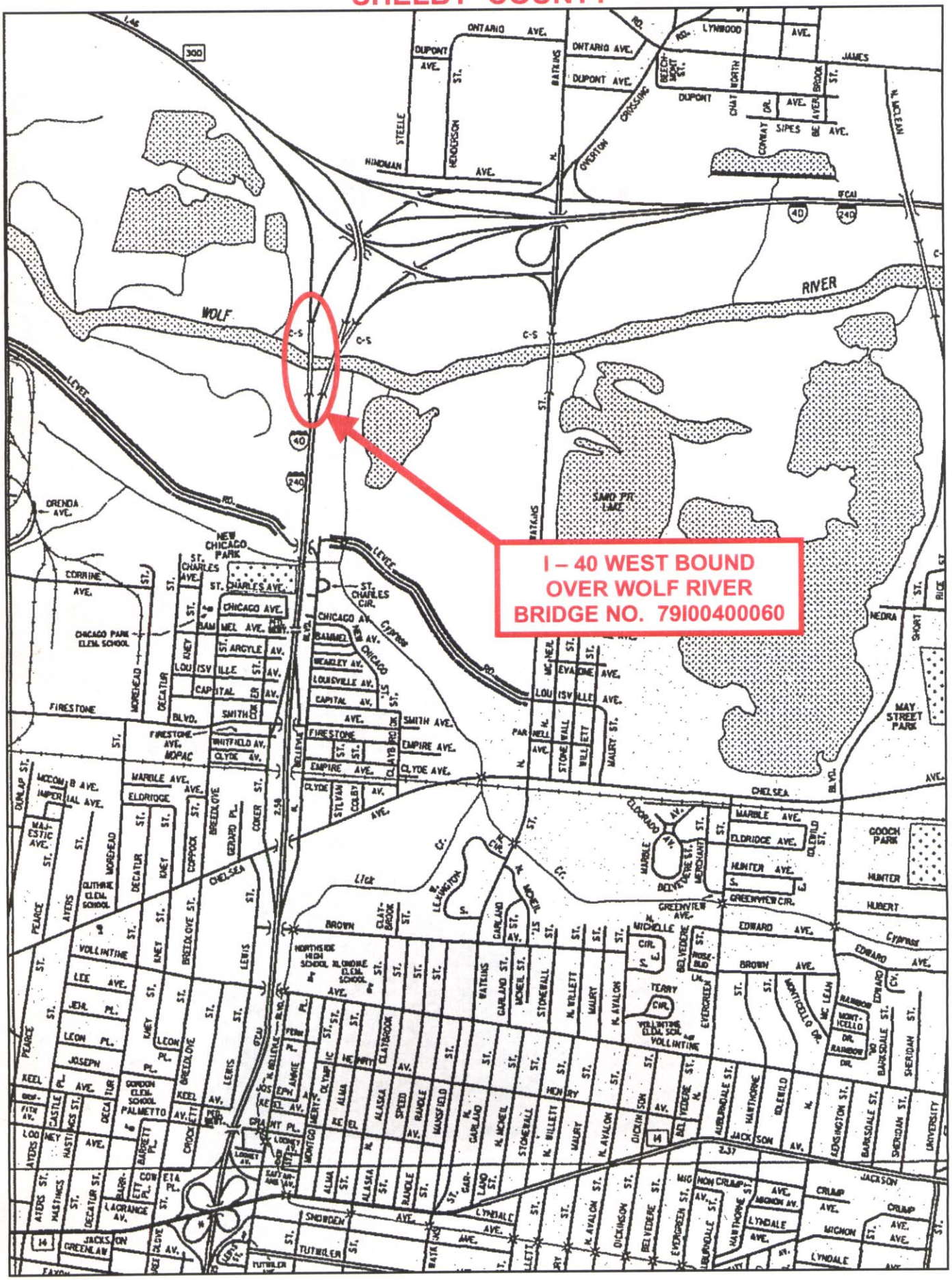
SHELBY COUNTY



STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF TRANSPORTATION
Bridge Inspection & Repair Office
Suite 1200, JKP Building
Nashville, Tennessee 37243-0338

July 1, 1996

Mr. Tom Everett
Bridge/Safety Management Engineer
Federal Highway Administration
249 Cumberland Bend
Nashville, Tennessee 37228

SUBJECT: I-40 over Wolf River, Shelby County, Bridge Number 79-I0040-5.09

Dear Mr. Everett:

We recently received information that we requested from Mr. Bill Hazlerig concerning possible additional channel migration of the captioned bridge. The inspectors utilized a sonar instrument to determine elevations of the channel bottom and embankments that were under water. Instrument readings indicated that there was no change in the channel and embankment elevations or channel migration. We have plotted the profiles of the channel under spans 5, 6, and 7 to show the channel profiles over the past 5 years. At this time we are confident that the bridge is in no danger due to scour or channel migration. Attached is a copy of the drawing showing the profiles.

We have plans to do additional cross sections of the channel as soon as the water level lowers. Should you have any further questions pertaining to the bridge, please let us know.

Yours very truly

Hollis I. Tackitt
Civil Engineering Manager 2

Attachment
HIT:hit

cc: File

File in Report

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BRIDGE INSPECTION AND REPAIR OFFICE
NASHVILLE, TENNESSEE 37243-0338

March 14, 1991

Mr. William L. Moore, Jr.
Regional Engineering Director
P. O. Box 429, 120 State Street
Jackson, TN 38301

RE: Contract Maintenance
Bridge No. 79-I40-5.09, L and R Lanes/Wolf River
Shelby County

Dear Mr. Moore:

We wish to inform you of our plans to schedule the following scour bridge repair project for the May 10, 1991, letting. We have listed the tentative items of repair that we plan for the bridge. Please review these and if your personnel can add any input to our proposed repairs, we will certainly appreciate it.

PROPOSED REPAIRS

1) Excavation and placement of rip-rap.

If we can be of any further assistance, please contact us.

Yours very truly,

Mike Jawson

(for)
Larry E. Hinds
Civil Engineering Manager 2
Bridge Inspection and Repair Office

RBG:gap

cc: Mr. Richard Gentry
Mr Jim AKIN
Mr CHARLIE HUNTER
Mr RAY BRISSON

STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF TRANSPORTATION
Bridge Inspection & Repair Office
Suite 1200, JKP Building
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July 1, 1996

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Yours very truly

Hollis I. Tackitt
Civil Engineering Manager 2

Attachment
HIT:hit

BRIDGE MAINTENANCE RECOMMENDATIONS

Tennessee Department of Transportation

COUNTY: SHELBY
LOCATION: 79-I0040-05.09-L
CO. SEQ.: 1 SPEC. CASE: 0

CROSSING: I40-LL / WOLF RIVER
FED. BRIDGE NO.: 79I00400060
MAINT. DIST.: 79

REPAIR LIST NO.: 3
DATE ADDED: 11/10/2003
REVISED:

FACILITY CARRIED:	I40-LL	NUMBER OF MAIN SPANS:	11
HIGHWAY SYSTEM:	02-INTERSTATE URBAN	NUMBER OF APPROACH SPANS:	0
BRIDGE WIDTH (CURB TO CURB):	71 FT 10 IN	BRIDGE LENGTH (FT):	751
BRIDGE WIDTH (OUT TO OUT):	74 FT 1 IN	MAXIMUM SPAN LENGTH (FT):	76
APPROACH ROADWAY (W/SHOULDERS):	71 FT 10 IN	SKEW ANGLE (DEGREES):	90

MAINTAINED BY:	STATE HIGHWAY AGENCY
MAIN SPAN MATERIAL:	PRESTRESSED CONCRETE CONTINUOUS
MAIN SPAN DESIGN TYPE:	STRINGER/MULTI-BEAM OR GIRDER
APPROACH SPAN MATERIAL:	OTHER OR NOT APPLICABLE
APPROACH SPAN DESIGN TYPE:	OTHER OR NOT APPLICABLE

INSPECTION DATE:	07/15/2003	GENERAL CONDITION:	FAIR
EVALUATION DATE:	09/09/2003	STRUCTURALLY DEFICIENT:	NO
PROPOSED REPLACEMENT:			
H TRUCK RATING @ INV.:	20 TONS	SUFFICIENCY RATING:	92.1

No.	RECOMMENDATIONS	REPAIR DATE	REPAIRED BY
1.	INSTALL SCOUR PROTECTION AT BENT NO. 3		
2.	CLEAR DRAINS		
3.	CLEAR DRIFT		
4.	CLEAR APPROACH DRAINS.		
5.	APPROACH GUARDRAILS ARE SUBSTANDARD		
6.	REPAIR EMBANKMENT EROSION AT ABUTMENT NO. 1		

COMMENTS:

ADDED TO REPAIR LIST DUE TO CHANNEL MIGRATION BEING REPORTED.

Bridge Maintenance Recommendations

Bridge Location No.: 79 - I0040 - 0509 L
(Co. Route Log Mile)

Under/Over Pass No.: - -

Crossing: WOLF RIVER

Road Name:

Road Name #2:

Bridge Rating: FAIR

Inspection Cycle: 15

Inspection Date: 8/2/01

Comments:

Bridge Number: **79I00400060**

Region: 04

District: 45 Spec.Case: 0

Maint.Resp.: 01 Co.Seq: 01

County: Shelby

City:

@ ' x '
Barrels Length Width

Maintenance Recommendations:

		Maintenance Completed by/date
226	GUARDRAIL TERMINALS AT APPROACH NO. 1 & 2 ARE SUBSTANDARD	
001	LEVEL APPROACH NO. _1 & 2	
009	CLEAN DRAINS AT APPROACH NO. _1 & 2	
043	CLEAN DRAINS IN SPAN NO. _2 THRU 9	
204	CUT VEGETATION	
201	CLEAN DRIFT	
228	APPROACH GUARDRAILS ARE SUBSTANDARD	

COMPLETION NOTIFICATION: RETURN WITHIN 6 MONTHS OF INSPECTION DATE.

INITIAL AND DATE RECOMMENDATIONS WHEN COMPLETED.

MAINTENANCE ACTIVITIES ARE COMPLETED (DATE) _____ BY_____

MAINTENANCE ACTIVITIES ARE PARTIALLY COMPLETED (DATE) _____ BY_____

MAINTENANCE ACTIVITIES ARE INCOMPLETE, SCHEDULED FOR (DATE) _____

EXPLANATIONS AND COMMENTS:

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 06/15/2000

County:	79
Route:	I0040
Special Case:	0
County Sequence:	01
Log Mile:	5.09

Bridge Number: (Includes Item 5A) 79I004000601

Feature Intersected: I40-LL / WOLF RIVER

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	09/16/1999 8/2/2001
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN. ____ FT. ____ IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN. ____ FT. ____ IN.
36	TRAFFIC SAFETY FEATURES	Br. Rail / Trans. / Appr. Rail / Appr. Rail Ends
		1 / 0 / 1/0 / 0
		___ / ___ / ___ / ___
41	STRC OPEN/CLOSED/POSTED (A K P)	A
		___
58	DECK	6
		___
59	SUPERSTRUCTURE	7
		___
60	SUBSTRUCTURE	7
		___
61	CHANL/CHANL PROTECTION	6
		___
62	CULVERT AND RETAIN WALL	N
		___
71	WATERWAY ADEQUACY	8/7
		___
72	APPROACH RDWY ALIGNMENT (USE VALUES OF 3, 6, OR 8)	8
		___
521	OVERALL CONDITION (Circle One)	
	GOOD (FAIR) POOR CRITICAL	

8/2/2001

TEAM LEADER SIGNATURE — REVIEW DATE

CONDITION CODING GUIDELINES
(Values for Coding Items 58, 59, 60 and 62)

- N NOT APPLICABLE
- 9 EXCELLENT CONDITION
- 8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
- 7 GOOD CONDITION - SOME MINOR PROBLEMS.
- 6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
- 5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
- 4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
- 3 SERIOUS CONDITION - LOSS OF SECTION, DETERIORATION, SPALLING OR SCOUR HAVE SERIOURSLY AFFECTED PRIMARY STRUCTURAL COMPONENTS. LOCAL FAILURES ARE POSSIBLE. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT.
- 2 CRITICAL CONDITION - ADVANCED DETERIORATION OF PRIMARY STRUCTURAL ELEMENTS. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT OR SCOUR MAY HAVE REMOVED SUBSTRUCTURE SUPPORT. UNLESS CLOSELY MONITORED IT MAY BE NECESSARY TO CLOSE THE BRIDGE UNTIL CORRECTIVE ACTION IS TAKEN.
- 1 "IMMINENT" FAILURE CONDITION - MAJOR DETERIORATION OR SECTION LOSS PRESENT IN CRITICAL STRUCTURAL COMPONENTS OR OBVIOUS VERTICAL OR HORIZONTAL MOVEMENT AFFECTING STRUCTURAL STABILITY. BRIDGE IS CLOSED TO TRAFFIC BUT CORRECTIVE ACTION MAY PUT BACK IN LIGHT SERVICE.
- 0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.

BRIDGE CONDITION CODING SHEET
DATA ENTRY JOB NO. 5043, P4

CULP5023
TRIMS KEY

BRIDGE NO. CO: 79
ROUTE: I00400
SEQ. NO: 060

LOCATION NO. CO. NO: 79
ROUTE: I0040
SC/CSQ: 0 01
LOG MILE: 0509
BR-SEQ: 060

FEATURE INTERSECTED: I40-LL / WOLF RIVER*

CODE ONLY THOSE NUMBERS WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE	COMMENTS
90	INSPECTION DATE	08 / / 95 12 / 11 / 97	RATINGS FOR CODING ITEMS 58 THRU 62
10	MINIMUM V. C. OVER DECK (PAVEMENT + SHOULDERS)	99 FT. 99 IN. ___FT. ___IN.	
14	MINIMUM V. C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN. ___FT. ___IN.	
54	MINIMUM VERTICAL UNDERCLEARANCE H R N	00 FT. 00 IN. ___FT. ___IN.	
36	TRAFFIC SAFETY FEATURE	1 0 1 0 ___ ___ ___ ___	
41	STRC OPEN/CLOSED/POSTED A K P	A ___	SUBSTANDARD SEE PHOTOLOG
58	DECK	6 ___	
59	SUPERSTRUCTURE	7 ___	
60	SUBSTRUCTURE	7 ___	
61	CHANL/CHANL PROTECTION	6 (6 / 4) 4	MAJOR REPAIRS SINCE LAST INSPECTION
62	CULV & RETAIN WALL	N ___	
72	APPROACH RDWY ALIGNMENT (CODE 3, 6, OR 8 UNLESS NECESSARY)	8 ___	

N NOT APPLICABLE
9 EXCELLENT CONDITION
8 VERY GOOD CONDITION-NO PROBLEMS NOTED
7 GOOD CONDITION-SOME MINOR PROBLEMS
6 SATISFACTORY CONDITION-MINOR DETERIORATION OF STRUCTURAL ELEMENTS
5 FAIR CONDITION-PRIMARY STRUCTURAL DEFECTS, SOUND BUT SHOW MINOR SECTION LOSS, SCOUR, CRACKING, SPALLING
4 POOR CONDITION-ADVANCED SECTION LOSS, DETERIORATION, SCOUR, SPALLING
3 SERIOUS CONDITION-LOSS OF SECTION, DETERIORATION, SPALLING, SCOUR SERIOUSLY EFFECT PRIMARY MEMBERS, FAILURES POSSIBLE, FATIGUE OR SHEAR CRACKS POSSIBLE
2 CRITICAL CONDITION-ADVANCED DETERIORATION OF PRIMARY ELEMENTS OR FATIGUE OR SHEAR CRACKS OR SEVERE SCOUR CONDITION, MAY REQUIRE CLOSURE FOR REPAIRS
1 IMMINENT FAILURE CONDITION-MAJOR SECTION LOSS OR CRITICAL CONDITION OF STRUCTURAL COMPONENT OR UNSTABLE OR CLOSED BUT REPAIRABLE FOR LIGHT TRAFFIC
0 FAILED CONDITION-OUT OF SERVICE AND BEYOND CORRECTIVE ACTION

OVERALL CONDITION

GOOD ____ POOR X

FAIR ____ CRIT ____

_____ SIGNATURE

____/____/____ DATE

TENNESSEE BRIDGE INSPECTION PROGRAM
SUMMARY OF EVALUATION

REV. 03-05-2003

BRIDGE ID NO: 79I00400060 LOCATION NO: 79 - I0040 - 5.01 L

(6A) CROSSING: I-40 W.B. / WOLF RIVER

(505) METHOD OF ANALYSIS: LOAD RESISTANCE FACTOR METHOD - RF

(548) RATING BASED ON: AASHTOWare Bridge Rating (4" Asphalt)

LOAD RATINGS IN TONS

INVENTORY (503)	H	32	(518B) HS	28
OPERATING (504)	H	42	(519) HS	36

REQ. POSTING:

(549) EVALUATOR: DCD

(522) EVAL. DATE: 11/15/2018

LAST UPDATED BY: LINER

(29) ADT: 119,200 (30) ADT YR: 2019

(100) STRAHNET ROUTE: YES

(19) DETOUR LENGTH: 1 KM

(520) VC OVER RDWY: 99.99 METERS

CONDITION RATINGS

(58) DECK RATING:	7
(59) SUPERSTRUCTURE RATING:	7
(60) SUBSTRUCTURE RATING:	6
(61) CHANNEL PROTECTION:	6
(62) CULVERT RATING:	N
(113A) NBIS SCOUR CODE:	5
(113B) TDOT SCOUR CODE:	C

APPRAISAL RATINGS

(67) STRUCTURAL EVALUATION:	6
(68) DECK GEOMETRY:	7
(69) UNDER CLEARANCE:	N
(70) BRIDGE POSTING:	5
(71) WATERWAY ADEQUACY:	8
(72) APPROACH RDWY ALIGNMENT:	8

CODE VALUES

N - NOT APPLICABLE
9 - EXCELLENT CONDITION
8 - VERY GOOD CONDITION
7 - GOOD CONDITION
6 - SATISFACTORY
5 - FAIR CONDITION
4 - POOR CONDITION
3 - SERIOUS CONDITION
2 - CRITICAL CONDITION
1 - FAILURE IS IMMINENT
0 - FAILED CONDITION

OTHER RATING ITEMS

(521) OVERALL CONDITION:	F
(513) TEXTURE COAT RATING:	F 10
(514) PAINT CONDITION RATING:	N
(41) WEIGHT POSTING CODE:	A
(36) TRAFFIC SAFETY FEATURES:	0 0 0 1
(525) REPAIR LIST NO:	N

COMMENTS

IN 1998 AN EXTENSIVE AMOUNT OF RIP-RAP WAS PLACED (BY THE REGION) ON THE NORTH BANK AND AN OLD COFFER DAM WAS REMOVED FROM UPSTREAM. IN THE NEXT INSPECTION AFTER THESE REPAIRS IT APPEARS THAT THE RIP RAP ON NORTH BANK SEEMS TO BE DIVERTING THE CHANNEL TOWARD THE SOUTH BANK (BENT NO. 3). MONITOR SCOUR CONDITION (ESPECIALLY AT BENT NO. 3.)

2016 - COLUMNS B, C, & D HAVE INCREASED IN EXPOSURE BUT FOOTING IS NOT VISABLE.

11/15/2018 THE CHANNEL IS ENCROACHING ONTO BENT #3. (MONITOR) (BTH)

(502) SUFF. RATING: 83.7

(528) STR. DEFICIENT: NO

(529) FUNC. OBSOLETE: NO

Bridge Name: I-240 WB over Wolf River
NBI Structure ID: 79I00400060
Bridge ID: 79I00400060

Analyzed By: bridgeware
Analyze Date: Friday, May 22, 2020 12:13:37
Analysis Engine: AASHTO LRFR Engine Version 6.8.1.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Friday, May 22, 2020 14:35:00

Structure Definition Name: Spans 1 - 10
Member Name: G1
Member Alternative Name: Typical Exterior

Load and Resistance Factor Rating Summary

Girder Summary

Live Load		Rating Factor	Controls	Capacity (Ton)	Span	Location (ft)	Percent	Impact	Lane
Annual Permit 1	Permit	1.038	STRENGTH-II Concrete Flexure	85.66	9	75.42	100.0	As Requested	As Requested
Annual Permit 2	Permit	1.165	STRENGTH-II Concrete Flexure	96.13	9	75.42	100.0	As Requested	As Requested
EV2	Legal	2.623	STRENGTH-I Concrete Flexure	75.42	9	75.42	100.0	As Requested	As Requested
EV3	Legal	1.748	STRENGTH-I Concrete Flexure	75.15	9	75.42	100.0	As Requested	As Requested
Gravel Truck	Legal	1.832	STRENGTH-I Concrete Flexure	67.79	9	75.42	100.0	As Requested	As Requested
Gravel Truck + Lane Load	Legal	1.247	STRENGTH-I Concrete Flexure	69.23	9	75.42	100.0	As Requested	As Requested
H 15-44	Inventory	2.155	STRENGTH-I Concrete Flexure	32.33	9	75.42	100.0	As Requested	As Requested
H 15-44	Operating	2.794	STRENGTH-I Concrete Flexure	41.91	9	75.42	100.0	As Requested	As Requested
HL-93 (US)	Inventory	0.768	STRENGTH-I Concrete Flexure	27.64	9	75.42	100.0	As Requested	As Requested
HL-93 (US)	Operating	0.995	STRENGTH-I Concrete Flexure	35.83	9	75.42	100.0	As Requested	As Requested
HS 20-44	Inventory	1.485	SERVICE-III PS Tensile Stress	53.45	10	37.58	50.4	As Requested	As Requested
HS 20-44	Operating	2.068	STRENGTH-I Concrete Flexure	74.45	9	75.42	100.0	As Requested	As Requested
Lane-Type Legal Load	Legal	1.499	STRENGTH-I Concrete Flexure	59.95	9	75.42	100.0	As Requested	As Requested
Overweight Permit	Permit	1.301	STRENGTH-II Concrete Flexure	165.93	9	75.42	100.0	As Requested	As Requested
SU7	Legal	1.787	STRENGTH-I Concrete Flexure	69.24	9	75.42	100.0	As Requested	As Requested
School Bus - Standard	Legal	4.706	STRENGTH-I Concrete Flexure	68.23	9	75.42	100.0	As Requested	As Requested
Type 3S2	Legal	2.201	STRENGTH-I Concrete Flexure	79.24	9	75.42	100.0	As Requested	As Requested

Note:
"N/A" indicates not applicable
"**" indicates not available

Bridge Name: I-240 WB over Wolf River
NBI Structure ID: 79I00400060
Bridge ID: 79I00400060

Analyzed By: bridgeware
Analyze Date: Friday, May 22, 2020 12:13:37
Analysis Engine: AASHTO LRFR Engine Version 6.8.1.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Friday, May 22, 2020 14:35:04

Structure Definition Name: Spans 1 - 10
Member Name: G2
Member Alternative Name: Typical Interior

Load and Resistance Factor Rating Summary

Girder Summary

Live Load		Rating Factor	Controls	Capacity (Ton)	Span	Location (ft)	Percent	Impact	Lane
Annual Permit 1	Permit	1.374	STRENGTH-II Concrete Flexure	113.33	1	74.54	100.0	As Requested	As Requested
Annual Permit 2	Permit	1.542	STRENGTH-II Concrete Flexure	127.19	1	74.54	100.0	As Requested	As Requested
EV2	Legal	3.149	STRENGTH-I Concrete Flexure	90.52	1	29.82	40.0	As Requested	As Requested
EV3	Legal	2.050	STRENGTH-I Concrete Flexure	88.14	1	29.82	40.0	As Requested	As Requested
Gravel Truck	Legal	2.198	STRENGTH-I Concrete Flexure	81.33	1	29.82	40.0	As Requested	As Requested
Gravel Truck + Lane Load	Legal	1.651	STRENGTH-I Concrete Flexure	91.60	1	74.54	100.0	As Requested	As Requested
H 15-44	Inventory	2.852	STRENGTH-I Concrete Flexure	42.78	1	74.54	100.0	As Requested	As Requested
H 15-44	Operating	3.697	STRENGTH-I Concrete Flexure	55.45	1	74.54	100.0	As Requested	As Requested
HL-93 (US)	Inventory	1.016	STRENGTH-I Concrete Flexure	36.57	1	74.54	100.0	As Requested	As Requested
HL-93 (US)	Operating	1.317	STRENGTH-I Concrete Flexure	47.41	1	74.54	100.0	As Requested	As Requested
HS 20-44	Inventory	1.433	SERVICE-III PS Tensile Stress	51.58	1	36.96	49.6	As Requested	As Requested
HS 20-44	Operating	2.589	STRENGTH-I Concrete Flexure	93.19	1	29.82	40.0	As Requested	As Requested
Lane-Type Legal Load	Legal	1.983	STRENGTH-I Concrete Flexure	79.32	1	74.54	100.0	As Requested	As Requested
Overweight Permit	Permit	1.722	STRENGTH-II Concrete Flexure	219.54	1	74.54	100.0	As Requested	As Requested
SU7	Legal	2.191	STRENGTH-I Concrete Flexure	84.89	1	29.82	40.0	As Requested	As Requested
School Bus - Standard	Legal	5.479	STRENGTH-I Concrete Flexure	79.44	1	29.82	40.0	As Requested	As Requested
Type 3S2	Legal	2.912	STRENGTH-I Concrete Flexure	104.84	1	74.54	100.0	As Requested	As Requested

Note:
"N/A" indicates not applicable
"**" indicates not available

Bridge Name: I-240 WB over Wolf River
NBI Structure ID: 79I00400060
Bridge ID: 79I00400060

Analyzed By: bridgeware
Analyze Date: Friday, May 22, 2020 12:13:37
Analysis Engine: AASHTO LRFR Engine Version 6.8.1.3001
Analysis Preference Setting: None

Report By: bridgeware
Report Date: Friday, May 22, 2020 14:35:08

Structure Definition Name: Spans 1 - 10
Member Name: G11
Member Alternative Name: Interior - max spacing

Load and Resistance Factor Rating Summary

Girder Summary

Live Load		Rating Factor	Controls	Capacity (Ton)	Span	Location (ft)	Percent	Impact	Lane
Annual Permit 1	Permit	1.417	STRENGTH-II Concrete Flexure	116.87	1	74.54	100.0	As Requested	As Requested
Annual Permit 2	Permit	1.366	STRENGTH-II Concrete Shear	112.68	1	67.09	90.0	As Requested	As Requested
EV2	Legal	2.758	STRENGTH-I Concrete Flexure	79.29	10	44.73	60.0	As Requested	As Requested
EV3	Legal	1.796	STRENGTH-I Concrete Flexure	77.21	10	44.73	60.0	As Requested	As Requested
Gravel Truck	Legal	1.926	STRENGTH-I Concrete Flexure	71.25	10	44.73	60.0	As Requested	As Requested
Gravel Truck + Lane Load	Legal	1.702	STRENGTH-I Concrete Flexure	94.46	1	74.54	100.0	As Requested	As Requested
H 15-44	Inventory	2.175	SERVICE-III PS Tensile Stress	32.63	10	37.58	50.4	As Requested	As Requested
H 15-44	Operating	3.812	STRENGTH-I Concrete Flexure	57.19	1	74.54	100.0	As Requested	As Requested
HL-93 (US)	Inventory	0.820	SERVICE-III PS Tensile Stress	29.53	10	37.58	50.4	As Requested	As Requested
HL-93 (US)	Operating	1.358	STRENGTH-I Concrete Flexure	48.89	1	74.54	100.0	As Requested	As Requested
HS 20-44	Inventory	1.084	SERVICE-III PS Tensile Stress	39.03	10	37.58	50.4	As Requested	As Requested
HS 20-44	Operating	2.268	STRENGTH-I Concrete Flexure	81.63	10	44.73	60.0	As Requested	As Requested
Lane-Type Legal Load	Legal	2.045	STRENGTH-I Concrete Flexure	81.80	1	74.54	100.0	As Requested	As Requested
Overweight Permit	Permit	1.803	STRENGTH-II Concrete Flexure	229.84	1	74.54	100.0	As Requested	As Requested
SU7	Legal	1.919	STRENGTH-I Concrete Flexure	74.36	10	44.73	60.0	As Requested	As Requested
School Bus - Standard	Legal	4.799	STRENGTH-I Concrete Flexure	69.59	10	44.73	60.0	As Requested	As Requested
Type 3S2	Legal	2.604	STRENGTH-I Concrete Flexure	93.76	10	44.73	60.0	As Requested	As Requested

Note:
"N/A" indicates not applicable
"**" indicates not available

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 08-03-01

VIEW ACROSS TOP OF DECK

BRIDGE NO.

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 08-03-01

LOOKING AHEAD ON ROUTE

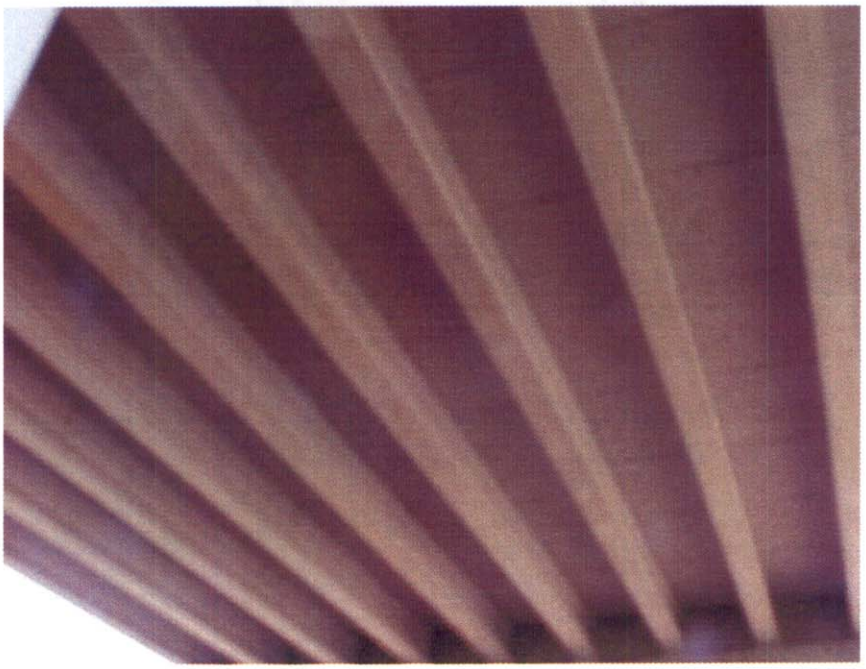
APPROACH #1, ASPHALT SPALLING AT JOINT

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 08-03-01

BENT #1

ABUTMENT #1

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 08-03-01



SPAN #4, BOTTOM OF DECK

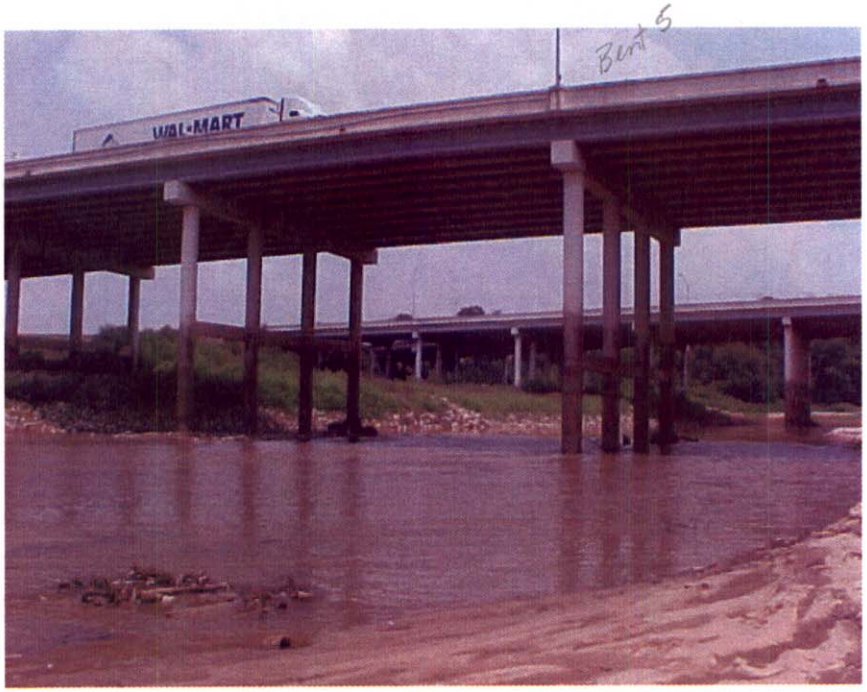
RIGHT ELEVATION AT BENT #4

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 08-03-01

RIGHT ELEVATION AT BENT #5

LEFT ELEVATION AT BENT #4

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 08-03-01



LEFT ELEVATION AT BENT #5

BENT #5

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 08-03-01

DRIFT AT BENT #5

SPAN #5, BOTTOM OF DECK

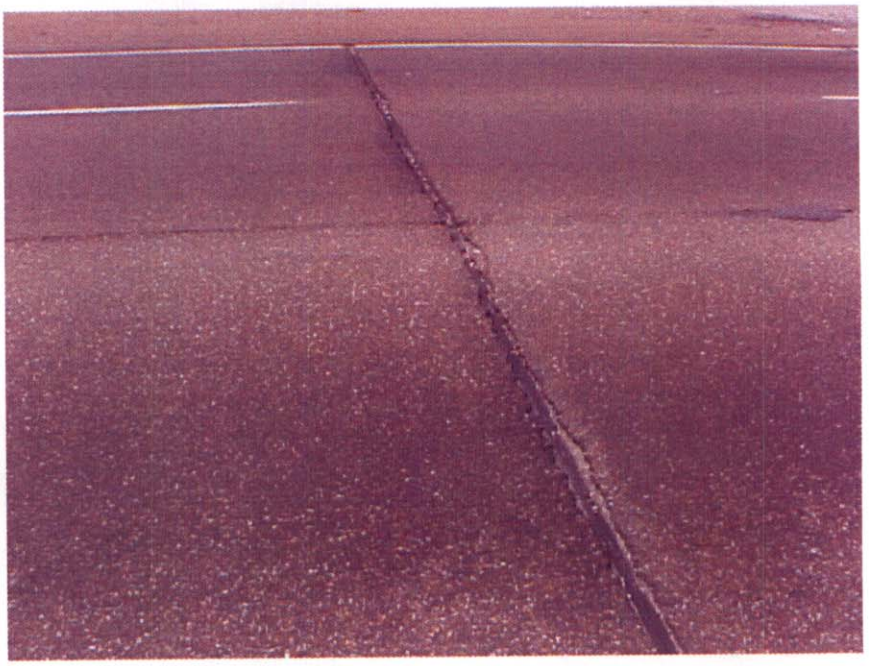
Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 08-03-01

SPAN #7, BOTTOM OF DECK

LOOKING BACK ON ROUTE

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 08-03-01

APPROACH #2 ASPHALT SPALLING



APPROACH #2 ASPHALT SPALLING AT JOINT

AUG 08 2001

Form BIR 3.0
(Rev. 9-22-98)
DT-0069

BRIDGE INSPECTION REPORT

Field Report No. 15 Date 8-2-01
Previous Report No. 14 Date
Plans: YES (X) NO ( )

Bridge No. 79I00400060 (Eleven Digit No.) Bridge Location No. 79 - I0040 - 5.09 L (Co. - Route - Log Mile)

Road Name over WOLF RIVER Crossing - OVER/UNDER PASS

Year Constructed
Year Widened
County Shelby
Year Rehabilitated
Structure Name (If Named)
Maintenance District 45

FEATURES

Wearing Surface Concrete ( ) Timber ( ) Asphalt (X) Depth 3" (in.)
Flared Width Yes (X) No ( ) Median Width Open (X) None ( ) Closed ( )
Navigational Control Yes ( ) No (X) Bridge Skew 90 ° LT ( ) RT ( )
Structure Type (Main Span) CONC. I. BEAM
Structure Type (Appr.Spans)
No. Main Spans 10 No. Approach Spans
Maximum Span Length 75' (**.* ft.)
Total Length 750.0 (**.* ft.)

INSPECTORS

1. COLLINS
2. LUKE
3. ADAMS
4. BYRD
5. REEVES
6.
7.
8.

WIDTHS (*.* ft.)

Deck Out-to-Out 76.0
Roadway Curb/Curb 74.0
Roadway Rail/Rail
Sidewalk Rt. Lt.
*Approach Roadway 48'
*(Does Not Include Shoulders)
Approach Shoulder Rt. 12'
Lt. 12'

CLEARANCES

Min. Vertical Clearance over Deck 5 (ft.-in.)
Min. Vertical Under Clearance 5 (ft.-in.)
Min. Lateral Under Clearance Rt. 5 (*.* ft.)
Min. Lateral Under Clearance Lt. 5 (*.* ft.)

FRACTURE CRITICAL: N/A
(If Yes, Include BIR 3.9)

NBIS Bridge Length (<25 ft.) N/A (ft.-in.)

UNDERWATER INSPECTION

To Be Performed By:
DOT FIELD TEAM ( ) CONTRACT DIVERS ( ) NONE REQUIRED ( )
Date
Change in Structural Condition: Yes ( ) No (X)
COMMENTS:

Major Repairs Made: Yes ( ) No (X)

BRIDGE RATING: ( ) (X) ( ) ( )
GOOD FAIR POOR CRITICAL

Supervising Bridge Inspector:

Form BIR 3.1
(Rev. 9-22-98)
DT-0080

Bridge Location No. 79 - I0040 - 5.09 L
Co. Route Log Mile

Date AUG 12 2001

PERFORMANCE EVALUATION

Time of Day Inspected 1:30 Weather Conditions P.C. 90°

Vehicles Observed ALL TYPES

LIVE LOAD BEHAVIOR

	YES	NO	Comments
Substructure			
Horiz./ Vert. Defl.	( )	(X)	
Vibration	( )	(X)	
Superstructure			
Horiz./ Vert. Defl.	( )	(X)	
Vibration	( )	(X)	

APPROACH

	Rating	Comments
Alignment	(G) F P C	
Slab	G F P C	
Joints	(G) F P C	#1 covered with A.C.
Pavement	G F (P) C	APP. #1 & #2 WEAR (001)
Embankment	(G) F P C	
Drains	G F (P) C	APP #1 & #2 ... 003 #1 LT #2 RT

TRAFFIC SAFETY FEATURES

	Rating	STANDARD	SUB-STANDARD	Comments
Bridgerailing	G (F) P C	(X)	( )	
Transitions	(G) F P C	( )	(X)	
Guardrail	(G) F P C	( )	(X)	
Guardrail Terminal	(G) F P C	( )	(X)	

SIGNING

	YES	NO	NEEDED
Paddleboards	( )	(X)	( )
Vertical Clearance (<14'-6")	( )	(X)	( )
NARROW ( )	( )	(X)	( )
ONE LANE BRIDGE ( )	( )	(X)	( )

Weight Limit Posted
YES ( ) NO (X)
Gross............. ______ Tons
2 Axle.............. ______ Tons
3 or more Axles.. ______ Tons

Other Signs or Plaques: NONE

Comments Regarding any Problems with Signing: NONE

Form BIR 3.2
(Rev. 9-22-98)
DT-0081

Bridge Location No. 79 - 10040 - 5.09 L
Co. Route Log Mile

Date ______

DECK

	Rating	Comments
Wearing Surface	G **(F)** P C	
Deck - Structural Condition	**(G)** F P C	
Curbs	G F P C	
Median	G F P C	
Sidewalks	G F P C	
Parapet	G **(F)** P C	
Railing	G F P C	
Paint	G F P C	
Drains	G F **(P)** C	W SIDE SPAN #2 - NO OPENING (043) BLOCKED
Lighting Standards	**(G)** F P C	
Utilities	G F P C	
Joint Leakage	G F P C	
Expansion Joints	G F P C	

SUPERSTRUCTURE

	Rating	Comments
Bearing Devices	G F P C	
Beams CIB	**(G)** F P C	
Girders	G F P C	
P C C S	G F P C	
BOLTS (PCCS)	G F P C	
Floor Beams	G F P C	
Stringers	G F P C	
Diaphragms	**(G)** F P C	
Bracing	G F P C	
Trusses - General	G F P C	
Portals	G F P C	
Bracing	G F P C	
Paint	G F P C	
Alignment of Members	**(G)** F P C	

TEXTURE COAT

Condition Rating G **(F)** P C
Overall Appearance G **(F)** P C
Staining Rating G **(F)** P C

Fading G **(F)** P C
Needs Spot Painting YES ( ) NO (✓)
Needs Repainting YES ( ) NO (✓)

Comments ______

RECOMMENDATIONS: ______

Scaling Rating G F P C
CLEAN SEAL JOINTS ( )
CLEAN DRAINS ( )

Form BIR 3.3
(Rev. 9-22-98)
DT-0082

Bridge Location No. 79 - 10040 - 5.09 L
Co. Route Log Mile

AUG 0 . 2001

Date _____

SUBSTRUCTURE

ABUTMENTS

	Rating	Comments	PILES TO BE REPLACED PILE(S)	ABUTMENT
Caps	(G) F P C			
Breastwall	G F P C			
Wings	(G) F P C			
Backwall	G (F) P C			
Plumb	(G) F P C			
Footing	G F P C			
Piles	G F P C			
Embankment	(G) F P C			
Bearing	(G) F P C			
Slope Paving	G F P C			
Rip Rap	(G) F P C			
Earthquake Devices	(G) F P C			

PIERS

		PILE(S)	PIER
Caps	G F P C		
Columns	G F P C		
Plumb	G F P C		
Footings	G F P C		
Piles	G F P C		
Bearing	G F P C		
Web	G F P C		
Earthquake Devices	G F P C		

BENTS

		PILE(S)	BENT
Caps	(G) F P C		
Columns	(G) F P C		
Plumb	(G) F P C		
Footings	G F P C		
~~Piles~~ STEEL	(G) F P C		
Bearing	G F P C		
~~Bracing~~ RIP RAP	(G) F P C		
Earthquake Devices	G F P C N/A		

Piles Need Replacement: NO (✓) YES ( )

CUT VEGETATION NO ( ) YES (✓) 30'

CLEAR DRIFT NO ( ) YES (✓) (20') @ BENT ?

RECOMMENDATIONS:

Form BIR 3.8
(Rev. 9-22-98)
DT-1508

Bridge Location No. 79 - I0040 - 0509 L
Co. Route Log Mile

Date ______

STREAM CHANNEL DATA AND CONDITIONS

Stream Crossing: WOLF RIVER

I. 1. Type of bed material? SAND
2. Has channel shifted? YES ( ) NO ( ) NOT APPARENT (✓)
3. Condition of rip-rap? (G) F P C — Est. % failed ____ % N/A ( )
4. Overall condition of channel? G (F) P C
5. Item 61 - Code values 0 thru 9 according to the recording and coding guide currently in effect: 6
6. Underwater diver inspection recommended? YES ( ) NO (✓)
If yes, why? ______

II. Channel and bank stability conditions: (check if applicable)
1. Steep bank conditions: - Failures upstream ( ) Failures downstream ( )
2. Moderate bank erosion ( )
3. Bank vegetation: a. low growth (✓) b. large timber (✓) c. clear banks ( )
d. dead trees upstream (✓) e. dead trees downstream (✓)
4. Sediment or gravel accumulation: YES ( ) NO ( ) UNKNOWN (✓)
5. Channel altered or straightened: YES ( ) NO ( ) UNKNOWN (✓)
6. Stable conditions: a. live growth (✓) b. bedrock ( )
c. boulders ( ) d. flat slopes (<=2:1) ( )

III. Waterway adequacy and debris characteristics: (check if applicable
1. Bridge deck elevations:
a. level with approach roadway. . . . . (✓)
b. higher than approach roadway. . . . . ( )
c. roadway approach >= 2 ft. above natural ground line. . (✓)
2. Abutment encroaches into channel. . . . . ( )
3. Large scour (blowhole) under bridge. . . . . ( )
4. Indications that flood waters overtop bridge:
NO (✓) YES ( ) OCASSIONALLY ( ) FREQUENTLY ( ) UNKNOWN ( )
5. Debris characteristics:
a. debris/drift present YES (✓) NO ( )
b. debris/drift likely to accumulate YES (✓) NO ( )
c. dead trees upstream (✓) dead trees downstream (✓)

IV. Comments: DRIFT AT BENTS
RIPRAP IN CHANNEL

SPECIAL INSPECTION DATA - FOR REASONS OTHER THAN FC OR SCOUR

I. Does this bridge need a special inspection? YES ( ) NO (✓)
II. Reason for special inspection: ______

Inspection Team's Summary

Bridge Location No. 79 - 10040 - 5.09 L

Inspection Date 8-2-01

Bridge Rating FAIR

THIS TEN SPAN C.I.B BRIDGE WITH CONCRETE SUBSTRUCTURE IS IN FAIR CONDITION. ALL TRAFFIC SAFETY FEATURES ARE PRESENT. APP # 1 & 2 PAVEMENT IS CRACKING & SPALLING AROUND JOINTS & PAVENT IS UNEVEN. DRAINS ON APP # 1 LT & APP. # 2 RT ARE 100% FILLED. DRAINS ON RT SIDE OF SPANS 2-9 ARE STOPPED UP.

VEG. IS HEAVY IN GENERAL.

Cross Section: yes ( ) no (X)

Pontis: yes ( ) no (X)

BR. NO. 79-I-40-5.09L

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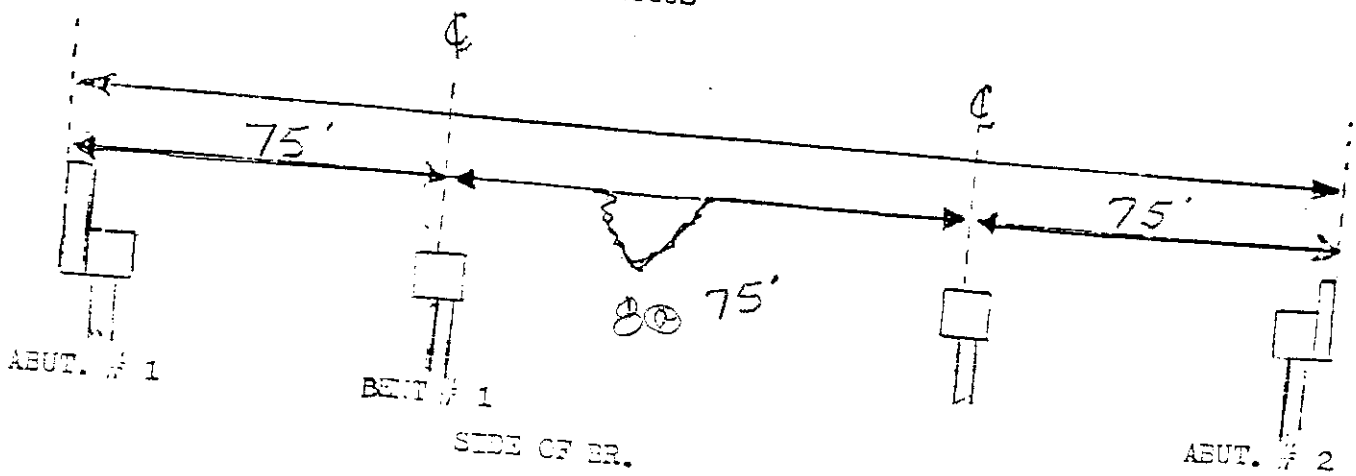
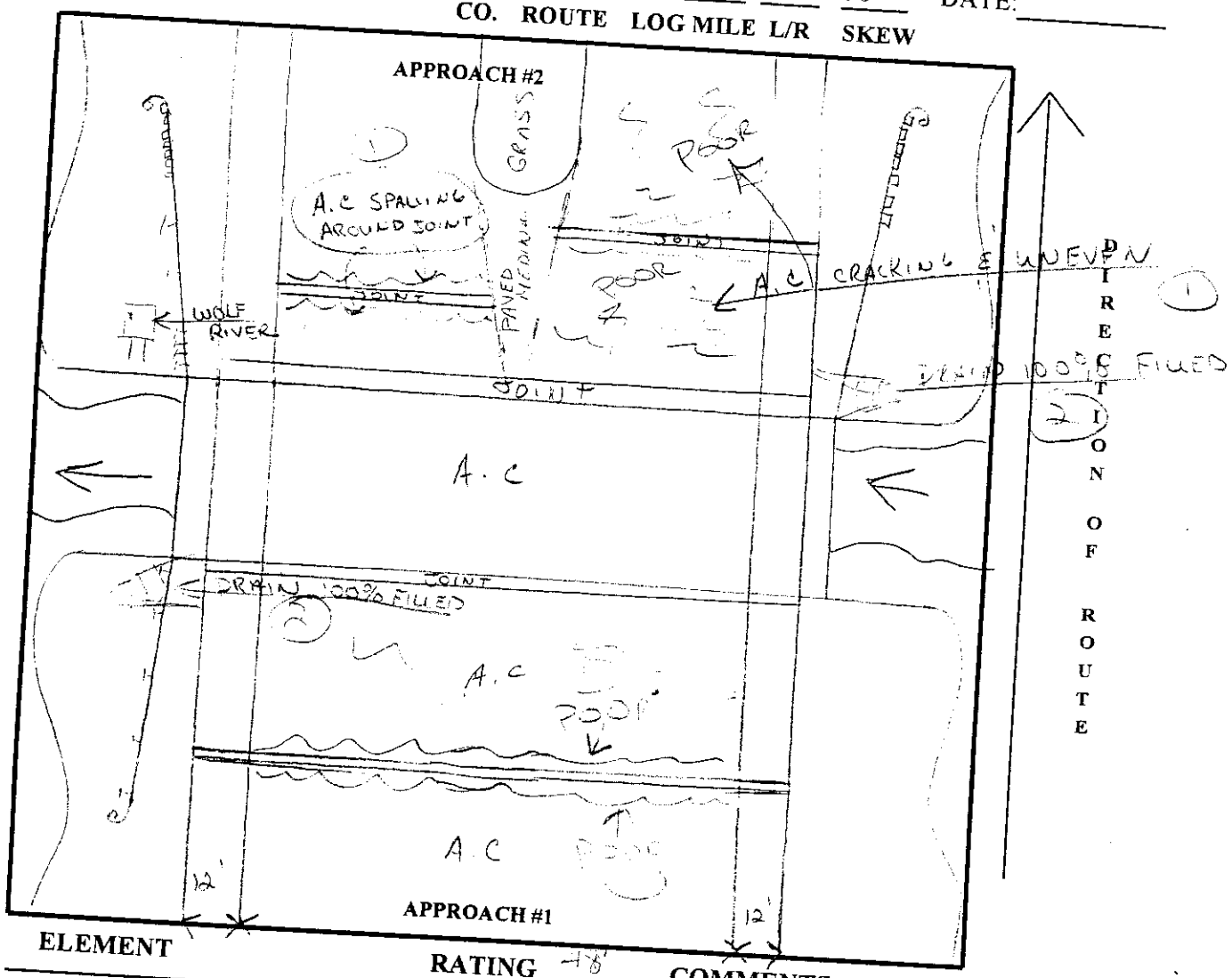
DIR. OF ROUTE →

F = FIXED
E = EXPANSION
S = SIMPLE
C = CONTINUOUS



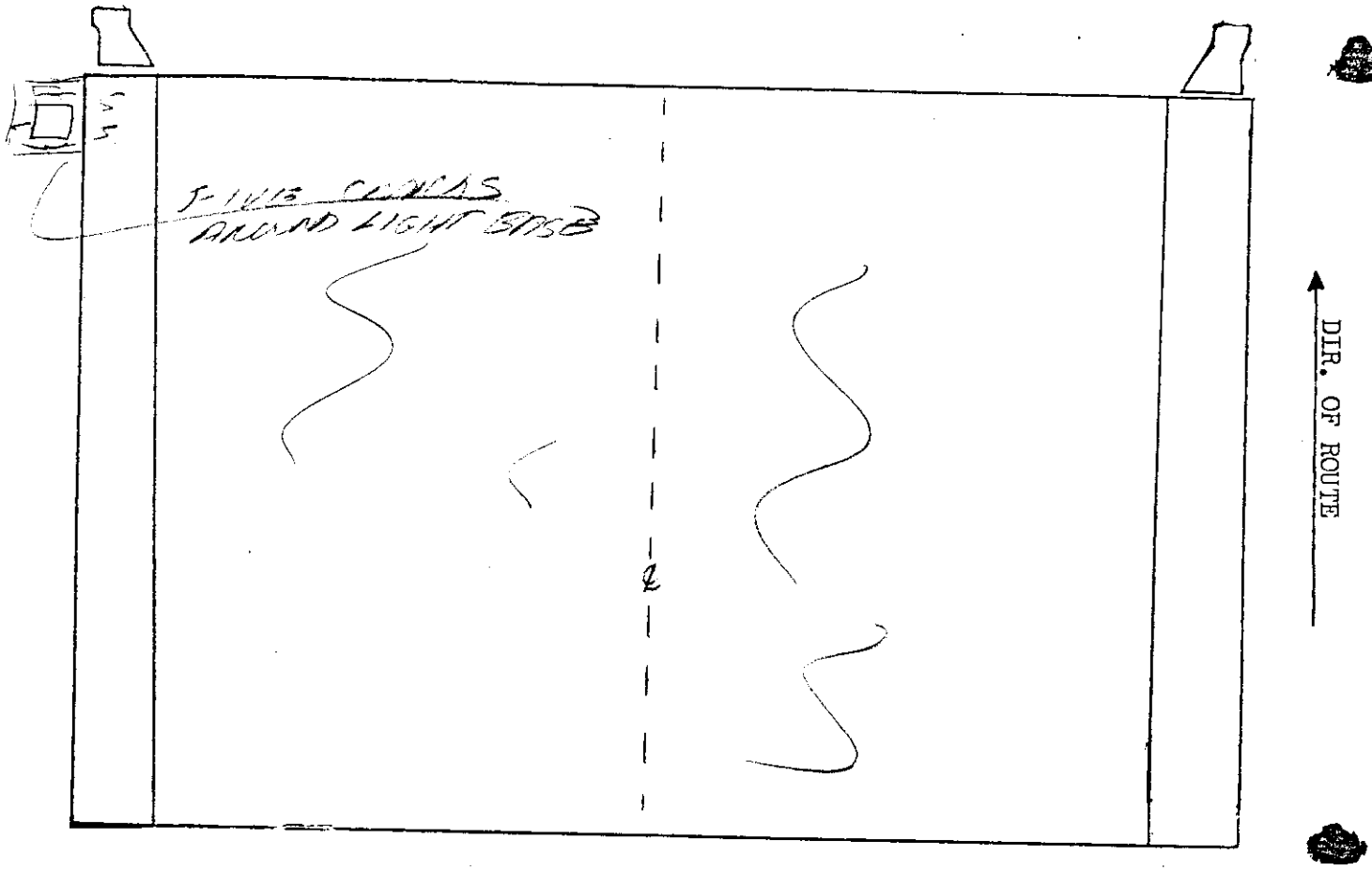
BRIDGE NO.: 79I00400060 79 I0040 0509 L 90 DATE: _____

CO. ROUTE LOG MILE L/R SKEW



ELEMENT	RATING	COMMENTS
ALIGNMENT	(G) F P C	
APPROACH PAVEMENT	G F (P) C	SPALLING AROUND JOINT
APPROACH SLAB	G F P C	N/A
APPROACH GUARDRAIL	(G) F P C	
EMBANKMENT	(G) F P C	
DRAINS	G F (P) C	SEE 2
APPROACH JOINT	(G) F P C	
SIGNS	(G) F P C	

BR. NO. 79 [illegible] 5.09 SPAN NO. 2 [illegible]



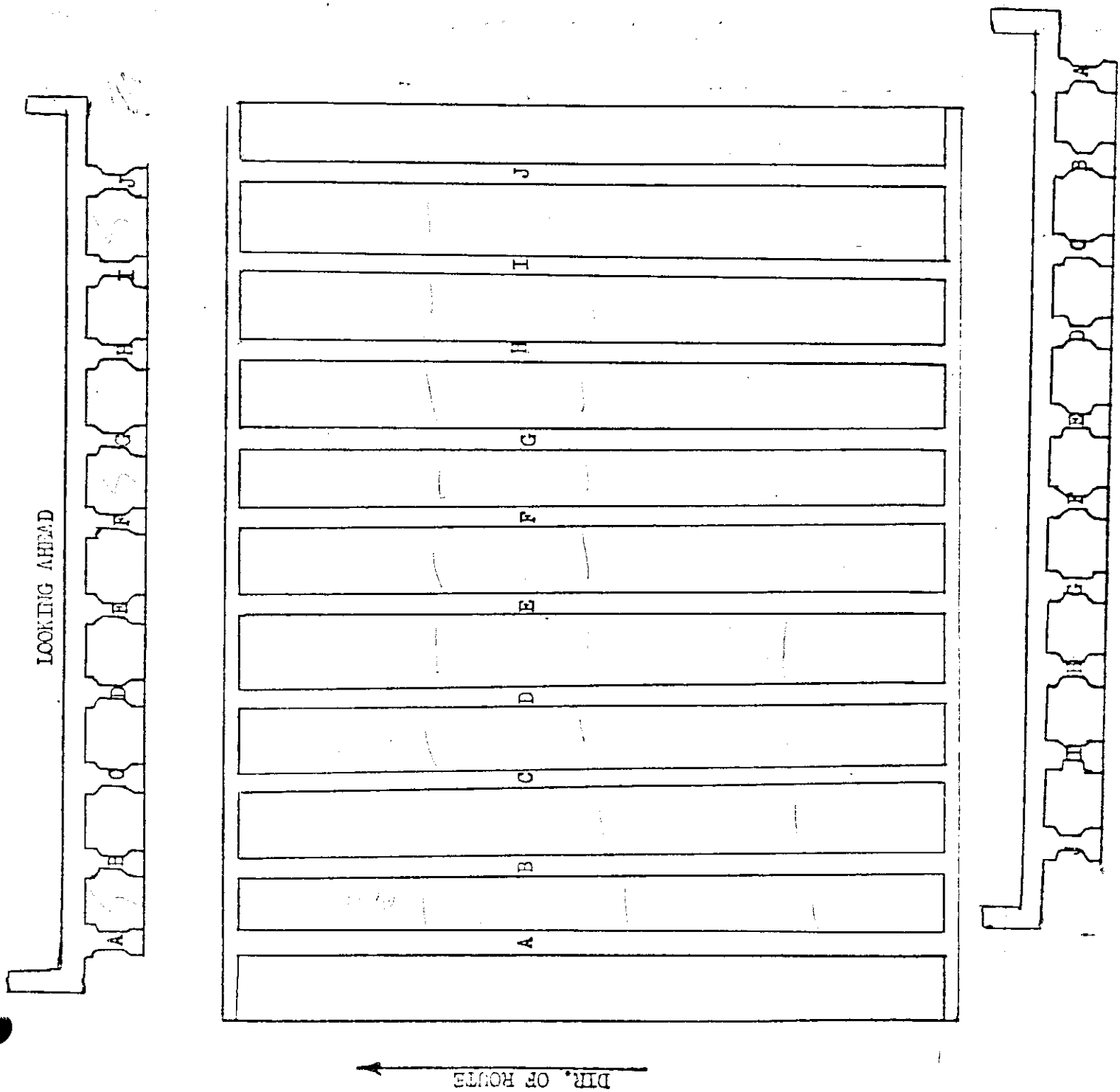
ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	1/4" CRACKS FINE CRACKS
PARAPET	G (F) P C	
RAILS & POST	G F P C	
DRAINS	G F P C	N/A
EXP. JOINTS	G F P C	N/A
LIGHT	(G) F P C	

BRIDGE NO. 79 I-40 509

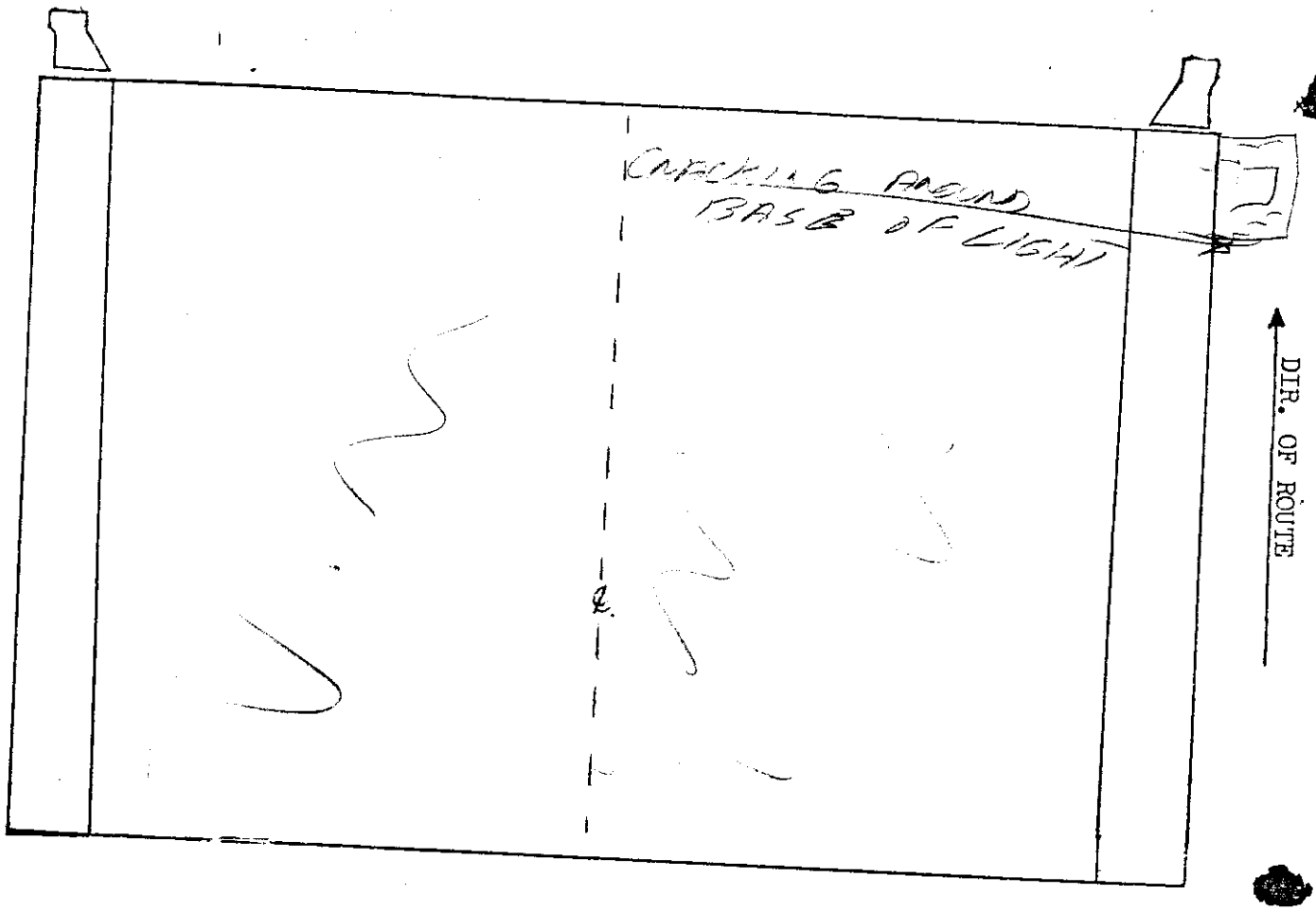
BENT NO. _____ SPAN NO. 1 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	PANELS
CONC. I. BEAMS	G F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
DIA.	(G) F P C	
BACKWALLS	(G) F P C	

BR. NO. 79 I-20 S.B. SK. ___ LT. SPAN NO. 1



BR. NO. 79 Rte 5.01 SPAN NO. 2



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	1/4" CRACKS
PARAPET	G (F) P C	FINE CRACKS
RAILS & POST	G F P C	
DRAINS	G F (P) C	LT SIDE
EXP. JOINTS	G F P C	N/A
LIGHT	(G) F P C	

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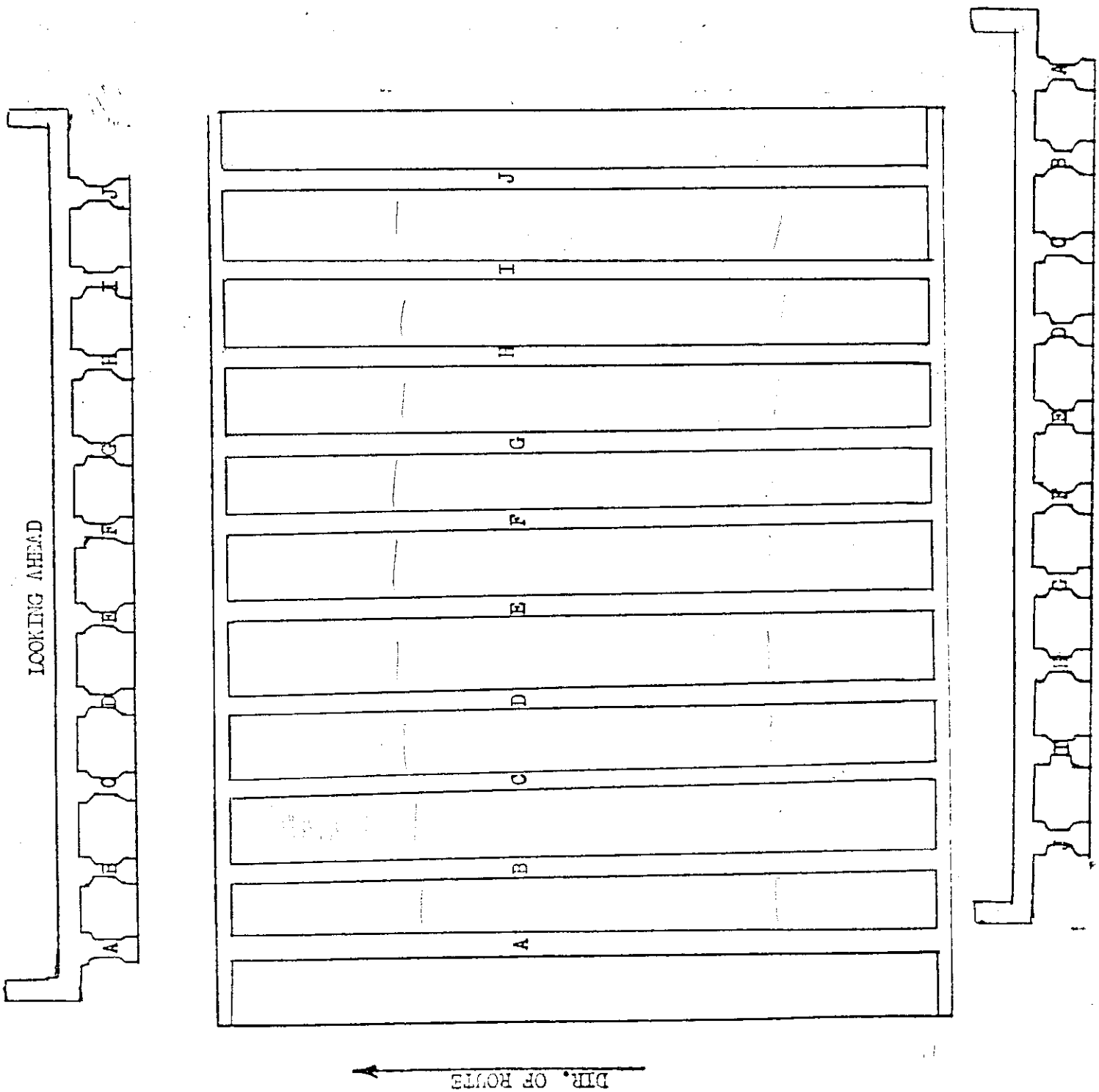
BRIDGE NO. 79 I-40 5.09 D12

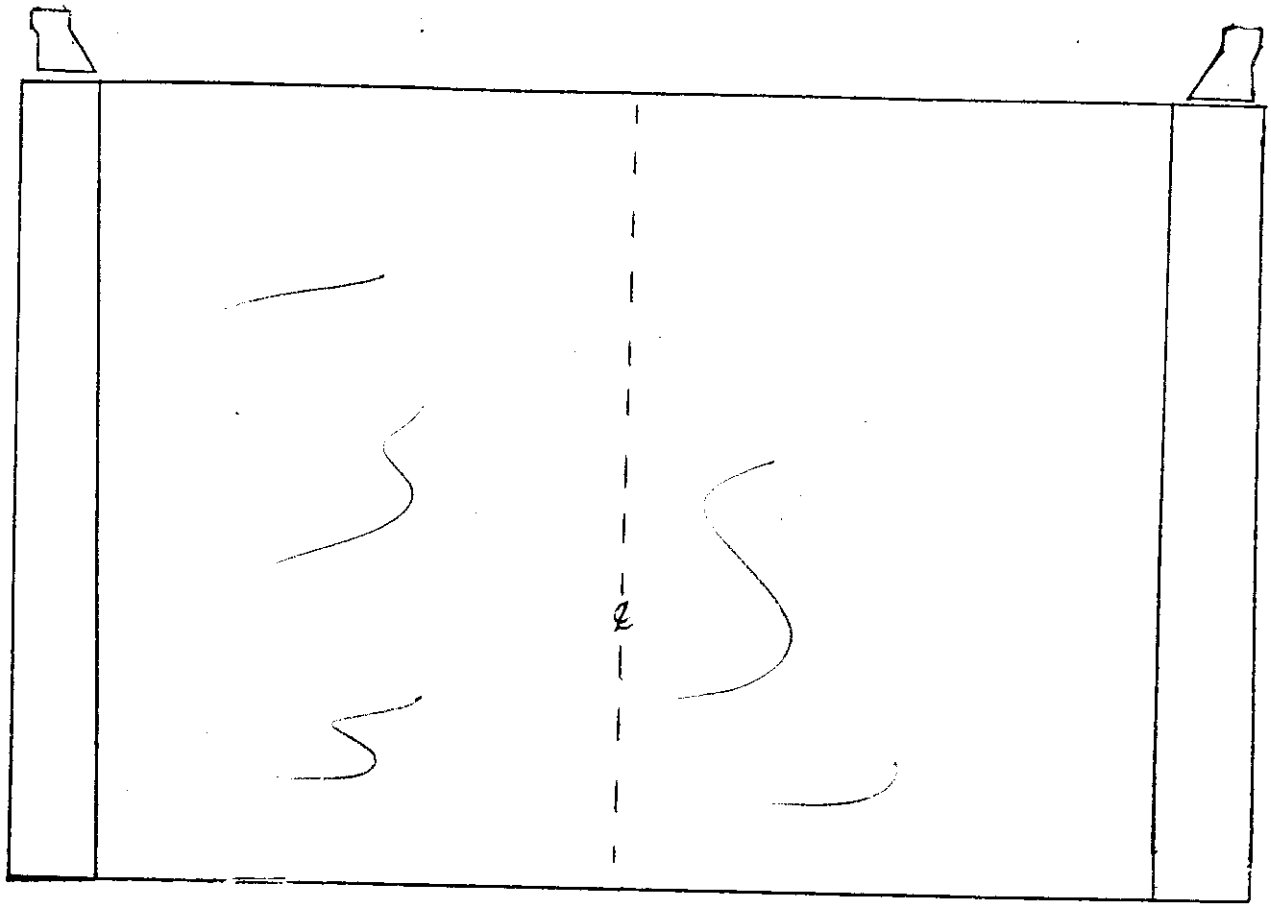
BENT NO. _____ SPAN NO. 2 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	PANELS
CONC. I. BEAMS	G F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
DIA.	(G) F P C	
BACKWALLS	G F P C	

BR. NO. 79 [illegible] SK. ___ LT. SPAN NO. 2



BR. NO. 79 Tuo 509 SPAN NO. 3



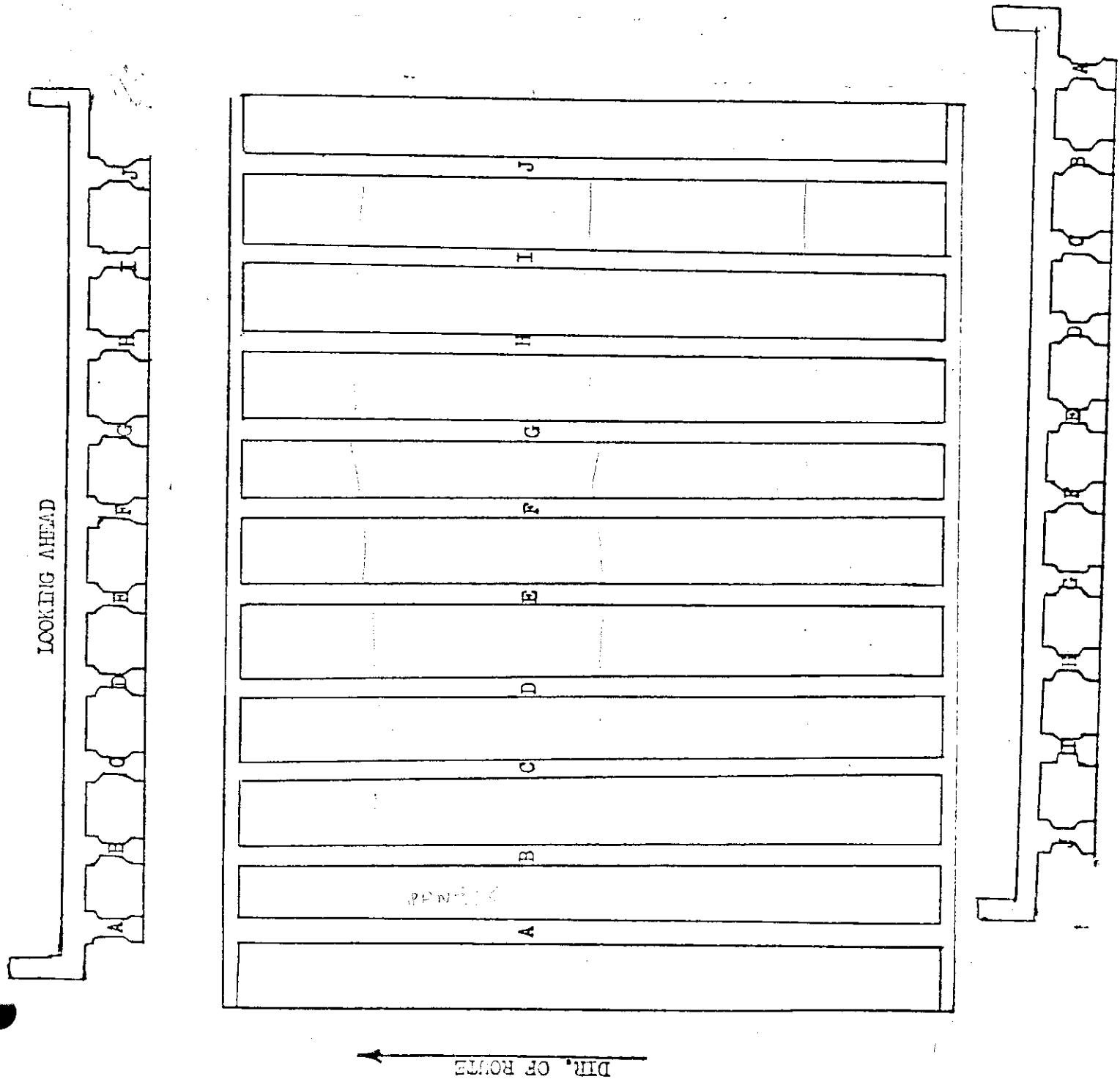
ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	1/4 CRACKS
PARAPET	G (F) P C	FINE CRACKS
RAILS & POST	G F P C	
DRAINS	G F (P) C	LT SIDE
EXP. JOINTS	G F P C	
	G F P C	

BRIDGE NO. 79 [illegible]

BENT NO. ______ SPAN NO. 3 ABT. NO. ______ PIER NO. ______

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	PANELS
CONC. I. BEAMS	G F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
DIA.	G F P C	
BACKWALLS	G F P C	

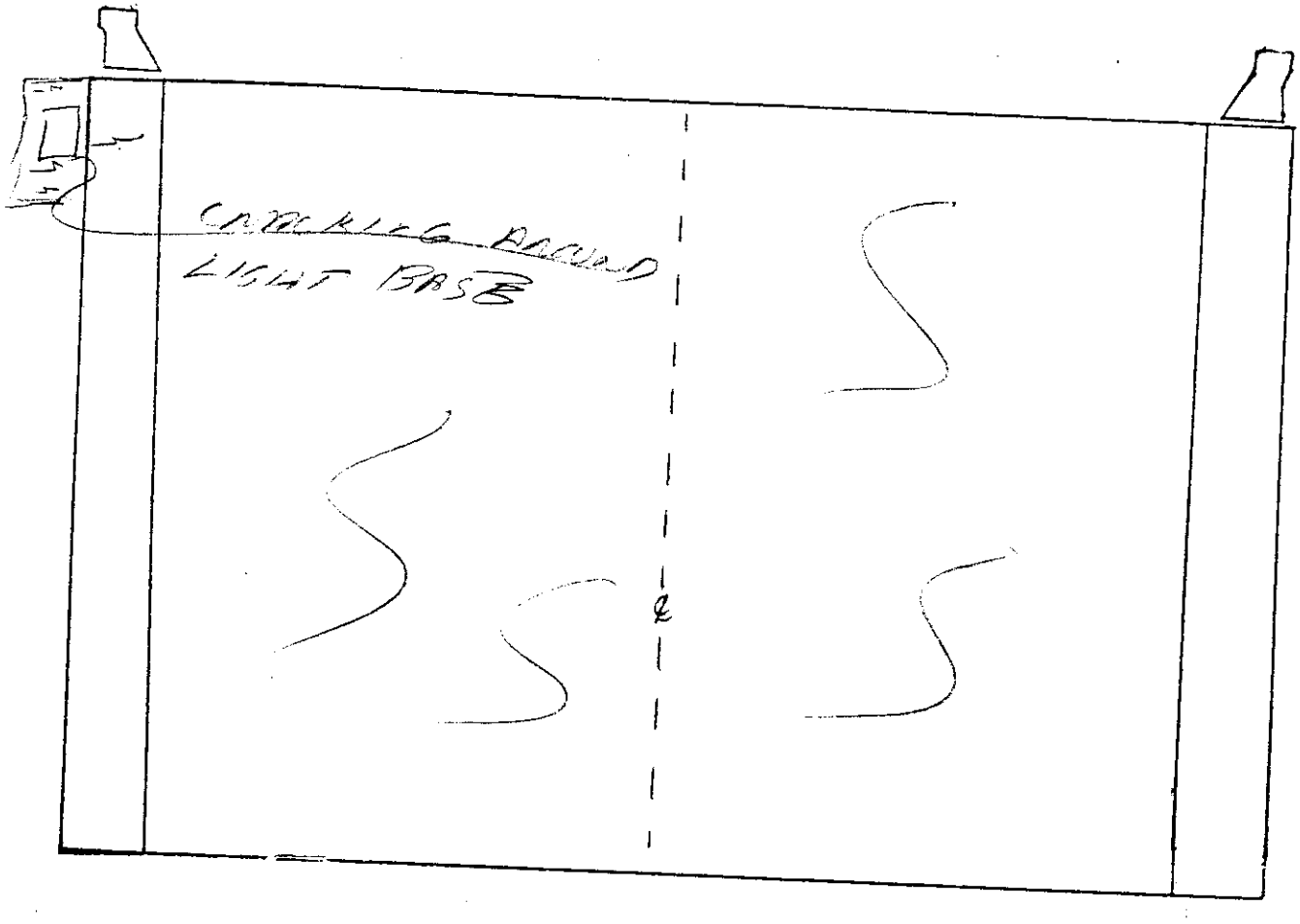
BR. NO. 79 T-40 5.09 SK. ___ LT. SPAN NO. 3



BR. NO. 79 L-20 S-9

4 AUG 02 2017

SPAN NO. 4



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	1/4 CRACKS
PARAPET	G (F) P C	FINE CRACKS
RAILS & POST	G F P C	
DRAINS	G F (P) C	LT SIDE
EXP. JOINTS	G F P C	
LIGHT	(G) F P C	

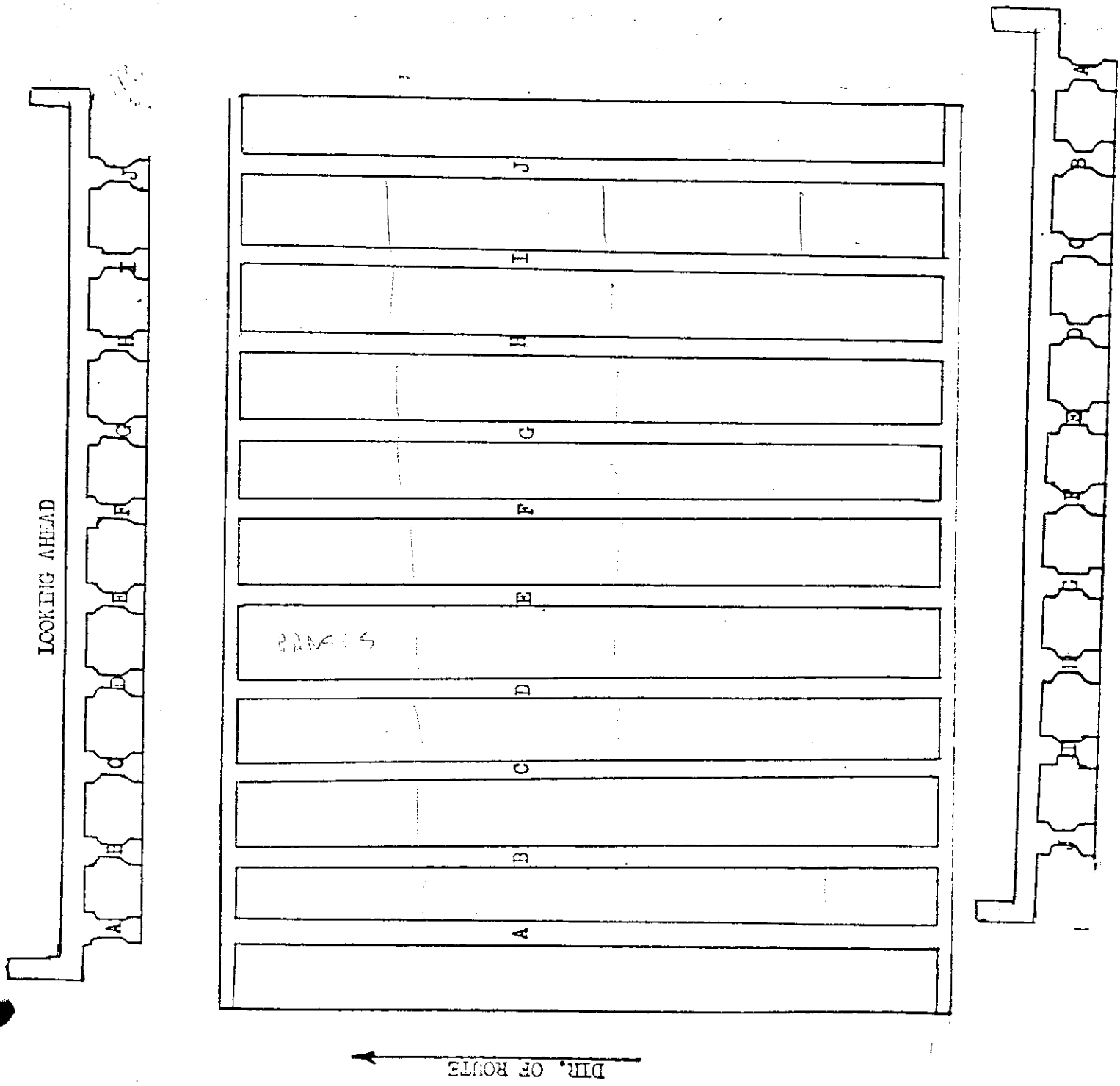
BRIDGE NO. 79

BENT NO. _____ SPAN NO. 4 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	
CONC. I. BEAMS	G F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
DIA.	(G) F P C	
BACKWALLS	G F P C	

BR. NO. 79 [illegible] SK. __ LT. SPAN NO. 4

5



BR. NO. 79 [illegible] SPAN NO. 5

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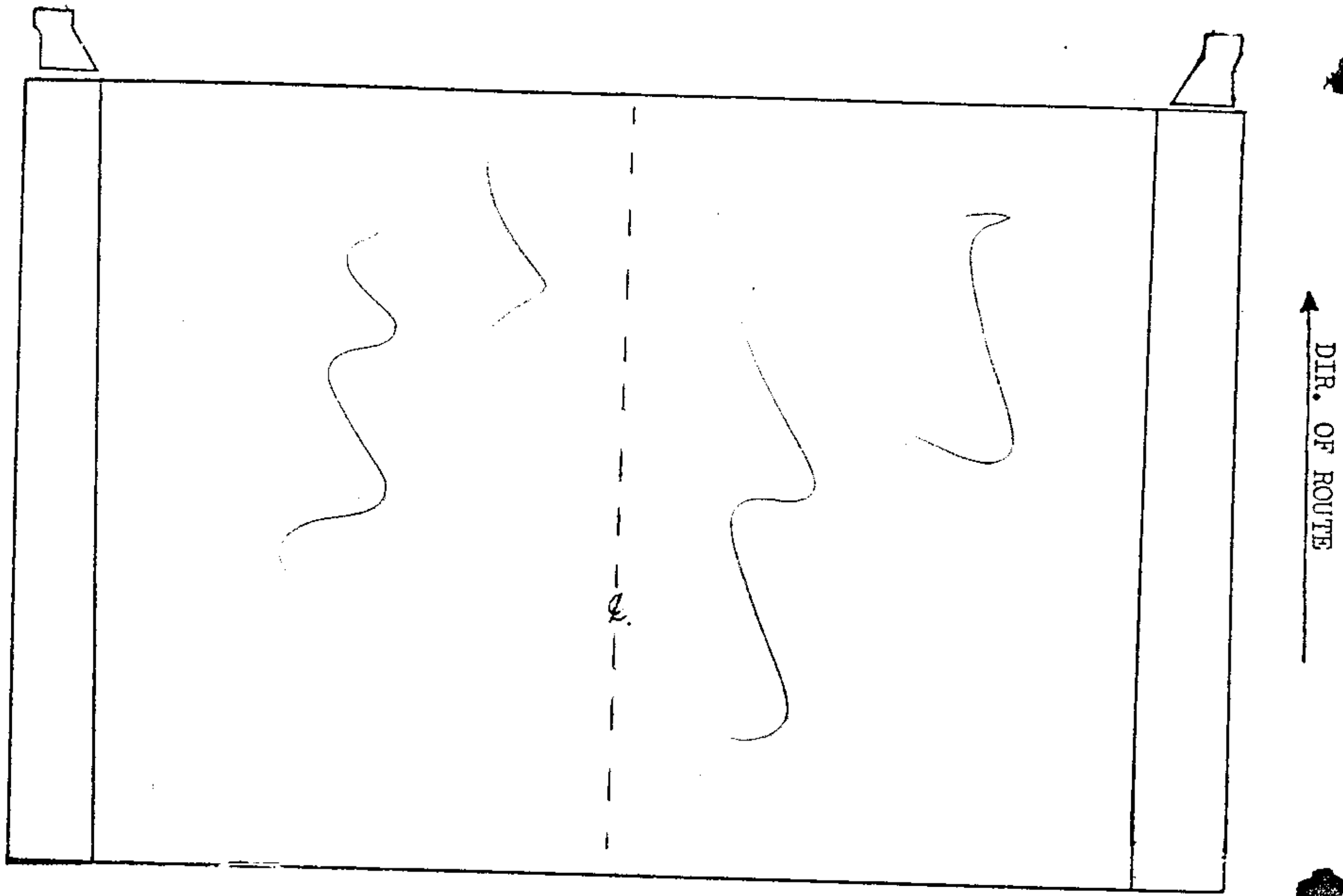


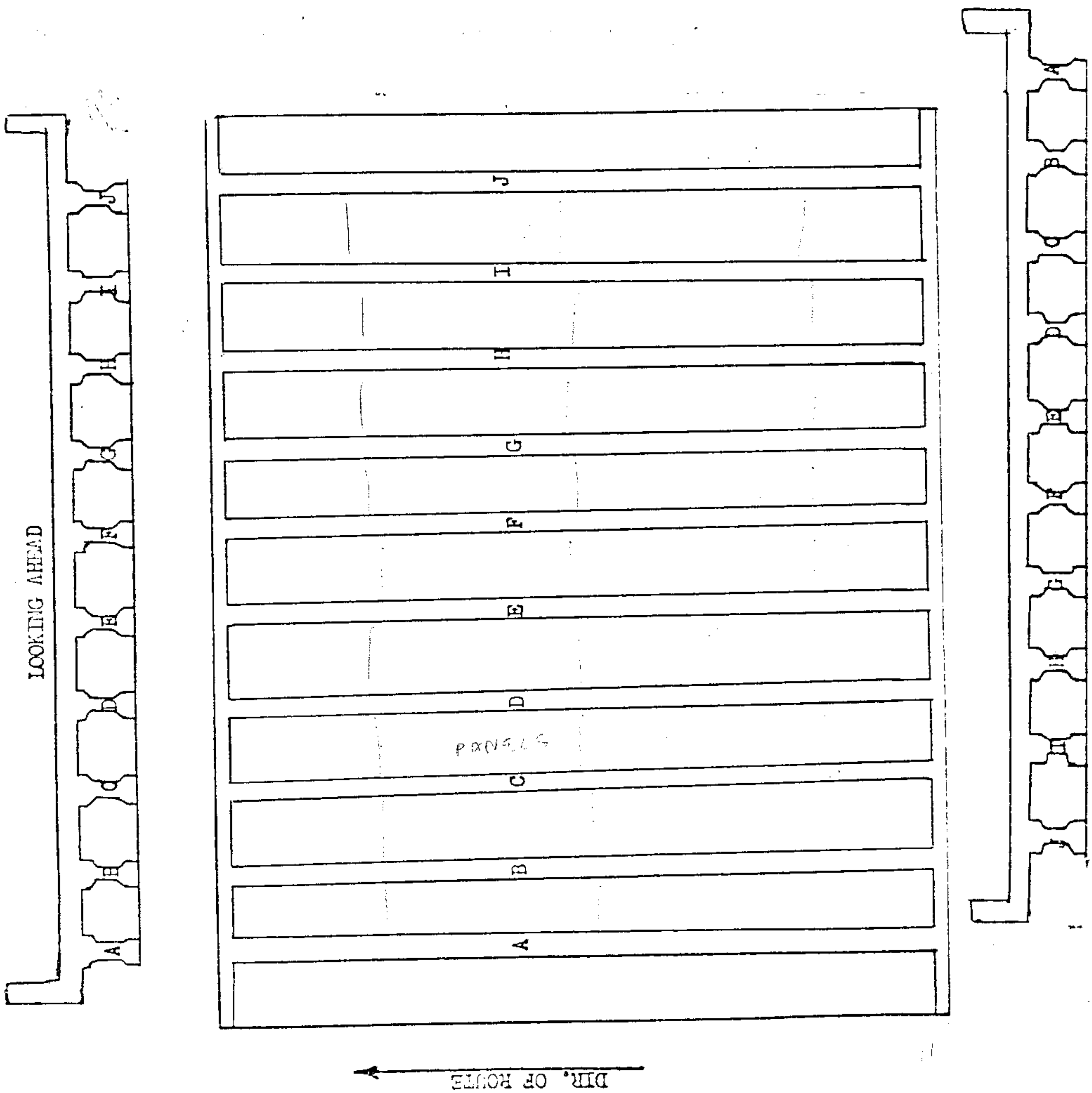
ELEMENT	RATING	COMMENT
TOP DECK	G F P C (F circled)	1/4" CRACKS
PARAPET	G F P C (F circled)	FINE CRACKS
RAILS & POST	G F P C	
DRAINS	G F P C (P circled)	LT SIDE
EXP. JOINTS	G F P C	
	G F P C	

BRIDGE NO. 29 I-40 509

BENT NO. _____ SPAN NO. 5 ABT. NO. _____ PIER NO. _____

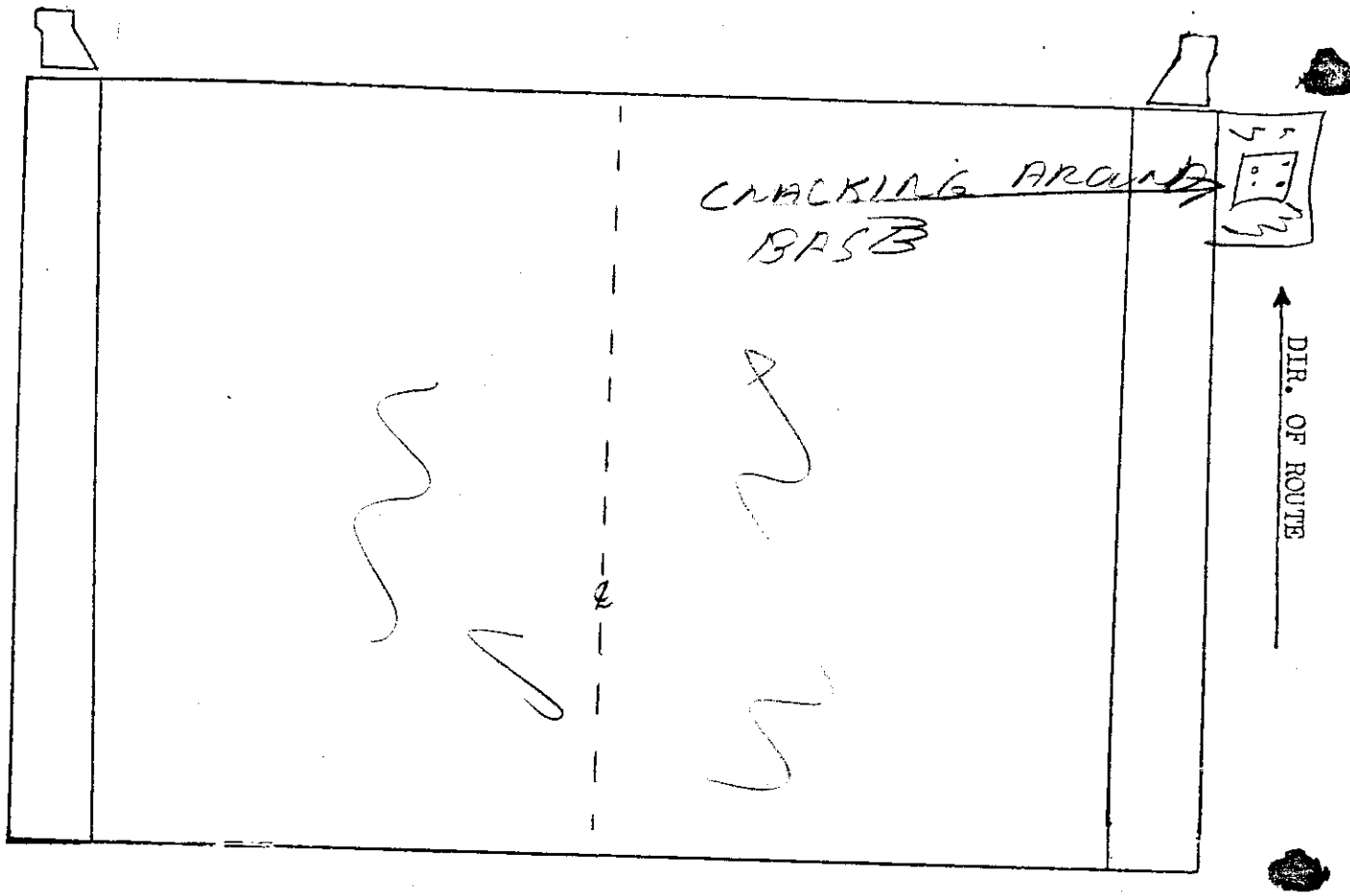
ELEMENT	RATING	COMMENTS
BOTTOM DECK	G F P C	
CONC. I. BEAMS	G F P C	
A	G F P C	
B	G F P C	
C	G F P C	
D	G F P C	
E	G F P C	
F	G F P C	
G	G F P C	
H	G F P C	
I	G F P C	
J	G F P C	
DIA.	G F P C	
BACKWALLS	G F P C	

BR. NO. 79 I-40 5.09 SK. __ LT. SPAN NO. 5



BR. NO. 79 I-40 EB

SPAN NO. 6



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	1/8" CRACKS
PARAPET	G (F) P C	FINE CRACKS
RAILS & POST	G F P C	
DRAINS	G F (P) C	U SIDE
EXP. JOINTS	G F P C	
LIGHT	(G) F P C	

AUG 0 6 2007

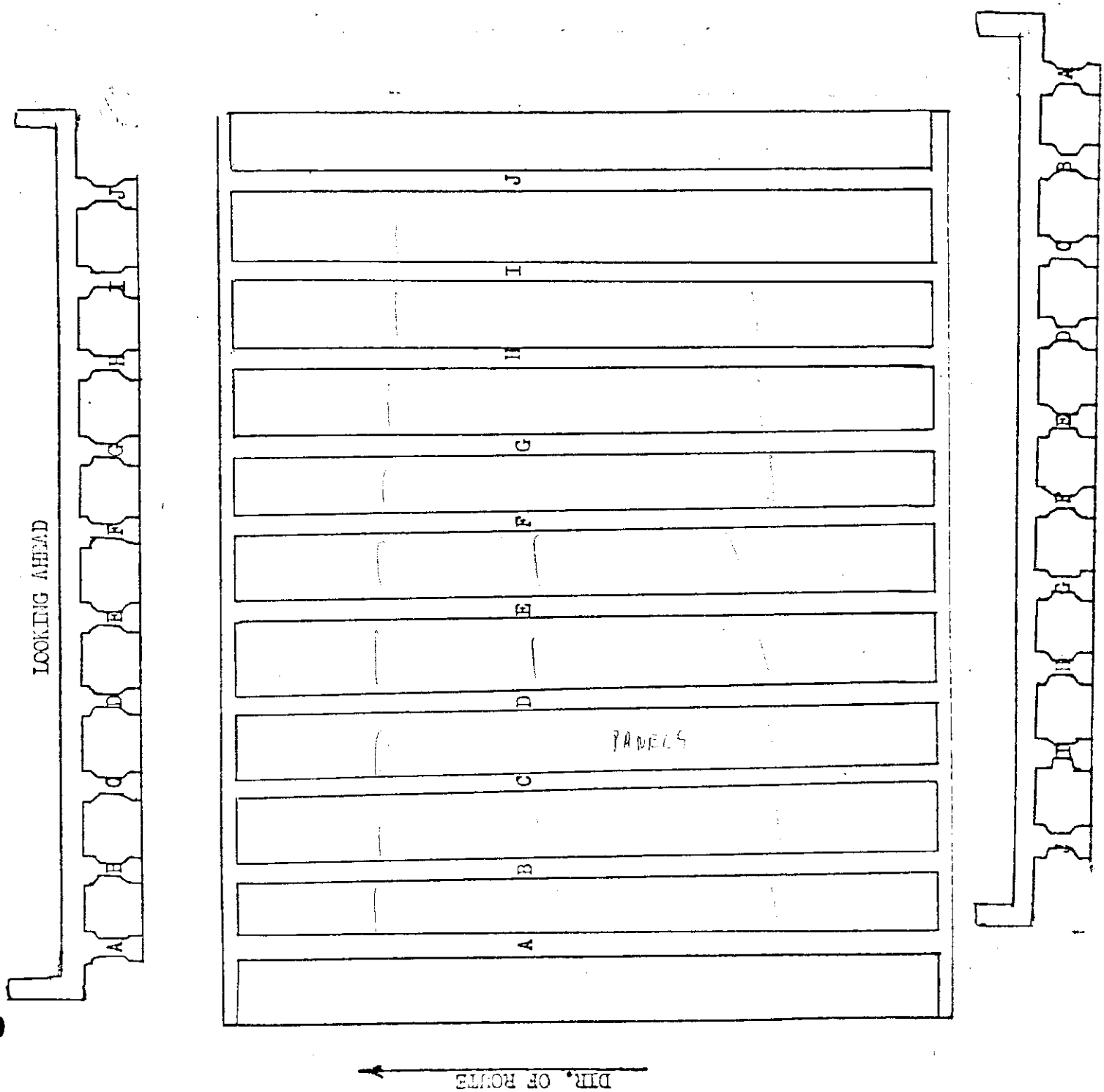
BRIDGE NO. 79 I-40 5-9

BENT NO. _____ SPAN NO. 6 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	G F P C	PATCH
CONC. I. BEAMS	G F P C	
A	G F P C	
B	G F P C	
C	G F P C	
D	G F P C	
E	G F P C	
F	G F P C	
G	G F P C	
H	G F P C	
I	G F P C	
J	G F P C	
DIA.	G F P C	
BACKWALLS	G F P C	N/A

BR. NO. 79 T-L-S SK. ___ LT. SPAN NO. 6

ET



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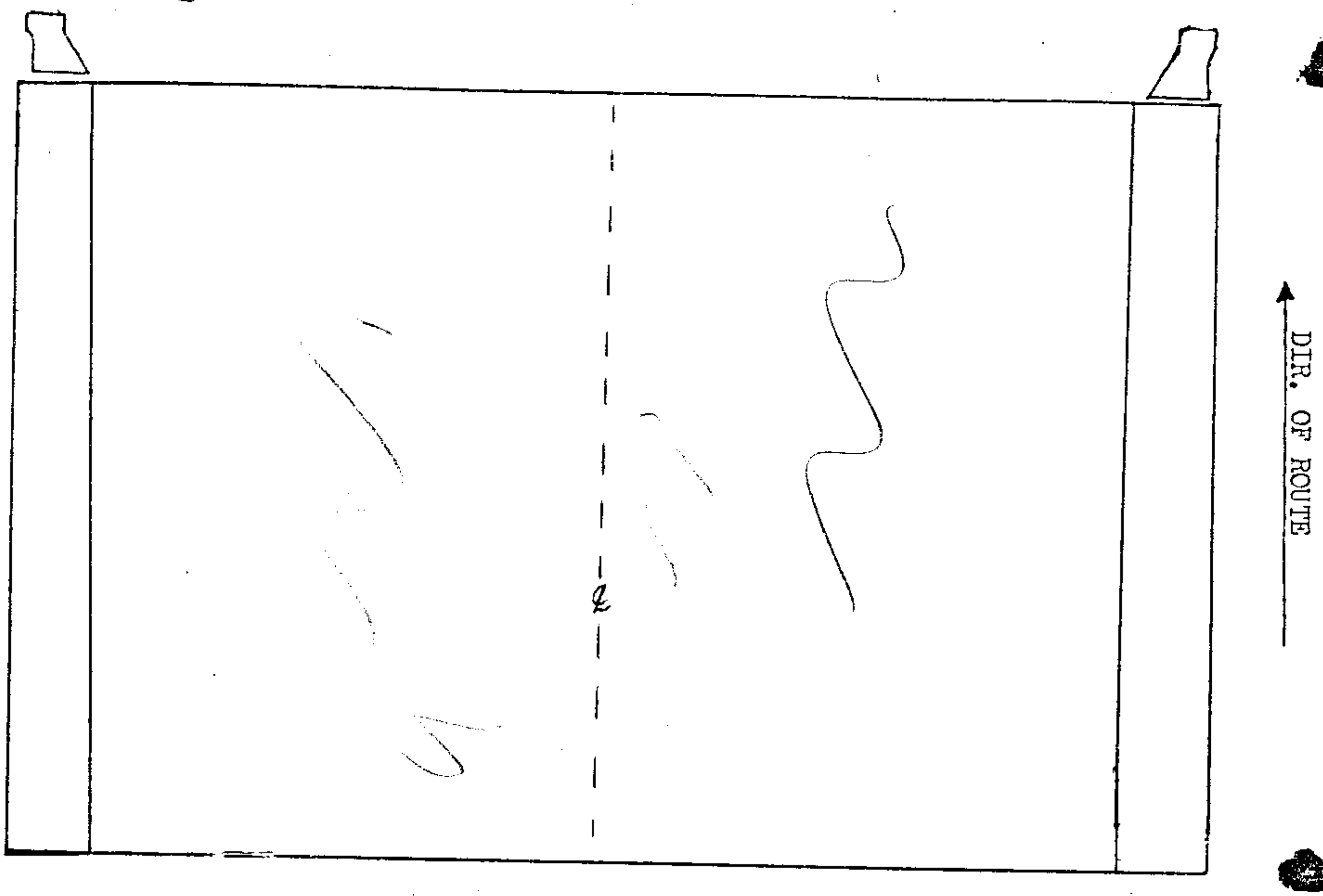
BR. NO. 79 - I-40 S 09

SPAN NO. 7



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	[illegible]
PARAPET	G (F) P C	END CRACKS
RAILS & POST	G F P C	
DRAINS	G F (P) C	LT SIDE
EXP. JOINTS	G F P C	
	G F P C	

BRIDGE NO. 79

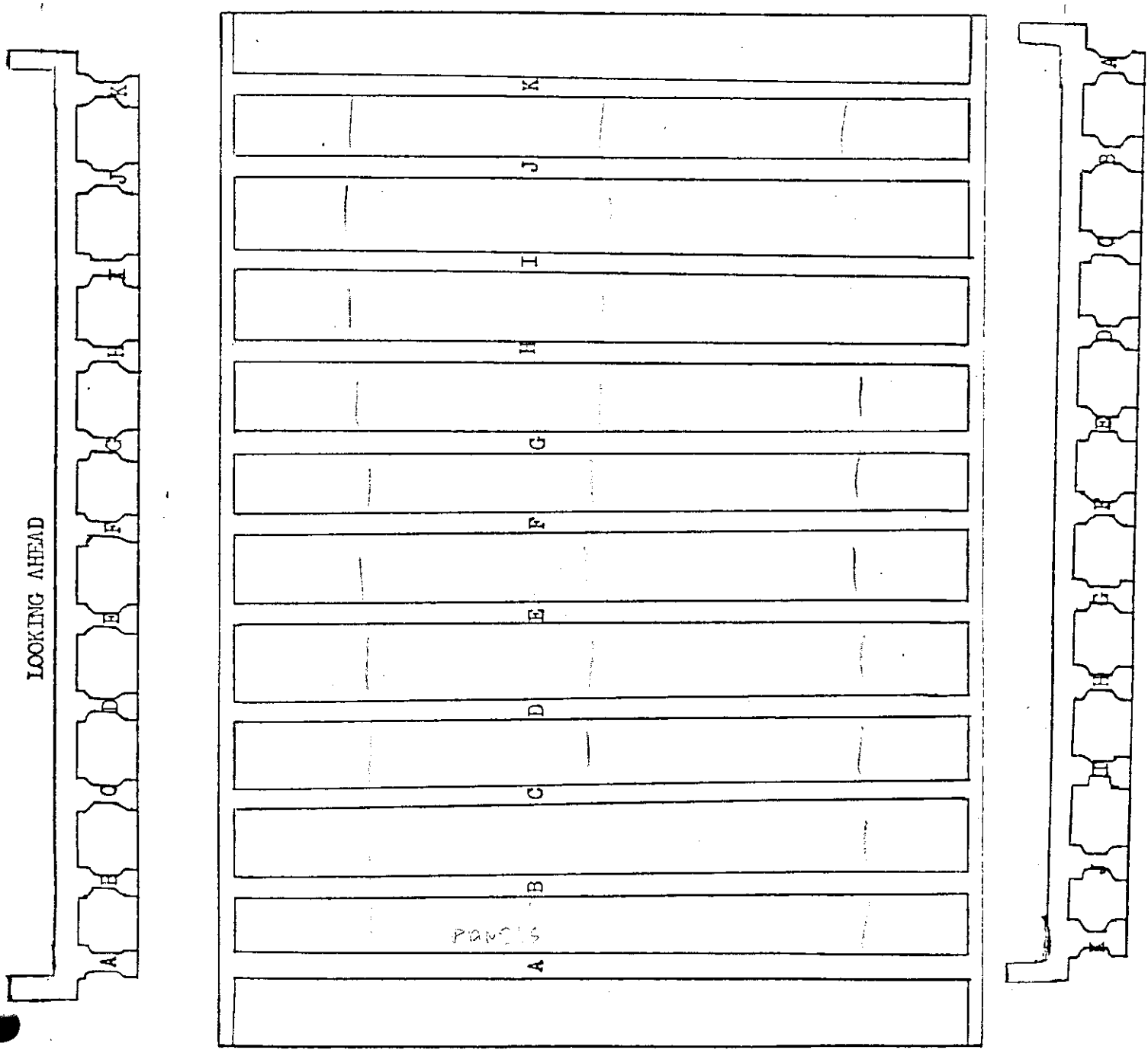
BENT NO. ______ SPAN NO. 2 ABT. NO. ______ PIER NO. ______

ELEMENT	RATING	COMMENTS
BOTTOM DECK	G F P C	
CONC. I. BEAMS	G F P C	
A	G F P C	
B	G F P C	
C	G F P C	
D	G F P C	
E	G F P C	
F	G F P C	
G	G F P C	
H	G F P C	
I	G F P C	
J	G F P C	
K	G F P C	
DIA.	G F P C	
BACKWALLS	G F P C	N/A

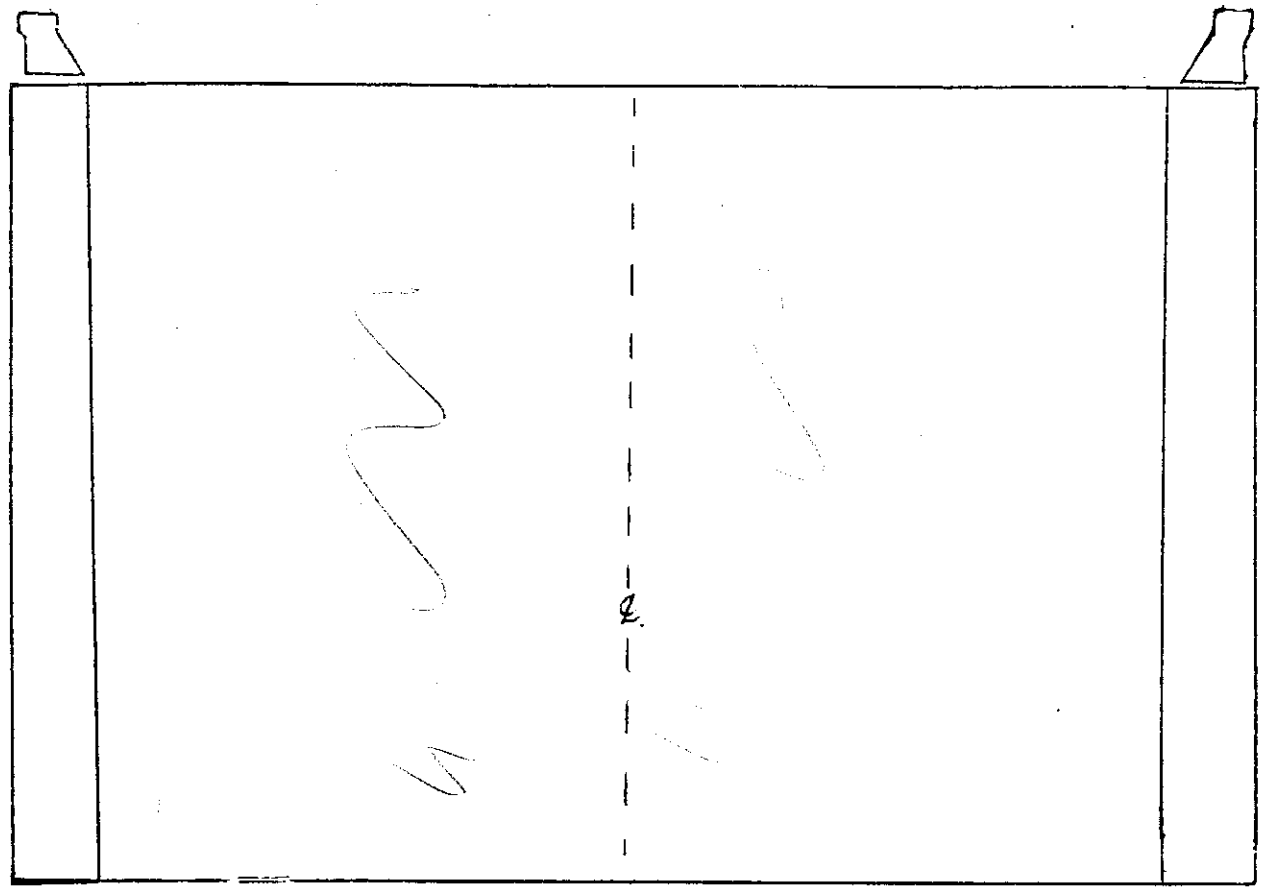
AUG 0 6 2009

BR. NO. 79 I-40 509 SK. __ LT. SPAN NO. 7

ET



BR. NO. 29 [illegible] SPAN NO. 8



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	1/4 CRACKS
PARAPET	G (F) P C	FAIR CONDITION
RAILS & POST	G F P C	
DRAINS	G F (P) C	AT SIDE
EXP. JOINTS	G F P C	
	G F P C	

