

Lakes & Waterways Advisory Board

May 9, 2017 12:00 noon

Chief Beary Community Room, 2 nd floor 500 N. Virginia Ave. • Winter Park, Florida



1 administrative

- a. Citizen Comments
- b. Approve February, 2017, Meeting Minutes
- c. New Ideas

2 action items

- Review Lakes Shoreline Vegetation Door Hanger
- Shoreline Permit Applications:
 - SAP 17-01 Request of John and MC Trbovich to build a boathouse/dock at 716 N.
 Interlachen Ave. on Lake Osceola
 - SAP 17-02 Request of Virgil Schenck to build a revetment/seawall at 260 Trismen Terrace on Lake Osceola
 - o SAP 17-03 Request of James W. Heavener Dynasty Trust to install a boat lift rail system at 850 Via Lugano on Lake Maitland.

3 reports

Lakes Management
WP Police Lakes Patrol
City of Maitland Update

Stormwater Management Sustainability

4 new business

5 adjourn

Next meeting date – June 13, 2017

appeals & assistance

"If a person decides to appeal any decision made by the Commission with respect to any matter considered at such meeting or hearing, he/she will need a record of the proceedings, and that, for such purpose, he/she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based." (F. S. 286.0105).

"Persons with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk's Office (407-599-3277) at least 48 hours in advance of the meeting."

13CITY OF WINTER PARK LAKES AND WATERWAYS ADVISORY BOARD

Regular Meeting 500 N. Virginia Ave Beary Community Room

MINUTES

February 14, 2017 12:00 pm

Present: Nora Miller, John Minton, Steven DiClemente, Doug Marks, Geoff Bedine (telephone), Jim Barnes and Jack Goggin

Absent: Amy Byrd

City of Winter Park Staff: Don Marcotte, Asst. Public Works Dir/Stormwater Engineer; Tim Egan, Water Quality and NPDES Compliance Manager; Amy Giannotti, Lakes Manager; Abby Gulden, Sustainability Coordinator; Debbie Wilkerson, Recording Secretary

Guests: Paul Ritter – City of Maitland, Jody Lazaro – Winter Park Library and Peter Gottfried, City Planning and Zoning Board

CALL TO ORDER. Acting Chm. Steve DiClemente called the Lakes and Waterways Advisory Board to order at 12:10 pm.

administration

Approval of Minutes

Acting Chm DiClemente asked for approval of the January 10, 2017, minutes, Mr. Goggin moved to approve the January 10, 2017, meeting minutes as presented.; seconded by Mr. Marks. Motion carried with a 7-0 vote.

Citizen Comments - None

New Ideas - None

Recognition of Lakes Division Staff

Mr. Di Clemente thanked the Lakes staff for all their hard work.

Action items

Educational Handout for Lakeshore Homeowners

After discussion the Board agreed to add a phone number to the handout. Mr. DiClemente moved to approve the handout as revised, adding a phone number and correcting a grammatical error, seconded by Mr. Marks, motion carried 7-0.

Shoreline Applications - None

reports

Lake Management

Introduction of Lakes Division Staff

Ms. Giannotti used a PowerPoint presentation to introduce the Lakes staff. It contained details of their jobs, length of time with the city and fun facts. The Board expressed their appreciation for all that the Lakes staff do to keep Winter Park lakes clean.

CITY OF WINTER PARKMarch 16LAKES AND WATERWAYS ADVISORY BOARD February 14, 2017- Page 2 of 2

Lakes Patrol - WP Police

Sgt. Locke reported that routine lakes patrol will start again in April.

City of Maitland - Paul Ritter

Mr. Ritter thanked the Lakes Division for their help in cleaning up Lk. Wampi. He updated the Board of the following projects, Lk. Nina tussock removal, Monroe Ave. drainage boxes, DEP letter stating Maitland has no tmdl's, Maitland is launching a new city logo, Lk Jem dredging project, and status of Dog Island.

Stormwater Management - Don Marcotte

Mr. Marcotte stated that two projects are going out to bid this month, Lk Sylvan Outfall and Lee Rd Outfall. Drainage improvement projects include Center Street and Canton Ave, Arbor Park Dr., Fawcett Rd., Rippling Ln and two pond projects, Nicolet Pond and Howell Pond. City Commission approved revised ordinance which will allow staff to levy fine against illicit discharge violations and other NPDES issues on Center Street. Rollins stormwater trails signs are being manufactured. We are going to begin GIS mapping of inlets and stormwater drains.

Sustainability Report - Abby Gulden

Ms. Gulden provided dates for 2017 watershed cleanups:

The Lk Chilton and Lk Sue clean-up had over 90 participants and collected over 850 pounds of trash. 100 UCF Knights volunteers will be on hand for the Lk Killarney clean up. Lk Bell and Lk Wildness cleanup will take place on April 1. The City will host a volunteer appreciation event. Apple snail clean-up will begin when their mating season starts.

EnviroScape Presentation

Ms. Giannotti presented EnviroScape, a watershed model that show the impacts of rain. The three-dimensional landscape illustrates residential, recreational, agricultural, industrial and transportation areas as possible sources of water pollution.

Ms. Gulden commented that she was able to purchase smaller watershed models from the Keep Winter Park Beautiful grant and she will be presenting one to each of the winners of the Green School Grants.

adjourn

Meeting adjourned at 12:35 p.m. Next meeting date March 14, 2017.

Respectfully submitted,

Debbie Wilkerson

Debbie Wilkerson Recording Secretary



CITY OF WINTER PARK SHORELINE ALTERATION PERMIT APPLICATION

Amt: \$<u>75</u> Check#: <u>146</u> Date: <u>4-10-17</u>

General Instructions: To request approval of a Shoreline Alteration Permit Application complete this application and submit to Public Works Department (500 N. Virginia Ave., Winter Park, FL 32789) along with the applicable fee and all additional information necessary for public hearing before the Lakes & Waterways Advisory Board. All required must be submitted with application. **Two complete sets of the application and plans are required**. (Signed and sealed plans are **NOT** required for the Shoreline Alteration Permit)

DEADLINE IS THE SECOND TUESDAY OF EACH MONTH FOR HEARING IN THE FOLLOWING MONTH.

