

# Information for File # 2015-01092-EJI

**Applicant:** DPAX Holdings LLC

**Corps Contact:** Evan Ingebrigtsen

**Address:** 10867 East Gull Lake Drive Brainerd, Minnesota 56401

**E-Mail:** evan.j.ingebrigtsen@usace.army.mil

**Phone:** 651-290-5765

**Primary County:** Cass

**Location Section/Township/Range:** S22 T143N R30W

**Information Complete On:** 2 June 2015

**Posting Expires On:** 6 May 2016

**Authorization Type:** LOP-10-R

This project was originally posted for review under LOP-05-MN on June 5<sup>th</sup> 2015. Due to the receipt of additional information, this project is now being reviewed under LOP-10-R.

This application is being reviewed in accordance with the practices for documenting Corps jurisdiction under Sections 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act identified in Regulatory Guidance Letter 07-01. We have made a preliminary determination that the aquatic resources that would be impacted by the proposed project are regulated by the Corps of Engineers under Section 404 of the Clean Water Act. Our jurisdictional review and final jurisdictional determination could result in modifications to the scope of the project's regulated waterbody/wetland impacts and compensatory mitigation requirements identified above. An approved jurisdictional determination will be made prior to reaching a permit decision, and will be posted on the St. Paul District web page at <http://www.mvp.usace.army.mil/>.

## Project

**PROJECT DESCRIPTION AND PURPOSE:** DPAX Holdings LLC has submitted a Department of the Army permit application to discharge fill material and remove dredged material within Leech Lake for the purpose of constructing an inland harbor. The applicants stated purpose for constructing the harbor is to provide protection for boats, lifts and docks from wave action on the west side of Otter Tail Point. The proposed harbor would be approximately 7,570 square feet and would dock four boats.

### **NAME, AREA AND TYPES OF WATERS (INCLUDING WETLANDS) SUBJECT TO IMPACT:**

The proposed project would impact approximately 1000 square feet of Leech Lake. In order to create the harbor entrance, approximately 225-275 cubic yards of sand and gravel would be dredged from 120 square feet of the lake bed and disposed of in an upland location. Approximately 175-225 cubic yards of riprap covering 880 square feet of lake bed would be placed below the ordinary high watermark on both sides of the dredged channel to prevent erosion. The proposed impacts would not result in permanent loss of waters.

