

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.	I-24-2(14)151	1965		

Revised 10/20/65
Changed Pile Footings for Bents to
Soil-Bearing Footings and Revised
quantities accordingly

GENERAL NOTES

SPECIFICATIONS:

General - Standard Road and Bridge Specifications of Tennessee
Department of Highways

Design - 1961 Edition AASHTO Specifications

LOADING: HS20-44' Alternate Military Loading

CONCRETE: To be Class "A"

REINFORCING STEEL: To be Intermediate or Hard Grade Standard CRSI

Hook Details shall apply, unless otherwise noted on the Bill of Steel.

NEOPRENE PADS: See Special Provisions

PILES: To be 10" B.P. 42

JOINT SEALER: See Special Provisions Class "A" or "B"

LINSEED OIL TREATMENT: See Special Provisions

FOUNDATION NOTE

Foundations for Bents shall be excavated to 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 footings carried to rock. Piles shall be driven to rock or minimum bearing of 28 tons for Bents and 44 tons for Abutments. No reinforcing steel for columns shall be ordered until final footing elevations are established. Cost of rod sounding shall be included in the cost of items bid on.

BRIDGERAIL NOTE

Build Bridgerail according to standard dwg. K-38-149 or 150 and use Endpost as shown on Dwg. K-47-117

For Aluminum Rail

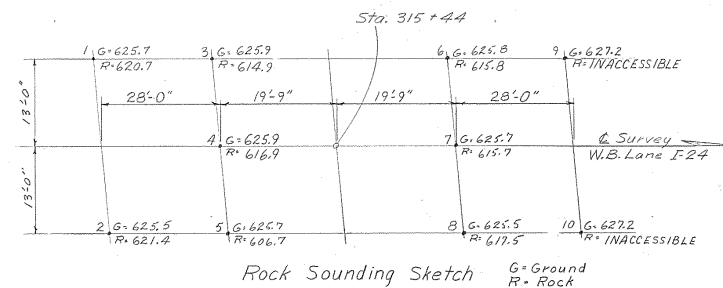
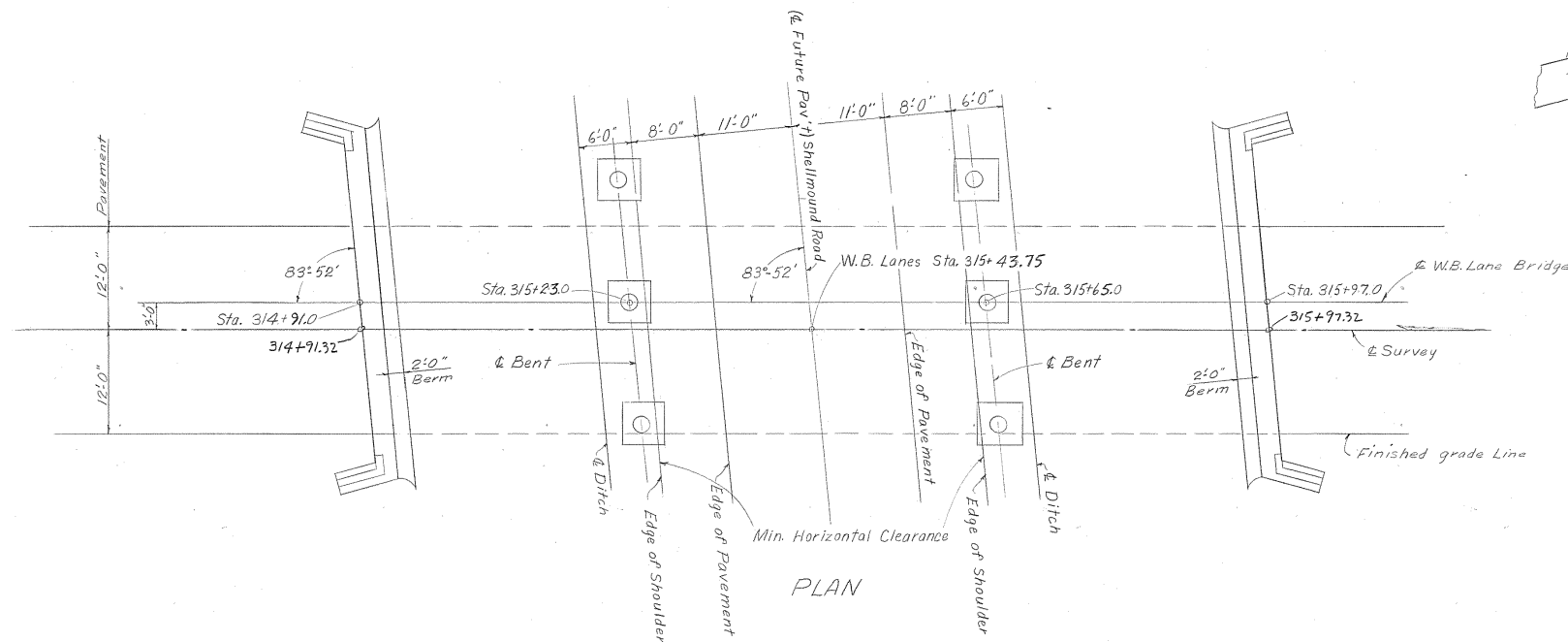
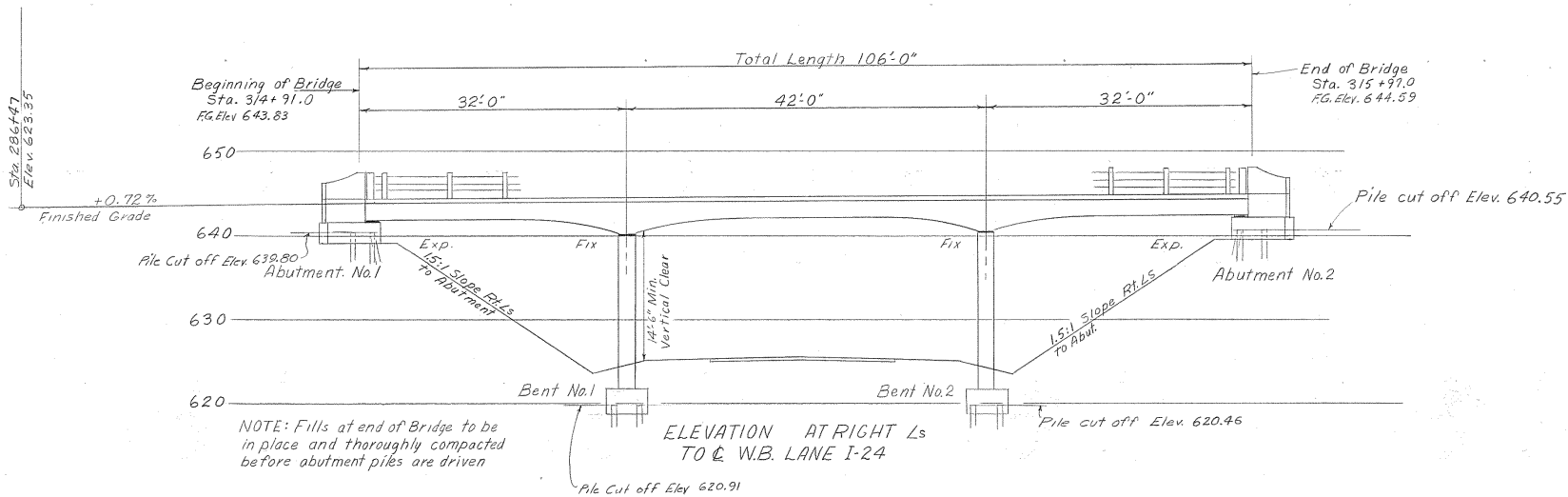
For Steel Rail

13 Spaces @ L = 7'-8" x 10 1/4"
11 Spaces @ L = 9'-0" x 1'-2 1/4"

LIST OF DRAWINGS

NO.

LAYOUT	K-47-114
SUPERSTRUCTURE	K-47-115
BENTS No. 1 & 2	K-47-116
ABUTMENTS 1 & 2	K-47-117
BILL OF STEEL	K-47-118
ALUMINUM BRIDGERAIL	K-38-149
STEEL BRIDGERAIL	K-38-150
PILE SPLICE DETAIL	H-5-111



ESTIMATED QUANTITIES

Item	Excavation Cu. Yds. Dry	Concrete Class "A" Cu. Yds.	Reinforcing Steel Lbs.	Bridgerail Lin. Ft.	Steel Piles 10" B.P. 42 Lin. Ft.	Linseed Oil Treatment Sq. Yds. @
Superstructure		170.3	59,772			
Abutment No. 1		15.5	1,147			
Bent No. 1	46	16.8	2,320			
Bent No. 2	45	17.1	2,322			
Abutment No. 2		15.5	1,147			
Total	91	235.2	67,968	203	220	500

① The cost of all joint material; Neoprene bearing pads and rubber bonding cement to be included in the Unit price bid for Class "A" concrete.
② The special provisions on Linseed Oil Treatment does not apply to Bent caps.

CORRECT

Grise

BRIDGE ENGINEER

APPROVE

STATE HIGHWAY ENGINEER

K-47-114

MICROFILMED

DESIGNED BY Hires & Burke
DRAWN BY JAMES FIELDS
TRACED BY
CHECKED BY P.B.B.

