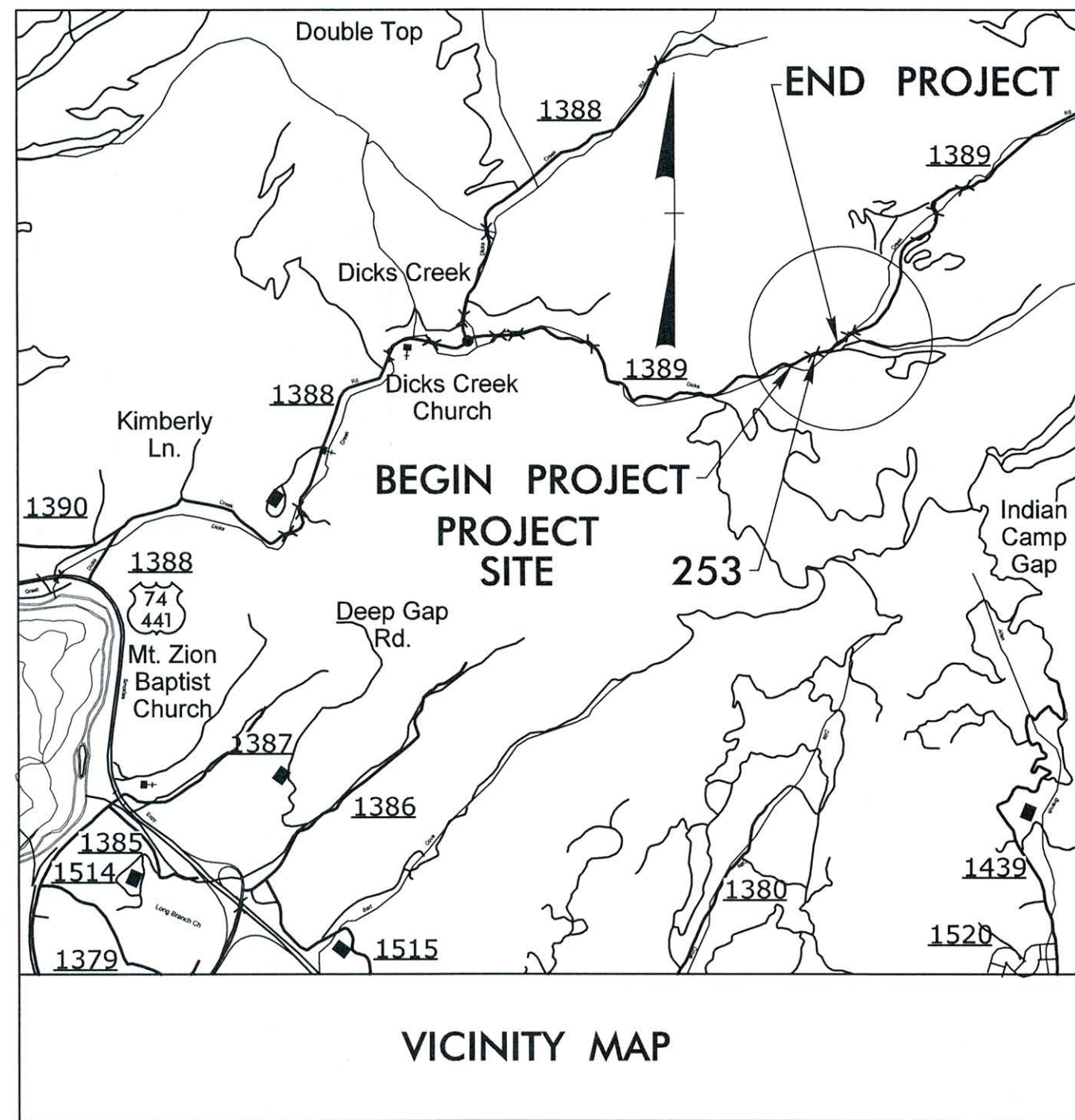


09/08/99

TIP PROJECT: 17BP.14.R.65

CONTRACT: DN00178

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols

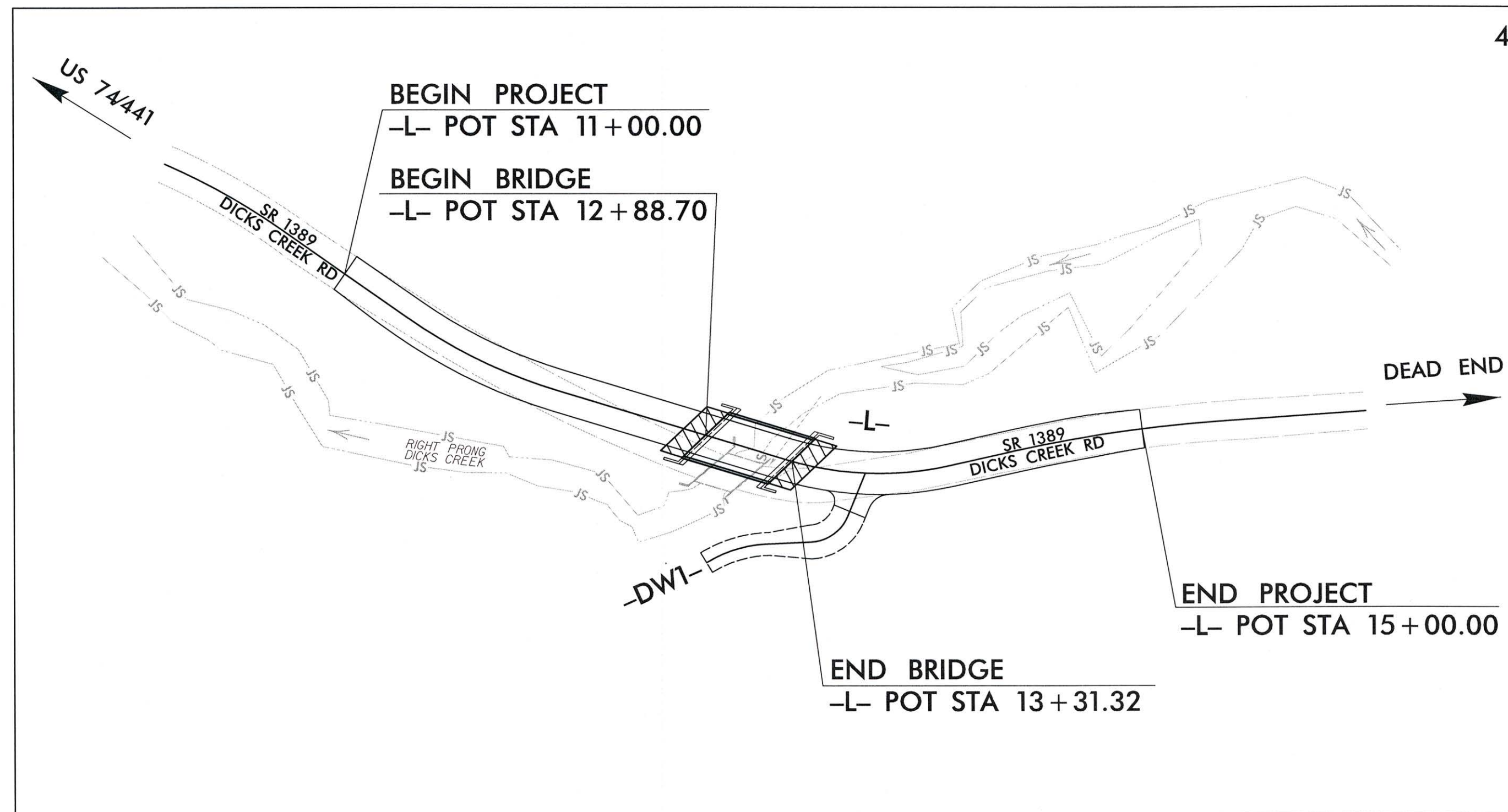


VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
JACKSON COUNTY

**LOCATION: BRIDGE NO. 253 OVER RIGHT PRONG
DICK'S CREEK ON SR 1389 (DICKS CREEK RD)**

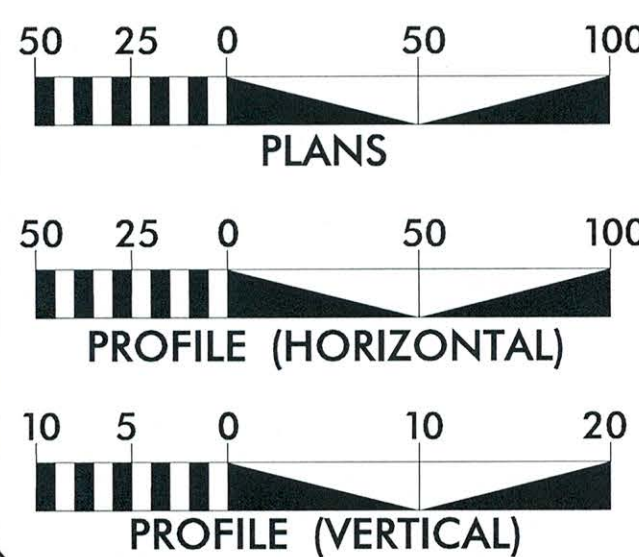
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.14.R.65	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.14.R.65		PE, RW, UTIL	
17BP.14.R.65		CONST	



GRAPHIC SCALES



DESIGN DATA

ADT 2000 = 70
V = 25 MPH
FUNC CLASS = LOCAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY STATE PROJECT 17BP.14.R.65 = 0.068 MILES
LENGTH STRUCTURES STATE PROJECT 17BP.14.R.65 = 0.008 MILES
TOTAL LENGTH STATE PROJECT 17BP.14.R.65 = 0.076 MILES

NCDOT CONTACT: JOSHUA DEYTON, PE
PROJECT ENGINEER

Prepared in the Office of:

AECOM

NC FIRM LICENSE No: F-0342
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259 (FAX)

RIGHT OF WAY DATE:
JUNE 29, 2012

LETTING DATE:
FY 2013

LEN HILL, PE
PROJECT ENGINEER

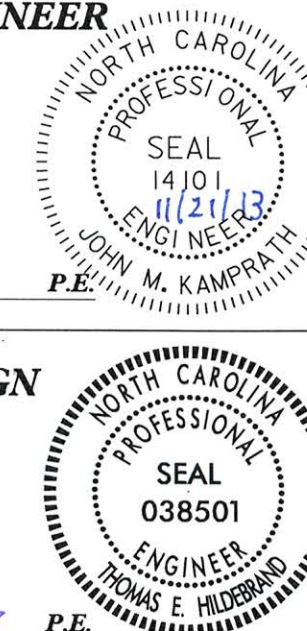
TOM HILDEBRAND, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

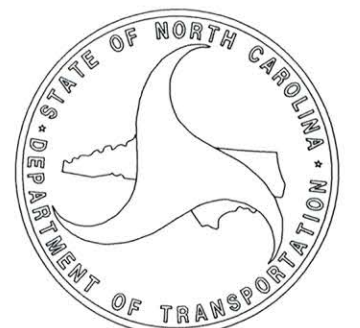
John M. Kamp
SIGNATURE: P.E.

**ROADWAY DESIGN
ENGINEER**

John M. Kamp
SIGNATURE: P.E.



**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**



STATE HIGHWAY DESIGN ENGINEER P.E.

INDEX OF SHEETS, LIST OF STANDARD DRAWINGS & GENERAL NOTES

PROJECT REFERENCE NO.
17BP.14.R.65

ROADWAY DESIGN
ENGINEER

12/9/12

SEAL
038501
ENGINEER
TRANSPORTATION

SHEET NO.
1-A

SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEETS
1-D	CENTERLINE COORDINATE LIST
2	TYPICAL SECTIONS, PAVEMENT SCHEDULE, AND WEDGING DETAIL
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF DRAINAGE QUANTITIES, SUMMARY OF GUARDRAIL, SUMMARY OF PAVEMENT REMOVAL, AND EARTHWORK SUMMARY
4	PLAN AND PROFILE SHEET
TMP-1 THRU TMP-4	TRANSPORTATION MANAGEMENT PLANS
PMP-01	PAVEMENT MARKING PLANS AND SIGNING PLANS
SIG-1 THRU SIG-2	TEMPORARY SIGNAL PLANS
EC-1 THRU EC-3	EROSION CONTROL PLANS
X-0	CROSS SECTION INDEX
X-1A	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-7	CROSS-SECTIONS
TS-01	STRUCTURE PLANS TITLE SHEET
S-01 THRU S-16	STRUCTURE PLANS
SN	STRUCTURE PLANS - STANDARD NOTES SHEET

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 07/30/12

GRADE LINE:
GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3' RADIUS OR RADIUS AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

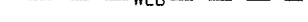
STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
848.02	Driveway Turnout - Radius Type
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.04	Drainage Ditches with Class 'B' Rip Rap

Note: Not to Scale

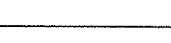
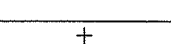
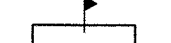
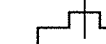
*S.U.E. = Subsurface Utility Engineering

CONVENTIONAL PLAN SHEET SYMBOLS

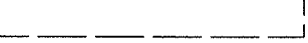
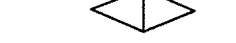
BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin	
Property Corner	
Property Monument	
Parcel/Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Known Soil Contamination: Boundary or Site	
Potential Soil Contamination: Boundary or Site	

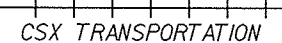
BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	
Sign	
Well	
Small Mine	
Foundation	
Area Outline	
Cemetery	
Building	
School	
Church	
Dam	

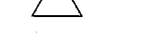
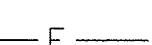
HYDROLOGY:

Stream or Body of Water	
Hydro, Pool or Reservoir	
Jurisdictional Stream	
Buffer Zone 1	
Buffer Zone 2	
Flow Arrow	
Disappearing Stream	
Spring	
Wetland	
Proposed Lateral, Tail, Head Ditch	
False Sump	

RAILROADS:

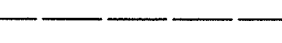
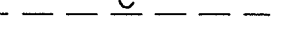
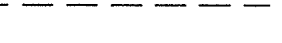
Standard Gauge	
RR Signal Milepost	
Switch	
RR Abandoned	
RR Dismantled	

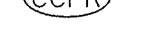
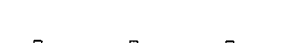
RIGHT OF WAY:

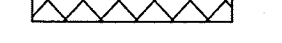
Baseline Control Point	
Existing Right of Way Marker	
Existing Right of Way Line	
Proposed Right of Way Line	
Proposed Right of Way Line with Iron Pin and Cap Marker	
Proposed Right of Way Line with Concrete or Granite Marker	
Existing Control of Access	
Proposed Control of Access	
Existing Easement Line	
Proposed Temporary Construction Easement	
Proposed Temporary Drainage Easement	
Proposed Permanent Drainage Easement	
Proposed Permanent Drainage / Utility Easement	
Proposed Permanent Utility Easement	
Proposed Temporary Utility Easement	
Proposed Aerial Utility Easement	

Proposed Permanent Easement with Iron Pin and Cap Marker

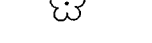
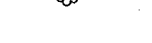
ROADS AND RELATED FEATURES:

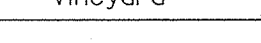
Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	

Proposed Curb Ramp	
Curb Cut Future Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	

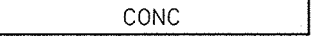
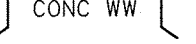
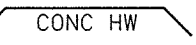
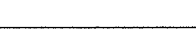
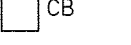
Equality Symbol	
Pavement Removal	

VEGETATION:

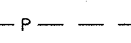
Single Tree	
Single Shrub	
Hedge	
Woods Line	

Orchard	
Vineyard	

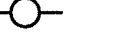
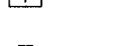
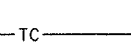
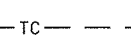
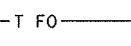
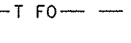
EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR:	
Head and End Wall	
Pipe Culvert	
Footbridge	
Drainage Box: Catch Basin, DI or JB	
Paved Ditch Gutter	
Storm Sewer Manhole	
Storm Sewer	

UTILITIES:

POWER:	
Existing Power Pole	
Proposed Power Pole	
Existing Joint Use Pole	
Proposed Joint Use Pole	
Power Manhole	
Power Line Tower	
Power Transformer	
U/G Power Cable Hand Hole	
H-Frame Pole	
Recorded U/G Power Line	
Designated U/G Power Line (S.U.E.*)	

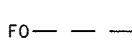
TELEPHONE:

Existing Telephone Pole	
Proposed Telephone Pole	
Telephone Manhole	
Telephone Booth	
Telephone Pedestal	
Telephone Cell Tower	
U/G Telephone Cable Hand Hole	
Recorded U/G Telephone Cable	
Designated U/G Telephone Cable (S.U.E.*)	
Recorded U/G Telephone Conduit	
Designated U/G Telephone Conduit (S.U.E.*)	
Recorded U/G Fiber Optics Cable	
Designated U/G Fiber Optics Cable (S.U.E.*)	

WATER:

Water Manhole	
Water Meter	
Water Valve	
Water Hydrant	
Recorded U/G Water Line	
Designated U/G Water Line (S.U.E.*)	
Above Ground Water Line	

TV:

TV Satellite Dish	
TV Pedestal	
TV Tower	
U/G TV Cable Hand Hole	
Recorded U/G TV Cable	
Designated U/G TV Cable (S.U.E.*)	
Recorded U/G Fiber Optic Cable	
Designated U/G Fiber Optic Cable (S.U.E.*)	

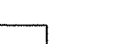
GAS:

Gas Valve	
Gas Meter	
Recorded U/G Gas Line	
Designated U/G Gas Line (S.U.E.*)	
Above Ground Gas Line	

SANITARY SEWER:

Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line	
Above Ground Sanitary Sewer	
Recorded SS Forced Main Line	
Designated SS Forced Main Line (S.U.E.*)	

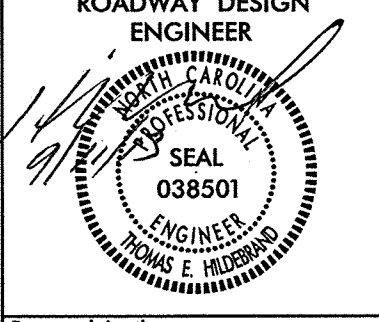
MISCELLANEOUS:

Utility Pole	
Utility Pole with Base	
Utility Located Object	
Utility Traffic Signal Box	
Utility Unknown U/G Line	
U/G Tank; Water, Gas, Oil	
Underground Storage Tank, Approx. Loc.	
A/G Tank; Water, Gas, Oil	
Geoenvironmental Boring	
U/G Test Hole (S.U.E.*)	
Abandoned According to Utility Records	
End of Information	

SURVEY CONTROL SHEET

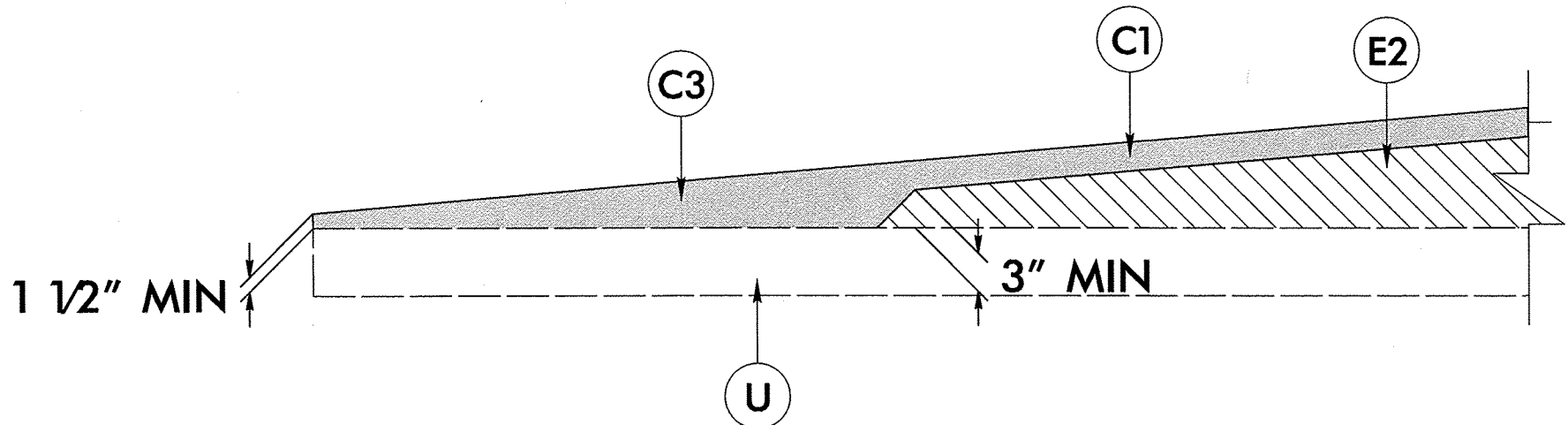
CENTERLINE COORDINATE LIST

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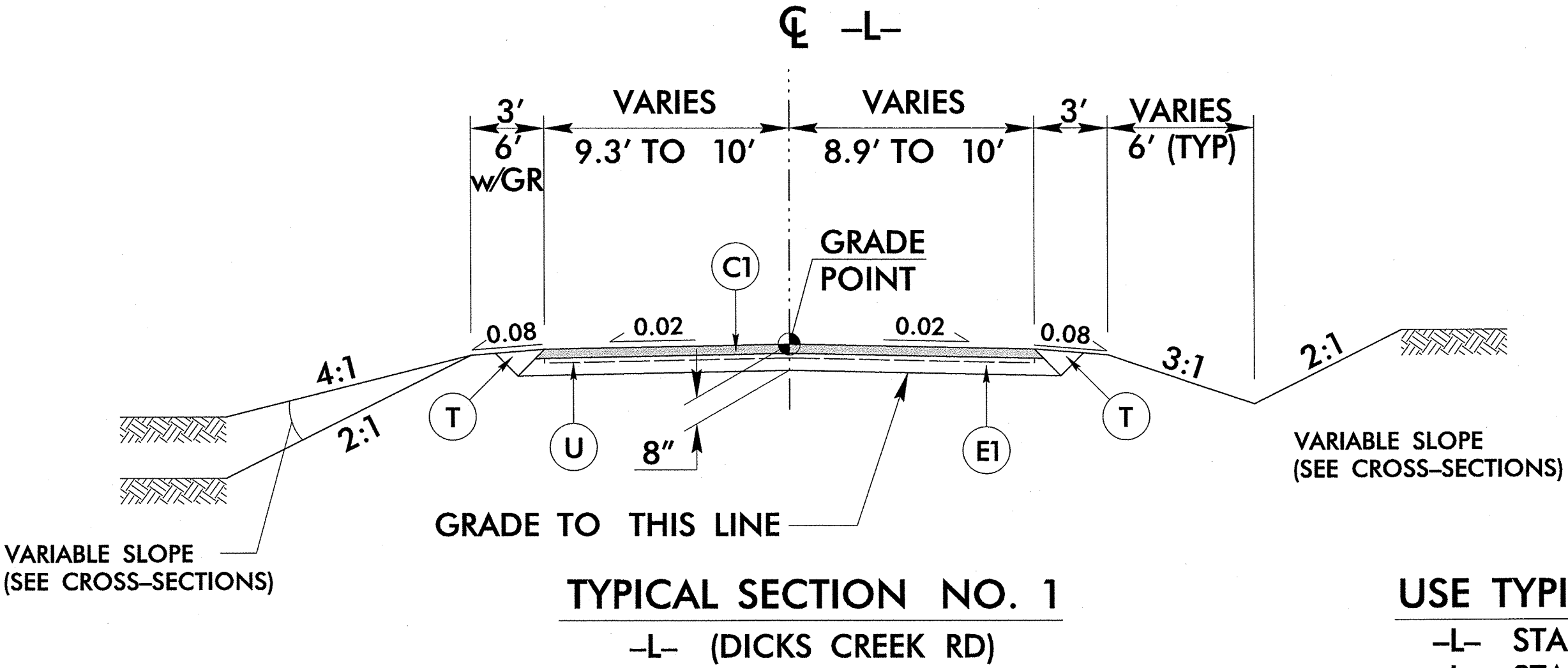
PROJECT REFERENCE NO.	SHEET NO.
17BP.14.R.65	2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
	
Prepared in the Office of: AECOM	
NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 475 Raleigh, NC 27603 (919) 854-6200 • (919) 854-6259 (FAX)	

PAVEMENT SCHEDULE	
(PRELIMINARY PAVEMENT DESIGN)	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. APPROX. 3¾" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 210 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT 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 5½" IN DEPTH.
J1	PROP. 8" AGGREGATE BASE COURSE.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL ON THIS SHEET)

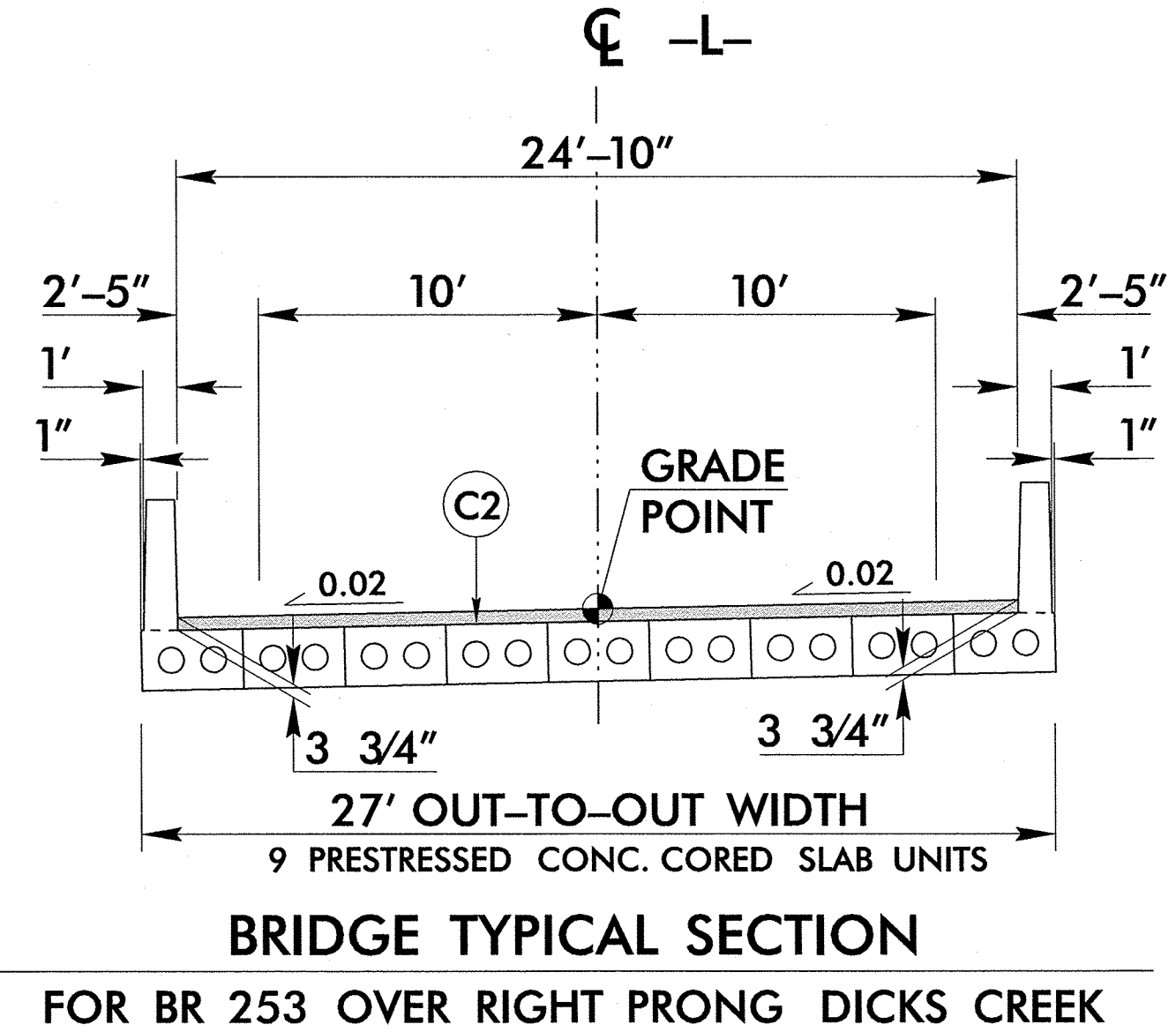
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



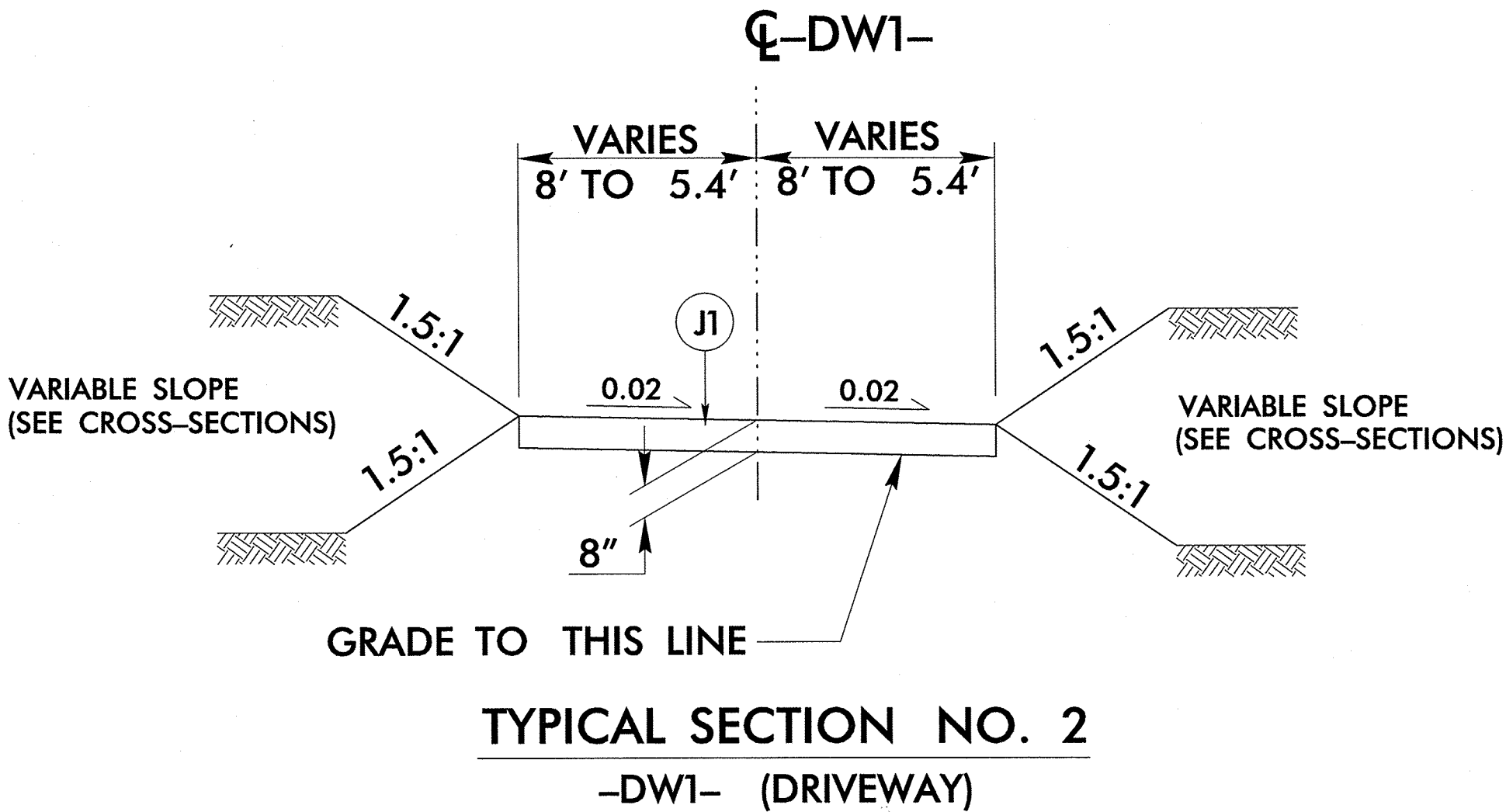
WEDGING DETAIL FOR RESURFACING
USE IN CONJUNCTION WITH
TYPICAL SECTION NO. 1



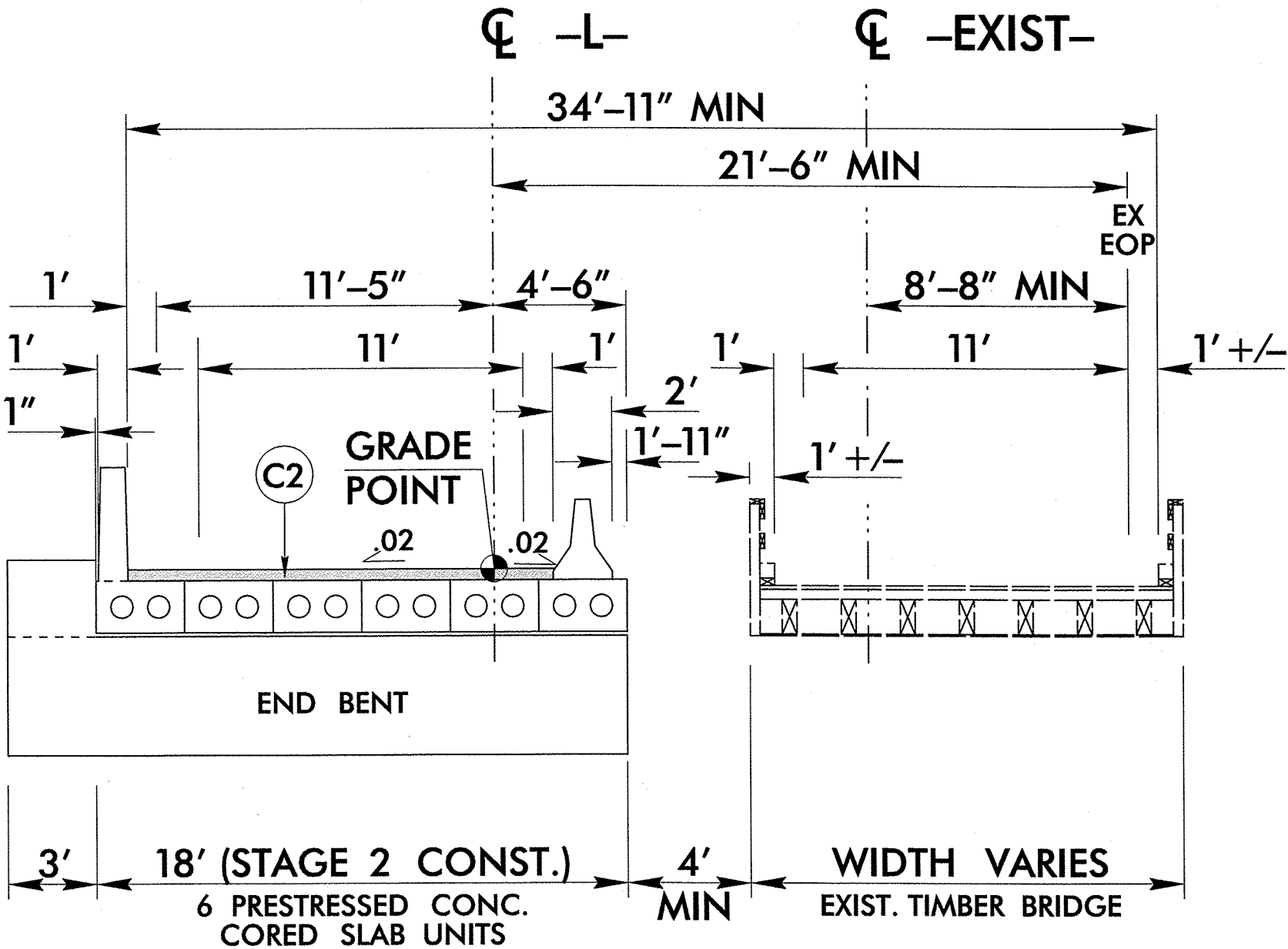
USE TYPICAL SECTION NO. 1
-L- STA 11+00.00 TO STA 12+88.70 (BEG BRIDGE)
-L- STA 13+31.32 (END BRIDGE) TO STA 15+00.00



USE BRIDGE TYPICAL SECTION
-L- STA 12+88.70 (BEG BRIDGE) TO
STA 13+31.32 (END BRIDGE)



USE TYPICAL SECTION NO. 2
-DW1- STA 10+09.71 TO STA 10+95.57



BRIDGE PHASE 1 STAGE 3 CONST.
FOR TEMP 1-LN 2-WAY TRAFFIC
(SEE TM PLANS FOR PHASING)

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT – DN00187

ITEM NUMBER	SEC #	QUANTITY	UNIT	DESCRIPTION	ITEM NUMBER	SEC #	QUANTITY	UNIT	DESCRIPTION
0000100000-N	800	1	LS	MOBILIZATION	3656000000-E	876	210.00	SY	GEOTEXTILE FOR DRAINAGE
0000400000-N	801	1	LS	CONSTRUCTION SURVEYING	6000000000-E	1605	1235.00	LF	TEMPORARY SILT FENCE
0008000000-E	200	1.00	ACR	SUPPLEMENTARY CLEARING & GRUBBING	6006000000-E	1610	135.00	TON	EROSION CONTROL STONE, CLASS A
0030000000-N	SP	1	LS	BRIDGE APPROACH FILL – SUBREGIONAL TIER AT STATION 13+10.04	6009000000-E	1610	25.00	TON	EROSION CONTROL STONE, CLASS B
0043000000-N	226	1	LS	GRADING	6012000000-E	1610	20.00	TON	SEDIMENT CONTROL STONE
	200	0.10	ACR	CLEARING AND GRUBBING	6015000000-E	1615	0.50	ACR	TEMPORARY MULCHING
	225	400.00	CY	UNCLASSIFIED EXCAVATION	6018000000-E	1620	50.00	LB	SEED FOR TEMPORARY SEEDING
	230	0.00	CY	BORROW EXCAVATION	6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
	250	755.00	SY	REMOVAL OF EXISTING ASPHALT PAVEMENT	6024000000-E	1622	100.00	LF	TEMPORARY SLOPE DRAINS
	250	1470.00	SY	BREAKING OF EXISTING ASPHALT PAVEMENT	6029000000-E	SP	100.00	LF	SAFETY FENCE
	500	800.00	SY	FINE GRADING	6030000000-E	1630	50.00	CY	SILT EXCAVATION
0057000000-E	226	50.00	CY	UNDERCUT EXCAVATION	6036000000-E	1631	2760.00	SY	MATTING FOR EROSION CONTROL :
0195000000-E	265	50.00	CY	SELECT GRANULAR MATERIAL	6071010000-E	SP	140.00	LF	WATTLE
0196000000-E	270	50.00	SY	GEOTEXTILE FOR SOIL STABILIZATION	6084000000-E	1660	0.50	ACR	SEEDING AND MULCHING
0199000000-E	SP	600	SF	TEMPORARY SHORING	6090000000-E	1661	50.00	LB	SEED FOR REPAIR SEEDING
0318000000-E	300	10.00	TON	FOUNDATION CONDITIONING MATERIAL,MINOR STRUCTURES	6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
0320000000-E	300	20.00	SY	FOUNDATION CONDITIONING GEOTEXTILE	6096000000-E	1662	50.00	LB	SEED FOR SUPPLEMENTAL SEEDING
0344000000-E	310	40.00	LF	18" SIDE DRAIN PIPE	6108000000-E	1665	0.50	TON	FERTILIZER TOPDRESSING
0995000000-E	340	27.00	LF	PIPE REMOVAL	6117000000-N	SP	19	EA	RESPONSE FOR EROSION CONTROL
1099700000-E	505	50.00	TON	CLASS IV SUBGRADE STABILIZATION					
1121000000-E	520	55.00	TON	AGGREGATE BASE COURSE	8035000000-N	402	1	LS	REMOVAL OF EXISTING STRUCTURE AT STATION 13+10.04
1220000000-E	545	50.00	TON	INCIDENTAL STONE BASE	8121000000-N	412	1	LS	UNCLASSIFIED STRUCTURE EXCAVATION AT STATION 13+10.04
1489000000-E	610	245.00	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	8182000000-E	420	27.60	CY	CL A CONC (BRG)
1519000000-E	610	170.00	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	8210000000-N	422	1	LS	BRIDGE APPROACH SLABS, STATION 13+10.04
1575000000-E	620	25.00	TON	ASPHALT BINDER FOR PLANT MIX	8217000000-E	425	4156.00	LBS	REINFORCING STEEL (BRIDGE)
					8364000000-E	450	165.00	LF	HP12X53 STL PILES
3030000000-E	862	25.00	LF	STEEL BM GUARDRAIL	8096000000-E	450	20	LF	PILE EXCAVATION IN SOIL
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS	8097000000-E	450	80.00	LF	PILE EXCAVATION NOT IN SOIL
3165000000-N	SP	3	EA	GUARDRAIL ANCHOR UNITS, TYPE 350 (TL-2)					
3195000000-N	SP	1	EA	GUARDRAIL ANCHOR UNITS, AT-1	8505000000-E	460	80.29	LF	VERTICAL CONC BARRIER RAIL
3215000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III	8608000000-E	876	63.00	TONS	RIP RAP CLASS II (2'-0" THICK)
6038000000-E	SP	50.00	SY	PERMANENT SOIL REINFORCEMENT MAT	8622000000-E	876	70.00	SY	GEOTEXTILE FOR DRAINAGE
					8657000000-N	430	1	LS	ELASTOMERIC BEARINGS
4400000000-E	1110	32.00	SF	WORK ZONE SIGNS (STATIONARY)	8763000000-E	430	360.00	LF	3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLABS
4405000000-E	1110	140.00	SF	WORK ZONE SIGNS (PORTABLE)					
4430000000-N	1130	70	EA	DRUMS					
4465000000-N	1160	2	EA	TEMPORARY CRASH CUSHIONS					
4470000000-N	1160	2	EA	RESET TEMPORARY CRASH CUSHION					
4490000000-E	1170	60.00	LF	PORTABLE CONCRETE BARRIER (ANCHORED)					
4505000000-E	1170	20.00	LF	RESET PORTABLE CONCRETE BARRIER (ANCHORED)					
4685000000-E	1205	900.00	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)					
4686000000-E	1205	900.00	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)					
4835000000-E	1205	18.00	LF	PAINT PAVEMENT MARKING LINES (24")					
4870000000-E	1205	18.00	LF	REMOVAL OF PAVEMENT MARKING LINES (24")					
7980000000-N	SP	1	EA	PORTABLE TRAFFIC SIGNAL SYSTEM (ACTUATED)					

SUMMARY OF EARTHWORK					
LINE	STATION TO STATION	Uncl. Excav.	Embank. +%	Borrow	Waste
-L -	11+00.00 to 12+88.70 BEG BRIDGE	32	37	5	0
-L -	13+31.32 END BRIDGE to 15+00.00	83	3	0	80
Summary No. 1 Subtotal		115	40	5	80
-DW1-	10+20.00 to 10+95.57	163	38	0	125
Summary No. 2 Subtotal		163	38	0	125
-L-	11+00.00 to 12+88.70 BEG BRIDGE	18	32	14	0
-L-	13+31.32 END BRIDGE to 15+00.00	27	30	3	0
Summary No. 3 Subtotal		46	62	16	0
TOTAL		323	140	22	205
ADJUSTMENTS DUE TO					
Est. Loss Due To Clearing And Grubbing		-30			-30
Earth Waste to Replace Borrow				-22	-22
GRAND TOTAL		293	140	0	153
SAY		350			
Est. Drainage Ditch Excav.		0 CY			
Select Granular Material		50 CY			
Estimate Undercut		50 CY			

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL				
LINE	Station	Station	LOC LT/RT/CL	YD ²
-L-	11+00.00	12+95.00	LT & RT	383.85
-L-	13+13.00	15+00.00	LT & RT	367.15
			TOTAL:	750.99
			SAY:	755

Approximate quantities only. Unclassified excavation, borrow excavation, shoulder borrow, fine grading, clearing and grubbing, breaking of existing pavement and removal of existing pavement will be paid for at the lump sum price for "Grading".

