

**CHARTER TOWNSHIP OF GARFIELD
PARKS AND RECREATION COMMISSION REGULAR MEETING**

Tuesday, October 4, 2016 - 4:30PM

**Garfield Township Hall
Large Upstairs Meeting Room
3848 Veterans Drive
Traverse City, MI 49684
Ph: (231) 941-1620**

A G E N D A

**Call Meeting to Order
Roll Call of Commission Members**

- 1. Review and Approval of the Agenda - Conflict of Interest**
- 2. Business to Come Before the Commission**
 - a. Discussion of Silver Lake Recreation Area Park Plan
 - b. Grand Traverse Commons Trails - Review SWOT analysis
 - c. Recommendation of contractor for TF15-0141 - Boardman Valley Nature Preserve Improvements grant
 - d. Miller Creek Nature Preserve construction projects - consideration of boardwalk and fishing platform bids / possible recommendation
 - e. Beacon Hills Park - potential inclusion in park ordinance
 - f. Review draft 2017 Park Fund Budget
 - g. Ongoing project updates
- 3. Public Comment**
- 4. Commissioner Reports**
- 5. Other Business**
- 6. Items for Next Agenda**
 - a. Potentially schedule special meeting
- 7. Adjourn**

Garfield Township will provide necessary reasonable auxiliary aids and services, such as signers for hearing impaired and audio tapes of printed materials being considered at the meeting to individuals with disabilities upon the provision of reasonable advance notice to Garfield Township. Individuals with disabilities requiring auxiliary aids or services should contact Garfield Township by writing or calling Kay Schumacher, Clerk, Ph: (231) 941-1620, or TDD #922-4412

Charter Township of Garfield

Grand Traverse County, Michigan

2012 - 2017

Five-Year Parks and Recreation Master Plan

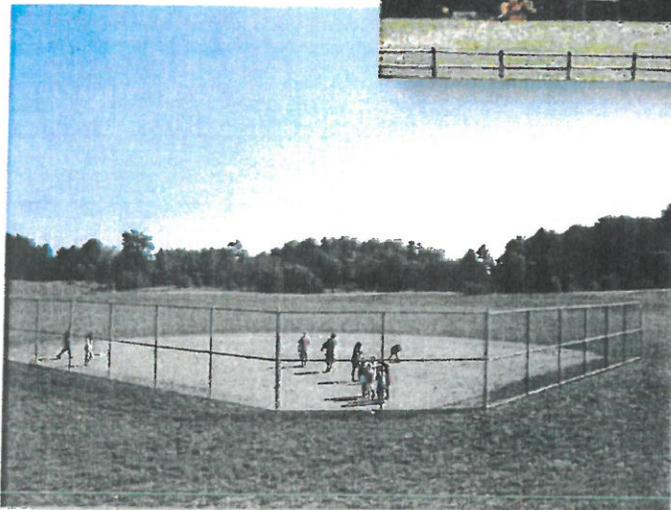
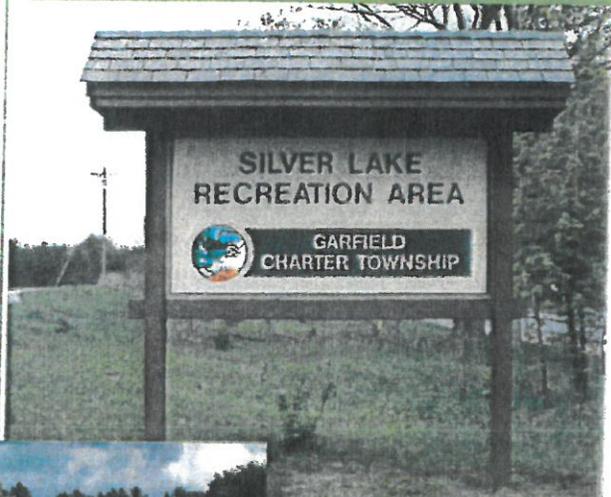
Amendment 1:

Silver Lake Recreation Area

Development Plan

And

Amended Acquisition Program





INTRODUCTION

The Charter Township of Garfield has developed this first amendment to the 2012 5-year parks and recreation master plan as a descriptive development plan for the Silver Lake Recreation Area at 1785 East Silver Lake Road and to amend the Township's land acquisition map in light of recent developments.

The *Silver Lake Recreation Area Development Plan* is intended to establish milestones for desired improvements to the park as identified via the public involvement process when the 2012 park plan was created.

The plan contains the following components:

- Development Plan Map
- Development Plan Map Descriptions
- General Policy Discussion
 - Tree Plantings / Invasive Species Removal
 - Park Lighting
 - Water Resources
 - Reservations

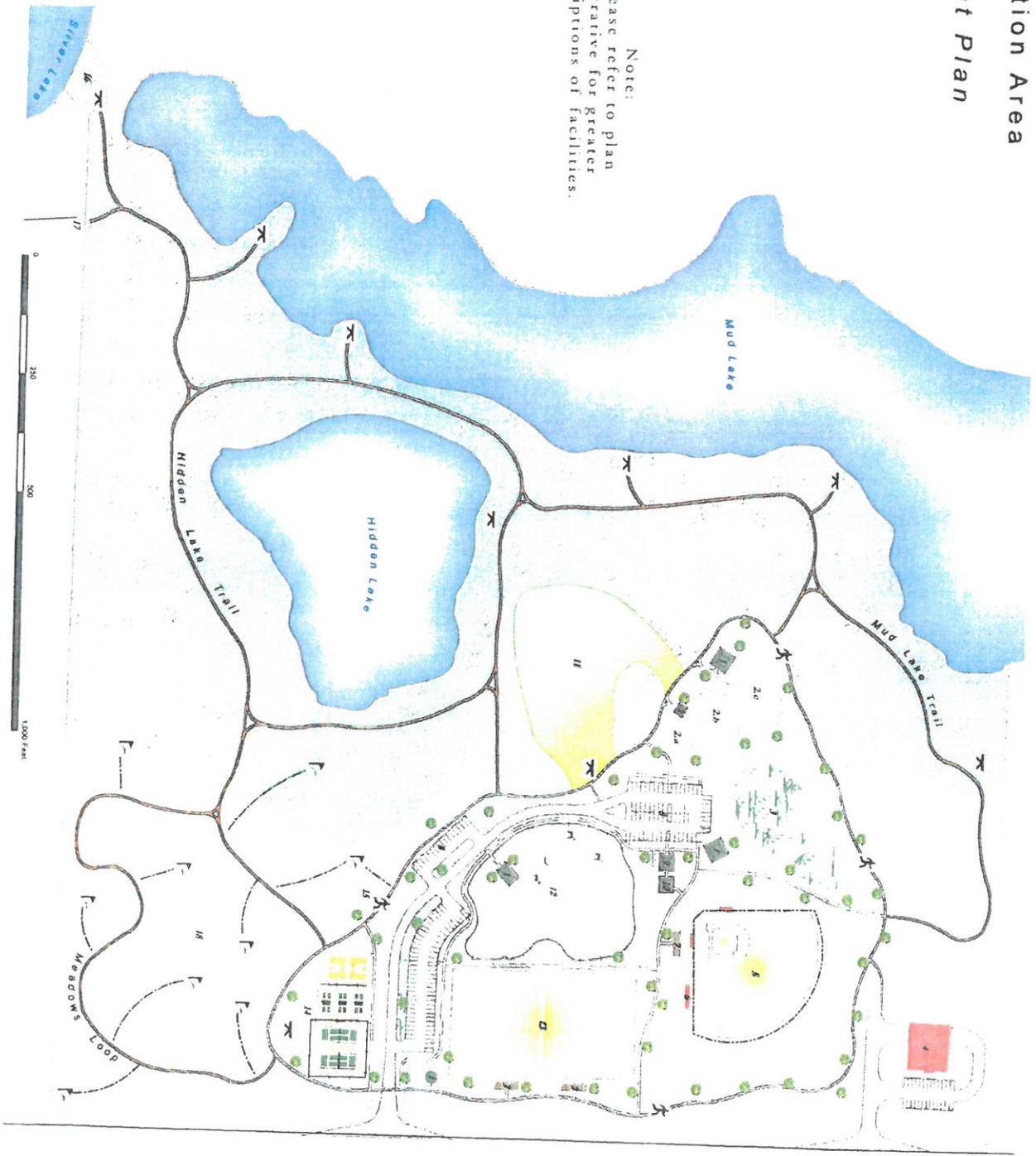
The *Amended Acquisition Plan* is intended to replace pages 47 and 58 of the adopted Five-Year Parks and Recreation Master Plan. Amendments relative to these pages reflect a change in the protection status of the Verizon Wireless parcel (reference number A22) and a desire to acquire additional property to increase the recreational value of the Boardman Valley Nature Preserve by acquiring additional property suitable for a parking area and small park (A21, J. Dean Templeton Trust).

Silver Lake Recreation Area Park Development Plan

Legend

-  Exercise Station
-  Disc Golf Hole
-  Picnic Table / Bench
-  Asphalt Pathway
-  Concrete Sidewalk
-  Natural Surface Pathway
-  1. Picnic Shelter
-  2a. Playground - 2-5 years
-  2b. Playground - 5-12 years
-  2c. Outdoor Gym - Adult
-  3. Drainage Area
-  4. Fire Station 12
-  5. Little League Field
-  6. Barning Cages
-  7. Observation Deck
-  8. Parking Lot
-  9. Restrooms / Utility Building
-  10. Storage Barn
-  11. Sledging Hill
-  12. Off-Leash Area
-  13. Multi-Purpose Field
-  14. Courts
-  15. Exercise Station
-  16. Natural Beach Area
-  17. South Park Entrance
-  18. South Meadow

Note:
Please refer to plan
narrative for greater
descriptions of facilities.



