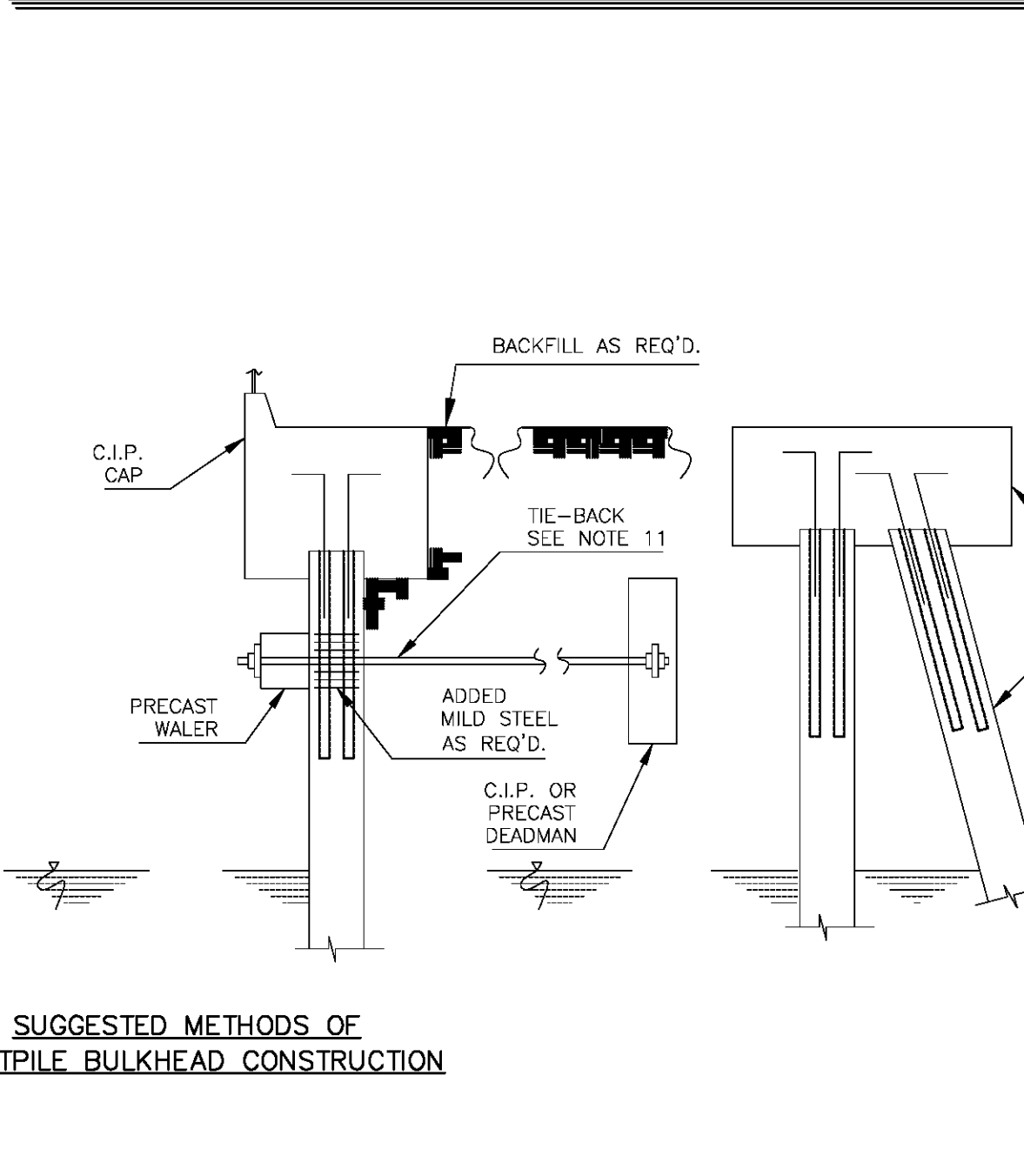


THICKNESS T in.	AREA, A <sub>c</sub> in. <sup>2</sup>	MOMENT OF INERTIA, I in. <sup>4</sup>	SECTION MODULUS, S in. <sup>3</sup>	MAXIMUM ALLOWABLE (Z) BENDING MOMENT, ft. - KIPS		APPROX. WT. (L) LBS. PER L.F.
				f' <sub>c</sub> =5000 psi	f' <sub>c</sub> =6000 psi	
6	72	216	72	6.0	7.2	75
8	96	512	128	10.7	12.8	100
10	120	1000	200	16.7	20.0	125
12	144	1728	288	24.0	28.8	150
14	168	2744	392	32.7	39.2	175
16	192	4096	512	42.7	51.2	200
18	216	5832	648	54.0	64.8	225
20	240	8000	800	66.7	80.0	250
24	288	13824	1152	96.0	115.2	300