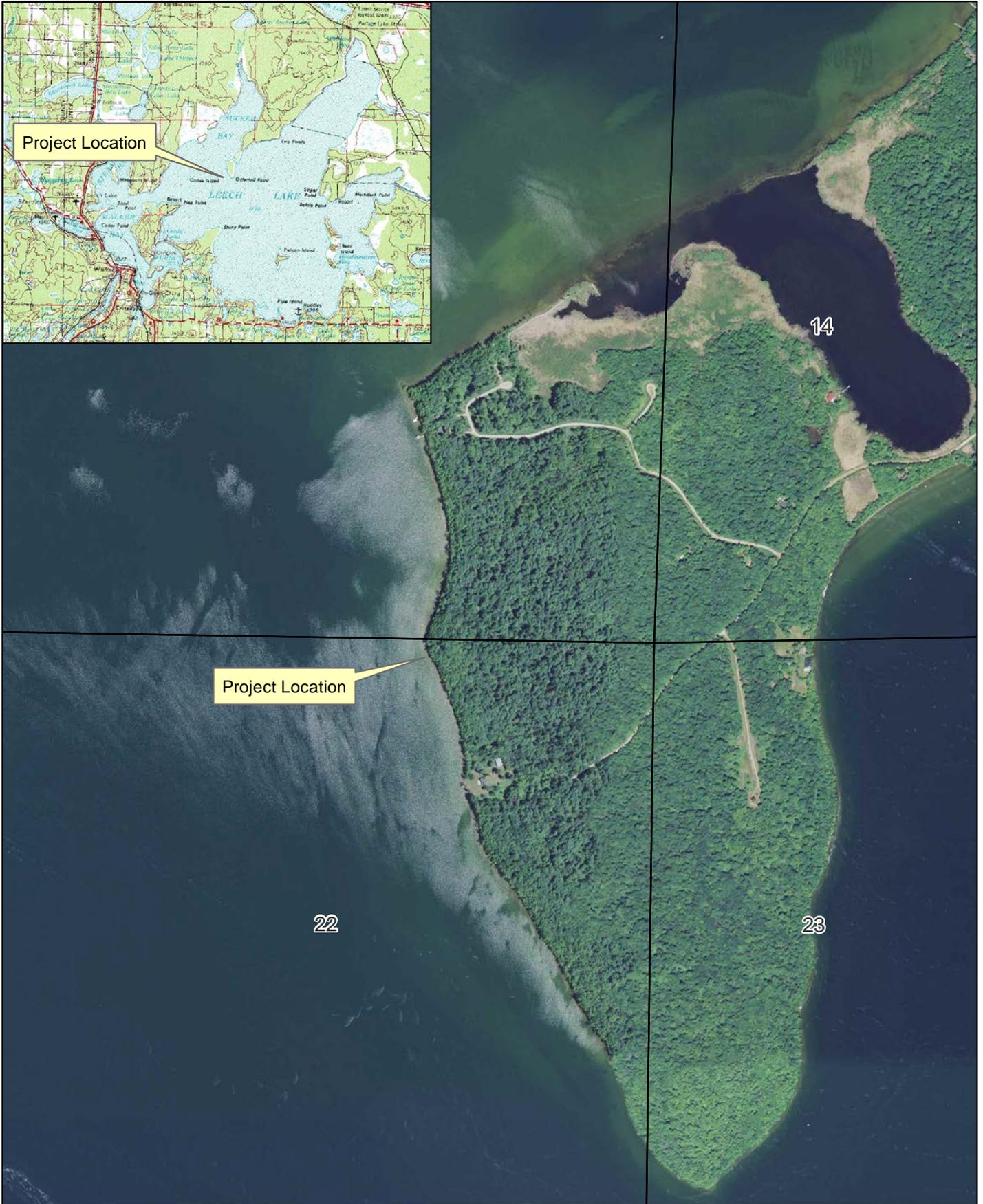
**ALTERNATIVES CONSIDERED:** The applicant considered three alternatives to the proposed harbor. The applicant's stated alternatives included developing the property into 100' lots,

developing a breakwater and the no build alternative. The no-build alternative would avoid impacts to Leech Lake, however the alternative was eliminated by the applicant since the property is located in an area on Leech Lake where prevalent wind and waves limit the use of typical docks and devices to store watercraft. The second alternative considered by the applicant was to construct a breakwater around the proposed dock and mooring structure, but due to the increased impacts to Leech Lake and the higher cost, the alternative was eliminated. The third alternative considered by the applicant was to develop the property into 100' lots as previously planned but the alternative was eliminated since it would result in a greater need to protect watercraft and create a cumulatively larger impact to the shoreline.

