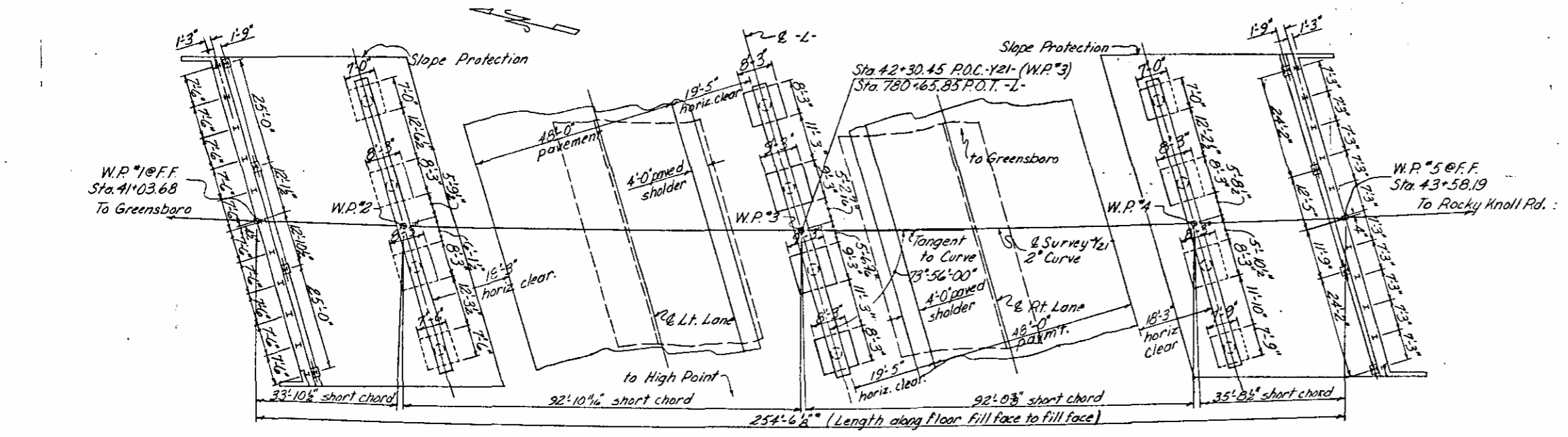


SECTION ALONG & SURVEY
Bent Sections at Right Angle to Bents

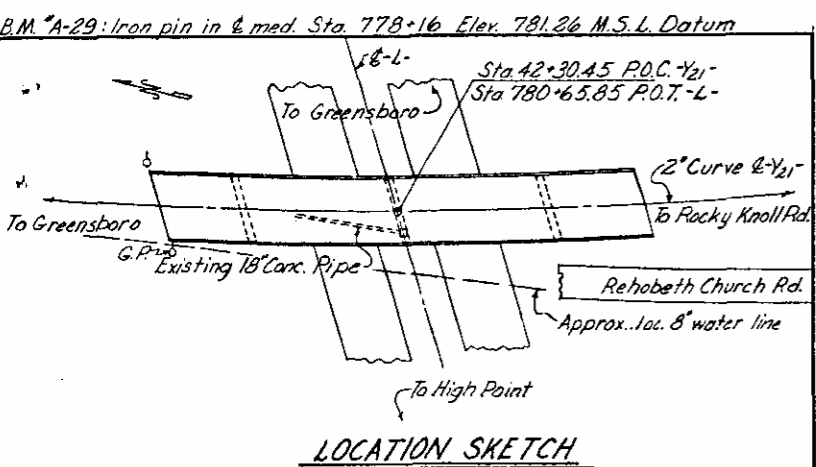
GENERAL NOTES

- Assumed Live Load** - HS 20-44 or alternate loading
- Reference to S-N Sheet** - For other design data and General Notes see sheet 5-N.
- Pile Lengths** - The Contractor will be responsible for determining lengths of piles required. See Special Provisions.
- Pile Capacities** - All piles to be driven to a minimum bearing capacity of 30 Tons each.
- Excavation Before Driving Piles** - The Contractor will be required to excavate through 10 feet of fill at End Bents "1" and "2" before driving piles. See sheet 5-N.
- Class of Concrete** - Class AA concrete shall be used in the Superstructure and Class A concrete shall be used in all other portions of the structure. See Special Provisions and Specifications.
- Linseed Oil Concrete Protection** - See Special Provisions for method of curing bridge deck and mixing and applying the linseed oil solution.
- For field painting structural steel**, see Spec. Prov.



PLAN
*Dist. along arc

- No Rubbed Surfaces** - No rubbed surface finish will be required on any part of the structure except as specified in the Special Provisions.
- Computed Foundation Load** - Computed foundation load for Bents "1, 2, & 3" equals 3 1/2 tons per sq. ft.
- Beginning Work** - Work is not to be started on End Bents No.1 and 2, and Bents No.1 and 3 until after roadway fill has been placed by roadway contractor. See Special Provisions for requirements for completion of Bent No.2 as the first order of work.
- Scarifying** - The roadway contractor will be required to remove the existing pavement and scarify the roadbed to a minimum depth of 2.0' within the area of E. Bent "2" piles, as directed by the engineer.
- Traffic** - Traffic shall be maintained on I-85 at all times during construction of this structure. Rehobeth Church road traffic shall be detoured until this structure is completed. See Special Provisions.
- Unclassified Structure Excavation** - Unclassified structure excavation for Bents No.1 and 3 shall be measured from the surface of the roadway fill. Unclassified structure excavation for Bent No.2 shall be measured from the natural ground line.

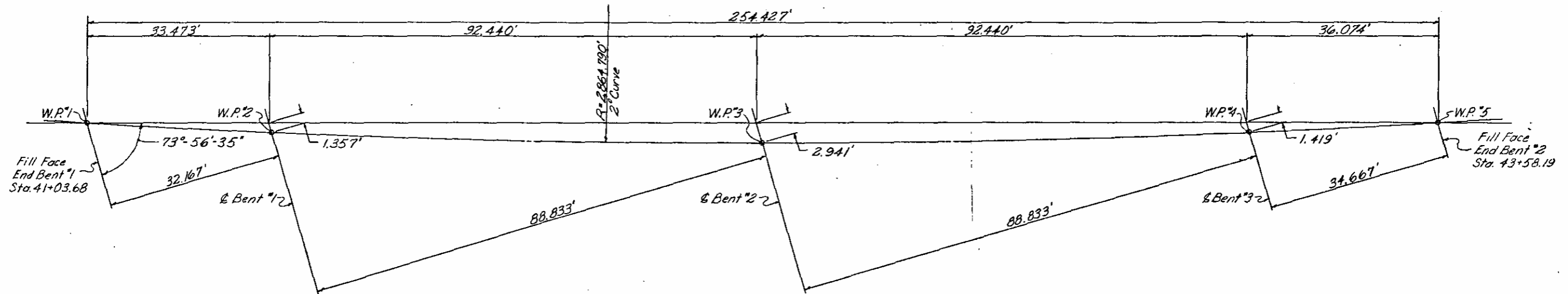


LOCATION SKETCH

PROJECT No. 8.1531603
GUILFORD COUNTY
STATION: 780+65.85 -L-
42+30.45 -Y21-

#225

| | | | | | |
|---|----|------|-----|----|------------------|
| STATE OF NORTH CAROLINA | | | | | |
| STATE HIGHWAY COMMISSION | | | | | |
| RALEIGH | | | | | |
| GENERAL DRAWING FOR | | | | | |
| BRIDGE OVER I-85 ON | | | | | |
| REHOBETH CHURCH RD. BETWEEN | | | | | |
| GREENSBORO & ROCKY KNOLL RD. | | | | | |
| February 1970 | | | | | |
| REVISIONS | | | | | |
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 3 | | |
| 2 | | | 4 | | |
| | | | | | SHEET NO. 5-130 |
| | | | | | TOTAL SHEETS 256 |



GEOMETRY OF LONG CHORD

Note: All Bents are parallel

TOTAL BILL OF MATERIAL

| | Class A-A Concrete | Class A Concrete | Structural Steel | 12 H 53 Steel Piles | Reinforcing Steel | Unclassified Structure Excavation | 4' Conc. Slope Prot. | Linseed Oil Conc. Prot. | 1-Bar Metal Rail |
|-------------------|--------------------|------------------|------------------|---------------------|-------------------|-----------------------------------|----------------------|-------------------------|------------------|
| | Cu. Yds | Cu. Yds | Approx. lbs. | No. Lin. Ft. | lbs. | Cu. Yds. | Sq. Yds | Gal. | Lin. Ft. |
| Superstructure | 506.9 | | 591,300 | | 130,950 | | | 41 | 498.28 |
| End Bent No. 1 | | 27.3 | | 15 375 | 5,594 | | 385 | | |
| Bent No. 1 | | 72.8 | | | 12,917 | 200 | | | |
| Bent No. 2 | | 85.2 | | | 13,436 | 140 | | | |
| Bent No. 3 | | 73.3 | | | 13,220 | 200 | | | |
| End Bent No. 2 | | 26.6 | | 15 375 | 5,413 | | 430 | | |
| Curved End Blocks | 0.8 | | | | 85 | | | | |
| Total | 507.7 | 285.2 | 591,300 | 30 750 | 131,615 | 540 | 815 | 41 | 498.28 |

PROJECT No. 8.1531603

GUILFORD COUNTY

STATION: 780+65.85-L-
42+30.45-Y21-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
**LONG CHORD & BILL OF MATERIAL
BRIDGE OVER I-85**

| REVISIONS | | | | | | SHEET NO. 5-181 |
|-----------|----|------|-----|----|------|---------------------|
| NO. | BY | DATE | NO. | BY | DATE | |
| 1 | | | 2 | | | TOTAL SHEETS 256 |
| 2 | | | 4 | | | |

STA 240 RT 40-93 COLLAR ELEV 783.0
BORING LOCATION (STA) 40-93 COLLAR ELEV 783.0
BORING NO. EB1-A BENT NO. EB1 TOTAL DEPTH 15.5

| ELEV | DEPTH | BLOW COUNT | SAMP | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|------|-----------------------------|--------|-----------------|
| 790.0 | 0 | | | ROCK LEDGES & SILTY DEBRIS | | |
| 783.0 | 7.0 | | | GREEN F. SANDY SILT, MICALS | | |
| 775.2 | 14.8 | | | AUGER REFUSAL @ 15.5' | | |
| 770.2 | 19.8 | | | | | |
| 767.5 | 22.5 | | | | | |

STA 240 RT 41-00 COLLAR ELEV 774.5
BORING LOCATION (STA) 41-00 COLLAR ELEV 774.5
BORING NO. EB1-C BENT NO. EB1 TOTAL DEPTH 10.1

| ELEV | DEPTH | BLOW COUNT | SAMP | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|------|----------------------------------|--------|-----------------|
| 790.0 | 0 | | | GREEN F. SANDY SILT, SILT MICALS | | |
| 774.6 | 5.6 | | | MINI ROCK LAYER @ 5.6' | | |
| 764.5 | 15.7 | | | AUGER REFUSAL @ 10.1' | | |
| | | | | HARD ROCK | | |

STA 240 RT 41-069 COLLAR ELEV 775.7
BORING LOCATION (STA) 41-069 COLLAR ELEV 775.7
BORING NO. EB1-B BENT NO. EB1 TOTAL DEPTH 15.1

| ELEV | DEPTH | BLOW COUNT | SAMP | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|------|--------------------------|--------|-----------------|
| 790.0 | 0 | | | GRAY SILTY SAND, A-2(4) | | |
| 775.7 | 4.7 | | | GREEN SILTY SAND, A-2(4) | | |
| 772.7 | 7.3 | | | AUGER REFUSAL @ 15.1' | | |
| 768.2 | 11.8 | | | | | |
| 763.2 | 16.8 | | | | | |
| 760.6 | 19.4 | | | | | |

SOIL TEST RESULTS

| SAMP | LOC. | DEPTH | A.A.S. CLASS | PLAS | C | % BY WEIGHT | NATURAL MOISTURE |
|------|-------|-----------|--------------|------|----|-------------------------|------------------|
| | | | | | | C.S.D. F.S.D. SILT CLAY | |
| 1 | EB1-A | 0-7 | A-4(8) | 28 | 3 | 7 | 15 60 12 |
| 3 | EB1-B | 3.5-4.5 | A-2(4) | 20 | NP | 45 | 50 27 6 |
| 4 | | 8.0-9.0 | A-2(4) | 19 | NP | 2 | 35 37 25 |
| 5 | | 13.0-13.4 | A-4(1) | 25 | NP | 5 | 33 36 26 |
| 2 | BI-A | 7.9-8.9 | A-2(4) | 16 | NP | 0 | 29 43 23 |
| 6 | BI-B | 7.9-8.9 | A-4(2) | 21 | NP | 0 | 32 33 30 |

FOUNDATION LOG SHEET

ABBREVIATIONS

| | | | |
|---------|-----------|-------|---------------|
| BLK. | BLACK | MAS | MASSIVE |
| BRN. | BROWN | MOI. | MOIST |
| BLDR. | BOULDER | MLC. | MULTICOLORED |
| CLY. | CLAY | ORG. | ORGANIC |
| CL. | CLAYEY | PL. | PLASTIC |
| CLS. | CLAYSTONE | PLI. | PLASTIC LIQD. |
| C. | COARSE | QTE. | QUARTZ |
| CMPT. | COMPACT | SAT. | SATURATED |
| DNS. | DENSE | SAP. | SANDOLITE |
| F. | FINE | SDY. | SANDY |
| FRAC. | FRACTURED | J.S. | SANDSTONE |
| GRVL. | GRAVEL | SD. | SAND |
| GVLY. | GRAVELLY | SILT. | SILT |
| GR. | GRAY | SILTY | SILTY |
| GRT. | GRANITE | SLTS. | SILTSTONE |
| H.D. | HARD | SLCS. | SLICENSIDES |
| L.O. | LOOSE | SLL. | SLIGHTLY |
| LYD. | LAYERED | STF. | STIFF |
| LYS. | LAYERS | V. | VERY |
| M. | MEDIUM | W. | WITH |
| MICALS. | MICACEOUS | YEL. | YELLOW |
| MX. | MUCK | | |

STA 240 RT 41-331 COLLAR ELEV 784.3
BORING LOCATION (STA) 41-331 COLLAR ELEV 784.3
BORING NO. BI-A BENT NO. BI TOTAL DEPTH 15.9

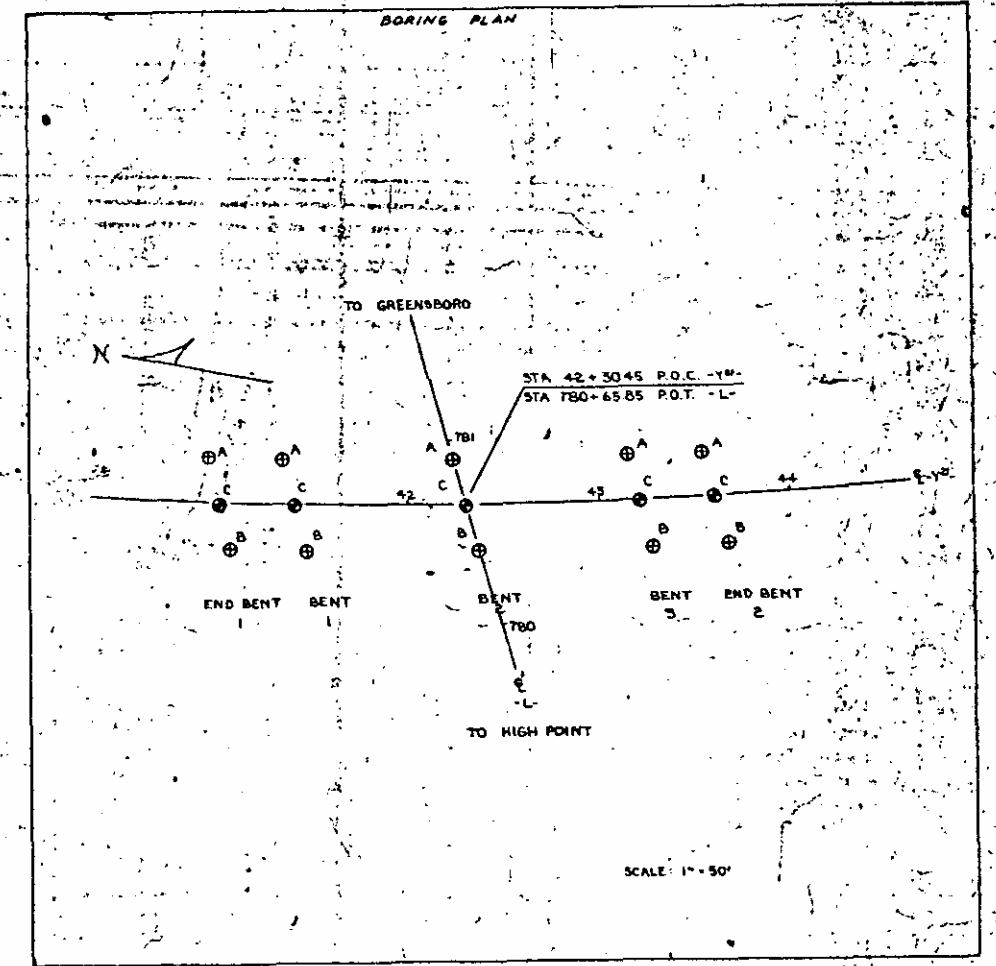
| ELEV | DEPTH | BLOW COUNT | SAMP | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|------|---------------------------------|--------|-----------------|
| 790.0 | 0 | | | ROCK EDGES & SILTY SAND, MICALS | | |
| 784.3 | 5.7 | | | GREEN SILTY SAND, MICALS | | |
| 776.9 | 13.1 | | | AUGER REFUSAL @ 13.9' | | |
| 772.1 | 17.9 | | | | | |
| 770.0 | 20.0 | | | | | |
| 768.4 | 21.6 | | | | | |

STA 240 RT 41-400 COLLAR ELEV 775.8
BORING LOCATION (STA) 41-400 COLLAR ELEV 775.8
BORING NO. BI-C BENT NO. BI TOTAL DEPTH 11.5

| ELEV | DEPTH | BLOW COUNT | SAMP | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|------|-------------------------------------|--------|-----------------|
| 790.0 | 0 | | | GREENISH F. SANDY SILT, SILT MICALS | | |
| 780.0 | 10.0 | | | AUGER REFUSAL @ 11.5' | | |
| 775.8 | 14.2 | | | | | |
| 770.0 | 20.0 | | | | | |
| 764.3 | 25.7 | | | | | |

STA 240 RT 41-469 COLLAR ELEV 778.0
BORING LOCATION (STA) 41-469 COLLAR ELEV 778.0
BORING NO. BI-B BENT NO. BI TOTAL DEPTH 18.0

| ELEV | DEPTH | BLOW COUNT | SAMP | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|------|----------------------------------|--------|-----------------|
| 790.0 | 0 | | | CONCRETE DEBRIS | | |
| 780.0 | 10.0 | | | GREEN SILTY SAND, MICALS, A-4(2) | | |
| 778.0 | 12.0 | | | AUGER REFUSAL @ 18.0' | | |
| 771.5 | 18.5 | | | | | |
| 766.5 | 23.5 | | | | | |
| 761.5 | 28.5 | | | | | |
| 760.9 | 29.1 | | | | | |



NOTES

- STANDARD PENETRATION TEST BORING.
- AUGER BORING.
- GROUND WATER STATIC LEVEL AFTER 24 HOURS.
- B.P.F. - BLOWS PER FOOT - STANDARD PENETRATION TEST.

| SOIL MOISTURE | SOIL CONSISTENCY | CLASSIFICATION |
|---------------|------------------|------------------|
| DRY 0-10% | LOOSE 0-10M | VERY LOOSE 0-10M |
| MOIST 10-20% | SOFT 2-4M | LOOSE 3-10M |
| WET 30-50% | M. STIFF 5-8M | M. DENSE 4-8M |
| WATER BEARING | STIFF 4-15M | DENSE 2-3M |
| | STIFF 16-30M | DENSE 3-4M |
| | HARD 31-45M | DENSE 4-5M |
| | Y. HARD 46-60M | |

THE LOGS SHOWN ON THIS SHEET ARE TAKEN FROM FIELD SURVEY DATA AND REPRESENTS THE BEST INFORMATION AVAILABLE. FIELD PROCEDURES ARE IN ACCORDANCE WITH A.S.T.M. AND A.A.S.H.O. STANDARDS.

NORTH CAROLINA STATE HIGHWAY COMMISSION DEPARTMENT OF LOCATIONS & SURVEYS

PROJECT NO. 81531603
GUILFORD COUNTY
ROUTE 1-85
BRIDGE ON Y-21
OVER 1-85

ANALYSIS & REPORT BY J.S. BRITT
SURVEY BY J.S. BRITT
DRAWN BY B.J. CRUNCH
CHECKED BY W.D. BINGHAM

STA 240 LT 42.231
BORING LOCATION (STA) 240-42.231 COLLAR ELEV. 779.8
BORING NO. B2-BENT NO. B2 TOTAL DEPTH 15.9

| ELEV | DEPTH | BLOW COUNT | SAMP NO | SOIL DESCRIPTION | MOIST % | NOTES & REMARKS |
|--------|-------|------------|---------|--|---------|-----------------|
| 7798.0 | 0 | | | | | |
| 7797.0 | 1.0 | | | | | |
| 7795.5 | 2.5 | 21 | | MED GRAY & LT GRAY SILTY SAND WITH BROWN SILTY CLAY AND SAND-SIZE CHIPS, SPARS OF QUARTZ. | | |
| 7693.0 | 10.5 | | | SAME AS ABOVE BUT MORE FINE SAND. | | |
| 7639.0 | 15.9 | | | CONCRETE SEAL ADHESIVE ON STEEL AUGER. AUGER REFUSAL @ 15.0' | | |
| | | | | HARD ROCK | | |

STA 240 RT 42.300
BORING LOCATION (STA) 240-42.300 COLLAR ELEV. 779.7
BORING NO. B2-C BENT NO. B2 TOTAL DEPTH 22.6

| ELEV | DEPTH | BLOW COUNT | SAMP NO | SOIL DESCRIPTION | MOIST % | NOTES & REMARKS |
|--------|-------|------------|---------|------------------|---------|-----------------|
| 7797.0 | 0 | | | | | |
| 7797.0 | 2.0 | | | | | |
| 7797.0 | 6.0 | | | | | |
| 7700.0 | 12.0 | | | | | |
| 7612.0 | 18.5 | | | | | |
| 7600.0 | 22.6 | | | | | |
| | | | | HARD ROCK | | |

STA 240 RT 42.300
BORING LOCATION (STA) 240-42.300 COLLAR ELEV. 779.8
BORING NO. B2-B BENT NO. B2 TOTAL DEPTH 15.0

| ELEV | DEPTH | BLOW COUNT | SAMP NO | SOIL DESCRIPTION | MOIST % | NOTES & REMARKS |
|--------|-------|------------|---------|------------------|---------|-----------------|
| 7798.0 | 0 | | | | | |
| 7772.0 | 2.6 | | | | | |
| 7722.0 | 16.0 | | | | | |
| 7700.0 | 18.0 | | | | | |
| 7648.0 | 15.0 | | | | | |
| | | | | HARD ROCK | | |

SOIL TEST RESULTS

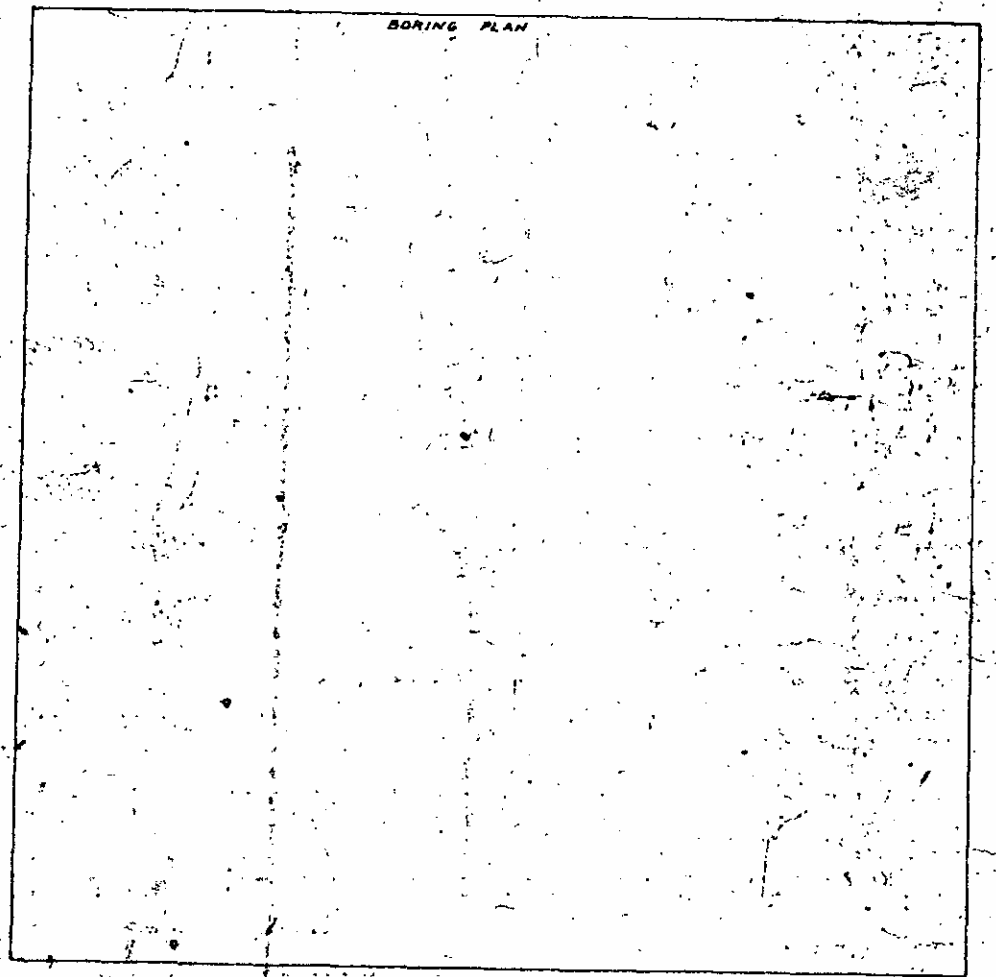
| SAMP | LOC. | DEPTH | A.A.S. CLASS | WGT | WATER | % BY WEIGHT | NATURAL MOISTURE |
|------|------|-----------|--------------|-----|-------|-------------|------------------|
| | | | | | | F.S.D. | |
| 21 | B2-A | 6.4-7.0 | A-4(0) | 20 | 35 | 43 | 26 |
| 11 | B3-A | 3.3-4.3 | A-2-4(0) | 26 | 5 | 48 | 22 |
| 12 | | 8.2-8.6 | A-2-4(0) | 25 | MP | 57 | 18 |
| 13 | | 13.2-14.2 | A-6(0) | 39 | LI | 39 | 28 |
| 14A | | 18.2-18.7 | A-4(2) | 27 | RD | 26 | 25 |
| 14B | | 18.7-19.2 | A-4(2) | 34 | 6 | 32 | 27 |
| 15 | | 22.8-23.5 | A-4(0) | 30 | 3 | 39 | 42 |
| 16 | B3-B | 3.3-4.3 | A-1-6(0) | 45 | 19 | 0 | 11 |
| 17 | | 8.3-9.3 | A-4(4) | 35 | 7 | 17 | 25 |
| 18 | | 10.7-11.7 | A-1-6(0) | 44 | 18 | 32 | 16 |
| 19 | | 13.2-14.2 | A-4(5) | 31 | 3 | 0 | 26 |
| 20 | | 17.7-18.1 | A-4(6) | 30 | NP | 0 | 13 |

SHEET NO. 2 TOTAL SHEETS

FOUNDATION LOG SHEET

ABBREVIATIONS

| | | | |
|-------|-----------|-------|---------------|
| BLK. | BLACK | MAS | MASSIVE |
| BRN. | BROWN | MOI | MULTICOLORED |
| BLOD | BOULDER | MTC. | MULTICOLORED |
| CLY | CLAY | ORG. | ORGANIC |
| CLY | CLAY | PL. | PLASTIC |
| C | CLAYSTONE | PLI | PLASTIC INTER |
| | COARSE | QZ | QUARTZ |
| | COMPACT | SAT. | SATURATED |
| | DENSE | SAP | SAPROLITE |
| | FINE | SDY | SANDY |
| FRAC. | FRACTURED | S.S. | SANDSTONE |
| GRAV. | GRAVEL | SD | SAND |
| GVLY | GRAVELLY | SLT. | SILT |
| GR | GRAY | SILTY | SILTY |
| GRT | GRANITE | SLS. | SILTSTONE |
| HD | HARD | SLS. | SILTSTONE |
| LD | LOOSE | SLS. | SILTSTONE |
| LYO. | LAYERED | SLS. | SILTSTONE |
| LYS | LAYERS | V. | VERY |
| M | MEDIUM | WI | WITH |
| MICAS | MICACEOUS | YEL. | YELLOW |
| MK | MUCK | | |



STA 240 LT 43.131
BORING LOCATION (STA) 240-43.131 COLLAR ELEV. 784.7
BORING NO. B3-A BENT NO. B3 TOTAL DEPTH 23.5

| ELEV | DEPTH | BLOW COUNT | SAMP NO | SOIL DESCRIPTION | MOIST % | NOTES & REMARKS |
|--------|-------|------------|---------|--|---------|-----------------|
| 784.7 | 0 | | | | | |
| 781.9 | 2.8 | 11 | | LT GRAY & LT BRN SILTY SAND SPARS OF GRANITIC LATE-40 | 10.9 | |
| 780.0 | 4.7 | | | | | |
| 7770.0 | 12.7 | | | | | |
| 7720.0 | 20.7 | | | | | |
| 7700.0 | 22.6 | | | | | |
| 7670.0 | 17.7 | | | | | |
| 7619.0 | 22.6 | | | | | |
| 7600.0 | 23.5 | | | | | |
| | | | | BORING TERMINATED @ 23.5' | | |

STA 240 RT 43.200
BORING LOCATION (STA) 240-43.200 COLLAR ELEV. 781.4
BORING NO. B3-C BENT NO. B3 TOTAL DEPTH 48.0

| ELEV | DEPTH | BLOW COUNT | SAMP NO | SOIL DESCRIPTION | MOIST % | NOTES & REMARKS |
|--------|-------|------------|---------|---------------------------|---------|-----------------|
| 781.4 | 0 | | | | | |
| 780.0 | 1.4 | | | | | |
| 7764.0 | 5.0 | | | | | |
| 7700.0 | 11.4 | | | | | |
| 7600.0 | 21.4 | | | | | |
| 7504.0 | 31.4 | | | | | |
| 7416.0 | 40.0 | | | | | |
| 7334.0 | 48.0 | | | | | |
| 7300.0 | 51.4 | | | | | |
| | | | | BORING TERMINATED @ 48.0' | | |

STA 240 RT 43.260
BORING LOCATION (STA) 240-43.260 COLLAR ELEV. 781.1
BORING NO. B3-B BENT NO. B3 TOTAL DEPTH 23.2

| ELEV | DEPTH | BLOW COUNT | SAMP NO | SOIL DESCRIPTION | MOIST % | NOTES & REMARKS |
|--------|-------|------------|---------|---------------------------|---------|-----------------|
| 781.1 | 0 | | | | | |
| 780.0 | 1.1 | | | | | |
| 7785.0 | 2.8 | | | | | |
| 7775.0 | 3.8 | | | | | |
| 7711.0 | 10.3 | | | | | |
| 7700.0 | 11.3 | | | | | |
| 7686.0 | 12.3 | | | | | |
| 7634.0 | 17.3 | | | | | |
| 7584.0 | 22.3 | | | | | |
| | | | | BORING TERMINATED @ 23.2' | | |

NOTES

- STANDARD PENETRATION TEST BORING.
- AUGER BORING.
- GROUND WATER - STATIC LEVEL AFTER 24 HOURS.
- B.P.F. - BLOW PER FOOT - STANDARD PENETRATION TEST.

| SOIL MOISTURE | SOIL CONSISTENCY |
|---------------|-------------------------------|
| DRY 0.00% | VERY STIFF 8-10 MP |
| MOIST 10.00% | STIFF 5-8 MP |
| WET 30.00% | VERY STIFF 3-5 MP |
| WATER BEARING | STIFF 1-3 MP |
| | VERY STIFF 0.5-1 MP |
| | STIFF 0.2-0.5 MP |
| | VERY STIFF 0.1-0.2 MP |
| | STIFF 0.05-0.1 MP |
| | VERY STIFF 0.02-0.05 MP |
| | STIFF 0.01-0.02 MP |
| | VERY STIFF 0.005-0.01 MP |
| | STIFF 0.002-0.005 MP |
| | VERY STIFF 0.001-0.002 MP |
| | STIFF 0.0005-0.001 MP |
| | VERY STIFF 0.0002-0.0005 MP |
| | STIFF 0.0001-0.0002 MP |
| | VERY STIFF 0.00005-0.0001 MP |
| | STIFF 0.00002-0.00005 MP |
| | VERY STIFF 0.00001-0.00002 MP |

THE LOG SHOWN ON THIS SHEET WAS TAKEN FROM FIELD SURVEY DATA AND REPRESENTS THE BEST INFORMATION AVAILABLE. FIELD PROCEDURES ARE IN ACCORDANCE WITH A.S.T.M. AND A.A.S.H.O. STANDARDS.

