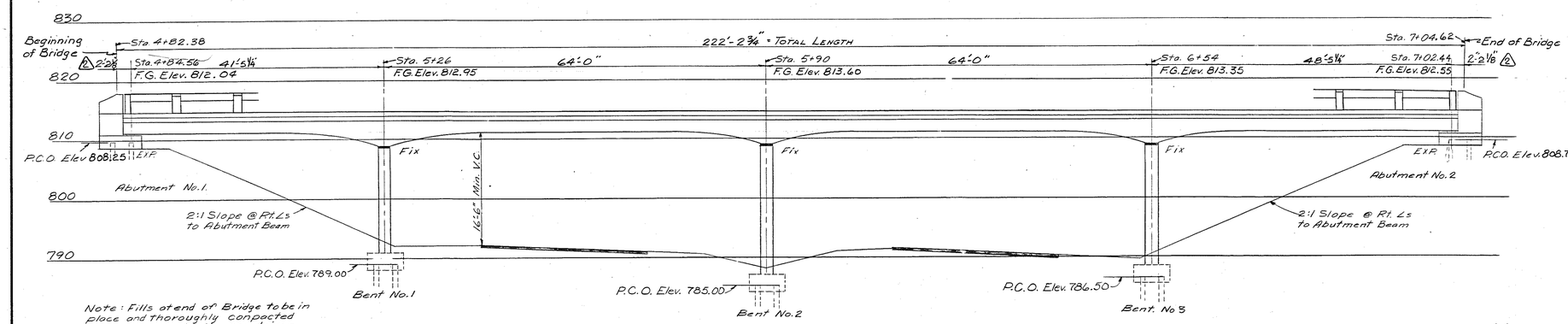
FED. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		

PROJECT No.

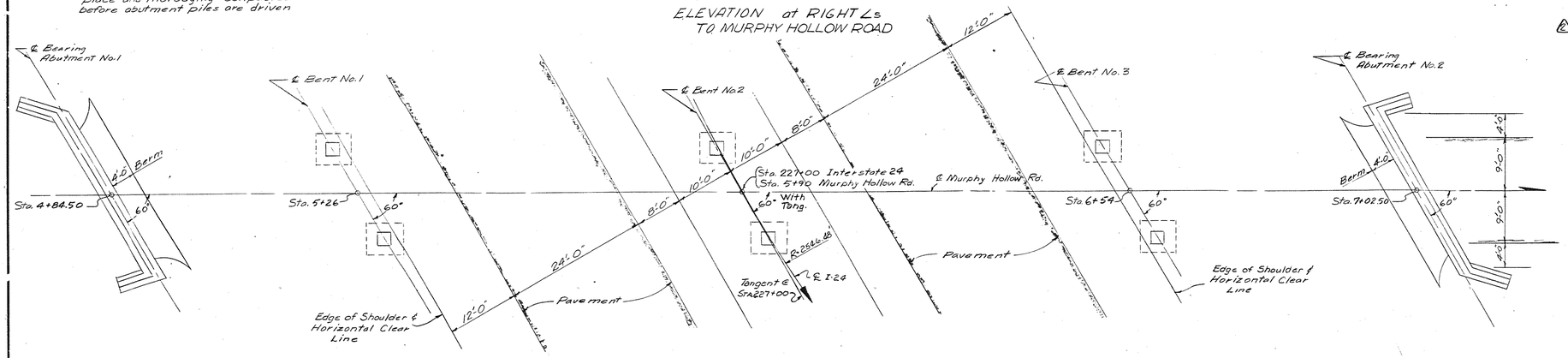
2 REVISED 8-30-66

1 REVISED 8-3-65



Note: Fills at end of Bridge to be in place and thoroughly compacted before abutment piles are driven

ELEVATION at RIGHT Ls TO MURPHY HOLLOW ROAD



PLAN

GENERAL NOTES

SPECIFICATIONS: Standard Road and Bridge Specifications of the Tennessee Department of Highways.

LOADING: H15-44. 1

CONCRETE: To be Class 'A'.

REINFORCING STEEL: To be Intermediate or Hard Grade. Standard CRSI Hook Details shall apply except as noted.

DESIGN SPECIFICATIONS: AASHO 1961 Edition.

NEOPRENE PADS: See special provisions.

PILES: To be 10" BP 42.#

JOINT SEALER: See Special Provisions Class 'A' or 'B'.

2

FOUNDATION NOTE

Foundation for Bents shall be excavated to the pile cut off elevations shown. Rod soundings shall then be made as directed by the Engineer. From the results obtained, the Engineer will decide if piles will be used or the footing carried to rock. Piles shall be driven to refusal on rock or minimum bearing of 45 ton for Bents and 20 tons for Abutments. No reinforcing steel for columns shall be ordered until final footing elevations are established. Cost of rod soundings shall be included in the cost of items bid on.