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

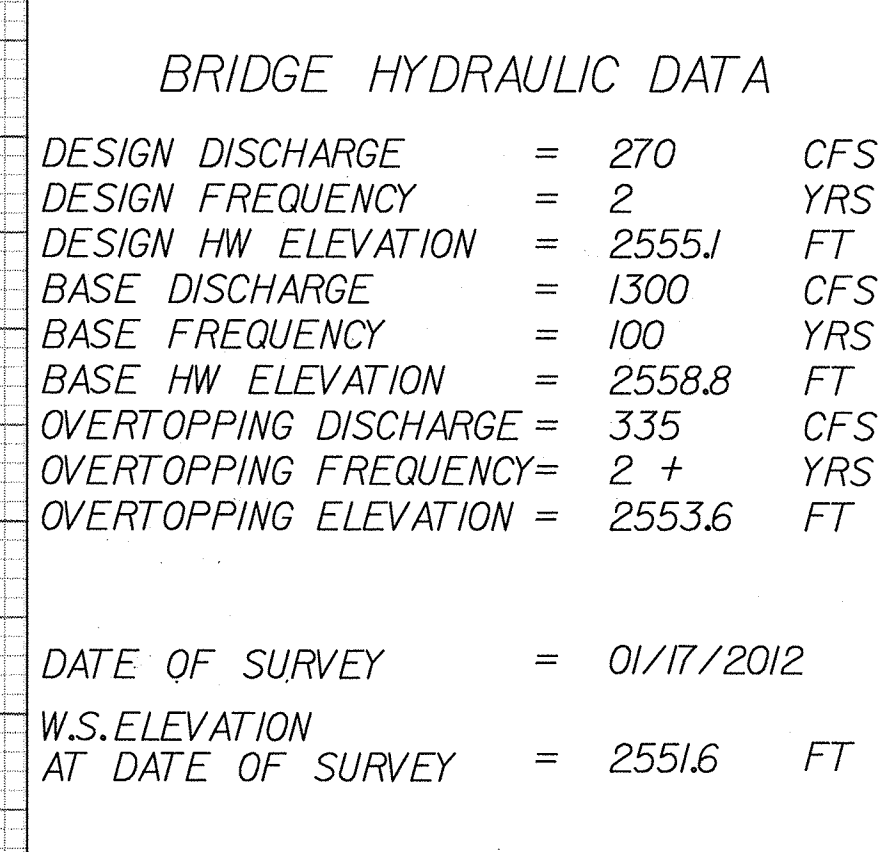
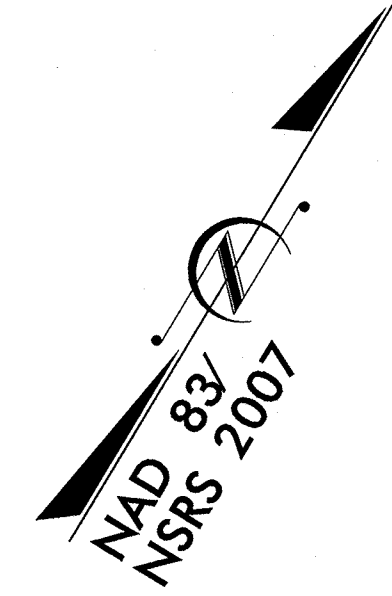
LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

[illegible]

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

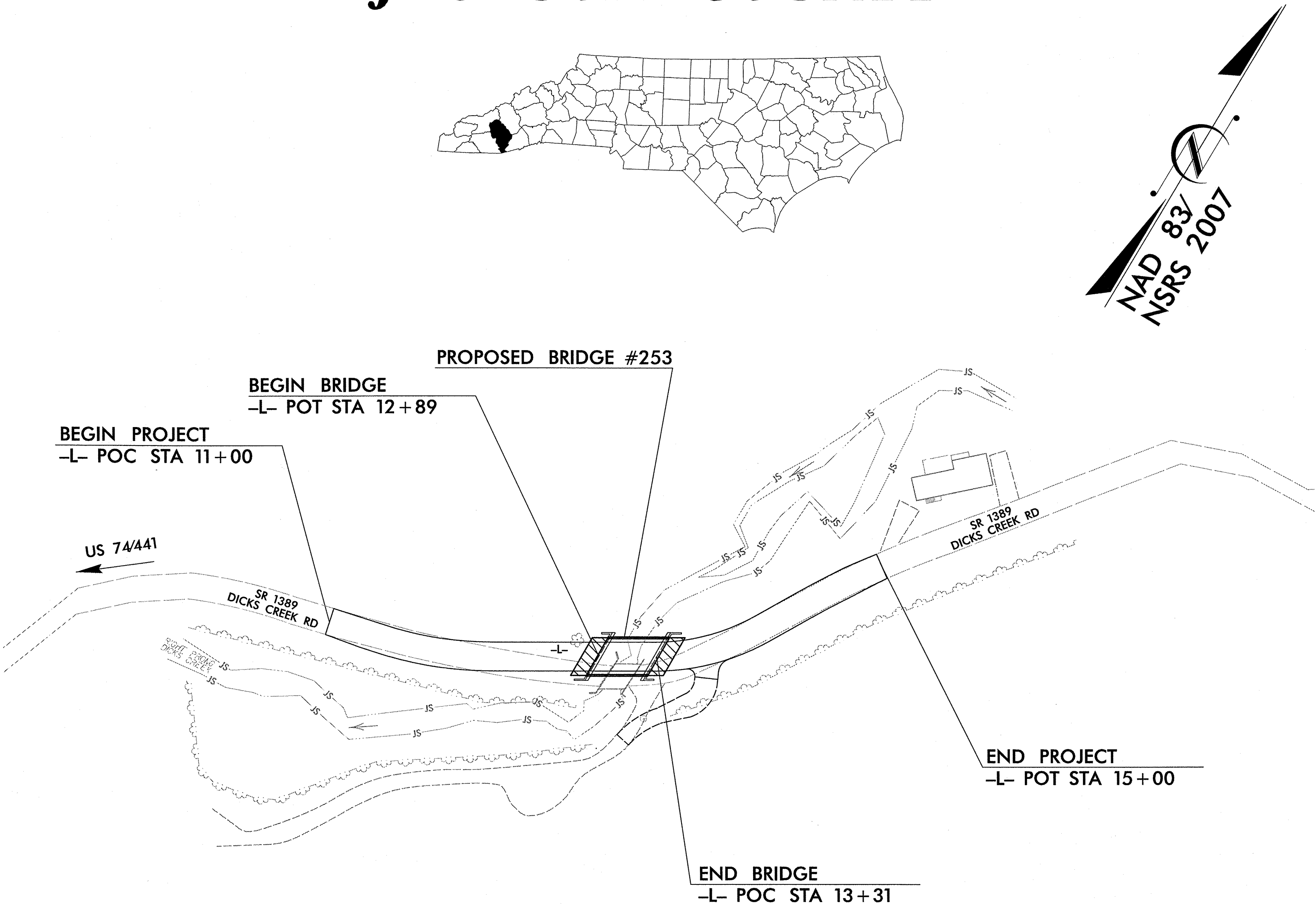
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

JACKSON COUNTY



INDEX OF SHEETS

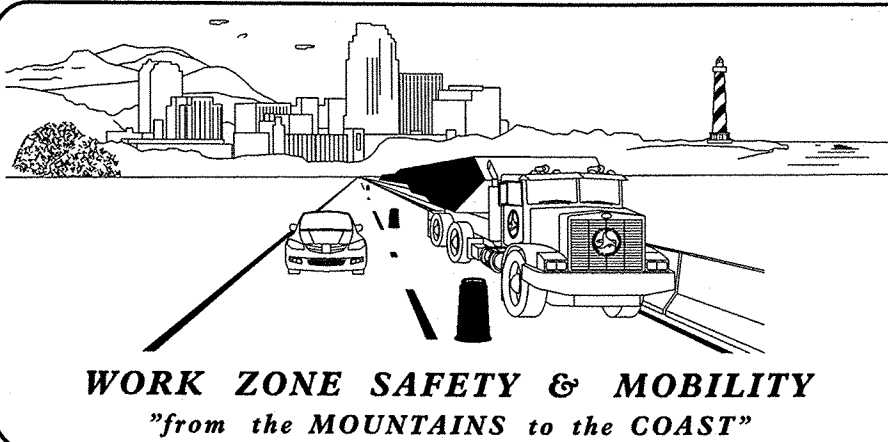
SHEET NO.	TITLE
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	GENERAL NOTES
TMP-2	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-3	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE III DETAIL
PMP-1	PAVEMENT MARKING PLAN

NOTE: WRITTEN PHASING FOR THE TRAFFIC CONTROL PLAN
APPEARS ON THE OVERVIEW SHEETS

ROADWAY STANDARD
DRAWINGS

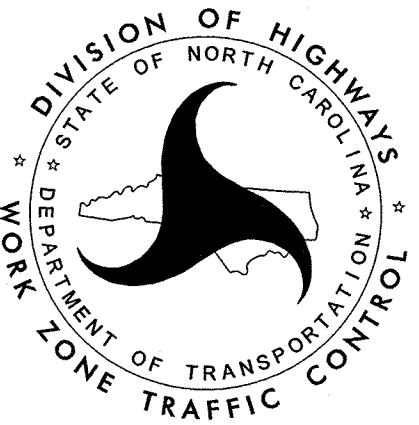
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD
DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF
TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE
TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART
OF THESE PLANS:

STD.NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1160.01	TEMPORARY CRASH CUSHION
1170.01	PORTABLE CONCRETE BARRIER
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J.S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
K.J. VAN METRE, PE TRAFFIC CONTROL PROJECT ENGINEER
T.E. HILDEBRAND, PE TRAFFIC CONTROL PROJECT DESIGN ENGINEER
TRAFFIC CONTROL DESIGN ENGINEER



AECOM
NC Firm License No.: F-0342
701 Corporate Center Drive
Suite 475 Raleigh, NC 27607
Phone: 919-854-6200

APPROVED: *[Signature]*
DATE: 9/12/13

SEAL

NORTH CAROLINA
PROFESSIONAL
SEAL
18187
ENGINEER
KEVIN J. VAN METRE

17BP.14.R.65

TIP PROJECT:

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIREDOVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
DICKS CREEK RD	7:00AM - 9:00AM AND 4:00PM - 6:00PM, MONDAY THRU FRIDAY.

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

DICKS CREEK RD
TO BE DETERMINED BY DIVISION PERSONNEL.

LANE AND SHOULDER CLOSURE REQUIREMENTS

C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

F) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

G) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

H) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

I) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 100 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

J) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

K) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

L) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

M) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

N) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

O) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

P) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

Q) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC CONTROL DEVICES

R) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

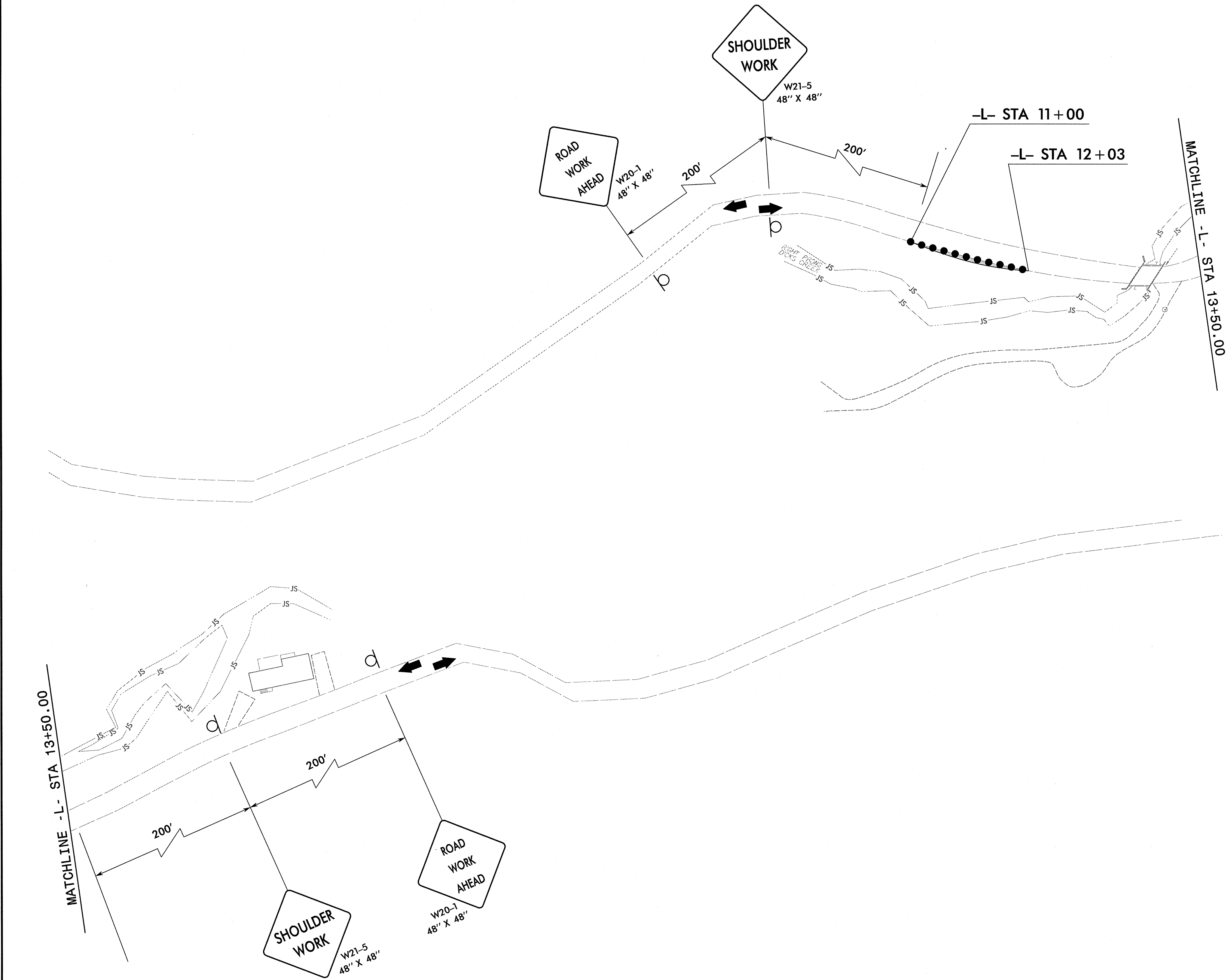
S) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

T) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

U) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

MISCELLANEOUS

V) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 50 FT AND 100 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

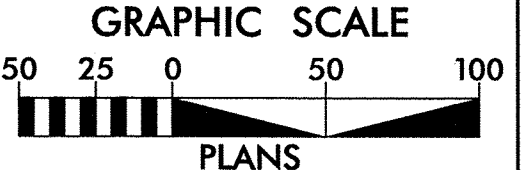


PHASING NOTES

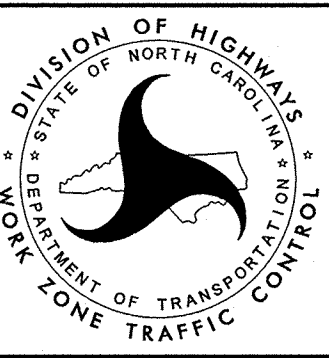
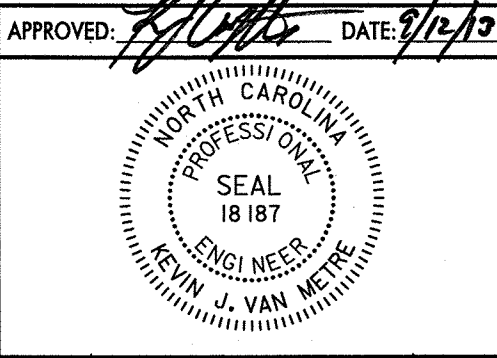
- STAGE 1: MAINTAIN TRAFFIC ON EXISTING ROADWAY.
- STAGE 2: INSTALL ADVANCED WARNING SIGNS AND TRAFFIC CONTROL DEVICES.
- STAGE 3: CONSTRUCT PROPOSED WIDENING FROM STA. 11+00 TO STA. 12+03 (AT EXISTING ROADWAY ELEVATION).

LEGEND

- | | |
|--|-----------------------|
| | EXISTING ROADWAY |
| | PROPOSED CONSTRUCTION |
| | COMPLETED ROADWAY |

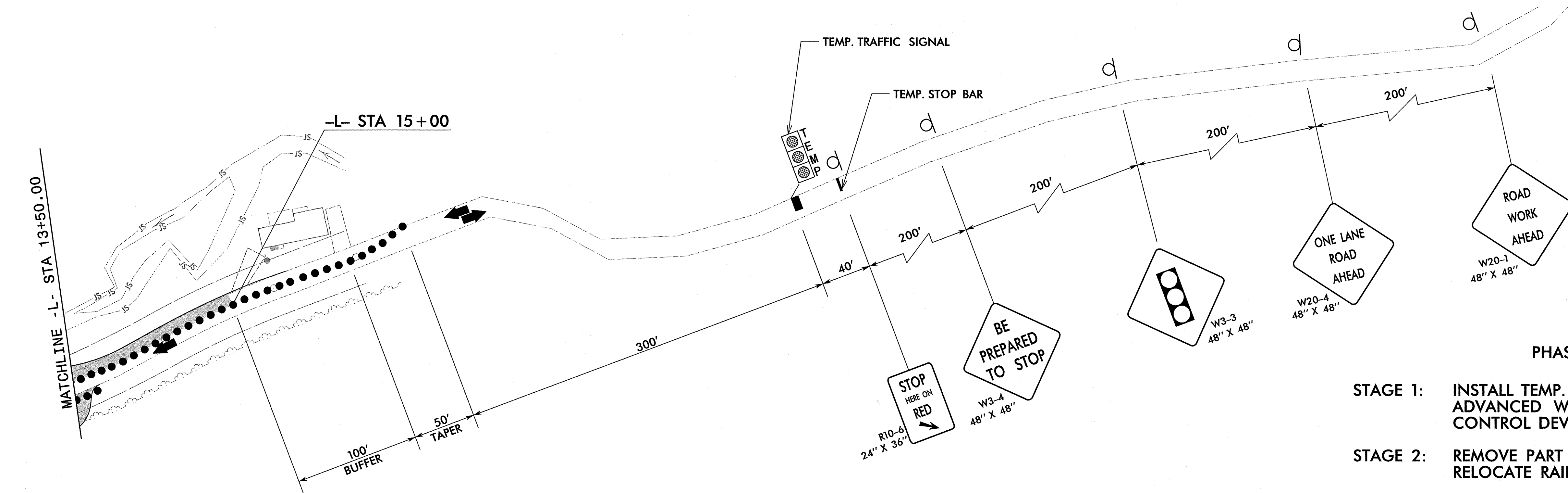
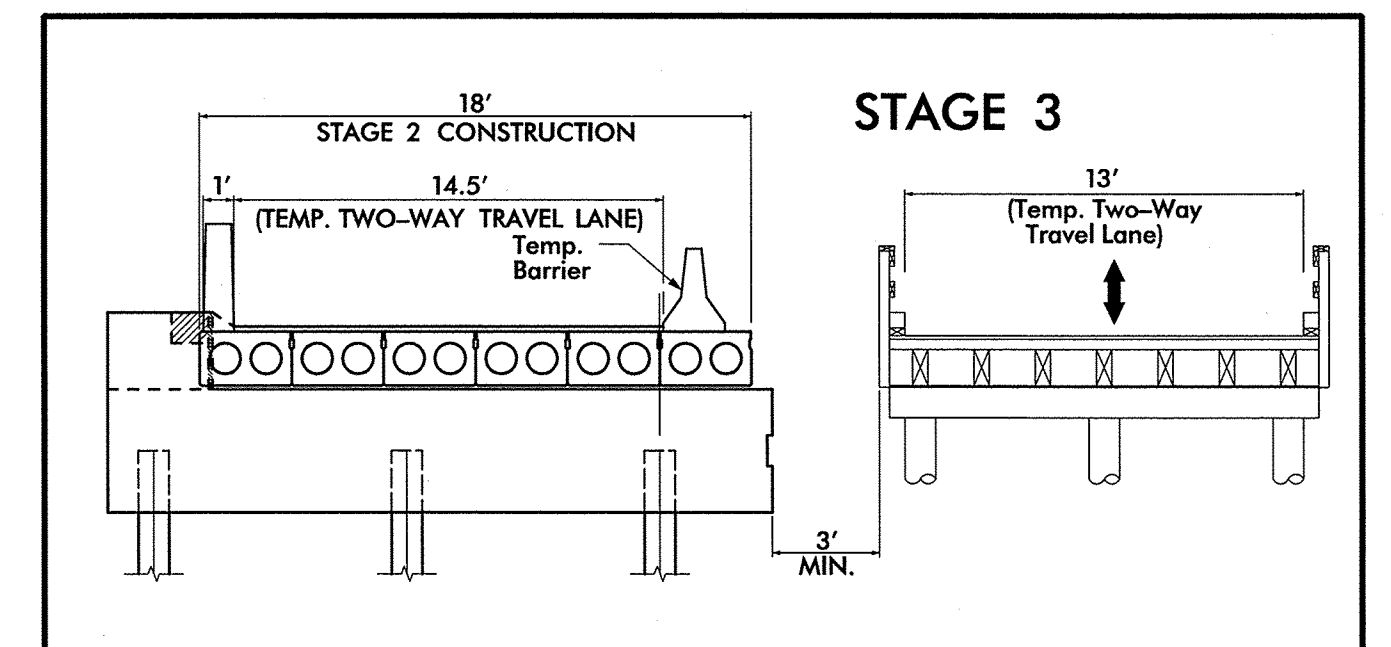
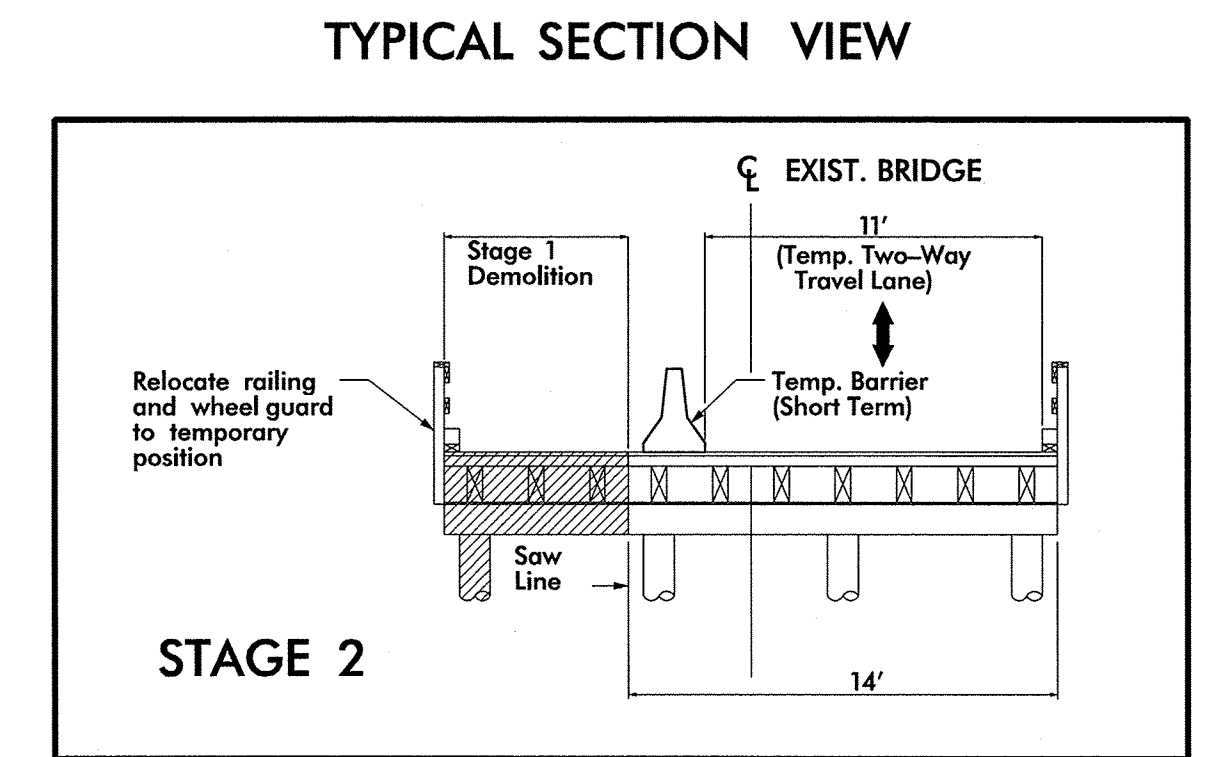
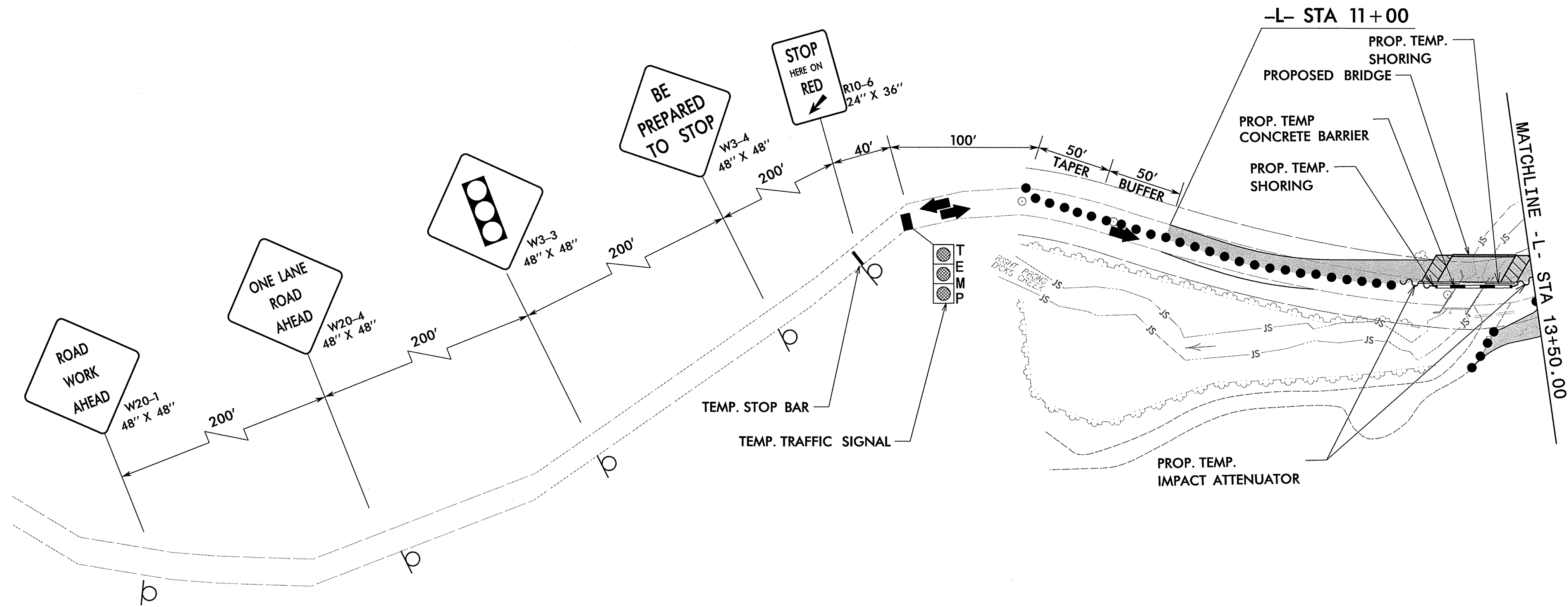


AECOM
NC Firm License No.: F-0342
701 Corporate Center Drive
Suite 475 Raleigh, NC 27607
Phone: 919-854-6200



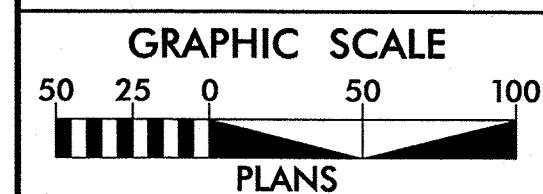
PHASE I DETAIL

DATE	REVISIONS
9/11/2013	
DESIGN BY: TEH	
REVIEWED BY:	



LEGEND

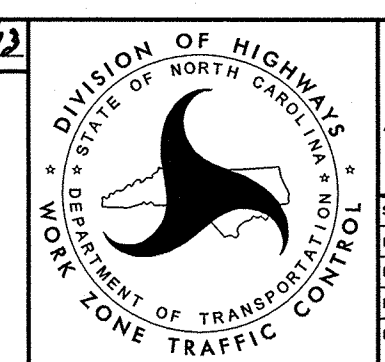
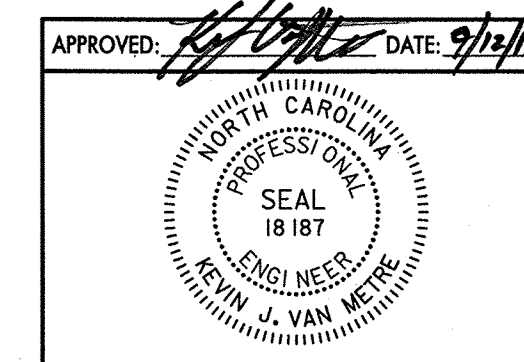
	EXISTING ROADWAY
	PROPOSED CONSTRUCTION
	COMPLETED ROADWAY



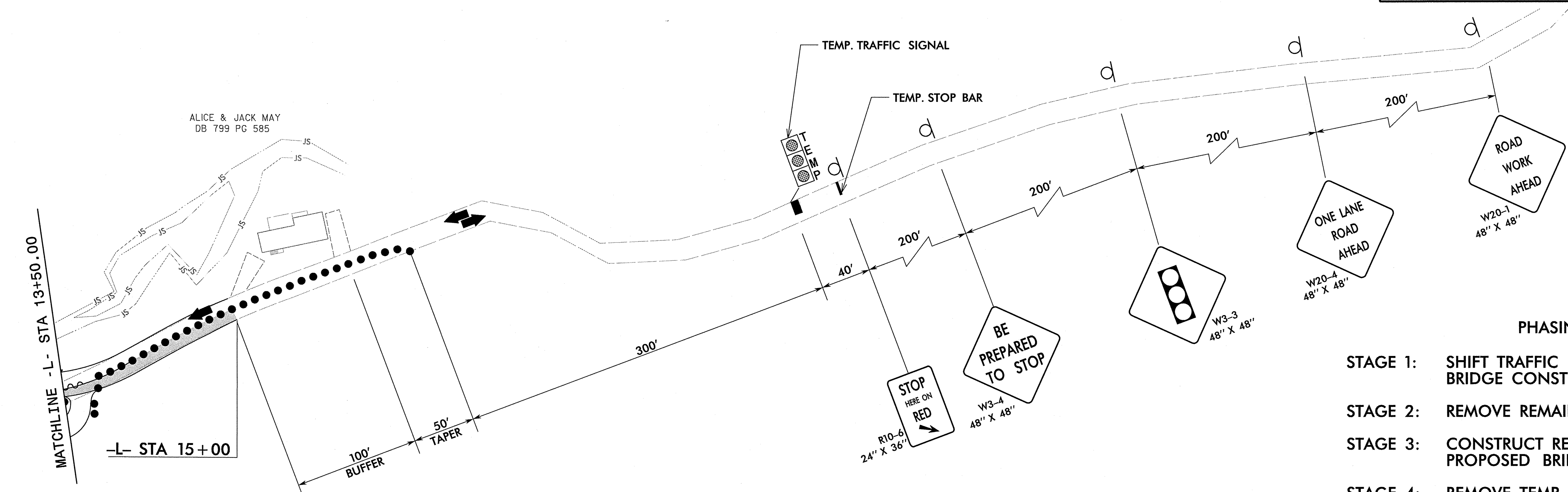
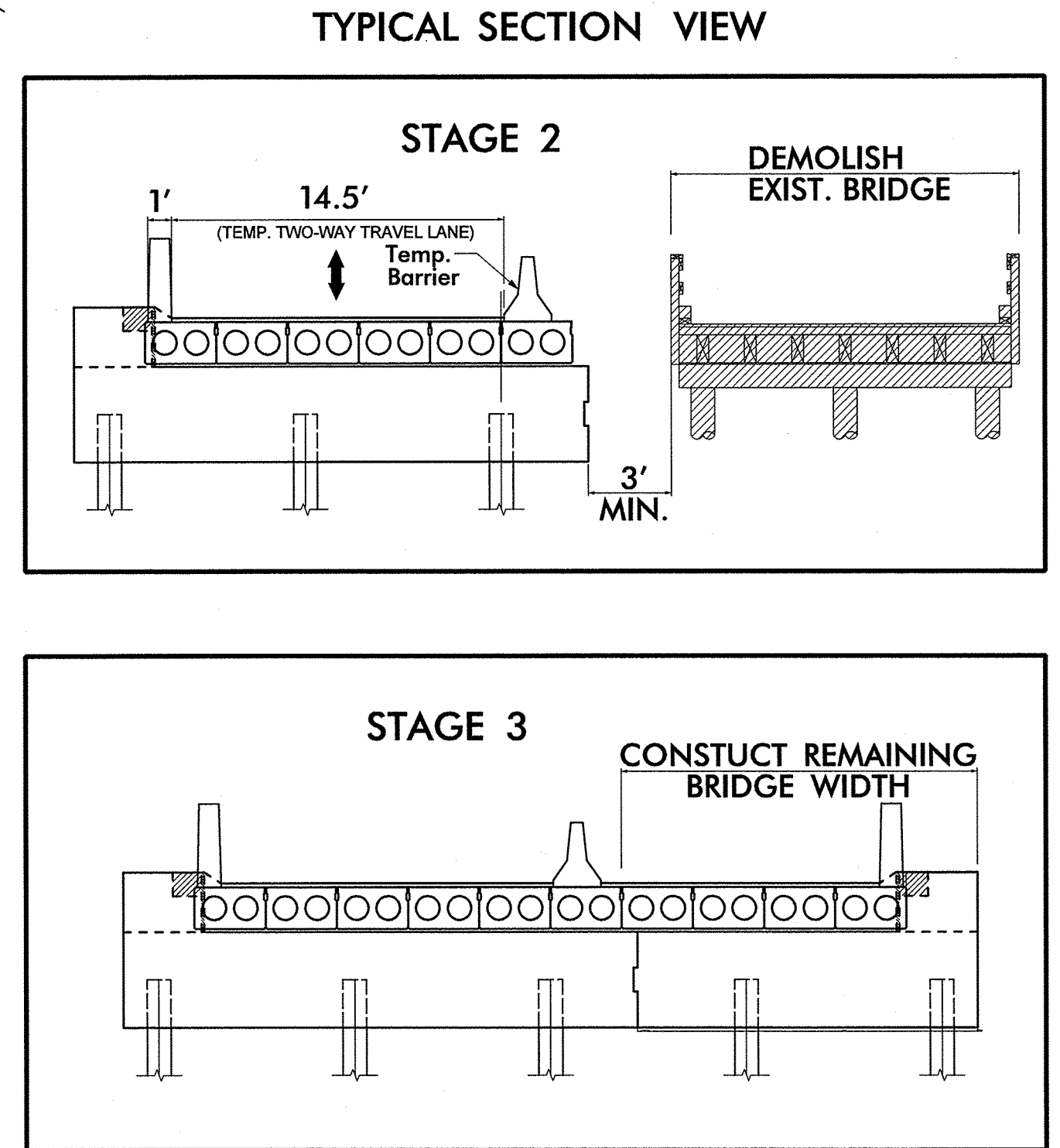
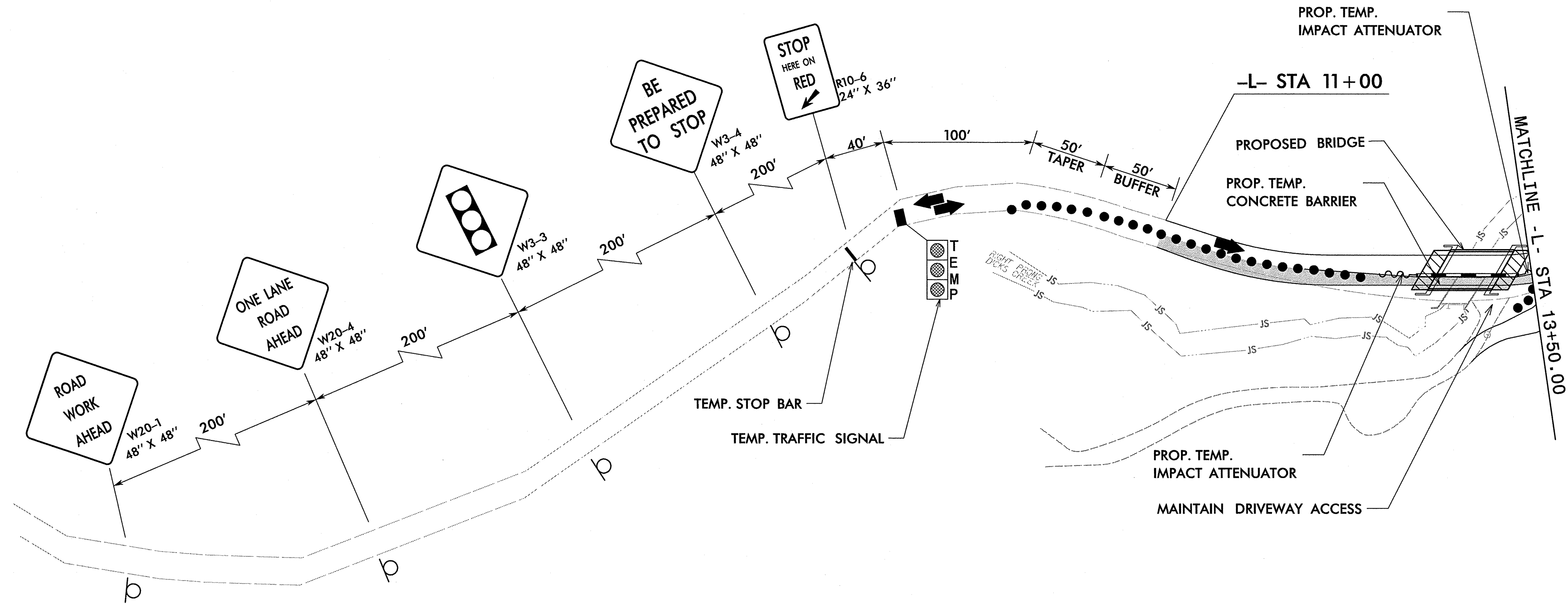
PHASING NOTES

- STAGE 1: INSTALL TEMP. SIGNALS, TEMP. STOP BARS, ADVANCED WARNING SIGNS AND TRAFFIC CONTROL DEVICES.
- STAGE 2: REMOVE PART OF EXISTING BRIDGE, RELOCATE RAILING, AND PLACE TEMP. BARRIER.
- STAGE 3: CONSTRUCT PORTION OF PROPOSED BRIDGE AND ROADWAY AS SHOWN, INCLUDING PROPOSED DRIVEWAY.

