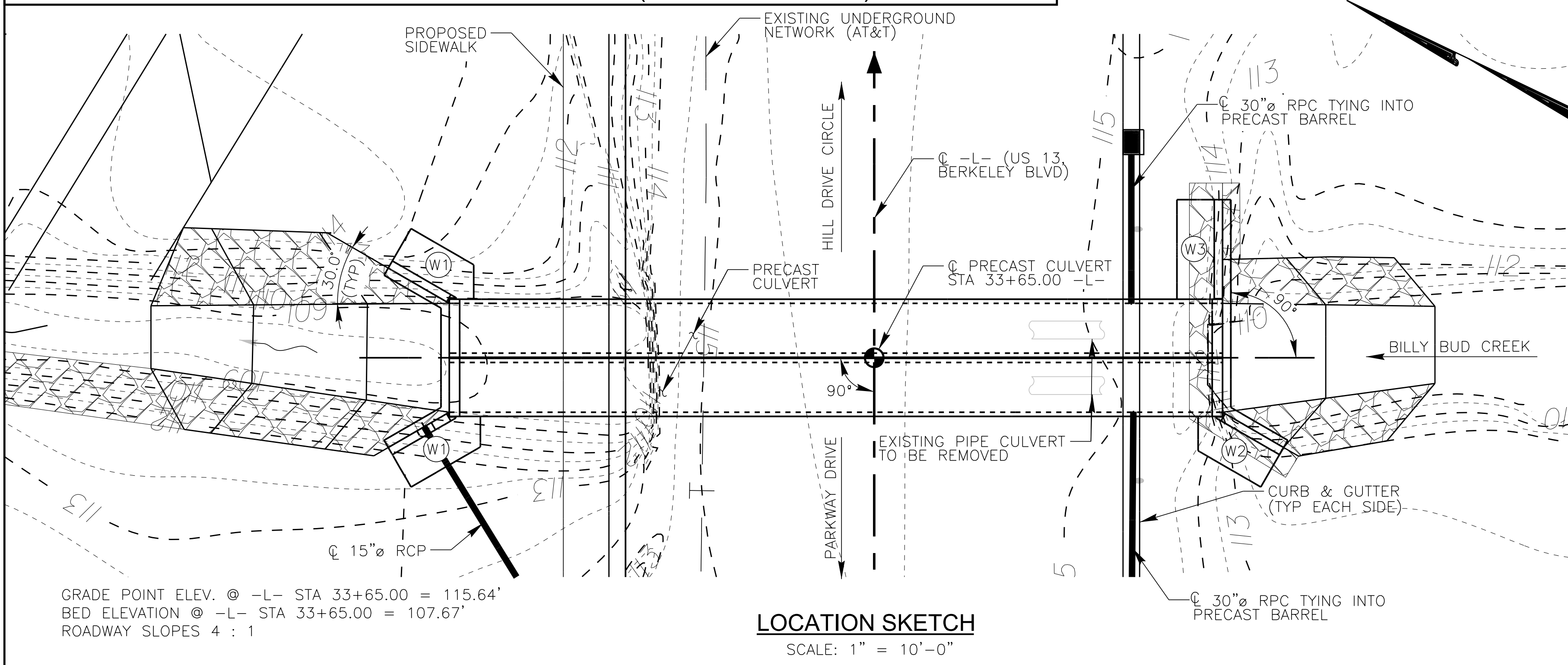


BENCH MARK: REBAR WITH CAP: -L- STA 34+20.04 (39.72' OFFSET RT) ELEV. 115.03'

F.A. PROJECT NO. STP-0013 (33)



GRADE POINT ELEV. @ -L- STA 33+65.00 = 115.64'
BED ELEVATION @ -L- STA 33+65.00 = 107.67'
ROADWAY SLOPES 4 : 1

NOTES:

- ASSUMED LIVE LOAD ----- HS520-44 OR ALTERNATE LOADING.
- DESIGN FILL ----- 2.99'
- DESIGN PARAMETERS:
MAXIMUM ALLOWABLE SOIL BEARING PRESSURE = 2500 PSF
SOIL DENSITY = 120 PCF
EFP = 50 PCF
COEFFICIENT OF FRICTION = 0.35
- FOR BORING INFORMATION, SEE GEOTECHNICAL REPORT.
- SEE ROADWAY PLANS FOR RIP RAP REQUIREMENTS AT CULVERT ENDS.
- FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.
- FOR ADDITIONAL INFORMATION REGARDING DRAINAGE, GRADING, AND ROADWAY, SEE ROADWAY PLANS.
- THE CONTRACTOR SHALL STAKE OUT THE LENGTH OF CULVERT FOR ENGINEER REVIEW PRIOR TO ORDERING PRECAST.
- CONTRACTOR TO FIELD VERIFY THAT CULVERT INVERTS ARE 1' BELOW EXISTING GRADE BEFORE CONSTRUCTION OF CULVERT, SEE SHEET C-3 SECTION A-A.
- SEE SPECIAL PROVISIONS FOR PRECAST REINFORCED CONCRETE BOX CULVERT AT STA 33+65.00 -L-.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- PRECAST BOX SHALL BE DESIGNED TO ACCOMMODATE 1/2" DIFFERENTIAL SETTLEMENT AT JOINTS.
- CONTRACTOR SHALL INCLUDE DETAILS FOR 3" WEEP HOLES AT 10 FT MAX SPACING IN SHOP DRAWINGS. THE WEEP HOLES SHALL BE APPROXIMATELY 6" ABOVE NORMAL STREAM FLOW. #78 STONE FILLED POROUS BAGS SHALL BE PLACED IN FRONT OF EACH WEEP HOLE. CONTRACTOR MUST VERIFY INFORMATION PROVIDED.

