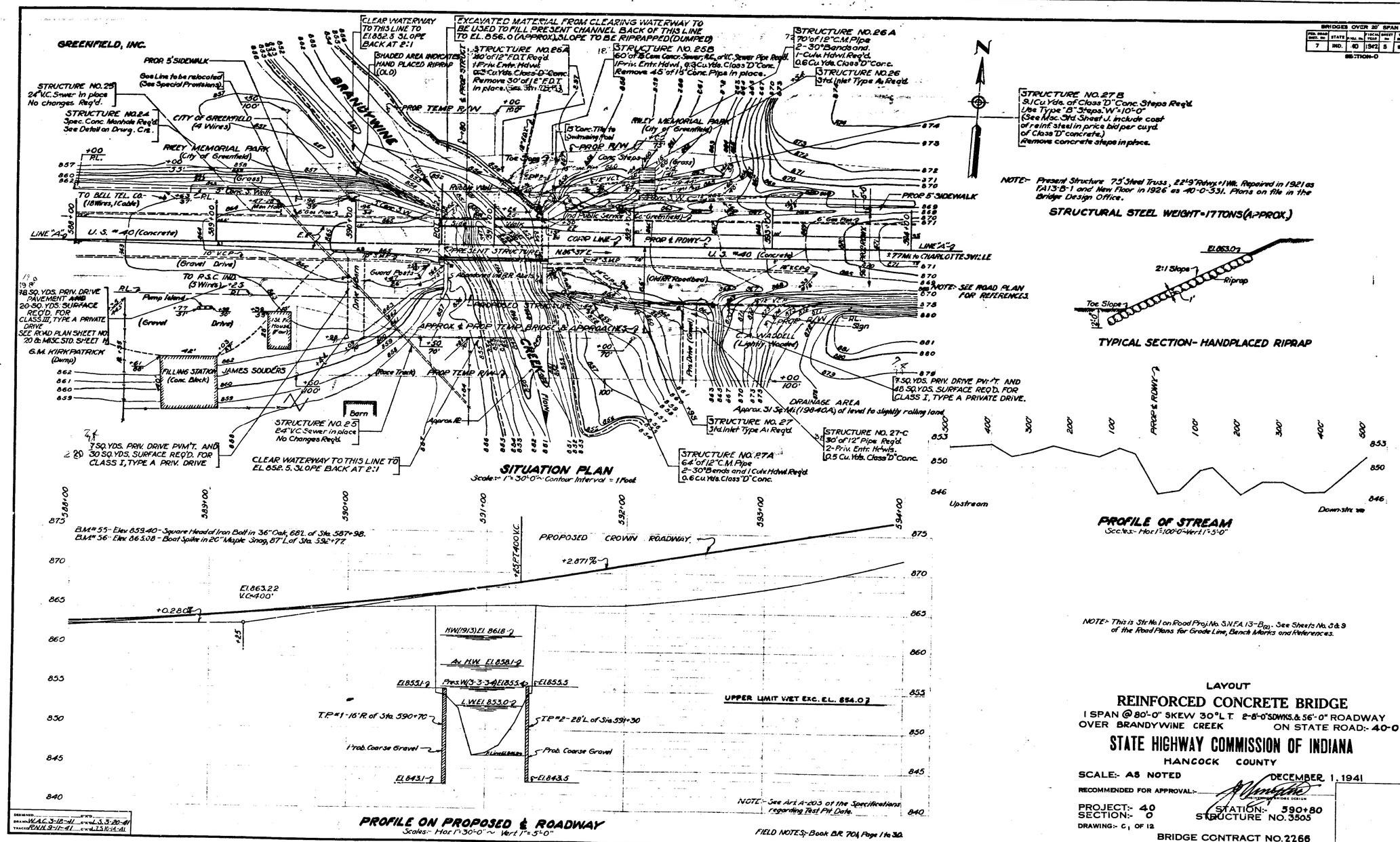
FED. ROAD DIST. NO.	STATE	FED. ROAD NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	40	1942	5	88

BRIDGES OVER 20' SPAN

SECTION-O



DESIGNED
DRAWN W.A.C. 3-12-41 CHKD. J.S. 3-20-41
TRACED P.N.H. 3-31-41 CHKD. J.S.N. 4-11-41

LAYOUT

REINFORCED CONCRETE BRIDGE

1 SPAN @ 80'-0" SKEW 30° L.T. 2-8'-0" SDWKS. & 56'-0" ROADWAY
OVER BRANDYWINE CREEK ON STATE ROAD:- 40-O

STATE HIGHWAY COMMISSION OF INDIANA

HANCOCK COUNTY

SCALE:- AS NOTED DECEMBER 1, 1941

RECOMMENDED FOR APPROVAL:-

PROJECT:- 40
SECTION:- O
DRAWING:- C, OF 12

STATION:- 590+80
STRUCTURE NO. 3505

BRIDGE CONTRACT NO. 2266

BRIDGES OVER 20' SPAN					
PROJ. ROAD SHEET No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	40	1942	8	33

SECTION- 0

JOINT LEGEND:-
Joint "A"- indicates ¾" open joint in handrail only.
Joint "B"- indicates ¾" open joint in handrail and ½" pref. bit. exp. jt. (with copper flashing) in sidewalk and spandrel wall down to top of arch ring.
Joint "C"- indicates ¾" open joint in handrail and ½" pref. bit. exp. jt. in sidewalk, sliding joint located between bracket and sidewalk slab to be troweled smooth and have two layers of roofing felt (medium weight).

ROADWAY, SIDEWALKS, AND CURB TO BE BUILT TO A 400' V.C. Bs = +2.871 % GRADE.
HANDRAIL AND COPING TO BE BUILT TO A + 2.559 % GRADE.

L = 158'-8⅜" Out. to Out Handrail (North Side) 156'-8⅜" (South Side)

ELEVATION

Hand placed Riprap (Typ.) — Bronze Bench Marker (See Special Provisions) — WING "B" — Base Handrail El. 865.98 — Prop. Grnd. Line 2:1 Slope 1 to Skew — El. 848.50 — El. 845.00 — Spring Line El. 852.50 — Pres. Grnd. Line — Pres. W. (3-3-30) El. 855.49 — L.W. El. 853.0 — H.W. (1933) El. 861.8 — Ave. H.W. El. 858.1 — F.L. El. 846.8 — Clear Span = 80'-0" — Rise = 12'-0" — Pres. Str. — Prop. Grnd. Line 2:1 Slope 1 to Skew — Crown Roadway — Hand placed Riprap (Old) — WING "C" — Str. No. 26 A — Base Handrail El. 869.76 — Structure No. 26 Std. Inlet Type A1 — ℄ Integral Curb — 56'-0" R.C. Pavement — Structure No. 27 Std. Inlet Type A1 — Base Handrail El. 870.99 — ℄ Shoulder Line — Str. No. 27 A

NOTE:-
For Miscellaneous Approach Details, See Br. Std. M.
For Method of Placing Special Filling Material, See Br. Std. S2.
For Standard Inlet Type A1 Details, See Miscellaneous Stds. Sheets C and D.

PLAN

N — FOUNDATION NO. 1 — ℄ To Abut. #1 Sta. 590+40 — 28'-0" To In. Curb — Clear Roadway — 30° Skew — ℄ Structure Str. No. 530+80 — ½" Pref. Bit. Exp. Jt. — 80'-0" Clear Span — ℄ Roadway — ℄ Span — 56'-0" Clear Roadway — 33'-7" To Fa. Spand. Wall — 33'-8⅜" To Fa. Arch Ring — 28'-0" To In. Curb — ℄ To Abut. #2 Sta. 591+20 — FOUNDATION NO. 2 — 19'-0⅜" — 19'-10⅝" — 104.5° — Transv. Walk Liners (Typical) — Longit. Curb Liner — ½" Pref. Bit. Exp. Jt. — Integral Curb — Structure No. 27 Std. Inlet Type A1 — ℄ Sta. 591+93 — WING "A" — WING "D" — Str. No. 27 A

SECTION AT CROWN

Projected on a Plane Perpendicular to ℄ Roadway

4" Traffic Lane Stripes — ½" Pref. Bit. Exp. Jt. — 4" Sdwk. — ℄ Pavement — ℄ Roadway — 56'-0" Clear Roadway — 28'-0" To In. Curb — 22'-0" — Crown Rdwy. On 400' V.C. and +2.871 % Grade — Top Curb & Sdwk. on 400' V.C. and +2.871 % Grade — Earth Fill — Special Filling Material — Base H.R. on +2.559 % Grade — Const. Jt. Keyways — 14'-0" — 14'-9" — 33'-7" To Fa. Spand. Wall — 33'-8⅜" To Fa. Arch Ring — 6" Gas Line to be relocated (See Special Provisions)

GENERAL NOTES

Depth of footings to be extended if found necessary. See Art. B 202 of Specifications.
Piles shall have bearing value shown on Detail Drawings. Determine pile lengths by Arts. D 101 and 104 of Specifications.
Reinforcing steel covering shall be 3 inches in footings, 2 inches in all other parts unless noted.
All dimensions on Details and Bending Diagrams for Reinforcing Bars are measured on centerlines of Bars.
Concrete in footings, wingwalls, abutment counterforts, and abutments up to skewbacks (outer portion of abutments up to umbrella tops) to be Class "E".
Concrete in structure not noted above to be Class "D".
Waterproof abutments, wingwalls, counterforts, arch ring, and spandrel walls in accordance with Specifications.
Bevel forms ¾ inch under copings; and chamfer exposed edges ¾ inch unless noted.
Wings and Stream Banks to be rip-rapped.
Outlet Ends of drains thru structure to project 3". Cut or burn off Inlet Ends flush with Concrete.
See Special Provisions for items included in this contract.

STANDARD DRAWINGS:-
For Typical Walk Liner & Copper Flashing Details, See Br. Std. C, dated Sept. 21, 1935.

TYPICAL CROSS SECTION

FOR ROAD PROJ. S.N.F.A. NO. 13 SEC. "B" (2)
See Road Plan Sheet No. 2 & Std. D-11-GR
(Note:- 4" Traffic Lane Stripes to be placed as shown on Road Plan Sheet No. 2)

NOTE:- All Shoulders and Slopes to be Sodded.

DESIGNED — CHKD. — DRAWN: O.H.B. 10-23-41 — CHK'D. J.M.W. 9-28-41 — TRACED: O.H.B. 10-28-41 — CHK'D. J.M.W. 9-28-41

GENERAL PLAN

REINFORCED CONCRETE BRIDGE

1 SPAN @ 80'-0" SKEW 30° LT. 2-8'0" SDWKS. & 56'-0" ROADWAY
OVER BRANDYWINE CREEK ON STATE ROAD:- 40-0

STATE HIGHWAY COMMISSION OF INDIANA

HANCOCK COUNTY

SCALE:- ⅛"=1'-0" DECEMBER 1, 1941

RECOMMENDED FOR APPROVAL:- DIRECTOR OF ROAD DESIGN

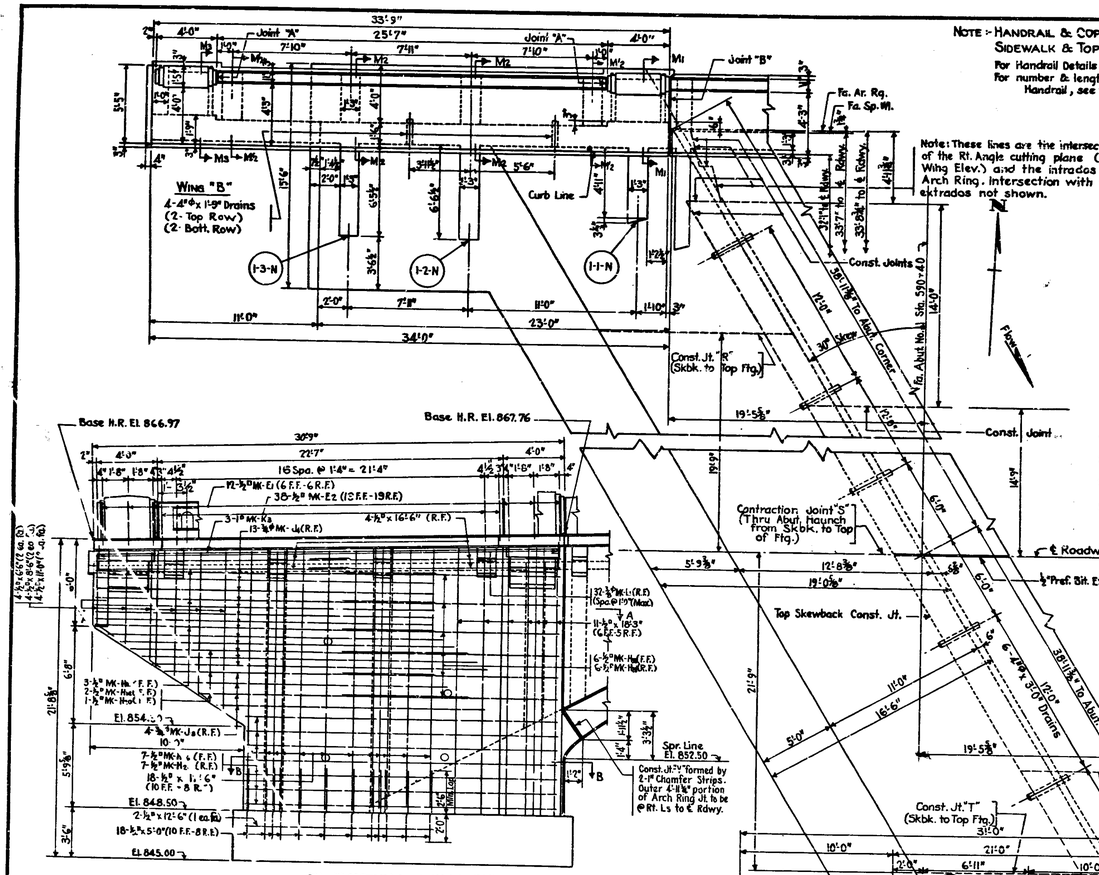
PROJECT:- 40
SECTION:- 0
DRAWING:- C2 OF 12

STATION:- 590+80
STRUCTURE NO. 3505

BRIDGE CONTRACT NO. 2266

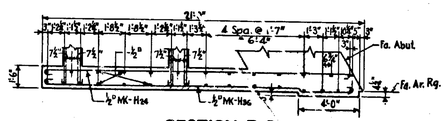
NOTE:- HANDRAIL & COPING TO BE BUILT TO A + 2.559 % GRADE.
SIDEWALK & TOP CURB TO BE BUILT TO A + 2.871 % GRADE AND A 1.00' V.C.
For Handrail Details, see Drwg. C8.
For number & length of horizontal bars in Handrail, see "Bill of Materials".

BRIDGES OVER 20' SPAN					
FED. PROJECT NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	40	1942	7	33

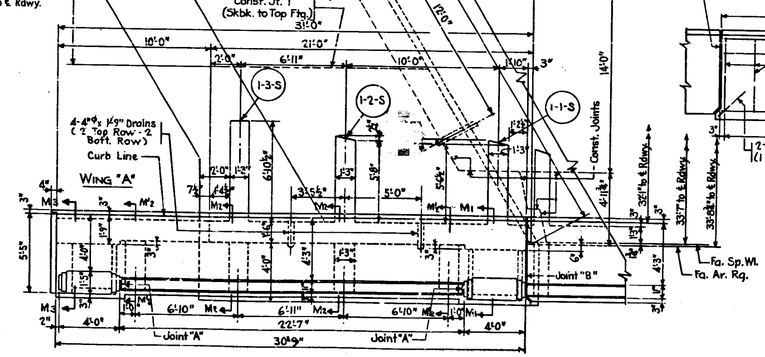


ELEVATION - WING "A"

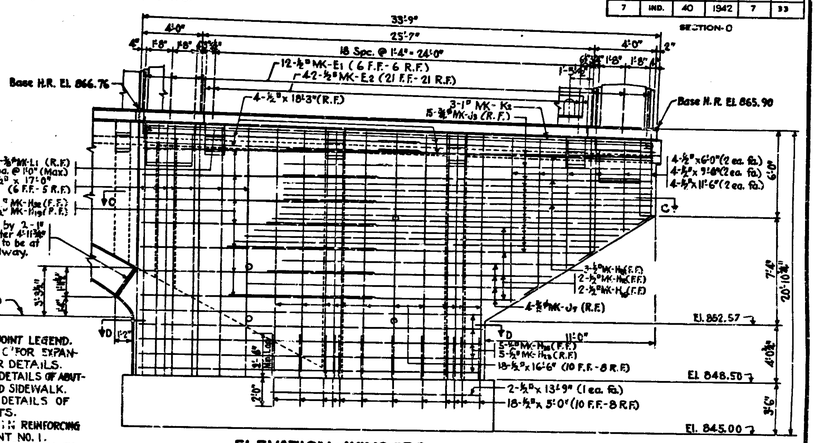
SECTION A-A



SECTION B-B

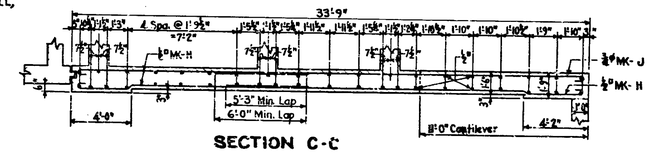


PLAN

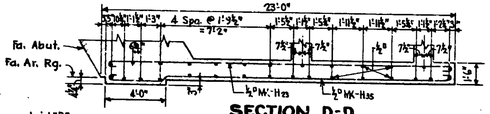


ELEVATION - WING "B"

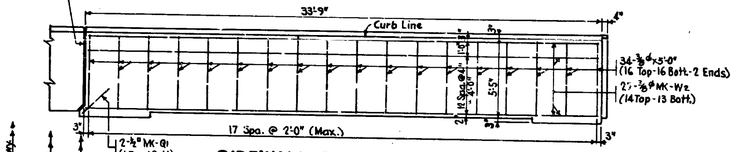
NOTE:
SEE DRWG. C2 FOR EXPANSION JOINT LEGEND.
SEE DRWG. C2 AND "BRIDGE STD. C" FOR EXPANSION JOINT AND WALK LINER DETAILS.
SEE DRWG C6 FOR ADDITIONAL DETAILS OF ABUTMENT BRACKETS, CURB, AND SIDEWALK.
SEE DRWG. C4 FOR ADDITIONAL DETAILS OF ABUTMENT COUNTERFORTS.
SEE DRWG. C10 FOR SPAN CTFT :: REINFORCING STEEL EMBEDDED IN ABUTMENT NO. 1.
SEE DRWG. C4 FOR DETAILS OF EXPANSION JTS. AND COPPER FLASHING IN WALK, SP. WALL, AND LONGIT. AR. RG. EXPANSION JTS.



