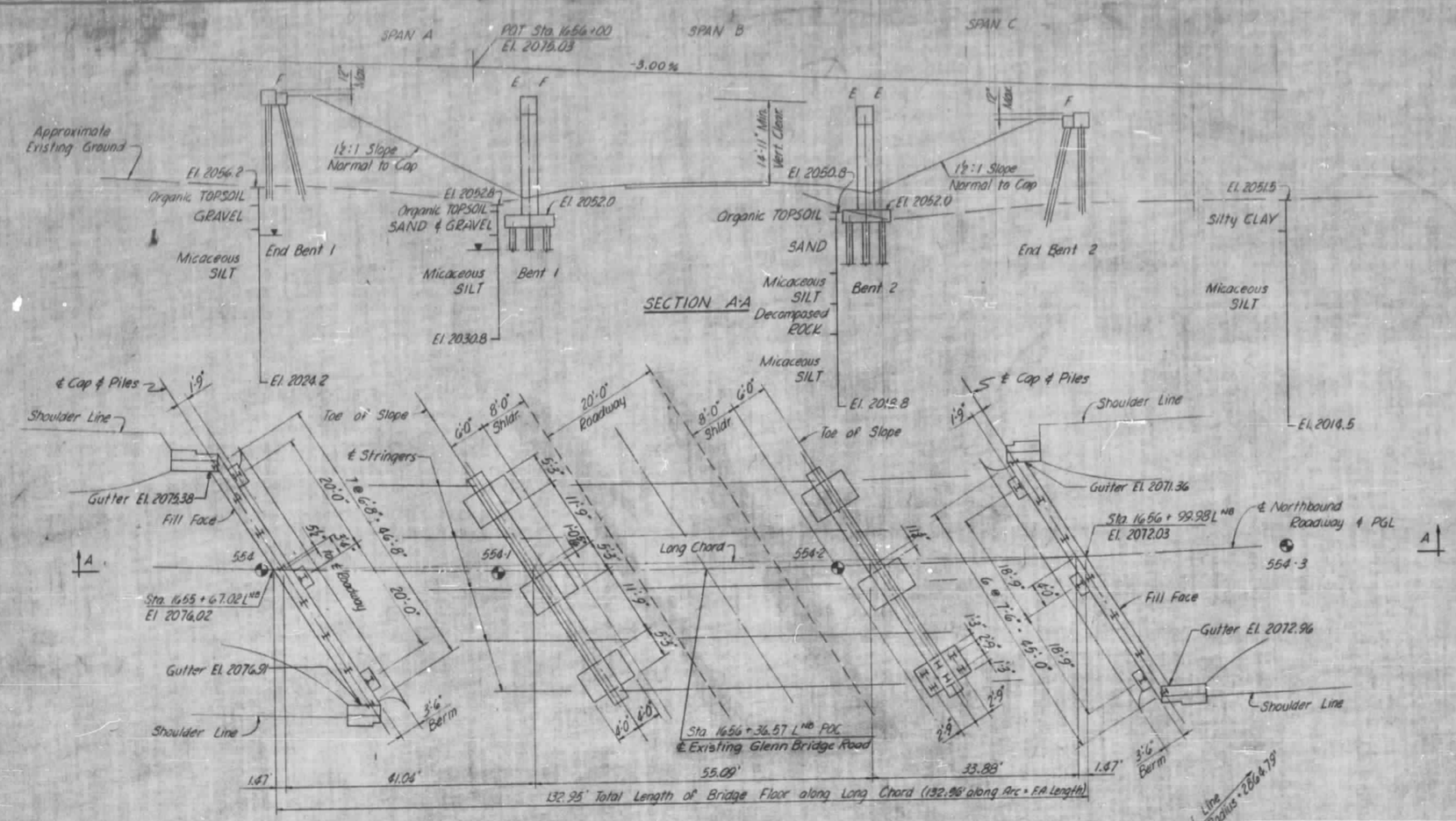
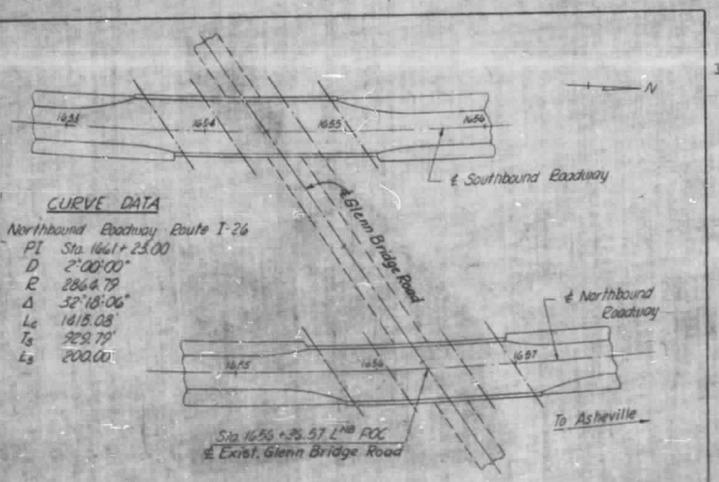
| FED. ROAD DIV. NO. | STATE | PROJECT NO. |
|---|---|---|
| 3 | N. C. | 8.19002 |
| FED. AID PROJ. | 7.26-1(10)6 | |




PLAN




CURVE DATA

Northbound Roadway Route I-26

| | |
|---|---|
| PI | Sta. 1661+25.00 |
| D | 2°00'00" |
| R | 2864.79 |
| Δ | 32°18'06" |
| $L_c$ | 1615.08 |
| $T_s$ | 929.79' |
| $L_s$ | 200.00 |

LOCATION SKETCH

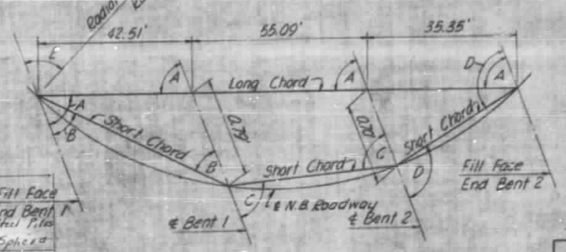
I HEREBY CERTIFY that this structure WAS BUILT ACCORDING TO PLANS.

SIGNED. [illegible]

RES. ENGR.

TOTAL BILL OF MATERIAL

| | Class "A" Concrete Cu. Yds. | Reinf. Steel Lbs. | Structural Steel Approx. Lbs. | 12 BP 53 Steel Piles No. | 12 BP 53 Steel Piles Lin. Ft. | Unclass. Str. Excav. Cu. Yds. | Metal Rails Lin. Ft. | Fill Face End Bent 1 12" Steel Piles No. Spliced |
|---|---|---|---|---|---|---|---|---|
| Superstructure | 176.3 | 46,816 | 104,800 | | 302.57 | | 264.19 | |
| End Bent 1 | 24.9 | 4,076 | | 11 | [illegible] | | | |
| Bent 1 | 42.3 | 6,813 | | 18 | 455 | 56 62.62 | | |
| Bent 2 | 41.1 | 6,641 | | 18 | [illegible] | 42 83.90 | | 4 |
| End Bent 2 | 24.5 | 4,015 | | 10 | 380 | | | |
| Approach Curbs | 3.2 | 76 | | | 311.67 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| TOTAL | 312.3 | 68,437 | 104,800 | 57 | 1768.24 | 71.52 | 264.19 | 4 |




A = 58°04'13"
B = 57°10'16"
C = 58°08'38"
D = 59°02'59"
E = 33°15'34"

BRIDGE LAYOUT DETAIL

## NOTES

Loading: AASHO H20-S16-44 and BPR Modified Loading for Military Vehicles.

Future surfacing: 20 lbs. per sq. ft.

Roadway width: 38'-0" curb to curb.

For other design data and general notes, see General Notes sheet.

Concrete surfaces shall be given a surface finish in accordance with the specifications.

The Contractor will be required to drive one 12 BP 53 steel test pile in place at Bents 1 & 2. The test pile shall be paid for as linear feet of 12 BP 53 Steel Piles. The order lengths for all piles shall be given after the test pile has been driven. The test pile shall be 30' long at Bent 1, and 40' long at bent 2.

All piles at End Bents shall be driven through the roadway fill.

Piles for all bents and End Bents shall be driven to a minimum bearing capacity of 30 tons.

◔ Indicates 2½" cased hole boring.

▼ Indicates ground water.

Benchmark: R.R. Spike in Pole #44 60' Lt. Sta. 1654+20 L NB Elevation 2053.04

Traffic on Glenn Bridge Road shall be maintained at all times during construction of the proposed structure. See Special Provisions.

PROJECT NO. 8.19002

HENDERSON-BUNCOMBE COUNTY

STATION 1656+37 L NB

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

GENERAL DRAWING
BRIDGE OVER
GLENN BRIDGE ROAD
ON PROPOSED NORTHBOUND
INTERSTATE ROUTE 26

REVISIONS

[redacted]