**COMPENSATORY MITIGATION:** The applicant has not proposed any compensatory mitigation.

**Drawings:** 2015-01092-EJI Page 1 of 5 through Page 5 of 5 See attached.

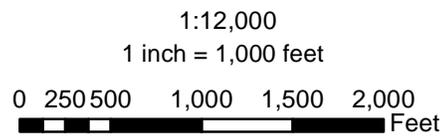
DPAX Holdings LLC Harbor Location Map

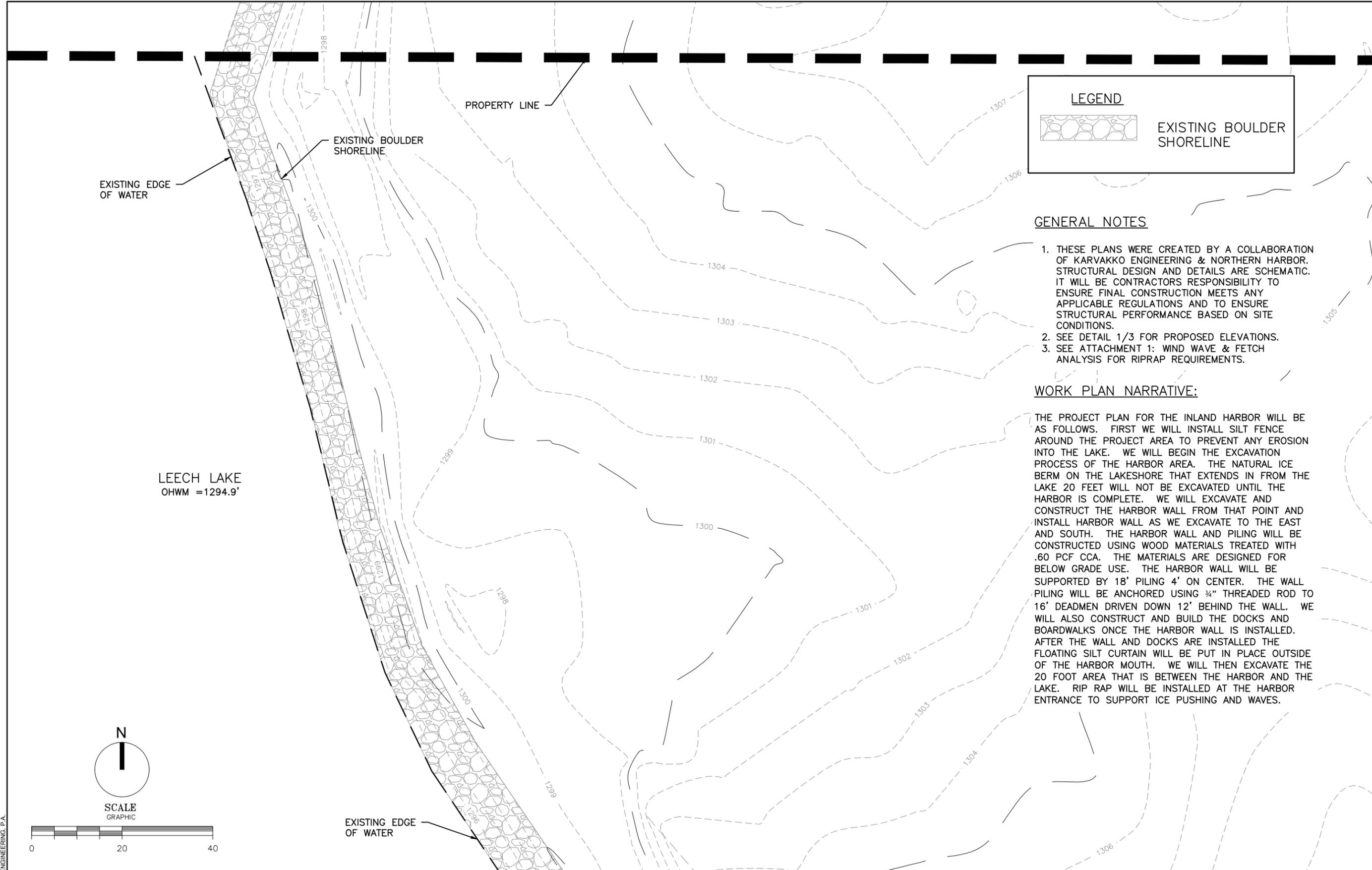


**Legend**

 Sections

T143N R30W S22  
Cass County, Minnesota





**LEGEND**



EXISTING BOULDER SHORELINE

**GENERAL NOTES**

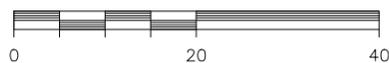
1. THESE PLANS WERE CREATED BY A COLLABORATION OF KARVAKKO ENGINEERING & NORTHERN HARBOR. STRUCTURAL DESIGN AND DETAILS ARE SCHEMATIC. IT WILL BE CONTRACTORS RESPONSIBILITY TO ENSURE FINAL CONSTRUCTION MEETS ANY APPLICABLE REGULATIONS AND TO ENSURE STRUCTURAL PERFORMANCE BASED ON SITE CONDITIONS.
2. SEE DETAIL 1/3 FOR PROPOSED ELEVATIONS.
3. SEE ATTACHMENT 1: WIND WAVE & FETCH ANALYSIS FOR RIPRAP REQUIREMENTS.