DATE

DATE

DATE

DATE

36'-4" Roadway with 9" curbs

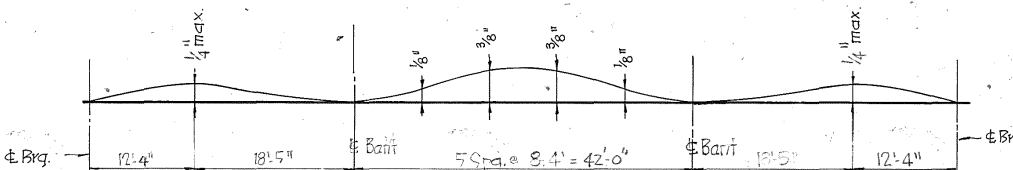
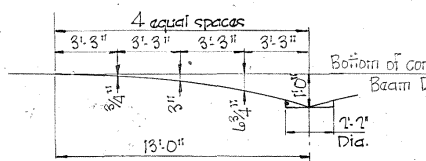
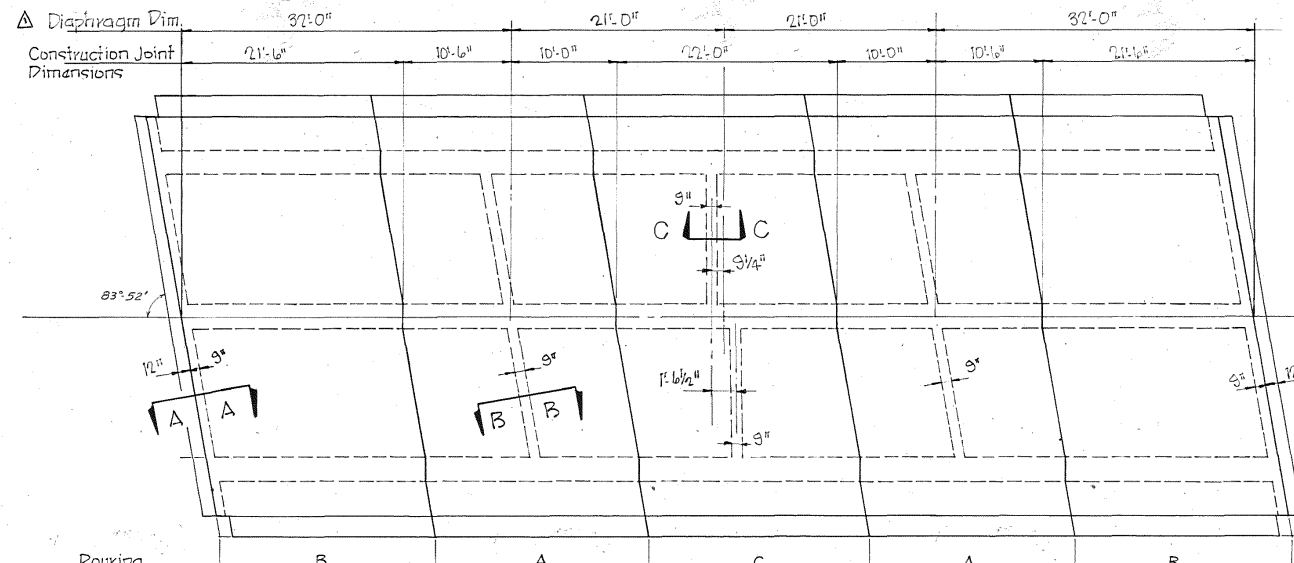
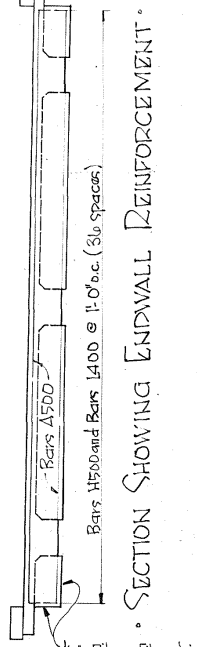
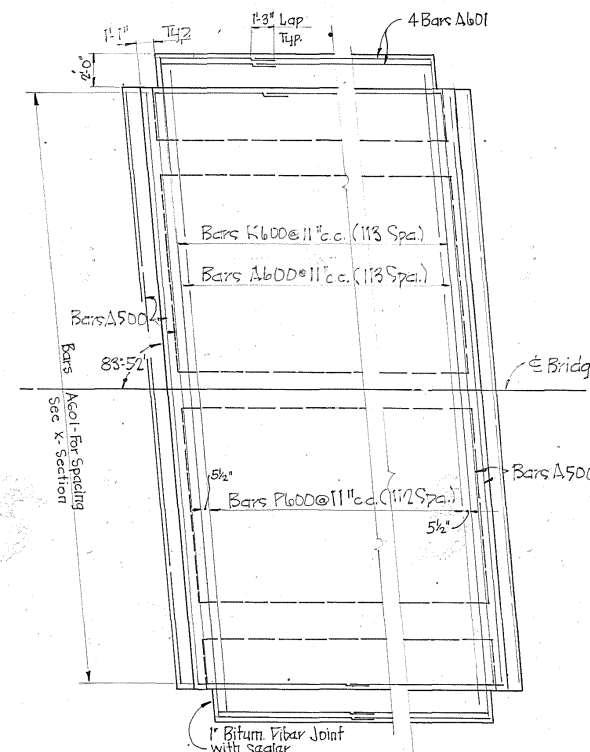
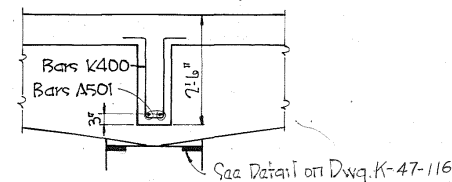
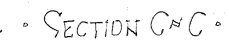
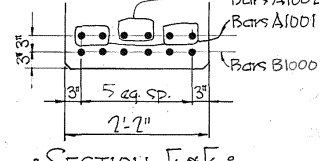
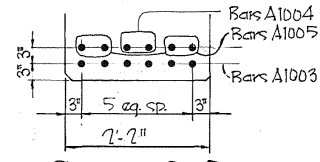
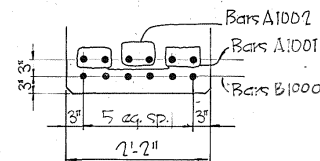
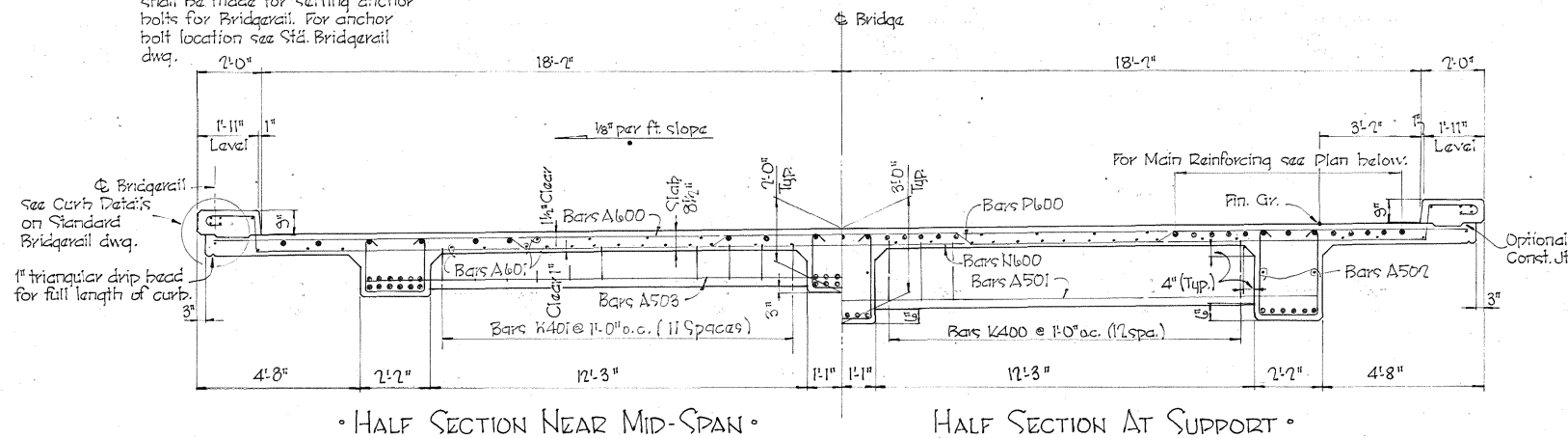
STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

LAYOUT OF BRIDGE
WESTBOUND I-24 OVER SHELLMOUND ROAD*1
STATION 3/4+91.0
MARION COUNTY
1965

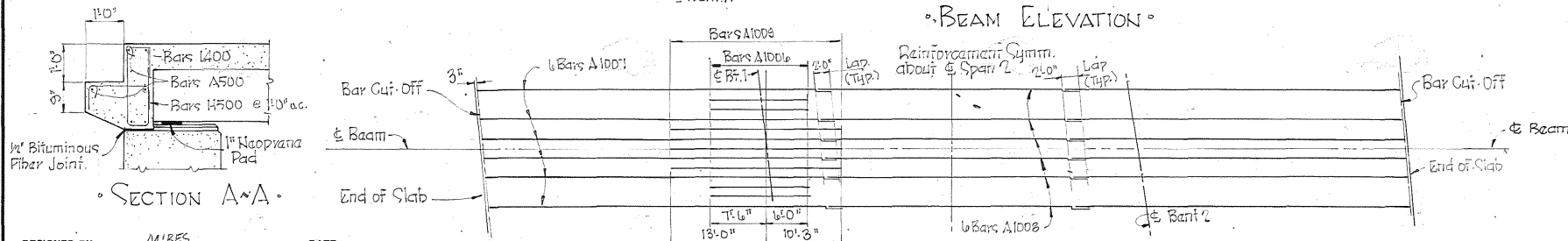
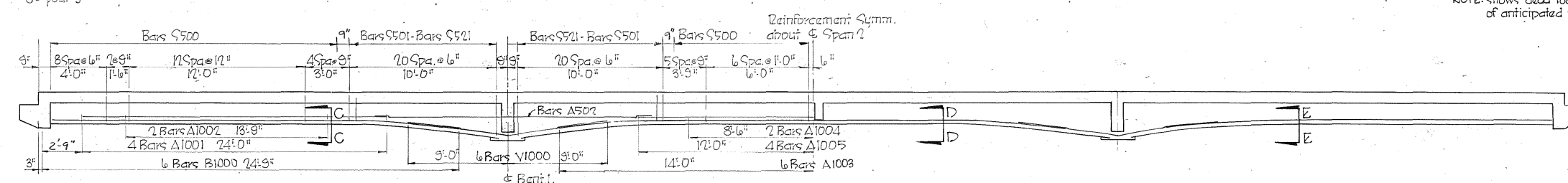
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		18		

Δ REVISED 5/27/65: CENTER SPAN DIAP.

NOTE: When pouring curbs provisions shall be made for setting anchor bolts for Bridgerail. For anchor bolt location see Std. Bridgerail dwg.



NOTE: Shows dead load camber only and should be increased by the amount of anticipated takeup in the falsework.



• ESTIMATED QUANTITIES •

Class "A" Concrete 170.3 Cu. Yds.

Reinforcing Steel 59,772 Lbs.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