| FED. ROAD DIV. NO. | STATE | PROJECT NO. |
|---|---|---|
| 9 | N. C. | 8.19002 |
| F. A. PROJECT | [illegible] | |

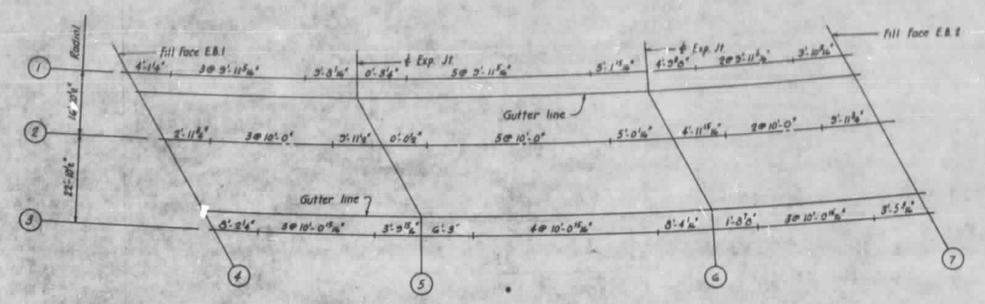
## GRADE DATA

-3.0%

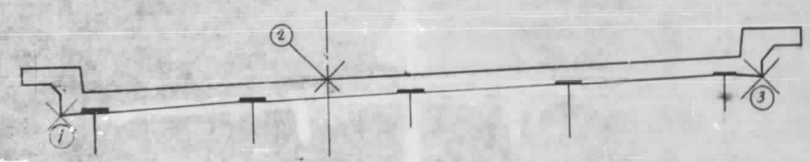
R.O.T. Sta: 1656+00
Elev: 2075.03

$G_1$ = -3.00%

| Column ① Bottom of overhang | | | Column ② Rt Roadway | | | Column ③ Bottom of overhang | | |
|---|---|---|---|---|---|---|---|---|
| Dist. | Elev. | | Dist. | Elev. | | Dist. | Elev. | |
| | 2078.696 | Fill Face | | 2076.019 | Fill Face | | 2076.071 | Fill Face |
| 4'-1¼" | .572 | 1655+60 | 2'-11⅝" | 2075.930 | 1655+70 | 8'-2¼" | 2075.827 | 1655+50 |
| 3'-11⅝" | 2074.272 | +70 | 10'-0" | .630 | +80 | 10'-0⁹⁄₁₆" | .527 | 1656+00 |
| 3'-11⅝" | 2073.972 | +80 | 10'-0" | .330 | 1655+90 | 10'-0⁹⁄₁₆" | 2075.227 | +10 |
| 3'-11⅝" | .672 | 1655+90 | 10'-0" | 2075.030 | 1656+00 | 10'-0⁹⁄₁₆" | 2074.927 | 1656+20 |
| 3'-8⅛" | .380 | ℄ Exp Jt | 3'-11⅛" | 2074.731 | ℄ Exp Jt | 3'-3⅛" | .813 | ℄ Exp Jt |
| 0'-3⅛" | .378 | 1656+00 | 0'-8⅛" | .730 | 1656+10 | 6'-3" | .627 | 1656+30 |
| 3'-11⅝" | 2073.072 | +10 | 10'-0" | .430 | +20 | 10'-0⁹⁄₁₆" | .327 | +40 |
| 3'-11⅝" | 2072.772 | +20 | 10'-0" | 2074.130 | +30 | 10'-0⁹⁄₁₆" | 2074.027 | +50 |
| 3'-11⅝" | .472 | +30 | 10'-0" | 2073.830 | +40 | 10'-0⁹⁄₁₆" | 2073.727 | +60 |
| 3'-11⅝" | 2072.172 | +40 | 10'-0" | .530 | +50 | 10'-0⁹⁄₁₆" | .427 | 1656+70 |
| 3'-11⅝" | 2071.872 | 1656+50 | 10'-0" | .230 | 1656+60 | 8'-4¼" | .179 | ℄ Exp Jt |
| 3'-1⁹⁄₁₆" | .716 | ℄ Exp Jt | 3'-8⅛" | 2075.080 | ℄ Exp Jt | 1'-8⅛" | 2073.127 | 1656+80 |
| 4'-2⅛" | .572 | 1656+60 | 4'-11⅝" | 2072.330 | 1656+70 | 10'-0⁹⁄₁₆" | 2072.827 | 1656+90 |
| 3'-11⅝" | 2071.272 | +70 | 10'-0" | .630 | +80 | 10'-0⁹⁄₁₆" | .527 | 1657+00 |
| 3'-11⅝" | 2070.972 | +80 | 10'-0" | .330 | 1656+90 | 10'-0⁹⁄₁₆" | .227 | 1657+10 |
| 3'-10⅝" | 2070.674 | Fill Face | 3'-11⅝" | 2072.031 | Fill Face | 3'-5⅛" | 2072.126 | Fill Face |




PLAN




TYPICAL SECTION

## HEADERS

| Column ④ Fill Face E.B.1 Dist. | Elev. | Column ⑤ ℄ Bent 1 Dist. | Elev. | Column ⑥ ℄ Bent 2 Dist. | Elev. | Column ⑦ Fill Face E.B.2 Dist. | Elev. | Column ⑧ ℄ Bent 4 Dist. | Elev. | Column ⑨ ℄ Bent 5 Dist. | Elev. | Column ⑩ ℄ Bent 6 Dist. | Elev. | Column ⑪ Fill Face E.B.2 Dist. | Elev. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lf. Gutter | 2075.936 | Lf. Gutter | 2074.018 | Lf. Gutter | 2072.416 | Lf. Gutter | 2071.556 | Lf. Gutter | | Lf. Gutter | | Lf. Gutter | | Lf. Gutter | |
| 2'-4⅝" | .557 | 2'-4⅝" | .155 | 2'-4⅝" | .497 | 2'-3⁹⁄₁₆" | .460 | | | | | | | | |
| | .537 | 2'-6½" | .241 | | .580 | | .525 | | | | | | | | |
| | .517 | 2'-4⅝" | .322 | | .663 | | .603 | | | | | | | | |
| | .497 | 2'-4⅝" | .404 | | .746 | | .633 | | | | | | | | |
| | .778 | | .486 | | .830 | 2'-3⁹⁄₁₆" | .777 | | | | | | | | |
| 2'-4⅝" | .858 | | .568 | | .913 | 2'-3⅝" | .863 | | | | | | | | |
| 2'-4⅝" | 2073.939 | | .649 | 2'-4⅝" | 2072.396 | | 2071.746 | | | | | | | | |
| ℄ | 2076.019 | ℄ | .731 | ℄ 2'-4⁹⁄₁₆" | 2073.080 | ℄ | 2072.031 | | | | | | | | |
| | .100 | | .813 | | .164 | | .115 | | | | | | | | |
| | .181 | 2'-4⅝" | .895 | | .247 | | .200 | | | | | | | | |
| | .262 | 2'-4⅝" | 2074.377 | | .331 | | .284 | | | | | | | | |
| | .343 | | 2075.059 | | .415 | | .369 | | | | | | | | |
| 2'-4⅝" | .424 | | .142 | | .498 | | .454 | | | | | | | | |
| 2'-4⅝" | .505 | | .224 | | .582 | 2'-3⅝" | .539 | | | | | | | | |
| | .586 | | .306 | | .666 | 2'-3⁹⁄₁₆" | .624 | | | | | | | | |
| | .667 | | .389 | 2'-4⅝" | .750 | | .709 | | | | | | | | |
| | .748 | | .471 | 2'-4" | .834 | | .794 | | | | | | | | |
| 2'-4⅝" | .829 | 2'-4⅝" | .554 | 2'-4" | 2073.918 | 2'-3⁹⁄₁₆" | .879 | | | | | | | | |
| Rt Gutter | 2076.511 | Rt Gutter | 2075.696 | Rt Gutter | 2074.002 | Rt. Gutter | 2072.964 | | | | | | | | |

Elevations shown in Columns 1 thru 7 are final required elevations of the completed structure. In setting up the form and screed elevations, provisions must be made for deflections where required.

For columns 4 thru 7 given elevations are at 2'-0" intervals normal to ℄ of roadway from the left gutter line to the right gutter line.

## SUPERIMPOSED DEAD LOAD DEFLECTION (inches)

| | SPAN A | SPAN B | SPAN C | | | | |
|---|---|---|---|---|---|---|---|
| INT. | 1/16" | 1/8" | 1/16" | | | | |
| EXT. | 1/16" | 1/8" | 1/8" | | | | |

**PROJECT NO.** 8.19002
HENDERSON - BUNCOMBE **COUNTY**
**STATION:** 1656+37 (N.B.)

STATE OF NORTH CAROLINA
**STATE HIGHWAY COMMISSION**
RALEIGH

ELEVATIONS FOR SETTING UP FORMS AND SCREEDS

August 1962

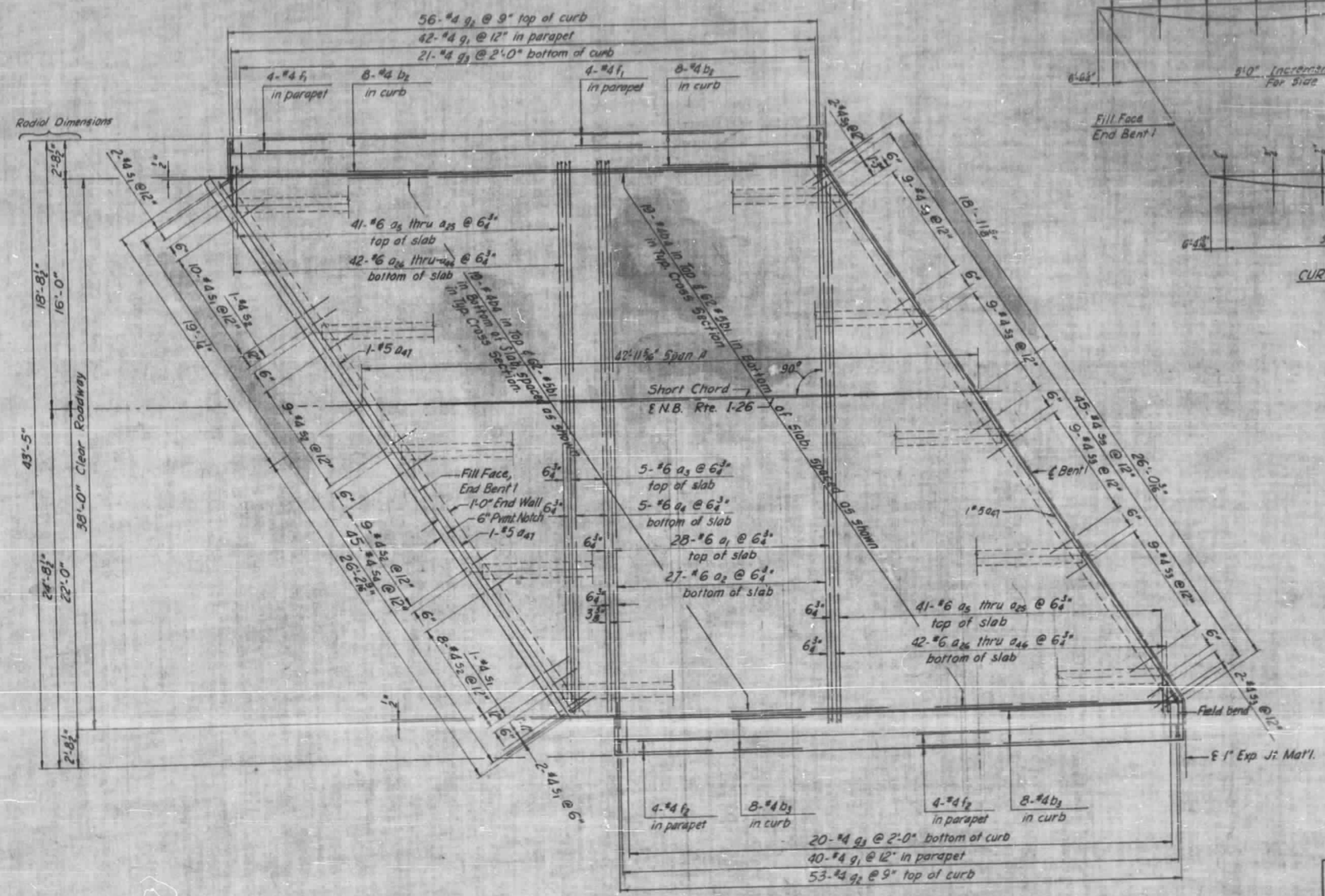
[redacted]

