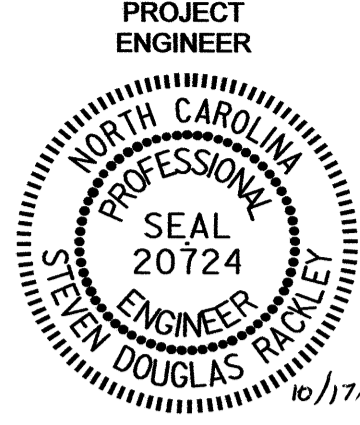
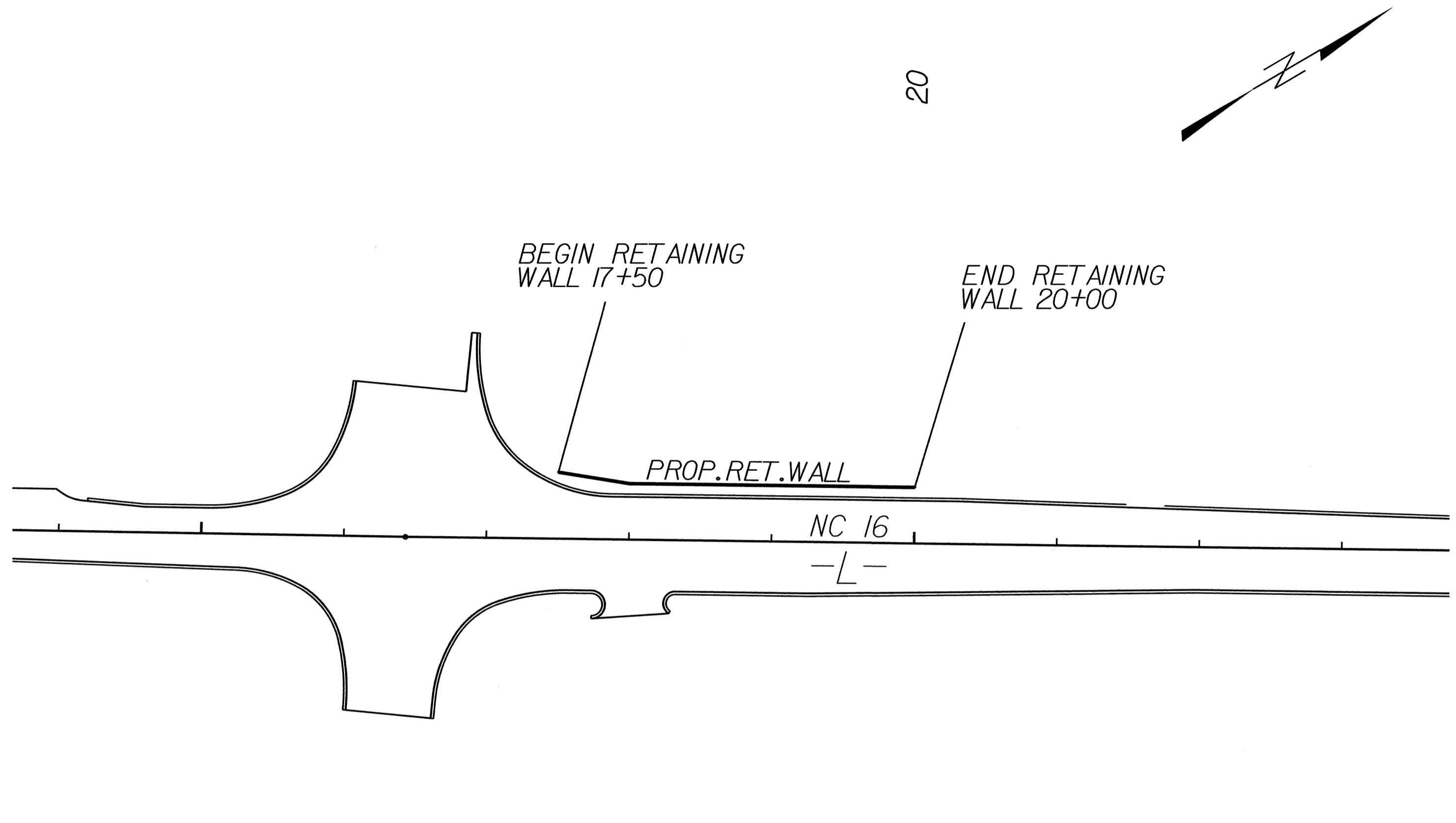


