

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

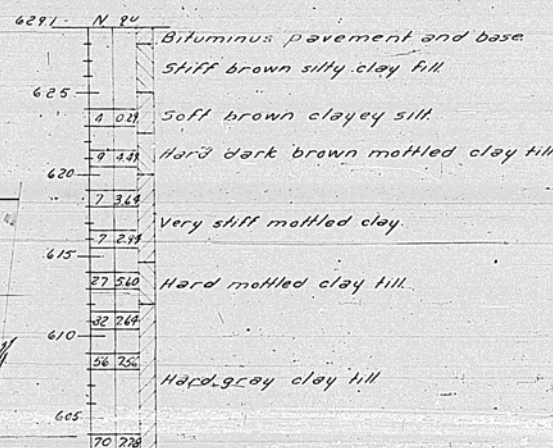
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 1
139X-2HF	139X-2F	MACON	11	9	6 SHEETS
139X-2HF	139X-2HF		31	18	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	U-135(16)		

GENERAL NOTES

Class X Concrete shall be used throughout.
The concrete floor slab shall be finished in accordance with Art. 511(b) of the Standard Specifications.
All exposed concrete surfaces of the abutments, wingwalls, rail support walls, stair walls, outside edge of curb and bottom of slab back to outside beam shall be rubbed according to Art. 521(a) of Standard Specifications.
The curbs and slab and the median and slab outside of the longitudinal construction joints shown on the cross section shall be poured monolithically. No transverse construction joints shall be made in the slab except by written permission of the engineer.
Railings shall be adjusted to true alignment after curbs have been poured.
The rail posts and rails shall be assembled in complete sections as shown in elevation on sheet 3.
All bearing plates, lead plates and anchor bolts shall be fabricated painted and set in accordance with Art. 514 of the Standard Specifications and are included for payment as structural steel. Estimated Weight 1650 lbs.
All structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint after inspection by the Illinois Division of Highways. See Art. 571 to 575 inc. of the Standard Specifications.
Waterproofing shall be done in accordance with Art. 5120 of the Standard Specifications.
All piles shall be creosoted.
All Metal Rail including Rail Post Anchors is included for payment as Metal Handrail. The number of lineal feet is measured end to end of handrail. The contract unit price for metal handrail includes installing the handrail.
The back filling behind abutments and wingwalls shall be done in accordance with Art. 5010 of the Standard Specifications.
Boring Data are shown on the drawings only as a guide to bidders in estimating soil conditions which may be encountered in the work.
Welding shall comply with Art. 55.4(c) of the Standard Specifications.
The following surfaces of the bridge from top of footing to ground line shall be waterproofed: the back of abutment walls, the back of wingwalls and back of rail support.

BORING No. 1 STA. 165+15

10 Ft. L. of E



BORING No. 2 STA. 164+50

25' R. of E

DESIGN STRESSES

$f_c = 18000$ psi Structural
 $f_s = 20000$ psi Reinforcement
 $f_c = 1800$ psi Superstructure
 $f_c = 800$ psi Substructure
 $n = 10$

STA. 164+83.40
BUILT 195 BY
STATE OF ILLINOIS
F.A. RT. 49 SEC. 139X-2-HB
F.A. PROJ. U-135(16)
LOADING H 20-516

NAME R. DATA
See Standard 2113

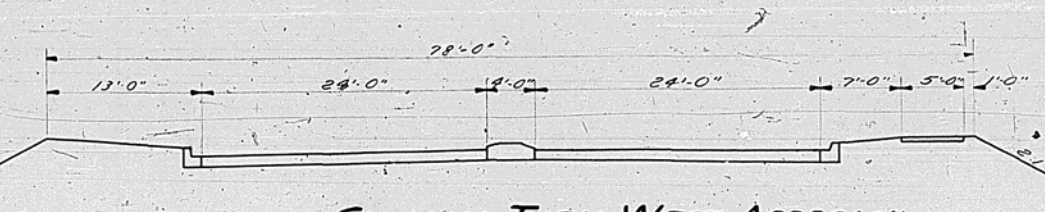
FOOTING PRESSURE
Main Wall 3000 #/sq.
Wing Wall 3240 Toe
240 Heel

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	SEC. 139X-2-HF	SEC. 139X-2-HB
Class X Concrete	Cu. Yds.	90.2	414.9		505.1
Reinforcement Bars	Lbs.	11,610	38,110		49,720
Structural Steel	Lbs.	58,700		58,700	58,700
Metal Handrail	Lin. Ft.	139			139
Name Plates	Each	1			1
Creosoted Piles	Lin. Ft.		160		160
Class A Excav. for Struct.	Cu. Yds.				975
Porous Granular Backfill	Cu. Yds.		167		167
Earth Excavation	Cu. Yds.		2,270		2,270
Corr. Metal Pipe 8" Perf.	Lin. Ft.				320

SECTION THRU WEST APPROACH

Scale 8" = 1'-0"



GENERAL PLAN

SEPARATION WITH LAKE SHORE DRIVE

PROJECT U-135(16)

