



Village of L'Anse & L'Anse Township Recreation Plan 2023-2027

APPENDIX A

VILLAGE OF L'ANSE MASTER PLAN EXCERPT

pasture. However, it can be seasonally wet and prone to erosion. The soil is not generally well suited for sanitary facilities.

2. *Skaneateles-Munising-Gay association*

This soil association is found on flatland and in depressions and drainage ways. Most areas where this association is found in the county are wooded. This soil association is well suited for woodland areas, with the only concerns being equipment limitations, seedling mortality, and plant competition.

3. *Kinross-Au Gres-Croswell association*

This soil association is poorly drained to moderately well drained and is found on lake plains, outwash plains and till plains. In the County this association is mainly found in woodland areas. It is best suited for woodland areas with primary concerns being equipment limitations, wind throw hazard and plant competition.

Scenic/Recreational Resources

The Village of L'Anse and the surrounding areas abound with recreational opportunities for all ages, year-round.

Scenic Amenities

The area is known for its beautiful Lake Superior shoreline, pristine wilderness areas, waterfalls, lakes, and streams. From the shoreline and bluffs of the Village, residents have a beautiful view of the Red Rocks and beautiful Keweenaw Bay that stretches between the Villages of Baraga and L'Anse. Residents want to preserve and more fully utilize these scenic amenities to attract new residents. Recreational trails are envisioned for the entire length of the Bay from the Village of Baraga, through the Village of L'Anse, and up to Pequaming. The areas along the Falls River would also provide outstanding opportunities for recreational trails and fishing opportunities from the Bay all the way to the Village owned property near the old Powerhouse.



Scenic waterfront path leading to the bluff



Falls River by the old powerhouse.



Recreational Facilities

The Michigan Department of Natural Resources (MDNR) recommends the *Recreation Park and Open Space Guidelines* of the National Recreation and Park Association (NRPA) as a standard for comparison for minimum acceptable spatial allocation measures for public parkland. The accepted standards, used as flexible planning guidelines, not absolutes, are:

- Community-based parks—6.25 to 10.5 acres of parkland per 1,000 residents
- Regional-serving parks—5 to 10 acres of parkland per 1,000 residents

L'Anse Village population is almost 2,000, so the minimum spatial allocation is from 13 to 21 acres of community-based parks and 10 to 20 acres of regional-serving parks for the residents. L'Anse currently has approximately 4 acres of parks (Waterfront Park, Marina/Boat Launch, Third Street Park, and Recreation Building) plus two walkways along the shore and Linden Creek that are publically-owned recreation lands. The school facilities (L'Anse Area Schools and Sacred Heart) add another 8 acres of recreation land, much of which is utilized by the public.

The NRPA standards address the following types of parks:

- Mini-parks with specialized facilities serving a limited population or interest group with a service area less than ½ mile radius, located within neighborhoods and in proximity to multi-family or elderly housing—0.25 to 0.5 acres per 1,000 people (0.5 to 1 acre, Village)
- Neighborhood park or playgrounds with areas for intense recreation activities with a service area of a 1 mile radius to serve a population up to 5,000, located with easy accessibility to neighborhood populations, geographically centered, and with safe walking and bike access—1 to 2 acres per 1,000 people (2 to 4 acres, Village)



Figure 3-14: MDNR Recreation Standards

- Community Park with intense recreational facilities or areas of natural quality for outdoor recreation with a service area of more than one neighborhood (1 to 2 mile radius), over 15 acres in size, easily accessible to the neighborhood served—5 to 8 acres per 1,000 people (10 to 16 acres, Village).

In the process of creating the 2003 Village of L'Anse, Township of L'Anse, and L'Anse Area School Recreation Plan, these standards were discussed in relation to the Village. In smaller communities such as L'Anse, neighborhood and community parks need not be separate facilities since existing parks are within easy access of the local population. However, it is also important to anticipate the needs of tourists along with those of the local community.

In conducting a needs assessment for the 2008-2012 Recreation Plan it was discussed that there is a need to expand the size of the current Waterfront Park to serve both residents and tourists. This site provides outstanding scenic opportunities, connects to community walkways, is adjacent to Downtown businesses and the marina, and is highly visible due to the topography and scenic draw of Keweenaw Bay. The park has the potential to catalyze other economic opportunities within the core of the Village. More parking and picnic facilities are needed for recreation users.

. Shown at right is an analysis of recreational facilities in comparison to DNR Opportunity Standards. This analysis is a quantitative analysis, yet there are other factors to be considered in recreation planning, such as location and quality of opportunities, accessibility for all members of the population, and unique community needs. For a more extensive qualitative analysis, see the community input summary later in this section.

The chart compares the Michigan Recreation standards based on actual population to existing facilities to determine possible deficiencies. Items such as the archery, rifle, and shotgun ranges are less frequently found in small communities. These items should be pursued only if local demand is evidenced

Recreation Opportunities per Michigan DNR Opportunity Standards: Village of L'Anse					
Village of L'Anse Population 1,888**	Michigan Recreation Standard--1 unit per population	Standards per Area Population	Existing Facilities	Needs Compared to Existing	Deficiencies per Standards
Archery Range (incl private, commercial)	50,000	0.04	0	-0.04	Only if local demand
Baseball Fields***	5,000	0.38	1	0.62	None
Basketball Courts, outdoor***	5,000	0.38	1	0.62	None
Bicycle Trails (miles)	40,000	0.05	only roads	-0.05	Yes-to meet stated local demand
Golf Courses (private, commercial)	25,000	0.08	in Township	-0.08	None
Horseshoe pits	7,500	0.25	1	0.75	None
Ice rinks, indoor	100,000	0.02	1	0.98	None
Ice rinks, outdoor	20,000	0.09	0	-0.09	Only if local demand
Picnic area/tables	200	0.44	14	4.56	None
Playgrounds	3,000	0.63	1	0.37	None
Rifle ranges (private, commercial)	50,000	0.04	0	-0.04	Only if local demand
Shotgun ranges (pvt, commercial)	50,000	0.04	0	-0.04	Only if local demand
Shuffleboard	7,500	0.25	1	0.75	None
Sledding hills	40,000	0.05	0	-0.05	Available in Covington
Soccer fields	10,000	0.19	0	-0.19	Yes-to be met by new facility at school?
Swimming pools (outdoor)	20,000	0.09	0	-0.09	Yes-to meet stated local demand
Tennis courts (outdoor)	4,000	0.47	1	0.53	3rd St. Park facility needs repair
Volleyball (outdoor)	7,500	0.25	1	0.75	None
Boat launches (parking)	400	4.72	1	-3.72	Also available in Area
Campgrounds/Campsites	150	12.59	0	-12.59	Available in Township
Cross-country ski trails (miles)	10,000	0.19	1	0.81	None
Fishing access (feet)	100	18.88	Many	Sufficient	None
Fishing piers	100,000	0.02	1	0.98	None
Hiking trails (miles)	5,000	0.38	2	1.62	At school and around the area
Horseback riding trails (miles)	20,000	0.09	0	-0.09	Yes
Nature areas	50,000	0.04	1	0.96	None
ORV areas (acres)	7,500	0.25	0	-0.25	Yes
ORV trails (miles)	10,000	0.19	0	-0.19	Yes
Land open to snowmobiling (acres)	1,000	1.89	Many	Sufficient	None
Snowmobile trails (miles)	3,000	0.63	Many	Sufficient	None
Swimming beaches	25,000	0.08	1	0.92	None
Roller skating (incl commercial)	20,000	0.09	0	-0.09	None

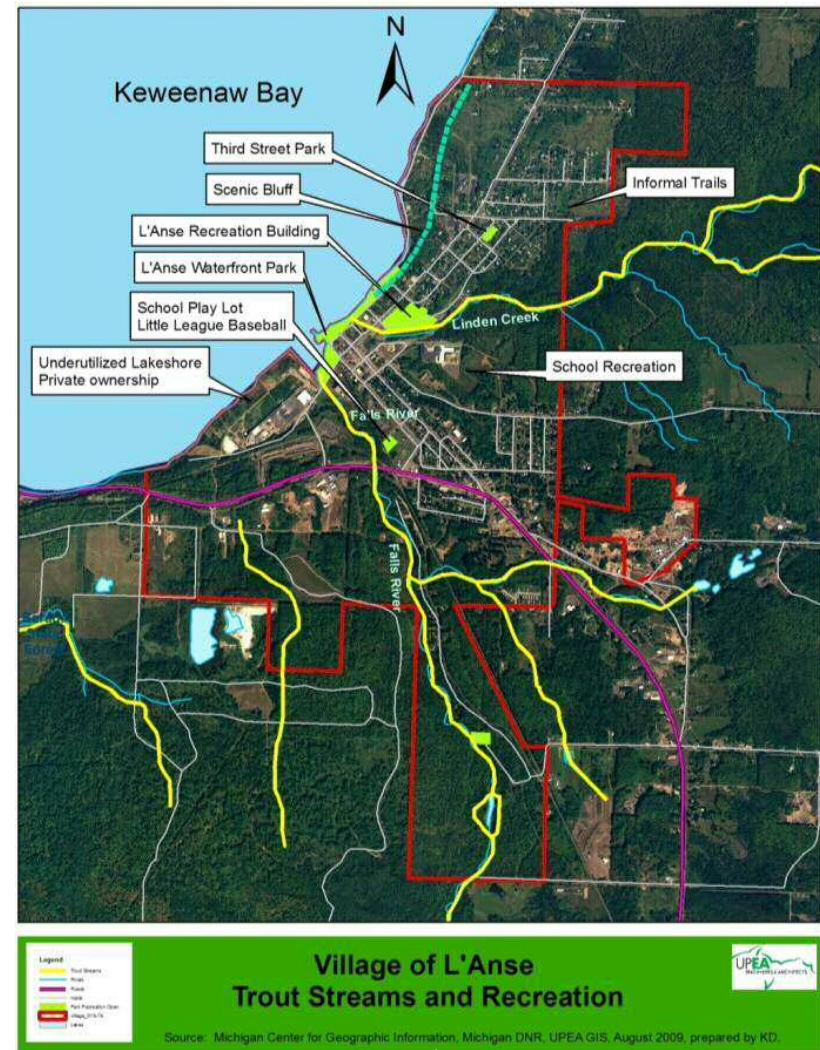
**2007 Population Estimate, U.S. Census Bureau
 ***Not including school facilities
 Source: Michigan Department of Natural Resources. 1986. *Building Michigan's Recreation Future*

in public visioning exercises. These items were not mentioned during the creation of this master plan. However, an outdoor ice rink and sledding hill were mentioned as possibilities for the former football field location by the Recreation Building (shown as a slight deficit in the opportunity analysis). A roller skating facility is listed as a deficit, and the community has mentioned the need for a skate park or rollerblade trails.

Under-utilized recreation opportunities are evident in every portion of the Village. Many informal trails have spontaneously developed in the vacant lands surrounding the neighborhoods on the northeastern Village boundary. The line of bluffs paralleling the lakeshore in the northwestern corner of the Village would provide outstanding scenic and interpretive recreation opportunities. There is an opportunity to create interpretive gardens which would provide recreational opportunities but also help stabilize the slopes along Linden Creek in the east central portion of the Village. The Falls River provides opportunities for fishing and trail activities in the core and southern portion of the Village where facilities are currently lacking for the neighborhoods divided from the rest of the Village by US-41. Outdoor recreation activities in the L'Anse area include camping, hiking, fishing, hunting, cross country skiing, and snowmobiling. Trout streams criss-cross the landscape (see *Figure 3-15*).

Regarding regional recreational opportunities, Baraga County has over 100,000 acres of state and privately owned commercial forestland available for recreation such as trails. The Peter Wolfe Chapter of the North Country Trail Association is responsible for 140 miles of the North Country hiking trail through the Upper Peninsula of Michigan. Two sections of completed trail totaling approximately 6.4 miles thread through Baraga County, with a third section of trail under construction.

L'Anse area recreation, as reported in the Village of L'Anse, Township of L'Anse and L'Anse area Schools Recreation Plan of 2008-



2012, includes the following:

Waterfront Park

Approximately two-acre site on Lake Superior waterfront includes playground equipment, pavilion, picnic tables, grills, beach, underground watering system, restrooms, volleyball courts (regular and beach volleyball), band shell, and waterfront walkway with lighting. The Village developed a splash pad in this park that has become so popular, there is a need to enhance it. This Village owns and maintains this park.

Marina and Boat Launch

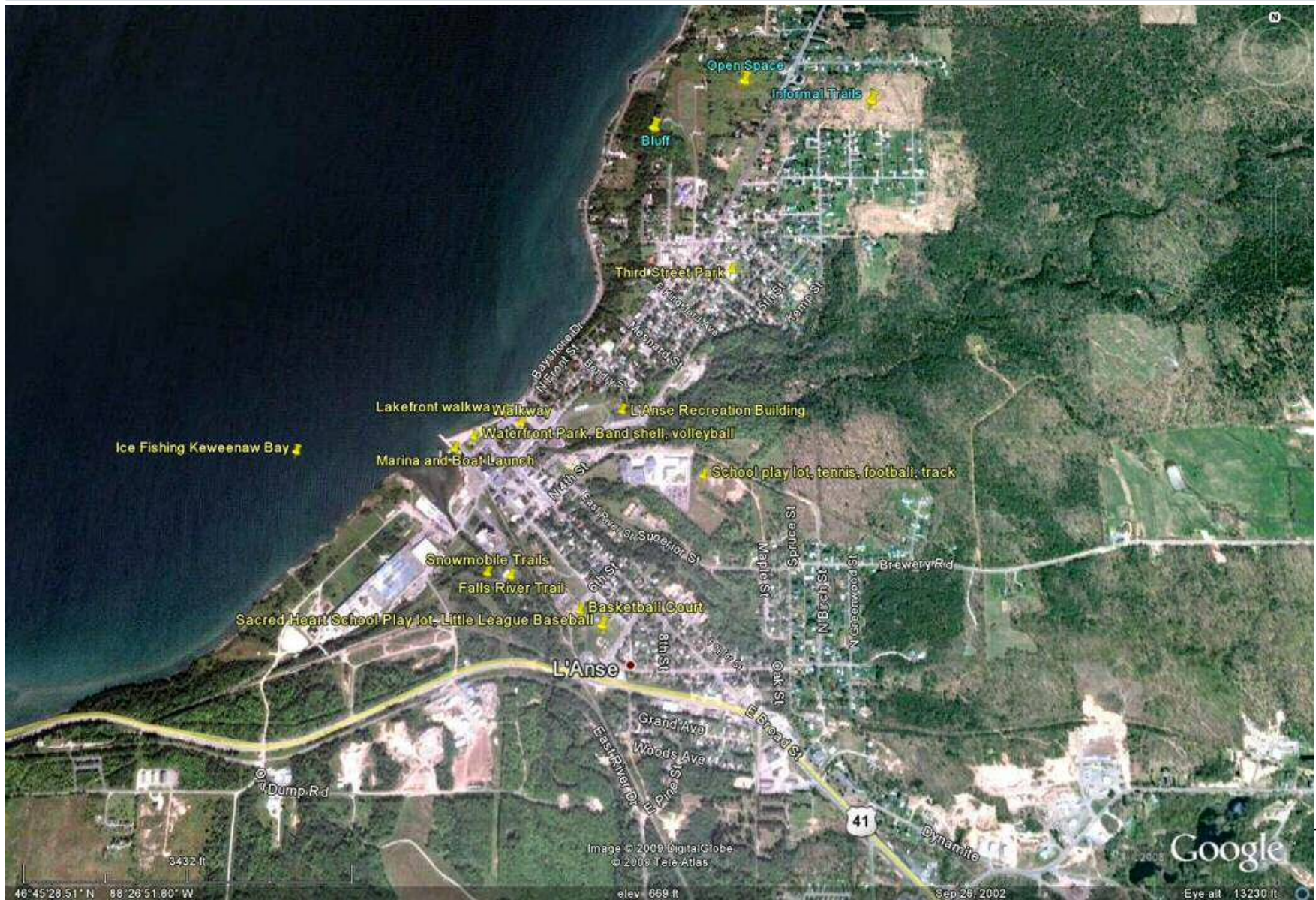
Approximately one acre special-use facility, located adjacent to the Waterfront Park and off Baraga Avenue. The Village-owned park includes docks, piers, and boat launch. The Village also maintains this facility.

Walkways

One walkway is located along Linden Creek starting at Lake Front Park and ending at Main Street which is the main business district. The walkway is concrete with benches and lighting. A second walkway is located along Lake Superior from Falls River to Division Street, and includes a concrete walkway, lighting, benches, and picnic tables. Both walkways are owned and maintained by the Village.



Figure 3-16: L'Anse Recreation



Third Street Park

Approximately one acre mini-park, located in the blocks between Third and Fourth streets. The Village-owned park includes tot baseball field, sandbox, swings, merry-go-round, monkey bars, play tires, and basketball and tennis courts. The tennis courts are in need of re-orientation because they face in an east/west direction, making visibility difficult.

School Play Lot and Tennis Courts

Approximately two acre site includes swings, slides, climbing apparatus, small basketball court, and tennis courts. This site is owned and maintained by the L'Anse School District and is located adjacent to the elementary school.

L'Anse Recreation Building (Ice Rink)

The facility includes artificial ice and warm-up area. The building is multi-use, housing such activities as car shows, roller-skating, art and crafts shows, and dances. The Village-owned and maintained facility is financed through U.S.D.O.I, DNR, and local funds.

Sacred Heart School Play Lot

The site is located west of L'Anse Avenue, is approximately one acre in size, and is owned and maintained by the parochial school. This location includes a play area with swings, slide, and merry-go-round.

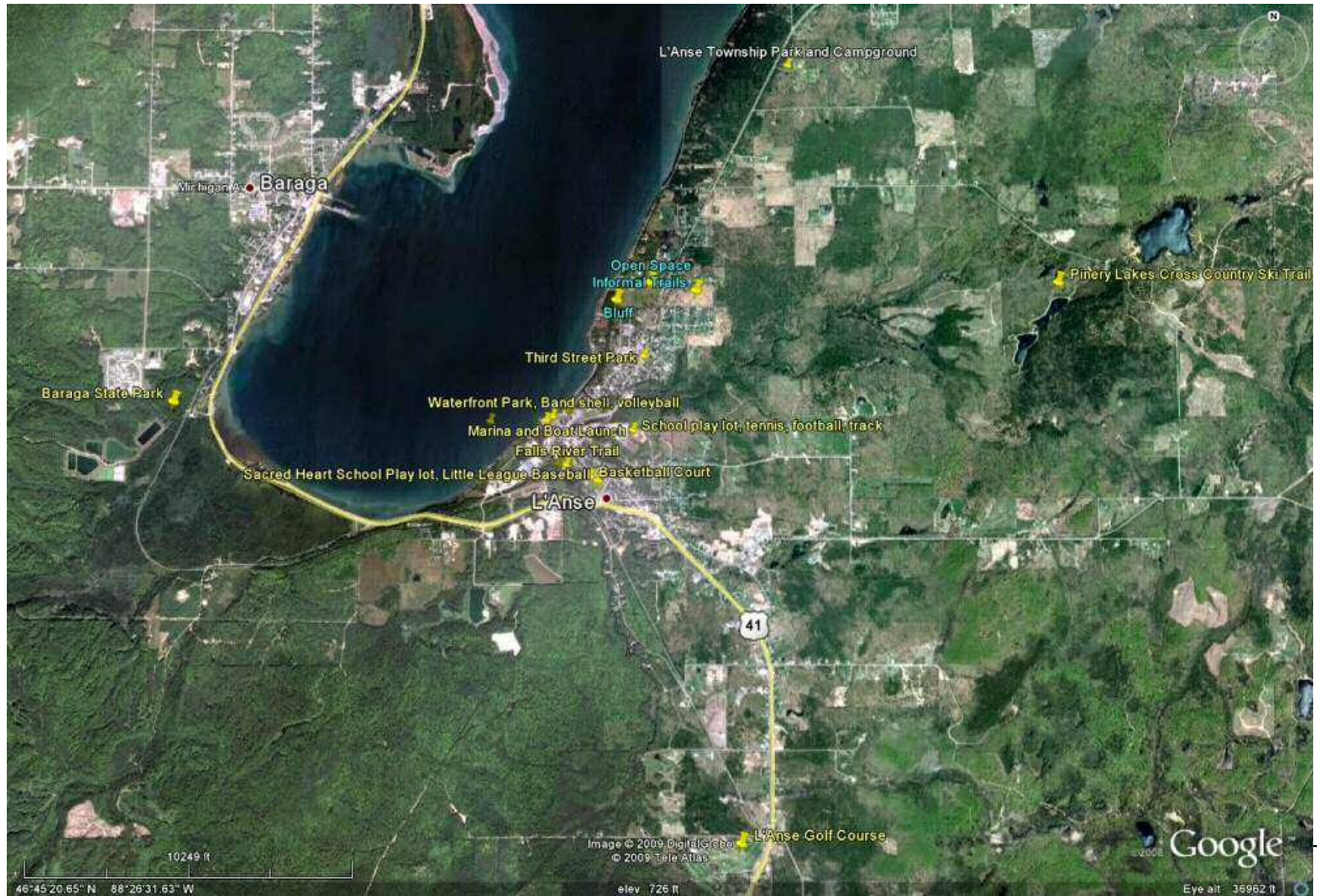
Little League Baseball Field

This one acre site is located on Sacred Heart School property and includes an improved field with dugouts and fencing.

Basketball Court

Located on Sixth Street, the facility is maintained by the Village of L'Anse with a twenty-five year lease on property from Sacred Heart Church.

Figure 3-17: L'Anse Area Recreation



L'Anse Golf Course

Nine hole golf course with driving range located three miles south of L'Anse on US-41. The course is leased to L'Anse Township for a period of 25 years and is open to the public.

Pinery Lakes Cross-Country Ski Trail

Located north of L'Anse on Indian Cemetery Road, the property is owned by the Village and the trail is maintained by the Baraga County Convention and Visitor Bureau. There are several loops through pine woods totaling approximately 10 kilometers of novice and intermediate levels.

Falls River Trail

Three acres of trail located along Falls River on leased land from U.P. Power Company, maintained by the Village.

Snowmobile Trails

In addition to parks and other Village-owned recreational facilities, the Baraga County Visitor and Convention Bureau maintains over 150 miles of groomed trail in the region, and the sport has proven a major economic boost. Due to the large amount of snow received, the area is a magnet for snowmobilers and other winter sports enthusiasts.

Lake Superior

By surface area, Lake Superior is the largest fresh water lake in the world and is the biggest of all the Great Lakes. During the spring, summer, and fall months, the lake offers endless fishing, boating and swimming opportunities. In the winter, the lake rarely freezes completely leading to large snow falls around the lake. Keweenaw Bay on the other hand does freeze and is a very popular ice fishing destination.

Camping

The Village does not have any camp sites within the Village limits. There are two camp grounds within the county; Baraga State Park and L'Anse Township Park and Campground.



Little League Baseball at Sacred Heart.



