

JULY 22 - 1958

STATE OF IOWA  
 STATE HIGHWAY COMMISSION  
 DESIGN FOR  
 67'-6" x 24' PRE-STRESSED CONCRETE BEAM BRIDGE  
 SECONDARY ROAD SYSTEM PROJ DS-1392(4)  
 CRAWFORD COUNTY  
 JANUARY 1958.

MILEAGE SUMMARY := 67'-6" = 0.01316 MILES.

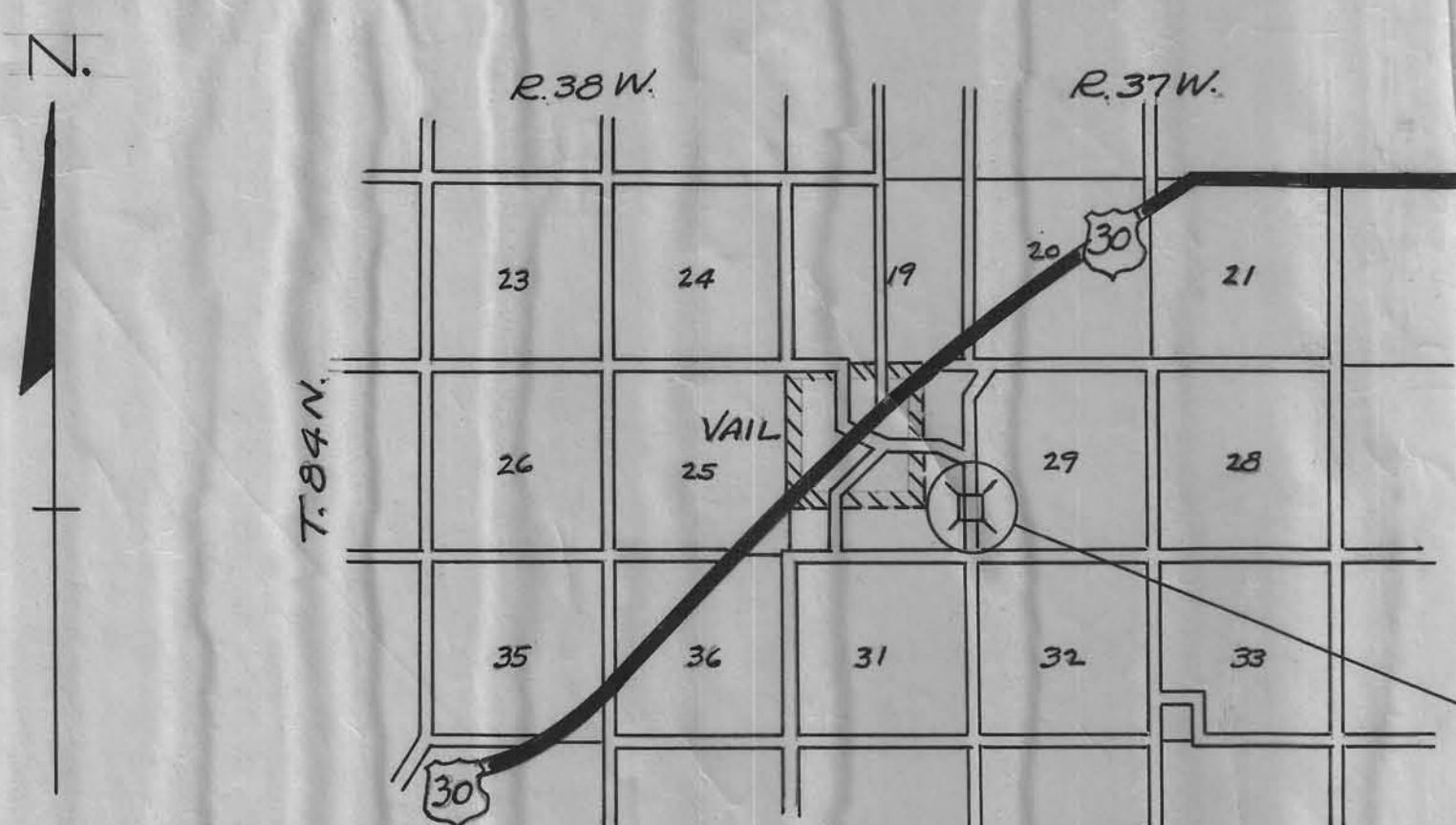
SPECIFICATIONS:  
 Design: A.A.S.H.O. Series of 1953.  
 Construction: Standard Specifications of the Iowa State Highway Commission, Series of 1956, plus current Special Provisions except as noted.

DESIGN-2558 WEST SIDE TWR CRAWFORD COUNTY. SEC-29-30 STA.13+34.50 OVER MILLER CREEK 67'-6" x 24' PRESTRESSED CONCRETE BEAM BRIDGE			
DESCRIPTION	ABUTMENTS	SUPERSTRUCT.	TOTAL
CONCRETE CLASS-"A"	15.00 C.Y.	41.20 C.Y.	56.20 C.Y.
REIN. STEEL	1546 LBS	8956 LBS	10,502 LBS
STRUCT. STEEL	52.50 "	1299 "	6,549 "
PRE-STRESSED BEAMS.		6 @ 67'-6"	6 @ 67'-6"
HANDRAIL		155'-0" L.F.	155'-0" L.F.
WOOD RAIL POSTS 8"x 6"		4	4
TREATED WOOD PILING	14 @ 45' 8 @ 30' 8 @ 25' L.F.		1070 L.F.
TREATED LUMBER	7032 F.B.M.		7032 F.B.M.
GALVANIZED HARDWARE	180 LBS.	32	212 LBS.
EXCAVATION CLASS #20	438 C.Y.		438 C.Y.
" CLASS #10	578 C.Y.		578 C.Y.
" CLASS #21	12 C.Y.		12 C.Y.
REMOVAL OF OLD STRUCTURE			LUMP SUM.

