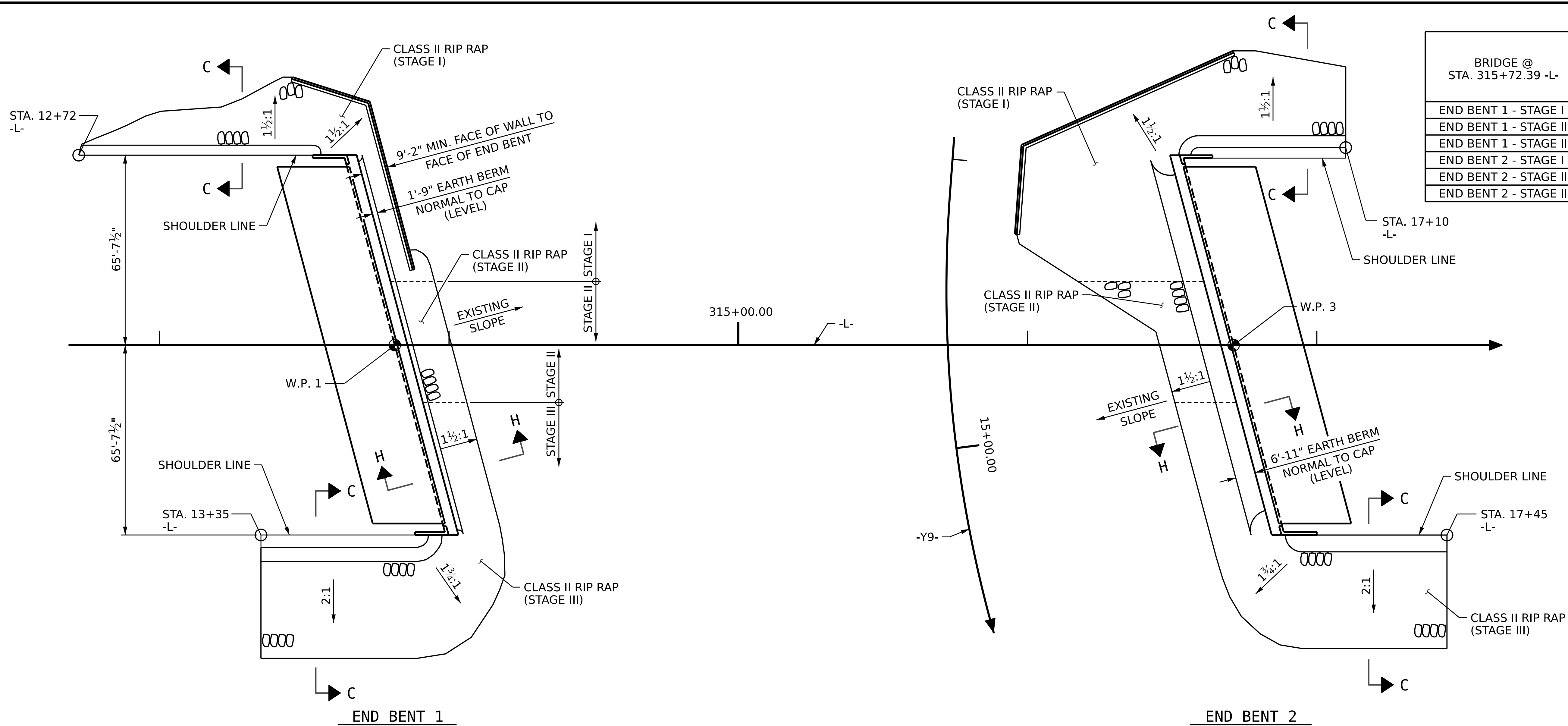


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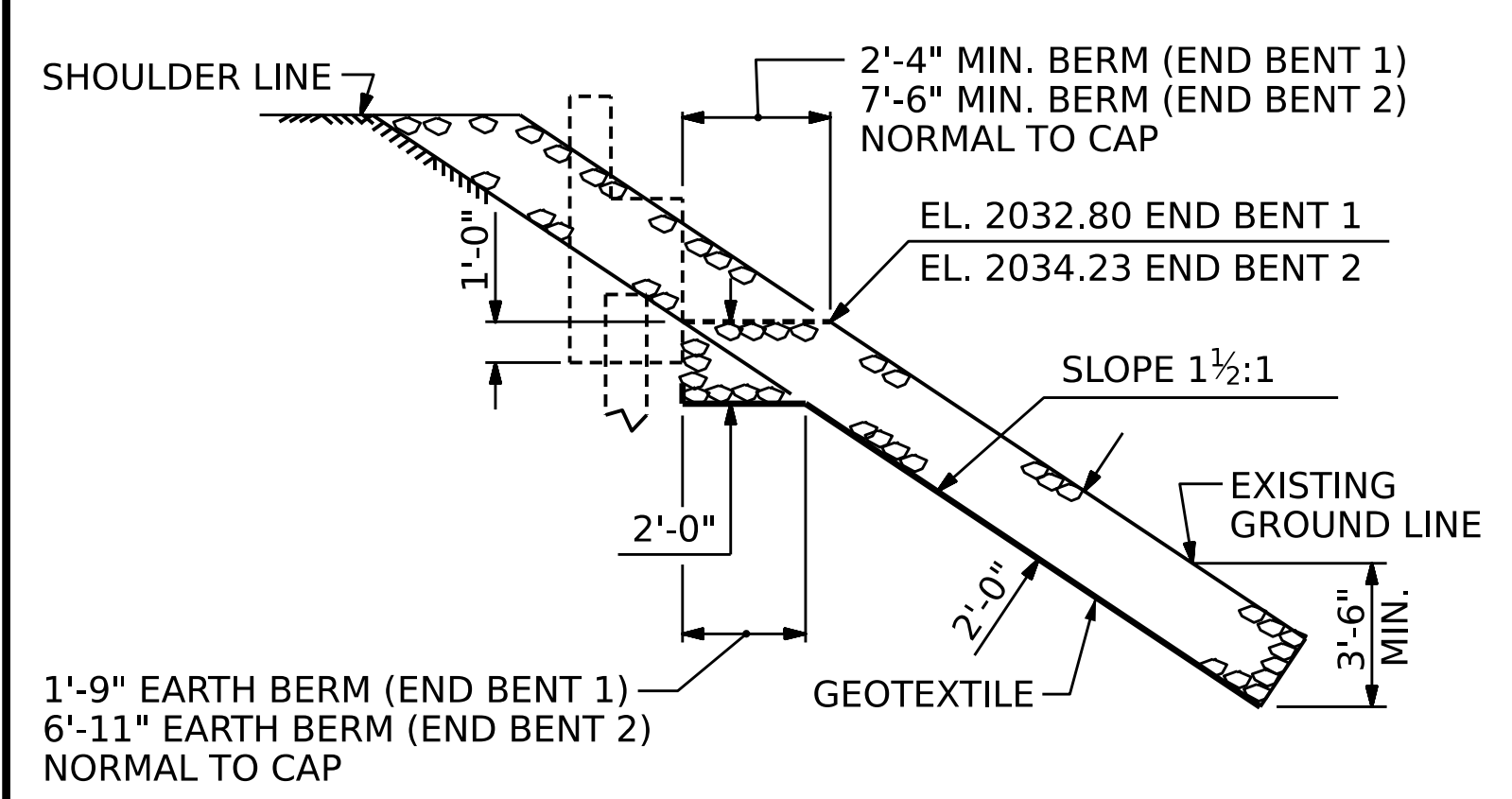
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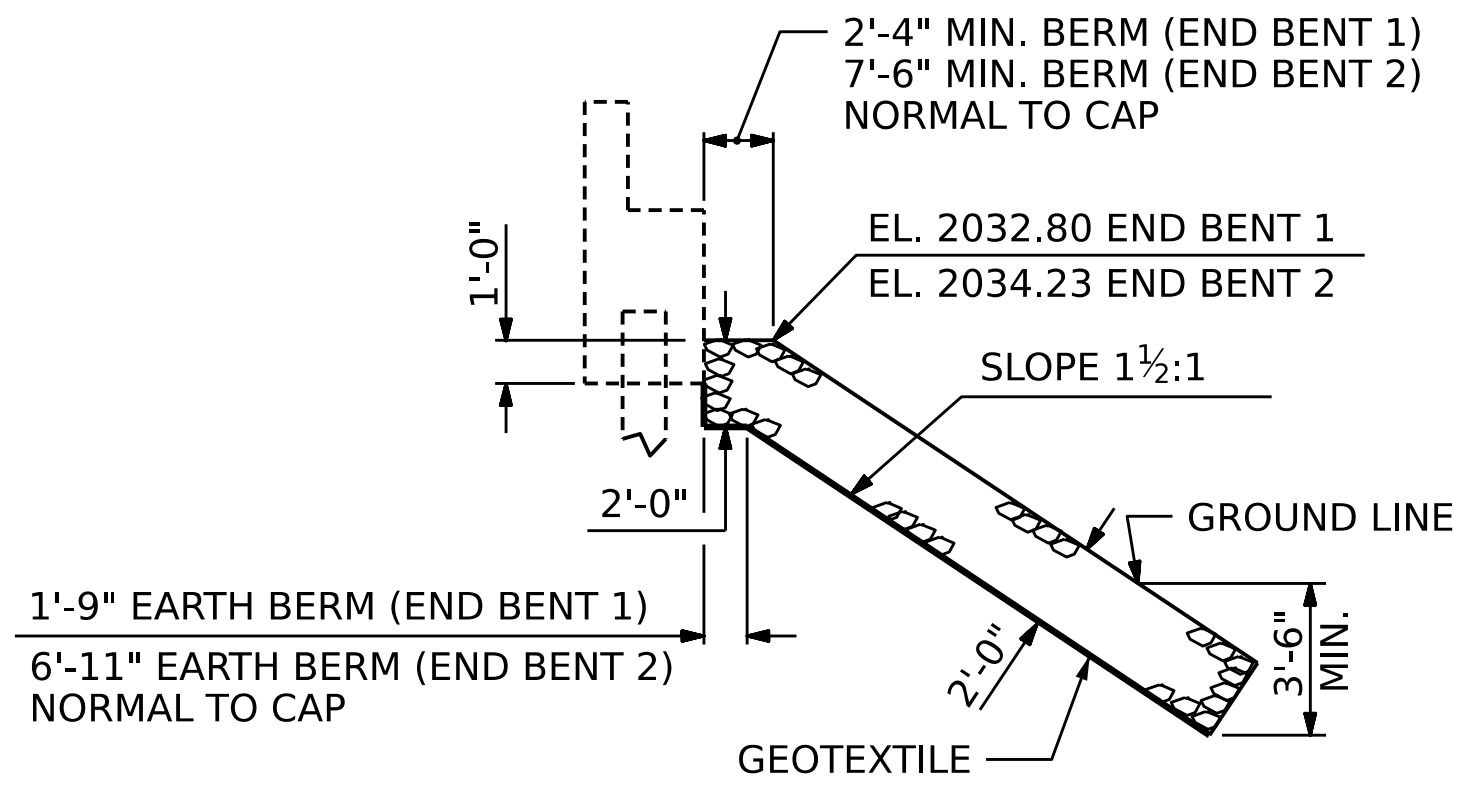


