FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	2958	3	17
F.A. Proj.		F-394(10)		

ELEVATIONS ALONG ℄ OF LINE
Ft.-0"= from B. Bridge

NOTES

Design Data: Assumed Live Load HS 15-44

For other Design Data and Typical Sect. see Sheet SH

Piles - Piles for End Bents to be driven to a minimum bearing capacity of 35 tons each. Piles for Interior Bents shall be driven to a minimum bearing capacity of 40 tons each. End Bent Piles to be driven through the roadway fill.

TEST PILES - The Contractor will be required to drive one test pile to determine the length of the piles required for each bent.

CONCRETE SURFACE FINISH - to be in accordance with the specifications.

SECTION ALONG ℄ OF BRIDGE
BENTS #1 & #2 SECTION A-A

PLAN

B.M. #10 - Spike in tree 24" Chinaberry 142'-8' (S) 1380 E., El 135.18 - Location Datum

LOCATION SKETCH

TOTAL Bill of MATERIAL

	Class A Concrete	Reinforcing Steel	Structural Steel	42" Corrugated Concrete Pipe	Riprap & Cushion Material & Underground Drainage Complete	Piles
	C.Y.	Lbs.	Approx. Lbs.	Lin. Ft.	C.Y.	No.
Superstructure	182.0	30,360	114,300		20	
End Conf. #1	13.7	2,347		6	210	
Bent #1	6.3	980		4	140	
Bent #2	8.1	1,366		5	175	
Bent #3	8.2	1,360		5	140	
End Bent #4	11.7	2,147		6	210	
Approach Slab	3.2	76				
Concrete Piles		10,775				
TOTAL	233.2	53,431	114,300	25 875	20	1

SPECIAL

CHECKED BY		DATE
DRAWN BY	[illegible]	DATE
TRACED BY		DATE
CHECKED BY		DATE

PROJECT NO. 2958
WILSON COUNTY
STATION: 137+34.5 ℄

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

GENERAL DRAWING
BRIDGE OVER US 301 & NC 42
BETWEEN
WILSON AND PINE TOPS

FEBRUARY, 1954

SUBMITTED BY _____ SPECIAL ENGR. _____ DATE _____
APPROVED BY _____ STATE HIGHWAY ENGINEER _____ DATE _____

SHEET S-3 OF 17

42-34-60

FED. ROAD. DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.			

PLAN

ELEVATION

SECTION A-B

PROJECT NO. _____

_____ COUNTY

STATION: _____

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

PROPOSED
CONCRETE SLAB
APPROACH

SUBMITTED BY _____ DATE _____

APPROVED BY _____ DATE _____

DESIGNED BY _____ DATE _____

DRAWN BY _____ DATE _____

TRACED BY _____ DATE _____

CHECKED BY _____ DATE _____

SHEET 5 OF 17

STATE OF NORTH CAROLINA
STATE HIGHWAY AND
PUBLIC WORKS COMMISSION

SUPERSTRUCTURE
CONCRETE SLAB
SHEET NO.

SHEET NO. OF 17

PROJECT NO.

COUNTY

STATION:

KODAK SAFETY FILM

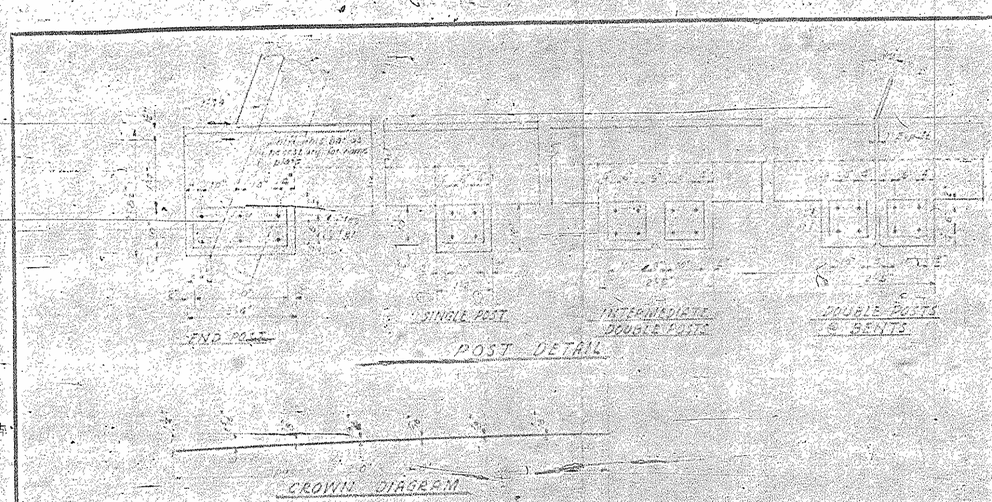
FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	1958	S-11	17

