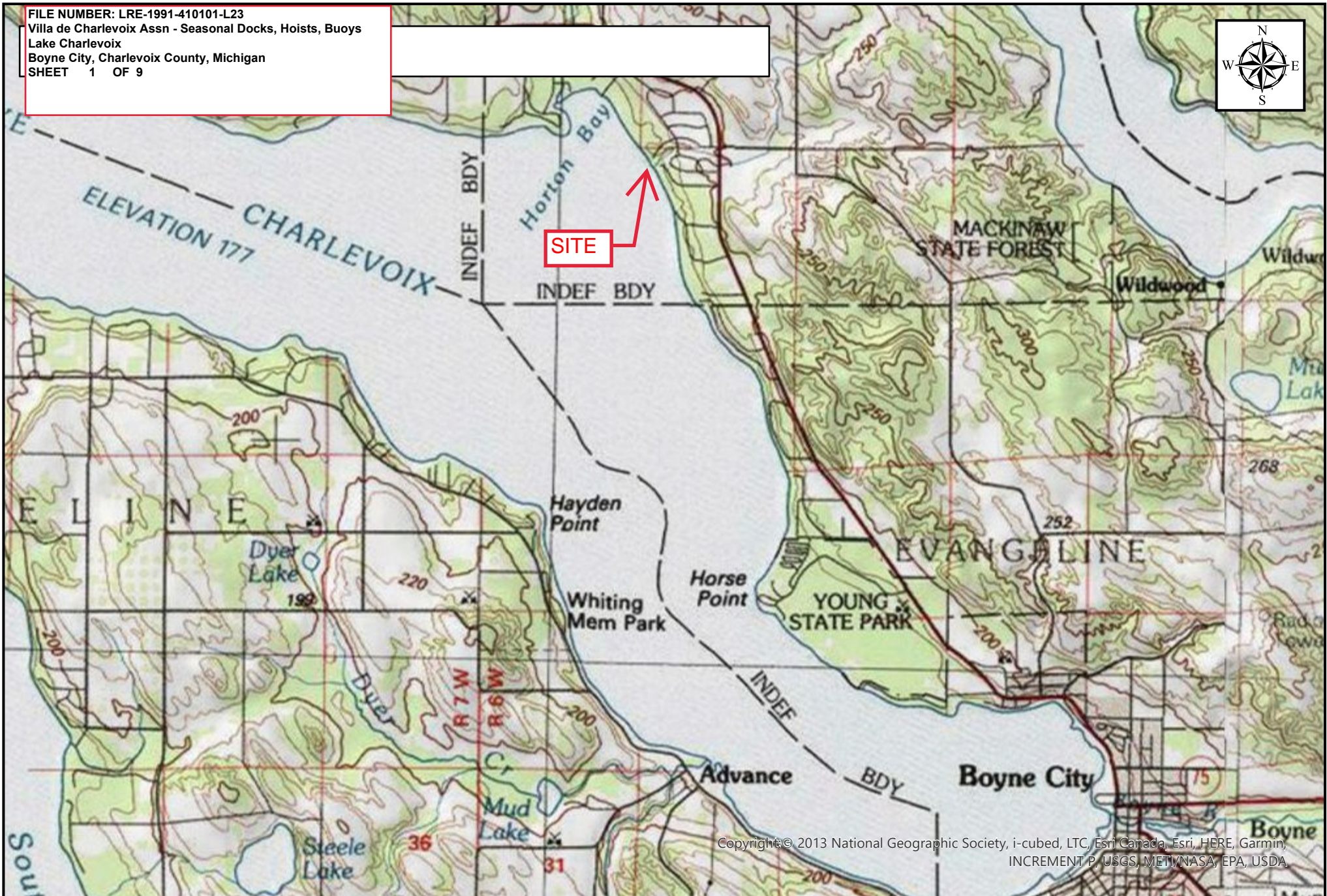


FILE NUMBER: LRE-1991-410101-L23
Villa de Charlevoix Assn - Seasonal Docks, Hoists, Buoys
Lake Charlevoix
Boyne City, Charlevoix County, Michigan
SHEET 1 OF 9



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Map Center: 85.073747°W 45.248871°N