NORTH CAROLINA STATE HIGHWAY COMMISSION
DEPARTMENT OF LOCATIONS & SURVEYS

PROJECT NO. 81531603
GUILFORD COUNTY
ROUTE 1-85
BRIDGE ON y.21
OVER 1-85

ANALYSIS & REPORT BY J.S. BRITT
SURVEY BY J.S. BRITT
DRAWN BY B.L. CROUCH

SHEET NO. 5-113
TOTAL SHEETS 107

STA 240+11 43-531

BORING LOCATION (STA) BORING NO. EB2 BENT NO. EB2 COLLAR ELEV. 782.2 TOTAL DEPTH 18.0

| ELEV. | DEPTH | BLOW COUNT | SAMP. NO. | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|-----------|--|--------|--------------------------|
| 782.4 | 0 | | | | | |
| 780.3 | 2.1 | 28-40 | 1 | BROWN SILTY SAND, GRAVELLY LEATHERED PERMATITE, 0-2% | | |
| 775.4 | 7.0 | 38-55 | 2 | GREEN MICACEOUS SILTY SAND (A-4(5)) | | |
| 770.4 | 12.0 | 28-35 | 3 | SAME AS ABOVE, VEINS OF FELDSPAR | | |
| 765.3 | 17.0 | | 4 | SAME AS ABOVE | | BORING TERMINATED @ 18.0 |

STA 240+11 43-60

BORING LOCATION (STA) BORING NO. EB2 BENT NO. EB2 COLLAR ELEV. 783.9 TOTAL DEPTH 80.2

| ELEV. | DEPTH | BLOW COUNT | SAMP. NO. | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|-----------|--------------------------------------|--------|--------------------------|
| 783.9 | 0 | | | | | |
| 780.0 | 3.9 | | | BROWN SILTY SANDS DENSE V. DENSE | | |
| 762.9 | 21.0 | | | DRK. BRN. S. SANDY SILT | | |
| 760.1 | 23.6 | | | FINE TO MED. TAN SLY SILT, M. DENSE | | |
| 752.9 | 31.0 | | | TAN FINE TO MED. SOY SILT, DENSE | | |
| 746.9 | 37.0 | | | TAN FINE TO MED. SOY SILT, V. DENSE | | |
| 736.4 | 47.7 | | | SAME AS ABOVE | | |
| 730.0 | 53.7 | | | SLIGHT INCREASE IN DENSITY, V. DENSE | | |
| 720.0 | 63.7 | | | | | |
| 710.0 | 73.7 | | | | | |
| 703.4 | 80.2 | | | | | BORING TERMINATED @ 80.2 |

STA 240+11 43-660

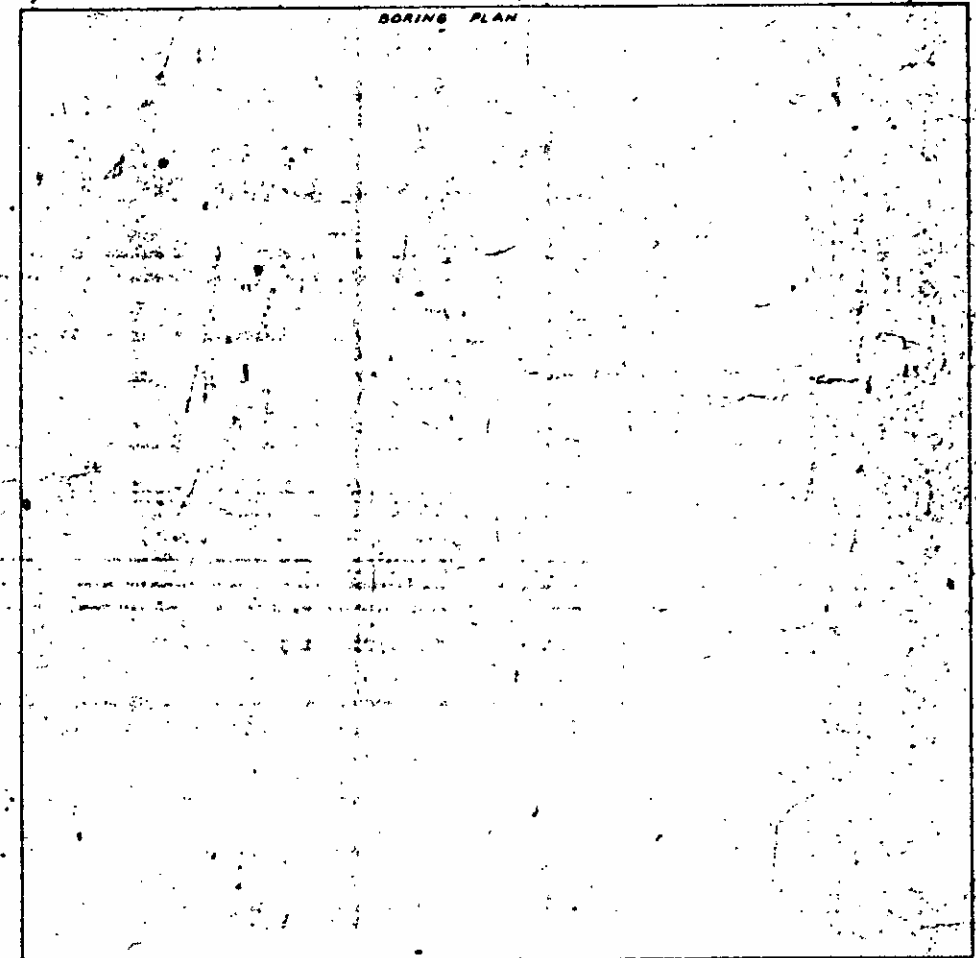
BORING LOCATION (STA) BORING NO. EB2 BENT NO. EB2 COLLAR ELEV. 781.6 TOTAL DEPTH 19.2

| ELEV. | DEPTH | BLOW COUNT | SAMP. NO. | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|-----------|---------------------------|--------|--------------------------|
| 781.6 | 0 | | | | | |
| 778.8 | 2.8 | | | GRAY TAN SILTY SAND | | |
| 774.0 | 7.6 | | | GREEN F. SILTY SAND, MKS. | | |
| 768.9 | 12.7 | | | SAME AS ABOVE | | |
| 765.0 | 15.7 | | | SAME AS ABOVE | | BORING TERMINATED @ 19.2 |

| SAMP. LOC. | DEPTH | A.A.S. NO. CLASS | LOW. UNIT | PLAS. INDEX | | % BY WEIGHT | | | | NATURAL MOISTURE |
|------------|-------|------------------|-----------|-------------|----------|-------------|------|------|-------|------------------|
| | | | | LIQ. IND. | PL. IND. | SAND | SILT | CLAY | WATER | |
| 7 | EB2-A | 24-34 | A-4(5) | 33 | 4 | 12 | 38 | 42 | 8 | |
| 8 | | 75-82 | A-4(5) | 32 | 4 | 20 | 36 | 34 | 10 | |
| 9 | | 12-0-124 | A-4(4) | 29 | 4 | 15 | 40 | 35 | 10 | |
| 10 | | 17-6-180 | A-4(2) | 25 | NP | 3 | 22 | 40 | 27 | 11 |

| | | | |
|-------|-----------|-------|---------------|
| BLK. | BLACK | MAS. | MASSIVE |
| BRN. | BROWN | MO. | MOIST |
| BDR. | BOULDER | MLC. | MULTI-COLORED |
| CLY. | CLAY | ORG. | ORGANIC |
| CT. | CLAYEY | PL. | PLASTIC |
| CLS. | CLAYSTONE | PLI. | PLASTIC INCL. |
| C. | COARSE | QTA. | QUARTZ |
| CMPT. | COMPACT | SAT. | SATURATED |
| DN. | DENSE | SAP. | SAPROLITE |
| F. | FINE | SDY. | SANDY |
| FRAC. | FRACTURED | S.S. | SANDSTONE |
| GRVL. | GRAVEL | SD | SAND |
| GVLY. | GRAVELLY | SLT. | SILT |
| GR. | GRAY | SLTY. | SILTY |
| GAT. | GRAVEL | SLTS. | SILTSTONE |
| HD. | HARD | SLCS. | SILTSHALE |
| LD. | LOOSE | SLG. | SLIGHTLY |
| LYD. | LAYERED | STF. | STIFF |
| LVS. | LAYERED | V. | VERY |
| M. | MEDIUM | WI. | WITH |
| MIC. | MICACEOUS | YEL. | YELLOW |
| ML. | MUCK | | |

BORING PLAN



BORING LOCATION (STA) BORING NO. BENT NO. COLLAR ELEV. TOTAL DEPTH

| ELEV. | DEPTH | BLOW COUNT | SAMP. NO. | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|-----------|------------------|--------|-----------------|
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BORING LOCATION (STA) BORING NO. BENT NO. COLLAR ELEV. TOTAL DEPTH

| ELEV. | DEPTH | BLOW COUNT | SAMP. NO. | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|-----------|------------------|--------|-----------------|
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BORING LOCATION (STA) BORING NO. BENT NO. COLLAR ELEV. TOTAL DEPTH

| ELEV. | DEPTH | BLOW COUNT | SAMP. NO. | SOIL DESCRIPTION | MOIST. | NOTES & REMARKS |
|-------|-------|------------|-----------|------------------|--------|-----------------|
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NOTES
 ○ STANDARD PENETRATION TEST BORING
 ● AUGER BORING
 ○ GROUND WATER STATIC LEVEL AFTER 24 HOURS
 ○ B.P.F. - BLOWS PER FOOT - STANDARD PENETRATION TEST

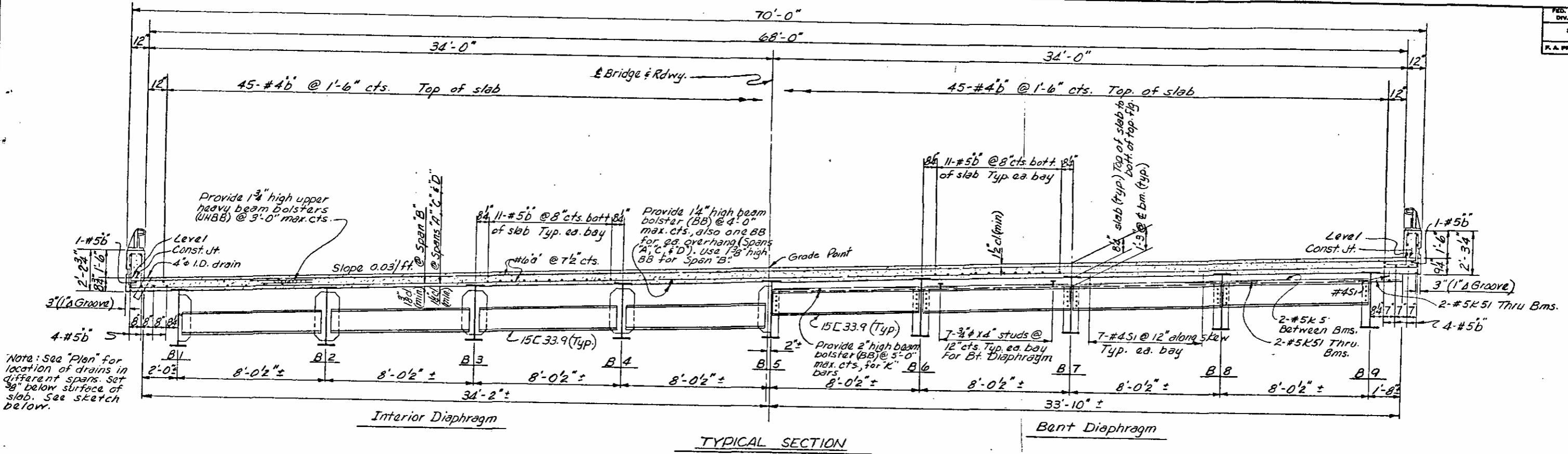
| SOIL MOISTURE | SOIL CONSISTENCY |
|----------------|-------------------|
| 25% WP - WATER | SC - 25% - STIFF |
| DRY 0-10% | V. LOOSE 0-10% |
| MOIST 10-20% | LOOSE 10-20% |
| WET 30-70% | M. STIFF 30-50% |
| WATER BEARING | V. STIFF 50-70% |
| | STIFF 70-80% |
| | VERY STIFF 80-90% |
| | VERY HARD 90-100% |
| | HARD 100% |

NORTH CAROLINA STATE HIGHWAY COMMISSION DEPARTMENT OF LOCATIONS & SURVEYS

PROJECT NO. B.1531603
 GUILFORD COUNTY
 ROUTE 1-85
 BRIDGE ON Y-21
 OVER 1-85

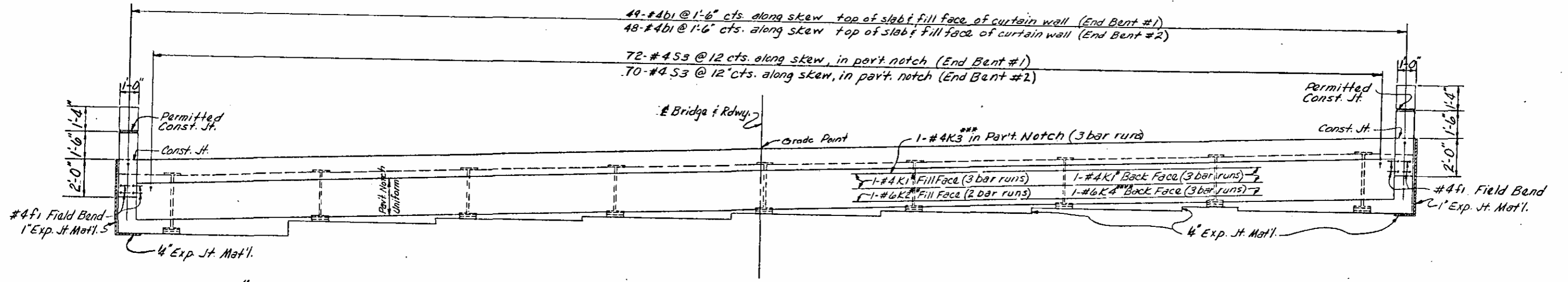
ANALYSIS & REPORT BY J.S. BRITT
 SURVEY BY J.S. BRITT
 DRAWN BY R.C. CROUCH
 CHECKED BY W.D. BINGHAM

SHEET NO. 3 TOTAL SHEETS 25



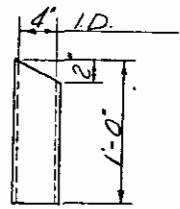
Note: See "Plan" for location of drains in different spans. Set 3/8" below surface of slab. See sketch below.

TYPICAL SECTION



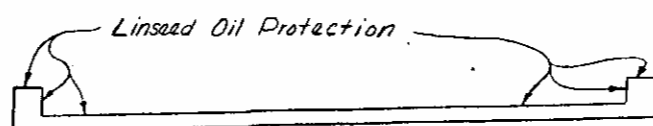
END VIEW (Showing Face of Curtain Wall)

- * K1 - E. Bent #1, K10 - E. Bent #2
- ** K2 - E. Bent #1, K20 - E. Bent #2
- *** K3 - E. Bent #1, K30 - E. Bent #2
- **** K4 - E. Bent #1, K40 - E. Bent #2



DRAIN DETAIL

Drains shall be of PVC plastic pipe. See sheet S-N. Top of floor drains to be set 3/8" below surface of slab. 3 drains required

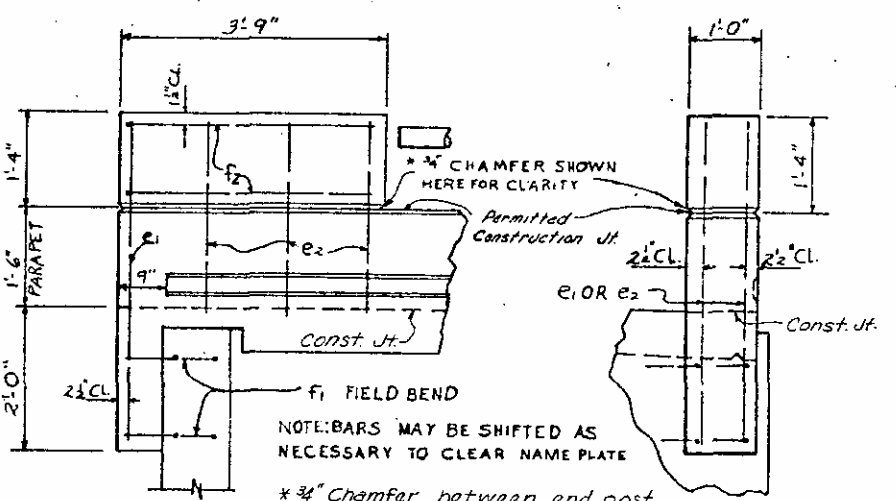


SKETCH SHOWING LINSEED OIL PROTECTION

NOTES
For design data and general notes, see sheet S-N.
For bars indicated and no bar mark shown, see "PLAN".

PROJECT No. 8.1531603
GUILFORD COUNTY
STATION: 780+65.25-1-

| | | | | | |
|--------------------------|----|------|-----|----|-------|
| STATE OF NORTH CAROLINA | | | | | |
| STATE HIGHWAY COMMISSION | | | | | |
| RALEIGH | | | | | |
| SUPERSTRUCTURE | | | | | |
| TYPICAL SECTION | | | | | |
| DECEMBER 1969 | | | | | |
| REVISIONS | | | | | |
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 2 | | |
| 2 | | | 4 | | |
| SHEET NO. | | | | | 5-185 |
| TOTAL SHEETS | | | | | 256 |

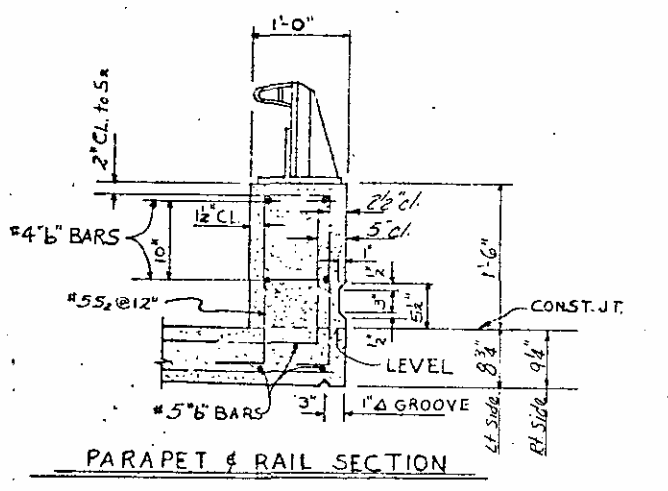


NOTE: BARS MAY BE SHIFTED AS NECESSARY TO CLEAR NAME PLATE

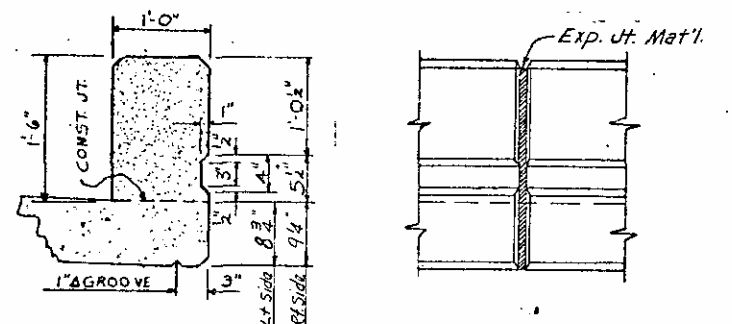
* 3/4" Chamfer between end post and parapet will be required only if the permitted const. jt. is used.

Note: For "C" divide & inserts for guard rail anchorage, see guard rail anchorage sheet.

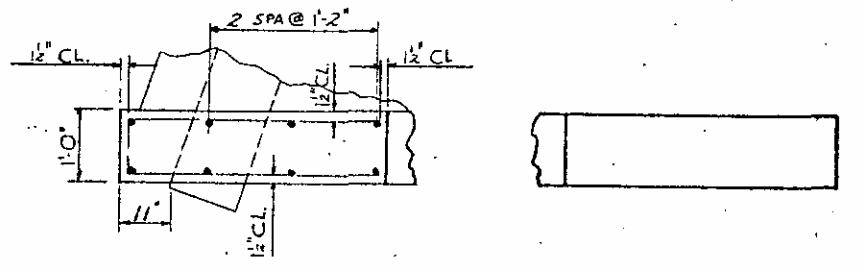
END POST DETAILS



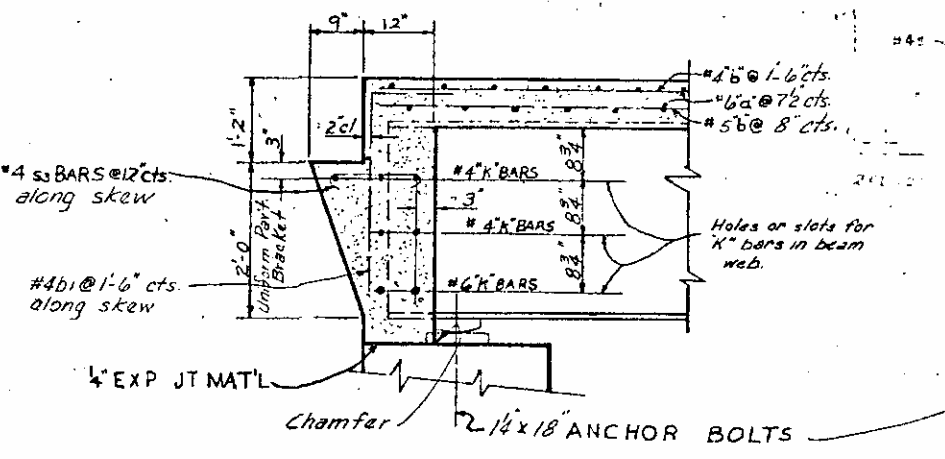
PARAPET & RAIL SECTION



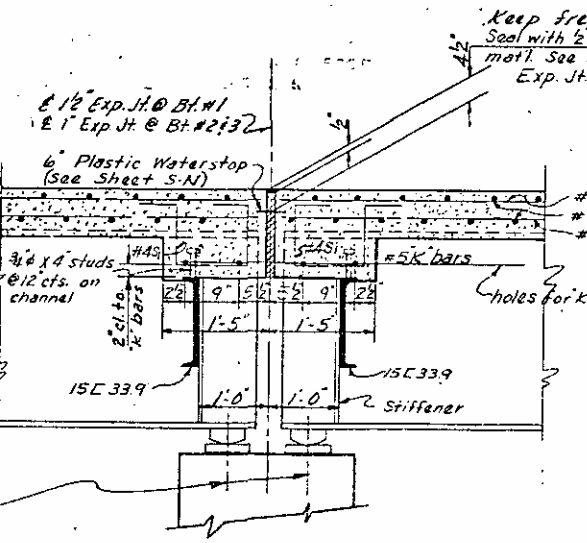
DETAIL RAIL BASE GROOVE



END POST DETAIL



SECTION A-A



SECTION B-B

REINFORCING STEEL IN THE PARAPET AND RAIL BASE SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

1. ALL REINFORCING STEEL SHALL BE GRADE 60 STEEL.

2. ALL REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

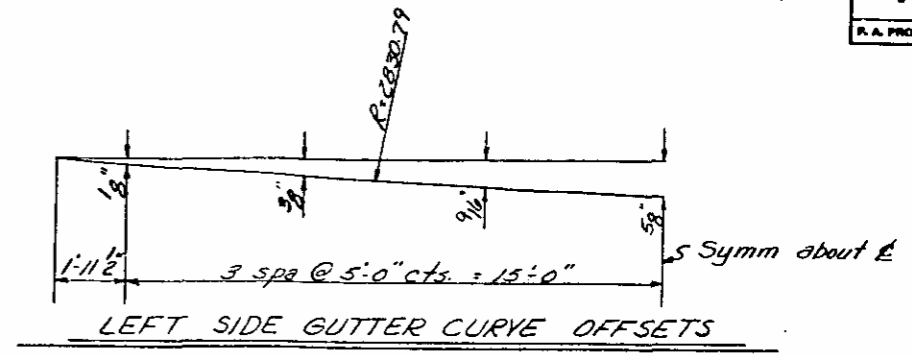
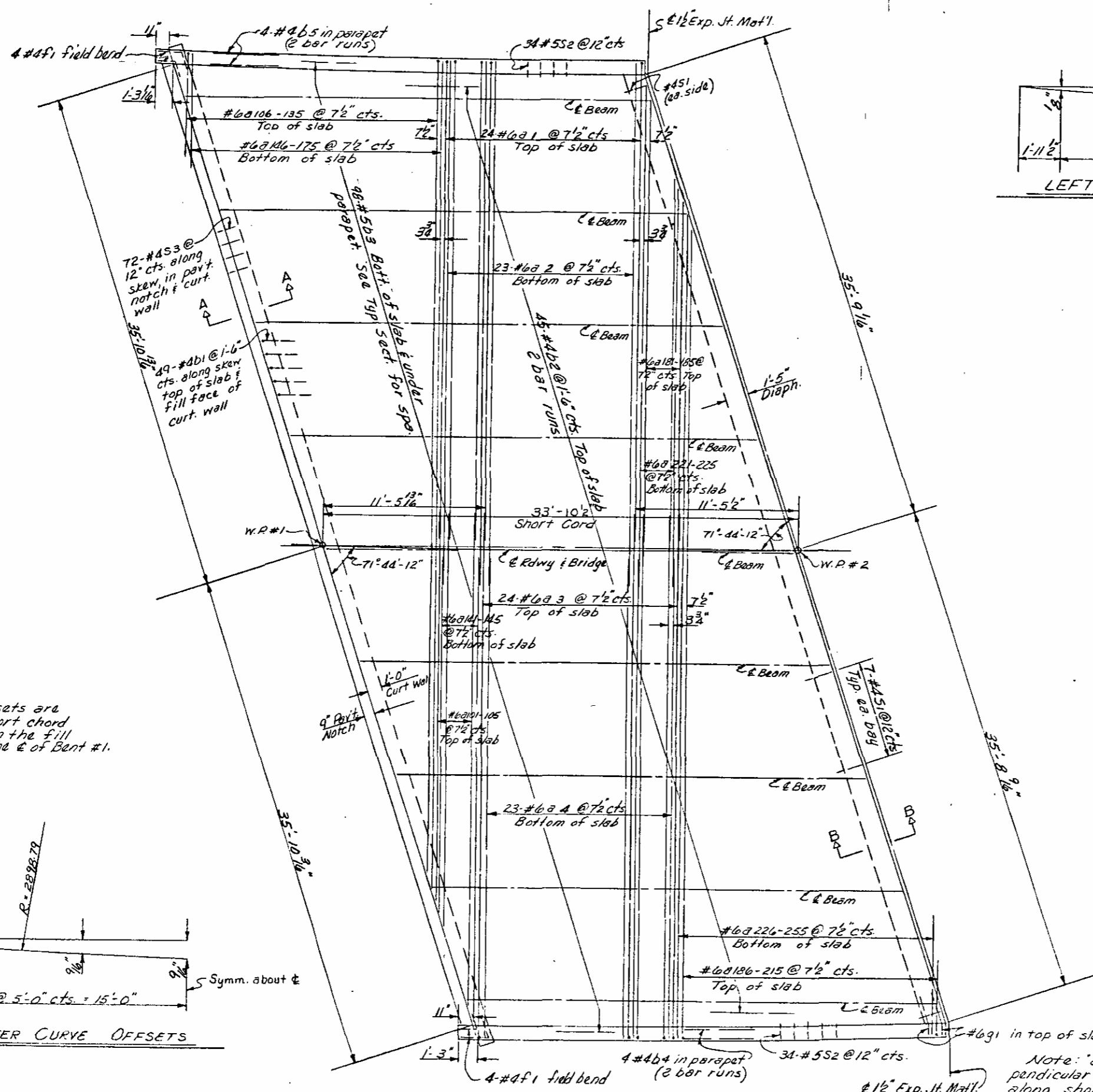
3. ALL REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

Keep free of concrete and seal with 1/2" hot poured rubber asphalt mat'l. See Special Provisions Exp. Jt. Mat'l. Above & Below

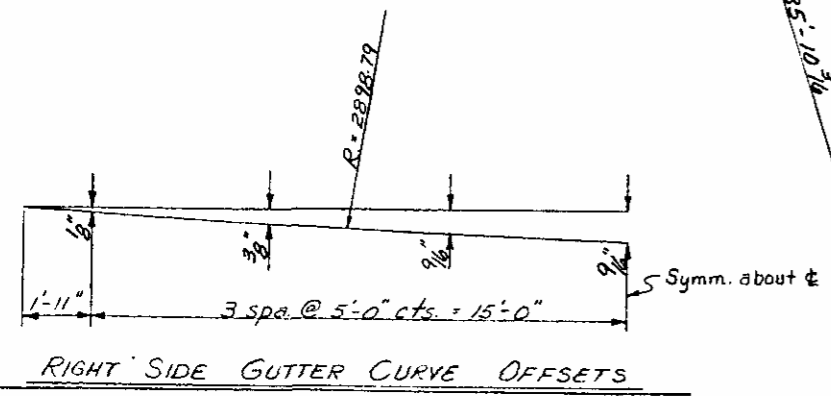
PROJECT NO. 8.1531603
 GUILFORD COUNTY
 STATION: 780+65.85 -L-

| | | | | | | |
|--------------------------|----|------|-----|----|------|------------------|
| STATE OF NORTH CAROLINA | | | | | | SHEET NO. 5 |
| STATE HIGHWAY COMMISSION | | | | | | |
| RALEIGH | | | | | | TOTAL SHEETS 252 |
| I-BM SUPERSTRUCTURE | | | | | | |
| ONE BAR METAL RAIL | | | | | | |
| DECEMBER 1969 | | | | | | |
| REVISIONS | | | | | | |
| NO. | BY | DATE | NO. | BY | DATE | |
| 1 | | | 3 | | | |
| 2 | | | 4 | | | |

| | |
|-------------------------------|------------------|
| SPECIAL | |
| DRAWN BY: U.K. PARRISH | DATE: DEC. 1967 |
| CHECKED BY: | DATE: |
| STANDARD | |
| DRAWN BY: H.O. BENTLEY, JR. | DATE: APRIL 1965 |
| CHECKED BY: G.C. DE FORD, JR. | DATE: JUNE 1965 |



Note: The curve offsets are measured from the short chord which is measured from the fill face of End Bent #1 to the center of Bent #1.