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DEVELOPMENT PLAN DESCRIPTIONS

The following describes existing and planned amenities at the Silver Lake Recreation Area. The majority of the improvements facilities described below were identified through the Public Involvement efforts of the Master Plan (see pages 33 and 34).

1. PICNIC SHELTERS

Three of the five picnic shelters indicated on the plan are in existence. Two additional shelters are planned, one near the playgrounds and another near the multi-purpose field.



2. PLAYGROUND / OUTDOOR GYM AREA



Two playgrounds (designed for 2-5 and 5-12 aged children) indicated on the plan have been built. Some comment received during the development of the Master Plan recommended that these playgrounds may be safer and more enjoyable if the wood mulch is replaced with “rubber mulch.”

The third area in this vicinity is envisioned as an outdoor gym, or “fitness zone.” Outdoor gyms provide opportunity for adult health and wellness via a variety of exercise equipment built to withstand the rigor of weather. Because the equipment utilizes the user’s body weight for resistance, it allows for both a safe and effective workout regardless of the age or fitness level of the users. In this location, the outdoor gym provides an opportunity for users to watch their children in the playgrounds while exercising. A high priority will be placed on establishing ADA-accessible fitness units alongside traditional units to ensure opportunity for all members of the community. As such, a wheelchair-friendly surface will also be required.

A significant amount of shade tree plantings should occur in this area in the immediate future to provide for a cooler exercise environment. Comment also requested adding an additional picnic shelter and additional trash receptacles in this area.

3. DRAINAGE AREA & RAIN GARDEN

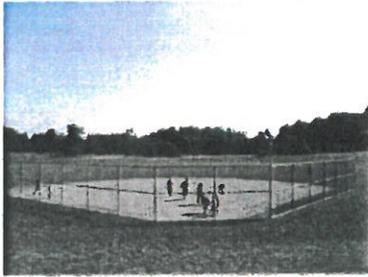
The north drainage basin appears to have been grossly overbuilt for the amount of stormwater runoff that is generated by the north parking lot. Accordingly, it may be possible to decrease the size of this basin to reclaim some parkland for recreational use. The Township may consider establishing a rain garden within this basin to provide an example to the community of how modern stormwater systems can look and function. Alternately, it may be possible to establish a fishing pond within this basin.

4. FIRE STATION 12

Fire Station 12 was completed in 2011. The firehouse will continue to evolve into an important park neighbor by providing a sense of security to park users, and also from a recreational standpoint by offering firehouse walkthroughs for park goers. The planned network of pathways will provide ready access between the park and Station 12.



5. LITTLE LEAGUE FIELD



Historically used as a T-Ball field (an amenity lacking in the area), the field will be renovated to continue to serve T-Ball leagues but also act as a regulation-size Little League Field. To accommodate this, the playing surface must be shifted to the northeast while the existing backstop remains where it is today. An outfield fence must also be installed for the field. Quality dugouts will greatly increase the player experience while using this facility. In addition to an

elevated viewing platform (see 7., below), additional bleachers, benches, and other seating should be installed as demand for field time increases. Grass hillside seating will also be an option due to topography.

6. BATTING CAGES

Room exists to establish one or two batting cages along the right-field line of the ball field, providing an opportunity for simultaneous training and ball play.



7. OBSERVATION DECKS

Taking advantage of existing topography, a number of elevated observation decks are planned adjacent to sports fields. These platforms will be level with the adjacent sidewalks or pathways and will provide an ADA-accessible opportunity to watch sporting events.

8. PARKING

A new, eastern parking lot was built in 2012 adjacent to the multi-purpose field. Even though expanded, parking availability is anticipated to remain relatively tight as the park grows in popularity and demand for its resources increase. Past bad habits of vehicle parking on the grass alongside the driveways must be discouraged to avoid damage to the irrigation system; methods likely include a combination of signage, physical barriers, and enforcement by the Sheriff's Deputies who patrol the park. The Township should encourage frequent, common users such as sports teams to carpool to the park to conserve parking spaces.

9. RESTROOMS / UTILITY BUILDING

No changes are planned to the existing restrooms, which are anticipated to adequately serve the park over the life of this plan. This structure also houses the electrical controls for the park and irrigation system.

10. STORAGE BARN

An additional utility barn is proposed near the restrooms to provide storage space for sports equipment. This barn should be designed to enclose the well head, but must allow access to the well for future maintenance.



11. SLEDDING HILL

Already a popular spot for sledding, the Township may consider formalizing this area into a dedicated sledding hill in the winter months. Careful consideration must be given to user safety if this sledding area is formalized, possibly including padded buffer walls to keep sledders within the designated hill area and away from trees.



12. OFF-LEASH AREA

Desire for a dog park was one of the most popular comments received in the public input phases of the Master Plan. This fenced off-leash dog area will be a popular regional amenity, and is also anticipated to reduce the recurring problem of people walking their pet off-leash in other areas of the park (which is prohibited by ordinance).



Planning and construction of this area should be a collaborative effort with local dog park enthusiasts, who can assist the Township in design and help develop a procedural policy for the park. This off-leash area is intended to be self-policing by the users.

Consideration must also be given to providing a water source, perhaps most efficiently with a small well and hand pump. The woodland that this area encloses should be maintained, but appropriately thinned and managed.

13. MULTI-PURPOSE FIELD

Constructed in 2012, this large area is designed to accommodate demand for all field sports such as rugby, football, lacrosse, and soccer. However, because it is also meant for the general public for casual uses such as kite flying or Frisbee tossing, the Township must take care to regulate league and club use to allow for adequate opportunity for public use.



14. COURT AREA – BASKETBALL, PICKLEBALL, TENNIS

Observations of park use have resulted in the planned reduction of one of the two existing basketball courts. In place of the basketball court, and also expanding towards the tennis court, three Pickleball courts will be installed. The existing two tennis courts will remain unchanged.

15. EXERCISE STATIONS



In addition to the Outdoor Gym described above, a series of exercise stations are planned along the paved walking loop to provide an opportunity for well-balanced physical fitness. Typically, the participant will proceed from one exercise



station to the next and perform the exercise illustrated at each station.

16. NATURAL BEACH AREA

The beach area provides a small but important opportunity for the public to access Silver Lake for swimming and recreation, which was one of the most requested improvements stated during the public input process of the 5-Year Master Plan. Presently, the remainder of shoreline is private property other than the DNR boat launch on East Silver Lake Road, where swimming is prohibited. The soils in the area may require a hard-surfaced walking path to maintain good access from the park.

Because the beach area is located a significant walking distance from the parking lots, users are anticipated to come primarily from the neighborhoods to the south and/or users who may have completed a run or workout on the park's trail system and fitness equipment and are looking to cool off. Some families will likely walk from the parking area for picnic and swimming opportunities.

Care must be given to keep this area open to park users without disturbing adjoining properties. As such, this area will remain in a primarily natural state, with only minor weed removal and cleanup contemplated. Additional signage should be installed here to identify hours, property boundaries, and potential hazards such as unstable soils and the drop-off into the lake.

17. SOUTH PARK ENTRANCE

The Lake Drive road right-of-way abuts the south property line of the park. This south entrance will be maintained in its current state to provide non-motorized access to the park from the adjacent subdivision.

18. SOUTH MEADOW

Due to topography and sandy, unstable soils, the south meadow area will be maintained primarily for foot trails and open space. A small disc golf course may be possible within this area provided that it is appropriately designed to discourage players from walking off-trail and up and down the small hills.



GENERAL POLICY DISCUSSION

DEVELOPED / NATURAL AREAS OF PARK

In both current and planned states, most active recreation areas are concentrated within the eastern portion of the park (particularly those areas within the paved walking loop). Areas that lie west of the developed land should remain in a more natural state as a contrast to the developed land. The natural areas provide a useful buffer to the residential neighborhoods and give users the opportunity to enjoy a variety of recreational experiences. Trails within the natural area will be maintained in good condition, with attention given to poison ivy control.

TREE PLANTINGS / INVASIVE SPECIES REMOVAL

As time and budget permits priority should be placed to establishing a variety of vegetation for shade, aesthetics, and buffering. All plantings should be native to the region. To encourage deep root growth new trees should be located out of the path of regular irrigation system watering, or the irrigation system modified accordingly. Trees subjected to regular (bi-weekly) watering do not develop deep root systems.

Prior to the planting of new trees effort must be made to eradicate the population of spotted knapweed near the restrooms. This invasive species emits a chemical that inhibits the health and growth of other plantings.

Though the Silver Lake Recreation Area does not have a significant problem with other invasive species the park should be frequently monitored and problem species quickly removed.

PARK LIGHTING

Presently, the only lighting within the park is security lighting on the restroom facility. As the park is available for use from two hours before sunrise to two hours past sunset, additional lighting to illuminate the parking areas and paved walking loops is desirable. This lighting should be of a low-intensity and warm color so as not to disturb neighboring property owners. Intense lighting of the multi-purpose field or tennis courts is not appropriate.

WATER RESOURCES

The Silver Lake Recreation Area contains or has frontage on three separate water bodies; Silver Lake, Mud Lake, and Hidden Lake.

As described above, continued use of a natural existing beach area has been identified for the park's Silver Lake frontage. A hard-surfaced pathway will be installed to improve access to this frontage.

In current form, Hidden Lake is very shallow, perhaps 1-4 feet deep on average. Presumably the shallow depth comes from decades of aquatic vegetation growth, death, and infill.