REVISIONS: DATE | BY | DATE | BY | DATE | BY

DRAWN BY R. C. HARRILL
CHECKED BY [illegible]

| FED. ROAD DIST. NO. | STATE | PROJECT NO. |
|---|---|---|
| 9 | N. C. | B-19002 |

FED. AID PROJ. I-26-1(10)B




PROJECT NO. B-19002

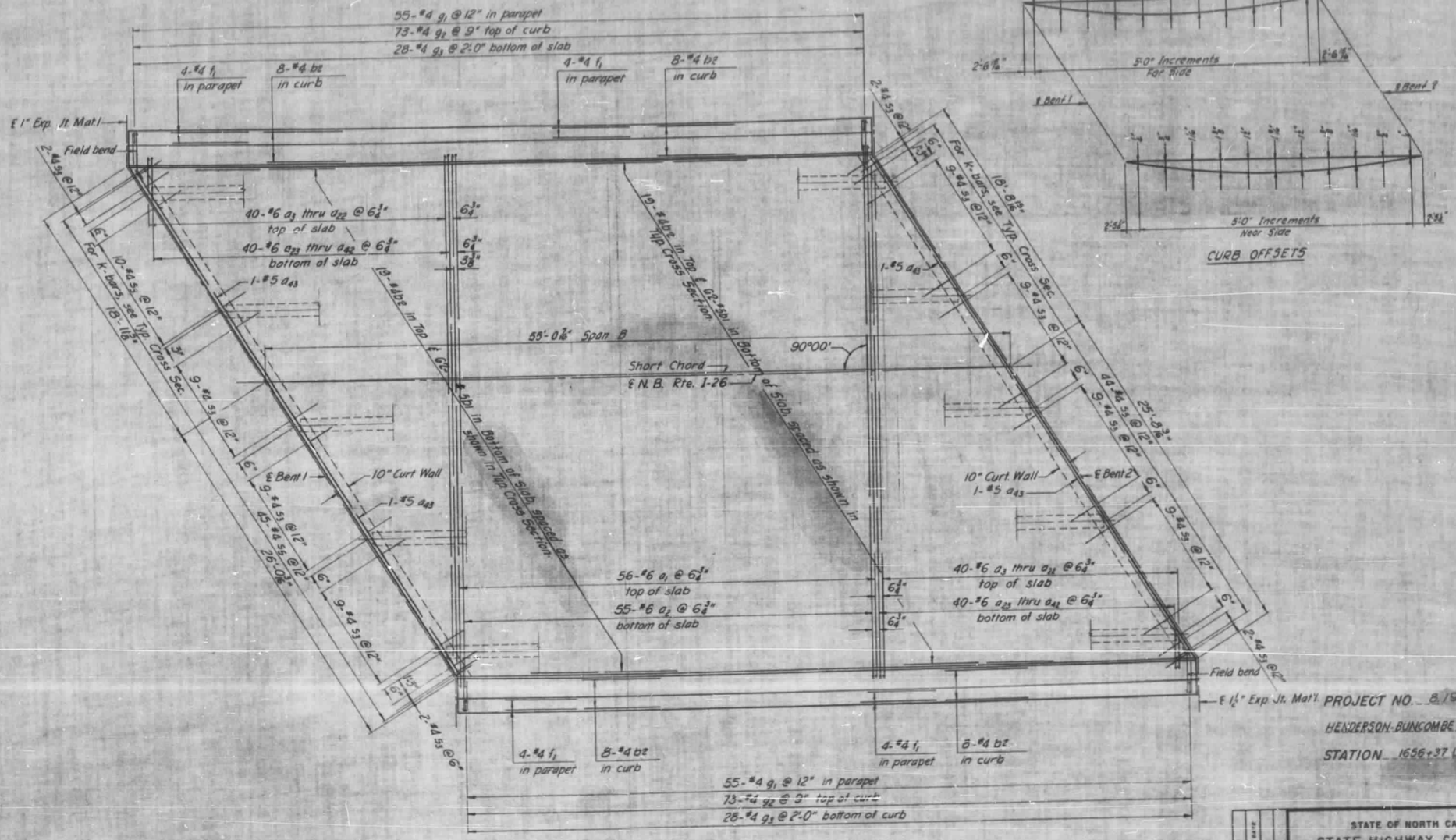
HENDERSON-BUNCOMBE COUNTY

STATION 1656+37 L N.B.

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUPERSTRUCTURE
SPAN A

REVISIONS




PROJECT NO. B-19002

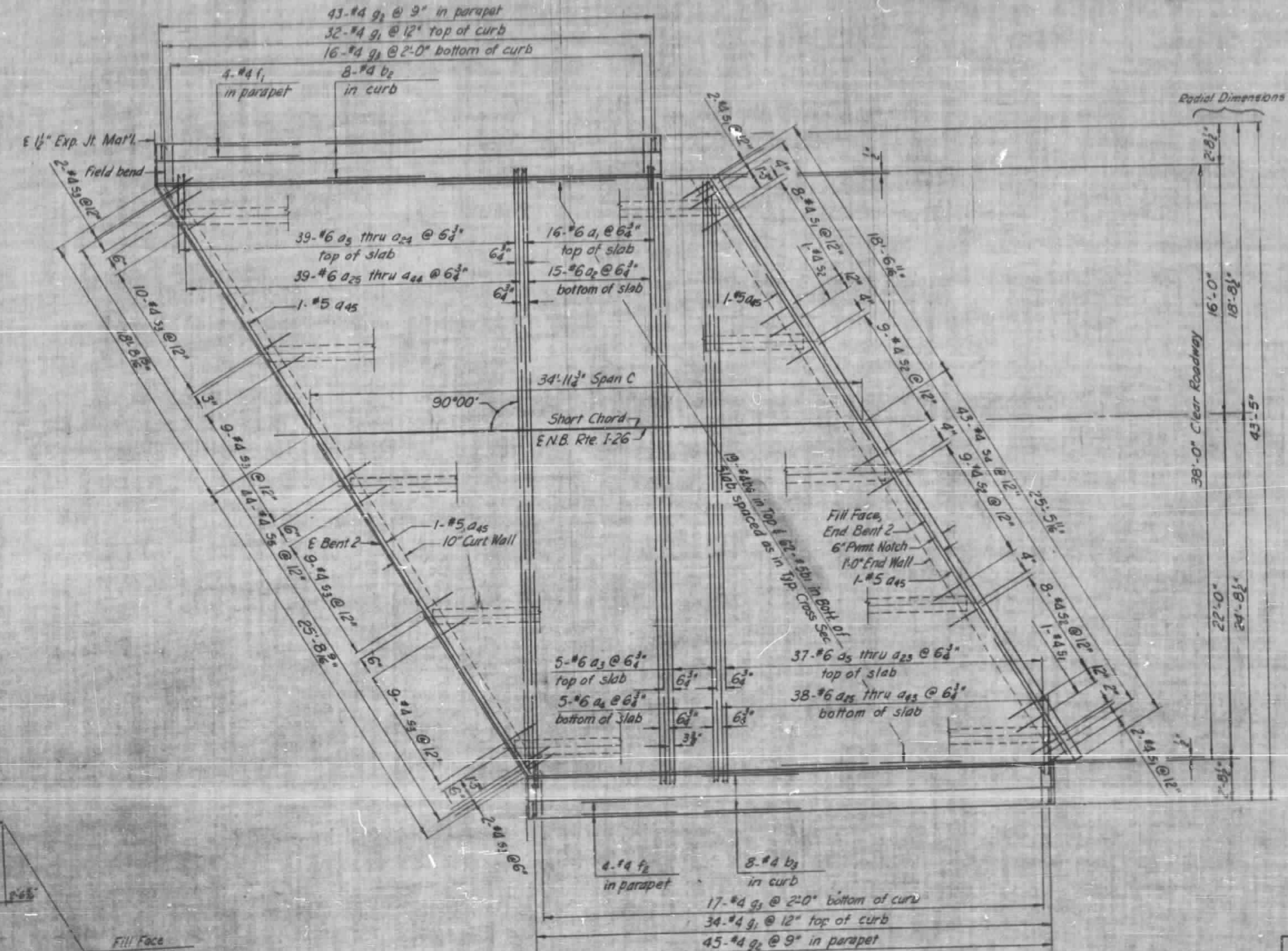
HENDERSON-BUNCOMBE COUNTY

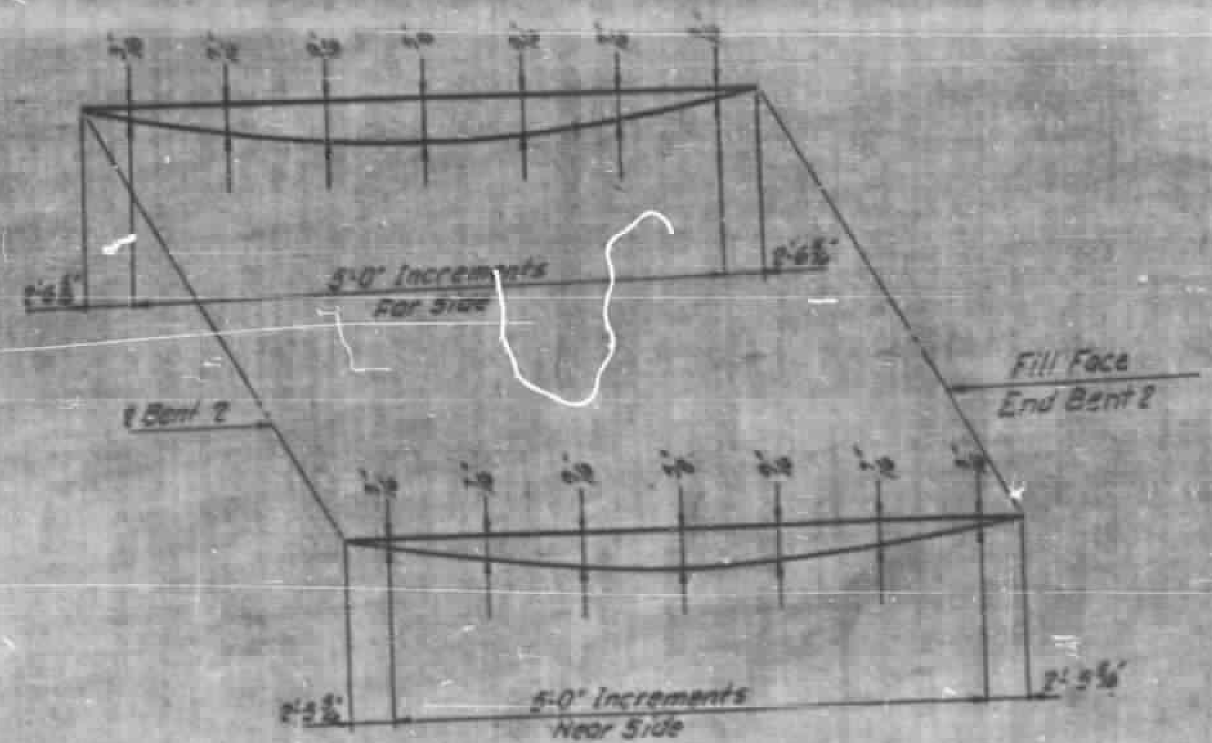
STATION 1656+37 ℄ N.B.

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUPERSTRUCTURE
SPAN B

| FED. ROAD DIST. NO. | STATE | PROJECT NO. |
|---|---|---|
| 8 | N.C. | 8.190002 |
| FED. AID PROJ. I-26-1(10)6 | | |




CURB OFFSETS

PROJECT NO. 8.190002

HENDERSON-BUNCOMBE COUNTY

STATION 1656+37 L N.B.

