

ELEVATION
(CONCRETE BARRIER IN FRONT OF SOUND BARRIER WALL NOT SHOWN FOR CLARITY, SEE ROADWAY PLANS)

SECTION A-A
(CONCRETE BARRIER IN FRONT OF SOUND BARRIER WALL NOT SHOWN FOR CLARITY, SEE ROADWAY PLANS)

PILE EXCAVATION DEPTHS "D"			
3'-0" Ø HOLE			
WALL -NW8- (STA. 10+00 TO 28+75 -NW8-)			
STATION	MAX WALL HEIGHT	PILE SPACING	SHAFT * DEPTH
STA. 92+91.45 -L- TO STA. 93+11.84 -L-	17'-0"	15'-0"	21'-0"
STA. 93+26.65 -L- TO STA. 94+91.71 -L-	14'-0"	15'-0"	19'-0"
STA. 95+06.71 -L- TO STA. 98+80.90 -L-	15'-0"	15'-0"	18'-6"
STA. 98+95.90 -L- TO STA. 102+12.16 -L-	16'-0"	15'-0"	19'-6"
STA. 102+28.21 -L- TO STA. 107+09.28 -L-	16'-0"	15'-0"	20'-0"
STA. 107+25.32 -L- TO STA. 108+58.60 -L-	16'-0"	15'-0"	15'-6"
STA. 108+72.68 -L- TO STA. 111+68.11 -L-	13'-0"	15'-0"	14'-0"

* FOUNDATION EXCAVATION DEPTHS ARE MEASURED FROM 1 FOOT BELOW THE FINISHED GRADE.

NOTES:

- FOR SOUND BARRIER WALL, SEE SPECIAL PROVISIONS.
- CONSTRUCT SOUND BARRIER WALL TO LINES AND GRADES SHOWN ON THE ROADWAY PLANS.
- PROVIDE PANELS WITH A FLAT BOTTOM.
- VERIFY THE LOCATION OF UNDERGROUND UTILITIES BEFORE DRILLING HOLES TO ENSURE SUFFICIENT CLEARANCE IS AVAILABLE.
- ADJUST PILE EXCAVATION ELEVATIONS TO MAINTAIN 6" MINIMUM EMBEDMENT OF THE BOTTOM PANEL.
- USE CLASS AA FOR PANELS AND CLASS A CONCRETE PILE EXCAVATION BACKFILL, IN ACCORDANCE WITH ARTICLE 1000-4 OF THE STANDARD SPECIFICATIONS.
- FOR SOUND BARRIER WALL STATIONS, OFFSETS, AND WALL ENVELOPE, SEE ROADWAY PLANS.
- PLACE 1" Ø BACKER RODS FULL HEIGHT ON EACH SIDE OF THE PRECAST PANELS. SET AND SEAL THE BACKER ROD IN PLACE WITH SEALANT THAT CONFORMS WITH ARTICLE 1028-3 OF THE STANDARD SPECIFICATIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR ELASTOMERIC BEARING DETAILS, SEE "SOUND BARRIER WALL DETAILS" SHEET 1 OF 3.
- FOR CONCRETE SHIM BLOCK DETAILS, SEE "SOUND BARRIER WALL DETAILS" SHEET 1 OF 3.
- FOR PRECAST PANEL DETAILS, SEE "SOUND BARRIER WALL DETAILS" SHEET 1 OF 3.
- FOR CONCRETE PILE DETAILS, SEE "SOUND BARRIER WALL DETAILS" SHEETS 1 & 2 OF 3.
- AT THE CONTRACTOR'S OPTION, USE CONTINUOUS FLIGHT AUGER PILES IN LIEU OF PILE EXCAVATION FOR SOUND BARRIER WALL FOUNDATION. SEE "CONTINUOUS FLIGHT AUGER PILES FOR SOUND BARRIER WALLS" SPECIAL PROVISION.
- THE ARCHITECTURAL CONCRETE SURFACE TREATMENT SHALL MATCH THE APPEARANCE (STONE SIZE AND SHAPE, STONE TEXTURE, PATTERN AND RELIEF) OF NATURAL STONE TO RESEMBLE A DRY STACKED STONE PATTERN WITH FEDERAL STANDARD 595 COLOR * FS30450 STAIN.

