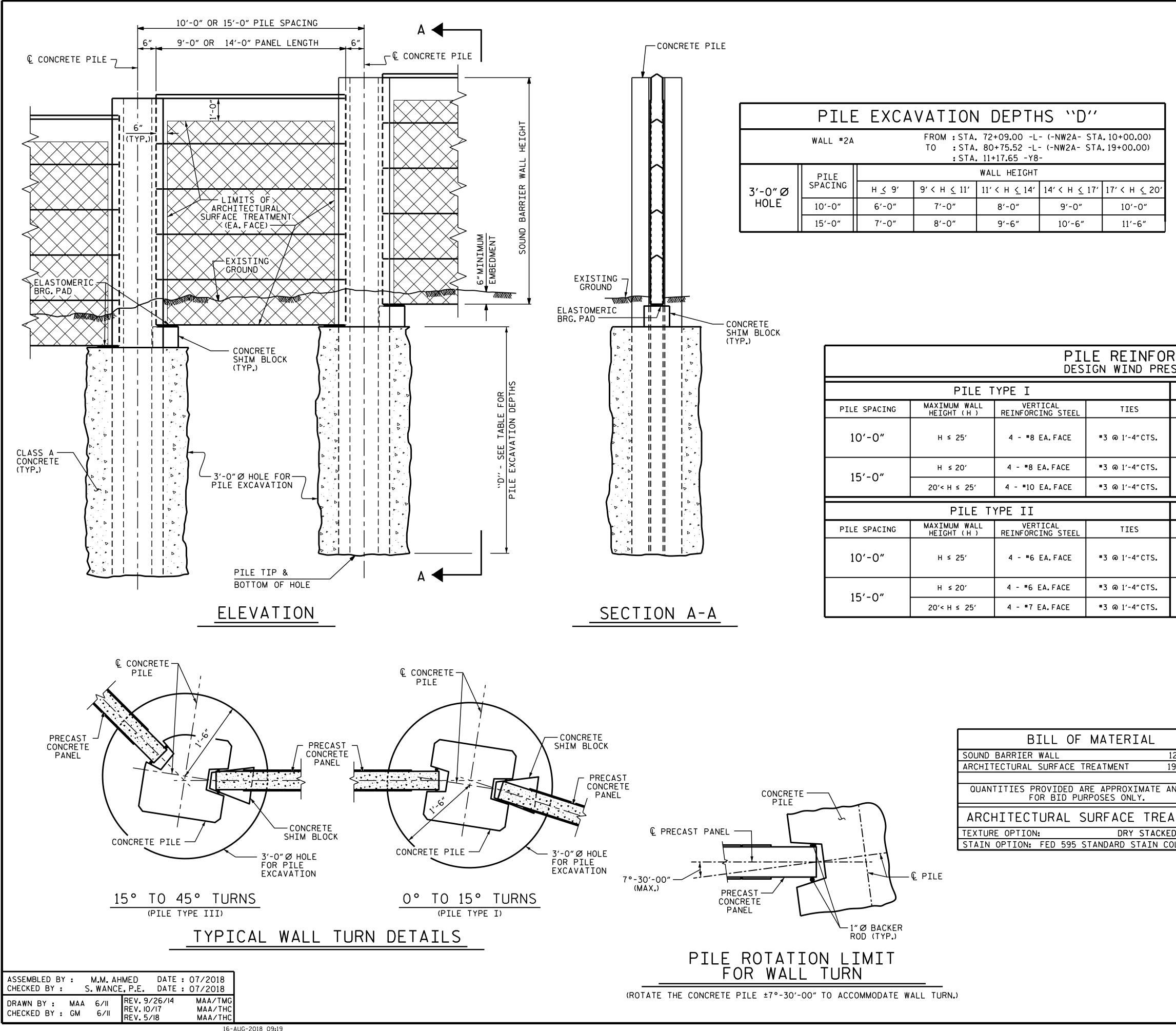
# This electronic collection of documents is provided for the convenience of the user and is Not a Certified Document -

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(ROTATE TH	E CONCRETE	PILE	±7°-30'-00"	ΤO	ACCOMMODATE	WALL	TURN.)

CO	NCF	RE	ΤE	-

SECTION A-
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PILE REINFORCING STEEL DESIGN WIND PRESSURE = 40 PSF									
	PILE T	YPE I			PILE T	PE III			
PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES	PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES		
10'-0"	H ≤ 25′	4 - <b>*</b> 8 EA.FACE	#3 @ 1′-4″CTS.	10'-0"	H ≤ 25′	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 1′-4″CTS.		
154 0%	H ≤ 20′	4 - *8 EA.FACE	#3 @ 1'-4"CTS.		H ≤ 20′	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 1'-4"CTS.		
15'-0"	20′< H ≤ 25′	4 - #10 EA.FACE	#3 @ 1′-4″CTS.	15'-0"	20′< H ≤ 25′	3 - #11 SHORT FACE 4 - #11 LONG FACE	#3 @ 1'-4"CTS.		
	PILE T	YPE 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		
10'-0"	H ≤ 25′	4 - <b>#</b> 6 EA.FACE	*3 @ 1′-4″CTS.	10'-0"	H ≤ 25′	3 - #9 SHORT FACE 4 - #9 LONG FACE	*3 @ 1'-4"CTS.		
151-0"	H ≤ 20′	4 - *6 EA.FACE	#3 @ 1'-4"CTS.	15/ 0/	H ≤ 20′	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 1'-4"CTS.		
15'-0"	20′< H ≤ 25′	4 - *7 EA.FACE	<b>*</b> 3 @ 1′−4″CTS.	15'-0"	20′< H ≤ 25′	3 - #11 SHORT FACE 4 - #11 LONG FACE	#3 @ 1'-4"CTS.		