BRIDGE @ STA. 315+72.39 -L-	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE
	TONS	SQUARE YARDS
END BENT 1 - STAGE I	256	284
END BENT 1 - STAGE II	77	86
END BENT 1 - STAGE III	457	508
END BENT 2 - STAGE I	585	650
END BENT 2 - STAGE II	131	145
END BENT 2 - STAGE III	464	516

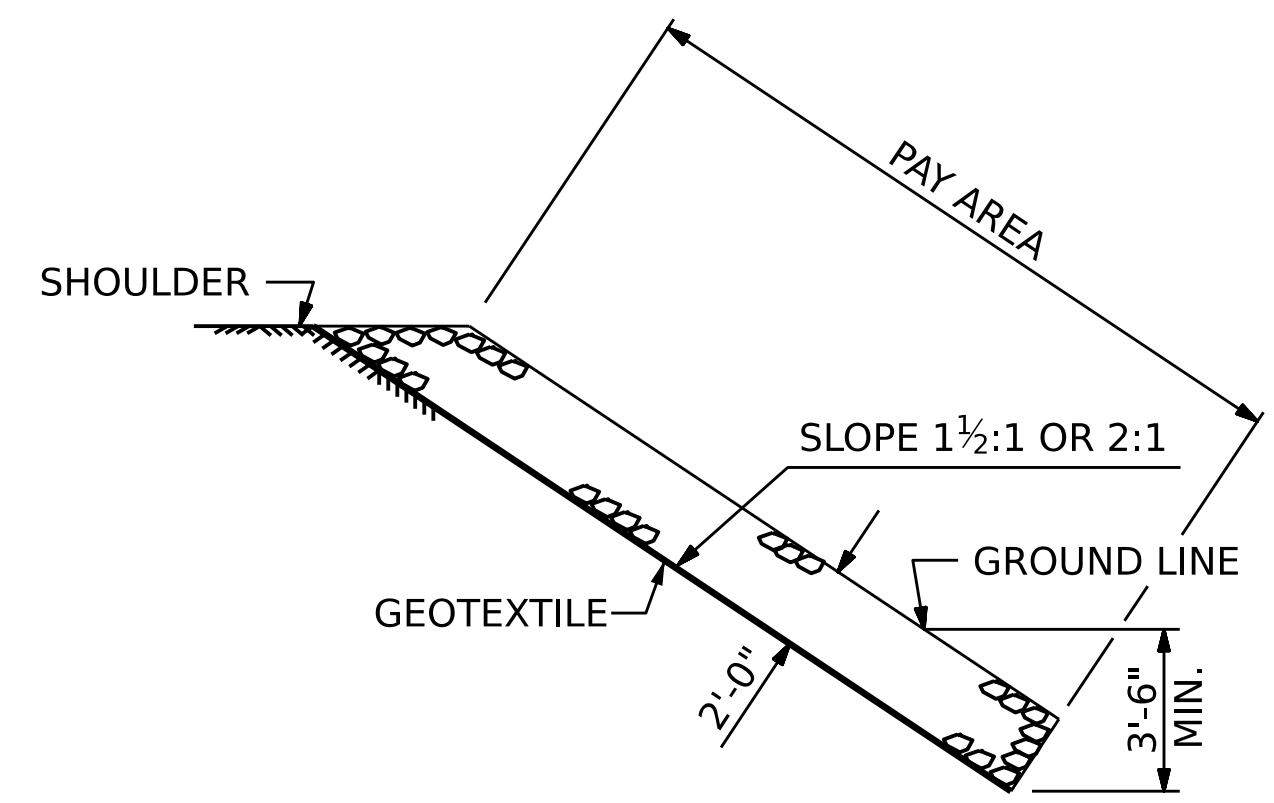
PLAN



SECTION H-H



**SECTION C-C
BERM RIP RAPPED**



SECTION C-C

PROJECT NO. B-4442
BUNCOMBE COUNTY
 STATION: 315+72.39 -L-



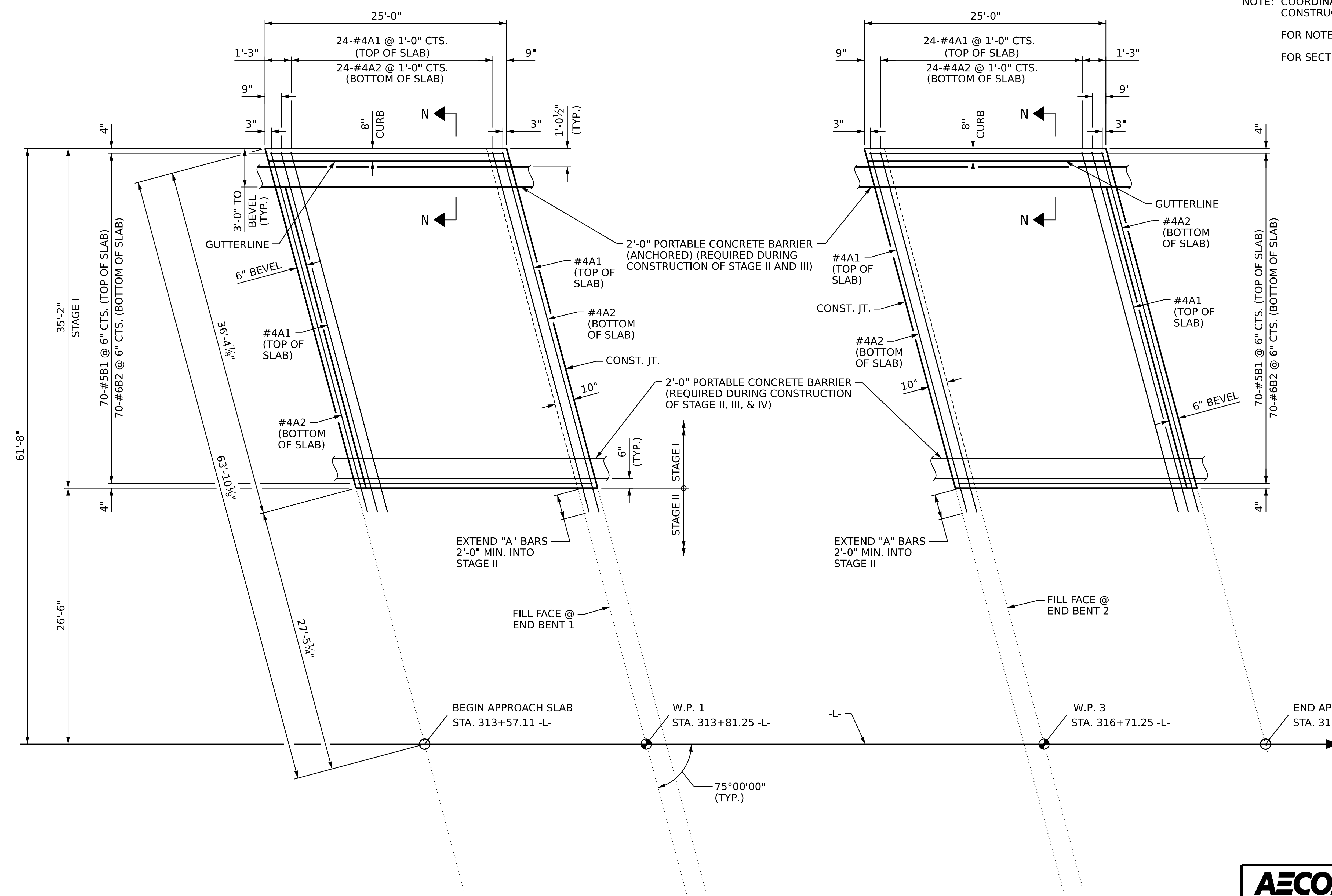
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD RIP RAP DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

DRAWN BY : D.R. DRUM DATE : 04/2022
 CHECKED BY : J.C. MORRISON DATE : 05/2022
 DESIGN ENGINEER OF RECORD : J.E. SLOAN DATE : 05/2022

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SHEET NO.
S-52
 TOTAL SHEETS
58

NOTE: COORDINATE PORTABLE CONCRETE BARRIER PLACEMENT WITH CONSTRUCTION SEQUENCE SHEETS.
 FOR NOTES, SEE SHEET 5 OF 6.
 FOR SECTION N-N, SEE SHEET 5 OF 6.