**WORK PLAN NARRATIVE:**

THE PROJECT PLAN FOR THE INLAND HARBOR WILL BE AS FOLLOWS. FIRST WE WILL INSTALL SILT FENCE AROUND THE PROJECT AREA TO PREVENT ANY EROSION INTO THE LAKE. WE WILL BEGIN THE EXCAVATION PROCESS OF THE HARBOR AREA. THE NATURAL ICE BERM ON THE LAKESHORE THAT EXTENDS IN FROM THE LAKE 20 FEET WILL NOT BE EXCAVATED UNTIL THE HARBOR IS COMPLETE. WE WILL EXCAVATE AND CONSTRUCT THE HARBOR WALL FROM THAT POINT AND INSTALL HARBOR WALL AS WE EXCAVATE TO THE EAST AND SOUTH. THE HARBOR WALL AND PILING WILL BE CONSTRUCTED USING WOOD MATERIALS TREATED WITH .60 PCF CCA. THE MATERIALS ARE DESIGNED FOR BELOW GRADE USE. THE HARBOR WALL WILL BE SUPPORTED BY 18' PILING 4' ON CENTER. THE WALL PILING WILL BE ANCHORED USING 3/4" THREADED ROD TO 16' DEADMEN DRIVEN DOWN 12' BEHIND THE WALL. WE WILL ALSO CONSTRUCT AND BUILD THE DOCKS AND BOARDWALKS ONCE THE HARBOR WALL IS INSTALLED. AFTER THE WALL AND DOCKS ARE INSTALLED THE FLOATING SILT CURTAIN WILL BE PUT IN PLACE OUTSIDE OF THE HARBOR MOUTH. WE WILL THEN EXCAVATE THE 20 FOOT AREA THAT IS BETWEEN THE HARBOR AND THE LAKE. RIP RAP WILL BE INSTALLED AT THE HARBOR ENTRANCE TO SUPPORT ICE PUSHING AND WAVES.



SCALE GRAPHIC



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NO.	REVISIONS	BY	APR.	DATE

DESIGNED KEK	CHECKED MJK
DRAWN BMW	APPROVED KEK
DATE 04/10/15	JOB NO. 14-131

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Certified By:  Lic. No. 50131  
 Printed Name: Keith E. Kinnen Date 04/10/15



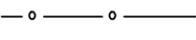
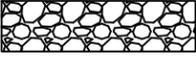
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DPAX HOLDINGS, LLP HARBOR
EXISTING CONDITIONS

