

STATE OF IOWA  
STATE HIGHWAY COMMISSION  
BRIDGES AND CULVERTS  
ON THE  
FARM TO MARKET SYSTEM  
CRAWFORD COUNTY

PROJECT NO. SN-1305 (6) \*\* 24  
ACCOUNT NO. 51 24 1305 002

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IOWA		1966	1	5

INDEX OF SHEETS  
SHEET NO. 1  
ITEM 1  
TITLE SHEET AND ESTIMATE OF QUANTITIES  
2-5  
DETAILS

MILEAGE SUMMARY

BRIDGE AT STA. 149+68.0 = 24'-0" = 0.00454 MI.  
BRIDGE AT STA. 271+56.5 = 75'-0" = 0.01420 MI.  
TOTAL NET MILEAGE = 0.01874 MI.

PROJECT NO. SN-1305 (6) \*\* 24  
DESIGNS FOR REINFORCED CONCRETE BOX CULVERTS AND  
24'X28' AND 75'X28' CONCRETE SLAB BRIDGES

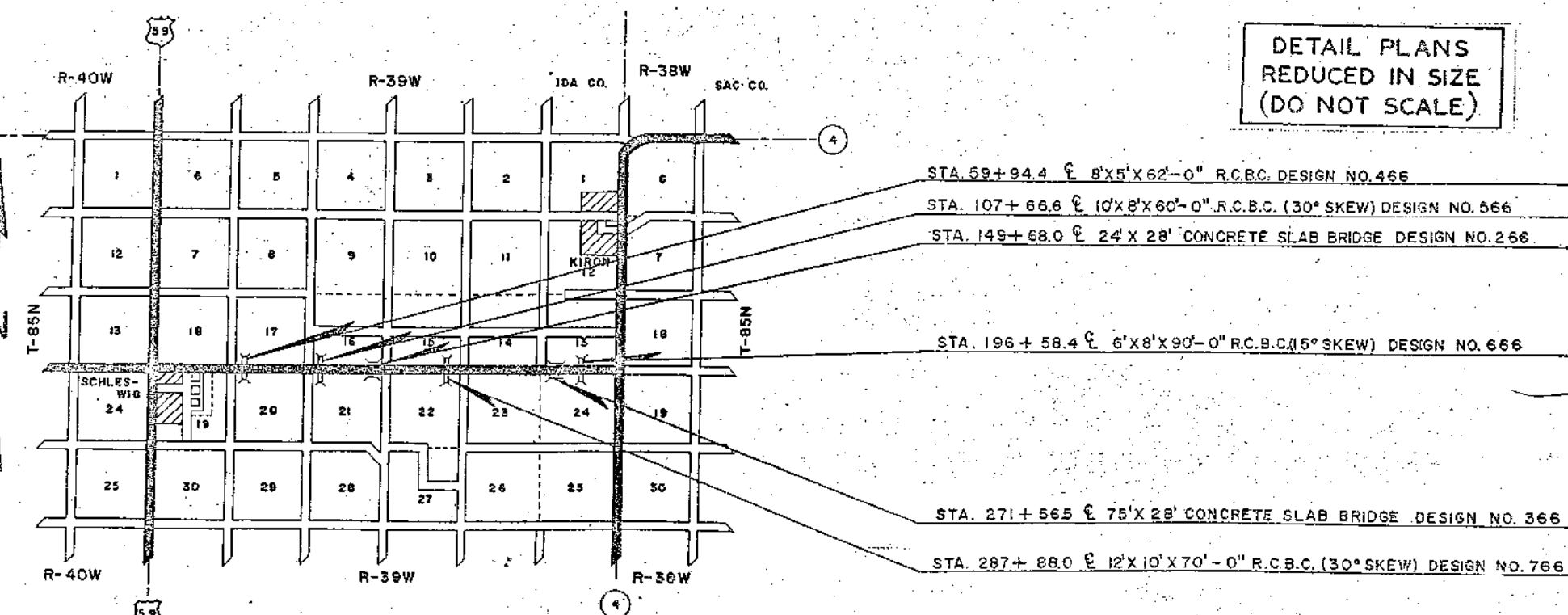
PLAN: 1 INCH = 100 FT.  
PROFILE: HOR. 1 INCH = 100 FT. VERT. 1 INCH = 10 FT.

