

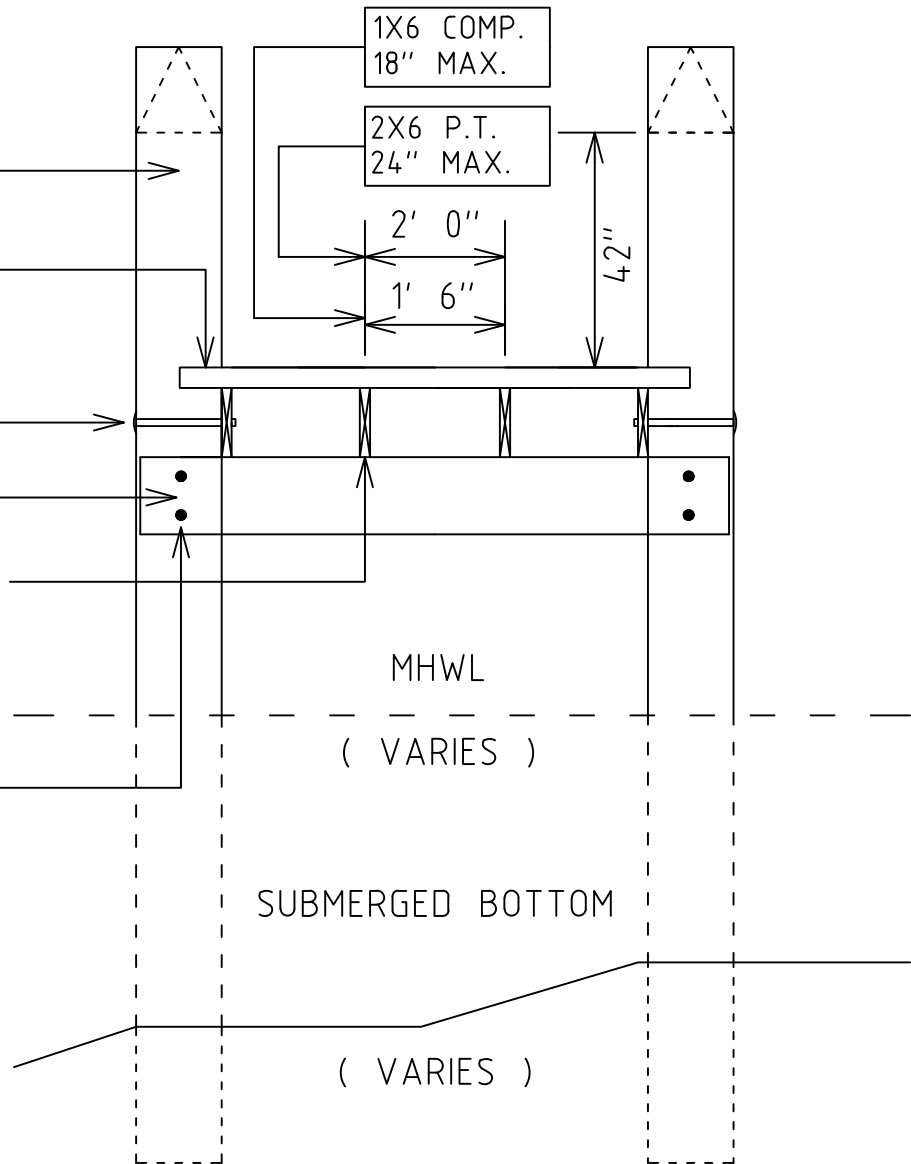
8" DIA. .25 CCA PILING JETTED 6' INTO BAY
 BOTTOM MECHANICALLY DRIVEN TO SETTLE.
 CUT END (CAPS OPTIONAL)

5/4"X6" COMPOSITE DECKING - GREY
 EDGES ROUTERD SMOOTH CUT AT
 CENTER LINE OF PILE.