F.A. RT. 49 SEC. 139X-2-HB-2HF

MACON COUNTY

STA. 164+83.40

LOADING H 20-516-44

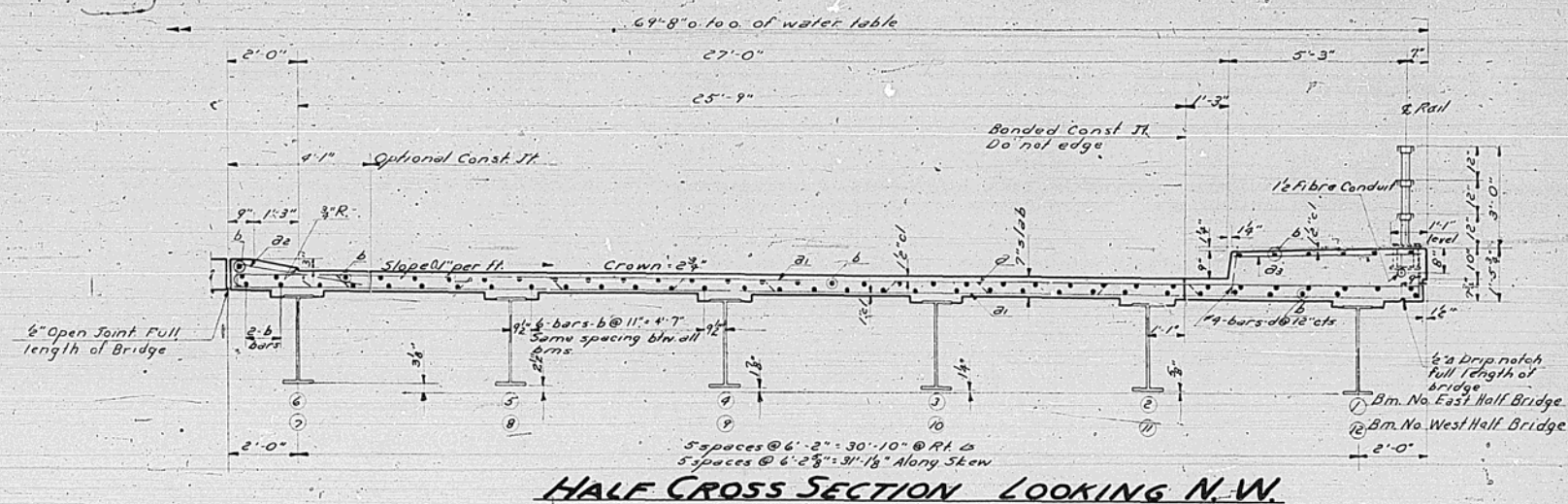
DESIGNED Harold P. Wendler
CHECKED Tugut M. Schell
DRAWN H.P.W. Corroseth
CHECKED T.M. L.

EXAMINED WE Hanson
PASSED
APPROVED K.H. Brilowicz

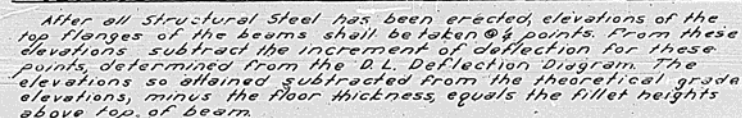
PLAN
Scale 3/8" = 1'-0"

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B. 1	3391-2HF	Macou	11	10
	3391-2F			
F.A. 49	3391-2HB		31	19
	3391-2B			
FED. ROAD DIST. NO. 2		ILLINOIS	U-135(10) U-135(16)	

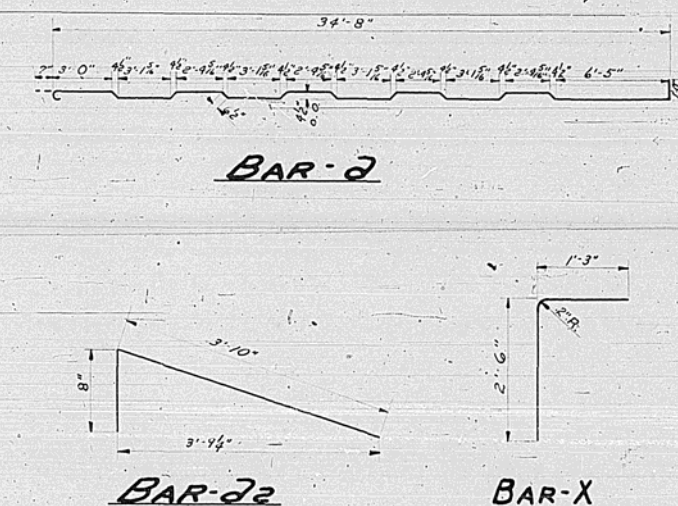
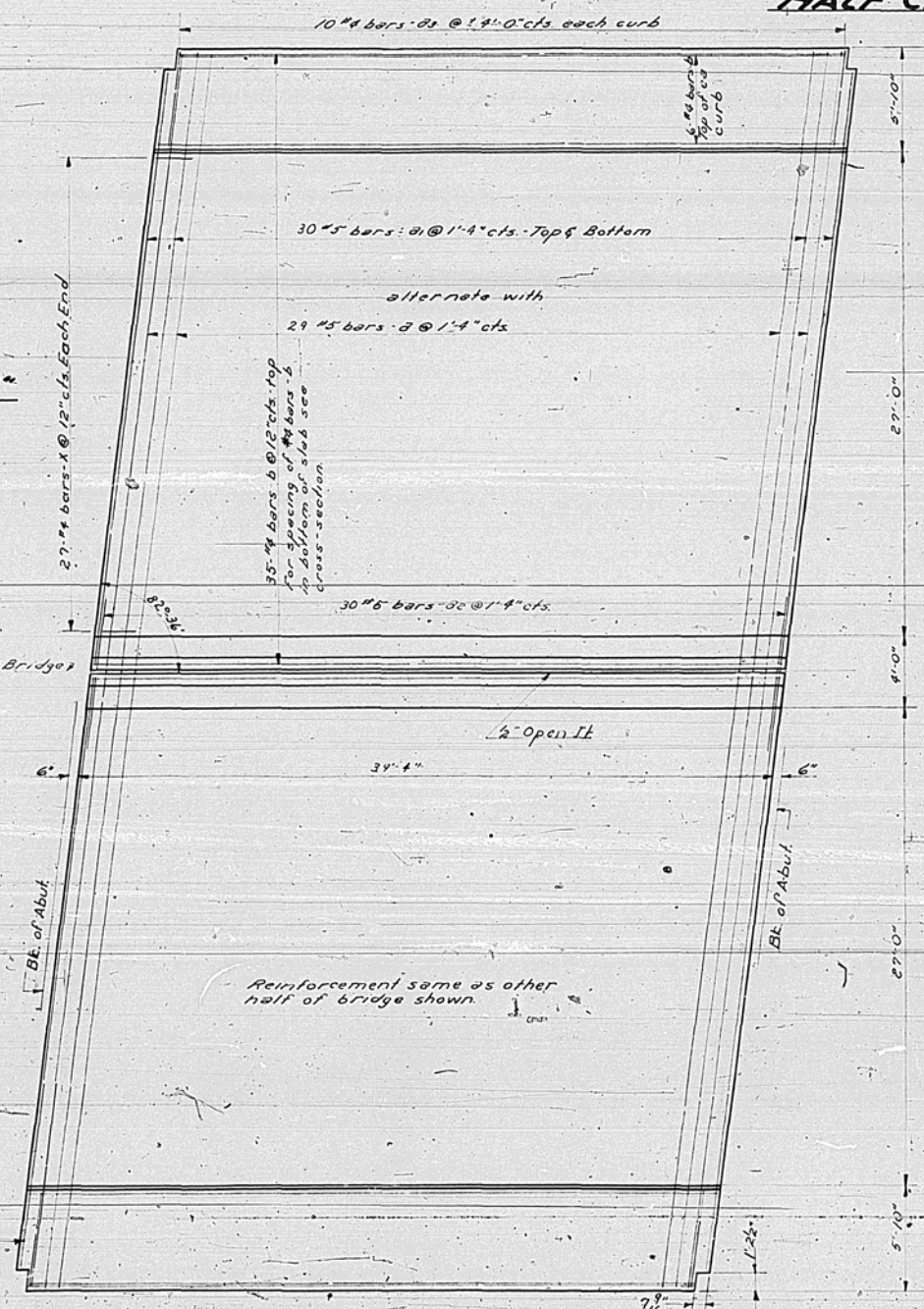
SHEET NO. 2
6 SHEETS



