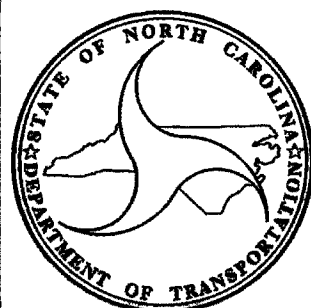
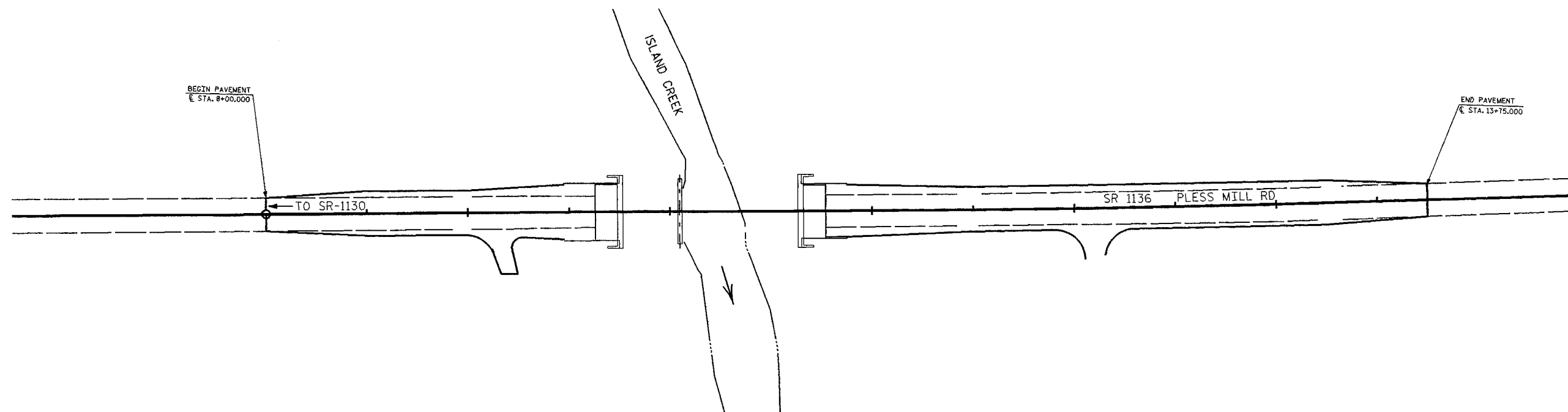
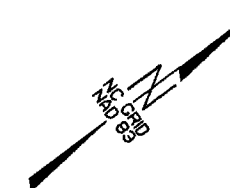


A vicinity map of Stanfield, Oregon. The map shows a network of roads, including Highway 1213 running north-south and Highway 1137 running east-west. A bridge labeled "BRIDGE #209" crosses a river. The town of Stanfield is marked with a population of 536. Other landmarks include "Island" and "AND NORTHWESTERN". Road numbers and distances are indicated along the routes.

STANLY COUNTY

**TYPE OF WORK: BRIDGE REPLACEMENT WITH PRE-STRESSED CONCRETE
CORED SLAB SUPERSTRUCTURE ON STEEL PILE END BENTS WITH INTERIOR
BENT ON SPREAD FOOTING AND ROADWAY APPROACHES**

[illegible]

ADT 2005 = 720
ADT 2025 = 940

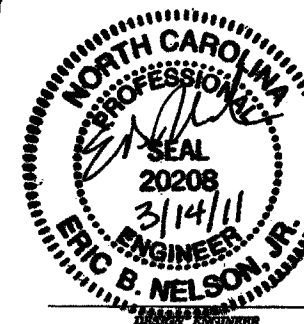
LENGTH ROADWAY TIP PROJECT = .237 MILE
LENGTH STRUCTURE TIP PROJECT = .022 MILE
TOTAL LENGTH TIP PROJECT = .259 MILE

2006 STANDARD SPECIFICATIONS

LETTING DATE:
MARCH 31, 2011

DAN HOLDERMAN, PE
STATE BRIDGE
MANAGEMENT ENGINEER

MIKE SUMMERS
BUDGET MANAGEMENT
PROJECT MANAGER



EXISTING BRIDGE CONSISTS OF A SINGLE SPAN TIMBER AND STEEL I-BEAM CONSTRUCTION. 15.9' CLEAR ROADWAY AND O.A.L. OF 40.2'

BEALUS A SMITH JR
DB 161PG 309
DB 250 PG 073
DB 548 PG 127

- PILES FOR END BENT NO.1 AND NO.2 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 45 TONS,
- WHEN DRIVING PILES, THE MAXIMUM BLOW COUNT SHALL NOT BE EXCEEDED.
- THE REQUIRED BEARING CAPACITY OF THE SPREAD FOOTING AT BENT NO.1 IS 5 TSF. THE REQUIRED BEARING CAPACITY SHALL BE VERIFIED.
- STEEL PILE POINTS ARE REQUIRED FOR PILES AT END BENT NO.1 AND END BENT NO.2. SEE SPECIAL PROVISIONS FOR STEEL PILE POINTS.

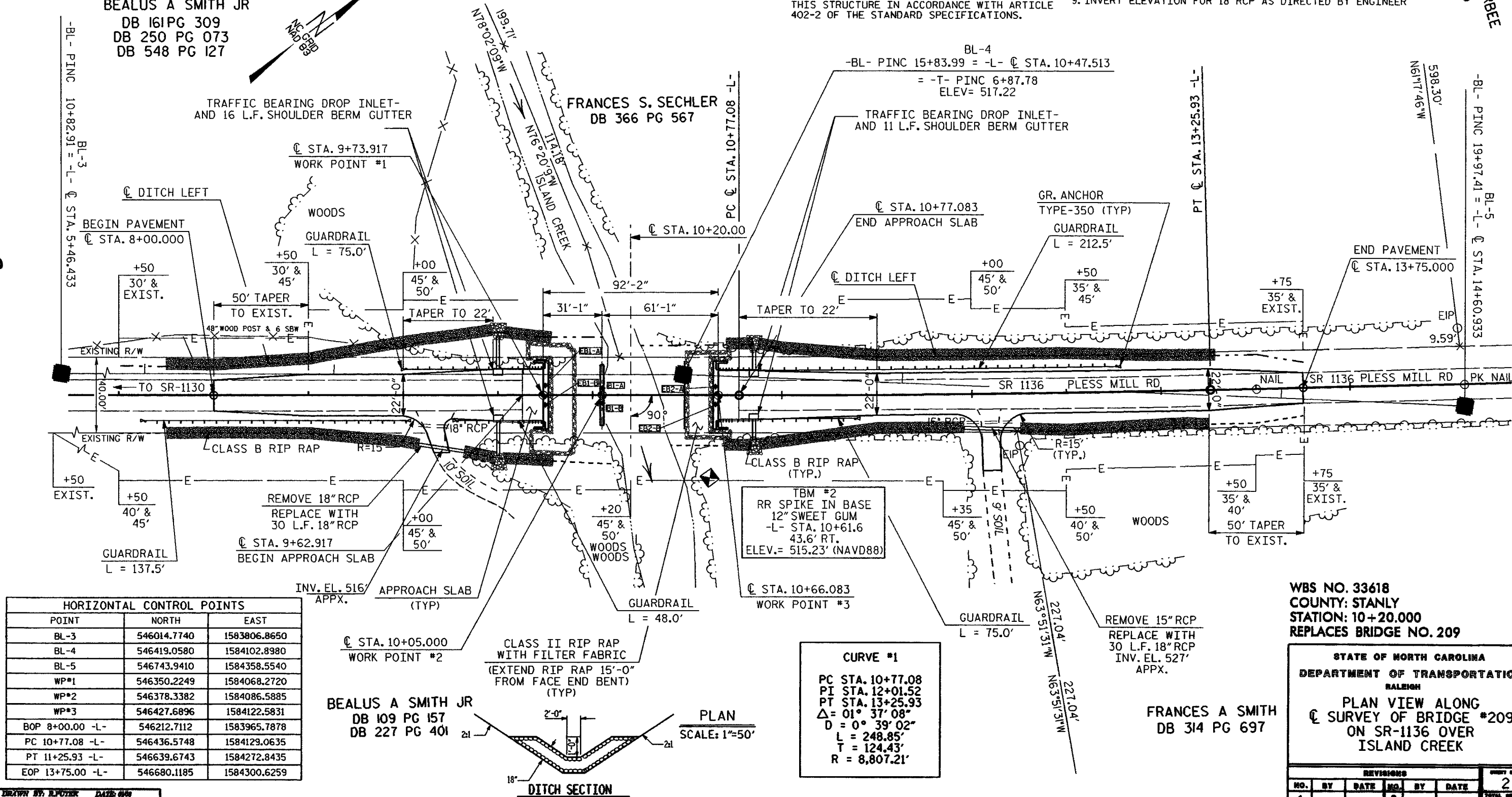
- FOOTING SHALL BE KEYED AT LEAST 12 INCHES INTO ROCK WITH MINIMUM THICKNESS AS SHOWN ON PLANS.
- THE SCOUR CRITICAL ELEVATION FOR BENT NO.1 IS THE AS CONSTRUCTED BOTTOM OF FOOTING. THE SCOUR CRITICAL ELEVATIONS ARE FOR USE BY MAINTENANCE FORCES TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.
- REMOVAL OF EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THIS STRUCTURE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

- THE QUANTITY OF RIP RAP TO BE PAID FOR WILL BE THE ACTUAL NUMBER OF TONS OF EACH CLASS OF RIP RAP WHICH HAS BEEN INCORPORATED INTO THE COMPLETED AND ACCEPTED WORK. THE RIP RAP WILL BE MEASURED BY BEING WEIGHED IN TRUCKS ON CERTIFIED PLATFORM SCALES OR OTHER CERTIFIED WEIGHING DEVICES. THE QUANTITY OF RIP RAP WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON: PLAIN RIP RAP CLASS II (2'-0" THICK)

PLAIN RIP RAP CLASS II (2'-0" THICK)		
END BENT NO 1	105	TONS
END BENT NO 2	85	TONS

- INVERT ELEVATION FOR 18" RCP AS DIRECTED BY ENGINEER

JAMES C. BARBEE
& CORLETTA L. BARBEE
DB 855 PG 353

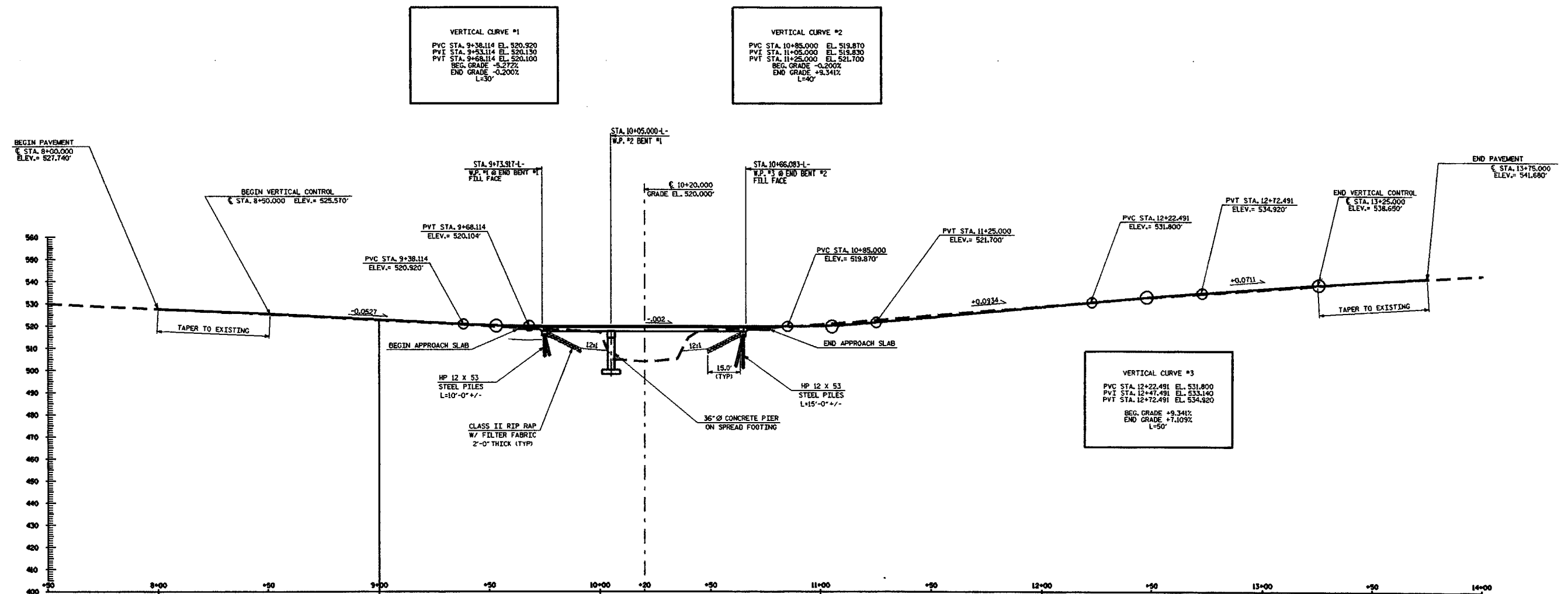


WBS NO. 33618
COUNTY: STANLY
STATION: 10+20.000
REPLACES BRIDGE NO. 209

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PLAN VIEW ALONG
SURVEY OF BRIDGE #209
ON SR-1136 OVER
ISLAND CREEK

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

DRAWN BY: R.POTER DATE: 04/00
CHECKED BY: R.WILKIE DATE: 10/00

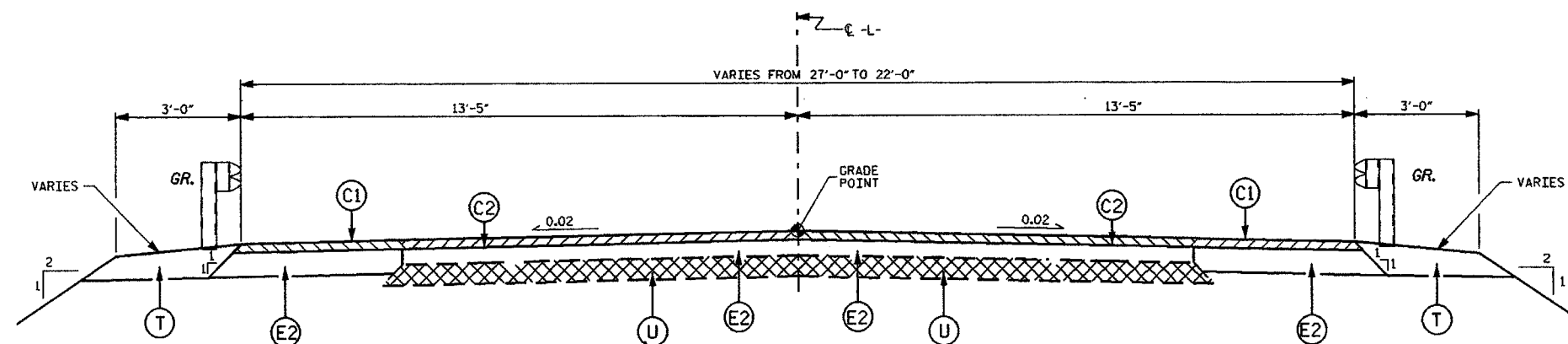


PROFILE
SCALE: 1" = 50'

WBS NO. 33618
COUNTY: STANLY
STATION: 10+20.000
REPLACES BRIDGE NO. 209

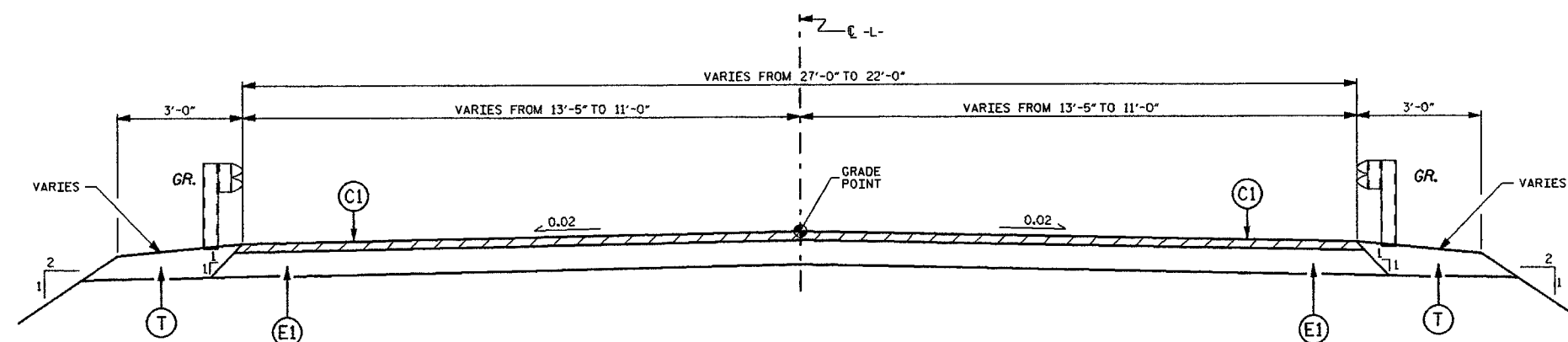
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PROFILE ALONG SURVEY OF BRIDGE #209 ON SR-1136 OVER ISLAND CREEK					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
					TOTAL SHEETS 15

DRAWN BY: R. POTER DATE:
CHECKED BY: R. WEISE DATE: FEB. 2001



TYPICAL SECTION FOR RESURFACING

(USE THIS SECTION WHEN THE PROPOSED GRADE ELEVATIONS ARE 9 OR MORE INCHES ABOVE THE EXISTING GRADE ELEVATIONS.)

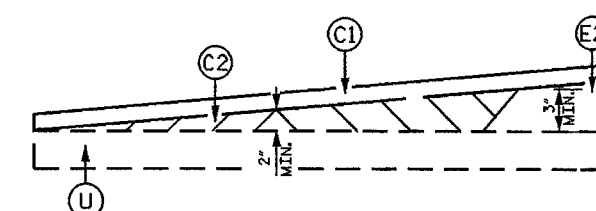


TYPICAL SECTION

(C1)	PROPOSED APPROXIMATE 2" MIN. ASPHALT CONCRETE SURFACE COURSE, TYPE SF 9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. IN EACH OF THE TWO LAYERS.
(C2)	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF 9.5A AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 2" IN DEPTH.
(E1)	PROPOSED APPROXIMATE 4" ASPHALT CONCRETE BASE COURSE TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
(E2)	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 6" IN DEPTH.
(T)	EARTH MATERIAL.
(W)	EXISTING PAVEMENT TO BE REMOVED.
(U)	EXISTING PAVEMENT

NOTES

1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
2. FOR METHOD OF SHOULDER CONSTRUCTION, SEE STD. DWG. 560.01



WEDGING DETAIL FOR RESURFACING

WBS NO. 33618
COUNTY: STANLY
STATION: 10+20.00
REPLACES BRIDGE NO. 209

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
TYPICAL
ROADWAY SECTIONS

DRAWN BY: R. PUTEK
CHECKED BY: R. WEISZ

DATE: NOV. 2007
DATE: FEB. 2010

NOTE: NOT TO SCALE

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1	JRM	01/08	3			4
2			4			15

ASSUMED LIVE LOAD = HS 20 OR ALTERNATE LOADING, EXCEPT THAT THE BEAMS HAVE BEEN DESIGNED FOR HS-25.

f'_c = 5,000 psi (MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS)

f'_{ci} = 4,000 psi (MINIMUM COMPRESSIVE STRENGTH @ TRANSFER OF STRESSING FORCE.)