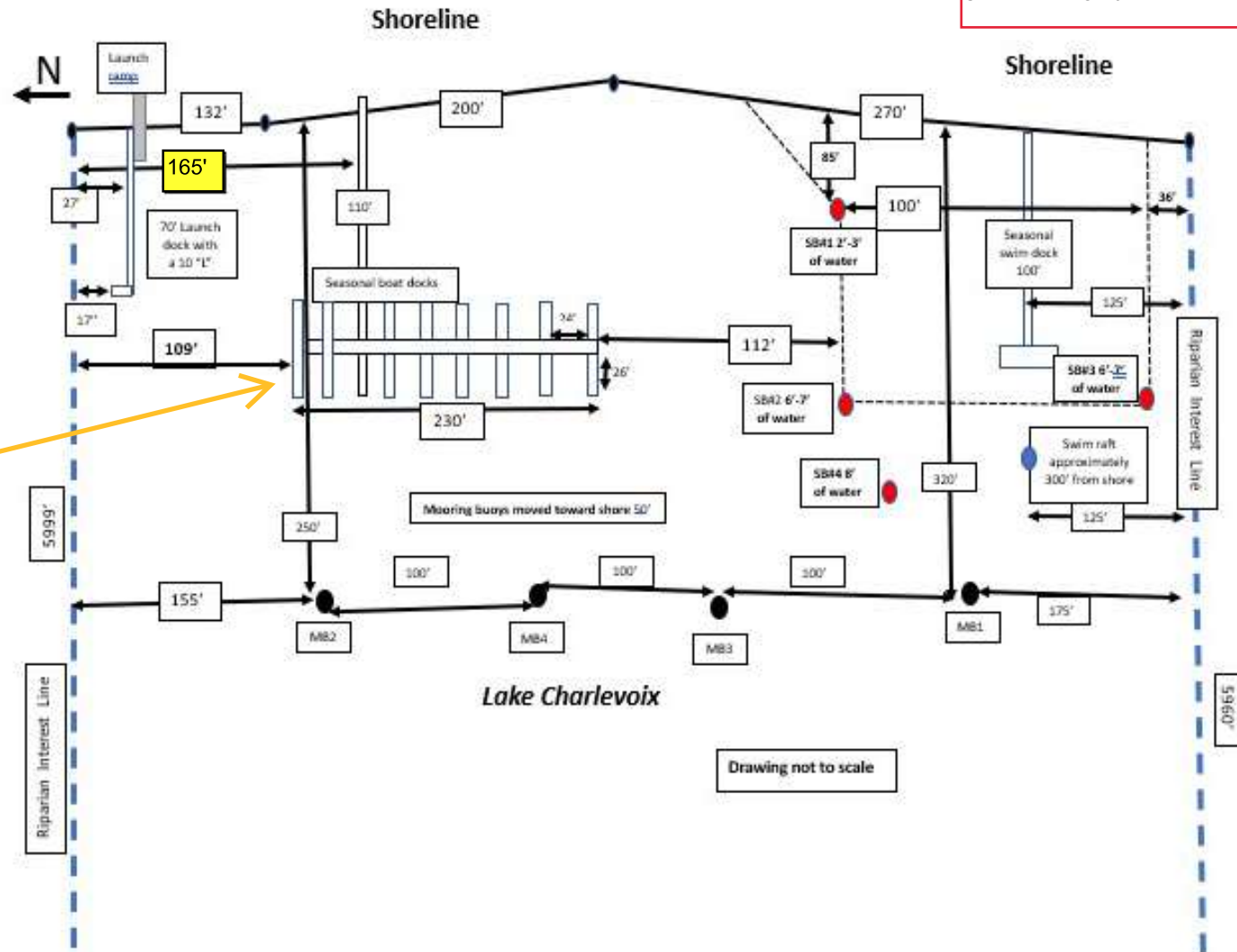
Map Created by: USACE

Date: 2/13/2024

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere

Edits in yellow/
 orange by Erin
 Emington, EGLE
 WRD 7/12/23

No slips allowed on
 the north side of
 the mooring dock



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Seasonal Structures Permitting Overall Site Plan

Scale: None	Project No.: 23-185	Drawing No.	Sheet: 8	Drawn by: hls
Date: July 10, 2023				Revised:

PREPARED FOR: Villa de Charlevoix Association
 4211 Concorde North
 Boyne City, MI 49712