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUPERSTRUCTURE
SPAN C

SHEET NO. 367

TOTAL SHEETS 91

| FED. AID PROJ. NO. | STATE | PROJECT NO. |
|---|---|---|
| 8 | N. C. | B-19002 |

FED. AID PROJ. I-26-1(10)6

## BILL OF MATERIALS —— SPAN A N.B.

| BAR | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT | BAR | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| a1 | 28 | 6 | 4 | 40'-9" | 1714 | b1 | 124 | 5 | Str. | 22'-3" | 2,878 |
| a2 | 27 | 4 | 3 | 41'-9" | 1693 | b2 | 14 | 4 | Str. | 21'-6" | 230 |
| a3 | 2 | | 1 | 39'-2" | 286 | b3 | 16 | 4 | Str. | 20'-6" | 219 |
| a4 | 5 | | 4 | 39'-9" | 288 | b4 | 38 | 4 | Str. | 22'-0" | 558 |
| a5 | 4 | | 1 | 37'-7" | 226 | | | | | | |
| a6 | 4 | | 4 | 35'-10" | 216 | | | | | | |
| a7 | | | | 34'-11" | 205 | f1 | 8 | 4 | Str. | 21'-6" | 115 |
| a8 | | | | 32'-6" | 194 | f2 | 6 | 4 | Str. | 20'-6" | 110 |
| a9 | | | | 30'-7" | 184 | | | | | | |
| a10 | | | | 28'-10" | 175 | | | | | | |
| a11 | | | | 27'-1" | 165 | | | | | | |
| a12 | | | | 25'-5" | 155 | g1 | 82 | 4 | 6 | 5'-7" | 306 |
| a13 | | | | 23'-8" | 145 | g2 | 109 | 4 | 5 | 5'-5" | 395 |
| a14 | | | | 21'-11" | 135 | g3 | 61 | 4 | Str. | 2'-4" | 64 |
| a15 | | | | 20'-2" | 122 | | | | | | |
| a16 | | | | 18'-5" | 111 | | | | | | |
| a17 | | | | 16'-8" | 100 | | | | | | |
| a18 | | | | 14'-11" | 90 | k1 | 12 | 4 | Str. | 23'-3" | 186 |
| a19 | | | | 13'-3" | 80 | k2 | 8 | 6 | Str. | 23'-6" | 282 |
| a20 | | | | 11'-6" | 70 | | | | | | |
| a21 | | | | 9'-9" | 59 | | | | | | |
| a22 | | | | 8'-0" | 48 | | | | | | |
| a23 | | | | 6'-3" | 38 | s1 | 15 | 4 | 6 | 8'-7" | 87 |
| a24 | 4 | | 4 | 4'-6" | 27 | s2 | 27 | 4 | 6 | 8'-1" | 165 |
| a25 | 2 | | 1 | 3'-8" | 11 | s3 | 40 | 4 | 6 | 6'-5" | 172 |
| a26 | 4 | | 4 | 38'-7" | 232 | s4 | 43 | 4 | 4 | 5'-5" | 103 |
| a27 | 4 | | 4 | 36'-10" | 221 | s5 | 45 | 4 | 4 | 5'-1" | 93 |
| a28 | | | | 35'-1" | 211 | | | | | | |
| a29 | | | | 33'-4" | 200 | | | | | | |
| a30 | | | | 31'-7" | 190 | | | | | | |
| a31 | | | | 29'-10" | 180 | | | | | | |
| a32 | | | | 28'-1" | 169 | | | | | | |
| a33 | | | | 26'-5" | 159 | | | | | | |
| a34 | | | | 24'-8" | 148 | | | | | | |
| a35 | | | | 22'-11" | 137 | | | | | | |
| a36 | | | | 21'-2" | 127 | | | | | | |
| a37 | | | | 19'-5" | 116 | | | | | | |
| a38 | | | | 17'-8" | 106 | | | | | | |
| a39 | | | | 15'-11" | 96 | | | | | | |
| a40 | | | | 14'-3" | 85 | | | | | | |
| a41 | | | | 12'-6" | 75 | | | | | | |
| a42 | | | | 10'-9" | 65 | | | | | | |
| a43 | | | | 9'-0" | 54 | | | | | | |
| a44 | | | | 7'-3" | 43 | | | | | | |
| a45 | 1 | | 1 | 5'-6" | 33 | | | | | | |
| a46 | 1 | 6 | 4 | 3'-9" | 23 | | | | | | |
| a47 | 4 | 5 | Str. | 23'-3" | 97 | | | | | | |

Reinforcing Steel lbs. 15,258

Class "A" Concrete C.Y. 57.1

## BILL OF MATERIALS —— SPAN B N.B.

| BAR | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT | BAR | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| a1 | 56 | 6 | 2 | 40'-9" | 3420 | b1 | 124 | 5 | Str. | 28'-6" | 3886 |
| a2 | 55 | 4 | 3 | 41'-9" | 3440 | b2 | 70 | 4 | Str. | 28'-3" | 1321 |
| a3 | 2 | | 1 | 37'-7" | 226 | | | | | | |
| a4 | 1 | | 1 | 39'-9" | 216 | | | | | | |
| a5 | | | | 34'-0" | 204 | f1 | 16 | 4 | Str. | 21'-3" | 302 |
| a6 | | | | 32'-2" | 193 | | | | | | |
| a7 | | | | 30'-4" | 182 | | | | | | |
| a8 | | | | 28'-6" | 171 | | | | | | |
| a9 | | | | 26'-6" | 159 | g1 | 110 | 4 | 6 | 5'-7" | 410 |
| a10 | | | | 24'-11" | 150 | g2 | 146 | 4 | 5 | 5'-5" | 540 |
| a11 | | | | 23'-1" | 139 | g3 | 36 | 4 | Str. | 2'-4" | 87 |
| a12 | | | | 21'-3" | 128 | | | | | | |
| a13 | | | | 19'-6" | 117 | | | | | | |
| a14 | | | | 17'-8" | 106 | | | | | | |
| a15 | | | | 15'-10" | 95 | k1 | 8 | 4 | Str. | 23'-0" | 123 |
| a16 | | | | 14'-0" | 84 | k2 | 8 | 6 | Str. | 23'-3" | 279 |
| a17 | | | | 12'-3" | 74 | | | | | | |
| a18 | | | | 10'-5" | 63 | | | | | | |
| a19 | | | | 8'-7" | 52 | | | | | | |
| a20 | | | | 6'-9" | 41 | | | | | | |
| a21 | | | 1 | 5'-0" | 30 | | | | | | |
| a22 | | | 1 | 3'-2" | 19 | | | | | | |
| a23 | | | 4 | 38'-7" | 232 | | | | | | |
| a24 | | | 4 | 36'-9" | 221 | | | | | | |
| a25 | | | | 35'-0" | 210 | s2 | 81 | 4 | 6 | 6'-5" | 347 |
| a26 | | | | 33'-2" | 199 | s5 | 89 | 4 | 4 | 3'-1" | 183 |
| a27 | | | | 31'-4" | 188 | | | | | | |
| a28 | | | | 29'-6" | 177 | | | | | | |
| a29 | | | | 27'-6" | 165 | | | | | | |
| a30 | | | | 25'-11" | 156 | | | | | | |
| a31 | | | | 24'-1" | 145 | | | | | | |
| a32 | | | | 22'-3" | 134 | | | | | | |
| a33 | | | | 20'-6" | 123 | | | | | | |
| a34 | | | | 18'-8" | 112 | | | | | | |
| a35 | | | | 16'-10" | 101 | | | | | | |
| a36 | | | | 15'-0" | 90 | | | | | | |
| a37 | | | | 13'-3" | 80 | | | | | | |
| a38 | | | | 11'-5" | 67 | | | | | | |
| a39 | | | | 9'-7" | 58 | | | | | | |
| a40 | | | | 7'-9" | 47 | | | | | | |
| a41 | | | 1 | 6'-0" | 36 | | | | | | |
| a42 | 1 | 6 | 4 | 4'-2" | 25 | | | | | | |
| a43 | 4 | 5 | Str. | 23'-3" | 97 | | | | | | |

Reinforcing Steel lbs. 19,255

Class "A" Concrete C.Y. 70.1

## BILL OF MATERIALS —— SPAN C N.B.

| BAR | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT | BAR | NO. BARS | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| a1 | 16 | 6 | 2 | 40'-9" | 979 | b1 | 62 | 5 | Str. | 24'-8" | 2742 |
| a2 | 15 | 4 | 3 | 41'-9" | 939 | b2 | 8 | 4 | Str. | 31'-8" | 169 |
| a3 | 3 | | 1 | 39'-2" | 294 | b3 | 8 | 4 | Str. | 29'-4" | 178 |
| a4 | 3 | | 4 | 39'-9" | 298 | b4 | 19 | 4 | Str. | 34'-8" | 440 |
| a5 | 4 | | 1 | 37'-7" | 226 | | | | | | |
| a6 | 4 | | 4 | 35'-8" | 214 | | | | | | |
| a7 | | | | 33'-10" | 203 | f1 | 4 | 4 | Str. | 31'-8" | 88 |
| a8 | | | | 31'-11" | 192 | f2 | 4 | 4 | Str. | 33'-4" | 89 |
| a9 | | | | 30'-1" | 181 | | | | | | |
| a10 | | | | 28'-2" | 169 | | | | | | |
| a11 | | | | 26'-4" | 158 | | | | | | |
| a12 | | | | 24'-5" | 147 | g1 | 66 | 4 | 6 | 5'-7" | 246 |
| a13 | | | | 22'-7" | 136 | g2 | 88 | 4 | 5 | 5'-5" | 319 |
| a14 | | | | 20'-8" | 124 | g3 | 35 | 4 | Str. | 2'-4" | 51 |
| a15 | | | | 18'-9" | 113 | | | | | | |
| a16 | | | | 16'-11" | 102 | | | | | | |
| a17 | | | | 15'-0" | 90 | | | | | | |
| a18 | | | | 13'-2" | 79 | r1 | 12 | 4 | Str. | 22'-3" | 182 |
| a19 | | | | 11'-3" | 68 | r2 | 8 | 6 | Str. | 23'-0" | 276 |
| a20 | | | | 9'-5" | 57 | | | | | | |
| a21 | 1 | | | 7'-6" | 45 | | | | | | |
| a22 | 4 | | | 5'-8" | 34 | | | | | | |
| a23 | 8 | | 1 | 3'-9" | 17 | s1 | 13 | 4 | 6 | 8'-7" | 78 |
| a24 | 1 | | 1 | 2'-10" | 4 | s2 | 27 | 4 | 6 | 8'-1" | 165 |
| a25 | 4 | | 4 | 38'-7" | 232 | s3 | 41 | 4 | 6 | 6'-5" | 176 |
| a26 | 4 | | 4 | 36'-8" | 220 | s4 | 43 | 4 | 4 | 5'-5" | 98 |
| a27 | | | | 34'-10" | 208 | s5 | 44 | 4 | 4 | 5'-1" | 91 |
| a28 | | | | 32'-11" | 198 | | | | | | |
| a29 | | | | 31'-1" | 187 | | | | | | |
| a30 | | | | 29'-2" | 175 | | | | | | |
| a31 | | | | 27'-4" | 164 | | | | | | |
| a32 | | | | 25'-5" | 153 | | | | | | |
| a33 | | | | 23'-7" | 142 | | | | | | |
| a34 | | | | 21'-8" | 130 | | | | | | |
| a35 | | | | 19'-9" | 118 | | | | | | |
| a36 | | | | 17'-11" | 108 | | | | | | |
| a37 | | | | 16'-0" | 96 | | | | | | |
| a38 | | | | 14'-2" | 85 | | | | | | |
| a39 | | | | 12'-3" | 74 | | | | | | |
| a40 | | | | 10'-5" | 63 | | | | | | |
| a41 | | | | 8'-6" | 51 | | | | | | |
| a42 | 1 | | | 6'-8" | 40 | | | | | | |
| a43 | 4 | 1 | 1 | 4'-9" | 29 | | | | | | |
| a44 | 1 | 6 | 4 | 3'-10" | 6 | | | | | | |
| a45 | 4 | 5 | Str. | 22'-3" | 92 | | | | | | |

Reinforcing Steel lbs. 12,809

Class "A" Concrete C.Y. 49.1

Note:
For Bent Bar Types and dimensions see Superstructure Cross Sections sheet.