60' SPAN

f'_c = 7,000 psi (MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS)

f'_{ci} = 5,600 psi (MINIMUM COMPRESSIVE STRENGTH @ TRANSFER OF STRESSING FORCE.)

ALL PRESTRESS STRANDS SHALL MEET THE REQUIREMENTS OF ASTM A416.
ALL PRESTRESS STRANDS SHALL BE 7 WIRE, LOW RELAXATION, HIGH
STRENGTH CABLES IN ACCORDANCE WITH THE SPECIFICATIONS.

SIZE	TYPE	AREA	ULTIMATE STR.	APPLIED FORCE
0.6" Ø	HIGH STR.	0.217"	58,600	43,950*
		PER CABLE	PER CABLE	PER CABLE

EXP. JT. MAT'L. SHALL MEET THE REQUIREMENTS OF AASHTO SPECIFICATION M153 TYPE I, TYPE II, OR TYPE III.

JOINT SEALER SHALL BE LOW MODULUS SILICONE SEALANT, SEE SECTION 1028-4 OF THE STANDARD SPECIFICATIONS.

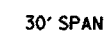
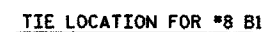
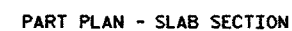
STRUCTURAL STEEL ITEMS SHALL BE OF A GRADE CONFORMING TO EITHER ASTM A36 OR A373, EXCEPT HIGH STRENGTH BOLTS. HIGH STRENGTH BOLTS SHALL BE ASTM A325. ALL STRUCTURAL STEEL EXCEPT PILE CAP PLATES SHALL BE GALVANIZED AS PER THE SPECIFICATIONS.

ALL MATERIAL AND WORKMANSHIP SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OF THE NC DEPARTMENT OF TRANSPORTATION DATED JULY 2006 AND THE SPECIAL PROVISIONS.

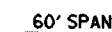
A POSITIVE HOLD DOWN SYSTEM MUST BE EMPLOYED TO PREVENT VOIDS FROM RISING.

NOTE:
SPIRAL WIRE REINFORCEMENT MAY BE USED IN LIEU OF DEFORMED BARS FOR STIRRUPS. MIN. W3.5 X 6" PITCH.

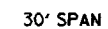
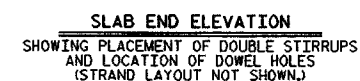
UNLESS OTHERWISE NOTED ON PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED $\frac{3}{4}$ ".



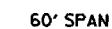
8-0.6" Ø H.S. STRANDS
EXTERIOR SLAB SECTIONS
FINAL DEFLECTION 0.223" (UP)



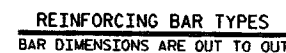
24-0.6" Ø H.S. STRANDS
EXTERIOR SLAB SECTIONS
FINAL DEFLECTION 3.083" (UP)



8-0.6" Ø H.S. STRANDS
INTERIOR SLAB SECTIONS
FINAL DEFLECTION 0.256" (UP)



24-0.6" Ø H.S. STRANDS
INTERIOR SLAB SECTIONS
FINAL DEFLECTION 3.516" (IP)



SPAN LENGTH	NUMBER OF SHEATHED STRANDS PER EXTERIOR SLAB SECTION	NUMBER OF SHEATHED STRANDS PER INTERIOR SLAB SECTION
30'	0	0
60'	9*	7**

* BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 8 FEET 9 INCHES FROM END OF SLAB

** BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 6 FEET 5 INCHES FROM END OF SLAB

* BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 8 FEET 9 INCHES FROM END OF SLAB

** BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 6 FEET 5 INCHES FROM END OF SLAB

WBS NO. 33618
COUNTY: STANLY
STATION: 16+20.00
REPLACES BRIDGE NO. 209

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH**

PRESTRESSED STANDARDS
30', & 60' SPANS
27' CLR RDWY 90°SKEW

REVISIONS						CHART NO.
NO.	BY	DATE	NO.	BY	DATE	
1	RW	2/10	3			TOTAL CHART
2			4			15

NOTE: NOT TO SCALE

DRAWN BY: R.PYTEK **DATE: NOV. 2007**
CHECKED BY: R. WISE **DATE: FEB. 2010**

```
#####SYSTIME#####
```

NOTES

EACH PRECAST RAIL UNIT SHALL BE CAST WITH CLASS AA
CONCRETE.

RAIL TO BE FLUSH WITH CORED SLAB UNITS AT EACH END
OF SPAN.

GROUT SHALL BE 5" ABOVE GUTTERLINE BETWEEN RAIL SECTIONS.

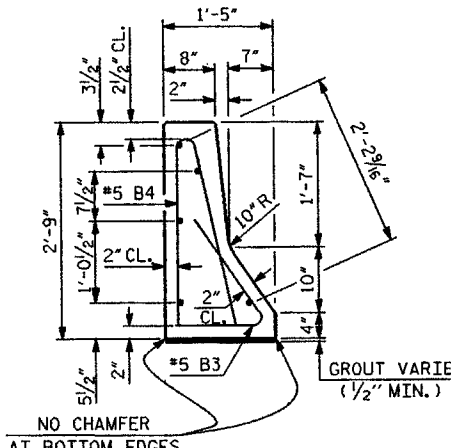
EACH PRECAST RAIL UNIT SHALL BE SUPPLIED WITH LIFTING DEVICE(S). NO CABLES ARE TO BE WRAPPED AROUND THE RAIL UNITS FOR LIFTING.

FOR LOCATION OF ANCHORS FOR GUARDRAIL, SEE SHEET NO. 14

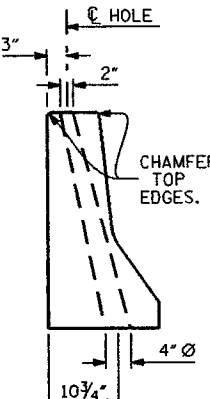
THE 2 1/2" Ø HOLES AT EACH END OF THE SLAB UNITS SHALL BE FILLED WITH GROUT. SEE STANDARD SPECIFICATIONS.

CONCRETE CHAMFERS:

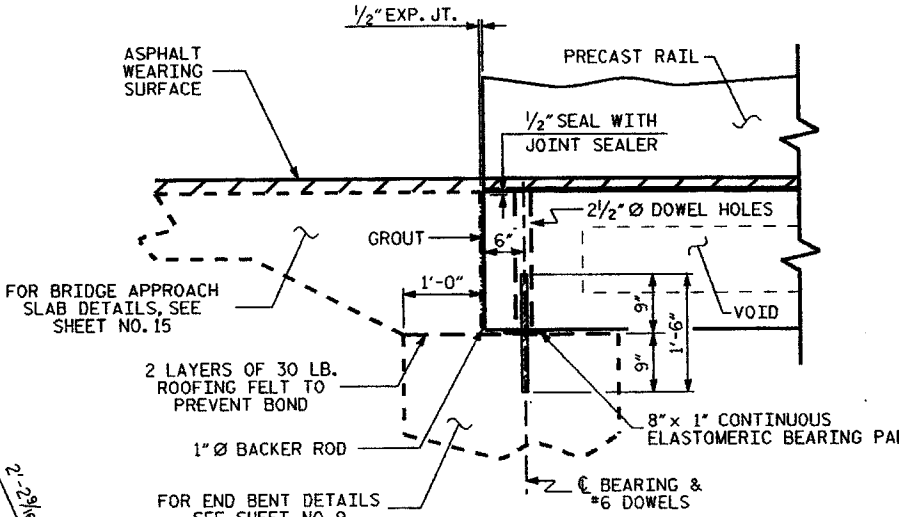
UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED $\frac{3}{4}"$ WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO $\frac{1}{2}"$ RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A $\frac{1}{4}"$ 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 $\frac{1}{4}"$ RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE SHOWN ON THE PLANS.



SECTION A-A

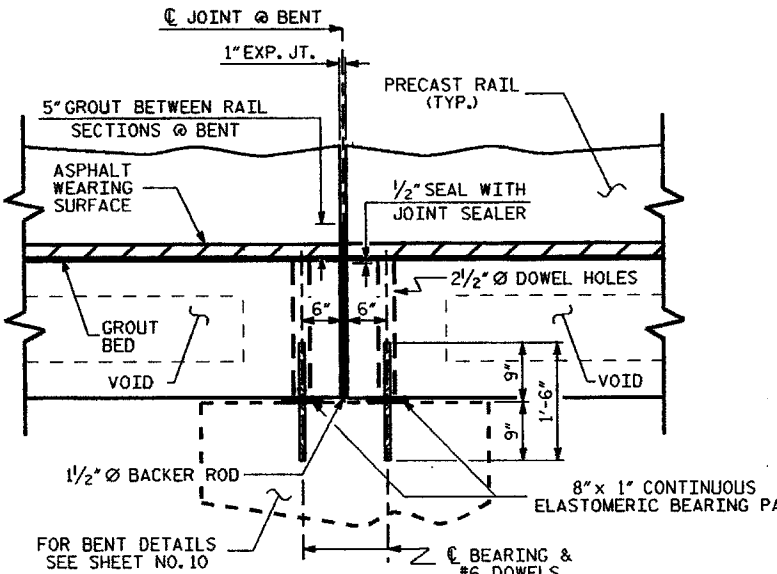


SECTION B-1



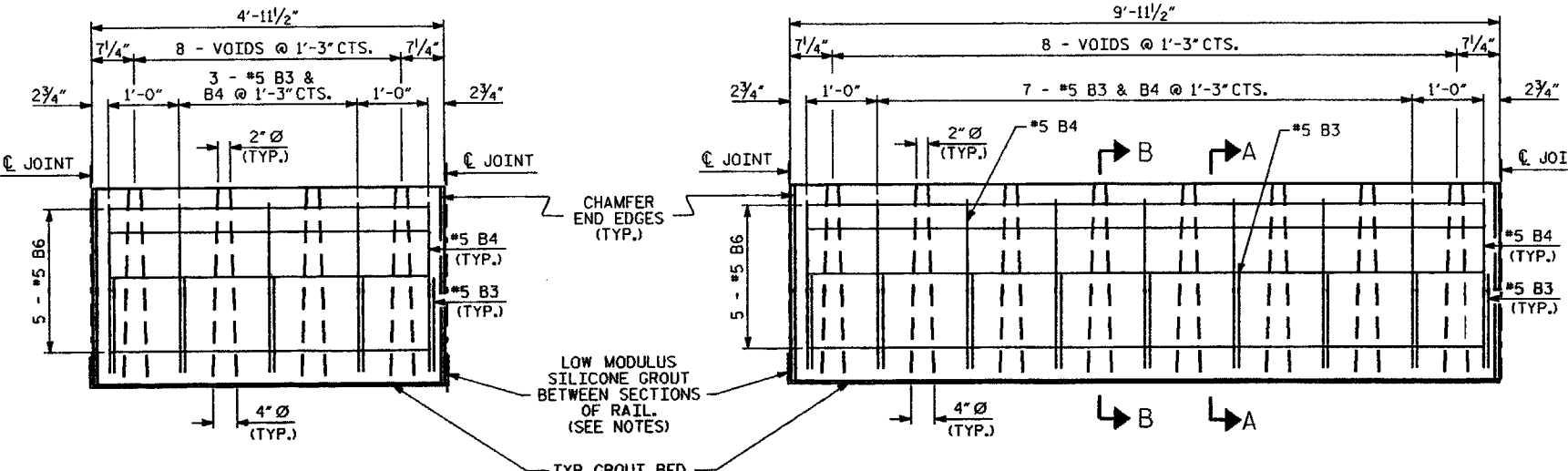
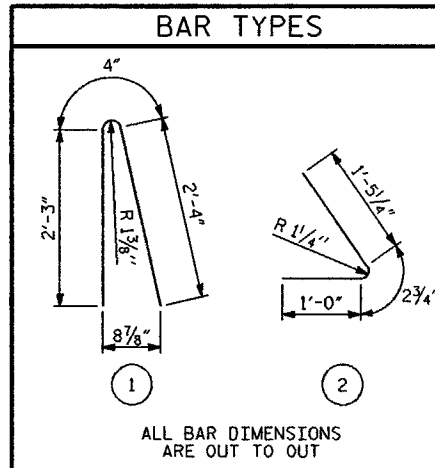
SECTION AT END BENT

BILL OF MATERIAL					
FOR ONE 5'-0" RAIL SECTION					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B3	5	#5	2	2'-8"	14
B4	5	#5	1	4'-11"	26
B6	5	#5	STR	4'-7"	24
REINFORCING STEEL LBS. = 64					
CLASS AA CONCRETE CU YDS = 0.5					



SECTION AT BEN

BILL OF MATERIAL					
FOR ONE 10'-0" RAIL SECTION					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B3	9	#5	2	2'-8"	25
B4	9	#5	1	4'-11"	46
B6	5	#5	STR	9'-7"	50
REINFORCING STEEL LBS. = 121					
CLASS AA CONCRETE CU YDS = 1.0					



TYPICAL 5'-0" PRECAST UNIT

TYPICAL 10'-0" PRECAST UN

DRAWN BY: CL BRIGHT DATE: 4/1/80
CHECKED BY: E WATKINS DATE: 2/2/80

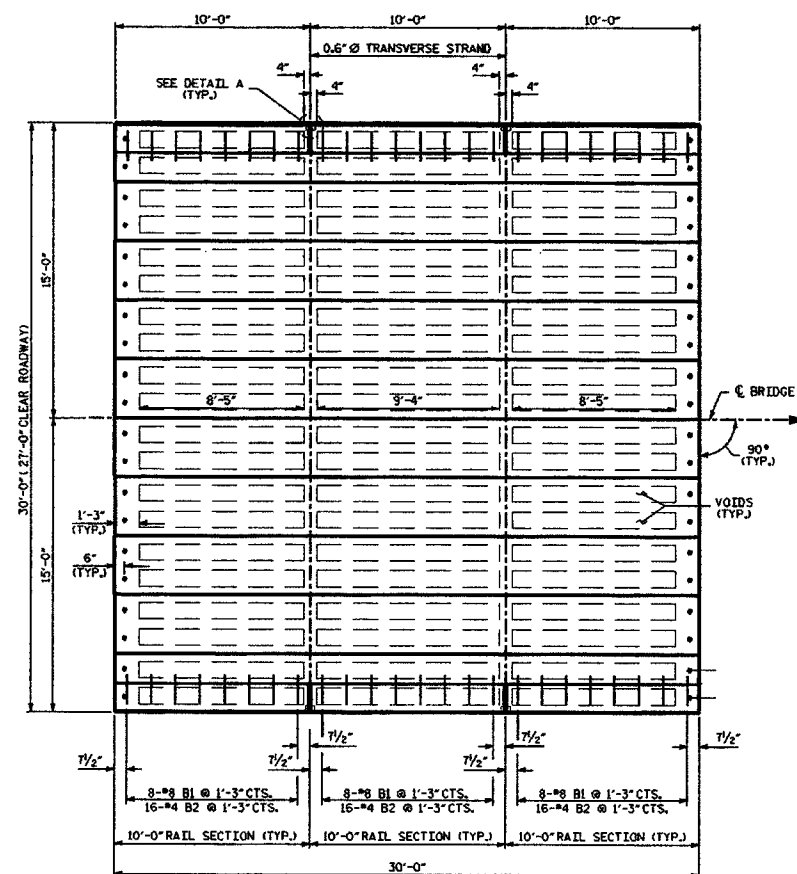
NOTE: NOT TO SCALE

WBS NO. 33618
COUNTY: STANLY
STATION: 10+20.00
REPLACES BRIDGE NO. 209

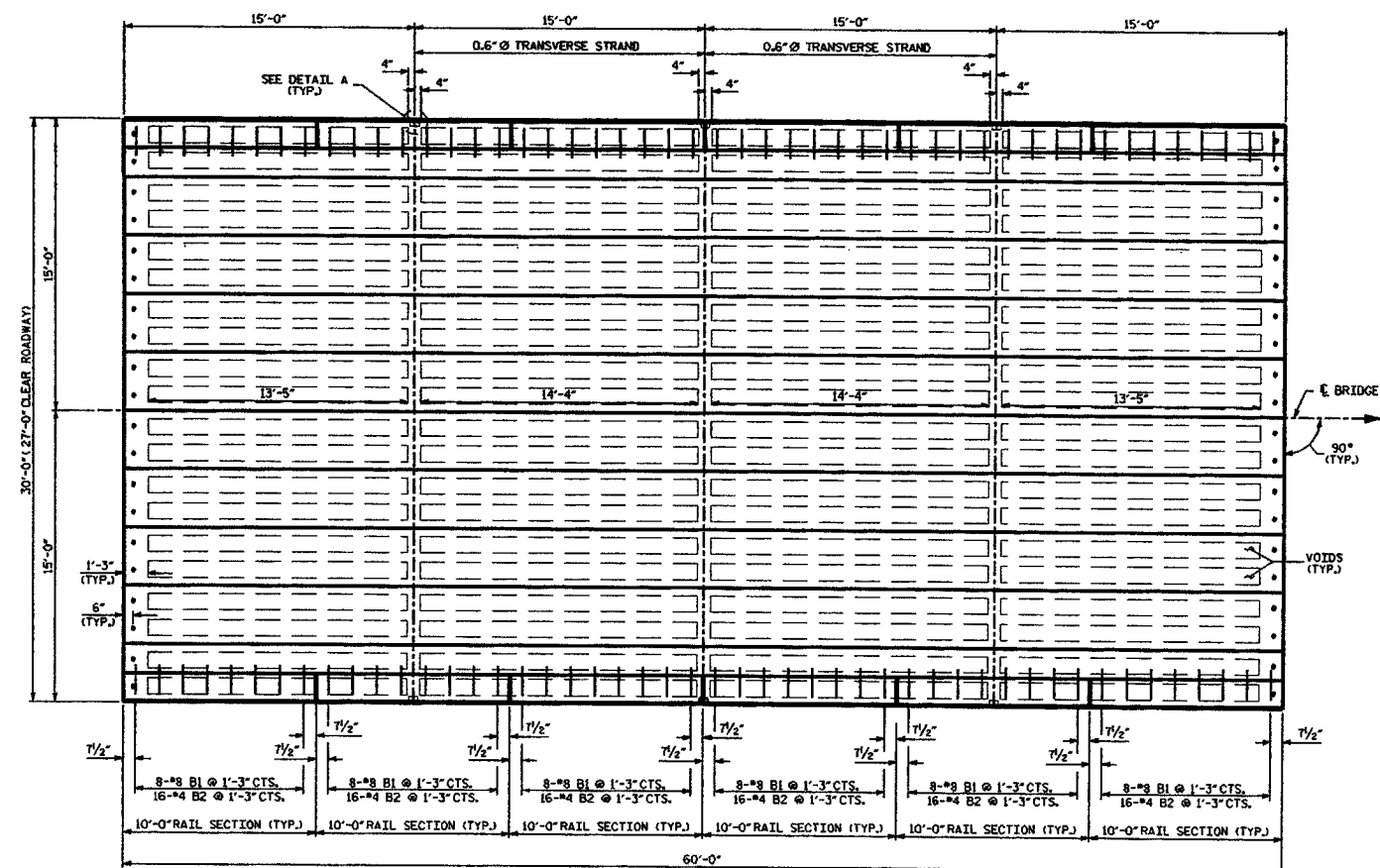
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD PRECAST CONCRETE BARRIER RAIL SECTION

