAY 658.79			
Medium Yellowish BROWN Rounded SAND 657.29	6	----	19
Medium Yellowish Brown SANDY LOAM 655.79	-5		
Very Stiff Yellowish Brown CLAY (Till) 654.29	10	2.35	12
Stiff Yellowish Brown CLAY (Till) 651.29	7	1.1 B	18
Hard Gray CLAY (Till) 649.29	-10 11	4.5 B	17
Very Stiff Gray CLAY (Till) 647.29	8	2.1 B	21
Stiff Gray CLAY (Till) 644.79	-15 7	1.8 B	22
Very Stiff Gray CLAY (Till)	6	2.1 B	21
	-20 9	2.7 B	20
	9	2.3 B	20
	-25 12	2.7 B	20
	12	2.3 B	18
	-30 12	2.4 B	19
	13	2.3 B	20
	-35 13	2.6 B	20
	12	2.3 B	21
	-40		

Elevation	Z	q t/s.f.	w (%)
Ground Surface 661.79	-40		
Very Stiff Gray CLAY (Till)	12	2.0 B	20
	13	2.5 B	23
614.79	-45 13	2.1 S	21
Very Stiff Gray CLAY (Lacustrine)	11	2.1 S	29
609.79	-50 13	2.9 B	25
Hard Gray CLAY (Lacustrine)	32	4.3 S	22
607.29	-55 20	3.3 S	12
Very Stiff Gray CLAY LOAM (Till)			
604.79			
Hard Gray CLAY LOAM (Till)	43	10.1 S	13
601.19	-60		
Limestone	300 3.75"	---	

Surface Water El. None
Groundwater El. at Completion 646.59
After 24 Hours 657.59

Boring No. 5
Station 1038+45.00
Offset 40' Lt ℄

Elevation	Z	q t/s.f.	w (%)
Ground Surface 661.61	0		
Embankment Fill 659.63			
Yellowish Brown SANDY LOAM			
Very Stiff Yellowish BROWN CLAY 657.63	11	2.3 B	15
Very Stiff Yellowish Brown SILTY CLAY 656.13	-5		
Very Stiff Yellowish Brown & GRAY CLAY (Till)	9	2.1 B	13
Yellowish Brown SANDY LOAM (Saturated)			
Hard Yellowish Brown CLAY (Till) 652.63	19	5.2 B	20
Hard Gray CLAY (Till)	-10 17	5.5 S	17
	17	4.0 E	--
645.13	-15 15	4.3 B	19
Very Stiff Gray CLAY (Till)	14	2.7 B	20
640.13	-20 12	2.7 B	19
Stiff Gray CLAY (Till)	7	1.2 B	21
635.13	-25 12	1.3 B	21
Very Stiff Gray CLAY (Till)	11	2.2 B	20
630.13	-30 11	Lost Sample	
Angular Gray SAND (Saturated) 629.13			
Very Stiff Gray CLAY (Till)	14	2.3 B	17
	-35 10	2.5 B	19
	11	2.1 B	18
	-40 12	2.3 B	19

Elevation	Z	q t/s.f.	w (%)
Ground Surface 661.63	-40		
B Very Stiff Gray CLAY (Till)	12	2.3 B	19
	13	2.4 B	21
612.63	-45 13	2.3 B	21
Very Stiff Gray CLAY (Lacustrine)	14	2.5 B	22
610.13	-50 13	2.3 S	26
Medium Gray SANDY LOAM (Saturated)	14	----	---
604.13	-55 15	---	--
Very Dense Gray SILT	65	--	17
603.13	-60		

Surface Water El. None
Groundwater El. at Completion 645.93
After 24 Hours 657.53

Boring No. 6
Station 1036+21.00
Offset 22' Rt ℄

Elevation	Z	q t/s.f.	w (%)
Ground Surface 659.57	0		
Stiff Black & Yellowish Brown CLAY 656.07	6	1.8 S	24
Stiff Yellowish Brown & Gray CLAY (Till) 653.57	-5 5	1.3 B	23
Yellowish Brown SAND (Saturated) 652.57			
Very Stiff Yellowish Brown CLAY (Till) 651.07	8	2.7 B	23
Stiff Gray CLAY (Till) 648.57	-10 8	1.8 B	20
Very Stiff Gray CLAY (Till) 646.07	8	2.3 B	21
Stiff Gray CLAY (Till)	-15 6	1.7 S	22
	7	1.4 B	21
636.07	-20 8	1.2 B	21
Very Stiff Gray CLAY (Till)	10	1.9 B	21
	-25 12	2.6 B	16
	14	2.7 B	20
627.57	-30 19	2.6 B	20
Medium Gray SILT 626.07	11	---	21
Very Stiff Gray CLAY (Till)	-35 14	2.1 B	19
	12	2.8 B	20
	-40 13	2.5 B	20

Elevation	Z	q t/s.f.	w (%)
Ground Surface 659.57	-40		
Very Stiff Gray CLAY (Till)	15	2.6 B	21
	-45 15	3.0 B	22
611.07	12	2.1 B	20
Hard Gray CLAY (Lacustrine)	-50 23	4.0 S	23
606.07	29	4.8 S	20
Dense Gray SILTY LOAM	-55 30	--	12
603.57			
Hard Gray CLAY (Fragments of Limestone)	75	---	23
601.57	-60		

Surface Water El. None
Groundwater El. at Completion 639.47
After 24 Hours 655.17

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu - Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight-%.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value

PREPARED P. Sander
CHECKED R. M. Barnard
REVIEWED R. M. B.

AUG. 28 '63
EXAMINED W. E. Baumann
PASSED H. J. Allen
APPROVED

BORING DATA
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-57	38-2HVB	IROQUOIS	31	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 17 OF 31 SHEETS

Boring No 7
Station 1035+45
Offset 23' Rt. ℄

Elevation	Z	Type	Qu	w (%)
659.57	0			
Ground Surface				
Very Stiff Black & Yellowish Brown CLAY	12	3.0	B	21
656.07				
Very Stiff Yellowish Brown & Gray CLAY (Till)	6	2.3	B	22
653.57				
Yellowish Brown SILT				
652.57				
Hard Yellowish Brown Clay (Till)	13	5.0	S	22
651.07				
Very Stiff Gray CLAY (Till)	9	3.6	B	19
	7	Lost Sample		
	10	2.8	B	21
	10	2.2	B	20
	10	2.2	B	24
Very Stiff Gray CLAY (Till)	10	2.2	B	21
	12	2.3	B	21
	12	2.3	B	21
	13	2.2	B	20
628.57				
Very Stiff Gray CLAY LOAM (Till)	16	2.7	B	16
626.07				
Very Stiff Gray CLAY (Till)	11	2.3	B	21
	13	2.5	B	18
	13	2.5	B	1

Surface Water El. None
Groundwater El. at Completion None
After 24 Hours None

Elevation	Z	Type	Qu	w (%)
659.57	0			
Ground Surface				
618.57				
Very Stiff Gray CLAY LOAM (Till)	14	2.0	B	14
616.07				
Very Stiff Gray CLAY (Till)	15	2.6	B	19
	12	2.6	B	23
	12	2.6	B	21
608.57				
Very Stiff Gray CLAY (Lacustrine)	13	2.9	S	24
604.57				
Medium Gray SILTY LOAM	26	3.6	B	17
Gray Sand (Water)				
603.07				

Boring No 8
Station 1035+94
Offset 21.5' Lt. ℄

Elevation	Z	Type	Qu	w (%)
659.89	0			
Ground Surface				
Very Stiff Black & Yellowish Brown CLAY	9	3.7	S	20
656.39				
Very Stiff Yellowish Brown & Gray CLAY (Till)	7	3.7	B	23
653.89				
Hard Yellowish Brown CLAY (Till)	16	5.0	S	22
651.39				
Very Stiff Gray CLAY (Till)	10	3.1	B	20
648.59				
Stiff Gray CLAY (Till)	6	1.6	B	21
	5	1.7	B	23
	7	1.4	B	21
641.39				
Very Stiff Gray CLAY (Till)	10	2.5	B	21
	11	2.4	B	19
	11	2.4	B	20
632.39				
Medium Gray Angular SAND Saturated	19	3.[illegible]	B	19
631.39				
Very Stiff Gray CLAY LOAM (Till)	16	2.2	B	13
628.89				
Medium Gray SILT	15	--	--	18
626.39				
	16	Lost Sample		
623.89				
Very Stiff Gray CLAY (Till)	11	2.0	B	21
	11	2.1	B	20

Surface Water El. None
Groundwater El. at Completion 639.39
After 24 Hours 646.49

Elevation	Z	Type	Qu	w (%)
659.89	0			
Ground Surface				
Very Stiff Gray CLAY (Till)	13	2.2	B	21
	12	2.4	B	25
	13	2.4	B	19
611.39				
Very Stiff Gray CLAY (Lacustrine)	13	3.0	B	26
608.89				
Hard Gray CLAY (Lacustrine)	33	8.7	S	21
606.39				
Very Stiff Gray CLAY LOAM (Till)	15	2.8	B	13
604.39				
Sand Filled in casing				
603.39				

Boring No 9
Station 1035+86.5℄
Offset 42.5' Lt. ℄

Elevation	Z	Type	Qu	w (%)
659.86	0			
Ground Surface				
Very Stiff Black & Yellowish Brown CLAY	5	2.9	S	18
657.36				
Loose Yellowish Brown & Gray SANDY LOAM (Saturated)	7	2.0	F	17
654.36				
Very Stiff Brown CLAY (Till)	13	4.5	S	22
653.86				
Hard Brown & Gray CLAY (Till)	12	4.5	B	18
648.86				
Very Stiff Gray CLAY (Till)	7	2.1	B	22
646.36				
Stiff Gray CLAY (Till)	5	1.6	B	22
641.36				
	12	2.6	B	20
Very Stiff Gray CLAY (Till)	10	2.3	B	21
637.36				
Medium Gray SILT (Saturated)	16	2.8	B	20
	18	--	--	17
633.86				
Very Stiff Gray CLAY (Till)	10	2.7	B	20
	10	2.7	B	16
626.36				
	11	3.1	B	17
Very Stiff to Hard Gray CLAY LOAM (Till)	12	2.4	B	16
	17	4.5	S	13
	15	2.9	S	15
619.86				

Elevation	Z	Type	Qu	w (%)
659.86	0			
Ground Surface				
618.86				
Very Stiff Gray CLAY (Till)	12	2.5	B	16
	10	2.5	B	22
612.56				
Very Stiff Gray CLAY (Lacustrine)	10	2.0	S	20
(1" sand seam, water)	13	2.0	B	23
608.86				
Hard Gray CLAY (Lacustrine)	24	6.3	S	20
(Thin Sand Seams) 606.86				
Medium Gray SILT (Saturated)	13			19
603.86				
Brown Sand to LIMESTONE	50/3"			
602.86				

Surface Water El. None
Groundwater El. at Completion 619.36
After 24 Hours 621.36

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu - Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight - %.

Type failure
B - Bulge Failure
S - Shear failure
E - Estimated Value

DESIGNED	Snider
CHECKED	R.M. Havard
DRAWN	
CHECKED	R.M.D.

AUG 28 1963

H.E. Baumann
DIRECTOR OF HIGHWAYS, STATE OF ILLINOIS

H. J. Otto
ENGINEER OF SOILS

CHIEF HIGHWAY ENGINEER

BORING DATA
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB	IROQUOIS	31	22

SHEET NO. 18
19 SHEETS

Boring No. 10
Station 1035 + 09
Offset 44' Rt ℄

Elevation	Z	N	Qu t/s.f.	w (%)
Ground Surface 659.77	0			
Stiff Black & Yellowish Brown CLAY				
656.27		6	—	19
Very Stiff Yellowish Brown & Gray CLAY (Till)	-5	7	2.7 B	21
653.77				
Hard Brown & Gray CLAY (Till)		16	3.5 B	20
648.77	-10	13	4.7 B	18
Very Stiff Gray CLAY (Till)		9	3.1 B	19
	-15	9	3.0 B	21
		9	2.8 B	20
	-20	9	2.6 B	20
Very Stiff Gray CLAY (Till)		11	2.5 B	20
	-25	11	2.8 B	20
631.27		13	3.0 S	19
Medium Gray SANDY LOAM (Saturated)				
629.77	-30	11	2.4 B	20
Very Stiff Gray CLAY (Till)		11	2.4 B	19
	-35	11	2.2 B	20
		10	2.2 B	21
	-40	11	2.9 B	21

Elevation	Z	N	Qu t/s.f.	w (%)
Ground Surface 659.77	-40			
Very stiff gray CLAY (Till)		13	2.6 B	21
613.77	-45	12	2.7 B	24
Very stiff Gray CLAY Lacustrine		12	2.2 B	25
609.27	-50	18	3.7 B	22

Surface Water El. none
Groundwater El. at Completion none
After 24 Hours none

Boring No. 11
Station 1039 + 26
Offset 22.5' Rt ℄

Elevation	Z	N	Qu t/s.f.	w (%)
Ground Surface 660.50	0			
Very Stiff Black & Yellowish Brown CLAY		8	3.5 B	23
656.00			2.0E	
Soft Yellowish Brown & Gray CLAY 654.50	-5	3	0.4 B	22
Hard Brown CLAY (Till)		13	6.6 S	22
652.00				
Very Stiff Brown & Gray CLAY (Till)	-10	10	3.7 S	20
		11	2.3 B	20
646.00				
Loose Gray SILT	-15	6	—	21
644.50				
Very stiff Gray CLAY (Till)		11	2.5 B	21
	-20	7	2.2 B	21
Very Stiff Gray CLAY (Till)		10	2.7 B	20
	-25	11	2.7 B	21
		12	2.6 B	17
632.00				
Medium Gray SILT				
630.50	-30	13	—	20
Very Stiff Gray CLAY (Till)		12	3.3 B	19
	-35	11	2.5 B	20
		10	2.3 B	21
	-40	13	2.9 B	21

Elevation	Z	N	Qu t/s.f.	w (%)
Ground Surface 660.50	-40			
619.50				
Medium Gray SILT (Saturated)		10	—	20
617.00				
Very Stiff Gray CLAY (Till)	-45	13	2.0 S	22
614.50				
Very Stiff Gray CLAY (Lacustrine)		12	2.4 S	25
	-50	16	3.7 B	25
609.50				
Hard Gray CLAY LOAM (Till)		17	5.0 B	12
606.50				
Gray SILT (Saturated)	-55			
Hard Gray CLAY LOAM (Till)		30	—	13
602.80				
Dense, Light Gray, Medium Bedded Limestone (cored)	-60	Rock Core		
598.90				

Surface Water El. none
Groundwater El. at Completion —
After 43 Hours 647.6

Boring No. 12
Station 1030 + 44.5
Offset 42' Rt ℄

Elevation	Z	N	Qu t/s.f.	w (%)
Ground Surface 661.51	0			
Embankment				
659.51				
Stiff Black & Yellowish Brown CLAY		7	2.0 B	23
657.51				
Very Stiff Yellowish Brown & Gray CLAY (Till)	-5	5	2.3 S	23
655.01				
Hard Brown & Gray CLAY (Till)		13	4.9 B	18
652.51				
Very Stiff Brown & Gray CLAY (Till)	-10	10	3.3 S	18
650.01				
Stiff Gray CLAY (Till)		6	1.3 B	22
	-15	6	1.2 B	22
645.01				
Very Stiff Gray CLAY (Till)		10	2.3 B	21
	-20	10	2.4 B	20
Very Stiff Gray CLAY (Till)		11	2.4 B	20
	-25	11	2.8 B	19
		12	2.4 B	20
	-30	12	2.1 B	20
		11	3.1 B	19
	-35	12	2.4 B	20
		12	2.5 B	22
622.51				
Medium Gray SILT (saturated)	-40			
620.01		14	—	19

Elevation	Z	N	Qu t/s.f.	w (%)
Ground Surface 661.51	-40			
620.01				
Very stiff Gray CLAY (Till)		12	2.5 B	17
(occasional 1" saturated sand seam)	-45			
		13	3.1 B	22
		14	2.5 B	24
612.51				
Very stiff gray CLAY (Lacustrine)	-50			
		12	2.7 B	25
610.01				
Hard Gray CLAY (Lacustrine)		34	5.9 B	7
607.51				
Very Stiff Gray CLAY LOAM (Till)	-55			
		19	2.1 B	15
605.01				
Hard Gray CLAY LOAM (Till)		154	—	11
LIMESTONE 603.01	-60			

Surface Water El. none
Groundwater El. at Completion none
After 60 Hours 651.31

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu - Uncontined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight - %.

