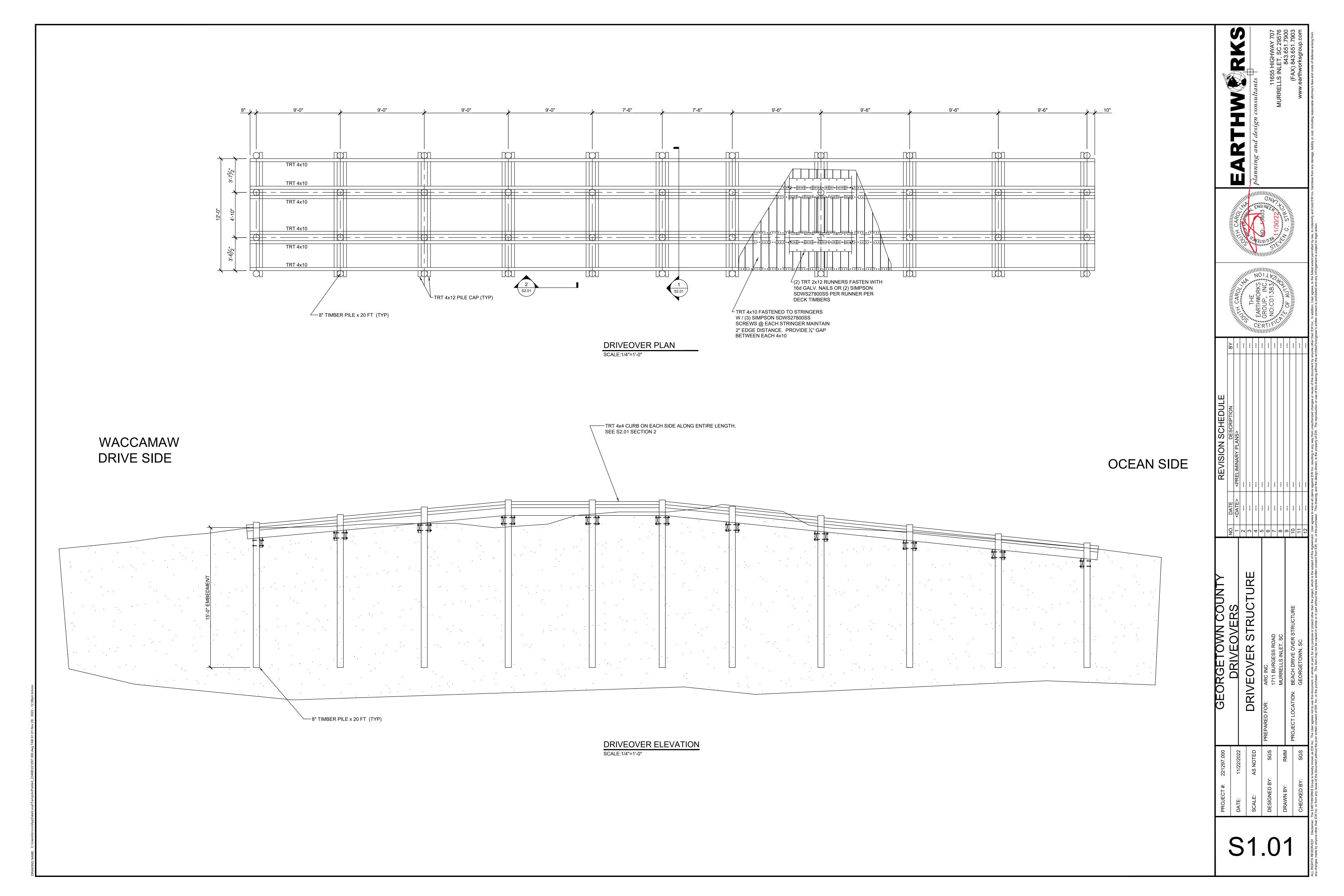
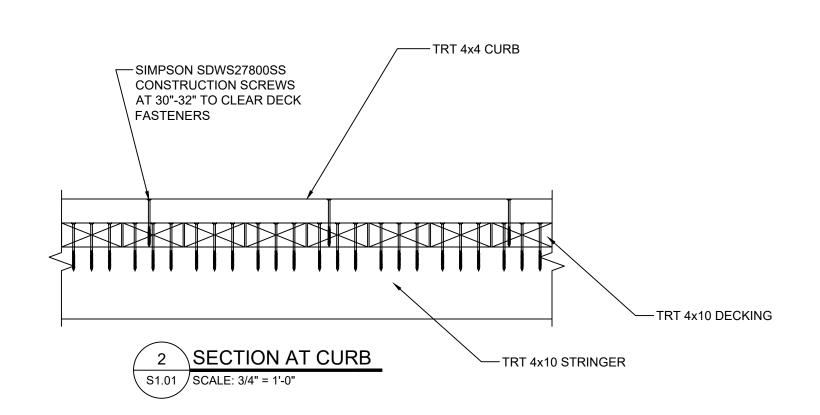
