



LAKE CHAMPLAIN YACHT CLUB

Shelburne, Vermont, USA — Est. 1887

New floating docks by Structurmarine

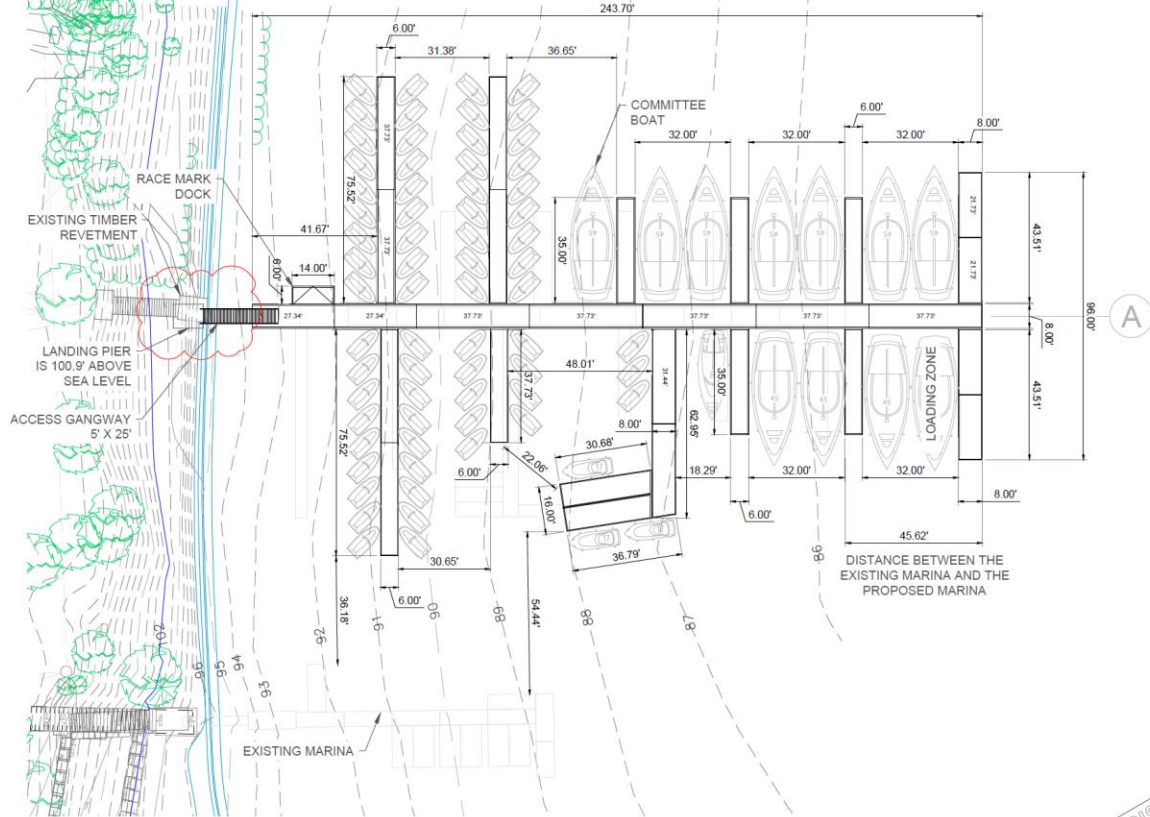




PROPERTY LINE



Shelburne Bay



GENERAL LAYOUT PLAN VIEW 1" = 40'

NOTE FROM CLIENT
 Project datum is based on NGVD 1929 established by differentially leveling from Lake Champlain. The elevation of Lake Champlain was determined from the United States Geological Survey gauging station 04294500 at Burlington, Vermont as reported on November 13, 2008 (Elevation 95.9')


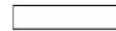

FOR DISCUSSION



SITE AERIAL (EXISTING MARINA)

LIST OF MATERIAL - section A

STRUCTURES

-  **ACCESS GANGWAY**
AG 5' w X 25' lg 1 unit
-  **MAIN DOCK - central**
8' w X 243.70' lg 1 units
-  **FINGER DOCK - south**
6' w X 75.52' lg 1 unit
6' w X 37.73' lg 1 unit
6' w X 35' lg 2 units
8' w X 43.51' lg 1 unit
- ANGLED DOCK - south**
8' w X 62.95' lg 1 units
16' w X 30.68' lg 1 unit
- FINGER DOCK - north**
6' w X 75.52' lg 2 units
6' w X 35' lg 3 units
8' w X 43.51' lg 1 unit
- RACE MARK - DOCK**
14'-0" w X 6'-0" lg 1 unit
- LOW GRAB RAIL**
- ANCHORING**
Anchor lines 16 units
- ACCESSORIES**
Mooring cleats 54 units

NOTE:
 - ANCHORING NOT INDICATED
 - DIMENSIONS TO BE CONFIRMED BY CLIENT



| REVISION # | DATE | DESCRIPTION | DRAWN BY | APPR. BY |
|------------|------------|------------------|----------|----------|
| 1 | 2024-04-18 | GENERAL REVISION | B.G. | B.N. |

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|-------------|-----------------------------|
| PROJECT | LAKE CHAMPLAIN YACHT CLUB |
| NO. PROJECT | 7987 |
| TITLE | PROPOSAL LAYOUT - section A |