2 BRIDGERAIL NOTE

Build Bridgerail according to Dwg. No. K-38-151

Use Endpost as shown on Dwg. No. K-49-116

Q = 219'-7⅜"

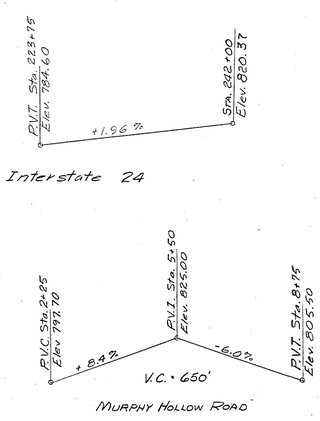
Panel	Panel Length	L	No. Spans
1	42'-3⅜"	5'-10"	6
2	63'-11½"	4'-10⅝"	8
3	63'-11½"	4'-10⅝"	8
4	43'-3⅜"	7'-0"	6

LIST OF DRAWINGS

	DWG. NO.
LAYOUT OF BRIDGE	K-49-114
SUPERSTRUCTURE	K-49-115
ABUTMENTS NO. 1 & 2	K-49-116
BENTS NO. 1, 2 & 3	K-49-117
BILL OF STEEL	K-49-118
BIRDGERAIL — See note this sheet &	K-38-151
PILE SPLICE DETAIL	A-5-146

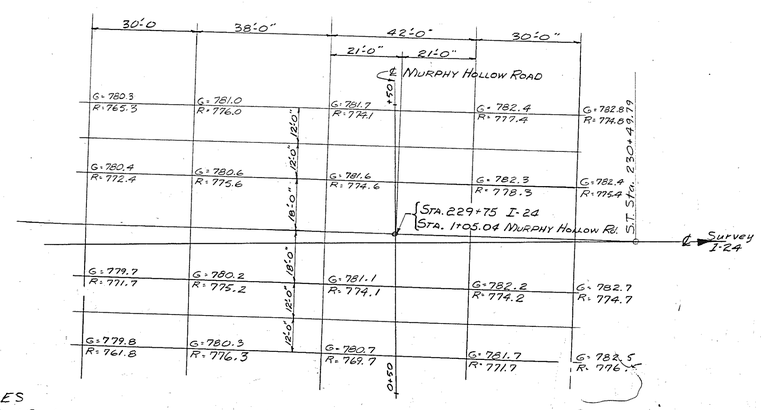
TRAFFIC DATA

1985 ADT- 360



SKETCHS OF FINISHED GRADES

Note: All Elevations shown are based on Finished Grade.

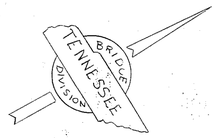


SOUNDING SKETCH

G = Ground Elevation

R = Rock Elevation

Note: Soundings shown are taken at original allignment. Profile of existing ground line in close similarity between present and original



2 ESTIMATED QUANTITIES

ITEM	Dry Excavation Cu.Yds.	Concrete Class "A" Cu.Yds.	Reinforcing Steel Lbs.	Concrete Bridgerail Lin. Ft.	Steel Piles 10" BP 42" Lin. Ft.	Linseed Oil Treatment Sq. Yds. *
Superstructure		251.5	96528			
Abutment No. 1		16.4	1963		210	
Bent No. 1	40	13.6	2213		130	
Bent No. 2	40	15.2	2596		120	
Bent No. 3	40	14.6	2453		130	
Abutment No. 2		16.4	1963		210	
Totals	120	327.7	107,716	440	800	815

Note: 1 Cost of Neoprene Bearing Pads, Rubber Bonding Cement and all Joint material to be included in the Unit Price Bid for Class A Concrete.

2 * Note: The Special Provisions on Linseed Oil Treatment does not apply to bent caps.

24'-0" Roadway with Buffer Curbs

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

LAYOUT OF BRIDGE NO. 10
MURPHY HOLLOW ROAD OVER I-24
STATION 227+00
MARION-HAMILTON COUNTY
1965

DESIGNED BY Don Fortner DATE June-1965
DRAWN BY JAME DATE
TRACED BY DATE
CHECKED BY Mires & Fortner DATE

CONFORM TO BRIDGE ENGINEER

APPROVED STATE HIGHWAY ENGINEER

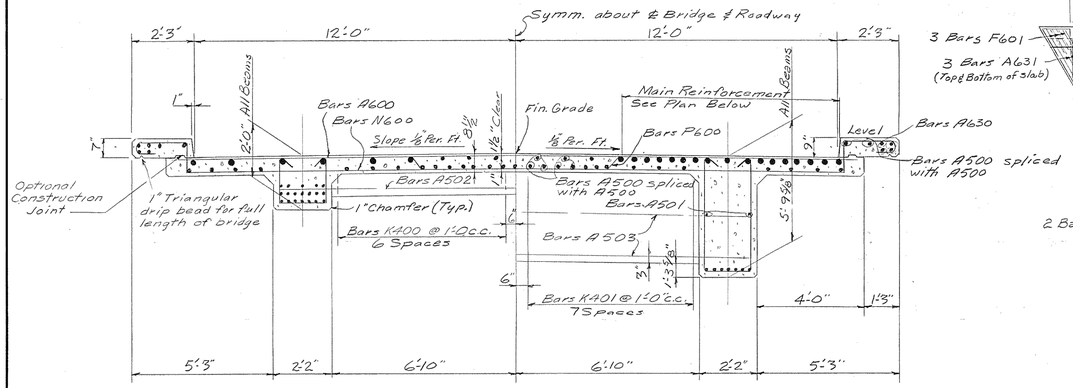
K-49-114

FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOT SHE
3	TENN.		19		

PROJECT NO.

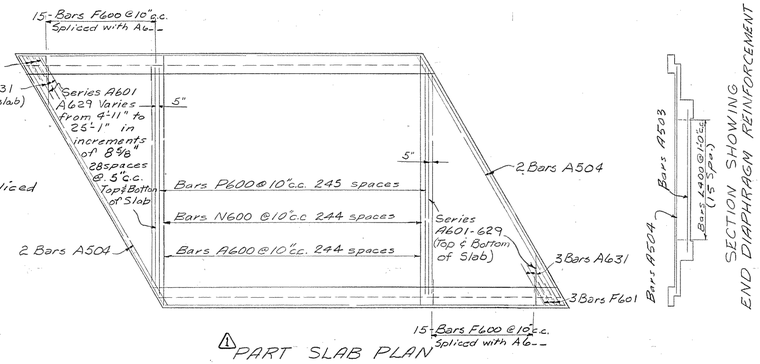
Revised 8-30-65

Note: When pouring curbs provisions shall be made for setting Reinforcing Steel Belts for Bridge rail. For Curb Detail see Dwg. No. K-38-151.