IN LETTING OF JULY 22, 1958

\* Bearing piling to be oversize.

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



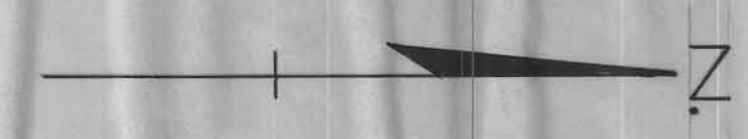
DESIGN No. 2558  
 PROJECT No. DS-1392(4).

APPROVED  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 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

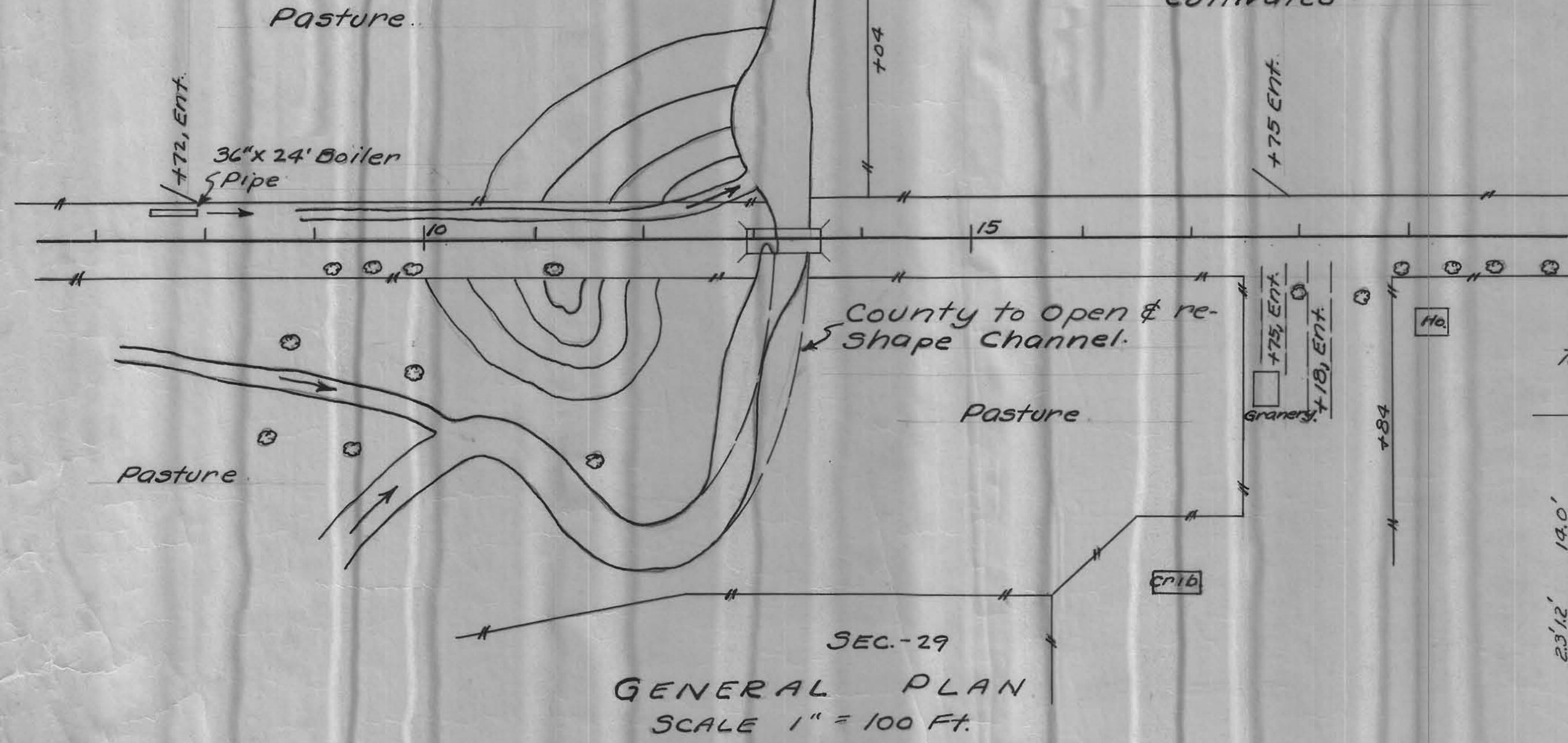


WEST SIDE TOWNSHIP  
T.84N. R.37W.  
SEC.30.