PLAN @ END BENT 1

PLAN @ END BENT 2

STAGE I CONSTRUCTION

PROJECT NO. B-4442
BUNCOMBE COUNTY
 STATION: 315+72.39 -L-
 SHEET 1 OF 6

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 AECOM License No. F0242

Professional Engineer Seal:
 JOHN E. SLOAN
 035062
 8/17/2022

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

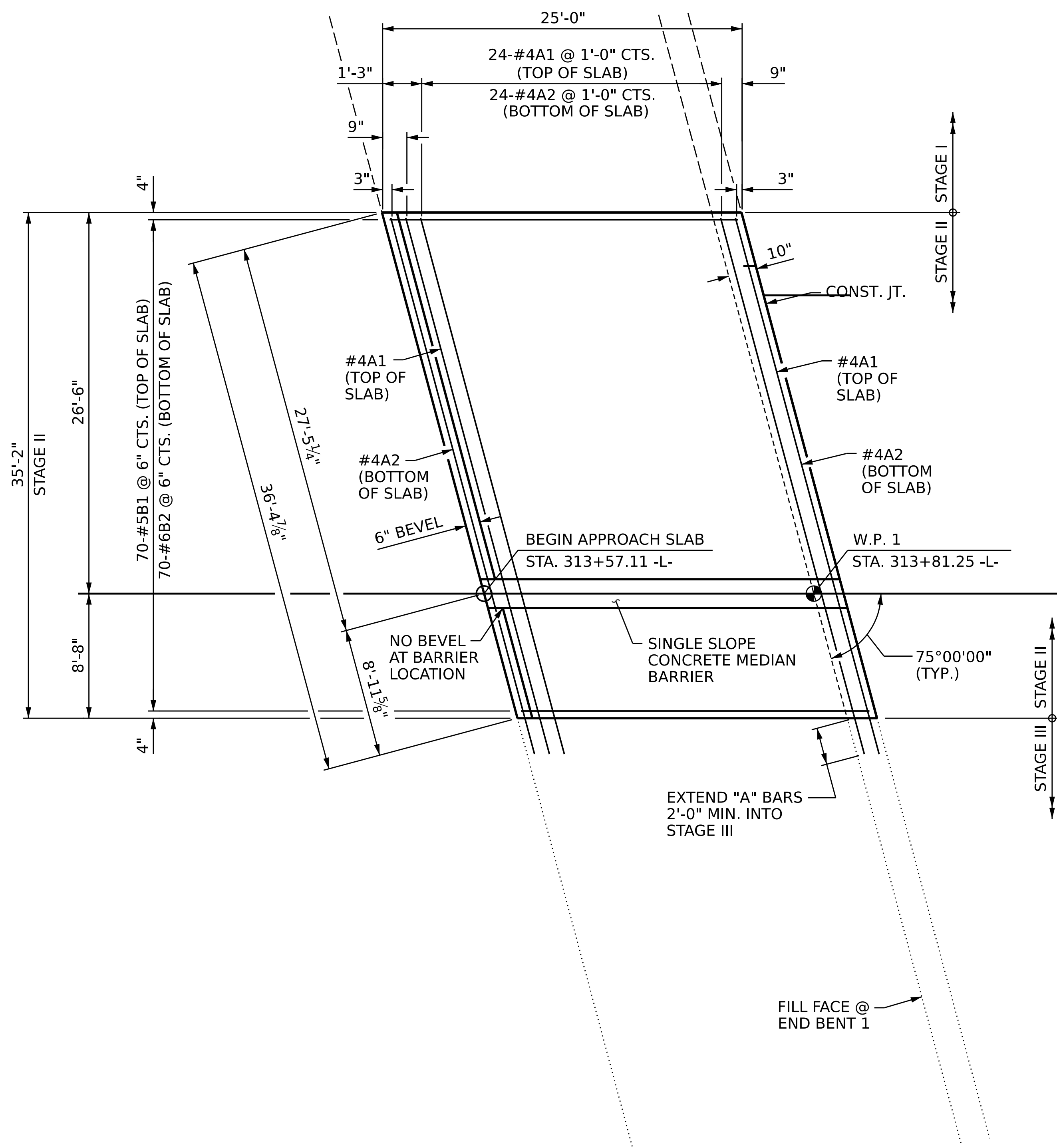
BRIDGE APPROACH SLAB FOR INTEGRAL ABUTMENT WITH FLEXIBLE PAVEMENT

STAGE I

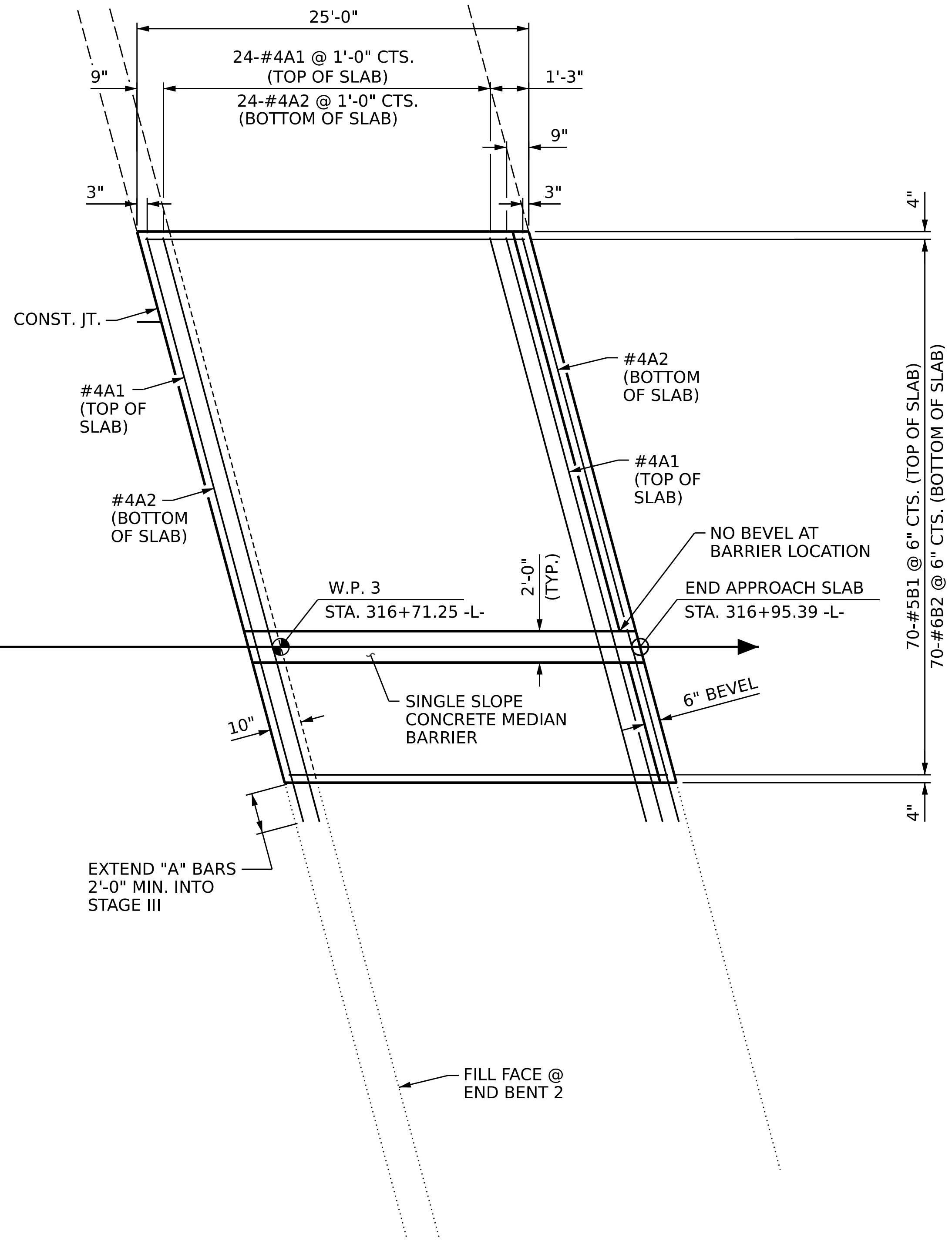
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			53
2			4			58