AUG 0 2 2001

BRIDGE NO. 79 I-26 EB

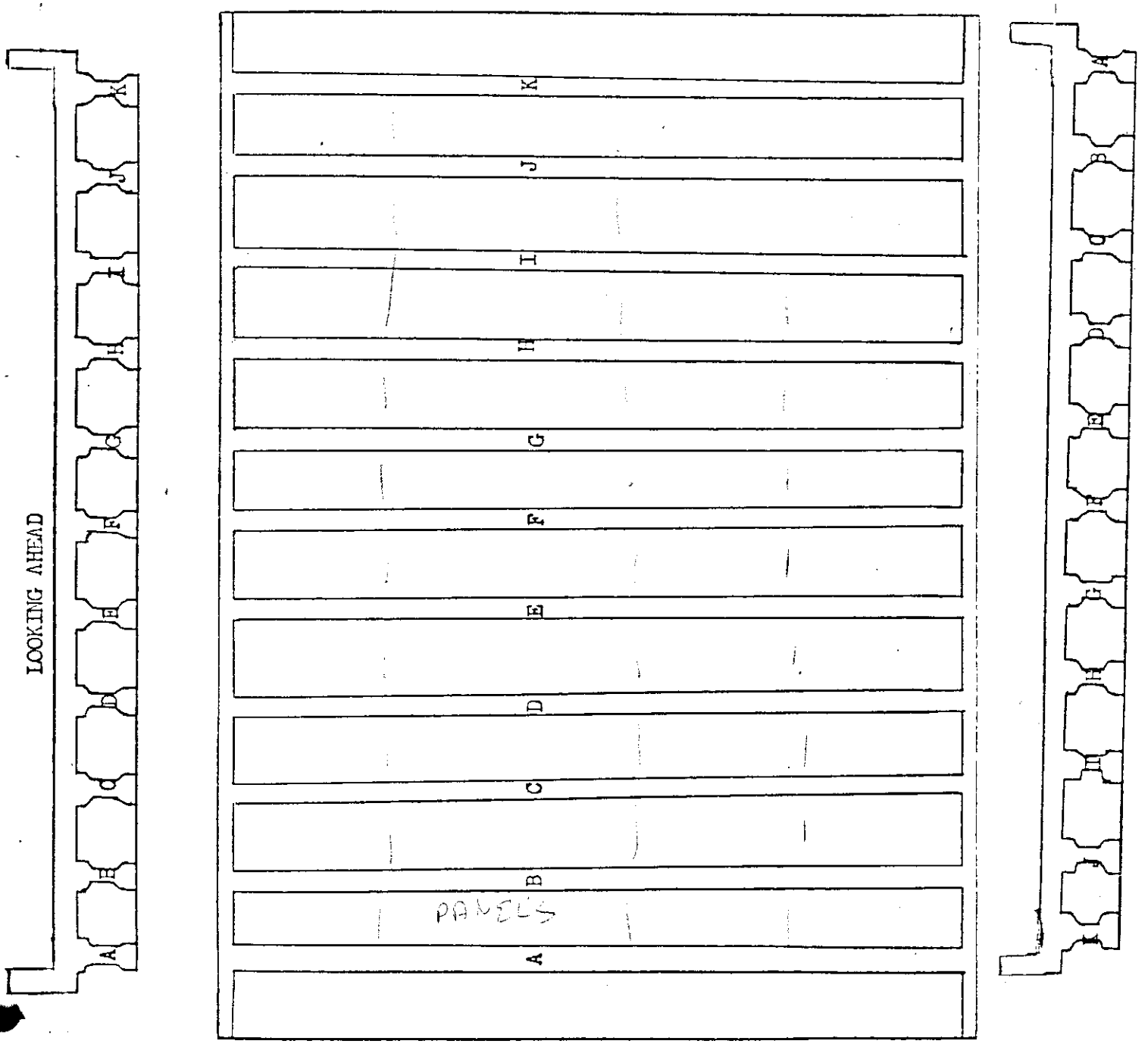
DB

BENT NO. _____ SPAN NO. 8 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	PANELS
CONC. I. BEAMS	G F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
K	(G) F P C	
DIA.	(G) F P C	
BACKWALLS	G F P C	NP

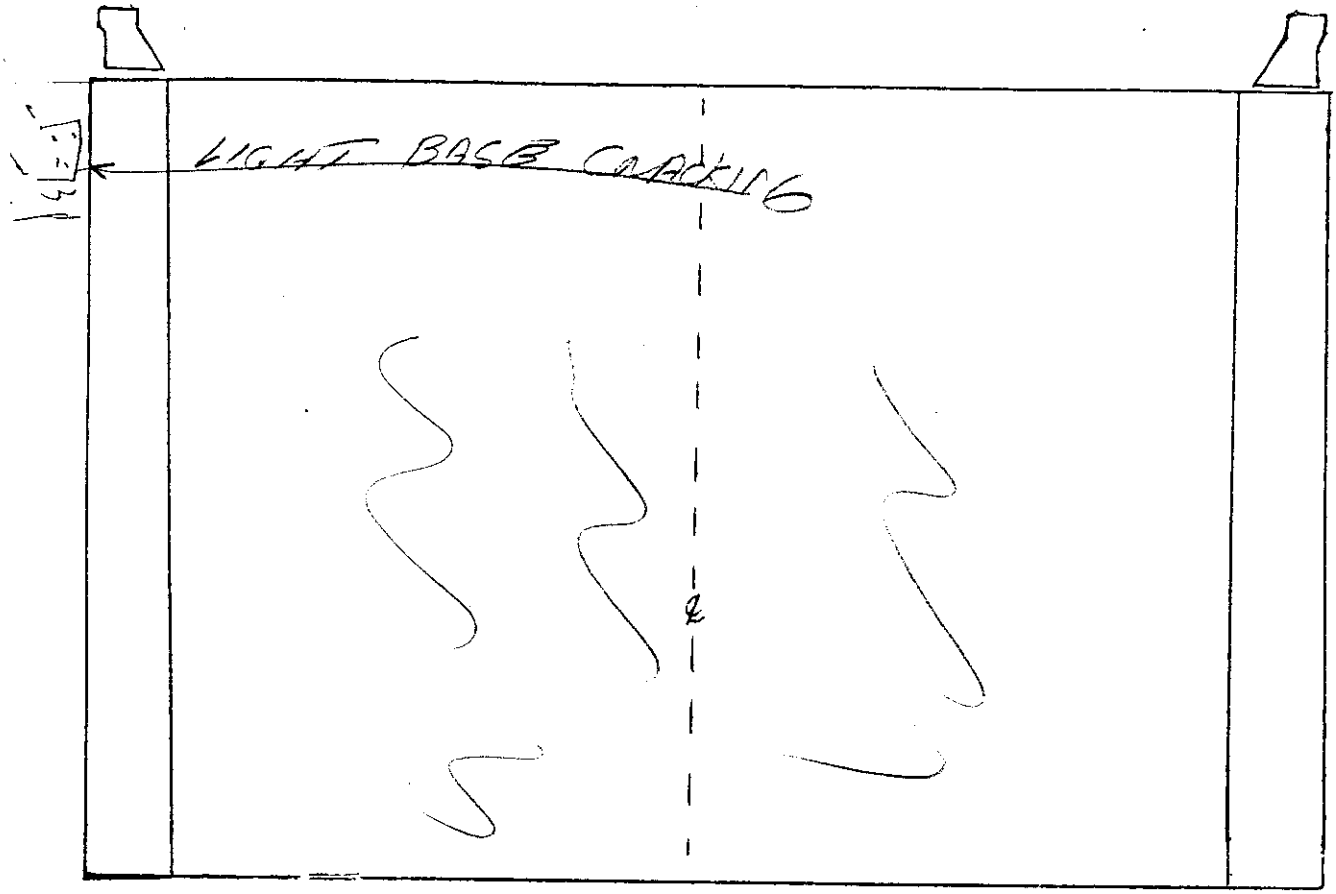
AUG 0 [illegible] 2005

BR. NO. 29 [illegible] SK. ___ LT. SPAN NO. 8



AUG 02 2010

BR. NO. 29 [illegible] 5.09 SPAN NO. 9



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	1/4" CRACKS
PARAPET	G (F) P C	FINE CRACKS
RAILS & POST	G F P C	
DRAINS	G F (P) C	LT SIDE
EXP. JOINTS	G F P C	
LIGHT	(G) F P C	

ET

BRIDGE NO. 79 T40 5.09 DB

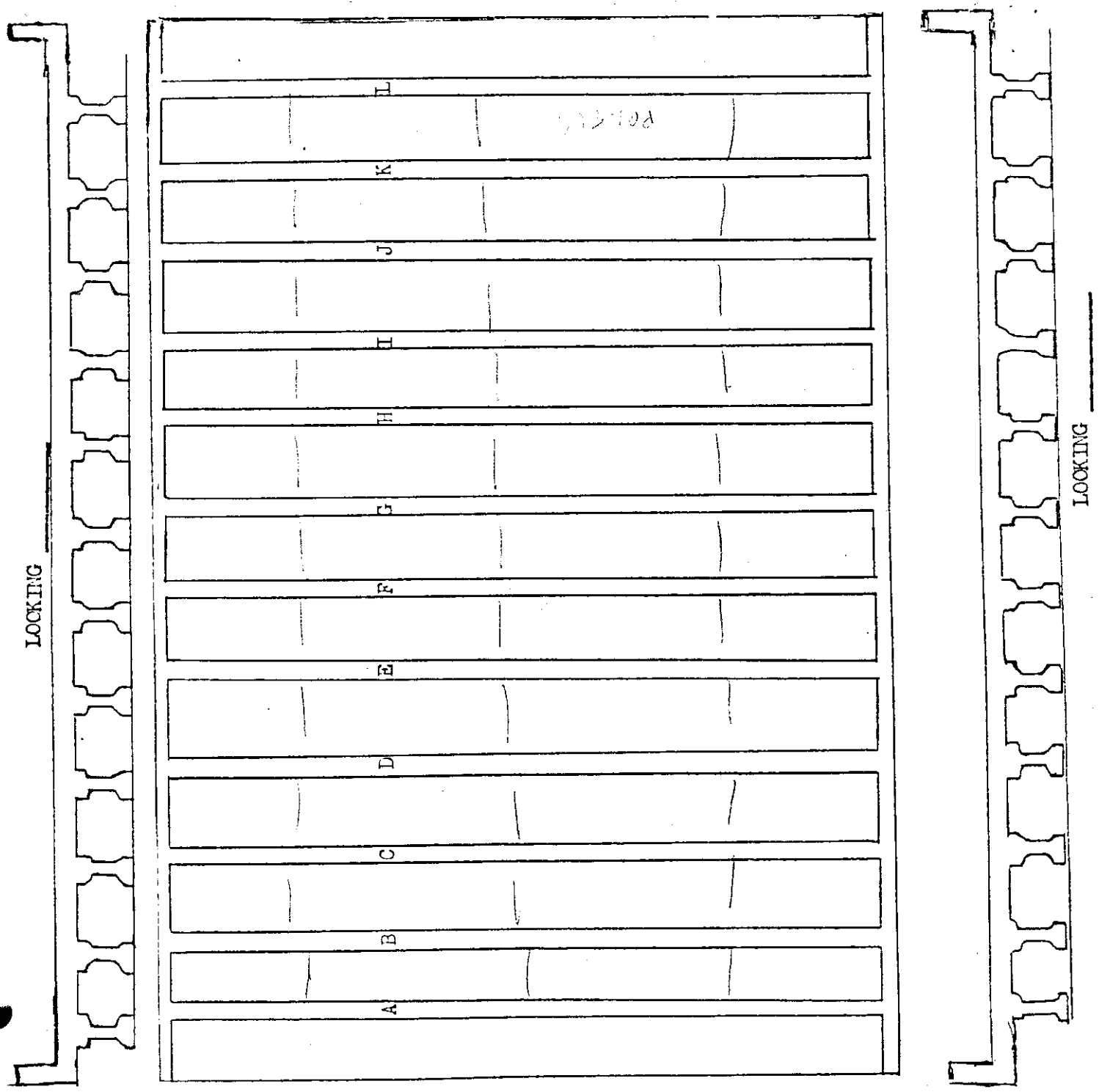
BENT NO. _____ SPAN NO. 9 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	PANELS
CONC. I. BEAMS	G F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
K	(G) F P C	
L	(G) F P C	
DIA.	(G) F P C	
BACKWALLS	G F P C	N/A

BR. NO. 79 SK SPAN NO. 9

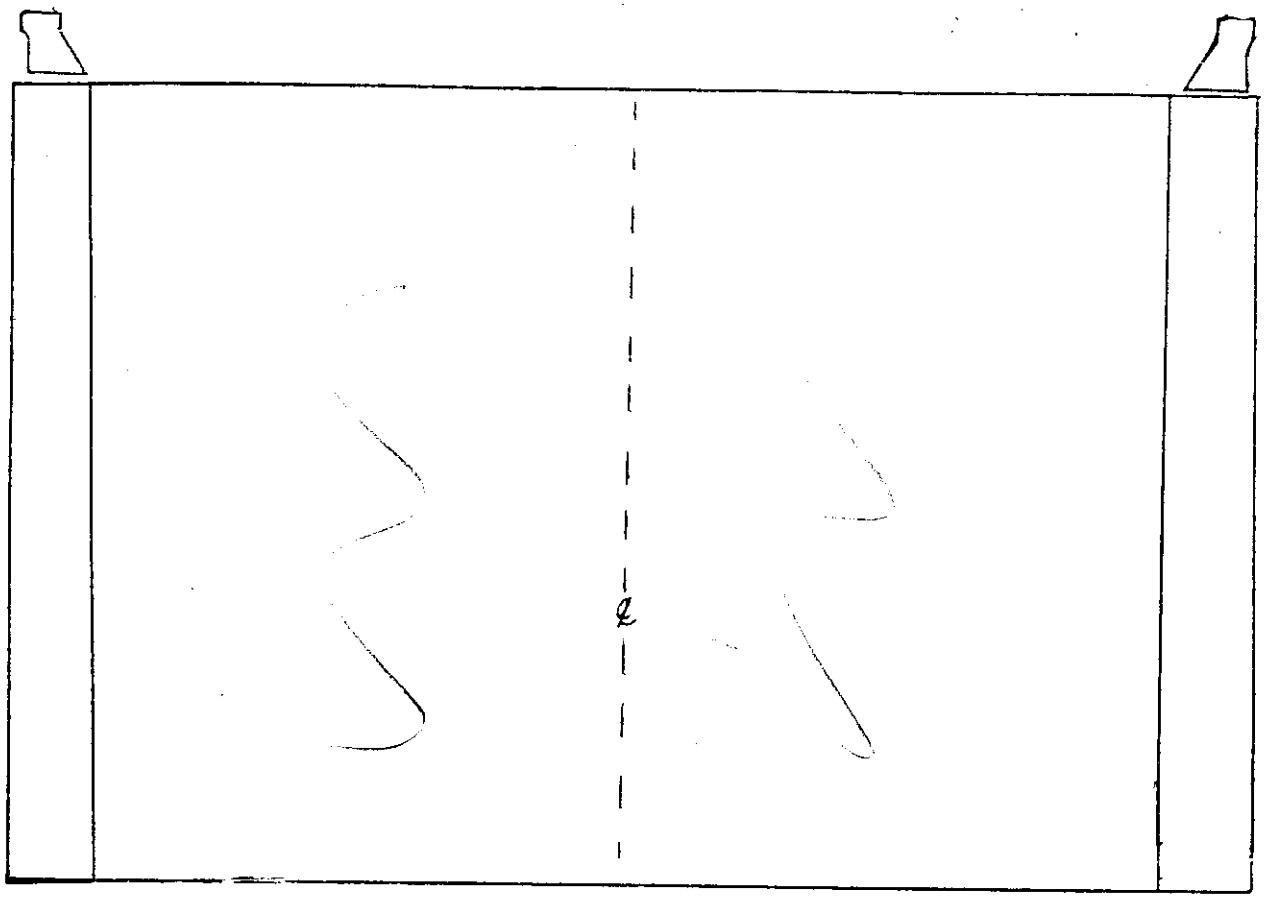
AUG

DIR. OF ROUTE



AUG

BR. NO. 79 T-40 5.09 SPAN NO. 10



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	¼" CRACKS
PARAPET	G (F) P C	FINE CRACKS
RAILS & POST	G F P C	
DRAINS	G F P C	N/A
EXP. JOINTS	G F P C	N/A
	G F P C	

AUG 16 200[illegible]

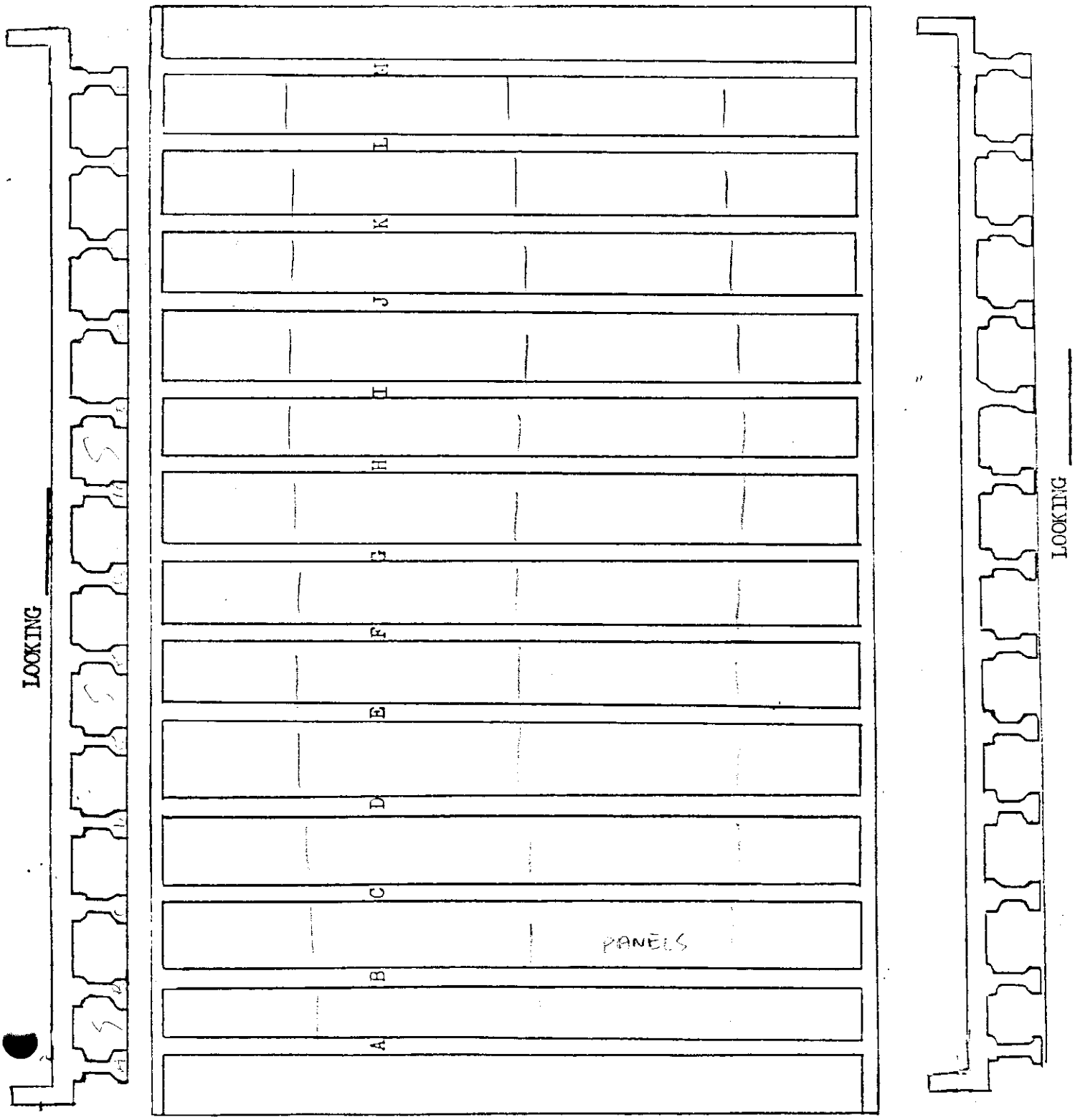
BRIDGE NO. 79 I-40 5.09

BENT NO. ______ SPAN NO. 10 ABT. NO. ______ PIER NO. ______

ELEMENT	RATING	COMMENTS
BOTTOM DECK	**G** F P C	PANELS
CONC. I. BEAMS	G F P C	
A	**G** F P C	
B	**G** F P C	
C	**G** F P C	
D	**G** F P C	
E	**G** F P C	
F	**G** F P C	
G	**G** F P C	
H	**G** F P C	
I	**G** F P C	
J	**G** F P C	
K	**G** F P C	
L	**G** F P C	
M	**G** F P C	
DIA.	**G** F P C	
BACKWALLS	G **F** P C	FINE CRACKS

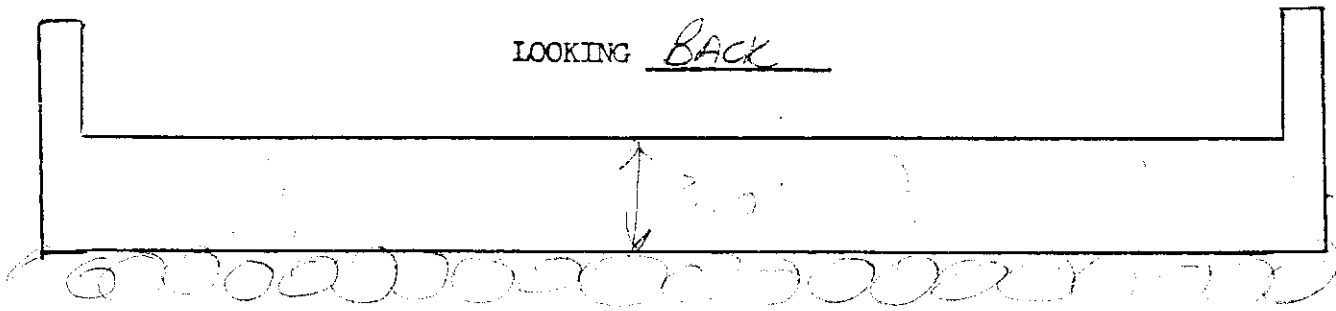
BR. NO. 79 I-43 [illegible] SK___ SPAN NO. 10

DIR. OF ROUTE



BRIDGE NO 79 T-40 5.0' L

ABUT. NO. 1

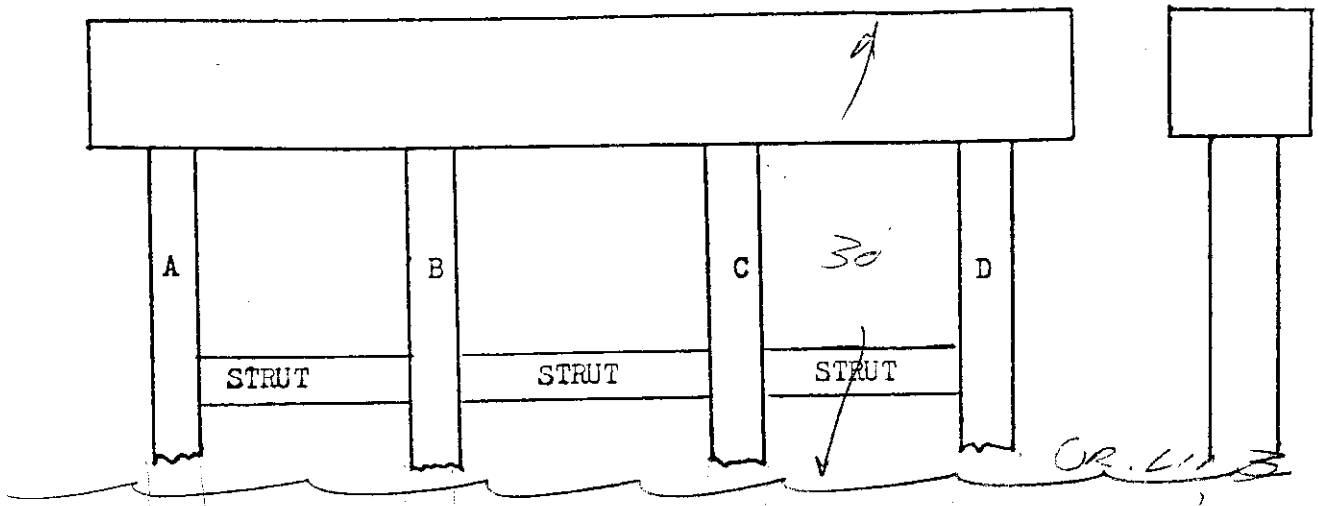


VIEW

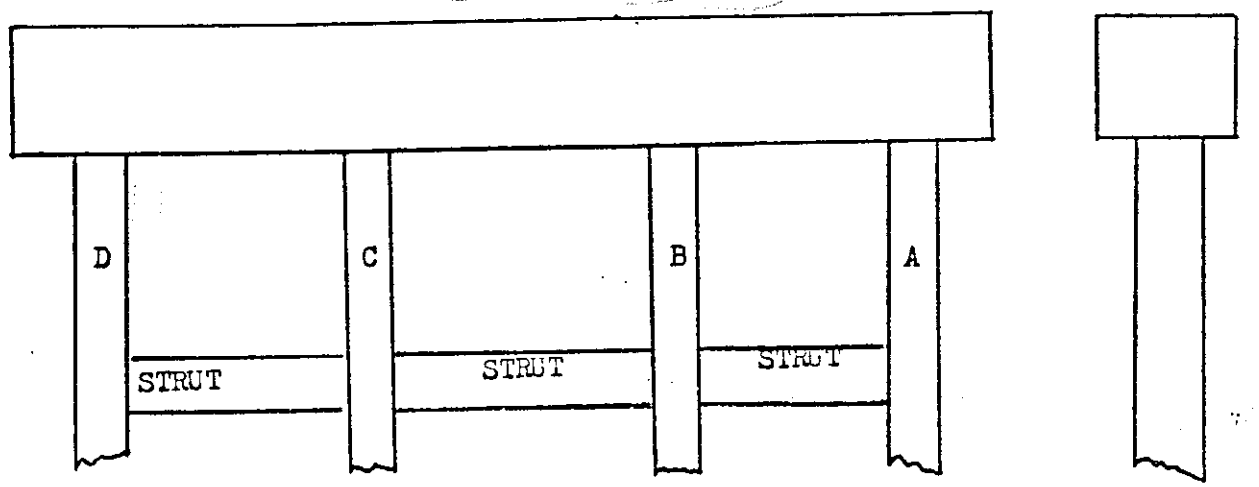
ELEMENT	RATING	COMMENT
BEARING	(G) F P C	
CAP	G (F) P C	
WINGS	(G) F P C	
EMBANKMENT	(G) F P C	
~~APPROACH PAVEMENT~~	(G) F P C	
VEG.	G F (P) C	

BR. NO. 79 I-40 5.09 SK. ____ BENT NO. 1

FRONT VIEW ___ END VIEW



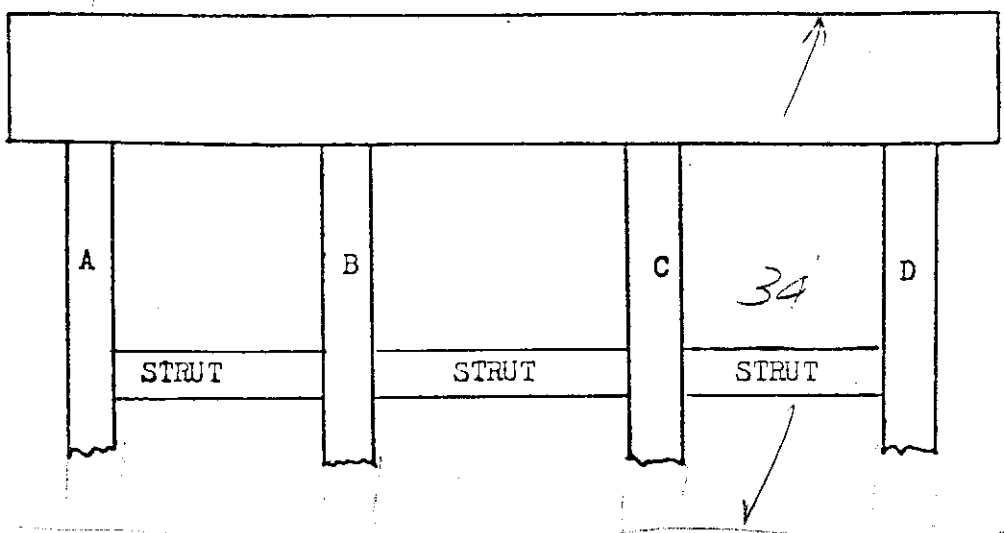
REAR VIEW ___ END VIEW



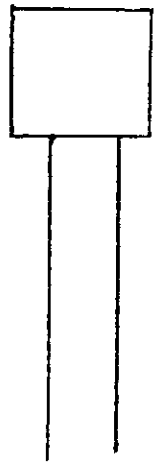
ELEMENT		RATING	COMMENT
BEARINGS		G F P C	NOT MEASURED ON RT SIDE BR. ALL BENTS
CAP		G F P C	
PILING	A	G F P C	
	B	G F P C	
	C	G F P C	
	D	G F P C	
STRUT		G F P C	

BR. NO. 79 [illegible] SK. ET BENT NO. 2

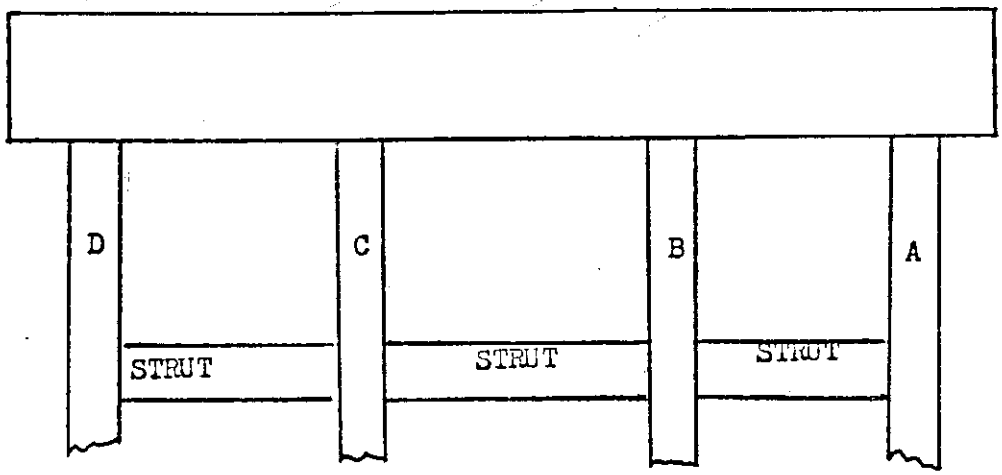
FRONT VIEW



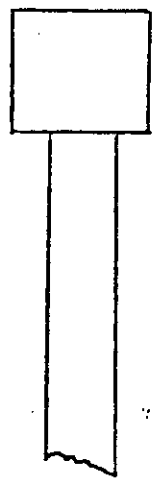
END VIEW



REAR VIEW



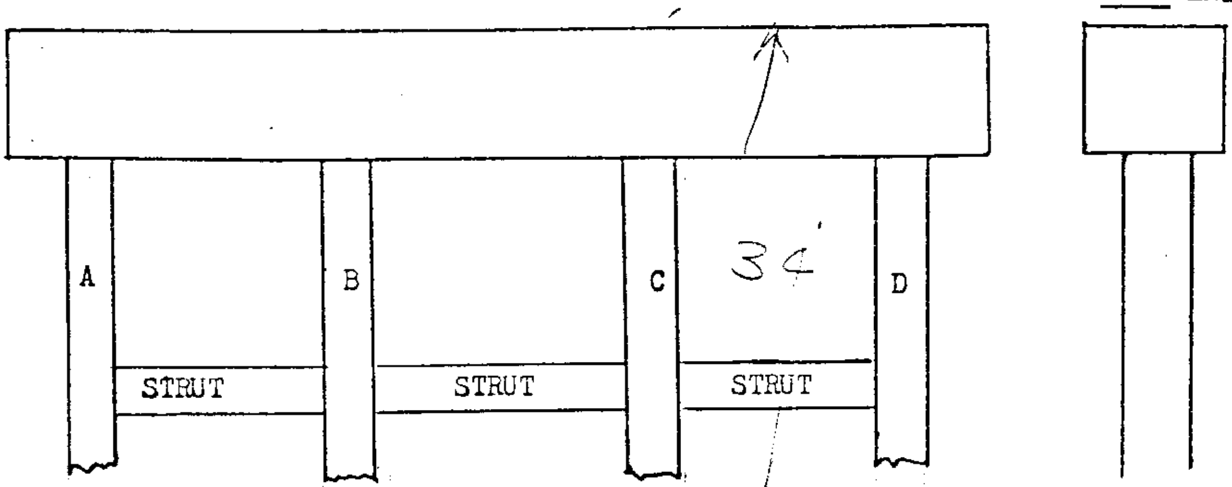
END VIEW



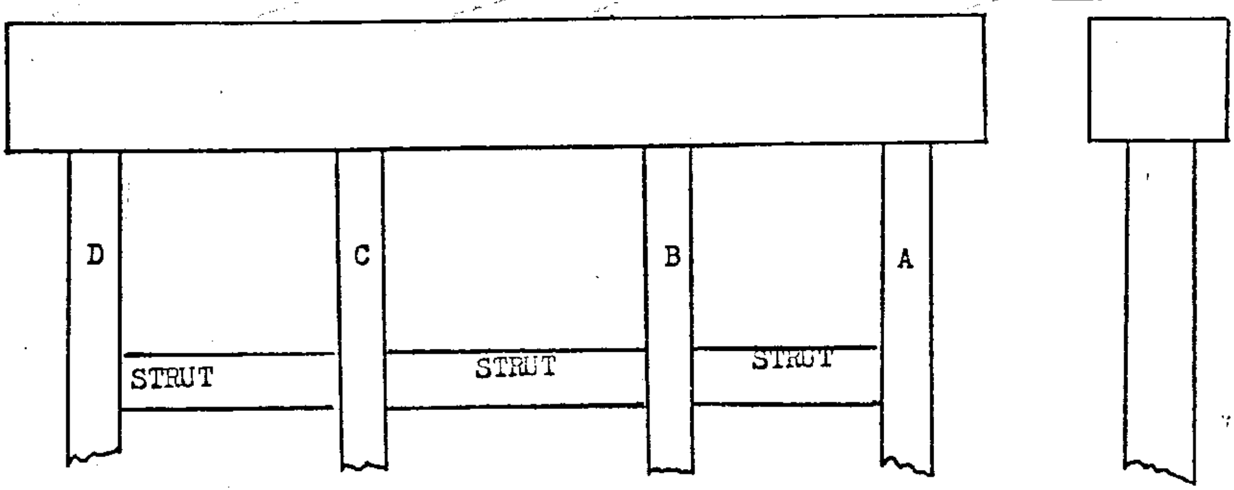
ELEMENT		RATING	COMMENT
BEARINGS		G F P C	
CAP		G F P C	
PILING	A	G F P C	
	B	G F P C	
	C	G F P C	
	D	G F P C	
STRUT		G F P C	

BR. NO. 79 SK. ____ BENT NO. 3

FRONT VIEW ____ END VIEW



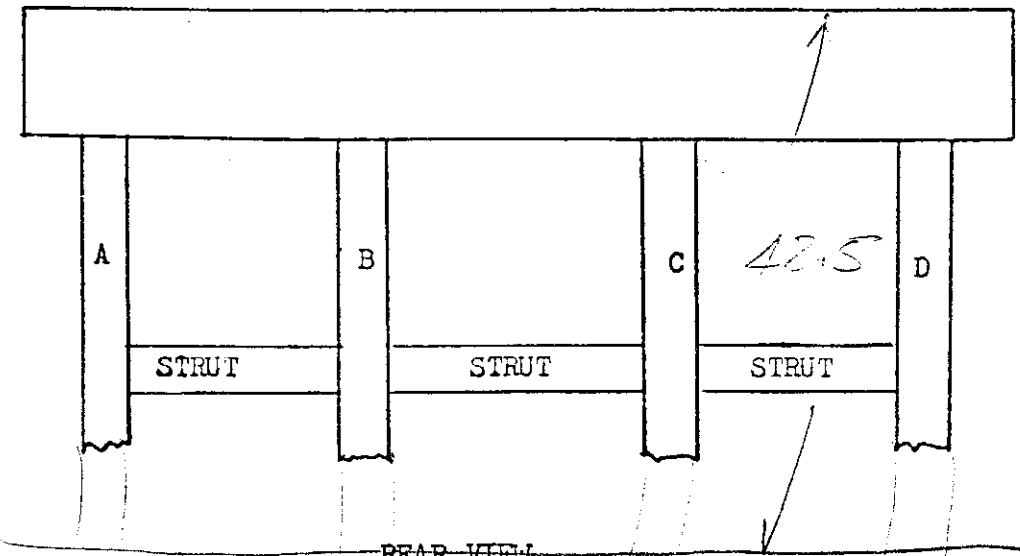
REAR VIEW ____ END VIEW



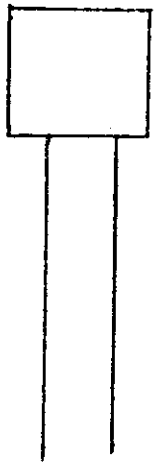
ELEMENT		RATING	COMMENT
BEARINGS		G F P C	
CAP		G F P C	
PILING	A	G F P C	
	B	G F P C	
	C	G F P C	
	D	G F P C	
STRUT		G F P C	

BR. NO. [illegible] SK. 5 AUG 02 2006 BENT NO. 4

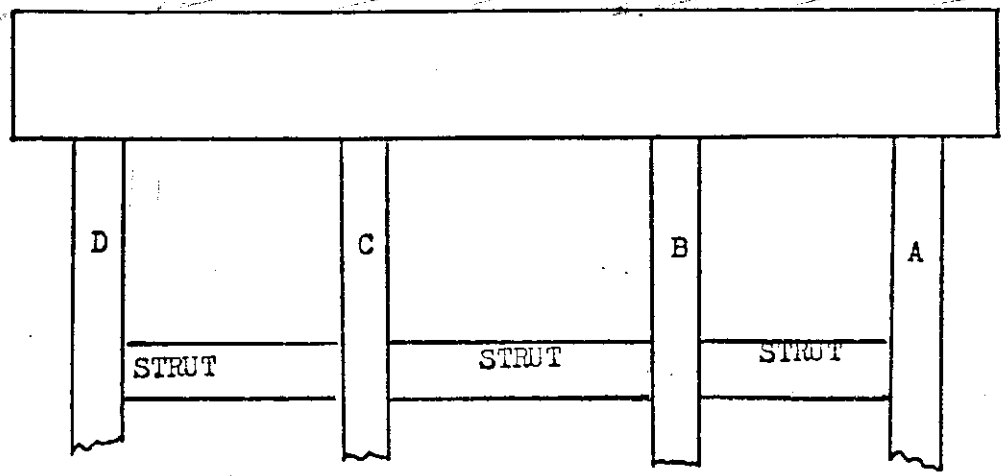
FRONT VIEW



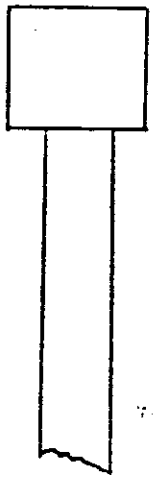
END VIEW



REAR VIEW



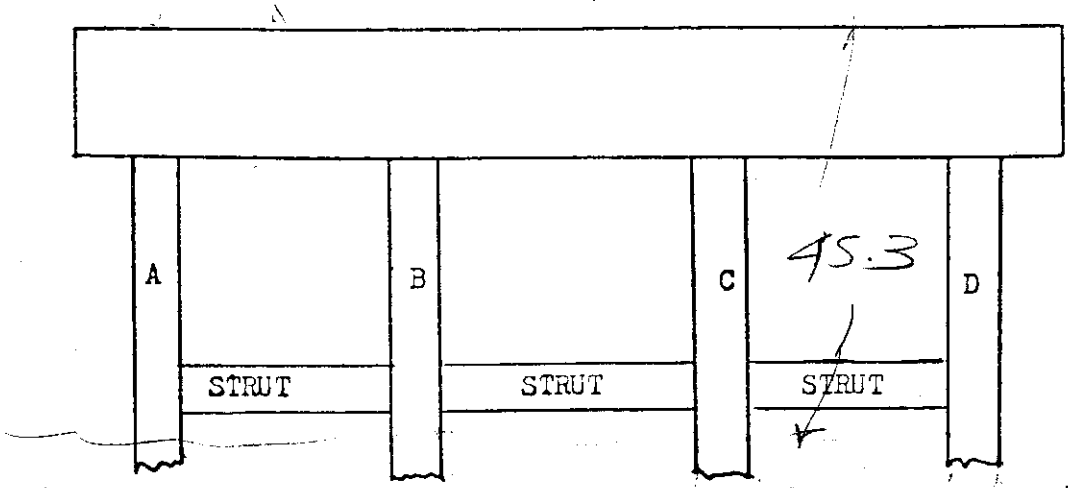
END VIEW



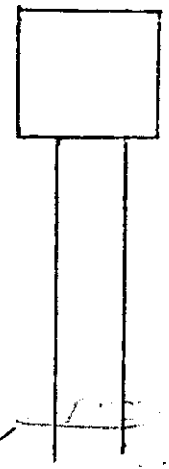
ELEMENT		RATING	COMMENT
BEARINGS		G F P C	
CAP		G F P C	
PILING	A	G F P C	
	B	G F P C	
	C	G F P C	
	D	G F P C	
STRUT		G F P C	

BR. NO. 79 [illegible] SK. ____ BENT NO. 5

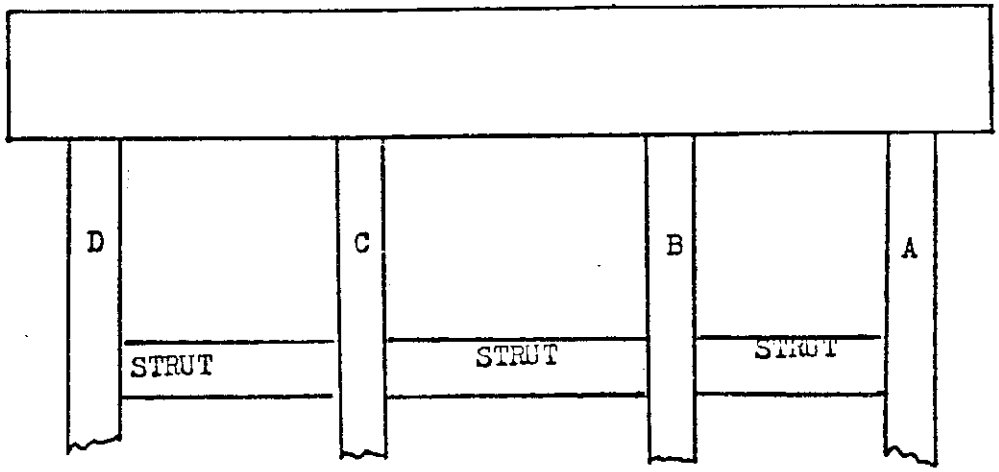
FRONT VIEW



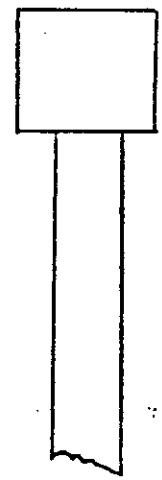
END VIEW



REAR VIEW



END VIEW

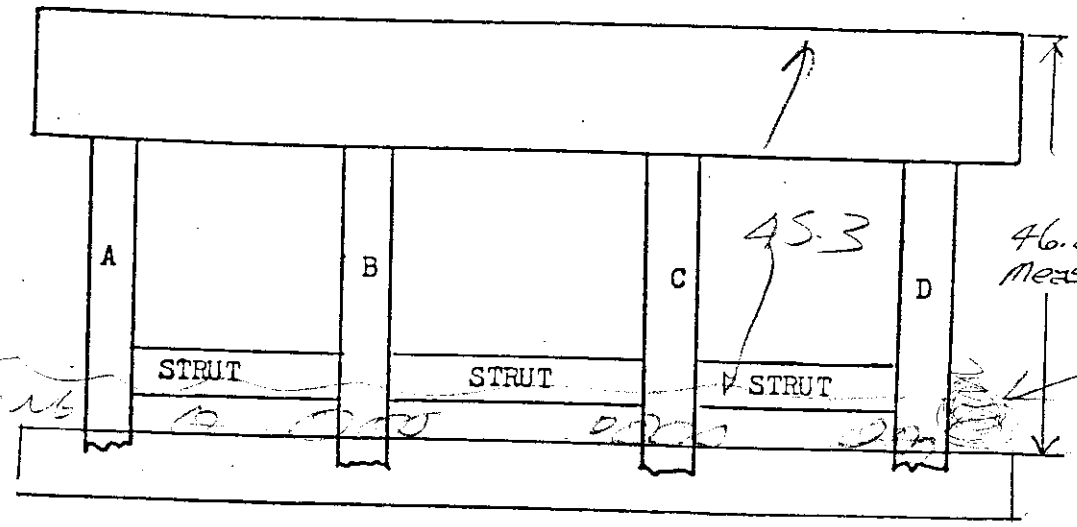


ELEMENT		RATING	COMMENT
BEARINGS		G F P C	
CAP		G F P C	
PILING	A	G F P C	
	B	G F P C	
	C	G F P C	
	D	G F P C	
STRUT		G F P C	

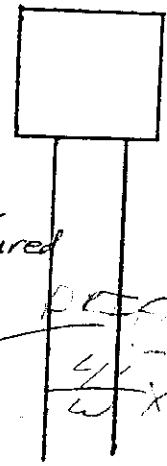
BR. NO. 79 I-40 5.09 SK. _____ BENT NO. 6

AUG 9 2001

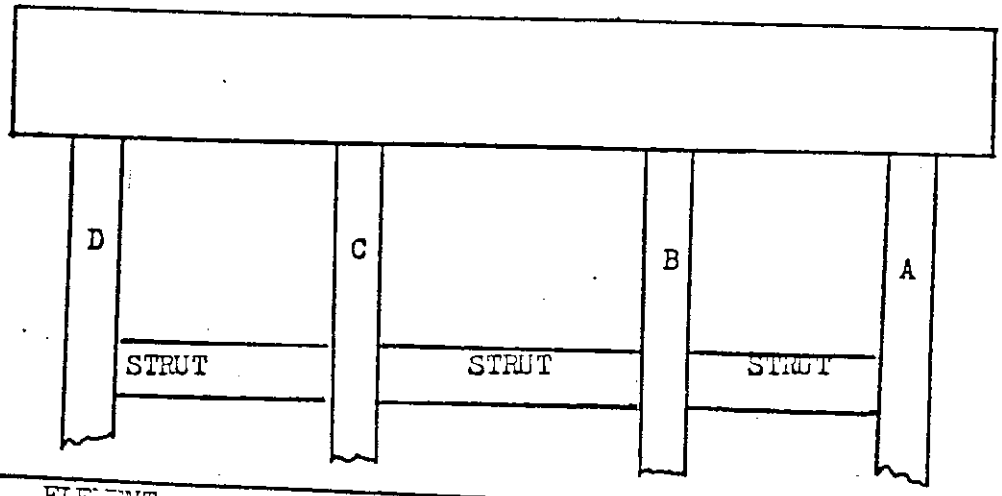
FRONT VIEW



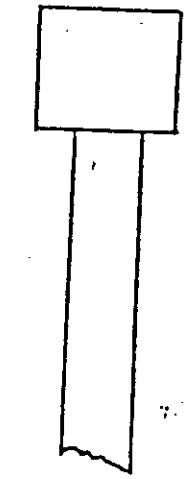
_____ END VIEW



REAR VIEW



_____ END VIEW

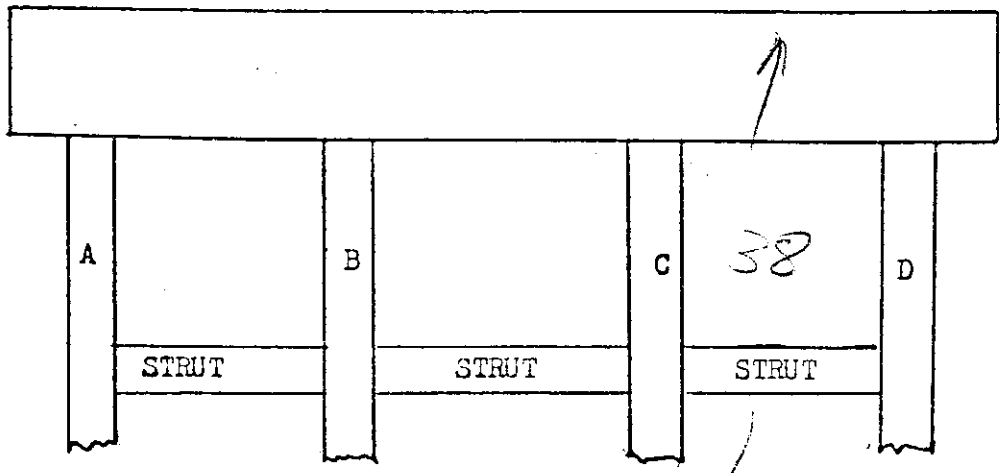


ELEMENT		RATING	COMMENT
BEARINGS		G F P C	
CAP		G F P C	
PILING	A	G F P C	
	B	G F P C	
	C	G F P C	
	D	G F P C	
STRUT		G F P C	

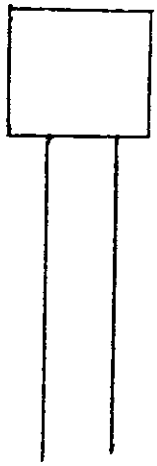
BR. NO. 79 I-40 5.09 SK. 4 BENT NO. 7

AUG 03 2001

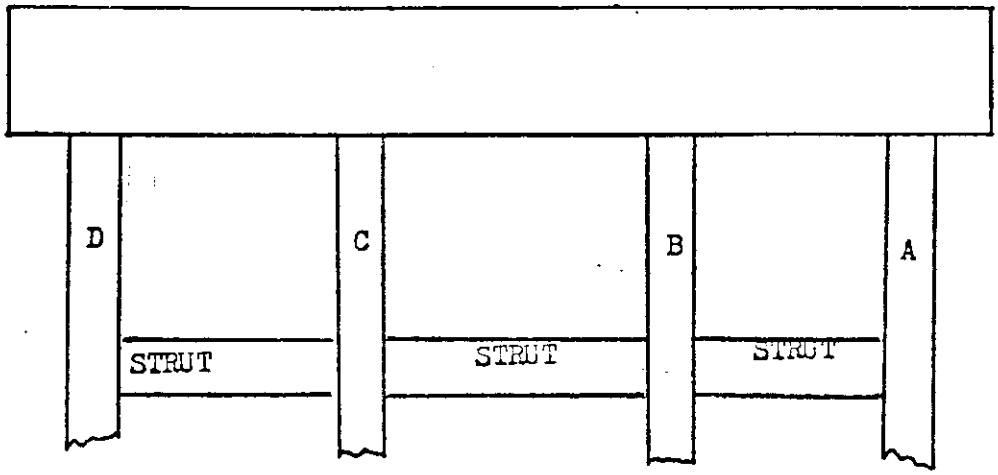
FRONT VIEW



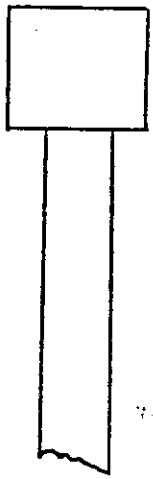
___ END VIEW



REAR VIEW



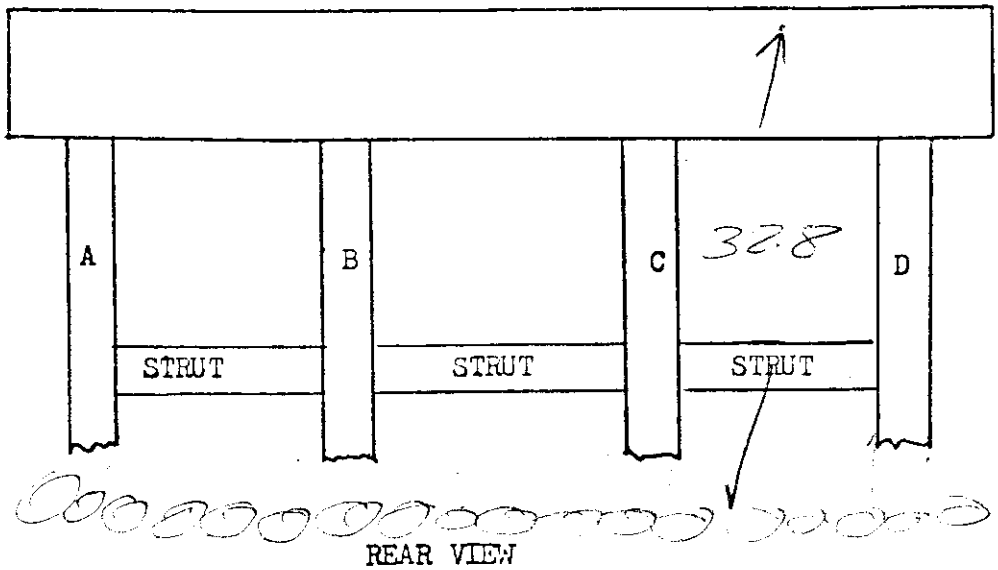
___ END VIEW



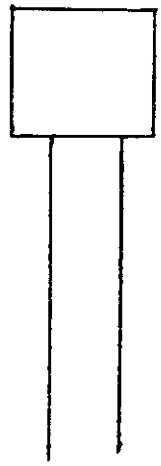
ELEMENT		RATING	COMMENT
BEARINGS		G F P C	
CAP		G F P C	
PILING	A	G F P C	
	B	G F P C	
	C	G F P C	
	D	G F P C	
STRUT		G F P C	

BR. NO. 79 I-20 5.09 SK. ____ BENT NO. 8

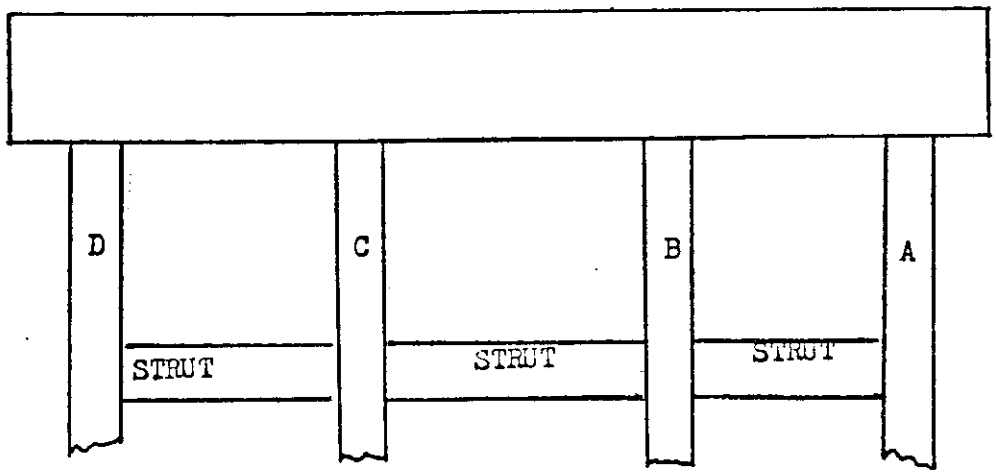
FRONT VIEW



___ END VIEW



REAR VIEW

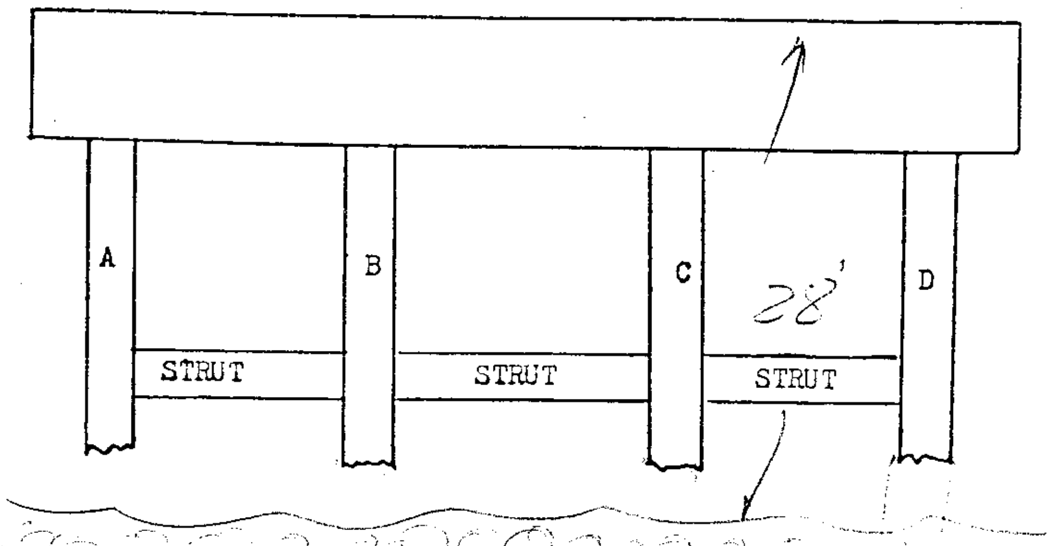


___ END VIEW

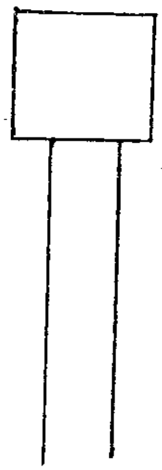
ELEMENT		RATING	COMMENT
BEARINGS		G F P C	
CAP		G F P C	
PILING	A	G F P C	
	B	G F P C	
	C	G F P C	
	D	G F P C	
STRUT		G F P C	

BR. NO. 79 [illegible] 209 SK. ____ BENT NO. ____ AUG 02 2001

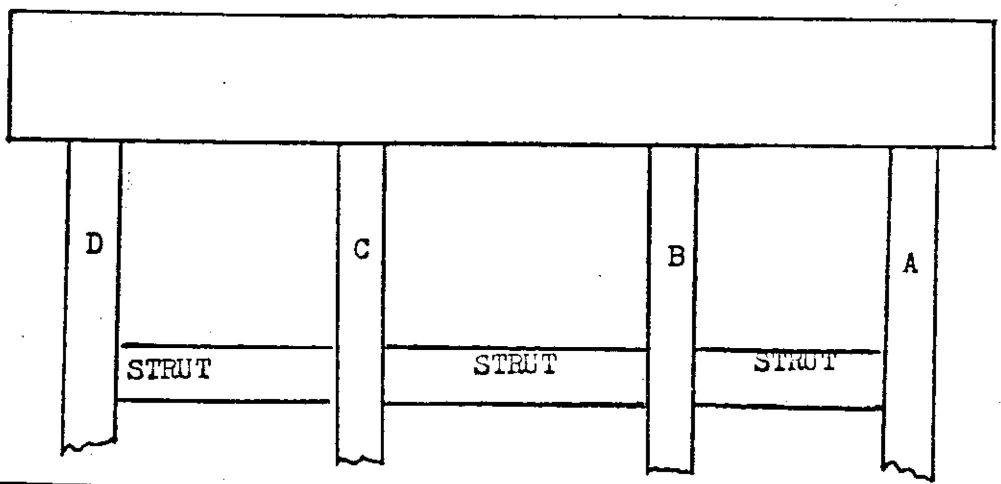
FRONT VIEW



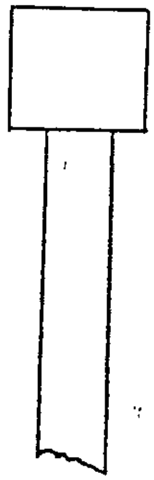
END VIEW



REAR VIEW

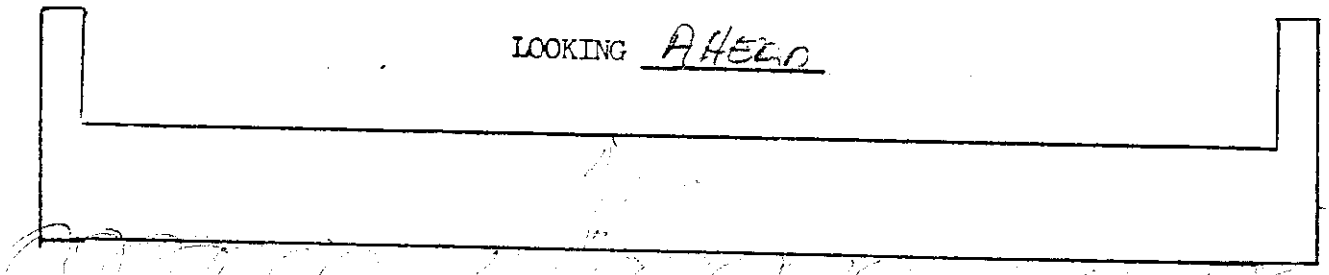


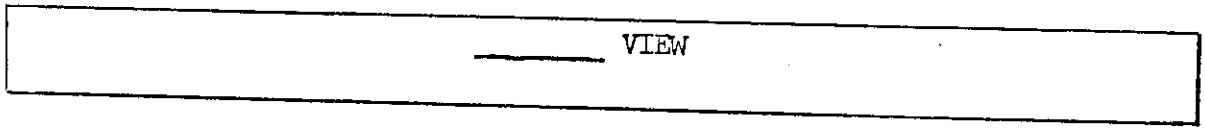
END VIEW



ELEMENT		RATING	COMMENT
BEARINGS		G F P C	
CAP		G F P C	
PILING	A	G F P C	
	B	G F P C	
	C	G F P C	
	D	G F P C	
STRUT		G F P C	

BRIDGE NO 79 I-40 509 ABUT. NO. 2





ELEMENT	RATING	COMMENT
BEARING	G F P C	
CAP	G F P C	
WINGS	G F P C	
EMBANKMENT	G F P C	
~~APAVEMENT~~ APPR	G F P C	
VEG.	G F (P) C	

Rev. 08/03/00

* Height on Rt Side (Looking Ahead)

Date: AUG 2, 2001

BRIDGE NUMBER:

Pg. # _____ of _____

CROSSING:

LAST EXPOSURE	ABUT/BENT/ PIER NUMBER	TOTAL HEIGHT TOP OF CAP TO (OR GROUND LINE/ DATE FOR PILES	(t) FOOTING THICKNESS	W/FTG @ H= TOP OF CAP TO TOP OF FOOTING	EXPOSURE
3.8'	A-1				3.0'
30'	P-1	40.7	4.0	36.7	30'
	P-2	55.0	4.5	50.5	34'
	P-3	60.7	4.5	56.2	34'
	P-4	61.2	4.5	56.7	42.5'
46	P-5	61.6	4.5	57.1	47.8
44.5'	P-6	50.5'	4.5	46.0	46.1
	P-7	50.4	4.5	45.9	38'
	P-8	51.3	4.5	46.8	32.8'
	P-9	48.3	4.5	44.3	28.0'
2.5'	A-2				2.0'

TOP OF CAP TO TOP OF WATER: 45.3 @ BENT #5 RIP-RAP: YES: (X) NO: ( )

~~100.00~~ C/L UPSTREAM: 50.3' @ BENT/PIER NO.: _____

THRU STRUCTURE: 47.8'

100.00' DOWNSTREAM: 48.3

COMMENTS:

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.29 (LOG MILE) _____ (LOG (km)) DATE: _____

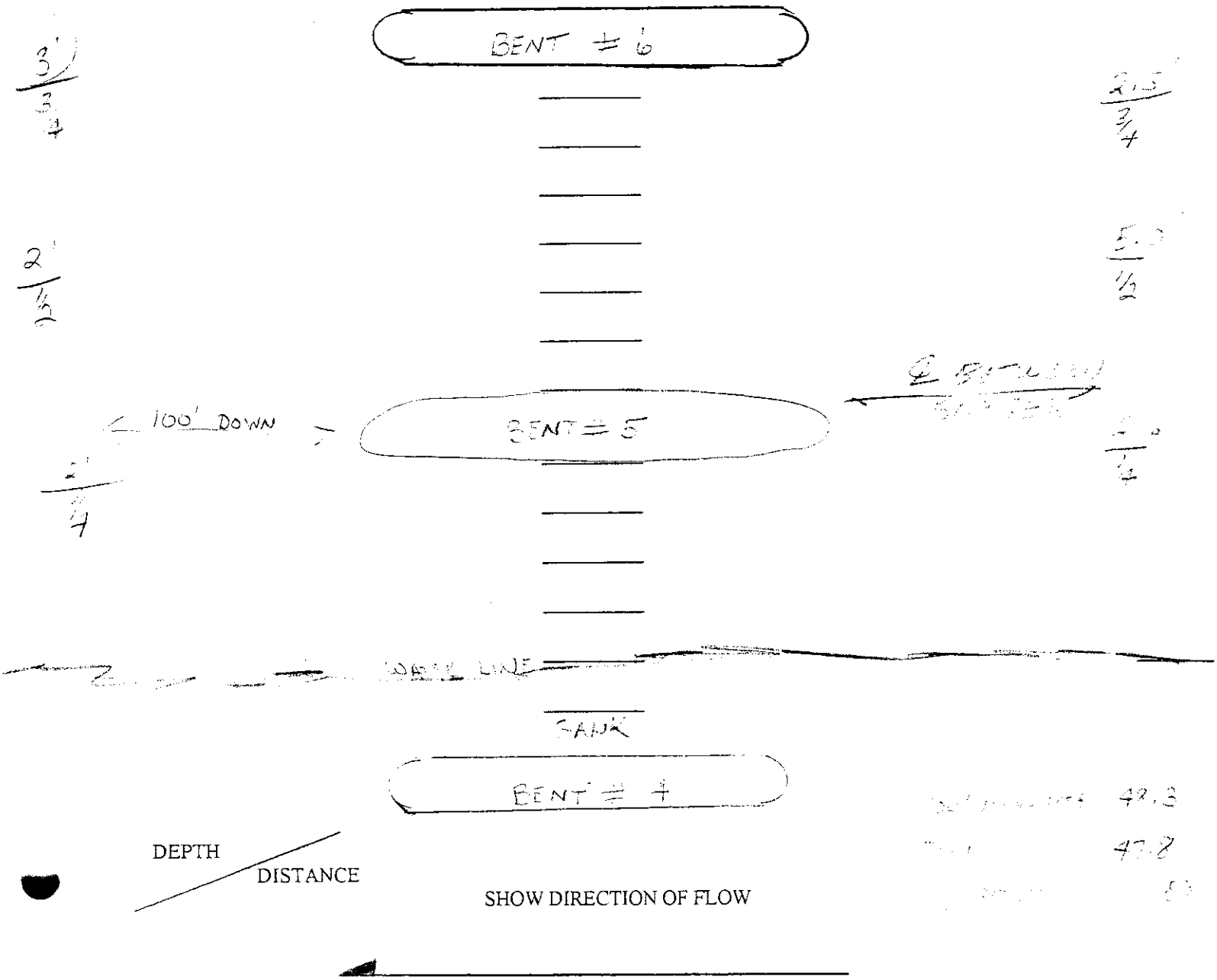
TOTAL HEIGHT (Top of Cap to Bottom of FTG) _____ BENT/PIER NO _____

FOOTING THICKNESS (T) _____ SCOUR: G (F) P C

TOP OF CAP TO TOP OF FTG (W/FTG @ H =) _____ DRIFT: G (F) P C

TOP OF CAP TO TOP OF WATER 45.3 @ BENT #5 MAXIMUM EXPOSURE _____

WATER DEPTH TO TOP OF FTG: _____



DEPTH / DISTANCE

SHOW DIRECTION OF FLOW

BRIDGE NO. 79I00400060 | 79 Co.: | I0040 Route | 0509 LogMile | L L/R | DATE:_____

Height on Rt. Side

TOTAL HEIGHT (Top of Cap to Bottom of Ftg) 61.6 | BENT/PIER NO. 5

FOOTING THICKNESS (T) 4.5 | SCOUR: G (F) P C

TOP OF CAP TO TOP OF FTG ~~57.1~~ 57.1 | DRIFT G (F) P C

TOP OF CAP TO TOP OF WATER 45.3 | MAXIMUM EXPOSURE 47.1

WATER DEPTH TO TOP OF FTG: _____

CA RT SIDE

DEPTH / DISTANCE

DIRECTION OF FLOW

	1.3'/10	1.5'/10	1.8'/10		
	1.3'/5	1.2/5	1.5'/5		
	1.0'/1	1'/1	1'/1		
1.2/10 0.6/5 0.7/1	(BENT # 5)			1'/1 1.5'/5 2'/10	
	1.0'/1	0.4'/1	3'/1		
	1.0'/5	2.0'/5	3'/5		
	1.4/10	2.5/10	3'/10		

15'L X 10' DIA

1.0'6

BRIDGE NO. 79I00400060

79	I0040	0509	L	DATE:
Co.:	Route	LogMile	L/R	

Height on N Side

TOTAL HEIGHT (Top of Cap to Bottom of Ftg) 50.5'

BENT/PIER NO. 6

FOOTING THICKNESS (T) 4.5'

SCOUR: G (F) P C

TOP OF CAP TO TOP OF FTG 46'

DRIFT (G) F P C

TOP OF CAP TO TOP OF WATER 453

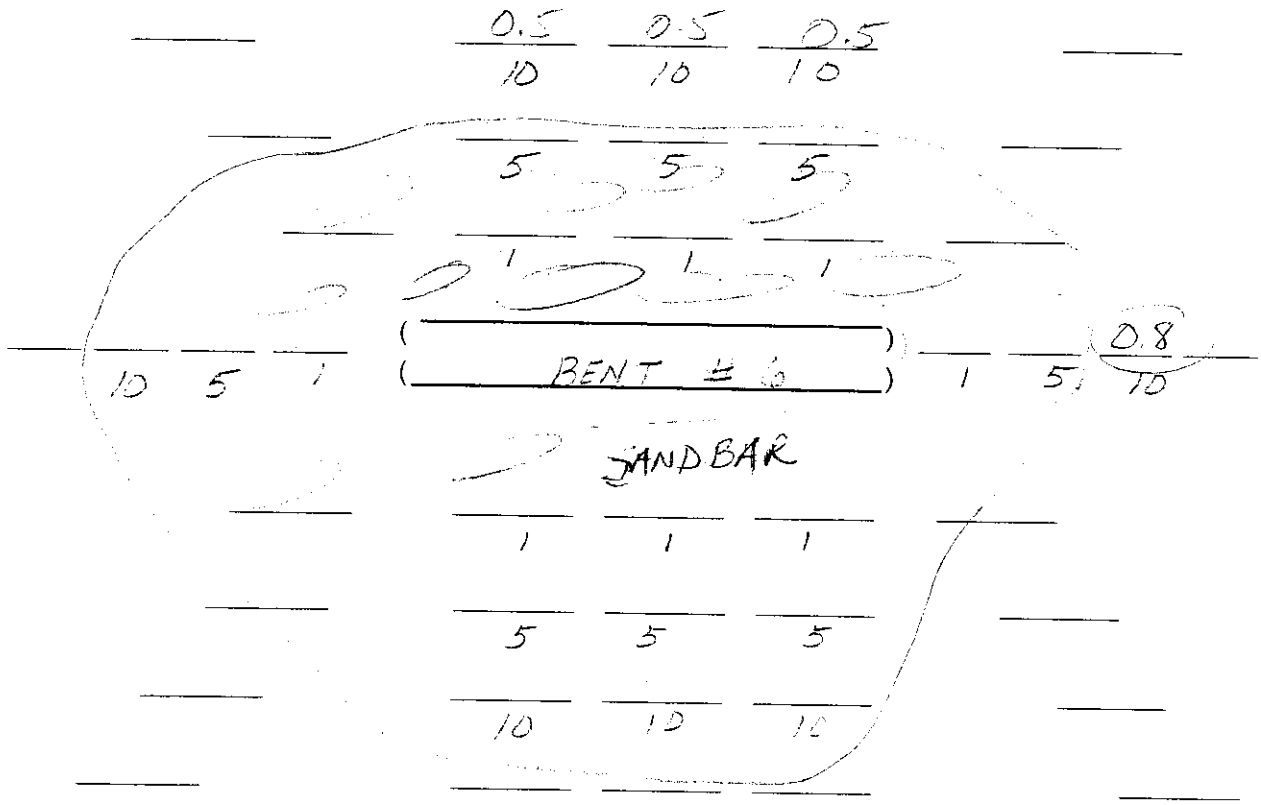
MAXIMUM EXPOSURE 46.1

WATER DEPTH TO TOP OF FTG: /

RT SIDE

DEPTH / DISTANCE

DIRECTION OF FLOW



NOTE: NO FOOTING VISIBLE, COVERED WITH

BRIDGE NO. 19 (COUNTY) I40 (ROUTE) 7.09 L (LOG MILE) _____ (LOG (km)) DATE: _____

TOTAL HEIGHT (Top of Cap to Bottom of FTG) _____

~~BENT~~/PIER NO 7

FOOTING THICKNESS (T) _____

SCOUR: G F P C

TOP OF CAP TO TOP OF FTG _____

DRIFT: G F P C

TOP OF CAP TO TOP OF WATER _____

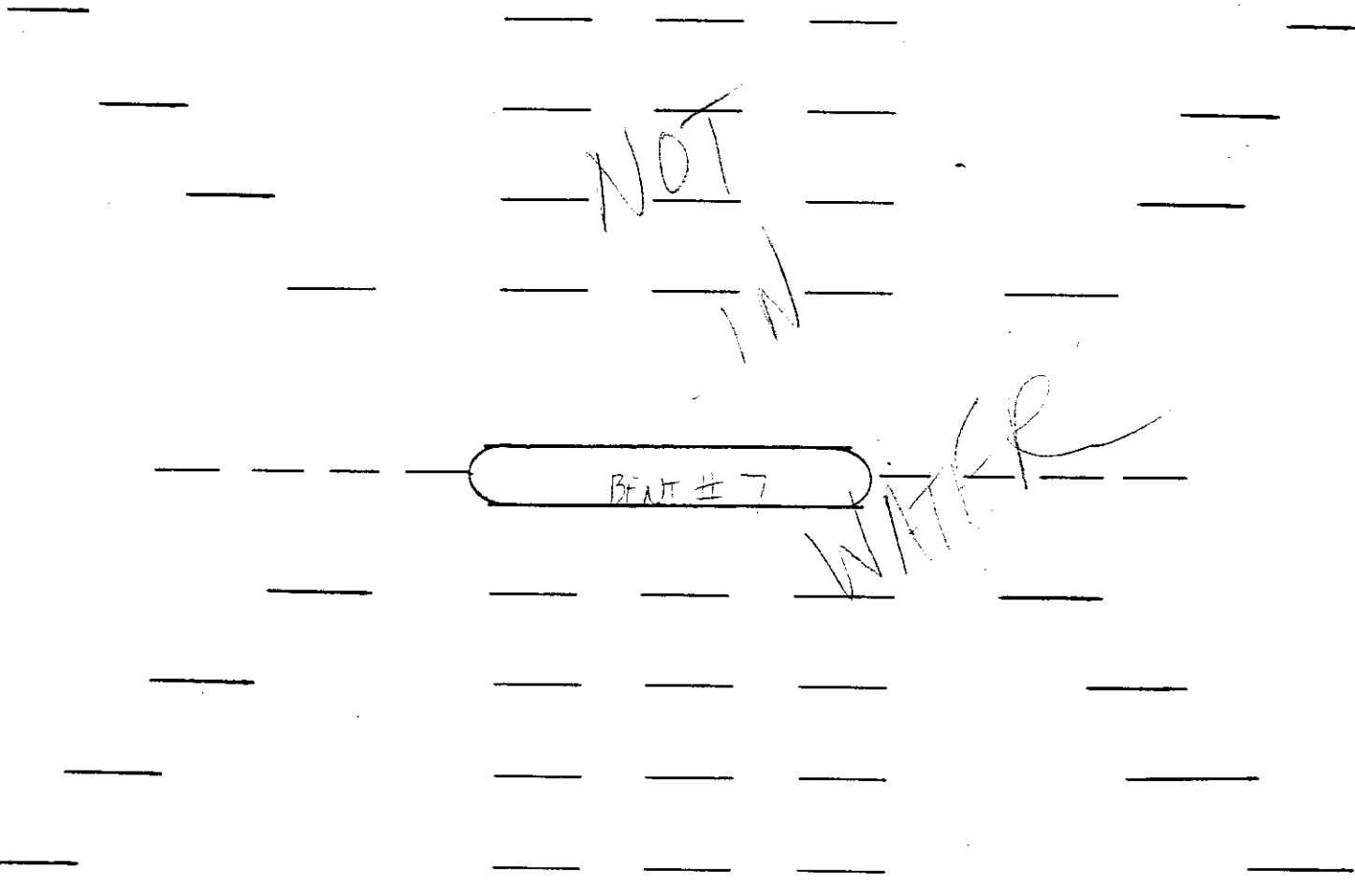
MAXIMUM EXPOSURE _____

WATER DEPTH TO TOP OF FTG: _____

DEPTH

DISTANCE

DIRECTION OF FLOW



100 FEET UPSTREAM , STREAMBED ELEVATIONS BANK TO BANK

RIGHT OR LEFT OF BRIDGE

FEDERAL NUMBER --- 79I00400060

BRIDGE NO. - . : ---------- 79 - I0040 - 05.09 - L

DATE : 10/26/98

NO CHANGE AS OF 08-02-01

CROSSING ---------- Wolf

NUMBER OF PIERS : -----

LOCATION OF PIERS : ---

BENCH MARK ELEV. -- 300

BENCH MARK LOC. ---- abut/wing

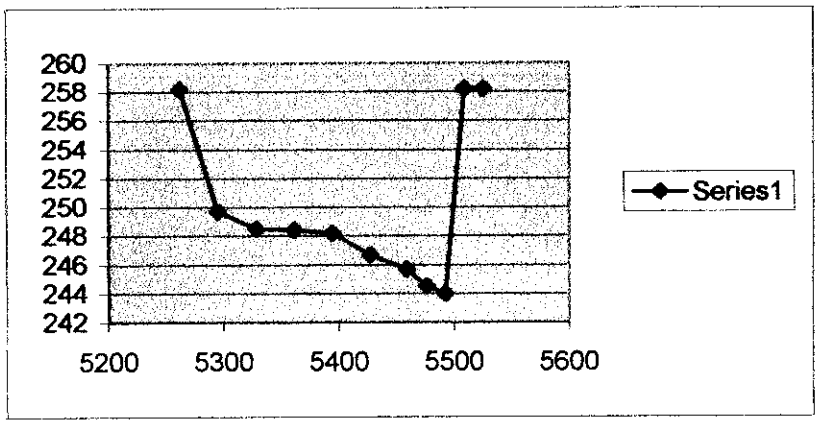
WATER ELEVATION : ----- 253.2

INSPECTORS
Williams
Parker
Coats
Kiestler

DISTANCE OF 0.00 = TOP OF BANK APPROACH 1 SIDE

DISTANCE AND ELEVATIONS IN I ARE IN STANDARD MEASUREMENT

5262	258.2
5295	249.7
5328	248.5
5361	248.4
5394	248.2
5427	246.7
5459	245.7
5476	244.5
5492	244
5509	258.2
5525	258.2



100 FEET UPSTREAM , STREAMBED ELEVATIONS BANK TO BANK

RIGHT OR LEFT OF BRIDGE

FEDERAL NUMBER --- 79I00400060

BRIDGE NO. . . : ---------- 79 - I0040 - 05.09 - L DATE : 10/26/98

CROSSING ---------- Wolf

NUMBER OF PIERS : -----

LOCATION OF PIERS : ---

BENCH MARK ELEV. -- 300

BENCH MARK LOC. ---- abut/wing

WATER ELEVATION : ----- 253.2

INSPECTORS
Williams
Parker
Coats
Kiestler

DISTANCE OF 0.00 = TOP OF BANK APPROACH 1 SIDE

DISTANCE AND ELEVATIONS IN I ARE IN STANDARD MEASUREMENT

5262	258.2
5295	249.7
5328	248.5
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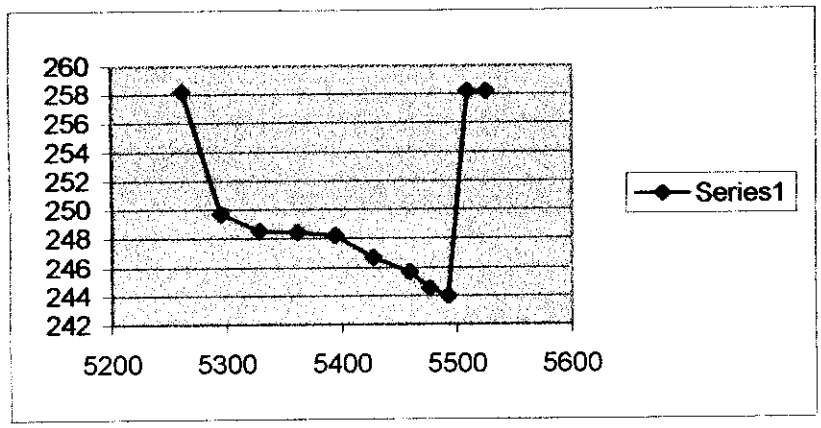
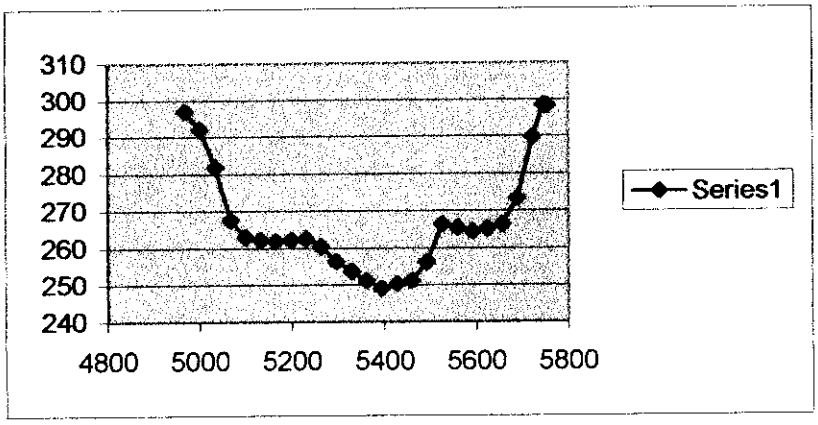
5492	244
5509	258.2
5525	258.2



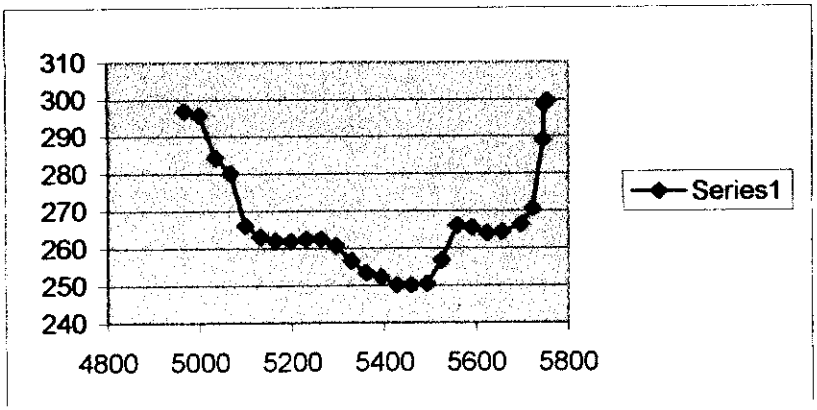
UPSTREAM GROUND ELEVATIONS @ EDGE OF BRIDGE

4967	297
5000	292
5033	281.9
5066	267.6
5098	263
5131	262.3
5164	261.8
5197	262.3
5230	262.5
5262	260.4
5295	256.3
5328	253.8
5361	251.2
5394	249
5427	250.3
5459	251.2
5492	256.2
5525	266.3
5558	265.4
5591	264.4
5623	265.1
5656	266.3
5689	273.3
5722	289.8
5745	298.4
5748	298.3
5755	298.3



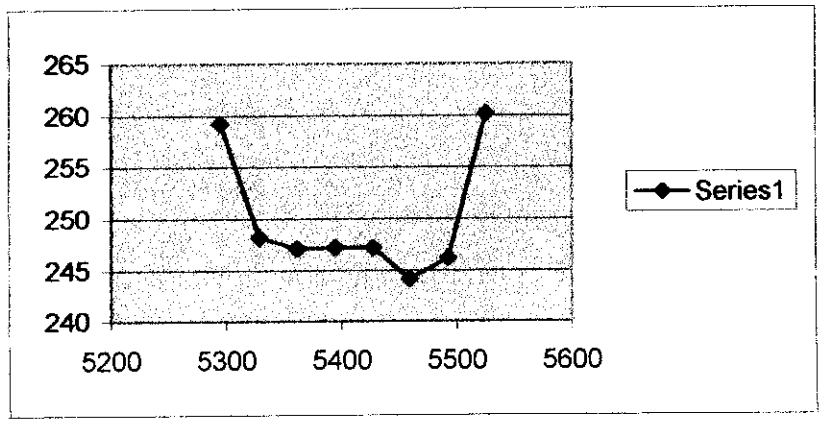
DOWNSTREAM GROUND ELEVATIONS @ EDGE OF BRIDGE

4967	296.9
5000	295.8
5033	284.3
5066	280.2
5098	266
5131	263
5164	262
5197	261.8
5230	262.4
5262	262.4
5295	260.6
5328	256.6
5361	253.5
5394	252.3
5427	250.2
5459	250.2
5492	250.5
5525	256.8
5558	265.9
5591	265.4
5623	264
5656	264.2
5698	266.2
5722	270.6
5745	289.1
5748	298.5
5755	299.5



100 FEET DOWNSTREAM, STREAM ELEVATIONS BANK TO BANK

5295	259.2
5328	248.2
5361	247.1
5394	247.2
5427	247.2
5459	244.2
5492	246.2
5525	260.2



SEP 16 1999

BRIDGE NO. 79 - I40 - 529 L
CO. ROUTE L/M R/L

DATE: _____

TOTAL HEIGHT (Top of Cap to Bottom of FTG) _____

BENT/~~PIER~~ COLUMNS NO. 5

FOOTING THICKNESS (T) _____

SCOUR: G (F) P C

TOP OF CAP TO TOP OF FTG _____

DRIFT: (G) F P C

TOP OF CAP TO TOP OF WATER _____

MAXIMUM EXPOSURE _____

WATER DEPTH TO TOP OF FTG: _____

TOP STRUT
14.5
TOP WATER

DEPTH
DISTANCE

← DIRECTION OF FLOW

	1.5' / 15'	1.6' / 15'	1.8' / 15'		
	1.6' / 10'	0.6' / 10'	1.6' / 10'		
	1.3' / 5'	0.9' / 5'	1.6' / 5'		
	1.0' / 1'	0.6' / 1'	0.5' / 1'		

1.5'/15' 1.7'/10' 2.0/5' 1.0'/1' (BENT #5) 0.5'/1' 1.5'/5' 1.8'/10' 2.0'/15'

	2.0' / 1'	1.0' / 1'	1.0' / 1'		
	1.5' / 5'	1.0' / 5'	2.0' / 5'		
	2.0' / 10'	1.6' / 10'	3.0' / 10'		
	2.3' / 15'	2.5' / 15'	3.0' / 15'		

SEP 16 1999 R.T

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.09.L (LOG MILE) (LOG (km)) DATE: 9-16-99

SEE PIER SHEET 6-7

TOTAL HEIGHT (Top of Cap to Bottom of FTG) _____

BENT/~~PIER~~ NO # 5 & # 6

MAJOR RIP-RAP REPAIR 5/98

FOOTING THICKNESS (T) _____

SCOUR: G (F) P C

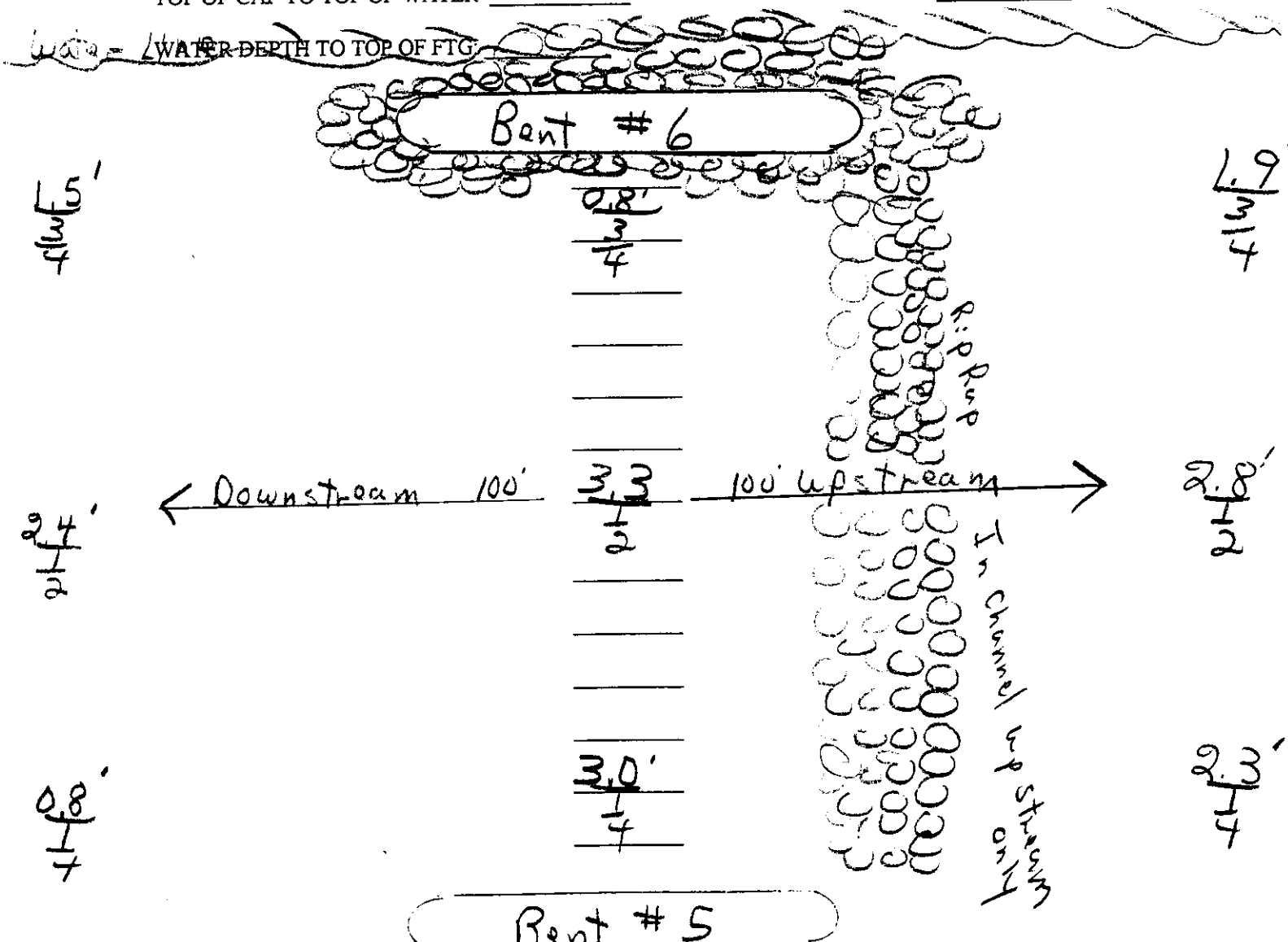
TOP OF CAP TO TOP OF FTG (W/FTG @ H =) _____

DRIFT: G (F) P C

TOP OF CAP TO TOP OF WATER _____

MAXIMUM EXPOSURE _____

Wat = ~~WATER DEPTH~~ TO TOP OF FTG



5'
3/4

1.9'
3/4

2.4'
1/2

2.8'
1/2

0.8'
1/4

2.3'
1/4

SEP 16 1999

BRIDGE NO. 79 / COUNTY 140 / ROUTE 5.09L / LOG MILE _____ / LOG (km) DATE: 9-16-99

TOTAL HEIGHT (Top of Cap to Bottom of FTG) 15.70

[redacted]/PIER NO 6

FOOTING THICKNESS (T) 1.21

SCOUR: G (F) P C

TOP OF CAP TO TOP OF FTG 14.32

DRIFT: G (F) P C

MAJOR RIP-RAP REPAIR 5/98

TOP OF CAP TO TOP OF WATER _____

MAXIMUM EXPOSURE _____

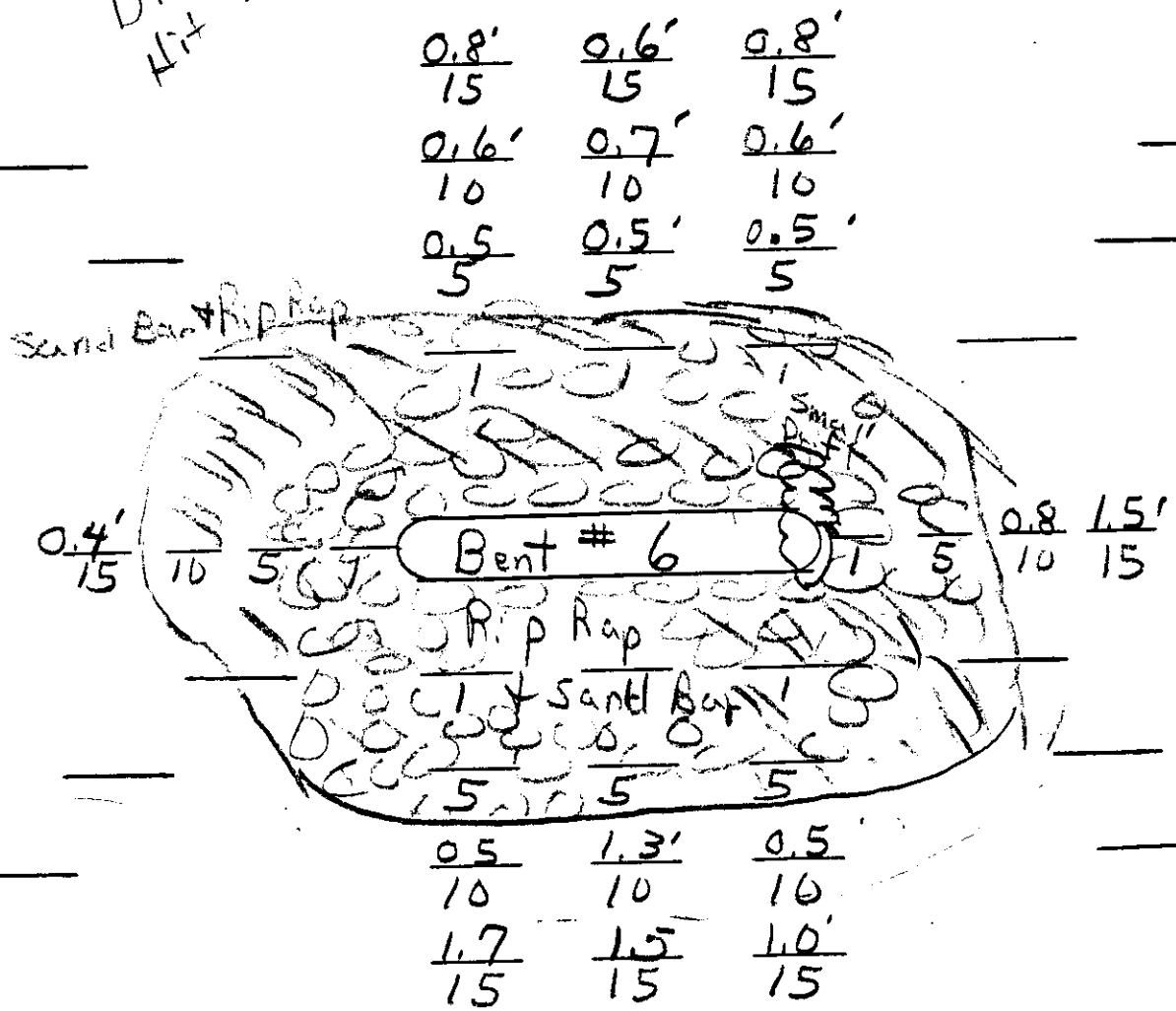
WATER DEPTH TO TOP OF FTG: _____

DEPTH

DISTANCE

Did not Hit Footings

DIRECTION OF FLOW



SEP 16 1999

BRIDGE NO. 79 (COUNTY) I40 (ROUTE) 1.091 L (LOG MILE) _____ (LOG (km)) DATE: _____

TOTAL HEIGHT (Top of Cap to Bottom of FTG) 15.30

~~BENT~~/PIER NO 7

FOOTING THICKNESS (T) 1.21

SCOUR: G F P C

TOP OF CAP TO TOP OF FTG 13.92

DRIFT: G F P C

TOP OF CAP TO TOP OF WATER _____

MAXIMUM EXPOSURE _____

WATER DEPTH TO TOP OF FTG: _____

DEPTH

DISTANCE

MAJOR RIP RAP REPAIR 5/98

DIRECTION OF FLOW

Bent #7

Not In Water

SEP 16 1999

Rev.: 07/29/97

DATE: 9-16-99

BRIDGE NUMBER: 79 (COUNTY) - I-40 (ROUTE) - 509L (LOG MILE) - _____ (LOG (km)) Pg. # 1 of 1

ABUT/BENT PIER NUMBER	TOTAL HEIGHT TOP OF CAP TO (OR GROUND LINE/ DATE FOR PILES	(t) FOOTING THICKNESS	W/FTG @ H = TOP OF CAP TO TOP OF FOOTING	EXPOSURE
		PLANS - (YES)		Ft/Tenths
	metric	metric	metric	
A-1				3.8'
P-1	12.46	1.21	11.24	29.95'
P-2	16.47	1.21	15.45	
P-3	17.81	1.21	16.59	
P-4	18.62	1.21	17.40	
P-5	~~18.79~~	~~1.21~~ 4.0	~~17.59~~	46.25'
Low Side P-6	~~50.53~~ ~~15.70~~	~~1.21~~ 4.0'	46.0' ~~14.32~~	44.47'
P-7	15.30	1.37	13.92	
P-8	16.18	1.37	14.81	
P-9	15.48	1.37	14.11	
A-2				2.5'
	PLANS	MEASUREMENT		
	from	PS Report.		

RIP-RAP ADDED 5/98

TOP OF CAP TO TOP OF WATER: _____

RIP-RAP: YES (X) NO: ( )

@ BENT / PIER NO.: 5, 6, 7, 8, 9

30.48 m UPSTREAM: _____

THRU STRUCTURE: _____

30.48 m DOWNSTREAM: _____

COMMENTS: Did not Hit footing on Bent 5 & 6 only Bent in water

DEC 12 1997

Rev.: 07/29/97

DATE: 12/12/97

BRIDGE NUMBER: 79 (COUNTY) - I-40 (ROUTE) - 5.09L (LOG MILE) - _____ (LOG (km)) Pg. #___of___

ABUT/BENT PIER NUMBER	TOTAL HEIGHT TOP OF CAP TO (OR GROUND LINE/ DATE FOR PILES	(t) FOOTING THICKNESS PLANS - (YES)	W/FTG @ H = TOP OF CAP TO TOP OF FOOTING	EXPOSURE
A-1				1.10 m
P-1	12.46	1.21	11.24	8.39 m
P-2	16.47	1.21	15.45	9.90 m
P-3	17.81	1.21	16.59	10.05 m
P-4	18.62 61.1'	1.21	17.40	12.80 m 41.9'
P-5	18.79	1.21	17.57	14.25 m
P-6	15.70	1.21	14.32	13.70m
P-7	15.30	1.37	13.92	9.38m
P-8	16.18	1.37	14.81	10.14m
P-9	15.48	1.37	14.11	8.20m
A-2				.82m
	PLANS MEASUREMENT			
	from 95 Report.			

TOP OF CAP TO TOP OF WATER: 13.25 m RIP-RAP: YES (X) NO: ( )

@ BENT / ~~PIER~~ NO.: _____

30.48 m UPSTREAM: 14.25 m 5 & 6 Has Rip-Rap

THRU STRUCTURE: 14.25m Around Piers Covered with Sand

30.48 m DOWNSTREAM: 14.25

REPAIRED 5/98

COMMENTS: There is Lime Stone Rock around Bent #5 & 6 covered with sand. Bent #7 needs to be Protected from scour Due to Lateral Movement of Channel. Bent #7 is not in Channel this inspection. But is in Channel during High water. Bent #7 is within 5.79 meters of edge of water. But is only 1.30 meters from edge of Channel.

DEC 12 1997

BRIDGE NO. 79 (COUNTY) I-10 (ROUTE) 5.09 (LOG MILE) _____ (LOG (km)) DATE: _____

SEE PIER SHEETS 6-7

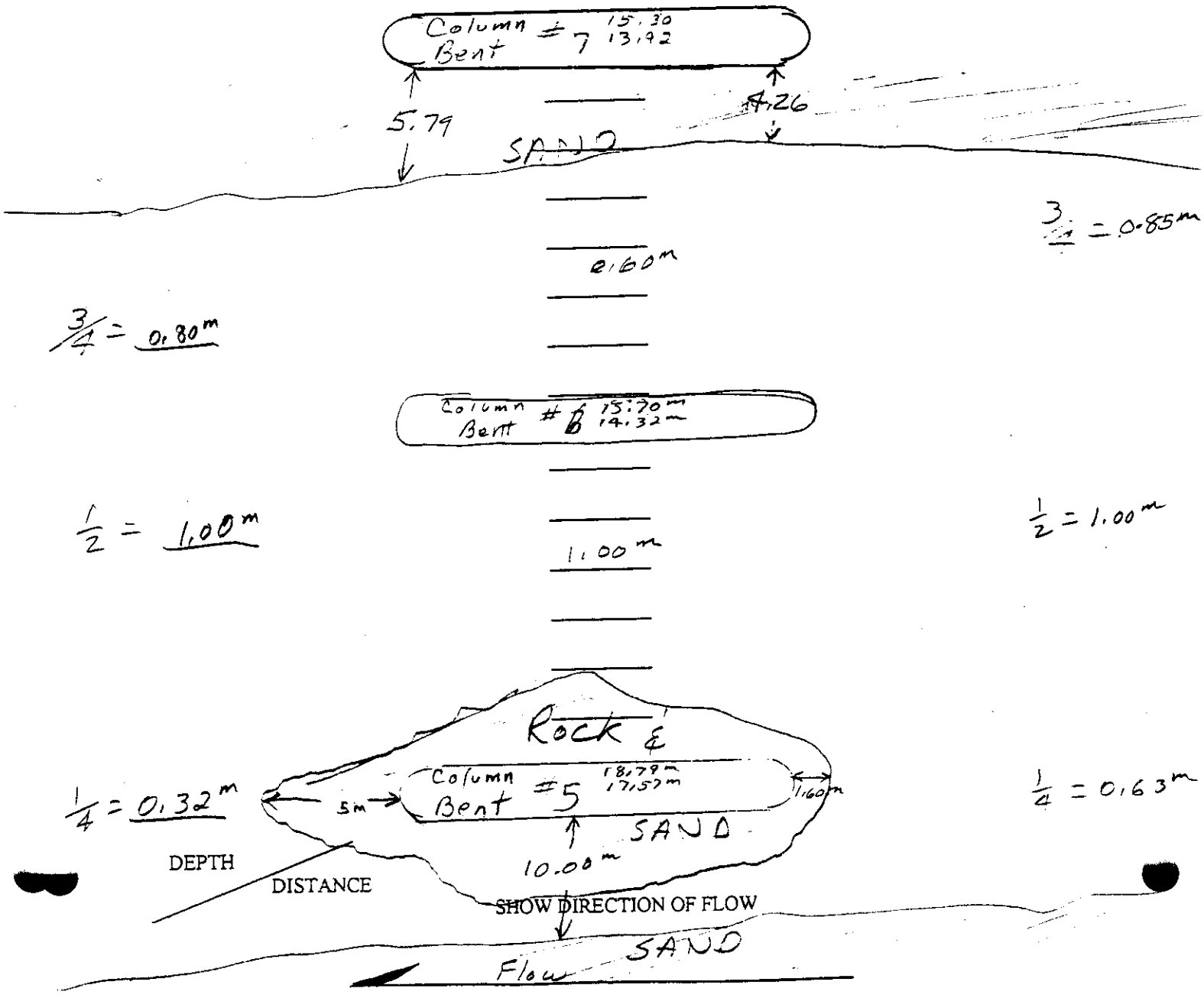
TOTAL HEIGHT (Top of Cap to Bottom of FTG) #6 ~ _____ BENT/PIER NO _____

FOOTING THICKNESS (T) _____ SCOUR: G F P C

TOP OF CAP TO TOP OF FTG (W/FTG @ H =) _____ DRIFT: G F P C

TOP OF CAP TO TOP OF WATER 13.25 MAXIMUM EXPOSURE _____

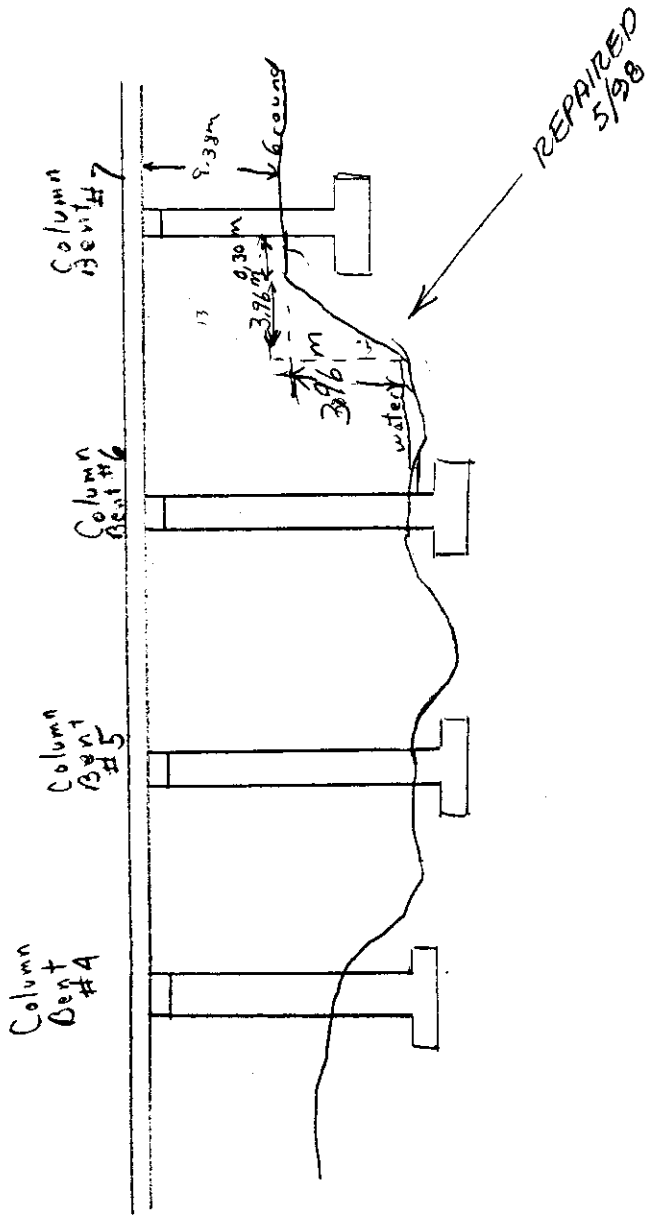
WATER DEPTH TO TOP OF FTG: _____



DEC 12 1997

79-I-40-5.09L

Rt. Side View



DEC 12 1997

73

BRIDGE NO. 79 / COUNTY — 140 / ROUTE — 5.09 / LOG MILE — _____ / LOG (km) — DATE: 12-11-97

TOTAL HEIGHT (Top of Cap to Bottom of FTG) 18.79 m +5.90

[redacted] PIER NO 35

FOOTING THICKNESS (T) 1.21 / 17.57

SCOUR: G (F) P C

TOP OF CAP TO TOP OF FTG +4.30

DRIFT: (G) F P C

TOP OF CAP TO TOP OF WATER 13.25

MAXIMUM EXPOSURE 14.25 m

WATER DEPTH TO TOP OF FTG: _____

DEPTH

DISTANCE

DIRECTION OF FLOW

1.00 m / 3.05	0.60 m / 3.05	0.60 m / 3.05
0.45 / 1.52	0.30 m / 1.52	0.60 m / 1.52
0.30 / 1.30	0.30 m / 1.30	0.30 / 1.30

0.23 m / 3.05 — 0.45 m / 1.52 — 0.30 m / 1.30 — Pier # 5. — 0.30 m / 1.30 — 0.30 m / 1.52 — 0.60 m / 3.05

0.40 m / 1.30	0.25 m / 1.30	0.60 m / 1.30
0.43 m / 1.52	0.40 m / 1.52	0.62 m / 1.52
0.45 m / 3.05	0.60 m / 3.05	0.78 m / 3.05

DEC 12 1997

75

BRIDGE NO. 19 (COUNTY) I40 (ROUTE) 7.09 (LOG MILE) _____ (LOG (km)) DATE: 12-11-97

TOTAL HEIGHT (Top of Cap to Bottom of FTG) 15.30

~~BENT~~/PIER NO ~~5~~ 6

FOOTING THICKNESS (T) 1.21

SCOUR: G (F) P C

TOP OF CAP TO TOP OF FTG 13.92

DRIFT: (G) F P C

TOP OF CAP TO TOP OF WATER 13.25

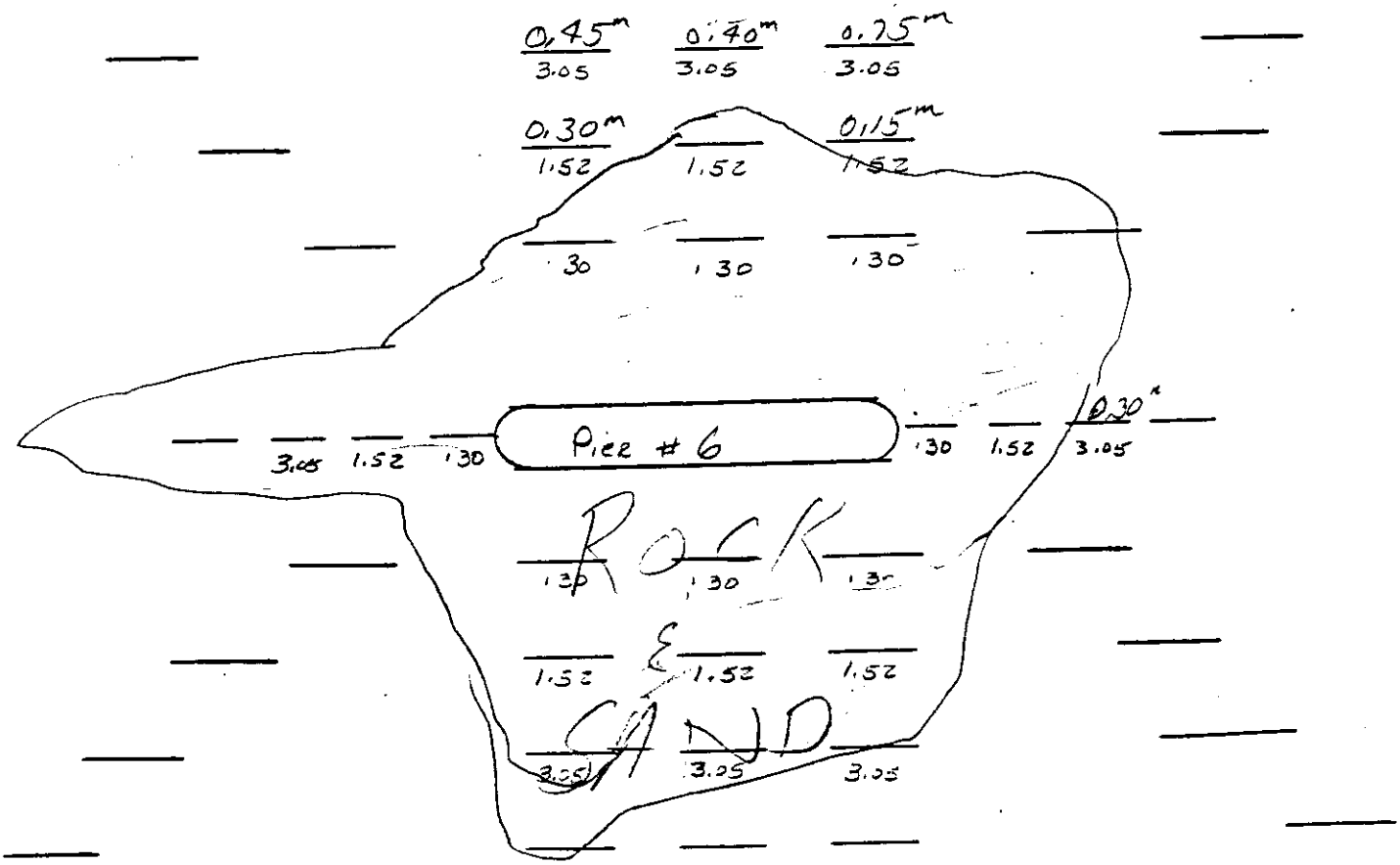
MAXIMUM EXPOSURE _____

WATER DEPTH TO TOP OF FTG: _____

DEPTH

DISTANCE

DIRECTION OF FLOW



750'-9⅛" Bk. To Bk. Abutments (Along W.B. ℄ I-240) L.L. BRIDGE

4'-9" | 74'-9" | 74'-9" | 74'-9" | 74'-9⅛" | 74'-9⅝" | 74'-11"

SPAN 2 | SPAN 3 | SPAN 4 | SPAN 5 | SPAN 6 | SPAN 7 | SPAN 8

℄ Pier "C" Sta. 236+75.00 F.G. El. 245.71

℄ Pier "D" Sta. 237+49.75 F.G. El. 246.41

℄ Pier "E" Sta. 238+24.51 F.G. El. 246.93

℄ Pier "F" Sta. 238+99.26 F.G. El. 247.30

AHEAD →

℄ Pier "G" Sta. 239+74.02 F.G. El. 247.49

℄ Pier "H" Sta. 240+48.82 F.G. El. 247.51

BASE LINE OF SURVEY

℄ Pier "I"

El. 229.2 (1937 Reg.)