BM - 1 PK NAIL IN CONCRETE BASE OF METAL LIGHT POLE STA. 14+99 -L- 521' RT.
EL. = 753.84'

GEOTECHNICAL ENGINEER SIGNATURE _____ DATE _____	PROJECT ENGINEER  SIGNATURE <i>Steven Douglas Rackley</i> DATE 10/17/07
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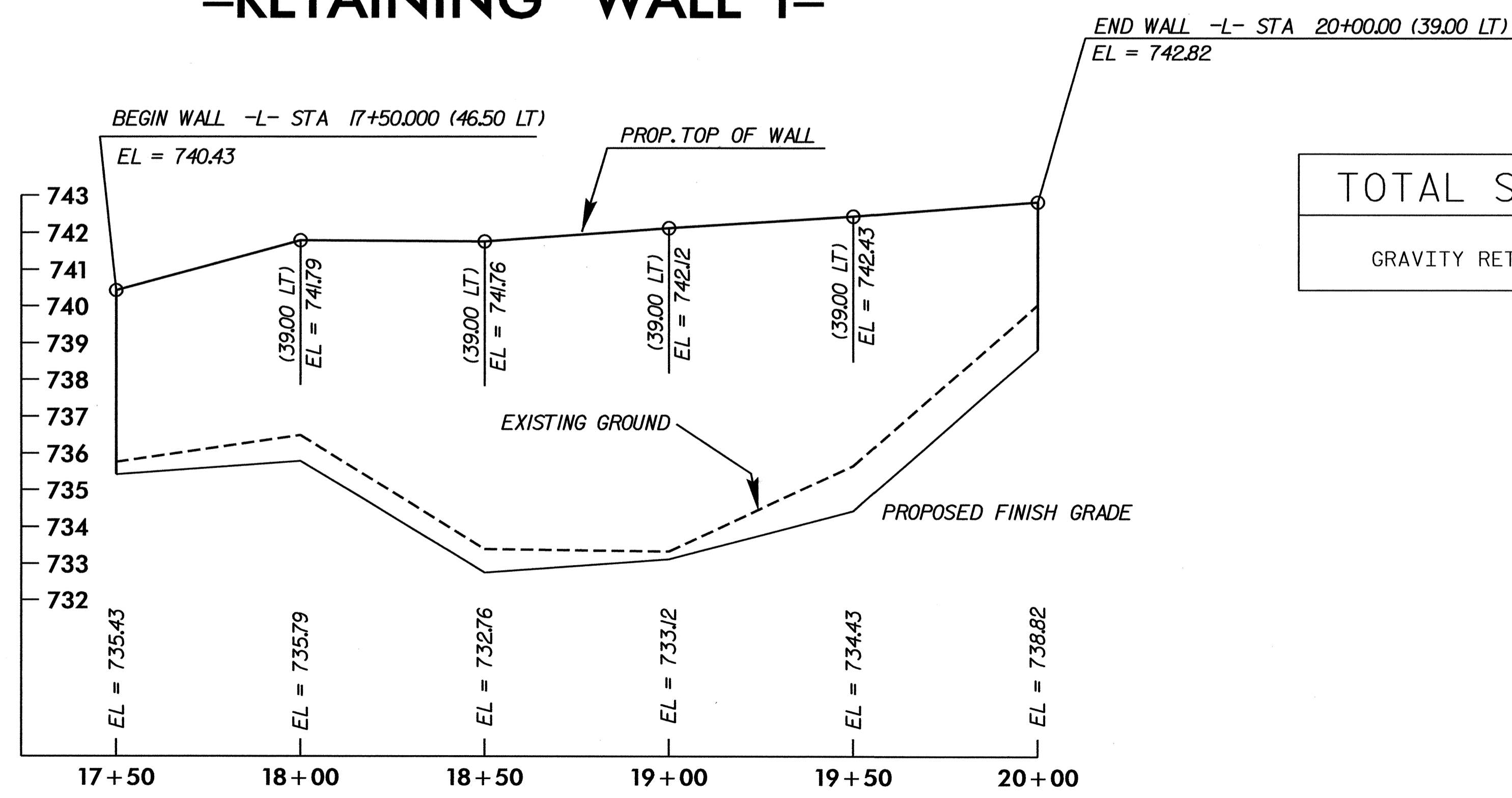
LOCATION SKETCH