SAP 17 : 01	Water Body: Osceola	
	(Lake, Canal, etc.)	
□ \$50.00 Fee for Docks Only	\$75. Fee for Boathouse & Dock	
APPLICANT/CONTRACTOR	OWNER	
Wise Marine Construction, Inc.	John and MC Trbovich	
P.O. Box 520524	716 N. Interlachen Ave	
Longwood, Fl 32750	Winter Park, FI 32789	
Phone: 407-297-0181	Phone: (407) 838-1404	
Email: marinewise@gmail.com	Email:John@arsenalvp.com	
Is the property under contract for purchase or	r lease?	
If the applicant is NOT the owner, attach a copy of the purchase or lease contract or option on the property, or a letter signed by the owner of record authorizing the applicant to act as agent for the owner. This information is requested to establish the legal status of the applicant and will be held in confidence, except as the information pertains to the zoning application		
Is the contract for purchase or lease continger	nt upon approval of this application? ☐ Yes ☐ No	
PROPERTY Street Address:(if different):	Name of lake, canal or stream	
	Osceola	

Shoreline Alteration Permit Application Staff Report (Dock/Boathouse)

Application #: 17:01

WATERBODY: Lake Osceola

Date: 04/25/17

APPLICANT NAME AND SITE ADDRESS:

John and MC Trbovich, 716 N. Interlachen Avenue, Winter Park, FL 32789

Dock Parameter	Proposed	Allowed	Variance yes/no/n.a.
Total Area (sq. feet)	464	600 max.	n/a
Length from OHW (feet)	30	30	n/a
Height of Roof (feet above deck)	11	11 max.	n/a
Height of Deck (feet above OHW)	2	2 max.	n/a
Side Yard Setback(s) (feet)	5	10 min.*	n/a
Meets Vegetation Criteria?	Yes	n/a	n/a

^{*} Side yard setback may be reduced to 5 feet without a variance if a signed letter of no objection is obtained from the affected adjacent property owner.

Comments:

Letter of no objection from adjacent property owner for the 5' side yard setback has been received.

Contractor has been notified that the following sketch revisions are required:

On the Plan View drawing, please change the term "Shoreline" to "OHW" or "Ordinary High Water" and show the elevation of 66.5 (NGVD) or 65.7 (NAVD).

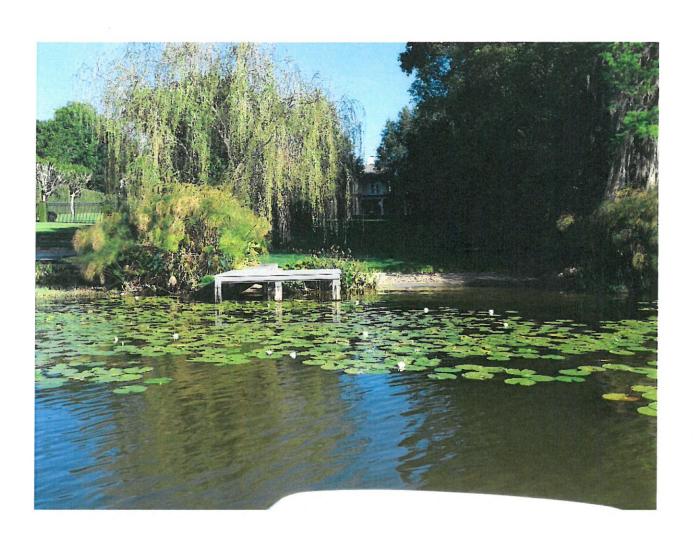
On the construction detail sketch, the bottom of the roof is shown at 11' above the deck. Please revise to show the peak of the roof no higher than 11' above the deck.

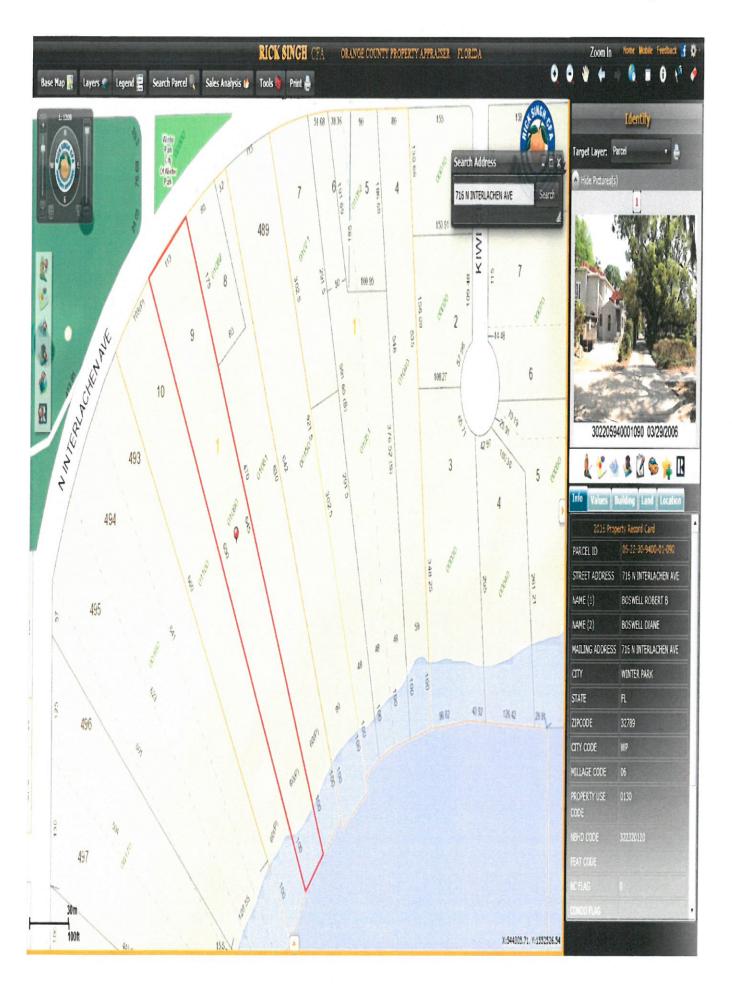
Staff Recommendation:

Approval (pending receipt of revised sketches) with one (1) condition.

<u>Condition 1.</u> Vegetation currently meets standards. All existing vegetation must remain throughout all phases of the project. If any vegetation is to be disturbed, a Shoreline Alteration Permit for vegetation removal must be obtained from the Lakes Division (407-599-3578) **prior** to the work commencing.

Reviewed By: Timothy Egan





City of Winter Park BOATDOCK/BOATHOUSE SITE PLAN APPLICATION GUIDELINES

Hearing Dates:

All dock and boathouse site plans are reviewed and decided upon by the Lakes and Waterways Advisory Board at their regular monthly meetings. Meetings are held every month on the second Tuesday, at 12:00 noon, at the Winter Park Public Safety Building located at 500 N. Virginia Avenue, Winter Park, FL 32789 in the Chief Beary Community Room, 2nd floor. Applicants may attend these meetings, but their presence is not required.

