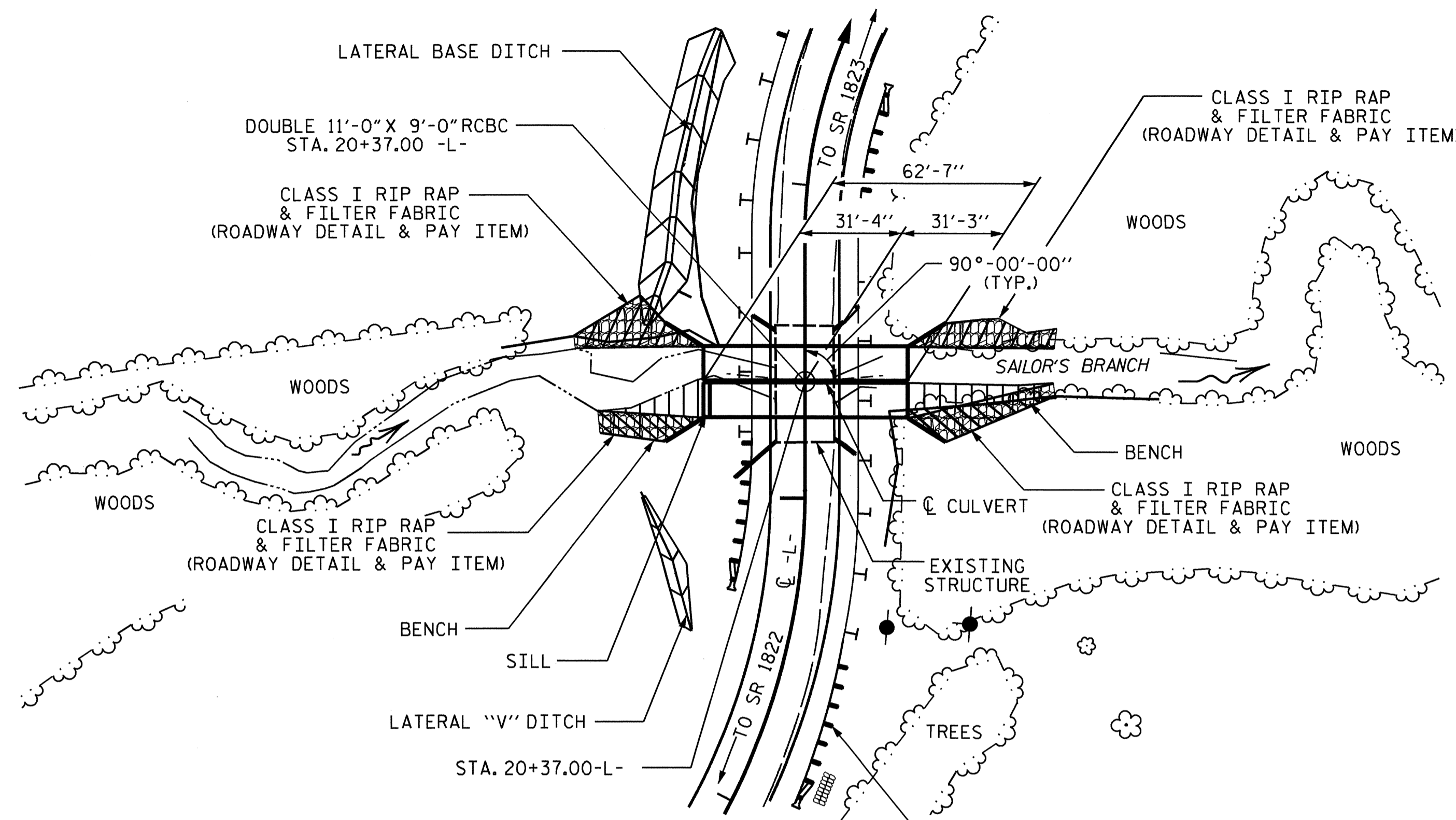


B.M. #2 : NAIL IN BASE OF 20"Ø SYCAMORE TREE 91.10' LEFT OF STA. 20+15.98-L- ELEV. 730.570



FOR UTILITY INFORMATION,
 SEE UTILITY PLANS AND
 SPECIAL PROVISIONS

LOCATION SKETCH

PROPOSED GUARDRAIL
 (ROADWAY DETAIL AND
 PAY ITEM) (TYP.)

ROADWAY DATA

GRADE POINT ELEV. @ STA. 20+37.00 -L- = 735.806 FT.
 BED ELEV. @ STA. 20+37.00 -L- = 719.870 FT.
 ROADWAY SLOPES = 2 : 1

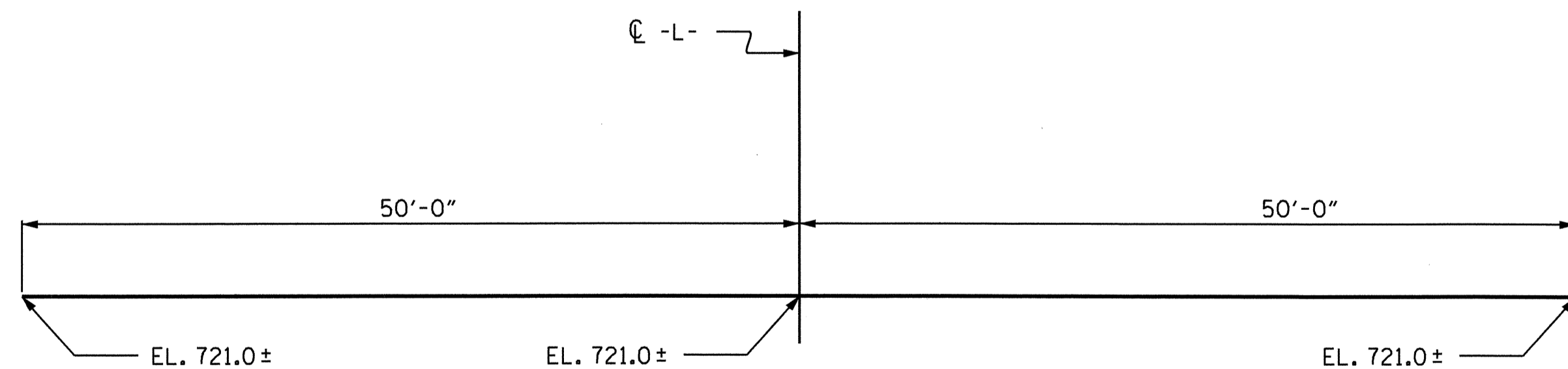
HYDRAULIC DATA

DESIGN DISCHARGE = 800 C.F.S.
 FREQUENCY OF DESIGN FLOOD = 25 YEARS
 DESIGN HIGH WATER ELEVATION = 728.300 FT.
 DRAINAGE AREA = 2.29 SQ. MI.
 BASIC DISCHARGE (Q100) = 1300 C.F.S.
 BASIC HIGH WATER ELEVATION = 730.600 FT.

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE = 2400 C.F.S.
 FREQUENCY OF OVERTOPPING FLOOD = + 500 YEARS
 OVERTOPPING FLOOD ELEVATION = 735.800 FT.

INASMUCH AS THE PAINT SYSTEM ON 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 20+37.00-L-."