-L- STA	OFFSET FROM CL (LEFT)	ELEV @ TOP OF WALL	* PROPOSED FINISHED GRADE	* EXPOSED WALL HEIGHT	** DESIGN WALL HEIGHT "H"
17+50.00	46.50	740.43	735.43	5.00	4.50
18+00.00	39.00	741.79	735.79	6.00	5.50
18+50.00	39.00	741.76	732.76	9.00	8.50
19+00.00	39.00	742.12	733.12	9.00	8.50
19+50.00	39.00	742.43	734.43	8.00	7.50
20+00.00	39.00	742.82	738.82	4.00	3.50

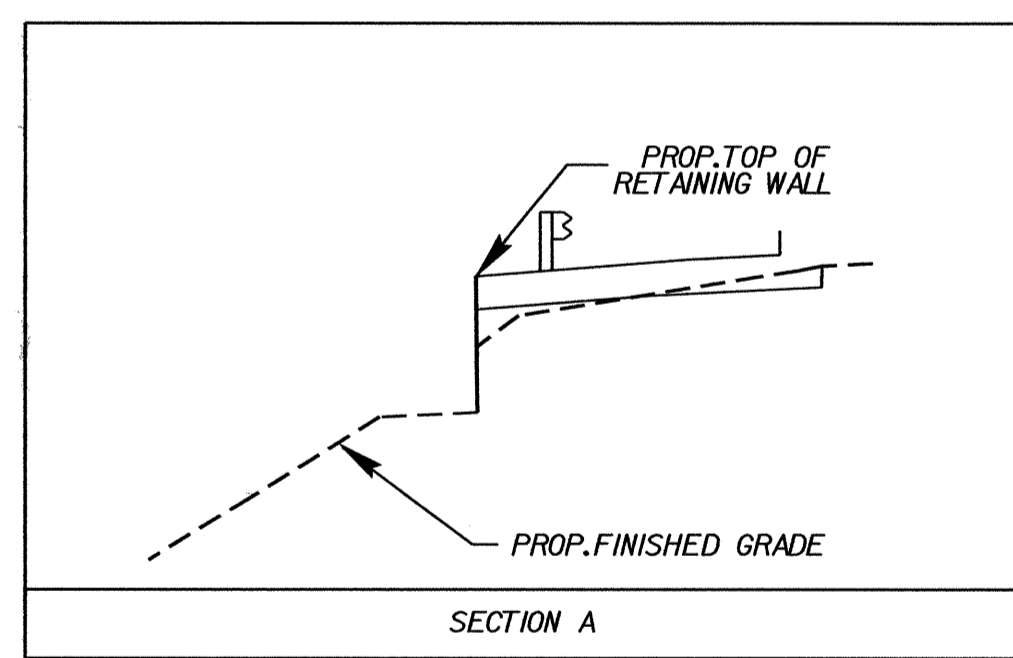
* EMBEDMENT DEPTH NOT INCLUDED IN THE ELEVATION TABLES

** FOR DESIGN WALL HEIGHT "H", SEE SHEET 2 OF 2

-RETAINING WALL 1-




