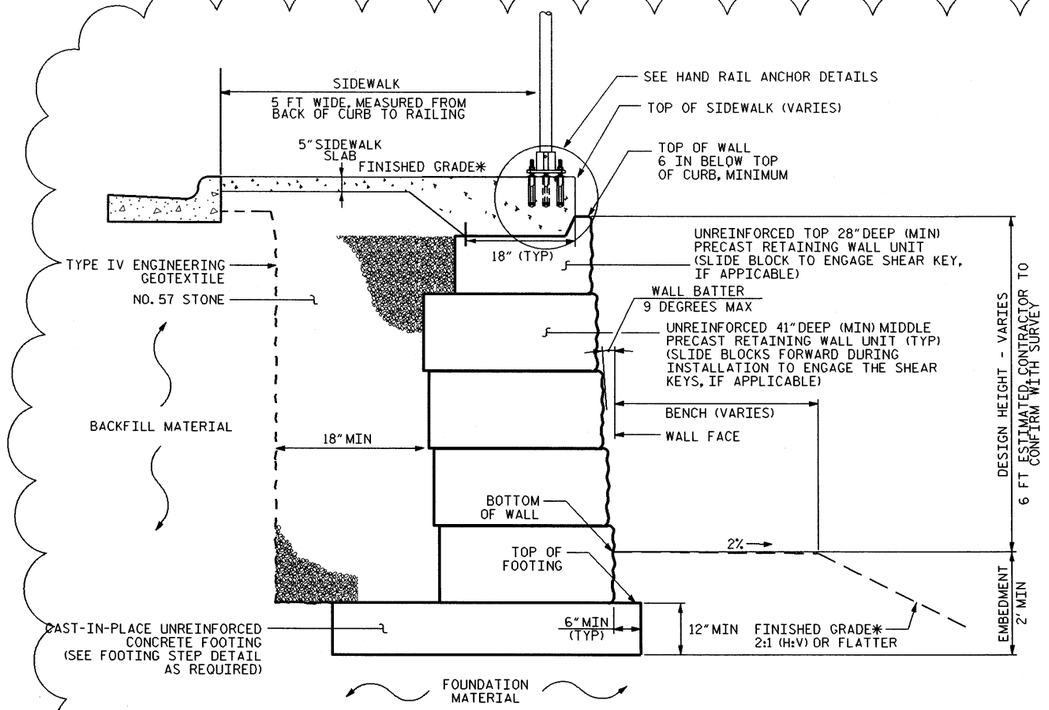
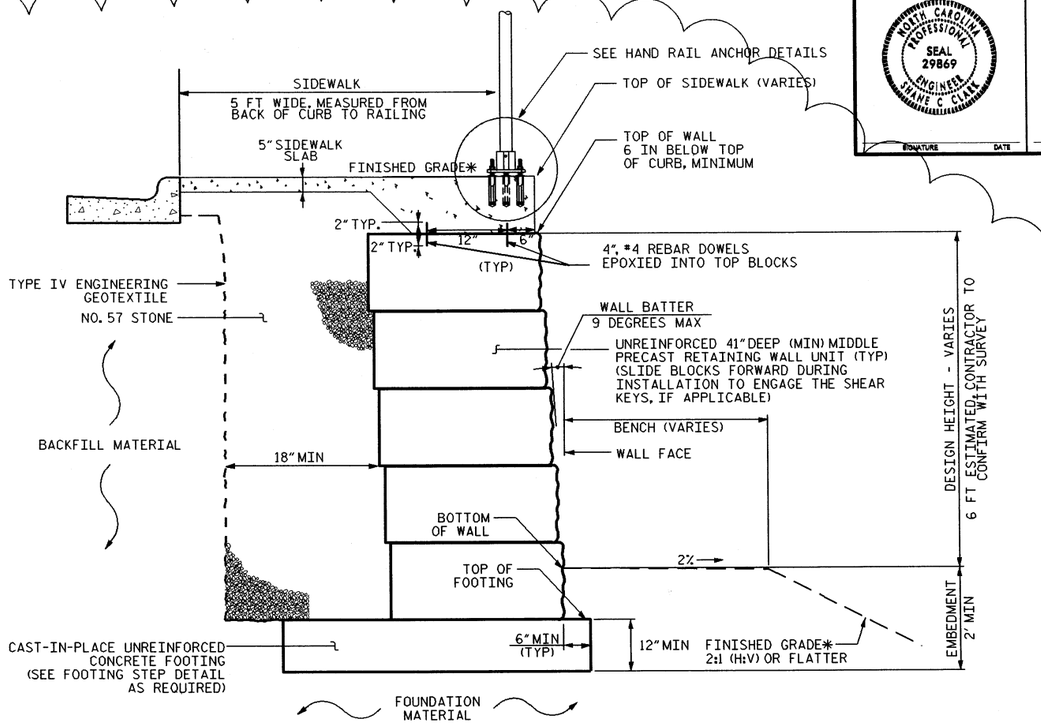