SUPERSTRUCTURE DETAILS
W.B. INTERSTATE 74 OVER SHELLMOUND ROAD #1
STATION 314+91
MARION COUNTY
1965

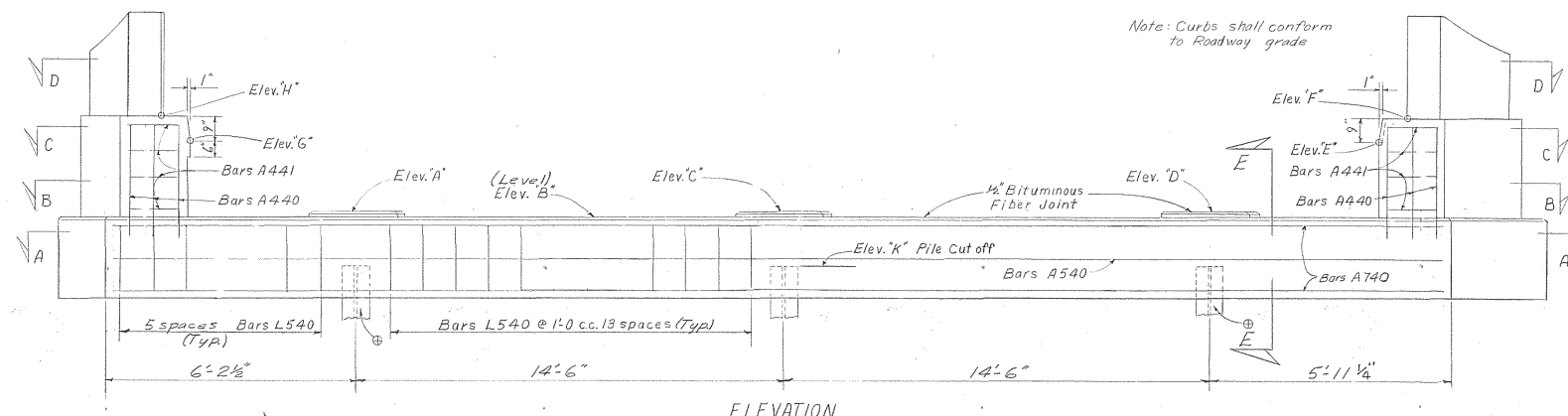
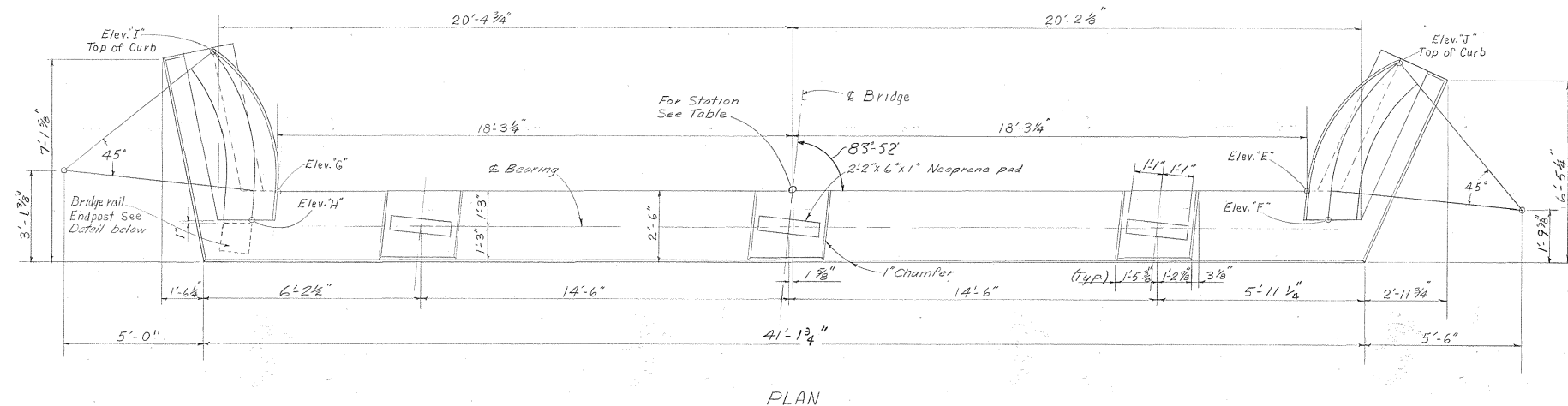
DESIGNED BY M. J. MILES
DRAWN BY J. WALTON
TRACED BY
CHECKED BY B. B. B.

DATE
DATE
DATE
DATE

APPROVED: Fred Green
BRIDGE ENGINEER
APPROVED: M. J. Dunlap
STATE HIGHWAY ENGINEER

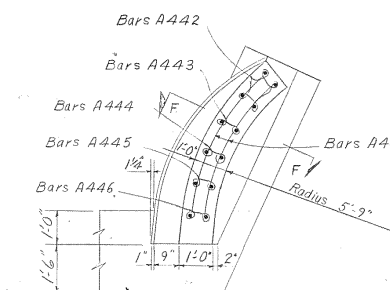
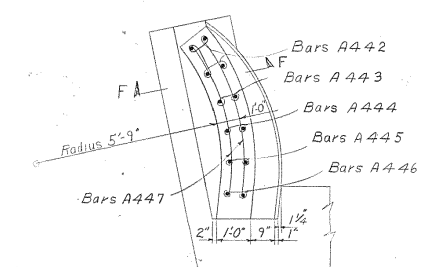
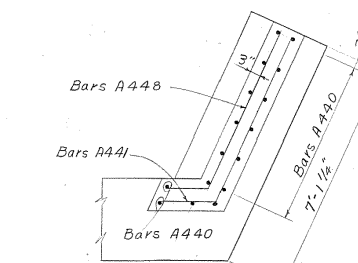
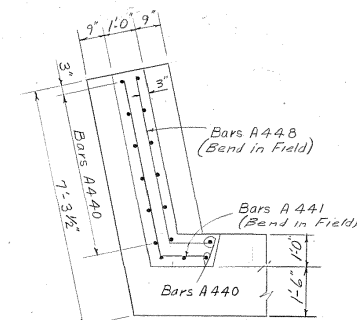
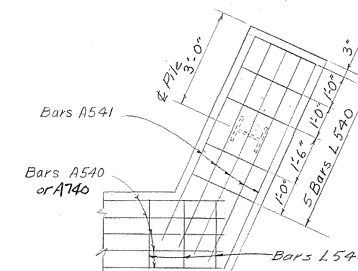
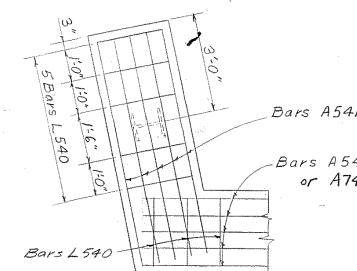
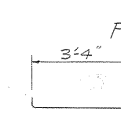
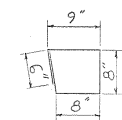
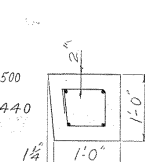
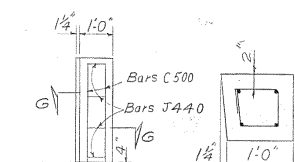
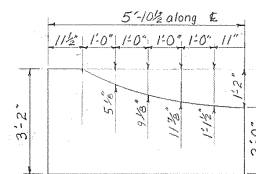
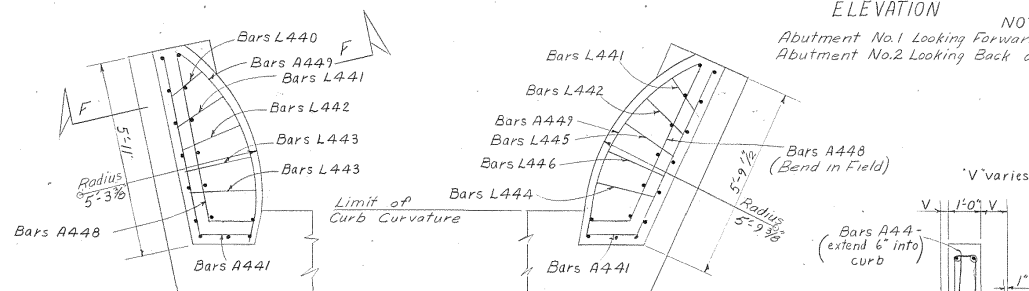
K-47-115

MICROFILMED



Note: Curbs shall conform to Roadway grade

NOTE: @ Batter these piles forward 2:12
Abutment No.1 Looking Forward on Survey
Abutment No.2 Looking Back on Survey



END POST LIST OF MATERIALS - EACH

Bars	Size	No.	Length	Quantities
				Concrete Class "A" Cu. Yds.
C500	5	4	3'-8"	.12
J440	4	4	3'-11"	26

Cost of end post to be included in the unit price bid for Bridgeway

ESTIMATED QUANTITIES

Location	Concrete Class "A" Cu. yds.	Reinforcing Steel Lbs.
Abutment No.1	15.5	1,747
Abutment No.2	15.5	1,747

TABLE OF STATIONS AND ELEVATIONS

Location	Stations	A	B	C	D	E	F	G	H	I	J	K
Abutment No.1	3/4+91	641.75	641.30	641.59	641.43	643.46	644.22	643.86	644.63	644.59	644.18	639.80
Abutment No.2	3/5+97	642.18	642.05	642.34	642.50	644.63	645.38	644.23	644.97	645.01	645.42	640.55

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

Abutment No.1 and 2
Westbound Interstate Rt.24 Over
Shellmound Road #1
Station 3/4+91.0
Marion County
1965

CORRECT: Fred Greve
BRIDGE ENGINEER
APPROVED: M. D. Dwyer
STATE HIGHWAY ENGINEER

K-47-117

MICROFILMED

DESIGNED BY: James Fields
DRAWN BY: James Fields
TRACED BY: James Fields
CHECKED BY: James Fields
DATE: 3-1-65
DATE: 3-1-65
DATE: 3-1-65
DATE: 3-1-65

BILL OF STEEL

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

SUPERSTRUCTURE									SUPERSTRUCTURE									ABUTMENTS 1&2									BENTS 1&2								
BAR	LOCATION	SIZE	NO. REQD	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO. REQD	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO. REQD	BENDING DIMENSIONS				LENGTH	BAR	LOCATION	SIZE	NO. REQD	BENDING DIMENSIONS				LENGTH
				a	b	c	d						a	b	c	d							a	b	c	d									
A500	Endwall	5	12					36'-0"	S517	Beam	5	12	1'-10"	2'-4 1/2"			7'-5"	A440	Wingwall	4	64					4'-2"	A850	Column Bent No1	8	24			17'-6"		
A501	Support Diaph.	5	4					30'-6"	S518	Beam	5	12	1'-10"	2'-5"			7'-6"	A441	Wingwall	4	16					7'-2"	A851	Column Bent No2	8	24			18'-3"		
A502	Beam Haunch	5	12					16'-6"	S519	Beam	5	12	1'-10"	2'-6"			7'-8"	A442	Wingpost	4	16					2'-3"									
A503	Int. Diaphragm	5	4					14'-5"	S520	Beam	5	12	1'-10"	2'-6 1/2"			7'-9"	A443	Wingpost	4	8					2'-5"	A1050	Dowels	10	18			4'-0"		
A600	Slab	6	114					37'-6"	S521	Beam	5	12	1'-10"	2'-7 1/2"			7'-11"	A444	Wingpost	4	8					2'-8"									
A601	Slab	6	156					36'-0"	V1000	Beam	10	36	7'-0"	11"	8 1/2"	5"	18'-1"	A445	Wingpost	4	8					3'-0"	C850	Footing	8	48	3'-9"		4'-3"		
																	A446	Wingpost	4	8					3'-5"										
A1001	Beam	10	24					24'-0"									A447	Wingpost	4	16					5'-6"	D650	Footing	6	96	6'-0"		7'-4"			
A1002	Beam	10	12					13'-9"									A448	Wingwall	4	16					6'-5"										
A1003	Beam	10	18					28'-0"									A449	Curb	4	8					6'-6"	T450	Columns	4	111	1'-10"	1'-0"	6'-9"			
A1004	Beam	10	6					17'-0"																											
A1005	Beam	10	12					24'-0"									A540	Abutment Beam	5	10					40'-7"										
A1006	Slab	10	24					13'-6"									A541	Abutment Beam	5	48					6'-10"										
A1007	Slab	10	36					42'-0"									A740	Abutment Beam	7	16					40'-7"										
A1008	Slab	10	18					26'-0"									L440	Curb	4	2	1'-3"	6"	11"		4'-10"										
A1009	Slab	10	18					23'-3"									L441	Curb	4	4	1'-9"	6"	11"		5'-10"										
																	L442	Curb	4	4	2'-0"	6"	11"		6'-4"										
B1000	Beam	10	36	24'-9"				26'-2"									L443	Curb	4	4	2'-1"	6"	11"		6'-6"										
H500	Rdwy. Bracket	5	74	1'-5"	7"			2'-7"									L444	Curb	4	2	1'-10"	6"	11"		6'-0"										
																	L445	Curb	4	2	1'-9"	6"	11"		5'-10"										
K400	Support Diaph.	4	52	6"	5"	1'-9"		4'-11"									L446	Curb	4	2	1'-11"	6"	11"		6'-2"										
K401	Int. Diaphragm	4	24	6"	5"	1'-0"		3'-5"																											
L400	Endwall	4	74	5"	6"	1'-8"		4'-8"									L540	Abutment Beam	5	100	2'-2"	1'-0"	2'-2"		7'-8"										
N600	Slab	6	114	40'-2 1/2"	1'-7"	36'-7 1/2"	1'-3"	44'-3"																											
P600	Slab	6	113	37'-6"	7'-0"	6'-2"	7'-4 1/2"	40'-3"																											
S500	Beam	5	222	1'-10"	1'-9"			6'-2"																											
S501	Beam	5	12	1'-10"	1'-9 1/2"			6'-3"																											
S502	Beam	5	12	1'-10"	1'-9 1/2"			6'-3"																											
S503	Beam	5	12	1'-10"	1'-10"			6'-4"																											
S504	Beam	5	12	1'-10"	1'-10"			6'-4"																											
S505	Beam	5	12	1'-10"	1'-10 1/2"			6'-5"																											
S506	Beam	5	12	1'-10"	1'-10 1/2"			6'-5"																											
S507	Beam	5	12	1'-10"	1'-11"			6'-6"																											
S508	Beam	5	12	1'-10"	1'-11 1/2"			6'-7"																											
S509	Beam	5	12	1'-10"	2'-0"			6'-8"																											
S510	Beam	5	12	1'-10"	2'-0 1/2"			6'-9"																											
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S514	Beam	5	12	1'-10"	2'-2 1/2"			7'-1"																											
S515	Beam	5	12	1'-10"	2'-3"			7'-2"																											
S516	Beam	5	12	1'-10"	2'-3 1/2"			7'-3"																											