Backwater El. 236.0 (1937)

Highwater El. 226.6 (50 Yr.)

El. 231.2 (50 Yr. Backwater)

25'-0"

WATER ELEV. 206.0

250 240 230 220 210 200 190 180

PIER ② PIER ③ PIER ④ PIER ⑤ PIER ⑥ PIER ⑦ PIE

300 250 200 150 100 50

Note: See Dwg. M-44-89 for pile cut-off and estimated tip elevations.

ELEVATION
Scale ~ 1" = 30'

PROFILES FROM FIELD NOTES 4/25/97

STATION

1+50 (50' DOWNSTREAM OF BRIDGE)

2+50 (NEAR ℄ OF BRIDGE)

3+60 (NEAR ℄ OF PIER 6)

(3+15 IS AT THE ℄ OF PIER 6)

749'-6" Bk. To Bk. Abutments (Along ℄ Ramp I)

8 Spans At. 74'-9" = 598'-0"

℄ Drain thru parapet

Sta. 267+06.44 ℄ Ramp I 48' Lt. Sta. 237+86.61 W.B. ℄ I-240

℄ Pier "E" Sta. 266+68.55

RIVER

℄ Pier "F" Sta. 265+93.80

Light Standard (Typ.)

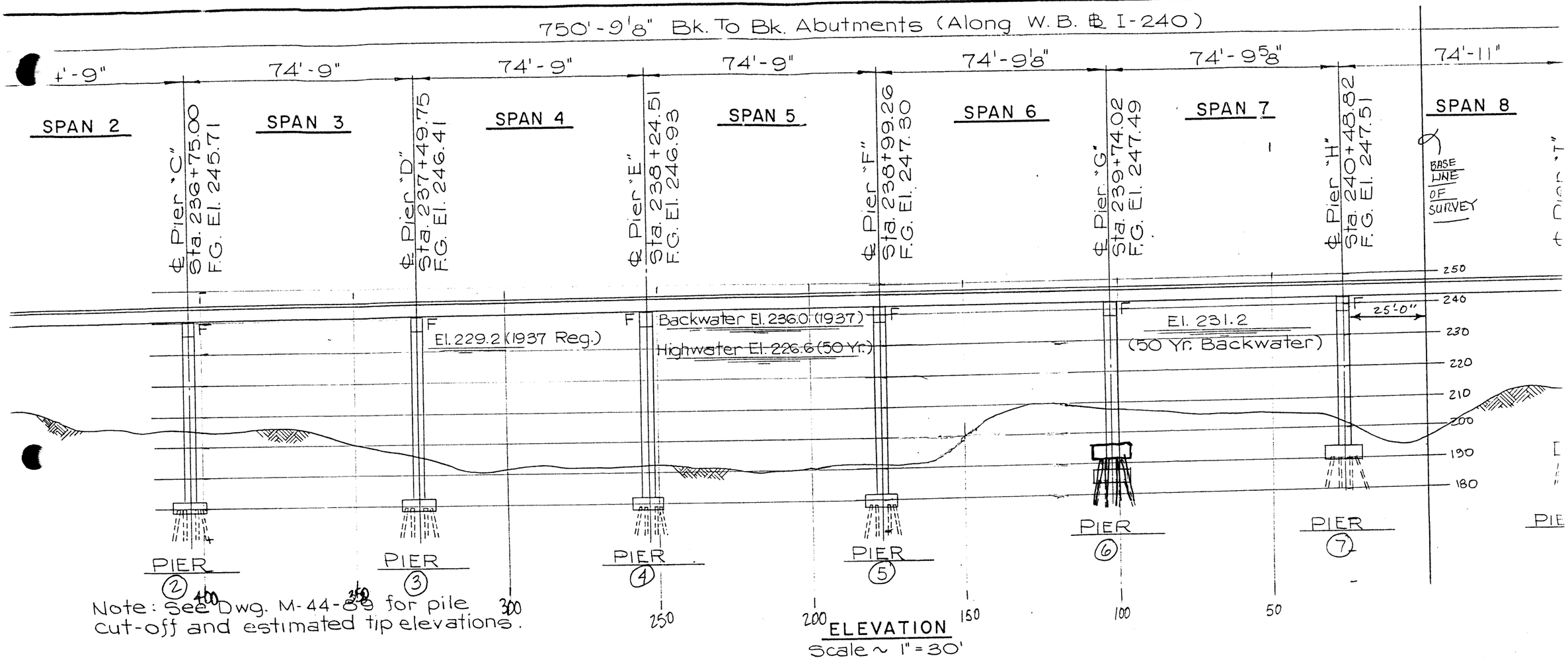
℄ Pier "G" Sta. 265+19.05

P.T. Crownline 36' Lt. Sta. 239+94.35 ℄ W.B. I-240

℄ Pier "H" Sta. 264+44.30

℄ Pier "I" Sta. 263+69.55

750'-9⅛" Bk. To Bk. Abutments (Along W.B. ℄ I-240)

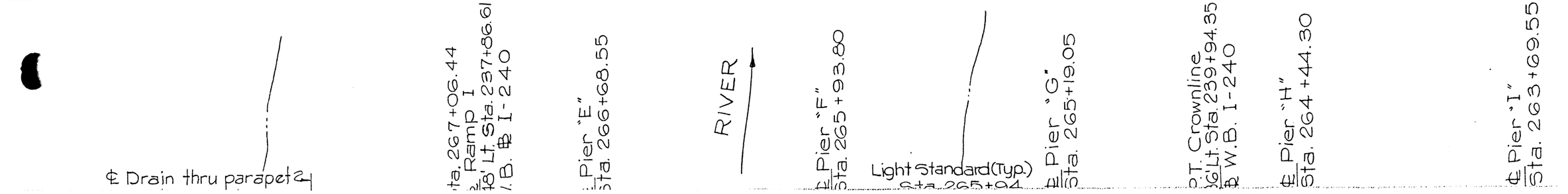


Note: See Dwg. M-44-89 for pile cut-off and estimated tip elevations.

ELEVATION
Scale ~ 1" = 30'

749'-6" Bk. To Bk. Abutments (Along ℄ Ramp I)

8 Spans At. 74'-9" = 598'-0"



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
P. O. BOX 429
JACKSON, TENNESSEE 38302-0429

April 30, 1997

Memorandum

TO: MR. PAUL SHARP, CIVIL ENGINEERING MANAGR I
Cindy Wacker FOR P
FROM: MR. BILL HAZLERIG, REGION BRIDGE ENGINEER

SUBJECT: **BRIDGE #79 - I0040 - 5.09L & R**

Please find enclosed scour notes on the above referenced structures. Also enclosed is a copy of the fax requesting this scour inspection footnoted with an explanation of the "reinforcing rods".

BH: csw

cc: File

RECEIVED
MAY 3 1997
D.O.T.
BRIDGE INSPECTION & REPAIR
PS

①

X-Sections

79-140-5.09 L & R

4-22-97

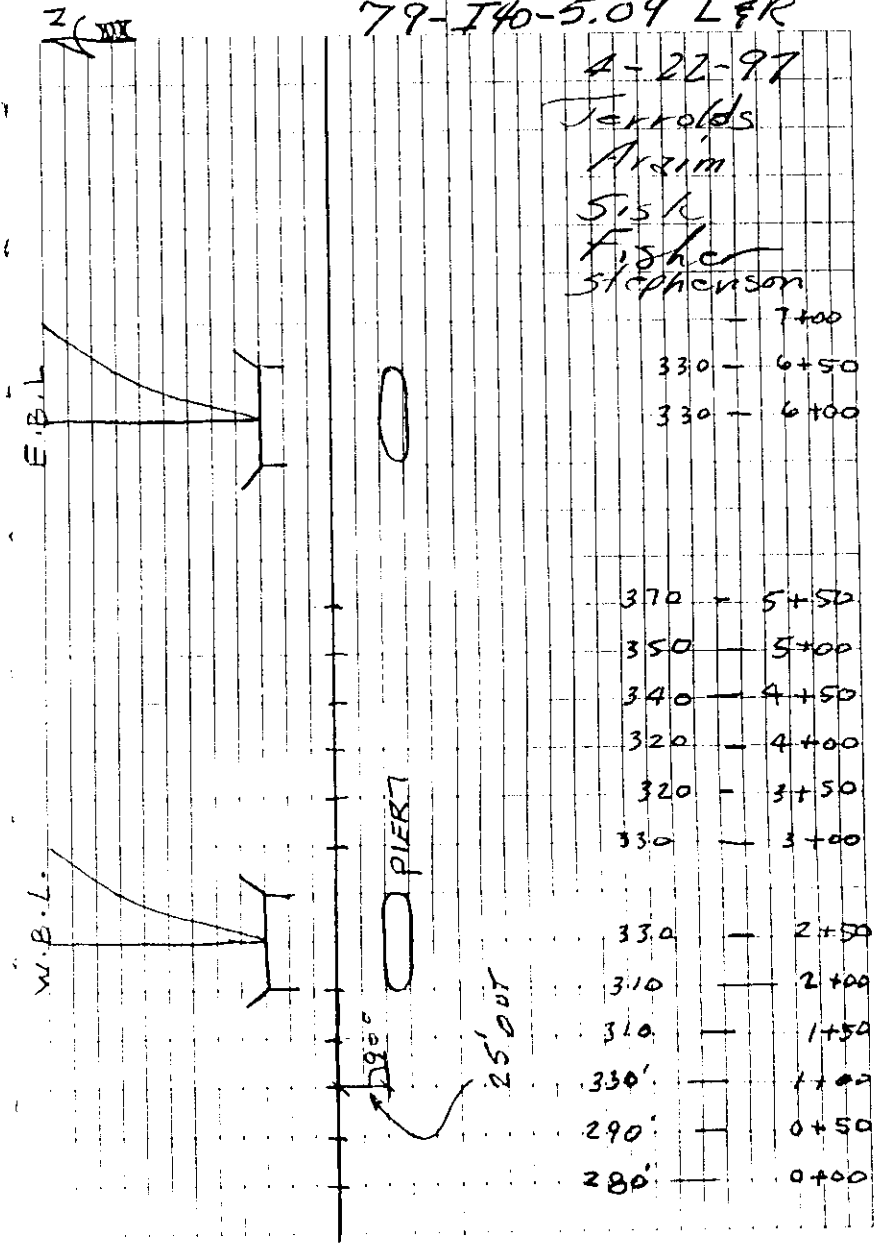
Jerrolds

Arain

Sisk

Fisher

Stephenson



4-22-97

② INVERTED ROD FROM R.R. 0.94

BM 217.25 BOTTOM OF PIER #7 STRUT LEFT BRIDGE

H.I. 216.31

Station	AT BASE LINE	Top Bank	EOW							
1+00	211.11 5.2 0.0	211.01 5.3 41.0	206.81 9.5 43.0	196.4 19.9/100	197.4 18.9/160	198.2 18.1/220	206.8 9.5/264 Edge water	207.2 9.1/313	209.1 7.2/322	208.9 7.4/350
0+50	210.71 5.6 0.0	211.61 4.7 38	206.81 9.5 40.6	195.4 20.9/100	196.4 19.9/160	197.6 18.7/220	206.8 9.5/279 Edge water	212.1 4.2/300 Edge old Bridge Abut.		
0+00	211.11 5.2 0.0	208.31 8.0 41.0	206.81 9.5 43.3	194.21 22.1 100	195.91 20.4 160	197.81 18.5 220	206.6 9.5/255 Edge Water	202.6 3.7/310	204.2 2.1/320 Edge Broken Conc	

(3)

Sta	B.S.	H.I.	F.S.	Elev.
	-1.71	215.54		217.25
1+50				
2+00				
2+50				

K-Fisher
M-[illegible]
P-[illegible]

4-25-97

Bottom Pier 7 Strict Lt. Bridge

1+50

Elev.	Rod / Dist.	Note
211.3	4.2 / 0.0	
210.0	5.5 / 34	
206.0	9.5 / 35	Edge water
195.4	20.1 / 95	
198.4	17.1 / 150	
197.9	17.6 / 210	
206.0	9.5 / 268	Edge water
207.7	7.8 / 300	
207.9	7.6 / 340	

2+00

Elev.	Rod / Dist.	Note
200.8	4.7 / 0.0	
210.0	5.5 / 28	
206.0	9.5 / 32	Edge water
198.1	17.4 / 70	
198.3	17.2 / 160	
199.2	16.3 / 225	
206.0	9.5 / 292	Edge water
208.5	7.0 / 303	
208.4	7.1 / 340	

2+50

Elev.	Rod / Dist.	Note
210.1	5.4 / 0.0	
211.3	4.2 / 25	
206.0	9.5 / 27	Edge water
196.7	18.8 / 90	
196.3	19.2 / 160	
199.2	16.3 / 225	
206.0	9.5 / 290	Edge water
208.2	7.3 / 330	
207.7	7.8 / 350	

4-25-97

(4)

Sta.	B.S.	H.I.	F.S.	F/(-)
		215.54		
3+00	5.2 / 0.0	210.3	3.8 / 27	211.7
	9.5 / 28 Edge water	206.0	19.1 / 90	196.4
	18.7 / 150	196.8	16.6 / 210	198.9
	9.5 / 280 Edge water	202.0	7.4 / 330	208.1
	7.5 / 350	208.0		
3+50	5.2 / 0.0	210.3	4.2 / 36	211.3
	9.5 / 37 Edge water	206.0	18.5 / 100	197.0
	17.9 / 160	197.1	16.5 / 220	199.0
	9.5 / 284 Edge water	202.0	7.4 / 320	204.4
	6.9 / 350	208.6		
4+00	5.2 / 0.0	210.3	4.0 / 39	211.5
	9.5 / #1 Edge water	206.0	17.8 / 100	197.7
	17.2 / 165	198.3	15.5 / 230	200.0
	9.5 / 298 Edge water	206.0	7.1 / 316	205.4
	7.0 / 350	208.5		
			+1.71	217.25

B.M. See Pg. 3 TIc = 0.00

⑤ 4-25-97

Sta	B.S.	H.I.	F.S.	Elev	
	-0.92	215.83		216.75	Bottom Pier 7 Strut (Rt. Bridge)
4+50					5.1/0.0 (210.7); 5.8/70 (210.0); 9.8/51 Edge Water (206.0); 15.4/110 (200.4); 19.1/170 (196.7); 16.5/235 (199.3); 9.8/303 Edge Water (206.0); 7.2/350 (208.6); 7.1/400 (208.7)
5+00					5.0/0.0 (210.8); 4.6/43 (211.2); 9.8/46 (206.0); 15.4/115 (200.4); 23.6/185 (192.2); 17.8/255 (198.0); 9.8/321 Edge Water (206.0); 7.1/360 (208.7); 7.3/400 (208.5)
5+50					4.9/0.0 (210.9); 4.4/37 (211.4); 9.8/39 Edge Water (206.0); 18.0/115 (197.8); 18.4/190 (197.4); 16.7/265 (199.1); 9.8/337 Edge Water (206.0); 7.6/370 (208.2); 7.5/400 (208.3)
			+0.92	216.75	Tie B.M. (See Above) T.E. = 0.00

4-25-97

⑥

Bottom Pier 7 Strut Rt. Bridge

Sta	B.S.	H.I.	F.S.	Elev.
	2.71	214.04		211.75
6+00				
6+50				
7+00				

4.9 / 0.0 209.1
2.4 / 42 211.6
8.0 / 48 Edge water 206.0
15.6 / 725 198.4
19.2 / 200 194.8
15.4 / 275 199.6
3.0 / 349 Edge water 206.0
3.5 / 378 210.5
5.4 / 410 208.6

6.0 / 0.0 208.0
4.4 / 68 209.6
8.0 / 78 Edge water 206.0
15.3 / 750 198.7
16.8 / 220 197.2
16.0 / 290 198.0
8.0 / 356 #29 water 206.0
3.3 / 380 210.7
5.1 / 410 208.8

6.2 / 0.0 207.8
5.8 / 50 208.2
3.9 / 100 210.1
8.0 / 104 Edge water 206.0
13.8 / 170 200.2
18.2 / 235 195.8
17.5 / 300 196.5
8.0 / 369 Edge water 206.0
2.9 / 389 211.1
4.4 / 420 209.6

Cont. Next Pg

4-25-97

① Sta	B.S.	H. I.	F.S	Elev
		214.04		
7+50				
			42.70	216.74

208.2 — 5.8 / 0.0

208.5 — 5.5 / 50

210.6 — 3.4 / 118

2060 — 1.3 / 176 Edge water

200.2 — 13.8 / 170

198.3 — 15.7 / 235

195.4 — 18.6 / 300 → In Line @ channel to Memphis Public Works

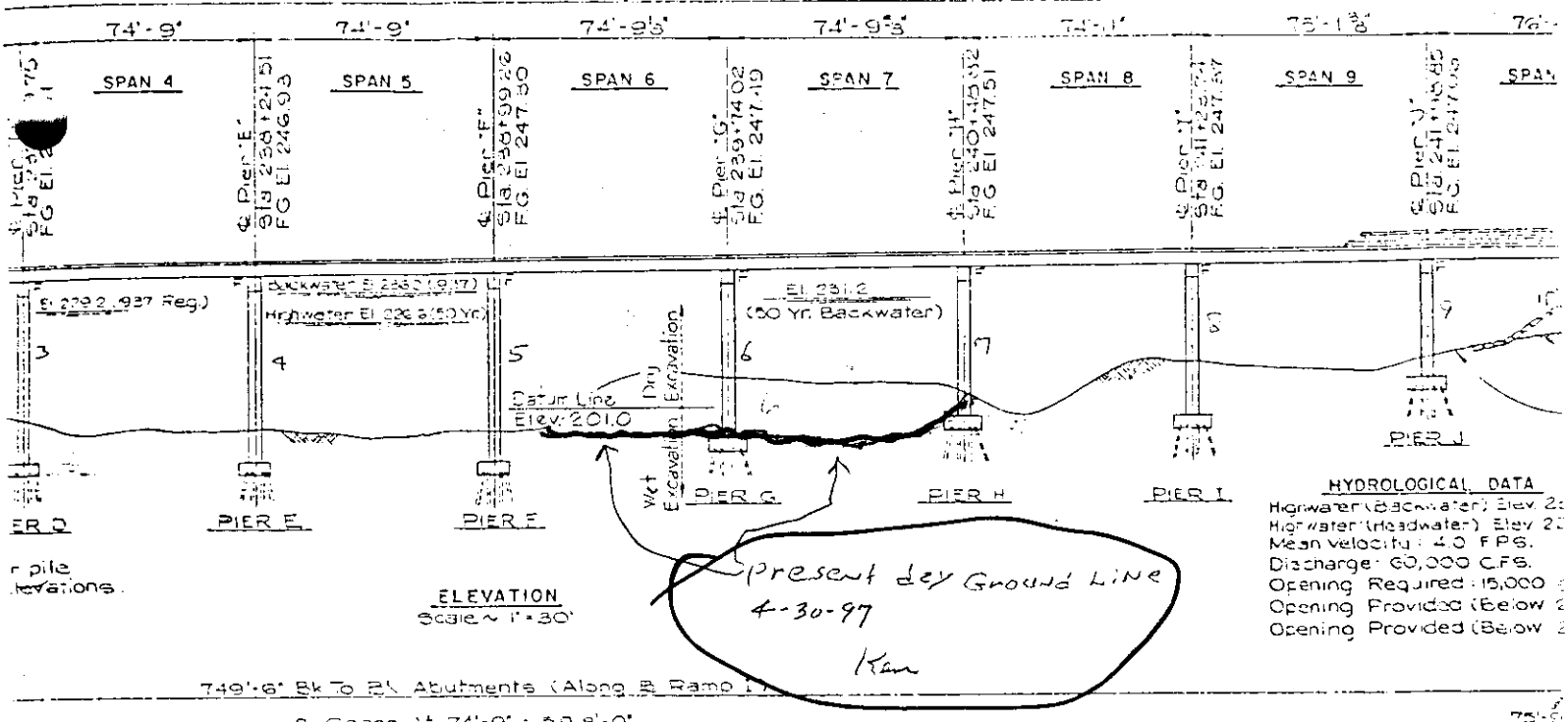
B.M. See Pg. 6

T.+ = -0.01

79-I40-5.09 Lt

APR 23 1997

750'-9 1/8" Bk. To Bk. Abutments (Along N.B. & I-240)



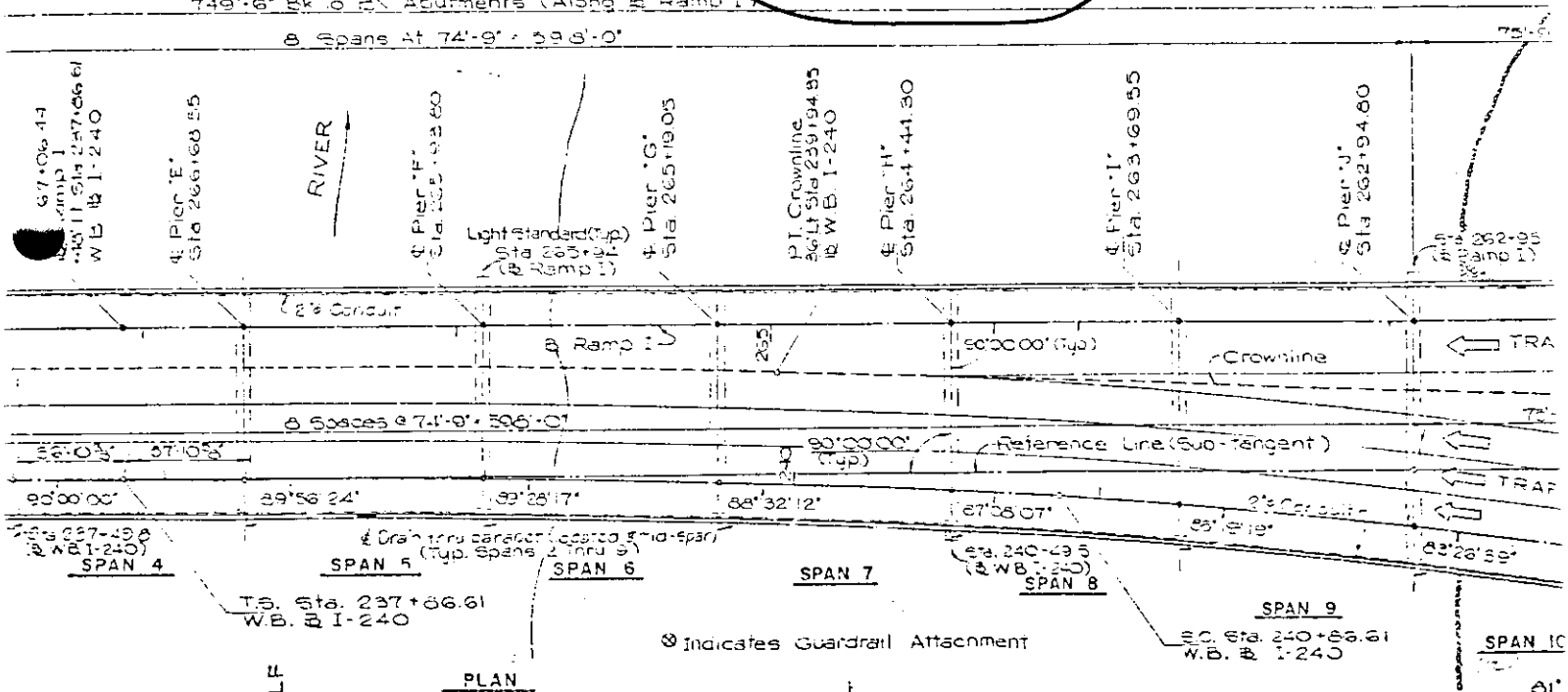
ELEVATION
Scale ~ 1" = 30'

HYDROLOGICAL DATA
Highwater (Backwater) Elev. 2
Highwater (Roadwater) Elev. 2
Mean velocity = 4.0 F.P.S.
Discharge = 60,000 C.F.S.
Opening Required = 15,000
Opening Provided (Below
Opening Provided (Below

Present day Ground Line
4-30-97
Ken

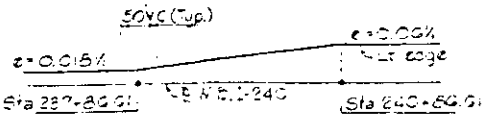
749'-6" Bk. To Bk. Abutments (Along B. Ramp I)

8 Spans At 74'-9" = 598'-0"



PLAN
Scale ~ 1" = 30'

WOLF

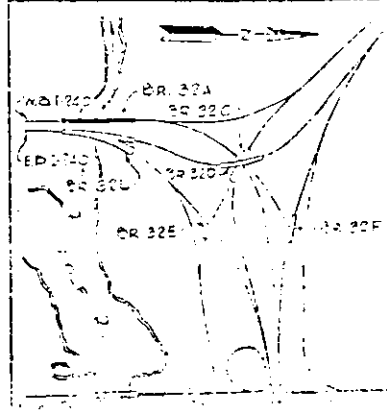


W.B. I-240 SUPERELEVATION DIAGRAM

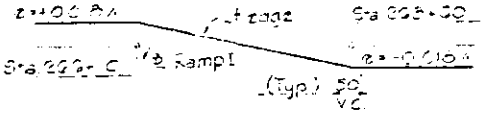
W. ℄ I-240 CURVE DATA
P.T. Sta 244+71.5
Δ = 19°-02'-58.5" (Rt.)
Dc = 2°-30'
R = 2291.83'
Lc = 761.88'
T = 384.54'

Es = 3"-45'
TLs = 200.04'
Tss = 100.04'
Ls = 300.00'

LOCATION SKETCH



PT Sta 241+50 El. 250.09



RAMP I SUPERELEVATION DIAGRAM

OFILE
finished grade

BIR 3.8A - USE FOR ANY BRIDGE WITH OBSERVED OR POTENTIAL SCOUR
Rev. 6-9-92
DT-1509

BRIDGE LOC. NO. 79 (CO.) - I90 (RTE.) - 5.09L (L.M.) DATE APR 2 8 1997

STREAM CHANNEL DATA AND CONDITIONS

STREAM CROSSING: Wolf River

I. SCOUR LOCATIONS:

	LOCATED IN CHANNEL	NOT IN CHANNEL	FAILED RIP-RAP	SOLID ROCK	COBBLE	GRAVEL	SAND	SILT	CLAY	NOT VISIBLE	SCOUR ABOVE FOOTING	FOOTING EXPOSED	PILES EXPOSED	UNDER SPREAD FOOTING	SLIGHT SCOUR (<= 1')	MODERATE SCOUR	SEVERE SCOUR
	CHANNEL BED MATERIAL										PIER & ABUTS				PIL BEN		
1. ABUT/PIER/BENT 4	✓		X			✓			✓	X				X			
2. ABUT/PIER/BENT 5	✓		X			✓			✓	X				X			
3. ABUT/PIER/BENT 6	✓		X			✓			✓	X	✓			X			
4. ABUT/PIER/BENT 7	✓		X			✓			✓	X	✓			X			
5. ABUT/PIER/BENT			X							X				X			
6. ABUT/PIER/BENT			X							X				X			
7. ABUT/PIER/BENT			X							X				X			

II. HAS THE CHANNEL SHIFTED? (CHECK ANSWER)

LATERALLY				VERTICALLY			
NO MOVEMENT	[ ]	NOT APPARENT	[ ]	NO MOVEMENT	[✓]	NOT APPARENT	[ ]
SLIGHT (<=1')	[✓]	MODERATE	[ ]	SLIGHT(<=1')	[ ]	MODERATE	[ ]
SEVERE (> 5')	[ ]			SEVERE(> 5')	[ ]		

III. ARE EMBANKMENT OR APPROACH SUBSTRUCTURE BEING THREATHENED BY BANK FAILURE? YES [✓] NO [ ]

IV. CHANNEL AND BANK STABILITY CONDITIONS: (CHECK IF APPLICABLE)

(1) STEEP BANK - FAILURES UPSTREAM [ ] DOWNSTREAM [ ]
CONDITIONS
(2) MODERATE BANK EROSION [✓]
(3) BANK VEGETATION (A) LOW GROWTH [ ] (B) LARGE TIMBER [✓]
(C) DEAD TREES [✓] (D) CLEAR BANKS [✓]
(4) SEDIMENT OR GRAVEL ACCUMULATION: YES [ ] NO [✓] UNKNOWN [ ]
(5) CHANNEL ALTERED OR STRAIGHTENED: YES [ ] NO [✓] UNKNOWN [ ]
(6) STABLE CONDITIONS: (A) LIVE GROWTH [ ] (B) BEDROCK [ ]
(C) BOULDERS [ ] (D) FLAT SLOPES [ ]
(< = 2:1)

BIR 3.8B - USE FOR ANY BRIDGE WITH OBSERVED OR POTENTIAL SCOUR
Rev. 6-9-92
DT-1509

BRIDGE LOC. NO.: 79 (CO.) - E40 (RTE.) - 5.07L (L.M.) DATE: APR 2 8 1997

STREAM CHANNEL DATA AND CONDITIONS (CON'T)

V. Waterway adequacy and debris characteristics: (check if applicable

(1) Bridge deck elevation:
(a) level with approach roadway . . . . . [✓]
(b) higher than approach roadqay . . . . . [ ]
(c) roadway approach >=2' above natural ground line . [✓]

(2) Abutment encroaches into channel . . . . . [ ]

(3) Large scour (blowhole) under bridge . . . . . [ ]

(4) Indications that flood waters overtop bridge:
NO [✓] YES [ ] ->OCCASIONALLY [ ] FREQUENTLY [ ] UNKNOW [ ]

(5) Debris characteristics:
(a) debris present: YES [✓] NO [ ]
(b) debris likely to accumulate: YES [✓] NO [ ]
(c) dead trees upstream: [✓] or downstream [✓]

VI. Condition of rip-rap? G F P C Est. % failed: ____ N/A: [✓]

VII. Underwater diver inspection recommended? YES [✓] NO [ ]

VIII. Overall condition of channel? G F (P) C

IX. Item 61 - Code values 0 thru 9 according to the recording and coding guide currently in effect: 4

X. Comments: Channel has moved from original position 110'±, toward Abut. #2. Bent #617 now located in channel, with ground line close to footing.

* *

SPECIAL INSPECTION DATA
(FOR REASONS OTHER THAN FC OR SCOUR)

I. Does this bridge need a special inspection? YES [ ] NO [X]

II. Reason for special inspection: _____

REV. 07-01-91

DATE APR 2 8 1997

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.09L (LOG MILE)

~~BENT~~/PIER NO. 4

TOTAL HEIGHT (TOP OF CAP TO BOTTOM OF FOOTING) : 61.09 ℄(P)

FOOTING THICKNESS (t) : 4.0 ℄(P)

(TOP OF CAP TO TOP OF FOOTING) W/FTG @ H = : 57.09 ℄(P)

TOP OF CAP TO TOP OF WATER : 36.1'

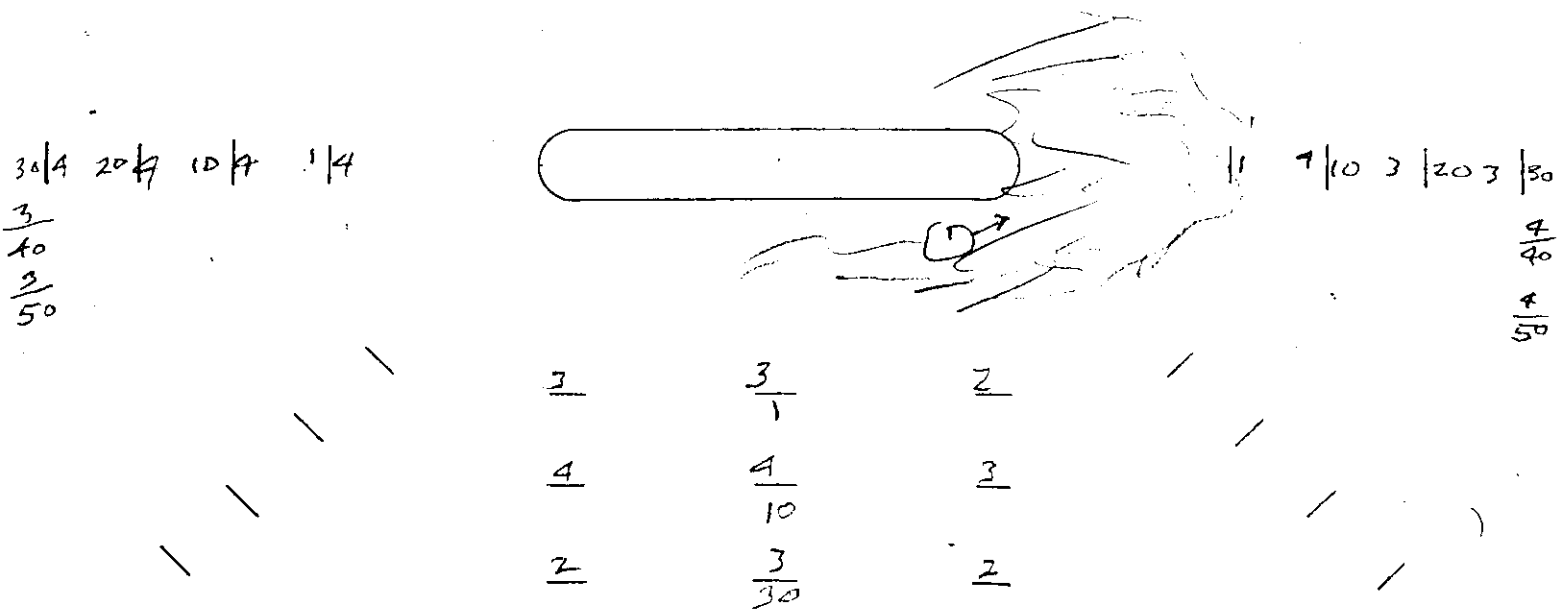
WATER DEPTH TO TOP FOOTING : ____

SCOUR : (G) F P C
DRIFT : G (F) P C
see (1)
MAXIMUM EXPOSURE 40.1

(1) = under water drift

DIRECTION OF ROUTE

5	5/40	4
5	6/30	4
4	6/20	5
4	6/10	4
4	9/1	9



SHOW DIRECTION OF FLOW

REV. 07-01-91

DATE APR 2 8 1997

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.09L (LOG MILE)

BENT/PIER NO. 5

SCOUR : F P C
DRIFT : G R P C see ①
MAXIMUM EXPOSURE 43.5'

TOTAL HEIGHT (TOP OF CAP TO BOTTOM OF FOOTING) : 61.67 ℄(P)

FOOTING THICKNESS (t) : 4.0 ℄(P)

(TOP OF CAP TO TOP OF FOOTING) W/FTG @ H = : 57.67 ℄(P)

TOP OF CAP TO TOP OF WATER : 36.5

WATER DEPTH TO TOP FOOTING : ____

① = under water drift

DIRECTION OF ROUTE

DISTANCE			
DEPTH			
6	6	6	
	40		
6	6	6	
	30		
6	5	6	
	20		
6	5	6	
	10		
7	6	4	
	1		
5	5	—	
	1		
5	5	5	
	10		
5	5	4	
	20		
5	5	4	
	30		
5	5	4	
	90		

30|6 20|6 10|6 1|6 — 5|1 5|10 5|20

6/40 6/50 — 5/30 5/40 5/50

SHOW DIRECTION OF FLOW

REV. 07-01-91

DATE APR 28 1997

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.09L (LOG MILE)

BENT/PIER NO. 6

SCOUR : G F P C see ①
DRIFT : G F P C

MAXIMUM EXPOSURE 42.5

TOTAL HEIGHT (TOP OF CAP TO BOTTOM OF FOOTING) : 51.51 ℄(P)

FOOTING THICKNESS (t) : 4.5 ℄(P)

(TOP OF CAP TO TOP OF FOOTING) W/FTG @ H = : 47.01 ℄(P)

TOP OF CAP TO TOP OF WATER : 36.5

WATER DEPTH TO TOP FOOTING : ____

① Scour Rated Poor due to Movement of Channel.

DIRECTION OF ROUTE

9	8 (40)	7
9	7 (30)	7
8	8 (20)	7
6	6 (10)	6
5	6 (1)	6

30|8 20|6 10|5 -|6

6 |- 5|10 7|20

9/40
9/50

7/30
7/40
7/50

6	6 (1)	5
5	5 (10)	6
7	7 (20)	7
6	7 (30)	7
—	(46)	—

DEPTH / DISTANCE

SHOW DIRECTION OF FLOW

BRIDGE NO. 79 I40 5.09 Lt. APR 28 1997

DATE _____

TOTAL HEIGHT:
(TOP OF CAP TO BOTTOM OF FTG.) 50.20

BENT/PIER NO. 7

FOOTING THICKNESS (t): 4.5

SCOUR: G F ① C

DRIFT: ② F P C

TOP OF CAP TO TOP OF FTG.: 42.67 Ahead

MAXIMUM EXPOSURE

TOP OF CAP TO TOP OF WATER: 36.5'

40.0

WATER DEPTH TO TOP OF FTG.: _____

DEPTH / DISTANCE

① Channel has moved dir. Route 110' ±, in to Bent # 7.

② Ground Line close to toe of footing

DIR. OF FLOW

Pier # 7

	2.0 / 1	3.5
3.5'	4.2'	6.8
	10	
9	8	7
	20	
8	7	7
	30	
9	8	7
	40	

Bank

BANK PROTECTION ADDED 5/98

flow

REV. 07-01-91

DATE : APR 28 1997

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.09L (LOG MILE)

BENT/PIER NO. _____

SCOUR : G F ~~P~~ C → see ①
DRIFT : G ~~F~~ P C
MAXIMUM EXPOSURE : _____

TOTAL HEIGHT (TOP OF CAP TO BOTTOM OF FOOTING) : 61.67' ℄

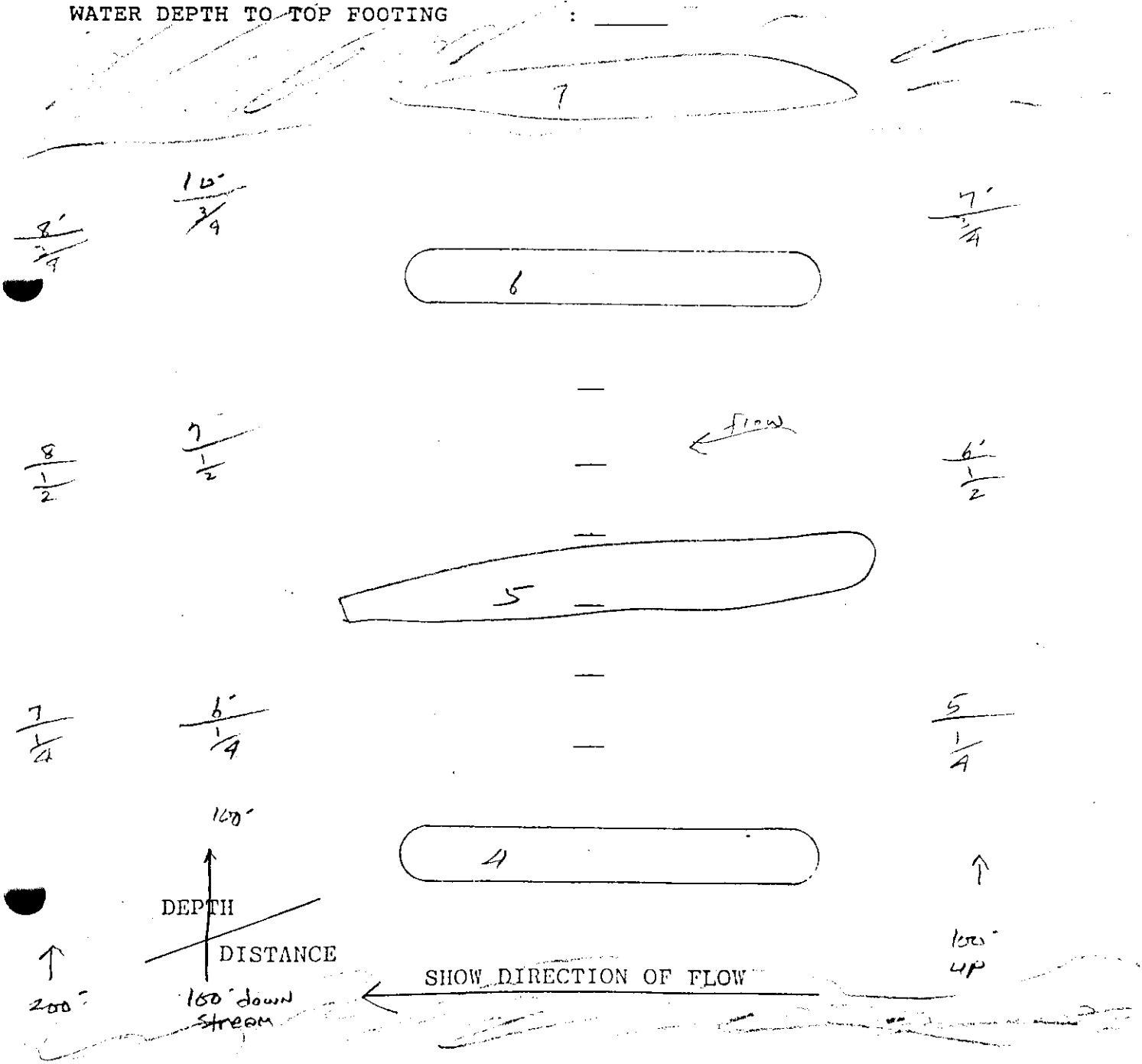
FOOTING THICKNESS (t) : 4.0' ℄

(TOP OF CAP TO TOP OF FOOTING) W/FTG @ H = : 57.67 ℄

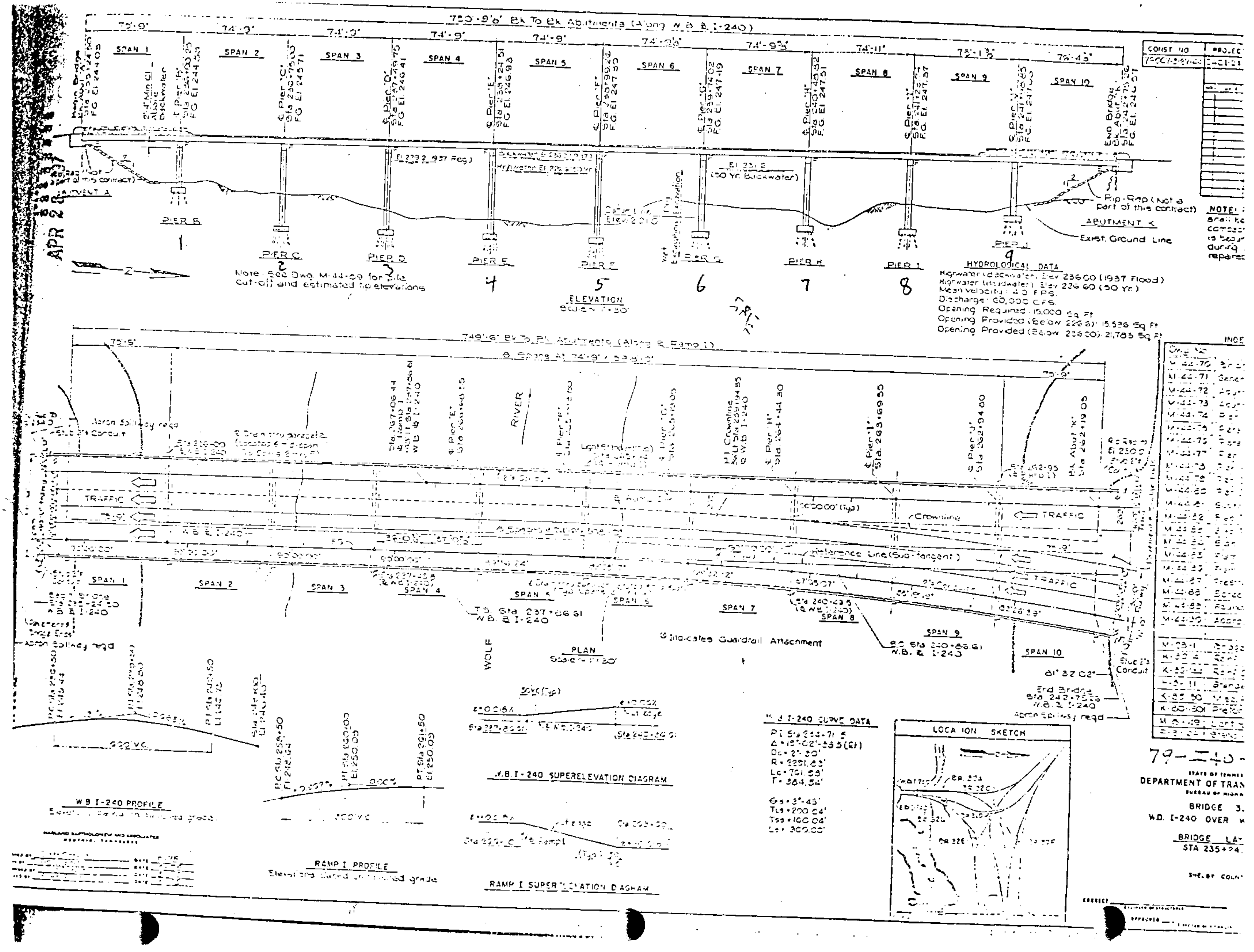
TOP OF CAP TO TOP OF WATER : _____

WATER DEPTH TO TOP FOOTING : _____

① Scour Rated Poor due to movement of channel. Channel has moved 110'± toward Bent # 2. Ground Line close to footing at Bent # 6 & 7



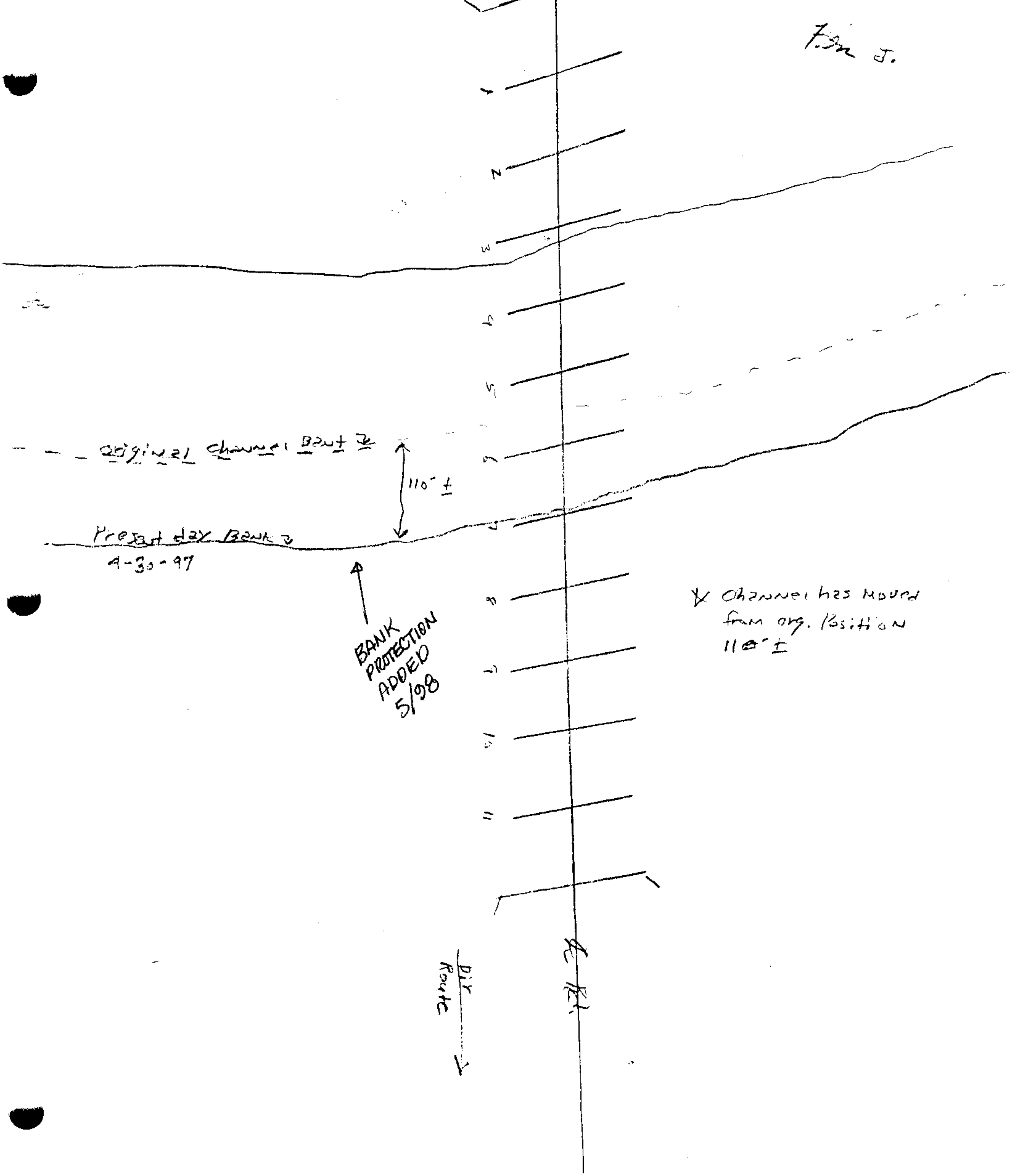
DIRECTION OF ROUTE



750'-9½" Bk To Bk Abutments (Along W.B. & I-240)
SPAN 1
SPAN 2
SPAN 3
SPAN 4
SPAN 5
SPAN 6
SPAN 7
SPAN 8
SPAN 9
SPAN 10
Begin Bridge Bk Abut "A" Sta 235+24.50 FG El 244.05
2'-4" Min Cl Above Backwater
℄ Pier "C" Sta 236+75.00 FG El 245.71
℄ Pier "D" Sta 237+49.75 FG El 246.41
℄ Pier "E" Sta 238+24.51 FG El 246.93
℄ Pier "F" Sta 238+99.26 FG El 247.50
℄ Pier "G" Sta 239+74.02 FG El 247.19
℄ Pier "H" Sta 240+48.82 FG El 247.51
End Bridge Bk Abut "K" Sta 242+75.26 FG El 246.57
El 229.2 (1937 Flood)
(50 Yr Backwater)
Rip-Rap (Not a Part of this contract)
ABUTMENT A
ABUTMENT K
Exist. Ground Line
PIER B
PIER C
PIER D
PIER E
PIER F
PIER G
PIER H
PIER I
PIER J
Note: See Dwg. M-44-89 for pile cut-off and estimated tip elevations
ELEVATION
Scale: 1"=30'
HYDROLOGICAL DATA
Highwater (Backwater): Elev 236.00 (1937 Flood)
Highwater (Headwater): Elev 226.60 (50 Yr)
Mean Velocity: 4.0 FPS
Discharge: 60,000 CFS
Opening Required: 15,000 Sq Ft
Opening Provided (Below 226.6): 15,536 Sq Ft
Opening Provided (Below 236.00): 21,785 Sq Ft
NOTE:
749'-6" Bk To Bk Abutments (Along ℄ Ramp I)
RIVER
WOLF
TRAFFIC
Crowline
Reference Line (Sub-Tangent)
P.I. Crowline Sta 239+94.85 W.B. I-240
℄ Pier "H" Sta 264+44.30
℄ Pier "I" Sta 263+69.55
℄ Pier "J" Sta 262+94.80
Bk Abut "K" Sta 262+19.05
T.S. Sta 237+86.61 W.B. ℄ I-240
Apron Spillway reqd
Indicates Guardrail Attachment
PLAN
Scale: 1"=30'
End Bridge Sta 242+75.26 W.B. ℄ I-240
W.B. I-240 PROFILE
RAMP I PROFILE
W.B. I-240 SUPERELEVATION DIAGRAM
RAMP I SUPERELEVATION DIAGRAM
W.B. I-240 CURVE DATA
LOCATION SKETCH
79-I40-
STATE OF TENNESSEE
DEPARTMENT OF TRAN
BRIDGE 3.
W.B. I-240 OVER W
BRIDGE LA
STA 235+24.
SHELBY COUNTY

79-I40-5.09Lt.

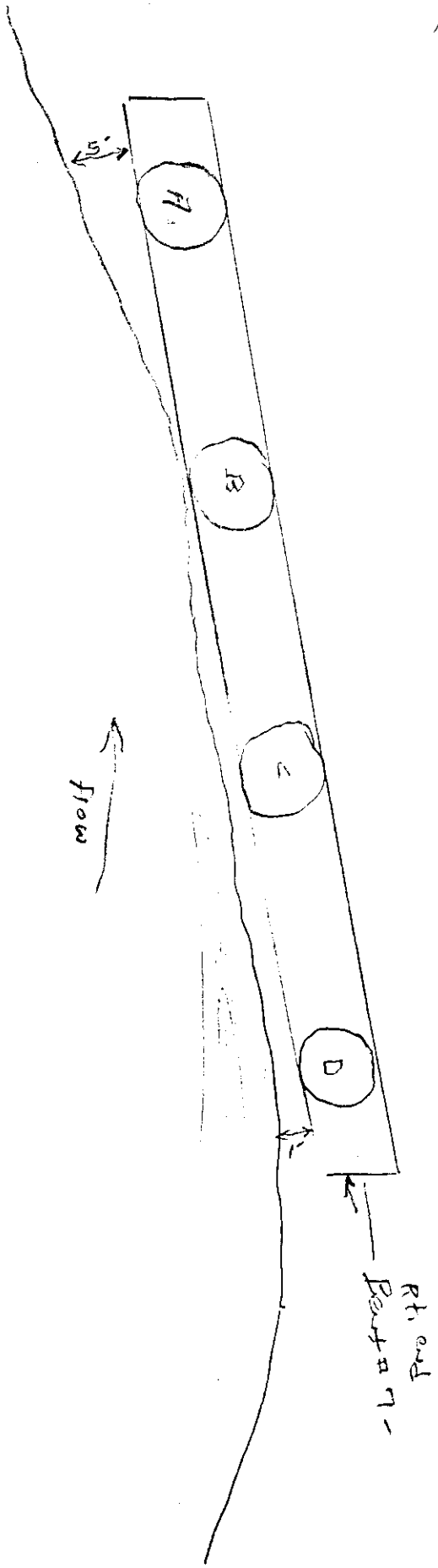
APR 28 1997



79-I40-5109Ct.

APR 28 1997
Bent #7

Ken J.



Channel has moved dir. of Route down 100' from its orig. Position. the channel has now washed into Bent # 7.

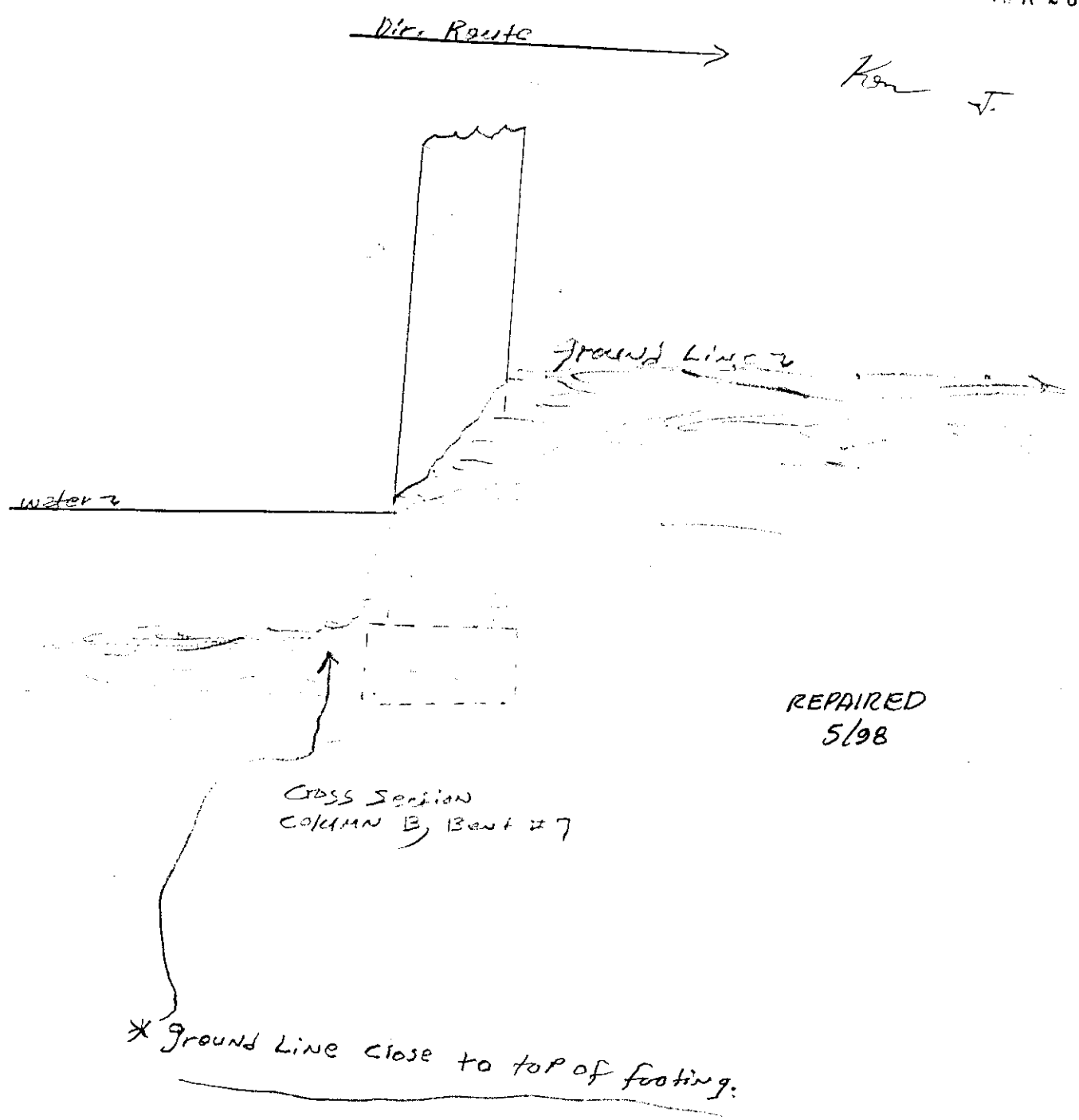
Bent # 7 was not designed to be located in the channel

REPAIRED 5/98

79-I40-5.094

Bent # 7

APR 2 8 1997



INSPECTION TEAMS' SUMMARY

APR 23 1997

BRIDGE # 79 I40 5.09

A scour check shows the channel to be moving toward Abut. # 2, It has moved 110'± from original Position to Bent # 7. also the ground line is close to the footing around B # 7.

This is a Poor Br. due to scour @ Bent # 7. ← REPAIRED 5/98

Ken [illegible]

* Steel sheet Piles up stream 100'± in middle of channel, may cause movement of channel under Br.

APR 2 8 1997

BRIDGE INSPECTION REPORT

FORM BIR 3.0
Rev. 6-9-92
DT-0069

FIELD REPORT NO.: _____ DATE: 4-18-97
PREVIOUS REPORT NO.: _____ DATE: ____
PLANS----- YES [X] NO [ ]

BRIDGE NO.: 79I0040C0060
ELEVEN DIGIT NUMBER

BRIDGE LOC. NO.: 79 (CO.) -I40 (RTE.) -5.09 (L.M.)

79 (CO.) -I-40 (RTE.) -5.09 (L.M.) OVER Wolf River

STRUCTURE NAME (if named)

YEAR CONSTRUCTED _____ (ESTIMATED OR ACTUAL) [ ] [ ]
COUNTY Shelby
MAINTENANCE DISTRICT NO. 45

YEAR WIDENED _____ ESTIMATED OR ACTUAL [ ] [ ]

YEAR REHABILITATED _____ ESTIMATED OR ACTU [ ] [ ]

FEATURES

WEARING SURFACE---CONCRETE [ ] TIMBER [ ] ASPHALT [ ] (DEPTH = ___")
FLARED WIDTH----------YES [ ] NO [ ]
NAVIGATIONAL CONTROL---YES [ ] NO [ ]
MEDIAN TYPE----------OPEN [ ] NONE [ ] CLOSED [ ]

BRIDGE SKEW 90°

STRUCTURE TYPE CIS (Main Span) NO. SPANS 10 (Main Span)

STRUCTURE TYPE _____ (Approach Spans) NO. SPANS _____ (Approach Spans)

MAXIMUM SPAN LENGTH _____ TOTAL LENGTH _____

INSPECTORS

1. Jerrolds
2. Sisk
3. Fisher
4. Stephenson
5. _____
6. _____
7. _____
8. _____
9. _____

WIDTHS

DECK OUT-TO-OUT ____
ROADWAY CURB-TO-CURB ____
SIDEWALK ____RT ____LT
*APPROACH ROADWAY ____
APPR. SHOULDER __RT ___LT

*DOES NOT INCLUDE SHOULDERS

CLEARANCES

MIN. VERTICAL OVER DECK __
MIN. VERTICAL UNDER CL. __
MIN. LATERAL UNDER CL. __RT __LT

UNDERWATER INSPECTION

INSPECTION PERFORMED BY:
DOT FIELD TEAM [ ] DATE _____
CONTRACT DIVERS [ ] DATE _____
NONE REQUIRES [ ]

(< 25FT.)
NBIS BRIDGE LENGTH _____ (FT.) (INCHES)

FRACTURE CRITICAL DETAILS: YES [ ] NO [ ]
IF YES, INCLUDE BIR 3.9

CHANGE IN STRUCTURAL CONDITION YES [ ] NO [X]
MAJOR REPIARS MADE YES [ ] NO [X]

COMMENTS: _____

BRIDGE RATING [ ] [ ] [X] [ ]
GOOD FAIR POOR CRITICAL

Kenneth Jenaga
SUPERVISING BRIDGE INSPECTOR

APR 2 8 1997

REV. : 07/29/93

DATE : ____ /____ /_

PAGE NUMBER : ___ OF

BRIDGE NUMBER : 79 (COUNTY) - I-40 (ROUTE) - 5.09 L (LOG MILE)

ABUT/BENT PIER NUMBER	TOTAL HEIGHT TOP OF CAP TO -- BOTTOM OF FOOTING (OR GROUND LINE / DATE FOR PILES)	(t) FOOTING THICKNESS * Plans - Yes	W/FTG @ H. = TOP OF CAP TO TOP OF FOOTING		EXPOSURE
A-1	(Center Line)			℄	
P-1	40.9	4.0	37.2 L 36.7 R	36.9	
P-2	54.7	4.0	51.0 L 50.5 R	50.7	
P-3	58.46	4.0	56.69 L 56.23 R	54.41	
P-4	61.00	4.0	57.41 L 56.71 R	57.00	40.1'
P-5	61.67	4.0	58.20 L 57.14 R	57.67	43.5'
P-6	51.51	4.0	48.00 L 46.03 R	47.21	42.5'
P-7	50.20	4.5	48.74 L 45.67 R	45.71	40.0'
P-8	53.1	4.5	[illegible]	[illegible]	
P-9	50.54	4.5	48.31 L 44.34 R	46.33	
A-2					

TOP OF CAP TO TOP OF WATER : 36.5 Bent #5, 6 & 7

100.00' UPSTREAM : 43.5'

THRU STRUCTURE : 44.5'

100.00' DOWNSTREAM : 46.5'

RIP - RAP : YES [ ] NO : X

@ BENT / PIER NO. : _____

COMMENTS :

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
P. O. BOX 429
JACKSON, TENNESSEE 38302-0429

August 27, 1996

M E M O R A N D U M

TO: Mr. Paul Sharp, Civil Engineering Manager I

FROM: Mr. Bill Hazlerig, Regional Bridge Engineer
Phillip Hazlerig FOR

SUBJECT: Scour Information (Bridge #79 - I0040- 05.09L)

Please find enclosed Scour Information you requested on the above referenced bridge.

BWH: cw

cc: File

8/26/96

RECEIVED

AUG 29

D.O.T.
BRIDGE INSPECTION & REPAIR

INSPECTION TEAMS' SUMMARY

BRIDGE # 79 I40 509L

A scour check of Bents 4, 5, & 7 shows little change since last INSP. -- the channel is moving into Bent # 7. No Repair has been Made since Last INSP. --- the scour is still Poor.

Ken Jewkes

REPAIRED
5/98

RECEIVED

8/26/96

BRIDGE INSPECTION REPORT

FORM BIR 3.0 AUG 29 1996
Rev. 6-9-92
DT-0069 D.O.T.
BRIDGE INSPECTION & REPAIR

FIELD REPORT NO.:________ DATE: 8-26-?
PREVIOUS REPORT NO.:________ DATE:____
PLANS----- YES [X] NO [ ]

BRIDGE NO.: 79I00400060
ELEVEN DIGIT NUMBER

BRIDGE LOC. NO.: 79 - I40 - 5.09
CO. RTE. L.M.

79 - I-40 - 5.09 OVER Wolf River
CO. RTE. L.M.

________ STRUCTURE NAME (if named)

YEAR CONSTRUCTED ______ COUNTY Shelby MAINTENANCE DISTRICT NO. 45
(ESTIMATED OR ACTUAL)
[ ] [ ]

YEAR WIDENED ________
ESTIMATED OR ACTUAL
[ ] [ ]

YEAR REHABILITATED ________
ESTIMATED OR ACTUA
[ ] [ ]

FEATURES

WEARING SURFACE---CONCRETE [ ] TIMBER [ ] ASPHALT [ ] (DEPTH = ___")
FLARED WIDTH-----------YES [ ] NO [ ]
NAVIGATIONAL CONTROL---YES [ ] NO [ ]
MEDIAN TYPE-----------OPEN [ ] NONE [ ] CLOSED [ ]

BRIDGE SKEW 90°

STRUCTURE TYPE CIB
Main Span

NO. SPANS 10
Main Span

STRUCTURE TYPE ________
Approach Spans

NO. SPANS ________
Approach Spans

MAXIMUM SPAN LENGTH ________ TOTAL LENGTH ________

INSPECTORS

1. Jernigan
2. [illegible]
3. Corbin
4. Fisher
5. Sh[illegible]
6.
7.
8.
9.

WIDTHS

DECK OUT-TO-OUT ____
ROADWAY CURB-TO-CURB ____
SIDEWALK ____ RT ____ LT
*APPROACH ROADWAY ____
APPR. SHOULDER ____ RT ____ LT

*DOES NOT INCLUDE SHOULDERS

CLEARANCES

MIN. VERTICAL OVER DECK ____
MIN. VERTICAL UNDER CL. ____
MIN. LATERAL UNDER CL. ____ RT
____ LT

UNDERWATER INSPECTION

INSPECTION PERFORMED BY:
DOT FIELD TEAM [ ] DATE________
CONTRACT DIVERS [ ] DATE________
NONE REQUIRES [ ]

(< 25FT.)
NBIS BRIDGE
LENGTH ________
(FT.) (INCHES)

FRACTURE CRITICAL
DETAILS: YES [ ] NO [ ]
IF YES, INCLUDE BIR 3.9

CHANGE IN STRUCTURAL CONDITION YES [ ] NO [X]
MAJOR REPIARS MADE YES [ ] NO [X]

COMMENTS:
Scour Check Culv[illegible]

BRIDGE RATING [ ] GOOD [ ] FAIR [X] POOR [ ] CRITICAL

[signature]
SUPERVISING BRIDGE INSPECTOR

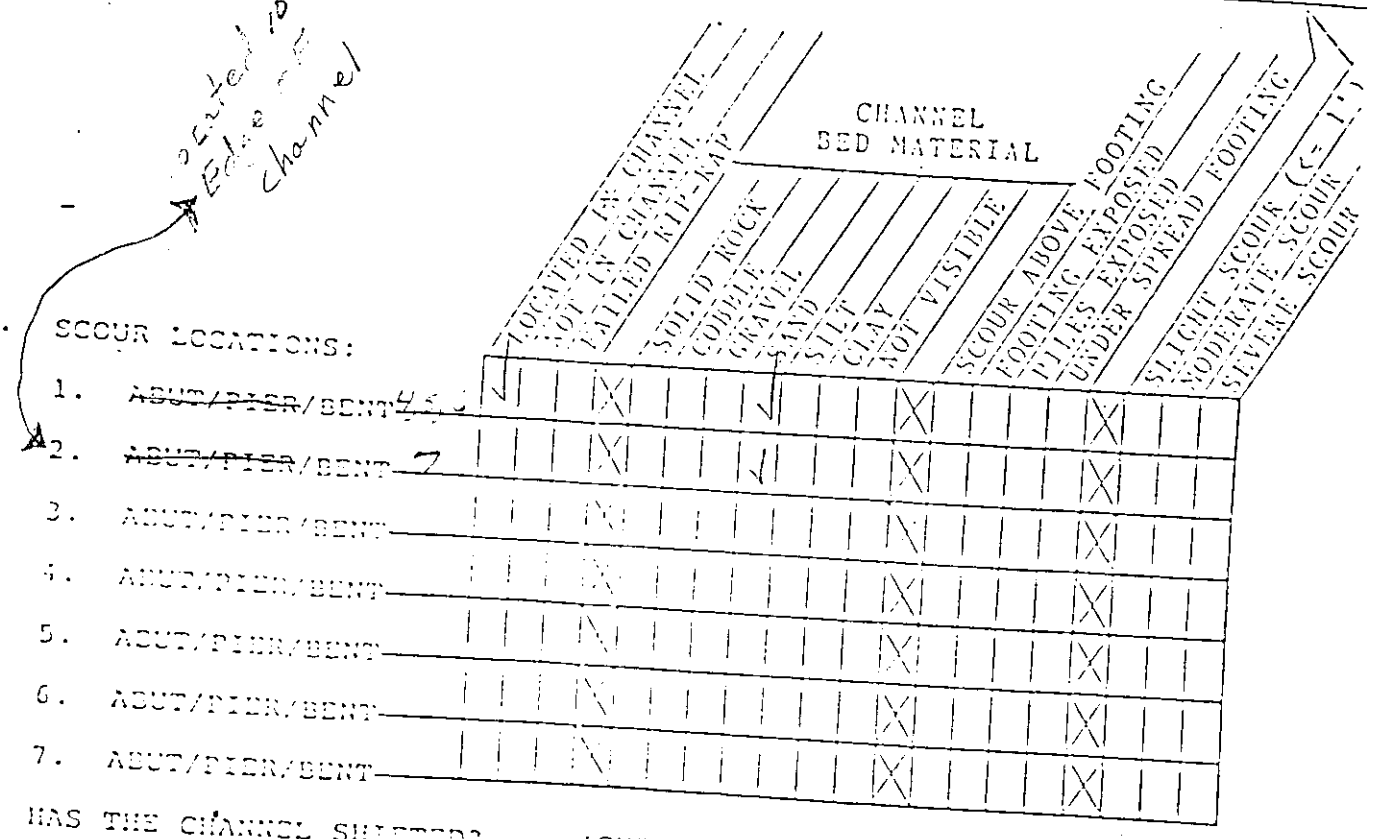
BIR 3.8A - USE FOR ANY BRIDGE WITH OBSERVED OR POTENTIAL SCOUR
Rev. 6-9-92
DT-1509

BRIDGE LOC. NO. 79 - I0040 - 0509 L
CO. RTE. L.M.

DATE 8-26-96

STREAM CHANNEL DATA AND CONDITIONS

STREAM CROSSING:



I. SCOUR LOCATIONS:

II. HAS THE CHANNEL SHIFTED? (CHECK ANSWER)

LATERALLY				VERTICALLY			
NO MOVEMENT	[ ]	NOT APPARENT	[ ]	NO MOVEMENT	[ ]	NOT APPARENT	[
SLIGHT (<=1')	[ ]	MODERATE	[ ]	SLIGHT(<=1')	[ ]	MODERATE	[
SEVERE (> 5')	[✓]			SEVERE(> 5')	[✓]		

III. ARE EMBANKMENT OR APPROACH SUBSTRUCTURE BEING THREATENED BY BANK FAILURE? YES [✓] NO [ ]

IV. CHANNEL AND BANK STABILITY CONDITIONS: (CHECK IF APPLICABLE)

(1) STEEP BANK - FAILURES UPSTREAM [ ] DOWNSTREAM [ ]
CONDITIONS
(2) MODERATE BANK EROSION [✓]
(3) BANK VEGETATION (A) LOW GROWTH [✓] (B) LARGE TIMBER [✓]
(C) DEAD TREES [ ] (D) CLEAR BANKS [ ]
(4) SEDIMENT OR GRAVEL ACCUMULATION: YES [ ] NO [✓] UNKNOWN [ ]
(5) CHANNEL ALTERED OR STRAIGHTENED: YES [ ] NO [✓] UNKNOWN [ ]
(6) STABLE CONDITIONS: (A) LIVE GROWTH [✓] (B) BEDROCK [ ]
(C) BOULDERS [ ] (D) FLAT SLOPES [ ]
(< = 2:1)

BIR 3.8B - USE FOR ANY BRIDGE WITH OBSERVED OR POTENTIAL SCOUR
Rev. 6-9-92
DT-1509

BRIDGE LOC. NO.: 79 (CO.) -I0040 (RTE.) -0509 L (L.M.) DATE: 8-26-96

STREAM CHANNEL DATA AND CONDITIONS (CON'T)

V. Waterway adequacy and debris characteristics: (check if applicable

(1) Bridge deck elevation:
(a) level with approach roadway . . . . . [ ]
(b) higher than approach roadway . . . . . [ ]
(c) roadway approach >=2' above natural ground line . [✓]

(2) Abutment encroaches into channel . . . . . [ ]

(3) Large scour (blowhole) under bridge . . . . . [ ]

(4) Indications that flood waters overtop bridge:
NO [✓] YES [ ] ->OCCASIONALLY [ ] FREQUENTLY [ ] UNKNOW [ ]

(5) Debris characteristics:
(a) debris present: YES [✓] NO [ ]
(b) debris likely to accumulate: YES [✓] NO [ ]
(c) dead trees upstream: [ ] or downstream [ ]

VI. Condition of rip-rap: G (F) P C Est. % failed: ___ N/A: [ ]

VII. Underwater diver inspection recommended? YES [✓] NO [ ]

VIII. Overall condition of channel? G (F) P C

IX. Item 61 - Code values 0 thru 9 according to the recording and coding guide currently in effect: 3

X. Comments: Bent # 5 & 6 have Large Drifts
Bent # 4, 5, & 6 Located in channel
Bent # 7 Located on Edge of Channel

* *

SPECIAL INSPECTION DATA
(FOR REASONS OTHER THAN FC OR SCOUR)

I. Does this bridge need a special inspection? YES [ ] NO [✓]

II. Reason for special inspection: ___

REV. : 07/29/93

DATE : 8 / 26 / 96

PAGE NUMBER : ___ OF ___

BRIDGE NUMBER : 79 (COUNTY) - I-40 (ROUTE) - 5.09 L (LOG MILE)

ABUT/BENT PIER NUMBER	TOTAL HEIGHT TOP OF CAP TO -- BOTTOM OF FOOTING (OR GROUND LINE / DATE FOR PILES)	(t) FOOTING THICKNESS Plans - Yes	W/FTG @ H = TOP OF CAP TO TOP OF FOOTING		EXPOSURE Rt. end Bent
A-1	(Center Line)			℄	
P-1	40.9	4.0	37.2 L 36.7 R	36.9	
P-2	54.7	4.0	51.0 L 50.5 R	50.7	
P-3	58.46	4.0	56.69 L 56.23 R	54.46	
P-4	61.09	4.0	57.41 L 56.76 R	57.09	43.6'
P-5	61.67	4.0	58.20 L 57.14 R	57.67	45.0'
P-6	51.51	4.0	48.00 L 46.03 R	47.01	45.2'
P-7	50.20	4.5	48.74 L 46.67 R	45.70	
P-8	53.11	4.5	50.39 L 46.83 R	48.61	
P-9	50.82	4.5	48.31 L 44.31 R	46.32	
A-2					

TOP OF CAP TO TOP OF WATER (Bent # 6) : 43.6'

100.00' UPSTREAM : 46.0'

THRU STRUCTURE : 46.2'

100.00' DOWNSTREAM : 45.5'

RIP - RAP : YES [ ] NO : [ ]
@ BENT / PIER NO. : ___
Unable to tell due to drift in soil and boat.

COMMENTS :

REV. 07-01-91

DATE 8-26-96

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.091 (LOG MILE)

~~BENT~~/PIER NO. 4

TOTAL HEIGHT
(TOP OF CAP TO BOTTOM OF FOOTING) : 61.09 ± (P)

FOOTING THICKNESS (t) : 4.0 ft (P)

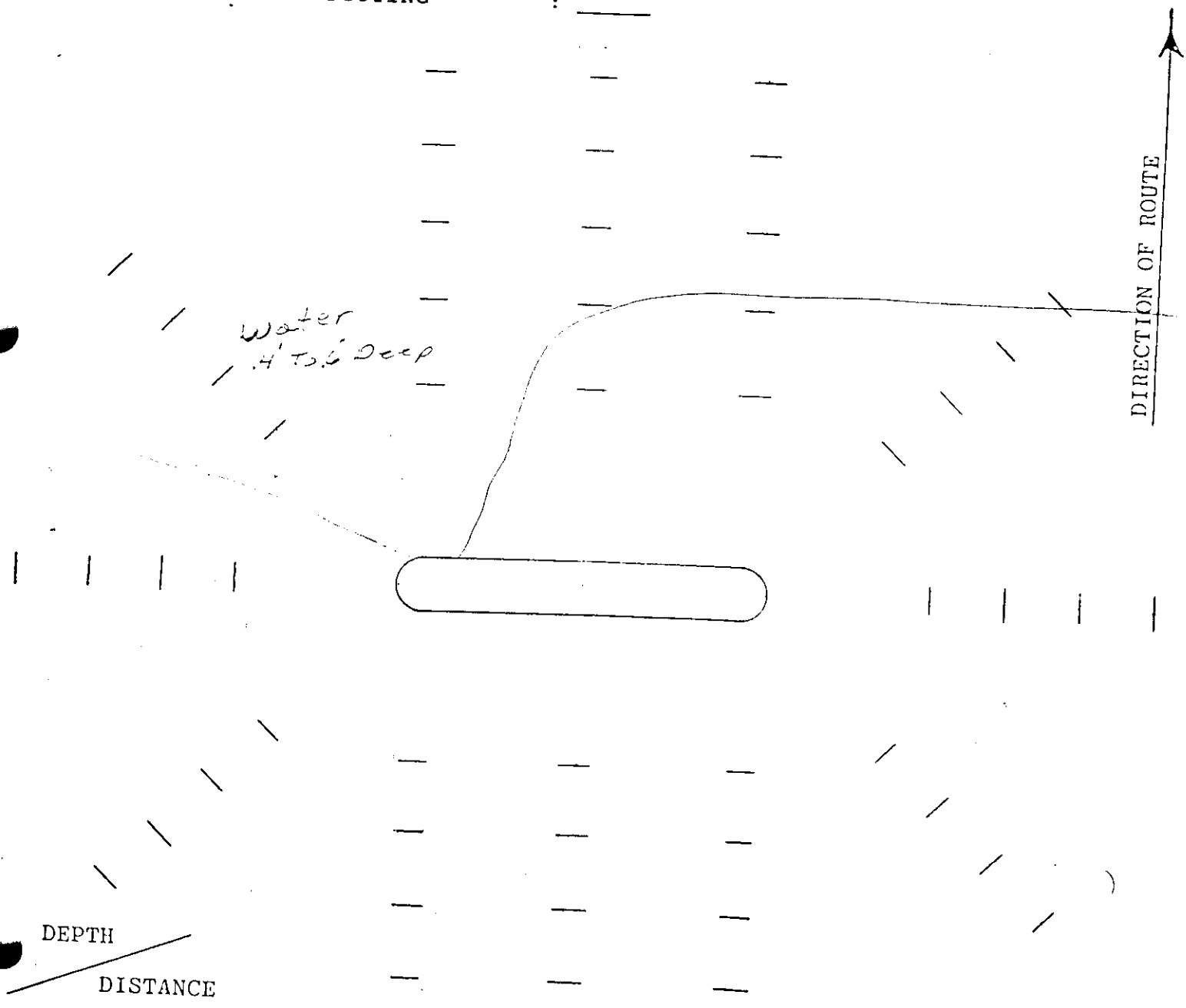
(TOP OF CAP TO TOP OF FOOTING)
W/FTG @ H = : 57.09 ± (P)

TOP OF CAP TO TOP OF WATER : 43.0'

WATER DEPTH TO TOP FOOTING : ____

SCOUR : G (P) C
DRIFT : (G) F P C

MAXIMUM EXPOSURE 43.1
Corbin



REV. 07-01-91

DATE 8-26-96

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.09L (LOG MILE)

BENT/PIER NO. 5

TOTAL HEIGHT (TOP OF CAP TO BOTTOM OF FOOTING) : 61.67 2(P)

FOOTING THICKNESS (t) : 4.0 2(P)

(TOP OF CAP TO TOP OF FOOTING) W/FTG @ H = : 57.67 2(P)

TOP OF CAP TO TOP OF WATER : 43.0'

WATER DEPTH TO TOP FOOTING : ____

SCOUR : G F (E) C

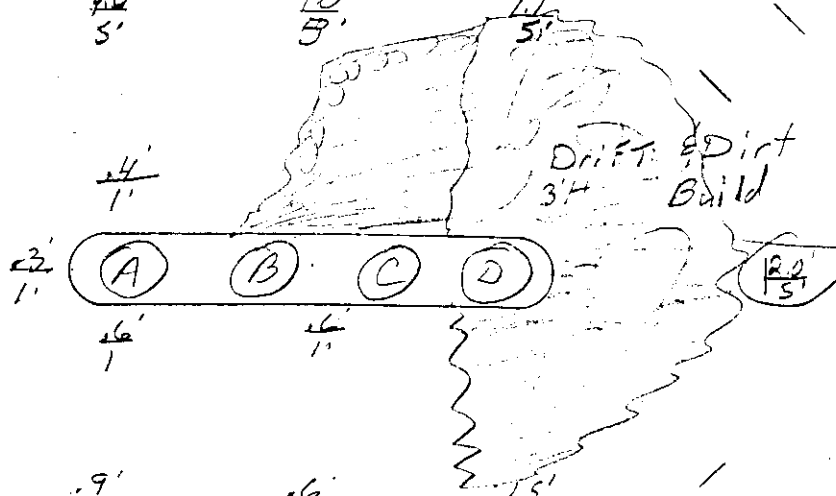
DRIFT : G F (E) C see (1)

MAXIMUM EXPOSURE 45.0'

Corbin-note
Sisk - Rod
Fisher - Boat

(1) Large drift around Bent

DIRECTION OF ROUTE



DEPTH / DISTANCE

SHOW DIRECTION OF FLOW

REV. 07-01-91

DATE 8-26-96

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.09L (LOG MILE)

BENT/PIER NO. 6

TOTAL HEIGHT (TOP OF CAP TO BOTTOM OF FOOTING) : 51.51 ℄(P)

FOOTING THICKNESS (t) : 4.5 ℄(P)

(TOP OF CAP TO TOP OF FOOTING) W/FTG @ H = : 47.01 ℄(P)

TOP OF CAP TO TOP OF WATER : 43.2'

WATER DEPTH TO TOP FOOTING : ____

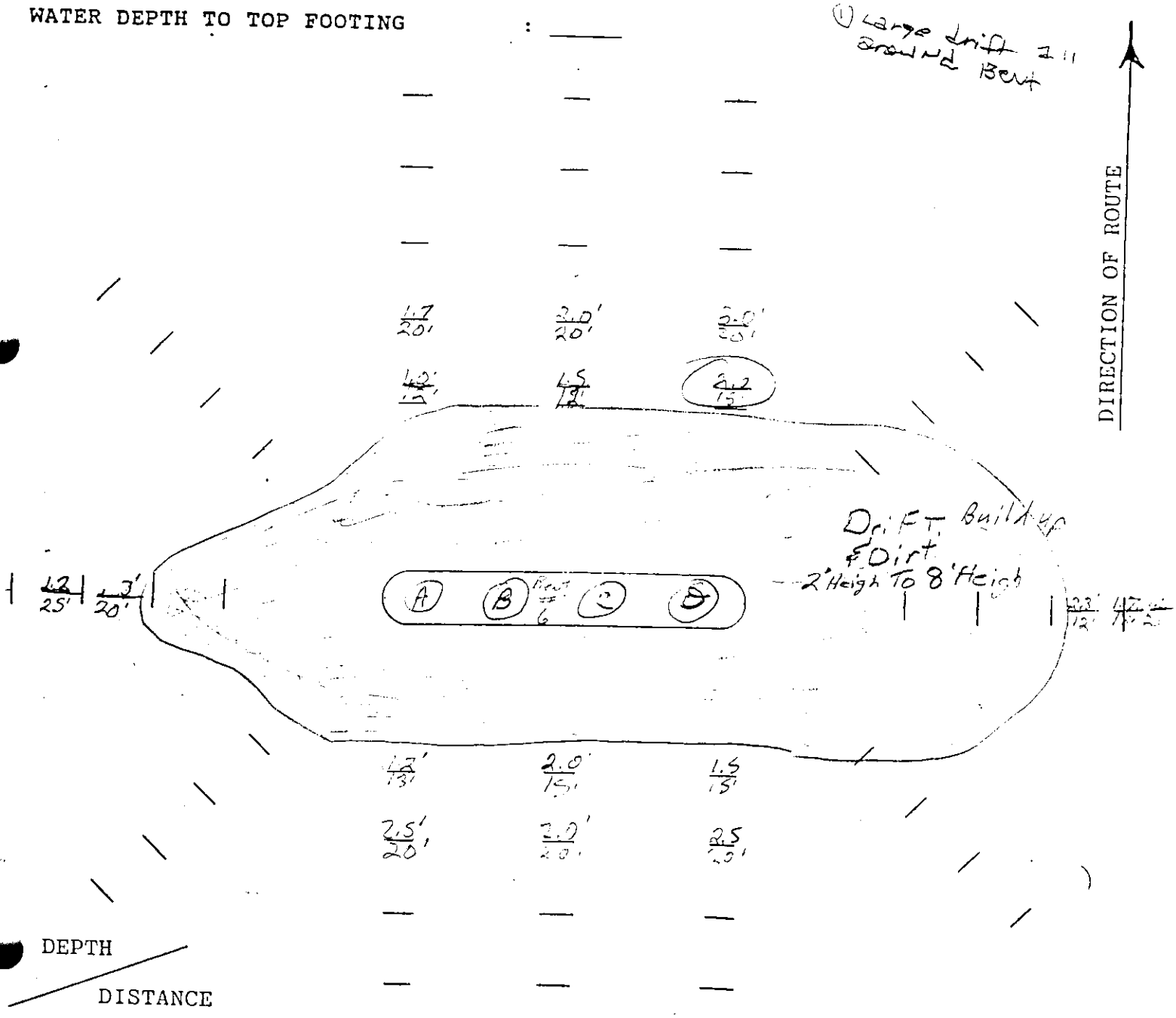
SCOUR : G F P C

DRIFT : G F P C → Scour

MAXIMUM EXPOSURE 45.2'

Corbin - N. to

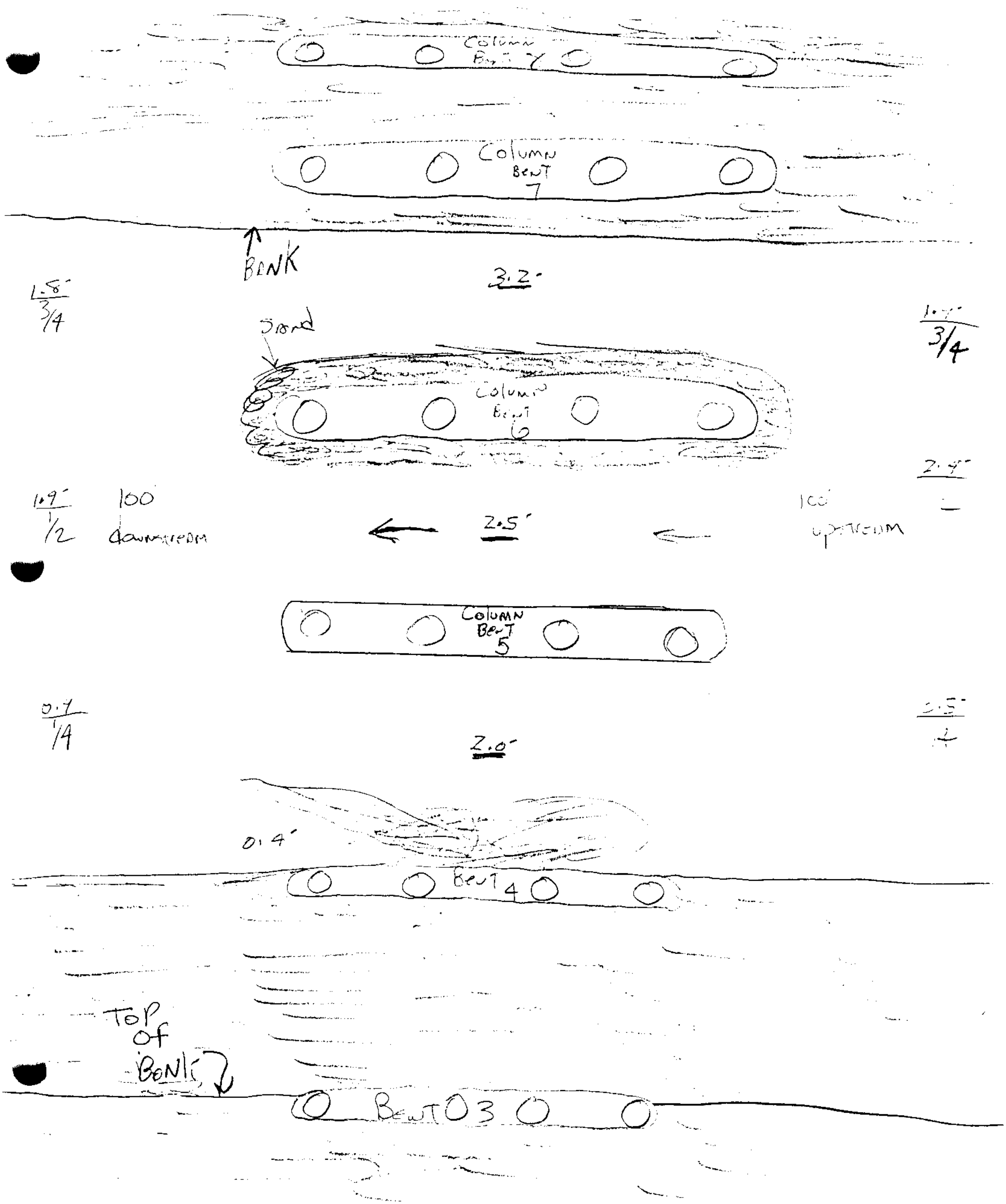
① Large drift all around Bent



SHOW DIRECTION OF FLOW

1-4 I 40 5.094

8-26-96

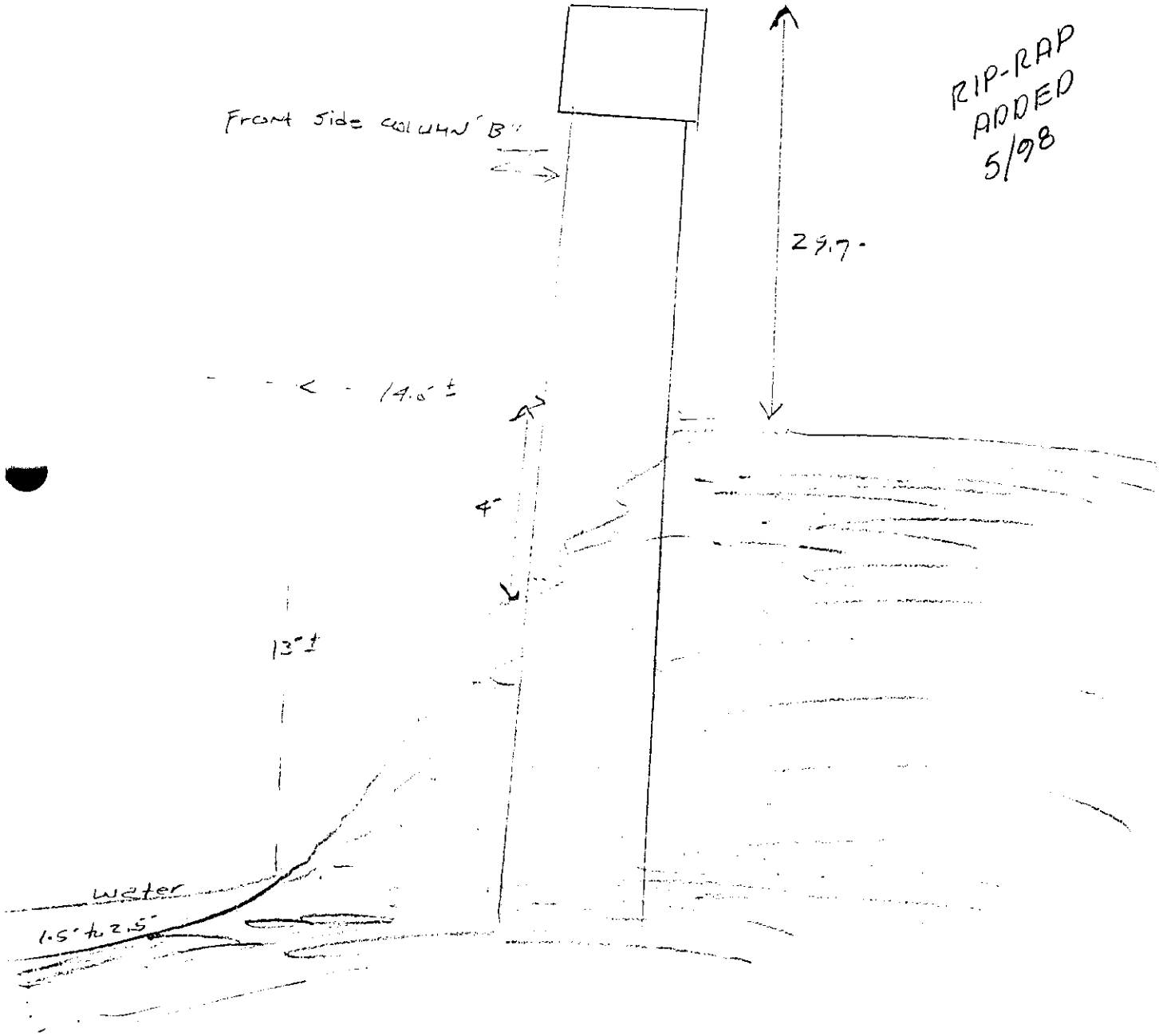


79-I40-5.09L

8-26-96

Bent # 7

Scour Poor channel cutting into Bent # 7.
No Protection from scour.



BRIDGE NO. 19 I90 5.07L

DATE 8/26/96

TOTAL HEIGHT:
(TOP OF CAP TO BOTTOM OF FTG.) 50.20' ℄(P) BENT/PIER NO. 7

FOOTING THICKNESS (t): 4.5' ℄(P) SCOUR: G F (E) C (D)

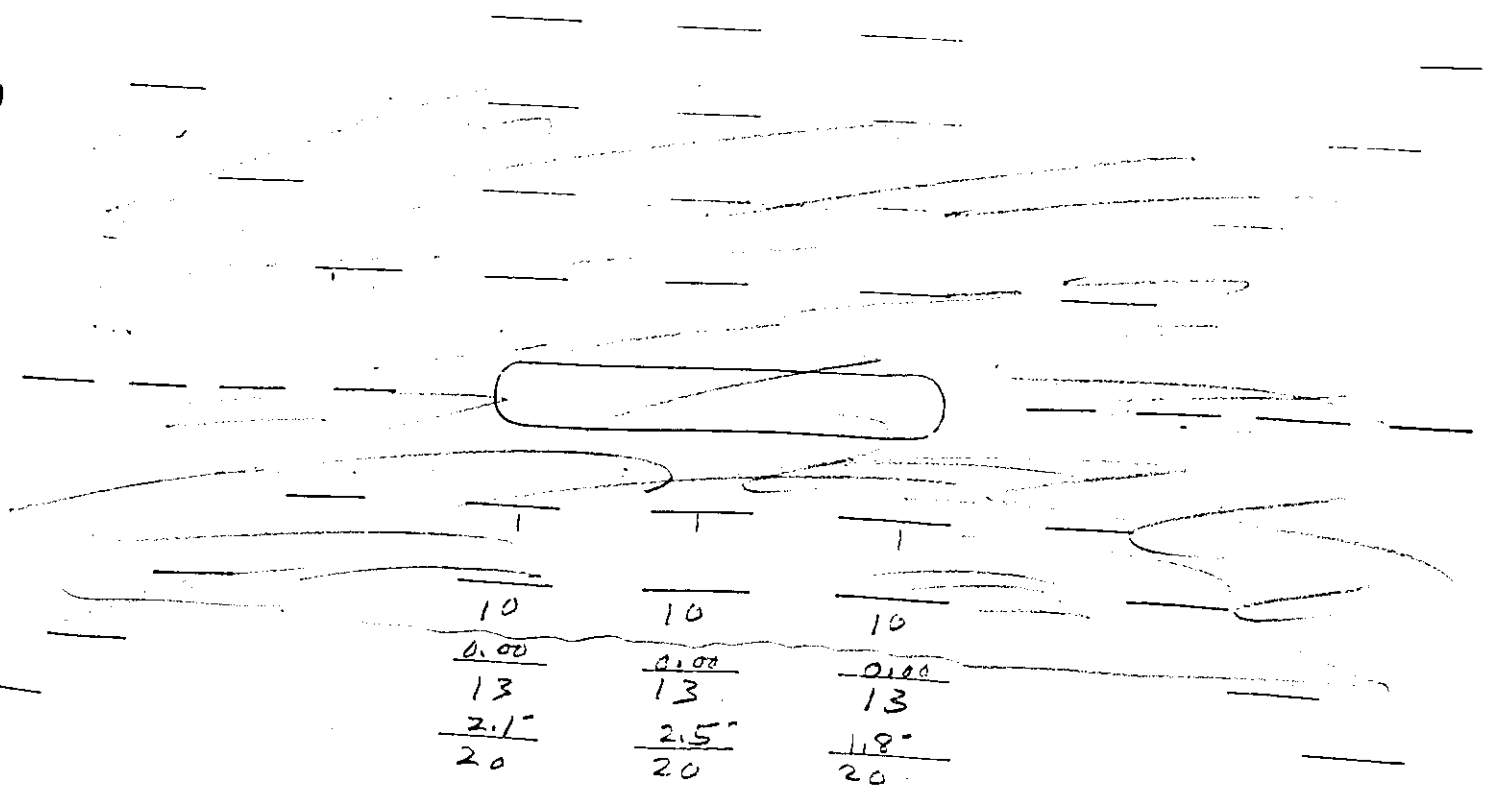
TOP OF CAP TO TOP OF FTG.: 45.70 ℄(P) DRIFT: (G) F P C

TOP OF CAP TO TOP OF WATER: 43.0' MAXIMUM EXPOSURE 334'

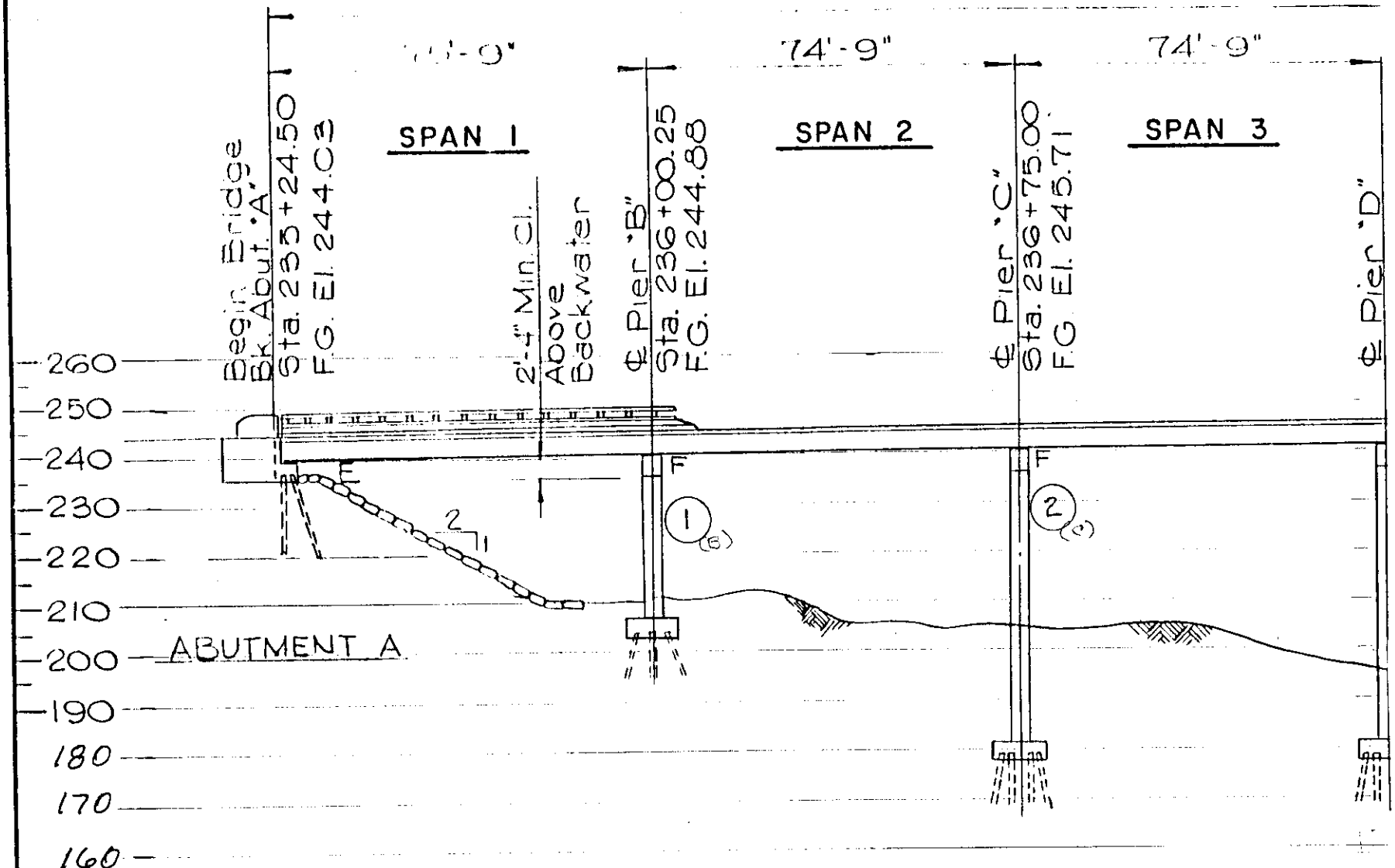
WATER DEPTH TO TOP OF FTG.: _____

DEPTH
DISTANCE

DIR. OF FLOW: ① Channel moving North into Bent 7

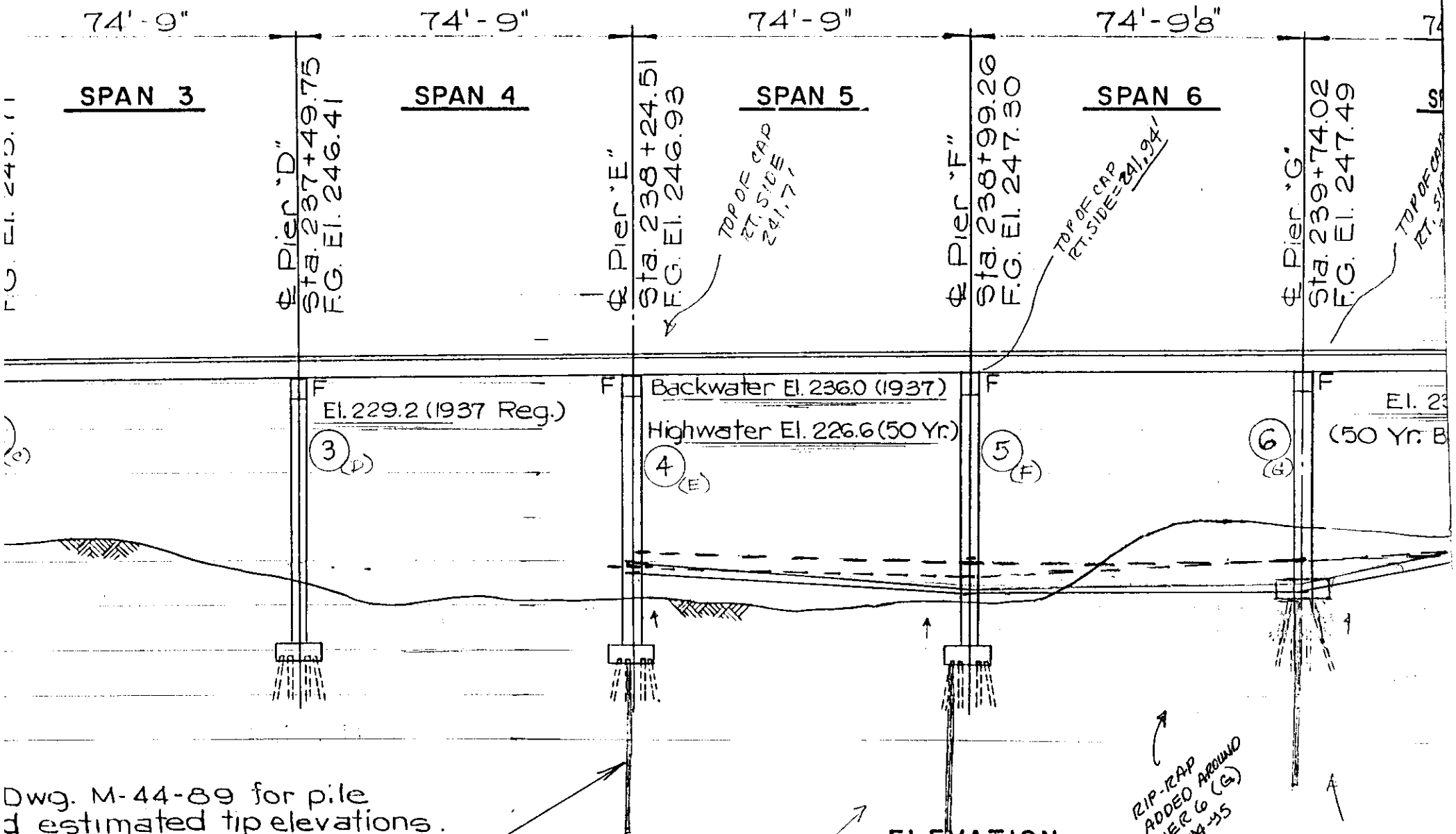


Flow



Note: See Dwg. M-44-89 for
cut-off and estimated tip el

750'-9⅛" Bk. To Bk. Abutments (Along W.B. ℄ I-240)

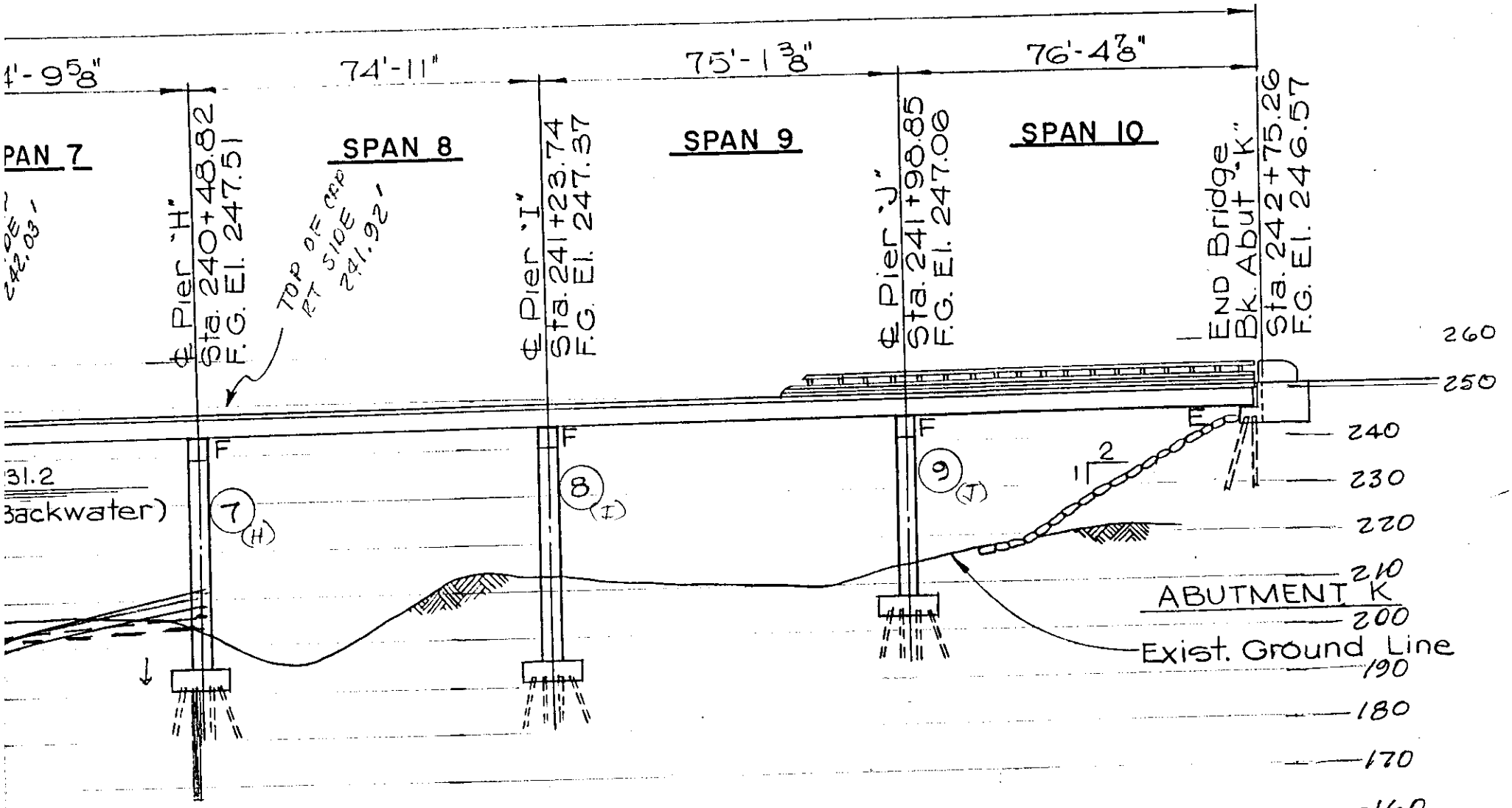


Dwg. M-44-89 for pile
d estimated tip elevations.