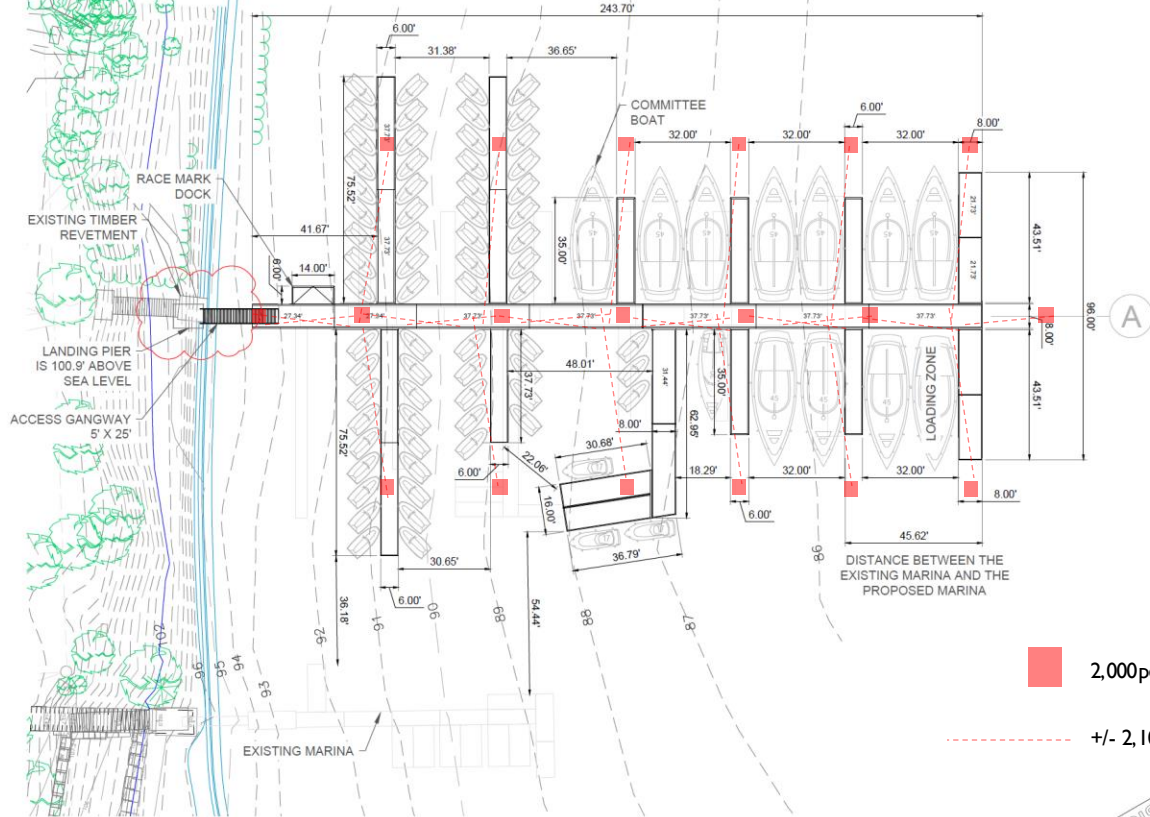
| | | | |
|-------------|----------|-------------|---|
| SCALE | as shown | NO. DRAWING | 7987-PP-05 |
| DRAWN BY | B.G. | DATE | 2024-02-20 |
| APPROVED BY | B.N. | DRAWING REF | CAD drawing from client 13262 - 2022 Update LYTIC Dock Plan 2.dwg |



PROPERTY LINE



Shelburne Bay



GENERAL LAYOUT PLAN VIEW 1" = 40'




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14'-0" w X 6'-0" lg 1 unit
- LOW GRAB RAIL**
- ANCHORING**
Anchor lines 16 units
- ACCESSORIES**
Mooring cleats 54 units

2,000pds existing anchor blocks qty.20

+/- 2,100 li/ft of chain by the LCYC

FOR DISCUSSION

NOTE:
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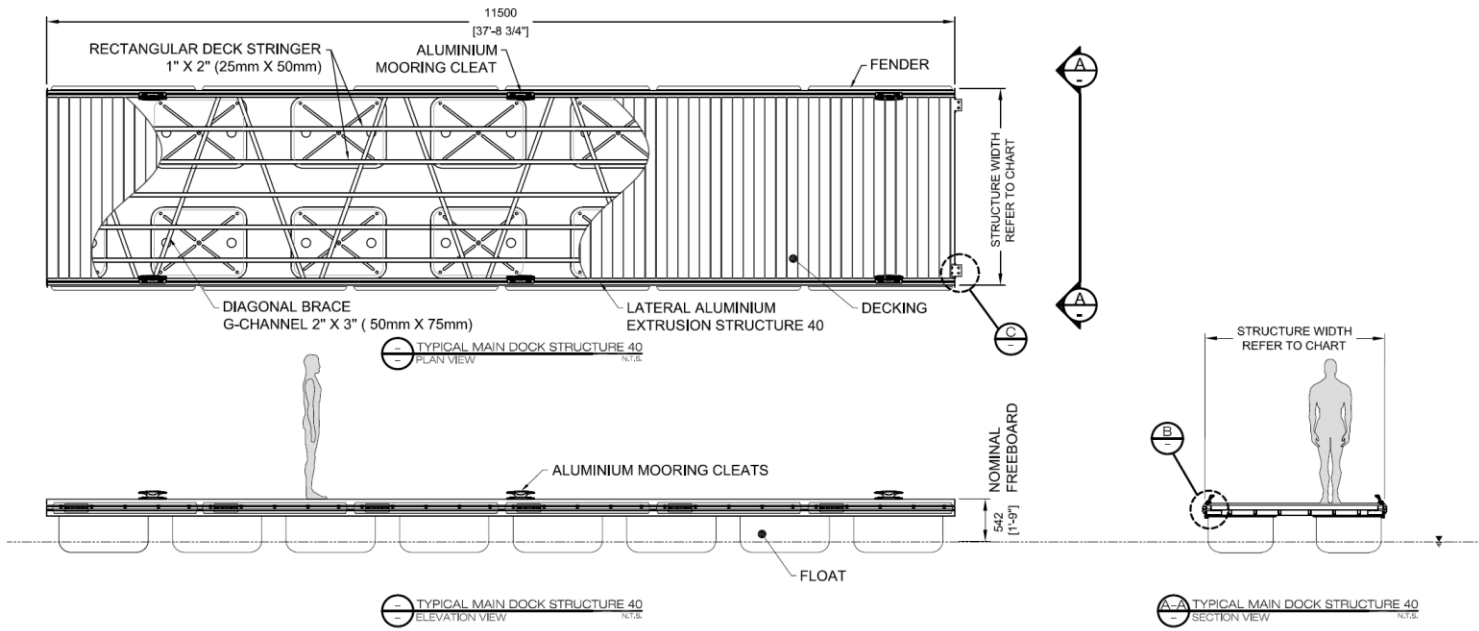


| REVISION # | DATE | DESCRIPTION | DRAWN BY | APPR. BY |
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| 1 | 2024-04-18 | GENERAL REVISION | B.G. | B.N. |

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| | |
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| PROJECT | LAKE CHAMPLAIN YACHT CLUB |
| NO PROJECT | 7987 |
| TITLE | PROPOSAL LAYOUT - section A |

| | | | |
|-------------|----------|-------------|--|
| SCALE | as shown | NO. DRAWING | 7987-PP-05 |
| DRAWN BY | B.G. | DATE | 2024-02-20 |
| APPROVED BY | B.N. | DRAWING REF | CAD drawing from client 13262 - 2022 Update LCYC Dock Plan 2.dwg |



SPECIFICATIONS:

STRUCTURE :
WELDED FRAME 6000 ALUMINIUM ALLOY EXTRUSION

WELDING :
MIG WELDS CONFORM TO CSA-W-47.2 & ANSI/AWS D1.2 STANDARDS

DECKING :
COMPOSITE WOOD DECKING 5/4\" X 6\" (25 mm X 140 mm)

FLOATS :
POLYETHYLENE SHELL 5 mm (3/16\") FILLED WITH EPS AT 16 Kg/m³ (1 LB/FT³) DENSITY. QUANTITY ACCORDING TO RESERVE OF BUOYANCY.