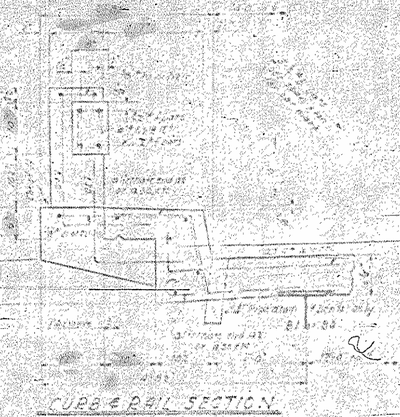
SPANS 4 & 5 - All dimensions shown in section and which are affected by dead load deflection are dimensions at 1/4 of bearing depth of slab between beams as shall be increased to compensate for dead load deflection and the vertical curve.

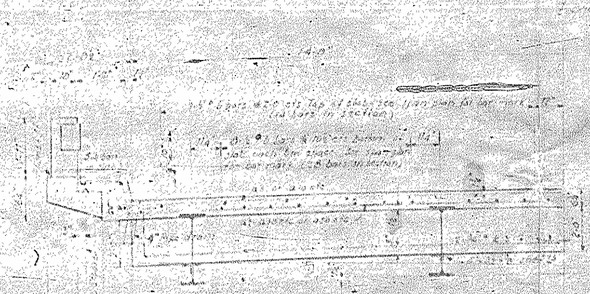
	SPAN 4	SPAN 5
DL Deflection Exterior Beam	3/8"	3/8"
Interior Beam	1/2"	1/2"
Ordinate for vertical curve	1/8"	1/8"

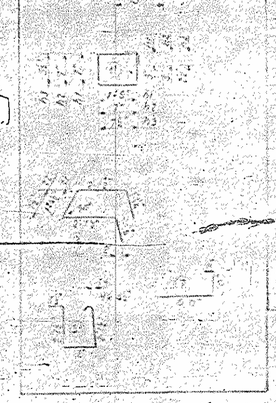
SPAN 6 & 7 - Dimensions shown in section and which are affected by dead load deflection are dimensions at 1/4 of bearing depth of slab at 1/4 of bearing depth of girder to compensate for dead load deflection and to provide correct vertical curve. Dimensions shown also apply for concrete filled pan section. Ordinate for vertical curve between 1/4 points is 1/8". Ordinate for vertical curve at 1/4 points is 1/16". Ordinate for vertical curve at abutments is zero.

	SPAN 6	SPAN 7
DL Deflection Exterior Beam	3/8"	3/8"
Interior Beam	1/2"	1/2"
Ordinate for vertical curve	1/8"	1/8"









BILL OF MATERIAL FOR 7 SPANS (LENGTH 350'-35'-0" @ C.)

