



Charter Twp. of Elmwood
Marina Master Plan - Phasing & Implementation



Final Draft - Dec. 20, 2016



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This plan was 50% funded by a grant from the MDNR Waterways program.

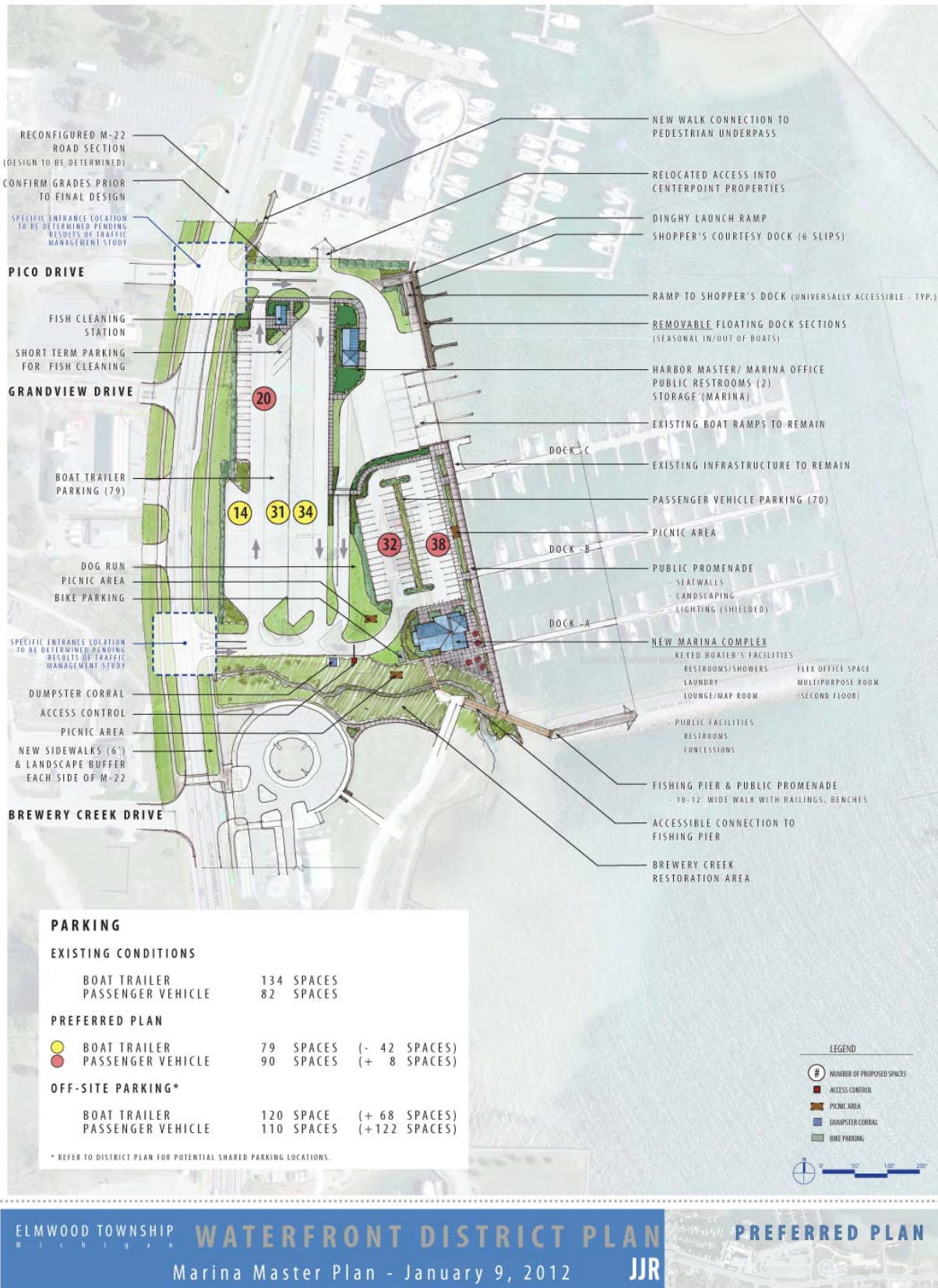


Executive Summary

In the spring of 2015, the Elmwood Township board ratified the marina committee’s selection of the GFA/JJR team to complete a phasing plan. This phasing plan would detail an implementation strategy for the marina master plan developed by JJR and adopted in January, 2012. The marina master plan work scope and this subsequent phasing plan include land-side improvements only, water-side features (docks and launch) were excluded.

GFA assisted the township with a Waterways grant application for this phasing plan. The grant application was successful and this project is 50% grant-funded – although the funds were delayed due to the Waterway’s need for emergency dredging. The phasing project was put on a hiatus a second time while a traffic study was completed, to resolve questions of traffic in the corridor and help provide more information to the project team on entrance/exit options. The final traffic study report was completed and delivered July, 2016 and the phasing plan process was activated with a revised schedule.

The objective of the phasing plan is to create a definitive resource document that will allow the township to move ahead in a planned, organized fashion and build out the marina master plan following consistent guidelines.





1. Background

1.1 History and Current Status

Rather than reiterate the background of the marina master plan project, we will simply reference the first four pages of the adopted Waterfront District Plan (WDMP). Major goals and objectives include:

- Preserve valuable assets of the area
- Enhance public access to the water
- Improve connection and safety for vehicles and pedestrians
- Improve the experience at the marina
- Create a waterfront destination and brand

Since the WDMP was adopted the township has considered additional options for the marina, including a fishing pier along the breakwater. This pier was designed by GFA and funded by the Great Lakes Fishery Trust, and appears on some of the earlier master plan drawings. The project was shelved due to its \$1M construction cost and the potential of future piers in the City of Traverse City and the pending development of Discovery Pier.

The Parking Challenge

One of the major project challenges was to provide sufficient parking to meet slipholder needs and retain as much trailer-rig parking for launch users as possible. Given the fact that the launch is extremely popular and the land-locked marina has finite space for parking, it was acknowledged by the group that the available space would never be able to meet parking demand on its own (especially given the fact that boats and rigs are increasing in size) and that an off-site parking area for overflow on peak weekends would be a primary concern. It is worth noting that while the state does prescribe a parking formula for spaces/slips for grant-eligibility purposes to the extent land allows, it does not do so for launches.



As you will see further on in the report, the committee considered Brewery Creek but due to traffic and other concerns ultimately changed the project scope and settled on the parking area next to Leelanau Studios on Cherry Bend Road north of the marina. This allows for use of the light at Cherry Bend to help facilitate left turns, and the parking area identified is a capped Superfund site with very few uses beyond surface parking.

Current Repairs

At present the marina is in the process of repairs and updates are planned to water-based features (docks and launch area) and some necessary interior work to the slipholder bath spaces. It has been noted that the parking lot is in need of repair and the harbormaster has solicited bids for both complete replacement and a more short-term sealing. It has also been noted that the roofs of the existing buildings are in poor condition and likely candidates for complete replacement in the next few years. There is a new harbormaster building which, as of this writing, is finishing a HVAC upgrade.



1.2 Project Goals

This phasing plan is intended to follow the Public Design Preferences (WDMP, Pages 4 and 5) and accomplish the following deliverables, as outlined in the contract Scope of Work. Each deliverable item is noted, and major milestones are noted.

- I. Topographic Survey (Services by GFA)
 - a. Base mapping to providing detailed framework of project areas for planning and designs.
 - i. Base mapping was completed and includes the marina property as well as the highway frontage for any intersection/crossing design needs.
- II. Planning/Phasing of Marina Development Project (Services by SmithGroup JJR/GFA)
 - a. Services provided under this category will include project kick off meeting, design workshop, phasing plan, and follow up progress meetings.
 - i. Project Kickoff Meeting – Project re-initiated as traffic study report neared completion. Schedule presented and accepted at June 30, 2016 marina committee meeting. Workshop is planned for August 25 so that schedule can move ahead.
 - ii. Workshop I scheduled for August 25, 2016 and completed.
 - iii. Workshop II scheduled for October 20, 2016 and completed. Boards were put online and online comment was accepted Oct. 21-Oct. 31, 2016. (Both the Aug. 25 and Oct. 20 meetings were televised, access via archive http://www.upnorthmedia.org/govtv_elmwoodtwp.asp.)
 - iv. Planning/phasing will be completed in the final version of this report.
- III. Preliminary Entrance Design (Services by SmithGroup JJR/GFA)
 - a. Identify basic geometric layout of a new entrance to improve ingress/egress to the Marina. This work will take into consideration traffic information and studies being prepared by the Township's traffic consultant.
 - i. Task is to define the dotted entrance/egress squares on the existing master plan. In order to do so the team must determine with the preferred options are for entrances and exits, as well as the traffic movement throughout the marina area. A traffic light at Brewery Creek Drive is no longer an option due to an anticipated MDOT-required expansion of M-22.
 - ii. Traffic study was reviewed and author Pete Lamourie was added to the project team, without changing the contract amount, to vet any future traffic management issues related to the marina project.



- iii. Public input was requested at the Aug. 25 workshop, to take into account the needs and wishes of the marina users (both slipholders and launch users) as well the assembled joint marina/parks & rec committee.
- iv. Public input was compiled into two diagrams and presented to the marina committee at the Sept. 22 meeting. Comments were requested and copies of prints were left with Pete Moon so that he could draw up any changes he wanted the project team to consider. Heather noted he could call her and she would pick them up when he had them ready.
- v. The team is proceeding with the design from Sept. 22, which was vetted a second time Oct. 20. North entrance will be IN only, with all traffic exiting from the south. South will be slipholder access, and as-needed entrance for returning offsite trailer rigs.
- vi. At the Nov. 9, 2016 marina committee meeting Pete Moon requested the southern trailer return option be removed from the circulation plan and the two-lane enter-only north entrance remain. The circulation plan was updated accordingly and appears in the December draft version of this report.

IV. Optimal Parking Layout (Services by SmithGroup JJR/GFA)

- a. The Brewery Creek property has been acquired by Elmwood Township to provide additional off-site parking for the Marina and launch users as well as to possibly provide an alternate travel route to and from Grandview Road to aid in reducing traffic congestion around the Marina. The property was previously developed for commercial use and will require some internal access reconfiguration to be more efficiently used for parking. The preliminary engineering phase will explore the optimal layout of the property for parking and access. The parking and internal traffic routes at the Marina site will also be evaluated.
 - i. The preliminary project planning of the project team followed this deliverable item.
 - ii. During the public input workshop Aug. 25 the suggestion was made that the former Superfund site at LEELANAU STUDIOS be considered for parking. Circulation concepts (last two scope items above) were developed.
 - iii. When the circulation drawings were presented at the Sept. 22 marina committee meeting it was noted that the internal circulation pattern of the marina would remain the same regardless of whether existing offsite parking was at Brewery Creek or LEELANAU STUDIOS.
 - iv. An email from Jack Kelly 9/29/2016 informed the project team that the Brewery Creek option was no longer to be explored and that the team should focus its efforts on the marina itself.
 - v. **As per above direction, the team has removed item IV. (Brewery Creek parking layout) from future work scope.** Jack requested a graphic illustrating the marina circulation 11/1/2016, with LEELANAU STUDIOS parking added. A draft of this graphic was sent on 11/2/2016.

V. M-22 Improved Pedestrian Crossing Preliminary Design (Services by SmithGroup JJR/GFA)

- a. M-22 is a very busy highway during all times of the year. With overflow parking for the Marina being offered off-site and across M-22, an improved pedestrian crossing will be required. As part of the preliminary engineering, design concepts will be developed for improved pedestrian crossings of M-22.
 - i. During related meetings (outside of this project) in August and September 2016 it has come to light that the Discovery Center is exploring their own pedestrian crossing design, that it will be removable and will likely be the first one installed.
 - ii. At the marina committee meeting Sept. 22 2016 Jack Kelly noted that the Discovery Center pedestrian refuge will be the first one in the corridor.
 - iii. As part of the visual preferences workshop the project team anticipates collecting input on pedestrian refuge design/appearance for the marina crossing point as it is a scope item above.
 - iv. The team compiled feedback on design alternatives Oct. 20 and is awaiting direction on whether this work item should be continued or removed from the work scope (11/9/2016).
 - v. **By means of a vote at the Nov. 9, 2016 marina committee meeting this item was removed from the work scope.**



VI. Soil Borings (Services by Otwell-Mawby)

- a. This will include the collection of soil borings to generally characterize site conditions and assist with future geotechnical investigations and foundation designs for potential features such as buildings, launch ramp and bridge to fishing pier.
 - i. These borings would be in locations where buildings are anticipated, so this task is scheduled for later in the process after both workshops when we have confirmed where the buildings will be.
 - ii. This work item was ordered based on the layout from the Oct. 20 workshop.
 - iii. Copies of the soil borings logs - Appendix A.

VII. Environmental Assessments (Services by Otwell-Mawby)

- a. An environmental impact assessment will be completed to determine what effect, if any, the proposed developments as noted in the Waterfront District Plan will have on areas such as the West Bay shoreline; Brewery Creek; and wetlands associated with the Brewery Creek Center property. The results of the assessments will be used to aid in further planning efforts and in the preliminary engineering of the improvements.
 - i. This task is scheduled for later in the process after both workshops when we have confirmed where the buildings will be and the traffic design impacts may be.
 - ii. A copy of the Environmental Assessment - Appendix B.

VIII. Probable Costs per Phase and Identification of Funding Sources (Services by SmithGroup JJR/GFA)

- a. This will include preparation of preliminary opinions of probable construction costs for anticipated project components for budgeting of future expenditures. This would be developed in tandem with the phasing plan and will also outline suggested avenues of funding with descriptions of application processes.
 - i. This task is scheduled for later in the process after both workshops when we have confirmed where the buildings will be and the traffic design impacts may be.
 - ii. This item is in development, with a draft scheduled for review at the December marina committee meeting.

IX. Preliminary Engineering Plan (Services by SmithGroup JJR/GFA)

- a. The information from the above task sections will be used to prepare a set of preliminary engineering design drawings consistent with the requirements specified in the Elmwood Township Zoning Ordinance for site plan submission.
 - i. This task is scheduled for later in the process after both workshops when we have confirmed where the buildings will be and the traffic design impacts may be.
 - ii. This item is in development, with a draft scheduled for review at the December marina committee meeting.

1.3 Process & Participants

This phasing plan followed the same process as regular marina committee business, with required approval from the township board for major actions requiring expenditures or grant applications and formal adoption of the final report.

After the township board approved initial grant application and the selection of the project team, the project moved back to the marina committee. Because the marina is an asset of the township's broader parks and recreation system, the workshops (Aug. 25, 2016 and Oct. 20, 2016) were conducted during joint meetings of both the marina committee and the parks and recreation committee. This phasing plan, once adopted, will be amended to the township's parks and rec plan and noted as a reference in the township master planning documents.

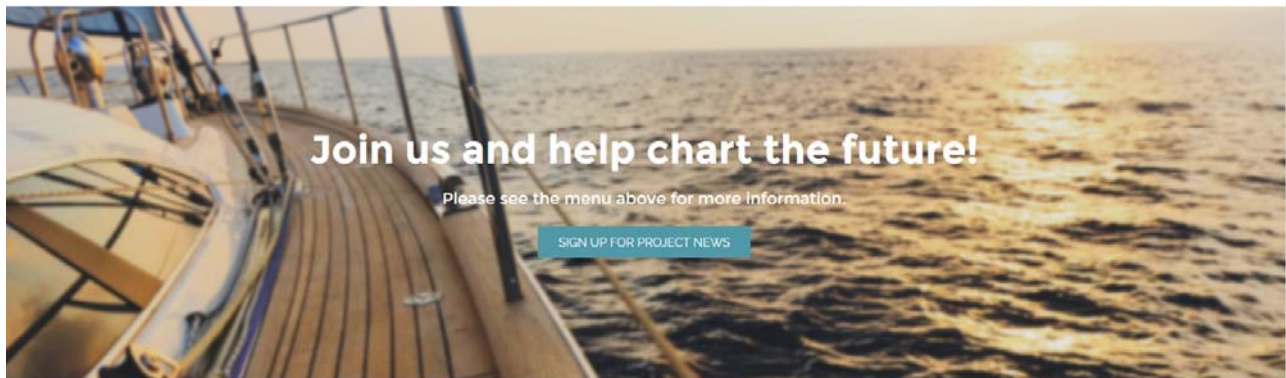


Waterfront District Plan – Marina Phasing

Once the project schedule was formally accepted by the marina committee, the project team set up a website as part of the public information effort for the project. This site is accessible directly (<http://tiny.cc/elmwoodmarina>) and through a link on the overall township marina site.

ELMWOOD TWP. MARINA IMPROVEMENTS - PHASING PLAN

HOME SCHEDULE UPDATES CONTACT US GRAPHICS



The workshops were each advertised in the Leelanau Enterprise, on the township's website, on the project website, and notices were emailed directly to the marina mailing list as well as a list maintained by the township of interested parties.

The project schedule was as follows:

Public Workshop – Joint Marina/Parks & Rec Committee Meeting	Aug. 25, 2016
Phasing Plan Development	Aug. 15-Oct. 30, 2016
Entrance/Exit Concept Development	Sept. 1-Oct. 15, 2016
Public Workshop – Joint Marina/Parks & Rec Committee Meeting	Oct. 20, 2016
Environmental Impact Assessment	Nov., 2016
Progress Mtg.	Nov. 9, 2016
Draft for Review	Dec. 15, 2016
Complete Plan Delivered	Jan. 15, 2017

2. Overall Schematics

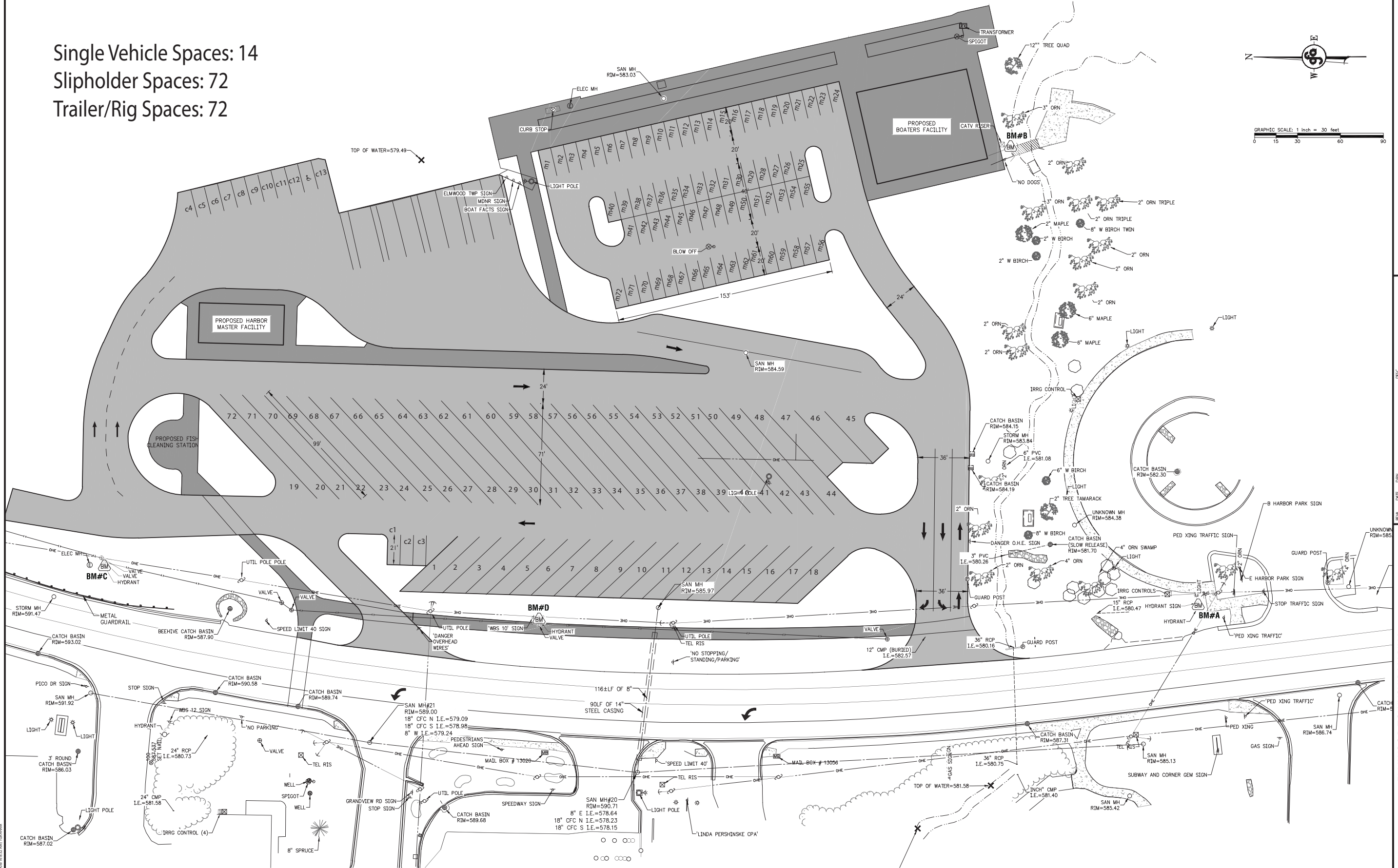
2.1 2016 Updated Conceptual Plan



2.2 QhYDU#Topographic : YUifYg

On following oversized page.