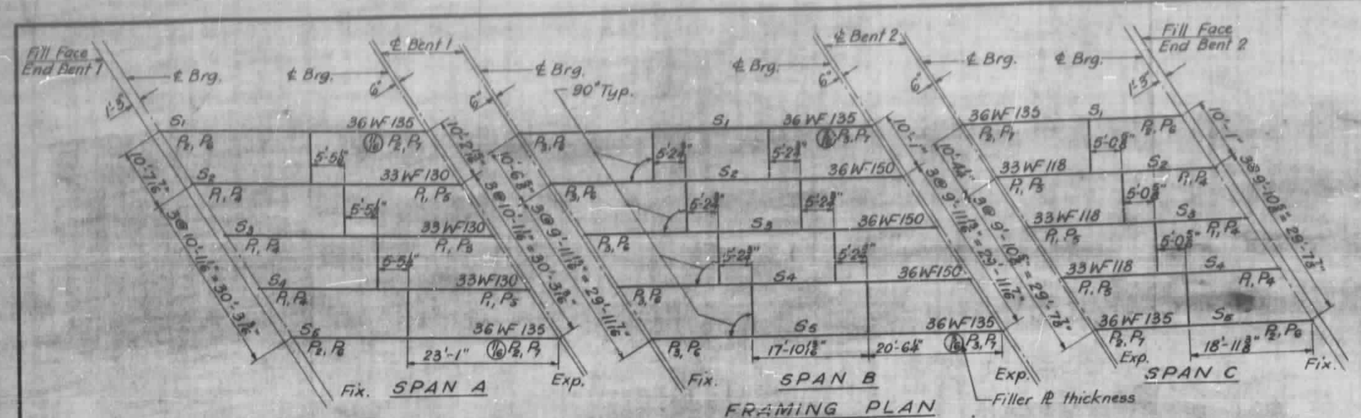
PROJECT NO. B-19002
HENDERSON-BUNCOMBE COUNTY
STATION 16.36 + 57 L NB

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUPERSTRUCTURE
BAR LISTS

| FED. ROAD DIST. NO. | STATE | PROJECT NO. |
|---|---|---|
| 8 | N. C. | 8.19002 |

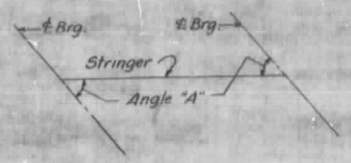
FED. AID PROJ. I-26-1(10)6

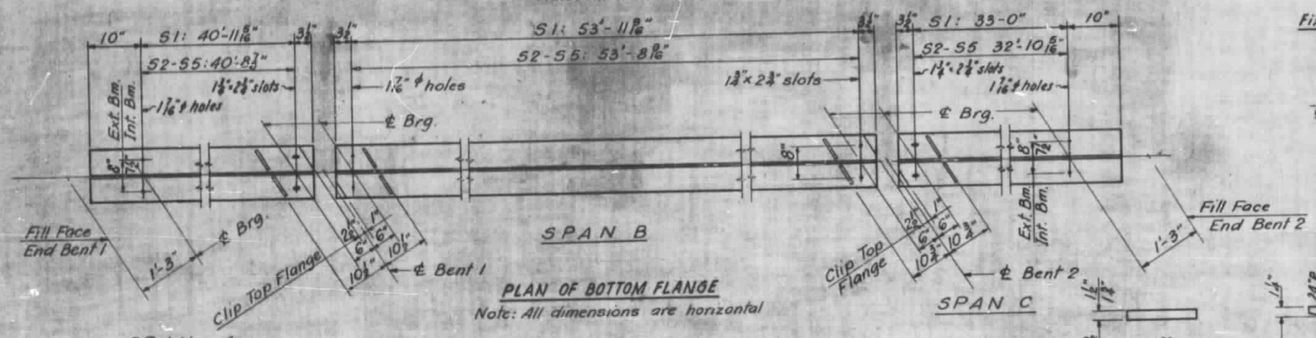



FRAMING PLAN

Note: All dimensions are horizontal.

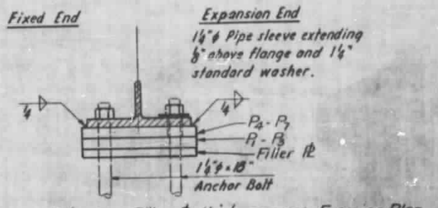
| ANGLE "A" | SPAN A | SPAN B | SPAN C |
|---|---|---|---|
| S1 | 56°-52'-17" | 57°-58'-27" | 58°-52'-48" |
| S2-S6 | 57°-25'-48" | 58°-23'-53" | 59°-17'-21" |




PLAN OF BOTTOM FLANGE

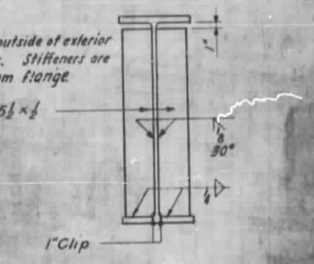
Note: All dimensions are horizontal

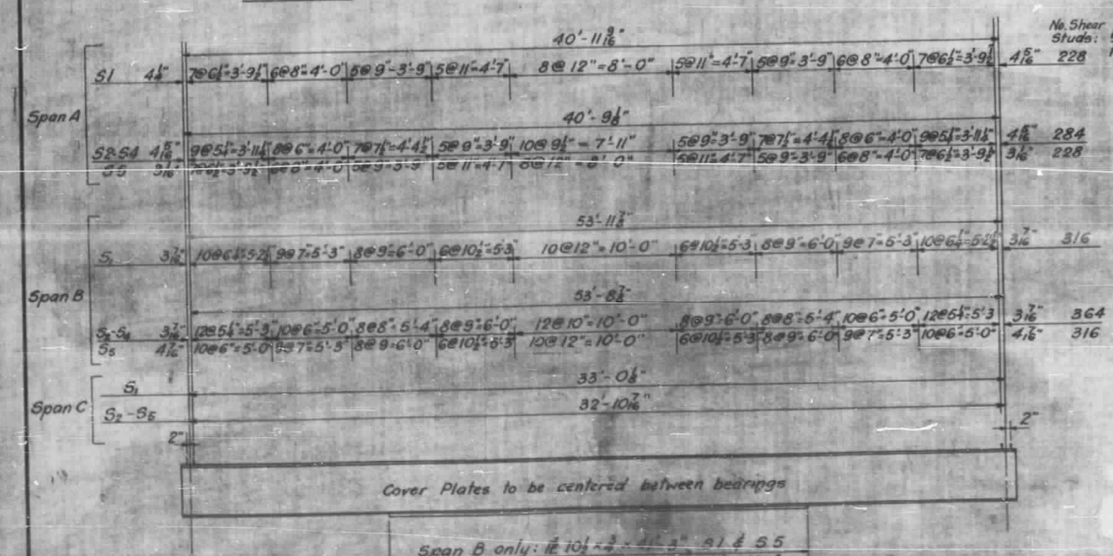



Note: For Filler ℔ thickness, see Framing Plan

SECTION THRU BEARING

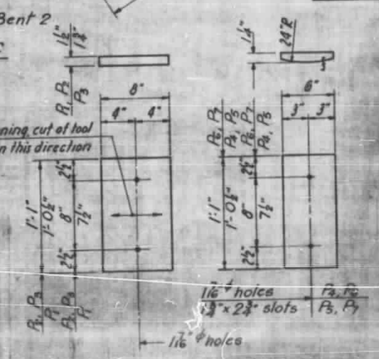
Note: Omit stiffeners on outside of exterior beams ϕ at End Bents. Stiffeners are to be normal to beam flange.




SHEAR STUD SPACING AND COVER PLATE LENGTH

Note: All dimensions are along beam grade




BEARING PLATE DETAILS

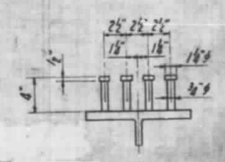
| DEFLECTION TABLE | SPAN "A" | | SPAN "B" | | SPAN "C" | |
|---|---|---|---|---|---|---|
| | Ext. Bm. | Int. Bm. | Ext. Bm. | Int. Bm. | Ext. Bm. | Int. Bm. |
| Steel | 1/16 | 1/16 | 1/8 | 1/8 | — | — |
| Concrete | 1/16 | 1/16 | 1/8 | 1/8 | 1/8 | 1/16 |
| Total DL Defl. | 1/8 | 1/8 | 1/4 | 1/8 | 1/8 | 1/16 |
| Vertical Curve | — | — | — | — | — | — |
| Total Camber | 1/8 | 1/8 | 1/4 | 1/8 | 1/8 | 1/16 |

Note: All beams and cover plates shall be of ASTM A313 or A36 grade structural steel.
Stress in extreme fiber of structural steel = 18,000 psi.
See Standard Notes sheet for further requirements.

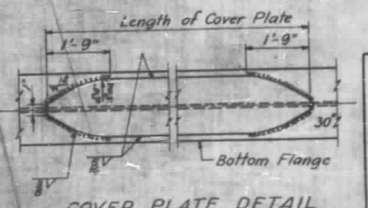
PROJECT NO. 8.19002

HENDERSON-BUNCOMBE COUNTY

STATION 1656+37 L-NB




SHEAR STUD DETAILS




COVER PLATE DETAIL

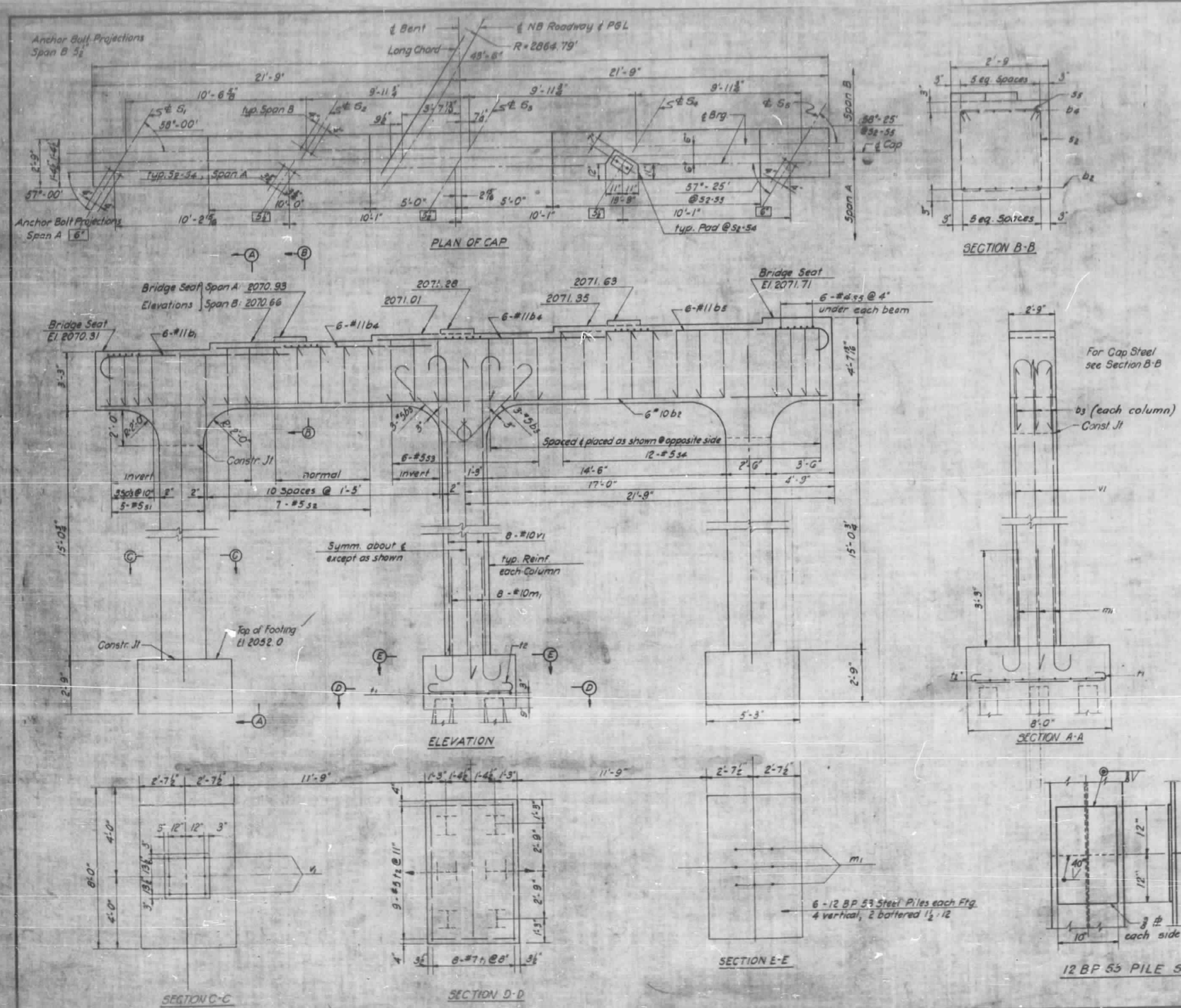
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

