

JAN 7 1958

STATE OF IOWA
STATE HIGHWAY COMMISSION
DESIGN FOR
150'-10"x24' PRE-STRESSED CONCRETE BEAM BRIDGE
SECONDARY ROAD SYSTEM PROJ. S-1392 (3)
CRAWFORD COUNTY
SEPTEMBER 1957.

MILEAGE SUMMARY: = 153'-13 1/4" = 0.029006 MILES.

SPECIFICATIONS:
 Design: A.A.S.H.O. Series of 1953.
 Construction: Standard Specifications of the Iowa State Highway Commission, Series of 1956, plus current Special Provisions except as noted.

DESIGN-957, WEST SIDE TWP. CRAWFORD COUNTY
 SEC. 30, STA. 5+57.415 OVER EAST BOYER RIVER.
 150'-10"x24' PRESTRESSED CONCRETE BEAM BRIDGE

DESCRIPTION	ABUTS.	PIERS	SUPERSTRUCT.	TOTAL
CONCRETE Class "C"				
" Class "A"	45.40 C.Y.	19.00 C.Y.	95.10 C.Y.	159.50 C.Y.
REIN. STEEL	2498 LBS.	3236 LBS.	21,764 LBS.	27,498 LBS.
STRUCT. STEEL			2911 "	2911 "
TREATED PILING	800 L.F.			800 L.F.
PRECAST CONC. PILING (P10-B)		630 L.F.		630 "
PRE-STRESSED BEAMS			6-55'-0" (A)	6-55'-0" (A)
"			12-46'-8" (A)	12-46'-8" (A)
HANDRAIL			307'-0 1/2" L.F.	307'-0 1/2" L.F.
EXCAVATION Class "20"	54 C.Y.			54 C.Y.
" Class "10"				2715 C.Y.
REMOVAL OF OLD STRUCTURE				LUMP SUM.

NOTE: Bridge Sign Assemblies Will be furnished & placed by Crawford County to conform with S & T Instruction No. 11, revised March-1, 1956.



LOCATION MAP
 SCALE 1" = 1 MILE

DESIGN # 957
 PROJECT # S-1392 (3)

APPROVED.

[Redacted signature]

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BOARD OF SUPERVISORS DATE.

APPROVED

CHIEF ENGINEER DATE
 IOWA HIGHWAY COMMISSION

DEPARTMENT OF COMMERCE
 BUREAU OF PUBLIC ROADS.
 RECOMMENDED FOR APPROVAL

DISTRICT ENGINEER DATE

APPROVED.

DIVISION ENGINEER DATE

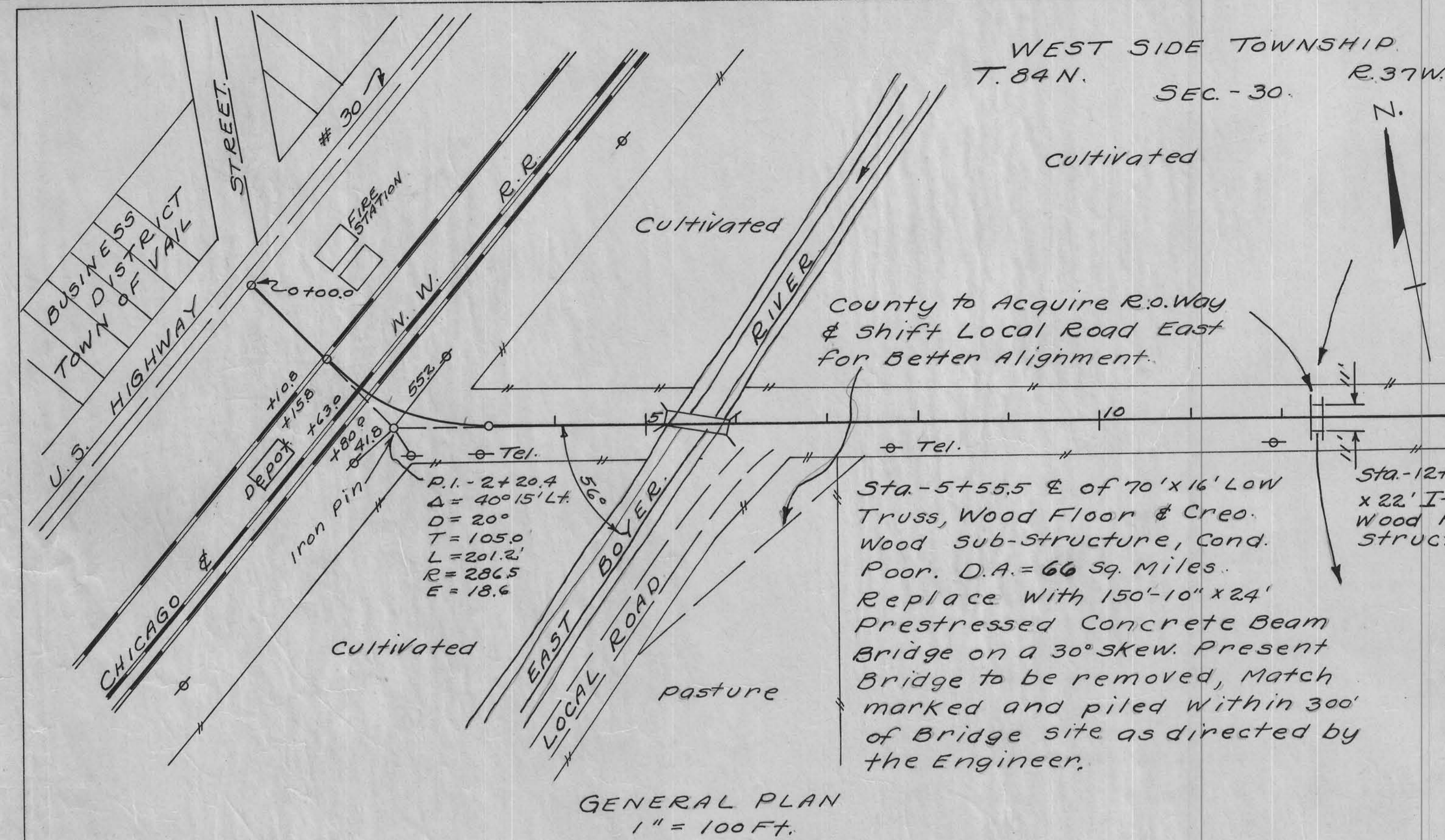


off's done
 12-11-57

CRAWFORD COUNTY.