Submittal Deadline:

Site plan applications must be received by the Public Works Department by the second Tuesday of the month, for hearing at the next month's Lakes Board meeting. Due to notification requirements within the City Code of Ordinances, applications received later than the second Tuesday of the month will be held for hearing at the next possible meeting.

CURRENT DOCK/BOATHOUSE ALLOWANCES AND RESTRICTIONS:

Dock Parameter	Allowed
Total Area	600 square feet (max.), includes boat slip(s).
	30 feet (max.) from ordinary high water line (OHW)*,
Length	50 feet (max.) from OHW on Lake Killarney
Height of Roof	11(max.) above the deck.
Height of Deck	1.0 foot (min.) above OHW, 2.0 feet (max.) above OHW
Side Yard Setback(s) **	10 feet (min.)

^{*} OHW is set by code for each lake. See table below.

Ordinary High Water (OHW) Elevations:

Lakes Virginia, Mizell, Osceola and Maitland	66.5 feet, NGVD
Lake Berry	70.2 feet, NGVD
Lake Spier	90.5 feet, NGVD
All Others	Call for OHW

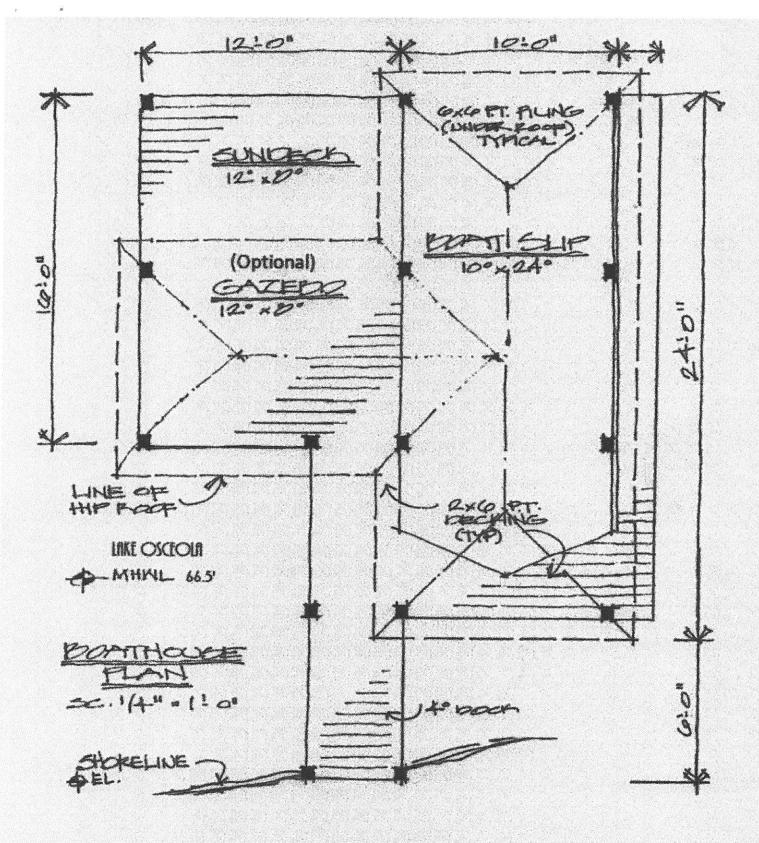
Questions:

Direct questions to Tim Egan at (407) 599-3599, or by e-mail to tegan@cityofwinterpark.org

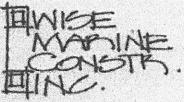
^{**} Side yard setback may be reduced to 5 feet without a variance if a signed letter of no objection is obtained from the affected, adjacent property owner.

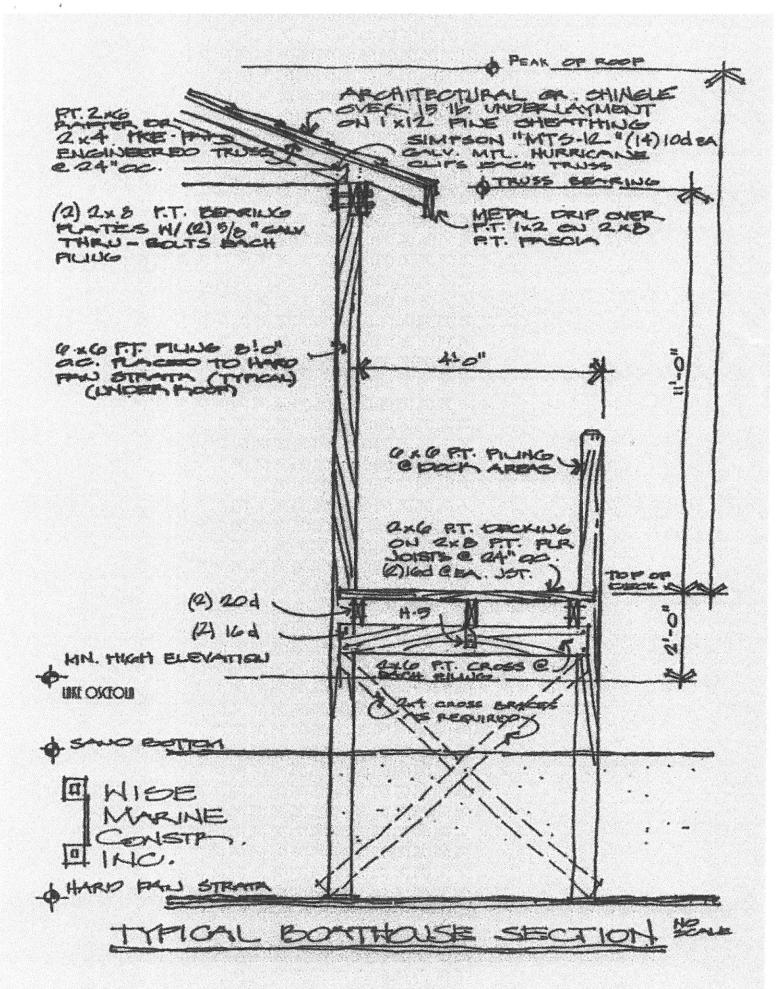
05-22-30-9400-01-090 PARCEL NO: (same as tax ID numb	er of Orange County property tax records)
Legal Description : Provide complete and accurate legal d and Page Number OR attach a copy of the legal description	
TOWN OF WINTER PARK A/67 & B/86 & M	ISC BOOK 3/220 LOT 9 BLK 1
CERTIFICATION	
I certify that, to the best of my knowledge and belief, al application is true and accurate, and that I am:	ll information supplied with this
 □ the owner of the property described herein □ a party to an agreement for purchase or lease of t X an agent for the owner or purchaser/lessee of this 	1 1 2
Cler	4/2/16
Signature	Date