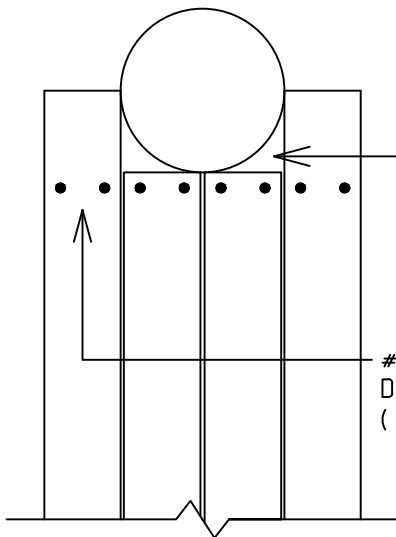
(1) 5/8" DIA. HDG CARRIAGE BOLT
 2/ HDG NUT & WASHER DRILLED
 THRU PILING.

2X8 PINE HEADER
 0.60 CCA TREATED
 FOR SPANS < 8'0"

(1) 5/8" DIA. HDG CARRIAGE BOLT
 SINGLE FOR SPAN (> 4')
 DOUBLE FOR SPAN (< 4')



TYPICAL DOCK SECTION



TOP/PLAN VIEW

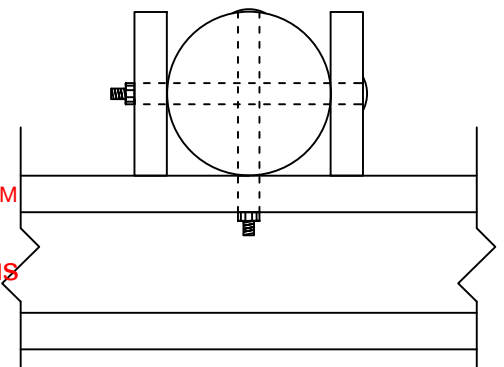
SQUARE OR RADIUS CUT
 AROUND PILE - OWNERS
 PREFERENCE

#12 STAINLESS STEEL
 DRIVE DECK SCREWS
 (2) PER STRINGER



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Signed: Jonathan Pettus



TOP FRAMING VIEW



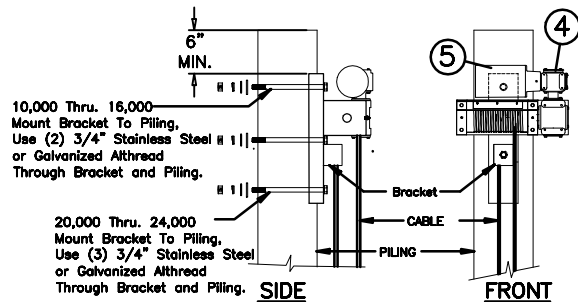
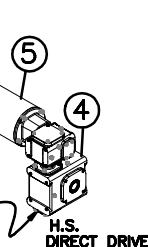
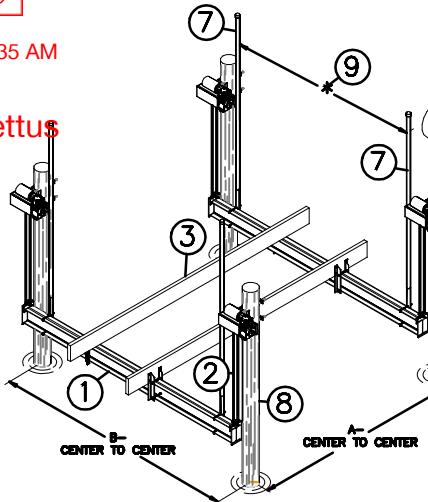
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Jonathan Pettus



Piling Penetration
To Be 12' Into The
Sand Bottom Or 7'
Into The Rock Strata

LIFT CAPACITY	A	B	RECOMMENDED PILING SIZES
10,000 LB	120"	150"	10" DIA
13,000 LB	120"	150"	10" DIA
16,000 LB	120"	168"	10" DIA
20,000 LB	132"	164"	10" DIA
24,000 LB	162"	188"	12" DIA
30,000 LB	162"	188"	12" DIA