Opportunity may exist to dredge this lake and establish a dedicated kids fishing pond. Prior to any dredging soil sampling would be necessary to determine if past agricultural use of the property has contaminated this pond.

Mud Lake is also quite shallow, but offers opportunities for wildlife watching. A series of benches, observation decks, and picnic tables along the shores of this lake would be beneficial.

The Township has heard reports that the sediment within Hidden Lake and Mud Lake can be hazardous to persons or animals entering the ponds. Therefore, postings should be installed to warn park users of the dangers of wading into the ponds.

RESERVATIONS

The following reservations recommendations either exist or should be implemented to ensure the most enjoyable experience for all park users. To allow for efficient policy changes from time to time these recommendations should be adopted by resolution of the Township Board rather than incorporated within this document.

1. RESERVATIONS – LEAGUES

- a. Require reservations for regular league or club use and practice.
- b. Ensure adequate public opportunity to use facilities outside of regular reservation times (i.e. multi-purpose field).
- c. Require the designated league play area to be positioned to maximize open area for other users (i.e. a football field takes up significantly less than full multi-field area, and could be shifted to one area of the field).
- d. Ensure adequate parking exists so that vehicles do not park outside of designated parking areas. Require leagues to provide estimated traffic generation counts. If a league is anticipated to regularly generate traffic in an amount greater than 50% of available spaces, then that league is not likely an appropriate partner to the park.
- e. Permit leagues to use existing and future utility structures to store equipment.
- f. Adopt appropriate league fees which will contribute to maintenance costs

2. RESERVATIONS – FACILITIES

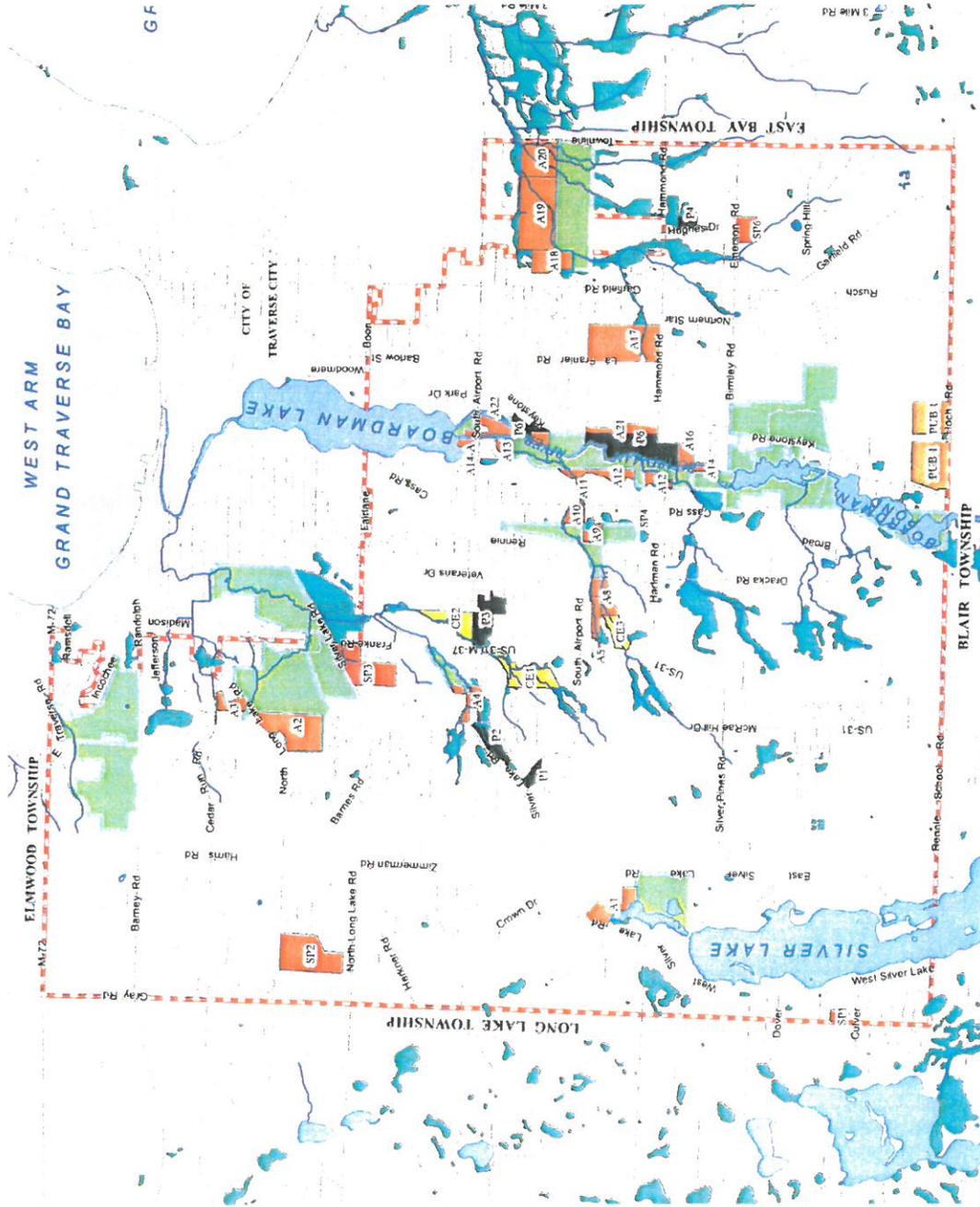
- a. Establish time-slot reservation policy for picnic shelters rather than allowing all-day reservations for one fee. For example, start with 2-3 hours for \$X, then charge hourly rates
- b. Identify one or two pavilions which may not be reserved to adequate opportunity for first-come, first-served use.





Green Infrastructure Plan Map

As Amended January 2013



Legend

Green Infrastructure Plan

- Acquisition Property ("A")
- Conservation Easement ("CE")
- Currently Protected Property ("P")
- Publicly Owned Property ("PUB")
- School Park ("SP")
- Existing Public Parkland

Wetlands

- Wetlands
- Stream



Prepared by: Garfield Township Planning Dept - January 2013
Data Source: Garfield Township, 2013



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space development can protect and enhance the green infrastructure, while often creating useable nature areas for Township residents. When evaluating any application for land use development, the Township should analyze the existing natural characteristics of the development site, as well as the relation of those natural features to surrounding properties, to identify and encourage the preservation of these natural features.

Table 4, below, identifies priority properties that have been identified for acquisition or protection through a conservation easement. **The Green Infrastructure Plan map** (see page 58) shows the location of each priority property, as well as other natural features such as streams and wetlands. As time permits, the Township should perform greater analysis of other green infrastructure elements such as significant woodlands. As noted above, though a particular property may not be indicated on the plan, efforts should be made to protect green infrastructure at all scales.

Map Index	Name	Method of Protection
A1	Silver Lake Connection to W. Silver Lake Road	Acquisition
A2	Commons State 40, Ransom Parcel	Acquisition
A3	Oleson PUD Open Space and Wetlands	Donation
A4	Oleson, Schmude Wetlands	Acquisition
A5	Applebees Parcel	Acquisition, Access Emnt
A6	Commerce Center Wetland	Donation, Access Emnt
A7	City-Owned Boardman Parcel	Acquisition
A8	Hanson Parcel	Donation
A9	Traverse Software	Acquisition
A10	Cass Road Self Storage	Donation or Cons. Emnt, Access Emnt.
A11	Miller Creek Corridor; BVNP / Miller Creek Connector	Donation or Cons. Emnt, Access Emnt.
A12	BVNP Parcels	Acquisition
A13	Logan Valley Pond	Donation or Cons. Emnt
A14	Misc. West Boardman River Parcels	Acquisition
A14-A	Logan Valley Development	Acquisition
A15	Misc. East Boardman River Parcel Easements	Easement
A16	Fraser Parcel	Acquisition
A17	Future East Side Community Park?	Acquisition
A18	SVEC, McClain, Godzibiewski Parcels	Acquisition
A19	Airport Approach	Donation
A20	Boyd	Acquisition
A21	J. Dean Templeton	Acquisition
A22	Verizon Wireless	Conservation Emnt / Acquisition
CE1	Lewis, Church, Outlet Mall, Tireland Parcels	Donation or Conservation Emnt
CE2	Sleder Wetlands	Donation or Conservation Emnt
CE3	C D F, Chelsea Park	Donation, Acquisition via PUD, Cons. Emnt
P1	S. Airport Road	Protected
P2	Silver Lake Road Conservation Easement	Protected
P3	Lowes Wetlands	Protected
P4	Hughes Drive	Protected
P6	Misc. Ongoing Acquisitions	Protected
PUB 1	Future East Side Community Park?	Publicly Owned (BPW)
SP1	Silver Lake Elementary School	School Park
SP2	TC West High School	School Park
SP3	TC West Middle School	School Park
SP4	Former Sabin Elementary Playgrounds	Donation
SP6	Traverse Bay Christian School	School Park