Δ REVISED 5/27/65

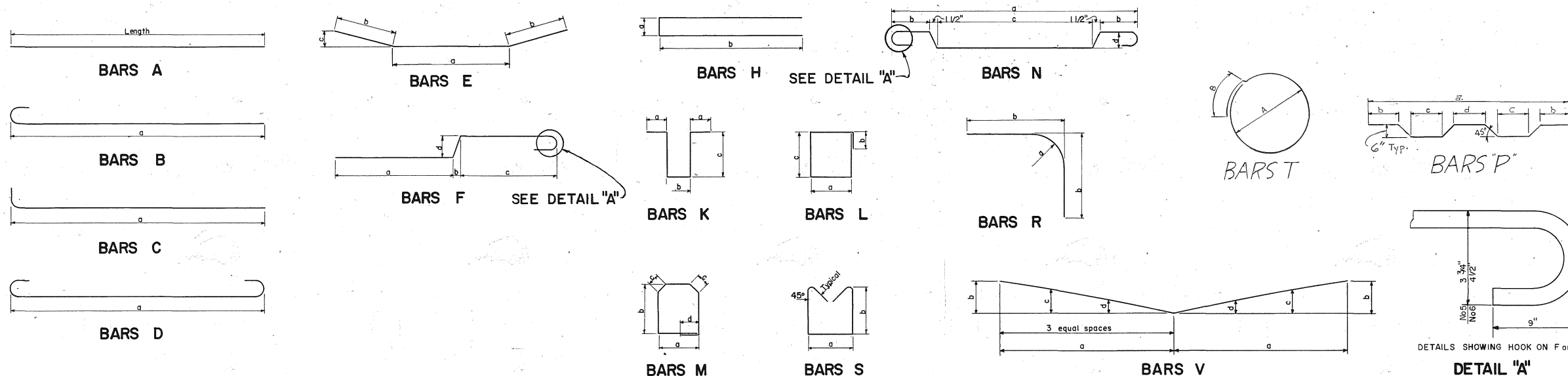
Δ REVISED 10/20/65

Δ

REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	06

NOTE: Dimensions shown on this sheet are outside to outside of bar.



DETAILS SHOWING HOOK ON F OR N BARS

DETAIL "A"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE
BILL OF STEEL
WESTBOUND I-24 OVER SHELLMOUND ROAD #1
STATION 314+91.0
MARION COUNTY
1965

CORRECT *Red Green*
BRIDGE ENGINEER

APPROVED *MDaup*
STATE HIGHWAY ENGINEER

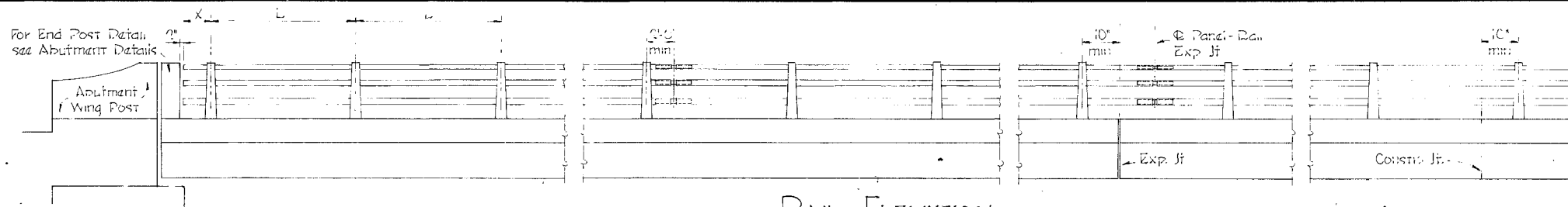
K-47-118

DESIGNED BY *Mires & Burke* DATE
DRAWN BY *T.E.P.* DATE
TRACED BY *J.W. & Gayl Parker* DATE 11-14-60
CHECKED BY DATE

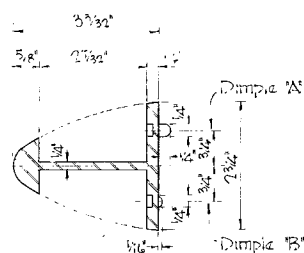
MICROFILMED

NOTE: For X & L dimensions see Layout of Bridge.
Dim X 10' min. 14' max.
Dim L 8'0" max.

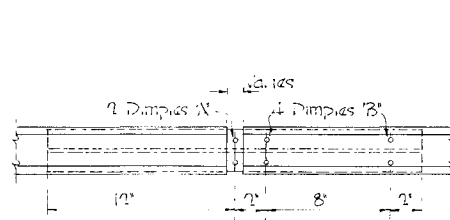
For End Post Details see Abutment Details.



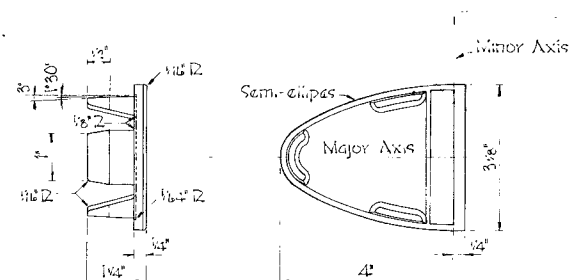
RAIL ELEVATION



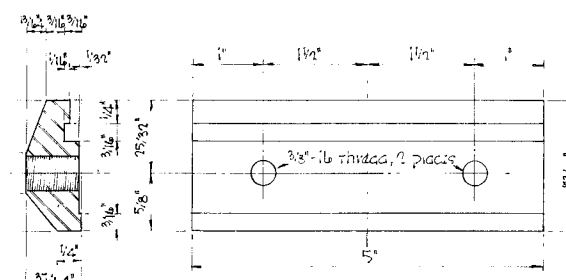
HANDRAIL SPICE MEMBER



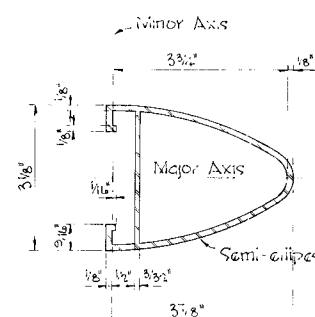
HANDRAIL EXPANSION & SPICE JOINTS



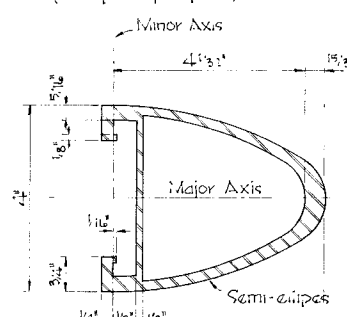
HANDRAIL END CAP
Cast Aluminum - Drive Pin



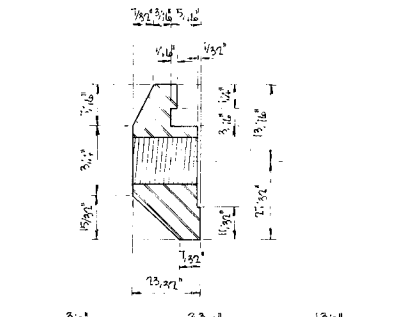
HANDRAIL CLAMP BAR
(2 required per post)



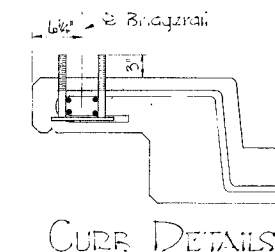
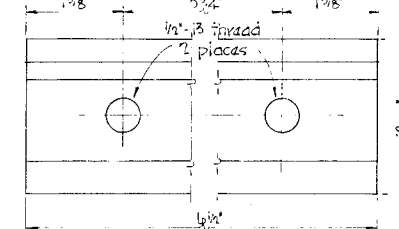
HANDRAIL SECTION



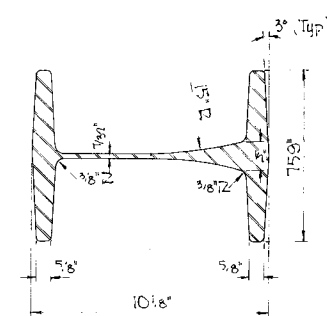
BARRIER RAIL SECTION



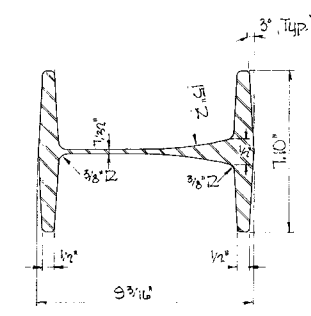
BARRIER RAIL CLAMP BAR
(4 required per post)