THE IOWA STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR CONSTRUCTION WORK, SERIES OF 1964, SHALL APPLY TO WORK ON THIS PROJECT, PLUS CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN	LOCATION			DESCRIPTION	ESTIMATE OF QUANTITIES									
	SEC.	TWP.	STATION		STRUCTURAL CONCRETE CLASS "C" CU. YDS.	REINFORCING STEEL LBS.	CLASS 10 EXCAV. CHANNEL CU. YDS.	CLASS 20 EXCAV. CU. YDS.	CLASS 24 EXCAV. CU. YDS.	FILTER MATERIAL TONS	COMPACTION BACKFILL CU. YDS.	4" PERFORATED FIBER PIPE LIN. FT.	1 1/2" GALVANIZED RAIL LBS.	REMOVALS LUMP SUM
466	17-20	85-39	59+94.4	8' X 5' X 62'-0"	82.46	7,912	NONE	132	NONE	NONE	NONE	NONE	NONE	LUMP SUM
566	16-21	85-39	107+66.6	30° SKEW 10' X 8' X 60'-0"	133.28	14,592	NONE	202	NONE	NONE	NONE	NONE	NONE	LUMP SUM
666	15-22	85-39	196+58.4	15° SKEW 6' X 8' X 90'-0"	110.99	12,665	NONE	210	NONE	NONE	NONE	NONE	NONE	LUMP SUM
766	13-24	85-39	287+88.0	30° SKEW 12' X 10' X 70'-0"	219.81	23,345	NONE	413	NONE	NONE	NONE	NONE	NONE	LUMP SUM
TOTAL					546.54	58,514	NONE	957	NONE	NONE	NONE	NONE	NONE	LUMP SUM

THESE BRIDGES WILL REQUIRE BRIDGE SIGN ASSEMBLIES (FURNISHED AND PLACED BY OTHERS) IN ACCORDANCE WITH SEC. 2-C-5 OF THE I.S.H.C. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, DATED JANUARY 1963.

DETAIL PLANS  
REDUCED IN SIZE  
(DO NOT SCALE)



TRAFFIC COUNT 142 TO 285 V.P.D. (1963)

PROJECT NO. SN-1305 (6) \*\* 24 DESIGN NO. 266 STA. 149+68.0  
SEC. 16-21 OTTER CREEK TOWNSHIP  
24'X28' CONCRETE SLAB BRIDGE

ITEM	ABUTMENTS	SUPERSTRUCTURE	TOTALS
*STRUCTURAL CONCRETE	CLASS "C" 7.4 CU. YDS.	CLASS "D" 52.2 CU. YDS.	59.6 CU. YDS.
REINFORCING STEEL	756 LBS.	6,825 LBS.	9,581 LBS.
CREOSOTED LUMBER	8,340 FBM		8,340 FBM
STRUCTURAL STEEL	6,850 LBS.	1,243 LBS.	8,093 LBS.
GALVANIZED HARDWARE	128 LBS.		128 LBS.
TREATED TRESTLE PILING 16 @ 40' 12 @ 35' 8 @ 30'	1,300 L.F.		1,300 L.F.
EXCAV. CLASS 10 CHANNEL	305 CU. YDS.		305 CU. YDS.
EXCAV. CLASS 20	228 CU. YDS.		228 CU. YDS.
EXCAV. CLASS 21	11 CU. YDS.		11 CU. YDS.
REMOVAL OF OLD BRIDGE			LUMP SUM

\* 52.2 CU. YDS. CLASS "D" CONCRETE FOR SUPERSTRUCTURE AND 7.4 CU. YDS. CLASS "C" CONCRETE FOR SUBSTRUCTURE  
I hereby certify these plans were made under my supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.  
DATE: 2-1-66  
Reg. No. 4988

PROJECT NO. SN-1305 (6) \*\* 24 DESIGN NO. 366 STA. 271+56.5  
SEC. 13-24 OTTER CREEK TOWNSHIP  
75'X28' CONCRETE SLAB BRIDGE