AECOM
NC Firm License No.: F-0342
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Suite 475 Raleigh, NC 27607
Phone: 919-854-6200

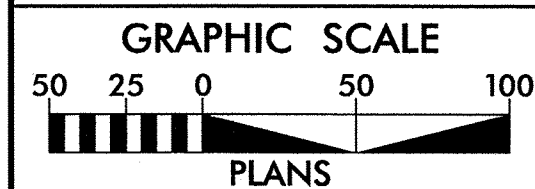


PHASE II DETAIL		REVISIONS	
SCALE:	DATE: 9/12/2013	DESIGN BY: TEH	REVIEWED BY:
DATE: 9/12/2013	DESIGN BY: TEH	REVIEWED BY:	



LEGEND

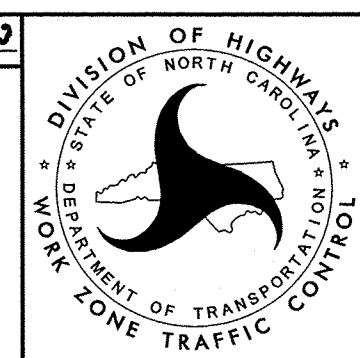
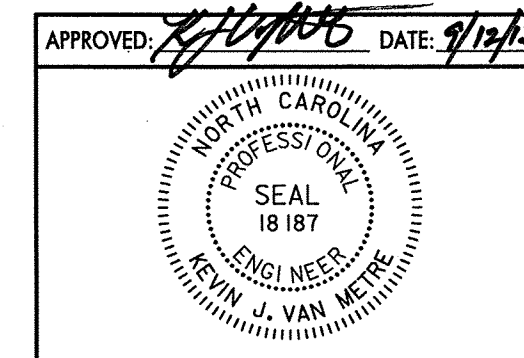
	EXISTING ROADWAY
	PROPOSED CONSTRUCTION
	COMPLETED ROADWAY



PHASING NOTES

- STAGE 1: SHIFT TRAFFIC TO ROADWAY AND BRIDGE CONSTRUCTED DURING PHASE II.
- STAGE 2: REMOVE REMAINING EXISTING BRIDGE.
- STAGE 3: CONSTRUCT REMAINING PORTION OF PROPOSED BRIDGE AND ROADWAY.
- STAGE 4: REMOVE TEMP. SIGNALS, TEMP. STOP BARS, ADVANCED WARNING SIGNS AND TRAFFIC CONTROL DEVICES.
- STAGE 5: OPEN PROJECT TO FINAL TRAFFIC PATTERN.

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Phone: 919-854-6200



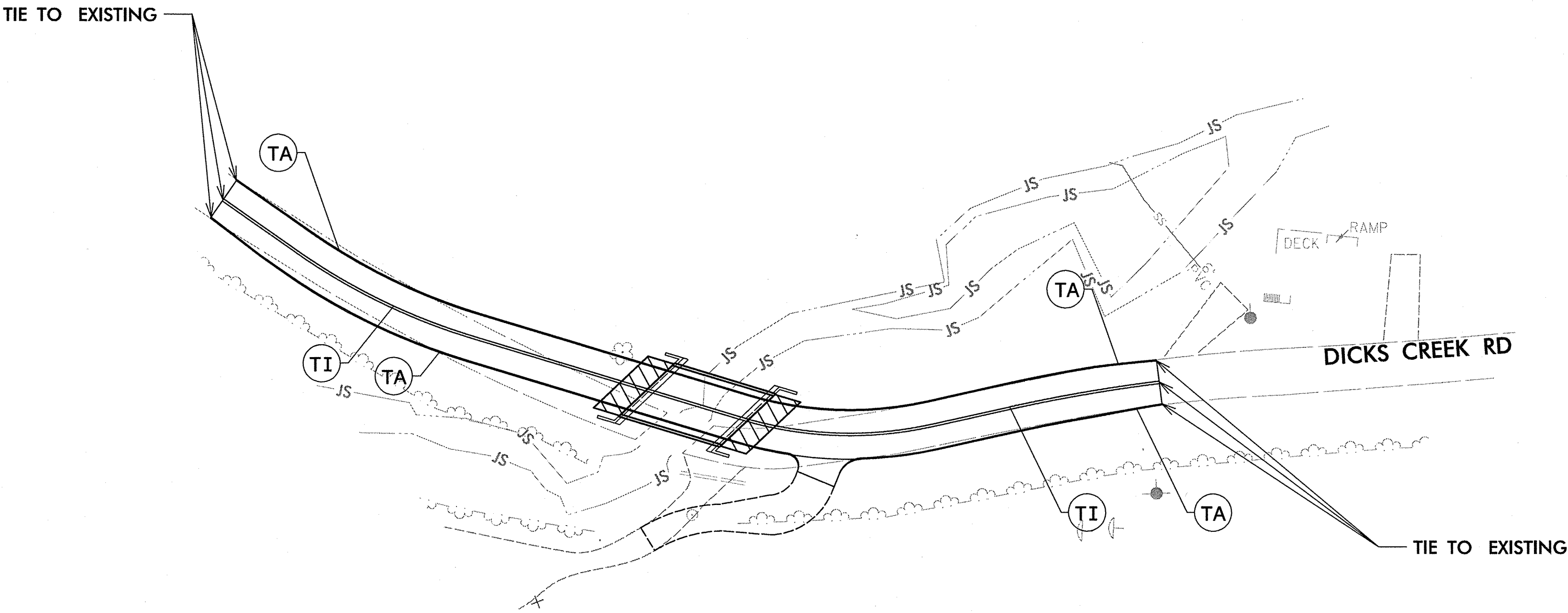
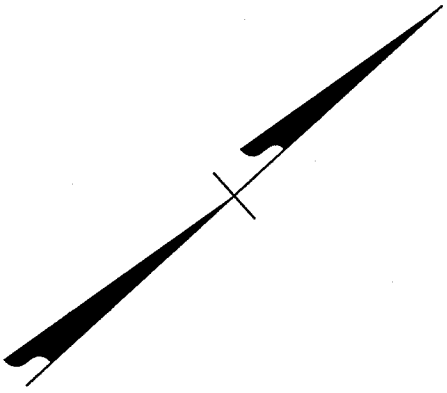
PHASE III DETAIL

SCALE: 1"=40'	DATE: 9/11/2013	DESIGNED BY: TEH	REVISIONS
DRAWN BY: KJV	REVIEWED BY:		

PROJECT MARKING SCHEDULE

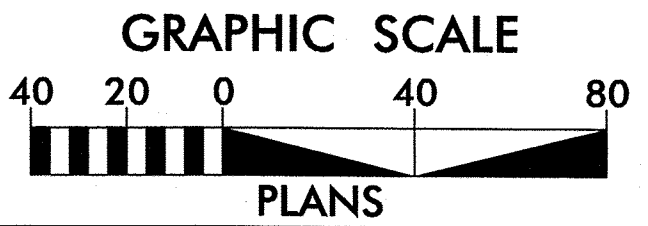
BRIDGE 253

SYMBOL DESCRIPTION	PAY ITEM	PAY ITEM QUANTITY
	THERMOPLASTIC(4", 120 MILS)	
TI YELLOW DOUBLE CENTER		900 LF
	THERMOPLASTIC(4", 90 MILS)	
TA WHITE EDGELINE		900 LF

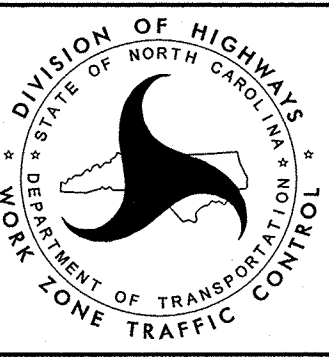
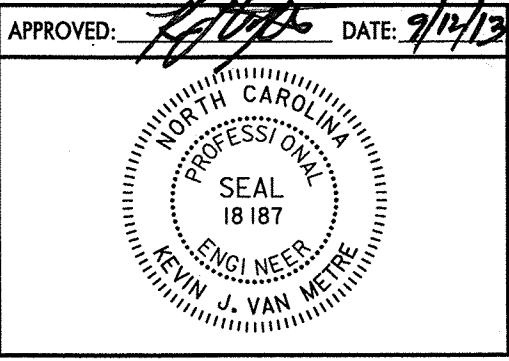


LEGEND

TA WHITE EDGELINE
TI YELLOW DOUBLE CENTER



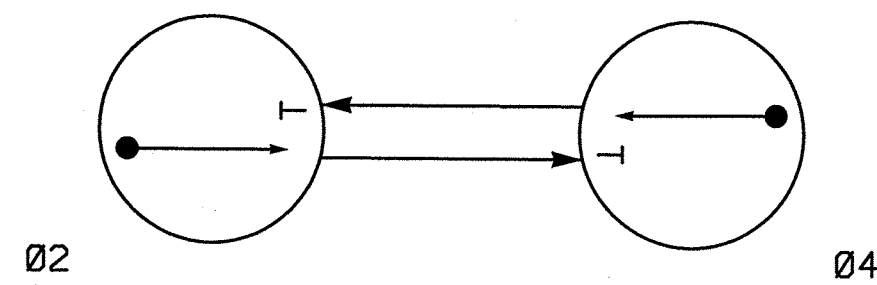
AECOM
NC Firm License No.: F-0342
701 Corporate Center Drive
Suite 475 Raleigh, NC 27607
Phone: 919-854-6200



PAVEMENT MARKING PLAN

SCALE:	DATE: 9/11/2013	REVISIONS
DWG. BY: TEH		
DESIGN BY: KJV		
REVIEWED BY:		

PHASING DIAGRAM

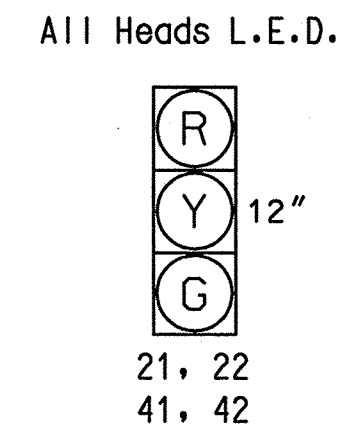


PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)

SIGNAL FACE	PHASE		
	Ø 2	Ø 4	FLIGHT
21, 22	G	R	R
41, 42	R	G	R

SIGNAL FACE I.D.

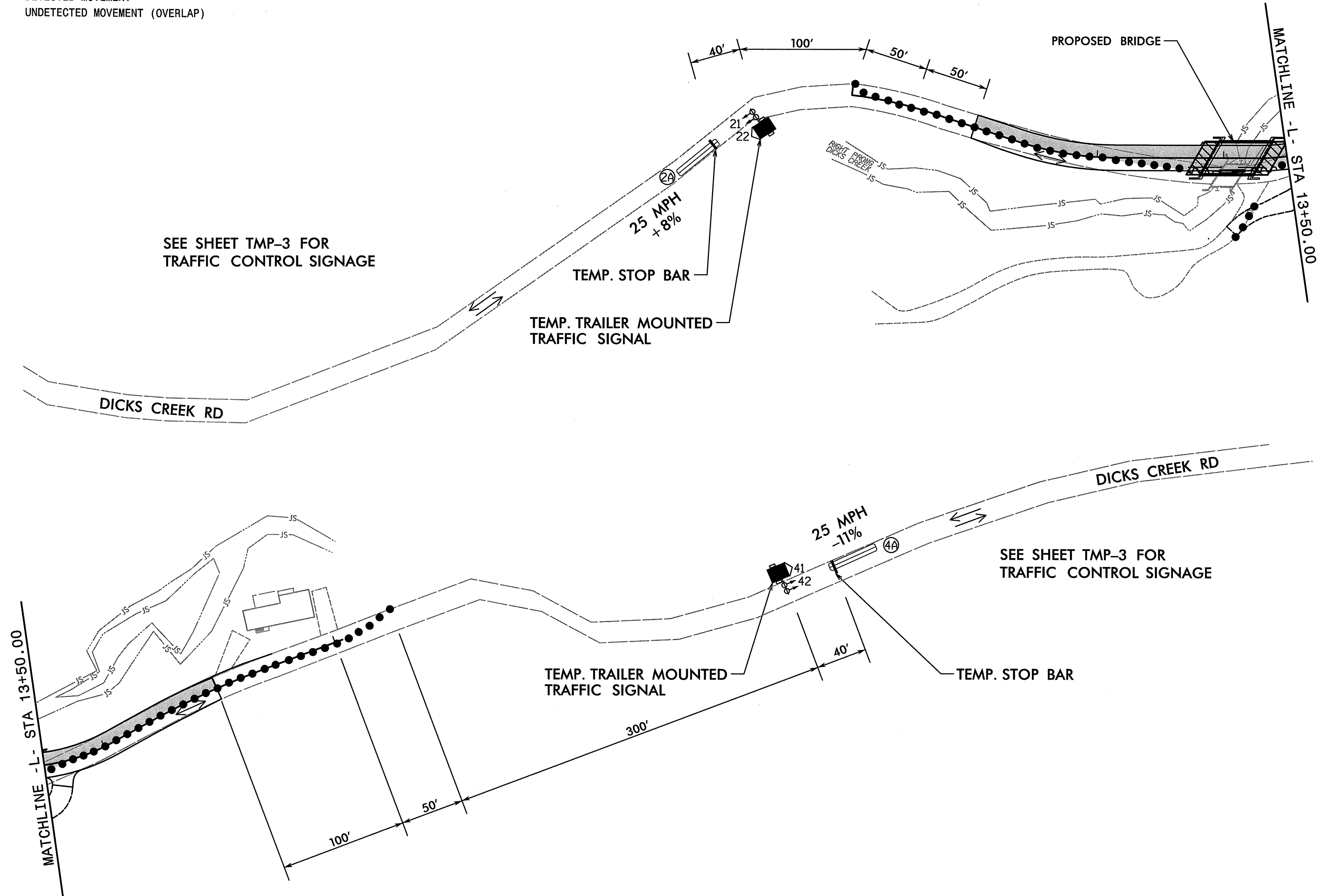


LOOP & DETECTOR INSTALLATION CHART						
INDUCTIVE LOOPS					DETECTOR PROGRAMMING	
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING EXTENSION
2A	6X40	-5	2-4-2	X	2	X X
4A	6X40	-5	2-4-2	X	4	X X

2 Phase Actuated Temporary Signal

NOTES

- SEE SPECIAL PROVISION FOR DETAILS ON PORTABLE TRAFFIC SIGNAL SYSTEM.
- MICROWAVE DETECTION OR VIDEO DETECTION MAY BE USED IN LIEU OF LOOP DETECTION AS SHOWN ON THE PLAN.
- TEMPORARY WOOD POLES WITH SPAN WIRE AND SIGNAL HEADS MAY BE USED IN LIEU OF THE TRAILER MOUNTED SIGNAL AS SHOWN ON THE PLAN.



TIMING CHART

PHASE	Ø2	Ø4
MINIMUM GREEN*	15 SEC.	15 SEC.
VEHICLE EXTENSION *	5 SEC.	5 SEC.
YELLOW CHANGE INT.	3.0 SEC.	3.9 SEC.
RED CLEARANCE	30.9 SEC.	30.9 SEC.
MAXIMUM GREEN*	30 SEC.	30 SEC.
RECALL POSITION	NONE	RECALL

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 4 lower than what is shown.

LEGEND

- | PROPOSED | EXISTING |
|----------|----------|
| | |
| | |
| | |
| | N/A |

TEMPORARY SIGNAL

AECOM
NC Firm License No.: F-0342
701 Corporate Center Drive
Suite 475 Raleigh, NC 27607
Phone: 919-854-6200

Prepared In the Offices of:

TEMPORARY SIGNAL
BRIDGE 253
PHASE 2 CONSTRUCTION

JACKSON COUNTY DIVISION 14

PLAN DATE: OCTOBER 2012 REVIEWED BY: C. N. MUSSMAN

PREPARED BY: S. W. COX REVIEWED BY: S. NANDAGIRI

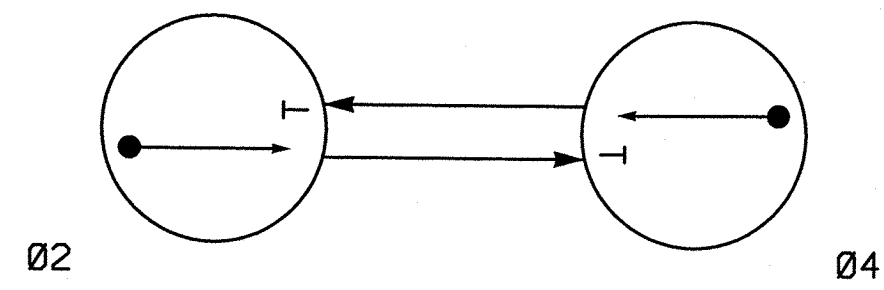
REVISIONS INIT. DATE

SCALE 1" = 50'

SIGNATURE DATE

SIG. INVENTORY NO. N/A

PHASING DIAGRAM



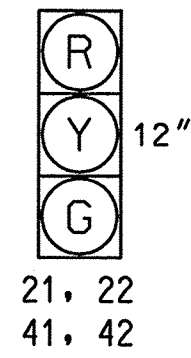
PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
UNDETECTED MOVEMENT (OVERLAP)

SIGNAL FACE	PHASE		
	Ø2	Ø4	FLASH
21, 22	G	R	R
41, 42	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.

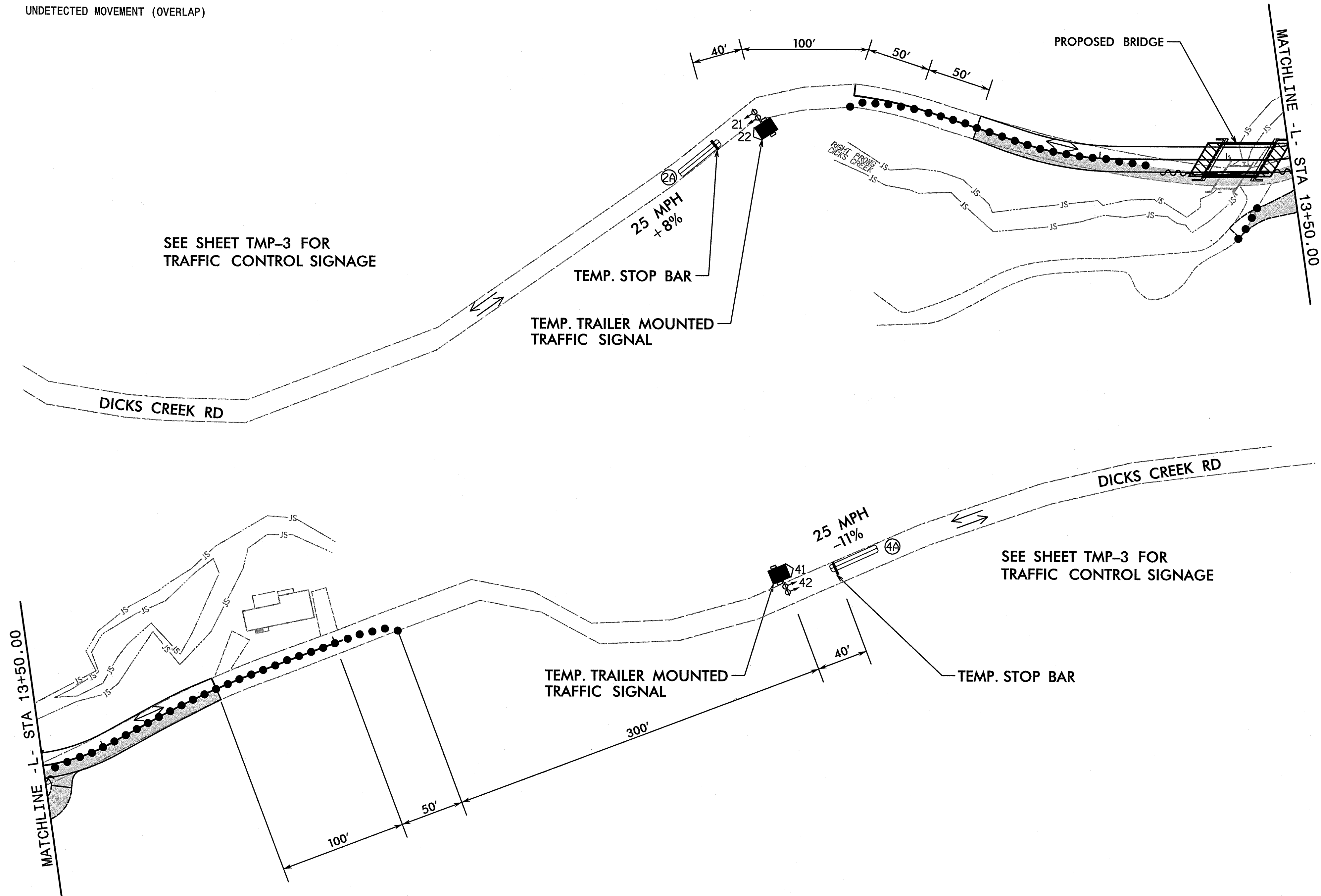


LOOP & DETECTOR INSTALLATION CHART					DETECTOR PROGRAMMING		
INDUCTIVE LOOPS				NEW LOOP	PHASE	CALLING	EXTENSION
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS				
2A	6X40	-5	2-4-2	X	2	X	X
4A	6X40	-5	2-4-2	X	4	X	X

2 Phase Actuated Temporary Signal

NOTES

- SEE SPECIAL PROVISION FOR DETAILS ON PORTABLE TRAFFIC SIGNAL SYSTEM.
- MICROWAVE DETECTION OR VIDEO DETECTION MAY BE USED IN LIEU OF LOOP DETECTION AS SHOWN ON THE PLAN.
- TEMPORARY WOOD POLES WITH SPAN WIRE AND SIGNAL HEADS MAY BE USED IN LIEU OF THE TRAILER MOUNTED SIGNAL AS SHOWN ON THE PLAN.



TIMING CHART

PHASE	Ø2	Ø4
MINIMUM GREEN*	15 SEC.	15 SEC.
VEHICLE EXTENSION *	5 SEC.	5 SEC.
YELLOW CHANGE INT.	3.0 SEC.	3.9 SEC.
RED CLEARANCE	30.9 SEC.	30.9 SEC.
MAXIMUM GREEN*	30 SEC.	30 SEC.
RECALL POSITION	NONE	RECALL

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 4 lower than what is shown.

LEGEND

- PROPOSED
Traffic Signal Head
Directional Arrow
Inductive Loop Detector
Trailer Mounted Signal
- EXISTING
N/A

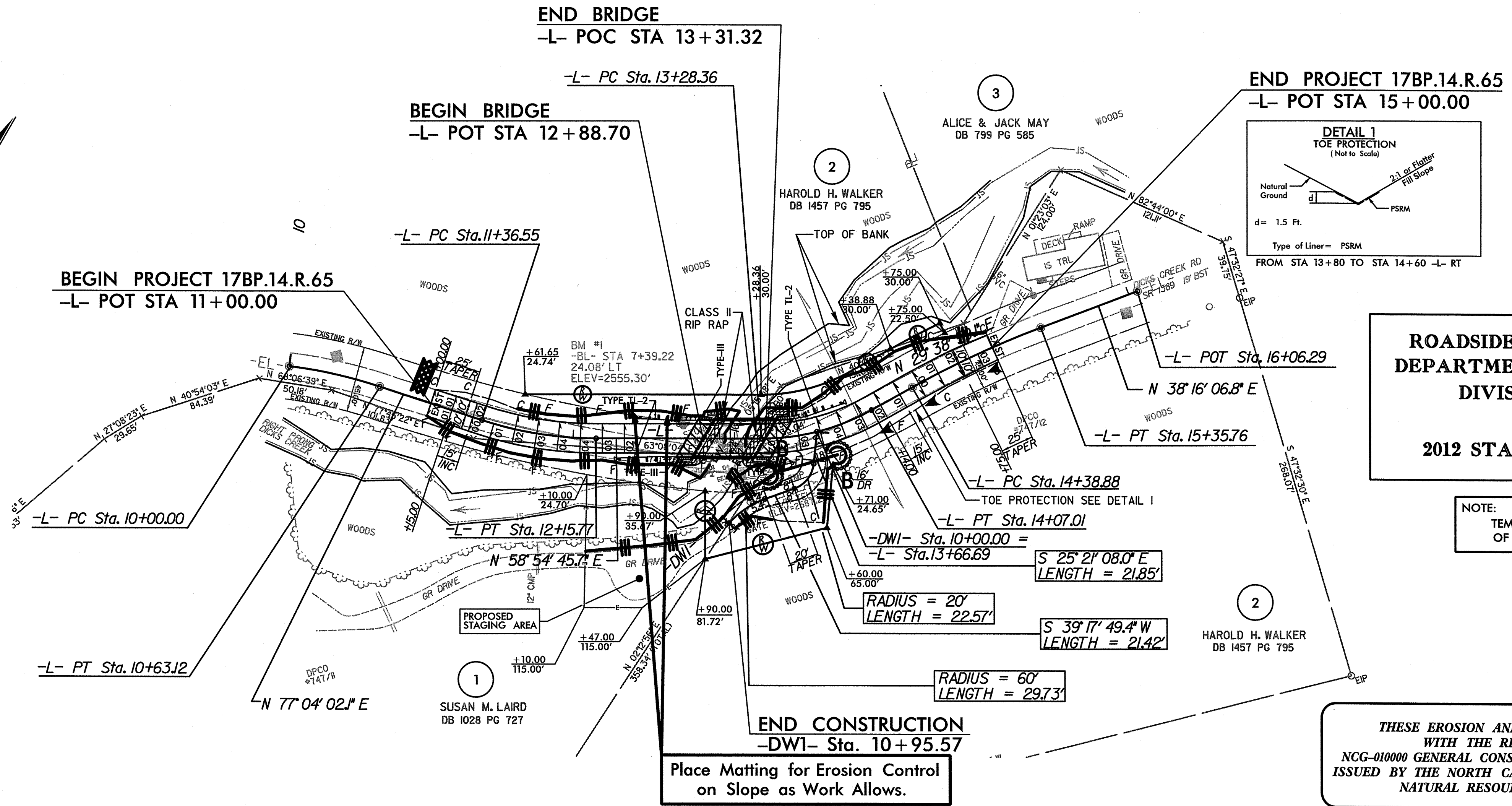
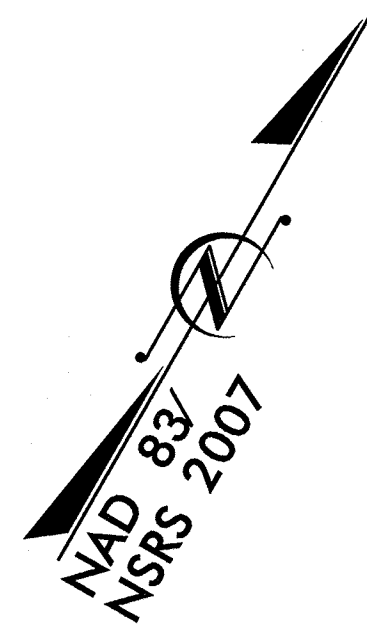
TEMPORARY SIGNAL

AECOM
NC Firm License No.: F-0342
701 Corporate Center Drive
Suite 475 Raleigh, NC 27607
Phone: 919-854-6200

Prepared In the Office of: 750 N. Greenfield Pkwy, Garner, NC 27529		TEMPORARY SIGNAL BRIDGE 253 PHASE 3 CONSTRUCTION		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER STEVEN W. COX 37856 DATE: 4-9-2013	
JACKSON COUNTY DIVISION 14		PLAN DATE: OCTOBER 2012		REVIEWED BY: C. N. MUSSMAN	
PREPARED BY: S. W. COX		REVIEWED BY: S. NANDAGIRI		INITIALS: DATE:	
REVISIONS:		INITIALS:		DATE:	
SCALE: 0 50' 1" = 50'		SIGNATURE:		DATE:	
		SIG. INVENTORY NO.:		N/A	

EROSION CONTROL PLAN

PROJECT REFERENCE NO.	SHEET NO.
17BP.14.R.65	EC-1
Prepared in the Office of: AECOM NC FIRM LICENSE No. F-0342 701 Corporate Center Drive, Suite 415 Raleigh, NC 27603 (919) 854-9200 • (919) 854-6259 FAX	



ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
2012 STANDARD SPECIFICATIONS

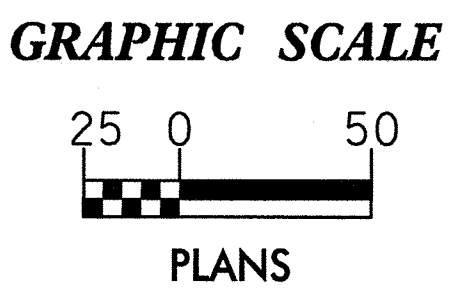
NOTE:
TEMPORARY SILT FENCE SHALL BE INSTALLED A MINIMUM
OF 3 FEET FROM TOE OF FILL

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES DIVISION OF WATER QUALITY.

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.

Sed. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	—>—>—>
1630.02	Silt Basin Type B	▨
1630.03	Temporary Silt Ditch	—>—>—>
1630.05	Temporary Diversion	—>—>—>
1630.06	Special Stilling Basin	—>—>—>
1632.03	Rock Inlet Sediment Trap Type C	□
1633.01	Temporary Rock Silt Check Type-A	▨
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	▨
1633.02	Temporary Rock Silt Check Type-B	▨
1635.01	Rock Pipe Inlet Sediment Trap Type-B	U
	Excelsior Wattles	—EW—



Rene Remy CPESC, CPSWQ
LEVEL III NAME

3135
LEVEL III CERTIFICATION NO.

2012 STANDARD DRAWINGS			
1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

8/17/99
REVISIONS
USER: rremy
DATE: 9/10/2013
TIME: 9:50:32 AM
DGN: RRE/Environmental/Design/49-0253.rvt/1601.dgn

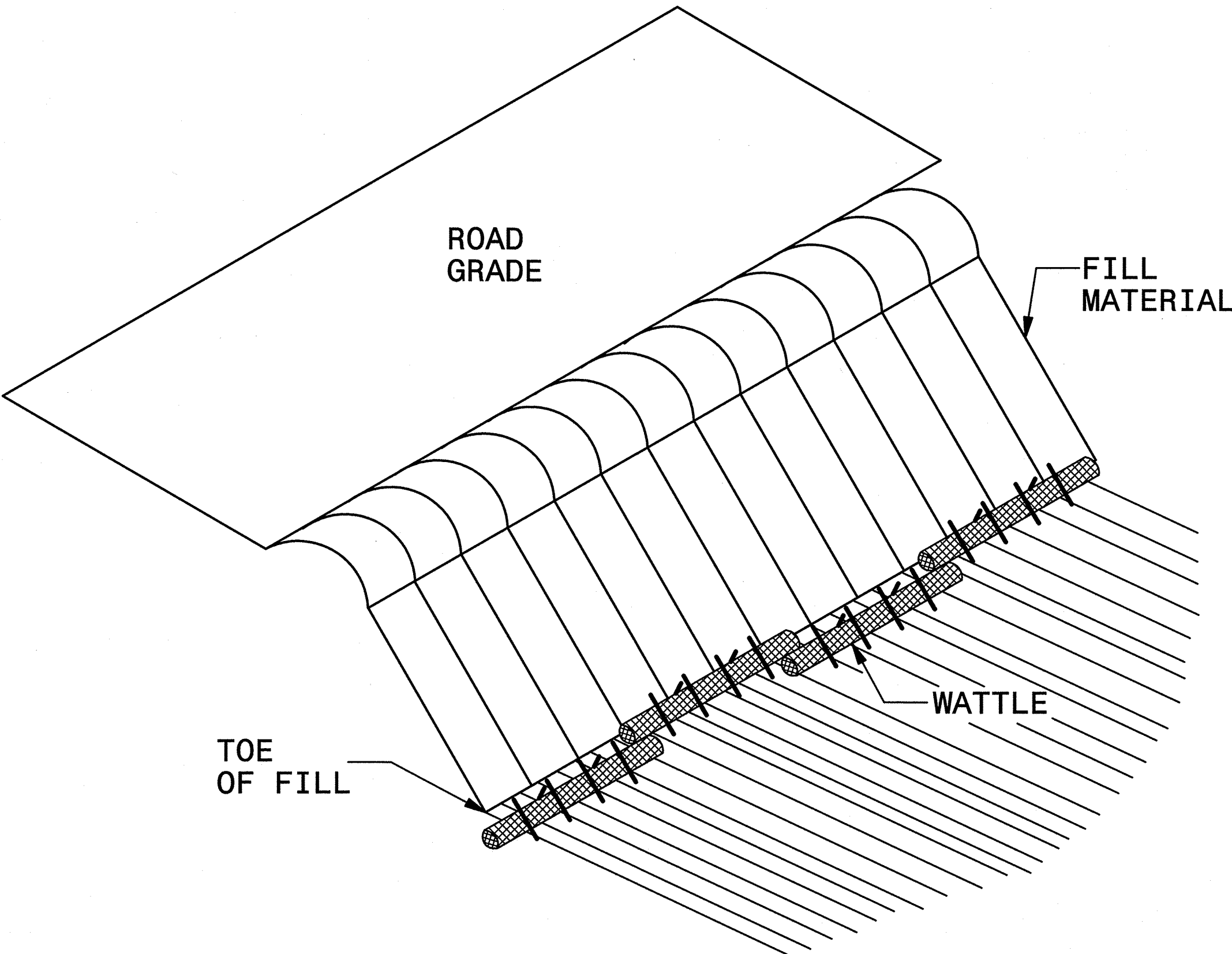
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
17BP.14.R.65	EC-2
Prepared in the Office of: AECOM 701 Corporate Center Drive, Suite 475 Raleigh, NC 27604 (919) 854-6200 • (919) 854-6259 FAX	

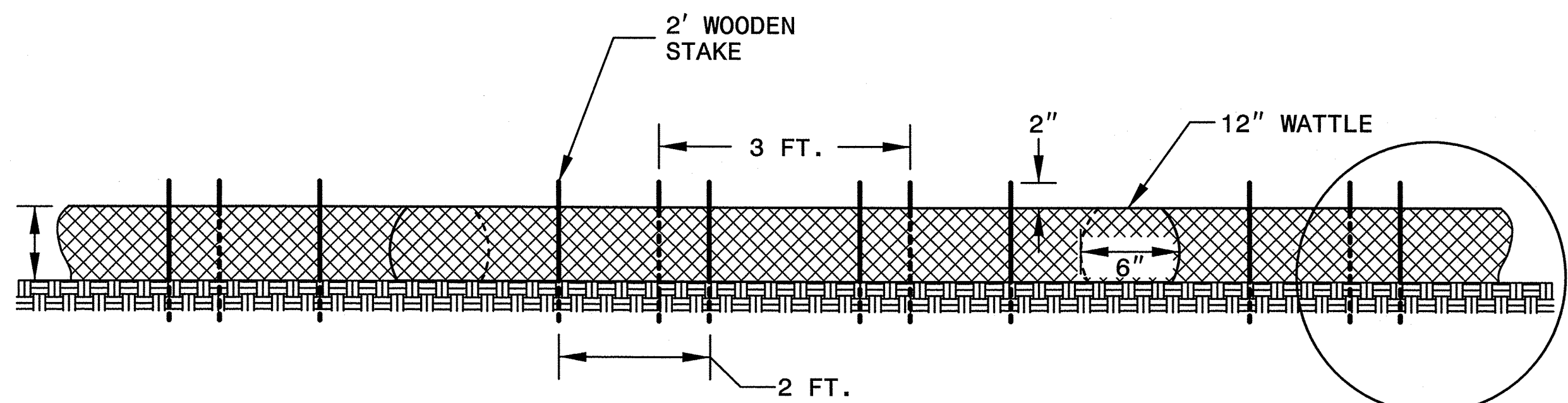
SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

WATTLE BARRIER DETAIL

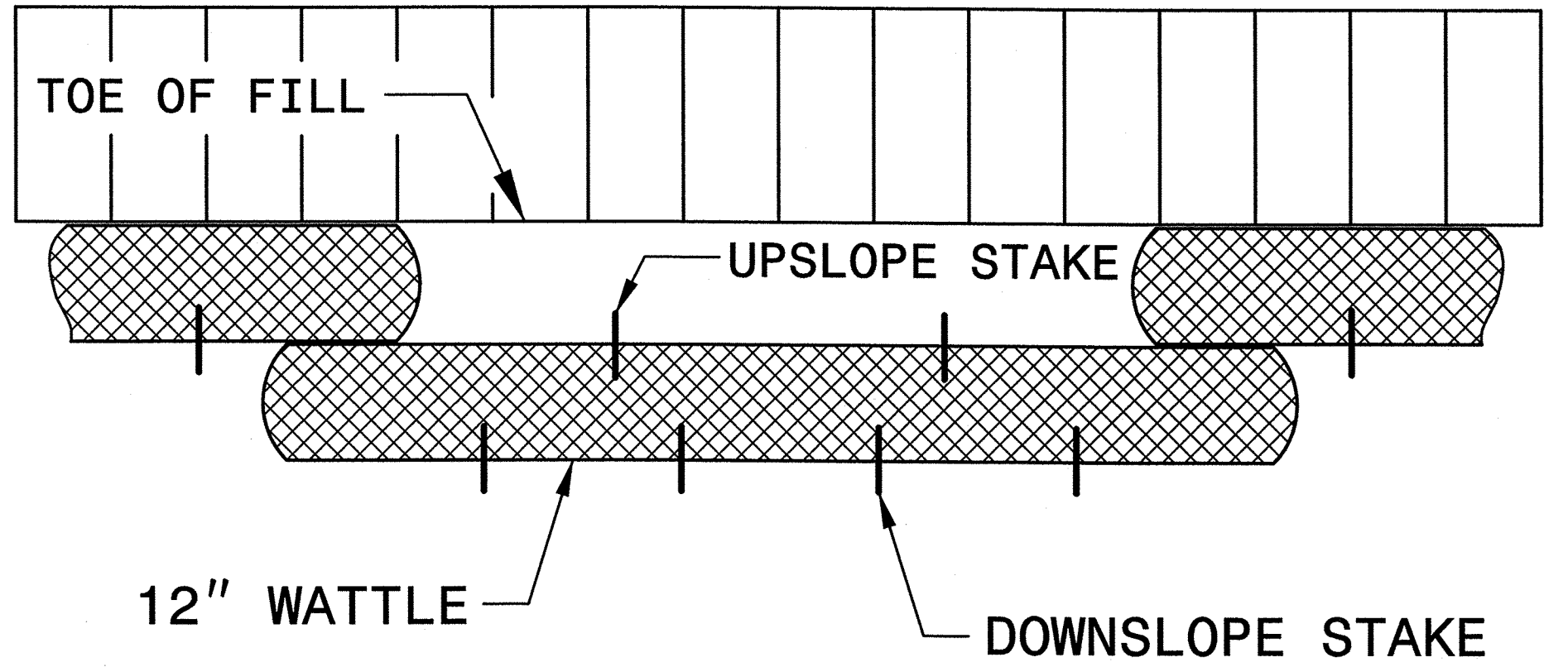
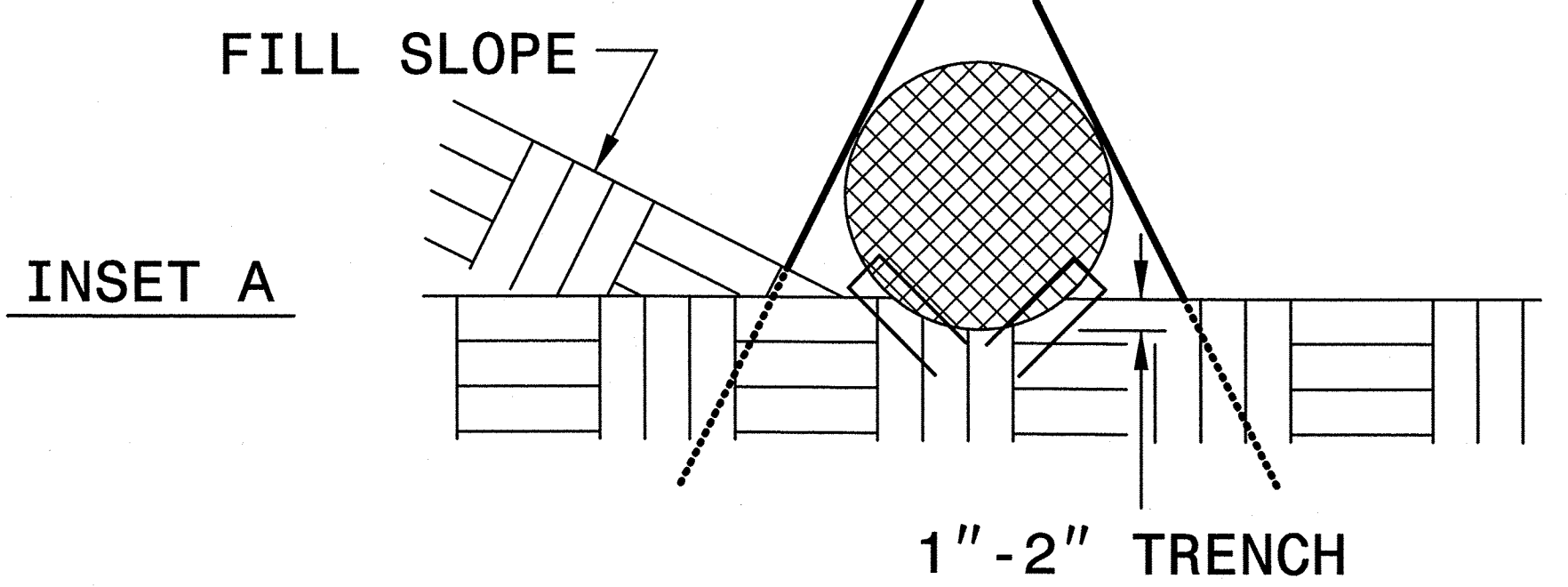


ISOMETRIC VIEW



FRONT VIEW

- NOTES:**
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE AND LENGTH OF 10 FT.
 - EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
 - DO NOT PLACE WATTLES ON TOE OF SLOPE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
 - 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.
 - FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 20 FT.