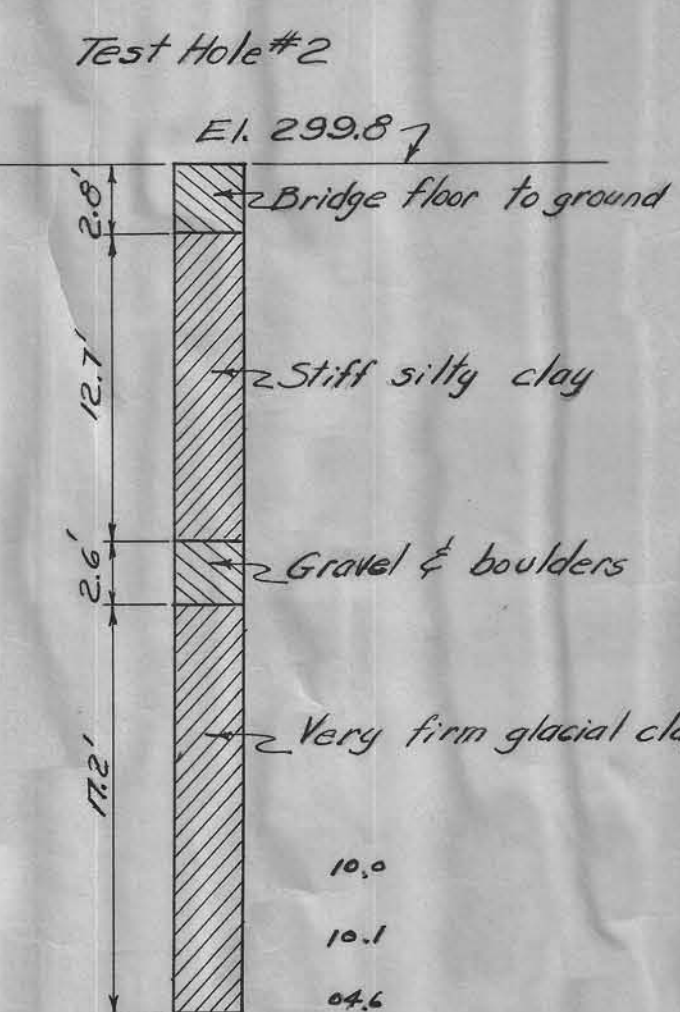
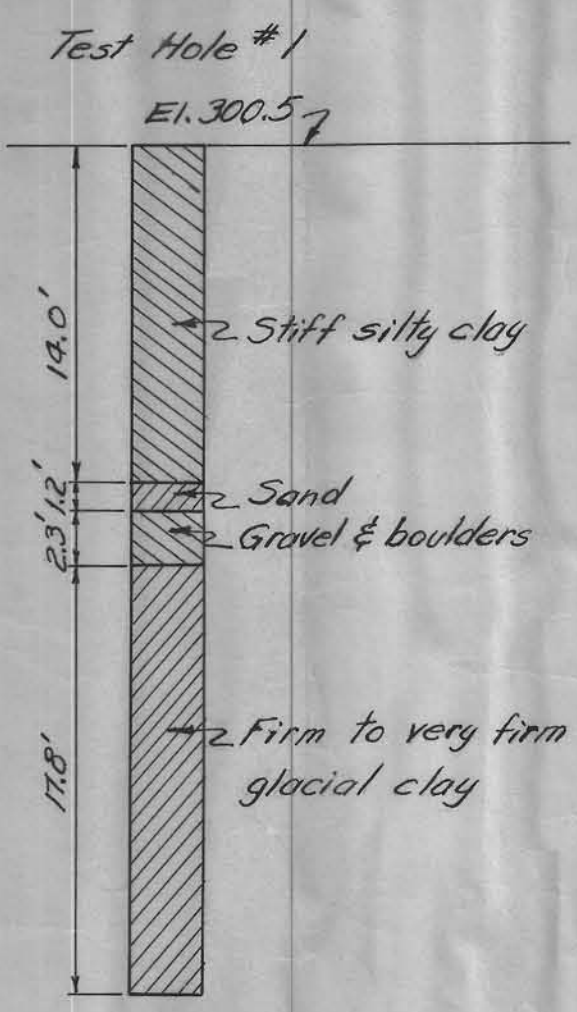
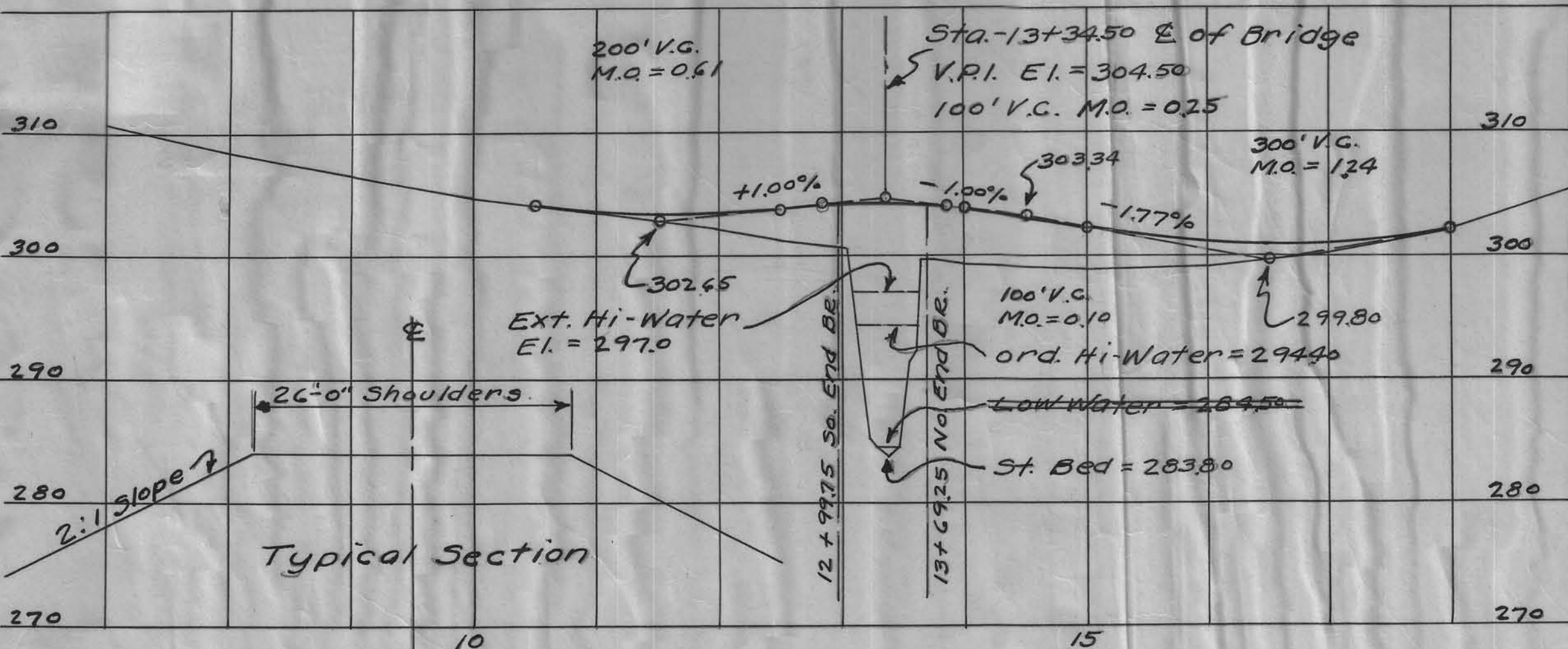