Single Vehicle Spaces: 14
 Slipholder Spaces: 72
 Trailer/Rig Spaces: 72



gfa Gourdie-Fraser
 Municipal | Development | Transportation

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 WWW.GFA.CA
 123 W First Street
 Tawas City, MI 49884

REV	DATE	DESCRIPTION

ELMWOOD TOWNSHIP MARINA

SITE PLAN

SECTION 28 & 33, T.28 N., R.11 W.
 ELMWOOD TOWNSHIP, LEECLANAU COUNTY, MICHIGAN

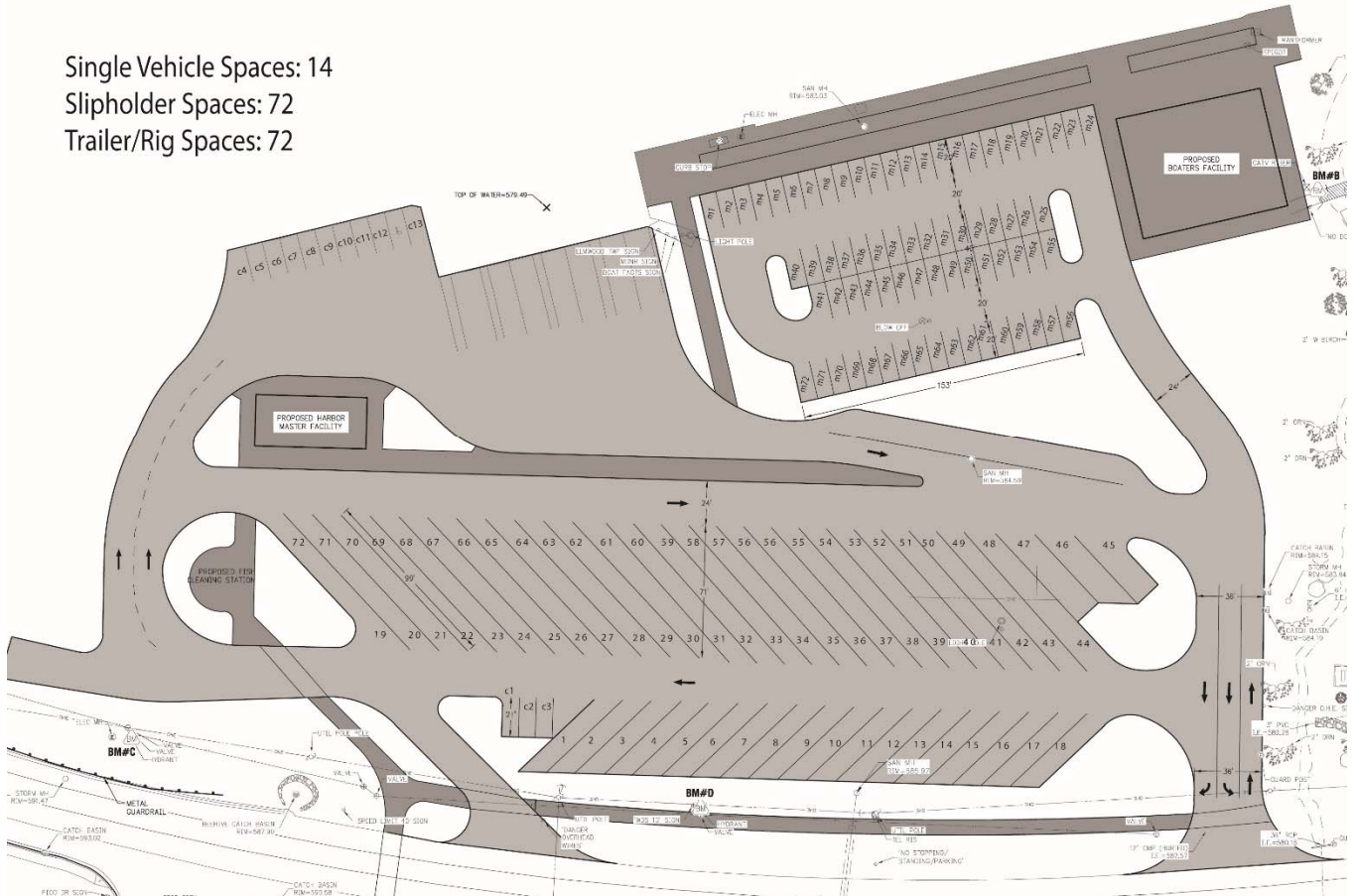
These documents are prepared in accordance with the contractual terms and conditions for this project.

P.L. BRIAN BOALS P.E.
 C.D. T. GRAHAM
 B. BOALS

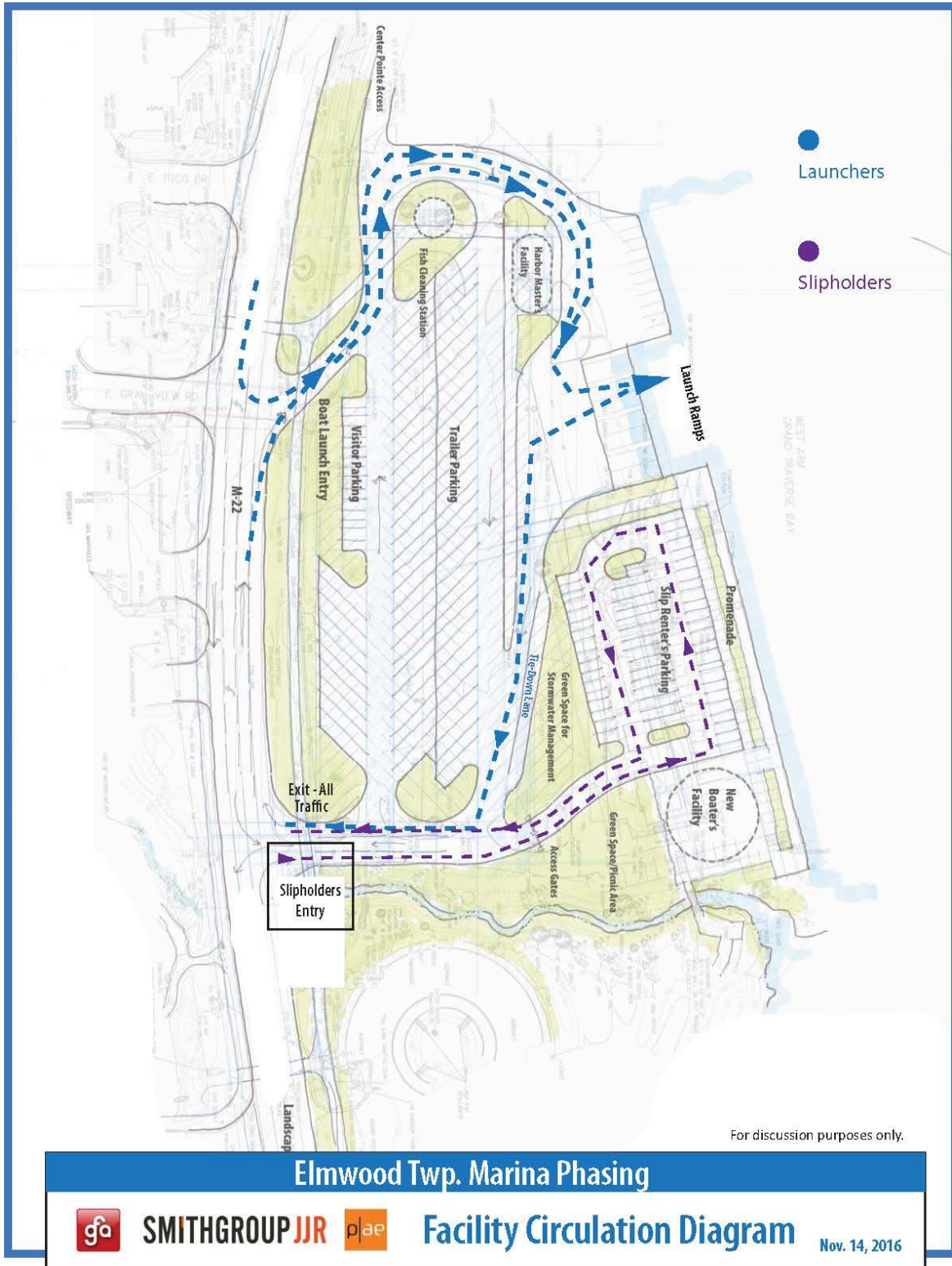
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2.3 Parking Estimate

Single Vehicle Spaces: 14
 Slipholder Spaces: 72
 Trailer/Rig Spaces: 72



2.4 Circulation





3. Project Phasing Scenarios

3.1 Development Schedule

Upon receipt of this plan, the township must adopt it and amend it to the Parks & Recreation Plan, in a planned update being executed under separate contract with Gosling-Czubak. The amended plan must be accepted by the MDNR by March 1. An application for Phase I is due to Waterways near/on its grant deadline of April 1. Once the first phase is in to Waterways, if the township wishes to continue with Waterways funding the same cycle would follow each year, until the phases are built out:

Phase I to Waterways for Funding	Mar. 25, 2017
Tentative Funding Outline	
Phase I Waterways Funding Approval*	Summer, 2017
Phase I Design	Fall/Winter, 2017
Phase I Bids	February, 2018
Phase II Grant Application	March, 2018
Phase I Construction	Spring, 2018
Process repeats through subsequent phases	

*While this is a typical schedule Waterways program funding can be subject to emergency redirection due to dredging, catastrophic storm damage or other issues.

3.2 Phasing Scenario Overview

The main purpose of this document is to break this large project into manageable portions, both from a fiscal-impact and a marina-impact standpoint. We present two scenarios for your consideration, once grant-dependent and one grant-independent. When we considered how to divide this project into phases we placed the most priority on minimizing the disruption to the operation of the marina.

3.3 Phasing Scenario A – Grant Funding Dependent

Although we have provided some additional avenues of funding, to simplify matters for the purposes of this phasing scenario we are assuming that the primary grant funding will be the MNDR Waterways program. Waterways provides a 50% grant for construction projects and a 50% match.

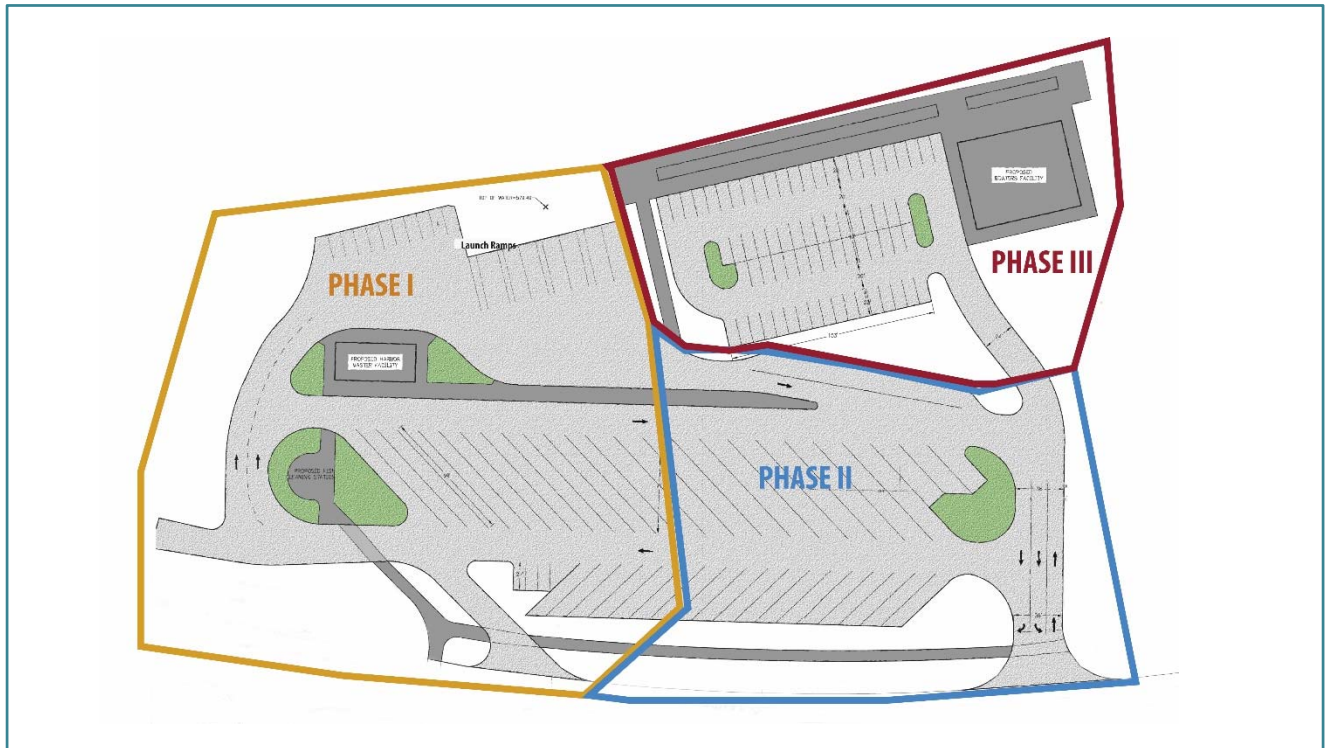


Figure: Graphical Illustration of Phases (Grant Dependent)

Narrative Explanation of Phases

When the team developed this scenario we tried to be considerate of all the facility users, and reduce the impact of each phase as much as possible. In Phase I, we propose a winter bid and start construction as soon as possible in the spring on a fast-track schedule to finish before May 15. It is reasonable to expect that early launch users and Centerpointe traffic will be mostly affected during this phase, and they would have to use a temporary access road for a short time (approximately a week). The launch may also be closed for a short period while the drive is repaved, but an alternate temporary entry/exit could be used at other times.

Phase II encompasses a large area of paving, and some waterfront work, so again we would propose a winter bid and start construction as soon as possible in the spring on a fast-track schedule to finish before May 15. Phase III, which includes the new boater’s facility, would bid in the winter again as well and construction would commence as soon as the boats leave the water in late summer. Under a fast-track schedule the existing comfort station would come down, the new paving would be installed and the new building would be closed in before winter. Interior building work would continue through the winter with the facility being ready for slipholders on May 15. Estimates for the new comfort station could vary widely depending on amenities and other features.

	<u>Phase Construction Estimate Totals</u>	<u>Notes</u>
Phase I	\$1,401,510.00	Includes new harbormaster bldg. (\$500,000) & fish cleaning station
Phase II	\$607,167.00	
Phase III	\$2,364,879.00	Includes new (\$1M) boater’s comfort station
Buildout Total	\$4,373,556.00	



Dec. 15, 2016 Meeting Comments

General: The group discussed the construction process, and how it might be managed to minimize downtime of the marina facilities – especially in the early spring when the boat launch is busy. The township will need to issue clear instructions to contractors working on the site, giving them guidance on where to stage their equipment, setting up temporary alternative access, etc. The phasing provided was generally approved by the group and determined to be a practical way to minimize downtime, maximize funding opportunities and manage the large overhaul necessary. Furniture should be TREX or similar, to minimize maintenance. Ken K. noted that we should review each phase as it moves to final design for safety improvements when/where we have the opportunity to make them.

Landscaping: Natural and/or raingarden greenspaces are preferred, not only for stormwater but also to discourage geese from frequenting the area. Manicured grass should be kept to a minimum.

An area should be designated for a dog run, as many marina users take dogs on their boats. This area should be accessible but screened to the extent possible. The comment was made that people are good about picking up after their dogs and that is to be further encouraged.

Buildings – General: The committee expressed their appreciation for the building style selected, as it not fits the feel of the waterfront but it is also compatible with other nearby existing structures in the corridor. Chairman Matuszyk noted that members of the marina committee had visited many other marinas and buildings in the years leading up to this plan, in order to develop a good idea of what was working elsewhere and how best to fulfill the needs of Elmwood marina users.

Harbormaster building: This should be a two-story building, with a public bathroom, garage and utility area on the ground floor and office on the second floor. There should be a secure area where staff can lock up tools and the cash box. This building should have white trim and siding – see the design guideline sheet.

Boater's building: This is to be a two-story building, with the boater's shower/restroom facility on the ground floor. The ground floor should also include an area for emergency response equipment and, ideally, an area for a concession stand on the wall facing the park. Usage periods for the concession stand will be determined at some point in the future – for example, it may only be used in the shoulder seasons. However, if the space is established it allows for that optional use in the future. The second floor should be an open lounge area, with space to review maps, and perhaps a small exercise area (treadmill, etc.). The township will explore the option of renting or using this second floor space in the non-marina season as it will be another recreational asset for the township. This building will match the harbormaster building in trim and color.



Fish cleaning station: The FCS will likely be a combination of a JWC Muffin Monster (or similar unit) housed under a pavilion. It will be serviced by extensions to the existing nearby sewer and water lines, as are the rest of the buildings on the site. The pavilion should share the same roofing and white trim as the rest of the buildings. The FCS offers the potential for sponsorship, as there are many area groups interested in it. Should the township receive offers to underwrite the cost of the FCS, the township could choose to put a plaque or some other sponsor signage in the FCS pavilion that is compatible with the site.



January 4, 2017 Meeting Comments

General: Pleased that the phasing plan is near completion; looking forward to seeing some real progress on the site; need a plan to promote the new improvements to marina users and township residents

Parks & rec committee (J. Tressler) pleased to see that the marina is considering ways to expand the property use to non-boaters during less active boating times.

(P. Moon) Notes that there are some undefined greenspaces on the plan that the team will refine as the phases move into final design.

(R. Matusyk) Notes that while Waterways is our first priority at the moment for grant funding, it's the committee's intention to evaluate any and all funding opportunities as they arise for these phased improvements.

Phase I: (K. Trevas) As this phase moves toward final design the team should consider how the existing new harbormaster building might be incorporated into the new plan as a component of the harbormaster building-to-be.