PCO=181.5'
AVG. PILE=42.2' LONG
AVG. PILE TIP
139.3'

ELEVATION
Scale ~ 1" = 30'

PCO = 181.5'
AVG. PILE = 43.5' LONG
AVG. PILE TIP = 138'



TOP OF FTG 196.0
BOT. OF FTG 191.5

PCO = 192.5'
AVG. PILE = 20' LONG
AVG. PILE TIP = 172.5

06/17/96
08/23/95
08/07/93
07/18/91
04/28/97

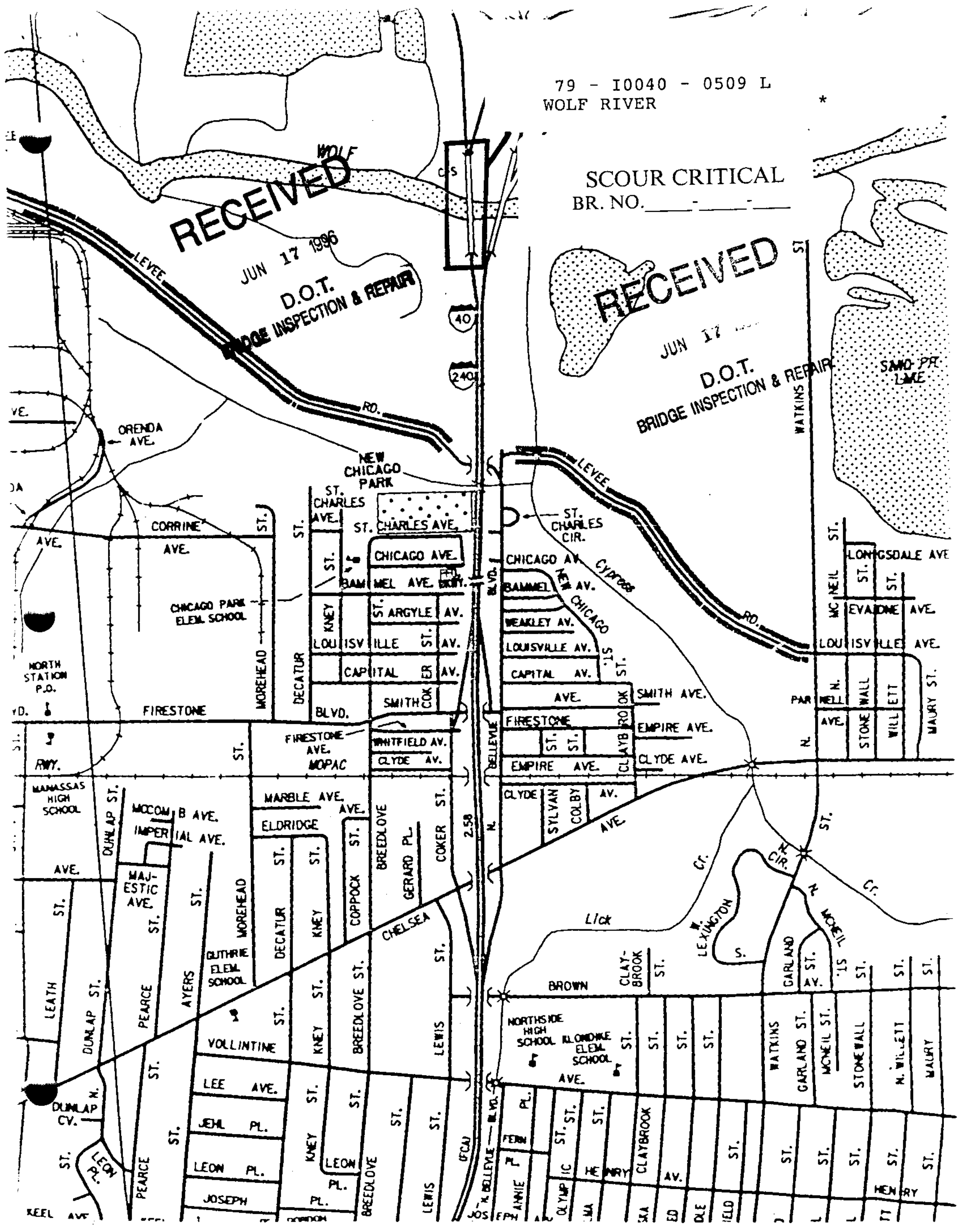
79-I40-5.09 L
OVER WOLF RV.

PROFILE
KLS
6-28-96

79 - I0040 - 0509 L
WOLF RIVER *

SCOUR CRITICAL
BR. NO.____-____-____

RECEIVED
JUN 17
D.O.T.
BRIDGE INSPECTION & REPAIR



INSPECTION TEAMS' SUMMARY

BRIDGE # 79 I 40 5096

This scour check of Bents 4-7 made durning flood stage of Wolf River, shows very little change in the Basic channel ground line, Vertically. the channel Banks are Hard to define due to high water (2+) but they appear close to being the same as when the scour was checked in Aug. of 95, at which time the channel had moved North 140' (±) from orginal Position & moving into Bent # 7.

This is a scour critical Bridge with the scour Rated Poor this Date (6-13-96)

Kenneth Jones

BRIDGE INSPECTION REPORT

6-13-96

FORM BIR 3.0
Rev. 6-9-92
DT-0069

FIELD REPORT NO.: _____ DATE: _____
PREVIOUS REPORT NO.: _____ DATE: _____
PLANS----- YES [X] NO [ ]

BRIDGE NO.: 79I0040060 (ELEVEN DIGIT NUMBER)

BRIDGE LOC. NO.: 79 (CO.) -I40 (RTE.) -5.09 (L.M.)

79 (CO.) -I-40 (RTE.) -5.09 (L.M.) OVER Wolf River

STRUCTURE NAME (if named) _____

YEAR CONSTRUCTED _____ (ESTIMATED OR ACTUAL) [ ] [ ]
COUNTY Shelby
MAINTENANCE DISTRICT NO. 45

YEAR WIDENED _____ ESTIMATED OR ACTUAL [ ] [ ]

YEAR REHABILITATED _____ ESTIMATED OR ACTUAL [ ] [ ]

RECEIVED
JUN 17 1996
D.O.T.
BRIDGE INSPECTION & REPAIR

FEATURES

WEARING SURFACE---CONCRETE [ ] TIMBER [ ] ASPHALT [ ] (DEPTH = ___")
FLARED WIDTH----------YES [ ] NO [ ]
NAVIGATIONAL CONTROL---YES [ ] NO [ ]
MEDIAN TYPE----------OPEN [ ] NONE [ ] CLOSED [ ]

BRIDGE SKEW 90°

STRUCTURE TYPE CIB (Main Span) NO. SPANS 10 (Main Span)

STRUCTURE TYPE _____ (Approach Spans) NO. SPANS _____ (Approach Spans)

MAXIMUM SPAN LENGTH _____ TOTAL LENGTH _____

INSPECTORS

1. Jenkins
2. Sisk
3. Fisher
4. Lane
5. Stephenson
6. _____
7. _____
8. _____
9. _____

WIDTHS

DECK OUT-TO-OUT _____
ROADWAY CURB-TO-CURB _____
SIDEWALK _____RT _____LT
*APPROACH ROADWAY _____
APPR. SHOULDER __RT ___LT

CLEARANCES

MIN. VERTICAL OVER DECK __
MIN. VERTICAL UNDER CL. __
MIN. LATERAL UNDER CL. __RT __LT

*DOES NOT INCLUDE SHOULDERS

UNDERWATER INSPECTION

INSPECTION PERFORMED BY:
DOT FIELD TEAM [ ] DATE _____
CONTRACT DIVERS [ ] DATE _____
NONE REQUIRES [ ]

(< 25FT.)
NBIS BRIDGE LENGTH _____ (FT.) (INCHES)

FRACTURE CRITICAL DETAILS: YES [ ] NO [ ]
IF YES, INCLUDE BIR 3.9

CHANGE IN STRUCTURAL CONDITION YES [ ] NO [ ]
MAJOR REPIARS MADE YES [ ] NO [ ]

COMMENTS: _____

BRIDGE RATING [ ] [ ] [ ] [ ]
GOOD FAIR POOR CRITICAL

_____
SUPERVISING BRIDGE INSPECTOR

RECEIVED

REV. : 07/29/93

JUN 17 1996

DATE : ____ / ____ / ____

D.O.T.

BRIDGE INSPECTION & REPAIR

PAGE NUMBER : ___ OF ___

BRIDGE NUMBER : 79 (COUNTY) - F40 (ROUTE) - 5.09 Lt. (LOG MILE)

ABUT/BENT PIER NUMBER	TOTAL HEIGHT TOP OF CAP TO BOTTOM OF FOOTING (OR GROUND LINE / DATE FOR PILES)	(t) FOOTING THICKNESS	W/FTG @ H = TOP OF CAP TO TOP OF FOOTING	EXPOSURE
Abut. 1				
Bent 1				
2				
3				
4	61.09'	4.0'	56.76' Rt end	42.40'
5	61.67'	4.0'	57.19' Rt end	44.80'
6	51.51'	4.0'	46.03 Rt. end	41.80'
7	50.20'	4.5'	42.67 Rt end	35.60'
8				
9				
Abut 2				

TOP OF CAP TO TOP OF WATER : 23.4' Rt end Bent 4 C2F

100.00' UPSTREAM : 42.4'

THRU STRUCTURE : 47.4'

100.00' DOWNSTREAM : 44.4'

RIP - RAP : YES [ ] NO : [ ]

@ BENT / PIER NO. : ____

Rip-Rap not Visible due to High water.

COMMENTS :

23.4

REV. 07-01-91

DATE : _____

BRIDGE NO. 79 (COUNTY) F.40 (ROUTE) 5.09 Lt. (LOG MILE)

BENT/~~PIER~~ NO. 4-7

TOTAL HEIGHT
(TOP OF CAP TO BOTTOM OF FOOTING) : _____

FOOTING THICKNESS (t) : _____

(TOP OF CAP TO TOP OF FOOTING)
W/FTG @ H = : _____

TOP OF CAP TO TOP OF WATER : 23.4' top Rt. end Bent #7 Cap

WATER DEPTH TO TOP FOOTING : _____

SCOUR : G F P C
DRIFT : G F P C
MAXIMUM EXPOSURE : _____

See individual scour sheets

100'± ← Bent # 7 → 100'±

21 / 3 / 4

19 / 3 / 4

Bent # 6

20 / 1 / 2

20 / 1 / 2

Bent # 5

19 / 1 / 4

1 / 4

Bent # 4

DEPTH / DISTANCE

SHOW DIRECTION OF FLOW

REV. 07-01-91

DATE _____

BRIDGE NO. 79 / COUNTY I-40 / ROUTE [illegible] / LOG MILE BENT/PIER NO. 2 "E"

TOTAL HEIGHT (TOP OF CAP TO BOTTOM OF FOOTING) : 61.09 ± (P)

SCOUR : G F P C
DRIFT : G F P C

MAXIMUM EXPOSURE 42.4

FOOTING THICKNESS (t) : 4.0 ± (P)

(TOP OF CAP TO TOP OF FOOTING) W/FTG @ H = : 57.09 ± (P)

180.50 = 9 STON Footing area.

TOP OF CAP TO TOP OF WATER : 23.4'

WATER DEPTH TO TOP FOOTING : 34.5

29.9
5.5
23.4

23.4
1.5
24.9

	—	21 / Mid	—
	—	—	—
	20 / 20	21 / 20	21 / 20
	20 / 10	20 / 10	19 / 10
	19 / 1	17 / 1	18 / 1

DIRECTION OF ROUTE

16 / 20	15 / 10	15 / 1		17 / 1	16 / 10	18 / 20

15 / 1	13 / 1	16 / 1
16 / 10	16 / 10	15 / 10
15 / 20	14 / 20	15 / 20
—	—	—

DEPTH / DISTANCE

SHOW DIRECTION OF FLOW

RECEIVED

REV. 07-01-91 JUN 17 1996 DATE __________

D.O.T.
BRIDGE INSPECTION & REPAIR

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5 (LOG MILE) BENT/PIER NO. 5

SCOUR : G F P C
DRIFT : G F P C
MAXIMUM EXPOSURE [illegible]

TOTAL HEIGHT : 61.67 (P)
(TOP OF CAP TO BOTTOM OF FOOTING)

FOOTING THICKNESS (t) : [illegible] (P)

(TOP OF CAP TO TOP OF FOOTING)
W/FTG @ H = : 57.67 (P)

TOP OF CAP TO TOP OF WATER : 23.8

WATER DEPTH TO TOP FOOTING : 33.8

30.3
6.5
23.8

23
mid.

23.8
71
24.5

21/20 23/20 22/20
22/10 24/10 22/10
21/1 20/1 21/1

19/20 | 19/10 | 19/1 | 21/1 | 20/10 | 22/20

19/1 19/1 22/1
19/10 21/10 22/10
20 20 20

DIRECTION OF ROUTE

DEPTH / DISTANCE

SHOW DIRECTION OF FLOW

RECEIVED

REV. 07-01-91

DATE _____

JUN 17 1996

D.O.T.
BRIDGE INSPECTION & REPAIR

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.09L (LOG MI) BENT/PIER NO. 6

TOTAL HEIGHT (TOP OF CAP TO BOTTOM OF FOOTING) : 51.51 ℄(P)

SCOUR : G F P C
DRIFT : G F P C

MAXIMUM EXPOSURE 41.8'

FOOTING THICKNESS (t) : 4.5 ℄(P)

(TOP OF CAP TO TOP OF FOOTING) W/FTG @ H = : 47.01 ℄(P)

TOP OF CAP TO TOP OF WATER : 23.8'

WATER DEPTH TO TOP FOOTING : 23.2

	21.0 mid		
20/20	21/20	20/20	
19/10	18/10	21/10	
18	16/1	15/1	

DIRECTION OF ROUTE

19/20	18/10	18/1				15/1	18/10	18/20

18/1	17/1	17/1
19/10	20/10	20/10
21/20	23/20	19/20
—	—	—

DEPTH / DISTANCE

SHOW DIRECTION OF FLOW

BRIDGE NO. 79 I-90 5.07 DATE

TOTAL HEIGHT: (TOP OF CAP TO BOTTOM OF FTG.) 50.20

FOOTING THICKNESS (t): 4.5'

TOP OF CAP TO TOP OF FTG.: 42.67 Rt. and

TOP OF CAP TO TOP OF WATER: 23.60

WATER DEPTH TO TOP OF FTG.: 19.07

BENT/PIER NO. 7

SCOUR: G F P C

DRIFT: G F P C

MAXIMUM EXPOSURE 35.6'

3.0
6.5
23.6

DEPTH / DISTANCE

← DIR. OF FLOW

23.6
12
35.6

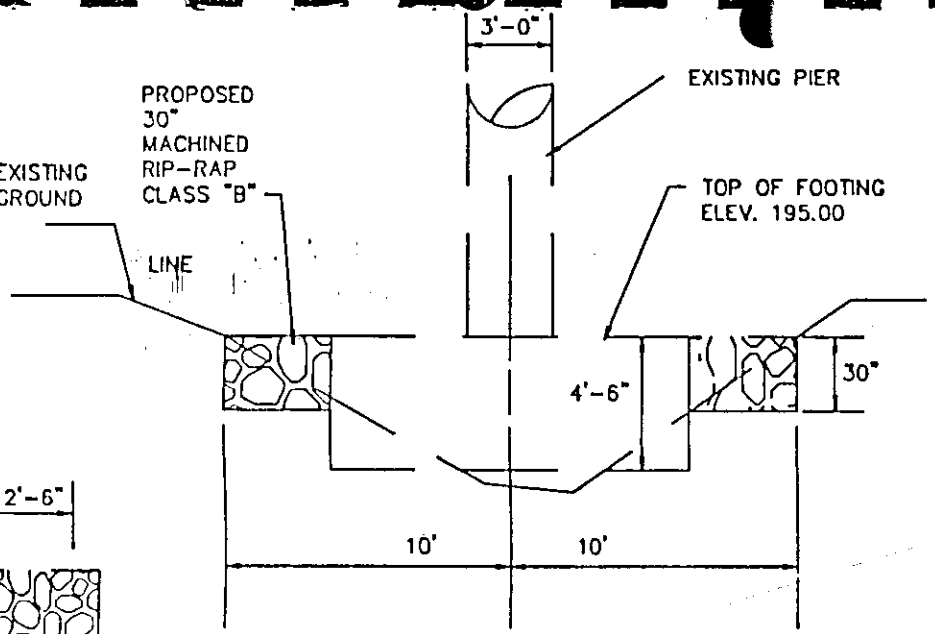
8.0 mid

		7/20	7/20	6/20				
		6.0/10	7.0/10	6.0/10				
		8/1	8/1	7.0/1				
6/20	7/10	6/1			12/1	8/10	5/20	
		7/1	7/1	12/1				
		15/10	16/10	16/10				
		20/20	21/20	20/20				

5' not Bank

PROJECT # 79007[illegible]-0
REV 5-14-91: [illegible] DET.

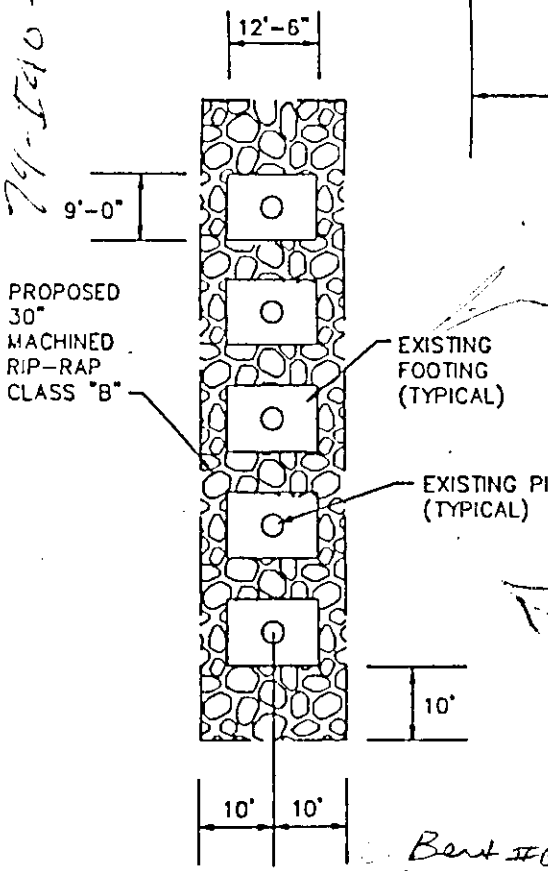
79-140-5.09



PIER G
PROFILE VIEW DETAIL
(N.T.S.)

* Rock Placed around Bent #6 footing

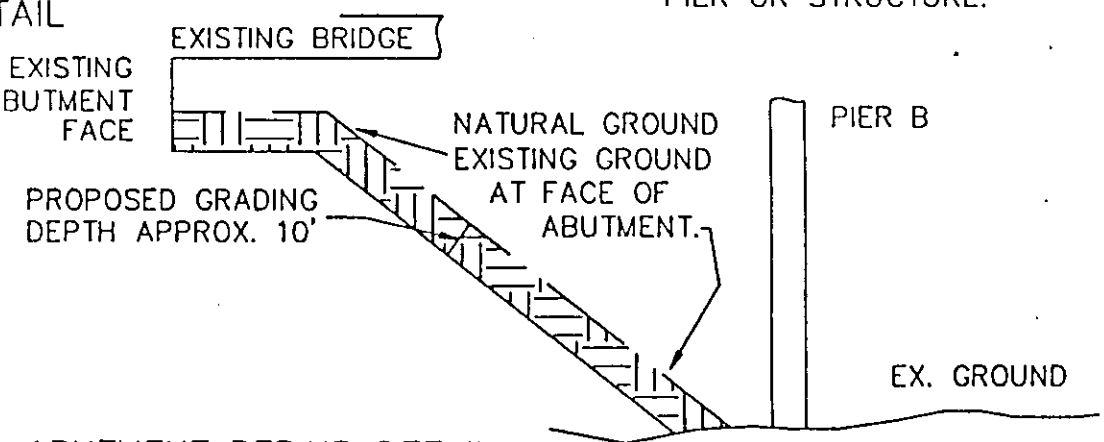
NOTE: LIMITS OF REPAIR FOR ABUTMENT FACE NOT TO DAMAGE EXIST. PIER OR STRUCTURE.



Bent #6 Only

PIER G
PLAN VIEW DETAIL
(N.T.S.)

5-22-95



ABUTMENT REPAIR DETAIL
(N.T.S.)

DETAILS FOR
BOTH STRUCTURES

BRIDGE SCOUR REPAIR DETAIL

I-40/240 OVER WOLF RIVER
BRIDGE NO. 79-140-5.09
SHELBY COUNTY
1991

5651

3 1995

REV. : 07/29/93

DATE : _____ /_____ /__

PAGE NUMBER : ____ OF _

BRIDGE NUMBER : 79 (COUNTY) - I-40 (ROUTE) - 5.09 L (LOG MILE)

(Plans - Yes)

ABUT/BENT PIER NUMBER	TOTAL HEIGHT TOP OF CAP TO BOTTOM OF FOOTING (OR GROUND LINE / DATE FOR PILES)	(t) FOOTING THICKNESS	W/FTG @ H = TOP OF CAP TO TOP OF FOOTING	EXPOSURE (Rt. End)
A-1	(Center Line)		℄	3.0'
P-1	40.9	4.0	37.2 L, 36.7 R — 36.9	27.5'
P-2	54.7	4.0	51.0 L, 50.5 R — 50.7	32.5'
P-3	58.46	4.0	56.69 L, 56.22 R — 54.46	33.0'
P-4	61.09	4.0	57.41 L, 56.72 R — 57.09	42.0'
P-5	61.67	4.0	58.30 L, 57.14 R — 57.67	43.7'
P-6	51.51	4.0	48.00 L, 46.[illegible] R — 47.[illegible]	46.2'
P-7	50.20	4.5	48.74 L, 4[illegible] R — 45.7[illegible]	30.8'
P-8	53.11	4.5	50.2[illegible] L, 4[illegible] R — 49.61	33.3'
P-9	50.82	4.5	48.3 L, 44.3[illegible] R — 46.32	26.9'
A-2				

Bent # 5

TOP OF CAP TO TOP OF WATER : 43.7

RIP - RAP : YES [ ] NO : [X]
@ BENT / PIER NO. : ______

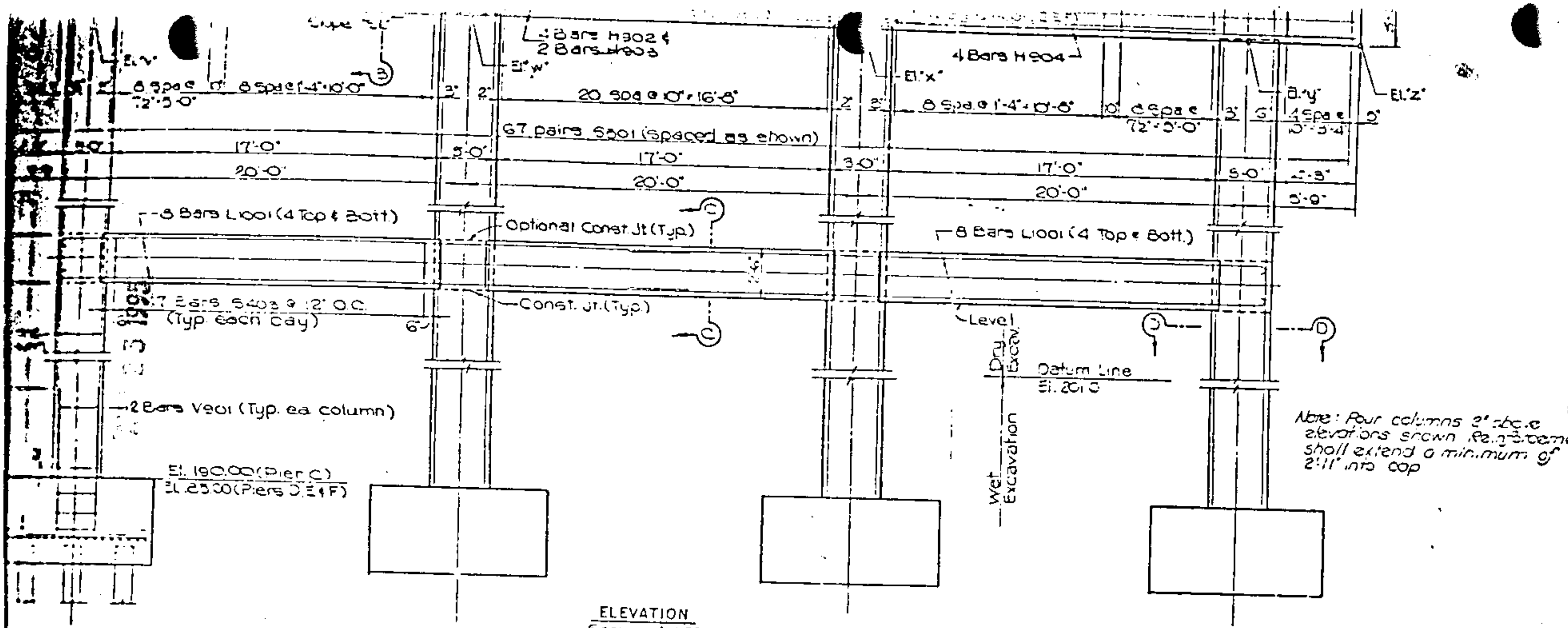
100.00' UPSTREAM : 4[illegible].7'

THRU STRUCTURE : 47.7'

100.00' DOWNSTREAM : 46.7'

COMMENTS :

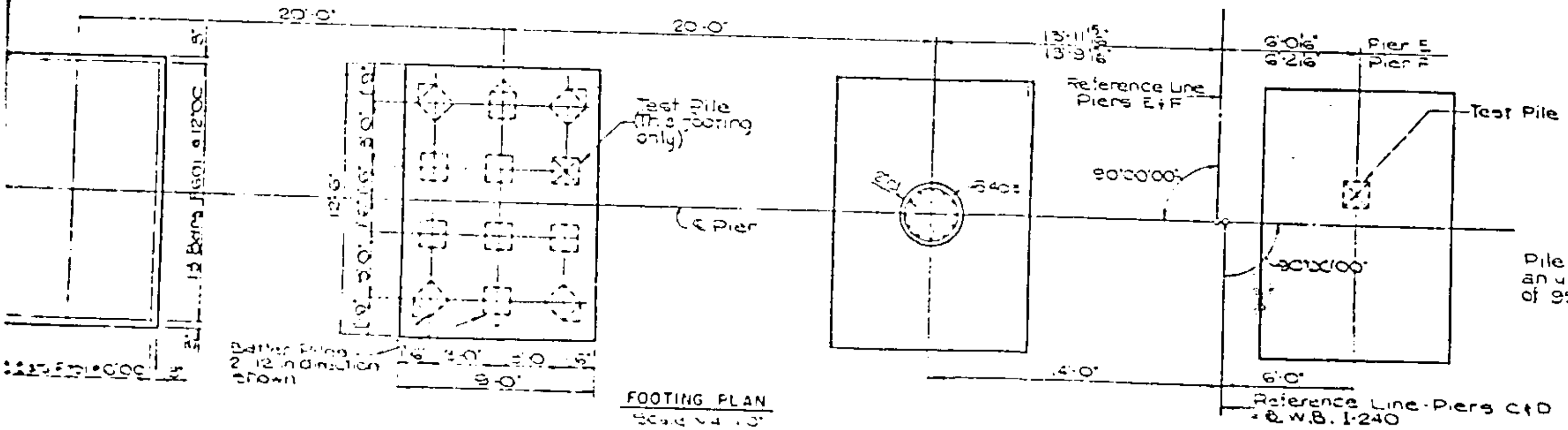
Ground Line [illegible] is [illegible] at Pier # 1 — Main River channel moving toward Abut. # 2 (12.5'±)



Pier	"A"	"B"
C	–	–
D	–	–
E	–	6"
F	6"	5"

Note:
△ⓘ "J" i[illegible]

ELEVATION
Scale ~ 1/4" = 1'-0"



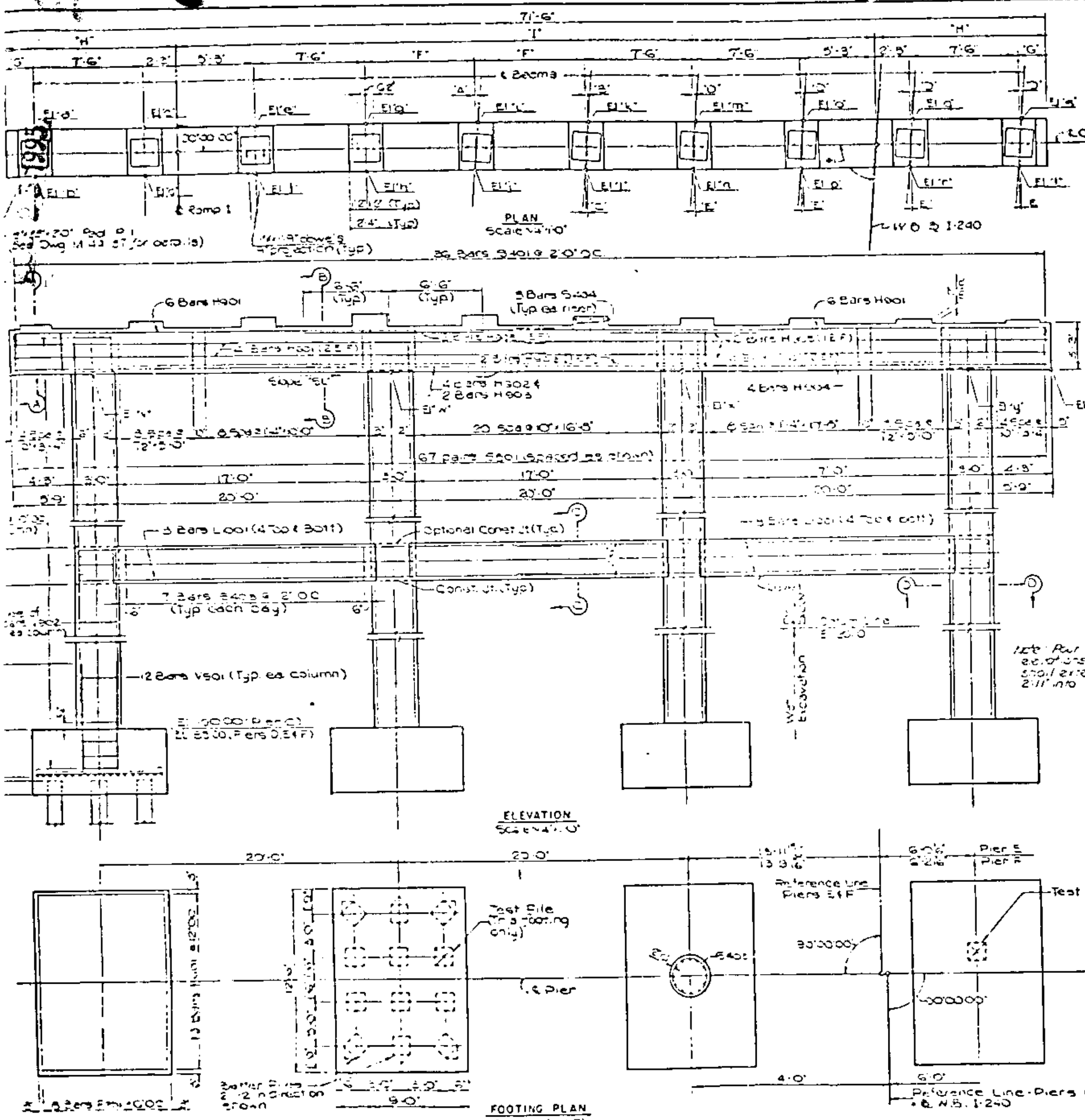
Pile Note: Drive all piles to an ultimate bearing capacity of 95 tons. 48 piles req'd each p[illegible]

FOOTING PLAN
Scale 1/4" = 1'-0"

TABLE OF ELEVATIONS

Pier	[illegible]
C	[illegible]
D	[illegible]
E	[illegible]
F	[illegible]

[illegible] AND ASSOCIATES



NOTES:
1. When pouring the pier cap, provisions shall be made for setting the dowel bars. If the Contractor elects to drill holes for the dowels, the reinforcement shall be placed so as not to interfere with the drilling. Dowel projection = 9". The top of dowels to be covered with 2" of compressible material and the projection wrapped with two layers of water proof paper.
2. See Dwg M-44-87 for Bearing Details.
3. See Dwg. M-44-89 for Estimated Tip Elev of Piles.
4. Riser blocks to be poured monolithically with pier cap beam. Bearing pad surface to conform to bottom of beam grade.
5. Min Bar Laps shall be, H601 = 1'-11" H900 = 2'-10" V900 = 3'-0" L601 = 3'-3"
6. See Dwg M-44-75 for all sections, Bill of Steel and Estimated Quantities

CONST NO	PROJECT NO.
79001-3127-44	[illegible]

TABLE OF VARIABLES △

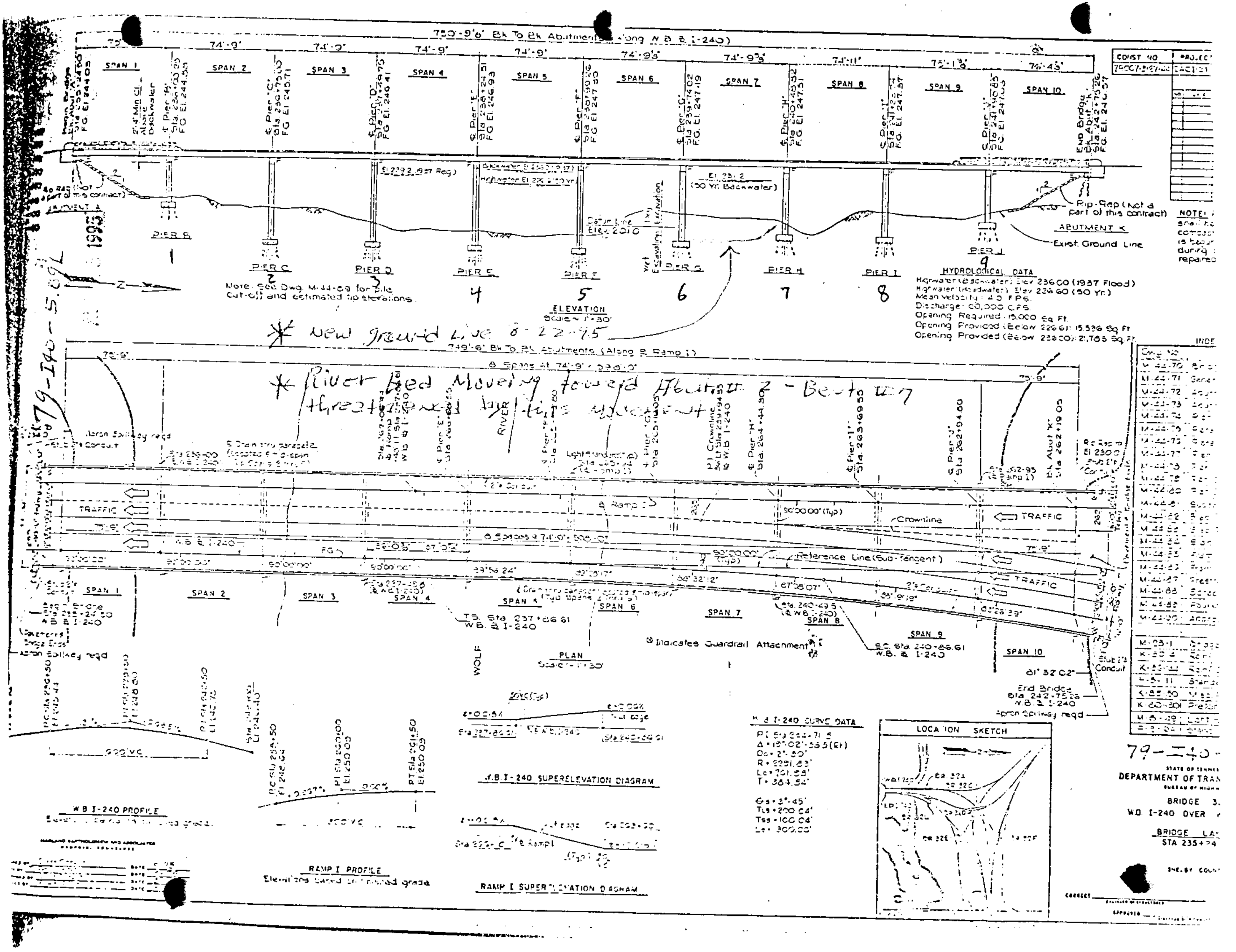
Pier	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J' ①	'K'
C	–	–	–	–	–	7'-6"	2'-0"	11'-9"	43'-0"	34	[illegible]
D	–	–	–	–	–	7'-6"	2'-0"	11'-9"	43'-0"	59	30'-9"
E	–	6"	–	5"	–	7'-6"	[illegible]	[illegible]	43'-0"	60	31'-1"
F	6"	5"	5"	8"	5"	7'-6"	[illegible]	[illegible]	43'-3"	60	31'-6"

Note: "K" is length of column bars V902.
△① "J" is typical each column.

TABLE OF ELEVATIONS

Pier	
C	[illegible]
D	[illegible]
E	[illegible]
F	[illegible]

STATE OF TENNESSEE
DEPARTMENT OF TRANSP
BUREAU OF HIGHWAYS
BRIDGE NO. 32A
W.B. I-240 OVER WOLF
PIERS C, D, E & F
STA. 235+24
SHELBY COUNTY



750'-9⅝' Bk To Bk Abutments along W.B. & I-240
SPAN 1
SPAN 2
SPAN 3
SPAN 4
SPAN 5
SPAN 6
SPAN 7
SPAN 8
SPAN 9
SPAN 10
PIER B
PIER C
PIER D
PIER E
PIER F
PIER G
PIER H
PIER I
PIER J
ABUTMENT A
ABUTMENT K
Rip-Rap (Not a part of this contract)
Exist. Ground Line
Note: See Dwg. M-44-89 for pile cut-off and estimated tip elevations.
ELEVATION
Scale - 1"=30'
HYDROLOGICAL DATA
Highwater (Backwater) Elev 236.00 (1937 Flood)
Highwater (Headwater) Elev 226.60 (50 Yr.)
Mean Velocity: 4.0 F.P.S.
Discharge: 60,000 C.F.S.
Opening Required: 15,000 Sq Ft
Opening Provided (Below 226.6): 15,536 Sq Ft
Opening Provided (Below 236.00): 21,765 Sq Ft
* New ground Line 8-22-95
* River Bed Moving toward Abutment Z - Bents 1-7 threatened by this movement
749'-6' Bk To Bk Abutments (Along Ramp I)
8 Spans At 74'-9' = 598'-0'
TRAFFIC
Crowntine
Reference Line (Sub-Tangent)
RIVER
WOLF
PLAN
Scale - 1"=30'
Indicates Guardrail Attachment
Apron Spillway reqd
End Bridge Sta 242+75.26 W.B. & I-240
T.S. Sta 237+86.61 W.B. & I-240
S.C. Sta 240+86.61 W.B. & I-240
W.B. I-240 CURVE DATA
W.B. I-240 SUPERELEVATION DIAGRAM
W.B. I-240 PROFILE
RAMP I PROFILE
Elevations based on finished grade
RAMP I SUPERELEVATION DIAGRAM
LOCATION SKETCH
79-I40-5.69L
1995
79-I40
STATE OF TENNESSEE
DEPARTMENT OF TRAN
BRIDGE
W.B. I-240 OVER
BRIDGE LA
STA 235+24
SHELBY COUN

AUG 3 1993

JUN 07 1993

REV. 07-01-91

BRIDGE NO. 79 (COUNTY) I-40 (ROUTE) 5.09L (LOG MILE) DATE _____

BENT/PIER NO.	TOTAL HEIGHT (TOP OF CAP TO BOTTOM OF FOOTING)	(t) FOOTING THICKNESS	W/FTG @ H = (TOP OF CAP TO TOP OF FOOTING)	EXPOSURE
Abut 1		Piling	℄	
B Pier # 1	40.9 ℄(P)	4.0 (P)	37.2 Lt. 36.7 Rt. Mean 36.9 (P)	
C Pier # 2	54.7 ℄(P)	4.0 (P)	51.0 Lt. 50.5 Rt. 50.7(P)	
D Pier # 3	58.46 ℄(P)	4.0 (P)	56.69 Lt. 56.23 Rt. 54.46(P)	
E Pier # 4	61.09 ℄(P)	4.0 (P)	57.41 Lt. 56.76 Rt. 57.09(P)	
F Pier # 5	61.67 ℄(P)	4.0 (P)	58.20 Lt. 57.14 Rt. 57.67(P)	
G Pier # 6	51.51 ℄(P)	4.5 (P)	48.00 Lt. 46.03 Rt. 47.01(P)	
H Pier # 7	50.20 ℄(P)	4.5 (P)	48.74 Lt. 42.67 Rt. 45.70(P)	
I Pier # 8	53.11 ℄(P)	4.5 (P)	50.39 Lt. 46.83 Rt. 49.61(P)	
J Pier # 9	50.82 ℄(P)	4.5 (P)	48.31 Lt. 44.34 Rt. 46.32(P)	
Abut # 2		Piling		

JUN 07 1993

REV. 07-01-91

BRIDGE NO. 79 (COUNTY) I40 (ROUTE) 5.09L (LOG MILE) DATE 6-7-93

BENT/PIER NO.	TOTAL HEIGHT (TOP OF CAP TO BOTTOM OF FOOTING)	(t) FOOTING THICKNESS	W/FTG @ H = (TOP OF CAP T) TOP OF FOOTING)	EXPOSURE
ABUT #1				
BENT #1				27.5'
#2				32.0'
#3				33.0'
BENT #4	61.1'	4.0'	57.1'	42.1'
#5	61.7'	4.0	57.7'	48.0'
#6	51.5'	4.5'	47.0'	46.8'
7				30.1'
8				36.8'
9				22.7'
ABUT #2				
	Measurements From Top of Column Bent #5			
100' Upstream				46.0'
Through Bdg.				45.8'
100' Downstream				46.5'

RECEIVED JAN 19 1990

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
P. O. BOX 429
JACKSON, TENNESSEE 38302-0429

MEMORANDUM

TO: Mr. Larry Hinds
Civil Engineering Manager 2

FROM: Jim Akin
Regional Bridge Engineer

SUBJECT Bridge No. 79 - I-40 - 5.09 L&R
over Wolf River

DATE: January 17, 1990

Attached are soundings we made January 16, 1990 around Bent 6 on subject structures. This reflects an increase in channel bank scour since our last inspection of April 26, 1989.

JA/w
Attached

cc: Mr. Bill Moore

pl. co-ordinate w/ TBRO

79-I 40 - 5.09 Bent 6 LT. Lane

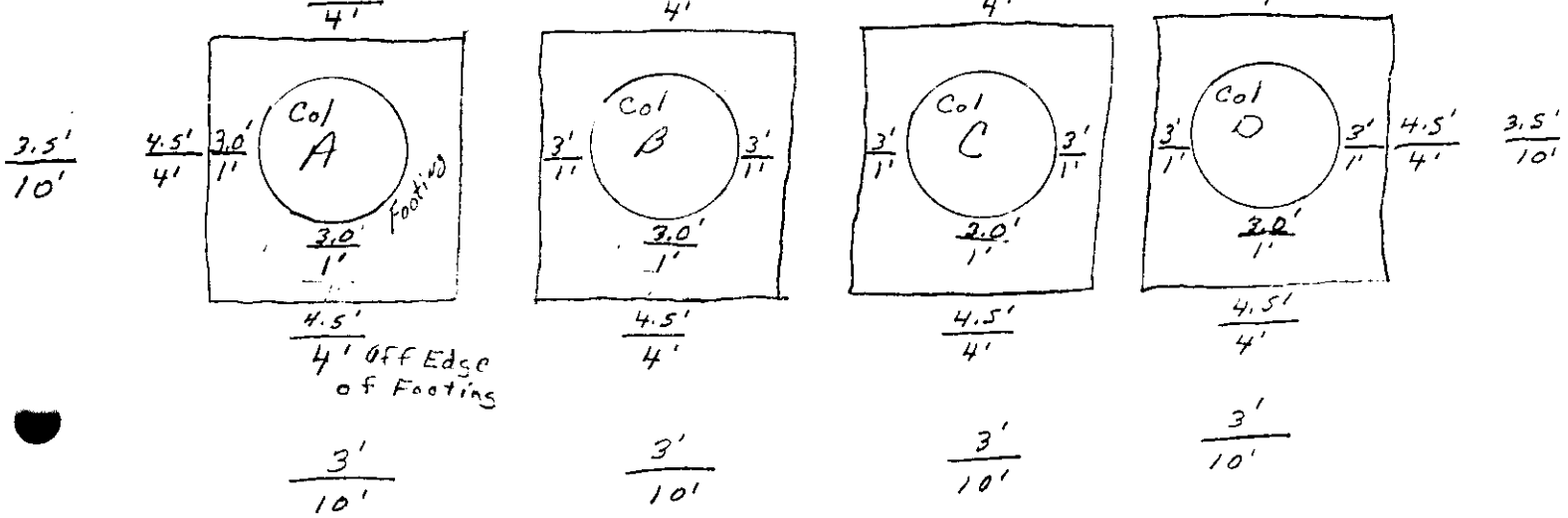
Bank. 1-16-90

1'/40' 1'/40' 1'/40' 1'/40' Corbin & Coltrain

5'/20' 5'/20' 5'/20' 5'/20'

5'/10' 5'/10' 5'/10' 5'/10'

3'/4' 3'/4' 3'/4' 3'/4'



4' Off Edge of Footing

3'/10' 3'/10' 3'/10' 3'/10'

Water Flow

Depth / Distance

1' shot on Top of Footing

4' shot OFF of Edge of Footing

Bottom of Strutt To Top of water 18'

Direction of Route

BRIDGE NO. 79 I 40 5.09 BENT/~~PIER NO.~~ 1

1-16-90

PIER HEIGHT

TOP CAP TO TOP OF FOOTING

Bottom of Strutt AT Col "D"

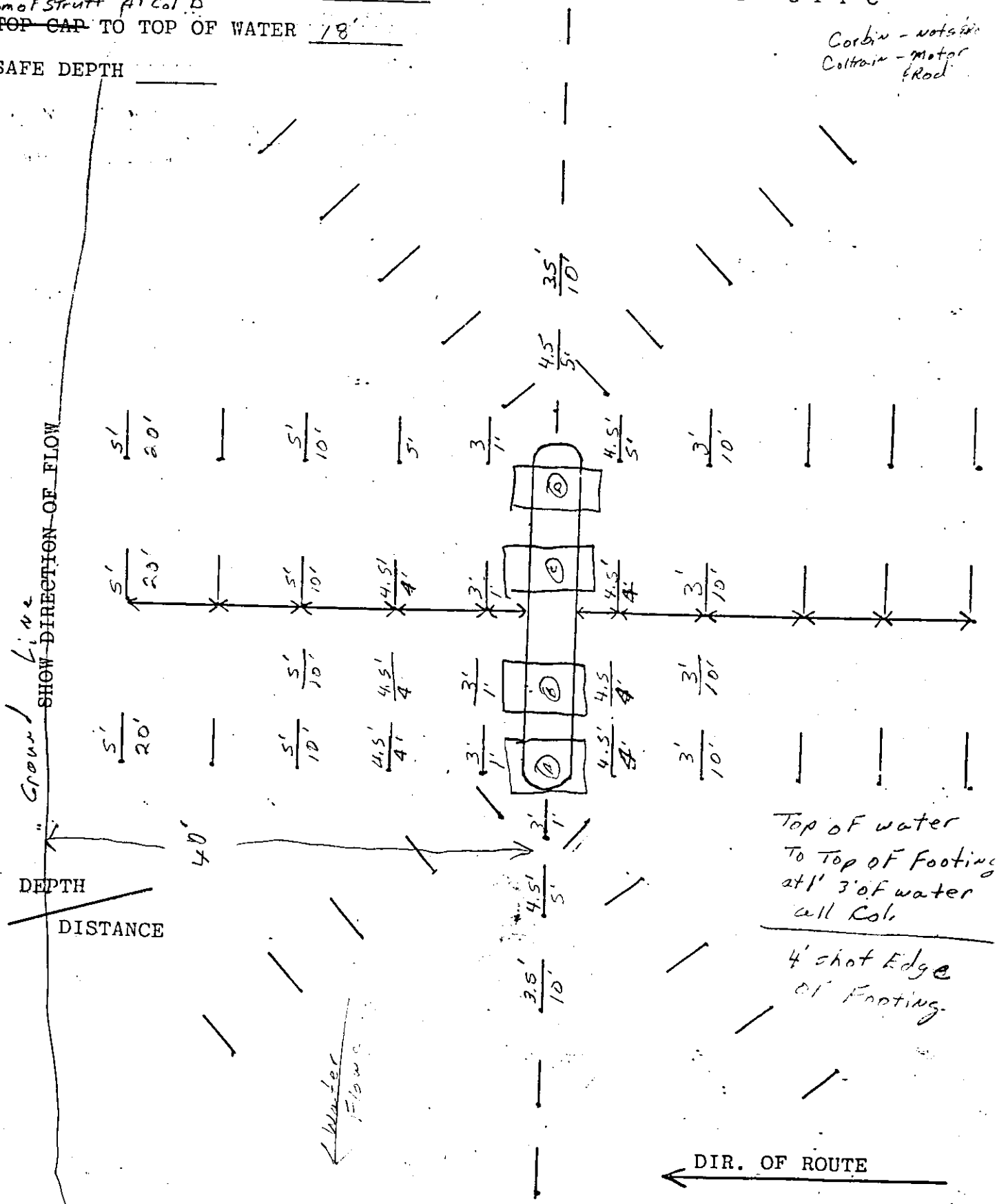
~~TOP CAP~~ TO TOP OF WATER 18'

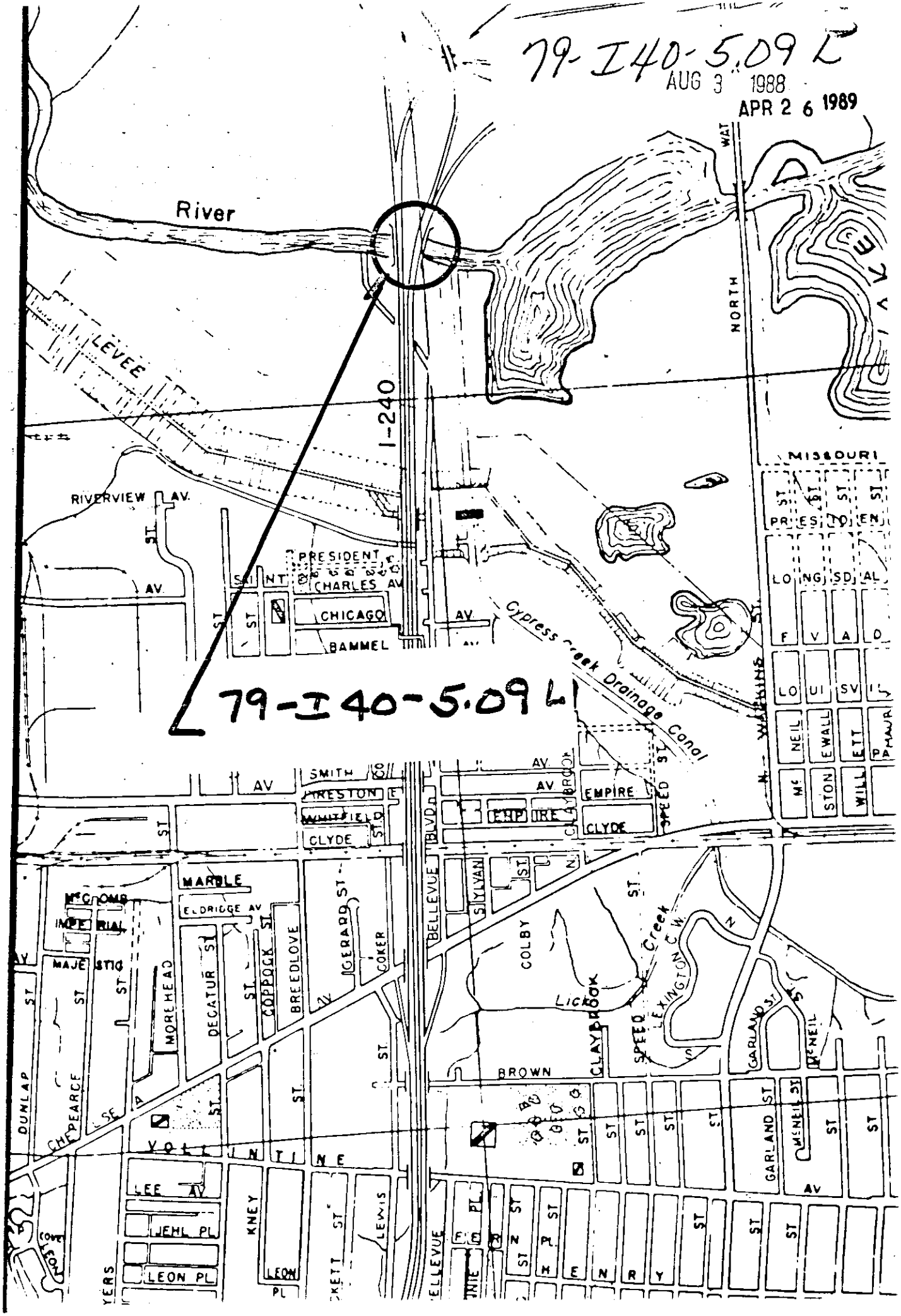
SAFE DEPTH

SCOUR = G F P C

DRIFT = G F P C

Corbin - water line
Coltrain - motor (Rod




79-I40-5.09 L
AUG 3 1988
APR 26 1989
River
LEVEE
I-240
NORTH
WAT
MISSOURI
RIVERVIEW AV.
PRESIDENT
CHARLES AV
CHICAGO AV
BAMMEL
Cypress Creek Drainage Canal
79-I40-5.09 L
SMITH
PRESTON
WHITTIER
CLYDE
EMPIRE
CLAYBROOK
MARBLE
ELDRIDGE AV
McCOMB
IMPERIAL
MAJESTIC
MOREHEAD
DECATUR ST
COPPOCK ST
BREEDLOVE
GERARD ST
COKER
BELLEVUE BLVD
SILVAN
COLBY
LICK BROOK
SPEED
LEXINGTON
GARLAND ST
McNEIL
BROWN
DUNLAP ST
PEARCE
LEE AV
JEHL PL
KNEY
LEON PL
LEON
LEWIS
HENRY

APR 2 6 1989

INSPECTION TEAMS SUMMARY

BRIDGE NO. 79 I-40 5.09 L

THIS COLUMN BENT BRIDGE WAS SOUNDED WITH 25' ROD. THERE WAS LARG DRIFT CAUGHT ON BENT # 4 AROUND COLUMN -D- CAUSING HEAVY EROSION ON EMBANKMENT BETWEEN BENT # 3 + 4. FOOTING WAS FELT AROUND COLUMN A B C + D OF BENT # 6 SCOUR AND EMBANKMENT EROSION IS IN POOR CONDITION

[signature]

APR 2 6 1989

BRIDGE NO. 19 I-40 5.09 Lt BENT/~~PIER NO.~~ 4

PIER HEIGHT _____

TOP CAP TO TOP OF FOOTING _____

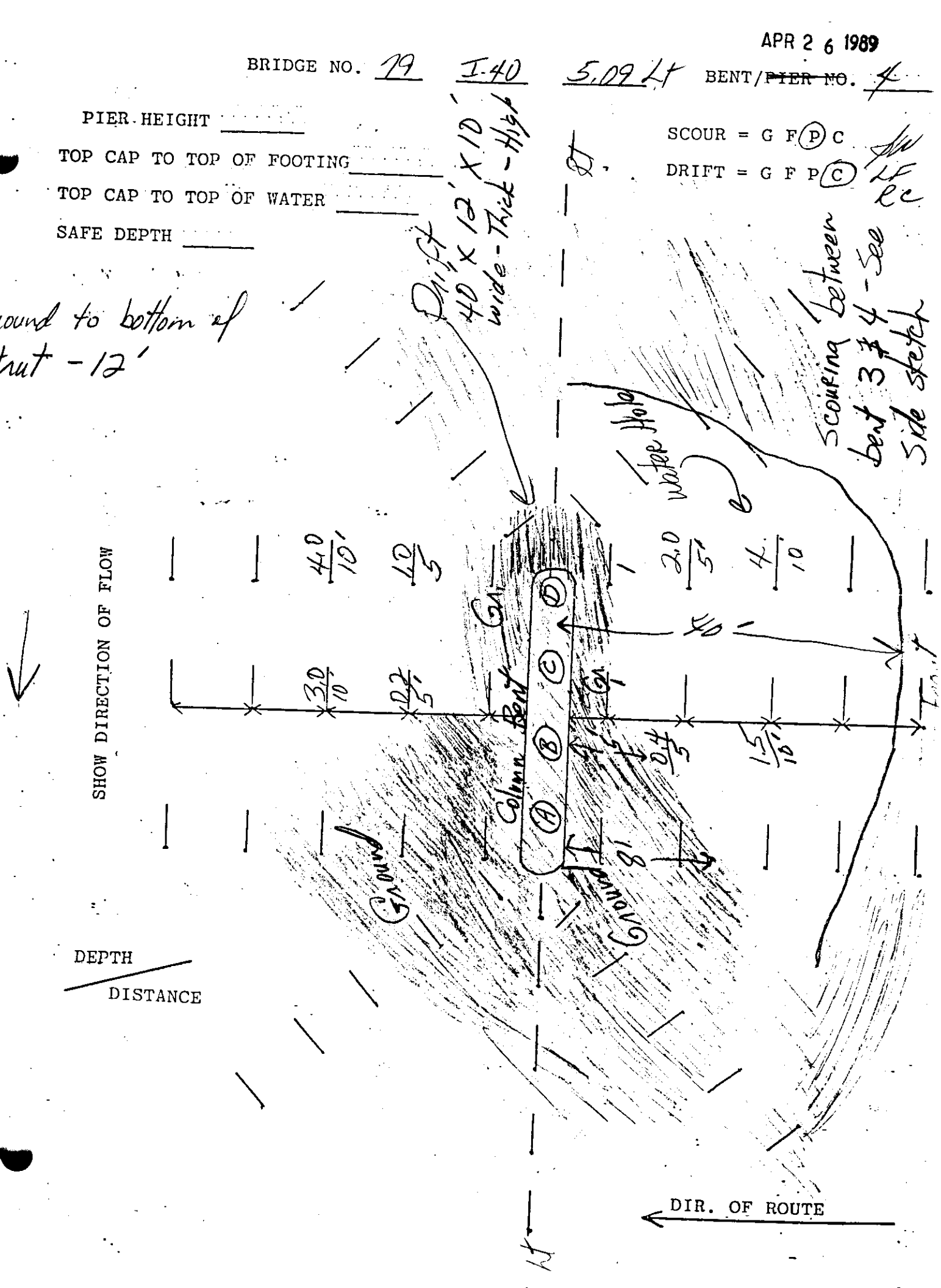
TOP CAP TO TOP OF WATER _____

SAFE DEPTH _____

SCOUR = G F (P) C

DRIFT = G F P (C)

Ground to bottom of strut - 12'



APR 2 6 1989

BRIDGE NO. 29 I-40 5.09 Lt BENT/~~PIER~~ NO. 5

PIER HEIGHT _____

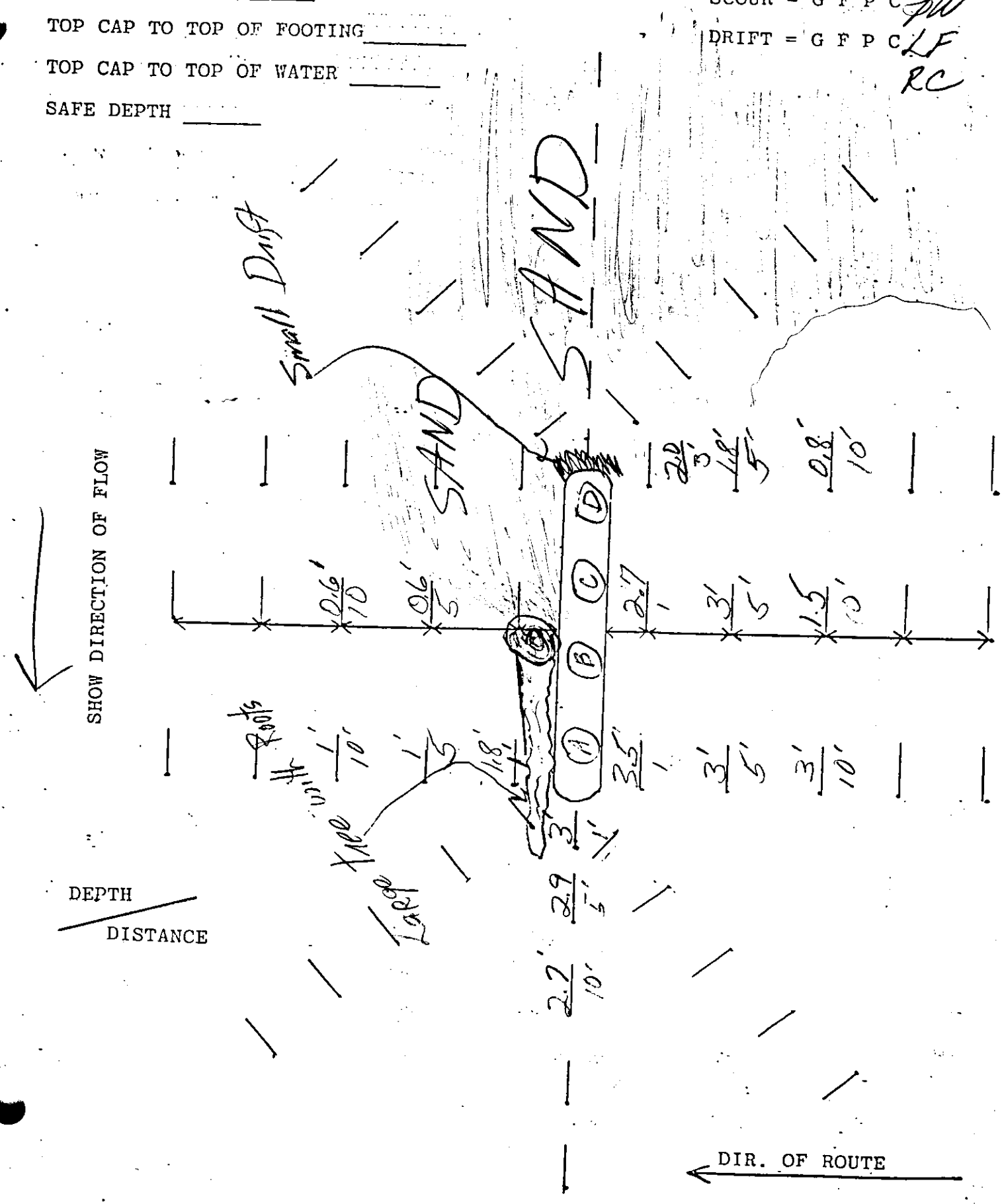
TOP CAP TO TOP OF FOOTING _____

TOP CAP TO TOP OF WATER _____

SAFE DEPTH _____

SCOUR = G F P C SW

DRIFT = G F P C LF RC



APR 2 6 1989

BRIDGE NO. 79 I-40 5.09 Lt BENT/~~PIER NO.~~ 6'

PIER HEIGHT _____

TOP CAP TO TOP OF FOOTING _____

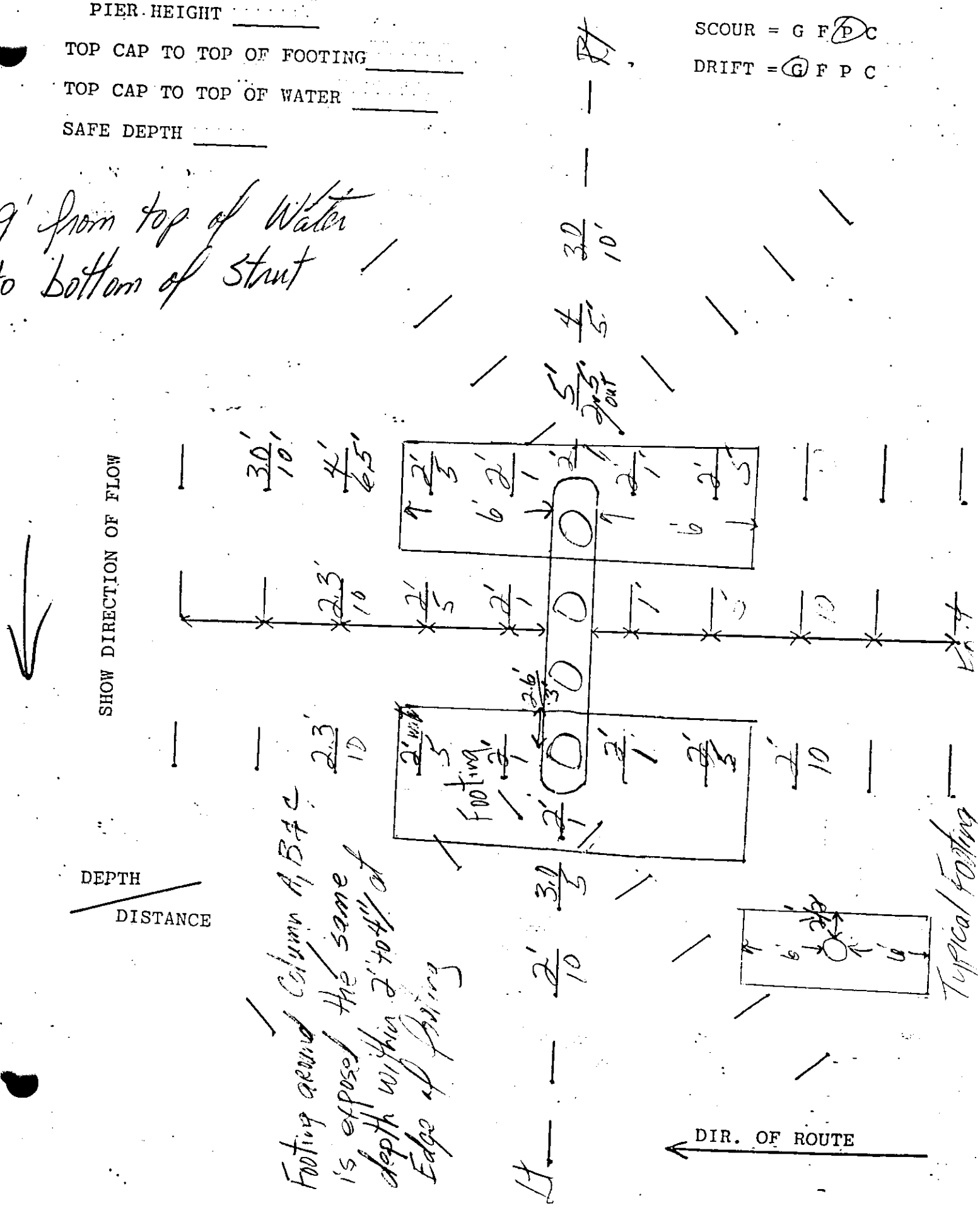
TOP CAP TO TOP OF WATER _____

SAFE DEPTH _____

SCOUR = G F (P) C

DRIFT = (G) F P C

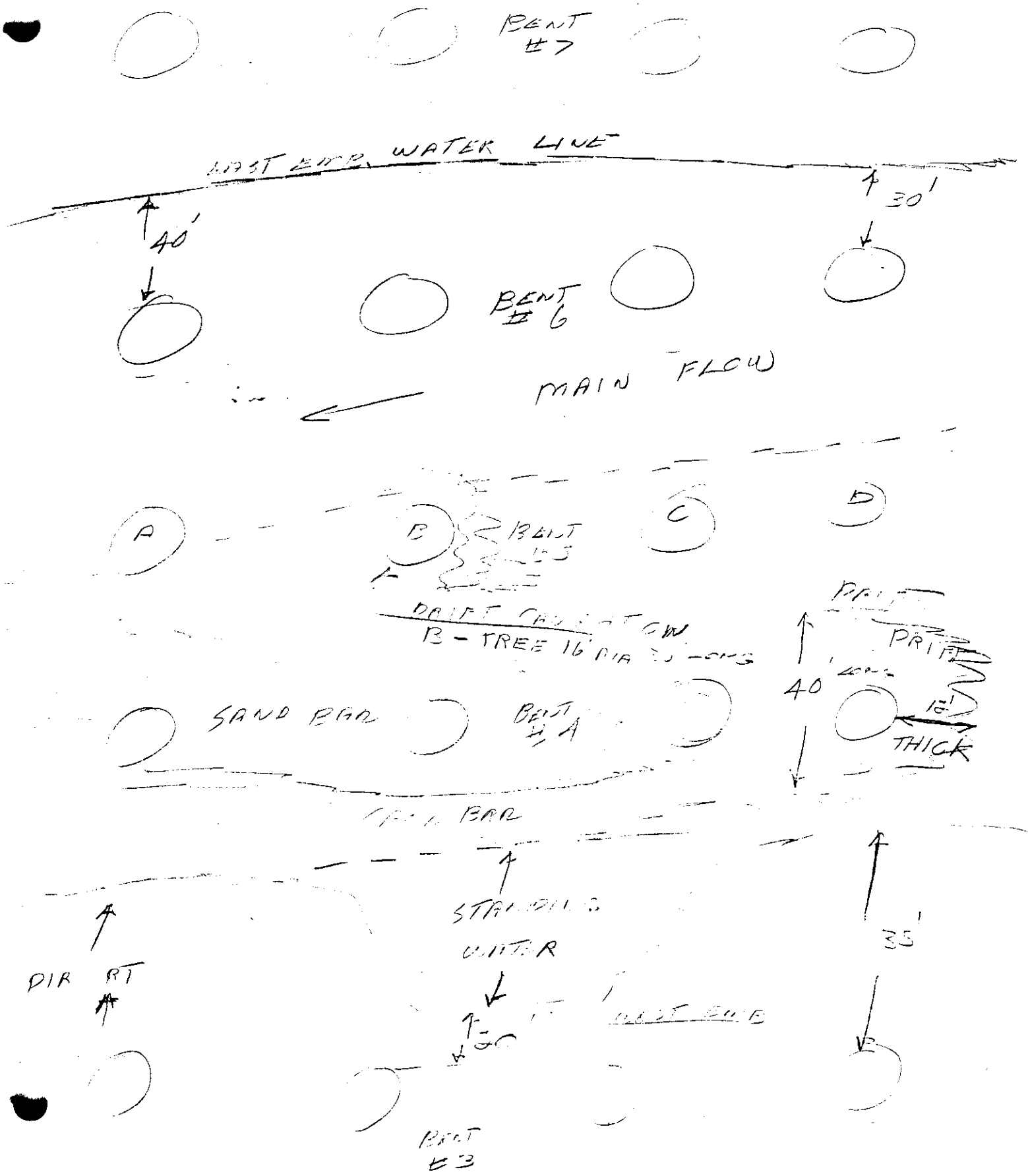
19' from top of Water to bottom of Strut



79-1-40 - 5.09 LT

JC

APR 26 1989



AUG 3 1988

BRIDGE NO. 79 I-40 5.09

~~PIER~~ BENT NO. 5

PIER ELEV. _____

WATER ELEV. _____

BOTTOM FOOTING ELEV. _____

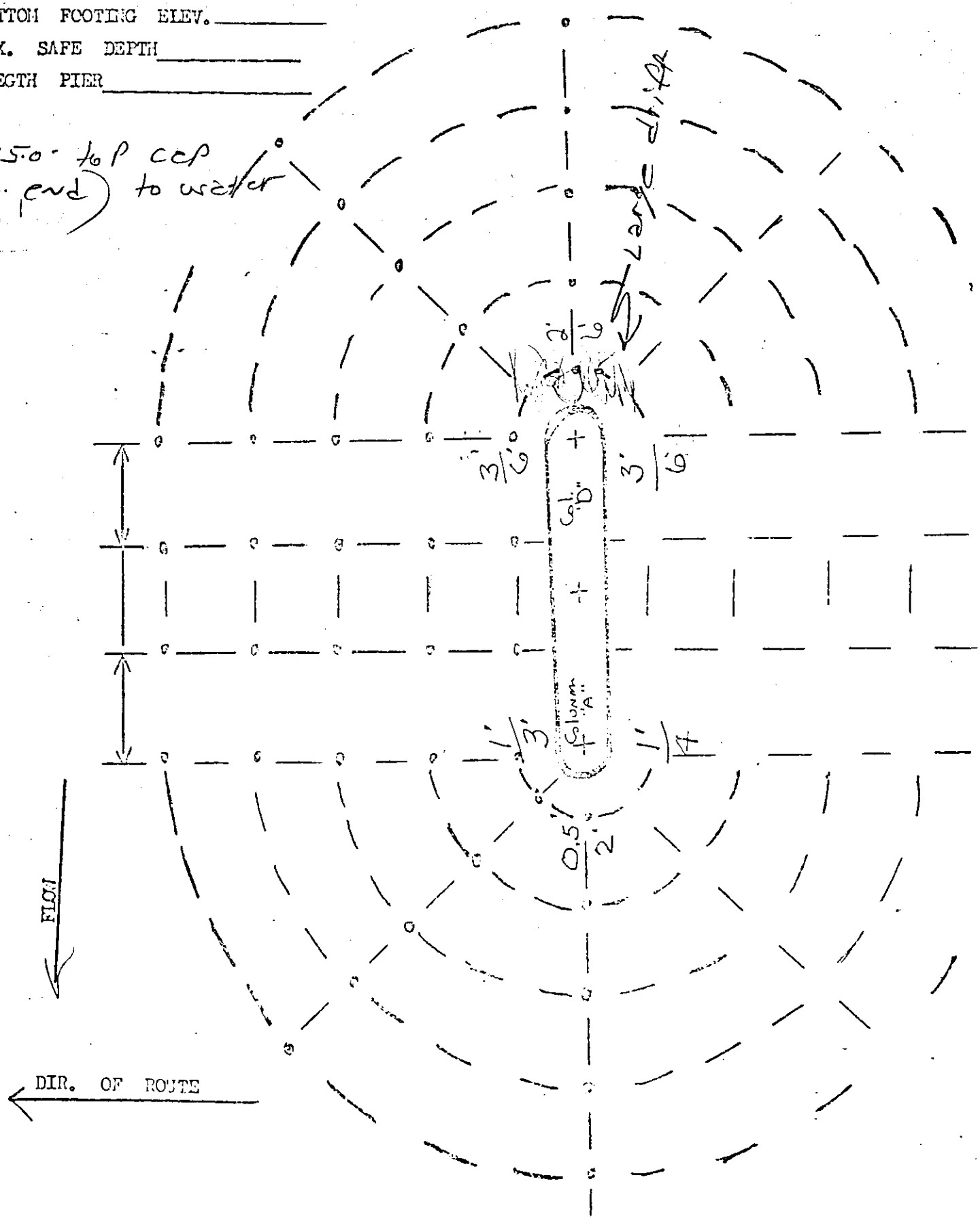
MAX. SAFE DEPTH _____

HIEGTH PIER _____

SOUNDING SKETCH

APR 2 6 1989

45.0 - top cap (Rt. end) to water



APR 2 6 1989 CT AUG 3 1988

BRIDGE NO. 79 I 40 5.09 ~~PIER~~ BENT NO. 6

PIER ELEV. ____

WATER ELEV. ____

BOTTOM FOOTING ELEV. ____

MAX. SAFE DEPTH ____

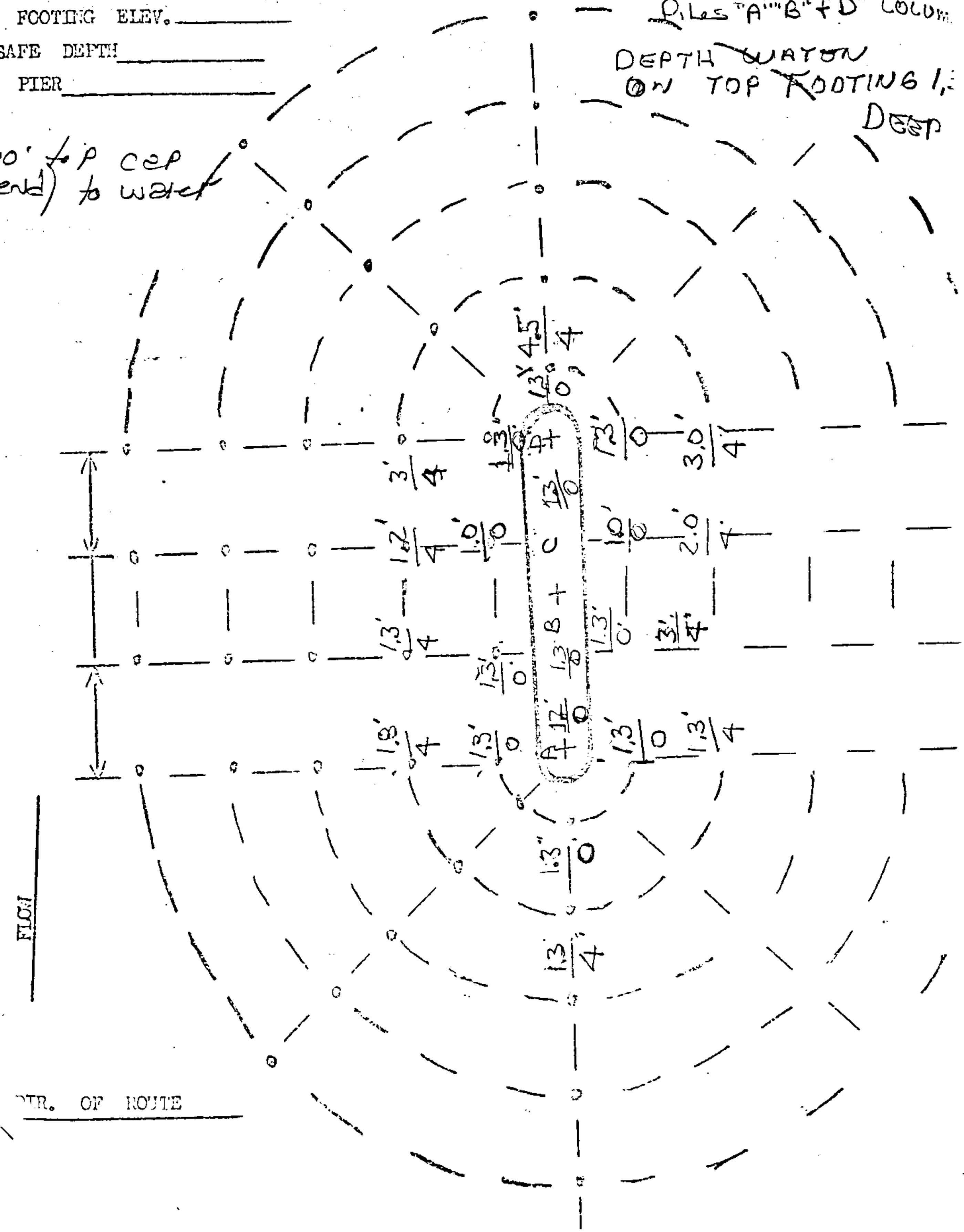
HIEGTH PIER ____

SOUNDING SKETCH

NOTE: Hit footing or Piles "A" "B" + "D" Colum

DEPTH ~~WATER~~ ON TOP ~~F~~OOTING 1.3 Deep

45.0' top cap (Rt. end) to water



AUG 3 " 1988

BRIDGE NO. 79 I-40 5.09

~~PIER~~ BENT NO. 5

PIER ELEV. _____

WATER ELEV. _____

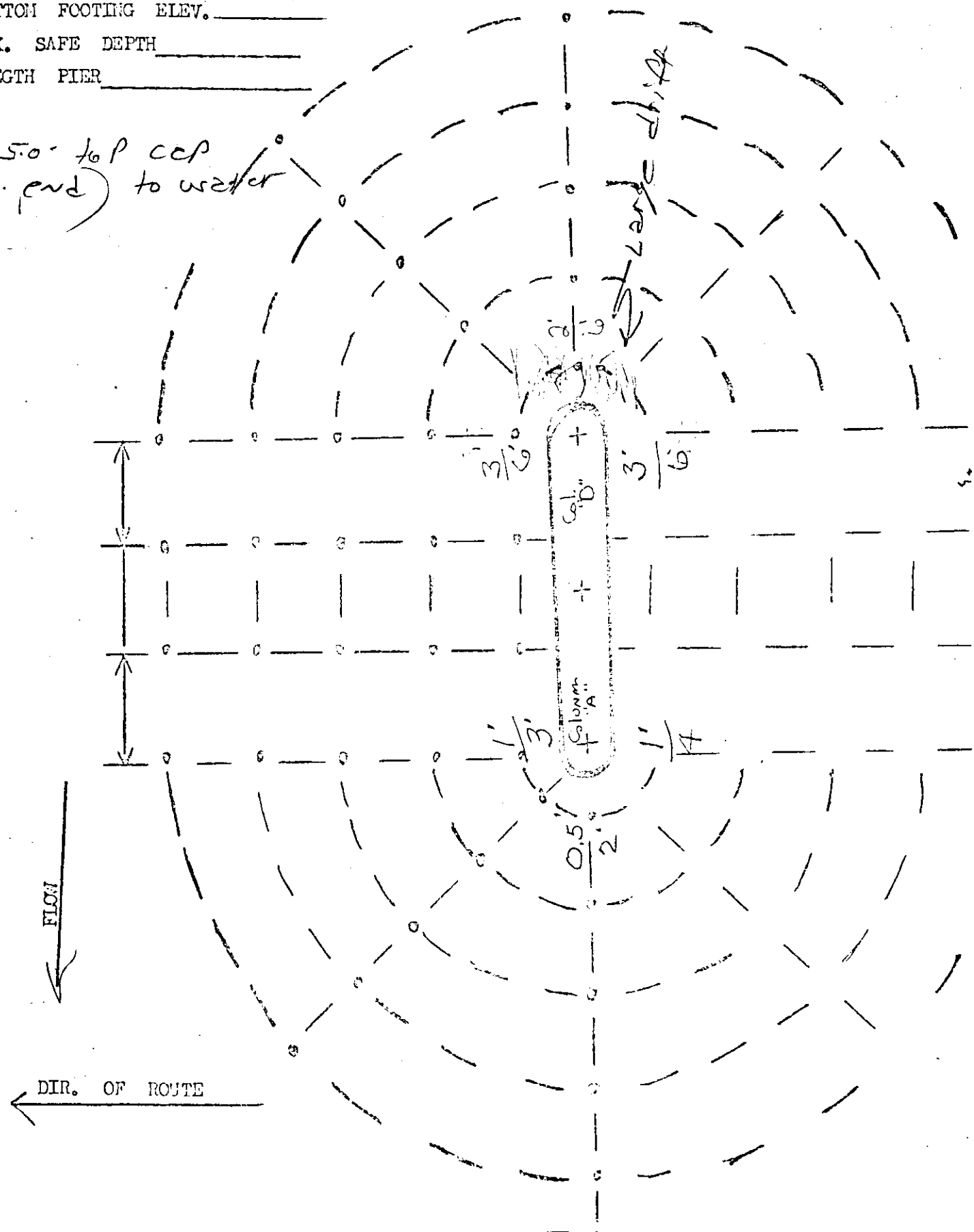
BOTTOM FOOTING ELEV. _____

MAX. SAFE DEPTH _____

HIEGTH PIER _____

SOUNDING SKETCH

45.0' top cap (Rt. end) to water



AUG 3 1988

BRIDGE NO. 29 I 40 5.09 ~~PIER~~ BENT NO. 6

PIER ELEV.

WATER ELEV.

BOTTOM FOOTING ELEV.

MAX. SAFE DEPTH

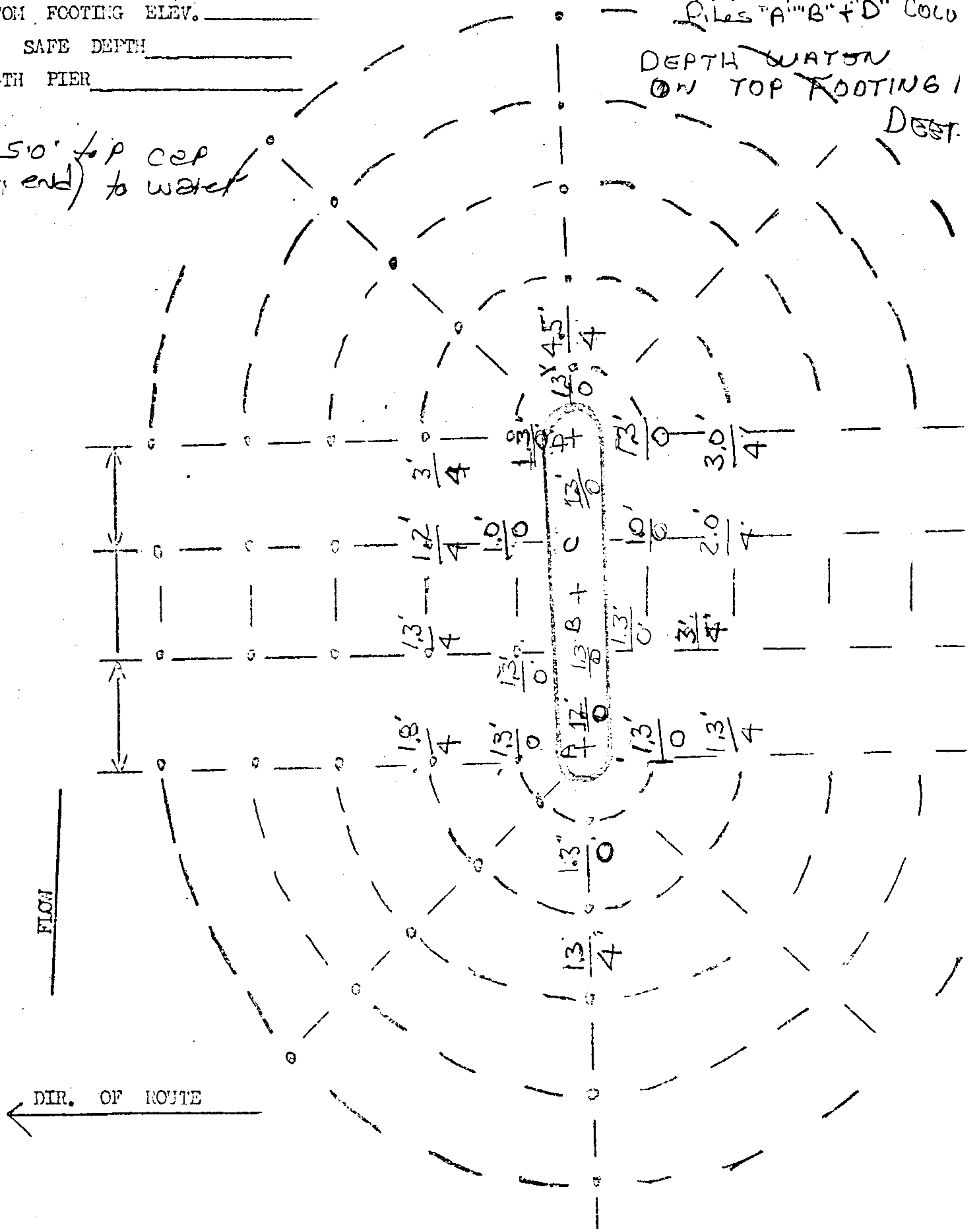
HIEGTH PIER

SOUNDING SKETCH

NOTE:
Hit footing or Piles "A" "B" + "D" Colu

DEPTH ~~WATER~~ ON TOP ~~FOOTING~~ Deep.

45.0' top cap (Rt. end) to water



79-I40-5.09 EBL

8/22/83 JRK

X WATER ELEVATION 197

ELEVATION 180.5

RIGHT SIDE LOOKING FOWARD ON SURVEY

LOOKING FOWARD ON SURVEY

PIER D EBL

GROUNDLINE (4/28/82)

5'

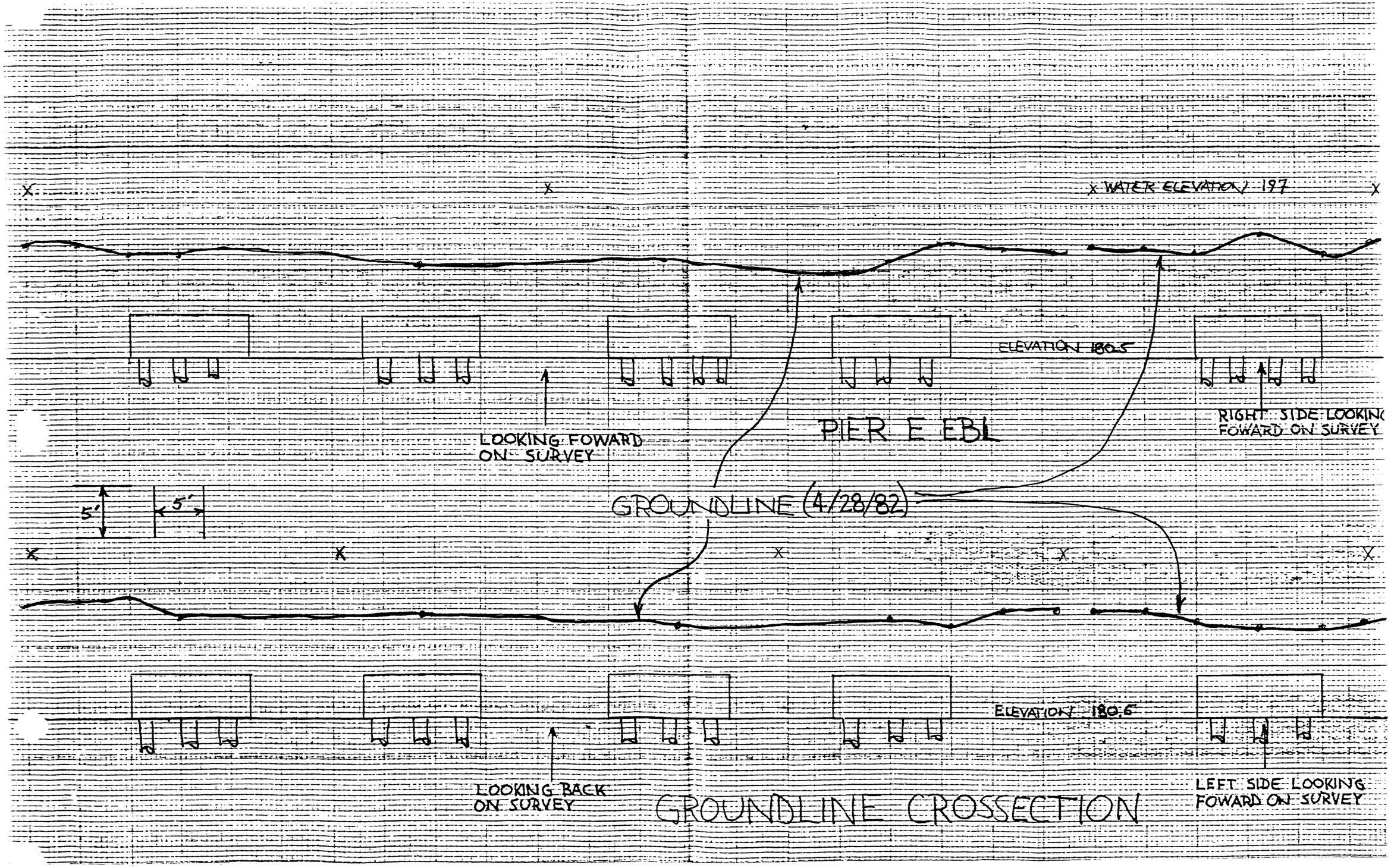
5'

ELEVATION 180.5

LOOKING BACK ON SURVEY

LEFT SIDE LOOKING FOWARD ON SURVEY

GROUNDLINE CROSSECTION



GROUNDLINE CROSSECTION

BRIDGE # 79-I40-5.09

WATER ELEVATION 197

ELEVATION 180.5

LOOKING FOWARD ON SURVEY

RIGHT SIDE LOOKING FOWARD ON SURVEY

5'

5'

GROUNDLINE (4/28/82)

PIER F EBL

ELEVATION 180.5

LOOKING BACK ON SURVEY

LEFT SIDE LOOKING FOWARD ON SURVEY

GROUNDLINE CROSSECTION

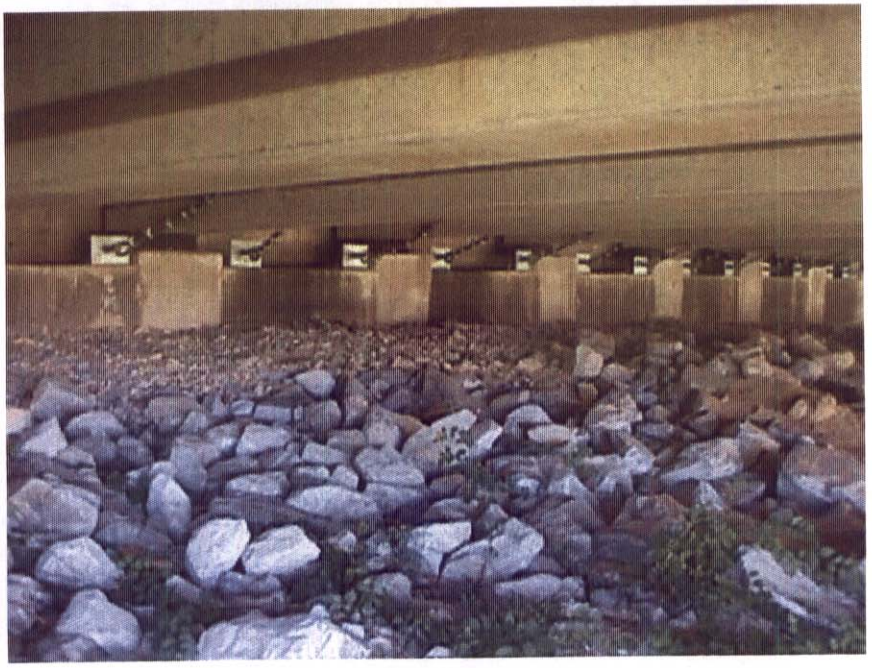
Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 09-16-99

RIGHT SIDE VIEW OF BRIDGE

VIEW ACROSS TOP OF DECK

Bridge Loc. No: 79 - I0040 - 05.09 - L **Date: 09-16-99**

LOOKING AHEAD ON ROUTE



ABUTMENT #1

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 09-16-99

ABUTMENT #1 EMBANKMENT UNDER CAP

LOOKING DOWNSTREAM, LEFT SIDE

NORTH BANK RIPRAPED 5/98

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 09-16-99

LOOKING UPSTREAM, RIGHT SIDE

LOOKING BACK ON ROUTE

Bridge Loc. No: 79 - I0040 - 05.09 - L **Date: 09-16-99**

5 6

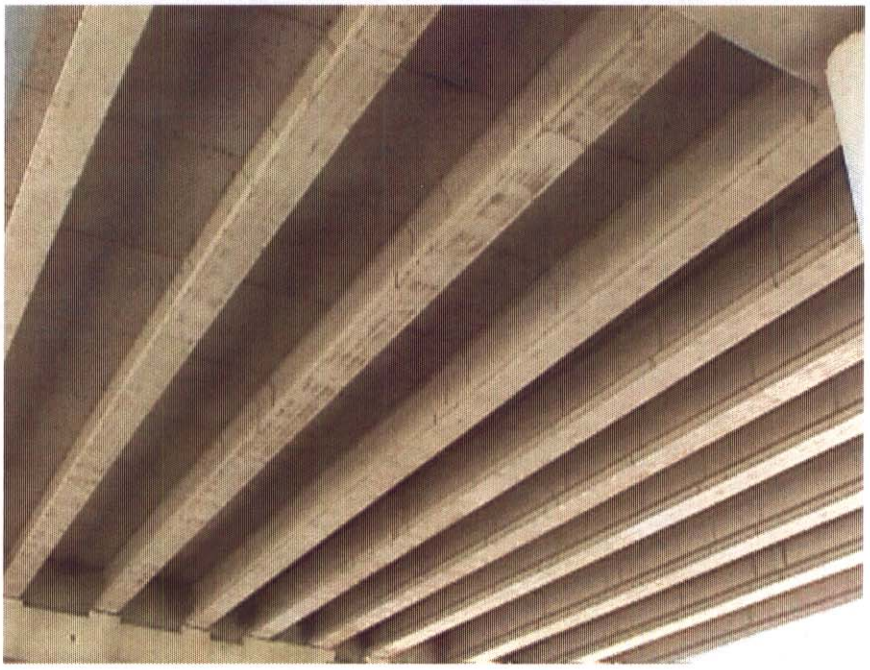
BENT #5 & BENT #6

5 6

~~LEFT~~ SIDE VIEW OF CHANNEL

RT

Bridge Loc. No: 79 - I0040 - 05.09 - L Date: 09-16-99



BOTTOM OF DECK, SPAN #7

ABUTMENT #2

BRIDGE INSPECTION REPORT

FORM BIR 3.0
REV. 06/09/92
DT-0069

FIELD REPORT NO. : 14 DATE : 9-16-99
PREVIOUS REPORT NO. : 1 DATE : 08/18/95
PLANS----YES[X] NO[ ]

SEP 16 1999

FEDERAL NO. : 79I00400060

CREEK NAME : WOLF RIVER

79 - I0040 - 0509 L
CO. ROUTE L.M. L/R

ROAD NAME :

___ - _____ - _____
CO. ROUTE L.M.

ROAD NAME :

YEAR REHABILITATED : ____
YEAR CONSTRUCTED : ____
(ESTIMATED OR ACTUAL)
[ ] [ ]

STRUCTURE NAME (IF NAMED) :

COUNTY : Shelby MAINTENANCE DIST. NO.: 0

FEATURES

WEARING SURFACE---CONCRETE [ ] TIMBER [ ] ASPHALT [X] (DEPTH = 6)
FLARED WIDTH----------YES [N] NO [ ] CLOSED [ ]
NAVIGATIONAL CONTROL---YES [ ] NO [X] BRIDGE SKEW :90 LT[ ] RT[ ]
MEDIAN TYPE----------OPEN [X] NONE [ ]

STRUCTURE TYPE : CIB (MAIN SPAN) NO. SPANS : 10 (MAIN SPAN)

STRUCTURE TYPE : (APPROACH SPANS) NO. SPANS : (APPROACH SPANS)

MAXIMUM SPAN LENGTH : 75.0 TOTAL LENGTH : 750

INSPECTORS
1. BOMAR
2. TOSH
3. GREER
4. ELLISON
5. EVANS
6. NEWTON
7. SCOTT
8.

WIDTHS (*.**m)

DECK OUT-TO-OUT : 76'
ROADWAY CURB/CURB : 74'
SIDEWALK RT ____ LT ____
*APPROACH ROADWAY : 48
APPR. SHLD. RT 12 LT 12
*DOES NOT INCLUDE SHOULDERS

CLEARANCES (*.**m)

MIN. VERT. OVER DECK : ____
MIN. VERT. UNDER CL. : ____
MIN. LAT. UNDER CL. : ____ RT
____ LT

UNDERWATER INSPECTION

INSPECTION PERFORMED BY :
DOT FIELD TEAM [X] DATE : 9-16-99
CONTRACT DIVERS [ ] DATE :
NONE REQUIRED [ ]

(<7.62m)
NBIS BRIDGE LENGTH NA (*.**m)

FRACTURE CRITICAL DETAILS: YES[ ] NO[X]
IF YES, INCLUDE BIR.3.9

CHANGE IN STRUCTURAL CONDITION YES[ ] NO[X]
MAJOR REPAIRS MADE YES[X] NO[ ]

COMMENTS : $200,000 RIP. RAP JOB

Dennis Bomar
SUPERVISING BRIDGE INSPECTOR

BRIDGE RATING [ ] [X] [ ] [ ]
GOOD FAIR POOR CRITICAL

SEP 16 1999

FORM BIR 3.1
Rev. 3-1-97
DT-0080

BRIDGE LOC. NO. 19 - I40 - 509L ( ) DATE: _____
CO. ROUTE L.M. (LOG km)

PERFORMANCE EVALUATION

Time of day inspected 1.00 PM Weather conditions HOT. 80°

Vehicles observed ALL TYPES.

LIVE LOAD BEHAVIOR	YES	NO	COMMENTS
Substructure			
Horiz. & Vert. Defl. - - -	[ ]	[X]	
Vibration - - - - - - - - -	[ ]	[X]	
Superstructure			
Horiz. & Vert. Defl. - - -	[ ]	[X]	
Vibration - - - - - - - - -	[ ]	[X]	

APPROACH

Alignment	(G)	F	P	C	
Slab	G	F	P	C	N/V
Joints	G	(F)	P	C	
Pavement	G	(F)	P	C	
Embankment	G	(F)	P	C	
Drains	G	F	P	C	None

TRAFFIC SAFETY FEATURES

					STANDARD	SUB-STANDARD	
Bridgerailing	G	(F)	P	C	[X]	[ ]	
Transitions	(G)	F	P	C	[X]	[ ]	
Guardrail	(G)	F	P	C	[X]	[ ]	
Guardrail Terminal	G	(F)	P	C	[X]	[ ]	

SIGNING

	YES	NO	NEEDED
Paddleboard - - - - - - - - - - - - -	[ ]	[X]	[ ]
Vertical Clearance (< 4.4 m) - - -	[ ]	[X]	[ ]
Narrow [ ] One Lane Bridge [ ] -	[ ]	[X]	[ ]

WEIGHT LIMIT POSTED YES [ ] NO [X]

GROSS--_____TONS

2 AXLE -_____TONS

3 OR MORE AXLES---_____TONS

Other Signs or Plaques _____

Comments Regarding Any Problems With Signing _____

RECOMMENDATIONS

Bridgerail Is Substandard [ ]
Approach Rail Is Substandard [ ]
Install Paddleboard Signs [ ]
Install Post Load Limit Signs [ ]
Level Approach [ ]

Other Recommendations _____

NOTE: UNLESS OTHERWISE NOTED, MEASUREMENTS ARE TO BE TAKEN TO TWO (2) DECIMAL PLACES IN METERS.

SEP 16 1999

[redacted] M BIR 3.2
Rev. 3-1-97
DT-0081

BRIDGE LOC. NO. 79 - I40 - 509L ( ) DATE: _____
CO. ROUTE L.M. (LOG km)

DECK					COMMENTS
WEARING SURFACE	G	(F)	P	C	
DECK - STRUCTURAL CONDITION	G	(F)	P	C	
CURBS	G	F	P	C	
MEDIAN	G	F	P	C	
SIDEWALKS	G	F	P	C	
PARAPET	G	(F)	P	C	
RAILING	G	F	P	C	
PAINT	G	F	P	C	
DRAINS	G	F	(P)	C	Span 1-10
LIGHTING STD'S	G	F	P	C	
UTILITIES	G	F	P	C	
JOINT LEAKAGE	G	(F)	P	C	① Abuts
EXPANSION JOINTS	G	F	P	C	

SUPERSTRUCTURE					COMMENTS
BEARING DEVICES	G	F	P	C	
~~GIRDERS OR~~ BEAMS	(G)	F	P	C	
FLOOR BEAMS	G	F	P	C	
STRINGERS	(G)	F	P	C	
DIAPHRAGMS	G	F	P	C	
BRACING	G	F	P	C	
TRUSSES - GENERAL	G	F	P	C	
- PORTALS	G	F	P	C	
- BRACING	G	F	P	C	
PAINT	G	F	P	C	
ALIGNMENT OF MEMBERS	(G)	F	P	C	

TEXTURE COAT

CONDITION RATING	G	(F)	P	C	FADING	G	(F)	P C
OVERALL APPEARANCE	G	(F)	P	C	NEEDS SPOT PAINTING?	YES [ ]		NO [X]
STAINING	G	(F)	P	C	NEEDS REPAINTING?	YES [ ]		NO [X]

COMMENTS: _____ SCALING G (F) P C

RECOMMENDATIONS _____ CLEAN & SEAL JOINTS [ ]

[redacted] _____ CLEAN DRAINS [ ]

NOTE: UNLESS OTHERWISE NOTED, MEASUREMENTS ARE TO BE TAKEN TO TWO (2) DECIMAL PLACES IN METERS.

SEP 16 1999

FORM BIR 3.3
Rev. 3-1-97
DT-0082

BRIDGE LOC. NO. 79 (CO.) -140 (ROUTE) -509L (L.M.) (_____) (LOG km)

DATE: _____

SUBSTRUCTURE

ABUTMENTS					COMMENTS	PILES TO BE REPLACED PILE(S)	BENT
CAPS	(G)	F	P	C			
BREASTWALL	G	F	P	C			
WINGS	(G)	F	P	C			
BACKWALL	(G)	F	P	C			
PLUMB	(G)	F	P	C			
FOOTING	G	F	P	C			
PILES	G	F	P	C	NV		
EMBANKMENT	G	F	(P)	C	ABUT #1 Washing		
BEARINGS	G	F	P	C			
SLOPE PAVING	G	F	P	C			
RIP RAP	(G)	F	P	C	Rock		

PIERS							
CAPS	G	F	P	C			
COLUMNS	G	F	P	C			
PLUMB	G	F	P	C			
FOOTINGS	G	F	P	C			
PILES	G	F	P	C			
BEARINGS	G	F	P	C			
WEB	G	F	P	C			

BENTS							
CAPS	G	(F)	P	C			
COLUMNS	G	(F)	P	C			
PLUMB	G	F	P	C			
FOOTINGS	G	F	P	C			
PILES	G	F	P	C			
BEARINGS	(G)	F	P	C			
BRACING Struts	G	(F)	P	C			

PILES NEED REPLACEMENT NO [X] YES [ ]

CUT VEGETATION NO [X] YES [ ]

CLEAR DRIFT NO [X] YES [ ]

RECOMMENDATIONS: _____

NOTE: UNLESS OTHERWISE NOTED, MEASUREMENTS ARE TO BE TAKEN TO TWO (2) DECIMAL PLACES IN METERS.

SEP 16 1999

FORM BIR 3.8
Rev. 3-1-97
DT-1508

BRIDGE LOC. NO. 79 - I40 - 5.09L ( ) DATE: 9-16-99
CO. ROUTE L.M. (LOG km)

STREAM CHANNEL DATA AND CONDITIONS

STREAM CROSSING: Wolf River

I.
1. Type of bed material? Sand-Silt And Clay
2. Has the channel shifted? YES [ ] NO [ ] NOT APPARENT [X]
3. Condition of rip-rap? G (F) P C Est. % failed ____ N/A [X]
4. Overall condition of channel? G (F) P C
5. Item 61 - Code values 0 thru 9 according to the recording and coding guide currently in effect: 6
6. Underwater diver inspection recommended? YES [ ] NO [X]
If yes, why? _____

II. Channel and bank stability conditions: (check if applicable)
1. Steep bank - Failures upstream [ ] downstream [ ] conditions
2. Moderate bank erosion [X]
3. Bank Vegetation (a) low growth [X] (b) large timber [X] (c) dead trees [X] (d) clear banks [ ]
4. Sediment or gravel accumulation: YES [ ] NO [X] UNKNOWN [ ]
5. Channel altered or straightened: YES [ ] NO [X] UNKNOWN [ ]
6. Stable conditions: (a) live growth [X] (b) bedrock [ ] (c) boulders [ ] (d) flat slopes (<=2:1) [ ]

III. Waterway adequacy and debris characteristics: (check if applicable)
1. Bridge deck elevations:
(a) level with approach roadway . . . . . [X]
(b) higher than approach roadway. . . . . [ ]
(c) roadway approach >=0.6 m above natural ground line. . [X]
2. Abutment encroaches into channel . . . . . [ ]
3. Large scour (blowhole) under bridge. . . . . [ ]
4. Indications that flood waters overtop bridge:
NO [X] YES [ ] OCCASIONALLY [ ] FREQUENTLY [ ] UNKNOWN [ ]
5. Debris characteristics:
(a) debris present YES [X] NO [ ]
(b) debris likely to accumulate: YES [X] NO [ ]
(c) dead trees upstream: [X] or downstream: [X]

IV. Comments: Light Scattered Debris Under Structure With Small Drift on RT Side Bent #5 Rip Rap Across Channel Upstream Side

* *

SPECIAL INSPECTION DATA - FOR REASONS OTHER THAN FC OR SCOUR

I. Does this bridge need a special inspection? YES [ ] NO [X]
. Reason for special inspection: _____

NOTE: UNLESS OTHERWISE NOTED, MEASUREMENTS ARE TO BE TAKEN TO TWO (2) DECIMAL PLACES IN METERS.

INSPECTION TEAMS SUMMARY

SEP 16 1999

BRIDGE NO. 79 (CO.) I0040 (ROUTE) 0509 (LM) L (R/L)

This Bridge is in Fair Condition Safety features Standard no problems with top Deck or Approaches. Substructur & Superstructure Concrete with no major problems No scour problems at this time did not hit footings.