PROFILE ALONG CULVERT

TOTAL STRUCTURE QUANTITIES	
CLASS A CONCRETE	
BARREL @ 2.267 CY/FT	141.9 C.Y.
SILL	0.8 C.Y.
WING ETC.	31.0 C.Y.
TOTAL	173.7 C.Y.
REINFORCING STEEL	
BARREL	27,575 LBS.
WINGS ETC.	1,803 LBS.
TOTAL	29,378 LBS.
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	106 TONS
REMOVAL OF EXISTING STRUCTURE	LUMP SUM

NOTES **F. A. PROJECT NO. : BRZ-1820(3)**

- ASSUMED LIVE LOAD -----HS20 OR ALTERNATE LOADING.
- DESIGN FILL = 7.06 FT.
- FOR OTHER DESIGN DATA AND NOTES SEE STANDARD NOTE SHEET.
- 3"Ø WEEP HOLES INDICATED TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
- CONCRETE IN CULVERTS TO BE POURED IN THE FOLLOWING ORDER:
 1. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS OF EASTERLY BARREL.
 2. THE REMAINING PORTIONS OF THE WALLS AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS OF EASTERLY BARREL.
 3. WING FOOTINGS AND FLOOR SLAB INCLUDING 4" OF ALL VERTICAL WALLS OF WESTERLY BARREL.
 4. THE REMAINING PORTIONS OF THE WALLS AND WINGS FULL HEIGHT FOLLOWED BY ROOF SLAB AND HEADWALLS OF WESTERLY BARREL.

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.

THIS BARREL STANDARD TO BE USED ONLY ON CULVERT ON 90° SKEW AND TO BE USED WITH STANDARD WING SHEET WITH THE SAME SKEW AND VERTICAL CLEARANCE.

DIMENSIONS FOR WING LAYOUT AS WELL AS ADDITIONAL REINFORCING STEEL EMBEDDED IN BARREL ARE SHOWN ON WING SHEET.

AT THE CONTRACTOR'S OPTION, HE MAY SPLICE THE VERTICAL REINFORCING STEEL IN THE INTERIOR FACE OF EXTERIOR WALL AND BOTH FACES OF INTERIOR WALLS ABOVE LOWER WALL CONSTRUCTION JOINT. THE SPLICE LENGTH SHALL BE AS PROVIDED IN THE SPLICE LENGTH CHART SHOWN ON THE PLANS. EXTRA WEIGHT OF STEEL DUE TO THE SPLICES SHALL BE PAID FOR BY THE CONTRACTOR.

AT THE CONTRACTOR'S OPTION HE MAY SUBMIT, TO THE ENGINEER FOR APPROVAL, DESIGN AND DETAIL DRAWINGS FOR A PRECAST REINFORCED CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE CULVERT SHOWN ON THE PLANS. THE DESIGN SHALL PROVIDE THE SAME SIZE AND NUMBER OF BARRELS AS USED ON THE CAST-IN-PLACE DESIGN. FOR OPTIONAL PRECAST REINFORCED CONCRETE BOX CULVERT, SEE SPECIAL PROVISIONS.

A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.

FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR 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.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THE EXISTING STRUCTURE CONSISTING OF A 40'-9" SIMPLE SPAN WITH A 19'-4" CLEAR ROADWAY WIDTH OF TIMBER DECK ON STEEL I-BEAMS AND CHANNELS WITH A 2" ASPHALT WEARING SURFACE ON RUBBLE MASONRY ABUTMENTS AND LOCATED AT THE SITE OF THE PROPOSED STRUCTURE SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT.

FOR CURING CONCRETE, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

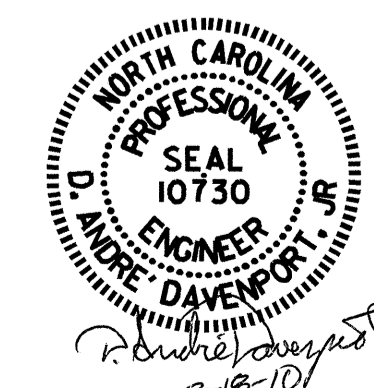
PROJECT NO. B-4117

GASTON COUNTY

STATION: 20+37.00 -L-

SHEET 1 OF 4 REPLACES BRIDGE NO. 173

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
BARREL STANDARD
DOUBLE 11 FT. X 9 FT.
CONCRETE BOX CULVERT
90° SKEW