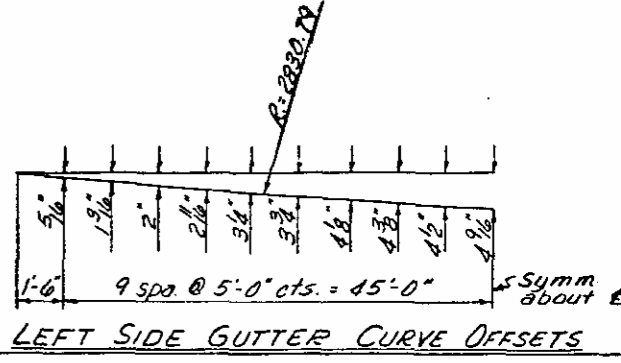
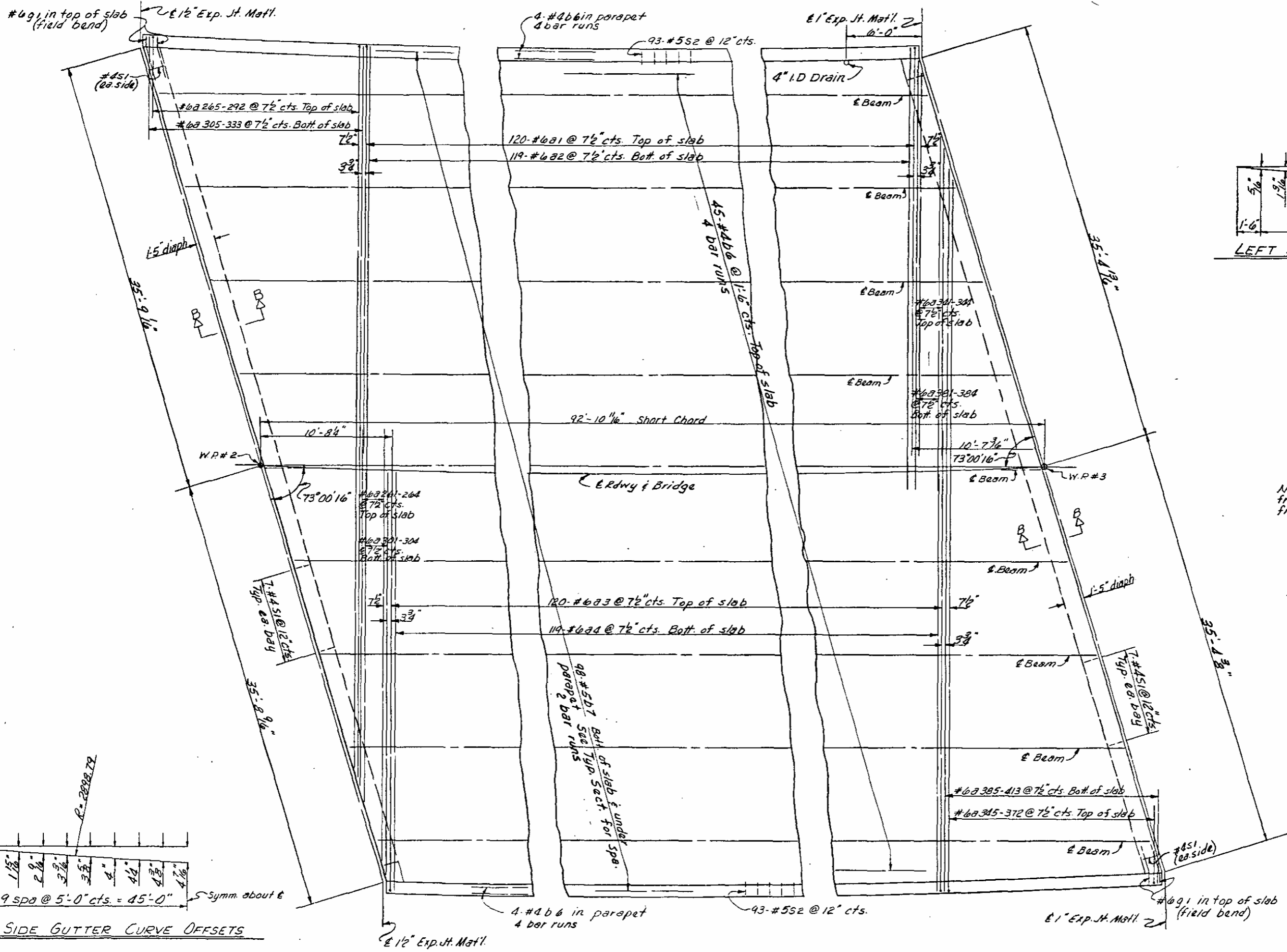


PLAN - SPAN "A"

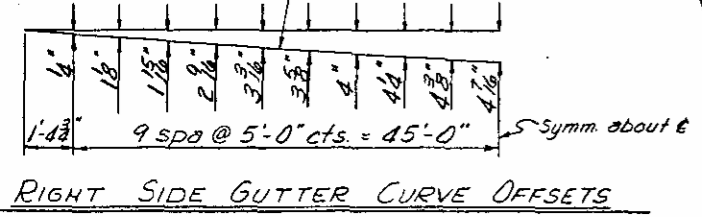
Note: "a" bars to be placed perpendicular to center short chord & spaced along short chord.

PROJECT No. 81531603
 GUILFORD COUNTY
 STATION: 780+65.85-L

| | | | | | |
|--|----|------|-----|----|------------------|
| STATE OF NORTH CAROLINA STATE HIGHWAY COMMISSION RALEIGH | | | | | |
| SUPERSTRUCTURE SPAN "A" | | | | | |
| DECEMBER 1949 | | | | | |
| REVISIONS | | | | | |
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 2 | | |
| 2 | | | 4 | | |
| SHEET NO. 5-137 | | | | | TOTAL SHEETS 256 |



Note: The curve offsets are measured from the short chord which is measured from E to E of bents.

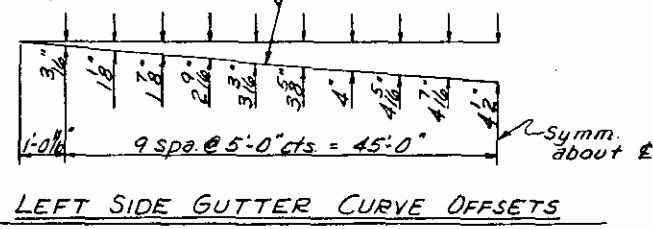
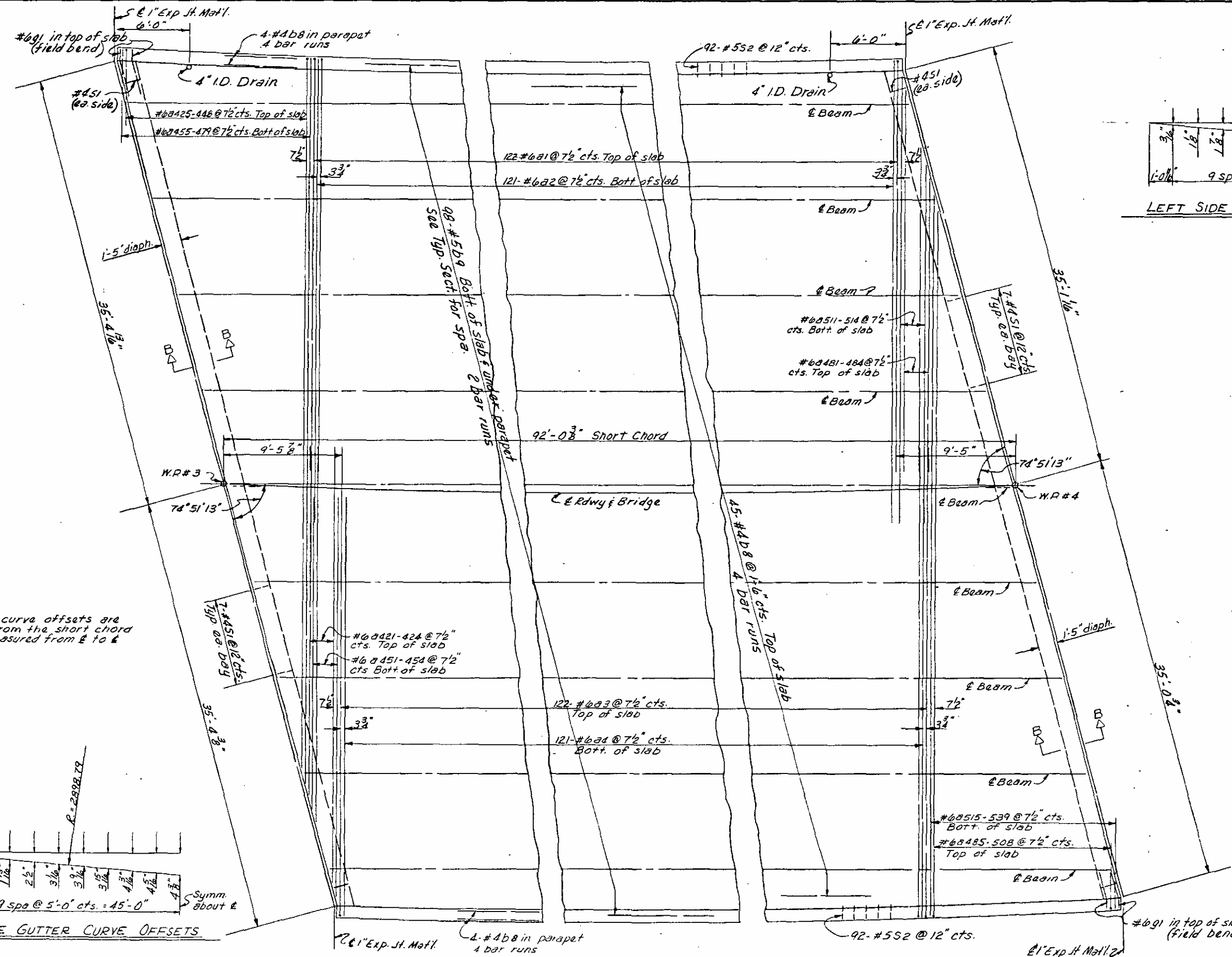


PROJECT NO. 8.1531603
 GUILFORD COUNTY
 STATION: 780+65.85 -L-

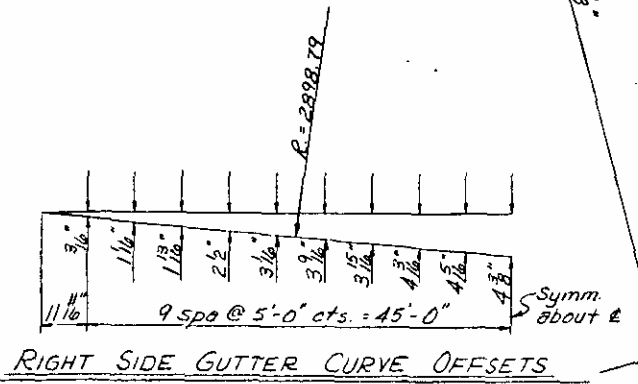
| | | | | | |
|--------------------------|----|------|-----|----|-------|
| STATE OF NORTH CAROLINA | | | | | |
| STATE HIGHWAY COMMISSION | | | | | |
| RALEIGH | | | | | |
| SUPERSTRUCTURE | | | | | |
| SPAN "B" | | | | | |
| DECEMBER 1969 | | | | | |
| REVISIONS | | | | | |
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 3 | | |
| 2 | | | 4 | | |
| SHEET NO. | | | | | 5-188 |
| TOTAL SHEETS | | | | | 256 |

PLAN - SPAN B

Note: "a" bars to be placed perpendicular to E short chord and spaced along short chord.



Note: The curve offsets are measured from the short chord which is measured from ϵ to ϵ of dents.

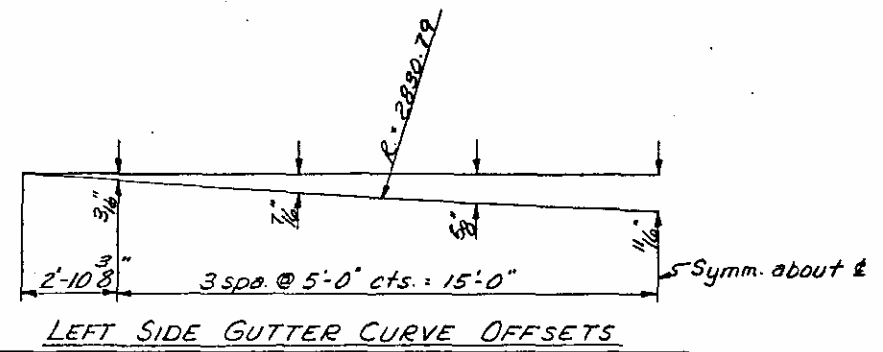
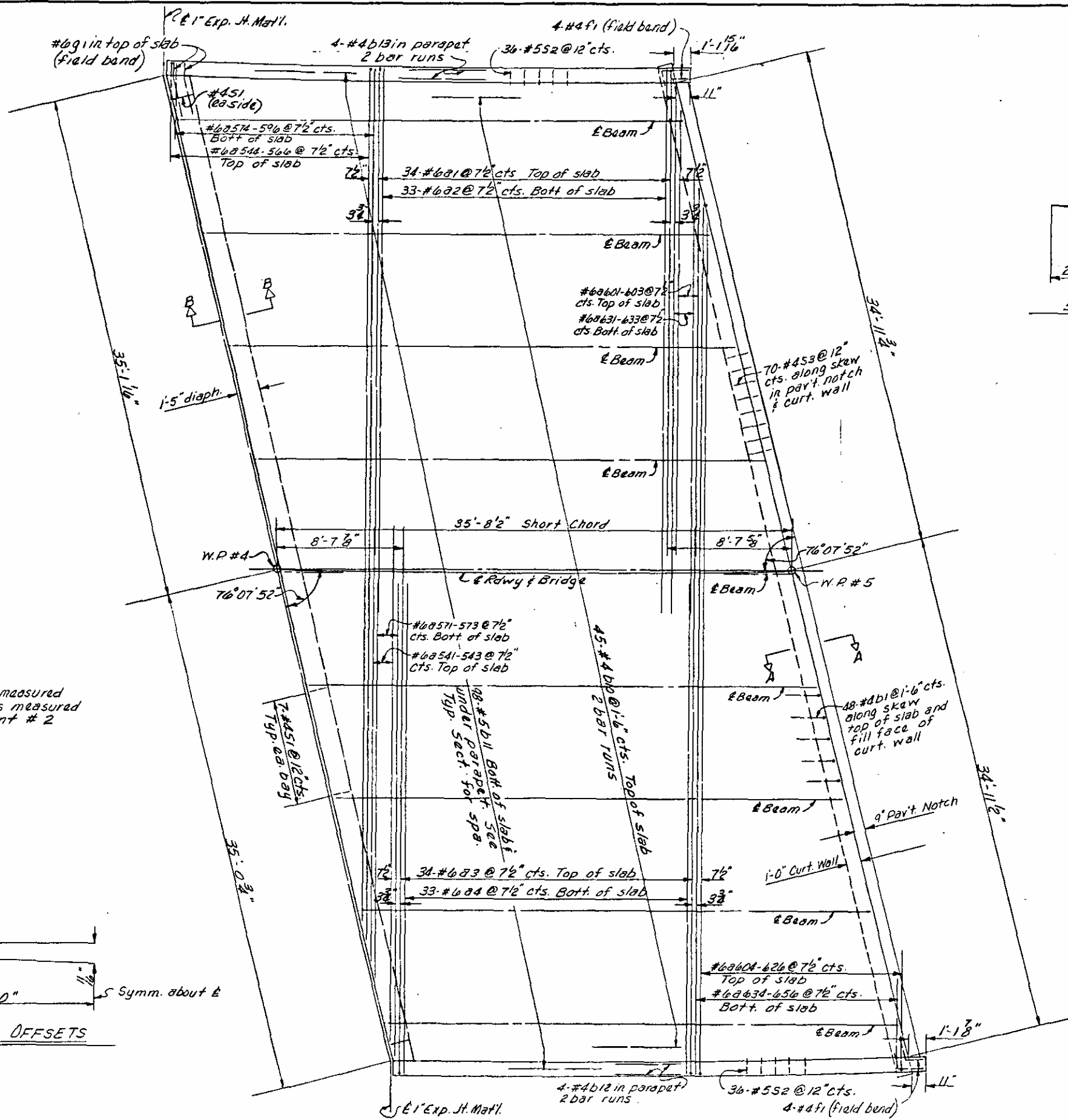


PROJECT No. 81531603
 GUILFORD COUNTY
 STATION: 780+65.85-L

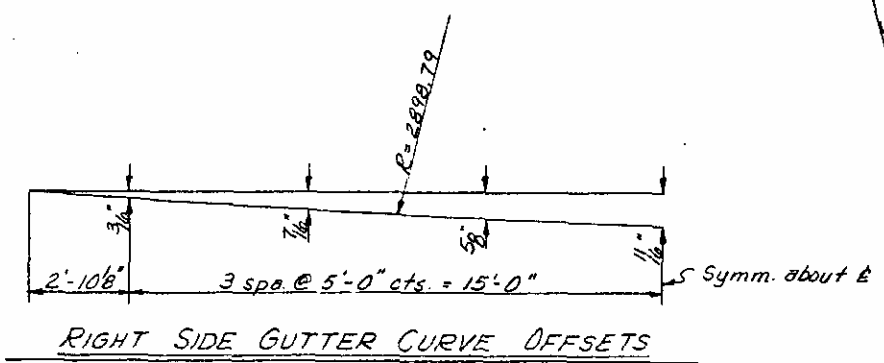
| | | | | | |
|--|----|------|-----|----|------|
| STATE OF NORTH CAROLINA STATE HIGHWAY COMMISSION RALEIGH | | | | | |
| SUPERSTRUCTURE SPAN "C" | | | | | |
| DECEMBER 1969 | | | | | |
| REVISIONS | | | | | |
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 3 | | |
| 2 | | | 4 | | |
| SHEET NO. | | | | | 5139 |
| TOTAL SHEETS | | | | | 256 |

PLAN - SPAN "C"

Note: "a" bars to be placed perpendicular to ϵ short chord and spaced along short chord.



Note: The curve offsets are measured from the short chord which is measured from the fill face of End Bent # 2 to the E of Bent # 3.



PROJECT No. 815316D3
 GUILFORD COUNTY
 STATION: 780+65.85-L

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|--|----|------|-----|----|------------------|
| STATE OF NORTH CAROLINA STATE HIGHWAY COMMISSION RALEIGH | | | | | |
| SUPERSTRUCTURE SPAN "D" | | | | | |
| JANUARY 1970 | | | | | |
| REVISIONS | | | | | |
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 2 | | |
| 2 | | | 4 | | |
| SHEET NO. 5-23 | | | | | TOTAL SHEETS 256 |

PLAN - SPAN "D"

Note: "a" bars to be placed perpendicular to E short chord & spaced along short chord.

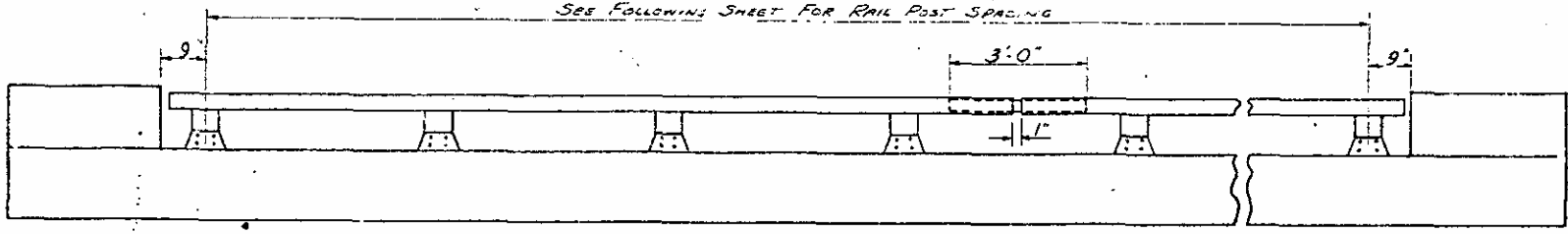
| BAR NO. | SIZE | TYPE | LENGTH | WT. | BAR NO. | SIZE | TYPE | LENGTH | WT. | BAR NO. | SIZE | TYPE | LENGTH | WT. | BAR NO. | SIZE | TYPE | LENGTH | WT. | BAR NO. | SIZE | TYPE | LENGTH | WT. | | | | | | | | |
|---------|------|------|--------|-------|----------------------------------|------|------|--------|-------|------------------|-------|----------|-----------|----------|---------|------|------|--------|-----|---------|------|------|--------|-----|--|--|--|--|--|--|--|--|
| 2605 | #6 | | 57.5 | 86 | 1 | #6 | | 3.6 | 37 | | | | | | | | | | | | | | | | | | | | | | | |
| 2606 | #6 | | 58.11 | 88 | 2 | #6 | | 7.9 | 93 | | | | | | | | | | | | | | | | | | | | | | | |
| 2607 | | | 52.4 | 79 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2608 | | | 49.10 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2609 | | | 47.3 | 71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2610 | | | 44.9 | 67 | 91 | 12 | #6 | str | 5.0 | 90 | | | | | | | | | | | | | | | | | | | | | | |
| 2611 | | | 42.3 | 63 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2612 | | | 39.8 | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2613 | | | 37.2 | 56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2614 | | | 34.7 | 52 | K1 | 12 | #4 | str | 25.7 | 205 | | | | | | | | | | | | | | | | | | | | | | |
| 2615 | | | 32.1 | 48 | K2 | 2 | #6 | | 38.1 | 114 | | | | | | | | | | | | | | | | | | | | | | |
| 2616 | | | 29.6 | 44 | K3 | 3 | #4 | | 24.8 | 49 | | | | | | | | | | | | | | | | | | | | | | |
| 2617 | | | 27.0 | 41 | K4 | 3 | #6 | | 24.1 | 117 | | | | | | | | | | | | | | | | | | | | | | |
| 2618 | | | 24.6 | 37 | K10 | 12 | #4 | | 24.11 | 200 | | | | | | | | | | | | | | | | | | | | | | |
| 2619 | | | 21.11 | 33 | K20 | 2 | #6 | | 37.1 | 111 | | | | | | | | | | | | | | | | | | | | | | |
| 2620 | | | 19.5 | 29 | K30 | 3 | #4 | | 24.1 | 48 | | | | | | | | | | | | | | | | | | | | | | |
| 2621 | | | 16.10 | 25 | K40 | 3 | #6 | | 25.5 | 115 | | | | | | | | | | | | | | | | | | | | | | |
| 2622 | | | 14.4 | 22 | K5 | 96 | #5 | | 8.0 | 801 | | | | | | | | | | | | | | | | | | | | | | |
| 2623 | | | 11.9 | 18 | K51 | 108 | #5 | str | 4.0 | 451 | | | | | | | | | | | | | | | | | | | | | | |
| 2624 | | | 9.3 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2625 | | | 6.8 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2626 | | | 4.2 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2631 | | str | 36.3 | 54 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2632 | | | 33.8 | 51 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2633 | | | 31.2 | 47 | S1 | 348 | #4 | 3 | 3.8 | 852 | | | | | | | | | | | | | | | | | | | | | | |
| 2634 | | | 60.0 | 90 | S2 | 510 | #5 | 4 | 5.10 | 3103 | | | | | | | | | | | | | | | | | | | | | | |
| 2635 | | | 57.5 | 86 | S3 | 142 | #4 | 5 | 2.0 | 190 | | | | | | | | | | | | | | | | | | | | | | |
| 2636 | | | 54.11 | 82 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2637 | | | 52.4 | 79 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2638 | | | 49.10 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2639 | | | 47.3 | 71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2640 | | | 44.9 | 67 | Reinforcing Steel, lbs = 130,950 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2641 | | | 42.3 | 63 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2642 | | | 39.8 | 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2643 | | | 37.2 | 56 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2644 | | | 34.7 | 52 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2645 | | | 32.1 | 48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2646 | | | 29.6 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2647 | | | 27.0 | 41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2648 | | | 24.6 | 37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2649 | | | 21.11 | 33 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2650 | | | 19.5 | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2651 | | | 16.10 | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2652 | | | 14.4 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2653 | | | 11.9 | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2654 | | | 9.3 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2655 | | | 6.8 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2656 | #6 | str | 4.2 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | CLASS "AA" CONC. | | | | CU. YDS. | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | Span | Slab | Parapets | End Posts | Total | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | A | 73.4 | 3.8 | 0.4 | 77.6 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | B | 145.5 | 10.2 | — | 175.7 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | C | 162.5 | 10.1 | — | 172.6 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | D | 76.6 | 4.0 | 0.4 | 81.0 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | Total | | | | 506.9 | | | | | | | | | | | | | | | | | | |
| b1 | 97 | #4 | 2 | 4.3 | 275 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b2 | 90 | #4 | str | 17.5 | 1047 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b3 | 98 | #5 | | 33.4 | 3424 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b4 | 8 | #4 | | 17.10 | 95 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b5 | 8 | #4 | | 18.1 | 97 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b6 | 212 | #4 | | 24.2 | 3422 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b7 | 196 | #5 | | 47.3 | 9659 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b8 | 212 | #4 | | 23.11 | 3387 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b9 | 196 | #5 | | 46.9 | 9557 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b10 | 90 | #4 | | 18.4 | 1102 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b11 | 98 | #5 | | 35.3 | 3603 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b12 | 8 | #4 | | 18.11 | 101 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b13 | 8 | #4 | str | 18.9 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Q1 | 8 | #8 | str | 4.6 | 96 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Q2 | 24 | #8 | str | 2.8 | 171 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

PROJECT NO. 81531603
 GUILFORD COUNTY
 STATION 780+65.85-L

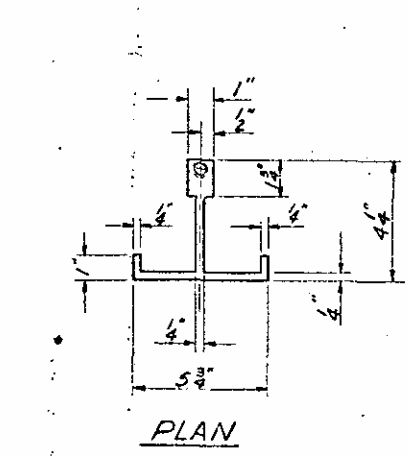
STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH
 SUPERSTRUCTURE
 BILL OF MATERIAL

| REVISIONS | | | | | |
|-----------|----|------|-----|----|------|
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 2 | | |
| 3 | | | 4 | | |