SECTION C-C



SECTION D-D



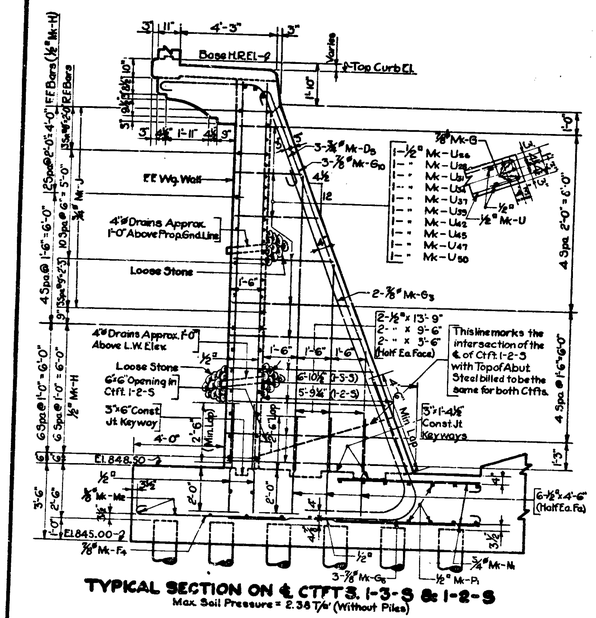
SIDEWALK PLAN - WING "B"

ABUTMENT NO. 1 DETAILS

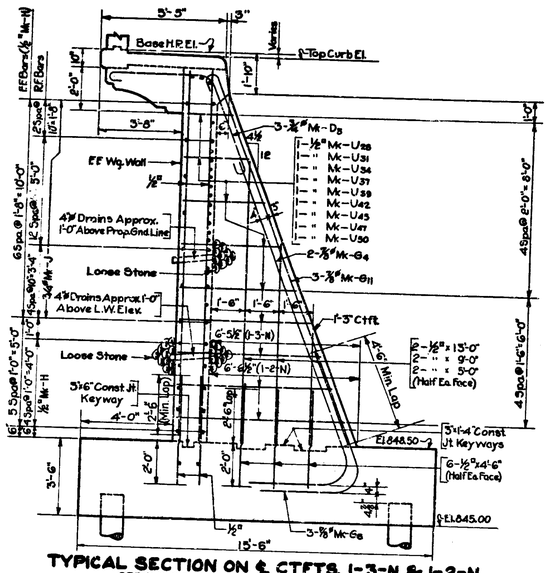
STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- ½" = 1'-0"
DECEMBER 1 1941
RECOMMENDED FOR APPROVAL:- [signature] BRIDGE ENGINEER
PROJECT:- 40
SECTION:- 0
DRAWING:- C3 OF 12
STATION:- 590+80
STRUCTURE NO. 3505
BRIDGE CONTRACT NO. 2266

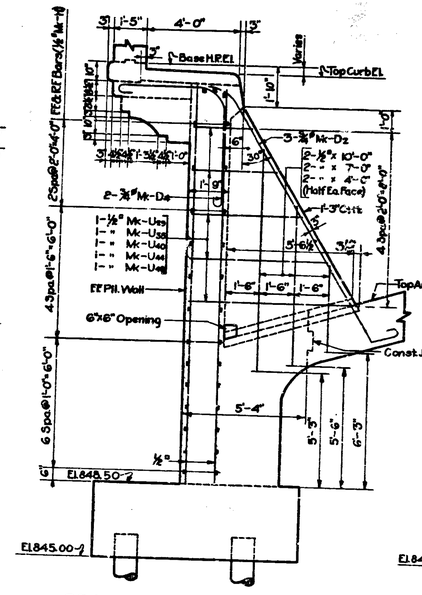
DESIGNED L.T.S. 11-7-41 C'K'D. C.L.M. 11-13-41
DRAWN L.T.S. 11-7-41 C'K'D. C.L.M. 11-13-41
TRACED O.N.B. 11-22-41 C'K'D. C.L.M. 11-24-41



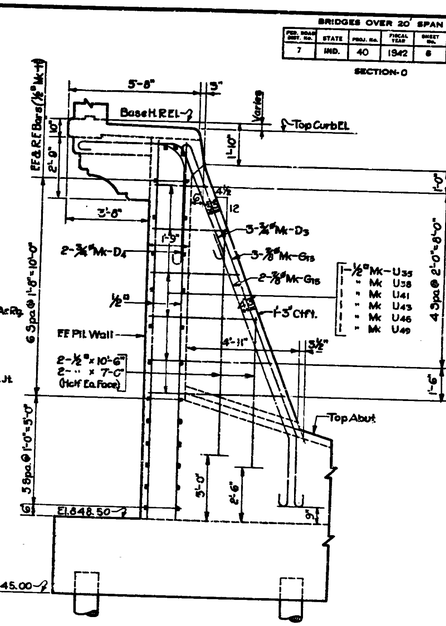
TYPICAL SECTION ON ℄ CTFTS. 1-3-S & 1-2-S
Max. Soil Pressure = 2.38 T/s.f. (Without Piles)



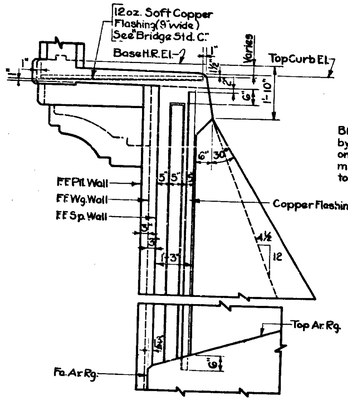
TYPICAL SECTION ON ℄ CTFTS. 1-3-N & 1-2-N
SEE DRWG. C7 FOR FOOTING STEEL & PILE SPACING
Max. Soil Pressure = 2.38 T/s.f. (Without Piles)



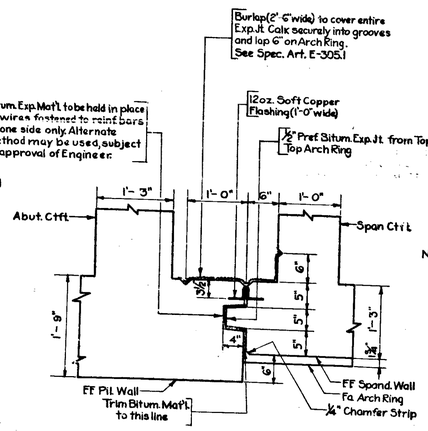
SECTION ON ℄ CTFT. 1-1-S
SEE DRWG. 7 FOR FOOTING STEEL & PILE SPACING



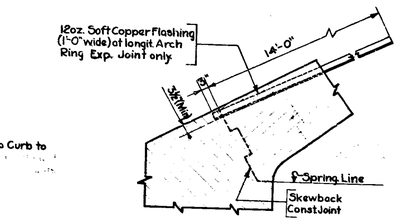
SECTION ON ℄ CTFT. 1-1-N



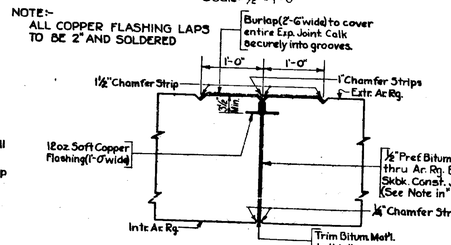
TYPICAL SECTION V-V
Scale:- ½" = 1'-0"



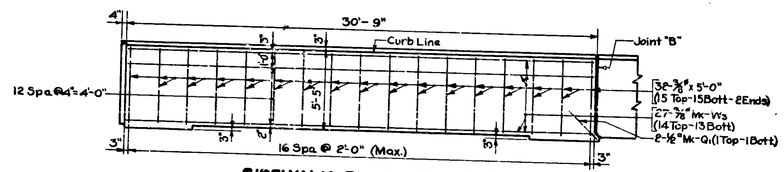
TYPICAL SECTION W-W
Scale:- 1" = 1'-0"



SECTION P-P
Scale:- ½" = 1'-0"



SECTION U-U
Scale:- 1" = 1'-0"



SIDEWALK PLAN ~ WING "A"
Scale:- ¼" = 1'-0"

COUNTERFORT DATA

CT'FT.	BASE H.R. ELEV.	TOP CURB ELEV.
1-1-S	867.71	867.38
1-2-S	867.46	867.14
1-3-S	867.28	866.97
1-1-N	866.72	866.46
1-2-N	866.43	866.24
1-3-N	866.23	866.06

NOTES:- SEE DRWG. C6 FOR EXPANSION JOINT LEGEND.
SEE DRWG. C2 AND "BRIDGE STD. C" FOR EXPANSION JOINT AND WALK LINER DETAILS.
SEE DRWG. C6 FOR ADDITIONAL DETAILS OF ABUTMENT BRACKETS, CURB AND SIDEWALK.
SEE DRWG. C10 FOR SPAN CTFT 1-N REINFORCING STEEL EMBEDDED IN ABUTMENT NO. 1.

PROJ. GRADE SEC. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	40	1942	8	33

BRIDGES OVER 20' SPAN
SECTION-O

ABUT. NO. 1 & MISCELLANEOUS DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- ⅜" = 1'-0" UNLESS NOTED
DECEMBER 1, 1941
RECOMMENDED FOR APPROVAL:-
BRIDGE DESIGN
PROJECT:- 40
SECTION:- O
STATION:- 590+80
STRUCTURE NO. 3505
DRAWING:- C4 OF 12
BRIDGE CONTRACT NO. 2266

DESIGNED: Z.S. 11-17-41 CHK'D: C.L.M. 11-17-41
DRAWN: Z.S. 11-19-41 CHK'D: C.L.M. 11-19-41
TRACED: R.N.H. 11-26-41 CHK'D: C.L.M. 11-29-41

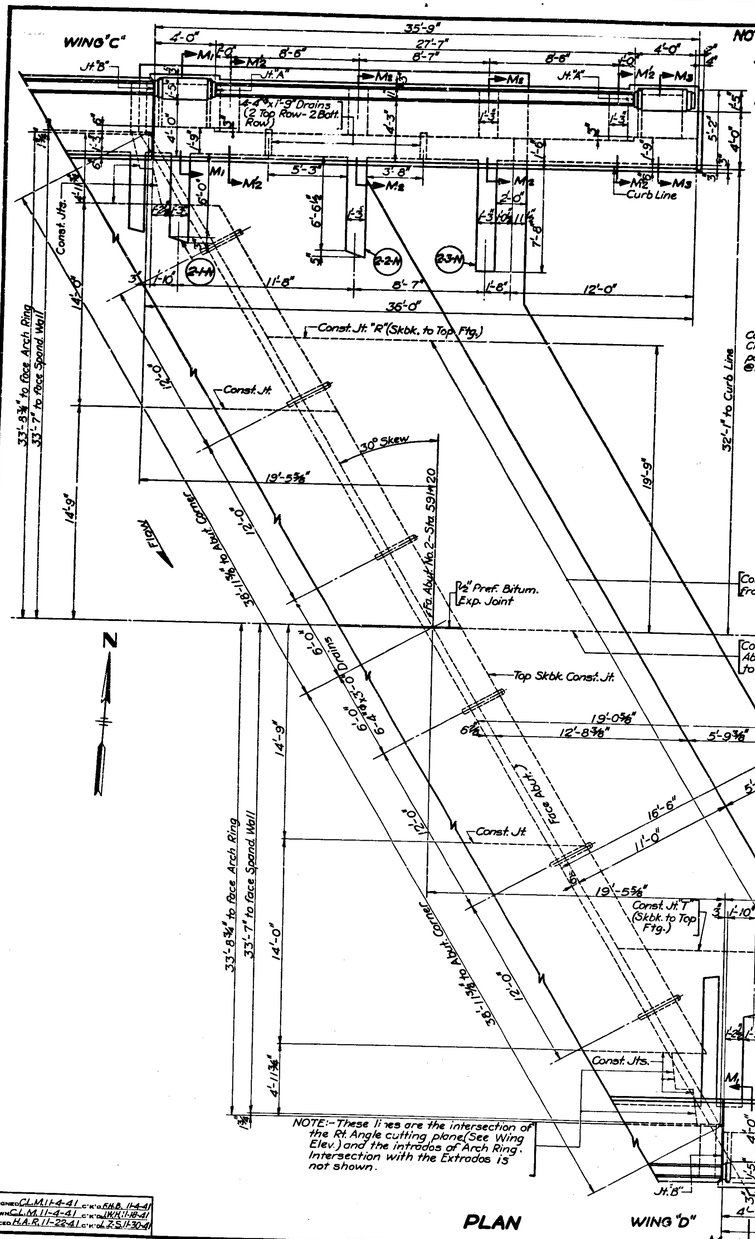
DES. WING WALL NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	40	1942	9	33

BRIDGES OVER 20' SPAN

SECTION-O

NOTE:-HANDRAIL & COPING TO BE BUILT TO A +2.559% GRADE. SIDEWALK & TOP CURB TO BE BUILT TO A +2.871% GRADE & A 400' VERTICAL CURVE.
For handrail details, see Drwg. C8.
For number and length of horizontal bars in handrail, see "Bill of Materials".

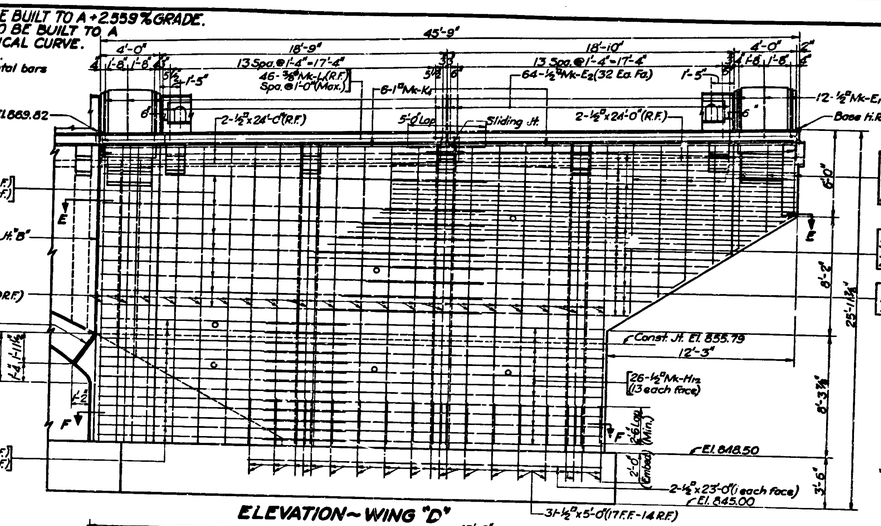
WING "C"

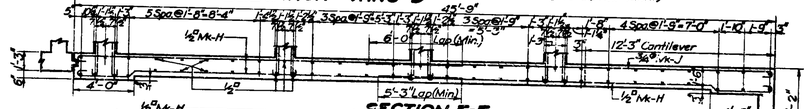


NOTE:- These lines are the intersection of the Rt. Angle cutting plane (See Wing Elev.) and the Intrados of Arch Ring. Intersection with the Extrados is not shown.

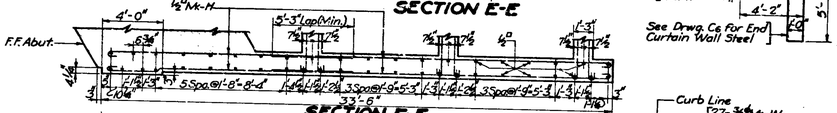
PLAN WING "D"

ELEVATION ~ WING "D"

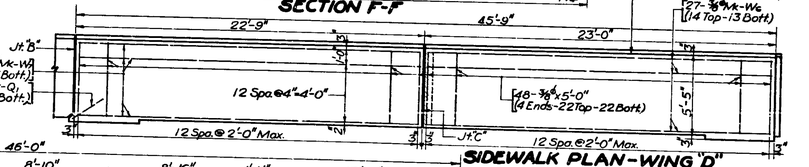




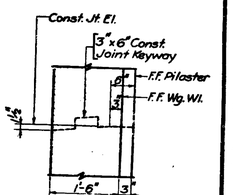
SECTION E-E



SECTION F-F



SIDEWALK PLAN - WING "D"



WING "D" CONSTRUCTION JOINT DETAIL
Scale:- 3" = 1'-0"

NOTES:- SEE DRWG. C2 FOR EXPANSION JOINT LEGEND.
SEE DRWG. C2 AND "A" BRIDGE STD. C" FOR EXPANSION JOINT AND WALK LINER DETAILS.
SEE DRWG. C5 FOR ADDITIONAL DETAILS OF ABUTMENT BRACKETS, CURB AND SIDEWALK.
SEE DRWG. C6 FOR ADDITIONAL DETAILS OF ABUTMENT COUNTERFORTS.
SEE DRWG. C10 FOR SPAN COUNTERFORT 10-S. REINFORCING STEEL EMBEDDED IN ABUTMENT NO. 2.
SEE DRWG. C4 FOR DETAILS OF EXPANSION JOINTS AND COPPER FLASHING IN WALK, SPAND. WALL AND LONGITUDINAL ARCH RING EXPANSION JOINTS.