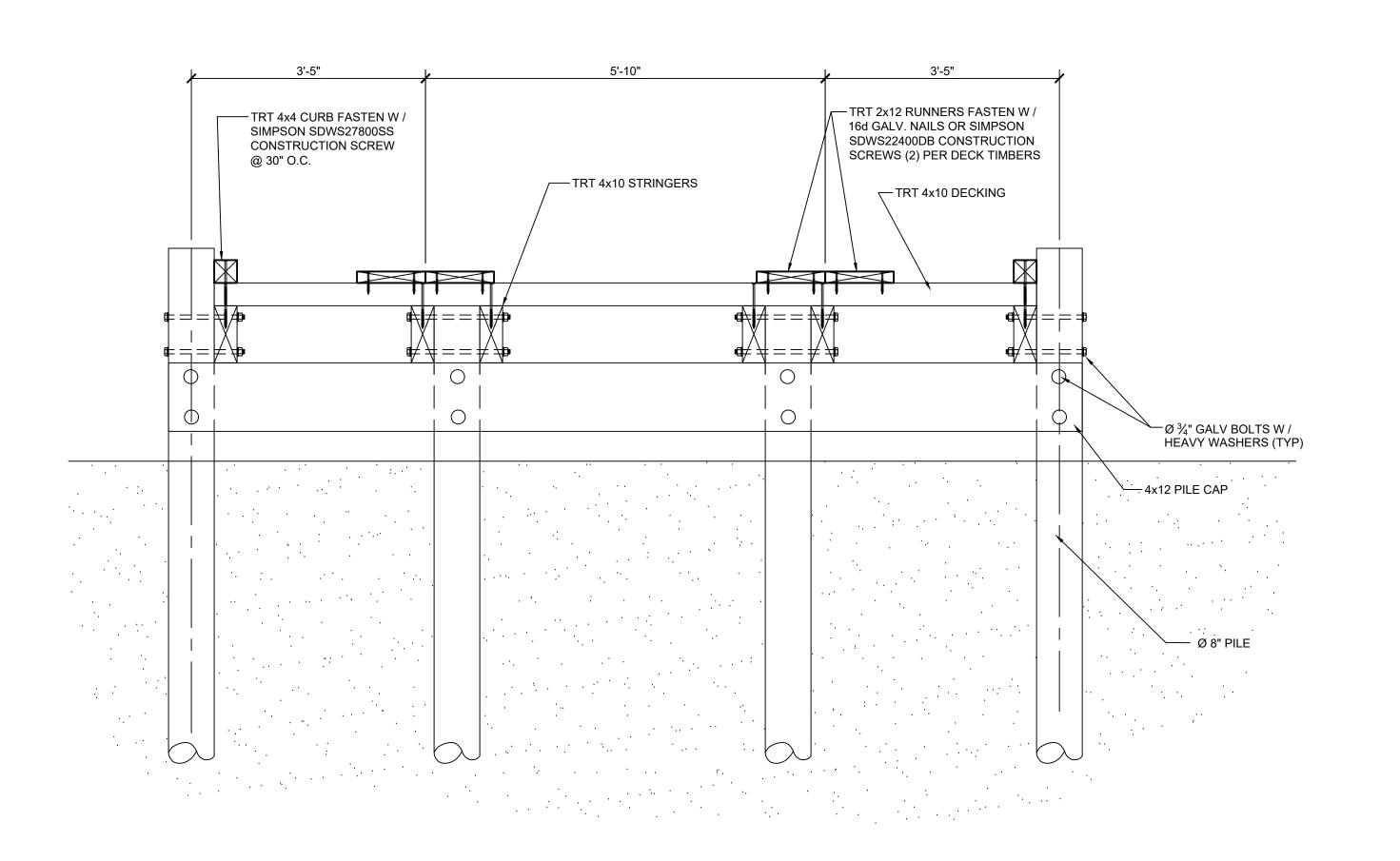


