B-1070

PROJECT: 8184100 2
STRUCTURES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N. C.	8.1841002		

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
8.1841001	BRM-5000(6)	P.E.
8.1841002	BRSTP-25(4)	CONST.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

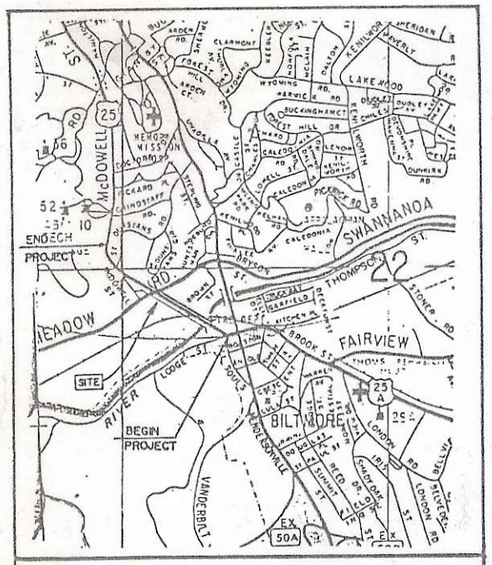
PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

BUNCOMBE CO.

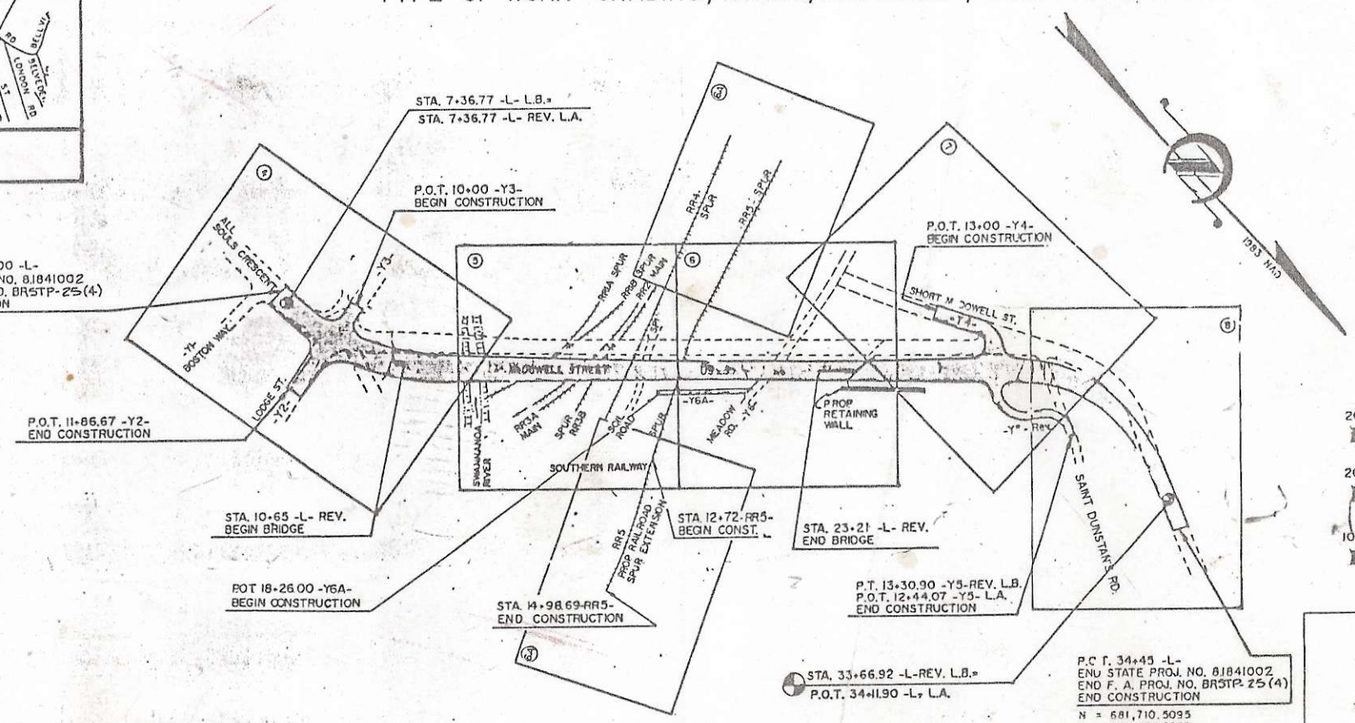
Brg. #76

LOCATION: BRIDGE NO. 76 OVER SWANNANOA RIVER, SOUTHERN RAILWAY AND SR 3556 AND APPROACHES ON McDOWELL STREET (US-25) IN CITY OF ASHEVILLE.

TYPE OF WORK: GRADING, PAVING, DRAINAGE, STRUCTURE & LIGHTING



VICINITY MAP
SHIPPING POINT ASHEVILLE, NC



LENGTH OF ROADWAY F. A. PROJECT BRM-5000 (6) = 0.273 MILE
LENGTH OF STRUCTURE F. A. PROJECT BRM-5000 (6) = 0.238 MILE
TOTAL LENGTH OF STATE PROJECT 8.1841001 = 0.511 MILES

CONVENTIONAL SYMBOLS

County Line
City or Town Line
Exist. Right of Way Line & Marker
Prop. Right of Way Line & Marker
Survey Line
Property Line
Exist. Fence
Proposed Road
Existing Road
Railroad
Control of Access Line
Slope Stake Line
Bridge
Culvert
Woods
Telephone or Telegraph Pole (EXISTING) (PROPOSED)
Tower Pole and Line
Power Pole (EXISTING) (PROPOSED)
Easement Line
Temporary Silt Fence
Guard Rail
Sanitary Sewer Line
Water Line
Gas Line
Proposed Woven Wire Fence
Proposed Chain Link Fence
Prop. Wheelchair Ramp
TEMP. DRAINAGE EASEMENT
PERM. DRAINAGE EASEMENT
PERM. EASEMENT

GRAPHIC SCALES

PLANS 20' 10' 0 20' 40'
PROFILE (HORIZONTAL) 20' 25' 0 20' 40'
PROFILE (VERTICAL) 10' 5' 0 10' 20'

DESIGN DATA

ADT 1995 = 25,300
ADT 2015 = 44,700
DHV = 10 %
D = 60 %
T = 3 %
V = 35 MPH

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

D R Morton P.E.
STATE HIGHWAY ENGINEER - DESIGN

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

PLANS PREPARED BY: TGS ENGINEERS

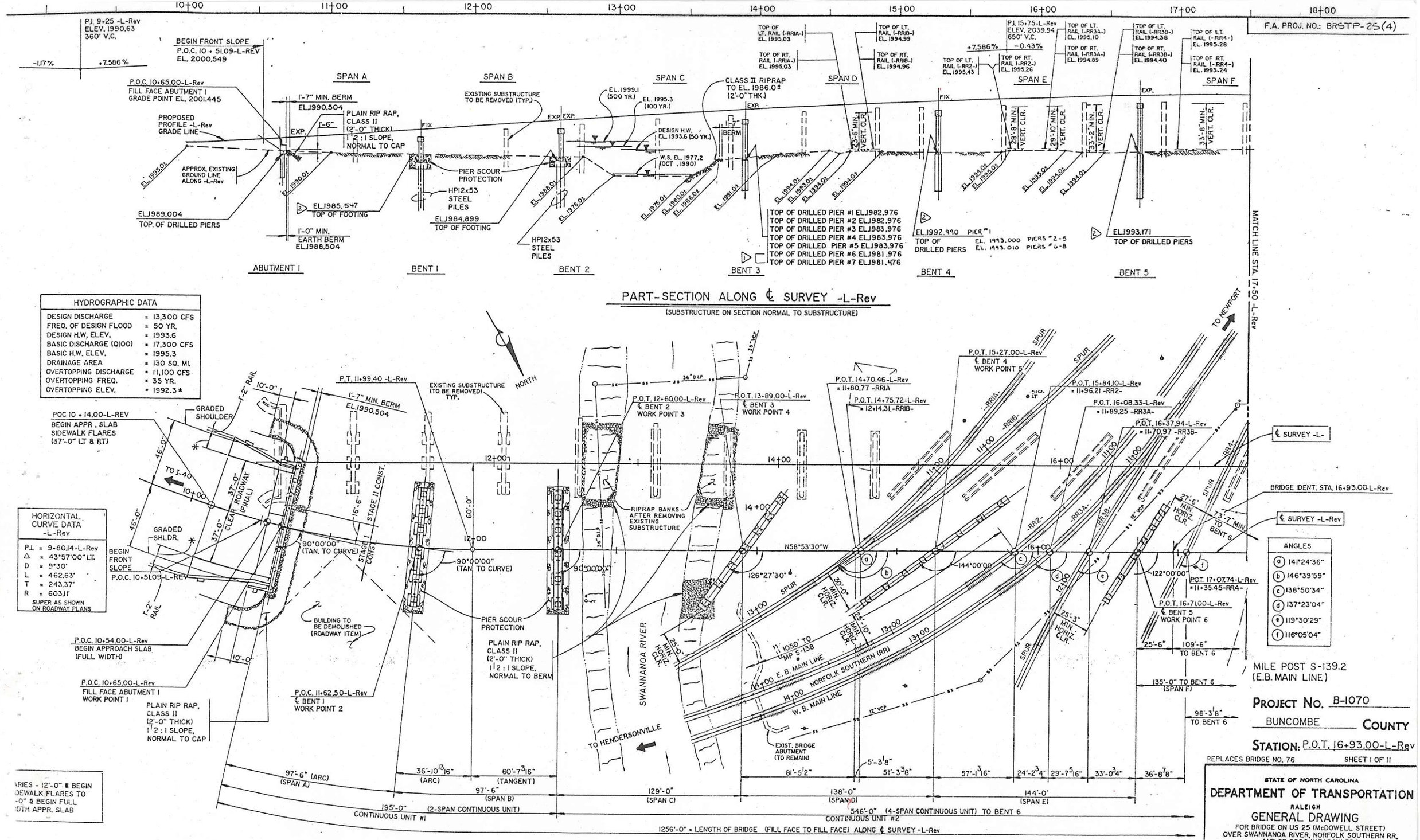
NORTH CAROLINA PROFESSIONAL SEAL 11279 LICENSED GARTH FLETCHER 4/12/96

TGS ENGINEERS
CONTACT: MR. R. E. PEARSON, P.E., NCDOT COORDINATION ENGINEER

LETTING DATE: OCT. 15, 1996

1995 STANDARD SPECIFICATIONS

F.A. PROJ. NO.: BRSTP-25(4)



ARIES - 12'-0" ℄ BEGIN
DEWALK FLARES TO
-0" ℄ BEGIN FULL
DTH APPR. SLAB

PART-PLAN

▷ REVISED TOP OF PIER ELEVATIONS @ BENT 3, PIERS 6 & 7. ✓BY: FCJ

▷ REVISED TOP OF PIER ELEVATIONS @ BENTS 1, 4, & 5. ✓BY: CEP

RTJ DATE Aug 1991
CCM DATE 7/95

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

PREPARED BY
THOMPSON-BORDON-SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev

REPLACES BRIDGE NO. 76 SHEET 1 OF 11

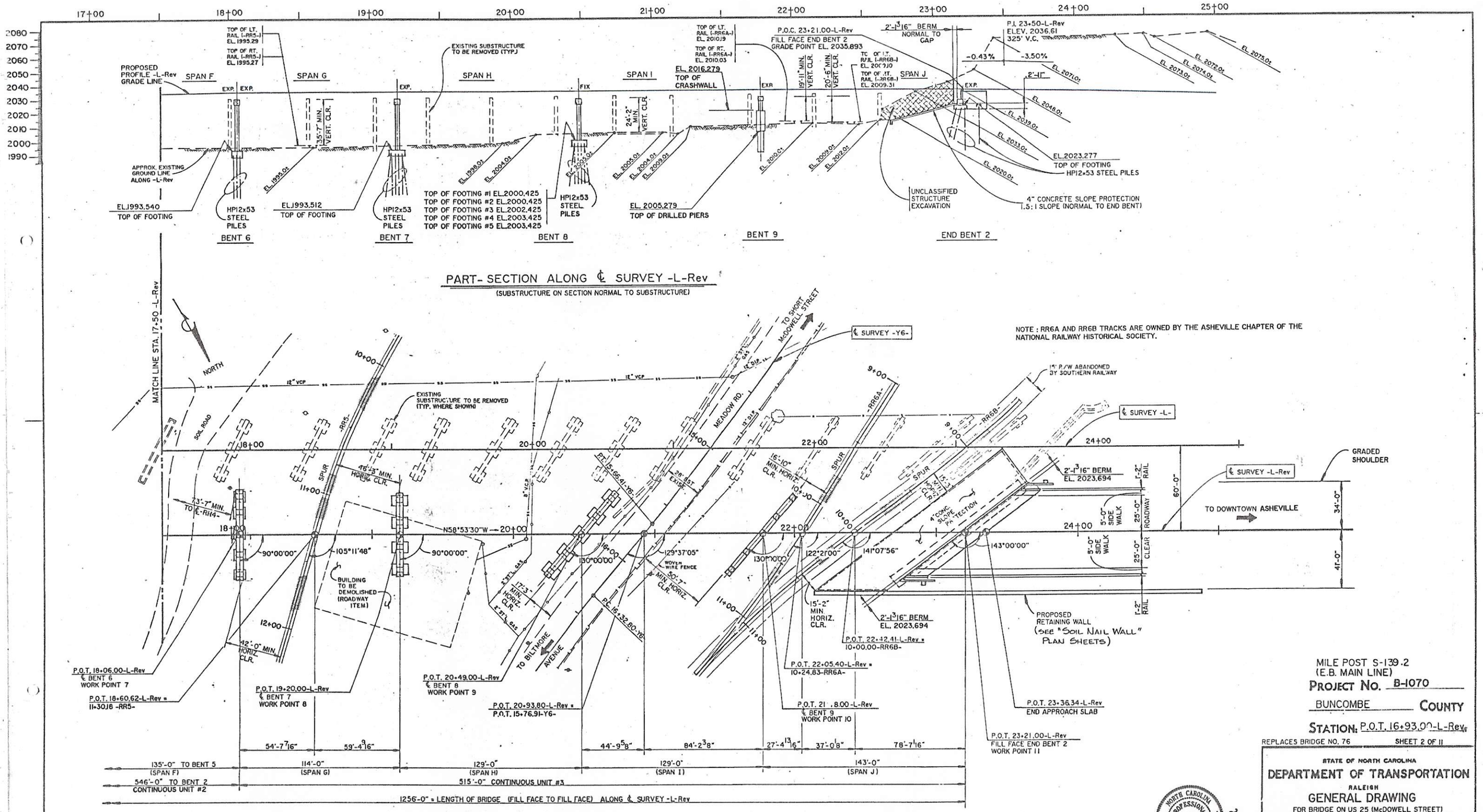
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR,
AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE

JULY 1995

REVISIONS							SHEET NO.
NO.	BY	DATE	NO.	BY	DATE		5-1
1	RDR	2/6/97	3				TOTAL SHEETS
2	RDR	3/7/97	4				27.4



MILE POST S-139.2
(E.B. MAIN LINE)

PROJECT NO. B-1070

BUNCOMBE **COUNTY**

STATION: P.O.T. 16+93.00-L-Rev

REPLACES BRIDGE NO. 76 SHEET 2 OF 11

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR,
AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE

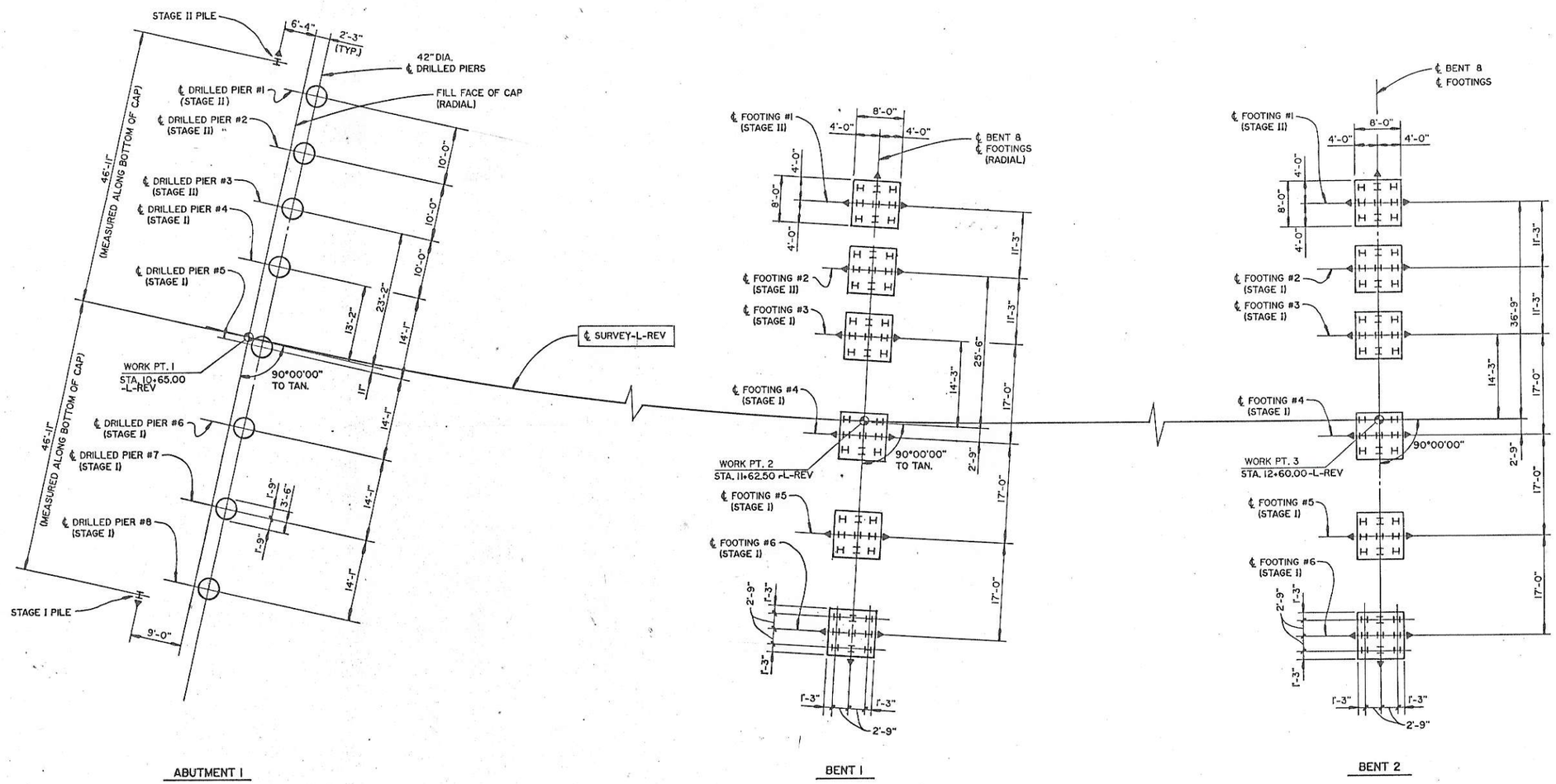
JULY 1995

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER 8-12-96

PREPARED BY
THOMPSON - GORDON - SHOOK
ENGINEERS, INCORPORATED

REVISIONS								SHEET NO.
NO.	BY	DATE	NO.	BY	DATE			5-2
1			3					TOTAL SHEETS
2			4					224

DRAWN BY RTJ DATE Aug 1991
CHECKED BY CCM DATE 7/95



ABUTMENT I

BENT I

BENT 2

▲ BATTER THESE PILES 3 : 12 IN DIRECTION SHOWN AT ABUTMENT I.

▲ BATTER THESE PILES $1\frac{1}{2}$: 12 IN DIRECTION SHOWN AT BENTS I & 2.

NOTES :

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

DIMENSIONS LOCATING PILES ARE SHOWN TO THE PILE CENTERLINE.

ALL PILES ARE HP 12 x 53 STEEL PILES.

PART-FOUNDATION LAYOUT - STAGE I & STAGE II CONSTRUCTION

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 3 OF 11

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

GENERAL DRAWING

FOR BRIDGE ON US 25 (McDOWELL STREET) OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR, AND SR 3556 (MEADOW RD.) BETWEEN I-40 AND DOWNTOWN ASHEVILLE IN THE CITY OF ASHEVILLE JUNE 1995

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER

4/12/96

PREPARED BY THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

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

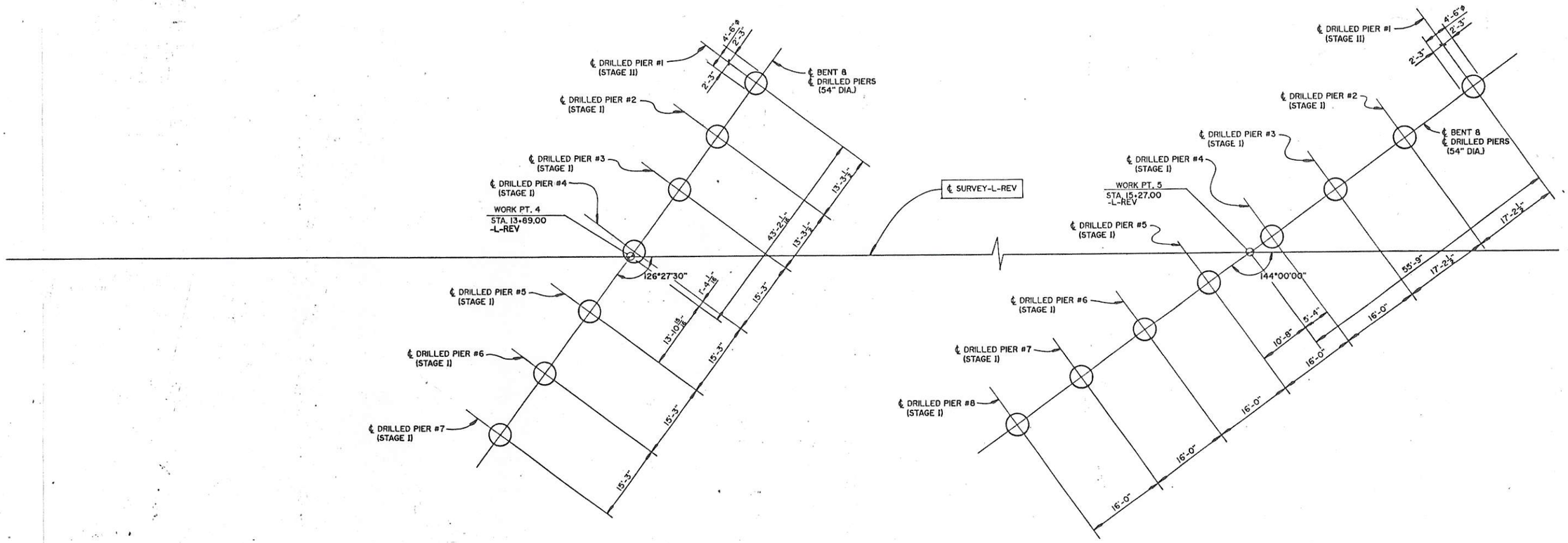
SHEET NO. S-3

TOTAL SHEETS 224

DRAWN BY RTJ DATE 6-25

CHECKED BY SCM DATE 7/95

SUBMISSION - NONE REQUIRED



PART-FOUNDATION LAYOUT - STAGE I & STAGE II CONSTRUCTION

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 4 OF 11

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

GENERAL DRAWING

FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR,
AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE
JUNE 1995

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LICENSED GARTH FAIRCLOTH

4/12/96

PREPARED BY
THOMPSON - GORDON - SHOOK
ENGINEERS, INCORPORATED

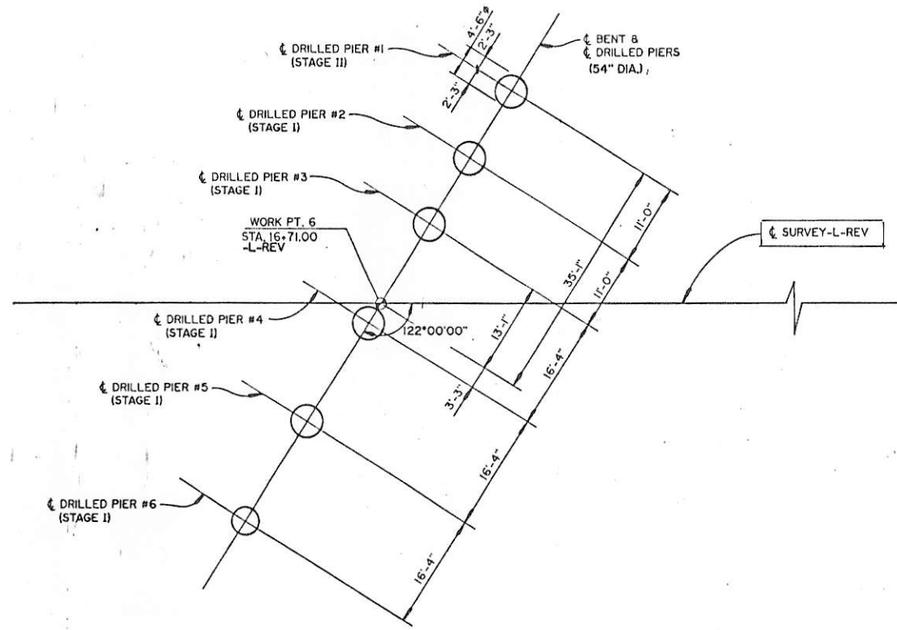
REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

SHEET NO. S-4

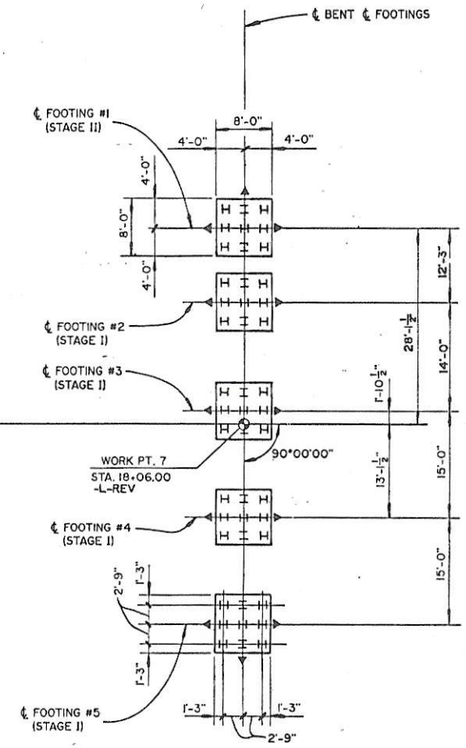
TOTAL SHEETS 224

DRAWN BY RTJ DATE 6-95
CHECKED BY CCM DATE 7/95

DRAWING NO. - CROSS DRAWINGS



BENT 5



BENT 6

▲ BATTER THESE PILES 1½ : 12 IN DIRECTION SHOWN

NOTES :

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

DIMENSIONS LOCATING PILES ARE SHOWN TO THE PILE CENTERLINE.

ALL PILES ARE HP 12×53 STEEL PILES.

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 5 OF 11

PART-FOUNDATION LAYOUT - STAGE I & STAGE II CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER

4/12/96

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

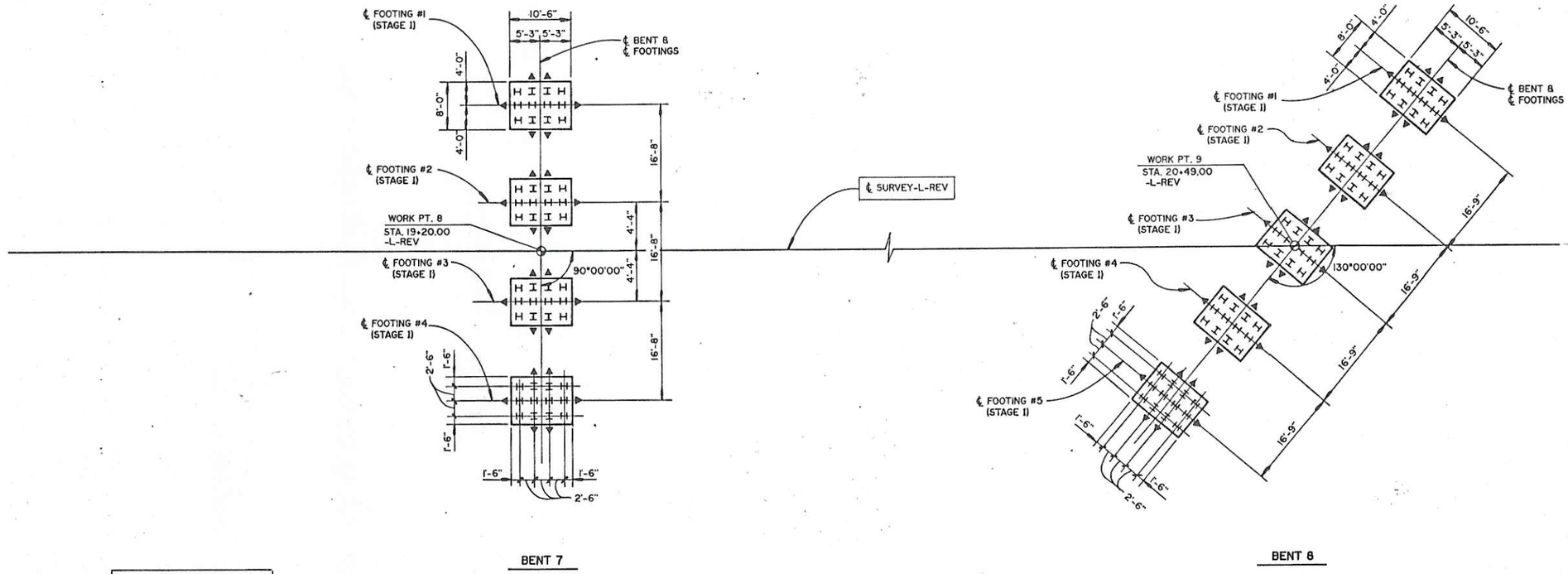
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON US 25 (McDOWELL STREET) OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR, AND SR 3556 (MEADOW RD.) BETWEEN I-40 AND DOWNTOWN ASHEVILLE IN THE CITY OF ASHEVILLE
JUNE 1995

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

SHEET NO. S-5
TOTAL SHEETS 224

DRAWN BY RTJ DATE 6-95
CHECKED BY CM DATE 7/95



▲ BATTER THESE PILES 1½:12 IN DIRECTION SHOWN

-NOTE-
ALL PILES ARE HP12x53 STEEL PILES

PART-FOUNDATION LAYOUT - STAGE I & STAGE II CONSTRUCTION

DIMENSIONS LOCATING PILES ARE SHOWN TO THE PILE CENTERLINE.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 6 OF 11

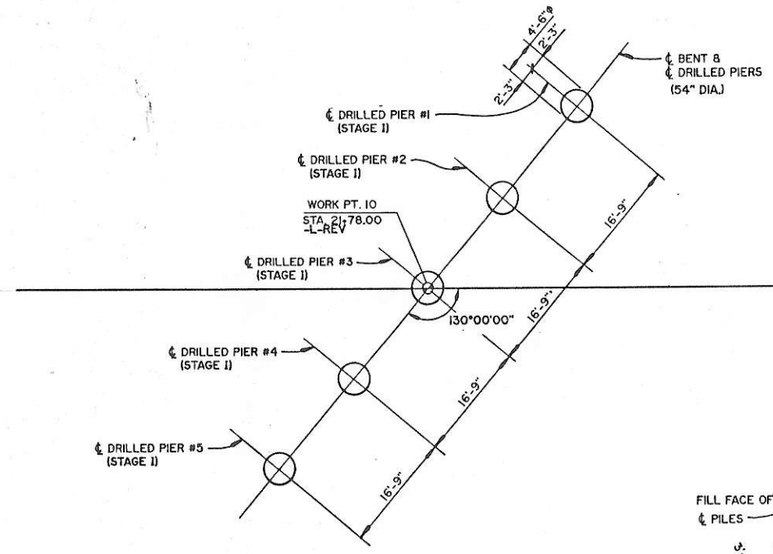
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR.
AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE
JUNE 1995

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

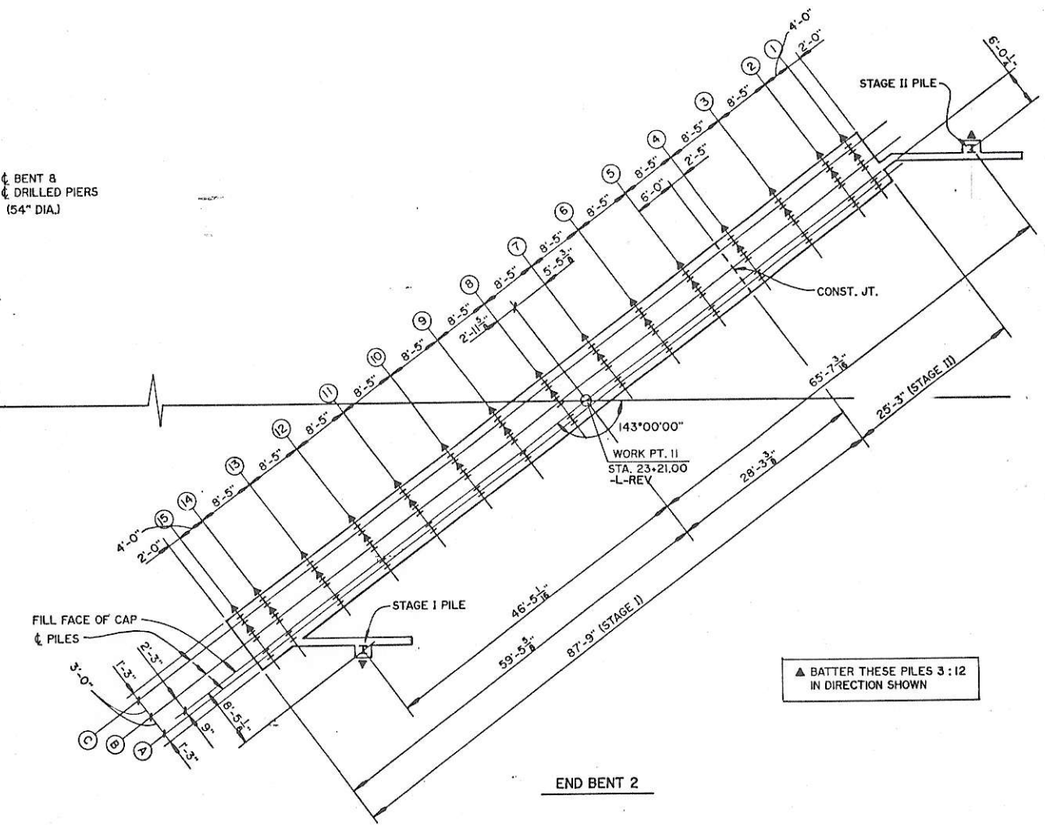
PREPARED BY
THOMPSON - GORDON - SHOOK
ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-6
1			3			TOTAL SHEETS
2			4			224

DRAWN BY RTJ DATE 6-95
CHECKED BY CCM DATE 7/95



BENT 9



END BENT 2

▲ BATTER THESE PILES 3 : 12
IN DIRECTION SHOWN

PART-FOUNDATION LAYOUT - STAGE I & STAGE II CONSTRUCTION

NOTES :

FOR DRILLED PIERS, SEE SPECIAL PROVISIONS.

DIMENSIONS LOCATING PILES ARE SHOWN TO THE PILE CENTERLINE.

ALL PILES ARE HP 12×53 STEEL PILES.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEWOOD GARTH FLETCHER

4/12/96

PREPARED BY
THOMPSON - GORDON - SHOOK
ENGINEERS, INCORPORATED

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 7 OF 11

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

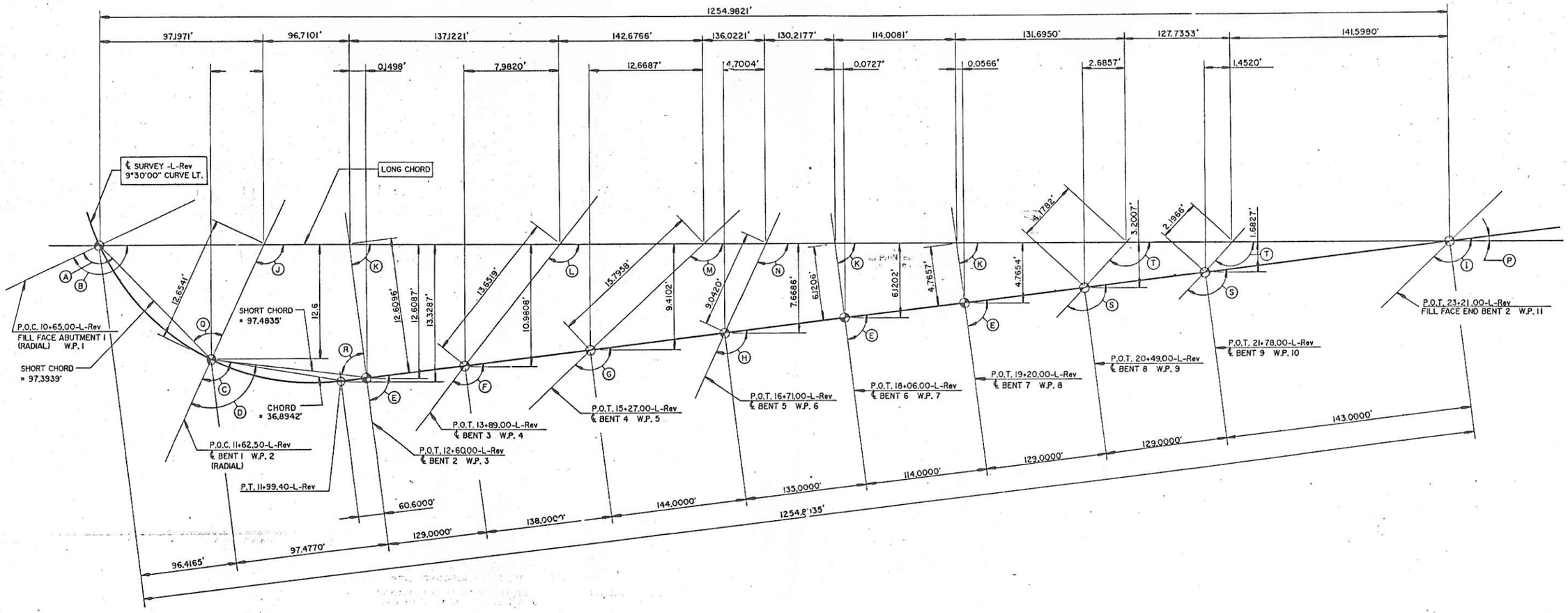
GENERAL DRAWING

FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR.
AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE
JUNE 1995

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

SHEET NO. S-7
TOTAL SHEETS 224

DRAWN BY RTJ DATE 6-95
CHECKED BY CCM DATE 7/95



LONG CHORD LAYOUT

HORIZONTAL CURVE DATA -L-Rev
P.I. = 9+80.14-L-Rev
Δ = 43°57'00" LT.
D = 9°30'
L = 462.63'
T = 243.37'
R = 603.11'
S.E. = .03'/'

ANGLES	
A	94°37'53"
B	102°05'15"
C	91°45'10"
D	92°50'32"
E	90°00'00" TO TAN.
F	126°27'30" TO TAN
G	144°00'00" TO TAN
H	122°00'00" TO TAN.
I	143°00'00" TO TAN.
J	92°49'29"
K	89°19'09"
L	125°46'39"
M	143°19'09"
N	121°19'09"
P	00°40'51"
Q	85°22'07"
R	89°20'12"
S	130°00'00" TO TAN.
T	129°19'09"

RELATIVE COORDINATE SYSTEM

WORK PT. No.	NORTHS	EASTS
1	3738.1096	9985.0867
2	3834.5230	9998.8715
P.T. OF CURVE	3871.4010	10000.0000
3	3932.0000	10000.0000
4	4061.0000	10000.0000
5	4199.0000	10000.0000
6	4343.0000	10000.0000
7	4478.0000	10000.0000
8	4592.0000	10000.0000
9	4721.0000	10000.0000
10	4850.0000	10000.0000
11	4993.0000	10000.0000

DRAWN BY RTI DATE August 1991
CHECKED BY CCM DATE 7/95

NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER LAWRENCE GARTH PLETCHER
4/12/96

PREPARED BY
THOMPSON - GORDON - SHOOK
ENGINEERS, INCORPORATED

MILE POST S-139.2 (EASTBOUND MAINLINE)

PROJECT No. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00 -L-Rev

REPLACES BRIDGE NO. 76 SHEET 8 OF 11

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR,
AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE
JULY 1995

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-8
1			3			TOTAL SHEETS
2			4			224

MINIMUM TIP ELEVATIONS FOR DRILLED PIERS		
LOCATION	DRILLED PIER NO.	MINIMUM TIP ELEVATION
ABUTMENT 1	1	1973.004
	2	1973.004
	3	1973.004
	4	1973.004
	5	1973.004
	6	1973.004
	7	1973.004
	8	1973.004
BENT 3	1	1964.976
	2	1964.976
	3	1964.976
	4	1964.976
	5	1964.976
	6	1963.976
	7	1963.976
BENT 4	1	1970.990
	2	1969.000
	3	1968.000
▷	4	1967.000
	5	1966.000
	6	1965.010
	7	1965.010
	8	1964.010
BENT 5	1	1962.171
	2	1962.171
▷	3	1961.171
	4	1961.171
	5	1961.171
	6	1961.171
BENT 9	1	1993.279
	2	1991.279
	3	1991.279
	4	1990.279
	5	1990.279

THESE MINIMUM TIP ELEVATIONS ARE PROVIDED FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

GENERAL DRAWING NOTES

ASSUMED LIVE LOAD = HS 20-44 OR ALTERNATE LOADING.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES, FOR SEISMIC PERFORMANCE CATEGORY B.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET S-N.

TO PROVIDE PROTECTION FROM POSSIBLE SCOUR, THE FOOTINGS SHALL NOT BE CONSTRUCTED AT ELEVATIONS HIGHER THAN THOSE SHOWN IN THE PLANS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", APRIL 1993.

THE SCOUR CRITICAL ELEVATION FOR BENT 1 IS 1982.00 FT.

THE SCOUR CRITICAL ELEVATION FOR BENT 2 IS 1981.00 FT.

THE SCOUR CRITICAL ELEVATIONS FOR BENT 3 IS 1970.00 FT.

STEEL CASINGS FOR THE DRILLED PIERS AT ABUTMENT 1, BENT 5 AND BENT 9 SHALL NOT BE LEFT IN PLACE.

PILE INTEGRITY TESTING (P.I.T.) WILL BE REQUIRED ON EACH DRILLED PIER. FOR PILE INTEGRITY TESTING, SEE SPECIAL PROVISIONS.

PILES FOR BENTS 1, 2, 6, 7 & 8 AND END BENT 2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 50 TONS PER PILE.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA AT END BENT 2 SHALL BE EXCAVATED FOR A DISTANCE OF THIRTY-FOUR FEET LEFT AND FORTY-ONE FEET RIGHT OF THE CENTERLINE OF SURVEY -L-REV. THIS WORK WILL BE MEASURED AND PAID FOR AS "UNCLASSIFIED STRUCTURE EXCAVATION".

FOR MAINTENANCE AND PROTECTION OF HIGHWAY TRAFFIC BENEATH THE PROPOSED STRUCTURE, SEE SPECIAL PROVISIONS.

FOR FABRICATED METAL STAY-IN-PLACE FORMS, SEE SPECIAL PROVISIONS.

REQUIRED TIP BEARING FOR ALL DRILLED PIERS IS 25 TSF.

WORK ON THE APPROACH SLABS SHALL NOT BE STARTED UNTIL THE APPROACH FILL HAS BEEN IN PLACE FOR ONE MONTH.

DRILLED PIERS, CAPS AND BACKWALL AT ABUTMENT 1 SHALL BE CONSTRUCTED PRIOR TO PLACING THE REQUIRED 11 FEET OF EMBANKMENT FILL.

THE 42 INCH AND 54 INCH DRILLED PIERS SHALL HAVE A MINIMUM PENETRATION OF THREE FEET INTO HARD ROCK. HARD ROCK SHALL BE DEFINED AS ROCK WHICH CANNOT BE DRILLED WITH CONVENTIONAL EARTH AUGERS AND/OR UNDERREAMING TOOLS, BUT INSTEAD REQUIRES THE USE OF SPECIAL ROCK AUGERS, CORE BARRELS AND/OR BLASTING. THE DRILLED PIERS SHALL HAVE MINIMUM DIAMETERS OF 40 INCHES AND 52 INCHES RESPECTIVELY, IN THE HARD ROCK ZONE.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE LOCATION OF THE U.S. SPRINT FIBER OPTIC CABLES IN THE VICINITY OF BENT 5.

FOR FALSEWORK AND FORMS OVER OR ADJACENT TO TRAFFIC, SEE SPECIAL PROVISIONS.

ALL STRUCTURAL STEEL FOR THIS STRUCTURE SHALL BE AASHTO M270, GRADE 50W, AND PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, UNLESS OTHERWISE NOTED ON THE PLANS.

THE SUBSTRUCTURE OF THE EXISTING STRUCTURE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION AND THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE STRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

AFTER SERVING AS A TEMPORARY STRUCTURE, THE EXISTING STRUCTURE CONSISTING OF A 27-SPAN (OF VARYING LENGTHS) REINFORCED CONCRETE SUPERSTRUCTURE WITH A 5'-0" SIDEWALK ON EACH SIDE, A 40'-0" CLEAR ROADWAY WIDTH FLARING TO A 50'-0" CLEAR ROADWAY WIDTH TO PROVIDE LEFT TURNING LANES AT THE SOUTH END FOR AN OVERALL LENGTH OF 1,390 FEET, SUPPORTED BY REINFORCED CONCRETE SUBSTRUCTURE AND LOCATED AT THE SITE OF THE PROPOSED STRUCTURE, SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY NOT POSTED FOR LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE DURING CONSTRUCTION OF THE PROPOSED BRIDGE, A LOAD LIMIT MAY BE POSTED AND MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.

ALL CONTINUOUS GIRDERS SPAN UNITS ARE COMPOSITE.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE THIRTY INCH SAMPLE OF EACH BAR SIZE USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO THIRTY INCH SAMPLES OF EACH BAR SIZE USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS.

HP 12x53 STEEL PILES AT END BENT 2 SHALL BE EMBEDDED TO THE MINIMUM TIP ELEVATION OF EL.2011.00, WITH 50 TONS BEARING. EIGHTEEN (18) INCH DIAMETER SHAFT EXCAVATION WILL BE REQUIRED TO ACHIEVE THIS. SEE THE SPECIAL PROVISION ENTITLED " SHAFT EXCAVATION FOR STEEL PILES " FOR DETAILS.

THE RETAINING WALL AT STA.23+00 ±, 41 FT. RIGHT OF -L-REV NEEDS TO BE CONSTRUCTED PRIOR TO CONSTRUCTING END BENT 2, IN ORDER TO FACILITATE THE REQUIRED FIFTY (50) FEET OF EXCAVATION.

INASMUCH AS THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 16+93.00-L-REV.

FOR REINFORCED CONCRETE DECK SLAB, SEE SPECIAL PROVISIONS.

ALL PAVEMENT MARKING WILL BE IN ACCORDANCE WITH THE PAVEMENT MARKING PLANS AND PROVIDE FOR BICYCLES.

THIS BRIDGE HAS BEEN DESIGNED BY THE STRENGTH DESIGN METHOD AS SPECIFIED IN AASHTO SPECIFICATIONS.

FOR POT BEARINGS, SEE SPECIAL PROVISIONS.

PLAIN RIP RAP SHALL BE PLACED ON THE EXISTING BANKS AT THE EXISTING SUBSTRUCTURE UNITS IMMEDIATELY AFTER REMOVAL OF THESE SUBSTRUCTURE UNITS.

PLAIN RIP RAP SHALL BE PLACED ON THE EXISTING SLOPE AT BENT 3 IMMEDIATELY AFTER BACKFILLING EXCAVATION OF BENT 3.

FOR EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR MODULAR EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR CURING BRIDGE DECK SLABS, SEE THE SPECIAL PROVISION ENTITLED "REINFORCED CONCRETE DECK SLAB".

FOR MECHANICAL BUTT SPLICING OF REINFORCING STEEL, SEE SPECIAL PROVISIONS.

ELECTRICAL CONDUIT SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR. SEE SPECIAL PROVISIONS AND DETAILS ENTITLED "ELECTRICAL CONDUIT SYSTEM". TRAFFIC SIGNAL CIRCUITRY SHALL BE PROVIDED BY OTHERS.

FOR REMOVAL OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

FOR "INSTALL PLASTIC TELEPHONE CONDUITS", SEE SPECIAL PROVISIONS.

FOR SELECT BACKFILL MATERIAL, SEE SPECIAL PROVISIONS.

MILE POST S-139.2
(E.B. MAIN LINE)

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-Rev

REPLACES BRIDGE NO. 76 SHEET 9 OF 11

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR,
AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE

JULY 1995

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FELDCAMP
4/12/96

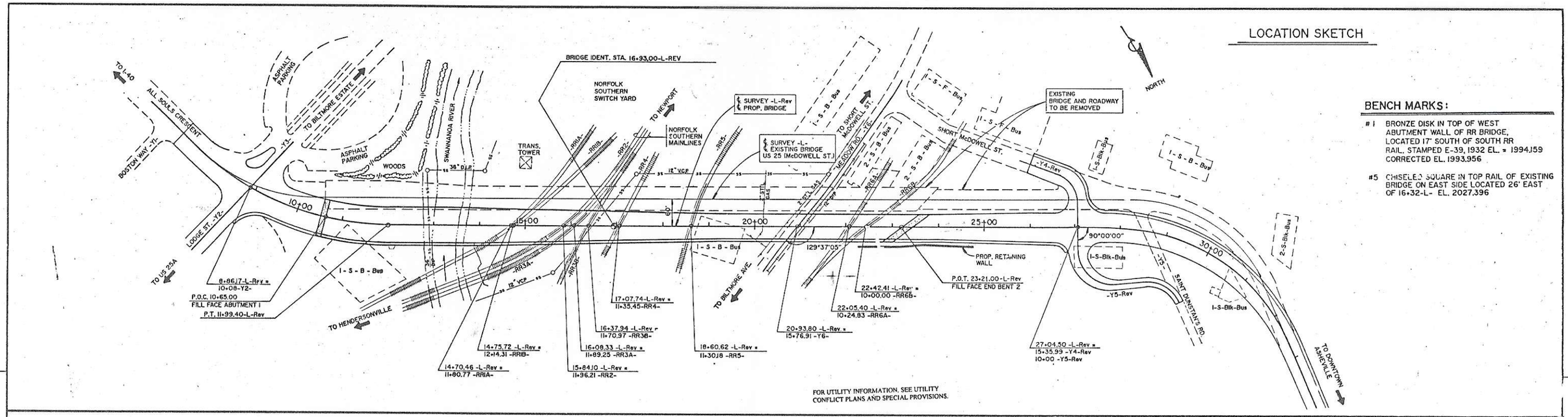
PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

REVISIONS							SHEET NO.
NO.	BY	DATE	NO.	BY	DATE		S-9
▷	RDR	3/7/97	3				TOTAL SHEETS
2			4				224

▷ REVISED MINIMUM TIP ELEVATIONS FOR BENTS 4 & 5. ✓ BY: CEP

CCM DATE 7/95
N.M.W. DATE 7/95

LOCATION SKETCH

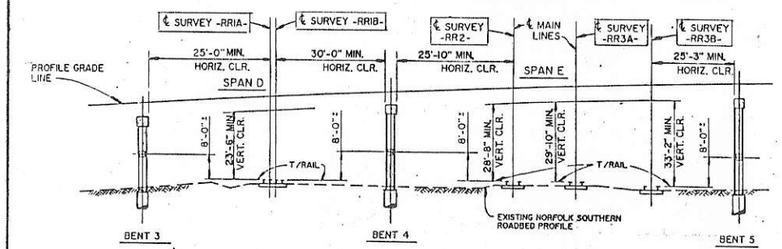


FOR UTILITY INFORMATION, SEE UTILITY CONFLICT PLANS AND SPECIAL PROVISIONS.

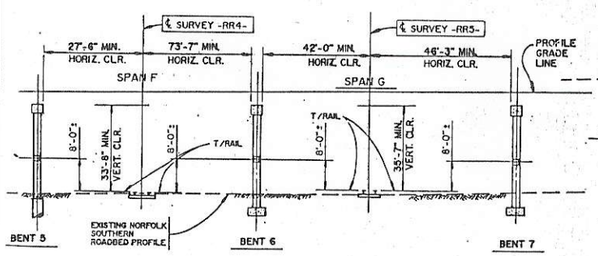
BENCH MARKS:

#1 BRONZE DISK IN TOP OF WEST ABUTMENT WALL OF RR BRIDGE, LOCATED 17' SOUTH OF SOUTH RR RAIL, STAMPED E-39, 1932 EL. = 1994.159 CORRECTED EL. 1993.956

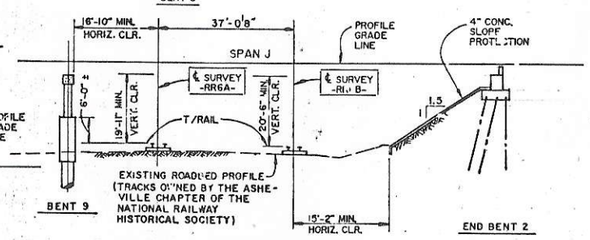
#5 CHISELED SQUARE IN TOP RAIL OF EXISTING BRIDGE ON EAST SIDE LOCATED 26' EAST OF 16+32-L- EL. 2027.396



THEORETICAL SECTION
NORMAL TO ℄ TRACKS (LOOKING WEST)



THEORETICAL SECTION
NORMAL TO ℄ TRACKS (LOOKING WEST)



THEORETICAL SECTION
NORMAL TO ℄ TRACKS (LOOKING WEST)

TOP OF RAIL ELEVATIONS		
-RRIA- STATIONS	LEFT RAIL	RIGHT RAIL
11+00	1994.81	1994.81
11+50	1995.00	1994.99
12+00	1995.05	1995.05
12+50	----	----
13+00	----	----

TOP OF RAIL ELEVATIONS		
-RR2- STATIONS	LEFT RAIL	RIGHT RAIL
11+00	1995.36	1995.13
11+50	1995.41	1995.26
12+00	1995.43	1995.27
12+50	1995.36	1995.20
13+00	1995.25	1995.10

TOP OF RAIL ELEVATIONS		
-RR3B- STATIONS	LEFT RAIL	RIGHT RAIL
11+00	1995.23	1994.94
11+50	1994.64	1994.67
12+00	1994.00	1994.03
12+50	1993.36	1993.39
13+00	----	----

TOP OF RAIL ELEVATIONS		
-RR5- STATIONS	LEFT RAIL	RIGHT RAIL
11+00	1995.45	1995.39
11+50	1995.21	1995.12
12+00	1995.97	1994.85
12+50	----	----
13+00	----	----

TOP OF RAIL ELEVATIONS		
-RR6A- STATIONS	LEFT RAIL	RIGHT RAIL
9+00	2009.08	2009.02
9+50	2009.70	2009.73
10+00	2010.25	2010.16
10+50	2009.91	2009.89
11+00	2009.87	2009.89

TOP OF RAIL ELEVATIONS		
-RRIB- STATIONS	LEFT RAIL	RIGHT RAIL
11+00	1994.78	1994.78
11+50	1994.95	1994.92
12+00	1994.99	1994.95
12+50	1995.03	1995.01
13+00	1994.79	1994.79

TOP OF RAIL ELEVATIONS		
-RR3A- STATIONS	LEFT RAIL	RIGHT RAIL
11+00	1994.89	1994.72
11+50	1995.00	1994.80
12+00	1995.13	1994.95
12+50	1995.31	1995.13
13+00	1995.30	1995.12

TOP OF RAIL ELEVATIONS		
-RR4- STATIONS	LEFT RAIL	RIGHT RAIL
11+00	1994.80	1994.99
11+50	1995.12	1995.24
12+00	1995.18	1995.30
12+50	----	----
13+00	----	----

TOP OF RAIL ELEVATIONS		
STATIONS	LEFT RAIL	RIGHT RAIL
9+00	2008.41	2008.59
9+50	2008.88	2009.01
10+00	2009.10	2009.31
10+50	2009.29	2009.63
11+00	2009.89	2009.88

MILE POST S-139.2 (EASTBOUND MAINLINE)

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-Rev

REPLACES BRIDGE NO. 76 SHEET 10 OF 11

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR, AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FANTONE
4/12/96

PREPARED BY
THOMPSON · GORDON · SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-10
TOTAL SHEETS 224

DRAWN BY RTJ DATE Apr. 1991
CHECKED BY CCM DATE 7/95

TOTAL BILL OF MATERIAL

ITEM	REMOVAL OF EXISTING STRUCTURE	FOUNDATION EXCAVATION		3'-6" DIA. DRILLED PIERS IN ROCK		3'-6" DIA. DRILLED PIERS NOT IN ROCK		4'-6" DIA. DRILLED PIERS IN ROCK		4'-6" DIA. DRILLED PIERS NOT IN ROCK		UNCLASSIFIED STRUCTURE EXCAVATION	
UNIT	LUMP SUM	CUBIC YARDS		LINEAR FEET		LINEAR FEET		LINEAR FEET		LINEAR FEET		CUBIC YARDS	
CONSTRUCTION STAGE	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II
SUPERSTRUCTURE													
CONTINUOUS UNIT #1													
CONTINUOUS UNIT #2													
CONTINUOUS UNIT #3													
ABUTMENT 1				24.0	14.4	56.0	33.6						
BENT 1		160	80										
BENT 2		150	30										
BENT 3								52.5	7.2	▷58.0	10.8		
BENT 4								52.5	8.8	134.5	13.2		
BENT 5								23.9	4.7	135.2	26.4		
BENT 6		100	25										
BENT 7		120	0										
BENT 8		180	0										
BENT 9		100	0					39.0	0	31.0	0		
END BENT 2		880	275									1,840	520
APPROACH SLABS													
SUB-TOTALS	LS	1,690	410	24.0	14.4	56.0	33.6	167.9	20.7	▷358.7	50.4	1,840	520
TOTALS	LS	2,100		38.4		89.6		188.6		▷ 409.1		2,360	

ITEM	REINFORCED CONCRETE DECK SLAB			GROOVING BRIDGE FLOORS			CLASS A CONCRETE		REINFORCING STEEL		BRIDGE APPROACH SLABS		SPIRAL COLUMN REINFORCING STEEL		STRUCTURAL STEEL	
UNIT	SQUARE FEET			SQUARE FEET			CUBIC YARDS		LBS		LUMP SUM		LBS		APPROX. LBS	
CONSTRUCTION STAGE	STAGE I	STAGE II	STAGE III	STAGE I	STAGE II	STAGE III	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II
SUPERSTRUCTURE																
CONTINUOUS UNIT #1	11,377	4,878	381	10,047	3,597	380									314,500	141,200
CONTINUOUS UNIT #2	34,105	7,828	1,092	30,443	4,179	1,089									1,170,500	317,000
CONTINUOUS UNIT #3	24,522	6,072	1,078	21,940	2,395	1,074									921,000	322,600
ABUTMENT 1							79.7	32.9	14,985	7,110			1,834	1,100		
BENT 1							132.2	51.8	21,799	9,078			1,055	528		
BENT 2							205.0	35.2	30,056	5,257			2,536	507		
BENT 3							▷ 206.5	34.8	▷42,829	6,753			▷ 7,985	1,353		
BENT 4							239.0	34.9	50,864	6,903			9,420	1,408		
BENT 5							181.1	33.5	40,051	7,298			8,820	1,741		
BENT 6							193.3	47.0	28,462	6,809			3,724	933		
BENT 7							196.6	0	29,974	0			3,774	0		
BENT 8							214.7	0	32,290	0			3,333	0		
BENT 9							249.6	0	35,763	0			3,163	0		
END BENT 2							158.8	54.8	17,994	5,207						
APPROACH SLABS											LS	LS				
SUB-TOTALS	70,004	18,778	2,551	62,430	10,171	2,543	▷ 2,056.5	324.9	▷345,067	54,415	LS	LS	▷45,644	7,570	2,406,000	780,800
TOTALS	91,333			75,144			▷ 2,381.4		▷ 399,482		LS		▷ 53,214		3,186,800	

ITEM	HP 12 x 53 STEEL PILES				CLASSIC BRIDGE RAILING		4" SLOPE PROTECTION		POT BEARINGS		FILTER FABRIC FOR DRAINAGE		PLAIN RIP RAP CLASS II (2'-0" THICK)	
UNIT	NUMBER	LF	NUMBER	LF	LINEAR FEET		SQUARE YARDS		LUMP SUM		SQUARE YARDS		TONS	
CONSTRUCTION STAGE	STAGE I	STAGE I	STAGE II	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II
SUPERSTRUCTURE														
CONTINUOUS UNIT #1					259.69	233.53			LS	LS				
CONTINUOUS UNIT #2					546.10	546.10			LS	LS				
CONTINUOUS UNIT #3					490.55	570.18			LS	LS				
ABUTMENT 1	1	17	1	17							119	84	107	76
BENT 1	36	360	18	180										
BENT 2	45	450	9	90										
BENT 3											76	306	69	275
BENT 4														
BENT 5														
BENT 6	36	900	9	225										
BENT 7	48	960	0	0										
BENT 8	60	960	0	0										
BENT 9														
END BENT 2	34	215	13	130			485	120						
APPROACH SLABS														
SUB-TOTALS	260	3,862	50	642	1,296.34	1,349.81	485	120	LS	LS	195	390	176	351
TOTALS	NO. = 310 , LF = 4,504				2,646.15		605		LS		585		527	

ITEM	EXPANSION JOINT SEALS		MODULAR EXPANSION JOINT SEALS		ELECTRICAL CONDUIT SYSTEM		SHAFT EXCAVATION FOR STEEL PILES		SELECT BACKFILL MATERIAL, CLASS I		INSTALL PLASTIC TELEPHONE CONDUITS
UNIT	LUMP SUM		LUMP SUM		LUMP SUM		LINEAR FEET		TONS		LUMP SUM
CONSTRUCTION STAGE	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I	STAGE II	STAGE I
SUPERSTRUCTURE											
CONTINUOUS UNIT #1	LS	LS	LS	LS	LS	LS					LS
CONTINUOUS UNIT #2			LS	LS	LS	LS					LS
CONTINUOUS UNIT #3			LS	LS	LS	LS					LS
ABUTMENT 1											
BENT 1											
BENT 2											
BENT 3											
BENT 4											
BENT 5											
BENT 6											
BENT 7											
BENT 8											
BENT 9											
END BENT 2							374	143	345	128	
APPROACH SLABS											
SUB-TOTALS	LS	LS	LS	LS	LS	LS	374	143	345	128	LS
TOTALS	LS		LS		LS		517		473		LS

▷ REVISED BENT 3, STAGE I, AND TOTAL QUANTITIES FOR DRILLED PIER NOT IN ROCK, CLASS A CONCRETE, REINFORCING STEEL, AND SPIRAL COLUMN REINFORCING STEEL. ✓ BY: FCJ

MILE POST S-139.2
(E.B. MAIN LINE)

PROJECT NO. B-1070
BUNCOMBE **COUNTY**
STATION: P.O.T. 16+93.00-L-Rev
REPLACES BRIDGE NO. 76 SHEET 11 OF 11

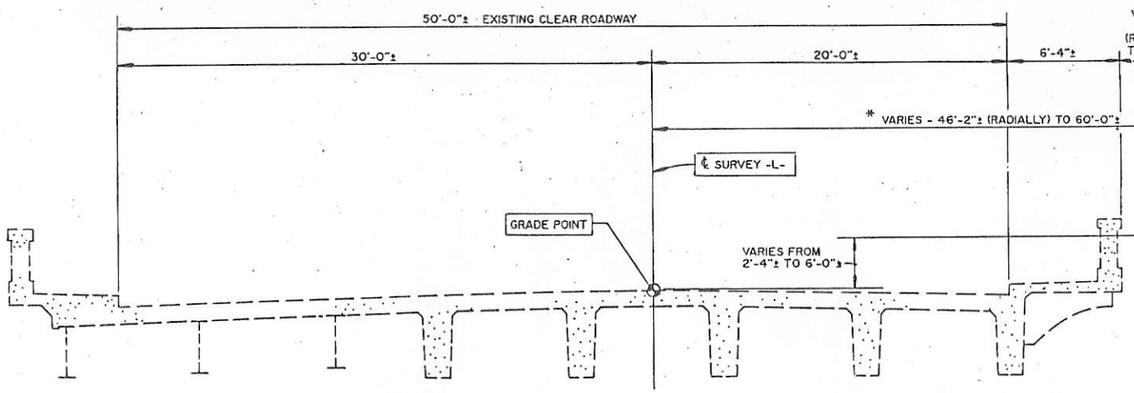
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH PARTRIDGE
4/12/96

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR,
AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE
JULY 1995

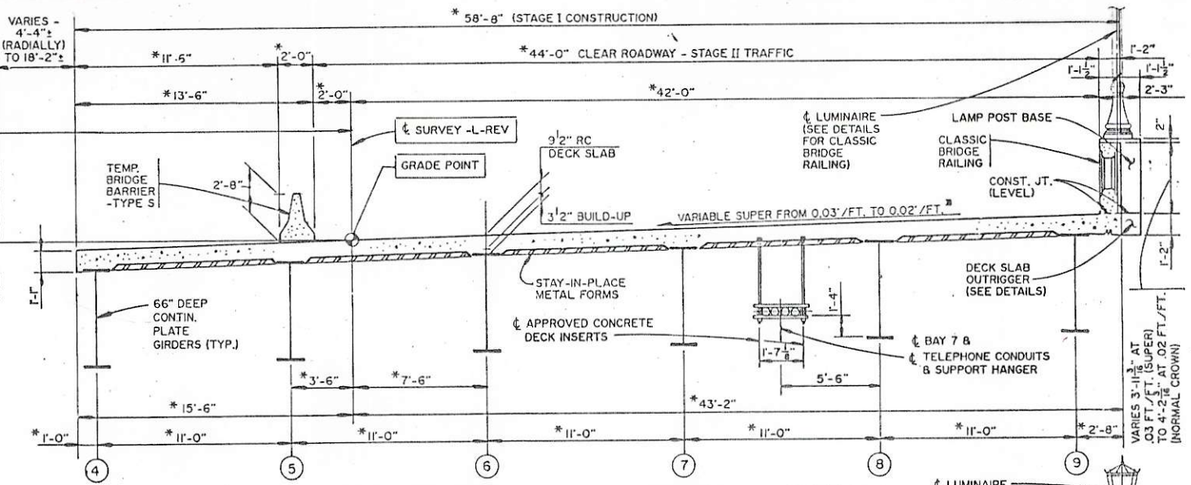
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-11
1	RDR	2/6/97	3			TOTAL SHEETS
2			4			224

DRAWN BY CCM DATE 7/95
CHECKED BY N.M.W. DATE 7-95

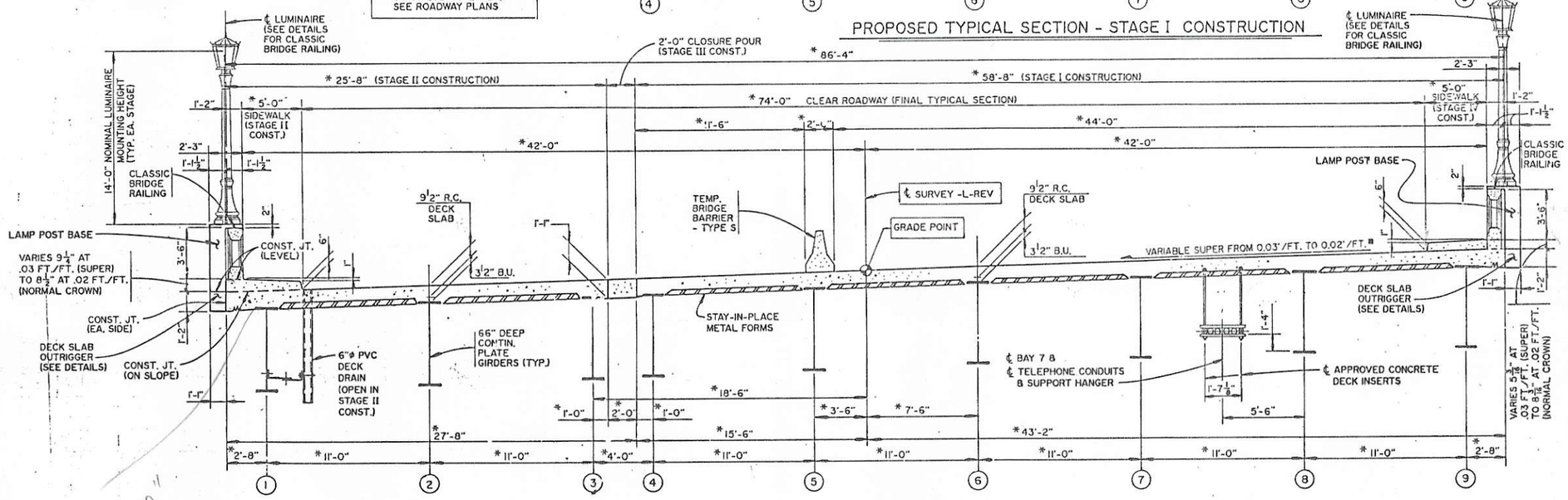


EXISTING TYPICAL SECTION
(AT SOUTH END OF EXISTING BRIDGE LOOKING NORTH)

■ SUPER ELEVATION FROM .03 TO NORMAL CROWN IS BETWEEN STA. 10+65-L-REV TO STA. 12+40-L-REV. SEE ROADWAY PLANS



PROPOSED TYPICAL SECTION - STAGE I CONSTRUCTION



PROPOSED TYPICAL SECTION
STAGES II & III CONSTRUCTION

PROPOSED TYPICAL SECTION
STAGES I & IV CONSTRUCTION

UTILITY NOTES:

THE DIMENSIONS AND DETAILS SHOWN FOR CONCRETE INSERTS ARE FOR THE CONTRACTOR'S BENEFIT IN PLACING THEM AND ARE NOT TO BE CONSTRUED TO BE AN APPROVAL FOR THE ATTACHMENT OF THE UTILITY TO THE SUPERSTRUCTURE.

FOR RESPONSIBILITIES FOR FURNISHING AND PLACING STEEL PLATE SLEEVE, SEE UTILITY SPECIAL PROVISIONS.

CONTINUOUS UNIT #1
TYPICAL SECTIONS - SPANS A & B
(ONE CONTINUOUS UNIT OF 2 SPANS @ 97'-6")

* RADIAL DIMENSIONS, MEASURED THRU THE WORK POINTS FROM P.C.C. 10+65.00-L-REV TO P.T. 11+99.40-L-REV.

DIMENSIONS FROM P.T. 11+99.40-L-REV TO P.O.T. 12+60.00-L-REV ARE MEASURED ALONG TANGENT PORTION OF THE FIRST CONTINUOUS UNIT.

NORTH CAROLINA PROFESSIONAL SEAL 11278 ENGINEER LEONARD GARTH FLETCHER
4/12/96

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev

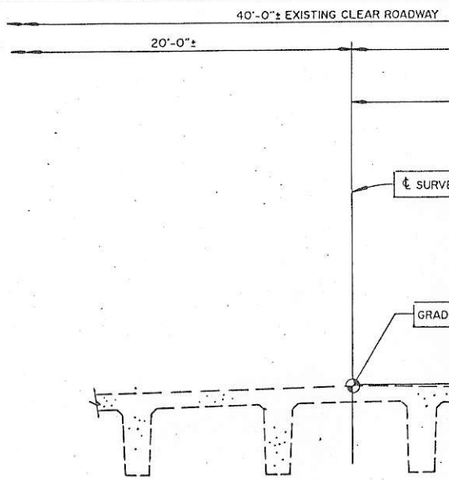
SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

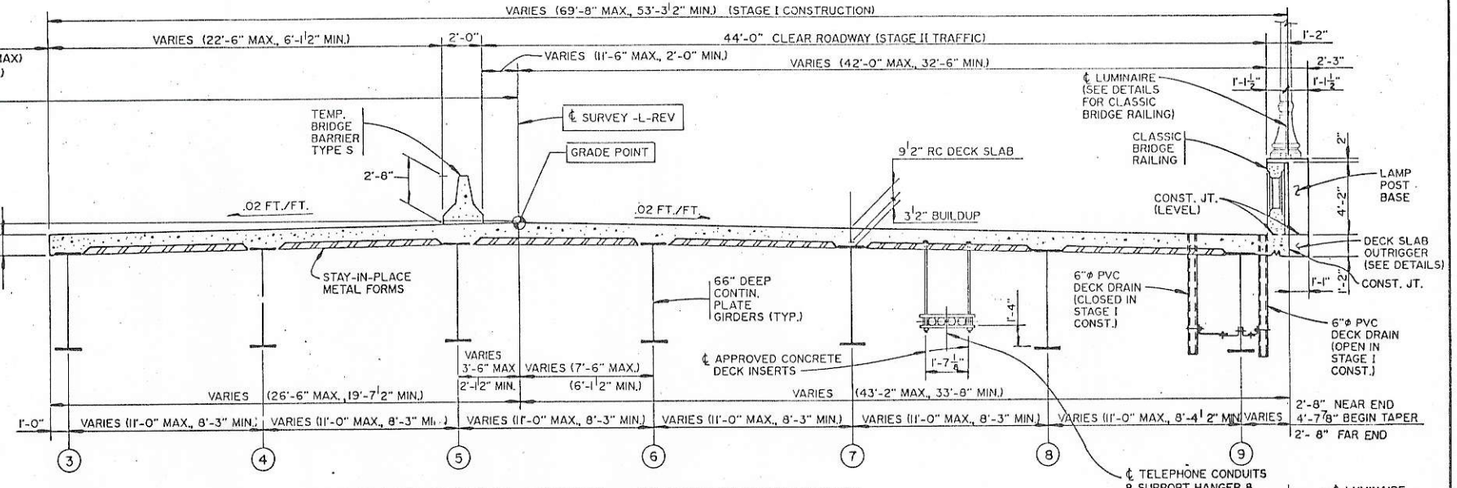
CONSTRUCTION SEQUENCE
FOR BRIDGE ON US 25 (McDOWELL STREET) OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR, AND SR 3556 (MEADOW RD.) BETWEEN I-40 AND DOWNTOWN ASHEVILLE IN THE CITY OF ASHEVILLE
JULY 1995

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	5-12
1			3			TOTAL SHEETS
2			4			224

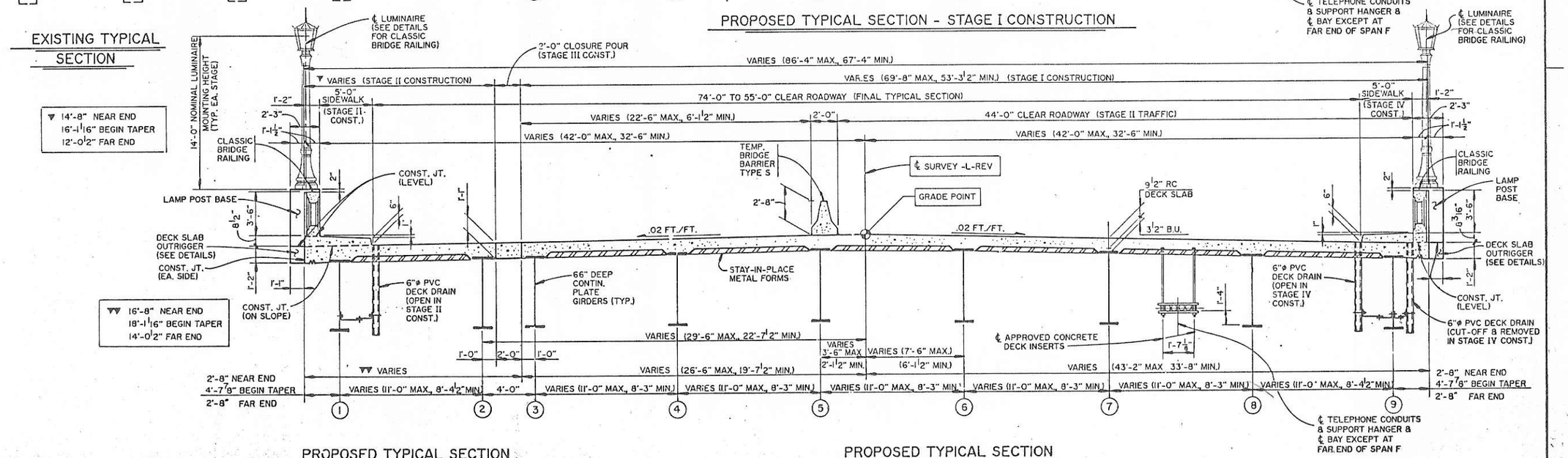
DRAWN BY RTJ DATE Sept '93
CHECKED BY JCM DATE 7/95



EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION - STAGE I CONSTRUCTION



PROPOSED TYPICAL SECTION
STAGES II & III CONSTRUCTION

PROPOSED TYPICAL SECTION
STAGES I & IV CONSTRUCTION

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-Rev

SHEET 2 OF 3

UTILITY NOTES:

THE DIMENSIONS AND DETAILS SHOWN FOR CONCRETE INSERTS ARE FOR THE CONTRACTOR'S BENEFIT IN PLACING THEM AND ARE NOT TO BE CONSTRUED TO BE AN APPROVAL FOR THE ATTACHMENT OF THE UTILITY TO THE SUPERSTRUCTURE.

FOR RESPONSIBILITIES FOR FURNISHING AND PLACING STEEL PLATE SLEEVE, SEE UTILITY SPECIAL PROVISIONS.

CONTINUOUS UNIT #2

TYPICAL SECTIONS - SPANS C, D, E & F

(ONE CONTINUOUS UNIT OF 4 SPANS - 1 @ 129' 0", 1 @ 136'-0", 1 @ 144'-0" & 1 @ 135'-0")

NORTH CAROLINA PROFESSIONAL SEAL 12790 ENGINEER LESTER GARTH FLETCHER
4/12/96

PREPARED BY THOMPSON - SOPLON - SHOOK ENGINEERS, INCORPORATED

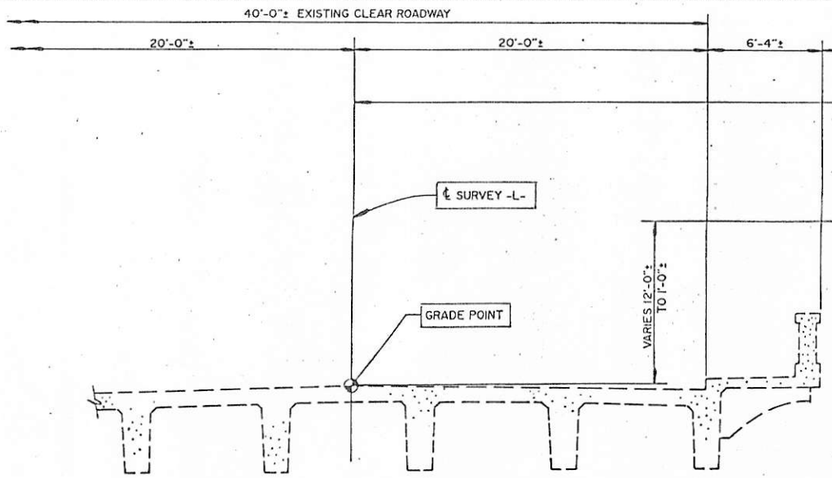
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

CONSTRUCTION SEQUENCE
FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR,
AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE
JULY 1995

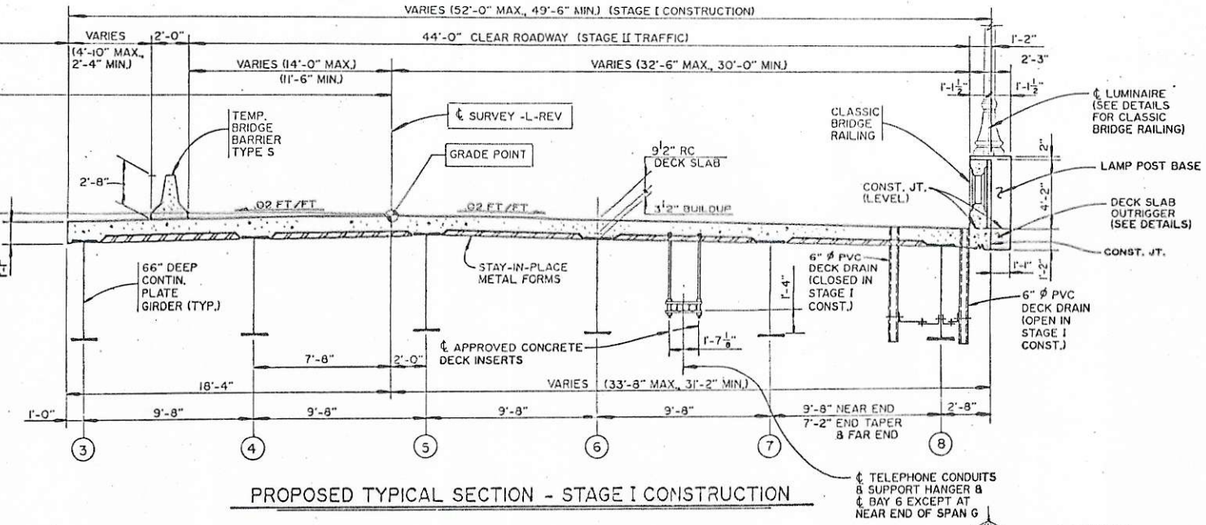
REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

SHEET NO. S-13
TOT. SHEETS 224

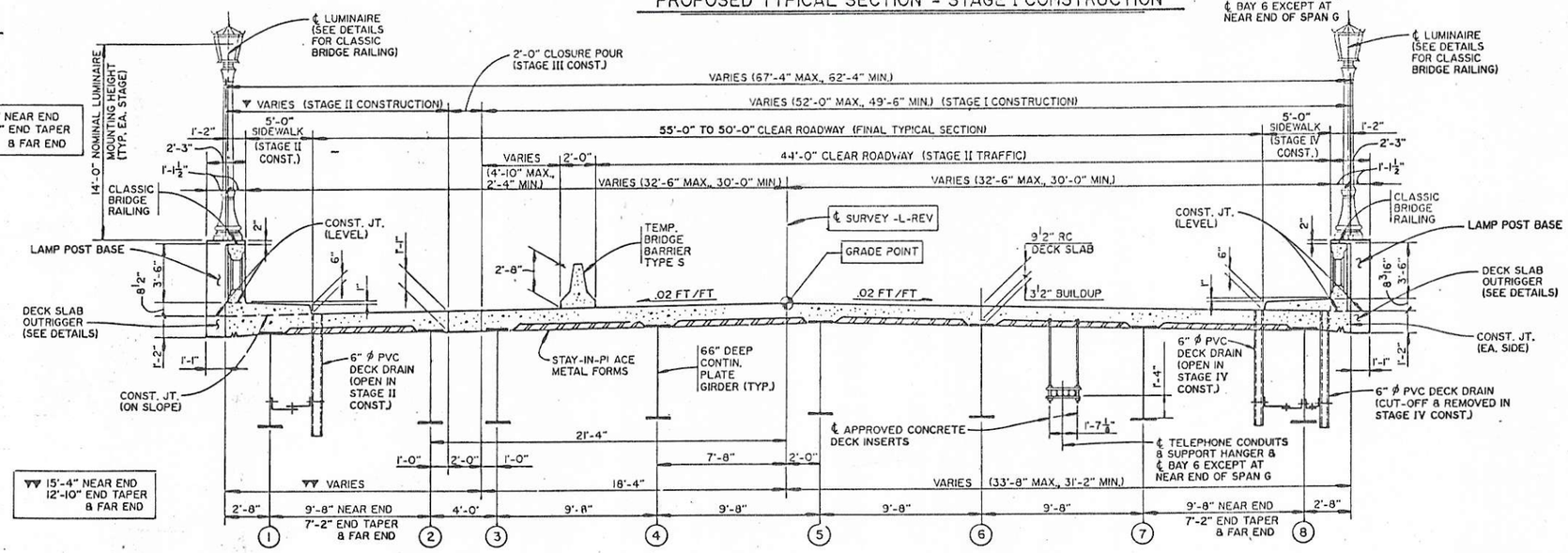
DRAWN BY RJ DATE SEPT '93
CHECKED BY ECM DATE 7/95



EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION - STAGE I CONSTRUCTION



PROPOSED TYPICAL SECTION
STAGES II & III CONSTRUCTION

PROPOSED TYPICAL SECTION
STAGES I & IV CONSTRUCTION

UTILITY NOTES:

THE DIMENSIONS AND DETAILS SHOWN FOR THE CONCRETE INSERTS ARE FOR THE CONTRACTOR'S BENEFIT IN PLACING THEM AND ARE NOT TO BE CONSTRUED TO BE AN APPROVAL FOR THE ATTACHMENT OF THE UTILITY TO THE SUPERSTRUCTURE.

FOR RESPONSIBILITIES FOR FURNISHING AND PLACING STEEL PLATE SLEEVE, SEE UTILITY SPECIAL PROVISIONS.

CONTINUOUS UNIT #3
TYPICAL SECTIONS - SPANS G, H, I & J

(ONE CONTINUOUS UNIT OF 4 SPANS - 1 @ 114'-0", 2 @ 129'-0", 1 @ 143'-0")

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

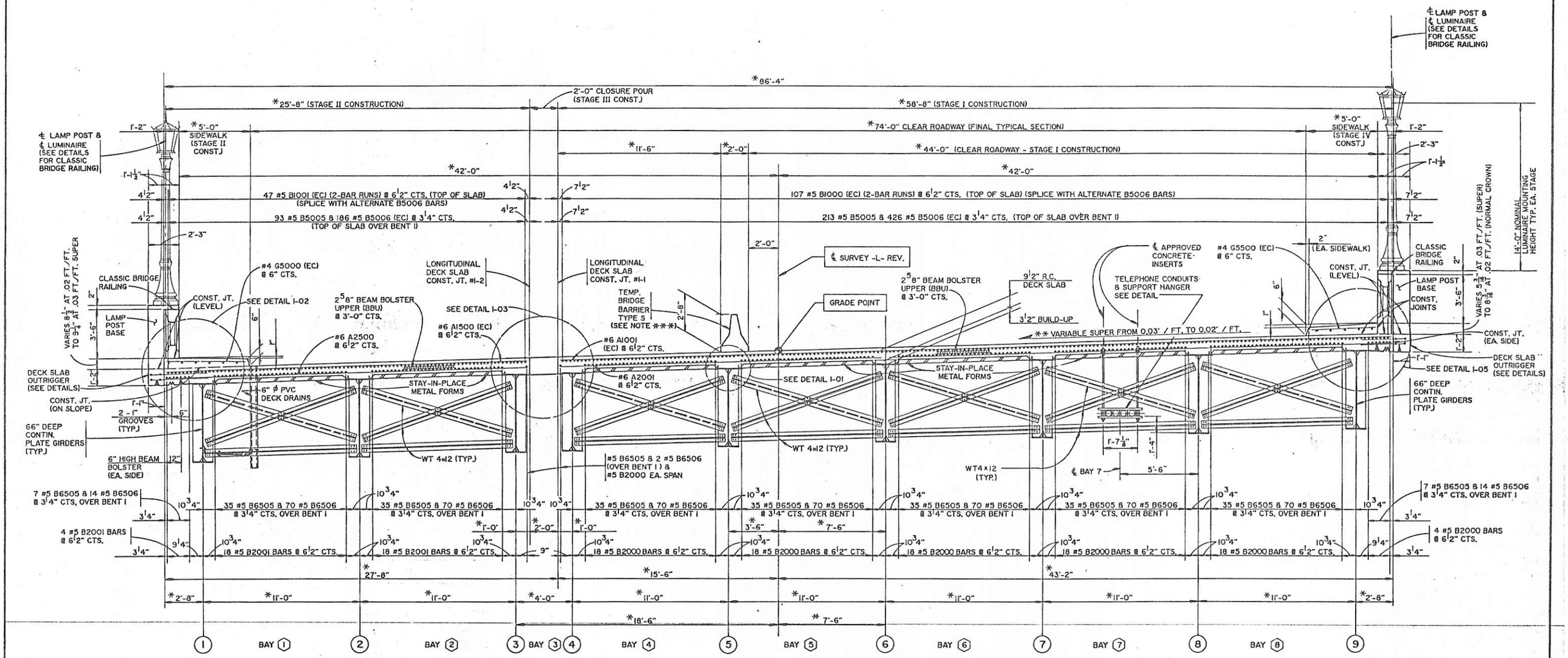
CONSTRUCTION SEQUENCE
FOR BRIDGE ON US 25 (McDOWELL STREET)
OVER SWANNANOA RIVER, NORFOLK SOUTHERN RR,
AND SR 3556 (MEADOW RD.)
BETWEEN I-40 AND DOWNTOWN ASHEVILLE
IN THE CITY OF ASHEVILLE
JULY 1995

NORTH CAROLINA PROFESSIONAL SEAL 12797 ENGINEER LEONARD GARTH FLETCHER
4/12/96

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

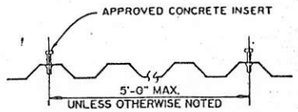
REVISIONS						SH CET NO.
NO.	BY	DATE	NO.	BY	DATE	5-14
1			3			TK FAL. BR. LETS
2			4			224

DRAWN BY RTL DATE Sept '93
CHECKED BY CGM DATE 7/95



NOTES: THE DIMENSIONS AND DETAILS SHOWN FOR CONCRETE INSERTS ARE FOR THE CONTRACTORS BENEFIT IN PLACING THE INSERTS AND ARE NOT TO BE CONSTRUED AS AN APPROVAL FOR THE ATTACHMENT OF A UTILITY LINE.

FOR RESPONSIBILITIES FOR FURNISHING AND PLACING CONCRETE INSERTS, SEE UTILITY SPECIAL PROVISIONS.



DETAIL OF LOCATION OF CONCRETE INSERTS IN CORRUGATIONS OF STEEL DECK

INSERTS MUST BE LOCATED IN HIGH PART OF "STAY-IN-PLACE" FORMS. EXACT LOCATION AS SHOWN IN INSERT SPACING PLAN MAY VARY SLIGHTLY IN ORDER TO AVOID LOCATING INSERTS ON SLOPING OR LOW SURFACE OF FORMS AND TO AVOID INTERMEDIATE CROSSFRAMES. IF POSSIBLE, DO NOT EXCEED 5'-0" SPACING.

TYPICAL SECTION AT INTERMEDIATE DIAPHRAGMS
SPANS A AND B

* RADIAL DIMENSIONS, MEASURED THRU THE WORK POINTS FROM P.O.C. 10+65.00-L-REV TO P.T. 11+99.40-L-REV.
DIMENSIONS FROM P.T. 11+99.40-L-REV TO P.O.T. 12+60.00-L-REV ARE MEASURED ALONG TANGENT PORTION OF THE FIRST CONTINUOUS UNIT.

** SEE DETAIL I-07 SHOWING VARIABLE SUPERELEVATION INFORMATION.

(EC) DENOTES EPOXY - COATED REINFORCING STEEL.

○ = OPEN CIRCLE = ADDITIONAL #5 B5005, B5006, B6505 & B6506 BARS OVER BENT 1.

● = CLOSED CIRCLE = MAIN #5 B1000 & B2000 BARS (STAGE I) & MAIN #5 B1001 & B2001 BARS (STAGE II)

*** TEMP. BRIDGE BARRIER, TYPE S SHALL BE RELOCATED TO FACILITATE STAGE IV SIDEWALK CONSTRUCTION. SEE TRAFFIC CONTROL PLANS.

DRAWN BY N. M. WILSON DATE SEPT. 94
CHECKED BY C.C.M. DATE 6/95

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEWOOD GARTH FLETCHER
4/12/96

U1.001

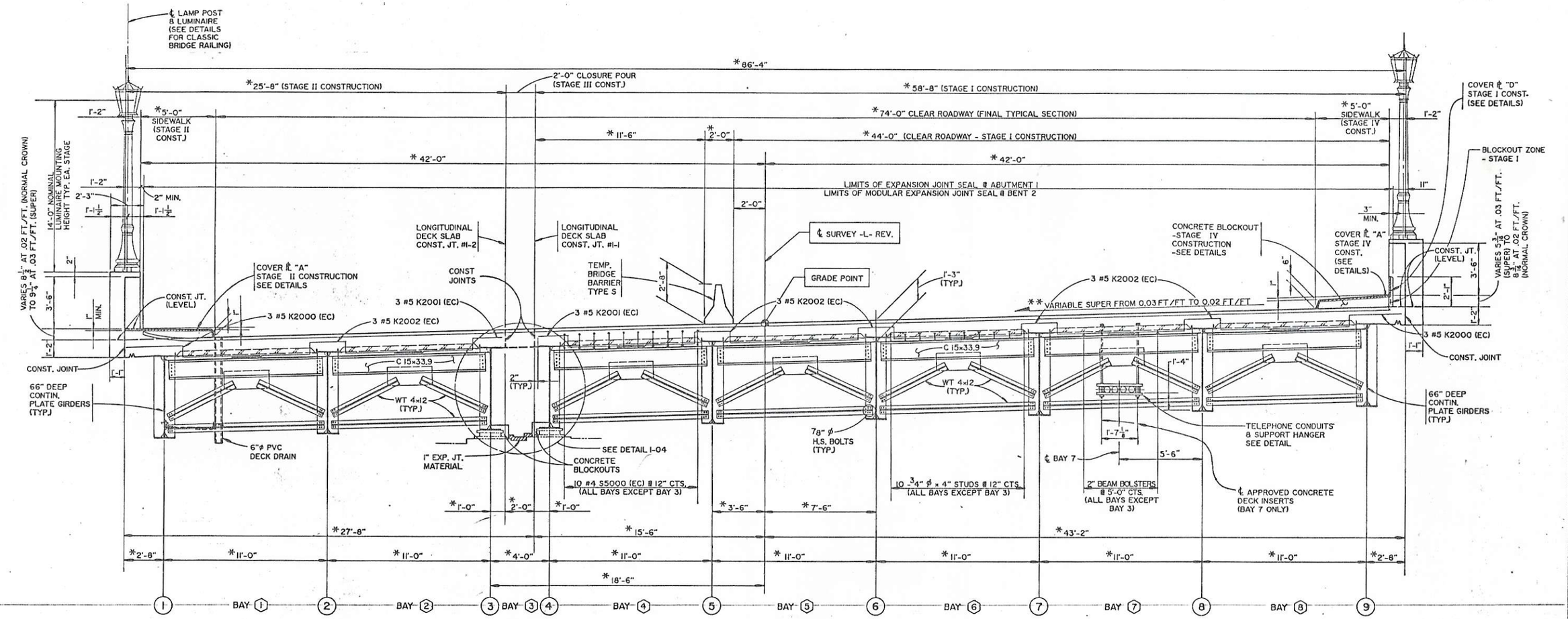
PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

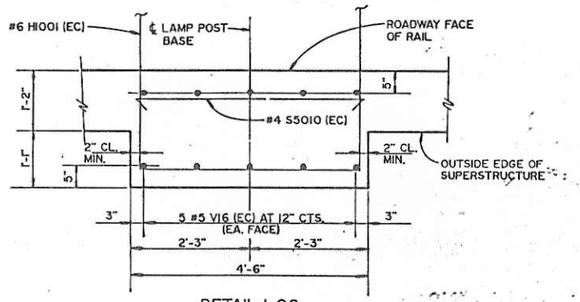
PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTIONS
CONTINUOUS UNIT #1
(SPANS A AND B)
SEPT. 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-15
1			3			TOTAL SHEETS
2			4			224





DETAIL I-08
PLAN OF DECK SLAB OUTRIGGER AT LAMP POST BASE

SEE SECTION G-G - CLASSIC BRIDGE RAILING DETAILS, SHEET 15 OF 17, FOR ADDITIONAL DETAILS.

TYPICAL SECTION AT END DIAPHRAGMS
SPANS A AND B

* RADIAL DIMENSIONS, MEASURED THRU THE WORK POINTS FROM P.O.C. 10+65.00-L-REV TO P.T. 11+99.40-L-REV. DIMENSIONS FROM P.T. 11+99.40-L-REV TO P.O.T. 12+60.00-L-REV ARE MEASURED ALONG TANGENT PORTION OF THE FIRST CONTINUOUS UNIT.	** SEE DETAIL I-07 SHOWING VARIABLE SUPERELEVATION INFORMATION.	(EC) DENOTES EPOXY - COATED REINFORCING STEEL.

NOTES FOR DECK SLAB - CONTINUOUS UNIT #1

THE DIMENSIONS AND DETAILS SHOWN FOR THE CONCRETE DECK INSERTS ARE FOR THE CONTRACTOR'S BENEFIT IN PLACING THEM AND SHOULD NOT BE CONSTRUED TO BE AN APPROVAL FOR THE ATTACHMENT OF THE UTILITY TO THE STRUCTURE.

FOR RESPONSIBILITIES FOR FURNISHING AND PLACING THE CONCRETE DECK INSERTS, SEE UTILITY SPECIAL PROVISIONS.