Banar

X CROSS SECTION

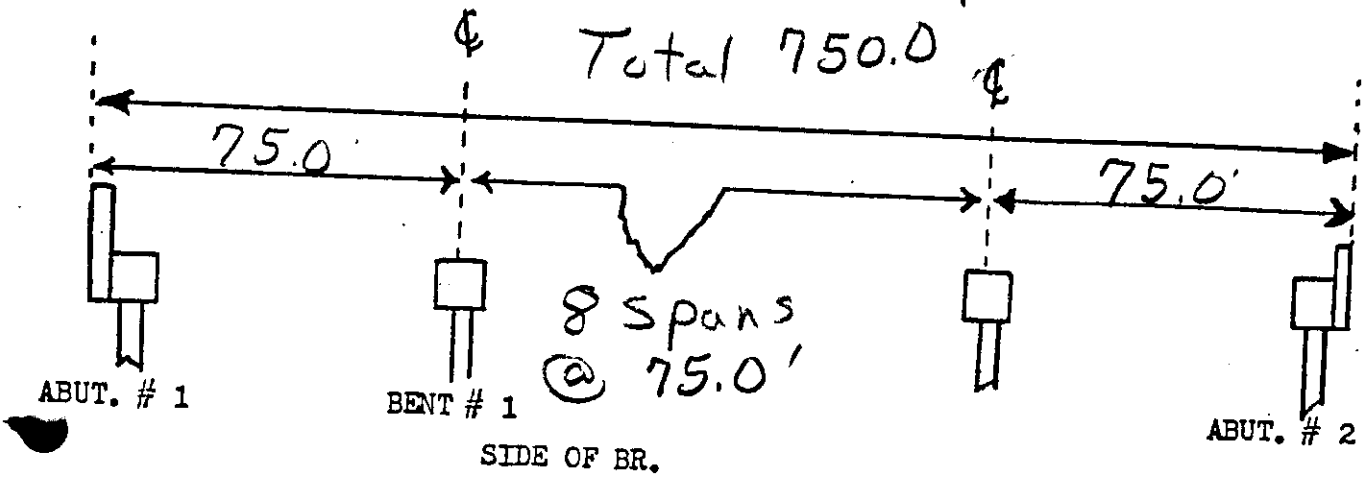
X PONTIS

SEP 16 1999

BR. NO. 79 I-40 5.09 LT

DIR. OF ROUTE →

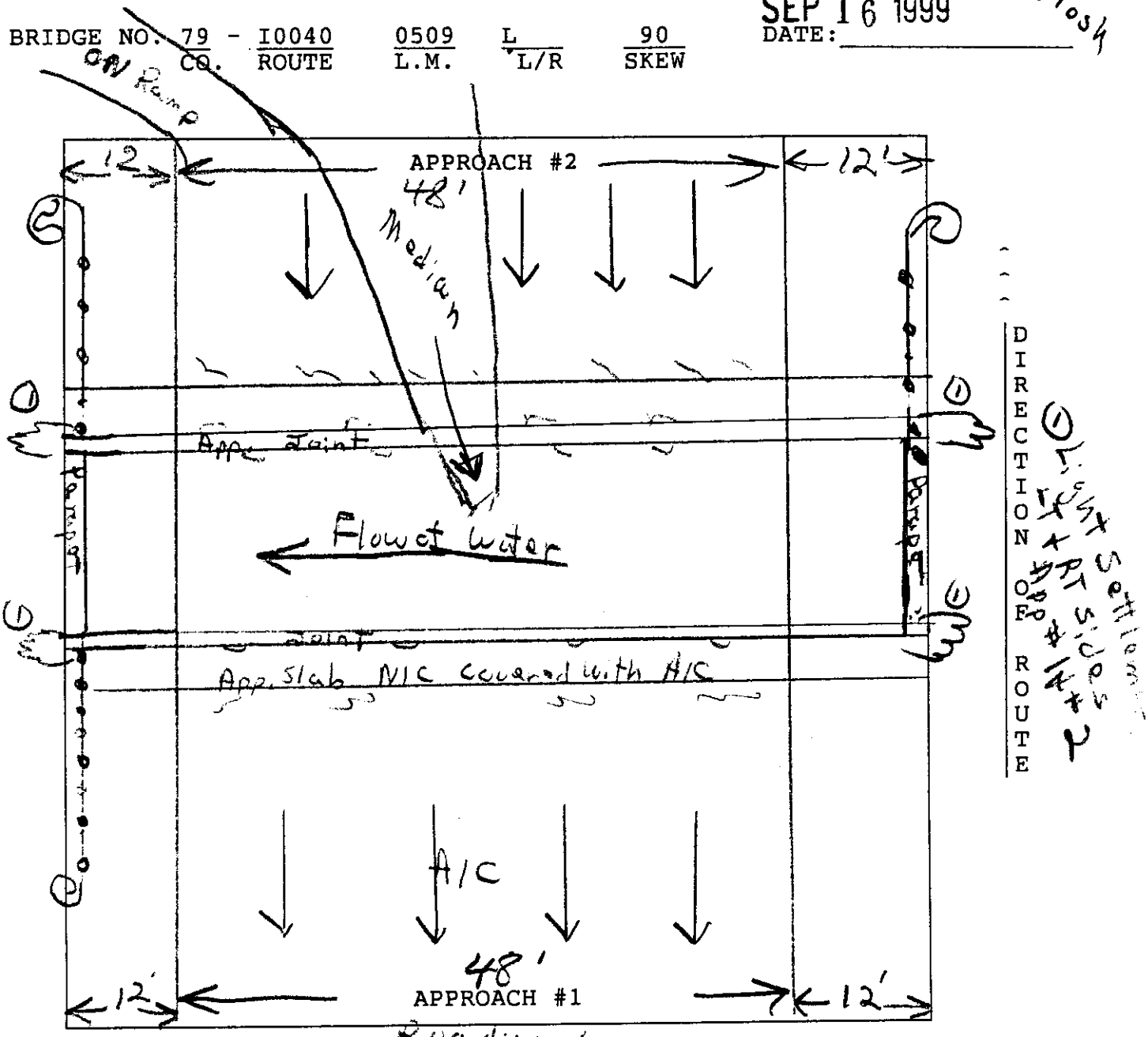
F = FIXED
E = EXPANSION
S = SIMPLE
C = CONTINUOUS



SIDE OF BR.

BRIDGE NO. 79 - I0040 0509 L 90
CO. ROUTE L.M. L/R SKEW

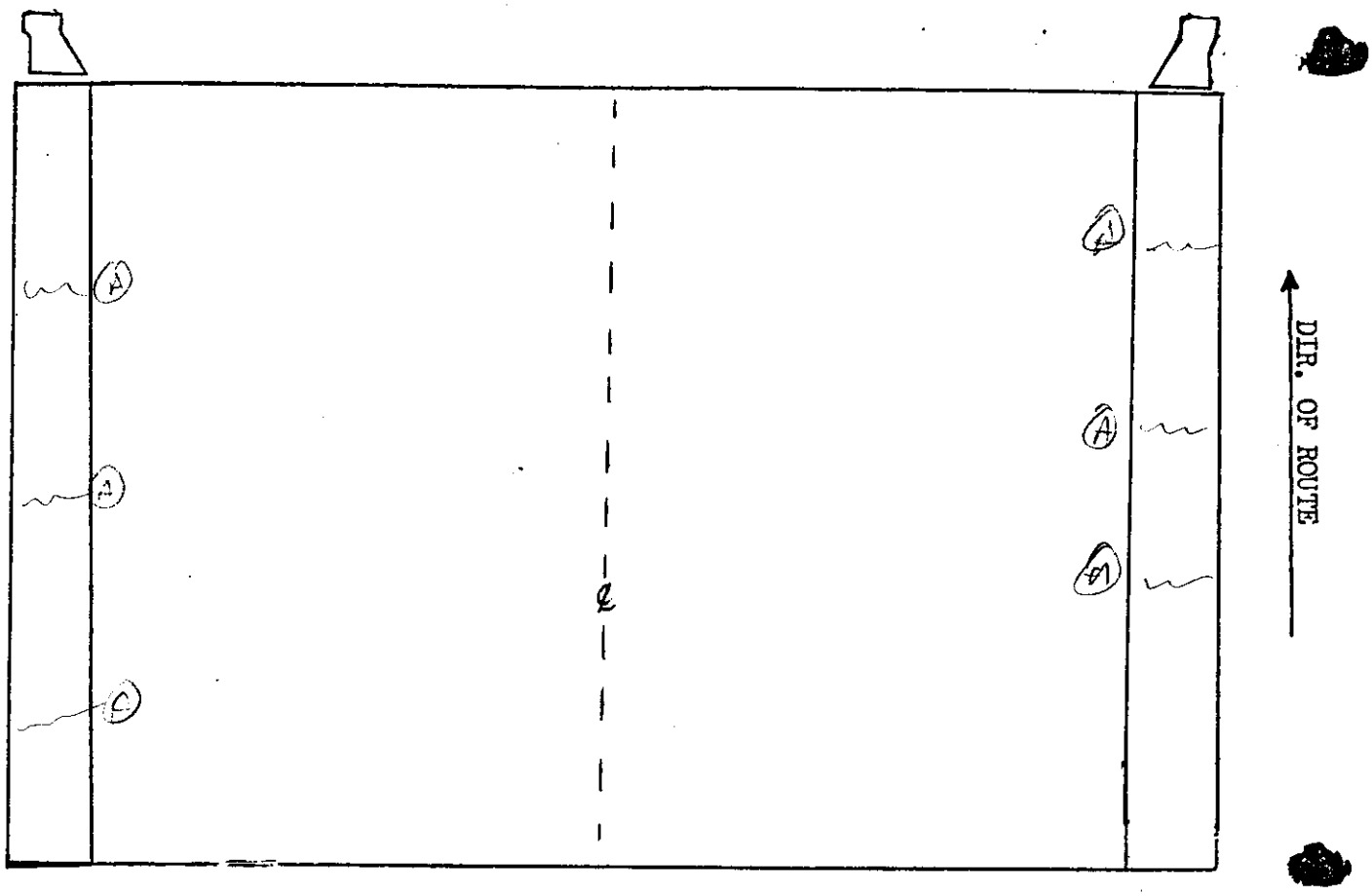
DATE: SEP 16 1999 R. Tosh



ELEMENT	RATING	COMMENTS
ALIGNMENT	(G) F P C	
APPROACH PAVEMENT	G (F) P C	Fine Cracks In A/C And Light Spalled Area In Conc. Next To Joint
APPROACH SLAB	G F P C	N/U Covered With A/C
APPROACH GUARDRAIL	G (F) P C	App #2 Lt Terminal Has Light Coll. Damage
EMBANKMENT	G (F) P C	See (1)
DRAINS	G F P C	None
APPROACH JOINT	G (F) P C	Light Debris In Joint App #1 & #2
SIGNS	G F P C	None

SEP 16 1999

BR. NO. 79 I-40 5.09 SPAN NO. 1



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	Normal Traffic Abra.
PARAPET	G (F) P C	(A) Fine Cracks
RAILS & POST	G F P C	
DRAINS	G F P C	None
EXP. JOINTS	G F P C	
	G F P C	

CT SEP 16 1999

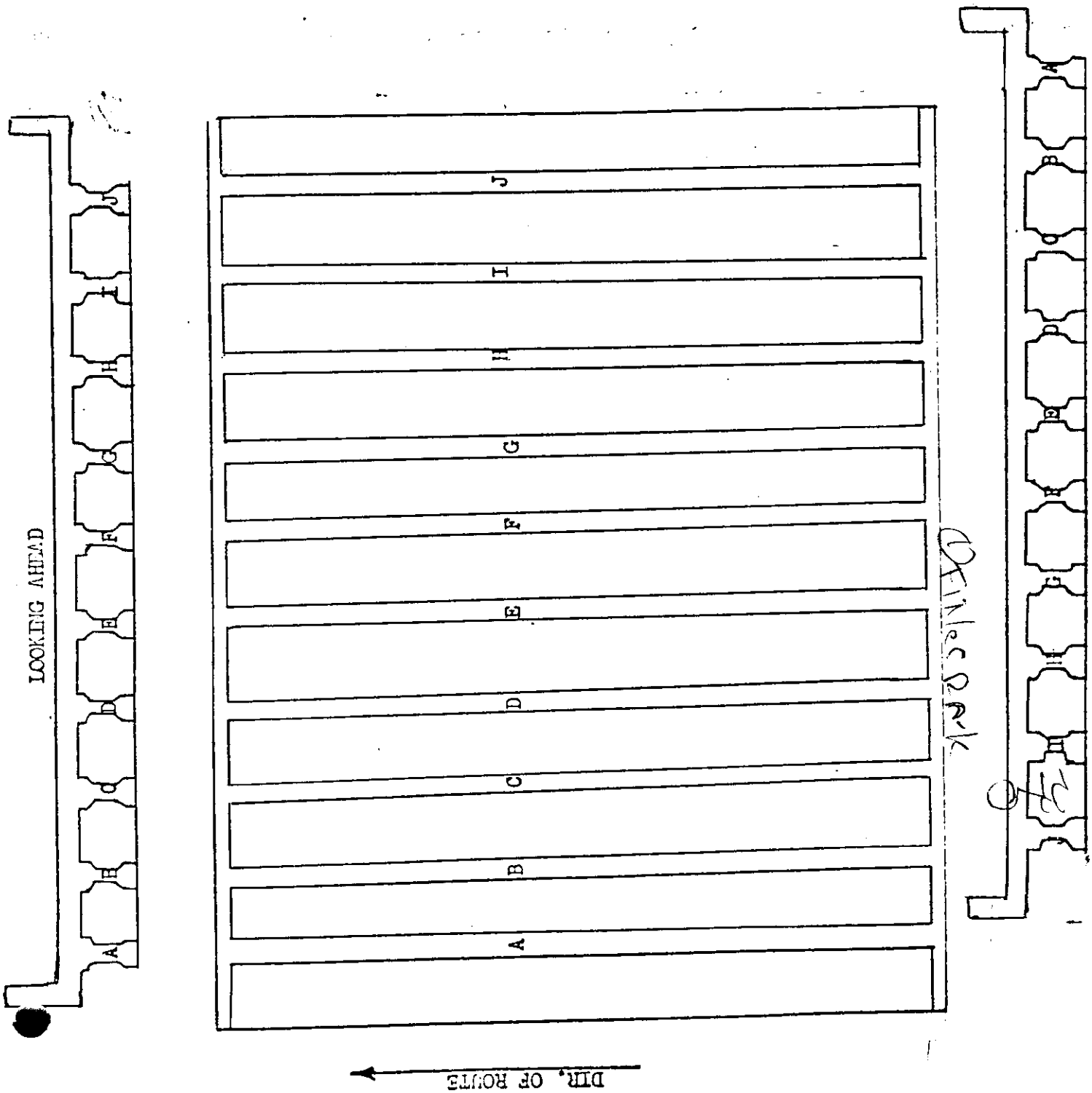
BRIDGE NO. 79 I-40 509

BENT NO. _____ SPAN NO. 1 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	
CONC. I. BEAMS	(G) F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
DIA.	(G) F P C	
BACKWALLS	(G) F P C	See #1
Earthquake Joints	(G) F P C	

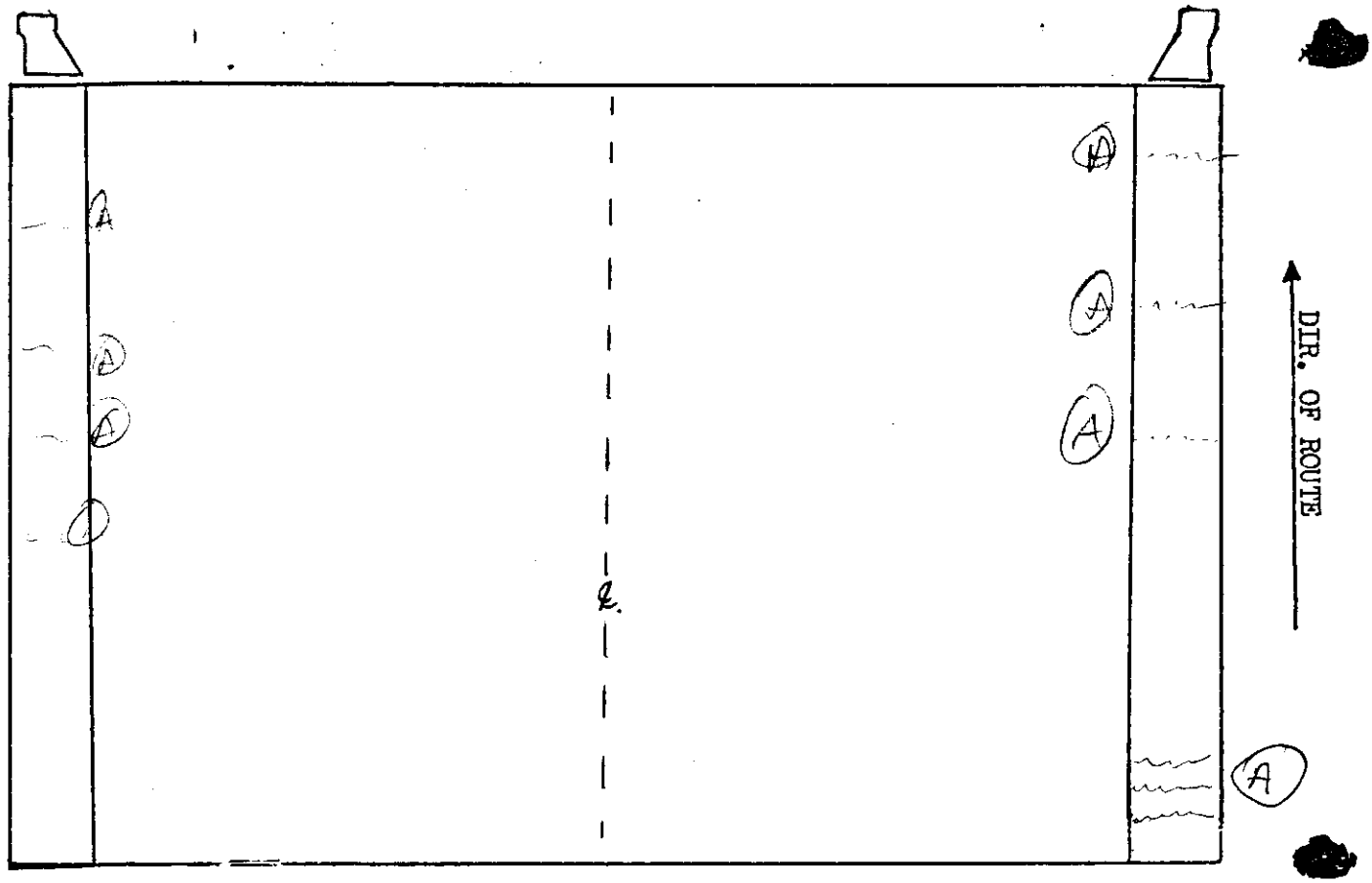
BR. NO. 79 I-40 5.09 SK. ___ LT. SPAN NO. 1

SEP 16 1999



SEP 16 1999

BR. NO. 79 I-40 5.09 SPAN NO. 2



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	Normal Traffic Areas.
PARAPET	G (F) P C	Five Cracks (A)
RAILS & POST	G F P C	
DRAINS	G F (P) C	Stopped up N. Side
EXP. JOINTS	G F P C	
	G F P C	

SEP 16 1999

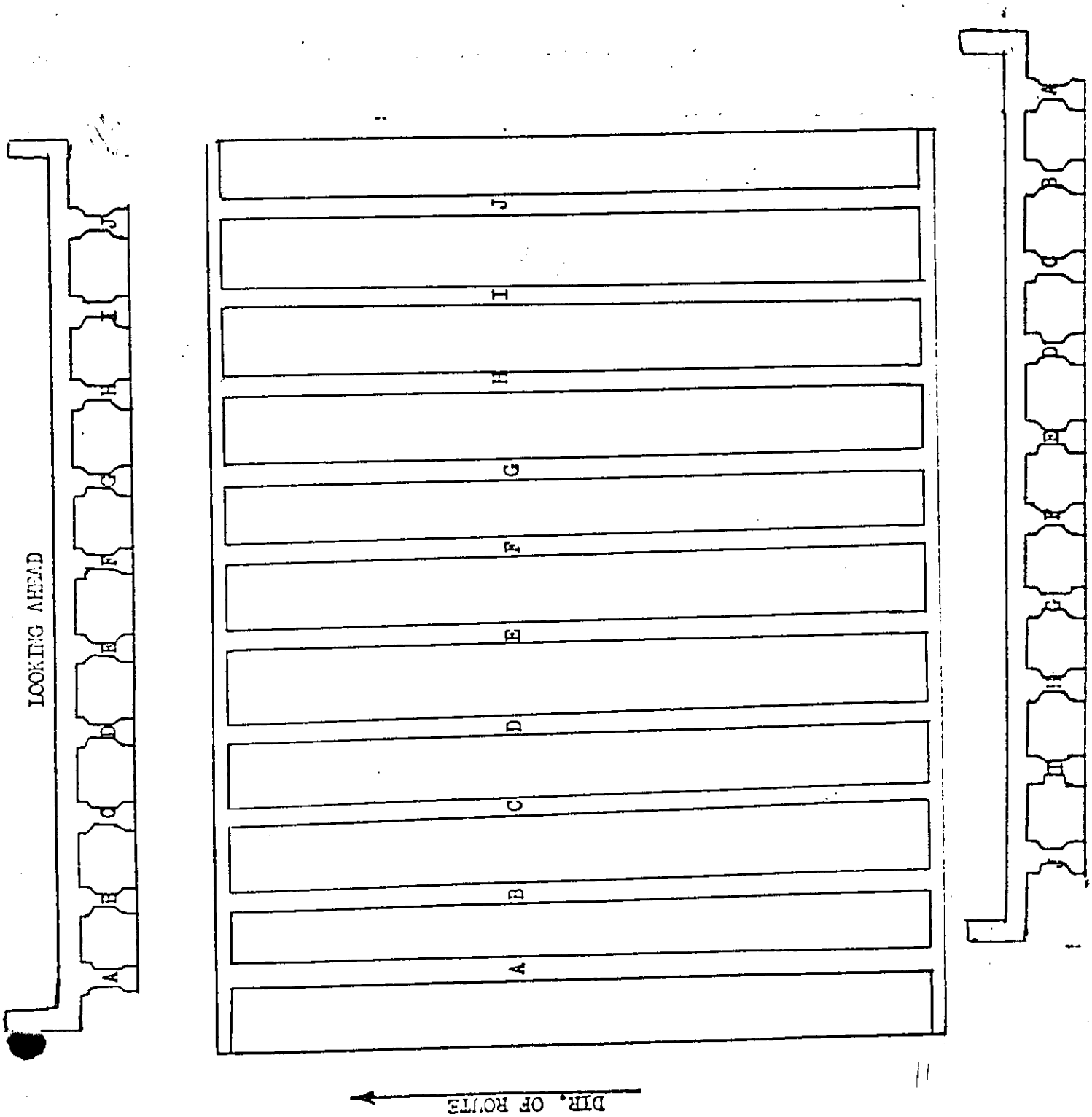
BRIDGE NO. 79 T-40 5.09

BENT NO. _____ SPAN NO. 2 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	Conc. Panels
CONC. I. BEAMS	G F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
DIA.	(G) F P C	
BACKWALLS	(G) F P C	

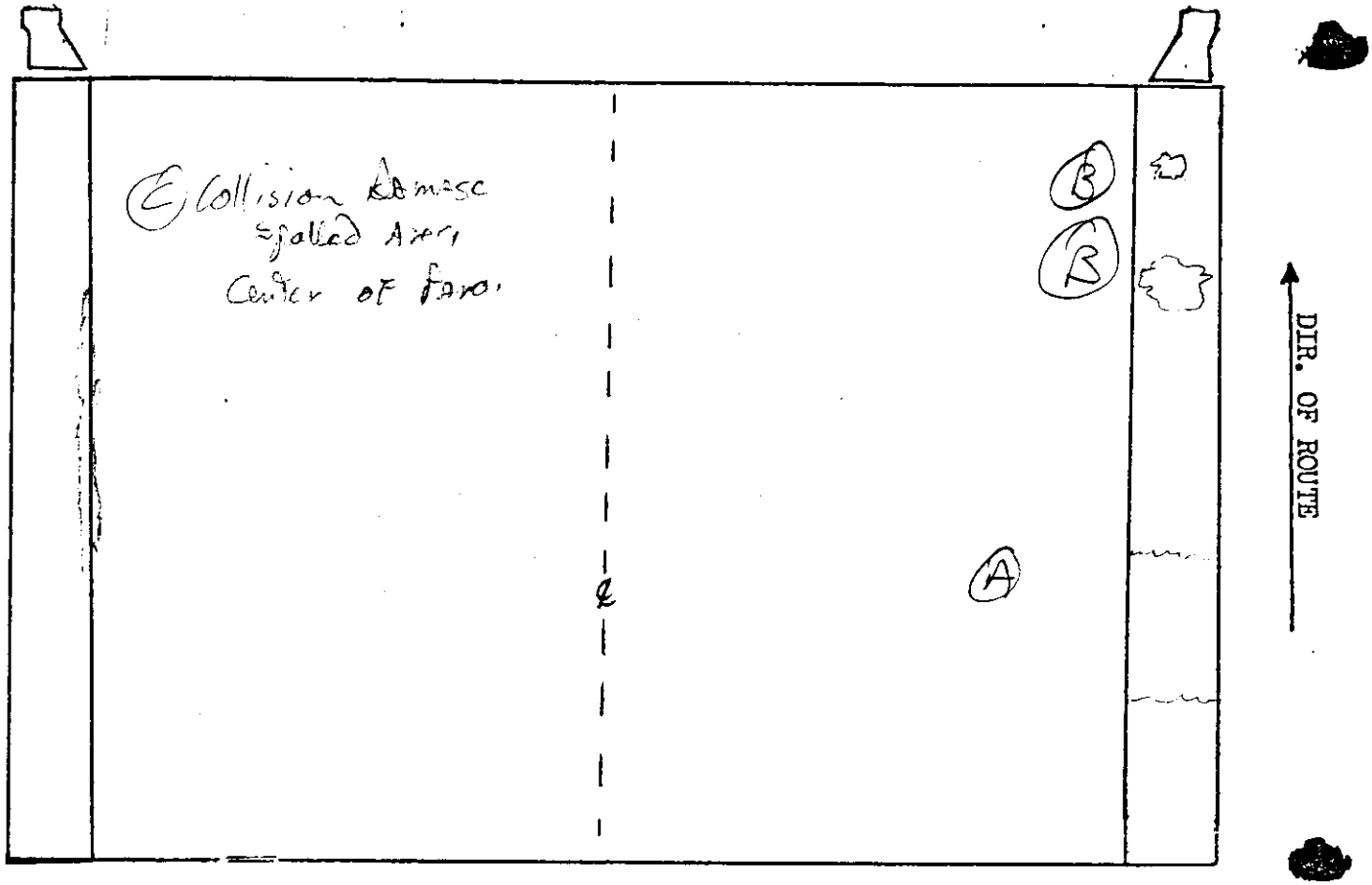
BR. NO. 79 I-40 5.09 SK. __ LT. SPAN NO. 2

SEP 16 1999



SEP 16 1999

BR. NO. 79 I-40 509 SPAN NO. 3



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	Normal Traffic Area.
PARAPET	G (F) P C	(A) - Fine Cracks (B) Spalled Top
RAILS & POST	G F P C	
DRAINS	G F (P) C	Ht. Side Stopped-up
EXP. JOINTS	G F P C	
	G F P C	

SEP 16 1999

BRIDGE NO. 79 I-40 5.09

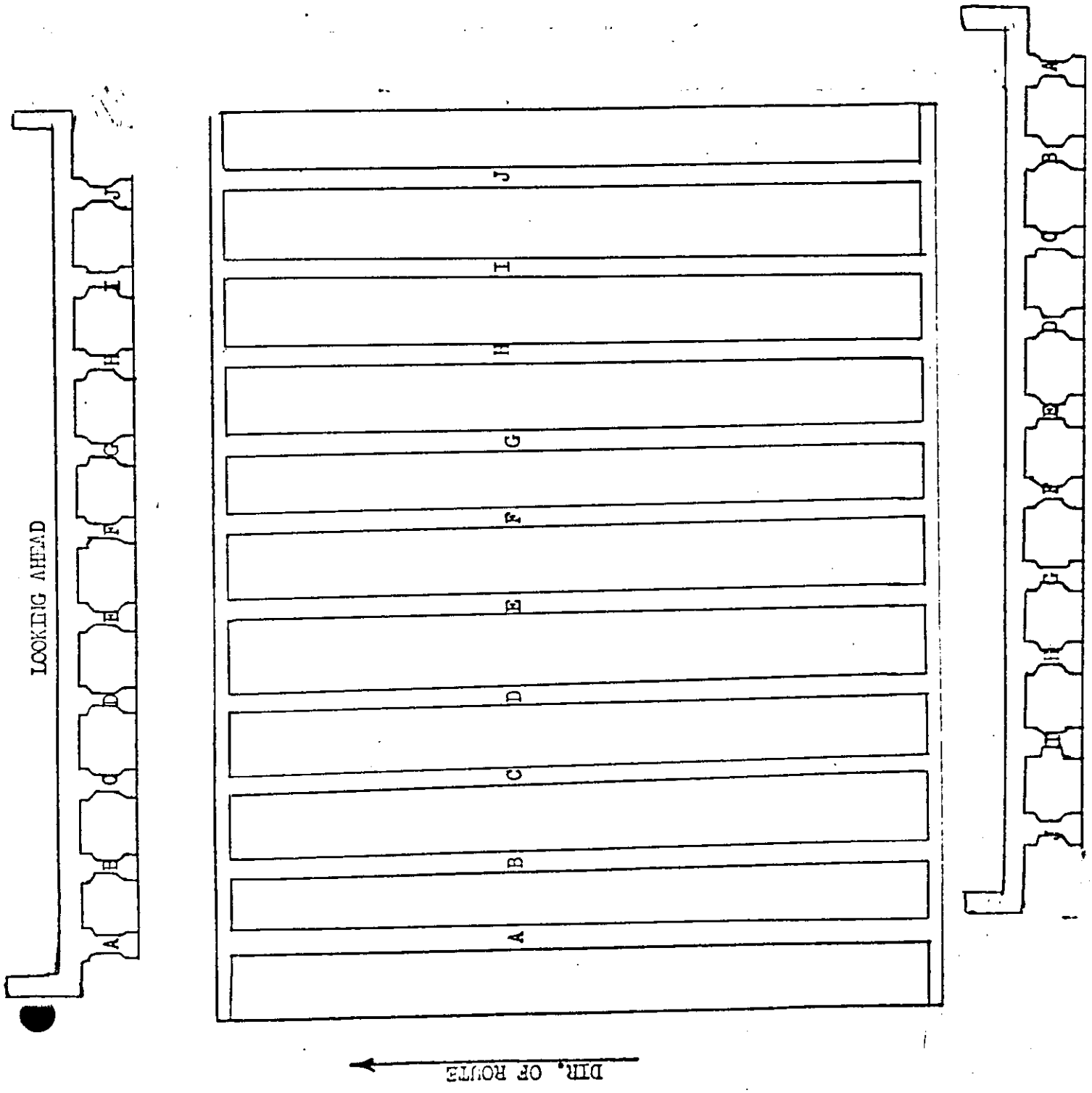
BENT NO. _____ SPAN NO. 3 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	G (F) P C	
CONC. I. BEAMS	(G) F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
DIA.	(G) F P C	
BACKWALLS	G F P C	

BR. NO. 79 -T-40 5.09 SK. __ LT. SPAN NO. 3

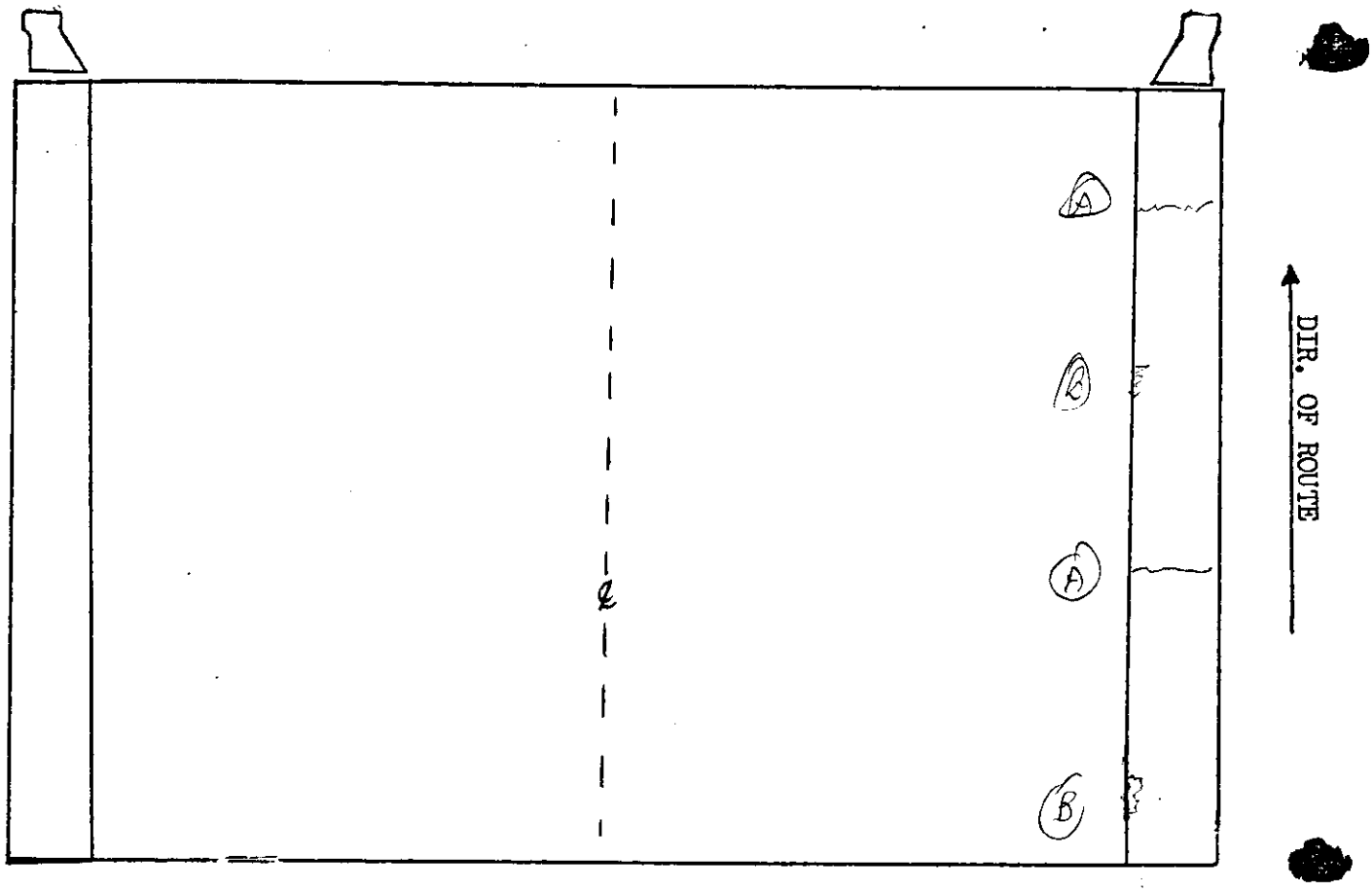
LT

SEP 16 1999



SEP 16 1999

BR. NO. 79 I-40 5.09 SPAN NO. 4



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	Normal Traffic Abras
PARAPET	G (F) P C	(A) Fine Crack (B) Small Spalled Area
RAILS & POST	G F P C	
DRAINS	G F (P) C	Lt. Side Stopped-up
EXP. JOINTS	G F P C	
	G F P C	

SEP 16 1999

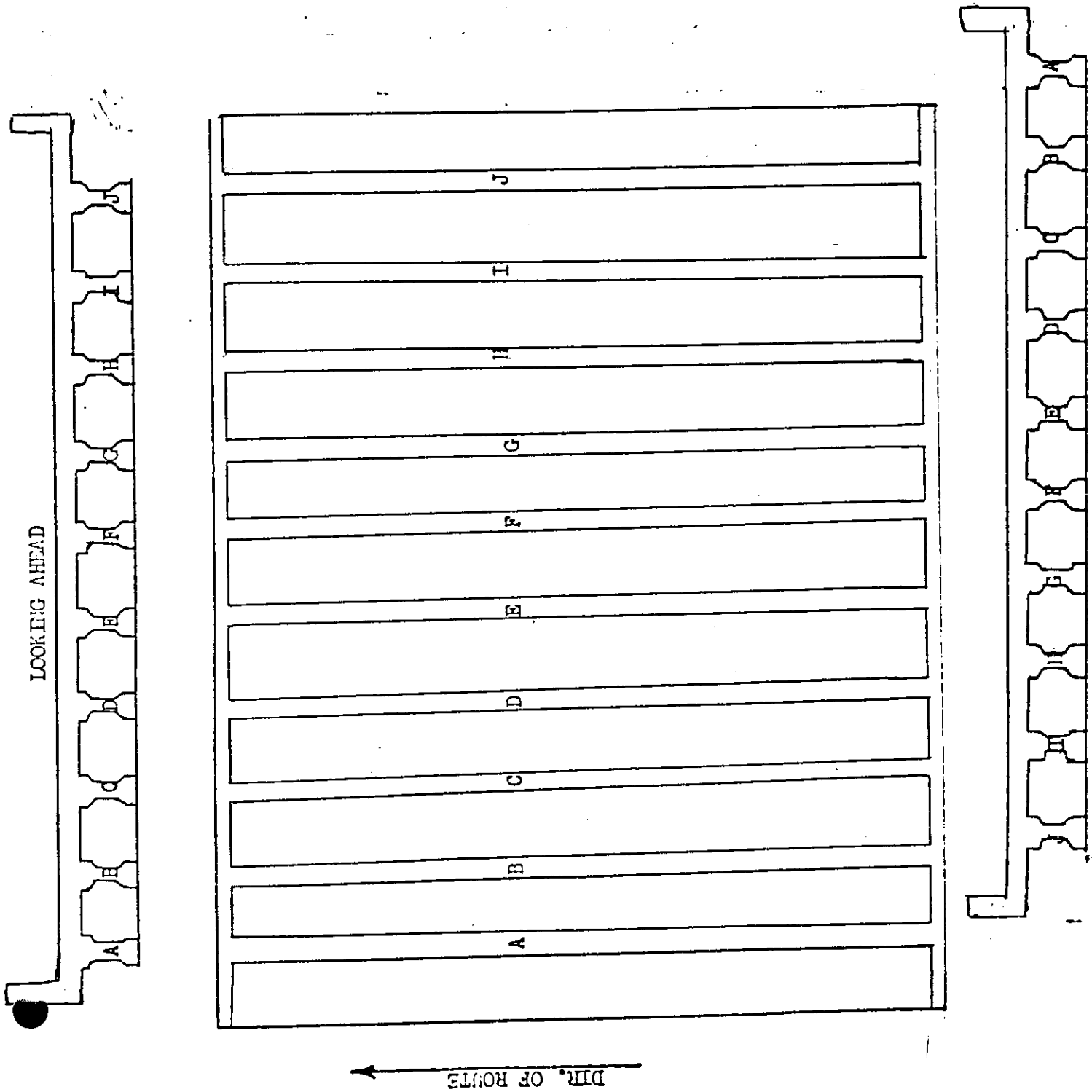
BRIDGE NO. 79 T-40 5.09

BENT NO. _____ SPAN NO. 4 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	Conc. Panels
CONC. I. BEAMS	G F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
DIA.	(G) F P C	
BACKWALLS	G F P C	

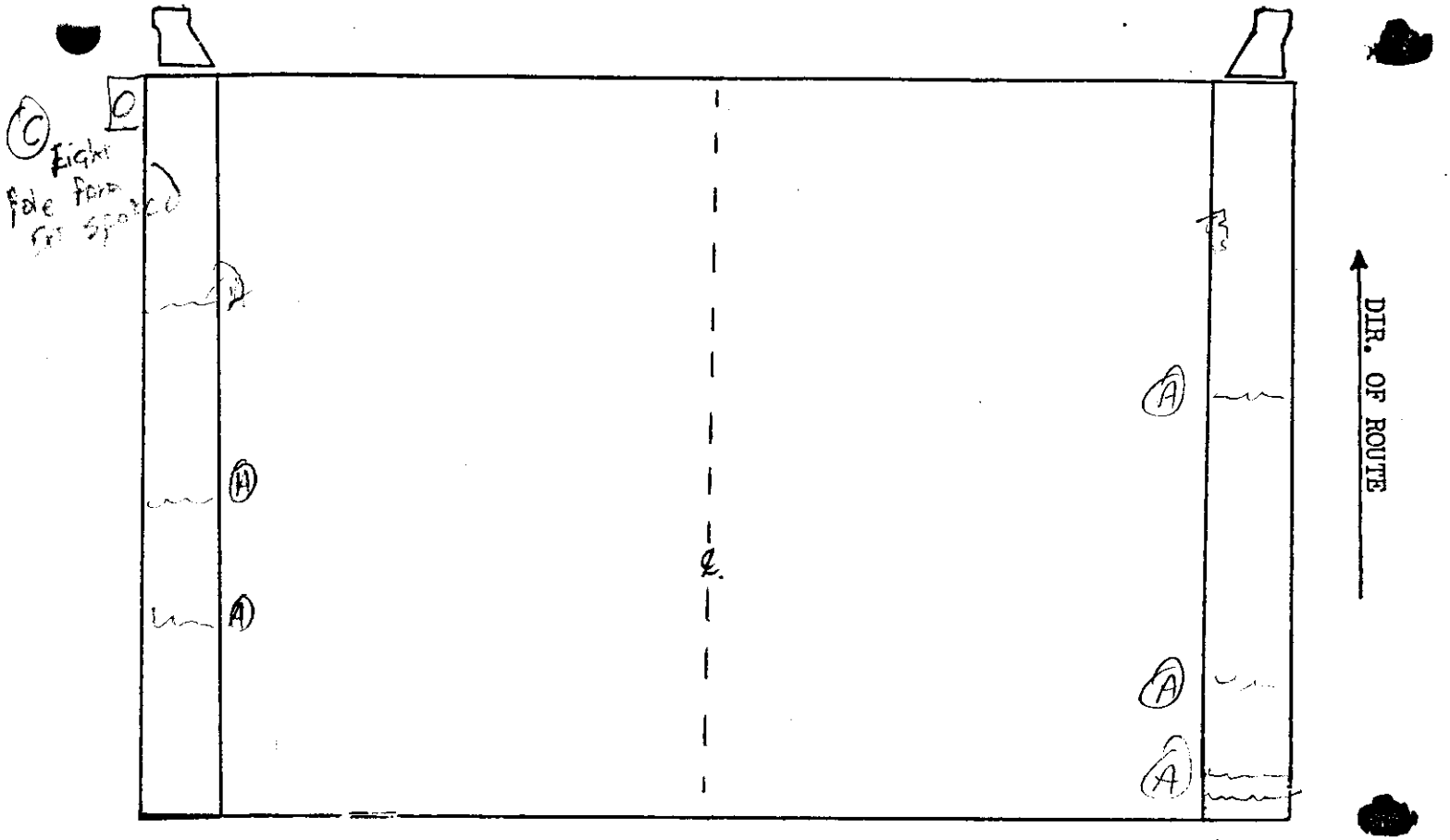
BR. NO. 79 T-40 599 SK. ___ LT. SPAN NO. 4

SEP 16 1999



SEP 16 1999

BR. NO. 79 I-40 5.09 SPAN NO. 5



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	Normal Traffic Area.
PARAPET	G (F) P C	(A) Fine Cracks (E) Small Spalled Area (C) Light Pole Area. Ext. Spalled
RAILS & POST	G F P C	
DRAINS	G F (P) C	Lt. Side - Stopped-up.
EXP. JOINTS	G F P C	
	G F P C	

LT SEP 16 1999

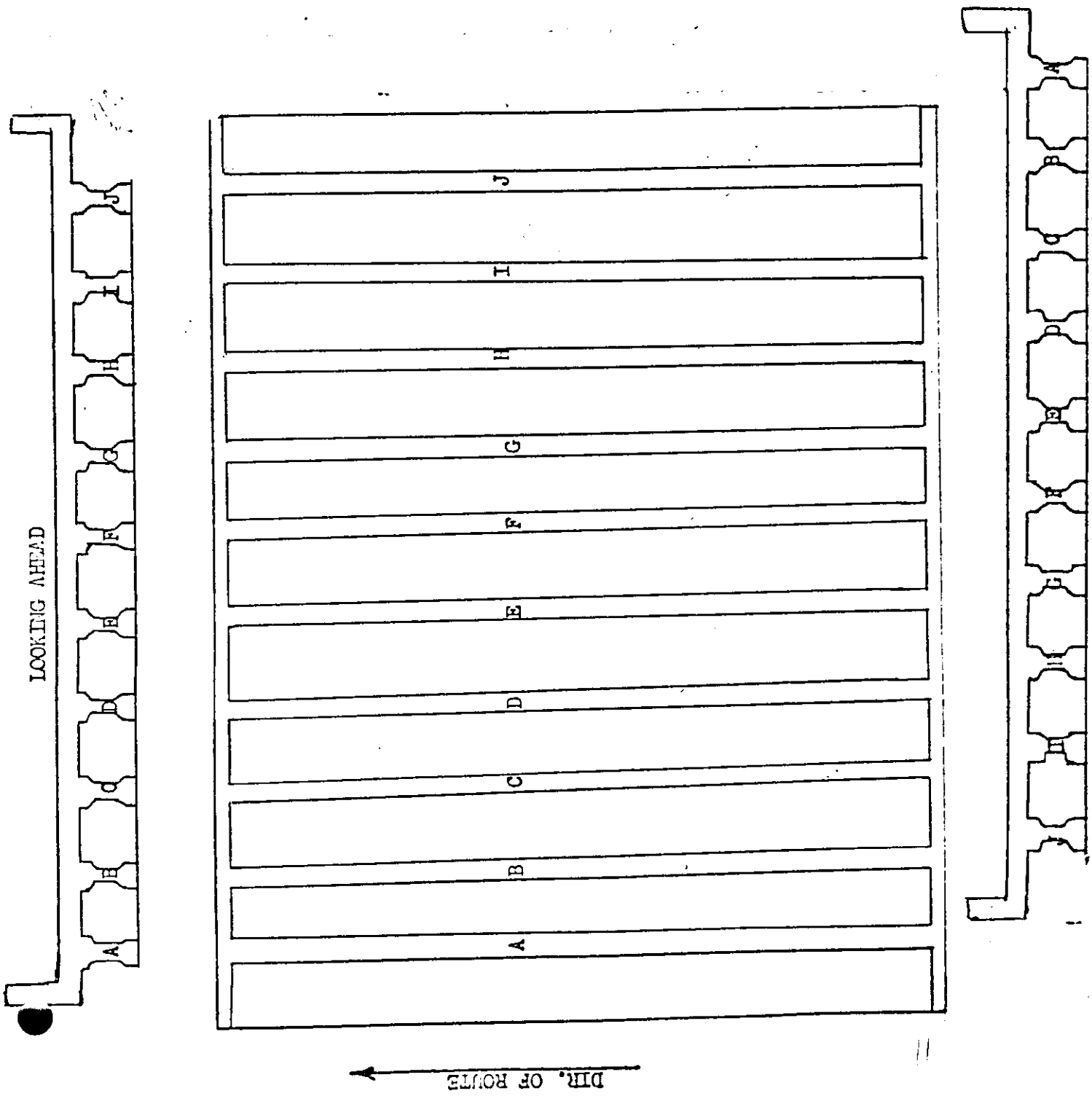
BRIDGE NO. 79 I-40 509

BENT NO. _____ SPAN NO. 5 ABT. NO. _____ PIER NO. _____

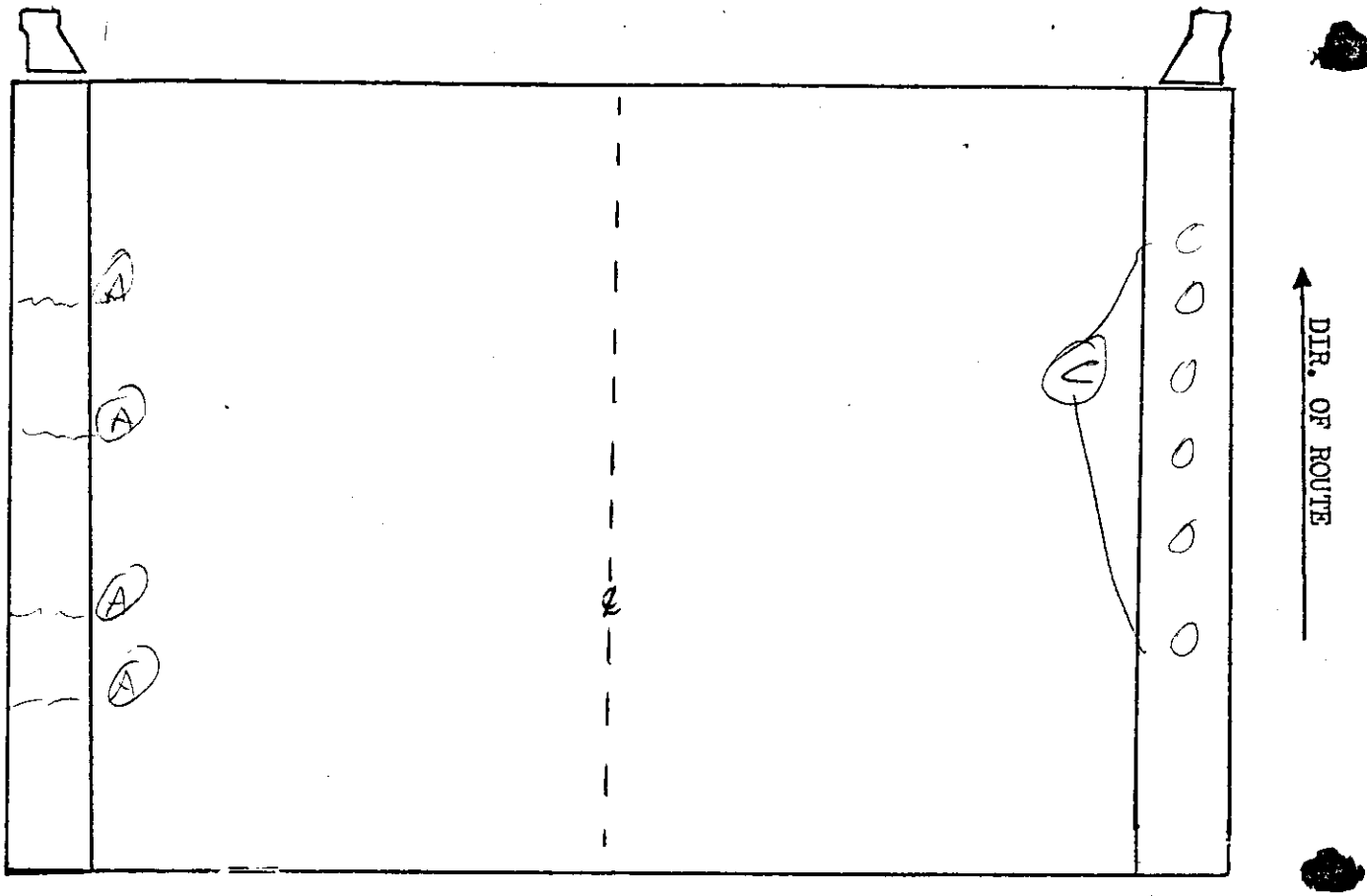
ELEMENT	RATING	COMMENTS
BOTTOM DECK	G F P C	
CONC. I. BEAMS	G F P C	
A	G F P C	
B	G F P C	
C	G F P C	
D	G F P C	
E	G F P C	
F	G F P C	
G	G F P C	
H	G F P C	
I	G F P C	
J	G F P C	
DIA.	G F P C	
BACKWALLS	G F P C	

BR. NO. 79 I-40 5.09 SK. __ LT. SPAN NO. 5

SEP 16 1999



BR. NO. 79 I-40 5.09 SEP 16 1999 SPAN NO. 6



ELEMENT	RATING	COMMENT
TOP DECK	G F P C	Normal Traffic Abra.
PARAPET	G (F) P C	(C) Tex coat chipping (A) Fine cracks
RAILS & POST	G F P C	" "
DRAINS	G F (P) C	N. Side Stopped up
EXP. JOINTS	G F P C	
	G F P C	

SEP 16 1999

A

BRIDGE NO. 79 I-40 509

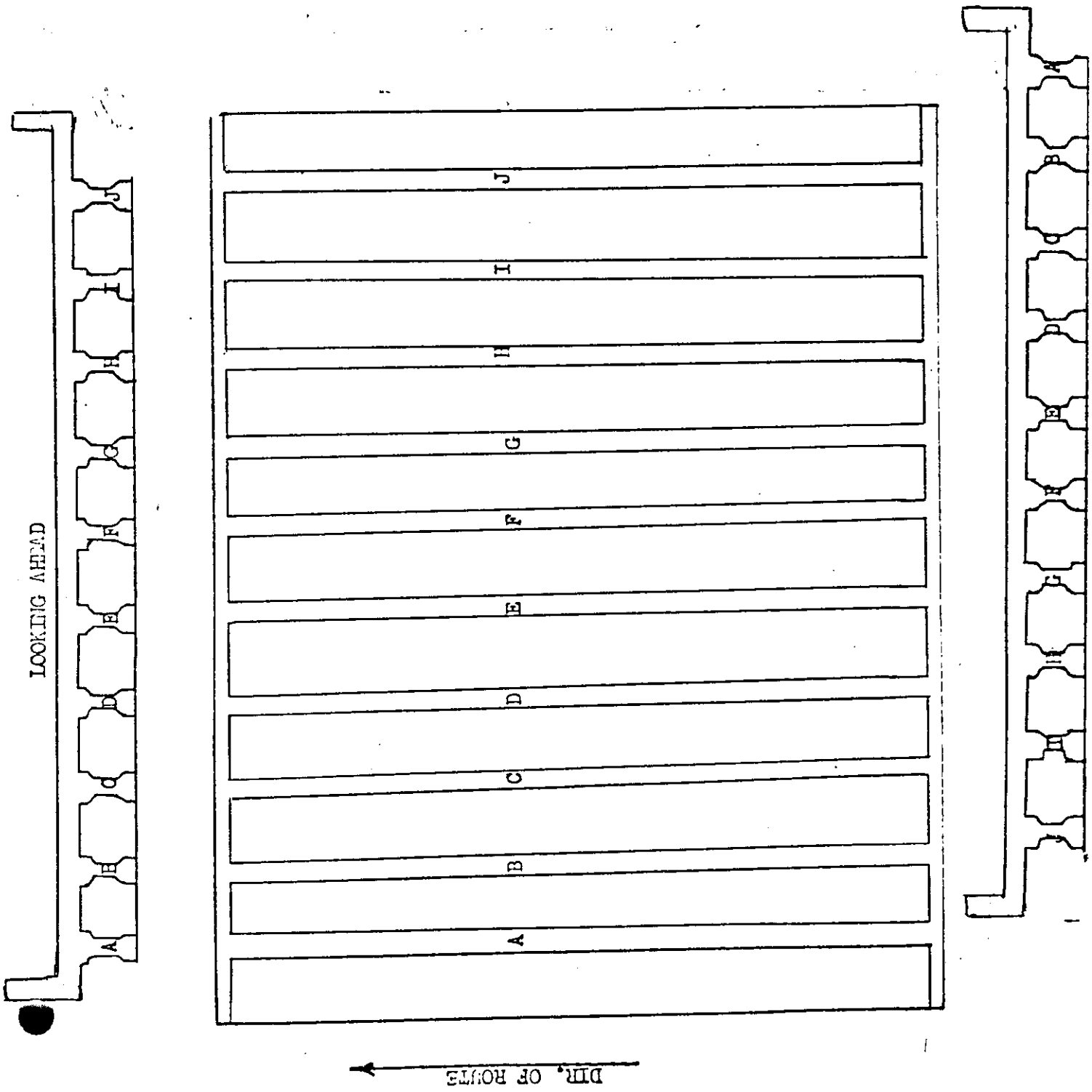
BENT NO. _____ SPAN NO. 6 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	
CONC. I. BEAMS	G F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
DIA.	(G) F P C	
BACKWALLS	G F P C	

SEP 16 1999

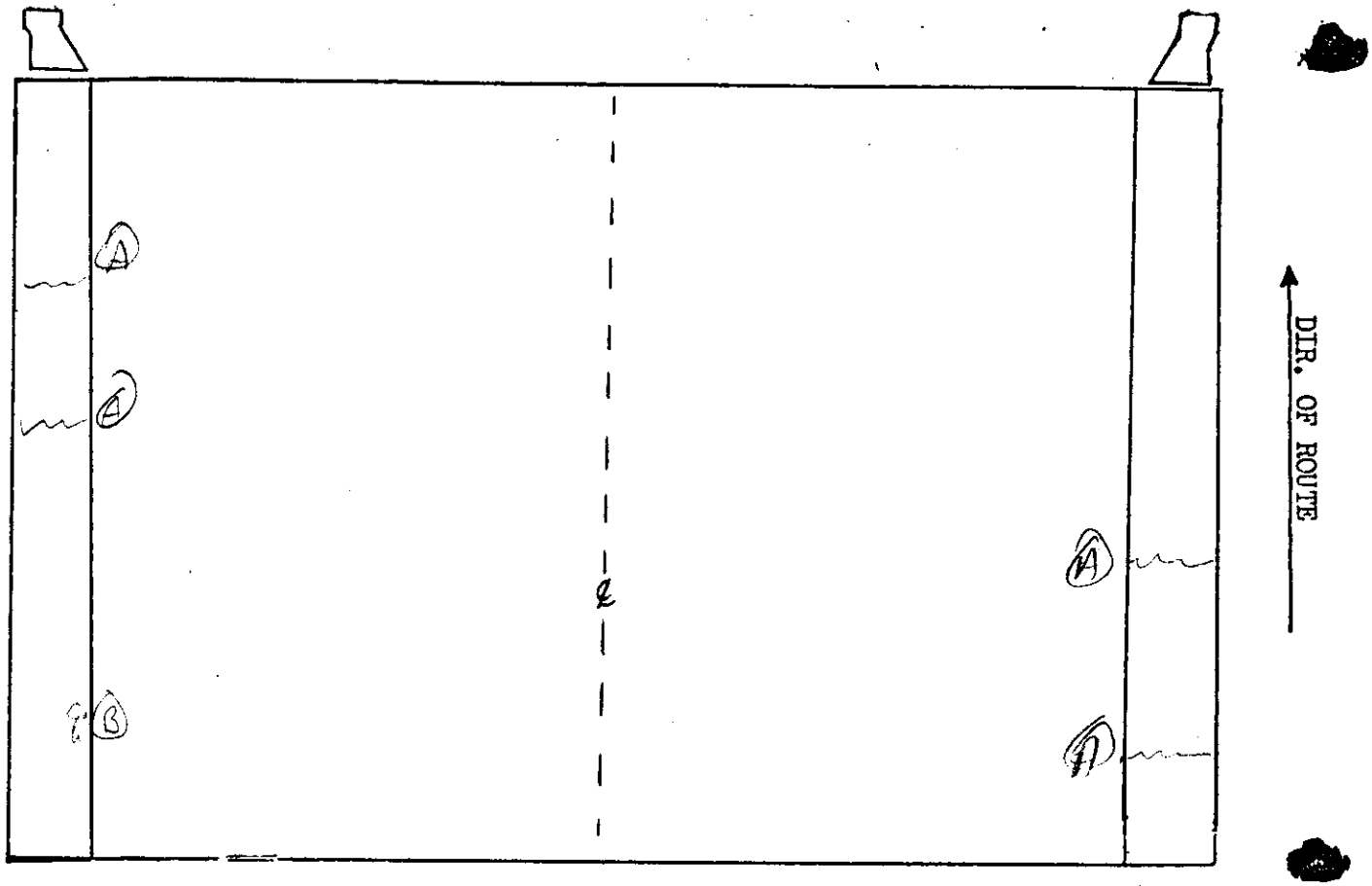
BR. NO. 79 T-40 5.09 SK. __ LT. SPAN NO. 6

LT



SEP - SEP 16 1999

BR. NO. 29-I-40 509 SPAN NO. 7



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	Normal Traffic Wear.
PARAPET	G (F) P C	(A) Fine Cracks (B) Spalled Area
RAILS & POST	G F P C	
DRAINS	G F (P) C	N. Side Stopped-up
EXP. JOINTS	G F P C	
	G F P C	

SEP 16 1999 ET

BRIDGE NO. 79 I-40 5.09

BENT NO. _____ SPAN NO. 7 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	Panels
CONC. I. BEAMS	(G) F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
K	(G) F P C	
DIA.	G F P C	None
BACKWALLS	G F P C	Fine Cracks

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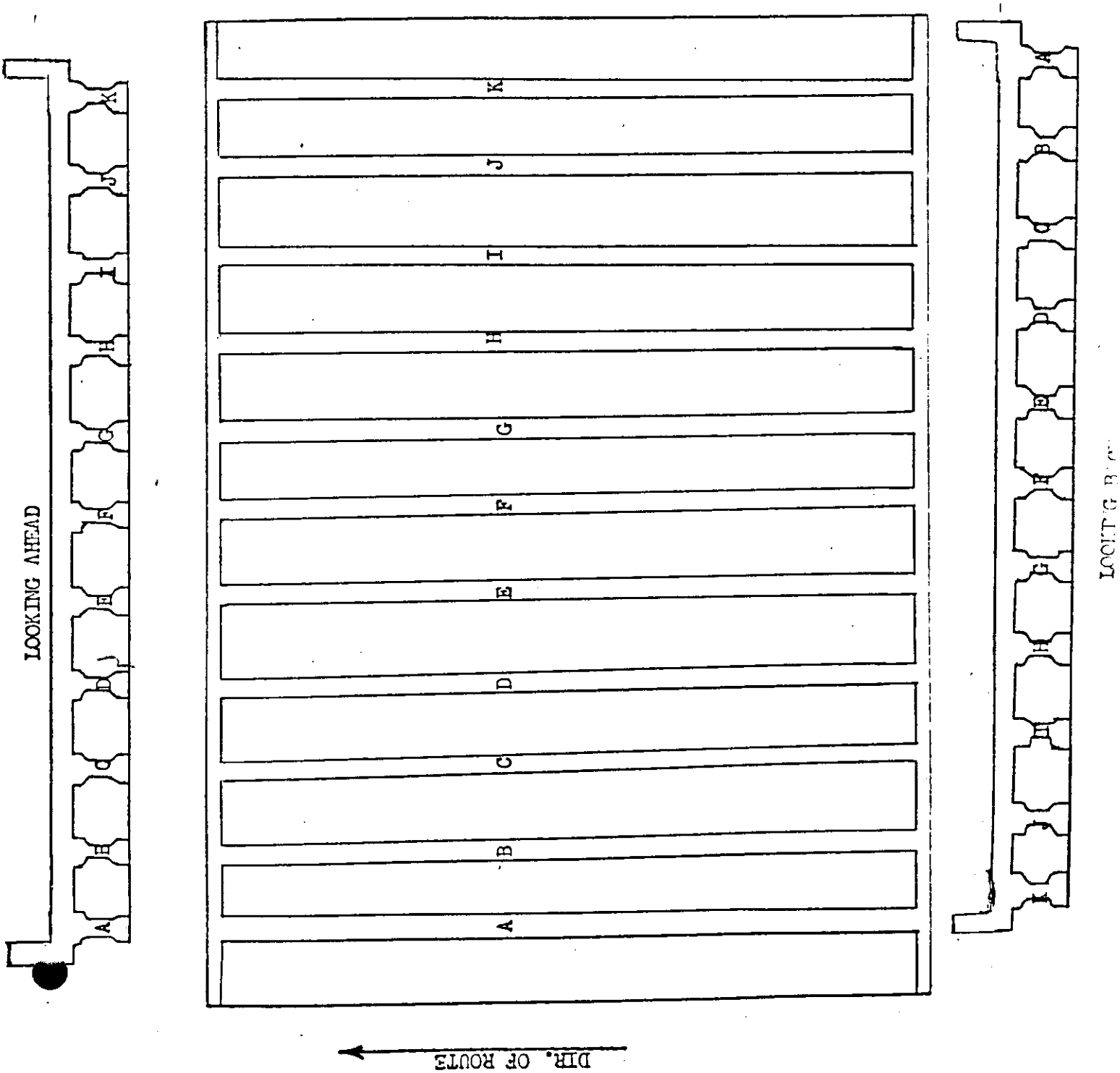
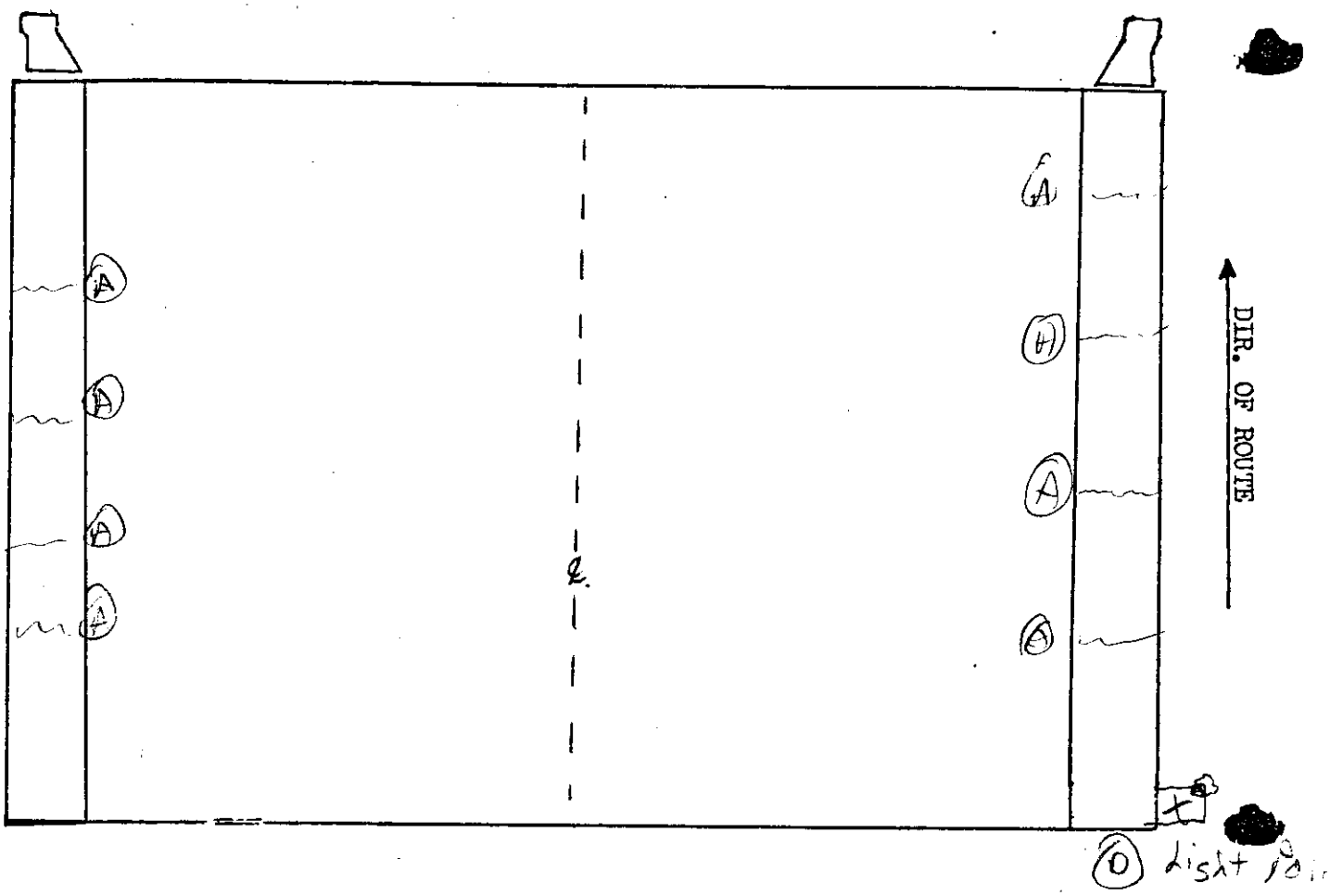
BR. NO. 79 I-40 509 SK. __ LT. SPAN NO. 7

LT



BR. NO. 79 I-40 5.09 LT SEP 16 1999 SPAN NO. 8



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	Normal Traffic Area
PARAPET	G (F) P C	(A) Fine Cracks (D) Light Pole Para. Extension spalled
RAILS & POST	G F P C	
DRAINS	G F (P) C	N. side Stopped-up
EXP. JOINTS	G F P C	
	G F P C	

SEP 16 1999

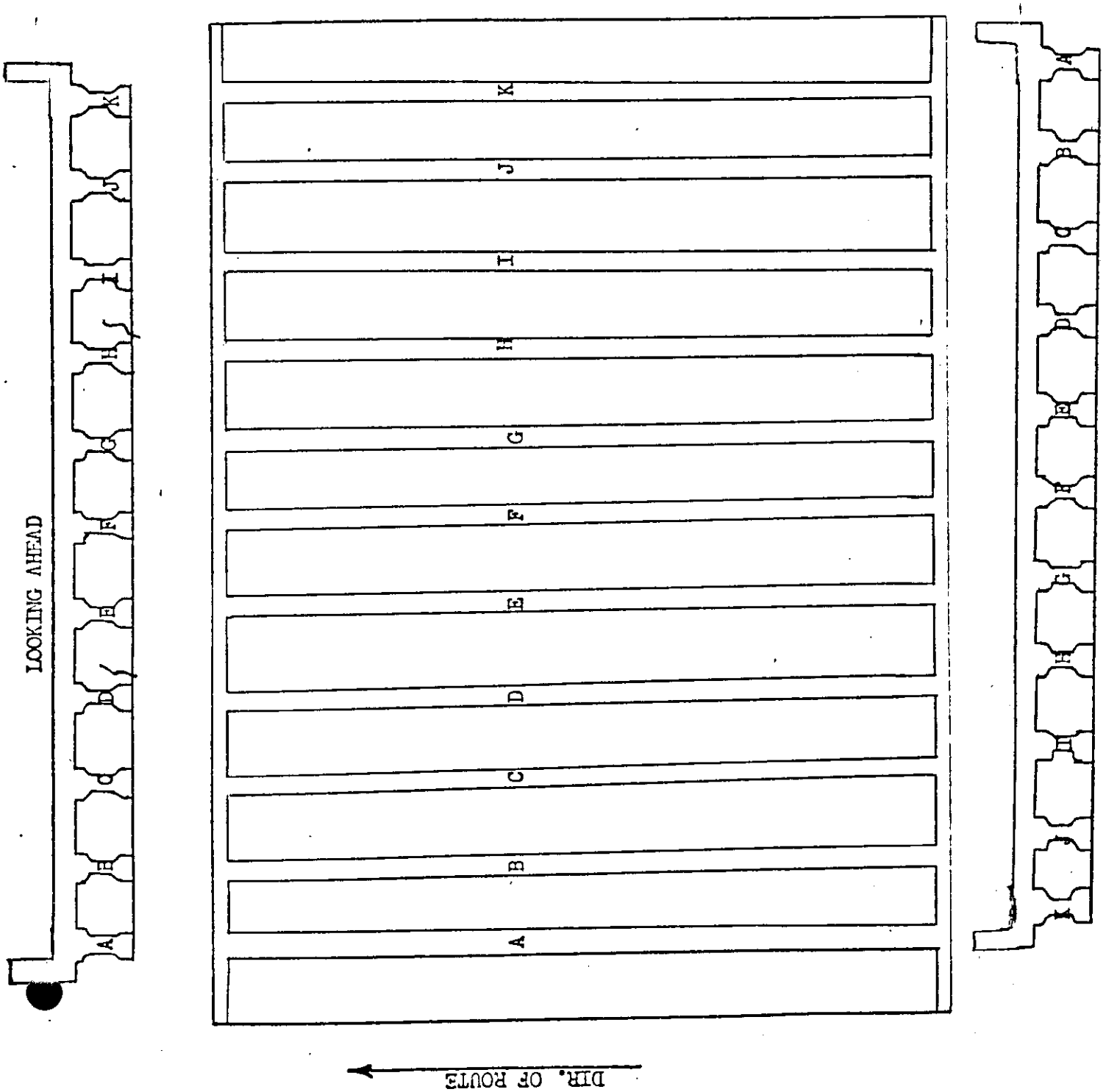
BRIDGE NO. 79 I-40 5.09

BENT NO. _____ SPAN NO. 8 ABT. NO. _____ PIER NO. _____

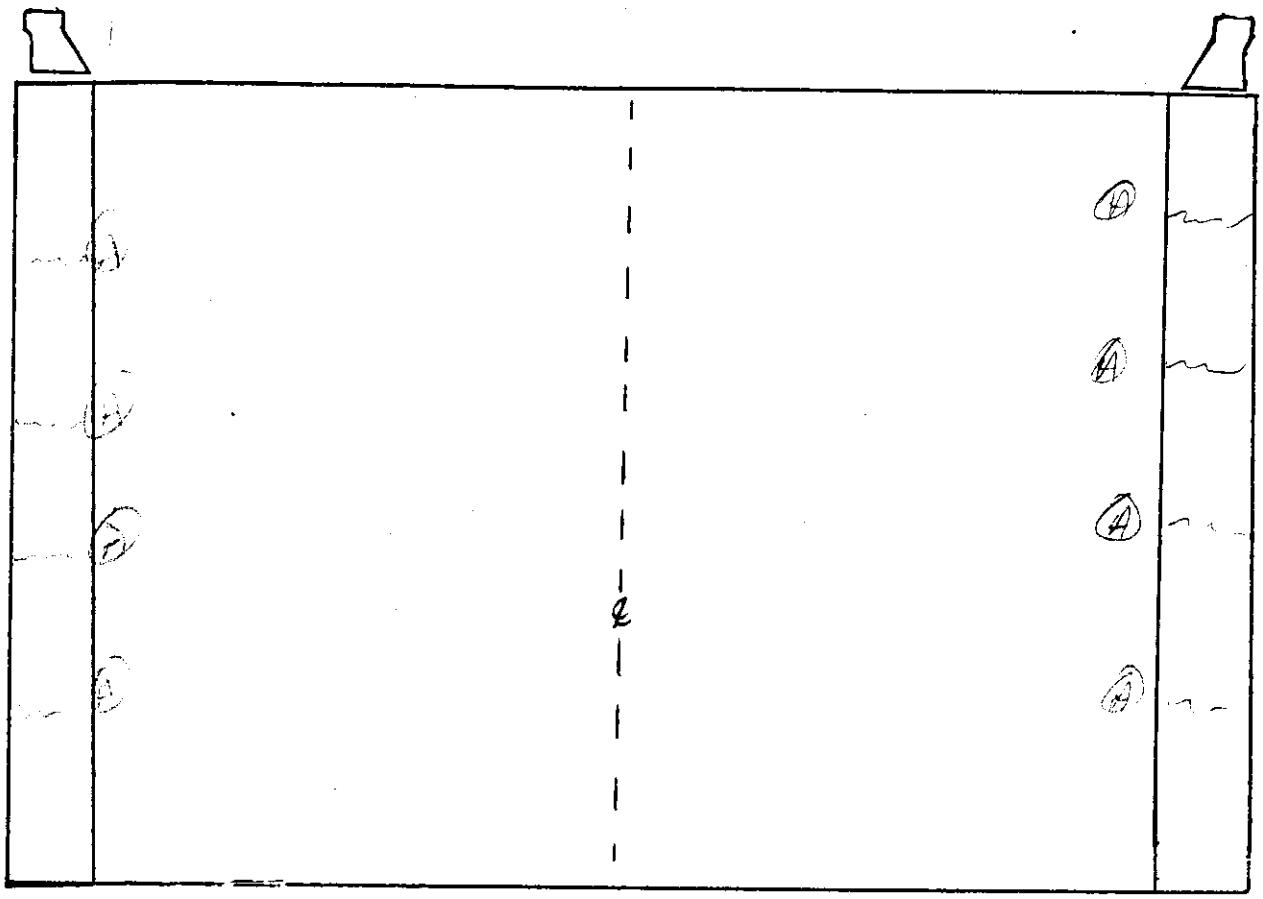
ELEMENT	RATING	COMMENTS
BOTTOM DECK	G F P C	
CONC. I. BEAMS	(G) F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
K	(G) F P C	
DIA.	G F P C	None
BACKWALLS	G (F) P C	Fine Cracks

SEP 16 1999

BR. NO. 79 ~~I-66~~ 5.09 SK. ___ LT. SPAN NO. 8



BR. NO. 29 I-40 5.09 CT SEP 16 1999 SPAN NO. 9



ELEMENT	RATING	COMMENT
TOP DECK	G (F) P C	Normal Traffic Also.
PARAPET	G (F) P C	(A) Fine Cracks
RAILS & POST	G F P C	
DRAINS	G F (P) C	At Side Stopped-up
EXP. JOINTS	G F P C	
	G F P C	

SEP 16 1999

ET

BRIDGE NO. 79 I40 5.09

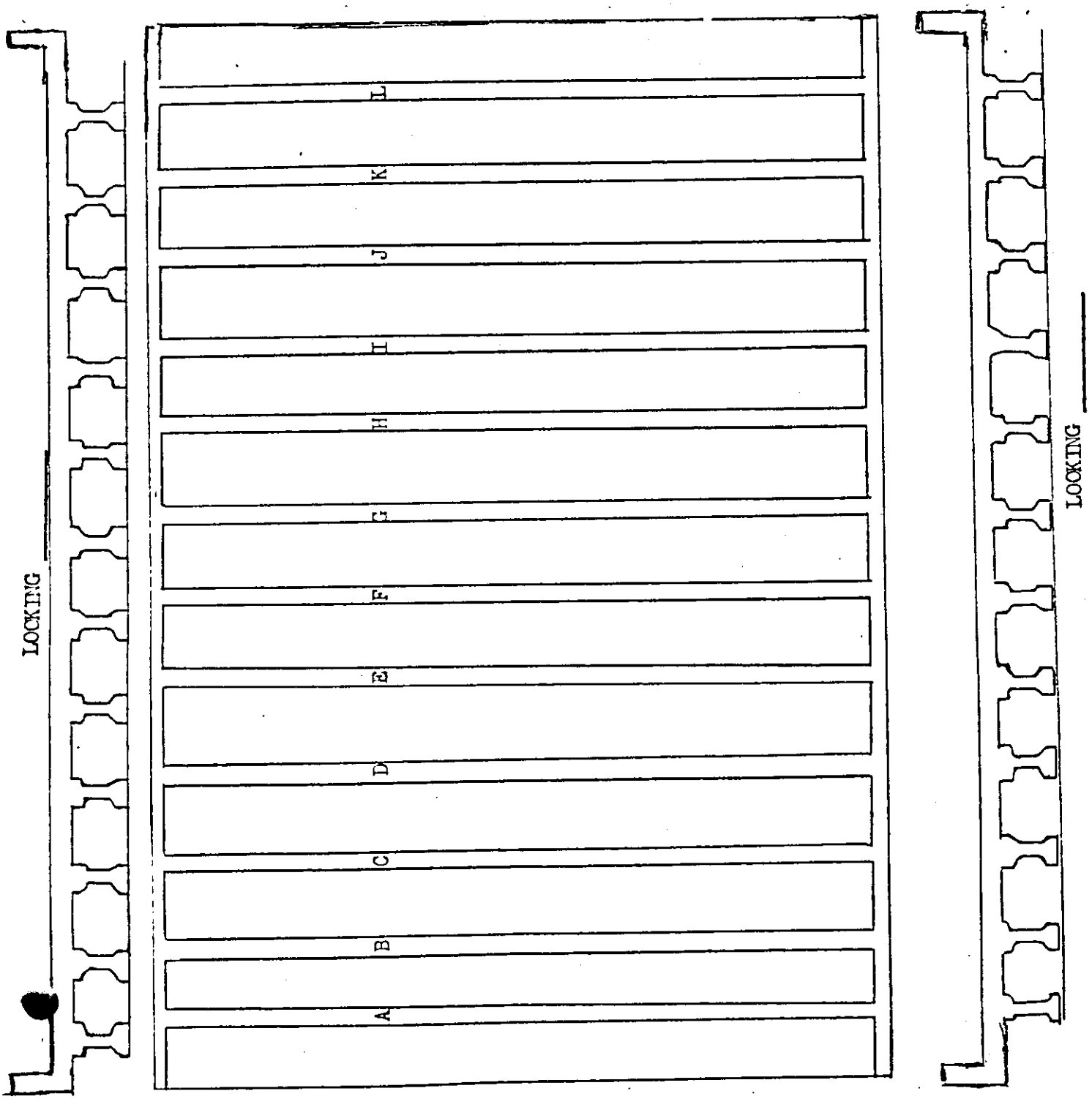
BENT NO. _____ SPAN NO. 9 ABT. NO. _____ PIER NO. _____

ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	Panels
CONC. I. BEAMS	(G) F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
K	(G) F P C	
L	(G) F P C	
DIA.	G F P C	None
BACKWALLS	(G) F P C	

BR. NO. 79 T40 5.09 SK ___ SPAN NO. 9 SEP 16 1999

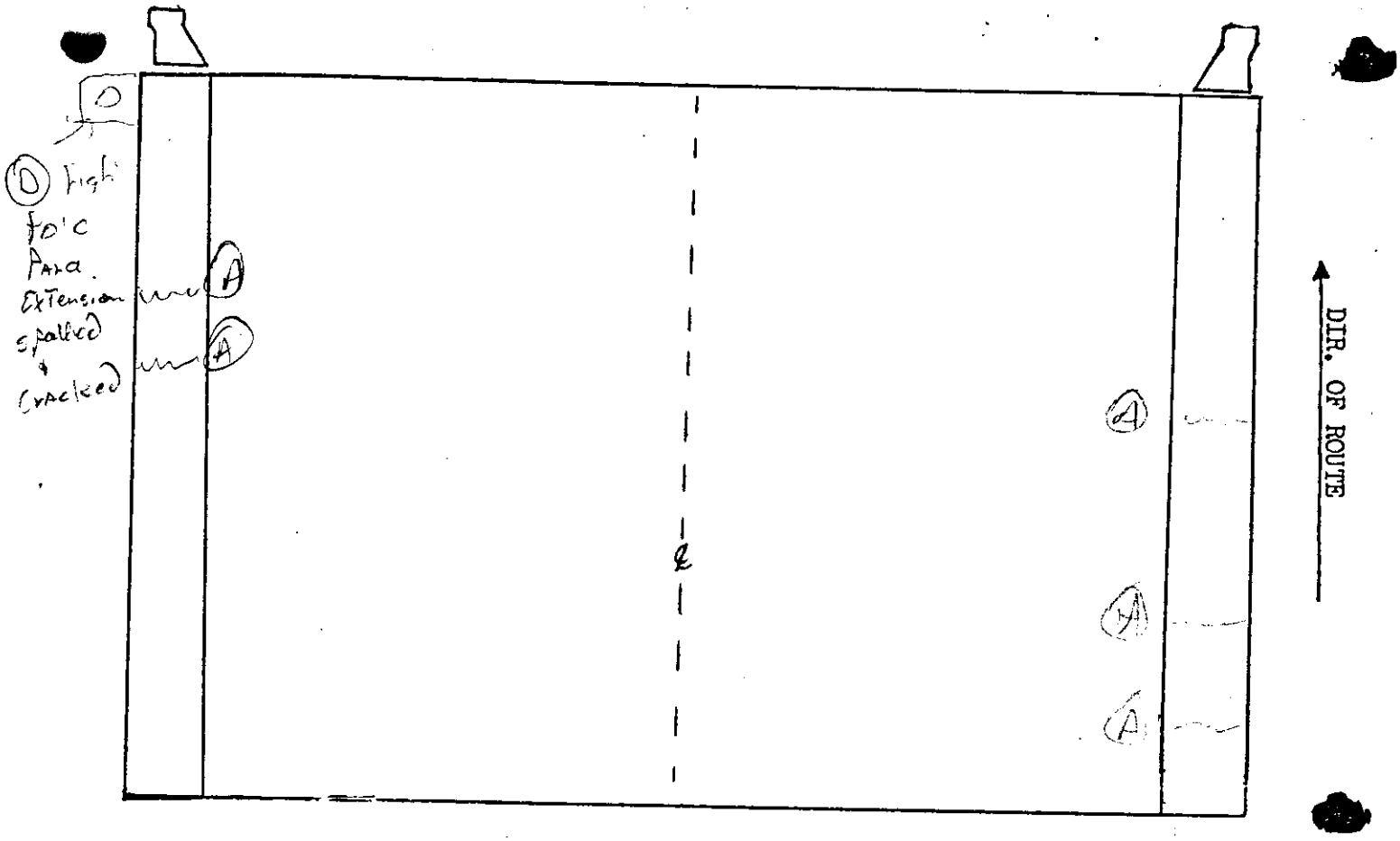
R.T

DIR. OF ROUTE



SEP 16 1999

BR. NO. 79 I-40 5.09 SPAN NO. 10



ELEMENT	RATING	COMMENT
TOP DECK	G F P C	Normal Traffic Abra.
PARAPET	G F P C	(A) Fine Cracks (D) Light Face Para. Ext. Spalled & Cracked
RAILS & POST	G F P C	
DRAINS	G F P C	No Drain
EXP. JOINTS	G F P C	
	G F P C	

SEP 16 1999

BRIDGE NO. 79 I-40 5.09

BENT NO. _____ SPAN NO. 10 ABT. NO. _____ PIER NO. _____

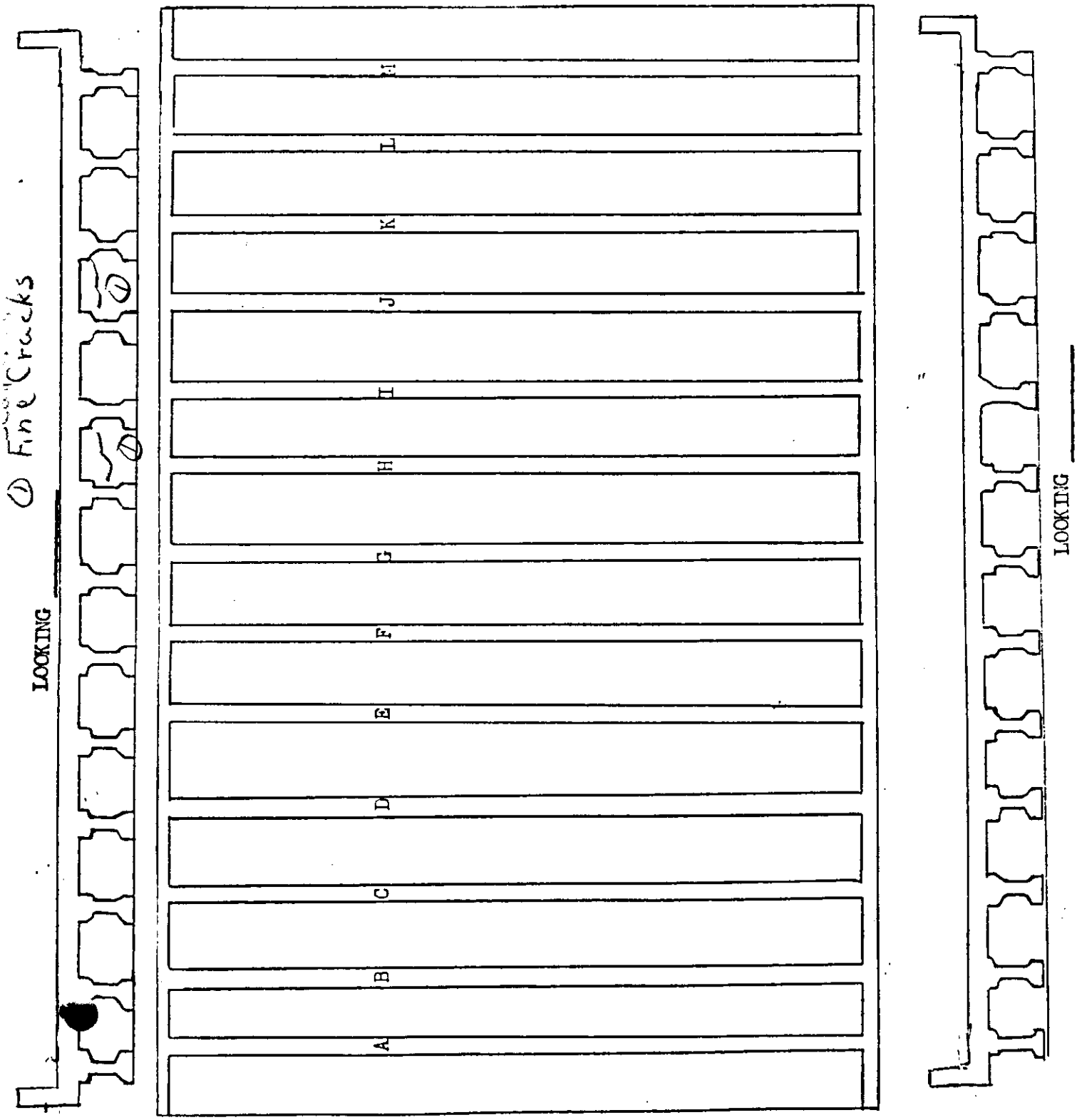
ELEMENT	RATING	COMMENTS
BOTTOM DECK	(G) F P C	Panels
CONC. I. BEAMS	(G) F P C	
A	(G) F P C	
B	(G) F P C	
C	(G) F P C	
D	(G) F P C	
E	(G) F P C	
F	(G) F P C	
G	(G) F P C	
H	(G) F P C	
I	(G) F P C	
J	(G) F P C	
K	(G) F P C	
L	(G) F P C	
M	(G) F P C	
DIA.	G F P C	None
BACKWALLS	G (F) P C	See 1

SEP 16 1999

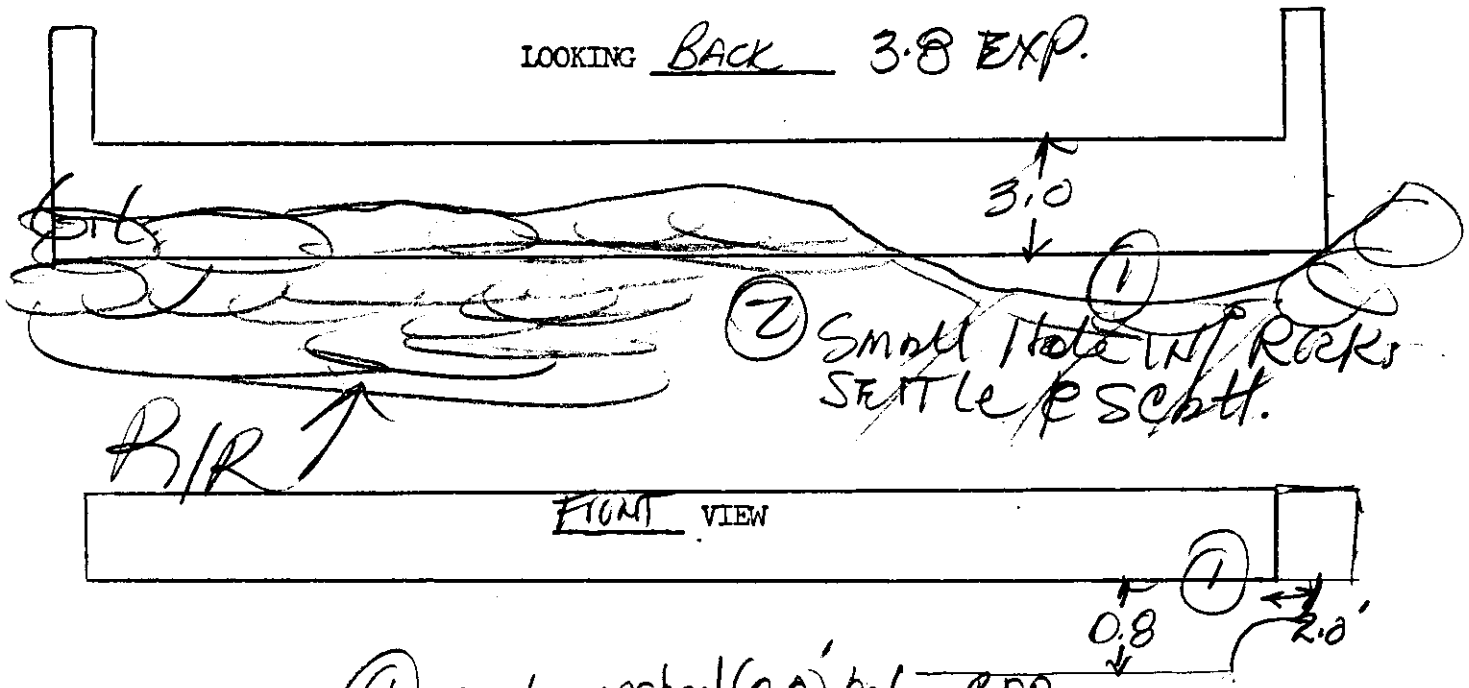
BR. NO. 79 I-40 509 SK ___ SPAN NO. 10

LT

DIR. OF ROUTE



BRIDGE NO 79 T-40 5.09 L SEP 16 1999 ABUT. NO. 1

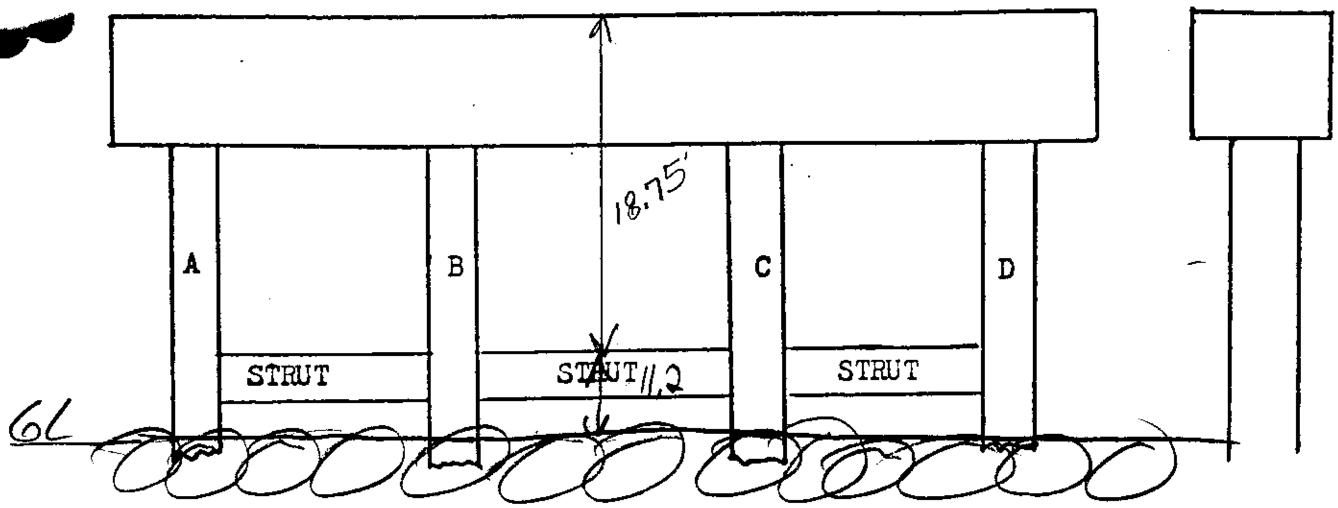


ELEMENT	RATING	COMMENT
BEARING	G (F) P C	LIGHT LEACHING (PODS) SCOUR POCKETS
CAP	G (F) P C	FINE CRACKS SEE #1 & PHOTO
WINGS	G (F) P C	SCOUR IN RIPRAP SETTLE (2)
EMBANKMENT	G F (P) C	
~~PAVEMENT~~ RIPRAP	G (F) P C	
VEG.	G F P C	

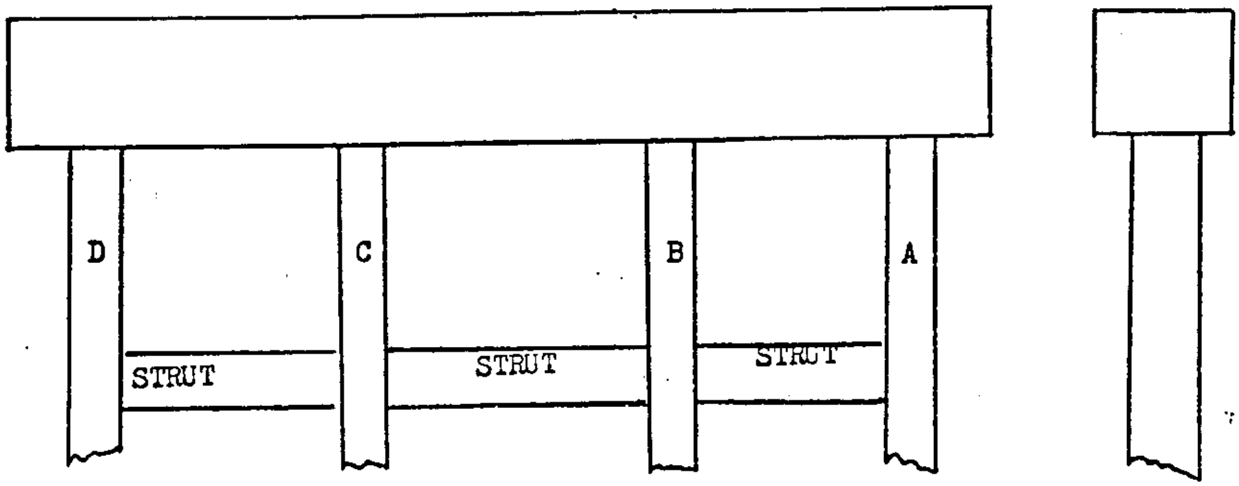
BR. NO. 79 I-40 5.09 SK. SEP 16 1999ENT NO. 1 30

LT

FRONT VIEW ____ END VIEW



REAR VIEW ___ END VIEW

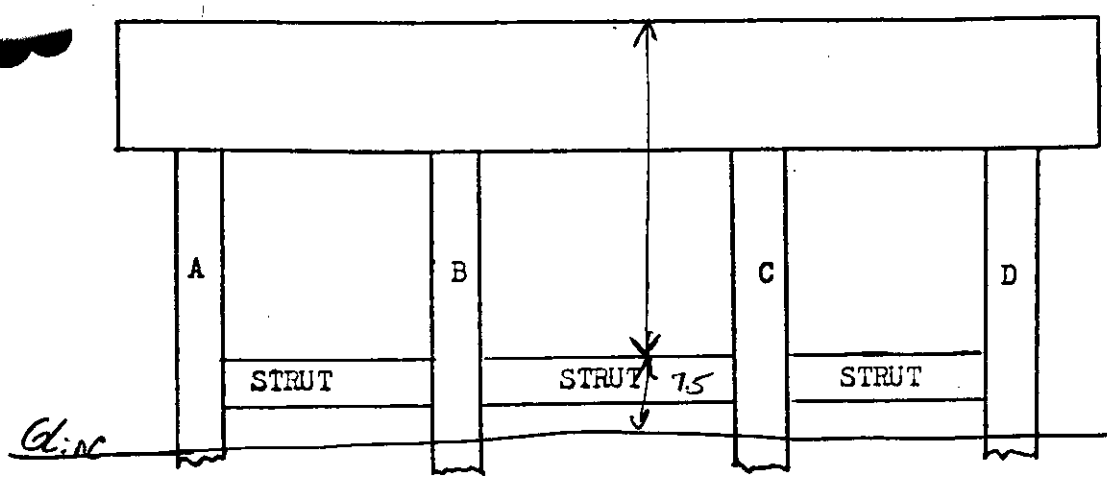


ELEMENT		RATING	COMMENT
BEARINGS		(G) F P C	Pads
CAP		G (F) P C	Popouts
PILING	A	G (F) P C	Popouts
	B	G (F) P C	
	C	G (F) P C	
	D	G (F) P C	
STRUT		G (F) P C	Popouts

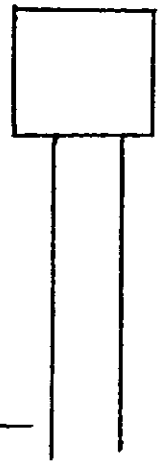
SEP 16 1999

BR. NO. 79 T-40 5.09 SK. LT BENT NO. 2

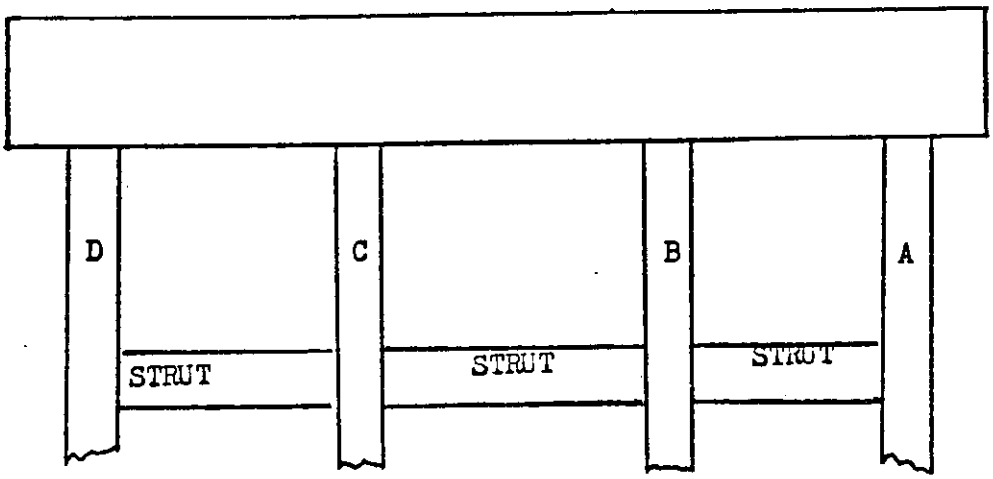
FRONT VIEW



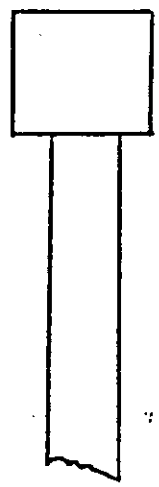
END VIEW



REAR VIEW



END VIEW



ELEMENT		RATING	COMMENT
BEARINGS		(G) F P C	Peels
CAP		G (F) P C	Popouts
PILING	A	G (F) P C	Popouts
	B	G (F) P C	
	C	G (F) P C	
	D	G (F) P C	
STRUT		G (F) P C	Popouts

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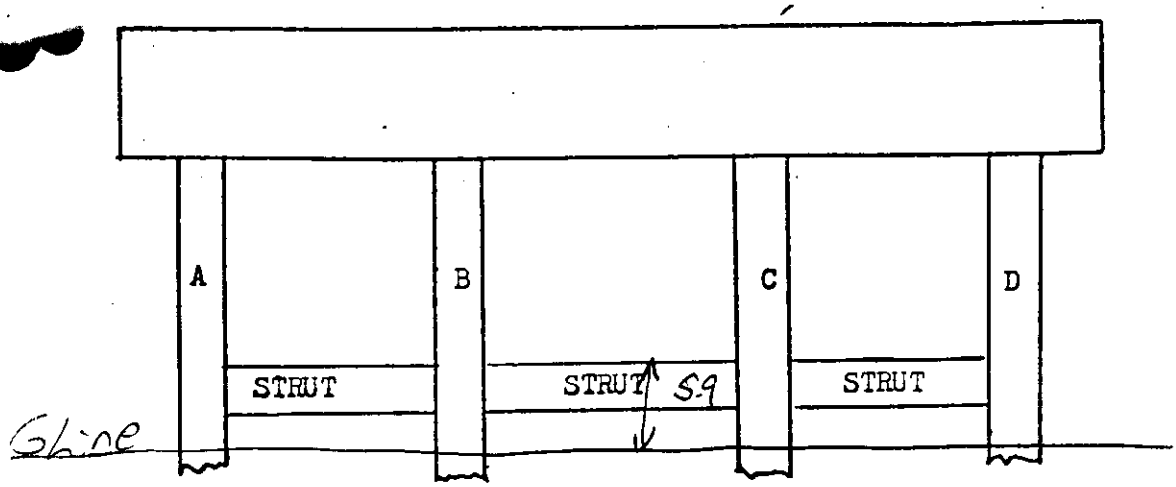
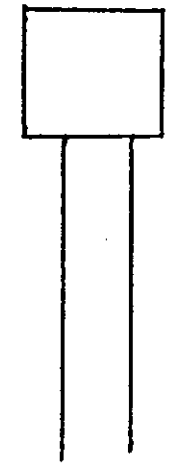
BR. NO. 79 I-140 \ 5.09 SK. ____ BENT NO. 3

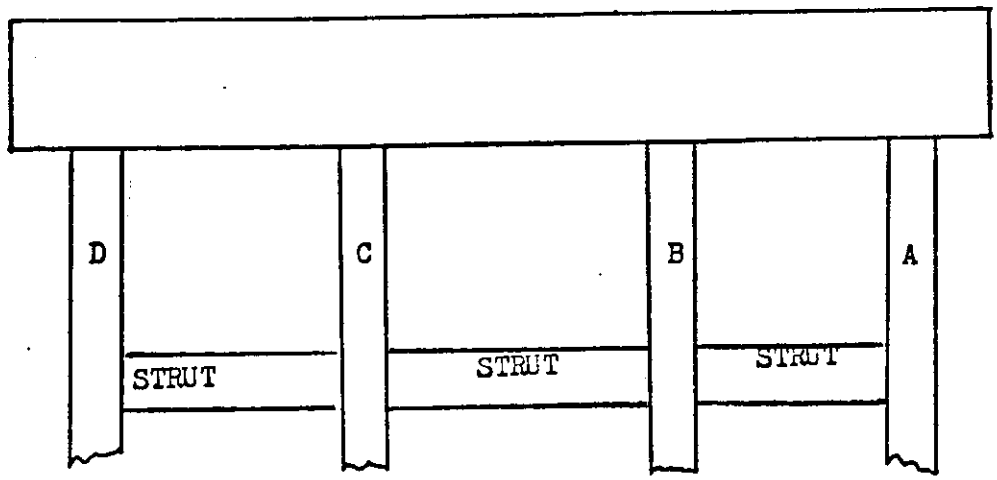
FRONT VIEW



___ END VIEW



REAR VIEW



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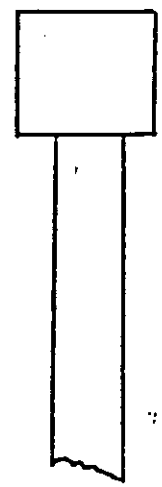

ELEMENT		RATING	COMMENT
BEARINGS		(G) F P C	Pads
CAP		G (F) P C	Popouts
PILING	A	G (F) P C	Popouts
	B	G (F) P C	
	C	G (F) P C	
	D	G (F) P C	
STRUT		G (F) P C	Popouts

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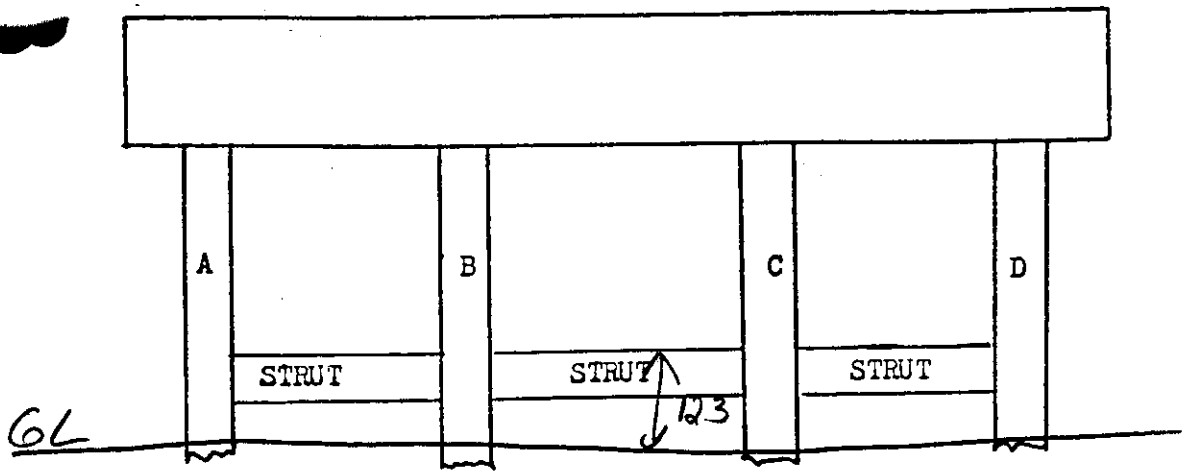
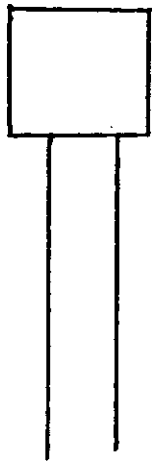
BR. NO. 79 Two 5.09 SK. ____ BENT NO. 4

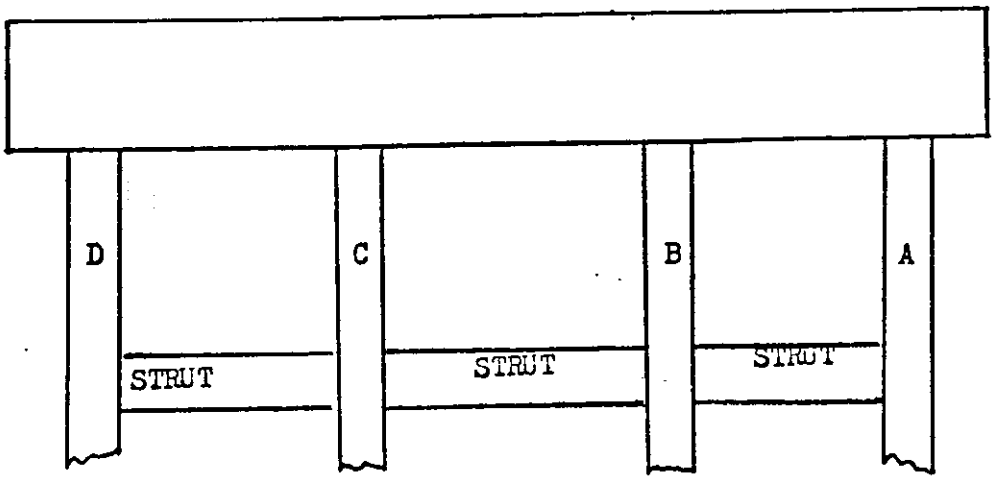
FRONT VIEW



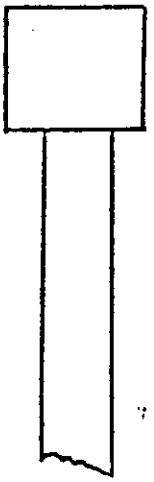
___ END VIEW



REAR VIEW



___ END VIEW



ELEMENT		RATING	COMMENT
BEARINGS		(G) F P C	Pads
CAP		G (F) P C	Popouts
PILING	A	G (F) P C	Popouts
	B	G (F) P C	
	C	G (F) P C	
	D	G (F) P C	
STRUT		G (F) P C	Popouts

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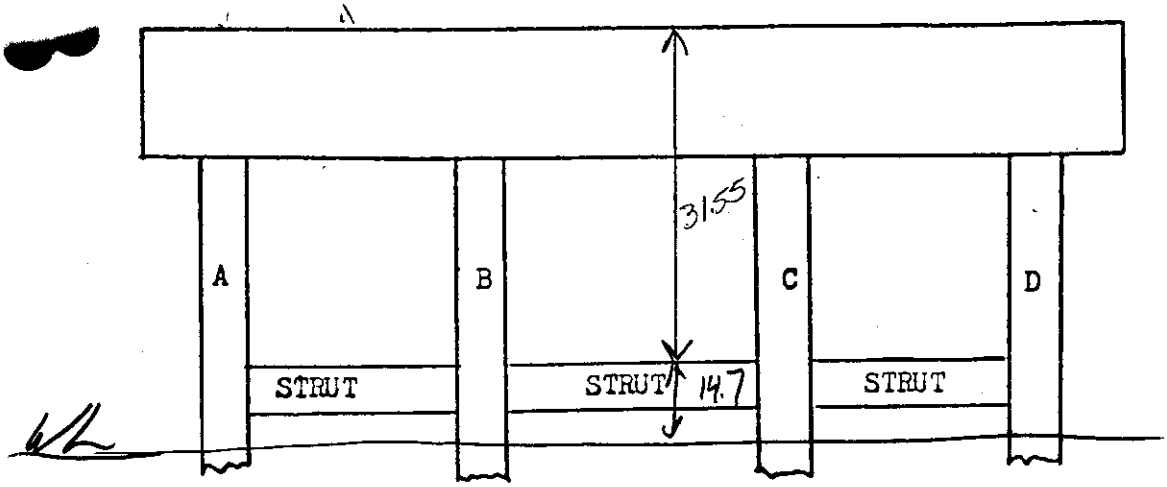
BR. NO. 79 I-40 5.09 SK. ____ BENT NO. 5

FRONT VIEW



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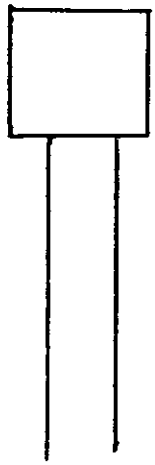
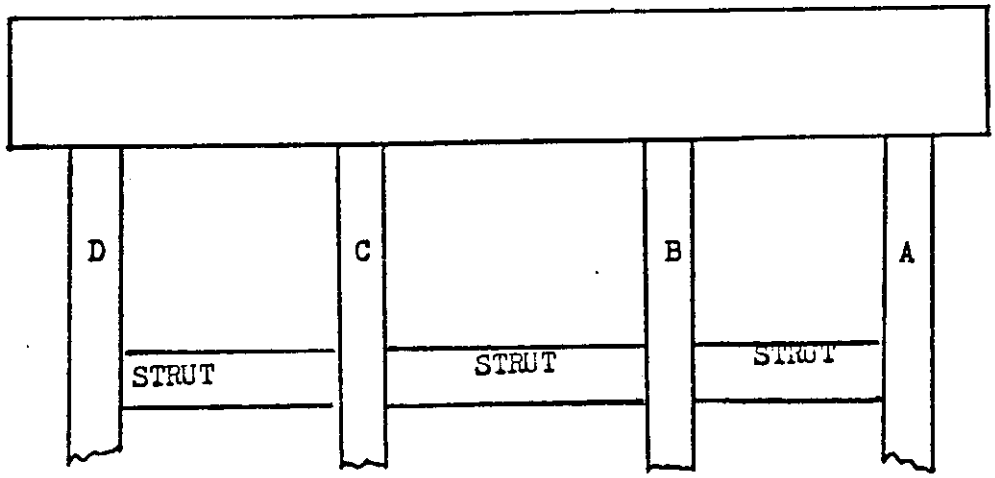
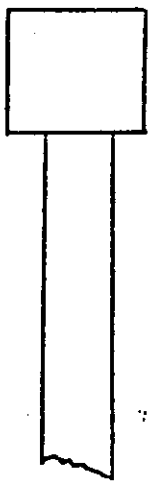


REAR VIEW



___ END VIEW



ELEMENT		RATING	CONTENT
BEARINGS		(G) F P C	Pads
CAP		G (F) P C	Popouts
PILING	A	G (F) P C	Popouts + water Abt.
	B	G (F) P C	
	C	G (F) P C	
	D	G (F) P C	
STRUT		G (F) P C	water Abt.