DESIGNED C.L.M. 11-4-41 C'K'D H.A.B. 11-4-41
DRAWN C.L.M. 11-4-41 C'K'D J.W.K. 11-18-41
TRACED H.A.B. 11-22-41 C'K'D J.S. 11-30-41

ABUTMENT № 2 DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

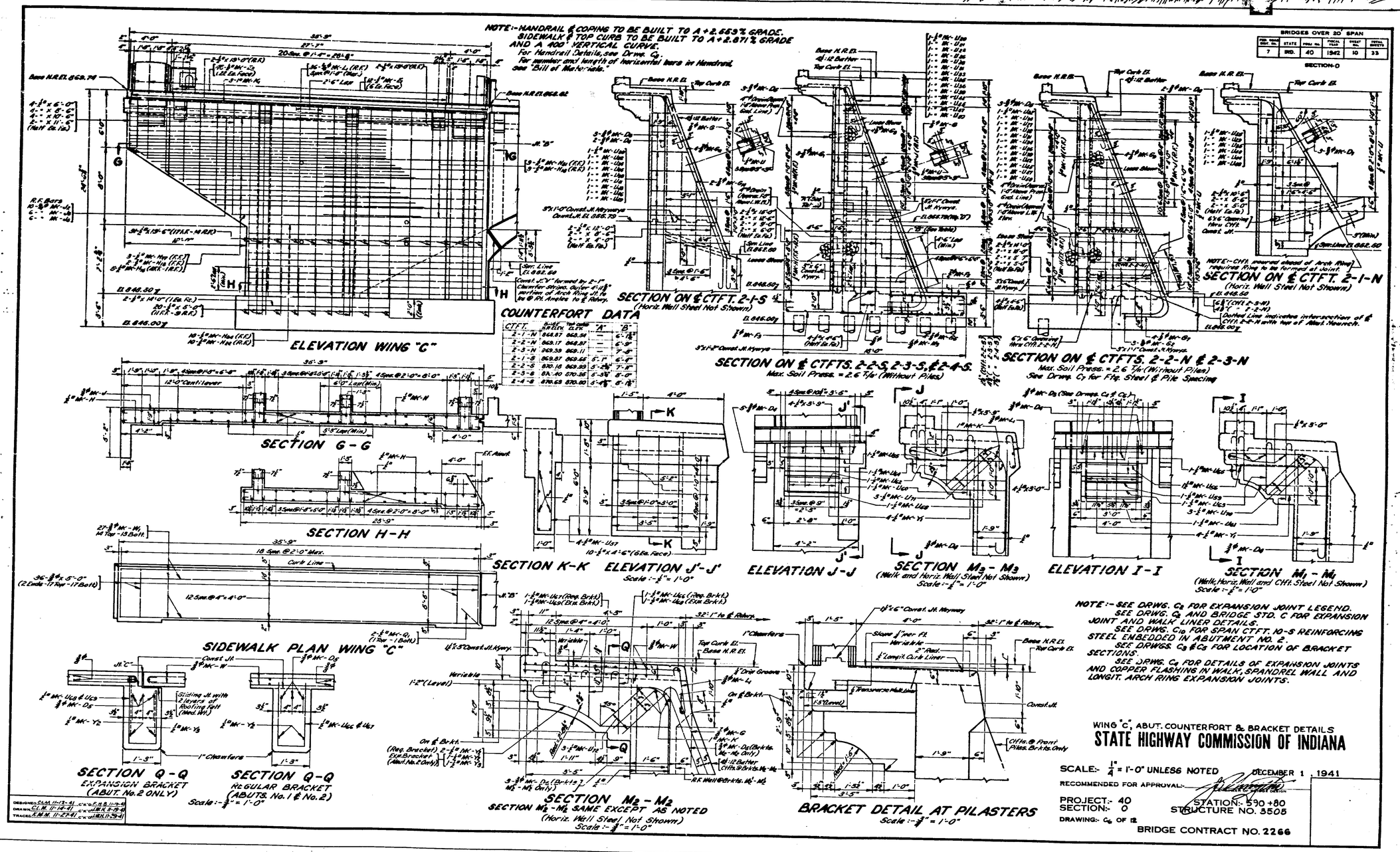
SCALE:- ¼" = 1'-0" (UNLESS NOTED) DECEMBER 1 1941

RECOMMENDED FOR APPROVAL: _____ CHIEF ENGINEER BRIDGE DESIGN

PROJECT:- 40
SECTION:- O
STATION:- 590+80
STRUCTURE NO. 3505

DRAWING:- C5 OF 12

BRIDGE CONTRACT NO. 2268



COUNTERFORT DATA

CTFT.	Bottom Ft. Elev.	Top Curb Elev.	"A"	"B"
2-1-N	868.87	868.54	—	6'-1 1/8"
2-2-N	869.17	868.87	—	6'-9"
2-3-N	869.39	869.11	—	7'-8"
2-1-S	869.87	869.55	5'-1"	6'-4"
2-2-S	870.18	869.99	5'-2 3/8"	7'-1"
2-3-S	870.40	870.56	5'-3 3/8"	8'-0"
2-4-S	870.63	870.80	5'-4 3/8"	8'-1 1/8"

NOTE:- SEE DRWG. C2 FOR EXPANSION JOINT LEGEND.
SEE DRWG. C2 AND BRIDGE STD. C FOR EXPANSION JOINT AND WALK LINER DETAILS.
SEE DRWG. C10 FOR SPAN CTFT. 10-S REINFORCING STEEL EMBEDDED IN ABUTMENT NO. 2.
SEE DRWGS. C3 & C5 FOR LOCATION OF BRACKET SECTIONS.
SEE DRWG. C4 FOR DETAILS OF EXPANSION JOINTS AND COPPER FLASHING IN WALK, SPANDREL WALL AND LONGIT. ARCH RING EXPANSION JOINTS.

WING "C", ABUT. COUNTERFORT & BRACKET DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- 1/4" = 1'-0" UNLESS NOTED — DECEMBER 1, 1941

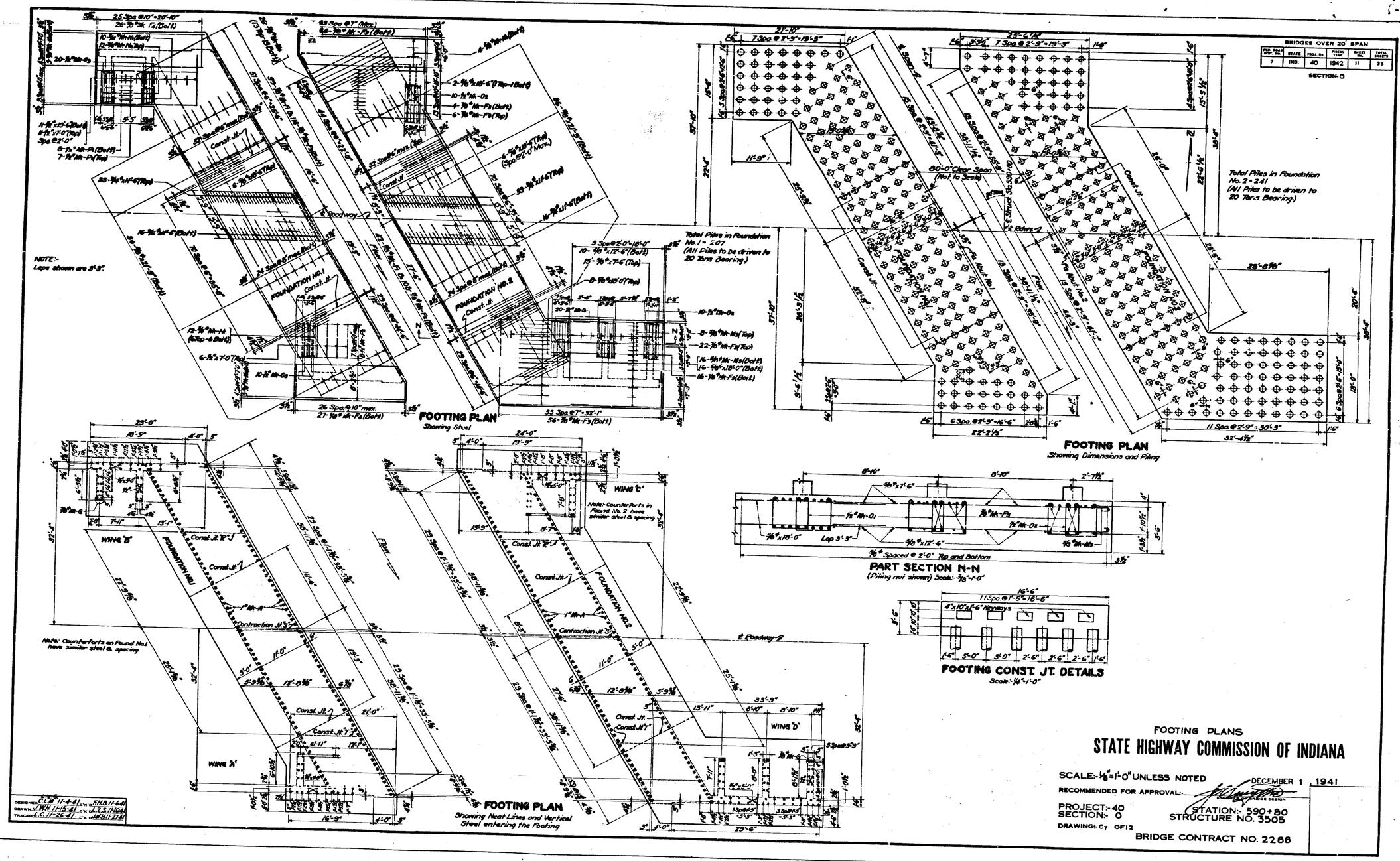
RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGE DESIGN

PROJECT:- 40
SECTION:- 0
DRAWING:- C6 OF 12

STATION:- 590+80
STRUCTURE NO. 3505

BRIDGE CONTRACT NO. 2266

DESIGNED C.L.M. 11-13-41 C'K'D F.H.B. 11-19-41
DRAWN C.L.M. 11-14-41 C'K'D J.W.H. 11-19-41
TRACED K.M.M. 11-27-41 C'K'D J.W.H. 11-29-41



FOOTING PLANS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:-1/8"=1'-0" UNLESS NOTED

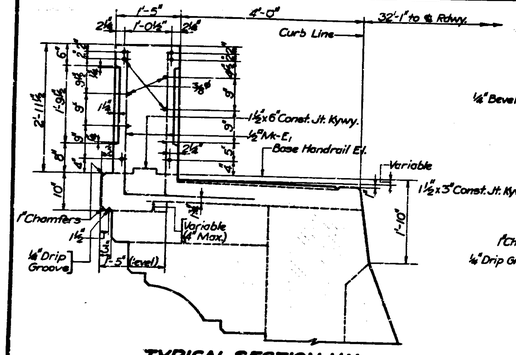
RECOMMENDED FOR APPROVAL:- DECEMBER 1, 1941

BRIDGE DESIGN

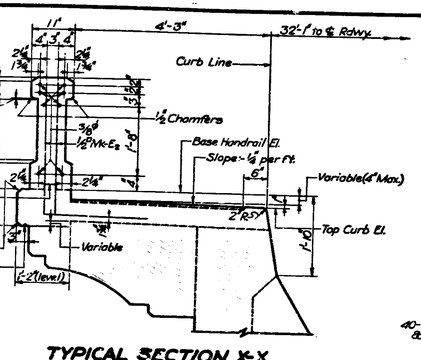
PROJECT:- 40
SECTION:- O
DRAWING:- C7 OF 12

STATION:- 590+80
STRUCTURE NO. 3505

BRIDGE CONTRACT NO. 2266



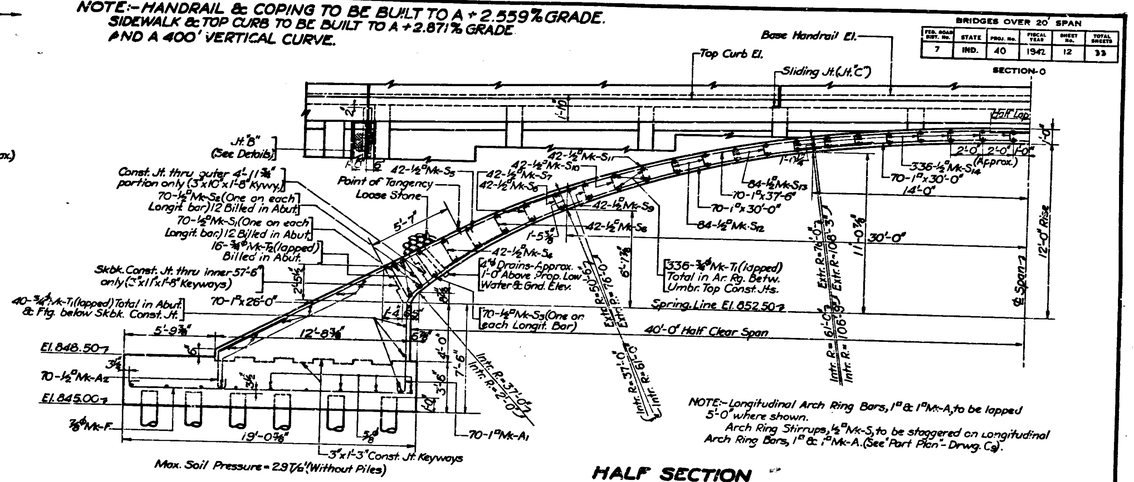
TYPICAL SECTION Y-Y
Scale:- ¾"=1'-0"



TYPICAL SECTION X-X
Scale:- ¾"=1'-0"

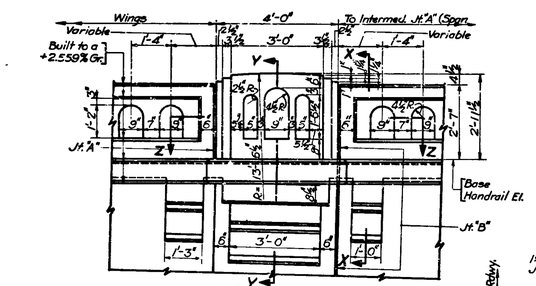
NOTE:- HANDRAIL & COPING TO BE BUILT TO A +2.559% GRADE. SIDEWALK & TOP CURB TO BE BUILT TO A +2.871% GRADE AND A 400' VERTICAL CURVE.

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	PROJ. No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	40	1942	12	33

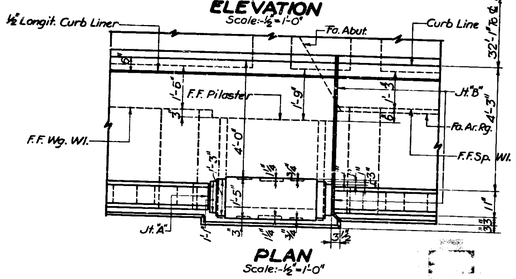


NOTE- Longitudinal Arch Ring Bars, 1" & 1"Mk-A, to be lapped 5'-0" where shown.
Arch Ring Stirrups, ½"Mk-S, to be staggered on Longitudinal Arch Ring Bars, 1" & 1"Mk-A. (See "Part Plan" - Drwg. C9).