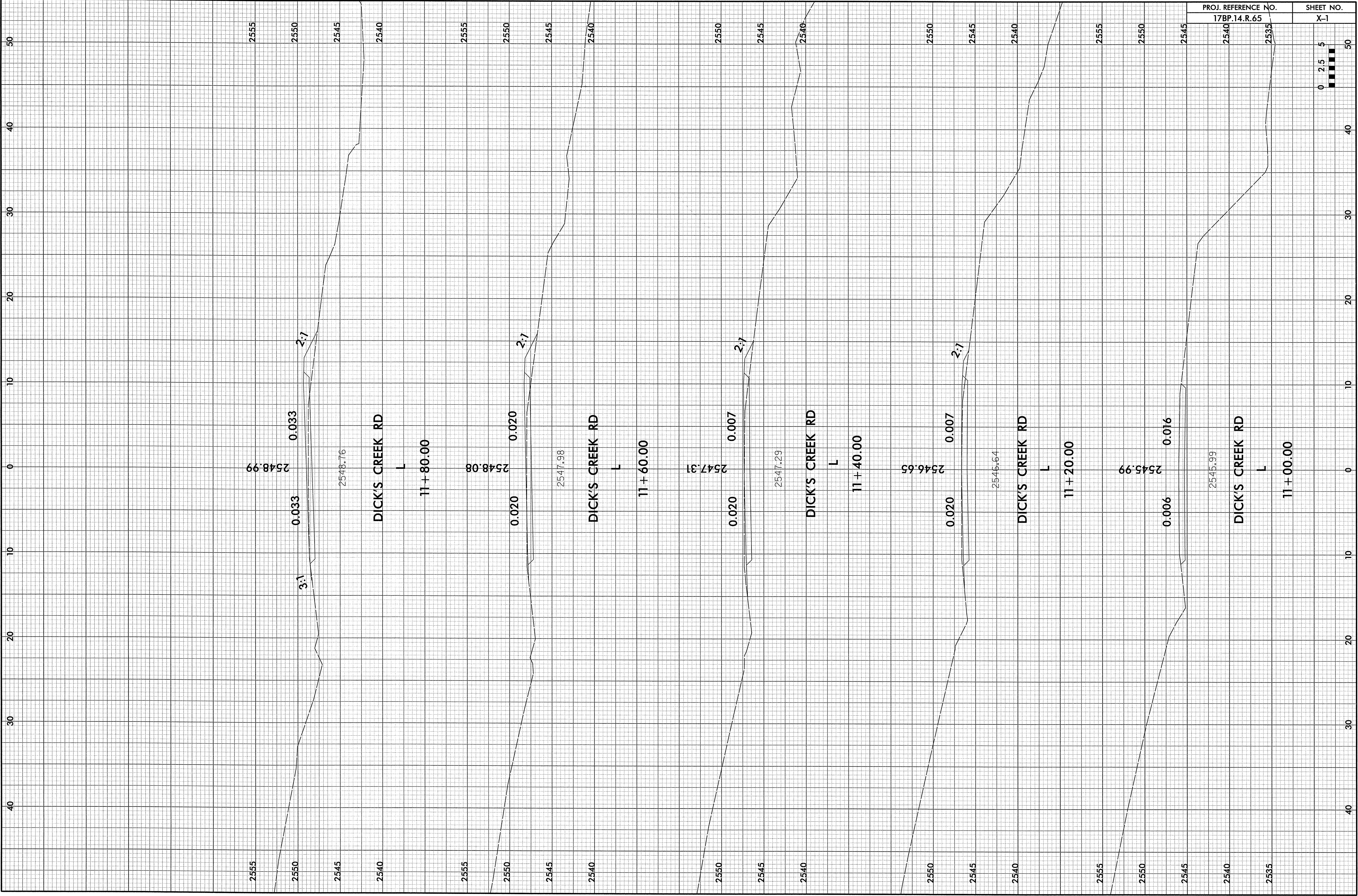


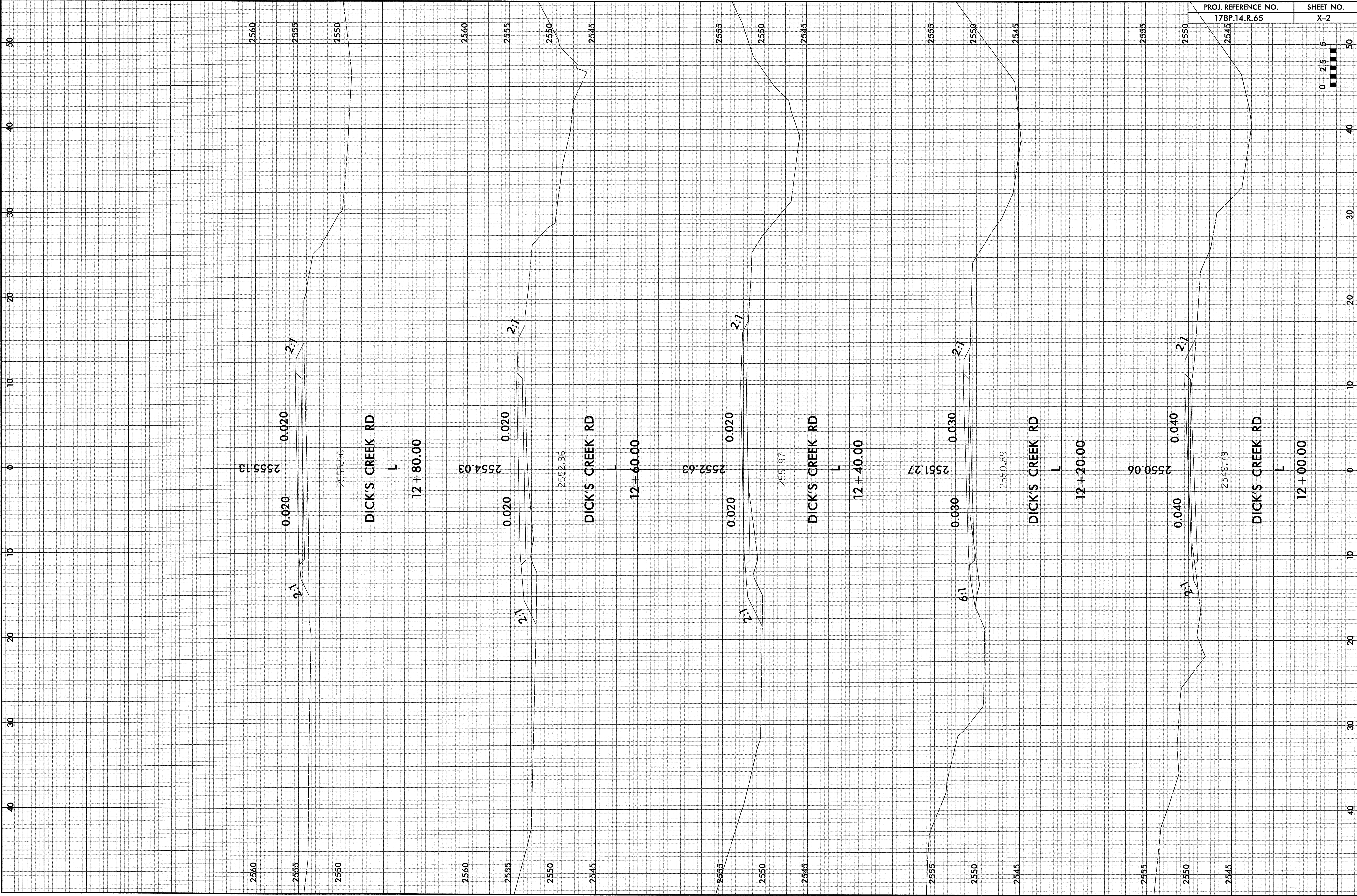
TOP VIEW

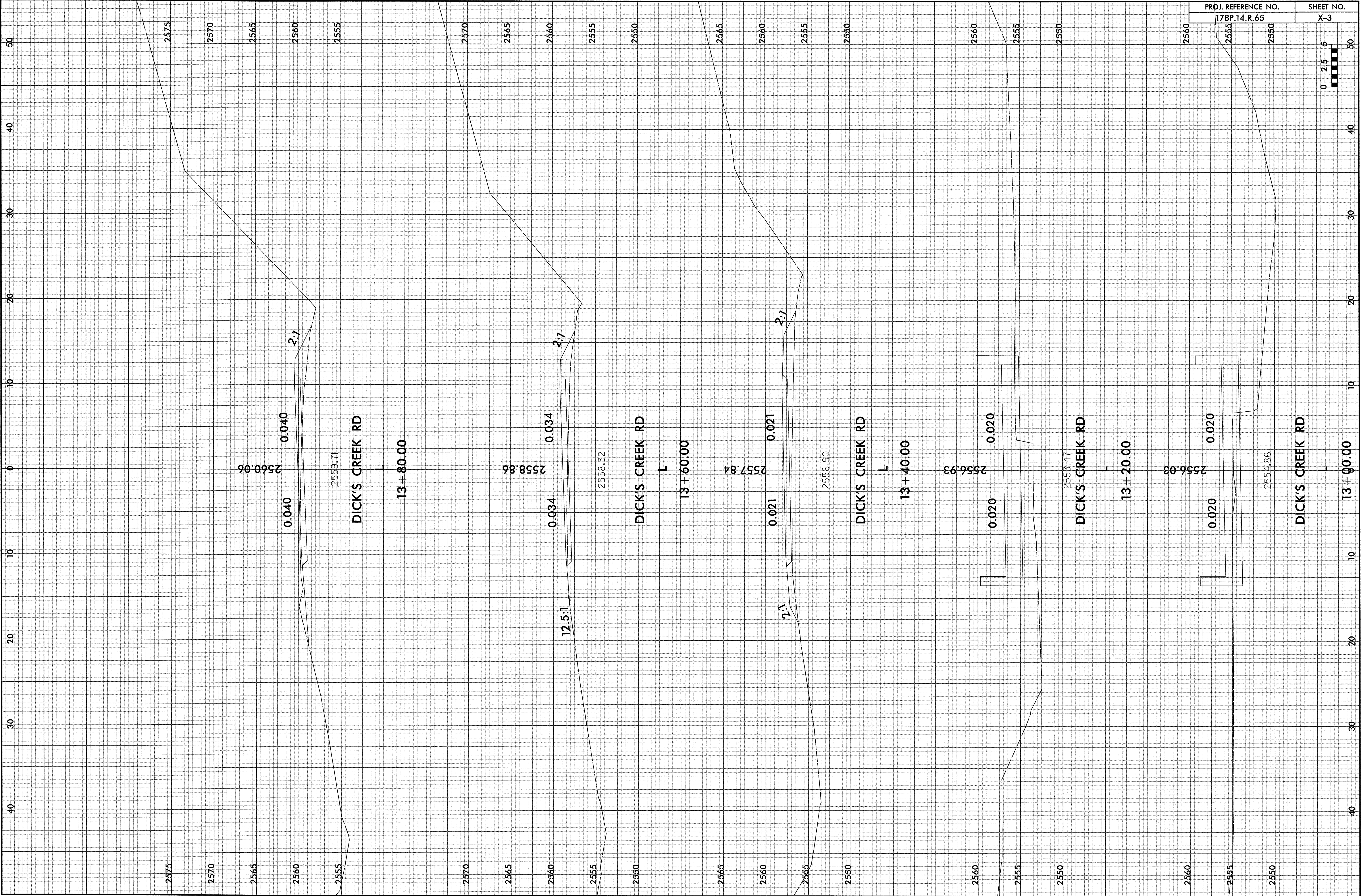
REVISIONS

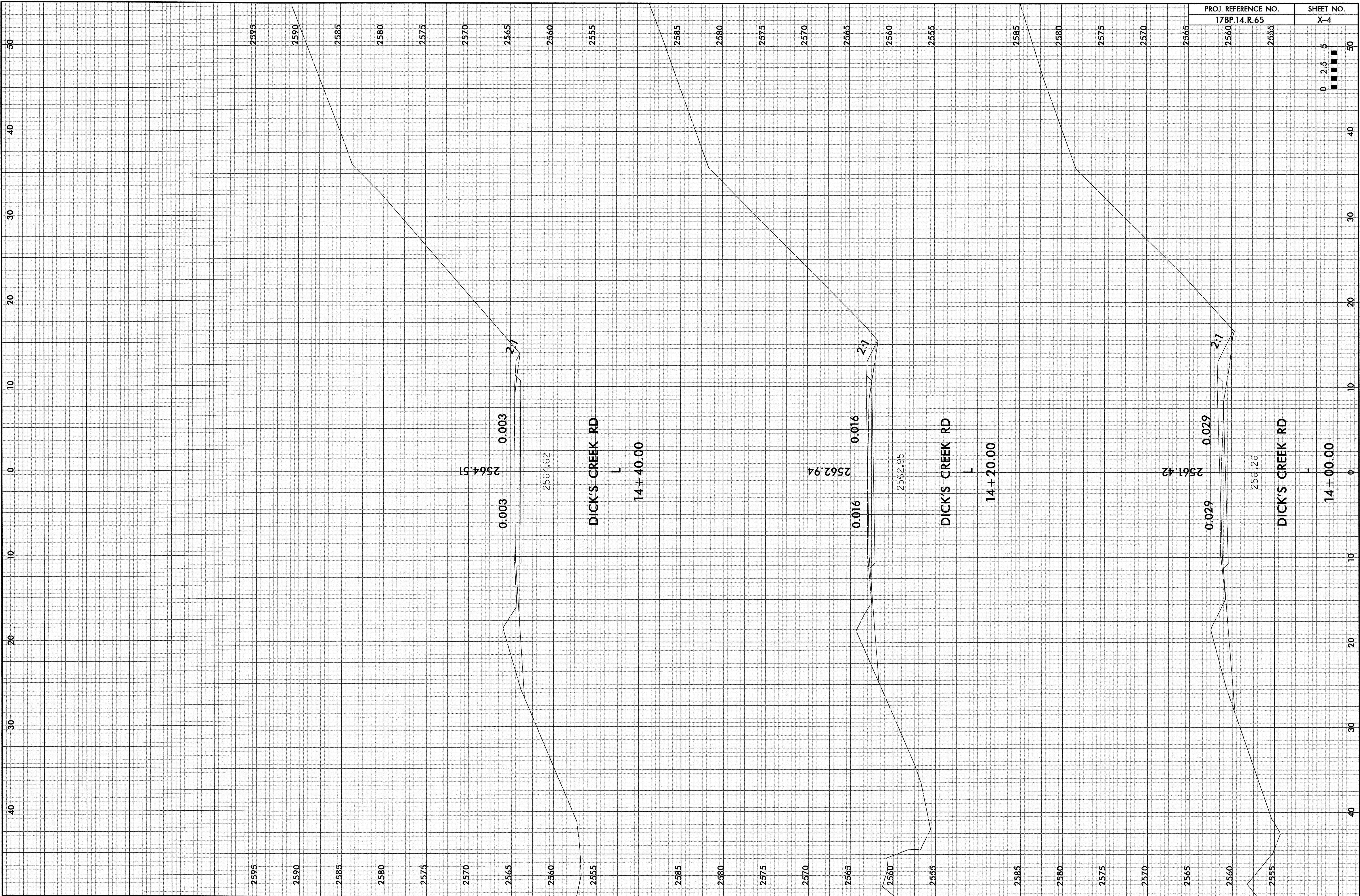
INDEX TO CROSS SECTIONS

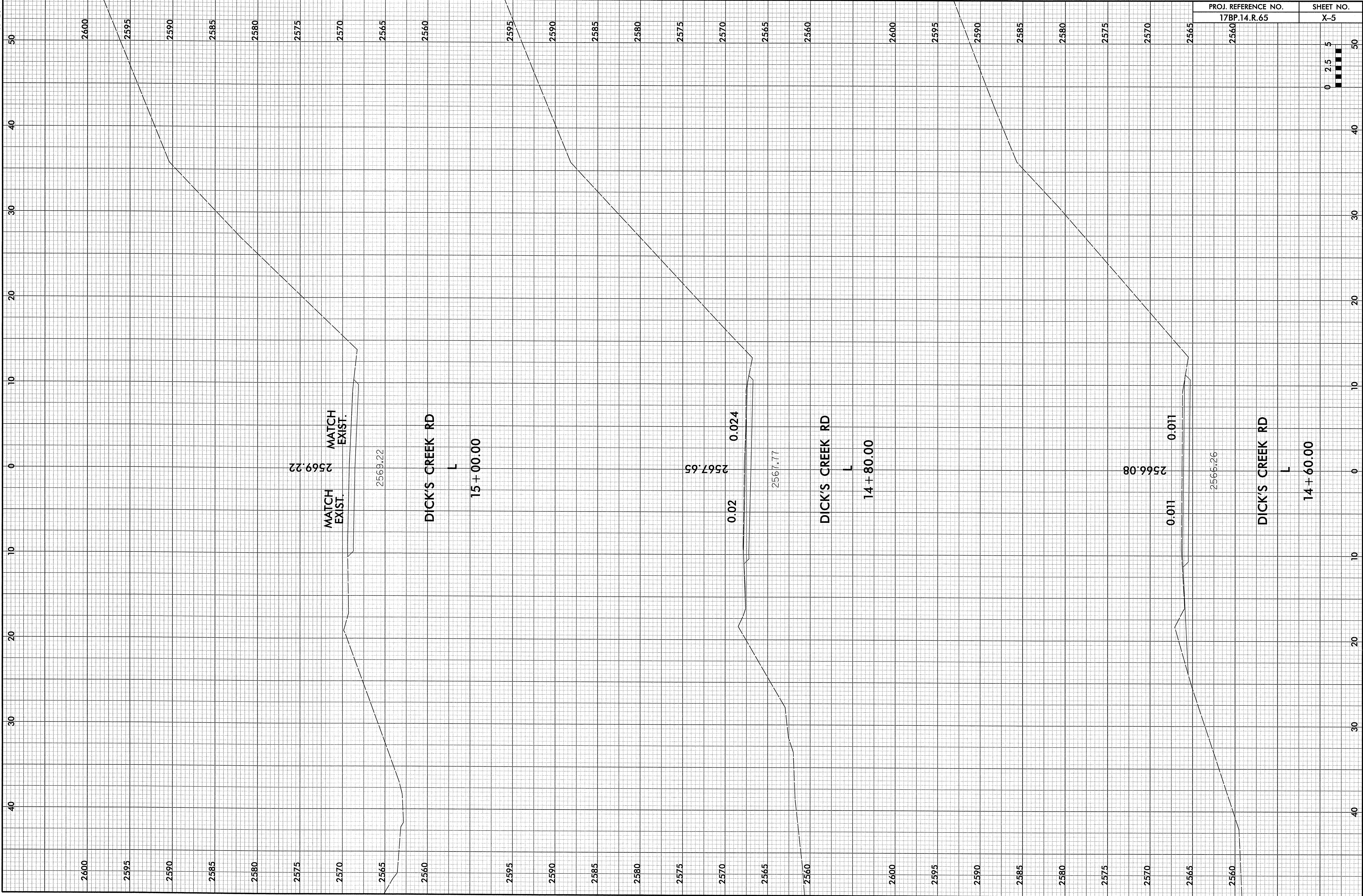
ALIGN.	ROAD NAME	NO.OF SHEETS	SHEET NO.	
			FROM	TO
-L-	DICK'S CREEK ROAD	6	X-1	X-6
-DWI-	DRIVEWAY	1	X-7	-







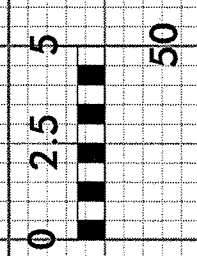
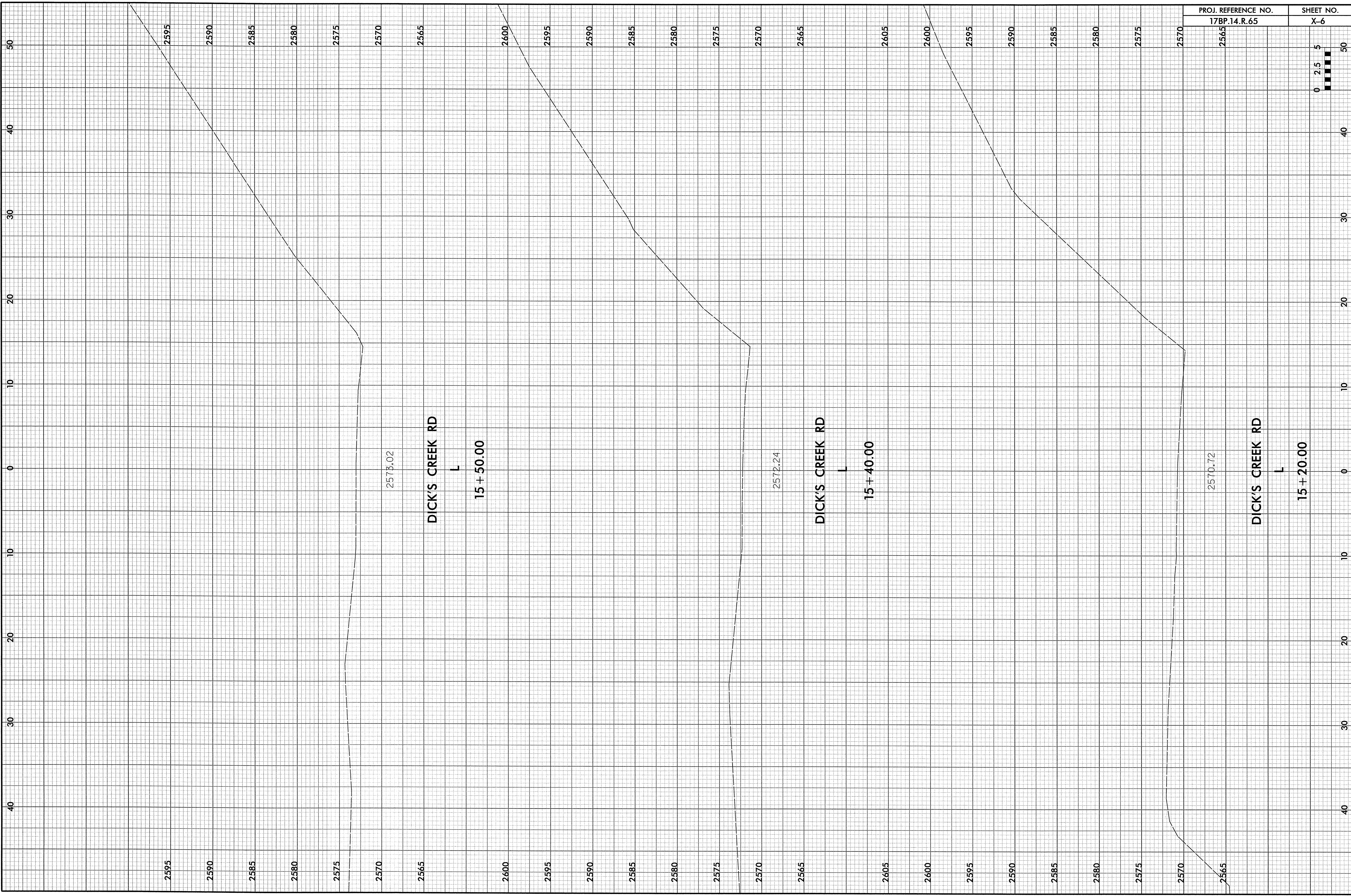




PROJ. REFERENCE NO.
17BP.14.R.65

SHEET NO.
X-5

0 2.5 5

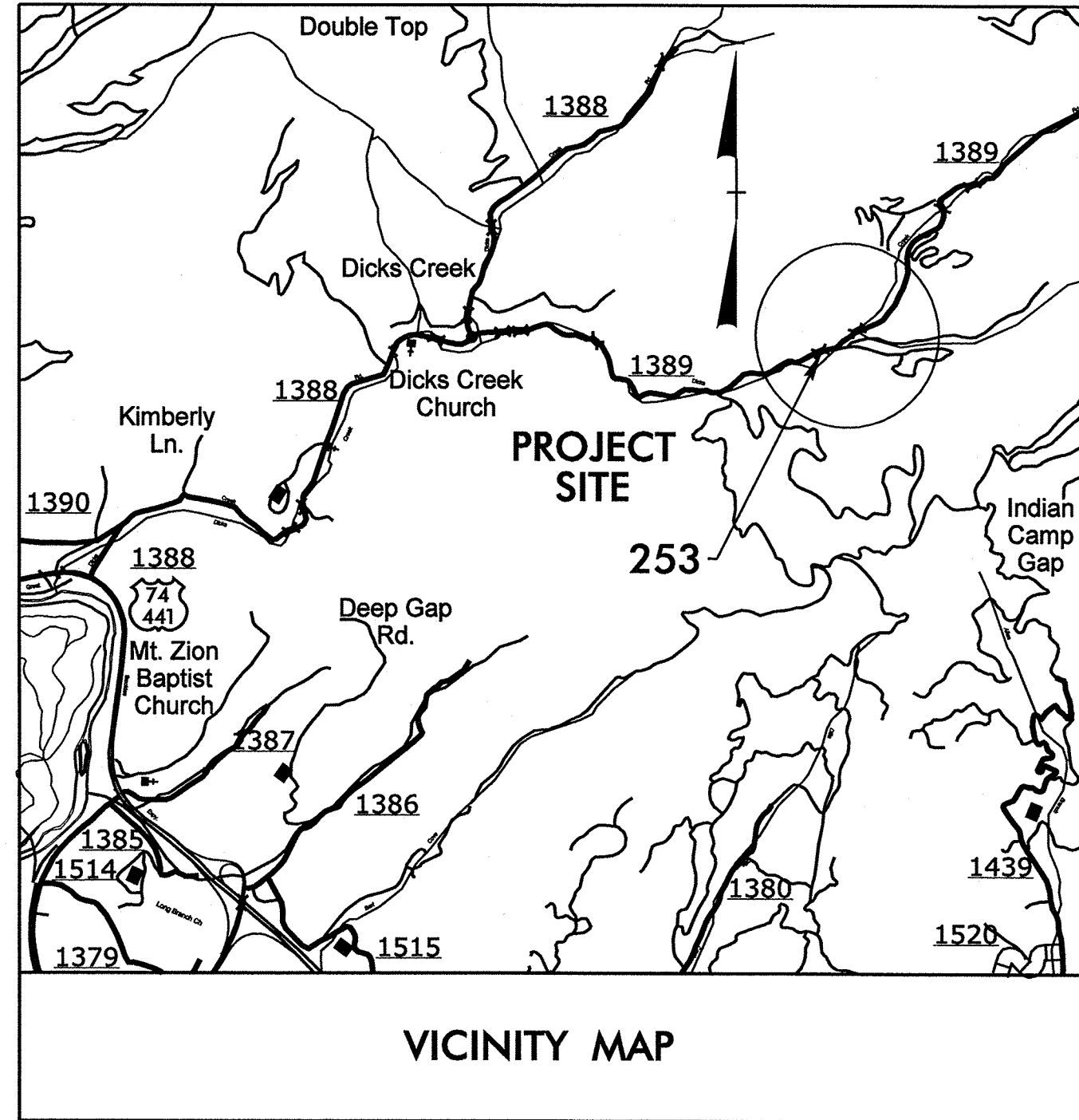




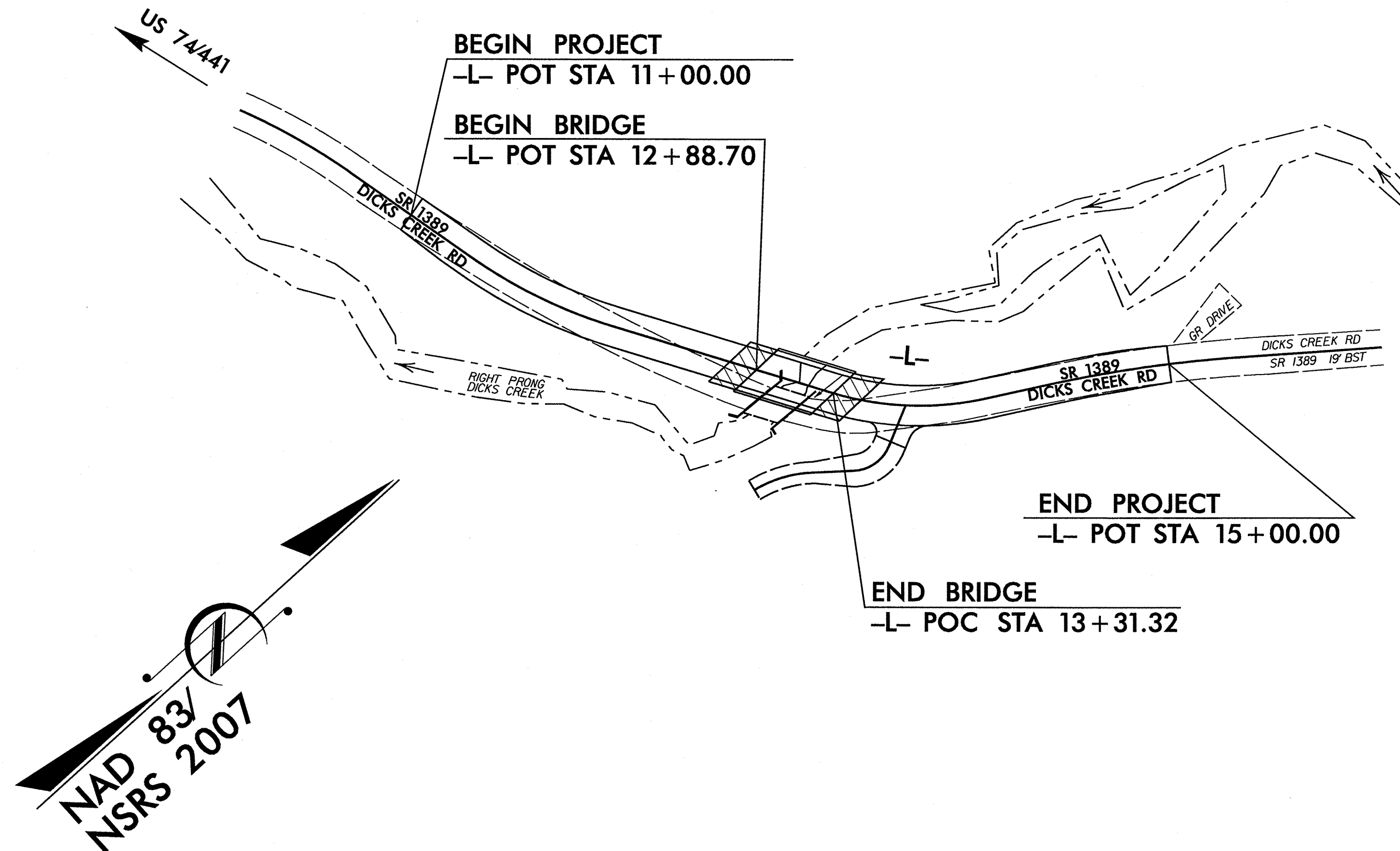
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Loweryd

CONTRACT: DN00187

TIP PROJECT: 17BP.14.R.65



STRUCTURE



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

DESIGN DATA

ADT 2000 = 70
V = 25 MPH
FUNC CLASS = LOCAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY STATE PROJECT 17BP.14.R.65 = 0.077 MILES
LENGTH STRUCTURES STATE PROJECT 17BP.14.R.65 = 0.008 MILES
TOTAL LENGTH STATE PROJECT 17BP.14.R.65 = 0.085 MILES

NCDOT CONTACT: JOSHUA DEYTON, PE
PROJECT ENGINEER

Prepared in the Office of:

AECOM

NC FIRM LICENSE No: F-0342
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259 (FAX)

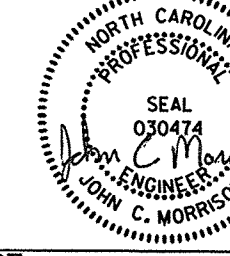
RIGHT OF WAY DATE:
JUNE 29, 2012

LETTING DATE:
FY 2013

LEN HILL, PE
PROJECT ENGINEER

TOM HILDEBRAND, PE
PROJECT DESIGN ENGINEER

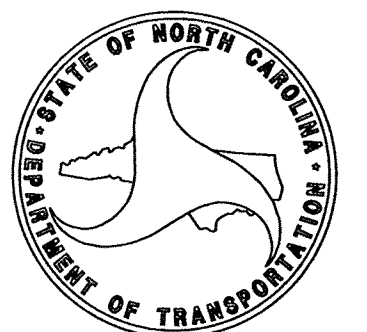
BRIDGE ENGINEER



SIGNATURE:

9/10/13
P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

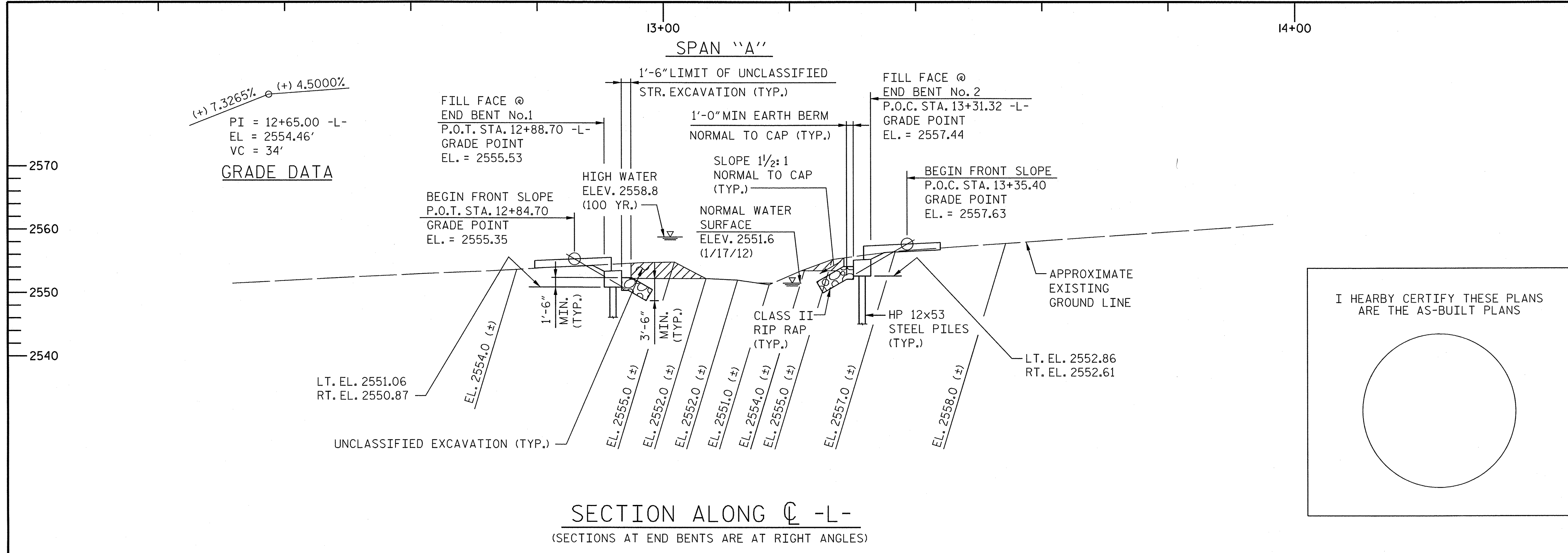


STATE HIGHWAY DESIGN ENGINEER
P.E.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.14.R.65	TS-01	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.14.R.65		PE, R/W, UTIL	
17BP.14.R.65		CONST	

DATE: 9/10/2013
TIME: 1:36:37 PM

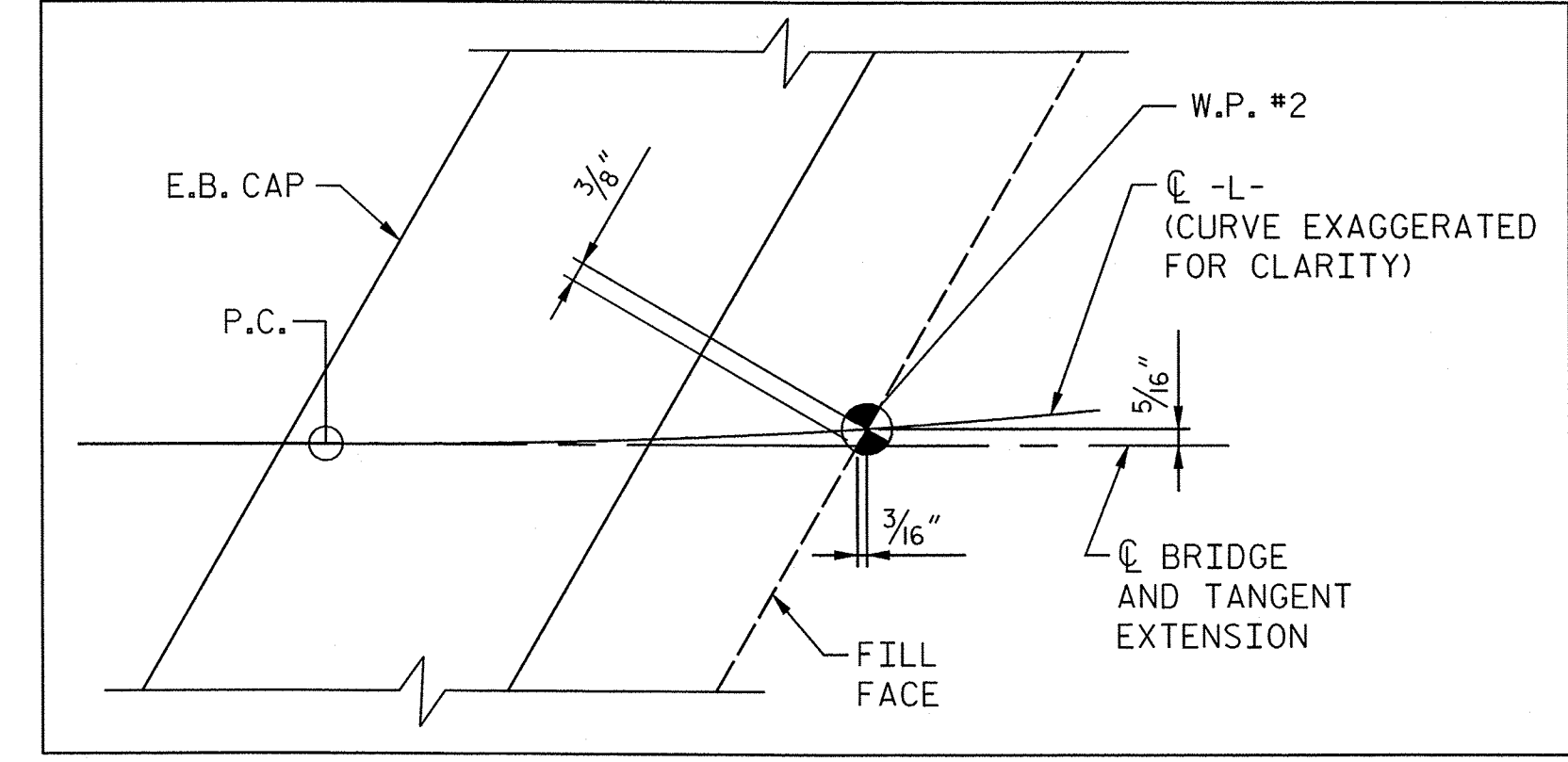
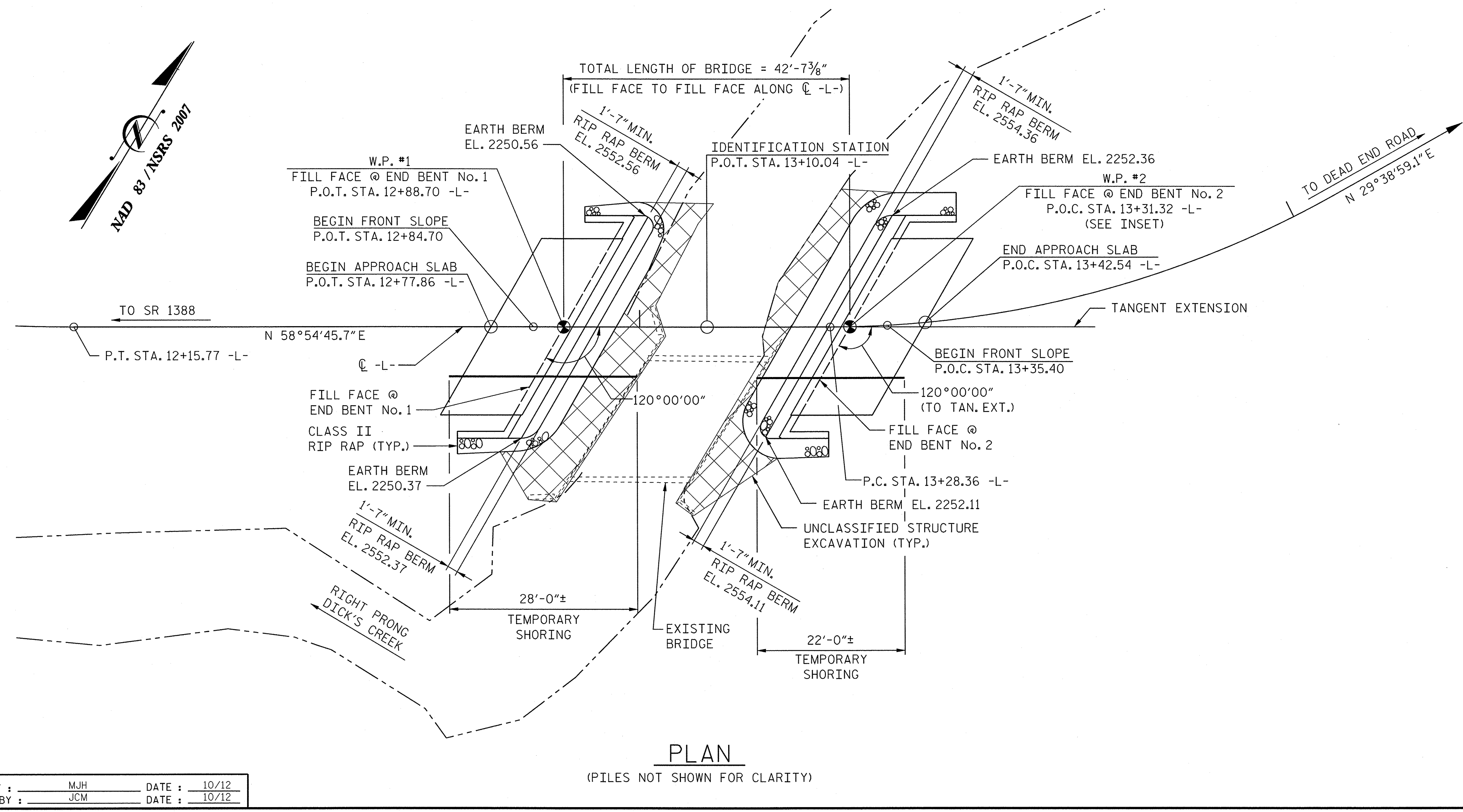
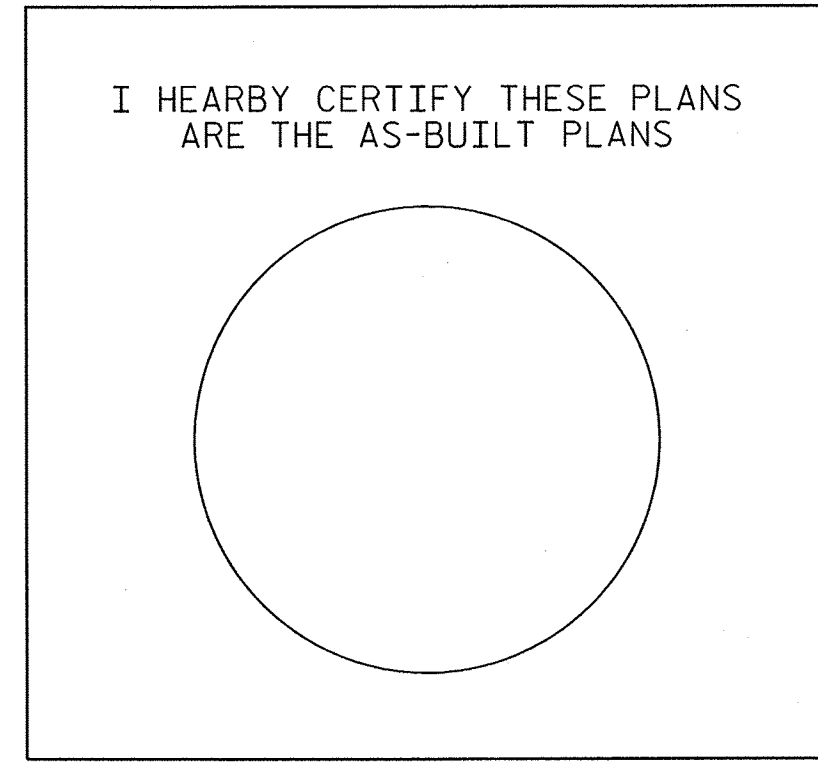
USER: C:\Users\jcm\OneDrive\Documents\17BP.14.R.65\17BP.14.R.65.dgn
C:\Users\jcm\OneDrive\Documents\17BP.14.R.65\17BP.14.R.65.dgn