A CENTER-TO-CENTER B CENTER-TO-CENTER
PILING SPACING

	1	2	3	4	5	6	7	8	9
Lift Cap.	2 Cables per lift I-Beam Size	Cable Size (STAINLESS STEEL)	Standard Bunk Board	Aluminum Gear Box	Motor (STAINLESS STEEL)	Required Volts/ AMPS	2" DIA Guide Post Height	Min. Recomm- ended Piling Size	MAX BEAM OF BOAT
10,000# DOUBLE PART	8"Hx5"W .35/.23 x150" LONG ● 4.7 Wt/Ln Ft.	5/16"x30"	2"x8"x12' Aluminum	Aluminum Housing	4 Each 3/4 H.P.	220V/25A	6'-6"	4 PILINGS/ 10" Dia.	9'-6"
13,000# DOUBLE PART	8"Hx5"W .41/.25 x150" LONG ● 7.023 Wt/Ln Ft.	5/16"x30"	2"x8"x12' Aluminum	Aluminum Housing	4 Each 3/4 H.P.	220V/25A	10'	4 PILINGS/ 10" Dia.	9'-6"
16,000# DOUBLE PART	10"Hx6"W .41/.25 x168" LONG ● 8.646 Wt/Ln Ft.	5/16"x30"	3"x10"x12' Aluminum	Aluminum Housing	4 Each 1 H.P.	220V/25A	10'	4 PILINGS/ 10" Dia.	11'
20,000# TRIPLE PART	10"Hx6"W .41/.25 x168" LONG ● 8.646 Wt/Ln Ft.	5/16"x45"	3"x10"x14' Aluminum	Aluminum Housing	4 Each 1 H.P.	220V/30A	10'	4 PILINGS/ 10" Dia.	11'
24,000# TRIPLE PART	10"Hx6"W .50/.29 x192" LONG ● 10.286 Wt/Ln Ft.	5/16"x45"	3"x10"x16' PT Wood Carpeted	Aluminum Housing	4 Each 1 H.P.	220V/30A	10'	4 PILINGS/ 12" Dia.	13'
30,000# TRIPLE PART	12"Hx7"W .62/.31 x192" LONG ● 14.292 Wt/Ln Ft.	5/16"x45"	3"x10"x16' PT Wood Carpeted	Aluminum Housing	4 Each 1 1/2 H.P.	220V/30A	10'	4 PILINGS/ 12" Dia.	13'

CUSTOM WIDTH'S AVAILABLE

THE WORK SPECIFIED HEREIN HAS BEEN DESIGNED & ALL WORK SHALL BE IN ACCORDANCE WITH STRUCTURAL PROVISIONS OF THE 7th EDITION 2020 FLORIDA BUILDING CODE.

NOTE:

THIS LIFTING STRUCTURE HAS BEEN DESIGNED TO WITHSTAND WIND LOADS ASSOCIATED WITH WIND SPEEDS OF $V_{100} = 180$ MPH, $V_{50} = 139$ MPH (3 SEC. GUST) EXPOSURE 'D' WITHOUT A BOAT ON THE LIFT PER ASCE 7-10 USING ABOVE GROUND SIGN/WALL METHOD, THE LIFTING STRUCTURE INCLUDING BOAT HAS BEEN DESIGNED TO WITHSTAND WIND SPEEDS OF $V_{100} = 90$ MPH IN EXPOSURE 'C' OR 80 MPH IN EXPOSURE 'D'.

OWNER RESPONSIBLE TO REMOVE BOAT FROM LIFT DURING WINDSTORM EVENT IN EXCESS V_{50} AS CALATED BELOW, PER FBC 3105.5.3 STRUCTURES DESIGNED TO BE READILY REMOVED OR REPOSITIONED DURING PERIODS OF HIGH WIND VELOCITY SHALL BE POSTED WITH A LEGIBLE AND READILY VISIBLE DECAL OR PAINTED INSTRUCTIONS TO BE THE OWNER OR TENANT TO REMOVE OR REPOSITION THE STRUCTURE OR PART THEREOF DURING SUCH PERIODS OF TIME AS ARE DESIGNATED BY THE U.S. WEATHER BUREAU AS BEING A HURRICANE WARNING OR ALERT. THE LIFT OWNER SHALL BE NOTIFIED OF THESE CONDITIONS BY THE PERMIT HOLDER. NO WARRANTY, EXPRESSED OR IMPLIED, IS CONTAINED HEREIN. V_{50} MAY BE CALCULATED BY THE FOLLOWING FORMULA: $V_{50} = v \cdot 0.6 \cdot V_{100}$ DESIGN OF BOAT WIND LOADING HAS BEEN PERFORMED WITH THE FOLLOWING RATIOS AS CONFIRMED BY OTHERS: $B/s=3$, $s/h = 0.75$, FOR A Cf OF 1.6 MAXIMUM WHERE H IS THE HEIGHT TO TOP OF BOAT, B IS HORIZONTAL DIMENSION, AND S IS VERTICAL DIMENSION.