Type failure:
G - Guige failure
S - Shear failure
E - Estimated Value

DESIGNED R. J. Sander
CHECKED R. M. Barnard
DRAWN
TRACED R. M. B.

AUG. 28 1963
EXAMINED W. E. Baumann
ENGINEER H. J. Allen
ENGINEER

BORING DATA
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB	IROQUOIS	31	23

SHEET NO. 19 / 19 SHEETS

Boring No. 13
Station 1019 + 06
Offset 43.5' Lt. ℄

Description	Elevation	Z	Blows/6"	Type	w (%)
Ground Surface 661.18	0				
Very Stiff Black & Yellowish Brown CLAY		10	3.1	B	20
657.60					
Very Stiff Yellowish Brown & Gray CLAY (Till)	-5	10	3.5	B	20
655.18					
Hard Brown & Gray CLAY (Till)		19	7.9	B	19
	-10	13	5.2	B	18
		11	4.1	B	20
647.68					
Stiff Gray CLAY (Till)	-15	6	1.6	B	21
		7	1.5	B	20
	-20	7	1.5	B	22
640.18					
Very Stiff Gray CLAY (Till)		9	2.3	B	20
	-25	10	2.4	B	21
		12	2.6	B	21
	-30	13	2.7	B	19
		12	2.3	B	19
	-35	13	2.8	B	15
		13	2.7	B	20
	-40	13	2.5	B	20

Description	Elevation	Z	Blows/6"	Type	w (%)
Ground Surface 661.18	-40				
Very Stiff Gray CLAY (Till)		11	2.5	B	20
	-45	14	3.1	B	19
		13	2.6	B	21
612.68					
Very Stiff Gray CLAY (Lacustrine)	-50	16	3.7	S	22
610.18					
Hard Gray CLAY (Lacustrine)		30	5.5	S	20
607.68					
Very Stiff Gray SILTY LOAM	-55	13	2.3	S	10
605.18					
Hard Gray CLAY LOAM (Fragments of Limestone)		101	---		--
603.18					
	-60				

Surface Water El. none
Groundwater El. at Completion none
After 67 Hours none

Boring No. 14
Station 1039+01
Offset 21.5' Lt. ℄

Description	Elevation	Z	Blows/6"	Type	w (%)
Ground Surface 662.06	0				
Embankment		11	2.7	B	20
660.06					
Very Stiff Black & Yellowish Brown CLAY		11	5.0	S	19
658.06					
Hard Brown & Gray CLAY (Till)	-5	14	5.4	B	21
	-10	13	5.3	B	18
		10	4.3	B	20
648.06					
Very Stiff Gray CLAY (Till)	-15	8	2.2	B	20
		9	2.6	B	21
	-20	12	3.0	B	21
Very Stiff Gray CLAY (Till)		12	3.4	B	19
	-25	13	3.1	B	19
		14	2.7	B	21
632.06	-30	12	2.8	B	20
		12	2.7	B	20
	-35	12	2.[illegible]	B	19
		12	3.0	B	20
622.06	-40	12	2.4	B	20

Description	Elevation	Z	Blows/6"	Type	w (%)
Ground Surface 662.06	-40				
Very Stiff Gray CLAY (Till)		11	2.9	B	22
	-45	13	2.9	B	24
		13	3.1	B	23
613.06					
Very Stiff Gray CLAY (Lacustrine)	-50	14	3.5	S	23
610.56					
Hard Gray CLAY LOAM (Till) (Several 2" Sand Seams)		20	4.1	S	15
608.06					
Medium Gray SANDY LOAM	-55	17	---		12
605.56					
Very Stiff Gray SILTY CLAY (Till) (Fragments of Limestone)		61	3.8	S	16
603.56					

Surface Water El. None
Groundwater El. at Completion None
After 24 Hours 651.66

Boring No. 15
Station 1032+52
Offset 38.5' Rt. ℄

Description	Elevation	Z	Blows/6"	Type	w (%)
Ground Surface 660.34	0				
Stiff Black & Yellowish Brown CLAY		4	---		33
654.34	-5	3	1.2	B	27
Yellowish Brown SILT (Saturated) 652.34					
Very Stiff Brown & Gray CLAY (Till)		9	3.2	S	21
	-10	8	2.8	B	18
649.34					
Stiff Gray CLAY (Till)		6	1.3	S	22
646.84					
Very Stiff Gray CLAY (Till)	-15	8	2.0	B	21
		7	2.0	B	22
	-20	7	3.0	B	22

Description	Elevation	Z	Blows/6"	Type	w (%)
		12	2.8	B	21
Very Stiff Gray CLAY (Till)	-25	10	3.0	B	21
		12	2.9	B	20
630.34	-30	16	3.5	S	12
Very Stiff Gray CLAY LOAM (Till) 629.34					
Stiff Gray CLAY (Till) 628.34			B 1.9		
Medium Gray Fine SAND (Saturated) 626.84		14			17
Medium Gray SILT (Saturated)	-35	19	--		26
622.84					
Very Stiff Gray CLAY (Till)		11	2.2	B	20
	-40	11	2.1	S	20
		12	2.8	B	23
	-45	15	2.7	S	21
614.34					
Stiff Gray CLAY (Till)		15	1.7	B	24
611.84					
Very Stiff Gray CLAY (Lacustrine)	-50	21	2.5	B	27
609.34					
Hard Gray CLAY LOAM (Till) 608.34			6.68		
Medium Gray SANDY LOAM		15			13
606.84					
Very Stiff Gray CLAY LOAM (Till) 605.84			3.1B		
Very Dense Gray SILTY LOAM (Limestone Fragments) 604.84	-55	91			15

Surface Water El. none
Groundwater El. at Completion 639.34
After 24 Hours 642.84

Boring No. 16
Station 1040+06
Offset 50.5' Lt. ℄

Description	Elevation	Z	Blows/6"	Type	w (%)
Ground Surface 662.13	0				
Black CLAY					
659.13					
Loose Yellowish Brown & Gray SANDY LOAM					19
656.63	-5	7	3.5	B	15
Very Stiff Yellowish Brown CLAY (Till) 655.13					
Hard Brown & Gray CLAY (Till)		12	4.9	B	22
	-10	14	4.7	B	17
		11	4.9	B	19
	-15	12	[illegible]	S	19
645.13					
Very Stiff Gray CLAY (Till)		7	3.2	B	21
	-20	12	3.6	B	20
		11	3.6	B	19
	-25	12	2.4	B	19
		11	3.3	B	21
	-30	10	3.1	B	20
		12	3.5	B	19
	-35	14	3.5	B	19
625.13					
Medium Gray SANDY LOAM (Saturated)		11	--		--
621.63	-40	13	3.1	B	19
Very Stiff Gray CLAY (Till)					

Surface Water El. None
Groundwater El. at Completion 621.63
After 24 Hours 640.21

DESIGNED R. Gander
CHECKED R.M. Bagard
DRAWN H.E. Baumann
CHECKED R.M.B.
APPROVED H.J. Allen

AUG. 28 1963

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu - Unconfined Compressive Strength - T/sf

w - Water Content - percentage of oven dry weight - %.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value

BORING DATA
F.A.I. RT. 57 SEC. 38-2HVB
IROQUOIS COUNTY
STA. 1037 + 61.38

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57 *		IROQUOIS	30	1

F.H.W.A. REG. 4 | ILLINOIS | PROJECT(S) C-93-057-85

* 38-2 RS & I & 38-2 HVB-I

P-93-042-84

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

SCALES { PLAN 1" = 100' / PROFILE HOR. / PROFILE VERT. / CROSS-SECTIONS

F.A.I. ROUTE 57
SECTION 38-2 RS&I & 38-2 HVB-I
IROQUOIS COUNTY
PROJECT ACIR-57-6(142)292

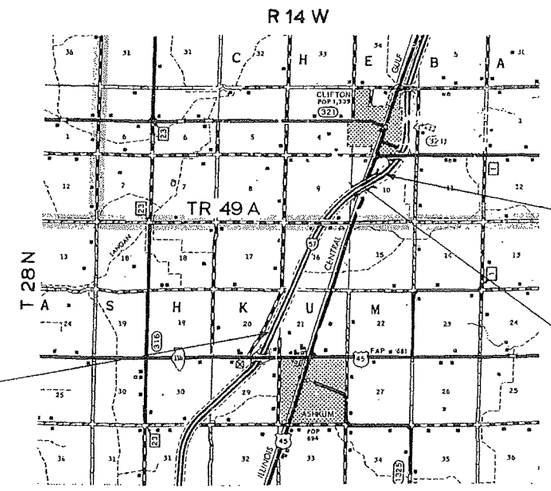
C - 93 - 057 - 85

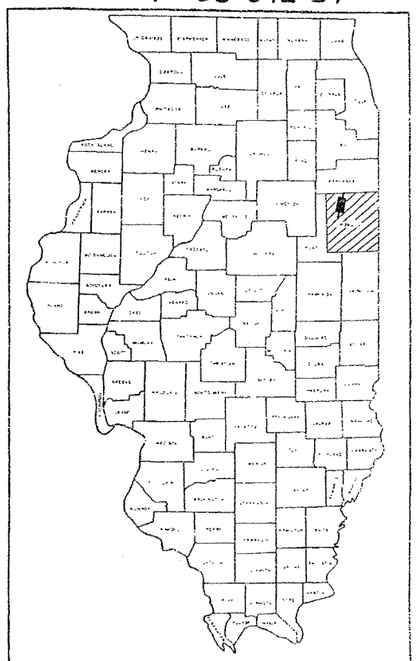
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	TYPICAL SECTION
3-4	DETAILS
5	SUMMARY OF QUANTITIES
6	SCHEDULE OF BITUMINOUS QUANTITIES
7-8	TABLES - SUMMARY OF QUANTITIES
9-10	PIPE UNDERDRAINS SCHEDULE OF QUANTITIES
11-16	PLANS F.A.I. 57
17	SLOPEWALL REHABILITATION
18	PAVEMENT MARKING DETAILS
19	INERTIAL BARRIER INSTALLATION DETAILS
20	TRAFFIC CONTROL
21	DECK SLAB REPAIR (PARTIAL DEPTH)
22-30	BRIDGE PLANS

STANDARDS

1686-4	SYMBOLS AND ABBREVIATIONS
2149-11	DELINEATORS
2169-7	WOVEN WIRE FENCE
2230-14	STEEL PLATE BEAM GUARD RAIL
2262-4	PRECAST REINFORCED CONCRETE FLARED END SECTION
2298-7	TRAFFIC CONTROL DEVICES
2299-10	TRAFFIC CONTROL DEVICES
2300-3	TRAFFIC CONTROL DEVICES
2313-5	TRAFFIC CONTROL DEVICES
2314-5	TRAFFIC CONTROL DEVICES
2316-8	TRAFFIC CONTROL DEVICES
2326-3	TRAFFIC BARRIER TERMINAL TYPE 10
2327-8	SUB-SURFACE DRAINS
2336-3	TRAFFIC BARRIER TERMINAL, TYPE 1 & 1A
2337-2	TRAFFIC BARRIER TERMINAL, TYPE 2
2341-1	TRAFFIC BARRIER TERMINAL, TYPE 6
2350-3	METAL POSTS FOR SIGNS, MARKERS, AND DELINEATORS
2362-1	CONCRETE HEADWALL FOR PIPE DRAINS
2364-1	GRATING FOR CONCRETE FLARED END SECTION
2383-1	TEMPORARY CONCRETE BARRIER





LOCATION OF SECTION INDICATED THUS: —

DESIGN DESIGNATION

14469 (95 ADT, INTERSTATE (BIT-6) STAGE I

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 4-25 19 85
R H Blanchard
DISTRICT ENGINEER

EXAMINED 5-17 19 85
W Wilson
ENGINEER OF BRIDGES AND TRAFFIC

PASSED 5-17 19 85
ENGINEER OF DESIGN

APPROVED 5-17 19 85
Earl Bourquin
DIRECTOR DIVISION OF HIGHWAYS

UTILITY LOCATING INFORMATION :
CALL J.U.L.I.E. 1-800-892-0123
(ASHKUM TOWNSHIP)

NET LENGTH OF SECTIONS: 38-2RS & I = 14755.50 LIN.FT = 2.795 MI.
38-2HVB-I = 372.33 LIN.FT = 0.070 MI.

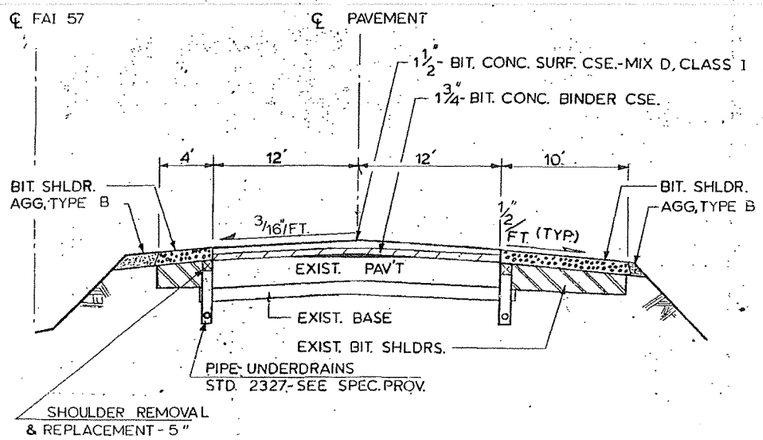
GROSS = NET PROJECT LENGTH = 15127.83 = 2.865 MI.