HORIZONTAL CURVE DATA -L-	
PI STA. 13+68.56	
$\Delta = 29^\circ 15' 46.6''$ (LT)	
D = 37' 12" 18.2"	
L = 78.65'	
T = 40.20'	
R = 154.00'	

HYDRAULIC DATA	
DESIGN DISCHARGE	270 CFS
FREQUENCY OF DESIGN FLOOD	2 YR.
DESIGN HIGH WATER ELEVATION	2555.10
DRAINAGE AREA	3.10 SQ. MI.
BASE DISCHARGE (Q 100)	1,300 CFS
BASE HIGH WATER ELEVATION	2558.80

OVERTOPPING FLOOD DATA	
OVERTOPPING DISCHARGE	335 CFS
FREQUENCY OF OVERTOPPING FLOOD	2+ YR.
OVERTOPPING FLOOD ELEVATION	2553.60



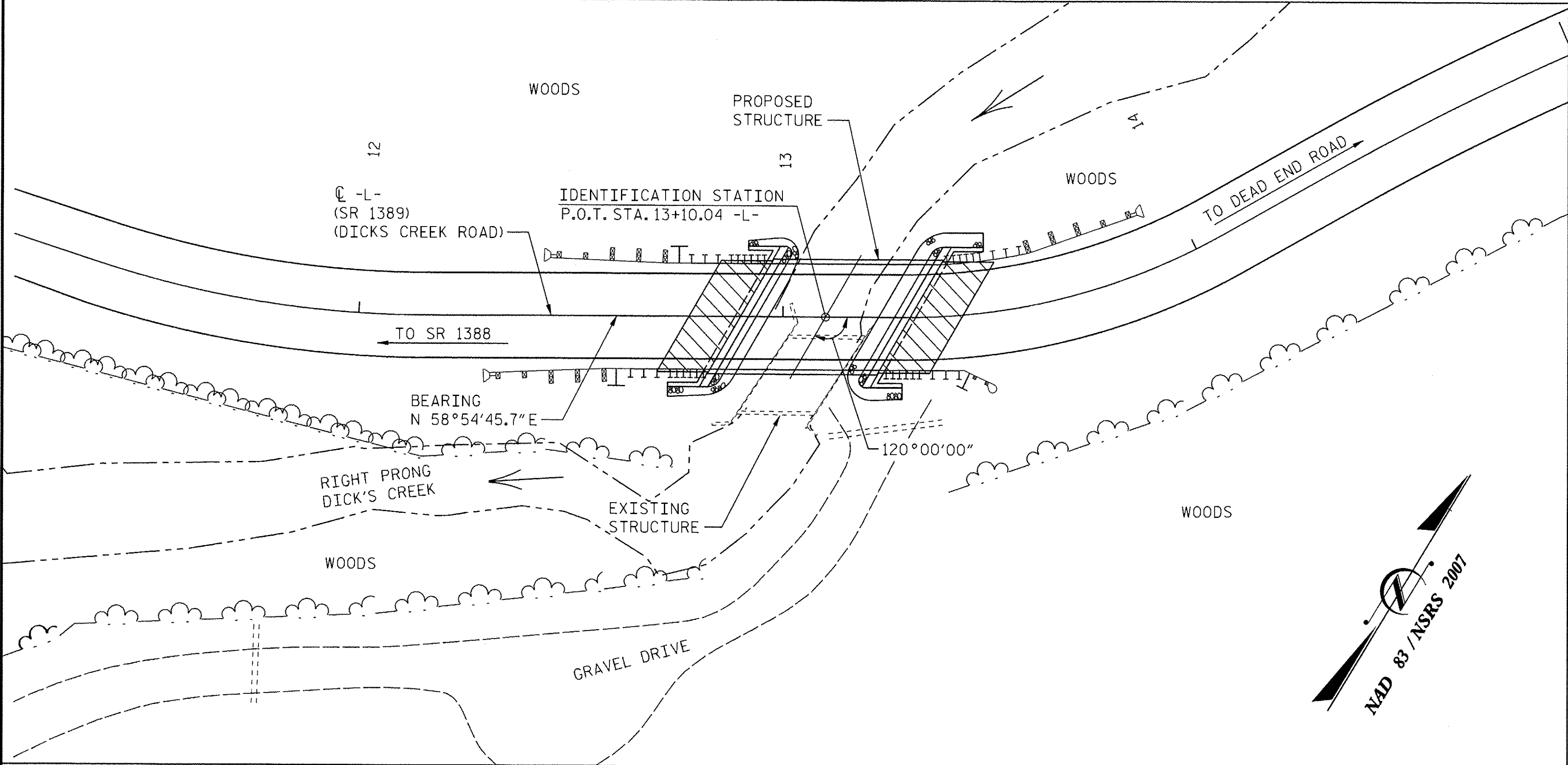
PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
STATION: 13+10.04 -L-
SHEET 1 OF 2 REPLACES BRIDGE NO. 253

AECOM
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RALEIGH, NC 27607
(919) 554-4200
www.aecom.com
AECOM License No. F-0342

SEAL
030474
JAN C. MORRISON
NORTH CAROLINA PROFESSIONAL ENGINEER
9/10/13

REVISIONS						SHEET NO. S-01 TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	

BENCH MARK: BM#1 - RR SPIKE IN 20"POPLAR TREE
11.60' LEFT OF -L- STA.12+75.20 =
24.08' LEFT OF -BL- STA.7+39.22
ELEV. 2555.30', NAVD 1988



LOCATION SKETCH

NOTES:

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR SEISMIC PERFORMANCE ZONE 1.

AFTER SERVING AS TEMPORARY STRUCTURE, THE EXISTING STRUCTURE CONSISTING OF 1 @ 20'-6" SPAN, 17.5'± CLEAR ROADWAY WIDTH, TIMBER FLOOR ON TIMBER JOIST, ON TIMBER CAPS W/ TIMBER POSTS AND SILLS AND LOCATED AT EXISTING CROSSING FOR PROPOSED STRUCTURE, SHALL BE REMOVED. THE EXISTING BRIDGE IS PRESENTLY POSTED BELOW THE LEGAL LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE FURTHER DETERIORATE, THIS LOAD LIMITATION MAY BE REDUCED AS FOUND NECESSARY DURING THE LIFE OF THE PROJECT.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED 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 401-2 OF THE STANDARD SPECIFICATIONS.

THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 23.3 FT± EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE 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 FOR ANY DELAYS OR ADDITIONAL COSTS INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

STEEL SHEET PILING REQUIRED FOR SHORING SHALL BE HOT ROLLED.

FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.

NO KNOWN UTILITY CONFLICTS.

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILES AT END BENT NO.1 AND END BENT NO.2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 85 TONS PER PILE.

DRIVE PILES AT END BENT NO.1 AND END BENT NO.2 TO A REQUIRED DRIVING RESISTANCE OF 145 TONS PER PILE.

TESTING PILES WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING MAY BE REQUIRED. THE ENGINEER WILL DETERMINE THE NEED FOR PDA TESTING. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILE EXCAVATION IS REQUIRED TO INSTALL PILES AT END BENT NO.1. EXCAVATE HOLES AT PILE LOCATIONS TO ELEVATION 2541 FT. (LEFT) AND 2541 FT. (RIGHT). FOR PILE EXCAVATION, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

PILE EXCAVATION MAY BE REQUIRED TO INSTALL PILES AT END BENT NO.2. IF NECESSARY, EXCAVATE HOLES AT PILE LOCATIONS TO ELEVATION 2543 FT. (LEFT) AND 2542 FT. (RIGHT). FOR PILE EXCAVATION, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

FOR PILE DRIVING CRITERIA, SEE SPECIAL PROVISIONS.

ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18 "EVALUATING SCOUR AT BRIDGE", MAY, 2001.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	PDA TESTING	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	3'-0" x 1'-9" PRESTRESSED CONCRETE CORED SLAB UNITS		VERTICAL CONCRETE BARRIER RAIL	PILE EXCAVATION IN SOIL	PILE EXCAVATION NOT IN SOIL	HP 12x53 STEEL PILES		RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS
	LUMP SUM	EACH	LUMP SUM	CU. YDS.	LUMP SUM	LBS.	NO.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	NO.	LIN. FT.	TONS	SQ. YD.	LUMP SUM
SUPERSTRUCTURE	LUMP SUM		—	—	LUMP SUM	—	9	360	80.29			—	—	—	—	LUMP SUM
END BENT No. 1	—		LUMP SUM	13.8	—	2078	—	—	—	10	40	5	75	27	30	—
END BENT No. 2	—		LUMP SUM	13.8	—	2078	—	—	—	10	40	5	90	36	40	—
TOTAL	LUMP SUM	1	LUMP SUM	27.6	LUMP SUM	4156	9	360	80.29	20	80	10	165	63	70	LUMP SUM

PROJECT NO. 17BP.14.R.65

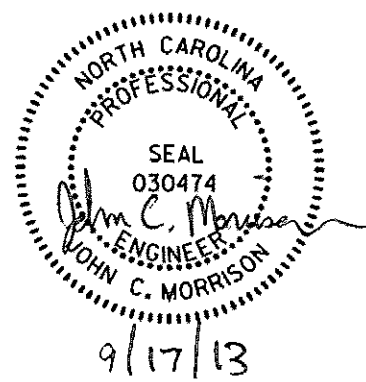
JACKSON COUNTY

STATION: 13+10.04 -L-

SHEET 2 OF 2 REPLACES BRIDGE NO. 253

AECOM

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON SR 1389
OVER RIGHT PRONG DICK'S CREEK
BETWEEN SR 1388 & DEAD END ROAD
24'-10" CLEAR ROADWAY - 120° SKEW

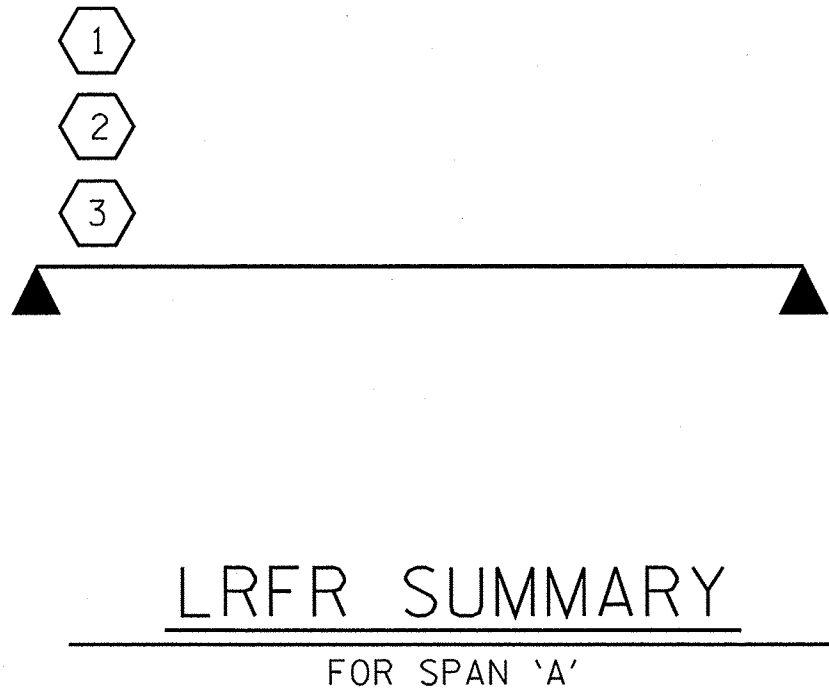
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DRAWN BY : MJH DATE : 10/12
CHECKED BY : JCM DATE : 10/12

DATE: 9/10/2013
TIME: 1:34:15 PM

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LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS																								
LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING	MINIMUM RATING FACTORS (RF)	TONS = W X RF	STRENGTH I LIMIT STATE											SERVICE III LIMIT STATE						COMMENT NUMBER	
						LIVELOAD FACTORS	MOMENT					SHEAR					LIVELOAD FACTORS	MOMENT						
							DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)		DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)		
DESIGN LOAD RATING	HL-93(Inv)	N/A	1	1.352	--	1.75	0.252	1.95	40'	EL	19.423	0.653	1.35	40'	EL	7.769	0.80	0.252	1.72	40'	EL	19.423		
	HL-93(0pr)	N/A	--	1.753	--	1.35	0.252	2.52	40'	EL	19.423	0.653	1.75	40'	EL	7.769	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.544	55.583	1.75	0.252	2.45	40'	EL	19.423	0.653	1.54	40'	EL	7.769	0.80	0.252	2.14	40'	EL	19.423		
	HS-20(0pr)	36.000	--	2.001	72.053	1.35	0.252	3.17	40'	EL	19.423	0.653	2	40'	EL	7.769	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	3.929	53.037	1.4	0.252	5.64	40'	EL	19.423	0.653	3.93	40'	EL	7.769	0.80	0.252	3.99	40'	EL	19.423	
		SNGARBS2	20.000	--	2.985	59.708	1.4	0.252	4.63	40'	EL	15.538	0.653	2.99	40'	EL	7.769	0.80	0.252	3.28	40'	EL	19.423	
		SNAGRIS2	22.000	--	2.852	62.746	1.4	0.252	4.53	40'	EL	15.538	0.653	2.85	40'	EL	7.769	0.80	0.252	3.23	40'	EL	15.538	
		SNCOTTS3	27.250	--	1.98	53.947	1.4	0.252	2.82	40'	EL	19.423	0.653	1.98	40'	EL	7.769	0.80	0.252	1.99	40'	EL	19.423	
		SNAGGRS4	34.925	--	1.782	62.222	1.4	0.252	2.54	40'	EL	19.423	0.653	1.78	40'	EL	7.769	0.80	0.252	1.79	40'	EL	19.423	
		SNS5A	35.550	--	1.746	62.059	1.4	0.252	2.47	40'	EL	19.423	0.653	1.89	40'	EL	7.769	0.80	0.252	1.75	40'	EL	19.423	
		SNS6A	39.950	--	1.662	66.381	1.4	0.252	2.35	40'	EL	19.423	0.653	1.79	40'	EL	7.769	0.80	0.252	1.66	40'	EL	19.423	
		SNS7B	42.000	--	1.585	66.556	1.4	0.252	2.24	40'	EL	19.423	0.653	1.86	40'	EL	7.769	0.80	0.252	1.58	40'	EL	19.423	
	TTST	TNAGRIT3	33.000	--	2.045	67.476	1.4	0.252	2.89	40'	EL	19.423	0.653	2.07	40'	EL	7.769	0.80	0.252	2.04	40'	EL	19.423	
		TNT4A	33.075	--	1.951	64.52	1.4	0.252	2.93	40'	EL	19.423	0.653	1.95	40'	EL	7.769	0.80	0.252	2.07	40'	EL	19.423	
		TNT6A	41.600	--	1.757	73.106	1.4	0.252	2.49	40'	EL	19.423	0.653	1.91	40'	EL	7.769	0.80	0.252	1.76	40'	EL	19.423	
		TNT7A	42.000	--	1.795	75.386	1.4	0.252	2.55	40'	EL	19.423	0.653	1.79	40'	EL	7.769	0.80	0.252	1.80	40'	EL	19.423	
		TNT7B	42.000	--	1.729	72.638	1.4	0.252	2.61	40'	EL	19.423	0.653	1.73	40'	EL	7.769	0.80	0.252	1.84	40'	EL	19.423	
		TNAGRIT4	43.000	--	1.661	71.441	1.4	0.252	2.53	40'	EL	15.538	0.653	1.66	40'	EL	7.769	0.80	0.252	1.79	40'	EL	19.423	
		TNAGT5A	45.000	--	1.659	74.644	1.4	0.252	2.35	40'	EL	19.423	0.653	1.77	40'	EL	7.769	0.80	0.252	1.66	40'	EL	19.423	
		TNAGT5B	45.000	3	1.568	70.561	1.4	0.252	2.28	40'	EL	19.423	0.653	1.57	40'	EL	7.769	0.80	0.252	1.61	40'	EL	19.423	



LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ_{DC}	γ_{DW}
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

CONTROLLING LOAD RATING

1 DESIGN LOAD RATING (HL-93)

2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING **

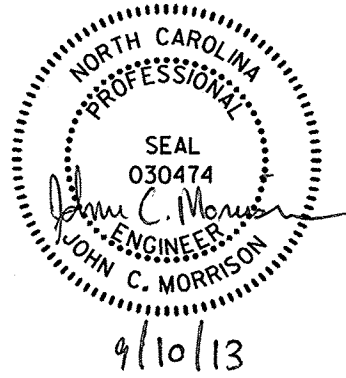
** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

I - INTERIOR GIRDER
EL - EXTERIOR LEFT GIRDER
ER - EXTERIOR RIGHT GIRDER

PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
STATION: 13+10.04 -L-

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
LRFR SUMMARY FOR
40' CORED SLAB UNIT
60° SKEW & 120° SKEW
(NON-INTERSTATE TRAFFIC)

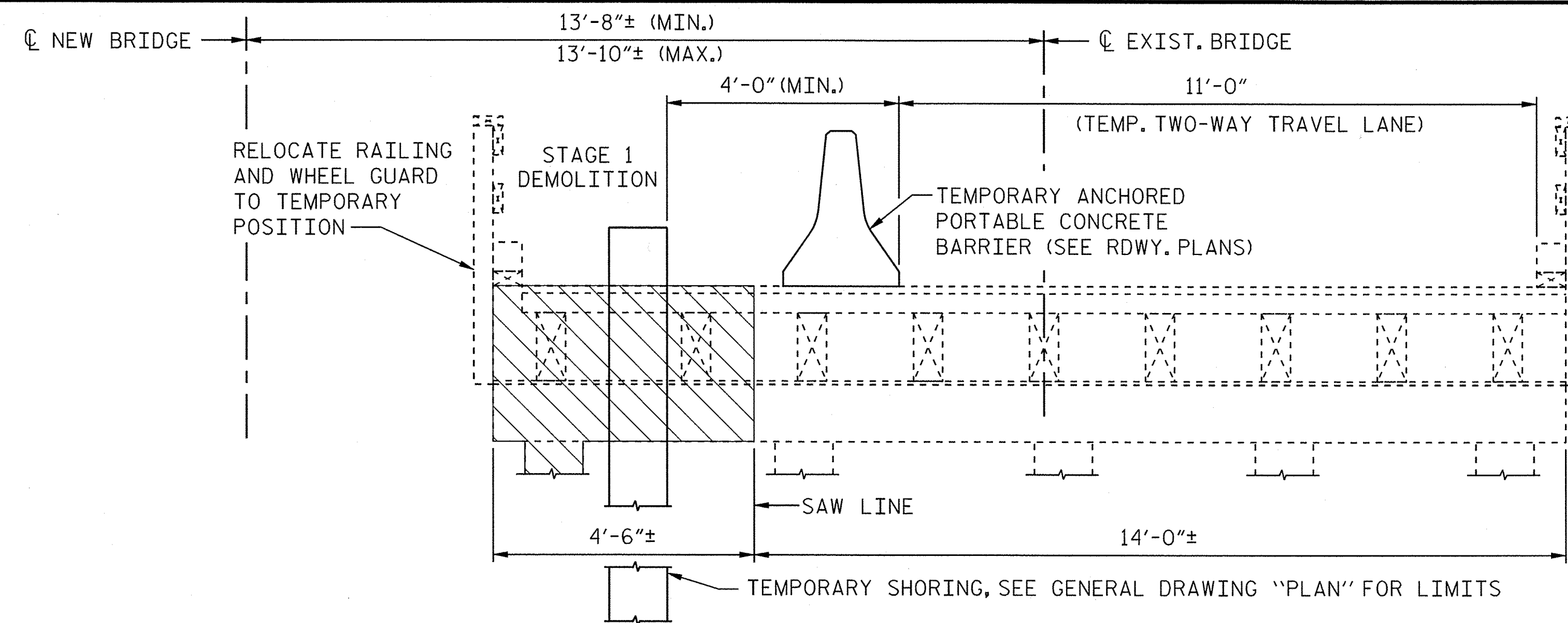
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NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.
S-03
TOTAL
SHEETS

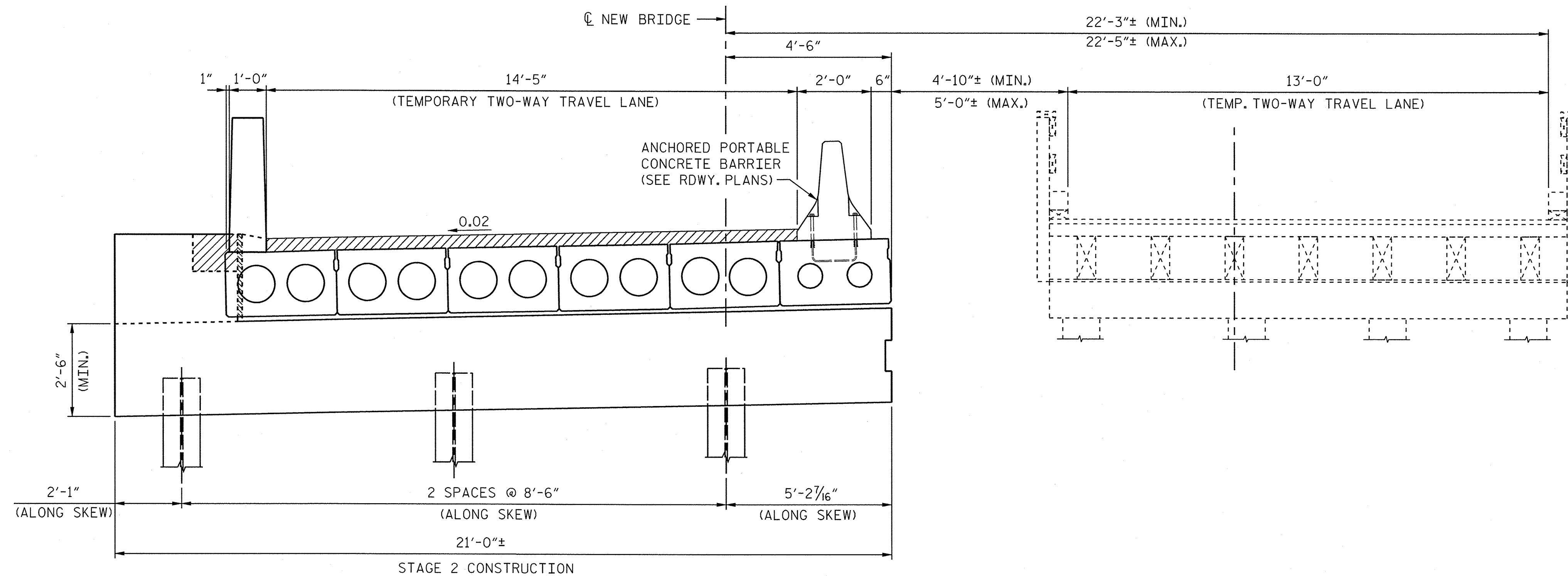
ASSEMBLED BY :	MLH	DATE :	10/12
CHECKED BY :	JCM	DATE :	10/12
DRAWN BY :	CVC	6/10	
CHECKED BY :	DNS	6/10	

DATE: 9/10/2013
TIME: 1:34:58 PM

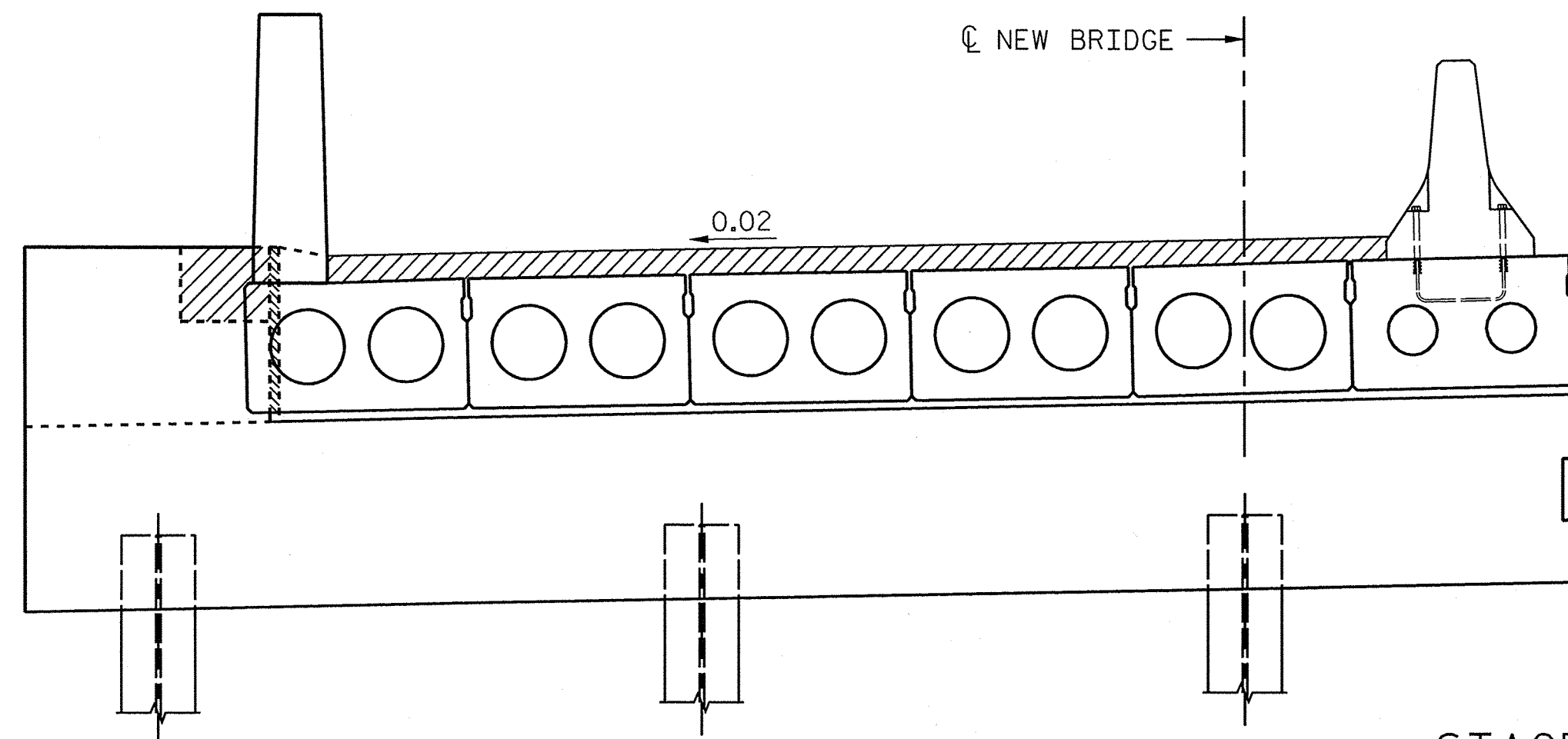
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STAGE 1



STAGE 2



STAGE 3

NOTES:

FOR STAGE 1, USE SHORT-TERM 11'-0" TEMPORARY LANE OR SHORT/OVERNIGHT CLOSURE TO CUT AND REMOVE DECK AND RELOCATE EXISTING RAILING.

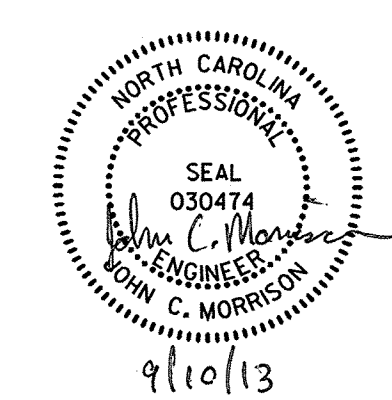
IF EXISTING PILE OR POST PLACEMENT CONFLICTS WITH SAW LINE, REMOVE DECK, BEAMS AND BEARING STRIP, BUT LEAVE POST AND CAPS IN PLACE UNTIL STAGE 3.

DIMENSIONS ARE NORMAL TO CL BRIDGE UNLESS OTHERWISE NOTED.

PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
STATION: 13+10.04 -L-

SHEET 1 OF 2

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(919) 854-6200 www.aecom.com
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RALEIGH

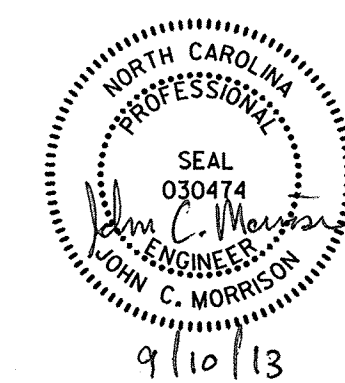
BRIDGE CONSTRUCTION
STAGING FOR MAINTENANCE
OF TRAFFIC

REVISIONS						SHEET NO. S-04 TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	

DRAWN BY : MJH DATE : 10/12
CHECKED BY : JCM DATE : 10/12



SHEET 2 OF 2



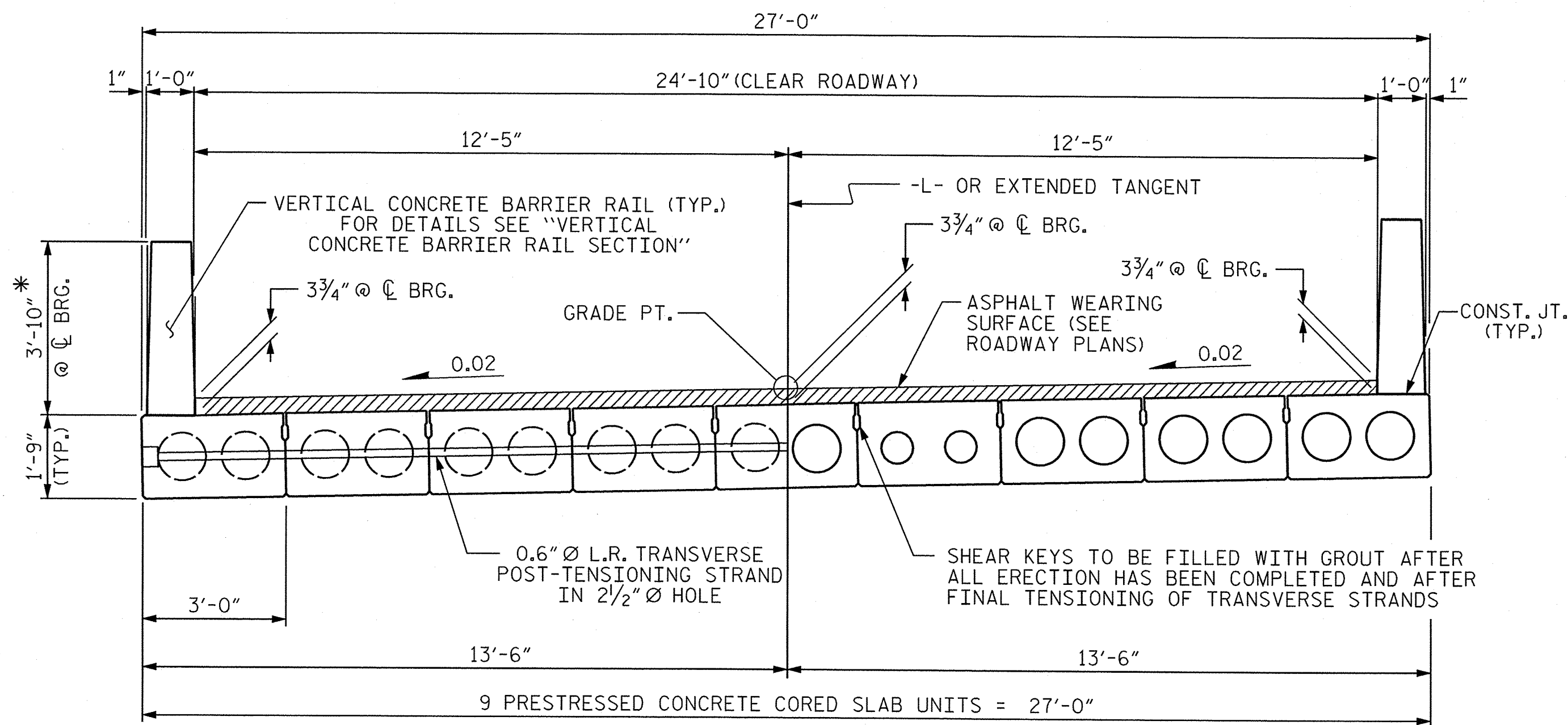
BRIDGE CONSTRUCTION STAGING FOR MAINTENANCE OF TRAFFIC

REVISIONS						SHEET NO. S-05
NO.	BY:	DATE:	NO.	BY:	DATE:	
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DRAWN BY : MJH DATE : 10/12
CHECKED BY : JCM DATE : 10/12

DATE: 9/10/2013
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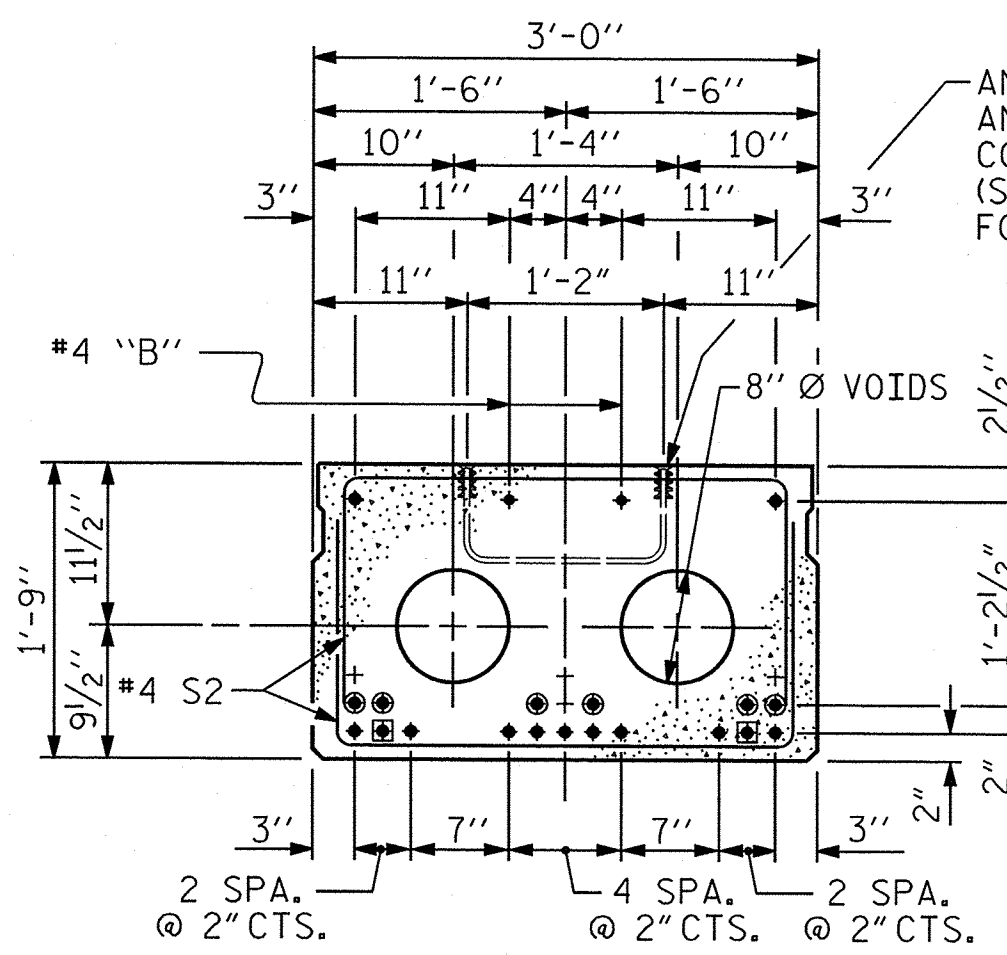


HALF SECTION
AT INTERMEDIATE DIAPHRAGMS

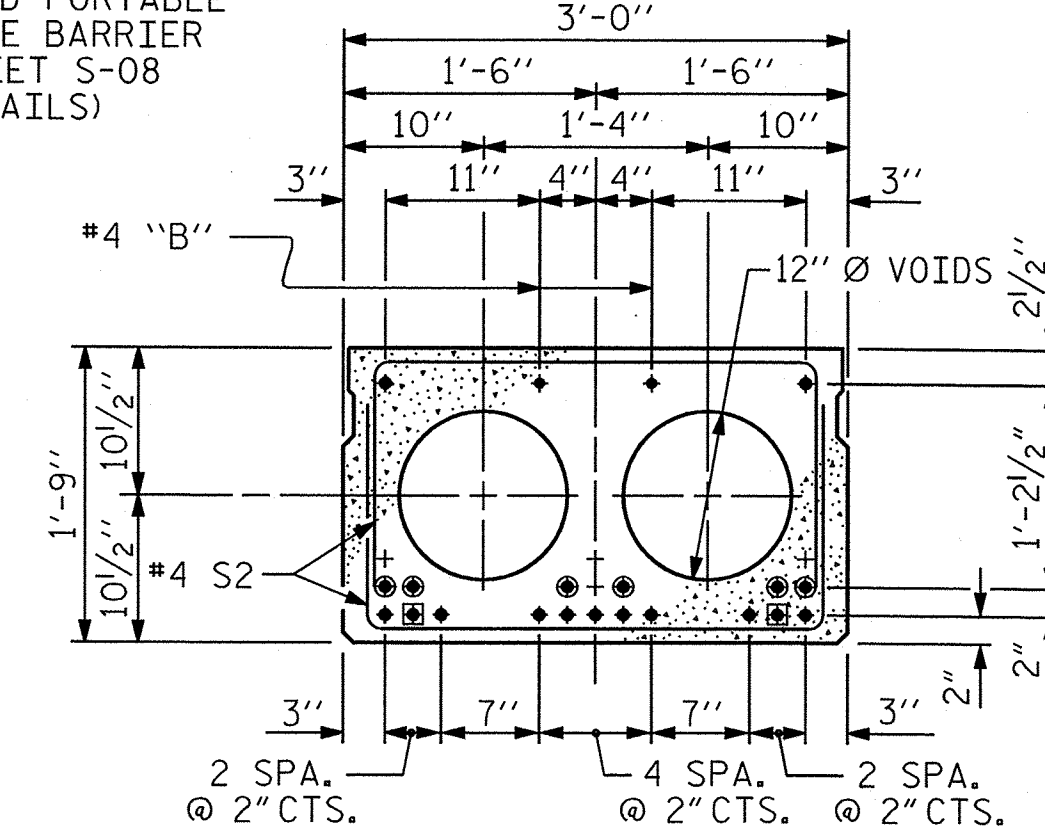
HALF SECTION
THROUGH VOIDS

TYPICAL SECTION

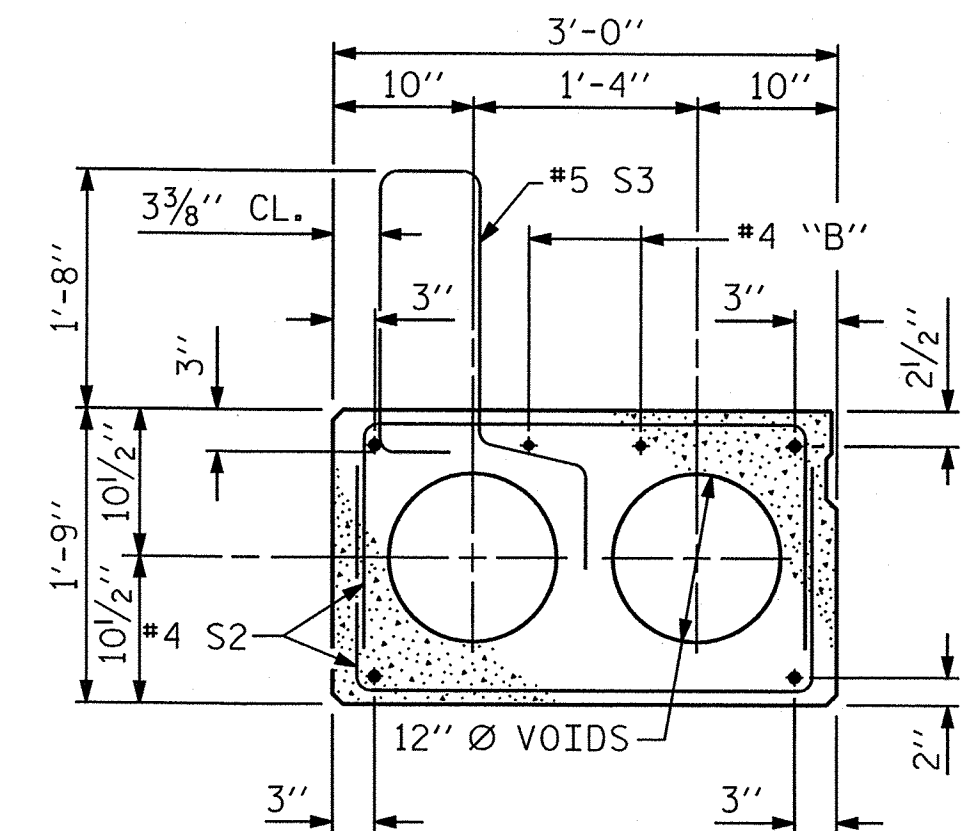
* - THE MAXIMUM BARRIER RAIL HEIGHT AND ASPHALT THICKNESS IS SHOWN. THE HEIGHT OF THE BARRIER RAIL AND ASPHALT THICKNESS VARIES WHILE THE TOP OF THE BARRIER RAIL FOLLOWS THE PROFILE OF THE GUTTERLINE. FOR RAIL HEIGHT DETAILS AND ASPHALT THICKNESS SEE THE "VERTICAL CONCRETE BARRIER RAIL SECTION" DETAIL.