FENDER :
COMPOSITE WOOD

CONNECTION :
NOISE-FREE RUBBER BLOCK CONNECTION

BOLLARDS :
CASTING - ALUMINIUM ALLOY AA356

SERVICE TROUGH :
UNDER DECK
OPTION: ALUMINIUM TROUGH COVER

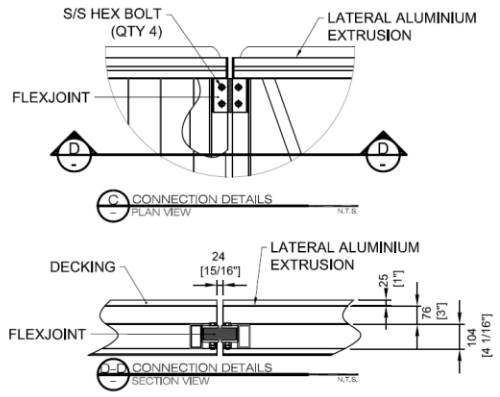
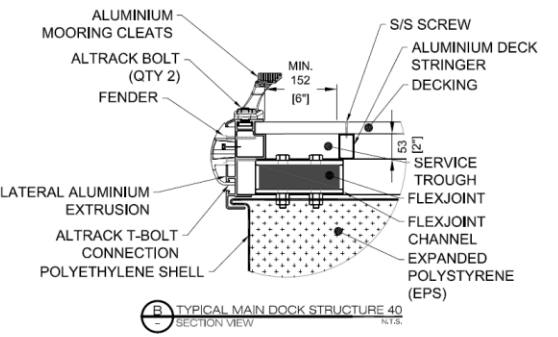
FEATURE : S/S ALTRACK \"T\" BOLT TO SECURE ACCESSORIES

WIDTH

| MODELS | IMPERIAL | METRIC |
|--------|----------|--------|
| MD-120 | 4'-0" | 1.2m |
| MD-150 | 5'-0" | 1.5m |
| MD-180 | 6'-0" | 1.8m |
| MD-200 | 6'-7" | 2.0m |
| MD-250 | 8'-3" | 2.5m |
| MD-300 | 9'-10" | 3.0m |

NOTE:

- TYPICAL DRAWING.
- DIMENSIONS SHOWN ARE NOMINAL AND MAY VARY ACCORDING TO THE APPLICATION.
- FLOATS QUANTITY IS FOR REPRESENTATION ONLY.

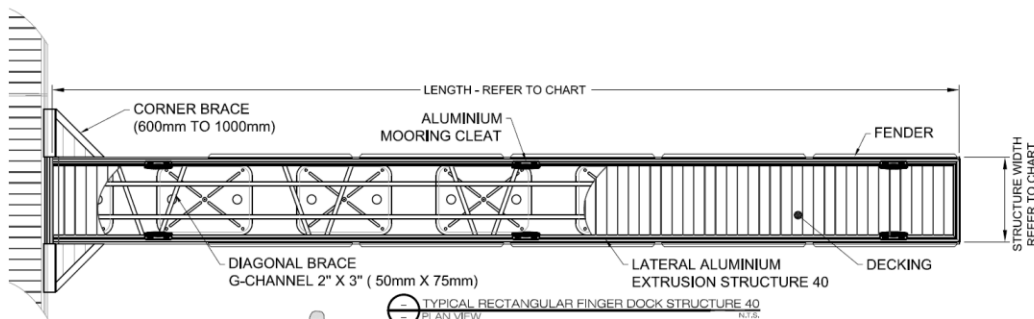


| REVISION # | DATE | DESCRIPTION | DRAWN BY | APPR. BY |
|------------|------|-------------|----------|----------|
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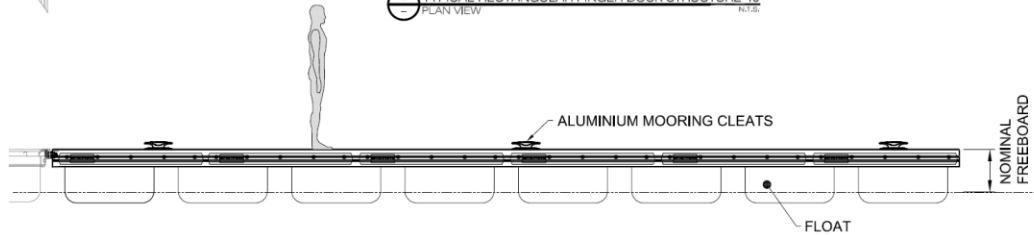
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| PROJECT | - | SCALE | N.T.S |
| NO. PROJECT | - | DRAWN BY | M.-A.M. |
| TITLE | TECHNICAL PLAN - TYPICAL MAIN DOCK - STRUCTURE 40 | APPROVED BY | |

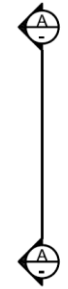
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| NO. DRAWING | TPMD-0040 |
| DATE | 25/04/2012 |
| DRAWING REF | |



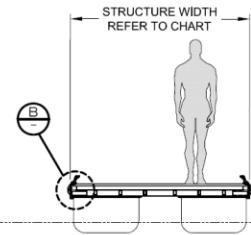
⊖ TYPICAL RECTANGULAR FINGER DOCK STRUCTURE 40
PLAN VIEW N.T.S.



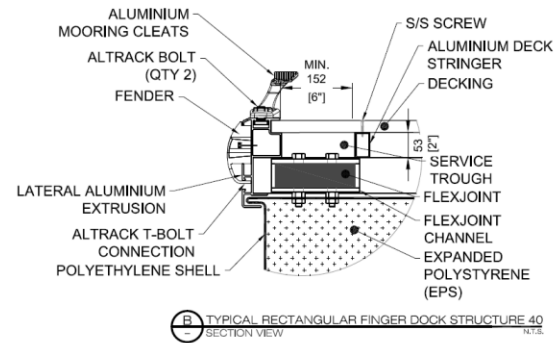
⊖ TYPICAL RECTANGULAR FINGER DOCK STRUCTURE 40
ELEVATION VIEW N.T.S.