FOR CLASSIC BRIDGE RAILS, SEE SPECIAL PROVISIONS.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 2 OF 2

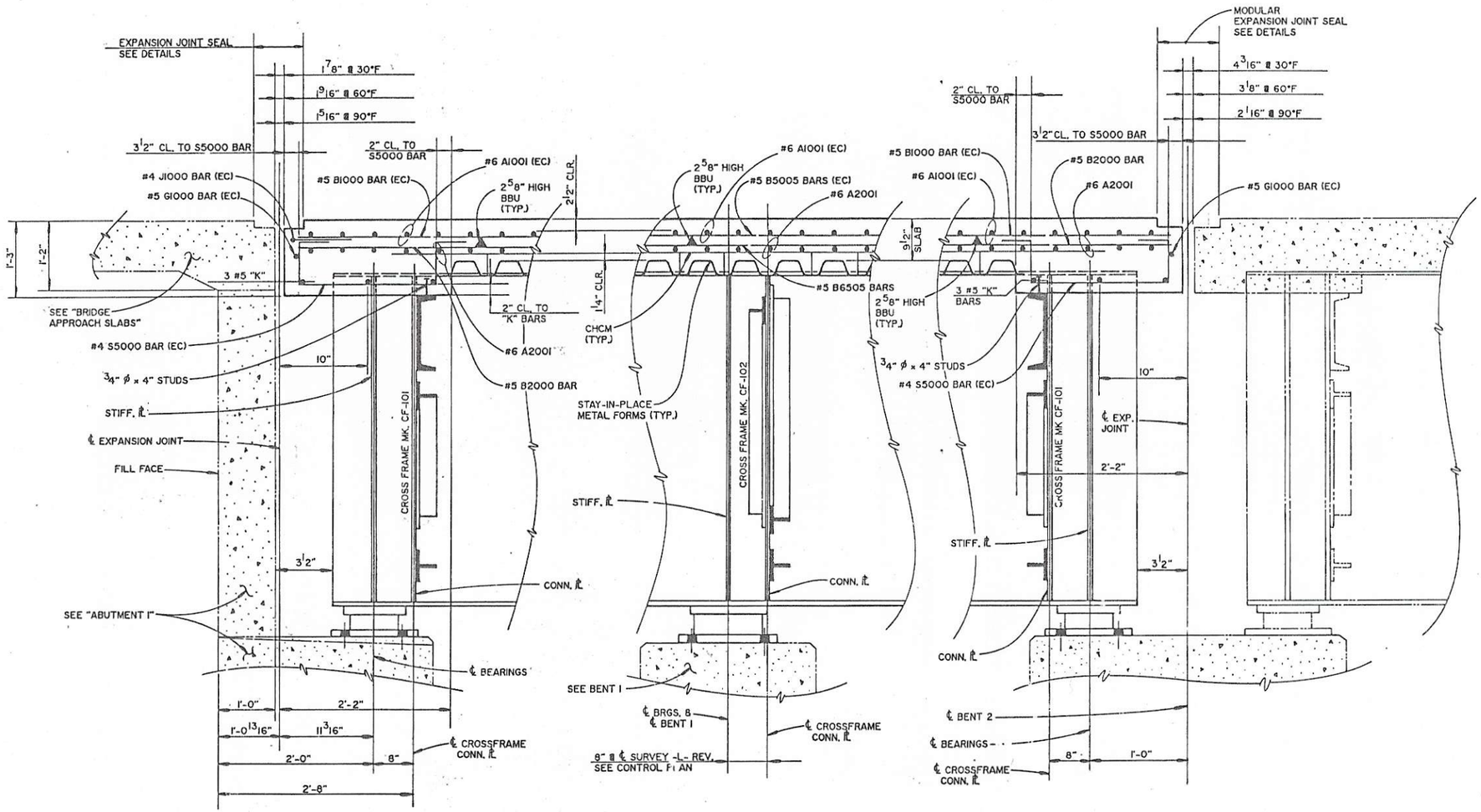
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTIONS
CONTINUOUS UNIT #1
(SPANS A AND B)
SEPT. 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	5-16
1			3			TOTAL SHEETS
2			4			224

U1.002

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

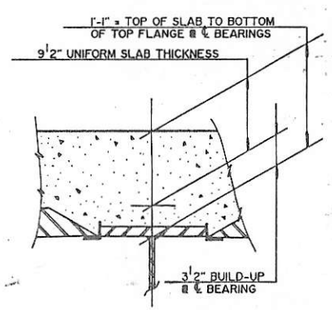
DRAWN BY N. M. WILSON DATE SEPT. 94
CHECKED BY CCM DATE 6/95



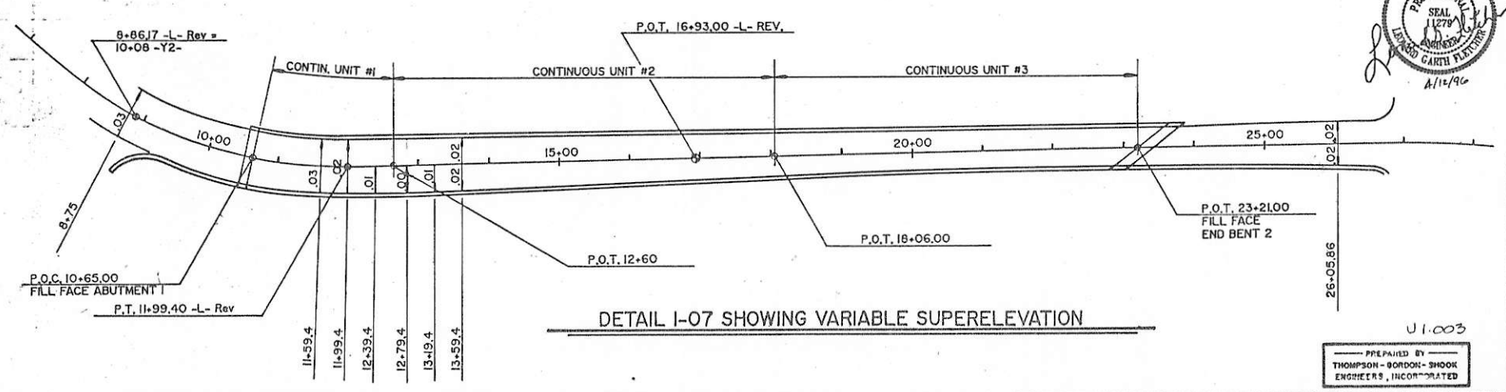
SECTION A-A

SECTION B-B

SECTION C-C



DETAIL I-01



DETAIL I-07 SHOWING VARIABLE SUPERELEVATION

NOTES FOR DECK SLAB - CONTINUOUS UNIT #1

PROVIDE CONTINUOUS HIGH CHAIR FOR METAL DECK (CHCM) @ 4'-0" CTS. WITH LEG SPACING TO MATCH THE PITCH OF THE FORMS AND WITH A HEIGHT TO SUPPORT THE BOTTOM LAYER OF SLAB REINFORCEMENT A CLEAR DISTANCE OF 1-1/4" ABOVE THE TOP OF THE STAY-IN-PLACE FORM.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THE TRANSVERSE JOINTS IN THE DECK SLAB (WHERE APPLICABLE) ARE CONTINUOUS IN A STRAIGHT LINE THROUGH THE CLASSIC BRIDGE RAIL. THE CONTRACTOR'S ATTENTION IS ALSO CALLED TO THE FACT THAT THE LONGITUDINAL JOINTS IN THE DECK SLAB ARE CONTINUOUS IN A STRAIGHT LINE FROM BEGINNING OF CONTINUOUS UNIT TO ENDING OF CONTINUOUS UNIT.

THE EXPANSION JOINT SEAL AT ABUTMENT 1 SHALL BE CAPABLE OF HANDLING A TOTAL THERMAL MOVEMENT, MEASURED PARALLEL TO THE CENTERLINE OF ROADWAY, OF 1-1/8" (9/16" EXPANSION AND 9/16" CONTRACTION FROM A MIDPOINT TEMPERATURE OF 60° F).

THE MODULAR EXPANSION JOINT SEAL AT BENT 2 SHALL BE CAPABLE OF HANDLING A TOTAL THERMAL MOVEMENT, MEASURED PARALLEL TO THE CENTERLINE OF ROADWAY, OF 4-1/4" (2-1/8" EXPANSION AND 2-1/8" CONTRACTION FROM A MIDPOINT TEMPERATURE OF 60° F).

THE TOP OF EXPANSION JOINT SEALS AND MODULAR EXPANSION JOINT SEALS SHALL BE SET A MINIMUM OF 1/8" AND A MAXIMUM OF 1/4" BELOW THE TOP OF SLAB.

FOR EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR MODULAR EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

CLASSIC BRIDGE RAILS AND SIDEWALKS IN THE CONTINUOUS UNIT SHALL NOT BE CAST UNTIL THE DECK SLAB CONCRETE IN EACH STAGE OF CONSTRUCTION HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

PREVIOUSLY CAST CONCRETE IN THE CONTINUOUS UNIT SHALL HAVE ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI BEFORE ADDITIONAL CONCRETE IS CAST IN THE UNIT.

STAY-IN-PLACE FORMS SHALL HAVE CLOSED TAPERED ENDS.

THE CONTRACTOR MAY, WHEN NECESSARY, PROPOSE A SCHEME FOR AVOIDING INTERFERENCE BETWEEN METAL STAY-IN-PLACE FORM SUPPORTS OR FORMS AND GIRDER STIFFENER OR CONNECTOR PLATES. THE PROPOSAL SHALL BE INDICATED AND INCLUDED, AS APPROPRIATE, ON EITHER THE STEEL WORKING DRAWINGS OR ON THE METAL STAY-IN-PLACE FORM WORKING DRAWINGS.

STRUCTURAL STEEL ERECTION IN EACH STAGE OF CONSTRUCTION FOR THE CONTINUOUS UNIT SHALL BE COMPLETE BEFORE FALSEWORK OR FORMS ARE PLACED IN EACH STAGE OF THE UNIT.

LAP SPLICES, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED IN THE B5000 BARS OVER BENT 1.

DIRECTION OF CASTING DECK CONCRETE SHALL BE FROM THE FIXED BEARING AT BENT 1 TOWARD EACH EXPANSION BEARING AT ABUTMENT 1 AND BENT 2.

SEE THE TRAFFIC CONTROL PLANS FOR STAGE I, II, III & IV LOCATIONS AND PAY LIMITS OF THE TEMPORARY BRIDGE BARRIERS - TYPE S.

THE TOPS OF DECK DRAINS SHALL BE SET 3/8" BELOW SURFACE OF DECK SLAB.

FALSEWORK AND METAL STAY-IN-PLACE FORMS SHALL NOT BE WELDED TO GIRDER FLANGES IN THE ZONES REQUIRING CHARPY V-NOTCH TESTS. SEE STRUCTURAL STEEL GIRDER ELEVATION SHEETS.

FOR BARS SHOWN AND NO BAR MARKS AND/OR BAR-RUNS SHOWN, SEE PLANS OF SPANS.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEWIS GARTH FLETCHER
4/12/96

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
DETAILS
(CONTINUOUS UNIT #1)
OCT. 1994

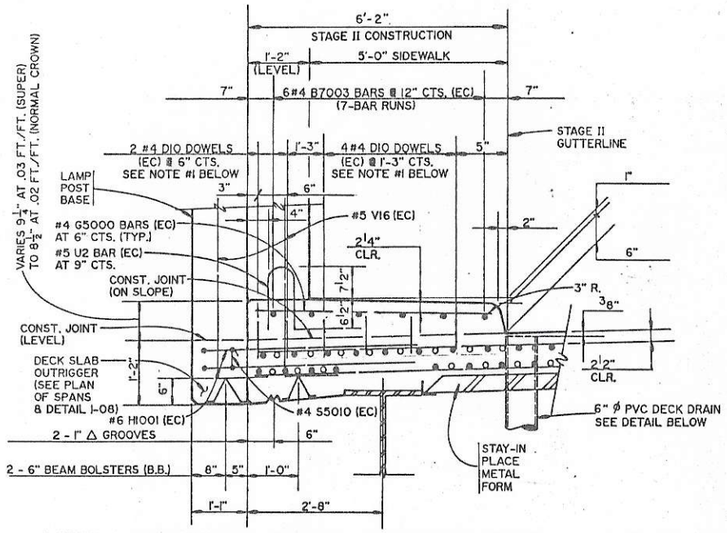
U1.003

PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

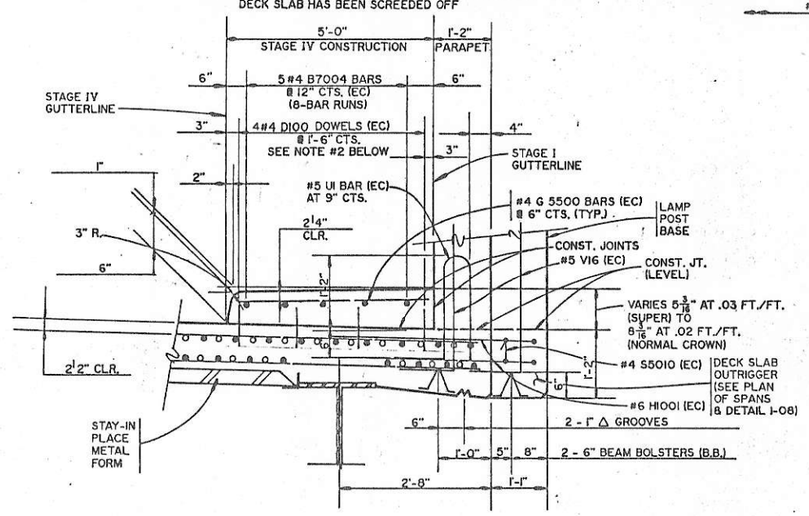
SHEET NO. S-17
TOTAL SHEETS 224

DRAWN BY N. M. WILSON DATE OCT. 94
CHECKED BY CCM DATE 6/95



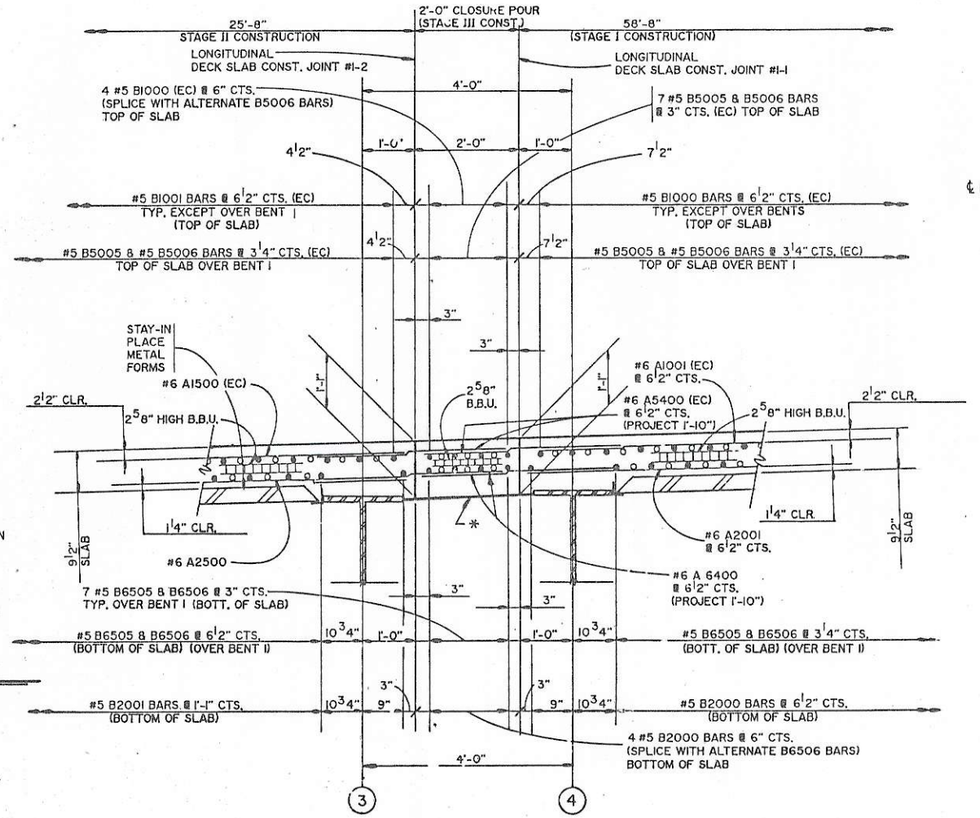
DETAIL I-02 - TYPICAL SIDEWALK SECTION - STAGE II CONSTRUCTION

NOTE #1 : DOWELS MAY BE PUSHED INTO GREEN CONCRETE AFTER DECK SLAB HAS BEEN SCREEDED OFF



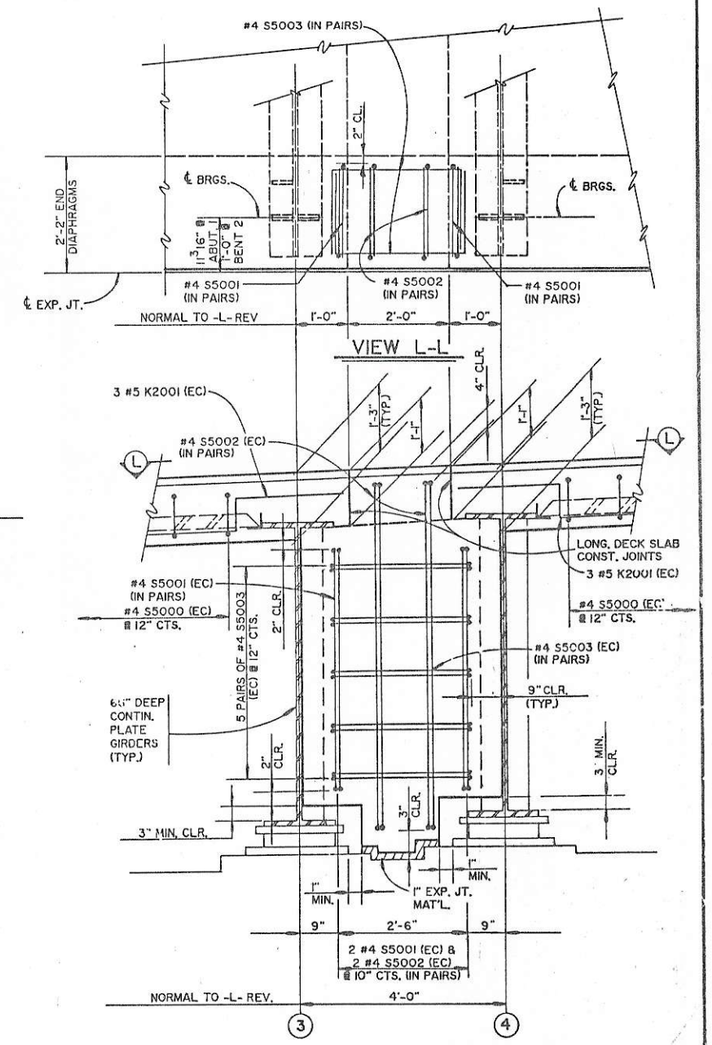
DETAIL I-05 - TYPICAL SIDEWALK SECTION - STAGE IV CONSTRUCTION

NOTE #2 : DOWELS SHALL BE ADHESIVELY ANCHORED IN DECK SLAB DURING STAGE IV SIDEWALK CONSTRUCTION. SEE SPECIAL PROVISIONS.

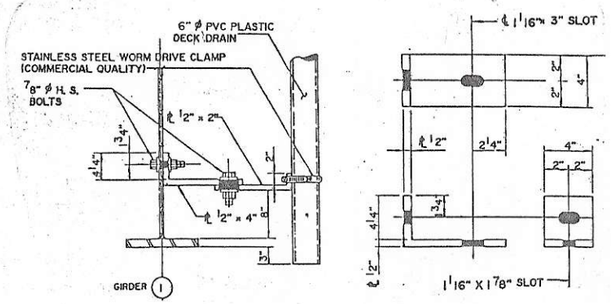


DETAIL I-03 - TYPICAL CLOSURE POUR SECTION

* FORM BOTTOM OF OVERHANGS & CLOSURE POUR FLUSH WITH BOTTOM OF TOP FLANGES.



DETAIL I-04 - TYPICAL CLOSURE POUR END DIAPHRAGM



DETAIL I-06 - DRAIN CONNECTION

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

NOTES:

COUPLING IN DRAIN PIPE WILL BE PERMITTED AS APPROVED BY THE ENGINEER.

TOP OF FLOOR DRAIN TO BE SET ⅜" BELOW SURFACE OF SLAB.

4- 1/2" SQUARE LUGS TO BE GLUED TO THE PVC PLASTIC PIPE AT EQUAL SPACES AROUND THE PIPE DRAIN APPROXIMATELY 4" FROM THE TOP OF THE PIPE.

BOLT SIZE TO BE SAME AS DIAPHRAGMS AND CROSS FRAME CONNECTIONS. STAINLESS STEEL WORM DRIVE HOSE CLAMP SHALL BE COMMERCIAL QUALITY.

PVC PLASTIC DECK DRAINS SHALL BE PAINTED WITH AN APPROVED VINYL PAINT. SEE SPECIAL PROVISIONS.

U1.004

PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

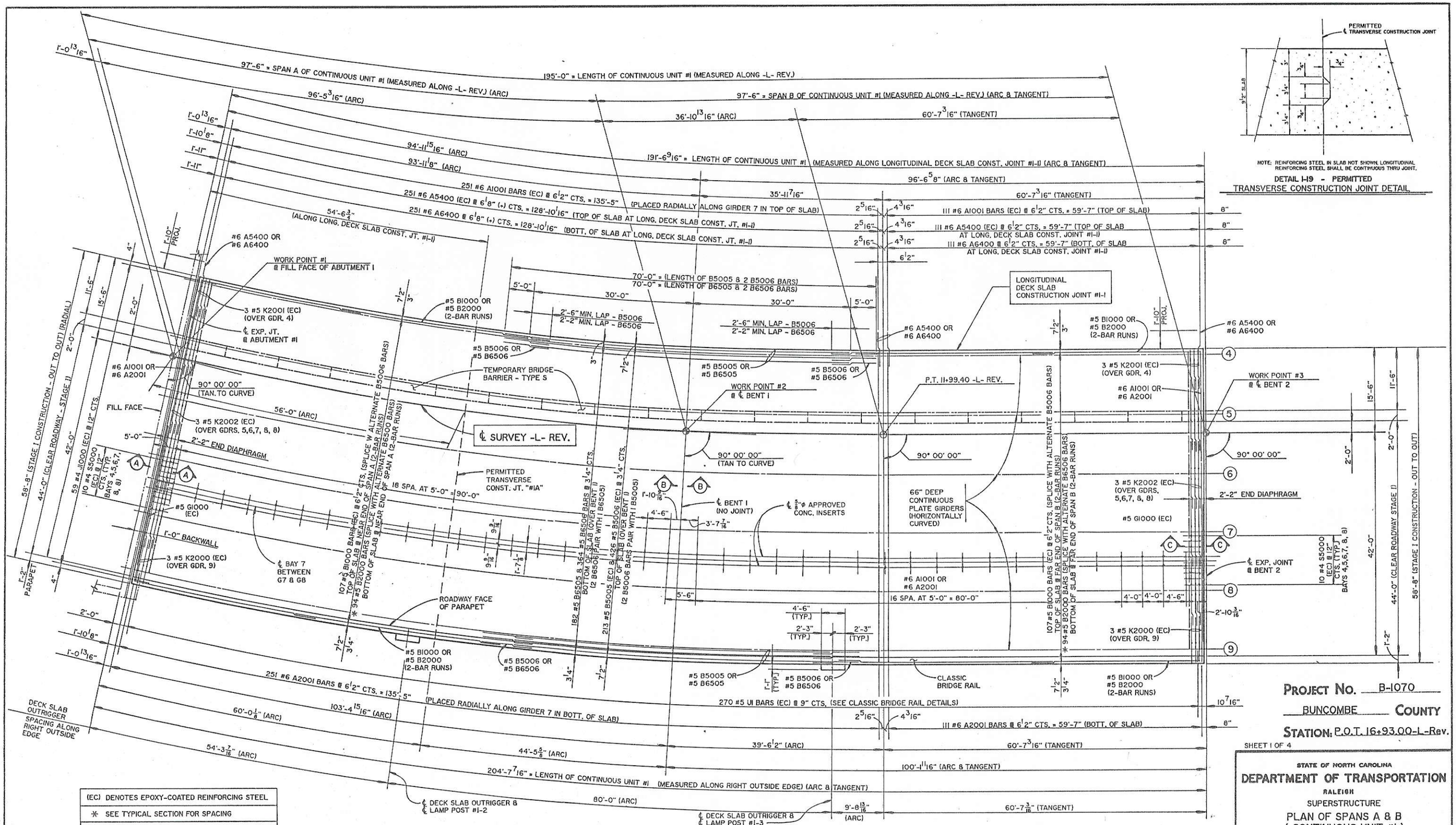
SUPERSTRUCTURE

DETAILS
(CONTINUOUS UNIT #1)

JAN. 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-18
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. M. WILSON DATE JAN 94
CHECKED BY CEM DATE 6/95



PLAN OF SPANS A & B (CONTINUOUS UNIT #1)
STAGE I CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPANS A & B
(CONTINUOUS UNIT #1)
STAGE I CONSTRUCTION
SEPT. 1994

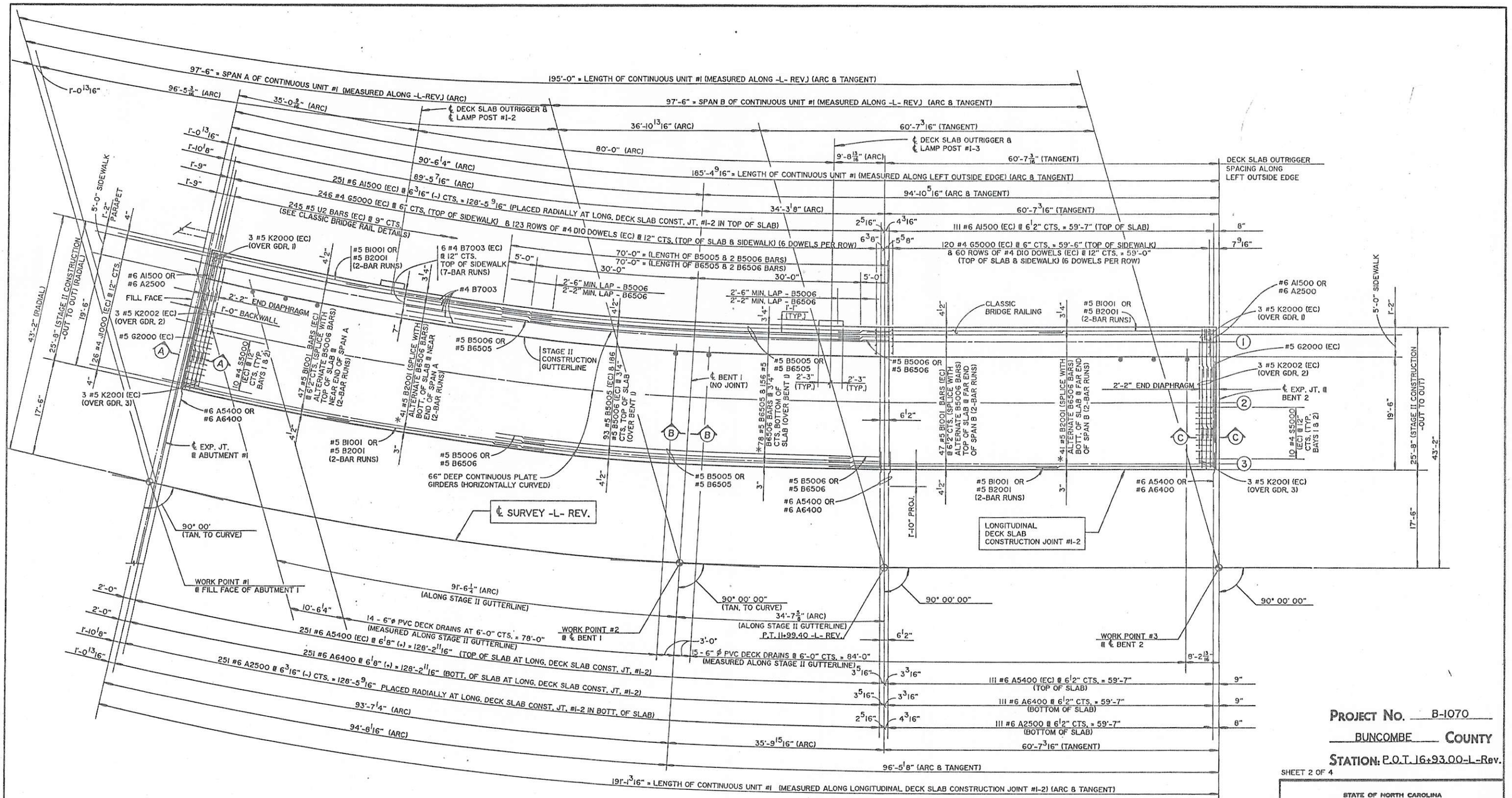
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-19
1			3			TOTAL SHEETS
2			4			224

NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER LEONARD GARTH THOMPSON 4/12/96

U1.005

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

DRAWN BY N. M. WILSON DATE SEPT. 94
CHECKED BY GCM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING
FOR CHORD-TO-ARC OFFSETS, SEE SHEET 4 OF 4.

PLAN OF SPANS A & B (CONTINUOUS UNIT #1)
STAGE II CONSTRUCTION

DRAWN BY N.M. WILSON DATE OCT. 94
CHECKED BY CCM DATE 6/95

NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER LEONARD GARTH FLETCHER
4/12/96

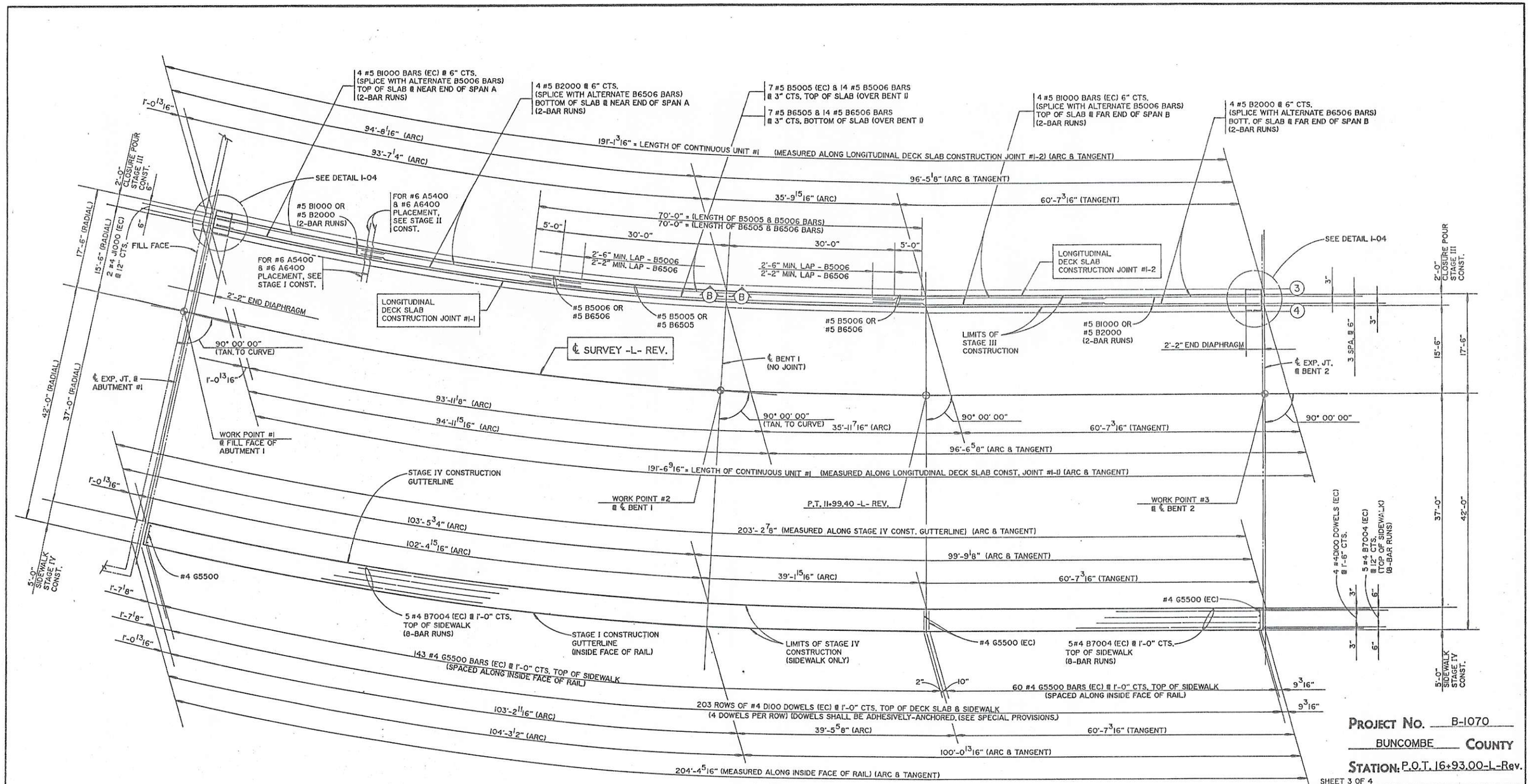
PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPANS A & B
(CONTINUOUS UNIT #1)
STAGE II CONSTRUCTION
OCT. 1994

REVISIONS							SHEET NO.
NO.	BY	DATE	NO.	BY	DATE		S-20
1			3				TOTAL SHEETS
2			4				224



(EC) DENOTES EPOXY-COATED REINFORCING STEEL

PLAN OF SPANS A & B (CONTINUOUS UNIT #1)
STAGES III & IV CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPANS A & B
(CONTINUOUS UNIT #1)
STAGES III & IV CONSTRUCTION

OCT. 1994

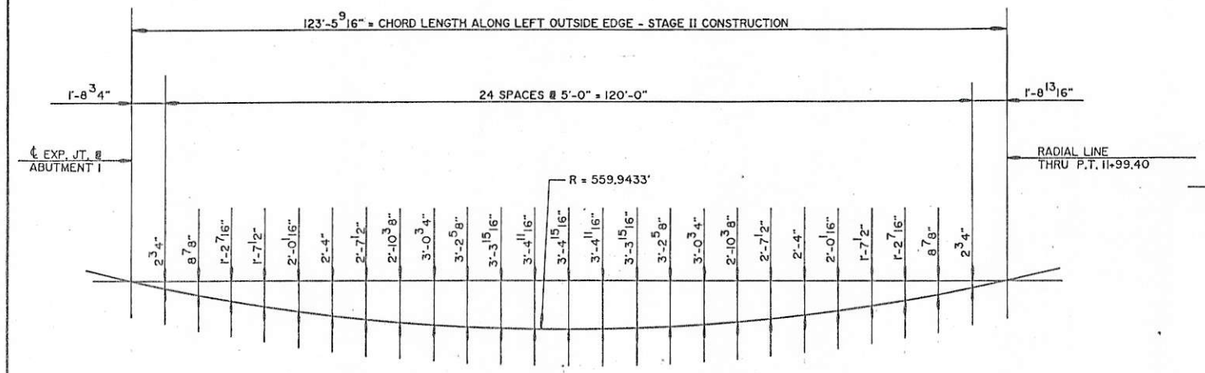
NORTH CAROLINA PROFESSIONAL SEAL 12704 ENGINEER GARTH TLEYJERE
4-12-96

U1.007

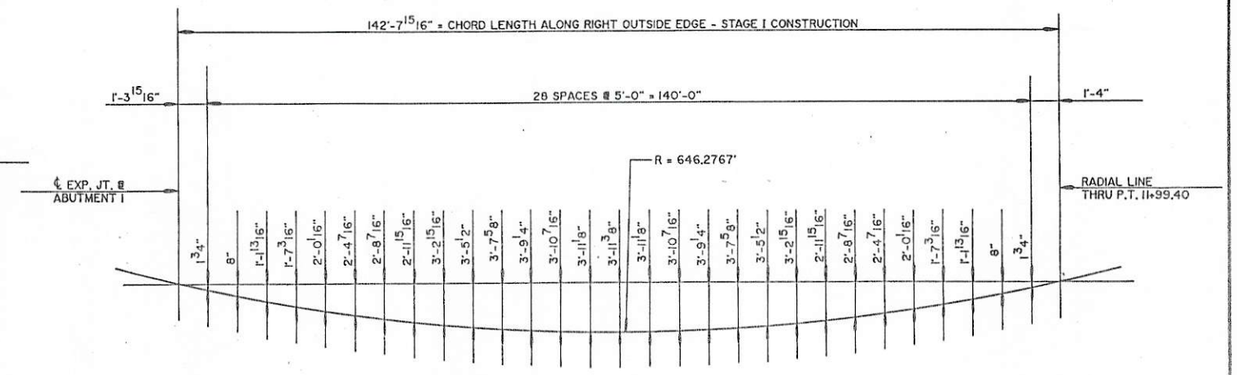
PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS								SHEET NO.
NO.	BY	DATE	NO.	BY	DATE			S-21
1			3					TOTAL SHEETS
2			4					224

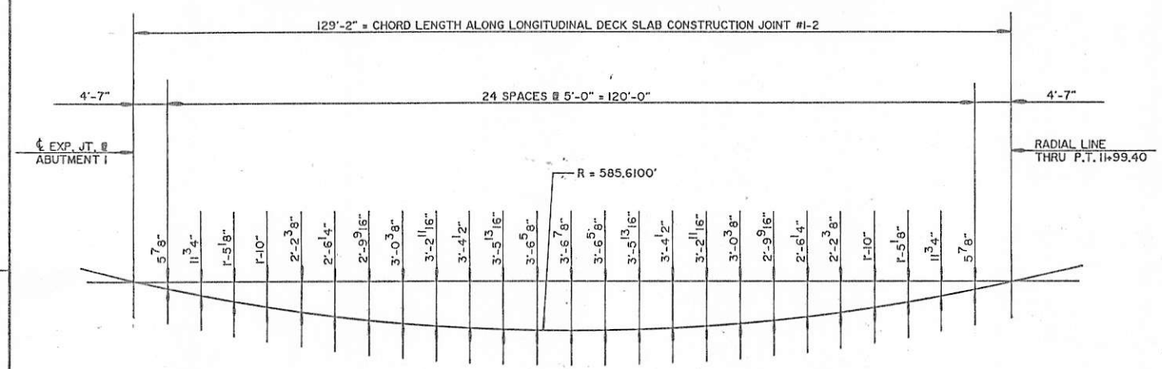
DRAWN BY N. M. WILSON DATE OCT. 94
CHECKED BY CCM DATE 6/1/15



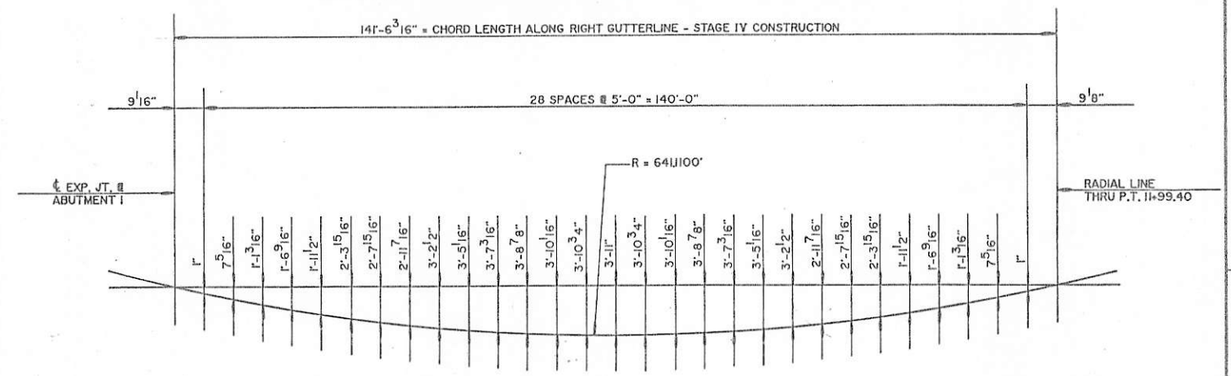
CHORD-TO-ARC OFFSETS @ LEFT OUTSIDE EDGE



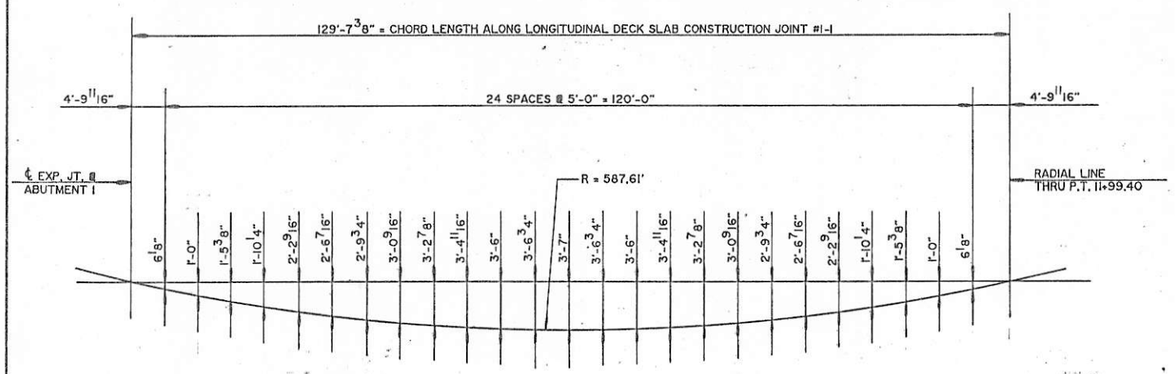
CHORD-TO-ARC OFFSETS @ RIGHT OUTSIDE EDGE



CHORD-TO-ARC OFFSETS @ LONGITUDINAL DECK SLAB CONSTRUCTION JOINT #1-2



CHORD-TO-ARC OFFSETS @ RIGHT GUTTERLINE



CHORD-TO-ARC OFFSETS @ LONGITUDINAL DECK SLAB CONSTRUCTION JOINT #1-1

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

CHORD-TO-ARC OFFSETS
CONTINUOUS UNIT #1

FEBRUARY 1995

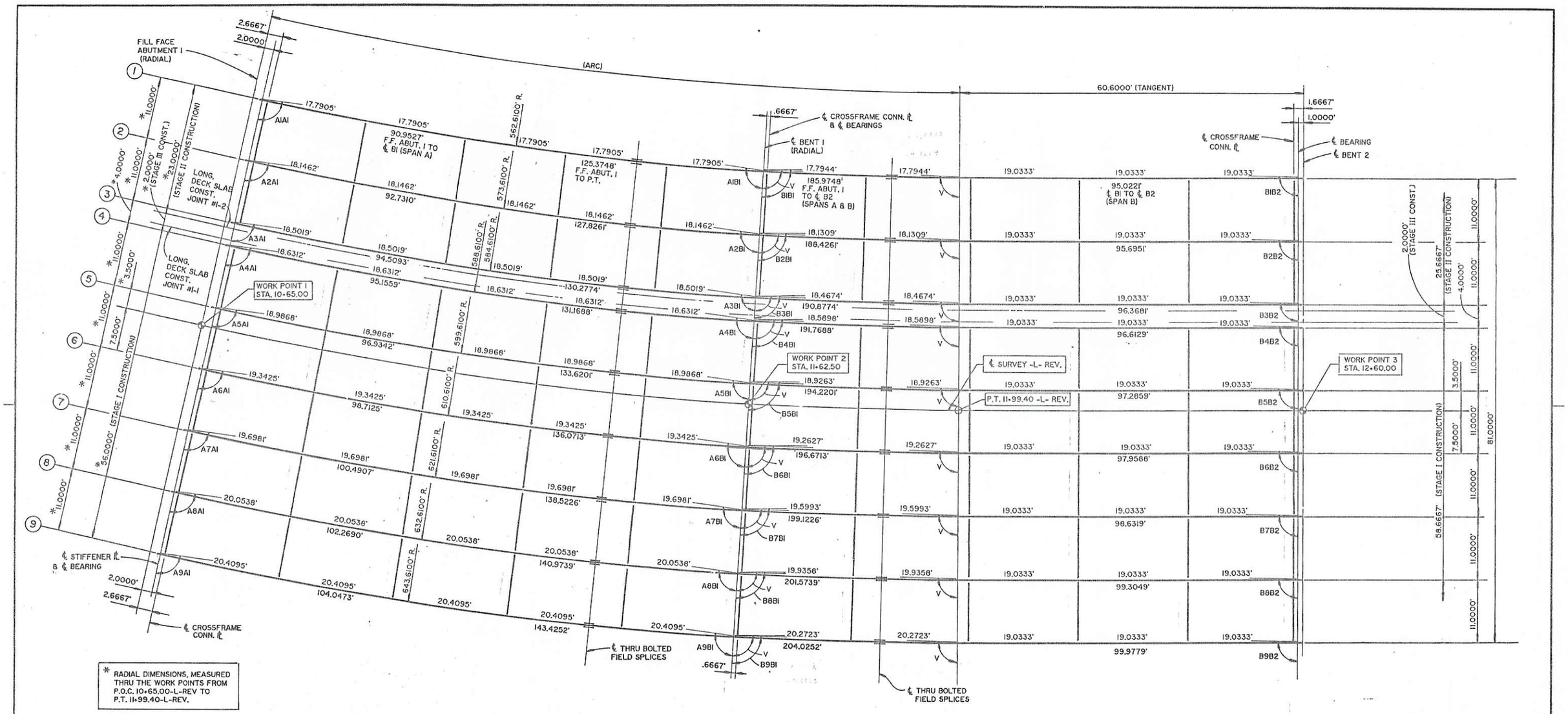
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEWOOD GARTH FLETCHER
4/12/96

U1.008

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-22
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. M. WILSON DATE FEB. 95
CHECKED BY CCM DATE 6/95



* RADIAL DIMENSIONS, MEASURED THRU THE WORK POINTS FROM P.O.C. 10+65.00-L-REV TO P.T. 11+99.40-L-REV.

CHORD ANGLES

SPAN A CHORD FROM ℄ BEARING AT ABUTMENT 1 TO ℄ BENT 1			
A1A1	94°43'59"	A1B1	94°31'46"
A2A1	94°43'52"	A2B1	94°31'53"
A3A1	94°43'45"	A3B1	94°32'00"
A4A1	94°43'43"	A4B1	94°32'02"
A5A1	94°43'36"	A5B1	94°32'09"
A6A1	94°43'30"	A6B1	94°32'15"
A7A1	94°43'24"	A7B1	94°32'21"
A8A1	94°43'19"	A8B1	94°32'26"
A9A1	94°43'13"	A9B1	94°32'32"

SPAN B CHORD FROM ℄ BENT 1 TO P.T.	
V	91°45'10"

SPAN B CHORD FROM ℄ BENT 1 TO ℄ BEARING AT BENT 2			
B1B1	92°51'48"	B1B2	90°38'32"
B2B1	92°51'22"	B2B2	90°38'58"
B3B1	92°50'54"	B3B2	90°39'26"
B4B1	92°50'43"	B4B2	90°39'36"
B5B1	92°50'16"	B5B2	90°40'04"
B6B1	92°49'49"	B6B2	90°40'31"
B7B1	92°49'22"	B7B2	90°40'58"
B8B1	92°48'56"	B8B2	90°41'24"
B9B1	92°48'30"	B9B2	90°41'50"

CONTROL PLAN FOR SPANS A & B
(CONTINUOUS UNIT # 1)

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER RICHARD GARTH FLETCHER
4/12/96

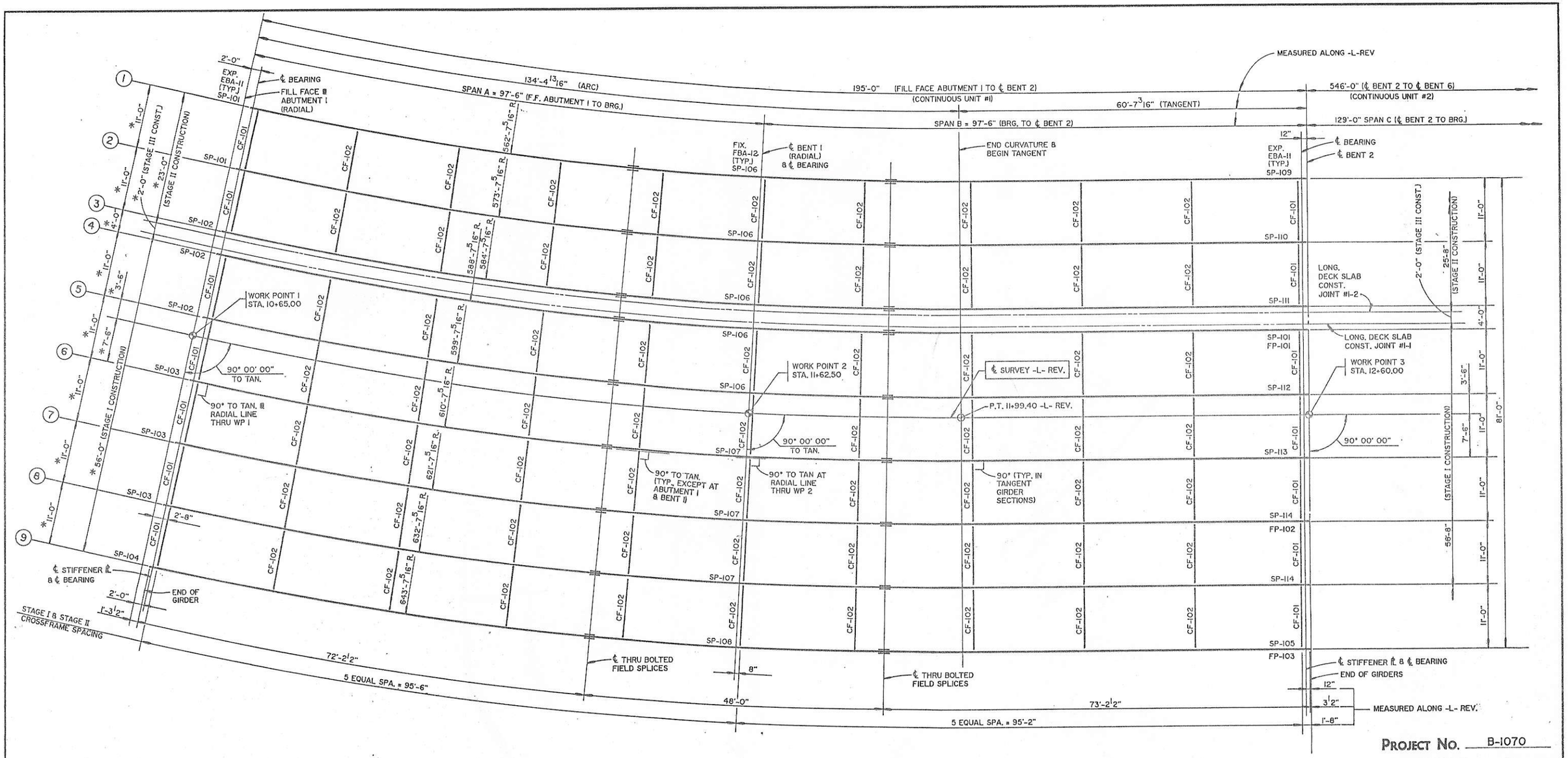
U1.001

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
CONTROL PLAN
CONTINUOUS UNIT #1
OCT. 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-23
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. M. WILSON / RTJ DATE OCT. 94
CHECKED BY CGM DATE 6/95



PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-Rev.

* RADIAL DIMENSIONS, MEASURED THRU THE WORK POINTS FROM P.O.C. 10+65.00-L-REV TO P.T. 11+99.40-L-REV.

DIMENSIONS FROM P.T. 11+99.40-L-REV TO P.O.T. 12+60.00-L-REV ARE MEASURED ALONG TANGENT PORTION OF THE FIRST CONTINUOUS UNIT.

FRAMING PLAN FOR SPANS A & B
(CONTINUOUS UNIT # 1)

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH KLETTER
4/12/96

U1-010

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

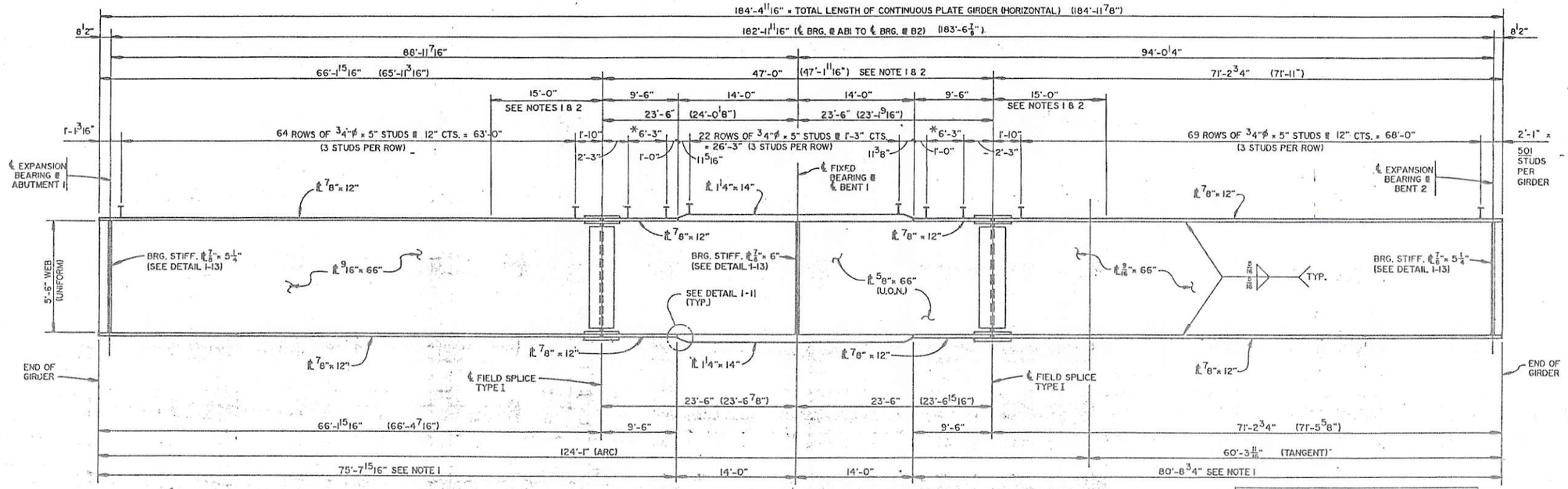
FRAMING PLAN
CONTINUOUS UNIT #1
OCT. 1994

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

SHEET NO. S-24
TOTAL SHEETS 224

DRAWN BY N. M. WILSON DATE OCT. 94
CHECKED BY CCM DATE 4/96

SOUTHERN PHOTO - GREENSBORO



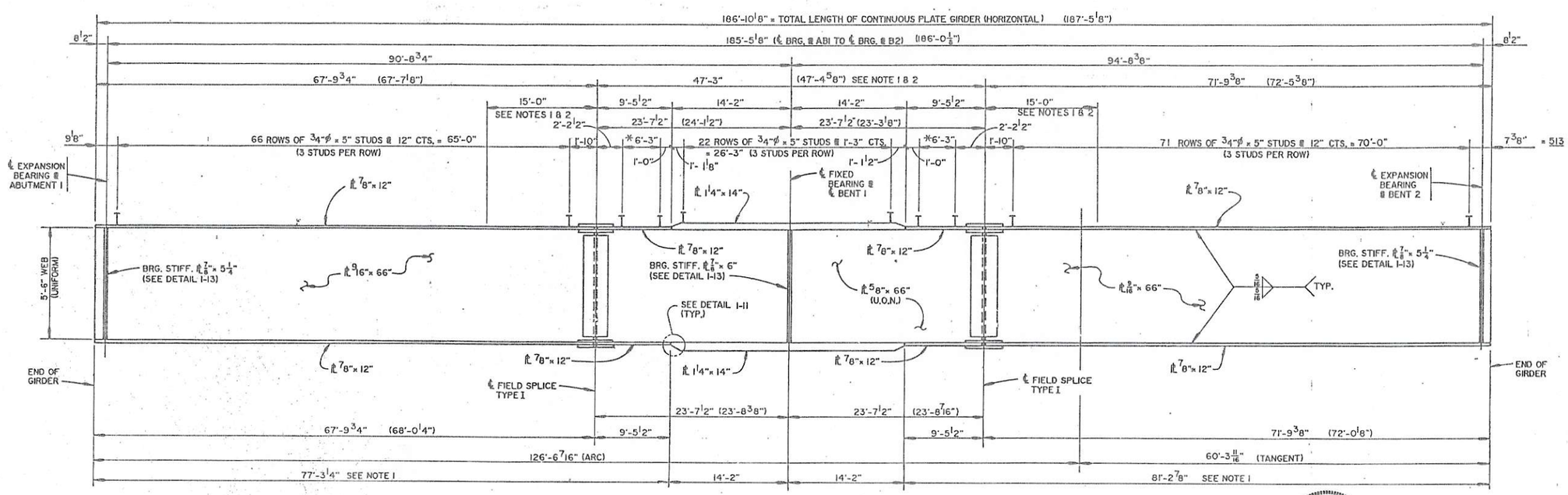
GIRDER NO. 1 ELEVATION

* 6 ROWS OF 3/4"-ϕ x 5" STUDS @ 1'-3" CTS. = 6'-3" (3 STUDS PER ROW)

NOTES :

1. CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.
   IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.
2. NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.
3. ALL DIMENSIONS SHOWN IN PARENTHESIS ARE SLOPED ALONG THE GRADE LINE.

NOTE : ALL SHEAR STUD SPACINGS SHOWN ON THIS SHEET ARE BASED ON THE SLOPED DISTANCE ALONG THE TOP FLANGE OF EACH GIRDER SECTION.



GIRDER NO. 2 ELEVATION

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 1 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER ELEVATION FOR GIRDERS NO. 1 AND NO. 2 CONTINUOUS UNIT #1

DECEMBER 1992

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

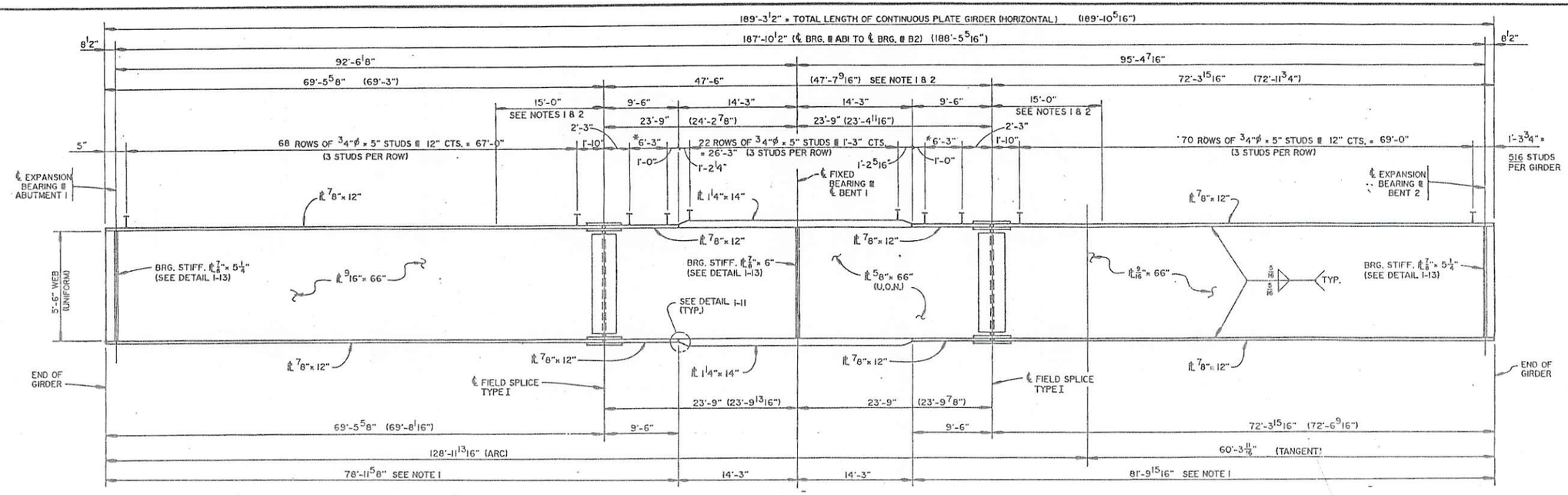
01.011

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-25
TOTAL SHEETS 224

DRAWN BY RJL DATE 12/92
CHECKED BY CCM DATE 01/96



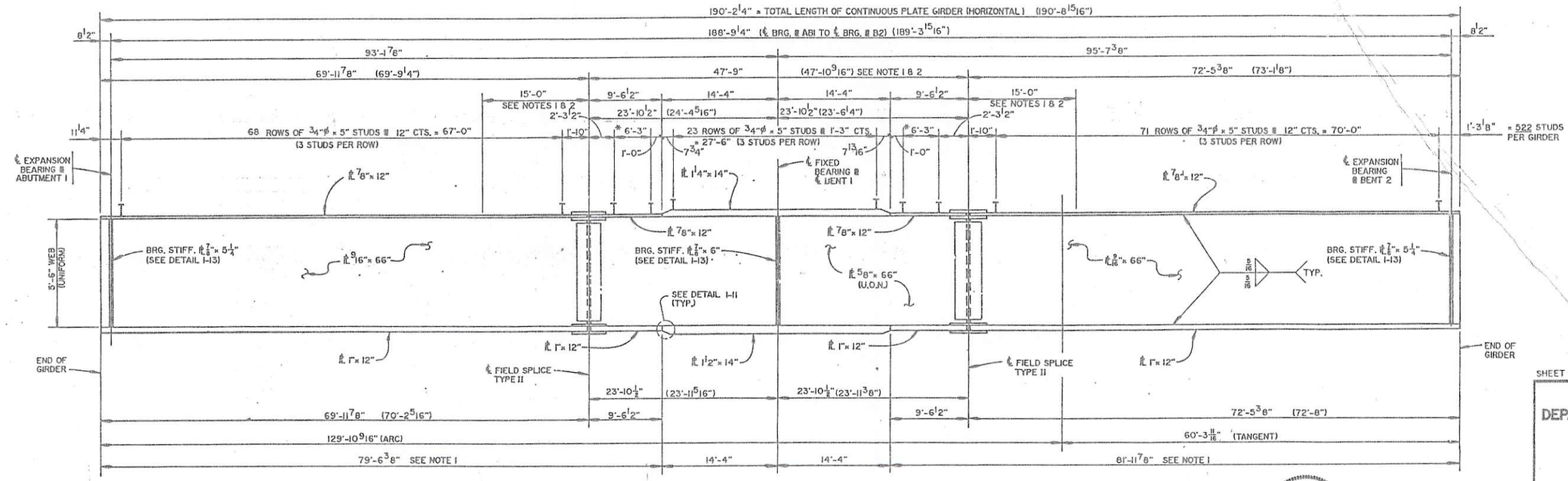
GIRDER NO. 3 ELEVATION

* 6 ROWS OF 3/4"ø x 5" STUDS @ 1'-3" CTS. = 6'-3" (3 STUDS PER ROW)

NOTES :

1. CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.
   IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.
2. NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.
3. ALL DIMENSIONS SHOWN IN PARENTHESIS ARE SLOPED ALONG THE GRADE LINE.

NOTE : ALL SHEAR STUD SPACINGS SHOWN ON THIS SHEET ARE BASED ON THE SLOPED DISTANCE ALONG THE TOP FLANGE OF EACH GIRDER SECTION.



GIRDER NO. 4 ELEVATION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 2 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER ELEVATION FOR GIRDERS NO. 3 AND NO. 4 CONTINUOUS UNIT #1
DECEMBER 1992

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

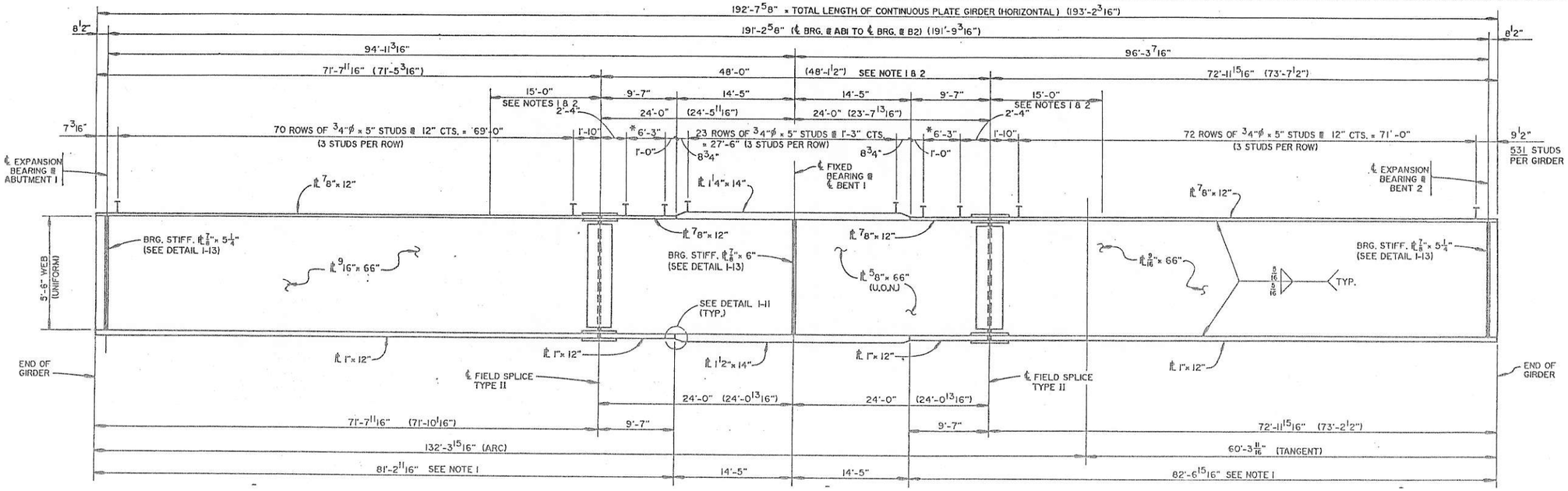
SHEET NO. S-26
TOTAL SHEETS 224

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER 4/12/96

01.012

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

DRAWN BY RJJ DATE 12/92
CHECKED BY CCM DATE 6/95



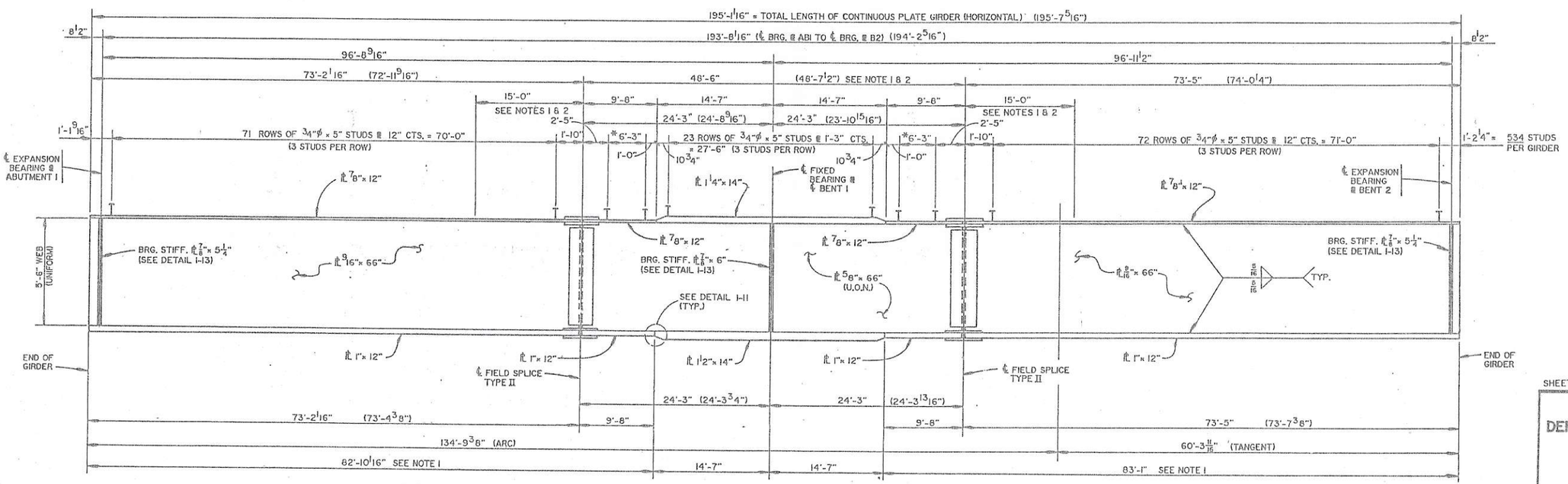
GIRDER NO. 5 ELEVATION

* 6 ROWS OF 3/4"ϕ x 5" STUDS @ 1'-3" CTS. = 6'-3" (3 STUDS PER ROW)

NOTES :

1. CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.
   IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.
2. NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.
3. ALL DIMENSIONS SHOWN IN PARENTHESIS ARE SLOPED ALONG THE GRADE LINE.

NOTE : ALL SHEAR STUD SPACINGS SHOWN ON THIS SHEET ARE BASED ON THE SLOPED DISTANCE ALONG THE TOP FLANGE OF EACH GIRDER SECTION.



GIRDER NO. 6 ELEVATION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 3 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER ELEVATION FOR GIRDERS NO. 5 AND NO. 6 CONTINUOUS UNIT #1

DECEMBER 1992

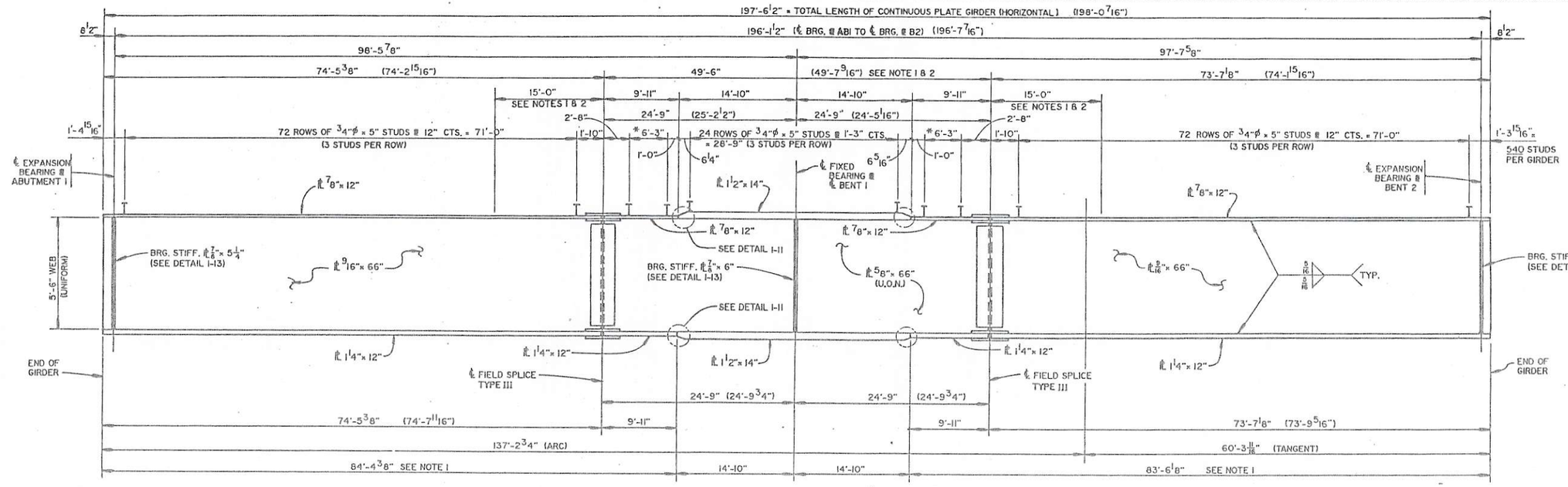
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER RICHARD GARTH TURCOTTE
4-12-96

U1.013

PREPARED BY
THOMPSON - GORDON - MINOR ENGINEERS, INCORPORATED

REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	SHEET NO. S-27
1			3			TOTAL SHEETS 224
2			4			

DRAWN BY RTI DATE 12/95
CHECKED BY CCM DATE 6/95



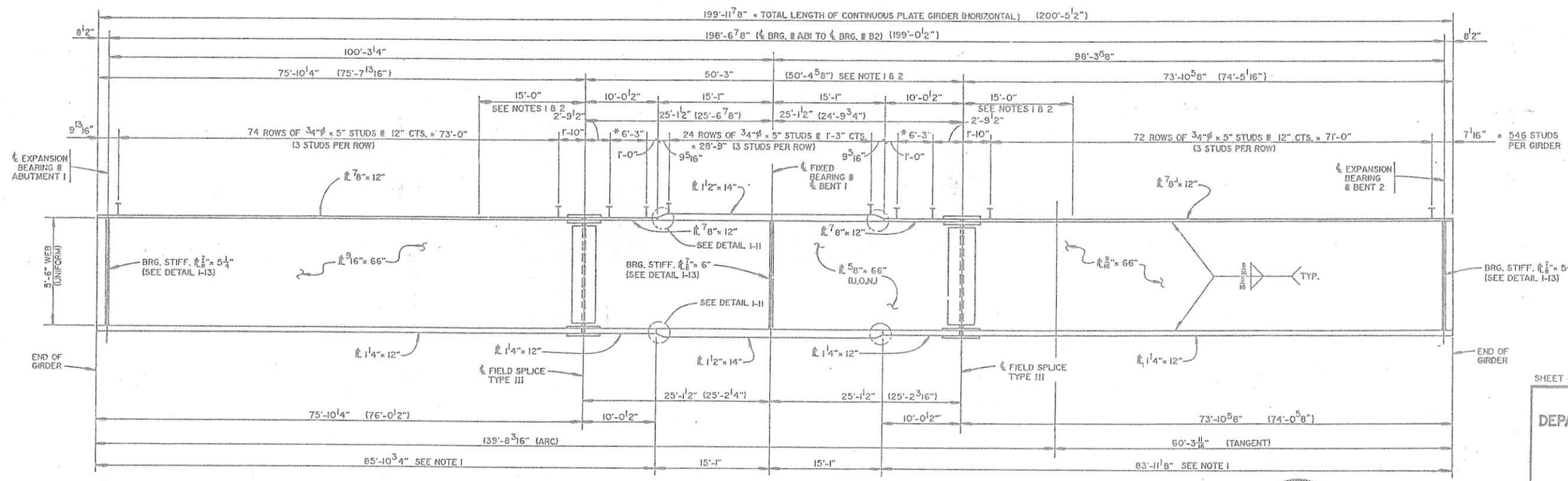
GIRDER NO. 7 ELEVATION

* 6 ROWS OF 3/4"ø x 5" STUDS @ 1'-3" CTS. = 6'-3" (3 STUDS PER ROW)

NOTES :

1. CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.
   IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.
2. NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.
3. ALL DIMENSIONS SHOWN IN PARENTHESIS ARE SLOPED ALONG THE GRADE LINE.

NOTE : ALL SHEAR STUD SPACINGS SHOWN ON THIS SHEET ARE BASED ON THE SLOPED DISTANCE ALONG THE TOP FLANGE OF EACH GIRDER SECTION.



GIRDER NO. 8 ELEVATION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 4 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER ELEVATION FOR GIRDERS NO. 7 AND NO. 8 CONTINUOUS UNIT #1
DECEMBER 1992

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD EARTH FLETCHER
4/12/96

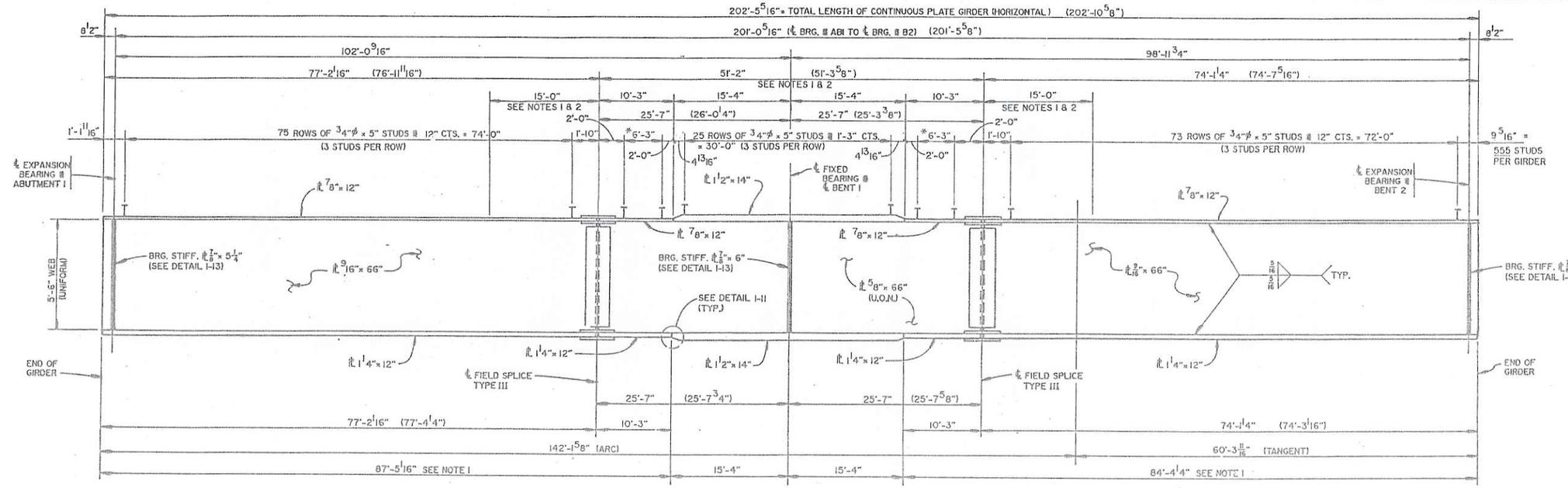
U1.014

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-28
TOTAL SHEETS 224

DRAWN BY RTL DATE 12/92
CHECKED BY CCM DATE 2/96



* 6 ROWS OF 3/4"ø x 5" STUDS @ 1'-3" CTS. = 6'-3" (3 STUDS PER ROW)

GIRDER NO. 9 ELEVATION

NOTES :

1. CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.
   IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.
2. NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.
3. ALL DIMENSIONS SHOWN IN PARENTHESIS ARE SLOPED ALONG THE GRADE LINE.

NOTE : ALL SHEAR STUD SPACINGS SHOWN ON THIS SHEET ARE BASED ON THE SLOPED DISTANCE ALONG THE TOP FLANGE OF EACH GIRDER SECTION.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 5 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER ELEVATION FOR
GIRDER NO. 9
CONTINUOUS UNIT #1
DECEMBER 1992

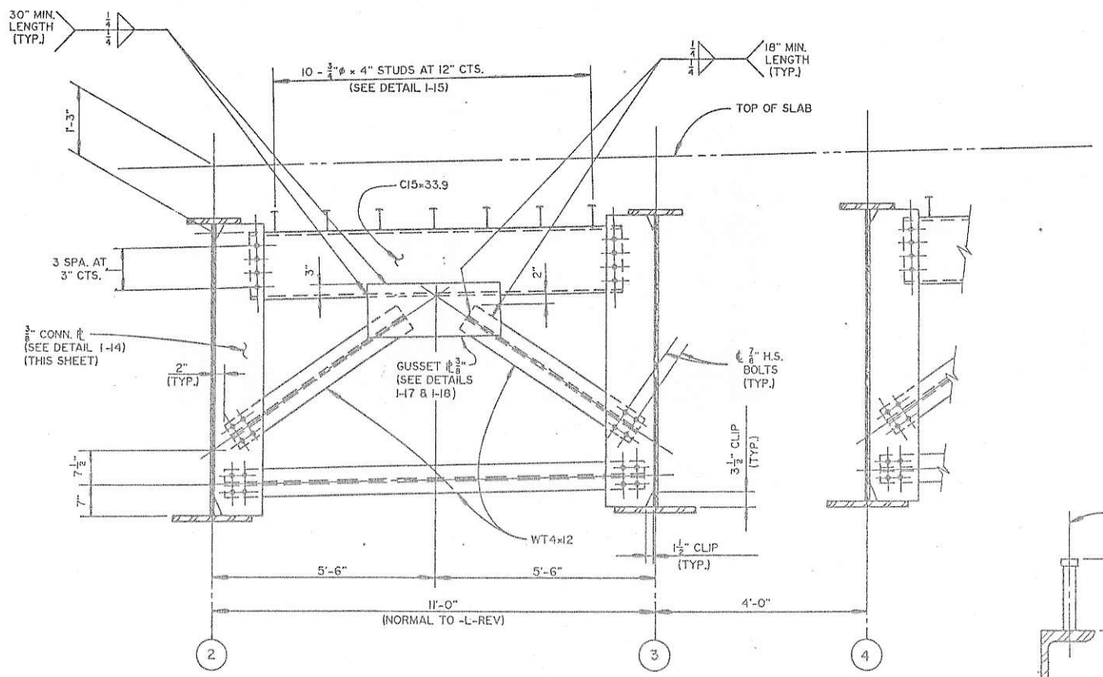
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
6/12/96

U1.015

PREPARED BY
THOMPSON-SORGON-SHOOB ENGINEERS, INCORPORATED

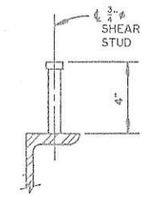
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-29
1			3			TOTAL SHEETS
2			4			224

DRAWN BY: BCL DATE: 12/92
CHECKED BY: CSM DATE: 6/95

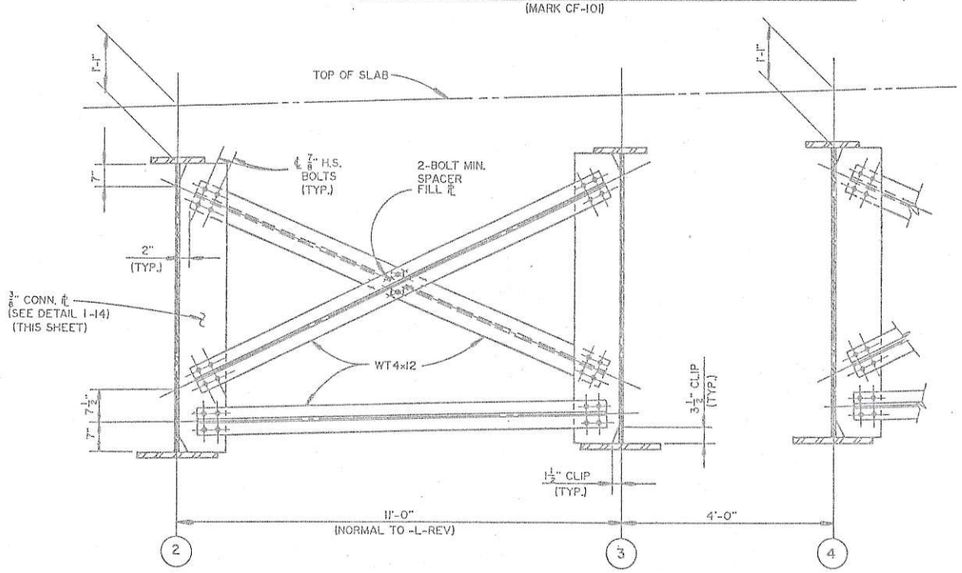


ABUTMENT 1 & BENT 2 CROSSFRAME

(MARK CF-101)

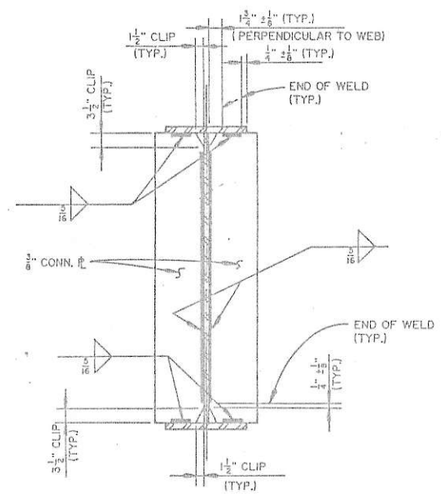


DETAIL 1-15

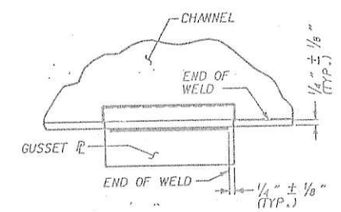


INTERMEDIATE CROSSFRAME

(MARK CF-102)

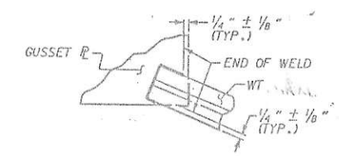


DETAIL 1-14



WELD TERMINATION DETAIL
FOR GUSSET PLATE CONNECTION

DETAIL 1-17



WELD TERMINATION DETAIL
FOR GUSSET PLATE/WT CONNECTION

DETAIL 1-18

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH PLETCHER

4/12/96

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

CROSSFRAME DETAILS
CONTINUOUS UNIT #1

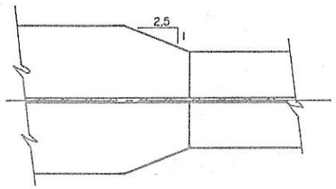
SEPT. 1994

REVISIONS								SHEET NO.
NO.	BY	DATE	NO.	BY	DATE			5-30
1			3					TOTAL SHEETS
2			4					224

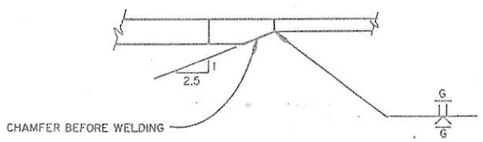
U1.016

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

DRAWN BY EH DATE 9-94
CHECKED BY LCM DATE 6/95

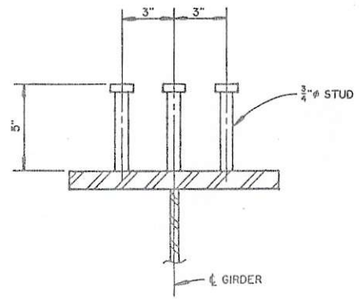


PLAN OF FLANGE

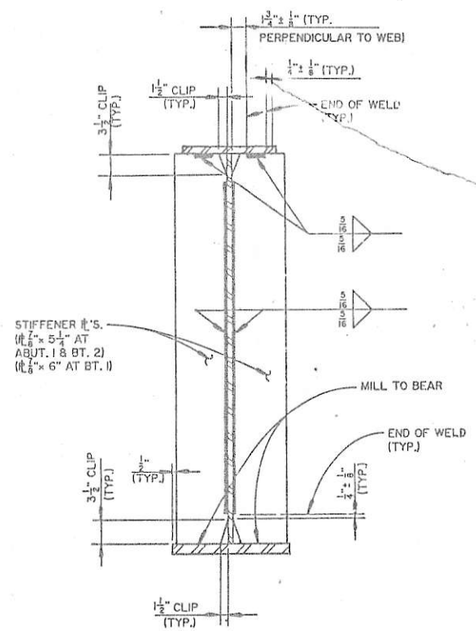


ELEVATION OF BOTTOM FLANGE
(TOP FLANGE SIMILAR)

DETAIL 1-11

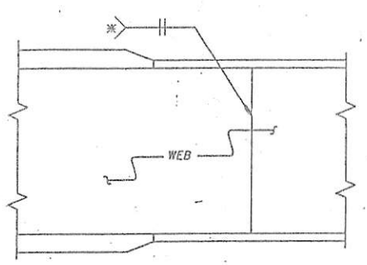


DETAIL 1-12



DETAIL 1-13
BEARING STIFFENER
(NORMAL TO WEB - TYP. ALL GIRDERS)

* GRIND SMOOTH AND FLUSH ON OUTER FACE OF EXTERIOR GIRDERS



ELEVATION
TYPICAL WEB BUTT JOINT

DETAIL 1-16

STRUCTURAL STEEL NOTES - CONTINUOUS UNIT NO. 1

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50W AND PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, UNLESS OTHERWISE NOTED ON THE PLANS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL OR VERTICAL UNLESS OTHERWISE NOTED.

CAMBERED GIRDER LENGTHS SHALL BE ADJUSTED AND BEARINGS ARE TO BE PLACED ON THE CAMBERED GIRDER SO AS TO BE ALIGNED WITH THE ANCHORS AFTER DEAD LOAD DEFLECTION HAS OCCURRED. SHOP PLANS SHALL BE PREPARED ACCORDINGLY.

FOR POT BEARINGS, SEE SPECIAL PROVISIONS.

AT ALL POINTS OF SUPPORT IN SPANS A & B, NUTS FOR ANCHOR BOLTS SHALL BE TIGHTENED FINGER TIGHT AND GIVEN AN ADDITIONAL 1/4 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP TOOL.

SHEAR STUDS ON GIRDERS MAY BE SHIFTED UP TO 1" IF NECESSARY TO CLEAR FLANGE SPLICE WELDS.

ALL FIELD CONNECTIONS TO BE 7/8" DIA. HIGH STRENGTH BOLTS UNLESS OTHERWISE NOTED. SEE ALSO BOLTED FIELD SPLICE DETAILS.

SHOP SPLICES ARE PERMITTED TO LIMIT THE MAXIMUM REQUIRED TOP FLANGE PIECE LENGTHS TO 60 FEET AND WEB PIECE LENGTHS TO 45 FEET. PERMITTED FLANGE AND WEB SHOP SPLICES SHALL NOT BE LOCATED WITHIN 15 FEET OF MAXIMUM DEAD LOAD DEFLECTION OR WITHIN 15 FEET OF INTERMEDIATE BEARINGS OF CONTINUOUS UNITS. KEEP 2 FEET MINIMUM BETWEEN WEB AND FLANGE SHOP SPLICES. NO SHOP SPLICES WILL BE PERMITTED IN THE BOTTOM FLANGE PLATES.

METAL STAY-IN-PLACE FORMS SHALL NOT BE WELDED TO GIRDER FLANGES IN THE ZONES REQUIRING CHARPY V-NOTCH TEST. SEE STRUCTURAL STEEL DETAIL SHEETS.

END OF GIRDERS SHALL BE PLUMB.

WHEN WELDING THE SOLE PLATE TO THE GIRDER, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE BEARING DOES NOT EXCEED 250° F. TEMPERATURES ABOVE THIS MAY DAMAGE THE TFE OR ELASTOMER.

BEARING STIFFENERS ARE TO BE PLACED NORMAL TO THE WEB OF THE GIRDER AND SHALL BE PLUMB.

IN LIEU OF THE TURN OF THE NUT METHOD, TENSION ON A325 BOLTS MAY BE CALIBRATED USING DIRECT TENSION INDICATOR WASHERS. FOR DIRECT TENSION INDICATORS, SEE SPECIAL PROVISIONS.

FOR RADIOGRAPHIC TESTING OF BUTT WELDS, SEE SPECIAL PROVISIONS.

FOR SURFACE PREPARATION OF UNPAINTED STRUCTURAL STEEL, SEE SPECIAL PROVISIONS.

PROJECT [illegible]-1070
BUNC[illegible] CO[illegible]
STATION: P.O.T. [illegible]00-L-REV

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LAWRENCE GARTH FLETCHER
4/12/96

U1.017

PREPARED BY
THOMPSON - GORDON - SHOOK
ENGINEERS, INCORPORATED

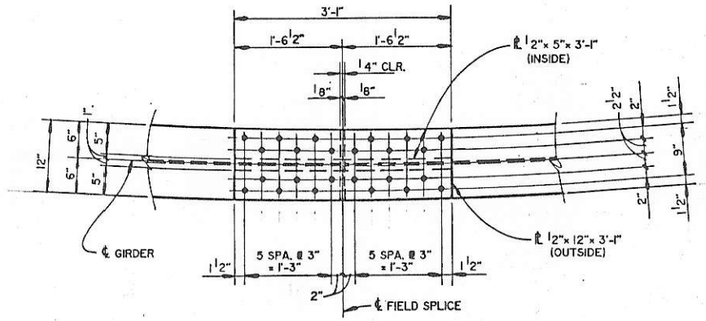
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
DETAILS
CONTINUOUS UNIT # 1

AUGUST 1994

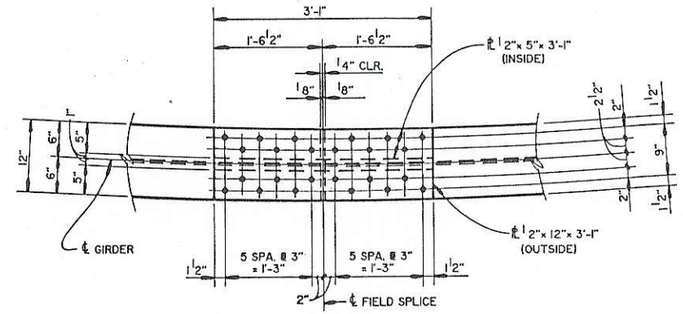
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-31
1			3			TOTAL SHEETS
2			4			224

DRAWN BY PTJ DATE 8-94
CHECKED BY CGM DATE 6/95

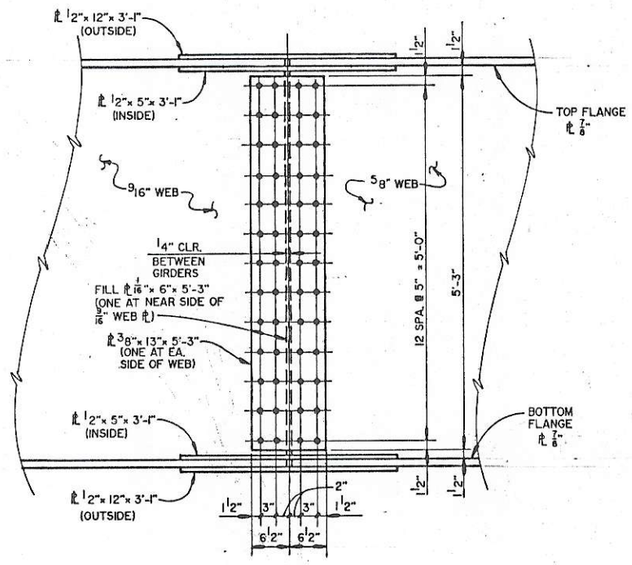
DGN SS1001 - INCH - SOUTHERN



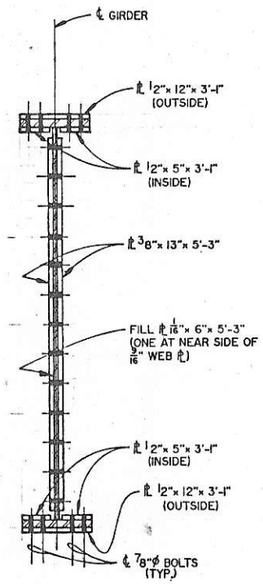
PLAN OF TOP FLANGE



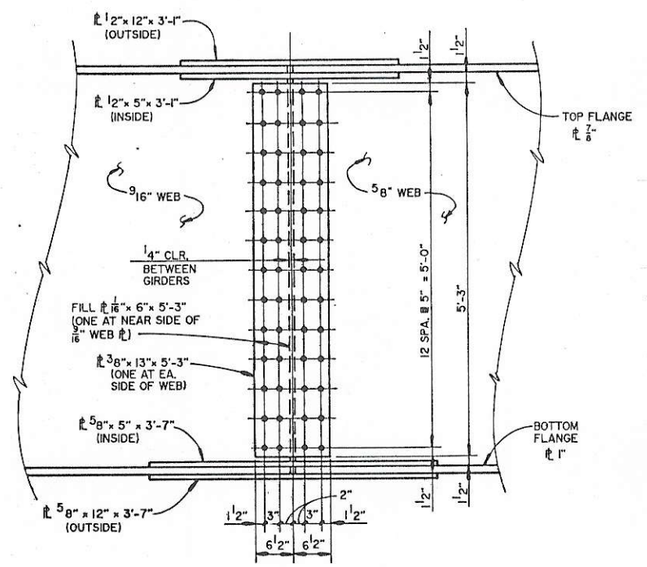
PLAN OF TOP FLANGE



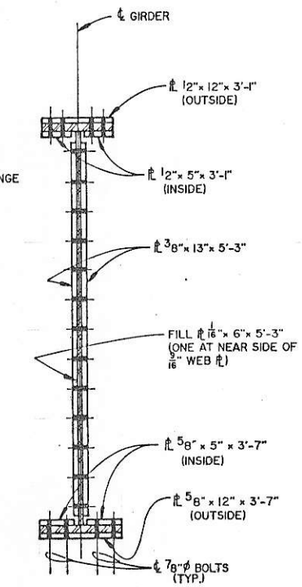
ELEVATION



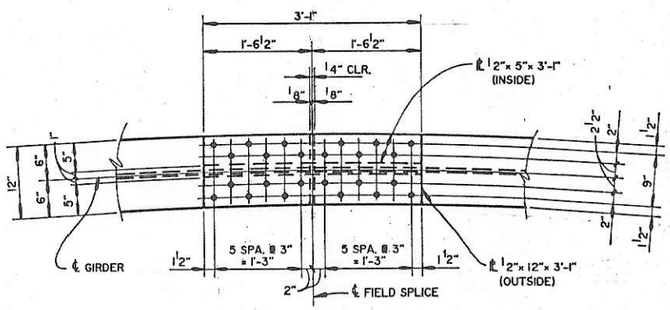
SECTION THRU SPLICE



ELEVATION



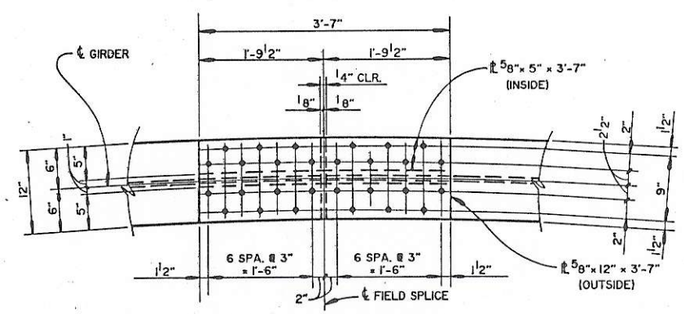
SECTION THRU SPLICE



PLAN OF BOTTOM FLANGE

FIELD SPLICE - TYPE I

(100 - 7/8" H.S. BOLTS REQ'D. THIS SPLICE)



PLAN OF BOTTOM FLANGE

FIELD SPLICE - TYPE II

(104 - 7/8" H.S. BOLTS REQ'D. THIS SPLICE)

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER

4/12/96

01.018

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

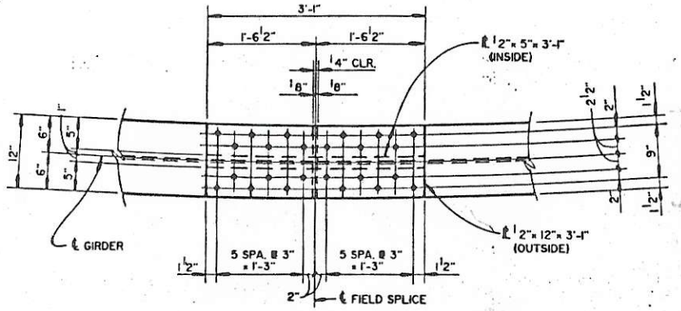
SUPERSTRUCTURE
STRUCTURAL STEEL

SPLICE DETAILS
CONTINUOUS UNIT #1

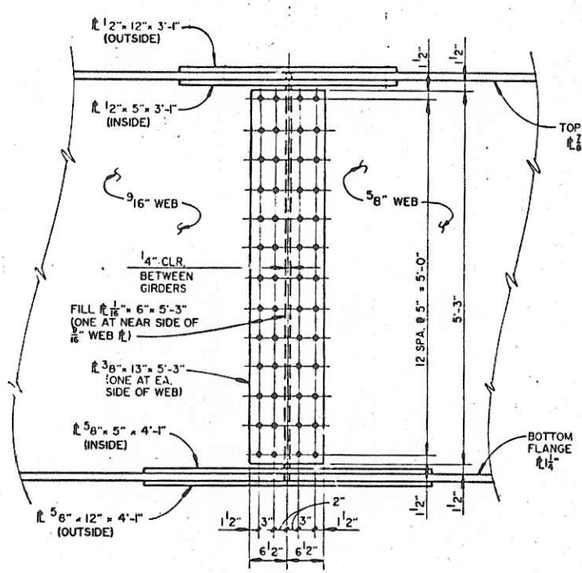
DECEMBER 1992

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-32
1			3			TOTAL SHEETS
2			4			224

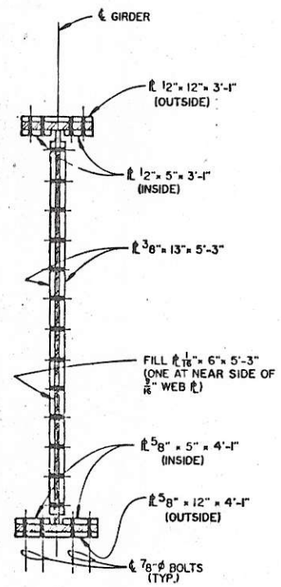
DRAWN BY RTI DATE 12/92
CHECKED BY CCM DATE 6/95



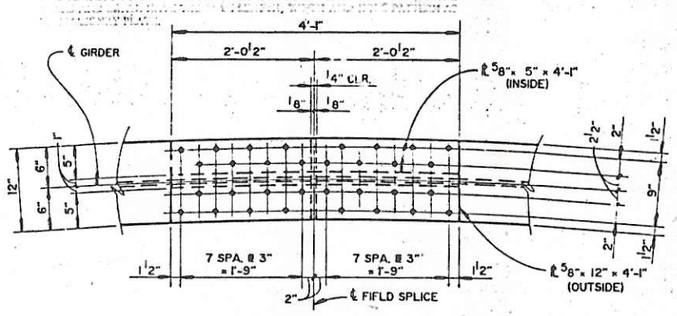
PLAN OF TOP FLANGE



ELEVATION



SECTION THRU SPLICE



PLAN OF BOTTOM FLANGE

FIELD SPLICE - TYPE III

(108 - 7/8" H.S. BOLTS REQ'D. THIS SPLICE)

DRAWN BY	RTL	DATE	11/92
CHECKED BY	CCM	DATE	6/95

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER

4/12/96

U1.019

PREPARED BY
THOMPSON - BORDON - SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

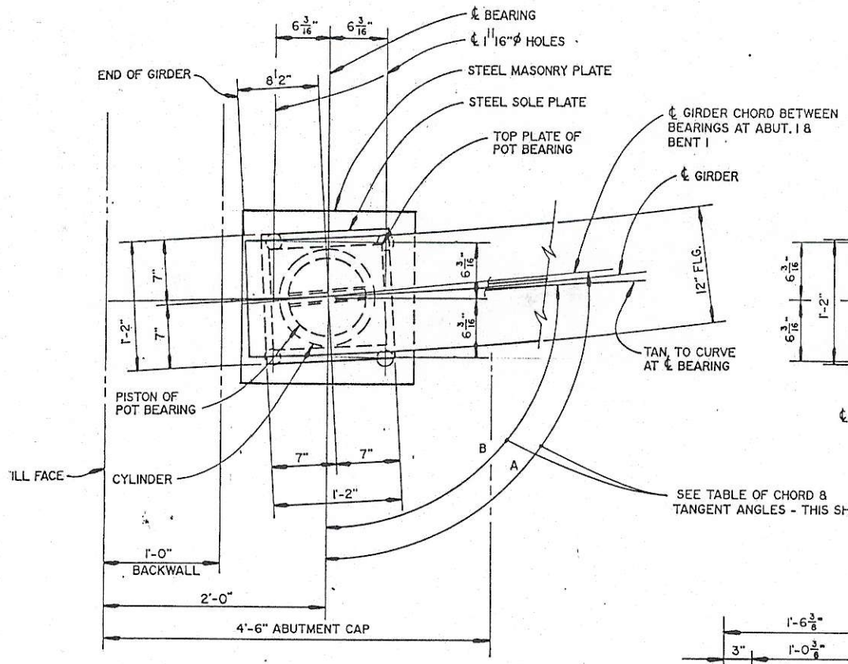
RALEIGH

SUPERSTRUCTURE
STRUCTURAL STEEL

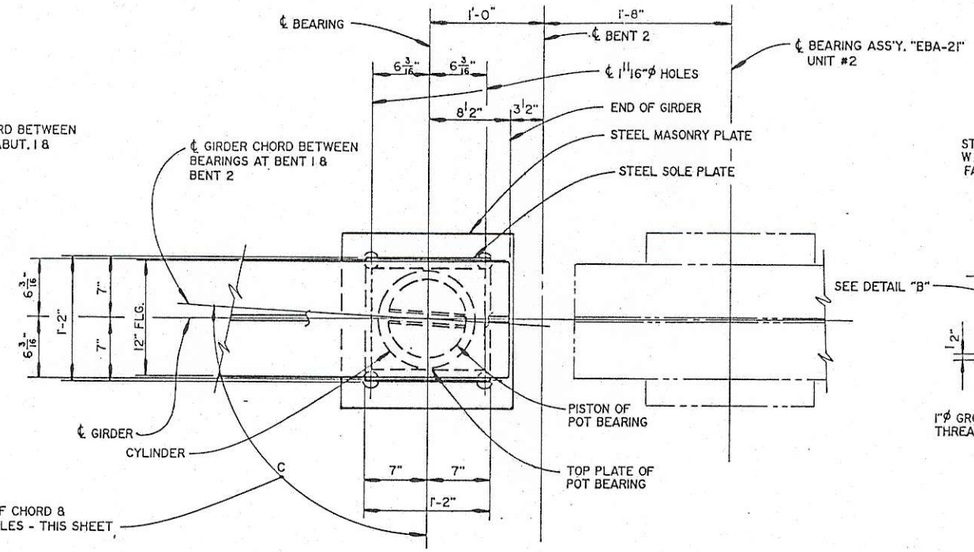
SPLICE DETAILS
CONTINUOUS UNIT #1

DECEMBER 1992

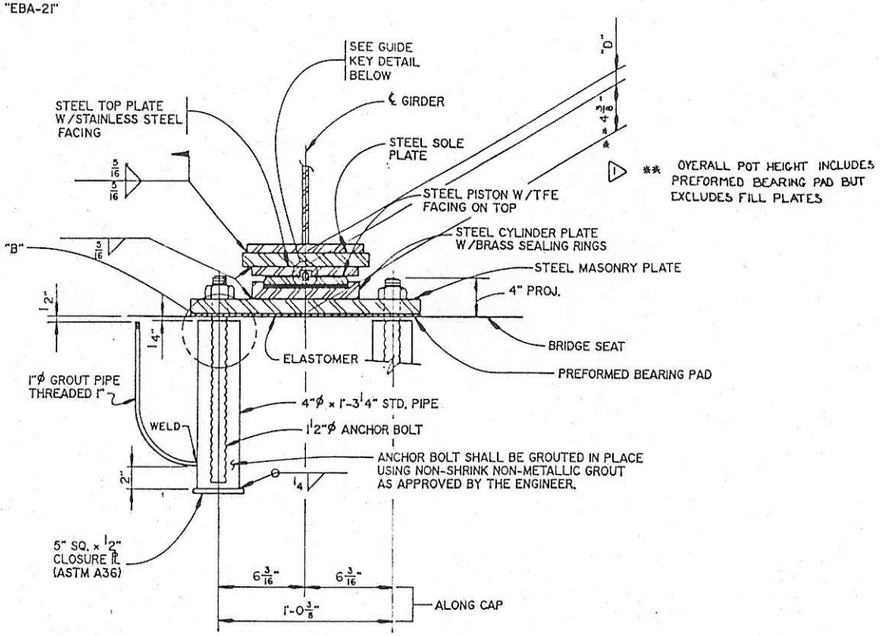
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-33
1			3			TOTAL SHEETS
2			4			224



PLAN - "EBA-II" AT ABUTMENT 1



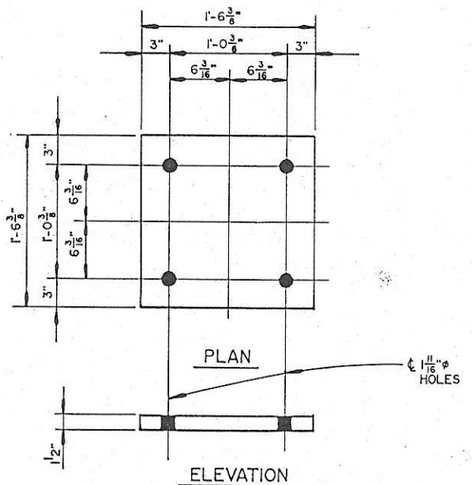
PLAN - "EBA-II" AT BENT 2



SECTION THRU EXPANSION BEARING ASSEMBLY

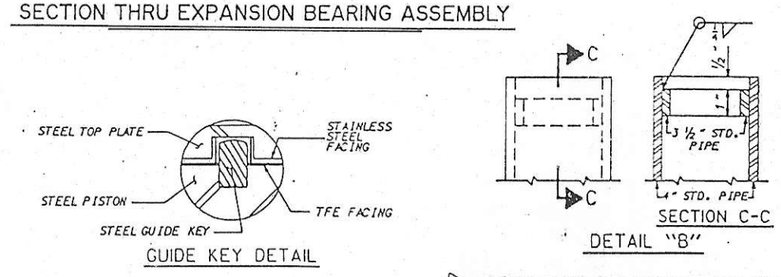
TABLE FOR FILL PLATES			
MARK	LOCATION	THICKNESS	NO. REQ'D.
FP-101	GDR. 4, BT. 2 (NS)	7/8"	1
FP-102	GDR. 7, BT. 2 (NS)	7/16"	1
FP-103	GDR. 9, BT. 2 (NS)	3/4"	1

* AT THE CONTRACTOR'S OPTION, HE MAY COMBINE FILL PLATES, FP-101, ETC., WITH THE MASONRY PLATE AT THE LOCATION SHOWN ON THE FRAMING PLAN. FILL PLATES NOT COMBINED SHALL HAVE THE THICKNESS AS SHOWN ON THE PLANS AND SHALL HAVE THE SAME LENGTH, WIDTH AND HOLE PATTERN AS THE MASONRY PLATE.