Table 4 -- Green Infrastructure Program



Facility Name	Facility Type	Size (acres)	Likely Service Area	Description of Amenities (Accessibility Rating also provided for Township-owned parks)
Grand Traverse Commons Natural Area	Natural Area	142 ac	Entire Township and Surrounding Areas	Accessibility Rating: 1 Amenities: Hiking Trails; Walking Trails; Cross Country Skiing; Mountain Biking
Boardman Valley Nature Preserve	Natural Area	92 ac	Entire Township and Surrounding Areas	Accessibility Rating: 1 Amenities: Hiking Trails; Walking Trails; Cross Country Skiing; Hunting; Fishing; Boardman River Access; Tennis; Beach Volleyball; Pickleball
Silver Lake Recreation Area	Community Park	84 ac	Less than 3 Miles	Accessibility Rating: 2 Amenities: Hiking Trails; Walking Trails; Picnic Pavilions; Playgrounds; Restrooms; Tennis; Basketball; Sledding Hill; T-Ball Field; Multi-purpose field
Miller Creek Nature Reserve	Natural Area	67 ac	Less than 3 Miles	Accessibility Rating: 1 Amenities: Hiking Trails; Walking Trails; Cross Country Skiing; Mountain Biking; Nature Watching; Hunting
Kid's Creek Park	Natural Area	20 ac	Less than 3 Miles	Accessibility Rating: 3 Amenities: Hiking Trails; Walking Trails; Nature Watching; Fishing Pond
Hughes Drive Natural Area	Natural Area	7.5 ac	Less than ½ Mile	Accessibility Rating: 1 Amenities: None, not developed
Grand Traverse Commons Barns Area	Community Park / Natural Area	53 ac	Entire Township and Surrounding Areas	Amenities: Currently under development. Once complete will include renovation of historic barns, outdoor amphitheater, interpretive center, community gardens, trails.
Hickory Meadows	Natural Area	110 ac	Entire Township and Surrounding Areas	Amenities: Hiking Trails; Cross Country Skiing; Nature Watching
Civic Center	Sports Complex	45 ac	Entire Township and Surrounding Areas	Amenities: Walking Trails; Indoor Pool; Skate/Bike Park; Baseball and Softball Fields; Ice Rink; Playgrounds.
County Nature Education Reserve	Natural Area	505 ac	Entire Township and Surrounding Areas	Amenities: Hiking Trails; Walking Trails; Cross Country Skiing; Fishing; Boardman River Access.
Keystone Soccer Complex	Sports Complex	15ac	Entire Township and Surrounding Areas	Amenities: Soccer Fields; Playground.
Maple Bay Park	Natural Area	n/a	Entire Township and Surrounding Areas	Amenities: Hiking Trails; Nature Watching; Lake Michigan Beach



As further discussed below, public use and enjoyment of the Boardman River is anticipated to increase greatly as a series of dams on the river are removed. The Township is committed to protecting and enhancing public access to this great resource.

Miller Creek Nature Reserve – Natural Resource Area



The Miller Creek Nature Reserve measures 67-acres and serves as a key piece of natural resource preservation between some of the most densely-developed areas in the center of Garfield Township. The reserve was established in phases, first as an open space and natural resource protection area within the Grand Traverse Crossings Planned Unit Development and subsequently expanding as an open space element of the Arbors Planned Unit Development.

Recreational opportunities at this park include hiking, nature watching, hunting, cross-country skiing, and snowshoeing. The nature trails at the Miller Creek Natural area pass through a former Red Pine plantation, skirt the edges of open meadows, cross boardwalks through cedar swamps, and follow Miller Creek, a tributary of the Boardman River.

Silver Lake Recreation Area – Community Park

The 84-acre Silver Lake Recreational area is located on East Silver Lake Road and was established in 2004 to provide additional opportunities for active and passive recreation to Township residents. Amenities within the eastern half of the park include three picnic pavilions, restrooms, a tee-ball field, two playgrounds, basketball



courts, tennis courts, an 0.7 mile Type II park trail loop, a sledding hill, and general all-purpose athletic fields. The western half of the park remains heavily wooded and offers 4,400 feet of Type III nature trails. At this time, the Silver Lake Recreation Area is viewed as far from “built out” and is a prime candidate for expanded recreational opportunities.

The Silver Lake Recreation Area is one of two remaining publicly owned properties with frontage on Silver Lake (the other being the MDNR boat launch). Currently, the roughly 100-foot shoreline within the park is in a natural state. The public has expressed interest in this shoreline being developed into a public beach area, which would be the only public swimming opportunity on the lake.



concerns over contamination resulting from the industrial uses that are adjacent to Boardman Lake. Past studies have indicated that there are elevated concentrations of contaminants in the sediments of Boardman Lake, and that the sediments in some areas are toxic to sediment-dwelling freshwater organisms. However, a 1992 Michigan Department of Natural Resources analysis found only minute concentrations of chemical contaminants within fish in the lake, and not at levels which warranted a specific consumption advisory for the lake.

The most recent DNR fisheries survey, conducted in 2003, indicated good populations of yellow perch, walleye, sunfish, and smallmouth bass that were from 1-to-2 inches above State averages in terms of growth rates. Because of past slow growth rates of northern pike, the DNR removed the minimum size limit of the species in 1983, and the northern pike in the lake are now also above State averages. In any case, even if fisherpersons choose not to keep their catch due to perceptions of contamination, the lake is an excellent in-town fishery.

By working to change the misconceptions about the health of Boardman Lake, and providing enhanced access opportunities such as fishing decks adjacent to bike paths, the Township can encourage greater public use and enjoyment of this in-town fishery and recreational resource.

SILVER LAKE

Silver Lake is a 645-acre waterbody in the southwest corner of the Township. The shoreline has been heavily residentially developed, and the lake is used primarily for boating opportunities for lakefront residents and the general public. Silver Lake is divided north to south between Garfield and Blair Townships.

The Township's Silver Lake Recreation Area is the only public park on Silver Lake. Presently, the park's Silver Lake shoreline (roughly 100-feet of frontage) is in a natural state and does not provide swimming or water access opportunities to the public.

The Michigan DNR maintains a boat launch on East Silver Lake Road; however, swimming is not permitted at the launch.

INVASIVE SPECIES

Invasive species are non-native organisms that cause harm to people, the economy, or the environment. For example, the sap from wild parsnip can cause intense blistering after coming into contact with skin and being exposed to sunlight. These species can harm the economy by increasing costs for farmland management or acting as a host to common pests, and by degrading the natural resources that so many tourists visit the area to enjoy. Perhaps most importantly, invasive species harm the natural environment by displacing the native species which would otherwise support the



PUBLIC INVOLVEMENT

The Township encouraged early and often public involvement by way of open meetings, surveys, and questionnaires. The following is a summary of common public sentiments and comments that were used to help shape the Goals and Objectives section of this Plan.

- Walking, hiking, and nature watching were some of the most common results when participants were asked why they used the Township parks.
- Many comments focused on keeping the Township's natural areas in a largely undeveloped state for both recreation and open space purposes, and keeping the ball fields and other active-recreation facilities at the Silver Lake Recreation Area, or at a future park elsewhere in the Township.
- Proximity/convenience to parks was an important consideration for many respondents. Some comments highlighted the lack of a Township-owned community park on the east side of the Township.
- Participants generally were of the opinion that the parks were well clean and well maintained. Some comments did raise concerns about poor cleanliness, or about the need for improved maintenance of facilities such as trails, garbage disposal, or the need for improvements such as better trail signage and way finding markers.
- Many comments highlighted opportunities for greater improvements to the Silver Lake Recreation Area, including things such as improved ball fields, a beach area, a dog park, a splash pad, additional picnic pavilions, etc.
- Many comments focused on increasing non-motorized access to the Township parks. One comment in particular encouraged the Township to require the installation of bike paths or sidewalks when new development occurs.
- Increasing public awareness and use of the Township's park system was encouraged. The Grand Traverse Commons Natural Area was the most well-known of all parks, with 85% of respondents aware that the park existed. The Boardman Valley Nature Preserve was also well known. On the other hand, nearly 60% of respondents did not know that the Miller Creek Nature Preserve existed.
- The Commons Natural Area and the Boardman Valley Nature Preserve were the most visited parks, with roughly 40% of respondents visiting the respective park from 1-5 times within the last two years. Despite being adjacent to some of the region's largest shopping centers, the Miller Creek Nature Reserve and Kid's Creek Park were the least visited of the Township's Parks.
- The majority of respondents rated the Township park system as "Good" or "Great" when considering the amount of parkland, the number of parks, park distribution and convenient location, beauty, cleanliness and maintenance, variety of recreational opportunities, safety,



- Coordinate efforts with local interest groups and recreation providers and create partnerships for providing these resources
- Encourage the Township Board to maintain a small millage to maintain consistent funding for the purpose of general maintenance, improvements, acquisition, and for local match purposes for grant opportunities

Goal 6. Increase public use, access to, and enjoyment of natural resources including the Boardman River, Boardman Lake, and Silver Lake.

Objectives.

- Invest in the restoration of bottomlands within former backwater areas as the three Boardman River dams are removed.
- Invest in the acquisition of properties with Boardman River frontage, or properties that will buffer previously protected parkland within the Boardman River valley.
- Continue to participate as an ex-officio member in the Boardman River Dams Implementation Team.
- Plan for anticipated commercial pressures on the Township's parkland and natural resources, such as kayaking or canoeing liveries utilizing the Boardman Valley Nature Preserve for launch and recovery, or the potential to develop a whitewater park similar to the Bear River project in Petoskey. Consider permitting managed commercial pressure as a method of increasing public access to resources while incorporating a commercial fee structure to provide expanded Township-wide recreation opportunities
- Continue to seek funding and easements for the completion of the Boardman Lake Trail and Boardman Valley Trail. Incorporate water access elements with trail planning, such as fishing decks or swimming platforms.
- Consider development of a public beach area on Silver Lake within Silver Lake Recreation Area, but take care to involve neighborhood stakeholders early and often in the consideration of this objective.
- Work with landowners, the DEQ, the DNR, and other stakeholders to manage the spread of invasive aquatic species within these waterbodies.

Goal 7. Promote public awareness and usability of the park system

Objectives.