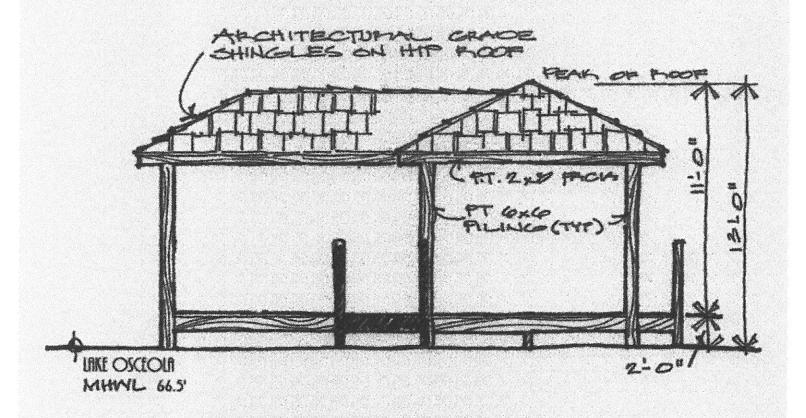
SHORELINE ALTERANTION APPROAVAL IS REQUIRED PRIOR TO SUBMITTING FOR A BUILDING PERMIT



JOHN AND M.CTRBOWOI 716 N. INTERLACHEN AVE WINTER PARK, FL 32789



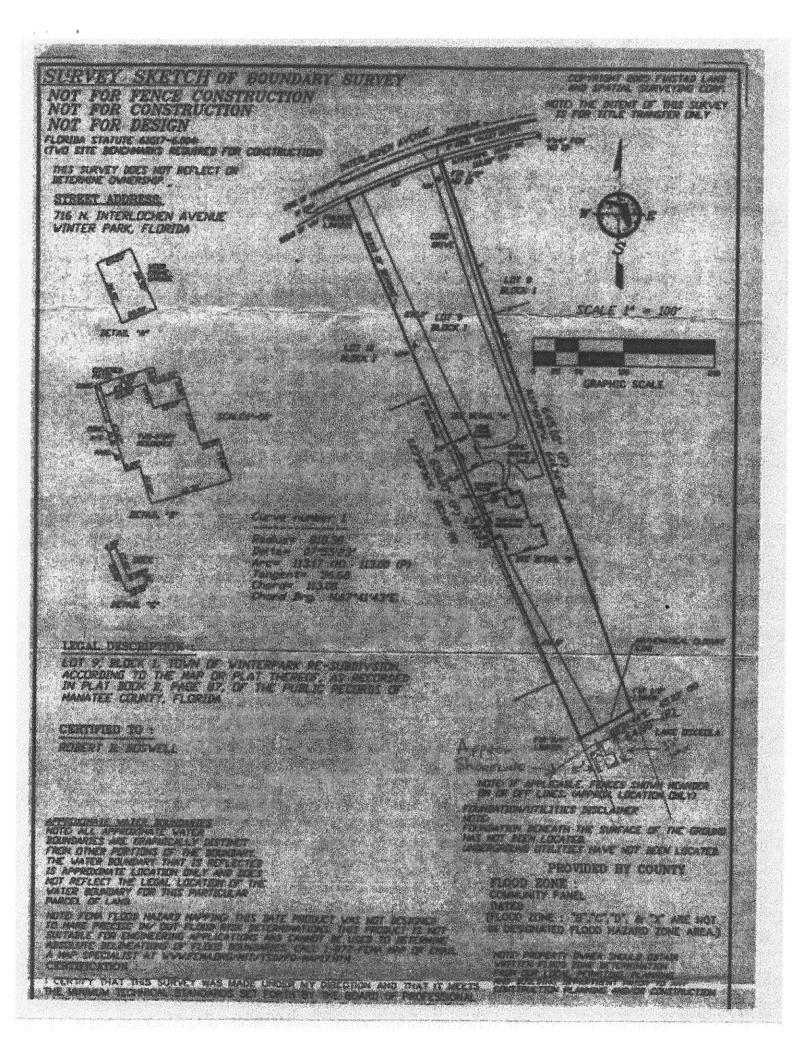




SHOPESIDE ELEVATION

JOHN AND M.C. TREOVICE 716 N. INTERLACIEN AVE WINTER PARK, R. 32789







CITY OF WINTER PARK SHORELINE ALTERATION PERMIT APPLICATION REVETMENTS AND SEAWALL

Ρ.	W. Dept i	ise only
A	mt: \$ / C	0
Cl	neck#:13	928
D	ate: 4-1	11-17
S	AP 17-	02

General Instructions: To request approval of a Shoreline Alteration Permit Application complete this application and submit to Public Works Department (500 N. Virginia Ave., Winter Park, FL 32789) along with the applicable fee and all additional

information necessary. Revetment/seawall applications require a public hearing before the Lakes & Waterways Advisory Board. All required documentation must be submitted with application. Ten (10) complete sets of the Revetment/Seawall application and plans (signed and sealed plans not required) are required.

FEE: \$100

APPLICATION DEADLINE IS THE SECOND TUESDAY OF EACH MONTH FOR HEARING IN THE FOLLOWING MONTH

Contractor (name & address) To Perform	
Work:	
Wise Marine Construction, Inc.	
P.O. Box 520524	
Longwood, FI 32752	
Phone: 407-297-0181	
Email: marinewise@gmail.com	
along main shoreline. Install seawall	
into existing seawall/revetment system.	
o daily boat traffic.	
ress knees and trees.	
(

Make checks payable to the City of Winter Park (\$100.00)

Shoreline Alteration Permit Application Staff Report (Revetment)

Application #: 17:02

WATERBODY: Lake Osceola

Date: 04/25/17

APPLICANT NAME AND SITE ADDRESS:

Virgil Schenck, 260 Trismen Terr., Winter Park, FL 32789

Seawall Parameter	Proposed	Allowed
Longth (foot)	172	n.a.
Length (feet)	1/2	II.a.
Slope (Horizontal:Vertical)	3:1	3:1 min.
	Varies	
Material	see comments	n.a.
Existing Erosion Problem (Yes/No)	Yes	Must have existing erosion problem
Meets vegetation requirement	Yes	n.a.