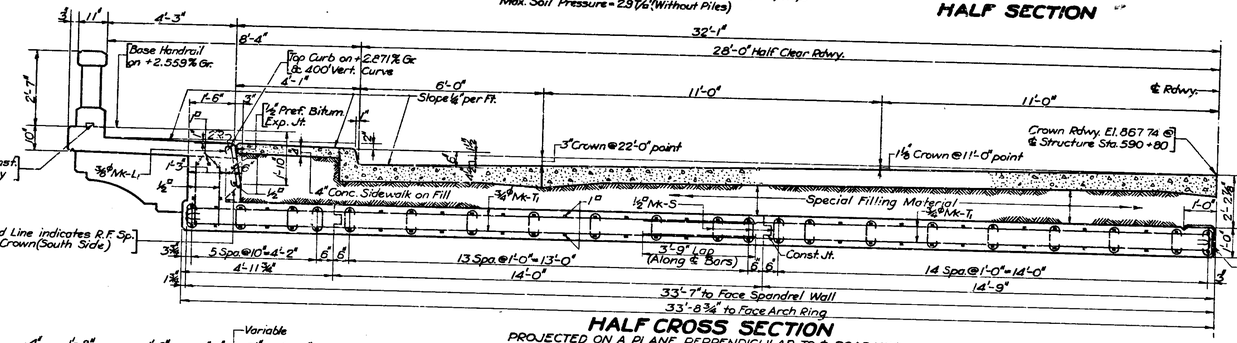
HALF SECTION



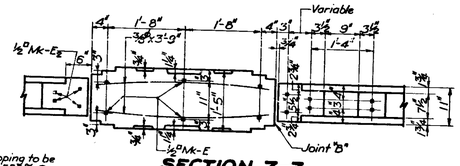
ELEVATION
Scale:- ½"=1'-0"



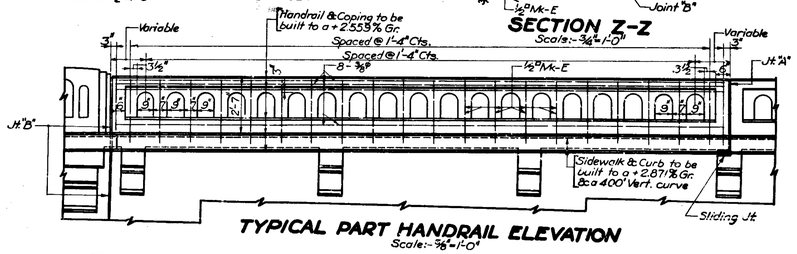
PLAN
Scale:- ½"=1'-0"



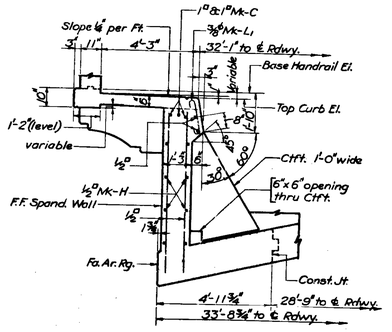
HALF CROSS SECTION
PROJECTED ON A PLANE PERPENDICULAR TO ℄ ROADWAY
Scale:- ½"=1'-0"



SECTION Z-Z
Scale:- ⅜"=1'-0"



TYPICAL PART HANDRAIL ELEVATION
Scale:- ⅜"=1'-0"



PART TYPICAL SECTION L-L
Scale:- ⅜"=1'-0"

NOTES:- SEE DRWG. C2 FOR EXPANSION JOINT LEGEND. SEE DRWG. C2 AND "BRIDGE STD. C" FOR EXPANSION JOINT AND WALK LINER DETAILS. SEE DRWG. C10 FOR ADDITIONAL DETAILS OF SPAN BRACKETS, CURB, COUNTERFORTS, & SIDEWALK. SEE DRWG. C4 FOR DETAILS OF EXPANSION JOINTS AND COPPER FLASHING IN WALK, SPANDREL WALL, AND LONGITUDINAL ARCH RING EXPANSION JOINTS.

DESIGNED C.L.M. 10-29-41 CHKD. F.H.B. 11-5-41
DRAWN C.L.M. 10-29-41 CHKD. F.H.B. 11-5-41
TRACED H.A.R. 11-17-41 CHKD. T.S.H. 11-30-41

—TYPICAL HANDRAIL DETAILS—

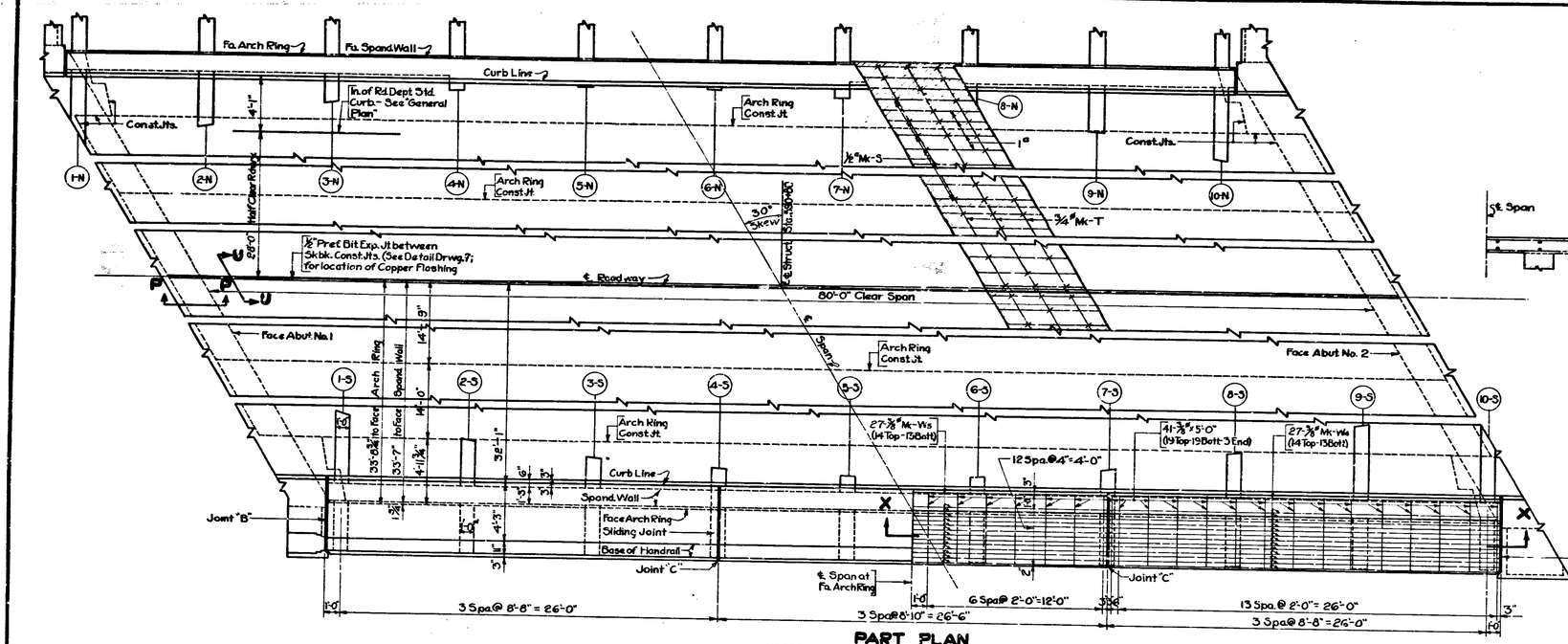
SECTIONS & HANDRAIL DETAILS
STATE HIGHWAY COMMISSION OF INDIANA

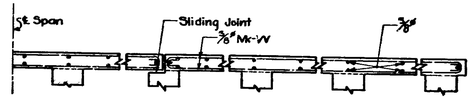
SCALE:- ¼"=1'-0" (UNLESS NOTED) DECEMBER 1, 1941
RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGE DESIGN
PROJECT:- 40
SECTION:- O
(STATION:- 590+80
STRUCTURE NO. 3505
DRAWING:- C8 OF 12
BRIDGE CONTRACT NO. 2266

BRIDGES OVER 20' SPAN

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	40	1942	13	33

SECTION-O

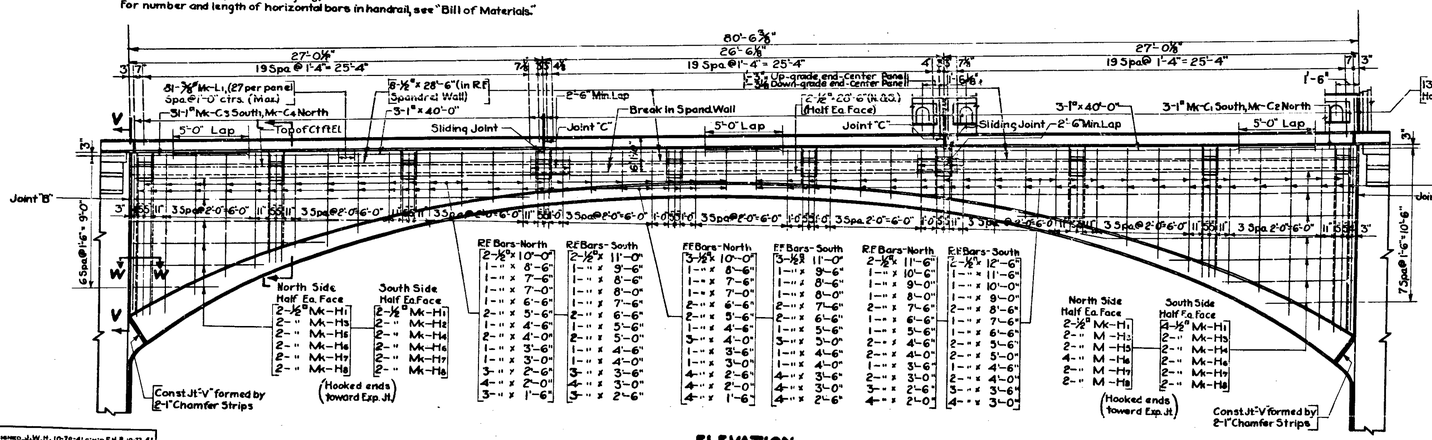




PART SECTION X-X
Not to Scale

PART PLAN
UPPER HALF SHOWS SIDEWALK SLAB REMOVED

NOTE:-
HANDRAIL & COPING TO BE BUILT TO A + 2.559% GRADE. CURB & SIDEWALK TO BE BUILT TO A + 2.871% GRADE AND 400' V.C.
For handrail details, see Drawing C8.
For number and length of horizontal bars in handrail, see "Bill of Materials."



ELEVATION

NOTES:- SEE DRWG. C2 FOR EXPANSION JOINT LEGEND.
SEE DRWG. C2 AND BRIDGE STD. C FOR EXPANSION JOINT AND WALK LINER DETAILS.
SEE DRWG. C6 FOR ADDITIONAL DETAILS OF SPAN BRACKETS, CURB, CTFTS. & SIDEWALK.
SEE DRWG. C4 FOR DETAILS OF EXPANSION JOINTS AND COPPER FLASHING IN WALK, SPAND. WALL, AND LONGIT. ARCH RING EXPANSION JOINTS.
SEE DRWG. C8 FOR HALF CROSS SECTION AND PART TYPICAL SECTION L-L.
SEE DRWG. C10 FOR TOP CURB & BASE HANDRAIL ELEVATIONS.

DESIGNED J.W.H. 10-28-41 checked R.H.B. 10-31-41
DRAWN J.W.H. 10-24-41 checked F.H.R. 11-1-41
TRACED P.N.H. 11-19-41 checked T.S. 11-30-41

SPAN — PART PLAN & ELEVATION

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- ¼" = 1'-0"

DECEMBER 1, 1941

RECOMMENDED FOR APPROVAL:-

PROJECT:- 40
SECTION:- O

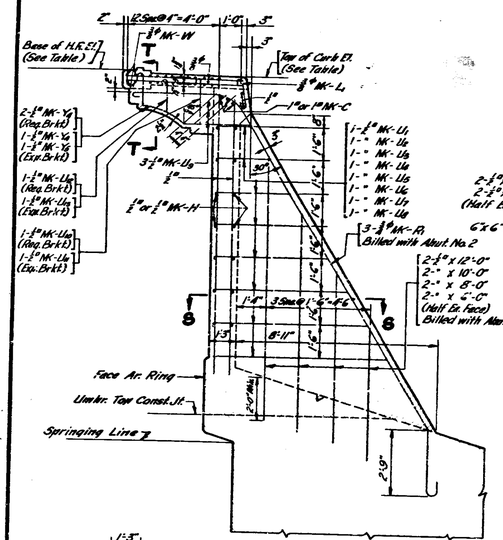
STATION:- 590+80
STRUCTURE NO. 3505

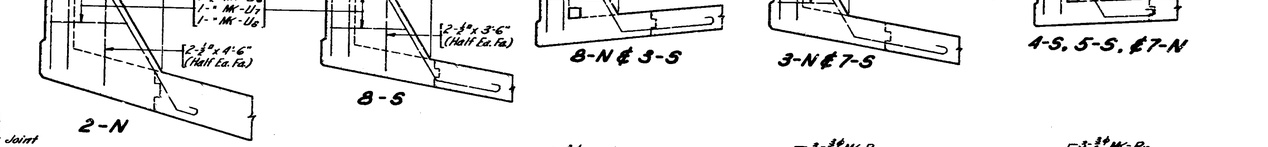
DRAWING:- C9 OF 12

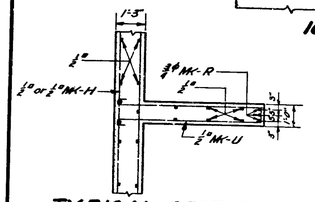
BRIDGE CONTRACT NO. 2266

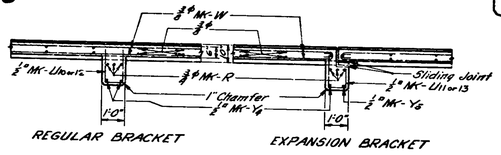
BRIDGES OVER 20' SPAN					
FED. ROAD PROJ. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	40	1942	14	33

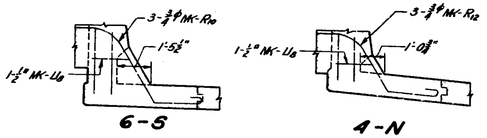
SECTION- O

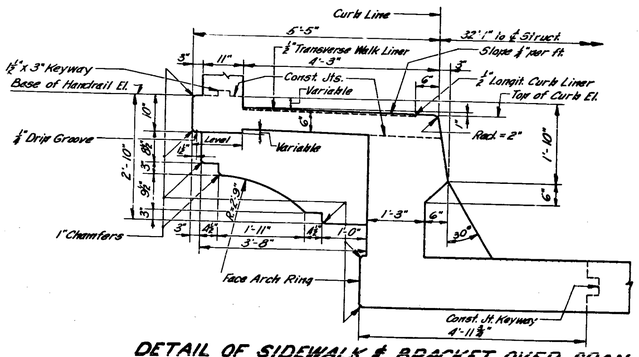












ELEVATIONS AT ℄ COUNTERFORTS

LOCATION	BASE H.R.	TOP CURB
1 - S	867.79	867.45
2 - S	868.01	867.66
3 - S	868.23	867.88
4 - S	868.45	868.11
5 - S	868.68	868.34
6 - S	868.90	868.58
7 - S	869.13	868.82
8 - S	869.35	869.07
9 - S	869.57	869.32
10 - S	869.79	869.56
1 - N	866.79	866.54
2 - N	867.01	866.73
3 - N	867.23	866.93
4 - N	867.45	867.13
5 - N	867.68	867.35
6 - N	867.91	867.56
7 - N	868.18	867.79
8 - N	868.35	868.01
9 - N	868.57	868.23
10 - N	868.80	868.47

NOTE :- ALL COUNTERFORT DETAILS NOT SHOWN ARE SIMILAR TO COUNTERFORT 10-S. SECTIONS ARE ON ℄ OF COUNTERFORTS.

DESIGNED J.W.H. 1065-41 C'K'D F.H.B. 1066-41
DRAWN J.W.H. 10-31-41 C'K'D F.H.B. 11-10-41
TRACED R.M.M. 11-19-41 C'K'D L.T.S. 11-29-41

SPAN COUNTERFORT & BRACKET DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- 3/8" = 1'-0" UNLESS NOTED DECEMBER 1, 1941

RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGE DESIGN

PROJECT:- 40
SECTION:- O
STATION:- 590+80
STRUCTURE NO. 3505

DRAWING:- C_{10} OF 12

BRIDGE CONTRACT NO. 2266

BILLS OF MATERIALS

BRIDGES OVER 20' SPAN					
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND.	40	1942	15	33