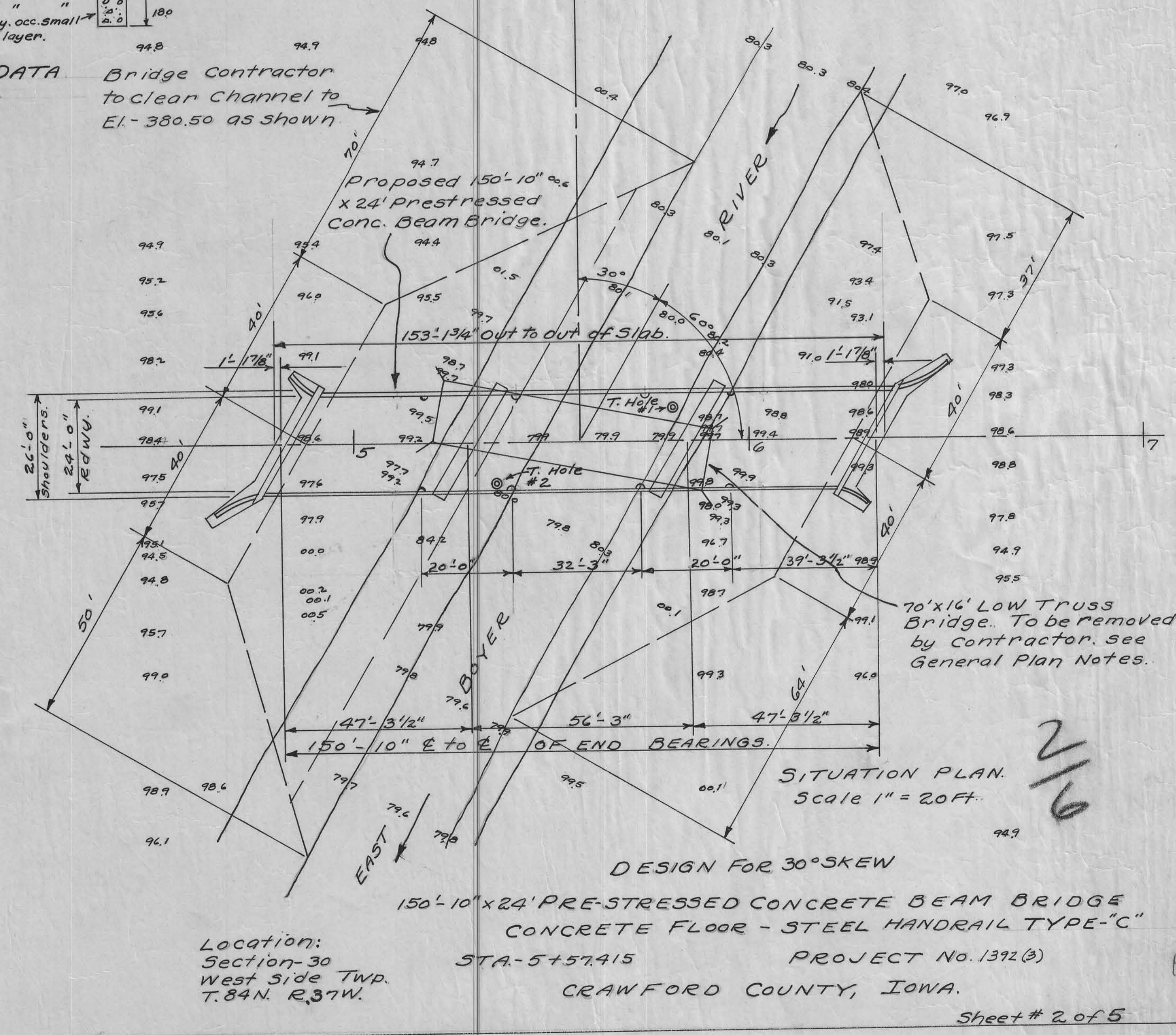
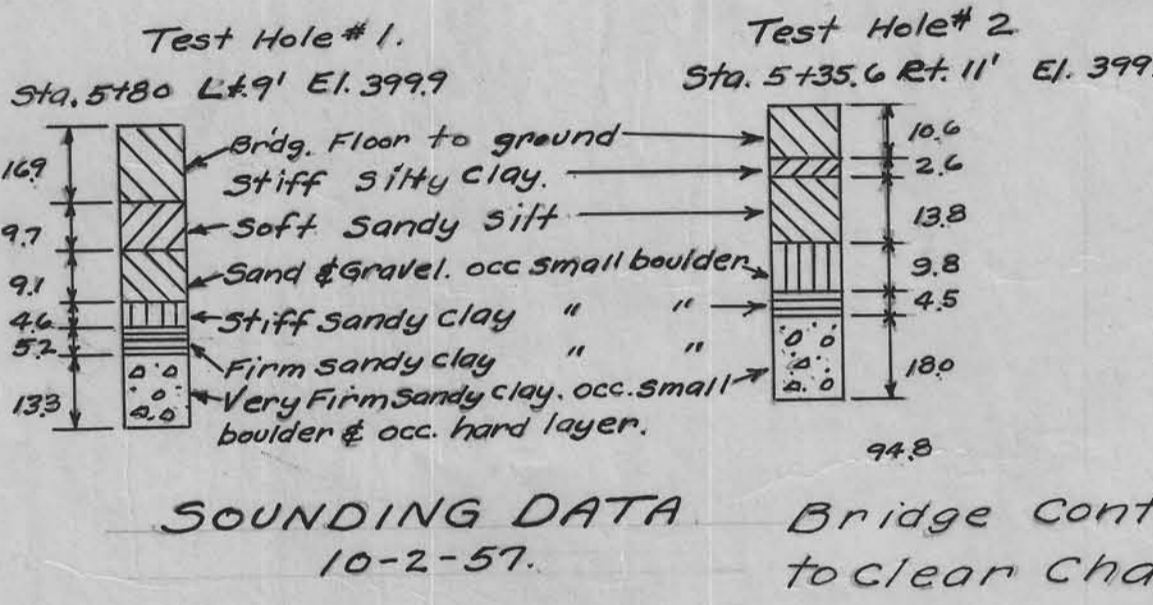
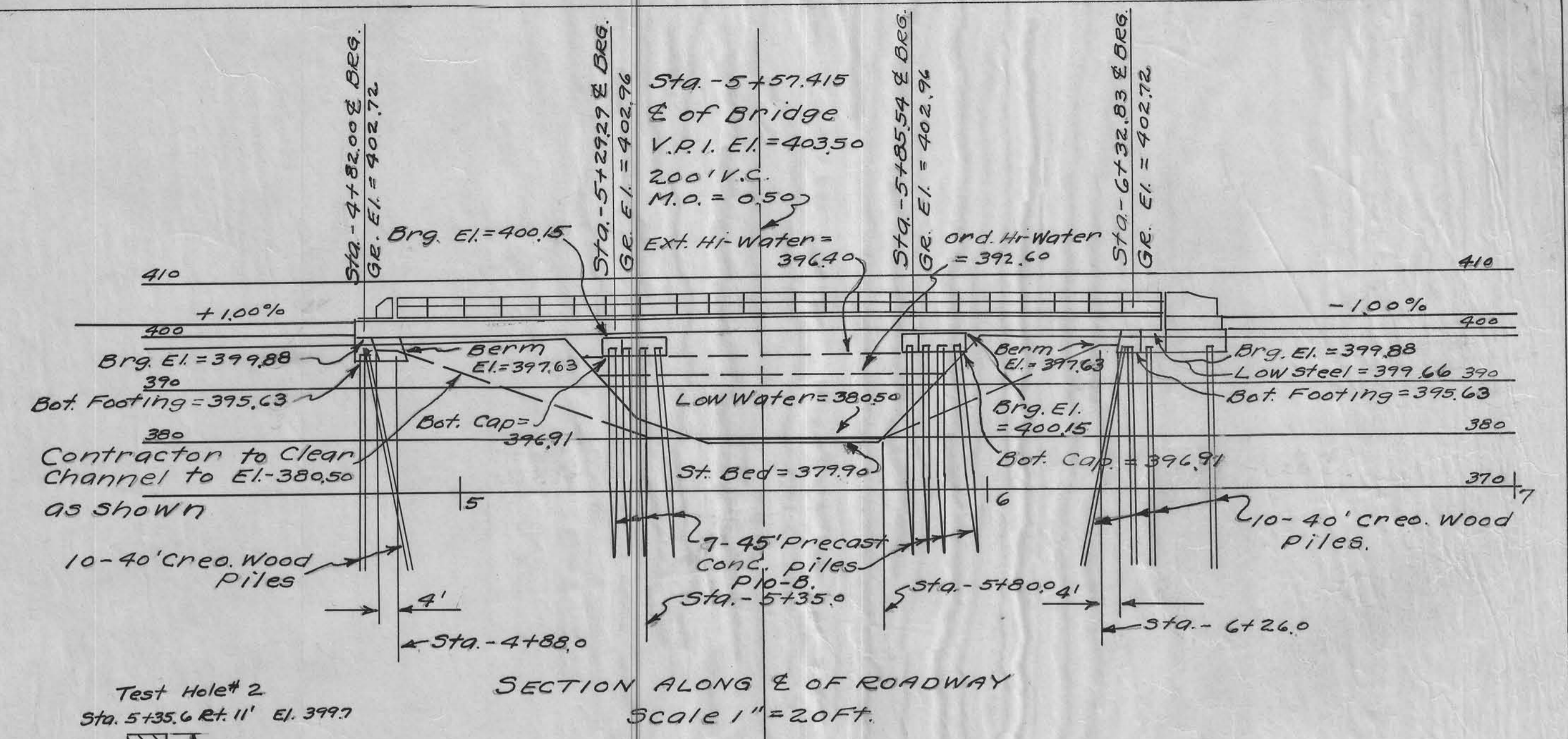
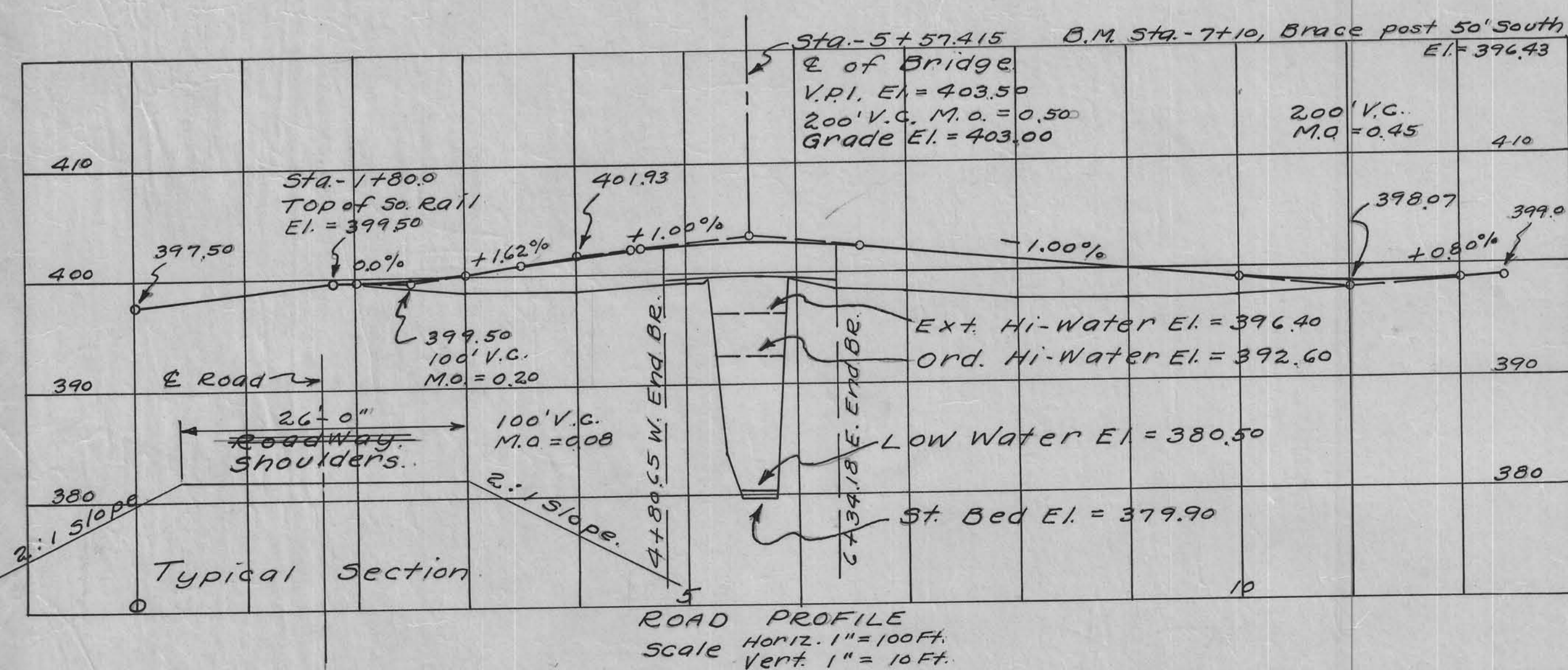
4117 JAN 7
 DESIGN No. - 957