REVISIONS						CURRENT BY
NO.	BY	DATE	NO.	BY	DATE	6
1	RW	2/10	8			TOTAL 15
2			4			

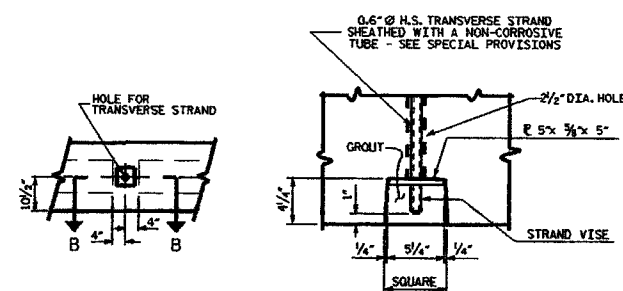


30' SPAN



60' SPAN

PLAN VIEW CORED SLABS



ELEVATION

SECTION B-B

DETAIL -A-

NOT TO SCALE

WBS NO. 33618
COUNTY: STANLY
STATION: 10+20.000
REPLACES BRIDGE NO. 209

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

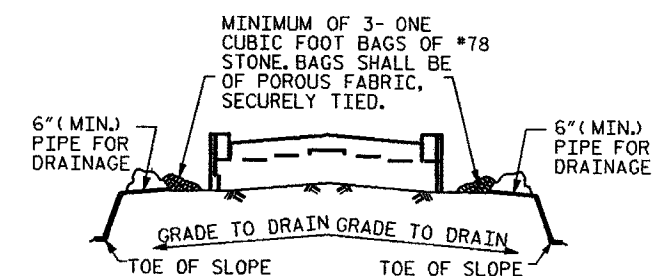
PLAN OF SPANS
30' & 60' SPANS
27' CLR. RDWY. 90° SKEW

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1	HW	2/10	3			7
2			4			

TOTAL SHEETS
15

STIRRUPS IN CAP MAY BE SHIFTED AS
NECESSARY TO CLEAR DOWELS.

FOR SECTION A-A, WING, LATERAL
GUIDE AND PILE SPLICE DETAILS
SEE SHEET 9.



BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END EXCAVATION. PIPE MAY BE EITHER CONCRETE CORRUGATED PLASTIC, PERFORATED PIPE WILL NOT BE ALLOWED.

BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTORS SHALL REMOVE AND DISPERSE OF SILT ACCUMULATION AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR EFFECTIVENESS.

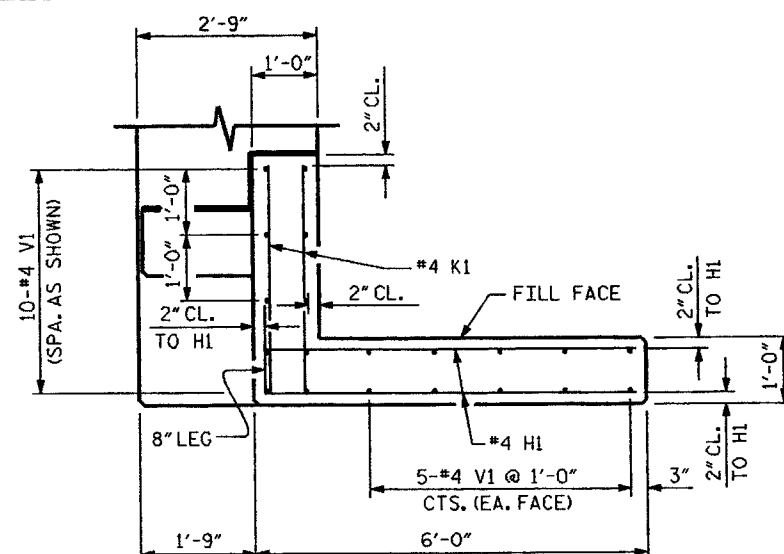
NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

WBS NO. 33618
COUNTY: STANLY
STATION: 16 + 20.00
REPLACES BRIDGE NO. 209

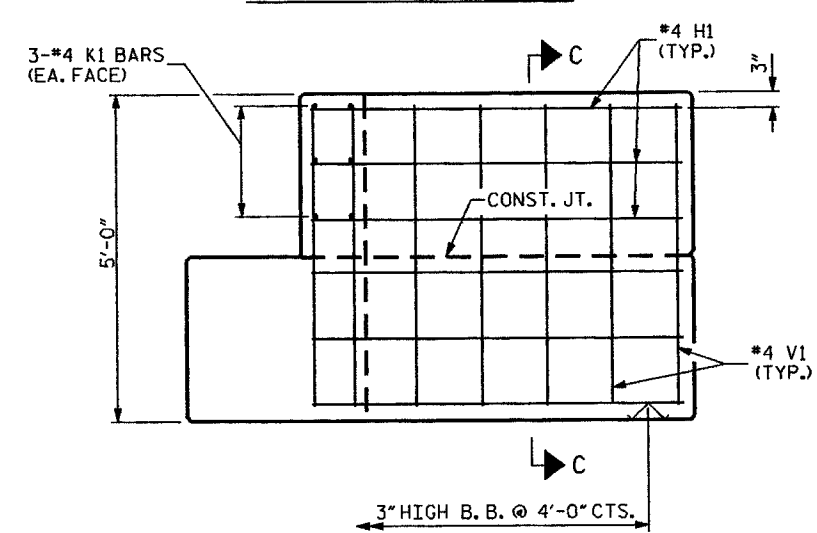
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT #1
27' CLEAR ROADWAY
90° SKEW

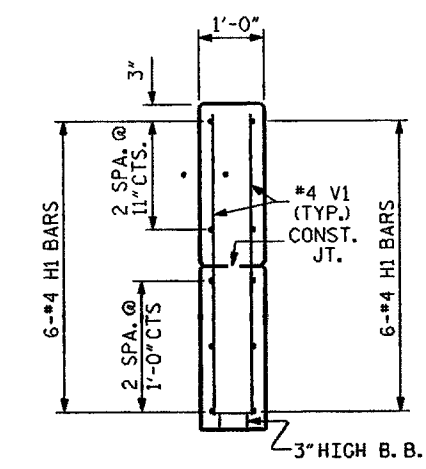
REVISIONS						CHIT NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL CHIT
2			4			15



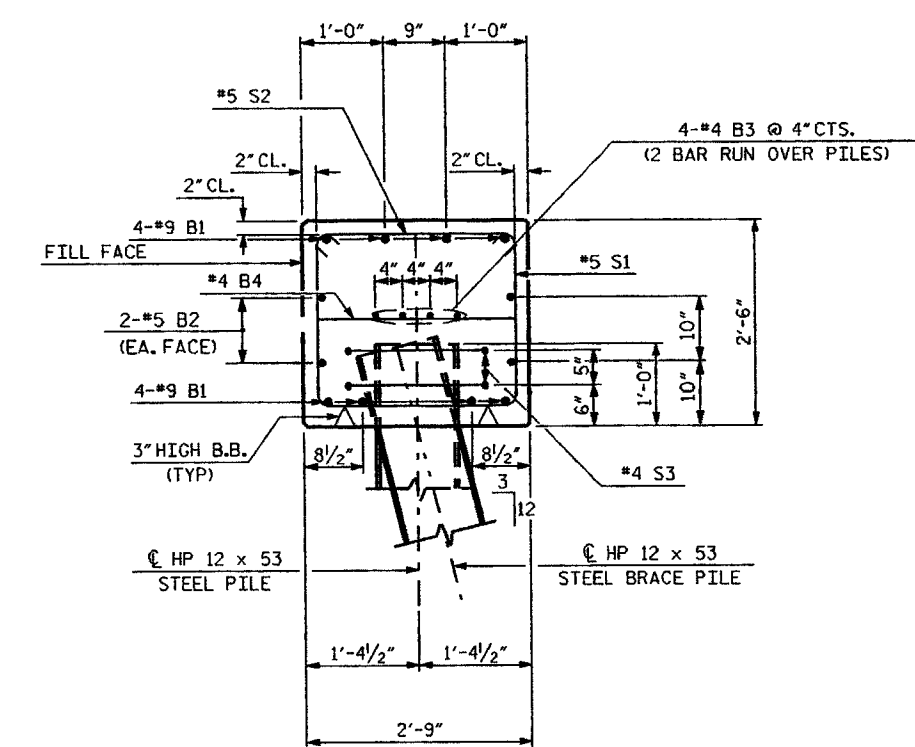
PLAN OF WING



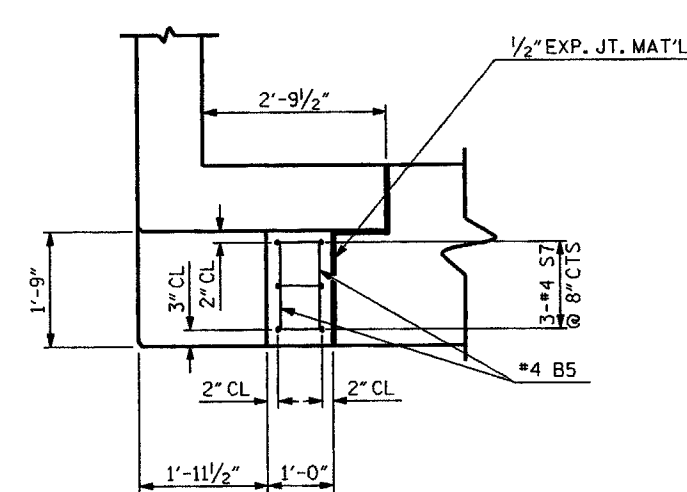
ELEVATION OF WING



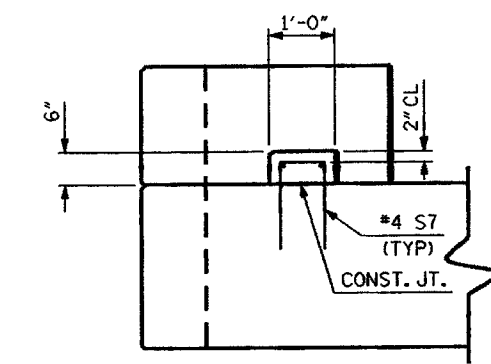
SECTION C-C



SECTION THRU A-A

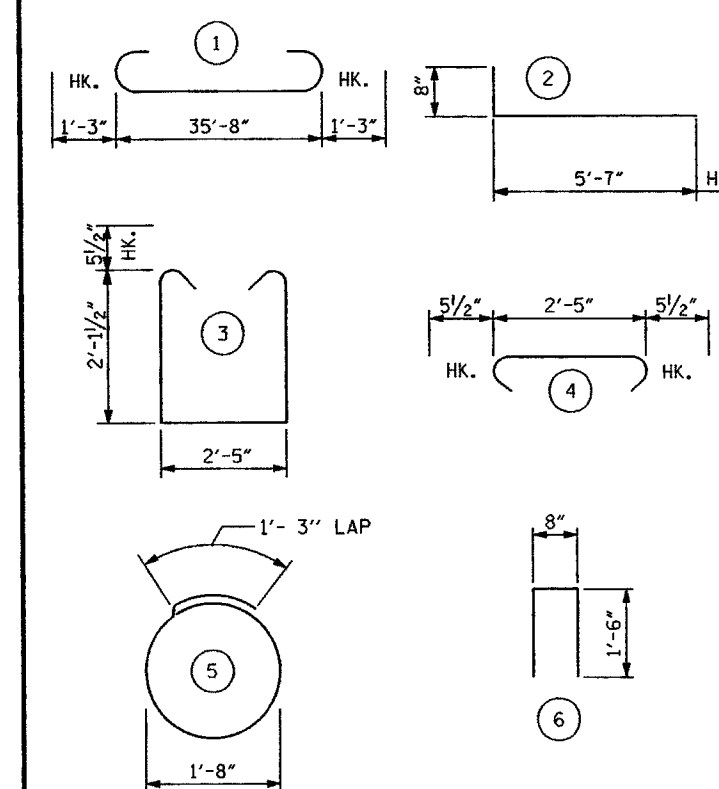


PLAN OF LATERAL GUIDE

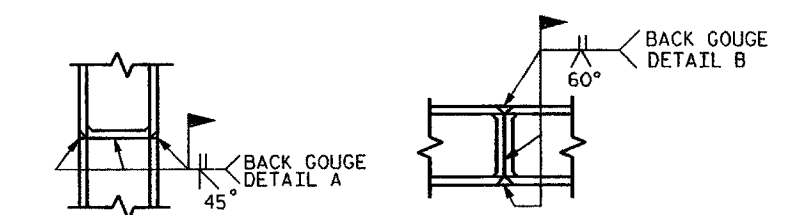


ELEVATION OF LATERAL GUIDE

BAR TYPES

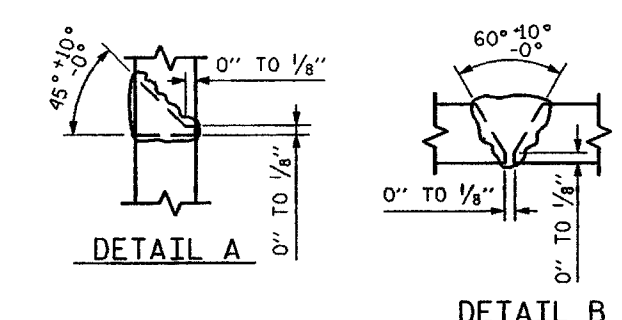


ALL BAR DIMENSIONS ARE OUT TO OUT.



*PILE VERTICAL

*PILE HORIZONTAL OR VERTICAL



*POSITION OF PILE DURING WELDING.

PILE SPLICE DETAILS

BILL OF MATERIAL

FOR END BENT ONE

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	9	1	38'-2"	1038
B2	4	5	STR	35'-8"	149
B3	8	4	STR	19'-1"	102
B4	9	4	STR	2'-5"	15
B5	4	4	STR	1'-4"	4
D1	20	6	STR	1'-6"	45
H1	24	4	2	6'-3"	100
K1	12	4	STR	3'-6"	28
S1	34	5	3	7'-7"	269
S2	34	5	4	3'-4"	118
S3	10	4	5	6'-6"	43
S7	6	5	6	3'-8"	13
V1	40	4	STR	4'-7"	122

REINFORCING STEEL = 2046 LBS.

CLASS "A" CONCRETE
 POUR 1 CAP & LOWER PART OF WINGS 10.1 CU.YD.
 POUR 2 UPPER PART OF WINGS 1.6 CU.YD.
 POUR 3 LATERAL GUIDES 0.1 CU.YD.
 TOTAL = 11.8 CU.YD.

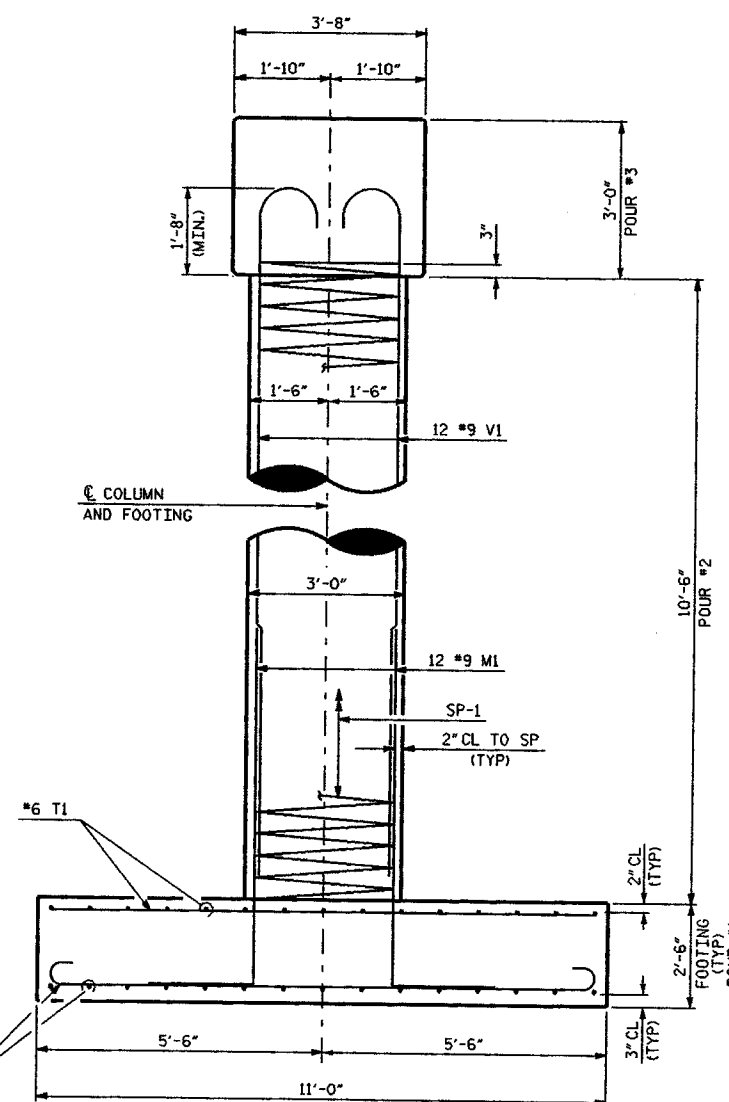
HP 12 X 53 PILES
 EB#1 5 PILES REQUIRED = 50 LIN FT.