DEPARTMENT OF TRANSPORTATION
RECEIVED FOR PROJECT ACCOUNTING

CONTRACT NO. 40162

IROQUOIS COUNTY SECTION 38-2 RS&I & 38-2 HVB-I ROUTE F.A.I. 57

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAI 57	38-2 RS &	IROQUOIS	[illegible]	2
F.H.W.A. REG. 4	ILLINOIS	PROJECT		



TYPICAL SECTION

FROM STATION 1035+17.77 TO STATION 1042+50.95
FROM STATION 1087+18.41 TO STATION 1167+47.27 (NBL)
FROM STATION 1087+80.69 TO STATION 1167+47.27 (SBL)
SUPERELEVATION TO RIGHT FROM STATION 1016+19.44 TO STATION 1033+17.77
TRANSITION FROM STATION 1033+17.77 TO STATION 1035+17.77
TRANSITION FROM STATION 1042+50.95 TO STATION 1044+50.95
SUPERELEVATION TO LEFT FROM STATION 1044+50.95 TO STATION 1085+18.41 (NBL)
TRANSITION FROM STATION 1085+18.41 TO STATION 1087+18.41 (NBL)
SUPERELEVATION TO LEFT FROM STATION 1044+50.95 TO STATION 1085+80.69 (SBL)
TRANSITION FROM STATION 1085+80.69 TO STATION 1087+80.69 (SBL)

NOTE: EXISTING SUPERELEVATION RATES SHALL BE MAINTAINED ON ALL CURVES.

STRUCTURAL DESIGN INFORMATION

STRUCTURAL DESIGN TRAFFIC YEAR: 1995 (14469)

ROAD CLASSIFICATION: CLASS I

PERCENT OF S.D.T. IN DESIGN LANE
P = 32 SU = 45 MU = 4.5

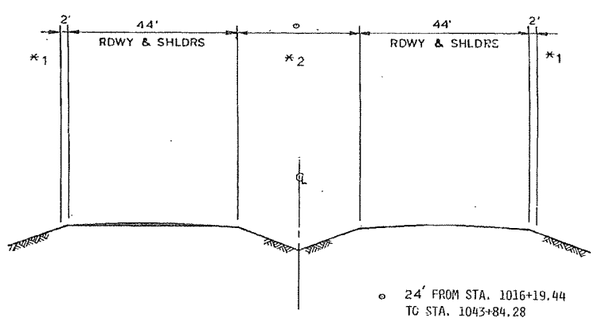
MINIMUM SOIL SUPPORT: IBR = 3.50

TRAFFIC FACTOR: TF = 22.90

COMPOSITE PAVEMENT STRUCTURAL NUMBER: SNc = 4.75

REQUIRED SURFACING THICKNESS: Ds = 5 3/8"

PAVEMENT STRUCTURAL MATERIALS:
STAGE I (THIS CONTRACT)
BITUMINOUS CONCRETE BINDER COURSE = 1 3/4"
BITUMINOUS CONCRETE SURFACE COURSE = 1 1/2"
STAGE II (FUTURE CONTRACT)
BITUMINOUS CONCRETE BINDER COURSE = 1 1/2"
BITUMINOUS CONCRETE SURFACE COURSE = 1 1/2"



o 24' FROM STA. 1016+19.44 TO STA. 1043+84.28

o 48' FROM STA. 1086+47.36 TO STA. 1168+67.27

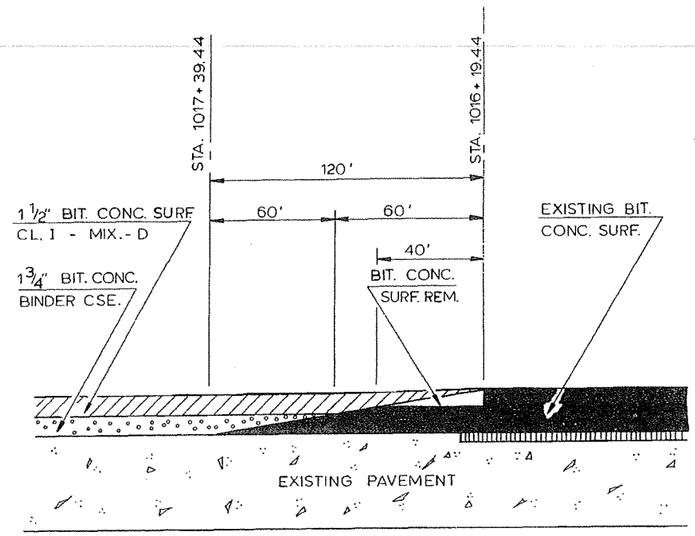
*1. SEEDING W/MULCH METHOD 2

*2. SEEDING W/MULCH METHOD 2 AT MEDIAN PIER & MEDIAN CROSSOVER

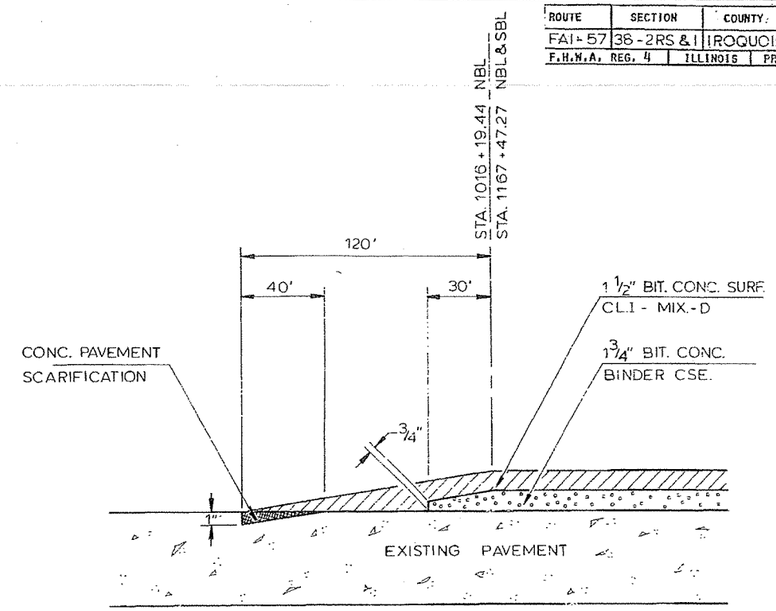
SEEDING DETAIL

TYPICAL SECTION

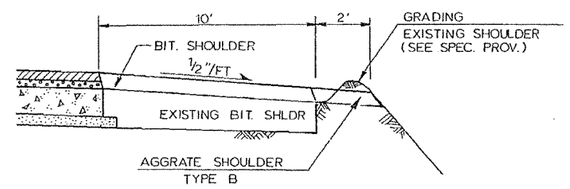
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAI-57	38-2RS & I	IROQUOIS	30	3
F.H.W.A. REG. 4	ILLINOIS	PROJECT		



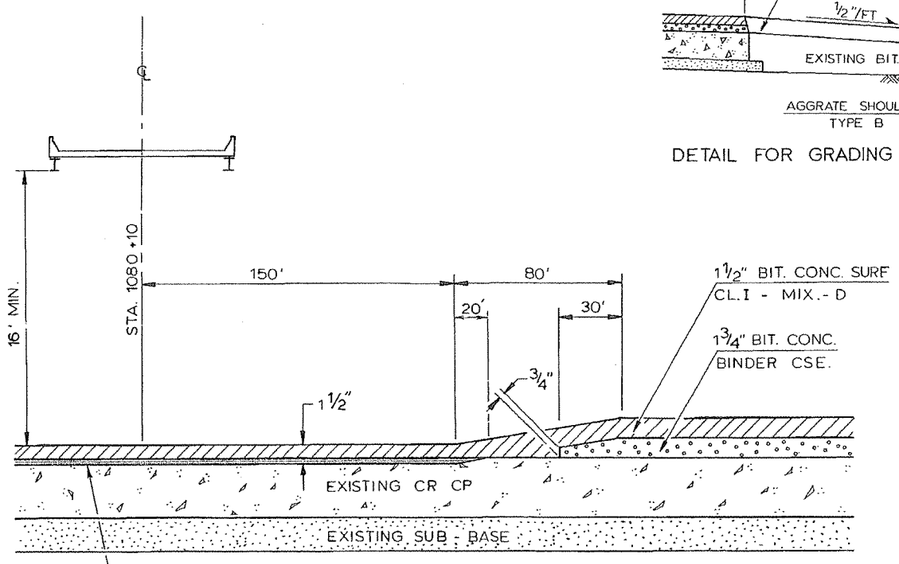
TAPER AT BEGINING OF JOB
SOUTHBOUND ONLY



TAPER AT BEGINING OF JOB - N.B.L. ONLY
TAPERS AT END OF JOB - N.B.L. & S.B.L.

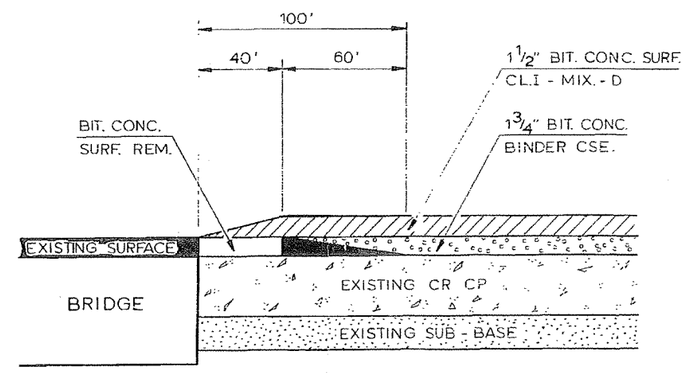


DETAIL FOR GRADING EXISTING SHOULDER



AT OVERHEAD (38-2HB2)
SOUTHBOUND ONLY

GRINDING OR SCARIFICATION (INCIDENTAL)
1/2" TO PROVIDE FOR 1 1/2" BIT. CONC. SURF.



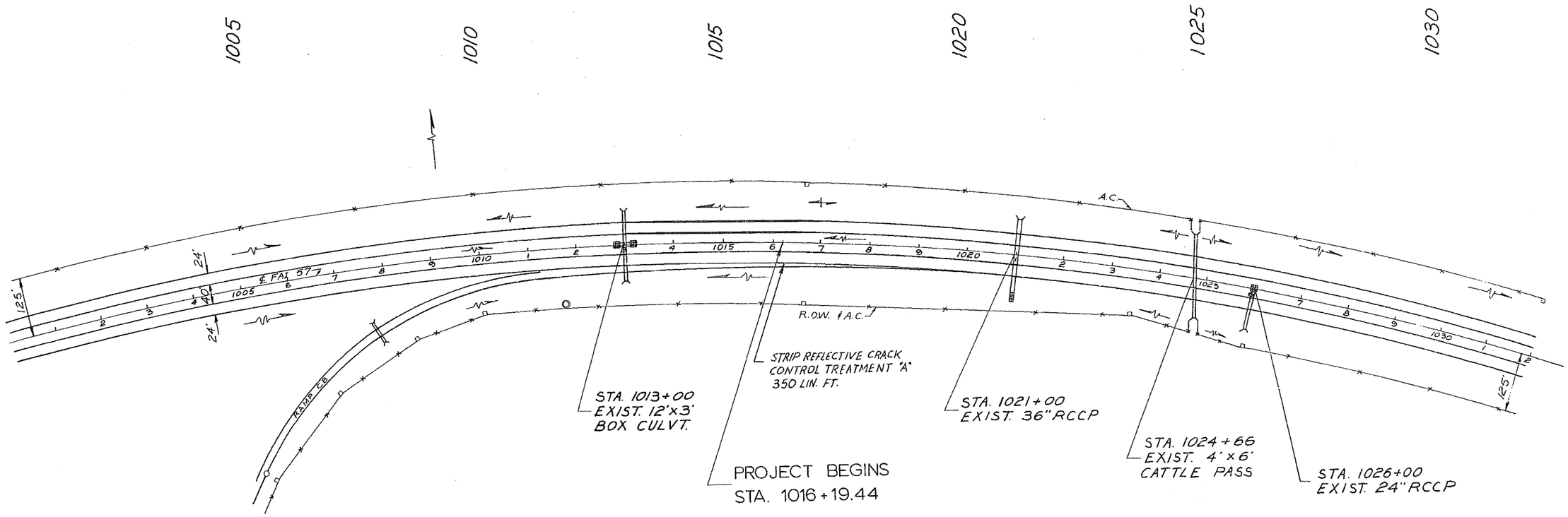
AT BRIDGES STA. 1037+61.39

TAPER DETAILS

SEC 10 T28N R14W 2PM

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAI 57	38-2RS11	IROQUOIS		11
F.H.W.A. REG. 4	ILLINOIS	PROJECT		

PC = 962 + 19.44
PT = 1033 + 84.44
D = 1°
SE = .02 FT/FT



-0.26% +0.26%
P.V.I. STA. 1013+00
V.C. = 400'
o = 0.26'

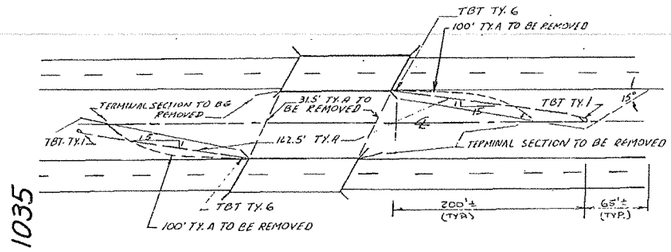
+0.26% +3.00%
P.V.I. STA. 1022 + 31.34
V.C. = 400'
o = 1.37'