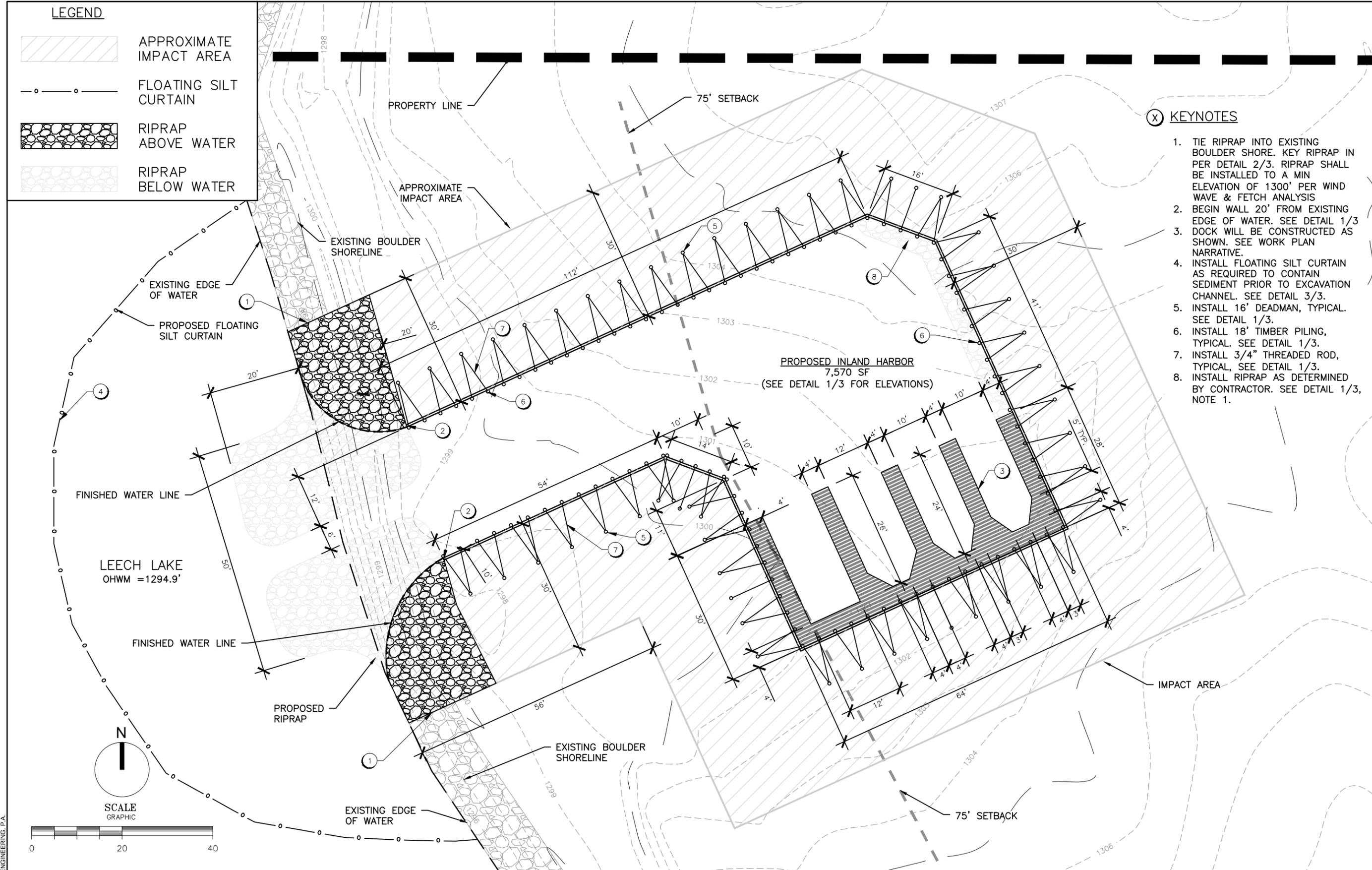
SHEET	1
OF	3

**LEGEND**

-  APPROXIMATE IMPACT AREA
-  FLOATING SILT CURTAIN
-  RIPRAP ABOVE WATER
-  RIPRAP BELOW WATER

**(X) KEYNOTES**

1. TIE RIPRAP INTO EXISTING BOULDER SHORE. KEY RIPRAP IN PER DETAIL 2/3. RIPRAP SHALL BE INSTALLED TO A MIN ELEVATION OF 1300' PER WIND WAVE & FETCH ANALYSIS
2. BEGIN WALL 20' FROM EXISTING EDGE OF WATER. SEE DETAIL 1/3
3. DOCK WILL BE CONSTRUCTED AS SHOWN. SEE WORK PLAN NARRATIVE.
4. INSTALL FLOATING SILT CURTAIN AS REQUIRED TO CONTAIN SEDIMENT PRIOR TO EXCAVATION CHANNEL. SEE DETAIL 3/3.
5. INSTALL 16' DEADMAN, TYPICAL. SEE DETAIL 1/3.
6. INSTALL 18' TIMBER PILING, TYPICAL. SEE DETAIL 1/3.
7. INSTALL 3/4" THREADED ROD, TYPICAL, SEE DETAIL 1/3.
8. INSTALL RIPRAP AS DETERMINED BY CONTRACTOR. SEE DETAIL 1/3, NOTE 1.