ESTIMATED QUANTITIES				
ITEM	QUANTITY			UNIT
	PHASE 1	PHASE 2	TOTAL	
CULVERT EXCAVATION, STA 33+65.00	-	-	-	LS
SELECT MATERIAL CLASS VI - #57 STONE BACKFILL	160	140	300	CY
PRECAST CULVERT AT STA 33+65.00	-	-	-	LS
** GEOTEXTILE FOR SOIL STABILIZATION	340	300	640	SY
* REINFORCING STEEL	1233	1394	2627	LBS
* CLASS A CONCRETE	16.9	19.5	36.4	CY

OVERTOPPING FLOOD DATA

OVERTOPPING DISCHARGE ----- 404 cfs
FREQUENCY OF OVERTOPPING FLOOD --- <10-YR
OVERTOPPING FLOOD ELEVATION ----- 115.54 ft

HYDRAULIC DATA

DESIGN DISCHARGE ----- 1000 cfs
FREQUENCY OF DESIGN FLOOD ----- 50-YR
DESIGN HIGH WATER ----- 116.0 ft
DRAINAGE AREA ----- 1.1 sq. mi.
BASE DISCHARGE (Q100) ----- 1200 cfs
BASE HIGH WATER ELEVATION ----- 116.1 ft

- * SHOWN FOR WINGS, FOOTING, CUTOFFS, AND HEADWALLS.
- ** GEOTEXTILE FABRIC-TYPE 4 IS INCLUDED IN THE GEOTEXTILE FOR SOIL STABILIZATION PAY ITEM

SPECIAL NOTICE - UTILITIES COORDINATION CULVERT CONSTRUCTION STATION 33+65

CONTRACTOR TO BE AWARE OF AN EXISTING UNDERGROUND NETWORK (AT&T) LOCATED APPROXIMATELY 4'± NORTH OF EXISTING EDGE OF PAVEMENT ON THE LEFT SIDE OF -L-. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION CONCERNING THE INSTALLATION OF THE PRECAST CULVERT UNDER THE EXISTING UTILITY NETWORK AND FOR UTILITY CONTACTS.

NO SEPARATE PAYMENT WILL BE MADE FOR THIS COORDINATION AND WORKING AROUND THE UNDERGROUND NETWORK CONSISTING OF 9-4" STEEL CONDUITS.

CONCRETE SHALL BE POURED IN THE FOLLOWING ORDER FOR EACH PHASE:

1. SET PRECAST BOX CULVERT.
2. WING FOOTING AND WING AND BOX CUTOFF WALLS.
3. WINGWALLS AND HEADWALL.

CAST-IN-PLACE WINGS, FOOTINGS, AND HEADWALL INFORMATION.

MINIMUM CONCRETE COMPRESSIVE STRENGTH = 3000 PSI

ALL REINFORCING STEEL SHALL BE GRADE 60.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 IN SAMPLES OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 IN SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