WBS NO. 33618
 COUNTY: STANLY
 STATION: 16+20.00
 REPLACES BRIDGE NO. 209

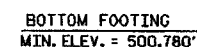
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DETAILS FOR
 END BENT NO. 1

NO.	BY	DATE	NO.	BY	DATE
1	WW	2/10	3		
2			4		



END ELEVATION



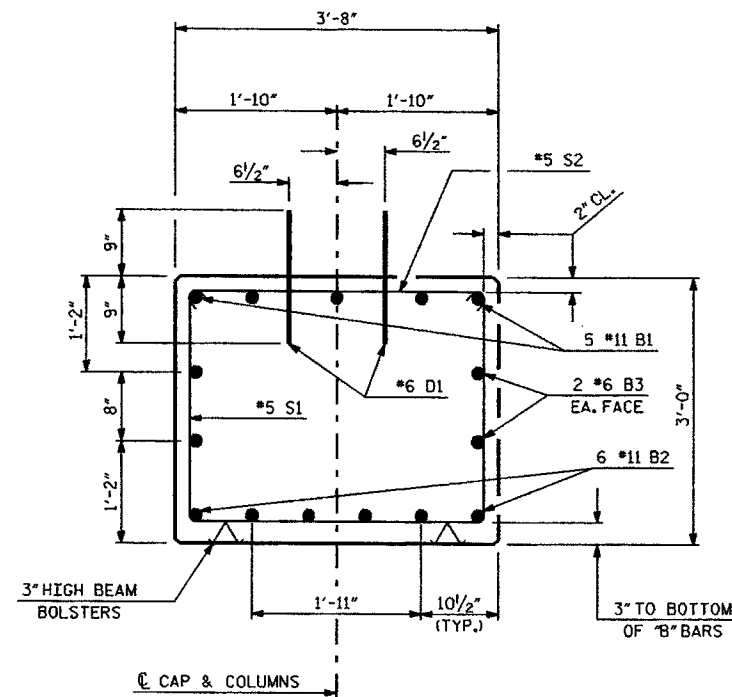
ELEVATION

WBS NO. 33618
COUNTY: STANLY
STATION: 10+20.00
REPLACES BRIDGE NO. 209

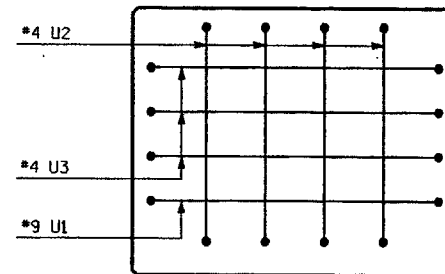
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
INTERIOR BENT #1
27' CLEAR ROADWAY
90° SKEW

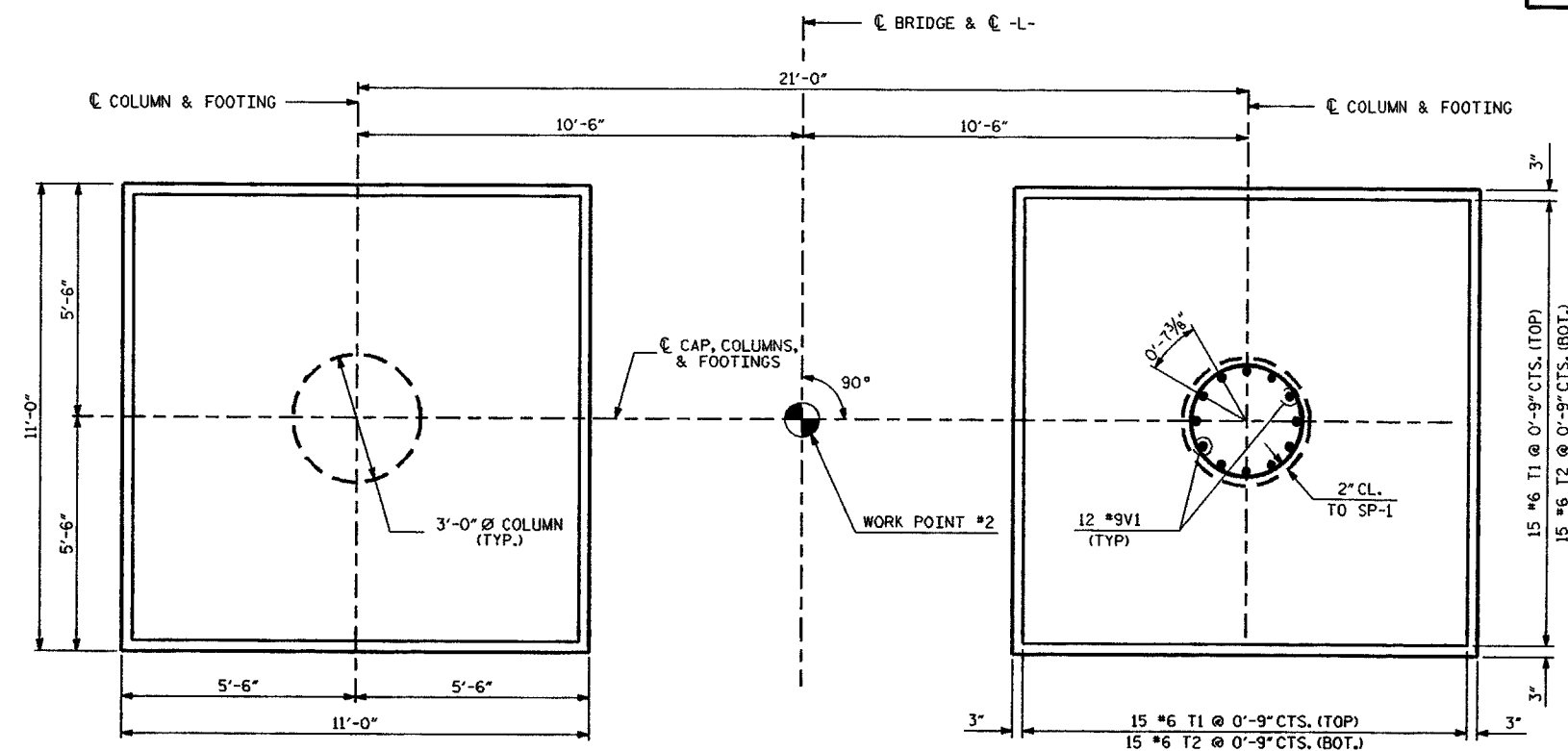
REVISIONS						SHEET NO. 10
NO.	BY	DATE	NO.	BY	DATE	
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2			4			



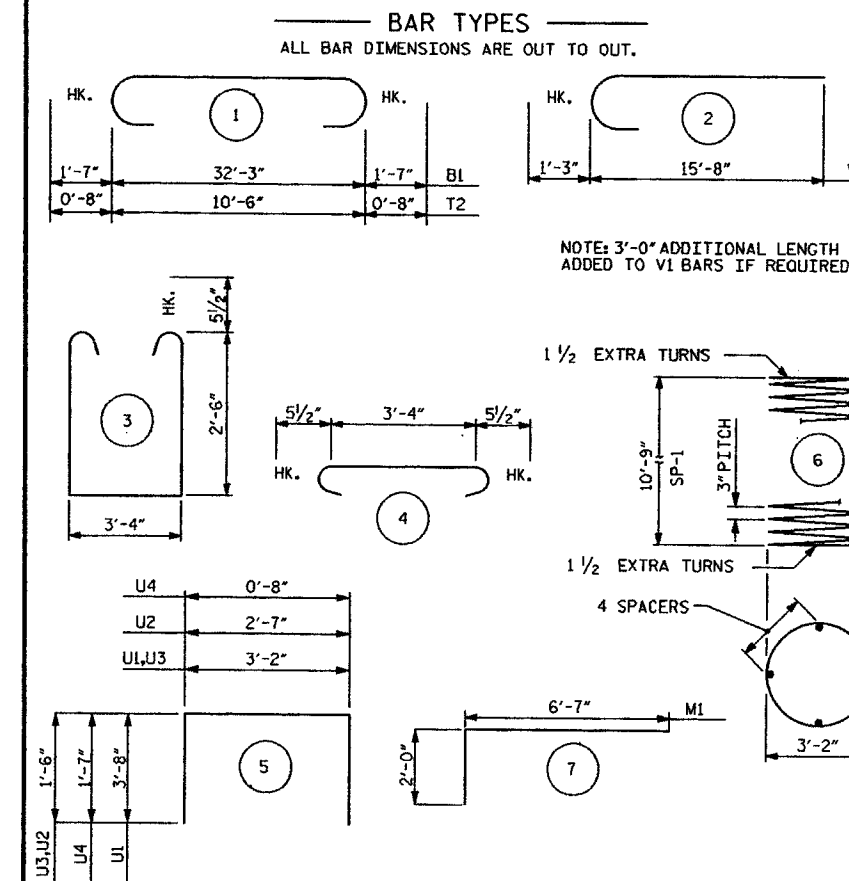
SECTION AA



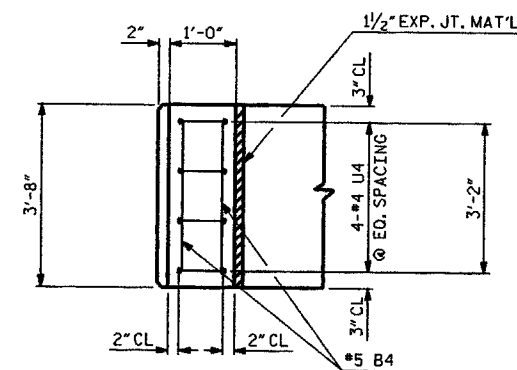
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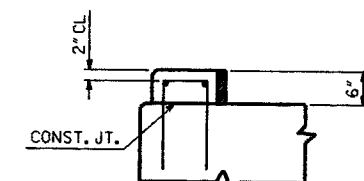
PLAN OF COLUMNS & FOOTINGS



** NOTE: THE "SP" SPIRAL REINFORCING STEEL SHALL BE W20 OR D-20 COLD DRAWN WIRE OR #4 PLAIN OR DEFORMED BAR.



PLAN



ELEVATION

LATERAL GUIDE DETAIL

BILL OF MATERIAL					
REINFORCING STEEL BENT NO. 1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	5	11	1	35'-5"	941
B2	6	11	STR	32'-3"	1028
B3	4	6	STR	32'-3"	194
B4	4	5	STR	3'-2"	13
D1	40	6	STR	1'-6"	90
M1	24	9	7	8'-7"	700
S1	47	5	3	9'-3"	453
S2	47	5	4	4'-3"	208
T1	60	6	STR	10'-6"	946
T2	60	6	1	11'-10"	1066
U1	2	9	5	10'-6"	71
U2	8	4	5	5'-7"	30
U3	6	4	5	6'-2"	25
U4	8	5	5	3'-10"	32
V1	24	9	2	16'-11"	1380
REINFORCING STEEL			TOTAL = 7177 LBS.		
SPIRAL COLUMN REINFORCING STEEL					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
SP-1	2	※	6	379'-7"	507
SPIRAL COLUMN REINFORCING STEEL			TOTAL = 507 LBS.		
CLASS "A" CONCRETE					
POUR #1- FOOTINGS				22.4 C.Y.	
POUR #2- COLUMNS				5.5 C.Y.	
POUR #3- CAP				13.3 C.Y.	
POUR #4- LATERAL GUIDES				0.1 C.Y.	
CLASS "A" CONCRETE			TOTAL = 41.3 C.Y.		

WBS NO. 33618
COUNTY: STANLY
STATION: 10+05.00
REPLACES BRIDGE NO. 209

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DETAILS FOR
INTERIOR BENT NO. 1
27' CLEAR ROADWAY
90° SKEW

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1	HW	2/10	3		
2			4		

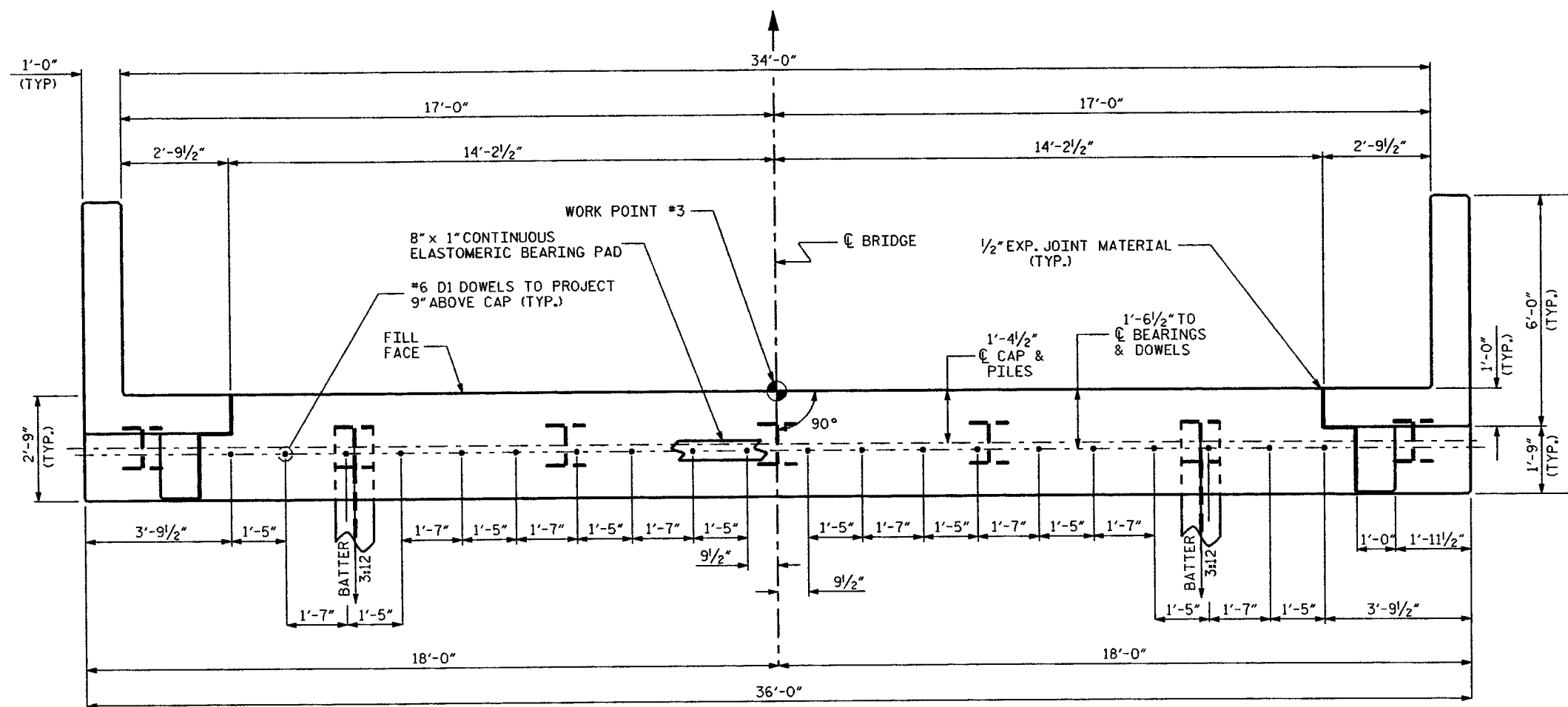
NOTE: NOT TO SCALE

DRAWN BY: J. F. FINE
CHECKED BY: R. W. WHEAT
DATE: NOV. 2007
DATE: JAN. 2008

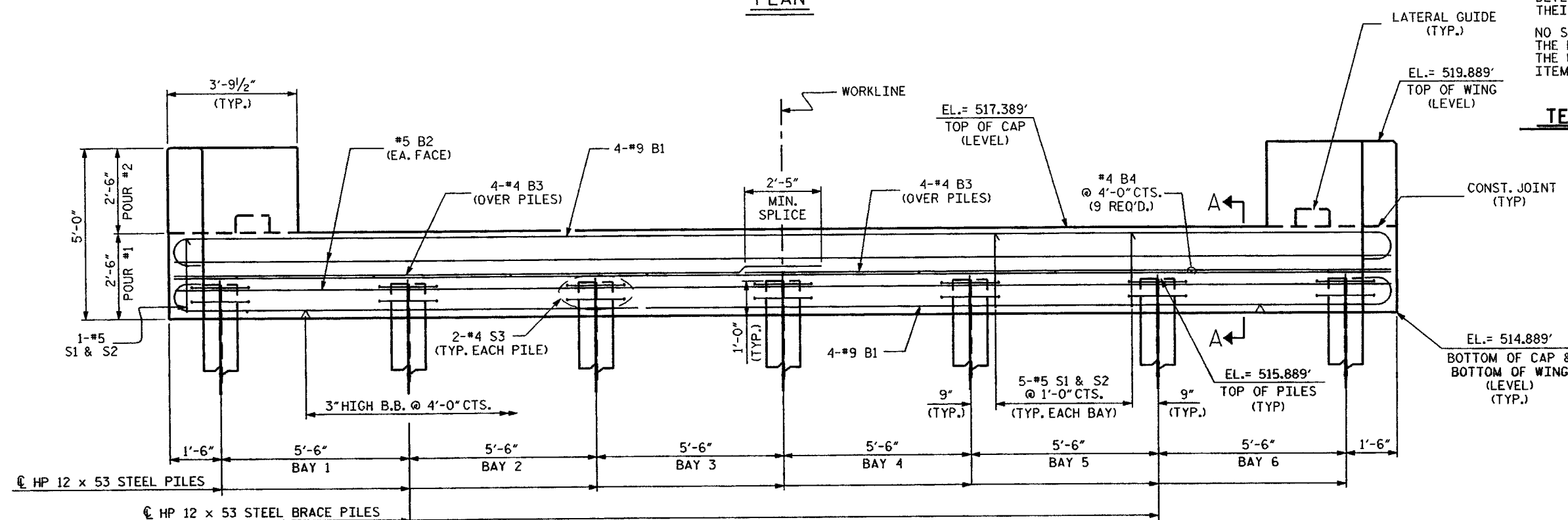
NOTES

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.

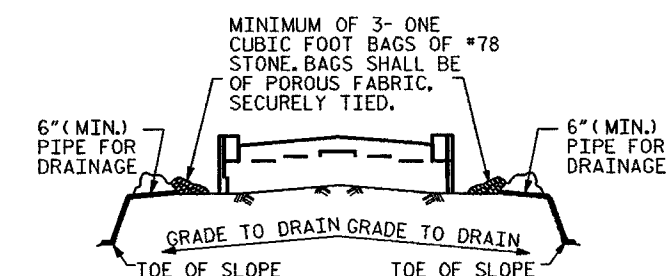
FOR SECTION A-A, WING, LATERAL GUIDE AND PILE SPICE DETAILS SEE SHEET 13.



PLAN



ELEVATION



BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END EXCAVATION. PIPE MAY BE EITHER CONCRETE CORRUGATED PLASTIC, PERFORATED PIPE WILL NOT BE ALLOWED.

BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTORS SHALL REMOVE AND DISPERSE OF SILT ACCUMULATION AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR EFFECTIVENESS.

NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

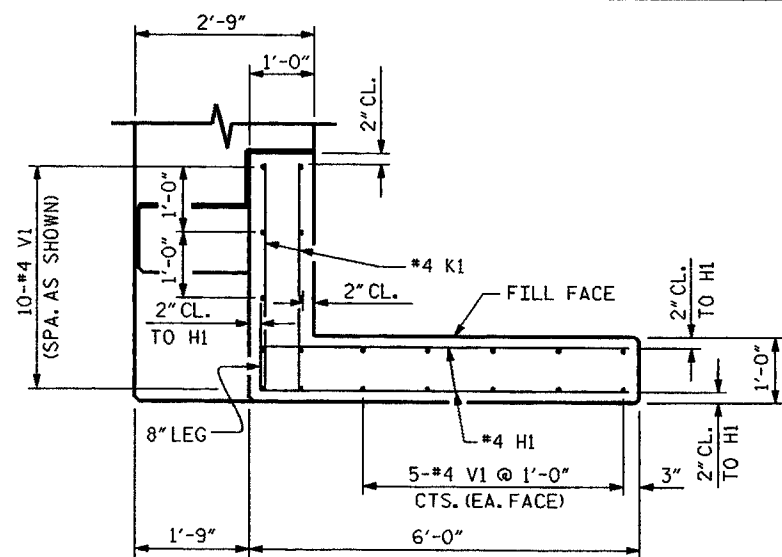
TEMPORARY DRAINAGE AT END BENT

WBS NO. 33618
COUNTY: STANLY
STATION: 10+20
REPLACES BRIDGE NO. 209

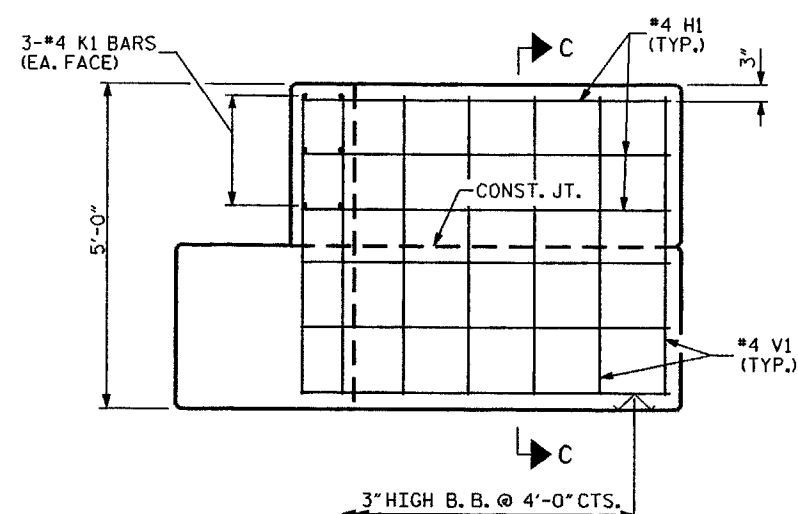
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT #2
27' CLEAR ROADWAY
90° SKEW

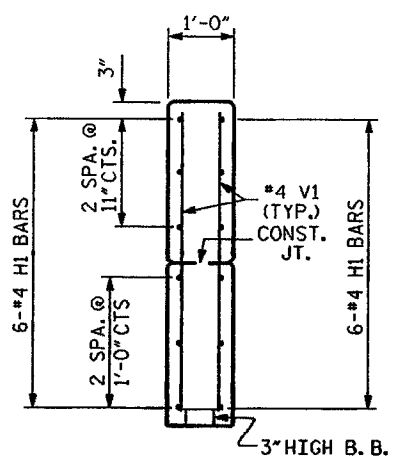
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			12
2			4			15



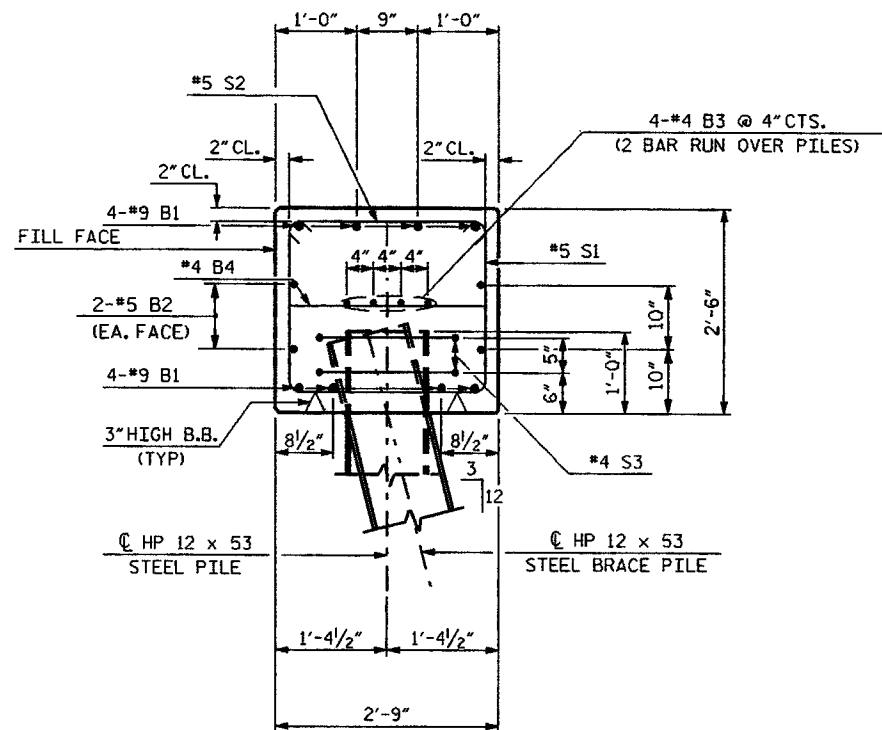
PLAN OF WING



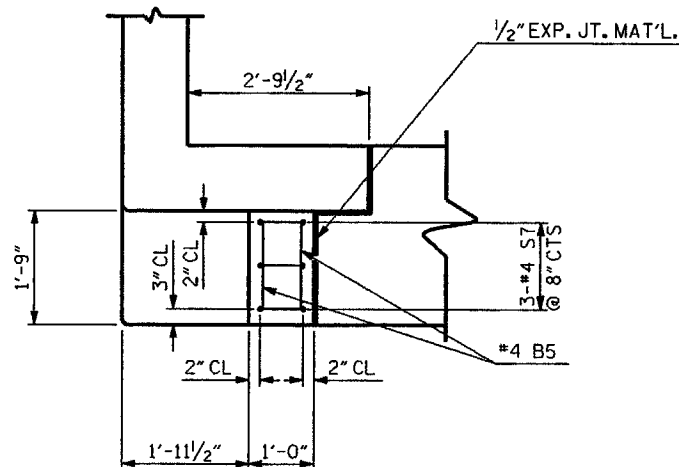
ELEVATION OF WING



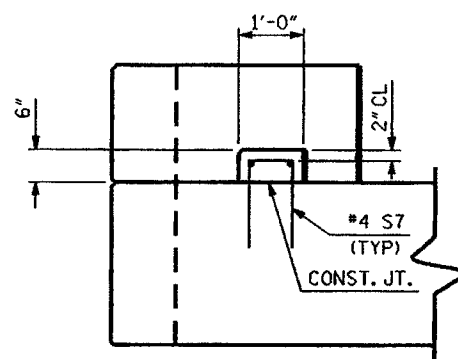
SECTION C-C



SECTION A-A

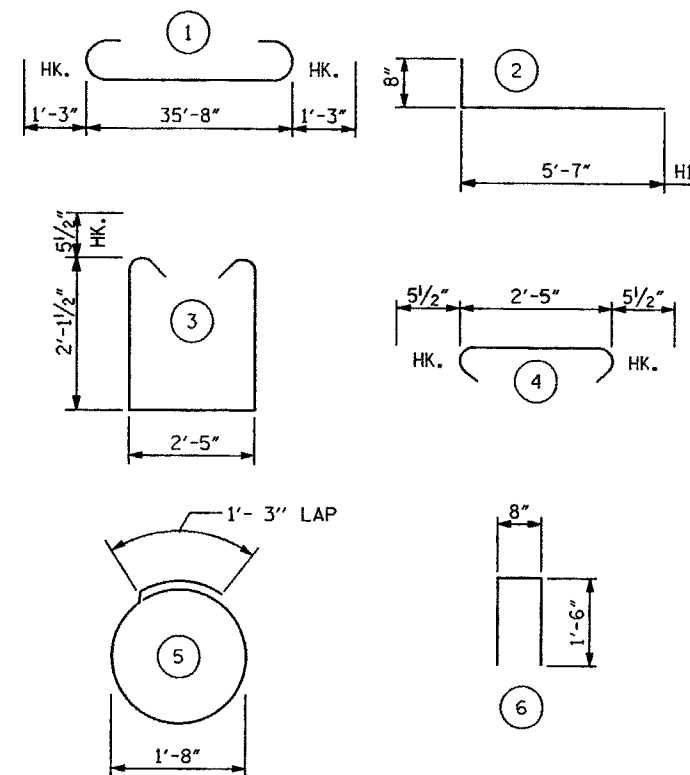


PLAN OF LATERAL GUIDE



ELEVATION OF LATERAL GUIDE

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

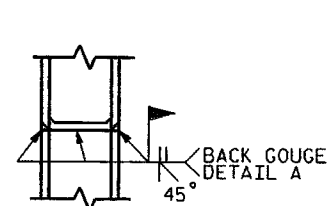
FOR ONE END BENT2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	9	1	38'-2"	1038
B2	4	5	STR	35'-8"	149
B3	8	4	STR	19'-1"	102
B4	9	4	STR	2'-5"	15
B5	4	4	STR	1'-4"	4
D1	20	6	STR	1'-6"	45
H1	24	4	2	6'-3"	100
K1	12	4	STR	3'-6"	28
S1	32	5	3	7'-7"	253
S2	32	5	4	3'-4"	111
S3	14	4	5	6'-6"	61
S7	6	5	6	3'-8"	23
V1	40	4	STR	4'-7"	105

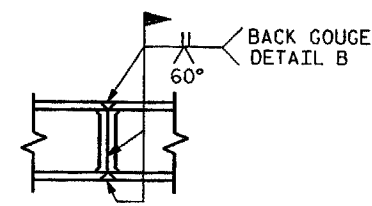
REINFORCING STEEL = 2034 LBS.

CLASS "A" CONCRETE
POUR 1 CAP & LOWER PART OF WINGS 10.1 CU.YD.
POUR 2 UPPER PART OF WINGS 1.6 CU.YD.
POUR 3 LATERAL GUIDES 0.1 CU.YD.
TOTAL = 11.8 CU.YD.

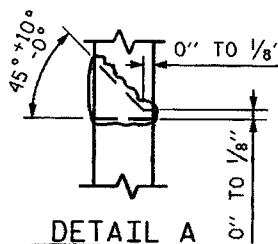
HP 12 X 53 PILES
EB#2 7 PILES REQUIRED = 105 LIN FT.



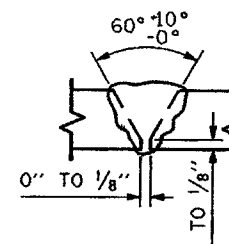
*PILE VERTICAL



*PILE HORIZONTAL OR VERTICAL



*POSITION OF PILE DURING WELDING.



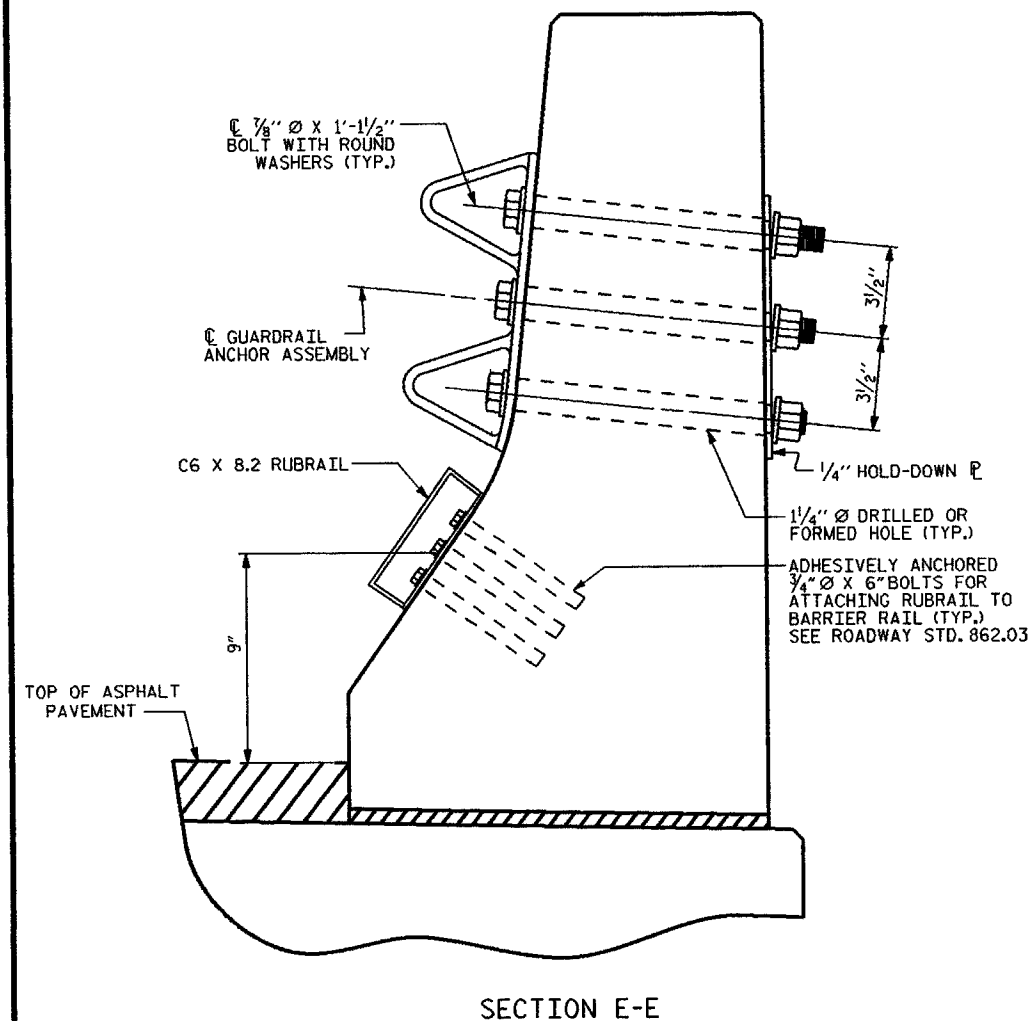
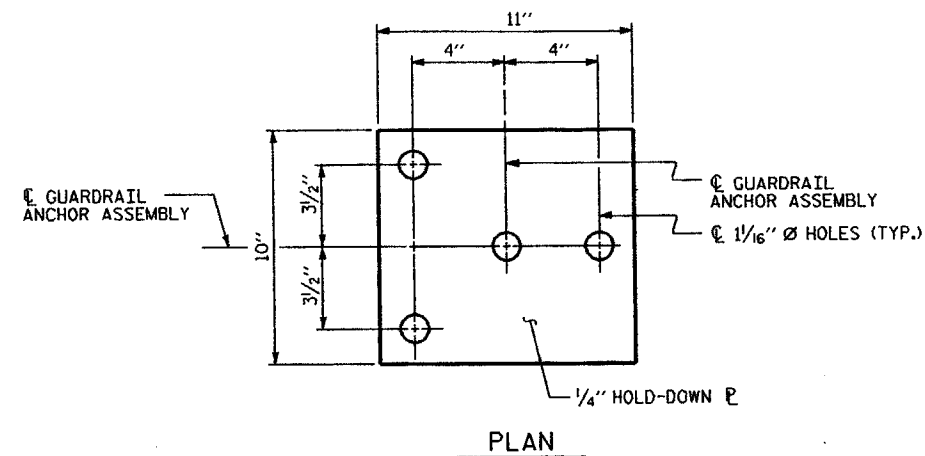
DETAIL B

PILE SPLICE DETAILS

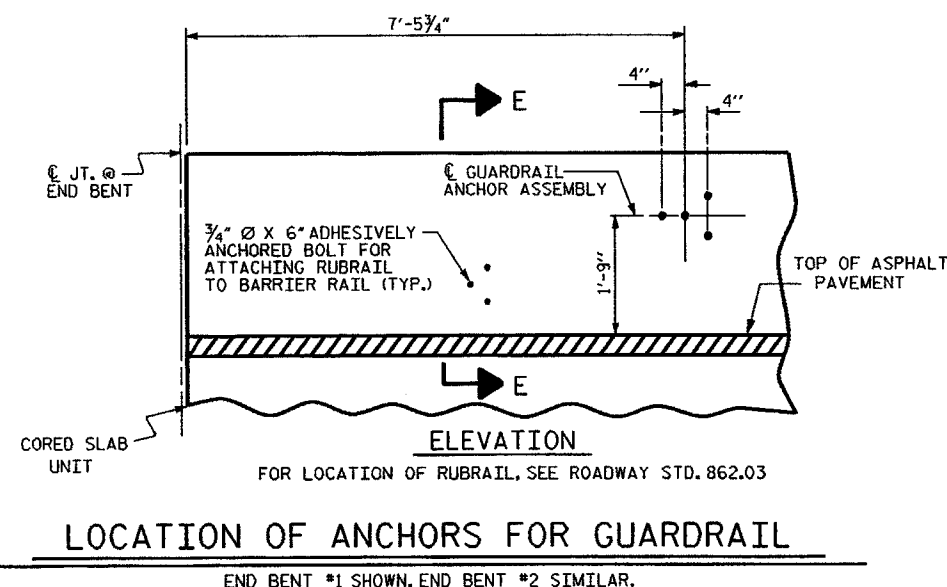
WBS NO. 33618
COUNTY: STANLY
STATION: 16+20.00
REPLACES BRIDGE NO. 209

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DETAILS FOR
END BENT NO. 2



B77-GUARDRAIL ANCHOR ASSEMBLY DETAILS



SKETCH SHOWING POINTS OF ATTACHMENTS
* DENOTES GUARDRAIL ANCHOR ASSEMBLY

- NOTES**
- THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 4 - 1/8" Ø BOLTS WITH NUTS AND WASHERS, RUBRAIL, AND ADHESIVELY ANCHORED BOLTS.
 - THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.
 - BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 1/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)
 - THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.
 - AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.
 - THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR STEEL BEAM GUARDRAIL.
 - THE 1/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.
 - THE C6 X 8.2 RUBRAIL IS TO BE ADHESIVELY ANCHORED TO THE RAIL USING THREE 3/4" Ø X 6" BOLTS WITH WASHERS. LEVEL ONE FIELD TESTING IS REQUIRED AND THE YIELD LOAD OF THE 3/4" Ø BOLT IS 12 KIPS. SEE ROADWAY STANDARD 862.03 FOR DETAILS AND LOCATION OF THE RUBRAIL.
 - SHIFT FIRST GUARDRAIL POST AS NECESSARY TO CLEAR END BENT CAP.