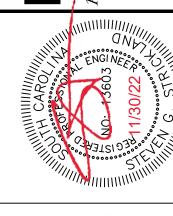
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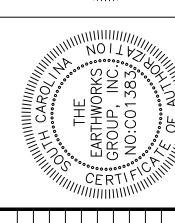












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GEORGETOWN COUN DRIVEOVERS STRUCTURAL DETAII

S2.01

TRUCTURAL NOTES

JOVE	RNING CODE:	2018	018 INTERNATIONAL BUILDING CODE WITH SOUTH CAROLINA AMENDMEN LOADS ARE IN ACCORDANCE WITH ASCE 7					
1.	RISK CATEGORY:	II	5.6.	IN ⁻	TERNAL PRESSURE COEFFI	CIENTS (GC _{ai}):		
1.1.	SNOW IMPORTANCE FACTOR (I _S)	1.00	5.6.1.		ENCLOSED STRUCTURE:	· •	± 0.1	
1.2.	ICE IMPORTANCE FACTOR - THIC	KNESS (<i>I_i</i>) 1.00	5.6.2.		PARTIALLY ENCLOSED STR	RUCTURE:	± 0.5	
1.3.	ICE IMPORTANCE FACTOR - WINE	$O(I_w)$ 1.00	5.6.3.		OPEN STRUCTURE:		± 0.0	
1.4.	SEISMIC IMPORTANCE FACTOR (/ _e) 1.00						
			6. SE	EISI	MIC LOAD INFORMATION			
2.	DEAD LOADS	PER MATERIAL WEIGHTS	6.1.	ΒA	ASIC PARAMETERS			
			6.1.1.		MCE _R GROUND MOTION (S _S	_s)	0.57	
3.	LIVE LOADS		6.1.2.		MCE _R GROUND MOTION (S ₁)	0.20	
3.1.	ROOF LIVE LOAD	20 PSF	6.1.3.		SEISMIC DESIGN VALUE @	0.2s SA (S _{DS})	0.51	
3.2.	FLOOR LIVE LOADS	40 PSF	6.1.4.		SEISMIC DESIGN VALUE @	0.1s SA (S _{D1})	0.26	
			6.2.	SI	TE CLASS:		D (Stiff Soils	
4.	SNOW LOADS		6.3.	SE	EISMIC DESIGN CATEGORY:		SDC	
4.1.	GROUND SNOW LOAD (P_g)	10 PSF	6.4.	ΒA	ASIC FORCE RESISTING SYS	STEM:		
4.2.	SNOW EXPOSURE FACTOR (C _e)	0.9						
4.3.	THERMAL FACTOR (C _t)	1.2			MOMENT-RESISTING FI	RAME SYSTEMS	3	
4.4.	FLAT ROOF SNOW LOAD (P_f)	10 PSF						
4.5.	SLOPED ROOF SNOW LOAD (Ps)	10 PSF	6.4.1.		RESPONSE MODIFICATION	` '	3.2	
			6.4.2.		SEISMIC RESPONSE COEF	` '	0.1	
5.	WIND LOADS				$C_{\rm S} = S_{\rm DS} / (F_{\rm S})$	R / I _e)		
5.1.	BASIC WIND SPEEDS		0.5	DE	CION DACE CUEAD.		0.40 * \	
	I.1. V _{ULT} :	150 MPH			ESIGN BASE SHEAR:		0.16 * V	
	I.2. V _{ASD} :	116 MPH	6.6.	ΑN	NALYSIS PROCEDURE USED			
5.2.		EXPOSURE B			EQUIVALENT LATE	RAL FURUE		
5.3.		< 30 FT	7. GE	EO1	TECHNICAL INFORMATION			
5.4.		,			DIL BEARING CAPACITY:	2,000 PSF (PER	R TABLE 1806 :	
	ROOF: -51.0 (MAX UPLIFT) & +18.5/-	·				2,000 1 01 (7 27	. ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	WALL: +36.6 (NET WINDWAR	D & LEEWARD)	8. FL	_OC	DD DESIGN DATA			
5.5.	COMPONENT & CLADDING PRESS	SURES (PSF)	8.1.	FL	OOD ZONE		X-ZON	
	ROOF: +22.2/-61.0 (ZONE 3) & +2	22.2/-24.0 (ZONE 1)	9. RA	ΔIN	LOAD			
	WALL: +24.0/-26.0 (ZONE 4) & +2	4.3/-32.0 (ZONE 5)			AIN INTENSITY - 100 YEAR, 1	HOUR (i)·	4.00 IN/H	
			0.1.	· V			1.50 114/111	

GENERAL

THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE, AND TO ENSURE THE STABILITY OF THE BUILDING AND ITS COMPONENT PARTS, AND THE ADEQUACY OF TEMPORARY OR INCOMPLETE CONNECTIONS, DURING ERECTION. THIS INCLUDES THE ADDITION OF ANY SHORING, SHEETING, TEMPORARY, BRACING OR TIEDOWNS THAT MIGHT BE NECESSARY. SUCH MATERIAL IS NOT SHOWN ON THE DRAWINGS. IF APPLIED, THEY SHALL BE REMOVED AS CONDITIONS PERMIT. THE ENGINEER TAKES NO RESPONSIBILITY FOR, CONSTRUCTION MEANS AND METHODS OR JOB SITE SAFETY DURING CONSTRUCTION. PROCESSING AND/OR APPROVING SUBMITTALS MADE BY THE CONTRACTOR WHICH MAY CONTAIN INFORMATION RELATED TO CONSTRUCTION METHODS OR SAFETY ISSUES, OR PARTICIPATION IN MEETINGS WHERE SUCH ISSUES MIGHT BE DISCUSSED, SHALL NOT BE CONSTRUED AS VOLUNTARY ASSUMPTION BY THE ENGINEER OF ANY RESPONSIBILITY FOR SAFETY PROCEDURES.