DRY STACKE

PILE	E EXCA	VATION	I DEPTH	IS ``D''					
WALL #2A FROM : STA. 72+09.00 -L- (-NW2A- STA. 10+00.00) TO :STA. 80+75.52 -L- (-NW2A- STA. 19+00.00) :STA. 11+17.65 -Y8-									
PILE SPACING	WALL HEIGHT								
	Н <u>≺</u> 9′	9'< Н <u>&lt;</u> 11'	11′ < H <_14′	14′ < Н <u>&lt;</u> 17′	17′ < H <_20′				
10'-0"	6'-0"	7'-0″	8'-0"	9'-0"	10'-0"				
15'-0"	7'-0"	8'-0"	9'-6"	10′-6″	11'-6″				
	WALL #2A PILE SPACING 10'-0"	WALL #2A PILE SPACING H <u>&lt;</u> 9' 10'-0" 6'-0"	WALL #2A       FROM : STA.         TO       : STA.         PILE	WALL #2A       FROM : STA. 72+09.00 -L         TO       : STA. 80+75.52 -L         STA. 11+17.65 -Y8         WALL HEIGHT         SPACING         H $\leq$ 9'         9' < H $\leq$ 11'         10'-0"         6'-0"         7'-0"         8'-0"	WALL "2A       TO       : STA. 80+75.52 -L- (-NW2A- STA         PILE       STA. 11+17.65 -Y8-         WALL HEIGHT       WALL HEIGHT         10'-0" $6'-0"$ 7'-0" $8'-0"$ 9'-0"				

## 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.

AT THE CONTRACTOR'S OPTION, USE 10'-O" OR 15'-O" PILE SPACINGS. STANDARD PRECAST CONCRETE PANELS MAY BE USED WITH THE 10'-O" AND 15'-O"PILE SPACING.

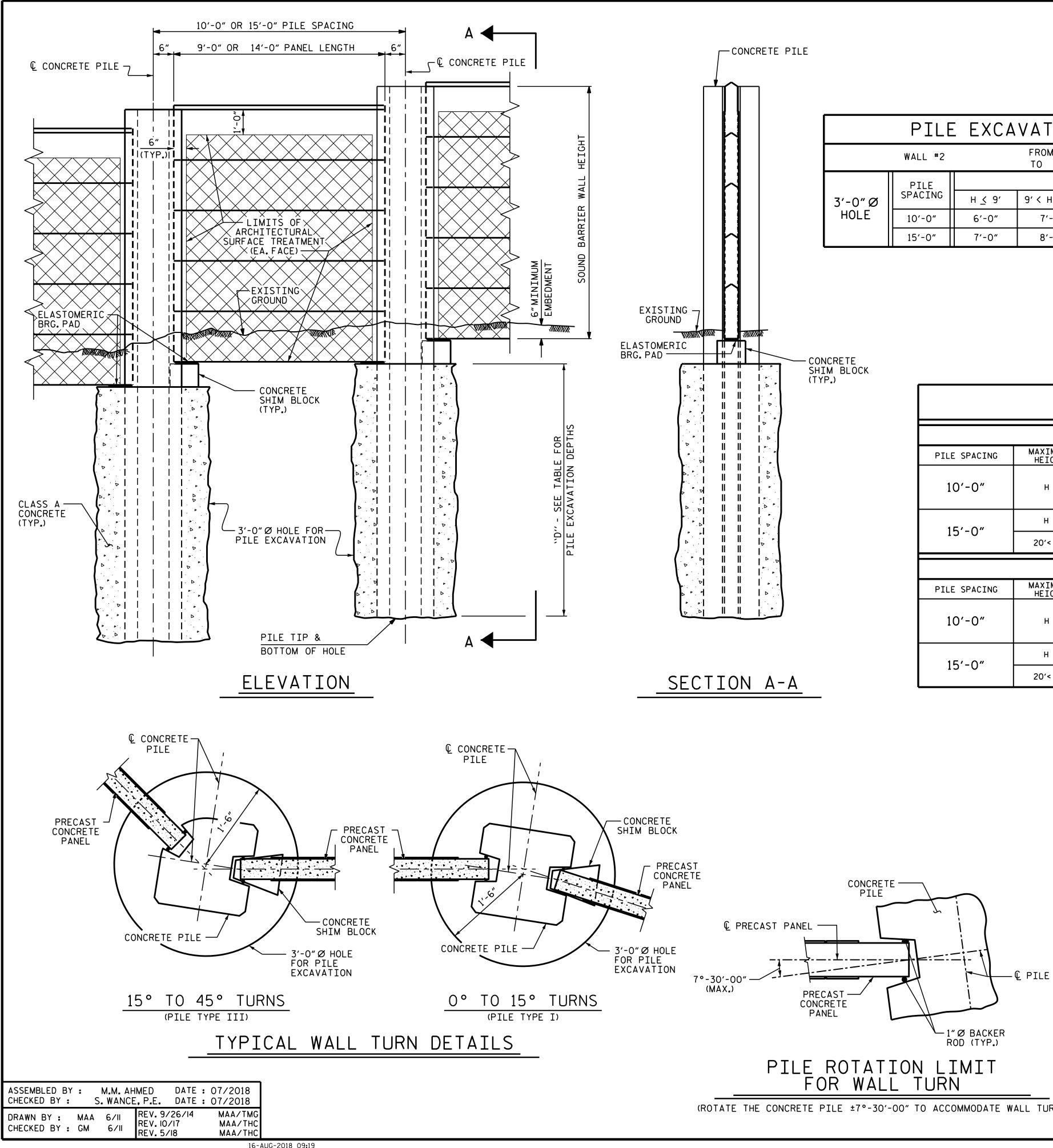
FOR SOUND BARRIER WALL STATIONS, OFFSETS, AND WALL ENVELOPE, SEE ROADWAY PLANS.

