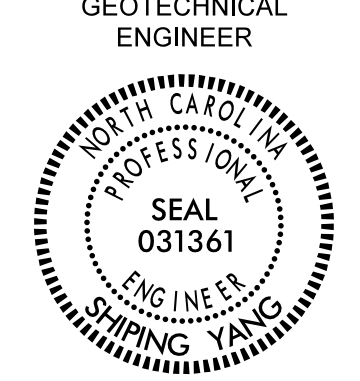


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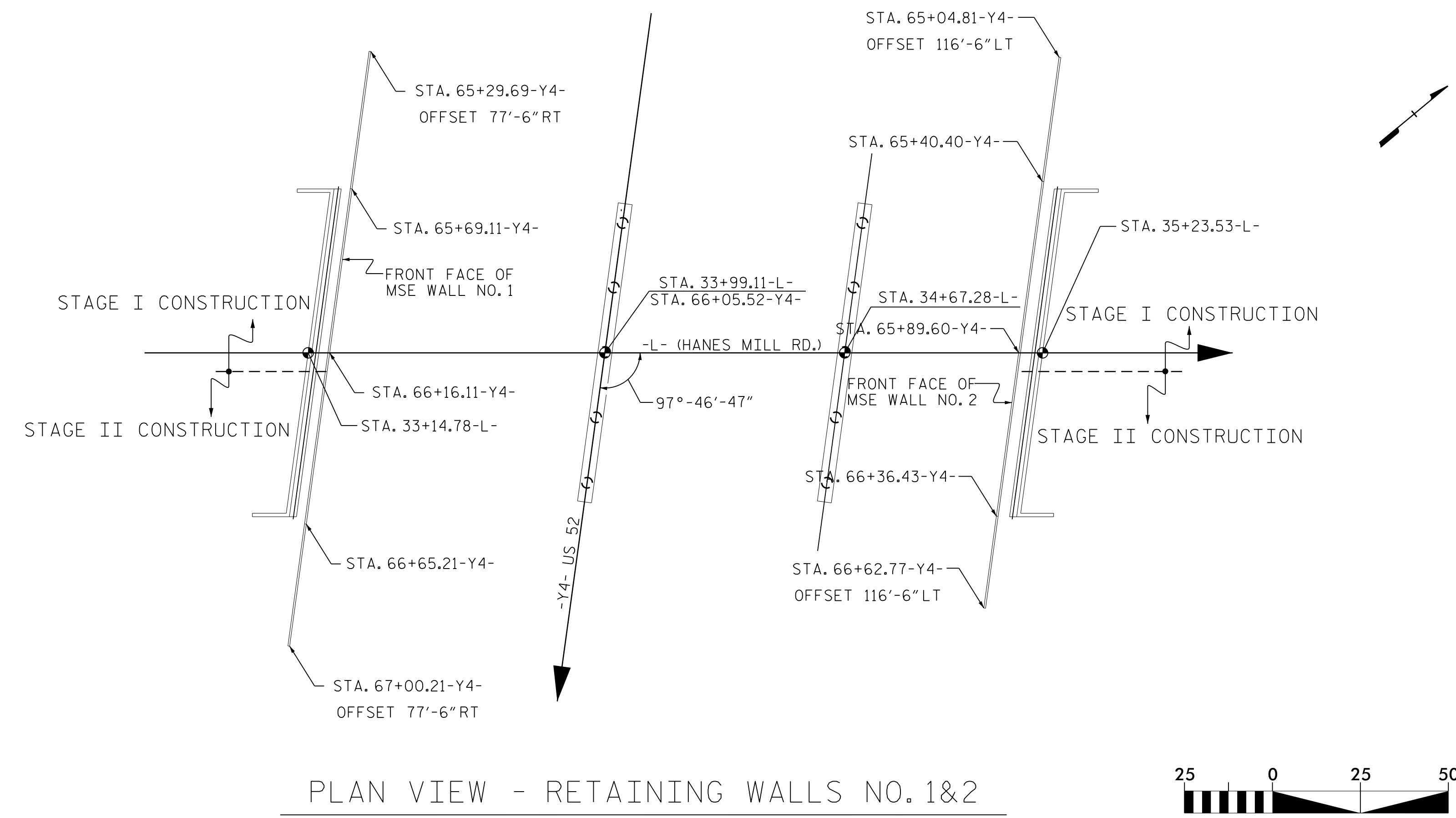