- Continue to promote the park system via the Township website, Facebook page, newsletter articles, and by including information about the entire park network at trailhead kiosks



The Kid's Creek Park can be used as an educational opportunity on a number of levels. The stream bank restoration that has occurred on the site provides countless examples of the benefit of riparian buffer practices. Planned removal of invasive species such as common buckthorn and autumn olive will provide an additional educational opportunity on the need to prevent and manage the spread of these species. The park's close proximity to Traverse City West Middle School and the new Grand Traverse Bay YMCA provides a great opportunity for these institutions to use the park as an outdoor classroom and recreation opportunity.

The Township should continue to increase the public visibility and awareness of the park. A new sign was installed in 2011 along the park's US-31 frontage, which helped a great deal. A sign at the Kohl's parking area and trailhead is highly desirable and would greatly increase visibility.

MILLER CREEK NATURE RESERVE

The Miller Creek Nature Reserve will continue to function primarily as a natural resource area. The Township has identified a number of neighboring properties that, if acquired or protected via a conservation easement, will protect existing parkland, increase recreational opportunities, increase access to the park, and provide greater protection to Miller Creek. As time and funding allows, the Township should invest in the acquisition or protection of these additional properties.

The Township should also continue to invest in the maintenance and improvement of the trail system within the MCNR. To increase the user experience, some trails should be rerouted further away from adjacent development, such as the proximity of single-family homes to the Beech Ridge Trail and the proximity of some Arbors Apartments buildings to the Sabin School Trail. Ease of navigation will continue to benefit through ongoing improvements to trail mapping and navigational markers. A mountain biking trail could be developed at this park by using a combination of existing and future trails.

The MCNR will function as a key connector in the regional trail network. To the west, the trails will provide a connection to existing and planned trails along and to the west of US-31. The park already provides non-motorized connectivity between residential development along Hartman Road to the south and commercial development such as the Grand Traverse Mall and the Crossings along South Airport Road. To the east, connections will be made across Cass Road and to the Boardman Valley Nature Preserve. It will be necessary for the Township to consider the location and trail type of the "connector" trails within the Reserve.

SILVER LAKE RECREATION AREA

The Silver Lake Recreation Area will continue to be improved upon as an active and passive recreation resource. The park has much room for active recreation improvements such as an irrigated and maintained multi-purpose athletic field, an additional ball field or improvements to the existing ball field, and multi-striped hard surfaced courts for activities such as basketball and



pickleball. Additional opportunities here may include an outdoor ice rink, splash pad, or a dog park. Disc golf may be appropriate, but likely at a smaller scale than a full 9-hole course.

To increase enjoyment along the pathways, the Township should invest annually in the planting of additional trees to provide shade. Exercise stations could be installed at regular intervals to create a “fitness trail” that would provide park goers of all ages and abilities with opportunities to increase health and wellness. The Township may also wish to consider extending the paved portions of the existing 0.7 mile loop to create an option for an even 1-mile loop.



As noted earlier in this Plan, the Silver Lake Recreation Area includes 100-feet of frontage on Silver Lake, which is presently in a natural state. Given the public desire for a swimming area on Silver Lake, the Township should consider developing a small beach on this frontage. However, any beach development plans should be closely coordinated with adjacent property owners and neighborhood associations.

NON-MOTORIZED PLAN

A high quality non-motorized transportation system may consist of a series of interconnected sidewalks, trails, bike paths, and other means by which the public can travel without using automobiles. This system provides not only alternative transportation options for the public but also provides many recreational opportunities. Recent real estate trends also indicate that prospective home buyers generally prefer to live in communities with nearby sidewalks, bike paths, or other similar facilities.

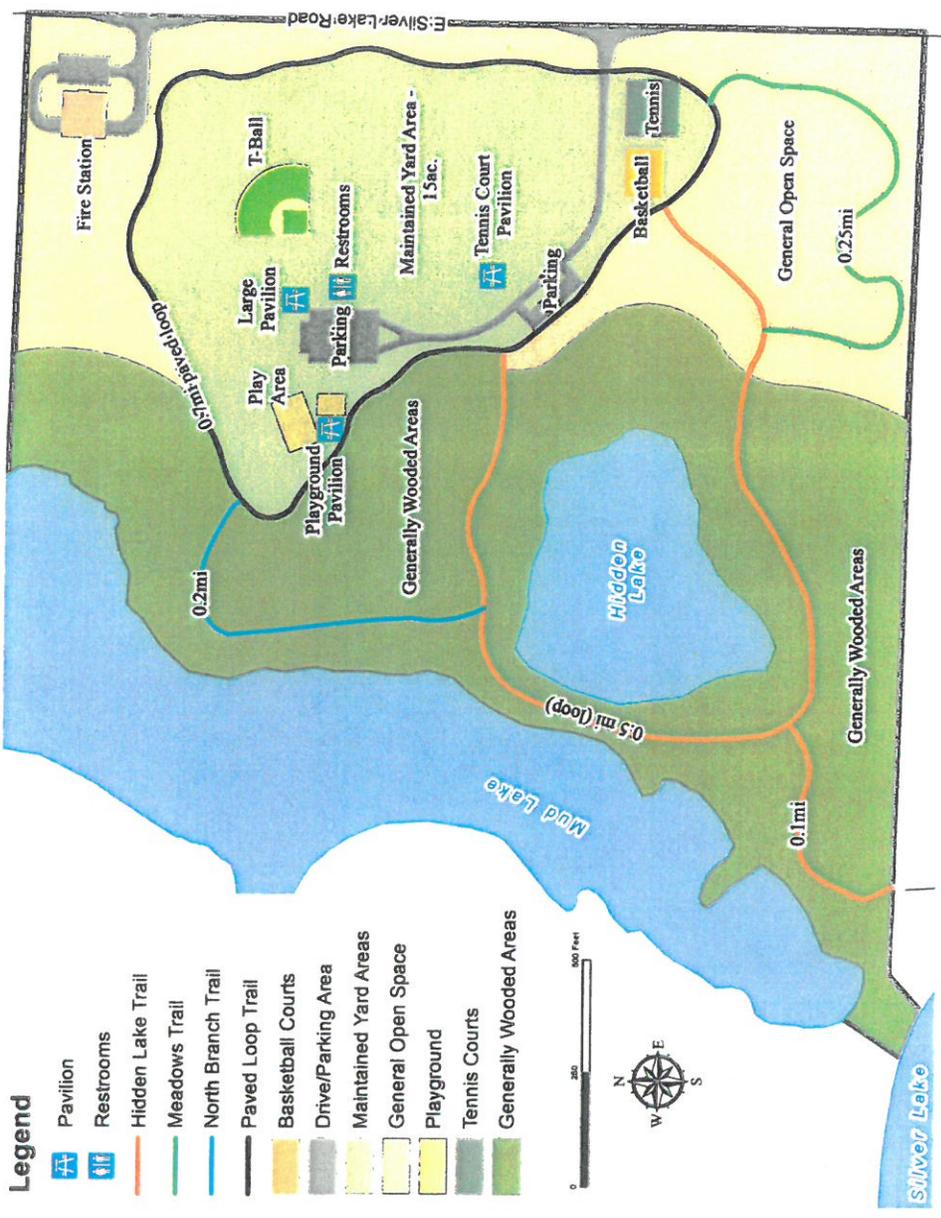
Due to constraints such as budget, right-of-way limitations, and desired timeline, different types of trails are appropriate for different areas of the Township. For example, it may be possible to quickly and economically establish a singletrack-type trail within the power line easements running from the Spring Hill neighborhood to the Keystone Recreational Complex in the southeastern corner of the Township. Another example of planned singletrack-type trails includes a connection between the Commons Natural Area and Hickory Meadows. Along South Airport Road, which is not bike-lane friendly but where the built environment limits potential trail building area, a narrower sidewalk would be the most appropriate trail type.

Two particular trail development projects are envisioned as the highest priority items over the 5-year life of this plan. One of these priority projects is the Buffalo Ridge Trail, which will connect numerous neighborhoods, schools, parks, and the new YMCA facility on Silver Lake Road. The other high-priority trail is completion of the West Boardman Lake Trail, which will result in a 5-mile loop encircling Boardman Lake. The **Non-Motorized Plan Map** is found on page 57.



Park Map

Silver Lake Recreation Area



From: Brian VanDenBrand
Sent: Thursday, September 29, 2016 10:43 AM
To: Dorothy Petroskey
Subject: FW: GT Commons info
Attachments: Commons SWOT.docx

Also for the park packet.

Brian VanDenBrand
Deputy Planner
Charter Township of Garfield
3848 Veterans Drive
Traverse City, MI 49684

Phone: 231-941-1620
bvandenbrand@garfield-twp.com

From: Brad Gerlach [<mailto:begerlach@yahoo.com>]
Sent: Wednesday, August 03, 2016 1:35 PM
To: Earl Gervais; Brian VanDenBrand
Subject: GT Commons info

Earl and Brian,

Several years ago, when I still worked for the Grand Traverse Regional Land Conservancy, the organization was considering spawning a "trail specific" Conservancy given the demand for planned "dirt" trails in our region. One of my tasks during this was to create a list of potential projects/partners and then assess the project.

This weekend I dug out my original notes and typed up a very short version of the overall report I made on the Commons (the full report including maps was around 16 pages if I remember correctly). Not sure it will help as you probably have heard all of what is included but happy to answer any questions about the content.

Brad

Strength, Weakness, Opportunity and Threat (SWOT) analysis – Grand Traverse Commons

Strengths

Location – Universal agreement that there is not a location more strategically located than the Commons . Fairly centrally located in TC, fits well with mixed use development, near large employers and schools.