Phase III: (K. Trevas) As this phase moves toward final design the team should consider how to incorporate the dinghy storage area, and to make sure enough space is left available for that use; (P. Moon) Notes that the dinghy storage has been improved; (R. Matusyk) notes that the dinghy improvements show the marina's long-term interest in this area and that it will definitely be incorporated into the final design for Phase III but that the best way to do this has yet to be determined.

Public Comment: (H. Harris-Brady) Noted that this is the third joint meeting in six months and encouraged the two committees to meet jointly in the future at strategic project points, and encouraged everyone in attendance to continue following the project both at meetings and on the website (<http://tiny.cc/elmwoodmarina>)



January 9, 2017 Meeting Comments

General: This meeting was televised and an archived copy is available online through Upnorthmedia.

Several people spoke in support of the plan during the opening public comment period. Plan overview was presented by Heather Harris-Brady and opened to questions.

(T. Lautner) Asked about the number of trailer spaces in the plan and the existing number of trailer spaces on the marina site itself – noting that the plan has a fewer number of spaces. HHBrady responded that the 2016 plan currently has 72 50' spaces compared to 79 spaces in the 2012 plan. The team felt it was necessary to plan for larger spaces as the marina is seeing more, larger rigs coming in.*

(T. Lautner) Asked if the team had identified a specific overflow parking lot for the additional needed trailer parking. HHBrady responded that the team had identified two potential areas – lots at Brewery Creek and the capped Superfund site adjacent to Leelanau Studios near the corner of Cherry Bend Road. The Cherry Bend Road site has the advantage of easier right-hand turns for trailer rigs as well as a light for the necessary left. J. Shaw noted that the township has a verbal agreement with Leelanau Studios that would allow overflow parking at this lot, but a written confirmation has not yet been received by the township.

(T. Lautner) Noted that the north entrance is aligned on the plan with Pico Drive, and that the topography starts to slope upward in that direction, which would need to be accounted for in the final design.

(C. Preston) Noted that she would like to make sure the pedestrian connectivity was maintained between the marina and the surrounding properties – both adjacent and on opposite sides of the highway. HHBrady responded that the team did research this and collect input, which can be incorporated when the project moves to final design of Phase II. At this future date the Discovery Center should have their pedestrian crossing installed so the design team can use it as a basis for the marina/park crossing to keep things consistent for drivers in the corridor.

The team has added an allowance for this item to Phase II, for budgeting purposes. Please see the following reference documents in the plan Appendix – which pertain particularly to circulation and pedestrian crossings:

- Oct. 20 board “Access/Wayfinding”
- SmithGroupJJR sketch dated Sept. 22, 2016
- Elmwood Township Traffic Study by Progressive A/E, Page 27
- August 25, 2016 Public Workshop Boards (Circulation Focus)

(K. Trevas) Asked about the Waterways grant program, and what we might expect from them in funding. HHBrady noted that she believes the program is supportive of Elmwood’s project, and that the program funded this phasing plan. She also mentioned that there is a funding section in the report, and that the team anticipates a variety of funding sources as the project moves through its phases.

*Spaces can always be restriped as marina demands change.



**PHASE I - MARINA MASTER PLAN
PRELIMINARY OPINION OF CONSTRUCTION COST
12/20/2016**

ITEM DESCRIPTION	ESTIMATED QUANTITY	ITEM UNIT	UNIT PRICE	TOTAL PRICE
General Site Items				
Mobilization	1	LS	\$20,000.00	\$20,000.00
Site Preparation (Pavement removal, Mass Grading, Removals/Salvage)	1	LS	\$40,000.00	\$40,000.00
HMA Pavement, LVSP 165#/SY (Wearing Course)	7,000	SY	\$5.50	\$38,500.00
HMA Pavement, LVSP 165#/SY (Leveling Course)	7,000	SY	\$5.50	\$38,500.00
22A, Aggregate Base (6" depth)	8,000	SY	\$6.25	\$50,000.00
Granular Subbase (12" depth)	3,500	SY	\$3.50	\$12,250.00
6" Subgrade Underdrain	200	LF	\$7.50	\$1,500.00
Concrete Curb & Gutter (Type B2)	400	LF	\$18.00	\$7,200.00
Concrete Sidewalk (Standard MDOT)	1,500	SF	\$4.00	\$6,000.00
Water Supply Service Lead (Harbor Master, Fish Cleaning)	300	LF	\$25.00	\$7,500.00
Sanitary Service Lead (Harbor Master, Fish Cleaning)	650	LF	\$40.00	\$26,000.00
Sanitary Manhole	2	EA	\$3,000.00	\$6,000.00
Roadway Removal/Restoration at utility connections	1	LS	\$6,500.00	\$6,500.00
12" Storm Sewer	300	LF	\$35.00	\$10,500.00
Drainage Structures	3	EA	\$2,500.00	\$7,500.00
Storm Water Basin Outlet Filters	2	EA	\$3,000.00	\$6,000.00
4" Utility Conduit (pavement crossings)	350	LF	\$8.00	\$2,800.00
Topsoil, Mulch & Fertilize	3,000	SY	\$2.50	\$7,500.00
Lawn Seed	1,500	SY	\$1.50	\$2,250.00
Meadow Seed	1,500	SY	\$2.00	\$3,000.00
Mulch Blanket	600	SY	\$2.00	\$1,200.00
Erosion Control (Silt Fence, Temporary Inlet Filters, Turbidity Curtain)	1	LS	\$3,000.00	\$3,000.00
Pavement Markings	1	LS	\$2,500.00	\$2,500.00
Site Signs (Traffic, Interpretive, Information Kiosks)	1	LS	\$6,000.00	\$6,000.00
GENERAL SITE SUBTOTAL				\$312,200.00
Landscape Items				
Acer f. 'Autumn Blaze'/Red Maple	8	EA	\$475.00	\$3,800.00
Acer s. 'Green Mountain'/Sugar Maple	4	EA	\$475.00	\$1,900.00
Amelanchier laevis 'Serviceberry'	3	EA	\$350.00	\$1,050.00
Picea glauca/White Spruce	3	EA	\$300.00	\$900.00
Pinus strobus/White Pine	3	EA	\$300.00	\$900.00
Craetegus crusgalli v. inermis/Thornless Hawthorn	2	EA	\$300.00	\$600.00
Juniperus 'Sea Green'/Juniper	20	EA	\$85.00	\$1,700.00
Cornus s. 'Cardinal'/Red-osier Dogwood	25	EA	\$75.00	\$1,875.00
Rhus a. 'Gro Low'/Gro Low Sumac	25	EA	\$75.00	\$1,875.00
Maintenance Strip	1	LS	\$1,500.00	\$1,500.00
Landscape Edging	100	LF	\$7.50	\$750.00
Irrigation	1	LS	\$15,000.00	\$15,000.00
LANDSCAPE SUBTOTAL				\$31,850.00
Amenity Items				
Fish Cleaning Station Pavilion	480	SF	\$200.00	\$96,000.00
Fish Cleaning Station (Appliances & Fixtures)	1	LS	\$25,000.00	\$25,000.00
Fish Cleaning Station Grinder Station ("Muffin Monster")	1	LS	\$30,000.00	\$30,000.00
Harbor Master Facility Building	2,000	SF	\$250.00	\$500,000.00
Site Light Fixtures	5	EA	\$8,000.00	\$40,000.00
Site Entrance Sign	1	LS	\$7,500.00	\$7,500.00
Benches, Chairs & Tables (Walden benches are \$1900 ea)	1	LS	\$12,000.00	\$12,000.00
Trash Receptacles	3	EA	\$2,000.00	\$6,000.00
Bike Rack	1	EA	\$1,200.00	\$1,200.00
AMENITY SUBTOTAL				\$717,700.00
CONSTRUCTION SUBTOTAL				\$1,061,750.00
CONSTRUCTION CONTINGENCY 10%				\$106,175.00
CONSTRUCTION TOTAL				\$1,167,925.00
FINAL DESIGN/ENGINEERING/PERMITTING/BIDDING/CONSTRUCTION SERVICES/PROJECT ADMINISTRATION 20%				\$233,585.00
PROJECT TOTAL				\$1,401,510.00



**PHASE II - MARINA MASTER PLAN
PRELIMINARY OPINION OF CONSTRUCTION COST
12/20/2016**

ITEM DESCRIPTION	ESTIMATED QUANTITY	ITEM UNIT	UNIT PRICE	TOTAL PRICE
General Site Items				
Mobilization	1	LS	\$20,000.00	\$20,000.00
Site Preparation (Pavement removal, Mass Grading, Removals/Salvage)	1	LS	\$40,000.00	\$40,000.00
HMA Pavement, LVSP 165#/SY (Wearing Course)	7,500	SY	\$5.50	\$41,250.00
HMA Pavement, LVSP 165#/SY (Leveling Course)	7,500	SY	\$5.50	\$41,250.00
22A, Aggregate Base (6" depth)	8,000	SY	\$6.25	\$50,000.00
Granular Subbase (12" depth)	4,000	SY	\$3.50	\$14,000.00
6" Subgrade Underdrain	250	LF	\$7.50	\$1,875.00
Concrete Curb & Gutter (Type B2)	450	LF	\$18.00	\$8,100.00
Concrete Sidewalk (Standard MDOT)	1,500	SF	\$4.00	\$6,000.00
Textured Concrete (Sidewalks, Cross-walks)	4,000	SF	\$15.00	\$60,000.00
Water Supply Service Lead (Boater's Facility)	350	LF	\$25.00	\$8,750.00
Sanitary Service Lead (Boater's Facility)	350	LF	\$40.00	\$14,000.00
Sanitary Manhole	2	EA	\$3,000.00	\$6,000.00
Roadway Removal/Restoration at utility connections	1	LS	\$6,500.00	\$6,500.00
12" Storm Sewer	350	LF	\$35.00	\$12,250.00
Drainage Structures	3	EA	\$2,500.00	\$7,500.00
Storm Water Basin Outlet Filters	2	EA	\$3,000.00	\$6,000.00
4" Utility Conduit (pavement crossings)	400	LF	\$8.00	\$3,200.00
Topsoil, Mulch & Fertilize	3,000	SY	\$2.50	\$7,500.00
Lawn Seed	1,500	SY	\$1.50	\$2,250.00
Meadow Seed	1,500	SY	\$2.00	\$3,000.00
Mulch Blanket	800	SY	\$2.00	\$1,600.00
Erosion Control (Silt Fence, Temporary Inlet Filters, Turbidity Curtain)	1	LS	\$3,500.00	\$3,500.00
Pavement Markings	1	LS	\$3,500.00	\$3,500.00
Site Signs (Traffic, Interpretive, Information Kiosks)	1	LS	\$5,000.00	\$5,000.00
GENERAL SITE SUBTOTAL				\$373,025.00
Landscape Items				
Acer f. 'Autumn Blaze'/Red Maple	8	EA	\$475.00	\$3,800.00
Acer s. 'Green Mountain'/Sugar Maple	4	EA	\$475.00	\$1,900.00
Amelanchier laevis 'Serviceberry'	5	EA	\$350.00	\$1,750.00
Picea glauca/White Spruce	5	EA	\$300.00	\$1,500.00
Pinus strobus/White Pine	3	EA	\$300.00	\$900.00
Craetegus crugalli v. inermis/Thornless Hawthorn	3	EA	\$300.00	\$900.00
Juniperus 'Sea Green'/Juniper	20	EA	\$85.00	\$1,700.00
Cornus s. 'Cardinal'/Red-osier Dogwood	25	EA	\$75.00	\$1,875.00
Rhus a. 'Gro Low'/Gro Low Sumac	25	EA	\$75.00	\$1,875.00
Maintenance Strip	1	LS	\$1,500.00	\$1,500.00
Landscape Edging	100	LF	\$7.50	\$750.00
Irrigation	1	LS	\$15,000.00	\$15,000.00
LANDSCAPE SUBTOTAL				\$33,450.00
Amenity Items				
Site Light Fixtures	5	EA	\$8,000.00	\$40,000.00
Site Entrance Sign	1	LS	\$7,500.00	\$7,500.00
Trash Receptacles	3	EA	\$2,000.00	\$6,000.00
AMENITY SUBTOTAL				\$53,500.00
CONSTRUCTION SUBTOTAL				\$459,975.00
CONSTRUCTION CONTINGENCY 10%				\$45,997.50
CONSTRUCTION TOTAL				\$505,972.50
FINAL DESIGN/ENGINEERING/PERMITTING/BIDDING/CONSTRUCTION SERVICES/PROJECT ADMINISTRATION 20%				\$101,194.50
PROJECT TOTAL				\$607,167.00



**PHASE III - MARINA MASTER PLAN
PRELIMINARY OPINION OF CONSTRUCTION COST
12/20/2016**

ITEM DESCRIPTION	ESTIMATED QUANTITY	ITEM UNIT	UNIT PRICE	TOTAL PRICE
General Site Items				
Mobilization	1	LS	\$25,000.00	\$25,000.00
Site Preparation (Pavement removal, Mass Grading, Removals/Salvage)	1	LS	\$40,000.00	\$40,000.00
Building Demolition	1	LS	\$40,000.00	\$40,000.00
HMA Pavement, LVSP 165#/SY (Wearing Course)	6,500	SY	\$5.50	\$35,750.00
HMA Pavement, LVSP 165#/SY (Leveling Course)	6,500	SY	\$5.50	\$35,750.00
22A, Aggregate Base (6" depth)	7,500	SY	\$6.25	\$46,875.00
Granular Subbase (12" depth)	3,500	SY	\$3.50	\$12,250.00
6" Subgrade Underdrain	200	LF	\$7.50	\$1,500.00
Concrete Curb & Gutter (Type B2)	900	LF	\$18.00	\$16,200.00
Concrete Sidewalk (Standard MDOT)	1,500	SF	\$4.00	\$6,000.00
Textured Concrete (Sidewalks, Cross-walks)	5,000	SF	\$15.00	\$75,000.00
Block Pavers	3,000	SF	\$20.00	\$60,000.00
Water Supply Service Lead (Boater's Facility)	300	LF	\$25.00	\$7,500.00
Sanitary Service Lead (Boater's Facility)	300	LF	\$40.00	\$12,000.00
Sanitary Manhole	2	EA	\$3,000.00	\$6,000.00
12" Storm Sewer	250	LF	\$35.00	\$8,750.00
Drainage Structures	3	EA	\$2,500.00	\$7,500.00
Storm Water Basin Outlet Filters	2	EA	\$3,000.00	\$6,000.00
4" Utility Conduit (pavement crossings)	300	LF	\$8.00	\$2,400.00
Topsoil, Mulch & Fertilize	3,500	SY	\$2.50	\$8,750.00
Lawn Seed	2,000	SY	\$1.50	\$3,000.00
Meadow Seed	1,500	SY	\$2.00	\$3,000.00
Mulch Blanket	1,200	SY	\$2.00	\$2,400.00
Erosion Control (Silt Fence, Temporary Inlet Filters, Turbidity Curtain)	1	LS	\$3,000.00	\$3,000.00
Pavement Markings	1	LS	\$4,000.00	\$4,000.00
Site Signs (Traffic, Interpretive, Information Kiosks)	1	LS	\$12,000.00	\$12,000.00
GENERAL SITE SUBTOTAL				\$480,625.00
Landscape Items				
Acer f. 'Autumn Blaze'/Red Maple	10	EA	\$475.00	\$4,750.00
Acer s. 'Green Mountain'/Sugar Maple	6	EA	\$475.00	\$2,850.00
Amelanchier laevis 'Serviceberry'	4	EA	\$350.00	\$1,400.00
Picea glauca/White Spruce	4	EA	\$300.00	\$1,200.00
Pinus strobus/White Pine	3	EA	\$300.00	\$900.00
Craetegus crugalli v. inermis/Thornless Hawthorn	5	EA	\$300.00	\$1,500.00
Juniperus 'Sea Green'/Juniper	20	EA	\$85.00	\$1,700.00
Cornus s. 'Cardinal'/Red-osier Dogwood	25	EA	\$75.00	\$1,875.00
Rhus a. 'Gro Low'/Gro Low Sumac	25	EA	\$75.00	\$1,875.00
Maintenance Strip	1	LS	\$2,000.00	\$2,000.00
Landscape Edging	200	LF	\$7.50	\$1,500.00
Irrigation	1	LS	\$18,000.00	\$18,000.00
LANDSCAPE SUBTOTAL				\$39,550.00
Amenity Items				
Boater's Facility Building	4,000	SF	\$250.00	\$1,000,000.00
Site Light Fixtures	5	EA	\$8,000.00	\$40,000.00
Water's Edge Low Level Light Fixtures	30	EA	\$4,000.00	\$120,000.00
Railing at Dock Entries	3	EA	\$7,500.00	\$22,500.00
Fire Pit	1	EA	\$10,000.00	\$10,000.00
Grills	4	EA	\$1,200.00	\$4,800.00
Picnic Tables	8	EA	\$2,000.00	\$16,000.00
Site Entrance Sign	1	LS	\$7,500.00	\$7,500.00
Benches, Chairs & Tables (Walden benches are \$1900 ea)	1	LS	\$35,000.00	\$35,000.00
Trash Receptacles	6	EA	\$2,000.00	\$12,000.00
Bike Rack	3	EA	\$1,200.00	\$3,600.00
AMENITY SUBTOTAL				\$1,271,400.00
CONSTRUCTION SUBTOTAL				\$1,791,575.00
CONSTRUCTION CONTINGENCY 10%				\$179,157.50
CONSTRUCTION TOTAL				\$1,970,732.50
FINAL DESIGN/ENGINEERING/PERMITTING/BIDDING/CONSTRUCTION SERVICES/PROJECT ADMINISTRATION 20%				\$394,146.50
PROJECT TOTAL				\$2,364,879.00



3.4 Phasing Scenario B – Grant Funding Independent

While this scenario is perhaps not as attractive at first blush, due to the fact that the township would be forgoing a chance to cut the cost of the improvements in half, we present it as an alternative because of the fact that the harbormaster has expressed concerns that many of the marina elements (building roof areas, parking) are in very poor condition. This scenario would allow the township to replace a large-ticket item (such as the boater's comfort station) earlier in the process than might otherwise be feasible under a grant-dependent scenario.

Under the scenario, for example, if the township wished to fund the new boater's comfort station on its own Phase III would become the first phase constructed and work would take place on the township's schedule.



4. Design Guidelines

This chapter outlines the design guidelines developed by JJR throughout the course of this project, and the Oct. 20, 2016 public workshop in particular. These guidelines are intended to provide an overall reference through build-out of all phases. As the township moves forward through the phases, this plan in general and these design guidelines in particular may be attached to future work scopes as phases move into final design.

Reference Photos from Park



TREES

To create a landscape character that suites northern Michigan and provides a park-like setting, the use of native trees is encouraged. Shade trees such as Sugar Maple should be the dominant plant. Evergreen trees such as White Pines should be used for winter color and screening needs; for instance, along M-22. Flowering trees such as Service Berry offer seasonal color and help create more intimate social places.



SERVICEBERRY



SUGAR MAPLE



RED MAPLE

NATURAL AREA

Lawn areas are necessary within the site for picnic, recreation, and social spaces. Other areas of the site, such as along the creek edge, offer an opportunity to use native grasses, perennial flowers and shrubs to create and enhance wildlife and fisheries habitat. Improving this natural corridor provides great interpretive learning opportunities.



STORM WATER MANAGEMENT

Redevelopment of the site will necessitate updating the storm water management measures to help improve water quality in the bay. The use of rain gardens and pervious unit pavers in parking bays is recommended as part of the overall strategy.