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Shiping Yang 2/10/2021

DATE: 2/10/2021

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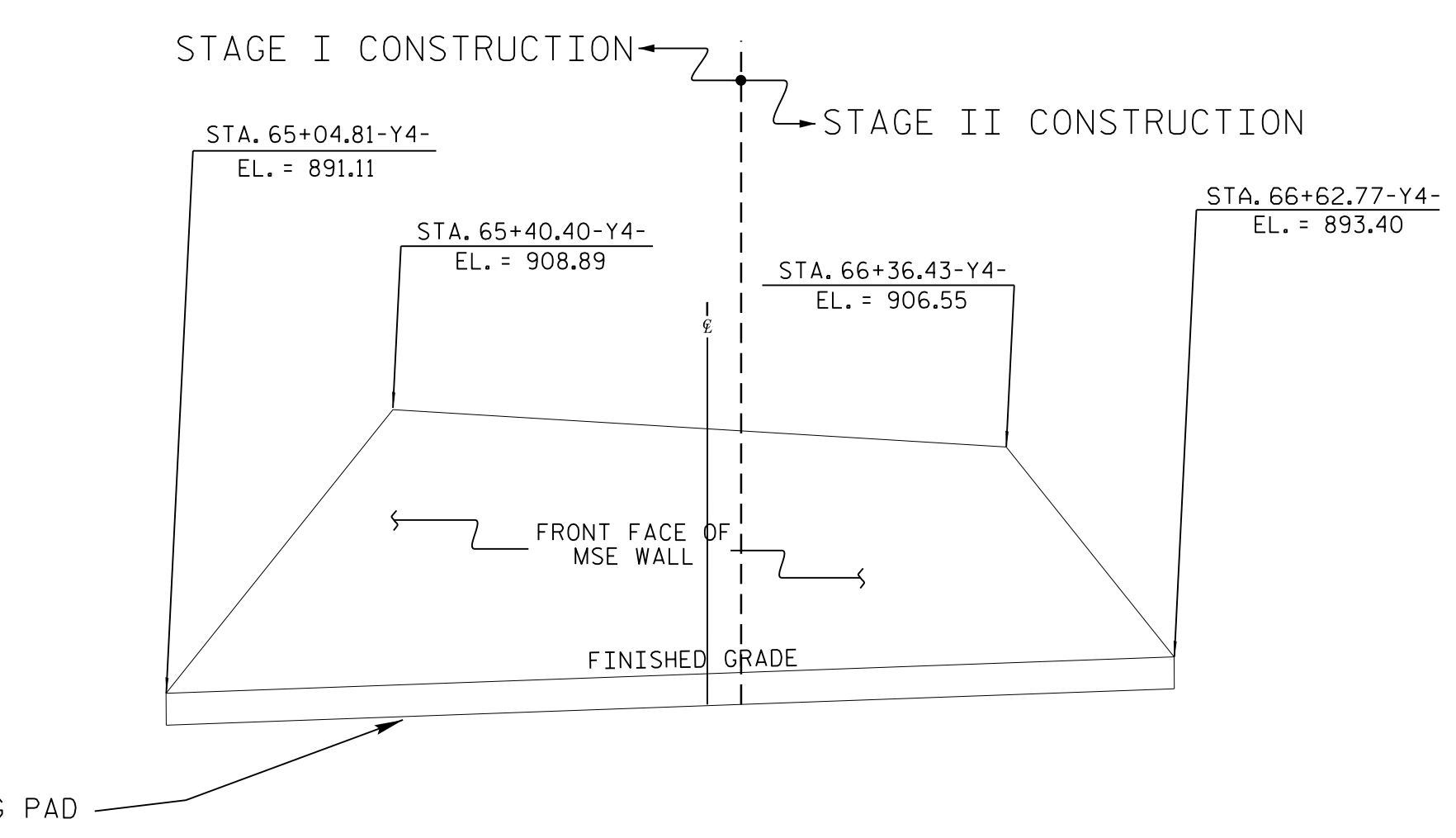
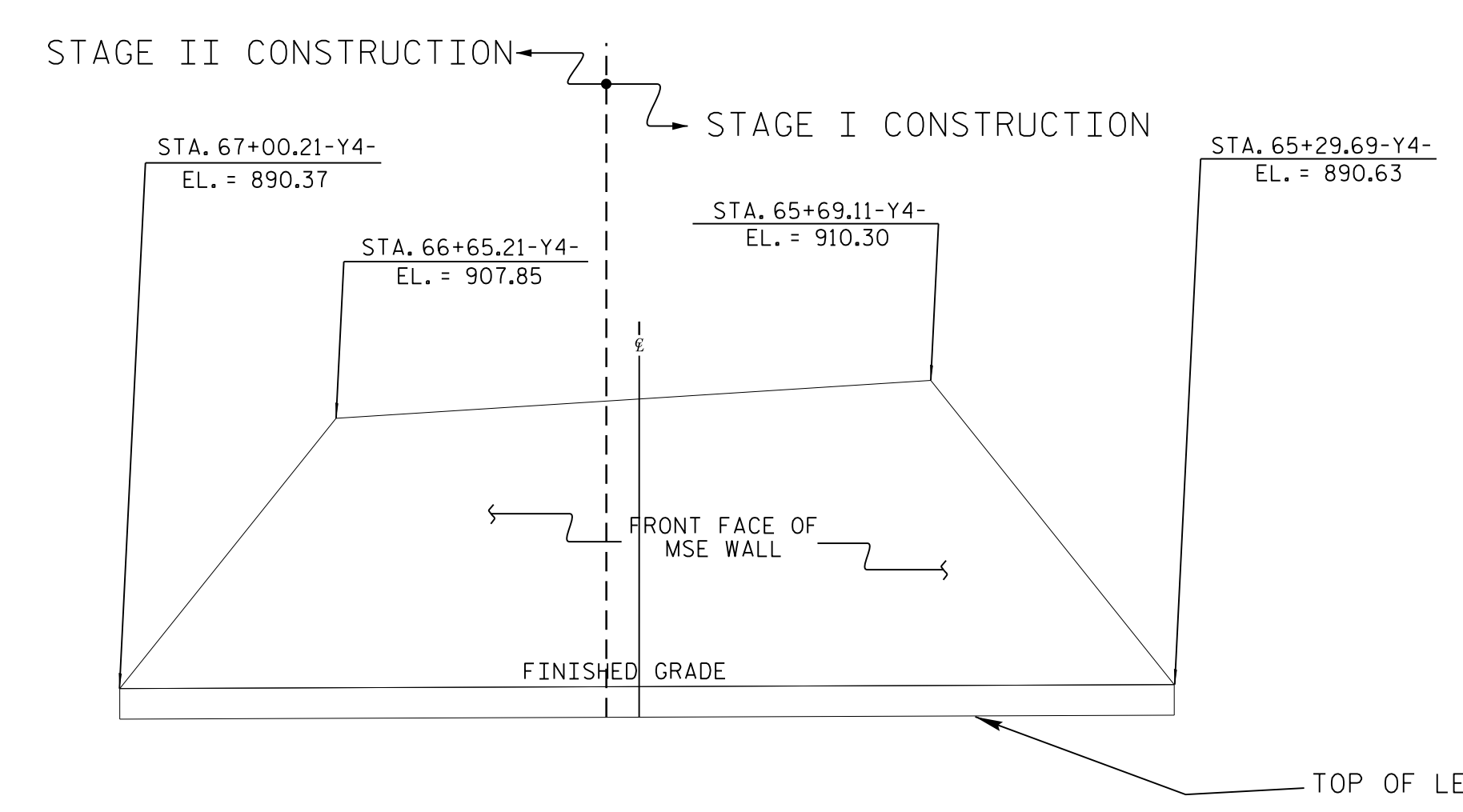
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MSE RETAINING WALL QUANTITIES		
RETAINING WALL NO. 1	-WALL1-	* 2815 SQUARE FEET
RETAINING WALL NO. 2	-WALL2-	* 2280 SQUARE FEET