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PLAN @ END BENT 1



PLAN @ END BENT 2

STAGE II CONSTRUCTION

PROJECT NO. B-4442
BUNCOMBE COUNTY
 STATION: 315+72.39 -L-
 SHEET 2 OF 6

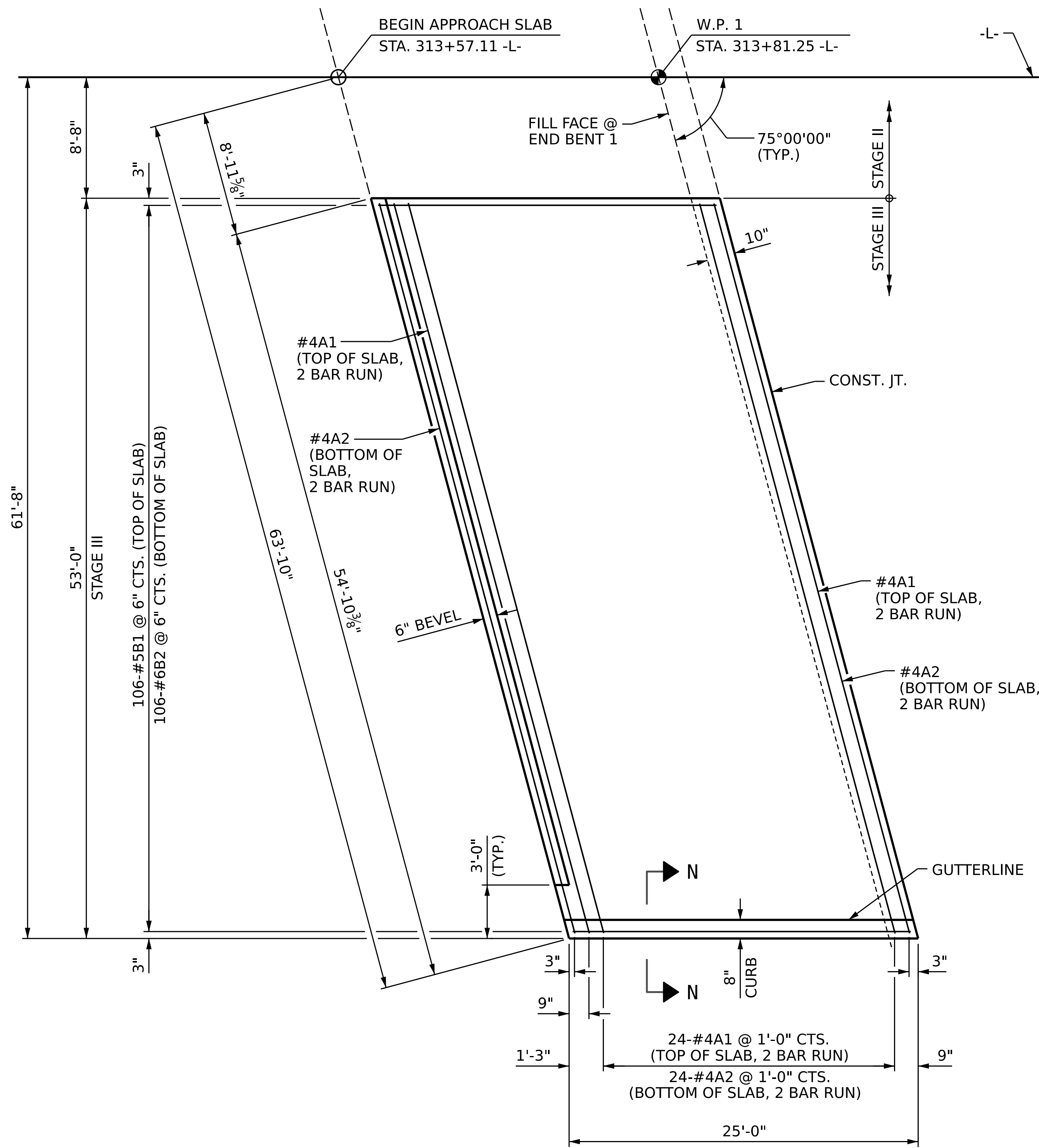
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8/17/2022
 SEAL
 035062
 JOHN E. SLOAN
 ENGINEER

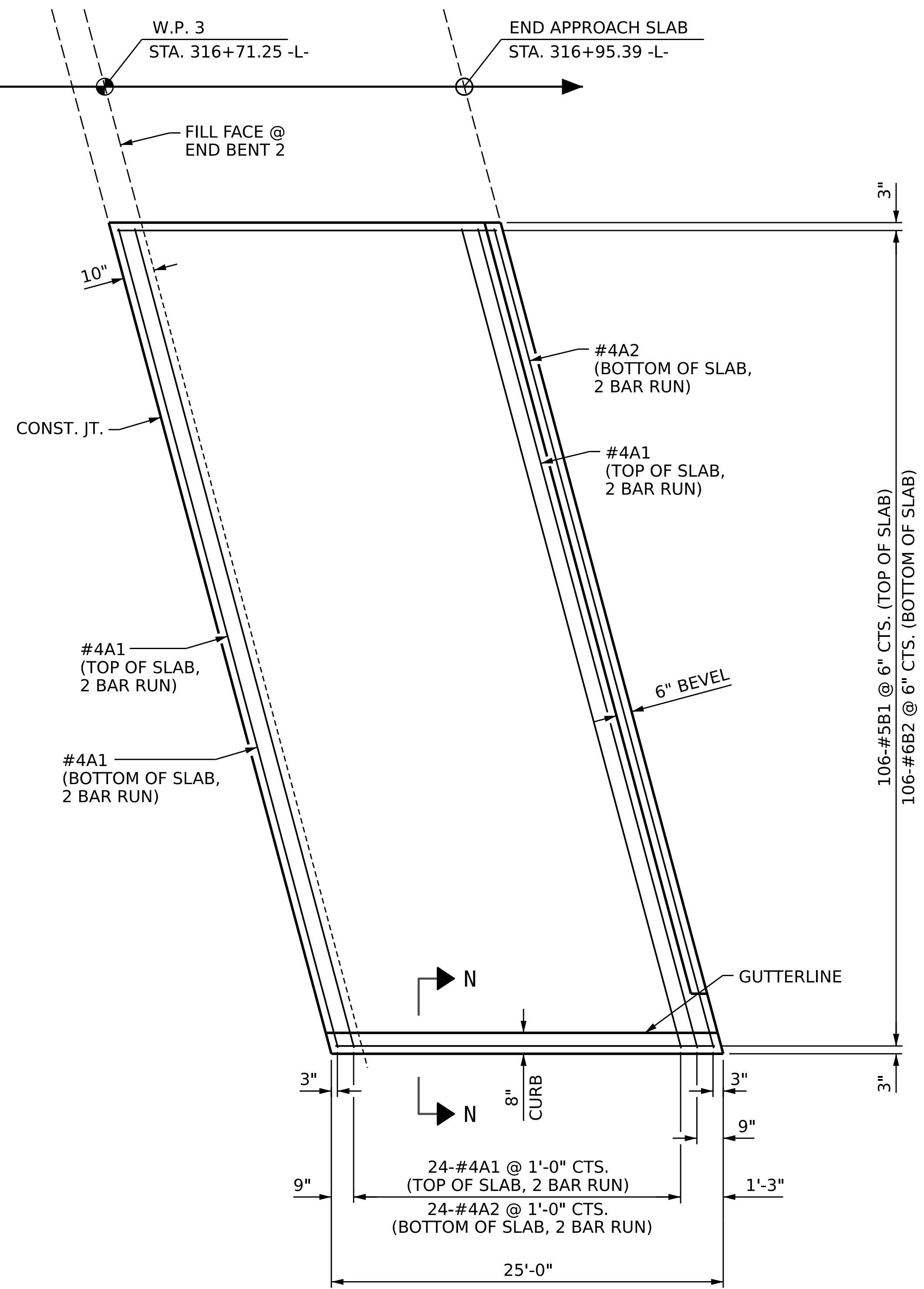
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BRIDGE APPROACH SLAB FOR INTEGRAL ABUTMENT WITH FLEXIBLE PAVEMENT					
STAGE II					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					TOTAL SHEETS
S-54					58

DRAWN BY :	D.R. DRUM	DATE :	04/2022
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PLAN @ END BENT 1



PLAN @ END BENT 2

STAGE III CONSTRUCTION

PROJECT NO. B-4442
BUNCOMBE COUNTY
 STATION: 315+72.39 -L-
 SHEET 3 OF 6

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Professional Seal:
 JOHN E. SLOAN
 ENGINEER
 SEAL 035062
 8/17/2022

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BRIDGE APPROACH SLAB FOR
 INTEGRAL ABUTMENT WITH
 FLEXIBLE PAVEMENT

STAGE III

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

SHEET NO.	S-55
TOTAL SHEETS	58

DRAWN BY: D.R. DRUM DATE: 04/2022
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NOTES:

THE COST OF THE CONCRETE MEDIAN BARRIER ON THE APPROACH SLAB SHALL BE INCLUDED IN THE LINEAR FOOT CONTRACT PRICE BID FOR "CONCRETE MEDIAN BARRIER".