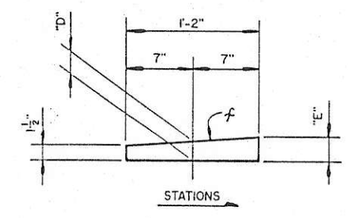


MASONRY PLATE - EBA-II

CHORD & TANGENT ANGLES			
GIRDER	AT ABUTMENT 1		AT BENT 2
	A (CHORD)	B (TANGENT)	C (CHORD)
1	94°43'59"	90°12'13"	90°38'32"
2	94°43'52"	90°11'59"	90°38'58"
3	94°43'45"	90°11'46"	90°39'26"
4	94°43'43"	90°11'41"	90°39'36"
5	94°43'36"	90°11'28"	90°40'04"
6	94°43'30"	90°11'16"	90°40'31"
7	94°43'24"	90°11'04"	90°40'58"
8	94°43'19"	90°10'52"	90°41'24"
9	94°43'13"	90°10'41"	90°41'50"



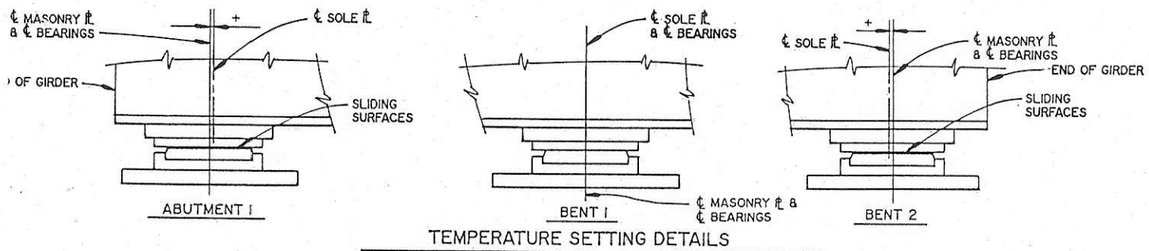
FOR ADDITIONAL POT BEARING DETAILS, SEE APPROVED SHOP DRAWINGS.



ELEVATION OF BEVELED SOLE PLATE

MARK SP-101 THRU SP-105 & SP-109 THRU SP-114

SOLE PLATE TABLE		
MARK	"D"	"E"
SP-101	2 1/16"	2 5/8"
SP-102	2 1/32"	2 9/16"
SP-103	2"	2 1/2"
SP-104	1 31/32"	2 7/16"
SP-105	1 15/16"	2 3/8"
SP-109	2 1/16"	2 5/8"
SP-110	2 1/16"	2 5/8"
SP-111	2 1/16"	2 5/8"
SP-112	2 1/16"	2 5/8"
SP-113	2"	2 1/2"
SP-114	2"	2 1/2"



TEMPERATURE SETTING DETAILS

TABLE FOR PLATE SETTING DATA (EXPANSION POT BEARINGS)				
TEMPERATURE AT TIME OF SETTING	30°F	60°F	90°F	*
EBA-II	- 1/4"	0	+ 1/4"	1/8"

* CORRECTION FOR END ROTATION DUE TO WEIGHT OF SLAB AND COMPOSITE DEAD LOAD.

REVISED SOLE PLATE THICKNESSES, OVERALL POT HEIGHTS, AND ADDED REFERRAL TO APPROVED SHOP DRAWINGS. ✓BY: CEP

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

BEARING DETAILS FOR CONTINUOUS UNIT #1

JANUARY 1993

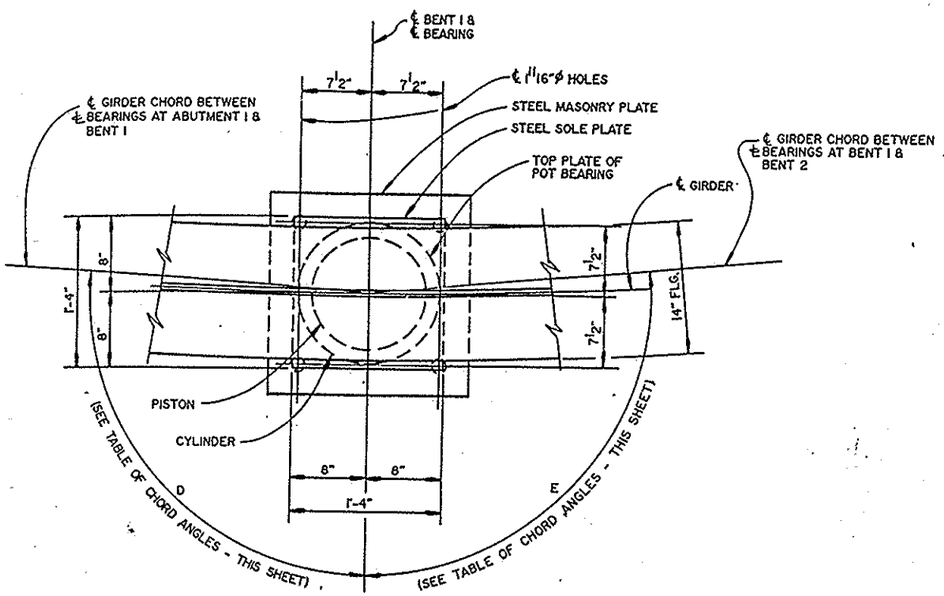
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

01.020

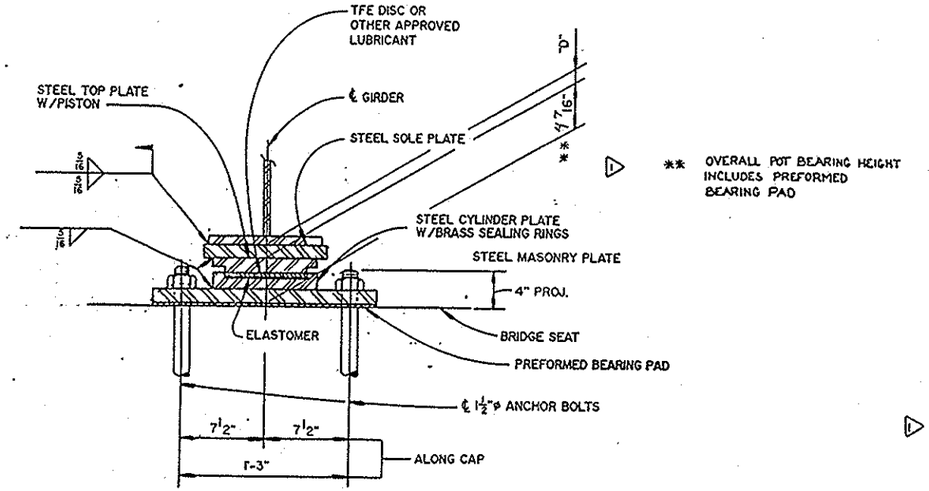
PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	SHEET NO. S-34
1	PGR	3/7/97	3			TOTAL SHEETS 224
2			4			

BY: RTJ DATE: 1-23
BY: CCM DATE: 6/96



PLAN - "FBA-12" AT BENT 1



** OVERALL POT BEARING HEIGHT INCLUDES PREFORMED BEARING PAD

SECTION THRU FIXED BEARING ASSEMBLY

NOTES:

FOR POT BEARINGS, SEE SPECIAL PROVISIONS.

FOR THERMAL SPRAYED COATINGS (METALIZATION), SEE SPECIAL PROVISIONS.

AT ALL POINTS OF SUPPORTS IN THE CONTINUOUS UNIT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT ON THE MASONRY PLATE AND GIVEN AN ADDITIONAL 1/4 TURN, THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

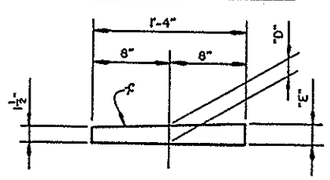
SOLE PLATES SHOULD BE WELDED TO GIRDER FLANGES AND ANCHOR BOLTS SHOULD BE GROUTED BEFORE FALSEWORK IS PLACED.

WHEN WELDING THE SOLE PLATE TO THE GIRDER, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE BEARING DOES NOT EXCEED 250°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE TFE OR ELASTOMER.

ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

THE CLOSURE PLATE AND THE STANDARD PIPE FOR THESE EXPANSION ASSEMBLIES SHALL NOT BE GALVANIZED.

1 FOR ADDITIONAL POT BEARING DETAILS, SEE APPROVED SHOP DRAWINGS.

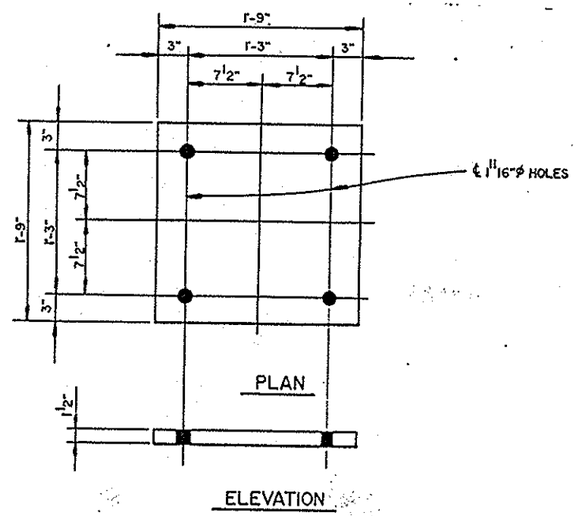


ELEVATION OF BEVELED SOLE PLATE

MARK SP-106 THRU SP-108

SOLE PLATE TABLE		
MARK	"D"	"E"
SP-106	2 1/8"	2 3/4"
SP-107	2 1/16"	2 3/8"
SP-108	2"	2 1/2"

1



PLAN

ELEVATION

MASONRY PLATE - FBA-12

TABLE OF CHORD ANGLES		
GIRDER	AT BENT 1	
	D	E
1	94°31'46"	92°51'48"
2	94°31'53"	92°51'22"
3	94°32'00"	92°50'54"
4	94°32'02"	92°50'43"
5	94°32'09"	92°50'16"
6	94°32'15"	92°49'49"
7	94°32'21"	92°49'22"
8	94°32'26"	92°48'56"
9	94°32'32"	92°48'30"

TABLE FOR LOADS AND MOVEMENTS						
BEARING	LOCATION	VERTICAL LOAD (K)			LATERAL LOAD (K)	TOTAL MOVEMENT (INCHES)
		DEAD	LIVE	TOTAL		
EBA-11	ABUTMENT 1	90	60	150	15	2"
FBA-12	BENT 1	250	100	350	35	0"
EBA-11	BENT 2	90	60	150	15	2"

1 REVISED SOLE THICKNESS, OVERALL POT HEIGHT, AND ADDED REFERRAL TO APPROVED SHOP DRAWINGS. ✓ BY: CEP

RJ DATE 1-23
CCM DATE 6/95

NORTH CAROLINA PROFESSIONAL SEAL 12779 ENGINEER LESTER GARTH FLETCHER
4/12/96

U1.021

PREPARED BY THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 2 OF 2

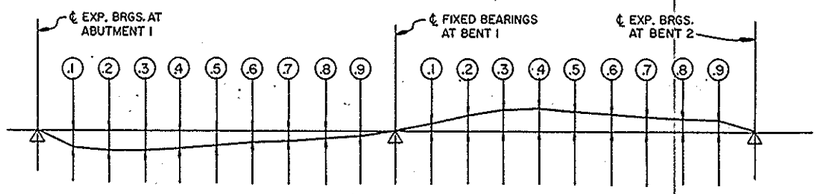
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
BEARING DETAILS FOR CONTINUOUS UNIT #1
JANUARY 1993.

REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1	RRR	3/7/97	3			
2			4			

SHEET NO. 5.35
TOTAL SHEETS 224

GIRDER 1

	SPAN A (℄ EXPANSION BEARINGS AT ABUTMENT 1)									SPAN B (℄ FIXED BEARINGS AT BENT 1; ℄ EXPANSION BEARINGS AT BENT 2)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.003	.006	.007	.008	.007	.006	.004	.002	0	.001	.004	.007	.010	.011	.012	.011	.008	.004
DEFLECTION DUE TO WEIGHT OF SLAB	.017	.031	.041	.044	.041	.033	.021	.010	.002	.007	.021	.038	.053	.064	.066	.060	.046	.024
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & SIDEWALK	.002	.004	.005	.005	.005	.004	.003	.001	0	.002	.004	.005	.005	.005	.004	.003	.001	0
TOTAL DEAD LOAD DEFLECTION	.022	.041	.053	.057	.053	.043	.028	.013	.002	.010	.029	.050	.068	.080	.082	.074	.055	.028
VERTICAL CURVE ORDINATE	-.063	-.103	-.122	-.118	-.104	-.089	-.075	-.061	-.046	.061	.120	.180	.224	.186	.149	.111	.074	.037
SUPERELEVATION ORDINATE	-.123	-.114	-.102	-.091	-.075	-.060	-.045	-.029	-.015	.002	.006	.009	.012	.024	.034	.046	.057	.069
CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING (CURVED GIRDERS) 2 1	.008	.015	.019	.021	.019	.015	.010	.005	.001	.001	0	.001	-.031	-.036	-.037	-.034	-.025	-.013
REQUIRED CAMBER 2 1	-2 1/8"	-2 7/16"	-2 7/16"	-2 1/4"	-1 15/16"	-1 5/8"	-1 5/16"	-1"	-3/4"	3/4"	1 1/2"	2 1/4"	2 7/16"	2 1/16"	1 3/4"	1 1/2"	1 1/4"	1 1/8"

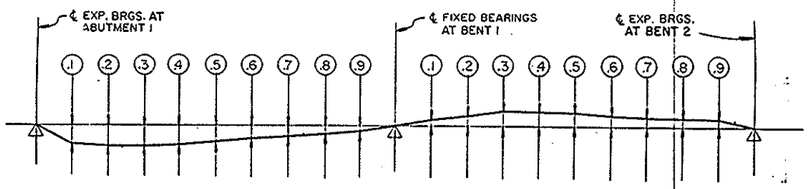


1 SCHEMATIC CAMBER ORDINATES - GIRDER 1

NOTE: SLOPE FOR THE ZERO CAMBER BASE LINE VARIES.

GIRDER 2

	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.003	.006	.008	.009	.008	.007	.004	.002	0	.001	.004	.007	.010	.011	.012	.011	.008	.005
DEFLECTION DUE TO WEIGHT OF SLAB	.024	.044	.057	.062	.058	.047	.031	.015	.003	.009	.027	.049	.068	.082	.085	.078	.059	.032
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & SIDEWALK	.002	.004	.005	.005	.005	.004	.003	.001	0	.001	.002	.004	.006	.007	.007	.007	.005	.003
TOTAL DEAD LOAD DEFLECTION	.029	.055	.070	.076	.071	.058	.038	.018	.003	.011	.033	.060	.084	.100	.104	.096	.072	.040
VERTICAL CURVE ORDINATE	-.062	-.102	-.119	-.115	-.099	-.084	-.069	-.054	-.038	.045	.012	.133	.165	.138	.111	.084	.058	.031
SUPERELEVATION ORDINATE	-.124	-.113	-.102	-.091	-.076	-.060	-.045	-.030	-.016	.001	.081	.006	.009	.021	.032	.043	.053	.065
CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING (CURVED GIRDERS) 2 1	.009	.015	.021	.022	.021	.017	.012	.006	.001	.001	.001	.001	-.039	-.047	-.049	-.045	-.034	-.019
REQUIRED CAMBER 2 1	-2 1/8"	-2 3/8"	-2 3/8"	-2 3/16"	-1 7/8"	-1 1/2"	-1 1/4"	-15/16"	-5/8"	9/16"	1 1/8"	1 11/16"	1 5/8"	1 3/8"	1 1/8"	1"	15/16"	15/16"

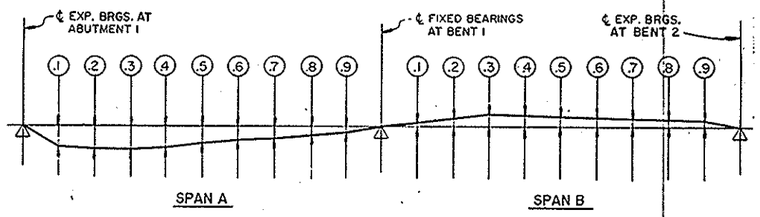


1 SCHEMATIC CAMBER ORDINATES - GIRDER 2

NOTE: SLOPE FOR THE ZERO CAMBER BASE LINE VARIES.

GIRDER 3

	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.004	.007	.009	.010	.009	.007	.005	.002	.001	.001	.004	.007	.010	.012	.012	.011	.008	.005
DEFLECTION DUE TO WEIGHT OF SLAB	.019	.035	.045	.049	.046	.037	.025	.012	.003	.006	.019	.035	.049	.059	.062	.056	.043	.023
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & SIDEWALK	.003	.005	.006	.007	.007	.005	.004	.002	0	.001	.003	.005	.007	.008	.009	.008	.006	.003
TOTAL DEAD LOAD DEFLECTION	.026	.047	.060	.066	.062	.049	.034	.016	.004	.008	.026	.047	.066	.079	.083	.075	.057	.031
VERTICAL CURVE ORDINATE	-.061	-.010	-.117	-.111	-.095	-.079	-.063	-.047	-.031	.028	.056	.084	.104	.087	.071	.054	.037	.021
SUPERELEVATION ORDINATE	-.124	-.205	-.104	-.094	-.079	-.063	-.049	-.034	-.020	.013	.025	.037	.048	.053	.057	.062	.066	.071
CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING (CURVED GIRDERS) 2 1	.010	-.018	.024	.025	.024	.020	.013	.007	.001	.001	.001	.001	-.030	-.034	-.037	-.034	-.026	-.014
REQUIRED CAMBER 2 1	-2 1/8"	-2 3/8"	-2 3/8"	-2 3/16"	-1 13/16"	-1 7/16"	-1 3/16"	-7/8"	-5/8"	1/2"	1"	1 7/16"	1 1/2"	1 1/4"	1 1/16"	1"	15/16"	15/16"



SCHEMATIC CAMBER ORDINATES - GIRDER 3

NOTE: SLOPE FOR THE ZERO CAMBER BASE LINE VARIES.

NOTE:
DEFLECTIONS ARE GIVEN AT TENTH POINTS BETWEEN BEARINGS IN DECIMALS OF A FOOT, EXCEPT FINAL REQUIRED CAMBER WHICH IS GIVEN IN FRACTIONS OF AN INCH.

DEAD LOAD DEFLECTIONS AND REQUIRED CAMBER FOR GIRDERS

2 REVISION NO. 2: REVISED INCORRECT NUMBERS IN REVISION NO. 1.

BY: NMW 2/26/97
CHECKED BY: CCM 2/27/97

1 REVISION NO. 1: REVISED TO CHANGE "CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING" & "REQUIRED CAMBER" FOR GIRDERS 1, 2 & 3; AND TO CHANGE "SCHEMATIC CAMBER ORDINATES - GIRDERS 1 & 2".

BY: NMW 1/30/97
CHECKED BY: CCM 1/30/97

NORTH CAROLINA PROFESSIONAL SEAL 12791 ENGINEER LEONARD GARY FLETCHER 4/12/96

U1.022

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

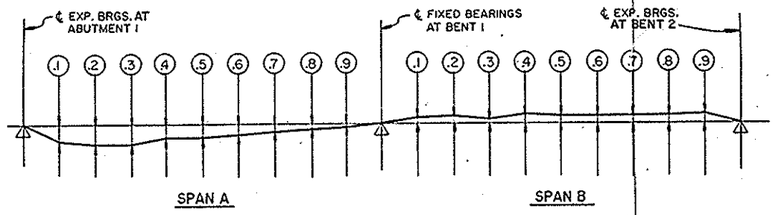
DEAD LOAD DEFLECTIONS
CONTINUOUS UNIT # 1
MAY 1995

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-3b
1	NMW	1/30/97	3			TOTAL SHEETS
2	CCM	2/27/97	4			224

DRAWN BY: RTL DATE: 5-95
CHECKED BY: CCM DATE: 6/95

GIRDER 4

	SPAN A (℄ EXPANSION BEARINGS AT ABUTMENT 1)									SPAN B (℄ FIXED BEARINGS AT BENT 1; ℄ EXPANSION BEARINGS AT BENT 2)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.004	.007	.009	.010	.009	.008	.005	.003	.001	.001	.004	.007	.010	.012	.012	.011	.008	.005
DEFLECTION DUE TO WEIGHT OF SLAB	.020	.036	.047	.051	.048	.039	.027	.013	.003	.006	.018	.033	.047	.057	.059	.054	.042	.023
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & SIDEWALK	.001	.003	.003	.004	.003	.003	.002	.001	0	0	.001	.003	.004	.004	.004	.004	.003	.002
TOTAL DEAD LOAD DEFLECTION	.025	.046	.059	.065	.060	.050	.034	.017	.004	.007	.023	.043	.061	.073	.075	.069	.053	.030
VERTICAL CURVE ORDINATE	-.061	-.099	-.116	-.110	-.094	-.077	-.061	-.044	-.028	.022	.044	.066	.082	.069	.056	.043	.030	.017
SUPERELEVATION ORDINATE	-.123	-.114	-.102	-.091	-.075	-.060	-.045	-.030	-.015	.002	.004	.007	.010	.021	.031	.042	.053	.065
CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING (CURVED GIRDERS) 2 1	.010	.019	.025	.027	.026	.021	.014	.007	.001	.001	.001	.002	-.029	-.035	-.036	-.033	-.025	-.014
REQUIRED CAMBER 2 1	$-2\frac{1}{16}$"	$-2\frac{5}{16}$"	$-2\frac{5}{16}$"	$-2\frac{1}{16}$"	$-1\frac{11}{16}$"	$-1\frac{3}{8}$"	$-1\frac{1}{8}$"	$-\frac{13}{16}$"	$-\frac{1}{2}$"	$\frac{5}{16}$"	$\frac{9}{16}$"	$\frac{3}{16}$"	$\frac{3}{4}$"	$\frac{11}{16}$"	$\frac{5}{8}$"	$\frac{5}{8}$"	$\frac{11}{16}$"	$\frac{13}{16}$"

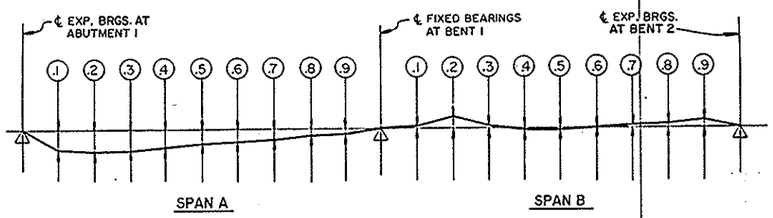


1 SCHEMATIC CAMBER ORDINATES - GIRDER 4

NOTE: SLOPE FOR THE ZERO CAMBER BASE LINE VARIES.

GIRDER 5

	SPAN A									SPAN B								
	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.004	.007	.010	.011	.010	.008	.006	.003	.001	.001	.004	.007	.009	.011	.012	.011	.008	.004
DEFLECTION DUE TO WEIGHT OF SLAB	.028	.052	.068	.074	.070	.057	.039	.020	.005	.008	.024	.046	.066	.079	.083	.076	.058	.005
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & SIDEWALK	.001	.002	.003	.003	.003	.003	.002	.001	0	.001	.002	.003	.003	.003	.003	.002	.001	0
TOTAL DEAD LOAD DEFLECTION	.033	.061	.081	.088	.083	.068	.047	.024	.006	.010	.030	.056	.078	.093	.098	.089	.067	.009
VERTICAL CURVE ORDINATE	-.060	-.098	-.113	-.106	-.089	-.072	-.055	-.037	-.020	.006	.011	.016	.021	.018	.015	.013	.010	.006
SUPERELEVATION ORDINATE	-.123	-.113	-.103	-.092	-.076	-.060	-.045	-.031	-.016	.001	.004	.006	.009	.021	.032	.042	.053	.066
CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING (CURVED GIRDERS) 2 1	.011	.020	.025	.028	.026	.021	.014	.007	.001	0	0	.001	-.038	-.045	-.047	-.043	-.032	-.004
REQUIRED CAMBER 2 1	$-2\frac{1}{16}$"	$-2\frac{5}{16}$"	$-2\frac{5}{16}$"	$-2\frac{1}{16}$"	$-1\frac{11}{16}$"	$-1\frac{5}{16}$"	$-1\frac{1}{16}$"	$-\frac{3}{4}$"	$-\frac{7}{16}$"	$\frac{1}{16}$"	$1\frac{3}{8}$"	$\frac{1}{4}$"	$-\frac{1}{16}$"	$-\frac{1}{16}$"	0	$\frac{1}{8}$"	$\frac{3}{8}$"	$\frac{13}{16}$"

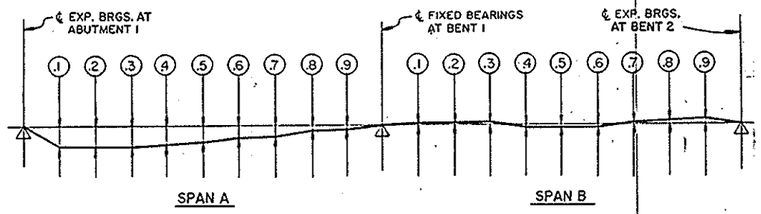


1 SCHEMATIC CAMBER ORDINATES - GIRDER 5

NOTE: SLOPE FOR THE ZERO CAMBER BASE LINE VARIES.

GIRDER 6

	SPAN A									SPAN B								
	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.004	.008	.011	.012	.011	.009	.006	.003	.001	.001	.003	.007	.009	.011	.012	.011	.008	.005
DEFLECTION DUE TO WEIGHT OF SLAB	.031	.057	.075	.081	.077	.063	.043	.022	.006	.007	.024	.045	.066	.080	.084	.077	.059	.032
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & SIDEWALK	.001	.003	.003	.004	.003	.003	.02	.001	0	0	.001	.002	.003	.004	.004	.003	.003	.001
TOTAL DEAD LOAD DEFLECTION	.036	.068	.089	.097	.091	.075	.051	.026	.007	.008	.028	.054	.078	.095	.100	.091	.070	.038
VERTICAL CURVE ORDINATE	-.059	-.096	-.111	-.103	-.085	-.067	-.049	-.031	-.012	0	.001	.001	.002	.002	.003	.002	.003	.003
SUPERELEVATION ORDINATE	-.123	-.114	-.102	-.091	-.076	-.060	-.045	-.029	-.016	.002	.004	.006	.009	.020	.030	.043	.052	.065
CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING (CURVED GIRDERS) 2 1	.012	.021	.028	.030	.029	.024	.007	.009	.001	.001	.001	.002	-.038	-.046	-.048	-.044	-.034	-.019
REQUIRED CAMBER 2 1	$-2\frac{1}{16}$"	$-2\frac{1}{4}$"	$-2\frac{1}{4}$"	$-1\frac{15}{16}$"	$-1\frac{9}{16}$"	$-1\frac{1}{4}$"	$-1\frac{1}{16}$"	$-\frac{5}{8}$"	$-\frac{5}{16}$"	$\frac{1}{16}$"	$\frac{1}{16}$"	$\frac{1}{8}$"	$-\frac{5}{16}$"	$-\frac{5}{16}$"	$-\frac{3}{16}$"	$\frac{1}{16}$"	$\frac{1}{4}$"	$\frac{9}{16}$"



1 SCHEMATIC CAMBER ORDINATES - GIRDER 6

NOTE: SLOPE FOR THE ZERO CAMBER BASE LINE VARIES.

NOTE:
DEFLECTIONS ARE GIVEN AT TENTH POINTS BETWEEN BEARINGS IN DECIMALS OF A FOOT, EXCEPT FINAL REQUIRED CAMBER WHICH IS GIVEN IN FRACTIONS OF AN INCH.

DEAD LOAD DEFLECTIONS AND REQUIRED CAMBER FOR GIRDERS

2 REVISION NO. 2: REVISED INCORRECT NUMBERS IN REVISION NO. 1.

BY: NMW 2/26/97
CHECKED BY: CCM 2/27/97

1 REVISION NO. 1: REVISED TO CHANGE "CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING" & "REQUIRED CAMBER" FOR GIRDERS 4, 5 & 6; AND TO CHANGE "SCHEMATIC CAMBER ORDINATES - GIRDERS 4, 5 & 6".

BY: NMW 1/30/97
CHECKED BY: CCM 1/30/97

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

01.023

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
DEAD LOAD DEFLECTIONS
CONTINUOUS UNIT # 1
MAY 1995

REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1	NMW	1/30/97	3			
2	CCM	2/27/97	4			

SHEET NO. S-37
TOTAL SHEETS 224

DRAWN BY RTI DATE 5-95
CHECKED BY CCM DATE 6/95

GIRDER 7

	SPAN A (℄ EXPANSION BEARINGS AT ABUTMENT 1)									SPAN B (℄ FIXED BEARINGS AT BENT 1; ℄ EXPANSION BEARINGS AT BENT 2)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.005	.009	.011	.012	.012	.010	.007	.004	.001	.001	.003	.006	.009	.011	.012	.011	.008	.005
DEFLECTION DUE TO WEIGHT OF SLAB	.031	.058	.075	.082	.078	.065	.045	.023	.007	.006	.022	.042	.061	.074	.079	.072	.055	.030
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & SIDEWALK	.002	.003	.004	.004	.004	.003	.002	.001	0	0	.001	.002	.003	.004	.004	.003	.003	.001
TOTAL DEAD LOAD DEFLECTION	.038	.070	.090	.098	.094	.078	.054	.028	.008	.007	.026	.050	.073	.089	.095	.086	.066	.036
VERTICAL CURVE ORDINATE	-.058	-.094	-.108	-.100	-.081	-.062	-.043	-.024	-.005	0	.001	.001	.002	.003	.003	.002	.003	.003
SUPERELEVATION ORDINATE	-.124	-.114	-.103	-.091	-.076	-.060	-.046	-.030	-.016	.002	.003	.005	.008	.018	.029	.041	.051	.062
CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING (CURVED GIRDERS) 2 1	.012	.021	.028	.031	.029	.024	.017	.009	.001	.001	.001	.002	-.035	-.043	-.046	-.042	-.032	-.018
REQUIRED CAMBER 2 1	$-2\frac{1}{16}$"	$-2\frac{1}{4}$"	$-2\frac{3}{16}$"	$-1\frac{15}{16}$"	$-1\frac{1}{2}$"	$-1\frac{3}{16}$"	$-\frac{7}{8}$"	$-\frac{1}{2}$"	$-\frac{1}{4}$"	$\frac{1}{16}$"	$\frac{1}{16}$"	$\frac{1}{8}$"	$\frac{5}{16}$"	$\frac{1}{4}$"	$\frac{3}{16}$"	$\frac{1}{16}$"	$\frac{1}{4}$"	$\frac{9}{16}$"

GIRDER 8

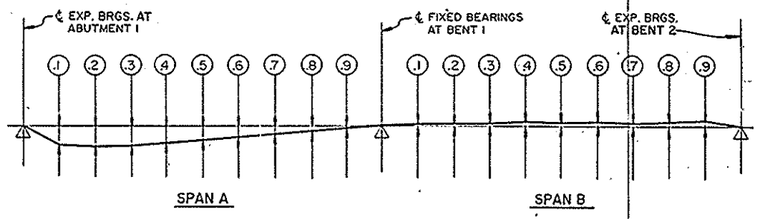
	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.005	.009	.012	.014	.013	.012	.007	.004	.001	.001	.003	.006	.009	.011	.012	.011	.008	.005
DEFLECTION DUE TO WEIGHT OF SLAB	.034	.063	.082	.090	.086	.071	.050	.026	.008	.006	.021	.042	.061	.075	.079	.073	.056	.031
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & SIDEWALK	.002	.003	.004	.004	.004	.003	.002	.001	0	0	.001	.002	.003	.004	.004	.003	.003	.001
TOTAL DEAD LOAD DEFLECTION	.041	.075	.098	.108	.103	.086	.059	.031	.009	.007	.025	.050	.073	.090	.095	.087	.067	.037
VERTICAL CURVE ORDINATE	-.057	-.092	-.106	-.096	-.076	-.057	-.037	-.017	.003	0	.001	.002	.002	.003	.004	.002	.003	.003
SUPERELEVATION ORDINATE	-.124	-.114	-.102	-.091	-.076	-.060	-.045	-.030	-.015	.003	.003	.005	.008	.018	.027	.040	.049	.061
CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING (CURVED GIRDERS) 2 1	.012	.022	.028	.031	.029	.024	.017	.010	.001	0	.001	.001	-.035	-.043	-.046	-.042	-.032	-.018
REQUIRED CAMBER 2 1	$-2\frac{1}{16}$"	$-2\frac{3}{16}$"	$-2\frac{3}{16}$"	$-1\frac{7}{8}$"	$-1\frac{1}{2}$"	$-1\frac{1}{8}$"	$-\frac{3}{4}$"	$-\frac{7}{16}$"	$-\frac{1}{8}$"	$\frac{1}{16}$"	$\frac{1}{16}$"	$\frac{1}{8}$"	$-\frac{5}{16}$"	$-\frac{1}{4}$"	$-\frac{3}{16}$"	0	$\frac{1}{4}$"	$\frac{9}{16}$"

GIRDER 9

	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.006	.010	.013	.015	.014	.012	.008	.004	.001	.001	.003	.006	.009	.011	.012	.011	.009	.005
DEFLECTION DUE TO WEIGHT OF SLAB	.029	.054	.070	.077	.073	.061	.043	.023	.007	.004	.016	.032	.048	.059	.063	.058	.045	.024
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & SIDEWALK	.002	.004	.005	.005	.005	.004	.003	.002	.001	0	.001	.002	.003	.004	.004	.004	.003	.002
TOTAL DEAD LOAD DEFLECTION	.037	.068	.088	.097	.092	.077	.054	.029	.009	.005	.020	.040	.060	.074	.079	.073	.057	.031
VERTICAL CURVE ORDINATE	-.057	-.091	-.103	-.093	-.072	-.051	-.031	-.010	-.012	0	.001	.002	.003	.004	.004	.001	.002	.003
SUPERELEVATION ORDINATE	-.123	-.114	-.102	-.091	-.076	-.061	-.046	-.030	-.017	.002	.003	.004	.006	.016	.026	.039	.048	.058
CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING (CURVED GIRDERS) 2 1	.012	.022	.029	.032	.031	.025	.018	.010	.001	.001	.001	.002	-.029	-.035	-.038	-.035	-.027	-.015
REQUIRED CAMBER 2 1	$-2\frac{1}{16}$"	$-2\frac{3}{16}$"	$-2\frac{1}{8}$"	$-1\frac{13}{16}$"	$-1\frac{3}{8}$"	$-1\frac{1}{16}$"	$-\frac{11}{16}$"	$-\frac{3}{8}$"	$-\frac{5}{16}$"	$\frac{1}{16}$"	$\frac{1}{16}$"	$\frac{1}{8}$"	$-\frac{1}{4}$"	$-\frac{3}{16}$"	$-\frac{1}{8}$"	$\frac{1}{16}$"	$\frac{1}{4}$"	$\frac{9}{16}$"

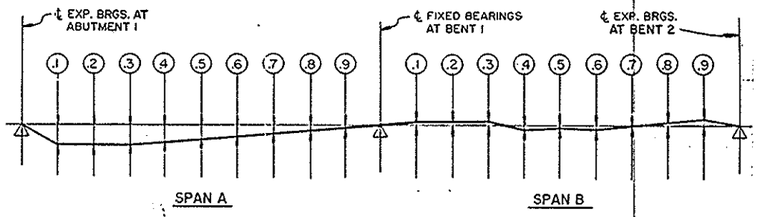
NOTE:
DEFLECTIONS ARE GIVEN AT TENTH POINTS BETWEEN BEARINGS IN DECIMALS OF A FOOT, EXCEPT FINAL REQUIRED CAMBER WHICH IS GIVEN IN FRACTIONS OF AN INCH.

DEAD LOAD DEFLECTIONS AND REQUIRED CAMBER FOR GIRDERS



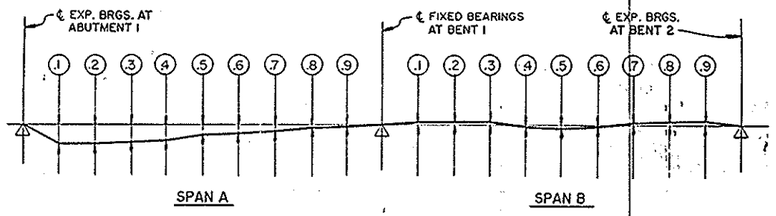
1 SCHEMATIC CAMBER ORDINATES - GIRDER 7

NOTE: SLOPE FOR THE ZERO CAMBER BASE LINE VARIES.



1 SCHEMATIC CAMBER ORDINATES - GIRDER 8

NOTE: SLOPE FOR THE ZERO CAMBER BASE LINE VARIES.



1 SCHEMATIC CAMBER ORDINATES - GIRDER 9

NOTE: SLOPE FOR THE ZERO CAMBER BASE LINE VARIES.

2 REVISION NO. 2: REVISED INCORRECT NUMBERS IN REVISION NO. 1.

BY: NMW 2/26/97
CHECKED BY: CCM 2/27/97

1 REVISION NO. 1: REVISED TO CHANGE "CAMBER DUE TO DISSIPATION RESULTING FROM HEAT CURVING" & "REQUIRED CAMBER" FOR GIRDERS 7, 8 & 9; AND TO CHANGE "SCHEMATIC CAMBER ORDINATES - GIRDERS 7, 8 & 9".

BY: NMW 1/30/97
CHECKED BY: CCM 1/30/97

NORTH CAROLINA PROFESSIONAL SEAL 12279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U1.024

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

DEAD LOAD DEFLECTIONS
CONTINUOUS UNIT # 1
MAY 1995

REVISIONS								SHEET NO.
NO.	BY	DATE	NO.	BY	DATE			5-38
1	NMW	1/30/97	3					TOTAL SHEETS
2	CCM	2/27/97	4					224

DRAWN BY RTJ DATE 5-95
CHECKED BY CCM DATE 6/95

EPOXY-COATED REINFORCING STEEL SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #1

STAGE I CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A1001	362	#6	STR.	58'-4"	31,717
A5400	362	#6	STR.	5'-0"	2,719
B1000	428	#5	STR.	36'-0"	16,071
B5005	213	#5	STR.	60'-0"	13,330
B5006	426	#5	STR.	7'-6"	3,332
K2000	6	#5	2	9'-11"	62
K2001	6	#5	2	8'-3"	52
K2002	24	#5	3	14'-10"	371
S5000	100	#4	1	4'-1"	273
S5010	2	#4	7	5'-9"	8
G1000	2	#5	STR.	58'-4"	122
H001	4	#6	6	14'-2"	85
J1000	59	#4	4	1'-5"	56
U1	270	#5	5	4'-6"	1,267
V13	20	#5	8	5'-7"	116
TOTAL					69,581

EPOXY-COATED REINFORCING STEEL SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #1

STAGE II CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A1500	362	#6	STR.	25'-4"	13,774
A5400	362	#6	STR.	5'-0"	2,719
B1001	188	#5	STR.	32'-6"	6,373
B5005	93	#5	STR.	60'-0"	5,820
B5006	186	#5	STR.	7'-6"	1,455
K2000	6	#5	2	9'-11"	62
K2001	6	#5	2	8'-3"	52
K2002	6	#5	3	14'-10"	93
G2000	2	#5	STR.	25'-4"	53
H001	4	#6	6	14'-2"	85
S5000	40	#4	1	4'-1"	109
S5010	2	#4	7	5'-9"	8
J1000	26	#4	4	1'-5"	25
U2	245	#5	5	3'-6"	894
V15	10	#5	8	5'-11"	62
V16	10	#5	8	5'-10"	61
TOTAL					31,645

REINFORCING STEEL SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #1

STAGE I CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A2001	362	#6	STR.	58'-4"	31,717
A6400	362	#6	STR.	4'-7"	2,492
B2000	376	#5	STR.	35'-7"	13,955
B6505	182	#5	STR.	60'-0"	11,390
B6506	364	#5	STR.	7'-2"	2,721
TOTAL					62,275

REINFORCING STEEL SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #1

STAGE II CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A2500	362	#6	STR.	25'-4"	13,774
A6400	362	#6	STR.	4'-7"	2,492
B2001	164	#5	STR.	32'-3"	5,516
B6505	78	#5	STR.	60'-0"	4,881
B6506	156	#5	STR.	7'-2"	1,166
TOTAL					27,829

CLASS AA CONCRETE SUMMARY (BY STAGE)

STAGE I	(DECK SLAB - POUR 1)	108.7 CY
	(DECK SLAB - POUR 2)	267.2 CY
STAGE II (DECK SLAB)		166.8 CY
STAGE II (SIDEWALK)		21.5 CY
STAGE III (CLOSURE POUR)		15.6 CY
STAGE IV (SIDEWALK)		17.2 CY
TOTAL		597.0 CY

GROOVING BRIDGE FLOORS SUMMARY (BY STAGE)

DECK SLAB	STAGE I	STAGE II	STAGE III	TOTAL
	10,047	3,597	380	14,024

GROOVING BRIDGE FLOORS (UNIT #1 ONLY) = 14,024 SF

EPOXY-COATED REINFORCING STEEL SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #1

STAGE III CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1000	16	#5	STR.	32'-8"	545
B5005	7	#5	STR.	60'-0"	438
B5006	14	#5	STR.	7'-6"	110
S5001	8	#4	6	8'-3"	44
S5002	8	#4	6	10'-0"	53
S5003	20	#4	6	6'-0"	80
TOTAL					1,270

EPOXY-COATED REINFORCING STEEL SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #1

STAGE IV CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B7004	40	#4	STR.	27'-3"	728
G5500	203	#4	STR.	4'-6"	610
D100	812	#4	STR.	0'-8"	362
J1000	2	#4	5	1'-5"	2
TOTAL					1,702

REINFORCING STEEL SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #1

STAGE III CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B2000	16	#5	STR.	32'-4"	540
B6505	7	#5	STR.	60'-0"	438
B6506	14	#5	STR.	7'-2"	105
TOTAL					1,083

CLASSIC BRIDGE RAIL QUANTITY SUMMARY (BY STAGE)

	EPOXY-COATED REINFORCING STEEL (LBS)	CLASS AA CONCRETE (CY)	LINEAR FOOTAGE (LF)
STAGE I	3,871	28.2	203.29
STAGE II	3,541	20.2	184.57
STAGE III	N/A	N/A	N/A
STAGE IV	N/A	N/A	N/A
TOTALS	7,412	48.4	387.86

CLASSIC BRIDGE RAIL ..... 387.86 LF

CONTINUOUS UNIT #1 SUPERSTRUCTURE QUANTITIES

REINFORCED CONCRETE DECK SLAB	16,636 SF
GROOVING BRIDGE FLOORS	14,024 SF
STRUCTURAL STEEL* ..... APPROX.	455,700 LBS
CLASSIC BRIDGE RAIL	387.86 LF
POT BEARINGS	LS
EXPANSION JOINT SEALS	LS
MODULAR EXPANSION JOINT SEALS	LS

SUPERSTRUCTURE REINFORCING STEEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM SPLICE LENGTHS

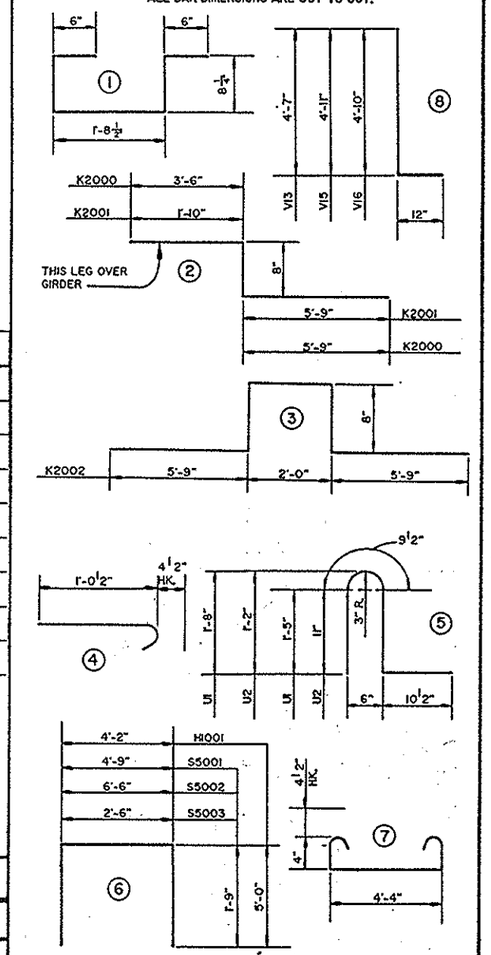
BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"
#5	2'-6"	2'-2"	2'-6"	2'-2"	3'-5"
#6	3'-0"	2'-7"	3'-10"	2'-7"	4'-4"
#8	6'-0"	4'-0"	6'-0"	4'-0"	6'-10"

STRUCTURAL STEEL QUANTITY BREAKDOWN*

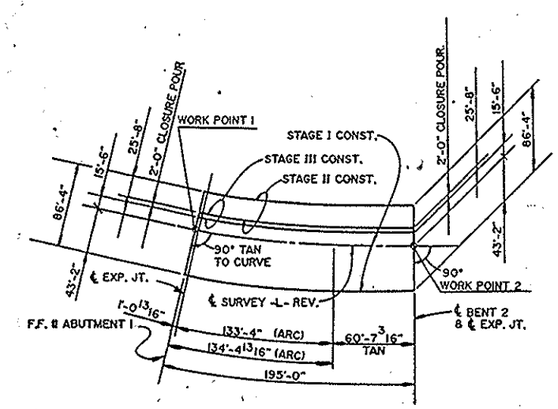
STAGE I CONSTRUCTION = APPROX. 314,500 LBS.
STAGE II CONSTRUCTION = APPROX. 141,200 LBS.
TOTAL (UNIT #1 ONLY) = APPROX. 455,700 LBS.

BAR TYPES

ALL BAR DIMENSIONS ARE OUT TO OUT.



LAYOUT FOR COMPUTING AREA OF REINFORCED CONCRETE DECK SLAB - CONTINUOUS UNIT #1



SUMMARY

STAGE I	11,377 SF
STAGE II	4,878 SF
STAGE III	381 SF
STAGE IV (SIDEWALK)	NA
TOTAL	16,636 SF

EPOXY-COATED REINFORCING STEEL SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #1

STAGE II SIDEWALK CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B7003	42	#4	STR.	28'-10"	809
G5000	365	#4	STR.	5'-9"	1,402
D10	1098	#4	STR.	1'-0"	734
TOTAL					2,945

EPOXY-COATED REINFORCING STEEL SUMMARY (BY STAGE)

STAGE I (DECK SLAB)	69,581 LBS
STAGE II (DECK SLAB)	31,645
STAGE II (SIDEWALK)	2,945
STAGE III (CLOSURE POUR)	1,270
STAGE IV (SIDEWALK)	1,702
TOTAL	107,143 LBS.

REINFORCING STEEL SUMMARY (BY STAGE)

STAGE I (DECK SLAB)	62,275 LBS
STAGE II (DECK SLAB)	27,829
STAGE II (SIDEWALK)	N/A
STAGE III (CLOSURE POUR)	1,083
STAGE IV (SIDEWALK)	N/A
TOTAL	91,187 LBS

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-Rev.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
REINFORCING STEEL SCHEDULES & SUMMARIES OF QUANTITIES FOR CONTINUOUS UNIT #1
MARCH 1995

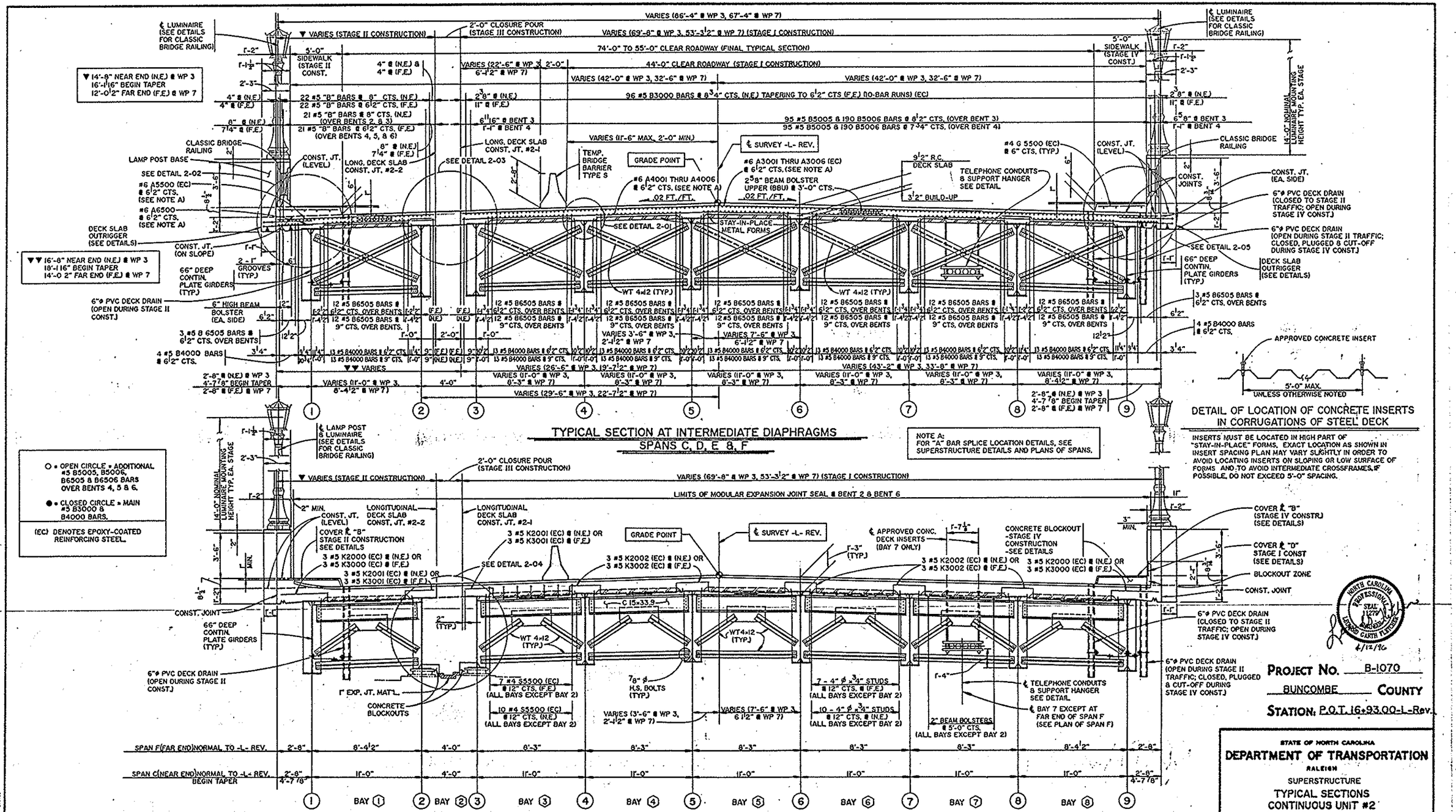
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U1.025

PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-39
1			3			TOTAL SHEETS
2			4			224

DRAWN BY: N. M. WILSON DATE: MAR. 95
CHECKED BY: C.C.M. DATE: 6/95



TYPICAL SECTION AT INTERMEDIATE DIAPHRAGMS
SPANS C, D, E & F

DETAIL OF LOCATION OF CONCRETE INSERTS IN CORRUGATIONS OF STEEL DECK

INSERTS MUST BE LOCATED IN HIGH PART OF "STAY-IN-PLACE" FORMS. EXACT LOCATION AS SHOWN IN INSERT SPACING PLAN MAY VARY SLIGHTLY IN ORDER TO AVOID LOCATING INSERTS ON SLOPING OR LOW SURFACE OF FORMS AND TO AVOID INTERMEDIATE CROSSFRAMES. IF POSSIBLE, DO NOT EXCEED 5'-0" SPACING.

NOTE A:
FOR "A" BAR SPLICE LOCATION DETAILS, SEE SUPERSTRUCTURE DETAILS AND PLANS OF SPANS.

○ = OPEN CIRCLE = ADDITIONAL #5 B5005, B5006, B6505 & B6506 BARS OVER BENTS 4, 5 & 6.

● = CLOSED CIRCLE = MAIN #5 B3000 & B4000 BARS.

(EC) DENOTES EPOXY-COATED REINFORCING STEEL.

TYPICAL SECTION AT END DIAPHRAGMS @
NEAR END OF SPAN C & FAR END OF SPAN F

NOTES:

THE DIMENSIONS AND DETAILS SHOWN FOR CONCRETE INSERTS ARE FOR THE CONTRACTOR'S BENEFIT IN PLACING THE INSERTS AND ARE NOT TO BE CONSTRUED AS AN APPROVAL FOR THE ATTACHMENT OF A UTILITY LINE.

FOR RESPONSIBILITIES FOR FURNISHING AND PLACING CONCRETE INSERTS, SEE UTILITY SPECIAL PROVISIONS.

U2.001

PREPARED BY
THOMPSON-SORDON-SHOOK ENGINEERS, INCORPORATED

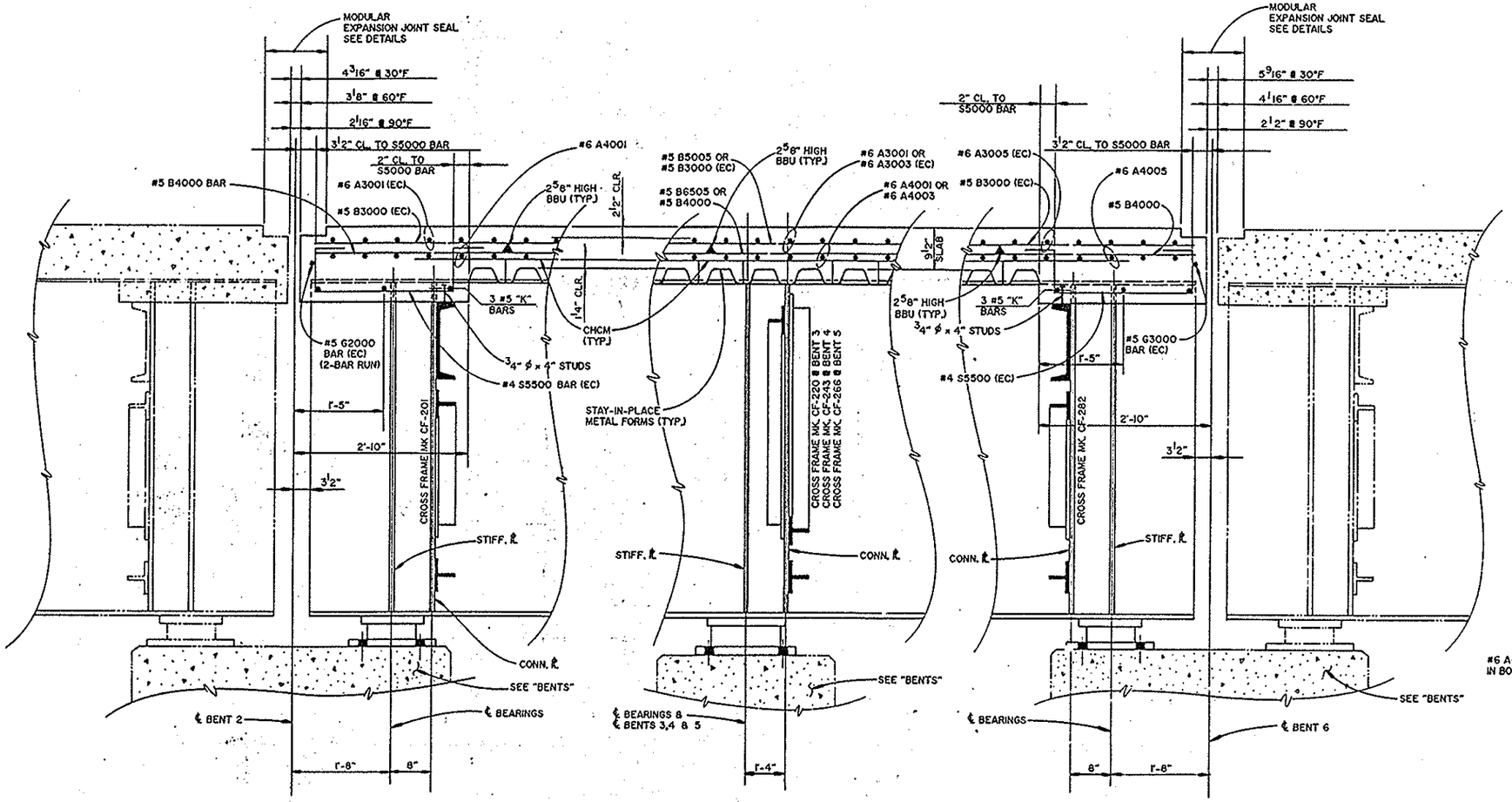
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTIONS
CONTINUOUS UNIT #2
(SPANS C, D, E & F)
MAY 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-40
1			3			TOTAL SHEETS
2			4			224

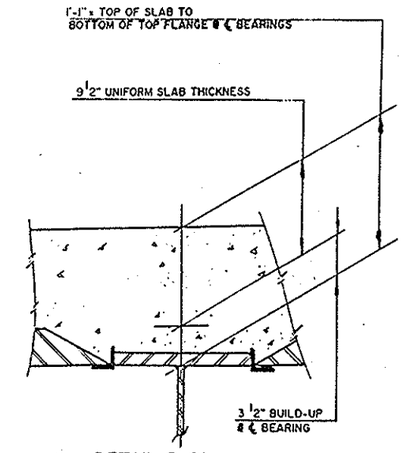
DRAWN BY N. M. WILSON DATE MAY 94
CHECKED BY GEM DATE 6/95



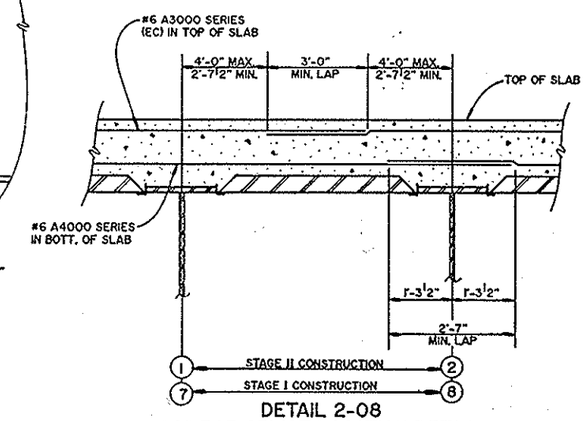
SECTION D-D

SECTION E-E

SECTION F-F

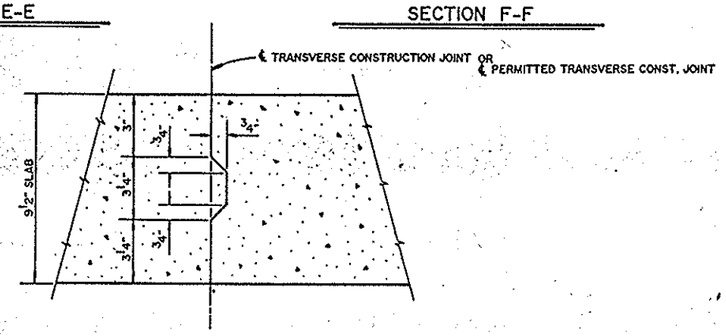


DETAIL 2-01



DETAIL 2-08
"A" BAR SPLICE LOCATION DETAIL

ADDITIONAL SLAB REINFORCEMENT NOT SHOWN FOR CLARITY.



NOTE: REINFORCING STEEL IN SLAB NOT SHOWN. LONGITUDINAL REINFORCING STEEL SHALL BE CONTINUOUS THRU JOINT.

DETAIL 2-07
TRANSVERSE CONSTRUCTION JOINT DETAIL

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
DETAILS
(CONTINUOUS UNIT #2)

OCT. 1994

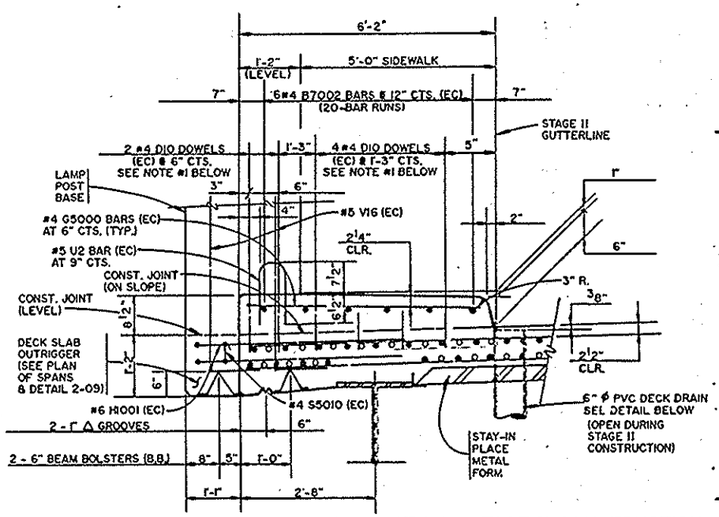
NORTH CAROLINA PROFESSIONAL SEAL 11278 ENGINEER LEONARD GARTH FANTICHI
8/12/94

U2.002

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

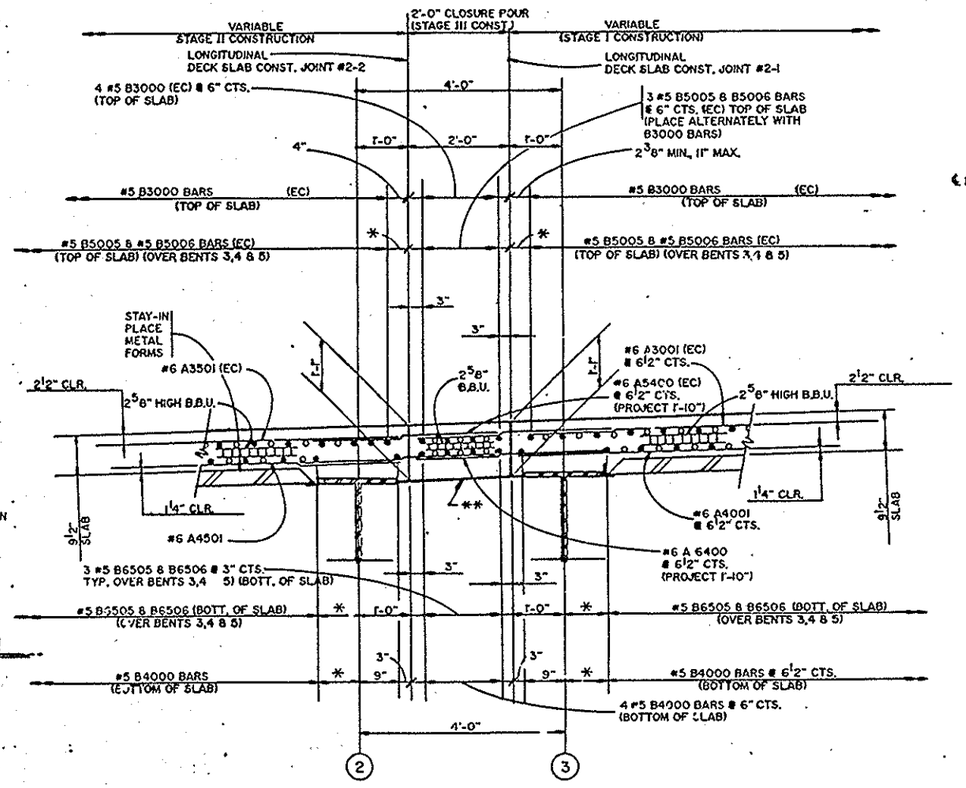
REVISIONS								SHEET NO.
NO.	BY	DATE	NO.	BY	DATE			S-41
1			3					TOTAL SHEETS
2			4					224

DRAWN BY N. M. WILSON DATE OCT. 94
CHECKED BY GCM DATE 6/95



DETAIL 2-02 - TYPICAL SIDEWALK SECTION - STAGE II CONSTRUCTION

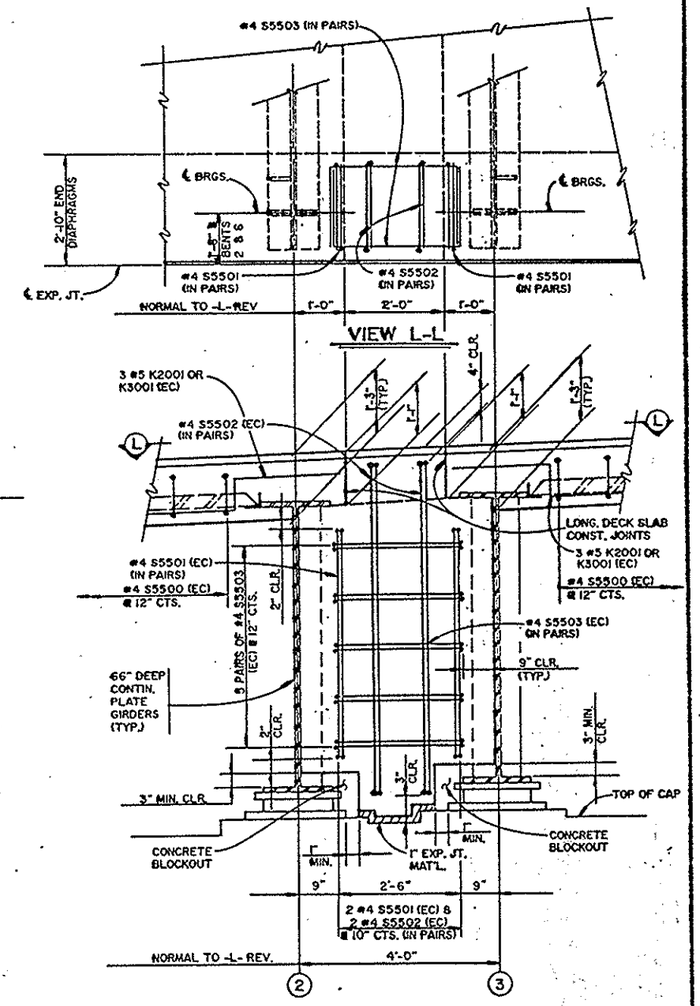
NOTE #1 : DOWELS MAY BE PUSHED INTO GREEN CONCRETE AFTER DECK SLAB HAS BEEN SCREEDED OFF



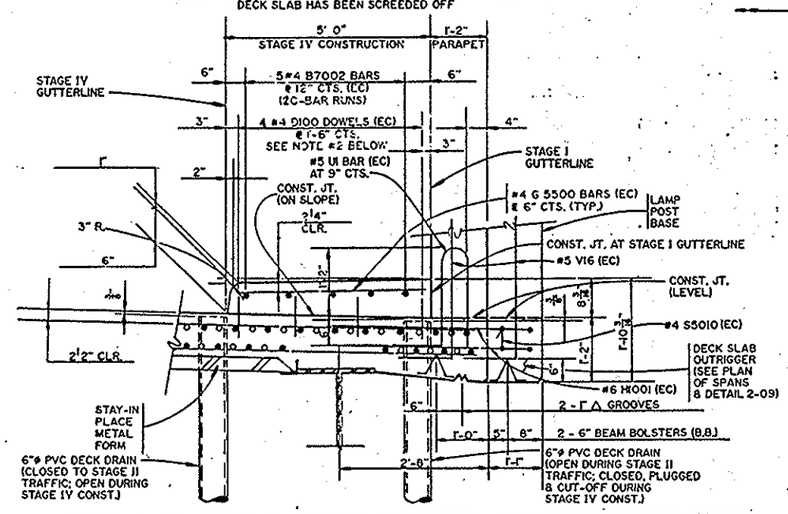
DETAIL 2-03 - TYPICAL CLOSURE POUR SECTION

** FORM BOTTOM OF OVERHANGS & CLOSURE POUR FLUSH WITH BOTTOM OF TOP FLANGES.

* SEE PLAN OF SPANS

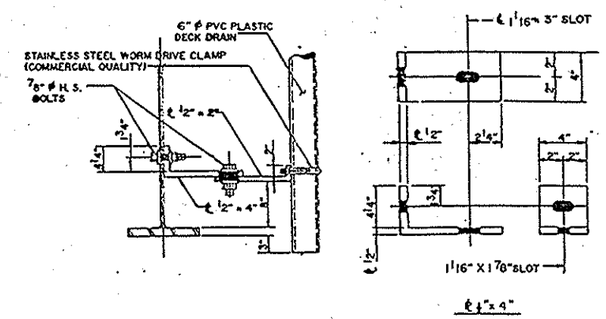


DETAIL 2-04 - TYPICAL CLOSURE POUR END DIAPHRAGM



DETAIL 2-05 - TYPICAL SIDEWALK SECTION - STAGE IV CONSTRUCTION

NOTE #2 : DOWELS SHALL BE ADHESIVELY ANCHORED IN SLAB DURING STAGE IV SIDEWALK CONSTRUCTION. SEE SPECIAL PROVISIONS.



DETAIL 2-06 - DRAIN CONNECTION

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/94

NOTES:

COUPLING IN DRAIN PIPE WILL BE PERMITTED AS APPROVED BY THE ENGINEER.

TOP OF FLOOR DRAIN TO BE SET ⅜" BELOW SURFACE OF SLAB.

4-1/2" SQUARE LUGS TO BE GLUED TO THE PVC PLASTIC PIPE AT EQUAL SPACES AROUND THE PIPE DRAIN APPROXIMATELY 4" FROM THE TOP OF THE PIPE.

BOLT SIZE TO BE SAME AS DIAPHRAGMS AND CROSS FRAME CONNECTIONS. STAINLESS STEEL WORM DRIVE HOSE CLAMP SHALL BE COMMERCIAL QUALITY.

PVC PLASTIC DECK DRAINS SHALL BE PAINTED WITH AN APPROVED VINYL PAINT. SEE SPECIAL PROVISIONS.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 2 OF 4

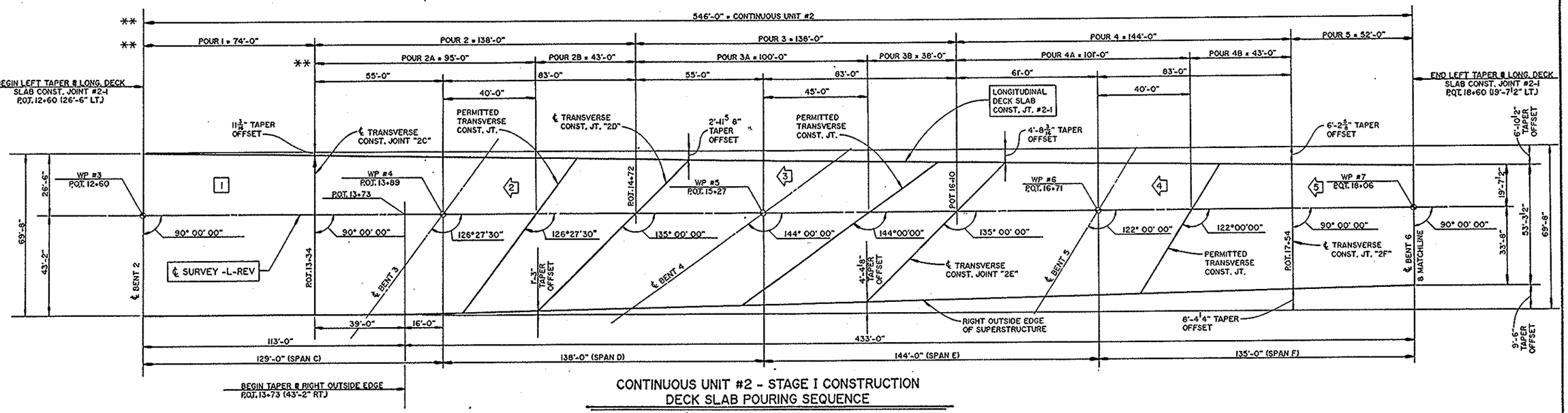
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
DETAILS
(CONTINUOUS UNIT #2)
JAN. 1994

REVISIONS								SHEET NO.
NO.	BY	DATE	NO.	BY	DATE			S-42
1			3					TOTAL SHEETS
2			4					224

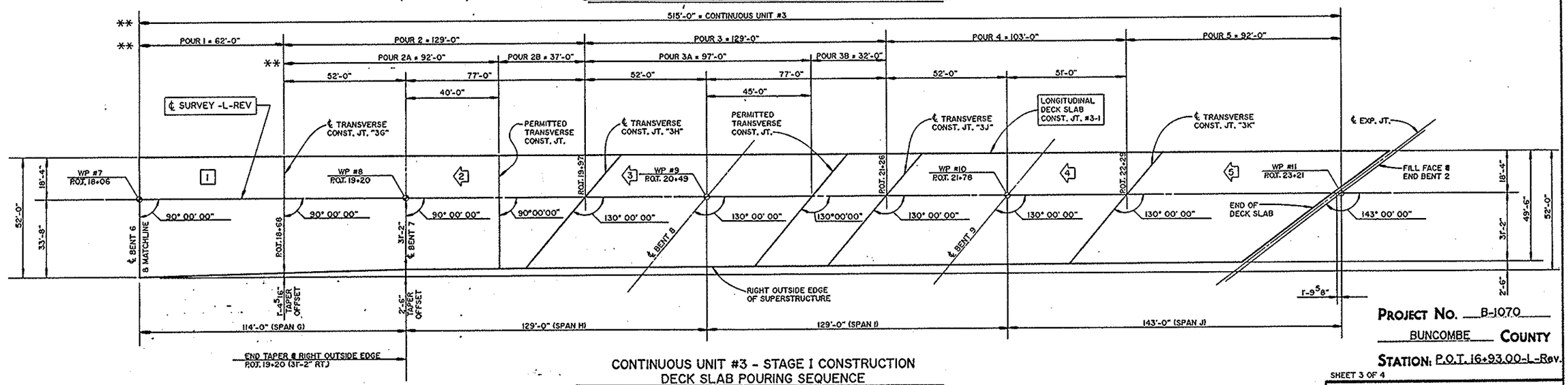
PREPARED BY THOMPSON - BURDON - SHOOK ENGINEERS, INCORPORATED

12.003

DRAWN BY N. H. WILSON DATE JAN. 94
CHECKED BY CAM DATE 6/95



CONTINUOUS UNIT #2 - STAGE I CONSTRUCTION
DECK SLAB POURING SEQUENCE



CONTINUOUS UNIT #3 - STAGE I CONSTRUCTION
DECK SLAB POURING SEQUENCE

#	INDICATES POUR NUMBER AND DIRECTION OF POUR (WHERE APPLICABLE)
**	MEASURED ALONG ℄ SURVEY -L- REV.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE DETAILS
DECK SLAB POURING SEQUENCE
CONTINUOUS UNITS #2 & #3
STAGE I CONSTRUCTION
MAY 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

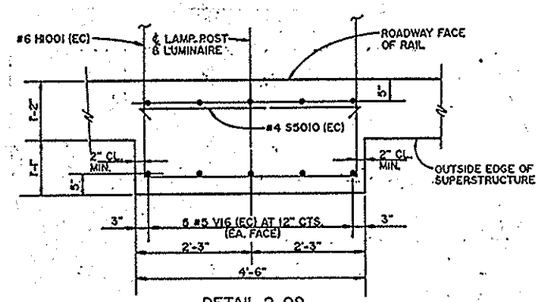
U2.004

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. 5-43
TOTAL SHEETS 224

DRAWN BY N. H. WILSON DATE MAY 94
CHECKED BY GEM DATE 6/95



DETAIL 2-09

PLAN OF DECK SLAB OUTRIGGER AT LAMP POST BASE

SEE SECTION G-G - CLASSIC BRIDGE RAILING DETAILS, SHEET 15 OF 17, FOR ADDITIONAL DETAILS.

NOTES FOR DECK SLAB - CONTINUOUS UNIT #2

PROVIDE CONTINUOUS HIGH CHAIR FOR METAL DECK (CHCM) @ 4'-0" CTS. WITH LEG SPACING TO MATCH THE PITCH OF THE FORMS AND WITH A HEIGHT TO SUPPORT THE BOTTOM LAYER OF SLAB REINFORCEMENT A CLEAR DISTANCE OF 1-1/4" ABOVE THE TOP OF THE STAY-IN-PLACE FORM.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THE TRANSVERSE JOINTS IN THE DECK SLAB (WHERE APPLICABLE) ARE CONTINUOUS IN A STRAIGHT LINE THROUGH THE CLASSIC BRIDGE RAIL. THE CONTRACTOR'S ATTENTION IS ALSO CALLED TO THE FACT THAT THE LONGITUDINAL JOINTS IN THE DECK SLAB ARE CONTINUOUS IN A STRAIGHT LINE FROM BEGINNING OF CONTINUOUS UNIT TO ENDING OF CONTINUOUS UNIT.

THE MODULAR EXPANSION JOINT SEAL AT BENT 2 SHALL BE CAPABLE OF HANDLING A TOTAL THERMAL MOVEMENT, MEASURED PARALLEL TO THE CENTERLINE OF ROADWAY, OF 4-1/4" (2-1/8" EXPANSION AND 2-1/8" CONTRACTION FROM A MIDPOINT TEMPERATURE OF 60° F).

THE MODULAR EXPANSION JOINT SEAL AT BENT 6 SHALL BE CAPABLE OF HANDLING A TOTAL THERMAL MOVEMENT, MEASURED PARALLEL TO THE CENTERLINE OF ROADWAY, OF 6-1/8" (3-1/16" EXPANSION AND 3-1/16" CONTRACTION FROM A MIDPOINT TEMPERATURE OF 60° F).

THE TOPS OF THE MODULAR EXPANSION JOINT SEALS SHALL BE SET A MINIMUM OF 1/8" AND A MAXIMUM OF 1/4" BELOW THE TOP OF SLAB.

FOR MODULAR EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

CLASSIC BRIDGE RAILS AND SIDEWALKS IN THE CONTINUOUS UNIT SHALL NOT BE CAST UNTIL THE DECK SLAB CONCRETE IN EACH STAGE OF CONSTRUCTION HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

PREVIOUSLY CAST CONCRETE IN THE CONTINUOUS UNIT SHALL HAVE ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI BEFORE ADDITIONAL CONCRETE IS CAST IN THE UNIT.

STAY-IN-PLACE FORMS SHALL HAVE CLOSED TAPERED ENDS.

THE CONTRACTOR MAY, WHEN NECESSARY, PROPOSE A SCHEME FOR AVOIDING INTERFERENCE BETWEEN METAL STAY-IN-PLACE FORM SUPPORTS OR FORMS AND GIRDER STIFFENER OR CONNECTOR PLATES. THE PROPOSAL SHALL BE INDICATED AND INCLUDED, AS APPROPRIATE, ON EITHER THE STEEL WORKING DRAWINGS OR ON THE METAL STAY-IN-PLACE FORM WORKING DRAWINGS.

STRUCTURAL STEEL ERECTION IN EACH STAGE OF CONSTRUCTION FOR THE CONTINUOUS UNIT SHALL BE COMPLETE BEFORE FALSEWORK OR FORMS ARE PLACED IN EACH STAGE ON THE UNIT.

LAP SPLICES, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED IN THE B5000 BARS OVER BENTS 3, 4 & 5.

SEE THE TRAFFIC CONTROL PLANS FOR STAGE I, II, III & IV LOCATIONS AND PAY LIMITS OF THE TEMPORARY BRIDGE BARRIERS - TYPE S.

THE TOP OF DECK DRAINS SHALL BE SET 3/8" BELOW SURFACE OF DECK SLAB.

FALSEWORK AND METAL STAY-IN-PLACE FORMS SHALL NOT BE WELDED TO GIRDER FLANGES IN THE ZONES REQUIRING CHARPY V-NOTCH TESTS. SEE STRUCTURAL STEEL GIRDER ELEVATION SHEETS.

FOR BARS SHOWN AND NO BAR MARKS AND/OR BAR RUNS SHOWN, SEE PLANS OF SPANS.

THE DIMENSIONS AND DETAILS SHOWN FOR THE CONCRETE DECK INSERTS ARE FOR THE CONTRACTOR'S BENEFIT IN PLACING THEM AND SHOULD NOT BE CONSTRUED TO BE AN APPROVAL FOR THE ATTACHMENT OF THE UTILITY TO THE STRUCTURE.

FOR RESPONSIBILITIES FOR FURNISHING AND PLACING THE CONCRETE DECK INSERTS, SEE UTILITY SPECIAL PROVISIONS.

DIRECTION OF CASTING DECK CONCRETE SHALL BE AS SHOWN ON THE DECK SLAB POURING SEQUENCE SHEET FOR STAGE I CONSTRUCTION. DIRECTION OF CASTING DECK CONCRETE IN SUBSEQUENT STAGES SHALL FOLLOW THE SAME PATTERN.