Above: Falls River shelter. Below: L'Anse Township Park.



Baraga State Park

This park, located on U.S. Highway 41 overlooking Keweenaw Bay, Lake Superior has 116 sites on 56 acres. Activities in the park include cross country skiing, fishing, hiking, and metal detecting. There is also a picnic area, picnic pavilion, and playground.

L'Anse Township Park and Campground

Located 3 miles north of the Village of L'Anse on Skanee Road, the park offers beautiful views of Lake Superior and Keweenaw Bay. The park and campground offer 30 modern campsites with electrical hook-ups, shower building, pavilion, playground, Lake Superior beach and shoreline, firewood, RV dump station.

Scenic/Recreational Summary

Residents of the Village of L'Anse benefit from the abundance of recreational opportunities available in surrounding municipalities as well as local recreation opportunities. But ongoing planning is needed for the Village of L'Anse to realize the most benefit from recreation expenditures by also becoming a recreation destination. Funding must be allocated in a manner that most closely meets the changing needs of the population base while addressing visitor opportunity. The scenic resources associated with the Village's location help to ensure visitor interest. Carefully targeted expenditures on facilities and promotional activities will improve sustained interest and maximum utilization of Village facilities. The Village can best utilize limited resources by creating recreation goals that complement economic and community development goals, and carefully choosing strategies to increase facility utilization and decrease ongoing costs.

L'Anse Waterfront

The waterfront is recognized and valued as one of Village's greatest assets for both residents and visitors. Because of the economic development benefits relating to the waterfront and the important ties to Downtown, this area merits priority attention and future enhanced investment. Careful development planning is needed to ensure maximum benefit. Collaborations with neighboring jurisdictions expand opportunity.

Opportunities include preserving or enhancing:

- *Waterfront views*
- *Public access to the water*

Opportunities for additional facilities on the waterfront:

- *Enlarged public park and marina with necessary parking facilities. Shower and toilet facilities at the marina.*
- *Farmer's Market*
- *Recreational trail network*
- *Kayak lockers/water trail stop*



Village of L'Anse & L'Anse Township Recreation Plan 2023-2027

APPENDIX B

L'ANSE TOWNSHIP MASTER PLAN EXCERPT

Scenic/Recreational Resources

L’Anse Township offers year-round recreational opportunities for all ages.

Scenic Amenities

The area is known for its beautiful Lake Superior shoreline, pristine wilderness areas, waterfalls, lakes, and streams. From the shoreline and bluffs of the Township, residents have a beautiful view of the Red Rocks and beautiful Keweenaw Bay that stretches between the Villages of Baraga and L’Anse. Residents want to preserve and more fully utilize these scenic amenities to attract new residents. Recreational trails are envisioned for the entire length of the Bay from the Village of Baraga, through the Village and Township of L’Anse, and up to Pequaming.

Recreational Facilities

The Michigan Department of Natural Resources (MDNR) recommends the *Recreation Park and Open Space Guidelines* of the National Recreation and Park Association (NRPA) as a standard for comparison for minimum acceptable spatial allocation measures for public parkland. The accepted standards, used as flexible planning guidelines, not absolutes, are:

- Community-based parks—6.25 to 10.5 acres of parkland per 1,000 residents
- Regional-serving parks—5 to 10 acres of parkland per 1,000 residents

L’Anse Township’s population is almost 4,000, so the minimum spatial allocation is from 25 to 42 acres of community-based parks and 20 to 40 acres of regional-serving parks for the residents. L’Anse Village currently has approximately 6 acres of parks (Waterfront Park, Marina/Boat Launch, Third Street Park, Recreation Building, and 6th Street Park) plus two walkways along the shore and Linden Creek that are publically-owned recreation lands and the Fall’s River hiking trail. The school facilities (L’Anse Area Schools and Sacred Heart) add another 9 acres of



Top: Scenic waterfront path leading to the bluff in L’Anse. Middle: Falls River by the old Powerhouse. Bottom: Red rocks on the south shore of Keweenaw Bay.

recreation land, much of which is utilized by the public.

The L'Anse Township Park includes 97 acres and serves the entire County. The L'Anse Township softball and hardball field includes 40 acres and serves the Village and Township. The Second Sand Beach Park is a mini-park of 30 acres serving the area. The L'Anse Golf Club is 80 acres. The Pinery Lakes Ski Trail is also located in the Township.

The NRPA standards address the following types of parks:

- Mini-parks with specialized facilities serving a limited population or interest group with a service area less than ½ mile radius, located within neighborhoods and in proximity to multi-family or elderly housing—0.25 to 0.5 acres per 1,000 people (1 to 2 acre for L'Anse Township)
- Neighborhood park or playgrounds with areas for intense recreation activities with a service area of a 1 mile radius to serve a population up to 5,000, located with easy accessibility to neighborhood populations, geographically centered, and with safe walking and bike access—1 to 2 acres per 1,000 people (4 to 8 acres for L'Anse Township)
- Community Park with intense recreational facilities or areas of natural quality for outdoor recreation with a service area of more than one neighborhood (1 to 2 mile radius), over 15 acres in size, easily accessible to the neighborhood served—5 to 8 acres per 1,000 people (20 to 32 acres for L'Anse Township)

In the process of creating the 2003 Village of L'Anse, Township of L'Anse, and L'Anse Area School Recreation Plan, these standards were discussed in relation to the Village and the Township. In smaller communities such as L'Anse, neighborhood and community parks do not need to be separate facilities since existing parks are within easy access of the local population. However, it is also important to anticipate the needs of tourists along with those of the local community.



*Top: L'Anse Township Park
Bottom: Second Sand Beach Park*

**Figure 3-1: MDNR Recreation Standard
L'Anse Township and L'Anse Village**

The community hopes to purchase additional acreage from CertainTeed Corporation to expand the Waterfront Park along the shore of Keweenaw Bay, however, current corporate policies are not favorable for this proposition. This would be the best opportunity to more fully utilize the beautiful lakeshore and create a park with the potential to serve as a regional draw for the community. This would also be a valuable marketing opportunity for improving the visible corporate presence of adjacent industries. This piece of property is a crucial link in the creation of a multi-use path along the Bay from Baraga to L'Anse to Pequaming, unless the route is diverted around the property along the Falls River. Other options include creating multiple mini-parks closer to neighborhoods serving specific population segments, or collaborating to create a network of bicycle/pedestrian paths along the lake shore, Linden Creek, and Falls River.

Shown at right is an analysis of recreational facilities in comparison to DNR Opportunity Standards. This analysis is a quantitative analysis, yet there are other factors to be considered in recreation planning, such as location and quality of opportunities, accessibility for all members of the population, and unique community needs.

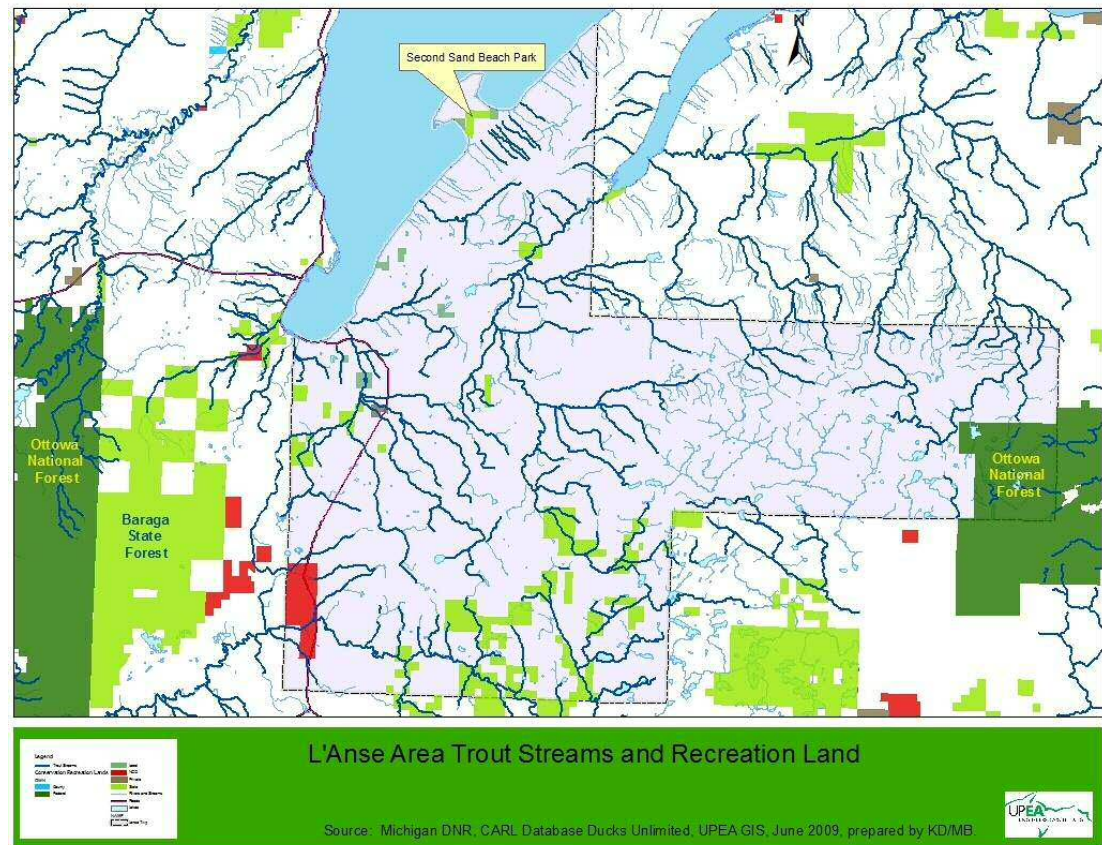
Recreation per Michigan DNR Opportunity Standards: Township & Village of L'Anse				
Village of L'Anse and L'Anse Township Population = 3,926**	Michigan Recreation Standard--1 unit per population	Standards per Area Population	Existing Facilities	Needs Compared to Existing
Archery Range (incl private, commercial)	50,000	0.08	0	-0.08
Baseball Fields***	5,000	0.79	1	0.21
Basketball Courts, outdoor***	5,000	0.79	1	0.21
Bicycle Trails (miles)	40,000	0.10	only roads	-0.05
Golf Courses (private, commercial)	25,000	0.16	1	0.84
Horseshoe pits	7,500	0.52	0	-0.52
Ice rinks, indoor	100,000	0.04	1	0.96
Ice rinks, outdoor	20,000	0.20	0	-0.20
Picnic area/tables	200	19.63	47	27.37
Playgrounds	3,000	1.31	4	2.69
Rifle ranges (private, commercial)	50,000	0.08	0	-0.08
Shotgun ranges (pvt, commercial)	50,000	0.08	0	-0.08
Shuffleboard	7,500	0.52	1	0.48
Sledding hills	40,000	0.10	0	-0.10
Soccer fields	10,000	0.39	0	-0.39
Swimming pools (outdoor)	20,000	0.20	0	-0.20
Tennis courts (outdoor)	4,000	0.98	1	0.02
Volleyball (outdoor)	7,500	0.52	1	0.48
Boat launches (parking)	400	9.82	1	-8.82
Campgrounds/Campsites	150	26.17	33	6.83
Cross-country ski trails (miles)	10,000	0.39	10	9.61
Fishing access (feet)	100	39.26	Many	Sufficient
Fishing piers	100,000	0.04	1	0.96
Hiking trails (miles)	5,000	0.79	Many	Sufficient
Horseback riding trails (miles)	20,000	0.20	0	-0.20
Nature areas	50,000	0.08	1	0.92
ORV areas (acres)	7,500	0.52	0	-0.52
ORV trails (miles)	10,000	0.39	0	-0.39
Land open to snowmobiling (acres)	1,000	3.93	Many	Sufficient
Snowmobile trails (miles)	3,000	1.31	Many	Sufficient
Swimming beaches	25,000	0.16	1	0.84
Roller skating (incl commercial)	20,000	0.20	0	-0.20
**U.S. Census Bureau, 2000 Census	Source: Michigan Department of Natural Resources.			
***Not including school facilities	1986. Building Michigan's Recreation Future			

The chart compares the Michigan Recreation standards based on actual population to existing facilities in both L'Anse Village and Township to determine possible deficiencies. Items such as the archery, rifle, and shotgun ranges are less frequently found in small communities. These items should be pursued only if local demand is evidenced in public visioning exercises. These items were not mentioned during the creation of this master plan. However, an outdoor ice rink and sledding hill were mentioned as possibilities for the former football field location by the Recreation Building (shown as a slight deficit in the opportunity analysis). A roller skating facility is listed as a deficit, and the community has mentioned the need for a skate park or rollerblade trails.

Boat launches with parking are listed as a significant deficit. There is a need for ORV facilities and trails. The soccer field is being built at the high school along with the new football field. Residents have considered alternatives for the outdoor swimming pool, such as utilizing a private facility in surrounding areas. One alternative may be a splash park with water jets, which is a lower maintenance item. Although baseball fields don't show as a deficit, the community has mentioned the need for another facility.

Within the Village, informal trails have spontaneously developed in the vacant lands surrounding the neighborhoods on the northeastern Village boundary. The line of bluffs paralleling the lakeshore in the northwestern corner of the Village would provide outstanding scenic and interpretive recreation opportunities. There is an opportunity to create interpretive gardens which would provide recreational opportunities but also help stabilize the slopes along Linden Creek in the east central portion of the Village. The

Figure 3-2: Township recreation land and trout streams



Falls River provides opportunities for fishing and trail activities in the core and southern portion of the Village where facilities are currently lacking for the neighborhoods divided from the rest of the Village by US-41.

Outdoor recreation activities in the L’Anse area include camping, hiking, fishing, hunting, cross country skiing, and snowmobiling. Trout streams crisscross the landscape (see map).

Regarding regional recreational opportunities, Baraga County has over 100,000 acres of state and privately owned commercial forestland available for recreation such as trails. The Peter Wolfe Chapter of the North Country Trail Association is responsible for 140 miles of the North Country hiking trail through the Upper Peninsula of Michigan. Two sections of completed trail totaling approximately 6.4 miles thread through Baraga County, with a third section of trail under construction.

L’Anse area recreation, as reported in the *Village of L’Anse, Township of L’Anse and L’Anse area Schools Recreation Plan of 2008-2012*, includes:

Waterfront Park

Approximately two-acre site on Lake Superior waterfront includes playground equipment, pavilion, picnic tables, grills, beach, underground watering system, restrooms, volleyball courts (regular and beach volleyball), band shell, and waterfront walkway with lighting. The Village owns and maintains this mini-park.

Marina and Boat Launch

Approximately one acre special use facility, located adjacent to the Waterfront Park and off Baraga Avenue. The Village-owned park includes docks, piers, and boat launch. The Village also maintains this facility.



**Top: L’Anse Waterfront Park
Middle: L’Anse Marina
Bottom: L’Anse Band Shell in the Waterfront Park**

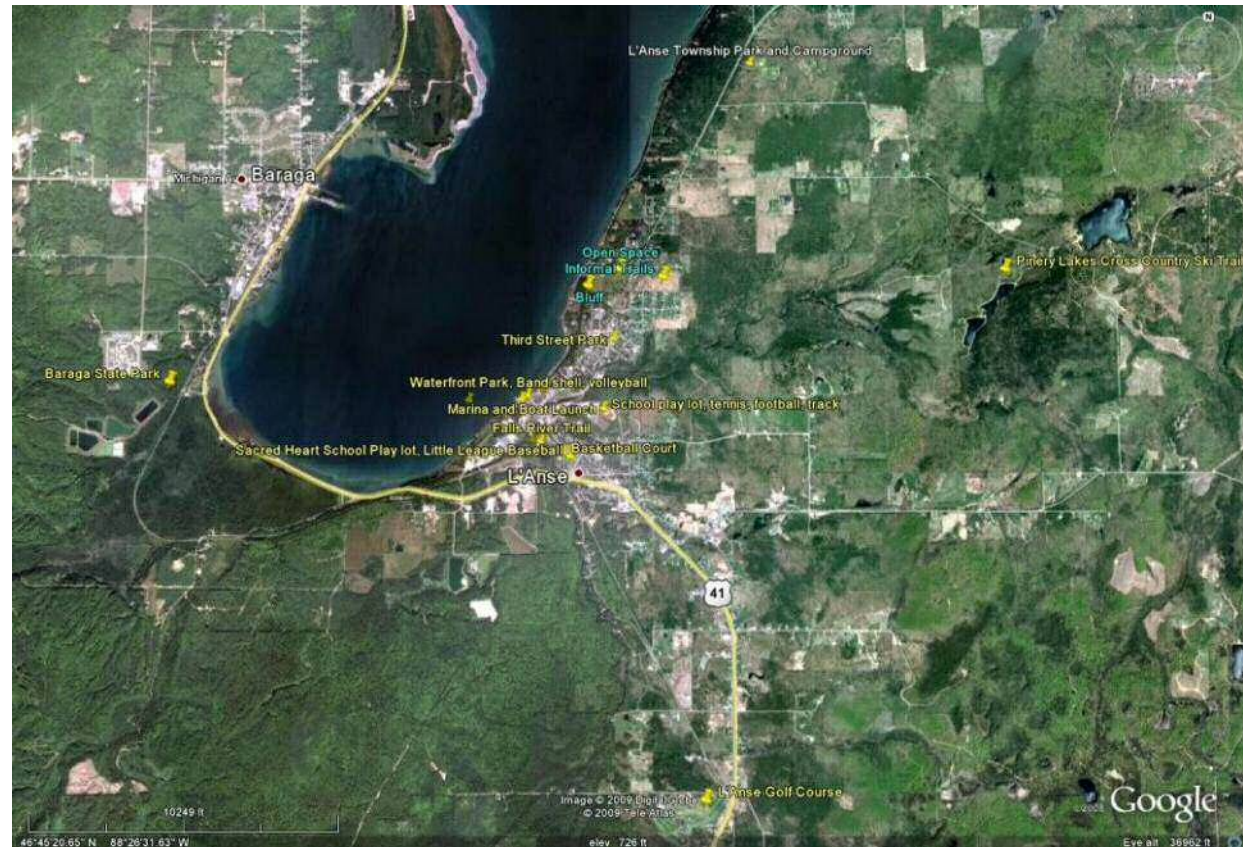
Walkways

One walkway is located along Linden Creek starting at Lake Front Park and ending at Main Street which is the main business district. The walkway is concrete with benches and lighting. A second walkway is located along Lake Superior from Falls River to Division Street, and includes a concrete walkway, lighting, benches, and picnic tables. Both walkways are owned and maintained by the Village.

Third Street Park

Approximately one acre mini-park, located in the blocks between Third and Fourth streets. The Village-owned park includes tot baseball field, sandbox, swings, merry-go-round, monkey bars, play tires, and basketball and tennis courts. The tennis courts are in need of re-orientation because they face in an east/west direction, making visibility difficult.

Figure 3-3: L'Anse Area Recreation



School Play Lot and Tennis Courts

Approximately two acre site includes swings, slides, climbing apparatus, small basketball court, and tennis courts. This site is owned and maintained by the L’Anse School District and is located adjacent to the elementary school.

L’Anse Recreation Building (Ice Rink)

The facility includes artificial ice and warm-up area. The building is multi-use, housing such activities as car shows, roller-skating, art and crafts shows, and dances. The facility is financed through U.S.D.O.I, DNR, and local funds, and is owned and maintained by the Village.

High School Football Field and Track

This approximately five acre site owned and maintained by the L’Anse School District is located adjacent to the L’Anse Recreation Building. These facilities are currently being relocated to the site of the L’Anse School in a new athletic complex, so this site awaits reuse. Wetness is an issue on the site. The Village would like to purchase this property from the School District for a soccer and baseball field, outdoor ice rink, and sledding hill. The outdoor rink would provide more opportunity for open skating since the indoor ice facility has limited time available for open skating due to hockey and figure skating uses. The current indoor facility could be utilized as a warming area and restrooms for the outdoor facility.

Sacred Heart School Play Lot

The site is located west of L’Anse Avenue, is approximately one acre in size, and is owned and maintained by the parochial school. This location includes a play area with swings, slide, and merry-go-round.



*Top: Little League Baseball field at Sacred Heart School
Bottom: Falls River*



Little League Baseball Field

This one acre site is located on Sacred Heart School property and includes an improved field with dugouts and fencing.

6th Street Basketball Court

Located on Sixth Street, the facility is maintained by the Village of L’Anse with a twenty-five year lease on property from Sacred Heart Church.

L’Anse Golf Club

Nine-hole golf course with driving range located three miles south of L’Anse on U.S. 41. The course is leased to L’Anse Township for a period of 25 years and is open to the public.

Pinery Lakes Cross-Country Ski Trail

Located north of L’Anse on Indian Cemetery Road, the property is owned by the Village and the trail is maintained by the Ski Club. There are several loops through pine woods totaling approximately 10 kilometers of novice and intermediate levels.

Falls River Trail

Three acres of trail located along Falls River on leased land from U.P. Power Company, maintained by the Village.



*Top: Snowmobile recreational opportunities
Bottom: The shoreline of Keweenaw Bay, Lake Superior*



Snowmobile Trails

In addition to parks and other village-owned recreational facilities, Baraga County has over 150 miles of groomed trail in the region, and the sport has proven a major economic boost. Due to the large amount of snow received, the area is a magnet for snowmobilers and other winter sports enthusiasts.

Lake Superior

By surface area, Lake Superior is the largest fresh water lake in the world and is the biggest of all the Great Lakes. During the spring, summer, and fall months, the lake offers endless fishing, boating and swimming opportunities. In the winter, the lake rarely freezes completely leading to large snow falls around the lake. Keweenaw Bay on the other hand does freeze and is a very popular ice fishing destination.



Camping at L'Anse Township Park.

Camping

There are two camp grounds within the county; Baraga State Park and L'Anse Township Park and Campground.

Baraga State Park

This park, located on U.S. Highway 41 overlooking Keweenaw Bay, Lake Superior has 116 sites on 56 acres. Activities in the park include cross country skiing, fishing, hiking, and metal detecting. There is also a picnic area, picnic pavilion, and playground.

L'Anse Township Park and Campground

Located 3 miles north of the Village of L'Anse on Skanee Road, the park offers beautiful views of Lake Superior and Keweenaw Bay. The park and campground offer 30 modern campsites with electrical hook-ups, shower building, pavilion, playground, Lake Superior beach and shoreline, firewood, RV dump station.

L'Anse Township Softball and Hardball Field

This 40 acre facility is used by the Village and Township.

Second Sand Beach Park

This beautiful stretch of Lake Superior shoreline is on the north coast of Pequaming. Second Sand Beach Park includes a picnic area, restrooms, grocery store and great swimming beach for families. This area is also used for launching kayaks.

Revisiting Public Recreational Input

It is important to understand that the comments and considerations presented here represent summaries of actual participant comments, not an analysis.

Attitudinal Surveys

The Baraga County Attitudinal surveys reflect the priority importance of waterfront recreation development in both Baraga and L'Anse. The L'Anse Waterfront Park was indicated as the most utilized facility in the area along with the marina. However, respondents also indicated that facilities most in need of repair include the L'Anse and Baraga lakeshores and beaches (including Second Sand Beach). It was indicated that these facilities were highly utilized by tourists. Waterfront development and boat rides on Lake Superior were two of the top listed priorities for tourism development.