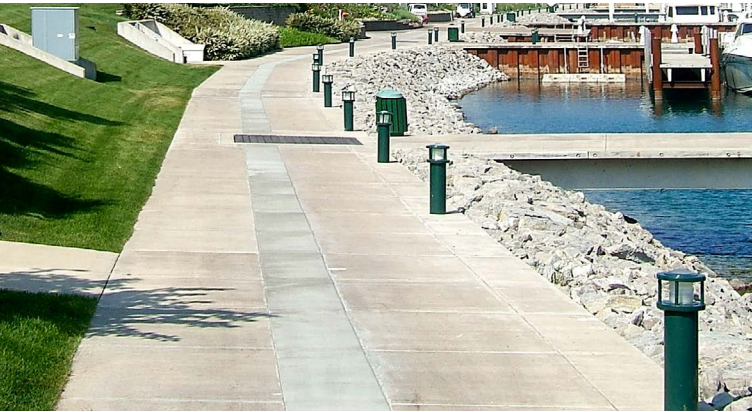
IMAGE AREAS

Areas of the site which should receive more detailed landscape enhancements include the marina entrances and exits, the frontage along M-22, and the area adjacent to the boater facility. This use of low growing flowering and evergreen shrubs is recommended, preferably native plants.



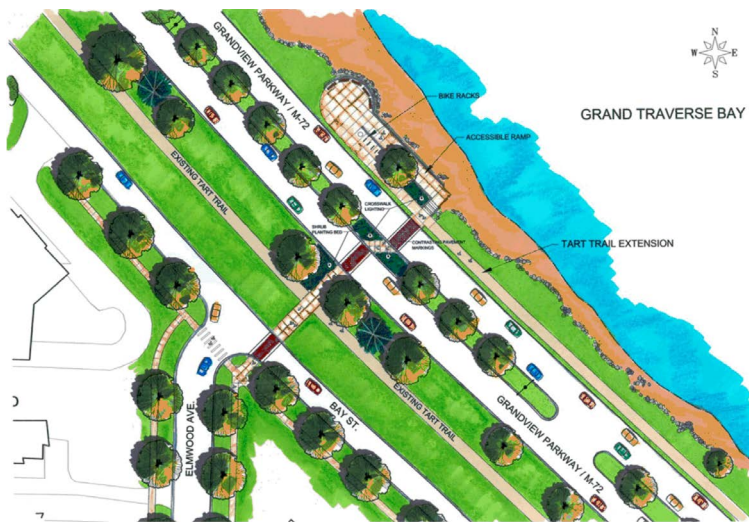
SURFACE TREATMENT

For the promenade along the waterfront the use of poured concrete is recommended, with the potential for judicious use of pavers at key points. The concrete can be scored in an interesting pattern that works with the design of the building and rhythm of bollard lights. Patio areas for boater's use should utilize unit pavers of concrete or brick to create a more intimate social setting.



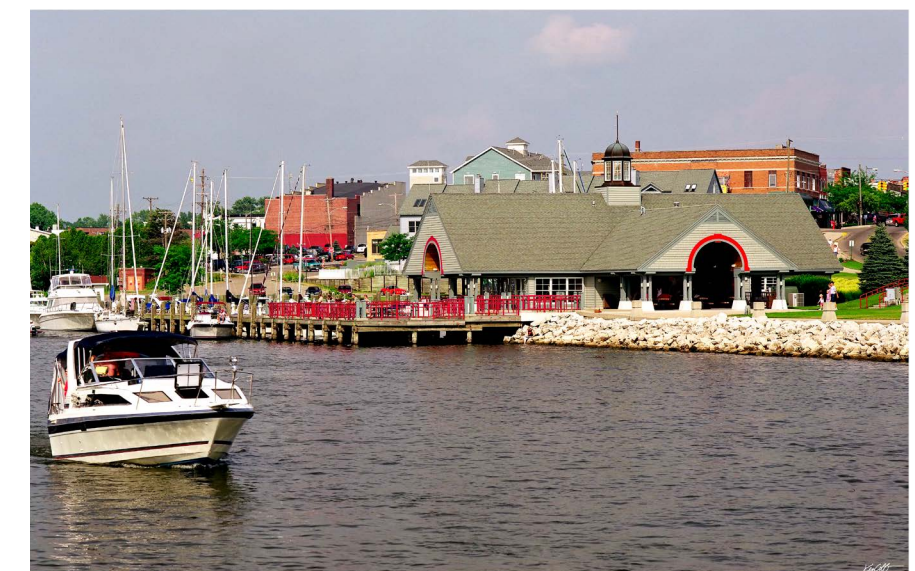
CROSSING

Improving the pedestrian crossing with a boulevard refuge island will better connect the west side of M-22 to the waterfront. The use of more obvious signage and different paving materials such as poured concrete will further act as a visual cue of the pedestrian crossing.



ARCHITECTURE

The Boater's Facility and Harbor Master's office should be designed to be compatible with each other, and have a distinctly waterfront character. Both should be two stories in height; the second story allows for broader views of the site and bay for the boater's lounge and the harbor master. The building designs should include cement board or cedar siding, trim boards at corners, windows and doors, operable windows with divided lights, simple but well-articulated facades, and building massing that reduces the visual scale of the buildings and provides interest.



SIGNAGE / BLENDING

The existing signage standards used for the marina and park should be continued as they are attractive and legible. A new set of entrance signs should be installed in the same graphic vocabulary, suitably sized for the speed of traffic on M-22. The marina should also integrate interpretive learning displays where appropriate.



LIGHTING

In areas near the water's edge and docks, lighting should be provided by low level bollards which direct light at walk surfaces and not towards the docks. Other site light for parking areas, entrances, and walks should incorporate nautical themed fixtures and poles. If more efficient photometrics are required for the parking lots, the lights should be cut-off style and may be non-descript in appearance.



BIKE RACK

Bike racks are needed for both boaters and the visiting public. At least two bike parking areas are recommended, and each should be installed on a paved concrete base. The final design should coordinate with boaters to assess how many bike parking spaces should be provided.



RAILING

Along the waterfront a low pre-cast concrete curb can be used to define the edge, and the proposed bollard lights will provide further definition. Fabricated decorative rails can be used near the dock connections to provide for security and safety.



FURNISHING

Seating should be incorporated into the waterfront promenade either as a low wall or benches to match the adjacent park, or a combination of the two. Trash receptacles should be provided that match the adjacent park. For boater social areas the use of movable seats and chairs is recommend, perhaps in combination with low seat walls. Site furnishings should also include outdoor grills and picnic tables.



FIRE PIT

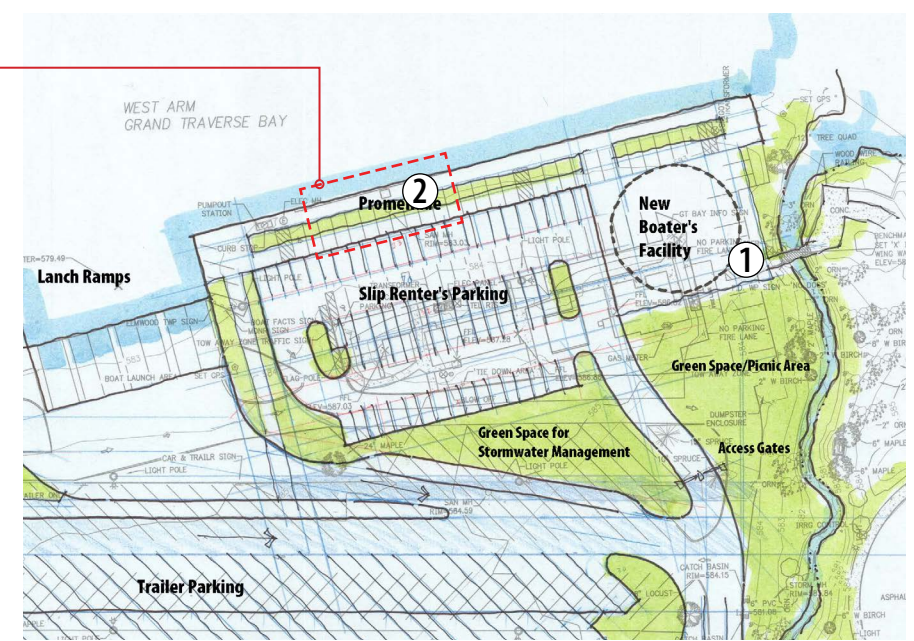
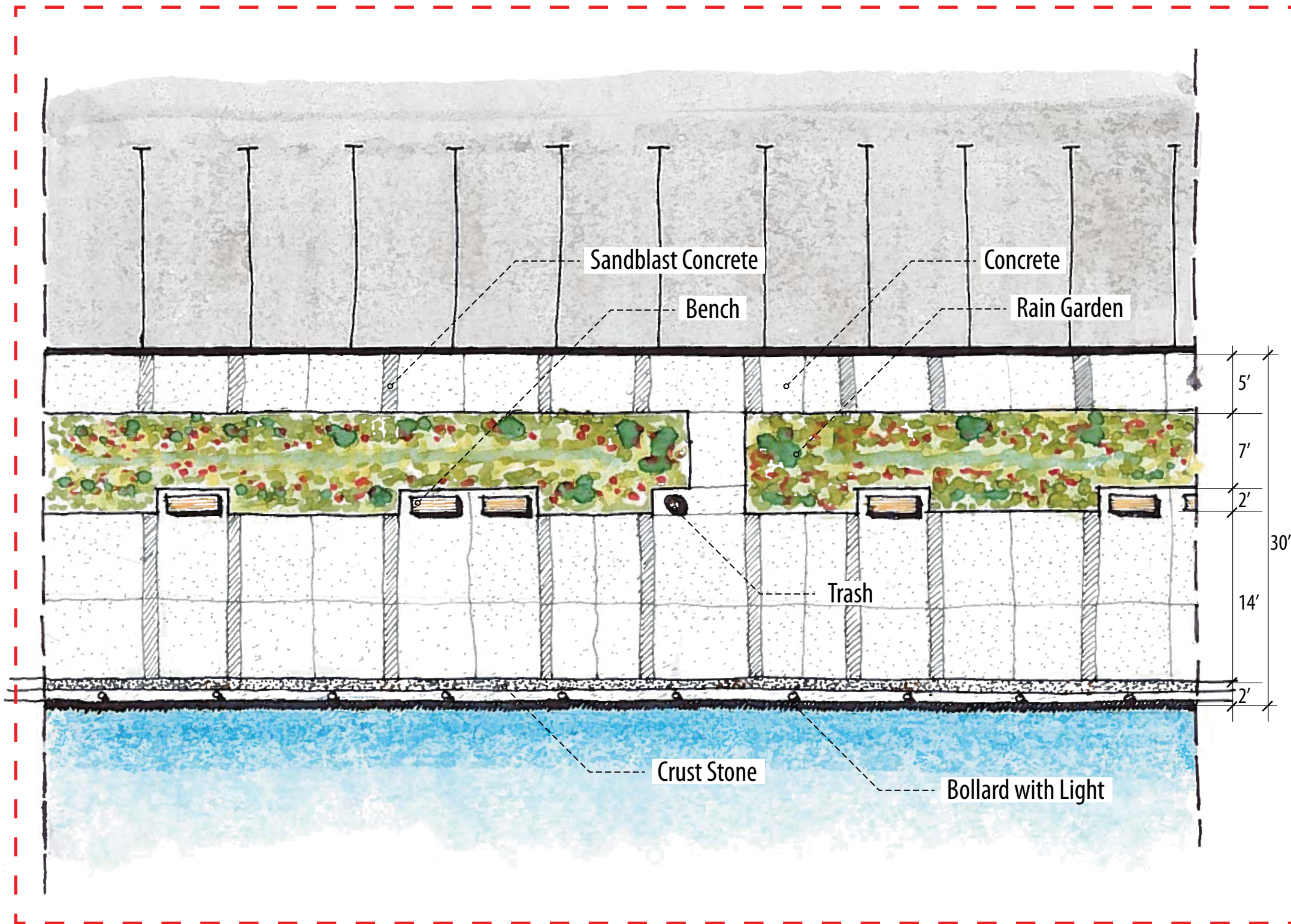
A fire pit in the boater's patio/social area would invite and enhance the use of the space. The pit should use propane or natural gas as a source of the flame to avoid impacting boaters with the odor of burning wood. The fire pit can be constructed of precast concrete wall units to blend with any seat walls of the same materials.



FISH CLEANING STATION

The fish cleaning station should be covered with a structure that provide shade and protection from the weather. The structure should be designed to be compatible with the architecture of the Boater's Facility and Harbor Master's office. The fish cleaning station would be a great place to include public restrooms for visitors.







5. Funding

Given the fact that the marina does need some substantial work in all aspects, and the fact that the Elmwood Township Marina has an unusual situation where the fees from A & B Dock are unrestricted, we recommend that the township create a master financial plan for the marina and update it regularly. This plan would include all sources of revenue (current and projected for each of the next five years), and all projected expenses (both land-side and water-side – current and project for each of the next five years). This will allow the township to evaluate allocation of marina revenue in a big-picture way.

The potential funding sources listed were chosen because they have goals that are in line with the marina and its associated township planning documents. Often projects are funded by a patchwork of grant applications, as opposed to a single funding source. While this list is provided as a place to start, please consult the granting agency websites for the most current information.



5.1 Local

- A. Grand Traverse Regional Community Foundation
- B. Rotary Charities
- C. Traverse City Light & Power (perhaps partnership on lighting)
- D. Kiwanis & Lions Clubs
- E. Grand Traverse Area Sportfishing Association
- F. Oleson Foundation

5.2 State

- A. Coastal Zone Management Program – Michigan Department of Environmental Quality

Match – 50%; Grants normally in the range of \$10,000-\$100,000

Grants can only be used in boundary area – Elmwood enjoys a much larger eligible area than most townships due to the presence of Cedar Lake close to the shoreline.

- B. Waterways Program – Michigan Dept. of Natural Resources

Match – 50%; Grant amounts vary; Large requests require 3-4 year notice

This program has been very reliable in the past, and has funded many aspects of the Elmwood marina – including this plan. Deadline is always April 1.

- C. Great Lakes Fishery Trust

No match required, but support and local commitment does improve the chances of success. Funded projects include research projects that benefit Great Lakes fishery resources; rehabilitation of Great Lakes fish species; protection/enhancement of Great Lakes fishery habitat; public education; projects to improve access to the Great Lakes.





D. Michigan DNR Natural Resources Trust Fund

This program funds land acquisition and recreation facility development.

Recreation Facility Development: Eligible public outdoor recreation projects include fishing and hunting facilities, beaches, boating access, picnic areas, campgrounds, winter sports areas, playgrounds, ball fields, tennis courts, and trails. Also included are facilities needed to support outdoor recreation, such as nature interpretive buildings, park visitor centers, restrooms, and storage buildings for park equipment. Renovation of existing facilities is eligible and encouraged, but not if poor maintenance, design, or construction was the cause of the facilities' poor or unsafe condition. All new construction and renovation must comply with all federal and state requirements regarding accessibility for people with disabilities.

Grant range \$50,000 - \$300,000, 25% minimum match. Deadline is always April 1.

E. MDNR Recreation Passport Grant

The grant program may only be used for local development projects. The program is focused on renovating and improving existing parks, but the development of new parks is eligible. Reimbursement program only.

Grant range \$7,500 - \$45,000, 25% minimum match. Deadline is always April 1.



F. MDNR Aquatic Habitat Grant

Projects that address aquatic habitat issues on public waters. Public waters are those: a) with legal public access through public lands or public access sites; b) with a permanent inflow or outflow to other waters; or c) that have been stocked with fish from DNR (or its predecessors) hatcheries. Priority will be given to projects on public waters with legal public access.

Projects that improve degraded watershed processes. Priority will be given to waters with lower numbers of degraded processes with a special emphasis to those near urban areas.

Projects that test and evaluate new and innovative methods to improve degraded watershed processes. Priority will be given to those that can serve as demonstration projects to determine applicability of new methods to other Michigan waters.

Evaluation of existing and new aquatic habitat improvement projects that will lead to improved decisions for future aquatic habitat projects.

Projects that inventory or assess watershed functions that clearly identify how they will lead to protection or remediation projects.

Preproposals due Aug. 26; Grant range \$25,000 - \$1.25M, 10% minimum match.

G. MDOT Transportation Alternatives Program

TAP is a competitive grant program that funds projects, such as bicycle facilities, shared-use paths, streetscape improvements that improve pedestrian safety, and historic preservation of transportation facilities that enhance Michigan's intermodal transportation system, promote walkability, and improve quality of life for Michigan citizens.

Rolling deadlines; recommended match 35%.



H. Land & Water Conservation Fund (MDNR – Federal Funding)

Must meet objectives outlined in the Michigan Statewide Comprehensive Outdoor Recreation Plan.

Improve the collaboration and cooperation between all outdoor recreation providers to ensure that Michigan's recreation system meets the needs and desires of its residents and visitors, and that users are made aware of opportunities throughout Michigan's outdoor recreation system; Ensure the maintenance and continuous improvement of outdoor recreation facilities; Improve access to and connectivity between recreational opportunities

Integrate the provision of outdoor recreation with economic development plans and activities to advance economic prosperity; Market outdoor recreation opportunities and their associated amenities to ensure that residents and visitors alike are aware of all opportunities and communities are realizing the economic benefits associated with those opportunities

Contribute to the protection of Michigan's high-quality natural resources and help residents and visitors gain appreciation of those resources through interpretation and programming

Deadline April 1; Grant range \$30,000 - \$100,000

5.3 Federal

A. Boating Infrastructure Grant (BIG)

The Boating Infrastructure Grant Program (BIG) provides grant funds to the states to construct, renovate, and maintain tie-up facilities with features for transient boaters in vessels 26 feet or more in length, and to produce and distribute information and educational materials about the program.

The governmental agency designated by each respective governor is eligible to participate in the BIG Program. The governmental agency may partner with local governments,

private marinas and others to fund eligible projects. The BIG Program includes two funding tiers, Tier One (non-competitive) and Tier Two (nationally competitive). Under Tier One each state, the D.C. and insular area may receive funding for eligible projects up to \$200,000 annually. Tier Two funds are made available through a nationally competitive process. Tier Two proposals received are reviewed, evaluated and ranked by a national panel with the final decision for funding made by the Director of the U.S. Fish and Wildlife Service. The ranking criteria, eligible projects and regulations are listed in 50 CFR 86. In FY2015 Michigan had one Tier 1 application, 21 Tier1s were funded nationally.