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.

# DTIE DETNEODOTNO CTEEL

2,147 S.F. 9,474 S.F. ND ARE		PROJE(	JOHN	ISTON		UNTY
TMENT		STATI	0N:	72+09.	.00 -	
) STONE		SHEET 1 O	F 5			
LOR 33531	NORTH CAROLINA SEAL 030024 BOUSIGNEER DocuSigned by: Aster Abralia DDA094AED5104FD 8/16/2018		UND E	E OF NORTH CAR OF TRAN RALEIGH	NSPORTA	ALL
		NO. BY:	REVIS	SIONS	DATE:	SHEET NO. NW-1
FINAL	NOT CONSIDERED _ UNLESS ALL JRES COMPLETED	1 2	UATE:	о. вт: З 4	DATE:	TOTAL SHEETS 5
						1

SID. NU. SBW1 (SHT 1)



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BILL OF MATERIAL	
SOUND BARRIER WALL	6,
ARCHITECTURAL SURFACE TREATMENT	10,
QUANTITIES PROVIDED ARE APPROXIMA	TE AI
FOR BID PURPOSES ONLY.	
ARCHITECTURAL SURFACE TF	REA
TEXTURE OPTION: DRY STA	CKED
STAIN OPTION: FED 595 STANDARD STAIN	V COL

			_E REINFO	RCING STEE SSURE = 40 P			
	PILE <sup>-</sup>	TYPE I			PILE T	YPE III	
PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES	PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES
10'-0"	H ≤ 25′	4 - *8 EA.FACE	#3 @ 1'-4"CTS.	10'-0"	H ≤ 25′	3 - #9 SHORT FACE 4 - #9 LONG FACE	*3 @ 1′-4″C1
	H ≤ 20′	4 - <b>*</b> 8 EA.FACE	#3 @ 1'-4"CTS.	15'-0"	H ≤ 20′	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 1'-4"C1
15'-0"	20'< H ≤ 25'	4 - *10 EA.FACE	#3 @ 1'-4"CTS.		20′< H ≤ 25′	3 - #11 SHORT FACE 4 - #11 LONG FACE	<b>#3 @ 1'-4″C</b> 1
	PILE T	YPE 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
10'-0"	H ≤ 25′	4 - <b>*</b> 6 EA.FACE	#3 @ 1'-4"CTS.	10'-0"	H ≤ 25′	3 - #9 SHORT FACE 4 - #9 LONG FACE	*3 @ 1'-4"C]
15'-0″	H ≤ 20′	4 - <b>*</b> 6 EA.FACE	#3 @ 1'-4"CTS.	454 64	H ≤ 20′	3 - #9 SHORT FACE 4 - #9 LONG FACE	<b>#3 @ 1'-4"C</b> ]
	20′< H ≤ 25′	4 - #7 EA.FACE	*3 @ 1'-4"CTS.	15'-0"	20′< H ≤ 25′	3 - #11 SHORT FACE 4 - #11 LONG FACE	<b>#</b> 3 @ 1'-4"CT

10'-6"

11'-6″

	PILE	E EXCA	VATION	I DEPTH	IS ``D''	
	WALL #2				(-NW2- STA.1 (-NW2- STA.1	
	PILE			WALL HEIGHT		
3'-0"Ø HOLE	SPACING	Н <u>≺</u> 9′	9'< Н <u>&lt;</u> 11'	11' < H <u>&lt;</u> 14'	14′ < H <u>&lt;</u> 17′	17' < H <_ 20'
HOLE	10'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"

8'-0"

9'-6"