PRECAST GRAVITY WALL WITH PRECAST TOP UNIT AND CAST-IN-PLACE SIDEWALK - TYPICAL SECTION



PRECAST GRAVITY WALL WITH SIDEWALK CAST-IN-PLACE ALONG TOP OF WALL - TYPICAL SECTION

GEOTECHNICAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 29869 ENGINEER SHANE C CLARK

SIGNATURE DATE

ENGINEER

SIGNATURE DATE

NOTES:

THE WALL WILL BE PAID FOR BASED ON THE FINAL EXPOSED FACE AS MEASURED FROM THE FINISHED GRADE IN FRONT (STREAM SIDE) TO THE TOP OF THE WALL. NO ADDITIONAL PAYMENT WILL BE MADE FOR EMBEDDED PORTIONS. PAYMENT WILL INCLUDE ALL MATERIALS, EXCAVATION, BACKFILL, BLOCKS, INSTALLATION, CONCRETE FOR FOOTINGS, DOWELS, GEOTEXTILES AND ANY INCIDENTALS REQUIRED TO PERFORM THE WORK.

USE PRECAST RETAINING WALL UNITS WITH A COBBLESTONE FACE FINISH. PROTECT BLOCKS AS REQUIRED TO PREVENT DAMAGE. DAMAGED, CHIPPED, OR DISCOLORED BLOCKS MAY BE REJECTED BY THE ENGINEER AND REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE WALL WILL BE CONSTRUCTED USING PRECAST BLOCKS AS SHOWN IN THE DETAILS. THE BLOCKS ARE TO BE LAID IN A RUNNING BOND PATTERN AND ALL EXPOSED END EDGES OF THE WALL ARE TO BE FINISHED WITH THE CORRESPONDING ENDBLOCKS.

ALTERNATE BLOCK SIZES MAY BE CONSIDERED, HOWEVER ADDITIONAL DESIGN DOCUMENTATION MAY BE REQUIRED. THE SYSTEM DESIGN SHOULD INCLUDE A TRAFFIC SURCHARGE OF 250 PSF AND BE CONSIDERED STABLE ACCORDING THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

1

A CAST-IN-PLACE SIDEWALK IS TO BE PLACED ON TOP OF THE WALL AS SHOWN IN THE DETAILS. THE SIDEWALK EDGE THICKNESS, ALONG THE TOP OF THE WALL, WILL VARY ALONG WITH THE GRADE AND IS TO BE CAST SUCH THAT THE TOP OF THE SIDEWALK (WALL EDGE) IS LEVEL WITH THE TOP OF THE BACK OF CURB.

A HANDRAIL IS REQUIRED ON TOP OF RETAINING WALL. SEE SHEETS 2 OF 3 AND 3 OF 3 FOR CONSTRUCTION AND ATTACHMENT DETAILS. THE HANDRAIL WILL BE PAID FOR "PER LINEAR FOOT" AND THE BID AMOUNT WILL BE INCLUSIVE OF ALL RAILING COMPONENTS AND THEIR INSTALLATION.

BEFORE BEGINNING PRECAST GRAVITY WALL, SURVEY WALL LOCATION AND SUBMIT A PROPOSED WALL PROFILE VIEW (WALL ENVELOPE) FOR REVIEW. THE ENVELOPE SHOULD SHOW THE TOP FINISHED GRADE OF THE SIDEWALK IN THE WALL ENVELOPE. DO NOT START WALL DESIGN OR CONSTRUCTION UNTIL THE REVISED WALL ENVELOPE IS ACCEPTED.

THE MINIMUM EMBEDMENT ELEVATION FOR RETAINING WALL INCLUDES EMBEDMENT FOR SCOUR.