CERTIFICATION OF BOAT LIFT TO EXISTING STRUCTURE AND ALL ELECTRICAL OR MECHANICAL CERTIFICATIONS ARE BY OTHERS; ENGINEER SEAL CERTIFIES ASSEMBLY OF LIFT ONLY.

THIS DETAIL IS PREPARED AS A GENERAL NON-SITE SPECIFIC MASTER PLAN SHEET DETAIL. TYPICAL FIELD CONDITIONS ARE ASSUMED IN THE DESIGN. WOOD PILES SHALL BE SEASONED WOOD WITH $G=0.55$ OR BETTER, SHOULD ANY SPECIFIC LOCATION DIFFER FROM THAT SPECIFIED HEREIN, OR STANDARD FIELD CONDITIONS, ADDITIONAL SPECIFIC ENGINEERING MAY BE REQUIRED AS DETERMINED BY THE BUILDING INSPECTOR AND PERMITTING CONTRACTOR. CARE SHALL BE TAKEN BY CONTRACTOR IN ALL APPLICATIONS OF THIS DETAIL. AS THIS IS NOT A SITE SPECIFIC DRAWING, IT IS THE RESPONSIBILITY OF OTHERS TO ENSURE THE INTEGRITY OF INSTALLATION TO THE HOST STRUCTURE.

ALUMINUM

MATERIAL: 6061 T6 ALUMINUM

ALL WELDS ARE MIN. 1/4" FULL FILLET WELD USING 5556 FILLER ALLOY. ALL WELDING MUST CONFORM TO AISC STEEL CONSTRUCTION MANUAL 13TH ED AS INSPECTED AND VERIFIED BY OTHERS. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALUMINUM MEMBERS FROM DISSIMILAR METALS TO PREVENT ELECTROLYSIS.

FASTENERS

ALL ANCHORS TO BE HILTI BRAND OR MFR EQUIVALENT. ALL BOLTS SHALL BE HOT DIPPED GALVANIZED, OR STAINLESS STEEL & MEET THE REQUIREMENTS OF ASTM A304 WITH HARDENED WASHERS AND HEX NUTS. WASHERS SHALL BE USED BETWEEN WOOD & BOLT HEAD & BETWEEN WOOD & NUT. WHERE GENERIC FASTENERS ARE LABELED IN DETAILS, CAPACITIES SHALL BE EQUAL TO OR GREATER THAN HILTI KWIK BOLT II OR RED HEAD THRU BOLTS. EMBEDMENT DEPTHS SPECIFIED HEREIN ARE DEPTHS INTO SOLID SUBSTRATE AND DO NOT INCLUDE THICKNESS OF STUCCO OR OTHER FINISHES.

ALUMINUM MEMBERS IN CONTACT WITH CONCRETE AND WOOD SHALL BE PROTECTED BY "KOPPERS BITUMINOUS PAINT" OR POLYETHYLENE TAPE UHMW (ULTRA HIGH MOLECULAR WEIGHT) 11.7 mils (0.30 mm) MIN. TOTAL THICKNESS IN ACCORDANCE WITH CURRENT FLORIDA BUILDING CODE. ALL WELDS PER FLORIDA BUILDING CODE.

SPECIALTY ENGINEERING SERVICES & SOLUTIONS INC. HAS NOT VISITED THIS JOBSITE. INFORMATION CONTAINED HEREIN IS BASED ON CONTRACTOR SUPPLIED DATA AND MEASUREMENTS. SPECIALTY ENGINEERING SERVICES & SOLUTIONS INC. SHALL NOT BE HELD RESPONSIBLE OR LIABLE IN ANY WAY FOR ERRONEOUS OR INACCURATE DATA OR MEASUREMENTS. WORK SHALL BE VERIFIED PRIOR TO CONSTRUCTION.