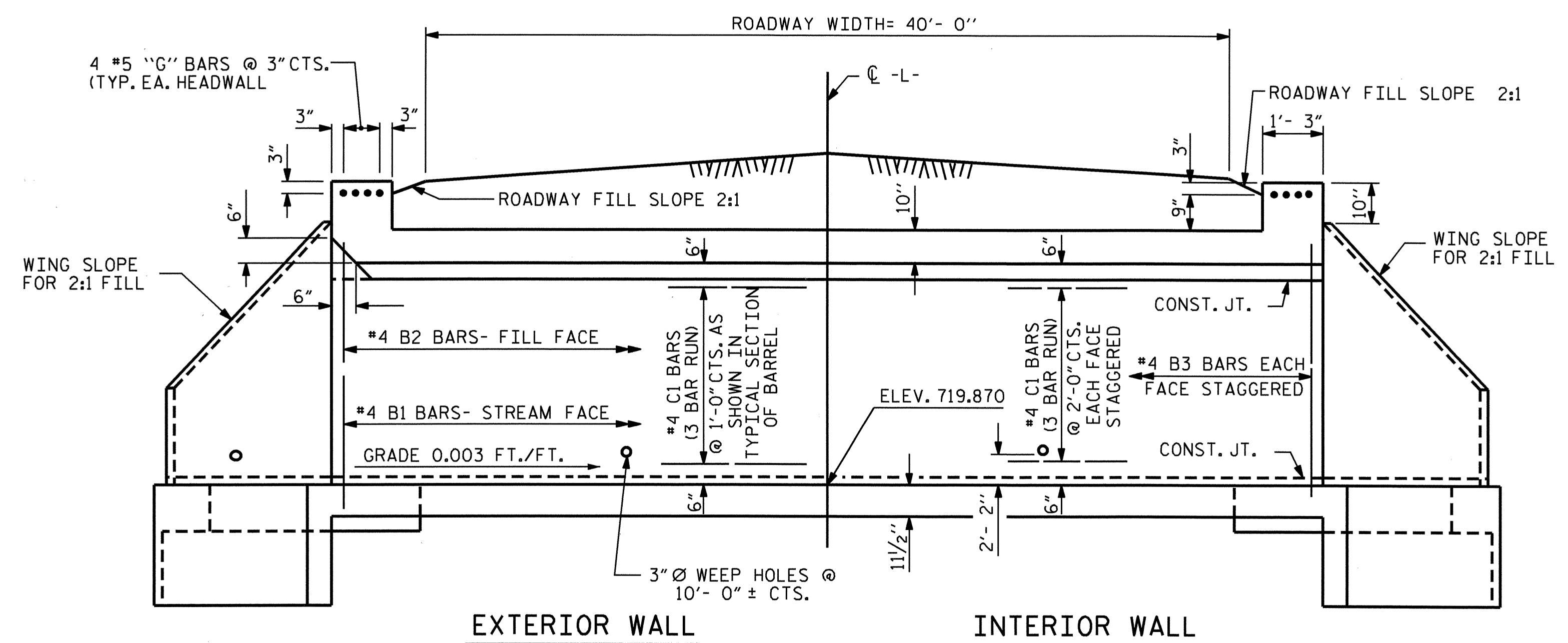


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			4

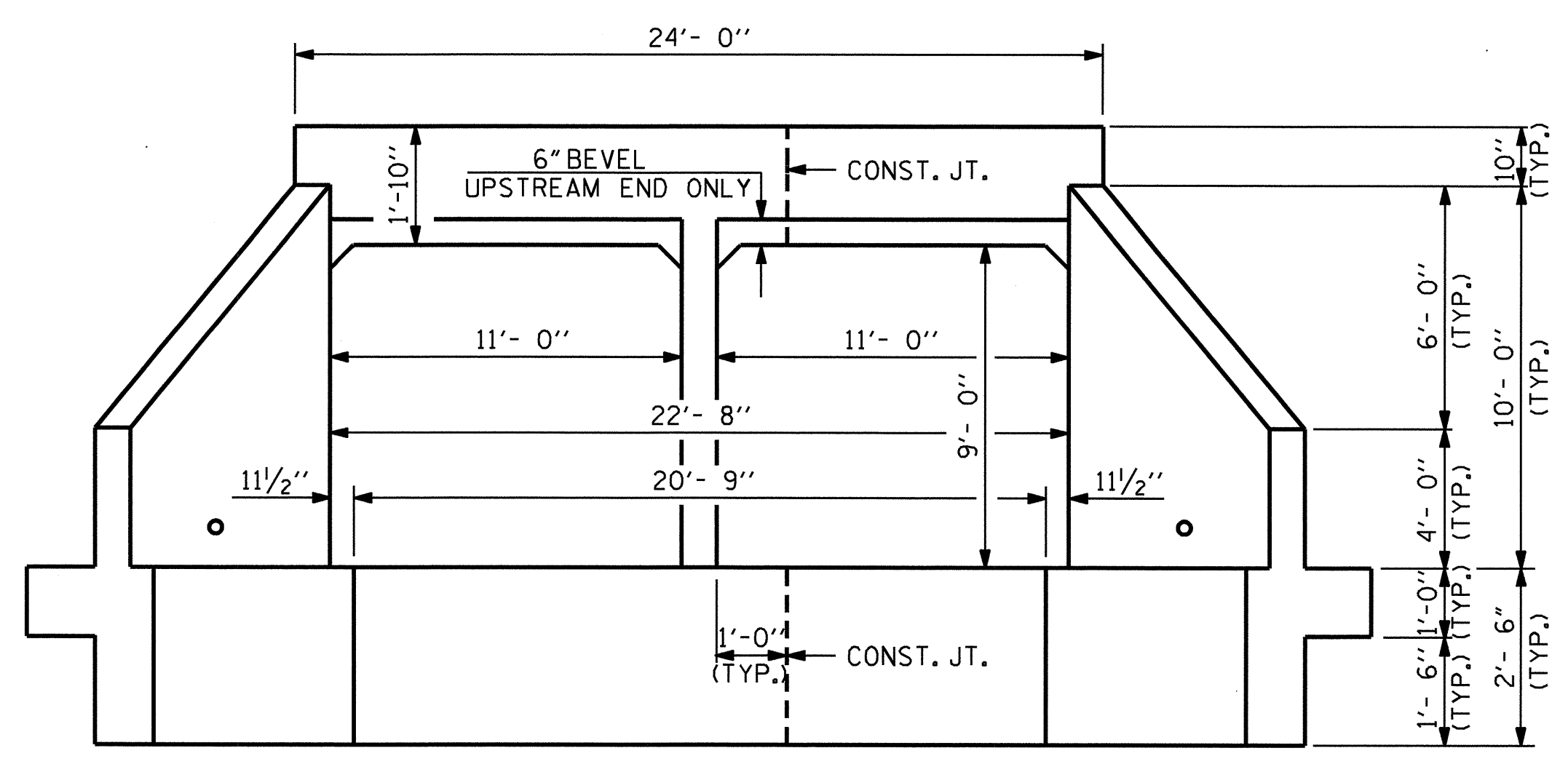
ASSEMBLED BY : D. A. GLADDEN DATE : 10-22-08
 CHECKED BY : M. G. SHAIKH DATE : 12-2-08
 DRAWN BY : R. W. WRIGHT DATE : JULY, 1990
 CHECKED BY : D. A. GLADDEN DATE : JULY, 1990