Trails including bicycle paths, cross-country ski trails, snowmobile trails, and well-marked hiking trails were also of high interest, although it was indicated that the snowmobile, cross-country, and hiking trails need repair. Residents indicated frequent use of the hiking, cross-country ski, and snowmobile trails. It was perceived that snowmobile trails and cross-country ski trails drew tourist use. All-purpose trails were of high priority interest for tourism development. Historical sites were also listed as a priority for tourism development, and can be integrated into an interpretive trails system along with other identified tourist activities including sightseeing and waterfalls.

Other priority recreational opportunities include fishing, hunting, picnic sites, and swimming pools. Facilities noted in need of repair include parks, campgrounds, and the Baraga Ice Rink. The casino, parks, fishing, and hunting facilities were perceived to be utilized by both residents and tourists. Residents also indicated use of the golf course and picnic sites while acknowledging tourist use of the Baraga State Park and area campgrounds. Fishing related activity was perceived as a top priority for tourism development.

Recreation options receiving a majority of responses as low to medium interest include canoeing/kayaking, evening enrichment classes, non-alcoholic bar/recreational center, tennis courts, and volleyball courts. Of no- to low- interest for a majority of respondents are gambling, golf, racquet club/health spa, and skateboarding park.

2000/2001 Baraga County Strategic Plan

Highlights of the strategic agenda relating to recreation include being proactive in protecting and improving public access and creating recreational walkways by utilizing planning and zoning tools. For example, land use concerns include the expenditure of public funds on roads for private property owners who then block views and access to the lake with their development, indicating a negative tradeoff. There was also a noted lack of coordination of planning and zoning across municipalities, and a corresponding need for cooperation between the various jurisdictions and the tribal government. Views were also polarized on “more” versus “less” development as being desirable, especially on the waterfront, indicating a need for planned development. The requirements of an older population should also be addressed in recreation planning.

Participants specifically wanted to restrict truck traffic along the shore of the bay from L’Anse north to the Whirl-I-Gig, and to create recreational bicycle/walking trails between Baraga and L’Anse, L’Anse and Pequaming, and L’Anse to Skanee. The first phase would be constructed between Baraga and L’Anse which are the greatest population centers.

Baraga County concerns regarding youth programs include the need to facilitate transportation to activities; create avenues for self expression (including the arts); offer a way to earn money; teach ballet, gymnastics, and swimming programs; provide access to technology; create a safe hangout place; and teach life skills. Of special concern were the needs of single parents and economically depressed youth and elders. A youth center, movie/community theater, and a public library were on the wish list. A youth shuttle bus is needed.

Within the youth focus group, social/recreation programs such as “Kids Rights”, “Peer Educator”, elementary basketball, hockey, Little League Baseball, summer soccer, Baraga/L’Anse figure skating, 4-H Youth, Baraga Water Safety, DNR Hunter Safety, KBIC Kids Fair, KBIC Pow Wow, KBIC summer youth (8-12 year olds), “Reggae on the Res”, after-school arts, mentoring, DNR “Summer Exploration Days”, DNR summer youth hiring, “Odyssey of the Mind”, and Baraga Village youth summer job programs were mentioned. Important special events include a New Year’s Eve Semi-Formal dance, church sponsored events, Baraga County Fair, “Santa Comes to Town”, and an Easter hunt. A strong network of parents supports the resource library and dances.

The youth recognized facilities of importance including the OCC Fitness Center in Baraga, cross-country ski and snowmobile trails, Lake Superior, Laird Township skating rink, L’Anse Waterfront Park, and neighborhood basketball and tennis courts.

Within the group studying tourism and recreation, natural resource amenities were identified as lake views, public access to water resources, waterfalls, changing seasons and fall colors, the Ottawa National Forest, wild berries, beaches, the south shore (Keweenaw Bay), hunting and fishing opportunities, Craig Lake State Park, Sturgeon Gorge, wildlife (bear, moose), and the quiet.

Community recreation amenities include nice parks; waterfront concerts; Travel Information Center; Lac Vieux Desert Trail; Huron Mountain gateway; docks and marina; live concerts and events at the casino; sweet rolls at the Hilltop Restaurant; availability of cabins, cottages and lodging; Skanee Road hunter walking trail; well-groomed snowmobile, cross-country, and hiking trails; golf course; and flea market.

Area community cultural/marketing opportunities that may be incorporated into recreational opportunities include the highest point; historical sites; Henry Ford heritage; burial mounds; Ghost Town; Aura Jamboree; Pow Wow; festivals and Fireman's Tournament; museums in Alberta, Baraga County, Covington and Arvon; Hanka Homestead; Bishop Baraga Shrine; "Land of Legends"; and the Huron Island lighthouse.

Focus Group Meeting, November 6, 2008

Sport fishing was highlighted and discussed as an opportunity by both Baraga and L'Anse Village economic development representatives and the Tribe. MDNR has increased trout plants in order to promote the area as a fishing destination, including ice fishing. It was felt that marketing is needed to clarify an image of the area as a fishing destination and to promote charter boat fishing. One obstacle is the high levels of mercury in the fatty lake trout which renders the oils unsafe. Lean lake trout are safe for consumption, but decreasing in population. The Tribe is working with Michigan Sea Grant and MSU Extension to find ways to deal with the contaminants in the fatty tissues of the fish, either by reducing the contaminants or separating them from the oils.

The MDNR mentioned that while hunting and fishing are declining in participants, wildlife and birdwatching is an opportunity for growth, and that the area should be marketed during migrations. An option is to develop an auto touring route based upon birdwatching, fishing, hunting, waterfalls, etc. These routes can become part of area trail systems and scenic routes, and marketed via distribution of a detailed map. Grant opportunities are available for the creation and marketing of these specialized routes and could be promoted in the L'Anse/Baraga/Covington triangle. The school has applied for a grant to create trails and bird watching experiences, signage, etc. It would be a 3 mile nature trail for seniors and others within the school boundaries. They would like to explore how to tie into a larger trail system. The trail features interesting terrain variations and handicapped accessible areas. They are awaiting grant approval for the project.

MDNR representatives mentioned that with the new ORV regulations, states are asking local municipalities to work with counties to suggest roads that should be accessible to ORV networks. The snowmobile industry is saturated, but the ORV industry operates 7-8

months of the year up here, and there are many opportunities in this area for touring ORV routes. Right now there is just a closed system in the Baraga Plains and the Agate Falls/Bergland-to-Sidnaw rail trail. More trails are needed here. Options include development of trails on state lands and working to get easements adjacent to state property. Another option is to add trails during highway reconstruction projects. The Tribe also mentioned difficulty in getting easements from private landowners. However it was suggested that the Baraga County Convention and Visitors Bureau can work out liability insurance for landowners as an incentive to participate.

Increased opportunity for silent sports such as kayaking, snowshoeing, mountain biking, and cross country skiing should be pursued. Interpretive and wayfinding signage is needed to support all area recreational opportunities.

Scenic/Recreational Summary

Township Residents are benefitted by an abundance of recreational opportunities. But ongoing planning and regional collaboration is needed to realize the most benefit from recreation expenditures by becoming a recreation destination. Because residents of the entire area enjoy recreational opportunity, collaborative efforts are appropriate and would ensure the most efficient use of fiscal resources. This is also the only way that the area can hope to become a recreation destination – by collaborating and collectively marketing activities and facilities.

Funding must be allocated in a manner that most closely meets the changing needs of the population base while addressing visitor opportunity. The scenic resources associated with the L’Anse area help to ensure visitor interest. Carefully targeted expenditures on facilities and promotional activities will improve sustained interest and maximum utilization of facilities. The Township can best utilize limited resources by creating recreation goals that complement economic and community development goals, and carefully choosing strategies to increase facility utilization and decrease ongoing costs.

The waterfront is recognized and valued as one of Township’s greatest assets for both residents and visitors. Because of the economic development benefits relating to the waterfront and the important ties to Downtown L’Anse, this area merits priority attention and future enhanced investment. Residents noted there was a need for greater utilization of the lakeshore and beaches.

The creation of a recreational trail network was of high priority interest for tourism development and enhanced quality of life for residents. Of highest priority is trail development along the lakeshore, with the first phase consisting of a Baraga to L’Anse link. Other opportunities include Falls River hiking and Linden Creek nature/riparian buffer trails. There is also evidence of a need for recreational trails in the vacant lands surrounding the neighborhoods in northeastern L’Anse Village, as informal trails crisscross the landscape. The line of bluffs paralleling the lakeshore in the northwestern corner of the Village would provide outstanding scenic and interpretive recreation opportunities. There is an opportunity to create interpretive gardens which would provide recreational opportunities but also help stabilize the slopes along Linden Creek in the east central portion of the Village. The Falls River and areas

around the Evergreen cemetery provide opportunities for fishing and trail activities in the core and southern portion of the Village where facilities are currently lacking for the neighborhoods divided from the rest of the Village by US-41.

It was noted that interpretive and wayfinding signs and maps are needed to enhance all recreational opportunities. The community was interested in exploring the expansion of fishing activity (perhaps sport fishing). There is a need to support youth recreation and transportation programs to help single parents. The community of Zeba needs to develop infrastructure on the parcel of land that allows access to Keweenaw Bay. This can become a community gathering area with the support of some community visioning exercises.

Opportunities include preserving or enhancing:

- Waterfront views and views from the bluffs
- Public access to the water

Opportunities for additional facilities on the waterfront include:

- Enlarged Waterfront Park and Marina with necessary parking facilities. Shower and toilet facilities at the marina.
- Farmer's Market
- Recreational trail network
- Kayak lockers/water trail stop
- Public fishing piers

Opportunities for additional collaborative trail networks include:

- Cross-country ski trails
- Scenic, interpretive, or fitness-oriented hiking trails along the rivers
- Snowmobile trails
- Designated ORV trail network
- Scenic trails/boardwalk along the bluffs
- Wildlife & Birdwatching nature trails
- Mountain Biking Trails
- Auto touring route linked to trail systems and area features

Miscellaneous Recreational Opportunities include:

- Outdoor ice rink and sledding hill (possibly in the former football field location by the L'Anse Recreation building)
- Roller skating facility (or skate park or roller blade trails)

- Splash park (in lieu of a pool)

It was noted that interpretive and wayfinding signs and maps are needed to enhance all area recreational opportunities. For example, there is a need to develop a summer non-motorized recreation map to include hiking trails, kayak put-ins, mountain bike trails, and scenic areas. Of further benefit is a winter non-motorized recreation map to include cross-country ski trails and snowshoe trails. An off-road vehicle trail map is also needed.



Village of L'Anse & L'Anse Township Recreation Plan 2023-2027

APPENDIX C

VILLAGE OF L'ANSE MARINA MASTER PLAN

Marina Study & Master Plan

Village of L'Anse Marina
Baraga County
Michigan

(Final Submittal)



Prepared for:
Village of L'Anse - Downtown Development Authority

Funded by:
Michigan Department of Natural Resources – Waterways Commission Grant

Prepared by:



January 31, 2014

TABLE OF CONTENTS

	<u>PAGE</u>
I. Introduction	1
A. Purpose.....	1
B. Scope of Study.....	1
II. Existing Site Conditions	1
A. Site Description	1
B. Marina Facilities	2
C. Docks	3
D. Navigation & Dredging	3
E. Waves & Ice	4
III. Market Conditions and Demand Analysis	5
A. Regional Market Survey	6
B. Summary of Facilities Surveyed.....	8
C. Recommendations	9
IV. Proposed Marina Master Plan.....	10
A. Proposed Improvements	10
B. Phasing of Improvements.....	11
C. Feasibility	12
V. Appendices	
A. Location Maps	
B. Existing Site Plan	
C. Site Photos	
D. USACE Water Levels	
E. USACE Water Levels Summary	
F. Water Fetch to Harbor	
G. Market Study	
H. Marina Master Plan Drawing and Phases	
I. Preliminary Estimates & Feasibility Analysis	
J. Pre-Application Review Correspondence from MDEQ/USACE	
K. SHPO Review Letter	
VI. References	
A. 2010 ADA Standards for Accessible Design, September 2010	
B. MDNR-Parks and Recreation Division: Harbor Development Standards Guide, latest edition	
C. MDNR Parks and Recreation Division: Facilities Design Guide	
D. Record Drawing - Marina Improvement Plan, 1997	
E. Shoreline Protection Manual, USACE, 1984	

I. INTRODUCTION

A. PURPOSE

The purpose of this study is to evaluate the existing facilities and make recommendations for possible improvements to the Village of L’Anse Marina located in Keweenaw Bay, Baraga County.

B. SCOPE OF STUDY

In April of 2013, the Village of L’Anse contracted with U.P. Engineers & Architects, Inc. to complete a Marina Study and Master Plan funded by a Michigan Department of Natural Resources (MDNR) – Waterways Commission grant. This study includes a physical evaluation of the existing facilities, the harbor configuration, sedimentation issues and general marina operations in order to prioritize what needs the most attention. We have also completed a market study to evaluate the marinas historic performance vs. other private and public facilities in the area. From this evaluation, we have prepared recommendations for improvements, options for future expansion and a feasibility analysis of these options. These recommendations will assist the Village of L’Anse in the decision making process for future planning of their marina, downtown and waterfront park.

II. EXISTING SITE CONDITIONS

The first step in the study was to inventory and evaluate the condition of marina facilities. This section of the report will describe the existing facilities, site amenities and their condition.

A. SITE DESCRIPTION

The L’Anse Village Marina is located on the eastern shore near the head of Keweenaw Bay on Lake Superior. The marina is one of two municipal marinas located in Keweenaw Bay, the other being the Village of Baraga Municipal Marina located approximately 1.75 miles away. See location maps provided in Appendix A. More specifically, the marina is located on the southwest end of Village’s downtown near the adjacent Waterfront Park. The L’Anse Waterfront Park extends from Linden Creek at the north to the Falls River at the south, with the marina located near the center of the Park. The marina was reconstructed in 1996 with grant funds provided by the MDNR – Waterways Commission grant.

The waterfront park provides several amenities such as a playground, three pavilions, band shell, public beach, volleyball courts, horseshoe pits and public

restrooms. See Existing Site Plan provided in Appendix B and Site Photos in Appendix C.

B. MARINA FACILITIES

The following is a general summary of the existing facilities:

The marina has eight (8) – 24' seasonal slips and five (5) – 30' transient slips. The eight seasonal slips are located on the floating pier at the center of the marina basin. The five transient slips are located around the sheet pile perimeter of the basin.

(4) Transient slips have both potable water and electric available. Each pedestal contains two (2)-20 amp outlets and (2)-30amp outlets. There are five (5) water spigots around the perimeter of the marina basin. It appears as though there were originally five (5) power pedestals, but one (1) has since been removed and taken out of service.

The marina also has fuel and sanitary pump-out services available, but they have not been used in several years. Currently, if fuel services are needed, the Village contacts local fuel distributor to provide a tanker truck to the marina. The sanitary pump is not currently installed, but is kept at the DPW garage until there is a request for pump-out services. These two amenities are not utilized since they have not been in high demand recently nor does the Village staff a harbor master to fulfill these requests.

The boat launch consists of a 36-foot wide segmented concrete ramp with a temporary steel dock dividing the ramp into two areas. The overall condition is fair with some minor cracking, settlement and spawling of the concrete panels. See photos in Appendix C. Launch fees for 2013 are \$3.00 for a daily pass or \$40.00 for a season permit, which is comparable to other facilities in the area.

Designated restroom facilities are not available at the marina, but they are available approximately 500 +/- feet away in the Waterfront Park. The men's restroom facilities in the Waterfront Park contain one urinal, one toilet and one sink. The woman's restroom contains two toilets and a sink. Both restrooms have a hand dryer and a water fountain is located outside between the two restrooms. These facilities are in fair to poor condition and should be considered for renovation or replacement, as they do not meet current Barrier Free guidelines for accessibility. Although, the restrooms were compliant with previous design codes when originally constructed.

A fish cleaning station is located adjacent to the boat launch adjacent to Baraga Avenue. This fish cleaning station was installed thru a MNRTF grant in 2003. The

marina is primarily used by local residents and sport fisherman. Therefore, the fish cleaning station is used frequently from May thru October.

The Village of L'Anse also provides Wi-Fi internet service throughout the downtown area. Reception varies depending on location, but is available at the marina or in close proximity.

C. DOCKS

The eight (8) seasonal slip are 24 foot long and are located on the floating pier in the center of the marina basin. The floating pier is approximately 18 years old and is nearing the end of its expected life. Although it is in fair condition, it should be considered for replacement in the future. Due to deterioration of wood framing and foam floatation, these structures typically last approximately 20 to 25 years in this northern climate.

Five (5) broadside transient spaces are available along the perimeter of the marina basin. Transient and seasonal slip fees are per the MDNR fee Schedule A and Rate 10, respectively. See spreadsheet in Appendix G for detailed data on other marina's amenities, rates, etc. in the area.

D. NAVIGATION AND DREDGING

The marina is protected by a rock pier on the north side that originally extended approximately 150 feet from the shoreline, but sedimentation from Linden Creek and storm water outlets to the north have resulted in vast sand beach on the north side. The rock pier now only extends approximately 75 feet from the shoreline. Another "zig-zag" shaped rock pier exists at the south creating the channel into the marina. This configuration provides additional protection from westerly winds across Keweenaw Bay. The minimum entrance width to the marina is approximately 50 feet, but has been restricted in recent years due to sedimentation and low water levels.

An ongoing problem to navigation is sedimentation of the channel leading to the marina and boat launch. The entry to the marina needs to be evaluated for possible modifications to reduce the long-term maintenance and navigation problems due to the accumulation of sediments.

About a decade ago, a Power Dam was removed upstream on the Falls River. The impoundment it originally created had a substantial amount of sand/silts retained upstream of the dam. Since the dam has been removed, the sediments have been transported downstream thru the fast moving water and have accumulated at the mouth of the river near the marina. This has resulted in a substantial change in the

water depth, expansion of the shoreline and growth of vegetation. As a result, the once used boat launch to the south is now closed and approximately 75' of shoreline vegetation exists, which is possibly considered a Great Lakes Emergent Shoreline Wetland. Furthermore, the shoreline vegetation/emergent wetlands have proceeded along the south side pier and will be impacted if the south pier is altered. Addressing the shoreline vegetation/wetlands will require a formal wetland delineation and mitigation of the site per the review received by the MDEQ/USACE pre-application meeting summary provided in Appendix J.

Furthermore, the storm sewer outlet and Linden Creek to the north have resulted in the deposit of additional sediments along the beach and the north side of the north rock pier. Prevailing winds from the north and northwest have pushed these sediments further south, resulting in an vast beach and the migration of sediments around the west end of the north rock pier.

The sedimentation of channel and marina entrance is clearly visible in the site aerial photograph and satellite imagery provided in Appendix C. Also note that the channel was dredged in March of 2012 to maintain operation. Due to the low water levels experienced in the previous years and the sediment deposition, the channel into the marina was limited to smaller boats with shallower draft. In 2012, approximately 1,660 cubic yards was removed.

Future planning should consider an extension and/or reconfiguration of the rock piers to provide a barrier to reduce the frequency of dredging within the navigable channel. A major consideration with modifications to the existing rock piers will be the presence of the sunken vessel the "Northerner" and the existing timber crib pier remains that was constructed over a century ago. These structures may be considered "historic" according to preliminary consultation with State Historic Preservation Office (SHPO). Their preliminary determination suggested an underwater archaeological study to determine if the site is eligible for National Register of Historic Places. If that determination is made, then no activities may be done to alter the existing vessel or pier remains. See consultation from SHPO included in Appendix K. Currently, a small "gap" exists between the existing north rock pier and sunken wood crib pier, which has allowed sediments from north to migrate into the navigation channel.

E. WAVES AND ICE

The L'Anse Village Marina location in the head of Keweenaw Bay is a prime location and is very well protected from waves in most directions. The longest "fetch" (distance across open water for waves to generate) is approximately 27 miles to Grand Traverse -"Louis's" Point at bearing 20 degrees (NNE). This fetch has a very

narrow band of few degrees each way; then the fetch is significantly shorter due to protrusions in the shoreline at Sand Point and Pequaming Point. Therefore, the probability of larger waves from this fetch direction is very small. The fetch to other locations within Keweenaw Bay range from 2 miles at 270 degrees (W), 15 miles at 0 degrees (N) to Portage Entry and 7 miles to 45 degrees (NE) to Pequaming Point. See Appendix F – “Fetch to Marina Schematic”. Therefore, the estimated maximum wave height, near the marina entrance channel and pier, are generally 2 feet or less during high wind events with an extended duration, common in late summer and fall. Brief winds during fast moving weather fronts or thunderstorms create “choppy” waves with a short “wavelength”. These waves are often 1 foot or less. Due to the existing marina configuration and rock piers, the inner basin remains calm during the above described wind events.

The southernmost part of Keweenaw Bay has historically frozen in January from Sand Point near the Village of Baraga easterly across the bay between the Village of L’Anse and Zeba. In more extreme winters, the bay has frozen out as far as the South Entry of the Keweenaw Waterway to the Huron Islands and beyond. Generally, there is a “static” freeze locking in the ice pack in the bay to the shoreline. A late winter/early spring thaw deteriorates the ice along the shoreline and the icepack often migrates northward with warm southerly winds. It is common for the icepack to move in and out of the bay during late March during an average winter.

The existing rock piers protecting the Village Marina basin have been in place for approximately 18 years and have endured past ice flows without noticeable deterioration or movement. Any future expansion or reconfiguration of the rock piers will require an analysis to design the improvements for the anticipated ice flows and ice pressures.

The existing marina basin and floating piers are entirely protected from the impacts of an ice flow. The inner basin and floating piers are “locked in” and do not see significant changes in ice conditions during the winter. The inner basin generally thaws slowly and deteriorates without damage to existing floating piers. See site photos in Appendix C.

III. MARKET ANALYSIS

A market analysis was also conducted to determine the future of boating in the Lake Superior region and determine if there is a need for additional amenities, slips, etc. in L’Anse. Other public and private marinas in the western Upper Peninsula were contacted and asked about their facilities, boating tourism and the amenities they provide. A spreadsheet summarizing the results of the survey is provided in

Appendix G. Marina owners were sent a standard questionnaire and/or where contacted directly.

What the market analysis determined is that there continues to be slow growth in Lake Superior boating despite increasing fuel costs and economic hardship. Those marinas that have invested in new facilities and can accommodate larger boats are experiencing growth in occupancies. Also, a common request is for sufficient depth to serve sailboats. Good service, amenities and being in the right communities that are interesting places to visit is a key factor. Keweenaw Bay specifically has seen recent growth in the sport fishing industry. Due to the abundance of trout, salmon and steelhead in the area, fishermen from across the Midwest travel to the area to enjoy what Keweenaw Bay has to offer. Boaters today look for facilities that offer the most amenities in order to make their experience more enjoyable and convenient.