HALF CROSS SECTION LOOKING N.W.



DETAIL OF FILLET



BILL OF MATERIAL-SUPER.

BAR	NO.	SIZE	LENGTH	SHAPE
1	2	#5	37'-9"	
2	128	#5	34'-9"	
3	60	#5	4'-6"	
4	20	#4	5'-6"	
5	300	#4	20'-0"	
6	80	#4	1'-0"	
7	108	#4	3'-9"	
Class X Concrete			Cu. Yds.	90.2
Reinforcement Bars			Lbs.	11,610
Structural steel			Lbs.	57,050

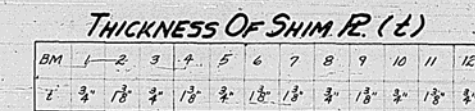
DESIGNED <i>Harold P. Wampler</i>	EXAMINED <i>W E Hanson</i> ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
CHECKED <i>T. M. Schill</i>	PASSED <i>E. E. Kientz</i> ENGINEER OF DESIGN
DRAWN <i>H. P. W.</i> <i>F. C. Groesch</i>	APPROVED <i>R. J. Bartelme</i> CHIEF ENGINEER
CHECKED <i>T. M. S.</i>	

Bend Bar-A₁ to
clear notch at
all corners

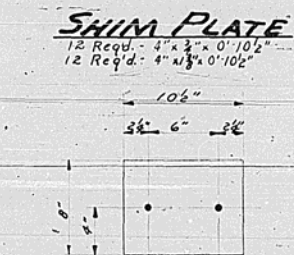
PLAN SHOWING REINFORCEMENT IN SLAB

DECK PLAN & DETAILS
SEPARATION WITH LAKE SHORE DRIVE
*PROJ. U-135 (16)
F.A. RT 49 SEC 139X-2HB-2HF
MACON COUNTY
STA. 164+83.40

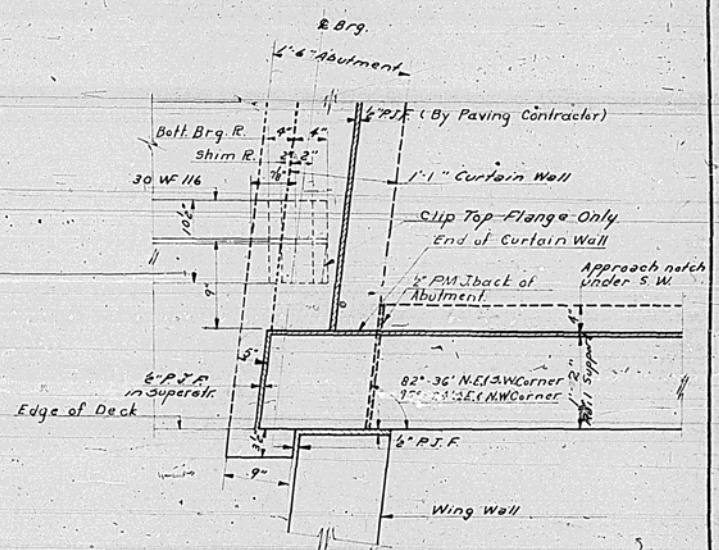
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO 3 6 SHEETS
S. R. L.	1391-241 1391-24	Macou	11	11	
F. A. 49	1391-248 1391-24		31	20	
FED. ROAD DIST. NO. 2					
ILLINOIS	FED. AID PROJECT		4-135 (1/2) 4-134 (1/2)		