BENDING DIAGRAMS (Dimensions are out to out)

Bar Mark	No.	Wt. Each	Size	Type	Dimensions A	Dimensions B	Length	Weight
A1	16	1894	#6	3	-	-	30'6"	913 lbs
A2	16	1394	#6	17	-	-	27'6"	671 lbs
A3	16						27'6"	
A4	16						27'6"	
A5	16						27'6"	
A6	16	16	#6	6	2"	27'3"	27'10"	446
A7	16	16	#6	1	2"	27'3"	27'6"	441
A8	16	16	#6	1	2"	27'3"	27'6"	441
A9	16	16	#6	1	2"	27'3"	27'6"	441
A10	16	16	#6	1	2"	27'3"	27'10"	446
A11	16	16	#6	1	2"	27'3"	27'6"	441
A12	16	16	#6	1	2"	27'3"	27'6"	441
A13	16	16	#6	1	2"	27'3"	27'6"	441
A14	16	16	#6	1	2"	27'3"	27'6"	441
A15	16	16	#6	1	2"	27'3"	27'6"	441
A16	16	16	#6	1	2"	27'3"	27'6"	441
A17	16	16	#6	1	2"	27'3"	27'6"	441
A18	16	16	#6	1	2"	27'3"	27'6"	441
A19	8	8	#6	1	2"	27'3"	27'6"	220
A20	16	16	#6	1	2"	27'3"	27'6"	441
A21	16	16	#6	1	2"	27'3"	27'6"	441
A22	16	16	#6	1	2"	27'3"	27'6"	441
A23	16	16	#6	1	2"	27'3"	27'6"	441
A24	16	16	#6	1	2"	27'3"	27'6"	441
A25	16	16	#6	1	2"	27'3"	27'6"	441
A26	16	16	#6	1	2"	27'3"	27'6"	441
A27	16	16	#6	1	2"	27'3"	27'6"	441
A28	16	16	#6	1	2"	27'3"	27'6"	441
A29	8	8	#6	1	2"	27'3"	27'6"	220
A30	8	8	#6	18	-	3'6"	28'11"	240
A31	8	8	#6	1	-	2'0"	27'6"	225
A32	8	8	#6	-	-	27'6"	27'6"	225
A33	8	8	#6	-	-	19'6"	19'6"	157
A34	8	8	#6	-	-	17'6"	19'11"	160
A35	8	8	#6	-	-	16'6"	17'2"	138
A36	8	8	#6	-	-	15'6"	14'11"	120
A37	8	8	#6	-	-	13'6"	13'8"	110
A38	8	8	#6	-	-	2'6"	9'11"	80
A39	8	8	#6	1	-	5'0"	7'5"	60
A40	8	8	#6	18	-	2'6"	4'11"	41
A50	8	8	#6	6	2"	19'6"	20'11"	335
A51	8	8	#6	1	2"	16'0"	17'5"	279
A52	8	8	#6	-	2"	16'0"	16'4"	262
A53	8	8	#6	-	2"	14'0"	14'4"	230
A54	8	8	#6	-	2"	12'0"	12'4"	198
A55	8	8	#6	-	2"	10'0"	10'4"	166
A56	8	8	#6	-	2"	8'0"	8'4"	134
A57	8	8	#6	-	2"	6'0"	6'4"	102
A58	8	8	#6	-	2"	4'0"	4'4"	70
A59	8	8	#6	-	2"	2'0"	2'4"	38
A60	8	8	#6	1	2"	1'0"	1'4"	22
A61	8	8	#6	1	2"	3'0"	3'4"	54
A62	8	8	#6	1	2"	5'0"	5'4"	86
A63	8	8	#6	1	2"	7'0"	7'4"	118
A64	8	8	#6	1	2"	9'0"	9'4"	150
A65	8	8	#6	1	2"	11'0"	11'4"	182
A66	8	8	#6	1	2"	13'0"	13'4"	214
A67	8	8	#6	1	2"	15'0"	15'4"	246
A68	8	8	#6	1	2"	17'0"	17'4"	278
A69	8	8	#6	1	2"	19'0"	19'4"	310
A70	8	8	#6	1	2"	21'0"	21'4"	342
A71	8	8	#6	1	2"	23'0"	23'4"	374
A72	8	8	#6	1	2"	25'0"	25'4"	406
A73	8	8	#6	1	2"	27'0"	27'4"	438
A74	8	8	#6	1	2"	29'0"	29'4"	470
A75	8	8	#6	1	2"	31'0"	31'4"	502
A76	8	8	#6	1	2"	33'0"	33'4"	534