Marinas, like any other tourism destination, must also be marketed to boaters. Positive reviews of a marina's service and facilities and the reputation of the community's hospitality is critical.

This following section of the report documents and provides market support for improvements to the L'Anse Marina. UPEA has performed this research in an effort to compile data on current boating trends in the region. The market study has provided UPEA and the Village with the data necessary to understand the existing market conditions. The results of this market study have been integrated into the Study's preliminary recommendations for improvements.

A. REGIONAL MARKET SURVEY

In order to gauge the demand for a marina expansion and upgrade, and provide a comparison to other marinas in the southern Lake Superior region, thirteen marinas were surveyed. These marinas were selected because of their relative proximity to the project site. Each marina was asked the same survey questions about their facility, market demand and future expansion plans. The following is a summary of other local marinas in closest proximity to L'Anse:

1. Baraga Village Municipal Marina

The Baraga Marina is owned and operated by the Village of Baraga. The Marina is located 2 miles west of the Village of L'Anse on the western shore of Keweenaw Bay of Lake Superior, in the Village of Baraga. Facilities at the marina include electric, water, gasoline, wastewater pump-out, and a full-time harbor master. Approximately 80 percent of the 20 seasonal slips are rented per year.

According to the Village Manager, revenues were up slightly from the last few years. The slips rates are broken down by season, monthly, weekly and transient or daily and then by length of boat. The seasonal rate ranges from \$528 for a boat less than 20 feet up to \$944 for a 36 foot boat; monthly rates range from \$225 for a boat less than 20 feet up to \$405 for a 36 foot boat; weekly rates range from \$112 for a boat less than 20 feet to \$202 for a 36 foot boat; daily or transient rates are between \$21 and \$38 depending on boat length. Daily launch fee is \$3.00 or annual launch fee is \$30.00.

2. Houghton County Marina (Municipal)

The Houghton County Marina is located on the north side of the Portage and on the east side of the bridge near the City of Hancock. The Marina has 54 slips in total with 10 slips reserved for transient boaters. The slips range in length but can comfortably accommodate a boat up to 70 feet in length. The full time harbor master stated that they currently have a waiting list of 50+/- boats. This is likely due to the available opportunities and events in Houghton/Hancock and the many amenities offered at the marina such as, electrical and water hook-ups, sanitary pump-out, premium diesel, showers, parking close to the docks and free bus passes. The marina has not seen an effect on its business due to the increased fuel prices or a slower national economy.

3. Witz Marina, Huron Bay, Skanee, Michigan (Private)

The Witz Marina on Huron Bay combines a 50 slip marina and a campground. 75% to 80% percent of the slips are seasonal rentals with the remaining slips for transient boaters. Facilities include a convenience store, electric, fuel, water, wastewater pump-out and an all sand harbor and beach. Most of their slip rentals are residents of Baraga County and the surrounding area. However, they also have people from all over the region that travel to fish in Huron Bay and Lake Superior. The marina has benefited from good sport fishing in Huron Bay during the last few years. In fact, the 2012 season was their best season ever, being full the majority of the season.

4. Pete's Marina, Pequaming Bay, L'Anse, Michigan (Private)

Pete's Marina is a private marina located 7 miles north of the Village of L'Anse in Pequaming Bay. According to owner, Pete VanStraten, the marina serves mostly local anglers in its 30 slips, slip rates are currently \$20.00 per foot per season. The marina has power, water and vault toilets. Transient

boaters are rarely attracted to the Marina due to its isolated location without amenities, food and shopping. The Marina does provide a lift that can accommodate larger boats for service and winter storage.

5. Baraga Lakeside Inn (Private)

The Baraga Lakeside Inn Marina is a private facility located 1.75 miles directly across Keweenaw Bay from the Village of L'Anse and just south of the Baraga Village Municipal Marina. It has 44 seasonal slip and 7 transient slips. All slips have power and water available. Their occupancy rate has been approximately 30% in recent years. Slip rates are \$75/month or \$300/season for boats less than 24 feet and \$125/month or \$500/season for boats over 24 feet. They do charge \$15/month or \$60/season for electrical. Occupancy has been steady, but low water levels and minimal draft depth have kept boaters away, particularly sailboats. Primary users of seasonal slips are local residents from Baraga County.

B. SUMMARY OF FACILITIES SURVEYED

1. Services

- a. Most marinas surveyed offer electric hook-ups, pump-out stations, picnic tables and restroom facilities. These appear to be the most common amenities.
- b. Some marinas offer showers, a boater's lounge, vending machines, ice, playgrounds and fish cleaning stations and fuel.
- c. The Village of L'Anse Marina currently offers most of these amenities and would be ranked as an "average" or "comparable" to other facilities in the Market Survey area.

2. Occupancy and Demand

- a. Average occupancy rate for seasonal slips at local marinas is approximately 75% or greater, except for Baraga Lakeside Inn, Eagle Harbor and Copper Harbor Marinas. Many marinas have been near full capacity in recent years, particularly in the Houghton Area.
- b. The primary user of the seasonal slips is local fisherman and recreational boaters with vessels less than 35 feet. A very low percentage of seasonal slip renters are by non-residents who use their boat for just pleasure cruising or as a "summer home".

- c. A small or moderate expansion could be considered in the Village of L'Anse for additional seasonal slips, since it has been full or nearly full the last few years. The need for additional seasonal slips was desired at several facilities.
- d. Additional transient slips are not in high demand at most local marinas, since their occupancy percentage is quite low compared to seasonal slips. Due to low water depth at most local marinas, larger boats and sailboats do not have docking opportunities in Keweenaw Bay. Therefore, it would be beneficial to develop the marina with several slips to accommodate larger vessels or sailboats with deep water slips.

3. Marketing Approach

- a. News about the hospitality and friendly attitude of a marina travels in the boating world, thus "word of mouth" is an important marketing tool. Improvements to docking facilities and amenities could draw more visitations to the marina. Users demand clean, convenient and accessible services.
- b. Southern Lake Superior is becoming noted as a destination for its many popular fisheries and this market segment has potential for additional season slips as well as transient slip rentals. Marketing the availability of access for anglers and transient boaters to area motels and to the Chamber of Commerce/Convention and Visitors Bureau could help promote this market segment. The community currently does a very good job promoting several events throughout the year that are centered around the downtown, Waterfront Park and marina.

C. RECOMMENDATIONS

The following is a list of recommendations for improvements at the L'Anse Village Marina, based on market survey of area marinas:

- a. Provide designated marina toilet/shower facilities in close proximity. (Existing restrooms are 500 feet away)
- b. Address sedimentation issues by extending or reconfiguring rock piers and perform dredging.

- c. Expand marina basin by moving south rock pier to create an area for future expansion and additional slips. Include additional site parking and improve site trailer parking maneuverability.
- d. Consider a moderate expansion of marina, in phases, to incorporate (4) additional seasonal slips and (4) additional transient slips in Phase II and (6) additional “deep water” transient slips in Phase III.
- e. Improve services and offer amenities that are desired by the primary user in the region. Amenities such as conveniently located restrooms, showers, fuel availability, additional seasonal docking and adequate navigation depth.

IV. PROPOSED MARINA MASTER PLAN

A. IMPROVEMENTS

Based on the condition assessment of the existing facility, historic usage and market evaluation of other area marinas we have developed an overall marina master plan to provide a vision for the future development at the L’Anse Village Marina. The master plan addresses the current marina needs and provides a plan for future expansion. A detailed Marina Master Plan is located in Appendix H. The following paragraphs highlight the proposed improvements shown in the Master Plan.

The existing facility is in need of minor repairs and improvements. The first item in need of repair or replacement is the concrete sidewalks around the steel sheet pile wall, which has settled significantly in isolated locations. Second, the existing floating pier should be considered for replacement. The existing pier is nearing the end of its expected life. Other misc. improvement could include additional parking, landscaping, site lighting and updated power pedestals.

The master plan includes the construction of a new toilet/shower building with Barrier Free design and accessibility. A new toilet/shower building would be approximately 800 square feet and would have new public men’s and women’s restrooms. Also, the facility would have separate restrooms for men’s and women’s with showers. These restrooms would require a passcode or keycode for access that would only be given to registered marina users. The location of this building would be located immediately adjacent to the existing marina. Currently, boaters must walk approximately 500 feet to use the restrooms in the

Waterfront Park near Linden Creek. There is also space for an office for a future harbor master and fuel sales monitoring equipment. A schematic floor plan and elevation of the proposed facility is provided in Appendix H.

Proposed navigation improvements would consist of closing the “gap” between the existing north rock pier and the sunken rock/wood crib pier. This would eliminate the movement of sediments from the north into the navigation channel of the marina. Extending the north pier slightly with a southerly angle will also provide additional protection at the inner marina basin. A fishing pier could be constructed at the far westerly end as well as an observation deck to view the sunken vessel the “Northerner”. Signage with the history of the vessel could be placed to document its history. Also, dredging should be considered to remove the existing sediments around the north pier extension.

The major improvements demonstrated in the marina master plan would be to relocate the south pier 100 feet southward and extend the pier 150 feet westerly to provide a barrier from the continuous flow of sediments from the Falls River. This configuration would not likely be feasible if the pier did not current exist. Substantial costs savings are available since the rock materials are already onsite. Dredging of the marina basin and the installation of the permanent steel piling are also required for the construction of the four (4) additional seasonal slips and ten (10) transient slips. This configuration significantly improves the navigation and maneuverability in and around the boat slips and the boat launch. This would eliminate the congestion encountered during the peak summer months and fishing tournaments/festivals. A completely developed Marina Master Plan is provided in Appendix H.

B. PHASING OF IMPROVEMENTS

Phasing of improvements will be necessary depending on grant funding and local match availability. The improvements recommended herein can be completed in phases to reflect the overall Marina Master Plan. We have separated the scope improvements into three phases. Although, the phases do no need to be completed in a particular order, we have separated them as such:

Phase I:

Includes the construction of a harbormaster building, modest improvements to existing services, replacement of floating pier, and significant improvements to site parking and accessibility. A schematic of Phase I improvements is provided in Appendix H.

Phase II:

Includes the relocation of the south rock pier to construct a new broadside mooring area for four (4) transient and four (4) seasonal slips. This relocation would also require harbor dredging to improve navigation in the newly constructed area. A schematic of Phase II improvements is provided in Appendix H.

Phase III:

Includes the construction of additional protection at the north side of the harbor entrance. The angled pier will provide additional protection and prevent further sedimentation of the marina entrance. The extension of the pier will provide an opportunity for a fishing pier and an observation area for the sunken vessel “Northerner”. Also, some additional dredging and the construction of six (6) additional transient slips, with deeper draft will allow slips for sailboats. Currently, ample depths for sailboats is not available in the area, as determined in the Market Survey. A schematic of Phase III improvements is provided in Appendix H.

C. FEASIBILITY

The goal of the Village would be to obtain grant funds to assist in the project construction. Pursuing a matching grant(s) that provide at least a 50/50 - grant/local match would significantly increase the probability of an improvement project.

Three “phased” options are currently presented and detailed estimates are provided in Appendix I. The project estimates, including engineering and contingency, for the three phases are as follows:

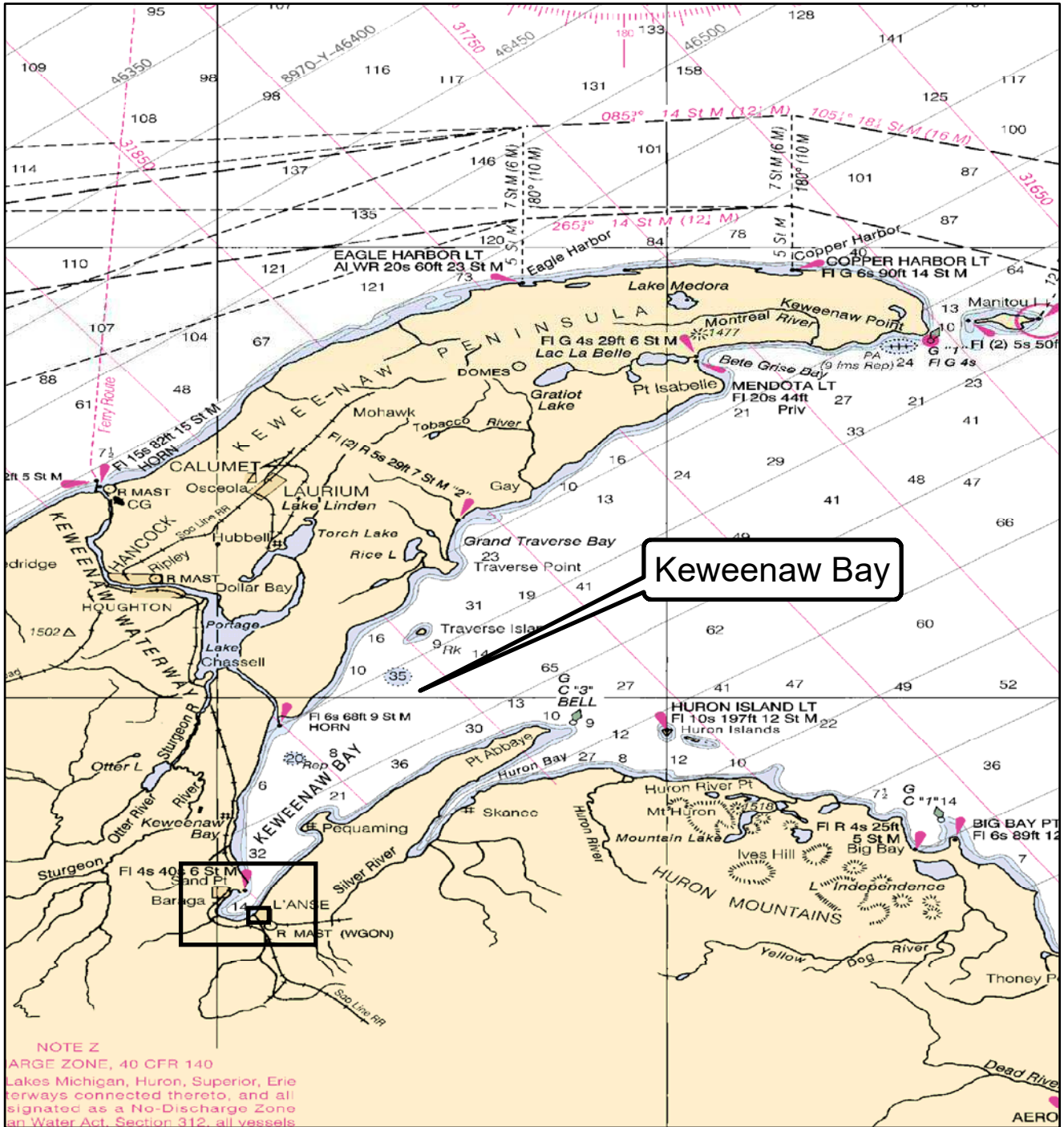
- Phase I: \$530,688 – Upgrade Existing Facilities
- Phase II: \$1,146,153 – South Pier Relocation & Docks
- Phase III: \$423,813 – North Pier Addition & Docks

TOTAL MARINA MASTER PLAN COST = \$2,100,653

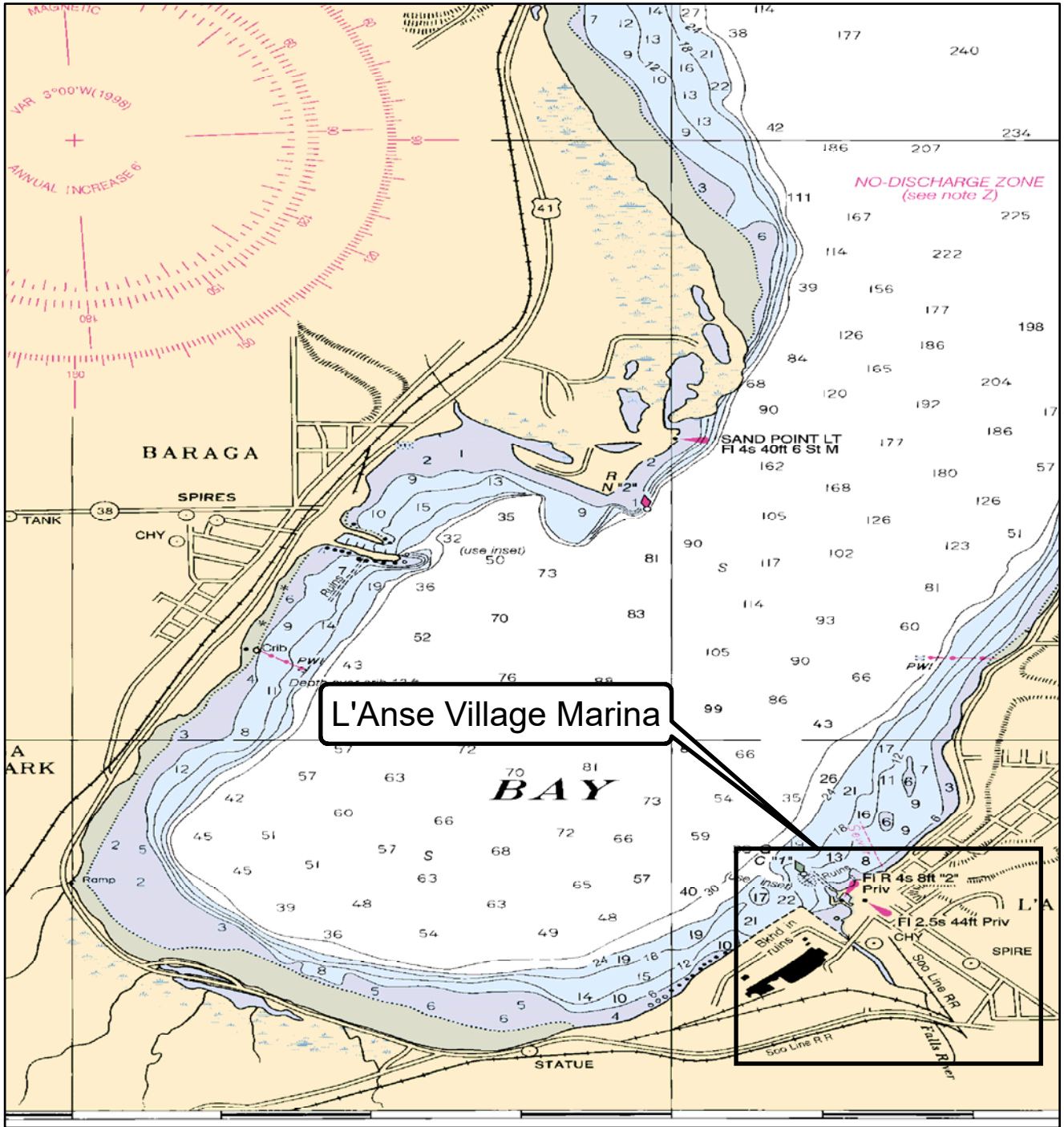
Currently, the Village of L’Anse and Downtown Development Authority have funds available that could finance an improvement project at the marina. Considering a principal and interest payment of approximately \$40,000 to \$45,000 per year for a 20 year bond, the Village could possibly afford a \$500,000 loan with 50/50 matching grant funds for a total construction project cost up to \$1,000,000. These phases will allow the Village to consider which phase(s) of development best fits the needs of the community in the future.

APPENDIX A

LOCATION MAPS

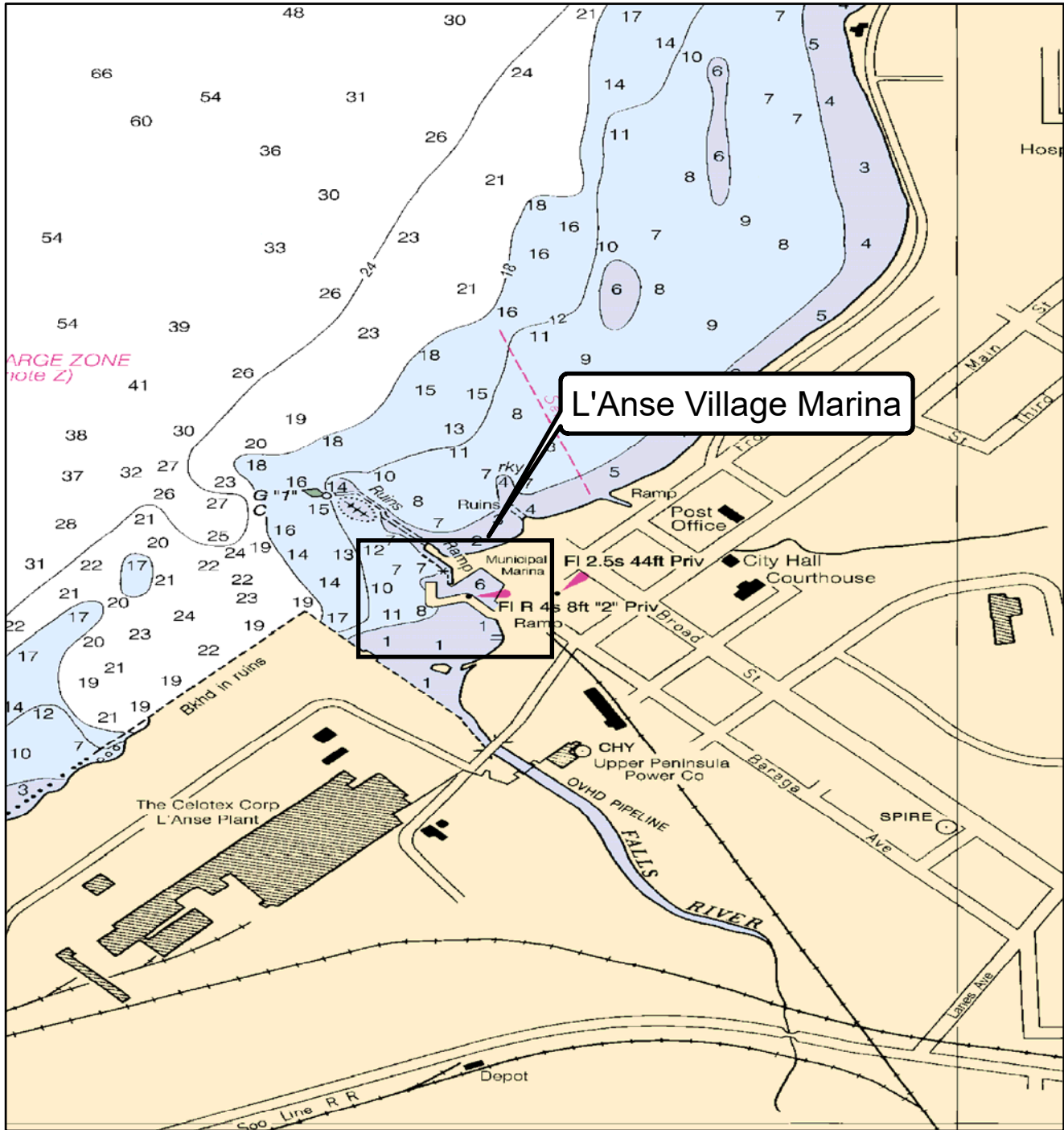


O r L P



K

B



L'Anse Village Marina

Municipal Marina
Ramp
Ruins
FI R 4s 8ft "2" Priv
Ramp

LA V M r

APPENDIX B

EXISTING SITE PLAN

WATER LEVEL DATA

- EL=603.40 MAX RECORDED (OCT, 1985)
- EL=603.10 ORDINARY HIGH WATER MARK (USACE)
- EL=602.60 ORDINARY HIGH WATER MARK (MDEQ)
- EL=602.17 AVG YEARLY HIGH (SEPTEMBER)
- EL=601.90 CURRENT (OCTOBER 2013)
- EL=601.18 AVG YEARLY LOW (MARCH)
- EL=601.10 LOW WATER (CHART) DATUM
- EL=599.54 MIN. RECORDED (APRIL, 1926)