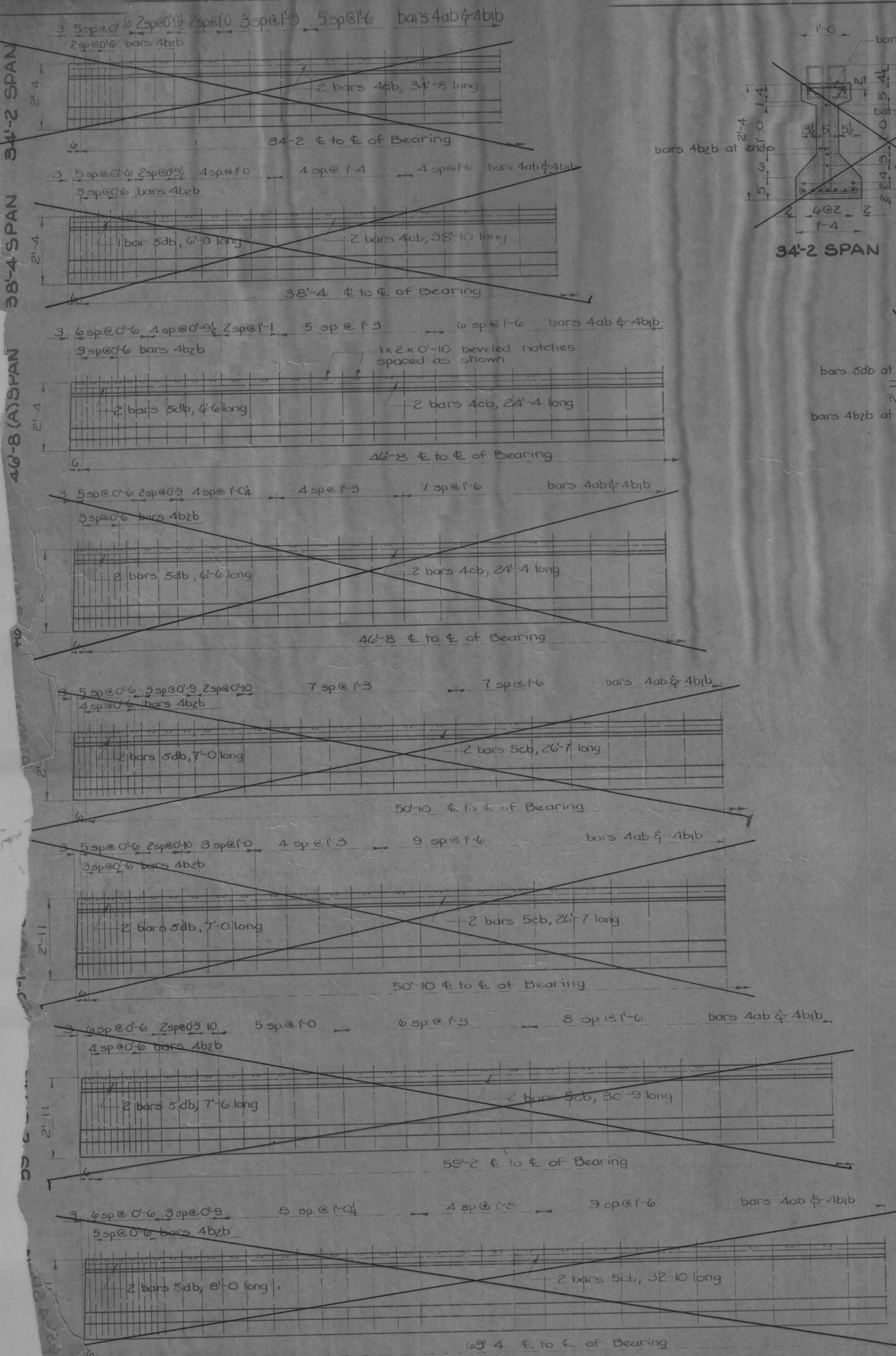
Sheet # 1 of 5
 PROJ. No. - S-1392 (3) File