GRAVITY RETAINING WALLS	1825	SQ. FT.
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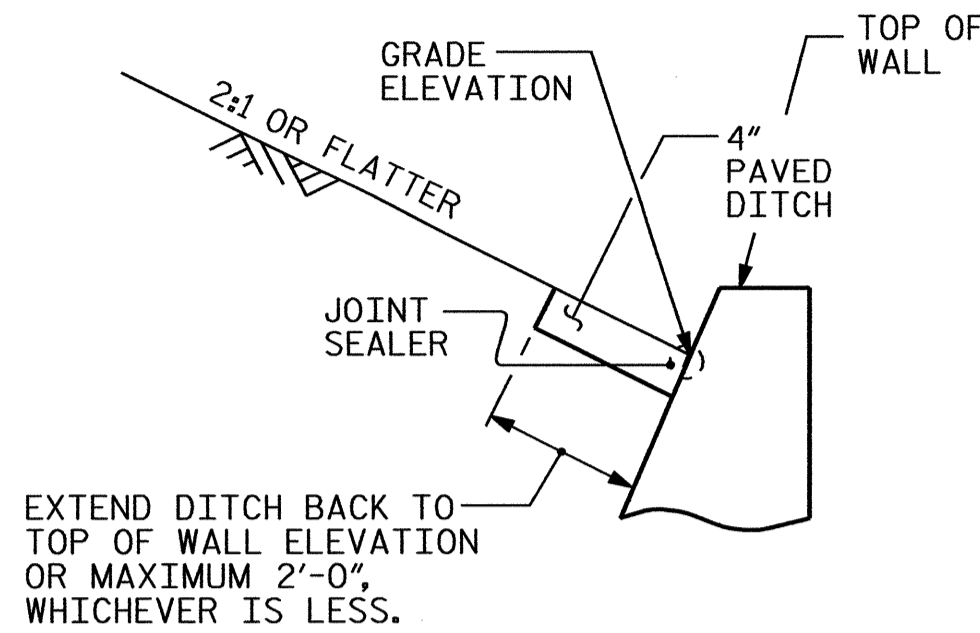
NOTES

- NO BRICK VENEER WILL BE ALLOWED.
- FLOW SOIL AROUND ENDS OF WALL AT A 2:1 (H:V) SLOPE AS NEEDED

PROJECT NO.: 37449
 LINCOLN COUNTY
 STATION: 17+50.00 -L- TO 20+00.00 -L-

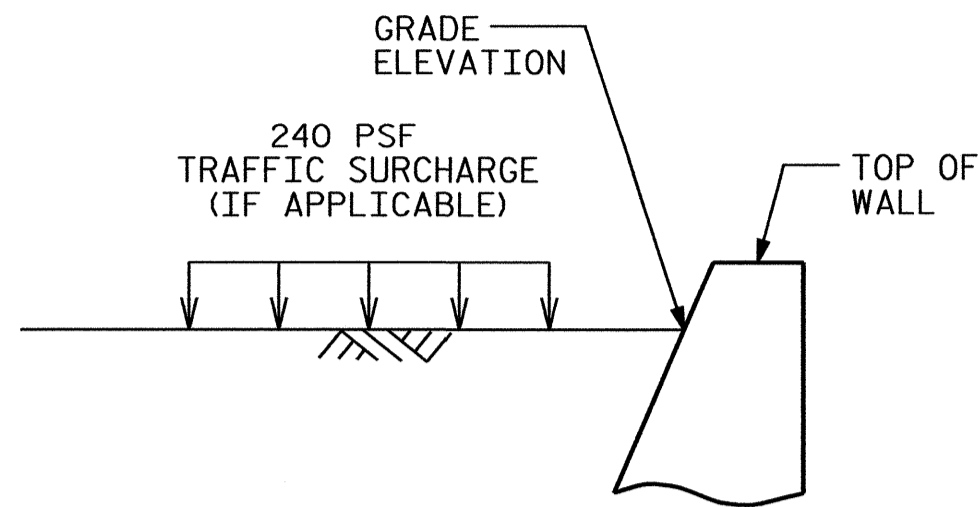
 DIVISION 12 DDC UNIT STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SHELBY	GRAVITY RETAINING WALL			SHEET NO. W-1	
	REVISIONS			TOTAL SHEETS 2	
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