A77	8	8	#6	1	2"	35'0"	35'4"	566
A78	8	8	#6	1	2"	37'0"	37'4"	598
A79	8	8	#6	1	2"	39'0"	39'4"	630
A80	8	8	#6	1	2"	41'0"	41'4"	662
A81	8	8	#6	1	2"	43'0"	43'4"	694
A82	8	8	#6	1	2"	45'0"	45'4"	726
A83	8	8	#6	1	2"	47'0"	47'4"	758
A84	8	8	#6	1	2"	49'0"	49'4"	790
A85	8	8	#6	1	2"	51'0"	51'4"	822
A86	8	8	#6	1	2"	53'0"	53'4"	854
A87	8	8	#6	1	2"	55'0"	55'4"	886
A88	8	8	#6	1	2"	57'0"	57'4"	918
A89	8	8	#6	1	2"	59'0"	59'4"	950
A90	8	8	#6	1	2"	61'0"	61'4"	982
A91	8	8	#6	1	2"	63'0"	63'4"	1014
A92	8	8	#6	1	2"	65'0"	65'4"	1046
A93	8	8	#6	1	2"	67'0"	67'4"	1078
A94	8	8	#6	1	2"	69'0"	69'4"	1110
A95	8	8	#6	1	2"	71'0"	71'4"	1142
A96	8	8	#6	1	2"	73'0"	73'4"	1174
A97	8	8	#6	1	2"	75'0"	75'4"	1206
A98	8	8	#6	1	2"	77'0"	77'4"	1238
A99	8	8	#6	1	2"	79'0"	79'4"	1270
A100	8	8	#6	1	2"	81'0"	81'4"	1302
A101	8	8	#6	1	2"	83'0"	83'4"	1334
A102	8	8	#6	1	2"	85'0"	85'4"	1366
A103	8	8	#6	1	2"	87'0"	87'4"	1398
A104	8	8	#6	1	2"	89'0"	89'4"	1430
A105	8	8	#6	1	2"	91'0"	91'4"	1462
A106	8	8	#6	1	2"	93'0"	93'4"	1494
A107	8	8	#6	1	2"	95'0"	95'4"	1526
A108	8	8	#6	1	2"	97'0"	97'4"	1558
A109	8	8	#6	1	2"	99'0"	99'4"	1590
A110	8	8	#6	1	2"	101'0"	101'4"	1622
A111	8	8	#6	1	2"	103'0"	103'4"	1654
A112	8	8	#6	1	2"	105'0"	105'4"	1686
A113	8	8	#6	1	2"	107'0"	107'4"	1718
A114	8	8	#6	1	2"	109'0"	109'4"	1750
A115	8	8	#6	1	2"	111'0"	111'4"	1782
A116	8	8	#6	1	2"	113'0"	113'4"	1814
A117	8	8	#6	1	2"	115'0"	115'4"	1846
A118	8	8	#6	1	2"	117'0"	117'4"	1878
A119	8	8	#6	1	2"	119'0"	119'4"	1910
A120	8	8	#6	1	2"	121'0"	121'4"	1942
A121	8	8	#6	1	2"	123'0"	123'4"	1974
A122	8	8	#6	1	2"	125'0"	125'4"	2006
A123	8	8	#6	1	2"	127'0"	127'4"	2038
A124	8	8	#6	1	2"	129'0"	129'4"	2070
A125	8	8	#6	1	2"	131'0"	131'4"	2102
A126	8	8	#6	1	2"	133'0"	133'4"	2134
A127	8	8	#6	1	2"	135'0"	135'4"	2166
A128	8	8	#6	1	2"	137'0"	137'4"	2198
A129	8	8	#6	1	2"	139'0"	139'4"	2230
A130	8	8	#6	1	2"	141'0"	141'4"	2262
A131	8	8	#6	1	2"	143'0"	143'4"	2294
A132	8	8	#6	1	2"	145'0"	145'4"	2326
A133	8	8	#6	1	2"	147'0"	147'4"	2358
A134	8	8	#6	1	2"	149'0"	149'4"	2390
A135	8	8	#6	1	2"	151'0"	151'4"	2422
A136	8	8	#6	1	2"	153'0"	153'4"	2454
A137	8	8	#6	1	2"	155'0"	155'4"	2486
A138	8	8	#6	1	2"	157'0"	157'4"	2518
A139	8	8	#6	1	2"	159'0"	159'4"	2550
A140	8	8	#6	1	2"	161'0"	161'4"	2582