COMMENTS:

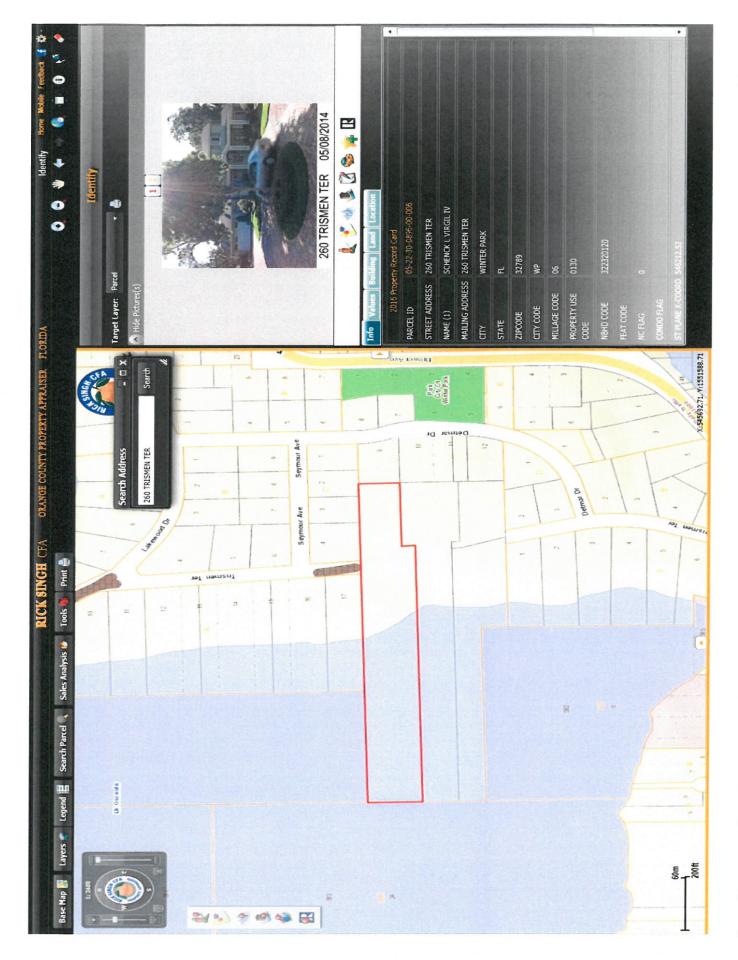
• The applicant is proposing to construct 100 linear feet of revetment to protect the shoreline from an ongoing erosion problem. The revetment will utilize three different cross sections, vinyl sheet pile w/stone face on steeper areas, stone over fabric on shallow slopes and stone only where a large amount of cypress knees are present. The packet contains a cross section drawing for each type and a plan view showing where each will be installed.

STAFF RECOMMENDATION:

Approval.

REVIEWED BY: Timothy Egan





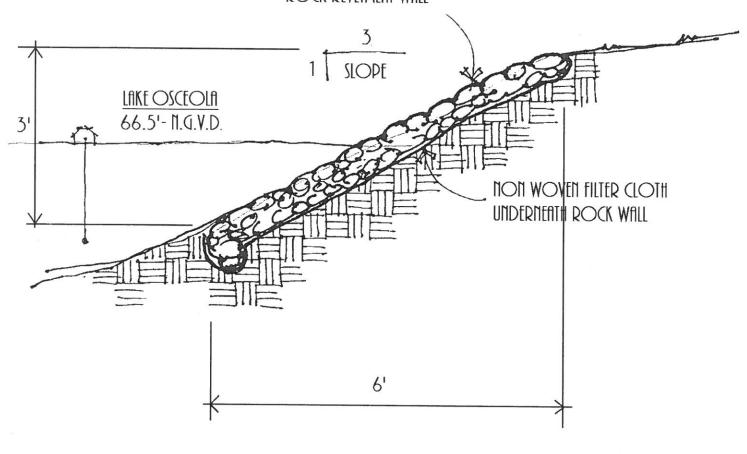
SECTION 1 (2) *5 & EACH FIE POO REDO. REVETMENT @ 3: I SlopE LAKE OSECOLA MMHW 66.5' 10-011 24"x24"x12" 50. 1 = 1-0" "SHORE GUARD" SERIES 225 VINY HAPPO BUN SHEET PILING · FOR · VIRGIL SCHENCK

277 TRISMEN TERRACE WINTER PARK, FL 32789

44. 297.0181

SECTION C

6" - 12" ALABAMA LIMESTONE Rock Reverment Wall



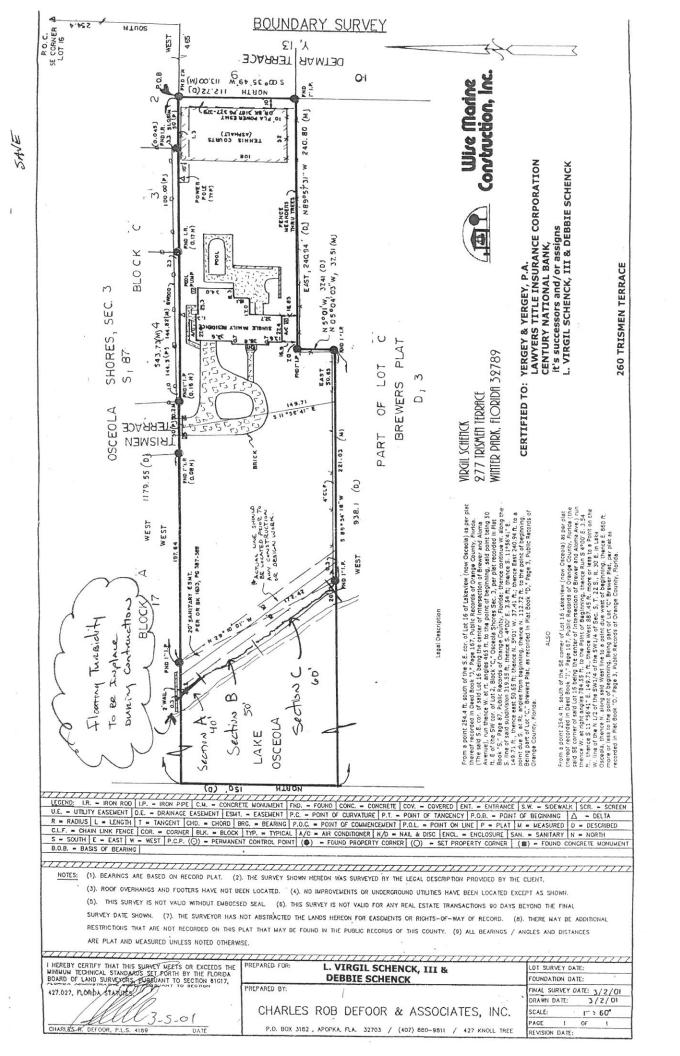
REVETMENT SECTION

NO SCALE

VIRGIL SCHENCK 277 TRISMEN TERRACE WINTER PARK, FLORIDA 32789



Wire Marine Construction, Inc.