INTERIOR SLAB SECTION
(13 STRANDS REQUIRED)
(CORED SLAB UNIT #6 ONLY)



INTERIOR SLAB SECTION
(13 STRANDS REQUIRED)

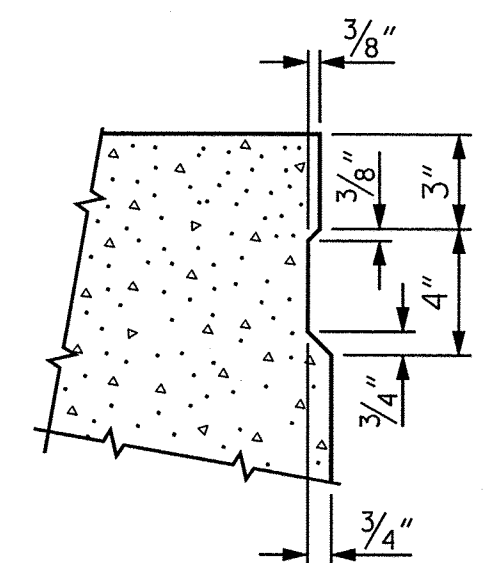


EXT. SLAB SECTION
(FOR PRESTRESSED STRAND LAYOUT, SEE
INTERIOR SLAB SECTION.)

0.6" Ø LOW RELAXATION STRAND LAYOUT

- BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 6'-0" FROM END OF CORED SLAB UNIT. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.
- BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 2'-0" FROM END OF CORED SLAB UNIT. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.
- OPTIONAL FULL LENGTH DEBONDED STRANDS. THESE STRANDS ARE NOT REQUIRED. IF THE FABRICATOR CHOOSES TO INCLUDE THESE STRANDS IN THE CORED SLAB UNIT, THE STRANDS SHALL BE DEBONDED FOR THE FULL LENGTH OF THE UNIT AT NO ADDITIONAL COST. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.

DEBONDING LEGEND

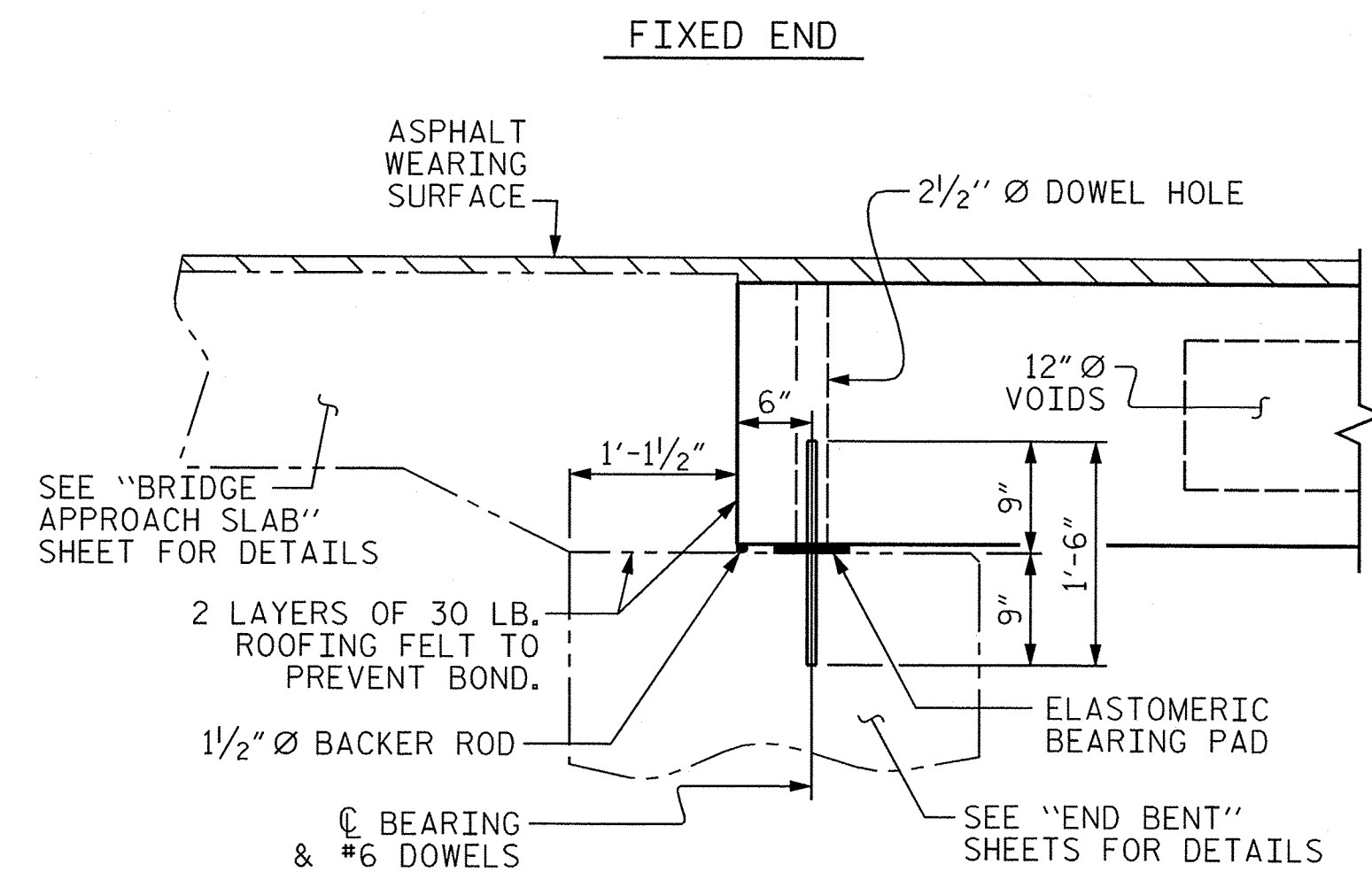


SHEAR KEY DETAIL

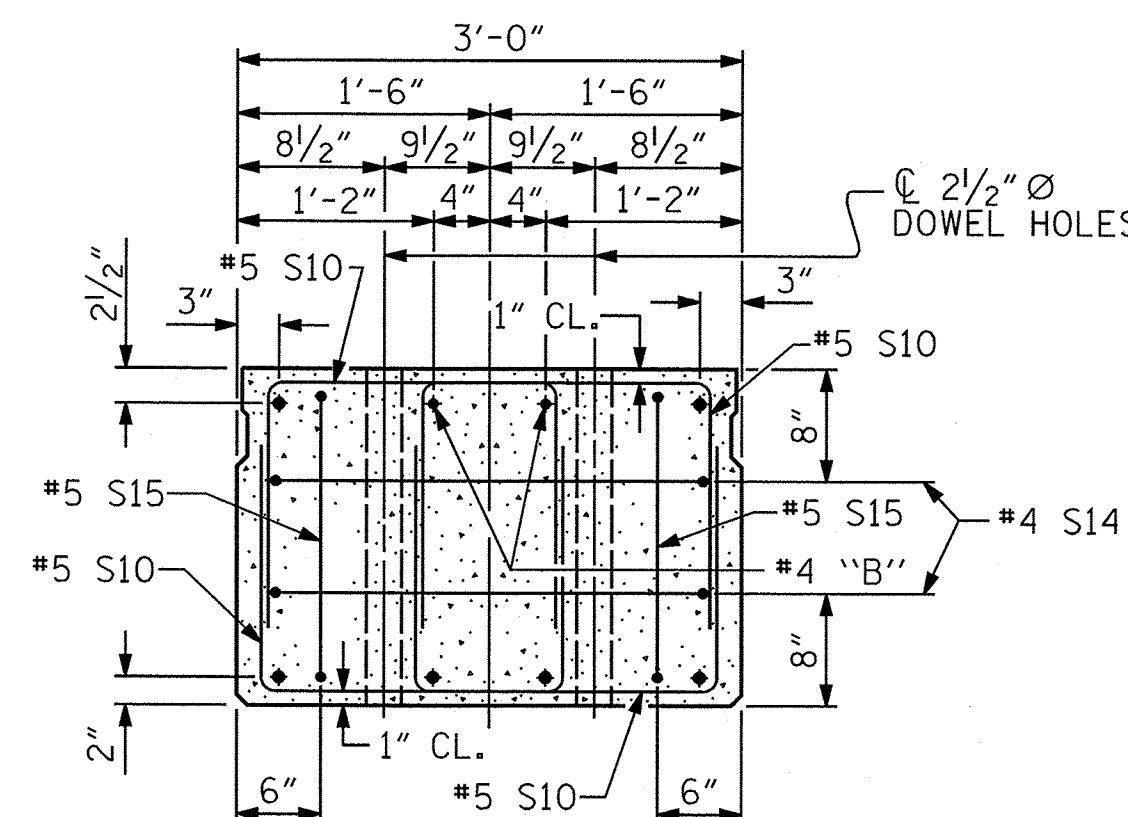
NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR CORED SLABS.

PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
STATION: 13+10.04 -L-

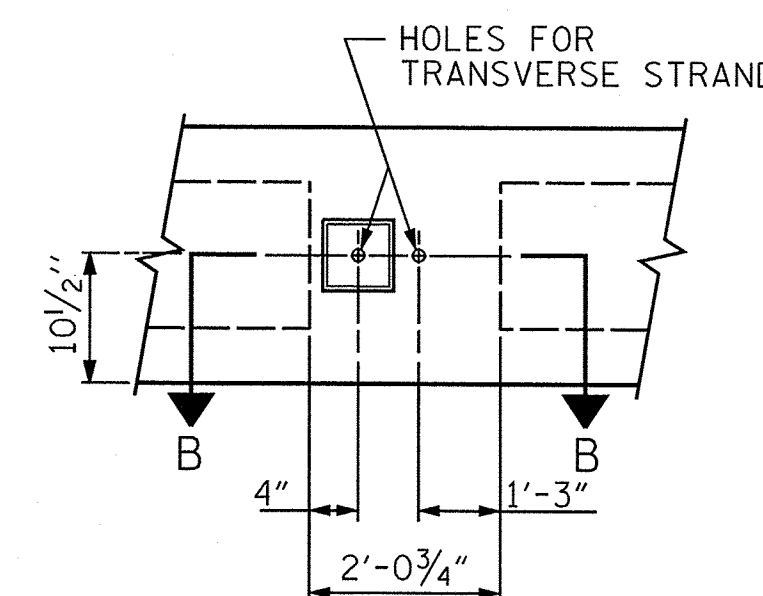
SHEET 1 OF 4



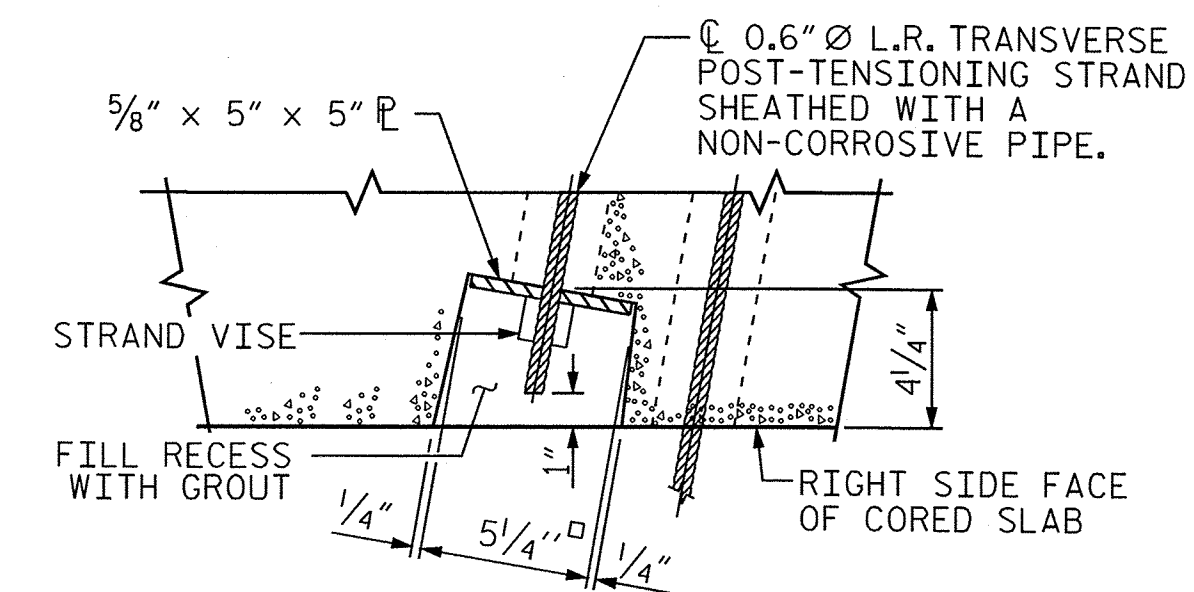
SECTION AT END BENT



END ELEVATION
SHOWING PLACEMENT OF DOUBLE STIRRUPS
AND LOCATION OF DOWEL HOLES.
(STRAND LAYOUT NOT SHOWN.)
INTERIOR SLAB UNIT SHOWN-EXTERIOR SLAB
UNIT SIMILAR EXCEPT SHEAR KEY LOCATION.

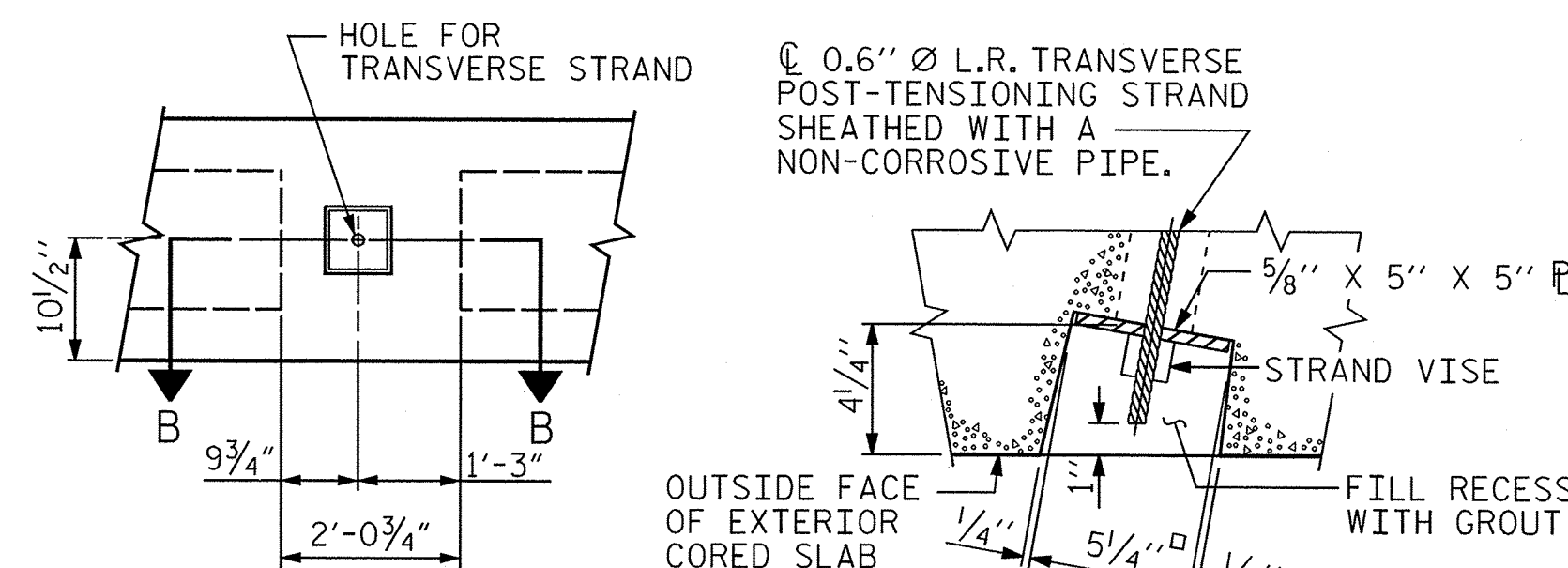


ELEVATION VIEW



SECTION B-B

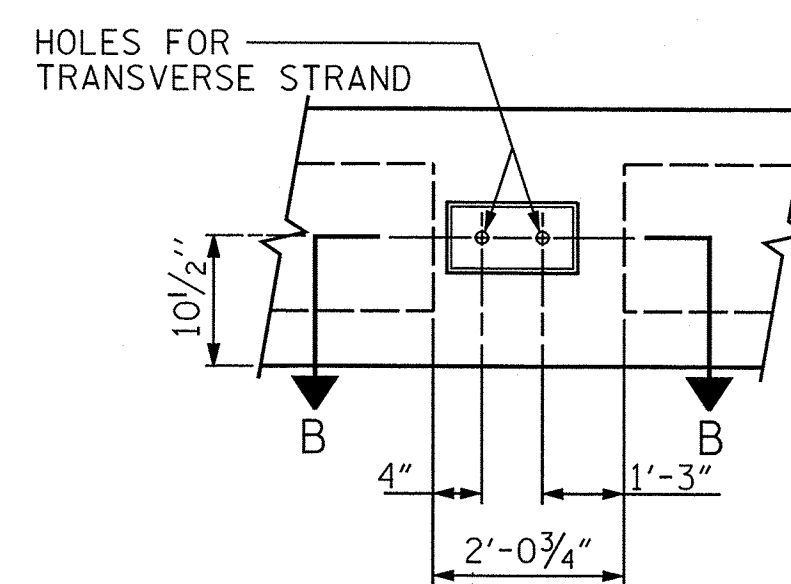
CORED SLAB UNIT #6



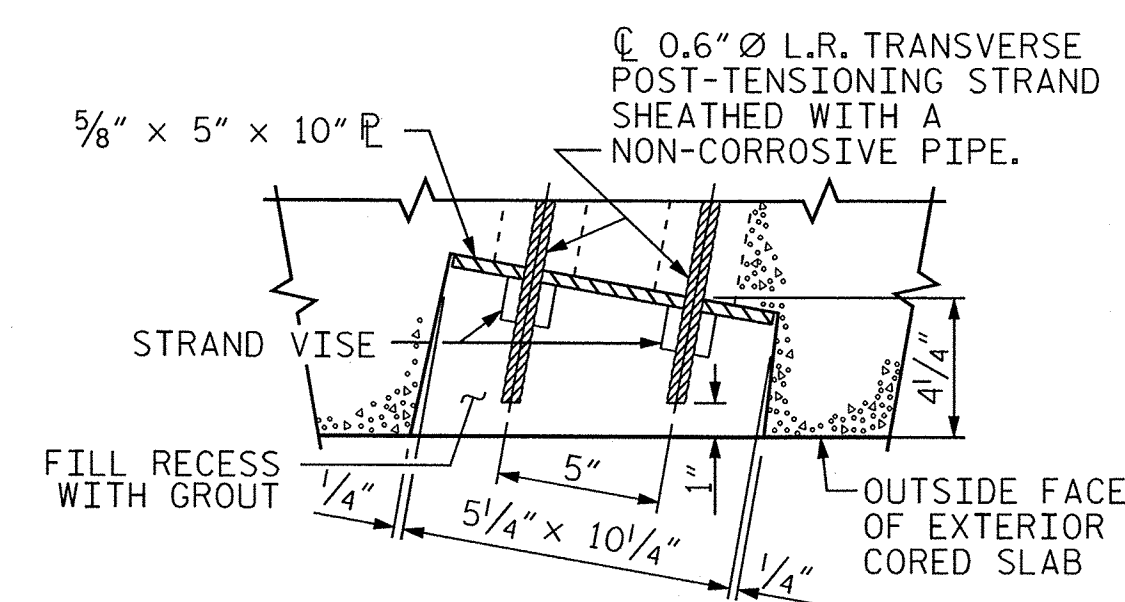
ELEVATION VIEW

SECTION B-B

CORED SLAB UNIT #9



ELEVATION VIEW

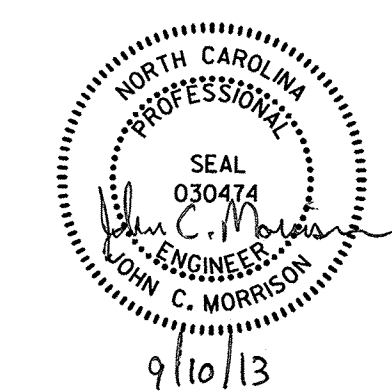


SECTION B-B

CORED SLAB UNIT #1

GROUTED RECESS AT END OF POST-TENSIONED STRAND-CORED SLABS

ASSEMBLED BY :	MJH	DATE :	10/12
CHECKED BY :	JCM	DATE :	10/12
DRAWN BY :	DGE	5/09	REV. 12/11
CHECKED BY :	BCH	6/09	MAA/AAC



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
3'-0" X 1'-9"
PRESTRESSED CONCRETE
CORED SLAB UNIT
120° SKEW

REVISIONS						SHEET NO. S-06
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			

USER: Lowryd
DGN: Q:\60238772\400_Tech_Info_Disc\450_NCDOT_StdTechDesFiles\BRG_253_Structures\B253_Spandgn



PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
 STATION: 13+10.04 -L-

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701 CORPORATE CENTER DRIVE, SUITE 475
RALEIGH, NC 27607
(919) 854-6200 www.aecom.com
AECOM License No. E-04242

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF 40' UNIT
24'-10" CLEAR ROADWAY
120° SKEW

REVISIONS						SHEET NO. S-07
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			

STD. NO. 21" PCS_27_120S_40L

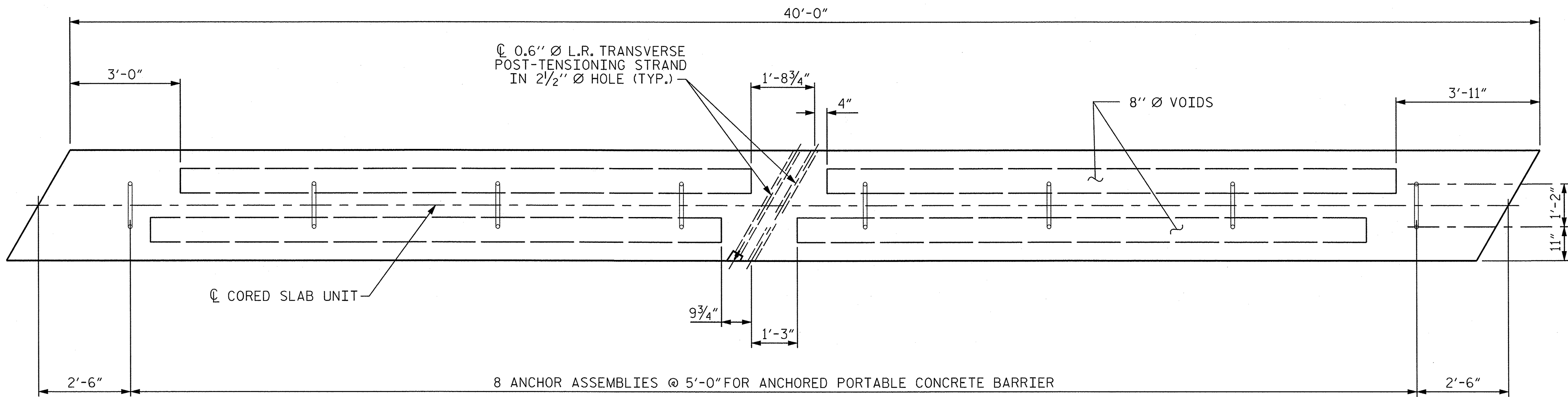


#4 S11 BARS MAY BE SHIFTED AS NECESSARY
TO MAINTAIN 1" CLEAR TO GROUTED RECESS AND
2 1/2" Ø TRANSVERSE POST-TENSIONING STRAND HOLES

ASSEMBLED BY :	MJH	DATE :	10/12
CHECKED BY :	JCM	DATE :	10/12
DRAWN BY :	DGE 5/09	REV.	12/5/11 MAA/AAC
CHECKED BY:	BCH 6/09		

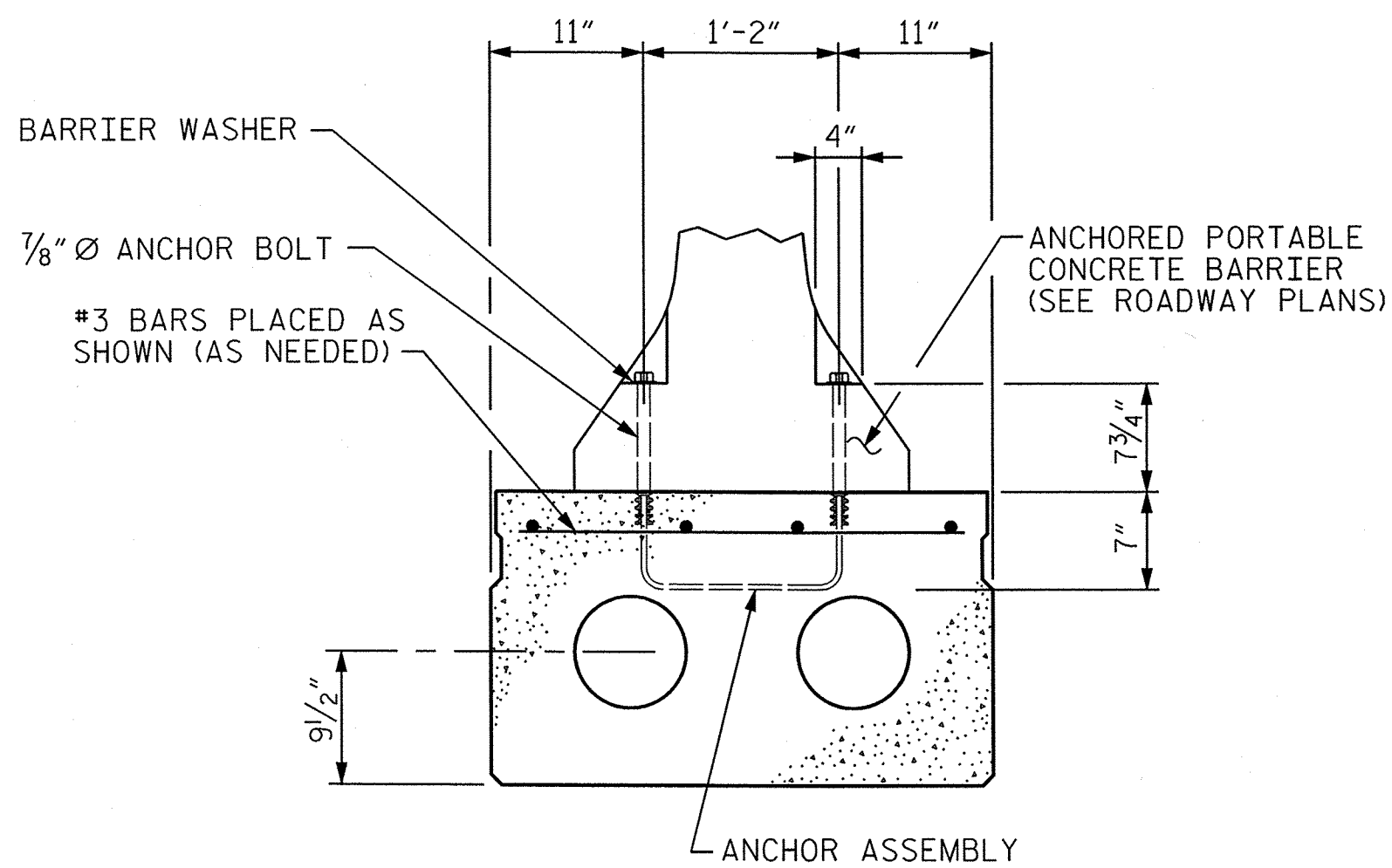
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TIME: 1:55:02 PM

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PLAN OF CORED SLAB UNIT #6

(SHOWING LOCATION OF ANCHOR ASSEMBLIES)



SECTION - CORED SLAB UNIT #6

(SHOWING PLACEMENT OF ANCHOR ASSEMBLY)

THE #3 BARS ARE INCIDENTAL AND THEIR COST SHALL BE INCLUDED IN THE PRICE BID FOR THE PRESTRESSED CONCRETE CORED SLAB

ANCHOR ASSEMBLY NOTES:

THE ANCHOR ASSEMBLY FOR PORTABLE CONCRETE BARRIER SHALL CONSIST OF THE FOLLOWING COMPONENTS:

- FERRULES SHALL BE MADE FROM STEEL MEETING THE REQUIREMENTS OF AASHTO M169, GRADE 12L14 AND SHALL HAVE A MINIMUM LENGTH OF THREADS OF 2 1/2".
- 2- 7/8" $\times$ 1'-0" ANCHOR BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307. ANCHOR BOLTS SHALL BE GALVANIZED. AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS MAY BE USED AS AN ALTERNATE FOR THE 7/8" $\times$ 1'-0" GALVANIZED BOLTS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.
- WIRE STRUTS SHOWN IN THE ANCHOR ASSEMBLY DETAIL ARE MINIMUM ALLOWABLE SIZE AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 100,000 P.S.I.

ANCHOR ASSEMBLY WITH BOLTS SHALL ASSEMBLED IN THE SHOP. BOLT THREADS MAY BE RECUT AS NECESSARY TO INSURE FIT.

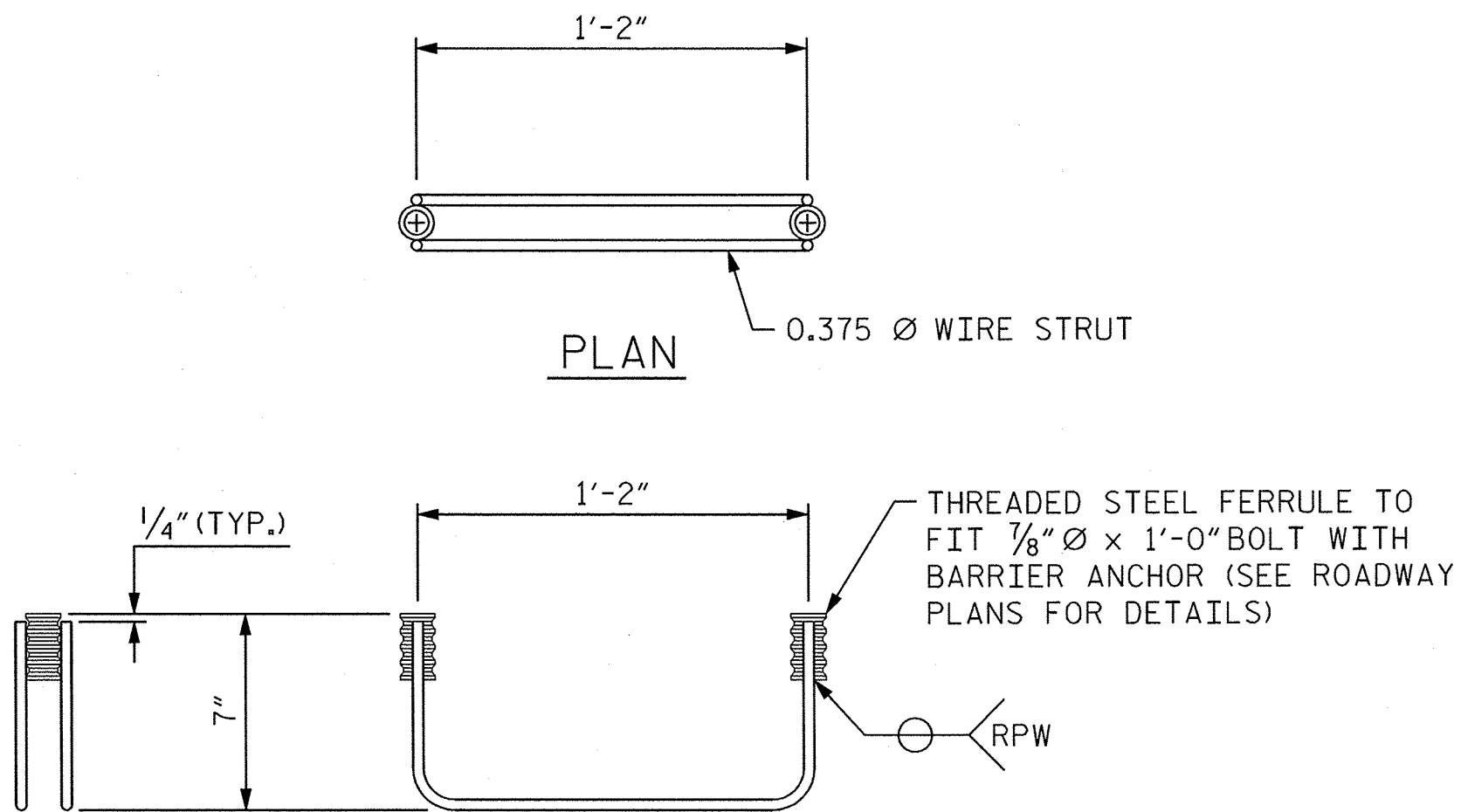
THE COST OF THE ANCHOR ASSEMBLY COMPLETE IN PLACE, SHALL BE INCLUDED, AS APPLICABLE, IN THE UNIT CONTRACT PRICE BID FOR 3'-0" $\times$ 1'-9" PRESTRESSED CONCRETE CORED SLAB OR LUMP SUM FOR THE APPROACH SLABS.

FERRULES TO BE PLUGGED DURING CASTING OF THE CORED SLAB UNITS OR POURING OF THE APPROACH SLABS AS RECOMMENDED BY THE MANUFACTURER.

AT THE CONTRACTOR'S OPTION, FERRULES WITH OPEN OR CLOSED ENDS MAY BE USED.

FOR 4" $\times$ 3 1/2" $\times$ 1/2" BARRIER WASHER TO BE USED WITH THE ANCHOR ASSEMBLY, SEE ROADWAY PLANS.

PAYMENT FOR THE ANCHORED PORTABLE CONCRETE BARRIER AND BARRIER WASHER ARE INCLUDED IN THE TRAFFIC CONTROL PLANS.



SIDE VIEW

ELEVATION

ANCHOR ASSEMBLY FOR ANCHORED PORTABLE CONCRETE BARRIER

(8 ASSEMBLIES REQUIRED IN CORED SLAB UNIT #6)
(4 ASSEMBLIES REQUIRED IN APPROACH SLABS)

PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
STATION: 13+10.04 -L-

SHEET 3 OF 4

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AECOM TECHNICAL SERVICES, INC.
701 CORPORATE CENTER DRIVE, SUITE 475
RALEIGH, NC 27607
(919) 854-6200
www.aecom.com
AECOM License No. F-52462

NORTH CAROLINA
PROFESSIONAL
SEAL
030474
ENGINEER
JOHN C. MORRISON
9/10/13

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

3'-0" $\times$ 1'-9"
PRESTRESSED CONCRETE
CORED SLAB UNIT
120° SKEW

REVISIONS						SHEET NO. S-08
NO.	BY:	DATE:	NO.	BY:	DATE:	
						TOTAL SHEETS

DRAWN BY: MTB DATE: 10/12
CHECKED BY: JCM DATE: 10/12

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 7 - 1/8" Ø BOLTS WITH NUTS AND WASHERS.

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.)