B. National Fish & Wildlife Fund Bring Back the Native Program (Great Lakes is a priority area) Wetland and fish passage restoration; habitat improvement

Deadlines – July of each year; Funding amounts \$50,000-\$100,000

5.4 Private

A. Mott Foundation Special Initiatives

B. Kresge Foundation Arts & Culture (public art)

C. Local private funders



APPENDIX A – Soil Boring Results

(Insert from Otwell)

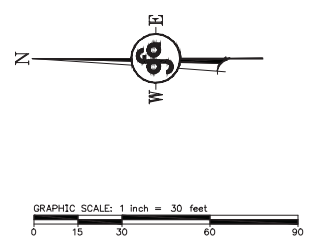
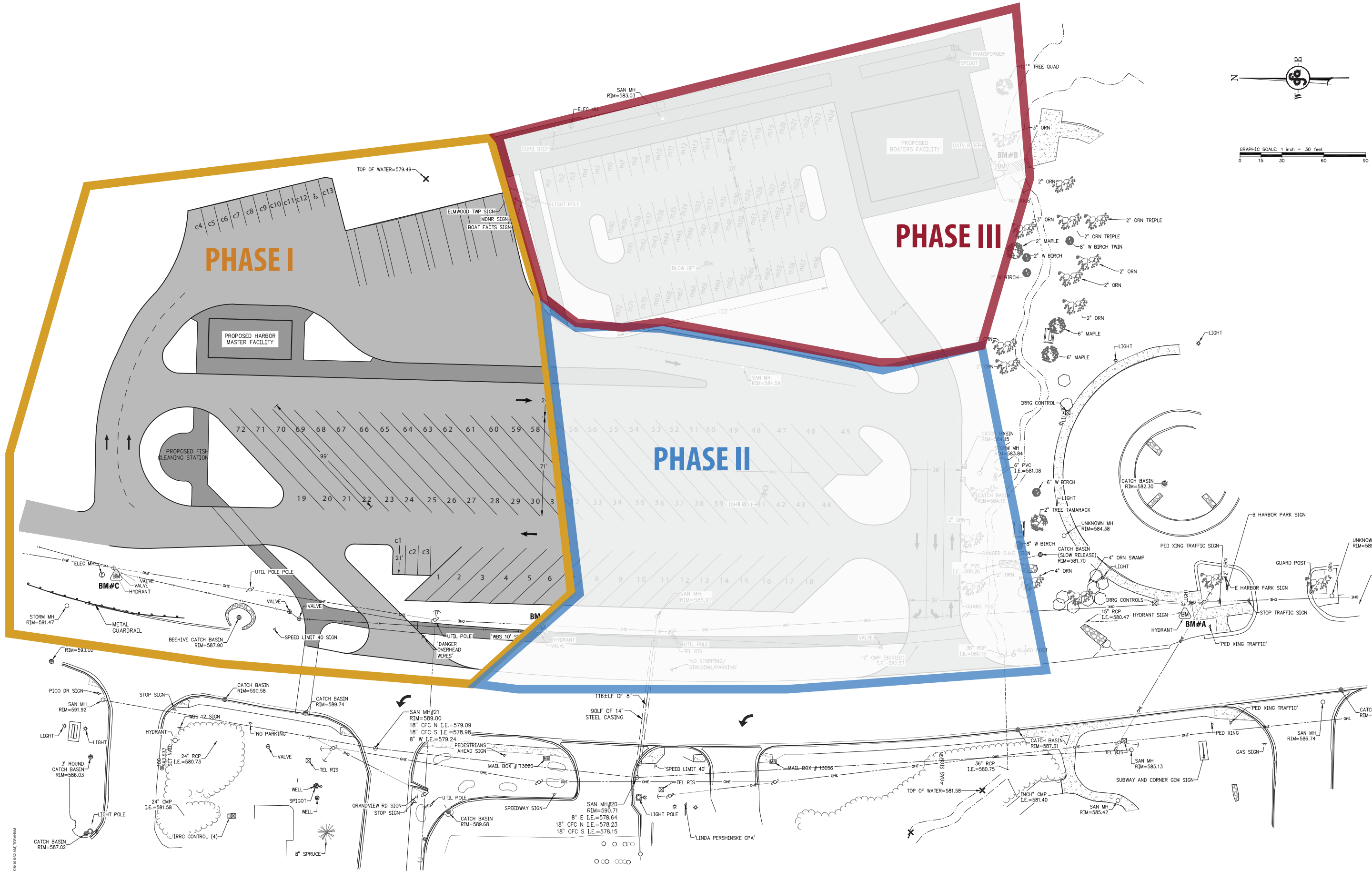


APPENDIX B – Environmental Impact Report

(Insert from Otwell)



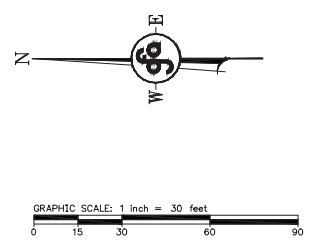
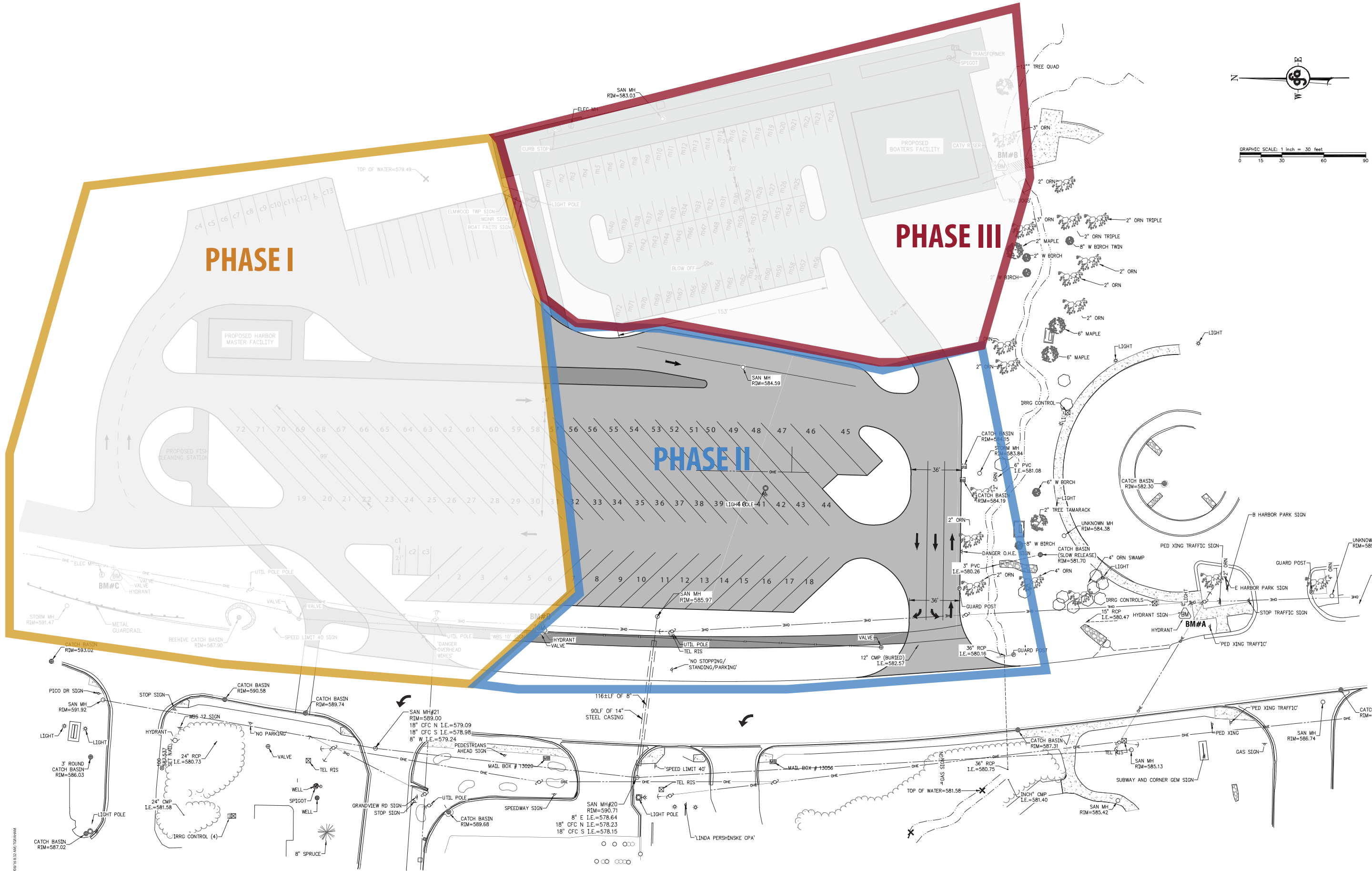
APPENDIX C – Preliminary Engineering Drawings



REV	DATE	DESCRIPTION

ELMWOOD TOWNSHIP MARINA
SITE PLAN
 SECTION 28 & 33, T.28 N., R.11 W.,
 ELMWOOD TOWNSHIP, LEECLANAU COUNTY, MICHIGAN

These documents are prepared in accordance with the contractual terms and conditions for this project.



PH 231.946.5874
 FAX 231.946.3703
 WWW.gfa.c
 123 W. First Street
 Trossen, MI 48884

REV	DATE	DESCRIPTION

ELMWOOD TOWNSHIP MARINA

SITE PLAN

SECTION 28 & 33, T.28 N., R.11 W.,
 ELMWOOD TOWNSHIP, LEELANAU COUNTY, MICHIGAN

P.L. BRIAN BOALS P.E.
 D.R. T. GRAHAM
 J.R. BOALS

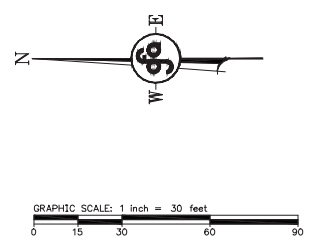
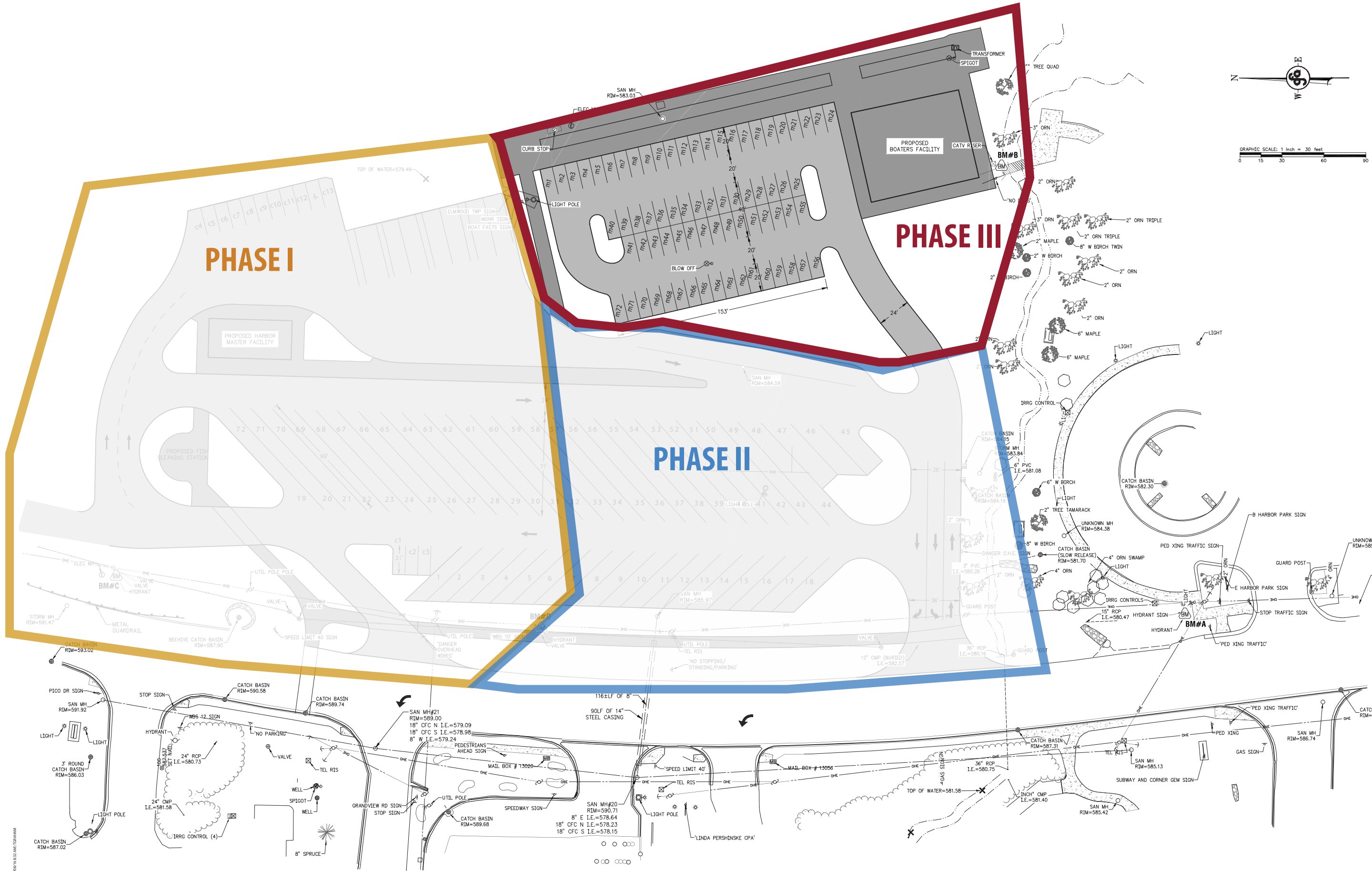
C.O. B. BOALS

15243

3.0

TOWN OF GRANDVIEW (FOR DATA) LEGWORK FOR BUREAU OF FIRE MARINA

These documents are prepared in accordance with the contractual terms and conditions for this project.



REV	DATE	DESCRIPTION

ELMWOOD TOWNSHIP MARINA
SITE PLAN
 SECTION 28 & 33, T.28 N., R.11 W.
 ELMWOOD TOWNSHIP, LEECLANAU COUNTY, MICHIGAN

These documents are prepared in accordance with the contractual terms and conditions for this project.



APPENDIX D - Additional Information

- Publicity/Feedback received from meetings
- Winter Programming Concept



Publicity/Feedback Received

Both the August and October public workshops were recorded and are available via archive at:

Elmwood Charter Township M... x +

www.upnorthmedia.org/govtv_elmwoodtwp.asp

UpNorth Media Center

About UpNorthTV GovernmentTV

Charter Township of Elmwood Board of Trustees meeting 8/8/16

Charter Township of Elmwood Board of Trustees meeting 7/11/16

Charter Township of Elmwood 6/13/16

Township Joint meetings

Charter Township of Elmwood Jt Marina & Parks & Recreation Committees meeting 8/25/16

Township Parks Commission

Charter Township of Elmwood Joint Parks & Marina Committee meeting 10/20/16

Both the workshops were advertised via press release, published public notice and also sent directly to the marina's mailing list and an additional list of interested parties maintained by the township. Copies of press releases are included on the following pages, followed by a summary of feedback received over the course of the project. Minutes of the rest of the marina committee meetings are available from the township upon request.



To: Charter Township of Elmwood Board
From: Brian Boals, PE & Heather Harris-Brady, GFA
Re: Elmwood Township Marina Phasing Plan Update
June 7, 2016

Executive Summary

Elmwood Township selected the GFA/SmithgroupJJR team (via March, 2015 RFP) to create a phasing plan for the approved new marina improvements. This was a separate contract, outside of the township's agreement for continuing engineering services. This plan was put on hold, pending the results of a traffic study, which was needed to determine the optimum entrance/exit configuration for the marina.

The township, under a contract with Progressive AE (Pete LaMourie), has been conducting a traffic study since last summer. While the final study document is not yet available, preliminary information has shown that while a light at Brewery Creek Drive is likely not the best choice for various reasons, there are still ways we can manage traffic in/out of the marina in order to proceed with the marina phasing plan.

Moving Forward

The marina committee is prepared to now move ahead with the marina phasing plan. It is our intention, as your marina phasing team, to add Pete LaMourie to our project team. He will assist us in vetting the entrance/exit designs that are part of the phasing plan scope. We will simply absorb this into our existing contract.

Over the summer we will be scheduling at least one, and possibly two, workshops as we develop the phasing plan. These workshops will be facilitated by SmithgroupJJR, with our assistance. After the workshops the phasing plan will be refined with the marina committee and brought to this board for final approval.

It is our intention at this time to finish the phasing plan so that the first phase of the marina plan will be ready for a 2017 Waterways grant application.

Attachments

Small-scale copy of the approved marina master plan

Heather Harris-Brady

Subject: FW: Aug. 25 Workshop Press Release
Attachments: poster.pdf; postcard.pdf

From: Heather Harris-Brady
Sent: Friday, July 29, 2016 4:23 PM
To: supervisor@elmwoodtownship.net
Cc: Brian Boals (brianb@gfa.tc) <brianb@gfa.tc>; gkoernus@chartermi.net; Pat Doher <Pat.Doher@smithgroupjir.com>; 'Bob Doyle' <Bob.Doyle@smithgroupjir.com>
Subject: Aug. 25 Workshop Press Release

Hi everyone -

I'm out all next week, so here's the press release you asked about last night.

I'm also attaching some artwork for flyers and postcards, if you want to start posting/handing them out next week. Otherwise, I will print some when I get back.

The release below can go out the email groups we identified at the meeting (Crew22, the corridor committee, the marina mailing list, all township boards/committees, and neighboring entities – such as Centerpointe, Brewery Creek, Tuscan, etc.).

The marina website seems to be down, so to speed things up I threw one together for the project:

<http://tiny.cc/elmwoodmarina>

There are likely items missing but it's a start, and George can just link it to the marina site when it gets back online.

That's all I can think of right now. I will probably be out of email service for most of the time I'm away, just FYI, but if you have questions I believe Brian is in the office most of next week.

Thanks, talk to you soon!
Heather

PRESS RELEASE

FOR IMMEDIATE RELEASE

ELMWOOD TOWNSHIP MARINA PLANNING WORKSHOP AUG. 25

(Traverse City, MI) July 29, 2016 – The Charter Township of Elmwood would like to cordially invite the public to a workshop Thursday Aug. 25 at the township hall on Lincoln Road, beginning at 6 pm. The township is asking for public input on a phasing plan for the marina master plan. Once completed this phasing plan will allow the township to move ahead with planning and funding future improvements to the township's marina property on Grand Traverse Bay. The Aug. 25 workshop will be a joint meeting of the township's marina committee and the parks & recreation committee, the public workshop will be the main item on the agenda.

For more information on the project please visit <http://tiny.cc/elmwoodmarina>, or contact Jack Kelly, Supervisor, Charter Township of Elmwood (946.9021).

Heather Harris-Brady

From: Dawson, Linnae (DNR) <DAWSONL@michigan.gov>
Sent: Wednesday, August 17, 2016 11:22 AM
To: Heather Harris-Brady
Cc: Brian Boals; Petersen, Paul (DNR)
Subject: RE: Launches

Hi Heather-

Sorry for the delay in my response, but it has been one of those weeks.
Based on what Paul forwarded to me on Monday, I will try to help the best I can.

As far as any guidance documents on launch rates- they don't exist. With that being said, here is what I can offer.

- DNR fee launch sites charge the \$11 recreation passport for Michigan plated vehicles. For non-Michigan plated vehicles it would be a \$9.00 daily pass or a \$31.00 annual pass- this is a little different than most non-DNR locations.
- Most non-DNR launch sites will have a daily launch fee and an annual launch pass

Launch rates, because of the vast number of launches statewide and the wide variety of "owners" – townships, cities, private, etc.- are extremely hard to track. Each site "owner" sets the fees based on what meets their needs, use, maintenance costs, etc.

The most important thing to remember is to be reasonable. I would suggest looking at other prices for launching in the area to get a ballpark. We don't want to discourage people from using the launch because the cost is prohibitive, but you also need to make sure your revenue helps to cover your costs.

I hope this helps a little. If you have any other questions, please don't hesitate to contact me.

Thanks,

Linnae Dawson
Recreational Harbor Coordinator
Programs and Grants Unit
Parks and Recreation Division
Michigan Department of Natural Resources

Young State Park
2280 Boyne City Rd
Boyne City, MI 49712

Phone: 517-290-2200
Fax: 231-582-7678
dawsonl@michigan.gov

From: Petersen, Paul (DNR)
Sent: Monday, August 15, 2016 8:38 AM
To: Heather Harris-Brady <heather@gfa.tc>
Cc: Brian Boals <brianb@gfa.tc>; Dawson, Linnae (DNR) <DAWSONL@michigan.gov>
Subject: RE: Launches

Hello Heather:

I have copied Linnae Dawson on your correspondence and she guide you regarding boat launch rate information.