CITY OF WINTER PARK SHORELINE ALTERATION PERMIT APPLICATION REVETMENTS AND SEAWALL

P. \	W. Dept use only
Am	t: \$
Che	eck#:
Dat	e: 4-11-17
SAI	17-03

General Instructions: To request approval of a Shoreline Alteration Permit Application complete this application and submit to Public Works Department (500 N. Virginia Ave., Winter Park, FL 32789) along with the applicable fee and all additional

information necessary. Revetment/seawall applications require a public hearing before the Lakes & Waterways Advisory Board. All required documentation must be submitted with application. Ten (10) complete sets of the Revetment/Seawall application and plans (signed and sealed plans not required) are required.

FEE: \$100 Fee waived per Tim Egan

APPLICATION DEADLINE IS THE SECOND TUESDAY OF EACH MONTH FOR HEARING IN THE FOLLOWING MONTH

Water Body: Lake Maitland		
Property Owner's Name(s) & Address:	Contractor (name & address) To Perform Work:	
James W. Heavener Dynasty Trust	Winter Brothers Construction	
850 Via Lugano	1260 Palmetto Ave. SuiteE	
Winter Park, FL 32789	Winter Park, FL 32789	
Phone: 407-418-6276	Phone: 407-788-3256	
Email: jim.heekin@lowndes-law.com	Email: sim@winterbrothers.net	
Site Address (if different): (same)		
Project Description: Removal of seawall and insta	allation of boat lift.	
Reason for Request: The wall has warped over time	ne, creating an unsafe bulkhead. Damage to the seawall	
	absorption, and it removes the need for a boat house.	
	ermit is necessary so that trees are preserved and so the	

Make checks payable to the City of Winter Park (\$100.00)

Shoreline Alteration Permit Application Staff Report Seawall removal, slope regrading and rail system installation

Application #: 17:03

WATERBODY: Lake Maitland

Date: 04/25/17

APPLICANT NAME AND SITE ADDRESS:

James W. Heavener Dynasty Trust, 850 Via Lugano, Winter Park, FL 32789

COMMENTS:

The applicant is proposing to remove an existing seawall that covers a portion of their shoreline, regrade the bank where the seawall was located and install a rail system to move their boat to and from an upland garage.

The rails are outside the 10' side yard setback above the OHW but occupy the setback below the OHW. P&Z did not comment or act on the setback issue.

Because the area around the rails is to be landscaped rather than paved, P&Z and staff are not considering it a boat ramp but the final decision rests with the Lakes and Waterways Advisory Board.

STAFF RECOMMENDATION:

Approval with five (5) conditions and one (1) special instruction to staff.

<u>Condition 1.</u> The rails must be installed at grade and the areas on either side of and between the rails must be landscaped with sod or other vegetative ground cover. Pavers or other hardscaping is not permitted.

<u>Condition 2.</u> The trolley mechanism that holds and moves the boat shall be stored inside the upland garage whenever it is not in use.

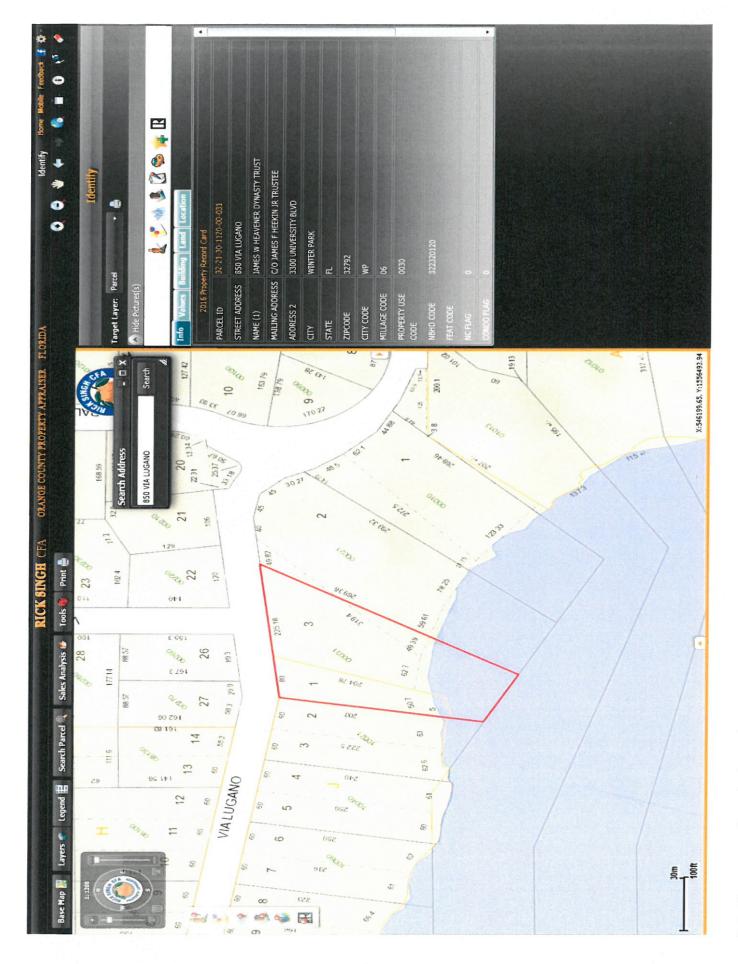
<u>Condition 3.</u> Boats may not be moored overnight within the setback area (east side of dock).

<u>Condition 4.</u> The applicant is responsible for scour protection of the neighboring property when the seawall is removed and regrading is performed (coordinate scour protection with the stormwater division (407-599-3599).

<u>Condition 5.</u> The applicant must place a small buoy at the waterward end of the easternmost rail to alert boaters and swimmers to its location. This buoy may be removed in the future with the consent adjacent property owner (to the east)

<u>Instruction to staff 1.</u> Public Works staff are instructed to notify the building department by phone and via comment on the building permit that the waterward end of the easternmost rail may not cross the property line (as projected into the lake) at any point.

REVIEWED BY: Timothy Egan



http://maps.ocpafl.org/webmap/

It is important for the waterfront property owner to understand that there may be a substantial amount of maintenance and expense required to maintain the new re-vegetated site and to keep it free of unwanted exotic vegetation.

This permit satisfies the requirements of the City of Winter Park Shoreline Protection Ordinance only. Additional permits may be required by the Florida Department of Environmental Protection or Florida Fish & Wildlife Conservation Commission. It is the responsibility of the permittee and their contractor to ensure that all necessary permits are obtained. The City assumes no responsibility for fines or other actions resulting from the permittee's failure to obtain all required permits or approvals.