ASSEMBLED BY : S. T. SANDOR
CHECKED BY : R. WEISZ
DATE : 10/2006
DATE : 1/2010
DRAWN BY : TLA 5/06
CHECKED BY : GM 5/06
ADDED 5/1/06

11-FEB-2010 11:41
*****DCN*****
rweisz AT BGMJ240329

NOT TO SCALE

PROJECT NO. : WBS. 33618
COUNTY: STANLY
STATION: 16+20.00-L-
REPLACES BRIDGE NO. 209

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD GUARDRAIL ANCHORAGE FOR BARRIER RAIL					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO. 14					TOTAL SHEETS 15

STD. NO. GRA2

NOTES

FOR REINFORCED BRIDGE APPROACH FILL, INCLUDING FABRIC, IMPERMEABLE MEMBRANE, 4" DRAINAGE PIPE, #78M STONE, AND SELECT MATERIAL SEE ROADWAY STANDARD 422.10 AND SPECIAL PROVISION.

AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED WITH 4" OF INTERMEDIATE OR SURFACE COARSE ASPHALT.

THE 6" COMPACTED A.B.C. SHALL EXTEND 10'-0" BEYOND THE END OF THE APPROACH SLAB AND 1'-0" OUTSIDE EACH EDGE OF SLAB.

THE CONTRACTOR MAY USE 4" TYPE B-25.0B ASPHALT CONCRETE BASE COURSE IN LIEU OF 6" COMPACTED A.B.C. IF THIS OPTION IS USED, THE BASE COURSE SHALL EXTEND 1'-0" BEYOND THE END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB.

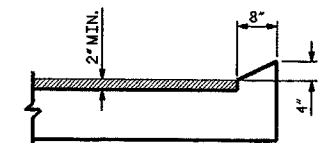
THE CONTRACTOR MAY USE 5" CLASS "A" CONCRETE BASE IN LIEU OF 6" COMPACTED A.B.C. IF THIS OPTION IS USED, THE CONCRETE BASE SHALL EXTEND 1'-0" BEYOND THE END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB. THE CONCRETE SHALL BE FINISHED TO A SMOOTH SURFACE AND A LAYER OF 30LB. ROOFING FELT SHALL BE PLACED BETWEEN THE CONCRETE BASE AND THE APPROACH SLAB TO PREVENT BOND. THE APPROACH SLAB SHALL NOT BE CAST UNTIL THE CONCRETE BASE HAS REACHED AN AGE OF THREE CURING DAYS.

TEMPORARY DRAINAGE, TEMPORARY BERM, AND SLOPE DRAINS WILL BE PAID UNDER THE LUMP SUM PRICE FOR APPROACH SLABS. SEE ROADWAY STANDARD 1622.01.

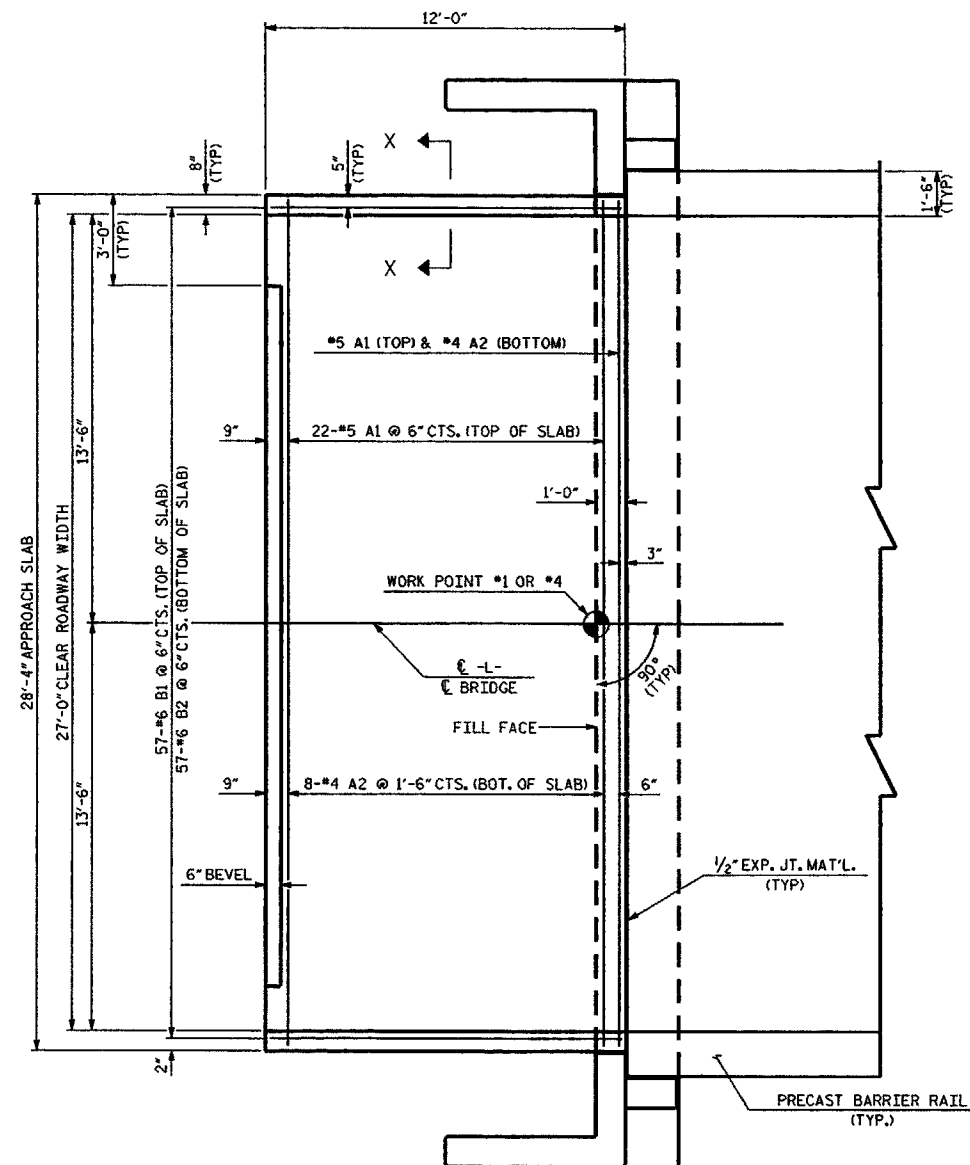
THE JOINT AT THE END OF THE BENT SHALL BE GROUTED AS SOON AS PRACTICAL AFTER CONSTRUCTION OF THE APPROACH SLAB.

APPROACH SLAB GROOVING IS NOT REQUIRED.

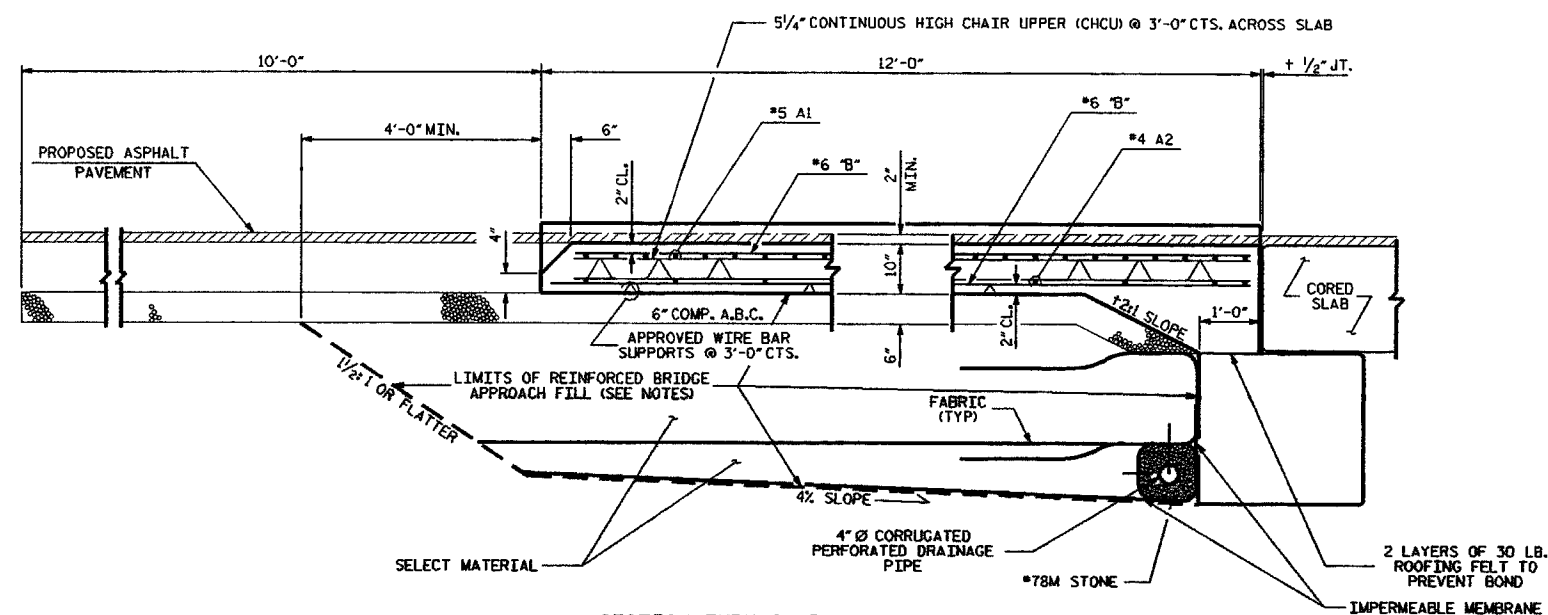
FOR JOINT DETAILS, SEE SHEET 6.



SECTION X-X



PLAN OF APPROACH SLAB #1 SHOWN
(APPROACH SLAB #2 SIMILAR)



SECTION THRU SLAB

+ NORMAL TO END BENT

NOTE: NOT TO SCALE

COUNTY: STANLY
STATION: 10+20.00
REPLACES BRIDGE NO. 209

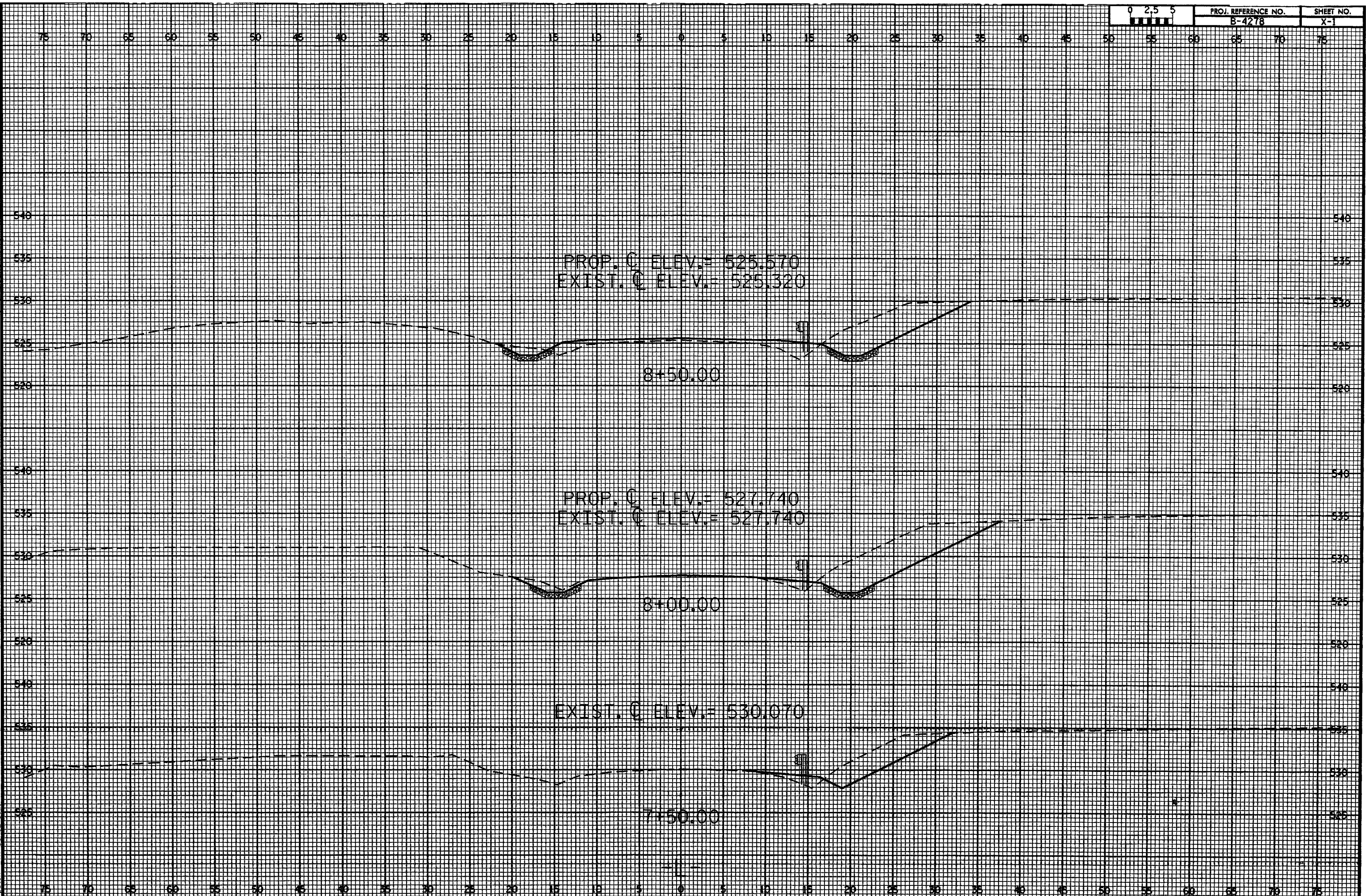
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

APPROACH SLAB FOR
BRIDGE #209 ON SR-1136
OVER ISLAND CREEK

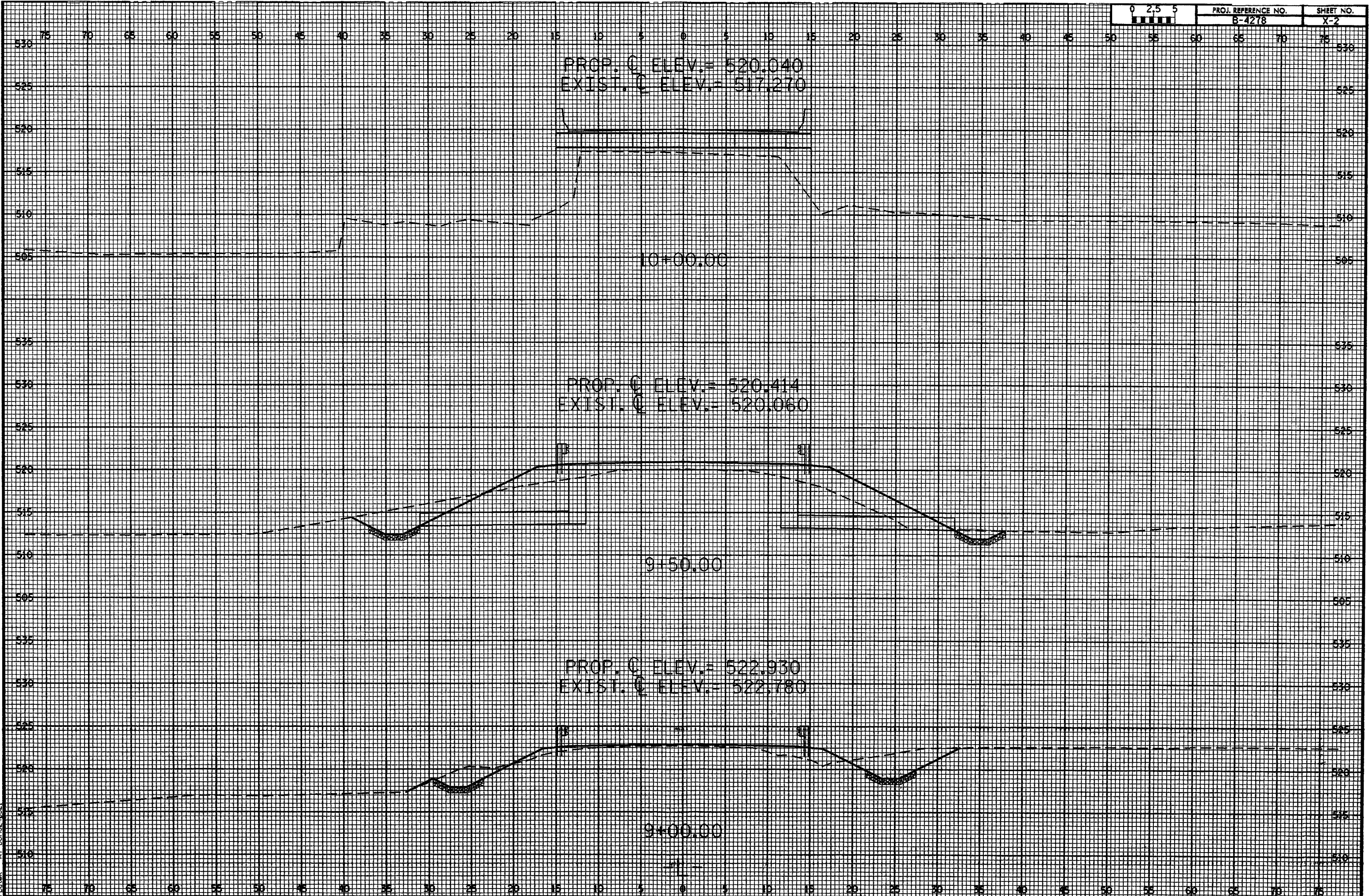
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1	SW	2/10	2		
3			4		