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

## 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.

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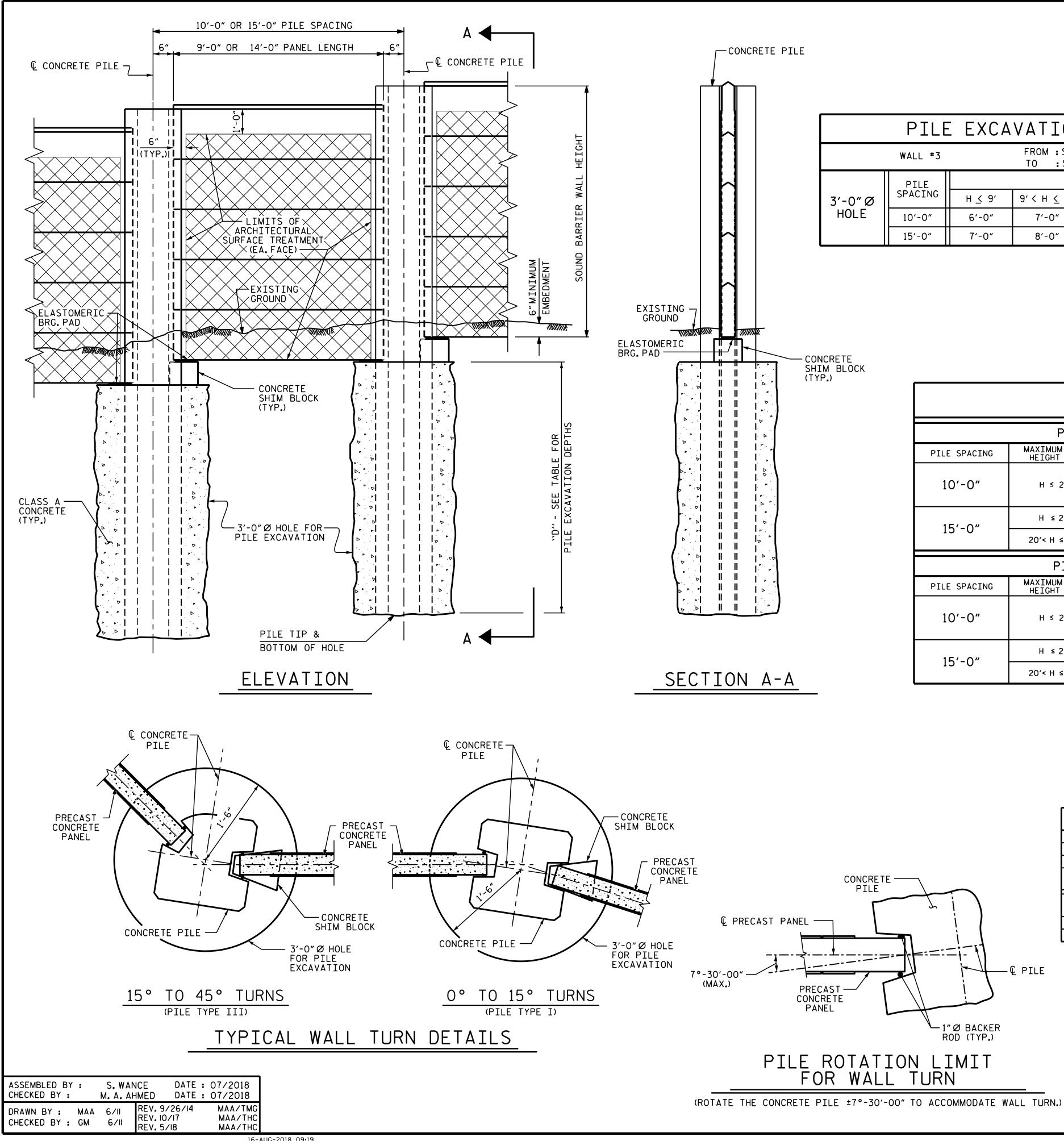
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5,822 S.F. 0,972 S.F. AND ARE TMENT 0 STONE		PROJEC STATIC	JOHN :	<u>R-3</u> NSTON 82+15	CO	UNTY
LOR 33531	BCUSIGNED DCUSIGNED BCUSIG		RTMENT	te of north card OF TRAN RALEIGH BARRI NW2	NSPORTA	
	0, 10, 2010		REVI	SIONS		SHEET NO.
	NOT CONSIDERED	NO. BY:	DATE:	NO. BY:	DATE:	NW-2
	LUNLESS ALL JRES COMPLETED	1 2		<u> ৩</u> ধ		total sheets 5
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SID. NO. SBW1 (SHT 1)



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BILL O	F MATERIAL
SOUND BARRIER WALL	14
ARCHITECTURAL SURFACE	TREATMENT 24
	D ARE APPROXIMATE A
FOR BID	PURPOSES ONLY.
ARCHITECTURAL	SURFACE TREA
TEXTURE OPTION:	DRY STACK
STAIN OPTION:	FS 595