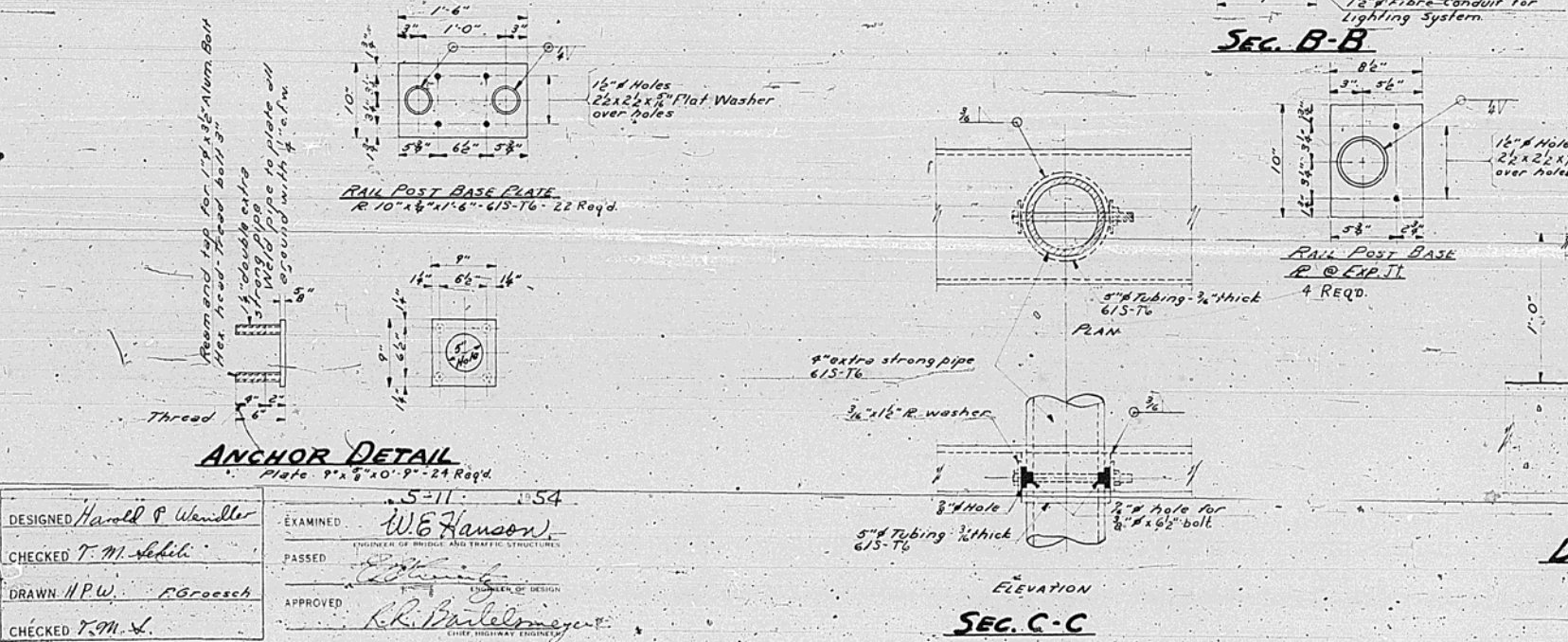
TYPICAL END BEARING DETAIL



BEARING PLATE



TYPICAL CORNER DETAIL



DETAIL D

BILL OF MATERIAL

Structural Steel	(Brg.)	Lbs.	1650
Metal Handrail*		Lin. ft	139
*Measured from end to end of rail			

NOTES

Metal Handrail shall be of Aluminum conforming to alloy 6061-T6.
All Posts shall be vertical.
The cost of furnishing, fabricating, and erecting all railing and accessories shall be included in unit price bid for Metal Handrail.
Metal Handrail shall be measured along center line of rail from end to end of handrail.
Metal Handrail and Anchors shall not be painted.
Assemble channels on Posts before welding Posts to Base Plate.
Install Handrail and Tubs after welding Posts to Base Plate.

HANDRAIL & BEARING DETAILS

SEPARATION WITH LAKE SHORE DRIVE

PROJ. U-135 (16)

F.A. RT. 49.

SEC. 139 X-2HB-2HF

MACON COUNTY

574.164 + 83.40

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S B I	139A-2B 139B-2E	Macou	19	17
1 A 49	139A-2B 139B-2B		31	21

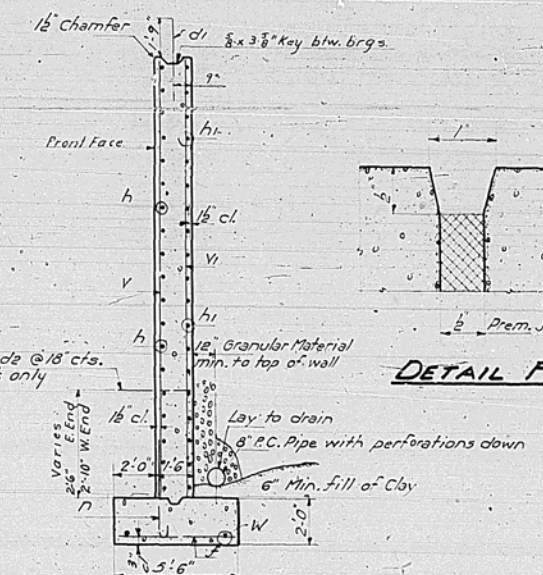
SHEET NO. 4

6 SHEETS

FED. ROAD DIST. NO. 7

ILLINOIS

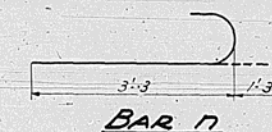
FED. AID PROJECT 4-135(16)
4-135(16)



SECTION THRU ABUTMENT



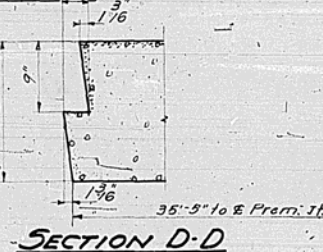
SECTION B-B



BAR n

BILL OF MATERIAL

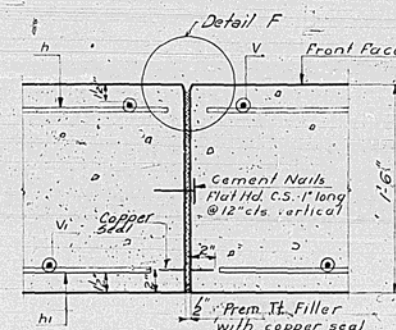
Bar	No.	Size	Length	Shape
h	28	#6	35'-0"	—
h1	136	#4	17'-9"	—
v	168	#9	16'-9"	—
v1	38	#4	16'-9"	—
d1	188	#4	3'-6"	—
d2	47	#4	2'-6"	—
n	168	#9	4'-6"	—
f	140	#4	5'-0"	—
w	12	#4	24'-3"	—
Class-X Concrete			Cu. Yds.	190.
Reinforcement Bars			Lbs.	18,910
Corr. Metal Pipe 8" Perft.			Lin ft.	320



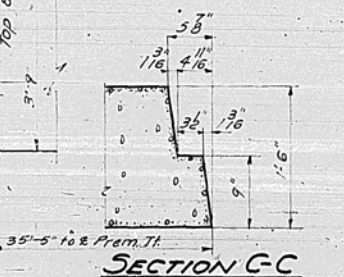
SECTION D-D



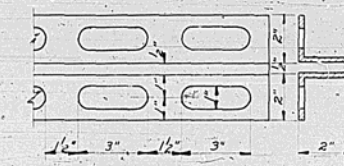
SECTION A-A



SECTION E-E



SECTION G-C



DETAIL OF
COPPER SEAL

Note: Copper Seal shall be 16 oz. cold rolled annealed copper with perforated flanges. Splices if necessary, shall be soldered or brazed. The cost of Copper Seal shall be included in the unit price per Cu. Yds. for Class X Concrete.