15
15

DRAWN BY: R. PUTER
CHECKED BY: R. WENSE
DATE: NOV. 2007
DATE: FEB. 2009

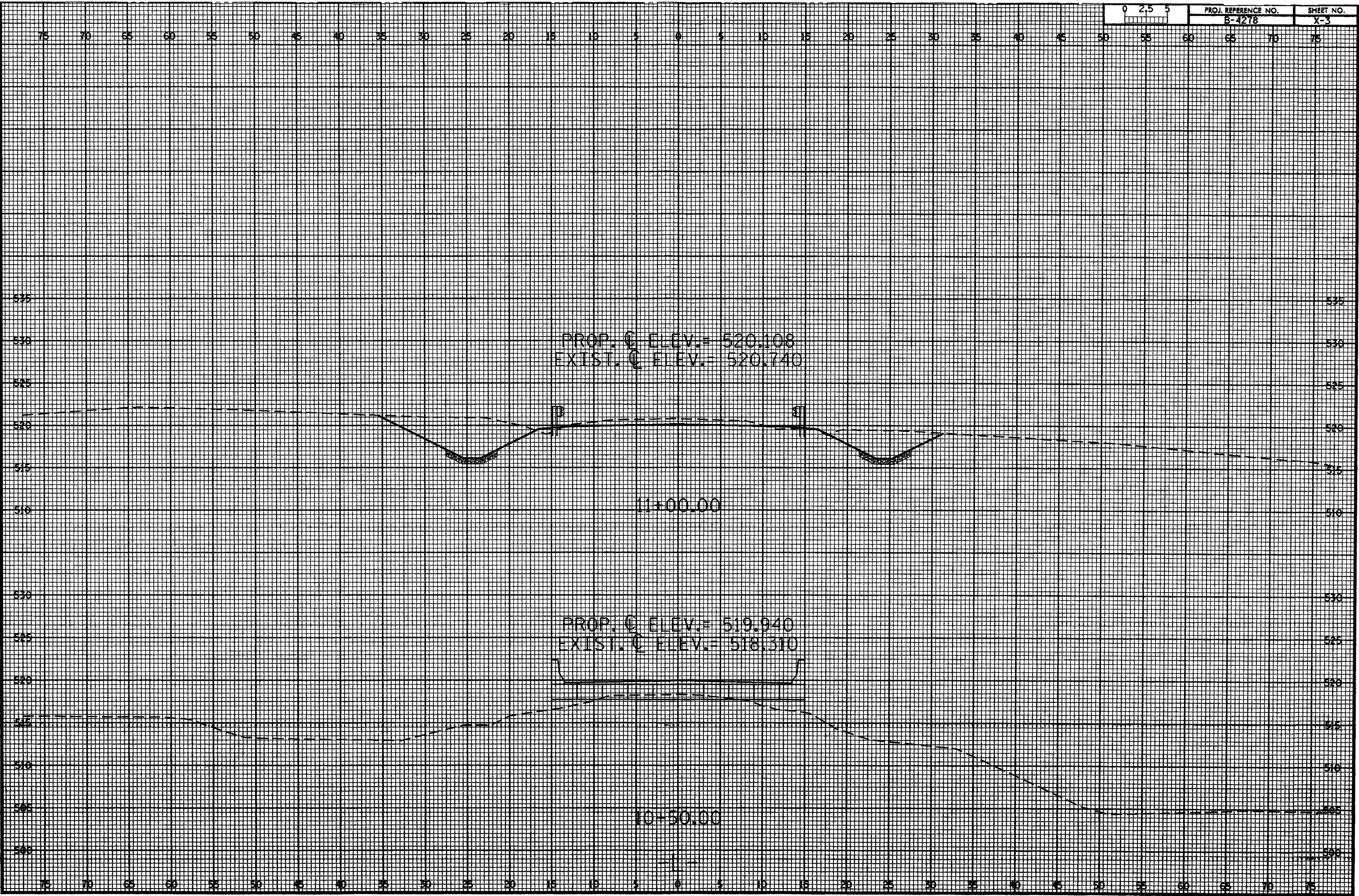


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Route



8/22/09

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	B-4278	X-3

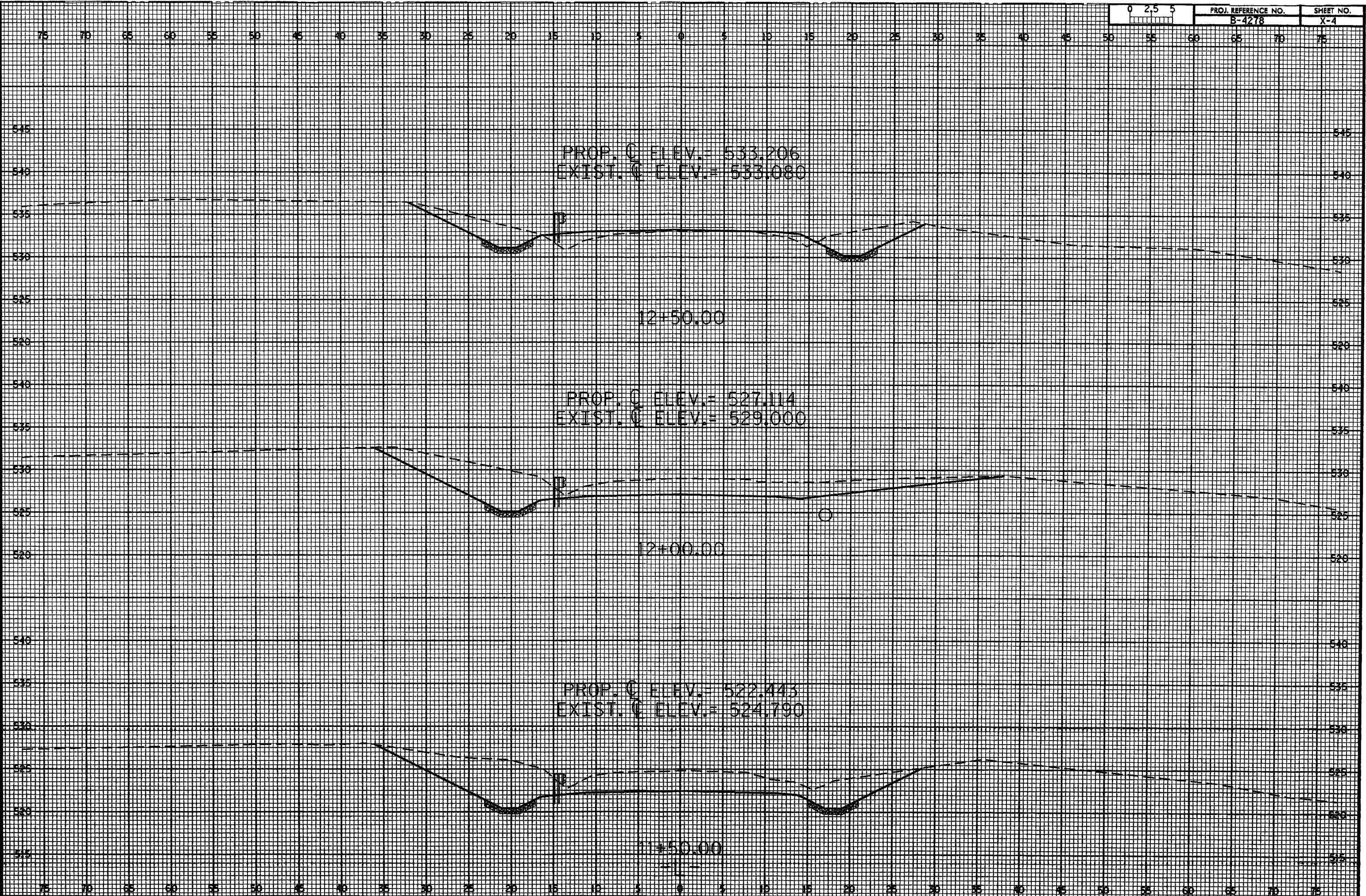


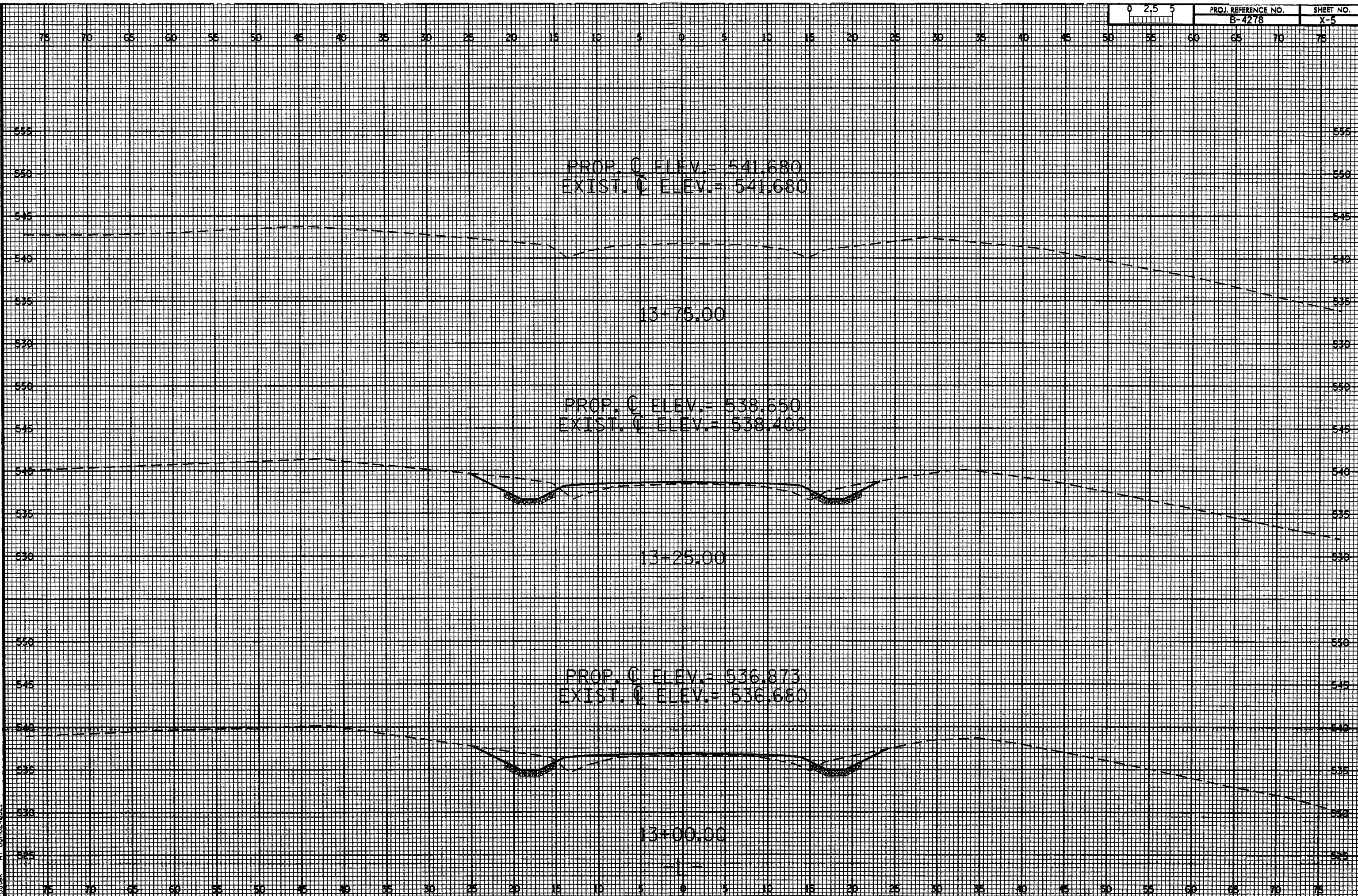
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8/23/99

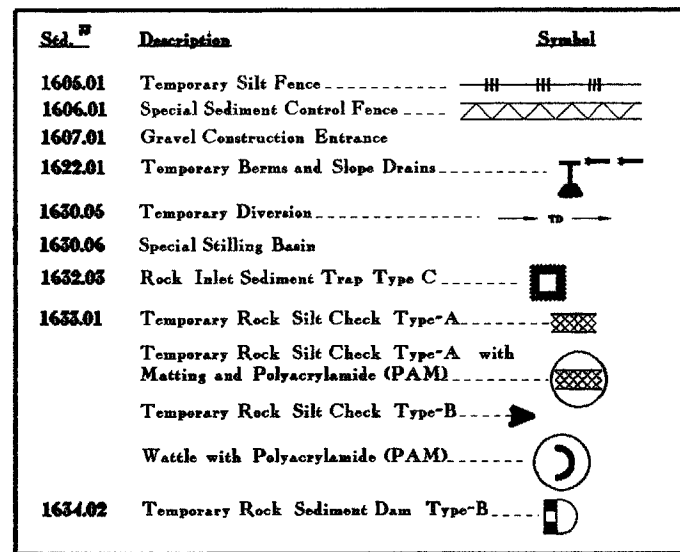
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0 2.5 5	PROJ. REFERENCE NO. B-4278	SHEET NO. X-4
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#209 STANLY

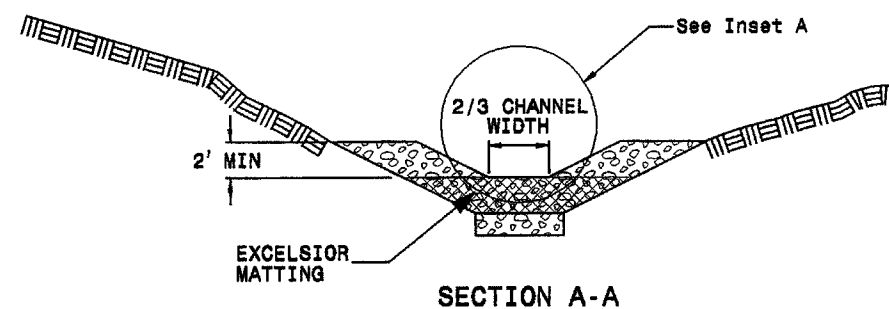
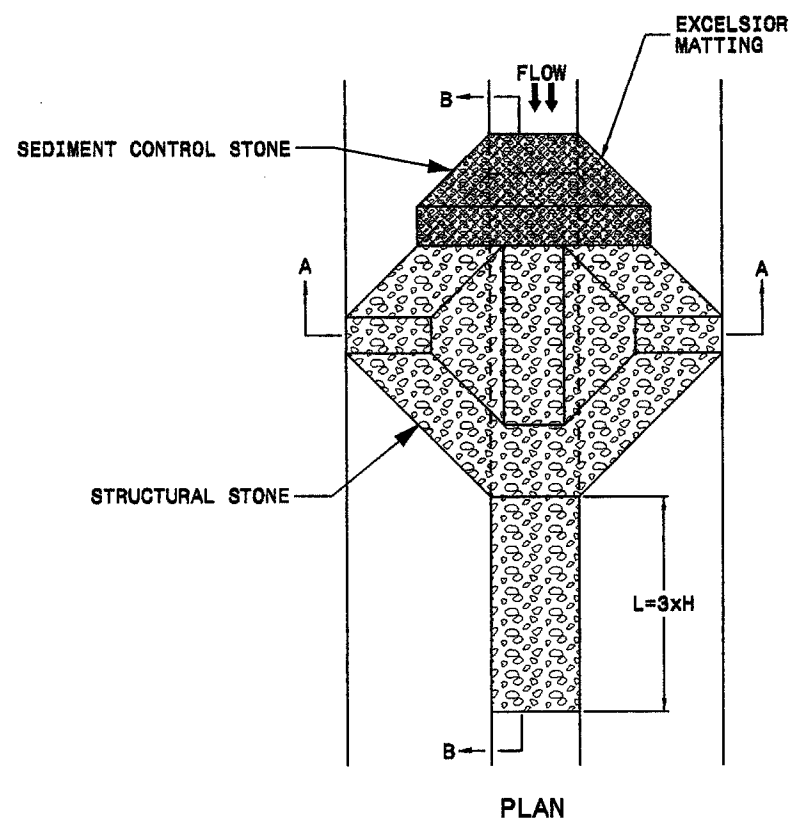


REVISIONS						SHEET NO. EC-1
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS
2			4			

PROJECT NO. B-4278
#209 STANLY

EROSION CONTROL PLAN

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)

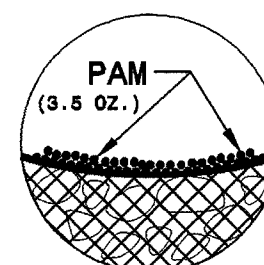


NOTES

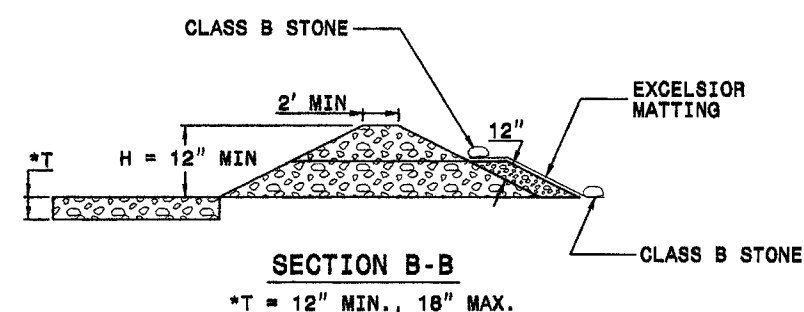
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION B-B

NOT TO SCALE

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2006 STANDARD SPECIFICATIONS

WBS NO. 33618
COUNTY: STANLY
STATION: 10+20.000
REPLACES BRIDGE NO. 209

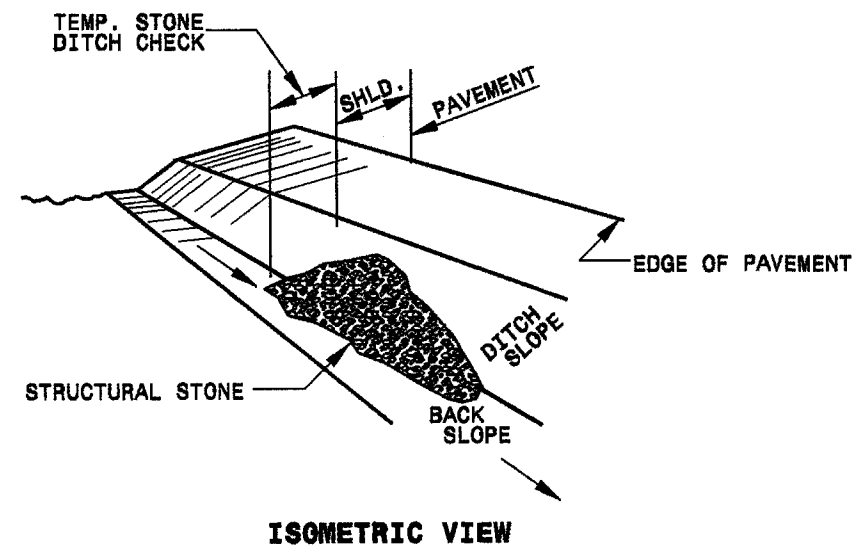
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN VIEW ALONG
C SURVEY OF BRIDGE #209
ON SR-1136 OVER
ISLAND CREEK