SPECIAL
STANDARD

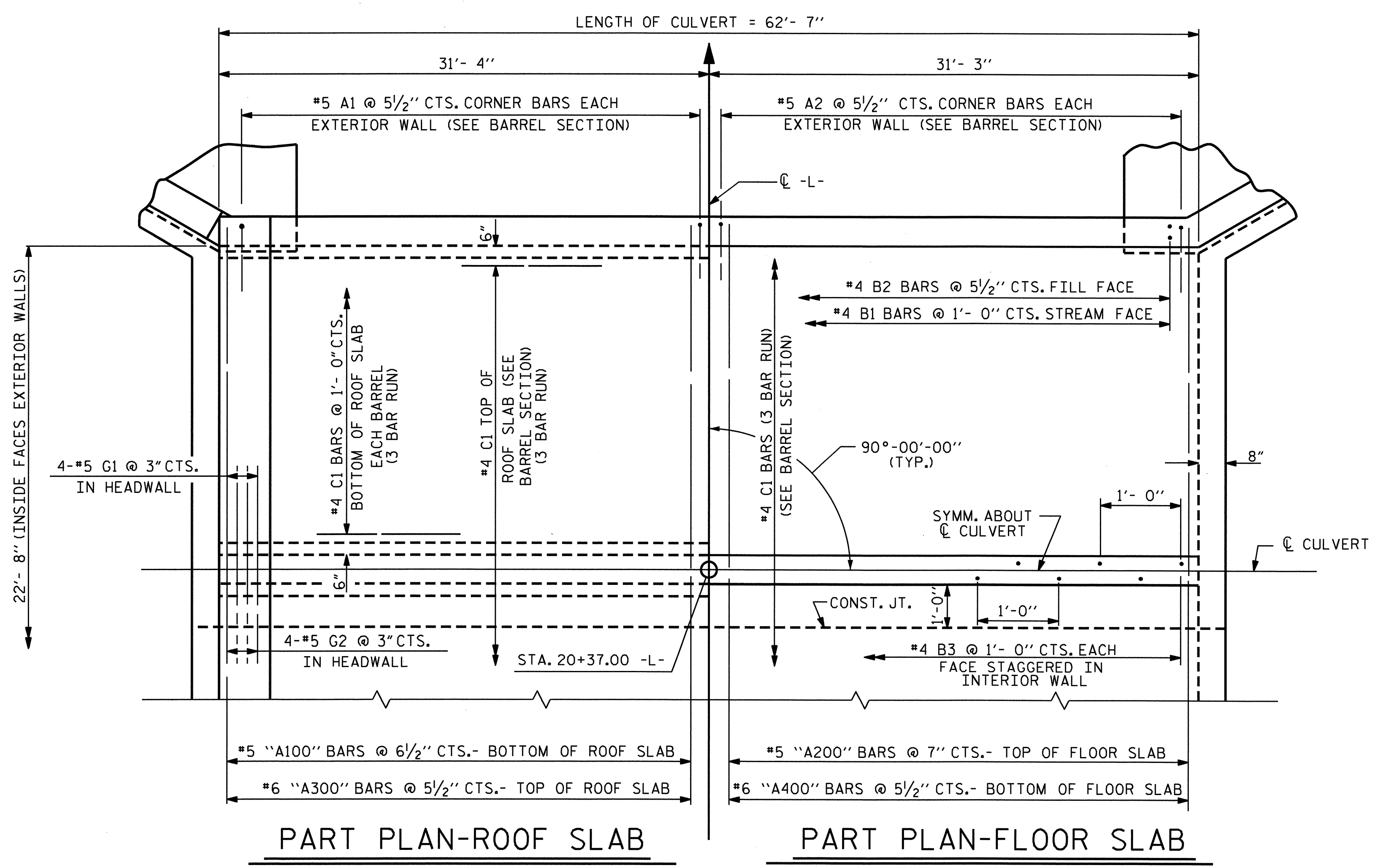
ADDED NOV. 1, 1990



EXTERIOR WALL INTERIOR WALL
CULVERT SECTION NORMAL TO ROADWAY



END ELEVATION

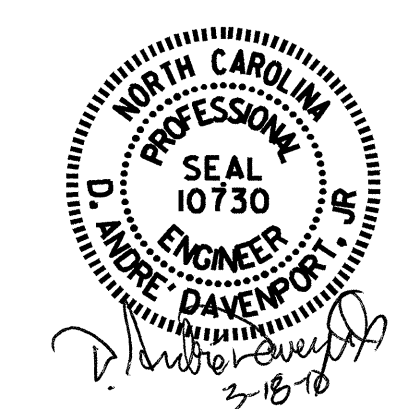


PART PLAN-ROOF SLAB PART PLAN-FLOOR SLAB

PROJECT NO. B-4117
GASTON COUNTY
 STATION: 20+37.00 -L-

SHEET 2 OF 4

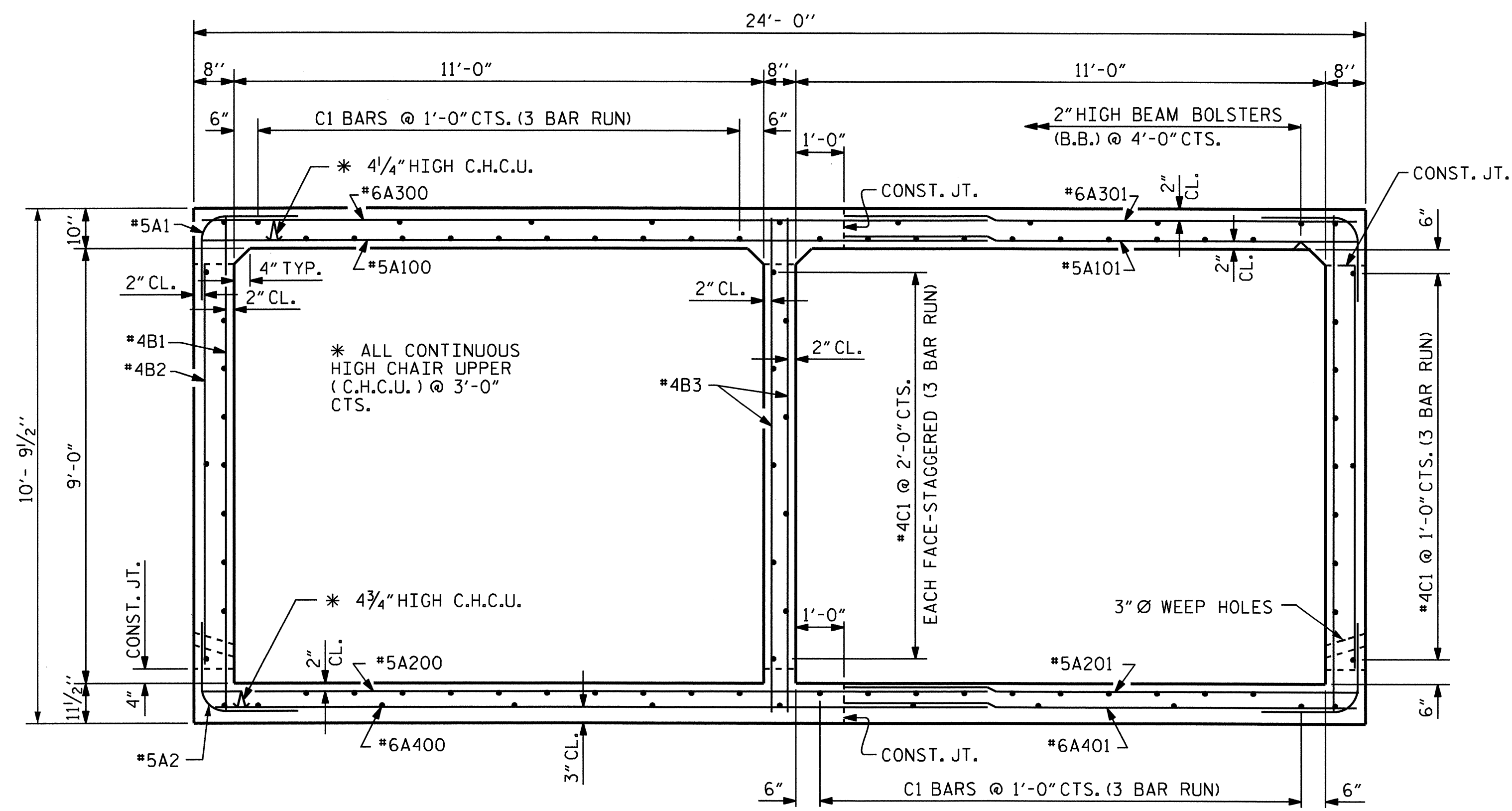
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
BARREL STANDARD
DOUBLE 11 FT. X 9 FT.
CONCRETE BOX CULVERT
90° SKEW



REVISED 11-19-99 BY M.M. CHECKED BY R.M.W.
 REDRAWN NOV. 1990 BY T.S.S. CHECKED BY ARB

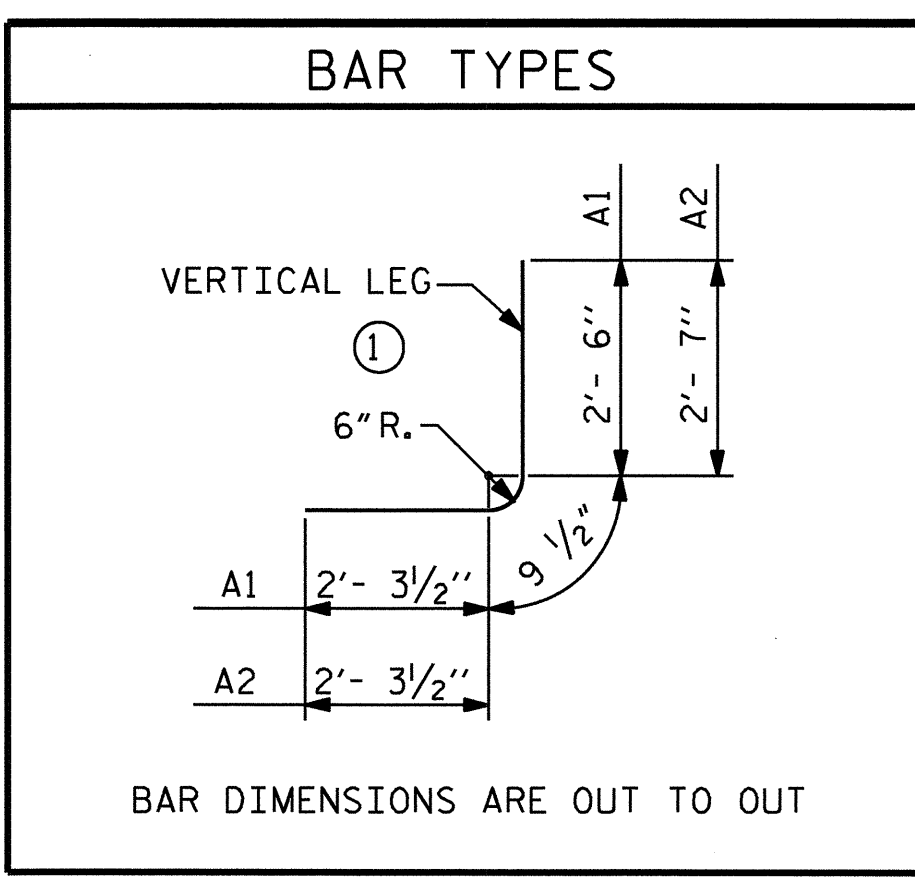
ASSEMBLED BY : <u>D. A. GLADDEN</u> DATE : <u>10-22-08</u>	SPECIAL
CHECKED BY : <u>M. G. SHAIKH</u> DATE : <u>12-2-08</u>	
DRAWN BY : <u>RALPH D. UNDERWOOD</u> DATE : <u>MAY 1971</u>	STANDARD
CHECKED BY : <u>JOEL A. JOHNSON</u> DATE : <u>JULY 1971</u>	

REVISIONS						SHEET NO. C-2
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 4
2			4			



RIGHT ANGLE SECTION OF BARREL (INLET END)

THERE ARE 91 #4C1 BARS IN SECTION OF BARREL.