FOR CLASSIC BRIDGE RAILS, SEE SPECIAL PROVISIONS.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LINWOOD GARTH FLETCHER
4/12/96

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

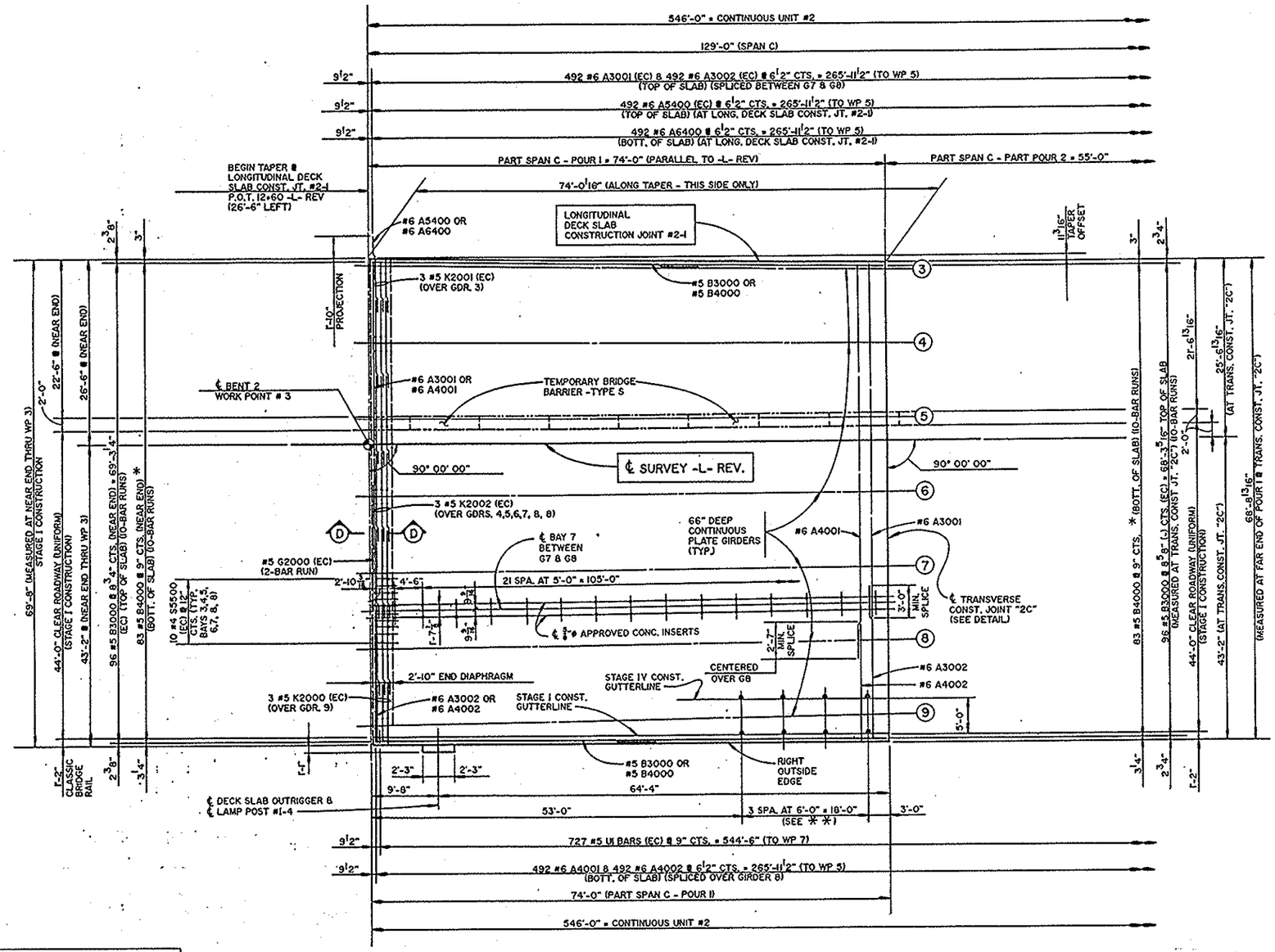
PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
DETAILS AND NOTES (CONTINUOUS UNIT #2)
MAY 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-44
1			3			TOTAL SHEETS
2			4			224

DRAWN BY RTJ DATE MAY 94
CHECKED BY CCM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING
* * 4 -6"ϕ PVC DECK DRAINS AT STAGE IV CONST. GUTTERLINE & 4 - 6"ϕ PVC DECK DRAINS AT STAGE I CONST. GUTTERLINE

PART-PLAN OF SPAN C (CONTINUOUS UNIT #2)
STAGE I CONSTRUCTION
(POUR I)

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 5

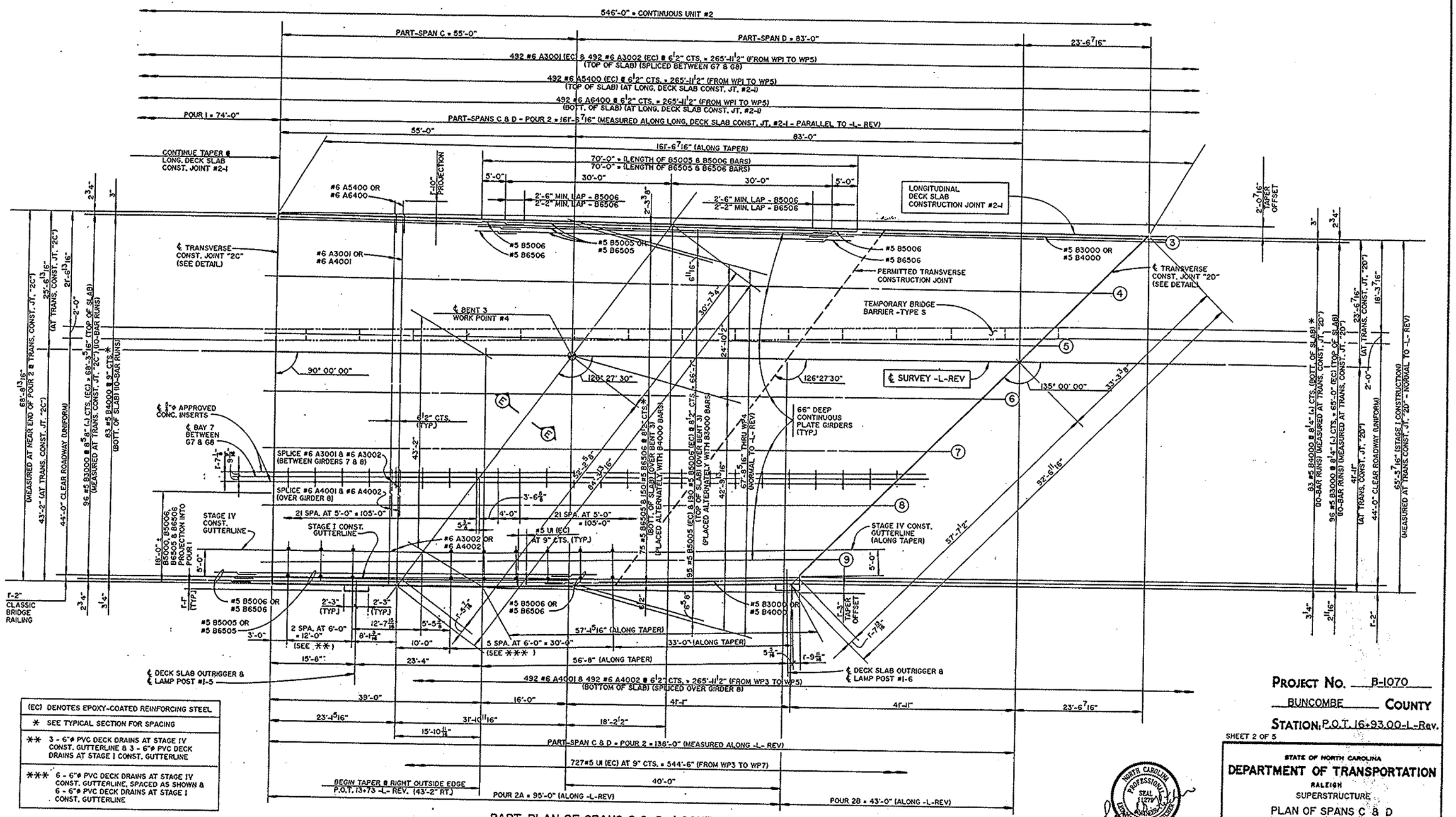
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPAN C
(CONTINUOUS UNIT #2)
STAGE I CONSTRUCTION
JUNE 1994

NORTH CAROLINA PROFESSIONAL SEAL 12279 ENGINEER LEONARD GARTH FLETCHER
6/13/96

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	SHEET NO. S-45
1			3			TOTAL SHEETS 224
2			4			

DRAWN BY N. M. WILSON DATE JUNE 94
CHECKED BY SCM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING
** 3 - 6"φ PVC DECK DRAINS AT STAGE IV CONST. GUTTERLINE & 3 - 6"φ PVC DECK DRAINS AT STAGE I CONST. GUTTERLINE
*** 6 - 6"φ PVC DECK DRAINS AT STAGE IV CONST. GUTTERLINE, SPACED AS SHOWN & 6 - 6"φ PVC DECK DRAINS AT STAGE I CONST. GUTTERLINE

PART-PLAN OF SPANS C & D (CONTINUOUS UNIT #2)
STAGE I CONSTRUCTION
(POUR 2)

DRAWN BY N. M. WILSON DATE JUNE 94
CHECKED BY GCM DATE 6/95

NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U2.005

PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

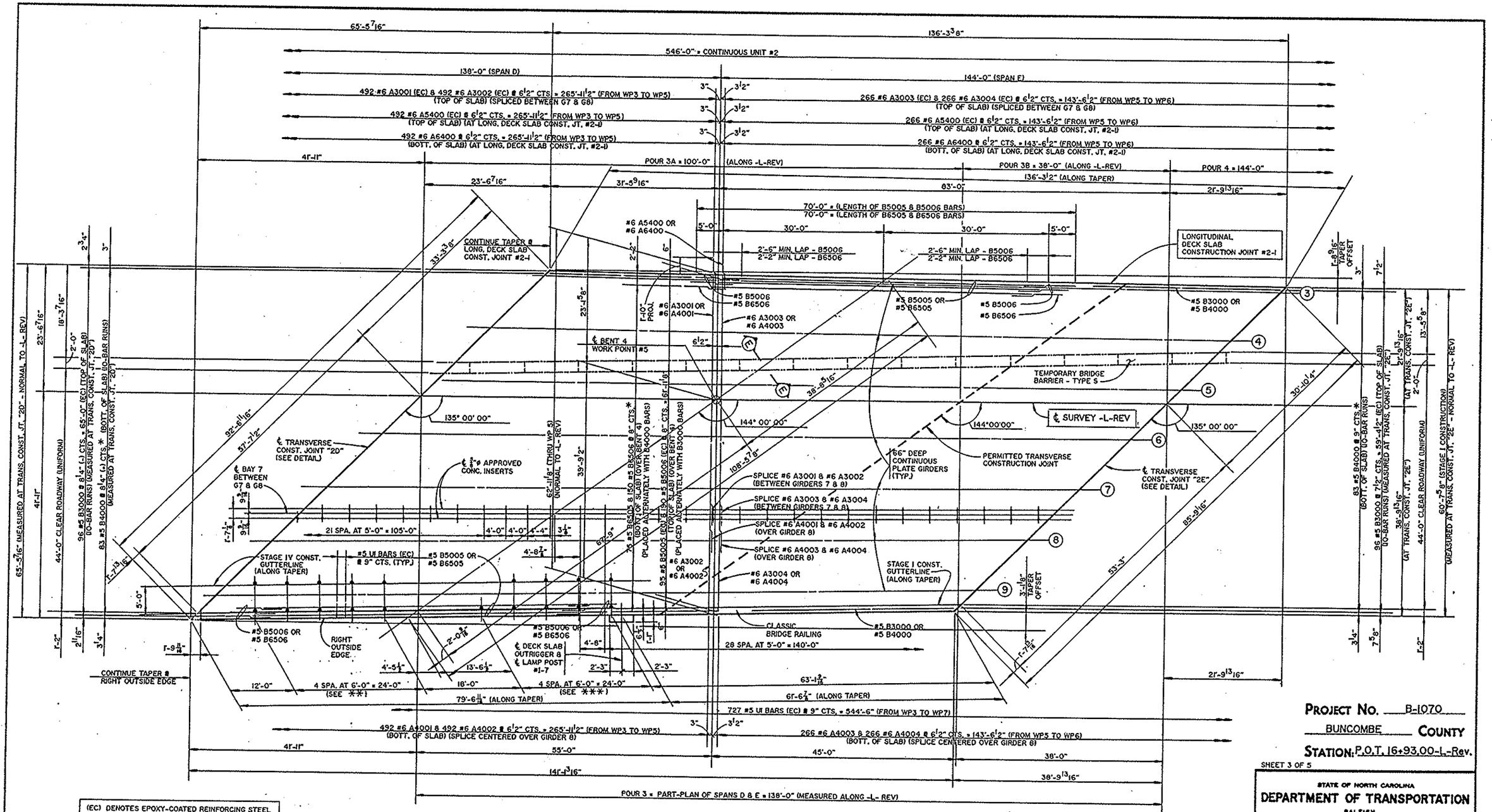
SHEET 2 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

PLAN OF SPANS C & D
(CONTINUOUS UNIT #2)
STAGE I CONSTRUCTION

JUNE 1994

REVISIONS							SHEET NO.
NO.	BY	DATE	NO.	BY	DATE		S-46
1			3				TOTAL SHEETS
2			4				224



(EC) DENOTES EPOXY-COATED REINFORCING STEEL	
* SEE TYPICAL SECTION FOR SPACING	
** 5 - 6"ø PVC DECK DRAINS AT STAGE IV CONST. GUTTERLINE & 5 - 6"ø PVC DECK DRAINS AT STAGE I CONST. GUTTERLINE	*** 4 - 6"ø PVC DECK DRAINS AT STAGE IV CONST. GUTTERLINE & 5 - 6"ø PVC DECK DRAINS AT STAGE I CONST. GUTTERLINE

PART-PLAN OF SPANS D & E (CONTINUOUS UNIT #2)
STAGE I CONSTRUCTION
(POUR 3)

DRAWN BY N. M. WILSON DATE JUNE 94
CHECKED BY CEM DATE 6/95

NORTH CAROLINA PROFESSIONAL SEAL 12794 ENGINEER LAWRENCE GARTH FLETCHER 4/12/96

U2.006

PREPARED BY THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

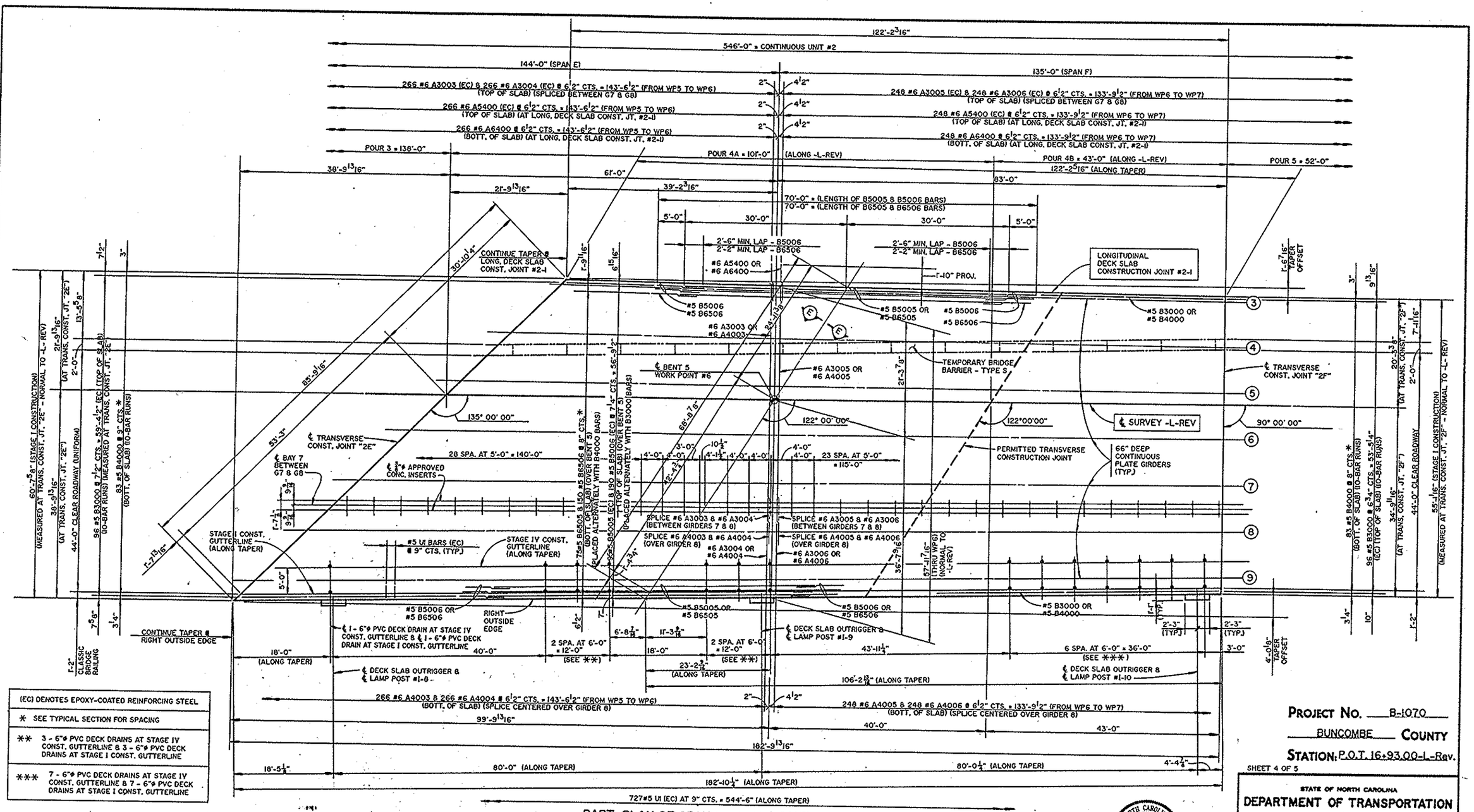
PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 3 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
PLAN OF SPANS D & E
(CONTINUOUS UNIT #2)
STAGE I CONSTRUCTION
JUNE 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-47
1			3			TOTAL SHEETS
2			4			224



PART-PLAN OF SPANS E & F (CONTINUOUS UNIT #2)
STAGE I CONSTRUCTION
(POUR 4)

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 4 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPANS E & F
(CONTINUOUS UNIT #2)
STAGE I CONSTRUCTION
JUNE 1994

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

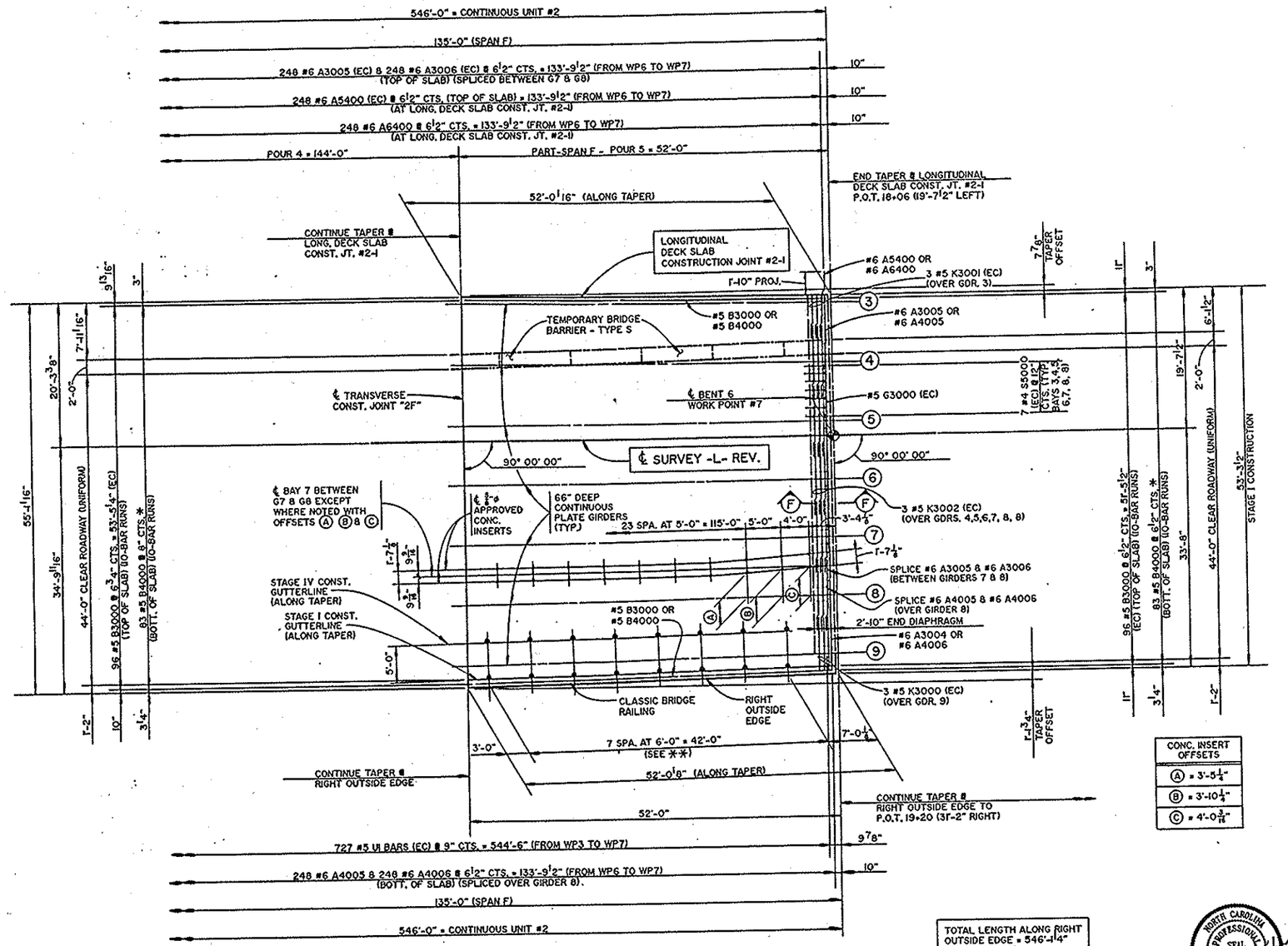
SHEET NO. S-48
TOTAL SHEETS 224

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER 6/12/96

U2.007

PREPARED BY
THOMPSON • GORDON • SHOOK ENGINEERS, INCORPORATED

DRAWN BY N. M. WILSON DATE JUNE 94
CHECKED BY CLM DATE 6/95



CONC. INSERT OFFSETS
Ⓐ = 3'-5¼"
Ⓑ = 3'-10¼"
Ⓒ = 4'-0 3/16"

TOTAL LENGTH ALONG RIGHT OUTSIDE EDGE = 546'-1/4" (ALONG TAPER)

(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING
** 8 - 6"φ PVC DECK DRAINS AT STAGE IV CONST. GUTTERLINE & 8 - 6"φ PVC DECK DRAINS AT STAGE I CONST. GUTTERLINE

PART-PLAN OF SPAN F (CONTINUOUS UNIT #2)
STAGE I CONSTRUCTION
(POUR 5)

DRAWN BY N.M. WILSON DATE JUNE 94
CHECKED BY CGM DATE 6/95

NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER LEONARD GARTH FINCHER 6/12/96

U2.008

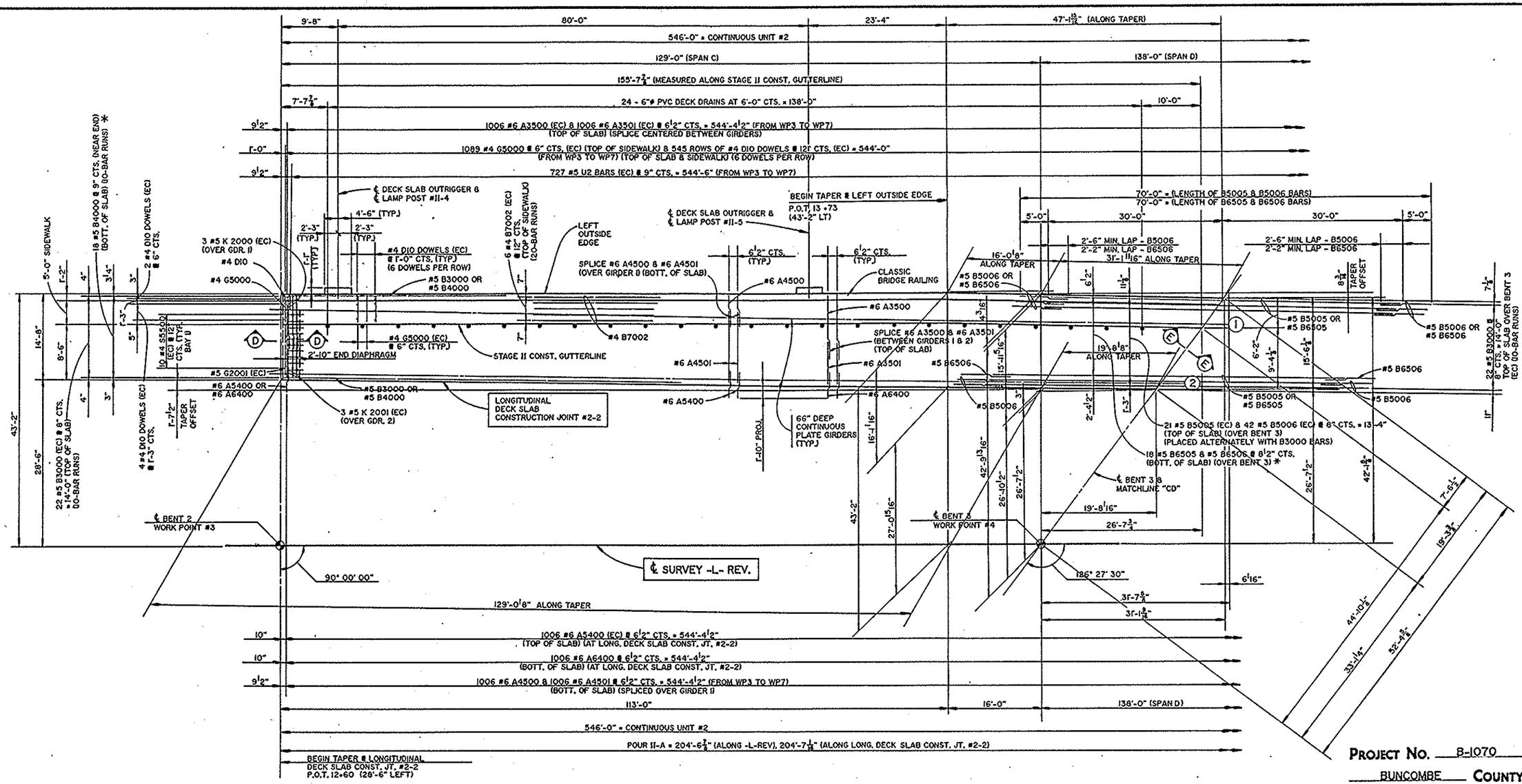
PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 5 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPAN F
(CONTINUOUS UNIT #2)
STAGE I CONSTRUCTION
JUNE 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	5-49
1			3			TOTAL SHEETS
2			4			224



(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING

PLAN OF SPAN C (CONTINUOUS UNIT #2)
STAGE II CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPAN C
(CONTINUOUS UNIT #2)
STAGE II CONSTRUCTION
JUNE 1994

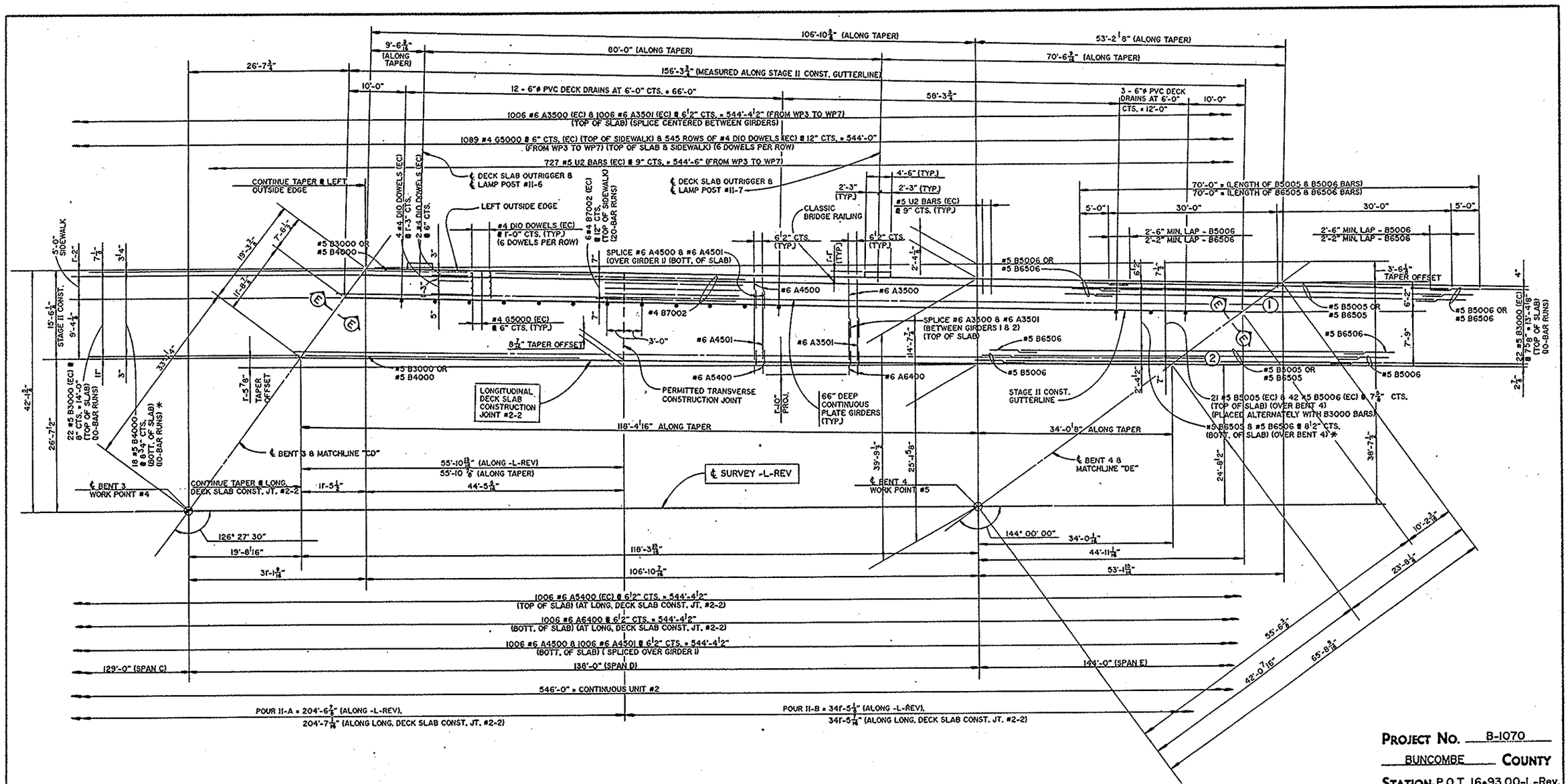
NORTH CAROLINA PROFESSIONAL SEAL 11276 ENGINEER LEONARD GARTH FLETCHER
6/12/96

42.009

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS								SHEET NO.
NO.	BY	DATE	NO.	BY	DATE			S-50
1			3					TOTAL SHEETS
2			4					224

DRAWN BY N. M. WILSON DATE JUNE 94
CHECKED BY CGM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING

PLAN OF SPAN D (CONTINUOUS UNIT #2)
STAGE II CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

PLAN OF SPAN D
(CONTINUOUS UNIT #2)
STAGE II CONSTRUCTION

JUNE 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
6/12/94

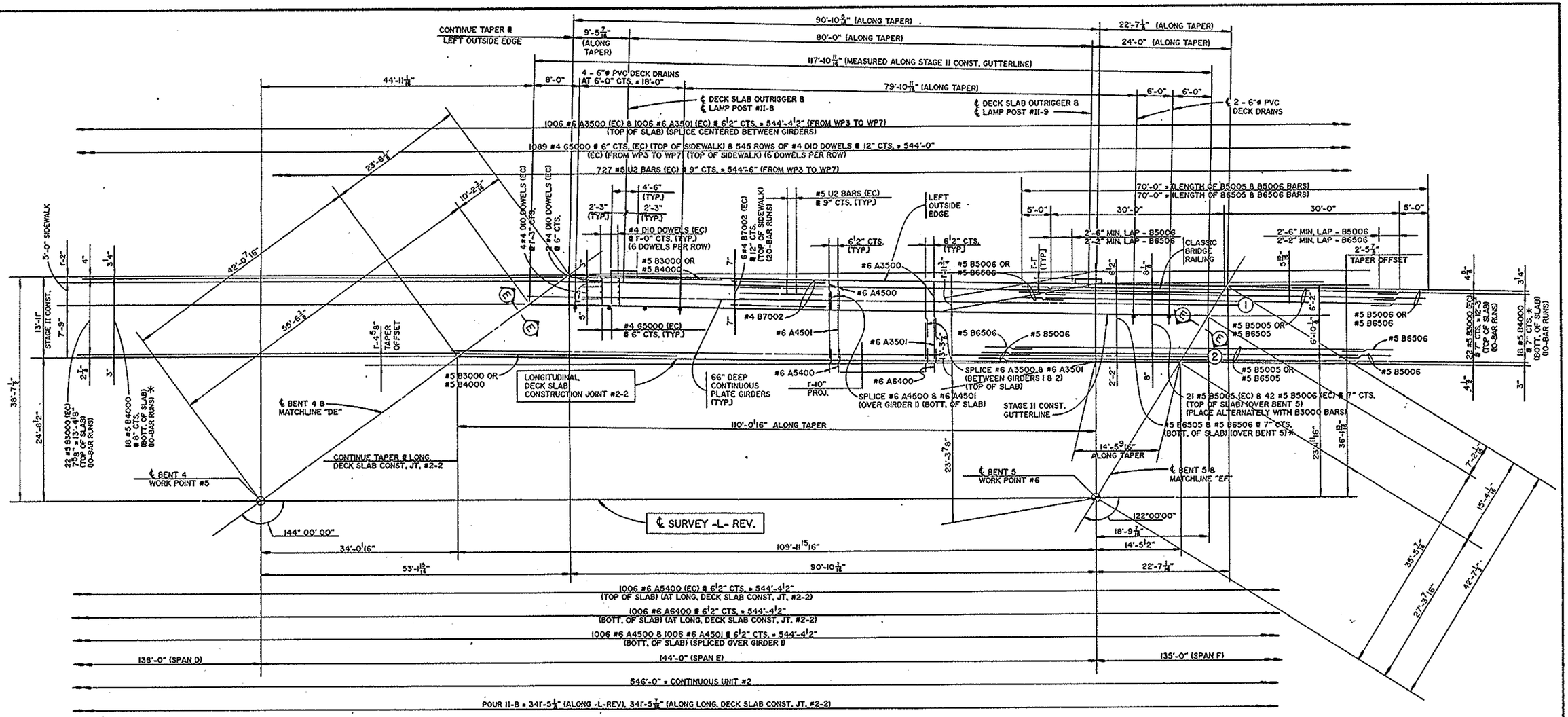
U2.010

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-51
TOTAL SHEETS 224

DRAWN BY N. M. WILSON DATE JUNE 94
CHECKED BY CGM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING

PLAN OF SPAN E (CONTINUOUS UNIT #2)
STAGE II CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

PLAN OF SPAN E
(CONTINUOUS UNIT #2)
STAGE II CONSTRUCTION

JUNE 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

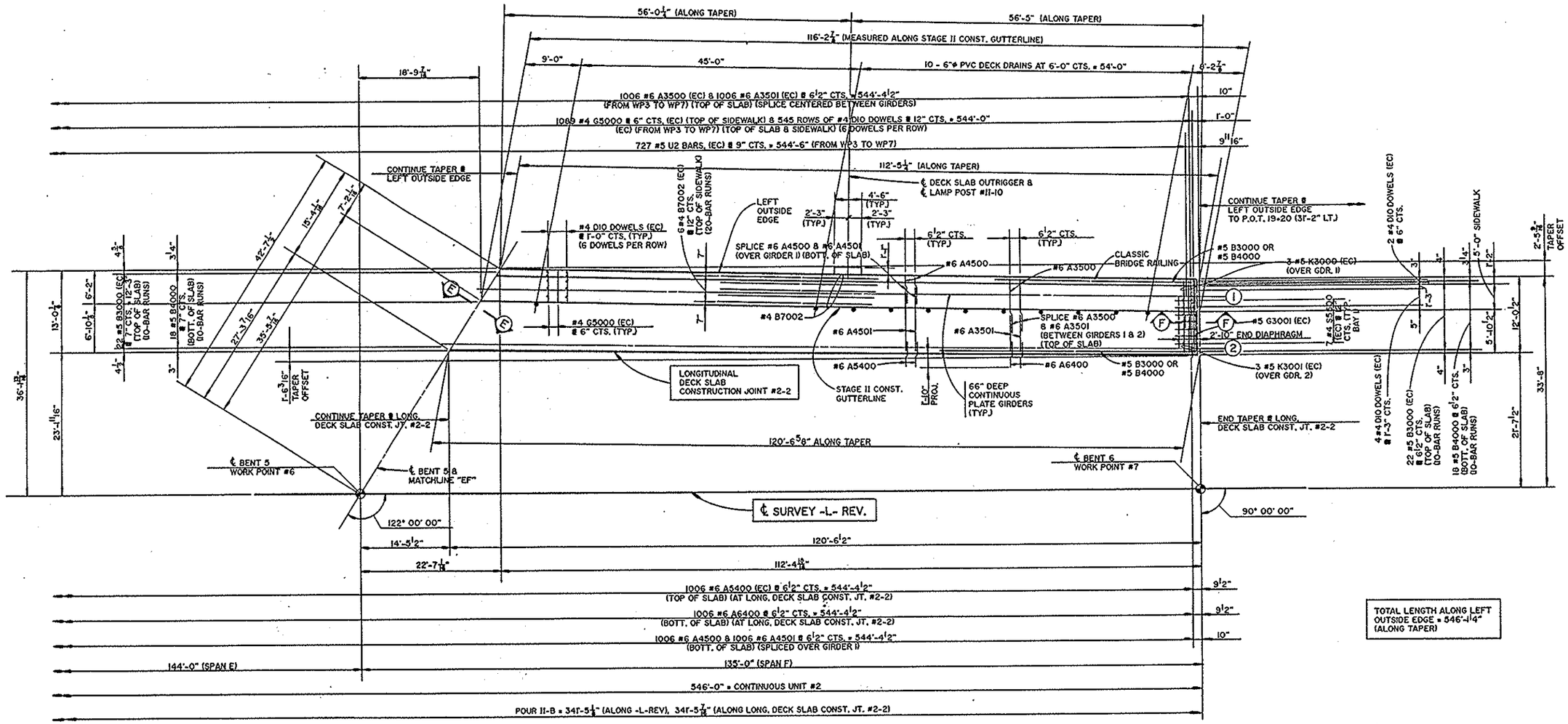
U2.011

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-32
TOTAL SHEETS 224

DRAWN BY N. M. WILSON DATE JUNE 94
CHECKED BY CCM DATE 6/95



TOTAL LENGTH ALONG LEFT OUTSIDE EDGE = 546'-1 1/4" (ALONG TAPER)

(EC) DENOTES EPOXY-COATED REINFORCING STEEL

* SEE TYPICAL SECTION FOR SPACING

PLAN OF SPAN F (CONTINUOUS UNIT #2)
STAGE II CONSTRUCTION

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-Rev.

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

PLAN OF SPAN F
(CONTINUOUS UNIT #2)
STAGE II CONSTRUCTION

JUNE 1994

NORTH CAROLINA PROFESSIONAL SEAL 12779 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U2.012

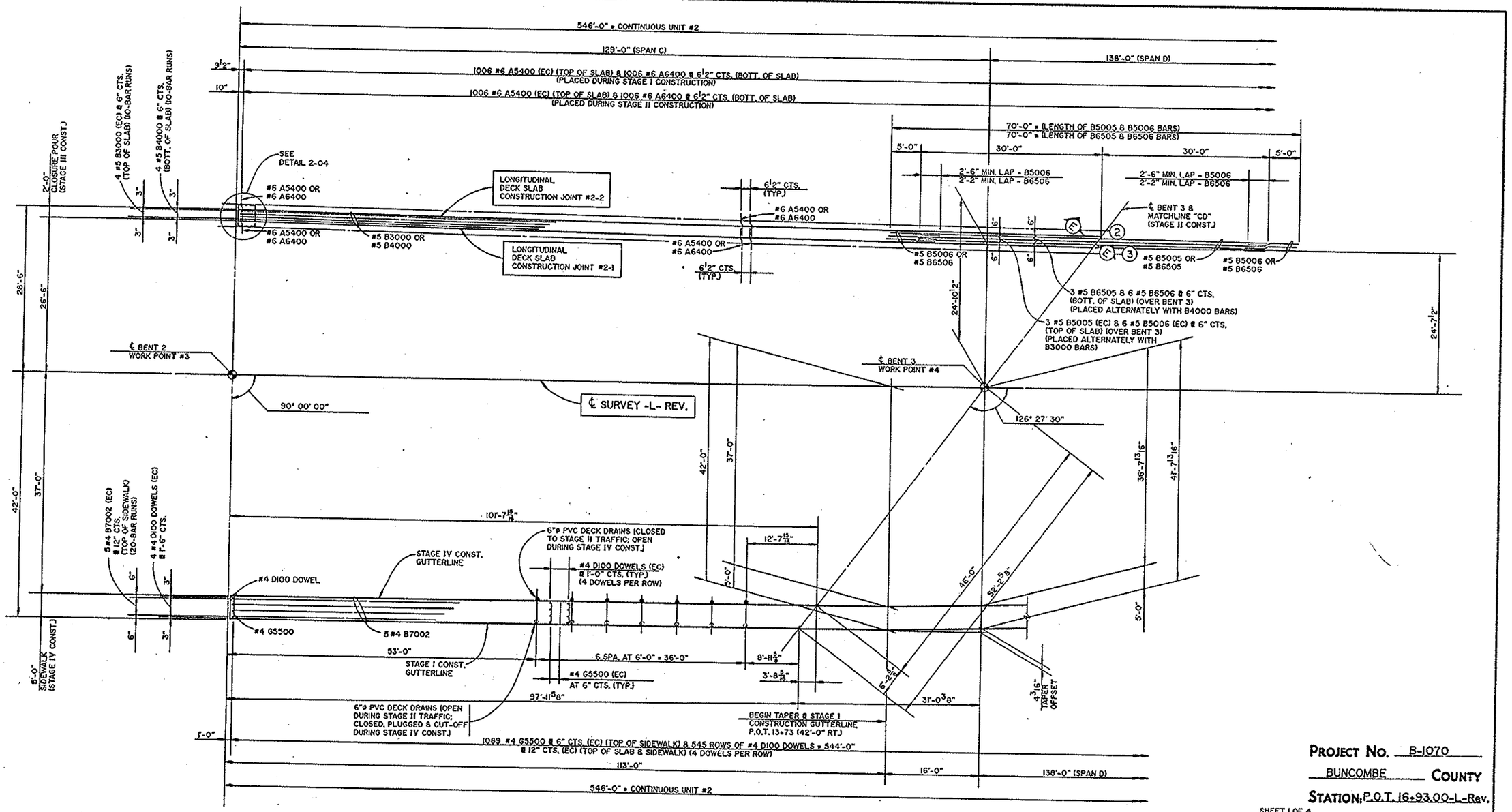
PREPARED BY THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-53

TOTAL SHEETS 224

DRAWN BY N. M. WILSON DATE JUNE 94
CHECKED BY GGM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL

PLAN OF SPAN C (CONTINUOUS UNIT #2)
STAGES III & IV CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPAN C
(CONTINUOUS UNIT #2)
STAGES III & IV CONSTRUCTION
JUNE 1994

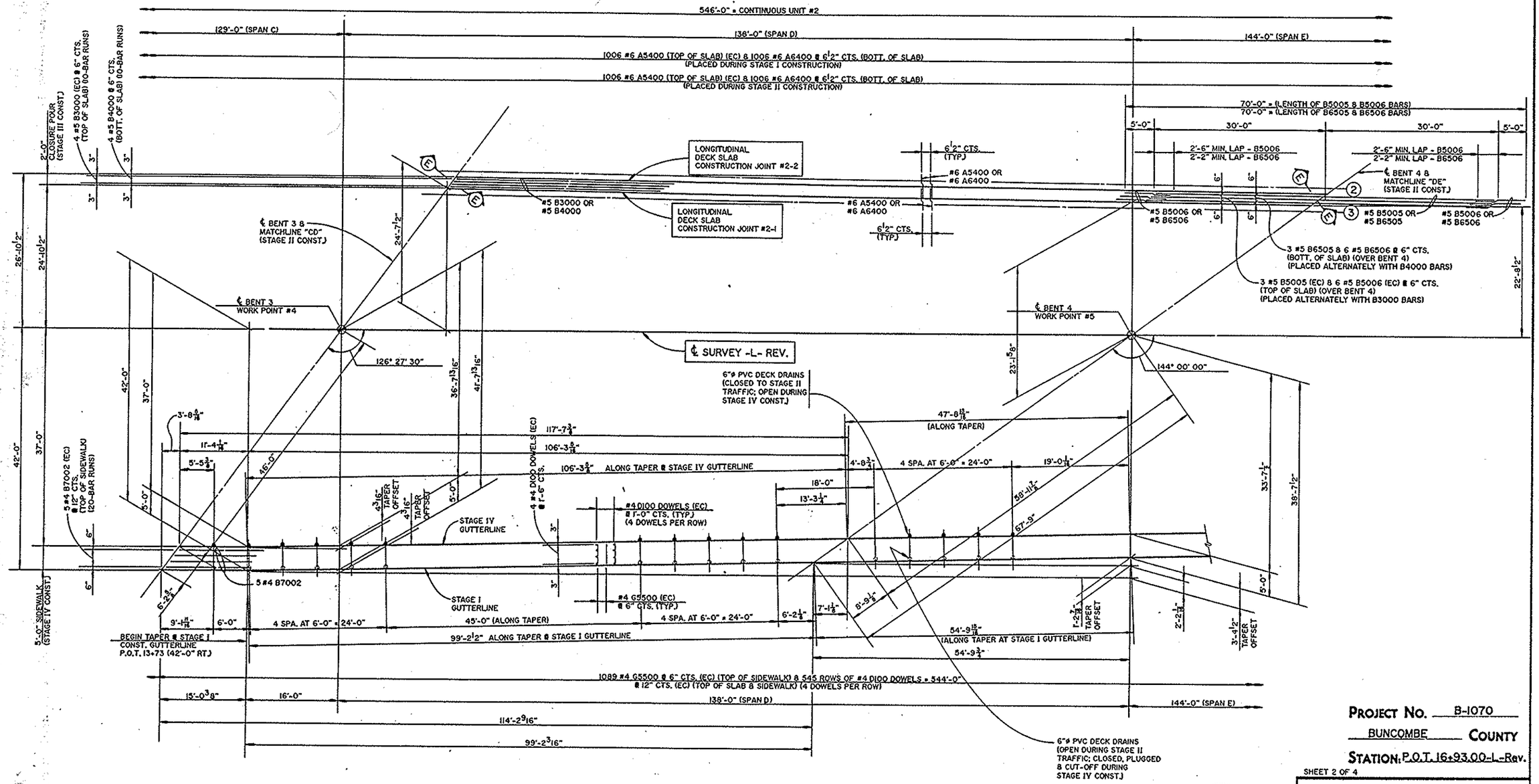
NORTH CAROLINA PROFESSIONAL SEAL 11279 LEONARD GARTH FLETCHER
4/12/96

U2.013

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-54
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. M. WILSON DATE JUNE 94
CHECKED BY CGM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL

PLAN OF SPAN D (CONTINUOUS UNIT #2)
STAGES III & IV CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
PLAN OF SPAN D
(CONTINUOUS UNIT #2)
STAGES III & IV CONSTRUCTION
JUNE 1994

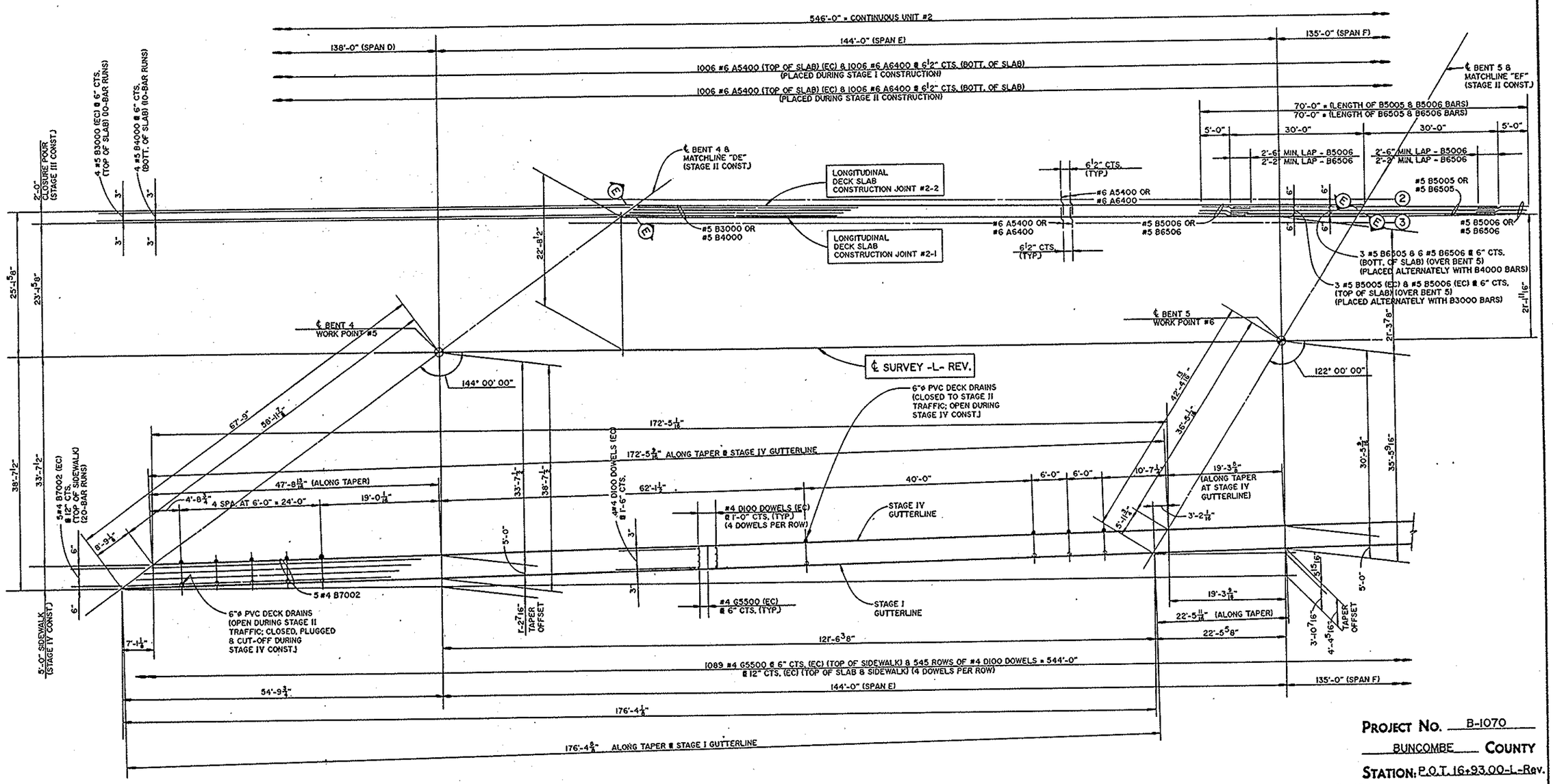
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-55
1			3			TOTAL SHEETS
2			4			224

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD CARTER FLETCHER
4/12/96

U2.014

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

DRAWN BY N. M. WILSON DATE JULY 94
CHECKED BY C.M. DATE 9/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL

PLAN OF SPAN E (CONTINUOUS UNIT #2)
STAGES III & IV CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPAN E
(CONTINUOUS UNIT #2)
STAGES III & IV CONSTRUCTION
JULY 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LAWRENCE GARTH FLETCHER
4/12/96

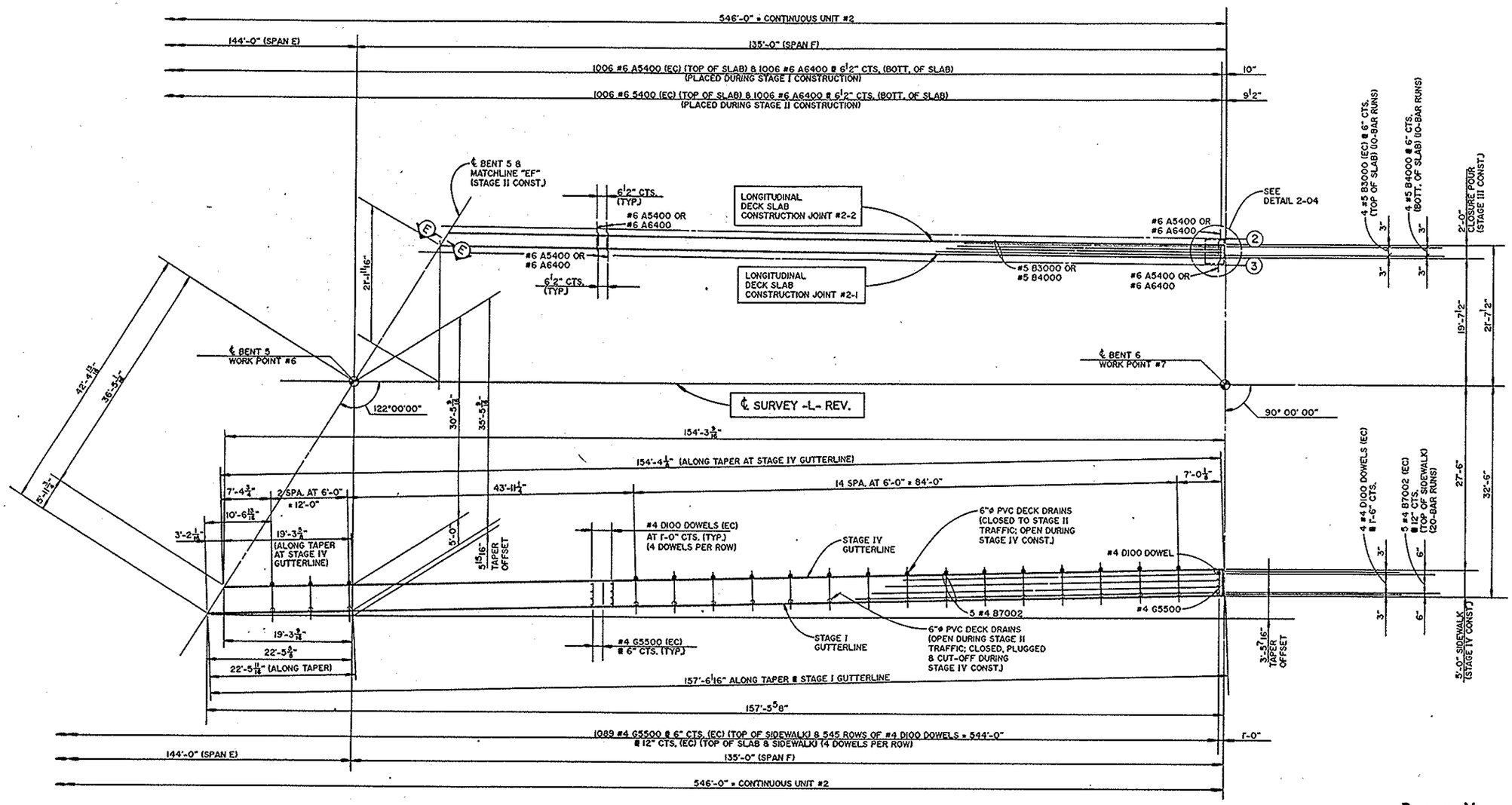
U2.015

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-36
TOTAL SHEETS 224

DRAWN BY N. M. WILSON DATE JULY 94
CHECKED BY CEM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL

PLAN OF SPAN F (CONTINUOUS UNIT #2)
STAGES III & IV CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPAN F
(CONTINUOUS UNIT #2)
STAGES III & IV CONSTRUCTION
JULY 1994

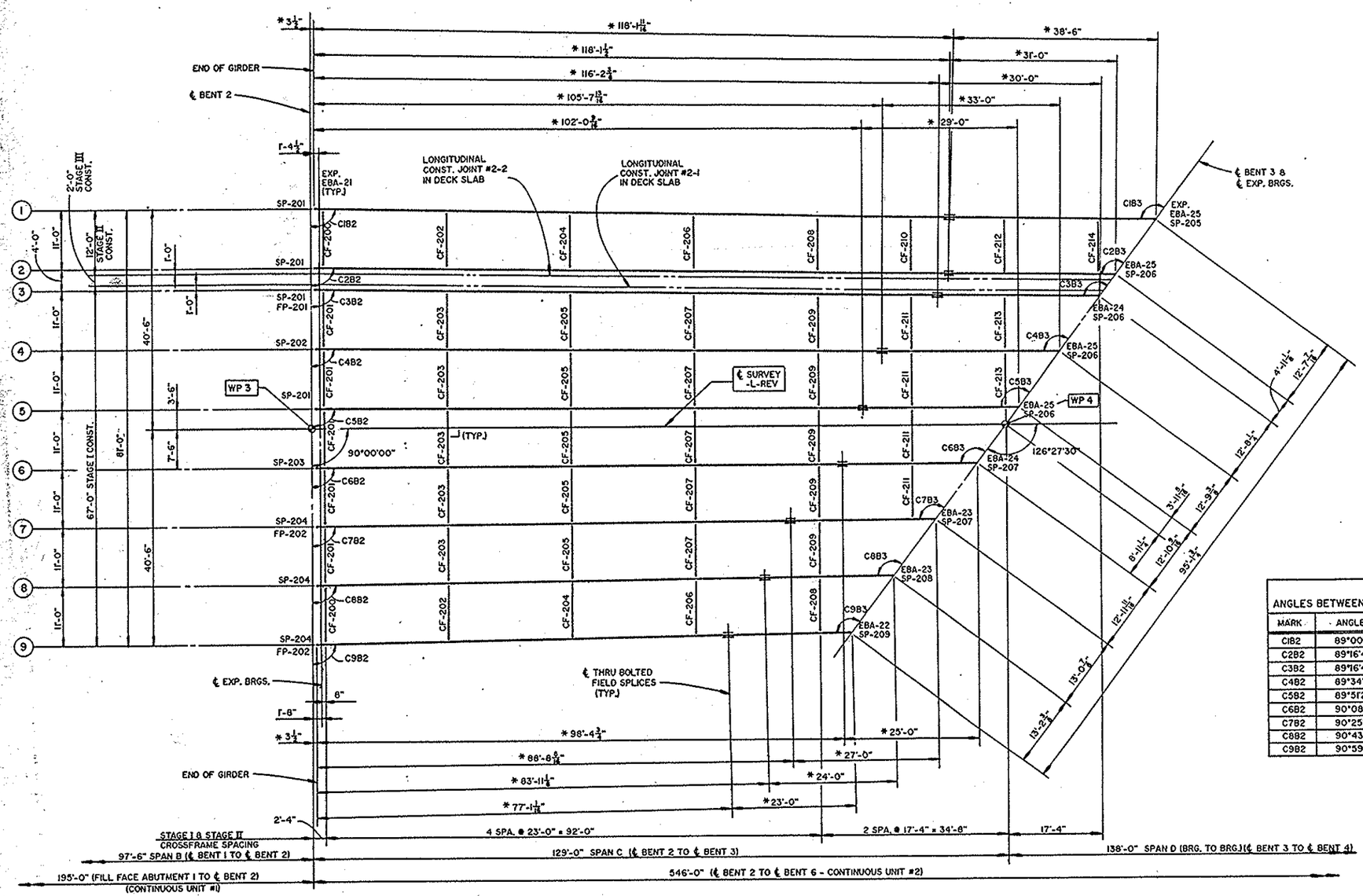
NORTH CAROLINA PROFESSIONAL SEAL 12787 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U2.016

PREPARED BY
THOMPSON • GORDON • SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	5-67
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. M. WILSON DATE JULY 94
CHECKED BY CCM DATE 6/95



SPAN C ANGLES BETWEEN ℄ GIRDERS AND ℄ BEARINGS			
MARK	ANGLE	MARK	ANGLE
C1B2	89°00'12"	C1B3	125°27'42"
C2B2	89°16'43"	C2B3	125°44'13"
C3B2	89°16'43"	C3B3	125°44'13"
C4B2	89°34'02"	C4B3	126°01'32"
C5B2	89°51'21"	C5B3	126°18'51"
C6B2	90°08'39"	C6B3	126°36'09"
C7B2	90°25'58"	C7B3	126°53'28"
C8B2	90°43'17"	C8B3	127°10'47"
C9B2	90°59'48"	C9B3	127°27'18"

* THESE DIMENSIONS ARE MEASURED ALONG ℄ GIRDER HORIZONTALLY.

FRAMING PLAN - SPAN C - STAGES I, II & III CONST.

GIRDER LENGTHS FOR UNIT #2	
1 9	* 545'-6"
2 3 8	* 545'-5 1/4"
4 7	* 545'-5 3/16"
5 6	* 545'-5"

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
FRAMING PLAN - SPAN C (CONTINUOUS UNIT #2) STAGES I, II & III CONST.
JULY 1994

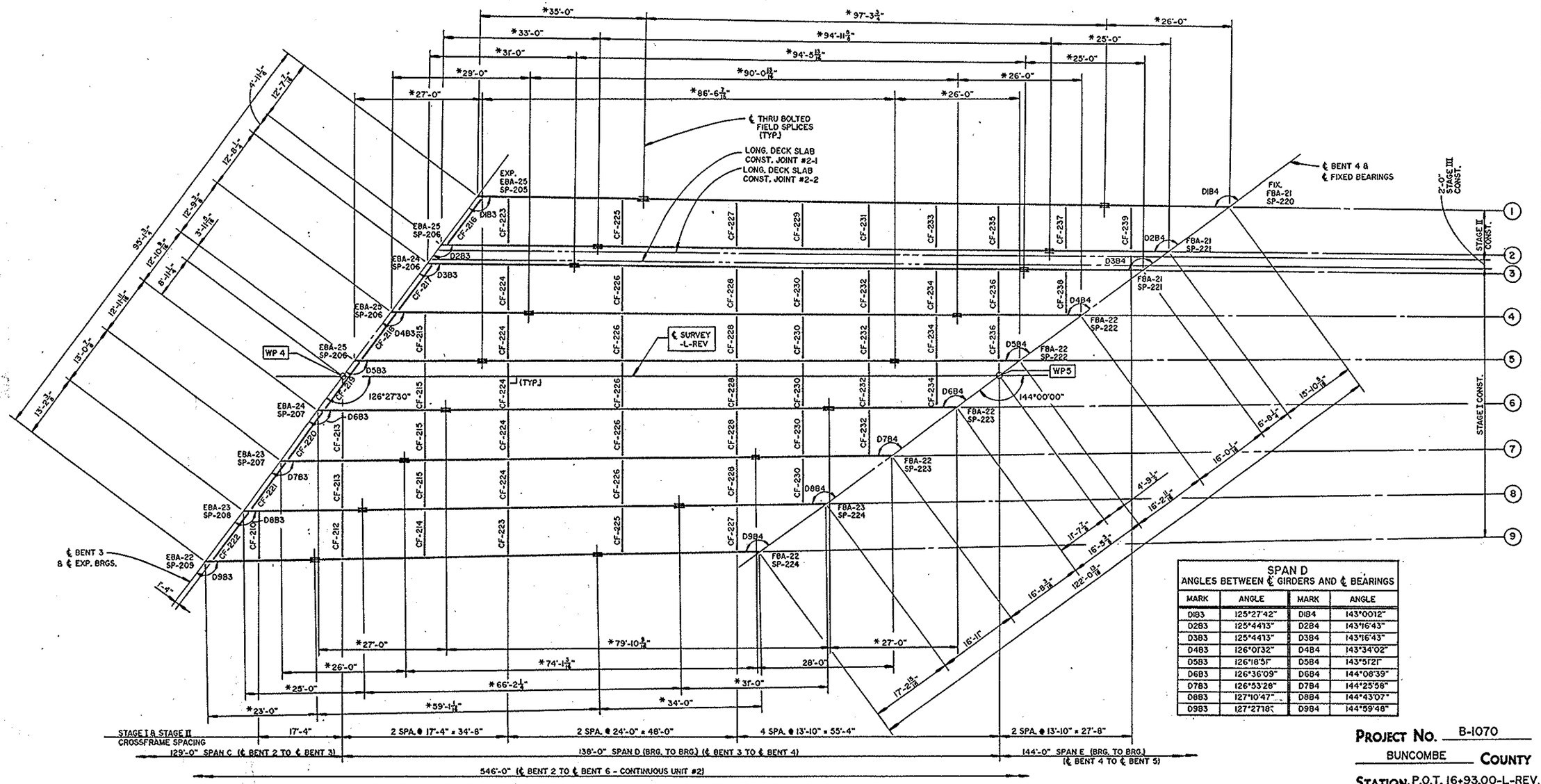
NORTH CAROLINA PROFESSIONAL SEAL 12779 ENGINEER LEONARD GARTH FLETCHER
4/12/96

J2.017

PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-58
1			3			TOTAL SHEETS
2			4			224

DRAWN BY RTJ DATE 7-94
CHECKED BY GCM DATE 6/95



SPAN D ANGLES BETWEEN ℄ GIRDERS AND ℄ BEARINGS			
MARK	ANGLE	MARK	ANGLE
D1B3	125°27'42"	D1B4	143°00'12"
D2B3	125°44'13"	D2B4	143°16'43"
D3B3	125°44'13"	D3B4	143°16'43"
D4B3	126°01'32"	D4B4	143°34'02"
D5B3	126°18'51"	D5B4	143°51'21"
D6B3	126°36'09"	D6B4	144°08'39"
D7B3	126°53'28"	D7B4	144°25'58"
D8B3	127°10'47"	D8B4	144°43'07"
D9B3	127°27'18"	D9B4	144°59'48"

* THESE DIMENSIONS ARE MEASURED ALONG ℄ GIRDER HORIZONTALLY.

FRAMING PLAN - SPAN D - STAGES I, II & III CONST.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV.

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
FRAMING PLAN - SPAN D (CONTINUOUS UNIT #2) STAGES I, II & III CONST.
JULY 1994

NORTH CAROLINA PROFESSIONAL SEAL 12279 ENGINEER LENDO GARTH FLETCHER
4/12/96

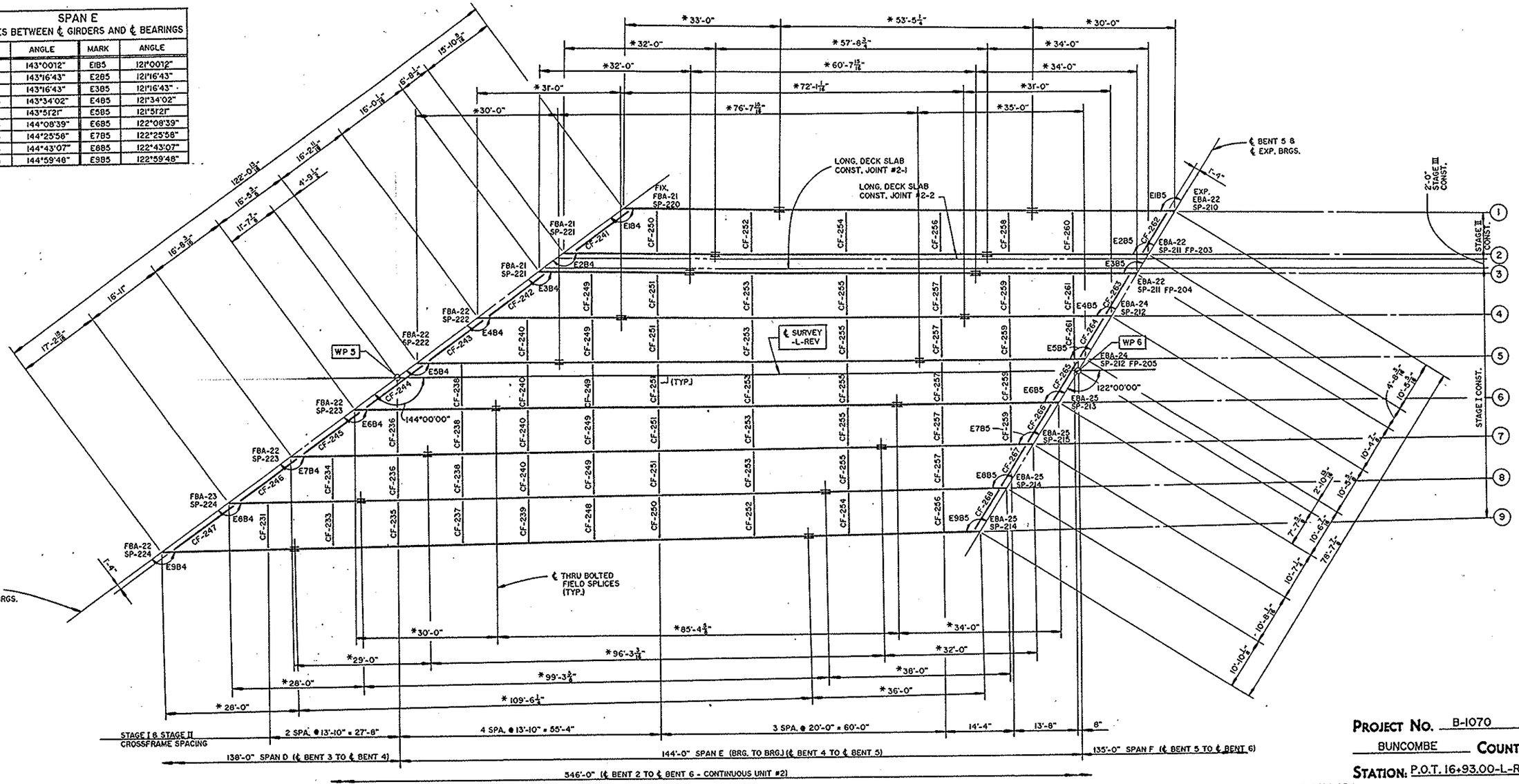
U2.018

PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-59
1			3			TOTAL SHEETS
2			4			224

DRAWN BY RT DATE 6-94
CHECKED BY SCM DATE 6/95

SPAN E ANGLES BETWEEN ℄ GIRDERS AND ℄ BEARINGS			
MARK	ANGLE	MARK	ANGLE
E1B4	143°00'12"	E1B5	121°00'12"
E2B4	143°16'43"	E2B5	121°16'43"
E3B4	143°16'43"	E3B5	121°16'43"
E4B4	143°34'02"	E4B5	121°34'02"
E5B4	143°51'21"	E5B5	121°51'21"
E6B4	144°08'39"	E6B5	122°08'39"
E7B4	144°25'58"	E7B5	122°25'58"
E8B4	144°43'07"	E8B5	122°43'07"
E9B4	144°59'46"	E9B5	122°59'48"



* THESE DIMENSIONS ARE MEASURED ALONG ℄ GIRDER HORIZONTALLY.

FRAMING PLAN - SPAN E - STAGES I, II & III CONST.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
FRAMING PLAN - SPAN E
(CONTINUOUS UNIT #2)
STAGES I, II & III CONST.
JULY 1994

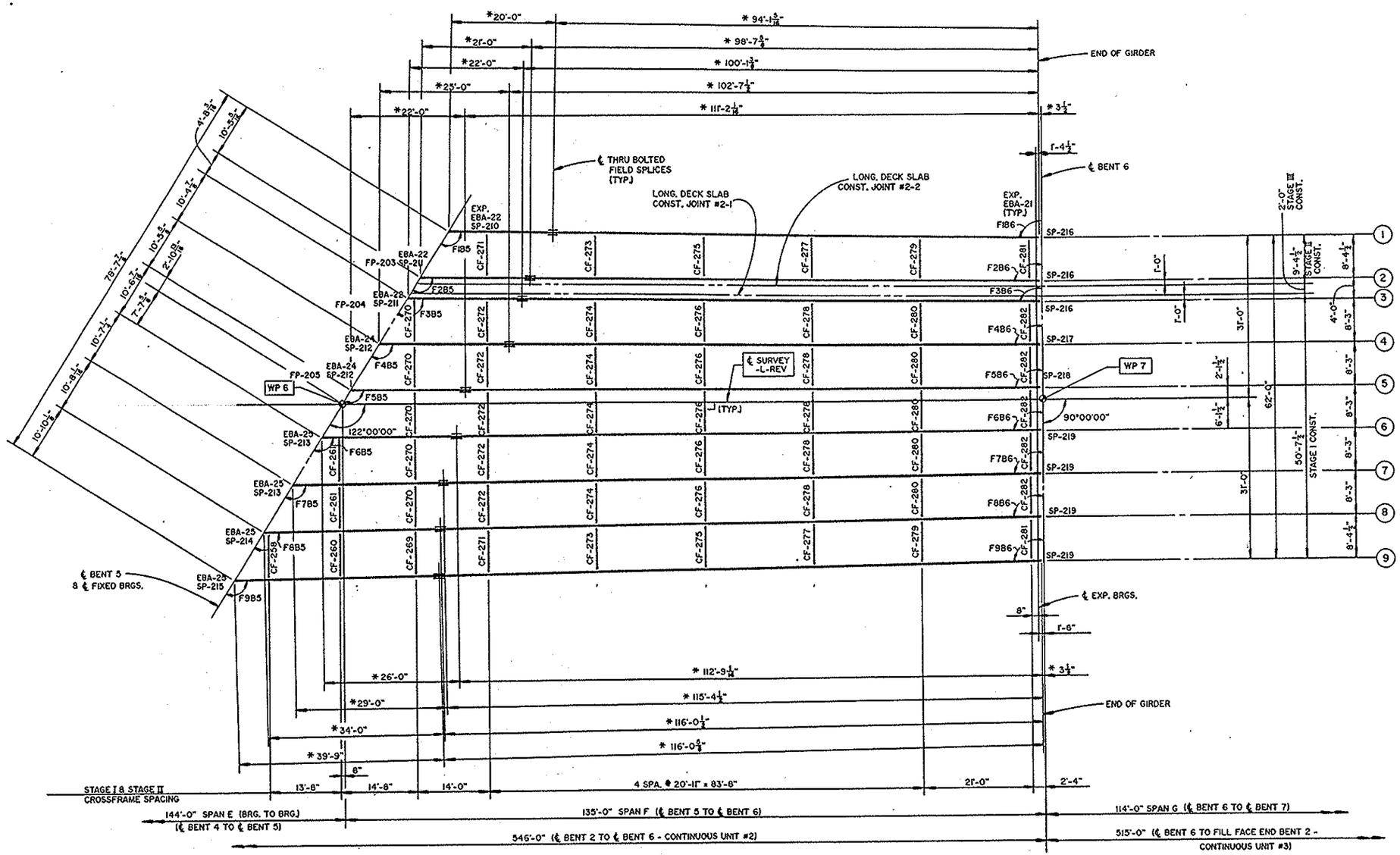
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

42.019

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-60
1			3			TOTAL SHEETS
2			4			224

DRAWN BY RT DATE 9-94
CHECKED BY CCM DATE 6/95



SPAN F ANGLES BETWEEN ℄ GIRDERS AND ℄ BEARINGS			
MARK	ANGLE	MARK	ANGLE
F185	121°00'12"	F186	89°00'12"
F285	121°16'43"	F286	89°16'43"
F385	121°16'43"	F386	89°16'43"
F485	121°34'02"	F486	89°34'02"
F585	121°51'21"	F586	89°51'21"
F685	122°08'39"	F686	90°08'39"
F785	122°25'58"	F786	90°25'58"
F885	122°43'07"	F886	90°43'17"
F985	122°59'48"	F986	90°59'48"

* THESE DIMENSIONS ARE MEASURED ALONG ℄ GIRDER HORIZONTALLY.

FRAMING PLAN - SPAN F - STAGES I, II & III CONST.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
FRAMING PLAN - SPAN F
(CONTINUOUS UNIT #2)
STAGES I, II & III CONST.
JULY 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER RICHARD GARTH FLETCHER
4/12/96

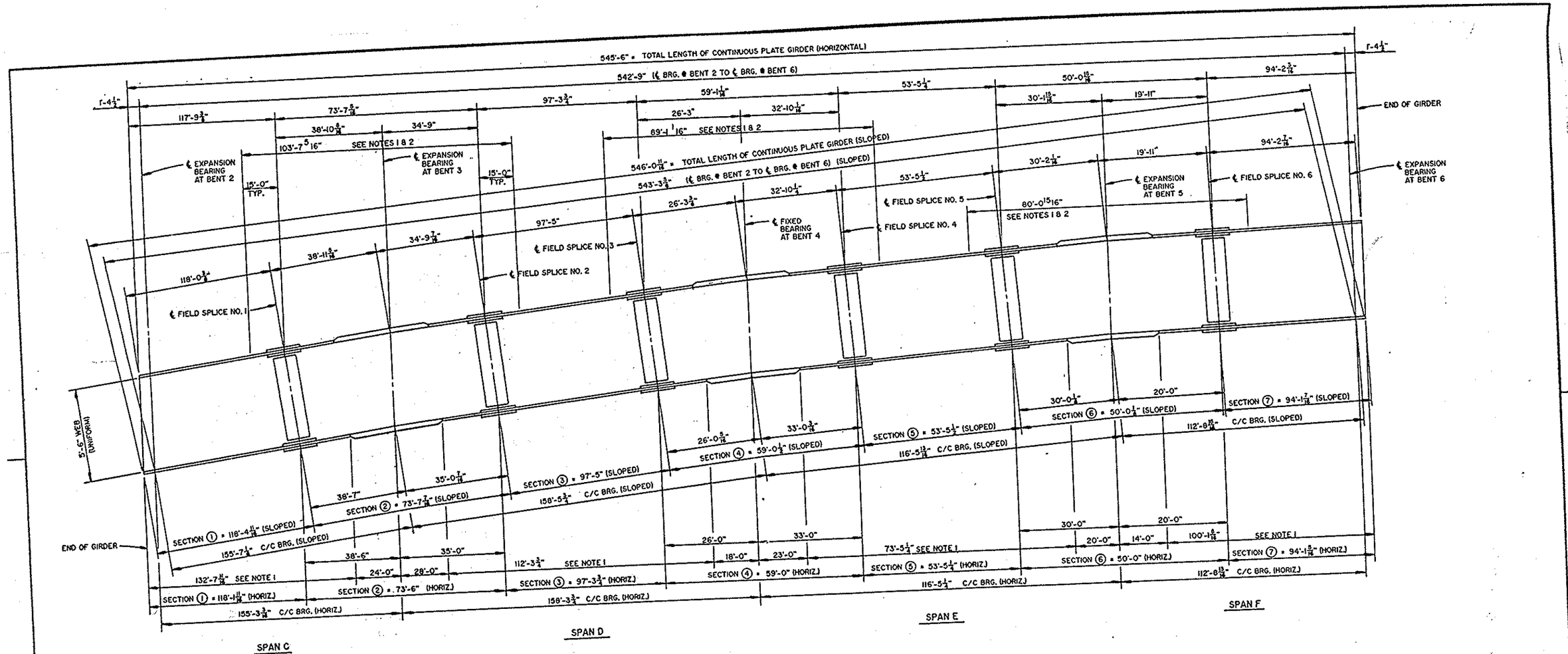
42.020

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-61
TOTAL SHEETS 224

DRAWN BY RTJ DATE 6-94
CHECKED BY CGM DATE 6/95



GIRDER 1 ELEVATION

NOTE 1: CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2: NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.

PROJECT NO. 8-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 1 OF 27

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEWIS GARTH FLETCHER
4/12/96

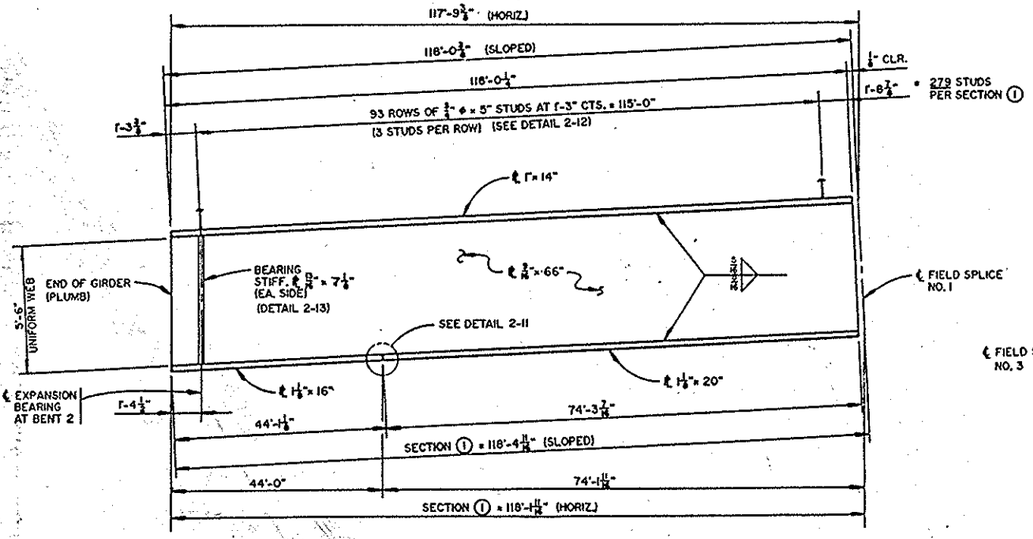
U2.021

PREPARED BY
THOMPSON · BORDON · SHOOK ENGINEERS, INCORPORATED

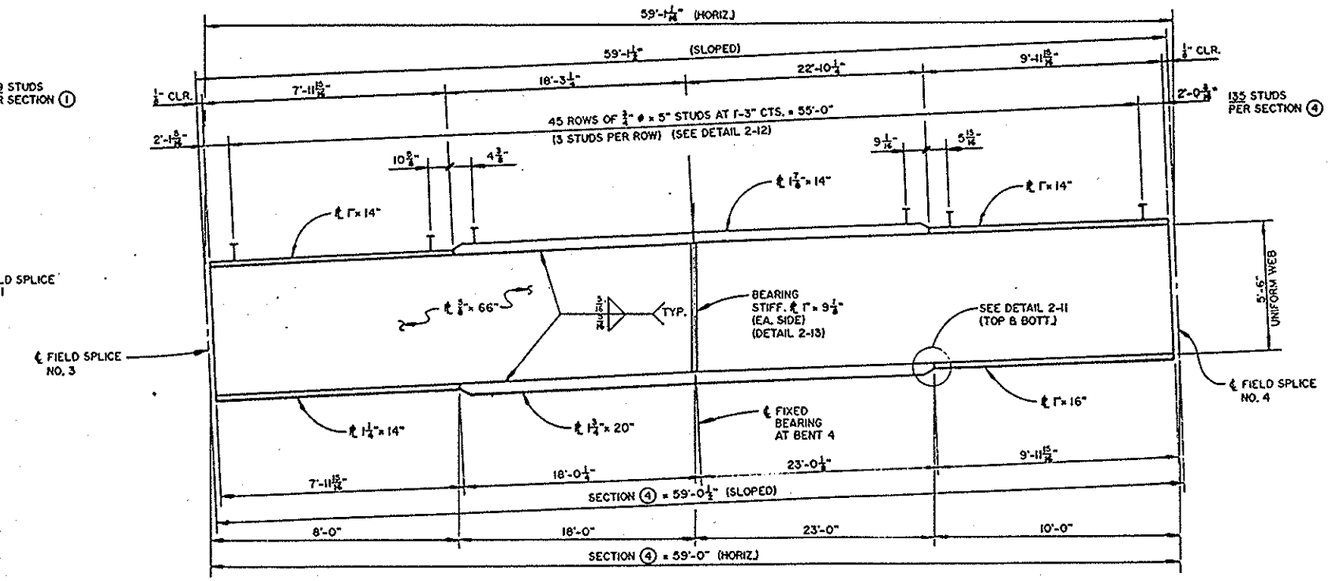
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 1 ELEVATION
CONTINUOUS UNIT #2
JULY 1994

REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	SHEET NO. S-62
1			3			TOTAL SHEETS 224
2			4			

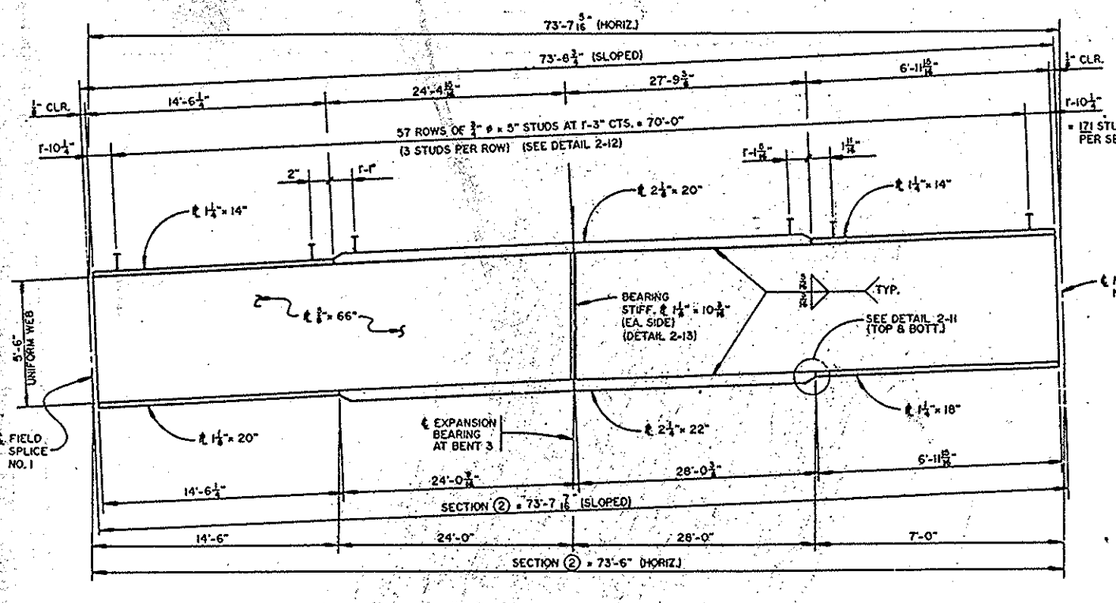
DRAWN BY RTJ DATE 1-94
CHECKED BY CGM DATE 6/95



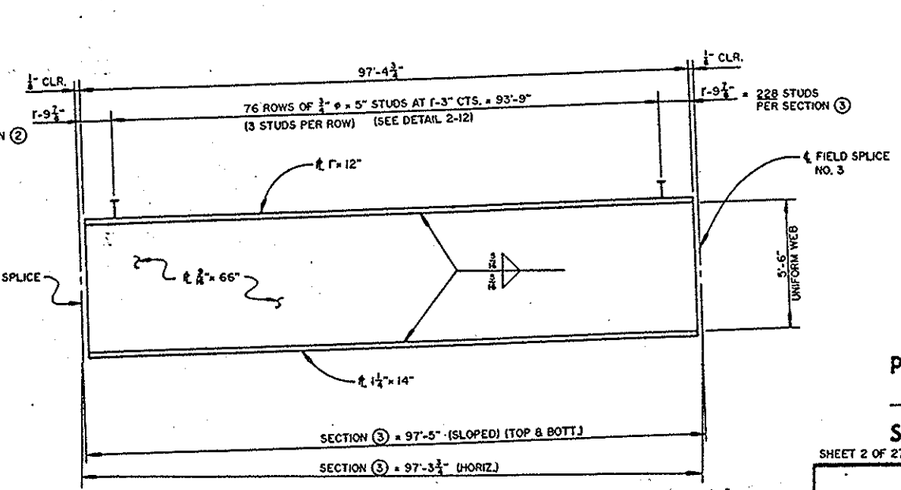
GIRDER SECTION 1 - 1 REQ'D.



GIRDER SECTION 4 - 1 REQ'D.



GIRDER SECTION 2 - 1 REQ'D.



GIRDER SECTION 3 - 1 REQ'D.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U2.022

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

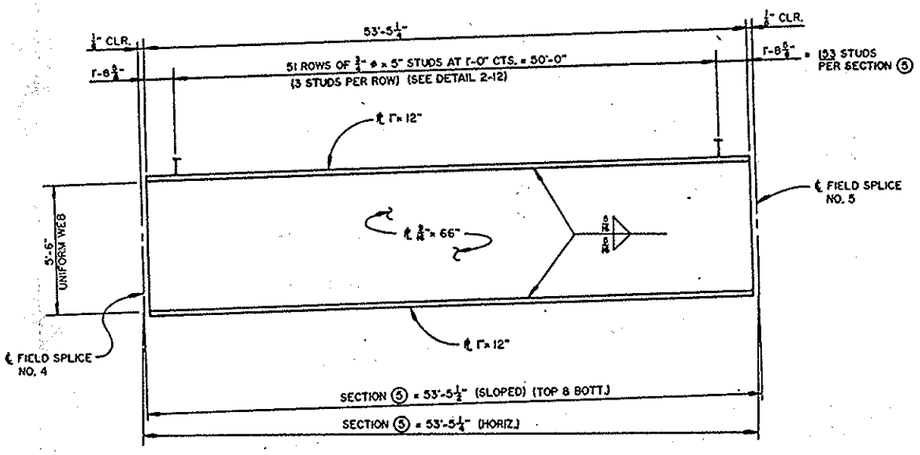
DRAWN BY: RTJ DATE: 5-96
CHECKED BY: CGM DATE: 6/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

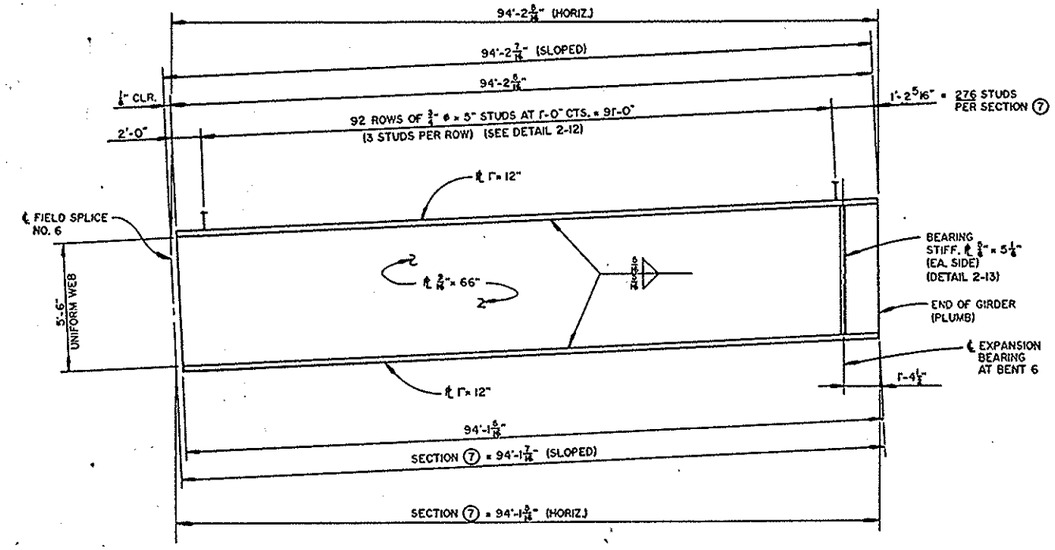
SHEET 2 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 1 DETAILS
CONTINUOUS UNIT #2
AUGUST 1994

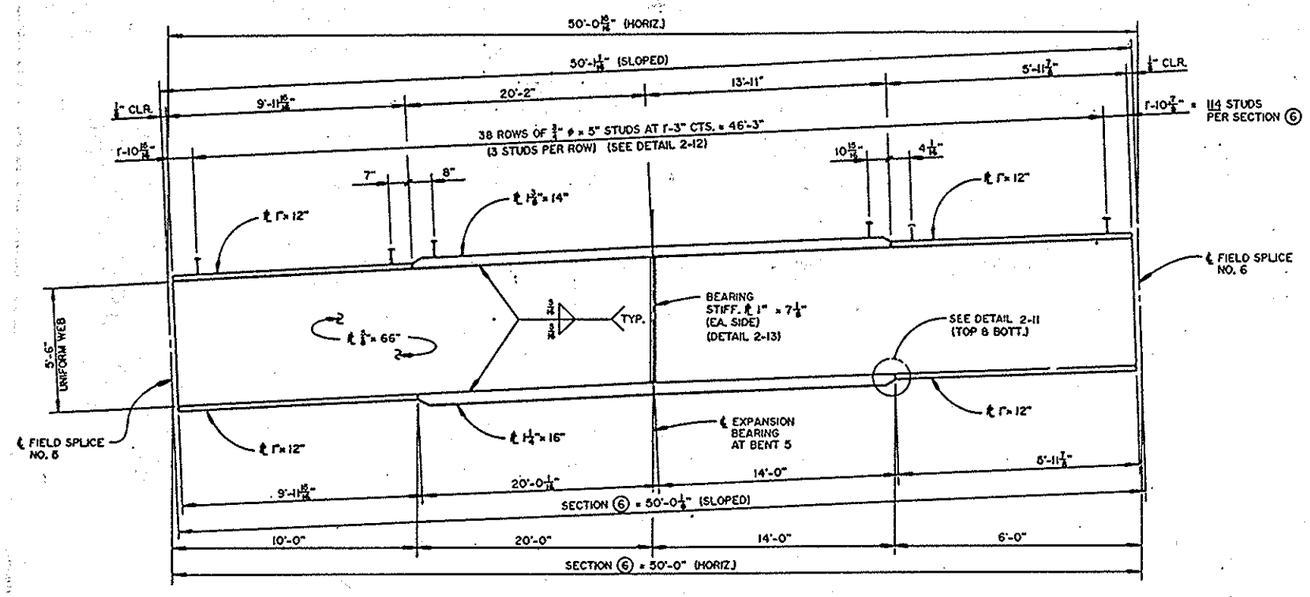
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-63
1			3			TOTAL SHEETS
2			4			224



GIRDER SECTION 5 - 1 REQ'D.



GIRDER SECTION 7 - 1 REQ'D.



GIRDER SECTION 6 - 1 REQ'D.

DRAWN BY RTJ DATE 8-94
CHECKED BY CCM DATE 6/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV
SHEET 3 OF 27

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER EDWARD GARTH FLETCHER
4/12/96

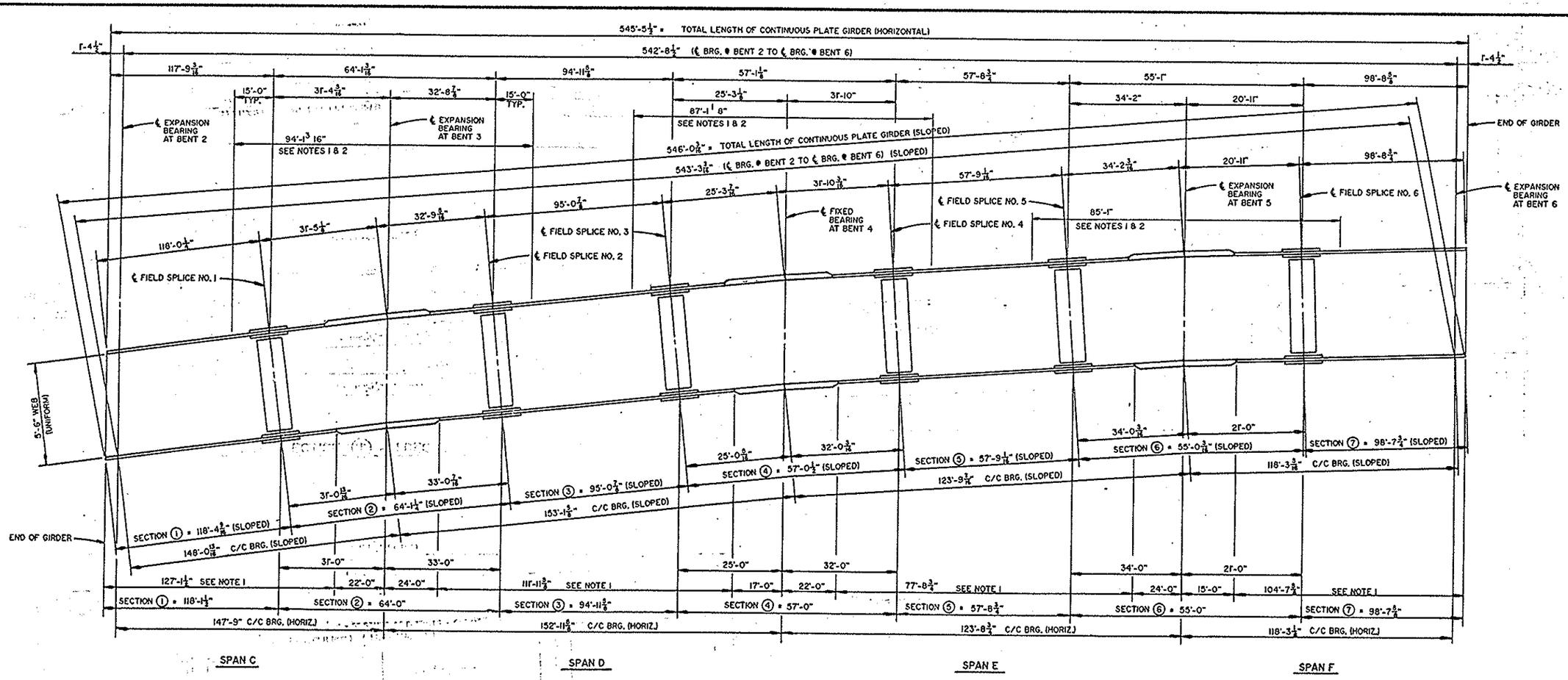
U2.023

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 1 DETAILS
CONTINUOUS UNIT #2
AUGUST 1994

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

SHEET NO. S-64
TOTAL SHEETS 224



GIRDER 2 ELEVATION

NOTE 1: CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2: NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 4 OF 27

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

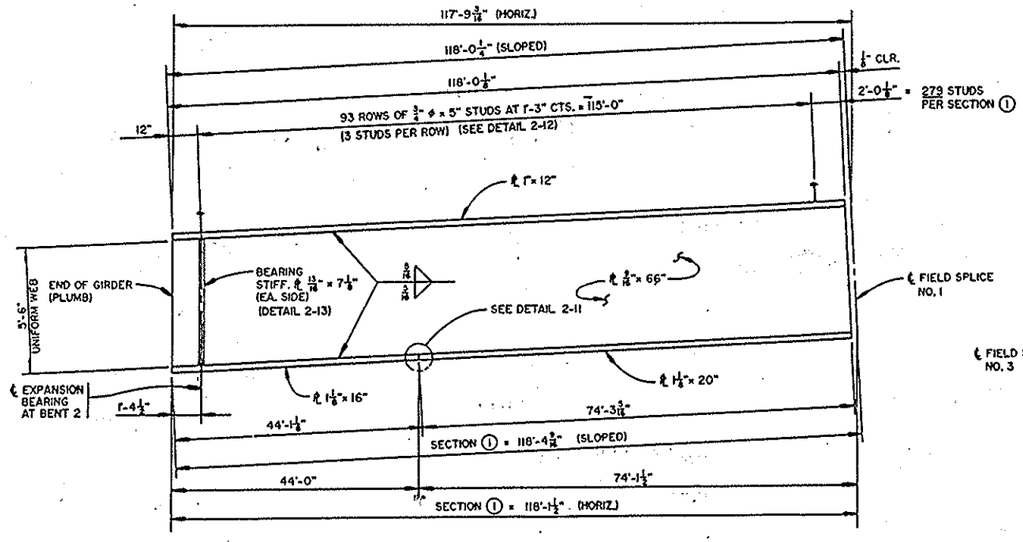
42.024
PREPARED BY
THOMPSON • BORDON • SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 2 ELEVATION
CONTINUOUS UNIT #2
JULY 1994

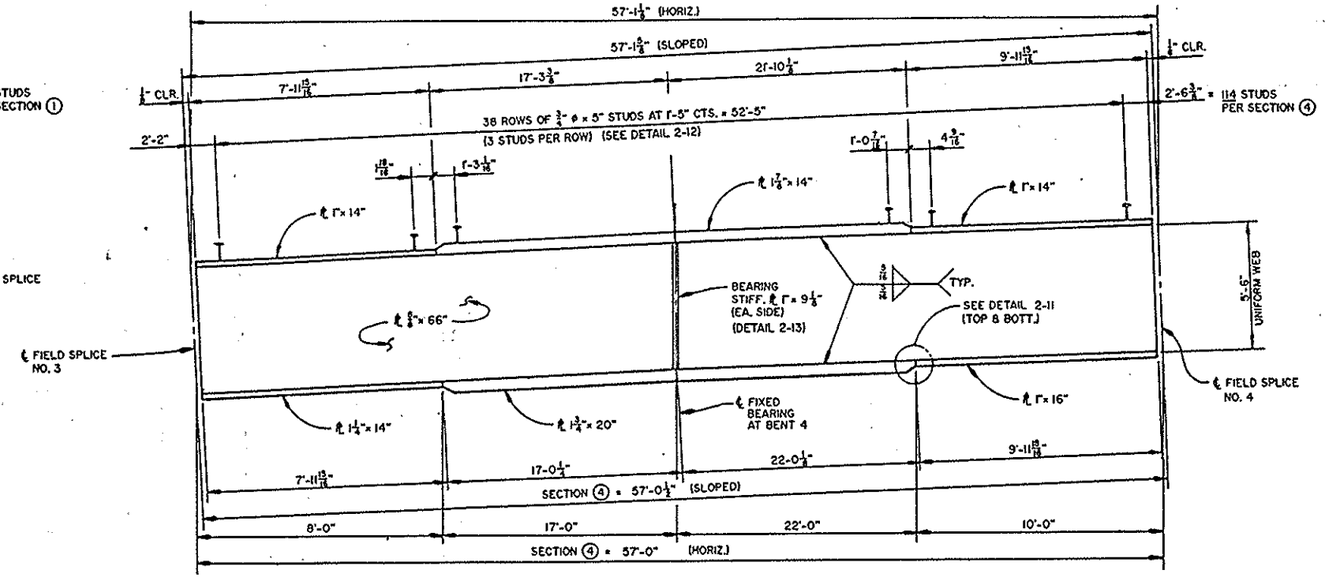
REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

SHEET NO. S-65
TOTAL SHEETS 224

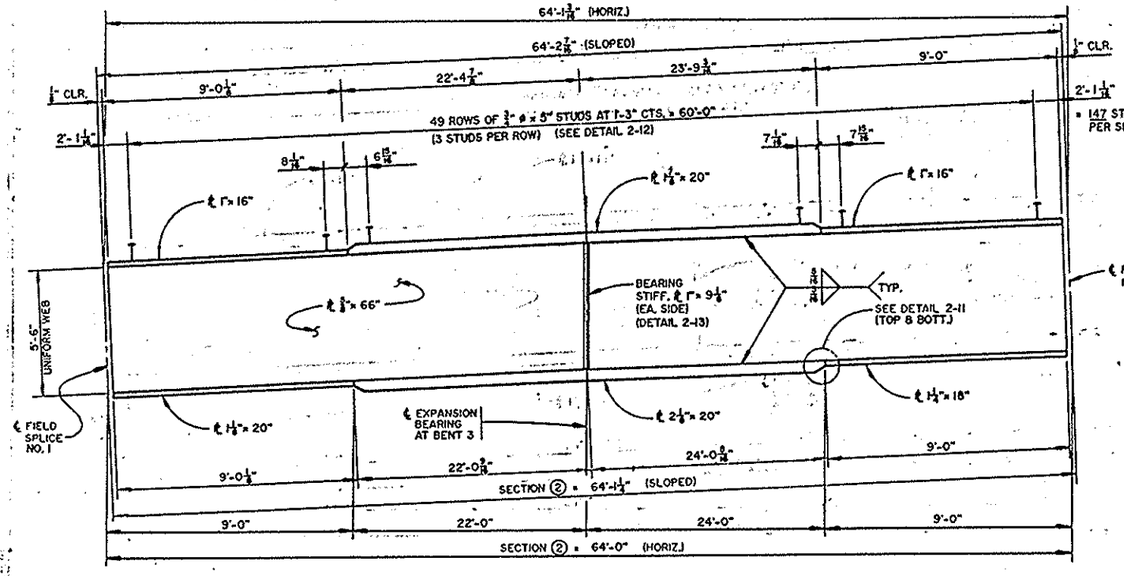
DRAWN BY BTL DATE 7-94
CHECKED BY GM DATE 6/95



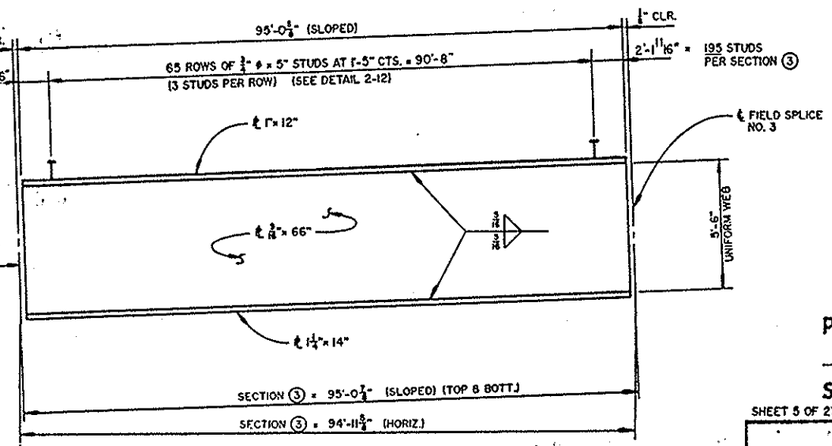
GIRDER SECTION 1 - 1 REQ'D.



GIRDER SECTION 4 - 1 REQ'D.



GIRDER SECTION 2 - 1 REQ'D.



GIRDER SECTION 3 - 1 REQ'D.