SPECIALTY ENGINEER SERVICES & SOLUTIONS. SHALL BE NOTIFIED AND GIVEN AN OPPORTUNITY TO REEVALUATE OUR WORK UPON DISCOVERY OF ANY INACCURATE INFORMATION PRIOR TO MODIFICATION OF EXISTING FIELD CONDITIONS AND FABRICATION AND INSTALLATION OF MATERIALS.

ENGINEERING SEAL AFFIXED HERETO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COSTS & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FORM DEVIATIONS OF THIS PLAN, EXCEPT AS EXPRESSLY PROVIDED IN HEREIN, NO CERTIFICATION OR AFFIRMATIONS ARE INTENDED.

**THIS SPECIFICATION SHEET GOOD ONLY AT THIS NAME AND ADDRESS
VOID WITHOUT HURRICANE SEAL OVER NAME**

NAME: _____

ADDRESS: _____

CITY: _____

STATE: _____

ZIP: _____

Oscar M. Bermudez, PE.
Reg. Florida No. 55141

DATE: _____

HURRICANE BOAT LIFTS
3301 S.E. Slater Street
Stuart, Florida 34997
(772)-781-2556
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B&B Engineers,
2237 Woods Edge Circle
Orlando, FL 32817



P.O. Box 3450
Apollo Beach, FL 33572
www.dockbuilders.com - 800.677.4710

6x16 Floating Dock Section

Design Assumptions:

Decking - 5/4" x 6" P.T., ThruFlow, or Composite**

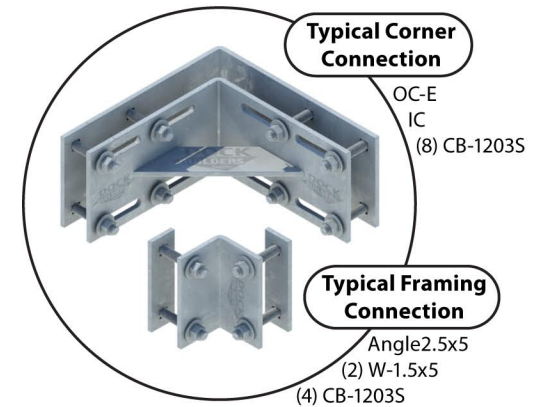
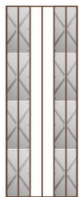
Framing - 2" x 8" P.T. Lumber

Maximum Stringer Spacing (inches): 12" O.C.

Estimated Dock Weight* (lbs): 1200



**Overhead Frame
& Float Layout**



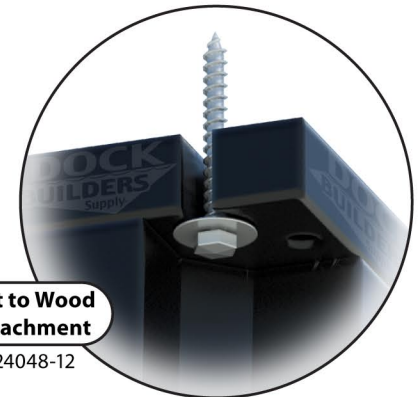
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**Dock Float to Wood
Frame Attachment**

DF-24048-12



Note: Dock Builders Supply assumes no responsibility or liability for the design, structural integrity, accuracy or completeness of this sketch/drawing. Sketch is provided as a guide-line only. Dimensions are approximate. Internal stringer blocking over the perimeter of dock floats is not shown, but should be incorporated throughout the frame to provide additional dock float mount points. Dock floats should be on-hand during construction to use as templates to accurately align internal stringers over the perimeter of floats. Lumber is not included with dock kits and must be acquired locally.

*Estimated dock weight includes the weight of standard P.T. framing, P.T. decking, hardware, and floats.

**For composite decking, always consult the manufacturer's documentation regarding recommended joist spacing.