SECTION-O

ABUTMENT NO. 1

~ REINFORCING STEEL ~

BENT	STRAIGHT	MARK	NO. PIECES	SIZE	LENGTH	LOCATION	TOTAL LENGTH	WEIGHT
L		A1	70	1□	15'-6"	Vert. Abut. & Intr. Ar. Rg.	1035'-0"	
L		A2	70	"	8'-3"	" " " R.F. Abut.	577'-6"	
L		K2	3	"	34'-9"	Horiz. Curb-Wg."B"	104'-3"	
L		K3	3	"	31'-9"	" " - " "A"	95'-3"	
	L	—	70	"	26'-0"	Vert. Abut. & Extr. Ar. Rg.	1820'-0"	
						TOTAL 1□	3682'-0"	12519#
L		F1	39	7/8φ	16'-9"	Transv. Abut. Ftg. (Bott.)	653'-3"	
L		F2	114	"	10'-3"	" " " "	1168'-6"	
L		F4	53	"	7'-9"	" Wg. Ftgs. (Top & Bott.)	410'-9"	
L		G3	4	"	20'-6"	Sloping Fa.-Clfts. 1-2-S, 1-3-S	82'-0"	
L		G4	4	"	19'-6"	" " - " 1-2-N, 1-3-N	78'-0"	
L		G6	12	"	11'-0"	" " - " 1-2-S & 1-3-N	132'-0"	
L		G10	6	"	19'-6"	" " - " 1-2-S & 1-3-S	117'-0"	
L		G11	6	"	18'-9"	" " - " 1-2-N & 1-3-N	112'-6"	
L		G13	3	"	19'-0"	" " - " 1-1-N	57'-0"	
L		G16	2	"	13'-9"	" " - " 1-1-N	27'-6"	
						TOTAL 7/8φ	2838'-6"	5802#
L		D2	3	3/4φ	20'-6"	Sloping Fa. Clft. & Brkt. 1-1-S	61'-6"	
L		D3	3	"	11'-6"	Pil. Brkts. & Vert. Clfts. 1-1-N	34'-6"	
L		D4	4	"	11'-0"	Brkts. & Vert. Wls. 1-1-N & 1-1-S	44'-0"	
L		D5	12	"	10'-3"	" " " " Clfts. (1-2-N, 1-3-S)	123'-0"	
L		D6	12	"	10'-0"	False Brkts. & Vert. Wls.	120'-0"	
L		J3	15	"	24'-9"	Horiz. R.F. Wg."B"	371'-3"	
L		J4	13	"	22'-9"	" " " "A"	295'-9"	
L		J7	4	"	19'-6"	" " " "B"	78'-0"	
L		J8	4	"	18'-3"	" " " "A"	73'-0"	
L		N1	34	"	7'-9"	Transv. Wg. Ftgs. (Top & Bott.)	263'-6"	
L		R2	3	"	22'-0"	Sloping Fa. Clft. 1-N	66'-0"	
L		T1	56	"	21'-9"	Transv. Abut. & Umbr. Tops	1218'-0"	
	L	—	49	"	11'-5"	Longit. " Ftg. (Top & Bott.)	563'-6"	
						TOTAL 3/4φ	3312'-0"	4975#
L		M2	10	5/8φ	22'-0"	Longit. Ftg.-Wgs. "A" & "B" (Bott.)	220'-0"	
	L	—	36	"	21'-9"	" Abut. Ftg. (Bott.)	783'-0"	
	L	—	6	"	18'-6"	Transv. " " (Top)	111'-0"	
						TOTAL 5/8φ	1114'-0"	1162#
L		E1	24	1/2□	5'-3"	Vert. H.R. Posts (F.F. & R.F.)	126'-0"	
L		E2	80	"	5'-0"	" " (F.F. & R.F.)	400'-0"	
L		H12	2	"	22'-6"	Horiz. Wg. "B" (F.F.)	45'-0"	
L		H14	2	"	19'-6"	" " "A" (")	39'-0"	
L		H16	2	"	17'-6"	" " "B" (")	35'-0"	
L		H19	7	"	15'-6"	" " "B" (R.F.)	108'-6"	
L		H20	1	"	15'-0"	" " "A" (F.F.)	15'-0"	
L		H21	6	"	14'-6"	" " "A" (R.F.)	87'-0"	
L		H23	5	"	23'-0"	" " "B" (")	115'-0"	
L		H24	7	"	20'-9"	" " "A" (")	145'-3"	
L		H28	3	"	23'-9"	" " "B" (F.F.)	71'-3"	
L		H29	3	"	21'-9"	" " "A" (")	65'-3"	
L		H32	7	"	15'-6"	" " "B" (")	108'-6"	
L		H33	6	"	14'-6"	" " "A" (")	87'-0"	
L		H35	5	"	23'-0"	" " "B" (")	115'-0"	
L		H36	7	"	21'-0"	" " "A" (")	147'-0"	
L		O3	30	"	6'-6"	Clft. Heel Beam Ftg. Stirrups	195'-0"	
L		P1	15	"	20'-6"	Longit. Wg."B" Ftg. (Top & Bott.)	307'-6"	
L		P2	8	"	10'-6"	" "A" " (")	84'-0"	
L		Q1	4	"	3'-0"	Diagonal Walk Corners	12'-0"	
L		S1	12	"	3'-6"	Ar. Rg. Stirrups - Umbr. Tops	42'-0"	
L		S2	12	"	3'-3"	" " " " "	39'-0"	
L		U26	2	"	17'-3"	Horiz. Clft. Stirrups	34'-6"	
L		U28	4	"	16'-3"	" " "	65'-0"	
L		U29	1	"	15'-9"	" " "	15'-9"	
L		U31	4	"	15'-0"	" " "	60'-0"	
L		U34	4	"	14'-0"	" " "	56'-0"	
L		U35	2	"	13'-6"	" " "	27'-0"	
L		U37	4	"	12'-9"	" " "	51'-0"	
L		U38	1	"	12'-3"	" " "	12'-3"	
L		U39	4	"	11'-9"	" " "	47'-0"	
L		U40	1	"	11'-3"	" " "	11'-3"	
L		U41	1	"	10'-9"	" " "	10'-9"	
L		U42	4	"	10'-3"	" " "	41'-0"	
L		U43	1	"	9'-3"	" " "	9'-3"	
L		U44	1	"	9'-0"	" " "	9'-0"	
L		U45	4	"	8'-9"	" " "	35'-0"	
L		U46	1	"	7'-9"	" " "	7'-9"	
L		U47	4	"	7'-3"	" " "	29'-0"	
L		U48	1	"	6'-6"	" " "	6'-6"	
L		U49	1	"	6'-3"	" " "	6'-3"	
L		U50	4	"	5'-9"	" " "	23'-0"	
L		U55	2	"	11'-9"	Horiz. Pil. Brkt. Stirrups	23'-6"	
L		U56	2	"	11'-3"	" " " "	22'-6"	
L		U57	8	"	10'-9"	Vert. End Wl. Stirrups	86'-0"	
L		U58	2	"	9'-9"	Horiz. Pil. Brkt. Stirrups	19'-6"	
L		U59	2	"	9'-3"	" " " "	18'-6"	
L		U60	2	"	9'-9"	Vert. " " "	19'-6"	
L		U61	2	"	9'-6"	" " " "	19'-0"	
L		U62	2	"	9'-0"	" " " "	18'-0"	
L		U63	2	"	8'-6"	" " " "	17'-0"	
L		U64	2	"	7'-9"	" " " "	15'-6"	
L		U65	2	"	7'-6"	" " " "	15'-0"	
L		U66	8	"	6'-0"	" Small " "	48'-0"	
L		U67	8	"	5'-0"	" " " "	40'-0"	
L		U70	6	"	8'-9"	Diag. Stirrups-Front Pil. Brkts.	52'-6"	
L		U71	6	"	8'-9"	" " -Rear " "	32'-6"	

DESIGNED ___	C'K'D L.Z.S. 11-21-41
DRAWN C.L.M. 11-21-41	C'K'D J.W.H. 11-21-41
TRACED H.A.R. 11-28-41	C'K'D J.W.H. 12-1-41

ABUTMENT NO. 1 (CONT'D.)

~ REINFORCING STEEL ~

BENT	STRAIGHT	MARK	NO. PIECES	SIZE	LENGTH	LOCATION	TOTAL LENGTH	WEIGHT
L		U72	24	1/2□	5'-9"	Diag. Stirrups-Small Pil. Brkts.	138'-0"	
L		Y1	16	"	7'-0"	Pil. Brkts.-Curved Face	112'-0"	
L		Y2	16	"	6'-0"	Small " " "	96'-0"	
	L	—	15	"	18'-3"	11 Vert. Wg."A" (F.F.)-4 Horiz. R.F. Curb-Wg."A"	273'-9"	
	L	—	18	"	17'-6"	" " "A" (F.F. & R.F.)	315'-0"	
	L	—	11	"	17'-0"	" " "B" (" " ")	187'-0"	
	L	—	22	"	16'-6"	18 " " "B" (R.F. & F.F.)-4 Horiz. R.F. Curb-Wg."A"	363'-0"	
	L	—	6	"	13'-9"	2 Hor. Wg."B" Ftg.-4 Vert. Clfts. 1-2-S & 1-3-S (F.F. & R.F.)	82'-6"	
	L	—	4	"	13'-0"	Vert. Clfts. 1-2-N & 1-3-N (F.F. & R.F.)	52'-0"	
	L	—	2	"	12'-6"	Hor. Wg."A" Ftg.	25'-0"	
	L	—	4	"	11'-6"	Vert. " "B" (F.F. & R.F.)	46'-0"	
	L	—	4	"	11'-0"	" " "A" (" " ")	44'-0"	
	L	—	13	"	10'-6"	11 Transv. Wg."B" Ftg. (Bott.)-2 Vert. Clft. 1-1-N (F.F. & R.F.)	136'-6"	
	L	—	2	"	10'-0"	Vert. Clft. 1-S (F.F. & R.F.)	20'-0"	
	L	—	4	"	9'-6"	" " 1-2-S & 1-3-S (F.F. & R.F.)	38'-0"	
	L	—	10	"	9'-0"	4 " Wg."B"-2 Vert. Clft. 1-N (F.F. & R.F.)-4 " Clfts. 1-2-N & 1-3-N	90'-0"	
	L	—	4	"	8'-6"	Vert. Wg."A" (F.F. & R.F.)	34'-0"	
	L	—	21	"	7'-0"	Transv. Wg. Ftg. Top (6 Wg."A"; 11 Wg."B")-Vert. Clfts. 1-2-S & 1-3-S (F.F. & R.F.)	147'-0"	
	L	—	6	"	6'-6"	2 Vert. Clft. 1-N (R.F.)-2 Vert. Wg."A" (F.F. & R.F.)	39'-0"	
	L	—	4	"	6'-0"	" Wg."B" (F.F. & R.F.)	24'-0"	
	L	—	4	"	5'-6"	" Clfts. 1-2-S & 1-3-S (F.F. & R.F.)	22'-0"	
	L	—	40	"	5'-0"	36 Vert. Wg.-4 Vert. Clfts. 1-2-N & 1-3-N (F.F. & R.F.)	200'-0"	
	L	—	44	"	4'-6"	Vert. Clfts. 1-2-S, 1-3-S & 1-1-S-2 Hor. End Walls (F.F. & R.F.)	198'-0"	
	L	—	4	"	4'-0"	Vert. Clfts. (F.F. & R.F.) 2-Clft. 1-S, 2-Clft. 1-N	16'-0"	
	L	—	8	"	3'-9"	Hor. Rear Pil. Brkts.	30'-0"	
	L	—	8	"	3'-0"	" Front " "	24'-0"	
						TOTAL 1/2□	6166'-3"	5241#
L		L1	67	3/8φ	1'-9"	Vert. R.F. Curbs	117'-3"	
L		W2	27	"	34'-0"	Longit. Walk Slab -Wg."B"	918'-0"	
L		W3	27	"	31'-0"	" " " - " "A"	837'-0"	
	L	—	8	"	25'-3"	Horiz. Handrail - " "B"	202'-0"	
	L	—	8	"	22'-3"	" " - " "A"	178'-0"	
	L	—	66	"	5'-0"	Transv. Walk Slabs-(Top & Bott.)	330'-0"	
	L	—	44	"	3'-6"	Horiz. Handrail Posts	154'-0"	
						TOTAL 3/8φ	2736'-3"	1029#
						TOTAL STEEL		30728#

~ CONCRETE ~

CLASS "E"-Ftg.-Wing "A" to Const. Jt.	= 45.5 Cu.Yds.	
-Inner Portion betw. Const. Jts.	= 76.5 " "	
-Wing "B" to Const. Jt.	= 82.3 " "	
TOTAL CLASS "E" Footing		= 204.3 Cu.Yds.
CLASS "E"-Above Ftg.-Wing "A" & Abut.*	= 56.8 Cu.Yds.	
-Abut. to Skbk. Betw. Jts. "T" & "S"	= 37.7 " "	
- " " " " "S" " "R"	= 34.2 " "	
-Wing "B" & Abut. ‡	= 60.3 " "	
TOTAL CLASS "E" Above Footing		= 189.0 Cu.Yds.
CLASS "D"-Sidewalks		= 7.6 " "
CLASS "D"-Handrail (5.3 Cu.Yds.)		= 64.2 Lin.Ft.

~ MISCELLANEOUS ~

12 Oz. Soft Copper Flashing (9" Wide)-Sdwk. Exp. Jts. @ Pilasters	= 12 Lin.Ft.
12 " " " " (1'-0" ")-Sp.Wl. " " " "	= 24 " "
4"φ Drains-Steel Boiler Tubing (Wt./Ft.-6.286#) 6@3'-0, 8@1'-9"	= ®201 Lbs.
207 Timber Piles @ 20'-0" (Approx.)	= 4140 Lin.Ft.

ABUTMENT NO. 2

~ REINFORCING STEEL ~

BENT	STRAIGHT	MARK	NO. PIECES	SIZE	LENGTH	LOCATION	TOTAL LENGTH	WEIGHT
L		A1	70	1□	15'-6"	Vert. Abut. & Intr. Ar. Rg.	1085'-0"	
L		A2	70	"	8'-3"	" " " R.F. Abut.	577'-5"	
L		K1	3	"	36'-9"	Horiz. Curb-Wg."C"	110'-3"	
L		K4	6	"	26'-0"	" " - " "D"	156'-0"	
	L	—	70	"	26'-0"	Vert. Abut. & Extr. Ar. Rg.	1820'-0"	
						TOTAL 1□	3748'-9"	12746#
L		F1	42	7/8φ	16'-9"	Transv. Abut. Ftg. (Bott.)	703'-6"	
L		F2	108	"	10'-3"	" " " "	1107'-0"	
L		F3	148	"	8'-3"	" Wg. Ftgs.-(Top & Bott.)	1221'-0"	
L		G1	9	"	22'-0"	Sloping Fa.-Clfts. 2-2-S, 2-3-S & 2-4-S	198'-0"	
L		G2	6	"	21'-0"	" " -Clft. 2-2-N & 2-3-N	126'-0"	
L		G5	12	"	11'-6"	" " -Clfts. 2-2-S, 2-3-S & 2-4-S	138'-0"	
L		G7	8	"	10'-6"	" " - " 2-2-N & 2-3-N	84'-0"	
L		G8	12	"	22'-6"	" " - " 2-2-S, 2-3-S & 2-4-S	270'-0"	
L		G9	8	"	21'-9"	" " -Clft. 2-2-N & 2-3-N	174'-0"	
L		G12	4	"	22'-6"	" " - " 2-1-S	90'-0"	
L		G14	2	"	15'-0"	" " - " 2-1-S	30'-0"	
						TOTAL 7/8φ	4141'-6"	8465#
L		D1	3	3/4φ	21'-6"	Sloping Fa.-Clft. 2-1-N	64'-6"	
L		D3	3	"	11'-6"	" " - " 2-1-S	34'-6"	
L		D4	14	"	11'-0"	Sloping Fa. Clfts. (2, 2-1-N) (2, 2-1-S)-10 Rear Pil. Brkts.	154'-0"	
L		D5	15	"	10'-3"	Brkts. & Sloping Fa. Clfts. 2-2-S, 2-3-S, 2-4-S, 2-2-N & 2-3-N	153'-9"	
L		D6	12	"	10'-0"	False Brkts. & Vert. Wls.	120'-0"	
L		J1	19	"	26'-9"	Horiz. R.F. Wg."D"	508'-3"	
L		J2	10	"	26'-0"	" " " "C"	260'-0"	
L		J3	6	"	24'-9"	" " " "	148'-6"	
L		J5	6	"	21'-0"	" " " "	126'-0"	
L		J6	4	"	20'-6"	" " " "D"	82'-0"	
L		R1	3	"	26'-0"	Sloping Fa.-Clft. 10-S	78'-0"	
L		T1	56	"	21'-9"	Transv. Abut. & Umbr. Tops	1218'-0"	
	L	—	49	"	11'-6"	Longit. Abut. Ftg. (Top & Bott.)	563'-6"	
						TOTAL 3/4φ	3511'-0"	5274#
L		M1	4	5/8φ	25'-6"	Longit. Ftg.-Wg."C" (Bott.)	102'-0"	
L		M3	24	"	18'-6"	" " - " "D" (Top & Bott.)	444'-0"	
L		M4	26	"	14'-6"	" " - " "C" (" " ")	377'-0"	
	L	—	36	"	21'-9"	" Abut. Ftg. (Bott.)	783'-0"	
	L	—	8	"	18'-6"	Transv. Ftg. (Top & Bott.)	148'-0"	
	L	—	24	"	18'-0"	Longit. " (" " ")	432'-0"	
	L	—	10	"	12'-6"	" " -Wg."D" (Bott.)	125'-0"	
	L	—	15	"	7'-6"	Transv. " " " (Top)	112'-6"	
						TOTAL 5/8φ	2523'-6"	2632#

ABUTMENT NO. 2 (CONT'D.)