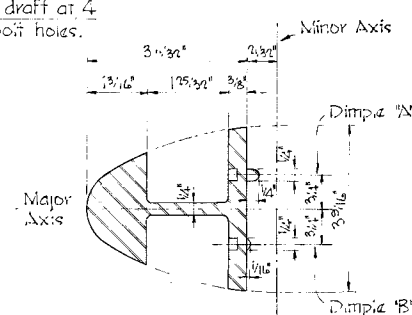
CURB DETAILS



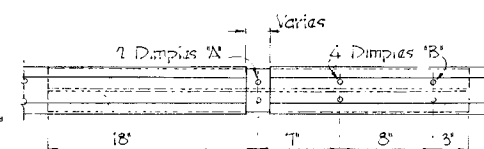
SECTION A-A



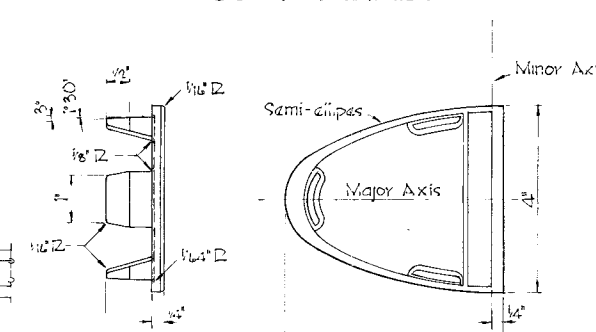
SECTION B-B



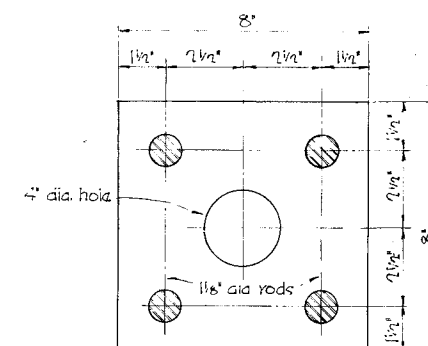
BARRIER RAIL SPICE MEMBER



BARRIER RAIL EXPANSION & SPICE JOINTS



BARRIER RAIL END CAP
Cast Aluminum - Drive Pin



SECTION C-C

GENERAL NOTES

DESIGN: AASHTO 1964 Interim Specifications.
All anchorage provisions and hardware are considered as parts of the rail for payment.
All open ends of rail members shall be capped.
Panel lengths of rail shall be attached to a minimum of 4 posts.
Rail post shall be set plumb unless otherwise noted on Plans.
Anchor bolts & nuts to be steel, galvanized to ASTM A-153.
Posts & End Caps shall be cast aluminum Alloy A36-T6.
Material for rail members shall be aluminum ASTM B721 Alloy 6061-T6, or 6061-T6.
Castings shall have a maximum draft of 3° and a minimum radius of fillet of 1/2" unless otherwise shown.
Splice material required to plumb post shall be aluminum alloy made from sheet or plate conforming to ASTM Specification B709-61, Alloy 1100 Condition O. Shims shall be of such dimensions to provide full bearing for the post.
All aluminum surfaces in contact with concrete shall be given a shop coat of zinc chromate paint.

All rails to be sawed to length. Flame cutting is not permitted.
Rails may be heated to a temperature not exceeding 400°F, for a period not exceeding 30 minutes, to facilitate bending.
Anchor bolts & nuts shall be ASTM A307 & anchor plates shall be ASTM A36 or A1.
Clamping Bar Attachment: Clamp Bars to be aluminum ASTM B721, Alloy 6061-T6 or 6061-T6. Stainless steel cap screws shall be ASTM A-193, grade B-8, 100,000 psi minimum yield & aluminum washers Aiscad 1024.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE

STANDARD
THREE RAIL
ALUMINUM BRIDGERAILING

CORRECT
FRED GURE
BRIDGE ENGINEER
APPROVED
M. DUNLAP
STATE HIGHWAY ENGINEER

12-38-149

4 Copies

DESIGNED BY: JWS
DATE: _____
DRAWN BY: JWS
DATE: _____
TRACED BY: JWS
DATE: _____
CHECKED BY: JWS
DATE: _____

Revised: May 21, 1965 (Dist. to Sec. R-13)
Revised: April 9, 1965 (Dist. Material)
Revised: March 30, 1965 (Dist. Splice)
Revised: Sept. 13, 1967

F-032-169

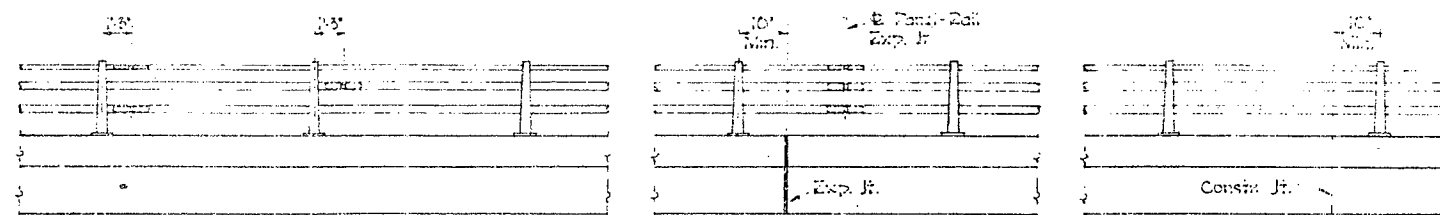
For End Post Detail
See Abutment Details.

Abutment Wing Post

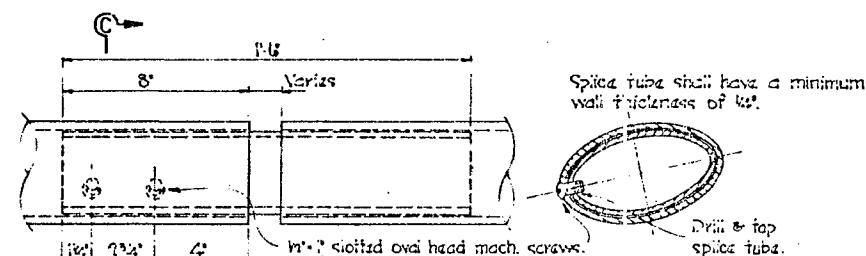
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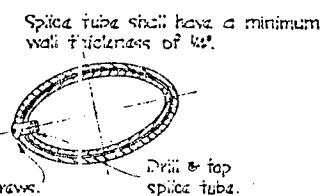
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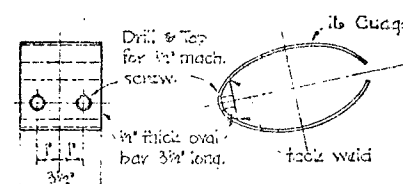
RAIL ELEVATION:



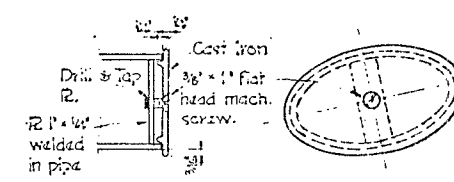
TYPICAL RAIL EXPANSION & SPlice JOINTS



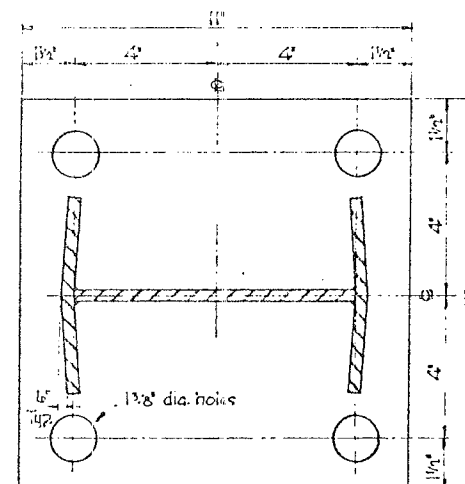
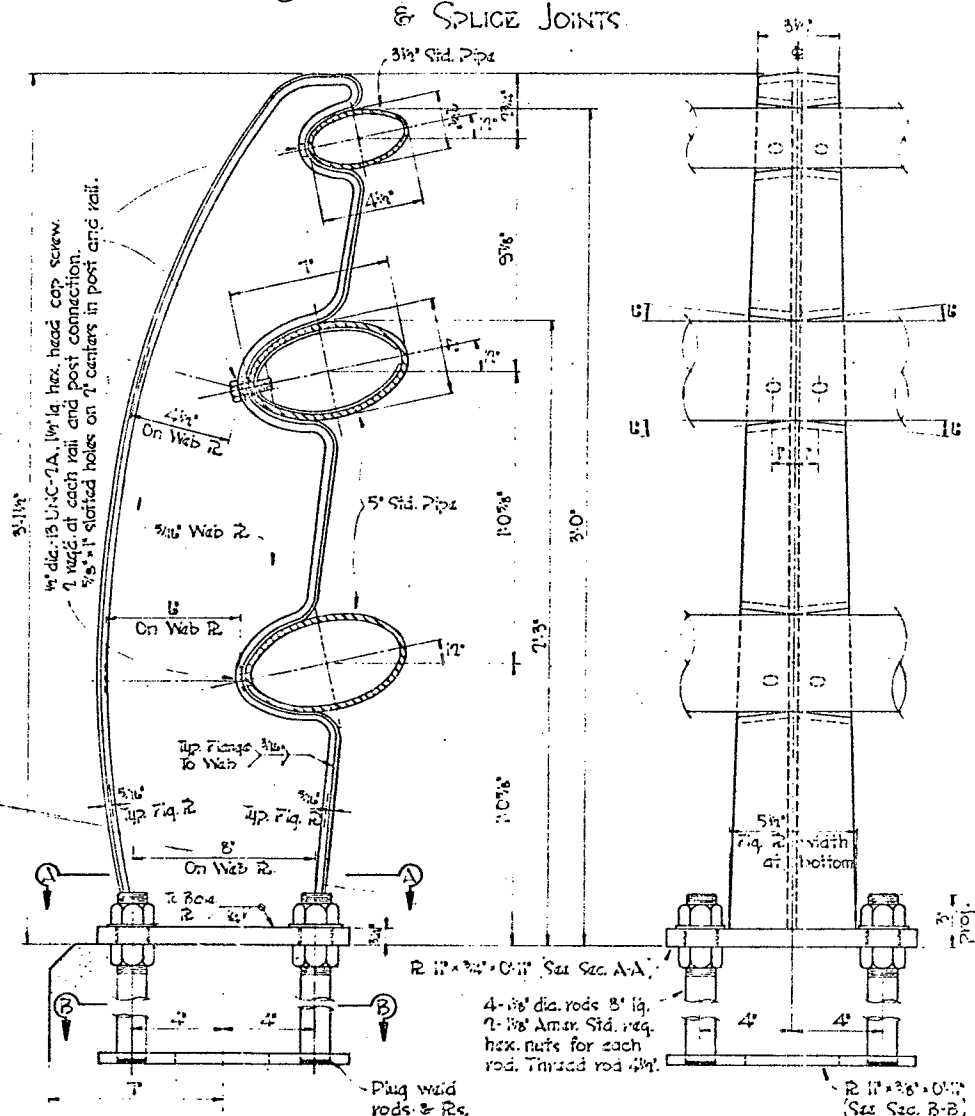
SECTION CnC



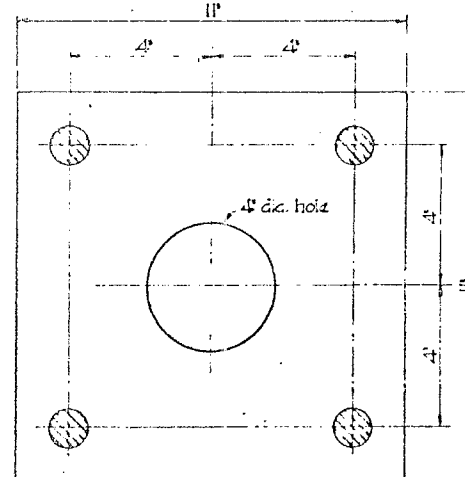
TYPICAL FASTENER DETAIL



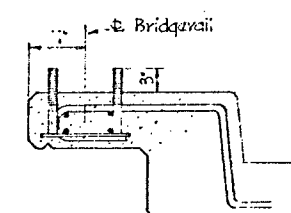
TYPICAL RAIL END CAP DETAIL



SECTION A-A



SECTION B-3



CURB DETAILS

GENERAL NOTES

DESIGN: AASHTO 1964 Interim Specifications.
POST, ANCHOR BOLT ASSEMBLY: ASTM-A36
RAILING: Steel rail pipe, schedule 40 ASTM-A53 grade A or B.
END CAPS: ASTM A36 Class 40
RAIL FASTENER: 6-MISC ITEMS: ASTM-A1 or A36.
TUBING FOR SPLICE JOINTS: ASTM-A36 Stainless tubing: Grade A or B.
BOLTS, MACHINE SCREWS & NUTS: ASTM-A307
GENERAL FABRICATION: 3- ERECTION REQUIREMENTS:
a. Rail shall be attached to a minimum of 4 post.
b. Each rail length furnished with splice joint at one end as required.
c. All welding shall conform to the Special Provisions regarding Welded Structures.
d. Railing to be fabricated and erected parallel to top of curb and each other. Post to be set plumb or truly vertical unless otherwise noted on Plans.
RAIL ITEM: This item shall include rails and caps, fasteners, machine screws, splice joints, post, anchor bolt assemblies and all other items to complete the railing.
GALVANIZING:
a. Post and rails to be hot dip galvanized to ASTM A153 after fabrication.
b. Anchor bolts, end caps, fasteners, splice joints, bolts and nuts to be galvanized to ASTM A153.
SPECIAL NOTE: Since the finished railing must meet all requirements of fit, alignment, grade and verticality of posts to the full satisfaction of the engineer, it is suggested that complete field measurements be made before any shop fabrication is performed.