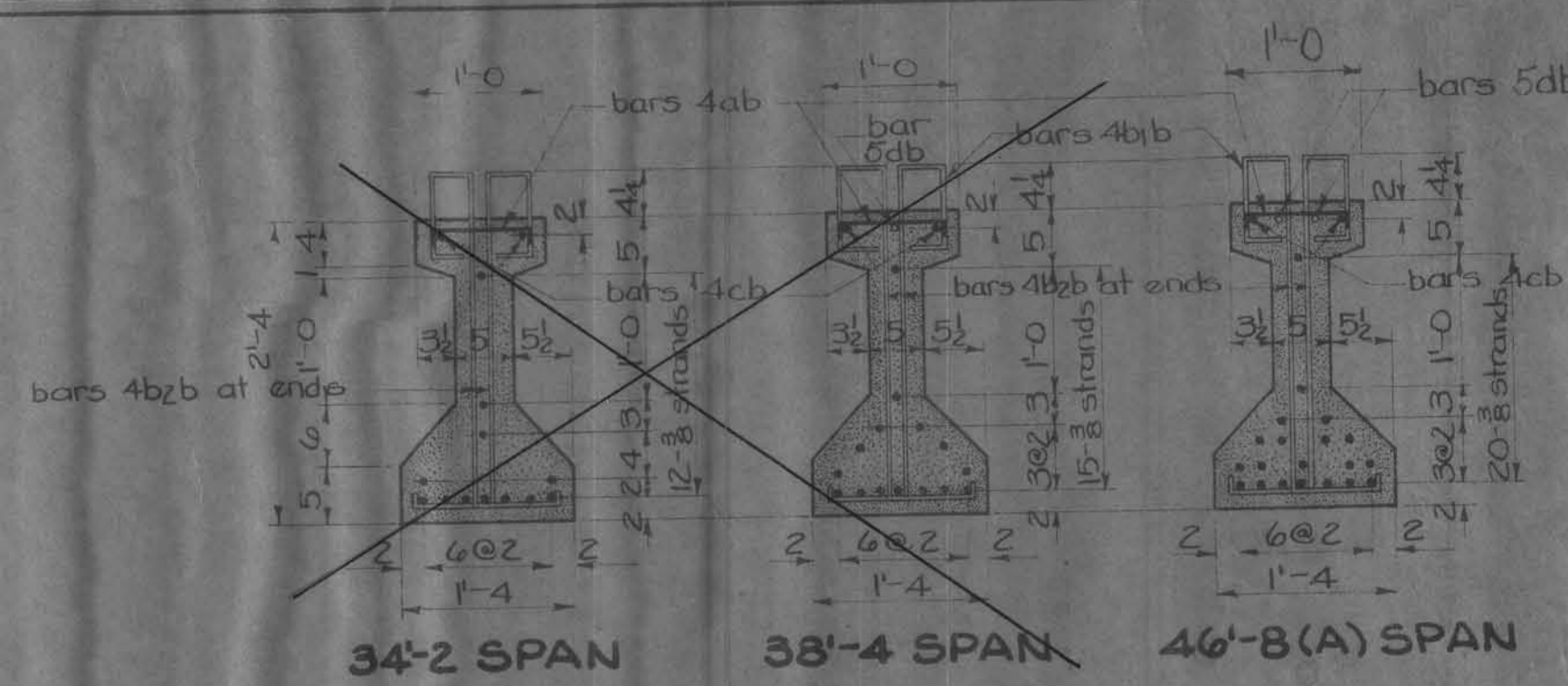
GENERAL NOTES:

Rail is to be anchored into Conc. wing post as shown on Standard H10-3. The Floor slab is to be thickened over the Piers & Abutments to compensate for the natural camber of the Pre-stressed beams. Shots should be taken after the beams are in place but before the Slab is poured and a New grade layed over the bridge. This will usually revise the grade a fraction of an inch. An allowance should be made for deflection of the beams due to the weight of the slab. (Approx. 7/16" @ E for 55'-0" beams and 5/16" @ E for 46'-8" beams). All exposed corners of 90° or sharper are to be filleted 3/4". Reinforcing bars are to be securely wired in place & supported on bar chairs before conc. is placed. Forms for slab are to be supported by the Pre-stressed beams. Bridge Seats for both Piers & Abutments are to be stepped as shown to provide for Crown of Roadway. For details of super-structure refer to Sheets P C-3 & P C-3(a) For sub-structure refer to standard P-10 for Piers & H10-3 for Abuts. With modifications shown on Sheet # 4 of these Plans. All Construction to be in accordance with the Iowa Highway Commission's Standards, Series of 1956 plus Current Special provisions as noted.