| | | | | | |

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	2756	5-12	17

PROJECT NO. 2756

WILSON COUNTY

STATION: 221+45.46

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

SUPERSTRUCTURE
STRUCTURAL STEEL
PLAN & DETAILS

MARCH 1954

SUBMITTED BY _____ BRIDGE ENGINEER

APPROVED BY _____ DATE _____
STATE HIGHWAY ENGINEER

SPECIAL

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

SHEET 5-12 OF 17

FILL & LOCATION PLAN

TYPICAL SECTION

DIAPHRAGM DETAILS

WELDING DETAILS
SHEAR CONNECTORS

WEB SHELF ANGLE

DETAIL AT BOTTOM FLANGE

ALL STEEL PLATE BEAMS

COUNTY

COMMISSION

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N. C.	2358	5-13	17

F.A. PROJ. F-2358(1)

2 REQUIRED

PLAN
End Bent N°1 or End Bent N°2

ELEVATION
End Bent N°1

ELEVATION
End Bent N°2

SECTION
THRU CAP

BAR TYPES
All dimensions are out to out.

BILL OF MATERIAL
FOR ONE END BENT

MARK	NO.	SIZE	TYPE	LENGTH	WEIGHT

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	N. C.	2153	5-14	17

PLAN
BENT N°1 & BENT N°3

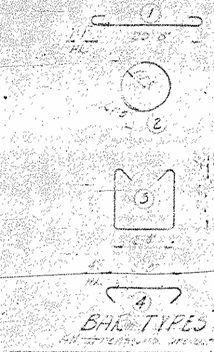
ELEVATION
BENT N°1

ELEVATION
BENT N°3

BILL OF MATERIAL FOR
BENT N°1 & BENT N°3

Bar	No.	Size	Type	Length	Weight
D1	8		1	31'-0"	248
D2	4		2	27'-0"	108
E1	8		3	8'-0"	64
E2	8		4	7'-7"	61
E3	8		5	7'-7"	61
Conc.					1104
Reinforcing Steel					1300 Lbs.
Class A Conc.					8.2 C.Y.
Class A Conc.					8.2 C.Y.
No. of Conc. Piles in Bent					4

BENT N°1
BENT N°3

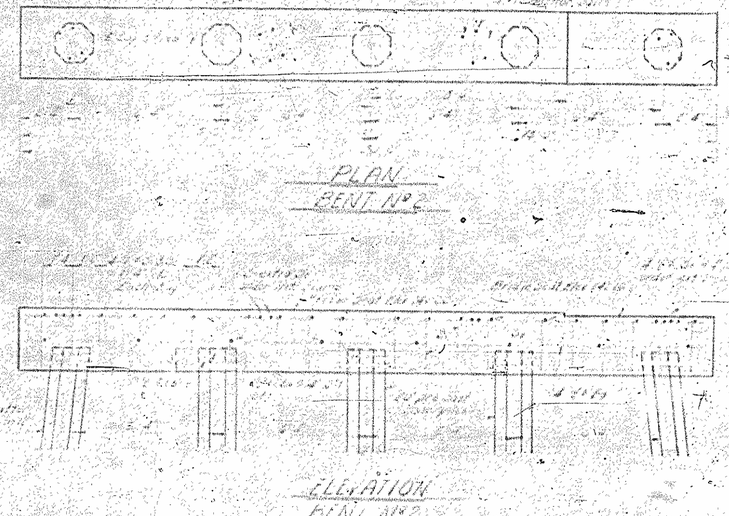


BAR TYPES

BILL OF MATERIAL
FOR BENT N°2

Bar	No.	Size	Type	Length	Weight
C	2		11	34'-0"	341
C1	2		12	34'-0"	341
D1	8		13	31'-0"	248
D2	4		14	27'-0"	108
E1	8		15	8'-0"	64
E2	8		16	7'-7"	61
E3	8		17	7'-7"	61
Conc.					1104
Reinforcing Steel					1300 Lbs.
Class A Conc.					8.2 C.Y.
No. of Conc. Piles in Bent					4