Sta. 13+28.3  $\pm$  of 67'-4" x 20' 2-Span I-Beam Bridge. Wood Floor, Steel Rail. So. End on Mud Sill, Pier; Double Bent Creeper piles, No. Abut.: Concrete. D.A. = 6100 AC. Replace with 67'-6" x 24' Pre-stressed Conc. Beam Bridge. Treated Wood Sub-Structure, Type "B" Steel Rail.

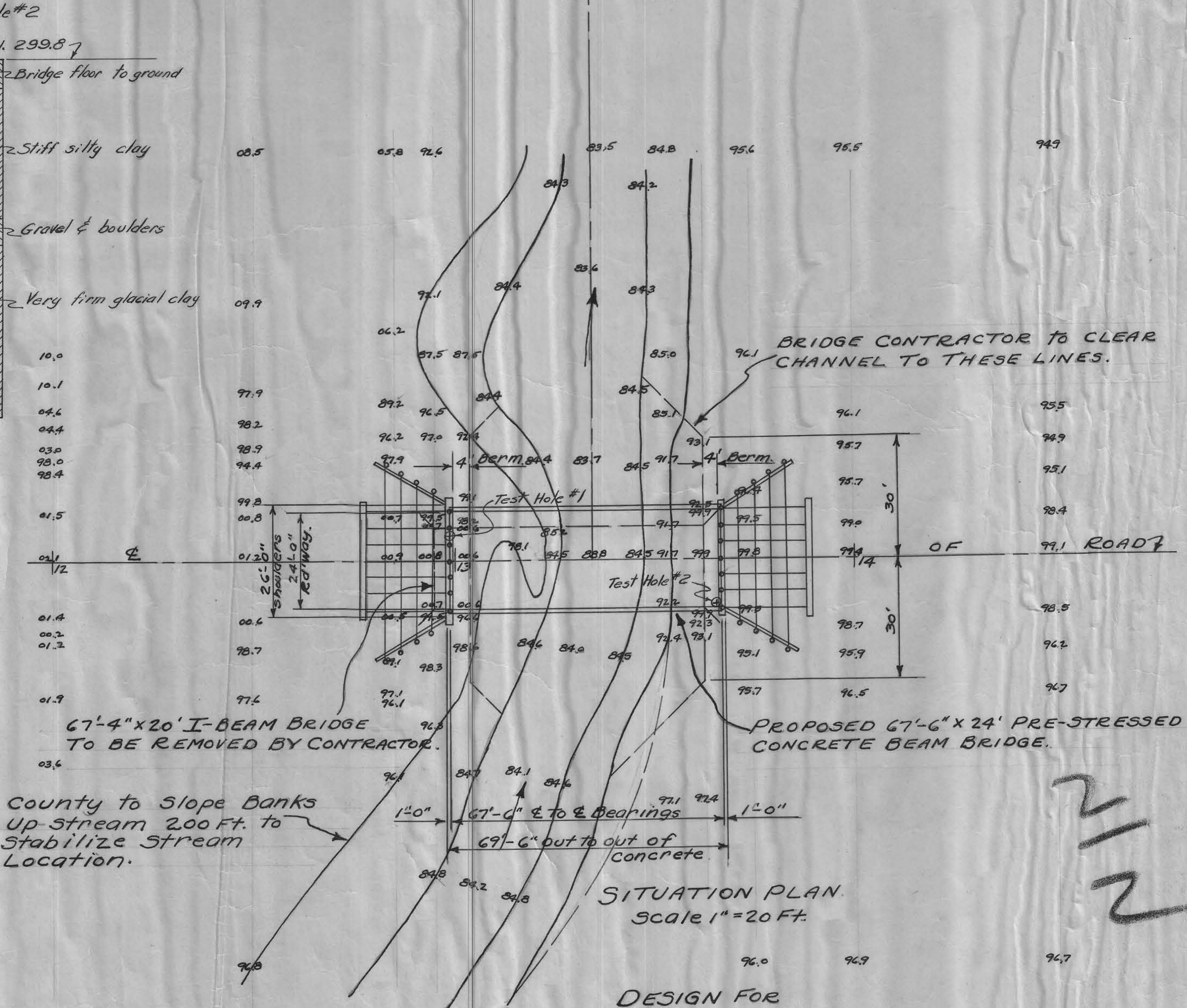
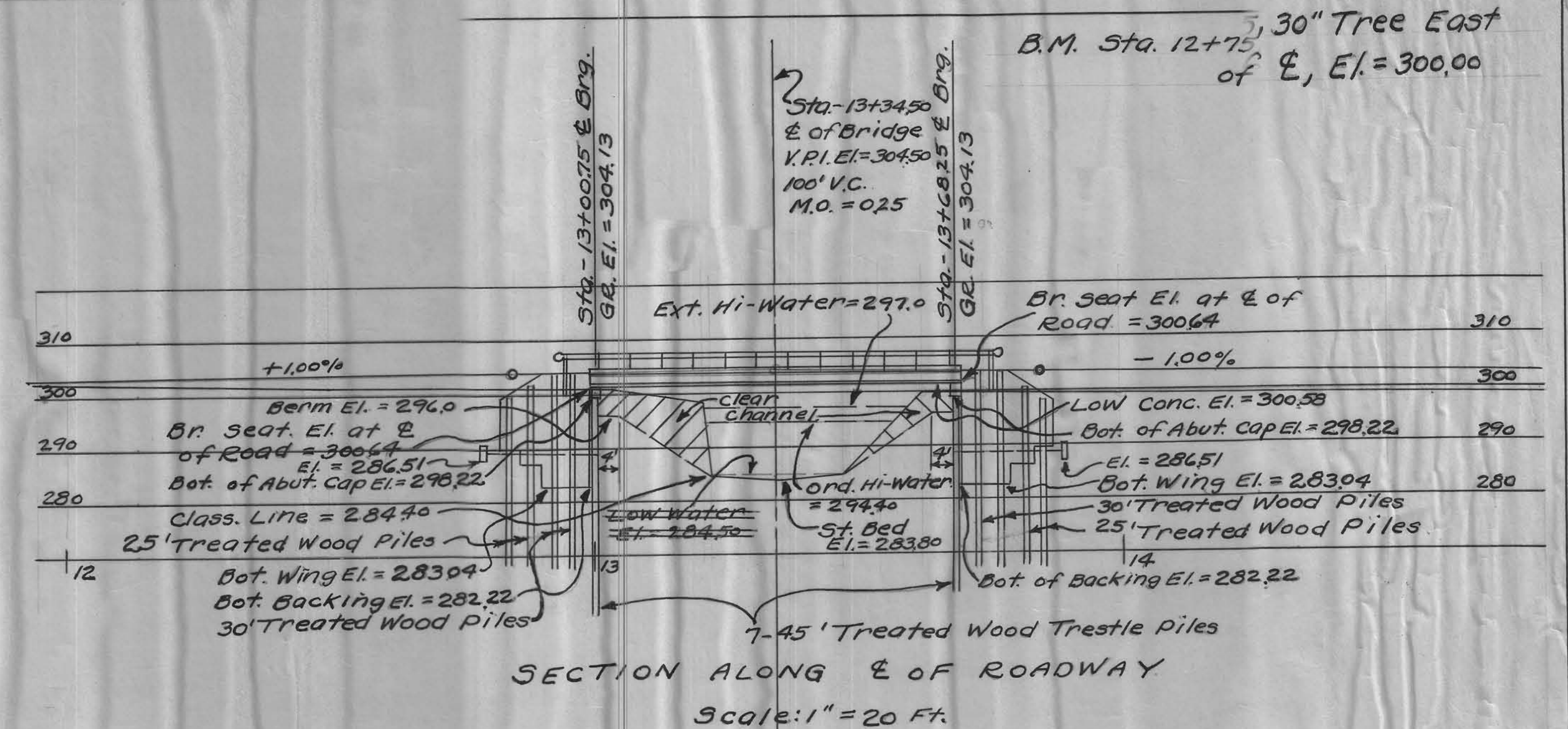
NOTE TO BRIDGE CONTRACTOR:  
Contractor to remove old bridge & pile within 300 feet of the bridge site as directed by the Engineer. Old Concrete Piers & Abutments & Broken Concrete to be removed down to Finished Ground Line El. of 283.80