⊖ TYPICAL RECTANGULAR FINGER DOCK STRUCTURE 40
SECTION VIEW N.T.S.



⊖ TYPICAL RECTANGULAR FINGER DOCK STRUCTURE 40
SECTION VIEW N.T.S.



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SECTION VIEW N.T.S.

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WELDING :
MIG WELDS CONFORM TO CSA-W-47.2 & ANSI/AWS D1.2 STANDARDS

DECKING :
COMPOSITE WOOD DECKING 5/4\"/>

FLOATS :
POLYETHYLENE SHELL 5 mm (3/16\") FILLED WITH EPS AT 16 Kg/m³ (1 LB/FT³) DENSITY. QUANTITY ACCORDING TO RESERVE OF BUOYANCY.

FENDER :
POLYETHYLENE

CONNECTION :
NOISE-FREE RUBBER BLOCK CONNECTION

CLEATS :
CASTING - ALUMINIUM ALLOY AA356

SERVICE TROUGH :
UNDER DECK
OPTION: ALUMINIUM TROUGH COVER

FEATURE : S/S ALTRACK \"T\" BOLT TO SECURE ACCESSORIES

FREEBOARD :
AJUSTABLE 300mm to 600mm

*LENGHT UP TO 15m
*BASE WIDTH UP TO 2.5m

- NOTE:**
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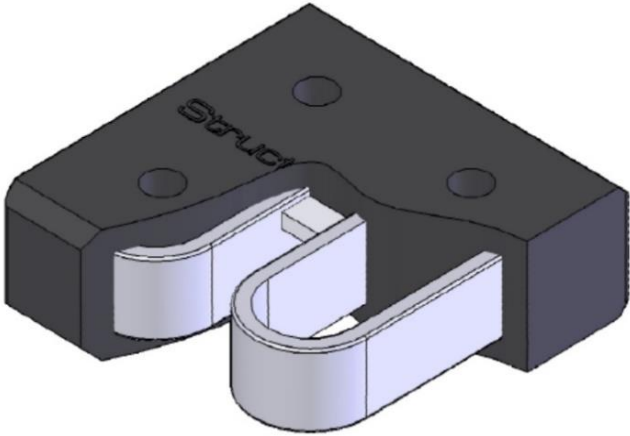
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|------------|------|-------------|----------|----------|
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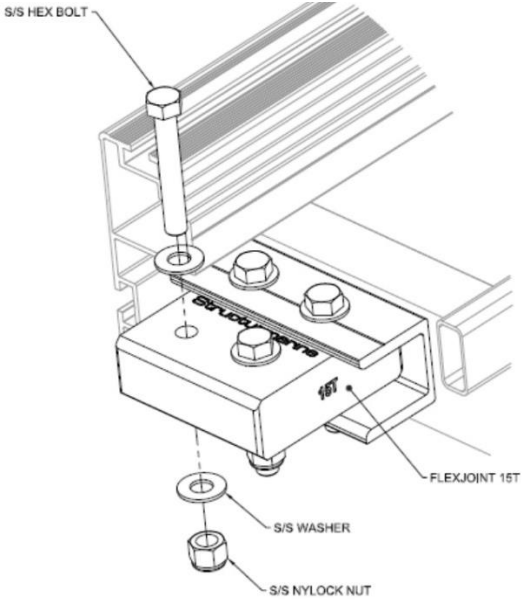
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| PROJECT | - | SCALE | N.T.S. |
| NO. PROJECT | - | DRAWN BY | M.-A.M. |
| TITLE | TECHNICAL PLAN - RECTANGULAR FINGER DOCK - STRUCTURE 40 | | |
| APPROVED BY | | DRAWING REF | |

| | |
|-------------|------------|
| NO. DRAWING | TPRFD-0040 |
| DATE | 28/05/2012 |
| DRAWING REF | 1 |

RUBBER CONNECOTRS



Structurmarine Flexjoint connector
15 Tons capacity



NOISE-FREE RUBER CONNECTOR, MADE FOR EXPOSED SITES.
SAFETY FUSE FOR EXCESIVE LOADS.



DECKING + FENDERS

Elevate™

Capped Wood Composite Decking

Strong. Dynamic. Fundamental.

Get advanced protection and beauty at a great value with our introductory capped wood composite board. Elevate provides unbeatable moisture protection with our proprietary Solid Core Difference that enables our decking to be installed on the ground, in the ground or underwater by creating an impermeable barrier that also fights damage from rot, insects and other harmful elements. Available in a curated selection of classic and premium colors with variegation for added texture and depth, Elevate composite decking allows you to create a stylish, durable outdoor environment simply and affordably.

- **Made in the USA with 95% recycled material**
- **20-Year Commercial Limited Structural Warranty and Transferable 50-Year Residential Structural Warranty**
- **30-Year Fade* and Stain Warranty**
- **Great value board**
- **1" x 6" boards available in 12', 16' and 20' lengths**
- **Available in solid and grooved edges**

*Fade up to 5 Delta E



Proprietary Solid Core



Zero Structural Field Failures in 30+ Years



Slip Resistance

Available Colors



1" x 6" Grooved Edge Board
Actual Dimensions 1" x 5.4"
Lengths 12', 16', 20'



1" x 6" Solid Edge Board
Actual Dimensions 1" x 5.4"
Length 20'



Fascia Board
Actual Dimensions 0.67" x 11.25"
Length 12'

For color availability in your region, please contact your MoistureShield representative.



MoistureShield Composite Decking Warranty

EFFECTIVE DATE:

THIS WARRANTY IS IN EFFECT FOR ALL MOISTURESHIELD DECKING PRODUCTS INSTALLED AFTER 5/01/2020

REGISTRATION

In order to be able to make a claim under this warranty, the original consumer purchaser must first activate this warranty within ninety (90) days of purchase of the Product by registering online at www.MoistureShield.com/warranty.

50 YEAR LIMITED STRUCTURAL WARRANTY COVERAGE APPLIES TO VANTAGE, ELEVATE, INFUSE, & VISION

MoistureShield composite decking used in residential decking construction (the product) for as long as the registered original consumer purchaser or the first properly registered transferee of the residence on which the MoistureShield composite deck is to be installed. This warranty covers decks installed within North America and warrants the Product (i) to be free from defects in material and manufacture and, (ii) when used for its intended purpose and properly installed and maintained according to MoistureShield's published installation instructions to (a) resist rot and (b) resist damage caused by insect or termite attacks. To be specific: this product resists rot and insect damage, but it is not rot or insect proof.