Signature of Property

James F. Heekin Jr., Trush

THE FOLLOWING INFORMATION MUST BE ATTACHED TO THE SHORELINE **ALTERATION PERMIT APPLICATION:**

- Ten (10) copies of sketch and photographs of entire shoreline before proposed changes; show 1. what plants are present and what plants will be removed. Indicate the length and width of both areas. Include the contour of the existing shoreline.
- Ten (10) copies sketch of entire shoreline showing the proposed changes. Show what vegetation 2. will be planted including its length and width. Show any changes in shoreline contour including the amount and type of material removed and/or filled in cubic yards. Show what measures will be taken to prevent erosion or pollution during construction.
- Applications for revetments or seawalls must include sketches showing the plan review (top) and 3. profile (side) of the proposed structure. The slope must be clearly shown and may not be steeper than 3:1 (horizontal: vertical)
- Please note that any properties that do not meet the current shoreline vegetation standards (50 feet 4. or 50% rule), must be revegetated before a shoreline alteration permit will be issued.

NOTES:

- All cleared or trimmed vegetation or excess dredge and/or fill material shall be removed from the 1. lake and/or lakefront for off-site disposal.
- The granting of this permit does not relieve the contractor or property owner of any obligations 2. under State law to obtain permits from other government agencies having jurisdiction.
- All Revetment/seawall applications are reviewed and decided upon by the Lakes and Waterways 3. Advisory Board at their regular monthly meetings. Meetings are held every month on the second Tuesday, at 12:00 noon, at the Winter Park Public Safety Building located at 500 N. Virginia Avenue, Winter Park, FL 32789 in the Chief Beary Community Room, 2nd floor. Applicants may attend these meetings, but their presence is not required.

Revised 7/29/16

SUMMARY OF SHORELINE PERMITTING REQUIREMENTS WITHIN THE CITY OF WINTER PARK

CITY OF WINTER PARK DEPARTMENT OF PUBLIC WORKS

Responsible Entity: Public Works Department Phone: 407-599-3599

Activities Requiring a Permit: Any revetment or seawall construction or repair.

Exemptions: None

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Responsible Entity: Environmental Resource Permitting Phone #: (407) 894-7555

Activities Requiring a Permit: Any new revetment or seawall construction or repair.

Exemptions: Replacement of existing wall/revetments - requires verification from the Department.

The Following Species Are Recommended Shoreline Re-vegetation:

Maidencane: This native grass grows to a height of approximately three feet. It will grow in a wide range of hydrologic conditions, from three feet or more above the ordinary water elevation to five feet below the ordinary water elevation (plants in deep water will grow longer stems than those on shore). Maidencane grows in very dense stands, but does not form floating mats like the exotic torpedo grass. This dense growth will help to minimize maintenance by preventing other plants from becoming established.

<u>Pickerel weed (Pontederia cordata):</u> This plant grows from the normal high water line out to a depth of about three feet. The leaves are dark green stalks that widen into blades two to four inches wide. Pickerel weed produces purple flower stalks throughout much of the year.

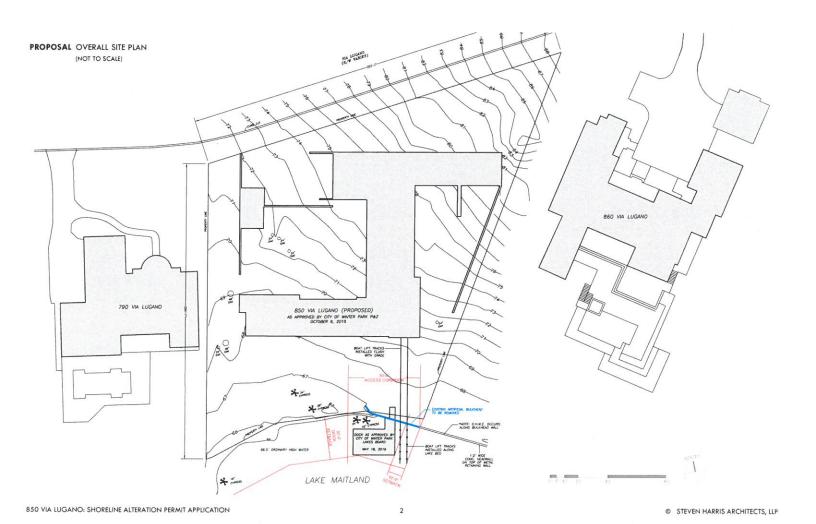
Blue flag iris (*Iris virginica*): This plant has a grass like appearance. The leaves are light green blades that grow to a height of two to three feet. Iris will grow from just below the ordinary high water line to an elevation of two feet above that line. Showy blue flowers are produced in the spring.

Golden Canna (Canna flaccida): Canna is a low growing (two to three feet) plant, similar tin shape to pickerelweed. Leaf stalks originate from the base of the plant and widen near the upper end (three to four inches wide). The plant will grow from the ordinary high water line to about two feet above that line, Canna produces showy yellow or orange flower in the spring and summer produces showy yellow or orange flowers in the spring and summer.

<u>Duck Potato (Sagittaria spp.):</u> this plant grows from the normal high water line out to a depth of about two feet. The leaves are light green stalks that widen into blades two to four inches wide. Duck Potato produces white flowers throughout much of the spring and summer.

Giant Bulrush (Scirpus californicus): This plant grows to a height of 8 feet, and forms dense clusters of tall, erect stems. Leaf blades are absent. The flowers form golden brown spikelets at the tops of the stems. Blooms spring and summer. Bulrush adds height and variety accents to aquascape plans and will grow in 0-5 feet of water

850 VIA LUGANO SHORELINE ALTERATION PROPOSAL





DOCUMENTATION

SEA WALL CONDITONS



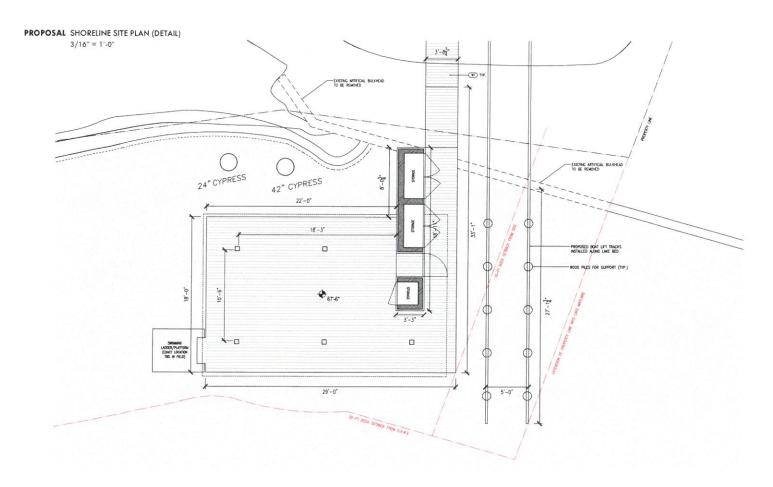
VIEW EAST THE WALL HAS WARPED OVER TIME, CREATING AN UNSIGHTLY AND UNSAFE BULKHEAD.