NORTH CAROLINA PROFESSIONAL SEAL 12717 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U2.028

PREPARED BY
THOMPSON - BORDON - SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

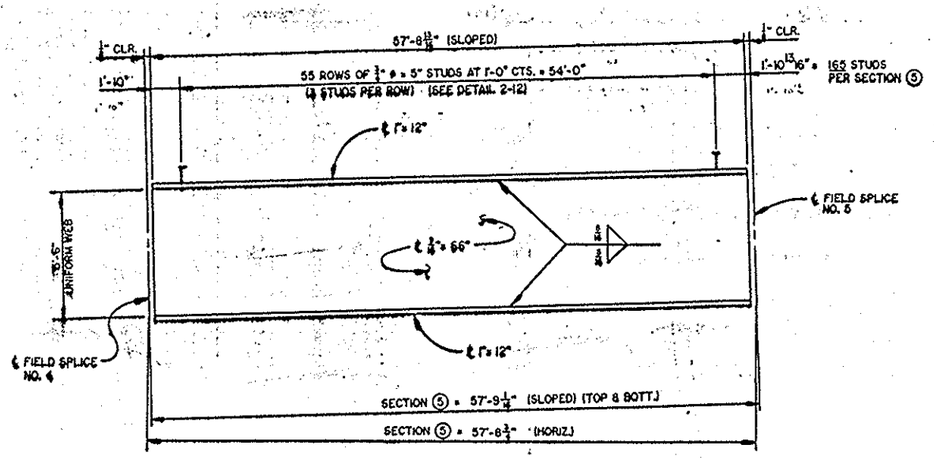
SHEET 5 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 2 DETAILS
CONTINUOUS UNIT #2
JULY 1994

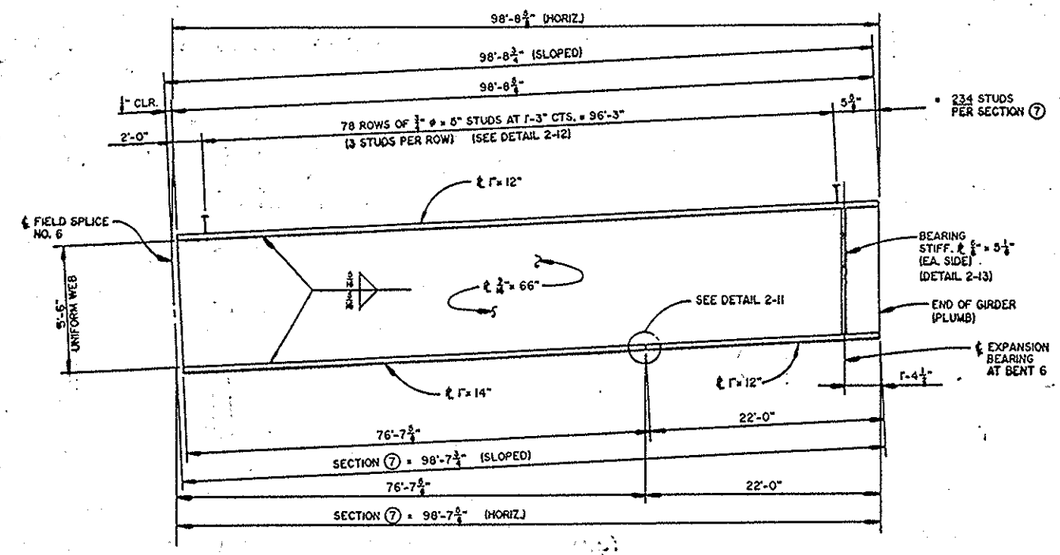
REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

SHEET NO. 5-26
TOTAL SHEETS 224

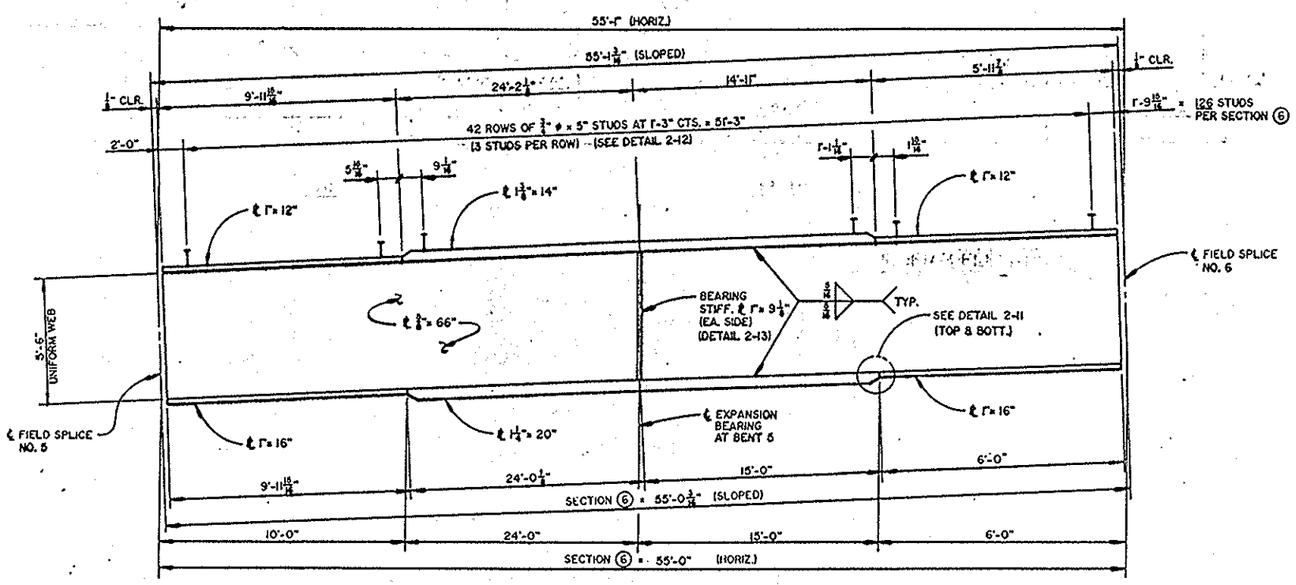
DRAWN BY: KTL DATE: 7-94
CHECKED BY: CCM DATE: 6/95



GIRDER SECTION 5 - 1 REQ'D.



GIRDER SECTION 7 - 1 REQ'D.



GIRDER SECTION 6 - 1 REQ'D.

DRAWN BY: DTL DATE: 7-24-95
CHECKED: SEM DATE: 6/95

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FELTSKOG
6/12/96

02.026
PREPARED BY
THOMPSON • GORDON • SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

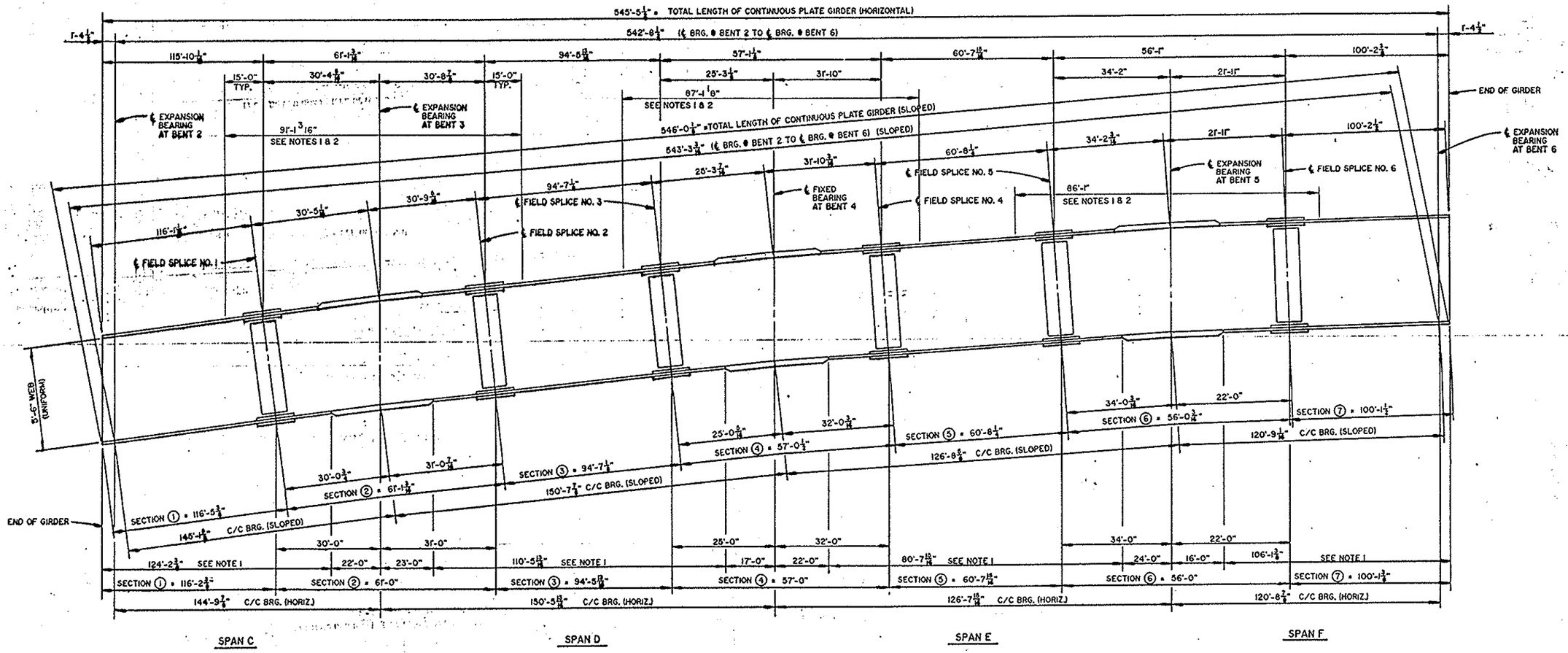
SHEET 6 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER 2 DETAILS
CONTINUOUS UNIT #2

JULY 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-6
1			3			TOTAL SHEETS
2			4			224



GIRDER 3 ELEVATION

NOTE 1: CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2: NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH HATCHER
4/12/96

U2.027

PREPARED BY
THOMPSON · GORDON · SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 7 OF 27

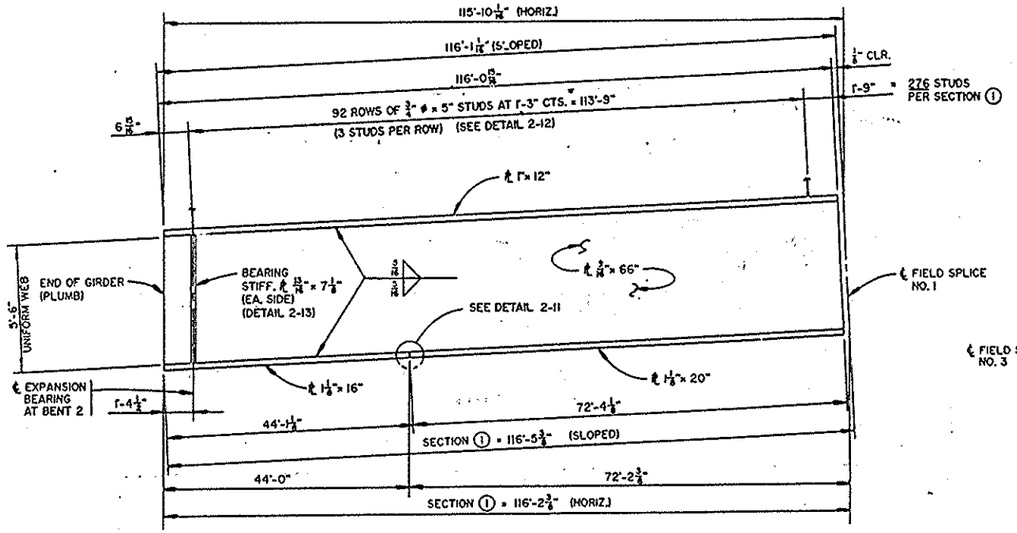
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER 3 ELEVATION
CONTINUOUS UNIT #2

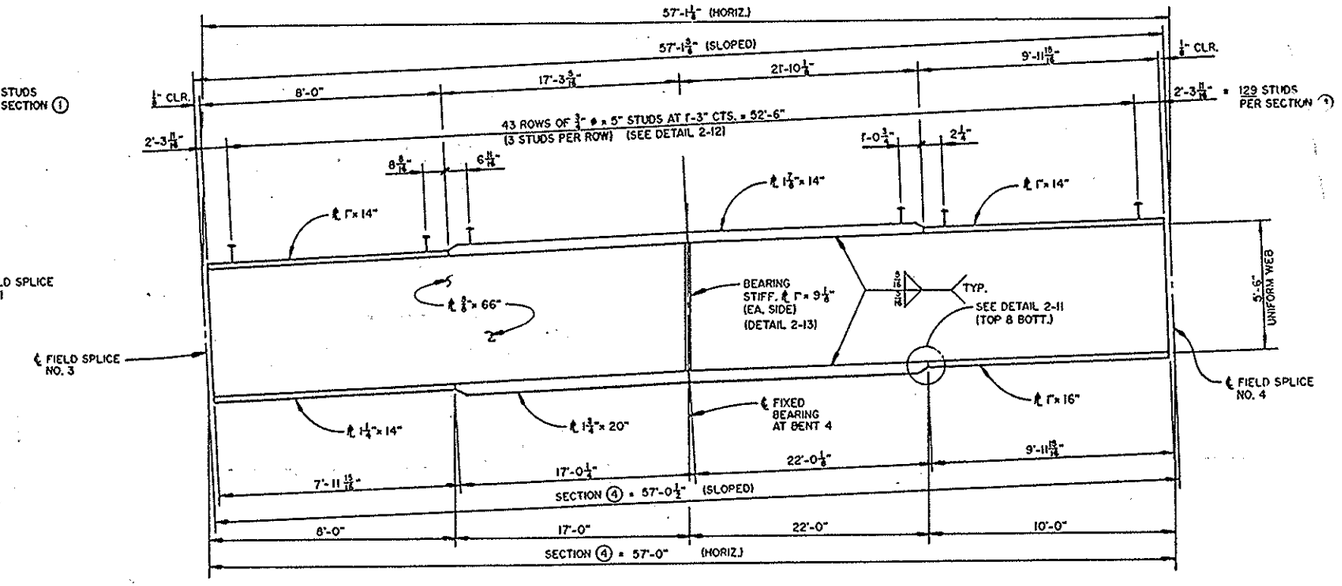
JULY 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-68
7			3			TOTAL SHEETS
8			4			224

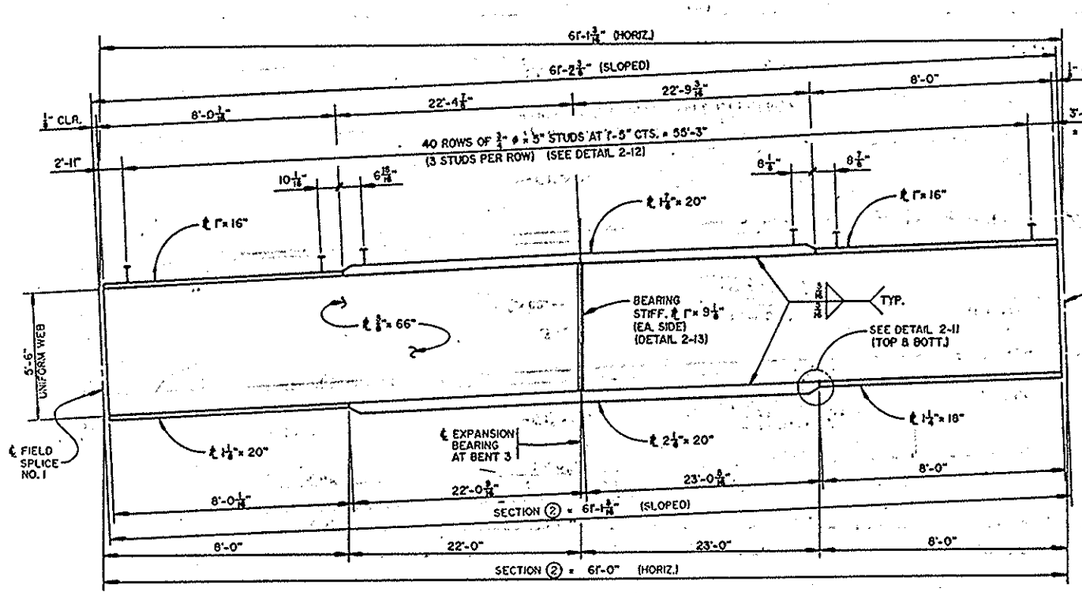
CCM DATE 7-96
CCM DATE 6/95



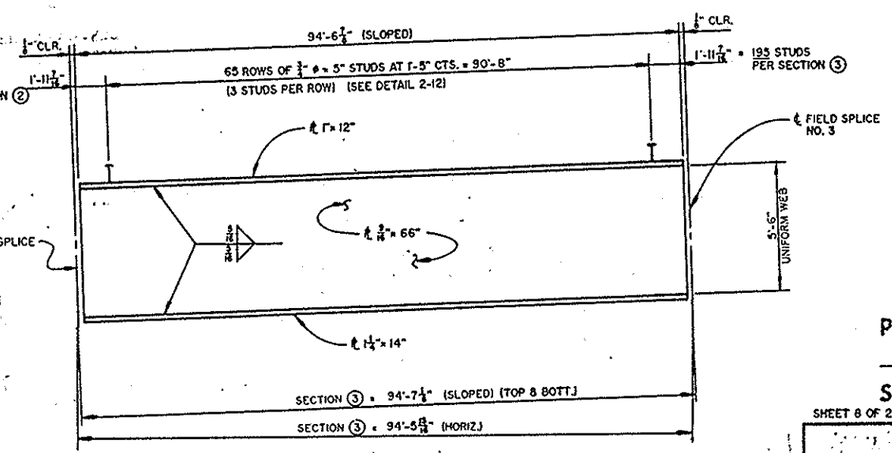
GIRDER SECTION 1 - 1 REQ'D.



GIRDER SECTION 4 - 1 REQ'D.



GIRDER SECTION 2 - 1 REQ'D.



GIRDER SECTION 3 - 1 REQ'D.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/94

U2.028

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

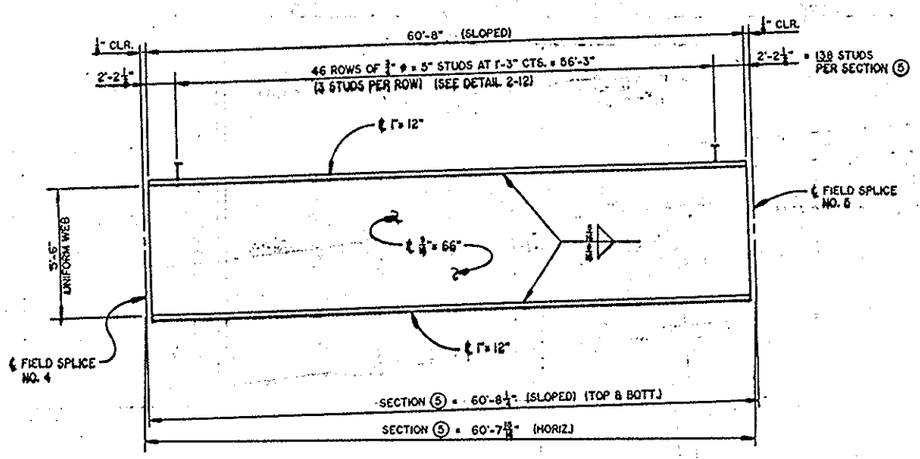
DRAWN BY KTJ DATE 8-94
CHECKED BY GCM DATE 9/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV
SHEET 8 OF 27

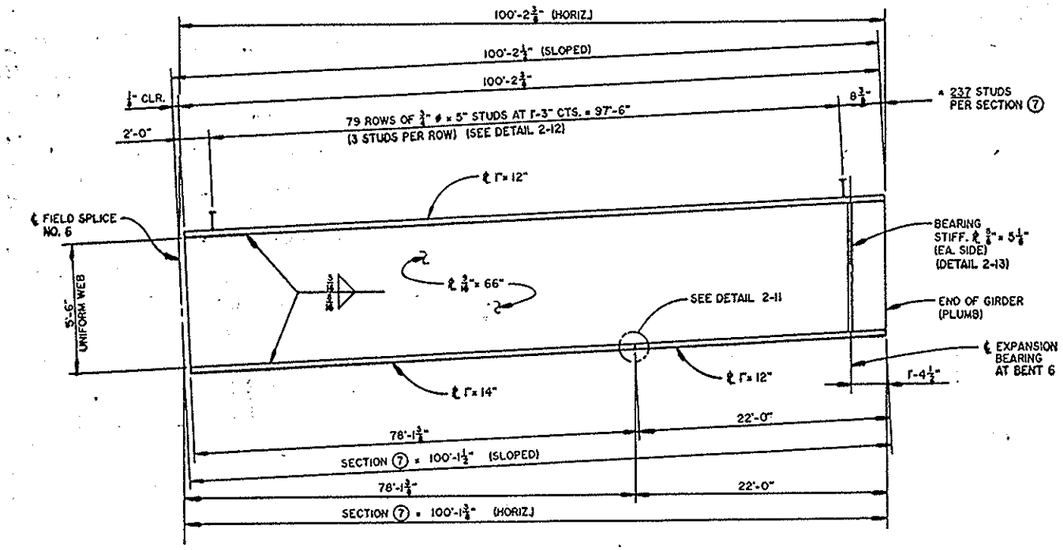
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 3 DETAILS
CONTINUOUS UNIT #2
AUGUST 1994

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

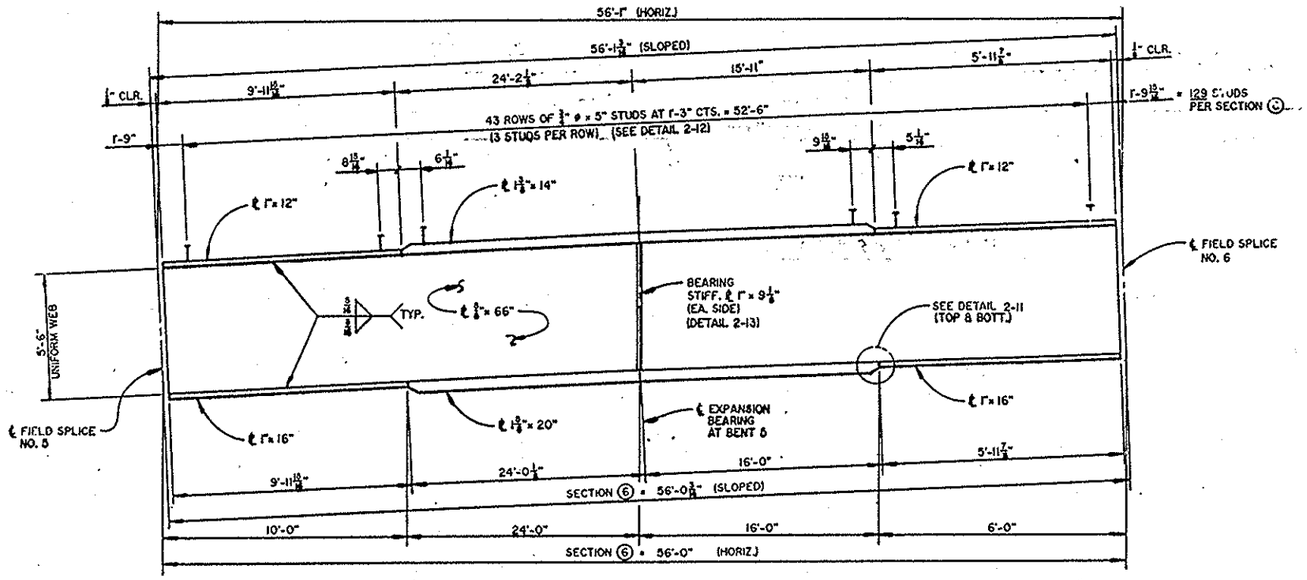
BY L.T. 5-69
TOTAL SHEETS 224



GIRDER SECTION 5 - 1 REQ'D.



GIRDER SECTION 7 - 1 REQ'D.



GIRDER SECTION 6 - 1 REQ'D.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 9 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 3 DETAILS
CONTINUOUS UNIT #2
JULY 1994

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

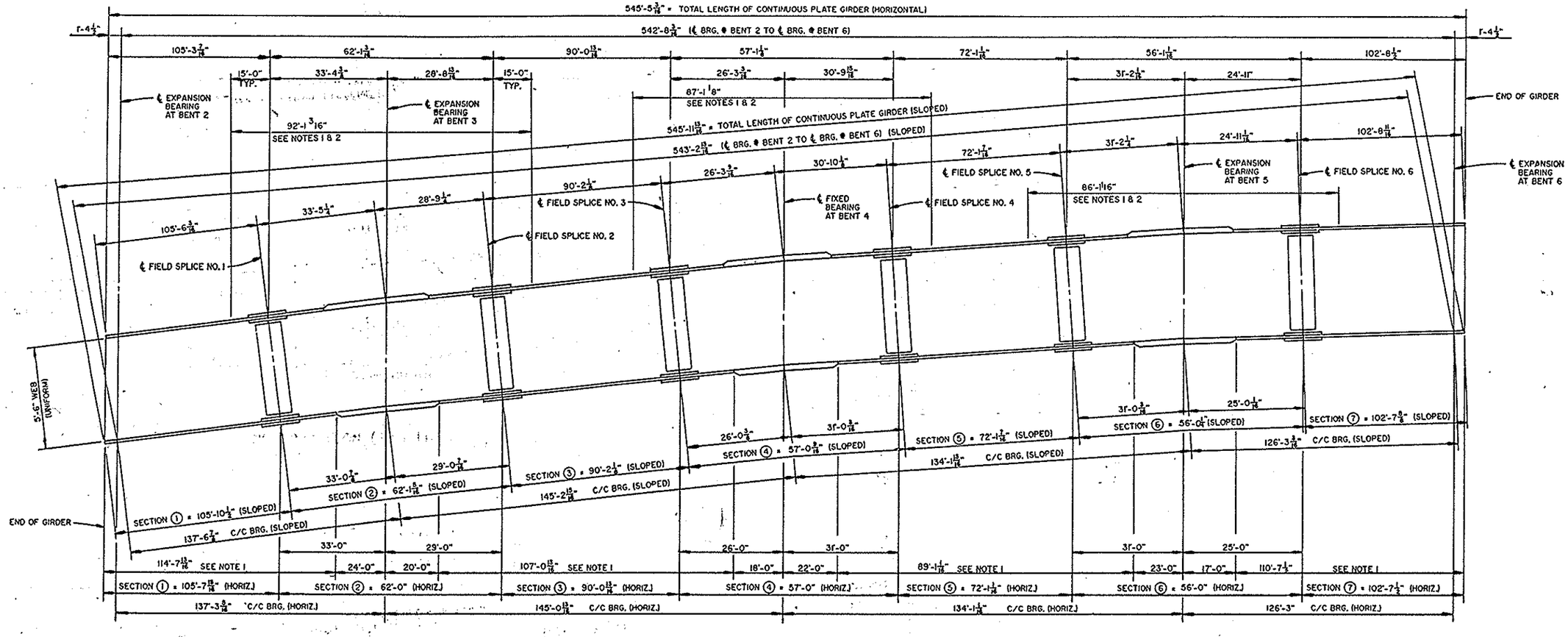
SHEET NO. S-70
TOTAL SHEETS 224

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U2.079

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

DRAWN BY RTJ DATE 7-94
CHECKED BY CGM DATE 6/95



GIRDER 4 ELEVATION

NOTE 1: CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2: NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 10 OF 27

NORTH CAROLINA PROFESSIONAL SEAL 11276 ENGINEER LEONARD GARTH FLETCHER
8/12/96

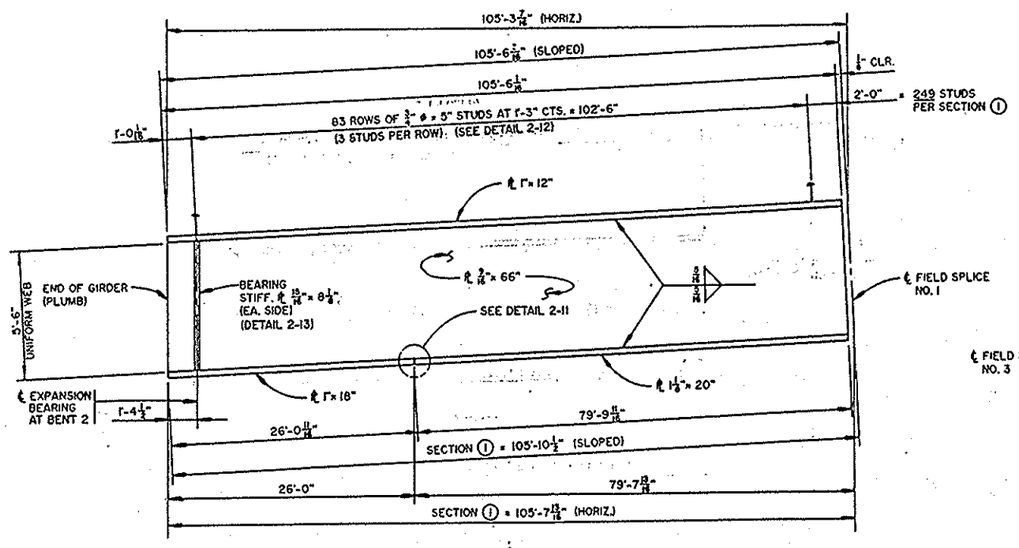
U2.030

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

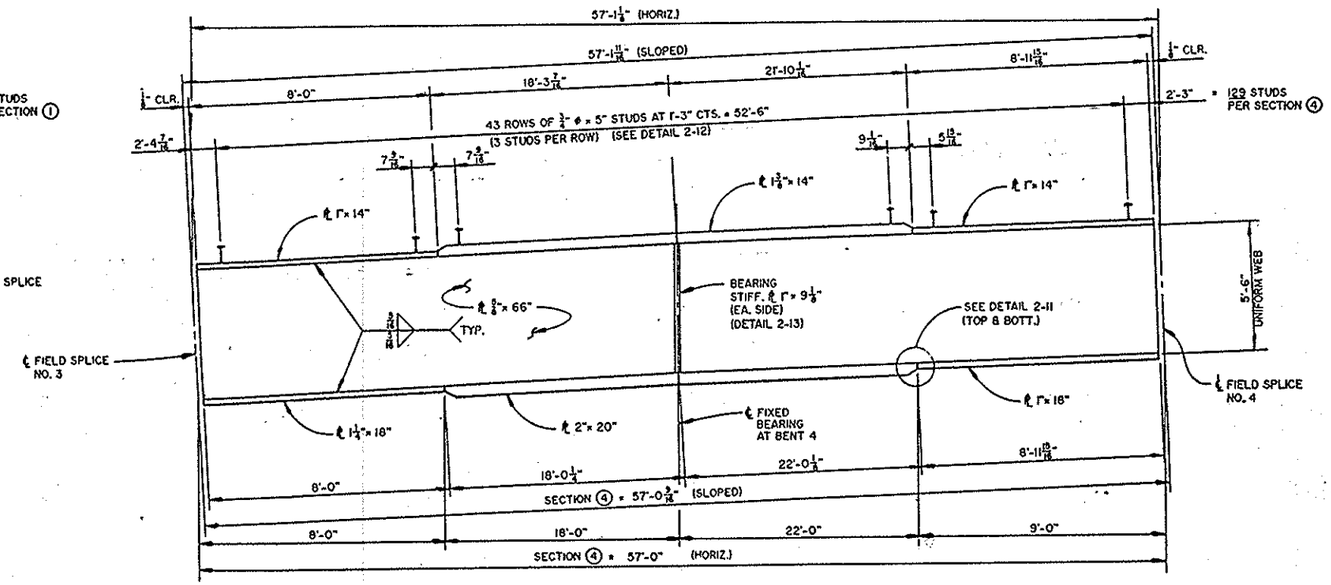
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 4 ELEVATION
CONTINUOUS UNIT #2
JULY 1994

REVISIONS							
NO.	BY	DATE	NO.	BY	DATE	SHEET NO.	S-71
1			3			TOTAL SHEETS	224
2			4				

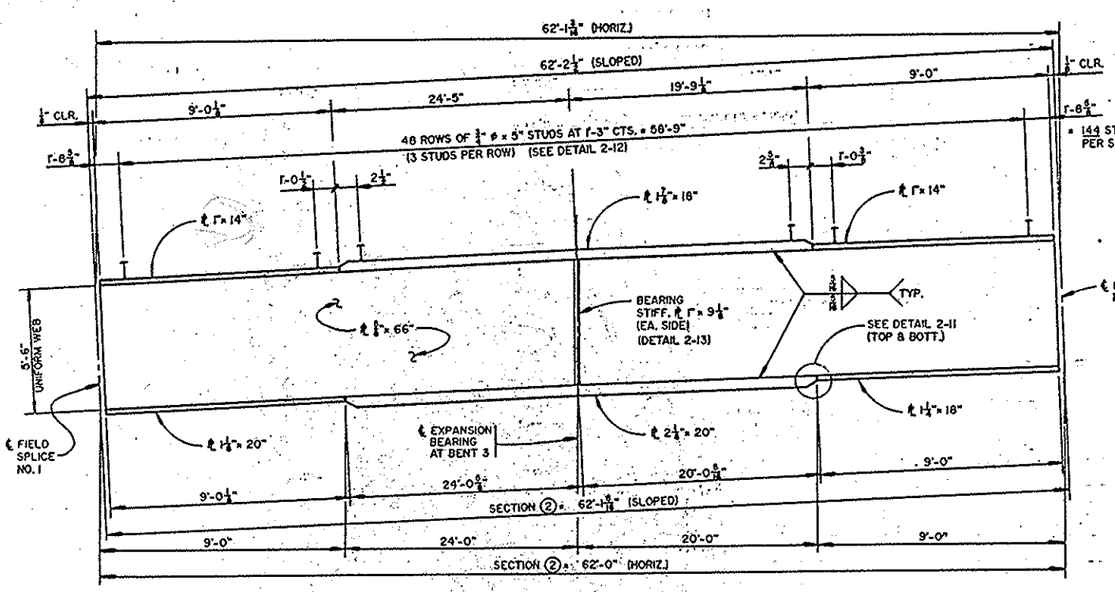
DRAWN BY RJ DATE 7-94
CHECKED BY LCM DATE 6/95



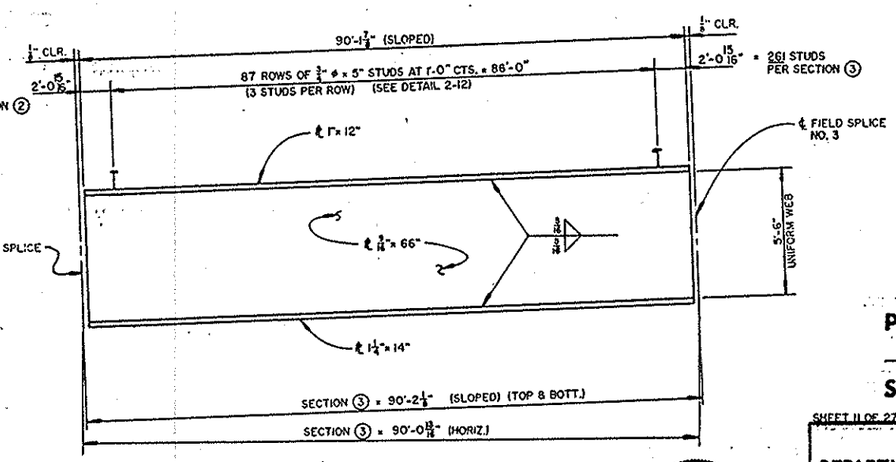
GIRDER SECTION 1 - 1 REQ'D.



GIRDER SECTION 4 - 1 REQ'D.



GIRDER SECTION 2 - 1 REQ'D.



GIRDER SECTION 3 - 1 REQ'D.

113.51

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 11 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 4 DETAILS
CONTINUOUS UNIT #2
AUGUST 1994

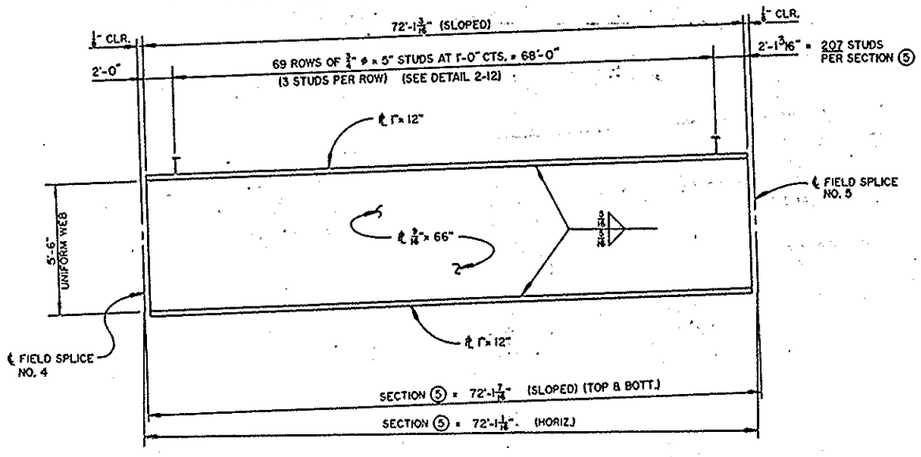
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD CARTH FLETCHER
4/12/96

U2.031

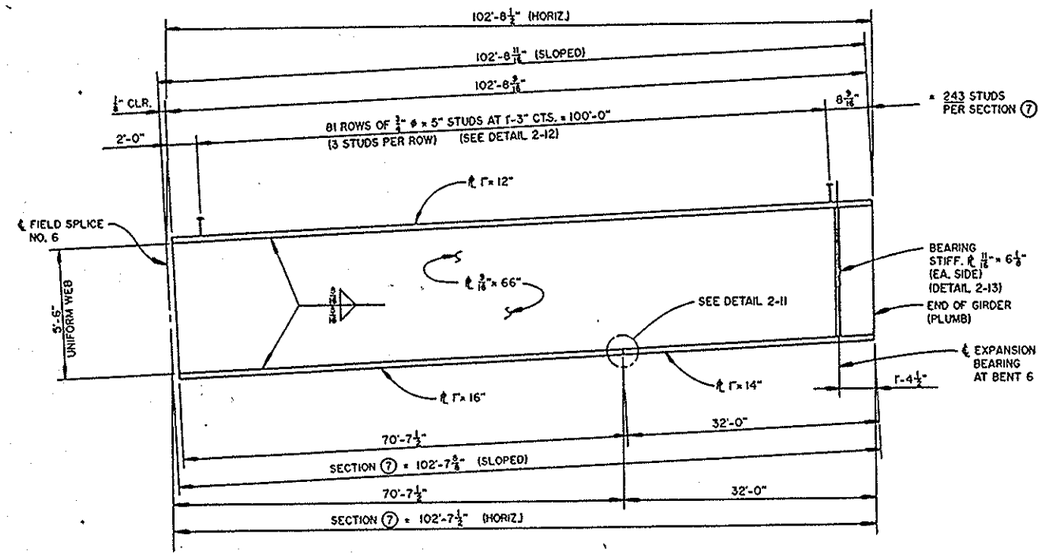
PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-72
1			3			TOTAL SHEETS
2			4			224

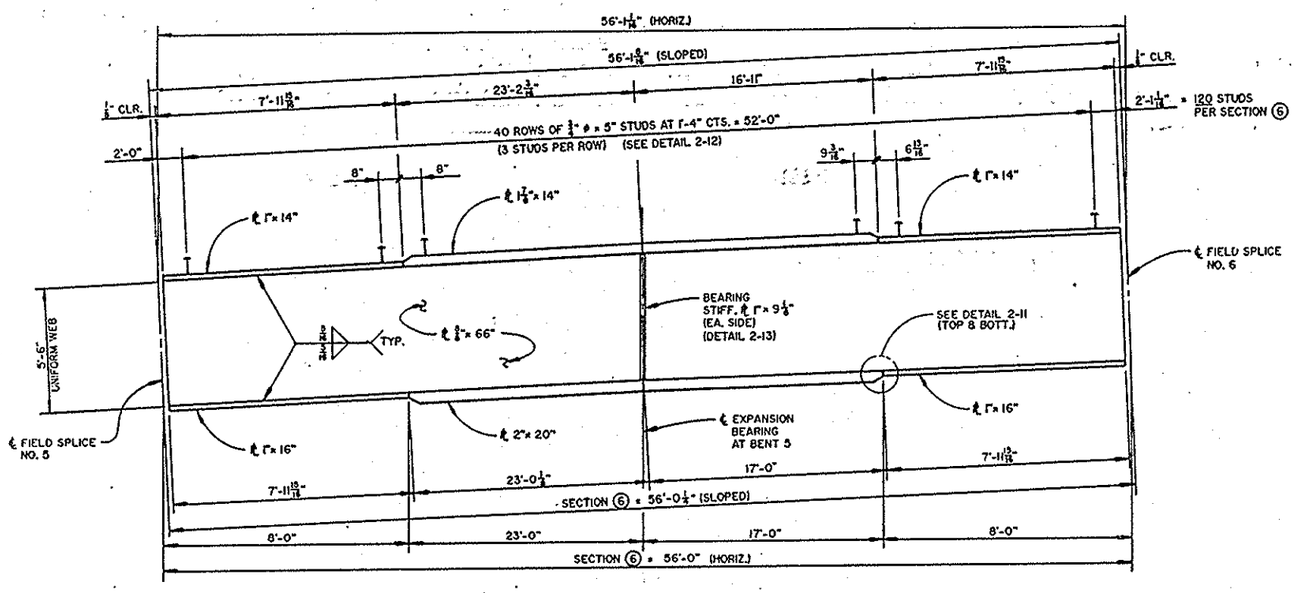
DRAWN BY RJ DATE 8-94
CHECKED BY SCM DATE 6/95



GIRDER SECTION 5 - 1 REQ'D.



GIRDER SECTION 7 - 1 REQ'D.



GIRDER SECTION 6 - 1 REQ'D.

DRAWN BY RJ DATE 5-94
CHECKED BY ZCM DATE 6/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV
SHEET 12 OF 27

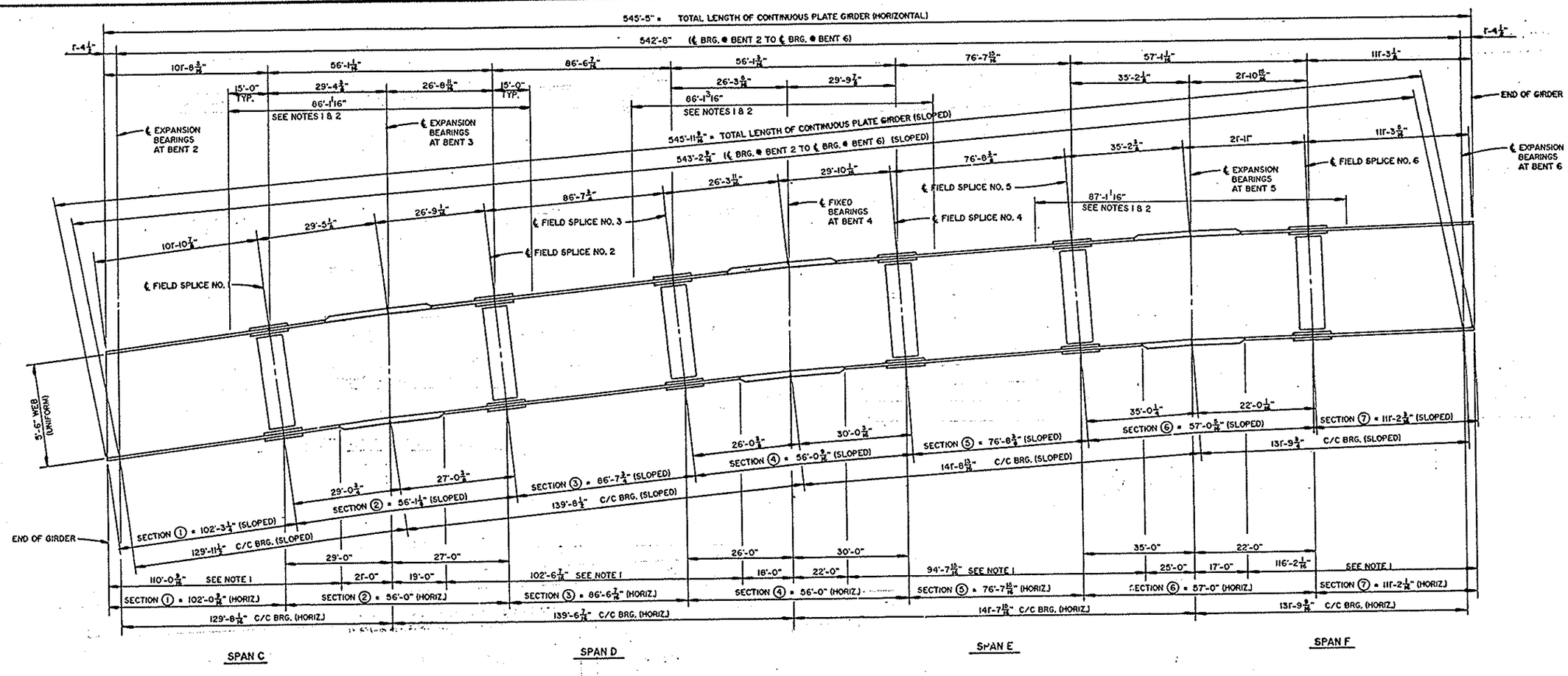
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 4 DETAILS
CONTINUOUS UNIT #2
AUGUST 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD CARTER FLETCHER
4/12/96

02.032
PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

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

TOTAL SHEETS 224



GIRDER 5 ELEVATION

NOTE 1: CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2: NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 13 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER 5 ELEVATION
CONTINUOUS UNIT #2

JULY 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

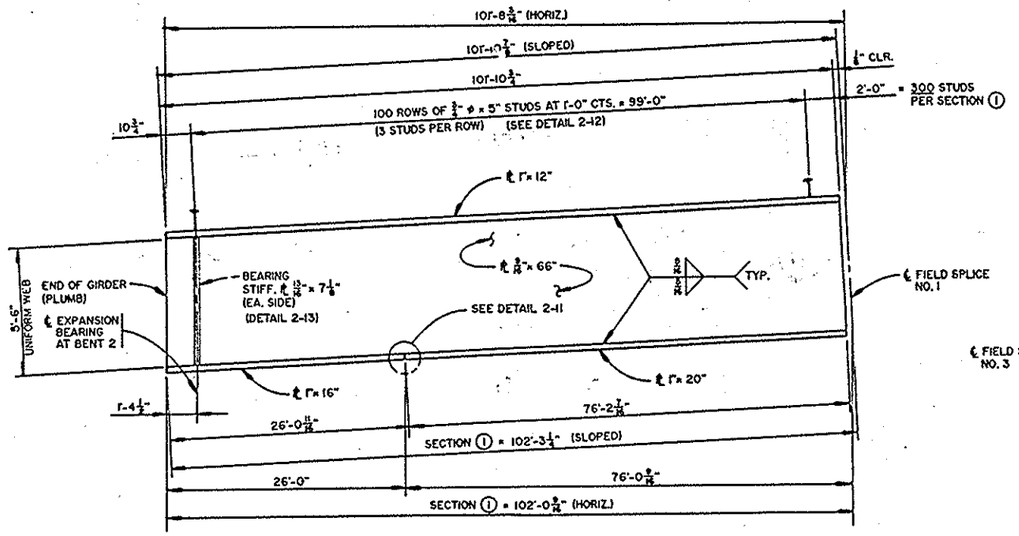
42.033

PREPARED BY
THOMPSON - BORDON - SHOOK ENGINEERS, INCORPORATED

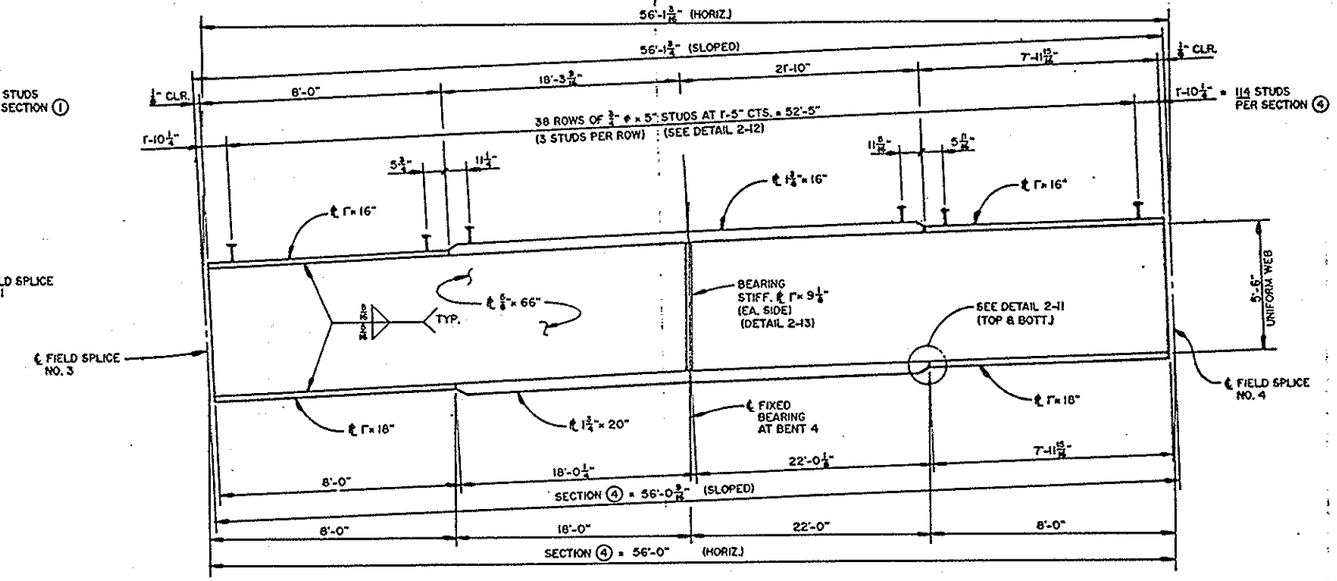
REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

SHEET NO. S-14
TOTAL SHEETS 224

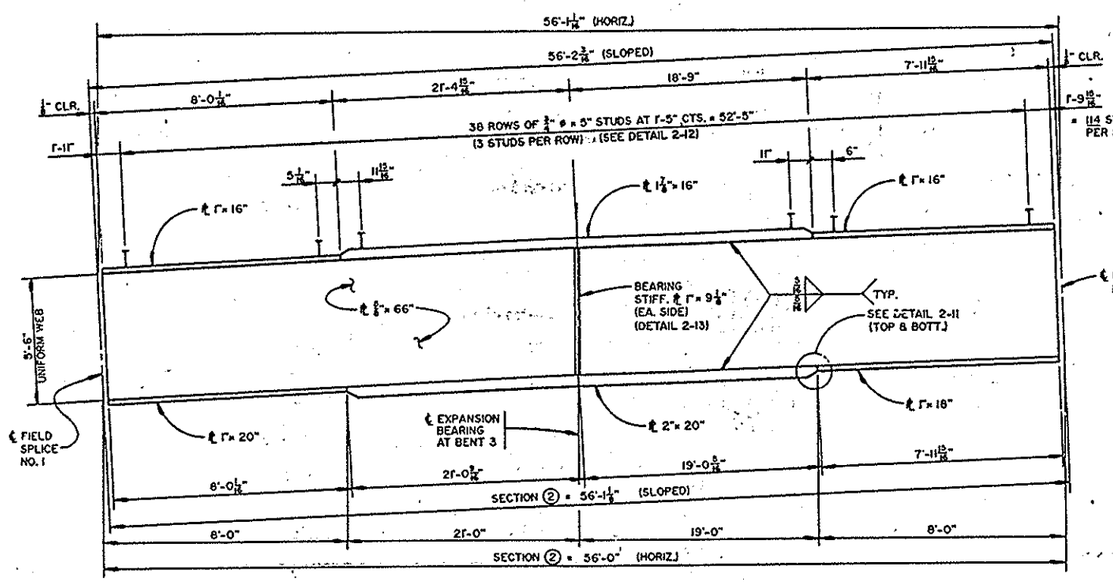
DRAWN BY RTJ DATE 7-94
CHECKED BY CGM DATE 6/95



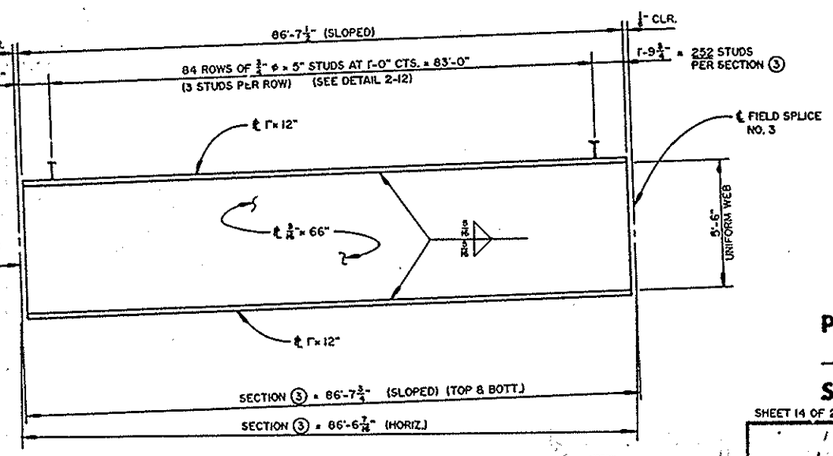
GIRDER SECTION 1 - 1 REQ'D.



GIRDER SECTION 4 - 1 REQ'D.



GIRDER SECTION 2 - 1 REQ'D.



GIRDER SECTION 3 - 1 REQ'D.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH PLATTNER
4/12/96

02.034

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 14 OF 27

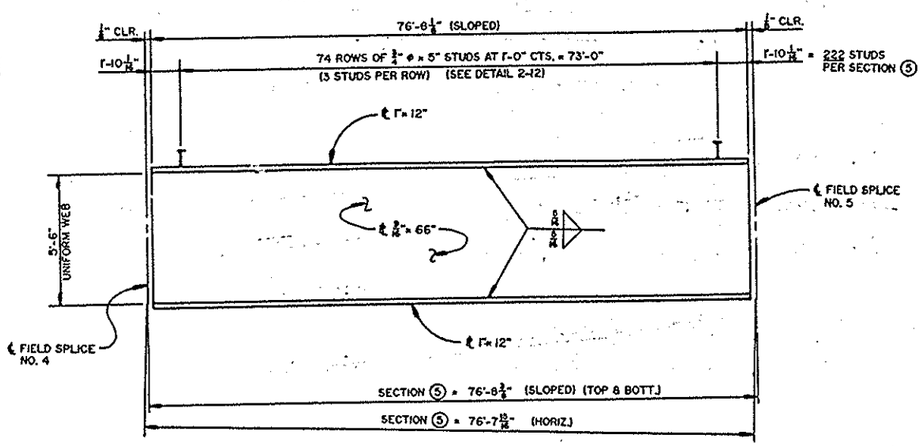
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER 5 DETAILS
CONTINUOUS UNIT #2

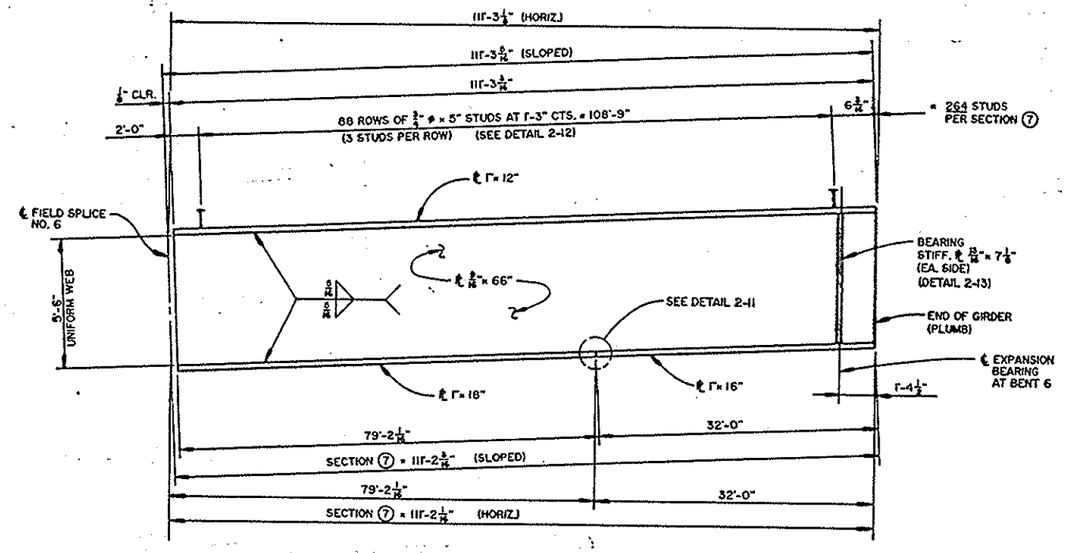
AUGUST 1994

REVISIONS							
NO.	BY	DATE	NO.	BY	DATE	SHEET NO.	S-75
1			3			TOTAL SHEETS	224
2			4				

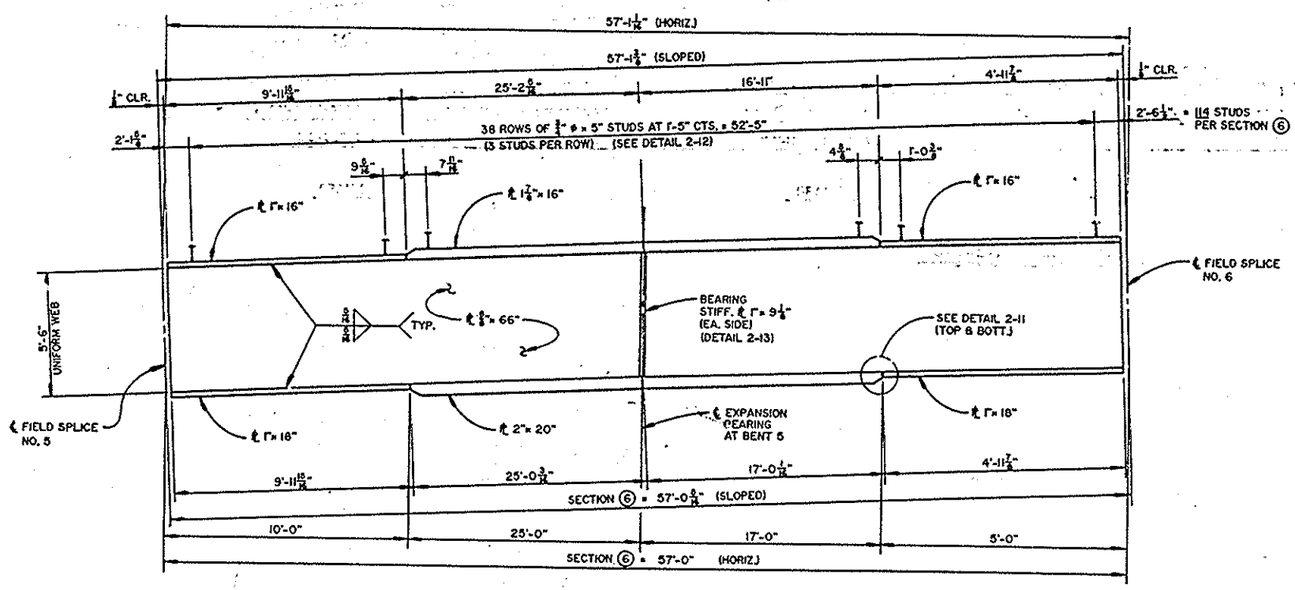
DRAWN BY: RTJ DATE 8-94
CHECKED BY: JCM DATE 8/95



GIRDER SECTION 5 - 1 REQ'D.



GIRDER SECTION 7 - 1 REQ'D.



GIRDER SECTION 6 - 1 REQ'D.

DRAWN BY RTJ DATE 8-94
CHECKED BY CCM DATE 6/96

NORTH CAROLINA PROFESSIONAL SEAL 11070 ENGINEER LEONARD GARTH FLETCHER
4/12/96

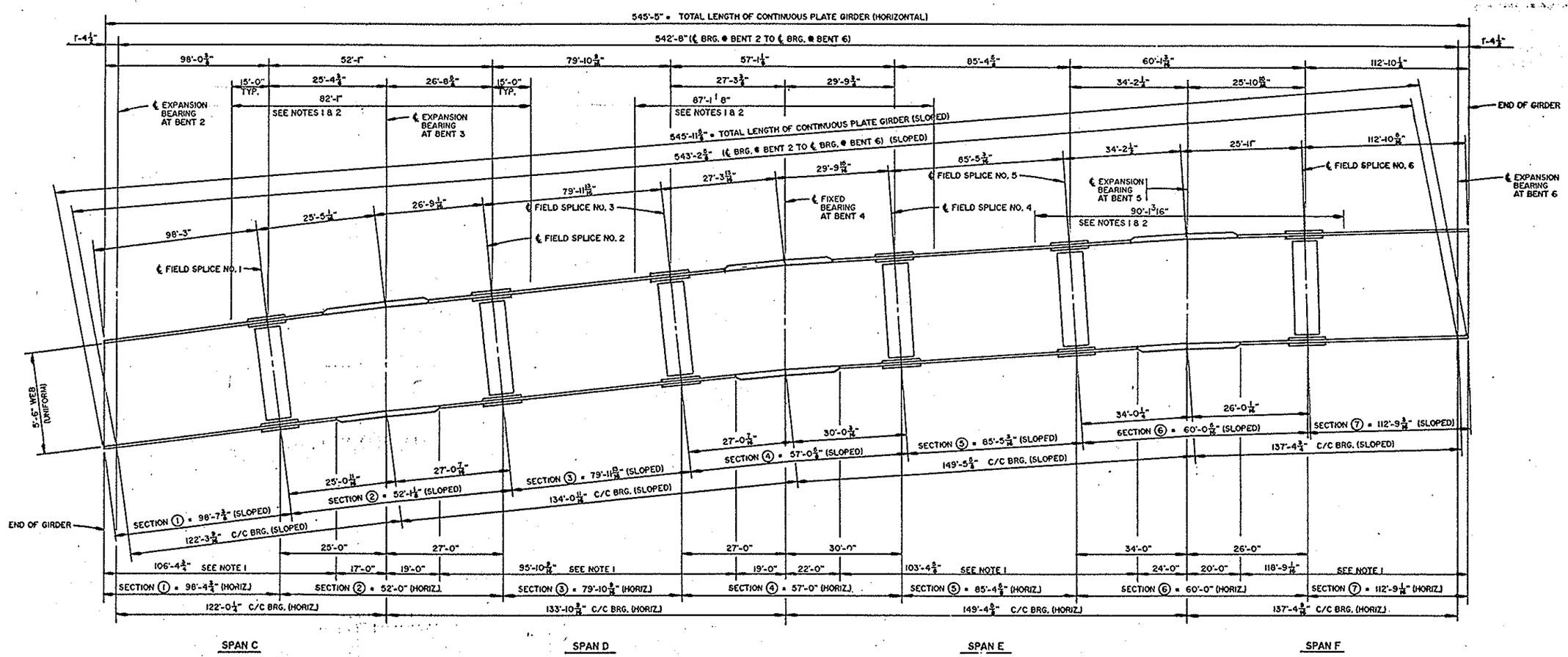
U2.035
PREPARED BY
THOMPSON - BORDON - SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 15 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 5 DETAILS
CONTINUOUS UNIT #2
AUGUST 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-76
1			3			TOTAL SHEETS
2			4			224



GIRDER 6 ELEVATION

NOTE 1: CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2: NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 16 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 6 ELEVATION
CONTINUOUS UNIT #2
JULY 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LICENSED GARTH FLETCHER
4/12/96

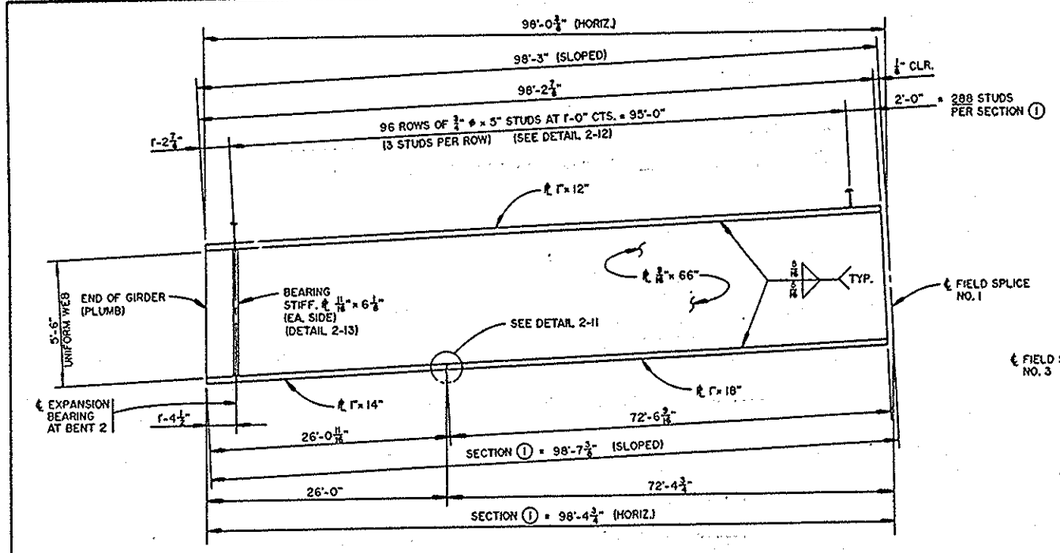
U2.056

PREPARED BY
THOMPSON-BORDON-SHOOK ENGINEERS, INCORPORATED

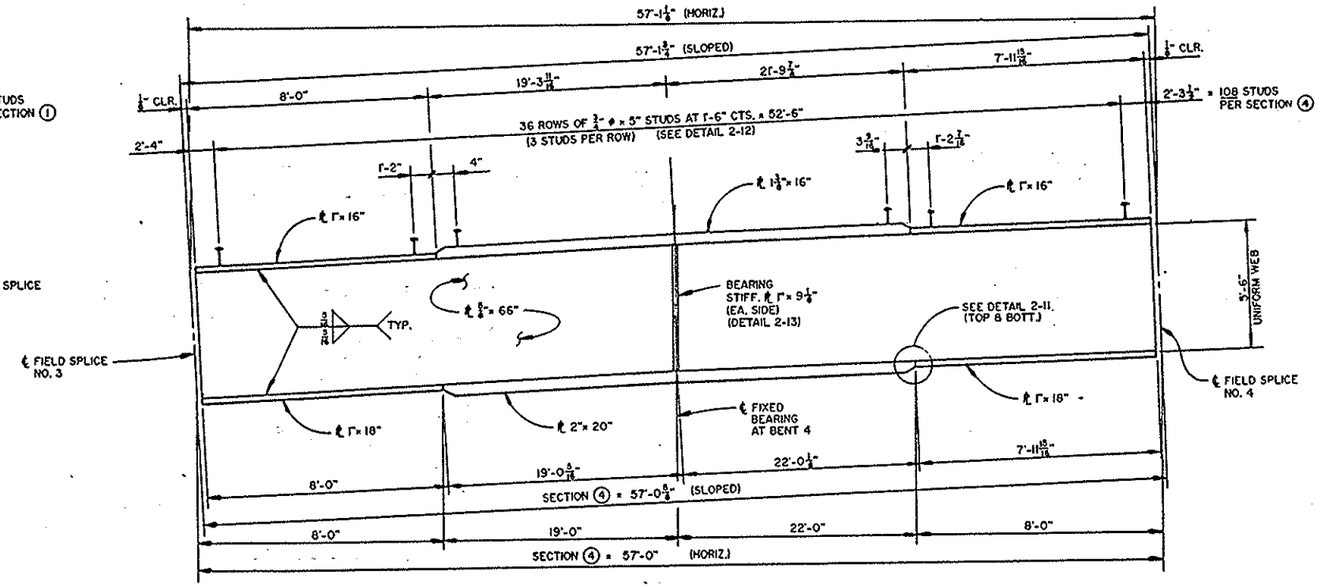
REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

SHEET NO. S-77
TOTAL SHEETS 224

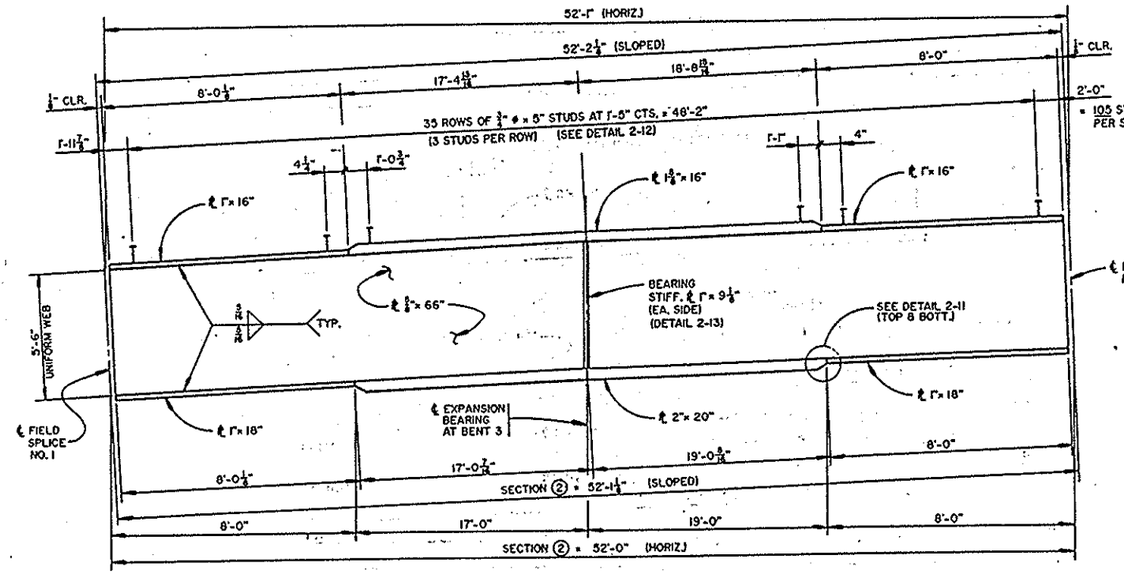
DRAWN BY BTL DATE 7-96
CHECKED BY CGM DATE Jul 5



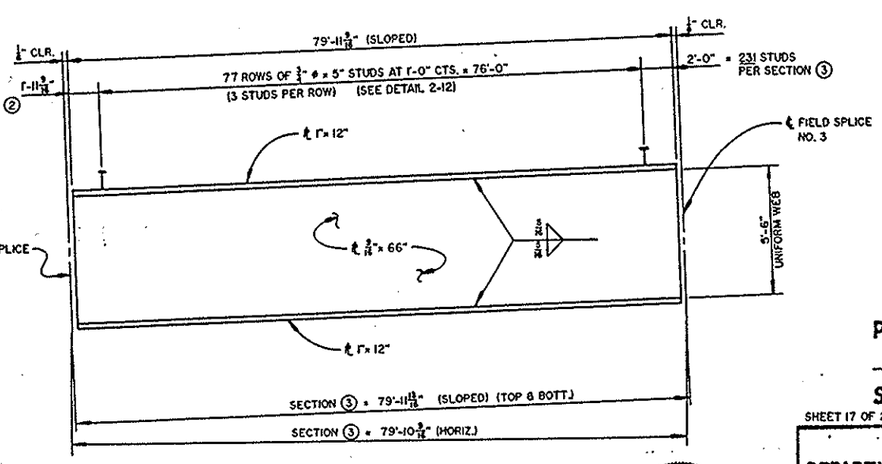
GIRDER SECTION 1 - 1 REQ'D.



GIRDER SECTION 4 - 1 REQ'D.



GIRDER SECTION 2 - 1 REQ'D.



GIRDER SECTION 3 - 1 REQ'D.

NORTH CAROLINA PROFESSIONAL SEAL 11278 ENGINEER EDWARD GARTH FLETCHER
4/12/96

42.037

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

DRAWN BY KTJ DATE 8-94
CHECKED BY GEM DATE 6/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 17 OF 27

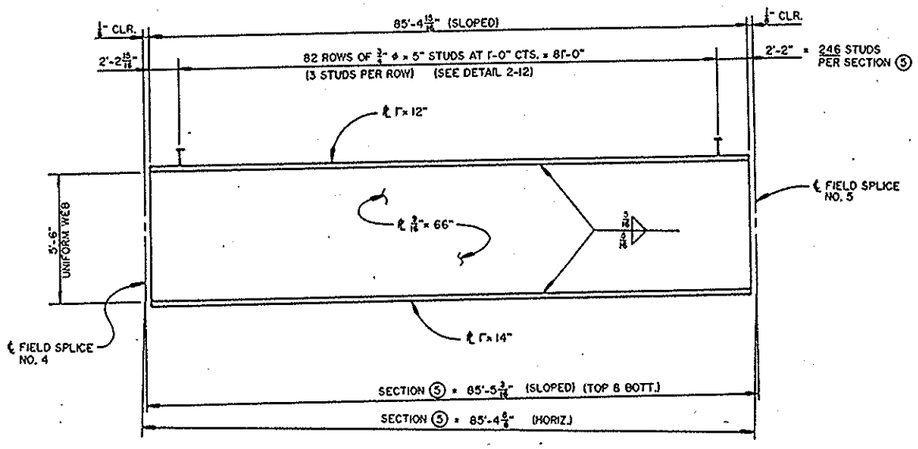
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER 6 DETAILS
CONTINUOUS UNIT #2

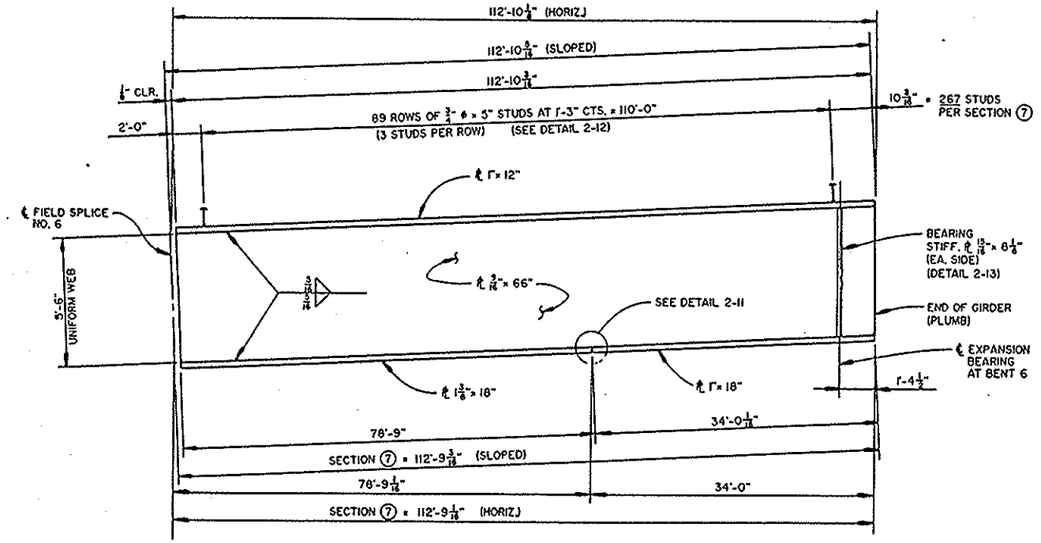
AUGUST 1994

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

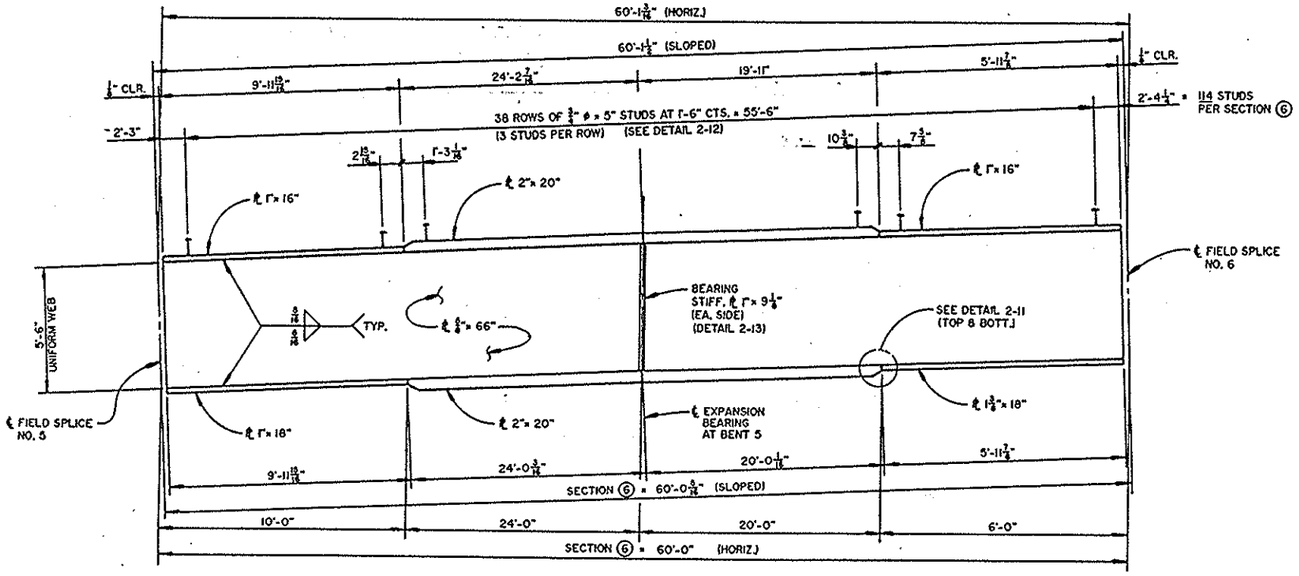
SHEET NO. 5-78
TOTAL SHEETS 224



GIRDER SECTION 5 - 1 REQ'D.



GIRDER SECTION 7 - 1 REQ'D.



GIRDER SECTION 6 - 1 REQ'D.

DRAWN BY RJ DATE 8-94
CHECKED BY GCM DATE 6/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 18 OF 27

NORTH CAROLINA PROFESSIONAL SEAL 11276 ENGINEER LEONARD GARTH FLETCHER
4/12/96

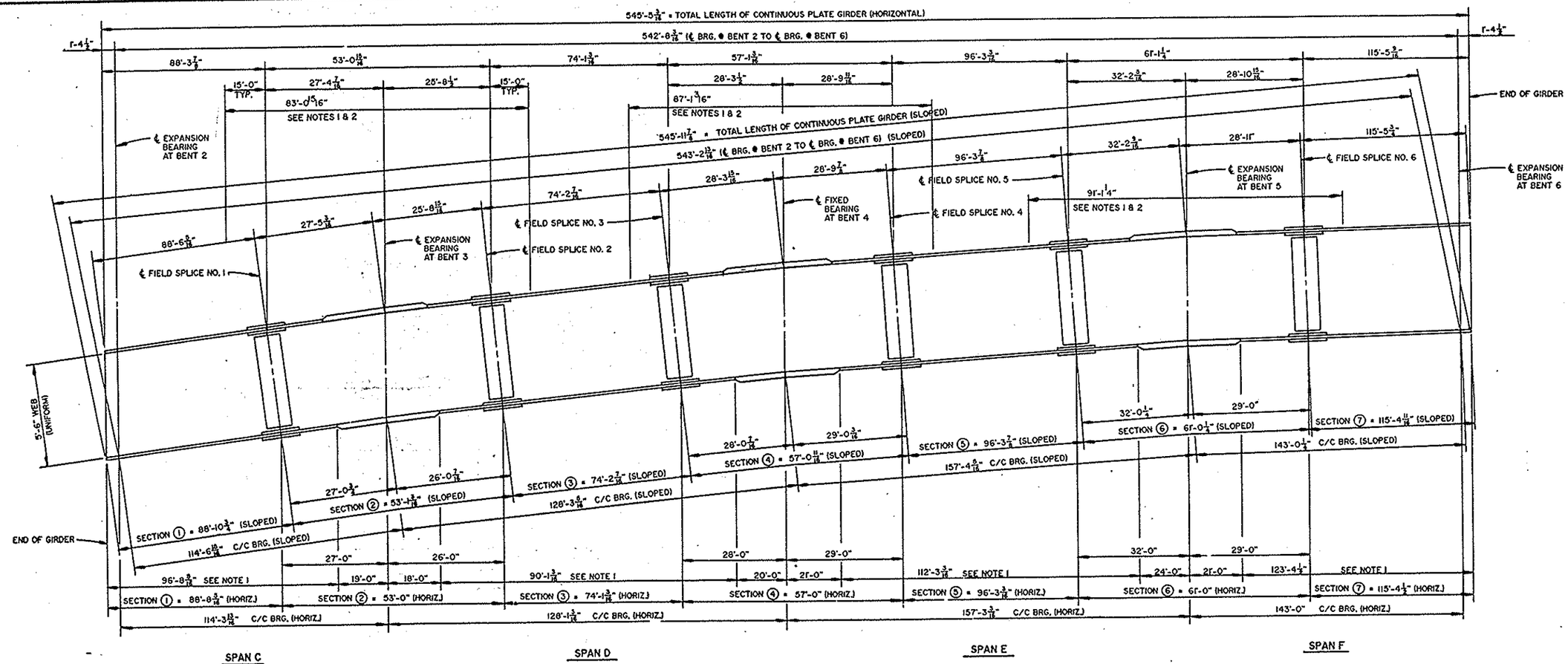
U2.038

PREPARED BY
THOMPSON - BORDON - SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 6 DETAILS
CONTINUOUS UNIT #2
AUGUST 1994

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

SHEET NO. S-79
TOTAL SHEETS 224



GIRDER 7 ELEVATION

NOTE 1: CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2: NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 19 OF 27

NORTH CAROLINA PROFESSIONAL SEAL 11279 LEONARD GARTH FLETCHER

4/12/96

U2.039

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER 7 ELEVATION
CONTINUOUS UNIT #2

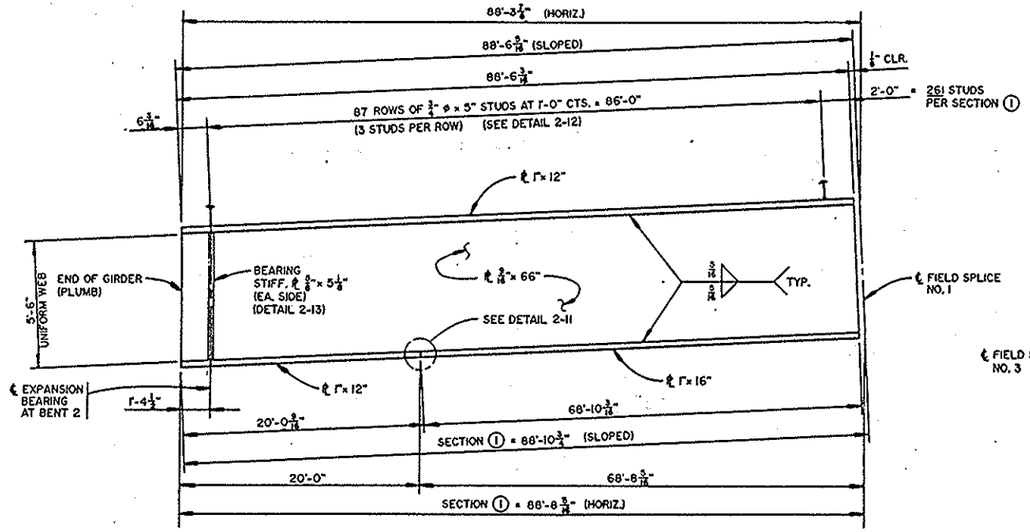
JULY 1994

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

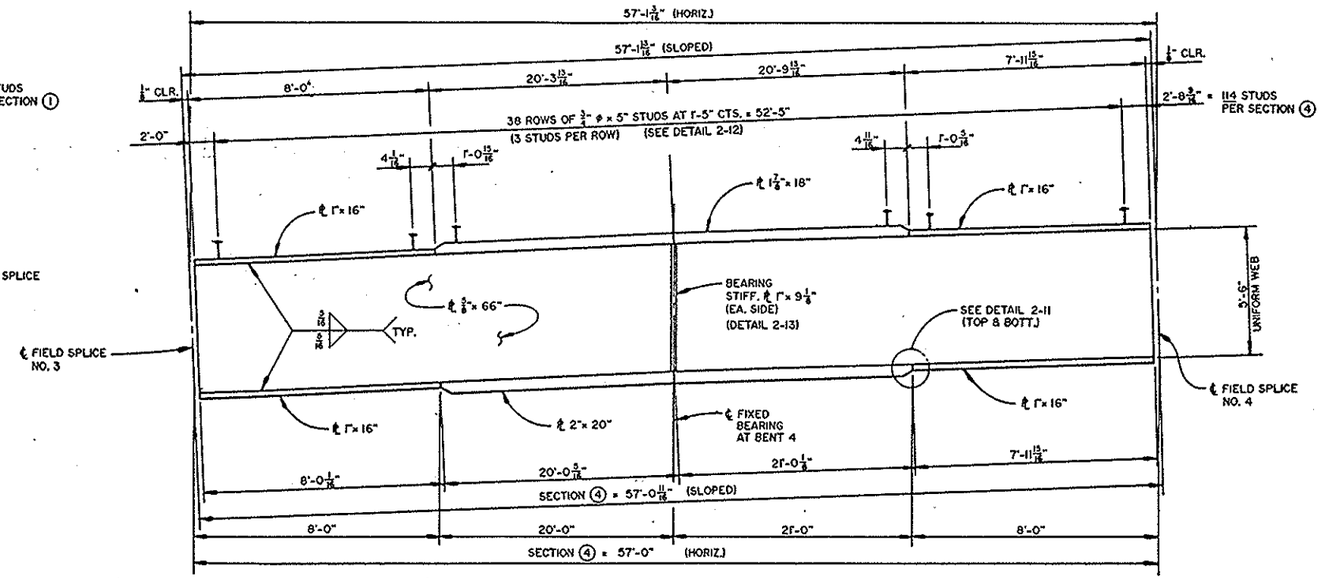
SHEET NO. S-80

TOTAL SHEETS 224

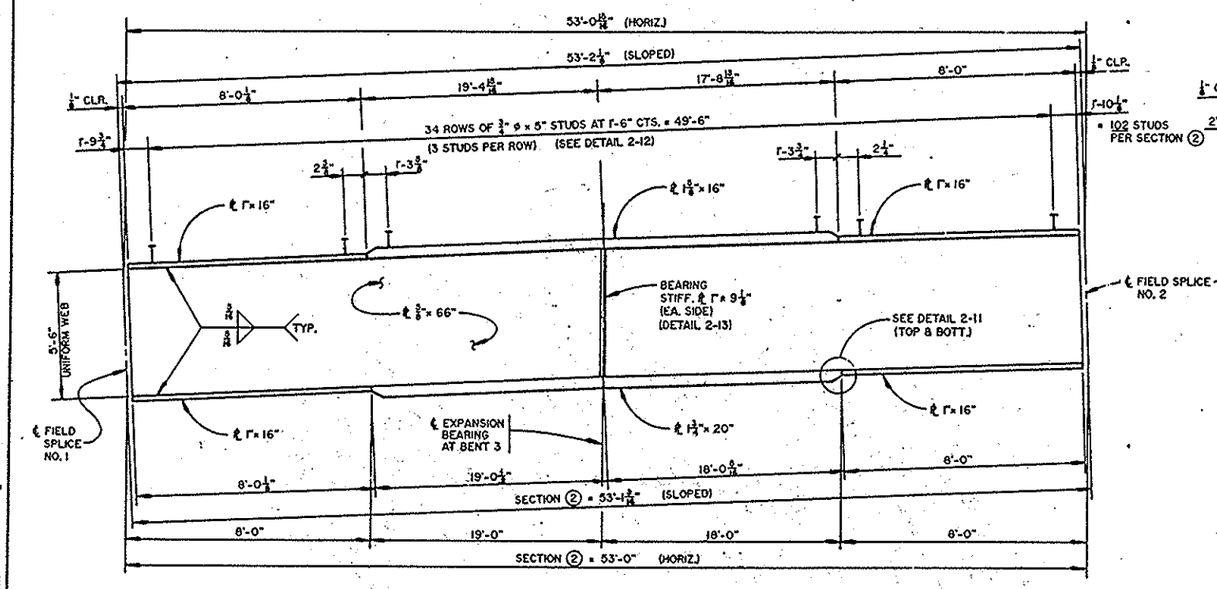
DRAWN BY RJJ DATE 7-94
CHECKED BY CM DATE 6/95



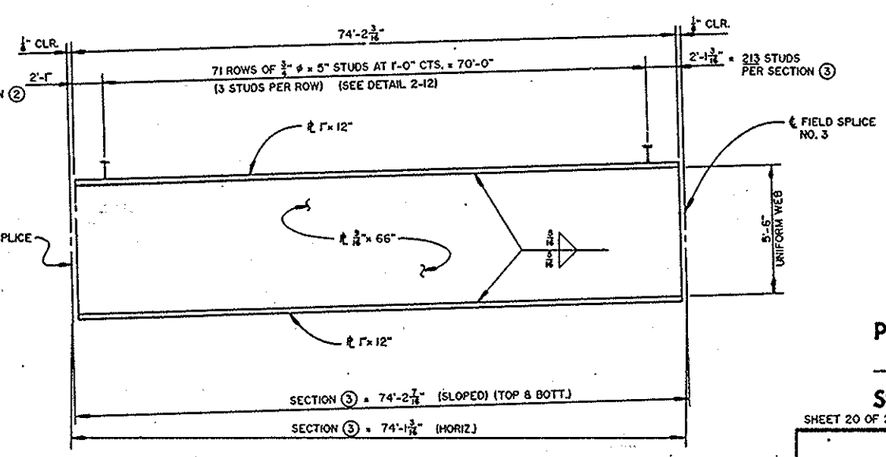
GIRDER SECTION 1 - 1 REQ'D.



GIRDER SECTION 4 - 1 REQ'D.



GIRDER SECTION 2 - 1 REQ'D.



GIRDER SECTION 3 - 1 REQ'D.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

42. D40

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

DRAWN BY RTL DATE 8-94
CHECKED BY CMA DATE 6/95

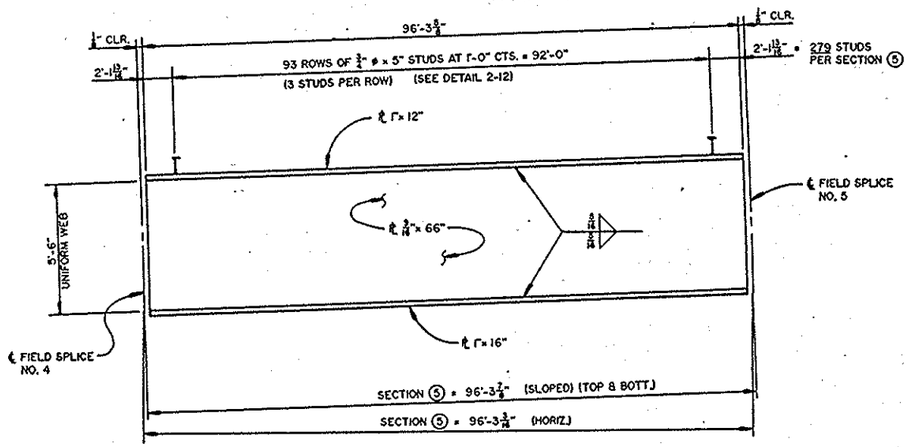
PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 20 OF 27

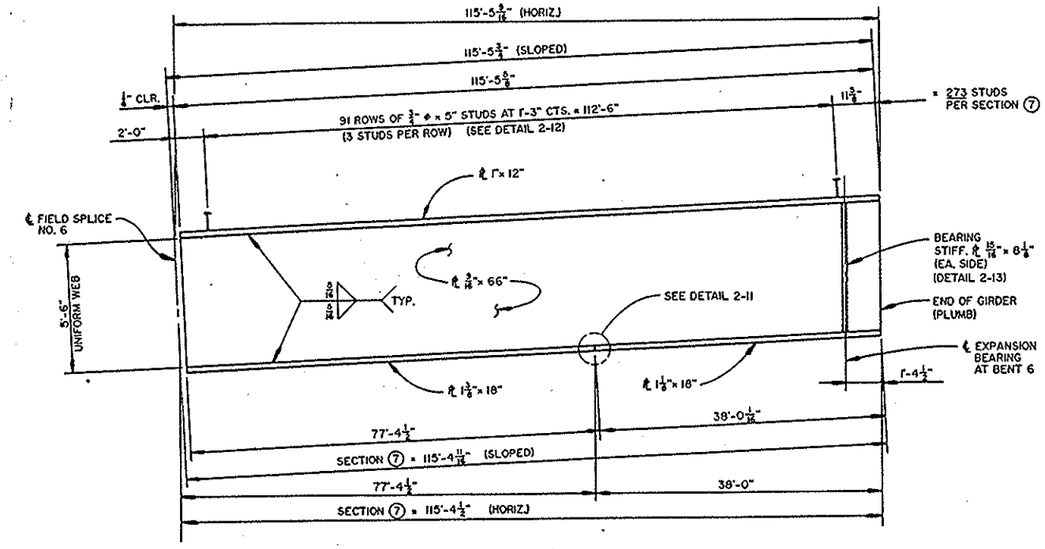
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 7' DETAILS
CONTINUOUS UNIT #2
AUGUST 1994

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

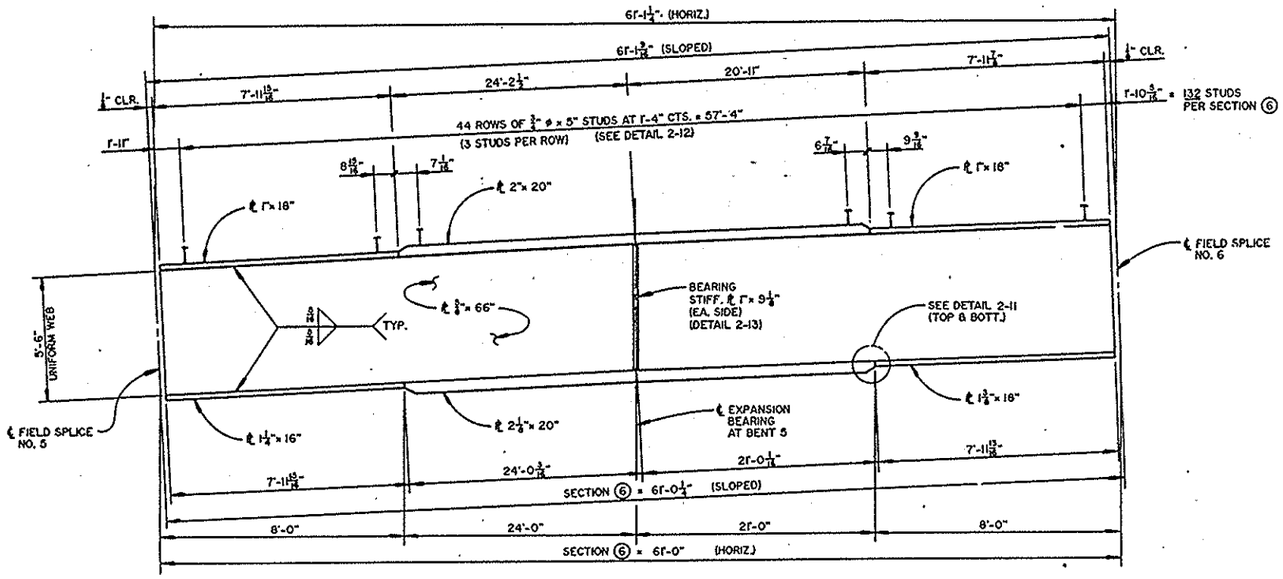
SHEET NO. S-81
TOTAL SHEETS 224



GIRDER SECTION 5 - 1 REQ'D.



GIRDER SECTION 7 - 1 REQ'D.



GIRDER SECTION 6 - 1 REQ'D.

DRAWN BY	RJV	DATE	8-94
CHECKED BY	SM	DATE	6/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 21 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER 7 DETAILS
CONTINUOUS UNIT #2

AUGUST 1994

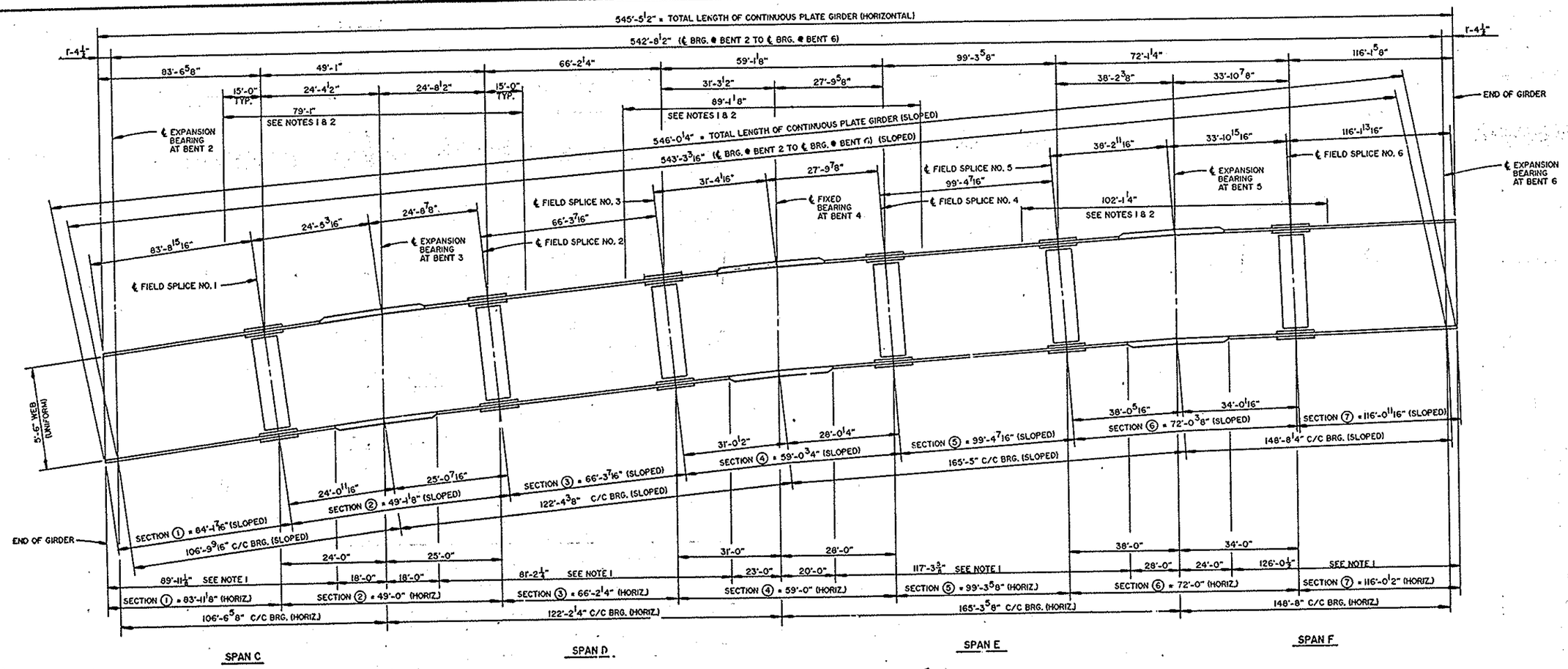
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

02.041

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-82
TOTAL SHEETS 224



GIRDER 8 ELEVATION

NOTE 1: CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2: NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 22 OF 27

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U2.042

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

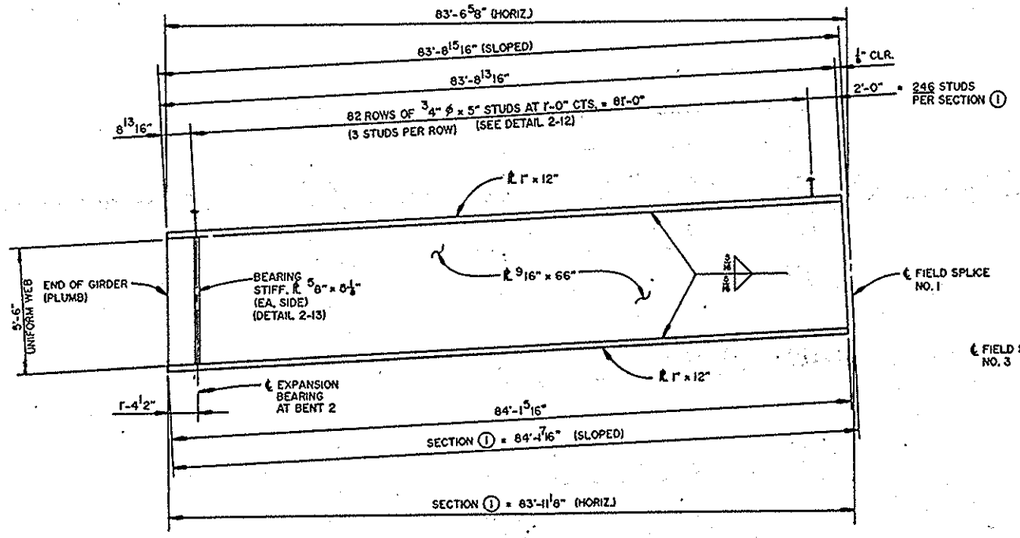
GIRDER 8 ELEVATION
CONTINUOUS UNIT #2

JULY 1994

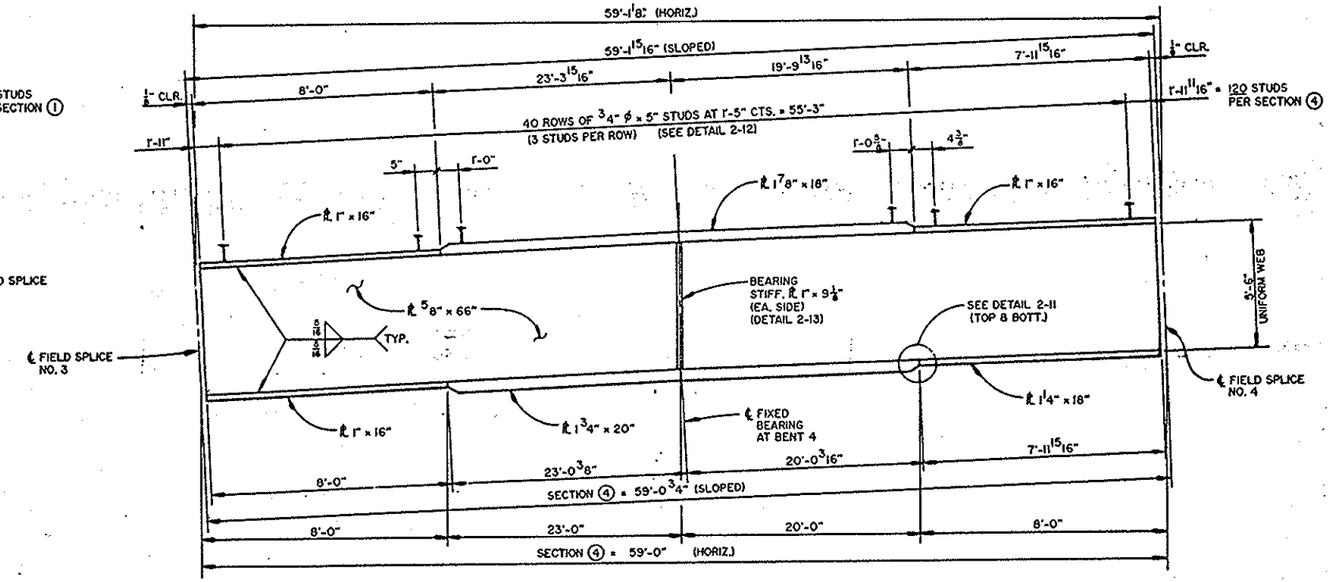
REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

SHEET NO. 5-83
TOTAL SHEETS 224

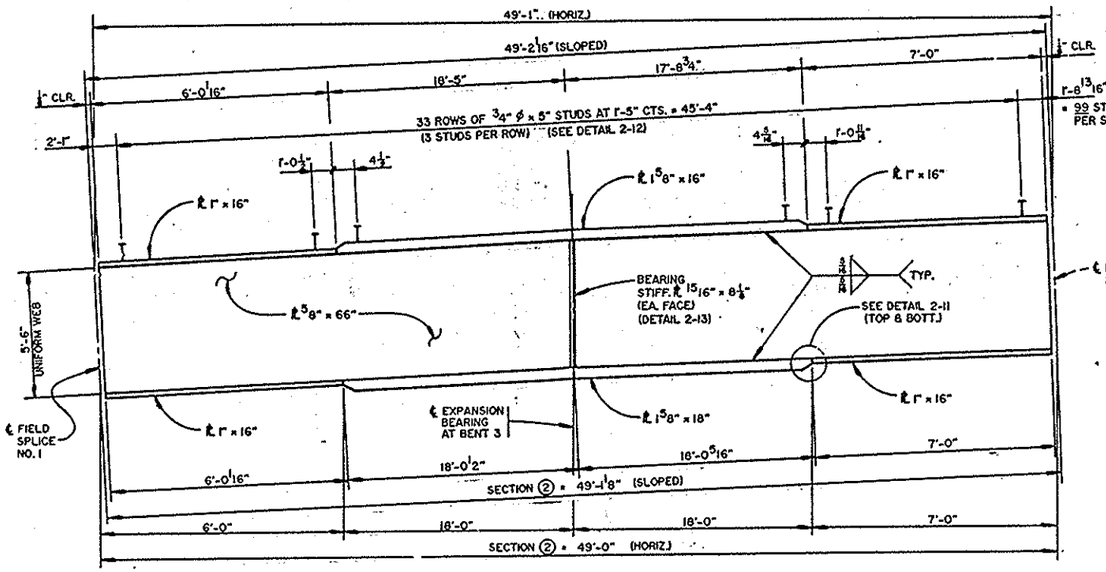
DRAWN BY: STJ DATE: 8-94
CHECKED BY: CM DATE: 6/95



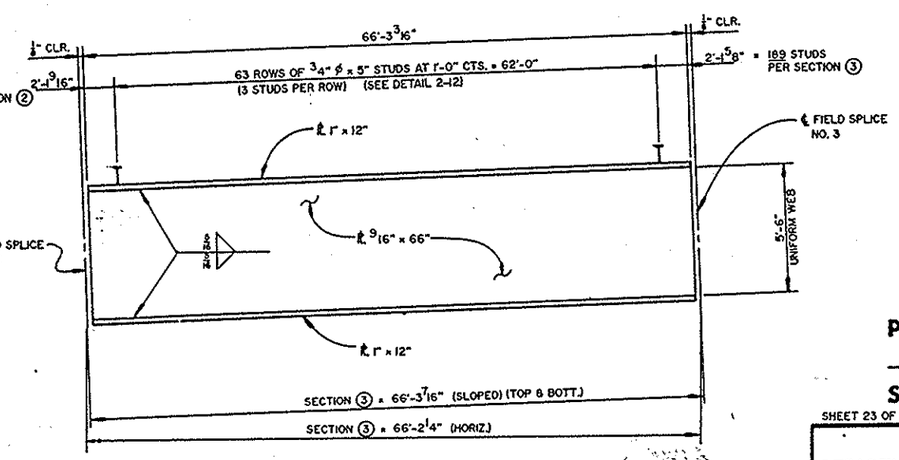
GIRDER SECTION 1 - 1 REQ'D.