ITEM	ABUTMENTS	SUPERSTRUCTURE	TOTALS
*STRUCTURAL CONCRETE	CLASS "C" 7.4 CU. YDS.	CLASS "D" 115.6 CU. YDS.	123.0 CU. YDS.
REINFORCING STEEL	756 LBS.	23,085 LBS.	23,841 LBS.
CREOSOTED LUMBER	8,352 FBM		8,352 FBM
STRUCTURAL STEEL	6,106 LBS.	3,947 LBS.	10,053 LBS.
GALVANIZED HARDWARE	133 LBS.		133 LBS.
TREATED TRESTLE PILING 16 @ 40' 12 @ 35' 8 @ 30'	1,300 L.F.		1,300 L.F.
CONCRETE PILES 12 P 10A 16" TYPE III 6 @ 38' 6 @ 40'			458 L.F.
EXCA. CLASS 10 CHANNEL			1,762 CU. YDS.
EXCA. CLASS 20	465 CU. YDS.		465 CU. YDS.
EXCA. CLASS 21	12 CU. YDS.		12 CU. YDS.
REMOVAL OF OLD BRIDGE			LUMP SUM

\* 115.6 CU. YDS. CLASS "D" CONCRETE FOR SUPERSTRUCTURE AND 7.4 CU. YDS. CLASS "C" CONCRETE FOR SUBSTRUCTURE

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
CHAIRMAN \_\_\_\_\_  
DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS  
APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
DIVISION ENGINEER \_\_\_\_\_

STA. 269+87.5 @ 60' X 16' PRESENT PONY TRUSS BRIDGE  
WOOD PLANK FLOOR, WOOD SUBSTRUCTURE WITH TWO  
STEEL "I" BEAM APPROACHS, 21.5' X 18' & 20.5' X 16', WOOD  
PLANK FLOOR, WOOD SUBSTRUCTURE, STEEL HANDRAILS  
BRIDGE CONTRACTOR TO REMOVE PRESENT BRIDGE & PILE WITHIN  
300' OF BRIDGE SITE AS DIRECTED BY COUNTY ENGINEER.  
OLD BRIDGE TO BE SUNKED.

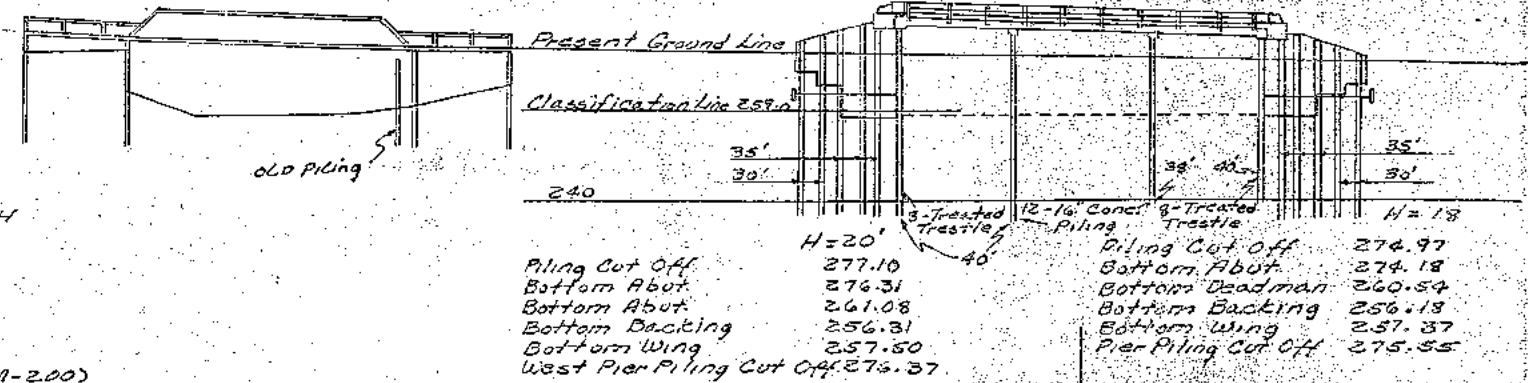
GENERAL NOTES:  
IOWA HIGHWAY COMMISSION STANDARD DESIGN  
J8-1, J8-2, J8-3 AND J8-5 JULY 1960  
SHALL APPLY TO THIS BRIDGE.  
ALL EXPOSED CORNERS OF 90° OR SHARPER  
ARE TO BE FILLETED 3/4".  
ALL REINFORCING BARS ARE TO BE SECURELY  
WIRED IN PLACE AND ADEQUATELY SUPPORTED  
ON BAR CHAIRS BEFORE CONCRETE IS PLACED.  
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH  
THE IOWA HIGHWAY COMMISSION STANDARD  
SPECIFICATIONS, SERIES OF 1960, WITH SPECIAL  
PROVISIONS APPLICABLE.