PROPERTY LOCATION: Parcel 001-400-000-00
 Concorde North
 Boyne City, MI 49712

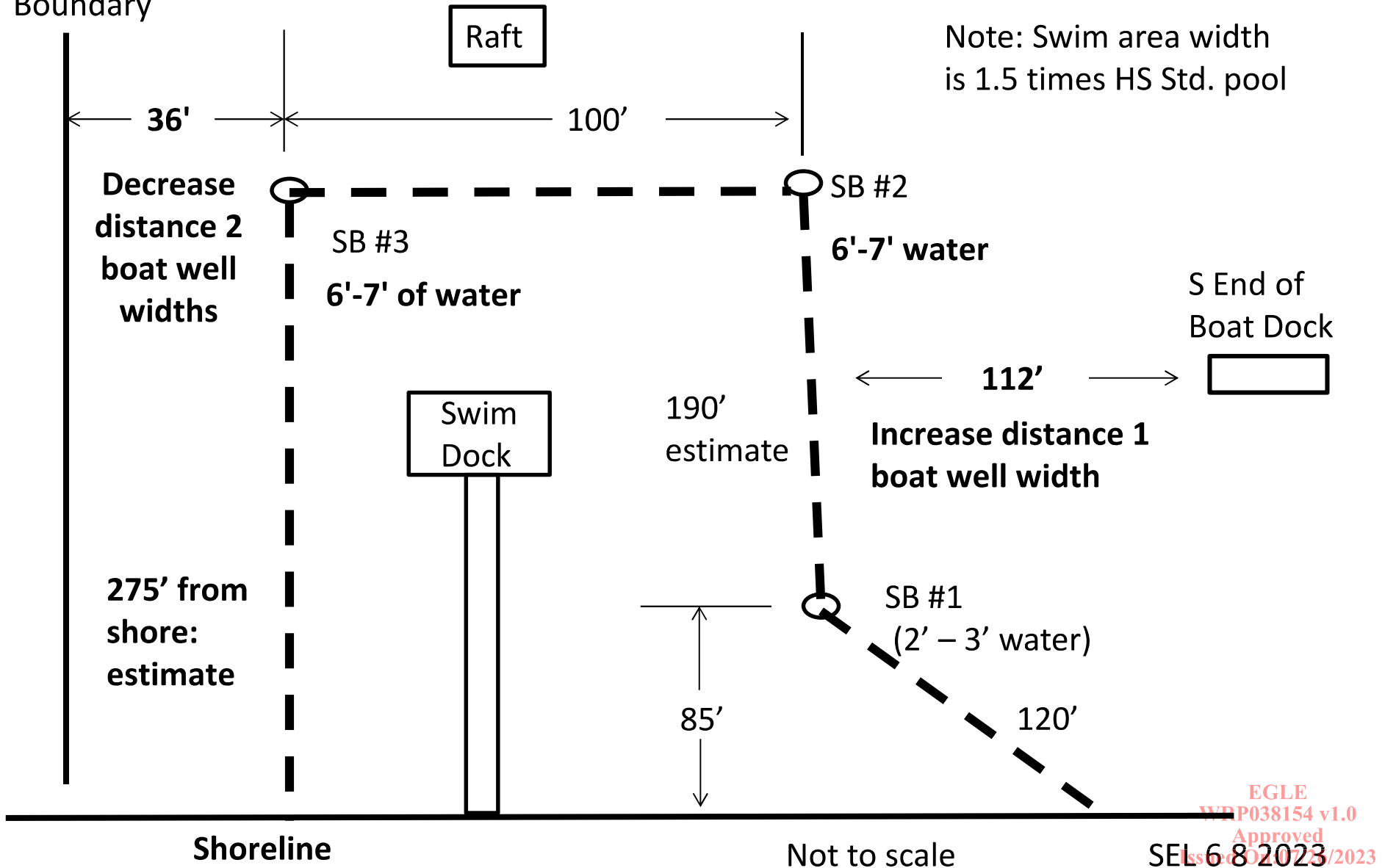
EGLE
 WRP038151 v1.0
 Approved
 Issued On: 07/26/2023
 Expires On: 07/26/2028