GENERAL NOTES:  
All Lumber is to be creosoted. Backing & Wing plank in 10" & 12" widths may be substituted for 8" plank shown, but payment will be made on basis of quantities shown. All piling are to be creosoted & are to comply with the specifications for Treated Timber Trestle Piles. All hardware is to be galvanized. C.I. ogee or malleable Washers are to be used under all heads & nuts bearing on wood. All bolts to have square heads & nuts. For details of Super-Structure refer to Iowa Highway Commission Standard H11-2 With Type "B" Rail & Curb. For details of Sub-structure refer to Iowa Highway Commission Standard H11-5 With H of 20'-0". All materials & construction to conform with the Iowa Highway Commission Standard Specifications, Series of 1956. Drive Abutment piling to full penetration if practicable, but to not less than 18 tons bearing.



SOUNDING DATA  
5-20-1958



DESIGN FOR  
67'-6" x 24' PRE-STRESSED CONCRETE BEAM BRIDGE  
CONCRETE FLOOR - STEEL HANDRAIL, TYPE "B"  
STA. 13+34.50 PROJECT No. DS-1392(4)  
CRAWFORD COUNTY, IOWA.  
Location: Section 29-30 West Side Twp. T.84N. R.37W.



BRIDGE DECK OVERLAY

BHS-C024(73)--63-24

LETTING DATE  
01-19-05

CRAWFORD COUNTY

**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 STANDARD 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."

**DRAWING APPROVAL**

ALL SHOP DRAWINGS THAT REQUIRE APPROVAL SHALL BE APPROVED BY SUNDQUIST ENGINEERING, P.C.

ADDRESS: 120 SOUTH MAIN, P.O. BOX 220  
DENISON, IOWA 51442-0220  
TELEPHONE: (712)263-8118

THESE SHOP DRAWINGS SHALL NOT BE SENT TO IOWA D.O.T. OFFICE OF BRIDGE DESIGN.