GIRDER SECTION 4 - 1 REQ'D.



GIRDER SECTION 2 - 1 REQ'D.



GIRDER SECTION 3 - 1 REQ'D.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER EDWARD GARTH HUTCHINS
4/12/96

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

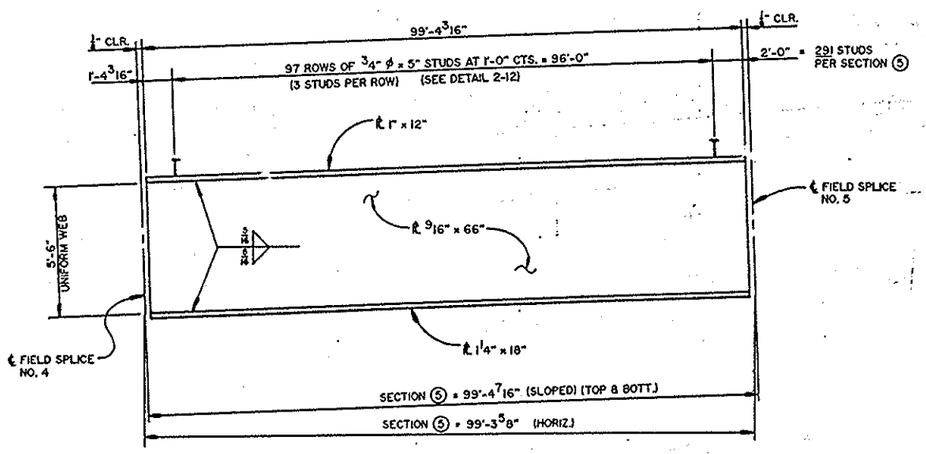
SHEET 23 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER & DETAILS
CONTINUOUS UNIT #2

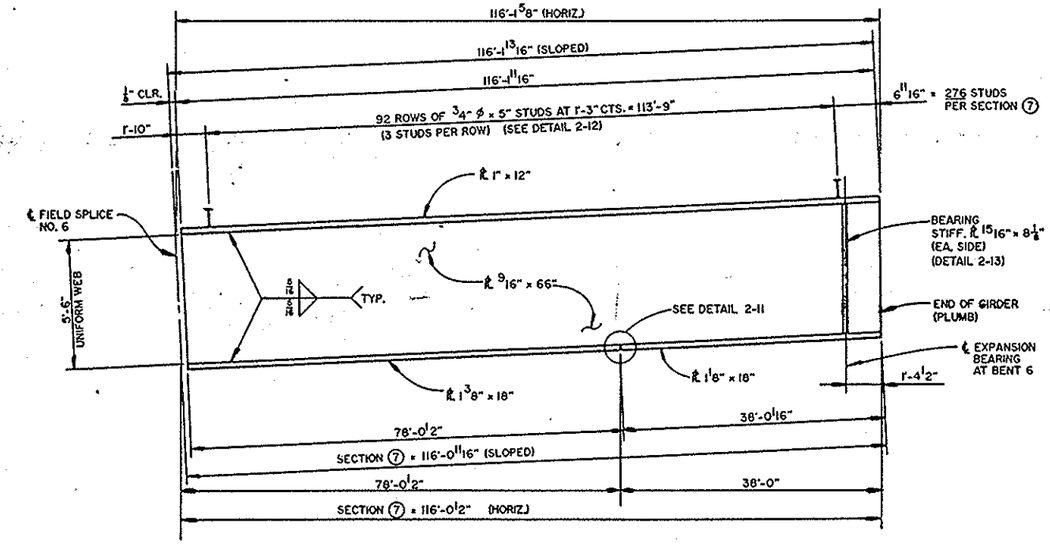
AUGUST 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-84
1			3			TOTAL SHEETS
2			4			224

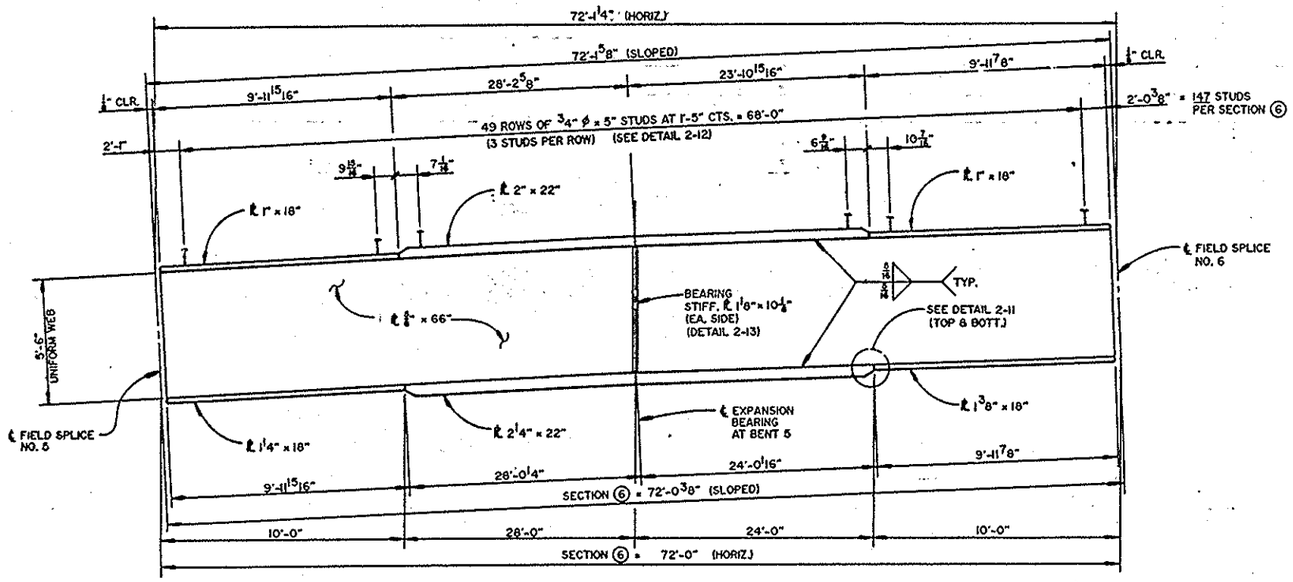
DRAWN BY RTJ DATE 8-94
CHECKED BY CCM DATE 10/95



GIRDER SECTION 5 - 1 REQ'D.



GIRDER SECTION 7 - 1 REQ'D.



GIRDER SECTION 6 - 1 REQ'D.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 24 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER & DETAILS
CONTINUOUS UNIT #2

AUGUST 1994

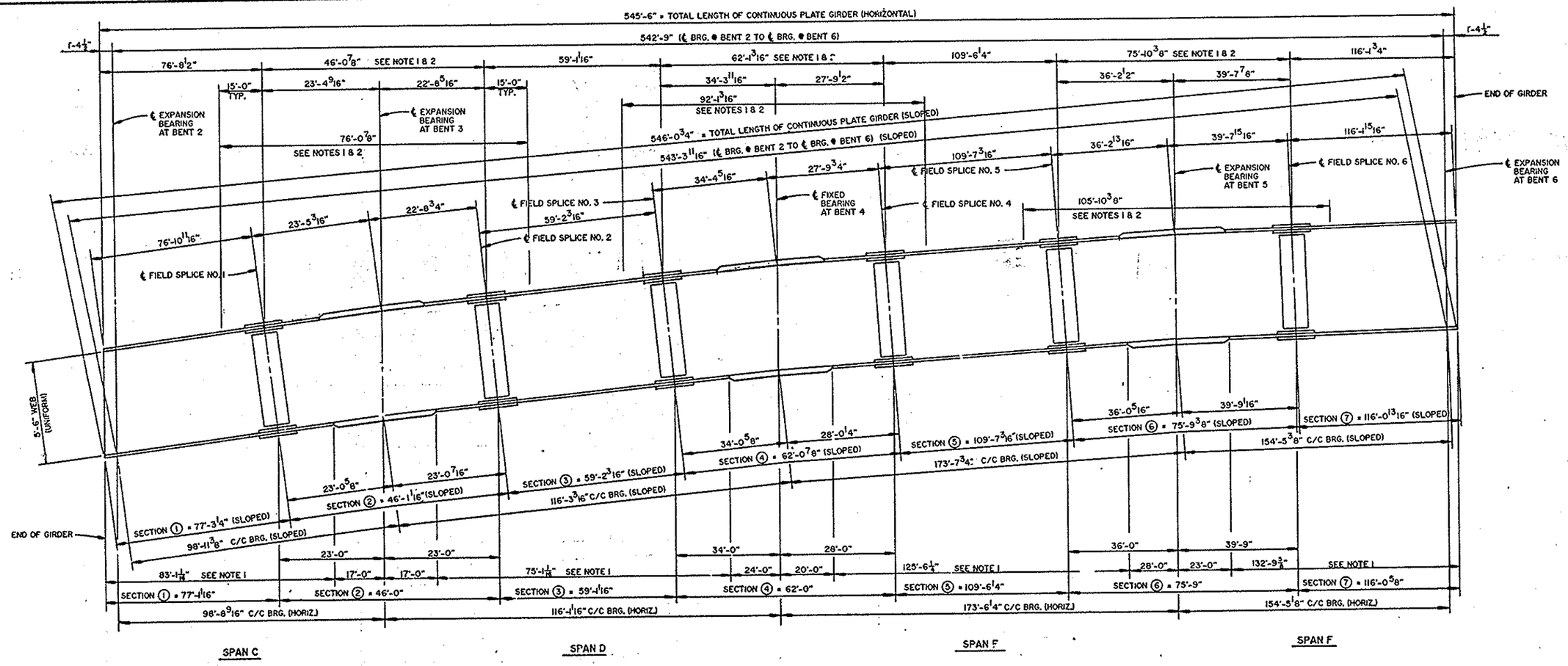
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-85
1			3			TOTAL SHEETS
2			4			224

NORTH CAROLINA PROFESSIONAL SEAL 12174 ENGINEER LEONARD GARRY FLAT
4/12/96

U2.044

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

DRAWN BY RTJ DATE 8-94
CHECKED BY LGM DATE 4/95



GIRDER 9 ELEVATION

NOTE 1: CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2: NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 25 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER 9 ELEVATION
CONTINUOUS UNIT #2

JULY 1994

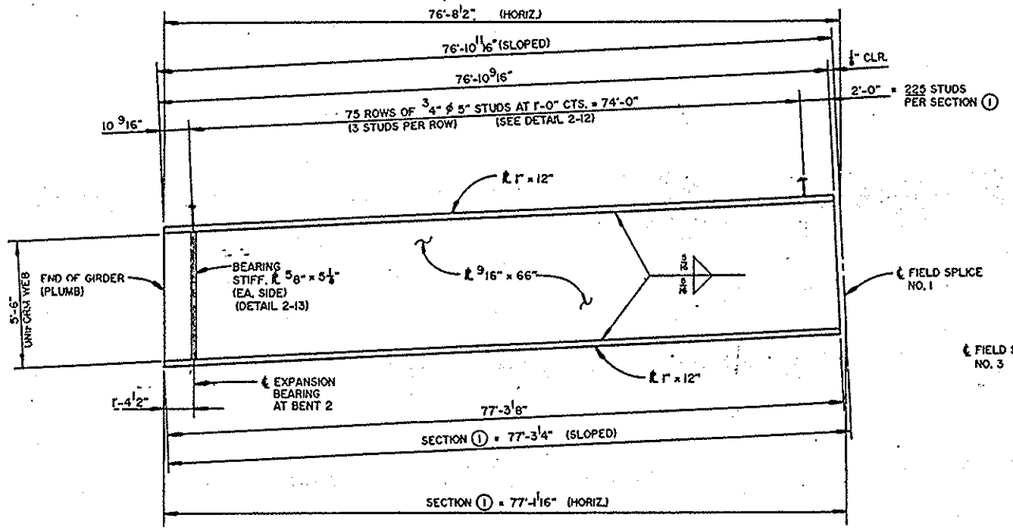
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U2.045

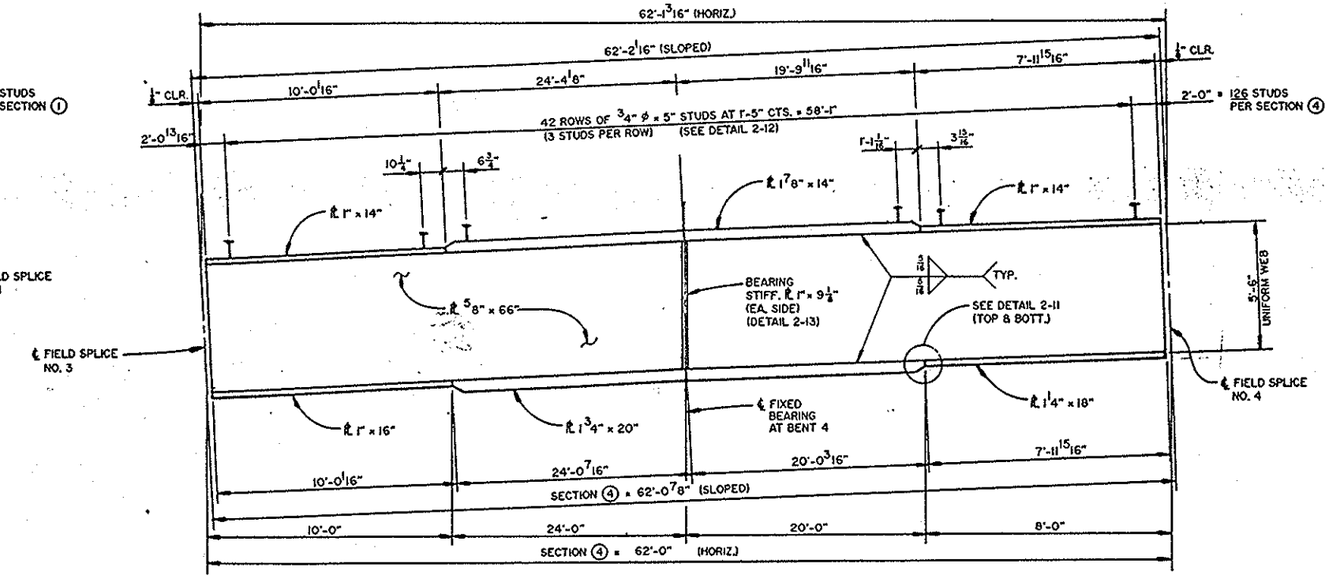
PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS							
NO.	BY	DATE	NO.	BY	DATE	SHEET NO.	S-86
1			3			TOTAL SHEETS	224
2			4				

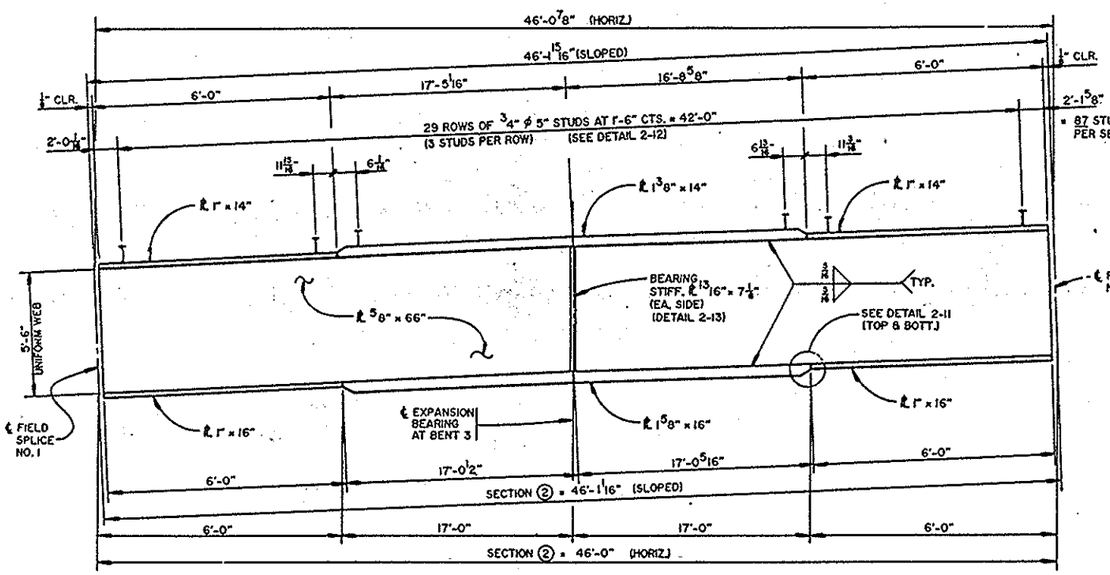
DRAWN BY BTL DATE 8-94
CHECKED BY GSM DATE 6/95



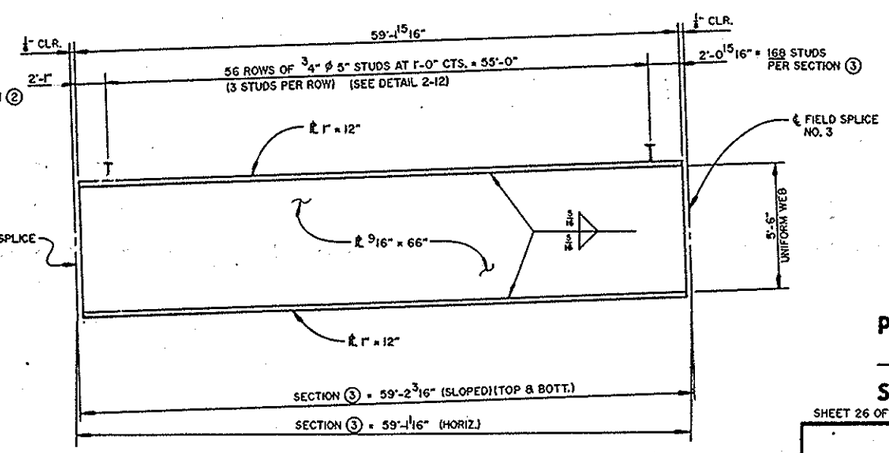
GIRDER SECTION 1 - 1 REQ'D.



GIRDER SECTION 4 - 1 REQ'D.



GIRDER SECTION 2 - 1 REQ'D.



GIRDER SECTION 3 - 1 REQ'D.

NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER EDWARD GARTH FLETCHER
4/12/96

U2.046

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

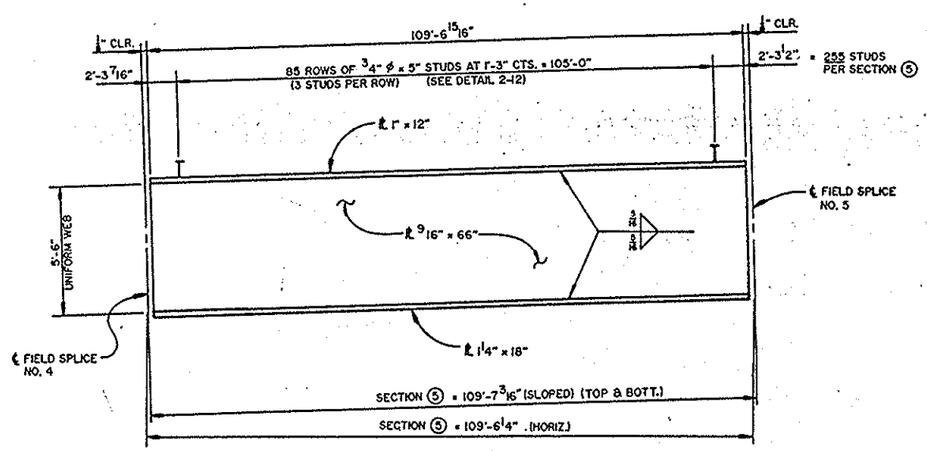
DRAWN BY KTJ DATE 8-96
CHECKED BY ZCM DATE 6/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

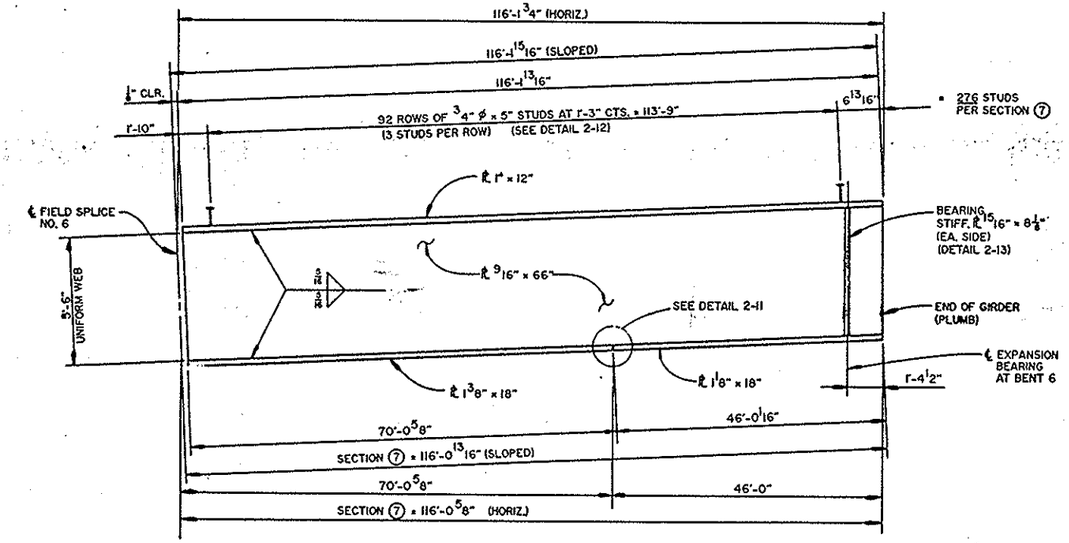
SHEET 26 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 9 DETAILS
CONTINUOUS UNIT #2
AUGUST 1994

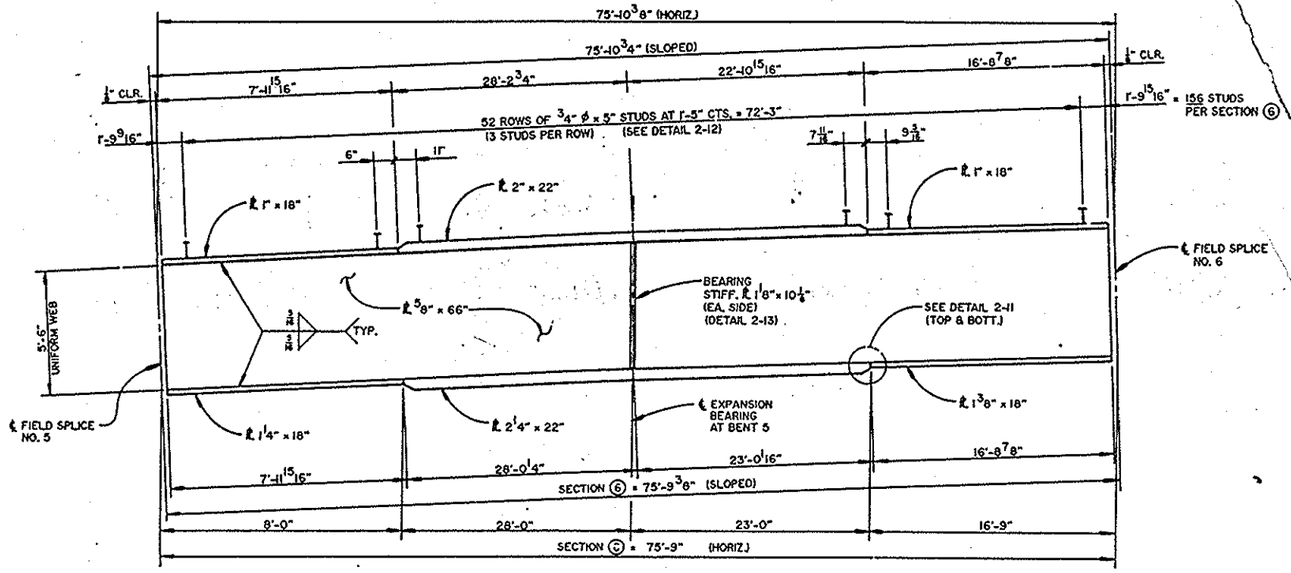
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-87
1			3			TOTAL SHEETS
2			4			224



GIRDER SECTION 5 - 1 REQ'D.



GIRDER SECTION 7 - 1 REQ'D.



GIRDER SECTION 6 - 1 REQ'D.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 27 OF 27

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER 9 DETAILS
CONTINUOUS UNIT #2

AUGUST 1994

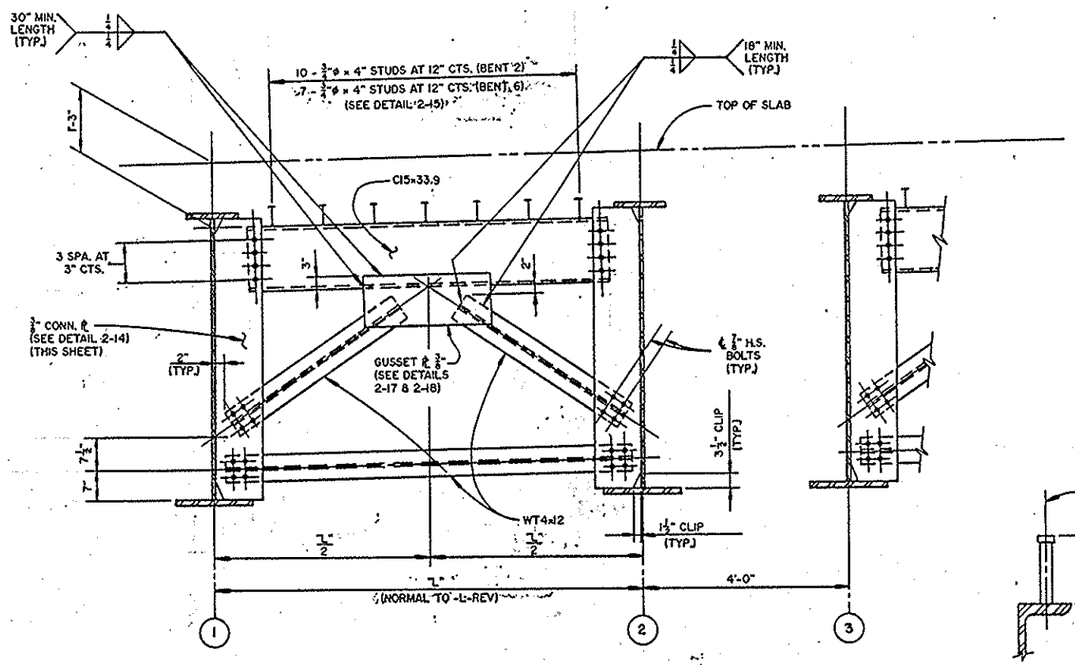
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U2.047

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

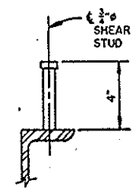
REVISIONS							SHEET NO.
NO.	BY	DATE	NO.	BY	DATE		S-88
1			3				TOTAL SHEETS
2			4				224

DRAWN BY RJ DATE 9-94
CHECKED BY CEM DATE 6/95



BENT 2 & BENT 6 CROSSFRAME

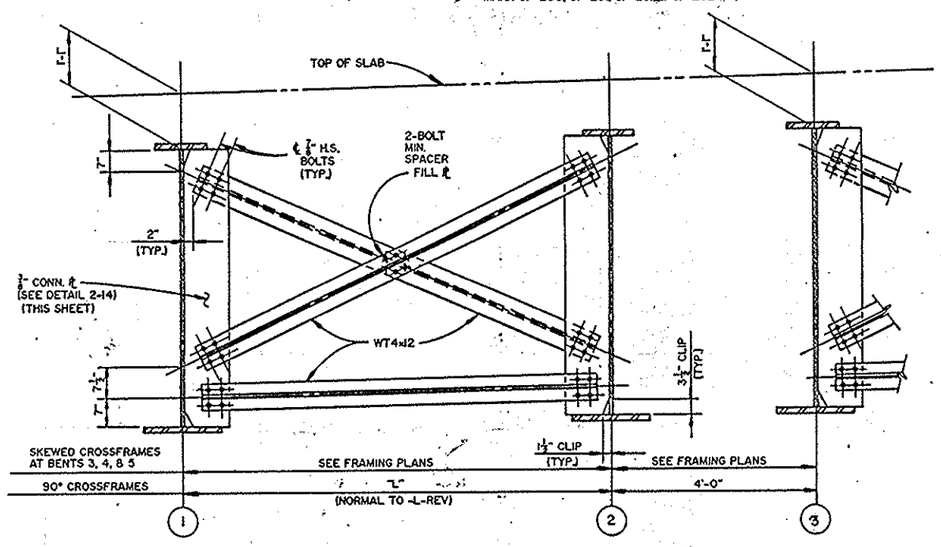
MARK CF-200, CF-201, CF-281 & CF-282



DETAIL 2-15

CROSSFRAME LENGTHS "L" (90° CROSSFRAMES ONLY)

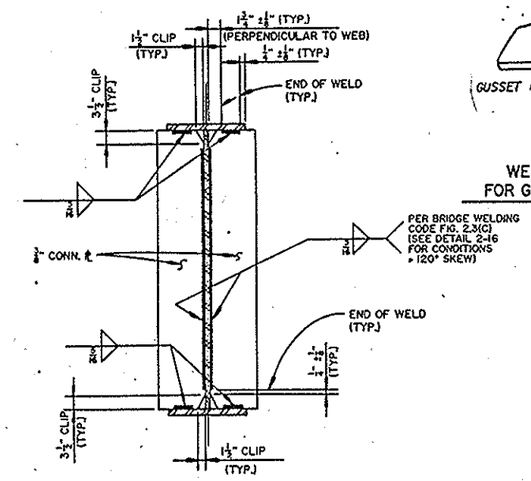
BENT 2 & BENT 6 CROSSFRAME		INTERMEDIATE CROSSFRAME					
	"L"		"L"		"L"		"L"
CF-200	10.9888'	CF-202	10.8782'	CF-228	9.9339'	CF-254	9.2580'
CF-201	10.9882'	CF-203	10.8724'	CF-229	9.9159'	CF-255	9.1751'
CF-281	8.3862'	CF-204	10.7676'	CF-230	9.8642'	CF-256	9.1619'
CF-282	8.2618'	CF-205	10.7566'	CF-231	9.8494'	CF-257	9.0743'
		CF-206	10.6571'	CF-232	9.7946'	CF-258	9.0929'
		CF-207	10.6407'	CF-233	9.7829'	CF-259	9.0021'
		CF-208	10.5465'	CF-234	9.7249'	CF-260	9.0272'
		CF-209	10.5249'	CF-235	9.7163'	CF-261	8.9333'
		CF-210	10.4631'	CF-236	9.6552'	CF-269	8.9567'
		CF-211	10.4376'	CF-237	9.6498'	CF-270	8.8594'
		CF-212	10.3798'	CF-238	9.5855'	CF-271	8.8894'
		CF-213	10.3503'	CF-239	9.5833'	CF-272	8.7889'
		CF-214	10.2965'	CF-240	9.5159'	CF-273	8.7889'
		CF-215	10.2630'	CF-248	9.5168'	CF-274	8.6836'
		CF-223	10.2131'	CF-249	9.4462'	CF-275	8.6883'
		CF-224	10.1757'	CF-250	9.4503'	CF-276	8.5782'
		CF-225	10.0998'	CF-251	9.3765'	CF-277	8.5877'
		CF-226	10.0548'	CF-252	9.3542'	CF-278	8.4729'
		CF-227	9.9824'	CF-253	9.2758'	CF-279	8.4872'
						CF-280	8.3675'



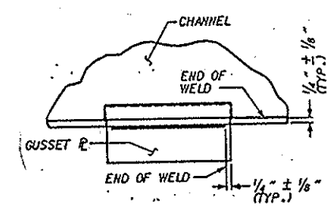
INTERMEDIATE CROSSFRAME

MARK CF-202 THRU CF-215, MARK CF-223 THRU CF-240, MARK CF-248 THRU CF-261 & MARK CF-269 THRU CF-280 — 90° CROSSFRAMES

MARK CF-216 THRU CF-222, MARK CF-241 THRU CF-247 & MARK CF-262 THRU CF-268 — SKEWED CROSSFRAMES AT BENTS 3, 4, 8 5

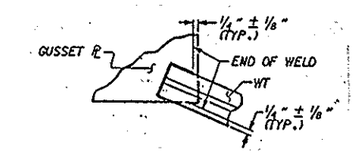


DETAIL 2-14



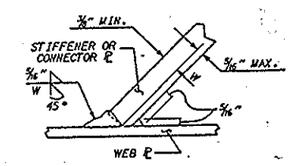
WELD TERMINATION DETAIL FOR GUSSET PLATE CONNECTION

DETAIL 2-17



WELD TERMINATION DETAIL FOR GUSSET PLATE/WT CONNECTION

DETAIL 2-18



DETAIL 2-16

>120° SKEW

NORTH CAROLINA PROFESSIONAL SEAL 12779 ENGINEER LEWIS GARTH FLETCHER

4/12/96

02.048

PREPARED BY THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

SUPERSTRUCTURE

STRUCTURAL STEEL

CROSSFRAME DETAILS

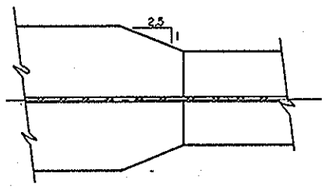
CONTINUOUS UNIT #2

SEPT. 1994

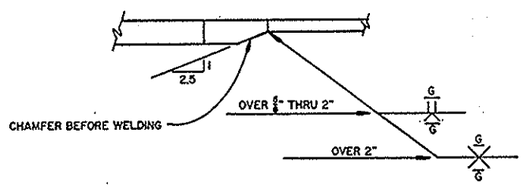
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	5-89
1			3			TOTAL SHEETS
2			4			224

DRAWN BY RPJ DATE 3-96

CHECKED BY ECM DATE 6/95

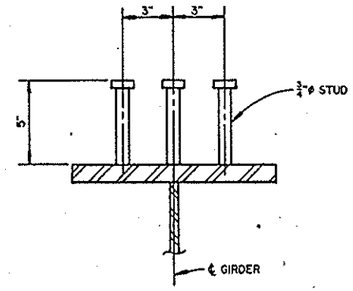


PLAN OF FLANGE

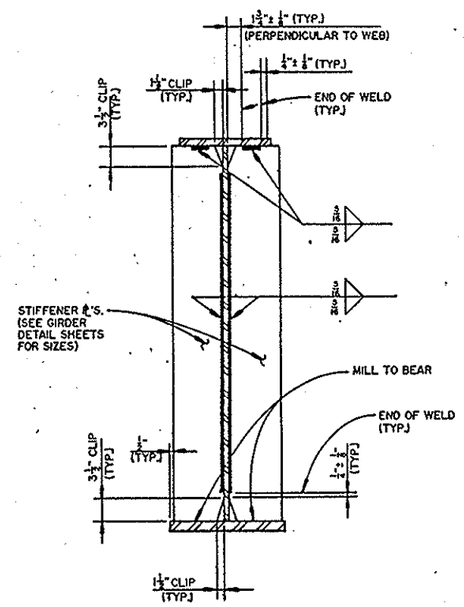


ELEVATION OF BOTTOM FLANGE
(TOP FLANGE SIMILAR)

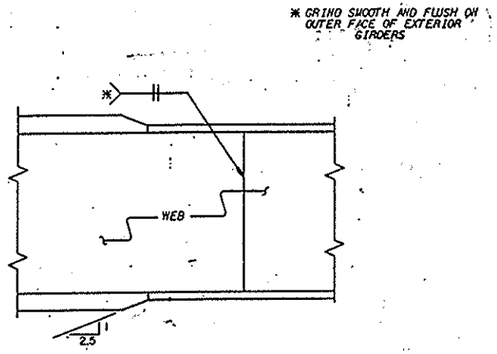
DETAIL 2-11



DETAIL 2-12



DETAIL 2-13
BEARING STIFFENER
(NORMAL TO WEB - TYP. ALL GIRDERS)



ELEVATION

TYPICAL WEB AND FLANGE BUTT JOINT

DETAIL 2-16

STRUCTURAL STEEL NOTES - CONTINUOUS UNIT NO. 2

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 50W AND PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, UNLESS OTHERWISE NOTED ON THE PLANS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL OR VERTICAL UNLESS OTHERWISE NOTED.

CAMBERED GIRDER LENGTHS SHALL BE ADJUSTED AND BEARINGS ARE TO BE PLACED ON THE CAMBERED GIRDER SO AS TO BE ALIGNED WITH THE ANCHORS AFTER DEAD LOAD DEFLECTION HAS OCCURRED, SHOP PLANS SHALL BE PREPARED ACCORDINGLY.

FOR POT BEARINGS, SEE SPECIAL PROVISIONS.

AT ALL POINTS OF SUPPORT IN SPANS C, D, E & F, NUTS FOR ANCHOR BOLTS SHALL BE TIGHTENED FINGER TIGHT AND GIVEN AN ADDITIONAL 1/4 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP TOOL.

SHEAR STUDS ON GIRDERS MAY BE SHIFTED UP TO 1" IF NECESSARY TO CLEAR FLANGE SPLICE WELDS.

ALL FIELD CONNECTIONS TO BE 7/8" DIA. HIGH STRENGTH BOLTS UNLESS OTHERWISE NOTED. SEE ALSO BOLTED FIELD SPLICE DETAILS.

SHOP SPLICES ARE PERMITTED TO LIMIT THE MAXIMUM REQUIRED TOP FLANGE PIECE LENGTHS TO 60 FEET AND WEB PIECE LENGTHS TO 45 FEET. PERMITTED FLANGE AND WEB SHOP SPLICES SHALL NOT BE LOCATED WITHIN 15 FEET OF MAXIMUM DEAD LOAD DEFLECTION OR WITHIN 15 FEET OF INTERMEDIATE BEARINGS OF CONTINUOUS UNITS. KEEP 2 FEET MINIMUM BETWEEN WEB AND FLANGE SHOP SPLICES. NO SHOP SPLICES WILL BE PERMITTED IN THE BOTTOM FLANGE PLATES.

METAL STAY-IN-PLACE FORMS SHALL NOT BE WELDED TO GIRDER FLANGES IN THE ZONES REQUIRING CHARPY V-NOTCH TEST. SEE STRUCTURAL STEEL DETAIL SHEETS.

END OF GIRDERS SHALL BE PLUMB.

WHEN WELDING THE SOLE PLATE TO THE GIRDER, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE BEARING DOES NOT EXCEED 250° F. TEMPERATURES ABOVE THIS MAY DAMAGE THE TFE OR ELASTOMER.

BEARING STIFFENERS ARE TO BE PLACED NORMAL TO THE WEB OF THE GIRDER AND SHALL BE PLUMB.

IN LIEU OF THE TURN OF THE NUT METHOD, TENSION ON A325 BOLTS MAY BE CALIBRATED USING DIRECT TENSION INDICATOR WASHERS. FOR DIRECT TENSION INDICATORS, SEE SPECIAL PROVISIONS.

FOR RADIOGRAPHIC TESTING OF BUTT WELDS, SEE SPECIAL PROVISIONS.

FOR SURFACE PREPARATION OF UNPAINTED STRUCTURAL STEEL, SEE SPECIAL PROVISIONS.

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U2.049

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

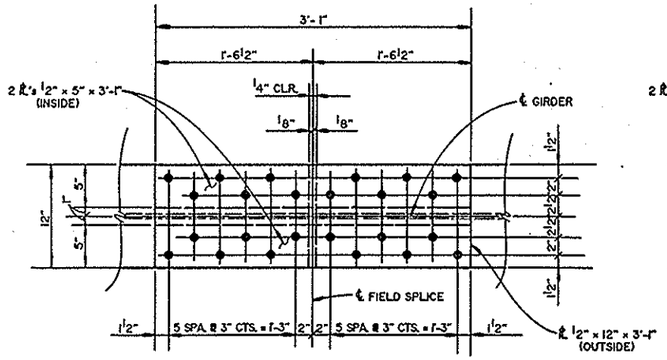
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL DETAILS
CONTINUOUS UNIT #2

AUGUST 1994

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

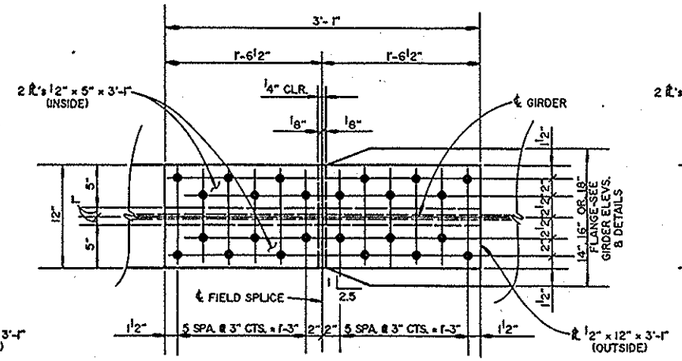
SHEET NO. S-90
TOTAL SHEETS 224

DRAWN BY RTJ DATE 3-94
CHECKED BY CCM DATE 6/15



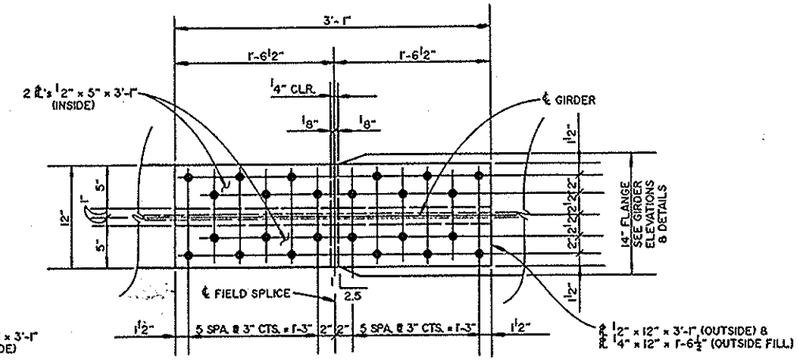
TYPE A FLANGE SPLICE

24 - 7/8" ϕ H.S. BOLTS REQ'D.



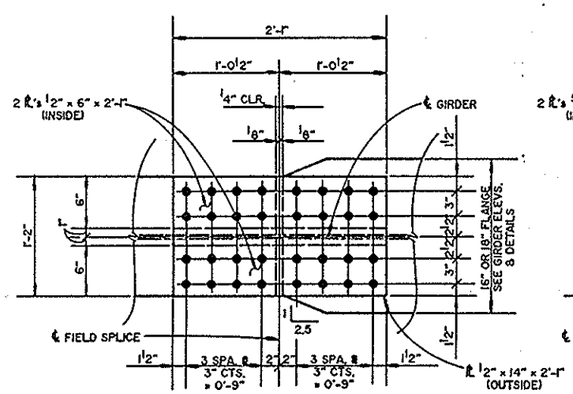
TYPE B FLANGE SPLICE

24 - 7/8" ϕ H.S. BOLTS REQ'D.



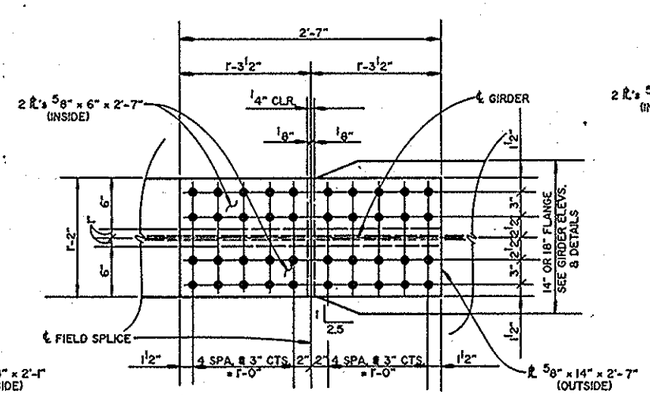
TYPE C FLANGE SPLICE

24 - 7/8" ϕ H.S. BOLTS REQ'D.



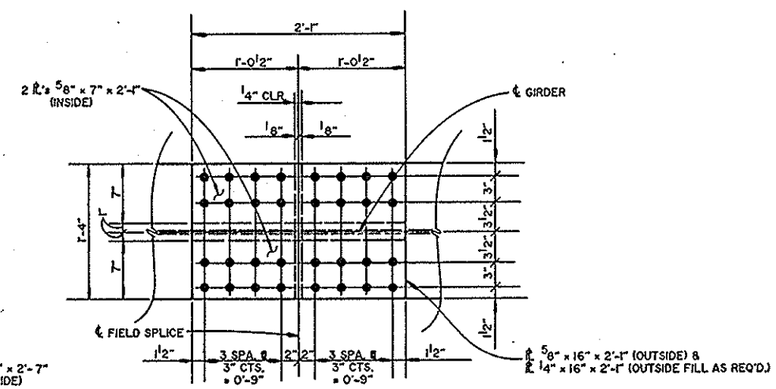
TYPE D FLANGE SPLICE

32 - 7/8" ϕ H.S. BOLTS REQ'D.



TYPE E FLANGE SPLICE

40 - 7/8" ϕ H.S. BOLTS REQ'D.



TYPE F FLANGE SPLICE

32 - 7/8" ϕ H.S. BOLTS REQ'D.

FLANGE SPLICE DETAILS

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 3

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

SUPERSTRUCTURE

STRUCTURAL STEEL
SPLICE DETAILS
CONTINUOUS UNIT #2

AUG. 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER

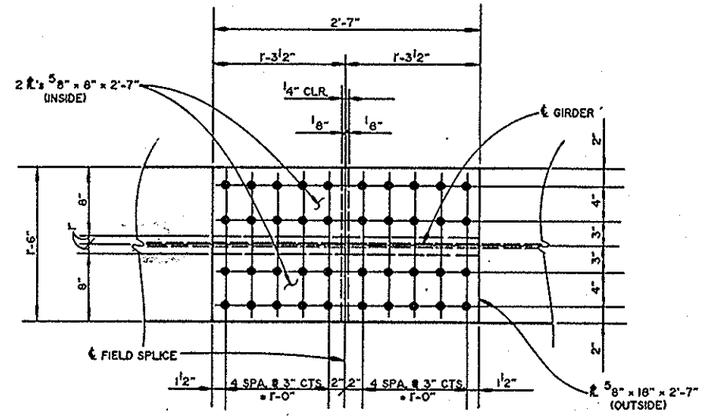
4/12/96

U2.050

PREPARED BY
THOMPSON - SORDONI - SHOOK
ENGINEERS, INCORPORATED

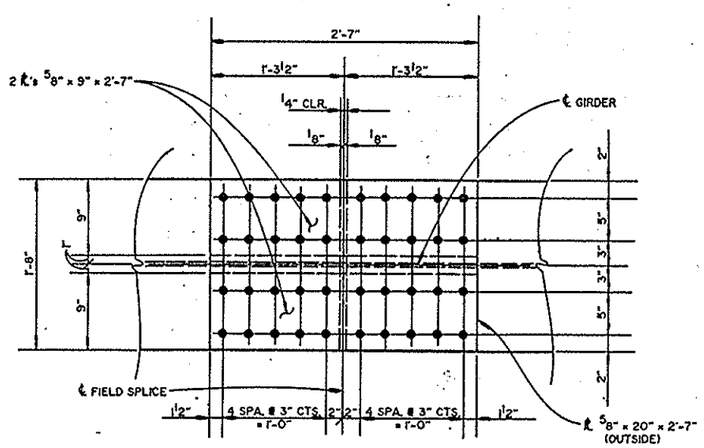
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	5-91
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. M. WILSON DATE AUG. 94
CHECKED BY CCM DATE 6/95



TYPE G FLANGE SPLICE

40 - 7/8" ϕ H.S. BOLTS REQ'D.



TYPE H FLANGE SPLICE

40 - 7/8" ϕ H.S. BOLTS REQ'D.

FLANGE SPLICE DETAILS

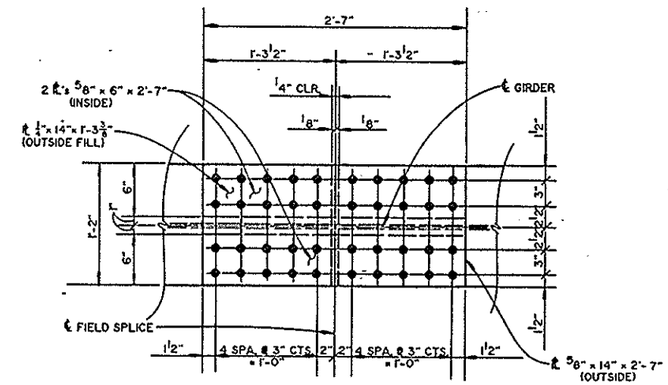
SUMMARY OF FIELD SPLICES

(BY TYPE, SIZE AND LOCATION)

GIRDER NO.	SPLICE NO.	WEB SPLICE TYPE	TOP FLANGE PLATE			BOTTOM FLANGE PLATE		
			LT.	RT.	SPLICE TYPE	LT.	RT.	SPLICE TYPE
1	1	I	1" x 14"	1½" x 14"	J	1½" x 20"	1½" x 20"	H
	2	I	1½" x 14"	1" x 12"	C	1½" x 18"	1½" x 14"	E
	3	II	1" x 12"	1" x 14"	B	1½" x 14"	1½" x 14"	E
	4	II	1" x 14"	1" x 12"	B	1" x 16"	1" x 12"	B
	5	II	1" x 12"	1" x 12"	A	1" x 12"	1" x 12"	A
	6	II	1" x 12"	1" x 12"	A	1" x 12"	1" x 12"	A
2	1	I	1" x 12"	1" x 16"	B	1½" x 20"	1½" x 20"	H
	2	I	1" x 16"	1" x 12"	B	1½" x 18"	1½" x 14"	E
	3	II	1" x 12"	1" x 14"	B	1½" x 14"	1½" x 14"	E
	4	II	1" x 14"	1" x 12"	B	1" x 16"	1" x 12"	B
	5	II	1" x 12"	1" x 12"	A	1" x 12"	1" x 16"	B
	6	I	1" x 12"	1" x 12"	A	1" x 16"	1" x 14"	D
3	1	I	1" x 12"	1" x 16"	B	1½" x 20"	1½" x 20"	H
	2	I	1" x 16"	1" x 12"	B	1½" x 18"	1½" x 14"	E
	3	II	1" x 12"	1" x 14"	B	1½" x 14"	1½" x 14"	E
	4	II	1" x 14"	1" x 12"	B	1" x 16"	1" x 12"	B
	5	II	1" x 12"	1" x 12"	A	1" x 12"	1" x 16"	B
	6	I	1" x 12"	1" x 12"	A	1" x 16"	1" x 14"	D

GIRDER NO.	SPLICE NO.	WEB SPLICE TYPE	TOP FLANGE PLATE			BOTTOM FLANGE PLATE		
			LT.	RT.	SPLICE TYPE	LT.	RT.	SPLICE TYPE
4	1	II	1" x 12"	1" x 14"	B	1½" x 20"	1½" x 20"	H
	2	I	1" x 14"	1" x 12"	B	1½" x 18"	1½" x 14"	E
	3	II	1" x 12"	1" x 14"	B	1½" x 14"	1½" x 18"	E
	4	II	1" x 14"	1" x 12"	B	1" x 18"	1" x 12"	B
	5	I	1" x 12"	1" x 14"	B	1" x 12"	1" x 16"	B
	6	I	1" x 14"	1" x 12"	B	1" x 16"	1" x 16"	F
5	1	I	1" x 12"	1" x 16"	B	1" x 20"	1" x 20"	H
	2	I	1" x 16"	1" x 12"	B	1" x 18"	1" x 12"	B
	3	II	1" x 12"	1" x 16"	B	1" x 12"	1" x 18"	B
	4	II	1" x 16"	1" x 12"	B	1" x 18"	1" x 12"	B
	5	II	1" x 12"	1" x 16"	B	1" x 12"	1" x 18"	B
	6	I	1" x 16"	1" x 12"	B	1" x 18"	1" x 18"	G
6	1	I	1" x 12"	1" x 16"	B	1" x 18"	1" x 18"	G
	2	I	1" x 16"	1" x 12"	B	1" x 18"	1" x 12"	B
	3	I	1" x 12"	1" x 16"	B	1" x 12"	1" x 18"	B
	4	II	1" x 16"	1" x 12"	B	1" x 18"	1" x 14"	E
	5	I	1" x 12"	1" x 16"	B	1" x 14"	1" x 18"	E
	6	I	1" x 16"	1" x 12"	B	1½" x 18"	1½" x 18"	G

GIRDER NO.	SPLICE NO.	WEB SPLICE TYPE	TOP FLANGE PLATE			BOTTOM FLANGE PLATE		
			LT.	RT.	SPLICE TYPE	LT.	RT.	SPLICE TYPE
7	1	II	1" x 12"	1" x 16"	B	1" x 16"	1" x 16"	F
	2	II	1" x 16"	1" x 12"	B	1" x 16"	1" x 12"	B
	3	I	1" x 12"	1" x 16"	B	1" x 12"	1" x 16"	B
	4	II	1" x 16"	1" x 12"	B	1" x 16"	1" x 16"	F
	5	I	1" x 12"	1" x 18"	B	1" x 16"	1½" x 16"	F
	6	I	1" x 18"	1" x 12"	B	1½" x 18"	1½" x 18"	G
8	1	II	1" x 12"	1" x 16"	B	1" x 12"	1" x 16"	B
	2	II	1" x 16"	1" x 12"	B	1" x 16"	1" x 12"	B
	3	I	1" x 12"	1" x 16"	B	1" x 12"	1" x 16"	B
	4	II	1" x 16"	1" x 12"	B	1½" x 18"	1½" x 18"	G
	5	I	1" x 12"	1" x 18"	B	1½" X 18"	1½" x 18"	G
	6	I	1" x 18"	1" x 12"	B	1½" x 18"	1½" x 18"	G
9	1	II	1" x 12"	1" x 14"	B	1" x 12"	1" x 16"	B
	2	II	1" x 14"	1" x 12"	B	1" x 16"	1" x 12"	B
	3	I	1" x 12"	1" x 14"	B	1" x 12"	1" x 16"	B
	4	II	1" x 14"	1" x 12"	B	1½" x 18"	1½" x 18"	G
	5	I	1" x 12"	1" x 18"	B	1½" x 18"	1½" x 18"	G
	6	I	1" x 18"	1" x 12"	B	1½" x 18"	1½" x 18"	G



TYPE J FLANGE SPLICE

40 - 7/8" ϕ H.S. BOLTS REQ'D.

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-Rev.

SHEET 2 OF 3

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

SUPERSTRUCTURE

STRUCTURAL STEEL
SPLICE DETAILS
CONTINUOUS UNIT #2

AUG. 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER

4/12/96

U2.051

PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

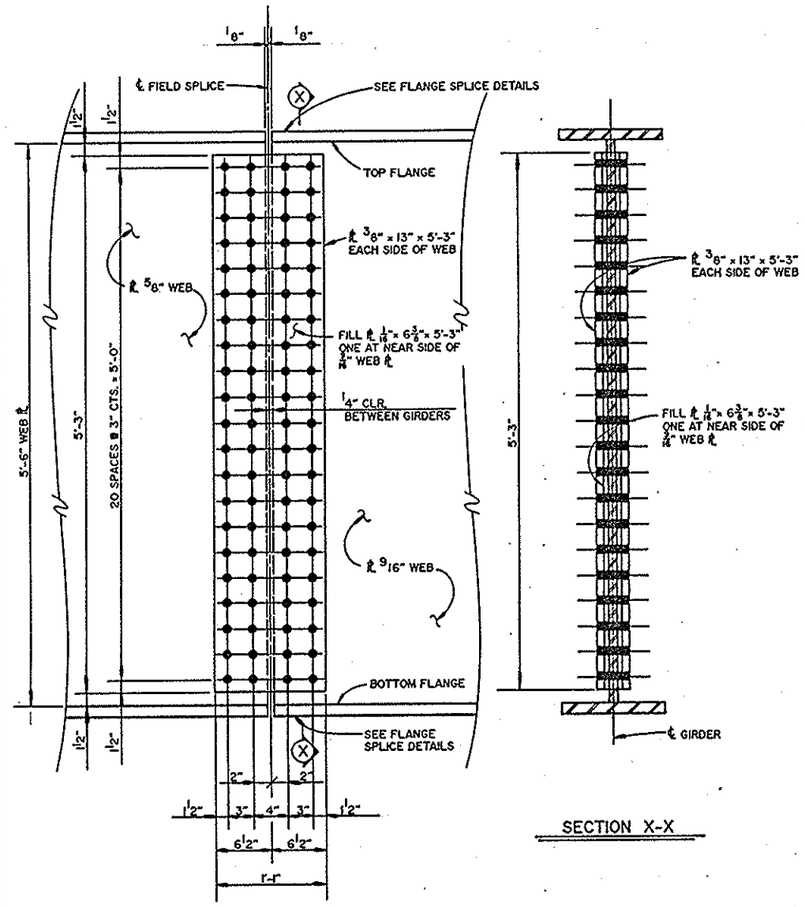
REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

SHEET NO. S-92

TOTAL SHEETS 224

DRAWN BY N. M. WILSON DATE AUG. 94

CHECKED BY CCM DATE 6/95

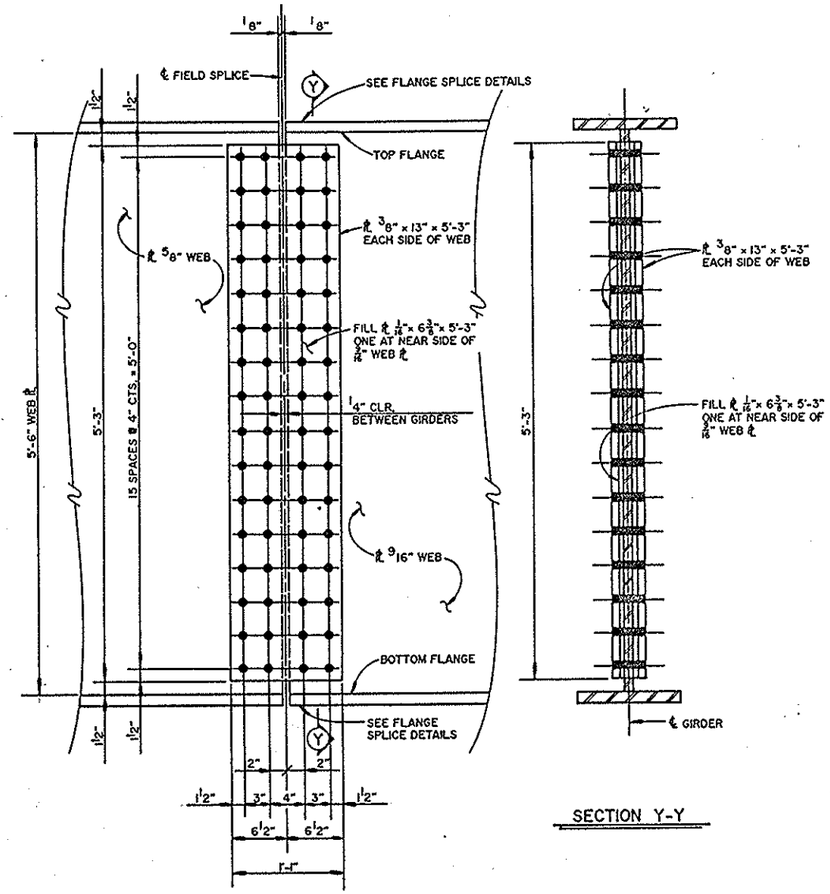


SECTION X-X

ELEVATION

TYPE I WEB SPLICE DETAIL

64 - 7/8" ϕ H. S. BOLTS REQUIRED



SECTION Y-Y

ELEVATION

TYPE II WEB SPLICE DETAIL

64 - 7/8" ϕ H. S. BOLTS REQUIRED

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-Rev.

SHEET 3 OF 3

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

SUPERSTRUCTURE

STRUCTURAL STEEL
SPLICE DETAILS
CONTINUOUS UNIT #2

AUG. 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER

4/12/96

U2.052

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

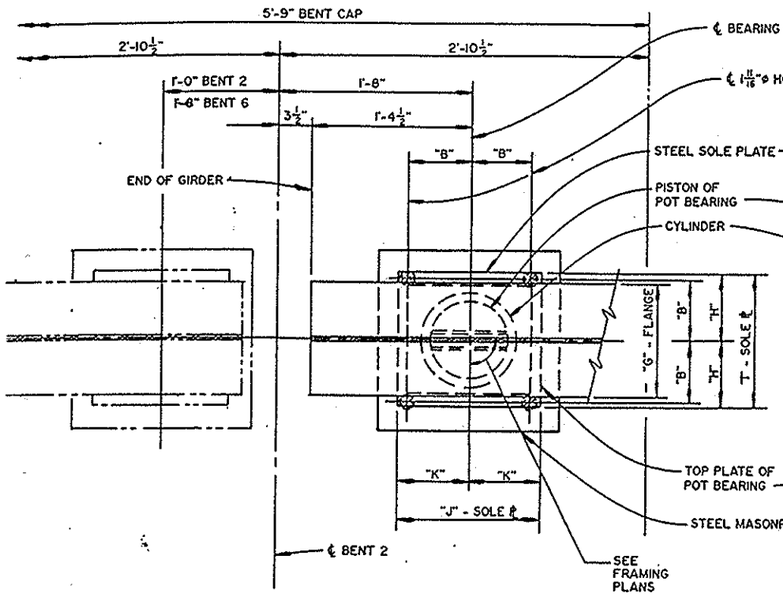
REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

SHEET NO. 5-93

TOTAL SHEETS 224

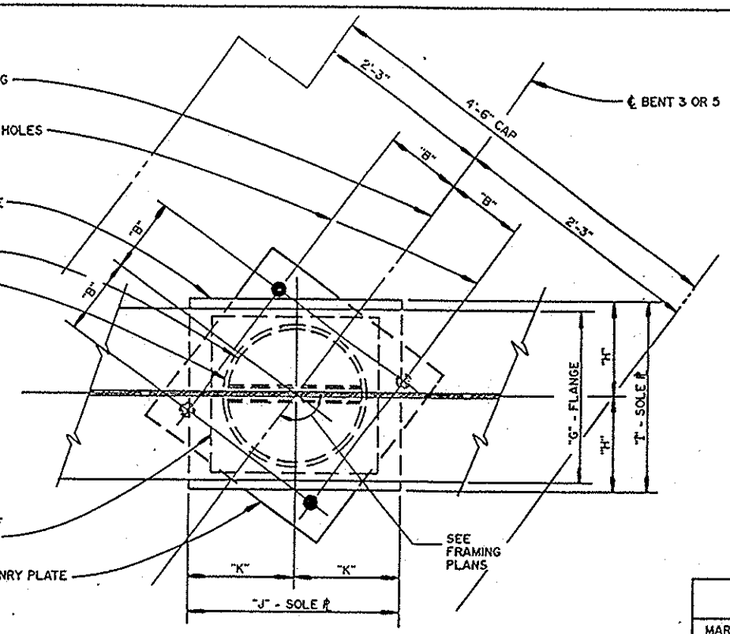
DRAWN BY N. M. WILSON DATE AUG. 94

CHECKED BY CGM DATE 6/95



PLAN - "EBA-21" AT BENT 2 AS SHOWN

(PLAN AT BENT 6 SIMILAR)



PLAN - "EBA-22", "EBA-23", "EBA-24" AND "EBA-25" AT BENTS 3 AND 5

TABLE FOR FILL PLATES *			
MARK	LOCATION	THICKNESS	NO. REQ'D.
FP-201	GDR. 3, BT. 2 (FS)	7/16"	1
FP-202	GDR. 7 & 9, BT. 2 (FS)	13/16"	2
FP-203	GDR. 2, BT. 5	11/16"	1
FP-204	GDR. 3, BT. 5	1/8"	1
FP-205	GDR. 5, BT. 5	3/16"	1

NOTES :

FOR POT BEARINGS, SEE SPECIAL PROVISIONS.

FOR THERMAL SPRAYED COATINGS (METALIZATION), SEE SPECIAL PROVISIONS.

AT ALL POINTS OF SUPPORTS IN THE CONTINUOUS UNIT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT ON THE MASONRY PLATE AND GIVEN AN ADDITIONAL 1/4 TURN. THE THREAD OF THE NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

WHEN WELDING THE SOLE PLATE TO THE GIRDER, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE BEARING DOES NOT EXCEED 250° F. TEMPERATURES ABOVE THIS MAY DAMAGE THE TFE OR ELASTOMER.

ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

THE CLOSURE PLATE AND THE STANDARD PIPE FOR THESE ASSEMBLIES SHALL NOT BE GALVANIZED.

SOLE PLATES SHOULD BE WELDED TO GIRDER FLANGES AND ANCHOR BOLTS SHOULD BE GROUTED BEFORE FORMS AND FALSEWORK ARE PLACED.

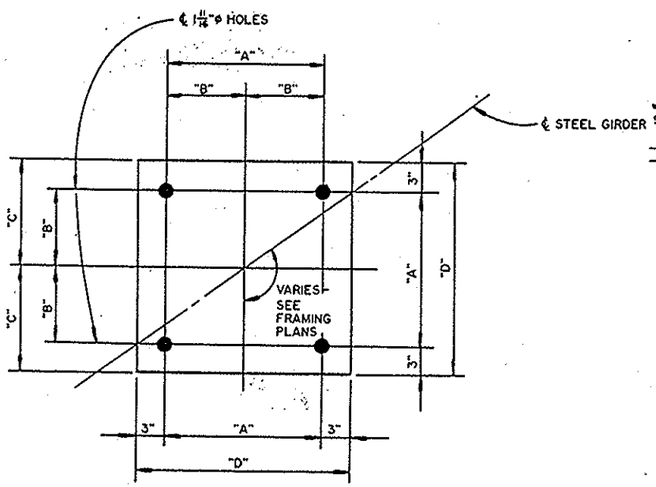
* AT THE CONTRACTOR'S OPTION, HE MAY COMBINE FILL PLATES, FP-201, ETC. WITH THE MASONRY PLATE AT THE LOCATION SHOWN ON THE FRAMING PLAN. FILL PLATES NOT COMBINED SHALL HAVE THE THICKNESS AS SHOWN ON THE PLANS AND SHALL HAVE THE SAME LENGTH, WIDTH AND HOLE PATTERN AS THE MASONRY PLATE.

▷ FOR ADDITIONAL POT BEARING DETAILS, SEE APPROVED SHOP DRAWINGS.

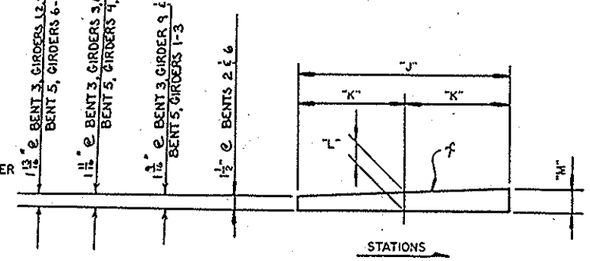
TABLE FOR EXPANSION BEARING ASSEMBLIES							
MARK	"A"	"B"	"C"	"D"	"E"	"F"	NO. REQ'D.
EBA-21	1'-0⅜"	6 3/16"	9 3/16"	1'-6⅜"	1½"	⊛ 4 11/16"	18
EBA-22	1'-6½"	9¼"	1'-0¼"	2'-0½"	1½"	4 15/16"	4
EBA-23	1'-6½"	9¼"	1'-0¼"	2'-0½"	1½"	5 1/16"	2
EBA-24	1'-6½"	9¼"	1'-0¼"	2'-0½"	1½"	5 3/16"	4
EBA-25	1'-6½"	9¼"	1'-0¼"	2'-0½"	1½"	5 5/16"	8

▷ ▷

⊛ 4⅝" AT BENT 2, GIRDERS 1-3,5

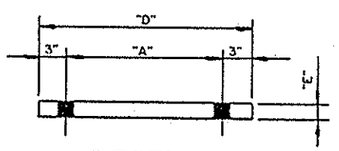


PLAN



▷ ELEVATION OF BEVELED SOLE PLATE

MARK SP-201 THRU SP-219



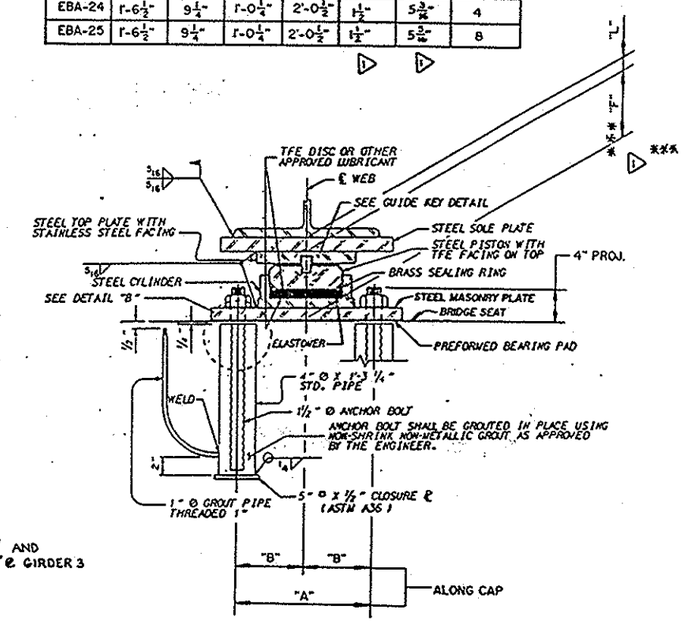
ELEVATION

MASONRY PLATE "EBA"

TABLE OF BEVELED SOLE PLATES FOR EXPANSION BEARING ASSEMBLIES									
	MARK	"G"	"H"	"T"	"J"	"K"	"L"	"M"	NO. REQ'D.
BENT 2	SP-201	1'-4"	9"	1'-6"	1'-3"	7½"	2"	2½"	4
	SP-202	1'-6"	10"	1'-8"	1'-3"	7½"	2"	2½"	1
	SP-203	1'-2"	8"	1'-4"	1'-3"	7½"	2"	2½"	1
	SP-204	1'-0"	7"	1'-2"	1'-3"	7½"	2"	2½"	3
BENT 3	SP-205	1'-10"	1'-0"	2'-0"	1'-10"	11"	2 3/16"	2 15/16"	1
	SP-206	1'-8"	11"	1'-10"	1'-10"	11"	** 2 3/16"	** 2 15/16"	4
	SP-207	1'-8"	11"	1'-10"	1'-10"	11"	2¼"	2 15/16"	2
	SP-208	1'-6"	10"	1'-8"	1'-10"	11"	2 3/16"	2 15/16"	1
	SP-209	1'-4"	9"	1'-6"	1'-10"	11"	2 3/16"	2 15/16"	1
BENT 5	SP-210	1'-4"	9"	1'-6"	1'-10"	11"	1¾"	1 13/16"	1
	SP-211	1'-8"	11"	1'-10"	1'-10"	11"	1¾"	1 15/16"	2
	SP-212	1'-8"	11"	1'-10"	1'-10"	11"	1⅞"	2 1/16"	2
	SP-213	1'-8"	11"	1'-10"	1'-10"	11"	2"	2 3/16"	1
	SP-214	1'-10"	1'-0"	2'-0"	1'-10"	11"	2"	2 3/16"	2
	SP-215	1'-8"	11"	1'-10"	1'-10"	11"	2"	2 3/16"	1
BENT 6	SP-216	1'-0"	7"	1'-2"	1'-3"	7½"	1⅝"	1¾"	3
	SP-217	1'-2"	8"	1'-4"	1'-3"	7½"	1⅝"	1¾"	1
	SP-218	1'-4"	9"	1'-6"	1'-3"	7½"	1⅝"	1¾"	1
	SP-219	1'-6"	10"	1'-8"	1'-3"	7½"	1⅝"	1¾"	4

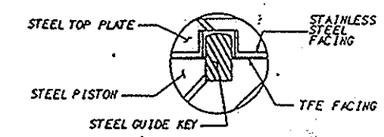
** L = 2 3/16" AND M = 2 15/16" ℄ GIRDER 3

△ △



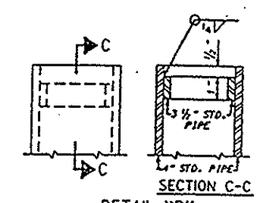
SECTION THRU EXPANSION BEARING ASSEMBLY

"EBA-21" THRU "EBA-25"



GUIDE KEY DETAIL

*** OVERALL POT HEIGHTS INCLUDE PREFORMED BEARING PAD BUT EXCLUDES FILL PLATES.



SECTION C-C

DETAIL "B"

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 1 OF 2

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

SUPERSTRUCTURE
STRUCTURAL STEEL

BEARING DETAILS
CONTINUOUS UNIT #2

SEPT. 1994

▷ REVISED SOLE PLATE AND MASONRY PLATE THICKNESSES, OVERALL POT HEIGHTS, AND ADDED REFERRAL TO APPROVED SHOP DRAWINGS. / BY: CEP

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LUCIUS GARTH FLETCHER III

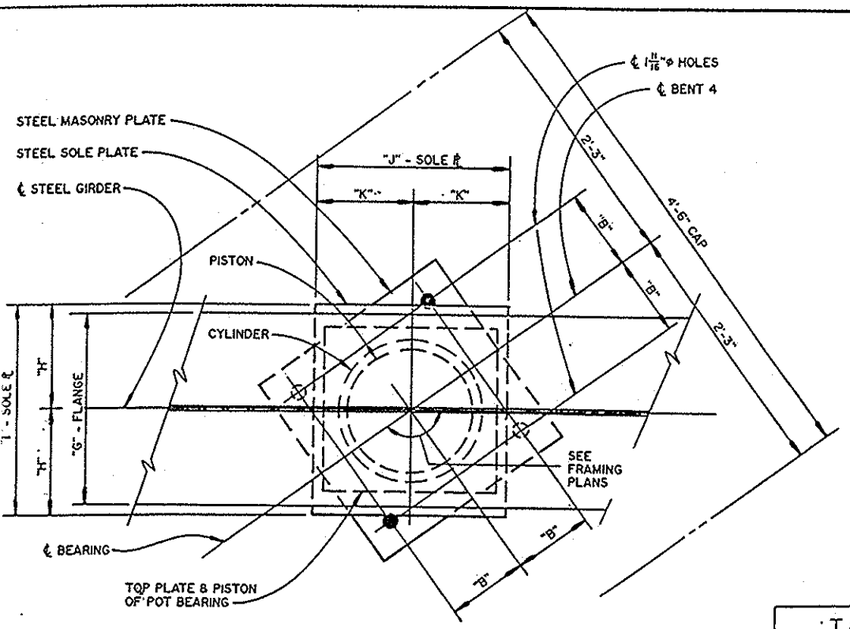
4/12/96

U2.053

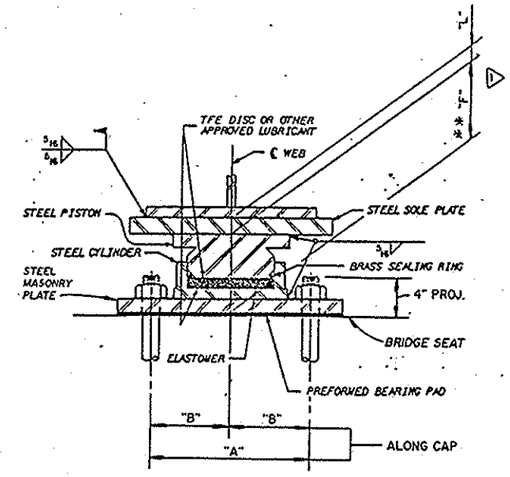
PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-94
▷	RGR	3/7/97	3			TOTAL SHEETS
2			4			224

RTJ DATE 7-94
CCM DATE 6/95



PLAN - "FBA-21", "FBA-22", AND "FBA-23 AT BENT 4

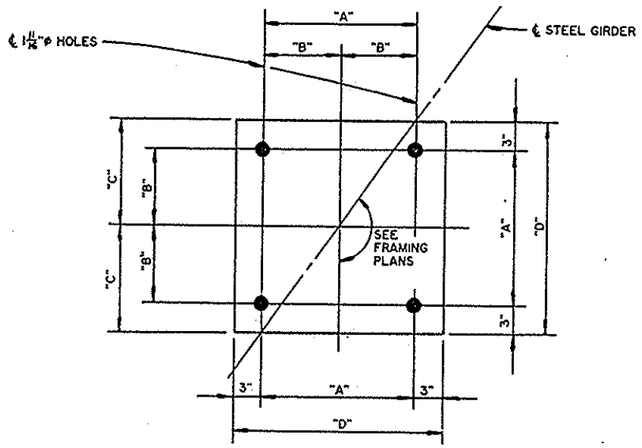


SECTION THRU FIXED BEARING ASSEMBLY

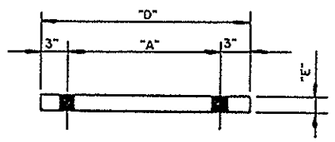
"FBA-21" THRU "FBA-23"

** OVERALL POT HEIGHTS INCLUDE PREFORMED BEARING PAD

TABLE FOR FIXED BEARING ASSEMBLIES							
MARK	"A"	"B"	"C"	"D"	"E"	"F"	NO. REQ'D.
FBA-21	1'-4 1/2"	8 1/4"	11 1/4"	1'-10 1/2"	1 1/2"	4 13/16"	3
FBA-22	1'-4 1/2"	8 1/4"	11 1/4"	1'-10 1/2"	1 1/2"	4 13/16"	5
FBA-23	1'-4 1/2"	8 1/4"	11 1/4"	1'-10 1/2"	1 1/2"	4 15/16"	1



PLAN

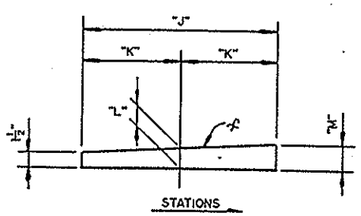


ELEVATION

MASONRY PLATE "FBA"

TABLE FOR LOADS AND MOVEMENTS						
BEARING	LOCATION	VERTICAL LOAD (K)			LATERAL LOAD (K)	TOTAL MOVEMENT (INCHES)
		DEAD	LIVE	TOTAL		
EBA-21	BT. 2 & 6	133	67	200	20	2"
EBA-22	BT. 3 & 5	280	120	400	40	2"
EBA-23	BT. 3	304	146	450	45	2"
EBA-24	BT. 3 & 5	347	153	500	50	2"
EBA-25	BT. 3 & 5	438	162	600	60	2"
FBA-21	BT. 4	254	146	400	40	NA
FBA-22	BT. 4	300	150	450	45	NA
FBA-23	BT. 4	350	150	500	50	NA

FOR ADDITIONAL POT BEARING DETAILS, SEE APPROVED SHOP DRAWINGS



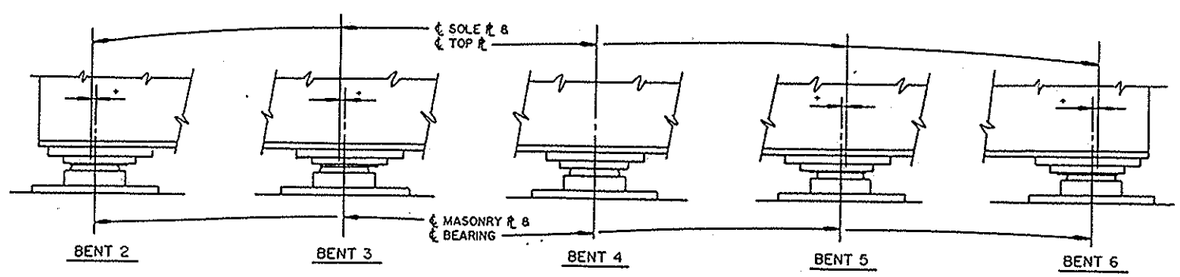
ELEVATION OF BEVELED SOLE PLATE

MARK SP-220 THRU SP-224

TABLE OF BEVELED SOLE PLATES FOR FIXED BEARING ASSEMBLIES								
MARK	"G"	"H"	"I"	"J"	"K"	"L"	"M"	NO. REQ'D.
SP-220	1'-8"	11"	1'-10"	1'-8"	10"	1 13/16"	2 1/8"	1
SP-221	1'-8"	11"	1'-10"	1'-8"	10"	1 3/4"	2"	2
SP-222	1'-8"	11"	1'-10"	1'-8"	10"	1 13/16"	2 1/8"	2
SP-223	1'-8"	11"	1'-10"	1'-8"	10"	1 7/8"	2 1/4"	2
SP-224	1'-8"	11"	1'-10"	1'-8"	10"	1 7/8"	2 1/4"	2

TABLE FOR PLATE SETTING DATA (FOR EXPANSION POT BEARINGS)				
TEMPERATURE AT TIME OF SETTING	30° F	60° F	90° F	*
EBA-21	- 3/8"	0"	+ 3/8"	3/16"
EBA-22	- 5/8"	0"	+ 5/8"	5/16"
EBA-23	- 5/8"	0"	+ 5/8"	5/16"
EBA-24	- 3/4"	0"	+ 3/4"	3/8"
EBA-25	- 3/4"	0"	+ 3/4"	3/8"

* CORRECTION FOR END ROTATION DUE TO WEIGHT OF SLAB AND COMPOSITE DEAD LOAD.



TEMPERATURE SETTING DETAILS

REVISED SOLE PLATE THICKNESSES, OVERALL POT HEIGHTS, AND ADDED REFERRAL TO APPROVED SHOP DRAWINGS. ✓ BY: CEP

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER 4/12/96

U2.054

PREPARED BY THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

BEARING DETAILS
CONTINUOUS UNIT #2

SEPT. 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-95
1	PGR	3/7/97	3			TOTAL SHEETS
2			4			224

RTL DATE 9-94
CCM DATE 6/95

GIRDER 1

	SPAN C (℄ EXPANSION BEARINGS AT BENT 2)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.064	.118	.153	.166	.158	.132	.093	.052	.020
DEFLECTION DUE TO WEIGHT OF SLAB	.116	.212	.275	.299	.285	.237	.168	.094	.036
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.026	.047	.062	.068	.065	.055	.040	.023	.008
TOTAL DEAD LOAD DEFLECTION	.206	.377	.490	.533	.508	.424	.301	.169	.064
VERTICAL CURVE ORDINATE	.134	.238	.312	.357	.372	.356	.312	.238	.134
REQUIRED CAMBER	$4\frac{1}{16}$"	$7\frac{3}{8}$"	$9\frac{3}{8}$"	$10\frac{11}{16}$"	$10\frac{3}{16}$"	$9\frac{3}{8}$"	$7\frac{3}{8}$"	$4\frac{7}{8}$"	$2\frac{3}{8}$"

	SPAN D (℄ EXPANSION BEARINGS AT BENT 3)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.002	.010	.028	.049	.063	.066	.057	.038	.017
DEFLECTION DUE TO WEIGHT OF SLAB	-.003	.018	.051	.087	.112	.116	.098	.064	.027
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	-.001	.005	.013	.022	.027	.028	.024	.015	.006
TOTAL DEAD LOAD DEFLECTION	-.006	.033	.092	.158	.202	.210	.179	.117	.050
VERTICAL CURVE ORDINATE	.139	.247	.325	.371	.386	.371	.324	.247	.139
REQUIRED CAMBER	$1\frac{5}{8}$"	$3\frac{3}{8}$"	5"	$6\frac{3}{8}$"	$7\frac{1}{16}$"	7"	$6\frac{1}{16}$"	$4\frac{3}{8}$"	$2\frac{1}{4}$"

	SPAN E (℄ FIXED BEARINGS AT BENT 4)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.006	-.007	-.006	-.004	-.002	-.001	-.002	-.003	-.003
DEFLECTION DUE TO WEIGHT OF SLAB	-.007	-.005	0	.005	.007	.005	-.001	-.007	-.009
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	-.002	-.002	-.001	0	.001	0	.001	.002	.002
TOTAL DEAD LOAD DEFLECTION	-.015	-.014	-.007	.001	.006	.004	-.002	-.008	-.010
VERTICAL CURVE ORDINATE	.075	.134	.176	.201	.210	.201	.176	.134	.076
REQUIRED CAMBER	$\frac{3}{4}$"	$1\frac{7}{16}$"	2"	$2\frac{7}{16}$"	$2\frac{9}{16}$"	$2\frac{7}{16}$"	$2\frac{1}{16}$"	$1\frac{1}{2}$"	$\frac{13}{16}$"

	SPAN F (℄ EXPANSION BEARINGS AT BENT 5 — ℄ EXPANSION BEARINGS AT BENT 6)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.008	.019	.030	.039	.045	.045	.040	.030	.016
DEFLECTION DUE TO WEIGHT OF SLAB	.022	.054	.087	.114	.131	.132	.118	.089	.048
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.005	.012	.020	.026	.030	.030	.027	.020	.011
TOTAL DEAD LOAD DEFLECTION	.035	.085	.137	.179	.206	.207	.185	.139	.075
VERTICAL CURVE ORDINATE	.071	.125	.165	.189	.196	.188	.164	.126	.071
REQUIRED CAMBER	$1\frac{1}{4}$"	$2\frac{1}{2}$"	$3\frac{5}{8}$"	$4\frac{7}{16}$"	$4\frac{13}{16}$"	$4\frac{3}{4}$"	$4\frac{3}{16}$"	$3\frac{3}{16}$"	$1\frac{3}{4}$"

GIRDER 2

	SPAN C								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.021	.038	.048	.050	.044	.032	.018	.006	-.001
DEFLECTION DUE TO WEIGHT OF SLAB	.113	.207	.272	.300	.292	.252	.189	.116	.049
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.022	.041	.053	.058	.057	.048	.035	.021	.008
TOTAL DEAD LOAD DEFLECTION	.156	.286	.373	.408	.393	.332	.242	.143	.056
VERTICAL CURVE ORDINATE	.121	.215	.282	.323	.336	.323	.283	.215	.122
REQUIRED CAMBER	$3\frac{3}{16}$"	6"	$7\frac{7}{8}$"	$8\frac{3}{4}$"	$8\frac{3}{4}$"	$7\frac{7}{8}$"	$6\frac{5}{16}$"	$4\frac{5}{16}$"	$2\frac{1}{8}$"

	SPAN D								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.012	.032	.052	.070	.078	.074	.059	.037	.016
DEFLECTION DUE TO WEIGHT OF SLAB	-.021	-.020	-.004	.018	.037	.045	.041	.026	.010
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.001	.005	.013	.021	.026	.026	.022	.014	.006
TOTAL DEAD LOAD DEFLECTION	-.008	.017	.061	.109	.141	.145	.122	.077	.032
VERTICAL CURVE ORDINATE	.130	.231	.303	.346	.361	.347	.304	.231	.130
REQUIRED CAMBER	$1\frac{7}{16}$"	3"	$4\frac{3}{8}$"	$5\frac{7}{16}$"	6"	$5\frac{7}{8}$"	$5\frac{1}{8}$"	$3\frac{11}{16}$"	$1\frac{15}{16}$"

	SPAN E								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.005	-.005	-.002	.001	.003	.002	-.001	-.004	-.005
DEFLECTION DUE TO WEIGHT OF SLAB	.001	.007	.016	.023	.024	.020	.012	.002	-.003
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	-.001	0	.002	.004	.004	.003	.001	-.001	-.002
TOTAL DEAD LOAD DEFLECTION	-.005	.002	.016	.028	.031	.025	.012	-.003	-.010
VERTICAL CURVE ORDINATE	.085	.152	.199	.277	.237	.227	.198	.151	.086
REQUIRED CAMBER	$\frac{15}{16}$"	$1\frac{7}{8}$"	$2\frac{9}{16}$"	$3\frac{11}{16}$"	$3\frac{3}{16}$"	3"	$2\frac{1}{2}$"	$1\frac{3}{4}$"	$\frac{15}{16}$"

	SPAN F								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.012	.054	.047	.062	.071	.072	.064	.049	.029
DEFLECTION DUE TO WEIGHT OF SLAB	.016	.040	.066	.089	.103	.105	.094	.072	.053
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.006	.014	.024	.031	.036	.036	.033	.025	.013
TOTAL DEAD LOAD DEFLECTION	.034	.108	.137	.182	.210	.213	.191	.146	.092
VERTICAL CURVE ORDINATE	.078	.138	.181	.207	.216	.207	.181	.138	.078
REQUIRED CAMBER	$1\frac{3}{8}$"	$2\frac{15}{16}$"	$3\frac{13}{16}$"	$4\frac{11}{16}$"	$5\frac{1}{8}$"	$5\frac{1}{16}$"	$4\frac{7}{16}$"	$3\frac{7}{16}$"	$2\frac{1}{16}$"

GIRDER 3

	SPAN C								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.020	.036	.046	.047	.042	.032	.019	.008	0
DEFLECTION DUE TO WEIGHT OF SLAB	.106	.196	.258	.284	.276	.238	.179	.111	.048
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.021	.039	.050	.055	.053	.046	.034	.020	.008
TOTAL DEAD LOAD DEFLECTION	.147	.271	.354	.386	.371	.316	.232	.139	.056
VERTICAL CURVE ORDINATE	.116	.207	.272	.310	.323	.310	.272	.207	.117
REQUIRED CAMBER	$3\frac{1}{8}$"	$5\frac{3}{4}$"	$7\frac{1}{2}$"	$8\frac{3}{8}$"	$8\frac{5}{16}$"	$7\frac{1}{2}$"	$6\frac{1}{16}$"	$4\frac{1}{8}$"	$2\frac{1}{16}$"

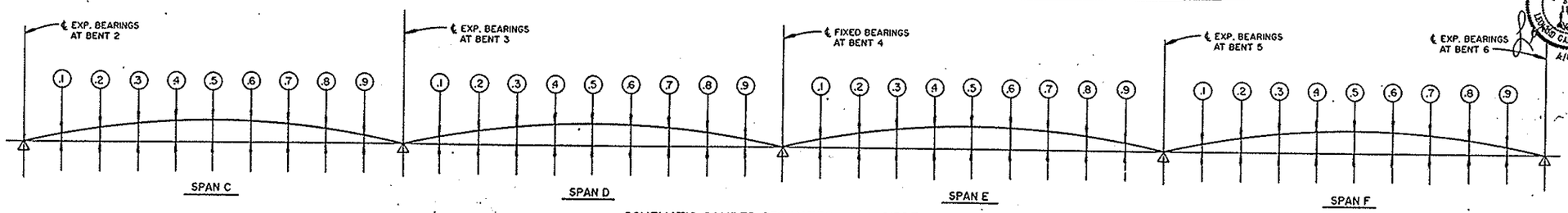
	SPAN D								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.011	.028	.048	.063	.070	.066	.052	.033	.014
DEFLECTION DUE TO WEIGHT OF SLAB	-.020	-.019	-.005	.016	.033	.041	.036	.023	.008
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	0	.004	.012	.011	.024	.002	.020	.012	.005
TOTAL DEAD LOAD DEFLECTION	-.009	.013	.055	.090	.127	.109	.108	.068	.027
VERTICAL CURVE ORDINATE	.126	.223	.293	.336	.350	.335	.294	.224	.126
REQUIRED CAMBER	$1\frac{3}{8}$"	$2\frac{13}{16}$"	$4\frac{3}{16}$"	$5\frac{1}{8}$"	$5\frac{3}{4}$"	$5\frac{5}{16}$"	$4\frac{13}{16}$"	$3\frac{1}{2}$"	$1\frac{13}{16}$"

	SPAN E								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.004	-.003	0	.004	.006	.004	0	-.003	-.005
DEFLECTION DUE TO WEIGHT OF SLAB	.002	.011	.020	.028	.054	.024	.014	.004	-.003
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	-.001	.001	.003	.005	.006	.005	.002	-.001	-.002
TOTAL DEAD LOAD DEFLECTION	-.003	.009	.023	.037	.066	.033	.016	0	-.010
VERTICAL CURVE ORDINATE	.089	.159	.208	.237	.248	.237	.207	.158	.089
REQUIRED CAMBER	$1\frac{1}{16}$"	2"	$2\frac{3}{4}$"	$3\frac{5}{16}$"	$3\frac{3}{4}$"	$3\frac{1}{4}$"	$2\frac{11}{16}$"	$1\frac{7}{8}$"	$\frac{15}{16}$"

	SPAN F								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.012	.030	.048	.064	.074	.075	.067	.051	.027
DEFLECTION DUE TO WEIGHT OF SLAB	.016	.039	.067	.090	.106	.109	.099	.075	.041
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.006	.014	.024	.032	.037	.038	.034	.026	.014
TOTAL DEAD LOAD DEFLECTION	.034	.083	.139	.186	.217	.222	.200	.152	.082
VERTICAL CURVE ORDINATE	.081	.143	.189	.215	.224	.216	.188	.144	.080
REQUIRED CAMBER	$1\frac{3}{8}$"	$2\frac{11}{16}$"	$3\frac{15}{16}$"	$4\frac{13}{16}$"	$5\frac{5}{16}$"	$5\frac{1}{4}$"	$4\frac{3}{8}$"	$3\frac{9}{16}$"	$1\frac{15}{16}$"

NOTE:
DEFLECTIONS ARE GIVEN AT TENTH POINTS BETWEEN BEARINGS IN DECMALS OF A FOOT. EXCEPT FINAL REQUIRED CAMBER WHICH IS GIVEN IN FRACTIONS OF AN INCH.

DEAD LOAD DEFLECTIONS AND REQUIRED CAMBER FOR GIRDERS



SCHEMATIC CAMBER ORDINATES - ALL GIRDERS

NOTE: SLOPE FOR THE ZERO CAMBER BASE LINE VARIES.