BRIDGE SIGN ASSEMBLY NOTE:  
PLACE TRIPLE THREE-INCH RED REFLECTORS (M-200)  
AT EACH END OF THE BRIDGE ON THE RIGHT-HAND  
SIDE ONLY FOR APPROACHING TRAFFIC, BY COUNTY.

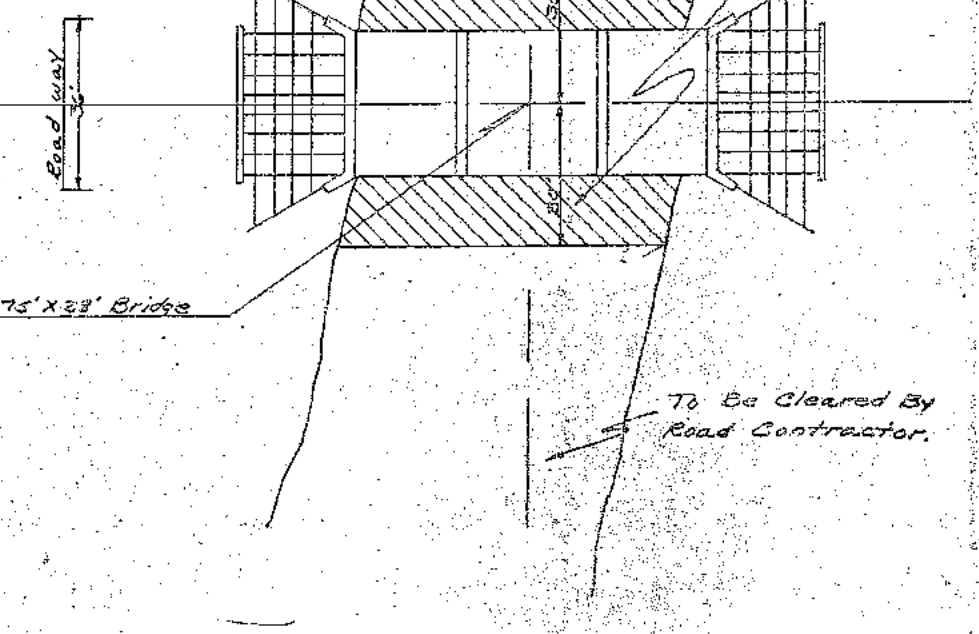
NOTE:  
BRIDGE DESIGNED 0'-6" HIGHER THAN GRADE, TO MEET  
FUTURE PAVING PLANS.

DESCRIPTION	ESTIMATE OF QUANTITIES		
	ABUTMENTS	SUPERSTRUCTURE	TOTALS
STRUCTURAL CONCRETE	CLASS C 7.4 C.Y.	CLASS D 115.6 C.Y.	123.0 C.Y.
REINFORCING STEEL	756 LBS.	23,085 LBS.	23,841 LBS.
CRESOTED LUMBER	8,352 FBM		8,352 FBM
STRUCTURAL STEEL	6,106 LBS.	3,947 LBS.	10,053 LBS.
GALVANIZED HARDWARE	13.3 LBS.		13.3 LBS.
TREATED TRESTLE PILING 16 @ 40', 12 @ 35', 8 @ 30'	1,300 L.F.		1,300 L.F.
CONCRETE PILES 12 PIOR 16" TYPE III		6 @ 38', 6 @ 40'	468 L.F.
EXCAV. CLASS 10 CHANNEL	1,762 C.Y.		1,762 C.Y.
EXCAV. CLASS 20	465 C.Y.		465 C.Y.
EXCAV. CLASS 21	12 C.Y.		12 C.Y.
REMOVAL OF OLD BRIDGE			LUMP SUM

Ext. Hi Water 269.0  
Ord. Hi Water 265.0  
Low Water 259.0  
Str. Bed 258.0



DA = 28 Sq. Mi., Rolling to Hilly  
Q<sub>0</sub> = 5960 CFS  
Des. H.W. = 14.7  
A = 0.04 S = 0.0017  
Area below H.W. = 1076 S.F.  
W.P. = 160.4 R = 6.67  
Q = 1070 (5.5) = 5895  
C = 1070/1530 = 0.70



Sta. 271+56.5 @ New 75' X 28' Bridge

DESIGN FOR  
75' X 28' CONTINUOUS CONC. SLAB BRIDGE  
STEEL CHANNEL RAIL  
TIMBER ABUTMENTS AND CONCRETE PILE BENTS  
STA. 271+56.5 PROJECT NO. SN-1305(6) \*\*24  
CRAWFORD COUNTY