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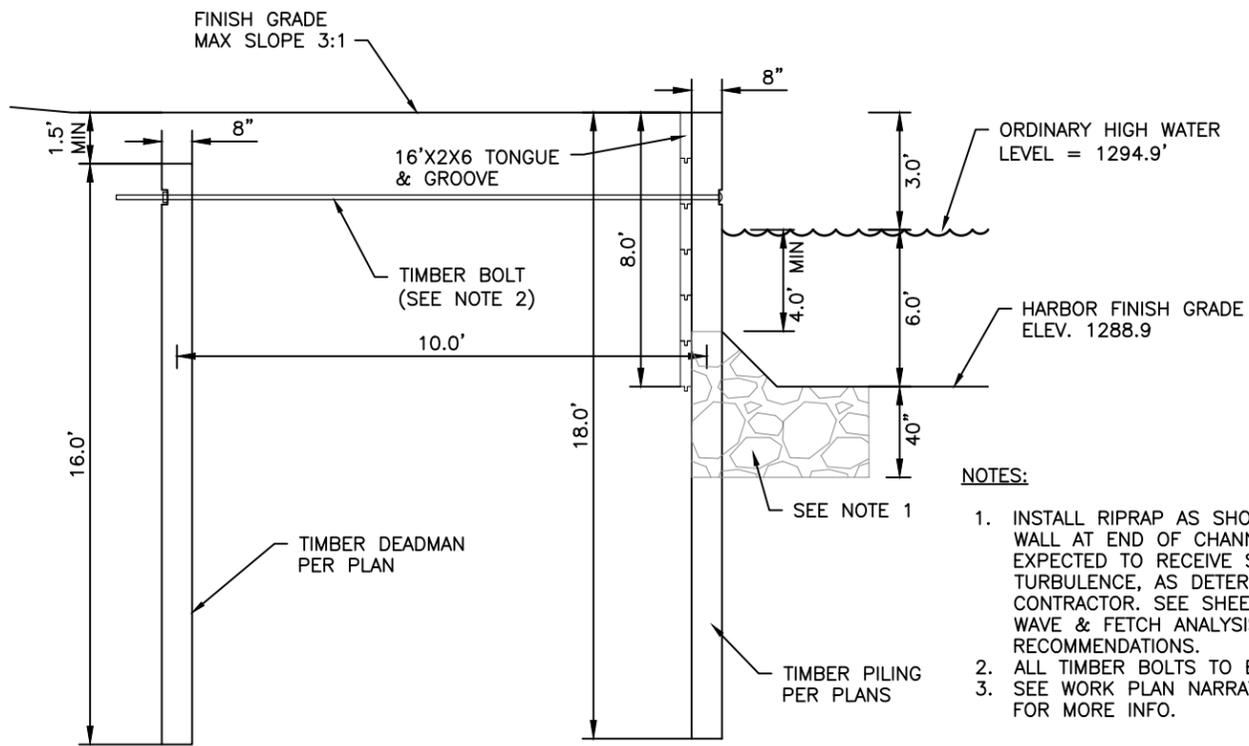
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 Printed Name: Keith E. Kinnen Date: 04/10/15

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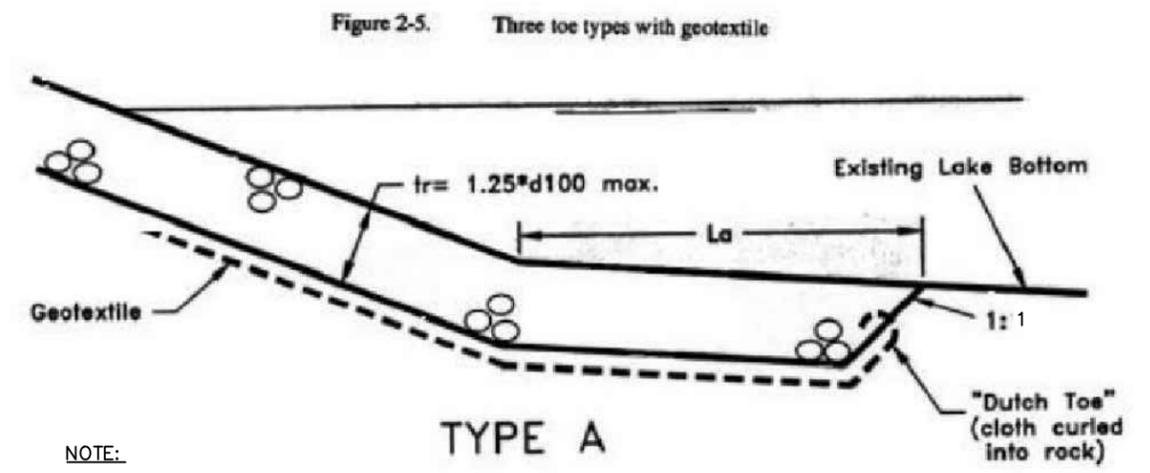