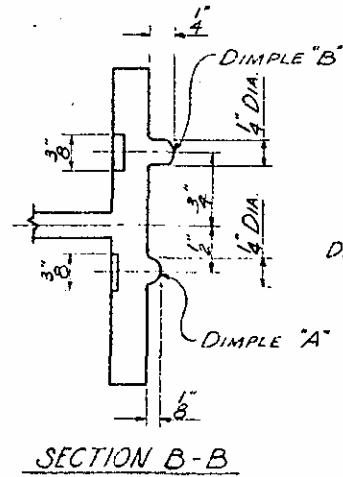
DRAWN BY J.K. PARRISH DATE JAN. '70
 CHECKED BY F.S. ALFORD, JR. DATE JAN. '70



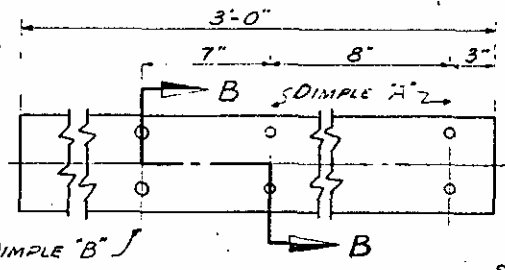
ELEVATION



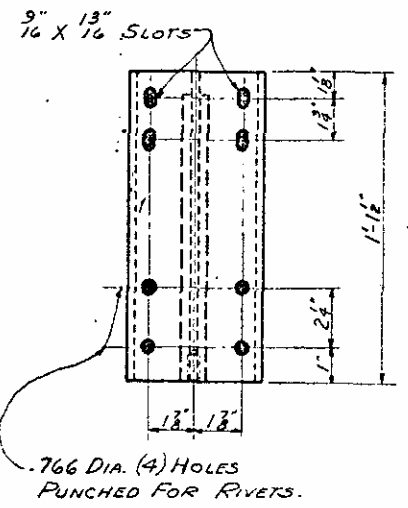
PLAN



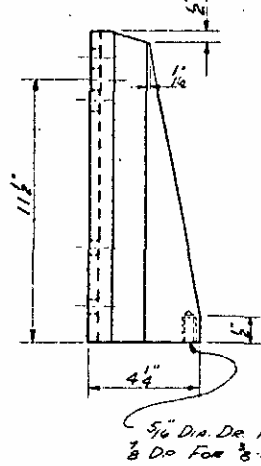
SECTION B-B



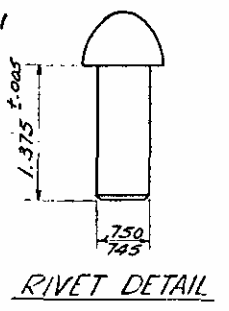
BAR SECTION EXPANSION BAR DETAILS



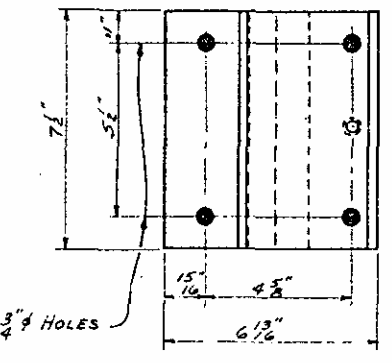
FRONT ELEVATION



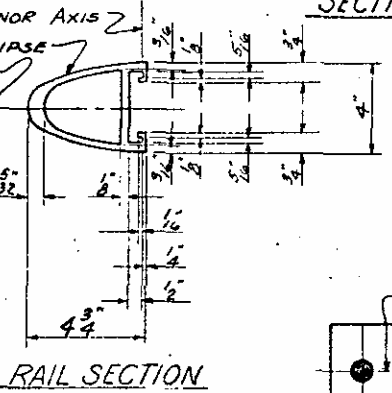
SIDE ELEVATION



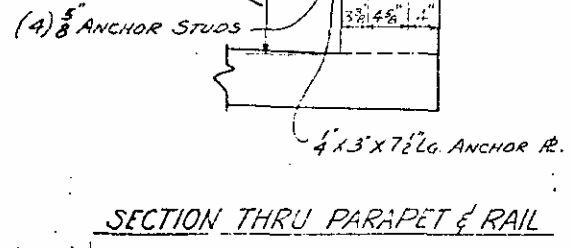
RIVET DETAIL



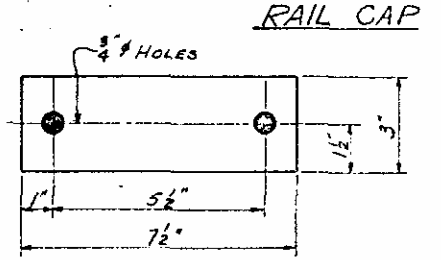
PLAN



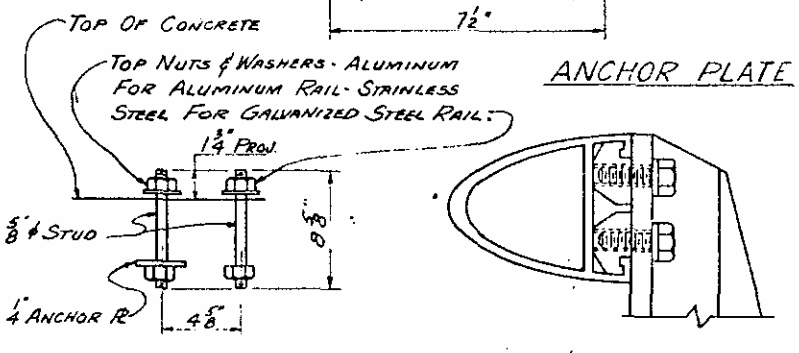
RAIL SECTION



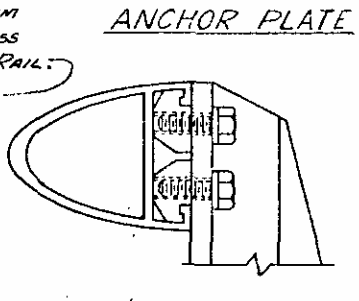
SECTION THRU PARAPET & RAIL



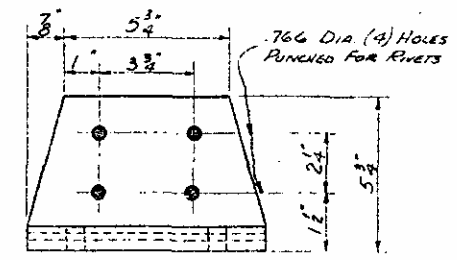
RAIL CAP



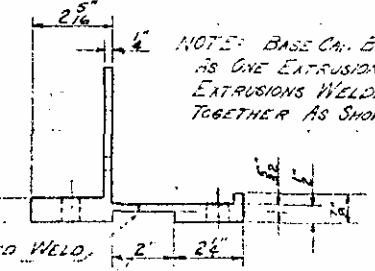
ANCHOR ASSEMBLY



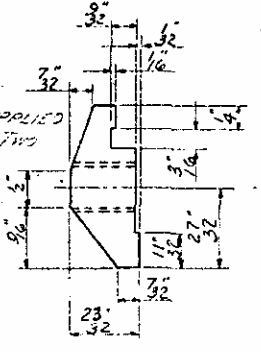
CLAMP & RAIL ASSEMBLY



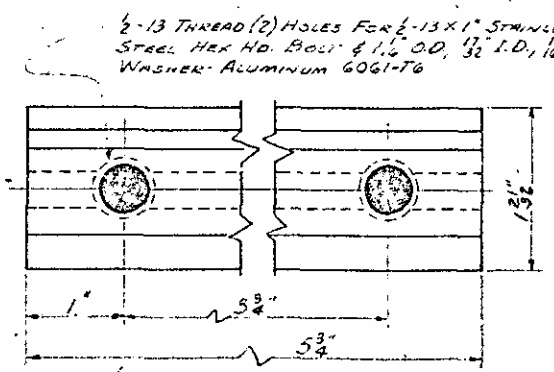
FRONT ELEVATION



SIDE ELEVATION



CLAMP BAR DETAIL (2 REQUIRED PER POST)



2-13 THREAD (2) HOLES FOR 1/2-13 X 1" STAINLESS STEEL HEX HD. BOLT & 1 1/2" O.D., 3/16" I.D., 1/16" THK. WASHER - ALUMINUM 6061-T6

AT THE CONTRACTOR'S OPTION METAL RAIL MAY BE EITHER ALUMINUM OR GALVANIZED STEEL IN ACCORDANCE WITH THE REQUIREMENTS OF THE GENERAL NOTES AND THE FOLLOWING SPECIFICATIONS FOR THE ALTERNATE MATERIALS; HOWEVER THE CONTRACTOR WILL BE REQUIRED TO USE THE SAME RAIL MATERIAL ON ALL STRUCTURES ON THIS PROJECT FOR WHICH METAL RAIL IS DESIGNATED.

ALUMINUM RAILS
 MATERIAL FOR POSTS, BASES & RAILS, EXPANSION BARS, & CLAMP BARS SHALL BE A.S.T.M. B-221 ALLOY 6061-T6.
 MATERIAL FOR ALUMINUM WASHER SHALL BE A.S.T.M. B-209 ALLOY ALCLAD 2024-T3.
 MATERIAL FOR RIVETS SHALL BE A.S.T.M. B-316 ALLOY 6061-T6.
 RIVETS SHALL BE 5/16" BUTT HEAD & CONE POINT COCD DRIVEN AS PER DRAWING.
 MATERIAL FOR ALUMINUM NUTS SHALL BE A.S.T.M. B-211 ALLOY 6061-T6.
 THE BASE OF RAIL POSTS, OR ANY OTHER ALUMINUM SURFACE IN CONTACT WITH CONCRETE SHALL BE THOROUGHLY COATED WITH AN ALUMINUM IMPREGNATED CAULKING COMPOUND OF APPROVED QUALITY.
 MATERIAL FOR SHIMS TO BE A.S.T.M. B-209 ALLOY 6061-T6.

GENERAL NOTES
 1. RAILING SHALL BE CONTINUOUS FROM END POST TO END POST OF BRIDGE. EACH JOINT IN RAIL LENGTH SHALL BE SPICED AS DETAILLED. RAIL LENGTHS OF RAIL SHALL BE ATTACHED TO A MINIMUM OF FOUR POSTS.
 2. END OF RAIL TO CLEAR FACE OF CONCRETE END POST BY 1 1/2".
 3. MATERIAL FOR ANCHOR STUDS SHALL BE TYPE 430 STAINLESS STEEL WITH MINIMUM 70,000 P.S.I. ULTIMATE STRENGTH.
 STUDS TO BE EMBEDDED 7" IN CONCRETE.
 NUTS SHALL BE AMERICAN STANDARD FINISHED HEXAGON THICK NUTS, CLASS 2B THREAD. ANCHOR PLATES SHALL BE A.S.T.M. A7 OR A36. MACHINE SCREWS FOR RAIL ATTACHMENT SHALL BE STAINLESS STEEL.
 4. CERTIFIED MILL REPORTS ARE REQUIRED FOR RAILS & POSTS. SHOP INSPECTION IS NOT REQUIRED.
 5. METAL RAIL POSTS TO BE SET NORMAL TO CURB GRADE.
 6. METHOD OF MEASUREMENT FOR METAL RAILS: UNLESS OTHERWISE STATED, THE LENGTH OF METAL RAILS TO BE PAID FOR, SHALL BE THE CONTINUOUS HORIZONTAL LENGTH MEASURED FROM INSIDE TO INSIDE OF CONCRETE POSTS.
 7. CURVED RAIL USAGE: WHERE RAILS ARE TO BE USED ON BRIDGES ON HORIZONTAL AND/OR VERTICAL CURVATURES, THE CONTRACTOR MAY AT HIS OPTION HAVE THE REQUIRED CURVATURE IN THE RAIL FORMED IN THE SHOP OR IN THE FIELD. IN EITHER EVENT THE RAIL SHALL CONFORM WITHOUT BUCKLING OR KINKING TO THE REQUIRED CURVATURE IN A UNIFORM MANNER ACCEPTABLE TO THE ENGINEER.
 8. TO INSURE FUTURE IDENTIFICATION OF THE FABRICATOR, A PERMANENT IDENTIFYING MARK SHALL BE PLACED ON EACH POST. THE METHOD OF MARKING AND LOCATION SHALL BE SUCH THAT IT DOES NOT DETRACT FROM THE APPEARANCE OF THE POST.
 9. SHIMS TO BE USED AS NECESSARY FOR POST ALIGNMENT.

GALVANIZED STEEL RAILS
 MATERIALS AND GALVANIZING ARE TO CONFORM TO THE FOLLOWING SPECIFICATIONS:
 RAIL POST & POST BASE: A.S.T.M. A36 GRADE STRUCTURAL STEEL GALVANIZED TO A.S.T.M. A-123.
 RAIL & EXPANSION BAR: A.S.T.M. A36 GRADE STRUCTURAL STEEL GALVANIZED TO A.S.T.M. A-123.
 CLOSURE PLATES & SHIMS: STEEL A36 GRADE C - GALVANIZED TO A.S.T.M. A123.
 NUTS & WASHERS FOR TOP END OF ANCHOR ASSEMBLY FOR STEEL RAIL SHALL BE TYPE 430 STAINLESS STEEL.

THE CUT ENDS OF GALVANIZED STEEL RAILING, AFTER GRINDING SMOOTH, SHALL BE GIVEN TWO COATS OF ZINC PAINT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION MIL-P-26915 USAF TYPE 1.

PAV LENGTH: 498.28'

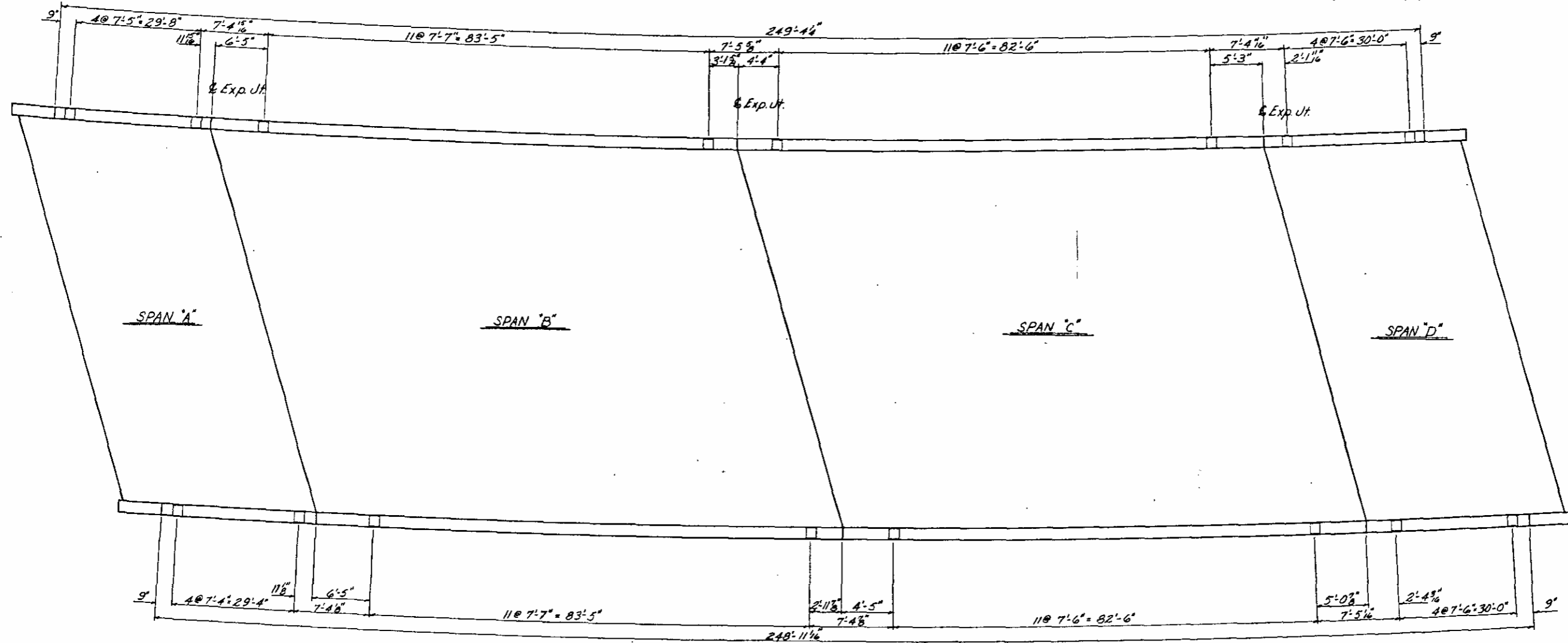
PROJECT NO. 8.1531603
 GUILFORD COUNTY
 STATION: 780+65.85 -L-

| | | | |
|-------------------------|----|--------------------------|----|
| STATE OF NORTH CAROLINA | | STATE HIGHWAY COMMISSION | |
| RALEIGH | | | |
| STANDARD | | | |
| 1 BAR | | | |
| METAL RAIL | | | |
| DATE | BY | DATE | BY |
| JULY | | 1964 | |

Revision No. 6: To add reference to shims
 By R.E.N. (5-19-62) & J.L.S.
 Revision No. 5: Base as 1 or 2 extrusions
 By R.E.N. (3-17-62) J.S.H.A.W.M.
 DRAWN BY G.L. Hatcher, Jr. DATE 2-20-59
 CHECKED BY E.C. DATE 4-14-59

Revision No. 4: To add to General Notes and revise weld detail on post base. By L.W.W. (12-6-63) & J.L.S.

REVISION NO. 3: To add -T6 to "Alloy 6061". BY: T.J.M. & J.L.S. 1-25-61
 Revision No. 2: To eliminate reference to Alloy 6062-T6. By W.K.C. (12-13-60) & J.L.S.
 Revised to show Anchor Stud location in parapet section. By C.J.K. (5-27-65) & J.L.S.



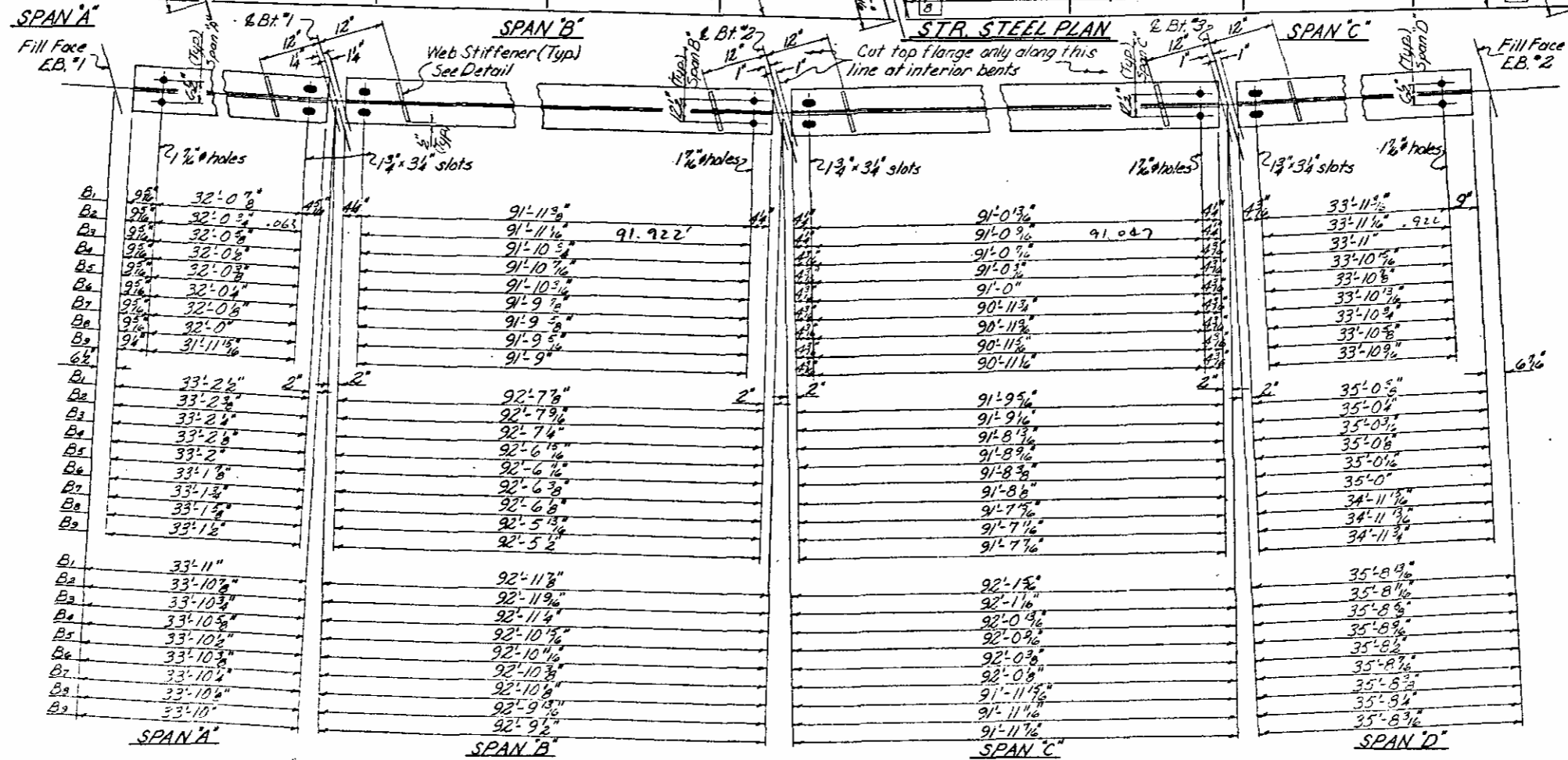
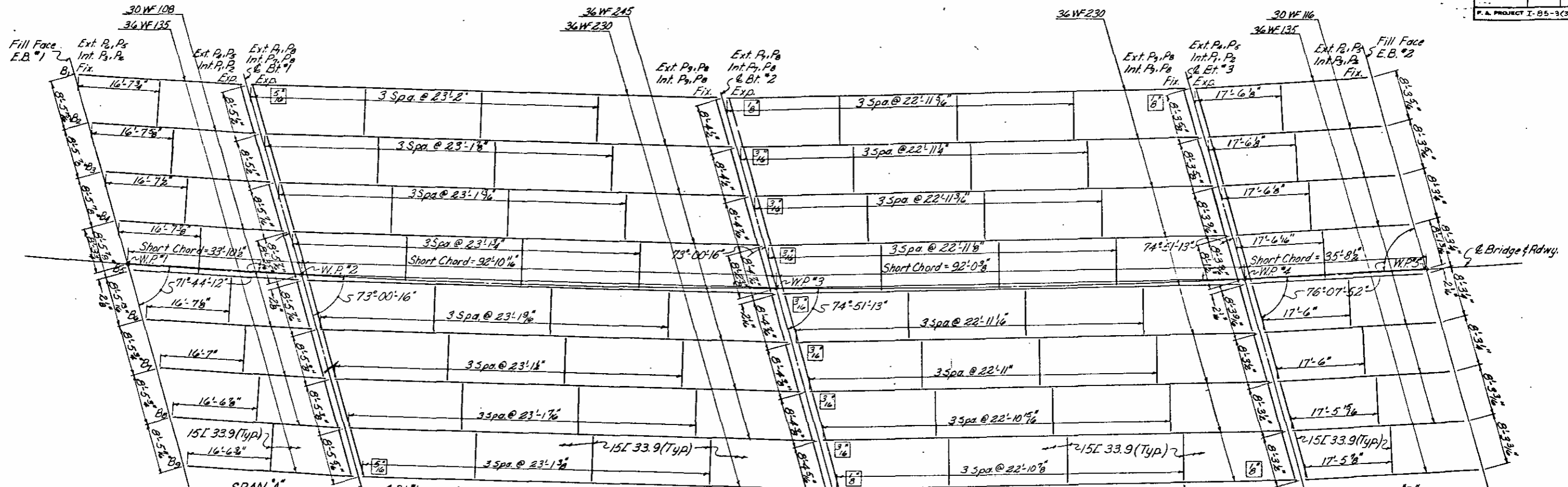
PLAN SHOWING RAIL POST SPACING

Note: Dimensions shown are measured along outside of superstructure.

PROJECT No. 8.1531603
GUILFORD COUNTY
 STATION: 780+65.85-6-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH
RAIL POST SPACING

| | | | | | |
|-----------|----|------|-----|----|------|
| Feb. 1970 | | | | | |
| REVISIONS | | | | | |
| NO. | BY | DATE | NO. | BY | DATE |
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Note:
 Dimensions to Diaphragms are from Beam ends.
 [Symbol] Indicates Fill R. req'd.

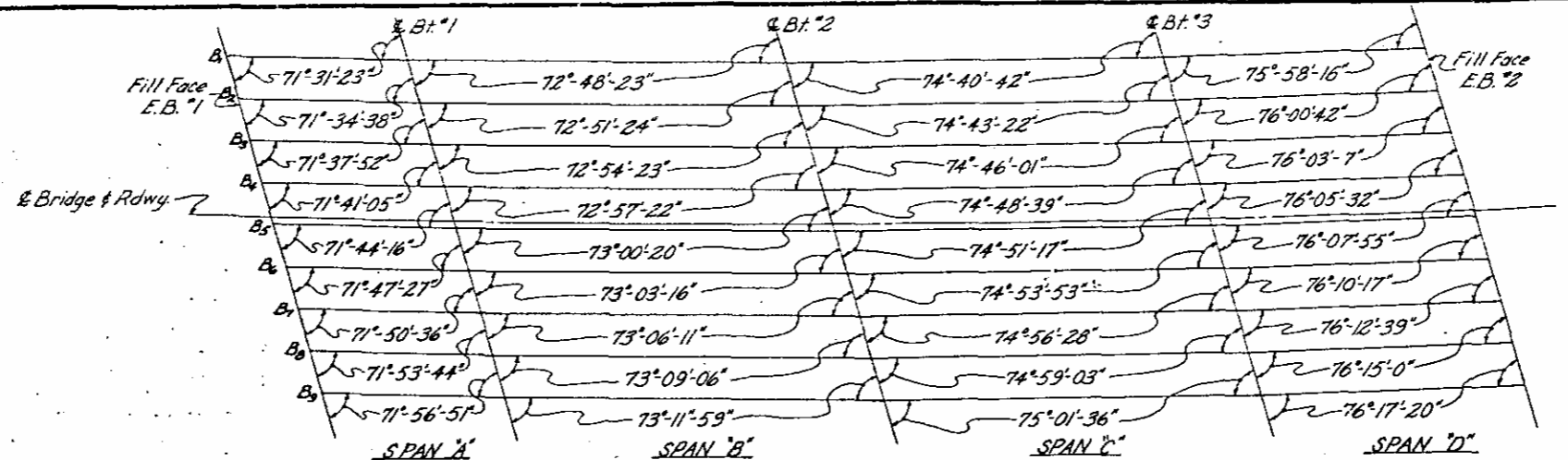
PROJECT No. 8.1531603
 GUILFORD COUNTY
 STATION: 780+65.85-L-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH

STRUCTURAL STEEL

Jan 1970

| REVISIONS | | | | SHEET NO. | | | |
|-----------|----|------|-----|-----------|------|--------------|--|
| NO. | BY | DATE | NO. | BY | DATE | S-195 | |
| 1 | | | 3 | | | TOTAL SHEETS | |
| 2 | | | 4 | | | 256 | |

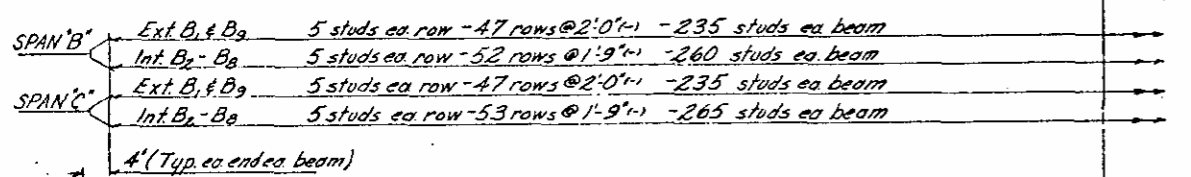


PLAN SHOWING ANGLES AT BENTS

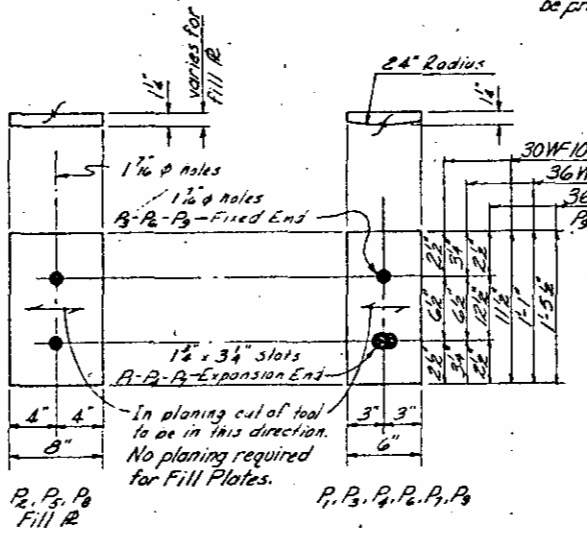
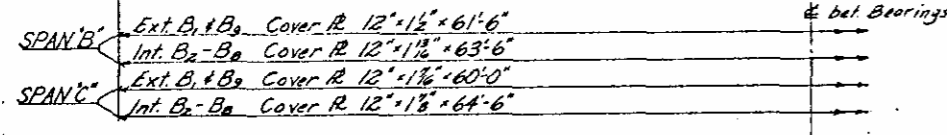
At the contractor's option, high strength steel lock-pin collar fasteners may be used as an alternate for high strength bolts as shown on plans. See Special Provisions.

All bearing assemblies shall be galvanized see Special Provisions.
 Cambered beam lengths shall be adjusted and bearings are to be placed on cambered beam so as to be aligned with the anchors after the dead load deflection has occurred. Shop plans shall be prepared accordingly.

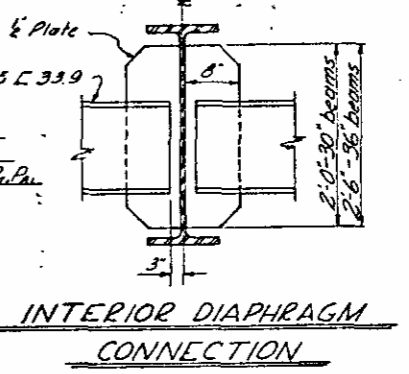
NOTES
 All beams and cover plates shall be of A.S.T.M. A36 grade structural steel. See sheet 3-N.
 End stiffeners to be parallel to ends of beams. No stiffeners are required at End Bents or on outside of exterior beams.
 At the contractor's option fill plates, when used, may be combined with masonry plates.
 Dimensions shown to diaphragms are from ends of beams.
 Interior diaphragms to be parallel to roadway deck.
 The contractor may, at his option, but without change in the contract price of the structural steel, use ST 9 25 connections bolted to the beam web and welded to the channel diaphragm in lieu of the welded plate interior diaphragm connections shown.
 In lieu of the welding procedure for shop and field welds indicated for the interior diaphragm connections, the contractor may, at his option, shop weld the connector plates to the beam webs and field weld the channels to the connector plates. Special care in handling the beams must be observed if connector plates are shop welded to the beam webs.
 See Superstructure Details for location of holes for reinforcing steel.
 For beam camber, see "Dead Load Deflections and Beam Camber" table.
 At the contractor's option he may substitute for the cover plates designated on the plans cover plates of the equivalent area provided these plates are at least 3/8" in thickness and do not exceed a width equal to the flange width less 2" or a thickness equal to 1 1/2 times the flange thickness.
 Weld sizes not shown are to be according to current A.W.S. Specifications.
 At all fixed points of support, nuts for anchor bolts are to be tightened finger tight then backed off 1/2 turn. The thread of the bolt nut shall then be burred with a sharp pointed tool.
 For description of studs see Special Provisions.