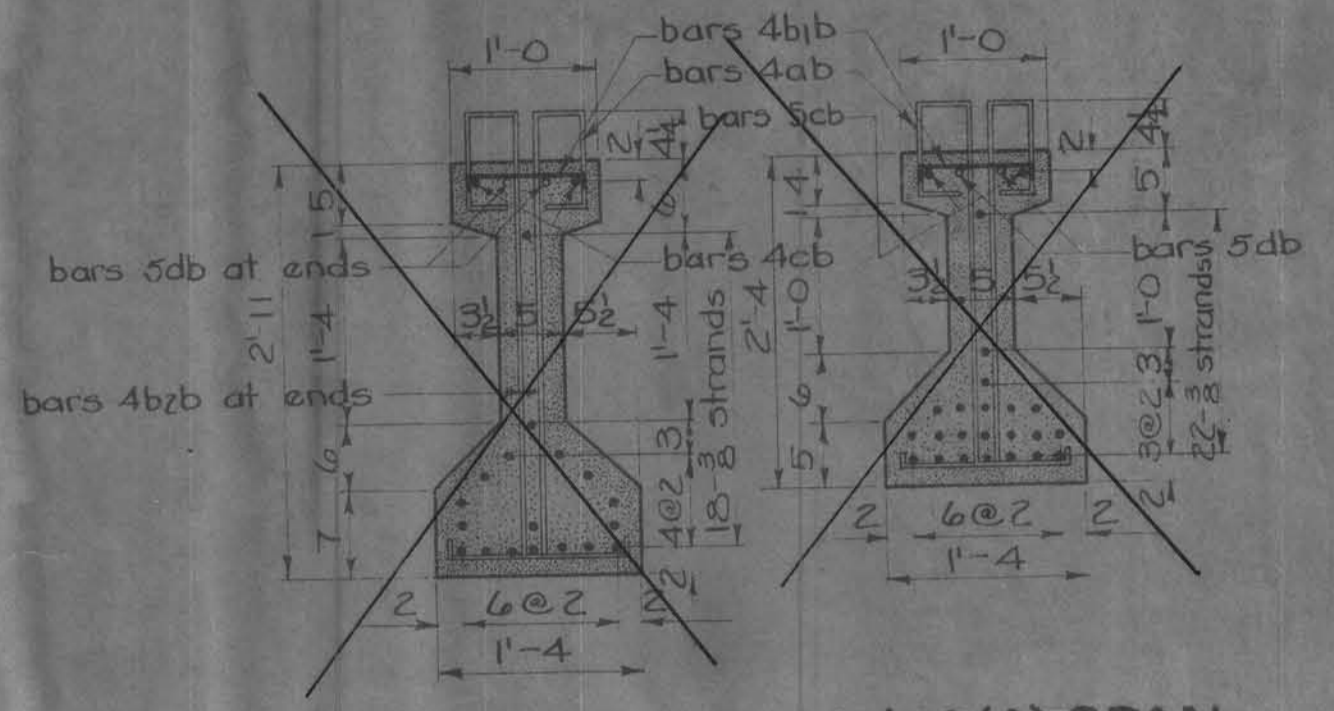




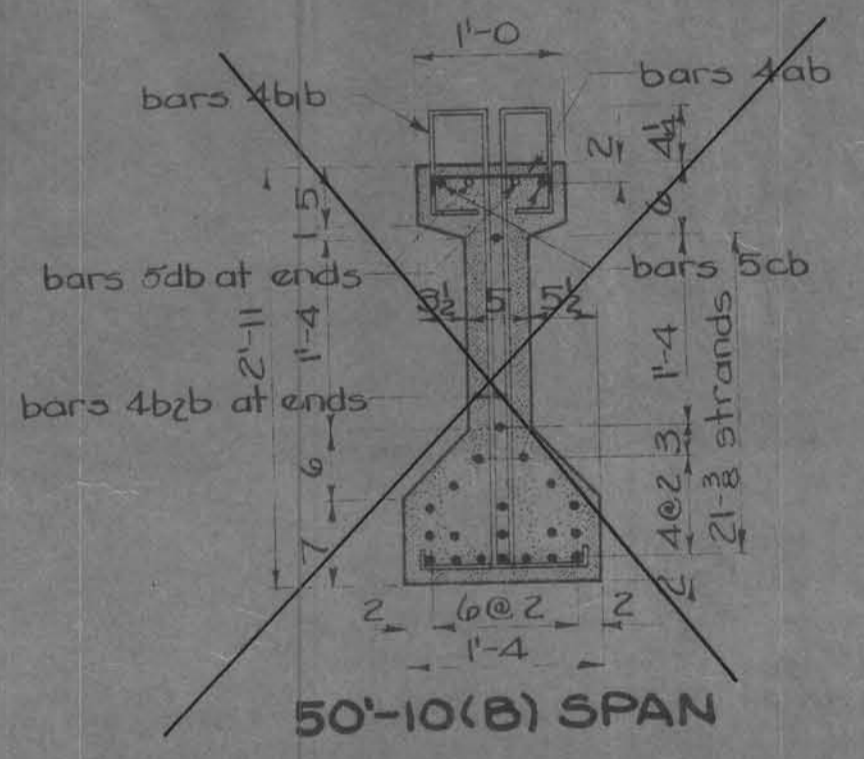
DETAILS OF BEAMS



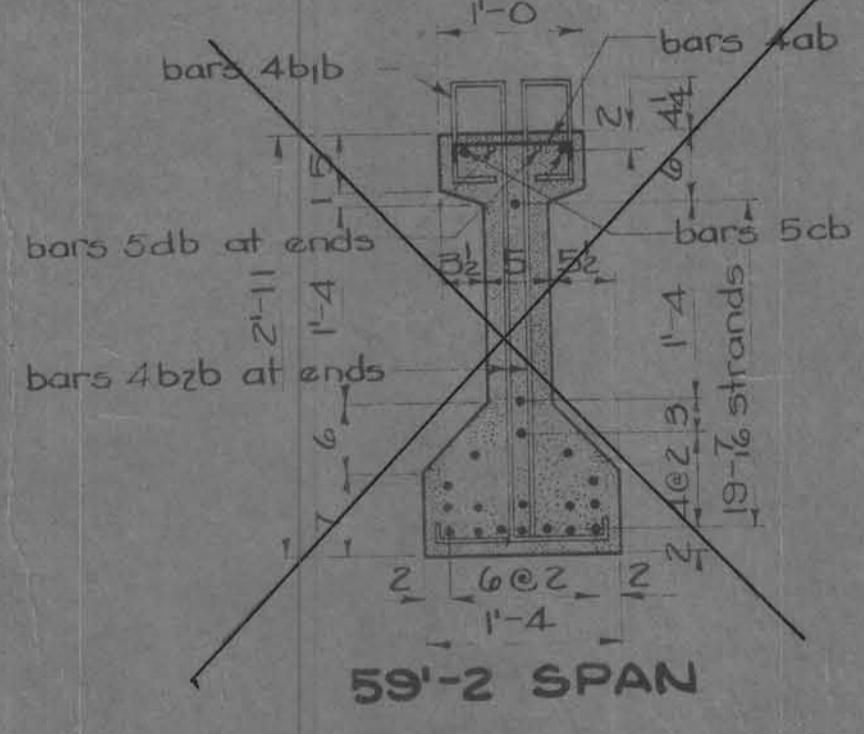
34'-2 SPAN 38'-4 SPAN 46'-8(A) SPAN



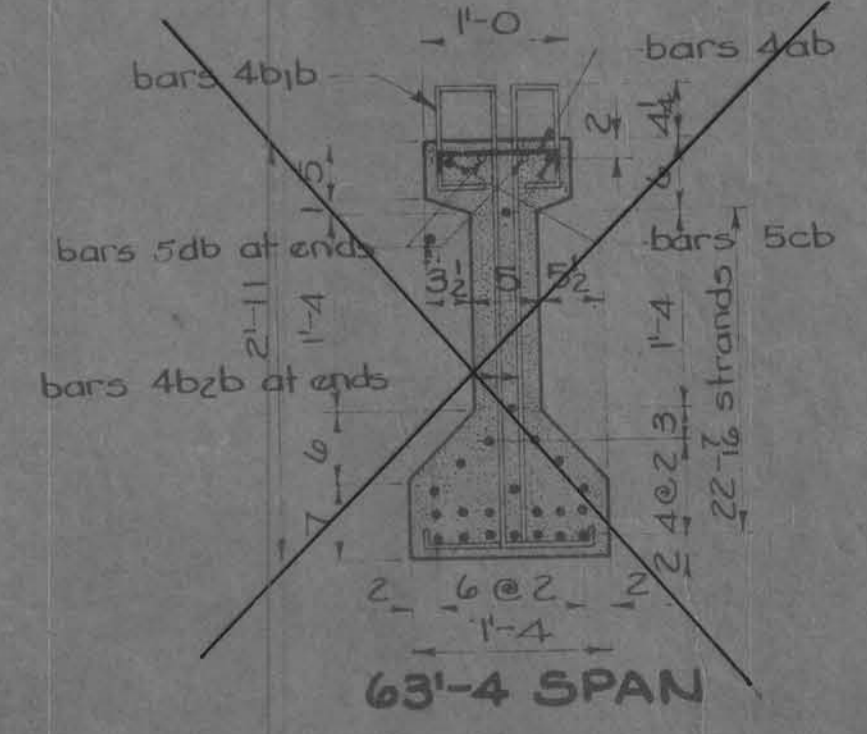
46'-8(B) SPAN 50'-10(A) SPAN



50'-10(B) SPAN



59'-2 SPAN



63'-4 SPAN

BEAM DATA							
SPAN	DEPTH	STRANDS	INITIAL PRE-STRESS	CONCR. (cu yd)	REIN. STEEL (lbs.)	STRUCT. STEEL (lbs.)	BEAM CAMBER As Erected Slab in Place
34'-2	2'-4	12	168 k	2.34	234	* 217	1/16
38'-4	2'-4	15	210 k	2.62	345	* 217	1/16
46'-8 A	2'-4	20	280 k	3.17	424	* 217	1/16
46'-8 B	2'-11	18	252 k	3.94	452	* 217	1/16
50'-10 A	2'-4	22	308 k	3.45	490	* 217	1/16
50'-10 B	2'-11	21	294 k	4.30	514	* 217	1/16
59'-2	2'-11	19	360 k	4.93	615	* 217	1/16
63'-4	2'-11	22	416 k	5.28	663	* 217	1/16

* If required

BILL OF REINFORCING STEEL FOR ONE BEAM									
BAR SHAPE	34'-2	38'-4	46'-8 A	46'-8 B	50'-10 A	50'-10 B	59'-2	63'-4	
	Nº Length	Nº Length	Nº Length	Nº Length	Nº Length	Nº Length	Nº Length	Nº Length	Nº Length
4ab	35 1'-1	39 1'-1	47 1'-1	45 1'-1	48 1'-1	47 1'-1	57 1'-1	61 1'-1	
4bb	70 4'-4	78 4'-4	94 4'-4	90 4'-11	98 4'-4	94 4'-11	114 4'-11	122 4'-11	
4bzb	12 2'-5	16 2'-5	16 2'-5	16 3'-0	20 2'-5	16 3'-0	20 3'-0	24 3'-0	
cb	2 3/4 34'-8	2 3/4 38'-10	4 3/4 24'-4	4 3/4 24'-4	4 3/4 20'-7	4 3/4 26'-7	4 5/8 30'-9	4 5/8 32'-10	
5db	—	2 6'-0	4 6'-6	4 6'-6	4 7'-0	4 7'-0	4 7'-6	4 8'-0	
TOTAL WT. (lbs)	234	345	424	452	490	514	615	663	

NOTE: This sheet is supplementary to Iowa State Highway Commission design sheet PCS and covers additional spans not covered on that sheet. For details, notes and specifications not shown refer to sheet PCS.