If the Product fails to conform to this warranty, then during the first year after the Product is sold, MoistureShield in its sole discretion shall replace the defective Product and/or reimburse the homeowner for all or a portion of the product at the sole discretion of MoistureShield based on extent of defectiveness of the product, as determined by MoistureShield. For every year after the first year, any warranty payment or replacement described above shall be reduced by 2% of the original purchase price each year until the fiftieth year, after which the warranty payment or replacement shall remain constant at 2% of the original purchase price. For example: if the purchaser makes a warranty claim in year five of the warranty period, the maximum eligible value of the warranty replacement materials or refund payment shall be the original purchase price reduced by 8% (2% times four years - years 2, 3, 4, and 5).

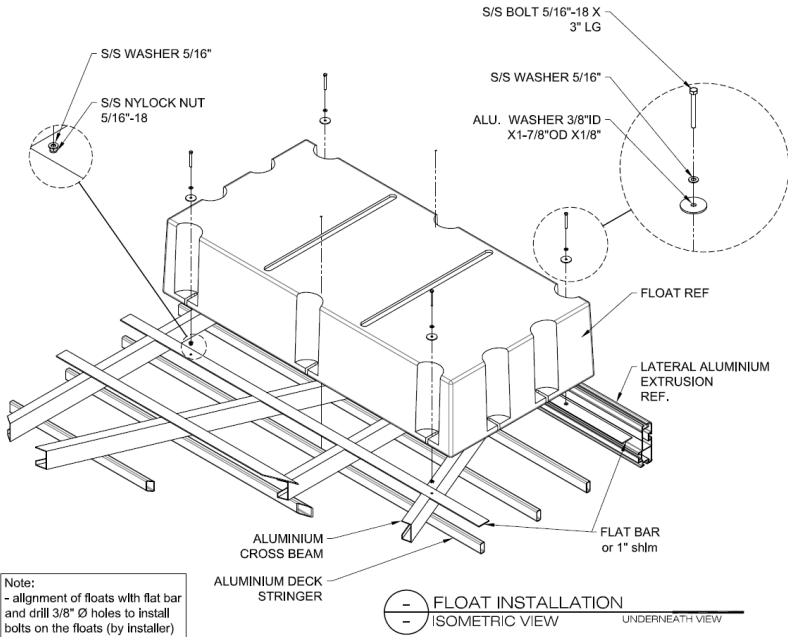
YEAR OF CLAIM PRORATED WARRANTY SCALE

| | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Yr1 100% | Yr6 90% | Yr11 80% | Yr16 70% | Yr21 60% | Yr26 50% | Yr31 40% | Yr36 30% | Yr41 20% | Yr46 10% |
| Yr2 98% | Yr7 88% | Yr12 78% | Yr17 68% | Yr22 58% | Yr27 48% | Yr32 38% | Yr37 28% | Yr42 18% | Yr47 8% |
| Yr3 96% | Yr8 86% | Yr13 76% | Yr18 66% | Yr23 56% | Yr28 46% | Yr33 36% | Yr38 26% | Yr43 16% | Yr48 6% |
| Yr4 94% | Yr9 84% | Yr14 74% | Yr19 64% | Yr24 54% | Yr29 44% | Yr34 34% | Yr39 24% | Yr44 14% | Yr49 4% |
| Yr5 92% | Yr10 82% | Yr15 72% | Yr20 62% | Yr25 52% | Yr30 42% | Yr35 32% | Yr40 22% | Yr45 12% | Yr50 2% |

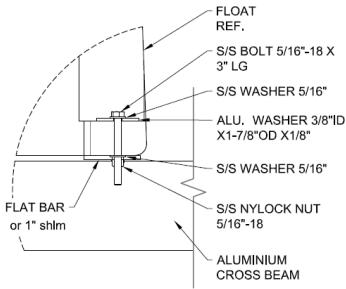
MoistureShield's replacement of the defective product or granting of a refund as described above in this warranty SHALL BE THE SOLE AND EXCLUSIVE REMEDY for any defect described in the first paragraph of this warranty. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR PURPOSE, OR OTHER WARRANTY OF QUALITY, WHETHER EXPRESS OR IMPLIED, AND ALL OTHER WARRANTIES, LIABILITIES AND OBLIGATIONS ON MoistureShield.



FLOATS

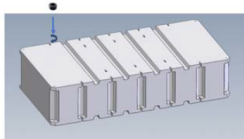


Note:
- alignment of floats with flat bar and drill 3/8" Ø holes to install bolts on the floats (by installer)



DETAIL - HARDWARE INSTALLATION

Installation Note:
- Don't forget to install the plugs before bolting the floats to the dock.
-Install the plugs on the floats only when you bolt them to the dock. (If installed too far in advance, sun floats will swell and become difficult to install.



Eagle Floats 15-Year Warranty

Hendren Plastics, Inc warrants all of its Eagle Float flotation devices to the original owner for a period of fifteen years from the date of purchase. This warranty covers cracking, peeling and ultra-violet degradation, which causes the float to lose its resiliency against strikes from boats or other watercraft under normal conditions.

Any Eagle Floats which have been subjected to alterations, accidents, misuse, negligence or ice movement are not covered by this warranty. Any damage caused by weather storms also nullifies this warranty. All floats must be properly installed and attached in order for this warranty to be in effect. Hendren Plastics will not honor this warranty on any Eagle Float which has been used for any purpose other than normal boat dock flotation.