DO NOT PLACE CONCRETE FOR FOOTINGS FOR RETAINING WALL UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.

WRAP FILL SLOPES AROUND WALL ENDS AS DIRECTED BY THE ENGINEER.

1

TOTAL STRUCTURE QUANTITIES

PRECAST RETAINING WALL	720	SQ. FT.
HANDRAIL	120	LN. FT.

PREPARED BY:	SCC	DATE:	11/12
REVIEWED BY:	SCC	DATE:	11/12

PROJECT NO.: ER-2791 (WBS 3613.3.07)

BUNCOMBE *COUNTY*

STATION: VARIES

SHEET 1 OF 3

GEOTECHNICAL ENGINEERING UNIT

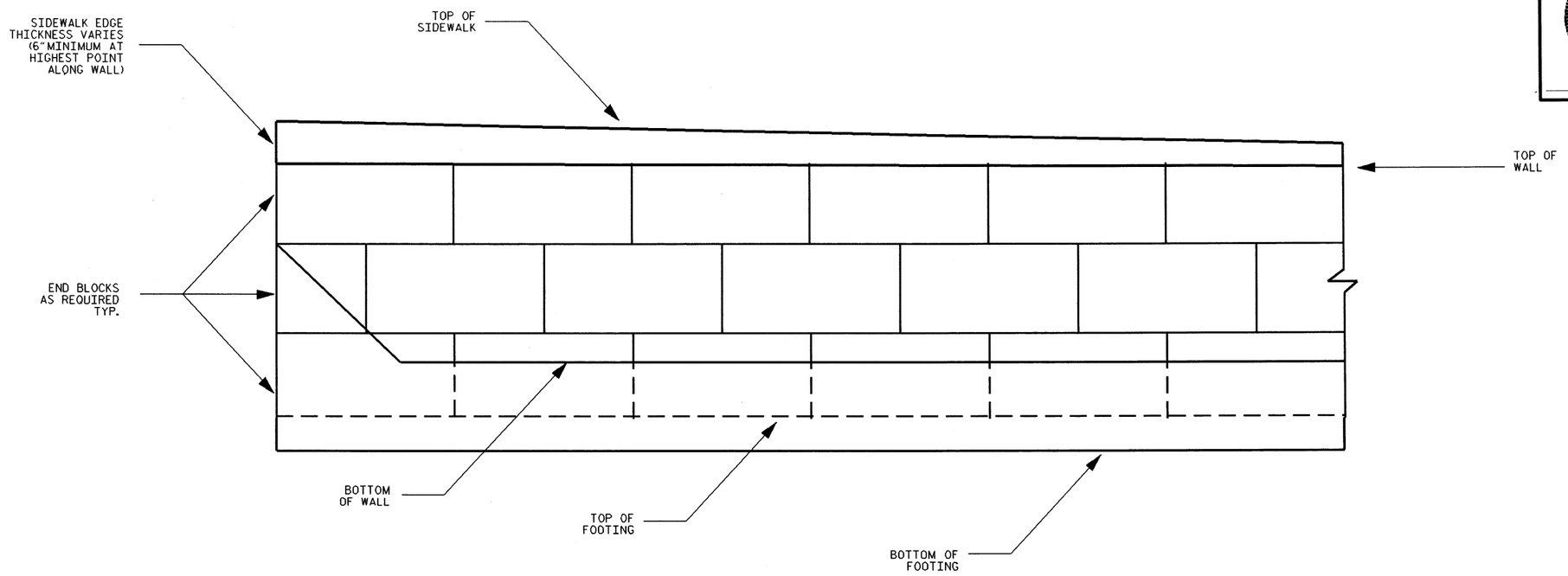
☐ *EASTERN REGIONAL OFFICE*
☐ *WESTERN REGIONAL OFFICE*
☐ *CONTRACT OFFICE*

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

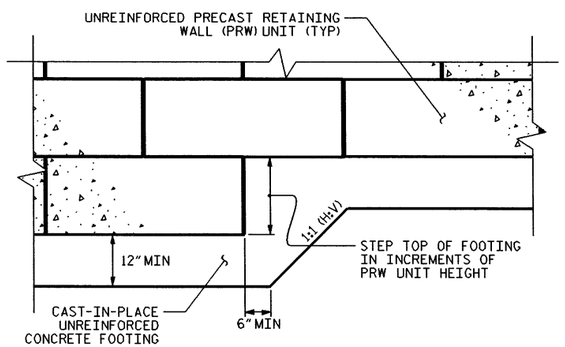
PRECAST GRAVITY RETAINING WALL WITH CAST-IN-PLACE SIDEWALK AND HANDRAIL

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1	SCC	1-11-13	3			TOTAL SHEETS
2			4			