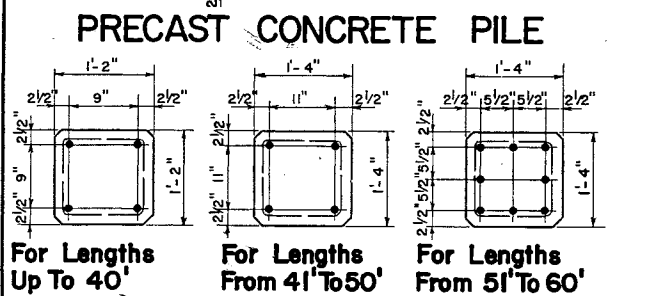
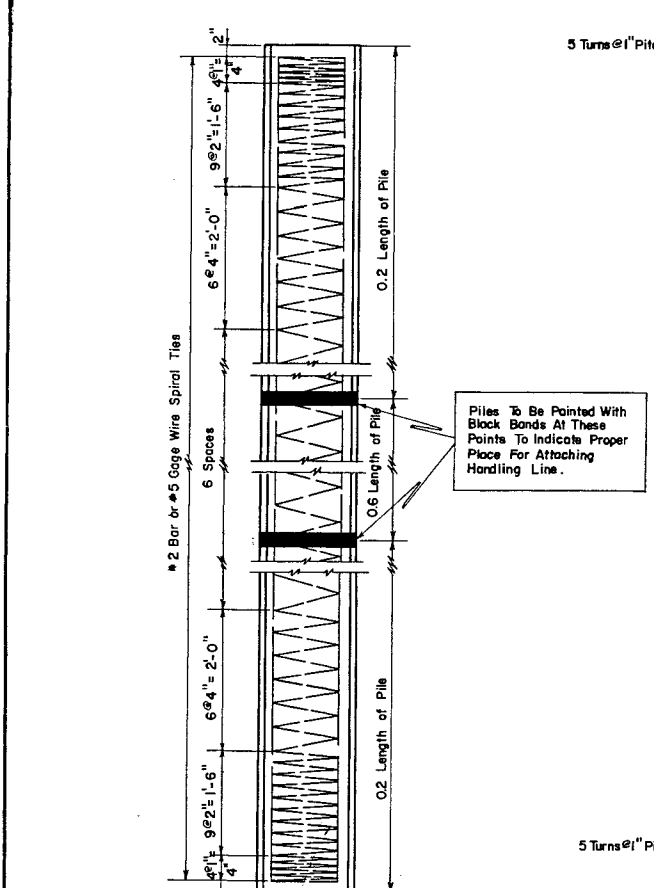
DESIGNED BY _____ DATE _____
DRAWN BY JWS DATE _____
TRACED BY _____ DATE _____
CHECKED BY _____ DATE _____

CORRECT Frank Jones
DIRECTOR'S NAME

APPROVED [Signature]

11 28 15

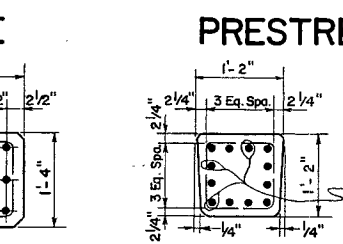
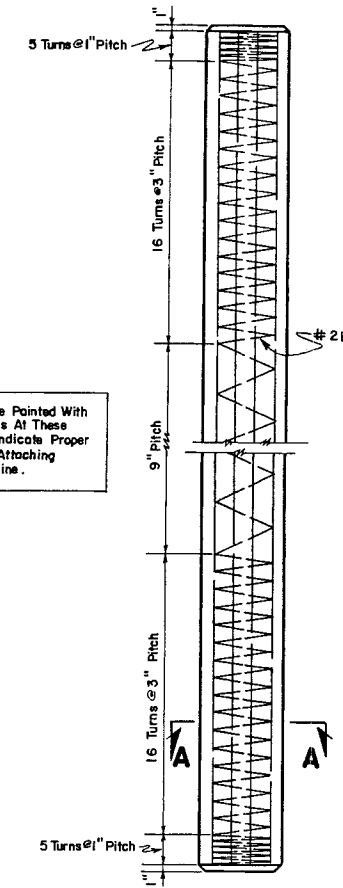
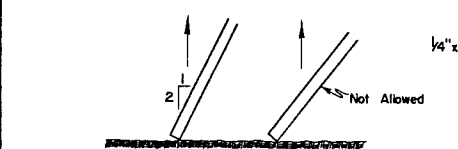
A. Coates



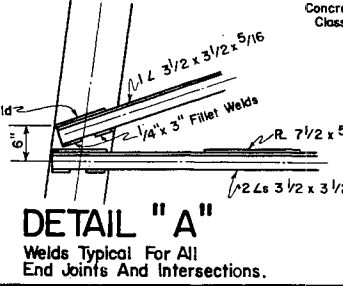
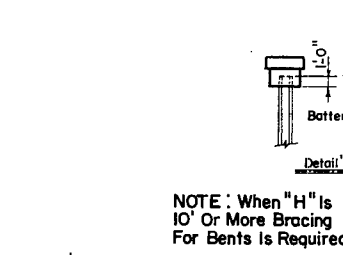
NOTE: If it becomes necessary to use size 2 piles the contractor will be allowed an increase in the size 1 bid of 25%.

Length Of Pile	Longitudinal Reinforcing	Weight Of Steel Per Ft.	Weight Of Pile Per Ft.
Up To 35'	4 # 7 Bars	9.6 #	205.3 #
36' To 40'	4 # 8 Bars	12.2 #	205.3 #
41' To 45'	4 # 9 Bars	15.1 #	265.3 #
46' To 50'	4 # 10 Bars	18.8 #	265.3 #
51' To 55'	8 # 9 Bars	28.9 #	265.3 #
56' To 60'	8 # 10 Bars	36.2 #	265.3 #

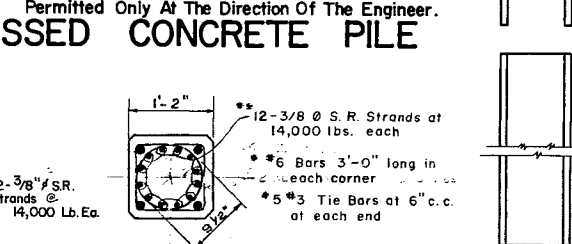
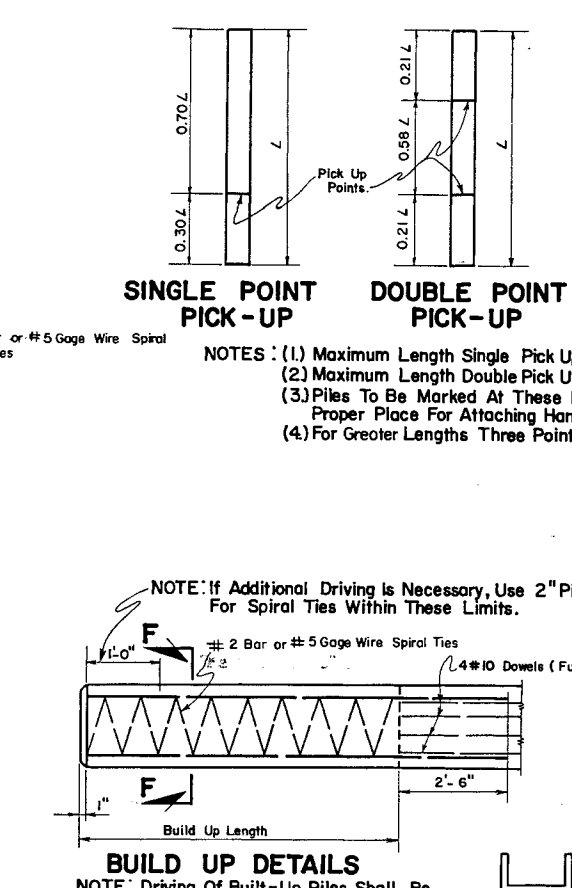
NOTE: In Handling The Piles, They Shall Be Supported At The Points Indicated. Piles To Be Picked Up By Pulling On Both Lines Uniformly. End Of Pile Not To Touch Ground Unless Piles Inclined 1:2 Or Steeper.



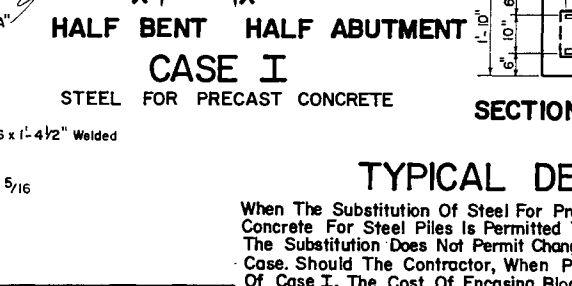
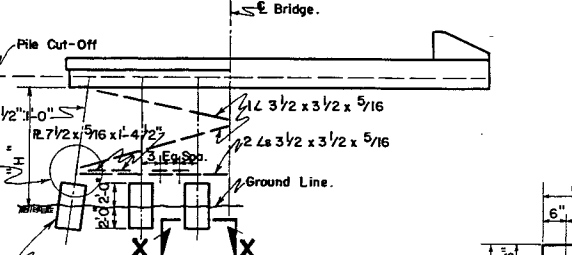
NOTE: End reinforcement required at tip end and driving end for all piles with circular strand patterns.
 ** NOTE: Subject to the approval of the Engineer of Structures, alternate strand sizes and arrangements of equivalent total force may be substituted.