ENGINEERING
ARCHITECTURE
PLANNING
SURVEYING
ENVIRONMENTAL

100 PORTAGE STREET
HOUGHTON, MI 49931
(906) 482-4810

424 SOUTH PINE STREET
ISHPEMING, MI 49849
(906) 485-1011

2906 N. STEPHENSON AVE., SUITE 2
IRON MOUNTAIN, MI 49801
(906) 563-5407

707 ASHMUN STREET
SAULT STE. MARIE, MI 49783
(906) 635-0511

1701 DUNLAP AVE., SUITE B
MARINETTE, WI 54143
(715) 732-4188

PROJECT TITLE:
MARINA MASTER PLAN

OWNER:
VILLAGE OF L'ANSE

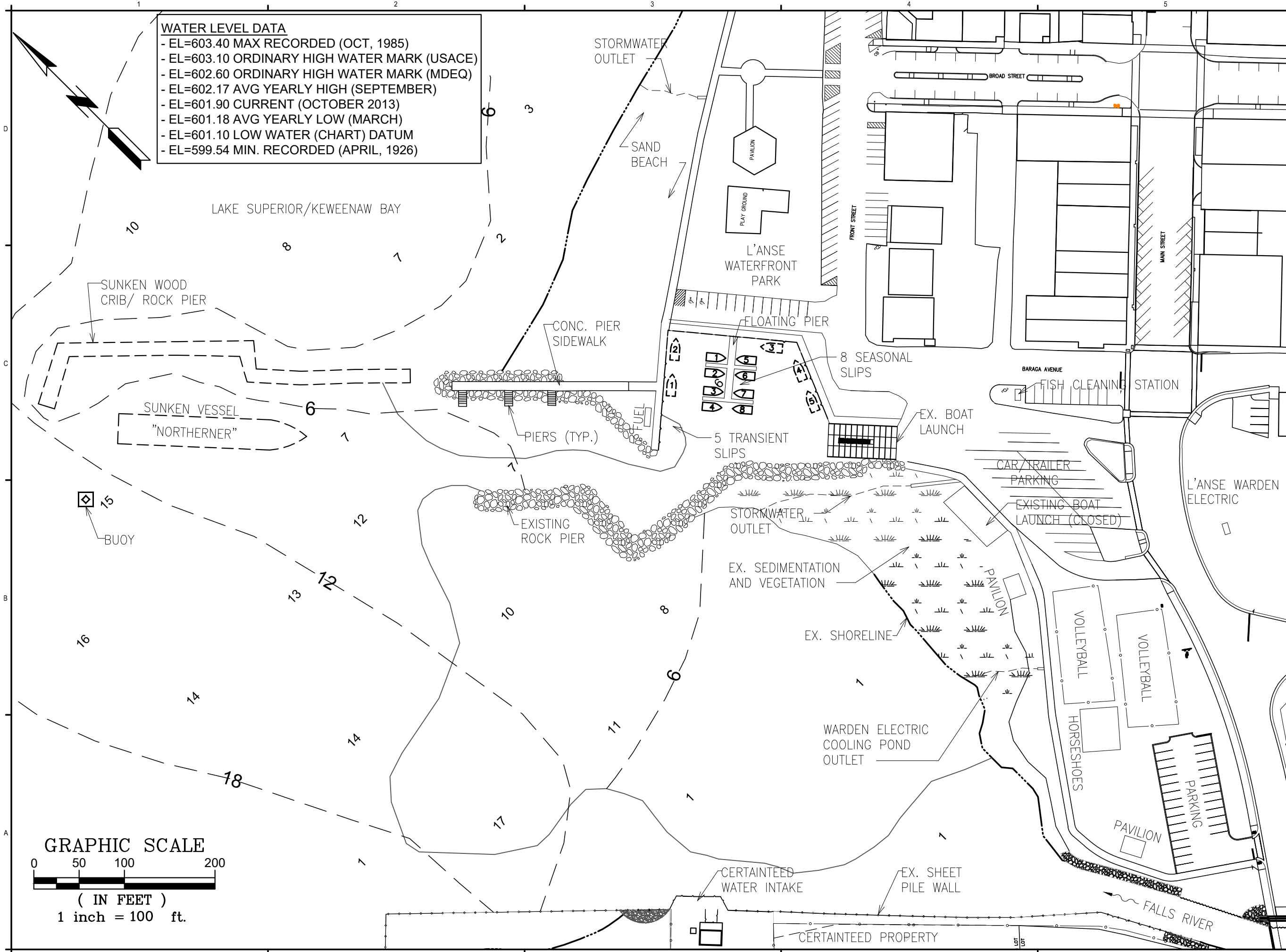
PROJECT LOCATION:
BARAGA COUNTY MICHIGAN

FINAL REVIEW	01/31/14
PRELIMINARY REVIEW	10/25/13
ISSUED FOR:	DATE:

PROJECT NO:	L02-13154
DRAWN BY:	MEP
CHECKED BY:	GRK
APPROVED BY:	GRK

EXISTING MARINA PLAN

C101



APPENDIX C

SITE PHOTOS



Photo 1: Site Aerial - Photo Courtesy of Great Lakes Shoreviewer



Photo 2: Harbor Entrance prior to 2012 dredging – Photo from Google Earth
Note: Sediments in channel & along north pier



Photo 3: Harbor Entrance in August 2013 – Local photo Courtesy of Derik Dougovito
Note: Dredged Channel (2012), Sedimentation from Falls River, Sunken boat “Northerner” and old crib pier



Photo 4: Marina Seasonal Slip Full – July 2013



Photo 5: East Side of Marina



Photo 6: Boat Launch



Photo 7: Harbor entrance looking west



Photo 8: South pier near shoreline & boat launch
Note: Sedimentation on south side and vegetation growth



Photo 9: Float Piers looking northeast; Waterfront Park beyond



Photo 10: Beach area north of pier at Waterfront Park



Photo 11: Floating Piers – Late Spring Ice 2013



Photo 12: Restroom Facilities at north of Waterfront Park near Linden Creek



Photo 13: Playground at Waterfront Park north of Marina



Photo 14: 500 gallon fuel tank & pump (not active)



Photo 15: Fish Cleaning Station adjacent to Boat Launch



Photo 16: Waterfront Park – south of Marina

S P



Photo 17: Typ. Power Pedestal

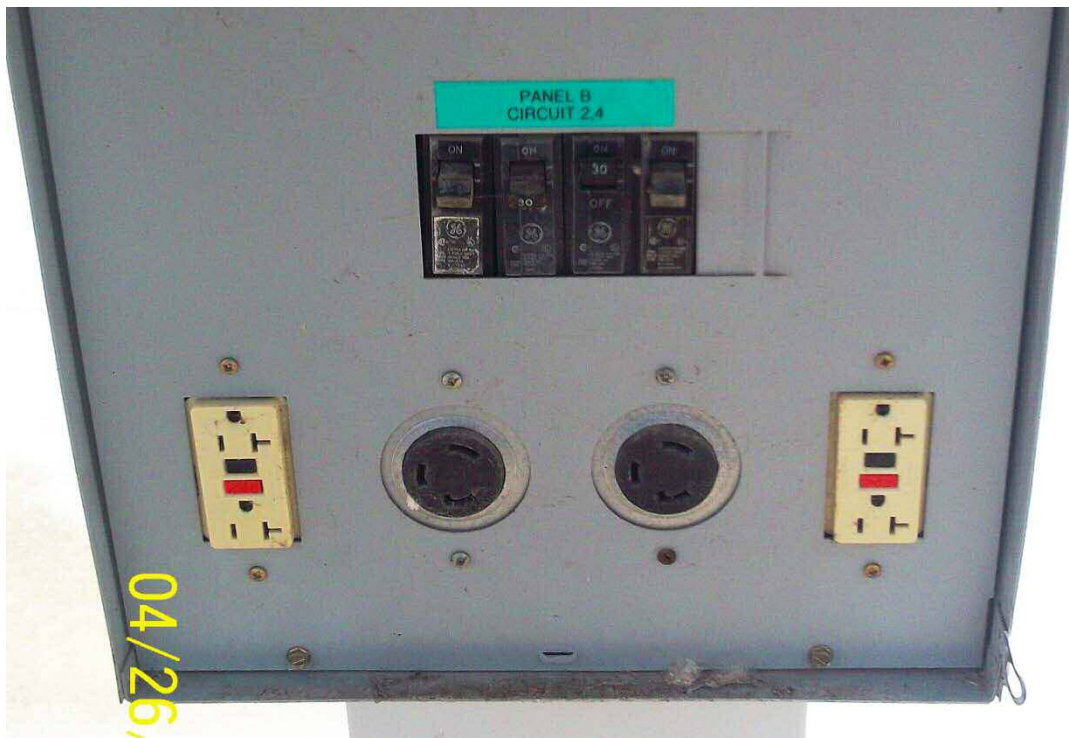


Photo 18: Electrical Pedestal – (2) 30 amp Shorepower, (2) 20 amp GFI

S P



Photo 19: Floating Pier



Photo 20: Sidewalk at north has settled near fence

S P



Photo 21: Settled sidewalk at NE corner

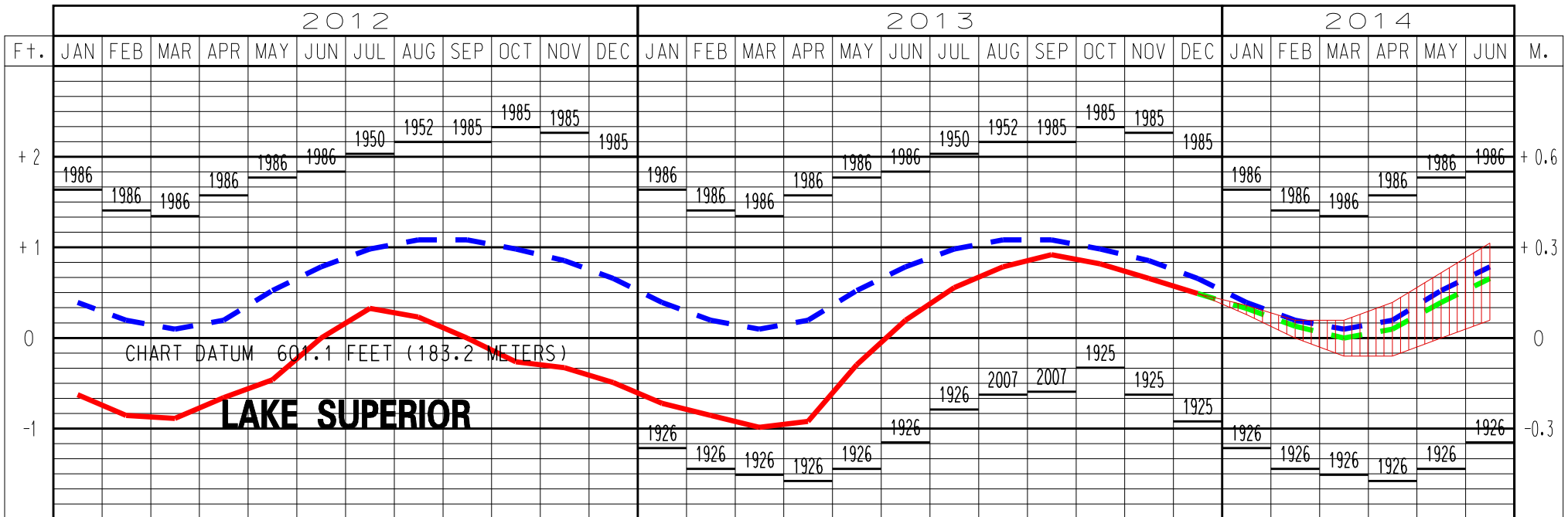


Photo 22: Existing boat launch at south not used due to sedimentation and vegetation due to changing water level and shoreline.

APPENDIX D

USACE WATER LEVELS

LAKE SUPERIOR WATER LEVELS – JANUARY 2014



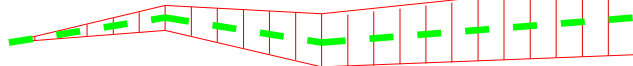
LEGEND

LAKE LEVELS

RECORDED



PROJECTED



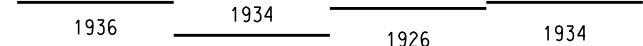
AVERAGE **



MAXIMUM **



MINIMUM **



** Average, Maximum and Minimum for period 1918-2012

APPENDIX E

USACE WATER LEVELS SUMMARY



DETROIT DISTRICT
U.S. ARMY CORPS OF ENGINEERS
CELRE-HH-W
477 MICHIGAN AVENUE
DETROIT, MICHIGAN 48226

DECEMBER 2013 GREAT LAKES WATER LEVEL SUMMARY

LAKE SUPERIOR

The monthly mean water level of Lake Superior declined 2 inches in December to a level of 601.54 ft. The 2 inch drop matches the typical change for Superior from November to December. The December level was 10 inches above its level of a year ago, 5 inches above chart datum, and 2 inches below long-term average (LTA). Lake Superior continued its 14 year stretch of being below its LTA, the longest in its period of record dating back to 1918. Precipitation on the Lake Superior basin was just 68% of average in December, but has been 106% of average during the past 12 months. The Superior level is expected to be 1 to 3 inches above chart datum through February, an inch below datum in March, and 1 to 7 inches above datum from April to June. The lake is forecasted to be 10 to 16 inches above last year's levels and 1 to 2 inches below LTA over the next six months.

LAKE MICHIGAN-HURON

Lake Michigan-Huron's average water level for the month of December was 577.33 feet, as it fell 2 inches from its mean November level. This water level decline matches Lake Michigan-Huron's typical change from November to December. The December mean level was 2 inches below chart datum, 11 inches above its level of last year, and 14 inches below its LTA. Lake Michigan-Huron also continues a 14 year stretch of below average levels, the longest in its period of record. The Lake Michigan-Huron basin received just ½ of the precipitation it normally receives in December. However, total precipitation over the last 12 months has been 111% of average. Over the next six months, Lake Michigan-Huron is forecasted to be 12 to 17 inches above last year's levels but remain 12 to 14 inches lower than its LTA. Michigan-Huron is expected to be 2 to 3 inches below chart datum through March, 1 inch above datum in April, and 5 to 9 inches above chart datum from May to June 2014.

LAKE ST. CLAIR

Lake St. Clair's December mean water level of 573.46 feet was the same as its November mean level. During December, Lake St. Clair was 8 inches above its level of a year ago and 4 inches below LTA. Lake St. Clair is forecasted to be 9 to 13 inches above its levels of a year ago through June. The lake is expected to be 2 inches below its LTA through January, an inch above its LTA in February, and 2 to 4 inches below its LTA from March through June.

LAKE ERIE

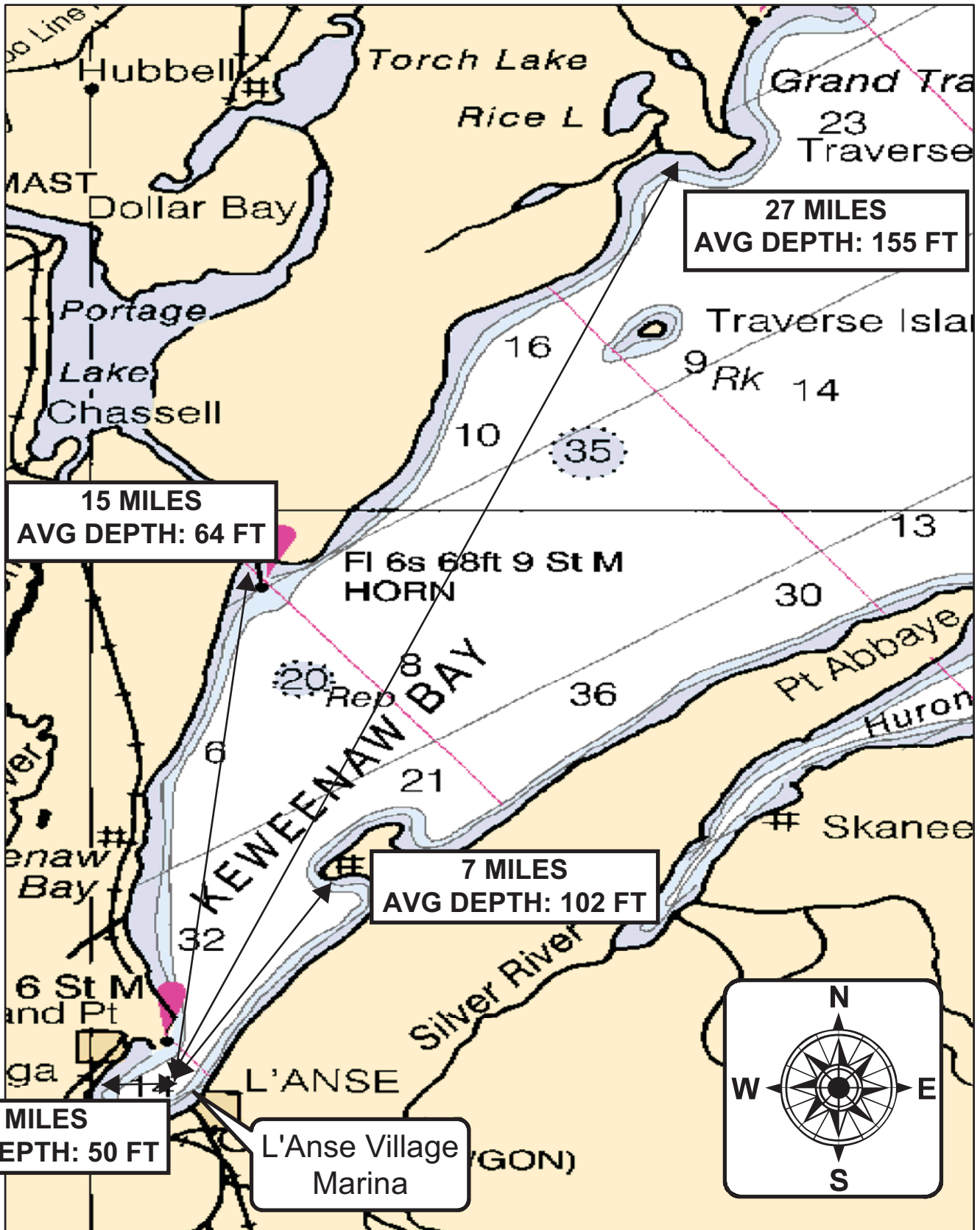
The average water level for Lake Erie was 570.67 feet in December, which is an inch drop from its November level. Its December mean level was 4 inches above last year's level and 2 inches below its LTA. The Lake Erie basin experienced precipitation that was 17% above its December average, and was the only Great Lake basin to receive above average precipitation in December. Lake Erie is projected to be 8 to 12 inches above its levels of a year ago through June. The water levels are projected to remain between 1 inch below and 2 inches above LTA over the next six months.

LAKE ONTARIO

The monthly mean water level of Lake Ontario for November was 244.52 feet, as it dropped 3 inches from November to December. The December water level was 9 inches above last year's level and equal to its LTA. Lake Ontario received only 64% of its average December precipitation last month, and has experienced 98% of annual average precipitation over the past year. The Lake is predicted to be 6 to 13 inches above last year's levels through June. Lake Ontario's water level is projected to range between 2 inches above and 2 inches below LTA over the next six months.

APPENDIX F

WATER FETCH TO HARBOR



Water Fetch to Marina

APPENDIX G

MARKET STUDY



U.P. Engineers & Architects is under contract with the Village of L'Anse per a Michigan Department of Natural Resources Waterways Commission grant to study the L'Anse Municipal Marina located in Keweenaw Bay, L'Anse, Michigan, for the potential to support expansion and/or improvement of the facility. As part of this study, we are evaluating the southern Lake Superior boating market and also want to compare the marina operation to other similar public and private marinas serving the region.

The participation of your organization in this planning effort is important and we appreciate your cooperation. By completing the enclosed survey, you and your organization will help develop a better understanding of the changes taking place in the boating community. We will be glad to share the results with you when the project is completed.

Please take the time to complete this survey and return it by August 1, 2013 in the enclosed self-addressed stamped envelope. If you have any questions, please contact me via phone at 906.482.4810 Ext. 22 or email gkingstrom@upea.com.

Sincerely,
U.P. Engineers & Architects, Inc.

A handwritten signature in blue ink that reads "Greg R. Kingstrom".

Greg Kingstrom, P.E.

Enclosures

Survey for Southern Lake Superior Marinas

Marina -

UPEA is studying the L'Anse Village Marina, located in Keweenaw Bay, Baraga County, Michigan, for the potential to support expansion and/or improvement of the facility. As part of this study, we are evaluating the southern Lake Superior market and also want to compare the marina operation to other similar public and private marinas serving the southern Lake Superior region.

1. Is the information on the marina we have from your website or the Department of Natural Resource's website accurate?
 - a. Number of slips = _____
 - b. Slip lengths = _____
 - c. Amenities/services = _____

2. Where do your boaters come from?
 - a. Percentage of local or seasonal?

 - b. Percentage of transient/visitors?

 - c. Where do your boaters come from?

 - d. What are the popular destinations from your marina?

3. What are the most popular destinations for boaters departing your facility?

4. What are your 2013 slip rates?
 - a. Do you charge individually "ala carte" for any of the amenities listed and if so how and what do you charge?

 - b. What do you charge for 30 amp service or 50 amp service?

 - c. What do you charge for pump out?

 - d. What do you charge for water?

 - e. Do you charge for showers?

 - f. Do you charge for WI-FI, courtesy phone?

5. What is your marina's overall occupancy rate?

6. Is use of your marina over the last 5 years...
 - a. Increasing?
 - b. Decreasing?

- c. Staying the same?
-
7. What is your view on the future of Lake Superior boating?
 - a. Demand for more slips?
 - b. Demand for larger slips?
 - c. More seasonal slips?
 - d. More transient slips?
 - e. Amenities?
 - f. Effect of increasing fuel costs?
 - g. Comments?

 8. What is the primary reason boaters are attracted to your marina?
 - a. Location ?
 - b. Amenities and attractions in the community?
 - c. Harbor of refuge?
 - d. Price?
 - e. Fishing?
 - f. Other: Please List

 9. Is your marina considering any future expansion or improvement projects?

 10. Any comments you would like to make that might be of help?

Thank you very much for your assistance.