Thank you!

Paul

From: Heather Harris-Brady [<mailto:heather@gfa.tc>]
Sent: Tuesday, August 09, 2016 3:19 PM
To: Petersen, Paul (DNR)
Cc: Brian Boals
Subject: Launches

Hi Paul,

I hope you are having a great summer! I'm helping Elmwood get some information together. Can you please tell me if Waterways has any guidance documents on establishing boat launch rates? I have a copy of the transient and slip rate document but I can't find anything on launch rates.

Thank you!
Heather

Heather Harris-Brady
Marketing Coordinator



123 W Front Street | Traverse City, MI 49684
tel (231) 946.5874 | **direct (231) 932.5531**
fax (231) 946.3703

[website](#) | [mobile website](#) | [grant blog](#) | [vCard](#) | [map](#) | [email](#)



Confidentiality Note: This e-mail and any attachments are confidential and may be protected by legal privilege. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you.

Dianne Keelan
6629 M 72 NW
Williamsburg, MI 49690
October 19, 2016

Elmwood Township Marina Committee
C/o Township Clerk, Connie Preston
10090 E. Lincoln Road
Traverse City, MI 49690

Re: Marina Master Plan Workshop Input Session

Dears Sirs/Madams

As a season slip holder at the Elmwood Township Marina, I regret that I am unable to attend the planning session on October 20th. Instead, I am sending a document that outlines my thoughts on some of the topics listed in the agenda for that meeting, Item #8.D. – Workshop Input session. (See attached document.)

My husband and I have docked our boat and utilized the marina facilities at 39 different marinas on Lakes Michigan and Huron. This includes multiple season leases at Elmwood Township Marina, Harbor West Yacht Club, and N.M.C. Maritime Marina (since dismantled).

We often stay at the Elmwood Marina 2-5 nights a week; as do many of the boaters who have seasonal leases, some living aboard for the entire season. Many of the long-stay boaters live a considerable distance from Greilickville and thus may not have adequate voice in the planning meetings which have been generally scheduled in the off-summer season. These boaters have great insight to the facility use of the marina. Our boating accommodation needs are somewhat different than those boaters who rarely sleep aboard their boats. Please make a concerted effort to gather the opinions of these boaters.

Sincerely,

Dianne Keelan

CC: Elmwood Township Parks and Recreation Committee
Smith Group JJR, Pat Doher & Bob Doyle
Heather Harris-Brady, Gourdie Fraser Associates

INPUT FOR PROPOSED ELMWOOD MARINA IMPROVEMENTS

- **Landscaping:**

- Maximize use of green space
- Around boaters lounge/shower building
- As a promenade along the waterfront
- Around the boaters picnic area
- Provide privacy for boaters' picnic area. We would appreciate eating our meal without the curious gaze of passer-bys.
- Use natural materials
- Shrubs rocks/boulders (example: Clinch Marina, Little Current Marina in Canada)
- Use "green" paved areas wherever feasible. (Example: Straits Harbor Marina Mackinaw City has cement pavers with holes in them to allow grass/moss to grow through which is used in their fire lanes.)

- **Lighting – Out Door:**

- Downward facing overhead lights.
- Dock lights with yellow light bulbs/lens to deter bugs.
- Avoid lighting that would interfere with night boating navigation especially approaching the marina entrance from a distance.

- **Lighting - Indoor:**

- If using sensor lights in the boaters lounge/shower facility, combine motion and sound detection as a safety feature.
- Provide adequate bright illumination in the restrooms and showers to assure safety.

- **Architectural Materials:**

- Keep an "Up North" décor.
- Emphasize natural materials.
- Reflect style of architecture in the harbor basin (Center Point and Harbor West).

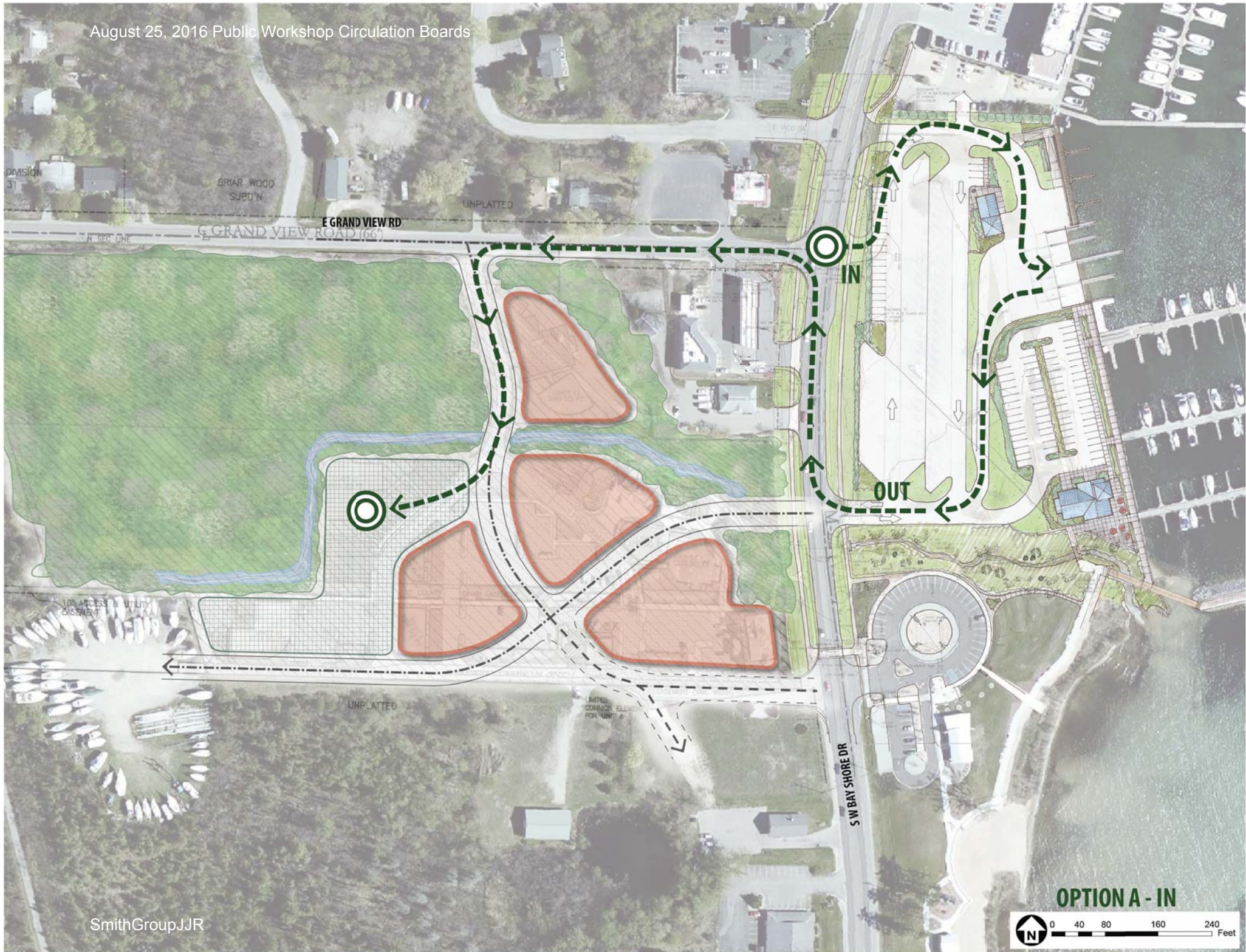
- **Placement of Boaters Lounge and Picnic Area:**

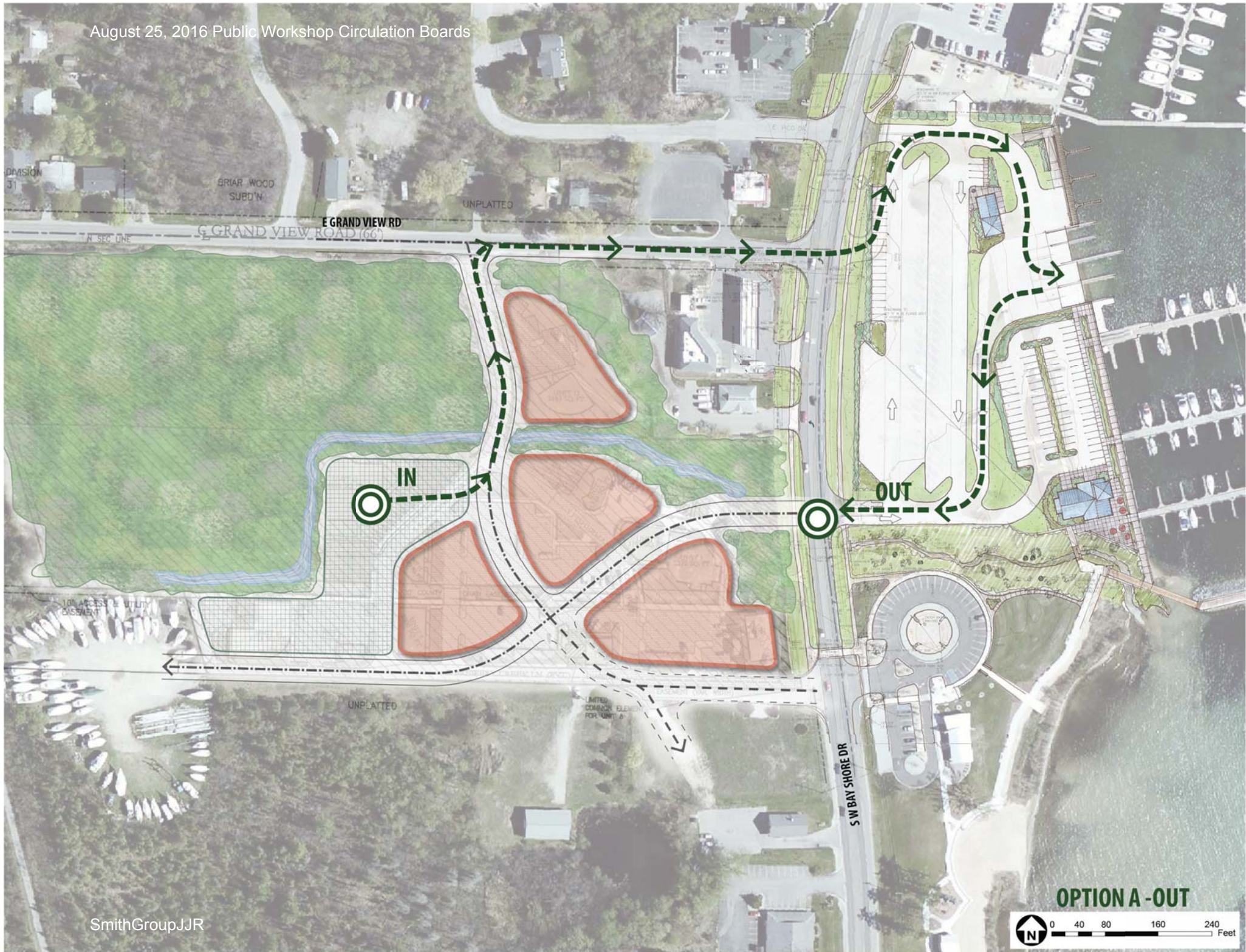
- Use a site orientation of the building with respect to prevailing winds of May-October.
- Use orientation of major windows with respect to sunrise/sunset May-October.

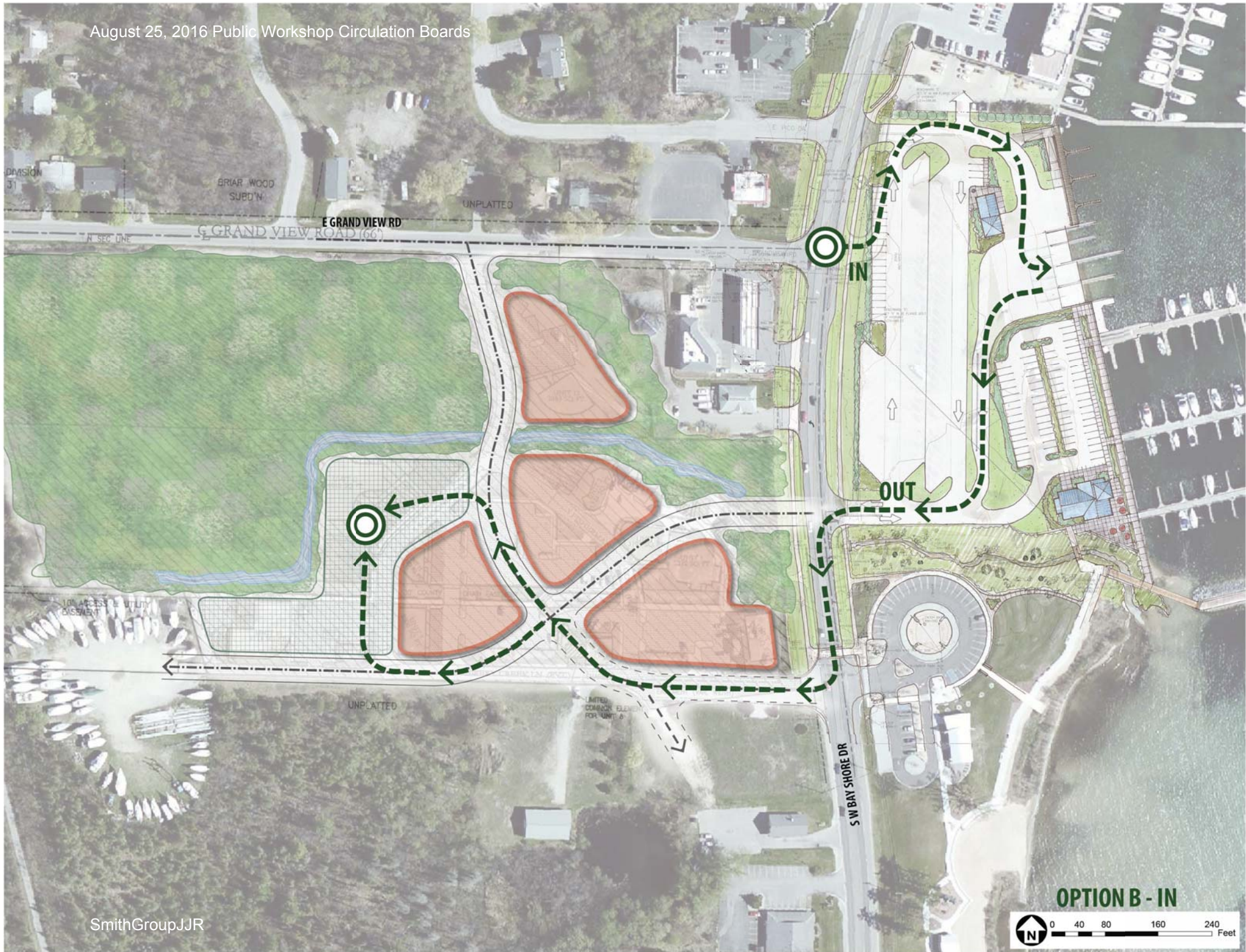
- **Picnic Area:**
- Provide relief from prevailing winds by site orientation and/or transparent windbreak curtains (example: Clinch Marina and Boyne City Marina)
- Provide a water faucet, paper towels, and a utility sink for rinsing dishes adjacent to the picnic area. (Example: Clinch Marina & Boyne City Marina.)
- **Shower facilities:**
- Use a “hospitality” approach to plumbing fixtures rather than an “institutional” appearance. (This is our “summer home”.) (Best examples: Elk Rapids Marina & Charlevoix Marina. Most luxurious example: Duncan Bay Yacht Club. Worst example: Straits Harbor Marina Mackinaw City.)
- Emphasize proper exhaust for moist shower air.
- Provide spot heating in individual showers (Michigan mornings can be chilly!)
- Showers should have toiletry shelves to hold shampoo, soap, hair products, razor, etc. all of which drain water through.
- Hand held shower extensions not only are a welcome option but also allow for rinsing down a previously used shower area aiding sanitation.
- Shower stalls should have adequate area for dressing in dry clothes.
- Provide at least 4 clothes hooks in shower/dressing stalls (clean dry clothes, used clothes, towel, and shower tote bag).
- **Restroom sink/toilet area: Women’s**
- Lots of large clothes' hooks for towels and shower tote bag.
- A dry vanity area with large mirror and good lighting for applying cosmetics, electrical outlets for hairdryers, surface to set toiletries.
- Provide access to paper towels for hand washing after applying cosmetics and for sanitary wipe of water on countertops.
- Do NOT use auto-timed water faucets; these are not “user-friendly” to people who consider this facility as their “summer home”. (A negative example is Straits Harbor Marina Mackinaw City which has had many negative complaints about the restroom fixtures.)