BAR DIMENSIONS ARE OUT TO OUT

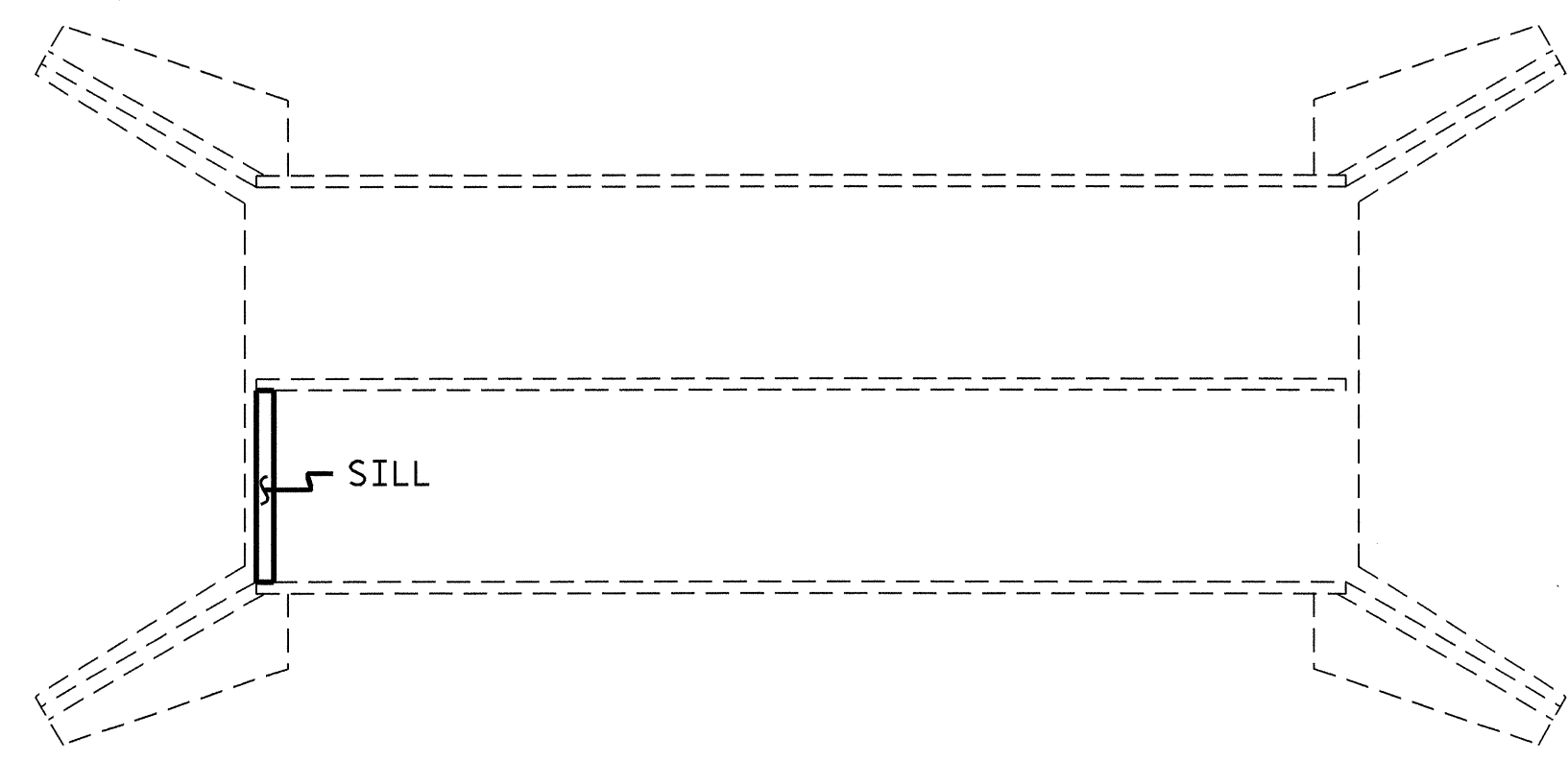
BILL OF MATERIAL

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT
A1	#5	1	5'- 7"	1596
A2	#5	1	5'- 8"	1619
A100	#5	STR	14'- 11"	1805
A101	#5	STR	10'- 6"	1270
A200	#5	STR	14'- 11"	1680
A201	#5	STR	10'- 6"	1183
A300	#6	STR	16'- 0"	3292
A301	#6	STR	10'- 6"	2161
A400	#6	STR	16'- 0"	3292
A401	#6	STR	10'- 6"	2161
B1	#4	STR	10'- 3"	863
B2	#4	STR	8'- 4"	1525
B3	#4	STR	10'- 3"	863
C1	#4	STR	22'-2"	4042
D1	#6	STR	2'-6"	11
G1	#5	STR	14'-11"	124
G2	#5	STR	10'-6"	88