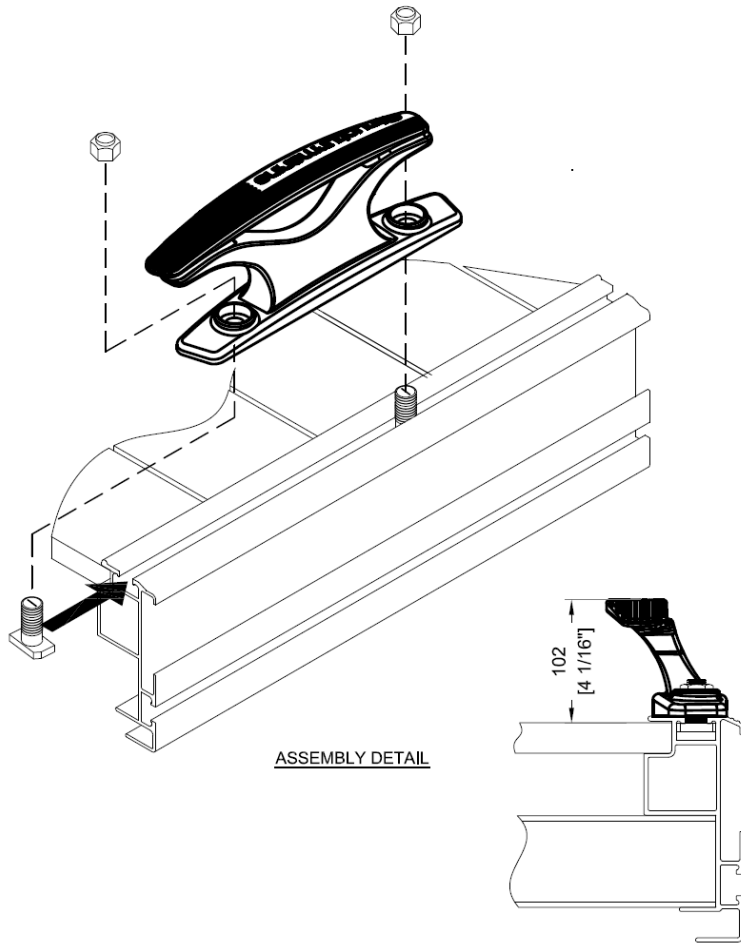
Hendren Plastics agrees to repair or replace any Eagle Float which has been determined to be defective due to poor workmanship or material only. This warranty does not cover any obligation for consequential or liquidated damages. It is the sole discretion of Hendren Plastics to determine whether a float should be repaired or replaced.

Any Eagle Float which is determined to be defective and shall be replaced under the above warranty shall be pro-rated as follows:

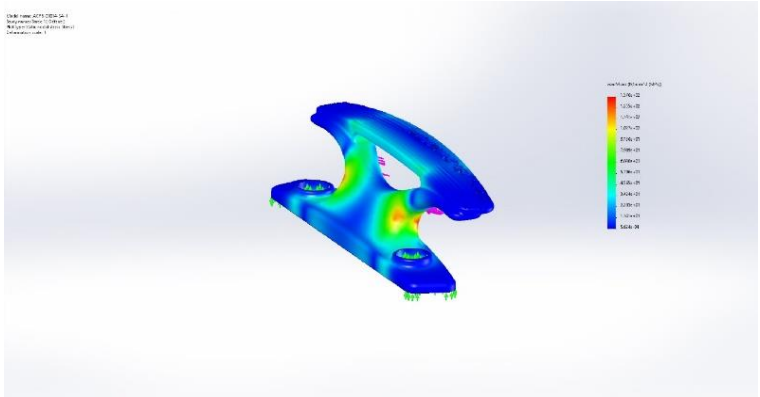
- First Ten years: 100%
- 11th & 12th year: 80%
- 13th & 14th year: 30%
- 15th year: 15%



MOORING CLEATS



ASSEMBLY DETAIL



Aluminum rail resistance

The al-track bolt is installed in one of the extrusion guide as shown in figure 1

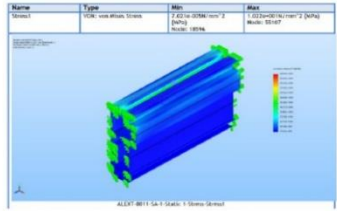
Tensile failure mode: Aluminum shear at the perimeter of the bolt flanges
 Sheared area (15,875mmx4,5mm+4,5mmx7mm*2)

Alloy 6061-T6, Fy is 240 Mpa [2]

$$Ss = Ts = (Oy), (As), (0,6), (Fy)$$

Resistance: bending stress at the base of the rail
 A digital model was produced in order to evaluate the bending stress at the base of the rail by applying a load of 1 kN

Alloy 6061-T6, Fy is 240 Mpa [2]



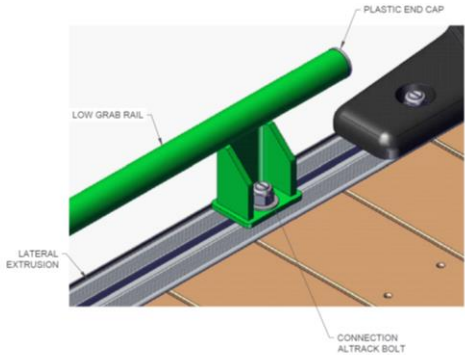
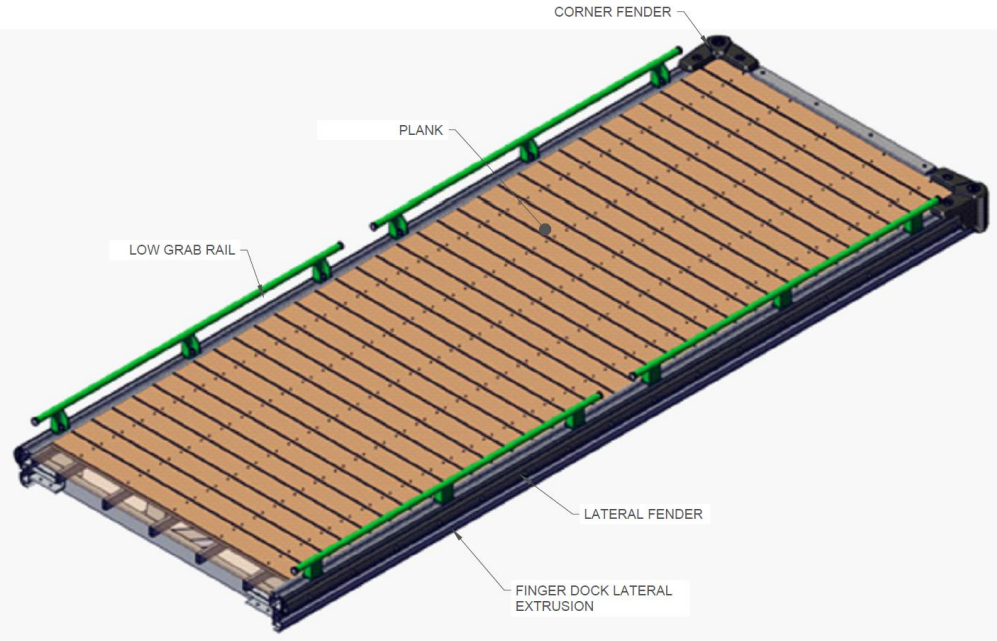
Knowing that 1 kN generates a maximum stress of 10.22 Mpa, we can deduce the Ss required to create the stress os