Use – Even with trail limitations, trail system is heavily used and well-known among local residents

Views – One of few locations with trail in the immediate TC area that affords elevated views of the city and water

Mixed forest types/ecological zones – The mixed types do provide different “feels” and views to trail users

Ownership – Some of the regular trail users hold a strong sense of “ownership”

Trail design – Agreement among users that the trail design is poor and they would support an upgrade

Weaknesses

Trail “design” – System was not designed per se but was developed mostly from system of existing two-tracks and social trails, to which additional bandit trail has been added. Many complaints about sand, erosion, blind spots, steep sections, etc. Some potentially popular uses (cross-country mountain biking being one) are not accommodated/encouraged in the current system.

Use conflicts – Many hikers and mountain bikers no longer use the Commons (or use it sparingly) due to historical conflicts. Hikers report being intimidated by the bikers and the trail design issues (blind spots, steep trail) exacerbate this. Bikers have not felt welcome by hikers and also do not want to ride where they scare/intimidate other users.

Soils – Many areas in the Commons have very light sandy soils fully exposed to the elements (no tree cover). Even with proper design, these zones will require materials to improve the trail bed.

Liability – Downhill/all mountain bike features are strewn about the property with some being maintained, some not. Landowners would likely be liable for injury caused by poorly designed or maintained “feature”.

Erosion – Poor trail design and bandit trail creation has caused heavy erosion in some areas. Some of the runoff feeds directly into the creek and/or wetlands.

Leadership – Who takes the lead in a redesign process? There is not an obvious group, etc.

Opportunities

Vision – Users, owners and other stakeholders all recognize the potential of the Commons given the location, the surrounding uses and the already heavy use of the trail despite its limitations. This could be a cornerstone of a Traverse City-centric trail push.

Partnerships – Many of the key stakeholders have moved more toward partnership-type projects, where they participate and lead a component of a project rather than taking the lead. The Commons redesign will require many people/organizations to play nice.

Threats

Status quo – Doing nothing will ensure the continued degradation of the trail system and the ecological values of the property as a whole. The erosion has accelerated and bandit trail has found its way into some of the nicest forest stands, bringing erosion, invasive species, etc. into those areas. Use will decline as the system begins to collapse.

Unchecked use – The downhill/all mountain trails have no controls. Any user can access them including any teenage daredevil with bike. Likewise, other trail users can blunder onto these trails, putting themselves and others at risk of injury. New trail forms all the time without signage.

Most likely outcome

Given the existing uses, soil issues and location, the most likely outcome of a design/input process will be a mixed use system. A total redesign will allow a reset of trail user expectations and hopefully alleviate the historical tension (now underground given the number of people no longer using the Commons) between user groups.

The terrain, soil and existing use patterns also point clearly at the required design. Foot traffic has dominated at the Commons and must be enhanced first. An ADA trail at the lower levels will serve people with physical restrictions, families with strollers, etc. This also aligns with installing the most accessible trails near the most developed areas.

Also at the lower levels should be a mixed hiking and novice/family biking loop. This would be wider trail with clear and long sightlines and minimal speeds for the wheeled traffic (fast riders would need to be warned to limit their speeds).

The climbs to the “top” pose the most challenge from a design perspective. It may be that the soils and space limit the possible lines up and down to two (necessary for loop). If so, those two segments must be gentle and wide with good sight lines as they will need to support both hiker and biker traffic. If

there can be 4 lines up/down, then the biker and hiker traffic could be segregated (this option would likely be preferred by most but not essential for project success).

At the top, the hiking trails must access the most scenic/view locations – some of the bandit/social trail has been created because the original “design” did not do this. Bikers will need to be routed to the State property area, where an all-mountain (features, technical challenges) system could be built and ringed by a fast-flow cross country loop (this would only be a few miles however as the space to do much does not really exist).

Given the space and soil limitations, the Commons cannot be all things trail. True downhill flow trails require better soils and should be served by a lift or bus/car service (Hickory Hills would meet these criteria). Also, such trails reaching to the bottom of the slopes would render much of the rest of the Commons unusable as you would have multi-use trail being bisected by downhillers.

Likewise the space, soils and use pattern do not suggest a true longer cross country mountain bike trail system. As noted, most of the mountain biking at the Commons should be designed to facilitate hiker use first. Again Hickory Hills (and Hickory Meadows) might be able to provide more of these opportunities.

Conceivably the design would allow for a bike park with a pump track and technical features trail. This should be near an access point (most likely the Barns area) given the intense maintenance requirements. One of the uphill/downhill trail segments to the “top” should link to the bike park (or be just a short spur away so that the park is integrated into the rest of the system).

From: Brian VanDenBrand
Sent: Thursday, September 29, 2016 11:09 AM
To: Dorothy Petroskey
Subject: FW: Commons Focus Group SWOT
Attachments: May 19 2016 Focucs Group SWOT.docx

Brian VanDenBrand

Deputy Planner
Charter Township of Garfield
3848 Veterans Drive
Traverse City, MI 49684

Phone: 231-941-1620
bvandenbrand@garfield-twp.com

From: Chris Kushman [<mailto:ckushman@traversetrails.org>]
Sent: Monday, May 23, 2016 4:26 PM
To: Brian VanDenBrand; Julie Clark
Subject: Commons Focus Group SWOT

Good afternoon Brian,

At your convenience can you look over the attached summary and let me know if it's an accurate representation of last week's meeting? Can you also outline the next steps? I'll include this information in the follow up e-mail to the meeting participants.

Thanks.

--

Chris Kushman
Planning and Management Director
TART Trails
PO Box 252
Traverse City, MI 49685
231.941.4300
ckushman@traversetrails.org

May 19, 2016 Commons' Trails Focus Group Purpose:

- Identifying Strengths, Weaknesses, Opportunities, and Threats (SWOT) at Garfield Township's Commons Park Lands relating to trails
 - Physical, social, environmental, or other issues that may inform trail planning and development
- Identifying current programs, projects, activities or services that may relate the trail's use, design, or experiences – On Agenda, but not covered because of time constraints
- The information from this stakeholder group will help direct Garfield Township's next steps planning a more enjoyable, sustainable, and better functioning trail system.
- The following SWOT is a compilation of stakeholder input that will be evaluated and then incorporated as planning elements.

Group Attendees:

- Tom White, NMMBA
- Chris Remy, Garfield Township Park & Recreation
- Earl Gervais, Trail advocate
- Christine Crissman, Watershed Center
- Gary Howe, City Parks representative to Joint Recreation Authority
- Todd Vigland, Grand Traverse Regional Land Conservancy
- Tom Vitale, Grand Traverse Conservation District
- Raymond Minervini, Grand Traverse Commons
- Maureen Madion, Preserve Hickory
- Gabe Schneider, TART Trail Ambassador
- Jim Graham, TC Track Club
- John Kostrzewa, Vasa Ski Club
- Steve Lagerquest, Grand Traverse Regional Land Conservancy
- Matt Cowall, Joint Recreation Authority
- Levi Kyser, Copper Ridge Riders

Group Identified SWOT:

Strengths (Major themes: terrain, nature, location, diversity, and opportunity)

- Beautiful
- Terrain
- Trail development
- Proximity to people
- Organic network
- Location
- Soils
- Topography
- Passion for the property
- Ecological diversity
- Scenic
- Test abilities
- Fun
- Protected from logging
- Old growth
- Partnerships
- Room for everyone
- Public park
- Diverse topography
- Dispersed but heavy use
- Political will
- Passion
- Multiple access point
- Recognized asset
- Diverse neighbors
- Intact habitats
- Wildlife seen
- Commune with nature
- Township park expansion
- Trail connections
- Accessible sanctuary
- Neighbors
- Destination recognition
- Trout streams
- Recreation development potential
- History
- Education opportunities
- Greenspire school
- Economic value
- Gardens
- Great for sit & relax
- Skilled representation
- All ages and abilities using
- Unique
- Something left to discover
- Strong leadership – public & private partnerships
- Visibility
- Historic redevelopment
- Water
- Timing
- Year round use
- Economic benefits to bike shops
- Aggressive ride opportunities

Weaknesses (Major themes: Difficulty reaching common core values, lack of organization/planning, natural/physical environment, diverse use and management)

- Degradation through use
- Mixed use
- Lack of organized trails
- Lack of parking & trailheads (2)
- Rogue trails
- Challenging soils
- Unsustainable trail design
- Historical development & infrastructure
- Poor signage
- Hard to manage
- Risk of exclusivity
- Roadway barriers
- Fall line trails – erosion
- NIMBY
- Money
- Time
- Navigation
- Lack of respect for nature
- Steep topography with potential high impact
- Homeless sites/camps
- Personal safety
- Human nature
- Challenging environment
- Wetlands
- No evacuation plans
- Spot mischief
- Closing established trails
- Gentrification
- Legacy environmental conditions
- Public awareness
- Difficulty reaching common core values (2)
- Diverse interests & ownership
- Finding consensus
- Adjacent to private residential
- No script
- Turf wars
- Roadway noise
- Too popular
- Maintaining quality habitat

Opportunities (Major themes: lots of potential for restore, showcase, educate, manage, multi-use, various MTB disciplines and abilities, connections, signage)