PREPARED BY: R.E. HUMPHRIES DATE: 9/07
 REVIEWED BY: S.D. RACKLEY DATE: 8/07

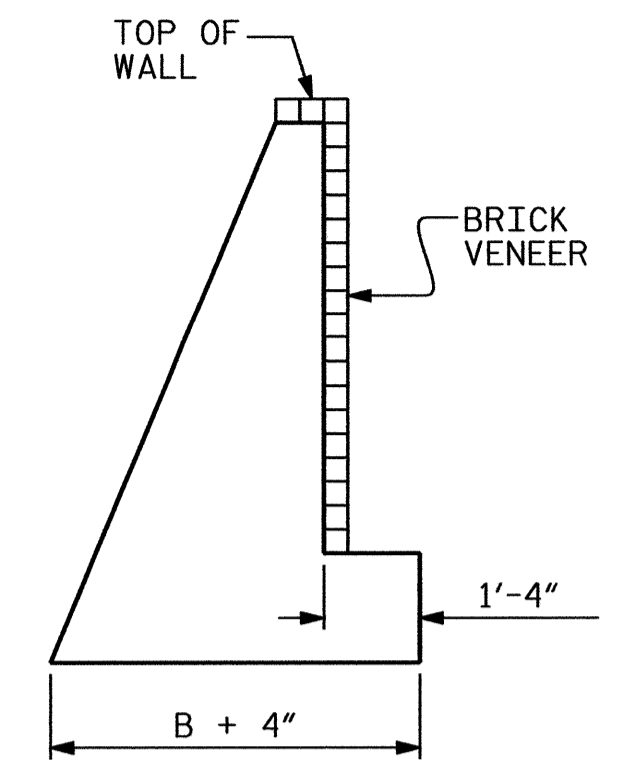


SLOPE CONDITION

EXTEND DITCH BACK TO TOP OF WALL ELEVATION OR MAXIMUM 2'-0", WHICHEVER IS LESS.



NO SLOPE CONDITION



BRICK VENEER DETAIL
(WHEN APPLICABLE)

NOTES

FOR GRAVITY RETAINING WALLS, SEE SECTION 453 OF THE STANDARD SPECIFICATIONS.

THE STANDARD GRAVITY RETAINING WALL IS BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
 TOTAL UNIT WEIGHT = 120 PCF (18.8 kN/m³)
 COHESION = 0 PSF (0 kPa)
 FRICTION ANGLE = 35 DEGREES
 (GROUNDWATER WITHIN 5'-0" (1.5m) OF BOTTOM OF FOOTING)
 FRICTION ANGLE = 30 DEGREES
 (GROUNDWATER MORE THAN 5'-0" (1.5m) BELOW BOTTOM OF FOOTING)

DO NOT USE A STANDARD GRAVITY RETAINING WALL IF THE ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE OR GROUNDWATER IS ABOVE THE BOTTOM OF FOOTING.

DO NOT USE A STANDARD GRAVITY RETAINING WALL WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS PRESENT BELOW THE WALL.

DO NOT PLACE CONCRETE UNTIL OBTAINING APPROVAL OF THE EXCAVATION DEPTH AND CHECKING FOUNDATION MATERIAL FOR IN-SITU ASSUMED SOIL PARAMETERS.

USE CLASS "A" CONCRETE AND PROVIDE VERTICAL BROOMED SURFACE FINISH FOR ALL EXPOSED SURFACES.

PROVIDE 3" (75mm) DIAMETER WEEP HOLES ON 10'-0" (3m) CENTERS ALONG WALL. SLOPE WEEP HOLES ON A 1" (25mm) PER FOOT (300mm) SLOPE THROUGH THE WALL SO THAT WATER DRAINS OUT OF THE FRONT OF THE WALL.