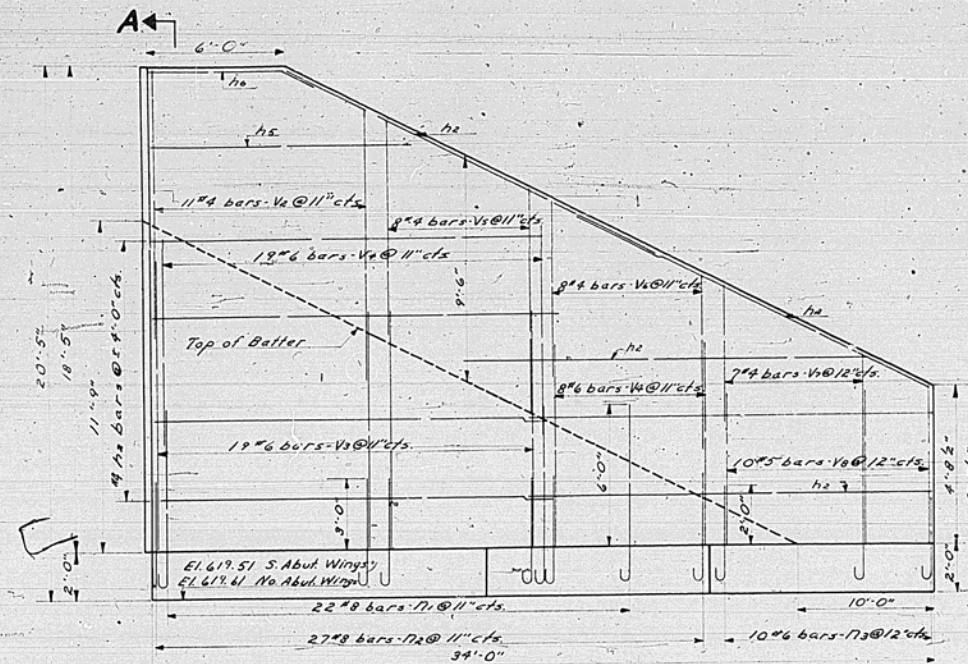
DESIGNED	Harold P. Wendler
CHECKED	T. M. Schick
DRAWN	H. P. W. Miller
CHECKED	T. M. Schick

5-11 1954
EXAMINED *W.E. Hanson*
Engineer in Charge and Inspector of Structures
PASSED *W.E. Hanson*
Inspector of Design
APPROVED *E.L. Whitehouse*
Engineer in Charge

ABUTMENTS
SEPARATION WITH LAKE SHORE DRIVE
PROJECT U-135 (16)
F.A. RT. 49 ~ SEC. 139X-2-HB
MACON COUNTY
STATION 164+83.40

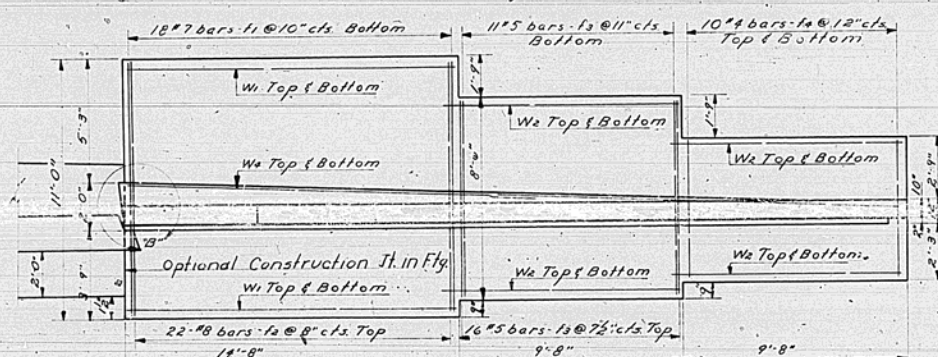
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
U.S. 49	139X-2H	Macon	19	18	6 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJ. NO. 135(16)	31	22	



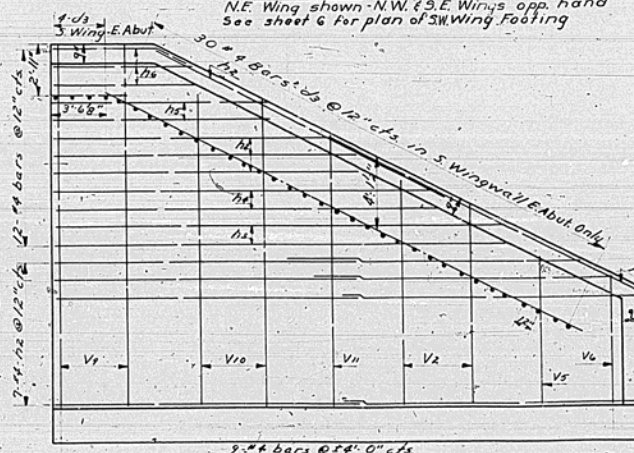
ELEVATION

Showing Reinforcement in Back Face
For All Wings



PLAN

NE Wing shown N.W. & S.E. Wings opp. hand
See sheet 6 for plan of SW Wing Footing

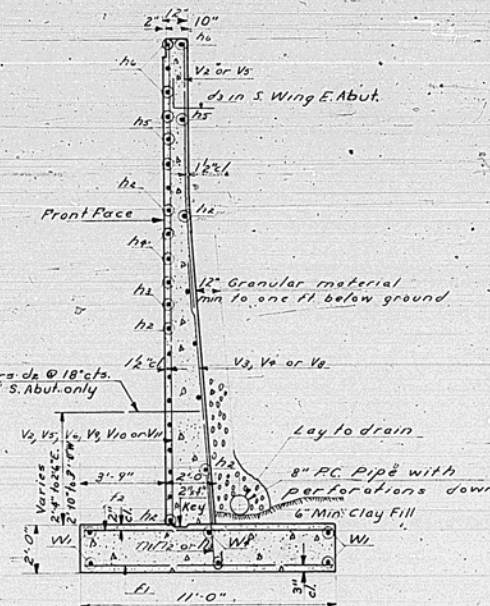


REINFORCEMENT - FRONT FACE

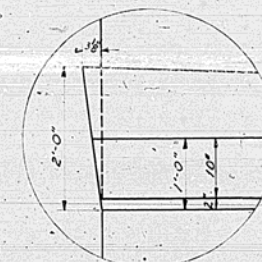
For all Wings 1354

DESIGNED: Harold P. Wandler
CHECKED: T. M. Schile
DRAWN: HPW, P. Groesch
CHECKED: T. M. Schile