DESIGN FOR 30° SKEW
 150'-10" x 24' PRE-STRESSED CONCRETE BEAM BRIDGE
 CONCRETE FLOOR - STEEL HANDRAIL
 Location: Section-30 West Side TWP. T.84N. R.37W.
 STA. 5+57.415 PROJECT No. S-1392 (3)
 CRAWFORD COUNTY, IOWA.

5/6

PCS(a)

BHS-CO24(62)--63-24

Letting Date

BRIDGE DECK OVERLAY
In Sec. 30
2003

CRAWFORD COUNTY

IOWA

DEPARTMENT OF TRANSPORTATION

Project Development Division
Plans of Proposed Improvement on The

FARM TO MARKET SYSTEM

CRAWFORD COUNTY

BRIDGE DECK OVERLAY

BHS-CO24(62)--63-24

ON COUNTY HIGHWAY M-55, SECTION 30, WESTSIDE TOWNSHIP
APPROXIMATELY .20 MILES SOUTH OF HIGHWAY 30

The Standard Specifications, Series of 2001, of the Iowa Department of
Transportation Plus Current Special Provisions and Supplemental
Specifications Shall Apply to Construction Work on this Project

PROJECT NUMBER : BHS-CO24(62)--63-24

INDEX OF SHEETS

No.	Description
1	TITLE PAGE, LOCATION MAP, AND TRAFFIC NOTES
2	QUANTITY SHEET INCLUDING ESTIMATE OF QUANTITIES, ITEM NOTES, AND GENERAL NOTES

PROJECT TRAFFIC CONTROL PLAN

THIS ROAD WILL BE CLOSED TO THROUGH TRAFFIC DURING CONSTRUCTION.
LOCAL TRAFFIC TO ADJACENT PROPERTIES WILL BE MAINTAINED AS PROVIDED
FOR IN ARTICLE 1107.08 OF THE CURRENT SPECIFICATIONS.

"TRAFFIC CONTROL DEVICES, PROCEDURES, LAYOUTS, SIGNING, AND PAVEMENT
MARKINGS INSTALLED WITHIN THE LIMITS OF THIS PROJECT SHALL CONFORM TO THE
"MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AS
ADOPTED BY THE DEPARTMENT PER 761 OF THE IOWA ADMINISTRATIVE CODE (IAC)
CHAPTER 130"

MILEAGE SUMMARY

Div.	Location	Lin. Ft.	Miles
	BRIDGE @ STA. 5+57.415	153' 1 3/4"	0.029
	TOTAL	153' 1 3/4"	0.029