Villa Swim Area Diagram

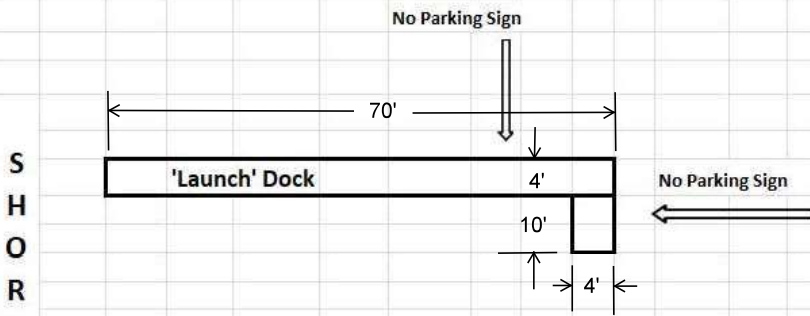
Riparian
Boundary

○
SB #4: 8' of water

Note: Swim area width
is 1.5 times HS Std. pool



VILLA LAUNCH BOAT DOCK DIAGRAM

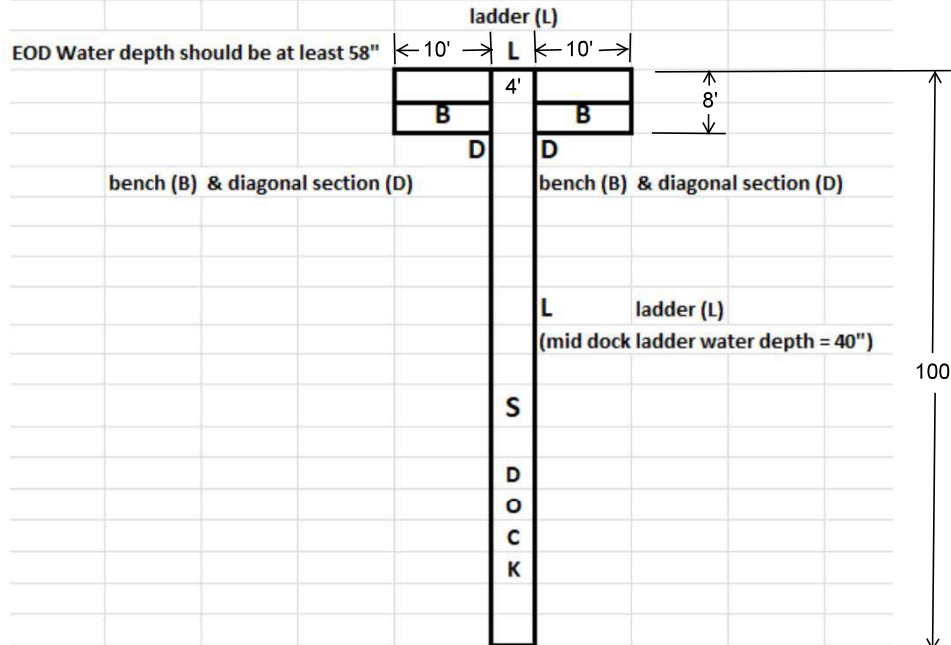


Note:

- Entrance = E-Z Dock Sections - seven (TBD) 10' dock sections straight next to cement launch drive
- end 'L' dock consists of one 10' dock sections
- top of docks shall be 25-26" above water or higher
- 1st dock section should be at least 80% on shore & along side of cement launch ramp
- Dock sections with cleats should be near and/or on 'L' dock section for vessel tie up capability

NO Bulmann Dock sections are to be used on this dock; return to shed area for reuse

VILLA SWIM DOCK DIAGRAM



Swim Dock:

- swim dock 'S' Dock ten 10' section long ;
(actual length determine by water depth)
- 5 braces at swim platform end
- top of docks shall be 29-30" above water
- 1st dock section should be at least 80% on shore

SEASONAL STRUCTURES PERMITTING

Plan View (Typical) of Boat Launch Dock & Swim Dock

Scale: As shown.	Project No.: 23-18-35	Drawing No. 3	Sheet: 3 of 7	Drawn by: spv
Date: February 16, 2023				Revised:
PREPARED FOR: Villa de Charlevoix Association 4211 Concord North Boyne City, MI 49712				Parcel 001-400-000-00 Concorde North Boyne City, MI 49712