Marina Survey Results - Western Lake Superior

Marina Name & Location	Phone #	Q 1a: Number of Slips	Q 1b: Slip Length	Q 1c: Facilities Offered	Q 2a: # of Local	Q 2b: # of Transient Boaters	Q 2c: Where do your boaters come from?	Q 2d: Popular Destinations	Q 3: Popular Destinations for departing Boaters	Q 4: Slip Rates	Q 4a: Ala carte charges for amenities (yes or no)	Q 4b: Charge for 30 amp or 50 amp	Q 4c: Charge for pump out
Saxon Harbor, Iron County, WI	(715)561-2697, (715)893-2242	91	24'-40'	There are 3 boat launches and the Saxon Harbor Boating Club operates the boat lift. Water and electricity is available to boaters as well as boat pump out and gasoline. Showers and toilets and fish cleaning station. Electric (30 amp and 50 amp). No Wifi. No diesel. Haul out. Bar and restaurant. Campground, pavilion. Grill with picnic tables. Two boat ramps. Hose down facility. Fish cleaning station. No cable TV.	91	transient wall = (12 boats) or 300'. Transient slips are available if people leave.	Seasonal: Northern Wisconsin, Tomahawk, Rhinlande, Eagle River, Ashland. Owassa. Michigan boaters: Ironwood, Hurley. (20 from Michigan) - Where are transients coming from ? Apostle Islands and Houghton Hancock, Minnesota - Silver Bay and all over	Fishing, Apostle Islands, Oman's creek	Fishing. Apostle Islands. Oman's creek. Little Girls Point.	\$21.00 - 24.50 for Iron County Resident, \$25.00 - 29.00 for non resident (per foot) for seasonal. \$1.00 per foot per night for transient.		No	\$1.00
Black River Harbor, Gogebic County, MI (DNR)		30	Broadside	Fuel, concessions, launch ramp, toilets, drinking water, parking, electricity (30 amp), long term parking, pump out, ice, public phone, playground/park, picnic tables, and dog run.	17	8 - transient wall is 120'	Ironwood, Local	Black River Harbor and fishing	Fishing	Stationary Dock Boat less than 20 feet = \$12.00, floating \$10. Stationary 20-29 feet = \$15, floating \$12. Stationary 30-39 feet = \$20, floating \$16. Stationary 40-49 feet = \$25, floating \$20. Interagency passes such as golden age %50 off. Accessibility issues have a pass 50% off.	Yes	No	Donation
Ontonagon Marina, Ontonagon County, MI (Municipal)	(906) 884-4225, (906) 884-2305, (906) 884-9950	38	45'-60'	Amenities include: water, electricity (30 am), restrooms, showers, gasoline, pump out, ice, fish cleaning station, boat launch, hoist, long-term parking, public phone, day-use dockage, playground/park and grills/picnic tables.	29	7	Seasonal: Ontonagon, Wisconsin, Iowa - Transient: ask harbor master	Houghton and Apostle Islands	Fishing (2 Charter Fishing operations())	Schedule 10 for Transient and Seasonal	Yes	Elect comes with transient fees and fuel services, none for seasonal.	\$5
Houghton County Marina, Houghton County, MI (Municipal)		54 total 44 seasonal 10 transient	23'-65'	Water, electricity (20, 30, 50 & 100 amp), restrooms, showers, gasoline, diesel, pump-out, ice, boat launch, dog run, day use dockage, grills/picnic tables, bus service, laundry, car rental, marine repairs, wifi/internet	40	9	Seasonal - Houghton County, 1 from WI, 1 from downstate. Transient - All over (Duluth, Marquette, Sault Ste. Marie, Lake Superior Travels, Copper Harbor, 400 mile radius)	Keweenaw, Fishing - Lac La Belle, Key Stone Bay, Copper Harbor, Restaurants. Bridgefest.	Isle Royale, Copper Harbor, Marquette, Apostle Island, Ontonagon	Cheapest Schedule for Michigan Waterways Commission (Cheaper than Marquette). Cheapest Schedule Transient price=\$1.00/ft (2012-11-13)	Yes	No for transient. Some for seasonal.	\$5
City of Houghton Marina, Houghton County, MI (Municipal)		30	24'	Public restrooms and shower. Boat Launch. Down town destination for shopping, eating, and events.	15	15	Seasonal - Local Residents, Transient - All over	Downtown restaurants and events	unknown	\$150 / year for seasonal. No charge for transient.	No amenities	N/A	N/A
Eagle Harbor, Keweenaw County, MI (DNR)	(906)289-4215	7	Broadside	Water, electricity (20 amp), showers, primitive restroom, gasoline, pump-out, parking, boat launch, dog run, day use, dockage, picnic tables	43%	57%	Seasonal - Calumet, Copper Harbor. Transient - seasonal residents of eagle harbor		Fishing, Isle Royale, Keweenaw Peninsula, Marquette Shoreline, Apostle Islands, Ontonagon	Cheapest Schedule for Michigan Waterways Commission (Cheaper than Marquette). Cheapest Schedule Transient price=\$1.00/ft (2012-11-13)	N/A	No	\$5
Copper Harbor, Keweenaw County, MI (DNR)	(906)289-4215	14	40' - 55' and 80'	ADA accessibility, Drinking water, electric (20, 30 & 50 AMP service), boat launch, fishing, gift shop, restrooms, showers, picnic tables, boater's lounge, parking, recycle bins, trash receptacles, vending machines, gasoline, diesel, pump out, ice, public phone, day use dockage.	None	100%			Fishing, Isle Royale, Keweenaw Peninsula, Marquette Shoreline, Apostle Islands, Ontonagon	Cheapest Schedule for Michigan Waterways Commission (Cheaper than Marquette). Cheapest Schedule Transient price=\$1.00/ft (2012-11-13)	N/A	No	\$5

Marina Survey Results - Western Lake Superior

Marina Name & Location	Q 4d: Charge for water	Q 4e: Charge for showers	Q 4f: Charge for Wi-Fi or courtesy phone	Q 5: Occupancy rate	Q 6: Use of the marina in the last 5 Years	Q 7a: Demand for more slips	Q 7b: Demand for larger slips	Q 7c: More seasonal slips	Q 7d: More transient slips	Q 7e: Amenities	Q 7f: Effect of increasing fuel costs	Q 8a: Location	Q 8b: Amenities and attractions	Q 8c: Harbor of refuge	Q 8d: Price	Q 8e: Fishing	Number of parking spaces? Single width or double width launch ramp?	Q 9: Considering future expansion	Q 10: Comments
Saxon Harbor, Iron County, WI	No	\$.50 / min	Pay	97% Seasonal	Increased	Not yet	Yes for 35' and up	Not yet	Yes on holidays	Wifi requested, cable tv	No effect so far	Yes	Yes	Yes	No	Yes	40. A double launch ramp and a single	Dredging and replacement of fixed docks in one basin to be floating	DNA
Black River Harbor, Gogebic County, MI (DNR)	No	No showers	No wifi available	65-75%	Staying the Same	No	Yes	No	No	Did not answer	No effect so far	Yes	Yes	Yes	No	Yes	17. A single width launch ramp	Pavilion, ADA walkway, new launch ramp, dredging	Dredging a constant need. Water levels are impacting boat launching
Ontonagon Marina, Ontonagon County, MI (Municipal)	No water available	No	No	100% seasonal, transient unknown	Increasing Use of lauch ramp and seasonal slips	Perhaps 2-3 more	No	Yes (2)	No	Wifi	No effect so far	Yes	Yes	Yes	No	Yes	42. A double width launch ramp	Wi-fi, ADA sidewalks, pavilion, and access to town	Shoaling at harbor mouth
Houghton County Marina, Houghton County, MI (Municipal)	No	\$2 for people not in the marina	No	100%	Increasing from 11-12 boat waiting list to 40 boat waiting list. 3 need ADA accomodations	Yes, more seasonal. Yes, more transient for small boats too.	No	Yes	Yes	ADA	More sailboats	Yes	Yes	Yes	Yes	Yes	15. A double width launch ramp	Yes, there are plans in the works for adding 20 slips and replacing the bathroom building. Additional parking. Updating the facility to be ADA accessible. Convert fixed piers to floating piers.	
City of Houghton Marina, Houghton County, MI (Municipal)	N/A	N/A	No	100% - Seasonal, unknown transient	Increasing	Yes, more seasonal. No need for more transient.	No	Yes	No	Electric desired	No effect so far	Yes	Yes	No	No	No	18. A single width launch ramp	No plan for expansion or improvement.	
Eagle Harbor, Keweenaw County, MI (DNR)	No	No	No	66% in 2 years, 100%	Increasing	No	No	No	No	No	No effect so far	Yes	Closest route to isle royale	Yes	No	Yes	12. A double width launch ramp	No plan for expansion or improvement.	-
Copper Harbor, Keweenaw County, MI (DNR)	No	No	No	Low use	Increasing	No	No	No	No	No	No effect so far	Yes	Yes	Yes	No	Yes	17. A single width launch ramp	Perhaps dredging	-

Marina Survey Results - Western Lake Superior

Marina Name & Location	Phone #	Q 1a: Number of Slips	Q 1b: Slip Length	Q 1c: Facilities Offered	Q 2a: # of Local	Q 2b: # of Transient Boaters	Q 2c: Where do your boaters come from?	Q 2d: Popular Destinations	Q 3: Popular Destinations for departing Boaters	Q 4: Slip Rates	Q 4a: Ala carte charges for amenities (yes or no)	Q 4b: Charge for 30 amp or 50 amp	Q 4c: Charge for pump out
Lac La Belle, Keweenaw County, MI (DNR)	(906)289-4698, Off-season Phone: (906)289-4215	10	38' - 150'	ADA accessibility, vault toilet, launch, parking, picnic table, and dog run.	None (no seasonal slips)	100%	All over	Stannard Rock, Copper Harbor	Fishing, Isle Royale, Keweenaw Peninsula, Marquette Shoreline, Apostle Islands, Ontonagon	No fees (no seasonal slips)	N/A	N/A	N/A
Baraga Village	(906)355-2256	20	Up to 24'	Electric, water, pump-out, gas, harbormaster	80%	20%	Local / Keweenaw	--	--	Marina Rates: For Boat Lengths of <20-36 ft: Seasonal = \$528-\$944; Monthly = \$225-\$405; Weekly = \$112-\$202; For Boat Lengths of <24-40 ft: Day = \$21-\$38 Launch Fees: Daily \$3; Boat Launch Seasonal Pass \$30 or \$3/day	No	No	No
Pequaming Marina	(906)353-6508	30		2 toilets, water and electrical.	Mostly local	--	Local residents	Huron Islands	Keweenaw / Stannard Rock	\$20/foot/season	Yes	Yes	N/A
Witz Marina	(906)524-7004	50-60	32'	Campground, general store (clothing, food, supplied, etc.), water, electric, gas, pump truck as needed, sand beach.	75-80%	Few	Local	Mostly lake trout fishing, salmon fishing has been really good the last few years. Totally booked last year 2012.	Mostly Lake Superior fishing. Some pleasure boating but not much.	No, included in campground fee and slip rental. Rates vary.	No, included in campground fee and slip rental.	No, included in campground fee and slip rental.	No, included in campground fee and slip rental.
Baraga Lakeside Inn	(906)353-6080	44 Permanent, 7 Transient	Longest 26' max	All of power and water. (7) 20 amp services.	97%	3%	Marquette, Houghton, Calumet	Local Area Stannard Rock	Keweenaw / Local Area	16'-24' = \$75/mo, \$300/season 25'-35' = \$125/mo, \$500/season	Yes	Yes, \$15/mo or \$60/season	N/A
Village of L'Anse	(906)524-6116	8 Seasonal, 5 Transient	24' Seasonal, 40' Transient	Power, water, fuel, restroom, pump-out, park, pavilion	All	5%	Local / Keweenaw Bay	Keweenaw Bay, Huron Islands + local events downtown	Keweenaw Bay, Huron Islands	18'-29' = \$12-\$18, \$160 to \$200 weekly Seasonal \$300 resident, \$500 non-resident	No	Included	--

Marina Survey Results - Western Lake Superior

Marina Name & Location	Q 4d: Charge for water	Q 4e: Charge for showers	Q 4f: Charge for Wi-Fi or courtesy phone	Q 5: Occupancy rate	Q 6: Use of the marina in the last 5 Years	Q 7a: Demand for more slips	Q 7b: Demand for larger slips	Q 7c: More seasonal slips	Q 7d: More transient slips	Q 7e: Amenities	Q 7f: Effect of increasing fuel costs	Q 8a: Location	Q 8b: Amenities and attractions	Q 8c: Harbor of refuge	Q 8d: Price	Q 8e: Fishing	Number of parking spaces? Single width or double width launch ramp?	Q 9: Considering future expansion	Q 10: Comments
Lac La Belle, Keweenaw County, MI (DNR)	N/A	N/A	Not available	Unknown	Increasing	No	No, smaller slips requested	Yes	No	Shelter / Pavilion	No effect so far	Yes	No	Yes	Yes	Yes	27. A double width launch ramp	Yes	DNA
Baraga Village	No	No	No	80% local	Last year went up a little. Maybe due to economy & fuel costs.	--	Yes	--	--	--	--	Yes	No	No	No	Yes	Double width ramp	Boardwalk upgrades to facility and to adjacent park. Received MNRTF Grant for the second floor phase of a boardwalk project.	DNA
Pequaming Marina	Yes	N/A	N/A	Unknown	Steady	No	No	No	No	No	Some	Yes	No	No	No	Yes	Single	DNA	DNA
Witz Marina	No, included in campground fee and slip rental.	No, included in campground fee and slip rental.	No, included in campground fee and slip rental.	Full last year. Booking up fast for summer 2013.	Increasing	Last year was the best year, but do not see any way to expand. Limited space.	Same as 7a	Same as 7a	N/A	--	No	Yes	Yes	No	Yes	Yes	Campground is a big draw. Many fishermen camp for a month or 2 and fish out of the marina.	Adding dock. Build garage for storage.	DNA
Baraga Lakeside Inn	Basic Fee	None	Yes from motel, pay phone at seasonal.	30%	Staying the same.	Need deeper water	Need deeper water	Okay as is	Okay as is	No	No	Yes	No	No	Yes	Some	None	No	Greater depth needed locally for sailboats.
Village of L'Anse	Included	None	Free Wi-Fi	Nearly full seasonal slips in recent years	Increasing	Yes	Yes	Yes	No	Restrooms/ shower	None	Yes	Fishing	Yes	Yes	Yes	Double launch	Yes	Need for improvements & expansion, address dredging needs & services.

2013 Transient Rates

Michigan State Waterways Commission

Slip Length	A	B	C	D	E	F
25	\$19	\$22	\$30	\$32	\$40	\$51
26	\$20	\$23	\$31	\$34	\$42	\$53
27	\$20	\$24	\$33	\$35	\$43	\$55
28	\$21	\$25	\$34	\$36	\$45	\$57
29	\$22	\$26	\$35	\$37	\$46	\$59
30	\$23	\$26	\$37	\$39	\$48	\$62
31	\$23	\$27	\$38	\$41	\$50	\$64
32	\$24	\$28	\$40	\$42	\$51	\$66
33	\$25	\$29	\$41	\$43	\$53	\$68
34	\$26	\$30	\$42	\$45	\$54	\$70
35	\$26	\$31	\$43	\$46	\$56	\$72
36	\$27	\$32	\$45	\$50	\$58	\$74
37	\$28	\$33	\$46	\$51	\$59	\$76
38	\$29	\$33	\$47	\$52	\$61	\$78
39	\$29	\$34	\$51	\$58	\$62	\$80
40	\$30	\$35	\$53	\$59	\$64	\$82
41	\$31	\$36	\$54	\$61	\$66	\$84
42	\$32	\$37	\$55	\$62	\$67	\$86
43	\$32	\$38	\$57	\$64	\$69	\$88
44	\$33	\$39	\$58	\$65	\$70	\$90
45	\$34	\$40	\$60	\$67	\$72	\$92
46	\$35	\$40	\$63	\$68	\$74	\$94
47	\$35	\$41	\$64	\$70	\$75	\$96
48	\$36	\$42	\$65	\$71	\$77	\$98
49	\$37	\$43	\$67	\$73	\$78	\$100
50	\$38	\$44	\$68	\$74	\$80	\$103
51	\$38	\$45	\$69	\$75	\$82	\$105
52	\$39	\$46	\$71	\$77	\$83	\$107
53	\$40	\$47	\$72	\$78	\$85	\$109
54	\$41	\$48	\$73	\$80	\$86	\$111
55	\$41	\$48	\$75	\$81	\$88	\$113
56	\$42	\$49	\$76	\$83	\$90	\$115
57	\$43	\$50	\$78	\$84	\$91	\$117
58	\$44	\$51	\$79	\$86	\$93	\$119
59	\$44	\$52	\$80	\$87	\$94	\$121
60	\$46	\$53	\$82	\$89	\$96	\$123
61	\$47	\$54	\$83	\$90	\$98	\$125
62	\$48	\$55	\$84	\$92	\$99	\$127
63	\$49	\$55	\$86	\$93	\$101	\$129
64	\$49	\$56	\$87	\$95	\$102	\$131
65	\$50	\$57	\$88	\$96	\$104	\$133
66	\$51	\$58	\$90	\$98	\$106	\$135
67	\$52	\$59	\$91	\$99	\$107	\$137
68	\$52	\$60	\$92	\$101	\$109	\$139
69	\$53	\$61	\$94	\$102	\$110	\$141
70	\$54	\$62	\$95	\$104	\$112	\$144
71	\$55	\$62	\$97	\$105	\$114	\$146
72	\$55	\$63	\$98	\$107	\$115	\$148
73	\$56	\$64	\$99	\$108	\$117	\$150
74	\$57	\$65	\$101	\$110	\$118	\$152
75 ft or greater	\$0.77	\$0.88	\$1.36	\$1.48	\$1.60	\$2.05

2013 Seasonal Rates

Michigan State Waterways Commission

Slip Length	2013 Rate 1	2013 Rate 2	2013 Rate 3	2013 Rate 4	2013 Rate 5	2013 Rate 6	2013 Rate 7	2013 Rate 8	2013 Rate 9	2013 Rate 10
20	\$2,120	\$1,720	\$1,620	\$1,420	\$1,160	\$1,020	\$960	\$880	\$760	\$700
21	\$2,226	\$1,806	\$1,701	\$1,491	\$1,218	\$1,071	\$1,008	\$924	\$798	\$735
22	\$2,332	\$1,892	\$1,782	\$1,562	\$1,276	\$1,122	\$1,056	\$968	\$836	\$770
23	\$2,438	\$1,978	\$1,863	\$1,633	\$1,334	\$1,173	\$1,104	\$968	\$874	\$805
24	\$2,544	\$2,064	\$1,944	\$1,704	\$1,392	\$1,224	\$1,152	\$1,056	\$912	\$840
25	\$2,650	\$2,150	\$2,025	\$1,775	\$1,450	\$1,275	\$1,200	\$1,100	\$950	\$875
26	\$2,756	\$2,236	\$2,106	\$1,846	\$1,508	\$1,326	\$1,248	\$1,144	\$988	\$910
27	\$2,862	\$2,322	\$2,187	\$1,917	\$1,566	\$1,377	\$1,296	\$1,188	\$1,026	\$945
28	\$2,968	\$2,408	\$2,268	\$1,988	\$1,624	\$1,428	\$1,344	\$1,232	\$1,064	\$980
29	\$3,074	\$2,494	\$2,349	\$2,059	\$1,682	\$1,479	\$1,392	\$1,276	\$1,102	\$980
30	\$3,180	\$2,580	\$2,430	\$2,130	\$1,740	\$1,530	\$1,440	\$1,350	\$1,140	\$1,015
31	\$3,286	\$2,667	\$2,511	\$2,232	\$1,829	\$1,581	\$1,457	\$1,395	\$1,178	\$1,116
32	\$3,392	\$2,784	\$2,592	\$2,336	\$1,888	\$1,632	\$1,504	\$1,440	\$1,216	\$1,152
33	\$3,498	\$2,871	\$2,673	\$2,409	\$1,947	\$1,683	\$1,584	\$1,485	\$1,254	\$1,188
34	\$3,604	\$2,958	\$2,754	\$2,516	\$2,006	\$1,734	\$1,632	\$1,530	\$1,292	\$1,224
35	\$3,710	\$3,080	\$2,835	\$2,590	\$2,065	\$1,785	\$1,680	\$1,610	\$1,330	\$1,260
36	\$3,888	\$3,240	\$2,952	\$2,736	\$2,124	\$1,872	\$1,728	\$1,656	\$1,368	\$1,296
37	\$3,996	\$3,330	\$3,034	\$2,849	\$2,183	\$1,924	\$1,813	\$1,702	\$1,406	\$1,332
38	\$4,104	\$3,420	\$3,154	\$2,964	\$2,242	\$2,014	\$1,862	\$1,786	\$1,444	\$1,368
39	\$4,251	\$3,588	\$3,276	\$3,081	\$2,340	\$2,106	\$1,950	\$1,833	\$1,482	\$1,404
40	\$4,360	\$3,680	\$3,400	\$3,200	\$2,400	\$2,200	\$2,000	\$1,920	\$1,520	\$1,440
41	\$4,469	\$3,772	\$3,485	\$3,321	\$2,460	\$2,296	\$2,091	\$2,009	\$1,558	\$1,476
42	\$4,578	\$3,864	\$3,570	\$3,444	\$2,520	\$2,394	\$2,184	\$2,100	\$1,596	\$1,512
43	\$4,687	\$4,042	\$3,698	\$3,569	\$2,623	\$2,494	\$2,279	\$2,150	\$1,634	\$1,548
44	\$4,796	\$4,136	\$3,828	\$3,652	\$2,728	\$2,552	\$2,376	\$2,244	\$1,672	\$1,584
45	\$4,905	\$4,275	\$3,960	\$3,735	\$2,835	\$2,655	\$2,430	\$2,295	\$1,710	\$1,620
46	\$5,014	\$4,416	\$4,094	\$3,864	\$2,944	\$2,714	\$2,484	\$2,392	\$1,748	\$1,656
47	\$5,123	\$4,559	\$4,183	\$3,948	\$3,055	\$2,820	\$2,538	\$2,444	\$1,786	\$1,692
48	\$5,232	\$4,704	\$4,320	\$4,080	\$3,120	\$2,880	\$2,592	\$2,496	\$1,824	\$1,728
49	\$5,341	\$4,802	\$4,410	\$4,214	\$3,185	\$2,940	\$2,646	\$2,548	\$1,862	\$1,813
50	\$5,450	\$4,900	\$4,500	\$4,300	\$3,250	\$3,000	\$2,700	\$2,600	\$1,900	\$1,850
51	\$5,559	\$5,049	\$4,590	\$4,386	\$3,315	\$3,060	\$2,754	\$2,652	\$1,938	\$1,887
52	\$5,668	\$5,200	\$4,732	\$4,472	\$3,380	\$3,172	\$2,808	\$2,704	\$1,976	\$1,976
53	\$5,777	\$5,300	\$4,823	\$4,558	\$3,445	\$3,233	\$2,862	\$2,756	\$2,014	\$2,014
54	\$5,886	\$5,454	\$4,914	\$4,644	\$3,510	\$3,294	\$2,916	\$2,808	\$2,052	\$2,106
55	\$6,050	\$5,555	\$5,005	\$4,730	\$3,575	\$3,355	\$2,970	\$2,860	\$2,090	\$2,145
56	\$6,160	\$5,656	\$5,152	\$4,816	\$3,640	\$3,416	\$3,080	\$2,912	\$2,184	\$2,184
57	\$6,270	\$5,757	\$5,244	\$4,902	\$3,705	\$3,477	\$3,135	\$2,964	\$2,280	\$2,223
58	\$6,380	\$5,858	\$5,336	\$4,988	\$3,770	\$3,538	\$3,190	\$3,016	\$2,378	\$2,262
59	\$6,490	\$5,959	\$5,428	\$5,074	\$3,835	\$3,599	\$3,245	\$3,068	\$2,478	\$2,301
60	\$6,600	\$6,120	\$5,520	\$5,160	\$3,900	\$3,660	\$3,300	\$3,120	\$2,520	\$2,340
Over 60 ft	\$110 per ft	\$102 per ft	\$92 per ft	\$86 per ft	\$85 per ft	\$61	\$55 per ft	\$52 per ft	\$42 per ft	\$39 per ft