THE CONCRETE MEDIAN BARRIER ON EACH APPROACH SLAB SHALL NOT BE CAST UNTIL ALL APPROACH SLAB CONCRETE HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

ALL REINFORCING STEEL IN CONCRETE MEDIAN BARRIERS SHALL BE EPOXY COATED.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE MEDIAN BARRIER AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN MEDIAN BARRIER EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF MEDIAN BARRIER SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

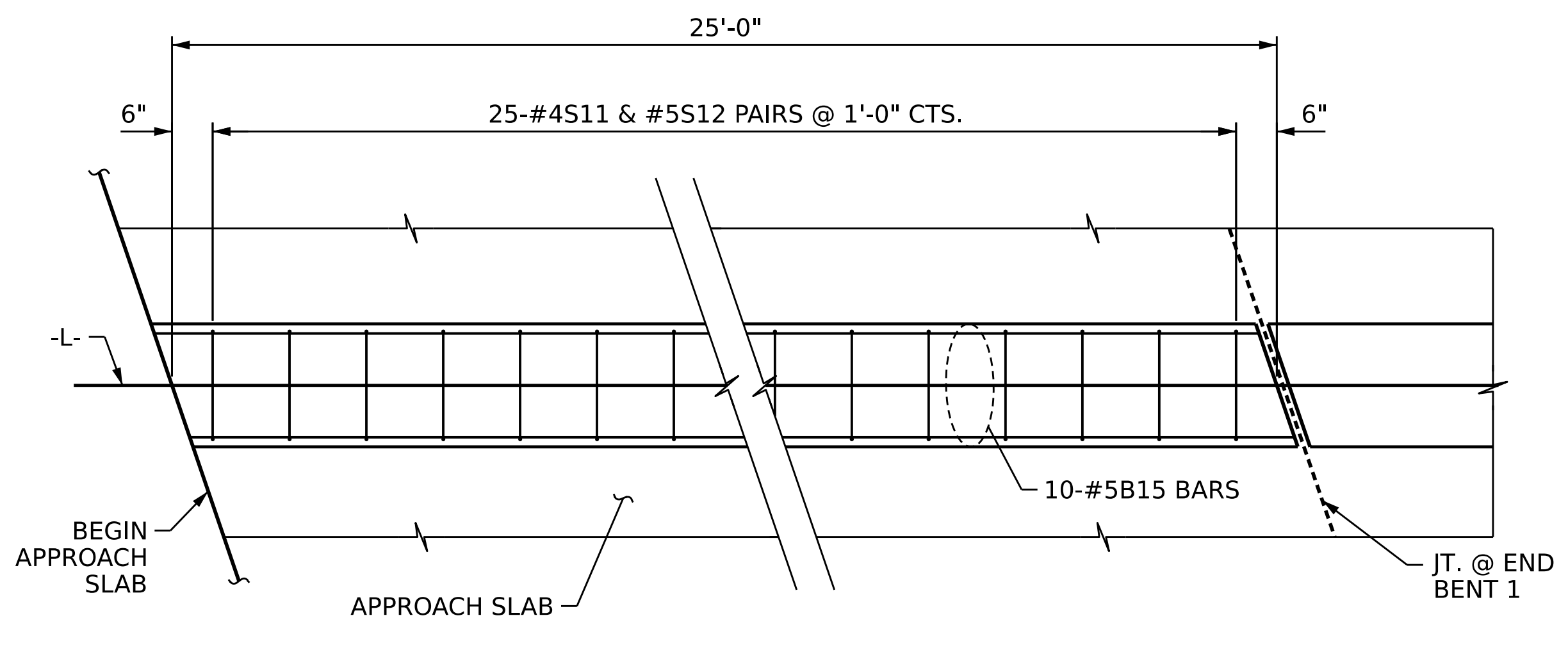
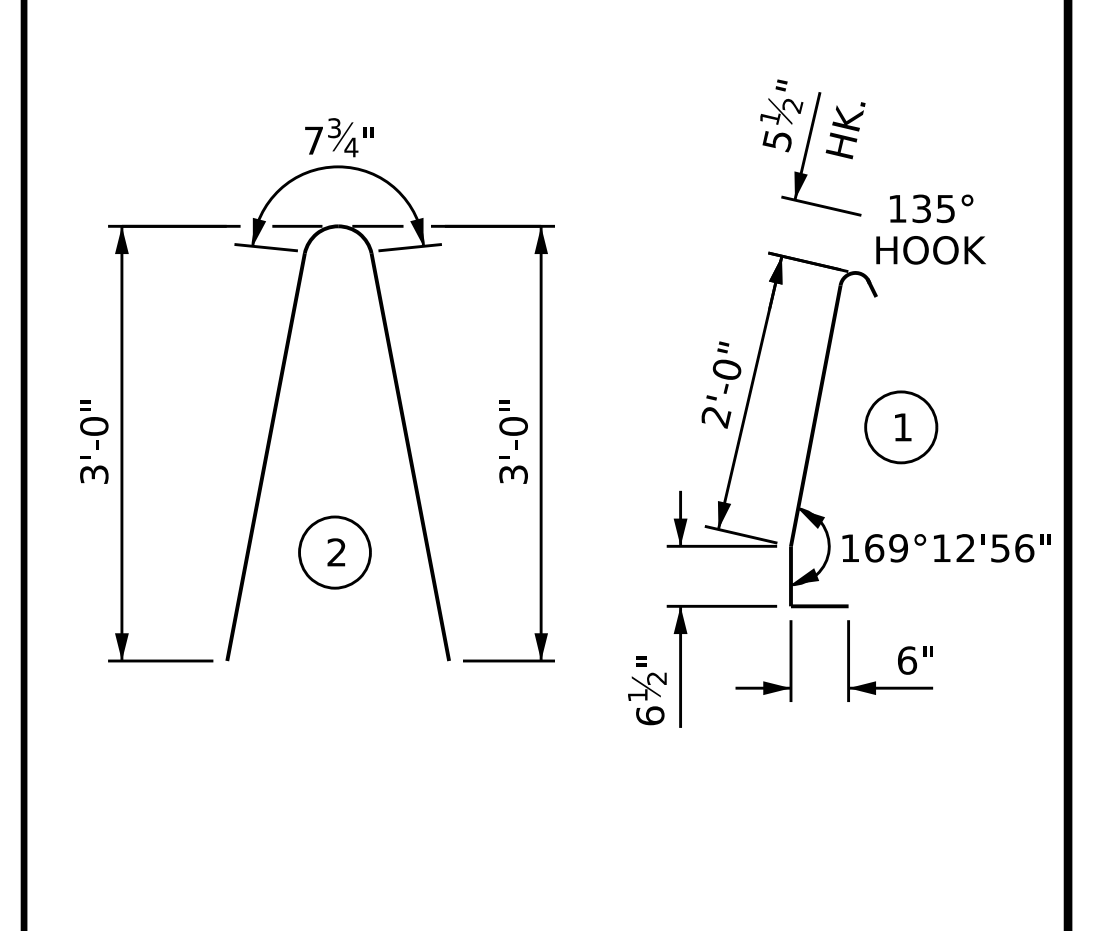
FOR ADDITIONAL NOTES, SEE SHEET 5 OF 6.