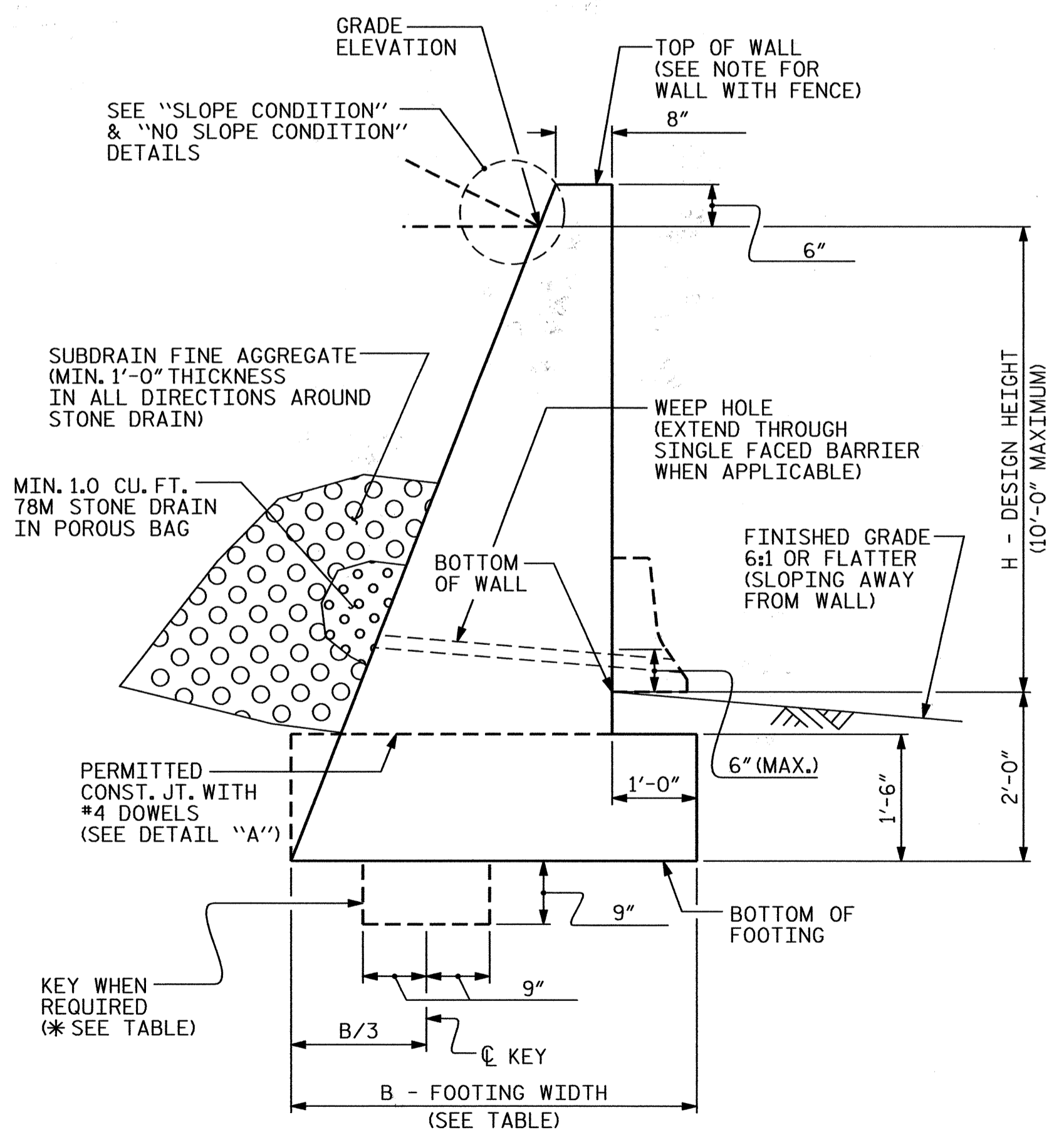
CONSTRUCT A HORIZONTAL DRAIN IN SUBDRAIN FINE AGGREGATE AT LEAST 1'-0" (300mm) TALL AND 1'-0" (300mm) WIDE TO CONNECT ALL STONE DRAINS.

PROVIDE GROOVED CONTRACTION JOINTS EVERY 10'-0" (3m) AND EXPANSION JOINTS EVERY 30'-0" (9m) ALONG THE WALL.