APPENDIX H

MARINA MASTER PLAN DRAWINGS AND TOILET/SHOWER BUILDING SCHEMATIC

WATER LEVEL DATA

- EL=603.40 MAX RECORDED (OCT, 1985)
- EL=603.10 ORDINARY HIGH WATER MARK (USACE)
- EL=602.60 ORDINARY HIGH WATER MARK (MDEQ)
- EL=602.17 AVG YEARLY HIGH (SEPTEMBER)
- EL=601.90 CURRENT (OCTOBER 2013)
- EL=601.18 AVG YEARLY LOW (MARCH)
- EL=601.10 LOW WATER (CHART) DATUM
- EL=599.54 MIN. RECORDED (APRIL, 1926)



ENGINEERING
ARCHITECTURE
PLANNING
SURVEYING
ENVIRONMENTAL

100 PORTAGE STREET
HOUGHTON, MI 49931
(906) 482-4810

424 SOUTH PINE STREET
ISHPEMING, MI 49849
(906) 485-1011

2906 N. STEPHENSON AVE., SUITE 2
IRON MOUNTAIN, MI 49801
(906) 563-5407

707 ASHMUN STREET
SAULT STE. MARIE, MI 49783
(906) 635-0511

1701 DUNLAP AVE., SUITE B
MARINETTE, WI 54143
(715) 732-4188

PROJECT TITLE:
MARINA MASTER PLAN

OWNER:
VILLAGE OF L'ANSE

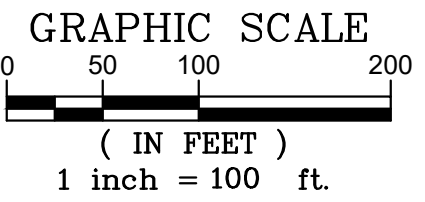
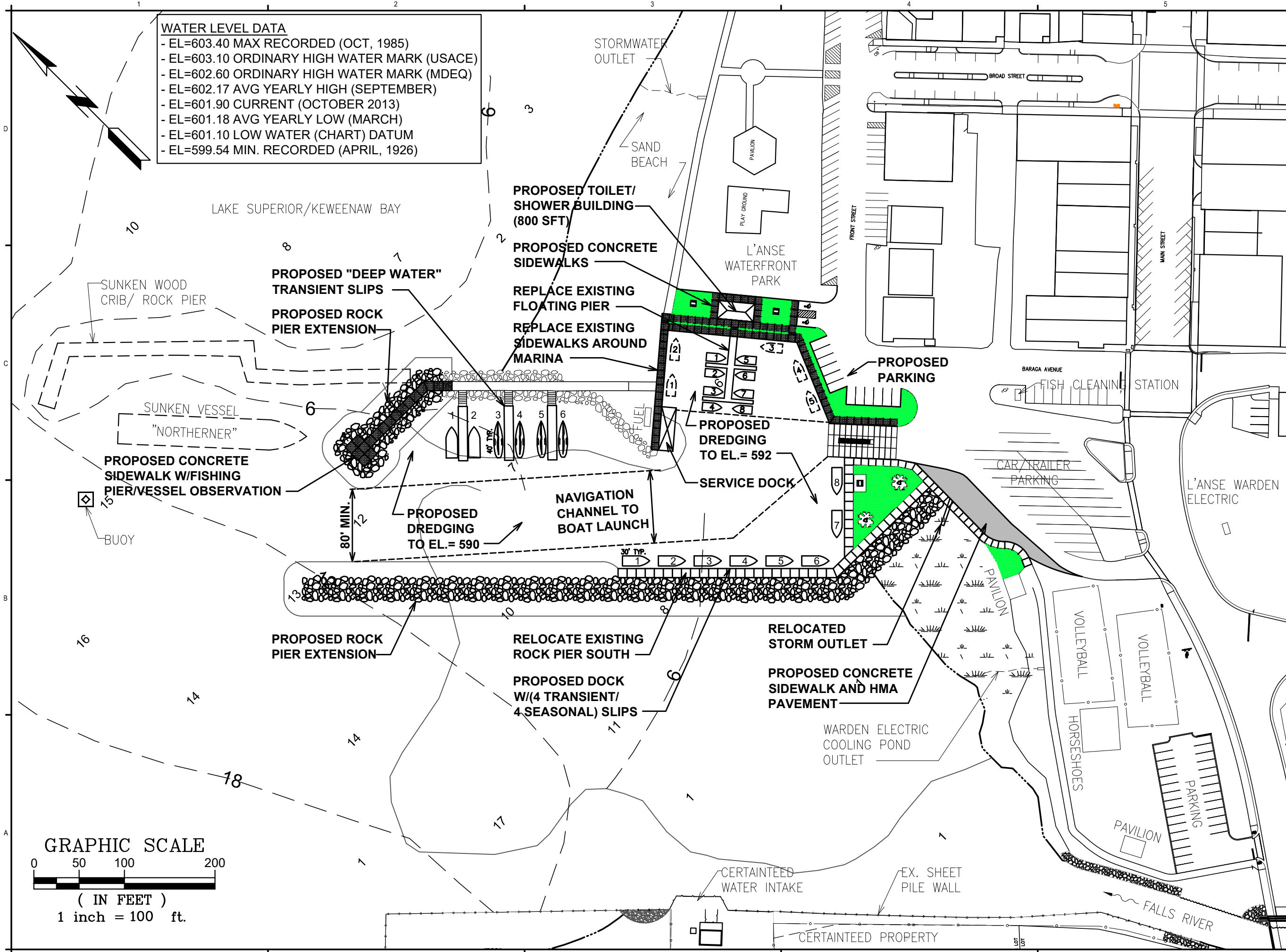
PROJECT LOCATION:
BARAGA COUNTY MICHIGAN

FINAL REVIEW	01/31/14
PRELIMINARY REVIEW	10/25/13
ISSUED FOR:	DATE:

PROJECT NO: L02-13154
DRAWN BY: MEP
CHECKED BY: GRK
APPROVED BY: GRK

PROPOSED MARINA MASTER PLAN

C102



WATER LEVEL DATA

- EL=603.40 MAX RECORDED (OCT, 1985)
- EL=603.10 ORDINARY HIGH WATER MARK (USACE)
- EL=602.60 ORDINARY HIGH WATER MARK (MDEQ)
- EL=602.17 AVG YEARLY HIGH (SEPTEMBER)
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(906) 635-0511

1701 DUNLAP AVE., SUITE B
MARINETTE, WI 54143
(715) 732-4188

PROJECT TITLE:
MARINA MASTER PLAN

OWNER:
VILLAGE OF L'ANSE

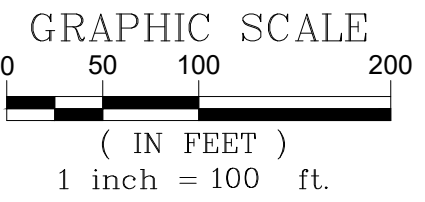
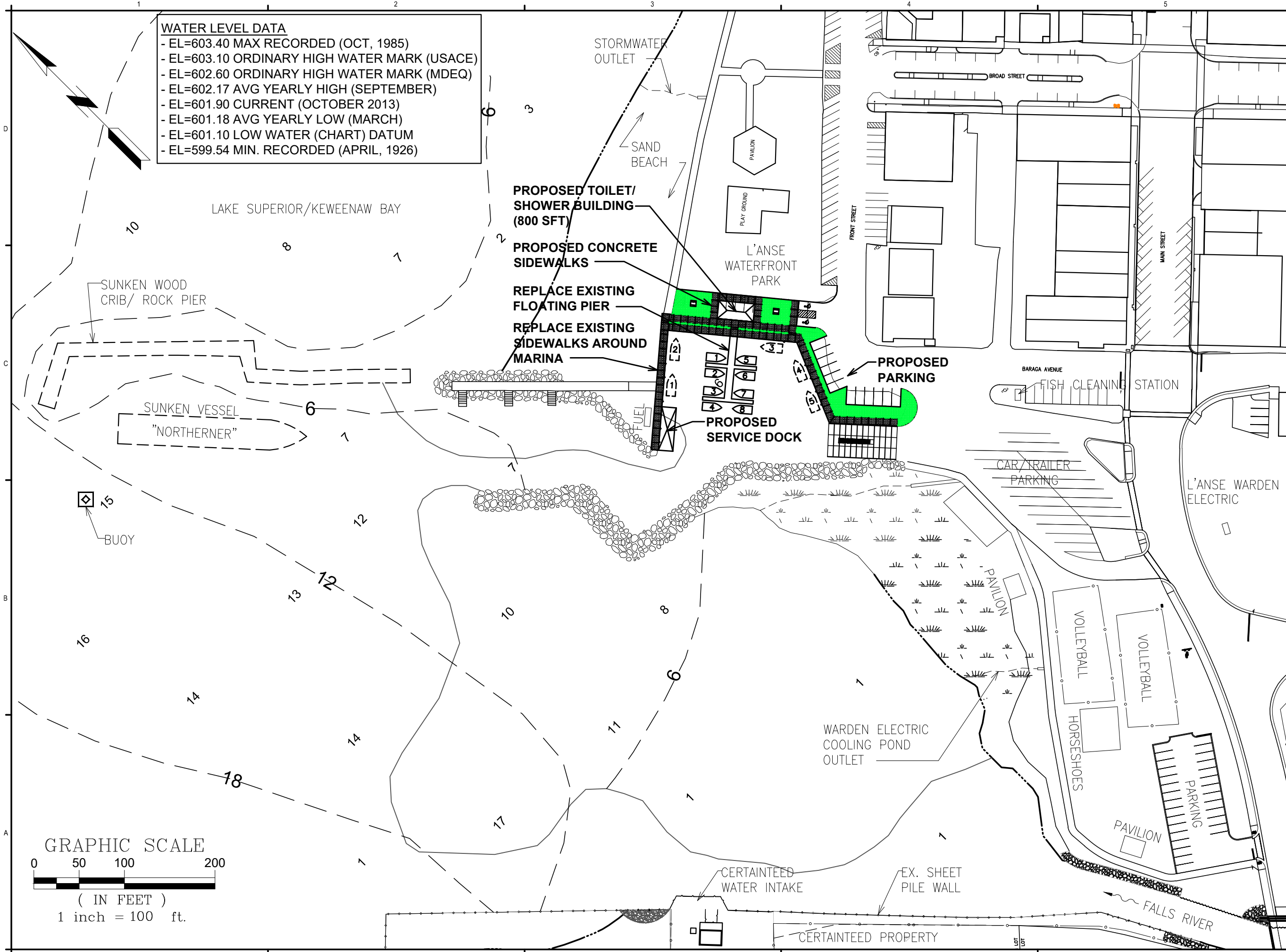
PROJECT LOCATION:
BARAGA COUNTY MICHIGAN

FINAL REVIEW	01/31/14
PRELIMINARY REVIEW	10/25/13
ISSUED FOR:	DATE:

PROJECT NO: L02-13154
DRAWN BY: MEP
CHECKED BY: GRK
APPROVED BY: GRK

PROPOSED MARINA PHASE I

C103



WATER LEVEL DATA

- EL=603.40 MAX RECORDED (OCT, 1985)
- EL=603.10 ORDINARY HIGH WATER MARK (USACE)
- EL=602.60 ORDINARY HIGH WATER MARK (MDEQ)
- EL=602.17 AVG YEARLY HIGH (SEPTEMBER)
- EL=601.90 CURRENT (OCTOBER 2013)
- EL=601.18 AVG YEARLY LOW (MARCH)
- EL=601.10 LOW WATER (CHART) DATUM
- EL=599.54 MIN. RECORDED (APRIL, 1926)



ENGINEERING
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100 PORTAGE STREET
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ISHPEMING, MI 49849
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1701 DUNLAP AVE., SUITE B
MARINETTE, WI 54143
(715) 732-4188

PROJECT TITLE:
MARINA MASTER PLAN

OWNER:
VILLAGE OF L'ANSE

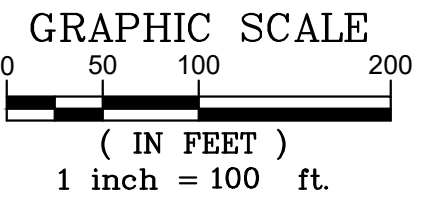
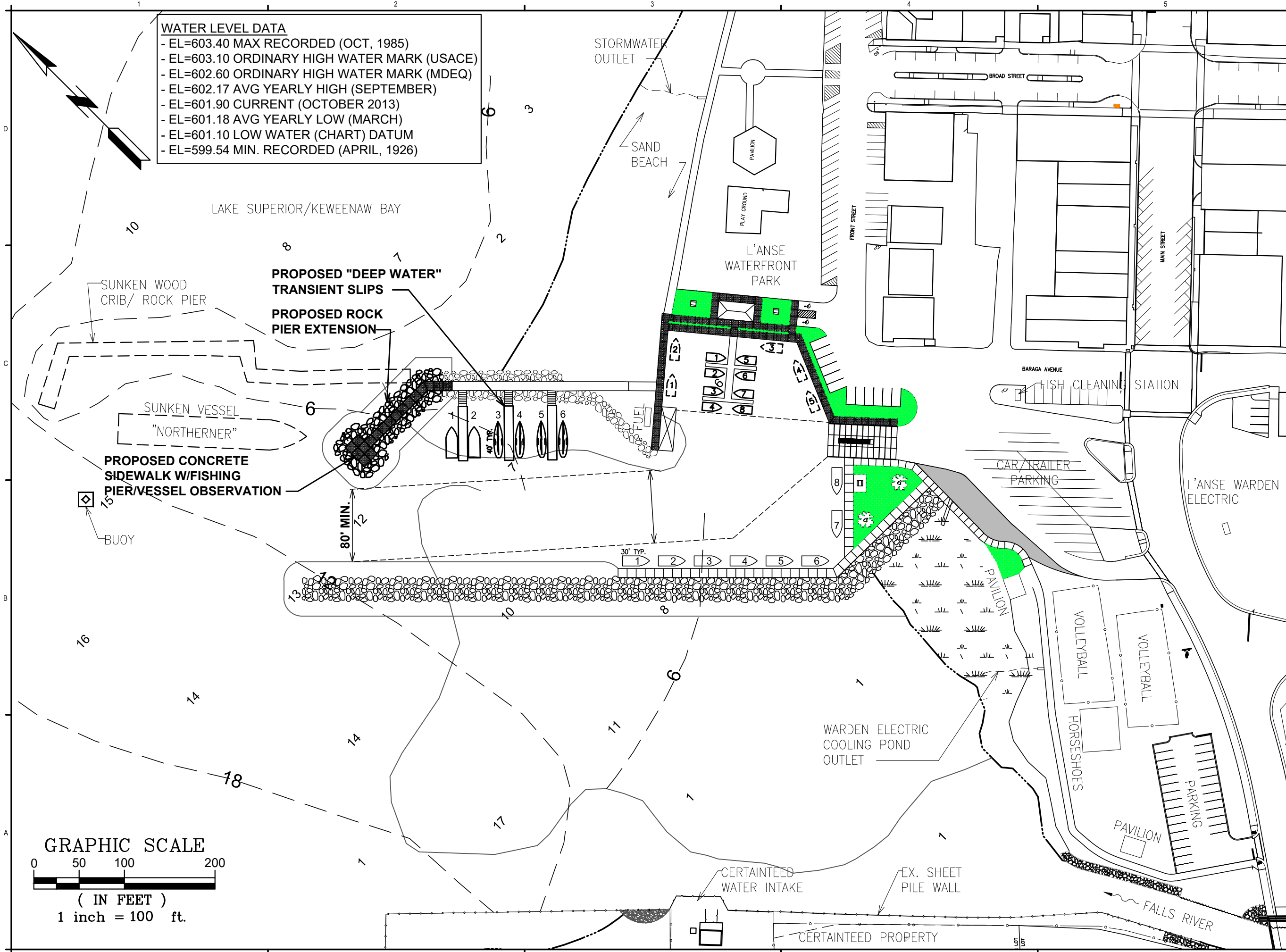
PROJECT LOCATION:
BARAGA COUNTY MICHIGAN

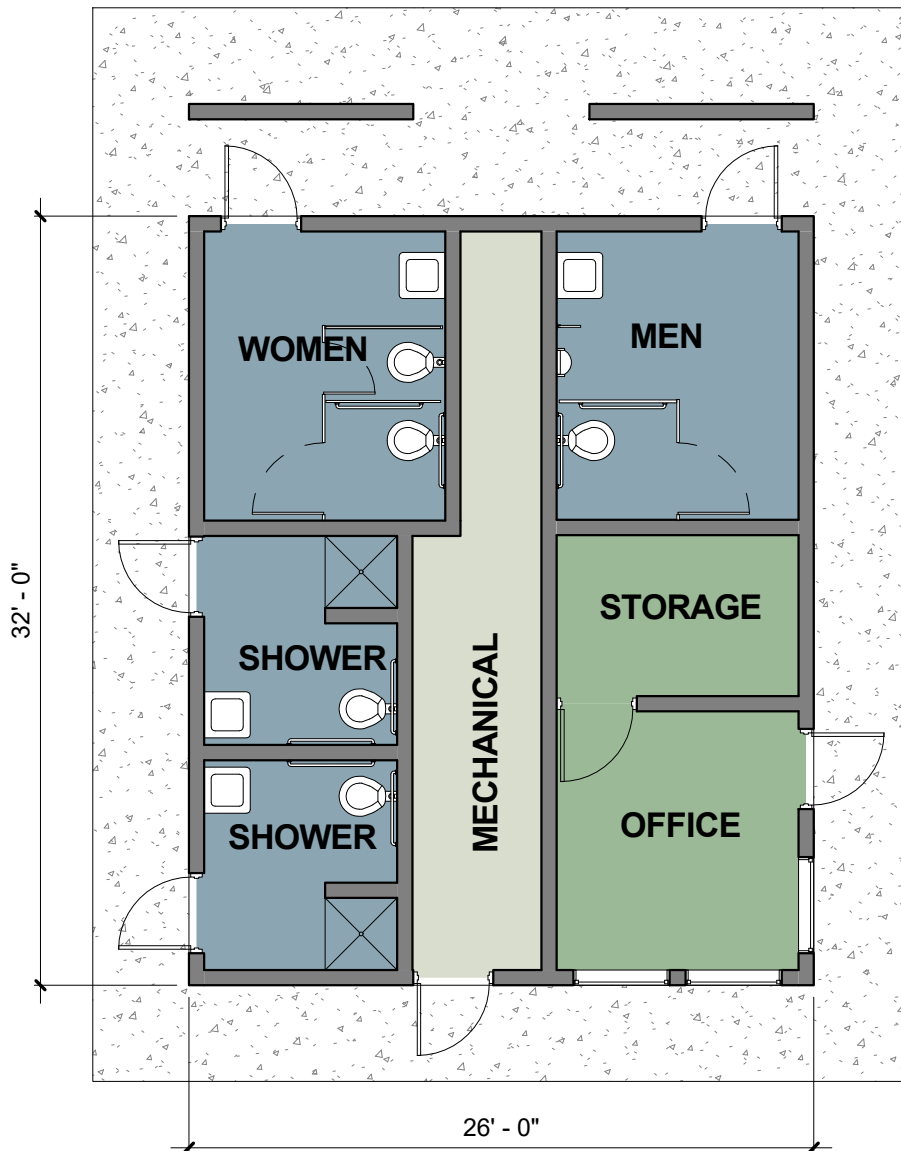
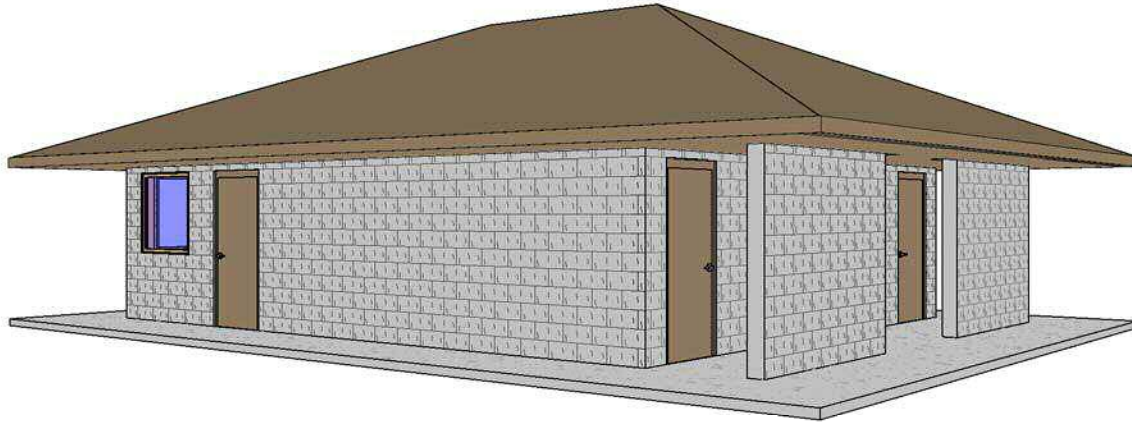
FINAL REVIEW	01/31/14
PRELIMINARY REVIEW	10/25/13
ISSUED FOR:	DATE:

PROJECT NO: L02-13154
DRAWN BY: MEP
CHECKED: GRK
APPROVED: GRK

PROPOSED MARINA PHASE III

C105





Marina Master Plan
Toilet / Shower Building
Village of L'Anse

APPENDIX I

PRELIMINARY ESTIMATES AND FEASIBILITY ANALYSIS

PHASE I EXISTING FACILIT UPGRADES

TOILET/SHOWER FACILITY
 SIDEWALKS, PARKING & BARRIER FREE UPGRADES
 NEW FLOATING PIER
 UTILITY UPGRADES
 1/31/2014

Item No.	Description	Unit	Qty.	Unit Price	Total
S i r					
1	Mobilization (5% Maximum)	LS	1	\$20,000.00	\$20,000.00
2	Parking Improvements	SYD	400	\$30.00	\$12,000.00
3	Replace Concrete Sidewalks around Marina	SFT	3650	\$10.00	\$36,500.00
4	Stone Fill & Geotextile Fabric under Sidewalk	CYD	150	\$22.00	\$3,300.00
5	Misc. Electrical, Site Lighting & Utilities	LS	1	\$20,000.00	\$20,000.00
6	Site Restoration, Seeding, Plantings, Restoration	SYD	1500	\$6.00	\$9,000.00
7	Power Pedestals Upgrades	EA	5	\$6,000.00	\$30,000.00
8	Fuel System Sanitary Pump-out Upgrade	LS	1	\$10,000.00	\$10,000.00
10	Site Amenities; Benches, Tables, Garbage Cans, Signage	LS	1	\$12,000.00	\$12,000.00
11	6x6x12 ft. Treated Wood Bumper Posts	EA	50	\$75.00	\$3,750.00
S S i r =					5 550.00
T /S r B d					
12	Toilet/Shower Building	SFT	800	\$200.00	\$160,000.00
13	Misc. Electrical, Site Lighting, Sanitary & Water Supply	LS	1	\$30,000.00	\$30,000.00
14	New Concrete Sidewalk at Toilet Building	SFT	3000	\$7.00	\$21,000.00
S T /S r B d =					2 000.00
M r l r					
15	New Main Pier x 80 feet	LS	1	\$25,000.00	\$25,000.00
16	New Floating Piers x 24' Each	LS	4	\$8,000.00	\$32,000.00
S M r l r =					5 000.00

S P l =	424 550.00
0 C =	42 455
E r =	8
PHASE I TOTAL =	5 0 88

PHASE II MARINA EXPANSION AT SOUTH

EXTENSION/RELOCATION OF SOUTH PIER
 DREDGING OF MARINA BASIN AND ENTRY
 ADDITIONAL DOCKING - 4 SEASONAL/4 TRANSIENT SLIPS
 STEEL FRAME DOCK AND AMENITIES
 1/31/2014

Item No.	Description	Unit	Qty.	Unit Price	Total
G r					
1	Mobilization (5% Maximum)	LS	1	\$45,000.00	\$45,000.00
2	Turbidity Curtain, Deep	FT	1200	\$18.00	\$21,600.00
3	Pile Driving Equipment & Barge	LS	1	\$40,000.00	\$40,000.00
4	Dredging of Basin to South	CYD	3000	\$40.00	\$120,000.00
S M Dr d =					22 00.00
S P r W r					
5	Steel H-Pile at South Pier/Broadside Dock (250 lft dock)	LFT	1400	\$65.00	\$91,000.00
6	Steel Sheeting, Furn and Driven at East Broadside Dock	SFT	3200	\$25.00	\$80,000.00
7	Steel Beams - Stringers @ 30#/ft (weathering steel)	ton	12	\$4,000.00	\$48,000.00
8	Steel Beams - Intermediate @ 15#/ft (weathering steel)	ton	4	\$4,000.00	\$16,000.00
9	3x6 Treated Wood Wood Nailers	Lft	1050	\$5.40	\$5,670.00
10	3x8 Treated Wood Decking	Sft	2800	\$8.00	\$22,400.00
11	3x8 Treated Wood Fascia/Ribbon	Sft	1400	\$8.00	\$11,200.00
12	6x6x12 ft. Treated Wood Bumper Posts	Ea	70	\$75.00	\$5,250.00
13	Misc. Bolts, deck fasteners	LS	1	\$5,000.00	\$5,000.00
14	12" Galv. Cleats	Ea	18	\$75.00	\$1,350.00
15	Aluminum Ladders	Ea	4	\$500.00	\$2,000.00
16	Power Pedestals	EA	4	\$6,000.00	\$24,000.00
17	Concrete Sidewalk at East Broadside Dock	SFT	3200	\$8.00	\$25,600.00
18	Misc. Electrical, Site Lighting & Water Supply	LS	1	\$50,000.00	\$50,000.00
19	Relocation of Existing Rock Pier	CYD	5000	\$20.00	\$100,000.00
20	Extension of South Rock Pier (150 ft.)	CYD	3500	\$60.00	\$210,000.00
21	Stone Fill & Geotextile Fabric	CYD	700	\$22.00	\$15,400.00
S S P r W r =					2 8 0.00

S P ll =	9 94 0
0 C =	9 94
E r =	2
PHASE II TOTAL =	4 5

PHASE III NORTH PIER EXTENSION DOCKS

EXTENSION OF NORTH PIER
 DREDGING OF MARINA BASIN AND ENTRY
 ADDITIONAL DEEP WATER DOCKING - 6 SLIPS
 1/31/2014

Item No.	Description	Unit	Qty.	Unit Price	Total
G r					
1	Mobilization (5% Maximum)	LS	1	\$20,000.00	\$20,000.00
2	Turbidity Curtain, Deep	FT	500	\$18.00	\$9,000.00
3	Equipment & Barge	LS	1	\$20,000.00	\$20,000.00
S M G r =					49 000.00
N P r N r					
4	New Floating Piers x 60' Each	LS	3	\$17,500.00	\$52,500.00
5	Power Pedestals Upgrades	EA	3	\$5,000.00	\$15,000.00
6	Water Supply to Piers	FT	550	\$15.00	\$8,250.00
7	Electrical Supply to Piers	FT	550	\$40.00	\$22,000.00
8	Pier Lighting	LS	1	\$18,000.00	\$18,000.00
S N r P r D =					5 50.00
N r P r W r					
9	Extension of North Rock Pier (150 ft.)	CYD	1750	\$60.00	\$105,000.00
10	Stone Fill & Geotextile Fabric under Sidewalk	CYD	150	\$22.00	\$3,300.00
11	Concrete Sidewalk at North Pier	SFT	1800	\$10.00	\$18,000.00
12	Dredging of Basin Entry	CYD	1200	\$40.00	\$48,000.00
S N r P r W r =					4 00.00

S P III =	9 050
0 C =	905
E r =	50 858
PHASE III TOTAL =	42 8

TOTAL CONSTRUCTION COST

MARINA STUD AND MASTER PLAN
 VILLAGE OF L ANSE
 BARAGA COUNT MICHIGAN
 / /20 4

PHASE I =	\$530,688
PHASE II =	\$1,146,153
PHASE III =	\$423,813
MARINA MASTER PLAN TOTAL	\$2,100,653

Bond Schedule - Local Share Bonding Capacity

Total Project Cost = \$1,000,000
Amount Financed = \$500,000 (50% grant)
Borrower Name: Village of L'Anse
Interest Rate: 5.000%
Yrs Deferred Principal: 0
Principal: \$500,000
Ammort. Factor: 0.0802
Ammortized Payment: \$40,121

Year	1st Interest	2nd Interest	Principal Paid	Total Year Payment	Loan Balance
					500,000
1	12,500	12,500	15,000	40,000	485,000
2	12,125	12,125	16,000	40,250	469,000
3	11,725	11,725	17,000	40,450	452,000
4	11,300	11,300	18,000	40,600	434,000
5	10,850	10,850	18,000	39,700	416,000
6	10,400	10,400	19,000	39,800	397,000
7	9,925	9,925	20,000	39,850	377,000
8	9,425	9,425	21,000	39,850	356,000
9	8,900	8,900	22,000	39,800	334,000
10	8,350	8,350	23,000	39,700	311,000
11	7,775	7,775	25,000	40,550	286,000
12	7,150	7,150	26,000	40,300	260,000
13	6,500	6,500	27,000	40,000	233,000
14	5,825	5,825	28,000	39,650	205,000
15	5,125	5,125	30,000	40,250	175,000
16	4,375	4,375	31,000	39,750	144,000
17	3,600	3,600	33,000	40,200	111,000
18	2,775	2,775	35,000	40,550	76,000
19	1,900	1,900	36,000	39,800	40,000
20	1,000	1,000	38,000	40,000	2,000

Current bonding capacity for Village of L'Anse would allow a construction project with a maximum cost of \$1,000,000, assuming a 50% grant.

APPENDIX J

PRE-APPLICATION REVIEW CORRESPONDENCE WITH MDEQ & USACE



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
BARAGA



DAN WYANT
DIRECTOR

August 28, 2013

Village of L'Anse
c/o Robert LaFave, Mgr.
101 N Main St
L'Anse, MI 49946



Dear Mr. LaFave:

SUBJECT: Preapplication Meeting
Michigan Department of Environmental Quality (MDEQ)
File Number 13-07-0021-P

This letter is a follow-up to our August 14, 2013, preapplication meeting regarding the proposed project in Village of L'Anse, Baraga County. The purpose of a preapplication meeting is to provide you with information that will clarify the permit process, answer preliminary questions about your specific project in order to avoid delays at a later date, and to determine, if possible, the need for wetland or inland lakes and streams permits.

During this meeting we reviewed the need to obtain a permit under Part 325, Great Lakes Bottomlands; and Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). The review was based on discussion of the proposed project and/or draft site plans, the proposed site, and potential modifications to the project discussed during our meeting.

During the review of the project site, the MDEQ's Water Resources Division (WRD) staff made the following findings regarding the need for a permit under Part 325 and Part 303 of the NREPA:

- A permit is required for the project as proposed.
- A permit is not required for the project as proposed.
- It cannot be determined whether a permit is required given the information presented at this time.

This determination is based on the draft project plans provided and discussion of the project at our on-site meeting. Provided that the proposed project and location are not altered, this determination is binding on the MDEQ for a period of two years from the date of this meeting.

During the review of the proposed project, WRD staff noted activities that, as currently designed, would require additional authorization under:

Section 404 of the federal Clean Water Act and/or the federal Rivers and Harbors Act from the United States Army Corps of Engineers.

During the meeting, we also discussed a number of issues related to the project, including the following:

- Possible alternative design options to minimize project effects on aquatic resources, specifically the following:
 - Avoidance and/or minimization of impacts to near-shore wetland areas, as well as to the overall great lakes bottomlands area to be occupied by proposed structures;
 - Careful evaluation of activities that may affect fisheries resources and recreation at the mouth of the Falls River and within Keweenaw Bay.

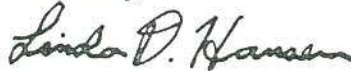
- Minimizing the overall footprint of the marina expansion to the greatest extent possible while still allowing for desired uses such as two-way boat traffic, etc.
- Avoidance and/or minimization of impacts to off-shore historical resources (shipwreck and cribbing just outside of marina area).
- The need to very specifically define the purpose(s) of your project in the permit application, with regard to each proposed activity.
- The need for a thorough analysis of alternative methods or locations in the permit application, specifically with regard to fisheries resource impacts, wetlands impacts, water quality, recreation such as boating and fishing, and riparian rights.
- The potential need for specific project timing and appurtenances such as construction during DNR dredging windows, the need for sediment containment and disposal, etc.
- The potential need for wetland mitigation.
 - The USACE wetland impact threshold for mitigation is 0.1 acres of impact. For MDEQ it is 0.3 acres of impact.
 - If mitigation is required by both agencies, one mitigation site can apply to both (separate mitigation sites/efforts are not required).
 - Emergent shoreline wetlands can potentially be relocated and established in areas in need of shoreline protection, increased habitat, runoff filtration etc. (i.e. creation vs. restoration).
- The need for a new or revised Great Lakes public trust bottomlands conveyance agreement with MDEQ Office of Great Lakes in Lansing. (If a new/revised conveyance is required, a copy of the application required for this must be submitted to MDEQ along with your Joint Permit Application package.)

Please note that this is not a permit. The WRD cannot indicate during a preapplication meeting whether or not a permit will be issued. The WRD cannot make a decision regarding a permit until it has considered all of the information provided in the final permit application, and, in some instances, has also considered comments received in response to a public notice of the project. Therefore, WRD staff cannot legally tell you whether the project will be permitted in advance of a permit application being submitted and reviewed.

The MDEQ file number assigned to this project is 13-07-0021-P. Please keep a record of this file number, and use it when submitting a final application or otherwise corresponding with our office on this project.

We appreciate the opportunity to meet with you or your representative to address these concerns. We have established a file for this project, and the information submitted to date will be used to facilitate processing of the final application. If you should have follow up questions before then, please contact me at (906) 353-7522 HansenL6@michigan.gov; or MDEQ, WRD, Upper Peninsula District Office, 420 Fifth Street, Gwinn MI, 49841-3004.

Sincerely,

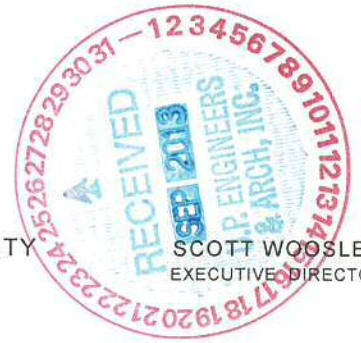


Linda D. Hansen, P.E.
Water Resources Division

cc: Ms. Jean Battle – USACE
Mr. Greg Kingstrom – UPEA
Baraga CEA

APPENDIX K

SHPO REVIEW LETTER



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
STATE HISTORIC PRESERVATION OFFICE

SCOTT WOOSLEY
EXECUTIVE DIRECTOR

September 20, 2013

GREG KINGSTROM
U P ENGINEERS & ARCHITECTS INC
100 PORTAGE STREET
HOUGHTON MI 49931

RE: ER13-535 L'Anse Village Marina, 101 N. Main Street, Sec. 5, T50N, R33W, Village of
L'Anse, Baraga County (USACE)

Dear Mr. Kingstrom:

We have received your request for review of the above-cited project. In Section IV. of your Application for Section 106 Review, it states that the wreck of the vessel *Northerner* and a timber crib pier are present in the Area of Potential Effects (APE). It also states that it is assumed that the wreck and the pier are not considered historic properties because they are not listed on the National Register of Historic Places (NRHP).

Section 106 of the National Historic Preservation Act of 1966, as amended requires federal agencies or their designated authorities to consider the impact of their actions on historic properties. Historic properties are defined as those that are included in, or eligible for inclusion in the National Register of Historic Places [36 CFR § 800.16(l)]. It is important to note that if a given cultural feature is not listed on the NRHP, it does not necessarily mean that the feature is not an historic property. While that could be the case, it is also entirely possible that the fact that a cultural resource does not appear on the NRHP is because the feature has not been evaluated to determine whether it is eligible for listing on the NRHP.

The wreck of the *Northerner* is recorded in the state archaeological site file – it is site number 20US203. There is no information about national register status in our record for the wreck, indicating that the site has not been evaluated for national register eligibility. This means that potential national register eligibility of the wreck is still an open question. The Section 106 application states that the wreck of the *Northerner* was severely damaged by a construction project in the summer of 1999. While those circumstances could affect the national register eligibility of the site, aerial photos of the wreck site suggest that it may still retain considerable integrity.

The timber crib pier also appears to be substantially intact, based on aerial photos. The pier could be an important historical structure in its own right, and could also be eligible for the NRHP.

Consequently, we have the following comments. The wreck of the *Northerner* and the timber crib pier should be examined and documented by a professional underwater archaeologist. Based on that investigation, the archaeologist should make recommendations about the NRHP eligibility of the wreck site and the pier. If it is determined that either the shipwreck or the pier are considered eligible, then a determination will need to be made with regard to the effect the proposed project will have upon historic properties. If neither the wreck nor the pier is determined eligible, then it is likely that the project would be considered to have no effect upon historic properties. Enclosed, for your convenience, is a list of archaeologists who have been found to meet or exceed the professional requirements for archaeologists

Another possibility is to design the project in such a way as to avoid any effect to the wreck or the pier. It appears that only option 3 will result in the extension of the rock pier far enough to encroach on the wreck of the *Northerner*. Can options 1 or 2 be adopted without affecting the wreck site? Could option 3 be revised to avoid the shipwreck? With regard to the wooden crib pier, the application states that "a possible alternative would be to extend the rock pier on top of the existing wooden cribs." Will this harm the old pier? Is the wooden crib pier sufficiently structurally sound to withstand rock placed on top of it?



If the pier was extended and the wreck left in place, perhaps easy access from the extended pier would make the Northerner an attractive dive site. If the project could be designed to avoid the wreck and the pier, the underwater survey would not be necessary, although it still may be desirable to take that step in order to reach a conclusion about the NRHP eligibility of both features.

Please note that the Section 106 review process cannot proceed until we are able to consider the information requested above. **This letter does not clear the project.** Please contact Dr. Dean Anderson at (517) 373-1618 with any questions or additional pertinent information that you may have regarding this project. **Please reference our project number in all communication with this office regarding this undertaking.** Thank you for your cooperation.

Sincerely,



Brian G. Grennell
Cultural Resource Management Specialist

for Brian D. Conway
State Historic Preservation Officer

Enclosure(s)

Copy: Paul Petersen, Waterways Grant Program Manager
Jean Battle USACE

Northerner

Type: Wooden steamer
Length: 220.0 x 37.0 x 13.3 ft., 1391 gt.
Depth: 15 ft.
Location: L'anse
LON/LAT: 46.45'32"/88.27'31"

Just off the municipal dock at L'Anse lies one of the Keweenaw's most interesting wrecks. Seldom dived because of her location, the Northerner offers an excellent archeological record as well as a fascinating history. She was built at Marine City, Michigan in 1871 by Morley & John J. Hill for Mr. J.M. Nicoll of Detroit and came out with official number 67128 as a two masted barge with a propeller hull but no machinery. She was constructed with large arched trusses running the length of her hull, and was used as a simple towbarge until 1880 when she was fitted with a low pressure 50" x 40" engine bult by S.F. Hodge in 1880.

On November 12, 1886 she was severely burned after stranding on the north side of the reef at Kelleys Island, Lake Erie, with a cargo of lime. She burned down to her hull as shown in this rare photo following the accident.



Steamer Northerner, 12/1886, Kelleys Island, Lake Erie
Milwaukee Public Library, Herman Runge Collection

References: Milwaukee Public Library, Herman Runge Collection, Julius F. Wolff Jr.-Lake Superior Shipwrecks, Randolph Beebe, David Swayze Wrecklist, NOAA Chart #14971

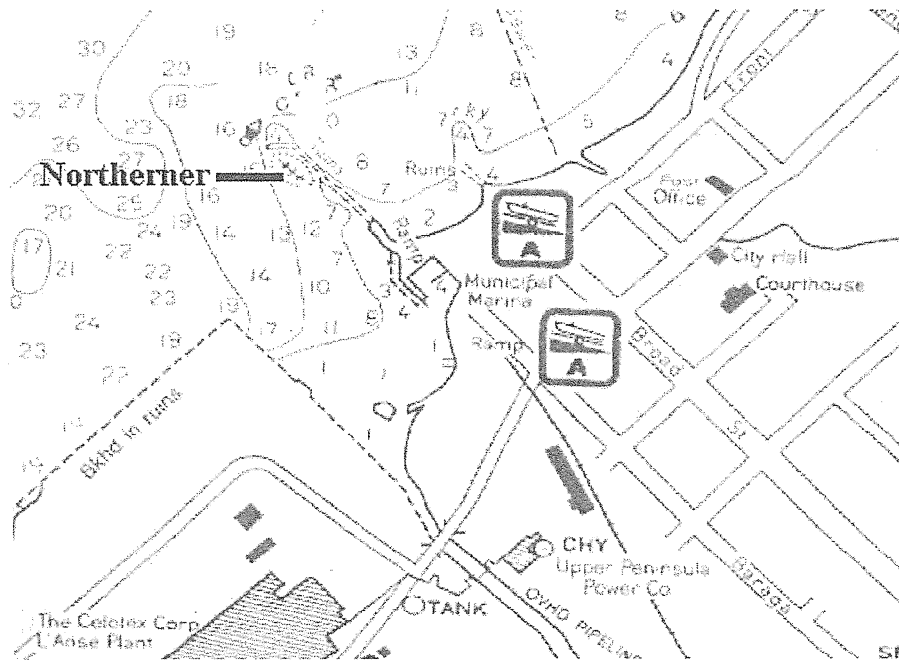
This began the Northerner's reputation as a hard luck ship. She suffered numerous accidents after this and despite being rebuilt she was plagued with crew problems. She was rebuilt in 1887 for Thomas Matham of Buffalo as a coarse freighter and valued at \$75,000, with a double deck, gangways and steel arches. In 1890 she was again sold to the Rochester Transportation Co. of Rochester, NY. Marine historian Herman Runge recalled seeing her at Milwaukee unloading coal and described her as follows: "When I knew her in 1891, she had 3 masts, and a black stack with a broad red band and a black ball - she was here with coal; her home port was Rochester, NY."

The Northerner was then chartered by Ward's Lake Superior Line to carry package freight, and it was in this capacity that she met her end. On December 7, 1892 she was upbound under Captain Peter McKinnon with a cargo of barrelled oil and steel rails when she blundered onto Keweenaw Point due to poor visibility. Salvors were soon on the scene and after dumping 2000 barrels of oil from her cargo, she floated free. She was then towed to L'Anse where she was laid up for repair, while the thick sludge from her oil washed up along Superior's south shore all winter.

On December 11th, the Northerner burned in a suspicious accident that remains unexplained. While she lay at her dock, someone dropped a kerosene lantern in her lamp room. Still saturated with oil, the Northerner was an immediate inferno. As the fire approached the remaining barrels of oil, Captain McKinnon allegedly tried to prevent local firefighters from extinguishing the flames. Apparently, he was successful, as the barrels flared and spread the fire to the nearby dock and warehouse which were also destroyed. The Northerner could not be extinguished and had to be scuttled to stop her from burning. Captain McKinnon was immediately relieved of command by Captain John McCullough, but it was too late for the Northerner. She was abandoned where she lay, but salvors did recover most of her cargo of tempered steel rails. The Northerner was a loss of \$50,000 and insurers were quick to scrutinize the behavior of the captain and crew. Arson was strongly suspected but it is unclear if any charges resulted.

Today the Northerner lies just off the municipal boat launch at L'Anse. She is in 10 -15 ft. of water and has substantial remains. Portions of her hull and frames remain as well as a good deal of machinery and tools. This site contains a number of small artifacts and tools which should be left for archeological survey. Like all the Keweenaw's wrecks, the Northerner is owned by the State and is monitored regularly. Please don't steal what remains.

In a sad development, the Northerner wreck was severely damaged by a construction project in the summer of 1999. Despite her historic nature and relative publicity, construction crews gave her little consideration and destroyed or removed significant portions of the wreck.



References: Milwaukee Public Library, Herman Runge Collection, Julius F. Wolff Jr.-Lake Superior Shipwrecks, Randolph Beebe, David Swayze Wrecklist, NOAA Chart #14971