~ REINFORCING STEEL ~

BENT	STRAIGHT	MARK	NO. PIECES	SIZE	LENGTH	LOCATION	TOTAL LENGTH	WEIGHT
L		E1	24	1/2□	5'-3"	Vert. H.R. Posts (F.F. & R.F.)	126'-0"	
L		E2	110	"	5'-0"	" " (F.F. & R.F.)	550'-0"	
L		H10	9	"	25'-6"	Horiz. Wg."D" (R.F.)	229'-6"	
L		H11	3	"	24'-0"	" " " (F.F.)	72'-0"	
L		H12	26	"	22'-6"	" " " (" & R.F.)	585'-0"	
L		H13	2	"	21'-9"	" " "C" (")	43'-6"	
L		H14	4	"	19'-6"	" " "D" (")	78'-0"	
L		H15	5	"	19'-3"	" " "C" (" & R.F.)	96'-3"	
L		H17	13	"	16'-9"	" " "D" (R.F.)	217'-9"	
L		H18	9	"	16'-3"	" " "C" (")	146'-3"	
L		H22	10	"	24'-0"	" " " (")	240'-0"	
L		H25	3	"	26'-0"	" " "D" (F.F.)	78'-0"	
L		H26	9	"	25'-6"	" " " (R.F.)	229'-6"	
L		H27	3	"	25'-3"	" " "C" (F.F.)	75'-9"	
L		H30	13	"	16'-9"	" " "D" (")	217'-9"	
L		H31	9	"	16'-3"	" " "C" (")	146'-3"	
L		H34	10	"	24'-0"	" " " (")	240'-0"	
L		O1	20	"	7'-0"	Clft. Heel Beam Ftg. Stirrups	140'-0"	
L		O2	20	"	6'-9"	" " " " "	135'-0"	
L		Q1	4	"	3'-0"	Diag. Walk Corners	12'-0"	
L		S1	12	"	3'-6"	Ar. Rg. Stirrups-Umbr. Tops	42'-0"	
L		S2	12	"	3'-3"	" " " " "	39'-0"	
L		U20	3	"	19'-9"	Horiz. Clft. Stirrups	59'-3"	
L		U21	3	"	19'-3"	" " "	57'-9"	
L		U22	2	"	18'-9"	" " "	37'-6"	
L		U23	3	"	18'-3"	" " "	54'-9"	
L		U24	2	"	18'-0"	" " "	36'-0"	
L		U25	1	"	17'-6"	" " "	17'-6"	
L		U26	3	"	17'-3"	" " "	51'-9"	
L		U27	2	"	17'-0"	" " "	34'-0"	
L		U28	5	"	16'-3"	" " "	81'-3"	
L		U29	1	"	15'-9"	" " "	15'-9"	
L		U30	1	"	15'-6"	" " "	15'-6"	
L		U31	5	"	15'-0"	" " "	75'-0"	
L		U32	1	"	14'-9"	" " "	14'-9"	
L		U33	3	"	14'-6"	" " "	43'-6"	
L		U34	3	"	14'-0"	" " "	42'-0"	
L		U35	5	"	13'-6"	" " "	67'-6"	
L		U36	5	"	13'-0"	" " "	65'-0"	
L		U38	1	"	12'-3"	" " "	12'-3"	
L		U39	5	"	11'-9"	" " "	58'-9"	
L		U40	1	"	11'-3"	" " "	11'-3"	
L		U41	1	"	10'-9"	" " "	10'-9"	
L		U42	5	"	10'-3"	" " "	51'-3"	
L		U43	1	"	9'-3"	" " "	9'-3"	
L		U44	1	"	9'-0"	" " "	9'-0"	
L		U45	5	"	8'-9"	" " "	43'-9"	
L		U46	1	"	7'-9"	" " "	7'-9"	
L		U47	5	"	7'-3"	" " "	36'-3"	
L		U48	1	"	6'-6"	" " "	6'-6"	
L		U49	1	"	6'-3"	" " "	6'-3"	
L		U50	5	"	5'-9"	" " "	28'-9"	
L		U55	2	"	11'-9"	" Pil. Brkt. Stirrups	23'-6"	
L		U56	2	"	11'-3"	" " " "	22'-6"	
L		U57	8	"	10'-9"	Vert. End Wall "	86'-0"	
L		U58	2	"	9'-9"	Horiz. Pil Brkt. "	19'-6"	
L		U59	2	"	9'-3"	" " " "	18'-6"	
L		U60	2	"	9'-9"	Vert. " " "	19'-6"	
L		U61	2	"	9'-6"	" " " "	19'-0"	
L		U62	2	"	9'-0"	" " " "	18'-0"	
L		U63	2	"	8'-6"	" " " "	17'-0"	
L		U64	2	"	7'-9"	" " " "	15'-6"	
L		U65	2	"	7'-6"	" " " "	15'-0"	
L		U66	8	"	6'-0"	" Regular " "	48'-0"	
L		U67	8	"	5'-0"	" " " "	40'-0"	
L		U68	1	"	5'-3"	" Exp. " "	5'-3"	
L		U69	1	"	4'-0"	" " " "	4'-0"	
L		U70	6	"	8'-9"	Diag. Stirrups-Front Pil. Brkts.	52'-6"	
L		U71	6	"	8'-9"	" " -Rear " "	52'-6"	
L		U72	27	"	5'-9"	" " -Small Brkts.	155'-3"	
L		Y1	16	"	7'-0"	Pil. Brackets-Curved Face	112'-0"	
L		Y2	17	"	6'-0"	16 Req.-1 Exp. Brkts.-Curved Fa.	102'-0"	
L		Y3	1	"	5'-0"	Exp. Brkt. Curved Fa.	5'-0"	
	L	—	4	"	24'-0"	Horiz. R.F. Curb-Wg."D"	96'-0"	
	L	—	2	"	23'-0"	" " Ftg. - " "	46'-0"	
	L	—	44	"	20'-6"	Vert. Wg."D" (F.F. & R.F.)	902'-0"	
	L	—	31	"	19'-6"	" " "C" (" " ")	604'-6"	
	L	—	4	"	19'-0"	Horiz. R.F. Curb-Wg."C"	76'-0"	
	L	—	6	"	15'-0"	Vert. Clfts. 2-2-S, 2-3-S & 2-4-S	90'-0"	
	L	—	6	"	14'-0"	4 " " (2-2-N & 2-3-N) 2 Hor. Ftg. Wg."C"	84'-0"	
	L	—	6	"	12'-6"	" " 2-2-S, 2-3-S & 2-4-S	75'-0"	
	L	—	4	"	12'-0"	" " 2-1-S & 10-S	48'-0"	
	L	—	4	"	11'-6"	" Wgs. (F.F. & R.F.)	46'-0"	
	L	—	10	"	10'-6"	8 " (F.F. & R.F.)-2 Vert. Clft. 2-1-N	105'-0"	
	L	—	6	"	10'-0"	" Clfts. 2-2-N, 2-3-N & 10-S	60'-0"	
	L	—	10	"	9'-0"	" " 2-2-S, 2-3-S, 2-4-S, 2-2-N & 2-3-N	90'-0"	
	L	—	12	"	8'-6"	4 Vert. Clfts. 2-1-S & 2-1-N; 8 " Wgs. (F.F. & R.F.)	102'-0"	
	L	—	2	"	8'-0"	Vert. Clft. 10-S	16'-0"	
	L	—	16	"	6'-0"	8 Vert. Clfts. 2-2-S, 2-3-S, 2-4-S & 10-S; 8 " Wgs. (F.F. & R.F.)	96'-0"	
	L	—	57	"	5'-0"	" Clfts. 2-2-N, 2-3-N & 2-1-N; Wg. Ftg. Stubs	285'-0"	
	L	—	40	"	4'-6"	20 " Clft. Ftgs.; 20 Horiz. End Walls	180'-0"	
	L	—	2	"	4'-0"	Vert. Clft. 2-1-S	8'-0"	
	L	—	8	"	3'-9"	Horiz. Rear Pil. Brkts.	30'-0"	
	L	—	8	"	3'-0"	" Front " "	24'-0"	
						TOTAL 1/2□	8714'-0"	7407#

ABUTMENT NO. 2 (CONT'D.)

~ REINFORCING STEEL ~

BENT	STRAIGHT	MARK	NO. PIECES	SIZE	LENGTH	LOCATION	TOTAL LENGTH	WEIGHT
L		L1	82	3/8φ	1'-9"	Vert. R.F. Curbs	143'-6"	
L		W1	27	"	35'-9"	Longit. Walk Slab-Wg."C"	965'-3"	
L		W6	27	"	23'-0"	" " " - " "D"	621'-0"	
L		W7	27	"	22'-9"	" " " - " "	614'-3"	
	L	—	8	"	27'-3"	Hor. Handrail - " "C"	218'-0"	
	L	—	16	"	18'-3"	" " - " "D"	292'-0"	
	L	—	84	"	5'-0"	Transv. Walk Slab (Top & Bott.)	420'-0"	
	L	—	44	"	3'-6"	Hor. Handrail Posts	154'-0"	
						TOTAL 3/8φ	3428'-0"	1289#
						TOTAL STEEL		37,813#

~ CONCRETE ~

CLASS "E"-Ftg.-Wing "C" to Const. Jt.	= 76.0 Cu.Yds.	
-Inner Portion Betw. Const. Jts.	= 76.5 " "	
-Wing "D" to Const. Jt.	= 88.7 " "	
TOTAL CLASS "E" Footing		= 241.2 Cu.Yds.
CLASS "E"-Above Ftg.-Wg. "C", Incl. Clfts. & Brkts. up to Bott. Sdwk. Abut. to Jt. "R" up to Skbk. except outer 4'-11¾" portion up to Umbr. Top	= 68.4 Cu.Yds.	
-Abut. to Skbk. Betw. Jts. "R" & "S"	= 34.2 " "	
- " " " " "S" " "T"	= 37.7 " "	
-Wg. "D" & Clfts. up to Const. Jt. El. 855.79 Abut. from Jt. "T" up to Skbk. except outer 4'-11¾" portion up to Umbr. Top	= 40.5 " "	
-Wg. "D" Incl. Clfts. & Brkts. above Const. Jt. El. 855.79 up to Bott. Sdwk.	= 44.0 " "	
TOTAL CLASS "E" Above Footing		= 224.8 " "
CLASS "D"-Sidewalks		= 9.4 " "
CLASS "D"-Handrail (6.2 Cu.Yds.)		= 81.2 Lin.Ft.

~ MISCELLANEOUS ~

12 Oz. Soft Copper Flashing (9" Wide)-Sdwk. Exp. Jts. @ Pilasters	= 12 Lin.Ft.
12 " " " " (1'-0" ")-Sp.Wl. " " " "	= 28 " "
4"φ Drains-Steel Boiler Tubing (Wt./Ft.-6.236#) 6@3'-0, 10@1'-9"	= ®223 Lbs.
241 Timber Piles @ 20'-0" (Approx.)	= 4820 Lin.Ft.

SPAN

~ REINFORCING STEEL ~

BENT	STRAIGHT	MARK	NO. PIECES	SIZE	LENGTH	LOCATION	TOTAL LENGTH	WEIGHT
L		C1	3	1□	20'-0"	End South Sp. Wl. & Hor. Curb	60'-0"	
L		C2	3	"	19'-0"	" North " " " " "	57'-0"	
L		C3	3	"	18'-0"	" South " " " " "	54'-0"	
L		C4	3	"	17'-0"	" North " " " " "	51'-0"	
	L	—	12	"	40'-0"	Horiz. Curbs	480'-0"	
	L	—	140	"	37'-6"	Longit. Ar. Rg.-Extrados	5250'-0"	
	L	—	210	"	30'-0"	" " " -Intrados	6300'-0"	
						TOTAL 1□	12252'-0"	41,657#
L		R3	3	3/4φ	19'-6"	Sloping Fa. Clft. 9-S	58'-6"	
L		R4	3	"	19'-3"	" " " 10-N	57'-9"	
L		R5	3	"	18'-9"	" " " 1-S	56'-3"	
L		R6	3	"	16'-6"	" " " 9-N	49'-6"	
L		R7	3	"	16'-3"	" " " 2-N	48'-9"	
L		R8	6	"	15'-3"	" " Clfts. 2-S & 8-S (3 Ea.)	97'-6"	
L		R9	12	"	15'-3"	" " " 8-N, 3-S, 3-N & 7-S (3 Ea.)	183'-0"	
L		R10	6	"	11'-9"	" " " 4-S & 6-S (3 Ea.)	70'-6"	
L		R11	6	"	11'-3"	" " " 4-N & 5-N (3 Ea.)	67'-6"	
L		R12	3	"	10'-9"	" " Clft. 4-N	32'-3"	
L		R13	6	"	10'-6"	" " Clfts. 5-N & 6-N (3 Ea.)	63'-0"	
L		T1	336	"	21'-9"	Transv. Ar. Rg.	7308'-0"	
						TOTAL 3/4φ	8032'-6"	12,155#
L		E2	264	1/2□	5'-0"	Vert. Handrail (F.F. & R.F.)	1320'-0"	
L		H1	10	"	29'-0"	Horiz. Spand. Walls	290'-0"	
L		H2	2	"	26'-6"	" " "	53'-0"	
L		H3	6	"	22'-6"	" " "	135'-0"	
L		H4	4	"	18'-6"	" " "	74'-0"	
L		H5	4	"	16'-6"	" " "	66'-0"	
L		H6	10	"	13'-0"	" " "	130'-0"	
L		H7	8	"	9'-0"	" " "	72'-0"	
L		H8	8	"	6'-0"	" " "	48'-0"	
L		U1	1	"	17'-0"	" Stirrups-Clfts.	17'-0"	
L		U2	2	"	15'-0"	" " "	30'-0"	
L		U3	4	"	13'-6"	" " "	54'-0"	
L		U4	5	"	11'-6"	" " "	57'-6"	
L		U5	7	"	10'-0"	" " "	70'-0"	
L		U6	9	"	8'-0"	" " "	72'-0"	
L		U7	13	"	6'-6"	" " "	84'-6"	
L		U8	18	"	4'-6"	" " "	81'-0"	
L		U9	60	"	6'-6"	Diag. " - Brkts.	390'-0"	
L		U10	16	"	5'-6"	Vert. " - Reg. Brkts.	88'-0"	
L		U11	4	"	4'-6"	" " - Exp. "	18'-0"	

® Billed in Summary as Cast Iron.

* -Wing "A", Incl. Clfts. & Brkts. up to Bott. Sidewalk, Abut. to Jt. "T" up to Skbk., except outer 4'-11¾" portion up to Umbr. Top.

‡ - Wing "B", Incl. Clfts. & Brkts. up to Bott. Sidewalk, Abut. to Jt. "R" up to Skbk., except outer 4'-11¾" portion up to Umbr. Top.

SPAN (CONT'D.)

~ REINFORCING STEEL ~

BENT	STRAIGHT	MARK	NO. PIECES	SIZE	LENGTH	LOCATION	TOTAL LENGTH	WEIGHT
L		U12	16	1/2□	4'-6"	Vert. Stirrups-Reg. Brkts.	72'-0"	
L		U13	4	"	3'-6"	" " -Exp. "	14'-0"	
L		Y4	36	"	7'-0"	Curved Fa.-Reg. & Exp. Brkts.	252'-0"	
L		Y5	4	"	5'-9"	" " -Exp. Brkts.	23'-0"	
L		S1	116	"	3'-6"	Stirrups-Ar. Rg.	406'-0"	
L		S2	116	"	3'-3"	" - " "	377'-0"	
L		S3	140	"	2'-9"	" - " "	385'-0"	
L		S4	84	"	2'-9"	" - " "	231'-0"	
L		S5	84	"	2'-6"	" - " "	210'-0"	
L		S6	84	"	2'-3"	" - " "	189'-0"	
L		S7	84	"	2'-3"	" - " "	189'-0"	
L		S8	84	"	2'-0"	" - " "	168'-0"	
L		S9	84	"	2'-0"	" - " "	168'-0"	
L		S10	84	"	1'-9"	" - " "	147'-0"	
L		S11	84	"	1'-9"	" - " "	147'-0"	
L		S12	168	"	1'-9"	" - " "	294'-0"	
L		S13	168	"	1'-6"	" - " "	252'-0"	
L		S14	672	"	1'-6"	" - " "	1008'-0"	
	L	—	16	"	28'-6"	Horiz. R.F. Curbs & Sp. Wls.	456'-0"	
	L	—	5	"	12'-6"	Vert. Sp. Wls. (F.F. & R.F.)	62'-6"	
	L	—	7	"	11'-6"	" " " (" " ")	80'-6"	
	L	—	5	"	11'-0"	" " " (" " ")	55'-0"	
	L	—	2	"	10'-6"	" " " (" " ")	21'-0"	
	L	—	7	"	10'-0"	" " " (" " ")	70'-0"	
	L	—	4	"	9'-6"	2 " " " -2 Vert. Clft. 10-N	38'-0"	
	L	—	4	"	9'-0"	" " " (F.F. & R.F.)	36'-0"	
	L	—	11	"	8'-6"	9 " " " -2 Vert. Clft. 1-S	93'-6"	
	L	—	4	"	8'-0"	" " " (F.F. & R.F.)	32'-0"	
	L	—	12	"	7'-6"	" " " (" " ")	90'-0"	
	L	—	4	"	7'-0"	2 " " " -2 Vert. Clft. 9-S	28'-0"	
	L	—	13	"	6'-6"	11 " " " -2 " " 10-N	84'-6"	
	L	—	13	"	5'-6"	" " " (F.F. & R.F.)	71'-6"	
	L	—	11	"	5'-0"	9 " " " -2 Vert. Clft. 9-S	55'-0"	
	L	—	17	"	4'-6"	11 " " " -Vert. Clfts. 9-N, 2-S & 2-N (2 Ea.)	76'-6"	
	L	—	16	"	4'-0"	" " " (F.F. & R.F.)	64'-0"	
	L	—	19	"	3'-6"	17 " " " -2 Vert. Clft. 8-S	66'-6"	
	L	—	24	"	3'-0"	" " " (F.F. & R.F.)	72'-0"	
	L	—	20	"	2'-5"	" " " (" " ")	50'-0"	
	L	—	17	"	2'-0"	" " " (" " ")	34'-0"	
	L	—	7	"	1'-6"	" " " (" " ")	10'-6"	
						TOTAL 1/2□	9329'-0"	7930#
L		L1	162	3/8φ	1'-9"	Vert. R.F. Curbs	283'-6"	
L		W4	108	"	26'-6"	Longit. Walk Slab (Top & Bott.)	2862'-0"	
L		W5	54	"	26'-0"	" " " (" " ")	1404'-0"	
	L	—	32	"	26'-9"	Horiz. Handrail	856'-0"	
	L	—	16	"	26'-3"	" "	420'-0"	
	L	—	164	"	5'-0"	Transv. Walk Slab (Top & Bott.)	820'-0"	
						TOTAL 3/8φ	6645'-6"	2499#
						TOTAL STEEL		64,241#

~ CONCRETE ~

CLASS "D"-Ar. Rg.-Inner Sect. (14'-9" Wide) Betw. Skbk. Const. Jts.	= 63.6 Cu.Yds.	
- " " " (14'-9" ") " " " "	= 63.6 " "	
- " " " (14'-0" ") " " " "	= 60.4 " "	
- " " " (14'-0" ") " " " "	= 60.4 " "	
-Outer Sections (2@4'-11¾" Wide) Betw. Umbr. Top Const. Jts.	= 39.0 " "	
-Spand. Wl.-North (Incl. Brkts. & Clfts.)	= 23.8 " "	
- " " -South (" " " ")	= 28.9 " "	
-Sidewalks	= 18.6 " "	
TOTAL CLASS "D" (Except Handrail)		= 358.3 Cu.Yds.
CLASS "D"-Handrail (9.6 Cu.Yds.)		= 161.1 Lin.Ft.