GEOTECHNICAL ENGINEER	ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 29869 ENGINEER SHANE C CLARK	
SIGNATURE DATE	SIGNATURE DATE



ELEVATION VIEW OF WALL (LOOKING FROM STREAM SIDE)



FOOTING STEP DETAIL

CONSTRUCTION SEQUENCE:

PRIOR TO BEGINNING WORK ON THE WALL AND AFTER THE WALL ENVELOPE HAS BEEN SUBMITTED, A PRECONSTRUCTION CONFERENCE BETWEEN THE CONTRACTOR, INSPECTORS AND ENGINEER WILL BE SCHEDULED

EXCAVATE TO BOTTOM OF FOOTING ELEVATION AS DETERMINED FROM THE FIELD SURVEY.

REMOVE ADDITIONAL SOIL, AS NEEDED TO AN APPROXIMATE 1:1 (H:V) SLOPE TO THE BACK OF CURB.

PLACE TYPE IV GEOTEXTILE, ACCORDING TO SECTION 1056 OF THE STANDARD SPECIFICATIONS, UP THE SLOPE AND SECURE AS NEEDED WITH PINS OR STAPLES.

AFTER FOOTING APPROVAL, PLACE CONCRETE SHOWN IN PLANS TO THE BOTTOM OF WALL ELEVATION.

CONSTRUCT THE RETAINING WALL ACCORDING TO THE PLANS, MANUFACTURER'S RECOMMENDATONS, OR AS DIRECTED BY THE ENGINEER.

PREPARED BY: SCC	DATE: 11/12
REVIEWED BY: JTW	DATE: 11/12

PROJECT NO.: ER-2791 (WBS 3613.3.07)