	PILE T	YPE I		PILE TYPE III					
PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES	PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES		
10'-0"	H ≤ 25′	4 - <b>#</b> 8 EA.FACE	<b>*</b> 3 @ 1′−4″CTS.	10'-0"	H ≤ 25′	3 - *9 SHORT FACE 4 - *9 LONG FACE	<b>*</b> 3 @ 1′−4″CTS.		
154 0%	H ≤ 20′	4 - *8 EA.FACE	#3 @ 1'-4"CTS.	15'-0″	H ≤ 20′	3 - *9 SHORT FACE 4 - *9 LONG FACE	#3 @ 1'-4"CTS.		
15'-0"	20′< H ≤ 25′	4 - #10 EA.FACE	#3 @ 1′-4″CTS.		20′< H ≤ 25′	3 - #11 SHORT FACE 4 - #11 LONG FACE	#3 @ 1′-4″CTS.		
	PILE T	YPE 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		
10'-0"	H ≤ 25′	4 - <b>#</b> 6 EA.FACE	#3 @ 1′-4″CTS.	10'-0"	H ≤ 25′	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 1′-4″CTS.		
15/_0″	H ≤ 20′	4 - *6 EA.FACE	*3 @ 1'-4"CTS.	15'-0″	H ≤ 20′	3 - *9 SHORT FACE 4 - *9 LONG FACE	*3 @ 1'-4"CTS.		
15'-0"	20′< H ≤ 25′	4 - *7 EA.FACE	#3 @ 1'-4"CTS.		20′< H ≤ 25′	3 - #11 SHORT FACE 4 - #11 LONG FACE	#3 @ 1'-4"CTS.		

	PILE	E EXCA	VAILON	I DEPTH	IS "D"					
WALL #3 FROM : STA. 102+88.25 -L- (47.5' RT.) TO : STA. 112+78.25 -L- (44.92'RT.)										
3'-0"Ø HOLE	PILE	WALL HEIGHT								
	SPACING	Н <u>≺</u> 9′	9' < H <u>&lt;</u> 11'	11′ < H <u>&lt;</u> 14′	14' < H <u>&lt;</u> 17'	17' < H <_20'				
	10'-0"	6'-0"	7'-0″	8'-0"	9'-0"	10'-0"				
	15'-0"	7'-0"	8'-0"	9'-6"	10′-6″	11'-6″				

## NOTES

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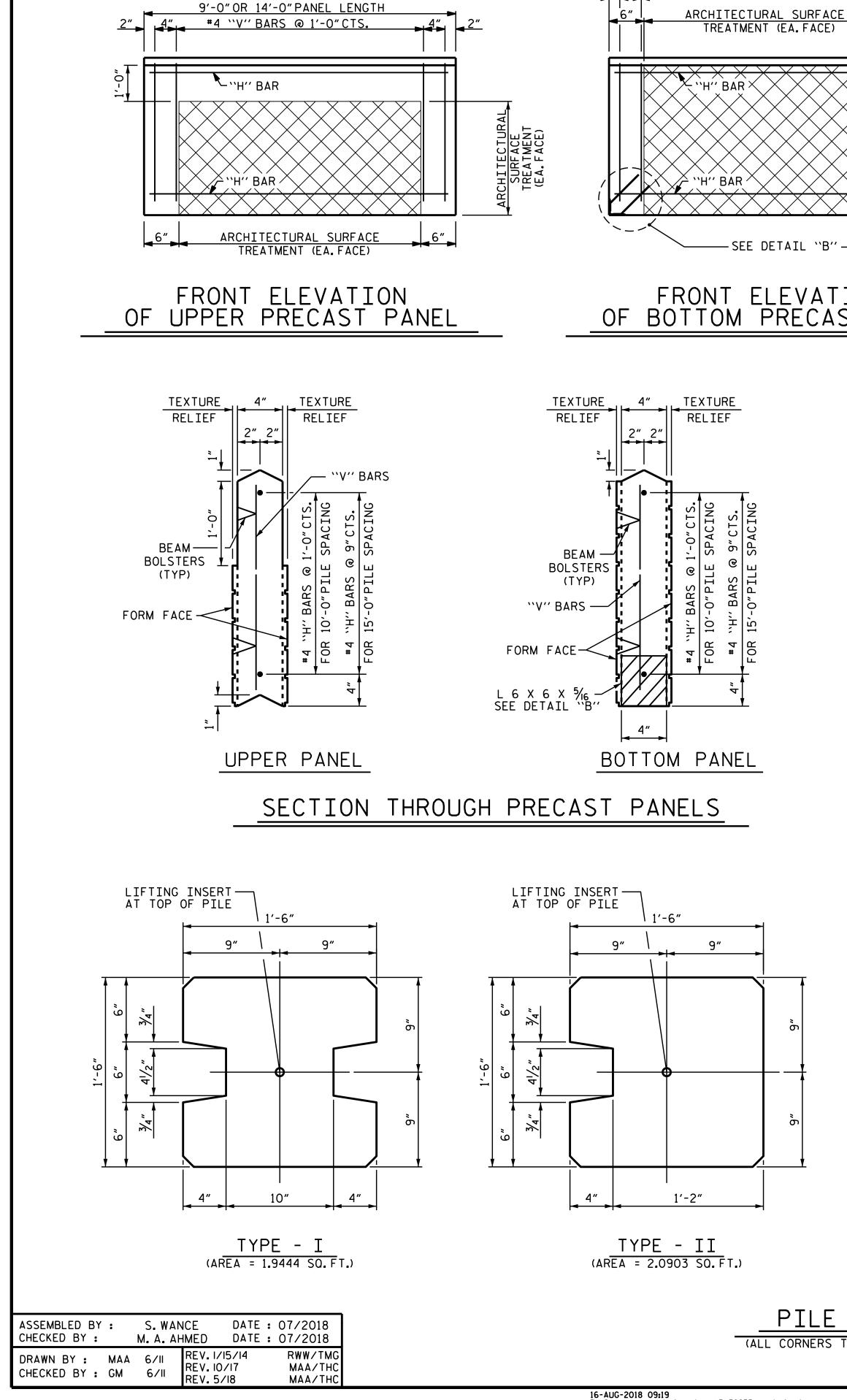
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# PILE REINFORCING STEEL DESIGN WIND PRESSURE = 40 PSF