**DPAX HOLDING, LLP HARBOR**  
**LAYOUT PLAN**

SHEET	2
OF	3



- NOTES:
1. INSTALL RIPRAP AS SHOWN ALONG EAST WALL AT END OF CHANNEL, OR IN AREAS EXPECTED TO RECEIVE SUBSTANTIAL TURBULENCE, AS DETERMINED BY CONTRACTOR. SEE SHEET 2 AND WIND WAVE & FETCH ANALYSIS FOR FURTHER RECOMMENDATIONS.
  2. ALL TIMBER BOLTS TO BE ZINC PLATED.
  3. SEE WORK PLAN NARRATIVE ON SHEET 1 FOR MORE INFO.



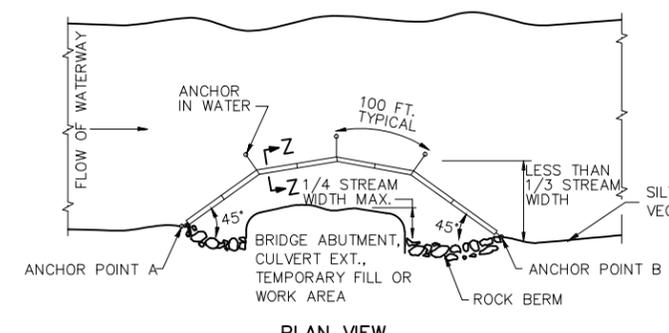
- NOTE:
1. SEE ATTACHMENT 1: WIND WAVE & FETCH ANALYSIS FOR RIPRAP REQUIREMENTS.
  2.  $L_a = 20'$
  3.  $d_{100} = 32"$

1 HARBOR WALL DETAIL  
3

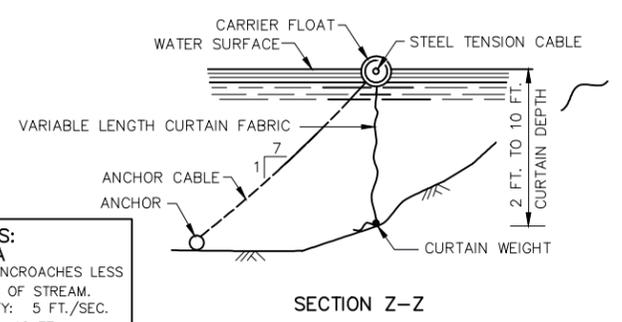
2 NRCS RIPRAP DETAIL  
3

NO SCALE

NO SCALE



DESIGN GUIDELINES:  
TYPE: WORK AREA  
WHEN TEMPORARY FILL ENCLOSES LESS THAN 1/4 OF THE WIDTH OF STREAM.  
MAXIMUM WATER VELOCITY: 5 FT./SEC.  
MAXIMUM WATER DEPTH: 10 FT.