* WALL AREA IS MEASURED USING THE DESIGN HEIGHT "H"

ARCHITECTURAL SURFACE TREATMENT		
RETAINING WALL NO. 1	-WALL1-	* 2815 SQUARE FEET
RETAINING WALL NO. 2	-WALL2-	* 2280 SQUARE FEET



NOTE: 1) OFFSET DIMENSIONS ARE FROM FACE OF WALL
2) THE WALL ENVELOPE DOES NOT ACCURATELY DEPICT THE ACTUAL FACE OF THE WALL

NOTE: 1) OFFSET DIMENSIONS ARE FROM FACE OF WALL
2) THE WALL ENVELOPE DOES NOT ACCURATELY DEPICT THE ACTUAL FACE OF THE WALL




PROJECT NO.: U-2729

FORSYTH COUNTY

STATION: WALL1: 65+29.67 TO 67+00.21 -Y4-
WALL2: 65+04.81 TO 66+62.77 -Y4-

SHEET 1 OF 4

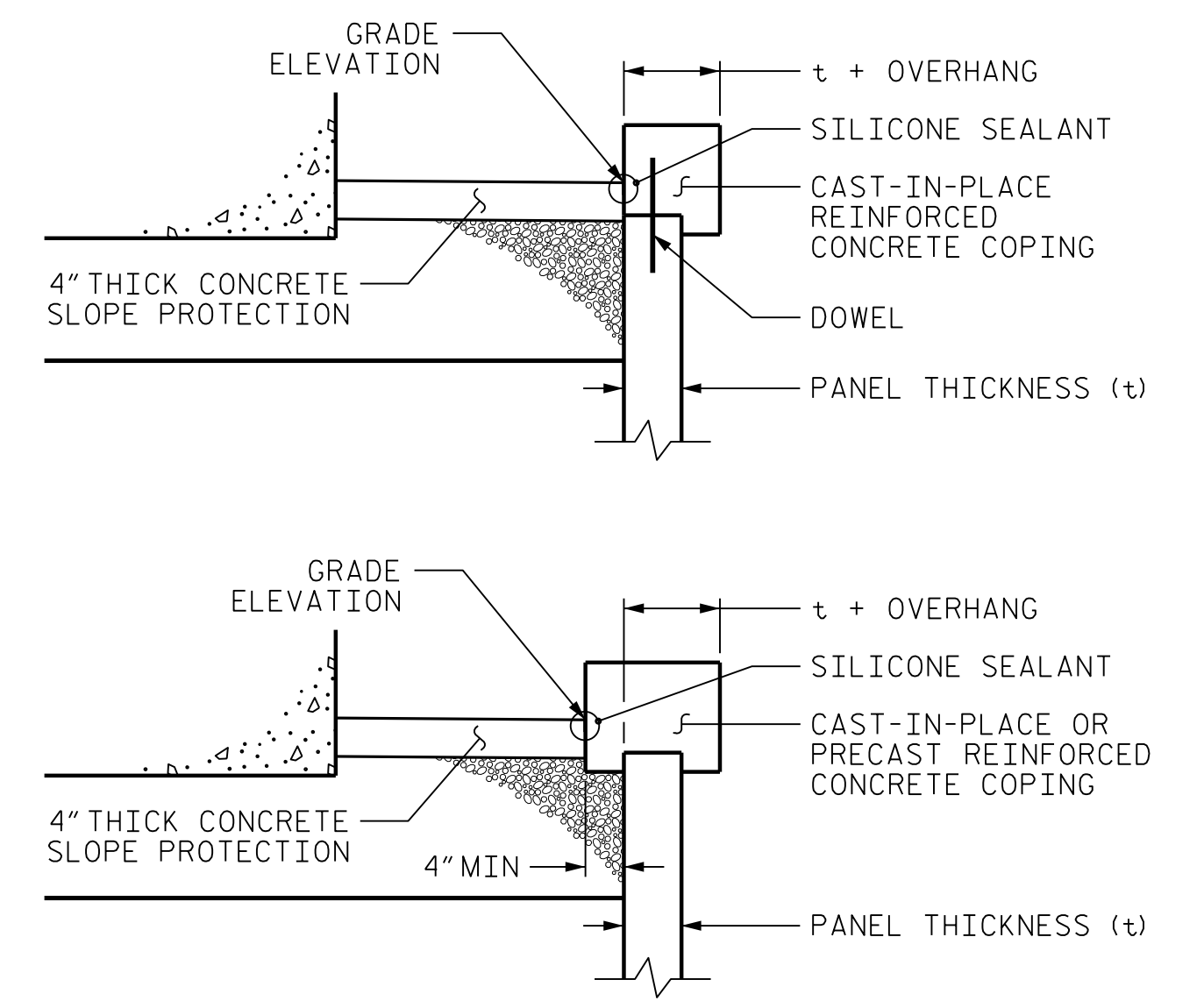
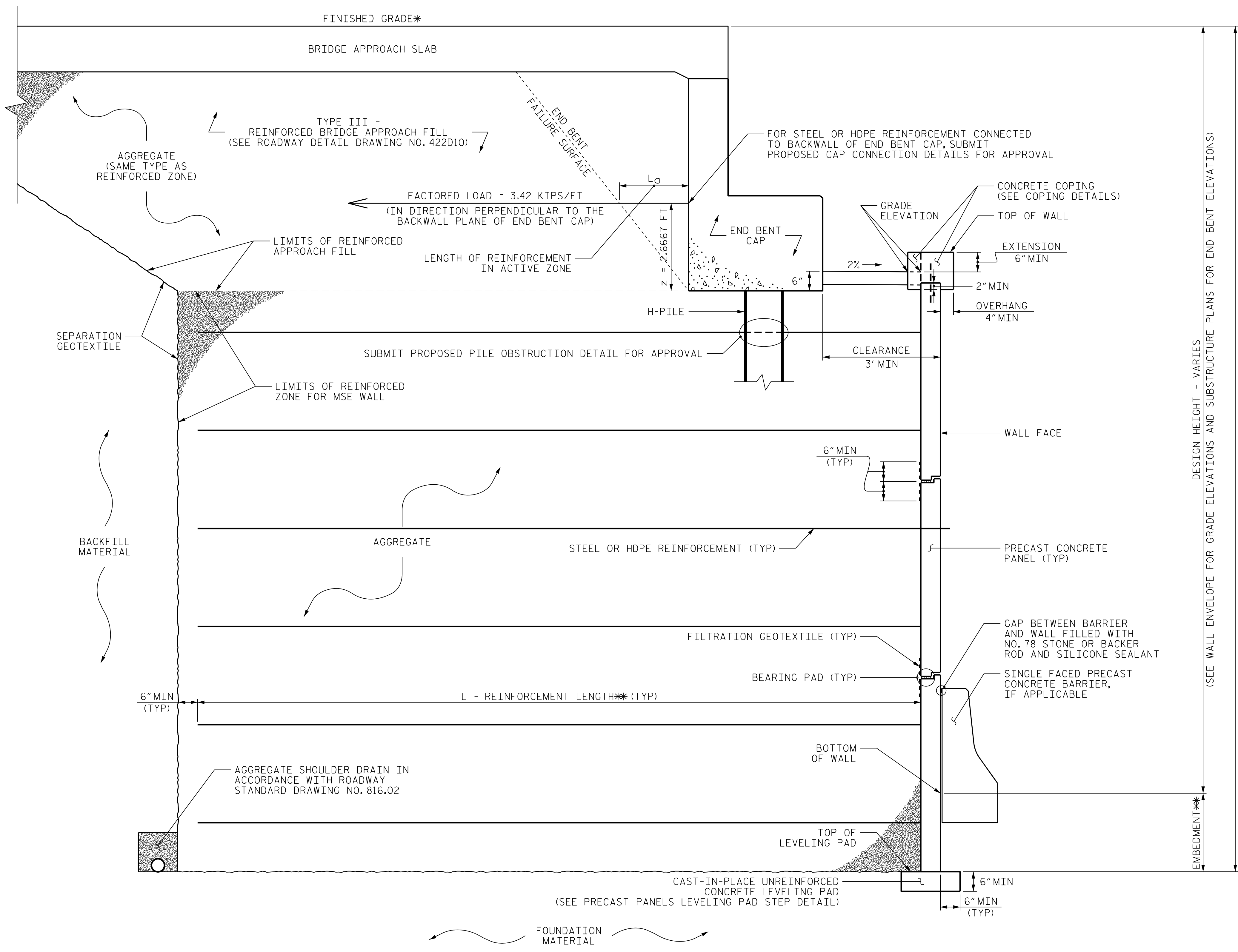