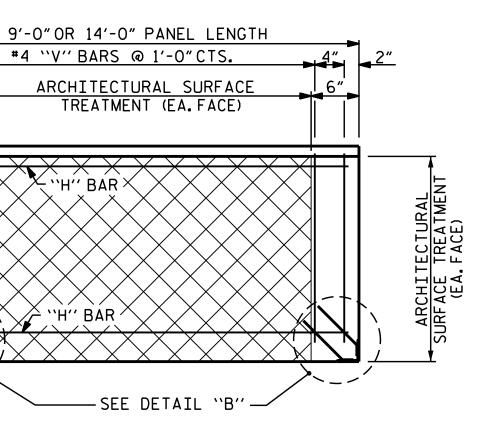
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TMENT		STATI	0N:	02+88		
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33531	OR ESSION A		ARTMENT	OF NORTH CAR OF TRAN RALEIGH	NSPORTA	
	Docusigned by: Aster Abraha DDA094AED5104FD 8/16/2018	50		BARRI NW3		
				SIONS		SHEET NO. NW-3
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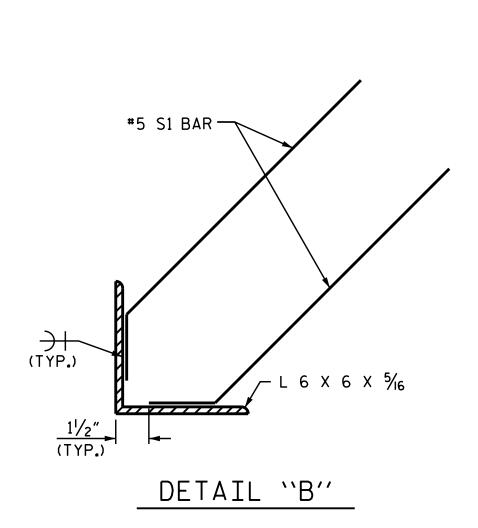


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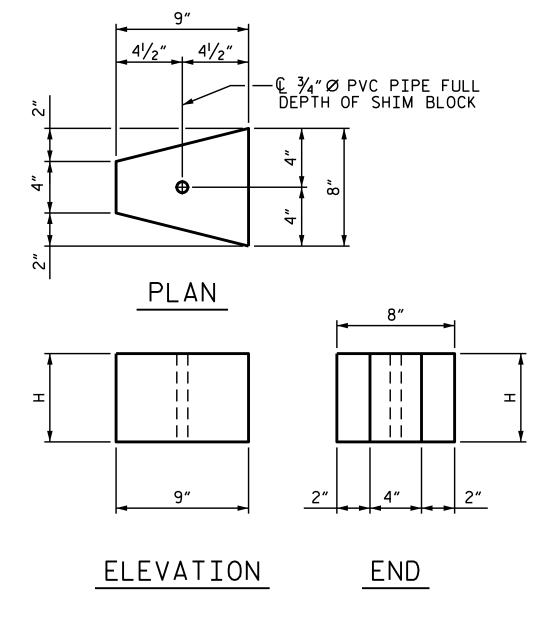
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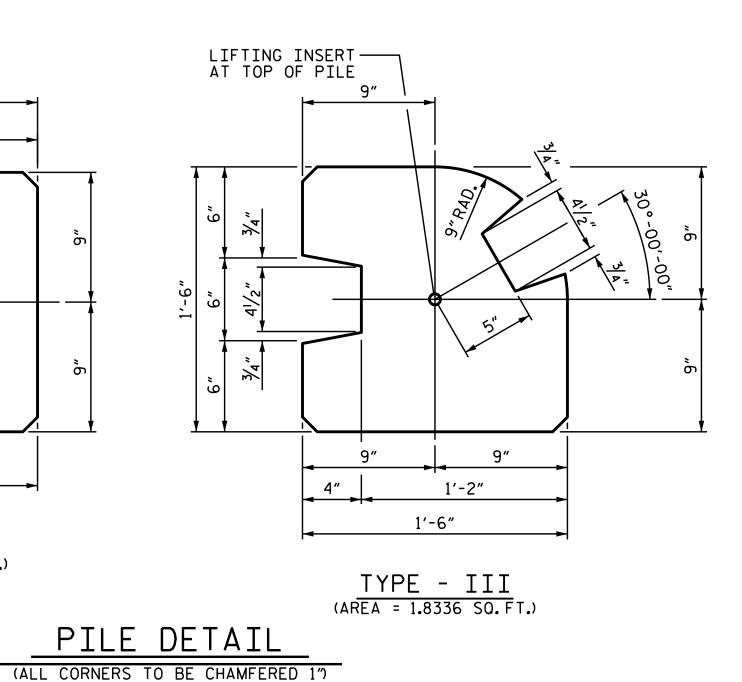
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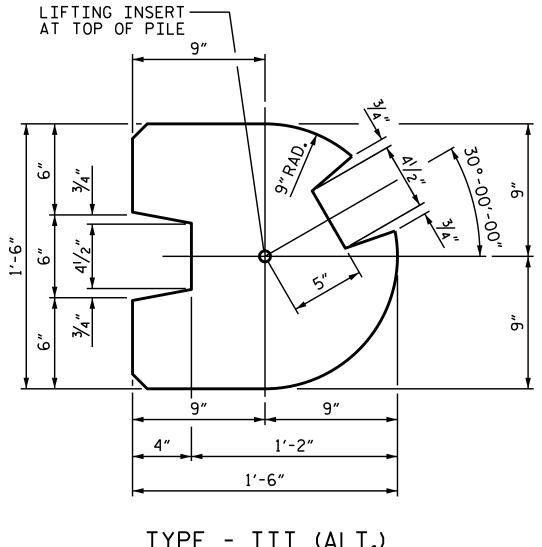