EXPOSURE CATEGORY D - PILE REINFORCING STEEL

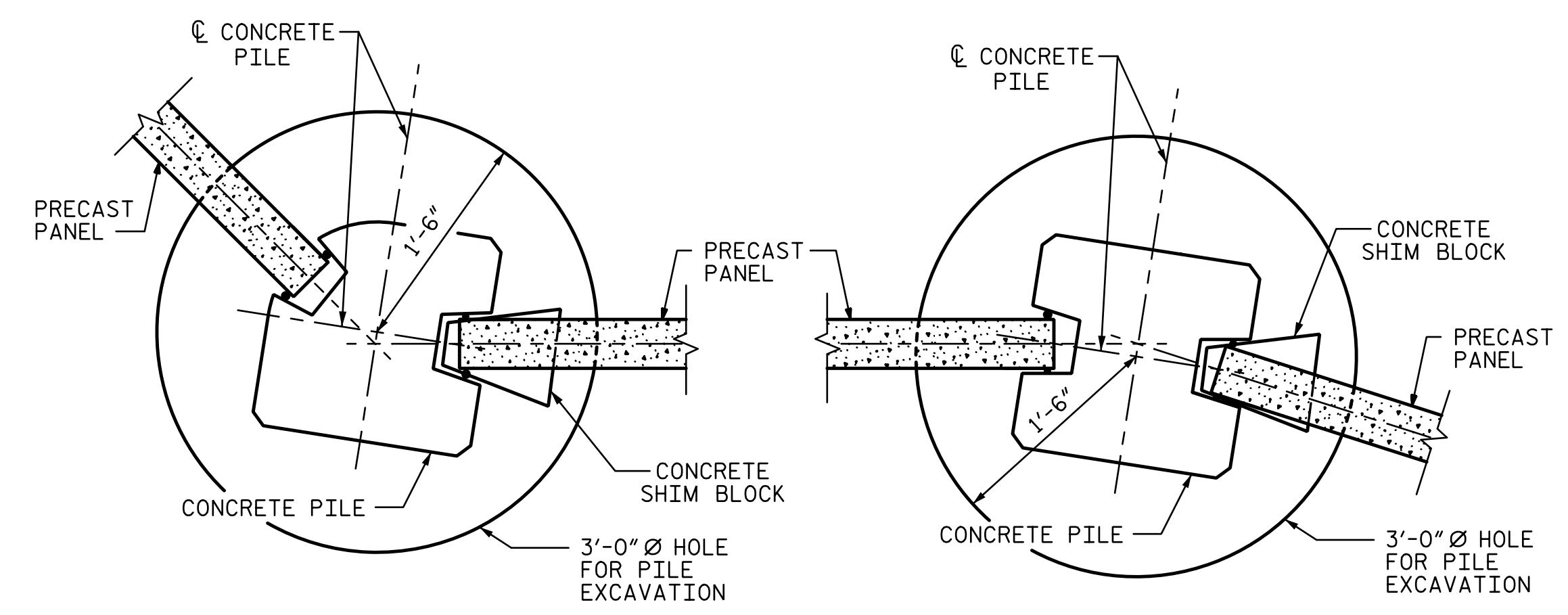
DESIGN WIND PRESSURE = 62 PSF (0' < H ≤ 14'); 71 PSF (14' < H ≤ 25')

PILE TYPE I				PILE TYPE III			
PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES	PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES
15'-0"	H ≤ 15'	4 - #8 EA. FACE	#3 @ 11" CTS.	15'-0"	H ≤ 15'	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 11" CTS.
15'-0"	15' < H ≤ 20'	4 - #10 EA. FACE	#3 @ 10" CTS.	15'-0"	15' < H ≤ 20'	3 - #11 SHORT FACE 4 - #11 LONG FACE	#3 @ 10" CTS.