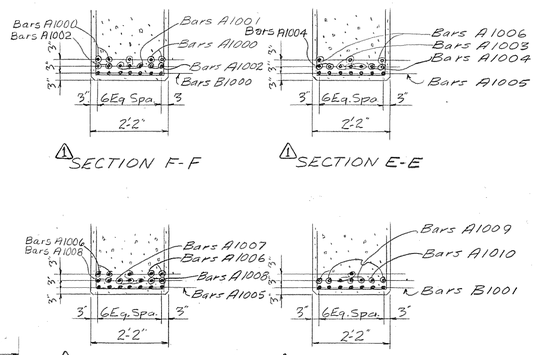
HALF SECTION NEAR MID SPAN HALF SECTION AT SUPPORT

TYPICAL CROSS SECTION



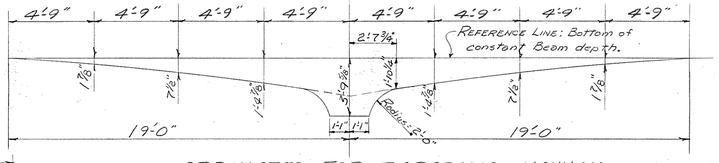
PART SLAB PLAN

SECTION SHOWING END DIAPHRAGM REINFORCEMENT

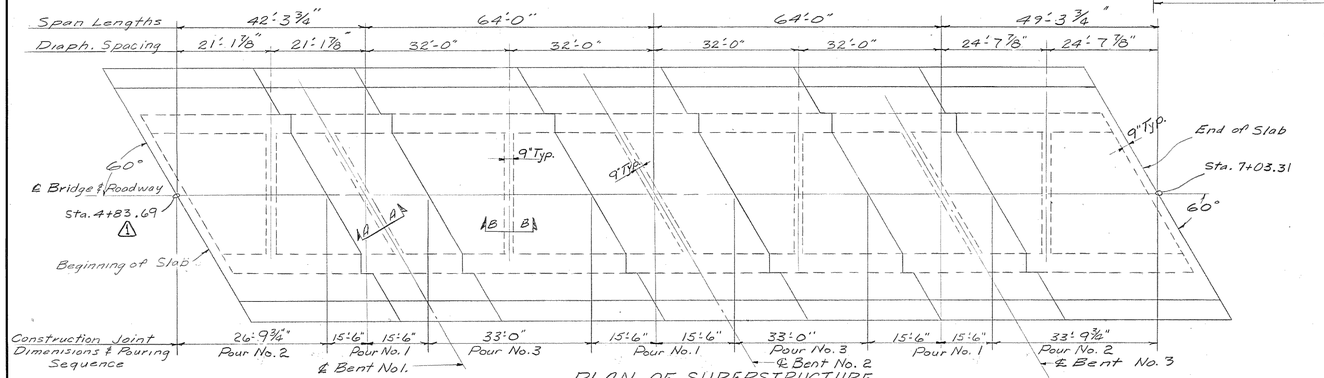


SECTION F-F SECTION E-E

SECTION D-D SECTION C-C

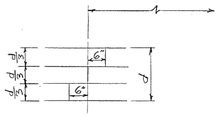


ORDINATES FOR PARABOLIC HAUNCH

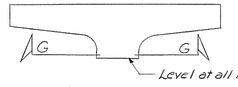


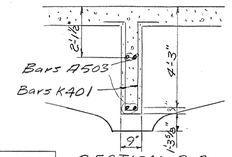
PLAN OF SUPERSTRUCTURE

Note: If the Contractor elects to place the concrete for the Superstructure in one operation, the above pouring sequence may be disregarded.

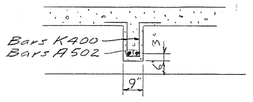


CONSTRUCTION JOINT FOR BEAMS



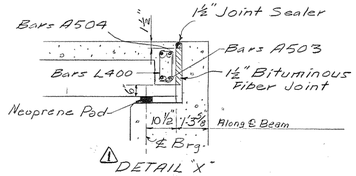


SECTION A-A

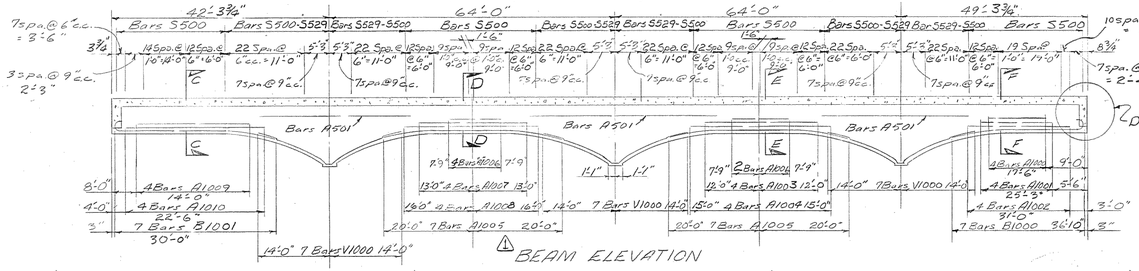


SECTION B-B

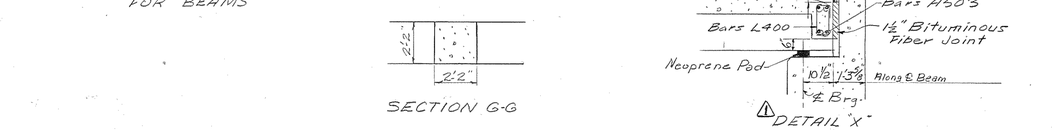
SECTION G-G



DETAIL "X"