- IT IS SOLELY THE RESPONSIBILITY OF EACH CONTRACTOR TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE ENGINEER DOES NOT SUPERVISE, CONSTRUCTION UNLESS CONTRACTED TO DO SO. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.
- EQUIPMENT FRAMING LOADS, OPENINGS AND STRUCTURE IN ANY WAY RELATED TO HVAC, PLUMBING, OR ELECTRICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL COORDINATE THIS INFORMATION WITH THE INVOLVED TRADES BEFORE PROCEEDING WITH SUCH PORTION OF THE WORK. EXCESS COST RELATED TO VARIATION IN THESE REQUIREMENTS TO BE BORNE BY THE
- SHOULD ANY OF THE DETAILED INSTRUCTIONS SHOWN ON THE PLANS CONFLICT WITH THESE STRUCTURAL NOTES, THE SPECIFICATIONS, OR WITH EACH OTHER, THE STRICTEST PROVISION SHALL GOVERN. DO NOT SCALE THESE DRAWINGS. USE DIMENSIONS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH ARCHITECTURAL FLOOR PLANS PRIOR TO CONSTRUCTION. ARCHITECTURAL FLOOR PLANS SHALL GOVERN DIMENSIONS, AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. DO NOT SCALE
- FIRST FLOOR WINDOWS AND DOORS SHALL HAVE A RATING OF DP55. GARAGE DOORS TO HAVE A RATING OF DP50. SECOND FLOOR WINDOWS SHALL HAVE A RATING OF DP55.
- NOTE ON TREATED LUMBER CONNECTIONS ALL NAILS, BOLTS, SCREWS, AND CONNECTORS THAT MAY COME INTO CONTACT WITH TREATED LUMBER WILL BE HOT DIPPED GALVANIZED (HDG). STAINLESS STEEL (SS), OR OTHER MATERIALS APPROVED BY THE MANUFACTURE TO MINIMIZE CORROSION CAUSED BY ACQ TREATMENT CHEMICALS.
- SOIL LOAD BEARING CAPACITY FOR SANDS, SILTY SANDS AND CLAYEY SAND ARE PRESUMED TO BE 2,000 POUNDS PER SQUARE FOOT FOR DESIGN PURPOSES. SOIL LOAD BEARING CAPACITY FOR CLAYS AND SILTS (SL, ML, MH, AND CH) ARE PRESUMED TO BE 1,500 POUNDS PER
- SHOULD A CONFLICT OCCUR BETWEEN THESE DRAWINGS AND THE AFOREMENTIONED CODE REFERENCES, THE MORE STRINGENT SHALL GOVERN.

REINFORCED CONCRETE

MATERIALS:

- 1.a. SPECIFICATIONS: IN GENERAL, COMPLY WITH ACI 318-14 "SPECIFICATIONS FOR STRUCTURAL CONCRETE"
- 1.b. STRUCTURAL CONCRETE:

LOCATION	F'c (PSI)
FOOTINGS	3,000
MONOLITHIC SLABS ON GRADE & ALL INTERIOR CONCRETE NOT OTHERWISE IDENTIFIED	3,500
RAISED STEMWALL SLABS & CONCRETE ON-GRADE, PIERS	3,000
BACKFILL BELOW FOOTINGS (MUD MAT)	2,000
ALL EXTERIOR CONCRETE NOT OTHERWISE IDENTIFIED	3,000

- ALL DEFORMED REINFORCING BARS: Fy = 60,000 ASTM A-615 GRADE 60
- MIXES: ALL CONCRETE MIXES SHALL BE DESIGNED BY THE SUPPLIER TO MEET THE REQUIREMENTS SET FORTH HEREIN
- SLUMP: MAXIMUM ALLOWABLE SLUMP FOR CONCRETE SHALL BE 4", UNLESS OTHERWISE NOTED OR APPROVED. IF HIGHER SLUMP IS DESIRED TO INCREASE WORKABILITY, CONTRACTOR SHALL CONSULT WITH CONCRETE SUPPLIER ABOUT USING A CONCRETE ADDITIVE THAT WILL INCREASE SLUMP WITHOUT INCREASING WATER/CEMENT RATIO OF THE CONCRETE. THE CONTRACTOR SHALL VERIFY THAT ANY CONCRETE ADDITIVES WILL NOT HAVE ANY DETRIMENTAL EFFECTS ON EMBEDDED ITEMS, FINISHES INDICATED ON PLANS, OR LIKELY FUTURE FINISHES.
- FINISHING: FINISHING OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 301 (LATEST EDITION).
- CURING: BEGINNING IMMEDIATELY AFTER PLACEMENT, CONCRETE SHALL BE PROTECTED FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES, AND MECHANICAL INJURY AND SHALL BE MAINTAINED WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR THE PERIOD NECESSARY FOR THE HYDRATION OF THE CEMENT AND HARDENING OF THE CONCRETE THE MATERIALS AND METHODS OF CURING SHALL CONFORM TO ACI 301.
- FIELD MANUAL: PROVIDE AT LEAST ONE COPY OF THE ACI FIELD REFERENCE MANUAL, SP-15, IN THE FIELD OFFICE AT ALL TIMES.
- MISCELLANEOUS:
- BENT BARS, IF REQUIRED, SHALL BE BENT PER MANUFACTURER RECOMMENDATIONS, UNLESS OTHERWISE APPROVED.
- PROVIDE SUPPORTS AS REQUIRED TO MAINTAIN ALIGNMENT OF SCHEDULED REINFORCING.
- GROUT UNDER COLUMN BASE PLATES SHALL BE NON-SHRINKING TYPE. THE USE OF LEVELING PLATES AT COLUMN BASES IS PROHIBITED. GROUT BELOW BEARING PLATES, SETTING PLATES AND COLUMN BASE PLATES IS TO BE INSTALLED ONLY AFTER THE STEEL IS PLUMBED.
- CONCRETE SLABS ON GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 302.IR-96 "GUIDE FOR CONCRETE".
- CONTROL JOINTS SHALL BE SPACED IN INTERIOR SLABS ON GRADE AT A MAXIMUM OF 20 FEET ON CENTER AND IN EXTERIOR SLABS ON GRADE AT A MAXIMUM OF 10 FEET ON CENTER, UNLESS OTHERWISE NOTED.
- CONTROL JOINTS SHALL BE PRODUCED USING CONVENTIONAL PROCESSES WITHIN 4 TO 12 HOURS AFTER THE SLAB HAS BEEN FINISHED. REINFORCING STEEL SHALL NOT EXTEND THROUGH THE CONTROL JOINT.