PLAN FAI 57

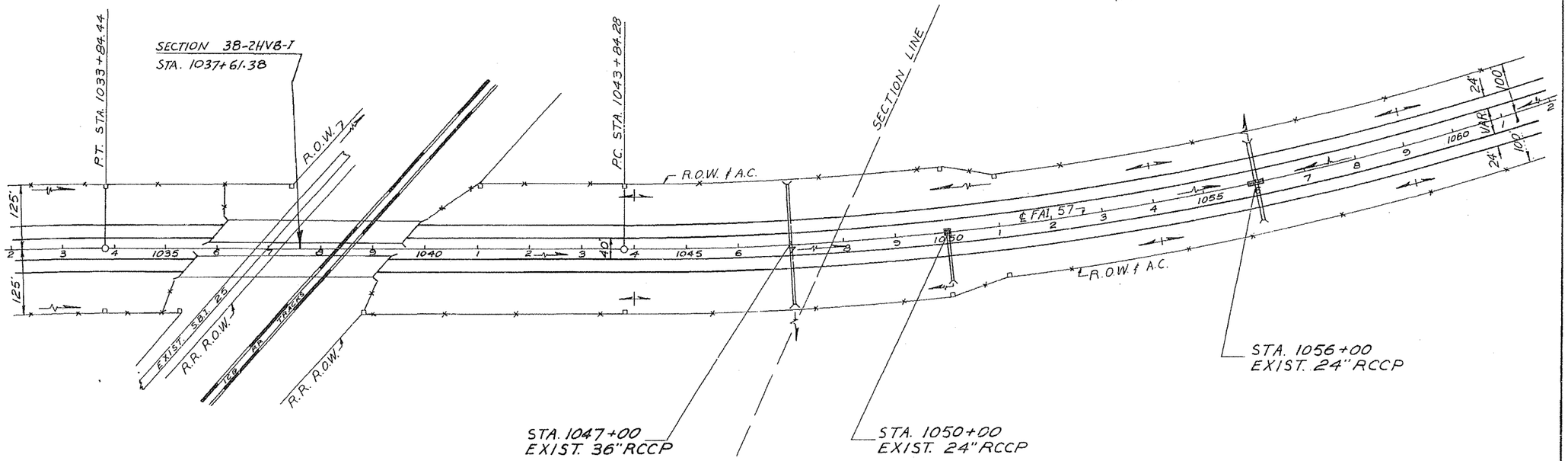
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAI 57	38-2RS&I	IROQUOIS		12
F.H.W.A. REG. 4	ILLINOIS	PROJECT		

SEC 10 T28N R14W 2PM

SEC 9 T28N R14W 2PM



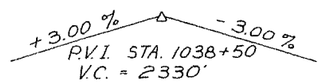
MEDIAN TREATMENT



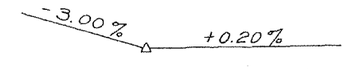
STATION 1037+61 - MEDIAN TREATMENT						
LOCATION	REMOVE		REMOVE & RE-ERECT	FURNISH		
LANE	SPBGR TYPE A LIN FT	TERM. SECTION EACH	TYPE A LIN FT	SPBGR TYPE A LIN FT	TRAF. BAR. TERM. TYPE 1 EACH	TRAF. BAR. TERM. TYPE 6 EACH
SB - E END		1	100	62.5	1	1
SB - BETWEEN BRIDGES	31.5					
SB - W END		1				
NB - W END		1	100	62.5	1	1
NB - BETWEEN BRIDGES	31.5					
NB - E END		1				
TOTAL	63	4	200	125	2	2

STATION 1037+61 - OUTSIDE TREATMENT										
LOCATION	REMOVE		VERT. ADJUST.	REMOVE & RE-ERECT	FURNISH					
					SPBGR		TRAF. BAR. TERM.			
LANE	SPBGR TYPE A LIN FT*	TERM. SECTION EACH	TYPE A LIN FT	TYPE A LIN FT**	TY.A LIN FT	TY.B LIN FT	TYPE 1A EACH	TYPE 2 EACH	TYPE 6 EACH	TYPE 10 EACH
SB - E END	25	1	850	25			1		1	
SB - W END	25	1	1,050	25		25		1		1
NB - W END	25	1	919	25			1		1	
NB - E END	25	1	938	25	100	25		1		1
TOTAL	100	4	3,757	100	100	50	2	2	2	2

* DAMAGED GUARDRAIL
** TO REPLACE DAMAGED GUARDRAIL REMOVED



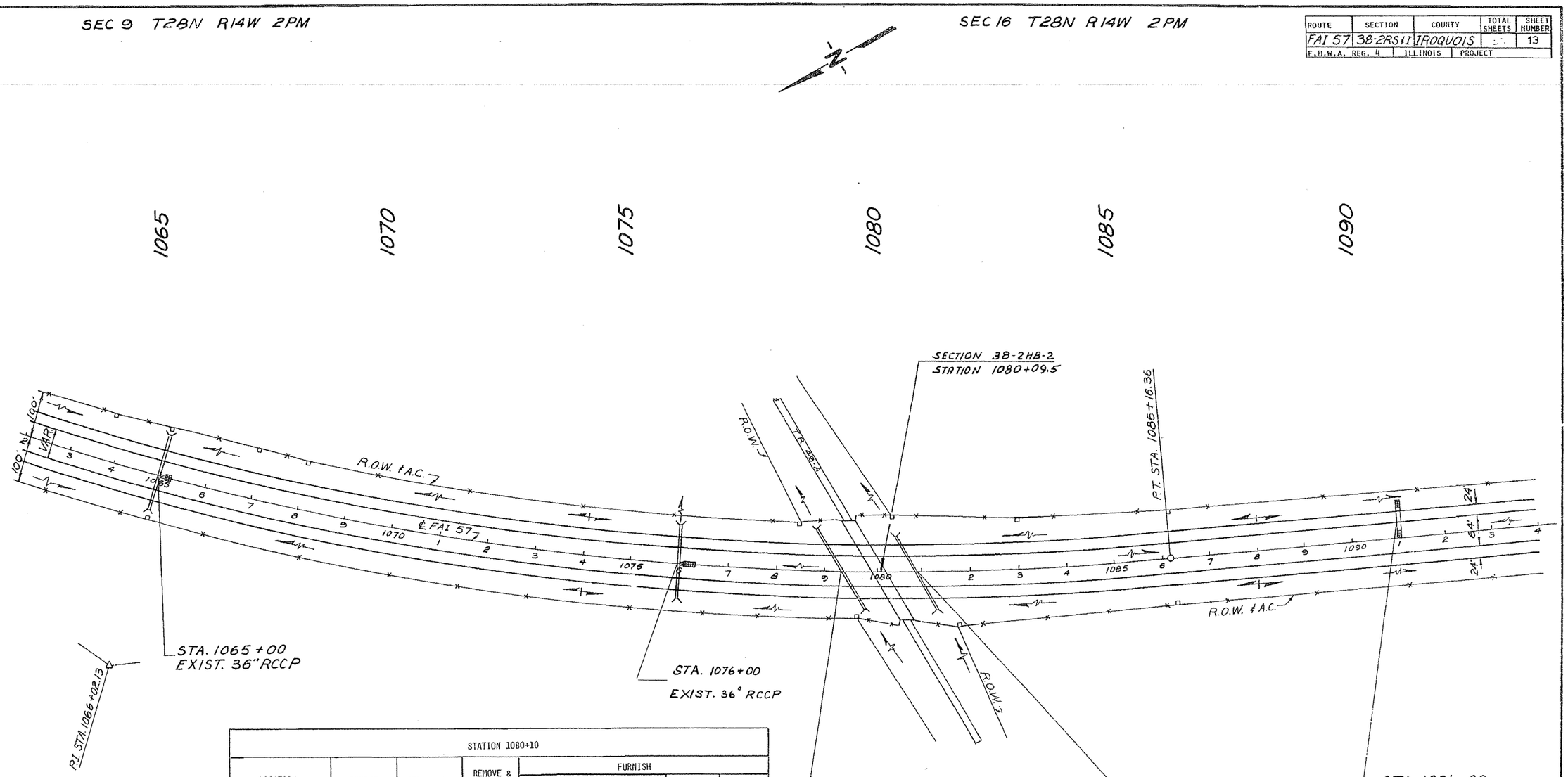
P.V.I. STA. 1038+50
V.C. = 2330'
o = 17.48'



P.V.I. STA. 1053+03.13
V.C. = 550'
o = 2.20'

PLAN FAI 57

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAI 57	38-2RS-1	IROQUOIS		13
F.H.W.A. REG. 4	ILLINOIS	PROJECT		



STATION 1080+10

LOCATION		REMOVE	VERT. ADJ.	REMOVE & RE-ERECT	FURNISH				
					SPBGR			END SECTION*	TBT TYPE 1A
LANE	SIDE	TERM. SEC. EACH	TYPE A LIN FT	TYPE A LIN FT	TYPE A LIN FT	TYPE B LIN FT	TYPE C LIN FT	EACH	EACH
SB	OUTSIDE	2	25	25	162.5	25	15' 7½"	1	1
NB	OUTSIDE	2	25	25	150	25	15' 7½"	1	1
SB	MEDIAN						15' 7½"	2	
NB	MEDIAN						15' 7½"		
TOTAL		4	50	50	312.5	50	62' 6"	6	2

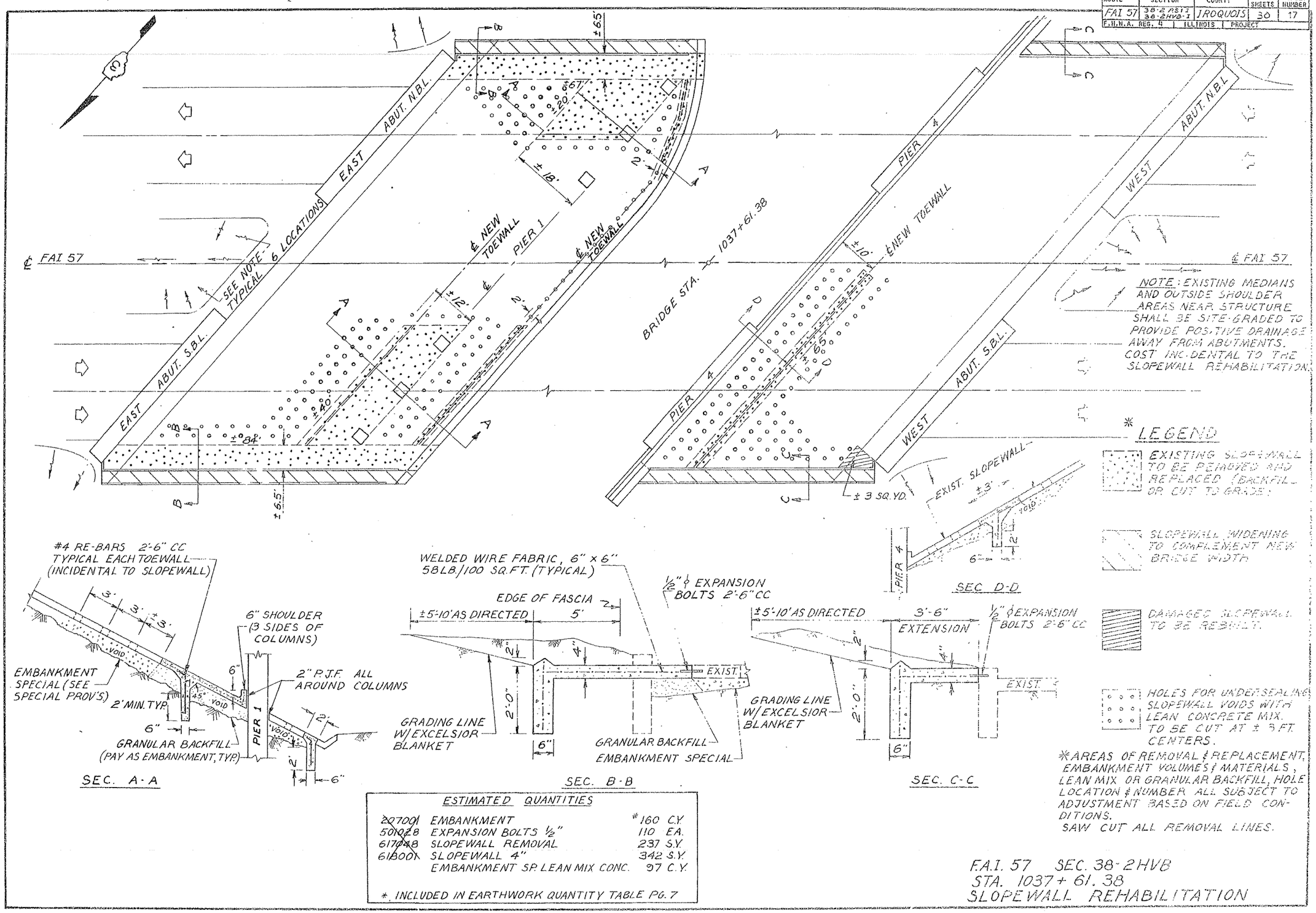
*INCIDENTAL TO TYPE C RAIL

+0.20% -0.22%

P.V.I. STA. 1081+00
V.C. = 600'
o = 0.32'

PLAN FAI 57

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NUMBER
FAI 57	38-2 RS12 38-2HVB-1	JROQUOIS	30	17
F.H.W.A. REG. 4	ILLINOIS	PROJECT		

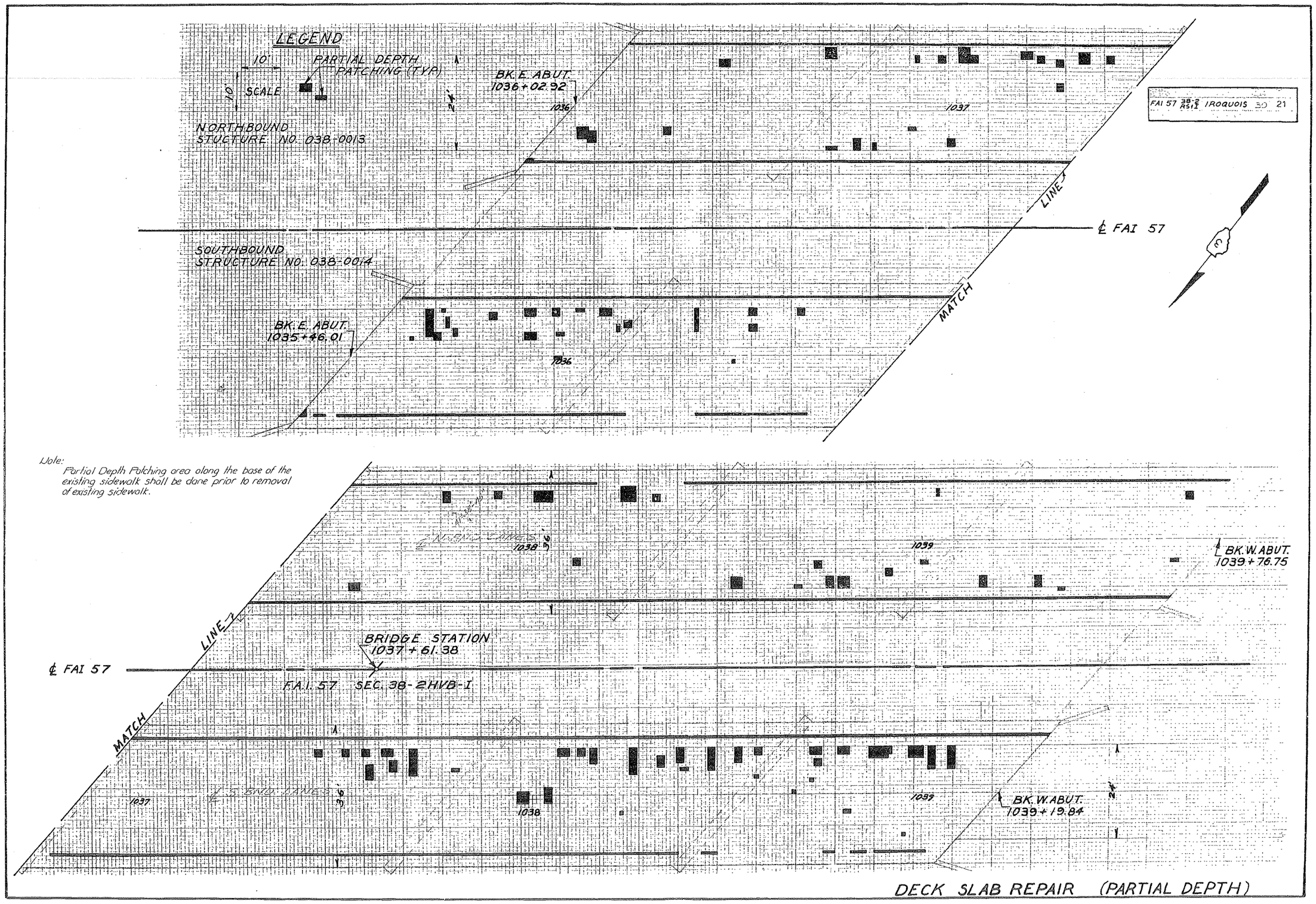


ESTIMATED QUANTITIES

20700	EMBANKMENT	*160 C.Y.
50102	EXPANSION BOLTS ½"	110 EA.
61704	SLOPEWALL REMOVAL	237 S.Y.
61800	SLOPEWALL 4"	342 S.Y.
	EMBANKMENT SP. LEAN MIX CONC.	97 C.Y.