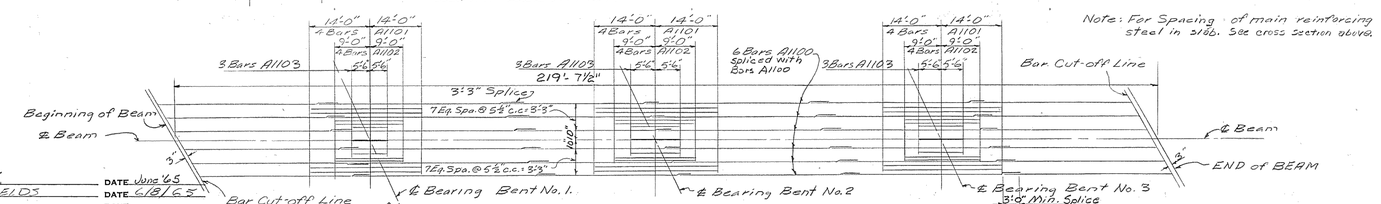


BEAM ELEVATION



DEAD LOAD CAMBER CURVE

NOTE: Dead load Camber based on total dead load of Superstructure Only and should be increased by the amount of anticipated take up in the falsework



Note: For Spacing of main reinforcing steel in slab. See cross section above.

PLAN - MAIN REINFORCING STEEL TOP OF SLAB (Typical for both Beams)

ESTIMATED QUANTITIES

Concrete Class "A" Cubic Yards	Reinforcing Steel Lbs.
251.5	96528

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

SUPERSTRUCTURE DETAILS (#10)
MURPHY HOLLOW ROAD OVER I-24
STATION 227+00
MARION - HAMILTON COUNTY

191.5

DESIGNED BY	D.W.F.	DATE	June '65
DRAWN BY	JAMES FIELDS	DATE	6/18/65
TRACED BY		DATE	
CHECKED BY	Mires & Fortner	DATE	July '65

COR. CT. Fred Grove, ENGINEER

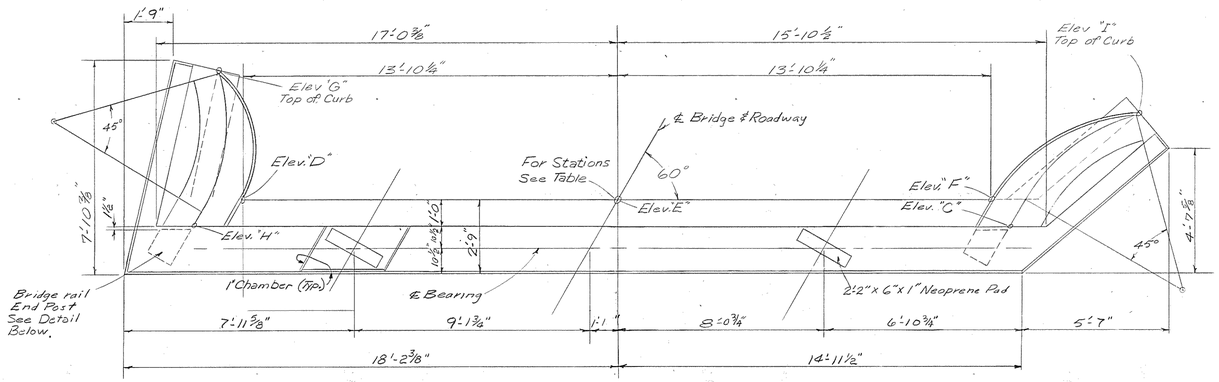
APPROVED G. R. Dunlap, STATE HIGH ENGINEER

K-49-115

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		

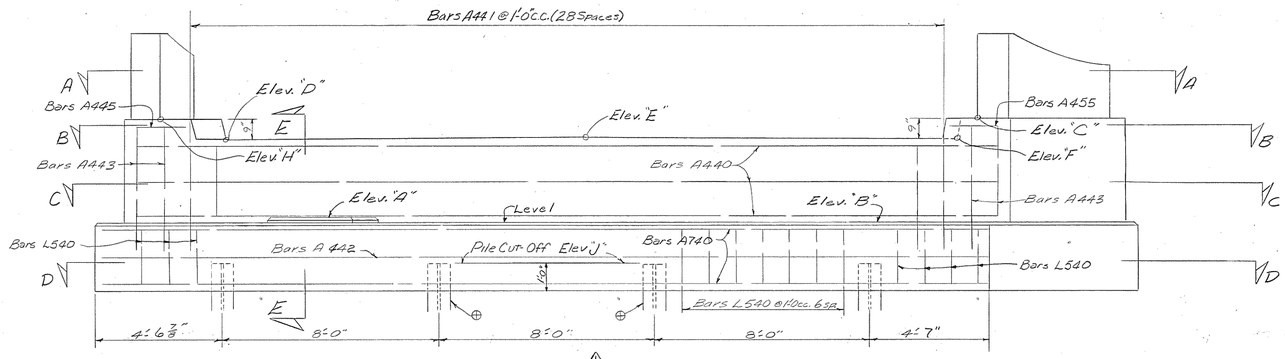
PROJ. NO.
Revised 8-30-66

Note: Neoprene pads shall be in place a minimum of two days before being disturbed by placing superstructure forms or concrete. Place Rubber Bonding Cement in such a way that Abutment will not be stained.