- CONSTRUCTION JOINTS PERMITTED ONLY WHERE SHOWN OR AS APPROVED BY THE STRUCTURAL ENGINEER. CONSTRUCTION JOINTS ARE TO BE KEYED. KEYWAYS SHALL BE 1-1/2 INCHES DEEP x 1/3 MEMBER THICKNESS.
- PROVIDE 6 MIL POLYETHYLENE VAPOR BARRIER BETWEEN SUBGRADE AND CONCRETE SLAB.
- TREAT SOIL FOR TERMITES PRIOR TO PLACEMENT OF CONCRETE.
- PREPARE SITE BY REMOVING ORGANIC/EXPANSIVE SOILS AND COMPACTING TO 95% PROCTOR DRY DENSITY.
- 4.h. SLAB FINISHES:
- ALL OFFICE SPACES, RETAIL, RESIDENTIAL AND SIMILAR SLABS SHALL HAVE MACHINE FINISH WITH $\frac{1}{8}$ " PER 10'-0" TOLERANCE
- ALL EXTERIOR, WET SURFACE, DRIVEWAYS, SIDEWALKS AND SIMILAR SLABS SHALL BE FINISHED WITH ROUGH NON-SKID SURFACE (BROOM FINISH). BRUSH LINES IN THE FINISH SHALL BE PARALLEL TO THE DIRECTION OF SLOPE.
- THE CONCRETE SLAB ON GRADE HAS BEEN DESIGNED USING A SUBGRADE MODULUS OF K=250 PCI AND A DESIGN LOADING OF 2,000 PSF. THE STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR DIFFERENTIAL SETTLEMENT, SLAB CRACKING OR OTHER FUTURE DEFECTS RESULTING FROM UNREPORTED CONDITIONS MITIGATING THE ABOVE ASSUMPTIONS.
- REINFORCEMENT FOR SLAB ON GRADE SHALL BE PLACED AT A LOCATION BETWEEN THE CENTER AND UPPER THIRD OF THE SLAB.

OPENINGS:

- OPENINGS SHOWN ARE FOR BIDDING PURPOSES ONLY. COORDINATE THEIR EXACT SIZES AND LOCATIONS WITH HVAC, PLUMBING, AND
- OTHER REQUIREMENTS BEFORE PROCEEDING WITH WORK. IF ANY OPENING NOT SHOWN ON THE PLANS IS REQUIRED, SECURE APPROVAL OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING
- PROVIDE TWO #5 BARS AROUND ALL SLAB OPENINGS, EXTENDING 2 FEET BEYOND OPENING IN EVER DIRECTION, UNLESS NOTED OTHERWISE. OPENINGS NOT EXCEEDING 16 INCHES x 16 INCHES MAY BE SLEEVED AS REQUIRED BY WORKING THE REINFORCING STEEL AROUND THEM.
- FOOTINGS AND PIERS:
- 6.a. INSTALL DOWELS IN FOOTINGS TO MATCH VERTICAL PIER OR WALL REINFORCING STEEL
- PROVIDE CORNER BARS AT FOOTING CORNERS TO MATCH HORIZONTAL REINFORCING. MINIMUM LAP LENGTH WITH HORIZONTAL REINFORCING STEEL = 35 BAR DIAMETERS.
- BACKFILL AGAINST BOTH SIDES OF WALLS EQUALLY UNTIL THE LOWER ELEVATION IS ATTAINED.
- PROVIDE MINIMUM 18 INCH THICK LAYER OF GRANULAR BACKFILL FULL HEIGHT OF ALL FOUNDATION WALLS.
- CAST IN CONTINUOUS DOVE TAIL ANCHOR SLOTS ON VERTICAL SURFACES WHERE MASONRY ABUTS, 16 INCHES ON CENTER FOR PARALLEL MASONRY SURFACES. INSTALL AT CENTERLINE OF MASONRY FOR PERPENDICULAR MASONRY SURFACES.
- PROVIDE LEAN CONCRETE UNDER FOUNDATIONS FOR ACCIDENTAL OVER EXCAVATION, SOFT SPOTS, AND TRENCHES.
- VENTILATING FOUNDATION WALL OPENINGS SHALL BE WITHIN 3 FEET OF EACH CORNER OF THE BUILDING. AREA OF OPENINGS SHALL BE NOT LESS THAN 1 SQ. FT. FOR EACH 150 SQ. FT. OF UNDER FLOOR SPACE AREA.
- 7. SPLICES: UNLESS OTHERWISE NOTED, MINIMUM LAP SPLICE LENGTHS TO BE AS FOLLOWS:

	REINFORCING STEEL	LAP LENGTH
	VERTICAL BARS (INCLUDING DOWELS)	30 BAR DIAMETERS
	HORIZONTAL BARS IN SLABS & FOOTINGS	30 BAR DIAMETERS
8.	CONCRETE COVER: UNLESS OTHERWISE NOTED, DETAIL REINFORCING TO PROVIDE CONCRETE CO	OVER AS FOLLOWS:
	STEEL LOCATION	CONCRETE COVER

	THE RESERVE BY THE BY T	_ 00 B/ ((C B)/ ((N E) E) (0
CONCRETE	COVER: UNLESS OTHERWISE NOTED, DETAIL REINFORCING TO PROVIDE CONCRETE COVER AS FOL	LOWS:
	STEEL LOCATION	CONCRETE COVER
	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3 INCHES
	CONCRETE EXPOSED TO EARTH OR WEATHER:	
	#5 BARS AND SMALLER	1-1/2 INCHES
	OTHERS	2 INCHES
	PILE CAPS	2-1/2 INCHES

C. STRUCTURAL LUMBER

- SPECIFICATIONS: UNLESS SPECIFICALLY SHOWN OTHERWISE, DESIGN, FABRICATION AND ERECTION SHALL BE GOVERNED BY THE LATEST EDITION OF THE FOLLOWING:
- 1.a. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION
- 1.b. U.S. PRODUCT STANDARD PS1

- STRUCTURAL LUMBER (INCLUDING BEARING AND EXTERIOR WALL STUDS): MINIMUM PROPERTIES OF SPRUCE-PINE-FIR #2, ALLOWABLE STRESSES PER THE NATIONAL DESIGN SPECIFICATION SUPPLEMENT, LATEST EDITION, 19% MAXIMUM MOISTURE CONTENT. OTHER ACCEPTABLE SPECIES INCLUDE HEM-FIR, SOUTHERN PINE AND DOUGLAS FIR-LARCH.
- 2.b. STRUCTURAL SHEATHING (PLYWOOD & OSB):
- FOR ROOFS: OSB OR C-D PLUGGED, 5-PLY, EXPOSURE 1, 7/16" THICK
- 2.b.2. FOR WALLS: OSB OR C-D PLUGGED, 5-PLY EXPOSURE 1, 7/16" THICK.
- FOR WALLS NOT AT SHEAR WALLS: OSB 7/16" THICK WITH PANEL INDEX W24, EXPOSURE 1
- ALL FRAMING EXPOSED TO THE WEATHER OR IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED IN ACCORDANCE 2.c. WITH THE AMERICAN WOOD PRESERVERS ASSOCIATION SPECIFICATIONS.
- WHERE POSSIBLE, ALL EXPOSED CUTS AND HOLES SHOULD BE COMPLETED BEFORE TREATMENT.
- CUTS AND HOLES DUE TO ON-SITE FABRICATION SHALL BE BRUSHED WITH TWO COATS OF COPPER NAPHTHENATE SOLUTION
- 2.c.2. CONTAINING A MINIMUM OF 2% METALLIC COPPER IN SOLUTION (PER AWPA STD. M4).

CONNECTIONS:

- 3.a. JOISTS & RAFTERS TO SIDES OF BEAMS: 16 GA. GALVANIZED STANDARD JOIST HANGERS, UNLESS OTHERWISE NOTED.
- 3.b. RAFTERS AND TRUSSES TO TOPS OF WALLS AND BEAMS: 18 GA. GALVANIZED HURRICANE ANCHORS.
- 3.c. PLYWOOD TO ROOF TRUSSES OR RAFTERS: NAILED WITH RING-SHANK NAILS. SEE STRUCTURAL WOOD PANEL NOTES BELOW.
- PROVIDE PLYWOOD CLIPS AT MID-SPAN OF PLYWOOD BETWEEN SUPPORTS, OR 3.c.1.
- PROVIDE BLOCKING BETWEEN ROOF FRAMING AT PLYWOOD EDGES AND NAIL WITH EDGE NAILING PATTERN. 3.c.2.
- ALL METAL CONNECTIONS SHALL BE SIMPSON OR USP.
- ALL CONNECTORS TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- CONTACT ENGINEER WITH QUESTIONS PERTAINING TO HOLDOWNS SPECIFIED ON PLANS.
- STUD COLUMNS SHALL BE SECURED WITH TWO ROWS OF 3 INCH 10d NAILS SPACED 24 INCHES ON CENTER, UNLESS OTHERWISE NOTED
- LOAD VALUES FOR 8d, 10d, 16d AND 20d DESIGNATIONS IN THE FASTENER SCHEDULES THROUGHOUT THESE PLANS REFER TO COMMON WIRE NAILS, UNLESS OTHERWISE NOTED. NAILS SHALL CONFORM TO A RECOGNIZED NATIONAL STANDARD, SUCH AS ASTM F1667, AS PRESCRIBED BY THE MODEL BUILDING CODES.