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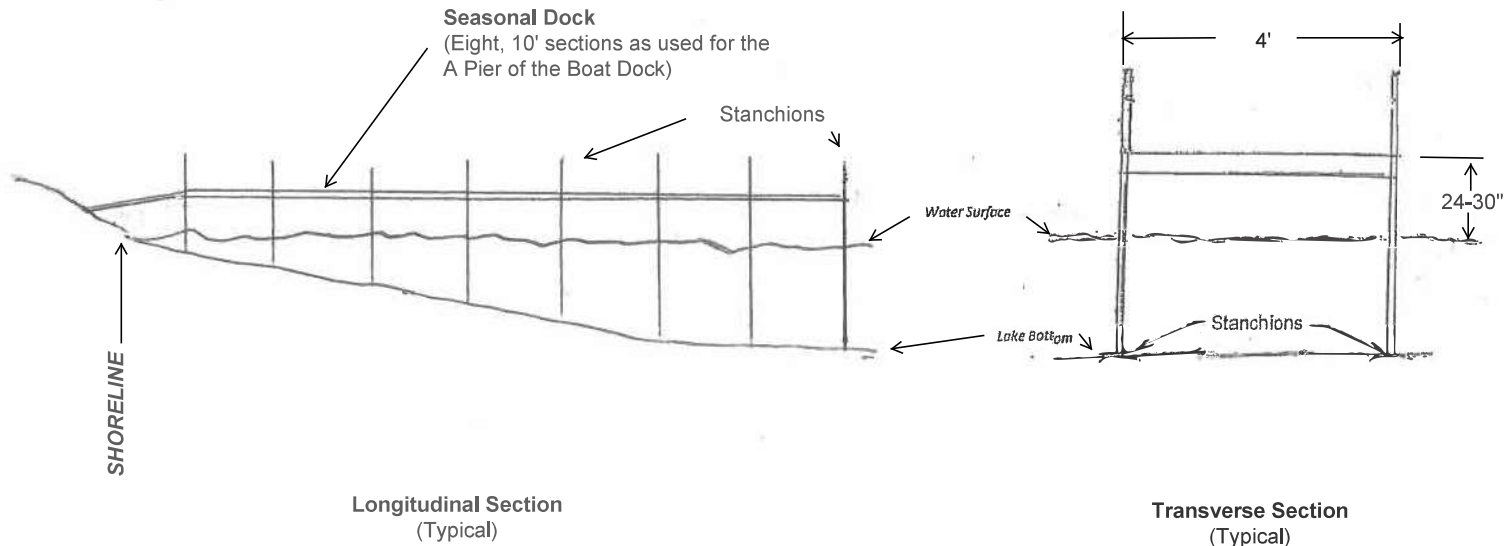
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FILE NUMBER: LRE-1991-410101-L23
 Villa de Charlevoix Assn - Seasonal Docks, Hoists, Buoys
 Lake Charlevoix
 Boyne City, Charlevoix County, Michigan
 SHEET 6 OF 9



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SEASONAL STRUCTURES PERMITTING Docks - Typical Sections

Scale: As shown.	Project No.: 23-1835	Drawing No. 4	Sheet: 4 of 7	Drawn by: spv
Date: February 16, 2023				Revised:

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VILLA DE CHARLEVOIX -- INDIVIDUAL MOORING BOUY DETAILS

- Mooring #1 consists of a 500 lbs Dor Mor Anchor, 15' 5/8" heavy chain, swivel shackle, 10' 3/8" chain; added 20' 3/8 " chain 6/25/2019 due to high water, non-movable –anchored into drop off bank, swing radius about 30'.
- Mooring #2 consists of a 400 # mushroom anchor, 30 feet of 1 inch chain (about 900 #s), a new swivel shackle, nominally 15 feet of 3/8 inch chain, a second swivel shackle, nominally 15 feet of 3/8 chain, non-movable, swing radius about 30'.
- Mooring #3 consists of 900# concrete square block, 10' of high strength 5/15" chain, 150# cylinder concrete block counter weight, 34' of high strength 3/8" chain to mooring ball. Movable- mooring location based on dock location safe clearance, swing radius about 35'.
- Mooring #4 consists of a 400 # mushroom anchor, 30 feet of 1 inch chain (about 900 #s), swivel shackle, nominally 15 feet of 3/8 inch chain, a second swivel shackle, nominally 15 feet of 3/8 chain, non-movable, swing radius about 30'.
- All mooring balls are 24" diameter and seasonally installed and removed; the mooring anchors are permanent i.e. they are left in the water and marked with ice buoys for winter season.
- Moored boats are limited to non beachable, self bailing, displacement type vessels and limited from 26 to 32 foot lengths with a nominal displacement from 5,000 to 12,500 pounds. Mooring #2 (Wilson mooring) shall be permitted to accommodate 26 to 36 foot vessels.