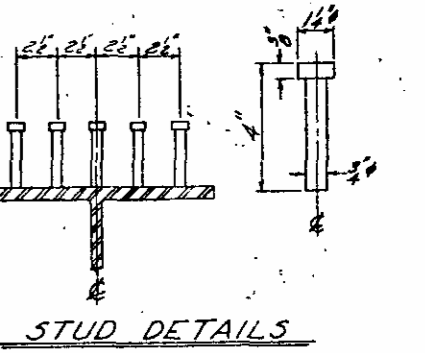
BEAM ELEVATION AND STUD SPACING



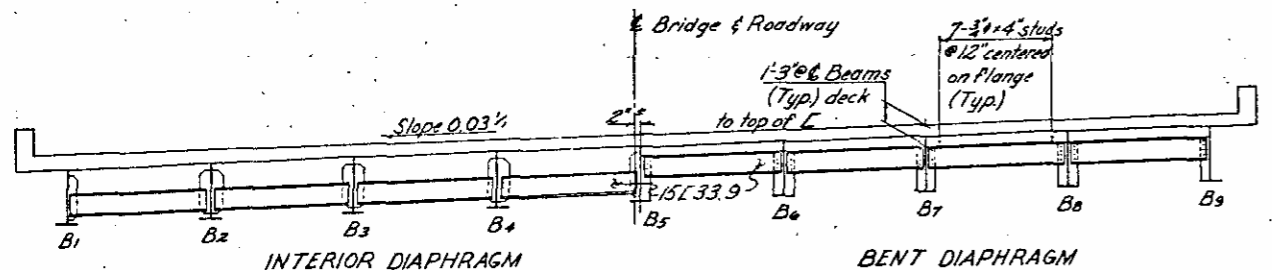
BEARING PLATES DETAILS



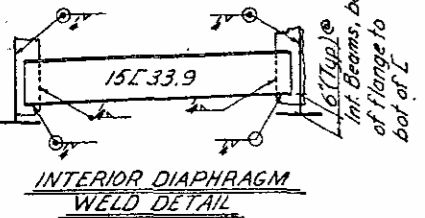
INTERIOR DIAPHRAGM CONNECTION



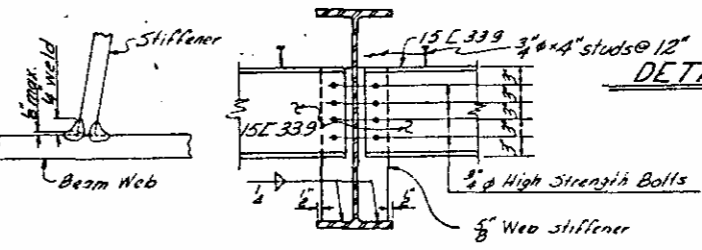
STUD DETAILS



TYPICAL SECTION



INTERIOR DIAPHRAGM WELD DETAIL

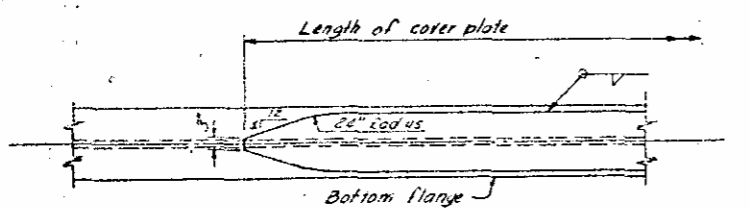


DIAPHRAGM CONNECTION AT BENT AND DETAIL OF WEB STIFFENER

Structural Steel Approx. Wt. = 591,300 lbs.

| BEARING PLATES REQUIRED | |
|---|--------------|
| P ₁ - 14 - 6" x 11 1/2" x 1/4" | Plane Finish |
| P ₂ - 28 - 8" x 11 1/2" x 1/4" | to 1/4" |
| P ₃ - 14 - 6" x 11 1/2" x 1/4" | |
| P ₄ - 4 - 6" x 1 1/2" x 1/4" | |
| P ₅ - 8 - 8" x 1 1/2" x 1/4" | |
| P ₆ - 4 - 6" x 1 1/2" x 1/4" | to 1/4" |
| P ₇ - 18 - 6" x 1 5/8" x 1/4" | |
| P ₈ - 36 - 8" x 1 5/8" x 1/4" | to 1/4" |
| P ₉ - 18 - 6" x 1 5/8" x 1/4" | |
| FILL PLATES REQUIRED | |
| 2 - 8" x 1 5/8" x 1/4" | |
| 4 - 8" x 1 5/8" x 1/4" | |
| 7 - 8" x 1 5/8" x 1/4" | |

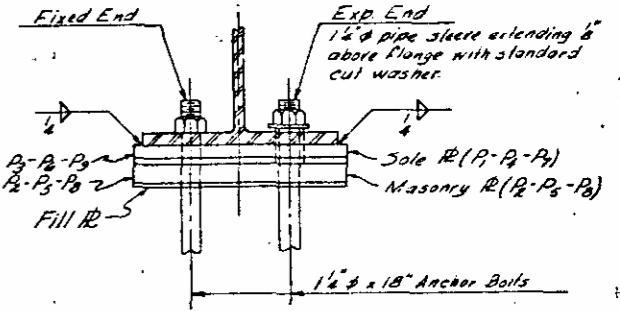
| DEAD LOAD DEFLECTIONS AND BEAM CAMBER | | | | | | |
|---------------------------------------|----------------|----------------------------------|--------|--|--------|--------|
| SPAN | Type of Beams | Deflection due to weight of beam | | Deflection due to superimposed (dead load) | | Camber |
| | | 1 | 2 | 1 | 2 | |
| SPAN "A" | Exterior Beams | 0" | 1/2" | 1/2" | 3/4" | 0" |
| | Interior Beams | 0" | 1/2" | 1/2" | 3/4" | 0" |
| SPAN "B" | Exterior Beams | 13/16" | 1 1/8" | 1 1/8" | 3 1/8" | 3/8" |
| | Interior Beams | 1 1/8" | 2 1/8" | 2 1/8" | 3 1/8" | 3/8" |
| SPAN "C" | Exterior Beams | 1/2" | 1 1/4" | 1 1/4" | 3 1/4" | 3/8" |
| | Interior Beams | 1/2" | 1 1/4" | 1 1/4" | 3 1/4" | 3/8" |
| SPAN "D" | Exterior Beams | 0" | 1/2" | 1/2" | 3/4" | 0" |
| | Interior Beams | 0" | 1/2" | 1/2" | 3/4" | 0" |



COVER PLATE WELD DETAIL

NOTE: Cover plate lengths are symmetrical about center of bearings, and for bottom flange only.

DETAIL AT BEARINGS

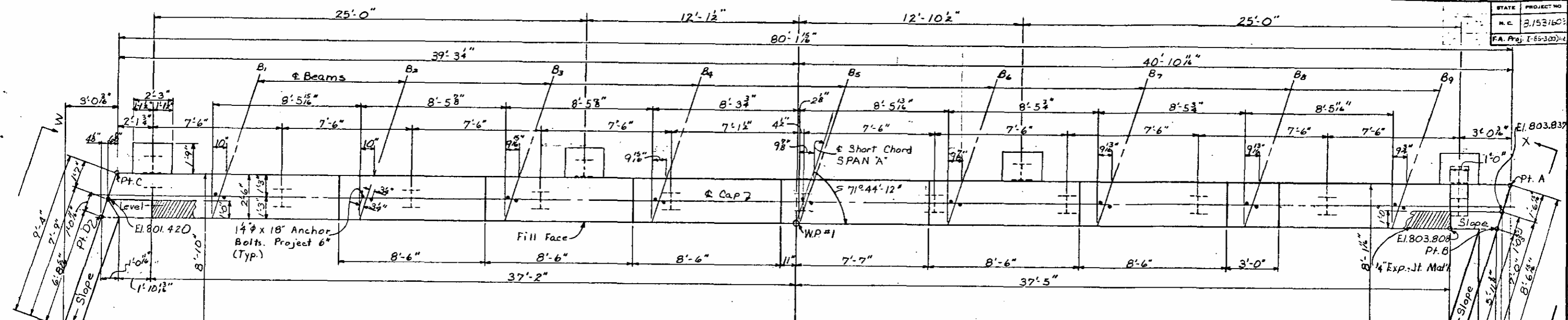


PROJECT No. 8.15316.03
 GUILFORD COUNTY
 STATION: 780+65.85-L

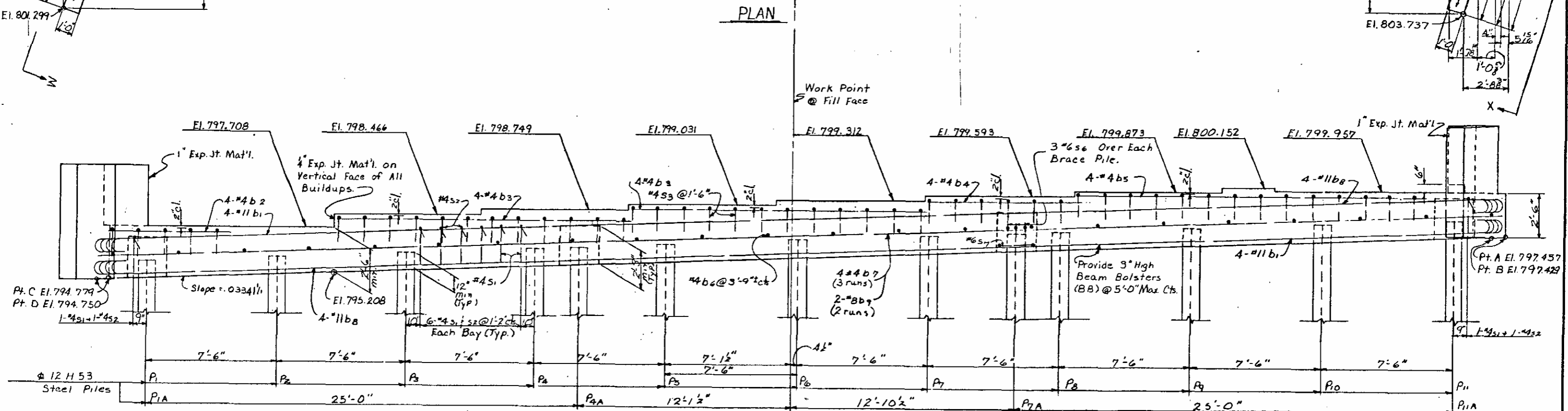
| STATE OF NORTH CAROLINA STATE HIGHWAY COMMISSION | | | | | |
|---|----|------|-----|----|------|
| SUPERSTRUCTURE STRUCTURAL STEEL DETAILS | | | | | |
| APRIL 1966 | | | | | |
| REVISIONS | | | | | |
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 1 | | |
| 2 | | | 2 | | |

ASSEMBLED BY G. L. Ketchum, Jr. DATE: MAR. 1970
 CHECKED BY E. G. ALFORD, JR. DATE: JAN. 1970
 DESIGNED BY S. L. SANTO, TOMAS DATE: APRIL 1966
 DRAWN BY DATE
 TRACED BY DATE
 CHECKED BY DATE

* No Shop Camber Required
 1) Deflection due to weight of slab.
 2) Deflection due to wt. of parapet, rail & future wearing surface.



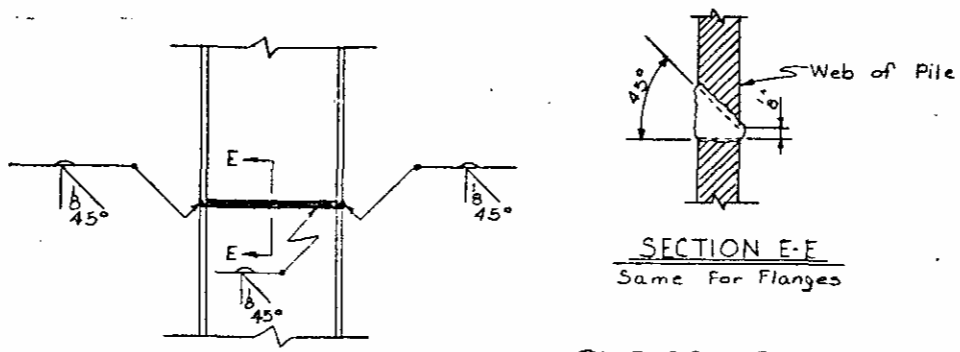
PLAN



ELEVATION

| Pile No. | Top of Pile Elevation | Brace Pile No. | Top of Pile Elevation |
|-----------------|-----------------------|-----------------|-----------------------|
| P ₁ | 795.867 | P _{1A} | 795.867 |
| P ₂ | 796.118 | P _{2A} | 796.702 |
| P ₃ | 796.368 | P _{3A} | 797.537 |
| P ₄ | 796.619 | P _{4A} | 798.373 |
| P ₅ | 796.870 | | |
| P ₆ | 797.120 | | |
| P ₇ | 797.371 | | |
| P ₈ | 797.621 | | |
| P ₉ | 797.872 | | |
| P ₁₀ | 798.123 | | |
| P ₁₁ | 798.373 | | |

TOP OF PILE ELEVATIONS



ELEVATION

PILE SPLICE DETAIL

PROJECT No. 3,153,1603
GUILFORD COUNTY
STATION: 780+65.85-1-

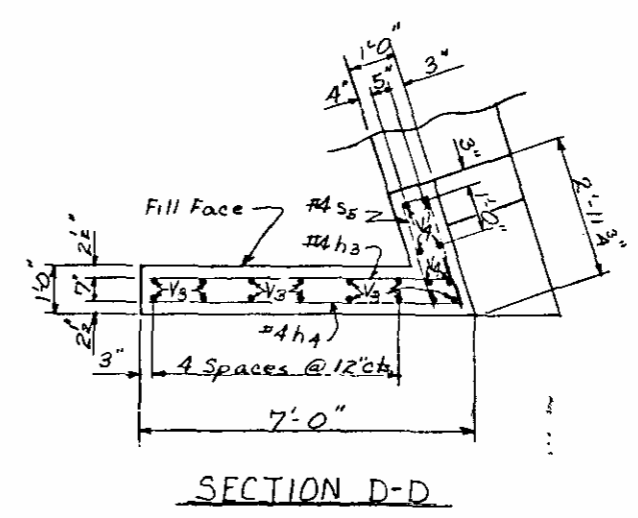
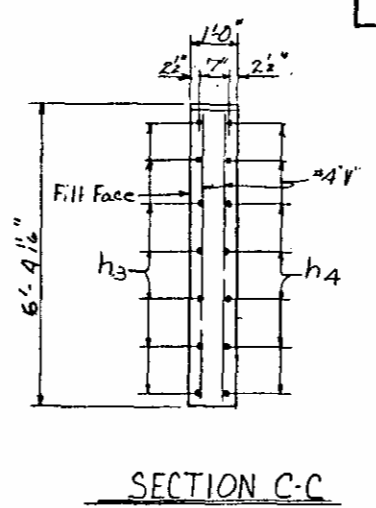
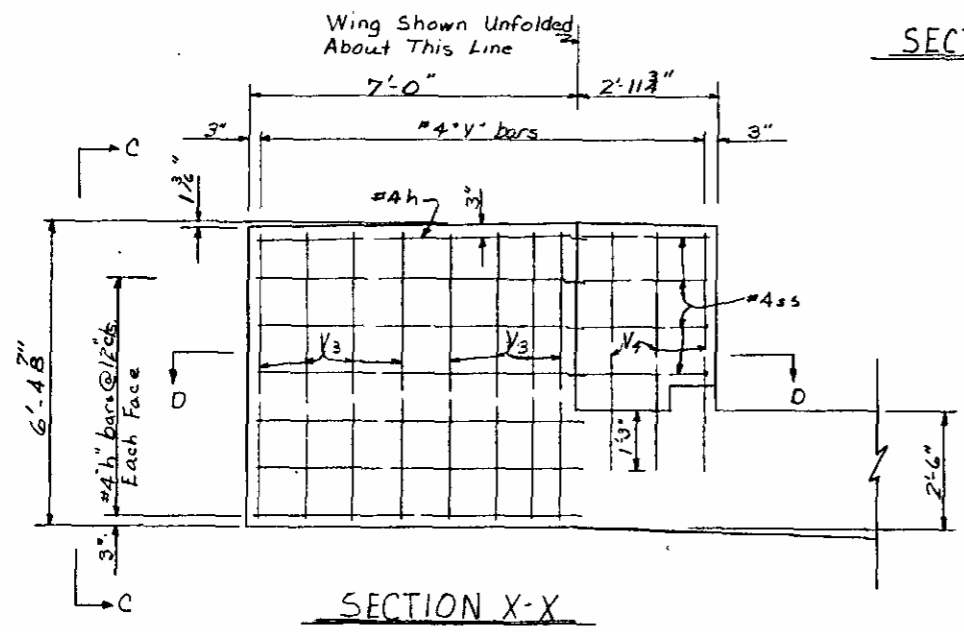
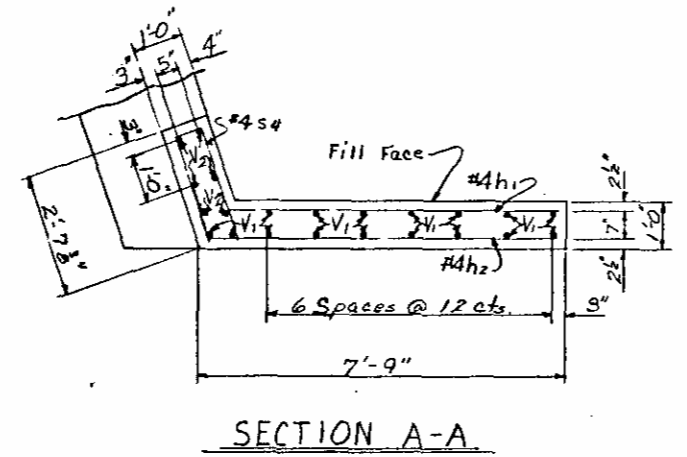
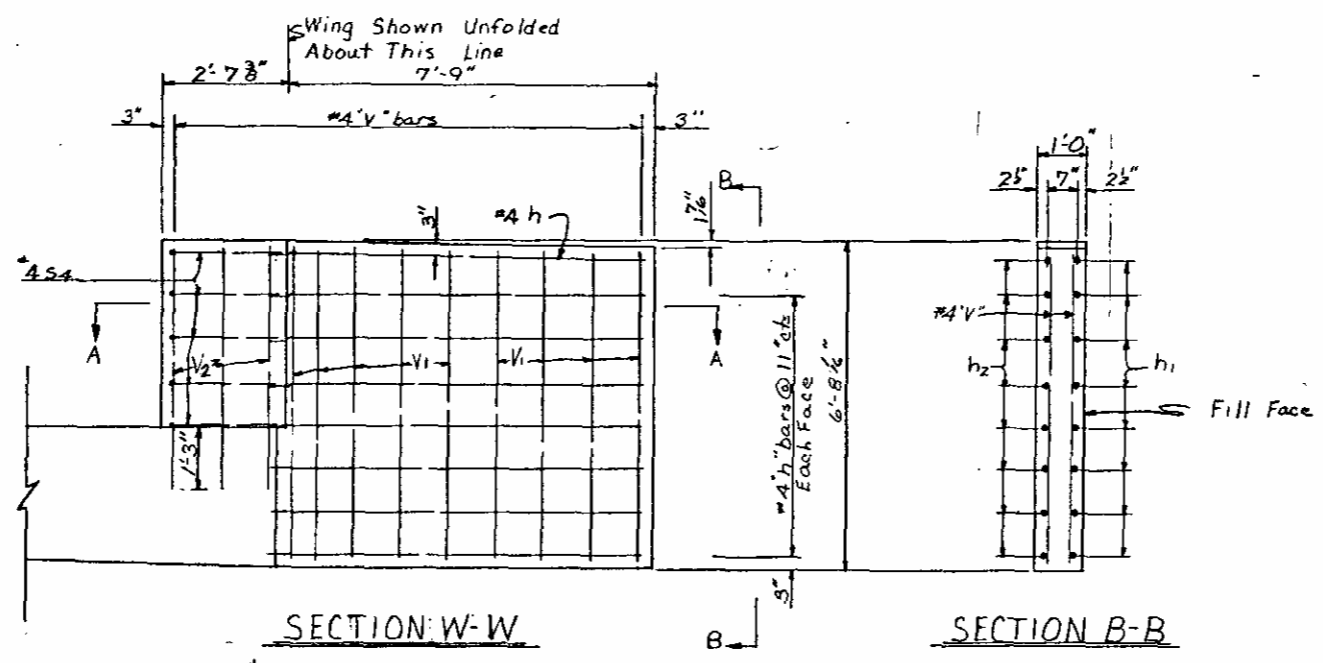
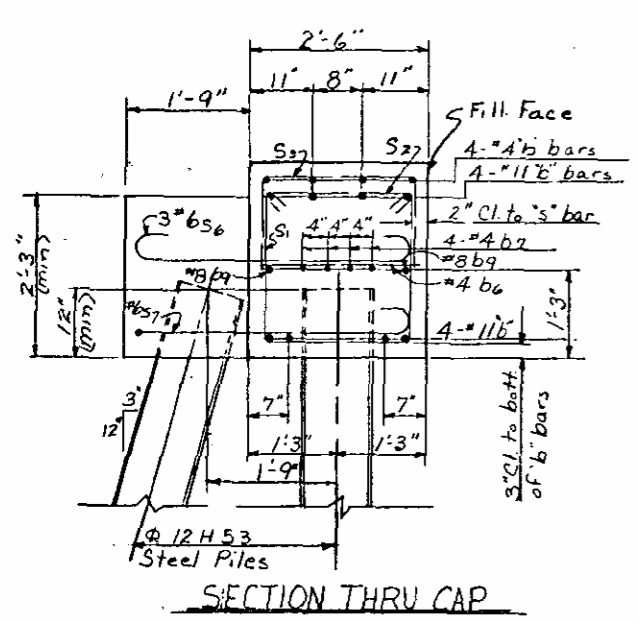
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

END BENT #1

JANUARY 1969

| REVISIONS | | | | SHEET NO. | |
|-----------|----|------|-----|-----------|------|
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 3 | | |
| 2 | | | 4 | | |

TOTAL SHEETS: 256

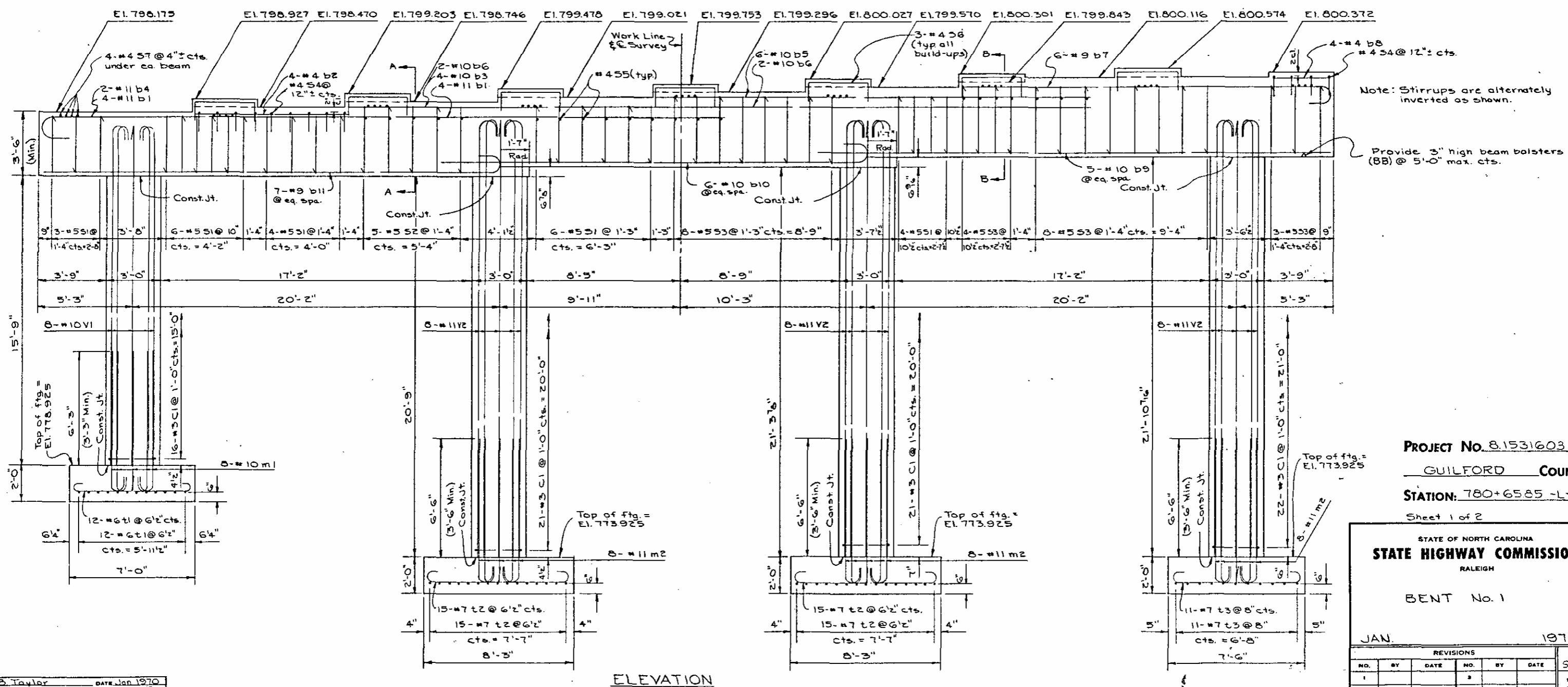
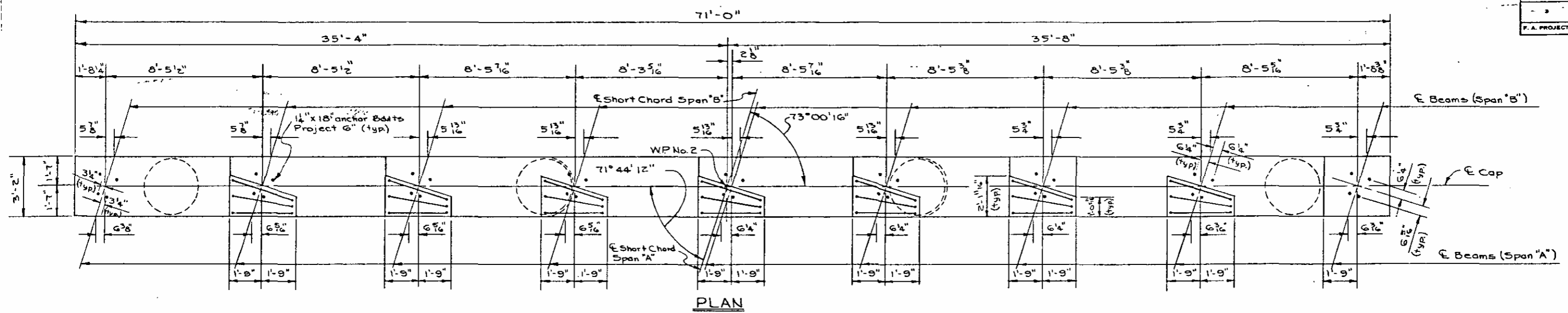


| BAR TYPES | | BILL OF MATERIAL | | | | |
|-------------------------------|-----|------------------|------|---------|--------|--|
| FOR END BENT NO. 1 | | | | | | |
| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT | |
| b1 | 8 | #11 | 1 | 47'-10" | 2033 | |
| b2 | 4 | #4 | Str. | 7'-0" | 19 | |
| b3 | 8 | #4 | Str. | 17'-0" | 91 | |
| b4 | 4 | #4 | Str. | 8'-6" | 23 | |
| b5 | 4 | #4 | Str. | 20'-0" | 53 | |
| b6 | 22 | #4 | Str. | 2'-2" | 32 | |
| b7 | 12 | #4 | Str. | 27'-6" | 220 | |
| b8 | 8 | #11 | 1 | 37'-10" | 1608 | |
| h1 | 8 | #4 | 4 | 8'-1" | 43 | |
| h2 | 8 | #4 | 4 | 7'-11" | 42 | |
| h3 | 7 | #4 | 5 | 6'-10" | 32 | |
| h4 | 7 | #4 | 5 | 7'-1" | 33 | |
| s1 | 62 | #4 | 7 | 7'-2" | 297 | |
| s2 | 62 | #4 | 3 | 2'-11" | 121 | |
| s3 | 49 | #4 | 2 | 4'-8" | 153 | |
| s4 | 5 | #4 | 6 | 5'-3" | 18 | |
| s5 | 4 | #4 | 6 | 5'-5" | 14 | |
| v1 | 16 | #4 | Str. | 6'-2" | 66 | |
| v2 | 6 | #4 | Str. | 4'-9" | 19 | |
| v3 | 14 | #4 | Str. | 5'-11" | 55 | |
| v4 | 6 | #4 | Str. | 4'-11" | 20 | |
| b9 | 4 | #8 | Str. | 41'-2" | 140 | |
| s6 | 12 | #6 | 9 | 5'-3" | 95 | |
| s7 | 4 | #6 | 8 | 11'-1" | 67 | |
| Reinforcing Steel Lbs. 5594 | | | | | | |
| Class "A" Concrete 27.3 Cu Yd | | | | | | |
| 12 H53 Steel Piles | | | | | | |
| No. 15 Lin. Ft. 375 | | | | | | |

PROJECT No. 81531603
 GUILFORD COUNTY
 STATION: 780+65.85-L-

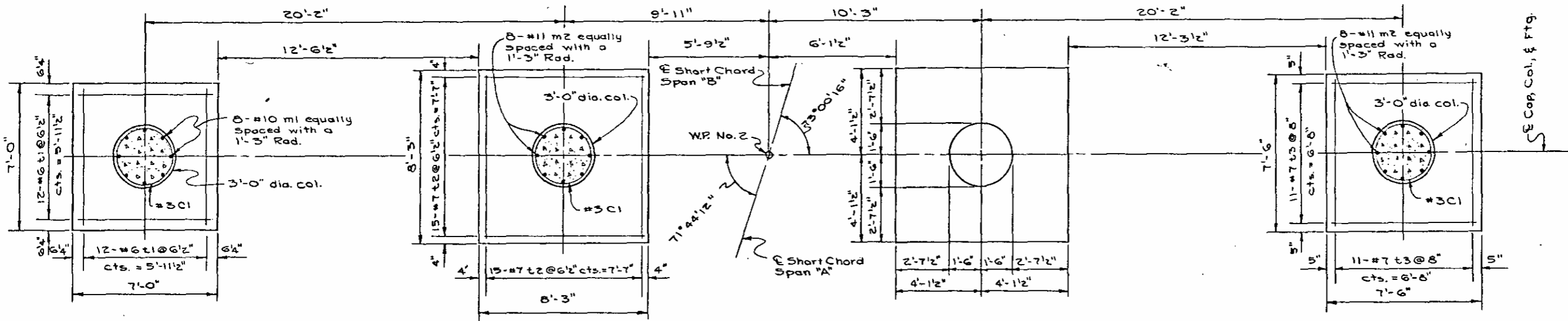
STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH
 END BENT #1
 SECTIONS & BAR TYPES

| REVISIONS | | | | | | SHEET | |
|-----------|----|------|-----|----|------|--------------|------|
| NO. | BY | DATE | NO. | BY | DATE | NO. | DATE |
| 1 | | | 3 | | | 5-109 | |
| 2 | | | 4 | | | TOTAL SHEETS | 256 |