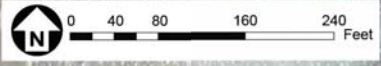
Public Workshop Boards

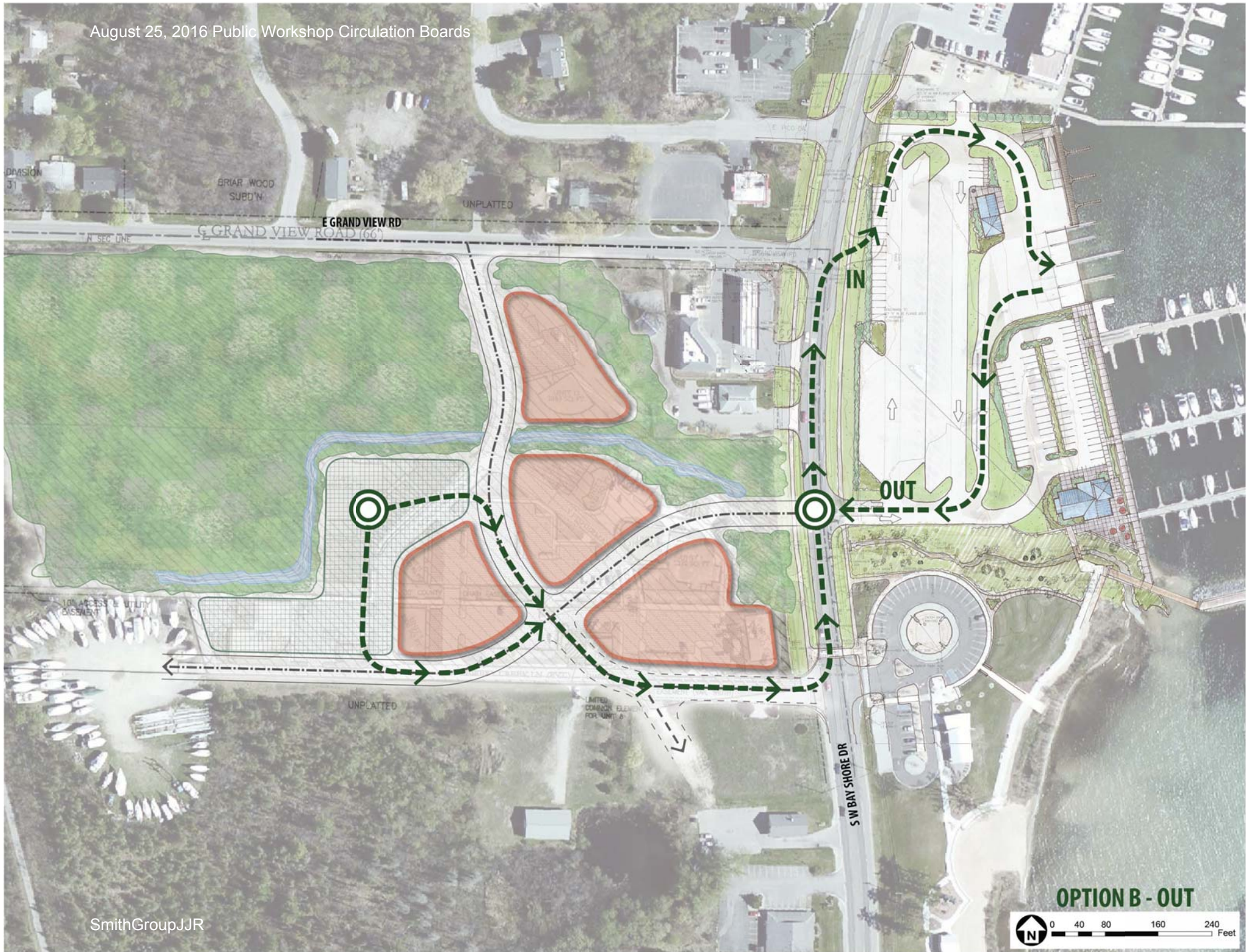


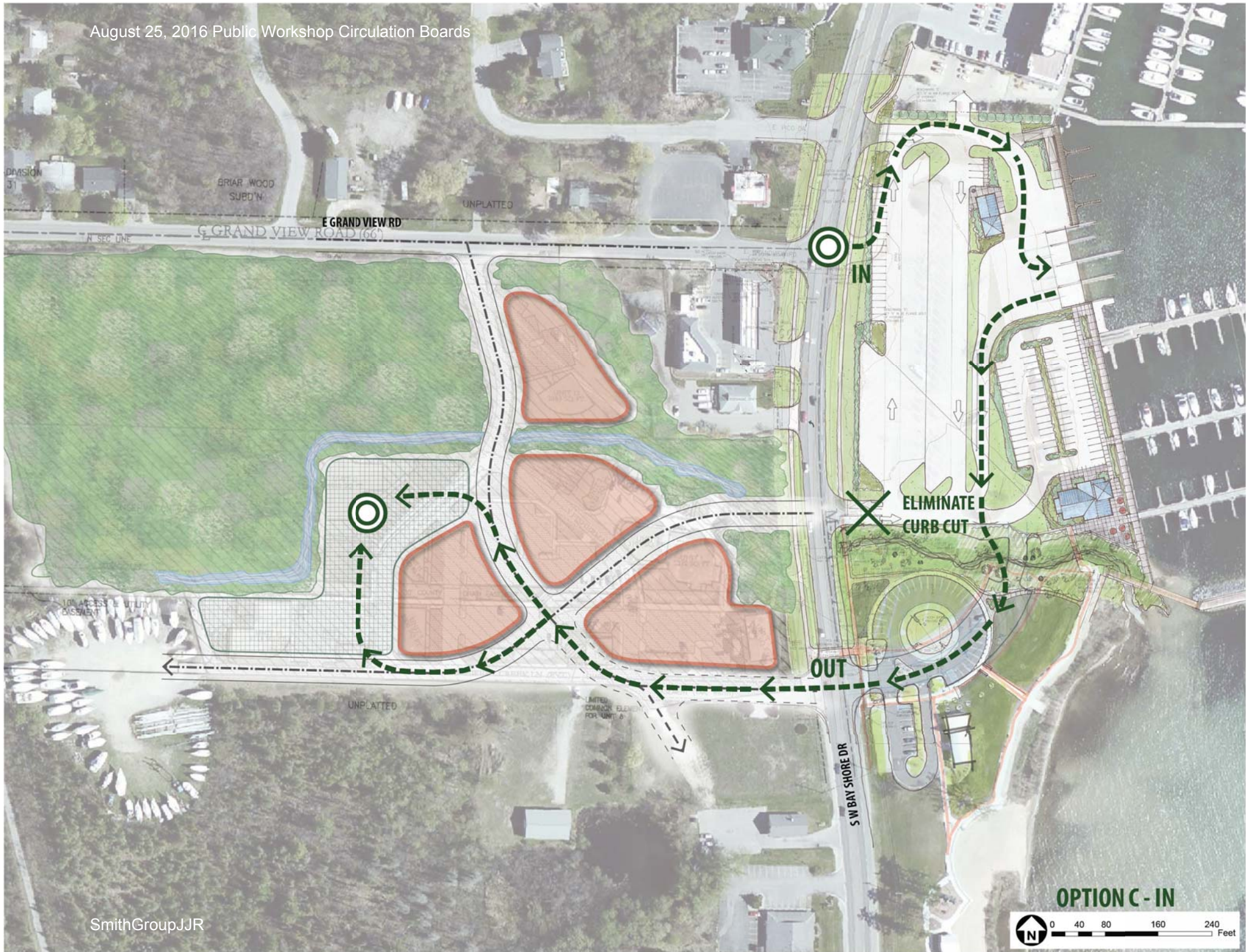




OPTION B - IN







DIVISION 31

BRIAR WOOD SUBD'N

UNPLATTED

E GRAND VIEW RD

G GRAND VIEW ROAD (66')

N SEC ONE

C
IN

ELIMINATE CURB CUT

OUT

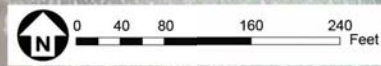
10' ACCESS EASEMENT

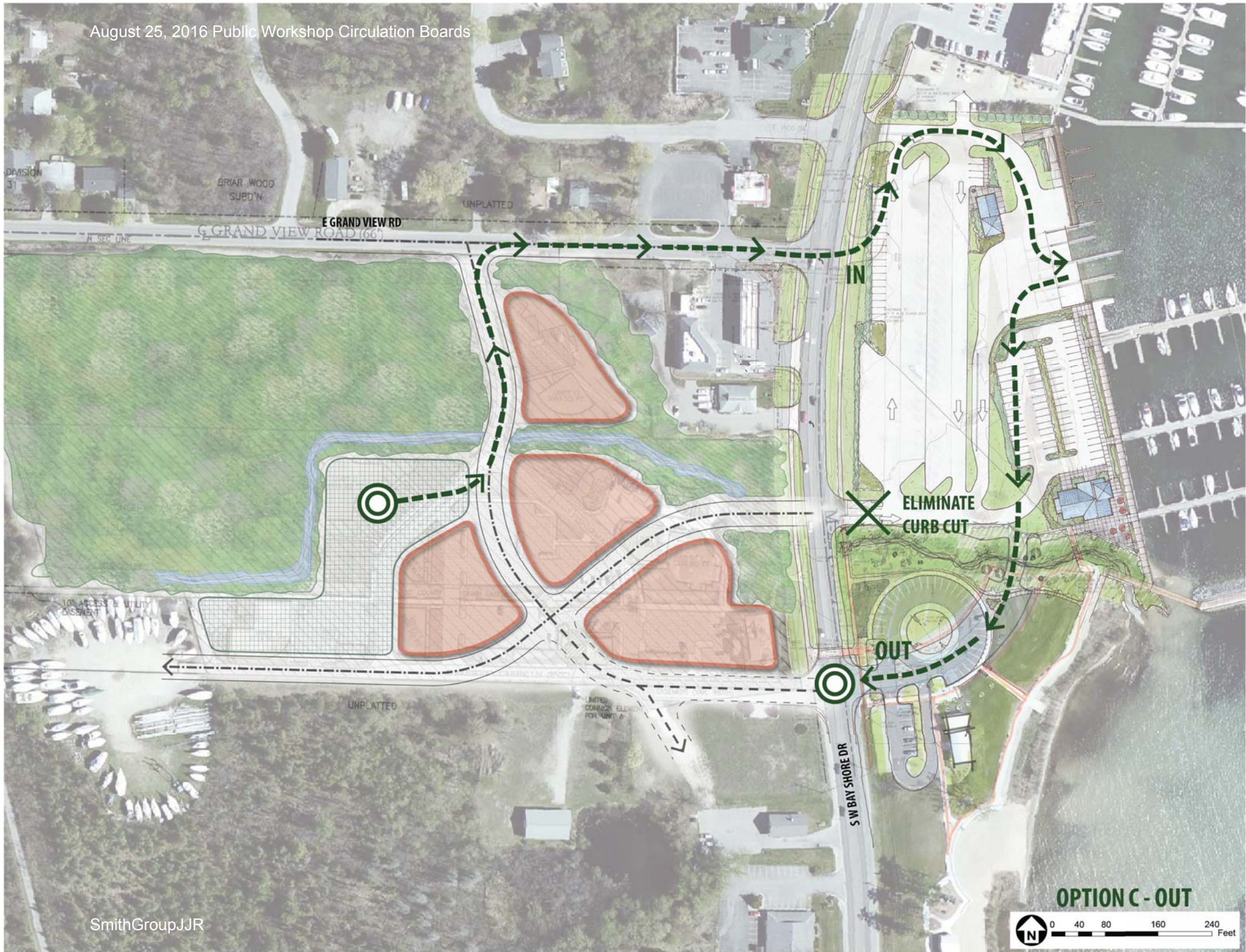
UNPLATTED

LIMITED CORRIDOR ELEM FOR UNIT 6

SW BAY SHORE DR

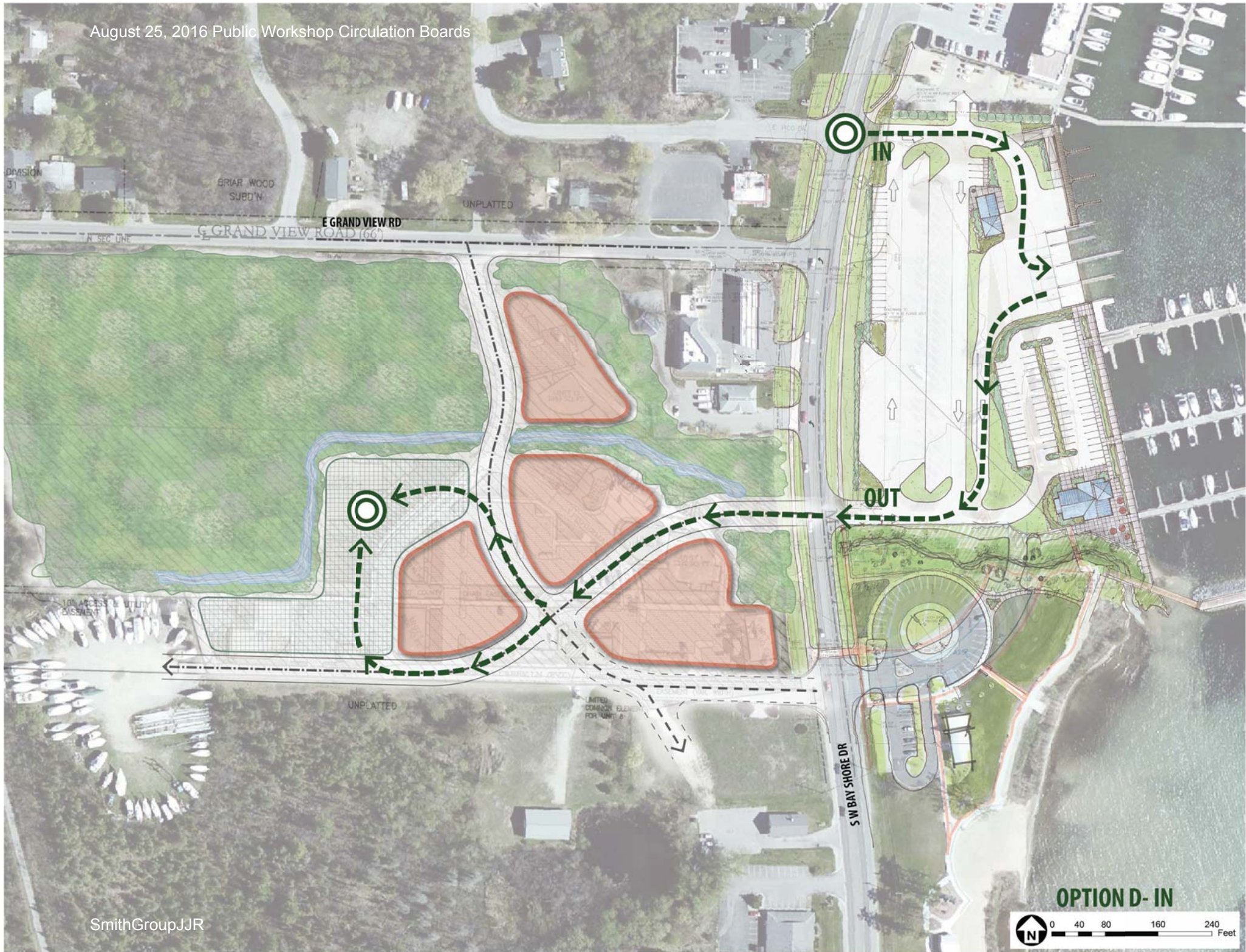
OPTION C - IN



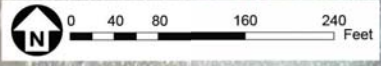


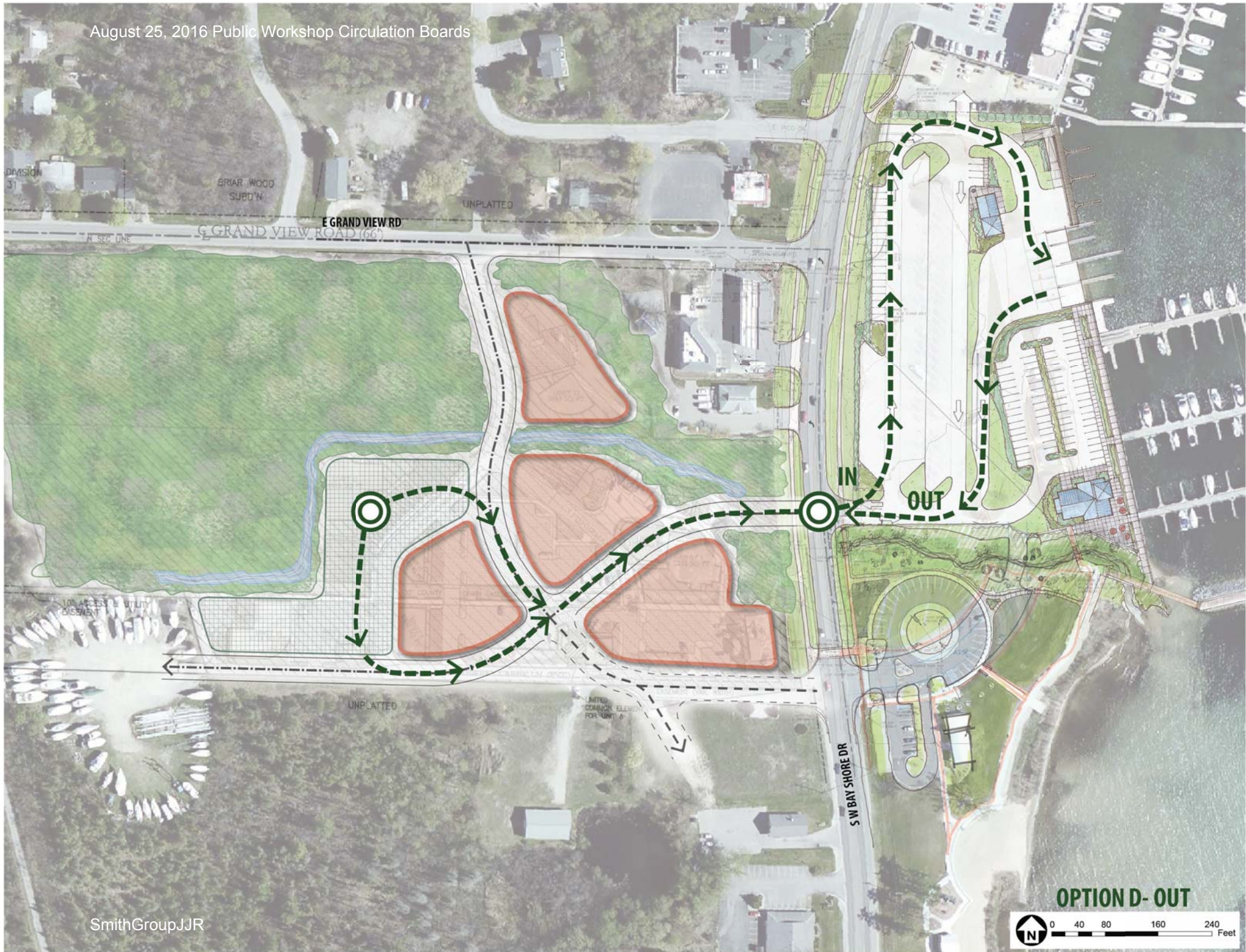
OPTION C - OUT



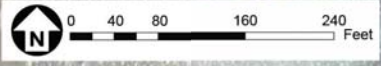


OPTION D- IN

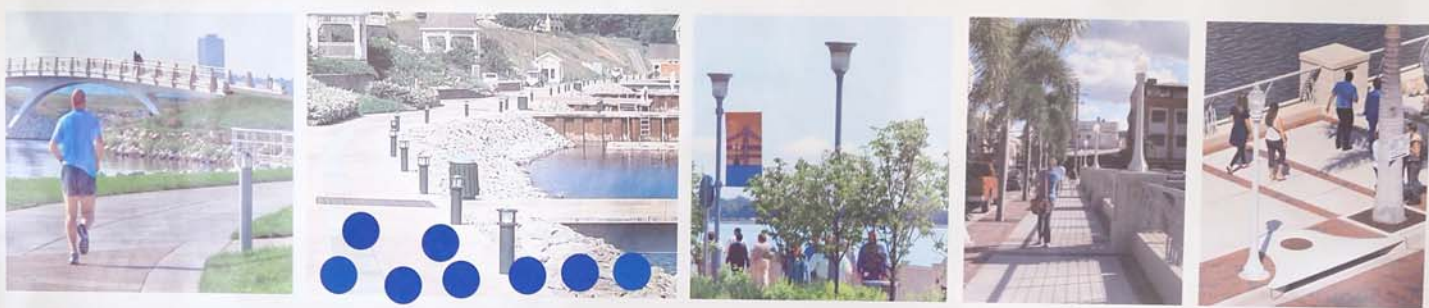
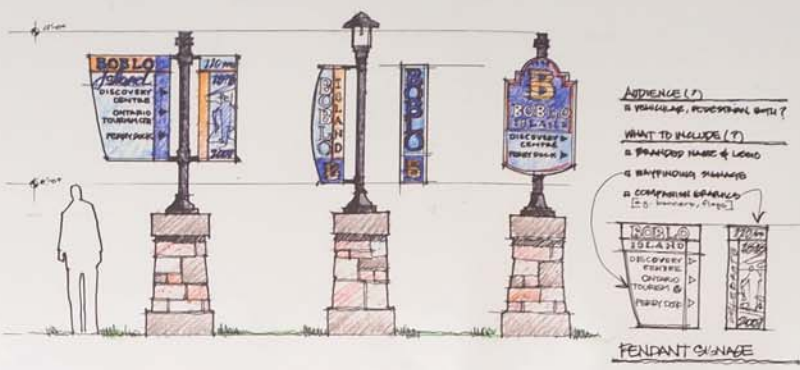




OPTION D- OUT



LIGHTING



FURNISHING



Keep design similar to the Paris

Less emphasis on walkway seating. Mainly benches will use it. No go-beds needed. People coming to walk away will go to main deck

Less emphasis on walkway seating. Mainly benches will use it. No go-beds needed. People coming to walk away will go to main deck



I like the lighting on the left at the children's museum. But the lighting is too bright.