- World class MTB destination
- Intermediate MTB trail
- Better wayfinding signage
- Connections
- Varied trail ability
- Diversity of trail users
- Collaborate & cooperate with parks
- Room for top quality uses
- Opportunity to enhance experiences
- Opportunity to restore, showcase, educate
- Understanding user groups – create next level
- Deeply understand users
- Winter use/year round use
- Education
- Measure triple bottom line
- Programming
- Creation of group to develop shared vision
- More fully utilize property
- Advanced gravity trail park
- Stewardship
- Progressive skill system
- Draw youth outside
- Multi-age fitness & health resource
- Destination
- Multi-user buy in & supports management
- Race opportunities on trails designed with BMP's
- Model for others
- Apply others' models
- Provide accessibility
- Economic stimulation
- Enhance existing asset
- Timing & future use – leave options open
- Shared & more parking options
- Big picture/planned
- Improve walking & biking access/connection
- Expansion
- Skills course
- Opportunities for exploration
- Trail from town to connect the commons

Threats (Major themes: overuse, stray from common core, diverse interests, loss of what makes this land special)

- User conflict
- Overuse
- Adjacent development
- Loss of State 40 acre parcel
- Changing political winds
- Lack of funding
- Liability associated with features & collisions
- Stray from common core
- Environmental impacts – erosion & sediment transport
- Careful advancement
- Maintenance funding sustainability
- Diversity of planners
- Loss of access points
- Lack of formal agreements
- Negligent design
- Lack of work logging – due diligence
- Meeting fatigue
- Poor public engagement
- E-bikes
- Canopy loss
- Bandit trail building
- Loss of exploration feel
- Over building
- Potential deed restrictions

From: Brian VanDenBrand
Sent: Thursday, September 29, 2016 10:40 AM
To: Dorothy Petroskey
Subject: FW: RFQ Analysis
Attachments: Proposal Summary Table - Boardman River Nature Preserve.docx

Please print this out for the Park Commission packet.

Thanks,

Brian VanDenBrand

Deputy Planner
 Charter Township of Garfield
 3848 Veterans Drive
 Traverse City, MI 49684

Phone: 231-941-1620
bvandenbrand@garfield-twp.com

From: Jennifer Hodges [<mailto:jennifer@gfa.tc>]
Sent: Tuesday, August 30, 2016 11:17 AM
To: Brian VanDenBrand
Cc: Chuck Korn
Subject: RFQ Analysis

summary, honestly it is a toss up between Spicer and Prein. I have highlighted some key things here that I wanted you to be aware of and also have attached a spreadsheet for your use. You have had a working relationship with all of them I believe so depending on whom you select, so I would suggest you inquire with them appropriately the comments I provided you. So basically I would make your final selection based upon working past working relationship. I hope you have found this helpful and thank you for letting me review.

Attached is the spreadsheet for the analysis:

1. Wade Trim:
 - ~Most expensive and local project experience
 - ~Using SME for soils and wetland delineation ☺
 - ~hourly rates are \$10 to \$15 higher than Prein or Beckett
2. Beckett Raeder:
 - ~Had qualifiers to renegotiate fees if construction budgets came in higher ☹
 - ~Using Otwell for soils which is ok..SME is better
 - ~Did not state if completing delineation of wetland
 - ~Cheapest overall price and local. Least likely to pay mileage expense
 - ~Did not provide meeting attendance, testing / oversight pricing as requested
 - ~No kayak launch experience, just boat launch
3. Prein
 - ~No kayak launch experience, just boat launch
 - ~3rd cheapest and local
 - ~Didn't state whom they would use as a subconsultant to do wetland delineation / soil investigation

4. Spicer

- ~Only one with significant amount of kayak launch design experience
- ~Using Otwell for soils and geotechnical which is ok, SME is better
- ~No local office (Manistee) and only \$1,000 less than Prein
- ~Do not charge for mileage / reproduction fees (including in staff hourly rate)
- ~Their hourly staff rates were higher than Prein or Beckett by about \$10 to \$15
- ~No real local projects, all downstate

In summary, honestly it is a toss up between Spicer and Prein. I have highlighted some key things here that I wanted you to be aware of and also have attached a spreadsheet for your use. You have had a working relationship with all of them I believe so depending on whom you select, so I would suggest you inquire with them appropriately the comments I provided you. So basically I would make your final selection based upon working past working relationship. I hope you have found this be helpful and thank you for letting me review.

Jennifer Hodges, P.E.
Project Manager
Gourdie Fraser
(231) 313-4861 – Cell
jennifer@gfa.tc

	Spicer Group	Prein & Newhof	Beckett & Raeder, Inc.	Wade Trim
Criteria 1: Local Presence	No office in TC. Closest office in Manistee (130 mi. / 3 hrs round trip)	Has office in TC. Project team likely located in Grand Rapids or Cadillac	Has office in TC. Project team likely located in Petoskey	Has office in TC. Staffed with limited project team members
Criteria 2: Experience with Park Design	Strong experience shown, multiple comparable projects highlighted	Strong experience shown, multiple comparable projects highlighted	Strong experience shown, multiple comparable projects highlighted	Strong experience shown, multiple comparable projects highlighted
Criteria 3: Experience with Trail Design	Strong experience shown, multiple comparable projects highlighted	Strong experience shown, multiple comparable projects highlighted	Strong experience shown, multiple comparable projects highlighted	Strong experience shown, multiple comparable projects highlighted
Criteria 4: Experience with ADA/UA Compliance & Kayak Launch	Strong experience shown with ADA/UA design. Multiple projects shown with ADA canoe/kayak launch. Will utilize sub-consultant Mark Trieglaff – ADA design specialist	Moderate experience shown with ADA/UA design. Highlighted projects showed limited inclusion of ADA Design. No inclusion of a previous project example with a canoe/kayak launch.	Moderate experience shown with ADA/UA design. Highlighted projects showed boat launch experience but no inclusion of previous project including canoe/kayak launch.	Good experience shown with ADA/UA design. One project shown with ADA canoe/kayak launch (one constructed four others designed with construction pending).
Criteria 5: Experience with DNR Trust Fund Grant Funding	Strong experience: Seven Trust Fund Grant projects identified, three of which include a kayak/canoe launch	Strong experience: Six Trust Fund Grant projects identified	Strong experience: Five Trust Fund Grants, Eight total DNR Funded projects identified	Strong experience: Five Trust Fund Grant projects identified
Criteria 6: Stated Means & Methods to Minimize Future Maintenance Costs	Material selection (anti-corrosion coated metals, synthetic decking materials)	Two courses of asphalt, focus on soil erosion and drainage for asphalt trail.	Low maintenance native landscaping	Reducing steep slopes & utilizing native vegetation.
Criteria 7: Stated Means & Methods to Control Construction Costs and Schedule	Frequent meeting / communication. Project management software: Vision accounting & Microsoft Project / Outlook	Proprietary costs database, retain list of preferred contractors for projects, detailed plans and construction documents.	Proposal states: "as a means to maintain project schedule, BRI will revise the schedule accordingly to reflect any anticipated periods of regulatory review and changes in the design process".	Perform initial review of design elements with project budget & adjust if necessary. Use BST Management Information Software to track costs progress costs and billing.
Criteria 8: Design Fee Amount and Services	\$25,900 Not to Exceed	\$26,000 Not to Exceed (Review Fees and Bidding Services not included)	\$23,880 Not to Exceed. Two preliminary design meetings and one final review meeting identified in the work plan	\$31,950 Not to Exceed. Includes one site walk through meeting with design team and sub-consultants.
Criteria 9: Team Member Bill Out Rates and Add-On Costs	Principal in Charge: \$200.00 / Hr Professional Engineer: \$135.00 / Hr Landscape Architect: \$122.00 / Hr Mileage, Reproduction, and Communication Fees included in Hourly Rates	Meetings & Workshops: \$101.00 / Hr (including drive time) Mileage \$0.60 / Mile Add'l Landscape Improvements: \$101.00 / Hr Cons. Staking: \$3,300.00 Not To Exceed Cons. Oversight: \$74.00 / Hr Material Testing: \$74.00 / Hr	Project Manager: \$120.00 / Hr Professional Engineer: \$130.00 / Hr Landscape Architect: \$110.00 / Hr Project Professional: \$90.00 / Hr Mileage, Reproduction, and Review Fees are unknown, stated to be billed "At Cost"	Principal in Charge: \$168.00 / Hr Project Manager: \$110.00 / Hr Project Engineer: \$174.00 / Hr Project Surveyor: \$113.00 / Hr Structural Engineer: \$172.00 / Hr Mileage \$0.60 / Mile Reproductions \$0.10 - \$1.40 / Sheet
Other Notable Points of Interest	Design Development: October – December Project available for bidding in early April	First preliminary design review meeting in late November, Project available for bidding in late March. Has recently worked with Garfield Township.	Three of four project team members are ASLA, the fourth is a PE. Work plan includes on-site meeting with DEQ for permitting. Design Development: October - mid-November, Final project deliverables in early January. Will utilize two sub consultants: Otwell-Mawby and Michigan Geomatics. Sub-consultants fees are marked up 15%.	Large firm with wide array of professionals to utilize for specific design elements. Will utilize two sub consultants: King & MacGregor (KME) and Soil and Material Engineers (SME). Sub-consultants fees are marked up 15%.
Points of Clarification – Questions to Ask	How many, if any, meetings are included in Not to Exceed costs? Are sub-consultant fees included in Not to Exceed costs?	How many, if any, meetings are included in Not to Exceed costs?	Are the meetings identified in the work plan included in Not to Exceed costs? Is the only means of controlling the schedule to adjust the proposed schedule? What is the "cost" of mileage and reproductions? Are sub-consultant fees included in Not to Exceed costs?	Are any meetings beyond the initial walk through included in Not to Exceed costs?