PLAN
BENT N°2



ELEVATION
BENT N°2

SECTION THRU
CAP - INT. BENT

PROJECT NO. 2153
WILSON COUNTY
STATION: 127+34.54

STATE OF NORTH CAROLINA
STATE HIGHWAY AND PUBLIC WORKS COMMISSION
RALEIGH

INTERIOR BENTS
N°1, N°2, & N°3

For 1154

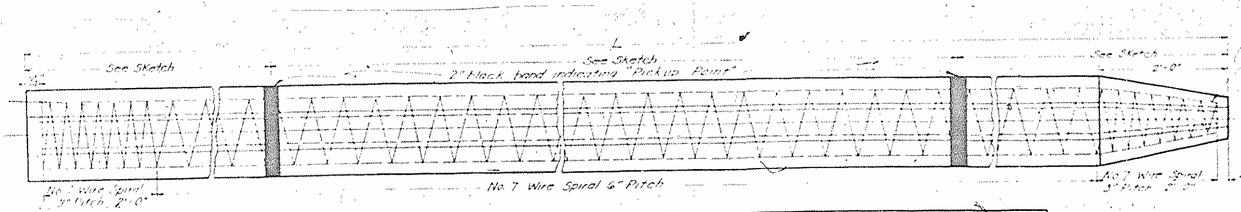
SUBMITTED BY ..... BRIDGE ENGINEER
APPROVED BY ..... STATE BRIDGE ENGINEER ..... DATE

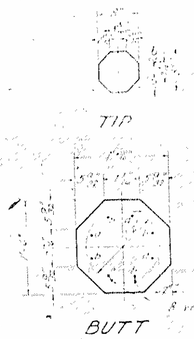
SPECIAL

DESIGNED BY ..... DATE .....
DRAWN BY ..... DATE .....
TRACED BY ..... DATE .....
CHECKED BY ..... DATE .....

SHEET 5-14 OF 17

FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	N.C.	2958		
F.A. Proj.				





FOR 1'-6" PILE

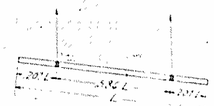
Concrete per lin ft of pile = 0.059 Cu Yds.
Concrete in point = 0.011 Cu Yds.

Wire per lin ft of pile @ 6" pitch = 0.618 lbs.
Wire per lin ft of pile @ 3" pitch = 1.235 lbs.
Wire in tip = 1.6 lbs.

QUANTITIES FOR ONE 1'-6" OCTAGONAL PILE

Length "L"	Vertical Reinforcing Bars Size	No.	Size	Length	Total Reinf. Steel Lbs.	Concrete Pile Wt. Cu. Yds.	Tons	Two Pickup Points 20% L	55% L	Three Pickup Points .15 L	.35 L
25'-0"	8	4	5/8"	27'-3"	214	1.66	3.37	5'-2"	14'-4"		
28'-0"	8	4	3/4"	30'-3"	339	1.87	3.79	5'-9"	15'-6"		
30'-0"	8	4	3/4"	32'-3"	365	2.01	4.07	6'-2"	17'-7"		
32'-0"	8	4	3/4"	34'-3"	390	2.15	4.35	6'-7"	18'-0"		
35'-0"	8	4	3/4"	37'-3"	428	2.35	4.76	7'-3"	20'-6"		
40'-0"	8	4	7/8"	42'-3"	659	2.70	5.47	8'-3"	23'-6"		
45'-0"	8	4	7/8"	47'-3"	743	3.04	6.16	9'-4"	26'-4"		
47'-0"	8	4	1"	49'-3"	1006	3.18	6.44	9'-9"	27'-6"		
50'-0"	8	4	1"	52'-3"	1072	3.39	6.86	10'-4"	29'-4"		
55'-0"	8	4	1"	57'-3"	1495	3.73	7.55	11'-4"	32'-3"		
60'-0"	8	4	1 1/4"	62'-3"	2058	4.08	8.26			9'-0"	21'-0"
65'-0"	8	4	1 1/4"	67'-3"	2748	4.42	8.95			9'-9"	22'-9"