BILL OF MATERIAL

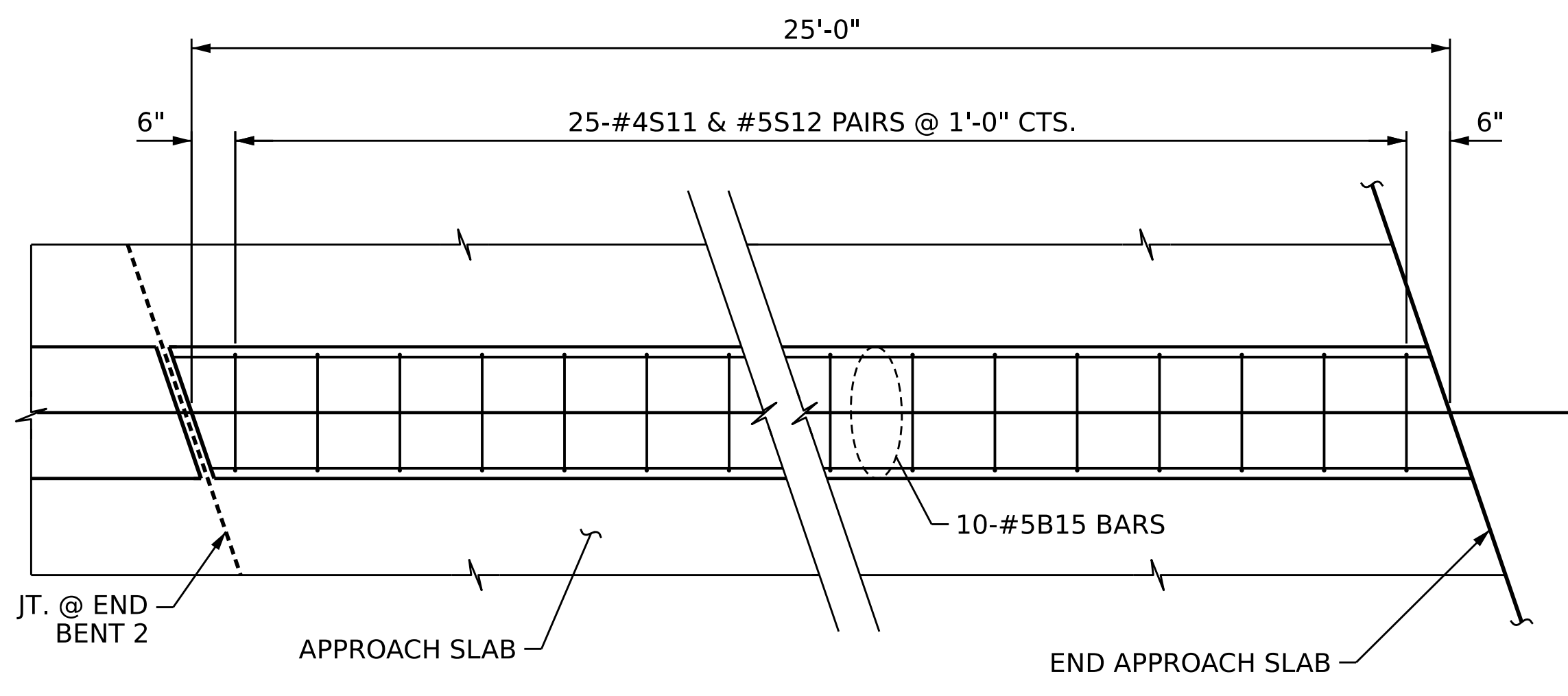
FOR ONE APPROACH SLAB (2 REQ'D)

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*B15	20	5	STR	24'-8"	515
*S11	25	4	2	8'-1"	135
*S12	50	5	1	3'-6"	183
* EPOXY COATED REINFORCING STEEL					833 LBS.
CLASS AA CONCRETE					8.6 C.Y.
CONCRETE MEDIAN BARRIER					50 L.F.