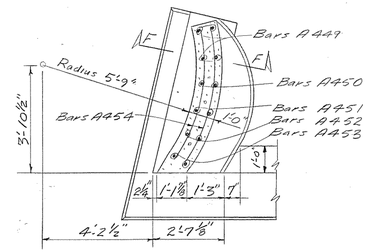
PLAN

Note: When pouring abutment beam, provisions shall be made for setting dowel bars for bearing pads. Bar projection = 4". If the contractor elects to drill holes for dowel bars, reinforcing shall be spaced so as not to interfere with drilling.

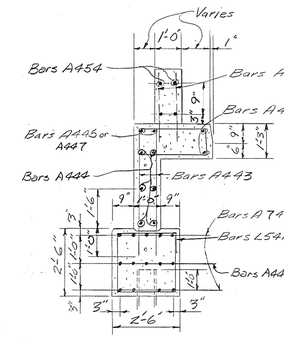


Note: ⊕ Batter these piles forward 2:12 (See Section E-E)

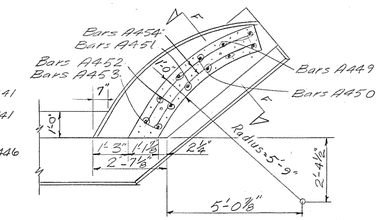
ELEVATION
Abutment No. 1 Looking back on Survey
Abutment No. 2 Looking forward on Survey



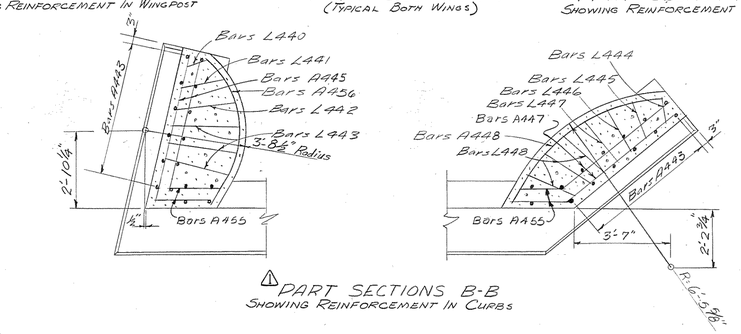
PART SECTION A-A
Showing Reinforcement in Wingpost



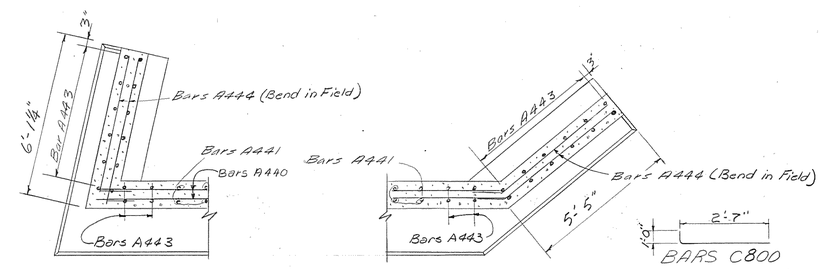
PART SECTION F-F
(Typical Both Wings)



PART SECTION A-A
Showing Reinforcement in Wingpost

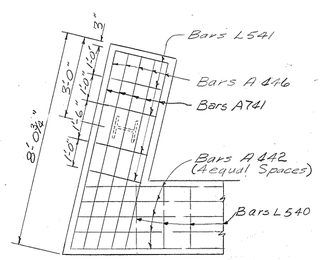


PART SECTIONS B-B
Showing Reinforcement in Curbs

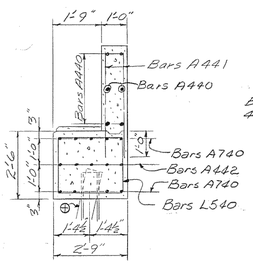


PART SECTIONS C-C
Showing Reinforcement in Wingwalls

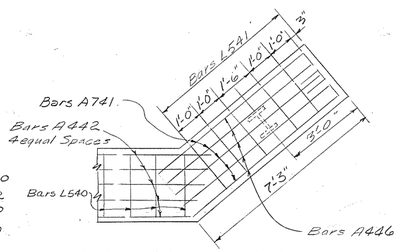
BARS C800



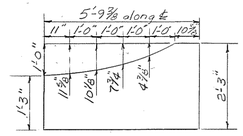
PART SECTION D-D



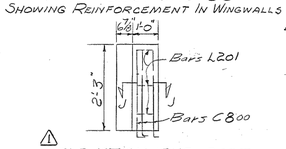
PART SECTION E-E
⊕ Batter Forward 2:12



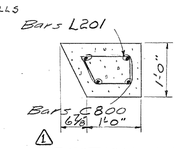
PART SECTION D-D



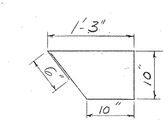
WING POST DEVELOPED



ELEVATION END POST



SECTION J-J



BARS L201

END POST LIST OF MATERIALS ~ EACH

BAR	SIZE	NO.	LENGTH	Quantities Concrete Cu. Yds	Quantities Reinforcing Steel Lbs.
C800	8	4	3'-7"	.107	41.0
L201	2	3	4'-6"		

TABLE OF STATIONS & ELEVATIONS

Location	Stations	ELEVATIONS "A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"
Abutment No. 1	4+82.38	810.00	809.75	812.42	812.05	811.98	811.67	812.65	812.80	812.30	808.25
Abutment No. 2	7+04.62	810.50	810.29	813.00	812.55	812.51	812.24	813.15	813.30	812.84	808.79