VIEW WEST DAMAGE TO THE SEAWALL PERMITS EROSION TO PORTIONS OF THE SHORELINE



INTENDED SHORELINE THE SEAWALL IS REMOVED, TREES ARE PRESERVED, AND THE INDIGENOUS VEGETATION CAN MEET THE LAKE NATURALLY.



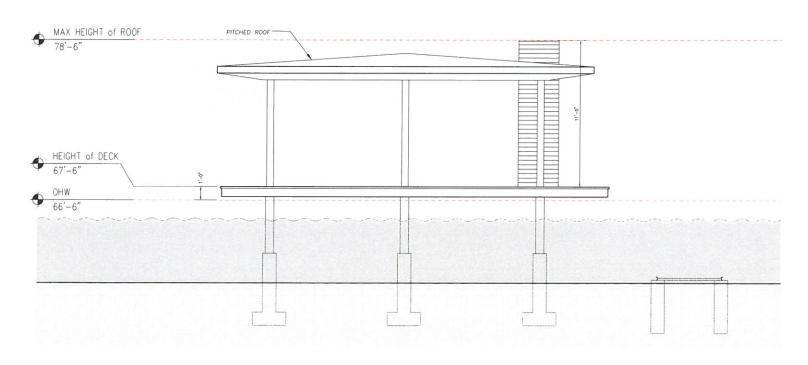
PROPOSAL DOCK ELEVATION (SOUTH) and BOAT LIFT TRACKS $1/4^{\prime\prime}=1^{\prime}\text{-}0^{\prime\prime}$

DOCK AS APPROVED ON 5-18-2016

PROPOSED AREA OF DOCK: 600 FT²
PROPOSED ENCLOSED STORAGE: 60 FT²
PROPOSED HEIGHT OF DECK: 67-6²
PROPOSED SIDEYARD SETBACK: 10 FT
PROPOSED MAXIMUM HEIGHT: 11 FT

BOAT LIFT TRACKS (BELOW)

INSTALLED ALONG LAKE BOTTOM (AS SHOWN)
TRACKS ARE ENTIRELY REMOVABLE
(NO PERMAMENT FOUNDATIONS REQ'D)
TRADITIONAL WOOD PILES FOR SUPPORT
(SHOWN AT MANUFACTURER'S SUGGESTION
TO LIMIT DISTURBANCE OF LAKE BED)



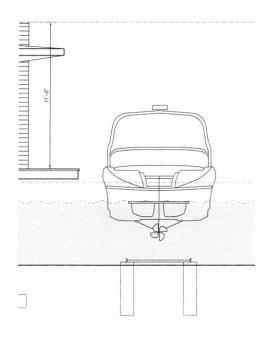
PROPOSAL BOAT LIFT TRACKS DIAGRAM OF OPERATION 1/4" = 1'-0"

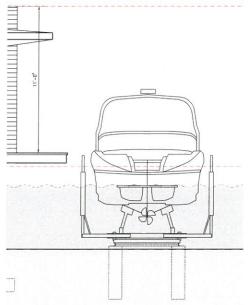
1 THE BOAT IS DRIVEN INTO POSITION ABOVE THE TRACKS.

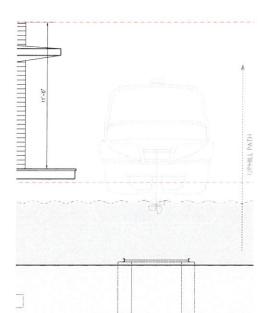
<S.

2 THE CARRIAGE IS LOWERED TO MEET THE BOAT.

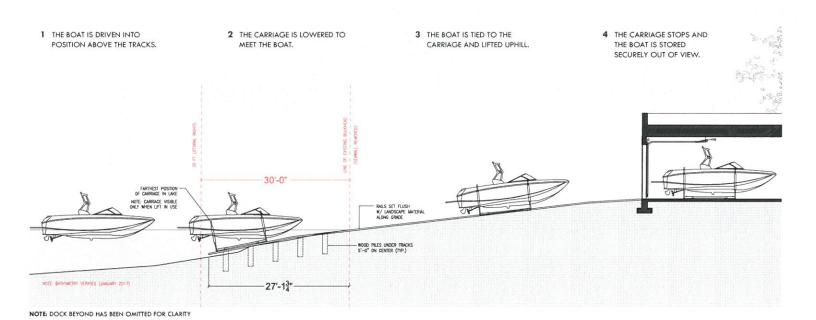
3 THE BOAT IS TIED TO THE CARRIAGE AND LIFTED UPHILL.







PROPOSAL BOAT LIFT TRACKS SECTION VIEW (NOT TO SCALE)

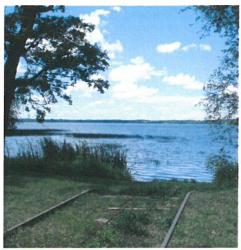


DOCUMENTATION BOAT LIFT TRACKS

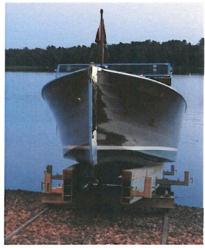
SAMPLE INSTALLATIONS:



TRACKS SHOWN ENTERING A LAKE WITH AQUATIC VEGETATION.
THE PRODUCT IS REMOVABLE: NETHER ITS PLACEMENT NOR ITS OPERATION IMPACT THE VIABILITY OF SURROUNDING PLANT LIFE AT THE SHORELINE.



TRACKS INSTALLED WITH LANDSCAPING.
THE PRODUCT IS INSTALLED FLUSH ALONG GRADE AND CAN BE PLANTED AND MAINTAINED WITH TRADITIONAL LANDSCAPING.



TRACKS INSTALLED OVER PERVIOUS GROUNDCOVER.
THE PRODUCT'S SMALL FOOTPRINT DOES NOT IMPACT
THE PERCOLATION OF RAINWATER THROUGH THE SOIL.