PROJECT No. 8.1531603
 GUILFORD COUNTY
 STATION: 780+65.85 -L-
 Sheet 1 of 2

| | | | | | |
|--|----|------|-----|----|------------------|
| STATE OF NORTH CAROLINA STATE HIGHWAY COMMISSION RALEIGH | | | | | |
| BENT No. 1 | | | | | |
| JAN. 1970 | | | | | |
| REVISIONS | | | | | |
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 3 | | |
| 2 | | | 4 | | |
| SHEET NO. S-129 | | | | | TOTAL SHEETS 256 |



PLAN OF FOOTING

Note: The two interior ftgs. are identical

BILL OF MATERIAL

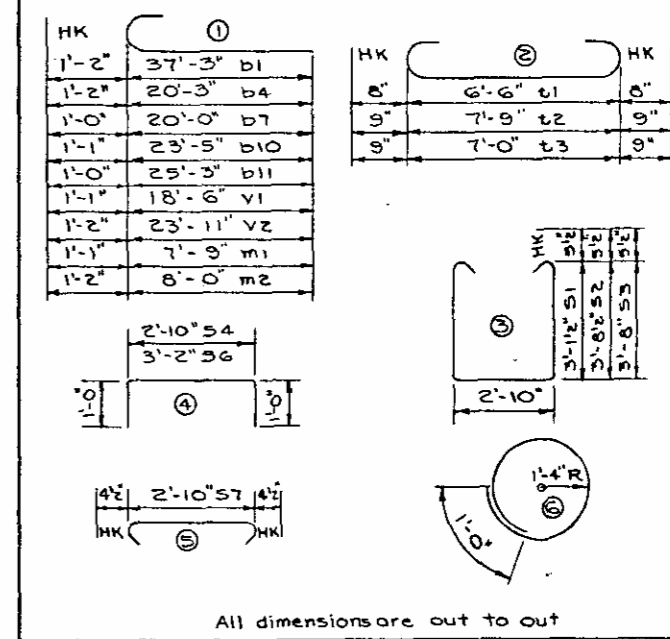
| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|-----|-----|------|------|--------|--------|
| b1 | 4 | #11 | 1 | 35'-5" | 816 |
| b2 | 4 | #4 | str. | 8'-6" | 23 |
| b3 | 4 | #10 | str. | 20'-3" | 349 |
| b4 | 2 | #11 | 1 | 21'-5" | 228 |
| b5 | 6 | #10 | str. | 23'-8" | 311 |
| b6 | 2 | #10 | str. | 40'-7" | 349 |
| b7 | 6 | #9 | 1 | 21'-0" | 428 |
| b8 | 4 | #4 | str. | 3'-1" | 8 |
| b9 | 3 | #10 | str. | 23'-8" | 617 |
| b10 | 1 | #10 | 1 | 24'-6" | 633 |
| b11 | 7 | #9 | 1 | 26'-3" | 625 |
| | | | | | |
| c1 | 80 | #3 | 6 | 9'-5" | 283 |
| | | | | | |
| m1 | 8 | #10 | 1 | 8'-10" | 304 |
| m2 | 24 | #11 | 1 | 9'-2" | 1169 |
| | | | | | |
| s1 | 23 | #5 | 3 | 10'-0" | 240 |
| s2 | 5 | #5 | 3 | 11'-2" | 58 |
| s3 | 23 | #5 | 3 | 11'-1" | 266 |
| s4 | 13 | #4 | 4 | 4'-10" | 42 |
| s5 | 21 | #4 | str. | 2'-10" | 40 |
| s6 | 21 | #4 | 4 | 5'-2" | 72 |
| s7 | 36 | #4 | 5 | 3'-7" | 86 |
| v1 | 24 | #6 | 2 | 7'-10" | 282 |
| t2 | 60 | #7 | 2 | 9'-3" | 1134 |
| t3 | 22 | #7 | 2 | 8'-6" | 382 |
| | | | | | |
| v1 | 8 | #10 | 1 | 19'-7" | 674 |
| v2 | 24 | #11 | 1 | 25'-1" | 3198 |

Reinforcing Steel Lbs. = 12,917

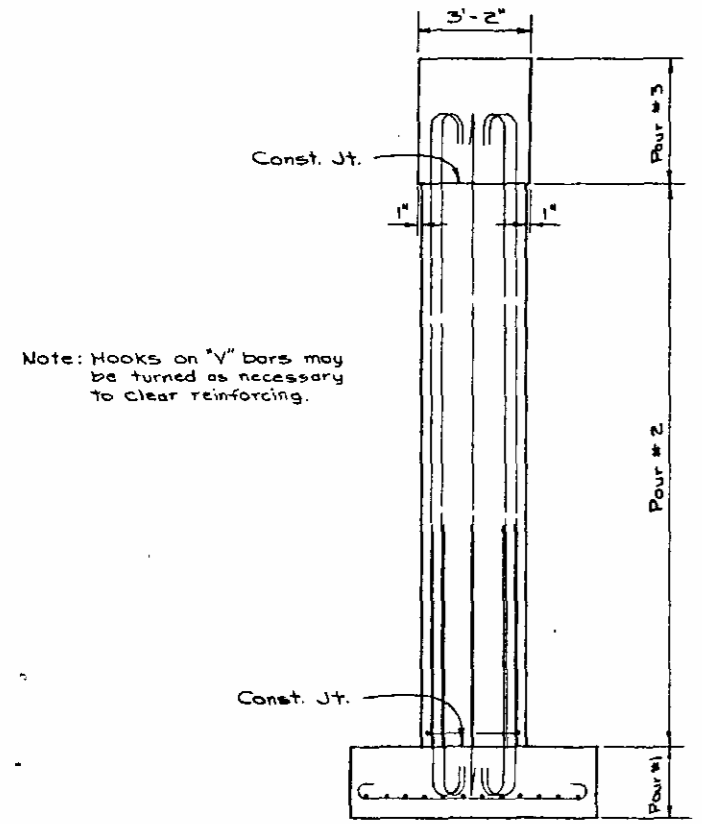
Class "A" Concrete Cu. Yds.

| | |
|---------|------|
| Pour #1 | 17.9 |
| Pour #2 | 20.9 |
| Pour #3 | 34.0 |
| Total | 72.8 |

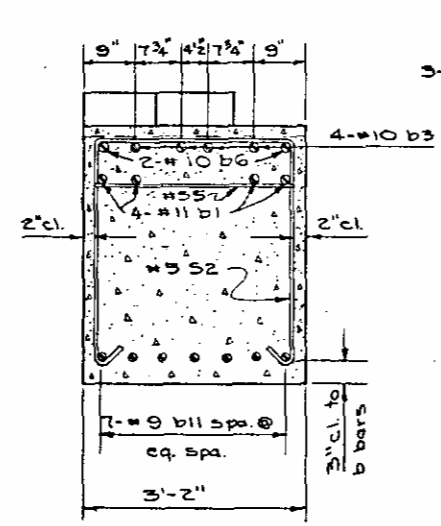
BAR TYPES



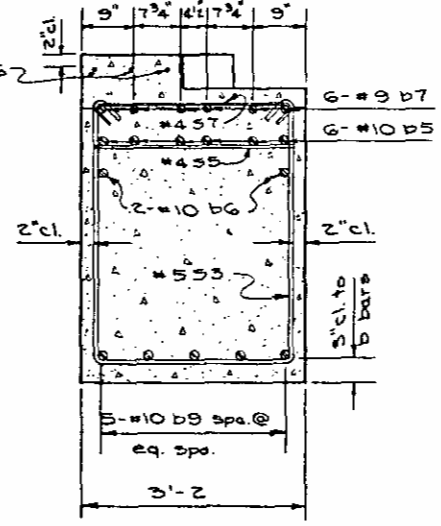
All dimensions are out to out



LT. END ELEVATION



SECTION A-A



SECTION B-B

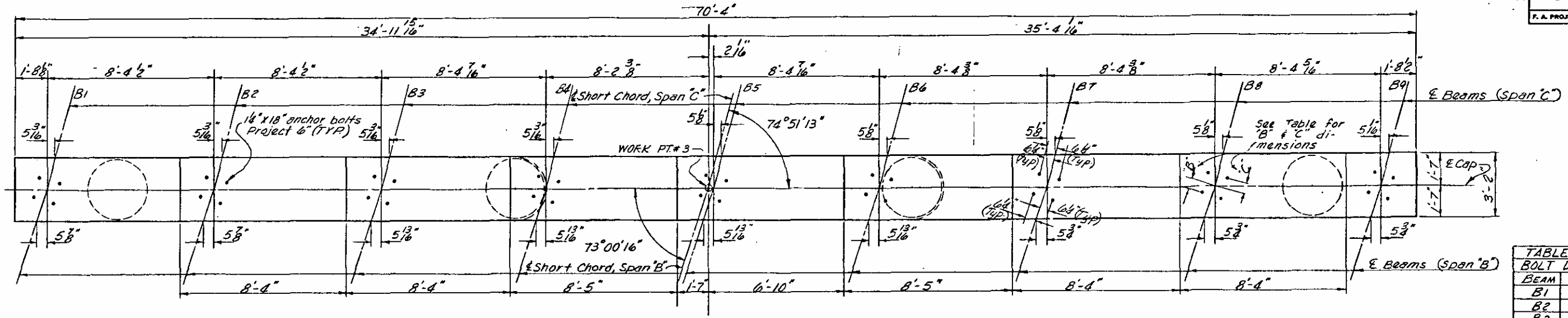
PROJECT No. 81531603
 GUILFORD COUNTY
 STATION: 780+65.85-L
 Sheet 2 of 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH

BENT No. 1

FEB. 1970

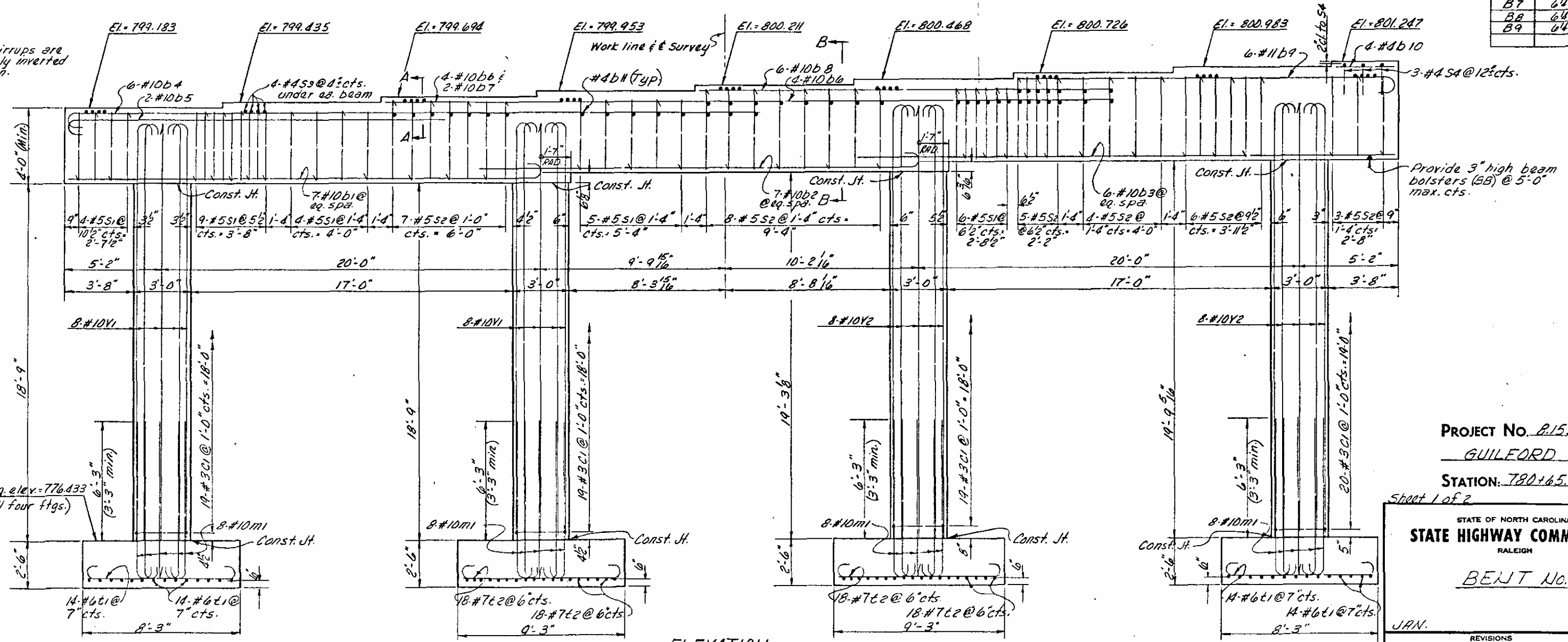
| REVISIONS | | | | | | SHEET NO. 5-200 |
|-----------|----|------|-----|----|------|---------------------|
| NO. | BY | DATE | NO. | BY | DATE | |
| 1 | | | 3 | | | TOTAL SHEETS 256 |
| 2 | | | 4 | | | |



| BEAM | B | C |
|------|-----|---------|
| B1 | 64" | 64" |
| B2 | 64" | 64" |
| B3 | 64" | 63 3/4" |
| B4 | 64" | 63 3/4" |
| B5 | 64" | 63 3/4" |
| B6 | 64" | 63 3/4" |
| B7 | 64" | 63 3/4" |
| B8 | 64" | 63 3/4" |
| B9 | 64" | 63 3/4" |

PLAN

Note: Stirrups are alternately inverted as shown.



ELEVATION

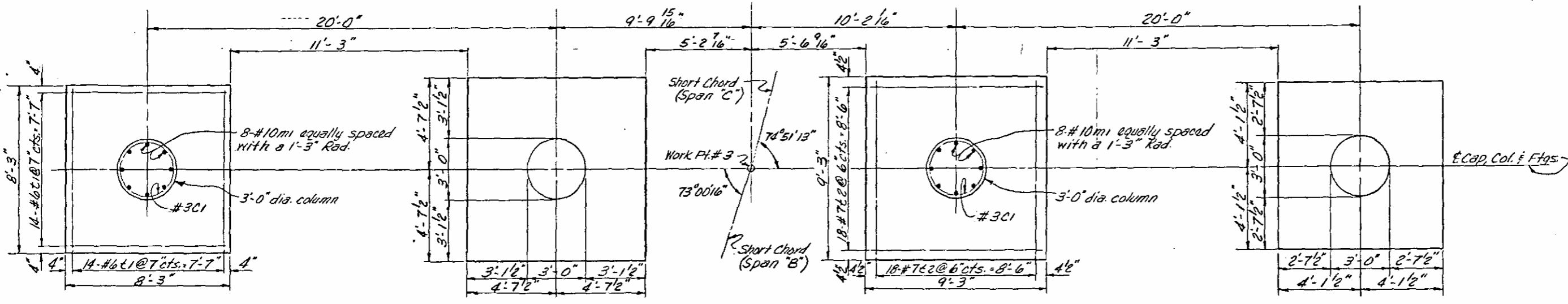
PROJECT No. 815316C3
 GUILFORD COUNTY
 STATION: 780+65.85 -L
 Sheet 1 of 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH

BENT No. 2

JAN. 1970

| REVISIONS | | | | | | SHEET NO. 5-201 |
|-----------|----|------|-----|----|------|---------------------|
| NO. | BY | DATE | NO. | BY | DATE | |
| 1 | | | 3 | | | TOTAL SHEETS 256 |
| 2 | | | 4 | | | |

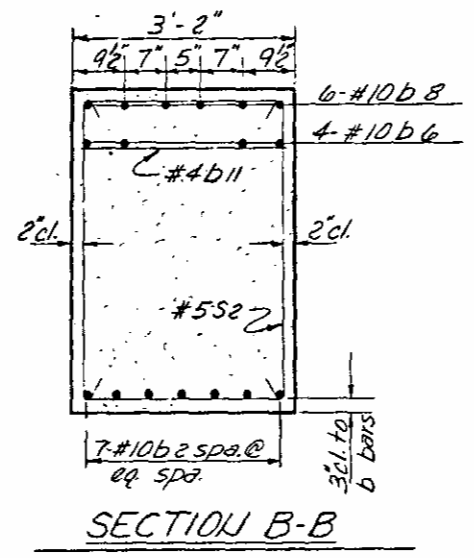
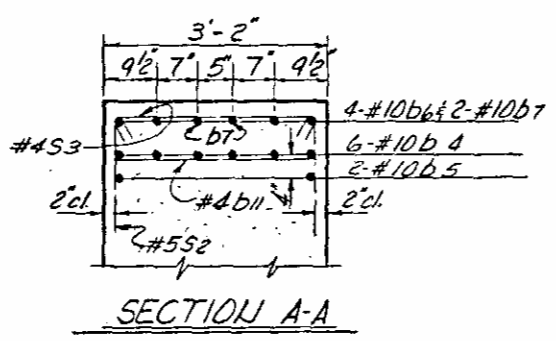
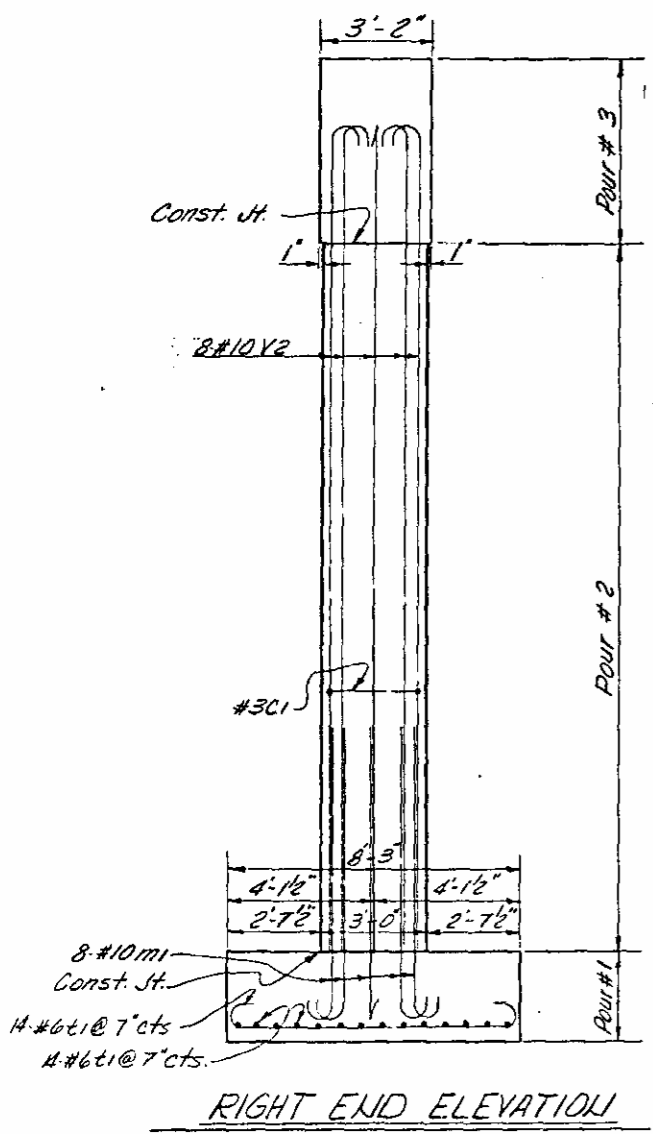


PLAN OF FOOTINGS
 Note: The two exterior fgs. are identical & the two interior fgs. are identical

| BILL OF MATERIAL | | | | | |
|------------------|-----|------|------|---------|--------|
| BENT No. 2 | | | | | |
| BAR NO. | NO. | SIZE | TYPE | LENGTH | WEIGHT |
| b1 | 7 | #10 | 1 | 26'-1" | 786 |
| b2 | 7 | #10 | 1 | 28'-4" | 725 |
| b3 | 6 | #10 | str. | 28'-3" | 729 |
| b4 | 6 | #10 | 1 | 37'-9" | 975 |
| b5 | 2 | #10 | 1 | 21'-0" | 181 |
| b6 | 4 | #10 | str. | 38'-6" | 663 |
| b7 | 2 | #10 | str. | 20'-0" | 172 |
| b8 | 6 | #10 | str. | 21'-11" | 566 |
| b9 | 6 | #11 | 1 | 20'-11" | 667 |
| b10 | 4 | #4 | str. | 3'-1" | 8 |
| b11 | 43 | #4 | str. | 2'-10" | 81 |
| | | | | | |
| c1 | 77 | #3 | 6 | 9'-5" | 273 |
| | | | | | |
| m1 | 32 | #10 | 1 | 9'-2" | 1262 |
| | | | | | |
| s1 | 28 | #5 | 3 | 11'-0" | 321 |
| s2 | 33 | #5 | 3 | 12'-0" | 413 |
| s3 | 36 | #4 | 5 | 3'-7" | 86 |
| s4 | 3 | #4 | 4 | 5'-10" | 12 |
| | | | | | |
| t1 | 56 | #6 | 2 | 9'-1" | 764 |
| t2 | 72 | #7 | 2 | 10'-3" | 1508 |
| | | | | | |
| v1 | 16 | #10 | 1 | 23'-1" | 1589 |
| v2 | 16 | #11 | 1 | 23'-11" | 1647 |

| BAR TYPES | |
|-----------|------------|
| ① | 25'-0" b1 |
| ② | 28'-3" b2 |
| ③ | 36'-8" b4 |
| ④ | 19'-11" b5 |
| ⑤ | 19'-9" b9 |
| ⑥ | 22'-0" v1 |
| ⑦ | 22'-10" v2 |
| ⑧ | 8'-1" m1 |
| ⑨ | 7'-9" t1 |
| ⑩ | 8'-9" t2 |
| ⑪ | 9'-1" s1 |
| ⑫ | 12'-0" s2 |
| ⑬ | 3'-7" s3 |
| ⑭ | 5'-10" s4 |
| ⑮ | 2'-10" t1 |
| ⑯ | 10'-3" t2 |
| ⑰ | 23'-1" v1 |
| ⑱ | 23'-11" v2 |

| | |
|-------------------------|--------|
| REINFORCING STEEL, LBS. | 13,436 |
| CLASS "A" CONCRETE | |
| CUL. YDS. | |
| POUR #1 | 28.4 |
| POUR #2 | 20.0 |
| POUR #3 | 36.8 |
| TOTAL | 85.2 |



PROJECT No. 81531603
 GUILFORD COUNTY
 STATION: 780+65.85-L
 Sheet 2 of 2

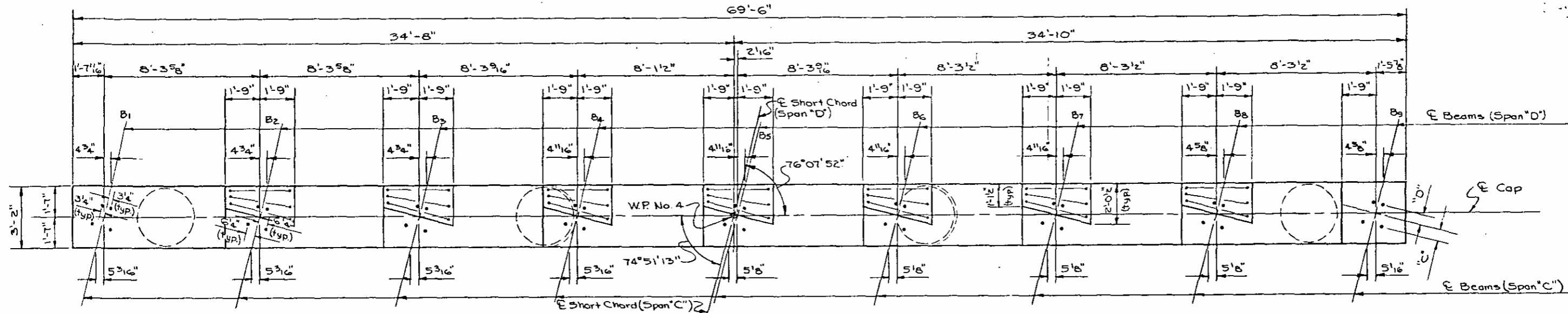
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH

BENT No. 2

JAH. 1970

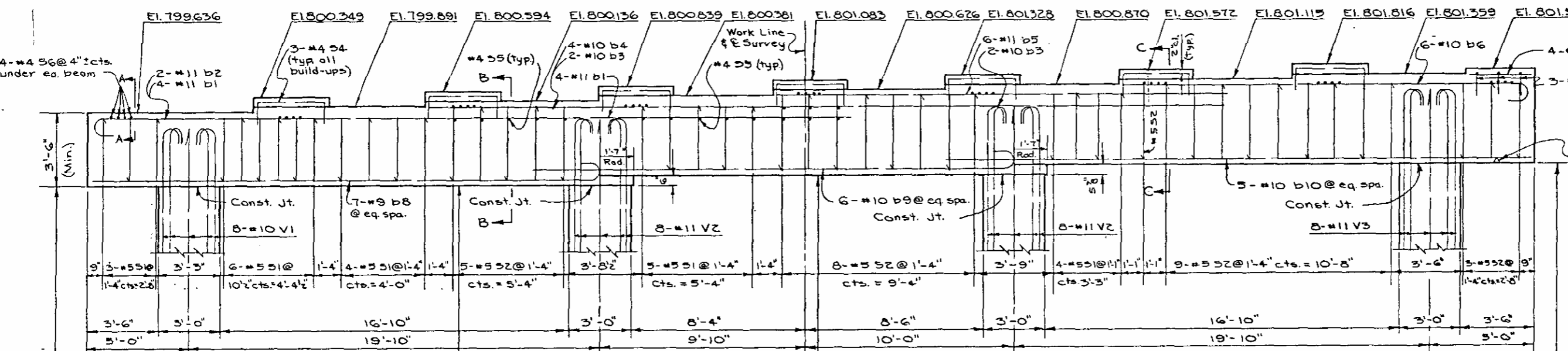
| REVISIONS | | | | | |
|-----------|----|------|-----|----|------|
| NO. | BY | DATE | NO. | BY | DATE |
| 1 | | | 2 | | |
| 2 | | | 4 | | |

SHEET NO. 5-202
 TOTAL SHEETS 256



PLAN

| BEAM | "C" | "D" |
|------|---------|---------|
| B1 | 6 1/4" | 6 3/16" |
| B2 | 6 1/4" | 6 3/16" |
| B3 | 6 3/16" | 6 3/16" |
| B4 | 6 3/16" | 6 3/16" |
| B5 | 6 3/16" | 6 3/16" |
| B6 | 6 3/16" | 6 3/16" |
| B7 | 6 3/16" | 6 3/16" |
| B8 | 6 3/16" | 6 3/16" |
| B9 | 6 3/16" | 6 3/16" |

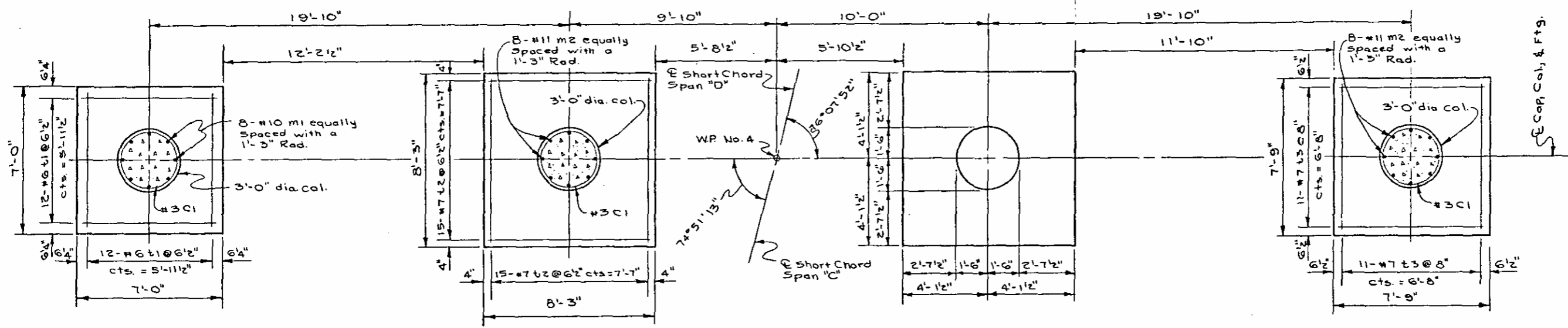


Note: Stirrups are alternately inverted as shown.
Provide 3" high beam bolsters (BB) @ 3'-0" max. cts.