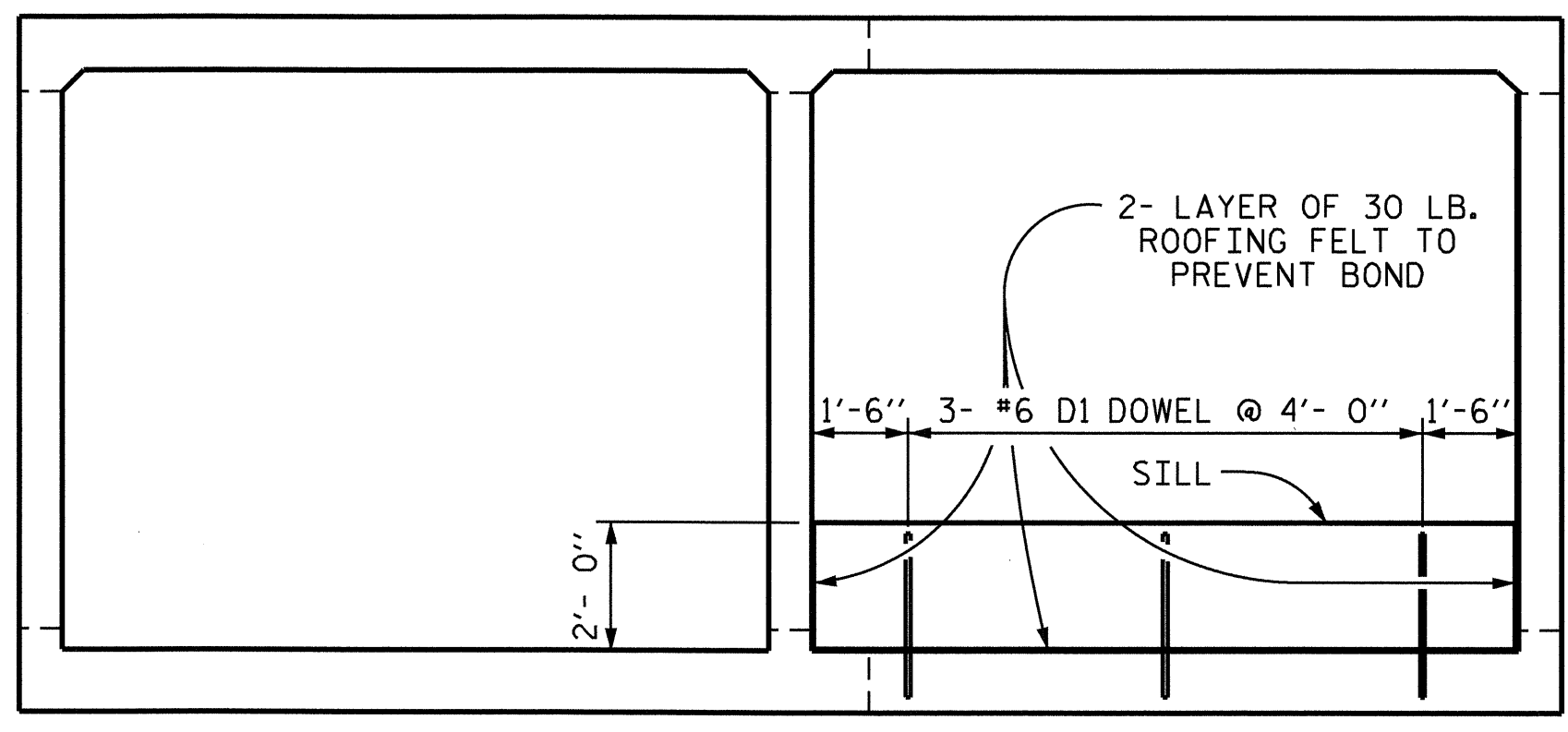
REINFORCING STEEL = 27575 LBS

SPLICE LENGTH CHART

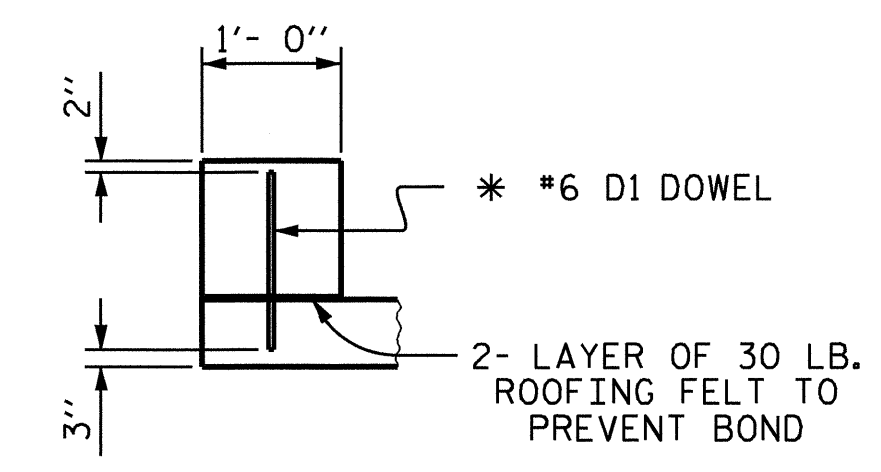
BAR	SIZE	LENGTH
A100	#5	1'- 9"
A200	#5	1'- 9"
A300	#6	2'-10"
A400	#6	2'-10"
B1	#4	1'- 9"
B2	#4	1'- 9"
B3	#4	1'- 9"
C1	#4	1'- 11"
G1	#5	1'- 9"
G2	#5	1'- 9"



PLAN
SHOWING SILL LOCATION



INLET END ELEVATION
LOOKING DOWN STREAM

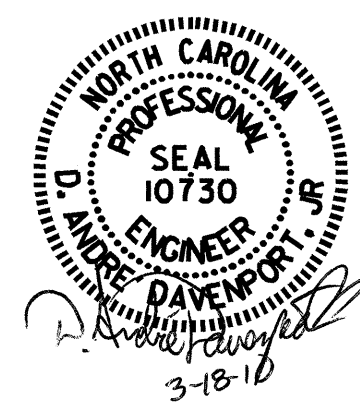


SECTION THROUGH SILL
* DOWELS MAY BE PUSHED INTO GREEN CONCRETE AFTER SLAB HAS BEEN FLOAT FINISHED

CULVERT SILL DETAILS

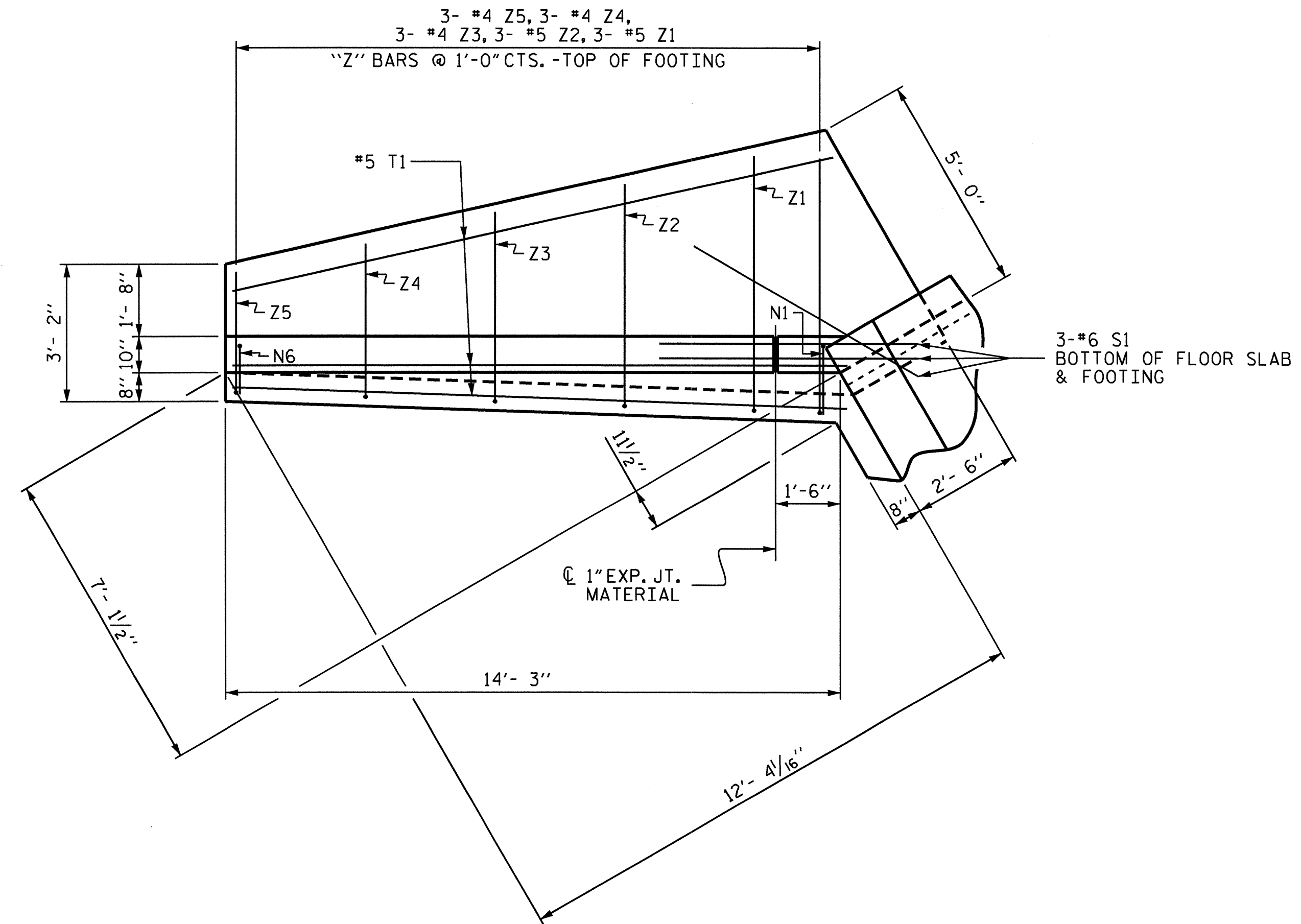
PROJECT NO. B-4117
GASTON COUNTY
 STATION: 20+37.00 -L-
 SHEET 3 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
BARREL STANDARD
 DOUBLE 11 FT. X 9 FT.
 CONCRETE BOX CULVERT
 90° SKEW