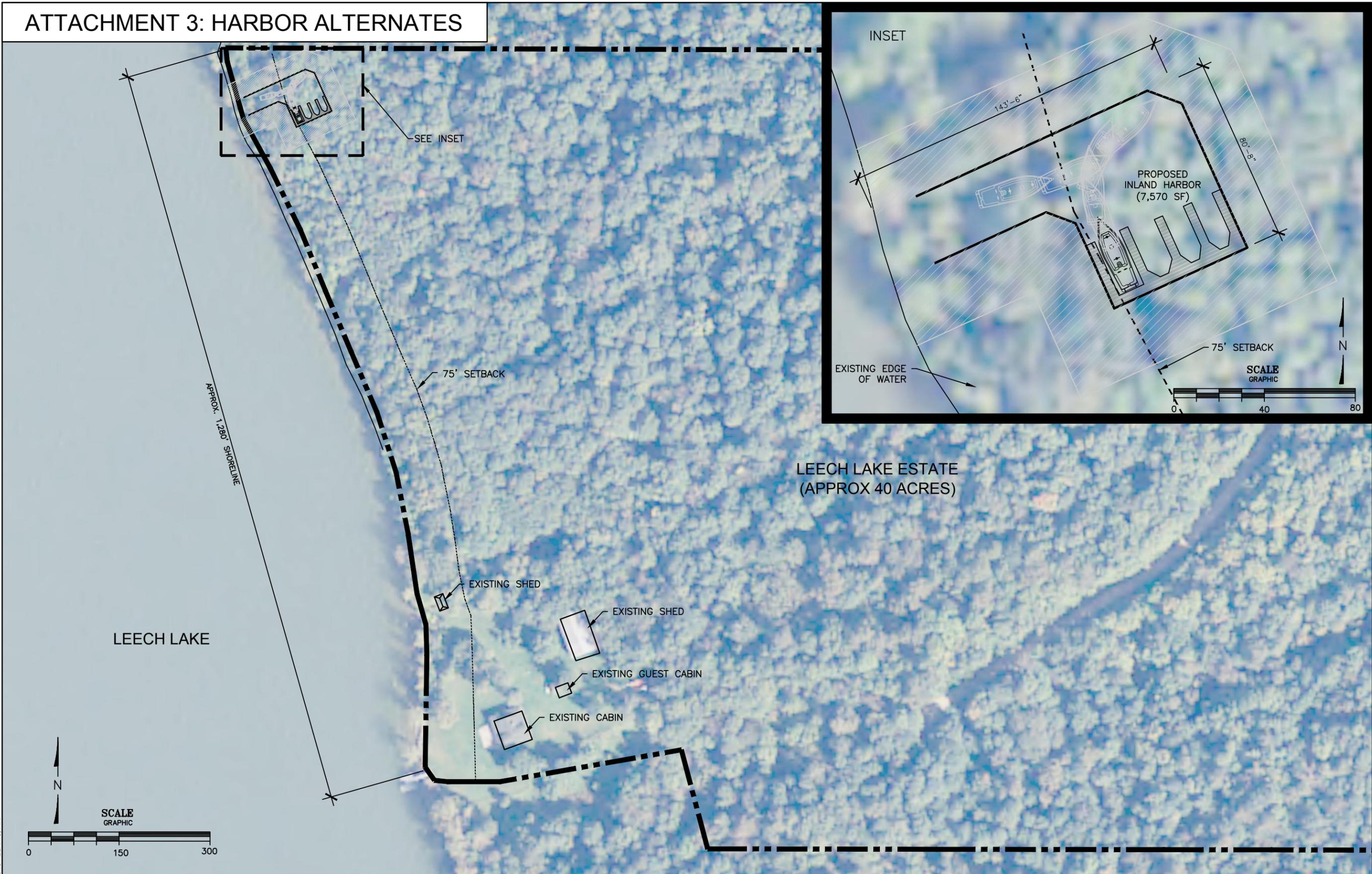
3 FLOTATION SILT CURTAIN-TYPE WORK AREA  
3

NO SCALE

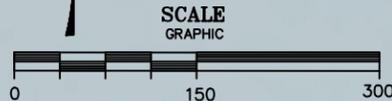
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DESIGNED KEK	CHECKED MJK	I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  Certified By: <i>Keith E. Kinnen</i> Lic. No. 50131 Printed Name: Keith E. Kinnen Date 04/10/15	 2300 BEMIDJI AVE N, SUITE 101, BEMIDJI, MN 56601 P: (218) 444-8004 F: (218) 444-8562 www.karvako.com	 218-507-0864	DPAX HOLDINGS, LLP HARBOR	SHEET 3
DRAWN BMW	APPROVED KEK				DETAILS	OF 3
DATE 04/10/15	JOB NO. 14-131					

# ATTACHMENT 3: HARBOR ALTERNATES



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ALTERNATIVE #2	SHEET 2
INLAND HARBOR	OF 3