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SEASONAL STRUCTURES PERMITTING Mooring Buoys

Scale: As shown.	Project No.: 23-1835	Drawing No. 6	Sheet: 6 of 7	Drawn by: spv
Date: February 16, 2023				Revised:

PREPARED FOR: Villa de Charlevoix Association
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PROPERTY LOCATION: Parcel 001-400-000-00
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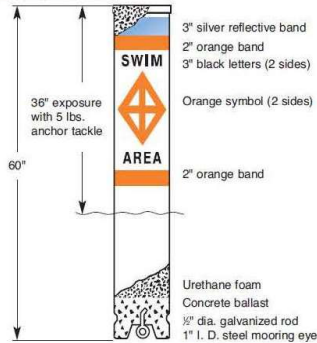
FILE NUMBER: LRE-1991-410101-L23
Villa de Charlevoix Assn - Seasonal Docks, Hoists, Buoys
Lake Charlevoix
Boyne City, Charlevoix County, Michigan
SHEET 8 OF 9

Regulatory Buoys • ABS type – 9" Dia.

Approved and universally used by local, state and federal agencies to ensure water safety. Ideal for private applications.

1

UNSINKABLE — filled with urethane foam



Specify desired symbols and messages when ordering.

Submerged buoyancy 84 lbs.
Net weight 49 lbs.

Model B1147R

Features

- Easy reconditioning of weather-worn buoys with excellent adhesion of restoration materials. See page 18.
- 9" diameter, white, ABS plastic exterior. Will not rust, chip or peel. Ultraviolet inhibited.
- Completely urethane foam filled. Virtually unsinkable.
- 3"-wide reflective band at top provides excellent nighttime visibility.
- Self-righting without tackle.
- Recessed cap allows buoy to stand upright.
- Heavy steel galvanized anchoring eye cast in an internal concrete ballast.
- Includes choice of standard symbols and messages.

Available Options

- Pickup eye built into top.
- Stainless steel anchoring eye for salt water applications.
- Agency or name identification.
- Cone cap top.
- Special non-standard messages.
- Solar lights (see page 11).
- Available in yellow.

Rope floats are: 3" x 5" (orn/wht/orn)

Rope Floats

FEATURES

- Self lock.
- Use for swim area.

Model Number	Lock-on Float Styles	Dia. and Length	Description	Net Wt.
B035LO		3" x 5"	1/2" dia. hole, orange/white/orange polyethylene shell. Ultraviolet inhibited. Lock on rope without fastener.	.12 lbs.
B059LO		5" x 9"	Orange/white/orange.	.42 lbs.
B139R3	Rope	1/2" x 300	1/2" orange and white twisted polypropylene rope, 300' reel 600' reel	35 lbs.
B139R6		1/2" x 600		65 lbs.

SEASONAL STRUCTURES PERMITTING

Swim Area Buoys and Swim Lines

Scale: As shown.
Date: February 16, 2023
Project No.: 23-1835
Drawing No.: 7
Sheet: 7 of 7
Drawn by: spv
Revised:

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Boat Slip, Hoist & Canopy Maximum Dimensions

Boat Slip

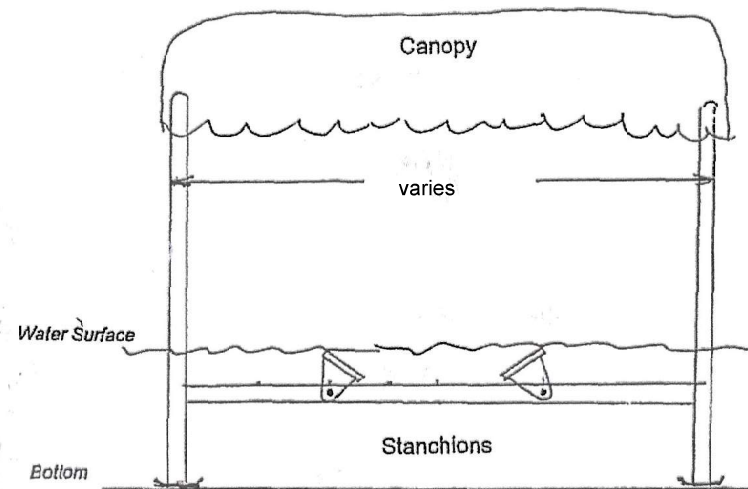
- Maximum Width - 12'
- Maximum Length - 28'

Boat Hoist

- Maximum Width - 12'
- Maximum Length - 28'

Boat Canopy

- Maximum Width - 12'
- Maximum Length - 28'



BOAT HOIST

Typical Section



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SEASONAL STRUCTURES PERMITTING

Boat Hoist & Canopy Details

Scale: As shown.

Date: July 17, 2023

Project No.:

23-18-35

Drawing No.

5

Sheet:

5 of 7

Drawn by: RLK

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