Iowa Department of Transportation  
**Highway Division**

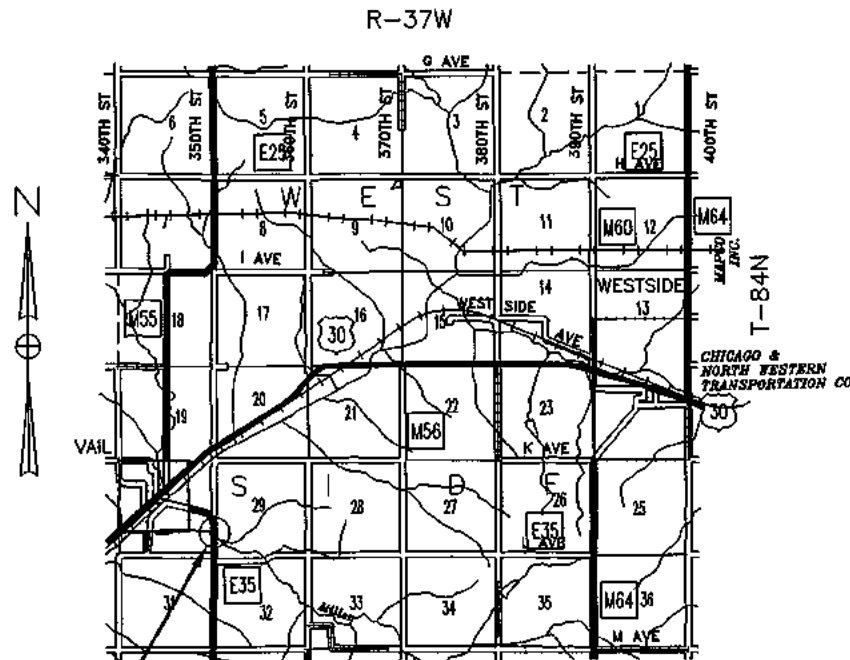
PLANS OF PROPOSED IMPROVEMENTS ON THE

**FARM-TO-MARKET SYSTEM  
CRAWFORD COUNTY**

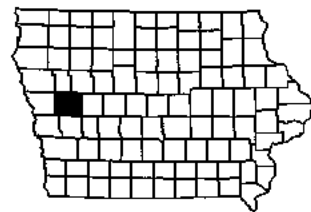
PROJECT NO. BHS-C024(73)--63-24  
**BRIDGE DECK OVERLAY  
ON COUNTY HIGHWAY M-55 OVER  
MILLER CREEK**

SCALE: AS NOTED

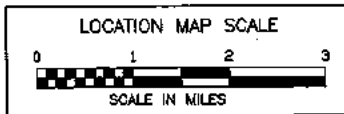
The Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction, Series 2001, plus the applicable General Supplemental Specifications, Developmental Specifications, Supplemental Specifications and Special Provisions, shall apply to construction work on this project.



STA. 13+34.5  
PROJECT LOCATION  
FHWA NO. 128650



25  
EGH



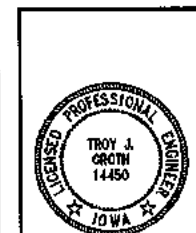
**SUNDQUIST ENGINEERING, P.C.**  
CONSULTING ENGINEERS  
HIGHWAYS • MUNICIPAL • MAPPING • SURVEYING  
120 S. MAIN, P.O. BOX 220, DENISON, IOWA 51442-0220  
PHONE: (712)263-8118 FAX: (712)263-2181

Approved  
*Mark Seibert*  
*Steve Clemens*  
*Y. Dean Hangers*  
*Robert Schramm*  
*John P. Hawley*  
BOARD OF SUPERVISORS

Approved  
*[Signature]* 10/18/04  
CRAWFORD COUNTY ENGINEER DATE

Iowa Department of Transportation  
**Highway Division**  
Accepted for Letting  
*[Signature]* 10/23/04  
DISTRICT 3 LOCAL SYSTEMS ENGINEER DATE

04-30-02	101-4
<b>DESIGN DATA RURAL</b>	
2000 AADT	320 V.P.D.
2020 AADT	X V.P.D.
201X DHV	X V.P.H.
TRUCKS	X %
TOTAL	
DESIGN ESALs	



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.  
*[Signature]* 10/18/04  
TROY J. GROTH, P.E. #14450 DATE  
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2005.  
PAGES OR SHEETS COVERED BY THIS SEAL:  
ALL SHEETS

**MILEAGE SUMMARY**

LOCATION	LIN. FT.	MILES
BRIDGE AT STA. 13+34.5	69.50	0.013

**STANDARD ROAD PLANS**

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

NUMBER	DATE	NUMBER	DATE	NUMBER	DATE
RG-6	10-02-01				
RS-27	10-28-97				

128650 01 059821

**GENERAL NOTES**

THIS DESIGN IS FOR REPAIRS TO THE EXISTING 67'-6" X 24' PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE ON COUNTY HIGHWAY M-55 OVER MILLER CREEK. 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 REPAIR, CLASS "A"
2. BRIDGE FLOOR OVERLAY
3. INSTALLATION OF HMA LEVELING COURSES 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 NEAR THE BOTTOM OF THE DESIGNATED CLASS A REPAIR AREAS 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.

PLAN QUANTITY OF FLOOR REPAIR IS BASED ON THE "PLOT OF BRIDGE DECK DELAMINATIONS" AS SHOWN IN THESE PLANS. ACTUAL SPALLED AND HOLLOW AREAS, AS DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION SHALL BE REPAIRED.

213-1

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.

213-7

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.

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 COUNTY ENGINEER.

**ESTIMATE REFERENCE INFORMATION**

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

2303-0000100 HOT MIX ASPHALT MIXTURE, COMMERCIAL MIX (INCLUDES ASPHALT BINDER), AS PER PLAN

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.

2413-0698071 BRIDGE FLOOR OVERLAY  
INCLUDES COST OF FURNISHING AND PLACING CONCRETE SEALER.

2413-0698072 BRIDGE FLOOR REPAIR, CLASS A  
CONCRETE SHALL BE PLACED MONOLITHICALLY WITH CONCRETE FOR BRIDGE FLOOR OVERLAY.