STRUCTURAL STEEL

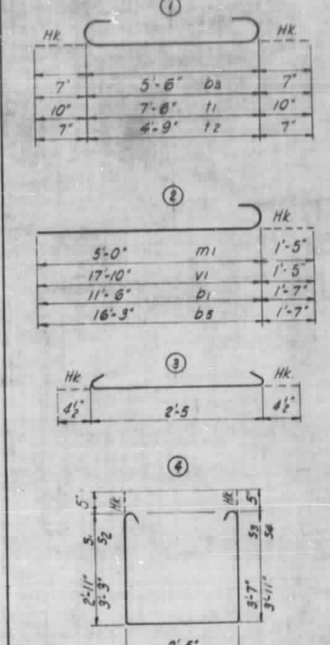
REVISIONS

| FED. ROAD DIST. NO. | STATE | PROJECT NO. |
|---|---|---|
| 8 | N. C. | 8.19002 |

FED. AID PROJ. I-26-1(10)6




## BAR DETAILS




NOTE: All bar dimensions are out-to-out.

Note: Reinforcing in Top of Cap may be shifted as necessary to clear Anchor Bolts.

## BILL OF MATERIAL

| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|
| $b_1$ | 6 | #11 | 2 | 13'-1" | 417 |
| $b_2$ | 6 | #10 | Str. | 43'-0" | 1110 |
| $b_3$ | 18 | #5 | 1 | 6'-8" | 125 |
| $b_4$ | 12 | #11 | Str. | 14'-9" | 940 |
| $b_5$ | 6 | #11 | 2 | 17'-10" | 568 |
| $m_1$ | 24 | #10 | 2 | 6'-5" | 663 |
| $s_1$ | 5 | #5 | 4 | 9'-1" | 47 |
| $s_2$ | 7 | #5 | 4 | 9'-9" | 71 |
| $s_3$ | 6 | #5 | 4 | 10'-5" | 65 |
| $s_4$ | 12 | #5 | 4 | 11'-1" | 138 |
| $s_5$ | 30 | #4 | 3 | 3'-2" | 64 |
| $t_1$ | 24 | #7 | 1 | 9'-2" | 450 |
| $t_2$ | 27 | #5 | 1 | 5'-11" | 167 |
| $v_1$ | 24 | #10 | 2 | 19'-3" | 1988 |

Reinforcing Steel Lbs. 6,818

Class "A" Concrete Cu. Yds. 42.3

12 BP 53 Steel Piles No. 18.

12 BP 53 Steel Piles Lin. Ft. 458

PROJECT NO. 8.19002

HENDERSON-BUNCOMBE COUNTY

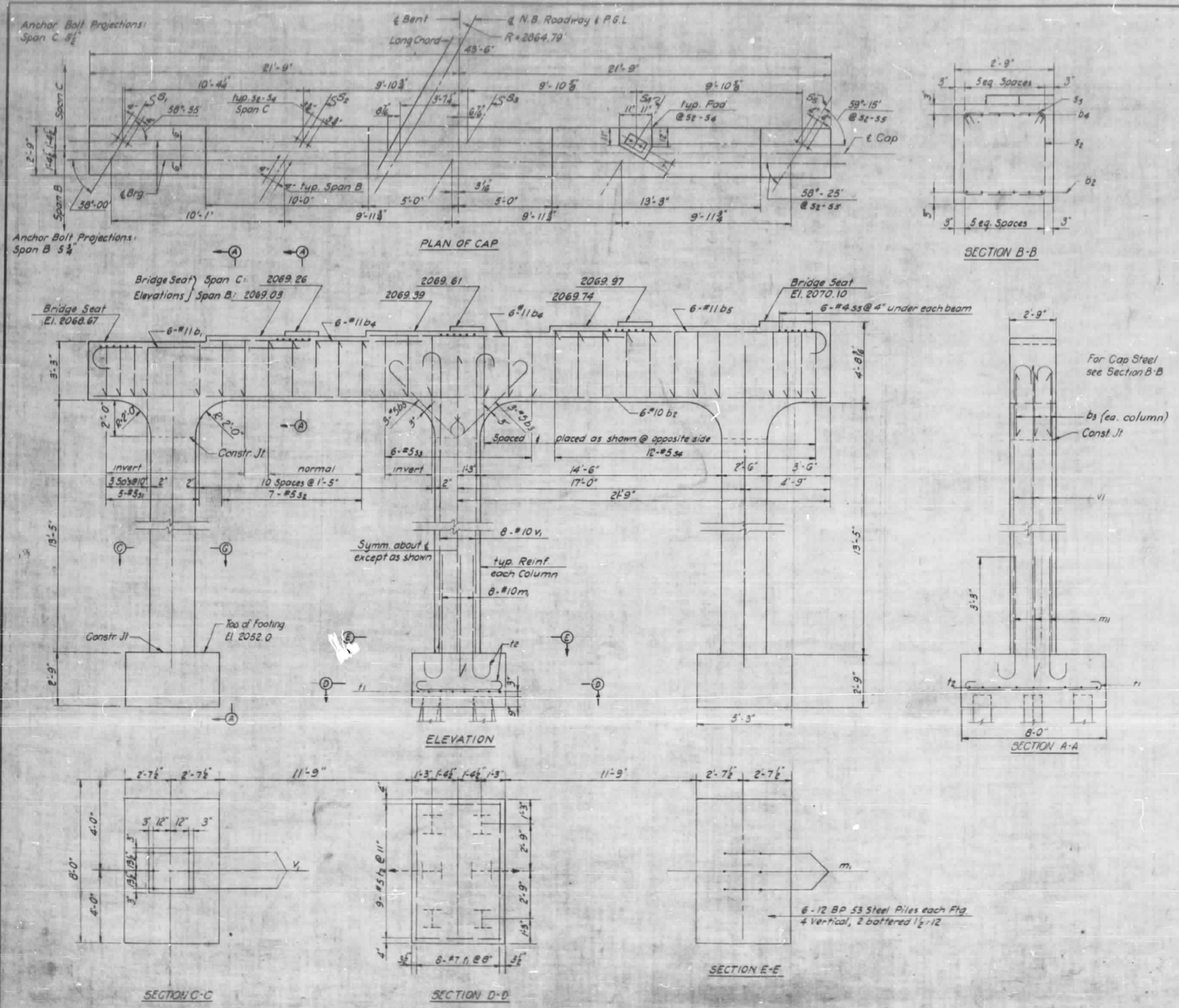
STATION 1656 + 37 L NB

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

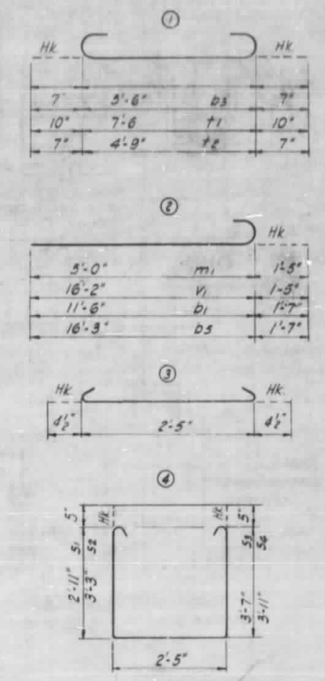
BENT 1

REVISIONS

| FED. ROAD DIST. NO. | STATE | PROJECT NO. |
|---|---|---|
| 3 | N. C. | 8.19002 |
| FED. AID PROJ. I-26-1(10)6 | | |




## BAR DETAILS




NOTE: All bar dimensions are out-to out.

Note: Reinforcing in Top of Cap may be shifted as necessary to clear Anchor Bolts.

## BILL OF MATERIAL

| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|
| b1 | 6 | #11 | 2 | 13'-1" | 417 |
| b2 | 6 | #10 | Str. | 43'-0" | 1110 |
| b3 | 16 | #5 | 1 | 6'-8" | 125 |
| b4 | 12 | #11 | Str. | 14'-9" | 940 |
| b5 | 6 | #11 | 2 | 17'-10" | 568 |
| m1 | 24 | #10 | 2 | 6'-5" | 663 |
| s1 | 5 | #5 | 4 | 9'-1" | 47 |
| s2 | 7 | #5 | 4 | 9'-9" | 71 |
| s3 | 6 | #5 | 4 | 10'-5" | 65 |
| s4 | 12 | #5 | 4 | 11'-1" | 138 |
| s5 | 30 | #4 | 3 | 3'-2" | 64 |
| t1 | 24 | #7 | 1 | 9'-2" | 450 |
| t2 | 27 | #5 | 1 | 5'-11" | 167 |
| v1 | 24 | #10 | 2 | 17'-7" | 1816 |

| | |
|---|---|
| Reinforcing Steel Lbs. | 6,641 |
| Class "A" Concrete Cu. Yds. | 41.1 |
| 12 BP 53 Steel Piles No. | 18 |
| 12 BP 53 Steel Piles Lin. Ft. | ~~635~~ 472.02 |