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

EROSION CONTROL PLAN

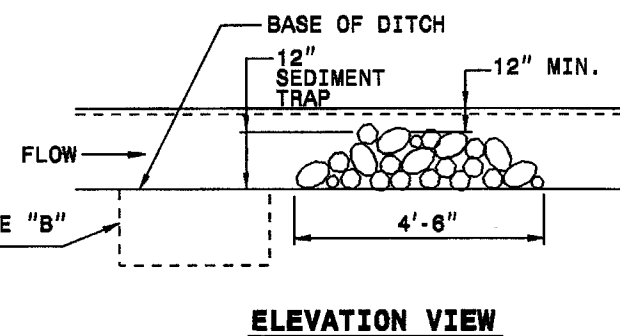
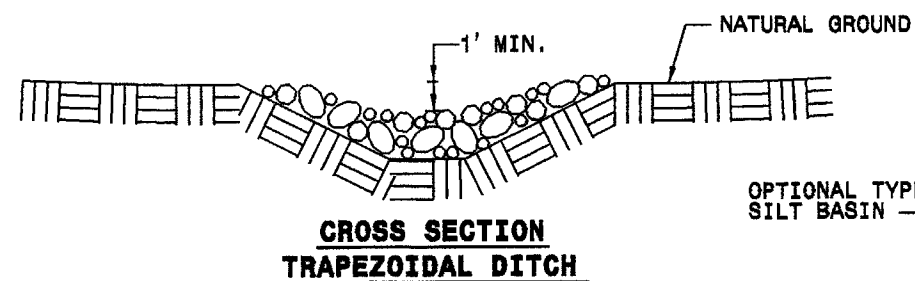
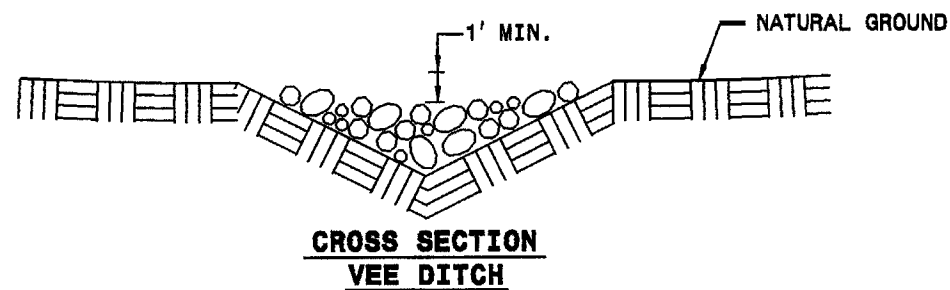
TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL



NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2006 STANDARD SPECIFICATIONS

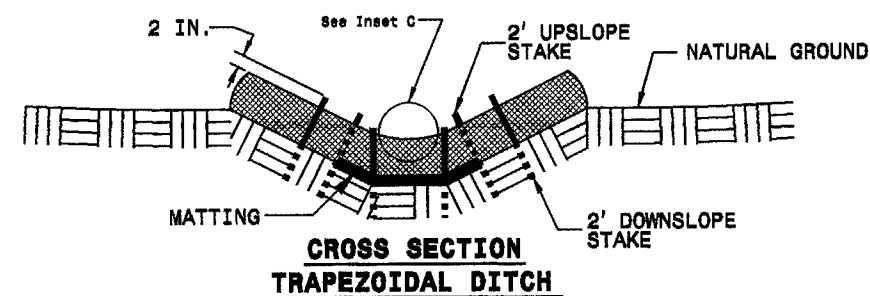
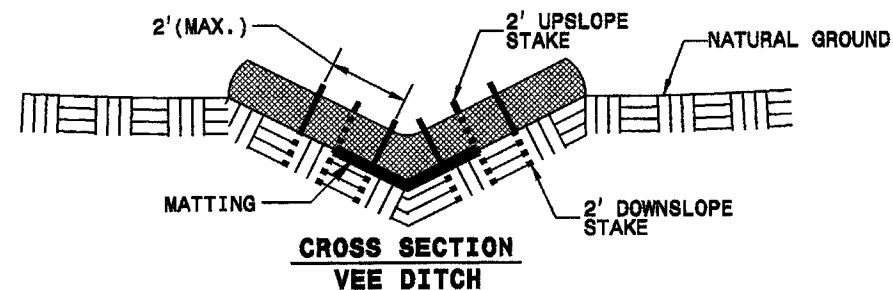
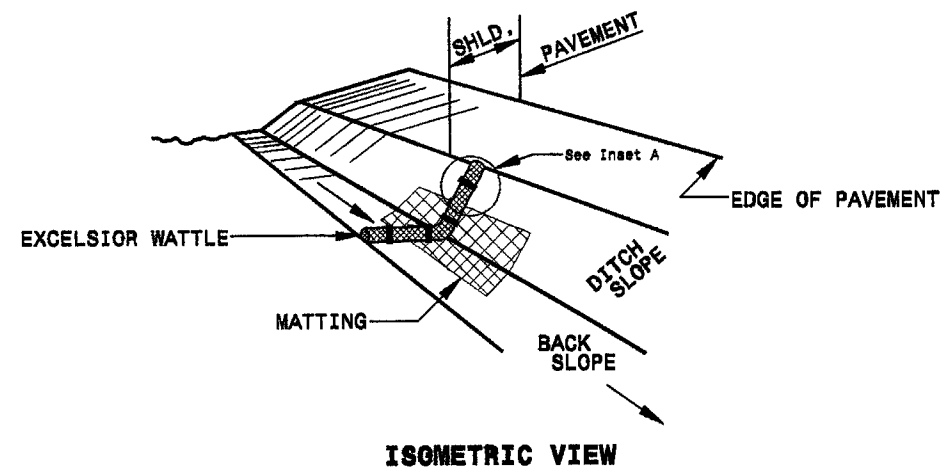
WBS NO. 33618
COUNTY: STANLY
STATION: 10+20.000
REPLACES BRIDGE NO. 209

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PLAN VIEW ALONG
SURVEY OF BRIDGE #209
ON SR-1136 OVER
ISLAND CREEK

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

EROSION CONTROL PLAN

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

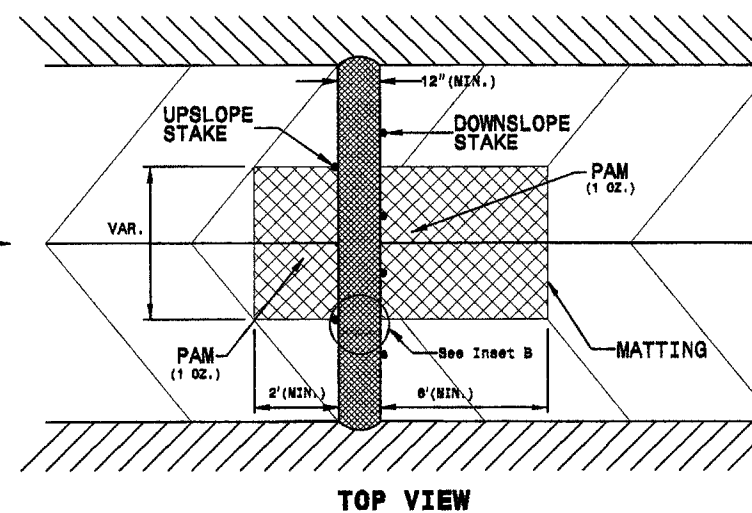
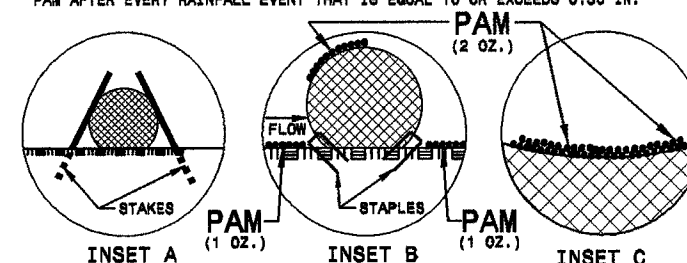
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

ROADSIDE ENVIRONMENTAL UNIT
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2006 STANDARD SPECIFICATIONS

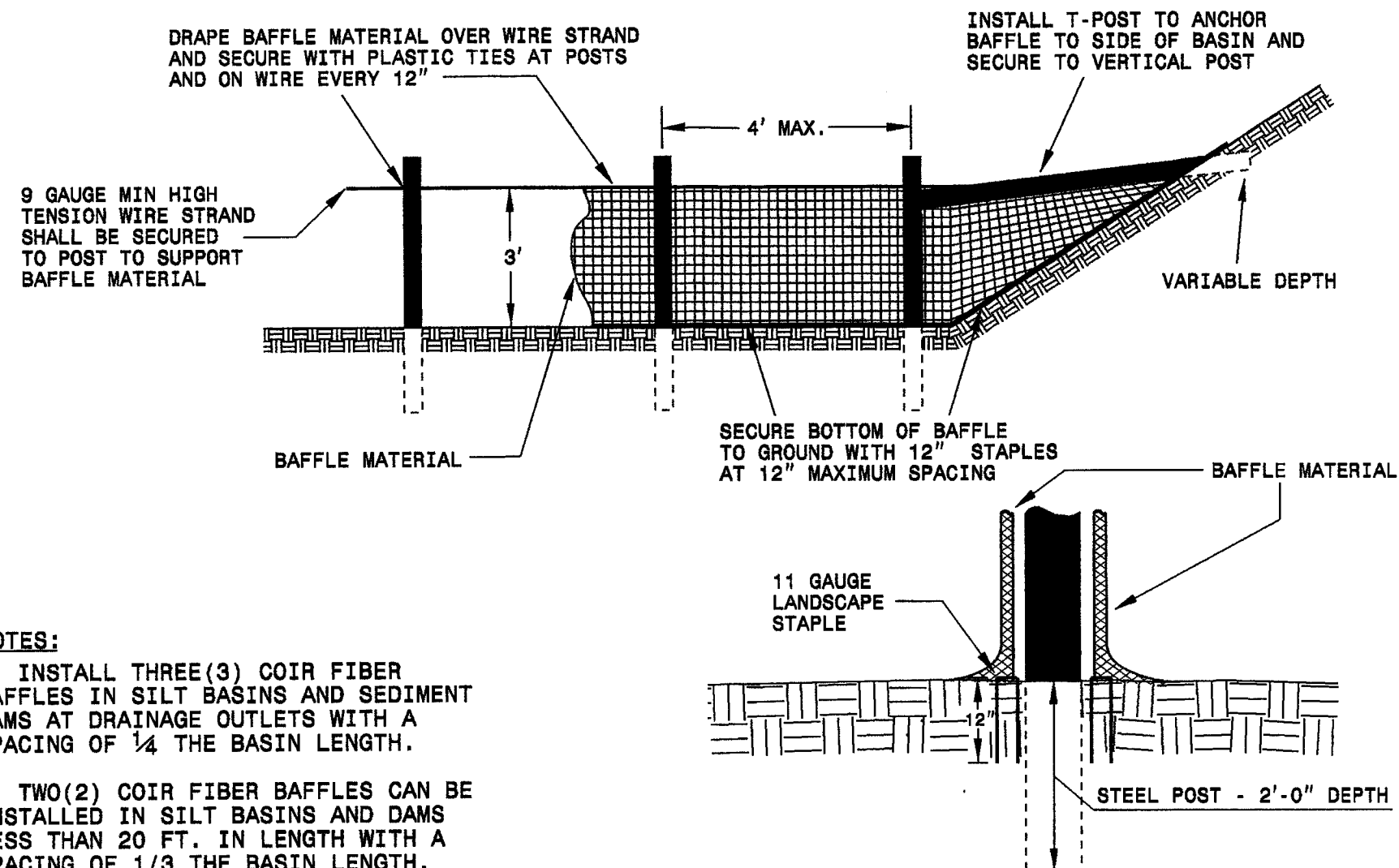
WBS NO. 33618
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PLAN VIEW ALONG
SURVEY OF BRIDGE #209
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ISLAND CREEK

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

~~#209 STANLY PROJECT NO. B-4278~~

COIR FIBER BAFFLE DETAIL



NOTES:

1. INSTALL THREE(3) COIR FIBER BAFFLES IN SILT BASINS AND SEDIMENT DAMS AT DRAINAGE OUTLETS WITH A SPACING OF $\frac{1}{4}$ THE BASIN LENGTH.
2. TWO(2) COIR FIBER BAFFLES CAN BE INSTALLED IN SILT BASINS AND DAMS LESS THAN 20 FT. IN LENGTH WITH A SPACING OF $\frac{1}{3}$ THE BASIN LENGTH.
3. TOP HEIGHT OF COIR FIBER BAFFLES SHALL NOT BE BELOW BASE OF EMERGENCY SPILLWAY ELEVATION.

**NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL
REQUIRE PRIOR APPROVAL BY ENGINEER.**

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2006 STANDARD SPECIFICATIONS

WBS NO. 33618
COUNTY: STANLY
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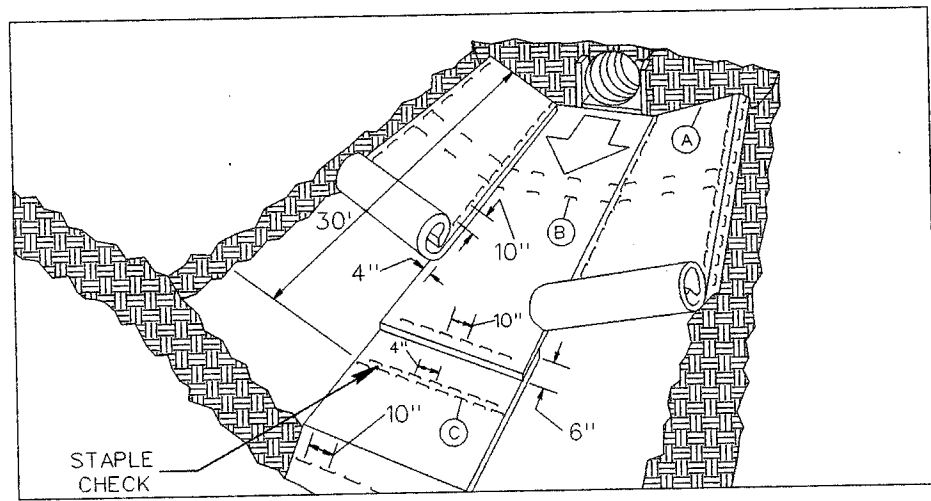
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PLAN VIEW ALONG
C SURVEY OF BRIDGE #209
ON SR-1136 OVER
ISLAND CREEK

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

#209 STANLY PROJECT NO. B-4278

EROSION CONTROL PLAN

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

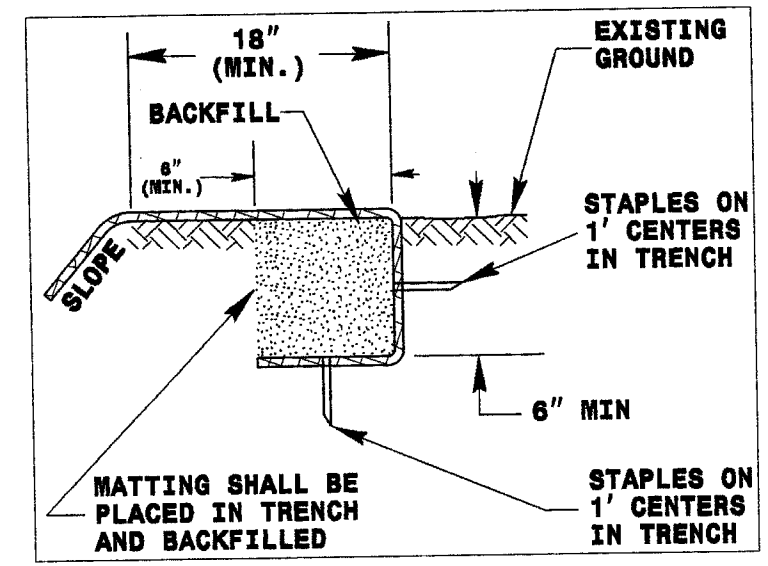
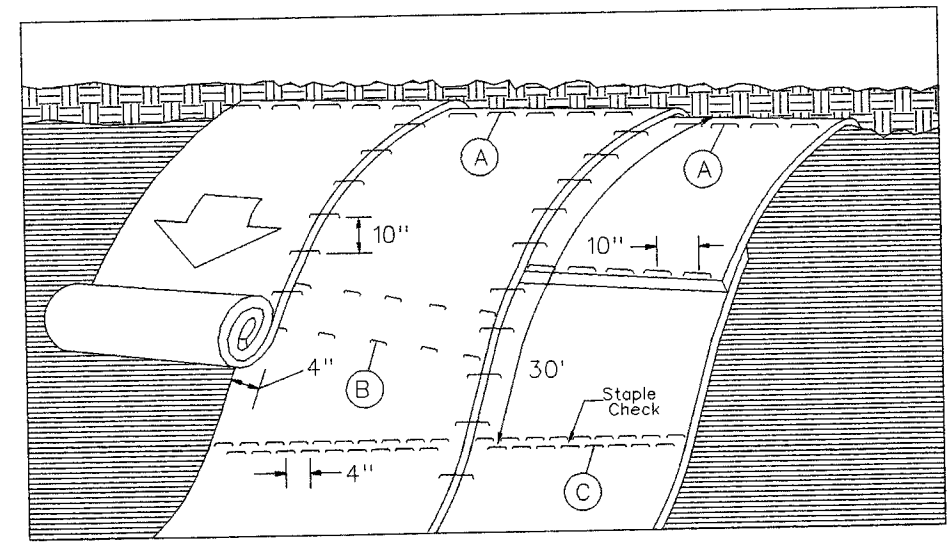


DIAGRAM A



MATTING ON SLOPES

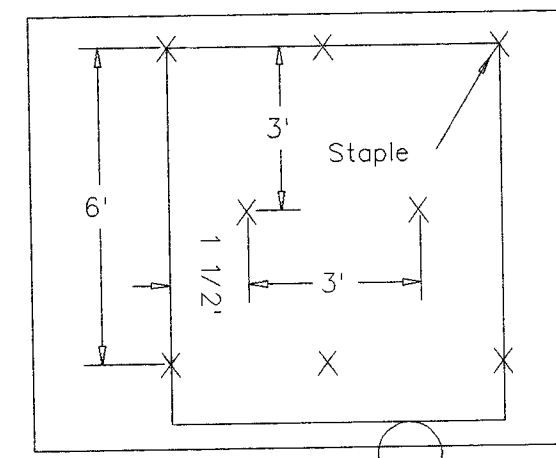


DIAGRAM B

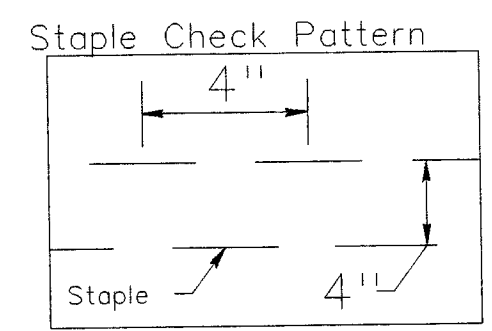


DIAGRAM C

NOT TO SCALE

NOTES:
THIS DETAIL APPLIES TO STRAW, EXCELSIOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION.
STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN VIEW ALONG C SURVEY OF BRIDGE #209 ON SR-1136 OVER ISLAND CREEK					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
					EC-6