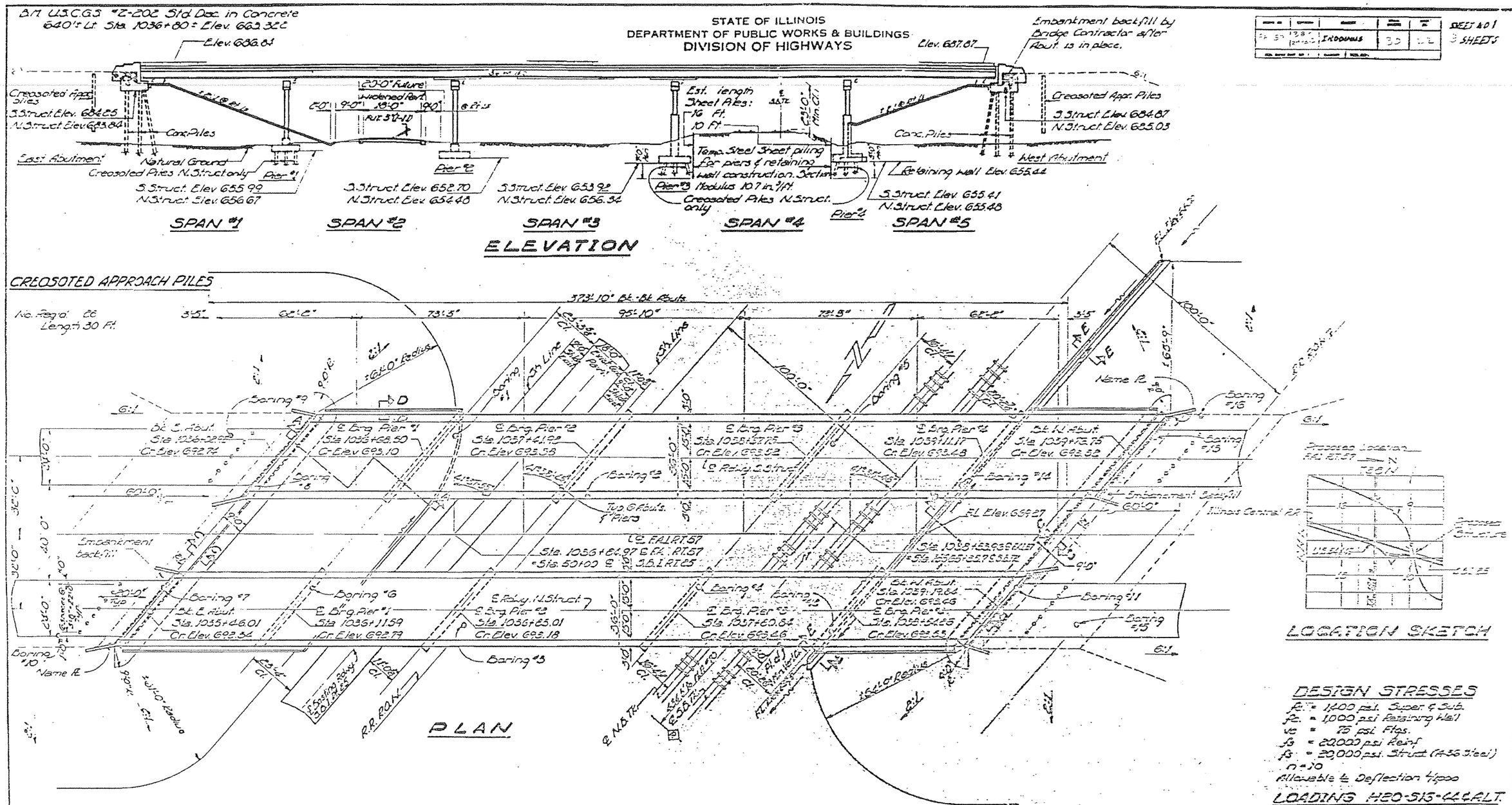
*. INCLUDED IN EARTHWORK QUANTITY TABLE PG. 7

F.A.I. 57 SEC. 38-2HVB
STA. 1037+61.38
SLOPEWALL REHABILITATION


LEGEND
10'
PARTIAL DEPTH PATCHING (TYP)
10'
SCALE
BK. E. ABUT.
1036+02.92
1036
1037
NORTHBOUND
STUCTURE NO. 038-0013
SOUTHBOUND
STRUCTURE NO. 038-0014
BK. E. ABUT.
1035+46.01
1036
MATCH LINE
℄ FAI 57
FAI 57 38-2 ASI.I. IROQUOIS 30 21
Note:
Partial Depth Patching area along the base of the existing sidewalk shall be done prior to removal of existing sidewalk.
1038
1039
BK. W. ABUT.
1039+76.75
BRIDGE STATION
1037+61.38
℄ FAI 57
F.A.I. 57 SEC. 38-2HVB-I
MATCH LINE
1037
1038
1039
BK. W. ABUT.
1039+19.84
DECK SLAB REPAIR (PARTIAL DEPTH)

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET 4 of 8 SHEETS



DESIGNED	P. Bauer
CHECKED	R. M. Stanard
DRAWN	A. Barbaro
CHECKED	J. M. G.

Aug. 29 1963
EXAMINED H. E. Baumann
PASSED H. P. Allen
APPROVED

(FOR INFORMATION ONLY)
GENERAL PLAN & ELEVATION
PROJ.
F.A.I. RT. 57 OVER S.B.I. RT. 25 & I.C.R.R.
F.A.I. RT. 57 SEC. 55-2HV3-1
IROQUOIS COUNTY
STA. 1037+61.38

Bench Mark: U.S.C.G.S. #2-202-Std. disc. in concrete, 640'± Lt. Sta. 1036+80±; Elev. 663.32.
Existing Structure: The existing dual five-span structures were built in 1966 as F.A.I. Route 57, Section 38-2HVB. The 7" R.C. slabs are supported on W36x150 beams. The existing structures are 373'-10" back to back of abutments and 36'-0" out to out of decks. Stage Construction: Close half of each structure at a time with Temp. Concrete Barriers.
Structure Number 038-0013 North Bound
038-0014 South Bound

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB	IROQUOIS	20	2
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
9 SHEETS

Notes: Deck drains in spans 1, 3 & 5 shall be spaced to clear any communication lines, cross arms and/or power lines under these spans by 10' as determined by the Engineer.

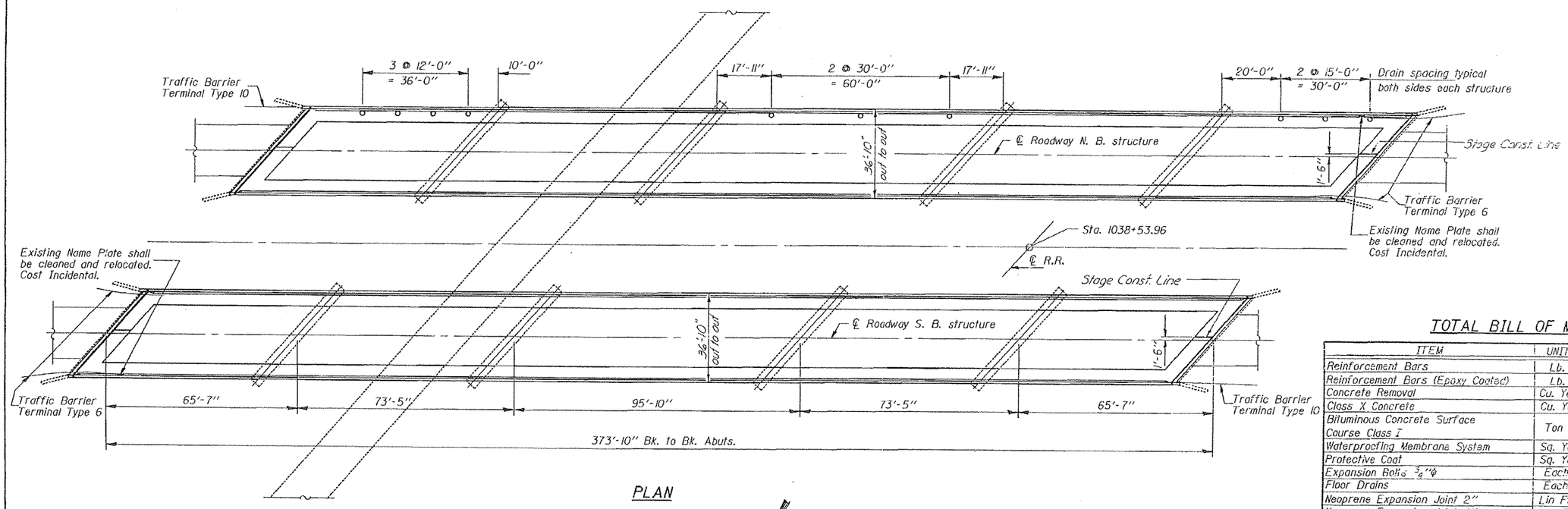
GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.

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

Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and $\frac{3}{4}$"ϕ x 12" hooked bolts.

Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.



PLAN

N

DESIGN STRESSES

fc = 1400 p.s.i.
fs = 27000 p.s.i. (Reinf.)

Design Specifications: 1983 A.A.S.H.T.O.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Reinforcement Bars	Lb.	23720	1800	25520
Reinforcement Bars (Epoxy Coated)	Lb.	28820		28820
Concrete Removal	Cu. Yd.	316	14	330
Class X Concrete	Cu. Yd.	305.2		305.2
Bituminous Concrete Surface Course Class I	Ton	195		195
Waterproofing Membrane System	Sq. Yd.	2823		2823
Protective Coat	Sq. Yd.	610		610
Expansion Bolts $\frac{3}{4}$"ϕ	Each		24	24
Floor Drains	Each	40		40
Neoprene Expansion Joint 2"	Lin Ft.	97		97
Neoprene Expansion Joint 4"	Lin Ft.	97		97
Bituminous Concrete Surface Removal	Sq. Yd.	2500		2500
Bridge Handrail Removal	Lin Ft.	1478		1478

Quantities for Slopewall Repair, Temporary Concrete Barrier and Deck Slab Repair are included in Roadway Plans.

DESIGNED	L. Zhong Huang
CHECKED	Robert F. Bass
DRAWN	J.T.Downing
CHECKED	T. S. H.

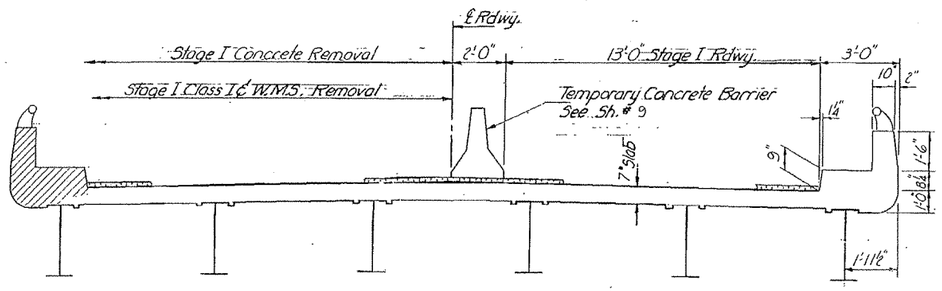
May 13, 1985
EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

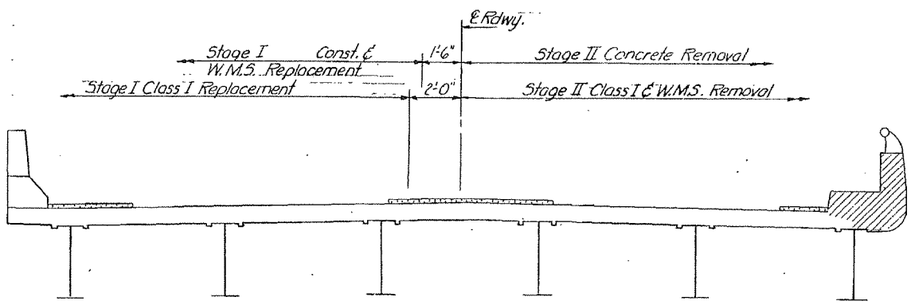
GENERAL DATA
F.A.I. RT. 57 SECTION 38-2HVB-I
IROQUOIS COUNTY
STATION 1037+61.38

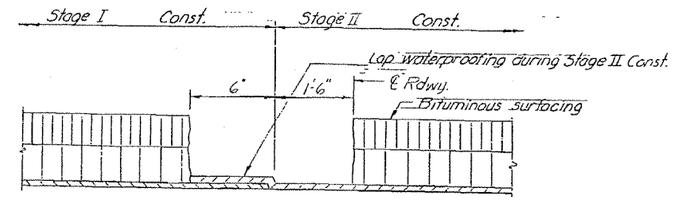
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB-1	IROQUOIS	30	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
9 SHEETS