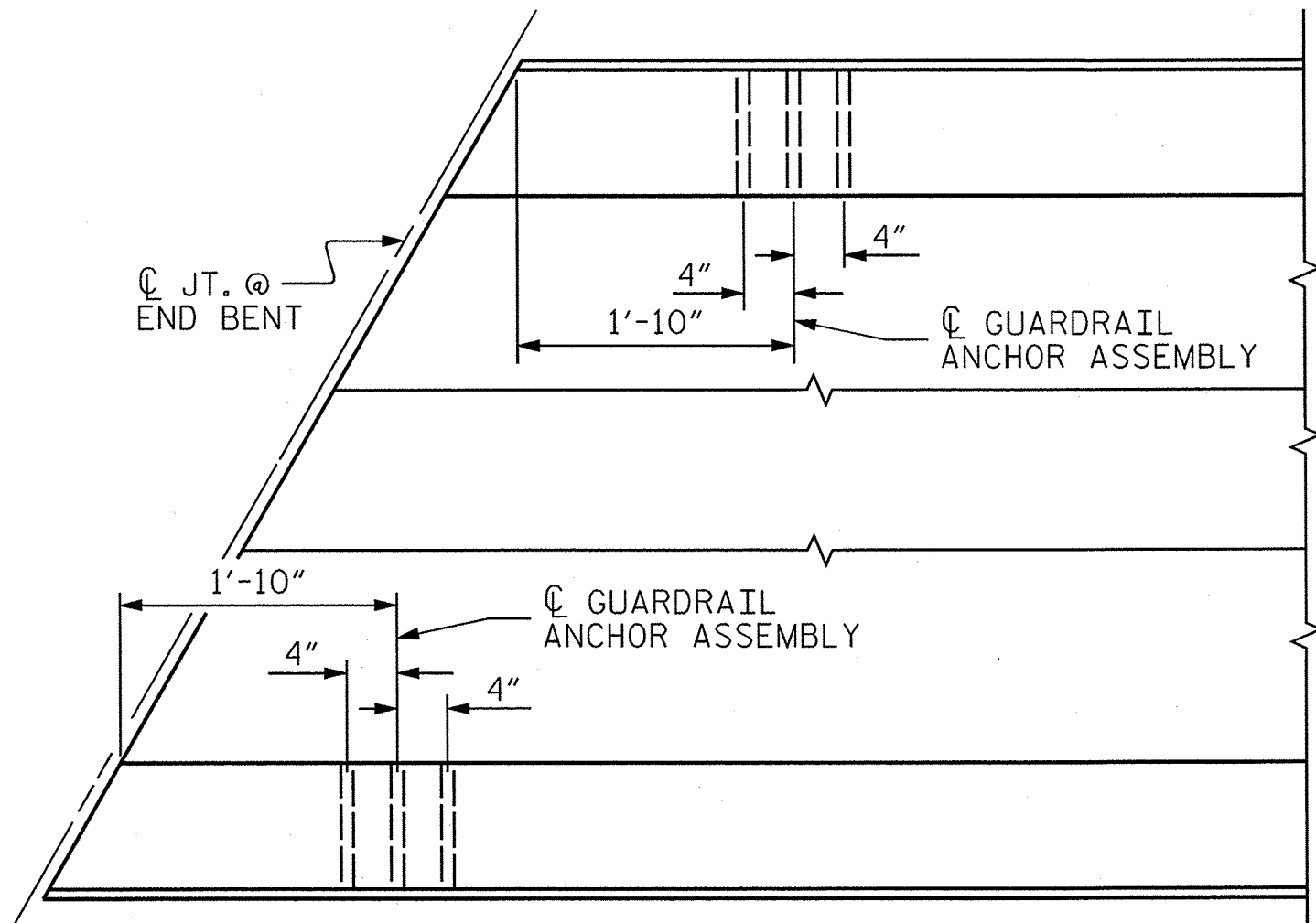
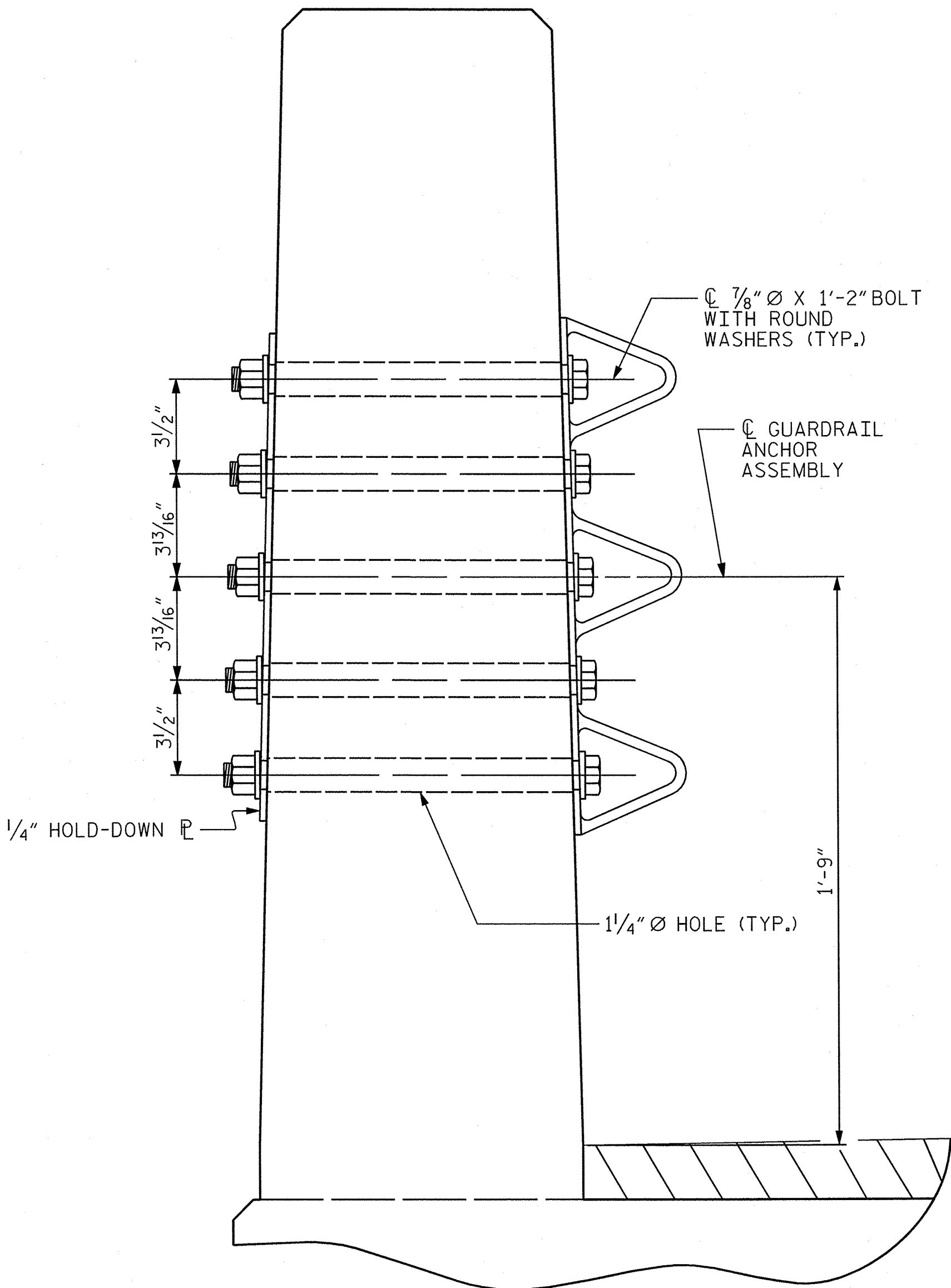
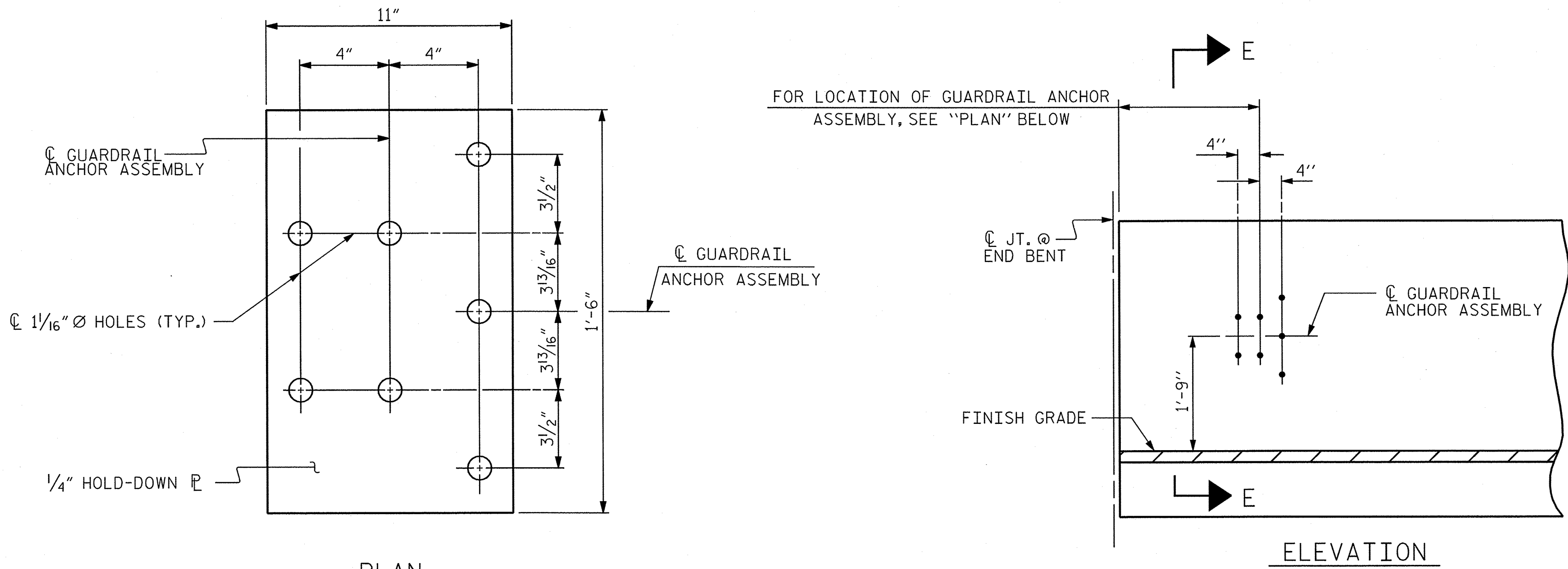
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

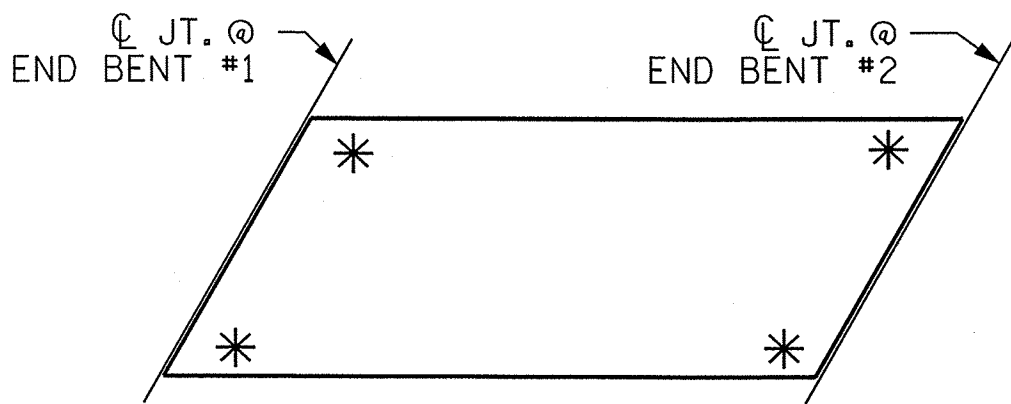
THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR VERTICAL CONCRETE BARRIER RAIL.

THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE VERTICAL CONCRETE BARRIER RAIL TO CLEAR ASSEMBLY BOLTS.

THE 1 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.



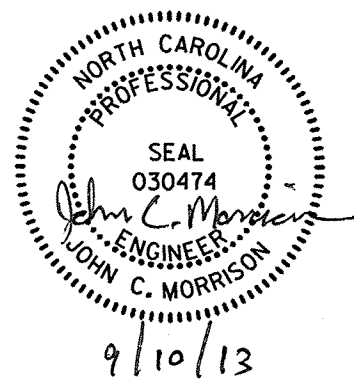
LOCATION OF
ANCHORS FOR GUARDRAIL
END BENT #1 SHOWN, END BENT #2 SIMILAR.



SKETCH SHOWING
POINTS OF ATTACHMENT
* DENOTES GUARDRAIL ANCHOR ASSEMBLY

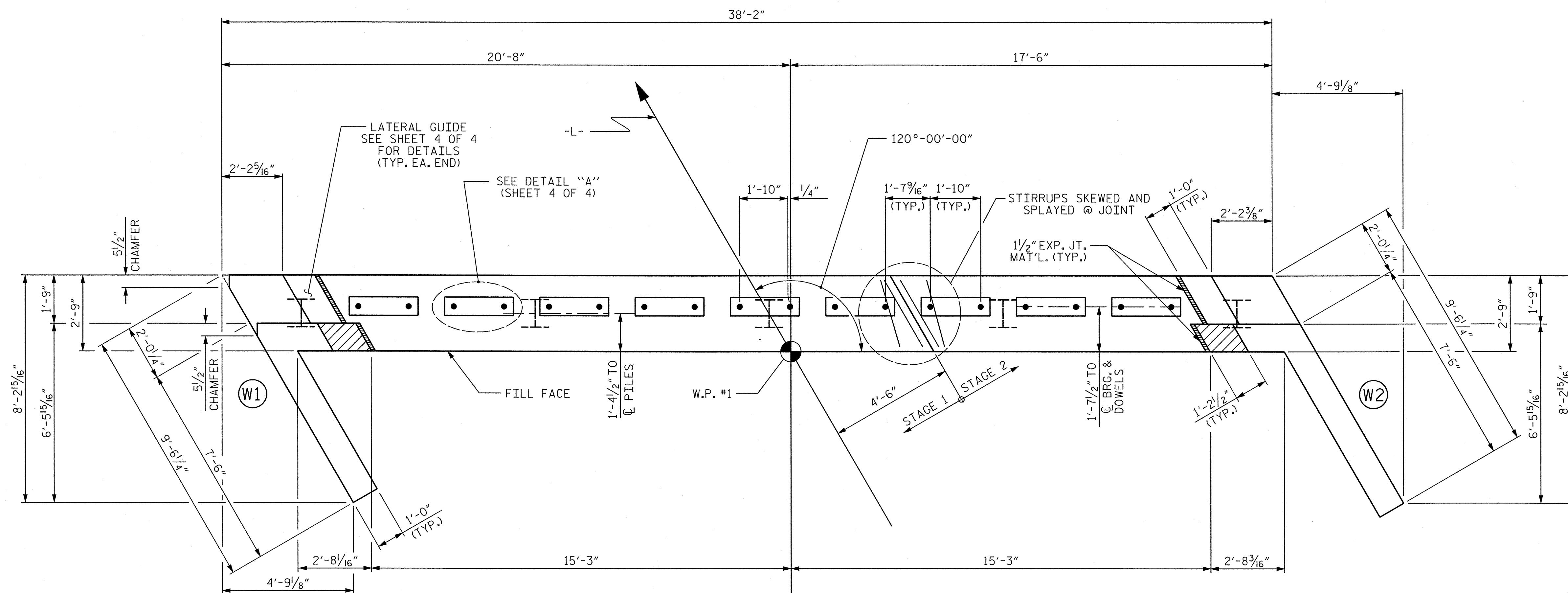
PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
STATION: 13+10.04 -L-

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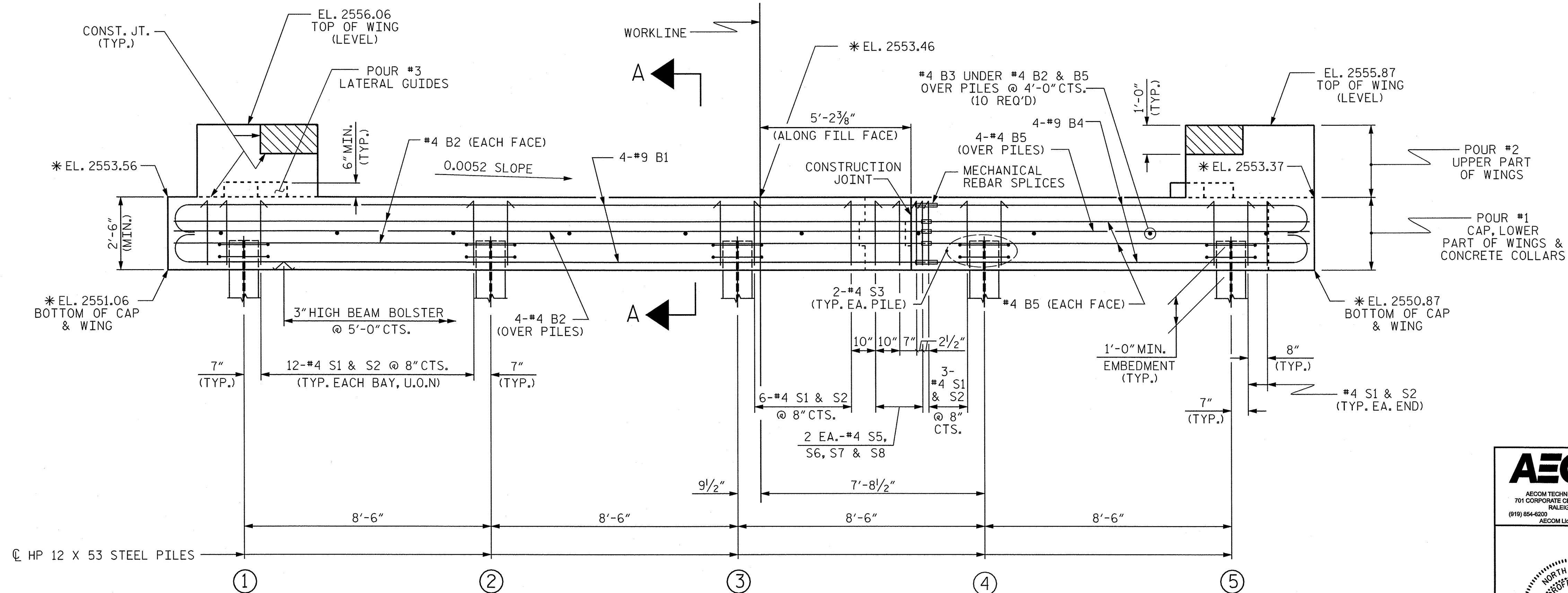


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
GUARDRAIL ANCHORAGE
FOR VERTICAL CONCRETE
BARRIER RAIL

REVISIONS						SHEET NO. S-10
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			



PLAN



ELEVATION

WINGS NOT SHOWN FOR CLARITY.
FOR SECTION A-A, SEE SHEET 4 OF 4.
CONCRETE COLLARS FOR STEEL PILES NOT SHOWN IN PLAN AND ELEVATION VIEWS FOR CLARITY.
SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL", SHEET 4 OF 4.

NOTES

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

THE LATERAL GUIDES ARE NOT TO BE
POURED UNTIL AFTER THE CORED SLAB
UNITS ARE IN PLACE.

THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE VERTICAL CONCRETE BARRIER RAIL IS CAST IF SLIP FORMING IS USED.

FOR PILE SPLICE DETAILS, SEE SHEET 4 OF 4.

FOR WING DETAILS, SEE SHEET 3 OF 4.

FOR MECHANICAL SPLICES, SEE SECTION 425-5(B)
OF THE STANDARD SPECIFICATIONS.

TOP OF PILE ELEVATIONS	
①	2552.05
②	2552.01
③	2551.97
④	2551.92
⑤	2551.88

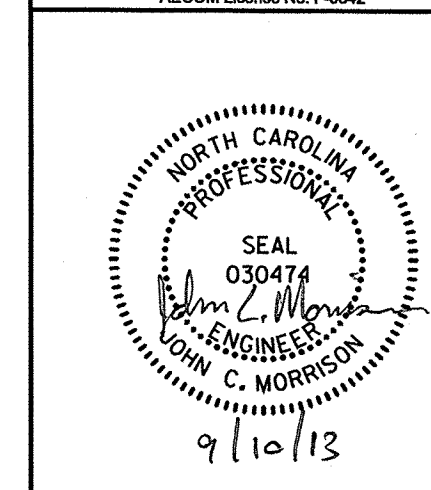
* ELEVATIONS PROJECTED ALONG C BEARINGS.

PROJECT NO. 17BP.14.R.65

JACKSON COUNTY

STATION: 13+10.04 -L-

SHEET 1 OF 4



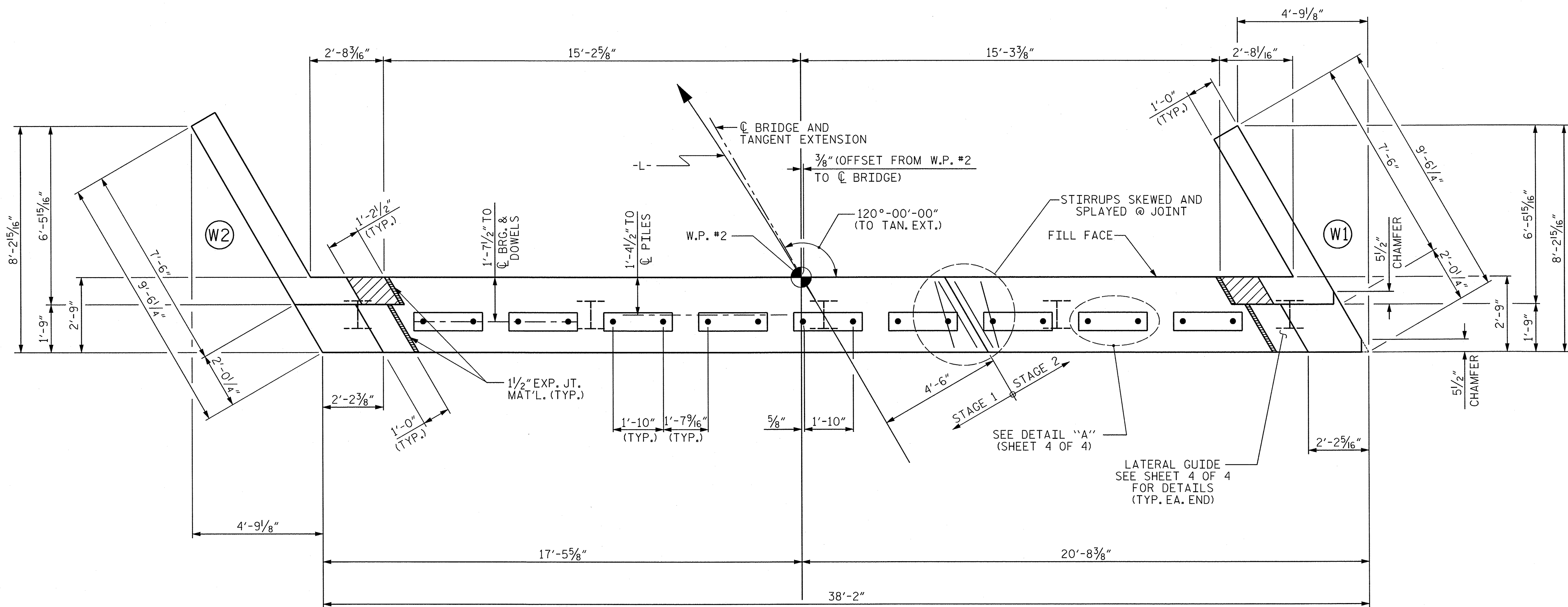
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT No. 1

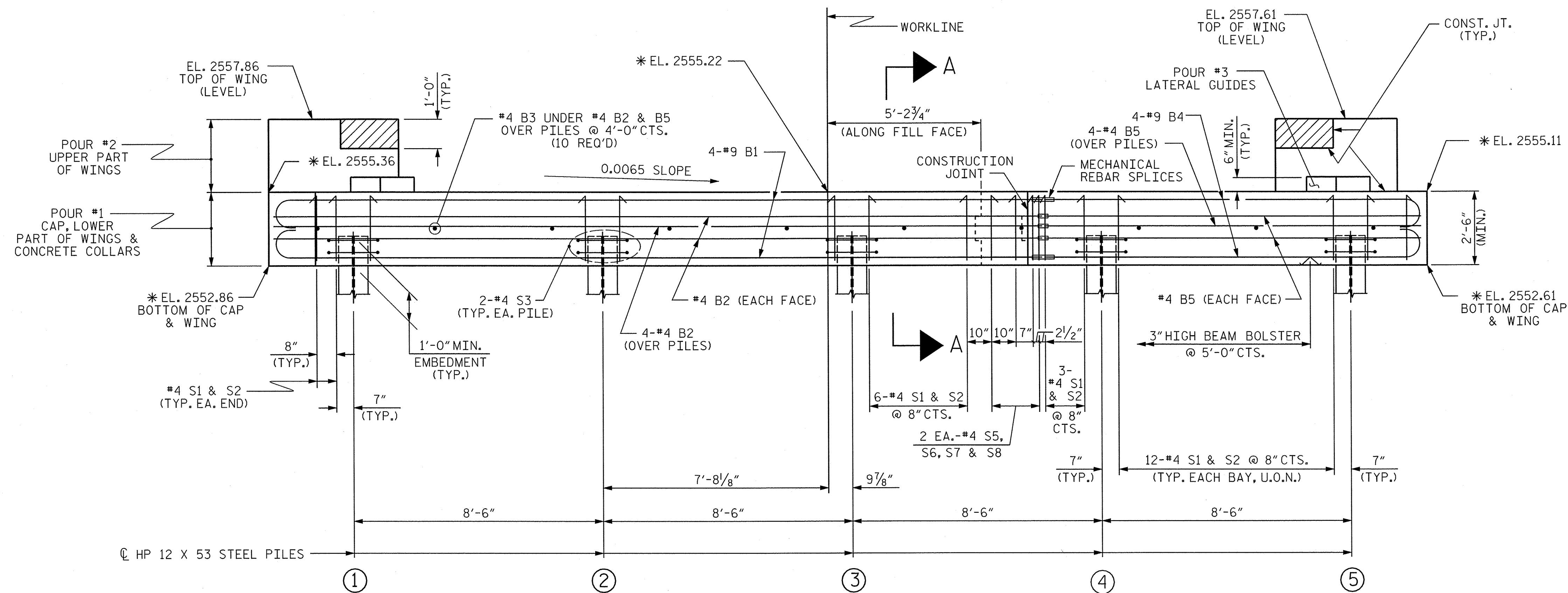
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			

DATE: 9/10/2013
TIME: 12:05 PM

USFR: 6062672-400.TechInfo.Dwg_450.MCDOT.StdtTechDwgFiles.BRG_253.Structures.0253.EndBent2.dgn



PLAN



ELEVATION

WINGS NOT SHOWN FOR CLARITY.
FOR SECTION A-A, SEE SHEET 4 OF 4.
CONCRETE COLLARS FOR STEEL PILES NOT SHOWN IN PLAN AND ELEVATION VIEWS FOR CLARITY.
SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL", SHEET 4 OF 4.

NOTES

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

THE LATERAL GUIDES ARE NOT TO BE POURED UNTIL AFTER THE CORED SLAB UNITS ARE IN PLACE.

THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE VERTICAL CONCRETE BARRIER RAIL IS CAST IF SLIP FORMING IS USED.

FOR PILE SPlice DETAILS, SEE SHEET 4 OF 4.

FOR WING DETAILS, SEE SHEET 3 OF 4.

FOR MECHANICAL SPLICES, SEE SECTION 425-5(B) OF THE STANDARD SPECIFICATIONS.

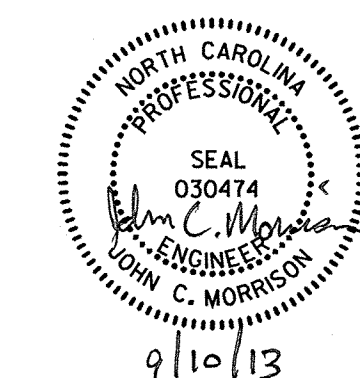
TOP OF PILE ELEVATIONS

①	2553.84
②	2553.79
③	2553.73
④	2553.68
⑤	2553.62

* ELEVATIONS PROJECTED ALONG ϕ BEARINGS.

PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
STATION: 13+10.04 -L-

SHEET 2 OF 4



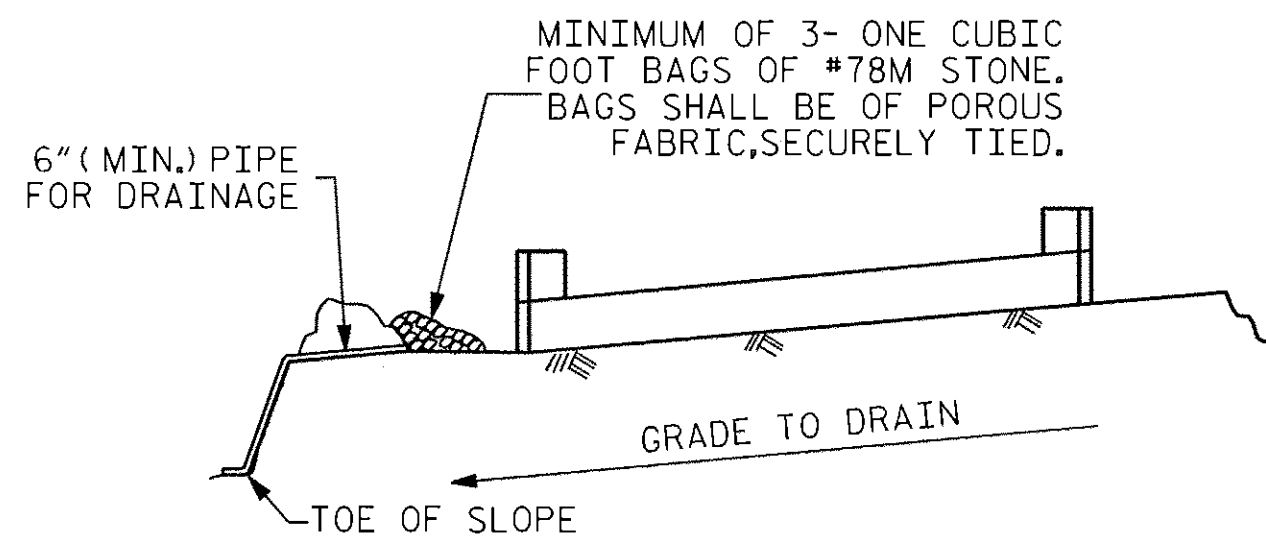
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT No. 2

REVISIONS

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

SHEET NO.
S-12
TOTAL SHEETS

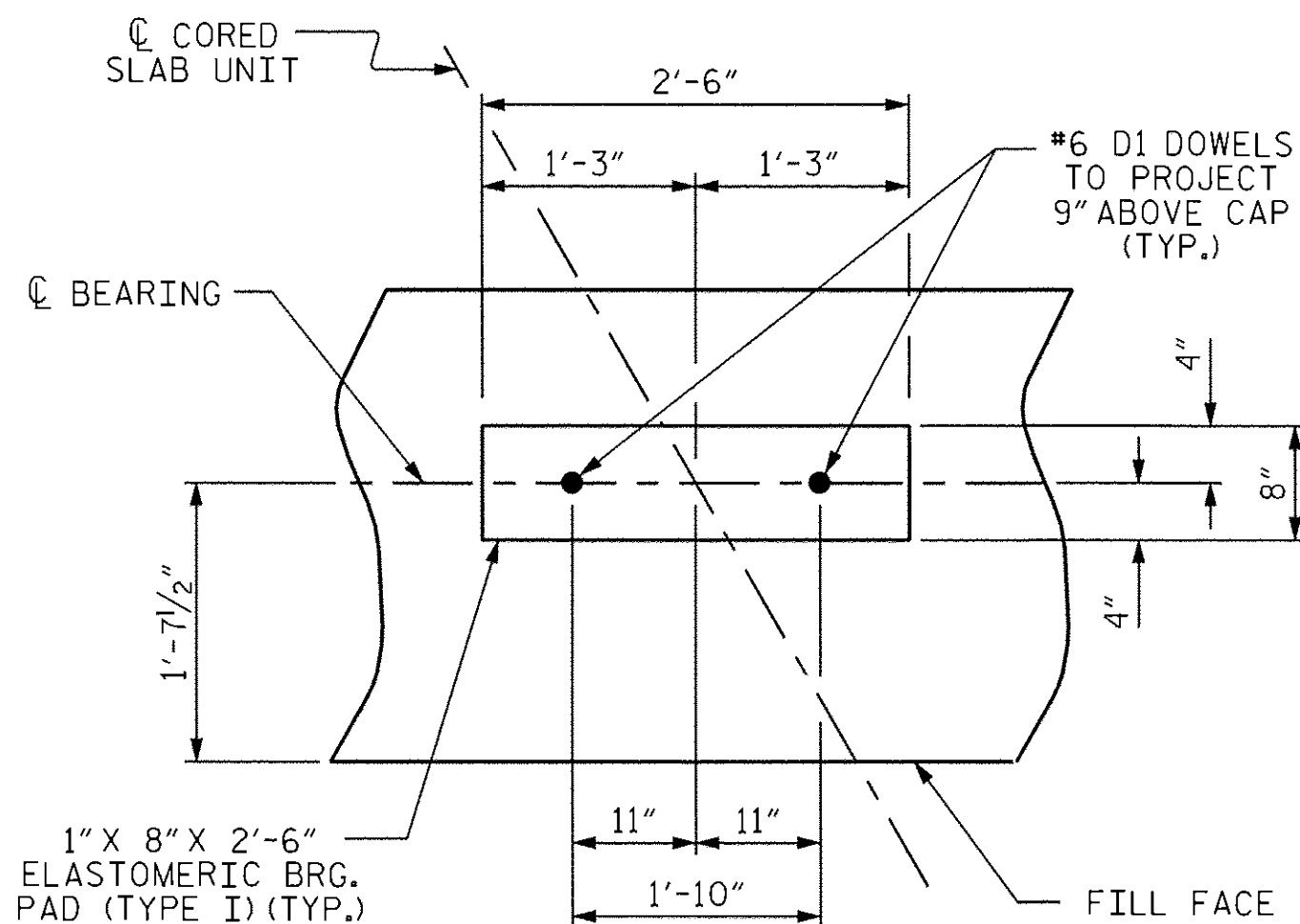


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS 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.

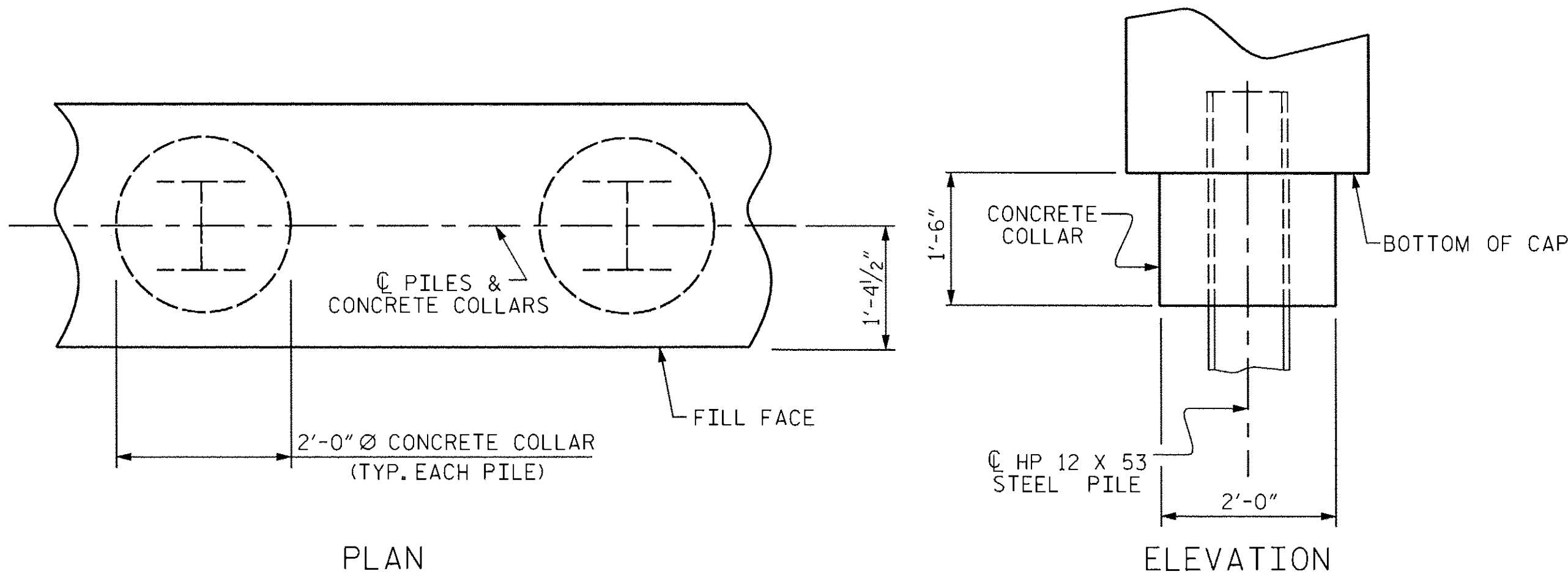
NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

TEMPORARY DRAINAGE AT END BENT



DETAIL "A"

(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR BY ROTATION)

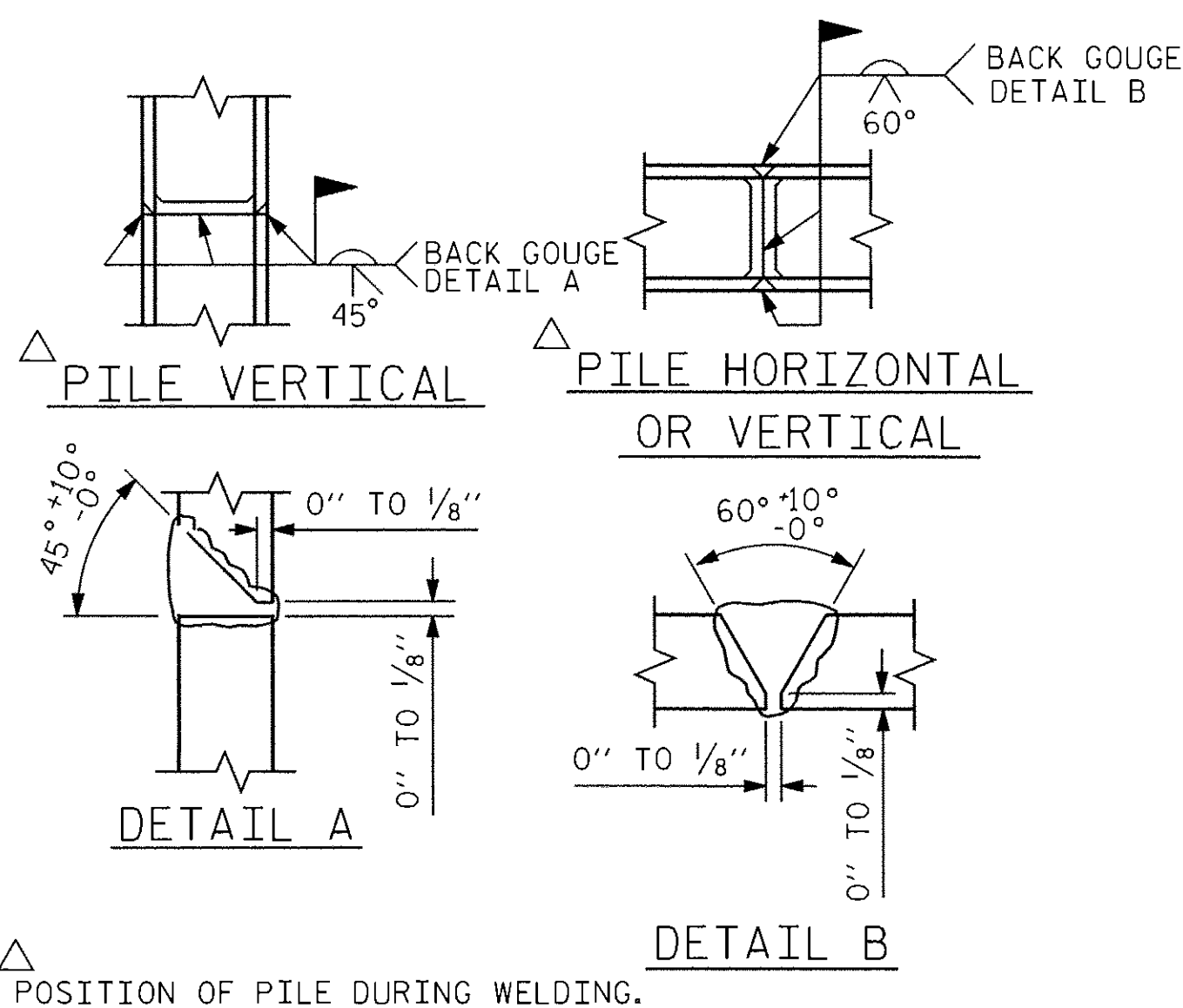


PLAN

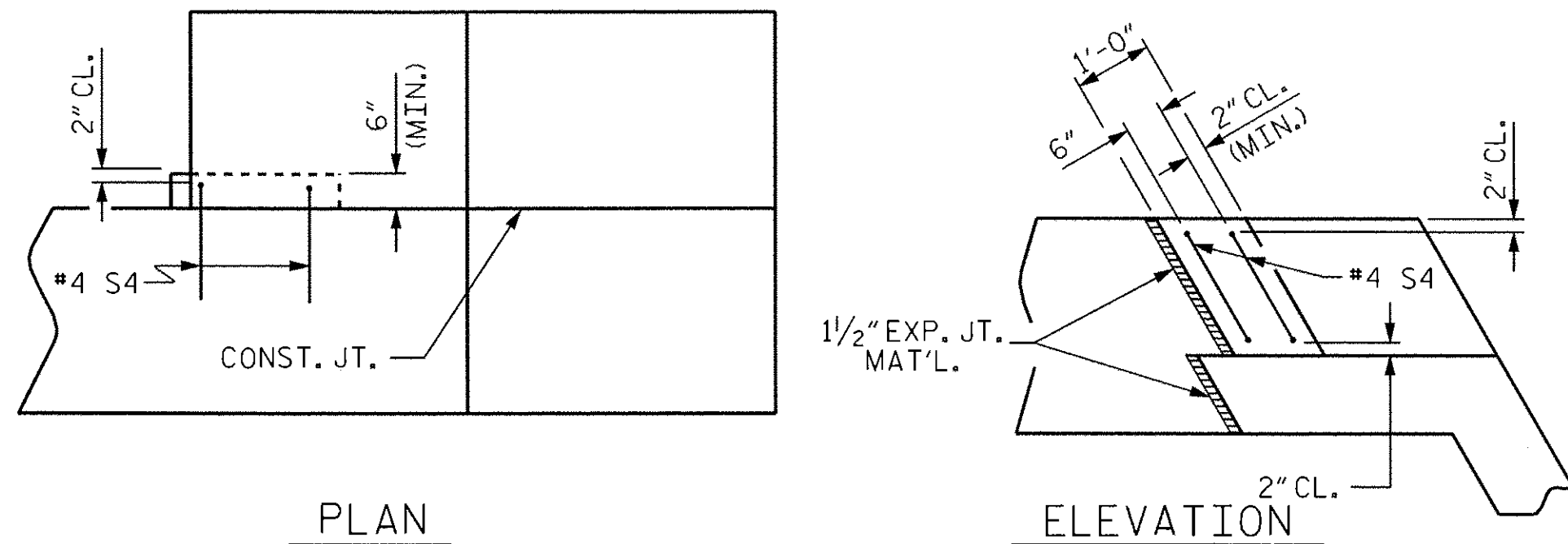
ELEVATION

CORROSION PROTECTION FOR STEEL PILES DETAIL

(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR BY ROTATION)