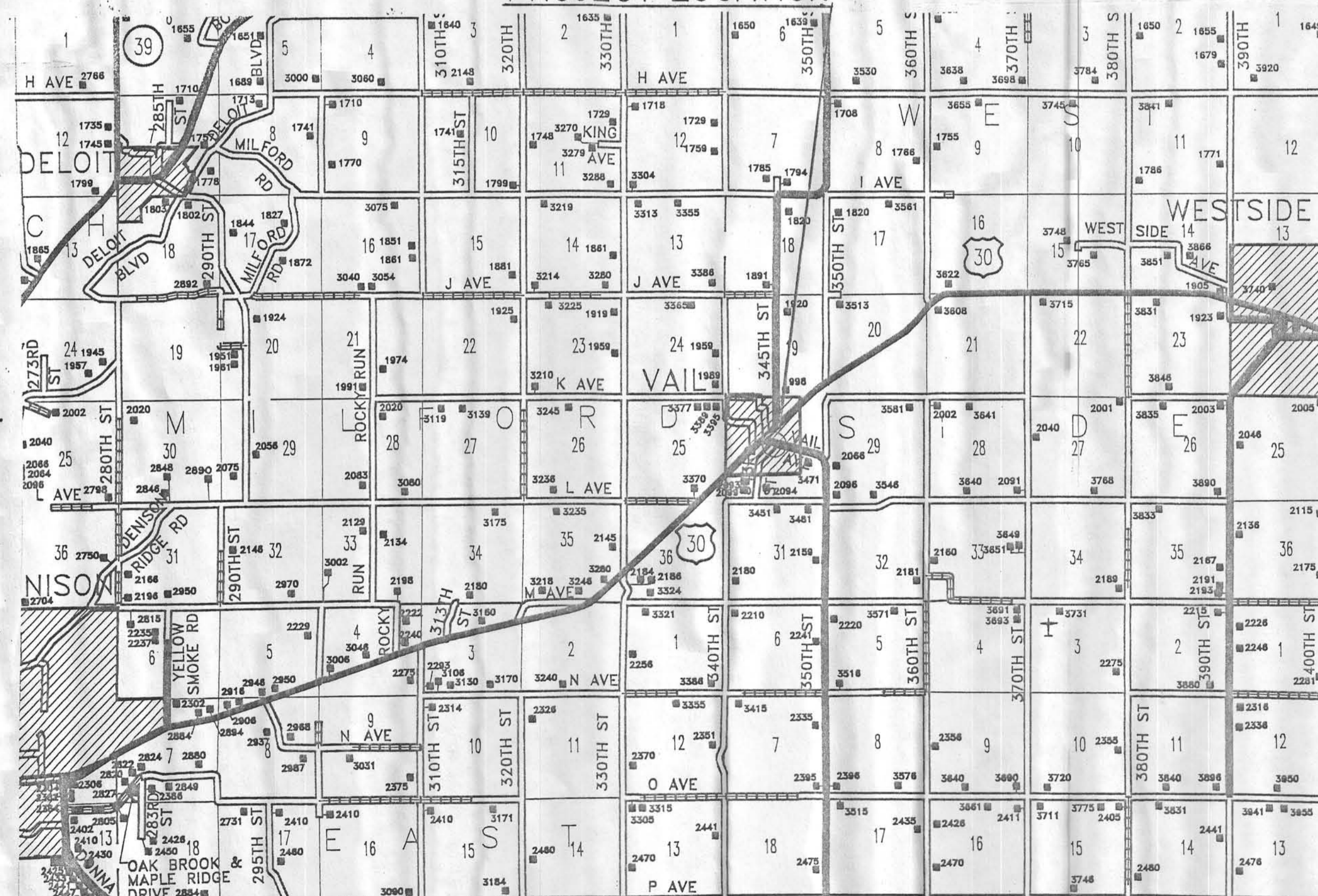
ROAD STANDARD PLANS

The following Standard Plans shall be considered applicable to construction work on this project.

Identification	Date	Identification	Date	Identification	Date
RG-6	10-02-01				
RS-27	10-28-97				

STA. 5+57.415
PROJECT LOCATION

Scales: As Noted



T-84N

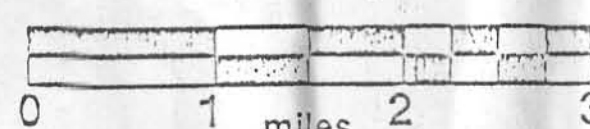
FHWA NO. 011480

T-83N

R-38W

R-37W

Location Map Scale



2000 AADT 360 V.P.D.

Approved
Board of Supervisors

PAUL J. ASSMAN, P.E. DATE

Pages or sheets covered
by this seal

My license renewal date is December 31, 2004

CRAWFORD COUNTY

PROJECT NUMBER: BHS-CO24(62)--63-24 Sheet No. 1 of

011480

06.

GENERAL NOTES:

THIS DESIGN IS FOR REPAIRS TO THE EXISTING 150'10" X 24' PRE-STRESSED CONCRETE BEAM BRIDGE ON COUNTY HIGHWAY M-55 OVER THE EAST BOYER RIVER. COPIES OF THE ORIGINAL DESIGN AND REPAIR PLANS WILL BE MADE AVAILABLE TO THE CONTRACTOR. CONTACT THE OFFICE OF CONTRACTS - PROJECT DEVELOPMENT DIVISION - IOWA D.O.T. - AMES.

REPAIR SHALL CONSIST OF:

1. BRIDGE FLOOR OVERLAY
2. INSTALLATION OF HMA LEVELING COURSE AT EACH APPROACH

ALL DIMENSIONS AND DETAILS SHOWN ON THESE PLANS PERTINENT TO NEW CONSTRUCTION IN RELATION TO EXISTING PORTIONS OF THE STRUCTURE SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING CONSTRUCTION.

BRIDGE FLOOR OVERLAY SHALL CONSIST OF REMOVING THE FLOOR CONCRETE TO A DEPTH OF 1/4" BELOW THE EXISTING SURFACE, EXCEPT AT DRAINS AND ELSEWHERE AS NOTED, TRANSPORTING THE CONCRETE REMOVED FROM THE PROJECT, AND OVERLAYING WITH 1 3/4" OF PCC.

UTILITY COMPANIES WHOSE FACILITIES ARE SHOWN ON THE PLANS OR ARE KNOWN TO BE WITHIN THE CONSTRUCTION LIMITS SHALL BE NOTIFIED BY THE BRIDGE CONTRACTOR OF THE STARTING DATE.

CONTRACTOR SHALL NOTIFY ONE-CALL (1-800-292-8989) FOR UTILITY LOCATES PRIOR TO COMMENCING WORK.

PRESENT FLOOR THICKNESS IS ABOUT 5 1/2 INCHES. THE CONTRACTOR SHALL EXERCISE CARE IN ORDER TO PREVENT UNNECESSARY REMOVAL OF CONCRETE BELOW THE TOP OF THE TOP LAYER OF REINFORCING. THE ENERGY OF HAND TOOLS SHALL BE RESTRICTED IN ORDER TO PREVENT UNBONDING OF REINFORCING. NO CONCRETE SHALL BE REMOVED BELOW THE TOP OF THE TOP LONGITUDINAL REINFORCING WITHOUT PRIOR PERMISSION FROM THE COUNTY ENGINEER.

SURFACE RAISE, AS SHOWN ON THE PLANS, SHALL BE A MINIMUM. IN ORDER TO LIMIT THE ADDITIONAL DEAD LOAD SURFACE RAISE SHALL BE RESTRICTED TO A MAXIMUM OF 1/2" MORE THAN SHOWN ON THE PLANS. PROFILE MAY BE ADJUSTED TO THE EXTENT POSSIBLE WITHIN THESE LIMITS.

TABULATION OF PAVEMENT MARKINGS			
LINE TYPE *	STATION TO STATION	SIDE	LENGTH Sta.
EDGE LINE RT.	4+05.842-7+08.988	RT.	3.031
EDGE LINE LT.	4+05.842-7+08.988	LT.	3.031
DOUBLE CENTER LINE	4+05.842-7+08.988	¢	6.063
TOTAL (STA.)			12.125

TABULATION OF SAFETY CLOSURES			
STATION	CLOSURE TYPE		REMARKS
	Road Qty.	Hazard Qty.	
3+00	1		
8+00	1		

10-29-02 313-1
It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. These areas shall not impact wetlands or "Waters Of The U.S.". No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans.