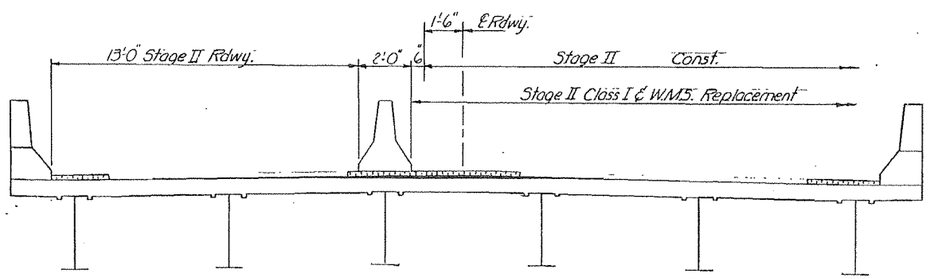




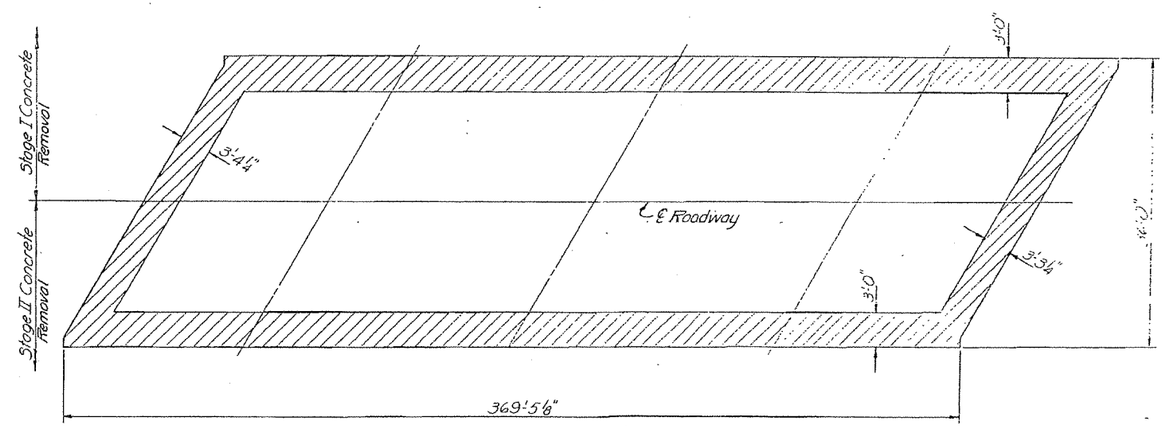


WATERPROOFING TREATMENT

Note:
Partial Depth Patching area along the base of the existing sidewalk shall be done prior to removal of existing sidewalk.



CROSS SECTIONS SHOWING STAGE REMOVAL & CONST.
(Looking West)



PLAN
CONCRETE REMOVAL

Note:
The Contractor shall not store or move construction materials and equipment between the exterior beam and the first interior beam prior to completion of Stage Construction.
Hatched area indicates "Concrete Removal"

DESIGNED	Twitching Hunt
CHECKED	Robert P. Ross
J.D. DRAWN	
CHECKED	T. S. H.

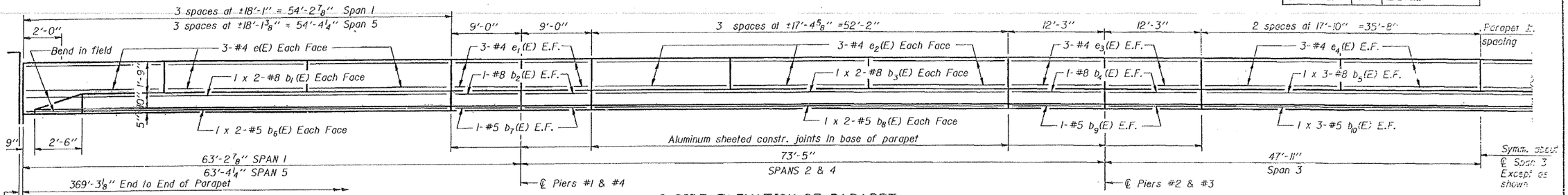
May 13, 1985
EXAMINED R. P. H. — ENGINEER OF BRIDGE DESIGN
PASSED James T. Rayburn — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

STAGE CONSTRUCTION DETAILS
F.A.I. RT. 57 SEC. 38-2HVB-1
IROQUOIS COUNTY
STA. 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-2HVB-1	IROQUOIS	30	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

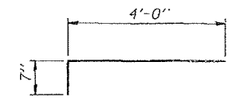
SHEET NO. 5
9 SHEETS



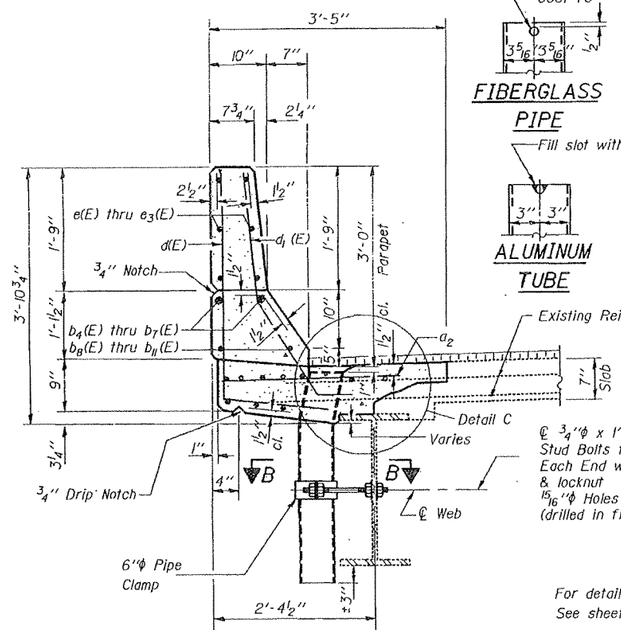
INSIDE ELEVATION OF PARAPET

MIN BAR LAPS

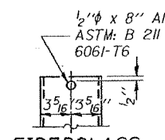
#5 Bar = 1'-8"
#8 Bar = 2'-6"



BAR x

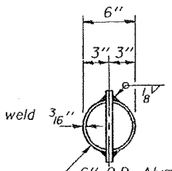


SECTION THRU PARAPET

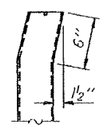


FIBERGLASS PIPE

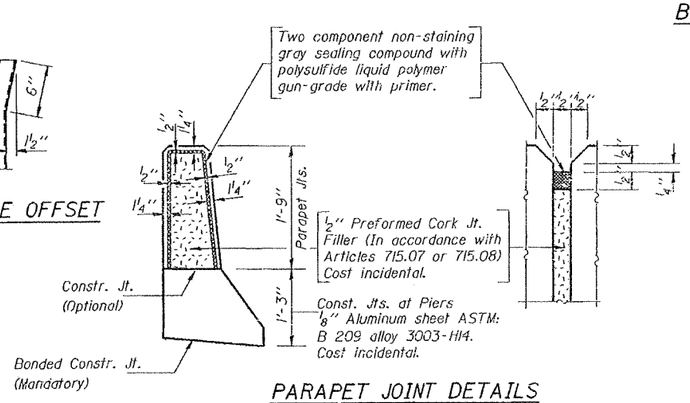
ALUMINUM TUBE



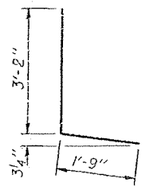
TOP PLAN
(Showing Aluminum Tube)



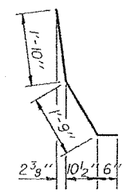
DRAIN TUBE OFFSET



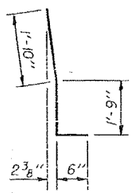
PARAPET JOINT DETAILS



BAR d(E)



BAR d1(E)



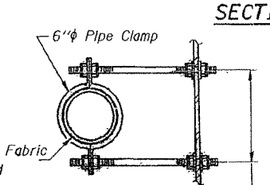
BAR d2(E)

TWO SUPERSTRUCTURES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	32	#5	23'-9"	—
a1	32	#5	25'-9"	—
a2	1472	#5	3'-0"	—
b	280	#5	28'-0"	—
b1	156	#5	30'-0"	—
b1(E)	32	#8	28'-4"	—
b2	32	#6	22'-2"	—
b2(E)	32	#8	8'-9"	—
b3	32	#6	30'-6"	—
b3(E)	32	#8	27'-3"	—
b4(E)	32	#8	12'-0"	—
b5(E)	24	#8	25'-4"	—
b6(E)	32	#5	28'-0"	—
b7 (E)	32	#5	8'-9"	—
b8 (E)	32	#5	26'-10"	—
b9 (E)	32	#5	12'-0"	—
b10 (E)	24	#5	24'-9"	—
d(E)	1476	#4	4'-11"	L
d1 (E)	1580	#5	4'-1"	L
d2(E)	32	#5	4'-1"	L
e(E)	144	#4	17'-10"	—
e1 (E)	96	#4	8'-9"	—
e2(E)	144	#4	17'-1"	—
e3(E)	96	#4	12'-0"	—
e4(E)	96	#4	17'-7"	—
x	272	#6	4'-7"	⌐
Reinforcement Bars (Epoxy Coated)			Lb.	28,820
Class X Concrete			Cu. Yd.	305.2
Concrete Removal			Cu. Yd.	316
Reinforcement Bars			Lb.	23,720

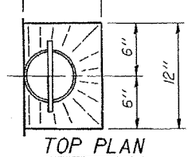
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

Notes:
The exterior surfaces of the Floor Drain shall be painted with one coat of Red Lead paint & two coats of Aluminum paint. The exterior surface of the Aluminum tube shall be cleaned and given a washcoat pretreatment in accordance with Steel Structural Painting Council's Spec. SSPC-SPI & SSPC-Paint 27 prior to painting.
Fiberglass pipe shall conform to ASTM: D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The surface of the Fiberglass pipe shall be free of bond inhibiting agents.

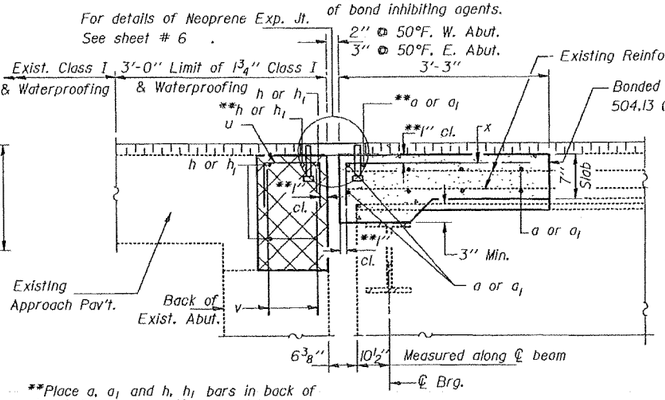


SECTION B-B

Dimension as required by Pipe Clamp



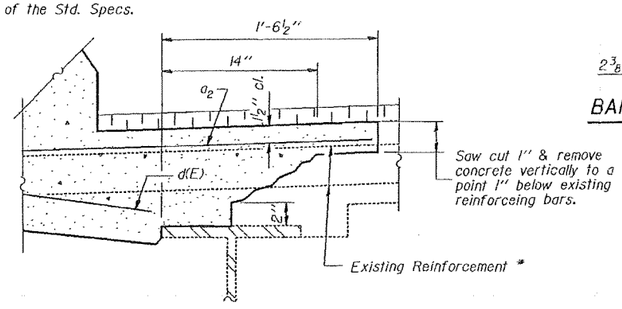
TOP PLAN



SECTION A-A

**Place a, a1 and h, h1 bars in back of anchor bolts as shown if required to maintain 1" cl. (+0-1/8"). Anchor bolts should be tied to a, a1 and h, h1 bars.

* Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into the new construction.



DETAIL C

DESIGNED	[illegible]
CHECKED	Robert T. Bass
DRAWN	J.T. Downing
CHECKED	[illegible]

May 13, 1985
EXAMINED [illegible] ENGINEER OF BRIDGE DESIGN
PASSED James T. Rayburn ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

S-2-D 12-1-83

TWO SUPERSTRUCTURES DETAILS
F.A.I. RT. 57 SECTION 38-2HVB-1
IROQUOIS COUNTY
STATION 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	[illegible]	IROQUOIS	[illegible]	[illegible]
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6
9 SHEETS

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
2½"	2½"	1¾" Min.
4"	3"	2½" Min.