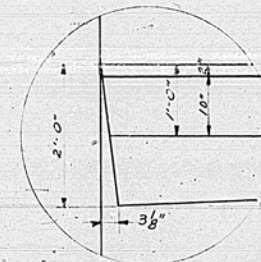
EXAMINED: W. E. Hanson
PASSED: [Signature]
APPROVED: R. H. Bailemeyer
CHIEF HIGHWAY ENGINEER



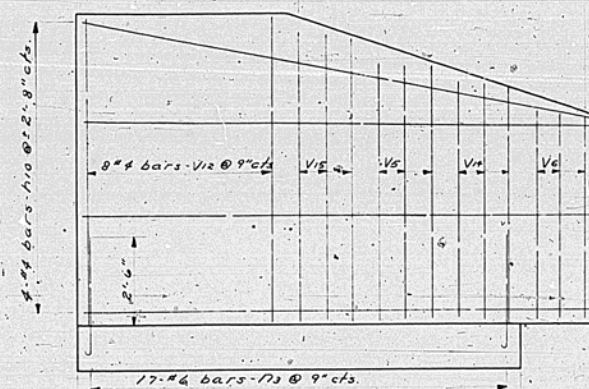
SEC. A-A



DETAIL "B"
N.E. S.W. Wingwall



DETAIL "B"
S.E. N.W. Wingwall

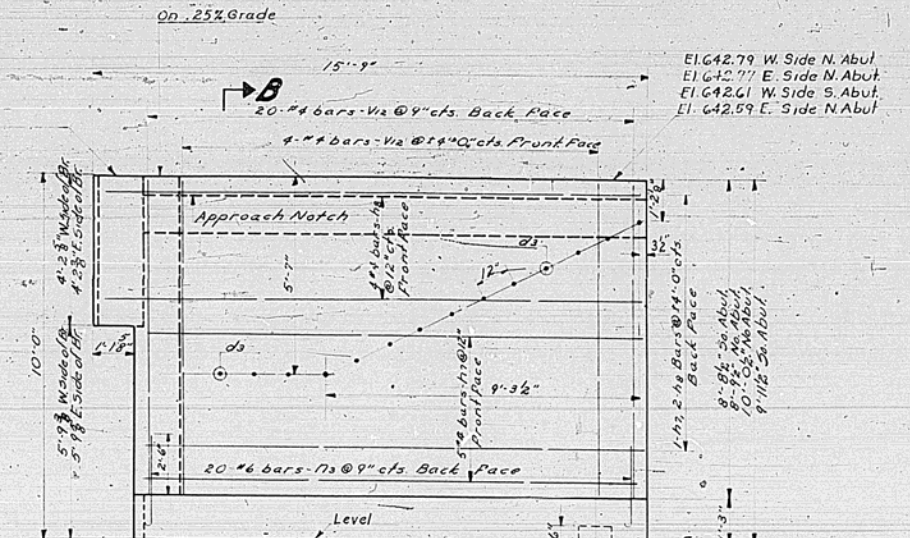


STAIR WALL

Showing Reinforcement in Back Face

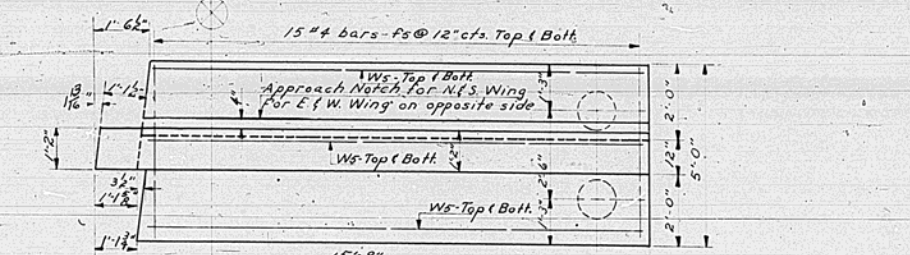
At North Abut
El. West Side 642.75
El. East Side 642.73
At South Abut
El. West Side 642.65
El. East Side 642.63

At North Abut
632.75 West
632.73 East
At South Abut
632.65 West
632.63 East



ELEVATION

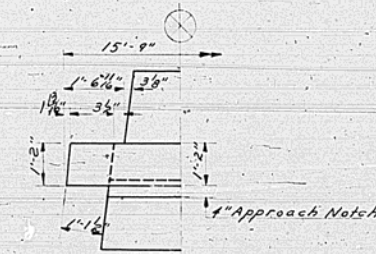
14#4 Bars in S.W. Rail support only



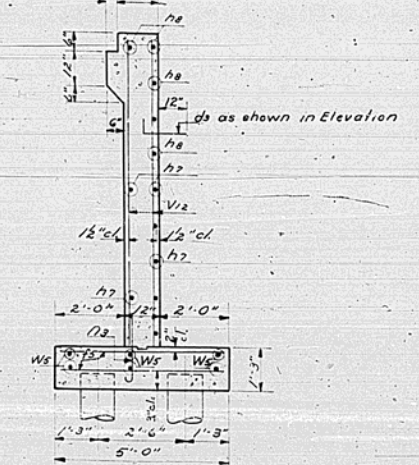
PLAN

WING SUPPORT FOR RAILING*

* Note: Section to left of 'x' in plan view is NE (SW) Wing support. Detail 'A' shows SE (NW) wing support.