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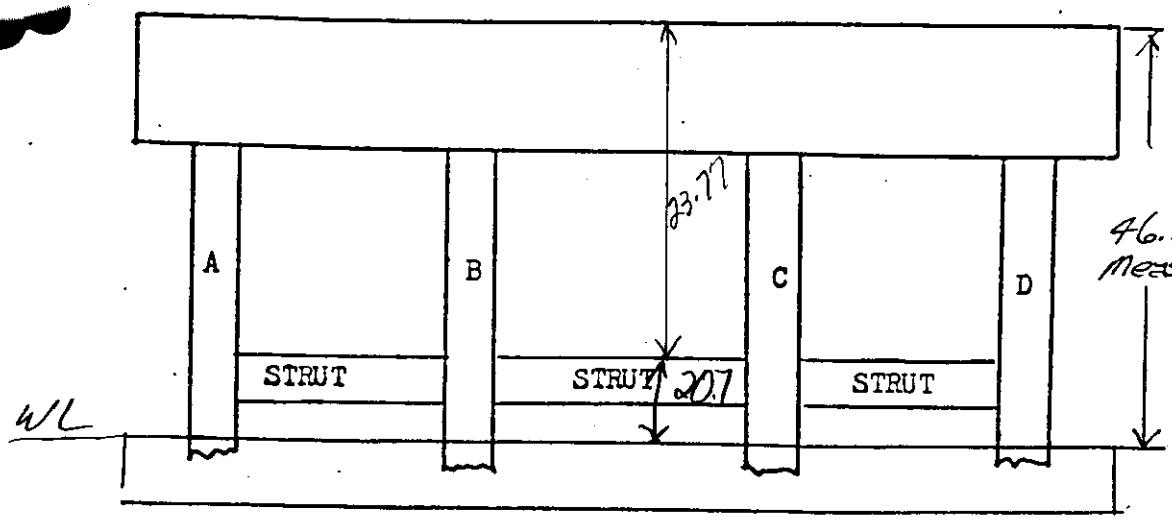
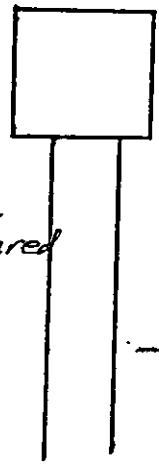
BR. NO. 79 I-40 5.09 SK. ____ BENT NO. 6

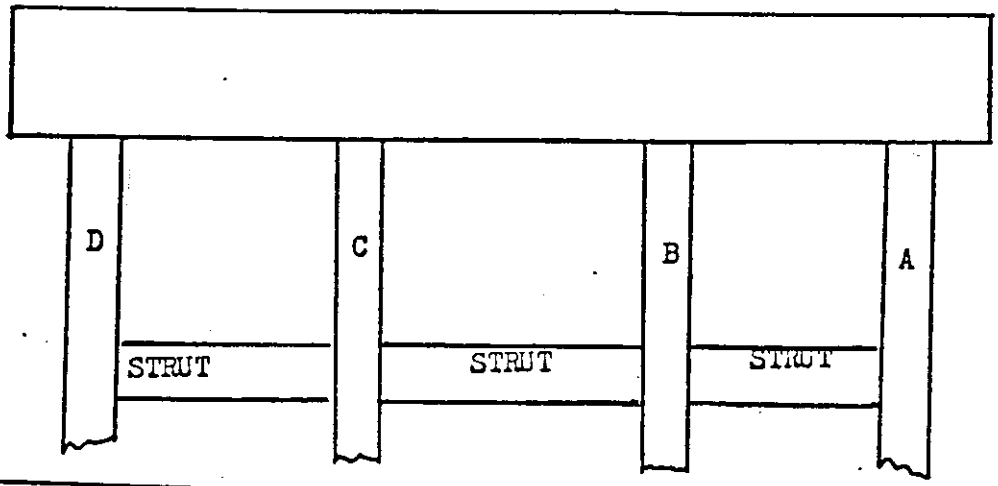
FRONT VIEW



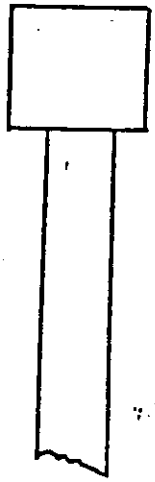
END VIEW



REAR VIEW



END VIEW



ELEMENT		RATING	COMMENT
BEARINGS		(G) F P C	Pads
CAP		G (F) P C	Roots
PILING	A	G (F) P C	Roots & Water Abr.
	B	G (F) P C	
	C	G (F) P C	
	D	G (F) P C	
STRUT		G (F) P C	Water Abr.

BR. NO. 79 I-40 5.09 SK. ____ BENT NO. 7

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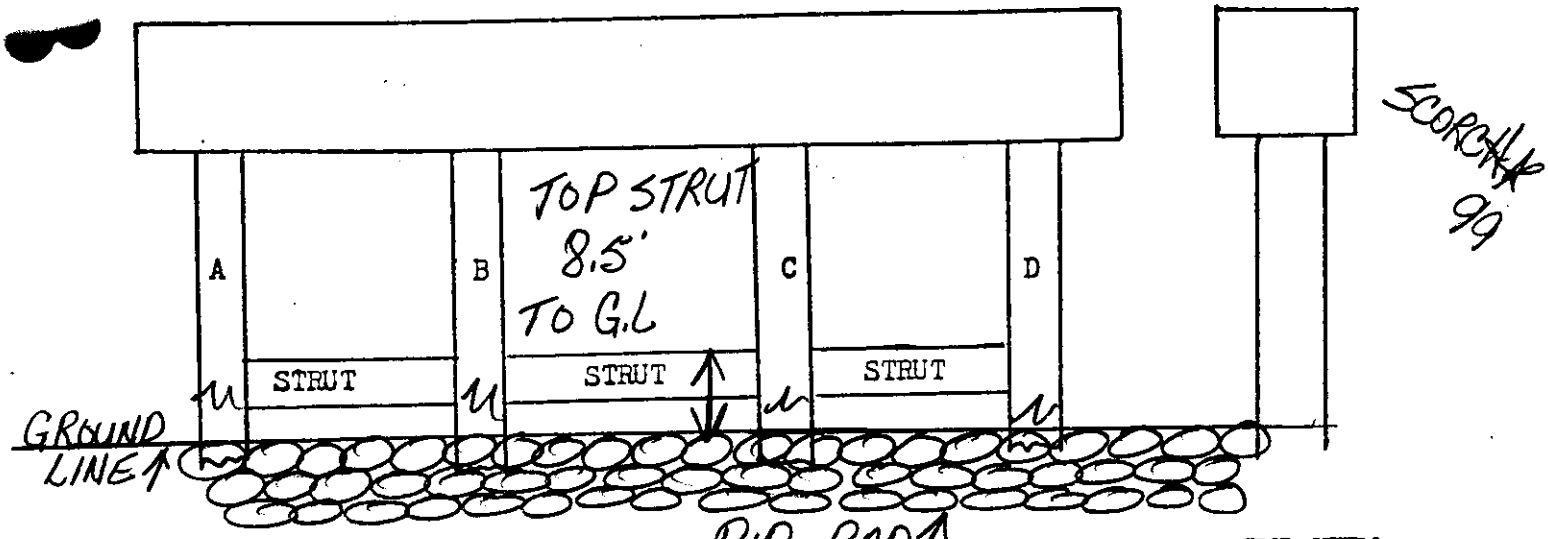
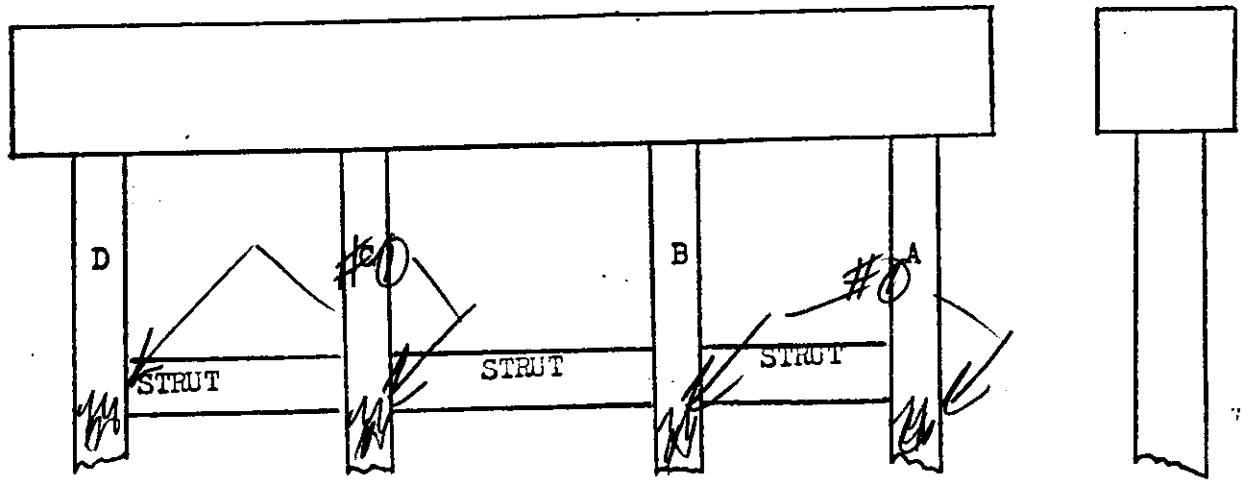
FRONT VIEW ___ END VIEW



REAR VIEW ___ END VIEW



ELEMENT		RATING	COMMENT
BEARINGS		(G) F P C	FIBER
CAP		(G) F P C	
PILING	A	G (F) P C	#0 LGHT WATER ABRASION & STAIN.
	B	G (F) P C	
	C	G (F) P C	
	D	G (F) P C	
STRUT		G (F) P C	#0 TYPICAL.
RIP RAP		(G) F P C	AROUND FRONT & REAR SIDE OF BENT.

BR. NO. 79 I-40 5.09 SK. ____ BENT NO. 8

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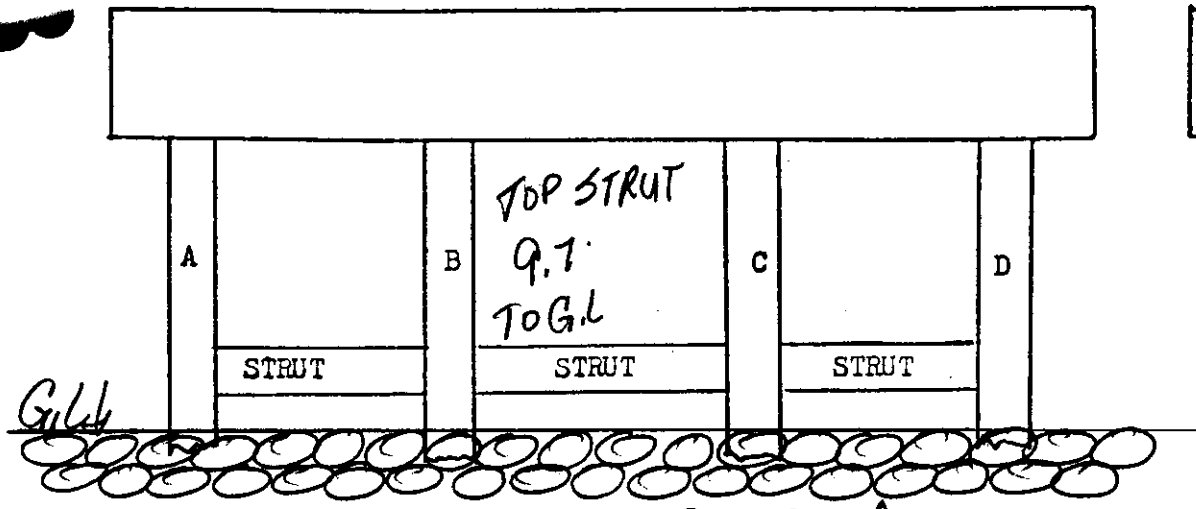
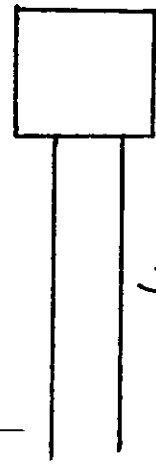
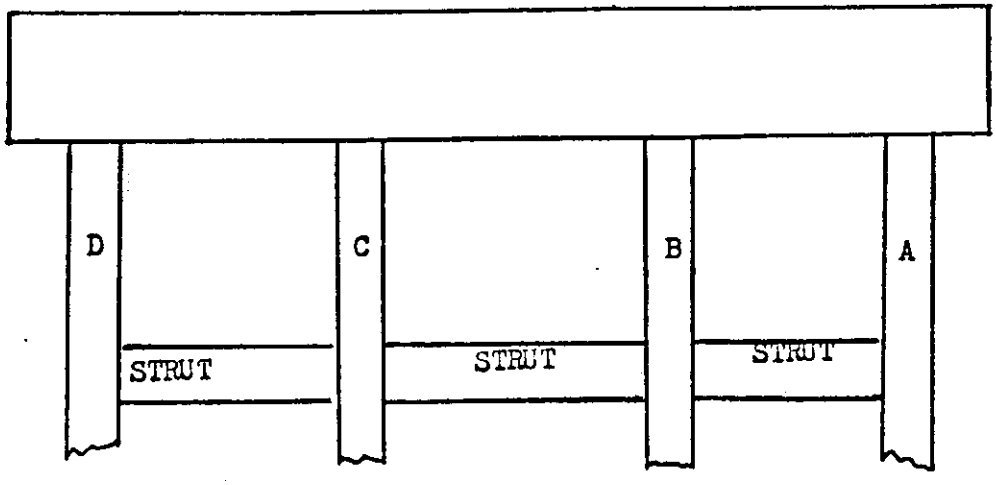
FRONT VIEW



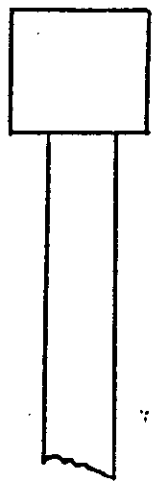
END VIEW



REAR VIEW



END VIEW

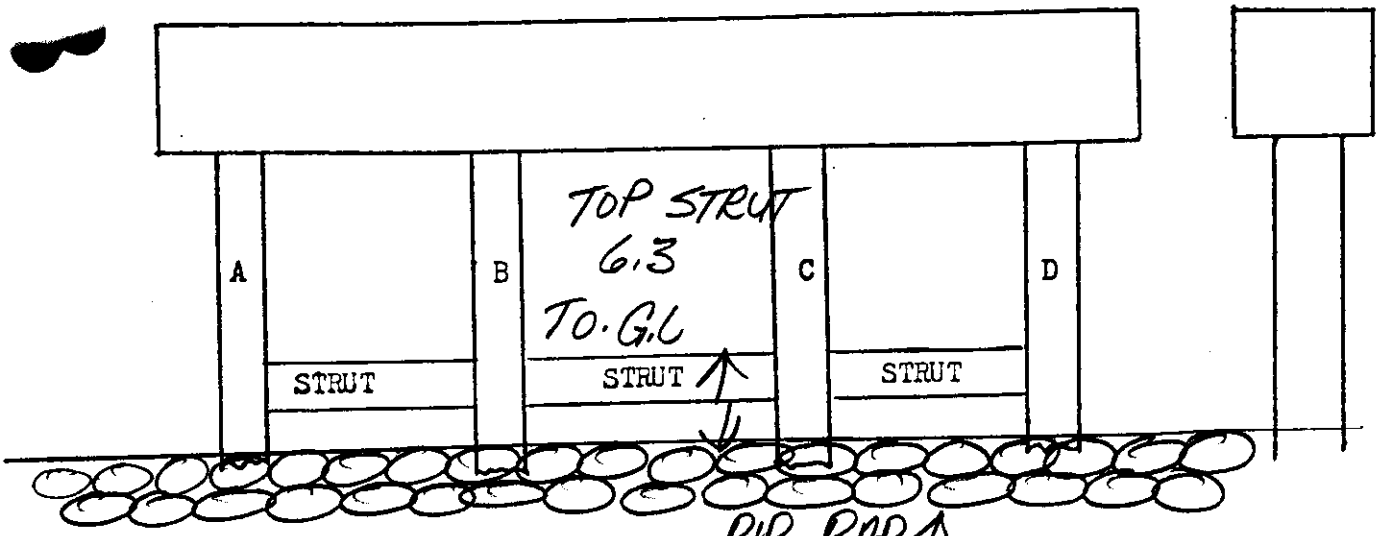


ELEMENT		RATING	COMMENT
BEARINGS		(G) F P C	FIBER PADS
CAP		(G) F P C	
PILING	A	G (F) P C	WATER ABRASION & STAIN.
	B	G (F) P C	
	C	G (F) P C	
	D	G (F) P C	
STRUT		G (F) P C	
RIP RAP		(G) F P C	FRONT & REAR SIDE OF BENT.

BR. NO. 79 I-40 5.09 SK. 4 BENT NO. 9

SEP 16 1999

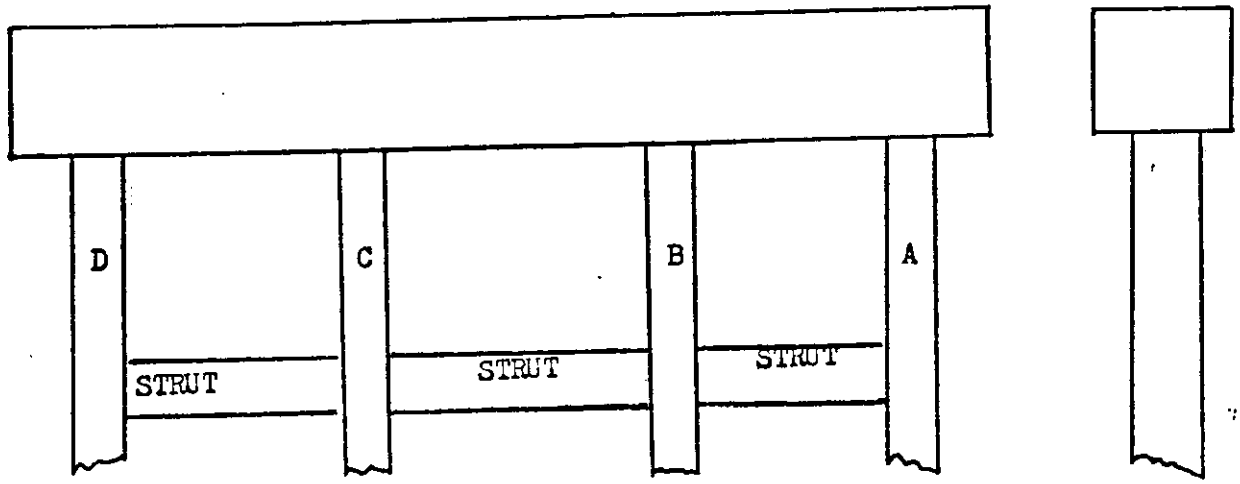
FRONT VIEW



END VIEW

SCRATCH

REAR VIEW



END VIEW

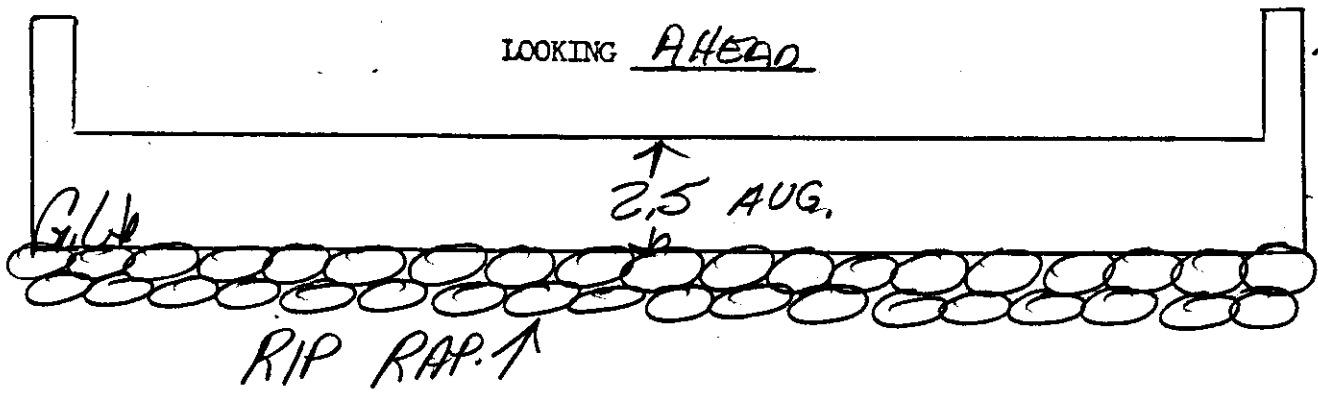
ELEMENT		RATING	COMMENT
BEARINGS		(G) F P C	FIBER PADS
CAP		(G) F P C	
PILING	A	G (F) P C	WATER STAIN.
	B	G (F) P C	
	C	G (F) P C	
	D	G (F) P C	
STRUT		G (F) P C	
RIP RAP		(G)	ON FRONT & REAR SIDE OF BENT.

BRIDGE NO 79 I-40 509 SEP 16 1999 ABUT. NO. 2

LT

SCORCH

99



_____ VIEW

ELEMENT	RATING	COMMENT
BEARING	(G) F P C	
CAP	(G) F P C	
WINGS	(G) F P C	
EMBANKMENT	(G) F P C	
~~PAVEMENT~~ RIP RAP	(G) F P C	
VEG.	G (F) P C	GROWTH

STABLELIZERS? TIED TO TOP of CAP & ATTACHED TO ALL C.I.B #s

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 1

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Substructure Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
ABUT	1	1	14" Conc.	17.35	39.	06/11/76
ABUT	1	1A	14" Conc.	20.	44.	06/11/76
ABUT	1	2	14" Conc.	20.	37.	06/11/76
ABUT	1	3	14" Conc.	20.	0.	06/12/76
ABUT	1	3A	14" Conc.	50.	83.	04/08/76
ABUT	1	4	14" Conc.	45.	36.	05/24/76
ABUT	1	5	14" Conc.	20.	49.	06/12/76
ABUT	1	5A	14" Conc.	20.	45.	06/15/76
ABUT	1	6	14" Conc.	45.	57.	05/29/76
ABUT	1	7	14" Conc.	20.	0.	06/12/76
ABUT	1	7A	14" Conc.	20.	0.	06/12/76
ABUT	1	8	14" Conc.	19.	0.	06/14/76
ABUT	1	9	14" Conc.	20.	50.	06/14/76
ABUT	1	9A	14" Conc.	15.29	57.	06/14/76
ABUT	1	10	14" Conc.	45.	36.	05/28/76
ABUT	1	11	14" Conc.	20.	57.	06/14/76
ABUT	1	11A	14" Conc.	20.	69.	06/14/76
ABUT	1	12	14" Conc.	16.25	67.	06/14/76

		Average Pile Length (ft) =		25.1606		
ABUT	2	1	14" Conc.	55.	0.	11/19/76
ABUT	2	2	14" Conc.	55.	0.	11/19/76
ABUT	2	3	14" Conc.	55.	0.	11/19/76
ABUT	2	4	14" Conc.	55.	55.	11/17/76
ABUT	2	5	14" Conc.	55.	0.	11/19/76
ABUT	2	6	14" Conc.	55.	0.	11/19/76
ABUT	2	7	14" Conc.	55.	0.	11/19/76
ABUT	2	8	14" Conc.	55.	0.	11/19/76
ABUT	2	9	14" Conc.	55.	0.	11/19/76
ABUT	2	10	14" Conc.	54.	0.	11/19/76
ABUT	2	11	14" Conc.	55.	0.	11/20/76
ABUT	2	12	14" Conc.	55.	0.	11/20/76
ABUT	2	13	14" Conc.	52.	0.	11/20/76
ABUT	2	14	14" Conc.	55.	0.	11/18/76
ABUT	2	15	14" Conc.	55.	0.	11/18/76
ABUT	2	16	14" Conc.	55.	0.	11/18/76

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 2

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Pile Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
Average Pile Length (ft) =				54.75		
BENT	1	1	14" Conc.	20.	53.	10/21/76
BENT	1	2	14" Conc.	20.	57.	10/21/76
BENT	1	3	14" Conc.	20.	45.	10/21/76
BENT	1	4	14" Conc.	20.	47.	10/21/76
BENT	1	5	14" Conc.	20.	55.	10/20/76
BENT	1	6	14" Conc.	20.	60.	10/24/76
BENT	1	7	14" Conc.	20.	75.	10/21/76
BENT	1	8	14" Conc.	20.	49.	10/21/76
BENT	1	9	14" Conc.	20.	67.	10/21/76
BENT	1	10	14" Conc.	20.	67.	10/21/76
BENT	1	11	14" Conc.	20.	0.	10/21/76
BENT	1	12	14" Conc.	20.	0.	10/21/76
BENT	1	13	14" Conc.	20.	0.	10/21/76
BENT	1	14	14" Conc.	20.	45.	10/21/76
BENT	1	15	14" Conc.	20.	54.	10/21/76
BENT	1	16	14" Conc.	20.	60.	10/21/76
BENT	1	17	14" Conc.	20.	92.	10/21/76
BENT	1	18	14" Conc.	20.	120.	10/21/76
BENT	1	19	14" Conc.	20.	95.	10/22/76
BENT	1	20	14" Conc.	20.	68.	10/21/76
BENT	1	21	14" Conc.	20.	67.	10/21/76
BENT	1	22	14" Conc.	20.	67.	10/21/76
BENT	1	23	14" Conc.	20.	64.	10/20/76
BENT	1	24	14" Conc.	20.	96.	10/21/76
BENT	1	25	14" Conc.	20.	88.	10/21/76
BENT	1	26	14" Conc.	20.	88.	10/21/76
BENT	1	27	14" Conc.	20.	68.	10/21/76
BENT	1	28	14" Conc.	20.	95.	10/22/76
BENT	1	29	14" Conc.	20.	71.	10/22/76
BENT	1	30	14" Conc.	20.	92.	10/22/76
BENT	1	31	14" Conc.	20.	90.	10/21/76
BENT	1	32	14" Conc.	20.	102.	10/21/76
BENT	1	33	14" Conc.	20.	90.	10/22/76
BENT	1	34	14" Conc.	20.	92.	10/22/76
BENT	1	35	14" Conc.	20.	82.	10/22/76
BENT	1	36	14" Conc.	20.	91.	10/22/76

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 3

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
Average Pile Length (ft) =				20.		
BENT	2	1	14" Conc.	20.	82.	07/15/76
BENT	2	2	14" Conc.	20.	60.	07/15/76
BENT	2	3	14" Conc.	20.	72.	07/15/76
BENT	2	4	14" Conc.	20.	50.	07/15/76
BENT	2	5	14" Conc.	20.	44.	07/15/76
BENT	2	6	14" Conc.	20.	0.	07/15/76
BENT	2	7	14" Conc.	20.	54.	07/15/76
BENT	2	8	14" Conc.	20.	66.	07/15/76
BENT	2	9	14" Conc.	16.41	55.	07/15/76
BENT	2	10	14" Conc.	20.	49.	07/15/76
BENT	2	11	14" Conc.	20.	0.	07/15/76
BENT	2	12	14" Conc.	20.	0.	07/15/76
BENT	2	13	14" Conc.	20.	0.	07/14/76
BENT	2	14	14" Conc.	20.	55.	07/15/76
BENT	2	15	14" Conc.	20.	88.	07/14/76
BENT	2	16	14" Conc.	20.	104.	07/14/76
BENT	2	17	14" Conc.	20.	82.	07/14/76
BENT	2	18	14" Conc.	20.	81.9	07/12/76
BENT	2	19	14" Conc.	20.	65.	07/14/76
BENT	2	20	14" Conc.	20.	52.	07/14/76
BENT	2	21	14" Conc.	20.	64.	07/13/76
BENT	2	22	14" Conc.	20.	64.	07/14/76
BENT	2	23	14" Conc.	20.	66.	07/14/76
BENT	2	24	14" Conc.	20.	71.	07/14/76
BENT	2	25	14" Conc.	20.	88.	07/21/76
BENT	2	26	14" Conc.	20.	84.	07/21/76
BENT	2	27	14" Conc.	20.	79.	07/21/76
BENT	2	28	14" Conc.	20.	66.	07/15/76
BENT	2	29	14" Conc.	20.	79.	07/15/76
BENT	2	30	14" Conc.	20.	83.	07/15/76
BENT	2	31	14" Conc.	20.	91.	07/15/76
BENT	2	32	14" Conc.	20.	75.	07/16/76
BENT	2	33	14" Conc.	20.	74.	07/15/76
BENT	2	34	14" Conc.	17.25	92.	07/21/76
BENT	2	35	14" Conc.	19.33	51.	07/19/76
BENT	2	36	14" Conc.	20.	0.	07/19/76
BENT	2	37	14" Conc.	20.	0.	07/23/76

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 4

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Pile Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
BENT	2	38	14" Conc.	20.	0.	07/23/76
BENT	2	39	14" Conc.	20.	0.	07/24/76
BENT	2	40	14" Conc.	17.	0.	07/20/76
BENT	2	41	14" Conc.	20.	88.3	07/12/76
BENT	2	42	14" Conc.	20.	79.	07/20/76
BENT	2	43	14" Conc.	20.	90.	07/20/76
BENT	2	44	14" Conc.	20.	95.	07/20/76
BENT	2	45	14" Conc.	20.	65.	07/20/76
BENT	2	46	14" Conc.	20.	78.	07/20/76
BENT	2	47	14" Conc.	20.	53.	07/20/76
BENT	2	48	14" Conc.	20.	71.	07/20/76

			Average Pile Length (ft) =	19.7915		
BENT	3	1	14" Conc.	45.	72.	12/09/76
BENT	3	2	14" Conc.	45.	81.	12/09/76
BENT	3	3	14" Conc.	45.	56.	12/09/76
BENT	3	4	14" Conc.	45.	73.	12/08/76
BENT	3	5	14" Conc.	45.	89.	12/05/76
BENT	3	6	14" Conc.	45.	76.	12/05/76
BENT	3	7	14" Conc.	45.	81.	12/06/76
BENT	3	8	14" Conc.	45.	65.	12/08/76
BENT	3	9	14" Conc.	45.	55.	12/08/76
BENT	3	10	14" Conc.	45.	0.	12/10/76
BENT	3	11	14" Conc.	45.	0.	12/10/76
BENT	3	12	14" Conc.	45.	0.	12/10/76
BENT	3	13	14" Conc.	45.	100.	12/13/76
BENT	3	14	14" Conc.	45.	100.	12/08/76
BENT	3	15	14" Conc.	45.	67.	12/10/76
BENT	3	16	14" Conc.	45.	104.	12/07/76
BENT	3	17	14" Conc.	45.	72.	12/08/76
BENT	3	18	14" Conc.	47.	165.	12/03/76
BENT	3	19	14" Conc.	45.	55.	12/07/76
BENT	3	20	14" Conc.	45.	54.	12/07/76
BENT	3	21	14" Conc.	45.	85.	12/07/76
BENT	3	22	14" Conc.	45.	54.	12/10/76
BENT	3	23	14" Conc.	45.	60.	12/10/76
BENT	3	24	14" Conc.	45.	52.	12/10/76
BENT	3	25	14" Conc.	45.	72.	01/24/77
BENT	3	26	14" Conc.	42.	62.	01/25/77

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 5

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
BENT	3	27	14" Conc.	45.	61.	01/25/77
BENT	3	28	14" Conc.	44.	62.	01/22/77
BENT	3	29	14" Conc.	44.	101.	01/22/77
BENT	3	30	14" Conc.	45.	97.	01/24/77
BENT	3	31	14" Conc.	45.	68.	01/22/77
BENT	3	32	14" Conc.	45.	108.	01/22/77
BENT	3	33	14" Conc.	45.	90.	01/24/77
BENT	3	34	14" Conc.	45.	86.	01/24/77
BENT	3	35	14" Conc.	45.	91.	01/24/77
BENT	3	36	14" Conc.	45.	95.	01/24/77
BENT	3	37	14" Conc.	45.	80.	01/25/77
BENT	3	38	14" Conc.	45.	100.	01/27/77
BENT	3	39	14" Conc.	45.	0.	01/27/77
BENT	3	40	14" Conc.	45.	76.	01/27/77
BENT	3	41	14" Conc.	52.	51.	01/05/77
BENT	3	42	14" Conc.	45.	90.	01/21/77
BENT	3	43	14" Conc.	45.	85.	01/21/77
BENT	3	44	14" Conc.	45.	72.	01/21/77
BENT	3	45	14" Conc.	44.	88.	01/21/77
BENT	3	46	14" Conc.	45.	131.	01/25/77
BENT	3	47	14" Conc.	43.	105.	01/25/77
BENT	3	48	14" Conc.	37.	103.	01/25/77

			Average Pile Length (ft) =	44.8542		
BENT	4	1	14" Conc.	44.	94.	10/17/76
BENT	4	2	14" Conc.	43.	42.	10/11/76
BENT	4	3	14" Conc.	43.5	0.	10/12/76
BENT	4	4	14" Conc.	43.	100.	10/11/76
BENT	4	5	14" Conc.	43.	0.	10/11/76
BENT	4	6	14" Conc.	43.	0.	10/11/76
BENT	4	7	14" Conc.	43.	0.	10/12/76
BENT	4	8	14" Conc.	43.	0.	10/11/76
BENT	4	9	14" Conc.	43.	0.	10/11/76
BENT	4	10	14" Conc.	43.	0.	10/12/76
BENT	4	11	14" Conc.	43.8	0.	10/12/76
BENT	4	12	14" Conc.	43.	0.	10/11/76
BENT	4	13	14" Conc.	43.	0.	10/11/76
BENT	4	14	14" Conc.	43.	0.	10/11/76
BENT	4	15	14" Conc.	43.	0.	10/11/76

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 6

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Pile Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
BENT	4	16	14" Conc.	43.	0.	10/08/76
BENT	4	17	14" Conc.	42.	0.	10/08/76
BENT	4	18	14" Conc.	42.3	0.	10/08/76
BENT	4	19	14" Conc.	42.	0.	10/11/76
BENT	4	20	14" Conc.	43.	0.	10/08/76
BENT	4	21	14" Conc.	42.8	0.	10/08/76
BENT	4	22	14" Conc.	43.	0.	10/11/76
BENT	4	23	14" Conc.	43.	0.	10/11/76
BENT	4	24	14" Conc.	43.	0.	10/11/76
BENT	4	25	14" Conc.	42.	0.	09/27/76
BENT	4	26	14" Conc.	42.	0.	09/27/76
BENT	4	27	14" Conc.	42.	0.	09/28/76
BENT	4	28	14" Conc.	41.	0.	09/17/76
BENT	4	29	14" Conc.	43.	142.	09/24/76
BENT	4	30	14" Conc.	41.8	0.	09/27/76
BENT	4	31	14" Conc.	41.	0.	09/27/76
BENT	4	32	14" Conc.	35.	0.	09/28/76
BENT	4	33	14" Conc.	42.	0.	09/27/76
BENT	4	34	14" Conc.	43.	0.	09/27/76
BENT	4	35	14" Conc.	43.	0.	09/27/76
BENT	4	36	14" Conc.	43.	0.	09/25/76
BENT	4	37	14" Conc.	43.	0.	09/25/76
BENT	4	38	14" Conc.	43.	0.	09/25/76
BENT	4	39	14" Conc.	43.	0.	09/25/76
BENT	4	40	14" Conc.	43.	0.	09/25/76
BENT	4	41	14" Conc.	25.	22.	09/15/76
BENT	4	42	14" Conc.	43.	0.	09/24/76
BENT	4	43	14" Conc.	43.	0.	09/25/76
BENT	4	44	14" Conc.	43.	0.	09/25/76
BENT	4	45	14" Conc.	43.	0.	09/25/76
BENT	4	46	14" Conc.	43.	0.	09/25/76
BENT	4	47	14" Conc.	43.	0.	09/25/76
BENT	4	48	14" Conc.	43.	0.	09/25/76
			Average Pile Length (ft) =	42.2542		
BENT	5	1	14" Conc.	45.	0.	12/14/76
BENT	5	2	14" Conc.	45.	0.	12/14/76
BENT	5	3	14" Conc.	45.	0.	12/14/76
BENT	5	4	14" Conc.	45.	0.	12/13/76

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 7

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Pile Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
BENT	5	5	14" Conc.	45.	0.	12/14/76
BENT	5	6	14" Conc.	45.	0.	12/14/76
BENT	5	7	14" Conc.	45.	0.	12/14/76
BENT	5	8	14" Conc.	45.	0.	12/14/76
BENT	5	9	14" Conc.	45.	0.	12/14/76
BENT	5	10	14" Conc.	45.	0.	12/14/76
BENT	5	11	14" Conc.	45.	0.	12/14/76
BENT	5	12	14" Conc.	45.	0.	12/14/76
BENT	5	13	14" Conc.	45.	0.	12/13/76
BENT	5	14	14" Conc.	45.	0.	12/13/76
BENT	5	15	14" Conc.	45.	0.	12/14/76
BENT	5	16	14" Conc.	45.	0.	12/12/76
BENT	5	17	14" Conc.	43.	0.	12/12/76
BENT	5	18	14" Conc.	45.	0.	12/04/76
BENT	5	19	14" Conc.	45.	0.	12/13/76
BENT	5	20	14" Conc.	45.	0.	12/13/76
BENT	5	21	14" Conc.	45.	0.	12/13/76
BENT	5	22	14" Conc.	45.	0.	12/13/76
BENT	5	23	14" Conc.	45.	0.	12/13/76
BENT	5	24	14" Conc.	45.	0.	12/13/76
BENT	5	25	14" Conc.	43.	0.	11/17/76
BENT	5	26	14" Conc.	43.	0.	11/17/76
BENT	5	27	14" Conc.	43.	0.	11/17/76
BENT	5	28	14" Conc.	43.	0.	11/15/76
BENT	5	29	14" Conc.	42.	0.	11/15/76
BENT	5	30	14" Conc.	42.	0.	11/15/76
BENT	5	31	14" Conc.	43.	0.	11/15/76
BENT	5	32	14" Conc.	42.	0.	11/15/76
BENT	5	33	14" Conc.	43.	0.	11/15/76
BENT	5	34	14" Conc.	39.	0.	11/16/76
BENT	5	35	14" Conc.	42.	0.	11/16/76
BENT	5	36	14" Conc.	39.	0.	11/17/76
BENT	5	37	14" Conc.	42.	0.	11/15/76
BENT	5	38	14" Conc.	42.	0.	11/15/76
BENT	5	39	14" Conc.	40.	0.	11/15/76
BENT	5	40	14" Conc.	43.	0.	11/13/76
BENT	5	41	14" Conc.	41.	0.	11/10/76
BENT	5	42	14" Conc.	42.	0.	11/13/76
BENT	5	43	14" Conc.	43.	0.	11/13/76
BENT	5	44	14" Conc.	42.	0.	11/13/76

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 8

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
BENT	5	45	14" Conc.	42.	0.	11/13/76
BENT	5	46	14" Conc.	43.	0.	11/13/76
BENT	5	47	14" Conc.	42.	0.	11/13/76
BENT	5	48	14" Conc.	43.	0.	11/13/76

		Average Pile Length (ft) =		43.4792		
BENT	6	1	14" Conc.	55.	0.	02/10/77
BENT	6	2	14" Conc.	55.	0.	02/10/77
BENT	6	3	14" Conc.	55.	0.	02/11/77
BENT	6	4	14" Conc.	51.	0.	02/11/77
BENT	6	5	14" Conc.	55.	116.	02/07/77
BENT	6	6	14" Conc.	55.	0.	02/09/77
BENT	6	7	14" Conc.	55.	0.	02/09/77
BENT	6	8	14" Conc.	54.7	0.	02/09/77
BENT	6	9	14" Conc.	45.5	0.	02/09/77
BENT	6	10	14" Conc.	55.	0.	02/09/77
BENT	6	11	14" Conc.	55.	0.	02/09/77
BENT	6	12	14" Conc.	55.	0.	02/12/77
BENT	6	13	14" Conc.	28.	0.	02/12/77
BENT	6	14	14" Conc.	47.	0.	02/14/77
BENT	6	15	14" Conc.	32.	0.	02/14/77
BENT	6	16	14" Conc.	55.	0.	02/14/77
BENT	6	17	14" Conc.	22.6	0.	02/14/77
BENT	6	18	14" Conc.	54.	0.	02/14/77
BENT	6	19	14" Conc.	54.	0.	02/14/77
BENT	6	20	14" Conc.	54.	0.	02/14/77
BENT	6	21	14" Conc.	54.	0.	02/14/77
BENT	6	22	14" Conc.	54.	0.	02/14/77
BENT	6	23	14" Conc.	54.	0.	02/14/77
BENT	6	24	14" Conc.	54.	0.	02/11/77
BENT	6	25	14" Conc.	55.	0.	02/11/77
BENT	6	26	14" Conc.	55.	0.	02/11/77
BENT	6	27	14" Conc.	55.	0.	02/09/77
BENT	6	28	14" Conc.	54.9	0.	02/09/77
BENT	6	29	14" Conc.	54.9	0.	02/07/77
BENT	6	30	14" Conc.	55.	0.	02/09/77
BENT	6	31	14" Conc.	54.7	0.	02/09/77
BENT	6	32	14" Conc.	54.6	0.	02/09/77
BENT	6	33	14" Conc.	54.4		

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 9

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
BENT	6	34	14" Conc.	54.7	0.	02/10/77
BENT	6	35	14" Conc.	54.6	0.	02/10/77
BENT	6	36	14" Conc.	54.7	0.	02/10/77
BENT	6	37	14" Conc.	25.	0.	02/12/77
BENT	6	38	14" Conc.	25.	0.	02/12/77
BENT	6	39	14" Conc.	25.	0.	02/12/77
BENT	6	40	14" Conc.	25.	0.	02/12/77
BENT	6	41	14" Conc.	25.	0.	02/12/77
BENT	6	42	14" Conc.	25.	0.	02/12/77
BENT	6	43	14" Conc.	23.	0.	02/12/77
BENT	6	44	14" Conc.	23.	0.	02/12/77
BENT	6	45	14" Conc.	25.	0.	02/11/77
BENT	6	46	14" Conc.	21.	0.	02/12/77
BENT	6	47	14" Conc.	25.	0.	02/12/77
BENT	6	48	14" Conc.	25.	0.	02/12/77
BENT	6	49	14" Conc.	25.	0.	02/12/77
BENT	6	50	14" Conc.	25.	0.	02/12/77
BENT	6	51	14" Conc.	23.8	0.	02/14/77
BENT	6	52	14" Conc.	25.	0.	02/14/77
BENT	6	53	14" Conc.	23.	0.	02/14/77
BENT	6	54	14" Conc.	25.	0.	02/14/77

		Average Pile Length (ft) =		42.687		
BENT	7	1	14" Conc.	20.	0.	10/08/76
BENT	7	2	14" Conc.	20.	0.	10/08/76
BENT	7	3	14" Conc.	20.	0.	10/08/76
BENT	7	4	14" Conc.	20.	0.	10/07/76
BENT	7	5	14" Conc.	20.	0.	10/07/76
BENT	7	6	14" Conc.	55.	35.	10/04/76
BENT	7	7	14" Conc.	20.	0.	10/07/76
BENT	7	8	14" Conc.	20.	0.	10/07/76
BENT	7	9	14" Conc.	20.	0.	10/07/76
BENT	7	10	14" Conc.	20.	0.	10/07/76
BENT	7	11	14" Conc.	20.	0.	10/07/76
BENT	7	12	14" Conc.	20.	0.	10/07/76
BENT	7	13	14" Conc.	20.	0.	10/07/76
BENT	7	14	14" Conc.	20.	0.	10/07/76
BENT	7	15	14" Conc.	20.	0.	10/07/76
BENT	7	16	14" Conc.	20.	0.	10/07/76

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 10

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
BENT	7	17	14" Conc.	20.	0.	10/07/76
BENT	7	18	14" Conc.	20.	0.	10/07/76
BENT	7	19	14" Conc.	20.	0.	10/07/76
BENT	7	20	14" Conc.	20.	0.	10/07/76
BENT	7	21	14" Conc.	20.	0.	10/07/76
BENT	7	22	14" Conc.	20.	0.	10/07/76
BENT	7	23	14" Conc.	20.	0.	10/07/76
BENT	7	24	14" Conc.	20.	0.	10/07/76
BENT	7	25	14" Conc.	20.	0.	10/06/76
BENT	7	26	14" Conc.	18.	0.	10/05/76
BENT	7	27	14" Conc.	20.	0.	10/05/76
BENT	7	28	14" Conc.	20.	0.	10/05/76
BENT	7	29	14" Conc.	20.	0.	10/05/76
BENT	7	30	14" Conc.	55.	35.	10/04/76
BENT	7	31	14" Conc.	20.	0.	10/05/76
BENT	7	32	14" Conc.	20.	0.	10/05/76
BENT	7	33	14" Conc.	20.	0.	10/05/76
BENT	7	34	14" Conc.	20.	0.	10/06/76
BENT	7	35	14" Conc.	20.	0.	10/05/76
BENT	7	36	14" Conc.	20.	0.	10/06/76
BENT	7	37	14" Conc.	20.	0.	10/07/76
BENT	7	38	14" Conc.	20.	0.	10/07/76
BENT	7	39	14" Conc.	20.	0.	10/07/76
BENT	7	40	14" Conc.	20.	0.	10/07/76
BENT	7	41	14" Conc.	20.	0.	10/07/76
BENT	7	42	14" Conc.	20.	0.	10/07/76
BENT	7	43	14" Conc.	20.	0.	10/07/76
BENT	7	44	14" Conc.	20.	0.	10/07/76
BENT	7	45	14" Conc.	20.	0.	10/07/76
BENT	7	46	14" Conc.	20.	0.	10/07/76
BENT	7	47	14" Conc.	20.	0.	10/07/76
BENT	7	48	14" Conc.	20.	0.	10/07/76
				Average Pile Length (ft) = 21.4167		
BENT	8	1	14" Conc.	45.	0.	10/02/76
BENT	8	2	14" Conc.	45.	0.	10/02/76
BENT	8	3	14" Conc.	45.	0.	10/04/76
BENT	8	4	14" Conc.	39.	0.	09/29/76
BENT	8	5	14" Conc.	55.	32.	09/28/76

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 11

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Pile Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
BENT	8	6	14" Conc.	37.	0.	09/30/76
BENT	8	7	14" Conc.	37.	0.	09/27/76
BENT	8	8	14" Conc.	38.	0.	09/28/76
BENT	8	9	14" Conc.	38.	0.	09/29/76
BENT	8	10	14" Conc.	35.5	0.	10/01/76
BENT	8	11	14" Conc.	45.	0.	10/01/76
BENT	8	12	14" Conc.	48.	0.	10/01/76
BENT	8	13	14" Conc.	42.	0.	10/01/76
BENT	8	14	14" Conc.	45.	0.	10/01/76
BENT	8	15	14" Conc.	45.	0.	10/01/76
BENT	8	16	14" Conc.	40.3	0.	09/30/76
BENT	8	17	14" Conc.	40.	0.	09/30/76
BENT	8	18	14" Conc.	40.	0.	09/30/76
BENT	8	19	14" Conc.	41.	0.	10/04/76
BENT	8	20	14" Conc.	41.	0.	09/30/76
BENT	8	21	14" Conc.	41.	0.	09/30/76
BENT	8	22	14" Conc.	42.	0.	10/01/76
BENT	8	23	14" Conc.	29.	0.	10/02/76
BENT	8	24	14" Conc.	45.	0.	10/02/76
BENT	8	25	14" Conc.	44.	0.	09/23/76
BENT	8	26	14" Conc.	46.	0.	09/23/76
BENT	8	27	14" Conc.	50.	0.	09/23/76
BENT	8	28	14" Conc.	41.	0.	09/22/76
BENT	8	29	14" Conc.	43.	0.	09/22/76
BENT	8	30	14" Conc.	15.	35.	09/13/76
BENT	8	31	14" Conc.	35.	17.	09/15/76
BENT	8	32	14" Conc.	40.	0.	09/22/76
BENT	8	33	14" Conc.	42.8	0.	09/22/76
BENT	8	34	14" Conc.	45.	0.	09/23/76
BENT	8	35	14" Conc.	29.	0.	09/23/76
BENT	8	36	14" Conc.	45.	0.	09/23/76
BENT	8	37	14" Conc.	50.	0.	09/23/76
BENT	8	38	14" Conc.	50.	0.	09/22/76
BENT	8	39	14" Conc.	49.	0.	09/22/76
BENT	8	40	14" Conc.	49.	0.	09/22/76
BENT	8	41	14" Conc.	55.	43.5	09/16/76
BENT	8	42	14" Conc.	50.	0.	09/22/76
BENT	8	43	14" Conc.	42.	0.	09/22/76
BENT	8	44	14" Conc.	50.	0.	09/22/76
BENT	8	45	14" Conc.	50.	0.	09/22/76

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 12

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Pile Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
BENT	8	46	14" Conc.	45.4	0.	09/23/76
BENT	8	47	14" Conc.	48.	0.	09/23/76
BENT	8	48	14" Conc.	50.	0.	09/23/76

		Average Pile Length (ft) =		42.9792		
BENT	9	1	14" Conc.	55.	0.	12/17/76
BENT	9	2	14" Conc.	50.	0.	12/17/76
BENT	9	3	14" Conc.	51.	0.	12/17/76
BENT	9	4	14" Conc.	48.	0.	12/17/76
BENT	9	5	14" Conc.	55.	0.	12/15/76
BENT	9	6	14" Conc.	47.	0.	12/15/76
BENT	9	7	14" Conc.	49.	0.	12/15/76
BENT	9	8	14" Conc.	55.	44.	12/09/76
BENT	9	9	14" Conc.	55.	0.	12/09/76
BENT	9	10	14" Conc.	50.	0.	12/17/76
BENT	9	11	14" Conc.	50.	0.	12/17/76
BENT	9	12	14" Conc.	40.	0.	12/12/76
BENT	9	13	14" Conc.	50.	0.	12/12/76
BENT	9	14	14" Conc.	50.	0.	12/12/76
BENT	9	15	14" Conc.	48.	0.	12/18/76
BENT	9	16	14" Conc.	51.	0.	12/16/76
BENT	9	17	14" Conc.	48.	0.	12/17/76
BENT	9	18	14" Conc.	52.	0.	12/18/76
BENT	9	19	14" Conc.	54.	0.	12/18/76
BENT	9	20	14" Conc.	51.	0.	12/18/76
BENT	9	21	14" Conc.	48.	0.	12/18/76
BENT	9	22	14" Conc.	48.	0.	12/18/76
BENT	9	23	14" Conc.	47.	0.	12/18/76
BENT	9	24	14" Conc.	47.	0.	12/18/76
BENT	9	25	14" Conc.	55.	0.	12/18/76
BENT	9	26	14" Conc.	55.	0.	12/18/76
BENT	9	27	14" Conc.	55.	0.	11/01/76
BENT	9	28	14" Conc.	55.	0.	10/30/76
BENT	9	29	14" Conc.	55.	0.	10/30/76
BENT	9	30	14" Conc.	55.	64.	10/28/76
BENT	9	31	14" Conc.	55.	0.	10/30/76
BENT	9	32	14" Conc.	55.	0.	10/30/76
BENT	9	33	14" Conc.	55.	0.	10/30/76
BENT	9	34	14" Conc.	55.	0.	11/01/76

* 0. = No Data Available

BRIDGE PILE SUMMARY REPORT

Federal ID#: 79I00400060 Page #: 13

Location #.: 79-I0040-0509-LL Print Date: 06/27/96

Crossing...: WOLF RIVER *

Project #..: 79007-3127-44 Contract #: 6978

Substructure Name	Pile Number	Pile Number	Pile Size	In Place Length (ft)	*Bearing (Tons)	Drive Date
BENT	9	35	14" Conc.	55.	0.	11/01/76
BENT	9	36	14" Conc.	55.	0.	11/01/76
BENT	9	37	14" Conc.	50.	0.	11/03/76
BENT	9	38	14" Conc.	54.	0.	11/03/76
BENT	9	39	14" Conc.	53.	0.	11/02/76
BENT	9	40	14" Conc.	55.	0.	10/30/76
BENT	9	41	14" Conc.	55.	0.	10/30/76
BENT	9	42	14" Conc.	55.	0.	10/30/76
BENT	9	43	14" Conc.	55.	0.	10/30/76
BENT	9	44	14" Conc.	55.	0.	10/30/76
BENT	9	45	14" Conc.	51.	0.	10/30/76
BENT	9	46	14" Conc.	51.	0.	10/31/76
BENT	9	47	14" Conc.	53.	0.	11/03/76
BENT	9	48	14" Conc.	55.	0.	11/03/76
				52.1042		

Average Pile Length (ft) = 52.1042

* 0. = No Data Available

SEP 16 1999

BRIDGE NO. 79-I40-5.09

E.B.L.

Pile B = Bent 1 — 48 piles driven — Size 1 = 14' x 14'
Original pile length 20' — Test pile length 15'
Min. req. bearing ton = 85 — Test piles were 5 & 29
Min. req. bearing ton for test pile = 85

Pile C = Bent 2 — 64 piles driven — Size 1 = 14' x 14'
Original pile length 20' — Test pile length 20'
Min. req. bearing ton = 54 — Test piles were 7 & 39
Min. req. bearing ton for test pile = 85

Pile D = Bent 3 — 64 piles driven — Size 1 = 14' x 14'
Original pile length 45' & 55' — Test pile length 55'
Min. req. bearing ton = 54 — Test piles were 7 & 39
Min. req. bearing ton for test pile = 85

Pile E = Bent 4 — 64 piles driven — Size 1 = 14' x 14'
Original pile length 50' & 55' — Test pile length 55'
Min. req. bearing ton = 57 — Test piles were 7 & 39
Min. req. bearing ton for test pile = 90

Pile F = Bent 5 — 80 piles driven — Size 1 = 14' x 14'
Original pile length 1-48 = 35' — Test pile length 55'
49-80 = 40' — Test piles were 40' & 72'
Min. req. bearing ton = Not Listed
Min. req. bearing ton for test pile = 80

Pile G = Bent 6 — 60 piles driven — Size 1 = 14' x 14'
Original pile length 50' & 55' — Test pile length 55'
Min. req. bearing ton = 65 — Test piles were 29 & 53
Min. req. bearing ton for test pile = 95

Pile H = Bent 7 — 72 piles driven — Size 1 = 14' x 14'
Original pile length 1-36 = 45' — Test pile length 55'
37-72 = 25' — Test piles were 29 & 65
Min. req. bearing ton = Not Listed
Min. req. bearing ton for test pile = 85

SEP 16 1999

Pile I = Bent 8 — 72 piles driven — Size 1 = 14' x 14'
Original pile length 45' & 50' — Test pile length 55'
Min. req. bearing ton = 58 — Test piles were 29 & 68
Min. req. bearing ton for test pile = 85

Pile JA = Bent 9 — 60 piles driven — Size 1 = 14' x 14'
Original pile length 20' — Test pile length 30'
Min. req. bearing ton = 30 — Test piles were 5 & 23
Min. req. bearing ton for test pile = Not listed

Pile KA = Bent 10 — 36 piles driven — Size 1 = 14' x 14'
Original pile length 30' — Test pile length 55'
Min. req. bearing ton = 65 — Test piles were 5 & 23
Min. req. bearing ton for test pile = 95

Pile JB & Ramp L = Bent 11 — 24 piles driven — Size 1 = 14' x 14'
Original pile length 25' — Test pile length 25,30, & 15
Min. req. bearing ton = Not listed — Test piles were 5, 12, & 13
Min. req. bearing ton for test pile = 75

Pile KB & Ramp L = Bent 12 — 24 piles driven — Size 1 = 14' x 14'
Original pile length 25' — Test pile length 55
Min. req. bearing ton = 51 — Test pile was 13
Min. req. bearing ton for test pile = 75

Pile LA = Abut. 2 — 15 piles driven — Size 1 = 14' x 14'
Original pile length 20' — Test pile length 55
Min. req. bearing ton = 44 — Test piles were 3 & 13
Min. req. bearing ton for test pile = 65

Pile LB = Abut. 3 — 9 piles driven — Size 1 = 14' x 14'
Original pile length 20' — Test pile length 55
Min. req. bearing ton = 44 — Test pile was 5
Min. req. bearing ton for test pile = 65

S T A T E O F T E N N E S S E E

Bids to be Received until 10:00 A.M. on June 14, 1991 .

DESCRIPTION OF WORK

In the State of Tennessee, in the County of Shelby: consisting of the Contract Rip-Rap Installation in Shelby County on I-40-5.09 left and right over Wolf River.

Project Ref. No.	Project No.		
	79007-4165-04	Road	0.00 Miles
		Bridge	0.00 Miles
County Shelby		TOTAL	0.00 Miles

ESTIMATE OF QUANTITIES AND SCHEDULE OF PRICES
(Sequence Numbers are for Departmental Use Only)

STATE OF TENNESSEE

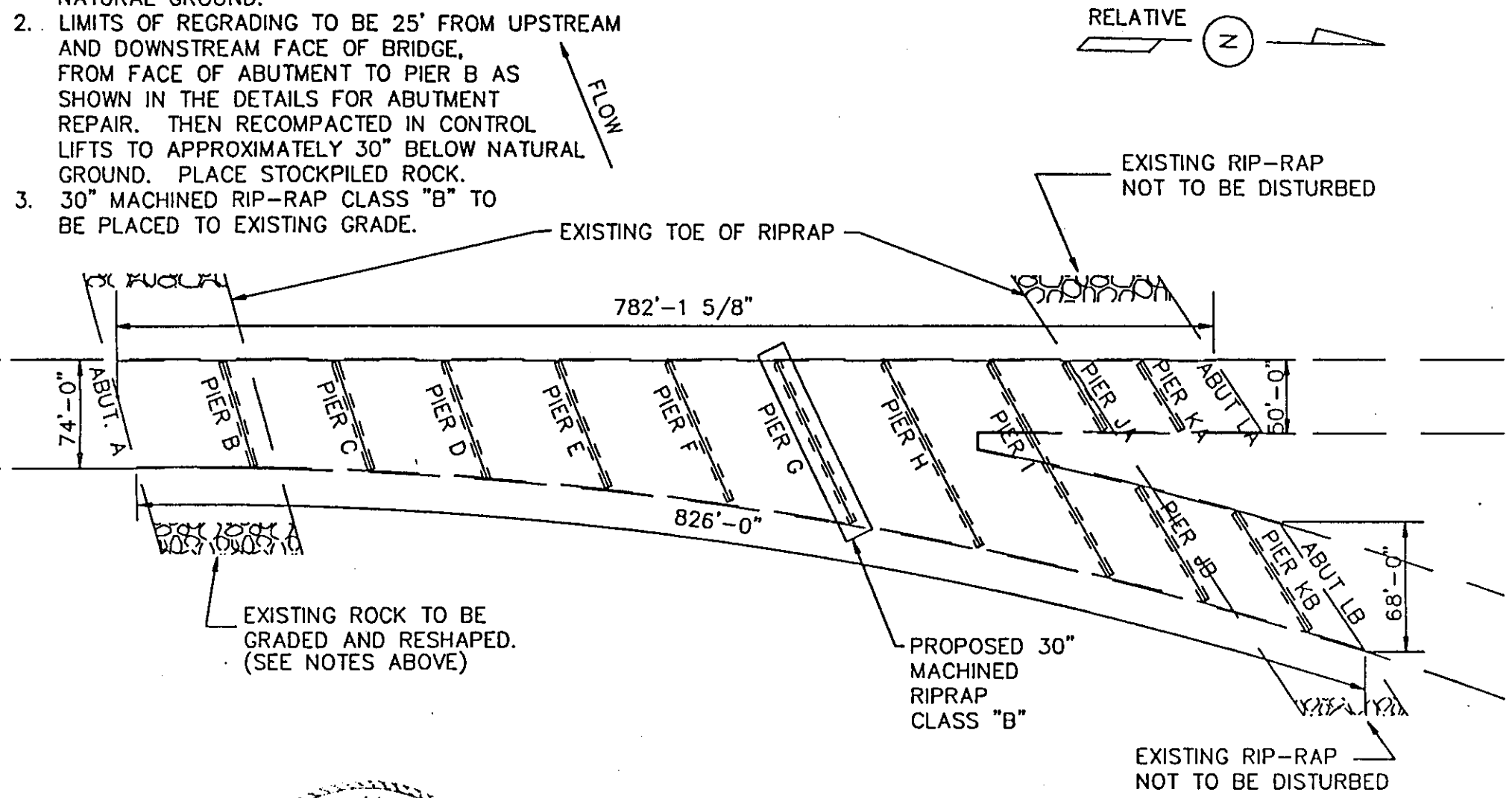
SHEET 2 OF 2
PROJECT NO. 79007-4165-04

COUNTY: Shelby

ITEM & SEQ. NO.	UNIT MEAS. AND QNTY.	ITEMS AND UNIT PRICES (SEQ. NO. FOR DEPT. USE ONLY)	UNIT PRICE	AMOUNT
203-01	CU. YD. 4500	ROAD & DRAINAGE EXCAVATION(UNCLASS) @_____DOLLARS		
20		_____CENTS	_____	_____
209-06	BALE 200	BALED HAY OR STRAW EROSION CHECKS @_____DOLLARS		
30		_____CENTS	_____	_____
209-08	L.F. 400	TEMPORARY SILT FENCES @_____DOLLARS		
40		_____CENTS	_____	_____
709-05.08	TONS 1765	MACHINED RIP-RAP [CLASS B] @_____DOLLARS		
50		_____CENTS	_____	_____
712-01	L.S. 1	TRAFFIC CONTROL @_____DOLLARS		
60		_____CENTS	_____	_____
717-01	L.S. 1	MOBILIZATION @_____DOLLARS		
70		_____CENTS	_____	_____
80		TOTAL CONTRACT		_____

1. EXISTING ROCK TO BE STOCKPILED ON SITE TO BE PLACED IN EXCAVATION TO 30" BELOW NATURAL GROUND.
2. LIMITS OF REGRADING TO BE 25' FROM UPSTREAM AND DOWNSTREAM FACE OF BRIDGE, FROM FACE OF ABUTMENT TO PIER B AS SHOWN IN THE DETAILS FOR ABUTMENT REPAIR. THEN RECOMPACTED IN CONTROL LIFTS TO APPROXIMATELY 30" BELOW NATURAL GROUND. PLACE STOCKPILED ROCK.
3. 30" MACHINED RIP-RAP CLASS "B" TO BE PLACED TO EXISTING GRADE.

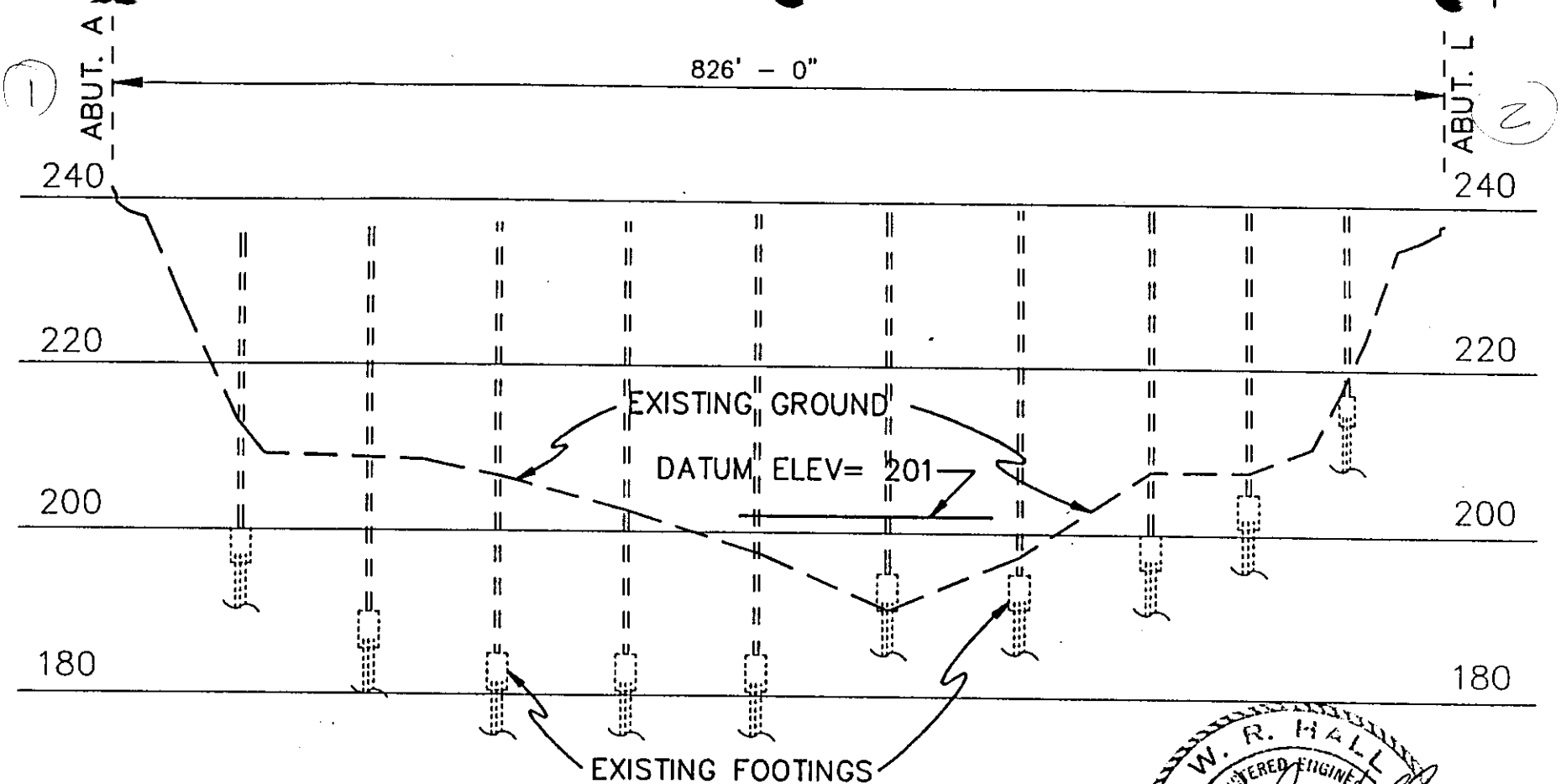
PROJECT # 79007-4165-04
REVISED 5-14-91: ADDED NOTES 1-3.



W. R. HALL
REGISTERED ENGINEER
No. 7242
STATE OF TENNESSEE

EASTBOUND BRIDGE
PLAN VIEW
SCALE: 1" = 100'

BRIDGE SCOUR REPAIR PLAN
I-40/240 OVER WOLF RIVER
BRIDGE NO. 79-140-5.09 RT.
SHELBY COUNTY
1991



ELEVATION VIEW
SCALE H: 1" = 100'
V: 1" = 20'

W. R. HALL
REGISTERED ENGINEER
04/03/91
No. 7262
STATE OF TENNESSEE

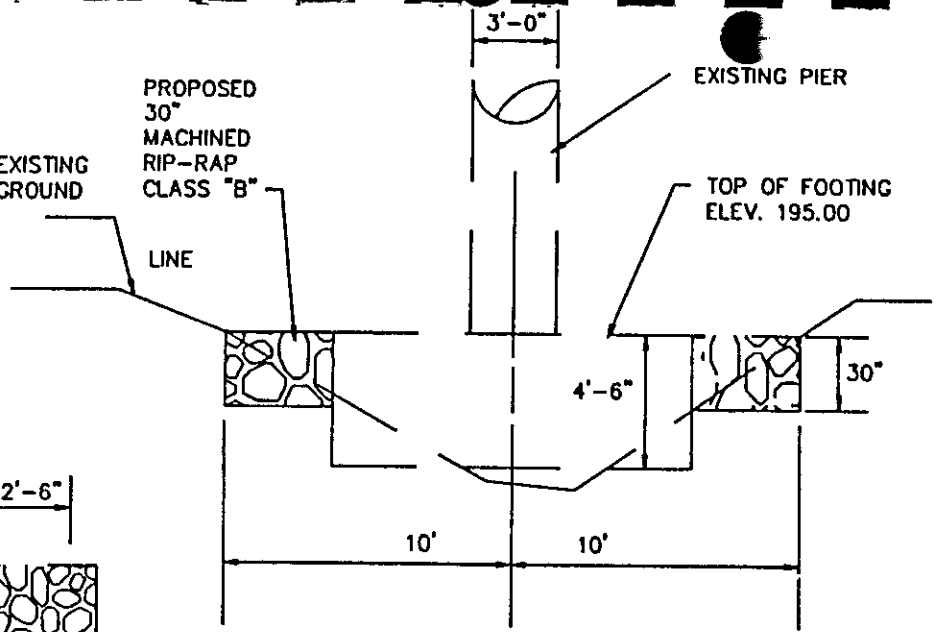
HYDRAULIC DATA

DRAINAGE AREA = SQ. MI.
DESIGN DISCHARGE (100 YR.) = 40510 C.F.S.
100 YR. FLOW AREA = SQ. FT.
DESIGN VELOCITY = 3.01 F.P.S.
DESIGN BRIDGE BACKWATER = FT.
ROADWAY OVERTOPPING ELEV. =

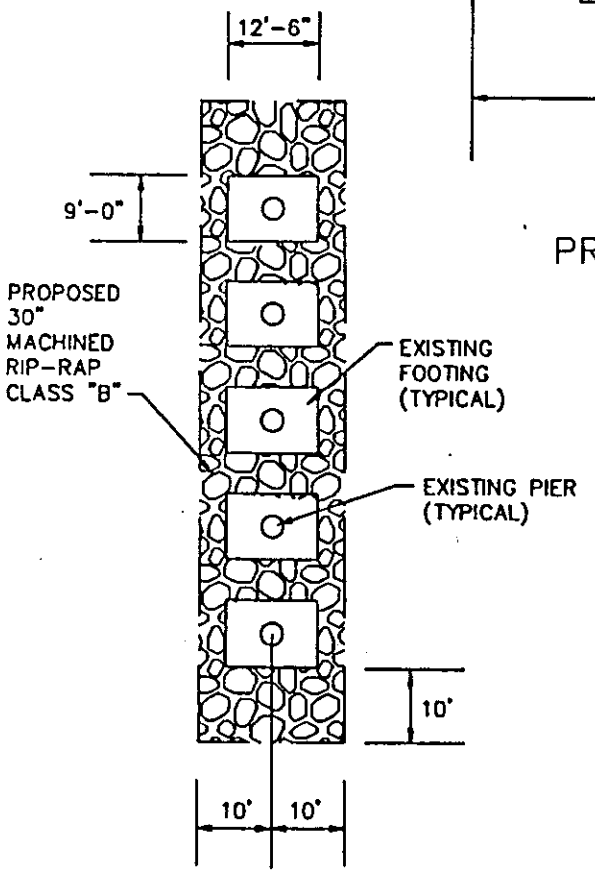
BRIDGE SCOUR REPAIR PROFILE

S.R. 140 OVER WOLF RIVER
BRIDGE NO. 79-140-5.09 RT.
SHELBY COUNTY
1991

PROJECT # 790[illegible]165-04
REV 5-14-91: [illegible]ED ABUT. DET.

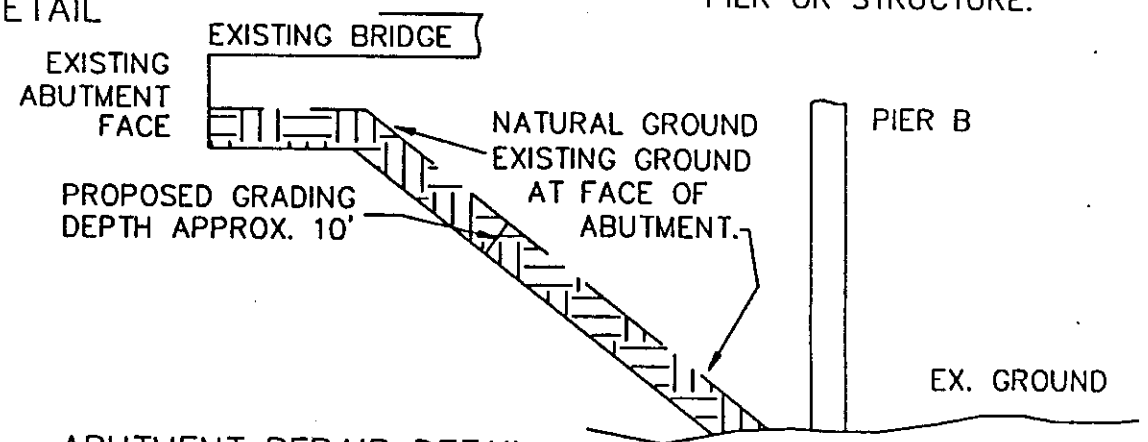


PIER G
PROFILE VIEW DETAIL
(N.T.S.)



PIER G
PLAN VIEW DETAIL
(N.T.S.)

NOTE: LIMITS OF REPAIR FOR ABUTMENT FACE NOT TO DAMAGE EXIST. PIER OR STRUCTURE.



ABUTMENT REPAIR DETAIL
(N.T.S.)

DETAILS FOR
BOTH STRUCTURES

BRIDGE SCOUR REPAIR DETAIL
I-40/240 OVER WOLF RIVER
BRIDGE NO. 79-140-5.09
SHELBY COUNTY
1991

[redacted] PROJEC[redacted]790([redacted]65-[redacted]
REVISED 5-14-91: [redacted]D NOTES 1-3.

1. EXISTING ROCK TO BE STOCKPILED ON SITE TO BE [redacted]CED IN EXCAVATION TO 30" BELOW NATURAL GROUND.
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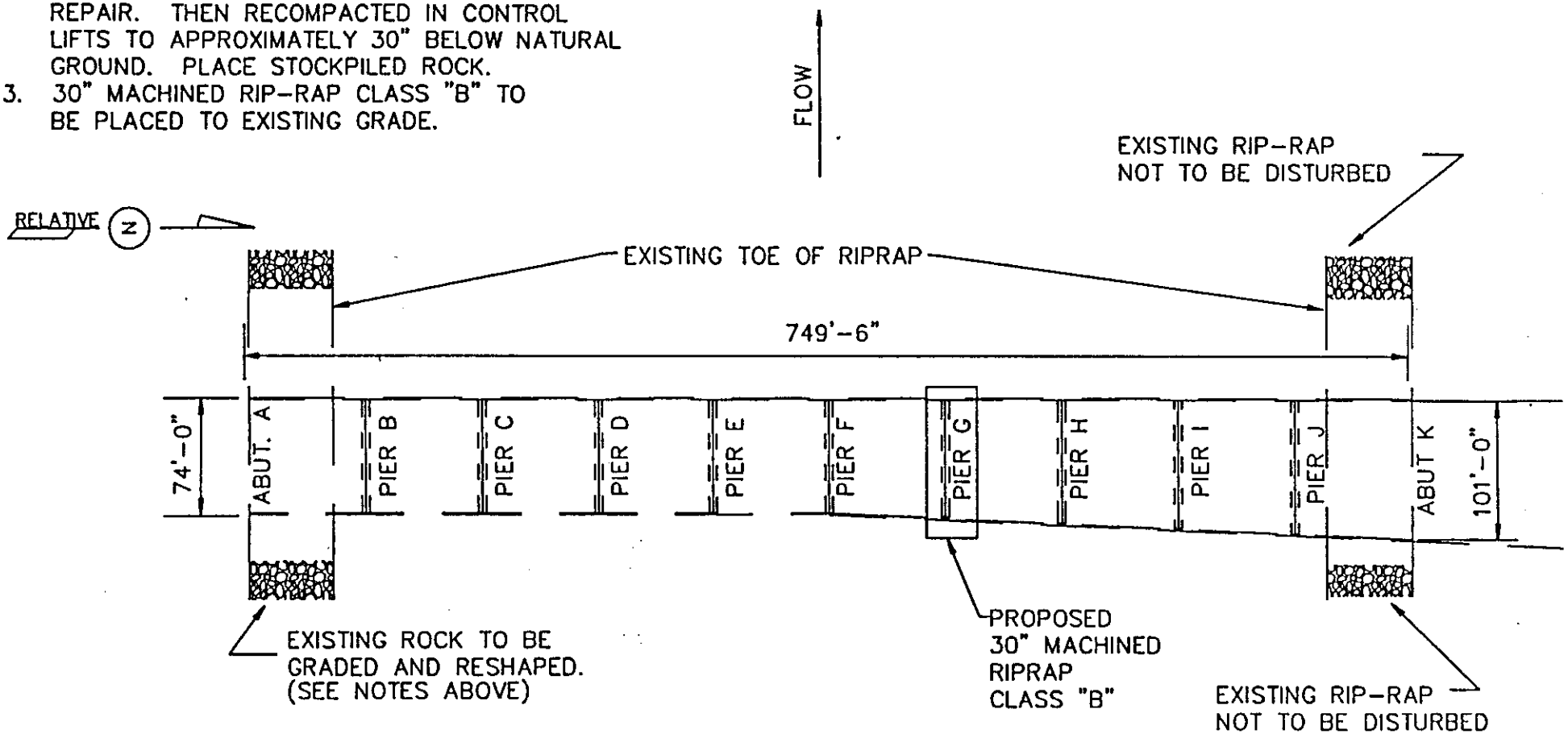
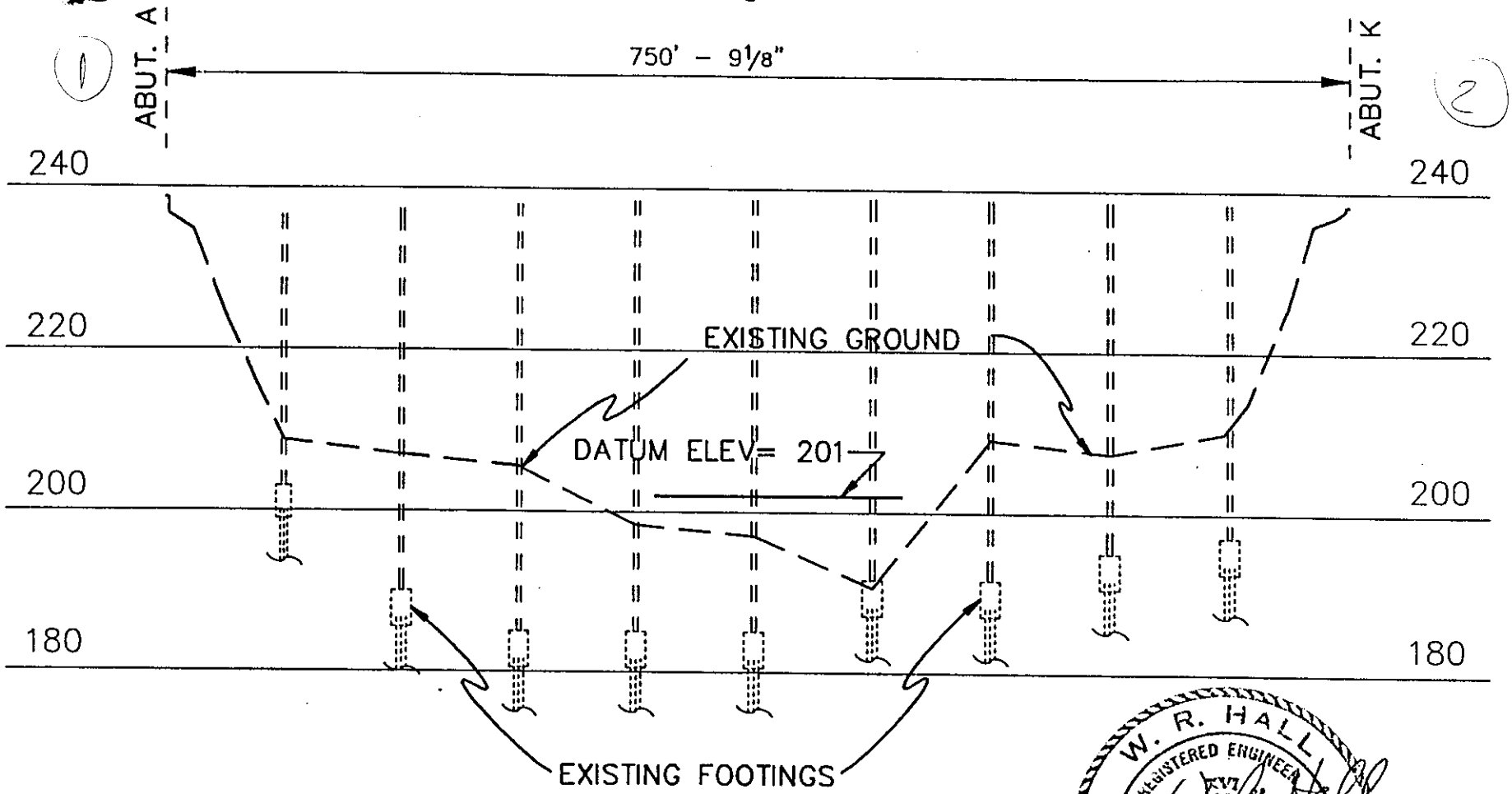


W. R. HALL
REGISTERED ENGINEER
W. R. Hall
05/17/91
STATE OF TENNESSEE

WESTBOUND BRIDGE
PLAN VIEW
SCALE: 1" = 100'

BRIDGE SCOUR REPAIR PLAN
I-40/240 OVER WOLF RIVER
BRIDGE NO. 79-140-5.09 LT.
SHELBY COUNTY
1991



ELEVATION VIEW
SCALE H: 1" = 100'
V: 1" = 20'

W. R. HALL
REGISTERED ENGINEER
04/03/91
No. 7242
STATE OF TENNESSEE

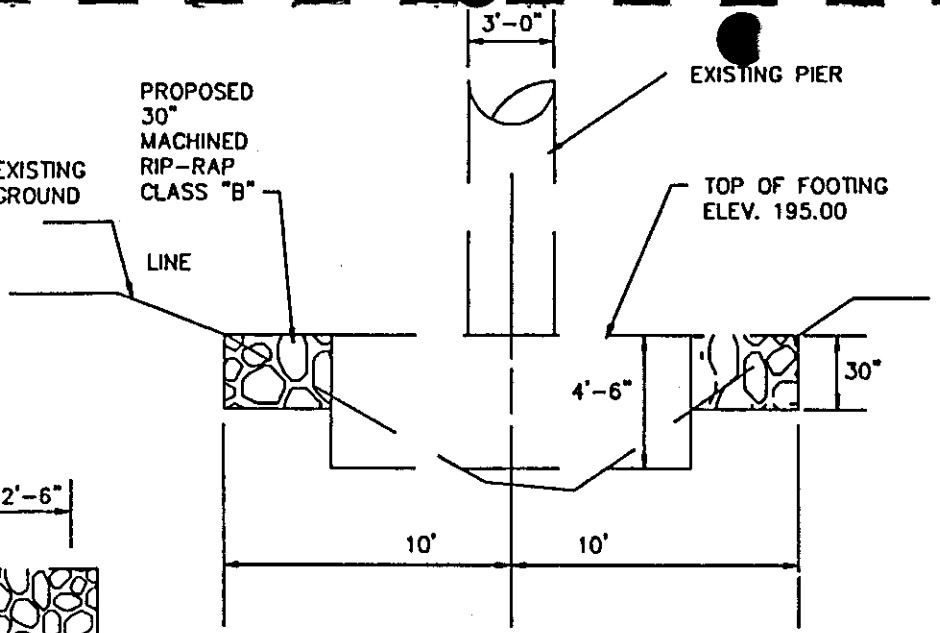
HYDRAULIC DATA

DRAINAGE AREA = SQ. MI.
DESIGN DISCHARGE (100 YR.) = 40510 C.F.S.
100 YR. FLOW AREA = SQ. FT.
DESIGN VELOCITY = 3.01 F.P.S.
DESIGN BRIDGE BACKWATER = FT.
ROADWAY OVERTOPPING ELEV. =

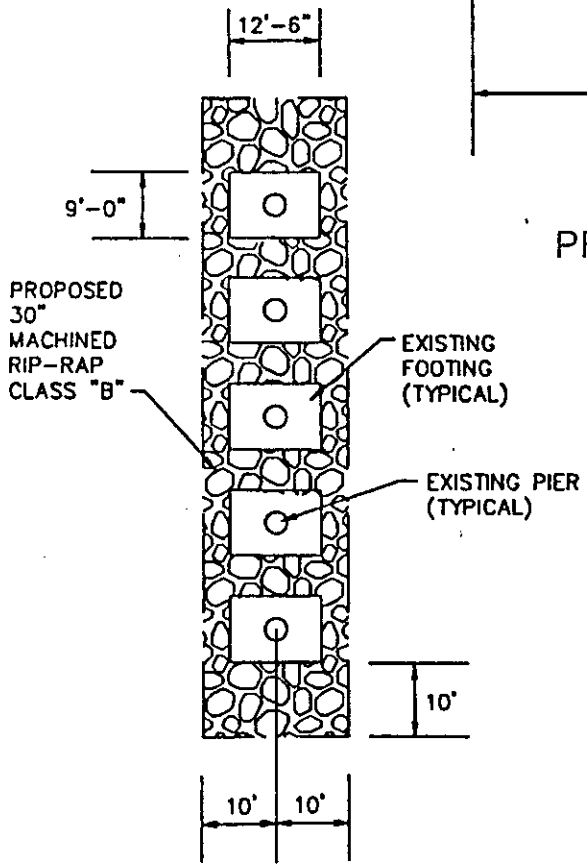
BRIDGE SCOUR REPAIR PROFILE

S.R. 140 OVER WOLF RIVER
BRIDGE NO. 79-140-5.09 LT.
SHELBY COUNTY
1991

PROJECT # 7900[illegible] 4165-04
REV 5-14-91: [illegible]ED ABUT. DET.

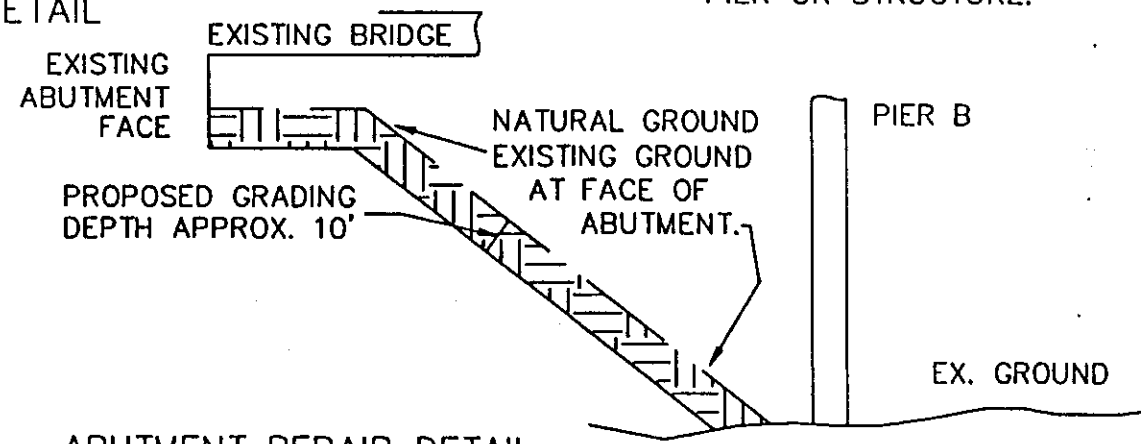


PIER G
PROFILE VIEW DETAIL
(N.T.S.)



PIER G
PLAN VIEW DETAIL
(N.T.S.)

NOTE: LIMITS OF REPAIR FOR ABUTMENT FACE NOT TO DAMAGE EXIST. PIER OR STRUCTURE.



ABUTMENT REPAIR DETAIL
(N.T.S.)

DETAILS FOR BOTH STRUCTURES

BRIDGE SCOUR REPAIR DETAIL

I-40/240 OVER WOLF RIVER
BRIDGE NO. 79-140-5.09
SHELBY COUNTY
1991

S T A T E O F T E N N E S S E E

Bids to be Received until 10:00 A.M. on June 14, 1991 .

DESCRIPTION OF WORK

In the State of Tennessee, in the County of Shelby: consisting of the Contract Rip-Rap Installation in Shelby County on I-40-5.09 left and right over Wolf River.

Project Ref. No.	Project No.		
	79007-4165-04	Road	0.00 Miles
		Bridge	0.00 Miles
County Shelby		TOTAL	0.00 Miles

ESTIMATE OF QUANTITIES AND SCHEDULE OF PRICES
(Sequence Numbers are for Departmental Use Only)

STATE OF TENNESSEE

SHEET 2 OF 2
PROJECT NO. 79007-4165-04

COUNTY: Shelby

ITEM & SEQ. NO.	UNIT MEAS. AND QNTY.	ITEMS AND UNIT PRICES (SEQ. NO. FOR DEPT. USE ONLY)	UNIT PRICE	AMOUNT
203-01	CU. YD. 4500	ROAD & DRAINAGE EXCAVATION(UNCLASS) @ _____ DOLLARS		
20		_____ CENTS	_____	_____
209-06	BALE 200	BALED HAY OR STRAW EROSION CHECKS @ _____ DOLLARS		
30		_____ CENTS	_____	_____
209-08	L.F. 400	TEMPORARY SILT FENCES @ _____ DOLLARS		
40		_____ CENTS	_____	_____
709-05.08	TONS 1765	MACHINED RIP-RAP [CLASS B] @ _____ DOLLARS		
50		_____ CENTS	_____	_____
712-01	L.S. 1	TRAFFIC CONTROL @ _____ DOLLARS		
60		_____ CENTS	_____	_____
717-01	L.S. 1	MOBILIZATION @ _____ DOLLARS		
70		_____ CENTS	_____	_____
80		TOTAL CONTRACT _____		

SCOUR REPAIR

SHELBY COUNTY
79-I40-5.09 / WOLF RIVER

PROJECT NO. 79002-4130-04

DONE BY REGION IV FORCES

PROJECT UNDER WAY
5/19/98

PICTURES IN REPAIR SECTION
SHOW WORK COMPLETE.
PICTURES DATED 10-2-98

PROJECT NUMBER REQUEST

(Include location map)

Date: 1-21-98

Requestor: MICHAEL ANDERSON
BRIDGE REPAIR

Phone No: 741-8398

Preliminary Engineering No.: -79002-4129-04

Construction No.: -79002-4130-04

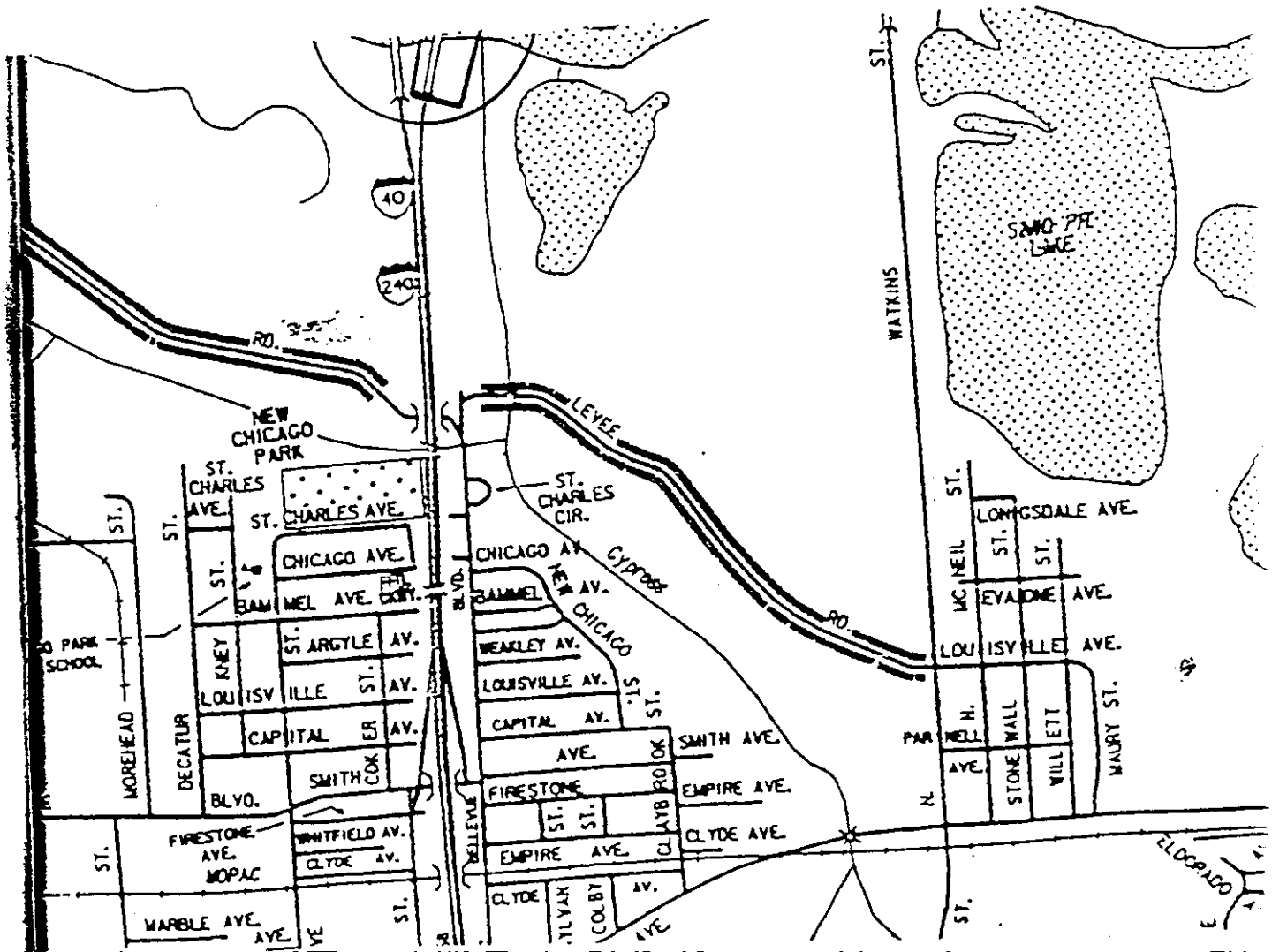
County: SHELBY Bridge No.: 79-I40-5.09(L&R)/

Crossing: WOLF RIVER

Type Work: INSTALLATION OF RIP-RAP AS BANK STABALIZATION & REMOVAL OF STREAM OBSTRUCTION FROM CHANNEL

Est. Proj. Cost: $ 262,500 Est. P.E. Cost: $ 30,000.00

Proposed Letting: MAY '98 Consultant: GARVER + GARVER



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BRIDGE INSPECTION AND REPAIR OFFICE
NASHVILLE, TENNESSEE 37243-0338

Memorandum

DATE: September 17, 1998

TO: Mr. Bill Hazlerig, Region IV Bridge Engineer

FROM: Wayne J. Seger, Civil Engineering Manager 1 MRA for

RE: 79-I40-5.09/ WOLF RIVER

As discussed, I am sending you this memo to confirm permission for removal of the cofferdams that are obstructing flow in the area of these structures.

It is the opinion of Mr. John Hewitt from the permitting section that neither the Tennessee Department of Environment and Conservation nor the United States Army Corps of Engineers requires a permit to remove a structure from an area. Further, as long as you are not in "waters of the State", we will be in full compliance with both agencies' regulations.

If you find that you are unable to get to one or both of these structures without bringing machinery or equipment directly into the stream flow, please stop work before this occurs.

If you have any further questions, please feel free to call me.

Wayne Uegar

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37243-0339

February 5, 1998

Mr. Daniel C. Eagar
Tennessee Department of Environment and Conservation
Division of Water Pollution Control
Natural Resource Section
6th Floor L. & C. Annex
401 Church Street
Nashville, Tennessee 37243-1534

Subject: Emergency Road Repair
Interstates 40 and 240
At Wolf River
Shelby County

Dear Mr. Eagar:

In accordance with the Tennessee Department of Environment and Conservation's General Permit for Emergency Road Repair, this office is providing a portion of the USGS quad map for Northwest Memphis, TN (404-NE), showing the location of an emergency road repair at the Wolf River, where the riverbank has scoured to the point of endangering the bridge piers. Immediate repairs are necessary to protect the safety of the motoring public. This is a "no-plans" operation by TDOT maintenance forces.

The repair, which will be conducted the week of February 9, will consist of the placement of soil and rip-rap of approximately 15" diameter to temporarily repair approximately 590 linear feet of bank which have been severely scoured, and rip-rap covering the existing substrate adjacent to the bank. It is our understanding that the river flow has scoured the bank and moved several feet toward the pier within the last few months, endangering pier stability due to the relatively short piling used under these piers. We are enclosing aerial photographs taken in 1987 and January 1998, which show the movement of the bank toward pier # 7 on both bridges. We are also enclosing photographs taken at the site.

Please note that the current instability of the banks is resulting in considerable erosion and sedimentation. We believe this project will have an overall benefit to water quality.

Diagrams showing the approximate scope of work are enclosed. Due to the varying conditions at the site, and the highly erodible sediments in the river, the engineer on the site will determine the final scope of work at the time the rip-rap is placed. The thickness of the rip-rap layer will vary between 3' and 6', depending on conditions.

We also are preparing to develop project plans for a more permanent solution to the bank erosion problem, which appears to be caused in part by the configuration of the opposite bank

and an existing obstruction in the river upstream of this site. At that time, we will apply for the appropriate permits for the additional work.

By copy of this letter, we request the concurrence of the Corps of Engineers, Memphis District, that this emergency work fits the criteria of one of the Nationwide Permits.

We also request that the Corps inform us at their early convenience if they are planning any related corrective or preservation work for this area of the Wolf River in the future, which may impact or aid potential TDOT work.

Please advise us if you have any questions or if we can be of any assistance.

Sincerely,

Paul D. Degges

(for)
Edward P. Wasserman
Engineering Director, Structures

Enclosures

PDD:JLH:pc

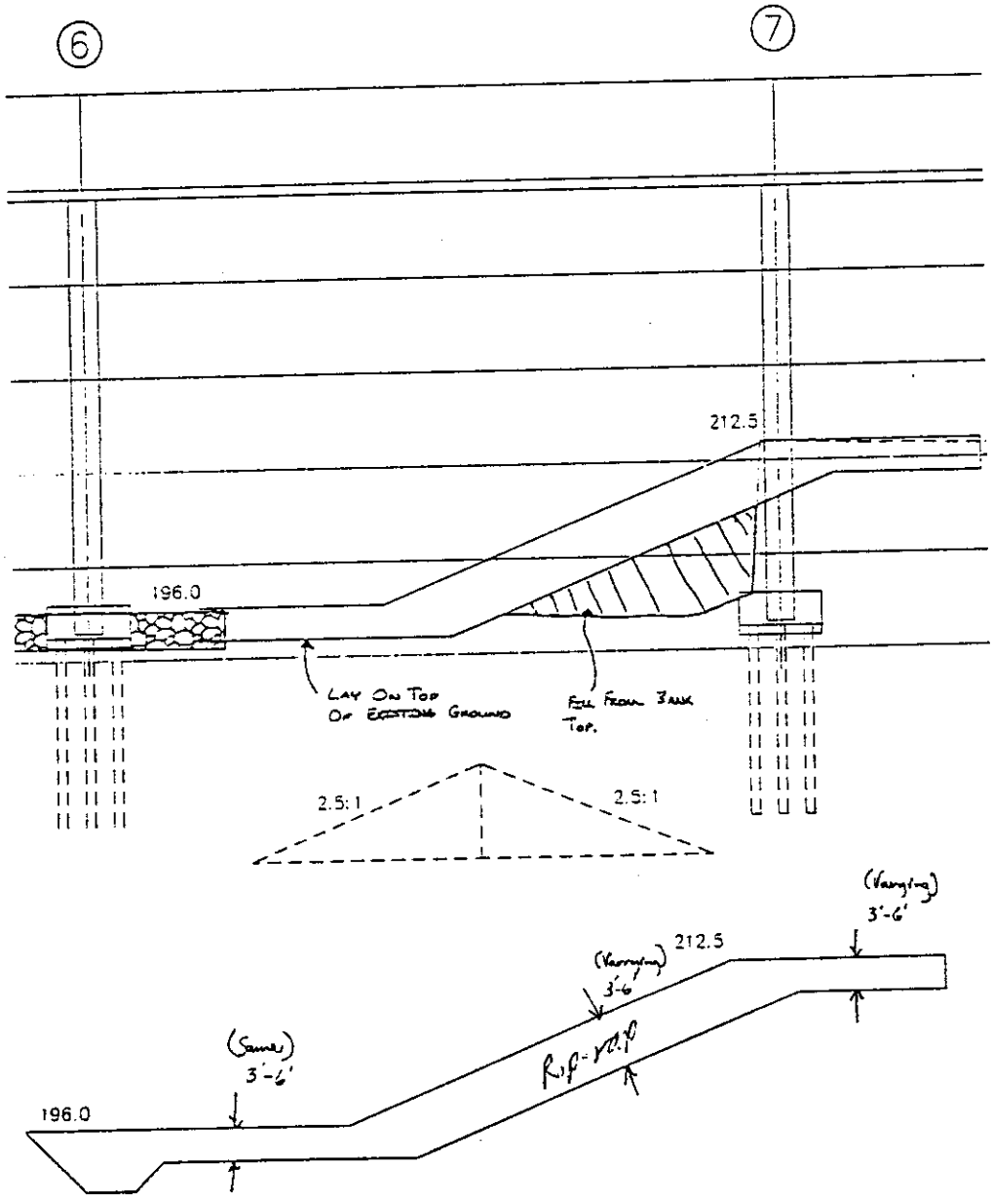
cc: Col. Gregory Bean, USACE Memphis District
Mr. Wayne Seger
Mr. Bill Hazlerig
Mr. Bob Englert

1998 REPAIRS

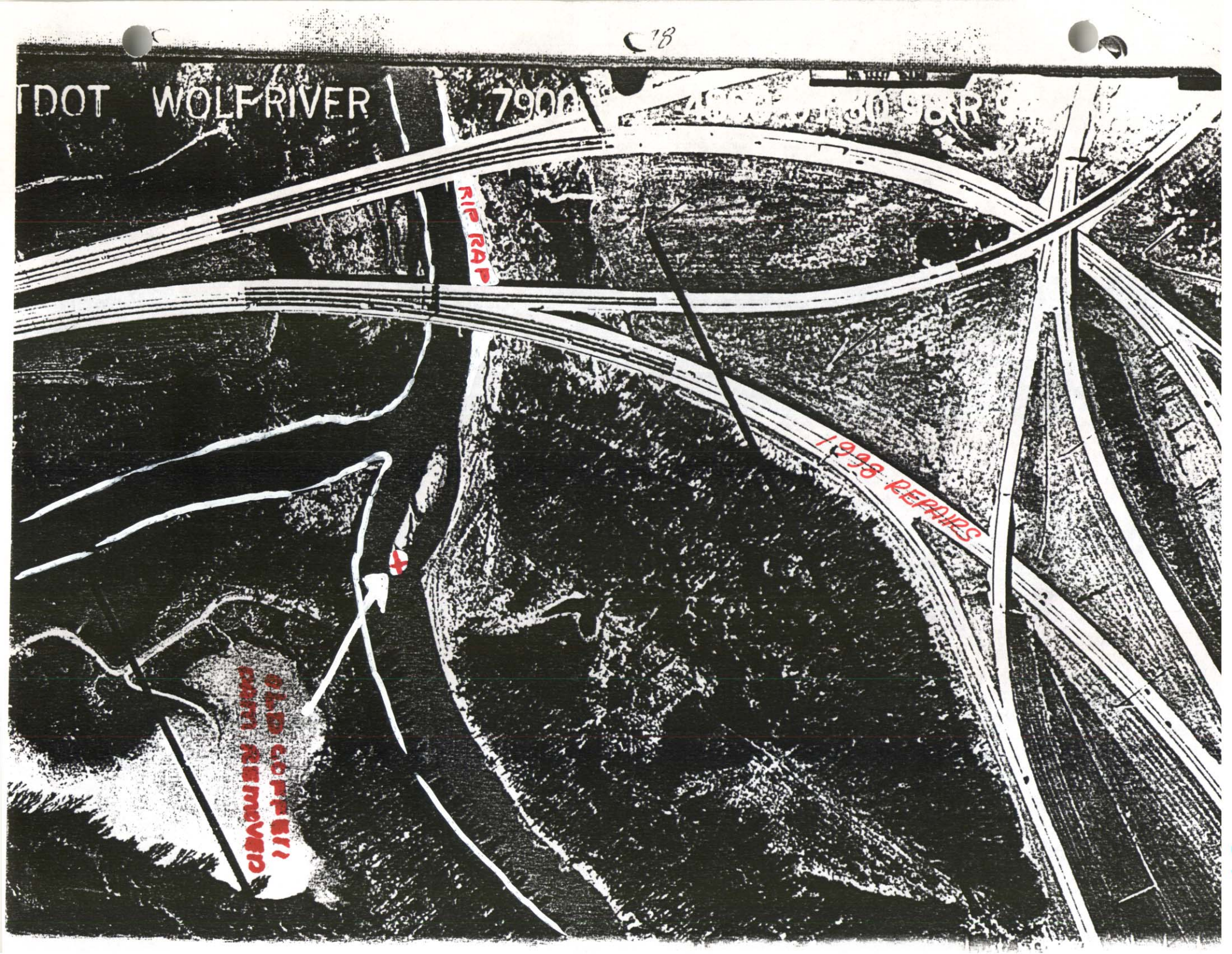
Scale: 1"=100'

5' off. (5' high)
wear oak pts s'

1998 REPAIRS



Scale: Horiz. 1" = 20'
Vert. not to scale


TDOT WOLF RIVER
7900
RIP RAP
1993 REPAIRS
OLD CONCRETE PART REMOVED

NOTE: "E" DENOTES EXPANSION
"F" DENOTES FIXED
"I" DENOTES INTEGRAL

PROJECT NO.	YEAR	SHEET NO.
79007-4158-04	1985	14

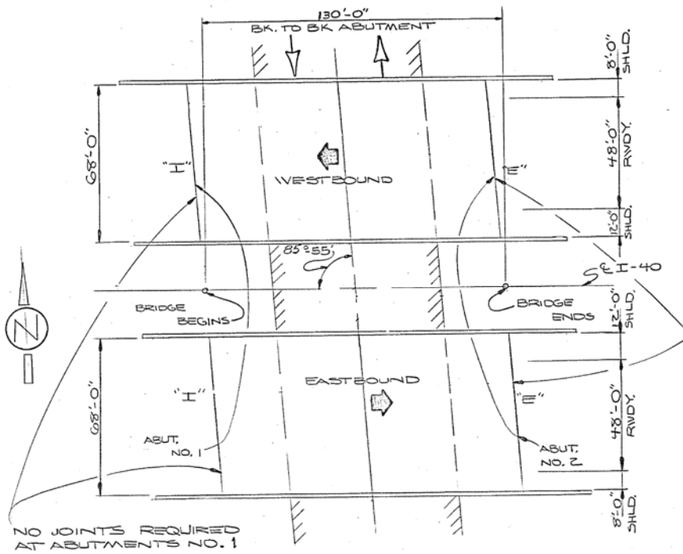
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

Scope of Work (General) Bridge No. 4

A. Remove and replace existing preformed elastic strip seal at abutment no. 2 both east & westbound lanes as shown in details type "E" on dwg. no. M-106-80.

B. Repave the existing east and westbound bridge decks including the approaches with new 1½" thick asphalt overlay as shown in details on dwg. no. M-106-75.



NO JOINTS REQUIRED AT ABUTMENTS NO. 1

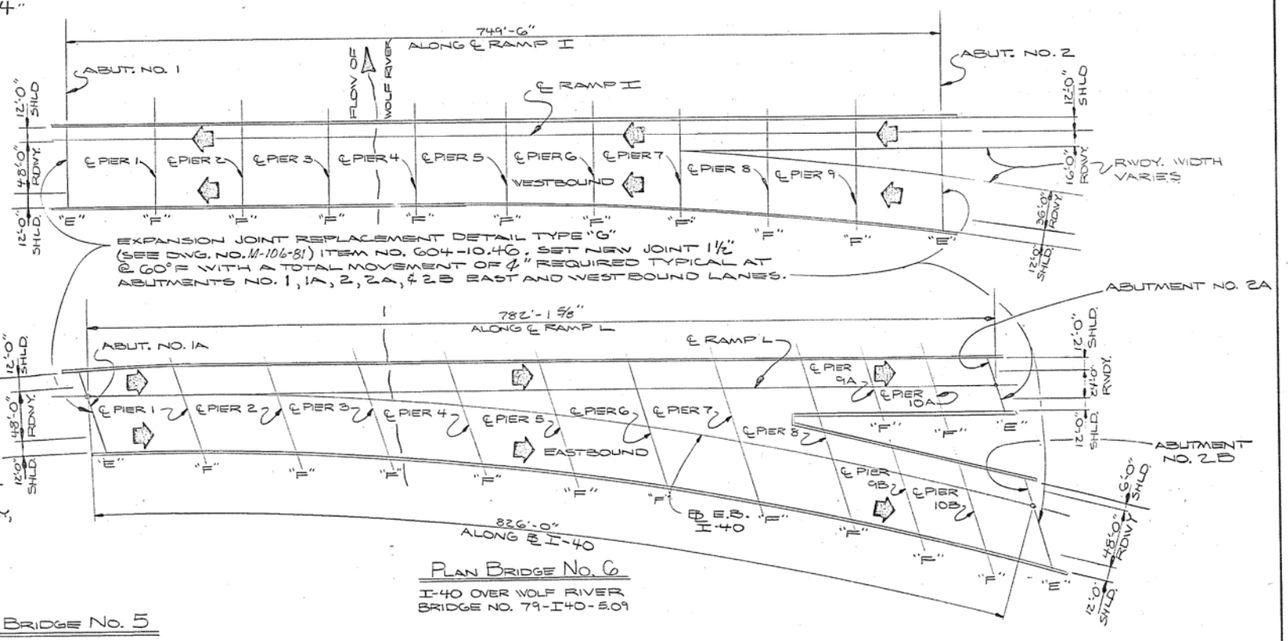
Plan Bridge No. 4
I-40 over Hollywood Street
Bridge No. 79-I40-7.60

NOTE TO CONTRACTOR: ABUTMENT NO. 1 IS INTEGRAL. ABUTMENT NO. 2 HAS AN EXISTING PREFORMED ELASTIC STRIP SEAL THAT IS TO BE REMOVED AND REPLACED WITH THE EXPANSION JOINT REPLACEMENT DETAIL TYPE "E" (SEE DWG. NO. M-106-80.) ITEM NO. 604-10.41. SET NEW JOINT 2" @ 80° F WITH A TOTAL MOVEMENT OF 4" REQUIRED AT ABUTMENTS NO. 2 ONLY. EAST AND WESTBOUND LANES.