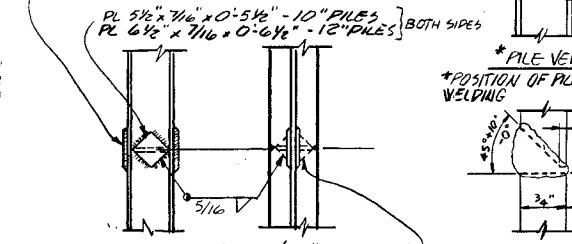
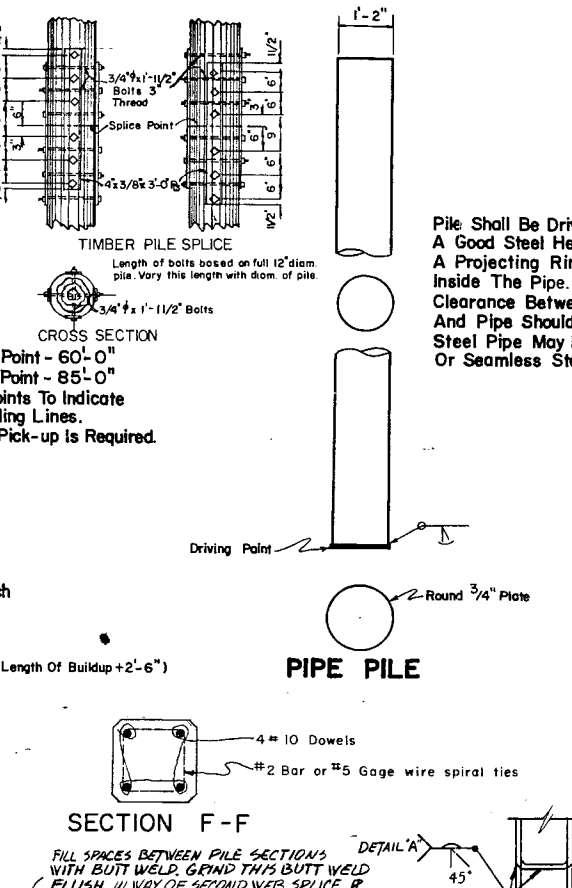
DESIGNED BY: J.W. SOUTHERLAND
 DRAWN BY: J.W. SOUTHERLAND
 CHECKED BY: J.W. SOUTHERLAND
 DATE: 5-27-60
 DATE: 2-6-62
 DATE: 2-6-62



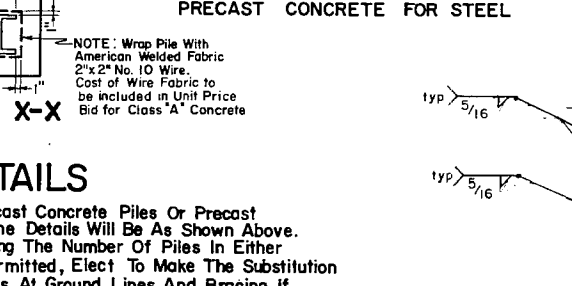
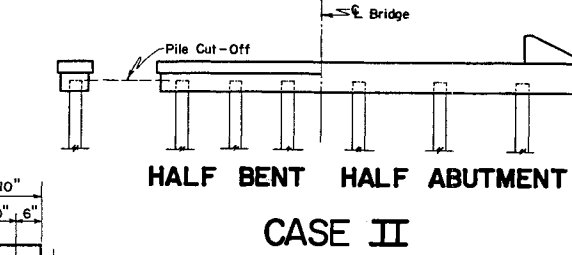
NOTE: Driving of Built-Up Piles Shall Be Permitted Only At The Direction Of The Engineer.



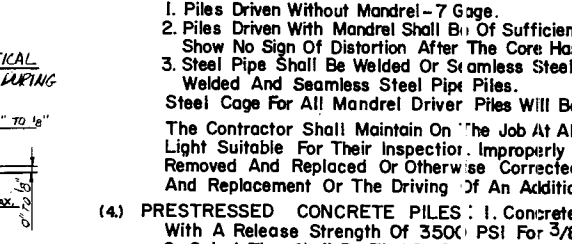
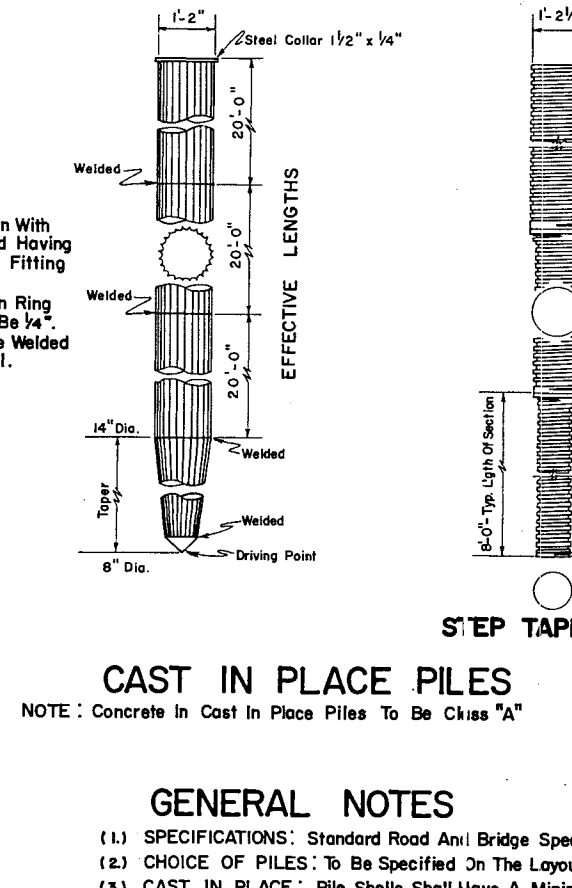
REV. - FEB. 6, 1962
 REV. - MAR. 1, 1961 BATTER ON PRESTRESSED PILE
 REV. - DEC. 8, 1960
 REV. - OCT. 27, 1960
 REV. - SEPT. 27, 1960 DELETE PILE SUBSTITUTIONS



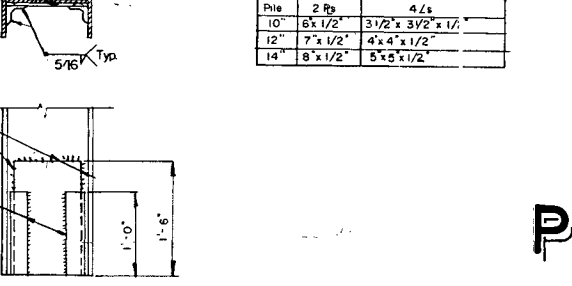
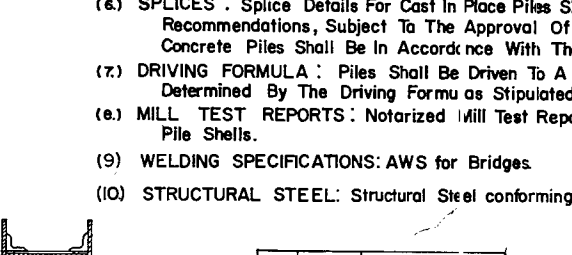
NOTE: Concrete in Cast in Place Piles To Be Class "A"



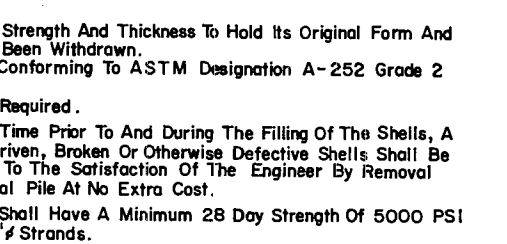
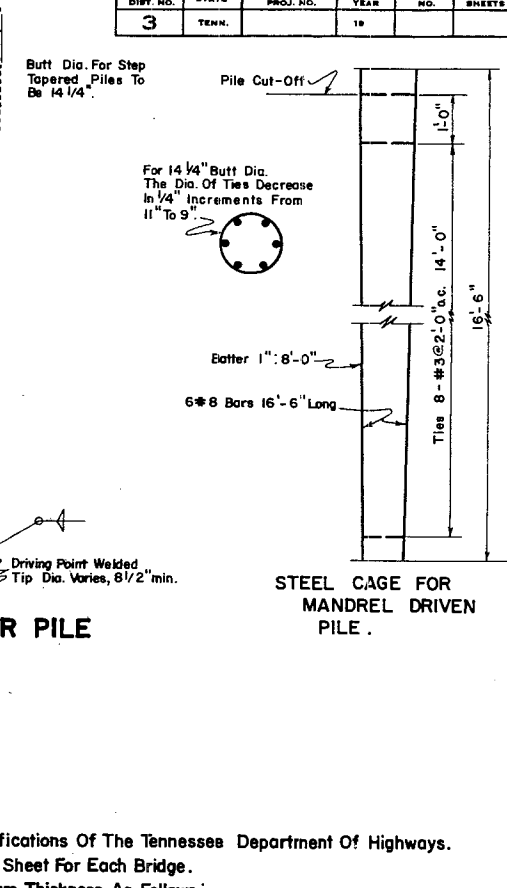
REV. - JULY 25, 1960
 REV. - DEC. 14, 1964 SPIRAL TIES
 REV. - JAN. 22, 1964 COST OF WIRE FABRIC
 REV. - FEB. 24, 1966 TIMBER PILE SPLICE, DETAIL OF PILE DRIVING POINT
 REV. - NOV. 27, 1973 ADDED ALT. SECTION A-A



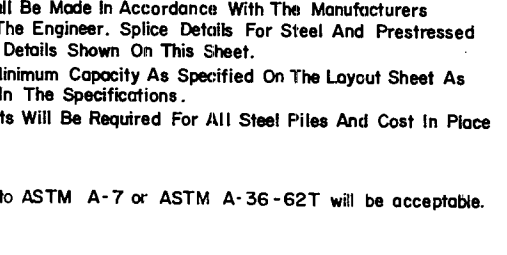
NOTE: Concrete in Cast in Place Piles To Be Class "A"



REV. - NOV. 12, 1982 DETAIL OF PILE SPLICE



NOTE: Concrete in Cast in Place Piles To Be Class "A"



REV. - NOV. 12, 1982 DETAIL OF PILE SPLICE

CAST IN PLACE PILES

NOTE: Concrete in Cast in Place Piles To Be Class "A"

GENERAL NOTES

- (1) SPECIFICATIONS: Standard Road And Bridge Specifications Of The Tennessee Department Of Highways.
- (2) CHOICE OF PILES: To Be Specified On The Layout Sheet For Each Bridge.
- (3) CAST IN PLACE: Pile Shells Shall Have A Minimum Thickness As Follows:
 1. Piles Driven Without Mandrel - 7 Gage.
 2. Piles Driven With Mandrel Shall Be Of Sufficient Strength And Thickness To Hold Its Original Form And Show No Sign Of Distortion After The Core Has Been Withdrawn.
 3. Steel Pipe Shall Be Welded Or Seamless Steel Conforming To ASTM Designation A-252 Grade 2 Welded And Seamless Steel Pipe Piles.
- (4) PRESTRESSED CONCRETE PILES: 1. Concrete Shall Have A Minimum 28 Day Strength Of 5000 PSI With A Release Strength Of 3500 PSI For 3/8" Strands.
 2. Spiral Ties Shall Be Tied To Corner Strands At Intervals Adequate To Prevent Excessive Movement During Vibration. They May Be Manufactured From Stock Meeting Any Grade Of Reinforcing Steel Or Hard Drawn Wire.
- (5) PILE POINTS: All Cast In Place Piles Shall Be Equipped With A Steel Driving Point. Driving Points Shall Be Mill Welded To The Pile Shell. Driving Points May Be Either Structural Steel, Forged Steel Or Cast Steel. Steel Piles Shall Have A Square Cut End Only. No Driving Point Is Required Unless Shown On The Bridge Plans.
- (6) SPLICES: Splice Details For Cast In Place Piles Shall Be Made In Accordance With The Manufacturers Recommendations, Subject To The Approval Of The Engineer. Splice Details For Steel And Prestressed Concrete Piles Shall Be In Accordance With The Details Shown On This Sheet.
- (7) DRIVING FORMULA: Piles Shall Be Driven To A Minimum Capacity As Specified On The Layout Sheet As Determined By The Driving Formula Stipulated In The Specifications.
- (8) MILL TEST REPORTS: Notarized Mill Test Reports Will Be Required For All Steel Piles And Cast In Place Pile Shells.
- (9) WELDING SPECIFICATIONS: AWS for Bridges.
- (10) STRUCTURAL STEEL: Structural Steel conforming to ASTM A-7 or ASTM A-36-62T will be acceptable.