ELEVATION

PROJECT No. 8.1531603
GUILFORD COUNTY
STATION: 780+65.85 -L
Sheet 1 of 2

| | | | | | | |
|--------------------------|----|------|-----|----|------|--------------|
| STATE OF NORTH CAROLINA | | | | | | SHEET NO. |
| STATE HIGHWAY COMMISSION | | | | | | |
| RALEIGH | | | | | | TOTAL SHEETS |
| BENT No. 3 | | | | | | |
| FEB. 1970 | | | | | | |
| REVISIONS | | | | | | |
| NO. | BY | DATE | NO. | BY | DATE | |
| 1 | | | 2 | | | |
| 2 | | | 4 | | | |



PLAN OF FOOTING

Note: The two interior ftgs. are identical

BILL OF MATERIAL FOR BENT No. 3

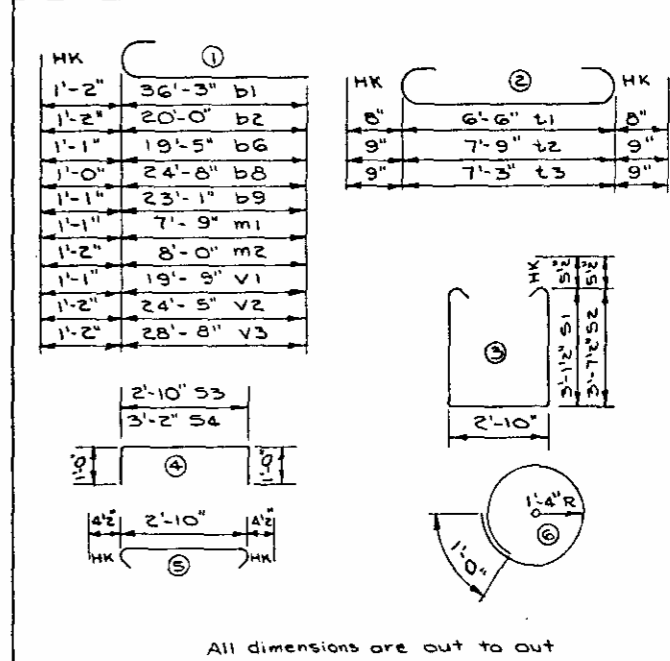
| BAR | NO. | SIZE | TYPE | LENGTH | WEIGHT |
|-----|-----|------|------|---------|--------|
| b1 | 4 | #11 | 1 | 37'-5" | 795 |
| b2 | 2 | #11 | 1 | 21'-2" | 225 |
| b3 | 2 | #10 | str. | 38'-0" | 327 |
| b4 | 4 | #10 | str. | 19'-10" | 34 |
| b5 | 6 | #11 | str. | 21'-8" | 691 |
| b6 | 6 | #10 | 1 | 20'-6" | 529 |
| b7 | 4 | #4 | str. | 2'-10" | 8 |
| b8 | 7 | #9 | 1 | 25'-8" | 611 |
| b9 | 6 | #10 | 1 | 24'-2" | 624 |
| b10 | 5 | #10 | str. | 27'-11" | 601 |
| | | | | | |
| CI | 85 | #3 | 6 | 9'-5" | 301 |
| | | | | | |
| m1 | 8 | #10 | 1 | 8'-10" | 304 |
| m2 | 24 | #11 | 1 | 9'-2" | 1169 |
| | | | | | |
| s1 | 22 | #3 | 3 | 10'-0" | 22 |
| s2 | 26 | #3 | 3 | 11'-0" | 298 |
| s3 | 3 | #4 | 4 | 4'-10" | 10 |
| s4 | 21 | #4 | 4 | 5'-2" | 72 |
| s5 | 16 | #4 | str. | 2'-10" | 30 |
| s6 | 36 | #4 | 5 | 3'-7" | 86 |
| | | | | | |
| t1 | 24 | #6 | 2 | 7'-10" | 282 |
| t2 | 60 | #7 | 2 | 9'-3" | 1134 |
| t3 | 22 | #7 | 2 | 8'-9" | 393 |
| | | | | | |
| v1 | 8 | #10 | 1 | 20'-10" | 717 |
| v2 | 16 | #11 | 1 | 25'-7" | 2175 |
| v3 | 8 | #11 | 1 | 29'-10" | 1268 |

Reinforcing Steel Lbs. = 13,220

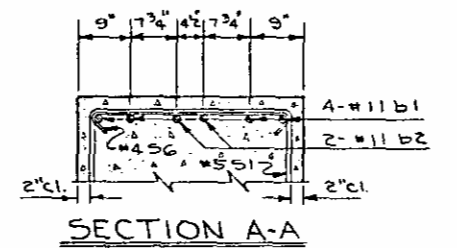
Class "A" Concrete Cu. Yds.

| | |
|---------|------|
| Pour #1 | 18.2 |
| Pour #2 | 22.3 |
| Pour #3 | 32.8 |
| Total | 73.3 |

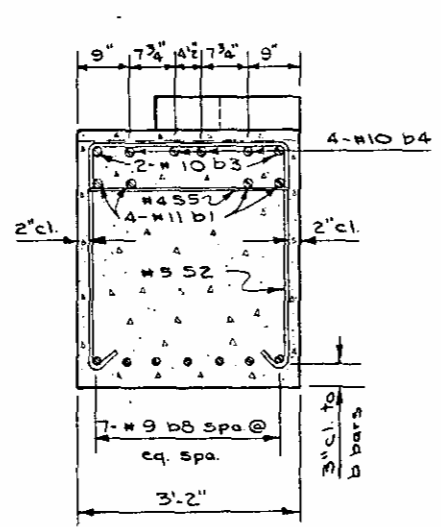
BAR TYPES



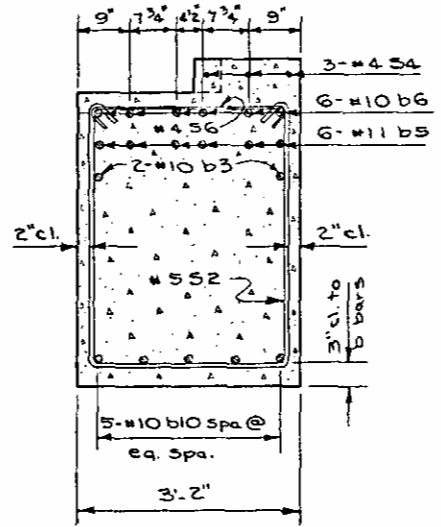
All dimensions are out to out



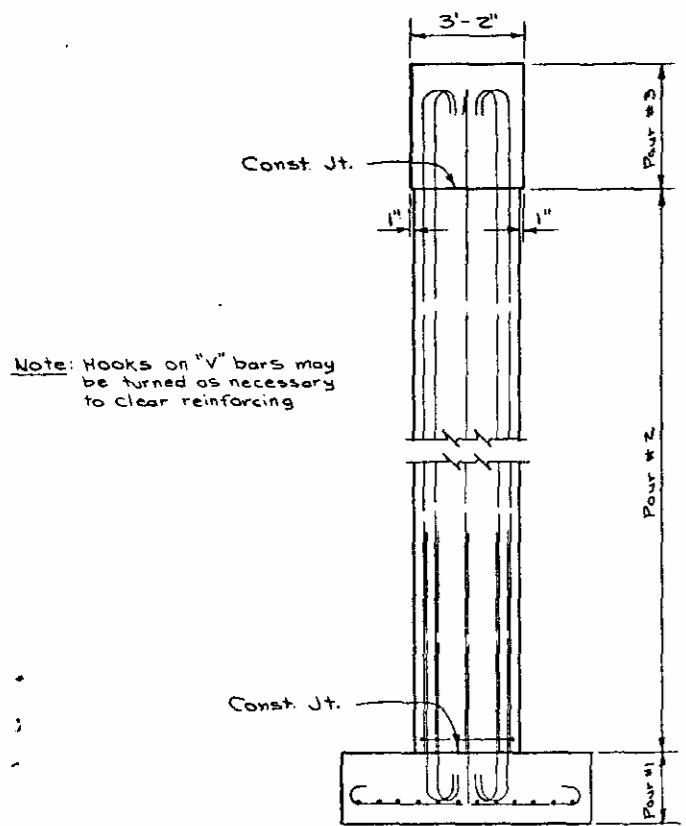
SECTION A-A



SECTION B-B



SECTION C-C



LT. END ELEVATION

Note: Hooks on "V" bars may be turned as necessary to clear reinforcing

PROJECT No. 81531603

GUILFORD COUNTY

STATION: 780+6585-L-

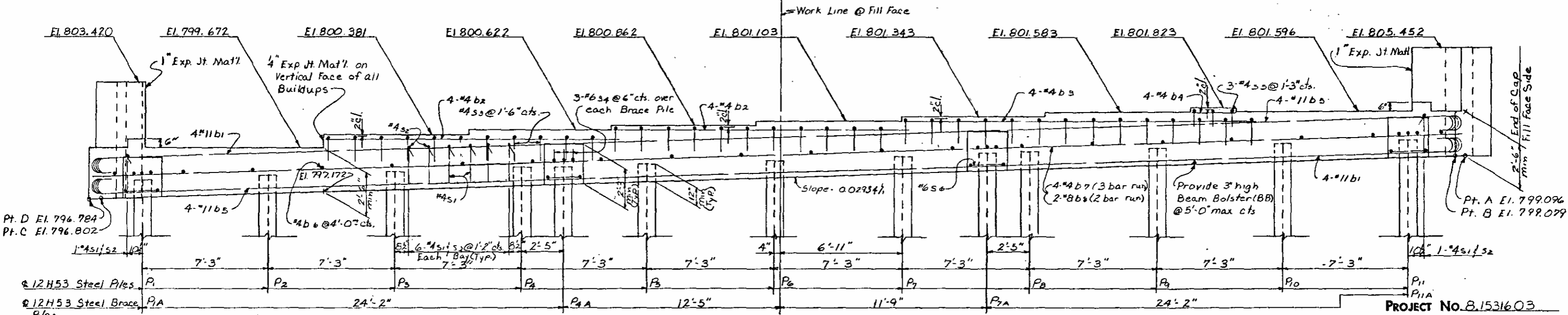
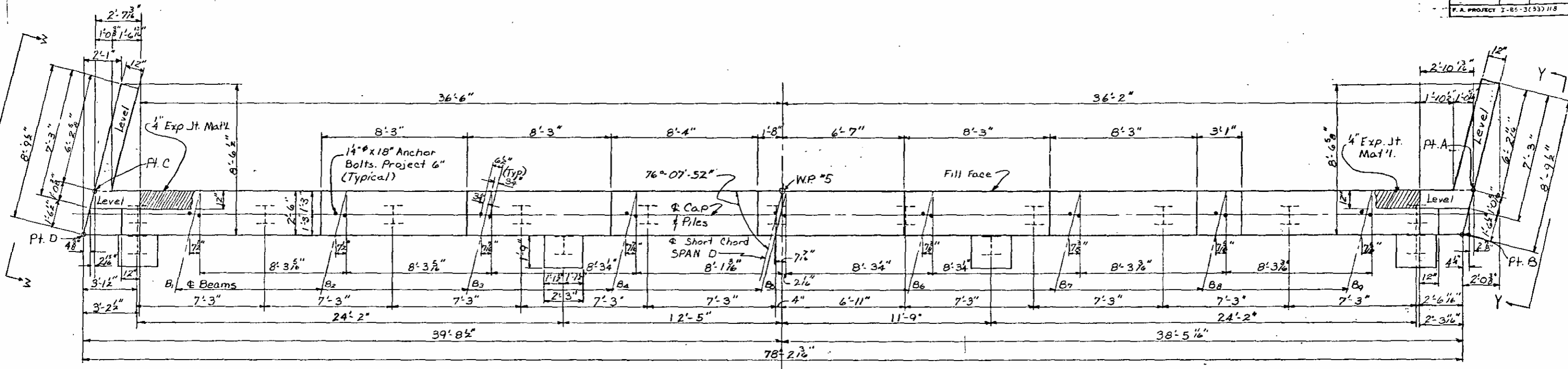
Sheet 2 of 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH

BENT No. 3

FEB. 1970

| REVISIONS | | | | | | SHEET NO. 5-204 |
|-----------|----|------|-----|----|------|---------------------|
| NO. | BY | DATE | NO. | BY | DATE | |
| 1 | | | 2 | | | TOTAL SHEETS 256 |
| 2 | | | 4 | | | |



| Pile Number | Top of Pile Elev. | Brace Pile Number | Top of Brace Pile Elev. |
|-------------|-------------------|-------------------|-------------------------|
| P1 | 797.891 | P1A | 797.891 |
| P2 | 798.104 | P4A | 798.600 |
| P3 | 798.316 | P7A | 799.309 |
| P4 | 798.529 | P11A | 800.018 |
| P5 | 798.742 | | |
| P6 | 798.955 | | |
| P7 | 799.167 | | |
| P8 | 799.380 | | |
| P9 | 799.593 | | |
| P10 | 799.805 | | |
| P11 | 800.018 | | |

TOP OF PILE ELEVATIONS

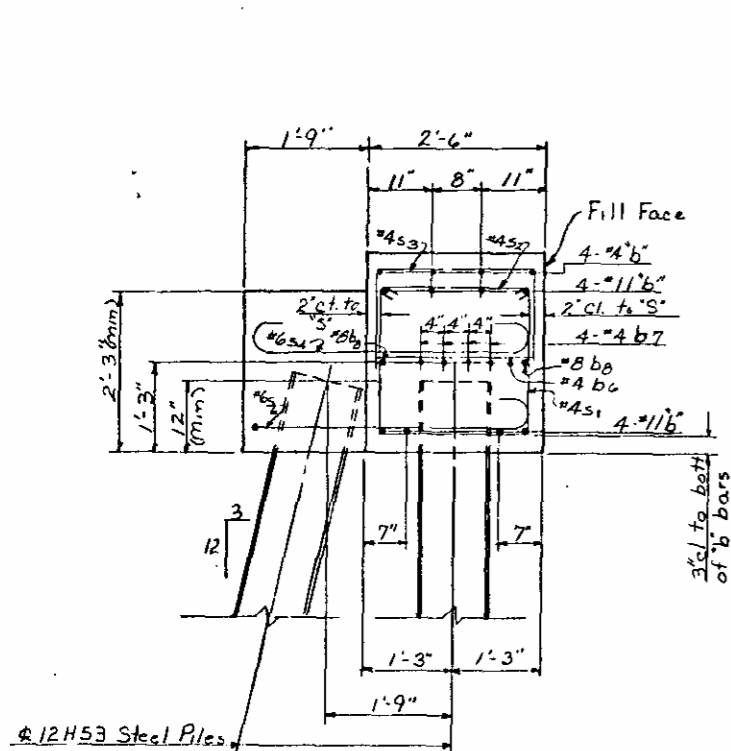
PROJECT No. 8.153.603
 GUILFORD COUNTY
 STATION: 780+65.85-1-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
 RALEIGH

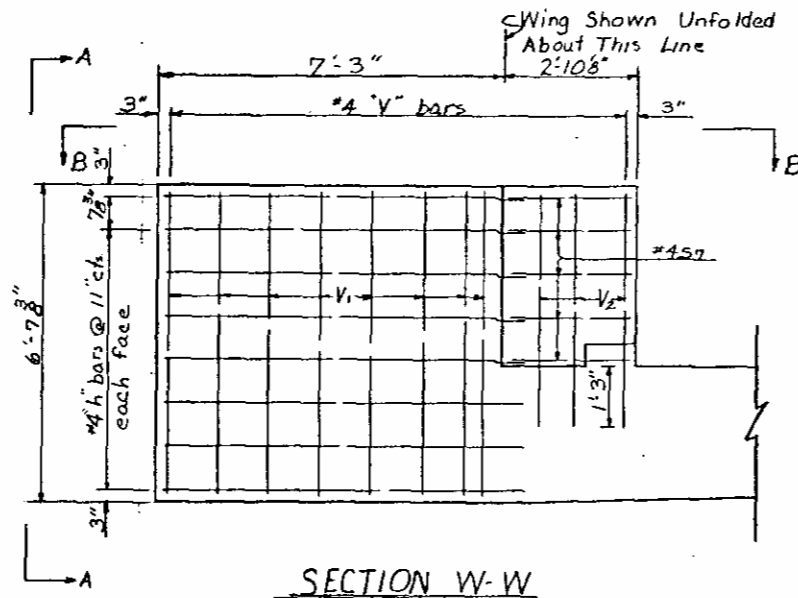
END BENT NO. 2

JANUARY 1970

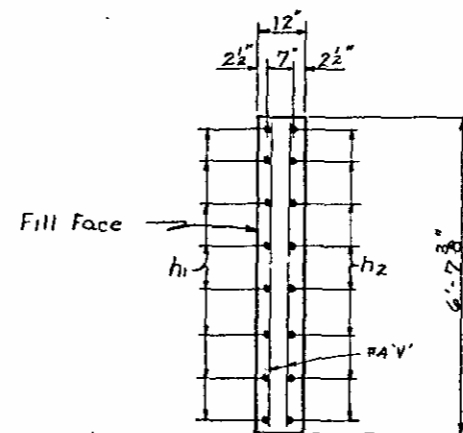
| REVISIONS | | | | | | SHEET NO. 5-205 |
|-----------|----|------|-----|----|------|------------------|
| NO. | BY | DATE | NO. | BY | DATE | |
| 1 | | | 3 | | | TOTAL SHEETS 256 |
| 2 | | | 4 | | | |



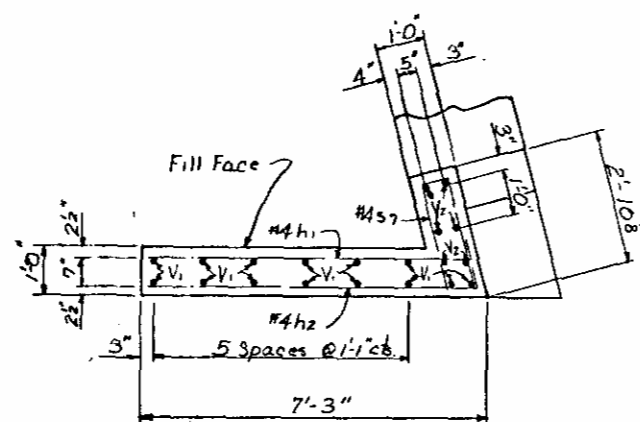
SECTION THRU CAP



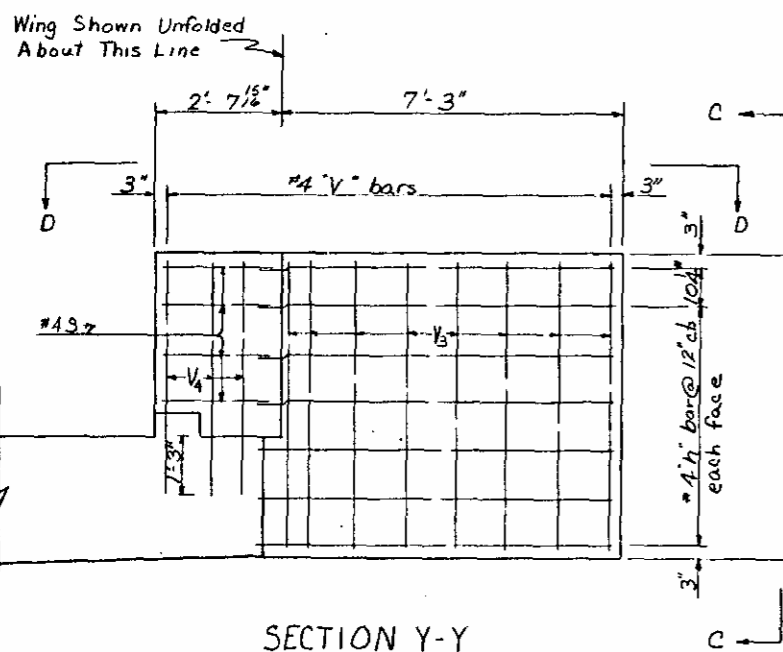
SECTION W-W



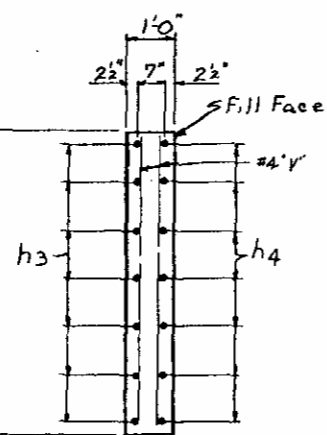
SECTION A-A



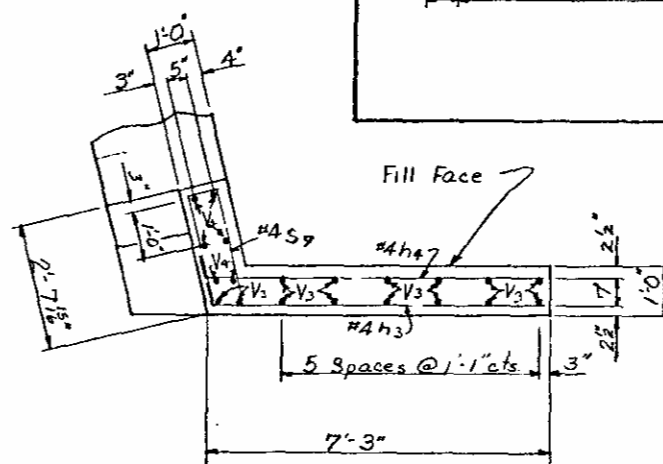
SECTION BB



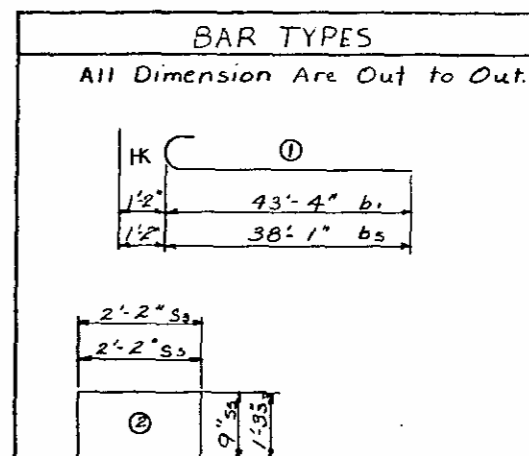
SECTION Y-Y



SECTION C-C



SECTION D-D



BAR TYPES
All Dimension Are Out to Out.

BILL OF MATERIAL
FOR END BENT #2

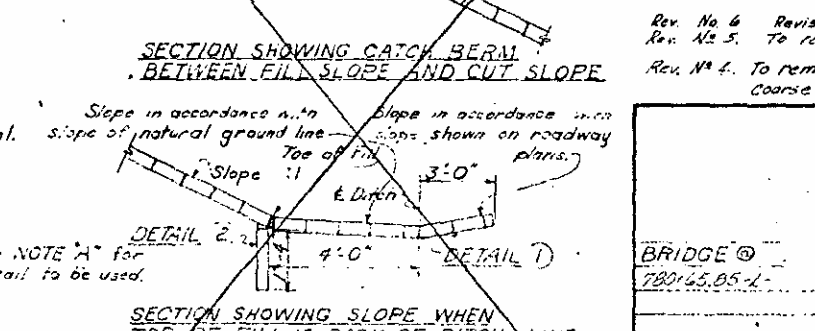
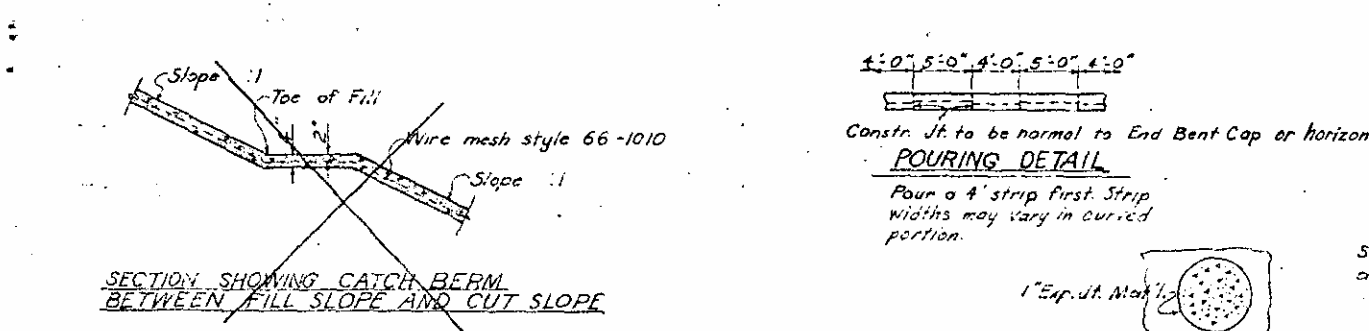
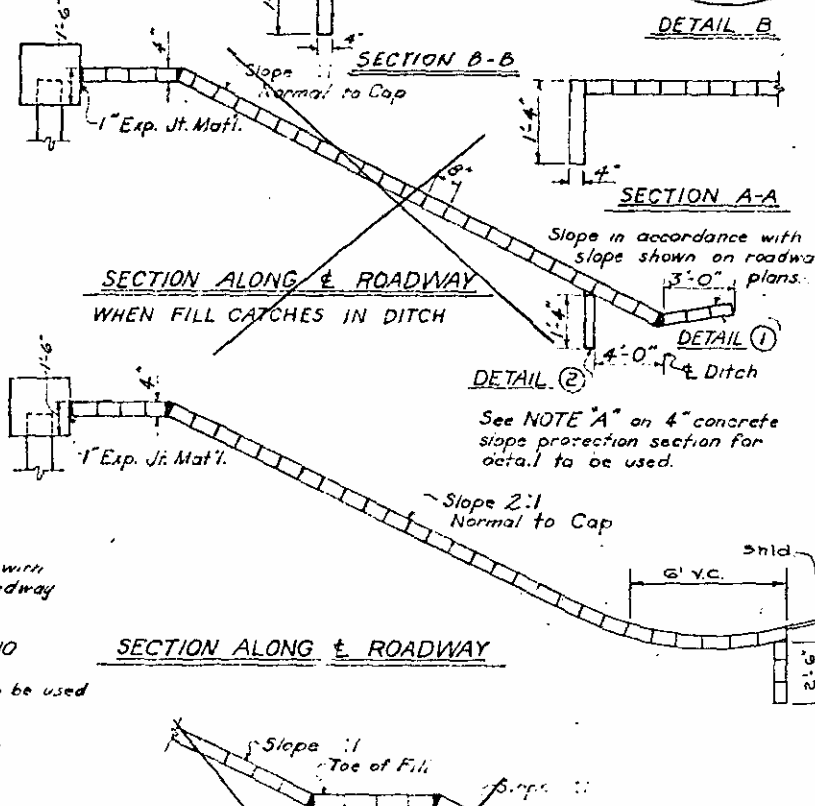
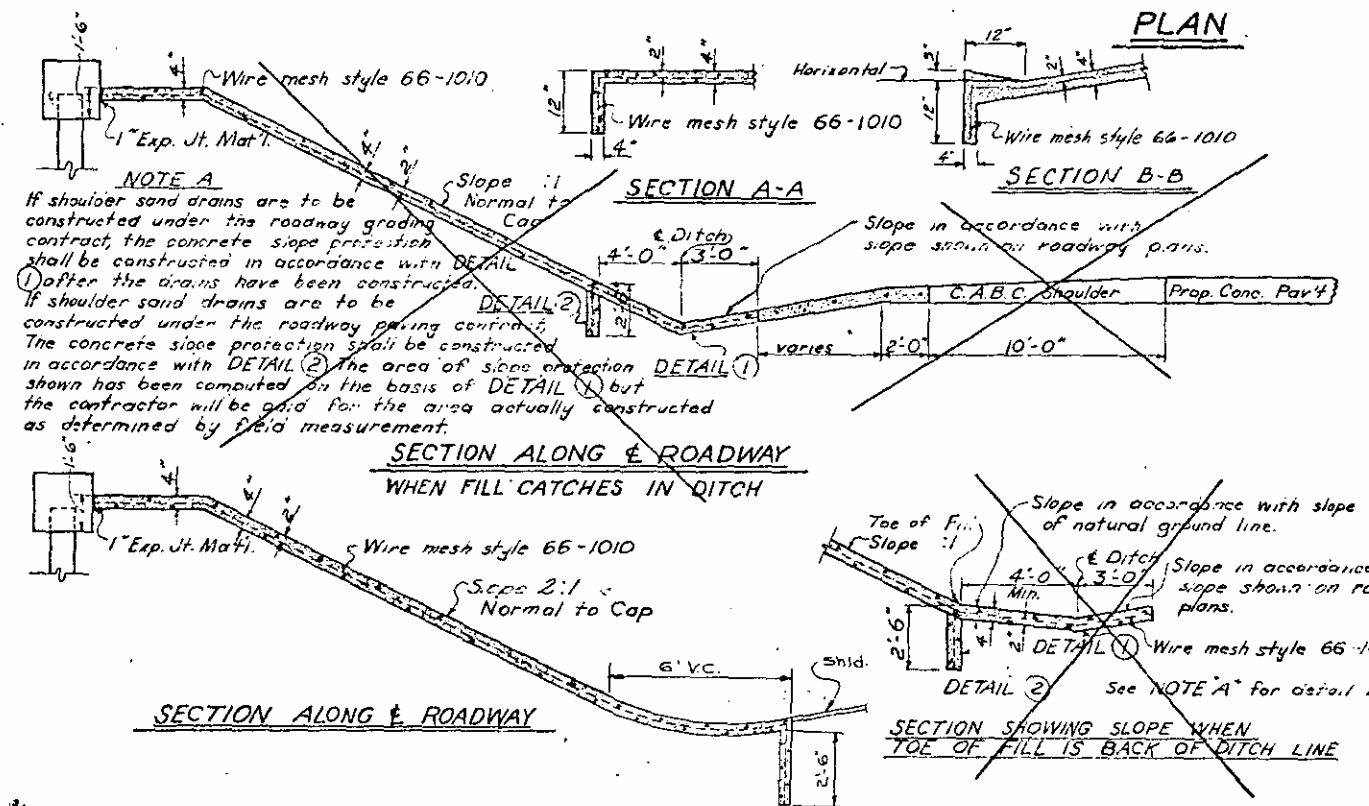
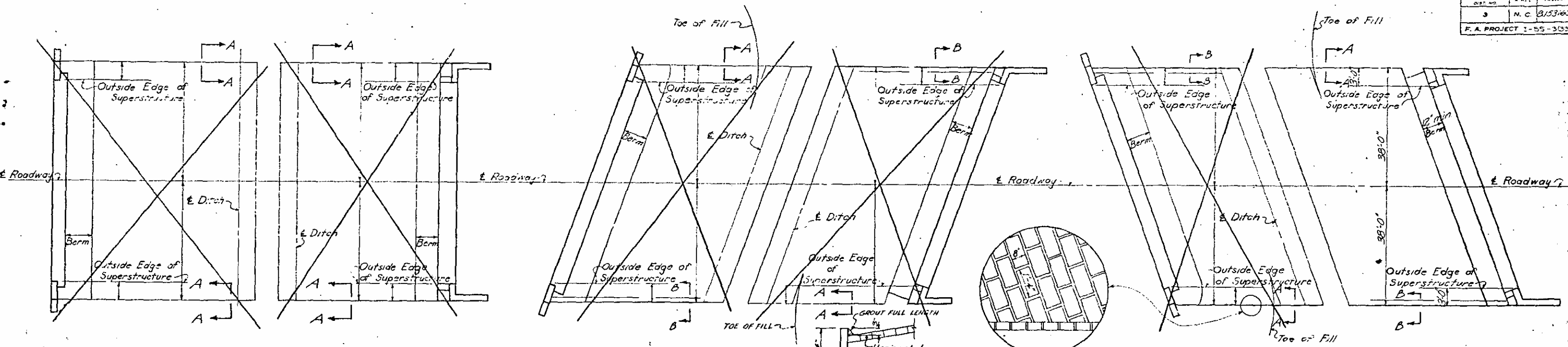
| BAR NO. | SIZE | TYPE | LENGTH | WEIGHT |
|---------|------|---------|----------|--------|
| b1 | #8 | #11 | 44'-6" | 1291 |
| b2 | #8 | #4 Str. | 16'-6" | 33 |
| b3 | #4 | #4 Str. | 20'-0" | 53 |
| b4 | #4 | #4 Str. | 2'-9" | 7 |
| b5 | #8 | #11 | 39'-3" | 1668 |
| b6 | #20 | #4 Str. | 2'-2" | 29 |
| b7 | #12 | #4 Str. | 26'-10" | 215 |
| b8 | #4 | #8 Str. | 40'-3" | 430 |
| h1 | #8 | #4 | 7'-2" | 38 |
| h2 | #8 | #4 | 7'-4" | 39 |
| h3 | #7 | #4 | 7'-5" | 35 |
| h4 | #7 | #4 | 7'-6" | 35 |
| s1 | #62 | #4 | 7'-2" | 297 |
| s2 | #62 | #4 | 2'-11" | 121 |
| s3 | #36 | #4 | 2'-4'-8" | 112 |
| s4 | #12 | #6 | 9'-5'-3" | 95 |
| s5 | #3 | #4 | 3'-8" | 7 |
| s6 | #4 | #6 | 11'-1" | 67 |
| s7 | #9 | #4 | 5'-5" | 33 |
| v1 | #14 | #4 Str. | 6'-3" | 58 |
| v2 | #6 | #4 Str. | 4'-10" | 19 |
| v3 | #14 | #4 Str. | 6'-0" | 56 |
| v4 | #6 | #4 Str. | 4'-11" | 20 |

Reinforcing Steel Lb. 5413
Class 'A' Concrete
Cu. Yd. 26.6
12H53 Steel Piles
No. 15, Lin. Ft. 375

PROJECT No. 8.1531603
GUILFORD COUNTY
STATION: 780+65.85-L-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
END BENT #2
SECTIONS AND BAR TYPES
JANUARY 1970

| REVISIONS | | | | | | SHEET NO. | |
|-----------|----|------|-----|----|------|--------------|--|
| NO. | BY | DATE | NO. | BY | DATE | 5-235 | |
| 1 | | | 3 | | | TOTAL SHEETS | |
| 2 | | | 4 | | | 255 | |



NOTES:
 A 4" concrete slope protection paving shall be placed under the ends of the bridge. Limits of the protection shall be as shown in the details. The contractor, at his option, may place either type, Alternate "A" or "B", as described below. Immediately before placing the paving, the slope shall be properly shaped and firmly compacted so that it conforms to the lines and grades shown. The finished surface shall be reasonably smooth and uniform and shall not vary more than 1/8 inch in a distance of 10 feet. Straight edging will not be required unless, in the opinion of the Engineer, visual inspection indicates a need for it.