INSTALLATION NOTES

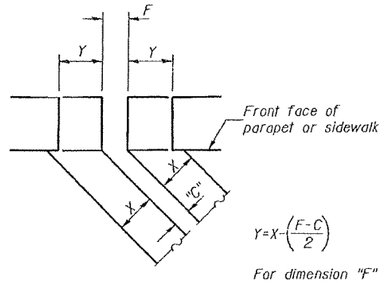
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

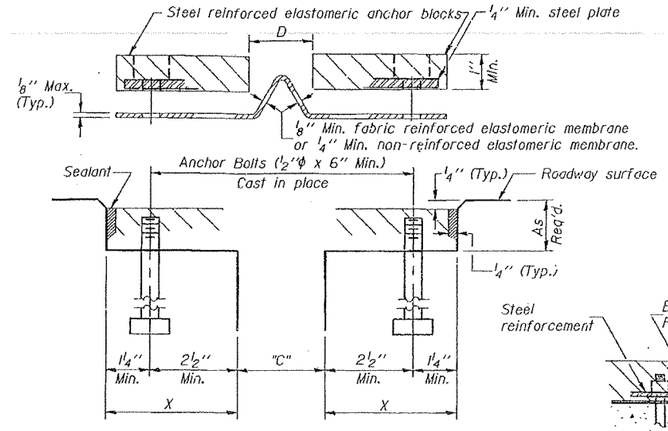
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



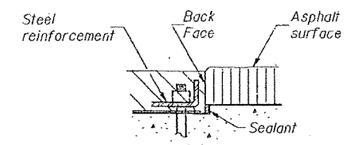
$Y = X - \left(\frac{F-C}{2}\right)$

For dimension "F" see sheet #4

FORMING BLOCKOUT SKETCH



CROSS SECTION



ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

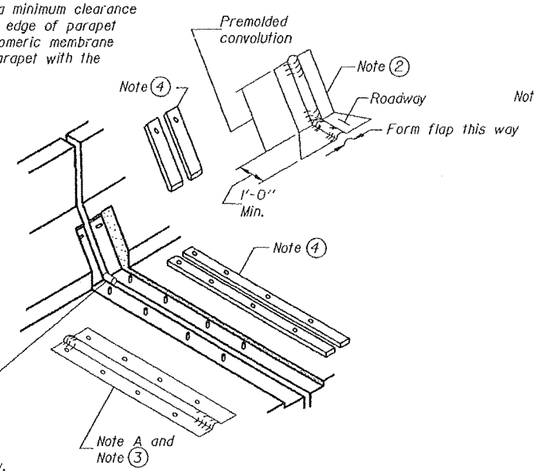
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

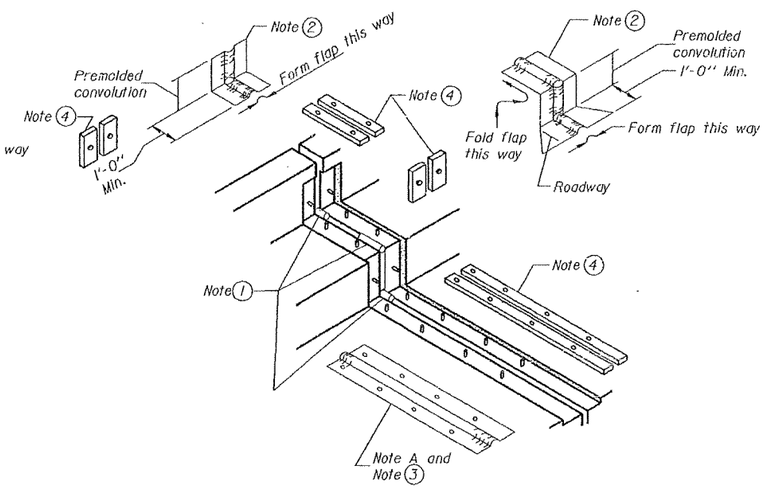
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

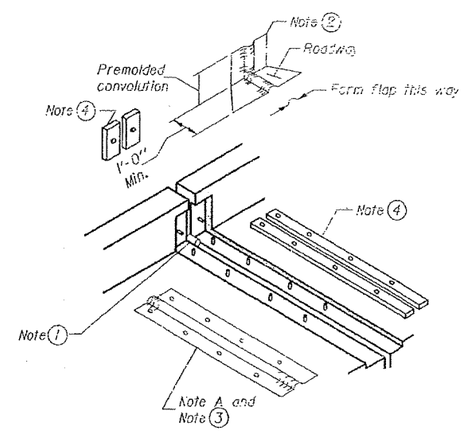
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



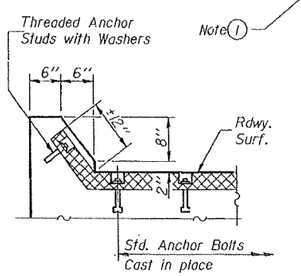
AT PARAPET



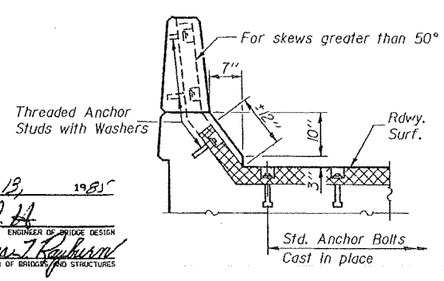
AT SIDEWALK OR MEDIAN



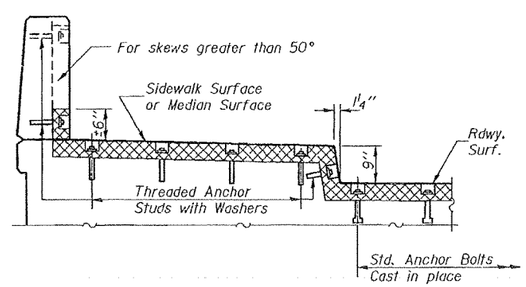
AT WALL



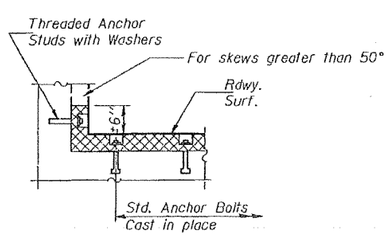
AT CURB



AT PARAPET



AT SIDEWALK OR MEDIAN



AT WALL

TYPICAL END TREATMENTS

DESIGNED	[illegible]
CHECKED	Robert F. Rino
DRAWN	J.T.Downing
CHECKED	[illegible]

EJ-CS 12-1-83

May 13, 1985
EXAMINED [illegible] ENGINEER OF BRIDGE DESIGN
PASSED James T. Rayburn ENGINEER OF BRIDGE AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINTS
For 2", 2½" and 4" Movement

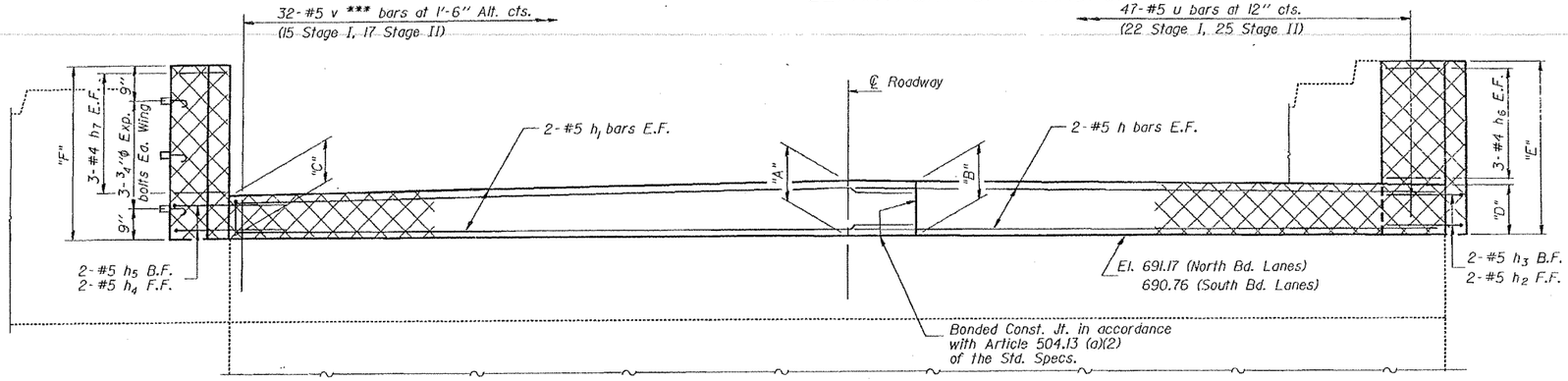
F.A.I. RT. 57 SECTION 38-2HVB-I
IROQUOIS COUNTY
STATION 1037+61.38

Notes:
Crossed Hatched areas shall be poured after superstructure has been poured and forms removed. Quantity of Class X Concrete Included with superstructure.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

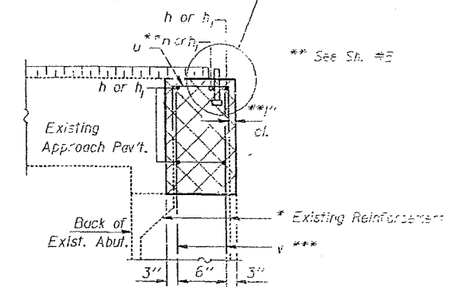
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. R.A. 57	38-2	TROQUOIS	20	18
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 7
9 SHEETS



ELEVATION

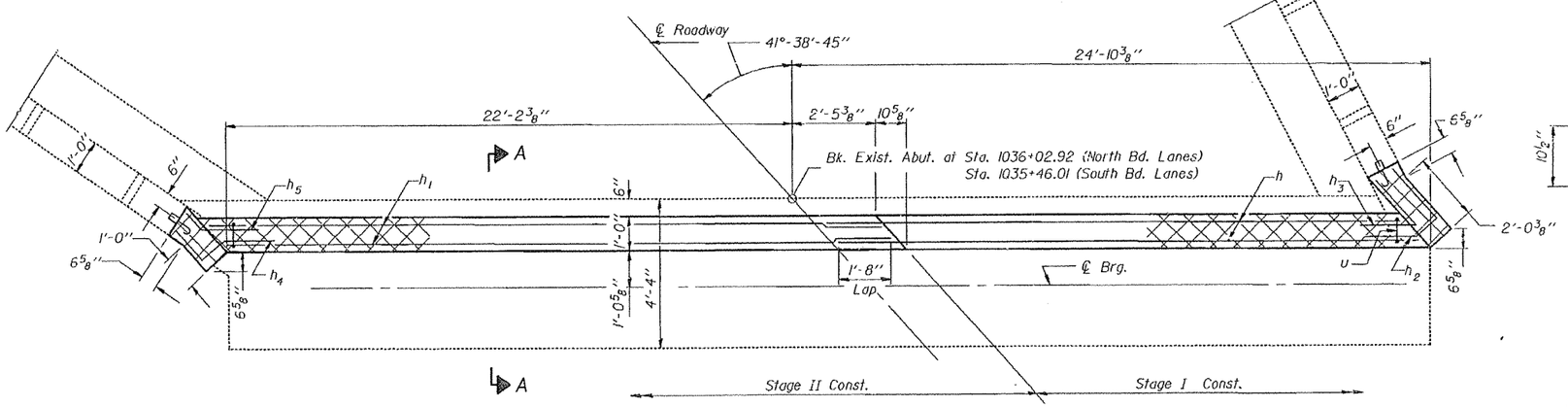
For details of Neoprene Exp. Jt. See sheets #6.



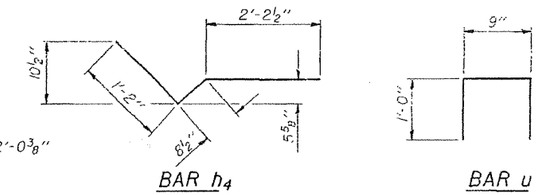
SECTION A-A

* Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into the new construction.

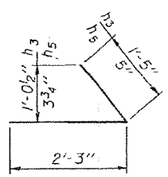
*** Drill 1"φ hole x 1'-0" deep. Fill 1/3 full with epoxy grout before placement of v bars. See Special Provisions for Epoxy Grout. Cost incidental.



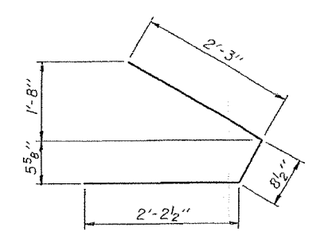
PLAN



BAR h_4 BAR u



BARS h_3 & h_5



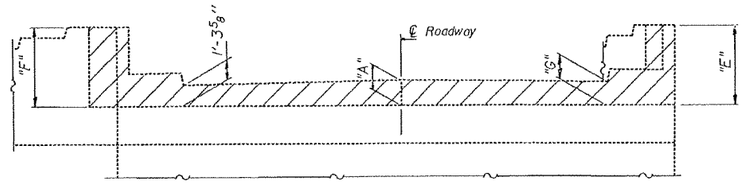
BAR h_2

TWO ABUTMENTS
BILL OF MATERIAL

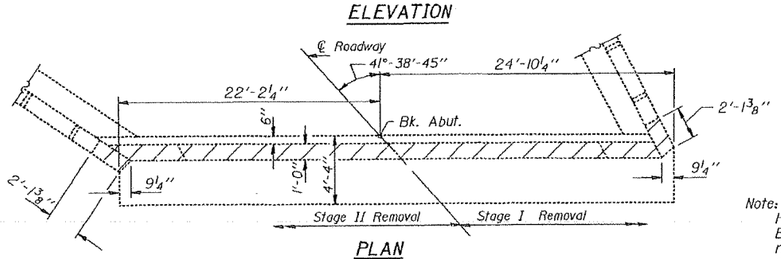
Bar	No.	Size	Length	Shape
h	8	#5	23'-0"	
h_1	8	#5	25'-3"	
h_2	4	#5	5'-2"	
h_3	4	#5	3'-8"	
h_4	4	#5	4'-1"	
h_5	4	#5	2'-8"	
h_6	12	#4	2'-3"	
h_7	12	#4	1'-3"	
u	94	#5	2'-9"	
v	64	#5	2'-0"	
Concrete Removal			Cu. Yd.	7
Reinforcement Bars			Lb.	900
Expansion Bolts ¾"φ			Each	12

DIMENSIONS "A" THRU "G"

Location	"A"	"B"	"C"	"D"	"E"	"F"	"G"
North Bd. Lanes	1'-7"	1'-7⅛"	1'-2⅞"	1'-5¼"	4'-8¾"	4'-6½"	1'-5⅝"
South Bd. Lanes	1'-7⅛"	1'-7¼"	1'-2¾"	1'-5⅝"	4'-9⅛"	4'-6⅜"	1'-6⅛"



ELEVATION



PLAN

CONCRETE REMOVAL

Note:
Hatched area indicates "Concrete Removal". Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into the new construction.

DESIGNED	Lichang Huang
CHECKED	Robert T. Rao
DRAWN	J.T. Downing
CHECKED	T.S.H.

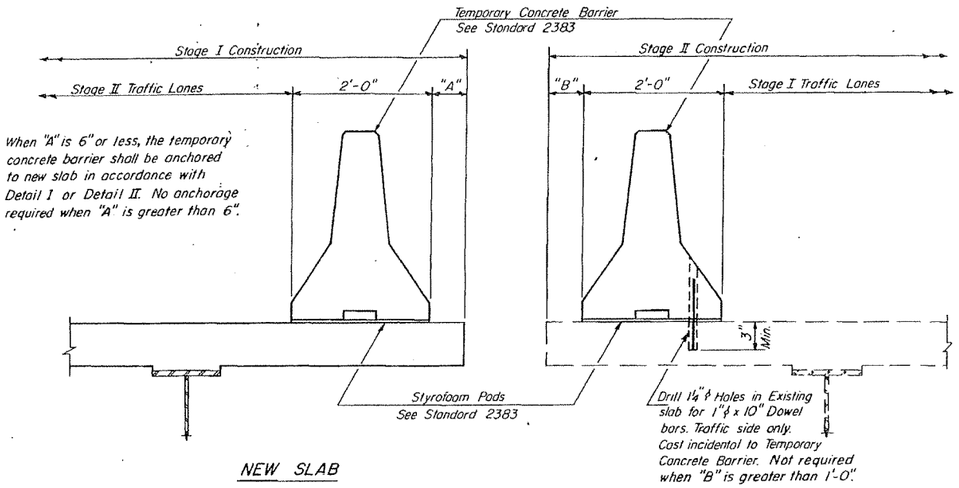
May 13, 1985
EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — James T. Rayburn, ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

EAST ABUTMENTS
F.A.I. RT. 57 SECTION 38-2HVB-I
IROQUOIS COUNTY
STATION 1037+61.38

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 57	38-2HVB-2	IROQUOIS	30	30
PROJ. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
OF SHEETS



NEW SLAB

SECTIONS THRU SLAB

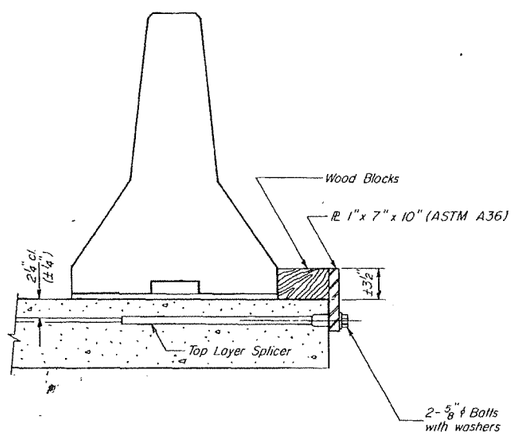
EXISTING SLAB

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x 10" steel PL to the top layer of coupiers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each 10'-0" barrier panel.