Taking the average load applied at 90 deg on the cleat's test, we can calculate the reactions on the two al-track bolts that connect the cleat to the extrusion

| | |
|----|------------------------|
| Oy | 0,9 |
| As | 268,9 mm ² |
| Fy | 240 Mpa |
| Ts | 35 kN 7834 lbs/bolt |
| σ | 240 Mpa |
| Os | 0,9 216 Mpa |
| Ss | 21 kN 4751 lbs/bolt |



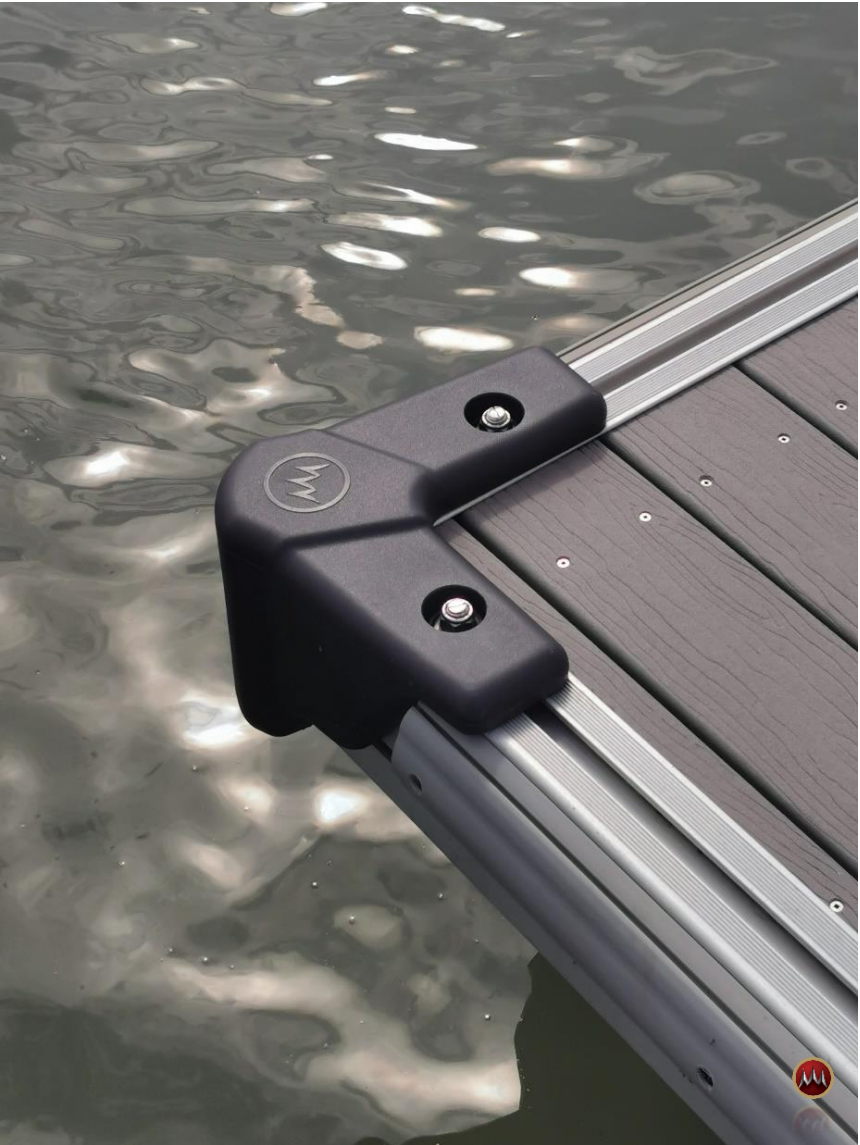
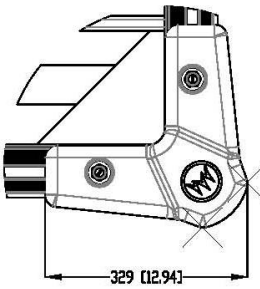
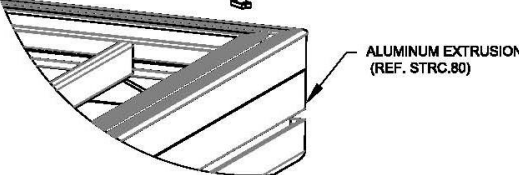
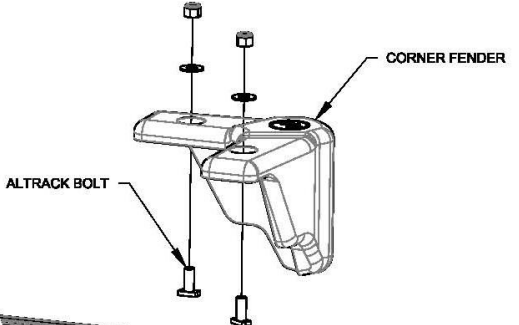
MOORING RAILS FOR DINGHIES