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REVISIONS						SHEET NO. W-1
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1			3			
2			4			

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REVIEWED BY: SCC	DATE: 1/2021



COPING DETAILS


AT THE CONTRACTOR'S OPTION, CONNECT COPING TO PANELS WITH DOWELS OR EXTEND COPING DOWN BACK OF PANELS.

MSE ABUTMENT WALL WITH PRECAST PANELS - TYPICAL SECTION 1

*SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.
 **SEE MSE RETAINING WALLS PROVISION AND IF APPLICABLE, MSE WALL NOTES FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.

PROJECT NO.: U-2729
 FORSYTH COUNTY
 STATION: WALL1: 65+29.67 TO 67+00.21 -Y4-
 WALL2: 65+04.81 TO 66+62.77 -Y4-

SHEET 2 OF 4


NORTH CAROLINA
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RETAINING WALL NOS. 1&2 MSE RETAINING WALL

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

PREPARED BY: SY	DATE: 1/2021
REVIEWED BY: SCC	DATE: 1/2021

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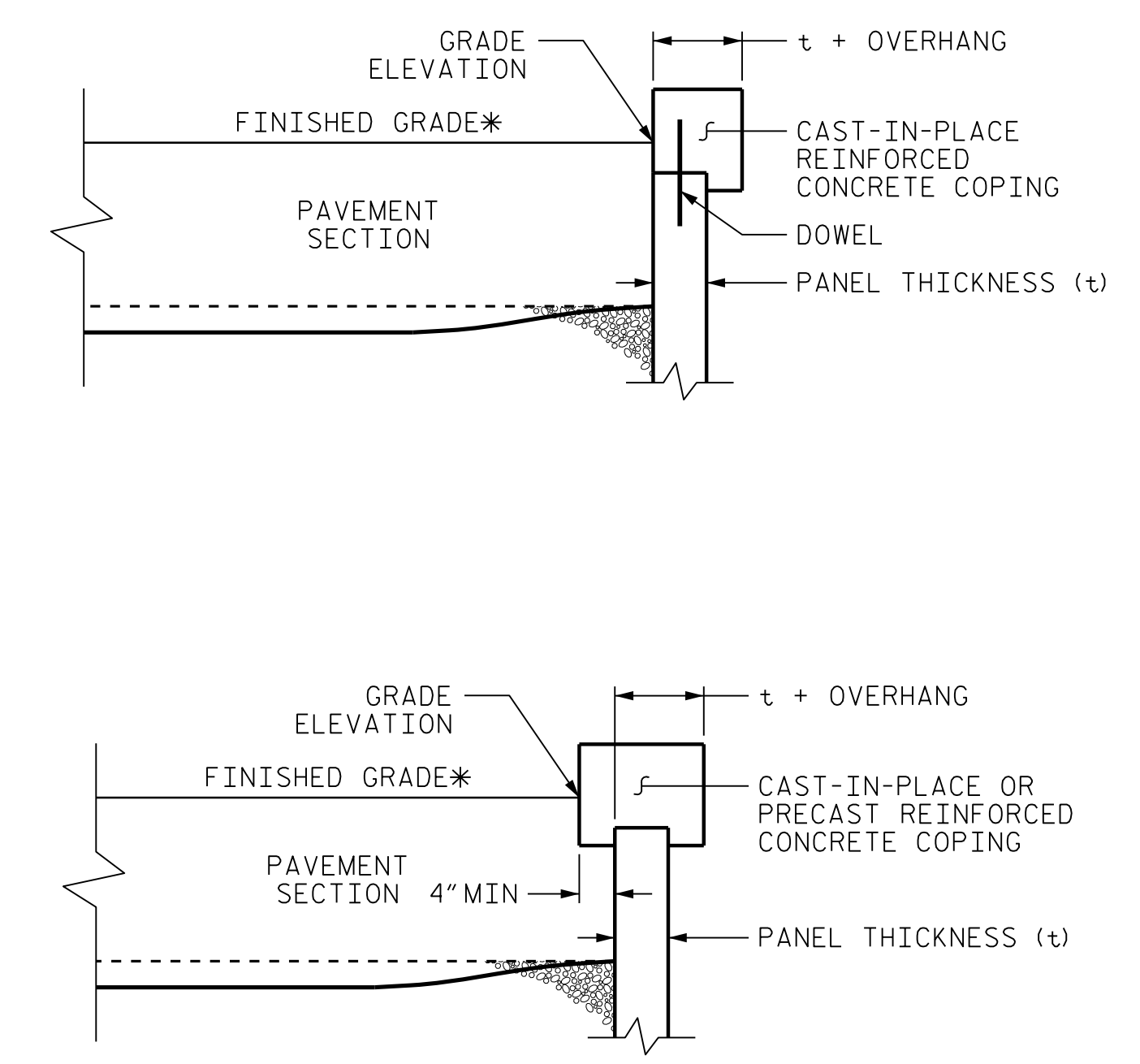
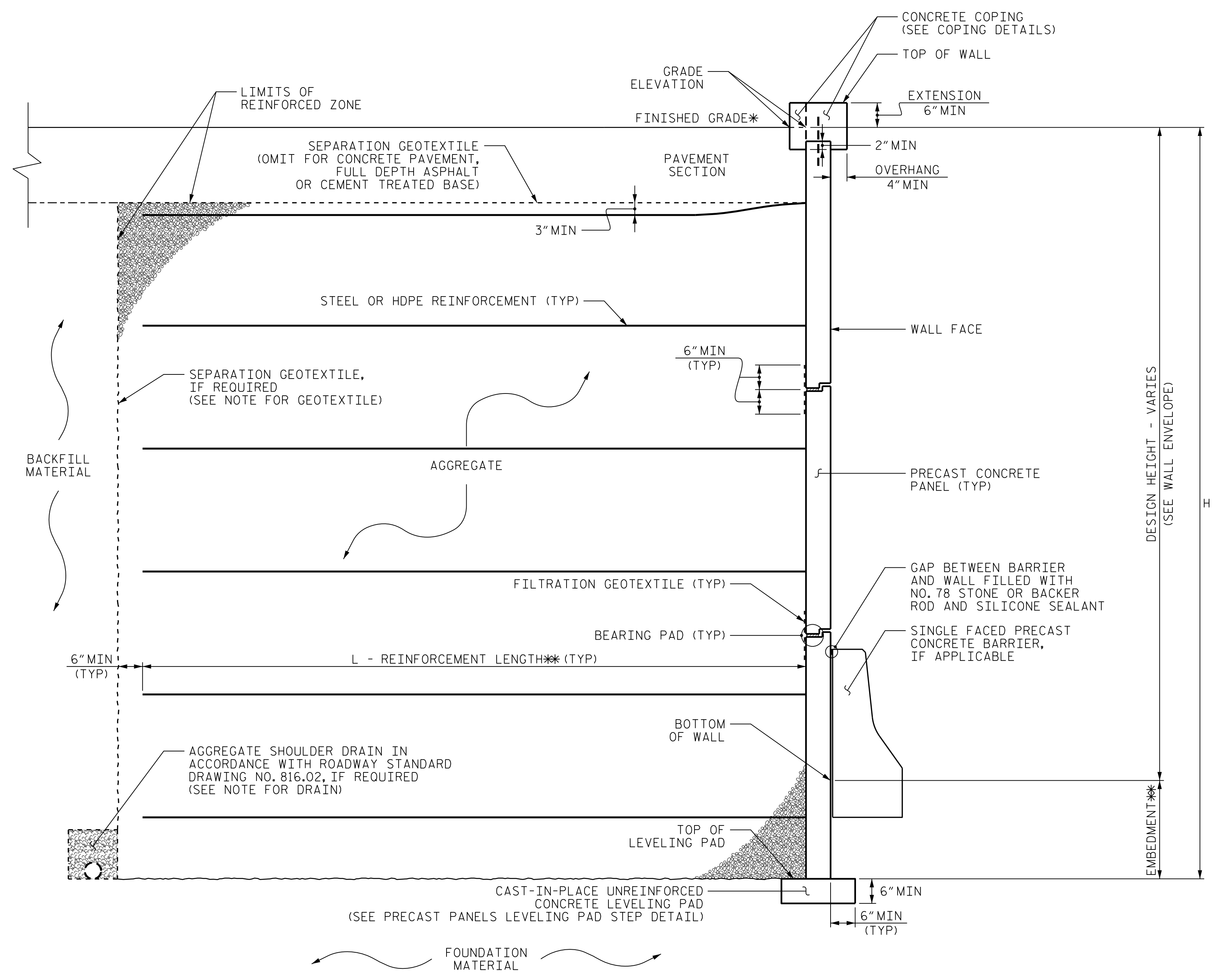
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SHIPPING YANG

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COPING DETAILS

AT THE CONTRACTOR'S OPTION, CONNECT COPING TO PANELS WITH DOWELS OR EXTEND COPING DOWN BACK OF PANELS.
*SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.