(1) ALL WEIGHTS ARE BASED ON 150 LBS./FT.<sup>3</sup> OF NORMAL WEIGHT CONCRETE.  
 (2) BASED ON "0" PSI ALLOWABLE STRESS ON TENSILE FACE AND 0.4 f'<sub>c</sub> ALLOWABLE STRESS ON COMPRESSION FACE, 1/2" DIA. ASTM A416 GRADE 270 STRESS-RELIEVED STRAND. IF OTHER GRADES OR SIZES OF STRANDS ARE USED, MOMENT CAPACITIES WILL BE RECALCULATED ACCORDINGLY.  
 (3) VALUES ARE BASED ON CONCENTRIC PRESTRESSING FORCE AND STRESS-RELIEVED STRAND. TOTAL LOSSES ARE ASSUMED AS 35,000 PSI. DESIGNER SHOULD VERIFY LOSSES BASED UPON JOB MATERIALS AND CONDITIONS. REFER TO PCI DESIGN HANDBOOK, THIRD EDITION. SHEETPILES MAY BE DESIGNED WITH ECCENTRIC PRESTRESSING FORCE, CHECK WITH LOCAL MANUFACTURERS.



**NOTES:**

- CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI. TABLES ARE BASED UPON 5 & 6 KSI. CHECK WITH LOCAL PRODUCERS FOR AVAILABILITY OF HIGHER STRENGTH CONCRETE.
- CEMENT SHALL CONFORM TO PORTLAND CEMENT ASTM C150. USE TYPE II FOR MARINE INSTALLATIONS WITH MINIMUM 7 SACK (658 LBS.)/CUBIC YARD FOR SEA WATER APPLICATIONS, (MAXIMUM WATER/CEMENT RATIO 0.45).
- DEFORMED REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 40 OR 60. STEEL WITH A YIELD HIGHER THAN 60 KSI CAN BE USED.
- PRESTRESSING STEEL SHALL CONFORM TO ASTM A416 AND A416 SUPPLEMENT FOR SEVEN-WIRE STRESS-RELIEVED AND LOW RELAXATION STRAND. IF LOW-RELAXATION STRAND IS USED, DESIGNER SHALL ADJUST AS REQUIRED.
- SPIRAL REINFORCEMENT SHALL CONFORM TO ASTM A82.
- STANDARD WIDTH "W" IS 3'-0" OR 4'-0" NOMINAL. SHEETPILES CAN BE OTHER WIDTHS. PRACTICAL LIMIT OF PRESTRESS LEVEL, WEIGHT AND DRIVABILITY MUST BE RECOGNIZED. CHECK WITH LOCAL PRESTRESSED CONCRETE MANUFACTURERS.
- SIZE AND LOCATION OF TONGUE AND GROOVE MAY VARY WITH DIFFERENT FABRICATORS. DESIGNER IS ADVISED TO CHECK WITH LOCAL MANUFACTURERS BEFORE SIZING AND DETAILING TONGUE GROOVE, OR LEAVE THESE DIMENSIONS OPTIONAL.
- DESIGNER SHOULD CHECK STEEL REINFORCING BAR REQUIREMENTS FOR END BLOCK TENSION. (TRANSFER ZONE)
- 6" AND 8" THICK CONCRETE SHEETPILES MAY HAVE ONE LAYER OF REINFORCEMENT.
- EQUIVALENT WELDED WIRE FABRIC CAN BE USED IN LIEU OF REINFORCING TIES OR WIRE SPIRALS.
- APPROPRIATE CORROSION PROTECTION FOR BULKHEAD TIE-BACK SYSTEMS SHALL BE APPROVED.
- LATERAL REINFORCEMENT SHOULD NO BE LESS THAN MINIMUM SHRINKAGE AND TEMPERATURE STEEL REQUIREMENTS PER ACI 318.
- INTERNAL JET PIPES IF USED FOR INSTALLATION SHOULD BE GROUTED IN FREEZE-THAW ENVIROMENTS.
- REFERENCES:  
 PCI JOURNAL-VOLUME 22, NO. 2 MARCH-APRIL 1977 "RECOMMENDED PRACTICE FOR DESIGN, MANUFACTURE AND INSTALLATION OF PRESTRESSED CONCRETE PILING"  
 ACI MANUAL OF CONCRETE PRACTICE-COMMITTEE 543 REPORT-"RECOMMENDATIONS FOR DESIGN, MANUFACTURE, AND INSTALLATION OF CONCRETE PILES."  
 "PLANT CAST PRECAST AND PRESTRESSED CONCRETE A DESIGN GUIDE BY WILLIAM R. PHILLIPS AND DAVID SHEPPARD. PRECAST CONCRETE INSTITUTE 1980.  
 PCI STANDARD 112-84 STANDARD PRESTRESSED CONCRETE SQUARE AND OCTAGONAL PILES  
 PCI MANUAL-FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF PRECAST AND PRESTRESSED CONCRETE PRODUCTS-PUBLICATION NO. MNL-116-85, 3RD EDITION PRECAST CONCRETE INSTITUTE CHICAGO 1985  
 PCI DESIGN-N HANDBOOK, 3RD EDITION PRECAST CONCRETE INSTITUTE-CHICAGO

Prestressed Concrete Institute COMMITTEE ON PRESTRESSED CONCRETE PILING		
PRESTRESSED CONCRETE SHEET PILES 6", 8", 10", 12", 14", 16", 18", 20" & 24"		
SHEET	DATE	DRWG. NO.