~ MISCELLANEOUS ~

Special Fill over Arch (Fa. to Fa. Abuts.)	= 870 Cu.Yds.
Earth " " " (" " " ")	= 15 " "

‡ SPLICE BARS

~ REINFORCING STEEL ~

BENT	STRAIGHT	MARK	NO. PIECES	SIZE	LENGTH	LOCATION	TOTAL LENGTH	WEIGHT
L		—	4	1□	13'-0"	Splice with 1□ cut for test	52'-0"	177#
L		—	1	7/8φ	12'-0"	" " 7/8φ " " "	12'-0"	25#
L		—	4	3/4φ	10'-6"	" " 3/4φ " " "	42'-0"	63#
L		—	3	5/8φ	9'-6"	" " 5/8φ " " "	28'-6"	30#
L		—	4	1/2□	8'-0"	" " 1/2□ " " "	32'-0"	27#
L		—	3	3/8φ	7'-0"	" " 3/8φ " " "	21'-0"	8#
						TOTAL SPLICE BARS		330#

‡ 1-3'-0" Sample for first 20,000# and 1-3'-0" Sample for each additional 20,000# or fraction thereof for 1□ and 7/8φ.

‡ 3-3'-0" Samples for first 20,000# and 1-3'-0" Sample for each additional 20,000# or fraction thereof for 3/4φ, 5/8φ, 1/2□ and 3/8φ.

BILLS OF MATERIALS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- NONE — DECEMBER 1, 1941

RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGE DESIGN

PROJECT:- 40 — STATION:- 590+60

SECTION:- O — STRUCTURE NO. 3505

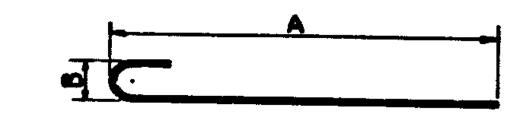
DRAWING:- C11 OF 12

BRIDGE CONTRACT NO. 2266

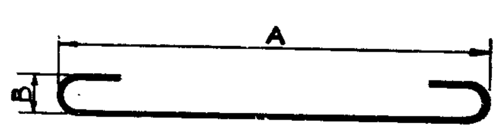
FED. ROAD DIST. No.	STATE	PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
7	IND.	40	1942	18	33

BRIDGES OVER 20' SPAN

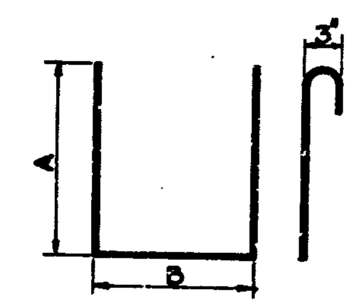
SECTION-O



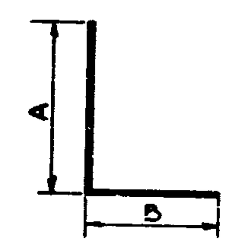
MARK	SIZE	A	B	LENGTH
A1	1"	14'-9"	6"	15'-6"
A2	"	7'-6"	"	8'-3"
K4	"	25'-1"	"	26'-0"
F1	7/8"φ	16'-0"	5"	16'-9"
F2	"	9'-6"	"	10'-3"
F3	"	7'-6"	"	8'-3"
F4	"	7'-0"	"	7'-9"
G8	"	21'-9"	"	22'-6"
G9	"	21'-1"	"	21'-9"
G10	"	18'-9"	"	19'-6"
G11	"	18'-0"	"	18'-9"
J1	3/4"φ	26'-1"	4½"	26'-9"
J2	"	25'-5"	"	26'-0"
J3	"	24'-1"	"	24'-9"
J4	"	22'-1"	"	22'-9"
J5	"	20'-4"	"	21'-0"
J6	"	19'-10"	"	20'-6"
J7	"	18'-10"	"	19'-6"
J8	"	17'-7"	"	18'-3"
N1	"	7'-0"	"	7'-9"
T1	"	21'-2"	"	21'-9"
M1	5/8"φ	25'-0"	4"	25'-6"
M2	"	21'-6"	"	22'-0"
M3	"	18'-0"	"	18'-6"
M4	"	14'-0"	"	14'-6"
H1	½"	28'-6"	3"	29'-0"
H2	"	26'-0"	"	26'-6"
H3	"	22'-0"	"	22'-6"
H4	"	18'-0"	"	18'-6"
H5	"	16'-0"	"	16'-6"
H6	"	12'-6"	"	13'-0"
H7	"	8'-6"	"	9'-0"
H8	"	5'-6"	"	6'-0"
H10	"	25'-0"	"	25'-6"
H11	"	23'-7"	"	24'-0"
H12	"	22'-1"	"	22'-6"
H13	"	21'-4"	"	21'-9"
H14	"	19'-1"	"	19'-6"
H15	"	18'-10"	"	19'-3"
H16	"	17'-1"	"	17'-6"
H17	"	16'-3"	"	16'-9"
H18	"	15'-9"	"	16'-3"
H19	"	15'-1"	"	15'-6"
H20	"	14'-7"	"	15'-0"
H21	"	14'-1"	"	14'-6"
P1	"	20'-0"	"	20'-6"
P2	"	10'-0"	"	10'-6"
Q1	"	2'-7"	"	3'-0"



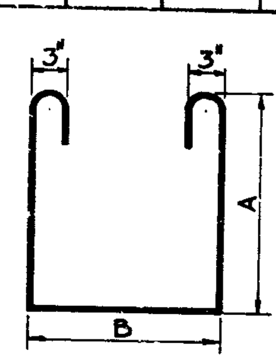
MARK	SIZE	A	B	LENGTH
K1	1"	35'-1"	6"	36'-9"
K2	"	33'-1"	"	34'-9"
K3	"	30'-1"	"	31'-9"
H22	½"	23'-1"	3"	24'-0"
H23	"	22'-2"	"	23'-0"
H24	"	20'-0"	"	20'-9"
S1	"	2'-7"	"	3'-6"
S2	"	2'-4"	"	3'-3"
S3	"	2'-0"	"	2'-9"
S4	"	1'-10"	"	2'-9"
S5	"	1'-7½"	"	2'-6"
S6	"	1'-5½"	"	2'-3"
S7	"	1'-4"	"	2'-3"
S8	"	1'-2"	"	2'-0"
S9	"	1'-1"	"	2'-0"
S10	"	1'-0½"	"	1'-9"
S11	"	11½"	"	1'-9"
S12	"	10"	"	1'-9"
S13	"	9"	"	1'-6"
S14	"	8½"	"	1'-6"
L1	3/8"φ	1'-3"	2"	1'-9"
W1	"	35'-4"	"	35'-9"
W2	"	33'-4"	"	34'-0"
W3	"	30'-4"	"	31'-0"
W4	"	26'-0"	"	26'-6"
W5	"	25'-6"	"	26'-0"
W6	"	22'-7"	"	23'-0"
W7	"	22'-4"	"	22'-9"



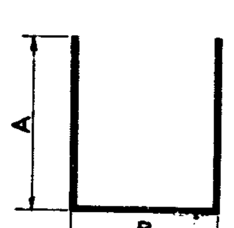
MARK	SIZE	A	B	LENGTH
U10	½"	2'-0"	7½"	5'-6"
U12	"	1'-6"	"	4'-6"
U60	"	3'-0"	3'-0"	9'-9"
U61	"	3'-0"	2'-6½"	9'-6"
U62	"	2'-7"	3'-0"	9'-0"
U63	"	2'-7"	2'-6½"	8'-6"
U64	"	2'-0"	3'-0"	7'-9"
U65	"	2'-0"	2'-6½"	7'-6"
U66	"	2'-2"	10½"	6'-0"
U67	"	1'-7½"	"	5'-0"



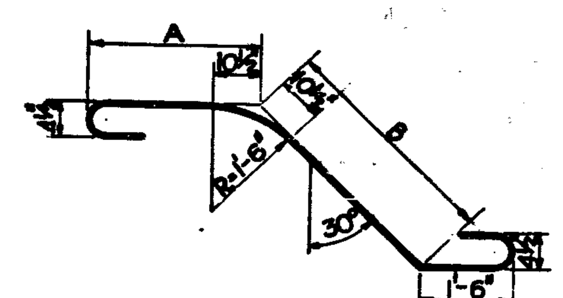
MARK	SIZE	A	B	LENGTH
C1	1"	7'-6"	12'-6"	20'-0"
C2	"	7'-6"	11'-6"	19'-0"
C3	"	7'-6"	10'-6"	18'-0"
C4	"	7'-6"	9'-6"	17'-0"
E1	½"	2'-1"	3'-2"	5'-3"
E2	"	2'-0"	3'-0"	5'-0"



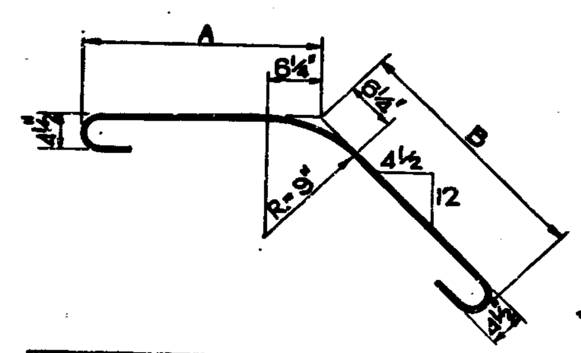
MARK	SIZE	A	B	LENGTH
O1	½"	2'-0"	2'-1½"	7'-0"
O2	"	2'-0"	1'-10½"	6'-9"
O3	"	2'-0"	1'-7½"	6'-6"
U70	"	2'-9"	2'-5½"	8'-9"
U71	"	2'-9"	2'-4"	8'-9"
U72	"	2'-0"	9½"	5'-9"
U9	"	2'-6"	7½"	6'-6"



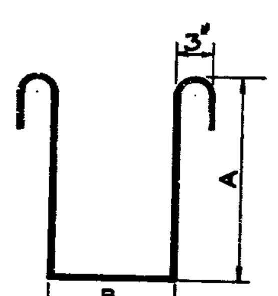
MARK	SIZE	A	B	LENGTH
U55	½"	4'-4"	3'-1"	11'-9"
U56	"	4'-3¾"	2'-7½"	11'-3"
U57	"	5'-0¾"	7½"	10'-9"
U58	"	3'-4"	3'-1"	9'-9"
U59	"	3'-3¾"	2'-7½"	9'-3"



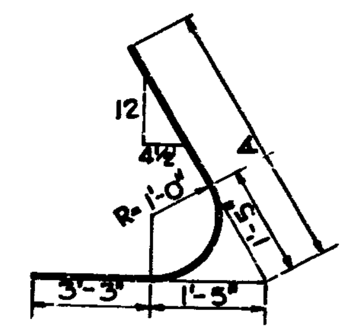
MARK	SIZE	A	B	LENGTH
D1	3/4"φ	4'-7"	14'-2"	21'-6"
D2	"	4'-7"	13'-1½"	20'-8"



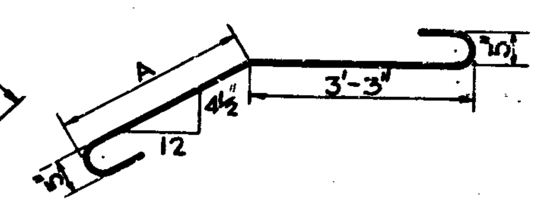
MARK	SIZE	A	B	LENGTH
D3	3/4"φ	4'-8"	5'-8"	11'-6"
D5	"	4'-4½"	4'-9"	10'-3"



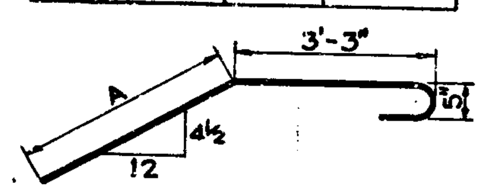
MARK	SIZE	A	B	LENGTH
U1	½"	7'-9"	7½"	17'-0"
U2	"	6'-9"	"	15'-0"
U3	"	6'-0"	"	13'-6"
U4	"	5'-0"	"	11'-6"
U5	"	4'-3"	"	10'-0"
U6	"	3'-3"	"	8'-0"
U7	"	2'-6"	"	6'-6"
U8	"	1'-6"	"	4'-6"
U20	"	9'-0"	10½"	19'-9"
U21	"	8'-9"	"	19'-3"
U22	"	8'-7"	"	18'-9"
U23	"	8'-3½"	"	18'-3"
U24	"	8'-2½"	"	18'-0"
U25	"	7'-10½"	"	17'-6"
U26	"	7'-9½"	"	17'-3"
U27	"	7'-8½"	"	17'-0"
U28	"	7'-3"	"	16'-3"
U29	"	7'-1"	"	15'-9"
U30	"	6'-11"	"	15'-6"
U31	"	6'-8"	"	15'-0"
U32	"	6'-7"	"	14'-9"
U33	"	6'-4"	"	14'-6"
U34	"	6'-1½"	"	14'-0"
U35	"	5'-10½"	"	13'-6"
U36	"	5'-7"	"	13'-0"
U37	"	5'-6½"	"	12'-9"
U38	"	5'-3"	"	12'-3"
U39	"	5'-0"	"	11'-9"
U40	"	4'-9½"	"	11'-3"
U41	"	4'-6"	"	10'-9"
U42	"	4'-3"	"	10'-3"
U43	"	3'-9"	"	9'-3"
U44	"	3'-7"	"	9'-0"
U45	"	3'-6"	"	8'-9"
U46	"	3'-0"	"	7'-9"
U47	"	2'-9"	"	7'-3"
U48	"	2'-5"	"	6'-6"
U49	"	2'-3"	"	6'-3"
U50	"	2'-0"	"	5'-9"



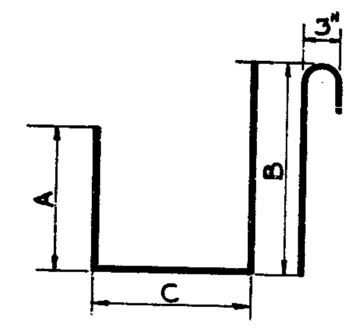
MARK	SIZE	A	LENGTH
G1	7/8"φ	18'-3"	22'-0"
G2	"	17'-3"	21'-0"
G3	"	16'-8"	20'-6"
G4	"	15'-8"	19'-6"
G5	"	7'-10"	11'-6"
G6	"	7'-2"	11'-0"
G7	"	6'-10"	10'-6"



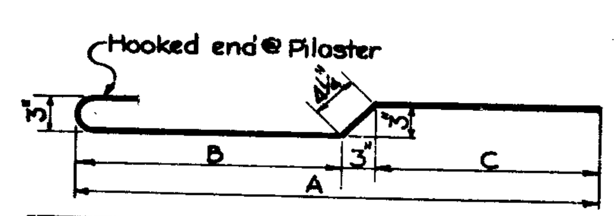
MARK	SIZE	A	LENGTH
G12	7/8"φ	17'-8"	22'-6"
G13	"	14'-3"	19'-0"



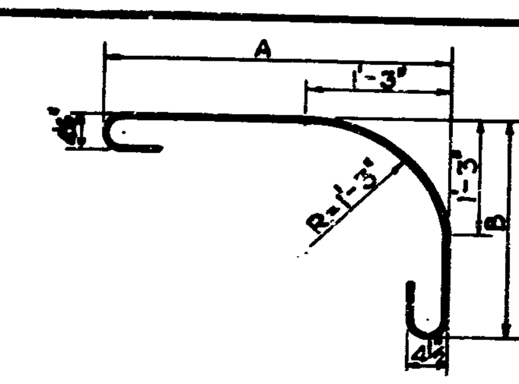
MARK	SIZE	A	LENGTH
G14	7/8"φ	11'-0"	15'-0"
G15	"	9'-9"	13'-9"



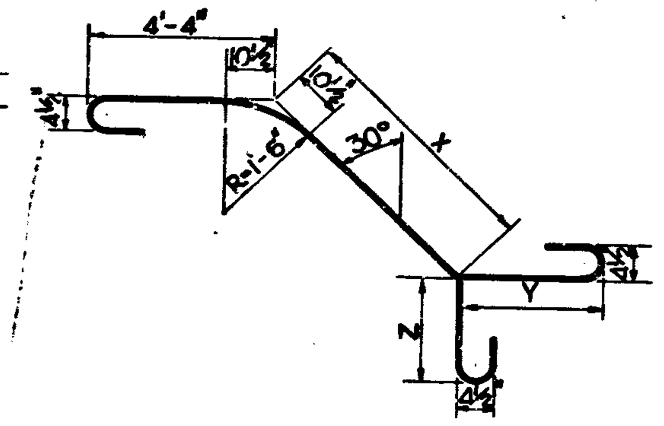
MARK	SIZE	A	B	C	LENGTH
U11	½"	1'-6"	2'-0"	7½"	4'-6"
U13	"	1'-0"	1'-6"	"	3'-6"
U68	"	1'-8½"	2'-2"	10½"	5'-3"
U69	"	1'-1½"	1'-7½"	"	4'-0"



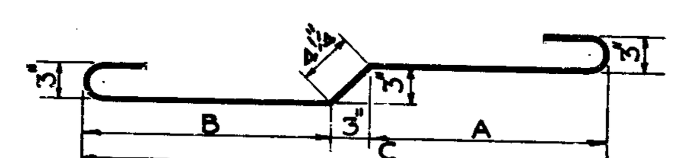
MARK	SIZE	A	B	C	LENGTH
H25	½"	25'-5"	3'-7"	21'-7"	26'-0"
H26	"	25'-0"	3'-3"	21'-6"	25'-6"
H27	"	24'-8"	3'-7"	20'-10"	25'-3"
H28	"	23'-3"	"	19'-5"	23'-9"
H29	"	21'-3"	"	17'-5"	21'-9"
H30	"	16'-2"	3'-3"	12'-8"	16'-9"
H31	"	15'-9"	"	12'-3"	16'-3"
H32	"	15'-0"	"	11'-6"	15'-6"
H33	"	14'-0"	"	10'-6"	14'-6"