BAR TYPES

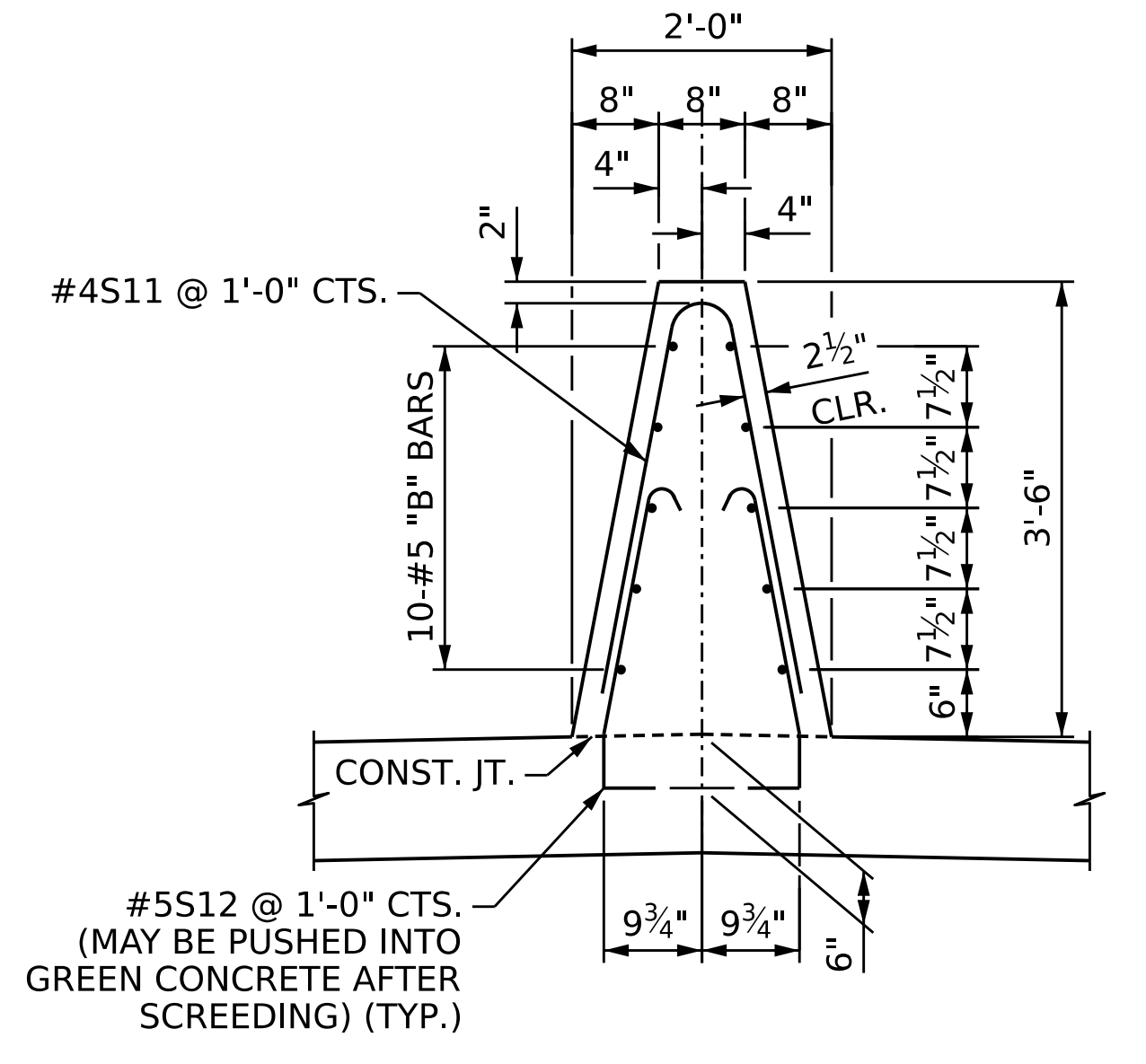


PLAN AT END BENT 1

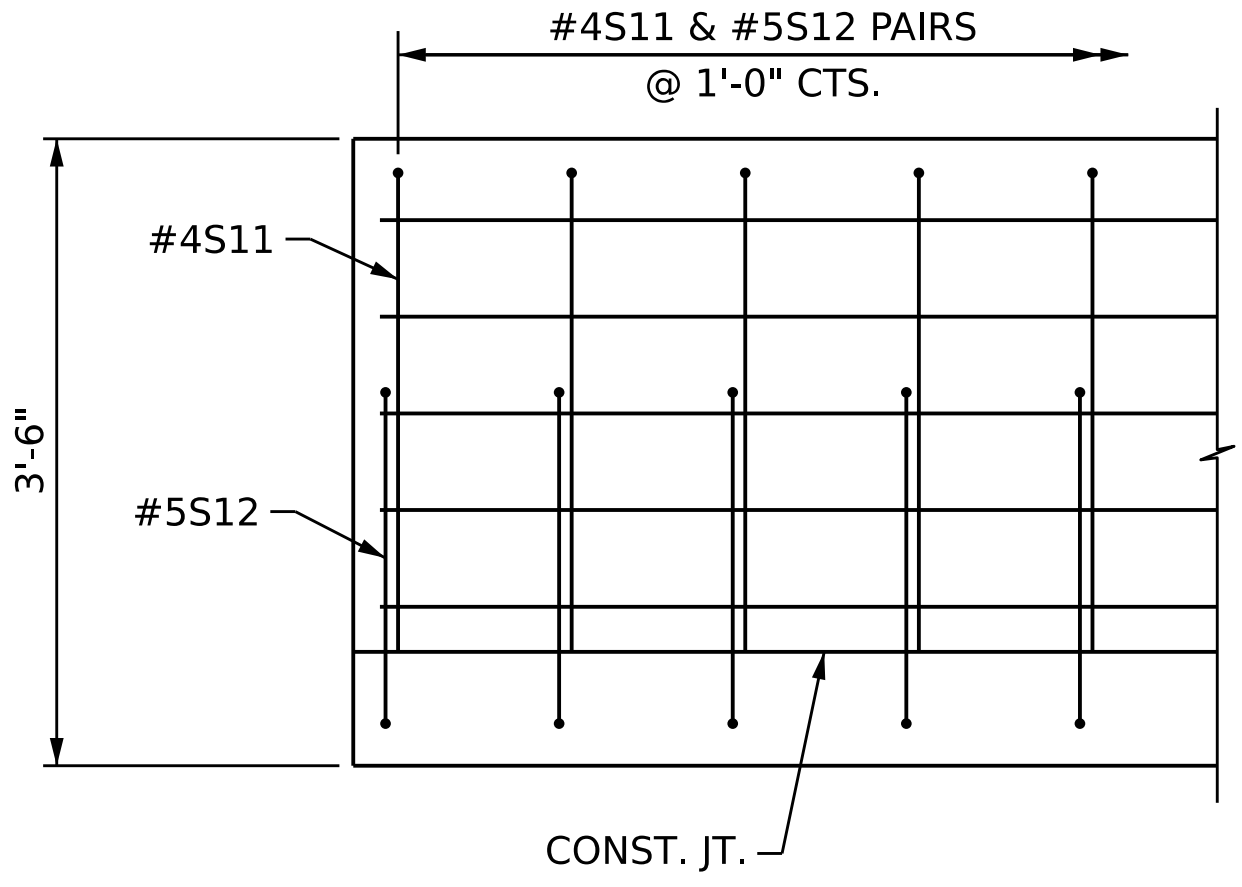


PLAN AT END BENT 2

PLAN OF CONCRETE MEDIAN BARRIER



SECTION THRU CONCRETE MEDIAN BARRIER



SIDE VIEW

CONCRETE MEDIAN BARRIER DETAILS

PROJECT NO. B-4442
BUNCOMBE COUNTY
 STATION: 315+72.39 -L-
 SHEET 4 OF 6

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8/17/2022

DocuSigned by:
 John E. Sloan
 SEAL
 035062
 ENGINEER
 JOHN E. SLOAN

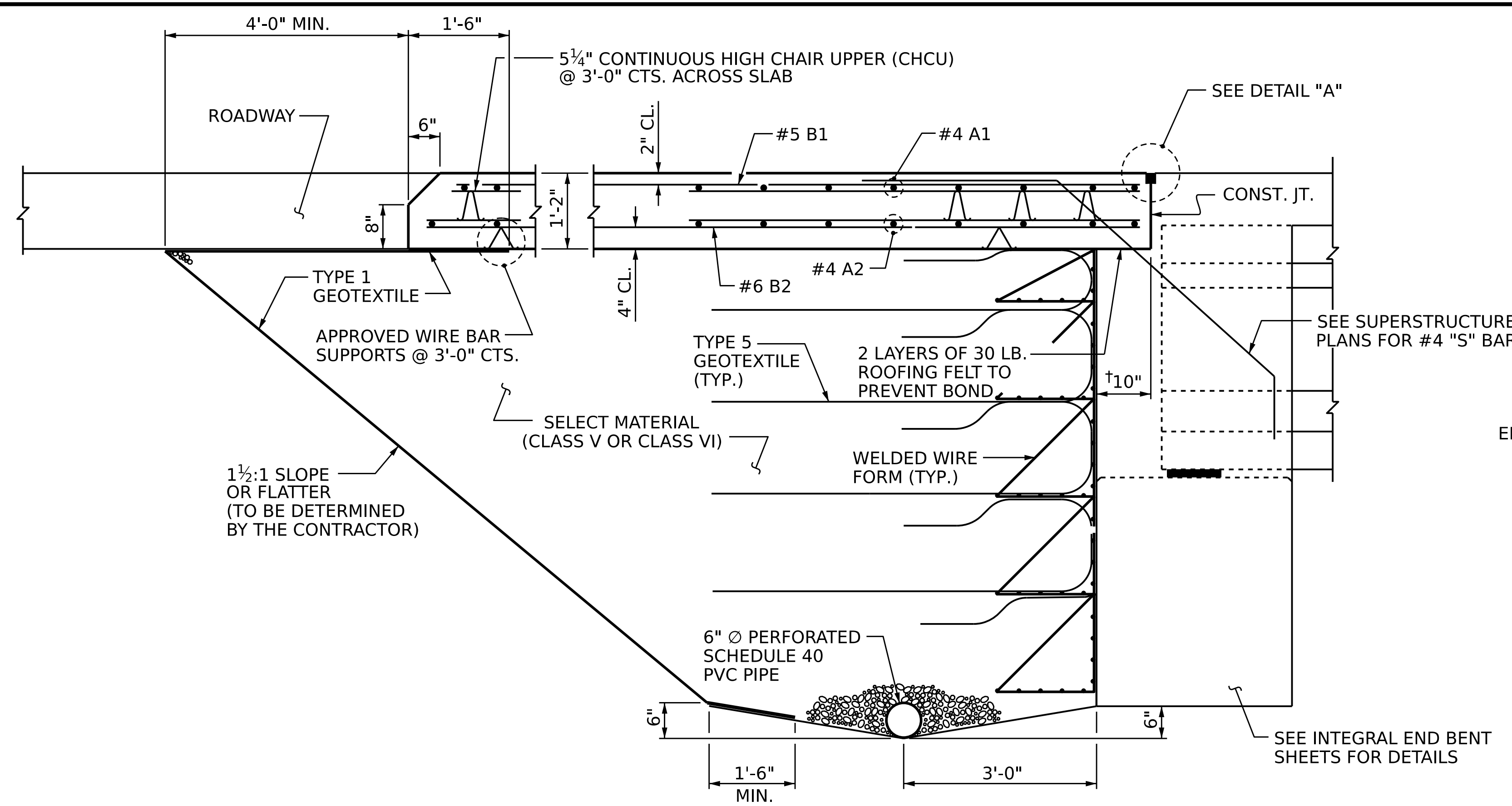
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BRIDGE APPROACH SLAB FOR
 INTEGRAL ABUTMENT WITH
 FLEXIBLE PAVEMENT