ESTIMATED QUANTITIES

Abutment No 1	Concrete Class "A"	16.4	Cu. Yds
	Reinforcing Steel	1963	Lbs.
Abutment No 2	Concrete Class "A"	16.4	Cu. Yds
	Reinforcing Steel	1963	Lbs.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

ABUTMENTS No. 1 & 2 (Alt. 10)
MURPHY HOLLOW ROAD OVER I-24
MARION - HAMILTON COUNTY
STATION 227+00
1965

DESIGNED BY D.W.F. DATE June '65
DRAWN BY JAMES FIELDS DATE 5/24/65
TRACED BY DATE
CHECKED BY H.A.M. & D.W.F. DATE July '65

CORRECT Fred Grove
BRIDGE ENGINEER
APPROVED J. R. Dunlap
STATE HIGHWAY ENGINEER

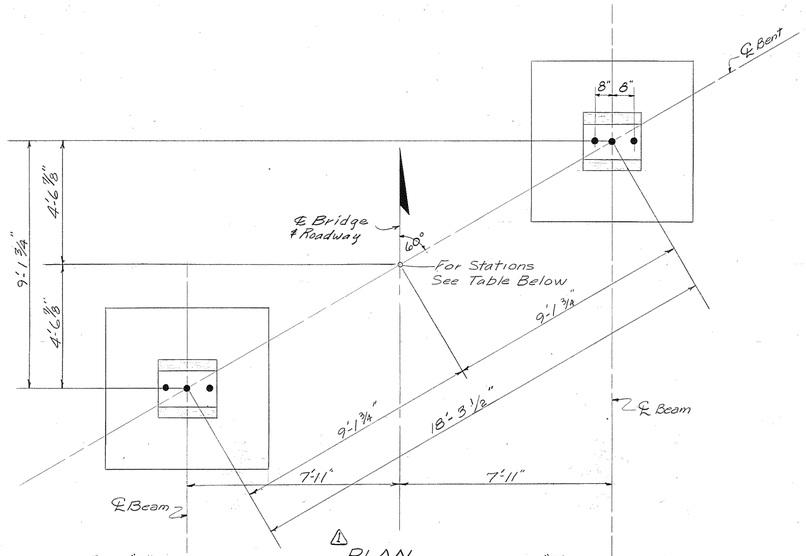
K-47-116

MICROFILMED

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		

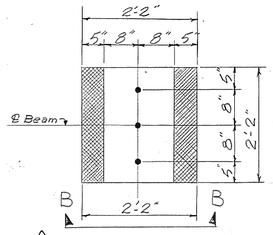
PROJECT No.

1 Revised 8-30-65

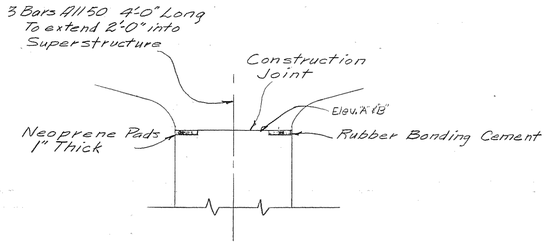


1 PLAN

Neoprene pads shall be in place a minimum of two days before being disturbed by placing superstructure forms or concrete. Place Rubber Bonding Cement in such a way that Columns surfaces will not be stained

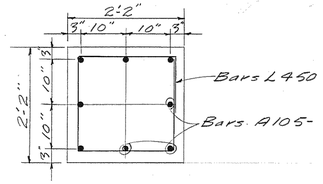


1 BEARING DETAIL

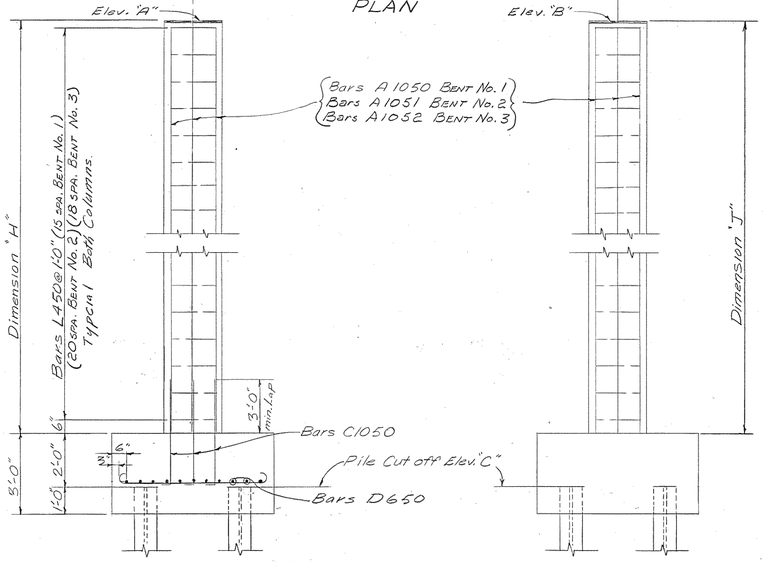


ELEVATION B-B

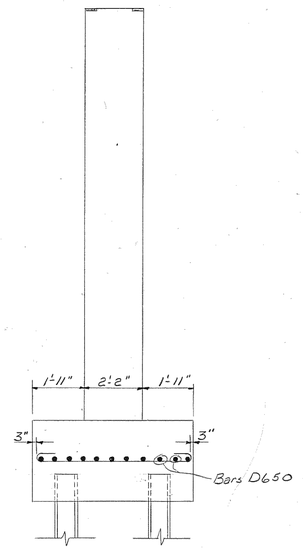
Note: When pouring Columns, provisions shall be made for setting dowel Bars. No chamfer on top of columns If the contractor elects to drill holes for dowel bars, the reinforcing steel shall be spaced so as not to interfere with drilling. Bar Projection, 9"