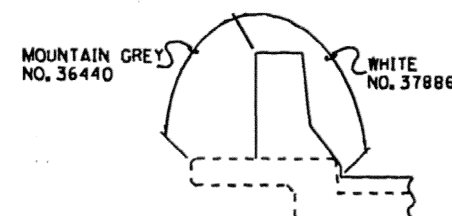
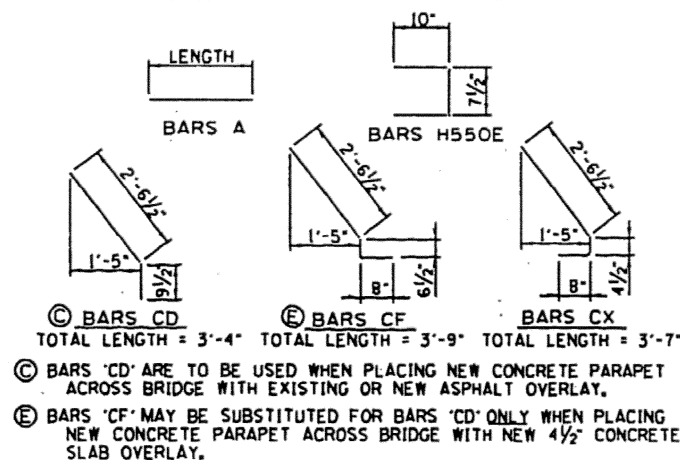
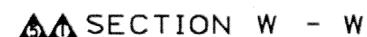
STATE OF TENNESSEE
 DEPARTMENT OF HIGHWAYS
 NASHVILLE

STANDARD PILE DETAILS

DESIGNED BY: Fred Green
 DRAWN BY: Fred Green
 CHECKED BY: Fred Green
 DATE: 5-27-60
 DATE: 2-6-62
 DATE: 2-6-62

H-5-III

SEE Std-5-1 & 5-2



GENERAL NOTES

SPECIFICATIONS, STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE
TENNESSEE DEPARTMENT OF TRANSPORTATION, (CURRENT EDITION)
DESIGN SPECIFICATIONS, AASHTO (CURRENT EDITION) WITH ADDENDA.

CONCRETE: SHALL BE CLASS 'A' F'C - 3,000 P.S.I. SEE STANDARD SPECIFICATIONS - CONCRETE STRUCTURES.

④ REINFORCING STEEL: SEE STANDARD SPECIFICATIONS.

FINISHING CONCRETE SURFACES: A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. SEE STANDARD SPECIFICATIONS. THE COLOR OF THE FINISH SHALL BE AS SHOWN IN TEXTURE COATING DETAIL THIS SHEET, FEDERAL COLOR STANDARD NO. 595A AND A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE.

NOTE: WHEN REMOVING PORTIONS OF THE EXISTING CONCRETE CURBING CARE SHALL BE TAKEN SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXISTING REINFORCING STEEL IN THESE AREAS ARE TO REMAIN IN PLACE AND SHALL BE COMPLETELY CLEANED TO THE FULL SATISFACTION OF THE ENGINEER BEFORE REPAIRING THE NEW CONCRETE PARAPET.

NOTE: PROFILE OF CONCRETE PARAPET AND ENDPOST SHALL CONFORM TO ROADWAY GRADE.

NOTE: DETAILS OF GUARDRAIL SHALL CONFORM TO STANDARD DRAWING S-GR-SERIES, EXCEPT FOR DETAILS SHOWN ON THIS SHEET.

⑤ SPECIAL NOTE TO CONTRACTOR WHEN POURING NEW SLAB:
THE CONTRACTOR SHALL POUR THE NEW CONCRETE SLAB TO THE CURB
REMOVAL LINE BEFORE POURING NEW PARAPET. BARS CF500E SHALL BE
LEFT PROJECTING OUT OF THE NEW SLAB.

NOTE: TOPS OF EXISTING CURBS AND EXISTING EXPOSED REINFORCING STEEL SHALL BE BLAST CLEANED BEFORE POURING THE NEW CONCRETE PARAPETS. COSTS OF BLAST CLEANING SHALL BE INCLUDED IN ITEM NO. 620-10.01.

① NOTE: CONTRACTOR TO POUR NEW CONCRETE JERSEY SHAPE PARAPETS WITH
 CONSTRUCTION JOINTS AT 6' OF ALL BENTS AND EXISTING EXPANSION
 JOINTS IN THE EXISTING BRIDGE. COST OF ALL MATERIALS NECESSARY
 FOR PLACING THE CONSTRUCTION JOINTS AT DESIGNATED LOCATIONS
 SHALL BE INCLUDED IN ITEM NO. 620-10-01.

NOTE: BRIDGES WITH CURB WIDTHS LESS THAN 3'-3" SHALL HAVE EXISTING BRIDGERAIL COMPLETELY REMOVED. BRIDGES WITH CURB WIDTHS 3'-3" OR WIDER SHALL HAVE ONLY THE TOP RAIL AND RAIL POST REMOVED. REINFORCING BARS IN THE POST SHALL BE CUT OFF FLUSH WITH THE TOP OF THE EXISTING CURB. THE AREA OF POST REMOVAL SHALL BE REPAIRED TO TOP OF THE SLOTTED RAIL. SEE DETAIL "X" ABOVE. COST OF REMOVING OLD RAILS AND REPAIRING SECTIONS OF BOTTOM RAIL SHALL BE PAID UNDER ITEM NO. 620-10.01.

NOTE: COST OF EXISTING CONCRETE CURB REMOVAL, NEW CLASS 'A' CONCRETE, NEW EPOXY COATED REINFORCING STEEL, FORMING, EXISTING BRIDGERAIL REMOVAL, BLAST CLEANING, DRILLING, CONCRETE GROUTS, TEXTURED COATING, EXCAVATION, BACKFILLING, LABOR AND ALL MISCELLANEOUS MATERIALS NECESSARY TO BUILD THE NEW CONCRETE PARAPET WITH NEW 10"-2" CONCRETE ENDPOST AT BRIDGE ENDS SHALL BE INCLUDED IN ITEM NO. 620-10.01.

⚠️ NOTE: WHEN PLACING NEW CONCRETE PARAPET RAIL ACROSS BRIDGES WITH EXISTING SIDEWALKS, THE EXISTING BRIDGERAIL SHALL REMAIN IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING THE EXISTING SIDEWALK CURB CANTILEVER WHEN POURING THE NEW JERSEY SHAPE CONCRETE PARAPET. COST OF SIDEWALK CURB SUPPORTS SHALL BE INCLUDED IN ITEM NO. 620-10.01.

② **NOTES:** NEW HOLES FOR GROUTED BARS SHALL BE DRILLED WITH A HIGH SPEED DRILL. THE DRILL BIT SHALL BE CAPABLE OF DRILLING THROUGH EXISTING REINFORCING BARS AND CONCRETE. THE DIAMETER OF THE HOLES SHALL BE $\frac{1}{8}$ " (+) LARGER THAN THE DIAMETER OF THE REINFORCING BARS. THE HOLES SHALL BE THOROUGHLY CLEANED BY METHODS APPROVED BY THE ENGINEER. AFTER CLEANING OUT THE HOLES, PACK WITH AN APPROVED GROUT AND DRIVE THE REINFORCING BAR TO ITS SEAT. A LIST OF APPROVED GROUTS MAY BE OBTAINED FROM THE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS.

⚠️Ⓢ NOTE: AFTER REMOVING PORTIONS OF THE EXISTING BRIDGERAIL AND ENDS, AND WHEN POURING THE NEW CONCRETE PARAPET THERE MAY BE AREAS ON TOP OF THE EXISTING CURBS OR WINGWALLS WHERE REINFORCING BARS AND/OR ANCHOR BOLTS MAY BE EXPOSED. IN THESE AREAS THE BARS AND/OR ANCHOR BOLTS SHALL BE CUT 1/4" MIN. BELOW THE EXISTING CONCRETE SURFACES, AND THE VOID FILLED WITH AN EPOXY SEALER. ALL WORK MUST MEET WITH THE APPROVAL OF THE ENGINEER. COST SHALL BE INCLUDED IN ITEM NO. 620-10.01.

(F) NOTE, BARS A501E IN THE TRAFFIC FACE OF THE PARAPET TO REST ON TOP OF THE EXISTING CURB AND CLEAR THE TOP OF THE NEW POURED PARAPET 1/2" ±.

⑥ DENOTES, COST OF REMOVING ANY PORTIONS OF EXISTING ASPHALT AND REPLACING OF SAME SHALL BE INCLUDED IN COST OF ITEMS BID ON.

(H) NOTE: FOR PARAPET DELINEATOR DETAILS AND SPACING, SEE STANDARD DRAWING STD-1-1.

3.2 TEXTURE COATING DETAIL

(SHOWING LIMITS OF TEXTURE COATING FEDERAL SPECIFICATION NO.'S)

4 (COST OF TEXTURE COATING SHALL BE INCLUDED IN ITEM NO. 620-10.01, AND INCLUDES 10'-2" ENDPOST AS SHOWN ON DRAWING NO. SBR-2-125.)

▲△ESTIMATED QUANTITIES - PER FOOT

ITEM	CLASS 'A' CONCRETE C.Y.	EPOXY COATED REINFORCING STEEL LB.	TEXTURED COATED FINIS (NEW) S.Y.
DETAILS 'A' & 'B'	0.12	19.6	1.05
DETAILS 'C' & 'D'	0.12	19.6	0.75

NOTE: ESTIMATED QUANTITIES PER FOOT ARE FOR DETAILS 'A' THRU 'D' FROM BEGINNING TO END OF EXISTING BRIDGE. THE ESTIMATED QUANTITIES FOR THE 10'-2" ENDPOST AT BRIDGE ENDS ARE SHOWN ON DWG. NO. SBR-2-125, AND SHALL BE INCLUDED IN ITEM NO. 620-10.01, CONCRETE PARAPET (BRIDGERAIL REPLACEMENT), LIN. FT.

☒ MINOR REVISION - FHWA
APPROVAL NOT REQUIRED

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DETAILS SHOWING REPLACEMENT
OF EXISTING
BRIDGERAIL SYSTEM WITH
NEW JERSEY SHAPE
CONCRETE PARAPET
AND NEW
10'-2" ENDPOST
1988

DESIGNED BY _____ DATE _____
 DRAWN BY KIM FRANKENFIELD DATE 3-22
 SUPERVISED BY GENTRY & McINTURFF DATE 3-22
 CHECKED BY McInturff DATE 3-22

WITH DRAWINGS SBR-2-125 & SBR-2-126






SBR-2-124