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER 8/12/96

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
DEAD LOAD DEFLECTIONS
CONTINUOUS UNIT #2
MARCH 1995

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-96
1			3			TOTAL SHEETS
2			4			224

U2.055

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

DRAWN BY RJL DATE 3-95
CHECKED BY ECM DATE 6/95

GIRDER 4

	SPAN C (℄ EXPANSION BEARINGS AT BENT 2)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.051	.094	.124	.136	.132	.114	.084	.051	.021
DEFLECTION DUE TO WEIGHT OF SLAB	.079	.144	.188	.206	.199	.168	.122	.072	.028
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.017	.030	.040	.044	.042	.036	.027	.016	.006
TOTAL DEAD LOAD DEFLECTION	.147	.268	.352	.386	.373	.318	.233	.139	.055
VERTICAL CURVE ORDINATE	.105	.186	.244	.278	.291	.279	.244	.186	.105
REQUIRED CAMBER	3"	$5\frac{7}{16}$"	$7\frac{1}{8}$"	$7\frac{15}{16}$"	$7\frac{15}{16}$"	$7\frac{3}{16}$"	$5\frac{3}{4}$"	$3\frac{7}{8}$"	$1\frac{15}{16}$"

	SPAN D (℄ EXPANSION BEARINGS AT BENT 3)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.008	-.004	.008	.022	.032	.034	.029	.018	.006
DEFLECTION DUE TO WEIGHT OF SLAB	-.005	.008	.033	.060	.074	.075	.060	.036	.013
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	-.001	.003	.009	.014	.017	.017	.014	.008	.003
TOTAL DEAD LOAD DEFLECTION	-.014	.007	.050	.096	.123	.126	.103	.062	.022
VERTICAL CURVE ORDINATE	.118	.208	.273	.312	.325	.312	.273	.208	.117
REQUIRED CAMBER	$1\frac{1}{4}$"	$2\frac{9}{16}$"	$3\frac{7}{8}$"	$4\frac{7}{8}$"	$5\frac{3}{8}$"	$5\frac{1}{4}$"	$4\frac{1}{2}$"	$3\frac{1}{4}$"	$1\frac{11}{16}$"

	SPAN E (℄ FIXED BEARINGS AT BENT 4)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.001	.008	.015	.022	.023	.020	.013	.005	0
DEFLECTION DUE TO WEIGHT OF SLAB	.004	.019	.035	.048	.051	.042	.026	.009	-.002
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	0	.003	.007	.009	.010	.008	.004	.001	-.001
TOTAL DEAD LOAD DEFLECTION	.005	.030	.057	.079	.084	.070	.043	.015	-.003
VERTICAL CURVE ORDINATE	.100	.178	.232	.266	.277	.266	.233	.177	.099
REQUIRED CAMBER	$1\frac{1}{8}$"	$2\frac{1}{2}$"	$3\frac{7}{16}$"	$4\frac{1}{8}$"	$4\frac{5}{16}$"	$4\frac{1}{16}$"	$3\frac{5}{16}$"	$2\frac{5}{16}$"	$1\frac{1}{8}$"

	SPAN F (℄ EXPANSION BEARINGS AT BENT 5 — ℄ EXPANSION BEARINGS AT BENT 6)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.008	.021	.037	.051	.061	.063	.057	.044	.024
DEFLECTION DUE TO WEIGHT OF SLAB	.021	.053	.092	.128	.152	.158	.144	.110	.060
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.005	.013	.022	.030	.035	.036	.033	.025	.014
TOTAL DEAD LOAD DEFLECTION	.034	.087	.151	.209	.248	.257	.234	.179	.098
VERTICAL CURVE ORDINATE	.088	.157	.207	.236	.246	.236	.206	.158	.089
REQUIRED CAMBER	$1\frac{7}{16}$"	$2\frac{15}{16}$"	$4\frac{5}{16}$"	$5\frac{5}{16}$"	$5\frac{15}{16}$"	$5\frac{15}{16}$"	$5\frac{1}{4}$"	$4\frac{1}{16}$"	$2\frac{1}{4}$"

GIRDER 5

	SPAN C								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.043	.079	.104	.115	.112	.096	.072	.044	.018
DEFLECTION DUE TO WEIGHT OF SLAB	.066	.121	.158	.174	.168	.143	.105	.063	.025
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.014	.025	.033	.037	.035	.030	.022	.013	.005
TOTAL DEAD LOAD DEFLECTION	.123	.225	.295	.326	.315	.269	.199	.120	.048
VERTICAL CURVE ORDINATE	.093	.165	.217	.248	.259	.249	.217	.166	.093
REQUIRED CAMBER	$2\frac{9}{16}$"	$4\frac{11}{16}$"	$6\frac{1}{8}$"	$6\frac{7}{8}$"	$6\frac{7}{8}$"	$6\frac{3}{16}$"	5"	$3\frac{7}{16}$"	$1\frac{11}{16}$"

	SPAN D								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.006	-.002	.008	.021	.029	.030	.024	.039	.011
DEFLECTION DUE TO WEIGHT OF SLAB	-.004	.008	.030	.051	.063	.062	.047	.021	.007
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	-.001	.002	.007	.012	.015	.014	.011	.006	.002
TOTAL DEAD LOAD DEFLECTION	.011	.008	.045	.084	.107	.106	.082	.066	.020
VERTICAL CURVE ORDINATE	.108	.192	.252	.288	.301	.289	.253	.192	.108
REQUIRED CAMBER	$1\frac{7}{16}$"	$2\frac{3}{8}$"	$3\frac{9}{16}$"	$4\frac{7}{16}$"	$4\frac{7}{8}$"	$4\frac{3}{4}$"	4"	$3\frac{1}{8}$"	$1\frac{9}{16}$"

	SPAN E								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.005	.015	.026	.035	.037	.033	.022	.011	.002
DEFLECTION DUE TO WEIGHT OF SLAB	.011	.033	.057	.074	.077	.064	.041	.017	.001
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.002	.007	.012	.016	.016	.014	.009	.003	0
TOTAL DEAD LOAD DEFLECTION	.018	.055	.095	.125	.130	.111	.072	.031	.003
VERTICAL CURVE ORDINATE	.112	.198	.260	.297	.310	.298	.261	.199	.112
REQUIRED CAMBER	$1\frac{9}{16}$"	$3\frac{1}{16}$"	$4\frac{1}{4}$"	$5\frac{1}{16}$"	$5\frac{1}{4}$"	$4\frac{15}{16}$"	4"	$2\frac{3}{4}$"	$1\frac{3}{8}$"

	SPAN F								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.007	.020	.037	-.053	.063	.067	.061	.047	.025
DEFLECTION DUE TO WEIGHT OF SLAB	.021	.057	.100	.141	.168	.175	.160	.123	.067
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.005	.014	.024	.033	.038	.040	.036	.028	.015
TOTAL DEAD LOAD DEFLECTION	.033	.091	.161	.227	.269	.282	.257	.198	.107
VERTICAL CURVE ORDINATE	.096	.172	.225	.258	.268	.257	.225	.171	.097
REQUIRED CAMBER	$1\frac{9}{16}$"	$3\frac{1}{8}$"	$4\frac{5}{8}$"	$5\frac{13}{16}$"	$6\frac{7}{16}$"	$6\frac{7}{16}$"	$5\frac{13}{16}$"	$4\frac{7}{16}$"	$2\frac{7}{16}$"

GIRDER 6

	SPAN C								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.036	.066	.086	.096	.093	.080	.060	.037	.015
DEFLECTION DUE TO WEIGHT OF SLAB	.055	.101	.132	.146	.141	.121	.089	.053	.022
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.012	.021	.028	.031	.030	.026	.019	.011	.005
TOTAL DEAD LOAD DEFLECTION	.103	.188	.546	.273	.264	.227	.168	.101	.042
VERTICAL CURVE ORDINATE	.077	.137	.177	.201	.205	.191	.160	.110	.063
REQUIRED CAMBER	$2\frac{3}{16}$"	$3\frac{7}{8}$"	$5\frac{1}{16}$"	$5\frac{11}{16}$"	$5\frac{5}{8}$"	5"	$3\frac{15}{16}$"	$2\frac{3}{16}$"	$1\frac{1}{4}$"

	SPAN D								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.005	-.002	.006	.015	.021	.020	.015	.007	.001
DEFLECTION DUE TO WEIGHT OF SLAB	-.026	.004	.021	.036	.043	.040	.027	.011	0
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	-.001	.001	.005	.008	.009	.009	.006	.002	0
TOTAL DEAD LOAD DEFLECTION	-.032	.003	.032	.059	.073	.069	.048	.020	.001
VERTICAL CURVE ORDINATE	.099	.177	.232	.265	.276	.265	.232	.177	.100
REQUIRED CAMBER	$\frac{13}{16}$"	$2\frac{3}{16}$"	$3\frac{3}{16}$"	$3\frac{7}{8}$"	$4\frac{3}{16}$"	4"	$3\frac{3}{8}$"	$2\frac{3}{8}$"	$1\frac{3}{16}$"

	SPAN E								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.008	.023	.039	.050	.052	.046	.033	.018	.005
DEFLECTION DUE TO WEIGHT OF SLAB	.019	.050	.082	.103	.106	.090	.060	.029	.006
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.004	.011	.018	.023	.023	.020	.013	.006	.001
TOTAL DEAD LOAD DEFLECTION	.031	.084	.139	.176	.181	.156	.106	.053	.012
VERTICAL CURVE ORDINATE	.124	.220	.289	.330	.344	.330	.289	.220	.124
REQUIRED CAMBER	$1\frac{7}{8}$"	$3\frac{3}{8}$"	$5\frac{1}{8}$"	$6\frac{1}{16}$"	$6\frac{5}{16}$"	$5\frac{13}{16}$"	$4\frac{3}{4}$"	$3\frac{1}{4}$"	$1\frac{5}{8}$"

	SPAN F								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.005	.017	.033	.005	.061	.065	.060	.047	.026
DEFLECTION DUE TO WEIGHT OF SLAB	.019	.053	.097	.139	.168	.178	.164	.127	.070
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.005	.013	.024	.033	.040	.041	.037	.029	.016
TOTAL DEAD LOAD DEFLECTION	.029	.083	.154	.177	.269	.284	.261	.203	.112
VERTICAL CURVE ORDINATE	.104	.186	.244	.279	.291	.279	.244	.186	.105
REQUIRED CAMBER	$1\frac{5}{8}$"	$3\frac{1}{4}$"	$4\frac{3}{4}$"	$5\frac{1}{2}$"	$6\frac{3}{4}$"	$6\frac{3}{4}$"	$6\frac{1}{16}$"	$4\frac{11}{16}$"	$2\frac{5}{8}$"

NOTE:
DEFLECTIONS ARE GIVEN AT TENTH POINTS BETWEEN BEARINGS IN DECIMALS OF A FOOT, EXCEPT FINAL REQUIRED CAMBER WHICH IS GIVEN IN FRACTIONS OF AN INCH.

DEAD LOAD DEFLECTIONS AND REQUIRED CAMBER FOR GIRDERS

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 2 OF 3

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLEMING
4/12/96

U2.056

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
DEAD LOAD DEFLECTIONS
CONTINUOUS UNIT #2
MARCH 1995

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	3-97
1			3			TOTAL SHEETS
2			4			224

DRAWN BY RJ DATE 3-95
CHECKED BY GGM DATE 6/95

GIRDER 7

	SPAN C (℄ EXPANSION BEARINGS AT BENT 2)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.030	.054	.071	.079	.077	.067	.050	.031	.013
DEFLECTION DUE TO WEIGHT OF SLAB	.046	.085	.111	.122	.119	.102	.076	.047	.019
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.010	.018	.023	.026	.025	.022	.016	.010	.004
TOTAL DEAD LOAD DEFLECTION	.086	.157	.205	.227	.221	.191	.142	.088	.036
VERTICAL CURVE ORDINATE	.063	.110	.143	.159	.159	.143	.112	.067	.027
REQUIRED CAMBER	1 13/16"	3 3/16"	4 3/16"	4 5/8"	4 9/16"	4"	3 1/16"	1 7/8"	3/4"

	SPAN D (℄ EXPANSION BEARINGS AT BENT 3)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.006	-.004	.001	.007	.010	.008	.004	-.001	-.003
DEFLECTION DUE TO WEIGHT OF SLAB	-.007	-.003	.007	.016	.019	.015	.005	-.004	-.007
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	-.001	0	.002	.004	.005	.004	.002	-.001	-.002
TOTAL DEAD LOAD DEFLECTION	-.014	-.007	.010	.027	.034	.027	.011	-.006	-.012
VERTICAL CURVE ORDINATE	.091	.161	.212	.242	.253	.243	.212	.162	.091
REQUIRED CAMBER	15/16"	1 7/8"	2 11/16"	3 1/4"	3 5/8"	3 1/4"	2 11/16"	1 7/8"	15/16"

	SPAN E (℄ FIXED BEARINGS AT BENT 4)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.013	.031	.051	.065	.068	.059	.042	.022	.006
DEFLECTION DUE TO WEIGHT OF SLAB	.027	.065	.104	.128	.130	.109	.070	.030	.004
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.006	.015	.024	.029	.030	.025	.017	.008	.001
TOTAL DEAD LOAD DEFLECTION	.046	.111	.179	.222	.228	.193	.129	.060	.011
VERTICAL CURVE ORDINATE	.138	.245	.321	.367	.382	.366	.320	.244	.138
REQUIRED CAMBER	2 3/16"	4 1/4"	6"	7 1/16"	7 5/16"	6 11/16"	5 3/8"	3 5/8"	1 13/16"

	SPAN F (℄ EXPANSION BEARINGS AT BENT 5 — ℄ EXPANSION BEARINGS AT BENT 6)								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.006	.019	.038	.056	.069	.074	.069	.053	.029
DEFLECTION DUE TO WEIGHT OF SLAB	.024	.066	.118	.167	.201	.212	.196	.151	.082
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.006	.016	.028	.038	.046	.048	.044	.034	.018
TOTAL DEAD LOAD DEFLECTION	.036	.101	.184	.261	.316	.334	.309	.238	.129
VERTICAL CURVE ORDINATE	.114	.202	.266	.303	.316	.303	.265	.202	.114
REQUIRED CAMBER	1 13/16"	3 5/8"	5 5/8"	6 3/4"	7 9/16"	7 5/8"	6 7/8"	5 1/4"	2 15/16"

GIRDER 8

	SPAN C								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.021	.038	.051	.057	.056	.049	.037	.023	.010
DEFLECTION DUE TO WEIGHT OF SLAB	.032	.060	.079	.088	.086	.075	.056	.034	.014
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.007	.012	.016	.018	.019	.016	.012	.007	.003
TOTAL DEAD LOAD DEFLECTION	.060	.110	.146	.163	.161	.140	.105	.064	.027
VERTICAL CURVE ORDINATE	.054	.094	.121	.135	.135	.122	.096	.056	.004
REQUIRED CAMBER	1 3/8"	2 7/16"	3 3/16"	3 9/16"	3 9/16"	3 1/8"	2 7/16"	1 7/16"	3/8"

	SPAN D								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.004	-.003	.001	.005	.006	.004	0	-.003	-.004
DEFLECTION DUE TO WEIGHT OF SLAB	-.005	-.002	.005	.010	.011	.006	-.002	-.008	-.009
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	-.001	0	.002	.003	.003	.002	0	-.002	-.002
TOTAL DEAD LOAD DEFLECTION	-.010	-.005	.008	.018	.020	.012	-.002	-.013	-.015
VERTICAL CURVE ORDINATE	.083	.147	.194	.221	.230	.220	.193	.147	.083
REQUIRED CAMBER	7/8"	1 11/16"	2 7/16"	2 7/8"	3"	2 13/16"	2 5/16"	1 5/8"	13/16"

	SPAN E								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.016	.040	.064	.080	.083	.072	.052	.028	.009
DEFLECTION DUE TO WEIGHT OF SLAB	.033	.080	.124	.150	.150	.124	.080	.034	.004
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.008	.019	.029	.035	.036	.030	.020	.009	.002
TOTAL DEAD LOAD DEFLECTION	.057	.139	.217	.265	.269	.226	.152	.071	.015
VERTICAL CURVE ORDINATE	.152	.269	.354	.404	.422	.404	.354	.270	.152
REQUIRED CAMBER	2 1/2"	4 7/8"	6 7/8"	8"	8 5/16"	7 9/16"	6 1/16"	4 1/16"	2"

	SPAN F								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.005	.019	.036	.055	.070	.075	.070	.054	.030
DEFLECTION DUE TO WEIGHT OF SLAB	.029	.076	.132	.186	.225	.237	.219	.253	.093
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.006	.017	.030	.042	.050	.052	.048	.037	.020
TOTAL DEAD LOAD DEFLECTION	.040	.112	.198	.278	.345	.364	.337	.344	.143
VERTICAL CURVE ORDINATE	.123	.218	.287	.327	.341	.327	.287	.218	.123
REQUIRED CAMBER	15/16"	3 15/16"	5 13/16"	7 1/4"	8 1/4"	8 5/16"	7 1/2"	6 3/4"	3 3/16"

GIRDER 9

	SPAN C								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.014	.026	.034	.038	.037	.031	.023	.014	.005
DEFLECTION DUE TO WEIGHT OF SLAB	.030	.055	.073	.082	.081	.071	.054	.034	.015
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.006	.012	.015	.017	.017	.015	.011	.007	.003
TOTAL DEAD LOAD DEFLECTION	.050	.093	.122	.137	.135	.117	.088	.055	.023
VERTICAL CURVE ORDINATE	.049	.087	.114	.130	.135	.128	.111	.082	.042
REQUIRED CAMBER	1 3/16"	2 3/16"	2 13/16"	3 3/16"	3 1/4"	2 15/16"	2 3/8"	1 5/8"	3/4"

	SPAN D								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.001	.002	.006	.009	.008	.004	-.001	-.005	-.006
DEFLECTION DUE TO WEIGHT OF SLAB	-.007	-.008	-.005	-.004	-.007	-.012	-.018	-.020	-.002
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	-.002	-.002	-.001	-.001	-.002	-.003	-.004	-.005	-.004
TOTAL DEAD LOAD DEFLECTION	-.010	-.008	0	.004	-.001	-.011	-.023	-.030	-.012
VERTICAL CURVE ORDINATE	.075	.133	.175	.200	.208	.200	.175	.133	.075
REQUIRED CAMBER	3/4"	1 1/2"	2 1/8"	2 7/16"	2 1/2"	2 1/4"	1 13/16"	1 1/4"	3/4"

	SPAN E								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	.024	.058	.093	.117	.124	.113	.086	.052	.021
DEFLECTION DUE TO WEIGHT OF SLAB	.049	.113	.172	.207	.208	.174	.116	.055	.013
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.011	.026	.039	.047	.048	.040	.028	.014	.003
TOTAL DEAD LOAD DEFLECTION	.084	.197	.304	.371	.380	.327	.230	.121	.037
VERTICAL CURVE ORDINATE	.167	.297	.390	.446	.465	.445	.389	.297	.167
REQUIRED CAMBER	3"	5 15/16"	8 5/16"	9 13/16"	10 1/8"	9 1/4"	7 7/16"	5"	2 7/16"

	SPAN F								
	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF STEEL	-.005	-.001	.013	.031	.045	.053	.053	.042	.023
DEFLECTION DUE TO WEIGHT OF SLAB	.026	.075	.143	.209	.257	.274	.255	.198	.108
DEFLECTION DUE TO WEIGHT OF CLASSIC RAIL & S'WALK	.006	.017	.033	.047	.057	.060	.056	.043	.023
TOTAL DEAD LOAD DEFLECTION	.027	.091	.189	.287	.359	.387	.364	.283	.154
VERTICAL CURVE ORDINATE	.132	.235	.309	.353	.368	.353	.309	.235	.132
REQUIRED CAMBER	15/16"	3 15/16"	6"	7 11/16"	8 3/4"	8 7/8"	8 1/16"	6 3/16"	3 7/16"

NOTE:
DEFLECTIONS ARE GIVEN AT TENTH POINTS BETWEEN BEARINGS IN DECIMALS OF A FOOT, EXCEPT FINAL REQUIRED CAMBER WHICH IS GIVEN IN FRACTIONS OF AN INCH.

DEAD LOAD DEFLECTIONS AND REQUIRED CAMBER FOR GIRDERS

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 3 OF 3

NORTH CAROLINA PROFESSIONAL SEAL 12776 LEONARD GARTH FLETCHER
4/12/90

U2.057

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
DEAD LOAD DEFLECTIONS
CONTINUOUS UNIT #2
MARCH 1995

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-9D
1			3			TOTAL SHEETS
2			4			224

DRAWN BY RTL DATE 5-95
CHECKED BY CCM DATE 6/95

EPOXY-COATED REINFORCING STEEL BAR SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #2

STAGE I CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A3001	492	#6	STR.	52'-0"	38,427
A3002	492	#6	STR.	20'-6"	15,149
A3003	266	#6	STR.	46'-0"	18,378
A3004	266	#6	STR.	19'-6"	7,791
A3005	248	#6	STR.	42'-9"	15,924
A3006	248	#6	STR.	18'-6"	6,891
A5400	1006	#6	STR.	5'-0"	7,555
B3000	960	#5	STR.	56'-10"	56,906
B5005	285	#5	STR.	60'-0"	17,835
B5006	570	#5	STR.	7'-6"	4,459
K2000	3	#5	2	9'-11"	31
K2001	3	#5	2	8'-3"	26
K2002	15	#5	3	14'-10"	232
K3000	3	#5	2	8'-8"	27
K3001	3	#5	2	7'-0"	22
K3002	15	#5	3	12'-4"	193
S5010	7	#4	6	5'-9"	27
S5500	102	#4	1	4'-9"	324
G2000	2	#5	STR.	36'-0"	75
G3000	1	#5	STR.	52'-11"	55
H1001	14	#6	5	14'-2"	298
U1	727	#5	4	4'-6"	3,412
V14	10	#5	7	5'-8"	59
V16	60	#5	7	5'-10"	365
TOTAL					194,461

EPOXY-COATED REINFORCING STEEL BAR SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #2

STAGE II CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A3500	1006	#6	STR.	9'-6"	14,355
A3501	1006	#6	STR.	8'-0"	12,088
A5400	1006	#6	STR.	5'-0"	7,555
B3000	220	#5	STR.	56'-10"	13,041
B5005	63	#5	STR.	60'-0"	3,943
B5006	126	#5	STR.	7'-6"	986
K2000	3	#5	2	9'-11"	31
K2001	3	#5	2	8'-3"	26
K3000	3	#5	2	8'-8"	27
K3001	3	#5	2	7'-0"	22
S5000	17	#4	1	4'-9"	54
S5010	7	#4	6	5'-9"	27
G2001	1	#5	STR.	14'-4"	15
G3001	1	#5	STR.	11'-8"	12
H1001	14	#6	5	14'-2"	298
U2	727	#5	4	3'-6"	2,654
V16	70	#5	7	5'-10"	426
TOTAL					55,560

REINFORCING STEEL BAR SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #2

STAGE I CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A4001	492	#6	STR.	57'-6"	42,492
A4002	492	#6	STR.	15'-0"	11,085
A4003	266	#6	STR.	51'-6"	20,576
A4004	266	#6	STR.	14'-6"	5,793
A4005	248	#6	STR.	47'-0"	17,507
A4006	248	#6	STR.	14'-0"	5,215
A6400	1006	#6	STR.	4'-7"	6,925
B4000	830	#5	STR.	56'-8"	49,056
B6505	225	#5	STR.	60'-0"	14,081
B6506	450	#5	STR.	7'-2"	3,364
TOTAL					176,094

REINFORCING STEEL BAR SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #2

STAGE II CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
A4500	1006	#6	STR.	4'-2"	6,296
A4501	1006	#6	STR.	13'-4"	20,147
A6400	1006	#6	STR.	4'-7"	6,925
B4000	180	#5	STR.	56'-8"	10,639
B6505	54	#5	STR.	60'-0"	3,379
B6506	108	#5	STR.	7'-2"	807
TOTAL					48,193

*DECK SLAB CLASS AA CONCRETE SUMMARY FOR STAGE I CONSTRUCTION

POUR 1	175.7CY
POUR 2A	204.8
POUR 2B	92.7
POUR 3A	217.2
POUR 3B	82.5
POUR 4A	213.0
POUR 4B	90.7
POUR 5	97.9
TOTAL	1,174.5 CY

GROOVING BRIDGE FLOORS SUMMARY (BY STAGE)

DECK SLAB	STAGE I	STAGE II	STAGE III	STAGE IV
POUR 1	4,589	4,179	1,089	N/A
POUR 2	7,981	N/A	N/A	N/A
POUR 3	7,804	N/A	N/A	N/A
POUR 4	7,629	N/A	N/A	N/A
POUR 5	2,440	N/A	N/A	N/A
TOTALS	30,443	4,179	1,089	N/A

GROOVING BRIDGE FLOORS ..... 35,711 SF

CLASS AA CONCRETE SUMMARY (BY STAGE)

STAGE I (DECK SLAB)*		1,174.5 CY
STAGE II	(DECK SLAB - POUR II-A)	108.3
	(DECK SLAB - POUR II-B)	180.7
STAGE II (SIDEWALK)		61.0
STAGE III (CLOSURE POUR)		44.2
STAGE IV (SIDEWALK)		46.2
TOTAL		1,614.9 CY

SUPERSTRUCTURE REINFORCING STEEL LENGTHS ARE BASED ON THE FOLLOWING MINIMUM SPLICE LENGTHS

BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"
#5	2'-6"	2'-2"	2'-6"	2'-2"	3'-5"
#6	3'-0"	2'-7"	3'-10"	2'-7"	4'-4"
#8	6'-0"	4'-0"	6'-0"	4'-0"	6'-10"

CLASSIC BRIDGE RAIL QUANTITY SUMMARY (BY STAGE)

	EPOXY - COATED REINFORCING STEEL (LBS)	CLASS AA CONCRETE (CY)	LINEAR FOOTAGE (LF)
STAGE I	10,526	75.5	546.1
STAGE II	10,526	60.0	546.1
STAGE III	N/A	N/A	N/A
STAGE IV	N/A	N/A	N/A
TOTALS	21,052	135.5	1,092.2

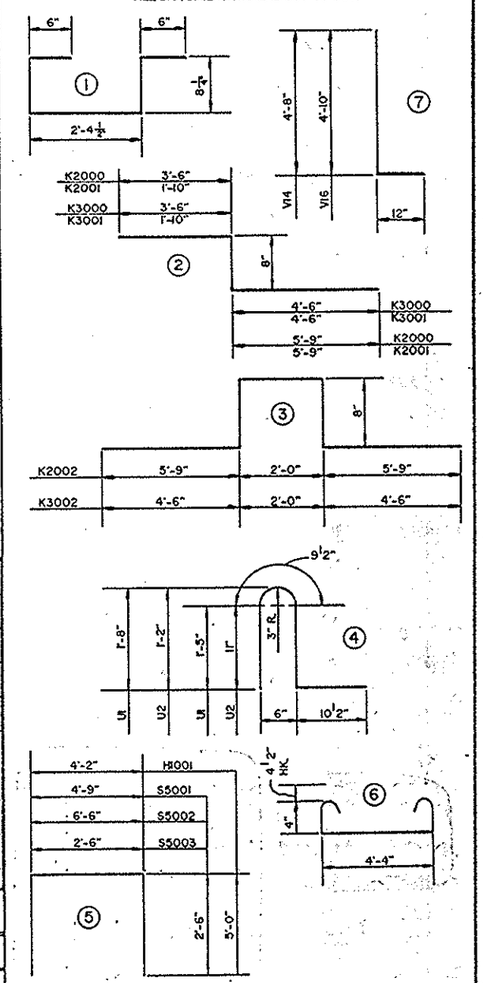
CLASSIC BRIDGE RAIL ..... 1,092.2 LF

CONTINUOUS UNIT #2 SUPERSTRUCTURE QUANTITIES

REINFORCED CONCRETE DECK SLAB	43,025 SF
GROOVING BRIDGE FLOORS	35,711 SF
STRUCTURAL STEEL .**	APPROX. 1,487,500 LBS
CLASSIC BRIDGE RAIL	1,092.2 LF
POT BEARINGS	LS
EXPANSION JOINT SEALS	LS
MODULAR EXPANSION JOINT SEALS	LS

BAR TYPES

ALL BAR DIMENSIONS ARE OUT TO OUT.



EPOXY-COATED REINFORCING STEEL BAR SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #2

STAGE III CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B3000	40	#5	STR.	56'-10"	2,371
B5005	9	#5	STR.	60'-0"	563
B5006	18	#5	STR.	7'-6"	141
S5501	8	#4	5	9'-9"	52
S5502	8	#4	5	11'-6"	61
S5503	20	#4	5	7'-6"	100
TOTAL					3,288

EPOXY-COATED REINFORCING STEEL BAR SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #2

STAGE IV CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B7002	100	#4	STR.	29'-3"	1,954
G5500	1089	#4	STR.	4'-6"	3,274
D100	2,180	#4	STR.	0'-8"	971
TOTAL					6,199

REINFORCING STEEL BAR SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #2

STAGE III CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B4000	40	#5	STR.	56'-8"	2,364
B6505	9	#5	STR.	60'-0"	563
B6506	18	#5	STR.	7'-2"	135
TOTAL					3,062

STRUCTURAL STEEL QUANTITY BREAKDOWN**

STAGE I CONSTRUCTION	= APPROX. 1,170,500 LBS.
STAGE II CONSTRUCTION	= APPROX. 317,000 LBS.
TOTAL (UNIT #2 ONLY)	= 1,487,500 LBS.

EPOXY-COATED REINFORCING STEEL BAR SCHEDULE FOR DECK SLAB CONTINUOUS UNIT #2

STAGE II SIDEWALK CONSTRUCTION

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B7002	120	#4	STR.	29'-3"	2,345
G5000	1089	#4	STR.	5'-9"	4,183
D10	3,270	#4	STR.	1'-0"	2,184
TOTAL					8,712

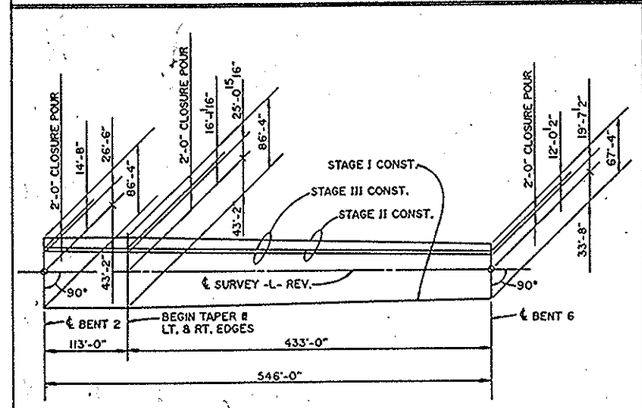
EPOXY-COATED REINFORCING STEEL SUMMARY (BY STAGE)

STAGE I (DECK SLAB)	194,461 LBS
STAGE II (DECK SLAB)	55,560
STAGE II (SIDEWALK)	8,712
STAGE III (CLOSURE POUR)	3,288
STAGE IV (SIDEWALK)	6,199
TOTAL	268,220 LBS.

REINFORCING STEEL SUMMARY (BY STAGE)

STAGE I (DECK SLAB)	176,094 LBS
STAGE II (DECK SLAB)	
STAGE II (SIDEWALK)	N/A
STAGE III (CLOSURE POUR)	3,062
STAGE IV (SIDEWALK)	N/A
TOTAL	227,349 LBS

LAYOUT FOR COMPUTING AREA OF REINFORCED CONCRETE DECK SLAB - CONTINUOUS UNIT #2



SUMMARY

STAGE I	34,105
STAGE II	7,828
STAGE III	1,092
STAGE IV (SIDEWALK)	NA
TOTAL	43,025 SF

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER

4/12/96

U2.058

PREPARED BY THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-Rev.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

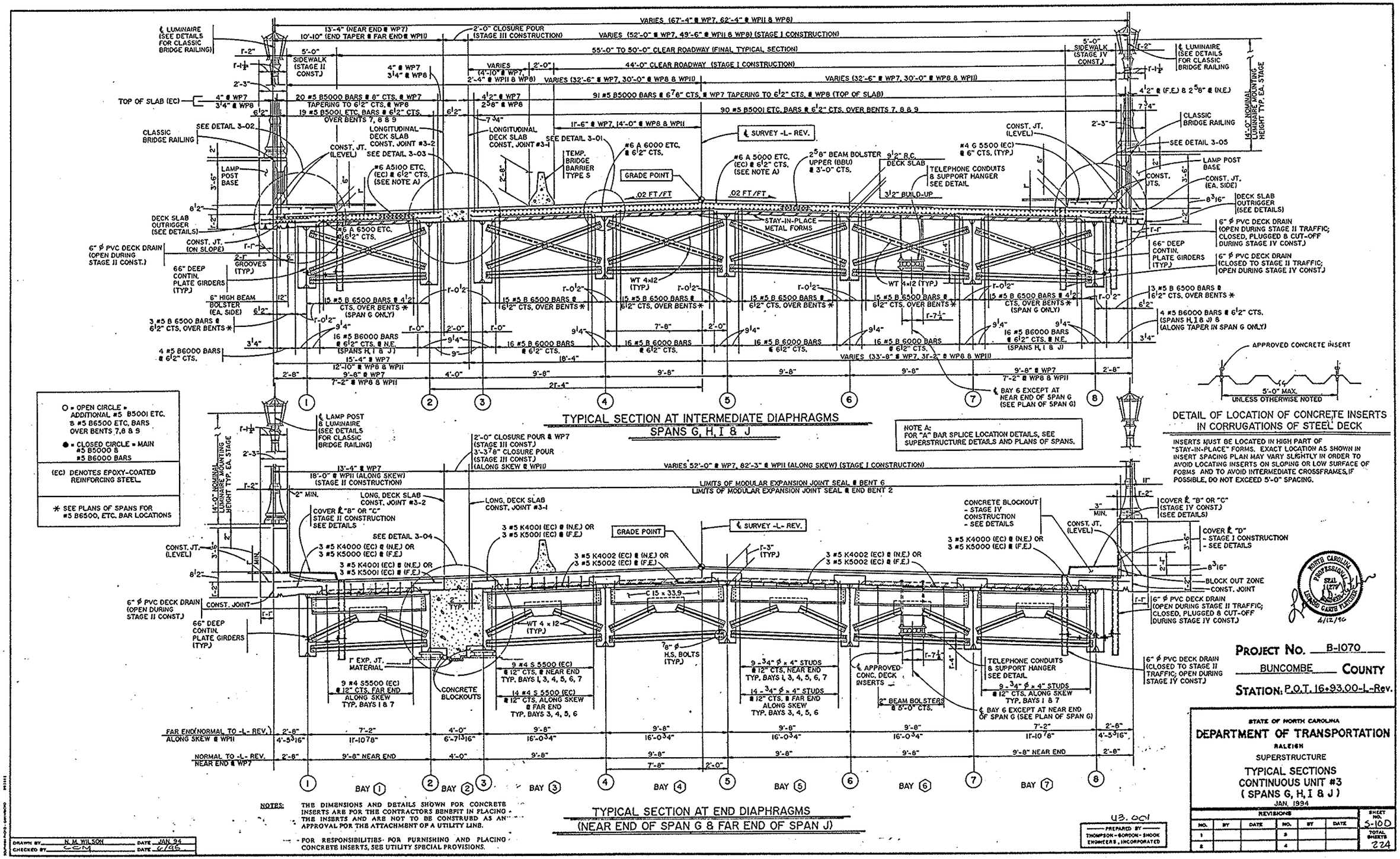
SUPERSTRUCTURE

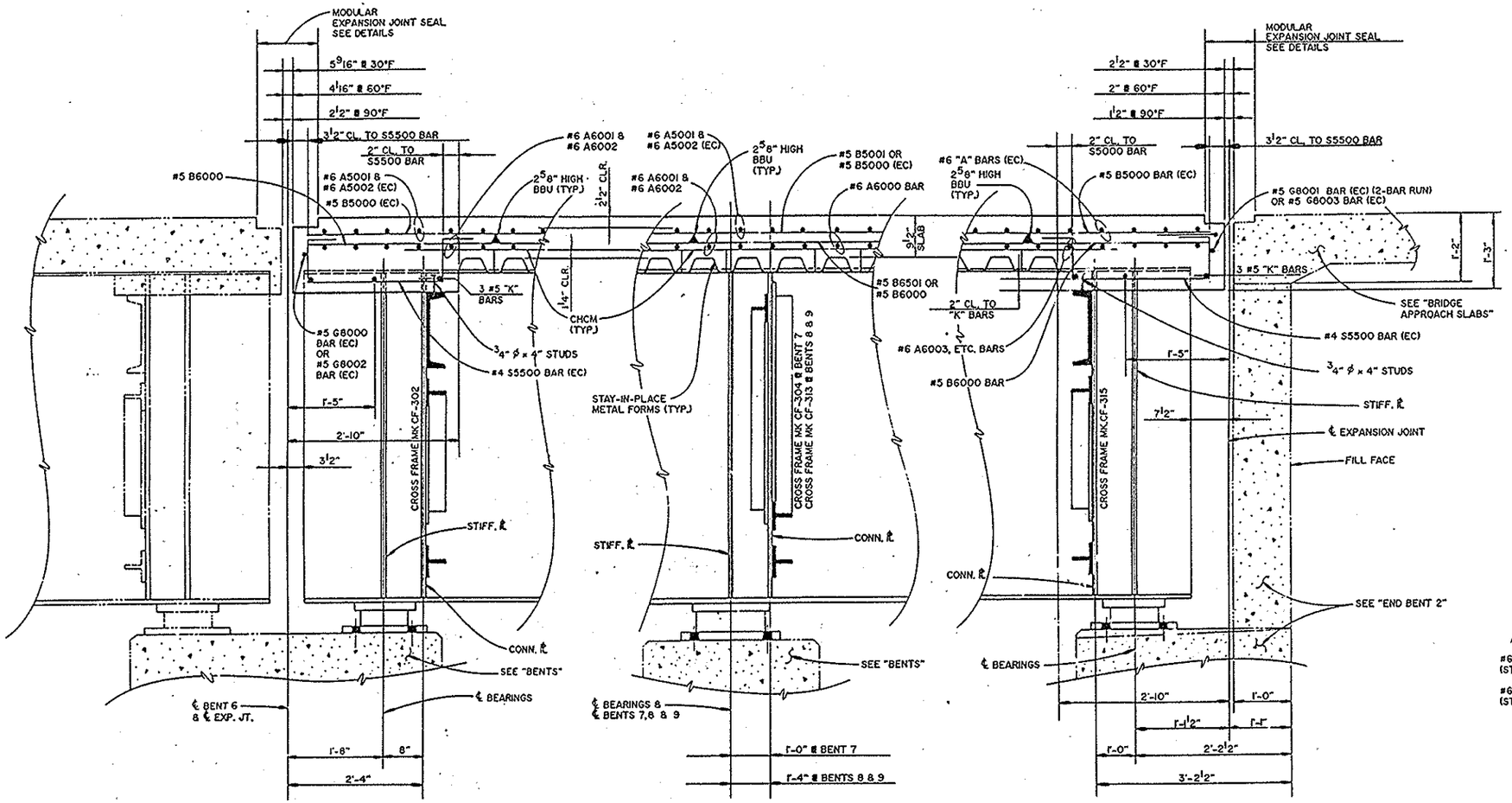
REINFORCING STEEL SCHEDULES & SUMMARIES OF QUANTITIES FOR CONTINUOUS UNIT #2

MARCH 1995

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-99
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. M. WILSON DATE MAR 95
CHECKED BY CSM DATE 1/95

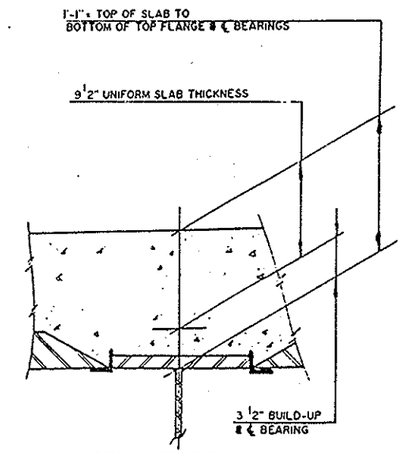

TYPICAL SECTION AT INTERMEDIATE DIAPHRAGMS
SPANS G, H, I & J
TYPICAL SECTION AT END DIAPHRAGMS
(NEAR END OF SPAN G & FAR END OF SPAN J)
DETAIL OF LOCATION OF CONCRETE INSERTS IN CORRUGATIONS OF STEEL DECK
INSERTS MUST BE LOCATED IN HIGH PART OF "STAY-IN-PLACE" FORMS. EXACT LOCATION AS SHOWN IN INSERT SPACING PLAN MAY VARY SLIGHTLY IN ORDER TO AVOID LOCATING INSERTS ON SLOPING OR LOW SURFACE OF FORMS AND TO AVOID INTERMEDIATE CROSSFRAMES, IF POSSIBLE, DO NOT EXCEED 5'-0" SPACING.
APPROVED CONCRETE INSERT
5'-0" MAX.
UNLESS OTHERWISE NOTED
NOTE A:
FOR "A" BAR SPLICE LOCATION DETAILS, SEE SUPERSTRUCTURE DETAILS AND PLANS OF SPANS.
O = OPEN CIRCLE = ADDITIONAL #5 B5001 ETC. & #5 B6500 ETC. BARS OVER BENTS 7, 8 & 9
● = CLOSED CIRCLE = MAIN #5 B5000 & #5 B6000 BARS
(EC) DENOTES EPOXY-COATED REINFORCING STEEL.
* SEE PLANS OF SPANS FOR #5 B6500, ETC. BAR LOCATIONS
VARIES (67'-4" @ WP7, 62'-4" @ WP11 & WP8)
VARIES (52'-0" @ WP7, 49'-6" @ WP11 & WP8) (STAGE I CONSTRUCTION)
55'-0" TO 50'-0" CLEAR ROADWAY (FINAL TYPICAL SECTION)
44'-0" CLEAR ROADWAY (STAGE I CONSTRUCTION)
VARIES (32'-6" @ WP7, 30'-0" @ WP8 & WP11)
91 #5 B5000 BARS @ 6 7/6" CTS. @ WP7 TAPERING TO 6 1/2" CTS. @ WP8 (TOP OF SLAB)
90 #5 B5001 ETC. BARS @ 6 1/2" CTS. OVER BENTS 7, 8 & 9
20 #5 B5000 BARS @ 8" CTS. @ WP7 TAPERING TO 6 1/2" CTS. @ WP8
19 #5 B5001 ETC. BARS @ 6 1/2" CTS. OVER BENTS 7, 8 & 9
11'-6" @ WP7, 14'-0" @ WP8 & WP11
VARIES (33'-6" @ WP7, 31'-2" @ WP8 & WP11)
℄ SURVEY -L- REV.
GRADE POINT
.02 FT/FT
STAY-IN-PLACE METAL FORMS
℄ BAY 6 EXCEPT AT NEAR END OF SPAN G (SEE PLAN OF SPAN G)
LIMITS OF MODULAR EXPANSION JOINT SEAL @ BENT 6
LIMITS OF MODULAR EXPANSION JOINT SEAL @ END BENT 2
VARIES 52'-0" @ WP7, 82'-3" @ WP11 (ALONG SKEW) (STAGE I CONSTRUCTION)
BAY 1
BAY 2
BAY 3
BAY 4
BAY 5
BAY 6
BAY 7
NOTES:
THE DIMENSIONS AND DETAILS SHOWN FOR CONCRETE INSERTS ARE FOR THE CONTRACTORS BENEFIT IN PLACING THE INSERTS AND ARE NOT TO BE CONSTRUED AS AN APPROVAL FOR THE ATTACHMENT OF A UTILITY LINE.
- FOR RESPONSIBILITIES FOR FURNISHING AND PLACING CONCRETE INSERTS, SEE UTILITY SPECIAL PROVISIONS.
43.001
PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96
PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTIONS
CONTINUOUS UNIT #3
(SPANS G, H, I & J)
JAN. 1994
REVISIONS
SHEET NO. S-10D
TOTAL SHEETS 224
DRAWN BY N. M. WILSON DATE JAN. 94
CHECKED BY CEM DATE 6/95



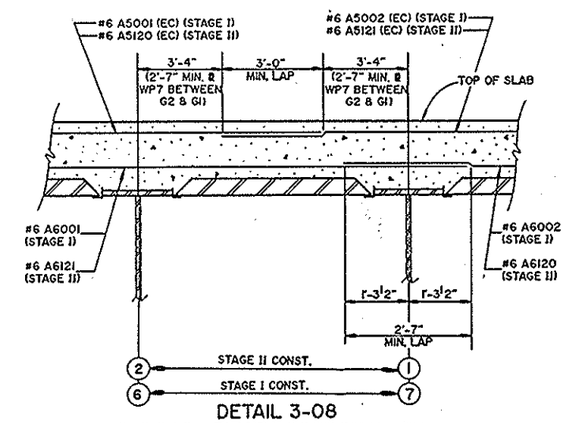
SECTION G-G

SECTION H-H

SECTION J-J

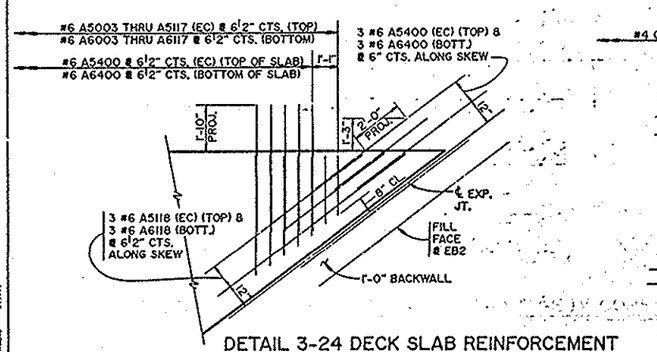


DETAIL "3-01"

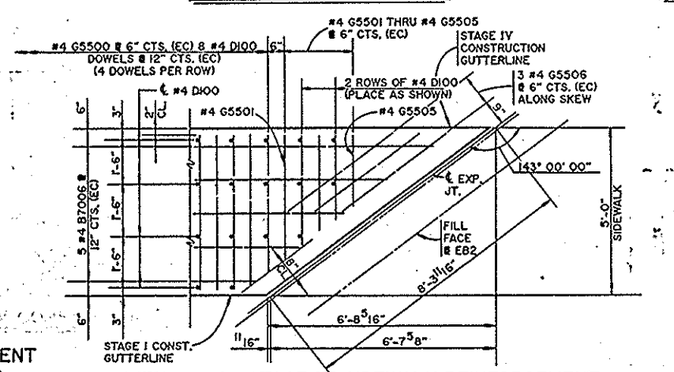


DETAIL 3-08
"A" BAR SPLICE LOCATION DETAIL

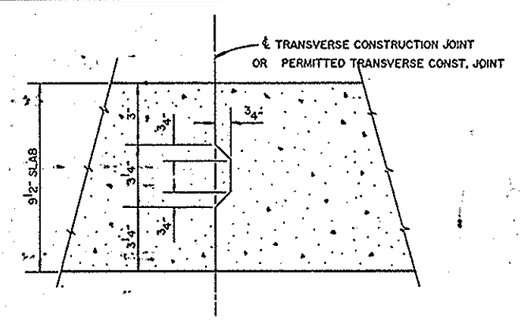
ADDITIONAL SLAB REINFORCEMENT NOT SHOWN FOR CLARITY.



DETAIL 3-24 DECK SLAB REINFORCEMENT
STAGE I CONSTRUCTION @ END BENT 2



DETAIL 3-22 STAGE IV SIDEWALK REINFORCEMENT
STAGE IV CONSTRUCTION @ END BENT 2



NOTE: REINFORCING STEEL IN SLAB NOT SHOWN. LONGITUDINAL REINFORCING STEEL SHALL BE CONTINUOUS THRU JOINT.

DETAIL 3-07
TRANSVERSE CONSTRUCTION JOINT DETAIL

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
DETAILS
(CONTINUOUS UNIT #3)
OCT. 1994

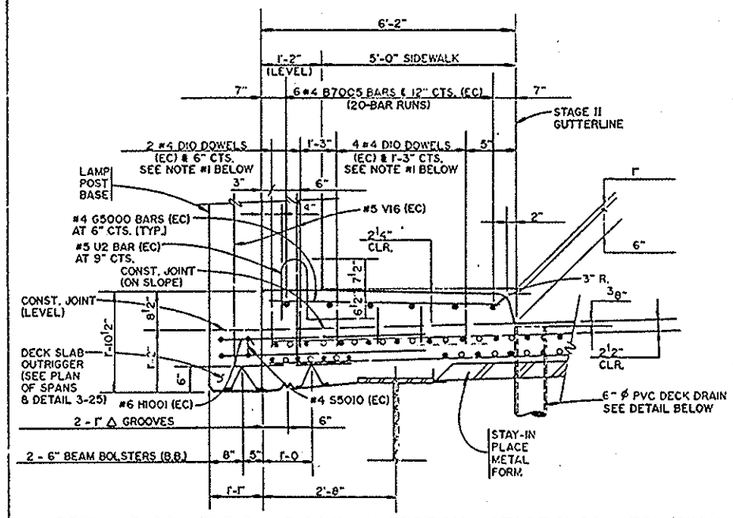
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
8/12/96

U3-002

PREPARED BY THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

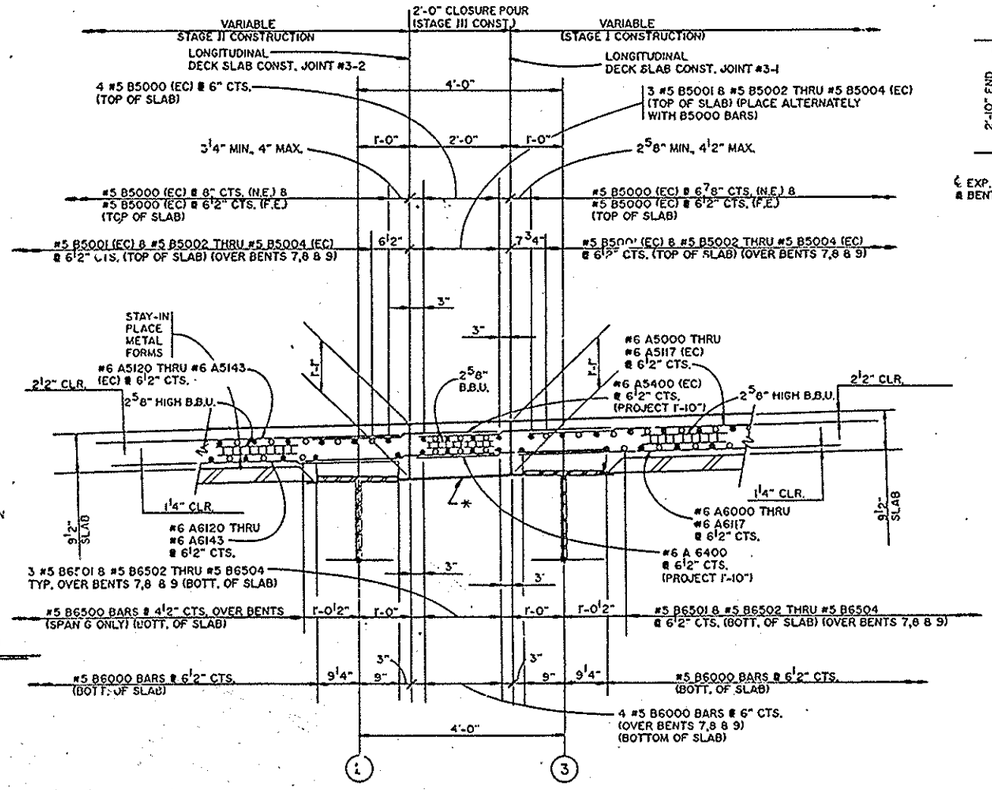
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	5-101
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. M. WILSON DATE OCT. 94
CHECKED BY CEM DATE 6/95



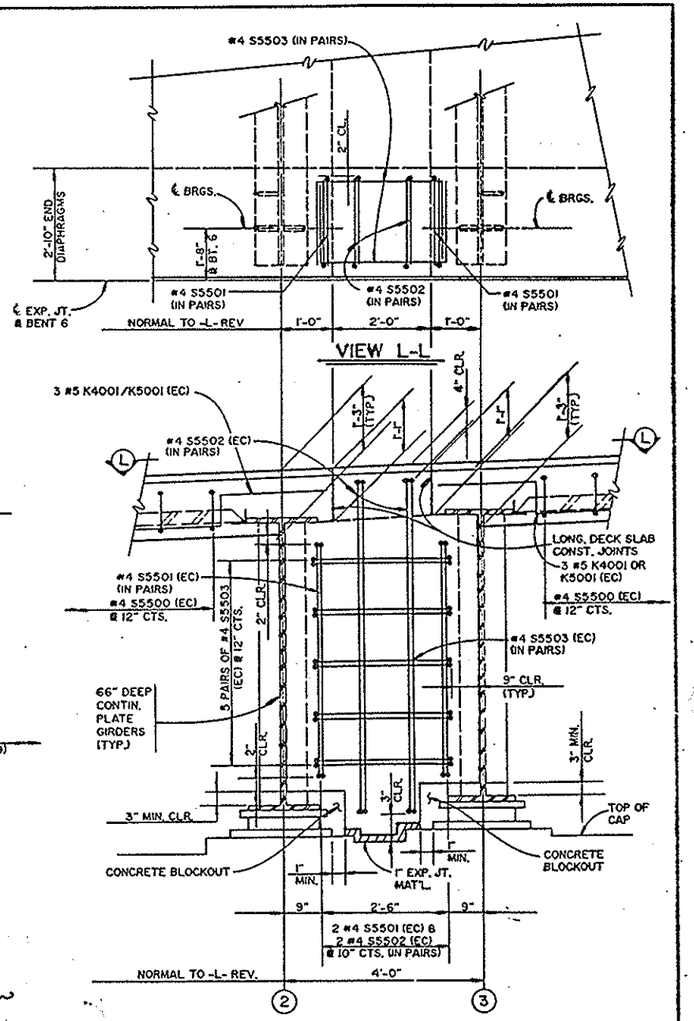
DETAIL 3-02 - TYPICAL SIDEWALK SECTION - STAGE II CONSTRUCTION

NOTE #1 : DOWELS MAY BE PUSHED INTO GREEN CONCRETE AFTER DECK SLAB HAS BEEN SCREEDED OFF

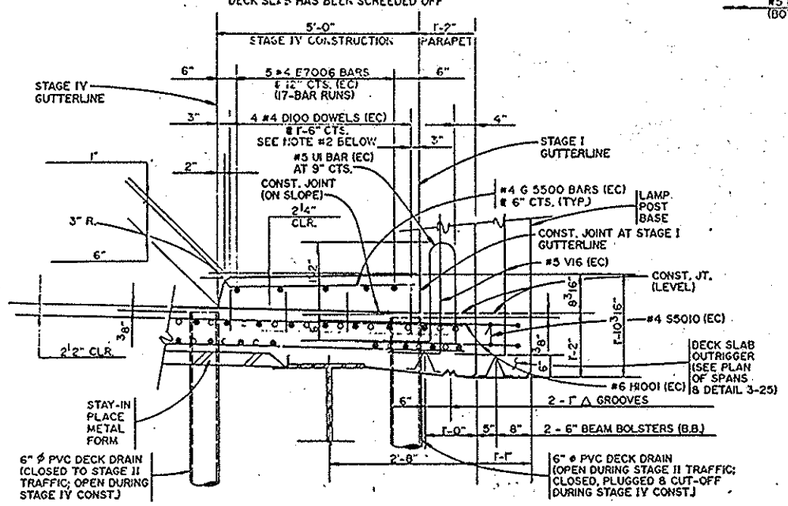


DETAIL 3-03 - TYPICAL CLOSURE POUR SECTION

* FORM BOTTOM OF OVERHANGS & CLOSURE POUR FLUSH WITH BOTTOM OF TOP FLANGES.

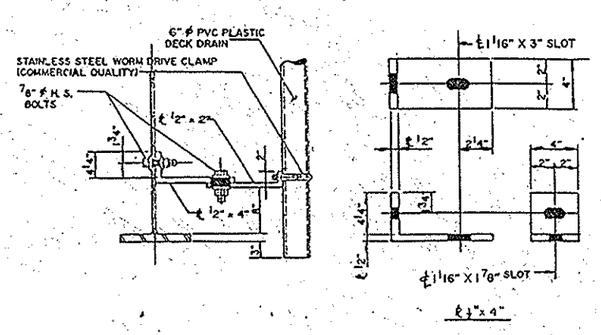


DETAIL 3-04 - CLOSURE POUR END DIAPHRAGM @ BENT 6



DETAIL 3-05 - TYPICAL SIDEWALK SECTION - STAGE IV CONSTRUCTION

NOTE #2 : DOWELS SHALL BE ADHESIVELY ANCHORED IN SLAB DURING STAGE IV SIDEWALK CONSTRUCTION. SEE SPECIAL PROVISIONS.



DETAIL 3-05 - DRAIN CONNECTION

NOTES:

COUPLING IN DRAIN PIPE WILL BE PERMITTED AS APPROVED BY THE ENGINEER.

TOP OF FLOOR DRAIN TO BE SET ⅜" BELOW SURFACE OF SLAB.

4- 1/2" SQUARE LUGS TO BE GLUED TO THE PVC PLASTIC PIPE AT EQUAL SPACES AROUND THE PIPE DRAIN APPROXIMATELY 4" FROM THE TOP OF THE PIPE.

BOLT SIZE TO BE SAME AS DIAPHRAGMS AND CROSS FRAME CONNECTIONS. STAINLESS STEEL WORM DRIVE HOSE CLAMP SHALL BE COMMERCIAL QUALITY.

PVC PLASTIC DECK DRAINS SHALL BE PAINTED WITH AN APPROVED VINYL PAINT. SEE SPECIAL PROVISIONS.

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER 12279 JAMES CARTER FLETCHER
4/15/96

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 2 OF 3

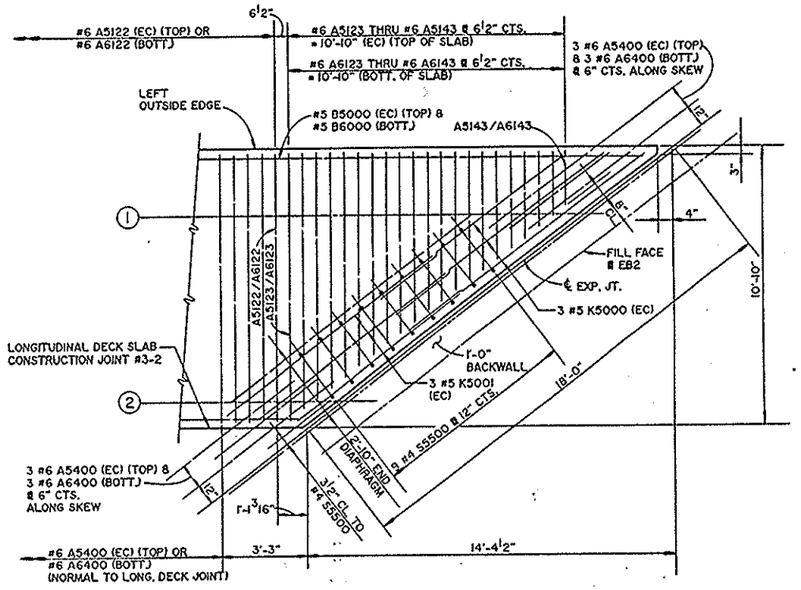
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
DETAILS
(CONTINUOUS UNIT #3)
JAN. 1994

REVISIONS								
NO.	BY	DATE	NO.	BY	DATE	SHEET NO. S-102
1			3			TOTAL SHEETS 224
2			4			

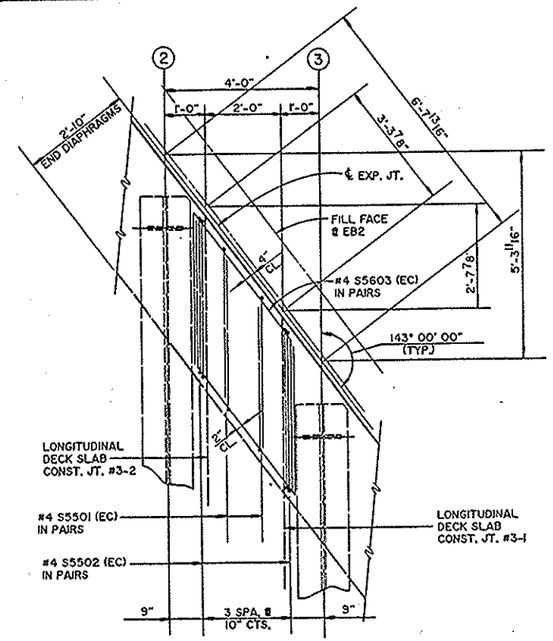
U3.003

PREPARED BY THOMPSON-BORDON-SHOOK ENGINEERS, INCORPORATED

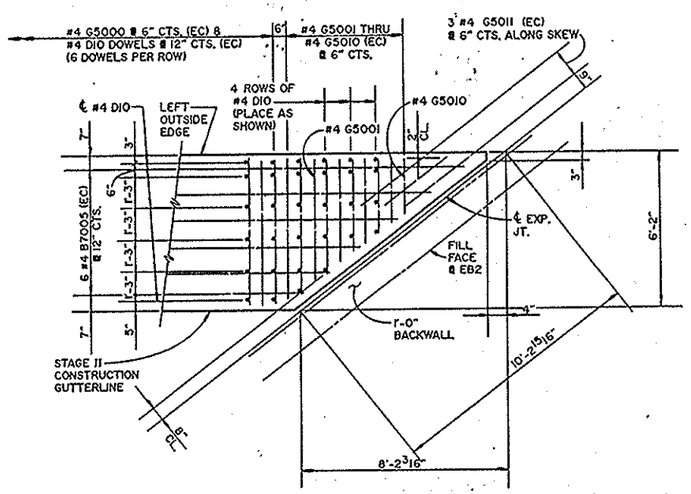
DRAWN BY N. M. WILSON DATE JAN. 94
CHECKED BY CEM DATE 6/95



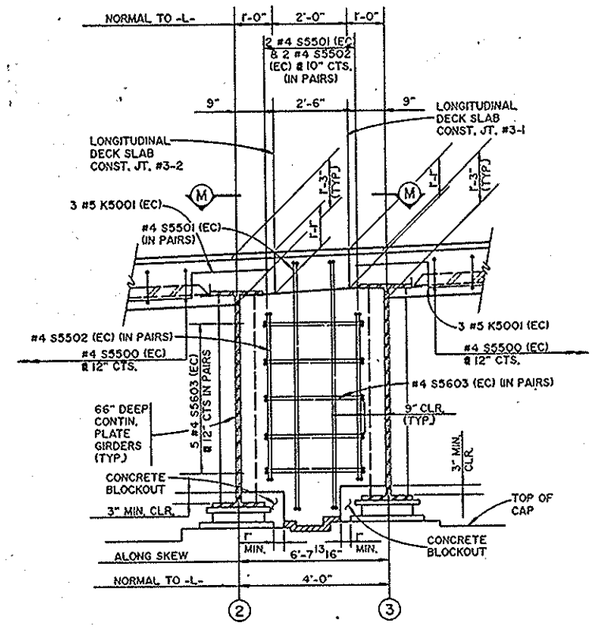
DETAIL 3-09 - DECK SLAB REINFORCEMENT
STAGE II CONSTRUCTION @ END BENT 2



VIEW "M-M"



DETAIL 3-10 - TOP OF SIDEWALK REINFORCEMENT
STAGE II CONSTRUCTION @ END BENT 2



DETAIL 3-23 - CLOSURE POUR END
DIAPHRAGM @ END BENT 2

NOTES FOR DECK SLAB - CONTINUOUS UNIT #3

PROVIDE CONTINUOUS HIGH CHAIR FOR METAL DECK (CHCM) @ 4'-0" CTS. WITH LEG SPACING TO MATCH THE PITCH OF THE FORMS AND WITH A HEIGHT TO SUPPORT THE BOTTOM LAYER OF SLAB REINFORCEMENT A CLEAR DISTANCE OF 1-1/4" ABOVE THE TOP OF THE STAY-IN-PLACE FORM.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THE TRANSVERSE JOINTS IN THE DECK SLAB (WHERE APPLICABLE) ARE CONTINUOUS IN A STRAIGHT LINE THROUGH THE CLASSIC BRIDGE RAIL. THE CONTRACTOR'S ATTENTION IS ALSO CALLED TO THE FACT THAT THE LONGITUDINAL JOINTS IN THE DECK SLAB ARE CONTINUOUS IN A STRAIGHT LINE FROM BEGINNING OF CONTINUOUS UNIT TO ENDING OF CONTINUOUS UNIT.

THE MODULAR EXPANSION JOINT SEAL AT END BENT 2 SHALL BE CAPABLE OF HANDLING A TOTAL THERMAL MOVEMENT, MEASURED PARALLEL TO THE CENTERLINE OF ROADWAY, OF 3-1/4" (1-5/8" EXPANSION AND 1-5/8" CONTRACTION FROM A MIDPOINT TEMPERATURE OF 60° F).

THE MODULAR EXPANSION JOINT SEAL AT BENT 6 SHALL BE CAPABLE OF HANDLING A TOTAL THERMAL MOVEMENT, MEASURED PARALLEL TO THE CENTERLINE OF ROADWAY, OF 6-1/8" (3-1/16" EXPANSION AND 3-1/16" CONTRACTION FROM A MIDPOINT TEMPERATURE OF 60° F).

THE TOPS OF THE MODULAR EXPANSION JOINT SEALS SHALL BE SET A MINIMUM OF 1/8" AND A MAXIMUM OF 1/4" BELOW THE TOP OF SLAB.

FOR MODULAR EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

CLASSIC BRIDGE RAILS AND SIDEWALKS IN THE CONTINUOUS UNIT SHALL NOT BE CAST UNTIL THE DECK SLAB CONCRETE IN EACH STAGE OF CONSTRUCTION HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

PREVIOUSLY CAST CONCRETE IN THE CONTINUOUS UNIT SHALL HAVE ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI BEFORE ADDITIONAL CONCRETE IS CAST IN THE UNIT.

STAY-IN-PLACE FORMS SHALL HAVE CLOSED TAPERED ENDS.

THE CONTRACTOR MAY, WHEN NECESSARY, PROPOSE A SCHEME FOR AVOIDING INTERFERENCE BETWEEN METAL STAY-IN-PLACE FORM SUPPORTS OR FORMS AND GIRDER STIFFENER OR CONNECTOR PLATES. THE PROPOSAL SHALL BE INDICATED AND INCLUDED, AS APPROPRIATE, ON EITHER THE STEEL WORKING DRAWINGS OR ON THE METAL STAY-IN-PLACE FORM WORKING DRAWINGS.

STRUCTURAL STEEL ERECTION IN EACH STAGE OF CONSTRUCTION FOR THE CONTINUOUS UNIT SHALL BE COMPLETE BEFORE FALSEWORK OR FORMS ARE PLACED IN EACH STAGE OF THE UNIT.

LAP SPLICES, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED IN THE B5000 BARS OVER BENTS 7, 8 & 9.

SEE THE TRAFFIC CONTROL PLANS FOR STAGE I, II, III & IV LOCATIONS AND PAY LIMITS OF THE TEMPORARY BRIDGE BARRIERS - TYPE S.

THE TOPS OF DECK DRAINS SHALL BE SET 3/8" BELOW SURFACE OF DECK SLAB.

FALSEWORK AND METAL STAY-IN-PLACE FORMS SHALL NOT BE WELDED TO GIRDER FLANGES IN THE ZONES REQUIRING CHARPY V-NOTCH TESTS. SEE STRUCTURAL STEEL GIRDER ELEVATION SHEETS.

FOR BARS SHOWN AND NO BAR MARKS AND/OR BAR-RUNS SHOWN, SEE PLANS OF SPANS.

THE DIMENSIONS AND DETAILS SHOWN FOR THE CONCRETE DECK INSERTS ARE FOR THE CONTRACTOR'S BENEFIT IN PLACING THEM AND SHOULD NOT BE CONSTRUED TO BE AN APPROVAL FOR THE ATTACHMENT OF THE UTILITY TO THE STRUCTURE.

FOR RESPONSIBILITIES FOR FURNISHING AND PLACING THE CONCRETE DECK INSERTS, SEE UTILITY SPECIAL PROVISIONS.

FOR CLASSIC BRIDGE RAILS, SEE SPECIAL PROVISIONS.

DIRECTION OF CASTING DECK CONCRETE SHALL BE AS SHOWN ON THE DECK SLAB POURING SEQUENCE SHEET FOR STAGE I CONSTRUCTION. DIRECTION OF CASTING DECK CONCRETE IN SUBSEQUENT STAGES SHALL FOLLOW THE SAME PATTERN

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
DETAILS
(CONTINUOUS UNIT #3)

MARCH 1995

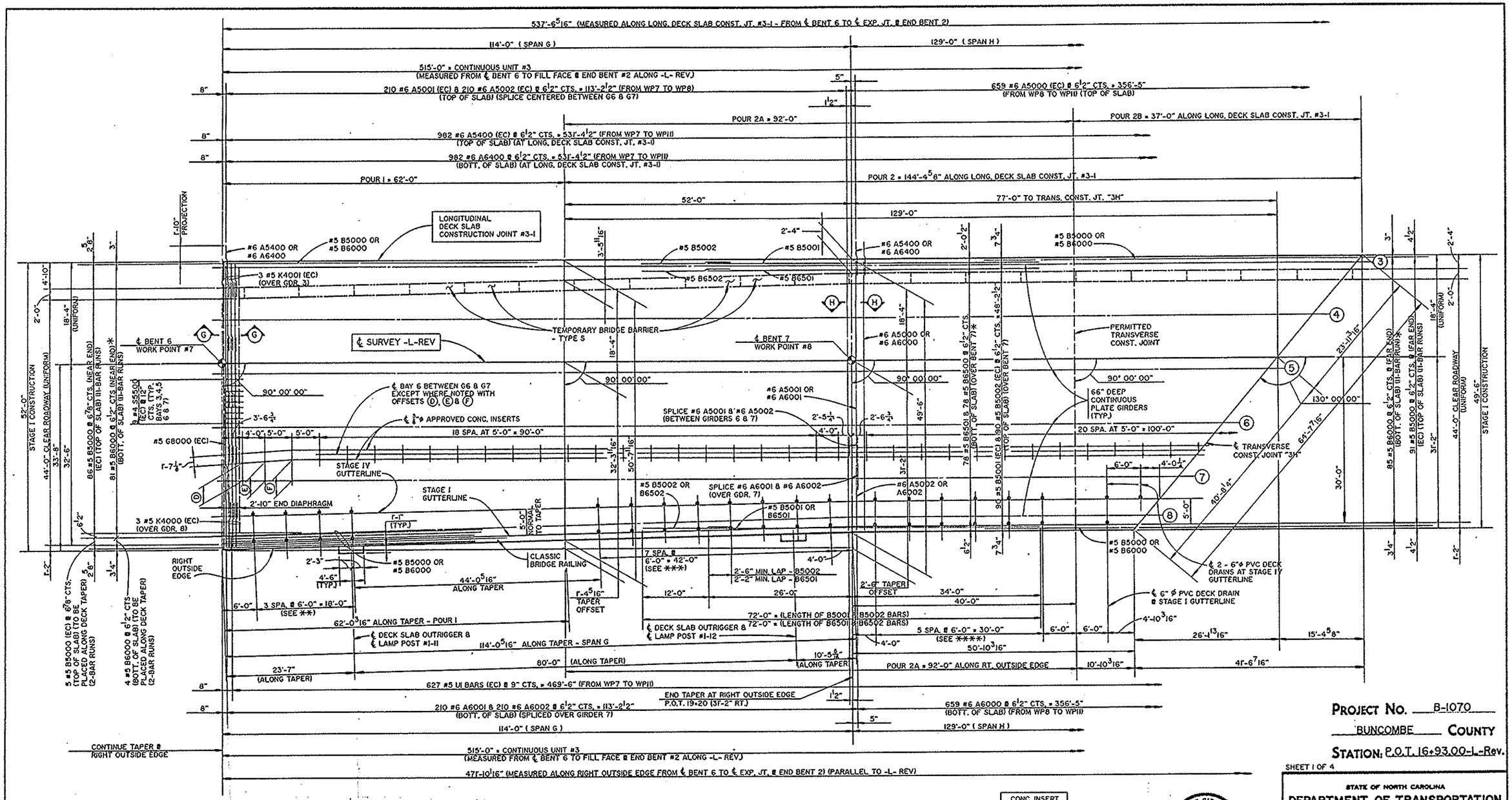
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FISHER
4/12/96

U3.004

PREPARED BY
THOMPSON - GORDON - SHOOK
ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-103
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. H. WILSON DATE MAR. 95
CHECKED BY CGM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL	** 4 - 6" ϕ PVC DECK DRAINS @ STAGE IV GUTTERLINE & 4 - 6" ϕ PVC DECK DRAINS @ STAGE I GUTTERLINE
* SEE TYPICAL SECTION FOR SPACING	*** 8 - 6" ϕ PVC DECK DRAINS @ STAGE IV GUTTERLINE & 8 - 6" ϕ PVC DECK DRAINS @ STAGE I GUTTERLINE
FOR DECK SLAB POURING SEQUENCE PLAN, SEE CONTIN. UNIT #2 - STAGE I CONSTRUCTION DETAIL SHEET 3 OF 3.	**** 6 - 6" ϕ PVC DECK DRAINS @ STAGE IV GUTTERLINE & 6 - 6" ϕ PVC DECK DRAINS @ STAGE I GUTTERLINE

CONC. INSERT OFFSETS
Ⓓ = 3'-3 3/4"
Ⓔ = 3'-6 3/16"
Ⓕ = 3'-10 3/16"

PLAN OF SPANS G & H (CONTINUOUS UNIT #3)
STAGE I CONSTRUCTION
(POURS 1 & 2)

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

PLAN OF SPANS G & H
(CONTINUOUS UNIT #3)
STAGE I CONSTRUCTION

JAN. 1994

NORTH CAROLINA PROFESSIONAL SEAL 11276 ENGINEER LEONARD GARTH FLETCHER
4/12/96

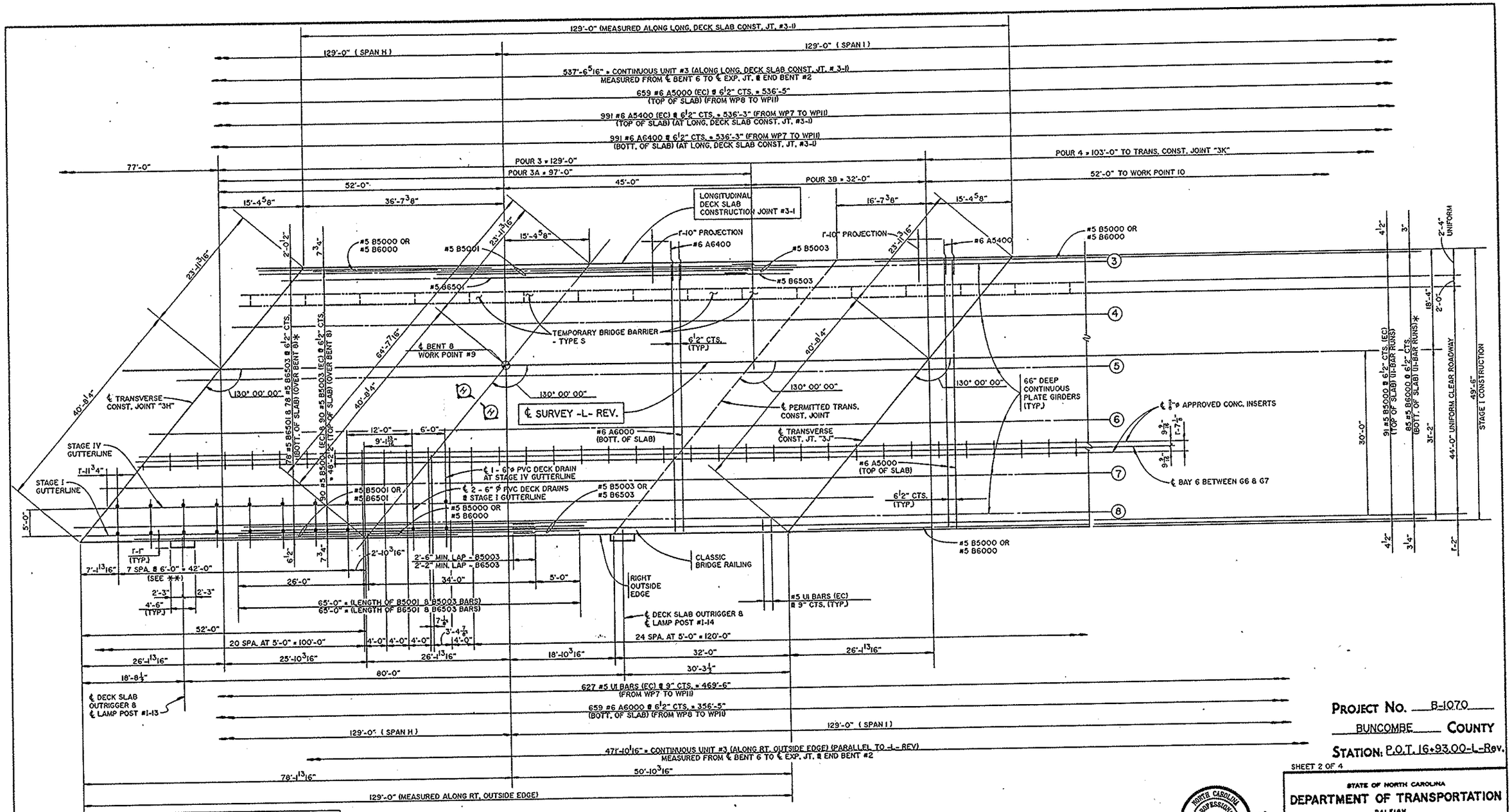
U3.005

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-104
TOTAL SHEETS 224

DRAWN BY N. M. WILSON DATE JAN. 94
CHECKED BY CCM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING
FOR DECK SLAB POURING SEQUENCE PLAN, SEE CONTIN. UNIT #2 - STAGE I CONSTRUCTION DETAIL SHEET 3 OF 3.
** 8 - 6" ø PVC DECK DRAINS @ STAGE IV GUTTERLINE & 8 - 6" ø PVC DECK DRAINS @ STAGE I GUTTERLINE.

PLAN OF SPANS H & I (CONTINUOUS UNIT #3)
STAGE I CONSTRUCTION
(POUR 3)

DRAWN BY N. H. WILSON DATE JAN. 94
CHECKED BY CCM DATE 6/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 2 OF 4

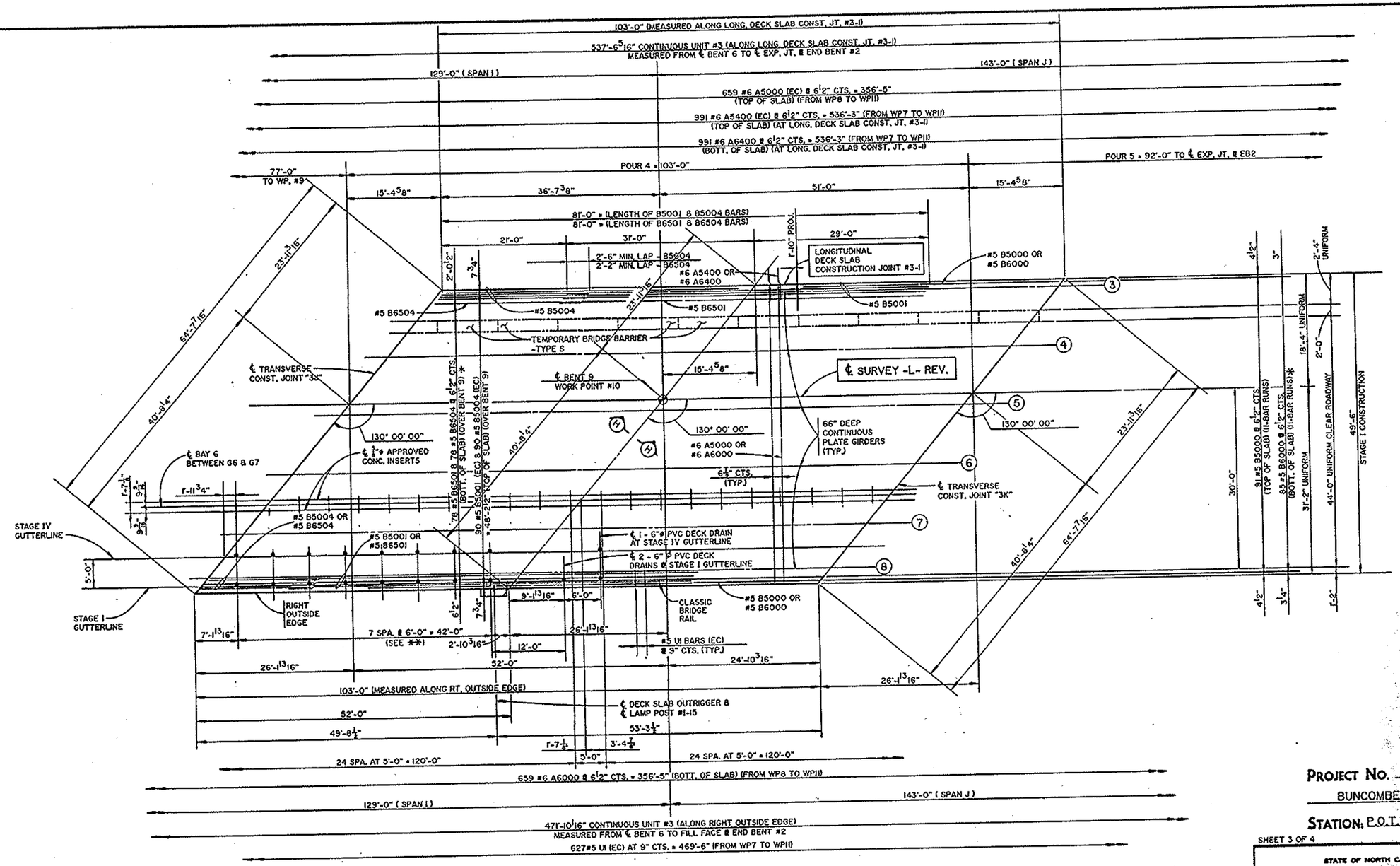
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPANS H & I
(CONTINUOUS UNIT #3)
STAGE I CONSTRUCTION
JAN. 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U3.006

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-105
1			3			TOTAL SHEETS
2			4			224



(EC) DENOTES EPOXY COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING
FOR DECK SLAB POURING SEQUENCE PLAN, SEE CONTIN. UNIT #2 - STAGE I CONSTRUCTION DETAIL SHEET 3 OF 3.
** 8 - 6" ø PVC DECK DRAINS @ STAGE IV GUTTERLINE & 8 - 6" ø PVC DECK DRAINS @ STAGE I GUTTERLINE

PLAN OF SPANS I & J (CONTINUOUS UNIT #3)
STAGE I CONSTRUCTION
(POUR 4)

DRAWN BY N. M. WILSON DATE MAY 94
CHECKED BY ZCM DATE 6/95

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FASTERLING
4/12/96

U3.007

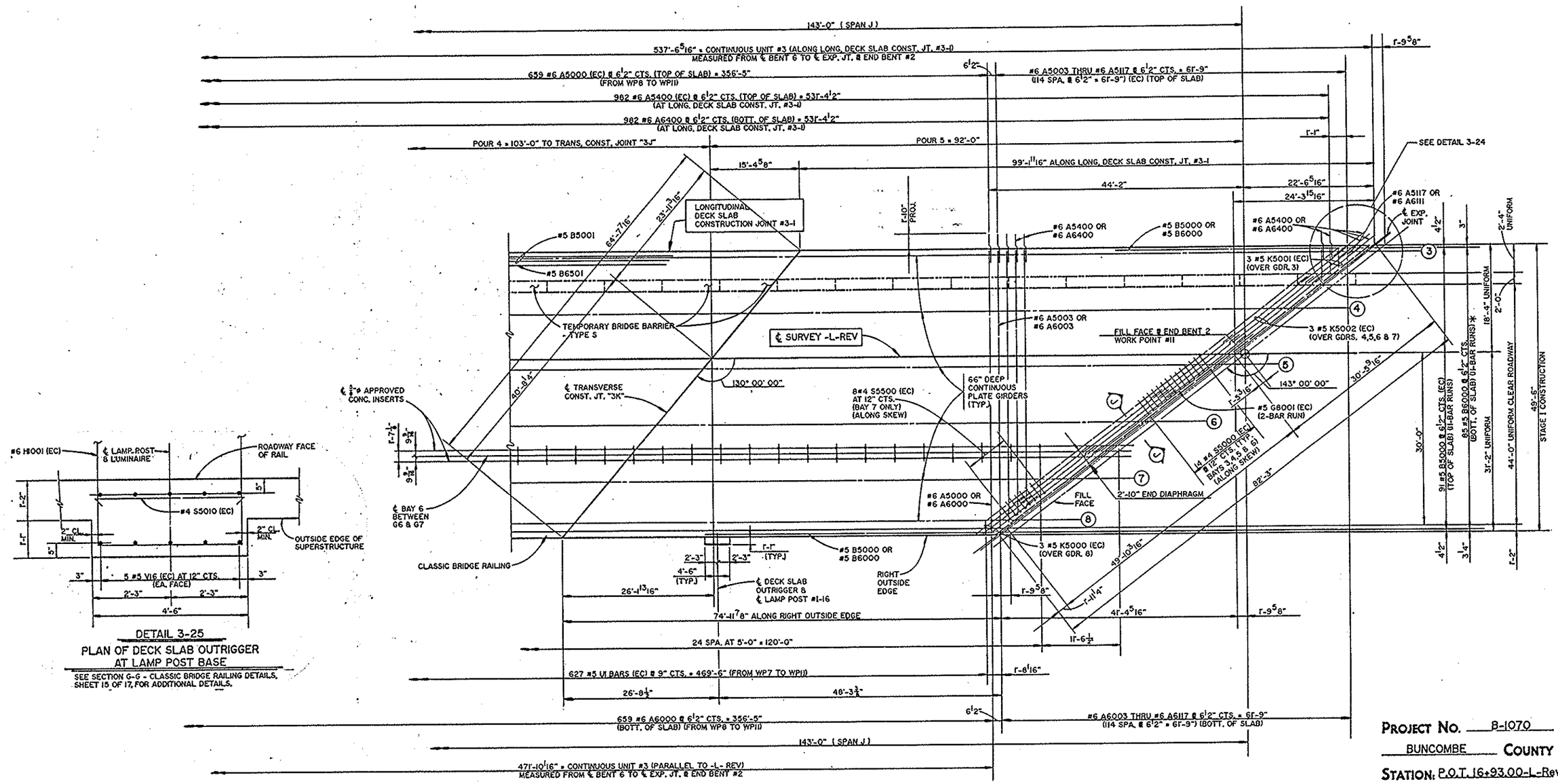
PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPANS I & J
(CONTINUOUS UNIT #3)
STAGE I CONSTRUCTION
MAY 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-106
1			3			TOTAL SHEETS
2			4			224



DETAIL 3-25
PLAN OF DECK SLAB OUTRIGGER AT LAMP POST BASE

SEE SECTION G-G - CLASSIC BRIDGE RAILING DETAILS, SHEET 15 OF 17, FOR ADDITIONAL DETAILS.

(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING
FOR DECK SLAB POURING SEQUENCE PLAN, SEE CONTIN. UNIT #2 - STAGE I CONSTRUCTION DETAIL SHEET 3 OF 3.

PLAN OF SPAN J (CONTINUOUS UNIT #3)
STAGE I CONSTRUCTION
(POUR 5)

NORTH CAROLINA PROFESSIONAL SEAL 12779 ENGINEER LEONARD CARTER TAYLOR
4/12/96

U3,000

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

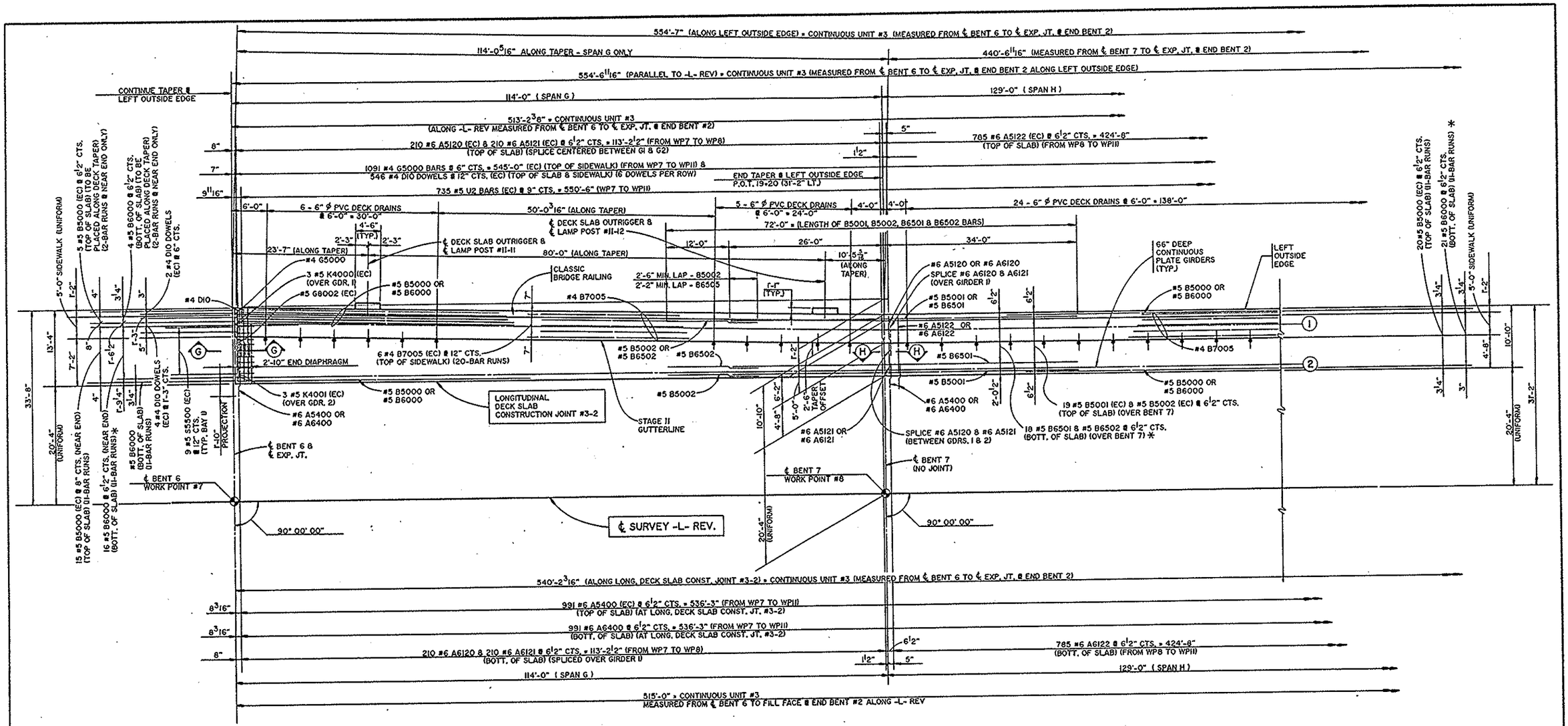
DRAWN BY N. N. WILSON DATE JAN. 94
CHECKED BY SCM DATE GMS

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 4 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPAN J
(CONTINUOUS UNIT #3)
STAGE I CONSTRUCTION
JAN. 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-107
1			3			TOTAL SHEETS
2			4			224



(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING

PLAN OF SPANS G & H (CONTINUOUS UNIT #3)
STAGE II CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

PLAN OF SPANS G & H
(CONTINUOUS UNIT #3)
STAGE II CONSTRUCTION
JAN. 1994

NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER LEONARD GARTH FLATCHER
4/12/96

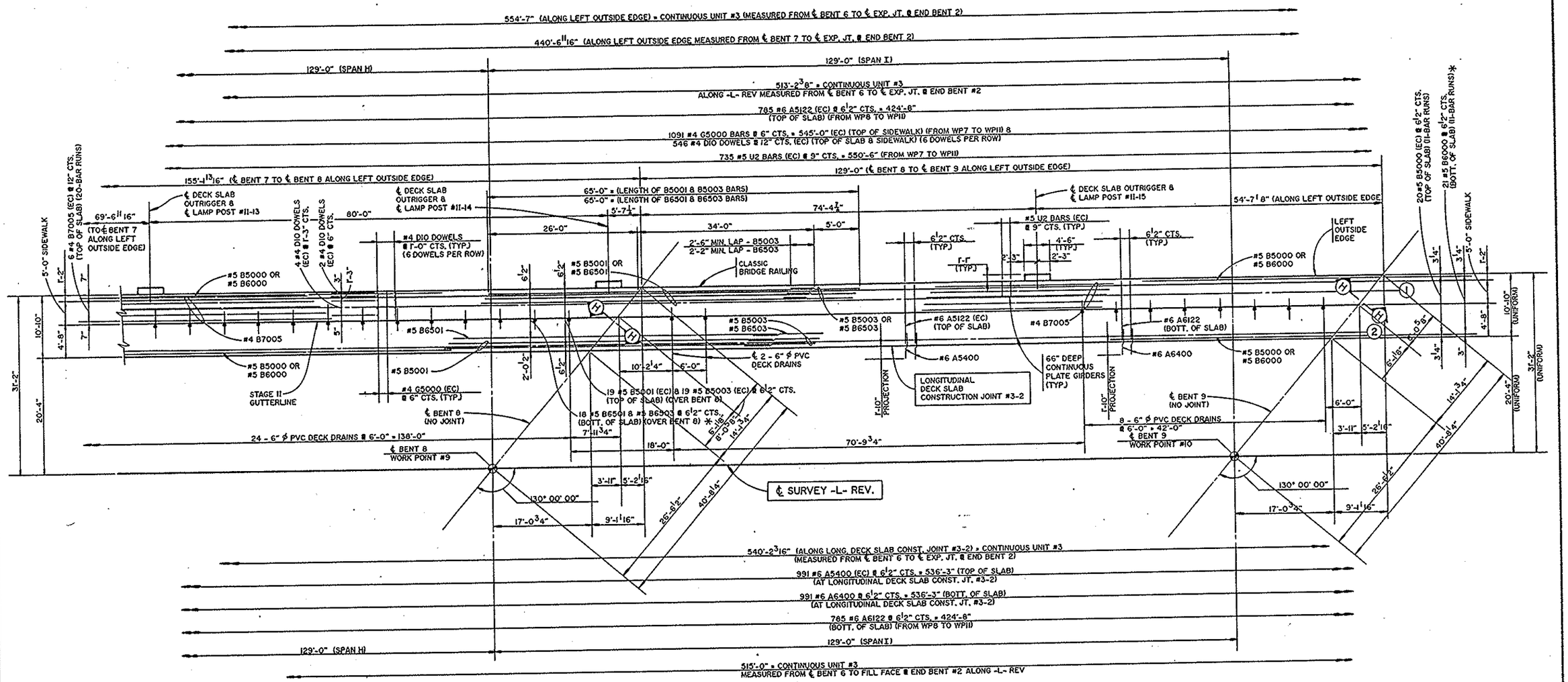
U3.009

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-108
TOTAL SHEETS 224

DRAWN BY H. M. WILSON DATE JAN. 94
CHECKED BY CEM DATE 1/94



PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV.

SHEET 2 OF 3

(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING

PLAN OF SPANS H & I (CONTINUOUS UNIT #3)
STAGE II CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD CARTER FLETCHER
4/12/96

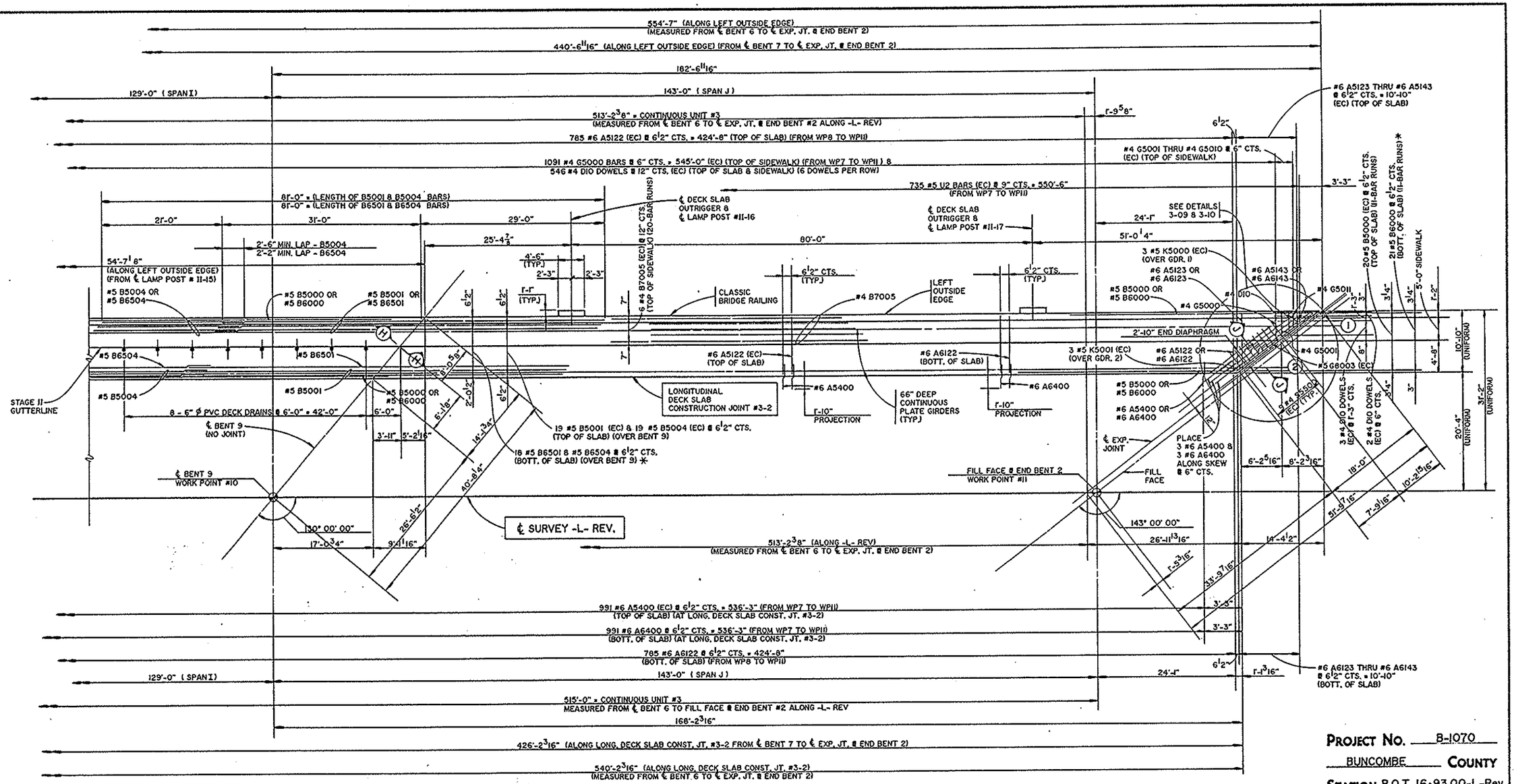
U3.010

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPANS H & I
(CONTINUOUS UNIT #3)
STAGE II CONSTRUCTION
MARCH 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-109
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. M. WILSON DATE MAR 94
CHECKED BY CCM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL
* SEE TYPICAL SECTION FOR SPACING

PLAN OF SPANS I & J (CONTINUOUS UNIT #3)
STAGE II CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

PLAN OF SPANS I & J
(CONTINUOUS UNIT #3)
STAGE II CONSTRUCTION
MARCH 1994

NORTH CAROLINA PROFESSIONAL SEAL 11274 ENGINEER LEONARD GARTH FLEMING
4/12/96

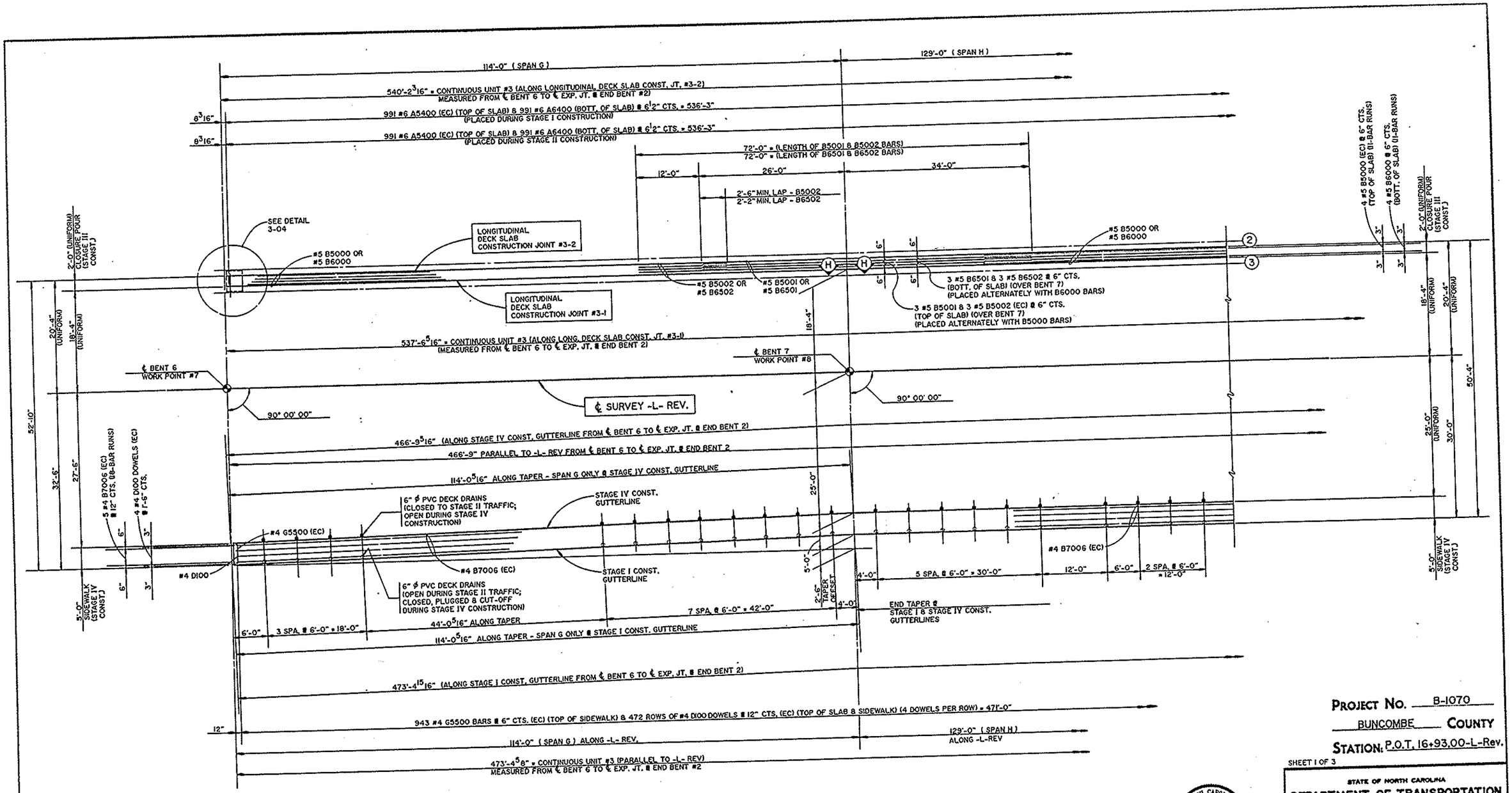
U3.011

PREPARED BY
THOMPSON - GORDON - SHOOK
ENGINEERS, INCORPORATED

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

SHEET NO. 3-110
TOTAL SHEETS 224

DRAWN BY N. M. WILSON DATE MAR. 94
CHECKED BY CSM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL

#4 D100 DOWELS (STAGE IV CONST.) SHALL BE ADHESIVELY ANCHORED. SEE SPECIAL PROVISIONS.