SECTION A-A
Typical Steel Arrangement



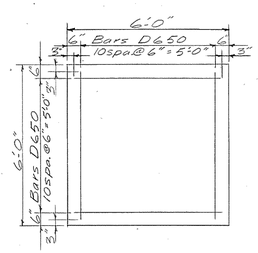
ELEVATION - BENT NO. 1, 2 & 3
Looking Forward On Survey



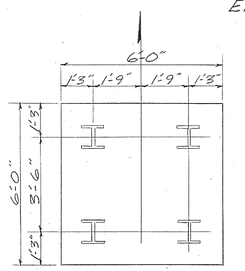
END ELEVATION

TABLE OF STATIONS, ELEVATIONS & DIMENSIONS

LOCATION	STATION	ELEVATIONS "A"	ELEVATIONS "B"	ELEVATIONS "C"	DIMENSIONS "H"	DIMENSIONS "J"
1 BENT NO.1	5+26	806.98	807.15	789.0	15'-11 3/4"	16'-1 7/8"
BENT NO.2	5+90	807.70	807.72	785.0	20'-8 3/4"	20'-8 5/8"
BENT NO.3	6+54	807.51	807.41	786.5	19'-0 1/8"	18'-10 5/8"



FOOTING REINFORCEMENT



PILE PLAN

ESTIMATED QUANTITIES

LOCATION	CONCRETE CLASS "A" CUBIC YARDS	REINFORCING STEEL LBS.
BENT NO.1	13.6	2213
BENT NO.2	15.2	2596
BENT NO.3	14.6	2453

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

BENTS 1, 2 & 3 (#10)
MURPHY HOLLOW ROAD OVER I-24
STATION 227+00
MARION-HAMILTON COUNTY
1965

DESIGNED BY D.W.F. DATE June 65
DRAWN BY JAMES FIELDS DATE 6/14/65
TRACED BY DATE
CHECKED BY H.A.M. D.W.F. DATE July 65

COR CT Fred Greve
BRIDGE ENGINEER
APPROVED W. B. Dunlap
STATE HIGHWAY ENGINEER

K-9-117

MICROFILMED

BILL OF STEEL

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		19		

PROJECT NO.
1 Revised 5-30-65

SUPERSTRUCTURE

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A500	Slab	5	234					38'-0"
A501	Beam	5	12					35'-0"
A502	Diaph.	5	8					17'-6"
A503	Diaph.	5	16					20'-0"
A504	Endwall	5	4					29'-6"
A600	Slab	6	245					25'-6"
Series A601-A629	Slab	6	4	Bars vary from 4'11" to 25'1" in increments of 8 5/8" - 28 Spaces				435'
A630	Curb	6	48					38'-8
A631	Slab	6	12	1				7'-6"
A1000	Beam	10	8					17'-6"
A1001	"	10	8					25'-3"
A1002	"	10	8					31'-0"
A1003	"	10	8					24'-0"
A1004	"	10	8					30'-0"
A1005	"	10	28					40'-0"
A1006	"	10	8					15'-6"
A1007	"	10	8					26'-0"
A1008	"	10	8					32'-0"
A1009	"	10	8					14'-0"
A1010	Beam	10	8					22'-6"
A1100	Slab	11	72					39'-3"
A1101	"	11	24					28'-0"
A1102	Slab	11	24					18'-0"
A1103	"	11	18					11'-0"
1 B1000	Beam	10	14	36'-10				38'-3"
1 B1001	"	10	14	30'-0"				31'-6"
K400	Diaph.	4	56	6"	5"	9"		2'-11"
1 K401	"	4	48	6"	1 5"	3'-10"		9'-3"
S500	Beam	5	324	1'-10"	1'-8"			6'-0"
S501	"	5	12	1'-10"	1'-9"			6'-2"
S502	"	5	12	1'-10"	1'-9"			6'-2"
1 S503	"	5	12	1'-10"	1'-10			6'-4"
S504	"	5	12	1'-10"	1'-10"			6'-4"
S505	"	5	12	1'-10"	1'-10½			6'-5"
S506	"	5	12	1'-10"	1'-10½			6'-5"
S507	"	5	12	1'-10"	1'-11"			6'-6"
S508	"	5	12	1'-10"	1'-11½			6'-7"
S509	"	5	12	1'-10"	2'-0"			6'-8"
S510	"	5	12	1'-10"	2'-1"			6'-10"
S511	"	5	12	1'-10"	2'-1½			6'-11"
S512	"	5	12	1'-10"	2'-2"			7'-0"
S513	"	5	12	1'-10"	2'-3"			7'-2"
S514	"	5	12	1'-10"	2'-4"			7'-4"
S515	"	5	12	1'-10"	2'-5			7'-6"
S516	Beam	5	12	1'-10"	2'-6"			7'-8"
S517	Beam	5	12	1'-10"	2'-7"			7'-10"

SUPERSTRUCTURE (CONT.)