MSE WALL WITH PRECAST PANELS - TYPICAL SECTION 2

*SEE ROADWAY PLANS FOR FINISHED GRADE DETAILS.
**SEE MSE RETAINING WALLS PROVISION AND IF APPLICABLE, MSE WALL NOTES FOR EMBEDMENT AND REINFORCEMENT LENGTH REQUIREMENTS.

PROJECT NO.: U-2729
FORSYTH COUNTY
STATION: WALL1: 65+29.67 TO 67+00.21 -Y4-
WALL2: 65+04.81 TO 66+62.77 -Y4-
SHEET 3 OF 4

NORTH CAROLINA
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DIVISION OF HIGHWAYS

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RETAINING WALL NOS. 1&2
MSE RETAINING WALL

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

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NOTES:

FOR MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALLS, SEE MECHANICALLY STABILIZED EARTH RETAINING WALLS PROVISION.

FOR TYPE III REINFORCED BRIDGE APPROACH FILL, SEE BRIDGE APPROACH FILLS PROVISION AND ROADWAY DETAIL DRAWING NO. 422D10.

FOR STEEL BEAM GUARDRAIL, SEE ROADWAY PLANS AND SECTION 862 OF THE STANDARD SPECIFICATIONS.

FOR SINGLE FACED PRECAST CONCRETE BARRIER, SEE ROADWAY PLANS AND SECTION 857 OF THE STANDARD SPECIFICATIONS.

AT THE CONTRACTOR'S OPTION, USE FINE AGGREGATE IN THE REINFORCED ZONE OF RETAINING WALL NOS. 1&2.

A RUSTIC ASHLAR ARCHITECTURAL FINISH IS REQUIRED FOR PRECAST CONCRETE PANELS FOR RETAINING WALL NOS. 1&2.

ARCHITECTURAL SURFACE FINISHES REQUIRE AN ADDITIONAL 2" OF PANEL OR CIP WALL THICKNESS. NO ADDITIONAL PAYMENT WILL BE INCLUDED FOR PAYMENT. ANY ADDITIONAL COSTS SHOULD BE INCLUDED IN THE COST OF SURFACE TREATMENT

A SEPARATION GEOTEXTILE IS REQUIRED AT THE BACK OF THE REINFORCED ZONE FOR RETAINING WALL NOS. 1&2.

A DRAIN IS REQUIRED FOR RETAINING WALL NOS. 1&2.

BEFORE BEGINNING MSE WALL DESIGN FOR RETAINING WALL NOS. 1&2, SURVEY WALL LOCATION AND SUBMIT A REVISED WALL PROFILE VIEW (WALL ENVELOPE) FOR REVIEW. DO NOT START WALL DESIGN OR CONSTRUCTION UNTIL THE REVISED WALL ENVELOPE IS ACCEPTED.

DESIGN RETAINING WALL NOS. 1&2 FOR THE FOLLOWING:

- 1) H = DESIGN HEIGHT + EMBEDMENT
- 2) DESIGN LIFE = 100 YEARS
- 3) MAXIMUM FACTORED VERTICAL PRESSURE ON FOUNDATION MATERIAL = 6500 PSF
- 4) MINIMUM REINFORCEMENT LENGTH (L) = 0.7H OR 6 FT, WHICHEVER IS LONGER
- 5) MINIMUM EMBEDMENT ELEVATION = 2 FT
- 6) REINFORCED ZONE AGGREGATE PARAMETERS:

AGGREGATE TYPE*	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) PSF
COARSE	110	38	0
FINE	115	34	0

*SEE MSE RETAINING WALLS PROVISION FOR COARSE AND FINE AGGREGATE MATERIAL REQUIREMENTS.

7) IN-SITU ASSUMED MATERIAL PARAMETERS:

MATERIAL TYPE	UNIT WEIGHT (γ) PCF	FRICTION ANGLE (ϕ) DEGREES	COHESION (c) PSF
BACKFILL	120	30	0
FOUNDATION	120	30	0

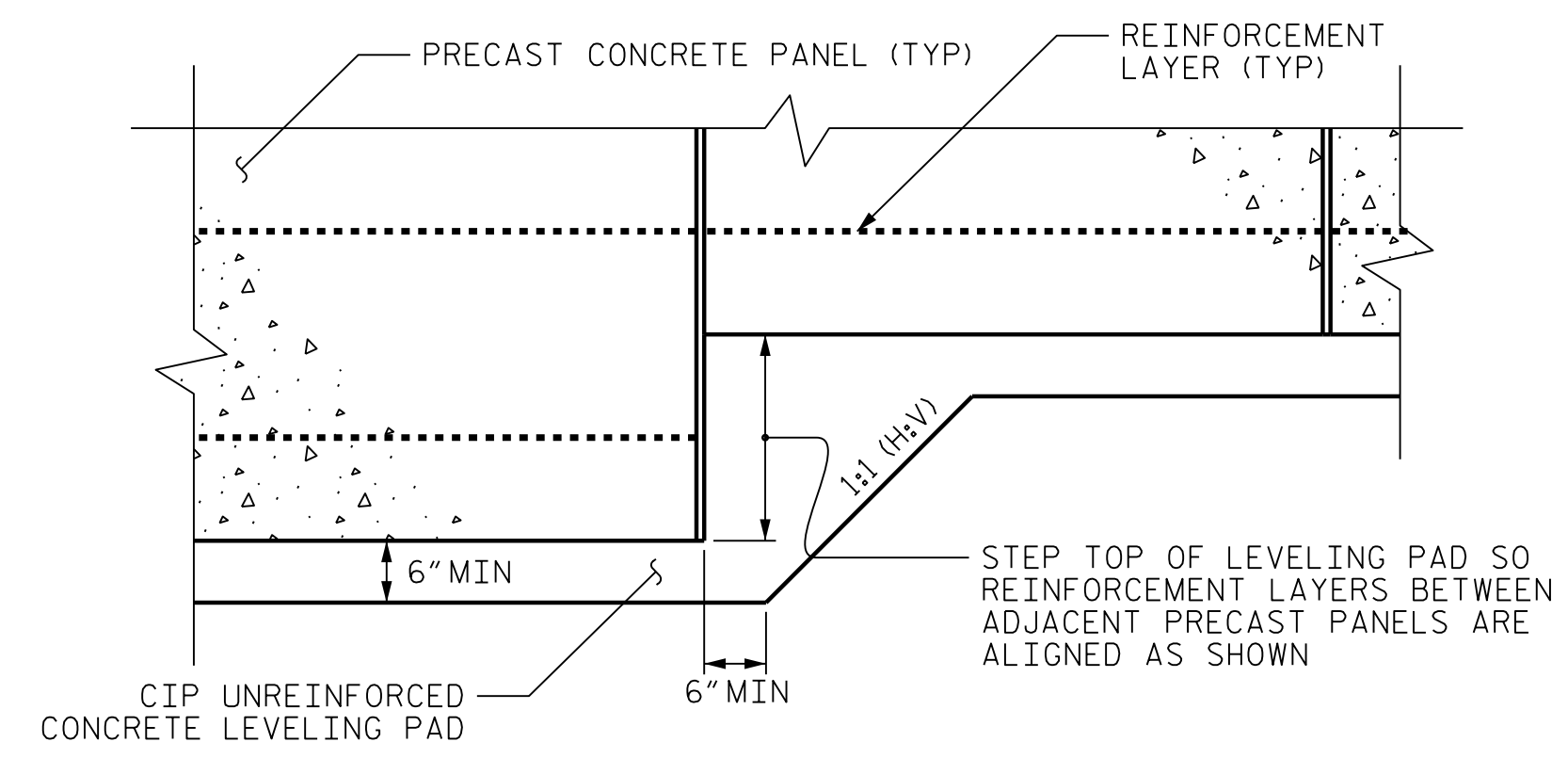
DESIGN RETAINING WALL NOS. 1&2 FOR A LIVE LOAD (TRAFFIC) SURCHARGE.

EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, GUARDRAIL, FENCE OR HANDRAIL POSTS, PAVEMENTS, PIPES, INLETS OR UTILITIES WILL OR MAY INTERFERE WITH REINFORCEMENT FOR RETAINING WALL NOS. 1&2.

DO NOT PLACE LEVELING PAD CONCRETE, AGGREGATE OR REINFORCEMENT FOR RETAINING WALLS NO. 1&2 UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

THE MSE WALLS WILL BE STAGE CONSTRUCTED, WITH THE STAGING OCCURRING 3'3" RT, -L-. "TEMPORARY SHORING" WILL BE REQUIRED FOR THE MAINTENANCE OF TRAFFIC AND WALL CONSTRUCTION. SEE ROADWAY AND STRUCTURE PLAN AND THE TEMPORARY SHORING PROVISIONS. SUBMIT ALL STAGING DETAILS AND ANY OTHER SHORING WITH THE WALL PACKAGE FOR REVIEW.

AT THE CONTRACTOR'S OPTION, "TEMPORARY SHORING FOR WALL CONSTRUCTION" MAY BE USED TO CONSTRUCT RETAINING WALL NOS. 1&2. SEE MSE RETAINING WALLS PROVISION FOR TEMPORARY SHORING FOR WALL CONSTRUCTION.




PROJECT NO.: U-2729

FORSYTH COUNTY

STATION: WALL1: 65+29.67 TO 67+00.21 -Y4-
WALL2: 65+04.81 TO 66+62.77 -Y4-

SHEET 4 OF 4



**NORTH CAROLINA
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**GEOTECHNICAL
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2			4			

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