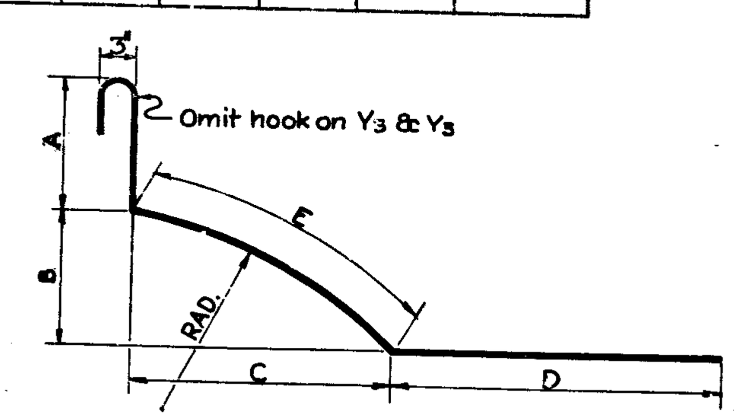
MARK	SIZE	A	B	LENGTH
D4	3/4"φ	4'-9"	5'-5"	11'-0"
D6	"	4'-6"	4'-8"	10'-0"



MARK	SIZE	X	Y	Z	LENGTH
R1	3/4"φ	17'-6"		2'-9"	26'-0"
R2	"	13'-6"		2'-9"	22'-0"
R3	"	13'-0"	9"		19'-6"
R4	"	12'-3"	1'-3"		19'-3"
R5	"	11'-9"	1'-3"		18'-9"
R6	"	8'-0	2'-9"		16'-6"
R7	"	9'-9"	9"		15'-3"
R8	"	7'-9"	2'-9"		16'-3"
R9	"	5'-3"	4'-3"		15'-3"
R10	"	4'-0"	2'-0"		11'-9"
R11	"	3'-6"	2'-0"		11'-3"
R12	"	3'-0"	2'-0"		10'-9"
R13	"	2'-6"	2'-3"		10'-6"

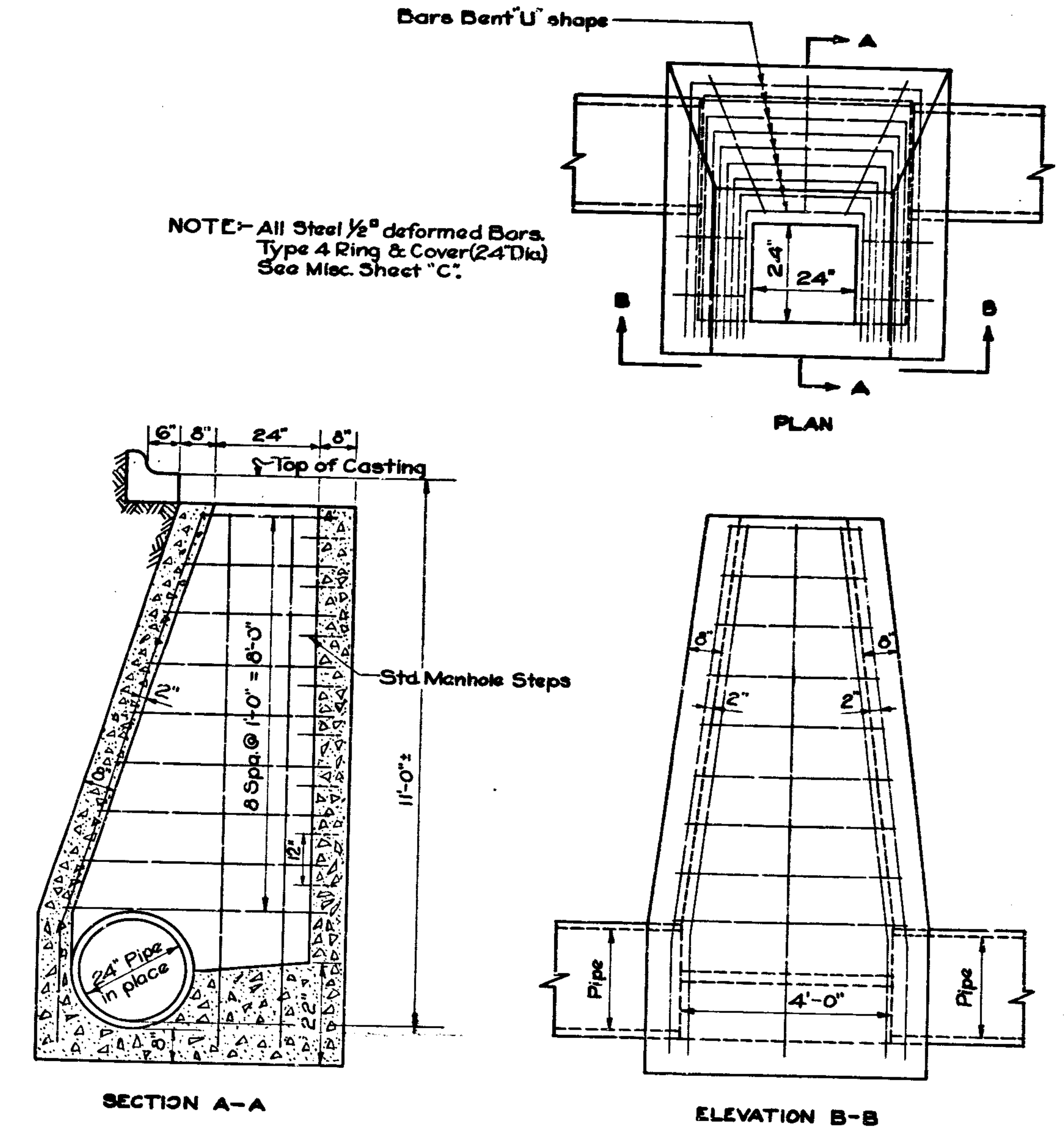


MARK	SIZE	A	B	C	LENGTH
H34	½"	19'-7"	3'-3"	23'-1"	24'-0"
H35	"	18'-8"	3'-3"	22'-2"	23'-0"
H36	"	16'-8"	3'-3"	20'-2"	21'-0"



MARK	SIZE	A	B	C	D	E	RAD.	LENGTH
Y1	½"	2'-3"	9¼"	1'-2½"	2'-9"	1'-6½"	1'-7¾"	7'-0"
Y2	"	1'-5"	9½"	1'-8¼"	2'-4"	1'-10¾"	2'-11¼"	6'-0"
Y3	"	8"	"	"	2'-5¼"	"	"	5'-0"
Y4	"	1'-6"	10"	1'-9"	3'-0"	2'-0"	2'-3⅜"	7'-0"
Y5	"	9"	10"	"	"	"	"	5'-9"

NOTE:- All Steel ½" deformed Bars.
Type 4 Ring & Cover (24" Dia.)
See Misc. Sheet "C".



SPECIAL CONCRETE MANHOLE
Scale:- ½" = 1'-0"

BENDING DIAGRAMS & MANHOLE DETAILS

STATE HIGHWAY COMMISSION OF INDIANA

SCALE:- AS NOTED

DECEMBER 1, 1941

RECOMMENDED FOR APPROVAL:- [signature] ENGINEER OF BRIDGE DESIGN

PROJECT:- 40
SECTION:- O

STATION:- 590+80
STRUCTURE NO. 3505

DRAWING:- C12 OF 12

BRIDGE CONTRACT NO. 2266

DESIGNED C.L.M., J.W.H. & C'K'D J.W.H., L.Z.S. &
DRAWN L.Z.S. 11-13-41, F.M.H. 11-28-41 C'K'D C.L.M. 11-17-41
TRACED H.A.S. 11-28-41 C'K'D C.L.M. 11-29-41

BRIDGES OVER 20' SPAN

DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	IND	40	1942	18	33

SECTION-O

APPROACH STRUCTURES

STRUCT. NUMBER	LOCATION	SIZE	KIND	LENGTH	CLASS "D" CONCRETE * CU. YDS.	REINF. STEEL * LBS.	CAST IRON * LBS.	REMARKS
24	Sta. 589+47 Lt.		Spec. Conc. M.H.					See Detail on Drwg. C_{12}
25	" 589+47 Lt.	24"	V.C. Sewer Pipe in place		Included in Str. 25B			No changes reqd.
25-A	" 590+92 Lt.	12"	Drain Tile	~~40'~~ 52	~~0.3~~			1 Priv. Entr. Hdwl. See Misc. Stds. Sheet "D" Remove 30' of 12" F.D.T. in place.
25-B	Sta. 591+10 Lt.	~~15"~~ 18	~~Cem. Conc. Sewer, R.C. or V.C. Sewer Pipe~~	60'	~~0.3~~ 14			1 Priv. Entr. Hdwl. Remove 45' of 15" Conc. Pipe in place.
26	" 591+54 Lt.		Std. Inlet Type A_1					See Misc. Stds. Sheets "C" & "D".
26-A	" 591+75 Lt.	12"	C.M. Pipe	~~78'~~ 72	0.6			Includes 8' for two 30° Bends, 1 Culv. Hdwl.
27	" 591+93 Rt.		Std. Inlet Type A_1					
27-A	" 591+75 Rt.	12"	C.M. Pipe	72'	0.6			Includes 8' for two 30° Bends, 1 Culv. Hdwl.
27-B	" 592+10 Lt.		Type "B" Steps. "W"=10'-0"		~~9.1~~ 10.5			Remove Conc. Steps in place - Steel to be included in cost of Concrete.
27-C	Sta. 592+40 Rt.	12"	Pipe	~~30'~~ 32	0.5			2 Priv. Entr. Hdwls.
				TOTALS	~~11.4~~ 13.6 / 13.6			* Totals of these columns carried to "Summary of Structure Quantities"

SUMMARY OF MISCELLANEOUS APPROACH QUANTITIES

ITEM	UNIT	NEW	RESET	REMOVAL
Concrete Pavement (Plain)	Sq.Yds.	1,115 ([illegible] Section)		758
~~Reinforced~~ Concrete Pavement	" "	~~2,857~~ 1,723		
Private Drive Pavement	" "	~~32~~ 35		
Asphalt Pavement, Including Base	" "			
Brick Pavement, Including Base	" "			
Concrete Crosswalk, 7" Thick	" "			
Concrete Sidewalk, 4" Thick	" "	~~283~~ 296		
Gravel or Crushed Stone				
Paved Side Ditch	Lin. Ft.			
Paved Gutter	" "			
Lip Type Gutter	" "			
Combined Curb and Gutter	" "			
Integral Curb	" "	832		
Stone Curb	" "			
Concrete Curb	" "			
Surface for Private Drives	Sq.Yds.	~~88~~ 68		
Surface for Adjusted Temp. Approaches	" "	~~700~~ 0		

ITEM	UNIT	NEW	RESET	REMOVAL
Catch Basin, Type	Each			
Catch Basin, Type	"			
Catch Basin, Type	"			
Catch Basin, Type	"			
Inlet, Type A_1 (Include Casting)	"	2		
Inlet, Type	"			
Manhole, Type "A"	"			
Manhole, Type "B"	"			
Special Concrete Manhole (Incl. Casting)	"	1		
Automatic Drainage Gate	"			
Guide Posts	"			

ITEM	LENGTH LIN. FT.
Flexible Plate Guard Rail	
Cable Guard Rail	
Pavement Expansion Joints Type $A_0, D_1, D_2, D_3, D_4,$ or D_5	~~228~~ 168
1" Cork or Rubber Expansion Joints	
½" Cork or Rubber Expansion Joints	
1" Rubber Expansion Joints	
½" Preformed Bituminous Exp. Joints	309
1" Preformed Bituminous Exp. Joints	
Pavement Contr. Jts. Type $A_0, D_1, D_2, D_4,$ or D_5	457
4" Traffic Lane Stripe	1368
Spec. Reinf. Contr. Jts.	1,120

SUMMARY OF EARTHWORK QUANTITIES

EXCAVATION WET CU. YDS.	DRY CU. YDS.	CLASS "X" CU. YDS.	CU. YDS.	COMMON CU. YDS.	WATERWAY CU. YDS.	SPECIAL FILLING MAT'L. CU. YDS.	SPECIAL BORROW CU. YDS.	SODDING SQ. YDS.	TOP SOIL SQ. YDS.	HAND PLACED RIPRAP (OLD) SQ. YDS.	FINISHING SHOULDERS AND DITCHES LIN. FT.
~~1,393~~ 1,355	~~1,175~~ 1,113			~~75~~ 0	~~920~~ 707	~~3,250~~ 4,655	~~2,370~~ 4,392	~~1,410~~ 1,628		~~165~~ 232	

SUMMARY OF STRUCTURE QUANTITIES

Concrete:

ITEM	CLASS "D" CU. YDS.	CLASS "E" FTG. CU. YDS.	CLASS "E" ABOVE FTG. CU. YDS.	CLASS "D" HANDRAIL CU. YDS.	CLASS "D" HANDRAIL LIN. FT.
ABUTMENT No. 1	7.6	204.3	169.0	5.3	64.2
SPAN	358.3	—	—	9.6	161.1
ABUTMENT No. 2	9.4	241.2	224.8	6.2	81.2
SPLICE BARS					
Quantities from					
Quantities from "Approach Structs" column	~~11.4~~ 13.6 (136)				
Reinf. Steel for Thickened Pavement					
Reinf. Steel for Lip Gutter, Pvm't. Tapers, etc.					
TOTALS	~~386.7~~ 388.3	445.5	415.8	21.1	306.5

Reinforcing Steel (1934 Std. Wts.):

ITEM	1¼"□ LBS.	1⅛"□ LBS.	1"□ LBS.	1"⌀ LBS.	⅞"⌀ LBS.	¾"⌀ LBS.	⅝"⌀ LBS.	½"□ LBS.	½"⌀ LBS.	⅜"⌀ LBS.	¼"⌀ LBS.	TOTALS LBS.
ABUTMENT No. 1			12519		5802	4975	1162	5241		1029		30728
SPAN			41657			12155		7930		2499		64241
ABUTMENT No. 2			12746		8465	5274	2632	7407		1289		37813
SPLICE BARS			177		25	63	30	27		8		330
TOTALS			67,099		14,292	22,467	3,824	20,605		4,825		133,112

Other:

ITEM	STRUCTURAL STEEL LBS.	PILES NO.	PILES LIN. FT.	CAST IRON LBS.	12 Oz. SOFT COPPER FLASHING (1'-0" WIDE) LIN. FT.	12 Oz. SOFT COPPER FLASHING (9" WIDE) LIN. FT.
ABUTMENT No. 1		207	~~4140~~ [illegible]	201	24	12
SPAN						
ABUTMENT No. 2		241	~~4820~~ [illegible]	223	28	12
SPLICE BARS						
TOTALS		448	~~8,960~~	424	* 52	* 24

* Included in cost of Concrete

[illegible]

MISCELLANEOUS

ITEM	UNIT	QUANTITY
Removal Present Structure	Lump Sum	1
Temporary Bridge and Approaches	Lump Sum	1
Furnishing Equipment For Driving Piles	Lump Sum	1

Special Filling Material (Fa. to Fa. Abuts.) = 870 Cu.Yds.
Earth Fill (" " " ") = 15 " "
} Included in Summary of Earthwork Quantities.

SUMMARY OF PIPE

TYPE	UNIT	4"	6"	8"	10"	12"	15"	18"	24"	30"	36"	42"	48"	54"	60"
Vitrified Clay	Lin. Ft.														
Vitrified Clay Sewer	" "														
Reinforced Concrete	" "														
Cast Iron	" "														
V.C., R.C., C.I.	" "			60											
Corrugated Metal	" "					~~150~~ 144									
Pipe	" "					~~30~~ 32									
Perforated	" "														
Drain Tile	" "					~~40~~ 52	52								
Concrete	" "														
Cem. Conc. Sewer, R.C., or V.C. Sewer	" "						~~60~~ 0								

BILL OF MATERIALS FOR THICKENED PAVEMENT

Bent	Straight	Mark	No. Pcs.	Size	Length	Location	Total Lgth.	Weight

(REINFORCING STEEL)

BARRICADES, BARRIERS, TRAFFIC SIGNS, AND LIGHTS

ITEM	UNIT	QUANTITY	ASSEMBLY	TOTAL
STANDARD 4'-0" x 4'-0" SIGNS	EACH	12	Signs, W-30X1-R	4
			" W-23X1-R	4
			" X-15-R	4
			Lanterns or Torches	8
STANDARD BARRICADES	EACH	2	Barricades	2
			Signs, X-12-R	2
			" G-17-R	2
			Lanterns	4
TORCHES	EACH	~~75~~ 32	Torches	75
			Sand Bags	150

R.R.G. 11-19-41
C.L.M. 11-28-41 J.Z.S. 11-29-41
K.M.M. 12-1-41 C.L.M. 12-1-41

SUMMARY

STATE HIGHWAY COMMISSION OF INDIANA

DECEMBER 1 1941

RECOMMENDED FOR APPROVAL: [signature]

PROJECT:- 40
SECTION:- O

STRUCTURE NO. 3505

BRIDGE CONTRACT NO. 2266

Rev. for Const. Changes 5-12-47.

40-0[illegible]