PROJECT NO. 8.19002

HENDERSON-BUNCOMBE COUNTY

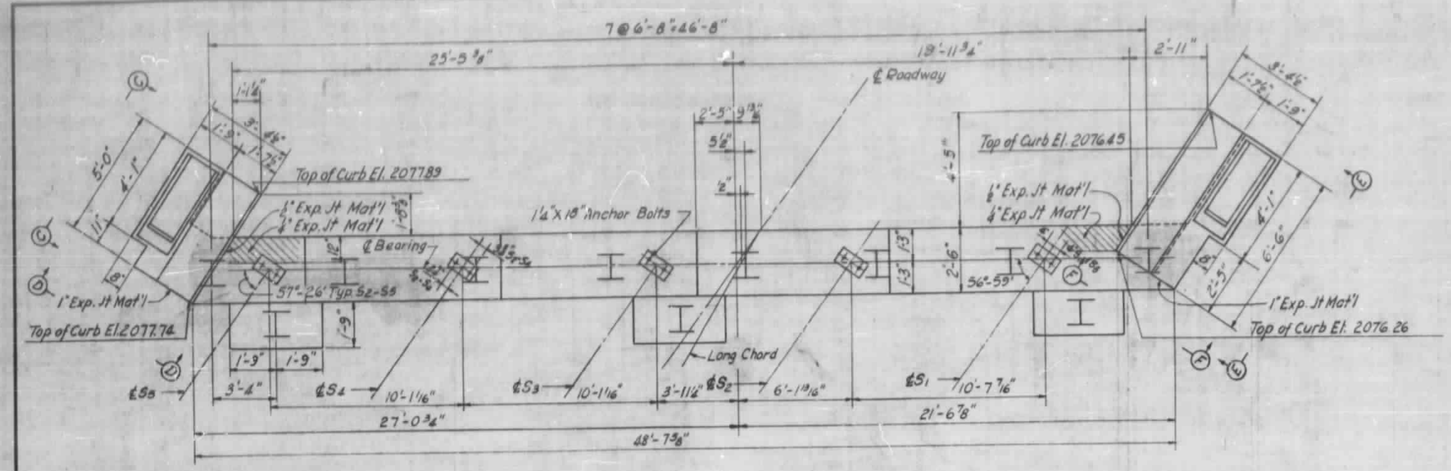
STATION 1656 + 37L NB

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

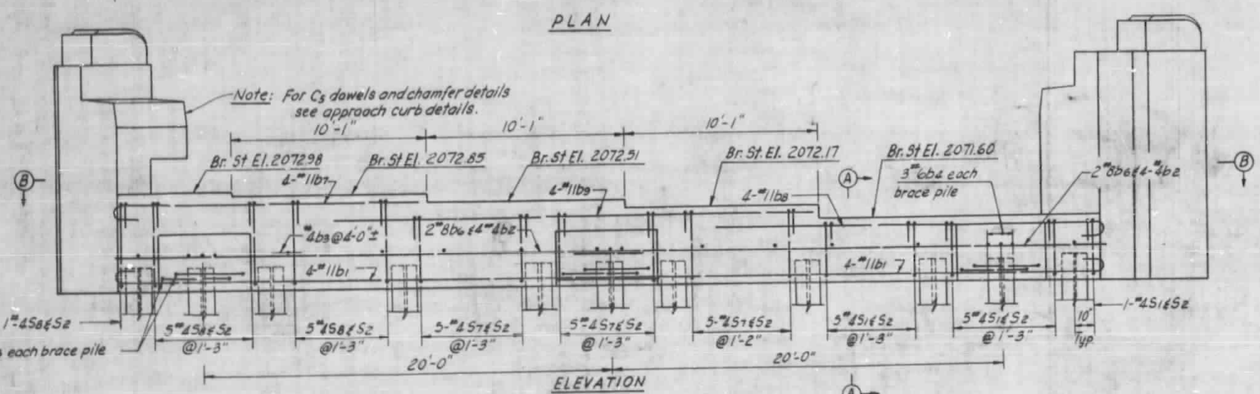
BENT 2

REVISIONS

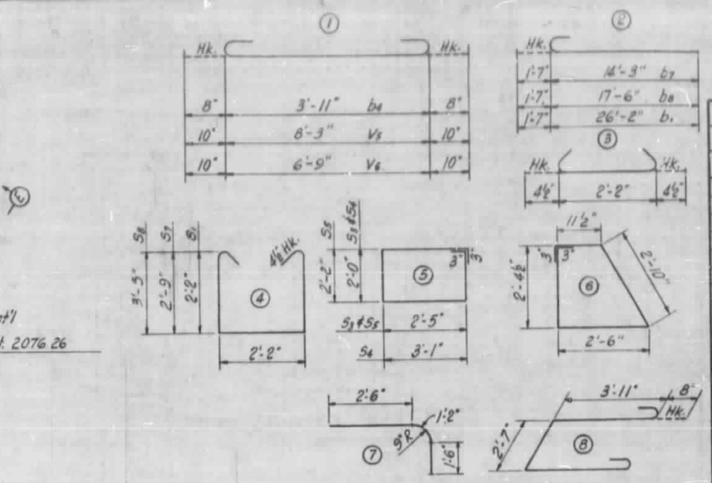
| DIST. NO. | STATE | PROJECT NO. |
|---|---|---|
| 3 | N. C. | 8.19002 |
| FED. AID PROJ. I-26-1(10)6 | | |




PLAN

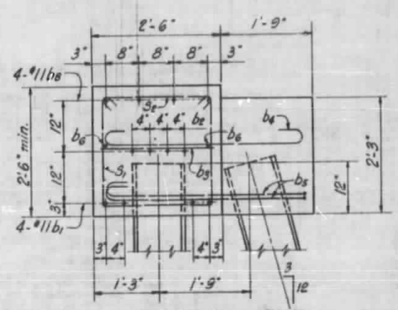



ELEVATION

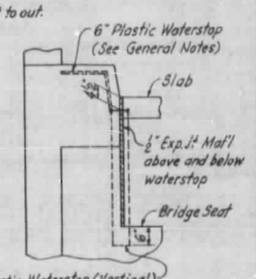


BAR TYPES

All dimensions are out to out.



SECTION A-A



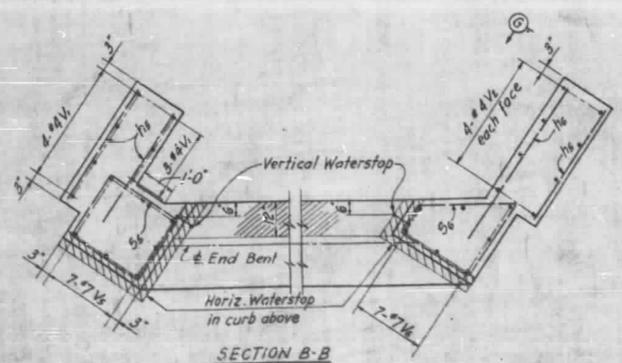

VIEW G-G

## BILL OF MATERIAL

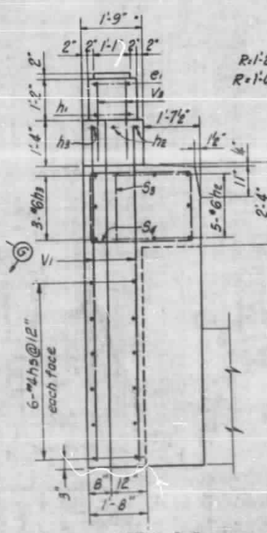
END BENT #1

| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|
| $b_1$ | 8 | #11 | 2 | 27'-9" | 1179 |
| $b_2$ | 8 | #4 | Str. | 25'-3" | 134 |
| $b_3$ | 10 | #4 | Str. | 2'-2" | 15 |
| $b_4$ | 9 | #6 | 1 | 5'-3" | 71 |
| $b_5$ | 6 | #6 | 8 | 11'-9" | 106 |
| $b_6$ | 4 | #8 | Str. | 25'-7" | 273 |
| $b_7$ | 4 | #11 | 2 | 15'-10" | 336 |
| $b_8$ | 4 | #11 | 2 | 19'-1" | 406 |
| $b_9$ | 4 | #11 | Str. | 23'-9" | 505 |
| | | | | | |
| | | | | | |
| $e_1$ | 4 | #4 | 7 | 5'-2" | 14 |
| $h_1$ | 4 | #4 | Str. | 3'-5" | 9 |
| $h_2$ | 7 | #6 | Str. | 4'-8" | 49 |
| $h_3$ | 8 | #6 | Str. | 3'-9" | 45 |
| $h_4$ | 10 | #6 | Str. | 6'-2" | 93 |
| $h_5$ | 17 | #4 | Str. | 3'-9" | 43 |
| $h_6$ | 5 | #4 | Str. | 5'-3" | 18 |
| | | | | | |
| | | | | | |
| | | | | | |
| $S_1$ | 11 | #4 | 4 | 7'-3" | 53 |
| $S_2$ | 37 | #4 | 3 | 2'-11" | 72 |
| $S_3$ | 3 | #4 | 5 | 9'-4" | 19 |
| $S_4$ | 6 | #4 | 5 | 10'-9" | 43 |
| $S_5$ | 5 | #4 | 5 | 9'-8" | 32 |
| $S_6$ | 4 | #4 | 6 | 9'-2" | 24 |
| $S_7$ | 15 | #4 | 4 | 8'-5" | 84 |
| $S_8$ | 11 | #4 | 4 | 9'-9" | 72 |
| | | | | | |
| | | | | | |
| $V_1$ | 7 | #4 | Str. | 9'-8" | 45 |
| $V_2$ | 8 | #4 | Str. | 8'-2" | 44 |
| $V_3$ | 12 | #4 | Str. | 2'-3" | 18 |
| $V_4$ | 7 | #4 | Str. | 2'-6" | 12 |
| $V_5$ | 7 | #7 | 1 | 9'-11" | 142 |
| $V_6$ | 7 | #7 | 1 | 8'-5" | 120 |
| | | | | | |
| | | | | | |
| Reinforcing Steel | | | | lbs. | 4076 |
| Class 'A' Concrete | | | | cu. yds. | 24.9 |
| 12 BP53 Steel Piles | | | | No. | 11 |
| 12 BP53 Steel Piles | | | | lin. ft. | 297 |

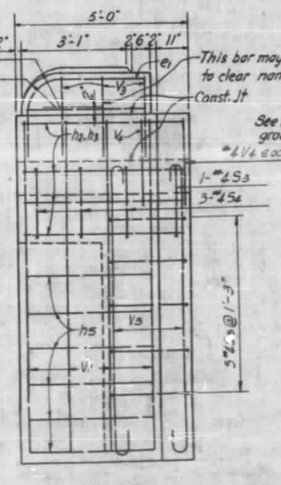
* Concrete displaced by pile heads has been deducted.