DETAIL "A"



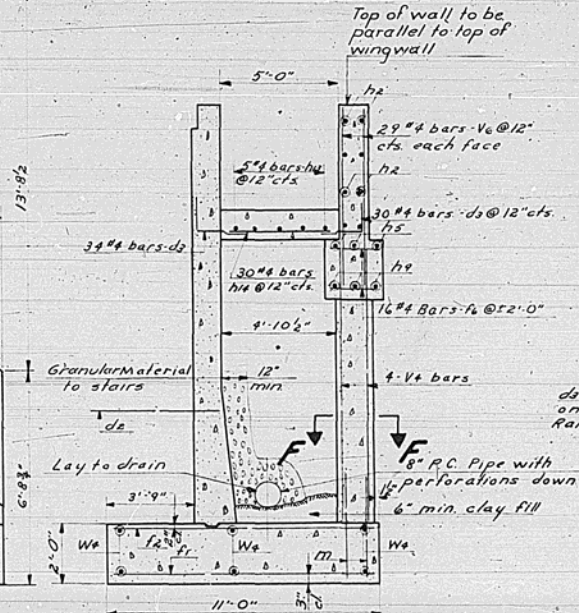
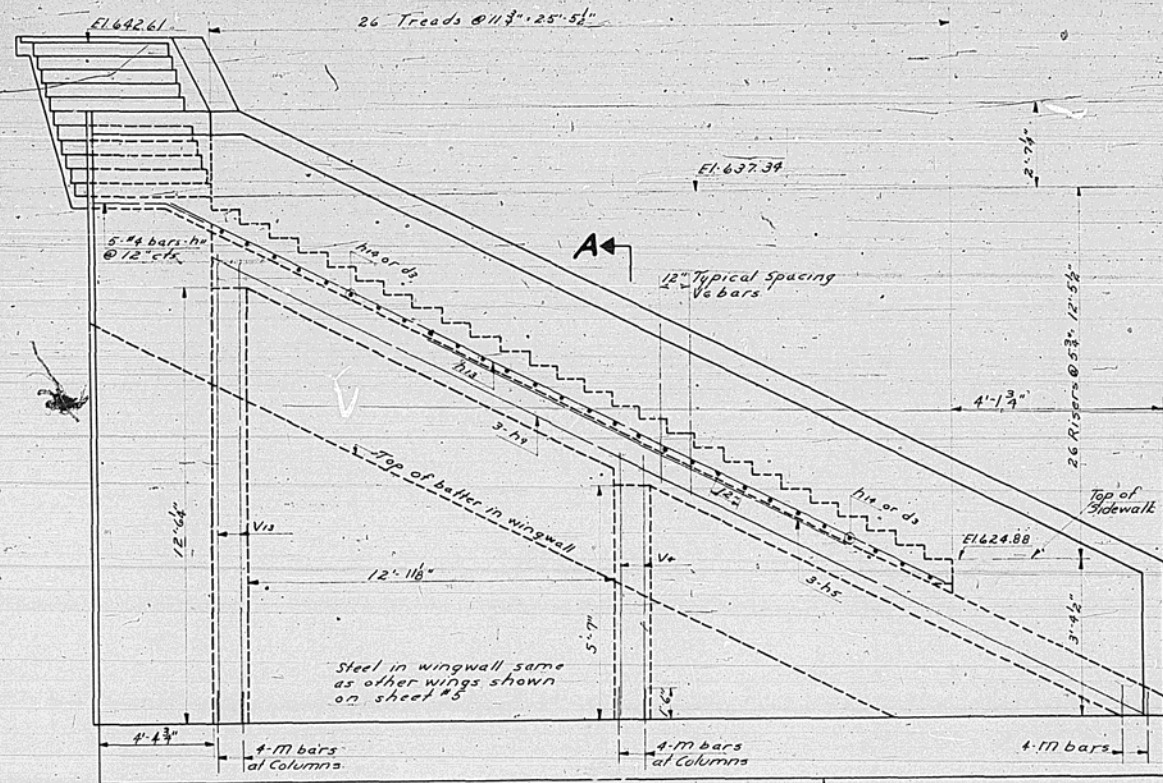
SECTION B-B

WINGWALLS & RAIL SUPPORT
SEPARATION WITH LAKE SHORE DRIVE
PROJ. U-135(16)
F.A. RT. 49 SEC. 139X-2-HB
MACON COUNTY
STA. 164+83.40

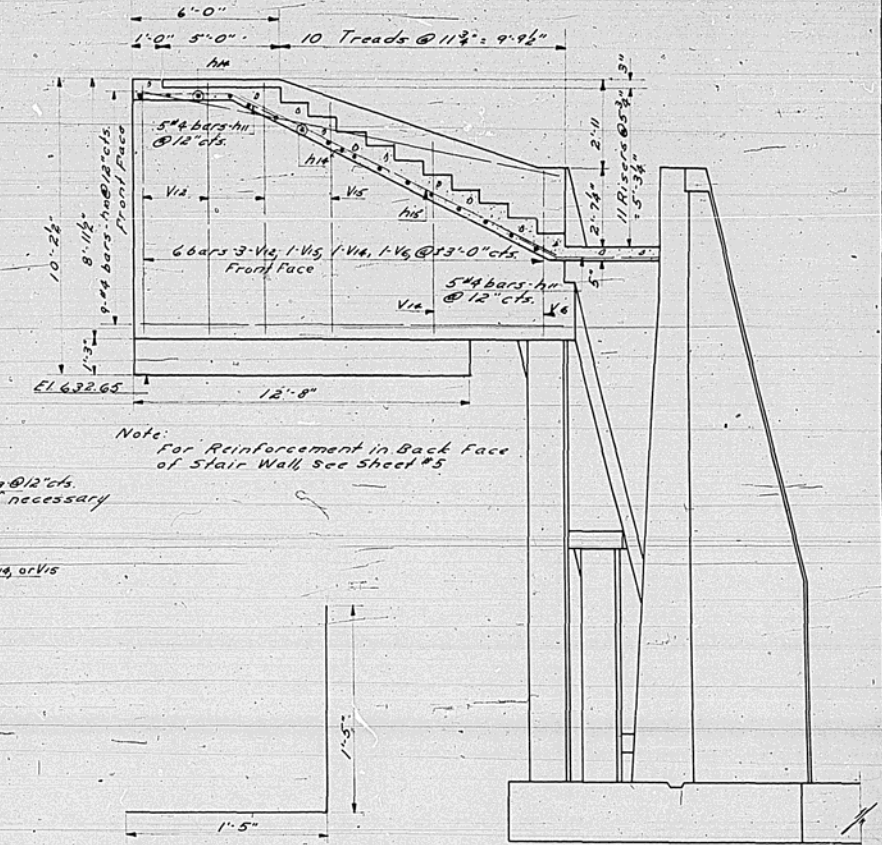
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 49	139X-2HB	MACON	19	19
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	31	23