D. DRIVEN PILES:

THE CONTRACTOR SHALL APPOINT A COMPETENT INSPECTOR QUALIFIED BY EXPERIENCE AND TRAINING THE INSPECTOR SHALL BE PRESENT AT ALL TIMES DURING PILE DRIVING OPERATIONS AND SHALL INSPECT ALL WORK IN CONNECTION WITH THE INSTALLATION OF THE PILES.

THE INSPECTOR SHALL KEEP THE FOLLOWING RECORDS FOR EACH PILE:

A. TYPE OF PILE

B. SIZE OF PILE

C. HAMMER MAKE, TYPE, SIZE, WEIGHT, AND FALL OF RAM

D. RATED BLOWS PER MINUTE AND ENERGY PER BLOW

E. DRIVING RECORD FOR THE FULL LENGTH OF THE PILE; BLOWS PER FT. F. DRIVEN LENGTH BELOW CUTOFF

G. PILE TIP ELEVATION H. PILE CUTOFF ELEVATION

THE RECORD SHALL BE KEPT UP-TO-DATE IN A NEAT AND LEGIBLE MANNER AND SHALL BE AVAILABLE FOR REVIEW BY THE ENGINEER. A COPY OF THE RECORD SHALL BE PROVIDED TO THE ENGINEER AT THE COMPLETION OF EACH DAY'S WORK.

QUALITY ASSURANCE:

MANUFACTURER'S CERTIFICATION; SUBMIT THE COPIES OF MANUFACTURE CERTIFICATION THAT THE PILING COMPLIES WITH THE SPECIFIED REQUIREMENTS.

TIMBER PILES PRESERVATIVE TREATMENT: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUALITY OF THE TREATED WOOD

PRODUCTS. AWPA QCIP QUALITY MARK AWPA ND-1, AWPA ND-4 WILL BE ACCEPTED AS EVIDENCE OF COMPLIANCE WITH

DELIVERY, STORAGE, AND HANDLING, STORE PILES IN ACCORDANCE WITH AWA MA.

PROVIDE STANDARD CLASS B SOUTHERN PINE CLEAN-PEELED PILES CONFORMING TO ASTM D 25. PILES SHALL BE IN ONE PIECE. SPLICES WILL NOT BE PERMITTED. EACH TREATED PILE SHALL BE BRANDED BY THE PRODUCER, IN

ALL PILES SHALL BE A MINIMUM OF 45 FEET LONG. MINIMUM TIP DIAMETER SHALL BE 8 INCHES. MINIMUM BUTT DIAMETER SHALL BE 12 INCHES (MEASURED 3 FEET FROM THE BUTT).

TREAT PILES BY THE FULL-CELL PRESSURE PROCESS IN ACCORDANCE WITH AWPA U1 (COMMODITY SPECIFICATION A, USE CATEGORY 4C) FOR ROUND TIMBER PILES, AWPA U1 (COMMODITY SPECIFICATION A, USE CATEGORY 4B) FOR SAWN TIMBER PILES, AWPA C3 FOR MARINE PILING.

E. TIMBER POSTS:

REFERENCED STANDARD

THE PUBLICATIONS LISTED BELOW FORM A PART OF THIS SPECIFICATION TO THE EXTENT REFERENCED. THE PUBLICATIONS ARE REFERRED TO IN THE TEXT BY THE BASIC DESIGNATION ONLY.

AWPA U1 1990 PILES, PRESSURE TREATMENT AWPA M4, 1990 CARE OF PRESSURE TREATMENT AWPA M6 1988 BRANDS USED ON FOREST PRODUCTS AWPA MP-4 1988 MARINE PILING PRESSURE TREATED WITH WATERBORNE WATERS

AWPA QCIP 1988 PRESSURE TREATED LUMBER, TIMBERS PLYWOOD CONSTRUCTION POLES, PILES AND SPECIAL PURPOSE

USE PRODUCTS INSPECTION AND ACCEPTANCE OF PILES ACCEPTANCE WILL BE ON THE BASIC CERTIFICATION, INSPECTION OF MATERIALS PROPOSED TO BE INCORPORATED IN THE WORK, RECEIPT OF, PILE DRIVING RECORDS, AND INSPECTION OF THE

COMPLETED PRODUCT.

POST INSTALLATION FOR WALKWAYS AND STAIRS THE CONTRACTOR SHALL AUGER ALL POSTS INTO THE SAND TO THE MINIMUM DEPT SPECIFIED ON THE PLANS. ALL POSTS SHALL BE A

OF 16 FEET UNLESS A LONGER LENGTH IS REQUIRED DUE TO DUNE HEIGHT. CONTRACTOR SHALL INSPECT ALL WORK IN CONNECTION WITH THE INSTALLATION OF THE POSTS.

MANUFACTURER'S CERTIFICATION; SUBMIT THE COPIES OF MANUFACTURE CERTIFICATION THAT THE PILING COMPLIES WITH THE SPECIFIED REQUIREMENTS.