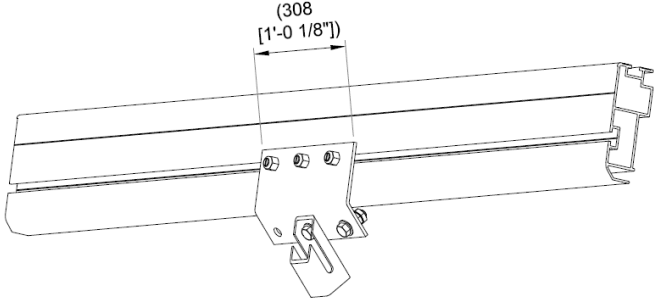
MARKER DOCK



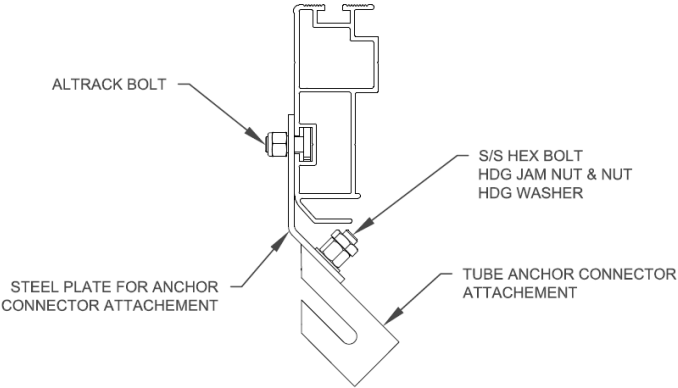
CORNER FENDERS



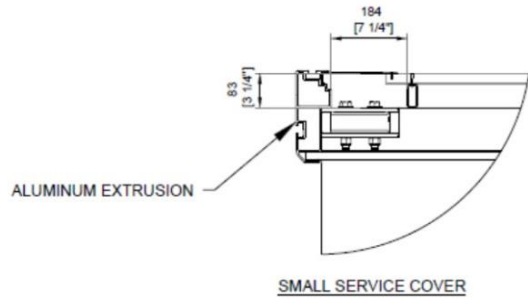
CHAIN CONNECTOR



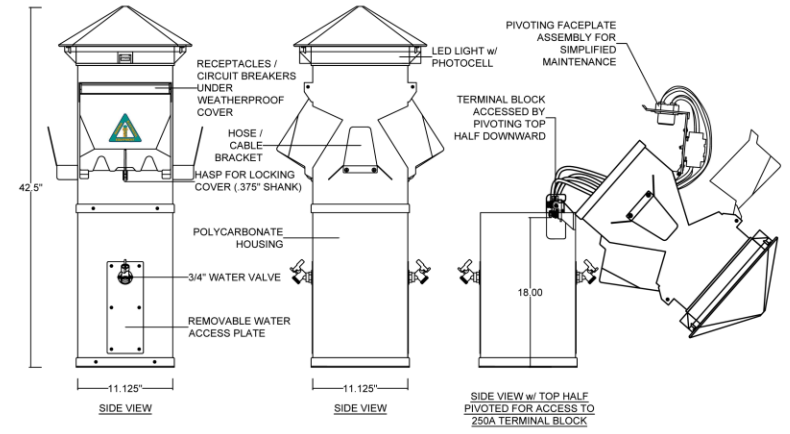
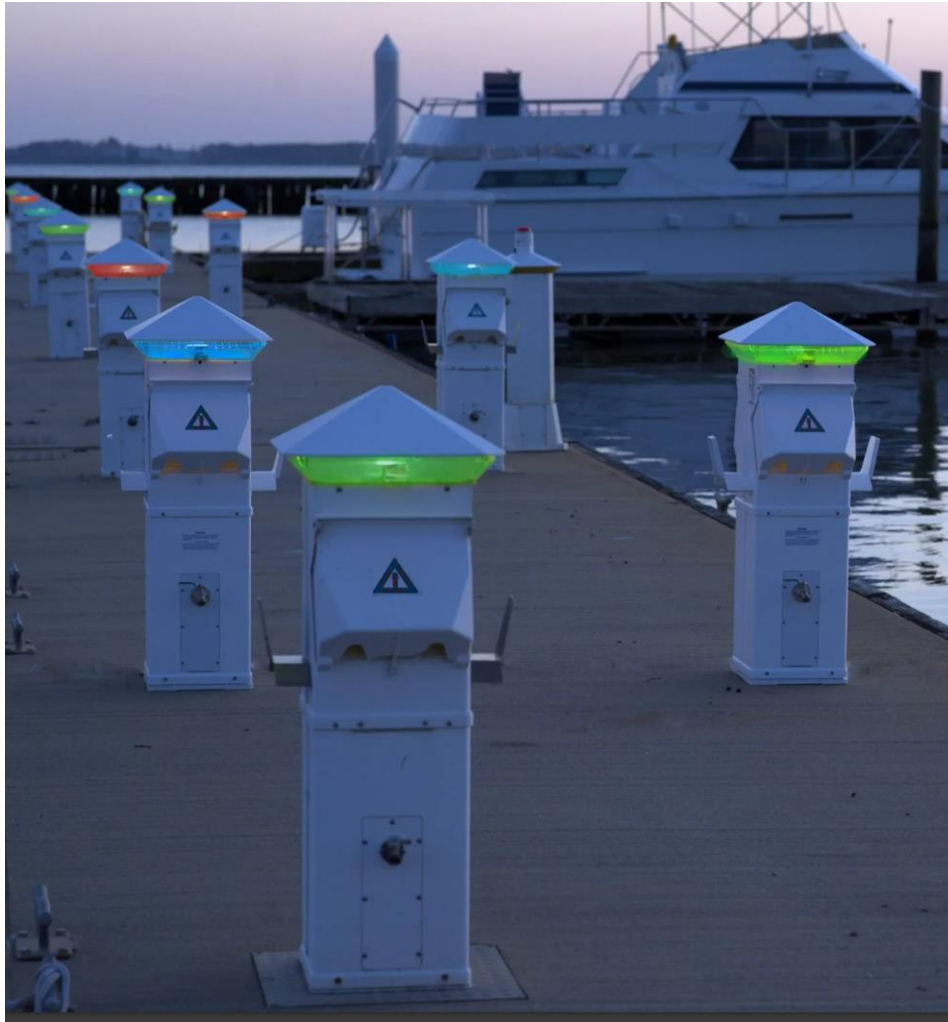
ASSEMBLY VIEW



SERVICE TROUGHS + COVER



PEDESTALS



DESIGN FOR WAVES AND HARSH ENVIRONMENT



The Best Western Waterfront Hotel in Fort Myers, Florida purchased a StructurMarine floating dock in 2016. It is large F shaped structure with plenty of tie ups for smaller or larger crafts. We are happy with the appearance and functionality of the StructurMarine dock system.

September 28, 2022 Fort Myers suffered a direct Category 5 hit from Hurricane Ian. We were directly impacted by the hurricane. I, myself, were one of the only employees left at the hotel. I personally photographed and taped the storm from a third-floor room. I never expected to see the dock again. It was completely under water for extended periods of time.

Not only did the StructurMarine dock withstand all the impact from wind and wave, after our power was restored approximately 10 days later, the blue lights that line the dock were still working. This performance was outstanding, other local marinas are in shambles, have lost everything. This performance was outstanding, other local marinas are in shambles, have lost everything. We were fortunate enough to have this strong dock in place. It was only rated for a Category 3 storm but completely withstood a Category 5 storm with some very minor repairs needed where it connects to the land walkway. We are so pleased that we invested in this dock.

Review provided: November 17, 2022

Kim Hawxhurst

Best Western Fort Myers Waterfront Inn



PROJECT REFERENCES