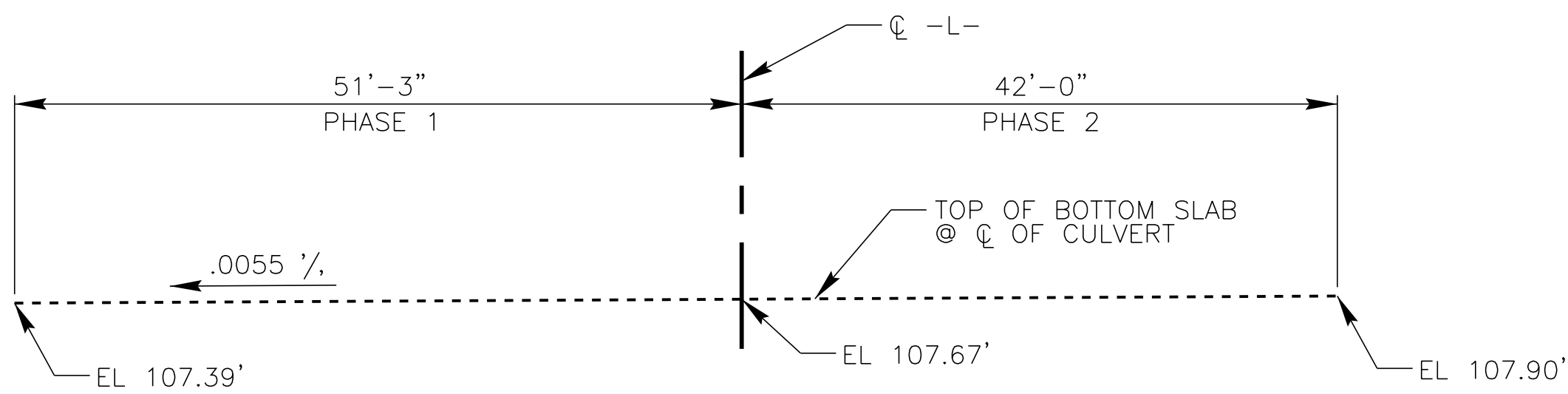
TEMPORARY SHORING SHOWING IN THE PHASING SECTION IS FOR THE ROADWAY SHORING ONLY. ANY OTHER SHORING REQUIRED FOR CONSTRUCTION OF THE CULVERT SHALL NOT BE PAID FOR AS A SEPARATE ITEM BUT INCIDENTAL TO OTHER CULVERT QUANTITIES.

CONTRACTOR WILL MAINTAIN THE ALIGNMENT OF THE PRECAST CULVERT SECTIONS DURING BACKFILL.

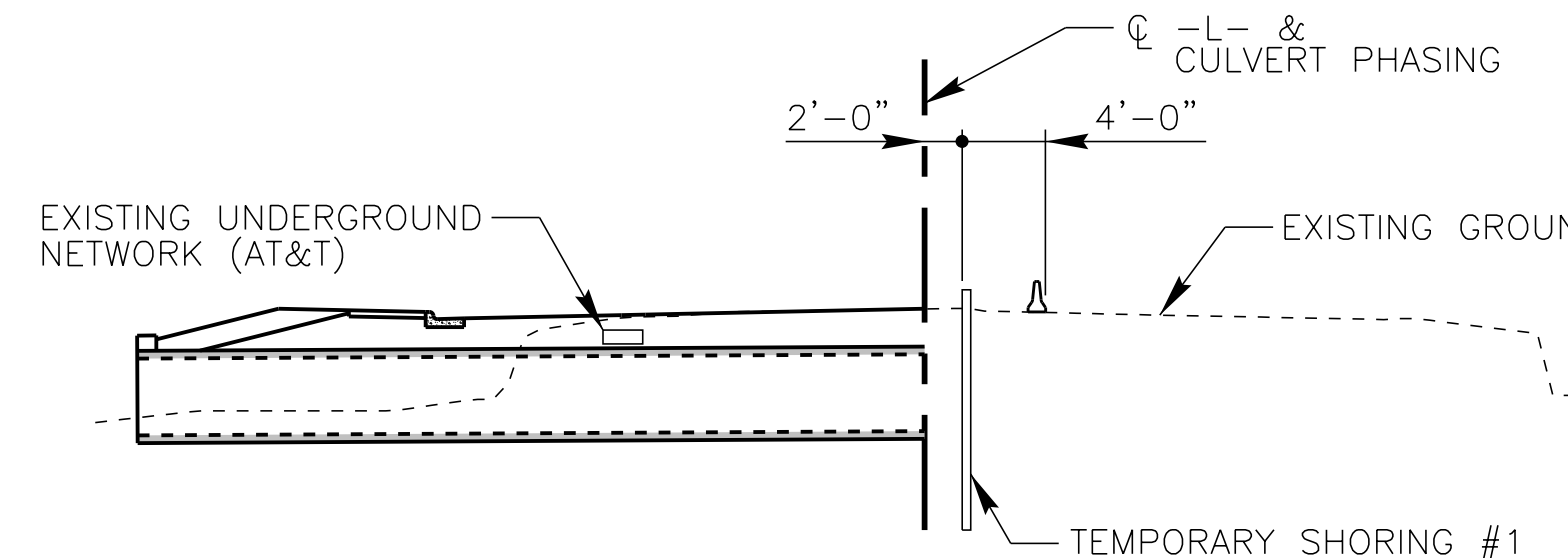
SETTING PRECAST CULVERT SECTION AND BACKFILL ORDER FOR EACH PHASE:

1. UNDERCUT AND BACKFILL WITH BEDDING MATERIAL.
2. SET CULVERT UNITS WITH NON COMPRESSIBLE JOINT FILLER MAT'L AT BOTTOM.
3. PLACE BACKER ROD AND JOINT SEALER MAT'L AFTER ALL CULVERT UNITS ARE IN PLACE. CONTRACTOR TO WRAP JOINTS AS REQUIRED BY SPECIAL PROVISIONS.
4. BACKFILL 1/2 OF CULVERT HEIGHT BRING FILL UP EQUAL ON EACH SIDE.
5. PLACE NON-SHRINK GROUT IN THE TOP AND DOWN SIDES AT ENDS.
6. FINISH BACKFILL AFTER GROUT HAS OBTAINED STRENGTH

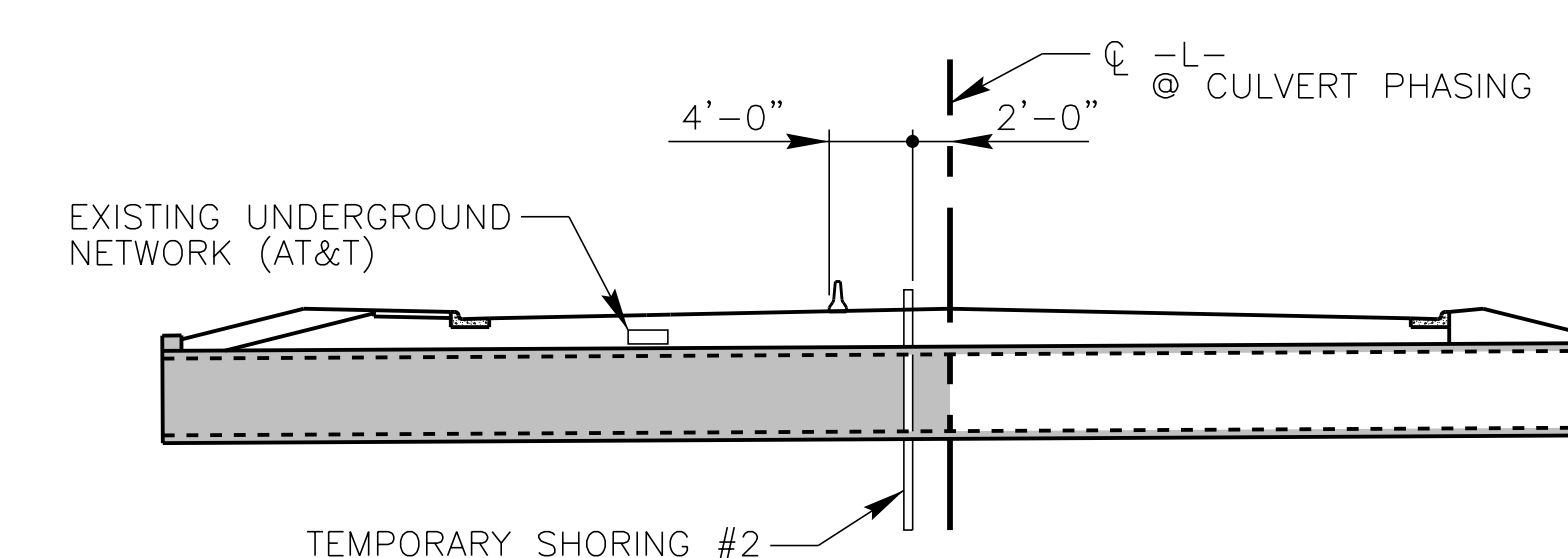
NO SEPARATE PAYMENT WILL BE MADE FOR NON COMPRESSIBLE JOINT FILLER MAT'L, BACKER ROD, JOINT SEALER MAT'L, AND NON-SHRINK GROUT. THESE ITEMS SHALL BE INCLUDED IN LS FOR PRECAST CULVERT.



PROFILE ALONG CULVERT



SHORING - PHASE 1



SHORING PHASE - 2

3				
2				
1				
NO.:	REVISION:	DATE:	DRAWN BY:	CHECKED BY:

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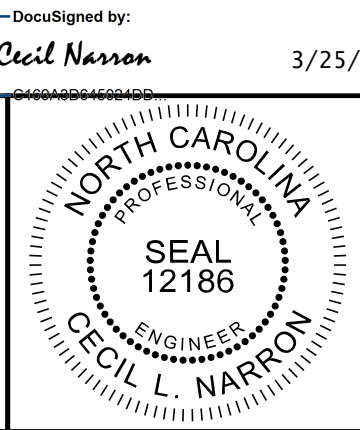
PREPARED IN THE OFFICE OF:

Kimley » Horn

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LAYOUT

DOUBLE 6' x 5' PRECAST CULVERT AT STA 33+65.00



SCALE: SCALE AS NOTED

PROJECT: **U-3609A BERKELEY BLVD CULVERT**

JOB NUMBER: 011746003 SHEET NUMBER: **C-1**