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
S518	Beam	5	12	1'-10"	2'-8"			8'-0"
S519	"	5	12	1'-10"	2'-9"			8'-2"
S520	"	5	12	1'-10"	2'-10"			8'-4"
S521	1 "	5	12	1'-10"	2'-11"			8'-6"
S522	"	5	12	1'-10"	3'-1"			8'-10"
S523	"	5	12	1'-10"	3'-2"			9'-0"
S524	"	5	12	1'-10"	3'-4"			9'-4"
S525	"	5	12	1'-10"	3'-6"			9'-8"
S526	"	5	12	1'-10"	3'-9"			10'-2"
S527	1 "	5	12	1'-10"	4'-3"			11'-2"
S528	"	5	12	1'-10"	5'-5"			13'-6"
S529	Beam	5	12	1'-10"	5'-5"			13'-6"
V1000	Beam	10	42					30'-6"
L400	End. Diaph	4	32	5"	6"	11"		3'-2"
F600	Slab	6	30	2'-0"	1½"	1'-11"	1'-3"	6'-0"
F601	"	6	6	2'-0"	1½"	2'-2"	1'-3"	6'-3"
N600	1 "	6	245	28'-2"	1'-11"	24'-1"	1'-3"	32'-0"
P600	Slab	6	246	8'-10"	6'-10"	25'-6"		25'-11"

ABUTMENTS NO. 1 & 2 (TOTAL)

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A440	Backwall	4	12					32'-6"
A441	Backwall	4	116					3'-0"
A442	Beam	4	10					32'-6"
A443	Wingwall	4	64					3'-9"
A444	"	4	24					7'-0"
A445	Curb	4	4					5'-7"
A446	Wing Ext.	4	20					7'-1"
A447	Curb	4	4					5'-0"
A448	1 Wingwall	4	4					7'-3"
A449	Wingpost	4	16					2'-0"
A450	"	4	8					2'-3"
A451	"	4	8					2'-5"
A452	"	4	8					2'-9"
A453	"	4	8					3'-0"
A454	Wingpost	4	16					5'-3"
A455	1 Curb	4	8					2'-3"
A456	1 Curb	4	4					6'-3"
A740	Beam	7	18					32'-6"
A741	Beam	7	36					7'-1"
L440	Curb	4	2	10"	6"	11"		4'-0"
L441	"	4	2	1'-7"	6"	11"		5'-6"
L442	"	4	2	2'-3"	6"	11"		6'-10"
L443	"	4	6	2'-6"	6"	11"		7'-4"
L444	"	4	2	1'-0"	6"	11"		4'-4"
L445	1 "	4	2	1'-3"	6"	11"		4'-10"
L446	1 "	4	2	1'-8"	6"	11"		5'-8"
L447	1 "	4	2	1'-10"	6"	11"		6'-0"
L448	1 Curb	4	6	2'-0"	6"	11"		6'-4"
L540	Beam	5	56	2'-5"	1'-0"	2'-2"		10'-2"
L541	Beam	5	22	2'-2"	1'-0"	2'-2"		9'-8"

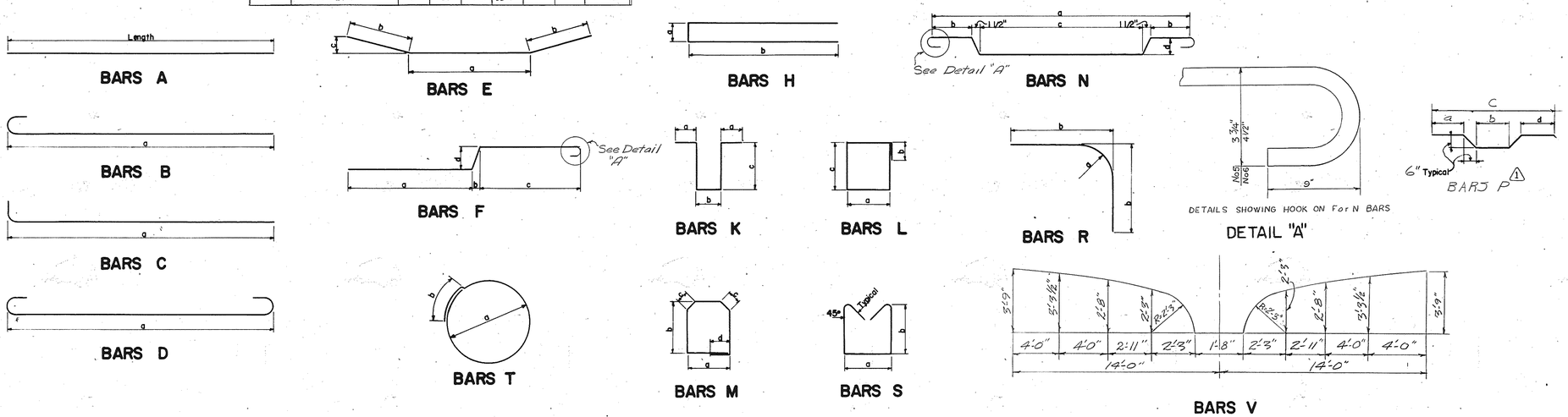
BENTS NO. 1, 2 & 3

BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS a	b	c	d	LENGTH
A1050	Column - Bent #1	10	16					15'-9"
A1051	" - Bent #2	10	16					20'-6"
A1052	Column - Bent #3	10	16					18'-9"
C1050	Columns	10	48	4'-9"				5'-5"
D650	Footings	6	132	5'-6"				6'-10"
L450	Columns	4	112	1'-10"	1'-0"	1'-10"		8'-4"
H1150	Columns	11	18					4'-0"

REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	06

NOTE: Dimensions shown on this sheet are out to out of Bar.



DESIGNED BY
DRAWN BY
TRACED BY JWS. & Gayl Parker
CHECKED BY HAM. & DWP

DATE
DATE
DATE 11-14-60
DATE July 65

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

BILL OF STEEL

MURPHY HOLLOW ROAD OVER I-24 (#10)
STATION 227+00
MARION-HAMILTON COUNTY
1965

CORRECT Fred Grove
BRIDGE ENGINEER
APPROVED
STATE HIGHWAY ENGINEER

K-49-118

MICROFILMED