Alternate "A" shall consist of 4" poured in place concrete paving as shown in details on this sheet. Concrete shall be Class B. The concrete surface shall be floated with a wooden float and finished.

The quantity to be paid for under this item shall be the number of square yards of slope protection measured in place complete and accepted, including the area of the toe walls below 4" thickness of protection. (For example 8" pay area for toe wall 1'-0" deep.) The quantity measured as provided for above, shall be paid for at the contract unit price per square yard for mesh, excavation, backfilling, preparation of slopes, and all materials, labor, equipment, tools and incidentals necessary to complete the work.

Alternate "B" shall consist of solid concrete blocks 4"x8"x16" laid in horizontal courses such that those in successive courses will break joints with units in the preceding one. Blocks are to be laid with their long axis parallel to the end bent cap with graded joints preferably 3/4" but not less than 1/2" nor more than 1" wide between successive courses and ends of blocks. Joints shall be graded by pouring a mixture of one part Portland cement to three parts sand mixed with sufficient water to enable the mixture to be poured through a spout. The concrete blocks shall be cast to accurate dimensions, shall have uniform surface color and texture, and shall be manufactured of materials to produce a compressive strength of not less than 3,000 p.s.i. at age of 28 days. No broken blocks shall be used except in constructing a straight line along each side of the paving down the slope. Care shall be taken to break the blocks so as to give a uniform workmanlike joint and surface.

Method of measurement and basis of payment shall be as prescribed above under Alternate "A".

ALTERNATE "A" wire mesh reinforcing to be style 66-1010 60" wide. Adjacent runs of wire mesh to lap at least 6". Slope Protection to be poured in alternate 4'x5' strips as shown in Pouring Detail. The cost of wire mesh to be included in the contract unit price bid per square yard for 4" concrete slope protection.

The same type of slope protection shall be used under both ends of any one bridge.

ASSEMBLED BY G.L. KETCHUM, JR. DATE 2-17-72
 CHECKED BY G.T. PHILLIPS DATE MAR 10 64

DETAILS FOR ALTERNATE "A"
 PLAN WHERE CONC. OR CONC. BLOCK SLOPE PROTECT. MUST BE PLACED AROUND A BENT COLUMN
 REV. NO. 2 TO ELIMINATE 90° CORNER AT TOP OF SLOPE FOR SHOWN VOTP SCAPED, AND SEC. 4-A AND TO ADAPT ALTERNATE FOR CONSTRUCTION USE.

DETAILS FOR ALTERNATE "B"
 REV. NO. 3 TO TAKE OUT DIMENSIONS FROM OUTSIDE EDGE OF SUPERSTRUCTURE TO OUTSIDE SLOPE PROTECTION VIEW
 REV. NO. 1 TO SHOW BERM 1'-6" ABOVE 3" FROM OF CAR. VIEW

BRIDGE # 78065.85-L

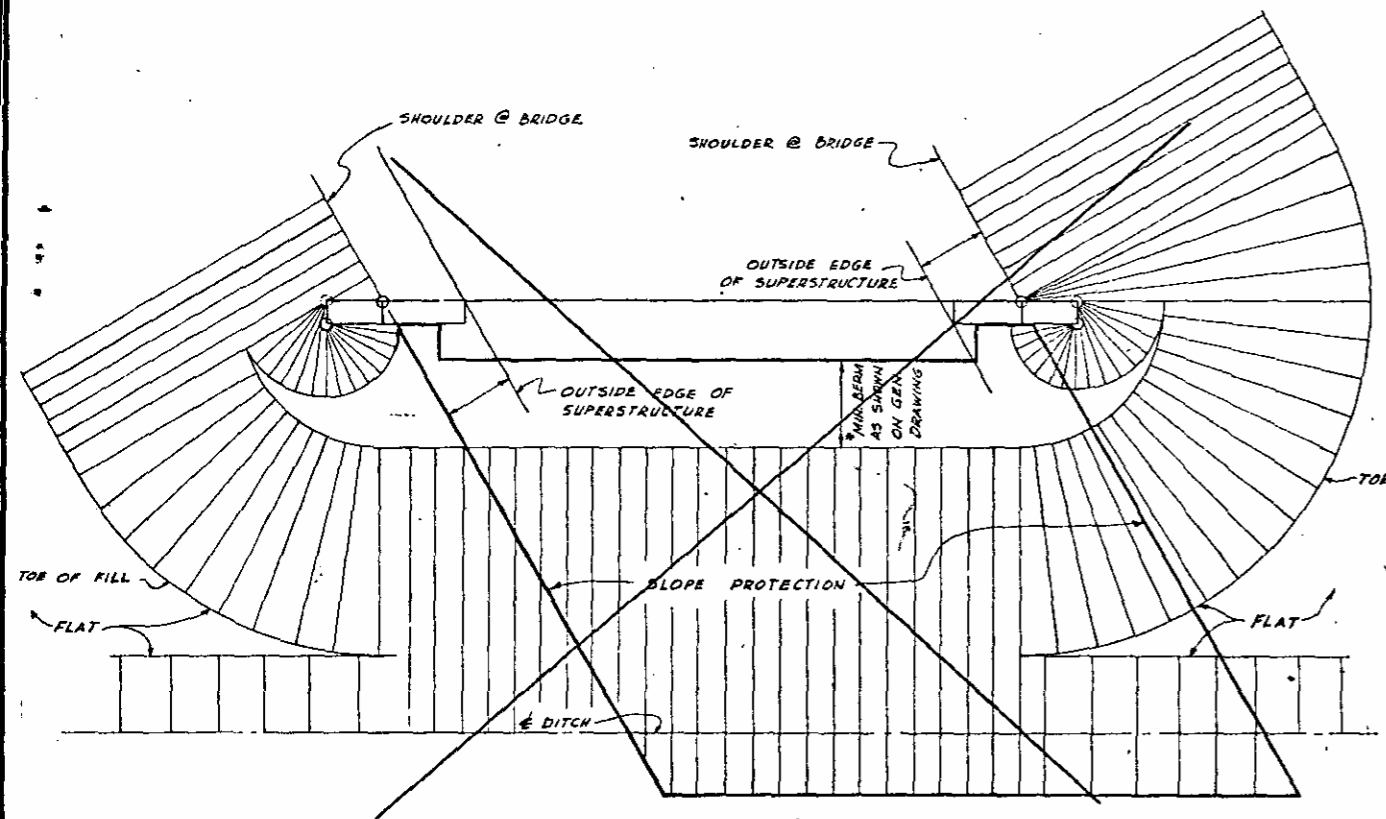
| REV. | DATE | BY | DESCRIPTION |
|------|---------|--------|-------------|
| 1 | 7-25-64 | JLS | PREPARED |
| 2 | 7-25-64 | JLS | REVISED |
| 3 | 7-25-64 | JLS | REVISED |
| 4 | 7-25-64 | JLS | REVISED |
| 5 | 7-25-64 | JLS | REVISED |
| 6 | 4-30-68 | T.M.J. | REVISED |

PROJECT NO. 8.153/603
 GUILFORD COUNTY
 STATION: 780.65.85 -L-
 SHEET 1 of 2

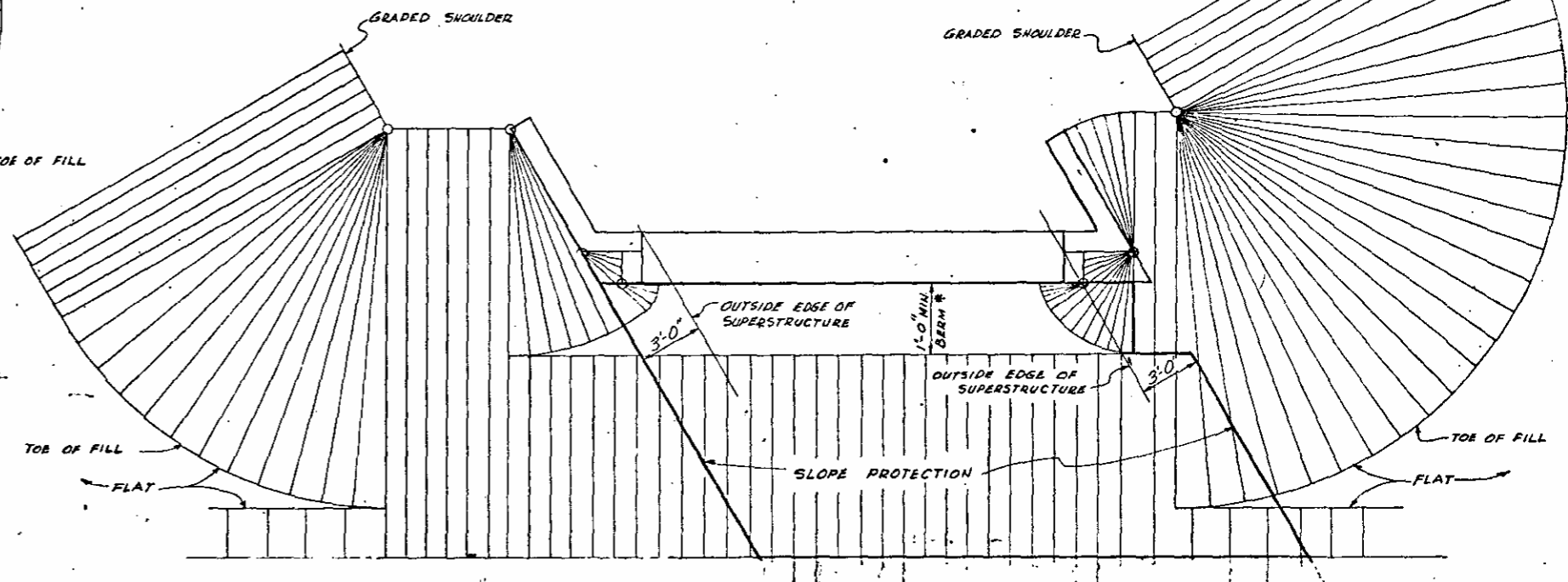
STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH

STANDARD
 SLOPE PROTECTION
 PAVING DETAILS

March 1964

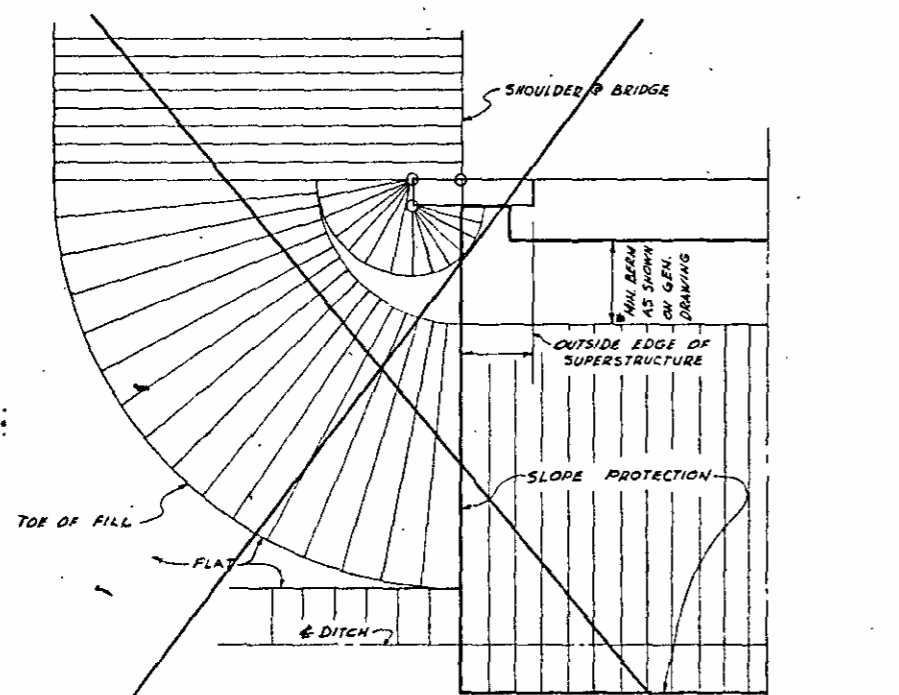


END BENT WITH EAR WALLS - SKEWED



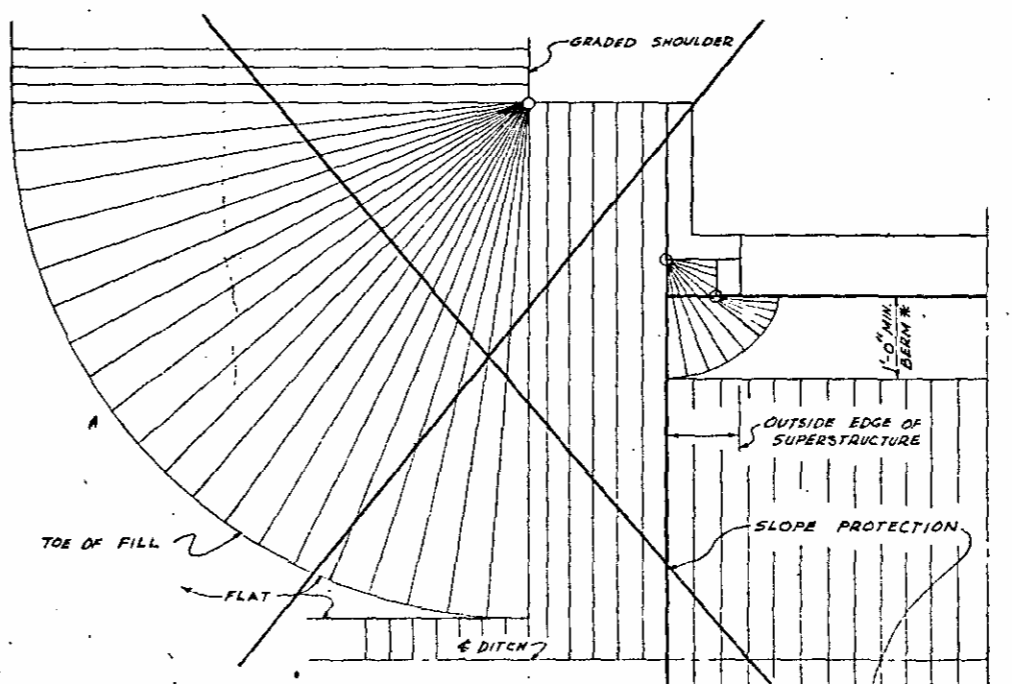
END BENT WITH SWEEP BACK WINGS - SKEWED

* NOTE: VARY BERM WIDTH AS NECESSARY TO FIT DITCH ALIGNMENT.



HALF PLAN END BENT WITH EAR WALLS - 90°

NOTE: OTHER SIDE SIMILAR.



HALF PLAN END BENT WITH SWEEP BACK WINGS - 90°

NOTE: OTHER SIDE SIMILAR.

PROJECT NO. 81531603
 GUILFORD COUNTY
 STATION: 780+65.85-L-

SHEET 2 OF 2

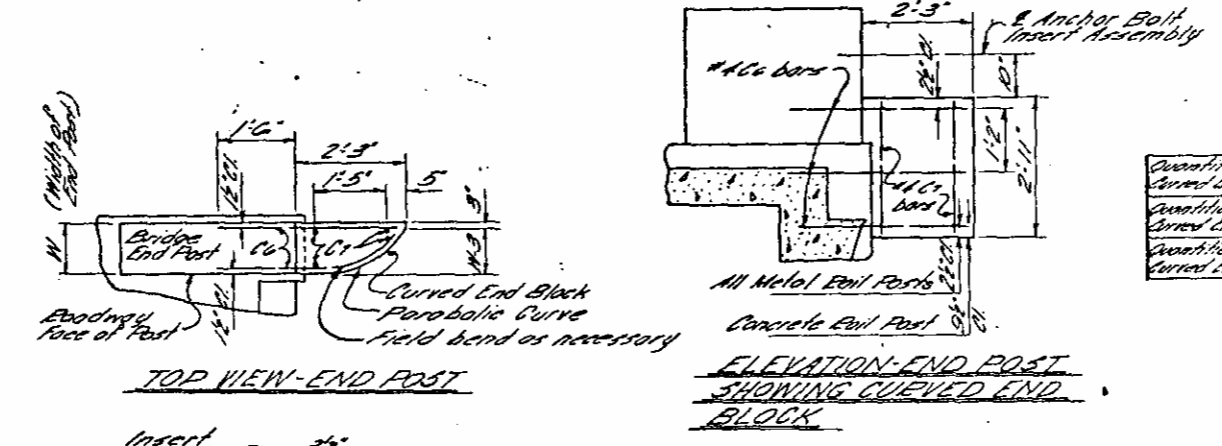
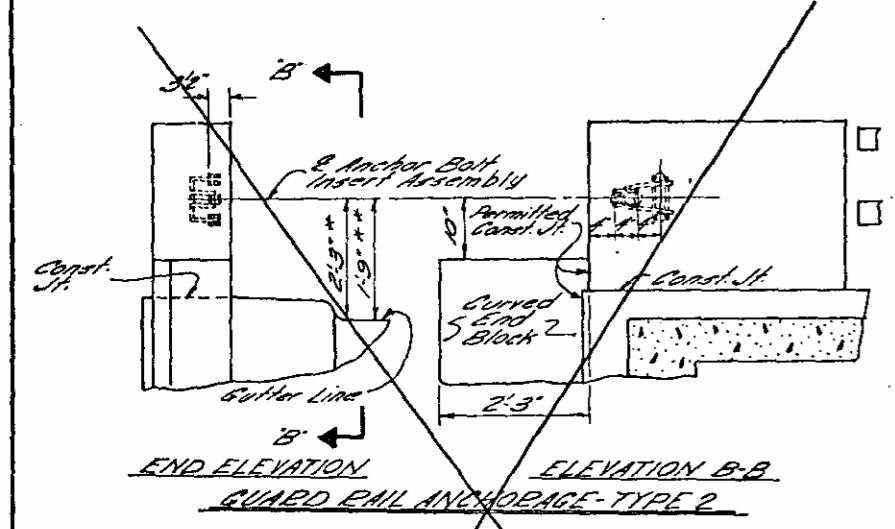
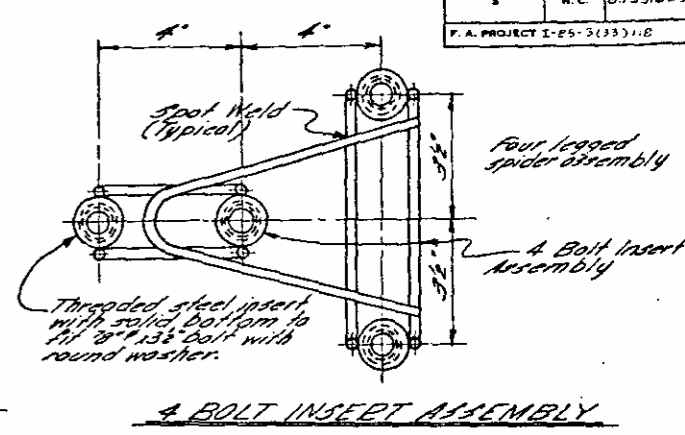
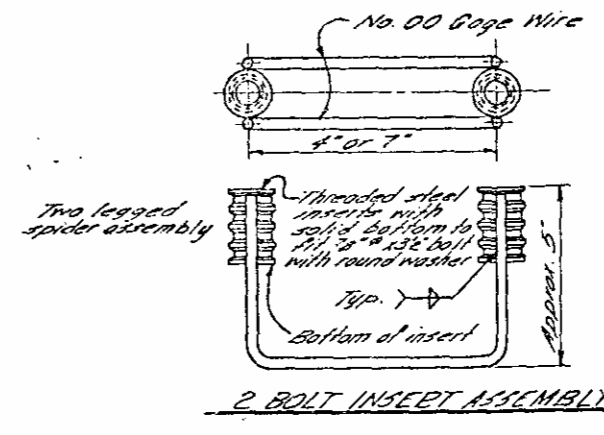
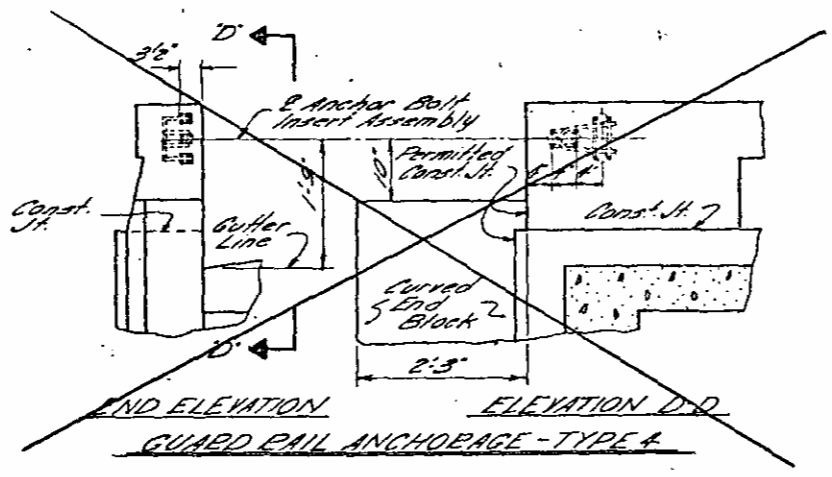
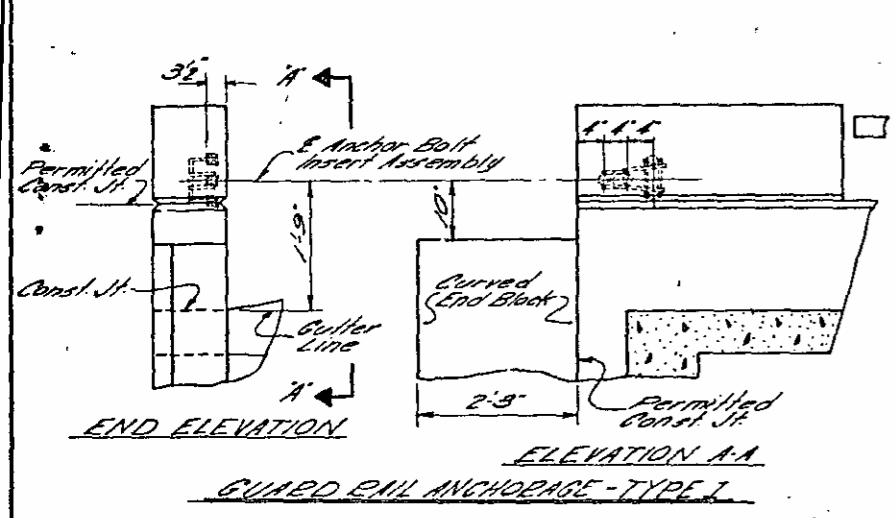
STATE OF NORTH CAROLINA
 STATE HIGHWAY COMMISSION
 RALEIGH
 STANDARD
 SLOPE PROTECTION PAVING
 DETAILS
 FEBRUARY 1964

| NO. | DATE | BY | REVISIONS |
|-----|----------|--------|-----------|
| 1 | 10-27-64 | F.H.E. | |
| 2 | 12-5-65 | F.G.R. | |

ASSEMBLED BY G.H. Ketchum, Jr. DATE 2-17-70
 CHECKED BY E.G. ALFORD, JR. DATE MAR 70
 DRAWN BY E.G. ALFORD, JR. DATE FEB 64
 CHECKED BY G.T. PHILLIPS DATE MARCH 64

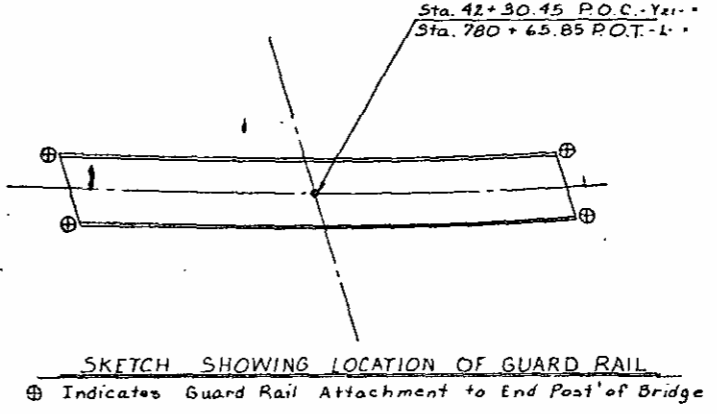
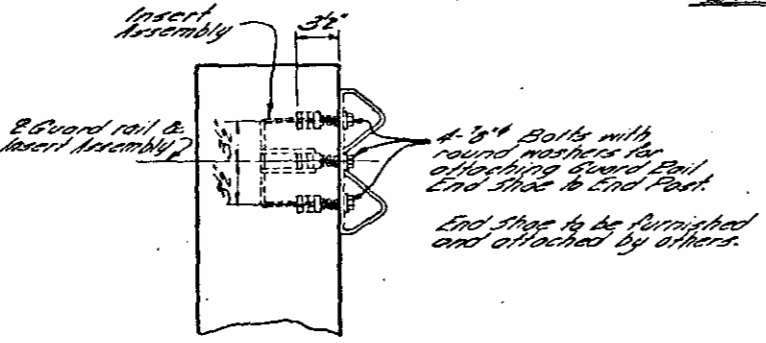
Rev. No. 3 To change min. berm from 3'-6" to 1'-0" on End Bents with Swept Back Wings. ✓ O.W.A.
 REV. NO. 2 TO ELIMINATE 90° CORNER AT TOE OF SLOPE FOR SKEWED BRIDGES. ✓ G.T.P.
 REV. NO. 1 TO TAKE OUT DIMENSIONS FROM OUTSIDE EDGE OF SUPERSTRUCTURE TO OUTSIDE SLOPE PROTECTION. ✓ P.H.S.

SHEET NO. 5-228
 TOTAL SHEETS 258



BILL OF MATERIAL FOR CURVED END BLOCK

| Bar No. | Size | Length | Weight |
|------------------------------------|------|--------|--------|
| C1 | #4 | 3'-7" | 14 |
| C2 | #4 | 2'-7" | 7 |
| Reinforcing steel 21 lbs | | | |
| Class II Concrete 2.21 | | | |
| Quantities for 2 Curved End Blocks | | | |
| Reinforcing steel 43 lbs | | | |
| Class II Concrete 3.47 | | | |
| Quantities for 3 Curved End Blocks | | | |
| Reinforcing steel 64 lbs | | | |
| Class II Concrete 4.24 | | | |
| Quantities for 4 Curved End Blocks | | | |
| Reinforcing steel 85 lbs | | | |
| Class II Concrete 5.67 | | | |



GENERAL NOTES

The cost of the 4 Bolt Insert Assembly Unit consisting of the Insert Assembly and 4 3/8" bolts with washers complete in place shall be included in the unit contract price bid for Class II Concrete.

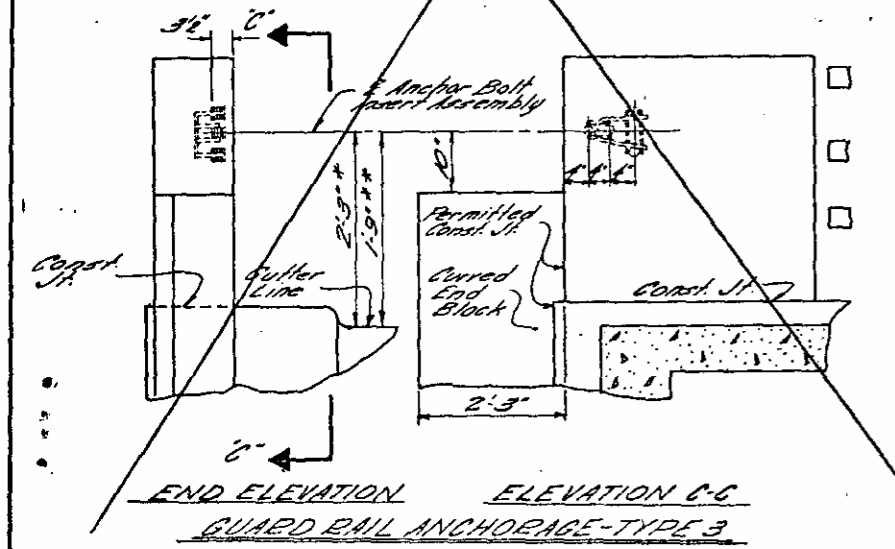
The excavation and back fill for curved end block will not be measured or paid for as a separate item. The entire cost of this work shall be included in the unit price bid for Class II Concrete.

The 3/4" bolt and washers shall conform to the requirements of A.S.T.M. A307 and shall be galvanized to conform to the requirements of A.S.T.M. A153.

The anchor unit shall be assembled in the shop. Bolt threads may be recut as necessary to insure fit.

The threaded steel inserts shall conform to the requirements of A.S.T.M. A108 with a minimum tensile strength of 60000 psi.

At the contractor's option stainless steel bolts and washers may be used as an alternate for the 3/4" galvanized bolts and washers. They shall conform to or exceed the mechanical requirements of A.S.T.M. A307. The use of this alternate shall be approved by the Engineer.



* For C curb and gutter approaching bridge.
** For no curb and gutter approaching bridge.