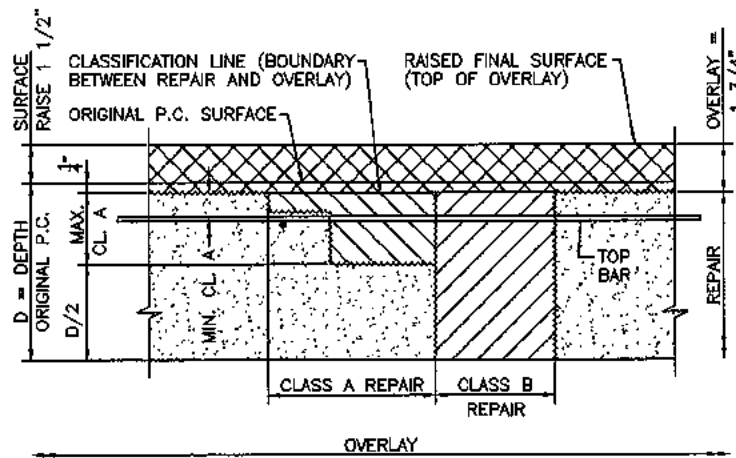
CARE SHALL BE EXERCISED TO PREVENT DAMAGING EXISTING REINFORCING STEEL DURING CONCRETE REMOVAL AND ALL OTHER OPERATIONS. CARE SHALL ALSO BE EXERCISED DURING ANY SAW CUTTING TO ENSURE DEPTH OF SAW CUT DOES NOT EXCEED THAT WHICH IS NECESSARY TO REMOVE UNSOUND CONCRETE.

**ESTIMATED PROJECT QUANTITIES**

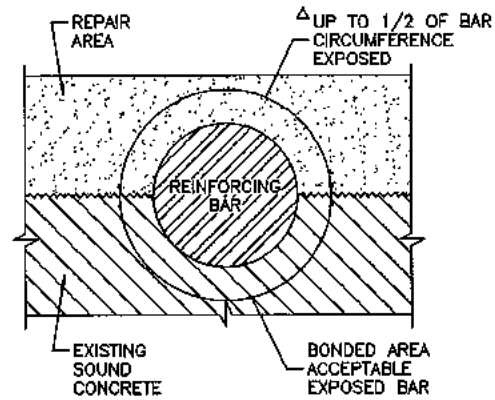
100-1A  
07-15-97

ITEM NUMBER	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUAN.
1	2303-0000100	HOT MIX ASPHALT MIXTURE, COMMERCIAL MIX (INCLUDES ASPHALT BINDER), AS PER PLAN	TON	15.4	
2	2413-0698071	BRIDGE FLOOR OVERLAY	SY	185.33	
3	2413-0698072	BRIDGE FLOOR REPAIR, CLASS A	SY	25.68	
4	2518-6910000	SAFETY CLOSURE	FACH	2	
5	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	8.78	
6	2528-8445110	TRAFFIC CONTROL	LS	1	
7	2533-4980005	MOBILIZATION	LS	1	

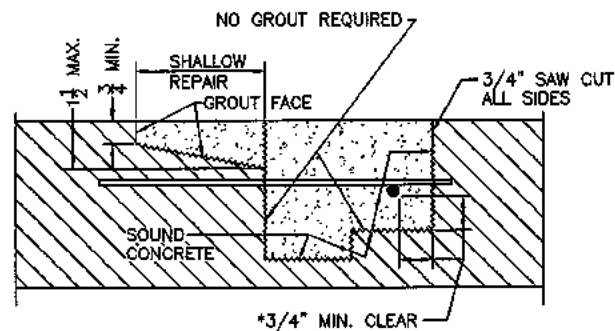
ESTIMATED PROJECT QUANTITIES  
AND GENERAL INFORMATION  
FHWA NO. 128650



REPAIR AND OVERLAY DEFINITION

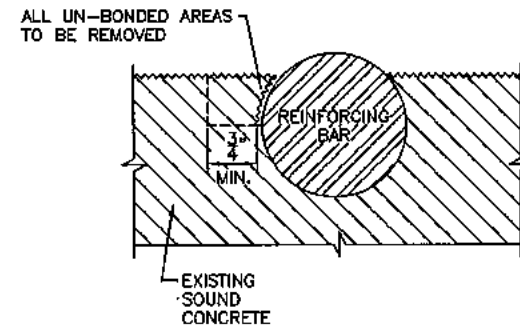


IF MORE THAN 1/2 OF THE REBAR IS EXPOSED IT SHALL BE TREATED AS AN UN-BONDED REBAR.



REPAIR DEFINITION

\*INDICATES CLEARANCE FOR AN UN-BONDED REBAR



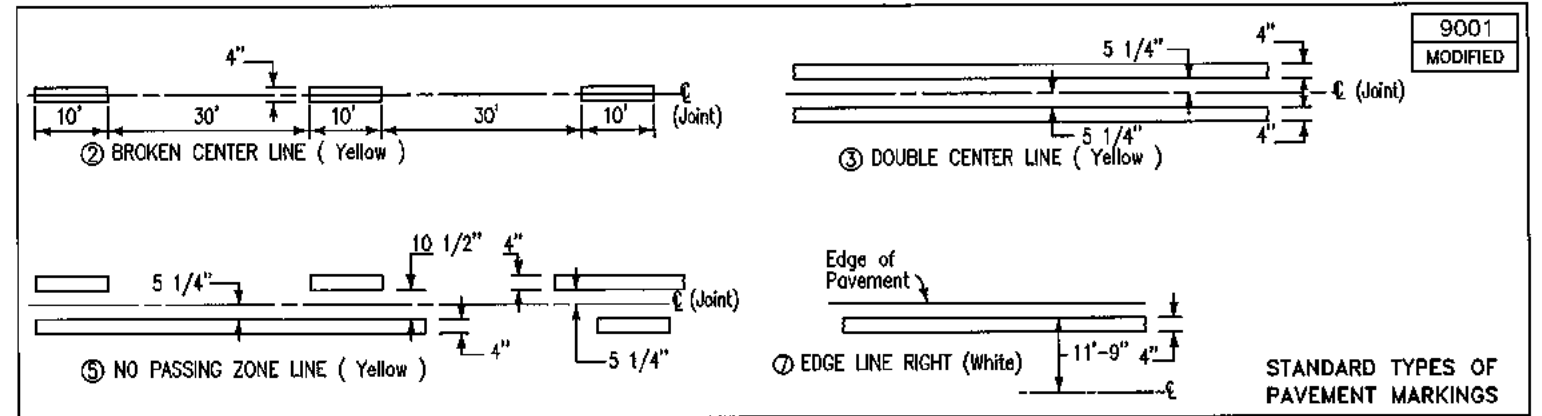
CONCRETE REMOVAL ADJACENT TO REINFORCING