SHEET NO. 6
6 SHEETS



SEC. G-G



Note: For Reinforcement in Back Face of Stair Wall see Sheet #5

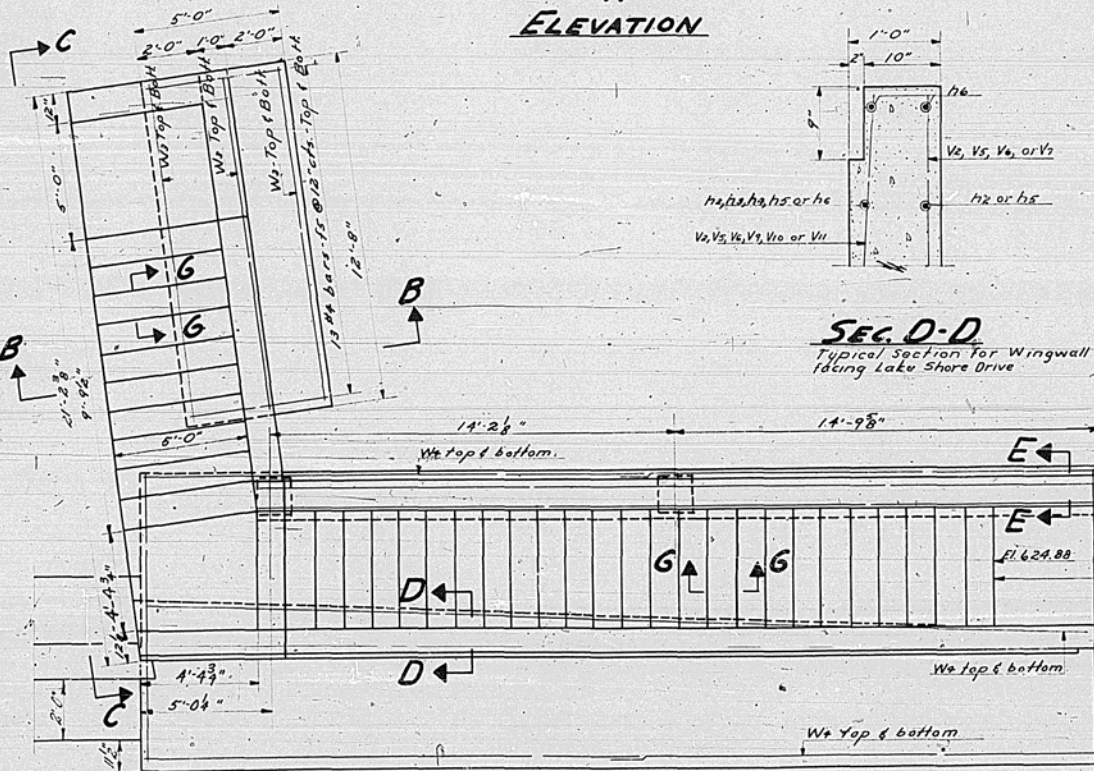
ELEVATION

SEC. A-A

SEC. B-B

BAR - d3

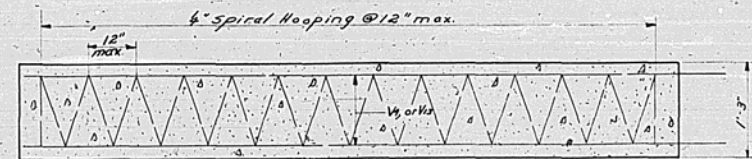
SEC. C-C



SEC. D-D
Typical Section for Wingwall facing Lake Shore Drive

SEC. E-E

SEC. F-F
Typical Column



TYPICAL COLUMN

The cost of furnishing and placing the 4" spiral hooping shall be incidental to the cost of Class X Concrete.

BILL OF MATERIAL - WINGWALLS & STAIRS

BAR	NO	SIZE	LENGTH	SHAPE	BAR	NO	SIZE	LENGTH	SHAPE
V2	52	#4	9'-3"		h15	5	#4	10'-0"	
V3	76	#4	8'-0"		f1	95	#7	10'-6"	
V4	112	#6	6'-6"		f2	117	#8	10'-6"	
V5	39	#4	7'-3"		f3	81	#5	8'-0"	
V6	98	#4	5'-3"		f4	60	#4	5'-6"	
V7	28	#4	3'-6"		f5	146	#4	4'-6"	
V8	40	#5	6'-6"		f6	32	#4	1'-9"	
V9	8	#4	20'-3"		W1	12	#4	14'-3"	
V10	8	#4	17'-6"		W2	24	#4	10'-0"	
V11	4	#4	15'-0"		W3	6	#4	12'-3"	
V12	107	#4	8'-6"		W4	24	#4	17'-3"	
V13	4	#4	13'-6"		W5	24	#4	13'-6"	
V14	4	#4	6'-6"						
V15	4	#4	8'-0"						
h2	120	#4	17'-6"		m1	88	#8	8'-6"	
h3	8	#4	26'-3"		m2	108	#8	5'-6"	
h4	8	#4	22'-6"		m3	137	#6	4'-3"	
h5	15	#4	12'-6"		m	12	#6	3'-0"	
h6	16	#4	8'-0"		d2	68	#4	2'-6"	
h7	24	#4	14'-3"		d3	94	#4	3'-0"	
h8	24	#4	15'-3"						
h9	3	#5	31'-9"						
h10	13	#4	15'-9"						
h11	15	#4	4'-6"						
h12	5	#4	29'-6"						
h13	46	#4	4'-9"						

Class X Concrete
Reinforcement Bars
Crossed Piles

Cu. Yds. 224.2
Lbs. 18,200
Lin. Ft. 160

DESIGNED: Harold R. Wendler
CHECKED: T.M. Schili
DRAWN: H.P.W. / G. Groesch
CHECKED: T.M. Schili

EXAMINED: W.E. Hanson
PASSED: [Signature]
APPROVED: [Signature]

BAR - m1 & m2

BAR - d3

BAR - h11

SOUTHWEST WINGWALL & STAIRS
SEPARATION WITH LAKE SHORE DRIVE
PROJ. U-135 (16)
F.A. RT. 49 SEC. 139 X-2-HB
MACON COUNTY
STA. 164+83.40