QUANTITIES FOR ONE PRECAST PANEL (FOR 1											
PANEL	CLASS AA		BAR						ES		
HEIGHT	CONCRETE		HORIZONTAL								
	C.Y.	NO.	BAR	SIZE	TYPE	LENGTH	WEIGHT (Ib)	NO.	BAR		
2'-0"	0.22	3	H1	#4	STR	8'-8"	17	11	V1		
3'-0"	0.33	4	H2	#4	STR	8'-8"	23	11	٧2		
4'-0"	0.44	5	Н3	#4	STR	8'-8"	29	11	٧3		
QUANTITIES FOR ONE PRECAST PANEL (FOR 1											
PANEL	BANEL CLASS AA BAR TYP						ΤYΡ	ES			
HEIGHT	CONCRETE	HORIZONTAL									
	C.Y.	N0.	BAR	SIZE	TYPE	LENGTH	WEIGHT (ID)	NO.	BAR		
3'-0"	0.52	5	H1	#4	STR	13'-8″	46	16	V1		
4'-0"	0.69	6	H2	#4	STR	13'-8″	55	16	٧2		
5'-0"	0.86	7	H3	#4	STR	13'-8"	64	16	٧3		
6'-0"	1.04	8	H4	#4	STR	13'-8"	73	16	٧4		

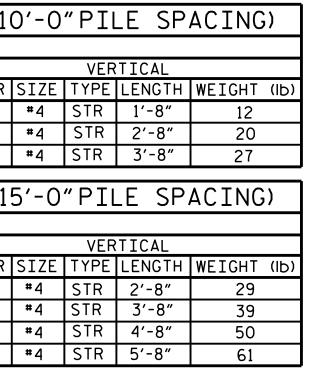


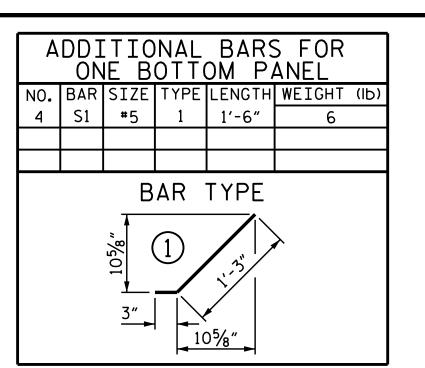


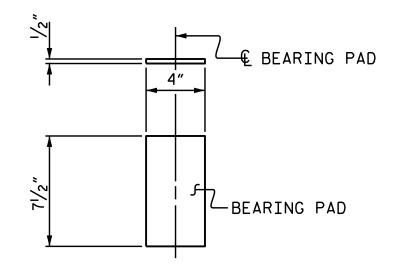




<u>TYPE - III (ALT.)</u> (AREA = 1.7163 SO.FT.)