04-30-02 313-7
Unless otherwise directed or authorized, all hot mix asphalt and other bituminous materials, which are not specifically addressed or described in the contract documents shall become the property of the contractor.

The contractor, in accordance with current rules and regulations of the Iowa Department of Natural Resources, may:

1. With the approval of the Engineer, blend or otherwise process the material for use with shoulder or special backfill aggregate, for use on the project.
2. With the approval of the Engineer, place with material in areas designated by the Engineer as Soil Aggregate Subbase without extra charge.
3. Remove the material from the project and stockpile for the contractor's future use.

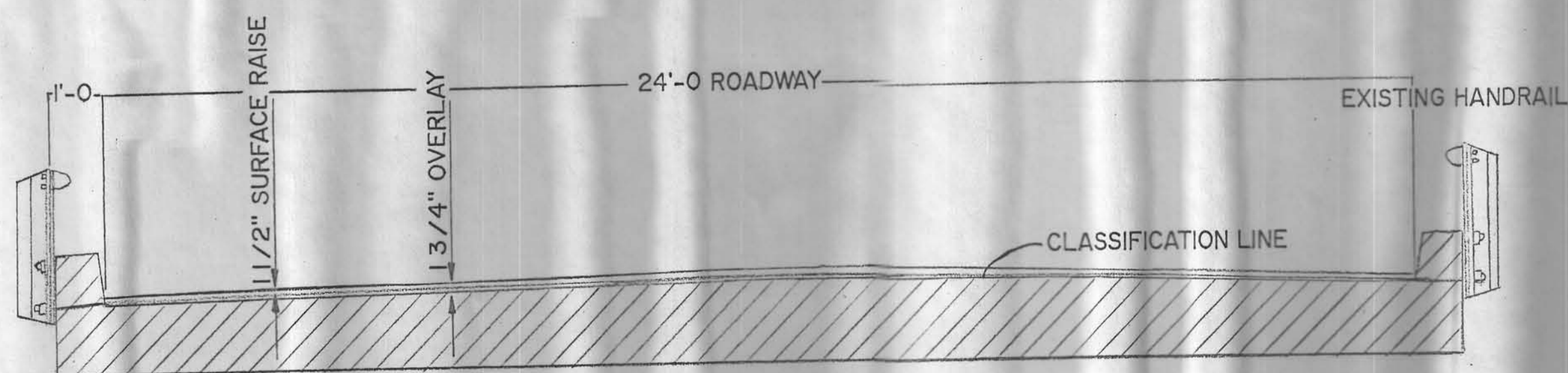
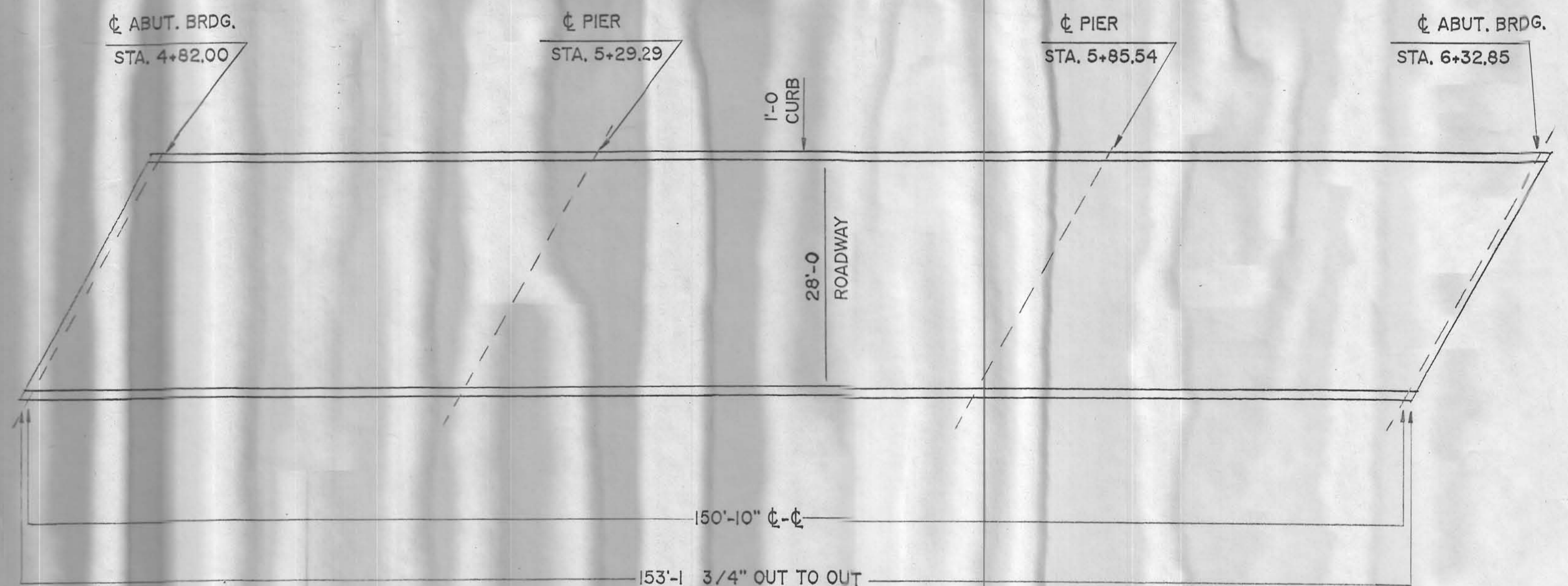
01-20-84 232-5
The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service area(s) will be subject to the approval of the resident engineer.

ESTIMATE OF QUANTITIES : BHS-CO24(62)--63-24				
REF. NO.	ITEM NO.	DESCRIPTION	UNITS	TOTAL
1	2413-0698071	BRIDGE FLOOR OVERLAY	SY	408.39
2	2303-0000100	HOT MIX ASPHALT MIXTURE COMMERCIAL MIX (INCLUDES ASPHALT BINDER), AS PER PLAN	TON	16.22
3	2527-9263110	PAINTED PAVEMENT MARKING	STA	12.125
4	2518-6910000	SAFETY CLOSURE	EACH	2.0
5	2528-8445110	TRAFFIC CONTROL	LS	1.0
6	2533-4980005	MOBILIZATION	LS	1.0

ESTIMATE REFERENCE SECTION
DATA LISTED BELOW IS FOR INFORMATIONAL PURPOSES ONLY AND SHALL NOT CONSTITUTE A BASIS FOR ANY EXTRA WORK ORDERS.

ITEM NO.	DESCRIPTION
1	INCLUDES COST OF FURNISHING AND PLACING CONCRETE SEALER.
2	CONTRACTOR SHALL PLACE TYPICAL ASPHALT LEVELING COURSES AT BRIDGE APPROACH SECTIONS AS NOTED AND SHOWN ON STANDARD ROAD PLAN RG-6. SHOULDER MATERIAL FOR AREAS AFFECTED BY LEVELING COURSES WILL BE PROVIDED AND PLACED BY COUNTY.

ALL CLASS A AND CLASS B BRIDGE DECK REPAIRS TO BE DONE BY OTHERS PRIOR TO COMMENCEMENT OF BRIDGE DECK OVERLAY.



TYPICAL CROSS SECTION