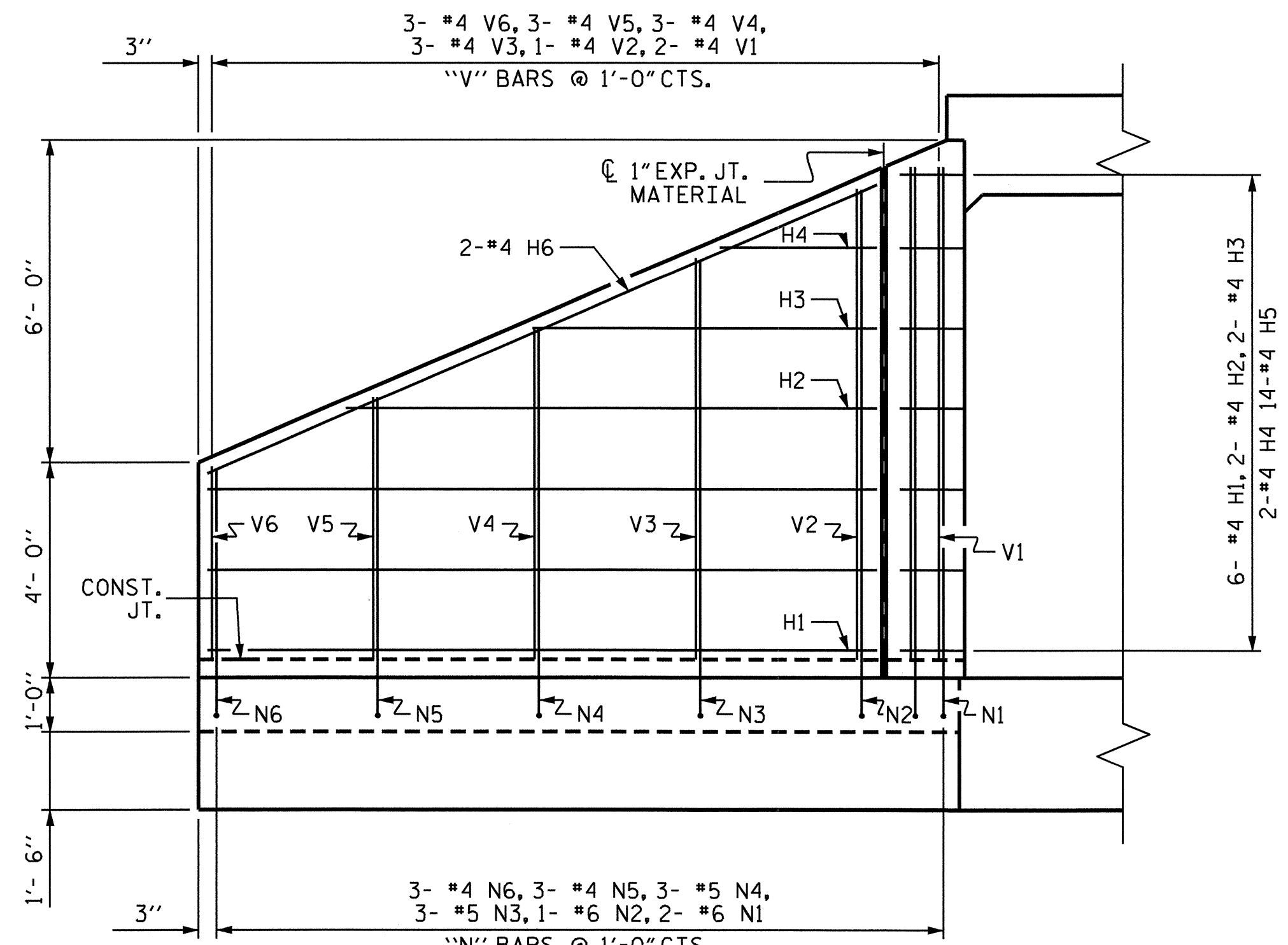


DRAWN BY : D. A. GLADDEN DATE : 10-22-08
 CHECKED BY : M. G. SHAIKH DATE : 12-2-08

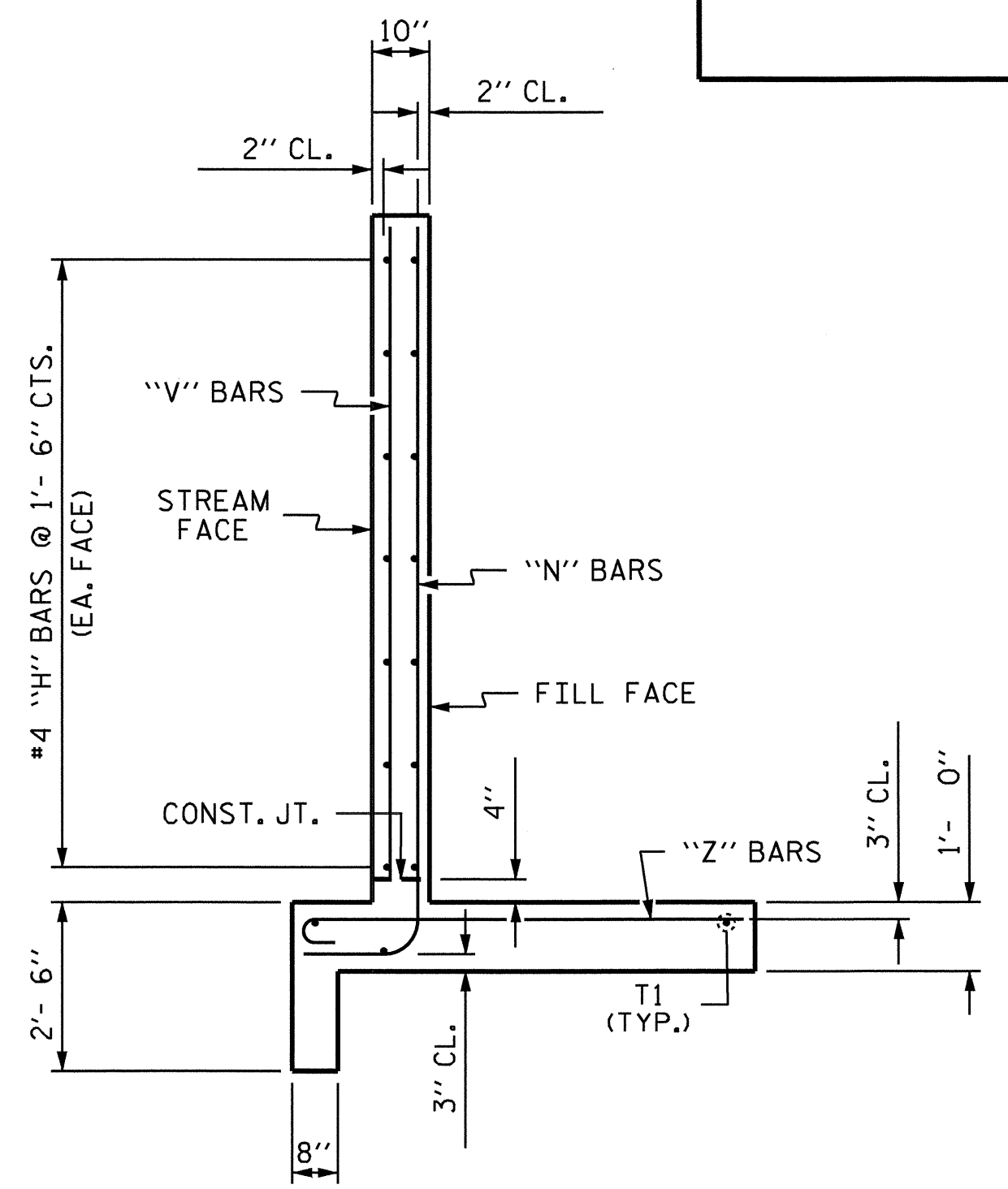
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-3
1			3			TOTAL SHEETS
2			4			4