PROJECT NO. R-3825B JOHNSTON \_\_COUNTY 72+09.00 -L-82+15.00 -L-STATIONS: 102+88.25 -L-SHEET 4 OF 5 STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH FESSION

SOUND BARRIER WALL DETAILS NW2A, NW2, AND NW3 Docusigned by: Aster Abraha

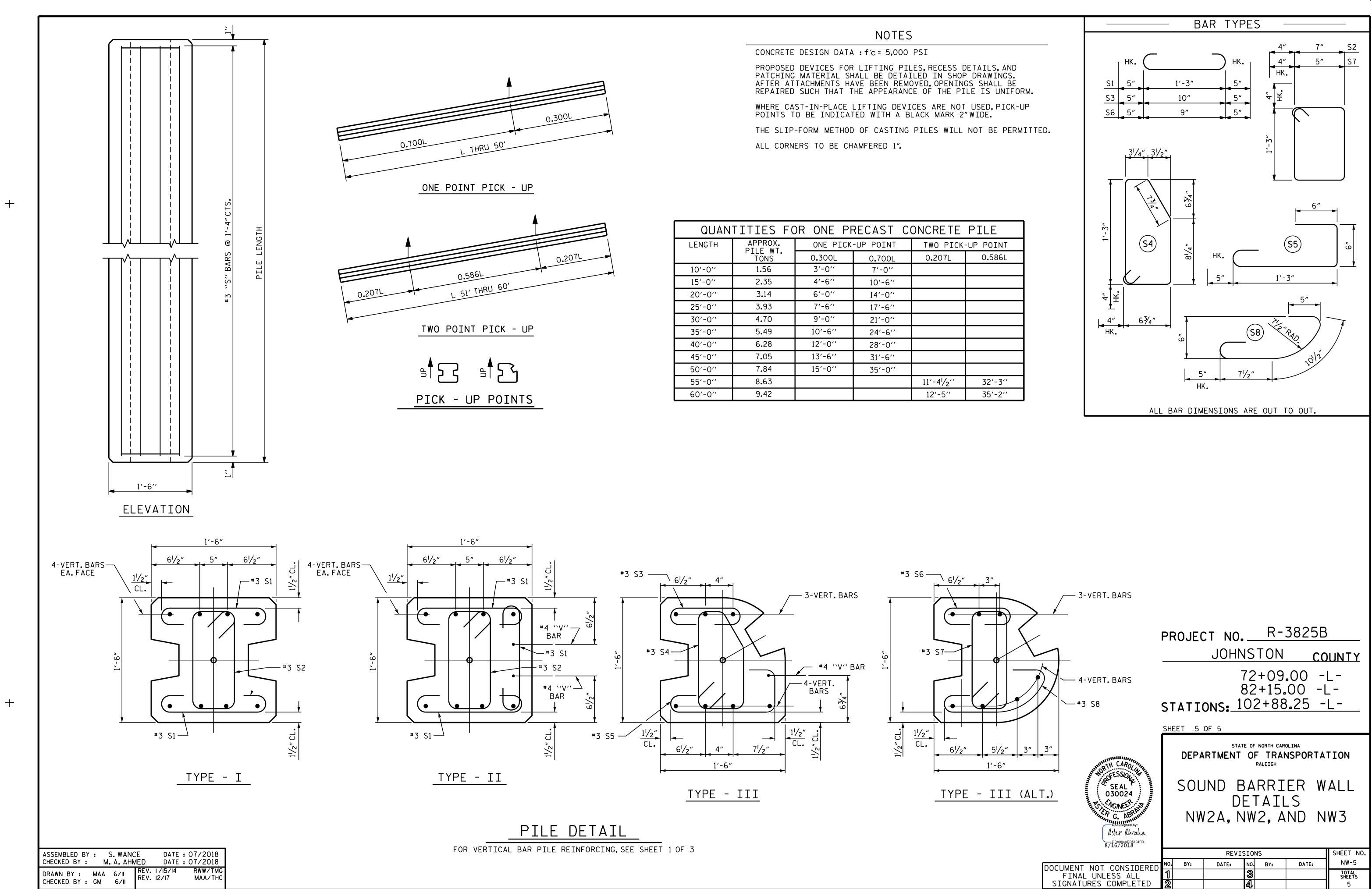
	REVISIONS						SHEET NO.
DOCUMENT NOT CONSIDERED	NO.	BY:	DATE:	NO.	BY:	DATE:	NW-4
FINAL UNLESS ALL	1			3			TOTAL SHEETS
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					STD.N	IO.SBW2	

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QUANTITIES FOR ONE PRECAST CONCRETE PILE									
LENGTH	APPROX.	ONE PICK	-UP POINT	TWO PICK-UP POINT					
	PILE WT. TONS	0.300L	0.700L	0.207L	0 <b>.</b> 586L				
10'-0''	1.56	3'-0''	7'-0''						
15'-0''	2.35	4'-6''	10'-6''						
20'-0''	3.14	6'-0''	14'-0''						
25'-0''	3.93	7'-6''	17'-6''						
30'-0''	4.70	9'-0''	21'-0''						
35'-0''	5.49	10'-6''	24'-6''						
40'-0''	6.28	12'-0''	28'-0''						
45'-0''	7.05	13'-6''	31'-6''						
50'-0''	7.84	15'-0''	35'-0''						
55'-0''	8.63			11'-4 <sup>l</sup> /2''	32'-3''				
60'-0''	9.42			12'-5''	35'-2''				

STD.NO.SBW3