QUALITY ASSURANCE:

TIMBER POST PRESERVATIVE TREATMENT: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUALITY OF THE TREATED WOOD PRODUCTS. AWPA QCIP QUALITY MARK AWPA ND-1, AWPA ND-4 WILL BE ACCEPTED AS EVIDENCE OF COMPLIANCE WITH DELIVERY, STORAGE, AND HANDLING, STORE POSTS IN ACCORDANCE WITH AWA MA. ALL POSTS SHALL BE A MINIMUM OF 16 FEET LONG.

TREAT POSTS BY THE FULL-CELL PRESSURE PROCESS IN ACCORDANCE WITH AWPA U1 (COMMODITY SPECIFICATION A, USE CATEGORY 4C)

TREAT PILES TO A RETENTION RATE OF 2.5 LB. CU./ FT.

TREATMENT REQUIREMENTS FOR MARINE CONSTRUCTION FRESH WATER

BELOW WATER MEMBERS

SAWN PILES, WALERS, 2.5 CCA, AWPA UC5A, 2.5 CCA, AWPA UC5A, SHEET PILES, CROSS BRACING 5B, 5C & C18 5B, 5C & C18

SPLASH ZONE MEMBERS

0.40 ACQ, 0.21 CA, SPLIT PILE CAPS & 0.60 ACQ, 0.6 CCA, STRINGERS AWPA UC4C & C2, AWPA UC5A, 5B, 5C & C18 0.24 MCA

0.16 MCA ABOVE WATER MEMBERS 0.25 ACQ, 0.10 CA, DECKING, HANDRAILS AWPA UC3B & C2

0.07 MCA 0.16 MCA TIMBER STRUCTURE SPECIFICATION NOTES ALL FACE AND ANCHOR PILES USED IN CONSTRUCTION SHOULD BE SPECIFIED IN ACCORDANCE WITH ASTM D25. PRESERVATIVE TREATMENT

0.40 ACQ, 0.21 CCA,

AWPA UC3B & C18

SHALL BE TO AWPA STANDARDS C-3 & C-18 (UC4C, 5A, 5B, 5C). ALL FASTENERS AND TIE RODS SHOULD BE HOT-DIP GALVANIZED PER ASTM A-153 OR BE CORROSION RESISTANT (BITUMASTIC COATED OR 300 SERIES STAINLESS STEEL)

ALL CUTS, HOLES AND INJURIES TO THE SURFACE OF TREATED WOOD SHOULD BE FIELD PROTECTED BY FIELD TREATMENT MEETING AWPA STANDARD M4.

ALL TREATED WOOD PRODUCTS SHOULD BE HANDLED AND FIELD FABRICATED IN ACCORDANCE WITH AWPA STANDARD M4 FOR THE CARE OF PRESERVATIVE TREATED WOOD PRODUCTS. FOR FURTHER INFORMATION ON FRESH AND SALTWATER SPECIFICATIONS, CONSULT THE AWPA BOOK OF STANDARDS AND OTHER

PLANT INSPECTION:

PUBLICATIONS.

THE ENGINEER RESERVES THE RIGHT TO PERFORM PLANT INSPECTION OF THE TREATING PROCESS. PROVIDE THE ENGINEER WITH A MINIMUM 3-WEEK ADVANCE NOTICE, INDICATING LOCATION OF THE INITIAL PRESERVATIVE TREATMENT. ALLOW THE ENGINEER ACCESS TO THE PLANT FOR INSPECTION

TOLERANCES IN AUGURING PILES: AT CUTOFF ELEVATION, BUTT SHALL BE WITHIN 4 INCHES OF THE LOCATION INDICATED. MANIPULATION TO PILES INTO POSITION WILL BE PERMITTED ONLY WITHIN THE AFOREMENTIONED TOLERANCE TO RETURN THE PILE TO THE DESIGN LOCATION.

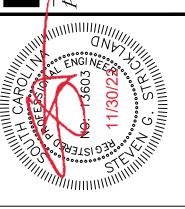
A VARIATION OF NOT MORE THAN 0.50 INCH PER FOOT OF PILE LENGTH FROM THE REQUIRED ANGLE FOR BATTER PILES WILL BE PERMITTED.

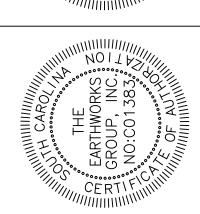
REMOVE AND REPLACE WITH NEW PILES THOSE DAMAGED, MISPLACED, DRIVEN BELOW DESIGN CUTOFF, OR DRIVEN OUT OF ALIGNMENT.

INSPECT PILES WHEN DELIVERED AND WHEN IN THE LEADS IMMEDIATELY BEFORE AUGURING, CUT PILES AT CUTOFF ELEVATION BY SAWING. CUTOFF ELEVATION FOR PILES SHALL BE A MINIMUM OF 7 FT ABOVE MEAN HIGH WATER.

INSTALLATION OF POSTS

AUGERING SHALL BE THE PREFERRED METHOD FOR THE INSTALLATION OF VERTICAL POSTS.





DATE DESCRIPTION	<date> <preliminary plans=""></preliminary></date>											
ON	-	2	3	4	2	9	7	8	6	10	11	10

$\overline{\mathbf{C}}$ RUC