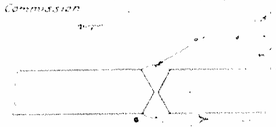
METHOD OF PICKING UP PILES
UNDER 60 FEET
2 PICKUP POINTS



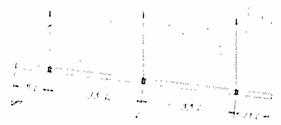
GENERAL NOTE

Class A concrete using stone or gravel No. 4 coarse aggregate shall be used. Concrete shall be compacted by internal vibration. All reinforcing steel shall be deformed bars. No splices of bars will be permitted. The spiral reinforcing shall be tied to the cage at points at intervals of not more than 2'-0" in groups of three turns, approved by the Engineer, so that the cage remains the same as the pile is manufactured.

All materials and workmanship as per the specifications of the North Carolina State Highway and Public Works Commission.

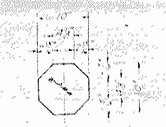


WELD DETAIL
For Bars over #8



METHOD OF PICKING UP PILES
60 FEET AND OVER
3 PICKUP POINTS

DETAIL OF BARS "b" FOR
1'-6" AND 1'-8" PILES



Concrete per lin ft of pile = 0.081 Cu Yds.
Concrete in point = 0.15 Cu Yds.

Wire per lin ft of pile @ 6" pitch = 0.824 lbs.
Wire per lin ft of pile @ 3" pitch = 1.648 lbs.
Wire in tip = 1.6 lbs.

FOR 1'-8" PILE

QUANTITIES FOR ONE 1'-8" OCTAGONAL PILE

Length "L"	Vertical Reinforcing Bars Size	No.	Size	Length	Total Reinf. Steel Lbs.	Concrete Pile Wt. Cu. Yds.	Tons	Two Pickup Points 20% L	55% L	Three Pickup Points .15 L	.35 L
25'-0"	8	4	3/4"	27'-3"	217	2.11	4.07	5'-2"	14'-3"		
28'-0"	8	4	3/4"	30'-3"	365	2.53	5.10	6'-0"	17'-0"		
30'-0"	8	4	3/4"	32'-3"	451	2.96	5.90	7'-3"	20'-6"		
32'-0"	8	4	3/4"	34'-3"	611	3.13	6.33	7'-8"	21'-5"		
35'-0"	8	4	3/4"	37'-3"	662	3.38	6.84	8'-3"	23'-3"		
40'-0"	8	4	7/8"	42'-3"	748	3.81	7.72	9'-4"	26'-4"		
45'-0"	8	4	7/8"	47'-3"	1010	3.98	8.06	9'-9"	27'-6"		
47'-0"	8	4	1"	49'-3"	1077	4.28	8.67	10'-6"	29'-6"		
50'-0"	8	4	1"	52'-3"	1508	4.66	9.44	11'-4"	32'-0"		
55'-0"	8	4	1"	57'-3"	1993	4.92	9.96	12'-0"	34'-0"		
60'-0"	8	4	1 1/4"	62'-3"	2864	5.09	10.31			9'-0"	21'-0"
65'-0"	8	4	1 1/4"	67'-3"	3667	5.34	10.82			9'-9"	22'-9"
70'-0"	8	4	1 1/4"	72'-3"	4444	5.51	11.16			10'-6"	24'-6"
75'-0"	8	4	1 1/4"	77'-3"	2970	5.94	12.05				

SUMMARY OF PILES

No.	Length	Diameter	Concrete Cu. Yds.	Reinf. Steel Lbs.
23	35'-0"	1'-8"	74.0	10,775