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			56
2			4			58

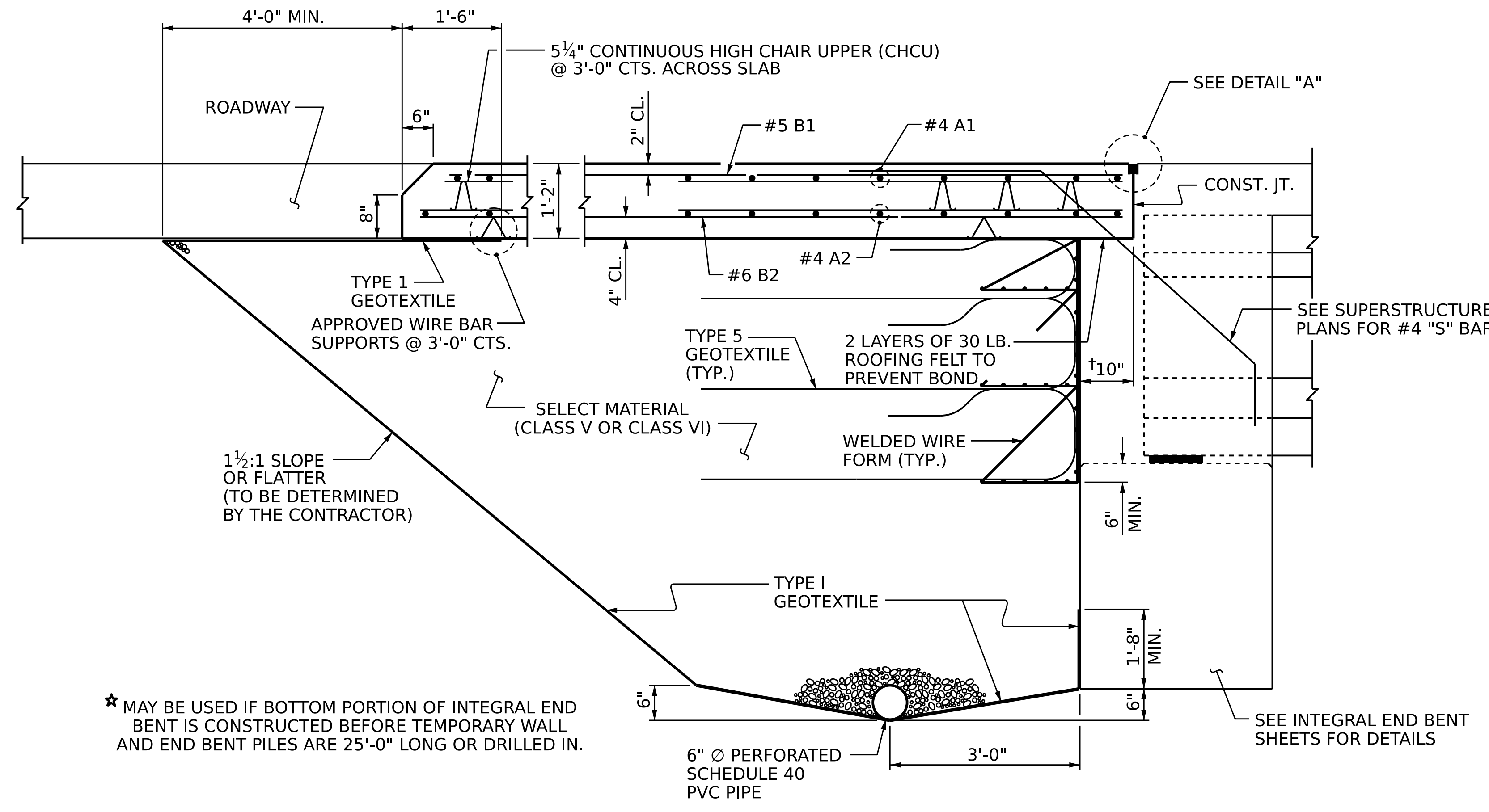
DRAWN BY: B.T. LEROY DATE: 05/2022
 CHECKED BY: J.C. MORRISON DATE: 05/2022
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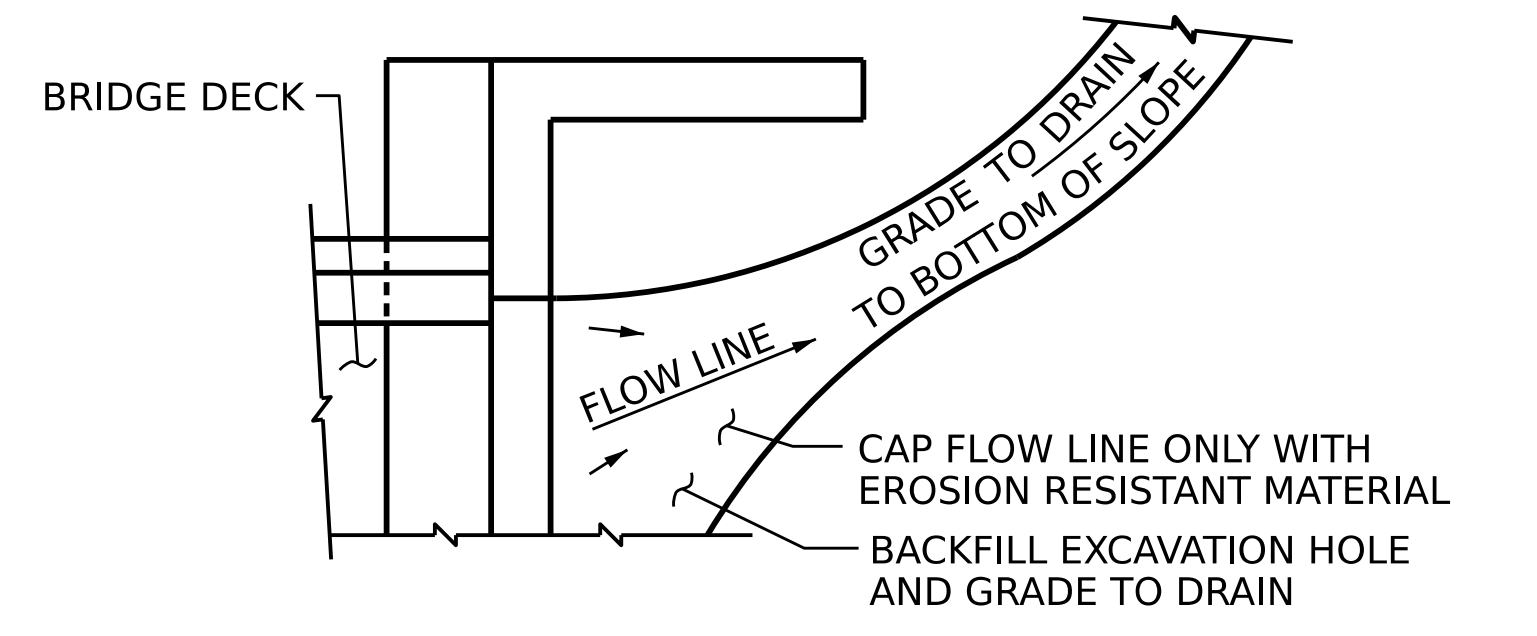
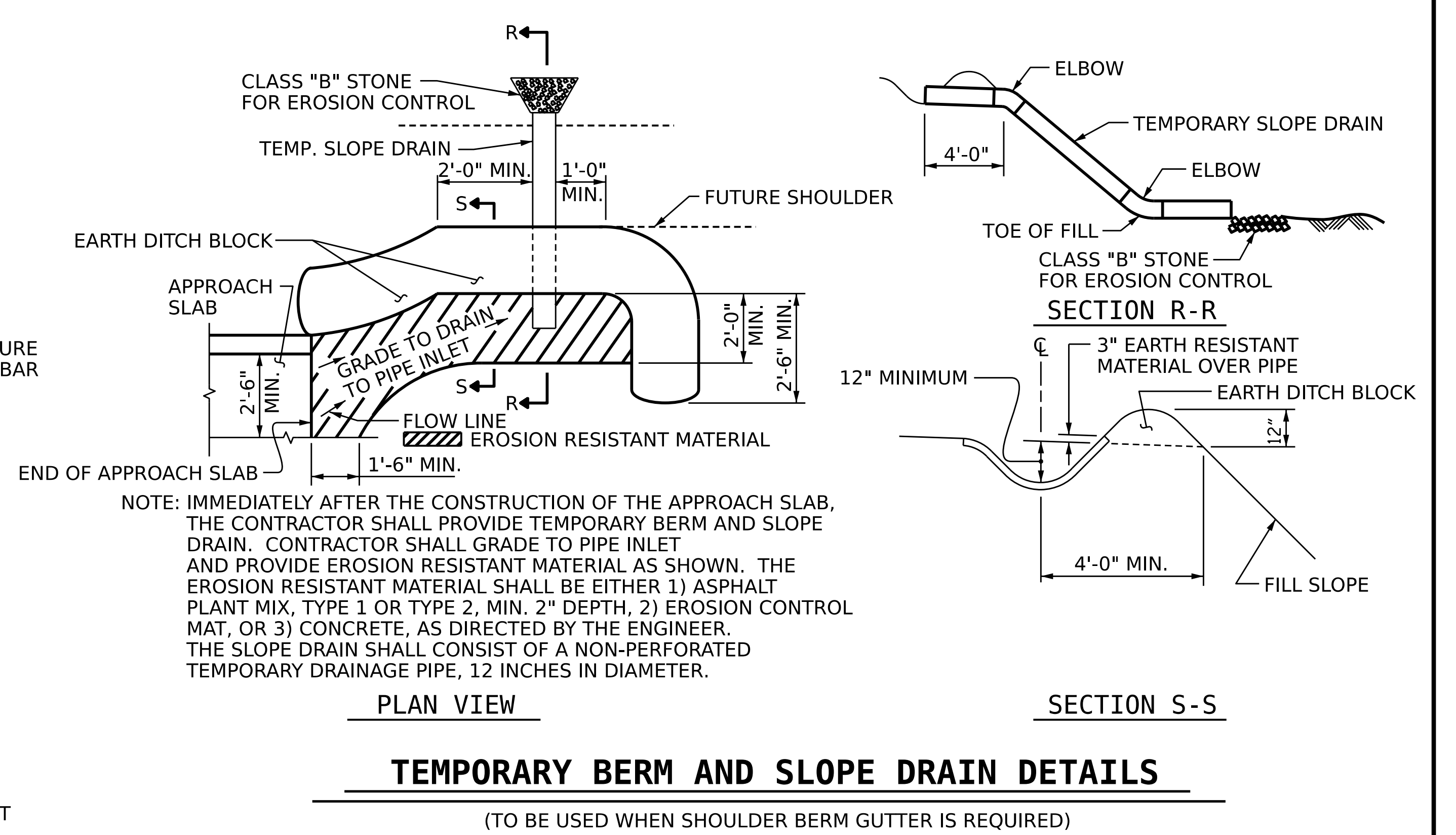
SECTION THRU SLAB
(TYPE A - ALTERNATE APPROACH FILL)

† NORMAL TO END BENT



SECTION THRU SLAB
(TYPE A - ALTERNATE APPROACH FILL)

★ MAY BE USED IF BOTTOM PORTION OF INTEGRAL END BENT IS CONSTRUCTED BEFORE TEMPORARY WALL AND END BENT PILES ARE 25'-0" LONG OR DRILLED IN.



NOTE: IF THE APPROACH SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE BACKFILLING OF THE END BENT EXCAVATION, GRADE TO DRAIN TO THE BOTTOM OF THE SLOPE AND PROVIDE EROSION RESISTANT MATERIAL, SUCH AS FIBERGLASS ROVING OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL EROSION AND TO PROTECT THE AREA ADJACENT TO THE STRUCTURE. THE CONTRACTOR WILL BE REQUIRED TO REMOVE THESE MATERIALS PRIOR TO CONSTRUCTION OF THE APPROACH SLAB.

PROJECT NO. B-4442
BUNCOMBE COUNTY
 STATION: 315+72.39 -L-
 SHEET 6 OF 6

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8/17/2022

DocuSigned by:
 John E. Sloan
 94068320C8D48

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH		STANDARD BRIDGE APPROACH SLAB FOR INTEGRAL ABUTMENT WITH FLEXIBLE PAVEMENT	
REVISIONS			
NO.	BY:	DATE:	NO.
1			3
2			4
SHEET NO.			S-58
TOTAL SHEETS			58

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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 36	- -	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	- -	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	- -	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	- - -	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	- - - - -	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	- - - - -	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	- - -	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	- - - - -	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	- - - - -	30 LBS. PER CU. FT. (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 2018 "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; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1 1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 3/4" 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 3/4" 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 12" 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 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

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 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" 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.

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 1/16 INCH 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. FINIS 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.

ENGLISH

JANUARY, 1990