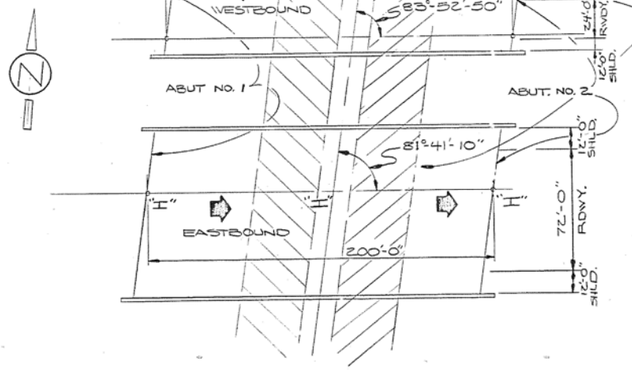
Scope of Work (General) Bridge No. 6

A. Remove and repair existing expansion joints at abutments no. 1 & 2 both east and westbound lanes as shown in details type "G" on dwg. no. M-106-81.

B. Repave the existing east and westbound bridge decks including the approaches with new 1½" thick asphalt overlay as shown in details on dwg. no. M-106-75.



Plan Bridge No. 6
I-40 over Wolf River
Bridge No. 79-I40-5.09



NOTE TO CONTRACTOR: THIS BRIDGE IS INTEGRAL ON BOTH ENDS. THERE WILL BE NO EXPANSION JOINT REPLACEMENT ON THIS BRIDGE. THIS BRIDGE TO BE PAVED OVER WITH 1½" ASPHALT OVERLAY WITH A 75'-0" TAPER AT EACH END OF BRIDGE.

Scope Of Work (General) Bridge No. 5

A. Repave the existing east and westbound bridge decks including the approaches with new 1½" thick asphalt overlay as shown in details on dwg. no. M-1062-75.

Plan Bridge No. 5
I-40 over Watkins Street
Bridge No. 79-I40-5.77

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

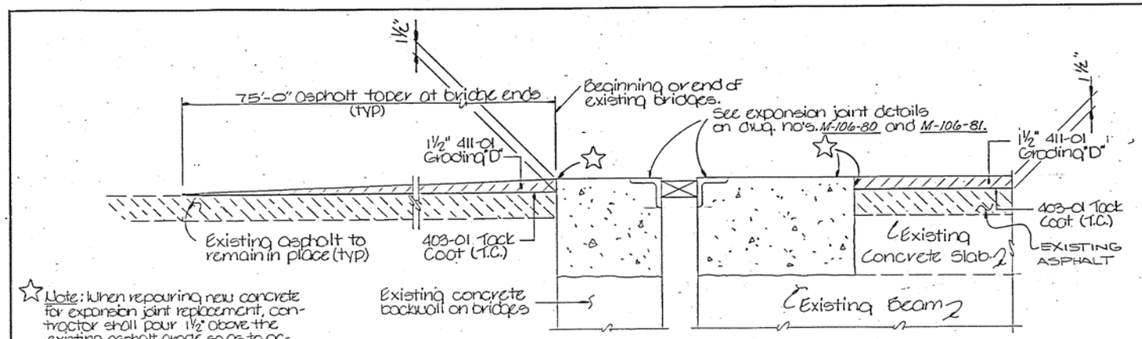
Bridge Repair for Bridges No. 4 thru 6.
Interstate 40
Shelby County
1985

DESIGNED BY _____ DATE _____
DRAWN BY Greg Ross DATE 5-85
SUPERVISED BY Gentry & McIntupee DATE 5-85
CHECKED BY Graves & Glasgow DATE 5-85

CORRECT Clellan L Lovell
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-106-74

BRUNING 44-141 61318



☆ Note: When repouring new concrete for expansion joint replacement, contractor shall pour 1½" above the existing asphalt grade so as to accomodate the new 1½" Grading "D" asphalt overlay.

SECTION SHOWING PAVING AND EXPANSION JOINT REPLACEMENT DETAILS

NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANING OF ALL EXISTING BRIDGE DECK DRAINS, WHEN PLACING THE NEW 1½" ASPHALT OVERLAY. CARE SHALL BE TAKEN SO AS TO TAPER THE NEW OVERLAY AROUND THE BRIDGE DECK DRAINS. COST OF CLEANING THE DRAINS AND TAPERING THE NEW ASPHALT OVERLAY SHALL BE INCLUDED IN COST OF ITEMS BID ON.

PROJECT NO.	YEAR	SHEET NO.
79007-4158-04	1985	15

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

ESTIMATED QUANTITIES

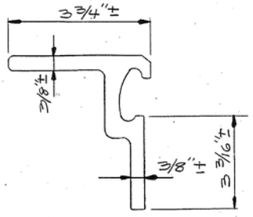
	ITEM NO.	ITEM	UNIT		BRIDGE NO. 4 I-40/ HOLLYWOOD ST. BRIDGE NO. 79-I40-7.60	BRIDGE NO. 5 I-40/ WATKINS ST. BRIDGE NO. 79-I40-5.77	BRIDGE NO. 6 I-40/WOLF RIVER BRIDGE NO. 79-I40-5.09	TOTAL
	403-01	Bituminous Material for Tack Coat (T.C.)	Ton		.75	.75	1.5	3
①	411-01.01	Mineral Aggregate for Asphaltic Concrete Surface (ACS) GR. "D"	Ton		227	381	1230	1838
	411-01.02	Asphalt Cement for Asphaltic Concrete Surface (ACS) GR. "D"	Ton		15	24	79	118
②	604-10.41	Expansion Joint Repair (Type "E")	L.F.		138	———	———	138
②	604-10.46	Expansion Joint Repair (Type "G")	L.F.		———	———	378	378

① DENOTES ITEMS FOR NEW 1½" ASPHALT OVERLAY ON BRIDGES NO. 4 THRU 6. SEE PAVING DETAILS ABOVE AND PLAN OF BRIDGES ON DWG. NO M-106-74

② DENOTES EXPANSION JOINT REPAIR ON BRIDGES NO. 4 & 6. SEE DETAILS AND NOTES ON DWG. NO'S. M-106-76, M-106-77, M-106-80, M-106-81, AND SEE SPECIAL NOTE BELOW.

Special Note Concerning Expansion Joint Repair Bid Item No's. 604-10.41, and 604-10.46.

The contractor shall inspect 450± Feet (22 individual pieces) of steel extrusions that are stored at the State Construction Office, located on Centennial Blvd. in Nashville, prior to submitting a bid for items no. 604-10.41 and 604-10.46. These extrusions are state property. The successful bidder on this project shall make provisions for picking up the extrusions and utilizing as much of the 450± Feet as reasonably possible in the fabrication of the expansion joints specified in item's no. 604-10.41 and 604-10.46. Shop drawings for the expansion joints shall show each individual piece of these extrusions and where they are used. See detail below for configuration of extrusions that are stock piled at the State Construction Office.



Extrusion Detail
STOCK PILED BY STATE

DESIGNED BY _____ DATE _____
DRAWN BY GLASGOW & ROSS DATE 6-85
SUPERVISED BY CENTRY & MAINTURFF DATE 6-85
CHECKED BY GRAVES & HALL DATE 6-85

BRUNING 44-141 61318

GENERAL NOTES:

DESIGN SPECIFICATION: AASHTO 1983 EDITION.

SPECIFICATIONS: STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (MARCH, 1981 EDITION).

LIST OF DRAWINGS

DRAWING	DWG. NO.	LAST REV. DATE
BRIDGE REPAIR DETAILS	M-106-74	
BRIDGE REPAIR AND ESTIMATED QUANTITIES	M-106-75	

REFERENCE DRAWINGS

BRIDGE NO. 4	M-44-36, 37, 38, 41
BRIDGE NO. 5	M-44-1.9, & 15
BRIDGE NO. 6	M-44-70, 72, 73, 81, 91, 94, 108, 109, 110, & 111

LIST OF DRAWINGS TO BE PRINTED WITH PLANS

DRAWING	DWG. NO.	LAST REV. DATE
STRIP SEAL EXPANSION JOINTS REPLACEMENT CONSTRUCTION TYPE "E"	M-106-80	
STRIP SEAL EXPANSION JOINTS REPLACEMENT CONSTRUCTION TYPE "G"	M-106-81	
GENERAL NOTES FOR EXPANSION JOINT REPLACEMENT CONSTRUCTION TYPES "A" THRU "F"	M-106-76	
EXPANSION JOINT REPLACEMENT CONSTRUCTION DETAILS TYPE "A" THRU "F"	M-106-77	

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR AND ESTIMATED QUANTITIES FOR BRIDGES No. 4 THRU 6
INTERSTATE 40
SHELBY COUNTY
1985

CORRECT Clellon L Lovell
ENGINEER OF STRUCTURES
APPROVED David Evans
DIRECTOR OF HIGHWAYS

M-106-75

ESTIMATED QUANTITIES

	ITEM NO.	ITEM DESCRIPTION	UNIT	79-I40-5.09 L&R OVER WOLF RIVER	79-2819-4.93 OVER I40-6.60	79-I40-7.60 L&R OVER FAU 2821	79-I40-8.25 L&R OVER I.C.G.RAILROAD	79-4186-2.11 OVER I40-9.36	79-I40-9.50 L&R OVER WOLF RIVER	TOTAL QUANTITIES
(1)	602-10.39	STRUCTURAL STEEL BRIDGE (REPAIRS)	EACH				24			24
(2)	604-03.60	BRIDGE JOINT SEISMIC MODIFICATION	EACH	48	36	36	28	40	30	218
(3)	604-10.42	CONCRETE REPAIRS	C.F.	36						36
	712-01	TRAFFIC CONTROL	L.S.	0.17	0.16	0.16	0.17	0.17	0.17	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	500	440		620	460	400	2420
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH			10	18			28
	712-05.01	WARNING LIGHTS (TYPE A)	EACH		6	2	4	6		18
	712-06	SIGNS (CONSTRUCTION)	S.F.		116	44	120	116		396
(4)	712-05.03	WARNING LIGHTS (TYPE C)	EACH				8			8
(5)	712-06.10	NEW SIGNS (CONSTRUCTION)	S.F.	232					232	464
(6)	712-06.16	SIGNS (CONSTRUCTION) (REDUCE SPEED WARNING)	EACH	4	2			2	4	12
	717-01	MOBILIZATION	L.S.	0.17	0.16	0.16	0.17	0.17	0.17	1
	712-08.03	ARROW BOARDS (TYPE C)	EACH			1	2			3

(1) INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY TO PROVIDE STRUCTURAL STEEL LATERAL SEISMIC RESTRAINTS.

(2) INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY TO PROVIDE WIRE ROPE SEISMIC RESTRAINTS.

(3) INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY TO PROVIDE CONCRETE LATERAL SEISMIC RESTRAINTS.

(4) TO BE USED ON FLEXIBLE DRUMS THROUGH TAPERS.

(5) INCLUDES THE INSTALLATION AND MAINTENANCE OF A NEW SIGN PANEL, SHEETING AND SUPPORTS.

(6) ITEM TO BE USED ONLY WHEN CONTRACTOR ESTABLISHES A REDUCED SPEED LIMIT WITHIN THE PROJECT CONSTRUCTION WORK ZONE LIMITS. ITEM INCLUDES SIGN FACE, SUPPORTS AND TWO (2) TYPE "B" FLASHING LIGHTS AS PER THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TURNING ON THE TYPE "B" FLASHERS WHEN WORKERS ARE IN THE CONSTRUCTION WORK ZONE AND TURNING THEM OFF WHEN WORKERS ARE NO LONGER PRESENT IN THE CONSTRUCTION WORK ZONE.

GALVANIZING OF NEW STEEL

ALL NEW STEEL SHALL BE GALVANIZED TO ASTM A123 STANDARDS.

NOTE: ROADSIDE BANKS/SLOPES USED BY THE CONTRACTOR FOR WORK ACCESS, PARKING, AND ANY OTHER OPERATIONS THAT ARE DISTURBED BY HIS OPERATIONS SHALL BE REPAIRED BY REGRADING, RESEEDING, MULCHING OR WHATEVER MEANS ARE NECESSARY TO RESTORE THE BANKS/SLOPES TO THE ORIGINAL CONDITION. ALL RESTORATION WORK SHALL MEET THE FULL SATISFACTION OF THE ENGINEER. COST OF ALL RESTORATION WORK SHALL BE INCLUDED IN ITEMS BID ON.

DESIGNED BY BRIAN EGLI DATE 01/1998
DRAWN BY SCOTT C. NELSON DATE 01/1998
SUPERVISED BY M.LAWSON & T.CHRISTIANSON DATE 01/1998
CHECKED BY M. LAWSON & B. EGLI DATE 02/1998

UTILITY NOTES

THE LOCATION OF UTILITIES SHALL BE FIELD LOCATED BY THE CONTRACTOR, AND BY CONTACTING THE UTILITY COMPANIES INVOLVED. SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC. AT 1-800-351-1111.

UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR IT'S REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO CO-OPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONTACTING ALL AFFECTED UTILITIES PRIOR TO SUBMITTING HIS BID, IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE WORK FOR THE PROJECT. SOME UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS, WHILE SOME WORK MAY BE REQUIRED "AROUND" UTILITY FACILITIES THAT WILL REMAIN IN PLACE. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR SHALL RECEIVE NO ADDITIONAL COMPENSATION FOR ANY DELAYS OR INCONVENIENCE CAUSED BY THE UTILITY ADJUSTMENTS.

THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.

CONST. WORK ZONE TRAFFIC CONTROL

ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF SIGN FACE IS FULLY COVERED

IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPERATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) S.F. AND 712-06.10, NEW SIGNS (CONSTRUCTION) S.F.

A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS FLAGGER SIGNS MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THIRY (30) FEET SETBACK, THE ENGINEER SHALL APPROVE ALTERNATE LOCATIONS.

THE CONTRACTOR WILL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC, UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO BE PARKED WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS THRITY (30) FEET SETBACK, THE ENGINEER SHALL APPROVE ALTERNATE LOCATIONS.

PROJECT NO.	YEAR	SHEET NO.
79959-4152-04	1998	2

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	4-6-98	BKE	REVISED QUANTITY & ADDED NOTE
2	5-8-98	BKE	ADDED GENERAL NOTE
3	5-15-98	BKE	ADDED GENERAL NOTE

GENERAL NOTES

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (MARCH 1, 1995 EDITION)

DESIGN SPECIFICATIONS: AASHTO 1992 EDITION WITH ADDENDA.

STRUCTURAL STEEL: SHALL CONFORM TO AASHTO M270 GRADE 36 (ASTM A709 GRADE 36) UNLESS OTHERWISE NOTED.

REINFORCING STEEL: SEE THE STANDARD SPECIFICATIONS.

GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED $\frac{1}{2}$" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND BAR DRIVEN TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED $\frac{1}{4}$" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.

SHOP DRAWINGS: SHALL BE SUBMITTED ACCORDING TO SPECIAL PROVISION NO. 105A. EXCEPT SHOP DRAWINGS SHALL BE SUBMITTED TO THE HEADQUARTERS BRIDGE INSPECTION AND REPAIR OFFICE IN LIEU OF THE DIVISION OF STRUCTURES.

BOLTS: SHALL BE HIGH TENSILE STRENGTH BOLTS (ASTM-A325), UNLESS OTHERWISE NOTED. SIZE TO BE AS NOTED ON PLANS. SEE AASHTO SPECIFICATIONS: ARTICLE 11.5.6 DIVISION II. EXISTING CONTRACT SURFACES SHALL BE CLEANED TO SSPC-10 SPECIFICATIONS PRIOR TO ATTACHMENT OF NEW MEMBERS.

CONCRETE: TO BE CLASS 'A' CONCRETE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

CONCRETE CURING: ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.

WELDING: ANSI/AASHTO/AWS D1.5-88 BRIDGE WELDING CODE AND THE STANDARD SPECIFICATIONS.

SPECIAL NOTE TO CONTRACTOR: CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO INSURE THAT NO DEBRIS IS DROPPED INTO THE STREAM. ANY DEBRIS WHICH IS ALLOWED TO DROP ON THE BANKS BELOW THE BRIDGE SHALL NOT BE ALLOWED TO ENTER THE STREAM AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. COST OF REMOVING AND DISPOSING OF DEBRIS SHALL BE INCLUDED IN ITEMS BID ON.

NOTE: ALL STRUCTURAL STEEL FOR SEISMIC RESTRAINER AND LATERAL RESTRAINERS, EXCEPT FOR NON-CORROSIVE WIRE ROPE AND THIMBLES, SHALL BE FABRICATED BY AISC, SIMPLE SPAN BRIDGES CATEGORY, CERTIFIED SHOP.

(1) SPECIAL NOTE CONCERNING DRILLED ANCHORS: AT ALL LOCATIONS WHERE A DRILLCO MAXI-BOLT OR ANCHOR BOLT IS SPECIFIED, A WILLIAMS UNDERCUTTING ANCHOR SHALL BE ACCEPTABLE AS WELL AS THE DRILLCO MAXI-BOLT.

(2) WIRE ROPE: WIRE ROPE SHALL BE AS SPECIFIED IN AASHTO DESIGNATION M277-81(1990).

(3) WIRE ROPE CLIPS: EACH CONNECTION SHALL HAVE A MINIMUM OF FOUR (4) WIRE ROPE CLIPS AND CUMULATIVELY DEVELOP 125% OF THE YIELD STRESS OF THE WIRE ROPE. THIS YIELD STRESS SHALL BE VERIFIED BY TENNESSEE DEPARTMENT OF TRANSPORTATION MATERIALS AND TEST.

WAYNE J. SECRIST REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 19224 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED QUANTITIES AND GENERAL NOTES

BRIDGE NO. 79-I40-5.09 (L&R)
BRIDGE NO. 79-2819-4.93
BRIDGE NO. 79-I40-7.60 (L&R)
BRIDGE NO. 79-I40-8.25 (L&R)
BRIDGE NO. 79-4186-2.11
BRIDGE NO. 79-I40-9.50 (L&R)
SHELBY COUNTY
1998

BR-33-29

LIST OF SPECIAL PROVISIONS

** DENOTES: CURRENT REVISION DATE, AS PER CONTRACT DOCUMENTS.

NO.	LAST REV. DATE	REGARDING
105A	**	APPROVAL OF SHOP DRAWINGS

LIST OF REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)

DRAWING NO.	DRAWING
M-44-70, M-44-72 THRU 75, M-44-77 THRU 81, AND M-44-85 THRU 87.	EXISTING BRIDGE DRAWINGS

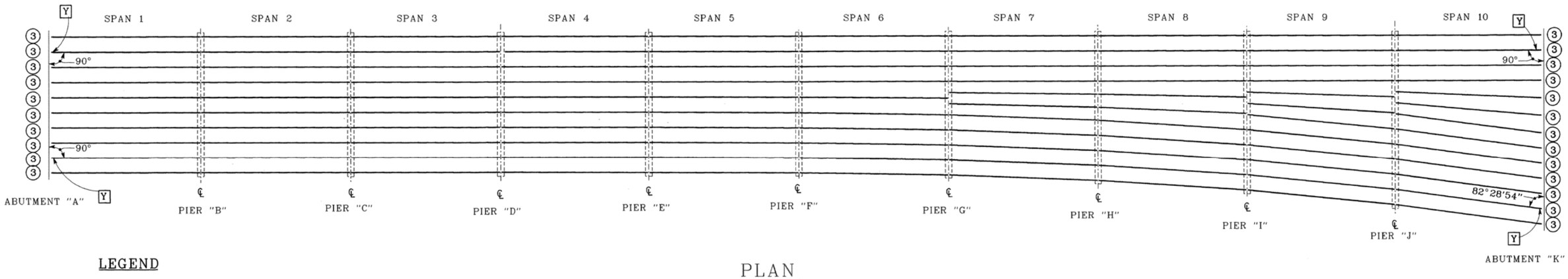
3 2 1 LIST OF DRAWINGS

DRAWING NO.	LAST REV. DATE	DRAWING
BR-33-30	5-15-98	SEISMIC RESTRAINER LAYOUT
BR-33-29	5-15-98	ESTIMATED QUANTITIES AND GENERAL NOTES
BR-33-40		TYPICAL SECTIONS
BR-33-44		SEISMIC RESTRAINER DETAILS TYPE (3) & (17)
BR-33-48		LATERAL RESTRAINER DETAILS TYPE [Y]
BR-33-49	5-8-98	BOLT INSTALLATION

PROJECT NO.	YEAR	SHEET NO.
79959-4152-04	1998	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	4-6-98	BKE	REVISED LIST OF DRAWINGS
2	5-8-98	BKE	REVISED LIST OF DRAWINGS
3	5-15-98	BKE	REVISED LIST OF DRAWINGS



LEGEND

[Y] DENOTES LATERAL RESTRAINT TYPE [Y] SEE BR-33-48 FOR DETAILS.
(3) DENOTES SEISMIC RESTRAINT TYPE (3) SEE BR-33-44 FOR DETAILS.
SEE BR-33-40 FOR TYPICAL CROSS-SECTIONS.

PLAN

(WEST BOUND LANE)

DIRECTION OF SURVEY

GENERAL SCOPE OF WORK

1) PROVIDE WIRE ROPE SEISMIC RESTRAINTS AT ABUTMENTS (TYPE 3). REFER TO LEGEND AND PLAN VIEW FOR DESCRIPTION AND LOCATION, THIS SHEET.

2) PROVIDE LATERAL SEISMIC RESTRAINTS AT ABUTMENTS REFER TO LEGEND AND PLAN VIEW FOR DESCRIPTION AND LOCATION, THIS SHEET.

WAYNE J. REGAN
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 19234
STATE OF TENNESSEE
March 23, 1998

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SEISMIC RESTRAINER LAYOUT
INTERSTATE 40 OVER WOLF RIVER
BRIDGE NO. 79-I40-5.09
(WEST BOUND LANE)
SHELBY COUNTY
1998

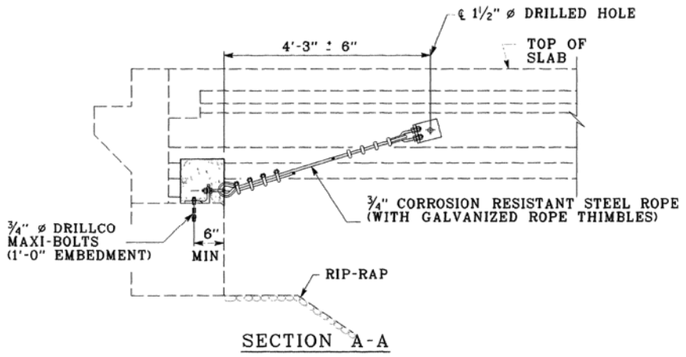
DESIGNED BY BRIAN EGLI DATE NOVEMBER 1997
DRAWN BY DON KIMBER DATE NOVEMBER 1997
SUPERVISED BY M. LAWSON & T. CHRISTIANSON DATE NOVEMBER 1997
CHECKED BY MIKE LAWSON & BRIAN EGLI DATE FEBRUARY 1998

BR-33-30

PROJECT NO.	YEAR	SHEET NO.
79959-4152-04	1998	

REVISIONS

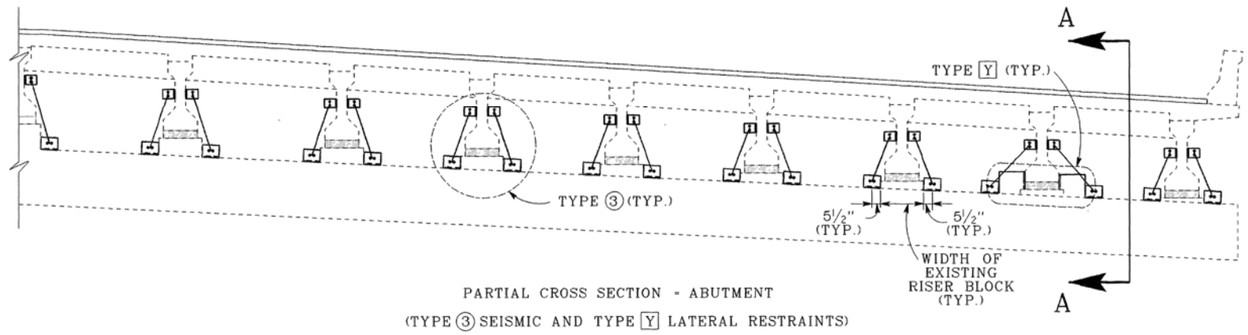
NO.	DATE	BY	BRIEF DESCRIPTION



SECTION A-A

TYPE ③ SEISMIC RESTRAINER
TYPE Y LATERAL RESTRAINER
@ ABUTMENTS 'A', 'LA' AND 'LB'

(TYPE ③ - 23 REQ'D. WEST BOUND LANE)
(TYPE Y - 4 REQ'D. WEST BOUND LANE)



PARTIAL CROSS SECTION - ABUTMENT
(TYPE ③ SEISMIC AND TYPE Y LATERAL RESTRAINTS)

TYPICAL CROSS SECTION

NOTE: DETAILS FOR TYPE Y SHOWN ON BR-33-48.
DETAILS FOR TYPE ③ SHOWN ON BR-33-44.

DESIGNED BY BRIAN EGLI DATE JANUARY 1998
DRAWN BY DON KIMBER DATE JANUARY 1998
SUPERVISED BY M. LAWSON & T. CHRISTIANSON DATE JANUARY 1998
CHECKED BY MIKE LAWSON & BRIAN EGLI DATE FEBRUARY 1998

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

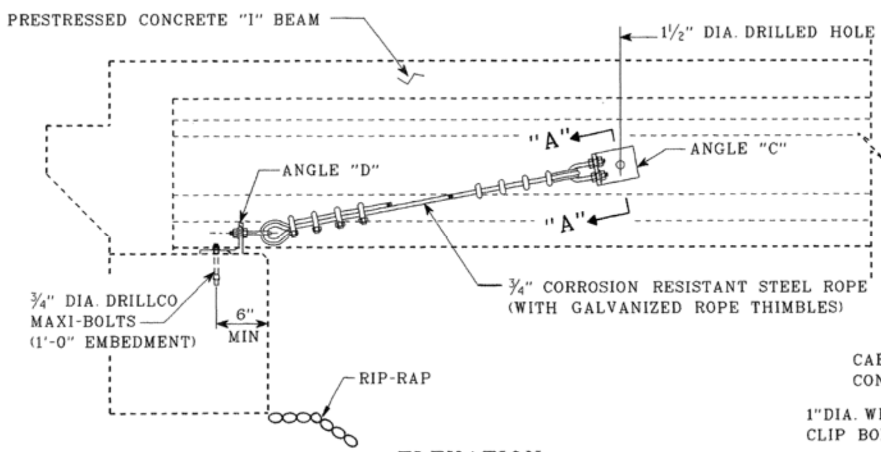
TYPICAL SECTIONS
INTERSTATE 40 OVER WOLF RIVER
BRIDGE NO. 79-I40-5.09
(WEST BOUND LANE)
SHELBY COUNTY
1998

BR-33-40

PROJECT NO.	YEAR	SHEET NO.
79959-4152-04	1998	

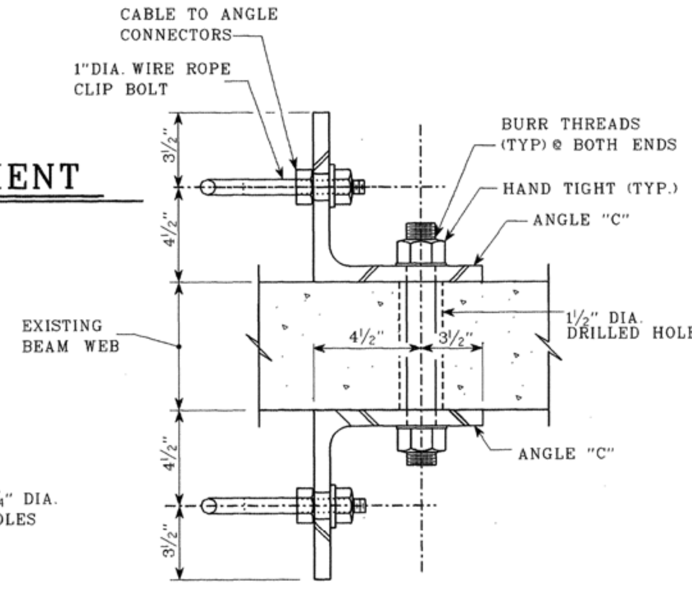
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

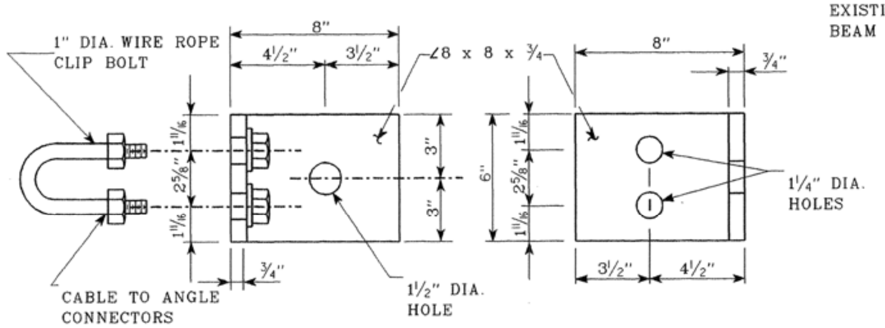


ELEVATION

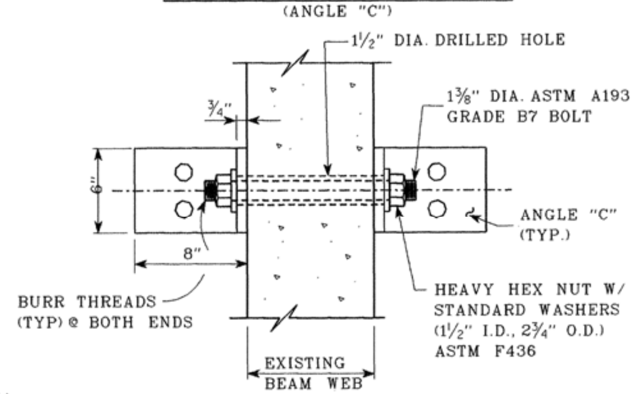
SEISMIC RESTRAINER @ ABUTMENT



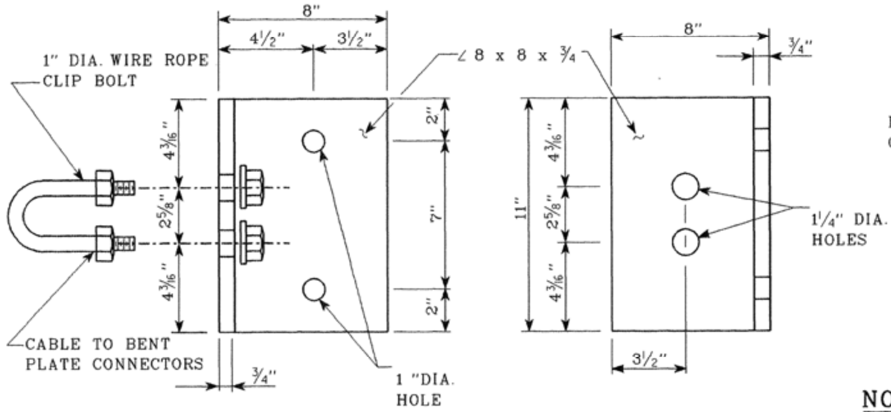
PLAN VIEW @ FITTING
(ANGLE "C")



ANGLE "C" DETAILS
(2 REQ'D PER ASSEMBLY)



SECTION A-A
(ANGLE "C")



ANGLE "D" DETAILS
(2 REQ'D PER ASSEMBLY)

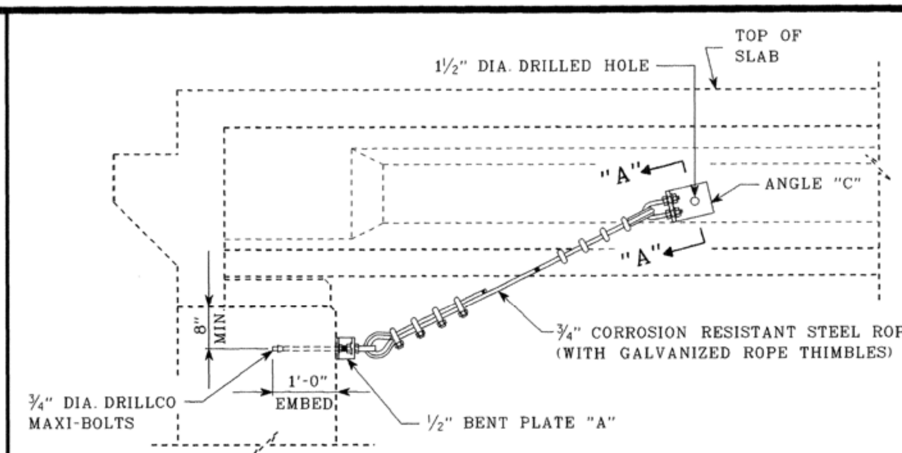
NOTES:

A PAIR OF STEEL ROPES AND ACCOMPANYING PLATES, BOLTS, NUTS, AND WASHERS IS CONSIDERED ONE ASSEMBLY.

SEE DWG. NO. BR-33-29 FOR GENERAL NOTES AND DWG. NO. BR-33-49 FOR PROCEDURE FOR INSTALLATION OF ANCHOR BOLTS.

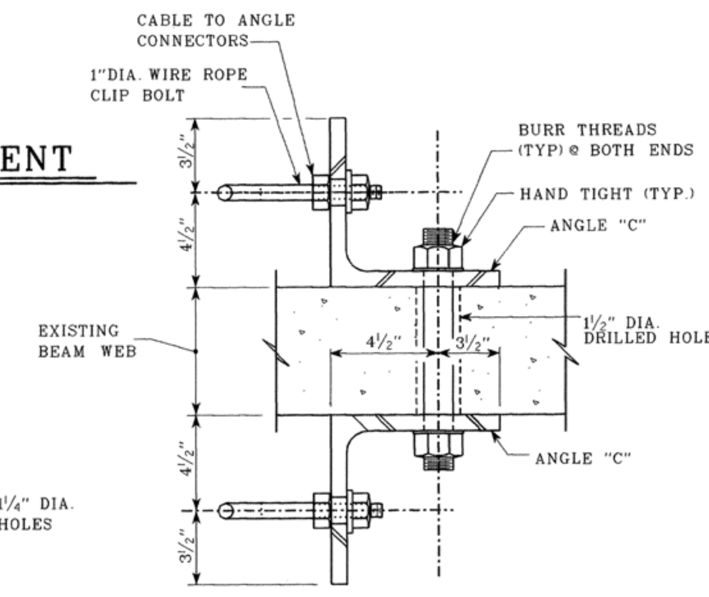
SEISMIC RESTRAINER TYPE ③

DESIGNED BY	Brian Egli	DATE	September, 1997
DRAWN BY	Cory Hawkins	DATE	December, 1997
SUPERVISED BY	Mike Lawson, J. Christiansen	DATE	December, 1997
CHECKED BY	Mike Lawson, Brian Egli	DATE	February, 1998

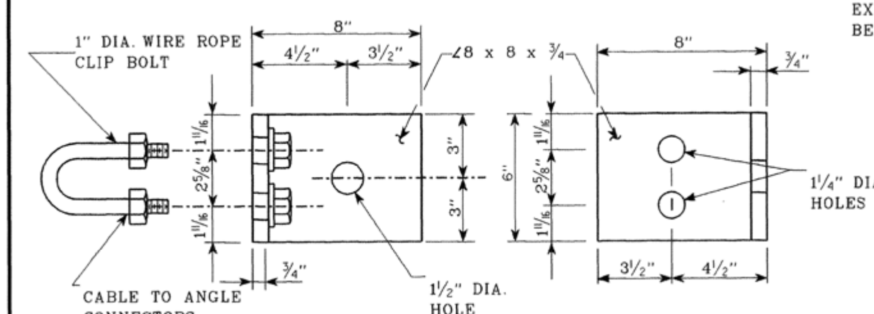


ELEVATION

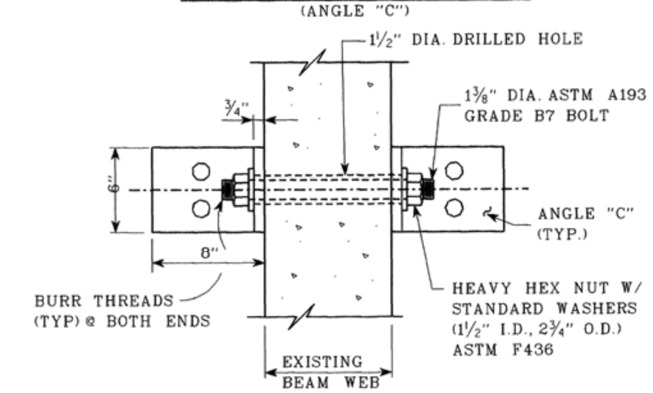
SEISMIC RESTRAINER @ ABUTMENT



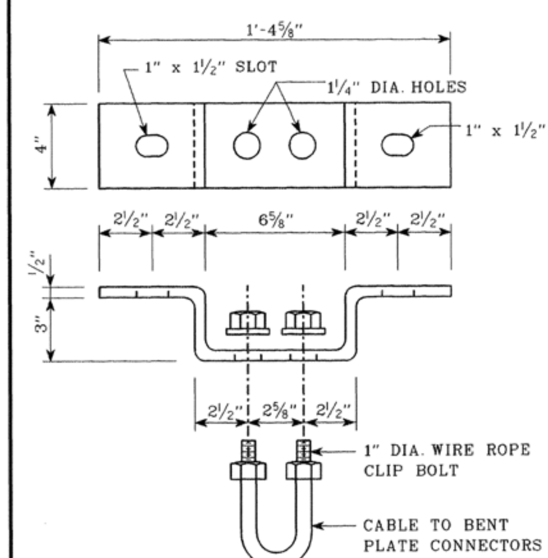
PLAN VIEW @ FITTING
(ANGLE "C")



ANGLE "C" DETAILS
(2 REQ'D PER ASSEMBLY)



SECTION A-A
(ANGLE "C")



BENT PLATE "A"
(2 REQ'D PER ASSEMBLY)

NOTES:

A PAIR OF STEEL ROPES AND ACCOMPANYING PLATES, BOLTS, NUTS, AND WASHERS IS CONSIDERED ONE ASSEMBLY.

SEE DWG. NO. BR-33-29 FOR GENERAL NOTES AND DWG. NO. BR-33-49 FOR PROCEDURE FOR INSTALLATION OF ANCHOR BOLTS.

SEISMIC RESTRAINER TYPE ⑰

WAYNE J. SEGER · REGISTERED ENGINEER · AGRICULTURE · COMMERCE · NO. 19224 · STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SEISMIC RESTRAINER DETAILS
TYPE ③ AND ⑰
SHELBY COUNTY
1998

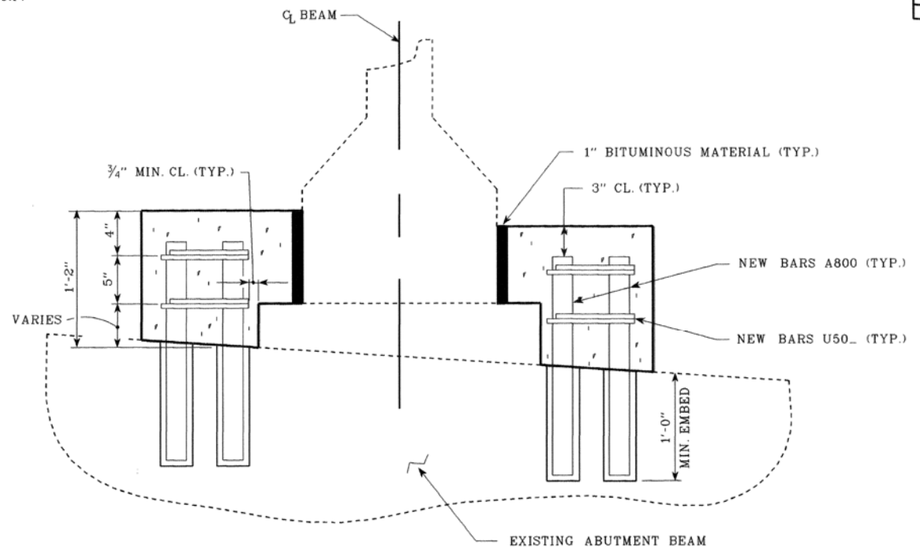
BR-33-44

PROJECT NO.	YEAR	SHEET NO.
79959-4152-04	1998	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

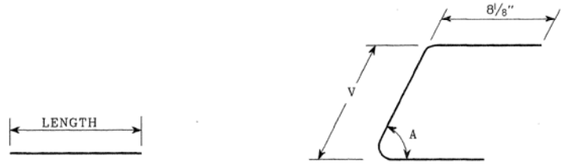
NOTE: COST OF DRILLING, GROUTING, BITUMINOUS FILLER, FORMING, REINFORCING STEEL, CONCRETE, LABOR, AND ANY MISCELLANEOUS MATERIALS TO CONSTRUCT THE LATERAL SEISMIC RESTRAINTS AS SHOWN IN DETAILS THIS SHEET SHALL BE INCLUDED IN ITEM NUMBER 604-10.42, CONCRETE REPAIRS, C.F.



TYPICAL CROSS SECTION @ ABUTMENT (TYPE "Y")

LATERAL BLOCK REINFORCEMENT							
BRIDGE NO.	TYPE	BARS	SIZE	"A"	NO. REQUIRED	V	LENGTH
79-140-5.09 EAST & WEST BOUND	PRESTRESSED I BEAM	A800	8		36		1'-11"
		U501	5	90.82	32	7⅜"	1'-11⅝"
		U502	5	74.73	24	7½"	1'-11¾"
		U503	5	57	16	8⅝"	2'-0⅞"

DIMENSIONS ARE OUT TO OUT ALONG SKEW



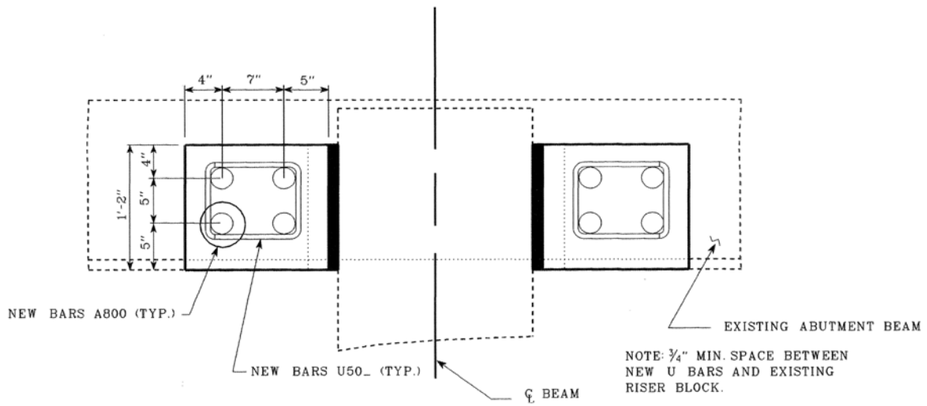
BARS A800 BARS U50_

BAR BENDS

NOTE: CONTRACTOR TO KEEP CONCRETE OFF THE EXISTING BEARING PADS

NOTE: CONTRACTOR TO KEEP BLOCK AT LEAST 1" FROM FACE OF DIAPHRAGM OR BACKWALL.

NOTE: CONTRACTOR TO REMOVE ± ½" OF CONCRETE IN BLOCK LOCATIONS FOR BONDABLE SURFACE.



PLAN

LATERAL RESTRAINER TYPE Y

WAYNE J. SECHLER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 19224
STATE OF TENNESSEE
1998

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LATERAL RESTRAINER DETAILS
TYPE Y
SHELBY COUNTY
1998

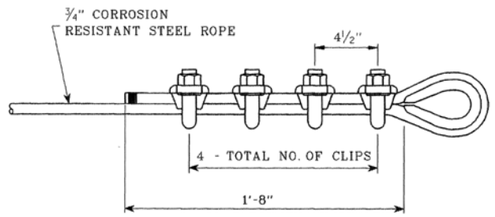
BR-33-48

DESIGNED BY Brian Egli DATE September, 1997
DRAWN BY Cory Hawkins DATE December, 1997
SUPERVISED BY Mike Lawson, J. Christianson DATE December, 1997
CHECKED BY Mike Lawson, Brian Egli DATE February, 1998

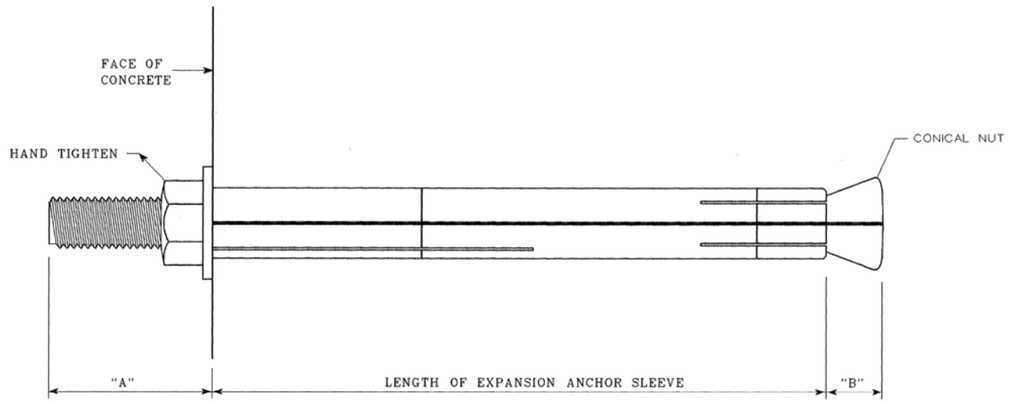
PROJECT NO.	YEAR	SHEET NO.
79959-4152-04	1998	

REVISIONS

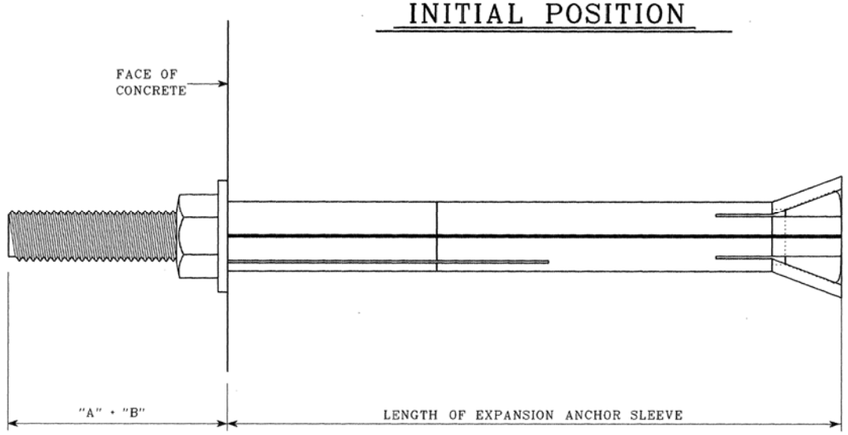
NO.	DATE	BY	BRIEF DESCRIPTION
1	5-8-98	B.K.E.	REVISED SHEET



WIRE ROPE CLIPS



INITIAL POSITION



SET POSITION

PROCEDURE FOR INSTALLATION OF ANCHOR BOLTS:

(3/4" DIAMETER DRILLCO MAXI-BOLT OR WILLIAMS BOLTS)(UNDERCUTING REQUIRED)

1. LOCATE PLACEMENT OF EXISTING REBAR IN VICINITY OF ANCHORS WITH A REBAR LOCATING DEVICE AND MAKE NECESSARY CORRECTIONS IN LOCATIONS OF ANCHORS ON CONCRETE. ANCHOR LOCATION MAY VARY PLUS OR MINUS 3 INCHES IN ANY DIRECTION BUT THE HOLE SHALL BE DRILLED WITHIN 6 DEGREES OF PERPENDICULAR TO THE NOMINAL CONCRETE SURFACE. CUTTING OF REBAR WILL BE ALLOWED.

2. HOLES SHALL BE DRILLED WITH A CARBIDE PERCUSSION DRILL BIT, A "REBAR EATER" BIT OR A DIAMOND CORE BIT.

3. THE DRILL BIT DIAMETER AND HOLE DEPTHS ARE SPECIFIED AS FOLLOWS:
   a) THE MAXIMUM DRILL BIT DIAMETER SHALL NOT EXCEED 1.172 INCH DIAMETER.
   b) THE HOLE DEPTH SHALL NOT BE LESS THAN THE ANCHOR EMBEDMENT PLUS 1½INCHES BUT MAY EXCEED THE SPECIFIED HOLE DEPTH BY NOT MORE THAN 1 INCH.

4. IF AN ANCHOR MUST BE RELOCATED AND A NEW HOLE DRILLED, THE OLD HOLE SHALL BE REPAIRED WITH A NON-SHRINKAGE PACK GROUT.

5. UNDERCUT IN PRIMARY HOLE SHALL BE AS SPECIFIED BY THE MANUFACTURER OF THE UNDERCUTTING TOOL.

6. CLEAN THE HOLE OF CONCRETE DUST AND DEBRIS USING OIL FREE COMPRESSED AIR OR BY VACUUMING. PLACE BEARING SLEEVE FLUSH WITH THE CONCRETE SURFACE.

7. THE EXPANSION SLEEVE IS TO EXPAND INTO THE UNDERCUT CREATED BY THE UNDERCUTTING TOOL THEREFORE THE ANCHOR TUBE MUST TERMINATE AT THE BASE OF THE UNDERCUT SECTION.

8. TO SET THE ANCHOR, IT IS NECESSARY TO DRAW THE CONICAL NUT OF THE STUD BOLT INTO THE ANCHOR SLEEVE. AFTER THE ASSEMBLY IS INSERTED INTO THE DRILLED HOLE, THE ANCHOR WILL BE CONSIDERED SET WHEN THE DIMENSION "A" (SEE ANCHOR SETTING DETAILS) HAS INCREASED BY AN AMOUNT EQUAL TO DIMENSION "B". AFTER THE STEEL PLATES ARE IN PLACE THE FINAL TENSION LOAD OF 28400 LBS. SHALL BE APPLIED. THE ANCHOR LOADS MAY BE APPLIED BY MANUAL TORQUING OR HYDRAULIC TENSIONING.

9. BECAUSE OF CLOSE TOLERANCE BETWEEN CONICAL NUT O.D. AND HOLE I.D. IT MAY BE NECESSARY TO LIGHTLY HAMMER THE ANCHOR INTO THE HOLE. IF HAMMERING IS NECESSARY, STEPS SHALL BE EMPLOYED WHICH WILL PREVENT DAMAGE TO THE STUD BOLT THREADS.

10. INSTALLATION PROCEDURES REQUIRED BY THE ANCHOR MANUFACTURER IN ADDITION TO THE INSTRUCTIONS LISTED ABOVE SHALL BE FOLLOWED.

11. BENT PLATES SHALL BE ASTM A709 (GRADE 36) MATERIAL GALVANIZED TO ASTM A123 STANDARD.

12. POSITION OF PLATE OR ANGLE ON BEAM:
    ABUTMENTS: THE PLATE OR ANGLE SHALL BE POSITIONED ON THE BEAM WITH CABLE IN THE FULL EXTENDED POSITION AND PLATE OR ANGLE POSITION MARKED. THE PLATE OR ANGLE SHALL THEN BE SHIFTED TOWARD THE ABUTMENT 3" AND THE ANCHOR BOLT LOCATIONS MARKED THROUGH THE PLATE OR ANGLE ANCHOR HOLES.
    BENTS (BEAM TO BEAM): AFTER ONE ANCHOR HAS BEEN ATTACHED THE ANGLE OF THE OTHER SHALL BE POSITIONED ON THE BEAM WITH CABLE IN THE FULL EXTENDED POSITION ANGLE POSITION MARKED. THE PLATE OR ANGLE SHALL THEN BE SHIFTED TOWARD THE BENT 3" AND THE ANCHOR BOLT LOCATIONS MARKED THROUGH THE ANGLE ANCHOR HOLE.

PROCEDURE FOR INSTALLATION OF ANCHOR BOLTS:

(3/4" HILTI BOLTS OR EQUAL)(NO UNDERCUTTING REQ'D)

1. INSTALLATION TO BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDED PROCEDURES.

WAYNE J. SEGER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 19224
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ANCHOR SETTING DETAILS

BOLT INSTALLATION
SHELBY COUNTY
1998

DESIGNED BY	Brian Egli	DATE	February, 1998
DRAWN BY	Cory Hawkins	DATE	March, 1998
SUPERVISED BY	Mike Lawson, J. Christianson	DATE	March, 1998
CHECKED BY	Mike Lawson, Brian Egli	DATE	April, 1998

1

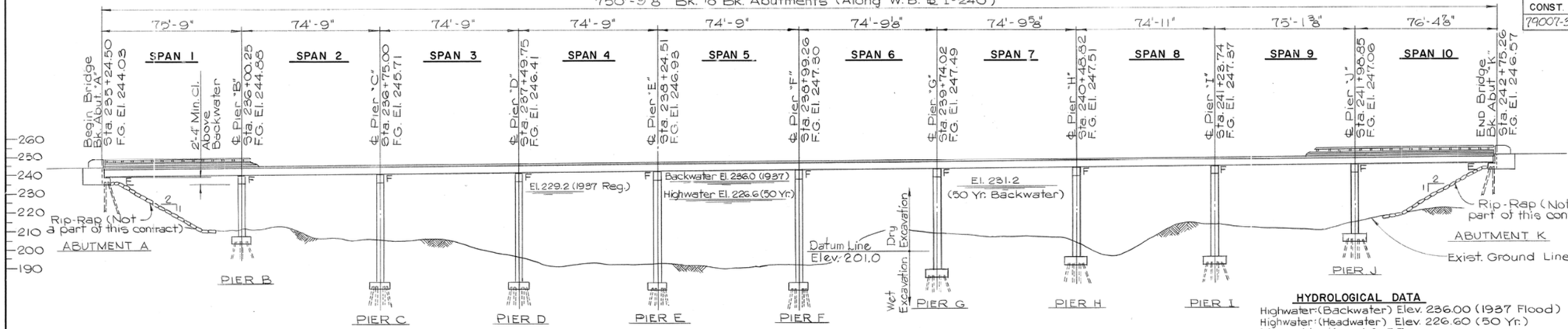
BR-33-49

CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(193)0	1975	3

REVISIONS X-081

NO.	DATE	BY	BRIEF DESCRIPTION

750'-9⅛" Bk. To Bk. Abutments (Along W.B. ℄ I-240)



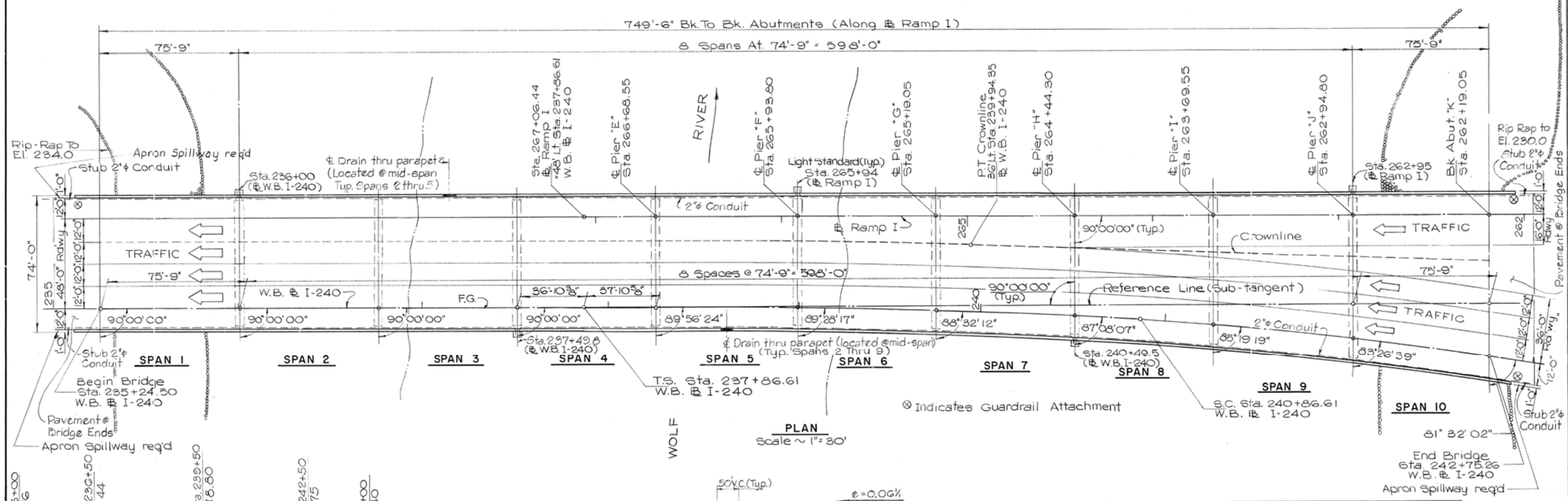
Note: See Dwg. M-44-89 for pile cut-off and estimated tip elevations.

ELEVATION
Scale ~ 1"=30'

NOTE: Fills at the end of the bridge shall be in place and thoroughly compacted before any abutment pile is begun. Any rip-rap damaged during bridge construction shall be repaired to the Engineer's satisfaction.

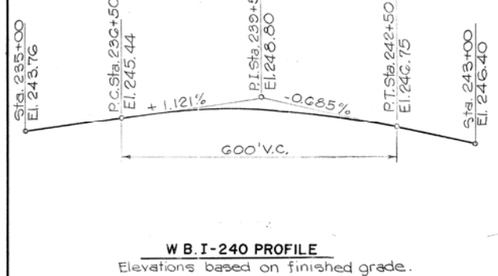
HYDROLOGICAL DATA
Highwater (Backwater) Elev. 236.00 (1937 Flood)
Highwater (Headwater) Elev. 226.60 (50 Yr.)
Mean Velocity: 4.0 F.P.S.
Discharge: 60,000 C.F.S.
Opening Required: 15,000 Sq. Ft.
Opening Provided (Below 226.6): 15,536 Sq. Ft.
Opening Provided (Below 236.00): 21,788 Sq. Ft.

749'-6" Bk. To Bk. Abutments (Along ℄ Ramp I)



⊗ Indicates Guardrail Attachment

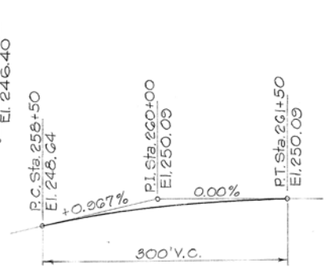
PLAN
Scale ~ 1"=30'



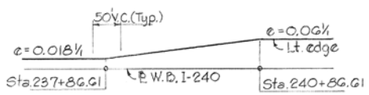
W.B. I-240 PROFILE
Elevations based on finished grade.

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

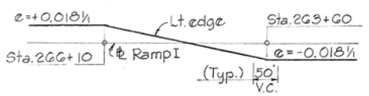
DESIGNED BY	D. McCorkle	DATE 9-75
DRAWN BY	T. Robison	DATE 9-75
SUPERVISED BY	D. McCorkle	DATE 9-75
CHECKED BY	F. Hoffman	DATE 9-75



RAMP I PROFILE
Elevations based on finished grade.



W.B. I-240 SUPERELEVATION DIAGRAM

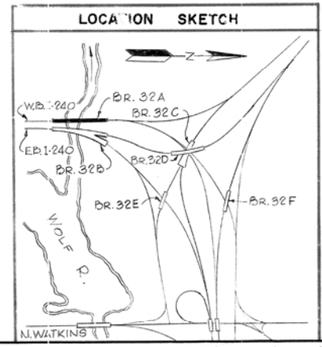


RAMP I SUPERELEVATION DIAGRAM

℄ W.B. I-240 CURVE DATA
P.I. Sta. 244+71.15
Δ = 19°-02'-58.5" (Rt.)
Do = 2° 30'
R = 2291.83'
Lc = 761.98'
T = 384.54'

Θs = 3°-45'
TLs = 200.04'
Tss = 100.04'
Ls = 300.00'

LOCATION SKETCH



INDEX TO DRAWINGS

Dwg. No.	Title
M-44-70	Bridge Layout.
M-44-71	General Notes & Estimated Quantities.
M-44-72	Abutment A.
M-44-73	Abutment K.
M-44-74	Pier B.
M-44-75	Piers C, D, E & F.
M-44-76	Piers C, D, E & F - Details.
M-44-77	Pier G.
M-44-78	Pier H.
M-44-79	Pier I.
M-44-80	Pier J.
M-44-81	Superstructure - Typical Sections.
M-44-82	Slab Plan - Spans 1-6.
M-44-83	Slab Plan - Spans 7-8.
M-44-84	Slab Plan - Spans 9-10.
M-44-85	Framing Plan - Spans 1-6.
M-44-86	Framing Plan - Spans 7-10.
M-44-87	Prestressed Beam & Bearing Details.
M-44-88	Screed Elevations.
M-44-89	Foundation Data
M-44-90	Approach Slab.
M-28-1	Bridge Railing - Concrete Parapet.
K-80-14	Reinf. Bar Support Details.
K-86-144	Reinf. Concrete Pavement @ Bridge Ends.
H-5-111	Standard Pile Details.
K-85-150	Misc. Abutment & Drainage Details
K-80-130	Preformed Elastic Joint Sealer
M-8-149	Light Standard Support Details
P-9-9A	Standard Apron Spillway @ Bridge Ends

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE 3LA
W.B. I-240 OVER WOLF RIVER

BRIDGE LAYOUT
STA. 235+24.50

SHELBY COUNTY

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M 44-70

Bridge Deck Sealant 6690 Sq. Yds. Class A Grading D 103 Cu. Yds.

MICROFILMED

GENERAL NOTES

1. SPECIFICATIONS: Standard Road and Bridge Specifications of the Tennessee Department of Highways (1968 Edition)

2. LOADING: H-S-20-44 with Alternate Military

3. DESIGN SPECIFICATIONS: 1973 AASHTO with Addenda.

4. CONCRETE: To be Class "A" (cast-in-place), f'c = 3000 psi. See Special Provision Regarding Section 604 - Concrete Structures.

5. REINFORCING STEEL: To be ASTM A615 Grade 60. Standard CRSI hook details apply unless otherwise noted on Bill of Steel. Bending dimensions shown are based on Grade 60 steel. Spacing dimensions are center to center unless otherwise noted on detail drawings.

6. BRIDGE RAIL: Build bridge rail in accordance with Tenn. Std. Dwg. M-26-1.

7. FINISHING CONCRETE SURFACES: Concrete finishing shall be in accordance with Section 604.22 of the Tennessee Standard Specifications except as modified by the Special Provision Regarding Section 604 - Concrete Structures. A Textured Coated Finish shall be used in lieu of a Class 2 Finish. The color of the finish shall be similar to Federal Specification No. (See Detail) Federal Color Standard 595a; and a color sample shall be submitted to the Engineer of Structures for approval. All exposed concrete surfaces including concrete parapets and wingposts, piers and abutments above grade (but not including bridge slab), shall receive a textured coat finish.

8. FOUNDATION NOTE (FRICTION PILES): After excavating to the proposed footing elevations, a test pile shall be driven at each substructure at the location designated on drawing numbers M-44-72 thru 80. A load test will then be applied to the test pile on Abutment A. The load test shall be in accordance with "Special Provision Regarding Load Test For Friction Piles." From the results of the load test the Engineer of Structures will determine final pile tip elevations. For pile design loads, cut-off elevations and pile tip elevations see table on Dwg. No. M-44-69. △1

9. ALTERNATE PILES: The Contractor may use piling of a different material or configuration from that shown on the plans provided the substitution meets minimum design standards and specifications, is approved by the Engineer and conforms to conditions established by the Special Provision No. 131, Regarding Section 606. Piling, dated Oct. 1, 1975.

10. TEST PILES: Test piles in Piers B, C, D & E shall be correlated to the load test in Abut. "A". Test piles in Piers F, G, H, I, J, and Abut. "K" shall be correlated to the load test in Pier JB, Bridge 32B. △1

11. See Special Provision Regarding Subsection 908.13 - Elastomeric Bearing Pads.

12. BRIDGE DECK SEALANT: The bridge deck and reinforced approach slab shall be sealed in a future paving contract. (6690 Sq. Yds. required.)

13. BRIDGE DECK FORMS: Bridge deck forms for concrete decks shall be constructed using either removable forms or permanent forms. In either case, forms shall be attached by means other than welding to support members. See Special Provision No. 450 "Special Provision Regarding Permanent Steel Bridge Deck Forms", Revised November 9, 1978.

14. COFFERDAM FOUNDATION PREPARATION: The lump sum bid for cofferdam items shall be full compensation to the contractor for preperation of foundations prior to pouring concrete for footings. The Contractor shall be paid for excavation in accordance with the standard specifications and the contract unit bid price for each excavation item, except that no percent increase will be allowed for extra depth excavation. If cofferdams are required, they shall be in accordance with Section 204 of the Std. Specifications. Regardless of whether cofferdams are used, the Contractor shall be paid for Items 204-15.01, 204-15.02 and 204-15.03. The cost of seal concrete if required is to be included in the cofferdam lump sum bid.

15. LINSEED OIL PROTECTIVE TREATMENT: Surfaces receiving Textured Coated Finish shall not receive a linseed oil treatment. See Special Provision regarding Section 604 - Concrete Structures.

16. ELASTOMERIC BEARING PADS: In lieu of the bearing devices shown on these plans the Contractor may submit shop plans and design calculations of alternate bearing devices to the Engineer of Structures for approval. Bearing seat elevations shall be adjusted to compensate for differences in bearing heights. The bearings shall be capable of providing the following minimum requirements under service loads. (Laminated pads - 50 durometer req'd., plain pads 70 durometer req'd.)

	E-1
Total Movement Req'd	2"
Dead Load Reaction	61K
Live Load Reaction	51K
Total (DL+LL+I) Reaction	125K

17. BAR DESIGNATIONS: The first number of all bar marks is the size of the bar: eg. H400 = #4 Bars, H1100 = #11 Bars.

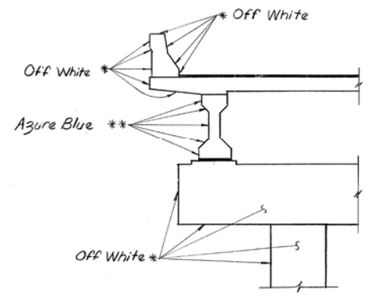
QUANTITY NOTES

1. Excavation based on existing ground profile.
2. See Alternate Pile Note.
3. The cost of polyethylene sheeting and all miscellaneous items necessary for installation to be included in cost of perforated C.M. Pipe.
4. Lump sum for Structure Lighting, Item No. 714-01.01, includes 1560 ft. 2" ϕ conduit with pull wires, 4 junction boxes, 20 anchor bolts and all necessary materials for installation of light standards.
5. The cost of 12 threaded steel inserts and 12 - 7/8" ϕ x 4" hex head bolts (A 307) shall be included in bridge items bid on.
6. The quantity given is out to out of wingposts. The cost of light standard base including concrete and reinforcing is to be included in the price bid for concrete parapet.
7. The cost of plain Elastomeric bearing pads, rubber bonding cement, inserts and dowel bars to be included in the cost of Prestressed Concrete Beams.
8. The cost of bituminous fiberboard, 2" ϕ drains, and all miscellaneous joint material to be included in bridge items bid on.
9. The cost of 3 spillway aprons shall be included in the cost of Roadway Items.

CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EAC1-240-1(133)9	1975	4

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
△	6-16-76	RBT	Removed Load on Pier J, changed to Pier JB
2	9-7-76	CEH	Conc. at Pier J Abut. K - Reinf. at Piers C, D, E, F.
3	6-9-77	GJM	Changed Tex. Coat. Finish Colors



TEXTURED COATING DETAIL △3

All surfaces marked with (*) shall have a textured coated finish similar to Off White (Fed. Spec. No. 37778), in addition to the surfaces marked, all exposed abutment, endwall, wingwall, wingpost & bent surfaces shall receive the same finish. Surfaces marked with (**) shall receive a textured coated finish similar to Azure Blue (Fed. Spec. No. 35190).

SUMMARY OF ESTIMATED QUANTITIES

Item No.	204-02.01	204-03.01	602-05.07	604-03.01	604-03.02	604-25.04	606-09.01	606-09.02	606-09.03	615-01.03	616-08	710-10	710-11	714-01.01	204-15.01	204-15.02	204-15.03	908-21.01		604-03.03
Description	Dry Excavation (Bridges)(1)	Wet Excavation (Bridges)(1)	Preformed Elastic Joint Sealer Type III	Class A Concrete (Bridges)	Steel Bar Reinforcement (Bridges)	Textured Coated Finish (New Structures)	Test Piles (Precast Conc. Size I)(2)	Loading Tests (Precast Conc. Size I)(2)	Precast Conc Piles-Size II (2)	Prestressed Conc. I beam Type III(7)	Concrete Parapet (6)	6"ϕ perf. CMP (18ga.) w/porous backfill(3)	6"ϕ CMP Underdrains (18ga.)	Structure Lighting (4)	Cofferdam	Cofferdam	Cofferdam	Bearings E-1		Linseed Oil Treatment
Unit	Cu.Yds.	Cu.Yds.	Lin. Ft.	Cu.Yds.	Lbs.	Sq.Yds.	Lin. Ft.	Each	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Each		Sq.Yds.
Abutment A	80		73.0	48.7	7550	25	90	1	450			80	4					10		27
Pier B	195	45		120.4	17840	245	40		680											
Pier C	140	430		158.7	△2 22933	260	40		920											
Pier D	40	565		164.6	△2 23991	280	30		690						1					
Pier E		495		165.4	△2 24127	285	30		690							1				
Pier F		495		166.1	△2 24263	290	30		690								1			
Pier G	195	265		156.4	20600	265	30		690											
Pier H	195	265		157.9	21550	270	30		690											
Pier I	210	290		162.0	23570	280	30		690											
Pier J	195	235		△2 164.4	24530	295	30		690											
Abutment K	100		99.5	△2 66.6	10470	30	110		770			107	4					13		36
Pvmte Bridge Ends				176.7	45230				210											462
Superstructure				1528.8	429,050	2410				7926	1520			1						6225
Total	1350	3085	172.5	△3 5,236.7	△3 696,304	4935	490	1	7860	7926	1520	187	8	1	1	1	1	23		6750

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY D. Mc Corkle DATE 9-'75
DRAWN BY T. Robison DATE 9-'75
SUPERVISED BY D. Mc Corkle DATE 9-'75
CHECKED BY F. Hoffman DATE 9-'75

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32A
W.B. I-240 OVER WOLF RIVER

GENERAL NOTES & ESTIMATED QUANTITIES
STA. 235+24.50

SHELBY COUNTY

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-71

N1346

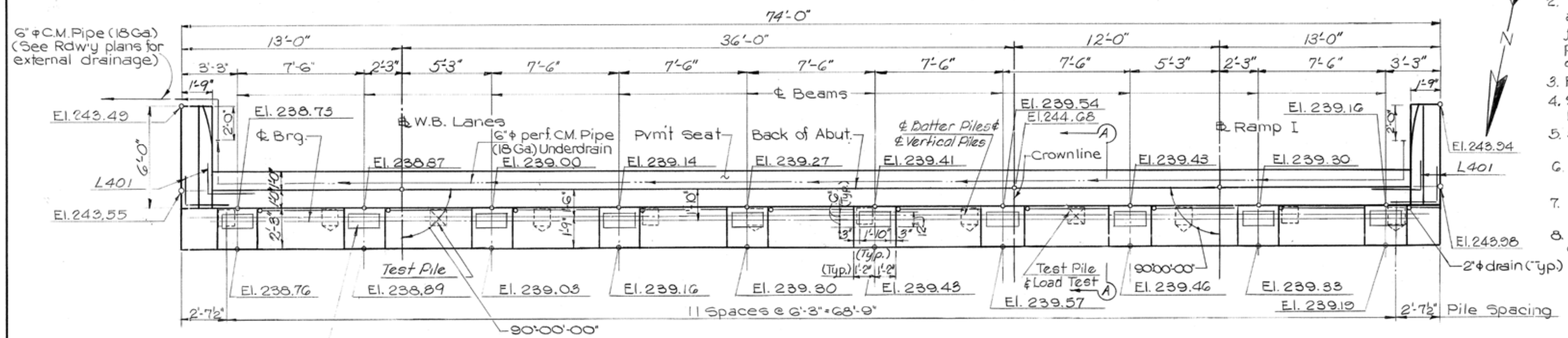
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(133)9	1975	5

REVISIONS

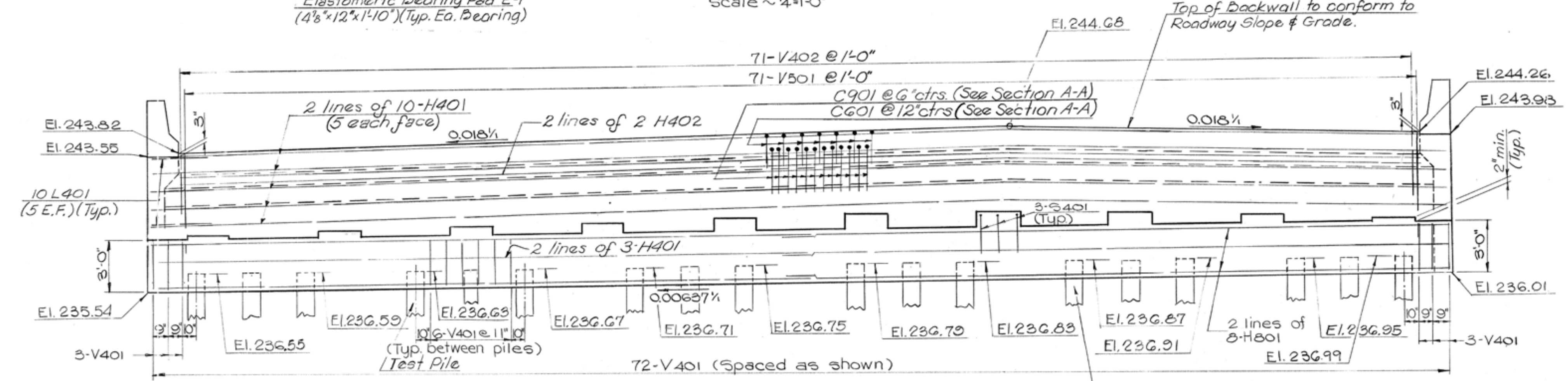
NO.	DATE	BY	BRIEF DESCRIPTION
1	6-11-76	rat	changed pile length & number due to loading tests.

NOTES:

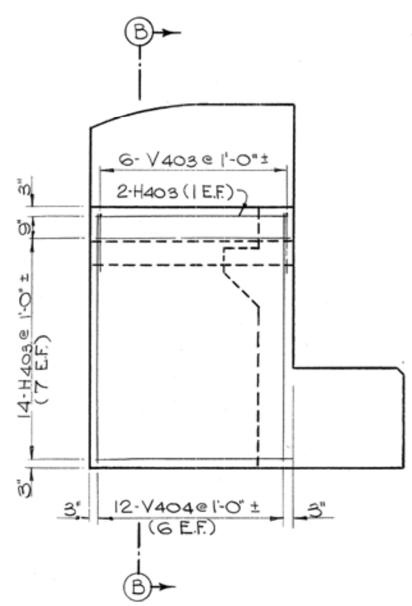
1. Riser Blocks to be poured monolithically with abutment beam. Riser block pad surface to conform to bottom of beam grade.
2. The backwall shall not be poured until the beams are in place. The end 2 feet of slabs at expansion joints and top 15" of the abutment backwall shall be poured concurrently, and are to be poured after all other pours are complete.
3. For Bearing Details see Dwg. M-44-87.
4. See Std. Dwg. M-28-1 for Details of Wingpost and Reinforcement to be placed in wingwalls for wingpost.
5. See Std. Dwg. K-86-144 & Dwg. M-44-90 for Detail of Approach Slab.
6. All drainage pipes to have a minimum downward slope of ⅛"/ft.
7. Minimum Bar Laps shall be as follows; H400 = 1'-4" H801 = 3'-0"
8. Cost of wingposts to be included in the cost of bridgerail system.



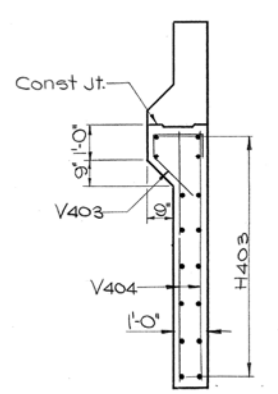
PLAN
Scale ~ ¼" = 1'-0"



ELEVATION
Scale = ¼" = 1'-0"



WING ELEVATION
Scale ~ ⅜" = 1'-0"

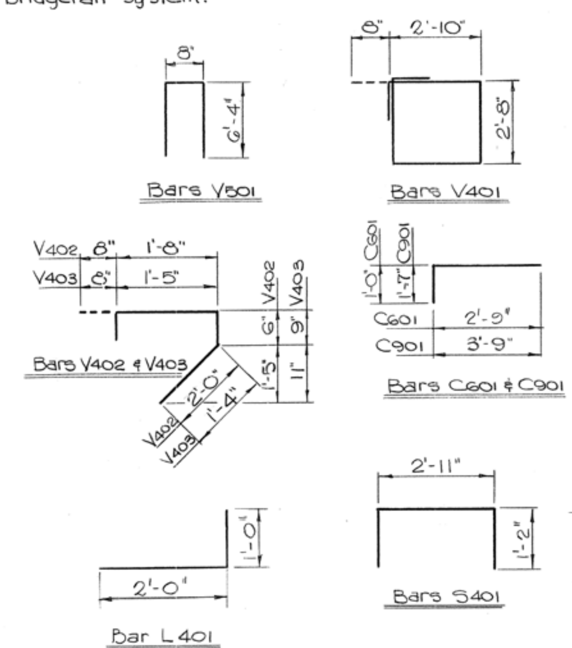


SECTION B-B
Scale ~ ⅜" = 1'-0"

PILE NOTE: Drive all piles to an ultimate bearing capacity of 40 tons. 18 piles, 20 foot long req'd. See Dwg. M-44-89 for additional pile data.
▽ Denotes direction of batter.

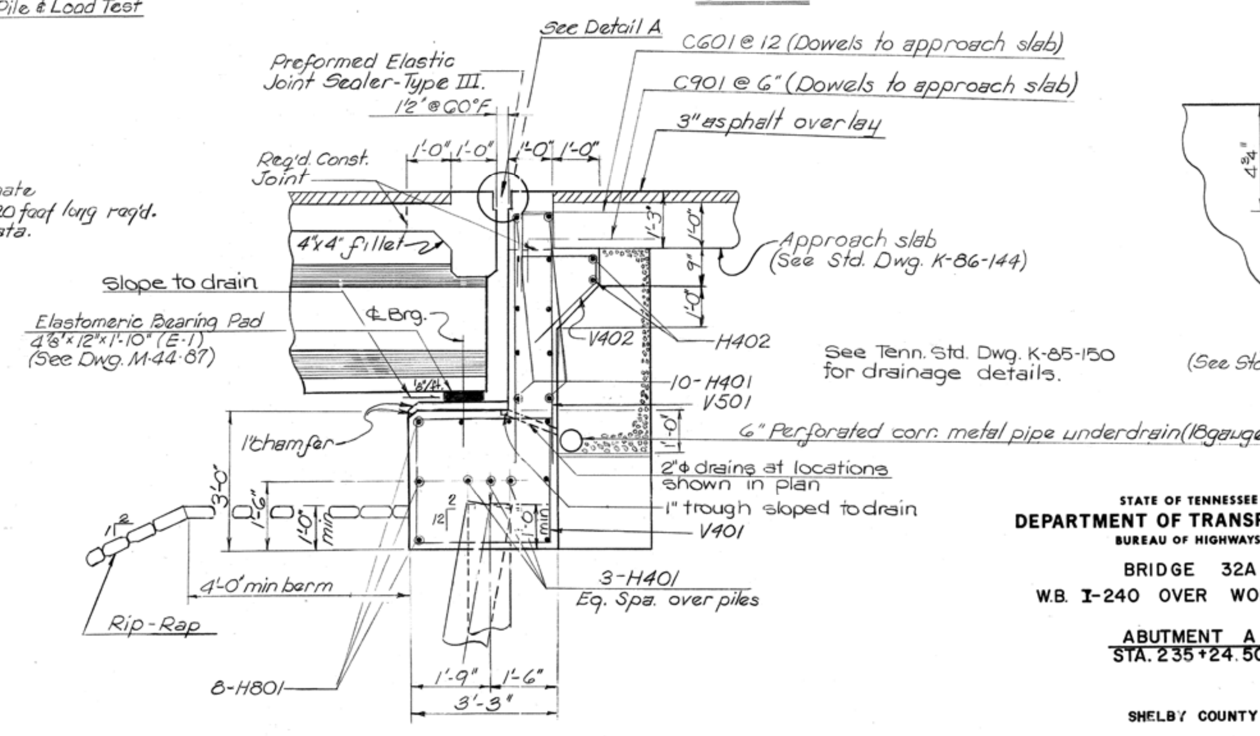
ESTIMATED QUANTITIES

Item No.	Item	Unit	Quantity
204-02.01	Dry Excavation	Cu. Yds	80
604-03.01	Class A Concrete (Bridge)	Cu. Yds	48.7
604-03.02	Steel Bar Reinforcement (Bridge)	Lbs.	7550
606-09.01	Test Piles (Precast Concrete Size 1)	Lin. ft.	90
606-09.02	Loading Tests (Precast Concrete Size 1)	Ea.	1
606-09.03	Precast Concrete Piling - Size 1	Lin. ft.	450
710-10	6" ⌀ Perf. C.M.P (18 Ga.) w/porous Backfill	Lin. ft.	80
710-11	6" ⌀ C.M.P. Underdrain (18 Ga.)	Lin. ft.	4



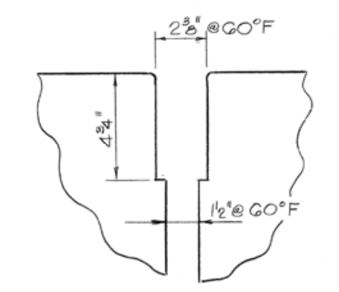
BILL OF STEEL

Mark	No. Required	Length	Shape
H401	26	37'-5"	straight
H402	4	35'-8"	straight
H403	32	5'-8"	straight
H801	16	38'-0"	straight
V401	72	12'-4"	closed stirrup
V402	71	4'-10"	bent
V403	12	4'-2"	bent
V404	24	7'-2"	straight
V501	71	13'-4"	U-bar
S401	30	5'-3"	U-bar
C601	71	3'-9"	hooked
C901	141	5'-4"	hooked
L401	20	3'-0"	L-bar



See Tenn. Std. Dwg. K-85-150 for drainage details.

SECTION A-A
Scale: ½" = 1'-0"



DETAIL
(See Std. Dwg. K-80-150 for details)

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY	D. McCorkle	DATE	9-'75
DRAWN BY	T. Robison	DATE	9-'75
SUPERVISED BY	D. McCorkle	DATE	9-'75
CHECKED BY	F. Hoffman	DATE	9-'75

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE 32A
W.B. I-240 OVER WOLF RIVER

ABUTMENT A
STA. 235+24.50

SHELBY COUNTY

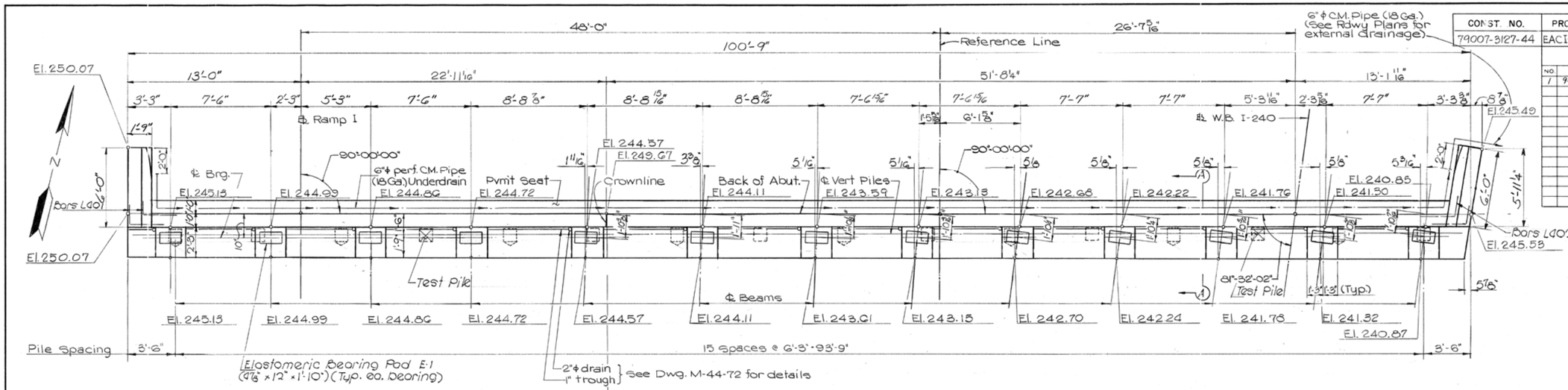
CORRECT ____ ENGINEER OF STRUCTURES
APPROVED ____ DIRECTOR OF HIGHWAYS

M-44-72

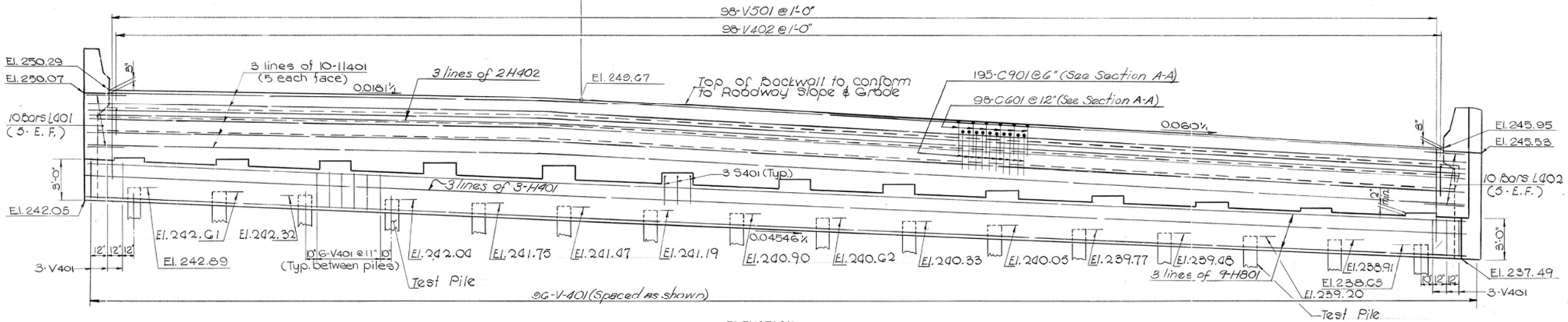
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(133)9	1975	G

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	9-7-76	CEH	Concrete Quantity



PLAN
Scale 1/4"=1'-0"



ELEVATION
Scale 1/4"=1'-0"

PILE NOTE: Drive all piles to an ultimate bearing capacity of 95 tons. 16 piles required. See Dwg. M-44-89 for additional pile data.
▽ Denotes direction of batter

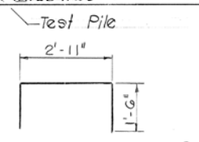
BILL OF STEEL

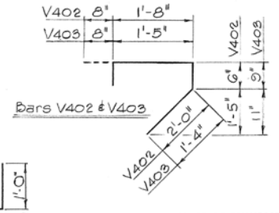
Mark	NO. Required	length	Shape
H401	39	34'-4"	
H402	6	33'-2"	
H403	32	5'-8"	
H801	20	35'-5"	
V401	96	12'-4"	
V402	98	4'-10"	
V403	12	4'-2"	
V404	24	7'-9"	
V501	98	14'-8"	
S401	39	5'-11"	
C601	98	3'-9"	
C901	195	5'-4"	
L401	10	3'-0"	
L402	10	3'-0"	

ESTIMATED QUANTITIES

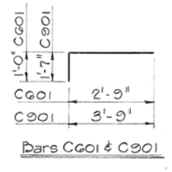
Item No.	Items	Units	Quantities
204-02.01	Dry Excavation	Cu. Yds.	100
604-03.01	Class A Concrete (Bridge)	Cu. Yds.	66.6
604-08.02	Steel Bar Reinforcement (Bridge)	Lbs.	10470
606-09.01	Test Piles (Precast Concrete Size 1)	Lin. Ft.	110
606-09.03	Precast Concrete Piling - Size 1	Lin. ft.	770
710-10	6" ϕ Perf. C.M.P. (18 Ga.) w/ porous Backfill	Lin. ft.	107
710-11	6" ϕ C.M.P. Underdrain (18 Ga.)	Lin. ft.	4

NOTES:
1. Riser Blocks to be poured monolithically with abutment beam. Riser block bearing pad surface to conform to bottom of beam grade.
2. The backwall shall not be poured until the beams are in place. The end 2 feet of slabs at expansion joints and top 15" of the abutment backwall shall be poured concurrently, and are to be poured after all other pours are complete.
3. For Bearing Details see Dwg. M-44-87.
4. See Std. Dwg. M-28-1 for Details of wingposts and reinforcement to be placed in wingwalls for wingposts.
5. See Std. Dwg. K-80-144 & Dwg. M-44-90 for detail of Approach Slab.
6. All drainage pipes to have a minimum downward slope of 1/8"/ft.
7. See Dwg. M-44-72 for Section A-A and elevation of wings.
8. Minimum Bar Laps shall be as follows; H400 = 1'-4" H801 = 3'-0"
9. Cost of wingposts to be included in the cost of bridgerail system.

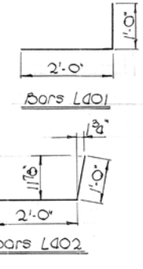


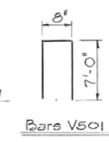


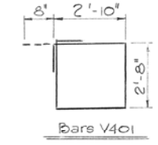
Bars V402 & V403



Bars C601 & C901







STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE 32A
W.B. I-240 OVER WOLF RIVER

ABUTMENT K
STA. 235+24.50

SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

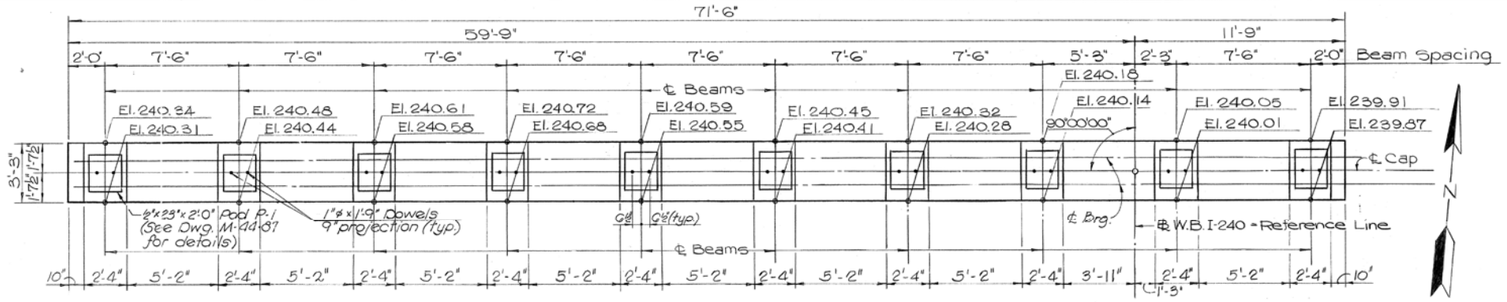
DESIGNED BY D. McCorkle DATE 9-'75
DRAWN BY T. Robison DATE 9-'75
SUPERVISED BY D. McCorkle DATE 9-'75
CHECKED BY F. Hoffman DATE 9-'75

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

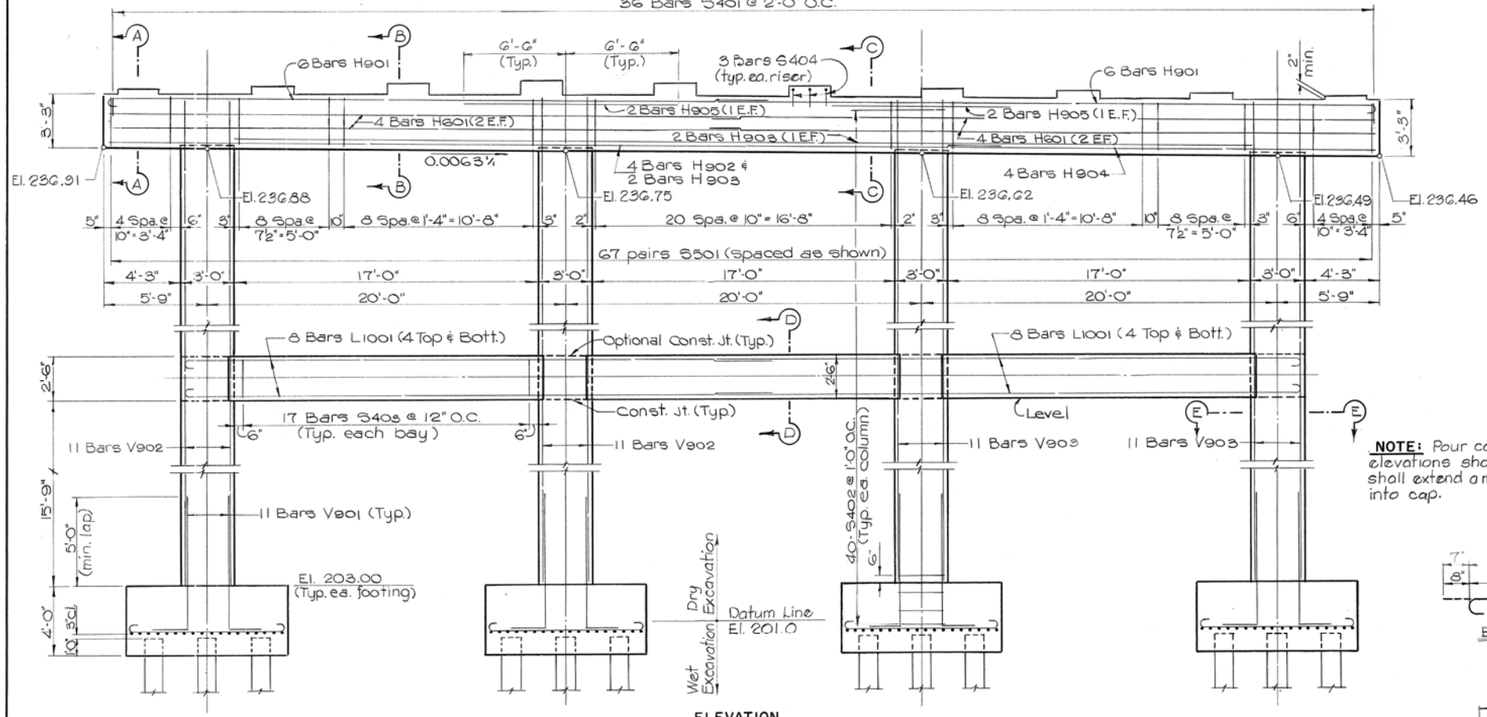
M-44-73

MICROFILMED

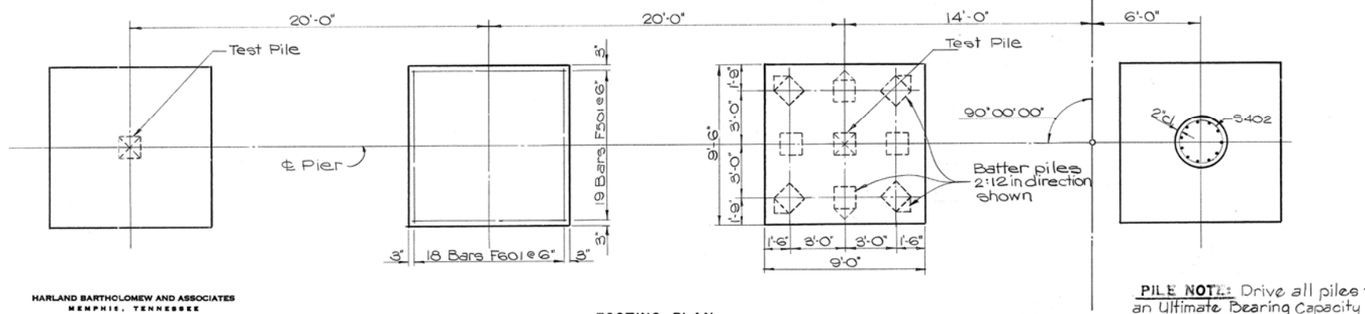
N1545



PLAN
Scale ~ 1/4"=1'-0"
36 Bars S401 @ 2'-0" O.C.



ELEVATION
Scale ~ 1/4"=1'-0"



FOOTING PLAN
Scale ~ 1/4"=1'-0"

PILE NOTE: Drive all piles to an Ultimate Bearing Capacity of 100 tons. 36 piles Required.

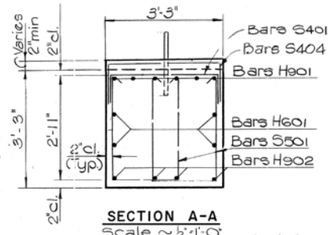
NOTE: Pour columns 2" above elevations shown. Reinforcement shall extend a minimum of 2'-11" into cap.

NOTES:
1. When pouring the Pier Cap provision shall be made for setting the dowel bars. If the Contractor elects to drill holes for the dowels, the reinforcement shall be placed so as not to interfere with the drilling. Dowel projection = 9". The top of dowels to be covered with 1/2" of compressible material and the projection wrapped with two layers of waterproof paper.
2. See Dwg. M-44-87 for Bearing Details.
3. See Dwg. M-44-89 for Estimated Tip Elevation of Piles.
4. Riser Blocks to be poured monolithically with Pier Cap Beam. Bearing Pad surface to conform to bottom of Beam Grade.
5. Minimum bar laps shall be as follows:
   H900 = 2'-10" V900 = 5'-0"
   H601 = 1'-11" L1001 = 3'-3"

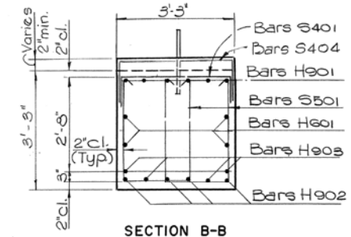
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EAC1-240-1(133)9	1975	7

REVISIONS

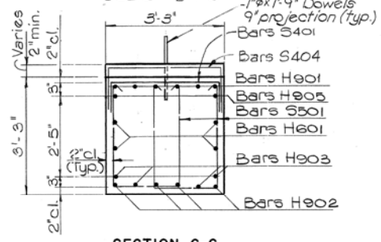
NO.	DATE	BY	BRIEF DESCRIPTION



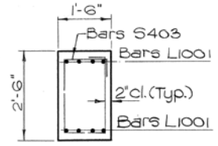
SECTION A-A
Scale ~ 2"=1'-0"



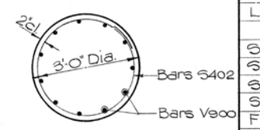
SECTION B-B
Scale ~ 2"=1'-0"



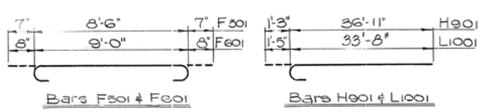
SECTION C-C
Scale ~ 2"=1'-0"

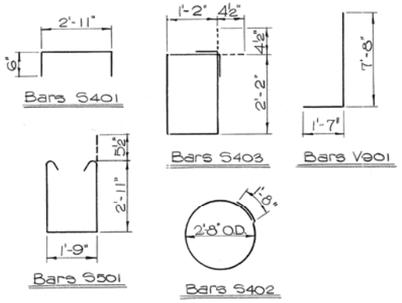


SECTION D-D
Scale ~ 2"=1'-0"



SECTION E-E
Scale ~ 2"=1'-0"





BILL OF STEEL

Bar	No.	Length	Shape
H901	12	38'-2"	
H902	4	49'-10"	
H903	4	57'-0"	
H904	4	24'-0"	
H905	4	13'-0"	
H601	8	36'-6"	
V901	44	9'-3"	
V902	22	36'-10"	
V903	22	36'-7"	
L1001	16	35'-1"	
S401	36	3'-11"	
S402	160	10'-0"	
S403	51	7'-5"	
S501	134	8'-6"	
F501	76	9'-8"	
F601	72	10'-4"	
S404	30	5'-8"	

ESTIMATED QUANTITIES

Item	Description	Unit	Quantity
604-03.01	Class A Concrete	Cu.Yd.	120.4
604-03.02	Steel Bar Reinforcement	Lbs.	17840
204-02.01	Dry Excavation	Cu.Yd	195
204-03.01	Wet Excavation	Cu.Yd.	45
606-09.01	Test Piles (Precast Conc. Size 1)	Lin. Ft.	40
606-09.03	Precast Conc. Piles (Size 1)	Lin. Ft.	680

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER

PIER B
STA. 235 + 24.50

SHELBY COUNTY

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

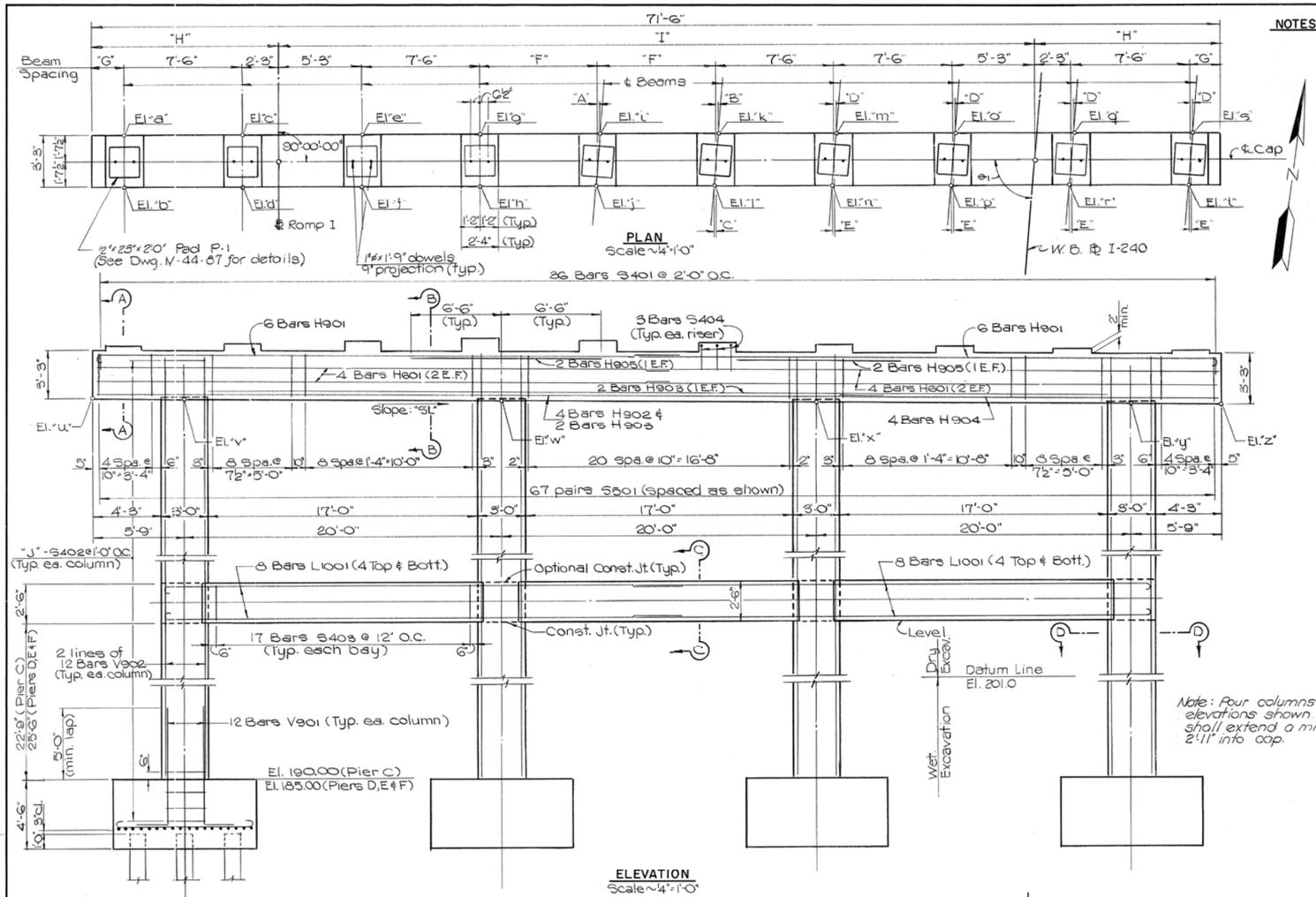
M-44-74

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY D.McCorkle DATE 9-'75
DRAWN BY T. Robison DATE 9-'75
SUPERVISED BY D.McCorkle DATE 9-'75
CHECKED BY F.Hoffman DATE 9-'75

MICROFILMED

N1546



NOTES:

1. When pouring the pier cap, provisions shall be made for setting the dowel bars. If the Contractor elects to drill holes for the dowels, the reinforcement shall be placed so as not to interfere with the drilling. Dowel projection = 9". The top of dowels to be covered with ½" of compressible material and the projection wrapped with two layers of water proof paper.
2. See Dwg. M-44-67 for Bearing Details.
3. See Dwg. M-44-69 for Estimated Tip Elev. of Piles.
4. Riser blocks to be poured monolithically with pier cap beam. Bearing pad surface to conform to bottom of beam grade.
5. Min Bar Laps shall be; H601 = 1'-11" H900 = 2'-10" V900 = 5'-0" L1001 = 3'-3"
6. See Dwg M-44-76 for all sections, Bill of Steel and Estimated Quantities.

CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(133)9	1975	8

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	9-7-76	CEH	Note added

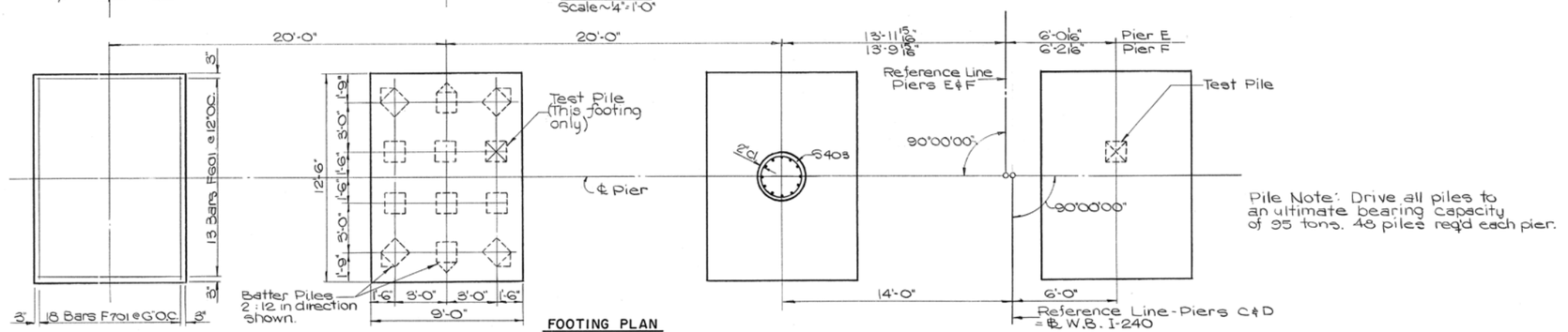
TABLE OF VARIABLES ⚠1

Pier	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J" ⓓ	"K"		Slope "SL"	℄1
C	—	—	—	—	—	7'-6"	2'-0"	11'-9"	48'-0"	54	27'-11"		0.0064½	90°00'00"
D	—	—	—	—	—	7'-6"	2'-0"	11'-9"	48'-0"	59	30'-9"		0.0064½	90°00'00"
E	—	6"	—	6"	—	7'-6 3/16"	1'-11 15/16"	11'-8 13/16"	48'-0 5/8"	60	31'-1"		0.0099½	89°56'24"
F	6"	8"	8"	8"	6"	7'-8 1/16"	1'-9 15/16"	11'-6 13/16"	48'-4 3/8"	60	31'-6"		0.0176½	89°28'17"

Note: "K" is length of column bars V902.
⚠ⓓ "J" is typical each column.

Note: Four columns 2" above elevations shown. Reinforcement shall extend a minimum of 2'-11" into cap.

ELEVATION
Scale ~ 1/4"=1'-0"



FOOTING PLAN
Scale ~ 1/4"=1'-0"

Pile Note: Drive all piles to an ultimate bearing capacity of 95 tons. 48 piles req'd each pier.