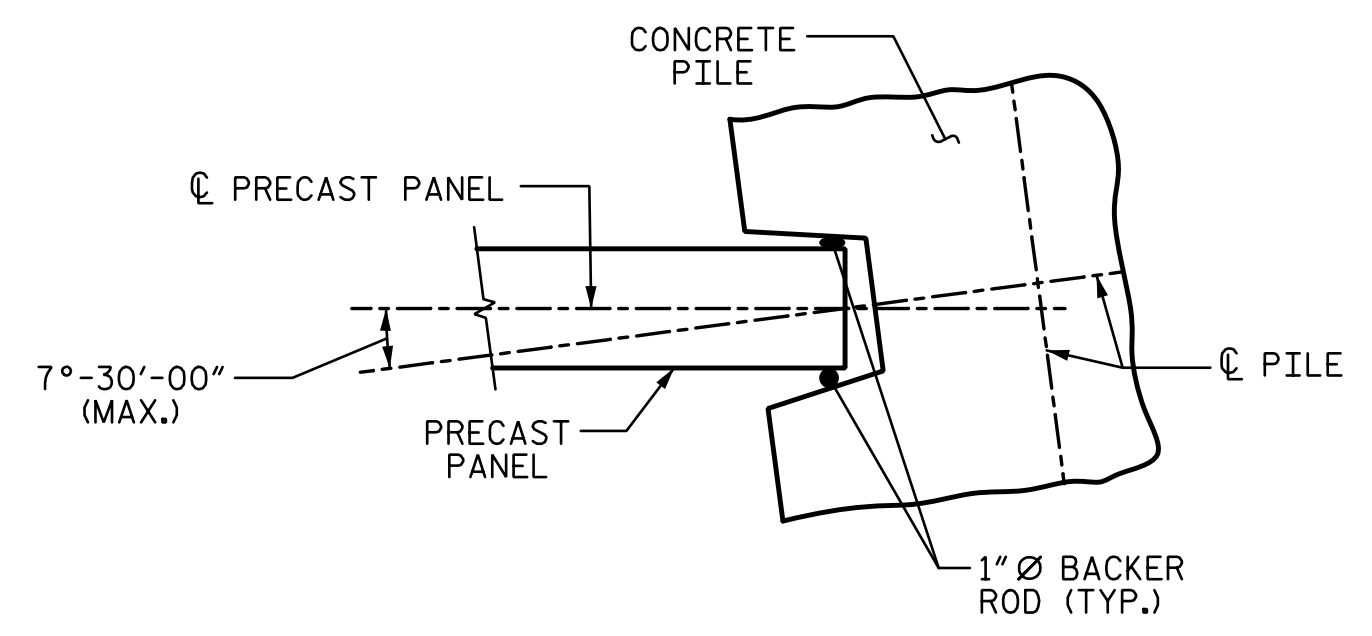
PILE TYPE II				PILE TYPE III ALT.			
PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES	PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES
15'-0"	H ≤ 15'	4 - #6 EA. FACE	#3 @ 11" CTS.	15'-0"	H ≤ 15'	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 11" CTS.
15'-0"	15' < H ≤ 20'	4 - #8 EA. FACE	#3 @ 10" CTS.	15'-0"	15' < H ≤ 20'	3 - #11 SHORT FACE 4 - #11 LONG FACE	#3 @ 10" CTS.

BILL OF MATERIAL -NW8-	
SOUND BARRIER WALL	S.F. 27,473
ARCHITECTURAL SURFACE TREATMENT	{S.F. 46,042}
QUANTITIES PROVIDED ARE APPROXIMATE AND ARE FOR BID PURPOSES ONLY.	

△ REVISED ARCHITECTURAL SURFACE TREATMENT QUANTITY
PROJECT NO. U-4751
NEW HANOVER COUNTY
STATION: 92+91.45 -L- = 10+00.00 -NW8-



TYPICAL WALL TURN DETAILS



PILE ROTATION LIMIT FOR WALL TURN

(ROTATE THE CONCRETE PILE ±7°-30'-00" MAX. TO ACCOMMODATE WALL TURN.)

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SOUND BARRIER WALL NO. -NW8-

STV ENGINEERS, INC.
 900 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-5991

10/10/2017

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	NW-5
1	STV	10-17	3			TOTAL SHEETS 17
2			4			

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DRAWN BY: MBC DATE: 5-17
 CHECKED BY: NML DATE: 5-17
 DESIGN ENGINEER OF RECORD: J. DICHAK DATE: 5-17