BIKE RACK



More bike racks

More bike racks but not they don't need waterproof paper. Elk Rapids racks are behind bathrooms.

No less bike spaces than we have now. New designs like this would less bikes

Elk Rapids racks are behind bathrooms

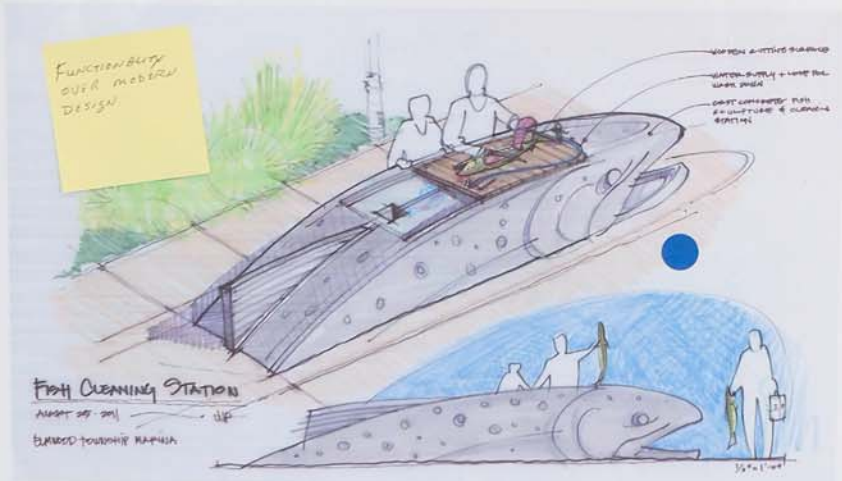
RAILING



Don't need railings



FISH CLEANING STATION



Functionality over modern design

WORKING OUTLINE SKETCHING
 MATERIALS: STAINLESS STEEL
 WORKING SKETCHING + COLOR FOR WORKING MODEL
 WORKING SKETCHING WITH PHOTOGRAPHY & CLIPPING ARTICLES

Fish Cleaning Station
 August 2016 - 2017
 ELK RAPIDS TOWNSHIP MARINA



Front End Fish Cleaning is good. Monitor

Personnel safety from walking through

ENGAGING ART



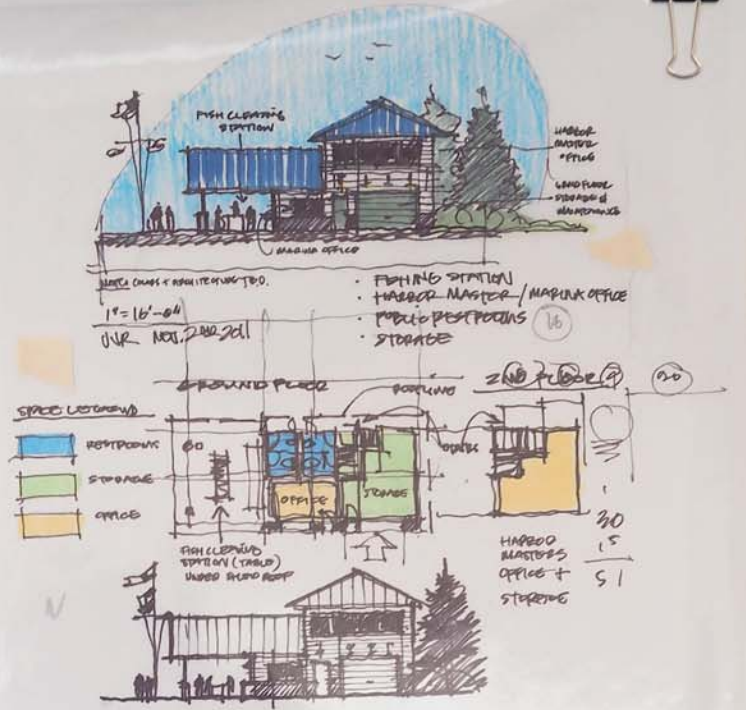
FIRE PIT



Warning Station in the winter for Tart Trail events



Like idea of 2nd floor in the kitchen area



Architecture design similar to Elkhart and GT Yacht Club
 Harbor Master's Office on 2nd floor
 Can see water in front + maintain activity

Create Multi-Purpose building - full kitchen, bar, - water, whiskey house for party

Check bathroom design & layout in Elk Rapids marina

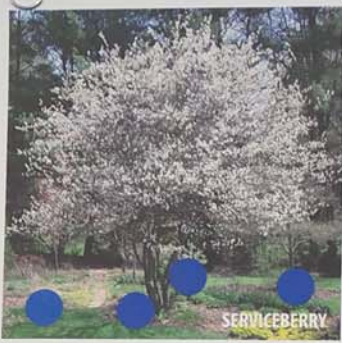
2nd Floor Lounge, water



Covered picnic & grill area



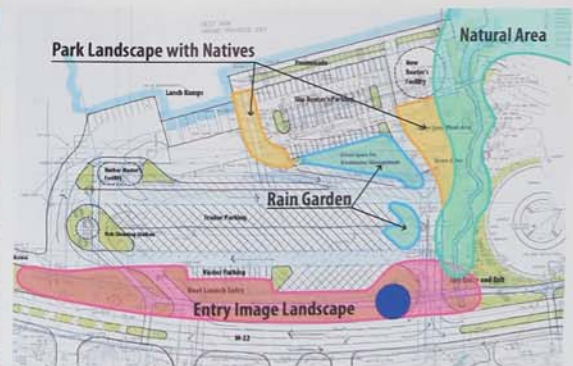
TREES



RAIN GARDEN



NATURAL AREA



ENTRY LANDSCAPE



CROSSING



SIGNAGE / BLENDING



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Elmwood Marina Sketch Plan

Gourdie-Fraser/SGJ/R September 22, 2016

Legend

1	Boat Trailer
2	Passenger Vehicle
3	Off-site Parking
4	Access Control
5	Picnic Area
6	Dumpster Corral
7	Bike Parking
8	Green Space
9	Stormwater Management
10	Picnic Area
11	Boater's Facility
12	Harbor Master's Facility
13	Fish Cleaning Station
14	Launch Ramps
15	Promenade
16	Visitor Parking
17	Slip Renter's Parking
18	Access Gates
19	Green Space/Picnic Area
20	Landscape and Pedestrian Island
21	Site Entry and Exit
22	Boat Trailer
23	Passenger Vehicle
24	Off-site Parking
25	Access Control
26	Picnic Area
27	Dumpster Corral
28	Bike Parking
29	Green Space
30	Stormwater Management
31	Picnic Area
32	Boater's Facility
33	Harbor Master's Facility
34	Fish Cleaning Station
35	Launch Ramps
36	Promenade
37	Visitor Parking
38	Slip Renter's Parking
39	Access Gates
40	Green Space/Picnic Area
41	Landscape and Pedestrian Island
42	Site Entry and Exit

BOAT TRAILER	90 SPACES	(+ 8 SPACES)
PASSENGER VEHICLE		
OFF-SITE PARKING*		
BOAT TRAILER	120 SPACE	(+ 68 SPACES)
PASSENGER VEHICLE	110 SPACES	(+122 SPACES)

* REFER TO DISTRICT PLAN FOR POTENTIAL SHARED PARKING LOCATIONS.

SLIPS)
IVERSALLY ACCESSIBLE - TY
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REMAIN
(70)

EX OFFICE SPACE
JLTIPURPOSE ROOM
ECOND FLOOR)

ENADE
INGS, BENCHES

LEGEND

#	NUMBER OF PROPOSED SPACES
■	ACCESS CONTROL
■	PICNIC AREA
■	DUMPSTER CORRAL
■	BIKE PARKING

Scale: 0' 50' 100' 200'

Heather Harris-Brady

From: Jack Kelly <supervisor@elmwoodtownship.net>
Sent: Tuesday, November 08, 2016 12:39 PM
To: 'Ryan Matuzak'; Jeff Shaw- Shaw Chiropractic; 'George Kobernus'; 'Kristin Dail'; Ken@KenKleinrichert.com; 'Peter Moon'
Cc: 'Kim Pontius'; Heather Harris-Brady; 'Connie Preston'; 'Carrie Schaub'; eric@leelanaunews.com; 'Elmwood Fire Chief'; 'Elmwood Fire'; 'Klaus Heinert'; 'Sara Kopriva'; 'George Prewitt'
Subject: Special Township Marina Committee Meeting Reminder

Dear Township Marina Committee Members, Consultant Heather Harris-Brady, Township Parks and Recreation Committee Chairman George Prewitt, and Township Planner Sara Kopriva-

- 1) Just wanted to remind Marina Committee members about tomorrow evening's (Wednesday, November 9th) special meeting. The meeting will start at 7 PM (not 6 PM as normal,) and it will be held in the Elmwood Township Fire Department Conference Room.
- 2) Tomorrow's Marina Committee agenda will consist of approving the 2017 Regular Meeting Schedule; summarizing progress and decisions made to date with respect to SmithGroupJJR/GFA developing the phased approach plan for future proposed marina improvements; and confirming what remains to be accomplished going forward by SmithGroup/GFA and the remaining execution timeframe.
- 3) FYI, Gosling Czubak Engineering Sciences was selected by the Township Parks and Recreation Committee as its recommended firm to revise/develop the Township's 2018-2022 5-Year Parks and Recreation Plan. Accordingly, this upcoming Monday evening (11/14) I fully expect the Township Board will accept the Parks and Recreation Committee's recommendation and award the contract to Gosling Czubak.
- 4) Once the contract is approved by the Township Board, the selected firm (Gosling Czubak) will be developing the new 5-Year Elmwood Township Parks and Recreation Plan (2018-2022) in two separate phases.
- 5) **The first phase of the Gosling Czubak contract** will consist of amending the current Elmwood Township 5-Year (2013-2017) Parks and Recreation Plan by developing a Marina Marketing Plan with the assistance of the Township Marina Committee in accordance with MDNR requirements. As discussed during many previous Marina Committee meetings, a Marina Marketing Plan is an MDNR Waterways Commission pre-requisite for submitting all future marina grant application, and it must be included in an MDNR approved 5-Year Parks and Recreation Plan. Thus, Gosling Czubak's job will be to develop the Marina Marketing Plan and get it approved by the MDNR not later than February 28, 2017. Doing so will enable SmithGroupJJR/GFA to submit its contracted Phase 1 Township Marina grant application deliverable to the MDNR Waterways Commission on the Township's behalf in March 2017. TIMING IS EVERYTHING!!!!
- 6) **The first phase of the Gosling Czubak contract** will also consist of working with the Township Parks and Recreation Committee to develop any amendments they need incorporated into the current (2013-2017) Parks and Recreation Plan to enable any Parks and recreation grant applications to be submitted in 2017. As with the Marina Marketing Plan, Gosling Czubak's job will be to get any needed/requested Parks and Recreation Committee amendments simultaneously approved by the MDNR not later than February 28, 2017.

- 7) **The second phase of the Gosling Czubak's contract** will consist of developing the remaining balance of the Township's new 5-Year (2018-2022) Parks and Recreation Plan by the end of Summer 2017. Doing so will set the stage for the new 5-Year Plan to be approved by the MDNR in January 2018.

- 8) **WARNING- PLEASE KEEP THIS IN MIND!!!** If the new 5-Year Plan is submitted and approved by the MDNR in 2017, then the MDNR will consider the Plan valid for 2017-2021. On the other hand, submitting the new 5-Year Plan and getting it approved by the MDNR in January 2018 will ensure that the MDNR considers the Plan valid for 2018-2022. **NO SENSE IN NEEDLESSLY LOSING A YEAR OF ELIGIBILITY!**

Looking forward to seeing everyone tomorrow night.

Best regards,
Jack

Park and Recreation Plan AND Marina Phasing Plan Scheduling

Date	Board/Committee	Meeting or Other	Action
15-Dec	Marina	Meeting	Review Draft Phasing Plan, provide comments
By Dec 21	GFA		Update Marina Phasing Plan based on comments at Dec 15 meeting, provide updates to staff
By Dec 29	Gosling		Incorporate Marina Phasing Plan into Park and Rec Plan
			Provide copies of Park and Rec Plan AND Marina Phasing Plan to Park & Rec and Marina Committees; Waterways requirements - A Recreation Harbor/Marina Recreation Plan which shall include the following: A description of how your community intends to address recreational plan elements like correct size of facility, marketing/events/partnering plans, dredging cycles (how often), dredge volume, and disposal location. Also, please address infrastructure replacement schedules, annual maintenance schedule or habilitation schedules of large investments like docks, buildings, etc. A brief description is acceptable and may be covered in the goals and objectives and t The last three years of harbor traffic (harbor logs) The last three years of financial summaries for the harbor (submitted with the community's Waterways grant application)
30-Dec	Staff		
Week of Jan 2	Park & Marina	Meeting	Review Draft Marina Marketing Plan/Park and Rec Plan Update AND Final Marina Phasing Plan, make recommendation to Townboard
By Jan 9	GFA/Gosling		Provide updates based on Park and Rec & Marina comments to Staff
Week of Jan 9	GFA/Staff	Call	Schedule call with Paul Petersen, Waterways, to review information and required grant materials; review what is necessary to close out grant for Phasing Plan
10-Jan	Staff		Provide copies of Park and Rec Plan AND Marina Phasing Plan to Clerk for Townboard packets
Week Jan 16	Townboard	Meeting	Review Park and Rec Plan Update and schedule public hearing to Park and Rec Plan AND adopt Marina Phasing Plan
20-Jan	Staff		Notice to paper for review period and public hearing of Park and Rec Plan
26-Jan	Staff		Notice published
Jan27- Feb 12			Park and Rec Plan available for public comment
13-Feb	Townboard	Meeting	Public Hearing on Park and Rec Plan, adopt Park and Rec Plan
By Feb 28			Submit Park and Rec Plan to State
By Mar 20			Complete Waterways Phase I application package
24-Mar			Submit application to Waterways

http://www.michigan.gov/dnr/0,4570,7-153-58225_37985-124962--,00.html



Winter Programming Concept

Over the course of developing both the WDMP and this phasing plan, the marina committee has discussed ideas for multi-season use of the marina's prime waterfront area. The marketing plan, in development, may offer some additional specifics but ideas have included spring/fall shoulder season events (markets, boat shows, fishing equipment shows, etc.). These options may be limited depending on how much area is needed for boat storage.

In order to capture some of the winter concepts discussed, this plan offers the programming concept on the following page. Keeping in mind many in the area sportfishing community use launches even into December (weather permitting) this concept would allow for boat storage and launch use, while also accommodating some additional uses that have been discussed in the past.

This idea offers several key advantages, including:

- Multi-use opens more avenues for funding
- Builds synergy with the park next-door
- Creates more recreational opportunities on the property for township residents who may not be summer marina users
- Still allows for launch use and storage
- Could find a community partner to assist with the winter sports (hockey or skating club/assn), similar to arrangements for soccer/baseball at Cherry Bend Park
- A key unique asset could help set the corridor apart – especially during a typically slow time of the year

For more information:

<http://woodtv.com/2015/12/14/mild-temps-no-match-for-middlevilles-new-ice-rink/>

<http://www.9and10news.com/story/27850585/newberry-community-builds-largest-synthetic-ice-rink>

Marina Winter Programming Concept

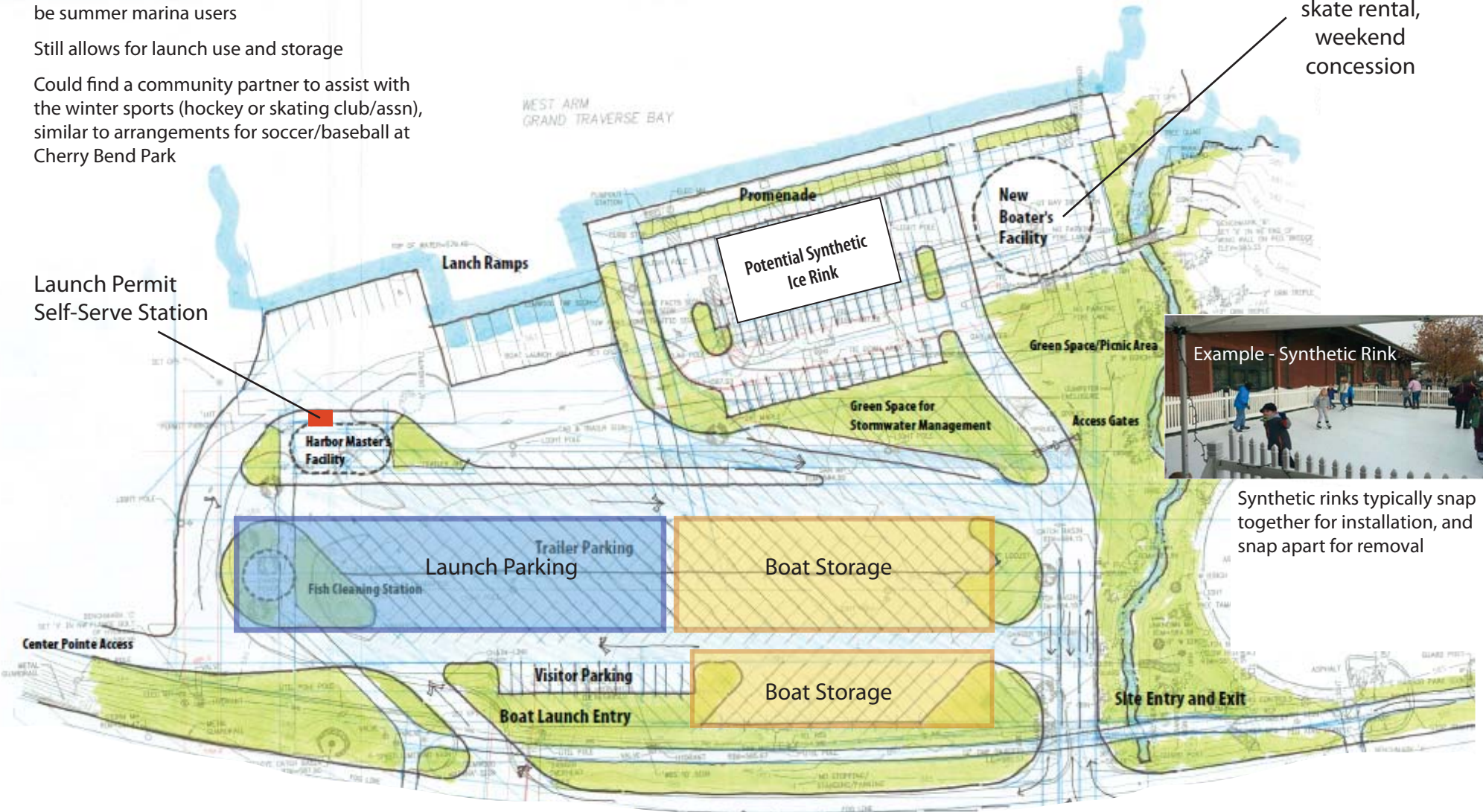


Advantages:

- Multi-use opens more avenues for funding
- Builds synergy with the park next-door
- Creates more recreational opportunities on the property for township residents who may not be summer marina users
- Still allows for launch use and storage
- Could find a community partner to assist with the winter sports (hockey or skating club/assn), similar to arrangements for soccer/baseball at Cherry Bend Park

Use facility for skate rental, weekend concession

Launch Permit Self-Serve Station



Example - Synthetic Rink

Synthetic rinks typically snap together for installation, and snap apart for removal