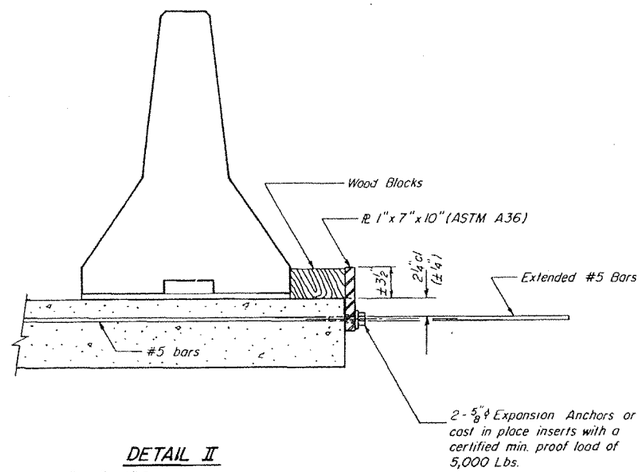
Detail II - With Extended Reinforcement Bars
Connect one (1) 1" x 7" x 10" steel PL to the concrete slab with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each 10'-0" barrier panel.

Cost of anchorage is incidental to Temporary Concrete Barrier.



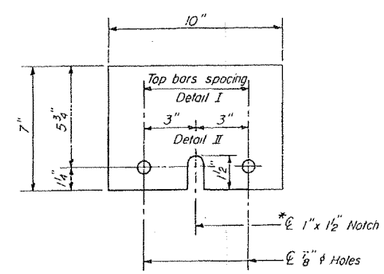
DETAIL I

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



DETAIL II

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



PL 1" x 7" x 10"

* Required only with Detail II

DESIGNED	Tu-Sheng Hsieh
CHECKED	Robert F. Bae
J.D. DRAWN	
CHECKED	L. S. H.

May 13 1985
EXAMINED H. W. Hi — ENGINEER OF BRIDGE DESIGN
PASSED James R. Kaufman — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

R-27 6-15-83

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
F.A.I. RT 57 SEC. 38-2HVB-I
IROQUOIS COUNTY
STA. 1037+61.38

EXHIBIT 5:

COST ANALYSIS

ALTERNATE 3 - DECK AND STEEL REPLACEMENT WITH A 40 FT. CLEAR DECK WIDTH, AND SUBSTRUCTURE RECONSTRUCTION

ITEM	UNIT	QUANTITY	UNIT COST	ITEM COST
TRAFFIC CONTROL (I-57 SB)	L SUM	1	$50,000	$50,000
TRAFFIC CONTROL (SBI 25)	L SUM	1	$10,000	$10,000
RAILROAD FLAGGER	DAY	120	$500	$60,000
RAILROAD LIABILITY INSURANCE	L SUM	1	$10,000	$10,000
TEMPORARY CONCRETE BARRIER	FOOT	800	$15	$12,000
RELOCATE TEMPORARY BARRIER	FOOT	800	$5	$4,000
PROTECTIVE SHIELD	SQ FT	7,810	$10	$78,100
SUPERSTRUCTURE CONCRETE REMOVAL	CU YD	475	$300	$142,500
CONCRETE SUPERSTRUCTURES	CU YD	490	$650	$318,500
BRIDGE DECK GROOVING	SQ YD	1,640	$5	$8,200
PROTECTIVE COAT	SQ YD	2,240	$1	$2,240
BRIDGE SEAT SEALER	SQ FT	860	$1	$860
DECK DRAINS	EACH	20	$150	$3,000
NEOPRENE EXPANSION JOINT 4"	FOOT	116	$100	$11,600
REMOVE STRUCTURAL STEEL	LBS	415,445	$0.25	$103,861
STRUCTURAL STEEL	LBS	420,000	$1.50	$630,000
ELASTOMERIC EXPANSION BEARINGS	EACH	35	$500	$17,500
TEMPORARY SHEET PILING	SQ FT	4,000	$15	$60,000
STRUCTURE EXCAVATION	CU YD	555	$30	$16,650
POROUS GRANULAR EMBANKMENT	CU YD	195	$30	$5,850
SUBSTRUCTURE CONCRETE REMOVAL	CU YD	65	$350	$22,750
SUBSTRUCTURE CONCRETE REPAIR	L SUM	1	$1,000	$1,000
CONCRETE STRUCTURES	CU YD	180	$550	$99,000
REINFORCING BARS, EPOXY COATED	LBS	134,000	$1	$134,000
CONCRETE SLOPEWALL REMOVAL	SQ YD	260	$20	$5,200
CONCRETE SLOPEWALL	SQ YD	390	$70	$27,300
PAVEMENT REMOVAL	SQ YD	227	$20	$4,540
BRIDGE APPROACH PAVEMENT	SQ YD	270	$180	$48,600
STEEL PILES, HP8X36	FOOT	315	$30	$9,450
STEEL PILES, HP10X42	FOOT	240	$40	$9,600
METAL SHOES	EACH	13	$200	$2,600
REMOVE AND RE-ERECT SPBGR	FOOT	900	$6	$5,400
TOTAL REHABILITATION COST (Structure Only)				$1,914,301

ALTERNATE 4 - TOTAL STRUCTURE REPLACEMENT WITH PIER AND ABUTMENT PILE REUSE

ITEM	UNIT	QUANTITY	UNIT COST	ITEM COST
TRAFFIC CONTROL (I-57 SB)	L SUM	1	$50,000	$50,000
TRAFFIC CONTROL (SBI 25)	L SUM	1	$10,000	$10,000
RAILROAD FLAGGER	DAY	180	$500	$90,000
RAILROAD LIABILITY INSURANCE	L SUM	1	$10,000	$10,000
TEMPORARY CONCRETE BARRIER	FOOT	800	$15	$12,000
RELOCATE TEMPORARY BARRIER	FOOT	800	$5	$4,000
PROTECTIVE SHIELD	SQ FT	7,810	$10	$78,100
SUPERSTRUCTURE CONCRETE REMOVAL	CU YD	475	$300	$142,500
CONCRETE SUPERSTRUCTURES	CU YD	490	$650	$318,500
BRIDGE DECK GROOVING	SQ YD	1,640	$5	$8,200
PROTECTIVE COAT	SQ YD	2,240	$1	$2,240
BRIDGE SEAT SEALER	SQ FT	860	$1	$860
DECK DRAINS	EACH	20	$150	$3,000
NEOPRENE EXPANSION JOINT 4"	FOOT	116	$100	$11,600
STRUCTURAL STEEL REMOVAL	LBS	415,445	$0.25	$103,861
STRUCTURAL STEEL	LBS	420,000	$1.50	$630,000
ELASTOMERIC EXPANSION BEARINGS	EACH	35	$500	$17,500
TEMPORARY SHEET PILING	SQ FT	9,900	$15	$148,500
STRUCTURE EXCAVATION	CU YD	1,360	$30	$40,800
POROUS GRANULAR EMBANKMENT	CU YD	195	$30	$5,850
SUBSTRUCTURE CONCRETE REMOVAL	CU YD	455	$250	$113,750
CONCRETE STRUCTURES	CU YD	605	$550	$332,750
REINFORCING BARS, EPOXY COATED	LBS	219,000	$1	$219,000
STEEL PILES, HP8X36	FOOT	315	$30	$9,450
STEEL PILES, HP10X42	FOOT	240	$40	$9,600
METAL SHOES	EACH	13	$200	$2,600
PAVEMENT REMOVAL	SQ YD	227	$20	$4,540
BRIDGE APPROACH PAVEMENT	SQ YD	270	$180	$48,600
REMOVE AND RE-ERECT SPBGR	FOOT	900	$12	$10,800
CONCRETE SLOPEWALL REMOVAL	SQ YD	960	$20	$19,200
CONCRETE SLOPEWALL	SQ YD	1,035	$70	$72,450
NAMEPLATE	EACH	1	$250	$250
TOTAL REPLACEMENT COST (Structure Only)				$2,530,501

Alternate 1 / Alternate 4 = 42.1%

Alternate 2 / Alternate 4 = 58.0%

Alternate 3 / Alternate 4 = 75.6%

EXHIBIT I4
S.N. 038-0014
I-57 (SB) OVER CN/IC RR AND SBI 25

EXHIBIT 6:

CORRESPONDENCE

Leskanich, Heather J

From: Ferguson, Steven P
Sent: Wednesday, April 22, 2009 3:41 PM
To: Craven, Tim A
Cc: Leskanich, Heather J
Subject: RE: SN 038-0014 & SN 038-0013

Tim,

I appreciate you looking into this. I'll plan on issuing the work order for the TS&L superstructure replacement Thursday or Friday.

Steve

From: Craven, Tim A
Sent: Wednesday, April 22, 2009 3:08 PM
To: Leskanich, Heather J
Cc: Ferguson, Steven P
Subject: RE: SN 038-0014 & SN 038-0013

Please see my responses below...
Thanks,
Tim

From: Leskanich, Heather J
Sent: Tuesday, April 07, 2009 2:13 PM
To: Craven, Tim A
Cc: Ferguson, Steven P
Subject: SN 038-0014 & SN 038-0013

Tim,
I believe Steve spoke to you about the above structures. We currently have an BCR approval for superstructure replacement and widened substructure for SN 038-0014 and I am working on an abbreviated BCR for SN 038-0013, since it was not addressed. (I was hoping to be submitting it already.....) The superstructure replacement was approved by your office in 2003, and there was not a SGR required/completed at the time. We currently have a consultant scheduled to do an SGR, and another consultant that has submitted manhours for the TS&L. In finishing things up, I have a few comments/questions...

- The cost estimate/comparison between the alternatives for SN 038-0014 (which I was intending on using in the abbreviated BCR) shows that the superstructure replacement with significant substructure modification is 76% the cost of replacement and states that it should not be considered as an alternative, and since that is what we are recommending, I was hoping to get any notes of estimates that was revised/used by your office to include. (I believe some of the additional $$ in substructure modifications is the 10' high pier crashwalls required by the RR that would need to be addressed)

The estimate in the BCR seems flawed. In a brief review, I noticed that the cost for steel piling is the same between super R&R and total R&R which doesn't seem to make sense. The cost for retaining the earth embankment does not seem to be addressed. I would stick with the super R&R scope.

- Is the scope of superstructure replacement still valid with LRFD design for substructure units, and thicker deck requirements? (SN 038-0014 has timber piles under piers 1 , 3 & 4, the BCR noted that the pile embedment does not meet current (2003) standards and could be a problem in a seismic event. Is this still OK to disregard with LRFD? SN 038-0013 is spread footings...will that make a difference?)

Let's keep with the super R&R scope. I have not replaced piers in the past due to a 6 inch embedment instead of a 12" embedment.

- The approval letter states that the existing and proposed truck DHV exceeds 250, therefore the clear width should be 42' 0". However the report showed a combined DHV. The projected truck DHV per direction would be 194 (Based on 2009 traffic data), therefore the clear width should be as originally proposed 40' 0".

We use the SIMS database for estimated truck traffic. It shows that the DHV reported in the BCR is one way traffic.

Any help/direction would be appreciated.....Call if you need any additional information or would like to see something compared differently.
Thanks,

Heather Leskanich
CE-III - Bridge & Hydraulics Unit
Illinois Department of Transportation
Region 2, District #3
700 East Norris Drive
Ottawa, IL 61350
(815) 434-8956
Email address: Heather.Leskanich@illinois.gov

Illinois Department of Transportation

Memorandum

To:	Diane M. O'Keefe	Attn: Thomas Sancken
From:	Ralph E. Anderson	By: Todd E. Ahrens
Subject:	BRIDGES AND STRUCTURES	Todd E. Ahrens
Date:	July 14, 2003	

FAI Route 57
Section 38-2HVB
Iroquois County

P-93-051-01
SN 038-0014 (South Bound)

I-57 over Canadian National/Illinois Central Railroad and FAS Route 317

We have received the Consultant prepared Bridge Condition Report (BCR) submitted with your memorandum dated April 1, 2003.

The BCR recommends:

- Deck replacement; add one new beam line, and substructure widening. 40'-0" proposed bridge clear width.
- Retrofit bottom welded cover plate terminations.
- Remove and replace all bearings.
- Jack super to provide 23'-0" minimum vertical clearance.
- Proposed work to be performed using stage construction.

After reviewing the BCR we have the following comments:

1. Based on the age and deteriorated condition of the existing deck we agree that, as a minimum, deck replacement is appropriate. However, our analysis shows that complete superstructure replacement is more cost effective than welded cover plate retrofit, painting of existing steel, and jacking the beams to provide the required vertical clearance over the railroad. We recommend that the scope-of-work be revised to superstructure replacement with substructure widening.

2. The existing and proposed Truck DHV exceeds 250. Therefore, in accordance with Design and Environment Manual paragraph 50-2.06(d)2, and Figure 44-5A, a 12'-0" right shoulder should be provided. With a proposed 6'-0" left shoulder, this results in a bridge clear width of 42'-0". Stage construction appears feasible.

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3. Preliminary calculations indicate that the existing abutments can be made semi-integral. It may be necessary to reduce the allowance for future wearing surface to limit the increase in loads to the existing substructure units. The use of semi-integral abutments will be finalized during the Type, Size, and Location (TSL) plan phase.

4. The new superstructure should provide 23'-0" minimum vertical clearance, measured 8'-0" from centerline track, over the railroad (see Design and Environment Manual Figures 39-5S and 39-5T).

5. No new soil borings are required at this structure. The existing boring data appears adequate for use but will require conversion to our current log format. A copy of this letter along with the existing borings and any foundation data will be transmitted to your District Geotechnical Engineer. Please contact our Foundations & Soils Unit if additional assistance is required.

Subject to the above comments, the Bridge Condition Report is approved. A Type, Size, and Location (TSL) plan will be required for this project. Please submit structure report, proposed cross section and proposed plan and profile so that our office may begin work to complete these plans.

GGE/aks4037

cc: William M. Kramer