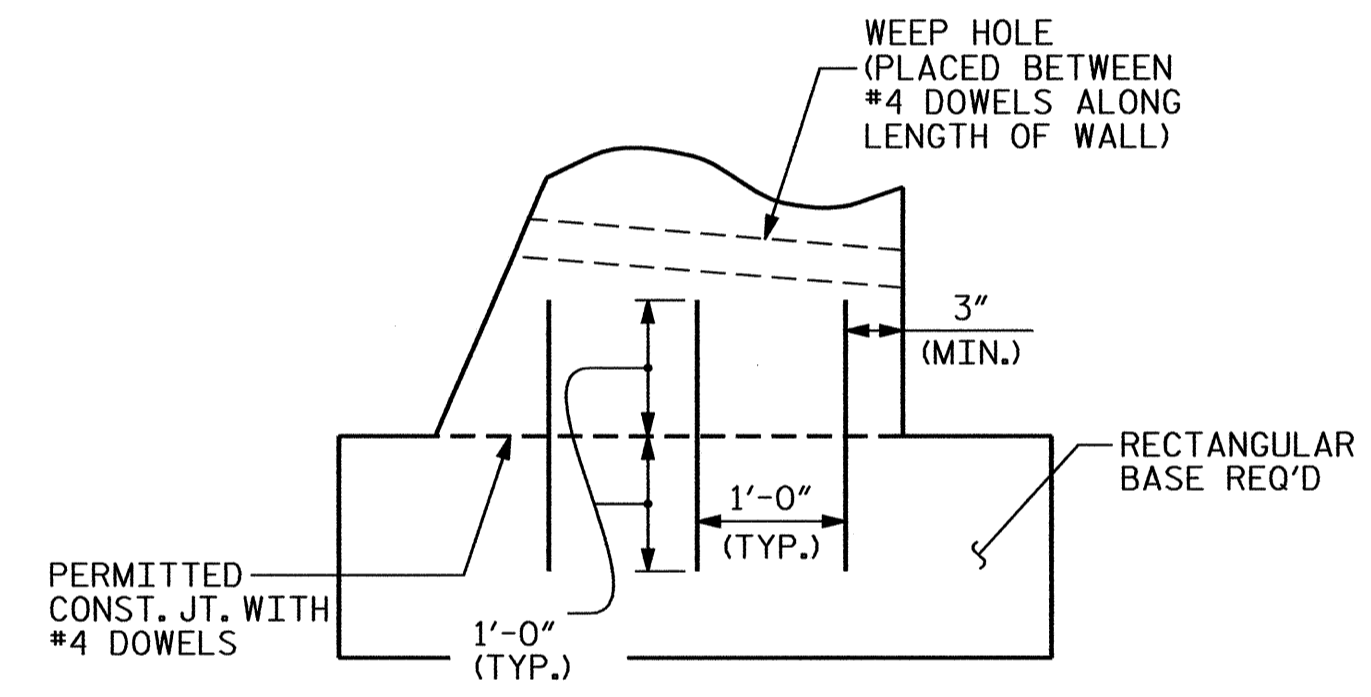
DO NOT BACKFILL BEHIND WALL UNTIL CONCRETE DEVELOPS A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI (20.7 MPa). COMPACT BACKFILL IN ACCORDANCE WITH SUBARTICLE 235-4(C) OF THE STANDARD SPECIFICATIONS. PLACE BACKFILL WITHIN 3'-0" (1m) OF THE BACK OF THE WALL WITH HAND OPERATED EQUIPMENT. DO NOT OPERATE HEAVY EARTH MOVING EQUIPMENT WITHIN 10'-0" (3m) OF THE BACK OF WALL.

WHEN A CONSTRUCTION JOINT IS LOCATED AT THE BASE OF THE WALL, IN SECTION, PROVIDE A MINIMUM OF 3-#4 DOWELS AT AN EQUAL SPACING. SPACE ALL DOWELS AT 1'-6" (460mm) CENTERS ALONG THE LENGTH OF THE WALL.

SEE PREVIOUS SHEET(S) FOR PLAN AND PROFILE VIEW (WALL ENVELOPE) AND PROPOSED ELEVATIONS FOR GRAVITY RETAINING WALL(S).



TYPICAL SECTION



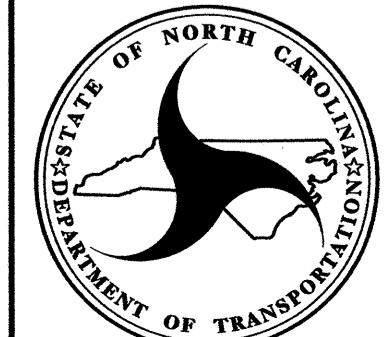
DETAIL "A"

H + 2 (ft)	< 6	6 - 9	> 9 - 12
NO SLOPE CONDITION WITHOUT TRAFFIC SURCHARGE	.60	.60	.60
NO SLOPE CONDITION WITH TRAFFIC SURCHARGE	.80	.75 *	.70 *
SLOPE CONDITION	.66	.70 *	.75 *

B/(H + 2) RATIO

* KEY IS REQUIRED FOR SLOPE CONDITION OR NO SLOPE CONDITION WITH TRAFFIC SURCHARGE WHEN H + 2ft IS 6'-0" OR GREATER.

PROJECT NO.: 37449
LINCOLN COUNTY
STATION: 17+50.00-L TO 20+00.00-L-
 SHEET 2 OF 2


DIVISION 12
DDC UNIT
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
SHELBY

STANDARD DRAWING NO. 453.01
STANDARD GRAVITY RETAINING WALL
 SHEET NO. W-2
 TOTAL SHEETS 2
 DATE: 7-18-06