PLAN OF SPANS G & H (CONTINUOUS UNIT #3)
STAGE III & IV CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

PLAN OF SPANS G & H
(CONTINUOUS UNIT #3)
STAGE III & IV CONSTRUCTION

MARCH 1994

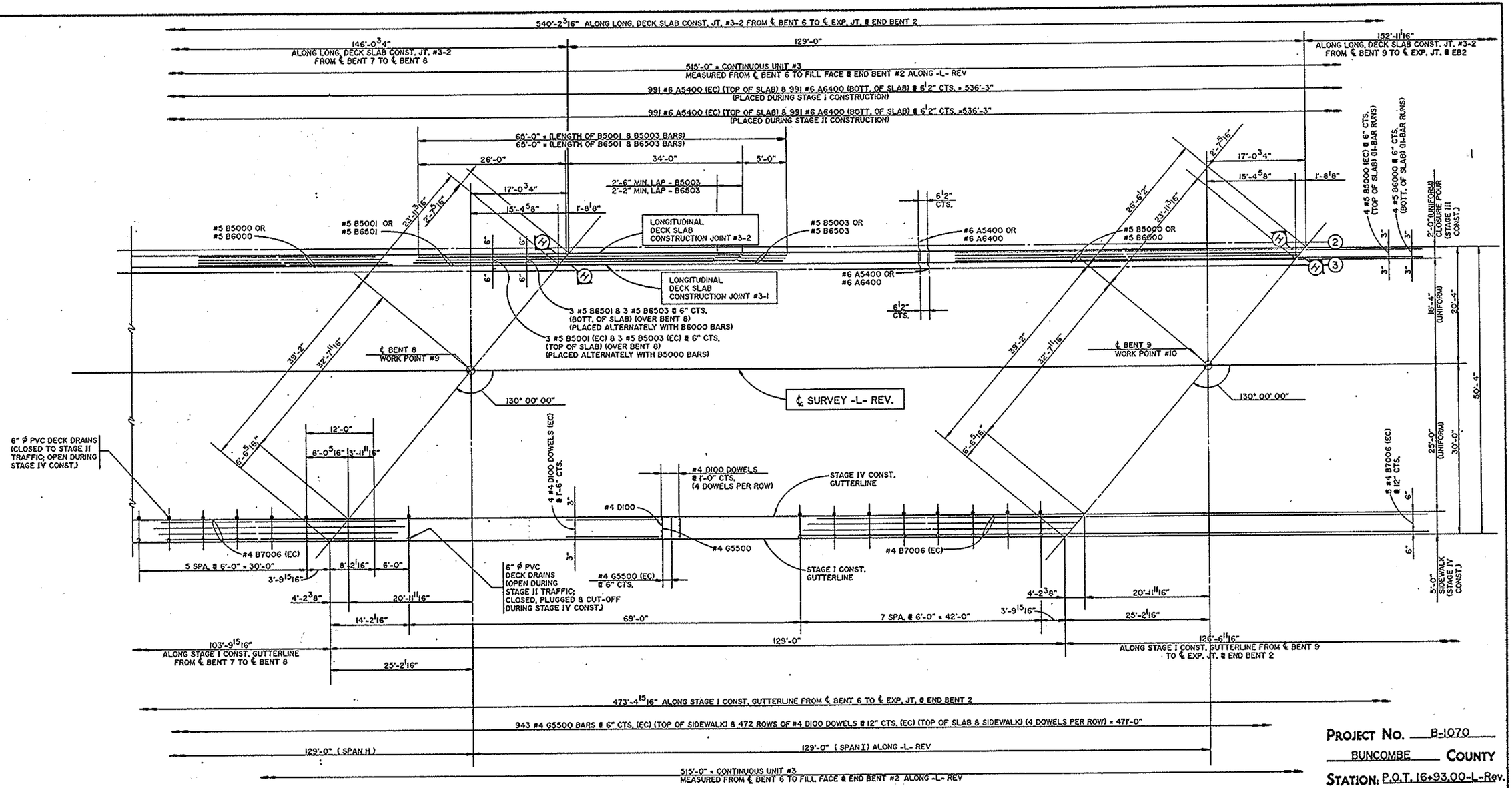
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-111
1			3			TOTAL SHEETS
2			4			224

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER DONALD GARTH HATCHER
4/12/96

U3.012

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

DRAWN BY N. M. WILSON DATE MAR. 94
CHECKED BY CCM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL
#4 D100 DOWELS (STAGE IV CONST.) SHALL BE ADHESIVELY ANCHORED. SEE SPECIAL PROVISIONS.

PLAN OF SPANS H & I (CONTINUOUS UNIT #3)
STAGE III & IV CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE

PLAN OF SPANS H & I
(CONTINUOUS UNIT #3)
STAGE III & IV CONSTRUCTION

MARCH 1994

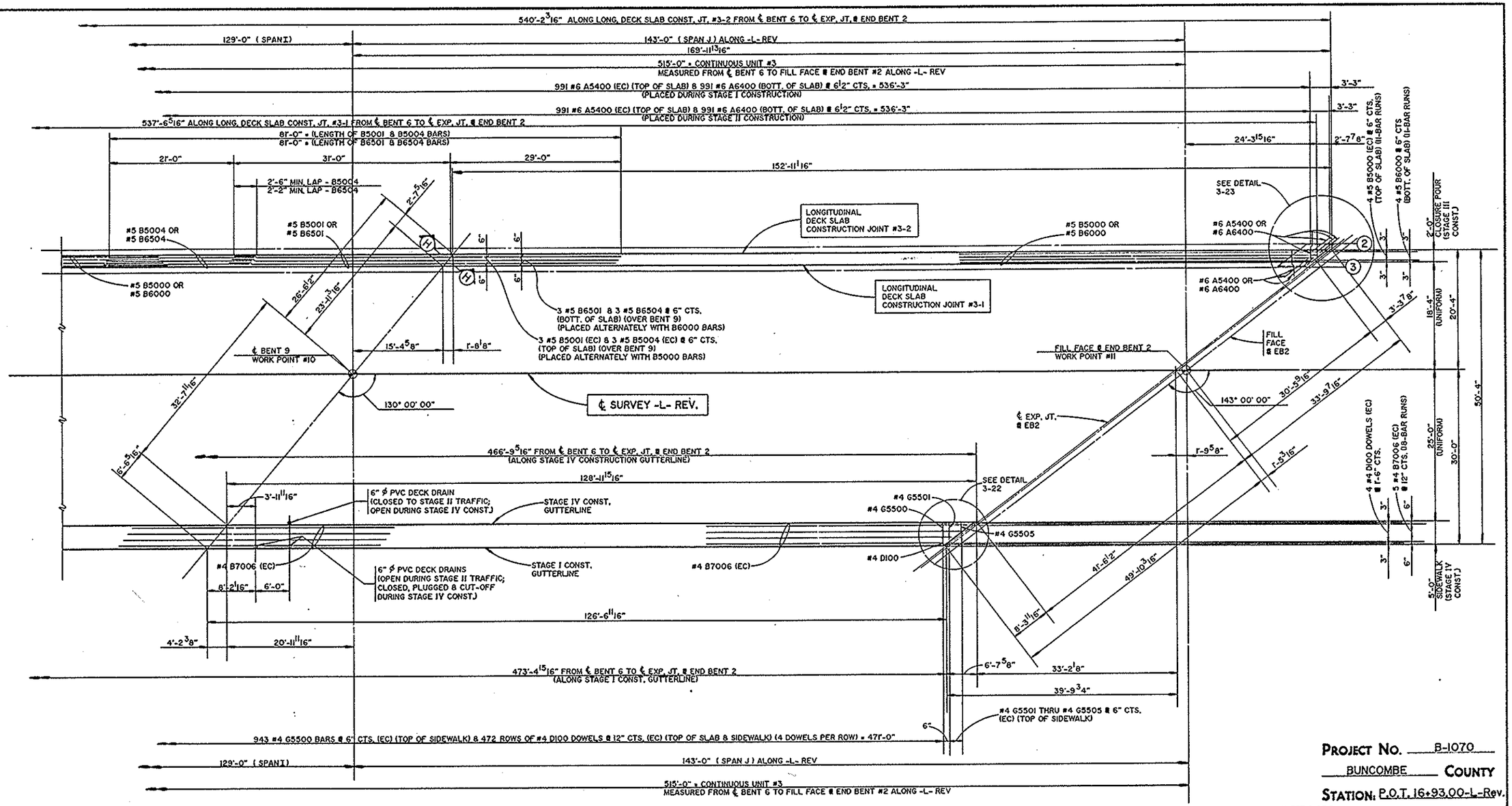
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FETCHER
4/12/96

U3.013

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS							SHEET NO.
NO.	BY	DATE	NO.	BY	DATE		S-112
1			3				TOTAL SHEETS
2			4				224

DRAWN BY N. M. WILSON DATE MAR 94
CHECKED BY CCM DATE 6/95



(EC) DENOTES EPOXY-COATED REINFORCING STEEL.
#4 D100 DOWELS (STAGE IV CONST.) SHALL BE ADHESIVELY ANCHORED. SEE SPECIAL PROVISIONS.

PLAN OF SPANS I & J (CONTINUOUS UNIT #3)
STAGE III & IV CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
6/12/96

03,014

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

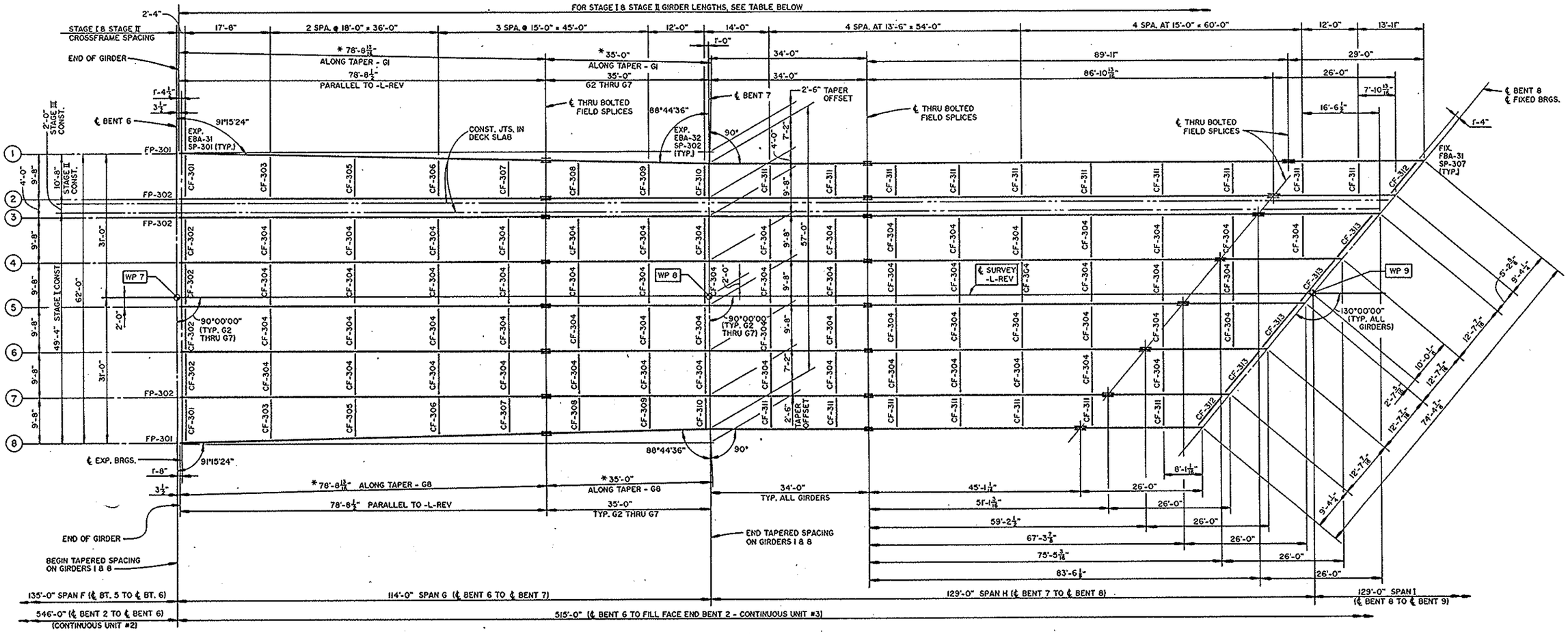
PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-Rev.

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
PLAN OF SPANS I & J
(CONTINUOUS UNIT #3)
STAGE III & IV CONSTRUCTION
MARCH 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-113
1			3			TOTAL SHEETS
2			4			224

DRAWN BY N. M. WILSON DATE MAR. 94
CHECKED BY CGM DATE 6/1/95



* THESE DIMENSIONS ARE MEASURED ALONG ℄ GIRDER HORIZONTALLY.

GIRDER LENGTHS FOR UNIT #3	
1	* 549'-8 5/8"
2	540'-2 3/16"
3	534'-10 7/16"
4	522'-0 1/2"
5	509'-2 3/16"
6	496'-4 3/8"
7	483'-6 11/16"
8	* 474'-0 15/16"

FRAMING PLAN - SPANS G & H - STAGES I, II & III CONSTRUCTION

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 1 OF 3

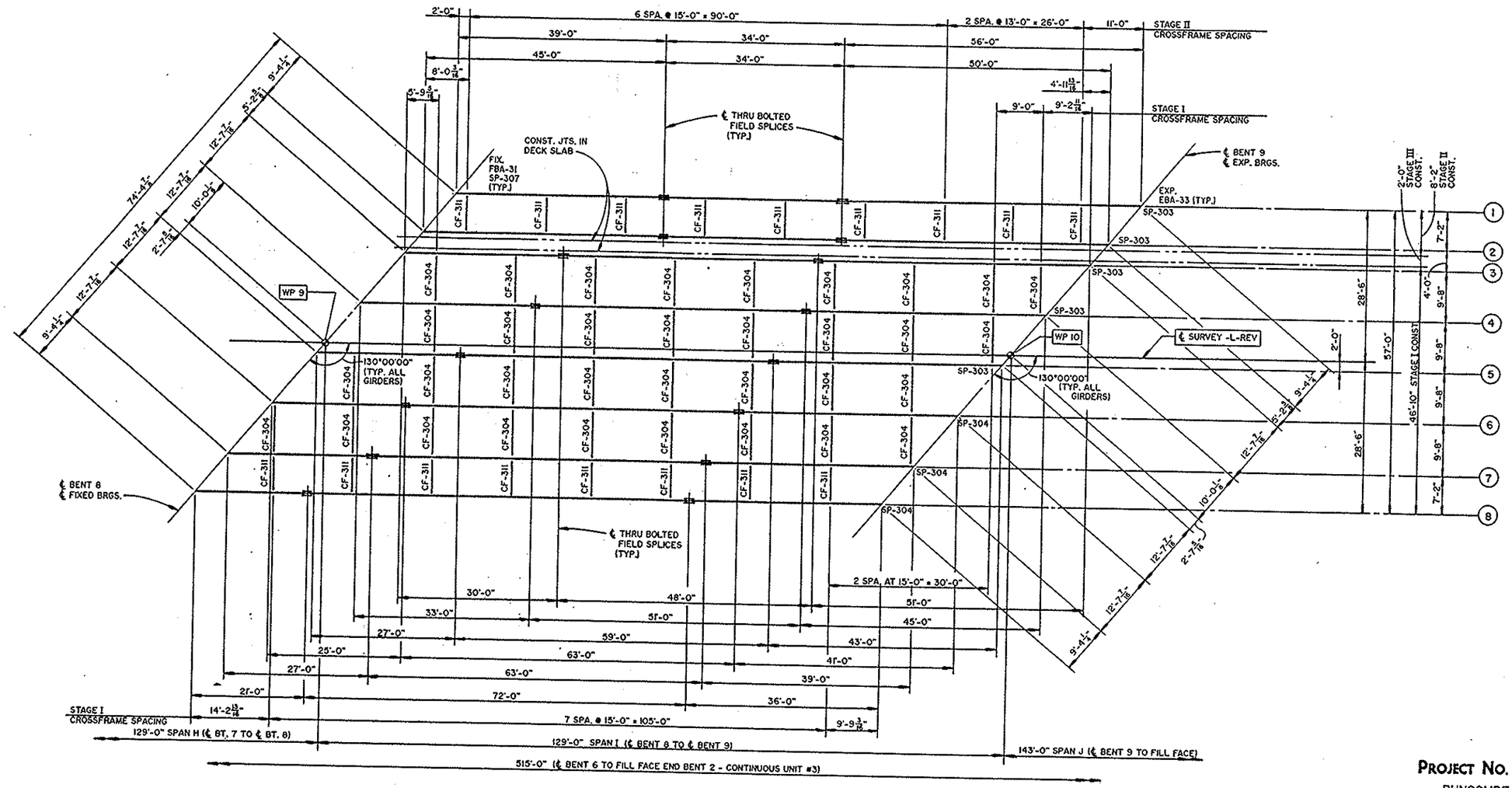
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
FRAMING PLAN - SPANS G & H
(CONTINUOUS UNIT #3)
STAGES I, II & III CONST.
MARCH 1994

NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER LEONARD GARTH FLETCHER
4/12/94

43.015
PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	5-114
1			3			TOTAL SHEETS
2			4			224

DRAWN BY RTL DATE 10-94
CHECKED BY GCM DATE 6/95



FRAMING PLAN - SPAN I STAGES I, II & III CONSTRUCTION

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
FRAMING PLAN - SPAN I
(CONTINUOUS UNIT #3)
STAGES I, II & III CONST.
MARCH 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER EDWARD GARTH FLETCHER
4/12/96

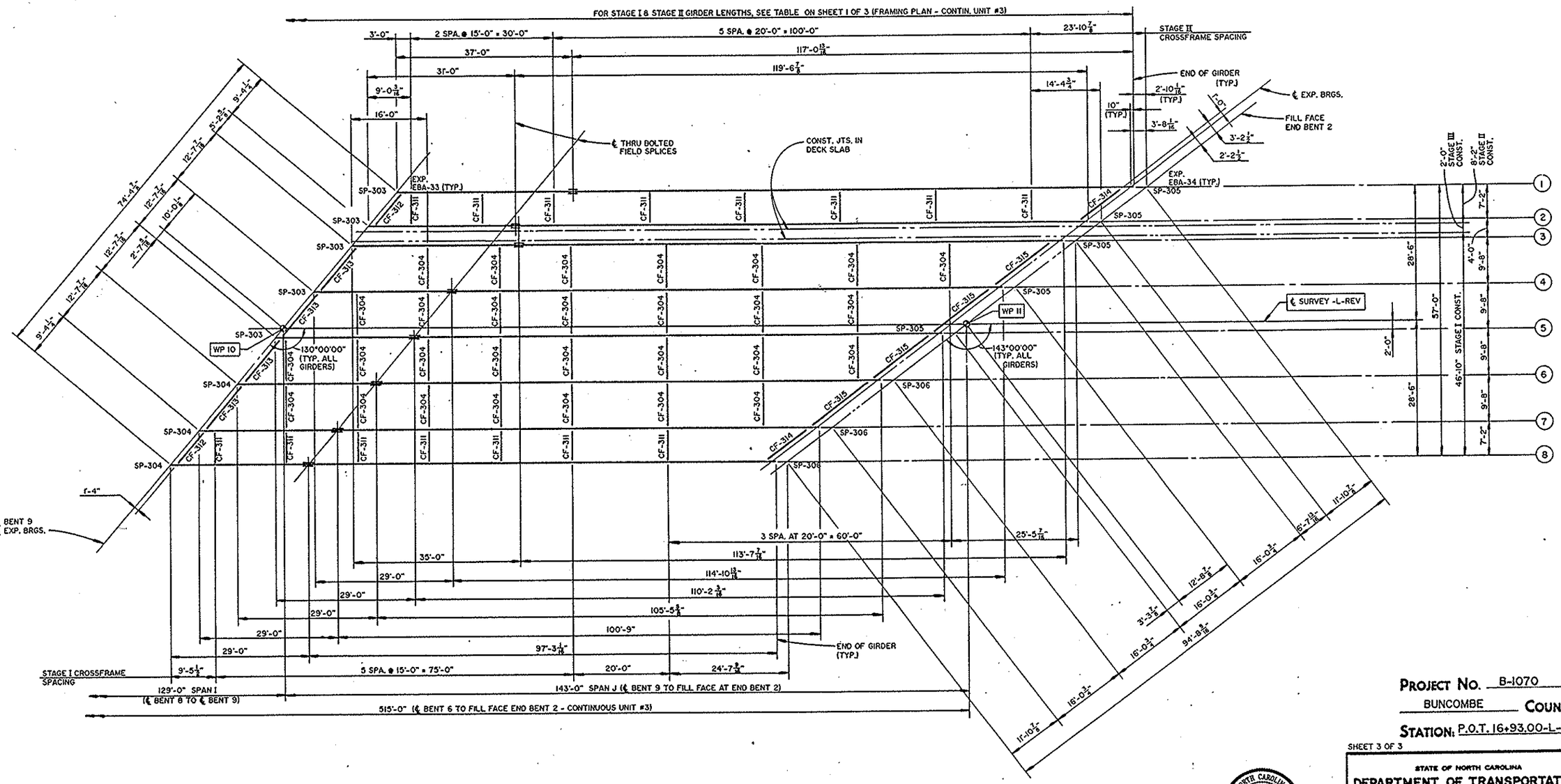
03.016

PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-115
TOTAL SHEETS 224

DRAWN BY RTJ DATE 1/94
CHECKED BY CM DATE 6/95



FRAMING PLAN - SPAN J - STAGES I, II & III CONSTRUCTION

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

FRAMING PLAN - SPAN J
(CONTINUOUS UNIT #3)
STAGES I, II & III CONST.

MARCH 1994

NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER LARRY GARTH FLEMING
4/12/94

U3.017

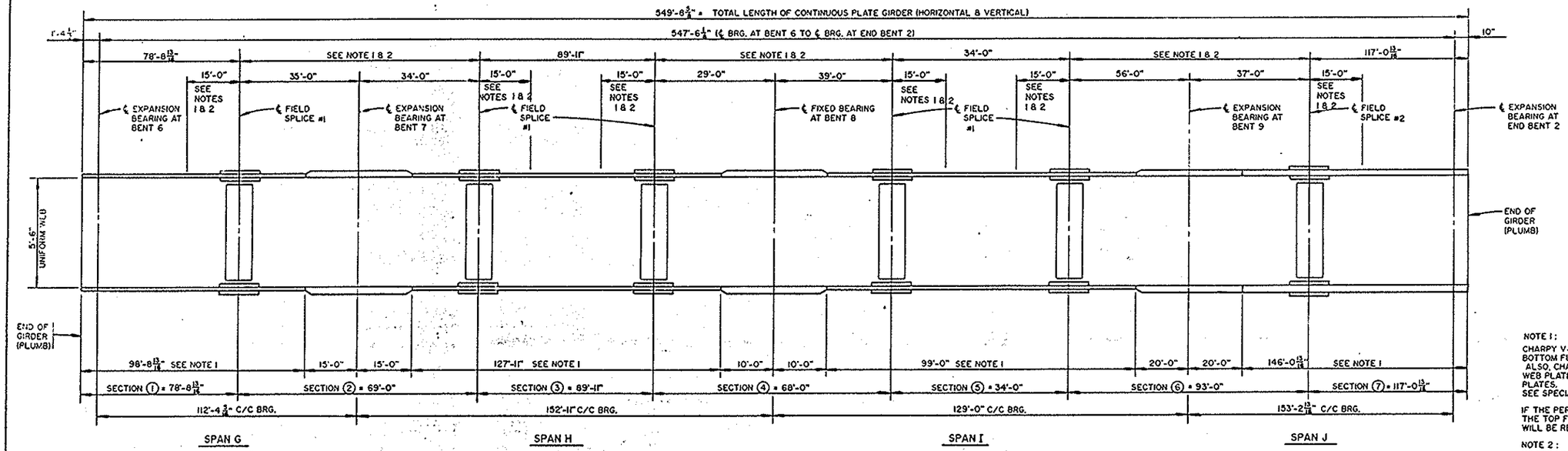
PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-116

TOTAL SHEETS 224

DRAWN BY RTL DATE 3/94
CHECKED BY ECM DATE 4/95

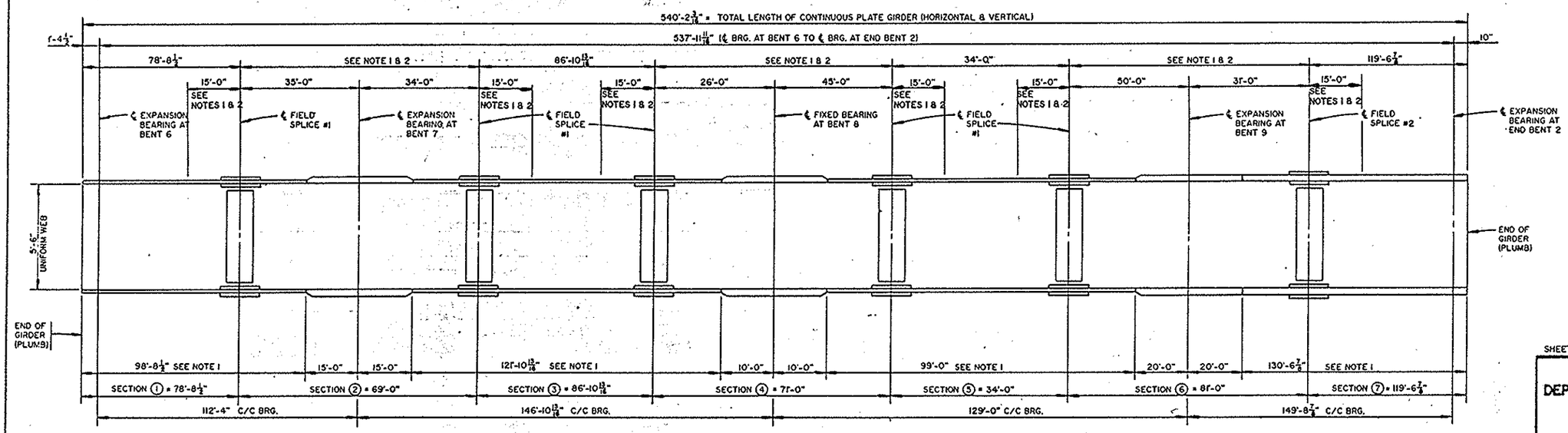


ELEVATION OF GIRDER 1

NOTE 1:
CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2:
NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.



ELEVATION OF GIRDER 2

NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER LEONARD CARTER PARTRIDGE
6/12/96

03.018

PREPARED BY
THOMPSON · GORDON · SHOOK ENGINEERS, INCORPORATED

DRAWN BY RTJ DATE 6-94
CHECKED BY CCM DATE 6/95

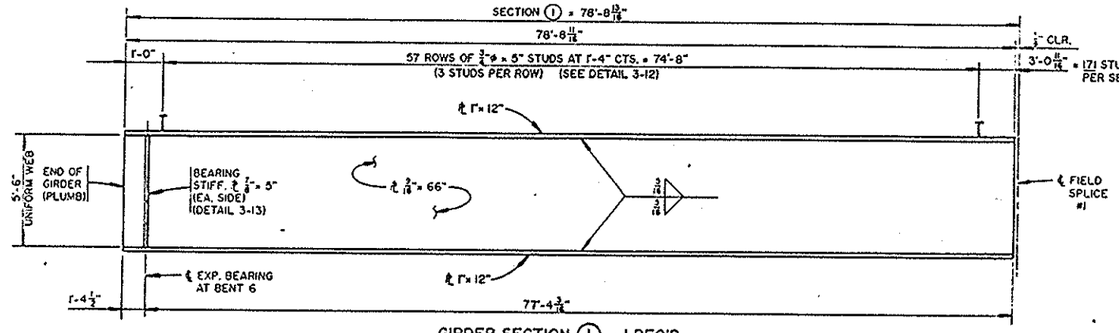
PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 1 OF 12

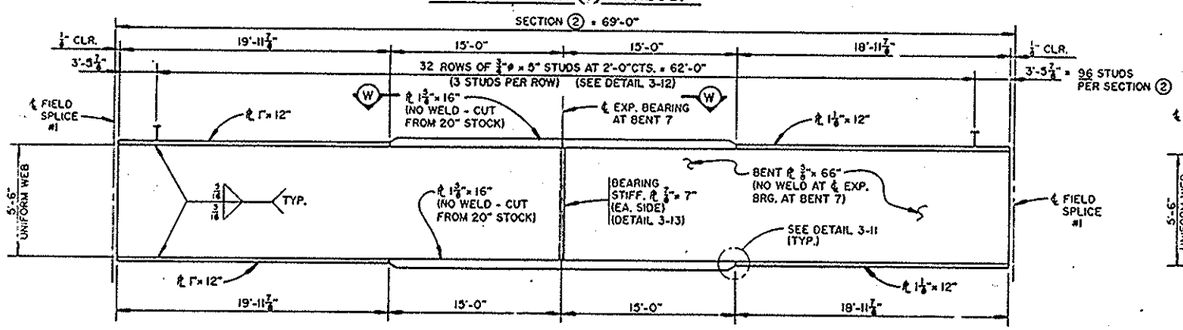
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER ELEVATIONS 1 AND 2
CONTINUOUS UNIT #3

OCTOBER 1994

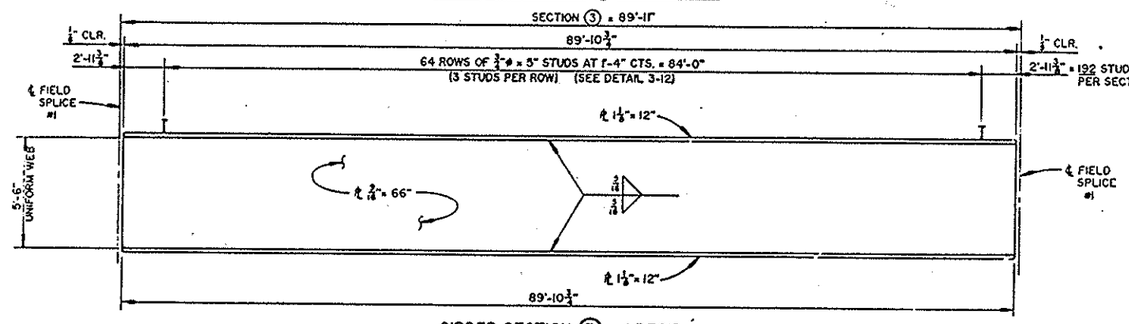
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-117
1			3			TOTAL SHEETS
2			4			224



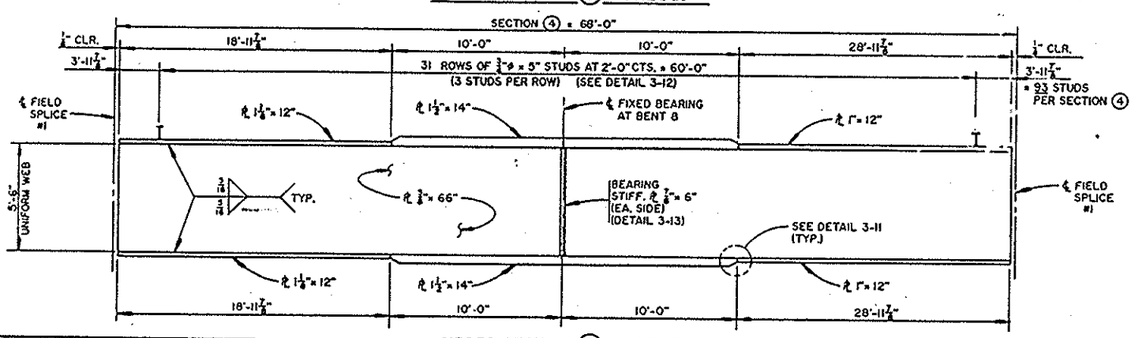
GIRDER SECTION 1 - 1 REQ'D.



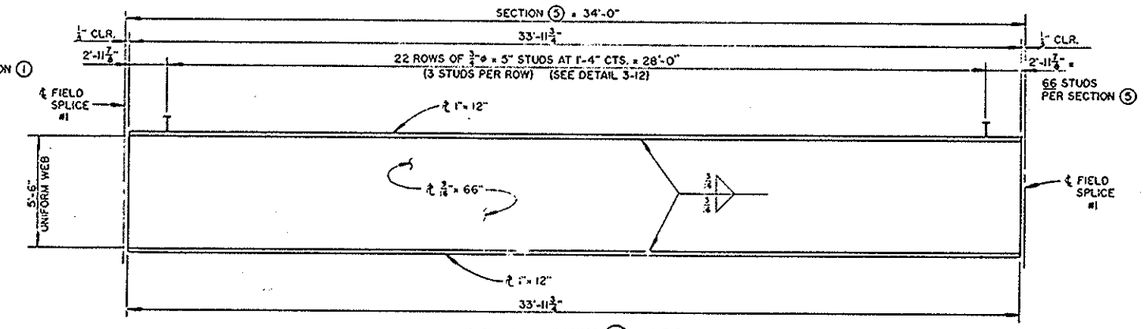
GIRDER SECTION 2 - 1 REQ'D.



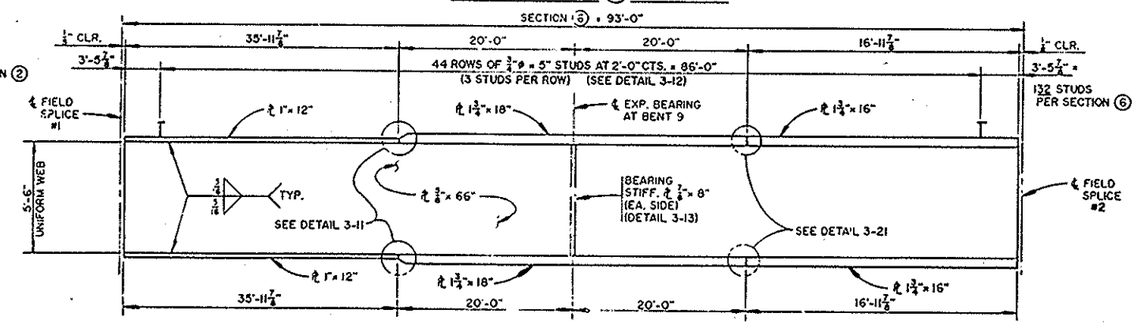
GIRDER SECTION 3 - 1 REQ'D.



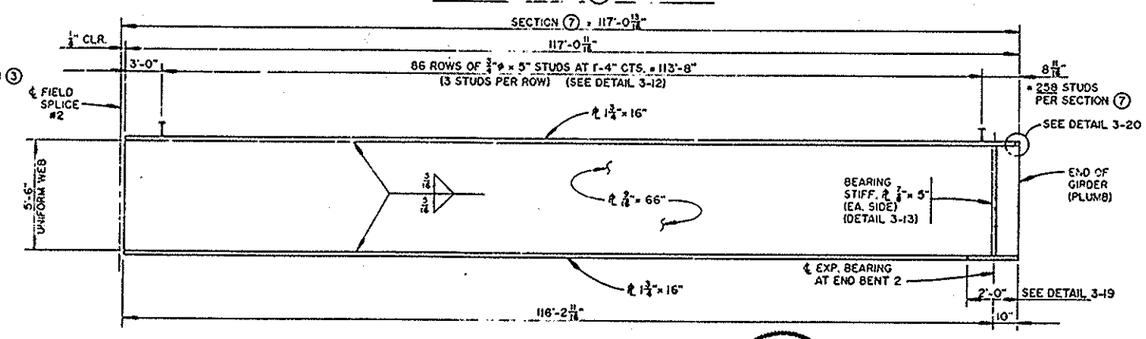
GIRDER SECTION 4 - 1 REQ'D.



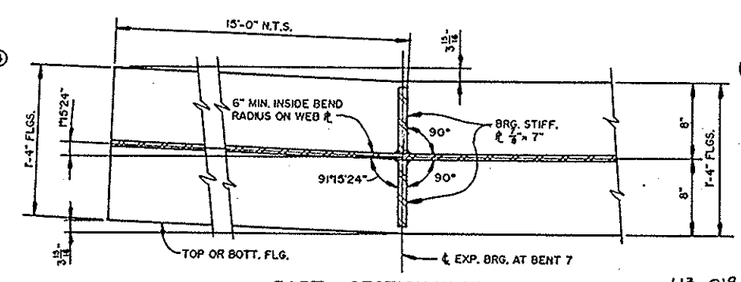
GIRDER SECTION 5 - 1 REQ'D.



GIRDER SECTION 6 - 1 REQ'D.



GIRDER SECTION 7 - 1 REQ'D.



PART - SECTION W-W

GIRDER 1 - SECTION 2 ONLY

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH PLAUTICH
4/12/96

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 2 OF 12

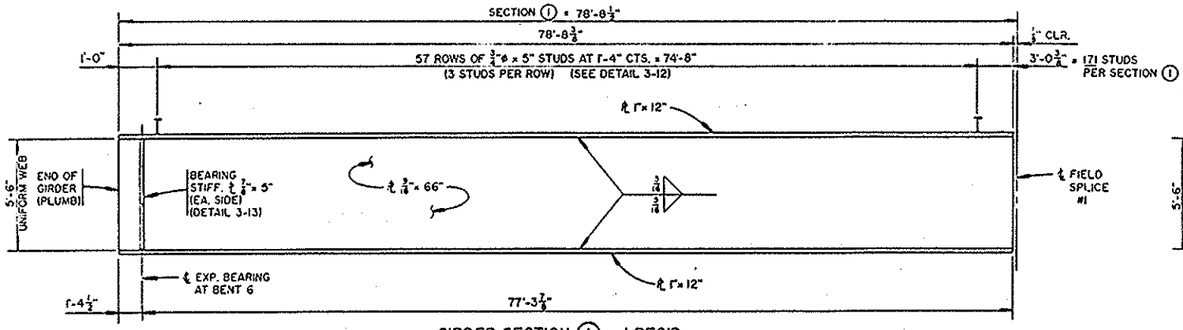
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 1 DETAILS
CONTINUOUS UNIT #3
OCTOBER 1994

REVISIONS							SHEET NO.
NO.	BY	DATE	NO.	BY	DATE		S-118
1			3				TOTAL SHEETS
2			4				224

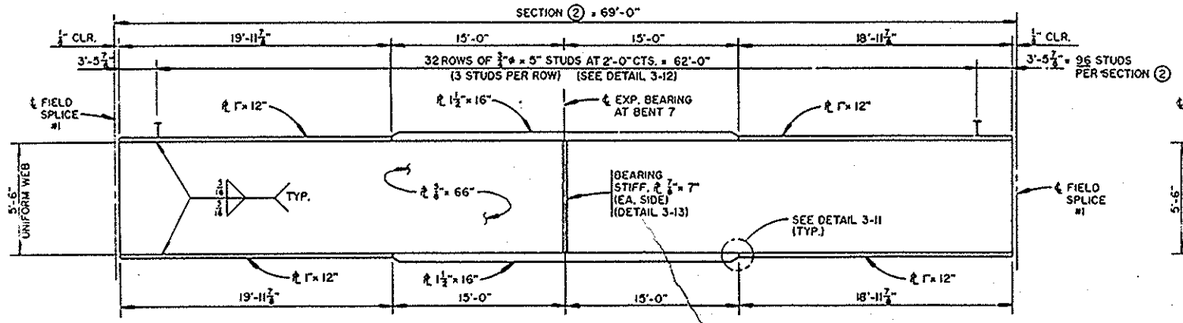
U3.019

PREPARED BY THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

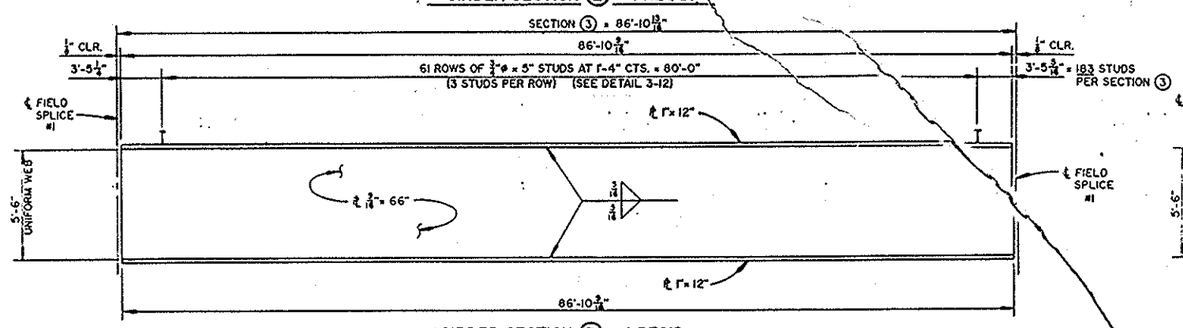
DRAWN BY RTJ DATE 12-93
CHECKED BY GGM DATE 6/95



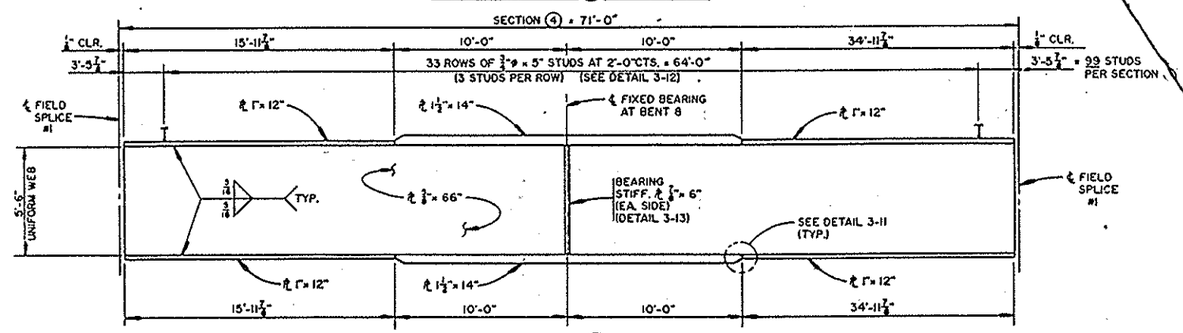
GIRDER SECTION ① - 1 REQ'D.



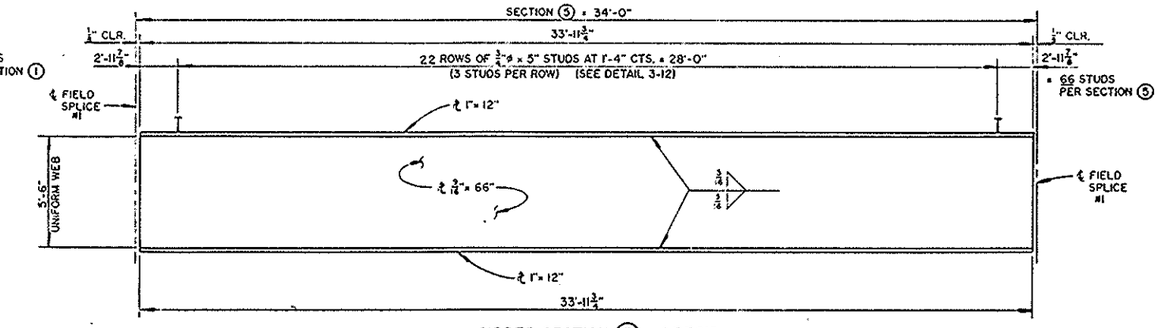
GIRDER SECTION ② - 1 REQ'D.



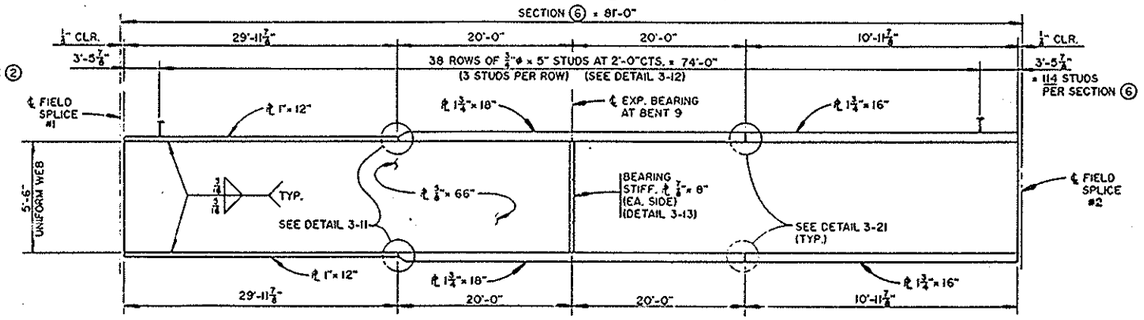
GIRDER SECTION ③ - 1 REQ'D.



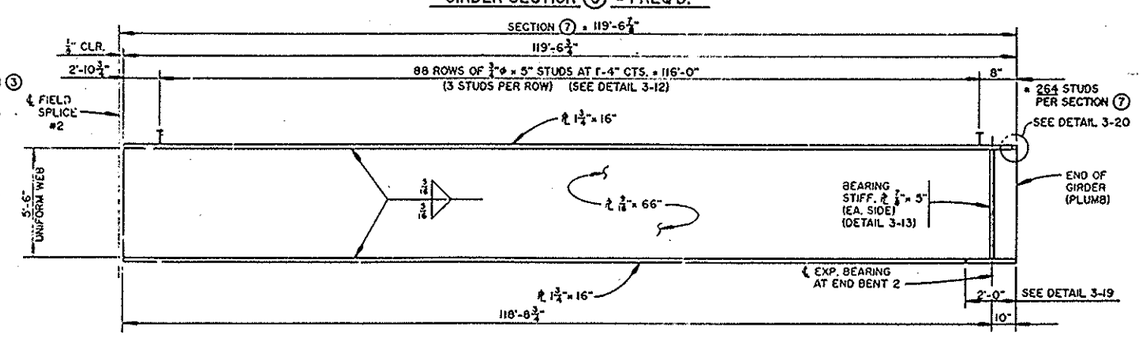
GIRDER SECTION ④ - 1 REQ'D.



GIRDER SECTION ⑤ - 1 REQ'D.



GIRDER SECTION ⑥ - 1 REQ'D.



GIRDER SECTION ⑦ - 1 REQ'D.

DRAWN BY KTL DATE 10-94
CHECKED BY CM DATE 9-95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

SHEET 3 OF 12

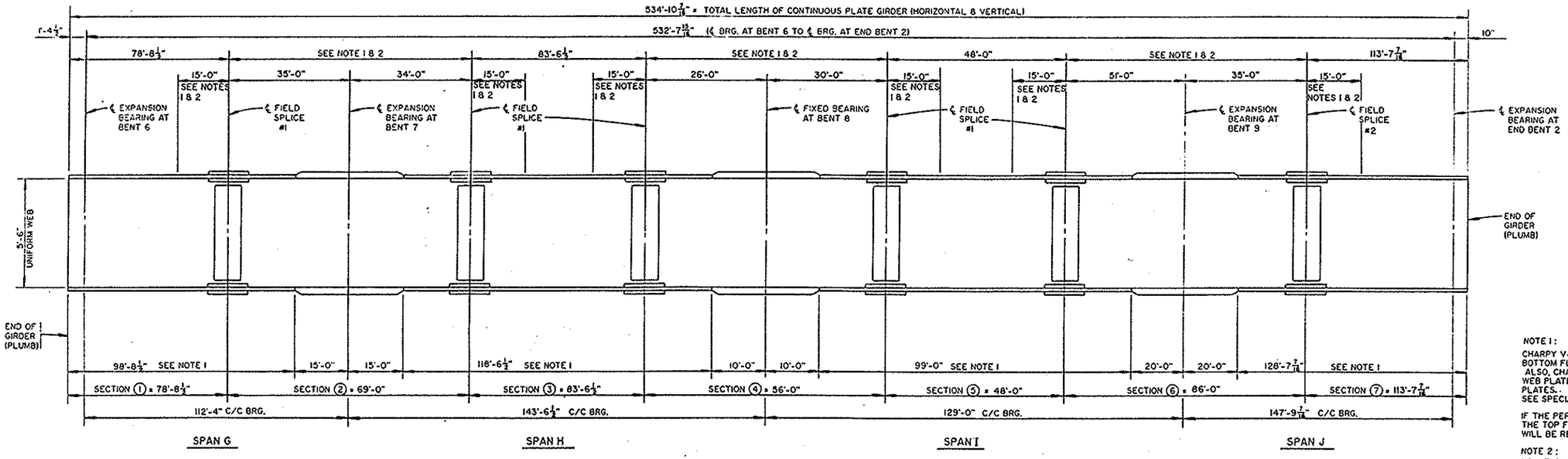
NORTH CAROLINA PROFESSIONAL SEAL 11270 ENGINEER LEONARD CARTER FLETCHER
4/12/96

U3.020

PREPARED BY
THOMPSON • GOFFOON • SMITH ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 2 DETAILS
CONTINUOUS UNIT #3
OCTOBER 1994

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-119
1			3			TOTAL SHEETS
2			4			224



ELEVATION OF GIRDER 3

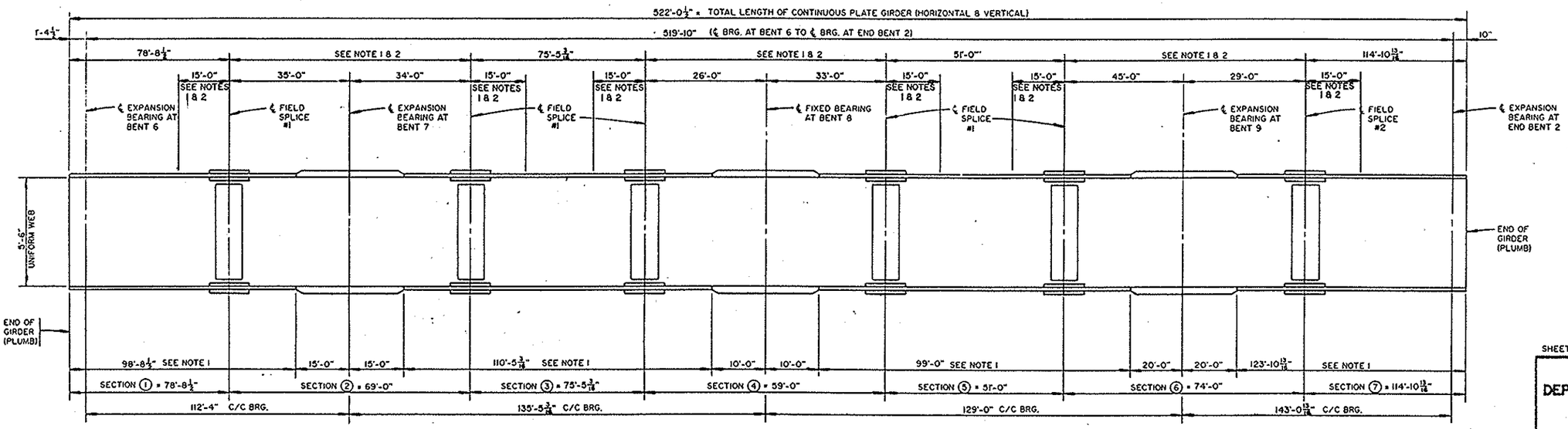
NOTE 1:

CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2:

NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.



ELEVATION OF GIRDER 4

NORTH CAROLINA PROFESSIONAL SEAL 11274 ENGINEER JERRY GARTH FLETCHER
4/12/96

U3.021

PREPARED BY
THOMPSON - BORDON - SHOOK ENGINEERS, INCORPORATED

DRAWN BY RTJ DATE 10-94
CHECKED BY CCM DATE 6/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

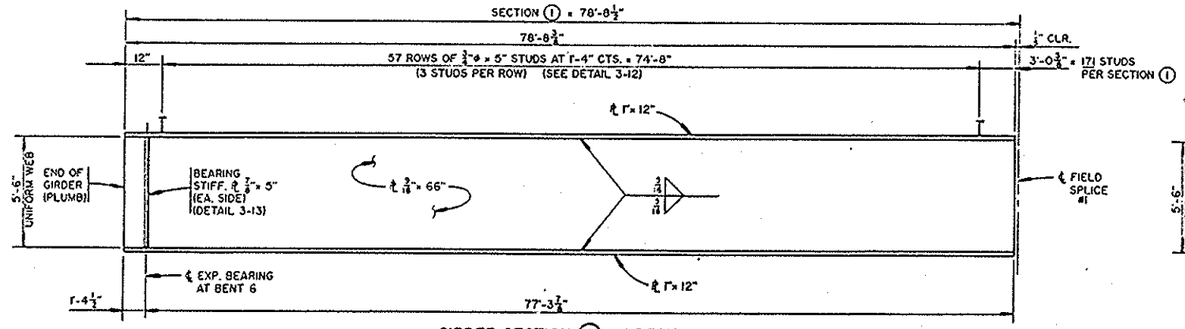
SHEET 4 OF 12

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

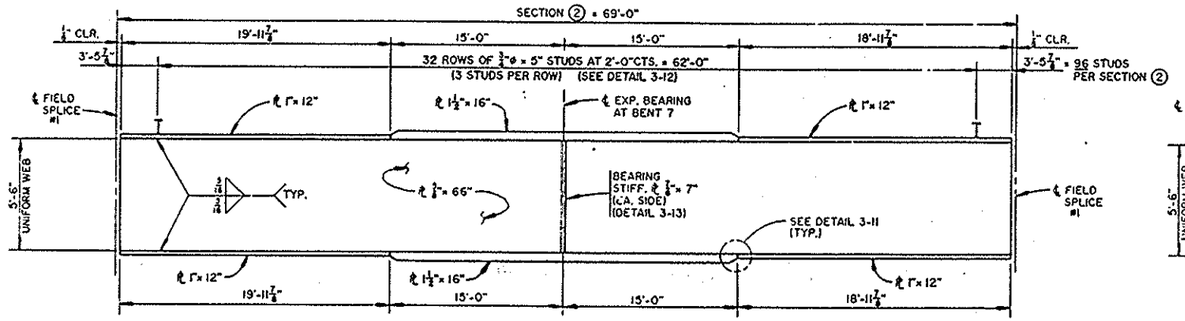
GIRDER ELEVATIONS 3 AND 4
CONTINUOUS UNIT #3

OCTOBER 1994

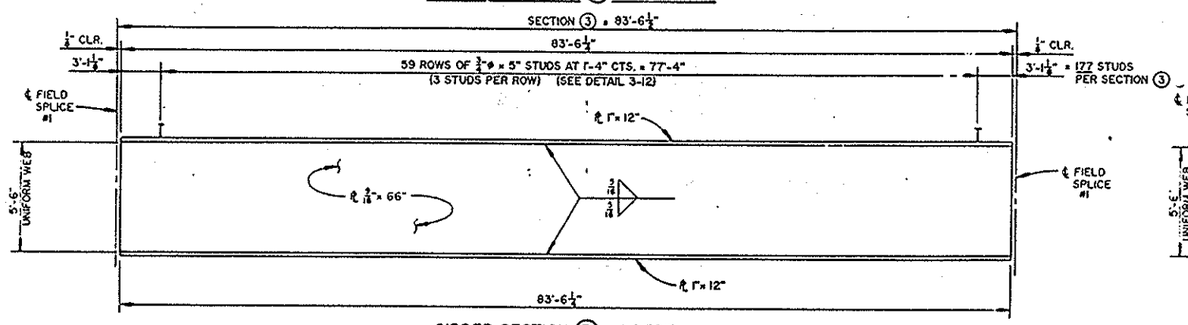
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-120
1			3			TOTAL SHEETS
2			4			224



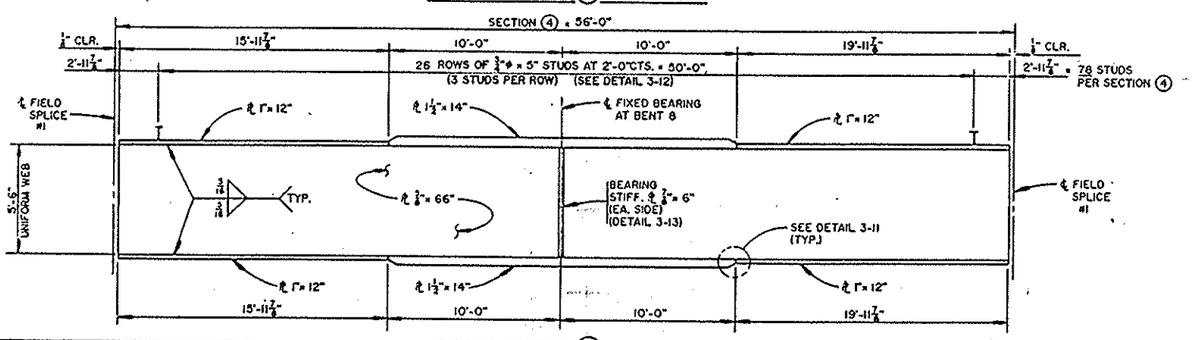
GIRDER SECTION ① - 1 REQ'D.



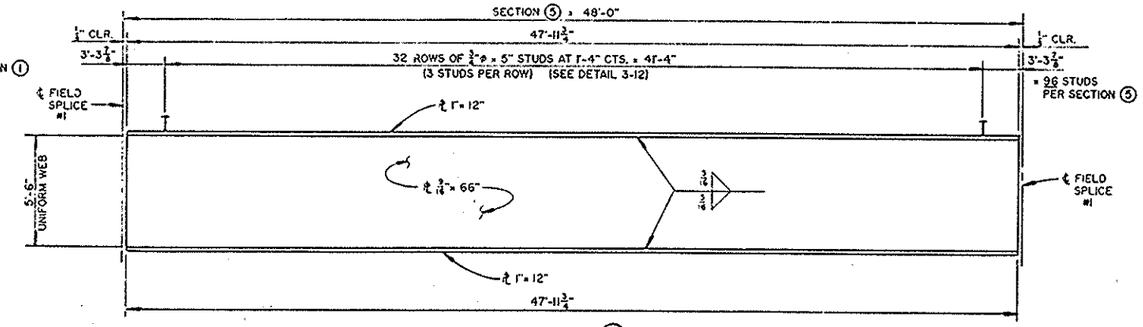
GIRDER SECTION ② - 1 REQ'D.



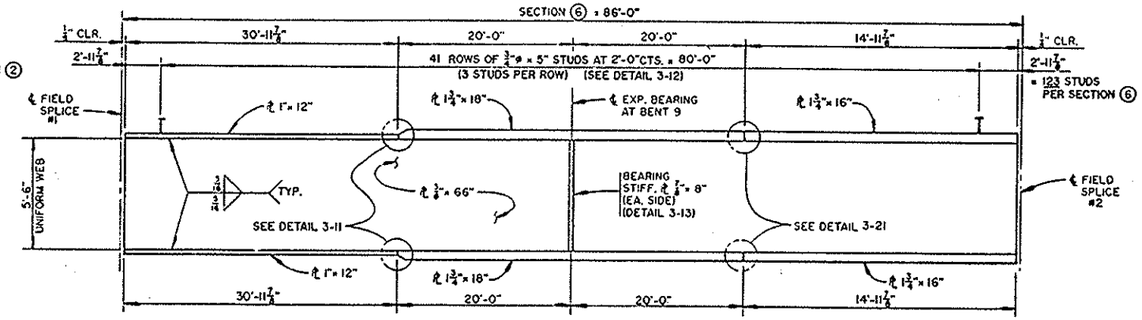
GIRDER SECTION ③ - 1 REQ'D.



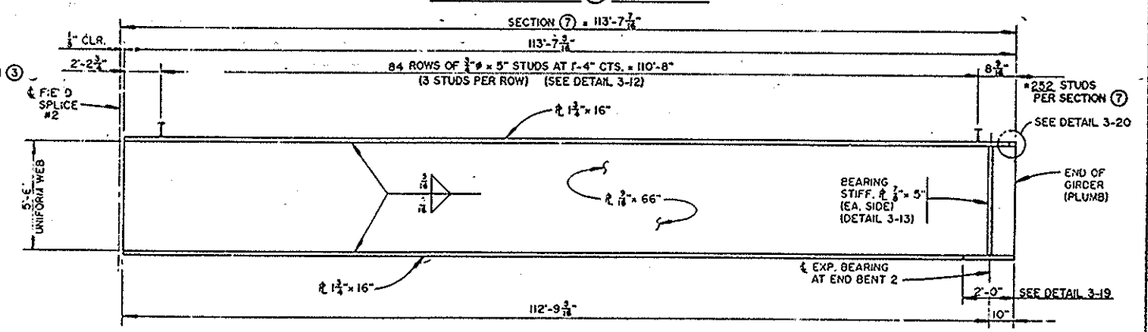
GIRDER SECTION ④ - 1 REQ'D.



GIRDER SECTION ⑤ - 1 REQ'D.



GIRDER SECTION ⑥ - 1 REQ'D.



GIRDER SECTION ⑦ - 1 REQ'D.

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 5 OF 12

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 3 DETAILS
CONTINUOUS UNIT #3

OCTOBER 1994

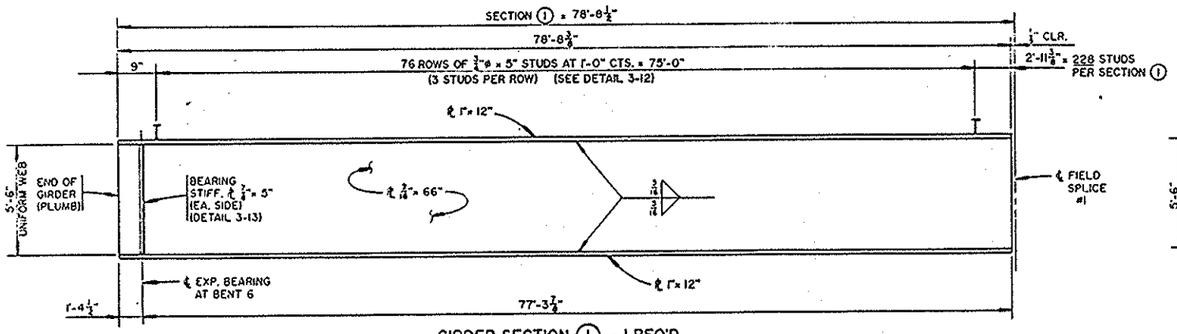
NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH TARTUCHER
4/12/96

03.022

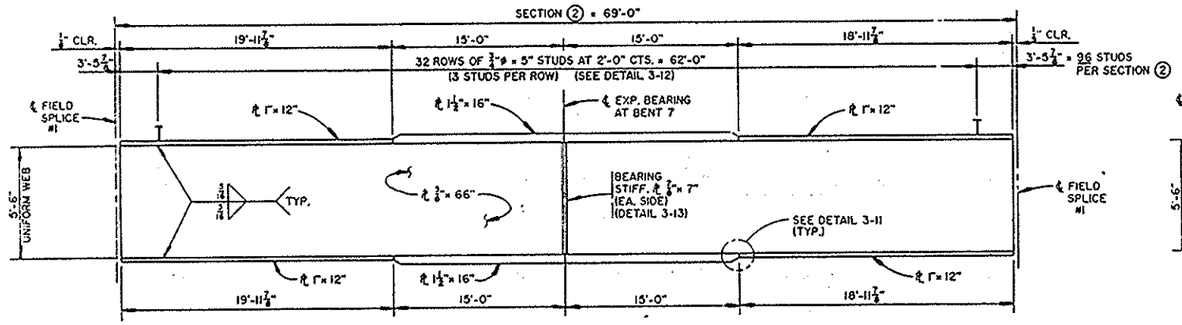
PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-121
1			3			TOTAL SHEETS
2			4			224

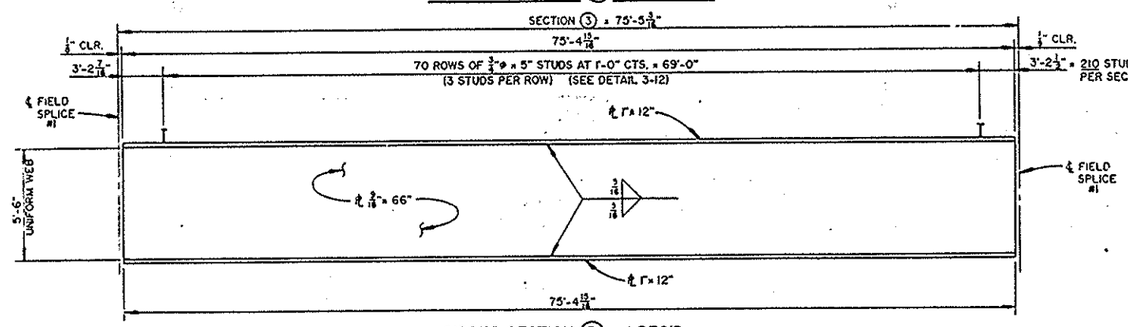
DRAWN BY RTJ DATE 10-94
CHECKED BY CGM DATE 6/95



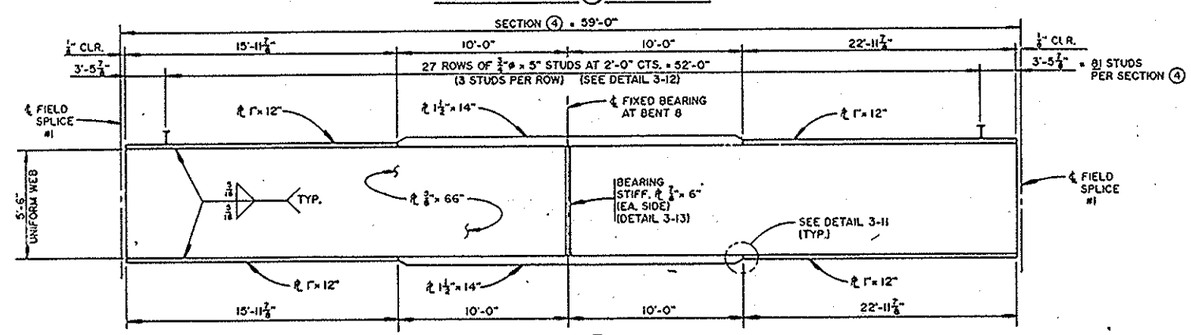
GIRDER SECTION ① - 1 REQ'D.



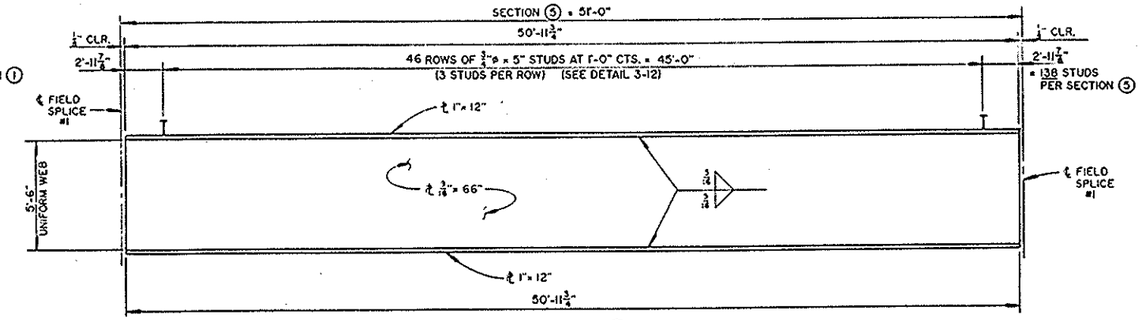
GIRDER SECTION ② - 1 REQ'D.



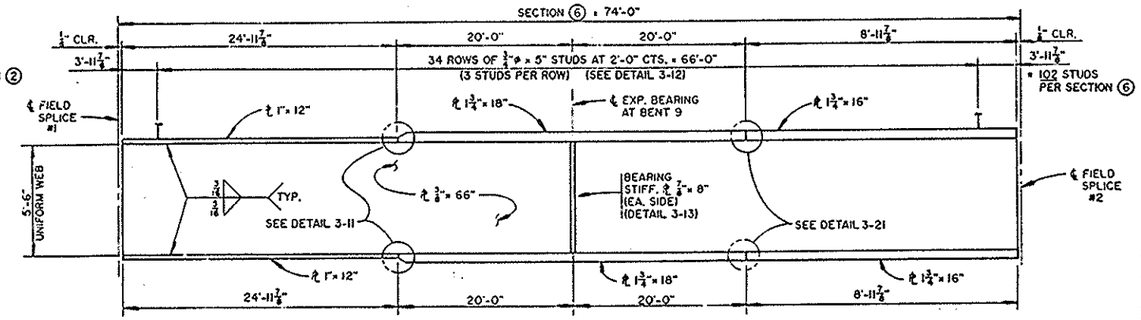
GIRDER SECTION ③ - 1 REQ'D.



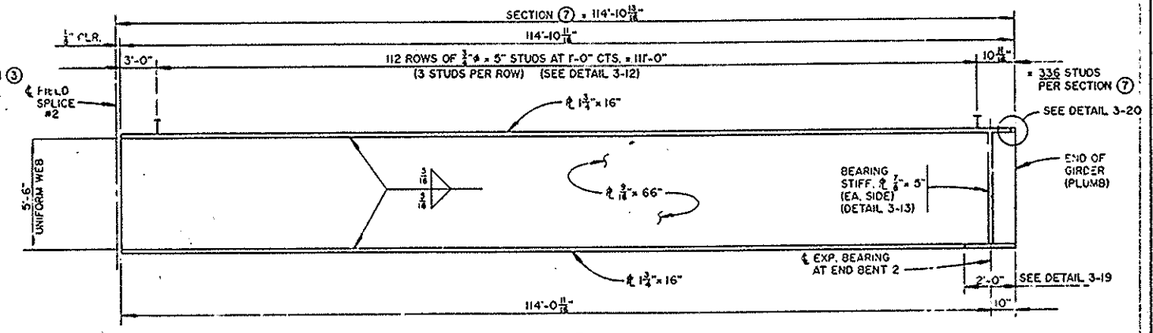
GIRDER SECTION ④ - 1 REQ'D.



GIRDER SECTION ⑤ - 1 REQ'D.



GIRDER SECTION ⑥ - 1 REQ'D.



GIRDER SECTION ⑦ - 1 REQ'D.

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 6 OF 12

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER 4 DETAILS
CONTINUOUS UNIT #3

OCTOBER 1994

NORTH CAROLINA PROFESSIONAL SEAL 12279 ENGINEER LEONARD CARTER FLETCHER
4/14/95

U3.023

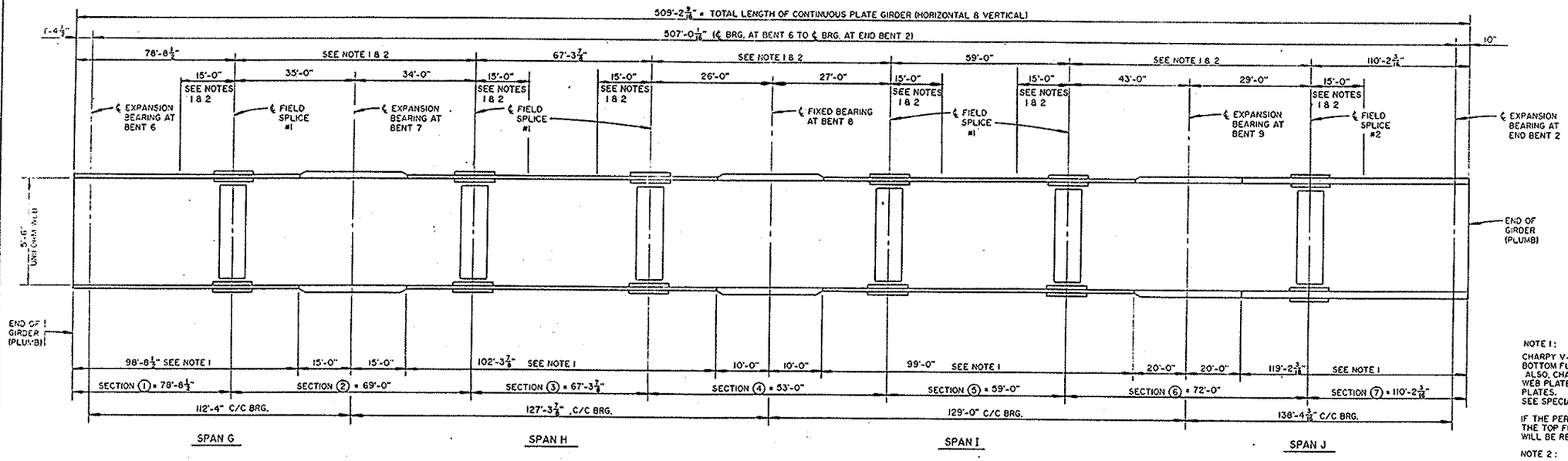
PREPARED BY
THOMPSON - GORDON - SHOOK
ENGINEERS, INCORPORATED

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-12.2
1			3			TOTAL SHEETS
2			4			224

DRAWN BY RTJ DATE 10-94
CHECKED BY CCM DATE 6/95

1.98

.3229



ELEVATION OF GIRDER 5

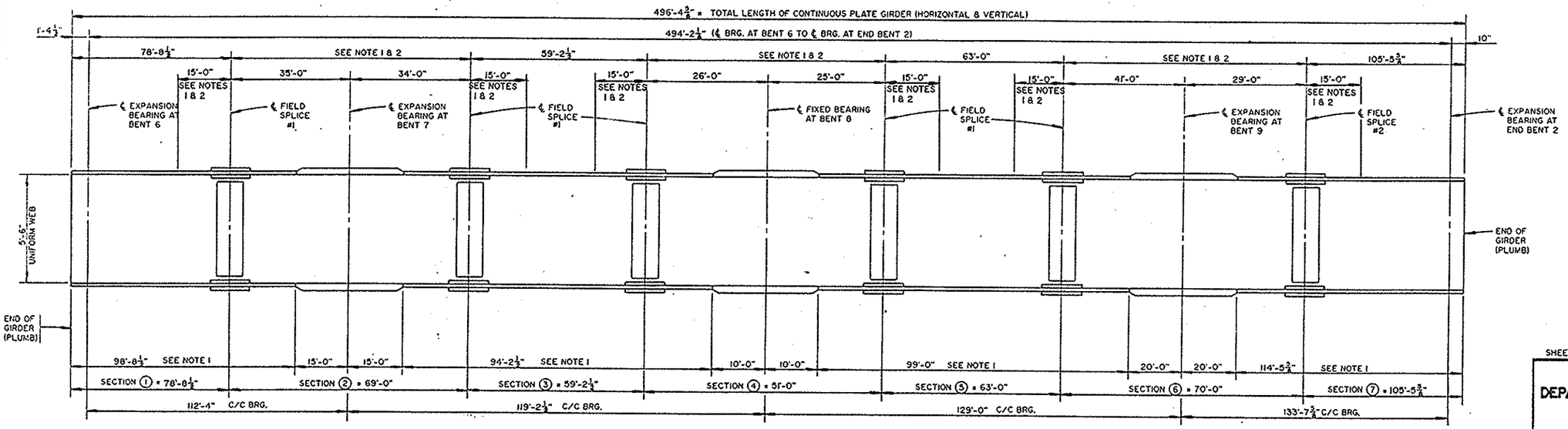
NOTE 1:

CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR TOP OR BOTTOM FLANGE PLATE WHICH FALLS WITHIN THESE LIMITS. ALSO, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR ALL WEB PLATES, WEB SPLICE PLATES AND FLANGE SPLICE PLATES. FOR CHARPY V-NOTCH TESTS, SEE SPECIAL PROVISIONS.

IF THE PERMITTED SHOP FLANGE SPLICE, AS INDICATED FOR THE TOP FLANGE, IS NOT USED, CHARPY V-NOTCH TESTS WILL BE REQUIRED FOR THE ENTIRE TOP FLANGE PLATE.

NOTE 2:

NO WELDING OF FORMS OR FALSEWORK TO THE TOP FLANGE WILL BE PERMITTED IN THIS REGION.



ELEVATION OF GIRDER 6

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U3.024

PREPARED BY
THOMPSON - GORDON - SHOOK ENGINEERS, INCORPORATED

DRAWN BY RTJ DATE 10-94
CHECKED BY GCM DATE 6/95

PROJECT NO. B-1070
BUNCOMBE COUNTY
STATION: P.O.T. 16+93.00-L-REV

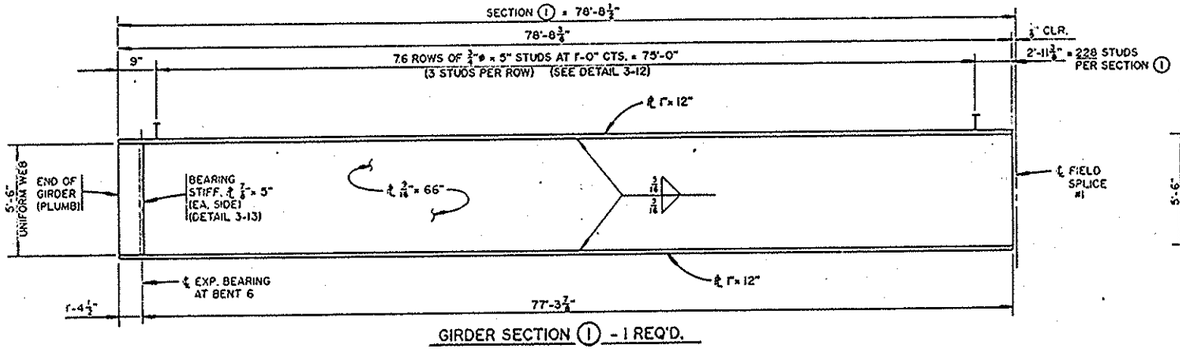
SHEET 7 OF 12

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

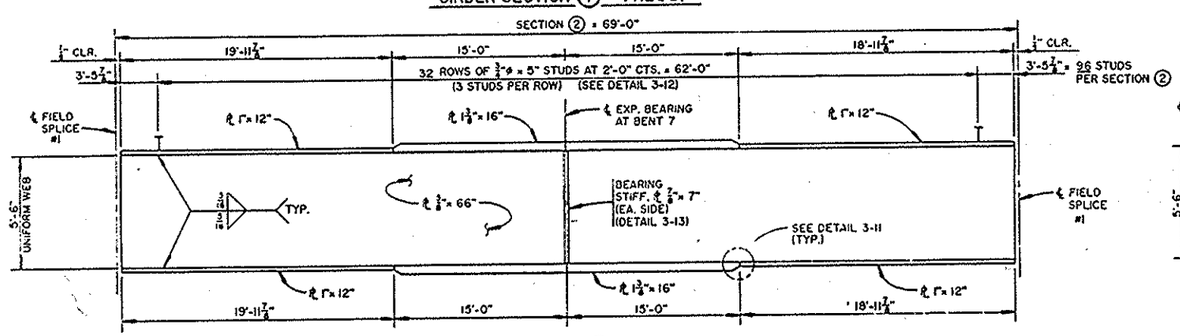
GIRDER ELEVATIONS 5 AND 6
CONTINUOUS UNIT #3

OCTOBER 1994

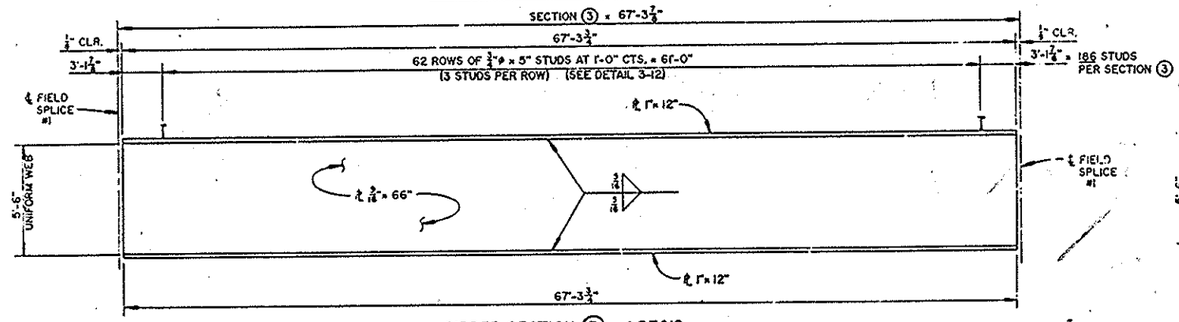
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-123
1			3			TOTAL SHEETS
2			4			224



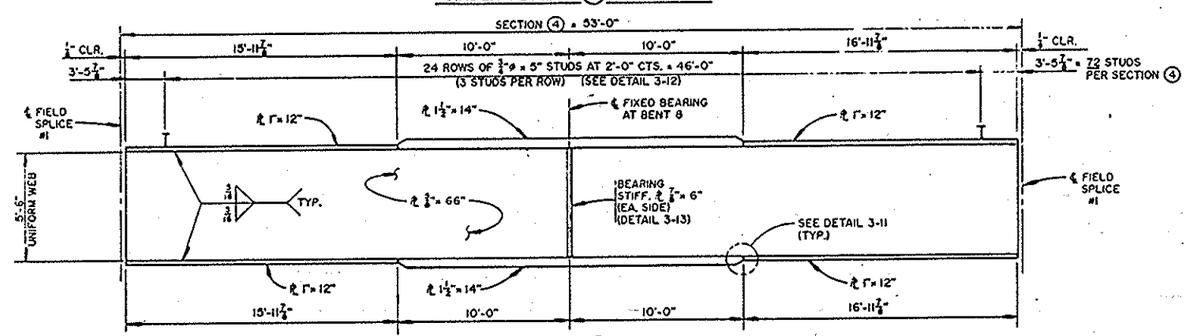
GIRDER SECTION ① - 1 REQ'D.



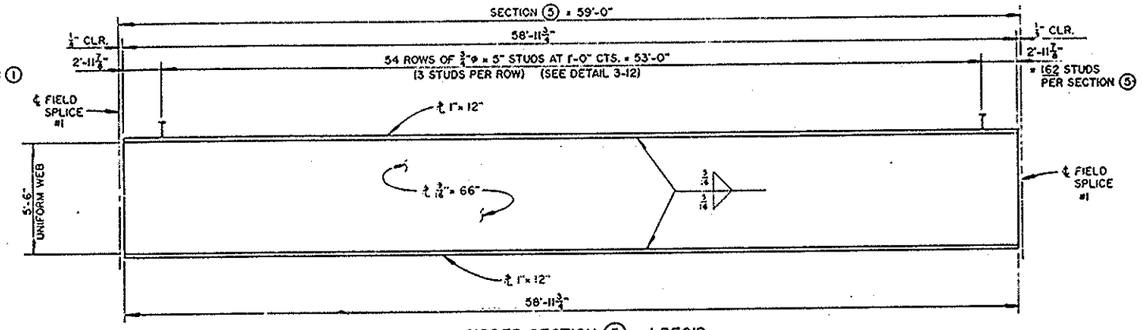
GIRDER SECTION ② - 1 REQ'D.



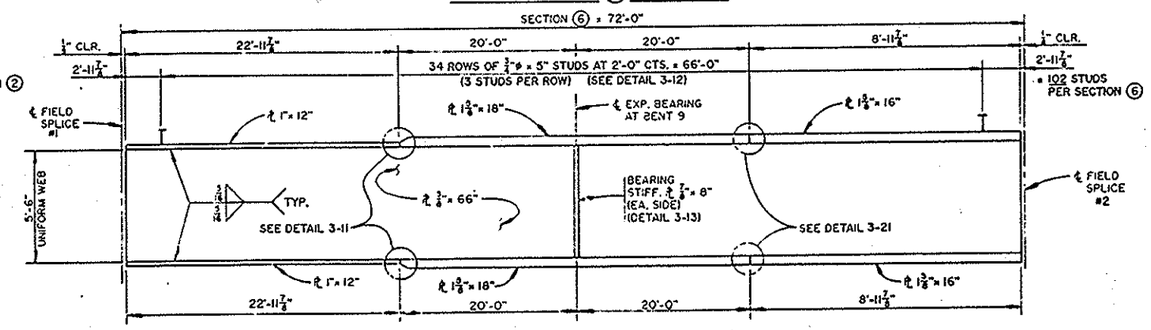
GIRDER SECTION ③ - 1 REQ'D.



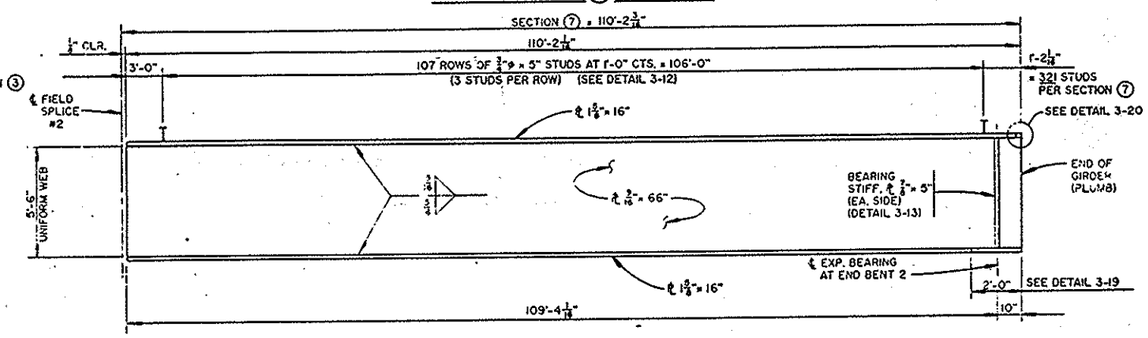
GIRDER SECTION ④ - 1 REQ'D.



GIRDER SECTION ⑤ - 1 REQ'D.



GIRDER SECTION ⑥ - 1 REQ'D.



GIRDER SECTION ⑦ - 1 REQ'D.

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L- Rev.

SHEET 8 OF 12

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER 4/12/96

U3.025

PREPARED BY THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

SUPERSTRUCTURE

STRUCTURAL STEEL

GIRDER 5 DETAILS

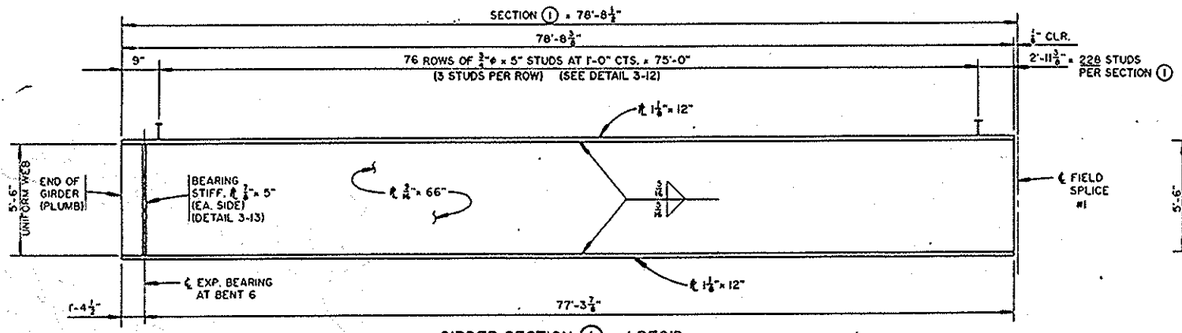
CONTINUOUS UNIT #3

OCTOBER 1994

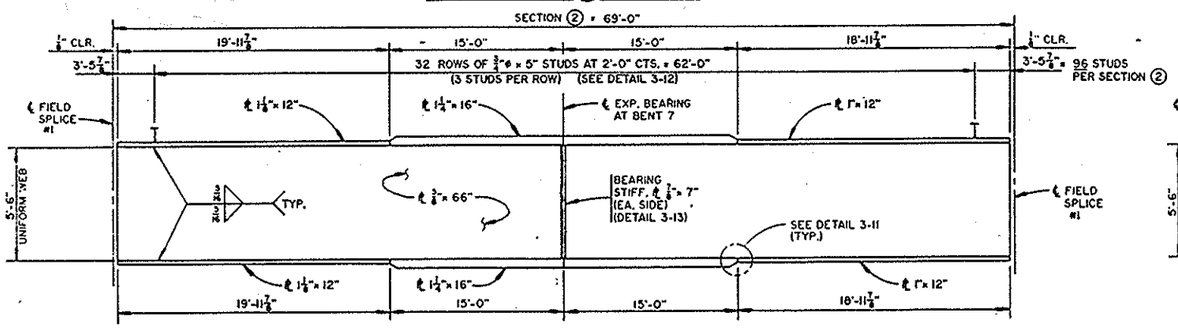
REVISIONS								SHEET NO.
NO.	BY	DATE	NO.	BY	DATE			S-124
1			3					TOTAL SHEETS
2			4					224

DRAWN BY RTJ DATE 2-92

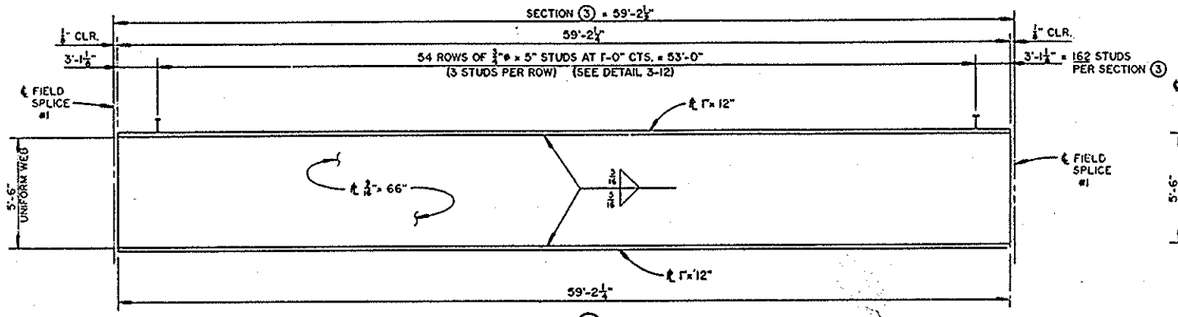
CHECKED BY EGM DATE 6/95



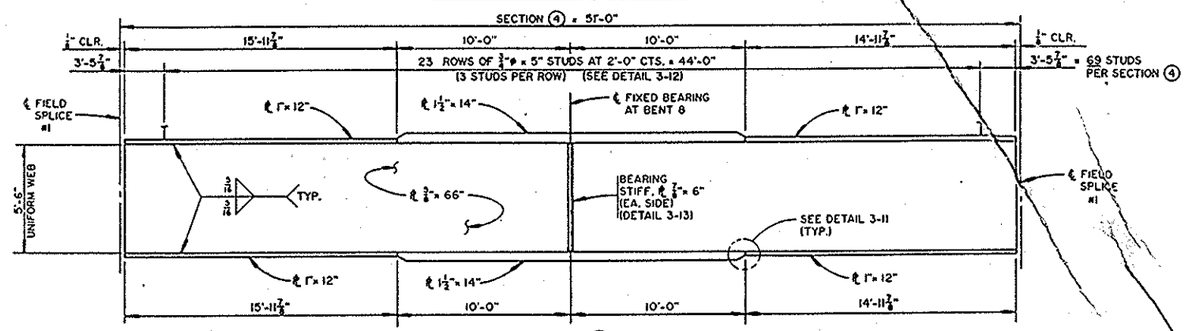
GIRDER SECTION ① - 1 REQ'D.



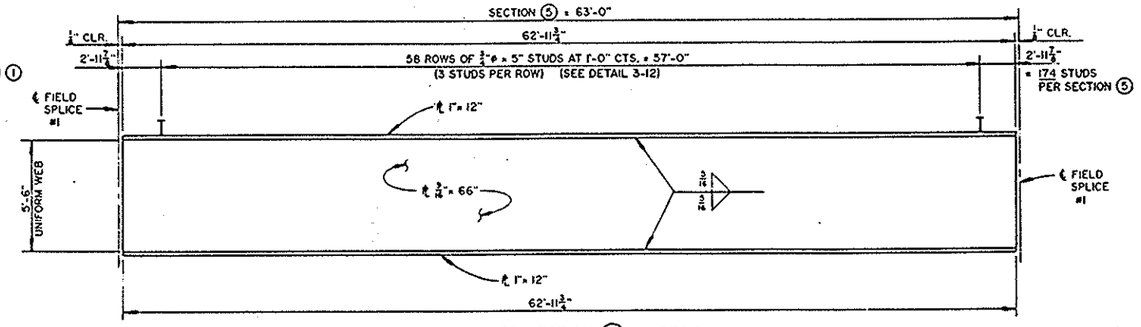
GIRDER SECTION ② - 1 REQ'D.



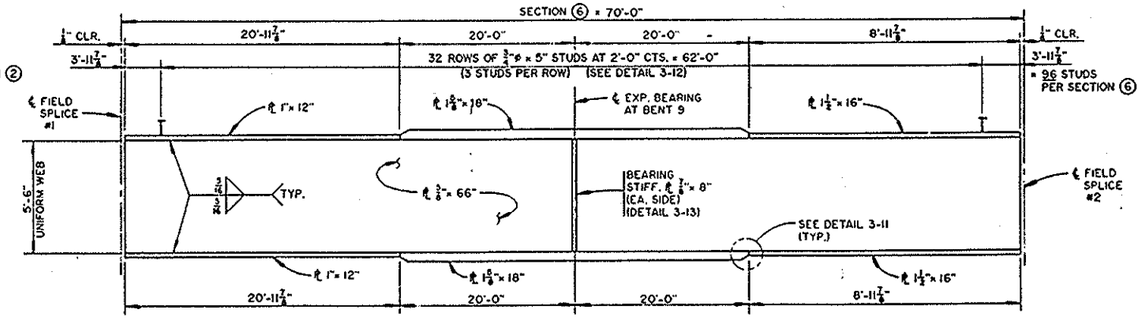
GIRDER SECTION ③ - 1 REQ'D.



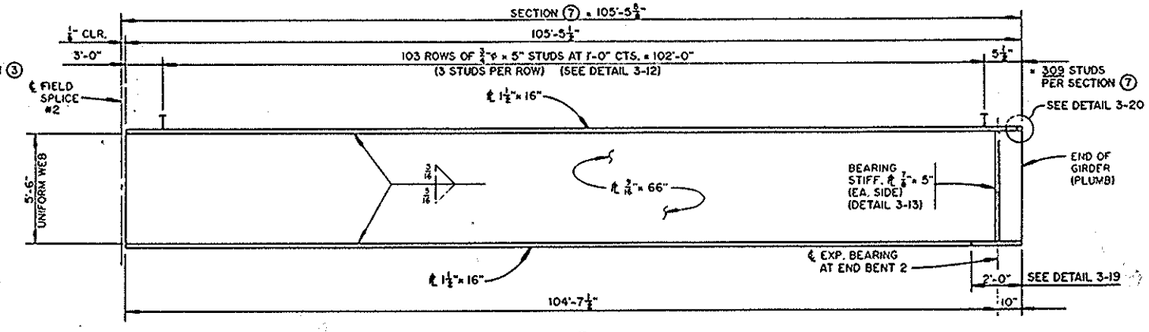
GIRDER SECTION ④ - 1 REQ'D.



GIRDER SECTION ⑤ - 1 REQ'D.



GIRDER SECTION ⑥ - 1 REQ'D.



GIRDER SECTION ⑦ - 1 REQ'D.

PROJECT NO. B-1070

BUNCOMBE COUNTY

STATION: P.O.T. 16+93.00-L-REV

SHEET 9 OF 12

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL

GIRDER 6 DETAILS
CONTINUOUS UNIT #3

OCTOBER 1994

NORTH CAROLINA PROFESSIONAL SEAL 11279 ENGINEER LEONARD GARTH FLETCHER
4/12/96

U3.026

PREPARED BY
THOMPSON-GORDON-SHOOK ENGINEERS, INCORPORATED

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

SHEET NO. S-125
TOTAL SHEETS 224

DRAWN BY KTJ DATE 6-94
CHECKED BY GCM DATE 6/95