BUNCOMBE ***COUNTY***

STATION: VARIES

SHEET 2 OF 3

GEOTECHNICAL ENGINEERING UNIT

☐ ***EASTERN REGIONAL OFFICE***

☐ ***WESTERN REGIONAL OFFICE***

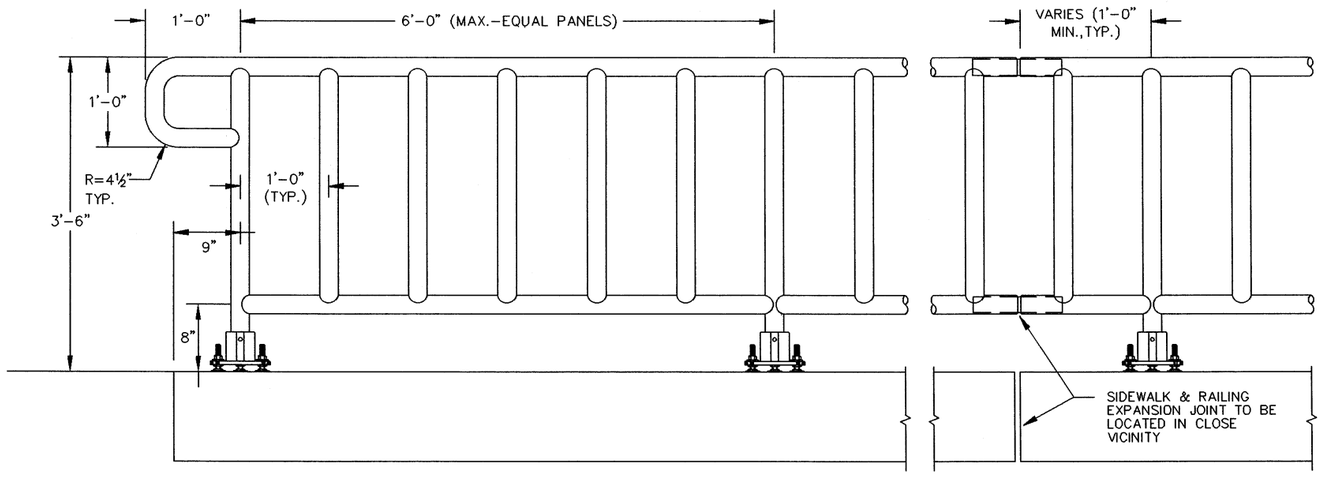
☐ ***CONTRACT OFFICE***

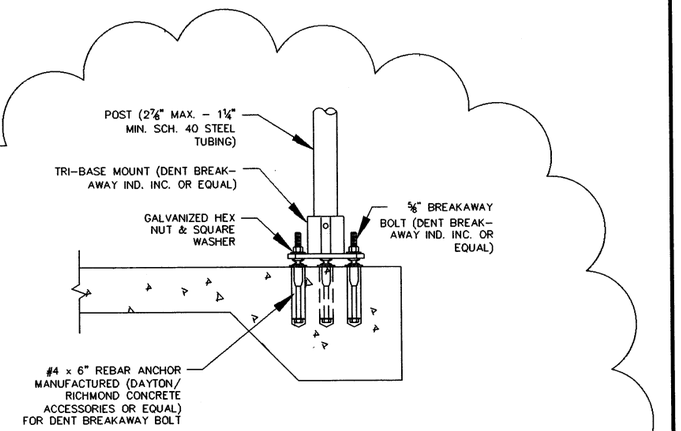
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PRECAST GRAVITY RETAINING WALL WITH CAST-IN-PLACE SIDEWALK AND HANDRAIL

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

GEOTECHNICAL ENGINEER	ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 29869 ENGINEER SHANE C CLARK	
SIGNATURE DATE	SIGNATURE DATE





HANDRAIL ANCHOR DETAILS

TYPICAL DETAIL - NOT TO SCALE

1

NOTES

DETAILS BASED ON CITY OF ASHEVILLE STANDARD DRAWING NO. 3.35

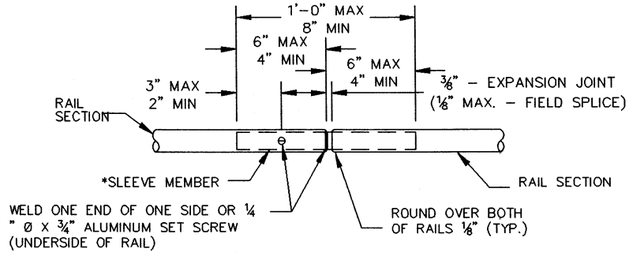
PIPE RAILING & POST: SCHEDULE 40 PLAIN END STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A53.

BASE PLATE; BASE PLATE SHALL BE IN ACCORDANCE WITH ASTM B209.

RESILIENT PADS OR NEOPRENE PADS: NEOPRENE PADS SHALL BE IN ACCORDANCE WITH DUROMETER HARDNESS 60 OR 70.

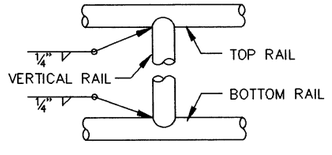
JOINTS: ALL FIXED JOINTS ARE TO BE EITHER WELDED ALL AROUND AND GROUND SMOOTH OR COMMERCIALLY DESIGNED FIXED JOINT SYSTEMS (SOLDERED, BRAZED, FUSED, BONDED OR SHRINK FITTED).

WELDING: ALL WELDING BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE.



*SLEEVE MEMBER SIZES:
FOR 2⅞" SCH. 40 PIPE RAIL USE 2" SCH. 40 SLEEVE
FOR 1¼" SCH. 40 PIPE RAIL USE 1" SCH. 40 SLEEVE

EXPANSON JOINT DETAILS



RAIL CONNECTION

PROJECT NO.: ER-2791 (WBS 3613.3.07)
BUNCOMBE ***COUNTY***
STATION: VARIES
SHEET 3 OF 3

PREPARED BY: SCC	DATE: 11/12
REVIEWED BY: SCC	DATE: 11/12

GEOTECHNICAL ENGINEERING UNIT
☐ ***EASTERN REGIONAL OFFICE***
☐ ***WESTERN REGIONAL OFFICE***
☐ ***CONTRACT OFFICE***
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PRECAST GRAVITY RETAINING WALL WITH CAST-IN-PLACE SIDEWALK AND HANDRAIL

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1	SCC	1-11-13	3		
2			4		

SHEET NO.
TOTAL SHEETS