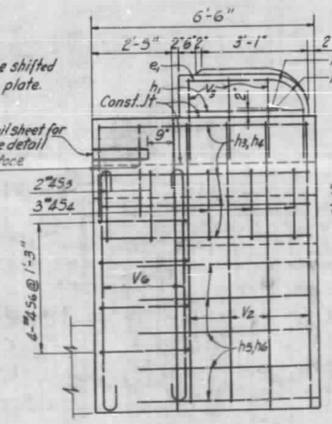

SECTION B-B



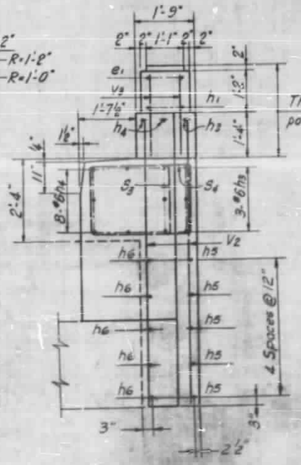
VIEW D-D




VIEW C-C




VIEW E-E




VIEW F-F

PROJECT NO. 8.19002

HENDERSON-BUNCOMBE COUNTY

STATION 1656+37 L NB

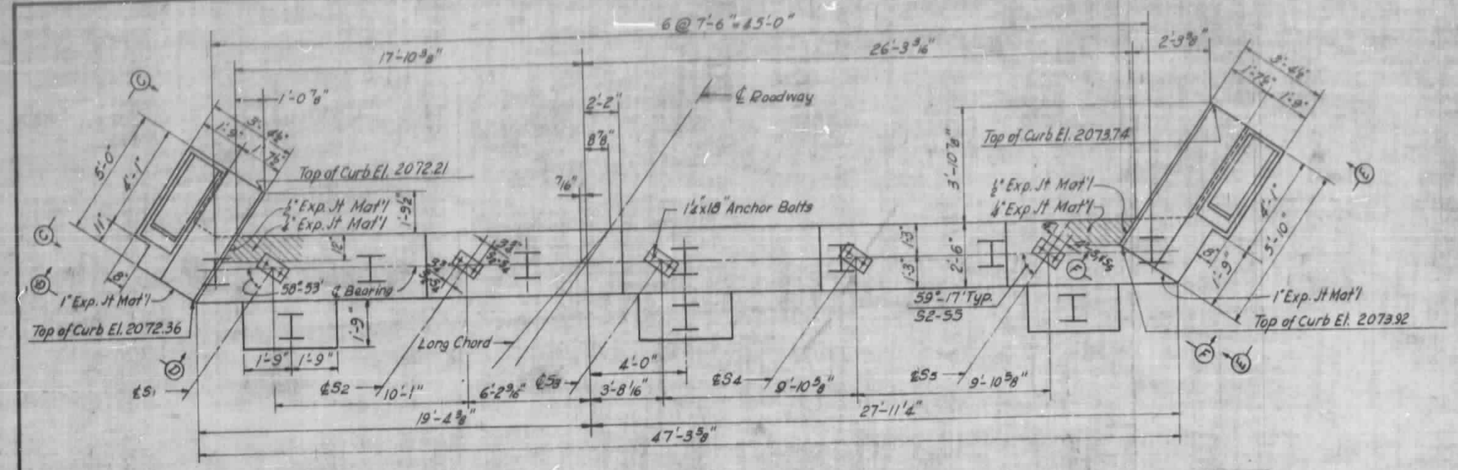
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

END BENT 1

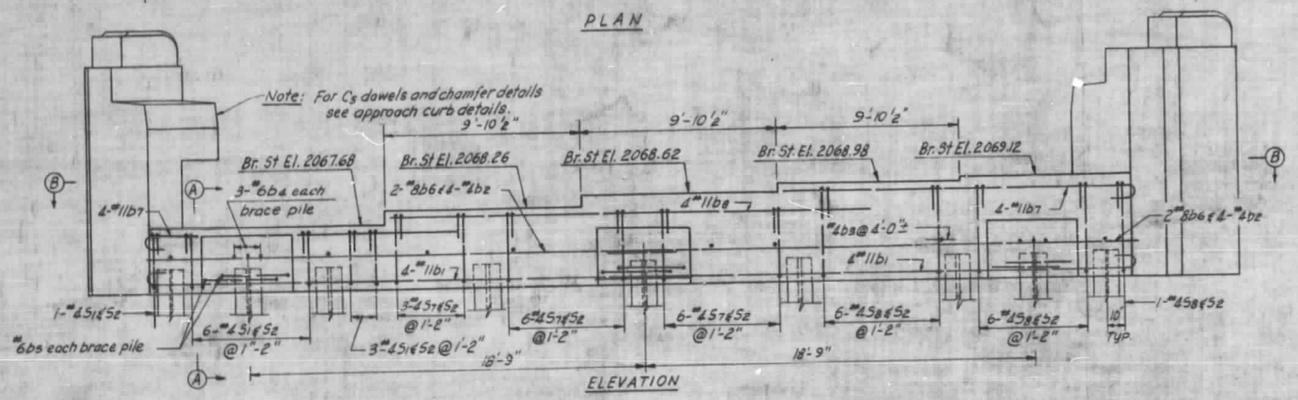
| REVISIONS | BY | DATE |
|---|---|---|
| | | |
| | | |
| | | |

| FED. ROAD DIST. NO. | STATE | PROJECT NO. |
|---|---|---|
| 3 | N. C. | B-19002 |

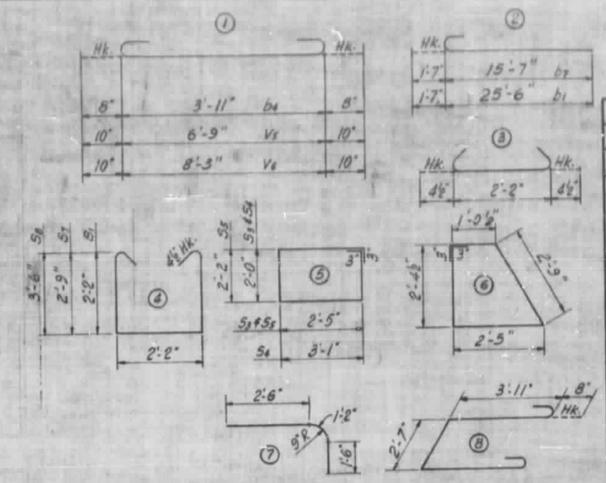
FED. AID PROJ. I-26-1(10)6



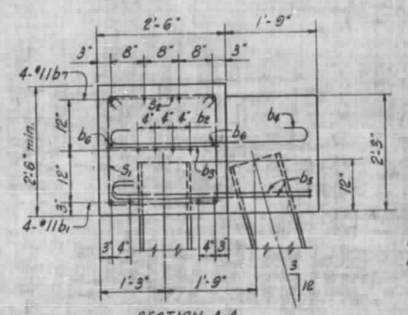

PLAN



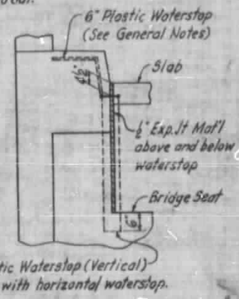

ELEVATION




BAR TYPES
All dimensions are out to out.




SECTION A-A



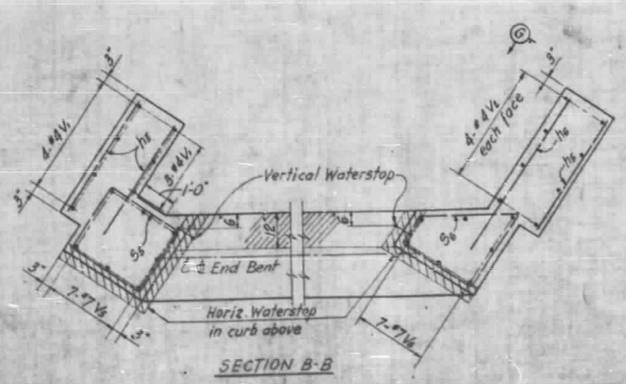

VIEW G-G

## BILL OF MATERIAL

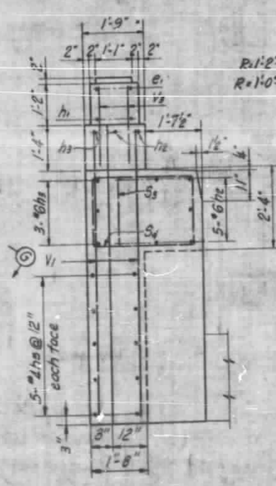
END BENT #2

| BAR | NO | SIZE | TYPE | LENGTH | WEIGHT |
|---|---|---|---|---|---|
| b1 | 8 | #11 | 2 | 27'-4" | 1151 |
| b2 | 8 | #4 | Str. | 24'-4" | 130 |
| b3 | 10 | #4 | Str. | 2'-2" | 15 |
| b4 | 9 | #6 | 1 | 5'-3" | 71 |
| b5 | 6 | #6 | 8 | 11'-9" | 106 |
| b6 | 4 | #8 | Str. | 25'-0" | 267 |
| b7 | 8 | #11 | 2 | 17'-2" | 730 |
| b8 | 4 | #11 | Str. | 23'-4" | 296 |
| e1 | 4 | #4 | 7 | 5'-2" | 14 |
| h1 | 4 | #4 | Str. | 3'-5" | 9 |
| h2 | 7 | #6 | Str. | 4'-8" | 49 |
| h3 | 8 | #6 | Str. | 3'-9" | 45 |
| h4 | 10 | #6 | Str. | 5'-6" | 83 |
| h5 | 16 | #4 | Str. | 3'-9" | 40 |
| h6 | 6 | #4 | Str. | 4'-6" | 18 |
| s1 | 10 | #4 | 4 | 7'-3" | 48 |
| s2 | 38 | #4 | 3 | 2'-11" | 72 |
| s3 | 3 | #4 | 5 | 9'-4" | 19 |
| s4 | 6 | #4 | 5 | 10'-8" | 43 |
| s5 | 4 | #4 | 5 | 9'-8" | 26 |
| s6 | 5 | #4 | 6 | 9'-1" | 30 |
| s7 | 15 | #4 | 4 | 8'-9" | 82 |
| s8 | 13 | #4 | 4 | 9'-11" | 86 |
| V1 | 7 | #4 | Str. | 8'-1" | 38 |
| V2 | 8 | #4 | Str. | 9'-7" | 51 |
| V3 | 12 | #4 | Str. | 2'-3" | 18 |
| V4 | 7 | #4 | Str. | 2'-6" | 12 |
| V5 | 7 | #7 | 1 | 8'-5" | 120 |
| V6 | 7 | #7 | 1 | 9'-11" | 142 |
| Reinforcing Steel | | | | lbs. | 4015 |
| * Class "A" Concrete | | | | cu. yds. | 24.5 |
| 12 BP53 Steel Piles | | | | No. | 10 |
| 12 BP53 Steel Piles | | | | lin. ft. | 330 |

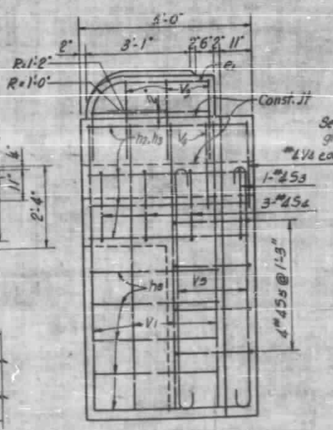
* Concrete displaced by pile heads has been deducted.



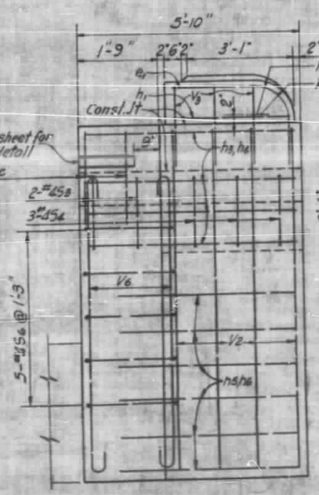

SECTION B-B



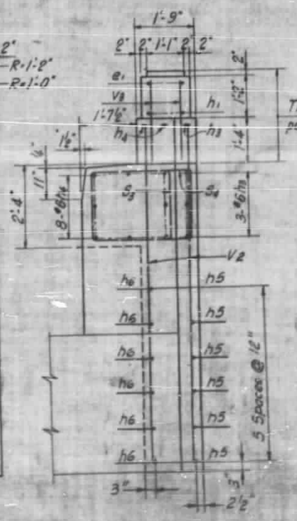

VIEW D-D




VIEW C-C




VIEW E-E




VIEW F-F

PROJECT NO. B-19002
HENDERSON-BUNCOMBE COUNTY
STATION 1656+37 L^NB

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

END BENT 2

REVISIONS
DATE
BY