TABLE OF ELEVATIONS

Pier	El."a"	El."b"	El."c"	El."d"	El."e"	El."f"	El."g"	El."h"	El."i"	El."j"	El."k"	El."l"	El."m"	El."n"	El."o"	El."p"	El."q"	El."r"	El."s"	El."t"	El."u"	El."v"	El."w"	El."x"	El."y"	El."z"
C	241.17	241.14	241.31	241.27	241.44	241.41	241.55	241.51	241.41	241.36	241.28	241.24	241.14	241.11	241.01	240.97	240.87	240.84	240.74	240.70	237.74	237.70	237.57	237.45	237.32	237.28
D	241.87	241.84	242.00	241.97	242.14	242.11	242.24	242.21	242.11	242.08	241.97	241.94	241.84	241.81	241.70	241.68	241.57	241.54	241.43	241.41	238.44	238.40	238.27	238.15	238.03	237.98
E	242.59	242.55	242.72	242.69	242.86	242.82	242.96	242.93	242.79	242.76	242.61	242.58	242.43	242.41	242.26	242.24	242.09	242.06	241.91	241.89	239.16	239.10	238.90	238.71	238.51	238.45
F	243.37	243.34	243.49	243.45	243.60	243.57	243.70	242.67	243.44	243.41	243.18	243.16	242.92	242.91	242.66	242.66	242.41	242.41	242.16	242.16	239.95	239.55	239.50	239.14	238.79	238.69

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY D. McCorkle DATE 9-'75
DRAWN BY T. Robison DATE 9-'75
SUPERVISED BY D. McCorkle DATE 9-'75
CHECKED BY F. Holman DATE 9-'75

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER
PIERS C, D, E & F
STA. 235+24.00
SHELBY COUNTY

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-75

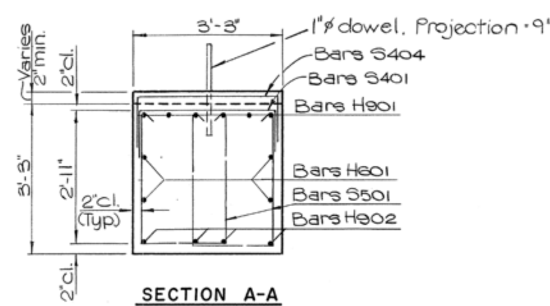
MICROFILMED

N1356

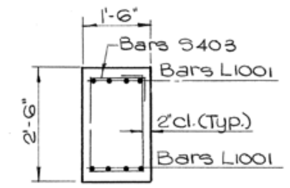
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(33)9	1975	9

REVISIONS

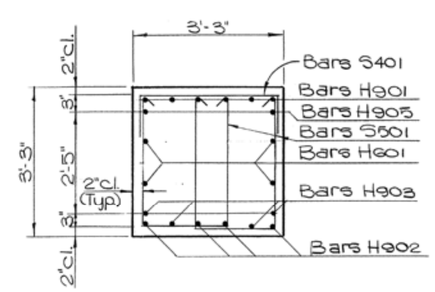
NO.	DATE	BY	BRIEF DESCRIPTION
1	9-7-76	CEH	Rein. Steel Qts. each Pier.
2	3-8-77	ref	Added footing plan & elevation for pier G



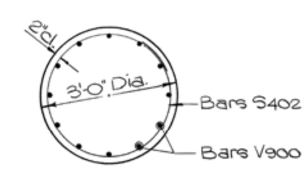
SECTION A-A
Scale ~ ½" = 1'-0"



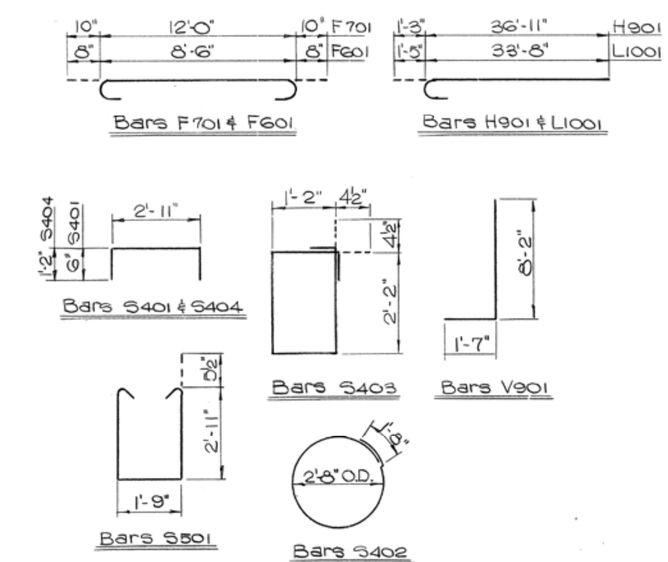
SECTION C-C
Scale ~ ½" = 1'-0"



SECTION B-B
Scale ~ ½" = 1'-0"



SECTION D-D
Scale ~ ½" = 1'-0"



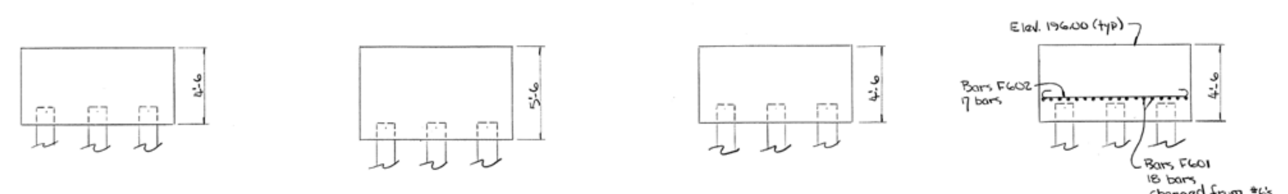
BILL OF STEEL (PER PIER)

	Bar	No.	Length	Shape
	H901	12	38'-2"	⊏—
	H902	4	49'-10"	—
	H903	4	57'-0"	—
	H904	4	24'-0"	—
	H905	4	13'-0"	—
	H601	8	36'-6"	—
	V901	48	9'-9"	—
*	V902	96	"K"	—
	L1001	16	35'-1"	⊏—
	S401	36	3'-11"	⌐¬
*	S402	"J"	10'-0"	O
	S403	51	7'-5"	▢
	S501	134	8'-6"	▢
	S404	30	5'-3"	⌐¬
	F701	72	13'-8"	⊂⊃
	F601	32	9'-10"	⊂⊃

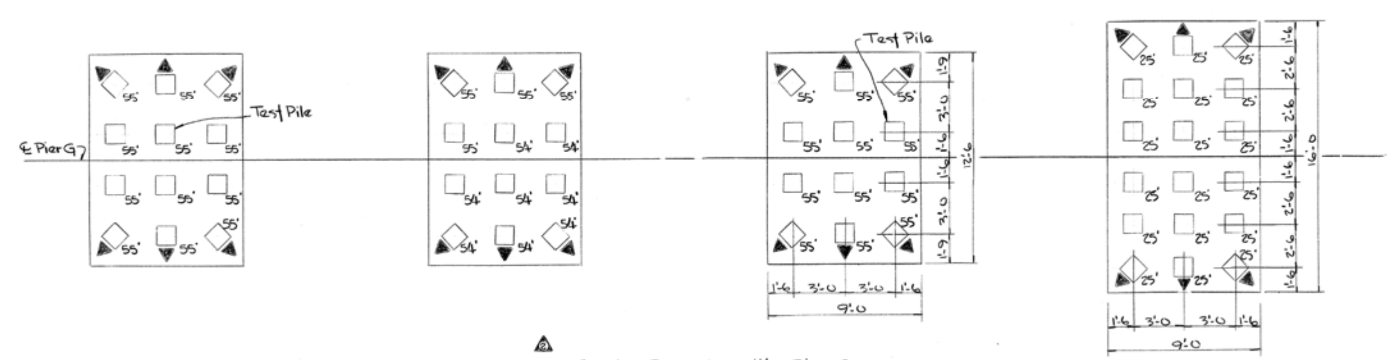
* See Dwg. M-44-75 for dimension "K" and number of S402 Bars "J" req'd per column.

ESTIMATED QUANTITIES ⚠1

Item	Description	Unit	Quantity			
			Pier C	Pier D	Pier E	Pier F
604-03.01	Class A Concrete	Cu. Yd.	158.7	164.6	165.4	166.1
604-03.02	Steel Bar Reinforcement	Lbs.	22,933	23,991	24,127	24,263
204-02.01	Dry Excavation	Cu. Yd.	140	40	—	—
204-03.01	Wet Excavation	Cu. Yd.	430	565	495	495
606-09.01	Test Piles (Precast Conc. Size 1)	Lin. Ft.	40	30	30	30
606-09.03	Precast Conc. Piles - Size 1	Lin. Ft.	920	690	690	690



Elevation



⚠2 Footing Plan As Built - Pier G

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W. B. I-240 OVER WOLF RIVER

PIERS C, D, E & F
STA. 235+24.00

SHELBY COUNTY

CORRECT ______ ENGINEER OF STRUCTURES
APPROVED ______ DIRECTOR OF HIGHWAYS

M-44-76

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY	D. Mc Corkle	DATE	9-'75
DRAWN BY	T. Robison	DATE	9-'75
SUPERVISED BY	D. Mc Corkle	DATE	9-'75
CHECKED BY	F. Hoffman	DATE	9-'75

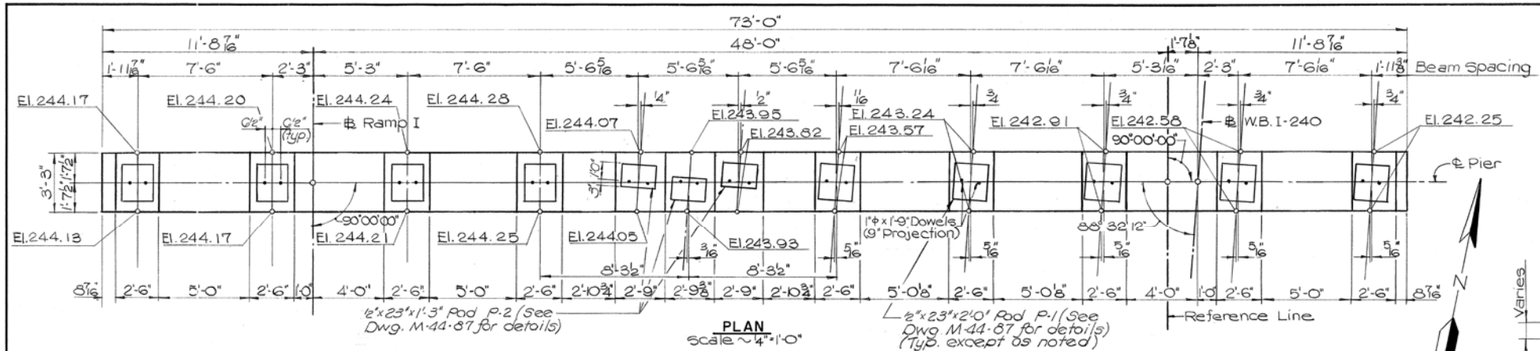
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(13)9	1975	10

REVISIONS

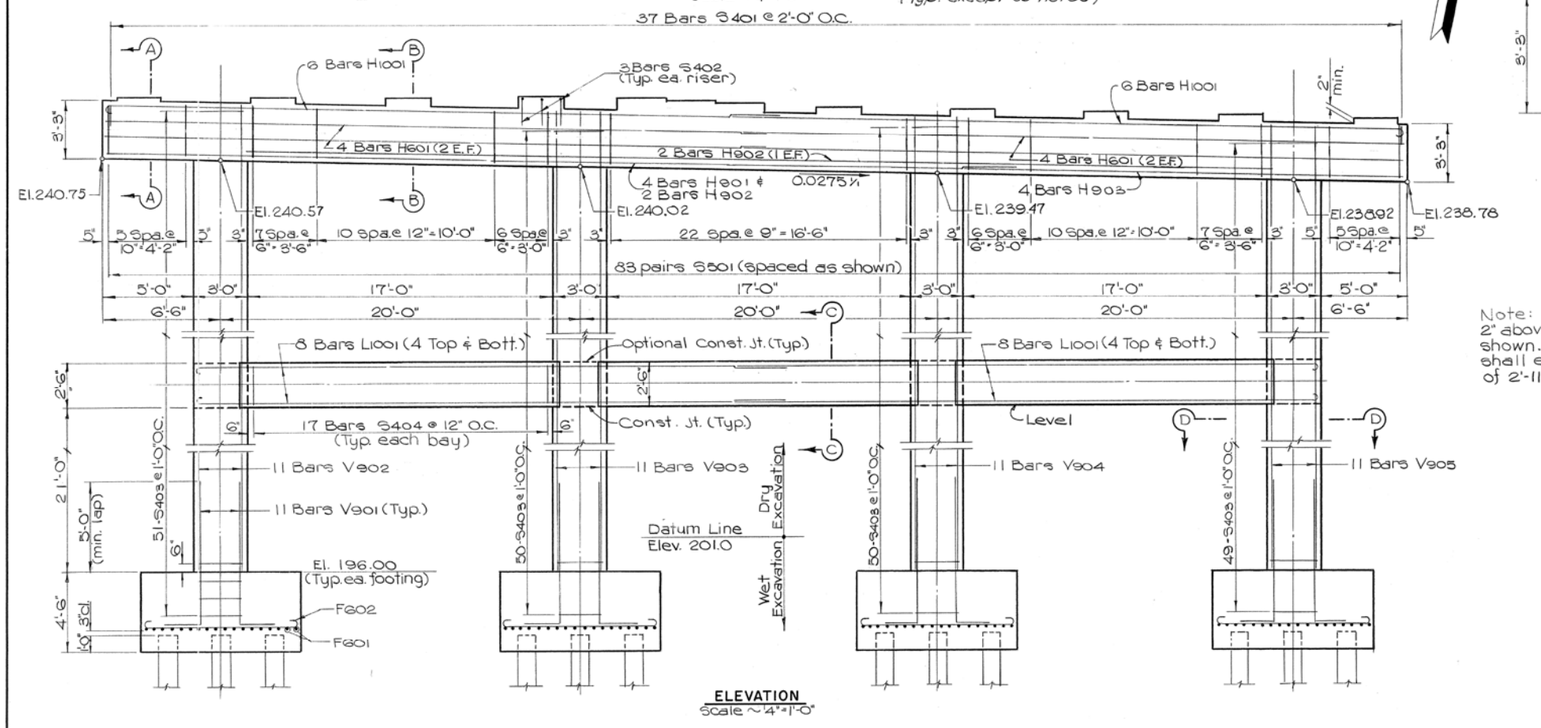
NO.	DATE	BY	BRIEF DESCRIPTION
1	3-1-77	RGT	Added note on footing plan

NOTES

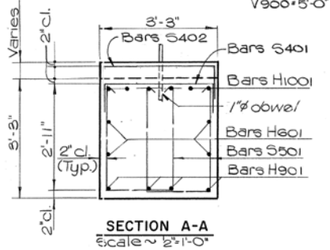
1. When pouring the pier cap provision shall be made for setting the dowel bars. If the Contractor elects to drill holes for the dowels, the reinforcement shall be placed so as not to interfere with the drilling. Dowel projection = 9". The top of dowels to be covered with ½" of compressible material and the projection wrapped with two layers of water proof paper.
2. See Dwg. M-44-87 for Bearing Details.
3. See Dwg. M-44-89 for Estimated Tip Elev. of Piles.
4. Riser blocks to be poured monolithically with pier cap beam. Bearing pad surface to conform to bottom of beam grade.
5. Min. Bar Laps shall Be; H601 = 1'-11" H900 = 2'-10" H1001 = 3'-3"
   V900 = 5'-0" L1001 = 3'-3"



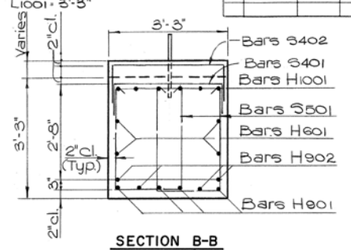
PLAN
Scale ~ 4" = 1'-0"



ELEVATION
Scale ~ 4" = 1'-0"

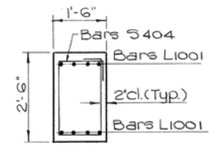


SECTION A-A
Scale ~ ½"=1'-0"

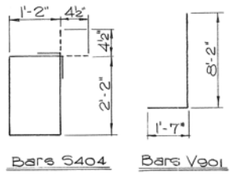


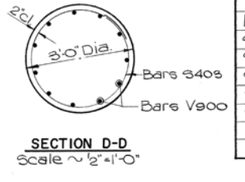
SECTION B-B
Scale ~ ½"=1'-0"

Note: Pour Columns 2" above elevations shown. Reinforcement shall extend a minimum of 2'-11" into pier cap.



SECTION C-C
Scale ~ ½"=1'-0"

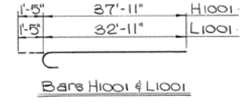


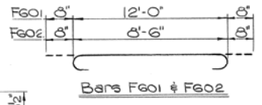


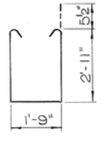
SECTION D-D
Scale ~ ½"=1'-0"

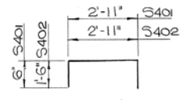
BILL OF STEEL

Bar	No.	Length	Shape
H1001	12	39'-4"	C
H901	4	50'-7"	—
H902	4	57'-0"	—
H903	4	24'-9"	—
H601	8	37'-3"	—
V901	44	9'-9"	L
V902	11	47'-6"	—
V903	11	47'-0"	—
V904	11	46'-5"	—
V905	11	45'-10"	—
L1001	16	34'-4"	C
S401	37	3'-11"	□
S402	36	5'-11"	□
S403	200	10'-0"	O
S404	51	7'-5"	□
S501	166	8'-6"	□
F601	72	13'-4"	⊂
F602	52	9'-10"	⊂



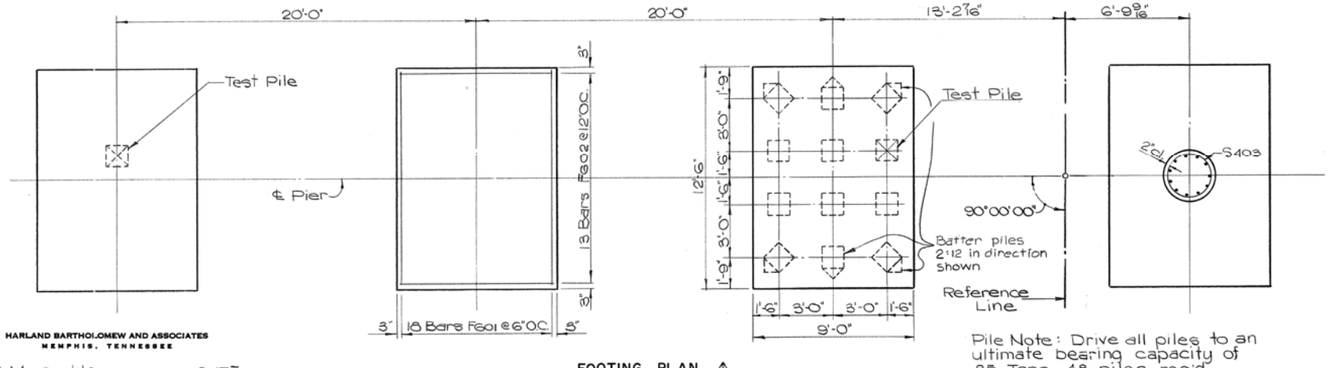






ESTIMATED QUANTITIES

Item	Description	Unit	Quantity
604-03.01	Class A Concrete	Cu.Yd.	156.4
604-03.02	Steel Bar Reinforcement	Lbs.	20,600
204-02.01	Dry Excavation	Cu.Yd.	195
204-03.01	Wet Excavation	Cu.Yd.	265
606-09.01	Test Piles (Precast Conc. Size 1)	Lin. Ft.	30
606-09.03	Precast Conc. Piles (Size 1)	Lin. Ft.	690



FOOTING PLAN
Scale ~ 4" = 1'-0"

⚠ * For plan of footing as built, see Dwg No. M-44-76

Pile Note: Drive all piles to an ultimate bearing capacity of 85 Tons. 48 piles req'd.

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY D. McCorkle DATE 9-'75
DRAWN BY T. Robison DATE 9-'75
SUPERVISED BY D. McCorkle DATE 9-'75
CHECKED BY F. Hoffman DATE 9-'75

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32A
W.B. I-240 OVER WOLF RIVER

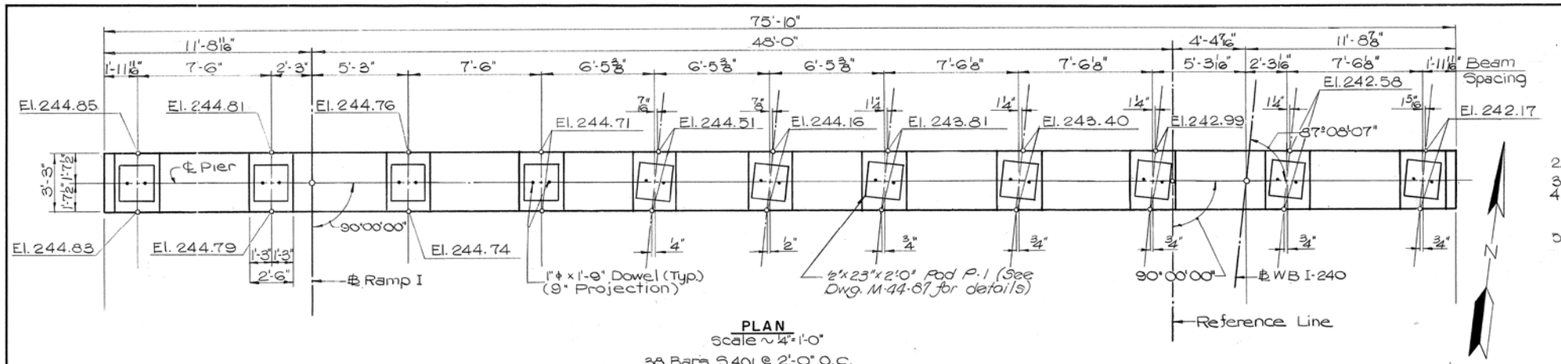
PIER G
STA. 235+24.50

SHELBY COUNTY

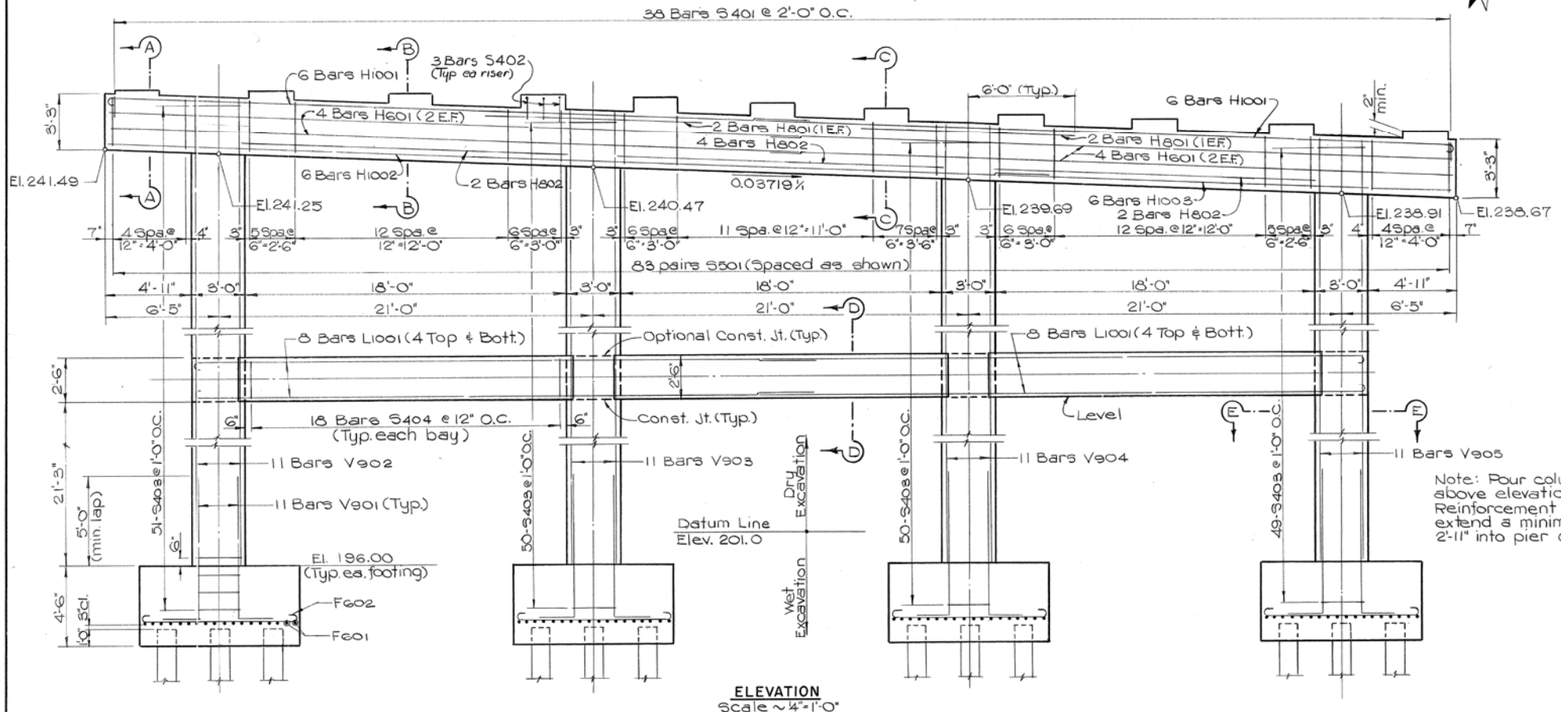
CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-77

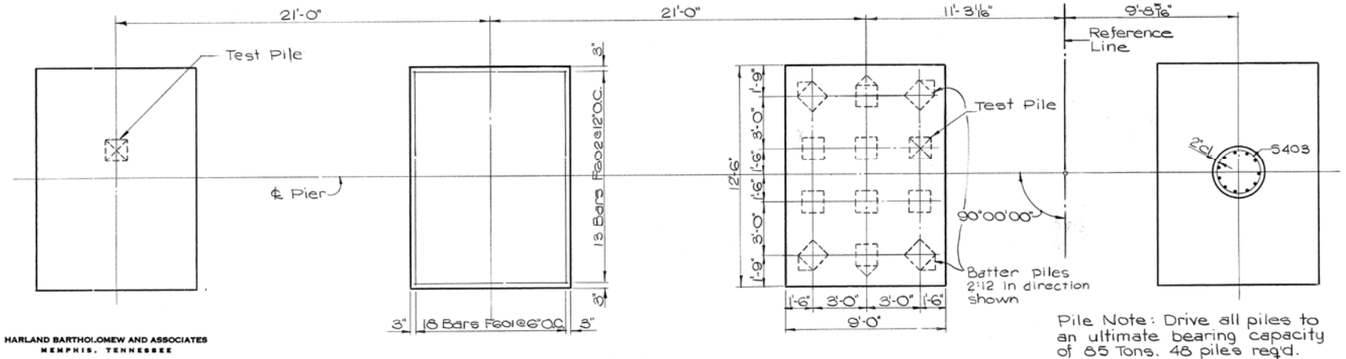
MICROFILMED



PLAN
Scale ~ 1/4"=1'-0"



ELEVATION
Scale ~ 4"=1'-0"



FOOTING PLAN
Scale ~ 4"=1'-0"

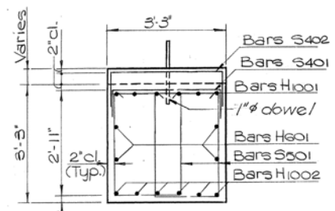
Pile Note: Drive all piles to an ultimate bearing capacity of 85 Tons. 48 piles req'd.

NOTES
1. When pouring the pier cap, provisions shall be made for setting the dowel bars. If the contractor elects to drill holes for the dowels, the reinforcement shall be placed so as not to interfere with the drilling. Dowel projection = 9". The top of dowels to be covered with 1/2" of compressible material and the projection wrapped with two layers of water proof paper.
2. See Dwg. M-44-87 for Bearing Details.
3. See Dwg M-44-89 for Estimated Tip Elev. of Piles.
4. Riser blocks to be poured monolithically with pier cap beam. Bearing pad surface to conform to bottom of beam grade.
5. Minimum Bar Laps shall be as follows:
   H1000 = 3'-3", H601 = 1'-11", V900 = 5'-0", L1001 = 3'-3"

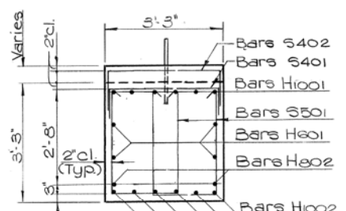
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(133)9	1975	11

REVISIONS

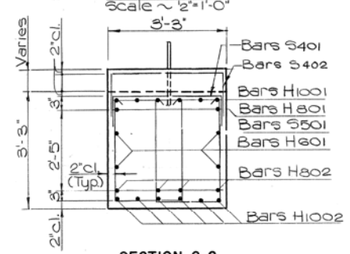
NO.	DATE	BY	BRIEF DESCRIPTION



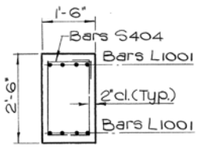
SECTION A-A
Scale ~ 1/2"=1'-0"



SECTION B-B
Scale ~ 1/2"=1'-0"



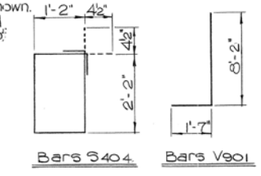
SECTION C-C
Scale ~ 1/2"=1'-0"

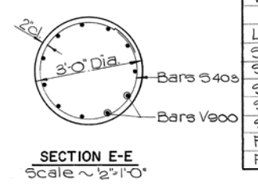


SECTION D-D
Scale ~ 1/2"=1'-0"

BILL OF STEEL

Bar	No.	Length	Shape
H1001	12	40'-9"	C
H1002	6	52'-11"	
H1003	6	25'-8"	
H801	4	12'-0"	
H802	8	18'-0"	
H601	8	38'-8"	
V901	44	9'-9"	L
V902	11	48'-2"	
V903	11	47'-4"	
V904	11	46'-7"	
V905	11	45'-10"	
L1001	16	55'-10"	C
S401	38	3'-11"	
S402	25	5'-11"	
S403	200	10'-0"	O
S404	54	7'-5"	
S501	166	8'-6"	
Fa01	72	13'-4"	C
F602	52	9'-10"	C

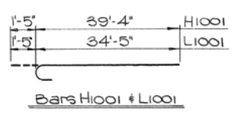




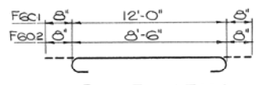
SECTION E-E
Scale ~ 1/2"=1'-0"

ESTIMATED QUANTITIES

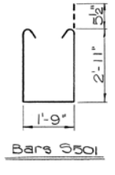
Item	Description	Unit	Quantity
604-03.01	Class A Concrete	Cu.Yd.	157.9
604-03.02	Steel Bar Reinforcement	Lbs.	21,550
204-02.01	Dry Excavation	Cu.Yd.	195
204-03.01	Wet Excavation	Cu.Yd.	265
606-09.01	Test Piles (Precast Conc. Size 1)	Lin. Ft.	30
606-09.03	Precast Conc. Piles (Size 1)	Lin. Ft.	690



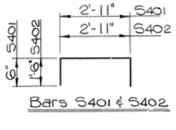
Bars H1001 & L1001



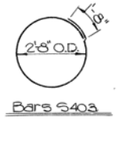
Bars F601 & F602



Bars S501



Bars S401 & S402



Bars S403

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER

PIER H
STA. 235 + 24.50

SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

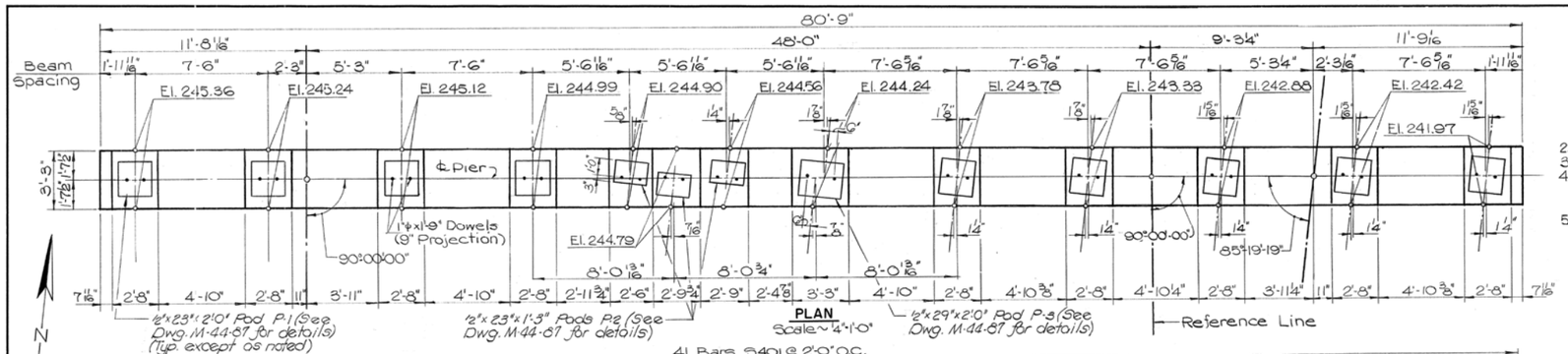
DESIGNED BY D. Mc Corkle DATE 9-'75
DRAWN BY T. Robison DATE 9-'75
SUPERVISED BY D. Mc Corkle DATE 9-'75
CHECKED BY F. Hollman DATE 9-'75

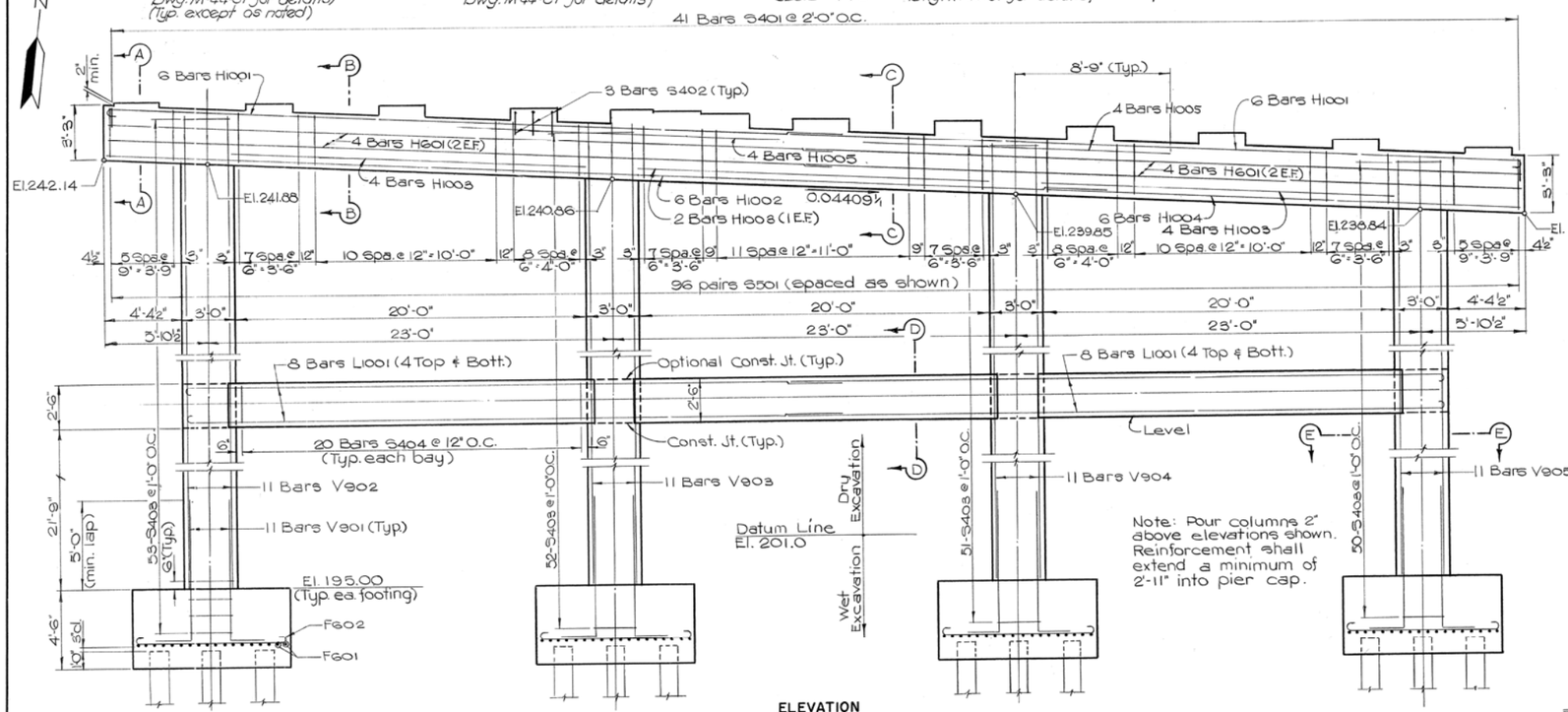
CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

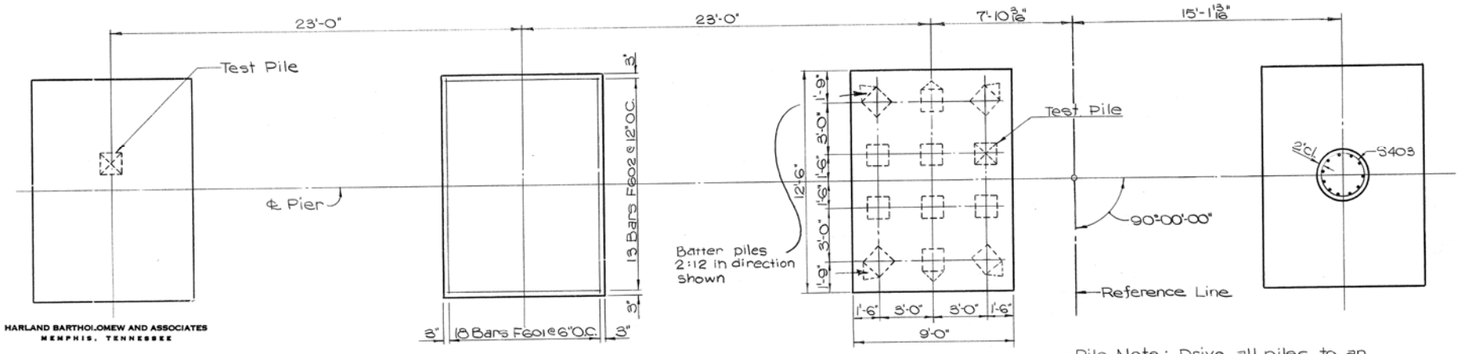
M-44-78

MICROFILMED

N1546







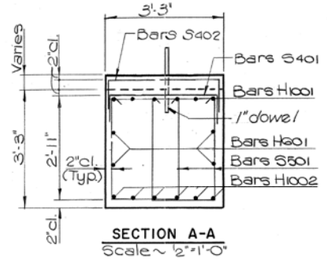
Pile Note: Drive all piles to an ultimate bearing capacity of 90 tons. 48 piles req'd.

NOTES
1. When pouring the pier cap provision shall be made for setting the dowels. If the contractor elects to drill holes for the dowels, the reinforcement shall be placed so as not to interfere with the drilling. Dowel projection = 9". The top of dowels to be covered with 2" of compressible material and the projection wrapped with two layers of water proof paper.
2. See Dwg. M-44-87 for Bearing Details.
3. See Dwg. M-44-89 for Estimated Tip Elev. of Piles
4. Riser blocks to be poured monolithically with pier cap beam. Bearing pad surface to conform to bottom of beam grade.
5. Minimum Bar Laps shall be as follows;
   H1000 = 3'-3" V900 = 5'-0"
   L1001 = 3'-3" H601 = 1'-11"

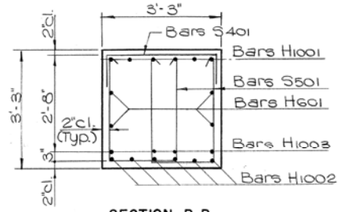
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(133)9	1975	12

REVISIONS

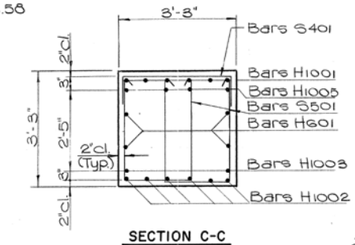
NO.	DATE	BY	BRIEF DESCRIPTION



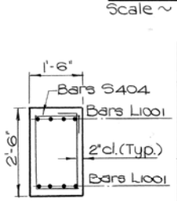
SECTION A-A
Scale ~ 1/2"=1'-0"



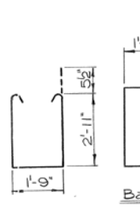
SECTION B-B
Scale ~ 1/2"=1'-0"

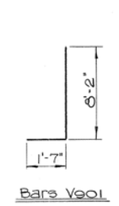


SECTION C-C
Scale ~ 1/2"=1'-0"

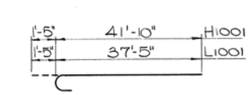


SECTION D-D
Scale ~ 1/2"=1'-0"

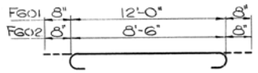




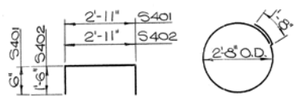
SECTION E-E
Scale ~ 1/2"=1'-0"



Bars H1001 & L1001



Bars F601 & F602



Bars S401 & S402 Bars S403

BILL OF STEEL

Bar	No	Length	Shape
H1001	12	43'-3"	⊂
H1002	6	56'-5"	—
H1003	10	20'-0"	—
H1004	6	27'-3"	—
H1005	8	17'-6"	—
H601	8	41'-1"	—
V901	44	9'-9"	└
V902	11	49'-10"	—
V903	11	48'-10"	—
V904	11	47'-10"	—
V905	11	46'-10"	—
L1001	16	38'-10"	⊂
S401	41	3'-11"	⊓
S402	39	5'-11"	⊓
S403	206	10'-0"	○
S404	60	7'-5"	▯
S501	192	8'-6"	⊓
F601	72	13'-4"	⊂
F602	52	9'-10"	⊂

ESTIMATED QUANTITIES

Item	Description	Unit	Quantity
604-03.01	Class A Concrete	Cu.Yd.	162.0
604-03.02	Steel Bar Reinforcement	Lbs.	23570
204-02.01	Dry Excavation	Cu.Yd.	2.10
204-05.01	Wet Excavation	Cu.Yd.	290
606-09.01	Test Piles (Precast Conc. Size 1)	Lin. Ft.	30
606-09.03	Precast Conc. Piles (Size 1)	Lin. Ft.	690

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER

PIER I
STA. 235 + 24.50

SHELBY COUNTY

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

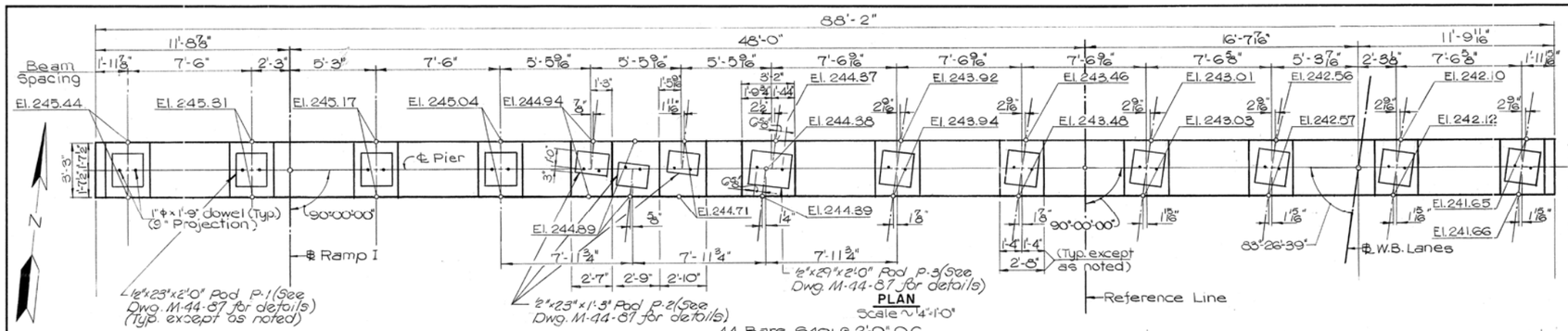
M-44-79

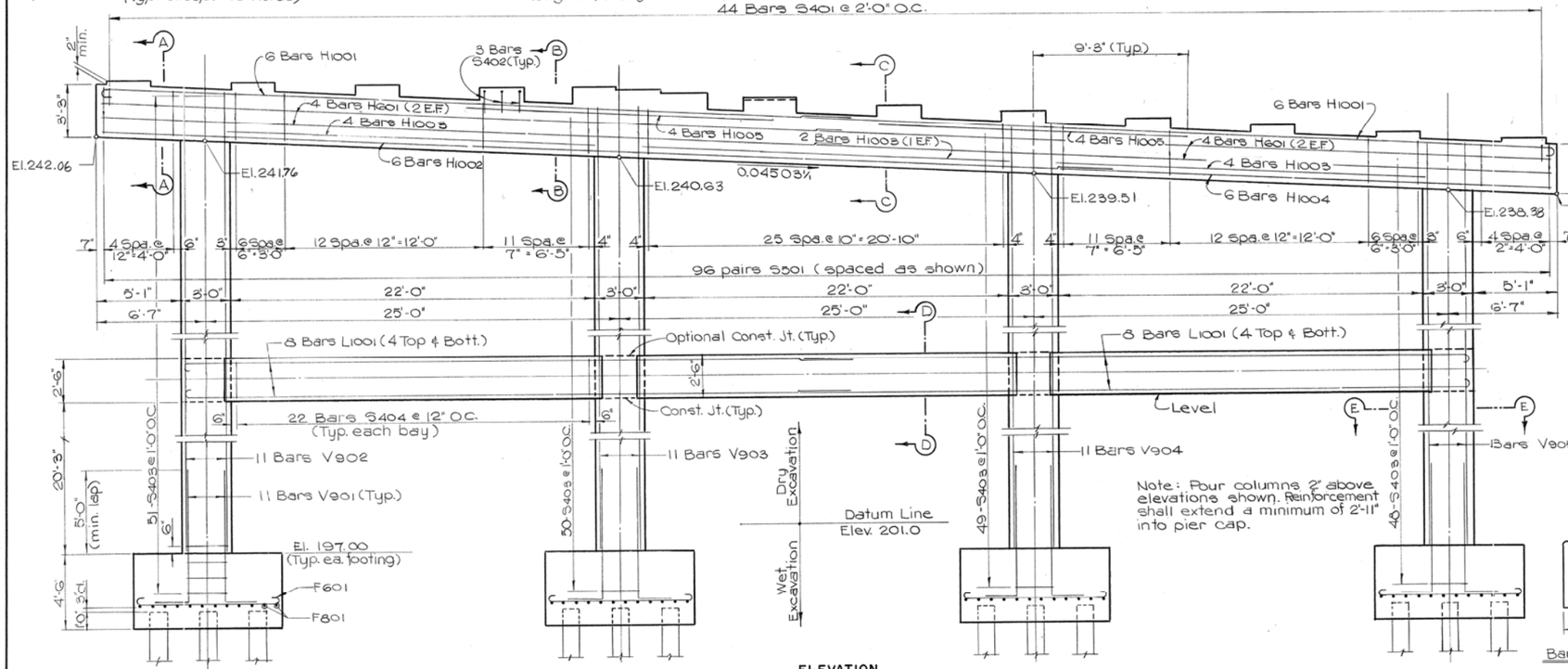
HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

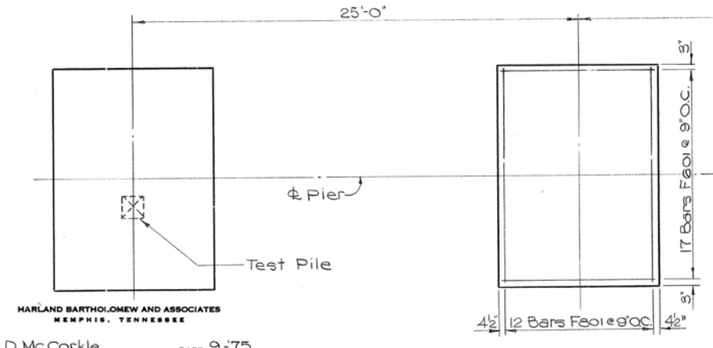
DESIGNED BY D. Mc Corkle DATE 9-'75
DRAWN BY T. Robison DATE 9-'75
SUPERVISED BY D. Mc Corkle DATE 9-'75
CHECKED BY F. Hoffman DATE 9-'75

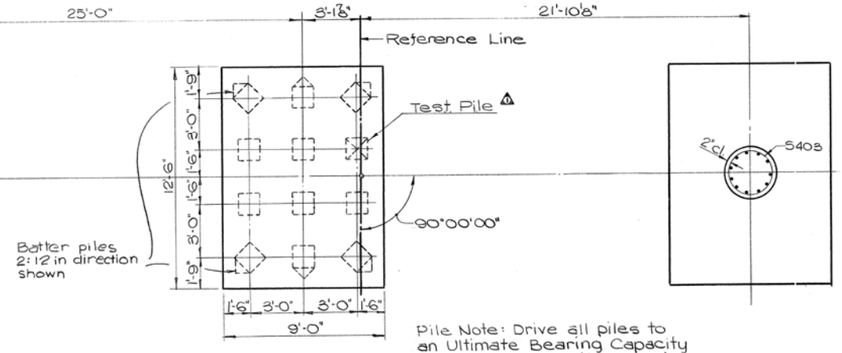
MICROFILMED

N1545



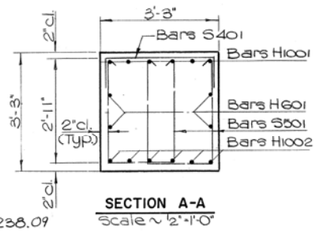




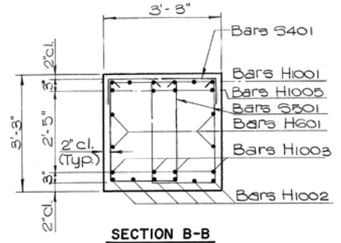


FOOTING PLAN
Scale ~ 1/4"=1'-0"

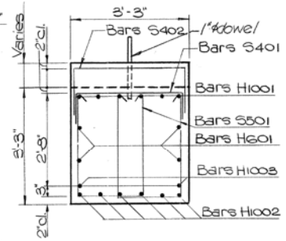
Pile Note: Drive all piles to an Ultimate Bearing Capacity of 100 Tons. 48 piles req'd.



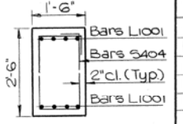
SECTION A-A
Scale ~ 1/2"=1'-0"



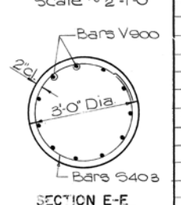
SECTION B-B
Scale ~ 1/2"=1'-0"



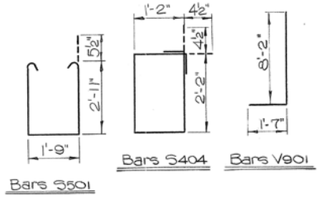
SECTION C-C
Scale ~ 1/2"=1'-0"

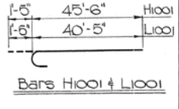


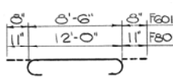
SECTION D-D
Scale ~ 1/2"=1'-0"

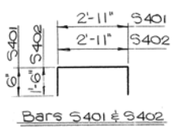


SECTION E-E
Scale ~ 1/2"=1'-0"









NOTES
1. When pouring the Pier Cap provision shall be made for setting the dowel bars. If the Contractor elects to drill holes for the dowels, the reinforcement shall be placed so as not to interfere with the drilling. Dowel projection = 9". The top of dowels to be covered with ½" of compressible material and the projection wrapped with two layers of water proof paper.
2. See Dwg. M-44-87 for Bearing Details.
3. See Dwg. M-44-89 for Estimated Tip Elev. of Piles.
4. Riser blocks to be poured monolithically with pier cap beam. Bearing pad surface to conform to bottom of beam grade.
5. Minimum Bar Laps shall be as follows;
   H1003 = 3'-3" V900 = 5'-0"
   L1001 = 3'-3" H601 = 1'-11"

CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(133)9	1975	13

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
⚠ 1	6-16-76	rat	Removed Load Test on Pile
2	9-7-76	GEH	Concrete Quantity

BILL OF STEEL

Bar	No.	Length	Shape
H1001	12	46'-11"	
H1002	6	60'-0"	
H1003	10	22'-0"	
H1004	6	31'-1"	
H1005	8	18'-6"	
H601	8	44'-10"	
V901	44	9'-9"	
V902	11	47'-9"	
V903	11	46'-7"	
V904	11	45'-5"	
V905	11	44'-4"	
L1001	16	41'-10"	
S401	44	3'-11"	
S402	42	5'-11"	
S403	198	10'-0"	
S404	66	7'-5"	
S501	192	8'-6"	
F601	68	9'-10"	
F801	48	13'-10"	

ESTIMATED QUANTITIES

Item	Description	Unit	Quantity
604-03.01	Class A Concrete	Cu.Yd.	⚠2 164.4
604-03.02	Steel Bar Reinforcement	Lbs.	24550
204-02.01	Dry Excavation	Cu.Yd.	195
204-03.01	Wet Excavation	Cu.Yd.	235
606-09.01	Test Piles (Precast Conc. Size I)	Lin. Ft.	30
606-09.03	Precast Conc. Piles (Size I)	Lin. Ft.	690

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER

PIER J
STA. 235+24.50

SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY D. Mc Corkle DATE 9-'75
DRAWN BY T. Robison DATE 9-'75
SUPERVISED BY D. Mc Corkle DATE 9-'75
CHECKED BY F. Holman DATE 9-'75

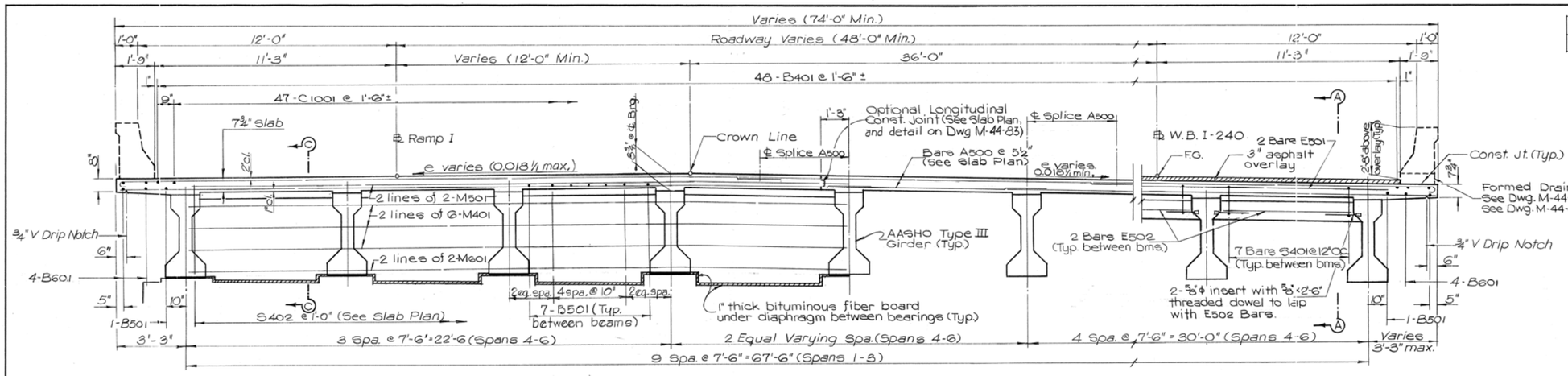
CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-80

CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(133)9	1975	14

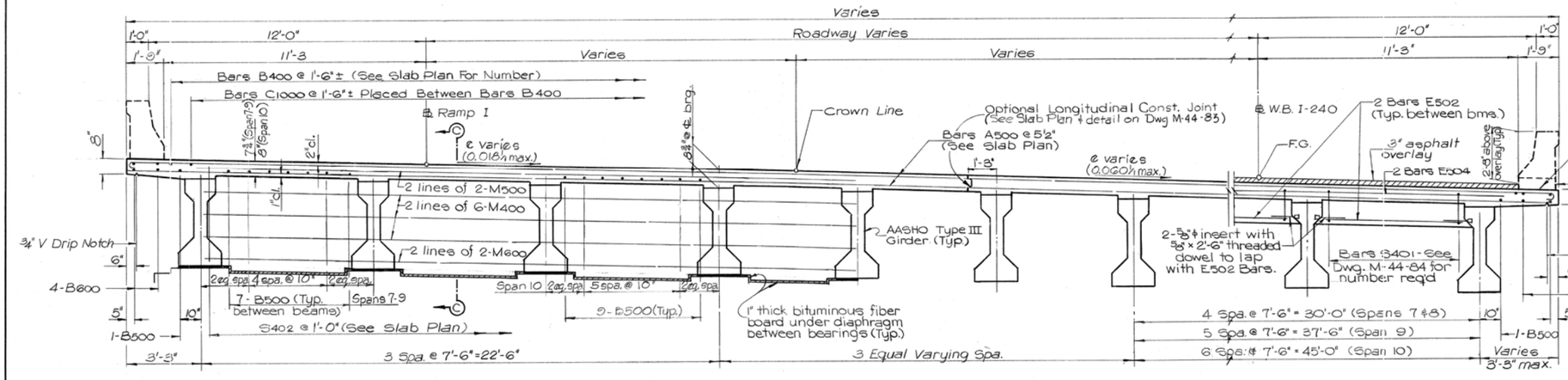
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



AT PIER DIAPHRAGM (PIERS B THRU G) **IN SPANS** **AT ABUTMENT A DIAPHRAGM**

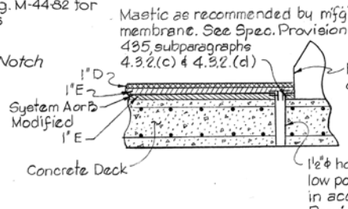
SPANS 1-6



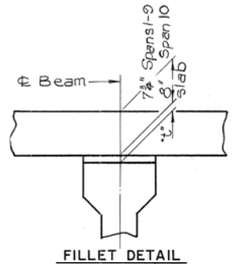
AT PIER DIAPHRAGM (PIERS H, I & J) **IN SPANS** **AT ABUTMENT K DIAPHRAGM**

NOTES

1. See Dwg. M-44-71 for General Notes & Design Stresses.
2. See Dwg. M-44-88 for Finished Slab Screed Elevations.
3. When pouring slab, provisions shall be made for setting reinforcing for parapet. See Tenn. Std. Dwg. M-28-1 for details of bridgerail and placement of reinforcing. The parapet shall not be poured until the slab is poured & cured.
4. The outside edge of slab & parapet shall conform to the horizontal curve.
5. The end two (2) feet of slabs at expansion joints and the top 15" of the abutment backwall shall be poured concurrently and are to be poured after all other pours are complete.
6. SLAB POURING SEQUENCE: Transverse slab const. joints may be located at the contractors option, except no joint may be located closer than ⅓ span length from an interior support. The contractor shall make provisions during placement of slab to prevent the exterior beam from twisting. No equipment shall be permitted on the bridge until all pours are made and concrete is properly cured.



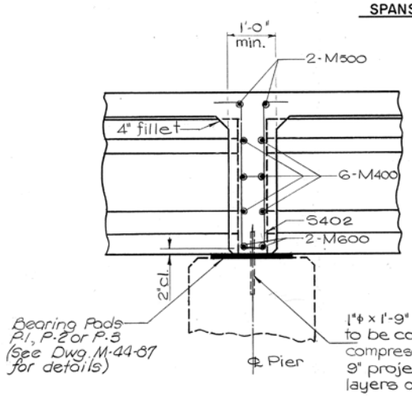
DECK SEALANT DETAIL



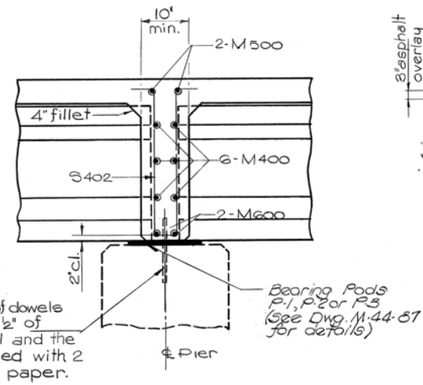
FILLET DETAIL
No Scale

Fillet Note: After the beams are in place, the Contractor shall field measure the top of beam elevations. These elevations subtracted from the finished surface elevations minus the slab thickness plus the algebraic dead load deflections (See Dwg. M-44-87) equals the required fillet thickness "t".

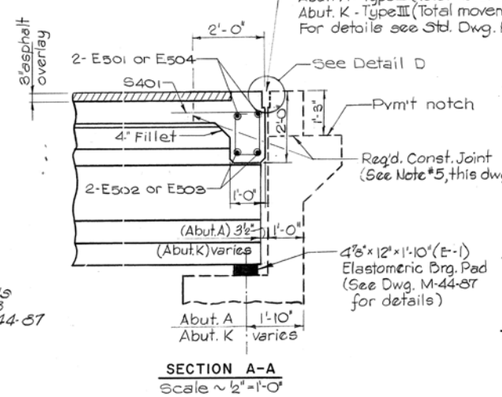
SPANS 7-10



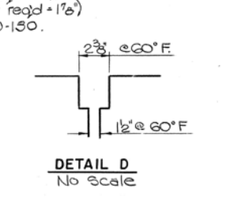
SECTION B-B
Scale ~ ½" = 1'-0"



SECTION C-C
Scale ~ ½" = 1'-0"



SECTION A-A
Scale ~ ½" = 1'-0"



DETAIL D
No Scale

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER

SUPERSTRUCTURE - TYPICAL SECTIONS
STA. 235 + 24.50

SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY	D. Mc Corkle	DATE 8-75
DRAWN BY	T. Robison	DATE 8-75
SUPERVISED BY	D. Mc Corkle	DATE 8-75
CHECKED BY	F. Hoffman	DATE 8-75

CORRECT _____ ENGINEER OF STRUCTURES

APPROVED _____ DIRECTOR OF HIGHWAYS

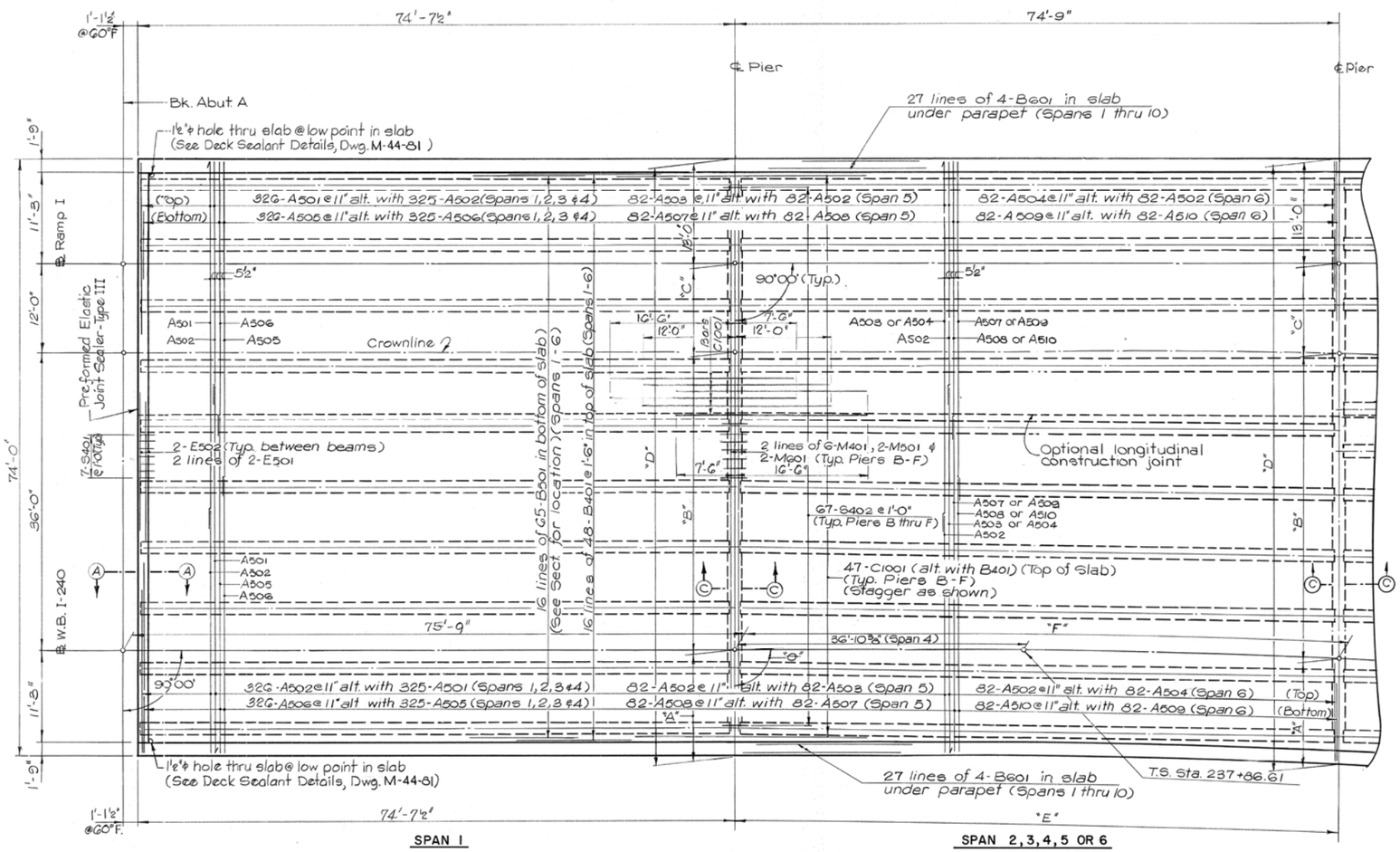
M-44-81

MICROFILMED

CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	BACI-240-1(133)9	1975	15

REVISIONS

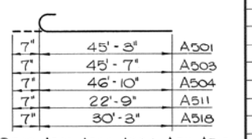
NO.	DATE	BY	BRIEF DESCRIPTION



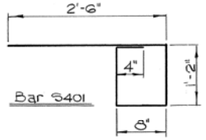
PLAN
Scale ⅛" = 1'-0"

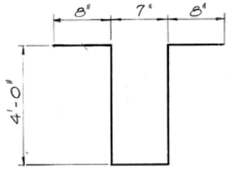
NOTES

1. See Dwg. M-44-81 for Typical Sections.
2. See Tenn. Std. Dwg. M-28-1 for parapet reinforcing to be placed in slab.
3. See Tenn. Std. Dwg. K-80-130 for details of Preformed Elastic Joint Sealer.
4. The parapet shall not be poured until the slab is poured and cured.
5. The outside edge of slab & Parapet shall conform to the horizontal curve.
6. All girders to be supported during slab construction to prevent rotation.
7. The end 2' of slab @ the expansion joint and top 15" of abutment backwall shall be poured concurrently and are to be poured after all other pours are complete.
8. Minimum bar laps shall be as follows:
   A500 = 1'-8" B500 = 1'-7"
   B400 = 1'-9" B600 = 2'-2"



Bars A501, A503, A504, A511, A518





BILL OF STEEL

Mark	No./Reqd	Length	Shape
A501	652	45'-10"	C
A502	980	30'-3"	—
A503	164	46'-2"	C
A504	164	47'-5"	C
A505	652	41'-6"	—
A506	652	34'-0"	—
A507	164	41'-9"	—
A508	164	34'-1"	—
A509	164	43'-0"	—
A510	164	33'-11"	—
A511	486	23'-4"	C
A512	486	30'-3"	—
A513	324	19'-0"	—
A514	486	26'-6"	—
A515	162	34'-0"	—
① A516	2 Sets	Varies	—
A517	162	37'-9"	—
A518	162	30'-10"	C
A519	162	41'-6"	—
A520	162	34'-0"	—
② A521	2 Sets	Varies	—
B401	1380	29'-3"	—
B501	1008	29'-8"	—
B502	660	26'-8"	—
B508	330	26'-4"	—
B601	216	29'-9"	—
C1001	445	24'-0"	—

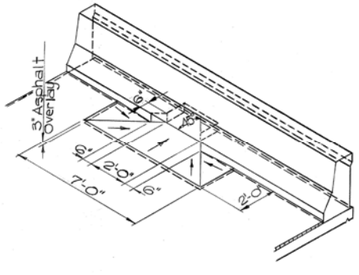
Mark	No./Reqd	Length	Shape
E501	4	36'-2"	—
E502	36	5'-10"	—
E503	6	7'-0"	—
E504	4	49'-5"	—
M401	60	34'-9"	—
M402	12	35'-6"	—
M404	12	36'-11"	—
M405	12	39'-5"	—
M406	18	29'-3"	—
M501	20	34'-11"	—
M502	4	35'-8"	—
M503	4	37'-1"	—
M504	4	39'-7"	—
M505	4	43'-3"	—
M601	20	35'-1"	—
M602	4	36'-0"	—
M603	4	37'-5"	—
M604	4	39'-11"	—
M605	4	43'-7"	—
S401	150	5'-10"	□
S402	637	9'-11"	⊓

① 324 bars each set. 18 bars each length from 26'-7" to 33'-8" in 5" increments.

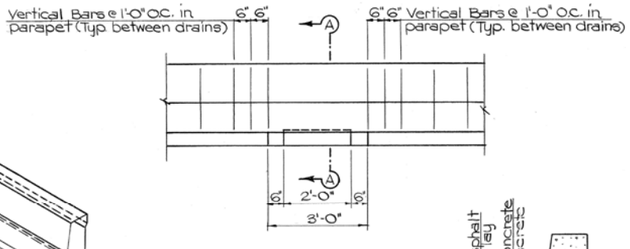
② 324 bars each set. 12 bars each length from 27'-0" to 43'-3" in 7½" increments.

TABLE OF DIMENSIONS AND ANGLES

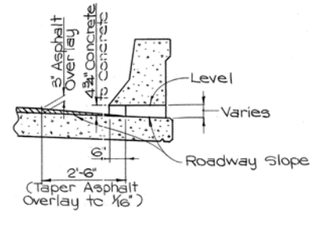
	"A"	"B"	"C"	"D"	"E"	"F"	"θ"
℄ Pier B	13'-0"	36'-0"	12'-0"	74'-0"			90°00'00"
Span 2					74'-9"	74'-9"	
℄ Pier C	13'-0"	36'-0"	12'-0"	74'-0"			90°00'00"
Span 3					74'-9"	74'-9"	
℄ Pier D	13'-0"	36'-0"	12'-0"	74'-0"			90°00'00"
Span 4					74'-9"	74'-9"	
℄ Pier E	13'-0"	36'-0"	12'-0⅛"	74'-0⅛"			89°56'24"
Span 5					74'-9"	74'-9"	
℄ Pier F	13'-0"	36'-0"	12'-4⅛"	74'-4⅛"			89°28'17"
Span 6					74'-9⅛"	74'-9⅛"	
℄ Pier G	13'-0⅛"	36'-0¼"	13'-6⅜"	75'-7¼"			88°32'12"



ISOMETRIC OF DRAIN
No Scale



ELEVATION
No Scale



SECTION A-A
No Scale

ESTIMATED QUANTITIES

Item No.	Item	Unit	Quantity
604-03.02	Steel Bar Reinforcement	Lbs.	429,650
604-03.01	Class A Concrete	Cu. Yds.	1528.8

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY D. McCorkle DATE 8-75
DRAWN BY T. Robison DATE 8-75
SUPERVISED BY D. McCorkle DATE 8-75
CHECKED BY F. Hoffman DATE 8-75

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER

SLAB PLAN - SPANS 1-6
STA. 235+24.50

SHELBY COUNTY

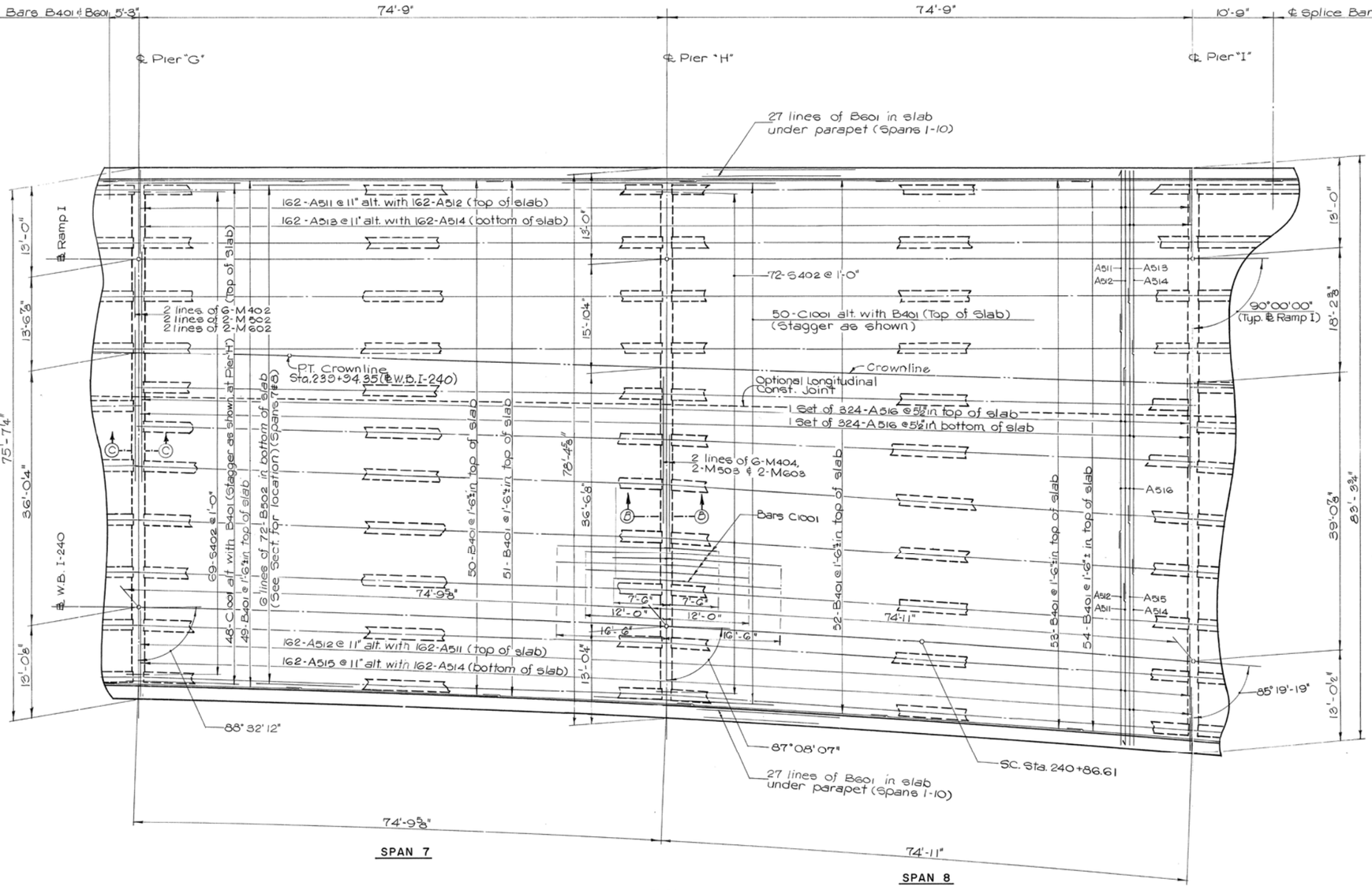
CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-82

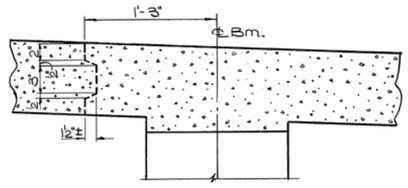
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(193)9	1975	10

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PLAN
Scale ~ ⅛"=1'-0"



OPTIONAL LONGITUDINAL CONSTRUCTION JOINT IN SLAB
Scale ~ 1½"=1'-0"

NOTES

1. See Dwg. M-44-81 for Typical Sections.
2. See Dwg. M-44-82 for Bill of Steel & Estimated Quantities.
3. See Tenn. Std. Dwg. M-28-1 for parapet reinforcing to be placed in slab. The parapet shall not be poured until the slab is poured and cured.
4. Minimum bar laps shall be as follows;
   A500 = 1'-8" B500 = 1'-7"
   B400 = 1'-3" B600 = 2'-2"
5. The outside edge of slab & parapet shall conform to the horizontal curve.
6. All girders to be supported during slab construction to prevent rotation.

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY D. Mc Corkle DATE 8-75
DRAWN BY T. Robison DATE 8-75
SUPERVISED BY D. Mc Corkle DATE 8-75
CHECKED BY F. Hoffman DATE 8-75

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32A
W.B. I-240 OVER WOLF RIVER

SLAB PLAN – SPANS 7-8
STA. 235+24.50

SHELBY COUNTY

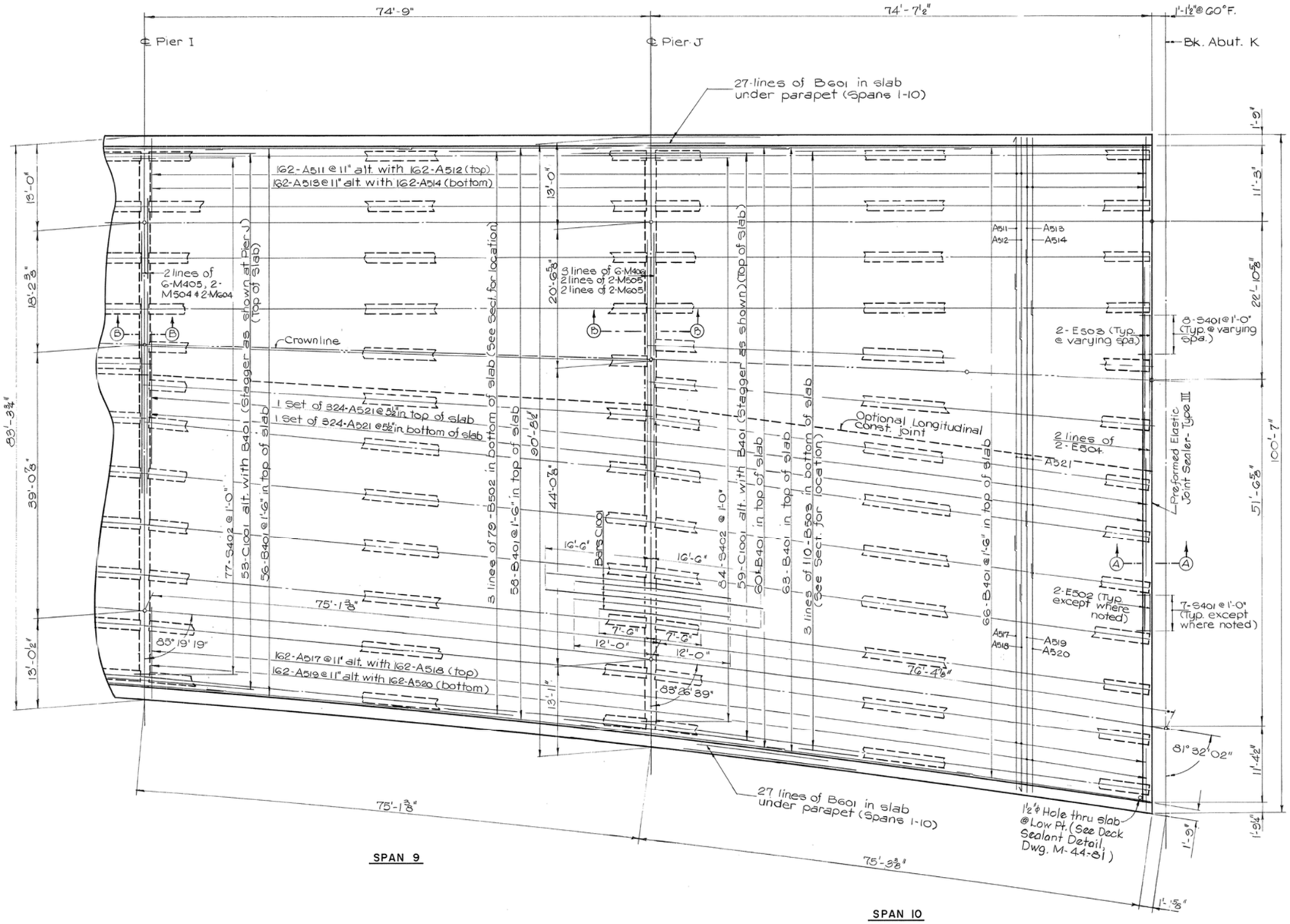
CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-83

CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(193)9	1975	17

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION



PLAN
scale ~ ⅛"=1'-0"

NOTES

1. See Dwg. M-44-81 for Typical Sections.
2. See Dwg. M-44-82 for Bill of Steel & Est. Quant.
3. See Tenn. Std. Dwg. K-80-130 for Details of Preformed Elastic Joint Sealer.
4. Minimum bar laps shall be as follows.
   A500 = 1'-8" B500 = 1'-7"
   B400 = 1'-3" B600 = 2'-2"
5. See Tenn. Std. Dwg. M-28-1 for parapet reinforcing to be placed in slab. The parapet shall not be poured until the slab is poured & cured.
6. The outside edge of slab & parapet shall conform to the horizontal curve.
7. All girders to be supported during slab construction to prevent rotation.
8. The end 2' of the slab at the expansion joint and top 15" of abutment backwall shall be poured concurrently, and are to be poured after all other poure are complete.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER

SLAB PLAN - SPANS 9-10
STA. 235+24.50

SHELBY COUNTY

CORRECT _____ ENGINEER OF STRUCTURES

APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-84

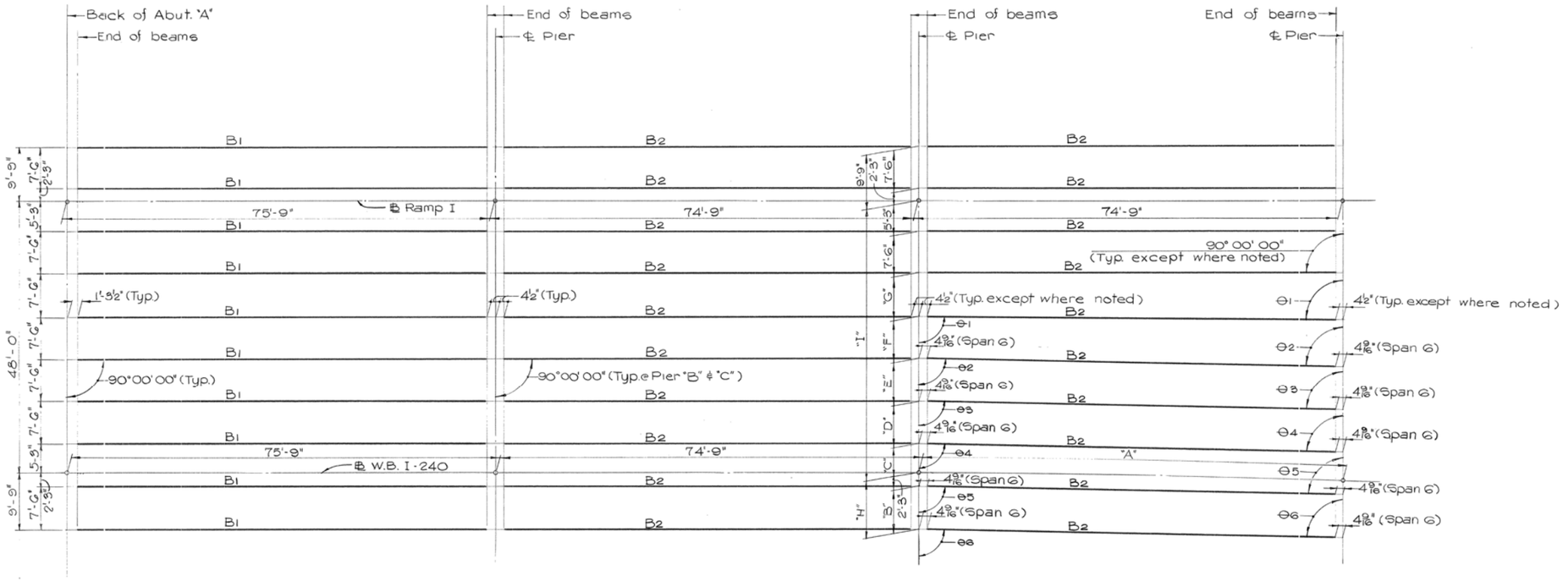
HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY D. Mc Corkle DATE 8-75
DRAWN BY T. Robison DATE 8-75
SUPERVISED BY D. Mc Corkle DATE 8-75
CHECKED BY F. Hoffman DATE 8-75

CONSTR. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(139)9	1975	13

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



SPAN 1

SPAN 2 OR 3

SPAN 4, 5 OR 6

FRAMING PLAN
Scale ~ 3/32" = 1'-0"

	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	θ1	θ2	θ3	θ4	θ5	θ6
Span 4	74'-9"														
℄ Pier E		7'-6"	5'-3"	7'-6"	7'-6"	7'-6 1/16"	7'-6 1/16"	9'-9"	48'-0 1/8"	89°59'42"	89°59'24"	89°59'24"	89°59'24"	89°59'24"	89°59'24"
Span 5	74'-9"														
℄ Pier F		7'-6"	5'-3"	7'-6"	7'-6"	7'-8 1/16"	7'-8 1/16"	9'-9"	48'-4 1/8"	89°52'23"	89°44'46"	89°44'44"	89°44'42"	89°44'40"	89°44'37"
Span 6	74'-9 1/8"														
℄ Pier G		7'-6 1/16"	5'-3 1/16"	7'-6 1/16"	7'-6"	8'-3 1/2"	8'-3 1/2"	9'-9 1/16"	49'-7 1/8"	89°31'28"	89°02'57"	89°02'48"	89°02'40"	89°02'32"	89°02'23"

NOTES

1. See Dwg. M-44-87 for beam details.
2. See Dwg. M-44-81 for Typical Sections @ Abutments & Piers.

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY D. Mc Corkle DATE 8-75
DRAWN BY T. Robison DATE 8-75
SUPERVISED BY D. Mc Corkle DATE 8-75
CHECKED BY F. Hoffman DATE 8-75

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER

FRAMING PLAN – SPANS 1-6
STA. 235+24.50

SHELBY COUNTY

CORRECT _____ ENGINEER OF STRUCTURES

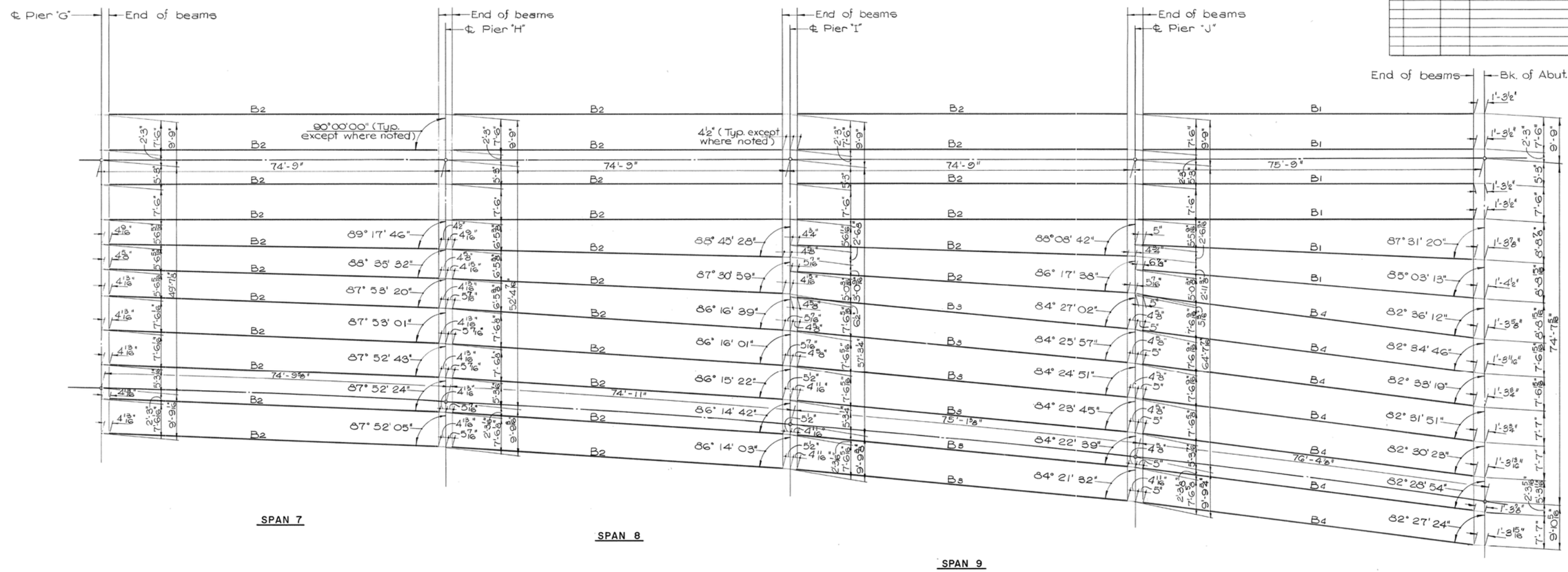
APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-85

CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(193)9	1975	19

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



FRAMING PLAN
Scale ~ 3/32" = 1'-0"

NOTES

1. See Dwg. M-44-67 for details of beams.
2. See Dwg. M-44-81 for typical sections ℄ abutments & piers.
3. Skew angles at opposite piers are identical to those shown.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER

FRAMING PLAN - SPANS 7-10
STA. 235+24.50

SHELBY COUNTY

CORRECT _____ ENGINEER OF STRUCTURES

APPROVED _____ DIRECTOR OF HIGHWAYS

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

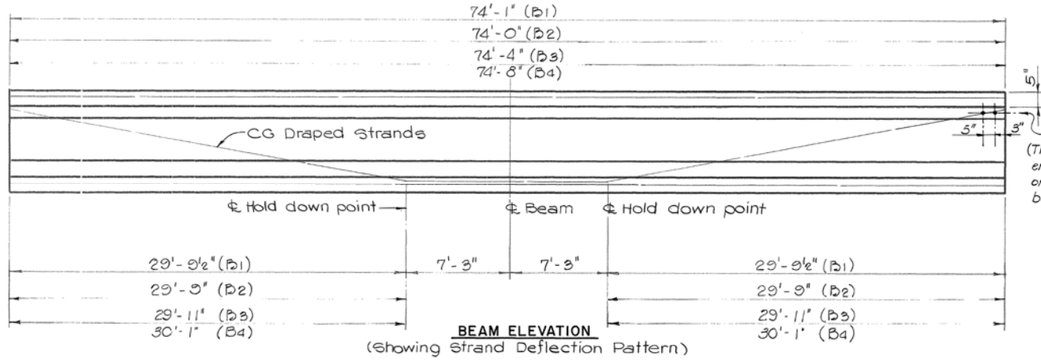
DESIGNED BY D. Mc Corkle DATE 8-75
DRAWN BY T. Rodison DATE 8-75
SUPERVISED BY D. Mc Corkle DATE 8-75
CHECKED BY F. Hoffman DATE 8-75

M-44-86

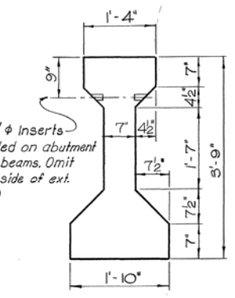
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EAC1-240-1(193)9	1975	20

REVISIONS

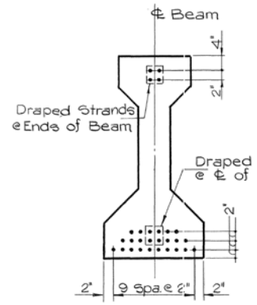
NO.	DATE	BY	BRIEF DESCRIPTION



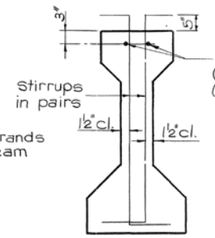
BEAM ELEVATION
(Showing Strand Deflection Pattern)



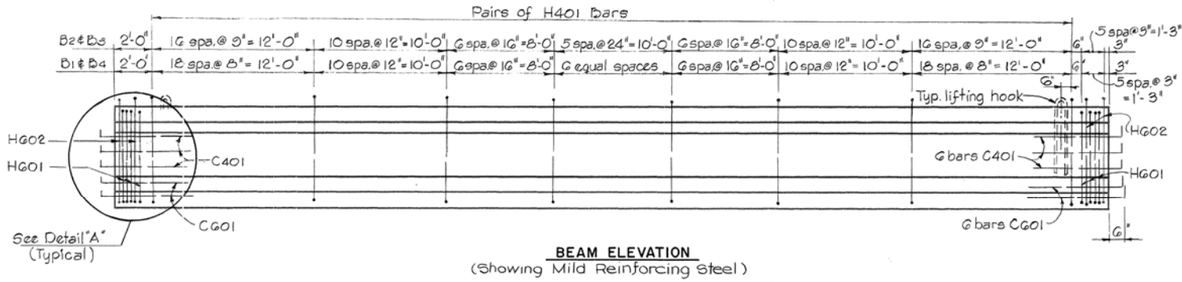
AASHO
TYPE III BEAM



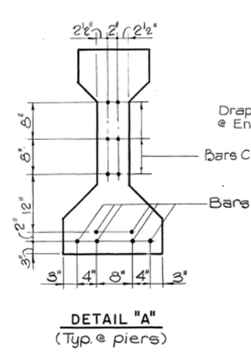
STRAND PATTERN
(Spans 1 & 10)
24-½"ϕ Strands



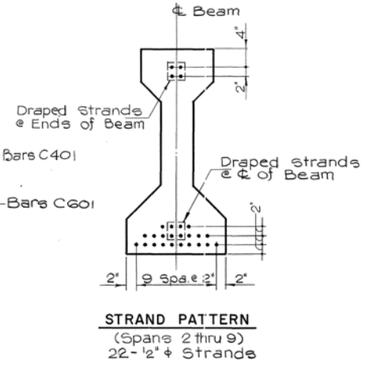
TYP. WEB
REINFORCING



BEAM ELEVATION
(Showing Mild Reinforcing Steel)



DETAIL "A"
(Typ. @ piers)

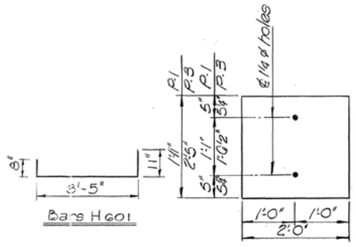


STRAND PATTERN
(Spans 2 thru 9)
22-½"ϕ Strands

NOTES:

1. The top of all beams are to be rough floated. At approximately the time of initial set, the top of the beams will also be scrubbed transversely with a coarse wire brush to remove all laitance and produce a rough surface.
2. Mild reinforcing shall be A.S.T.M. A615 Grade 60.
3. All prestressing strands to be ½"ϕ high strength type 270 K 7 wire uncoated stress-relieved prestressing strands.
4. An initial force of 28,910 lbs. shall be applied to each strand in all beams.
5. All beams are AASHTO-PCI standard Type III.
6. After the beam is removed from the prestressing bed, the bars C601 & C401 shall be bent horizontally a sufficient amount so as to permit the "C" bars of adjoining beam to mesh when in the erected position.
7. The prestressing strands shall be cut flush at abutment ends of beams and a protective coating placed on the ends of beams. At the pier ends of beams, the prestressing strands shall be left projecting 3"± from the ends of the beams. There shall be no protective coating placed on the ends of beams or on the projecting strands.
8. The concrete for this construction shall be of such properties as to attain a compressive strength of not less than 5000 P.S.I. at the age of 28 days and stress transfer shall not be made to the bridge member until the test specimens indicate that the concrete has reached a compressive strength of at least 4000 P.S.I. See Dwg. M-44-71 for concrete Finishing Note (Note *7)
9. The cost of furnishing and placing all plain Elastomeric Pads, dowel bars, inserts and rubber bonding cement shall be included in the bid price for the beams.
10. All beams to be supported during slab construction to prevent rotation.
11. Elastomeric bearing pads shall conform to Section 25 of AASHTO Standard Specifications for Highway Bridges (1973) plus Interim (1974).
12. Plain Bearings may be made of 70 durometer hardness Elastomers, Laminated Bearings shall be made of 50 durometer hardness Elastomers.

Note: Bars C601 & C401 to be omitted from the abutment end of beams B1 & B4



P-1 & P-3

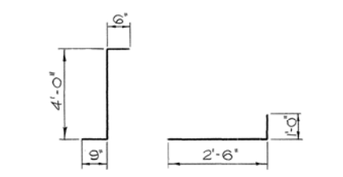
P-2

PLAIN BEARINGS
No. Req'd:
P-1 = 89
P-2, 9
P-3 = 2

LAMINATED BEARING E-1 FOR ABUTS.
(28 Req'd)

ELASTOMERIC BEARING PADS

Note: Cost of Plain Bearing, P-1, P-2 & P-3, to be included in price bid for prestressed concrete beams. Laminated bearings paid for under Item No. 908-21.01.



BAR BENDING DIAGRAM

BILL OF STEEL (ONE BEAM)

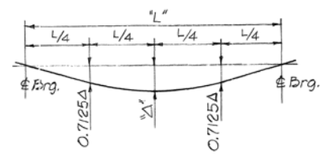
Mark	No. Req'd.	Length	Shape
C401	*	3'-6"	
C601	*	3'-6"	
H401	**	5'-3"	
HG01	16	5'-0"	
HG02	8	5'-3"	
HG03	4	38'-2"	

* 6 req'd. for B1 or B4; 12 req'd. for B2 or B3
** 150 req'd. for B1 or B4; 140 req'd. for B2 or B3

BEAM DATA & ESTIMATED QUANTITIES

Beam	No. Req'd.	Length	Δ (ft.)	Estimated Quantities per Beam		
				Conc. (Cu. Yd.)	Reinf. Steel (lbs.)	Prestressing Steel (lin. ft.)
B1	16	74'-1"	0.1298	10.7	1000	1,790
B2	78	74'-0"	0.1292	10.6	1010	1,659
B3	6	74'-4"	0.1316	10.7	1010	1,646
B4	7	74'-8"	0.1340	10.7	1000	1,804

Note: Cost of plain elastomeric pads, 1"ϕ x 1'-9" dowel bars, inserts and rubber bonding cement to be included in the cost of prestressed beams.



NOTE: This curve is for dead load of the slab and all dead loads that are applied after the slab is in place, and should be corrected to compensate for the effects due to vertical curve.

DEAD LOAD DEFLECTION DIAGRAM

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32A
W.B. I-240 OVER WOLF RIVER

PRESTRESSED BEAM & BEARING DETAILS
STA. 235+24.50

SHELBY COUNTY

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-87

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY	D. McCorkle	DATE 8-'75
DRAWN BY	T. Robison	DATE 8-'75
SUPERVISED BY	D. McCorkle	DATE 8-'75
CHECKED BY	F. Hoffman	DATE 8-'75

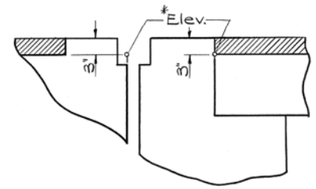
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(193)9	1975	21

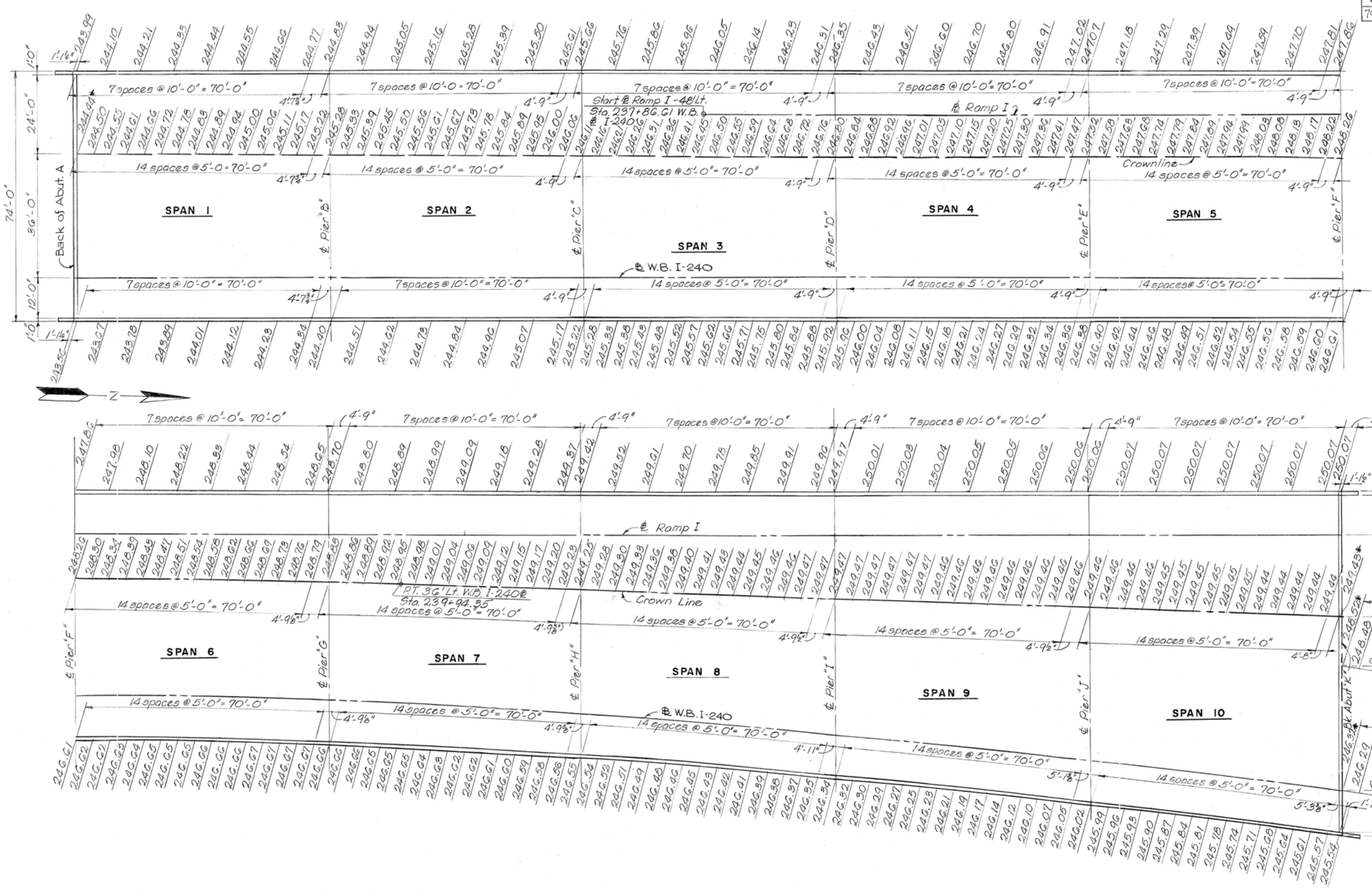
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

NOTES:

1. Elevations shown are top of concrete (3" below finished grade) and do not include asphalt overlay.
2. Elevations at Abutments and marked thus (*) are given to points as shown below.





STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32A
W.B. I-240 OVER WOLF RIVER

SCREED ELEVATIONS
STA. 235+24.50
SHELBY COUNTY

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY	D. McCorkle	DATE	9-'75
DRAWN BY	J. Starr	DATE	9-'75
SUPERVISED BY	D. McCorkle	DATE	9-'75
CHECKED BY	F. Hoffman	DATE	9-'75

CORRECT _____ ENGINEER OF STRUCTURES

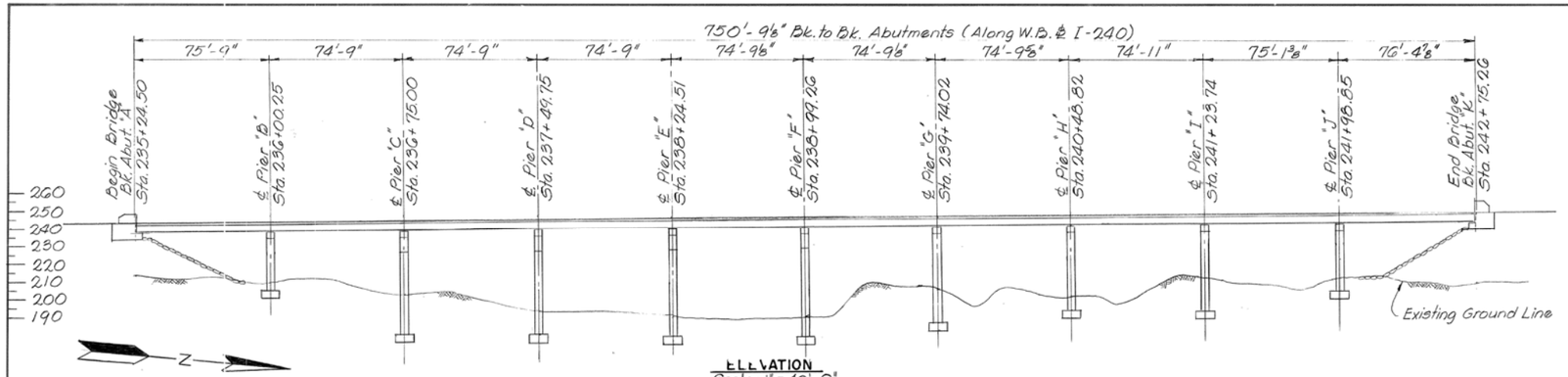
APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-88

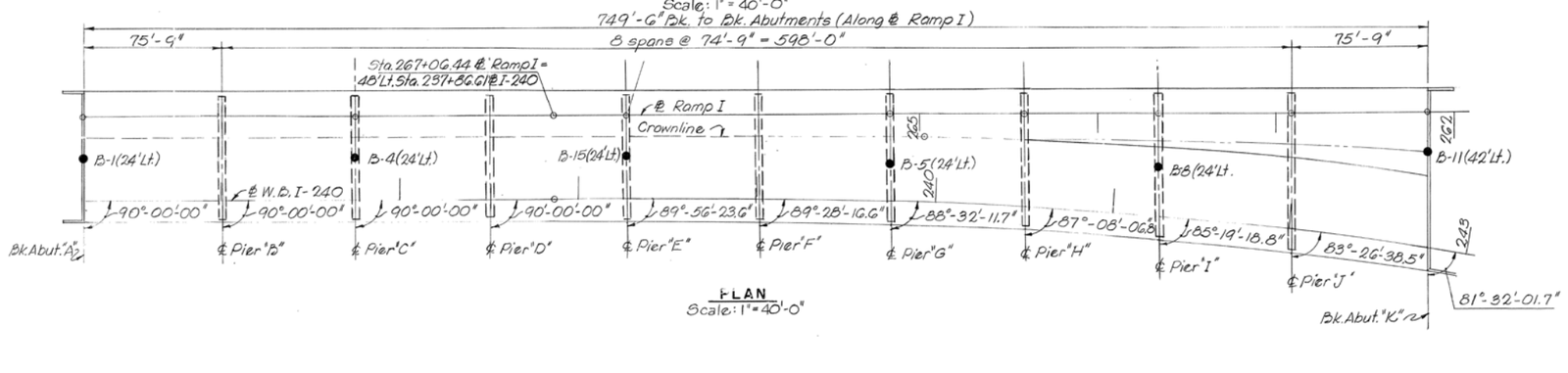
MICROFILMED

N11545

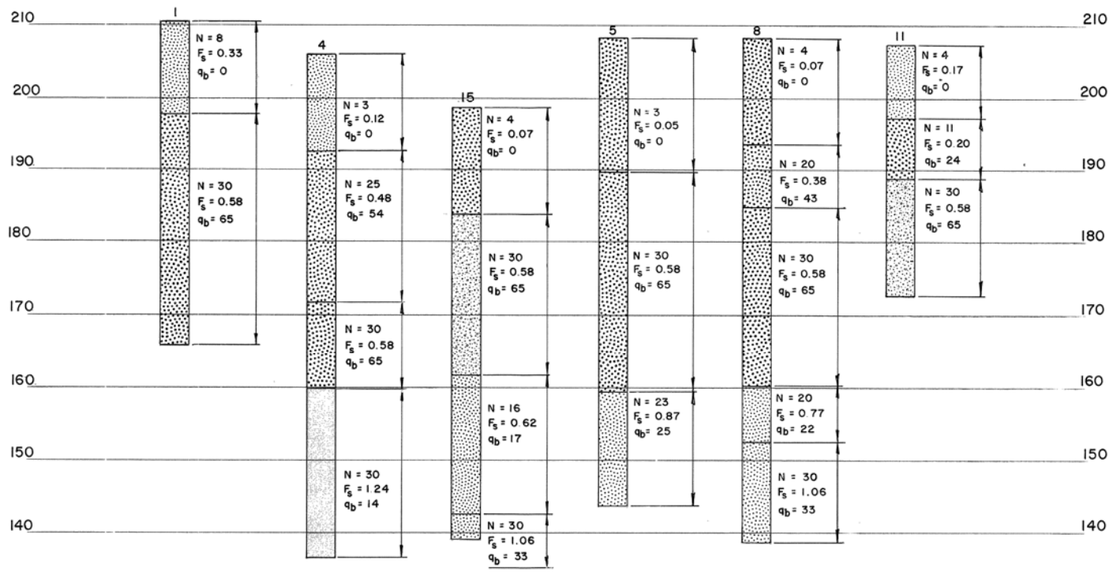
CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-31127-44	EACI-240-1(193)9	1975	22



ELEVATION
Scale: 1" = 40'-0"

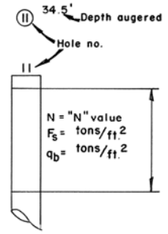


PLAN
Scale: 1" = 40'-0"



Legend

- GRAVEL
- SAND
- SILT
- CLAY



PILE DATA

Location	Design Load ①	Cut-off Elev.	Est. Tip Elev.	Pile Length ②
Abut. A.	95 Tons	Varies	192.0	45'
Pier B.	100 Tons	200.0	180.0	20'
Pier C	95 Tons	186.5	166.5	20'
Pier D	95 Tons	181.5	166.5	15'
Pier E	95 Tons	181.5	166.5	15'
Pier F	95 Tons	181.5	166.5	15'
Pier G	85 Tons	192.5	177.5	15'
Pier H	85 Tons	192.5	177.5	15'
Pier I	90 Tons	191.5	176.5	15'
Pier J	100 Tons	193.5	178.5	15'
Abut. K.	95 Tons	Varies	185.0	55'

① Design loads base on factored loads.
② Pile lengths subject to change after reviewing results of load tests.

NOTE:
This drawing is not to be used as a layout.

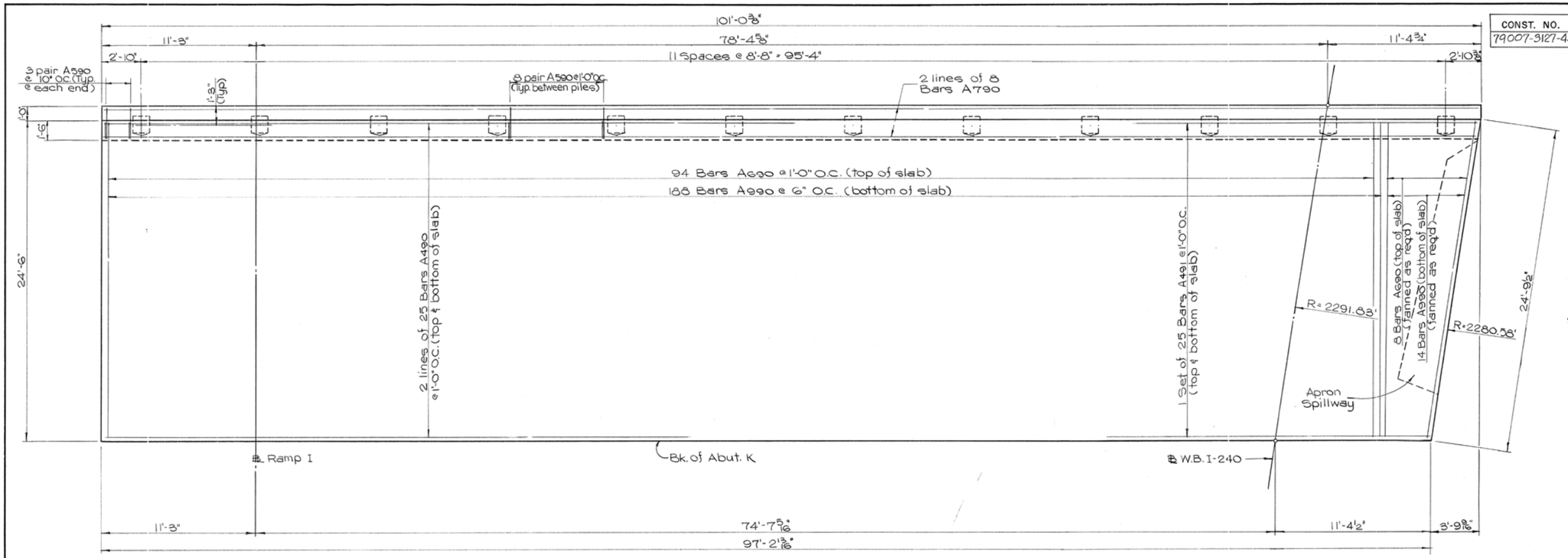
PROJECT I-240-1(83)4

FOUNDATION DATA

E.B. & W.B. I-240 OVER WOLF RIVER
BRIDGE NO. 32 A

SHELBY COUNTY

M-44-89



PLAN
Scale ~ ¼" = 1'-0"

CONST. NO.	PROJECT NO.	YEAR	SHEET NO.
79007-3127-44	EACI-240-1(133)9	1975	23

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

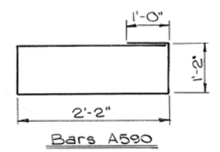
NOTES

1. See Tenn. Std. Dwg. K-86-144 for additional details.
2. Apron Spillway required at side of bridge at Abutment A and Abutment K. See Std. Dwg. P-S-9A for details. Cost of *three* (3) spillways to be included in cost of Roadway Items.

BILL OF STEEL

Bar	At Abut A		At Abut K		Shape
	No. Req'd	Length	No. Req'd	Length	
A490	100	35'-8"	100	34'-5"	——
A491	—	—	2 Sets	Varies*	——
A590	116	7'-6"	188	7'-6"	▭
A690	71	24'-0"	102	24'-0"	——
A790	16	36'-2"	16	51'-5"	——
A990	141	24'-0"	202	24'-0"	——

* 25 bars each set. 1 bar each length from 31'-5" to 35'-5" in 2" increments.



Bars A590

ESTIMATED QUANTITIES

Item	Description	Unit	Quantity	
			At Abut. A	At Abut. K
604-03.01	Class A Concrete	Cu. Yd.	73.3	103.4
604-03.02	Steel Bar Reinforcement	Lbs.	18,560	26,670
606-09.03	Precast Conc. Piles - Size 1)	Lin. Ft.	90	120

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE NO. 32 A
W.B. I-240 OVER WOLF RIVER

APPROACH SLAB
STA. 235+24.00

SHELBY COUNTY

CORRECT _____ ENGINEER OF STRUCTURES

APPROVED _____ DIRECTOR OF HIGHWAYS

M-44-90

HARLAND BARTHOLOMEW AND ASSOCIATES
MEMPHIS, TENNESSEE

DESIGNED BY D. McCorkle. DATE 9-'75
DRAWN BY T. Robison DATE 9-'75
SUPERVISED BY D. McCorkle DATE 9-'75
CHECKED BY F. Hoffman DATE 9-'75

MICROFILMED

N1545