TABULATION OF PAVEMENT MARKINGS

108-22  
MODIFIED

② Broken Center Line (Yellow) ③ Double Center Line (Yellow) ⑤ No-Passing Zone Line (Yellow) ⑦ Edge Line Right (White)

ROAD IDENTIFICATION	LOCATION		LENGTH (In Stations)				REMARKS
	STATION TO STATION	SIDE L R	②	③	⑤	⑦	
	12+24.75 - 14+44.25			2.195		4.390	
	LENGTH SUBTOTALS			2.195		4.390	
	QUANTITY FACTORS		.25	2	1	1	
	TOTALS			4.390		4.390	



9001  
MODIFIED

TABULATION OF RESURFACING RUNOUTS

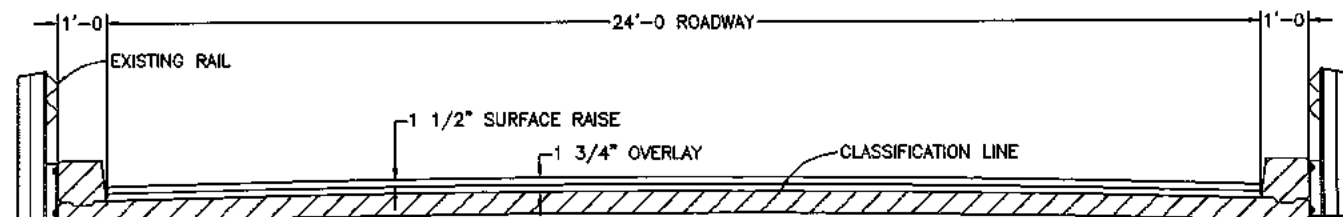
106-3  
10-29-02

MILEPOST		STATION		TYPE	LENGTH (Lin. Ft.)	REMARKS
From	To	From	To			
		12+24.75	12+99.75		75	
		13+69.25	14+44.25		75	

TABULATION OF SAFETY CLOSURES 108-13A  
10-28-97

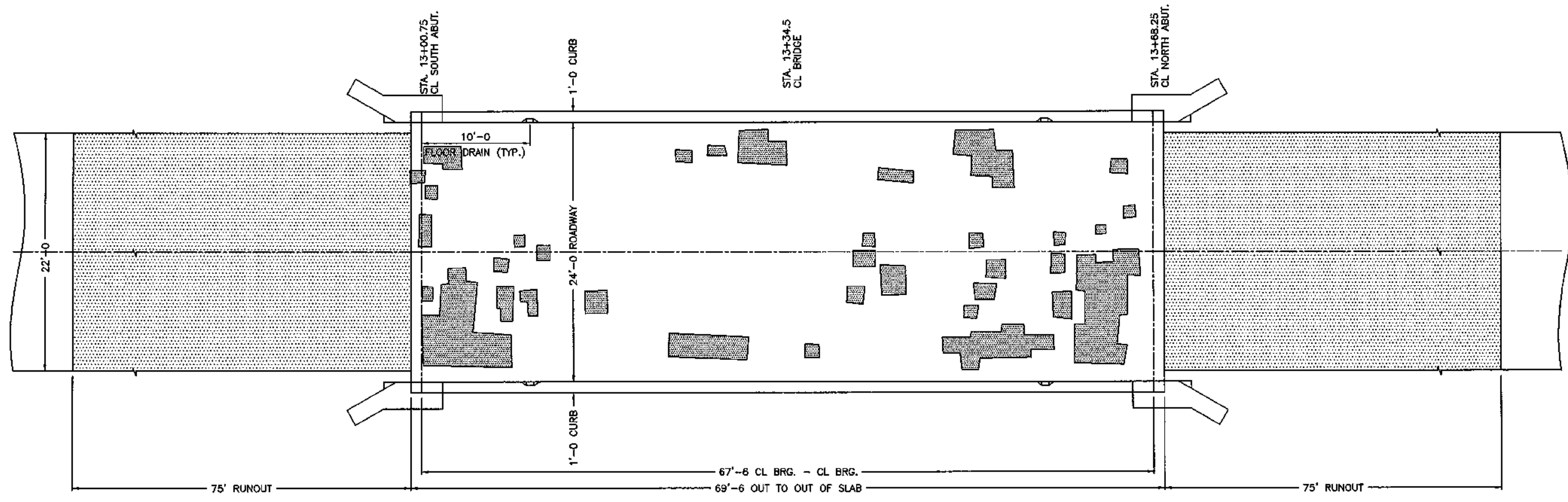
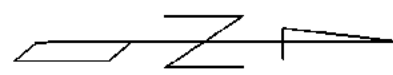
Refer to Section 2518 of the St'd. Specifications


STATION	CLOSURE TYPE		REMARKS
	Road Qty.	Hazard Qty.	
11+75	1	-	WEST END
15+00	1	-	EAST END



TYPICAL CROSS SECTION

TABULATIONS, TYPICALS  
FHWA NO. 128650



 BRIDGE FLOOR REPAIR, CLASS A

PLOT OF BRIDGE  
DECK DELAMINATIONS



**SITUATION PLAN**  
 67'-6 x 24' PRETENSIONED PRESTRESSED  
 CONCRETE BEAM BRIDGE  
 CONCRETE FLOOR - STEEL HANDRAIL, TYPE "B"  
 STA. 13+34.5  
 CRAWFORD COUNTY  
 FHWA NO. 128650