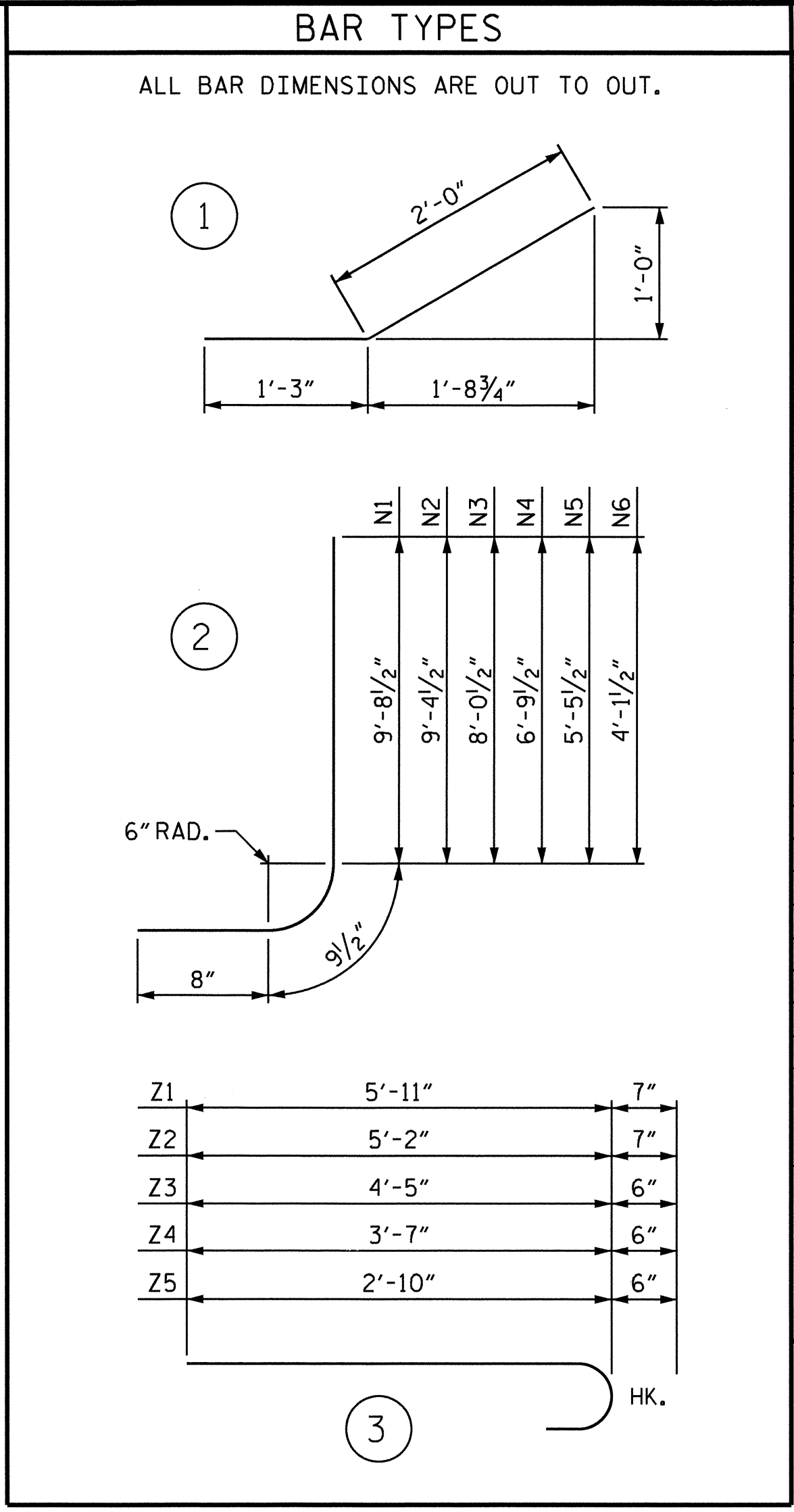
PLAN



ELEVATION



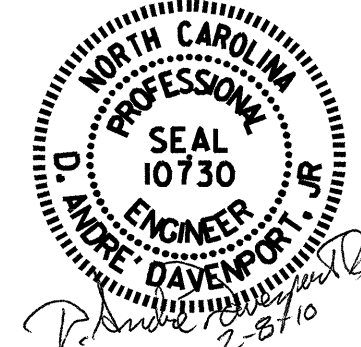
TYPICAL WING SECTION



BILL OF MATERIAL					
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
H1	24	#4	STR	12'-5"	199
H2	8	#4	STR	9'-10"	53
H3	8	#4	STR	6'-5"	34
H4	8	#4	STR	2'-11"	16
H5	56	#4	1	3'-3"	122
H6	8	#4	STR	13'-6"	72
N1	8	#6	2	11'-2"	134
N2	4	#6	2	10'-10"	65
N3	12	#5	2	9'-6"	119
N4	12	#5	2	8'-3"	103
N5	12	#4	2	6'-11"	55
N6	12	#4	2	5'-7"	45
S1	12	#6	STR	6'-0"	108
T1	12	#5	STR	14'-3"	178
V1	8	#4	STR	9'-2"	49
V2	4	#4	STR	8'-9"	23
V3	12	#4	STR	7'-5"	59
V4	12	#4	STR	6'-2"	49
V5	12	#4	STR	4'-10"	39
V6	12	#4	STR	3'-7"	29
Z1	12	#5	3	6'-6"	81
Z2	12	#5	3	5'-9"	72
Z3	12	#4	3	4'-11"	39
Z4	12	#4	3	4'-1"	33
Z5	12	#4	3	3'-4"	27
REINFORCING STEEL FOR 4 WINGS				1803	LBS
CLASS A CONCRETE					
4 WINGS				26.2	CY
2 HEADWALLS				2.2	CY
2 END CURTAIN WALLS				2.6	CY
TOTAL				31.0	CY

PROJECT NO. B-4117
GASTON COUNTY
 STATION: 20+37.00 -L-
 SHEET 4 OF 4

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD WINGS FOR CONCRETE BOX CULVERT					
H = 9'-0"			SLOPE = 2:1		
90° SKEW					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. C-4					TOTAL SHEETS 4



ASSEMBLED BY : D. A. GLADDEN DATE : 10-22-08
 CHECKED BY : M. G. SHAIKH DATE : 12-2-08
 DRAWN BY : CCJ 10/99
 CHECKED BY : RWW 03/00

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 250	--	140 MPa
- AASHTO M270 GRADE 345W	--	190 MPa
- AASHTO M270 GRADE 345	--	190 MPa
REINFORCING STEEL IN TENSION		
	GRADE 420	-- 165 MPa
CONCRETE IN COMPRESSION	-----	8.3 MPa
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	-----	12 MPa
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	2.6 MPa
EQUIVALENT FLUID PRESSURE OF EARTH	-----	480 kg/m ³
		(MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2006 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP; AND CLASS S SHALL BE USED FOR UNDERWATER FOOTING SEALS.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 19mm WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 38mm RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 6mm FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 6mm RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 300mm INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.
ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 22.23mm Ø SHEAR STUDS FOR THE 19.05mm Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 22.23mm Ø STUDS FOR 4 - 19.05mm Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 22.23mm Ø STUDS ALONG THE BEAM AS SHOWN FOR 19.05mm Ø STUDS BASED ON THE RATIO OF 3 - 22.23mm Ø STUDS FOR 4 - 19.05mm Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 610mm.

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 8mm IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 50mm OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

PLACEMENT OF BEAM OR GIRDER MEMBERS ON TRUCKS FOR HAULING SHALL BE DONE IN COMPLIANCE WITH LIMITS SHOWN ON SKETCHES PROVIDED TO THE MATERIALS AND TEST UNIT APPROVED BY THE STRUCTURE DESIGN UNIT DATED MAY 8, 1991. THESE SKETCHES PRIMARILY LIMIT THE UNSUPPORTED CANTILEVER LENGTH OF MEMBERS. WHEN THE CONTRACTOR WISHES TO PLACE MEMBERS ON TRUCKS NOT IN ACCORDANCE WITH THESE LIMITS, TO SHIP BY RAIL, TO ATTACH SHIPPING RESTRAINTS TO THE MEMBERS OR TO INVERT MEMBERS, HE SHALL SUBMIT A SKETCH FOR APPROVAL PRIOR TO SHIPPING. SEE ALSO ARTICLE 1072-1.1.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 2mm OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

METRIC

JANUARY, 1990