PILE SPLICE DETAILS

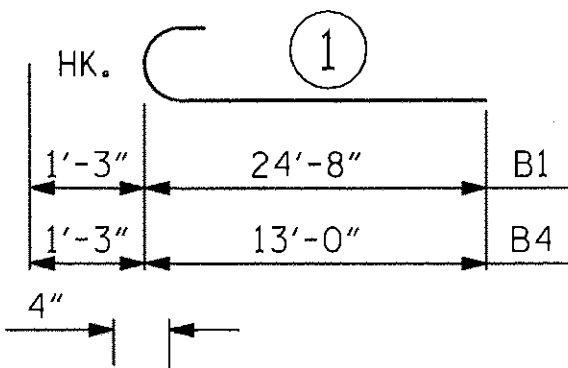
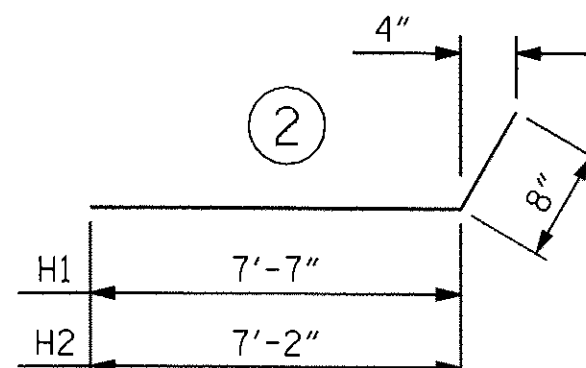
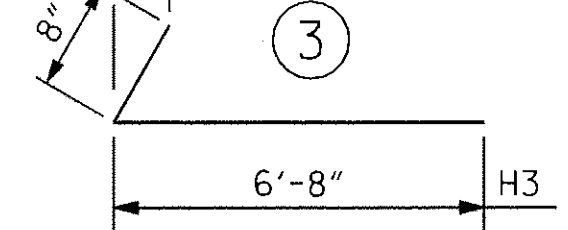
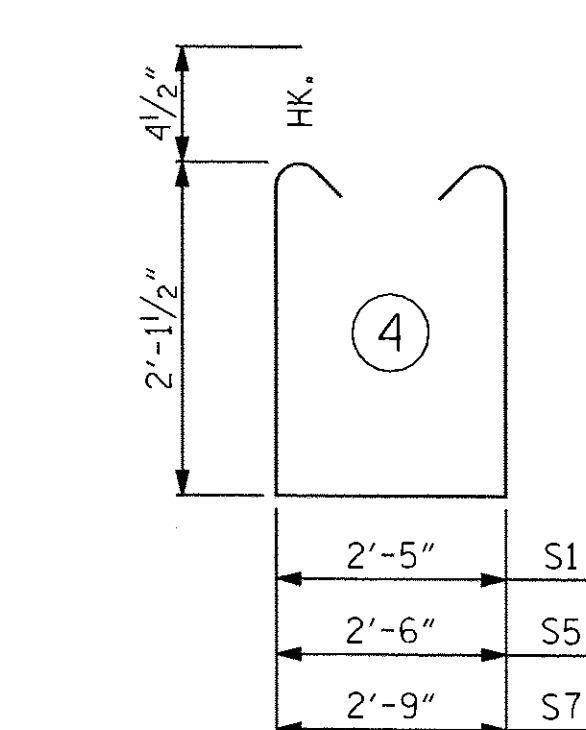
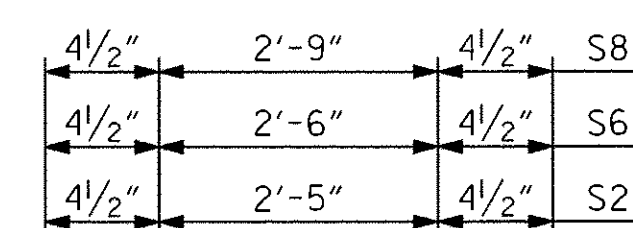
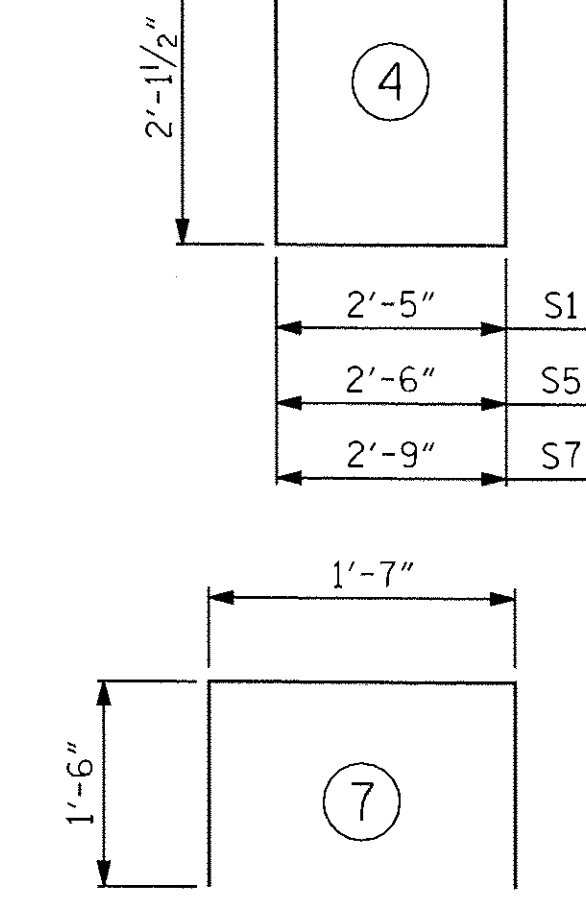
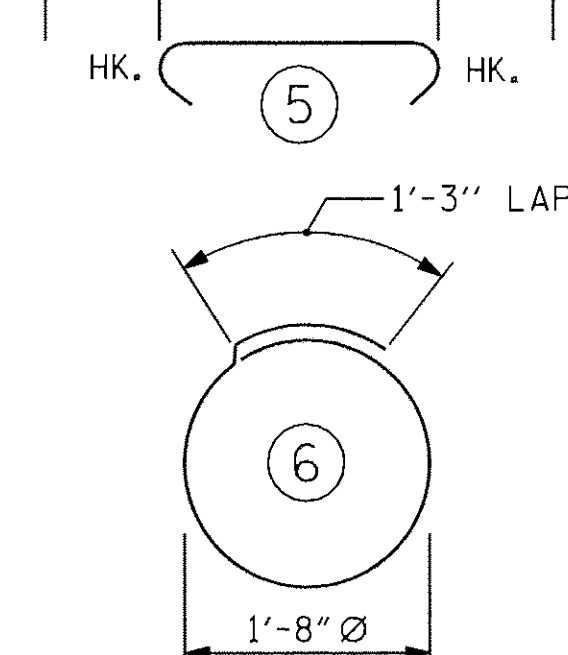


PLAN

ELEVATION

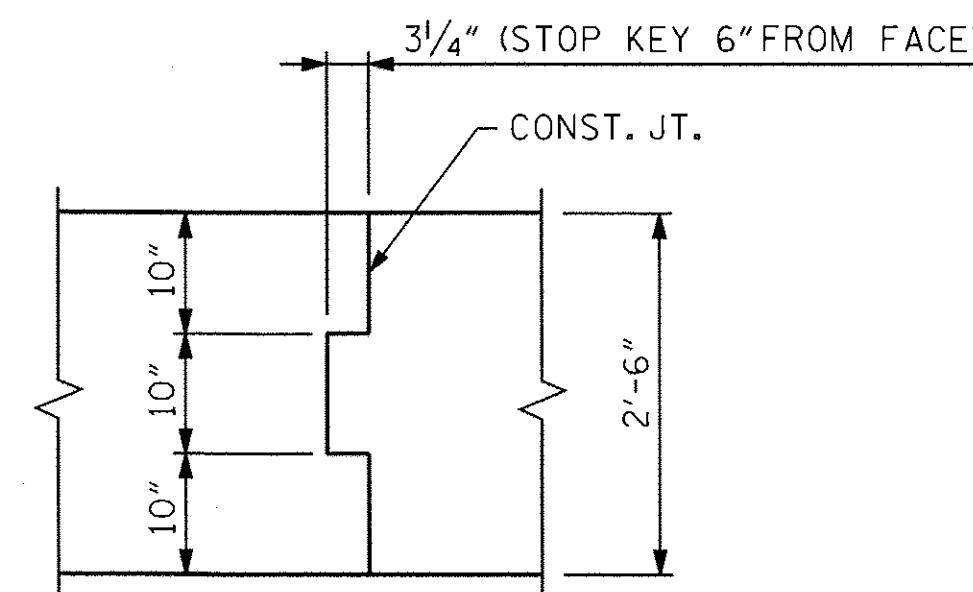
LATERAL GUIDE DETAILS

(END BENT No. 1, RIGHT LATERAL GUIDE SHOWN, LEFT END SIMILAR)
(END BENT No. 2 SIMILAR BY ROTATION)

BAR TYPES		BILL OF MATERIAL FOR ONE END BENT					
							
							
							
							
ALL BAR DIMENSIONS ARE OUT TO OUT.							
END BENT No. 1 HP 12 X 53 STEEL PILES NO: 5 LIN. FT.= 75		END BENT No. 2 HP 12 X 53 STEEL PILES NO: 5 LIN. FT.= 90					

REINFORCING STEEL (FOR ONE END BENT)						2078 LBS.
CLASS A CONCRETE BREAKDOWN (FOR ONE END BENT)						
POUR #1	CAP, LOWER PART OF WINGS & COLLARS				11.8 C.Y.	
POUR #2	UPPER PART OF WINGS				1.9 C.Y.	
POUR #3	LATERAL GUIDES				0.1 C.Y.	
TOTAL CLASS A CONCRETE					13.8 C.Y.	

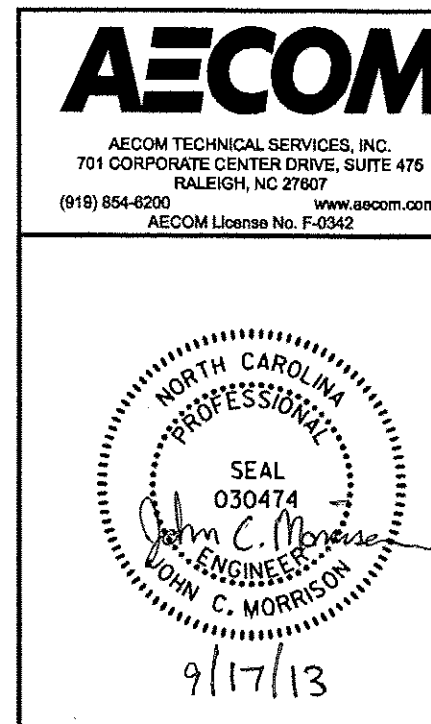
* MECHANICAL COUPLERS ARE REQUIRED. ADJUST BAR LENGTHS AS NECESSARY FOR THE APPROVED SPLICE MECHANISM USED. FOR MECHANICAL SPLICES, SEE SECTION 425-5(B) OF THE STANDARD SPECIFICATIONS.



CONST. JT. DETAIL

PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
STATION: 13+10.04 -L-

SHEET 4 OF 4



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

END BENT No. 1 & 2
DETAILS

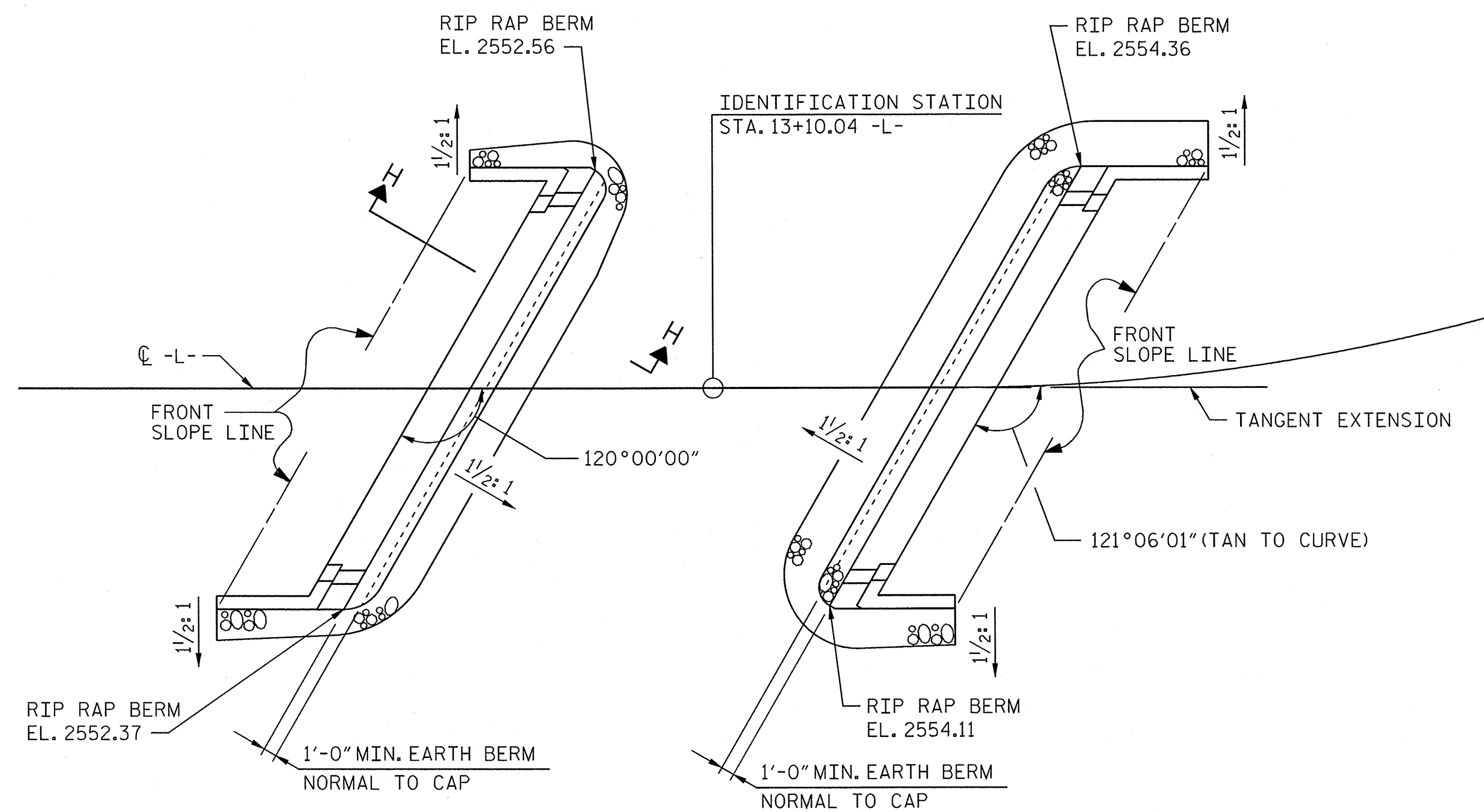
REVISIONS

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

SHEET NO.
S-14
TOTAL
SHEETS

DATE: 9/12/2013
TIME: 1:37:16 PM

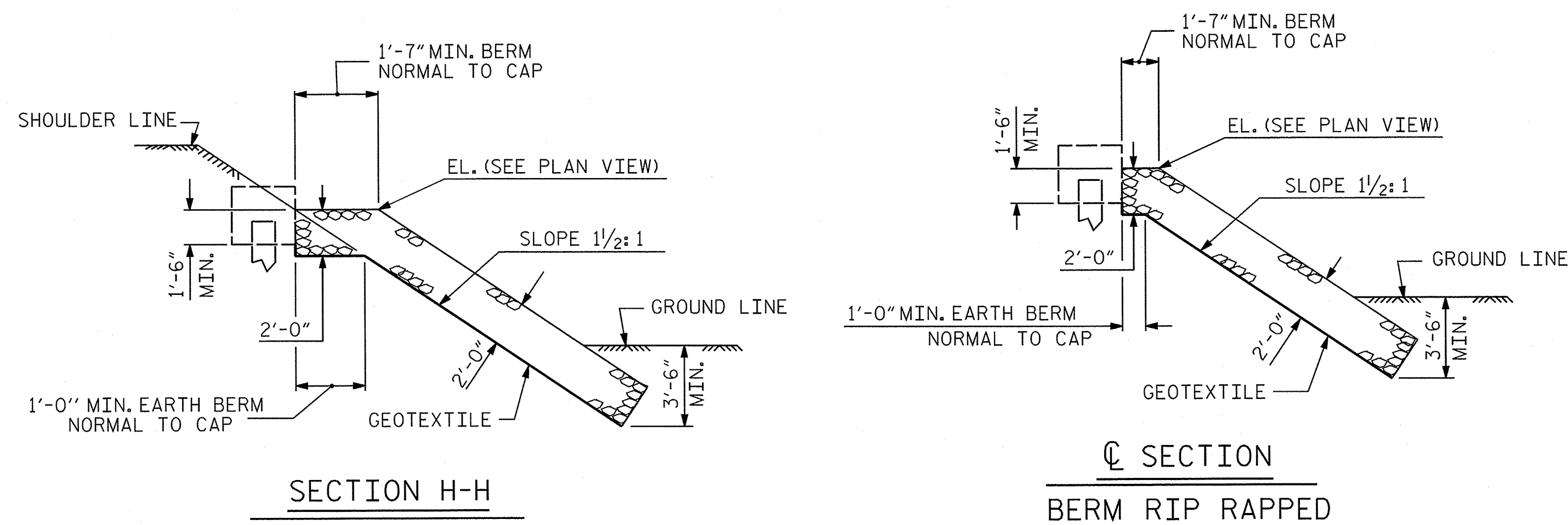
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BERM RIP RAPPED
AT END BENT No. 1

BERM RIP RAPPED
AT END BENT No. 2

ESTIMATED QUANTITIES		
BRIDGE @ STA. 13+10.04 -L-	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE
	TONS	SQUARE YARDS
END BENT 1	27	30
END BENT 2	36	40

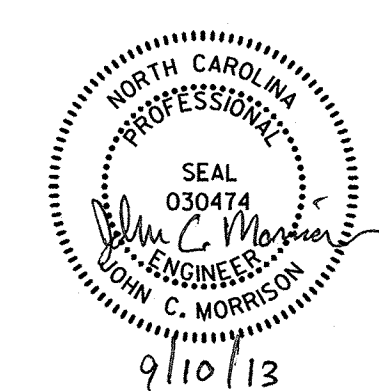


SECTION H-H

SECTION
BERM RIP RAPPED

PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
STATION: 13+10.04 -L-

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701 CORPORATE CENTER DRIVE, SUITE 475
RALEIGH, NC 27607
(919) 854-4200 www.aecom.com
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

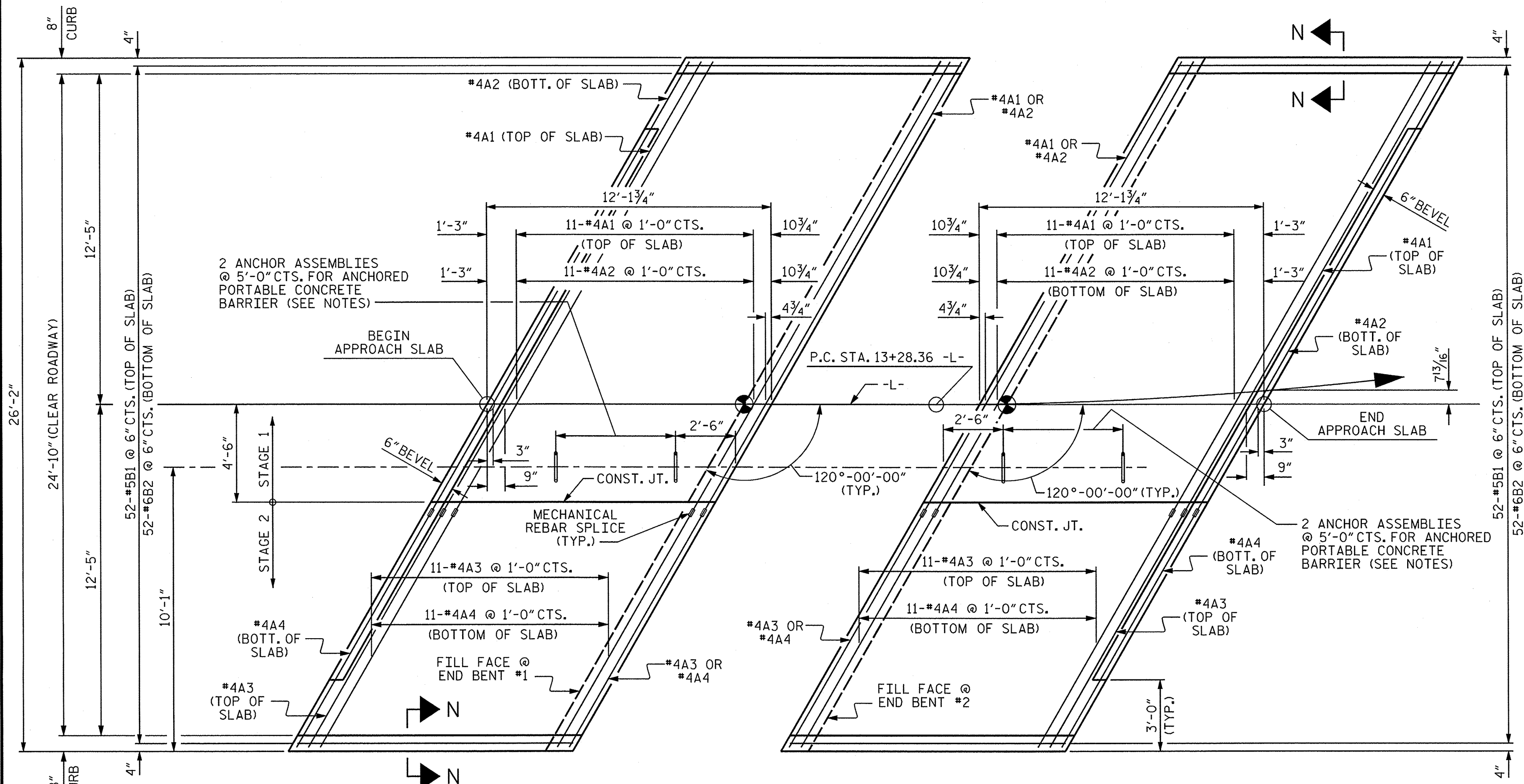
RIP RAP DETAILS

DRAWN BY : MJH DATE : 10/12
CHECKED BY : JCM DATE : 10/12

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

DATE: 9/10/2013
TIME: 1:23:48 PM

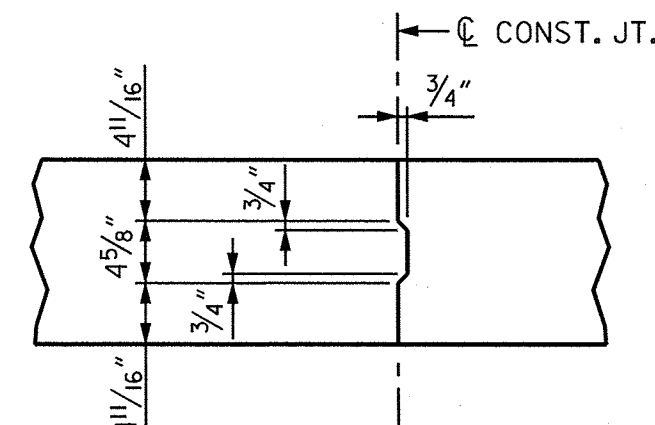
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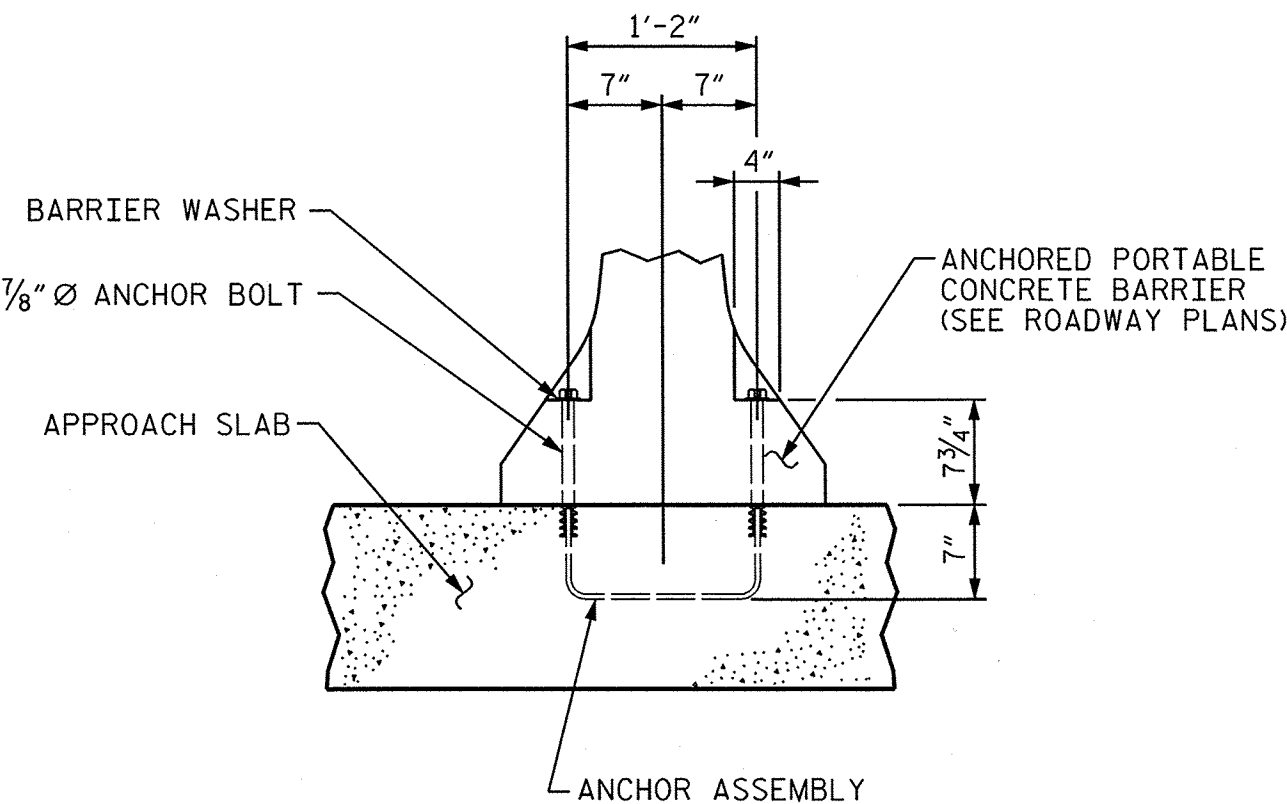
PLAN @ END BENT #1

PLAN @ END BENT #2

DIMENSIONS SHOWN ARE TYPICAL FOR BOTH APPROACH SLABS



CONSTRUCTION JOINT DETAIL



ANCHOR ASSEMBLY PLACEMENT DETAIL

(SHOWING PLACEMENT OF ANCHOR ASSEMBLY)

NOTES

FOR BRIDGE APPROACH FILL INCLUDING GEOTEXTILE, 4" Ø DRAINAGE PIPE, AND #78M STONE BACKFILL, SEE ROADWAY PLANS.

GEOTEXTILE SHALL BE TYPE 1 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1056.

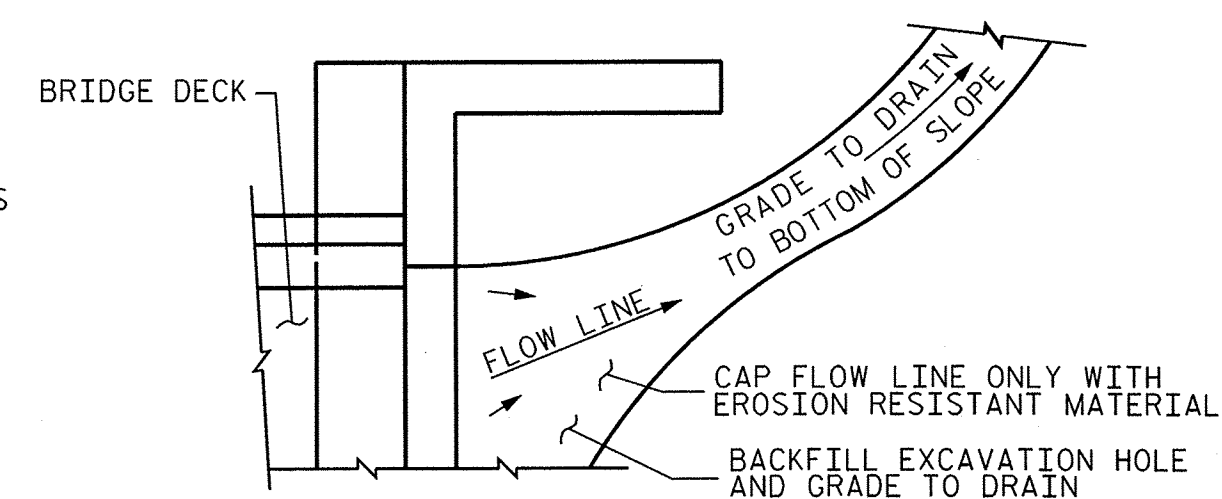
#78M STONE BACKFILL (CLASS V SELECT MATERIAL) SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 1016.

#78M STONE BACKFILL IS TO BE CONTINUOUS ALONG FILL FACE OF BACKWALL FROM OUTSIDE EDGE TO OUTSIDE EDGE OF APPROACH SLAB.

FOR THE 4" Ø DRAINAGE PIPE OUTLET(S), SEE ROADWAY STANDARD DRAWINGS.

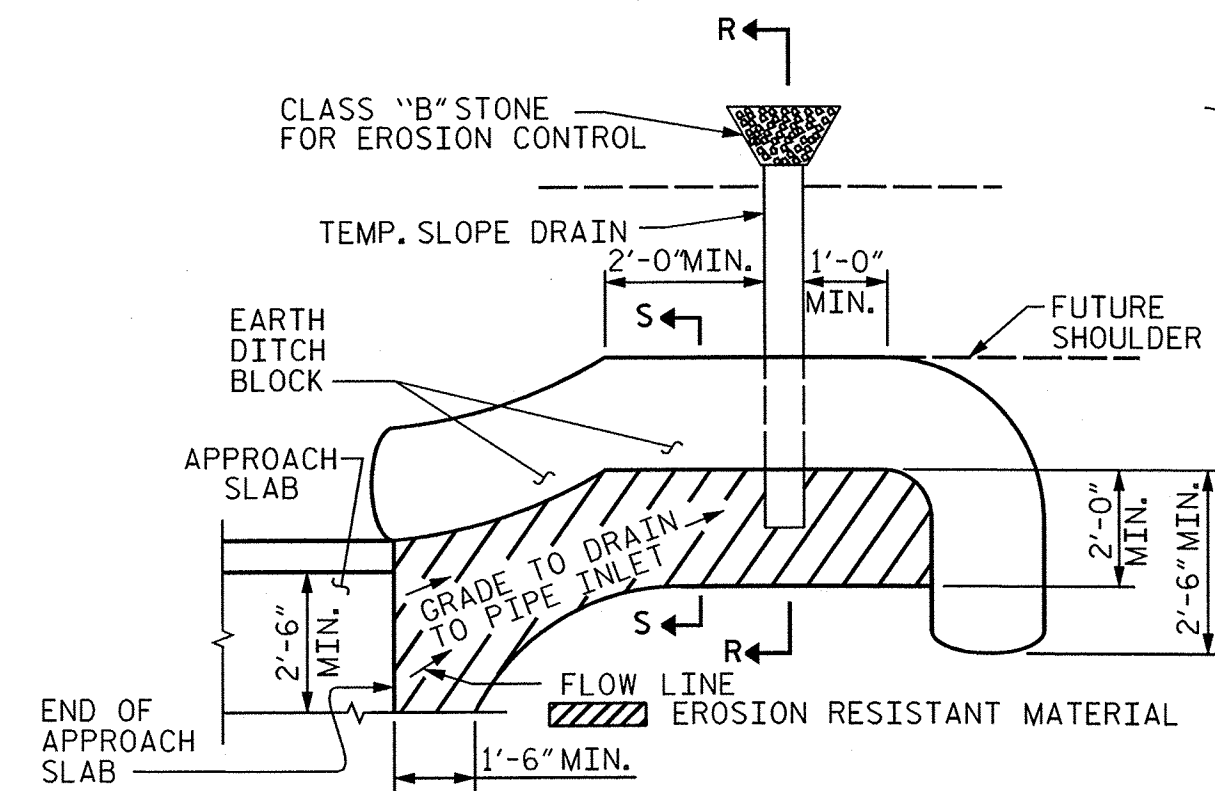
AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED, SEE ROADWAY PLANS.

APPROACH SLAB GROOVING IS NOT REQUIRED.



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.

TEMPORARY DRAINAGE DETAIL

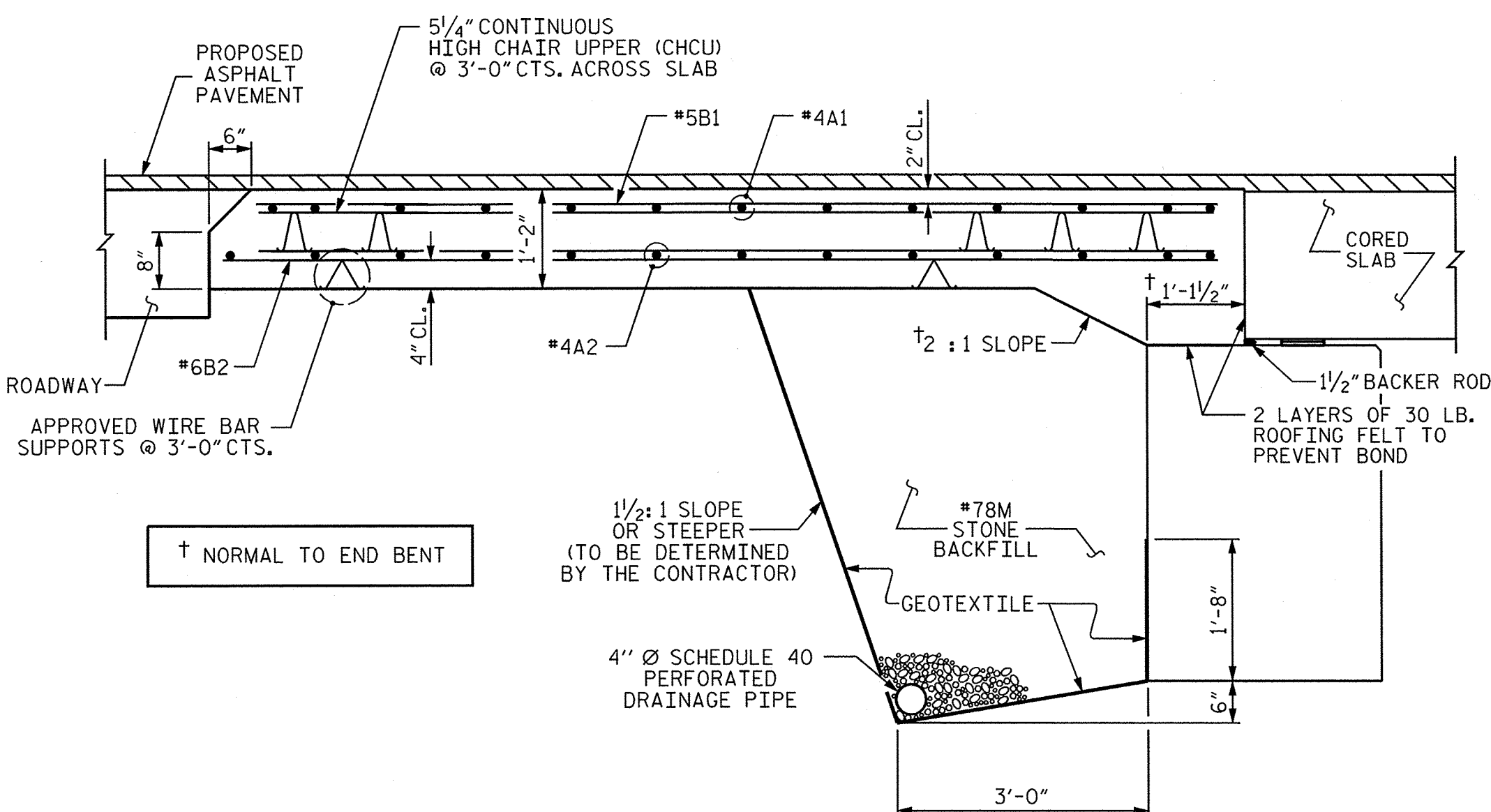


NOTE: IMMEDIATELY AFTER THE CONSTRUCTION OF THE APPROACH SLAB, THE CONTRACTOR SHALL PROVIDE TEMPORARY BERM AND SLOPE DRAIN. CONTRACTOR SHALL GRADE TO PIPE INLET AND PROVIDE EROSION RESISTANT MATERIAL AS SHOWN. THE EROSION RESISTANT MATERIAL SHALL BE EITHER 1) ASPHALT PLANT MIX, TYPE 1 OR TYPE 2, MIN. 2" DEPTH, 2) EROSION CONTROL MAT, OR 3) CONCRETE, AS DIRECTED BY THE ENGINEER. THE SLOPE DRAIN SHALL CONSIST OF A NON-PERFORATED TEMPORARY DRAINAGE PIPE, 12 INCHES IN DIAMETER.

PLAN VIEW

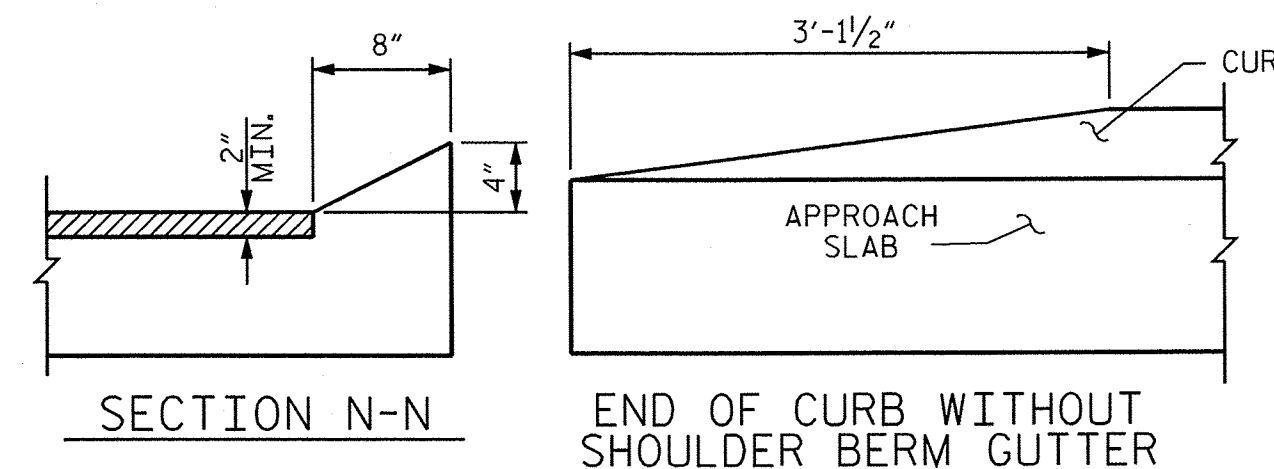
TEMPORARY BERM AND SLOPE DRAIN DETAILS

(TO BE USED WHEN SHOULDER BERM GUTTER IS REQUIRED)



SECTION THRU SLAB

ASSEMBLED BY : MJH
CHECKED BY : JCM
DATE : 10/12
DATE : 10/12
DRAWN BY : SHS/MAA 5-09
CHECKED BY : BCH 5-09
REV. 12-11
MAA/AAC



CURB DETAILS

SPLICE LENGTHS		
BAR SIZE	EPOXY COATED	UNCOATED
#4	2'-0"	1'-9"
#5	2'-6"	2'-2"
#6	3'-10"	2'-1"



PROJECT NO. 17BP.14.R.65
JACKSON COUNTY
STATION: 13+10.04 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
BRIDGE APPROACH SLAB
FOR PRESTRESSED CONCRETE
CORED SLAB UNIT
(SUB-REGIONAL TIER)
120° SKEW

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

STD. NO. BAS_27.120S

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 2012 "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 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 A 1/4" 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.