September 26, 2016

Robyn L. Schmidt
DEQ Water Resources Division
Cadillac District Office
120 West Chapin Street
Cadillac, MI 49601-2158

Dear Robyn,

Enclosed is a Joint Permit Application for the construction of a timber boardwalk at Miller Creek Nature Reserve, property owned by the Charter Township of Garfield, located in Section 21 of Garfield Township (T.27N, R.11W), in Grand Traverse County, MI. You will find an authorization letter from Garfield Charter Township, the application fee receipt for an Individual Permit with the DEQ, the Joint Permit application, maps to the proposed location, drawings of site plans, and pictures of the existing trail. If you have any questions or would like to meet on site, please feel free to contact me at 231-941-0960 x19 or by email at tvitale@gtcd.org.

Sincerely,

Thomas Vitale
Parkland Steward
Grand Traverse Conservation District



Charter Township of Garfield

Grand Traverse County

3848 VETERANS DRIVE
TRAVERSE CITY, MICHIGAN 49684
PH: (231) 941-1620 • FAX: (231) 941-1588

September 21, 2016

Ms. Robyn Schmidt
DEQ Water Resources Division
Cadillac District Office
120 West Chapin Street
Cadillac, MI 49601-2158

Dear Ms. Schmidt,

I, Chuck Korn, Supervisor, of Garfield Charter Township, do hereby grant authority to the Grand Traverse Conservation District to seek permits and perform all necessary work for the installation of a timber boardwalk on Garfield Township's Miller Creek Nature Reserve property located in Section 21 of Garfield Township (T.27N, R.11W), Grand Traverse County, MI.

Sincerely,

Chuck Korn, Supervisor
Charter Township of Garfield

cc: Tom Vitale, Parkland Steward, GTCD



AGENCY USE	Previous USACE File Number	Date Received	DEQ File Number
	USACE File Number		Fee received \$

Validate that all parts of this checklist are submitted with the application package. Fill out application and additional pages as needed.

- All items in Sections 1 through 9 are completed.
- Project-specific Sections 10 through 20 are completed.
- Dimensions, volumes, and calculations are provided for all impact areas.
- All information contained in the headings for the appropriate Sections (1-20) are addressed, and identified attachments (➔) are included.
- Map, site plan(s), cross sections; one set must be black and white on 8 1/2 by 11 inch paper; photographs.
- Application fee is attached.

1 Project Location Information For Latitude, Longitude, and TRS info anywhere in Michigan see www.mcqi.state.mi.us/wetlands/

Project Address (road, if no street address) <i>Miller Creek Nature Reserve 3125 W. South Airport Road</i>	Zip Code <i>49684</i>	Municipality (Township/Village/City) <i>Garfield Township</i>	County <i>Grand Traverse</i>
Property Tax Identification Number(s) <i>05-021-061-00</i>	Latitude <i>44.721325 N</i>	Township/Range/Section (TRS) T <i>27</i> N or S; R <i>11</i> E or W; Sec <i>21</i>	
Subdivision/Plat and Lot Number	Longitude <i>- 085 638345 W</i>	OR Private Claim # _____	

2 Applicant and Agent Information

Owner/Applicant (individual or corporate name) <i>Garfield Charter Township</i>	Agent/Contractor (firm name and contact person) <i>Grand Traverse Conservation District - Tom Vitale</i>
Mailing Address <i>3848 Veterans Drive</i>	Mailing Address <i>1450 Cass Road</i>
City <i>Traverse City</i> State <i>MI</i> Zip Code <i>49684</i>	City <i>Traverse City</i> State <i>MI</i> Zip Code <i>49685</i>
Contact Phone Number <i>231-941-1620</i> Fax <i>231-941-1588</i>	Contact Phone Number <i>231-941-0960</i> Fax <i>231-941-0837</i>
Email <i>Bvandenbrand@garfield-twp.com</i>	E-mail <i>tvitale@gtcd.org</i>
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project? ➔ If no, attach letter(s) of authorization from all property owners including the owner of the disposal site.	
Property Owner's Name (If different from applicant) <i>Garfield Charter Township</i>	Mailing Address <i>3848 Veterans Drive</i>
Contact Phone Number <i>231-941-1620</i>	City <i>Traverse City</i> State <i>MI</i> Zip Code <i>49684</i>

3 Project Description

Project Name <i>Miller Creek Nature Reserve Boardwalk</i>	Preapplication File Number - - -P
Name of Water body <i>Miller Creek</i>	Date project staked/flagged <i>9/06/16</i>

<p>The proposed project is on, within, or involves (check all that apply)</p> <p><input type="checkbox"/> an inland lake (5 acres or more)</p> <p><input type="checkbox"/> a pond (less than 5 acres)</p> <p><input checked="" type="checkbox"/> a stream, river, ditch or drain</p> <p><input type="checkbox"/> a legally established County Drain Date Drain was established _____</p> <p><input type="checkbox"/> a channel/canal</p> <p><input checked="" type="checkbox"/> 500 feet of an existing water body</p> <p><input type="checkbox"/> a Great Lake or Section 10 Waters</p> <p><input checked="" type="checkbox"/> a wetland</p> <p><input type="checkbox"/> a 100-year floodplain</p> <p><input type="checkbox"/> a dam</p> <p><input type="checkbox"/> a designated high risk erosion area</p> <p><input type="checkbox"/> a designated critical dune area</p> <p><input type="checkbox"/> a designated environmental area</p>	<p>Project Use</p> <p><input type="checkbox"/> private</p> <p><input type="checkbox"/> commercial</p> <p><input checked="" type="checkbox"/> public/government</p> <p><input type="checkbox"/> project is receiving federal/state transportation funds</p> <p><input type="checkbox"/> Wetland Restoration</p> <p><input type="checkbox"/> other</p>
---	--

Indicate the type of permit being applied for: General Permit Minor Project Individual (All other projects.) ➔ See Appendix C.

Written Summary of All Proposed Activities *Construct a 1,400' x 4' boardwalk for foot traffic through wetland and lowland conifers with seasonally wet soils in the upper reaches of Miller Creek. This will be open for public use at Garfield Township's Miller Creek Nature Reserve.*

Construction Sequence and Methods *Boardwalk is to be placed on a pod system to minimize impact. No major excavation is required. All work will be done by hand. Little debris clearing of down trees and woody shrubs may be needed. Traeted lumber is to be used. Two footbridges with ~10" utility pole base and stringers will span 20' over creek. Decking will be constructed using 2"x6" treated boards. See attached plans for further details.*



4 Project Purpose, Use and Alternatives *Attach additional sheets as necessary.*

Describe the purpose of the project and its intended use; include any new development or expansion of an existing land use.

This boardwalk is to improve the established trail network at Miller Creek Nature Reserve by increasing trail connectivity and enabling sustainable access through lowland conifer habitat for the education and enjoyment of public recreational users.

Describe the alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative locations, project layout and design, and construction technologies. For utility crossings include alternative routes and construction methods.

An alternative would be not to construct the boardwalk, thereby disallowing public access to that portion of the park.

5 Locating Your Project Site *Attach a legible black and white map with a North arrow.*

Names of roads of closest intersection *W. South Airport Road and Crossing Circle Drive*

Directions from main intersection to the project site, with distances from the best and nearest visible landmark and water body *From HI 31, turn east on W. South Airport Rd, continue east for 0.5 miles, turn south into drive for Aldi Foods, follow straight south to foot trail beyond parking bollards at trail marker 1;*

Continue south downhill on foot trail approximately 200', head west along trail north of pond for approximately 650'; follow flagged route to the south for proposed boardwalk.

Description of buildings on the site (color; 1 or 2 story, other)

Description of adjacent landmarks or buildings (address; color; etc)

Behind Aldi Food and Planet Fitness off W. South Airport Rd.

How can your site be identified if there is no visible address? *Trailhead for Miller Creek Nature Reserve*

6 Easements and Other Permits

No Yes Is there a conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property?

➔ If yes, attach a copy. Provide copies of court orders and legal lake levels if applicable.

List all other federal, interstate, state, or local agency authorizations including required assurances for Critical Dune Area projects.

Agency	Type of Approval	Number	Date Applied	Date approved /denied	Reason for denial

Compliance

If a permit is issued, when will the activity begin? (M/D/Y) *ASAP*

Proposed completion date (M/D/Y) *10/31/2017*

No Yes Has any construction activity commenced or been completed in a regulated area?

➔ If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s).

No Yes Were the regulated activities conducted under a DEQ and/or USACE permit?

➔ If Yes, list the permit numbers *NA*

No Yes Are you aware of any unresolved violations of environmental law or litigation involving the property?

➔ If Yes, attach explanation.

8 Adjoining Property Owners *Provide current mailing addresses. Attach additional sheets/labels for long lists.*

Established Lake Board

Contact Person

Mailing Address

City

State and Zip Code

Lake Association

List all adjoining property owners.

If you own the adjoining lot, provide the requested information for the first adjoining parcel that is not owned by you.

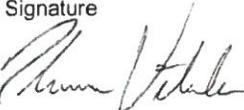
Property Owner's Name	Mailing Address	City	State and Zip Code
<i>GRAND TRAVERSE COMMERCE CENTRE</i>	<i>3347 W SOUTH AIRPORT RD STE A</i>	<i>Traverse City</i>	<i>49684</i>
<i>ARBORS NORTH ASSOCIATES LLC</i>	<i>1600 S BEACON BLVD STE 260</i>	<i>Grand Haven</i>	<i>49417</i>



9 Applicant's Certification

Read carefully before signing.

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application; that it is true and accurate; and, to the best of my knowledge, that it is in compliance with the State Coastal Zone Management program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the DEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site before and during construction and after the completion of the project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

<input type="checkbox"/> Property Owner <input checked="" type="checkbox"/> Agent/Contractor <input type="checkbox"/> Corp. or Public Agency / Title	Printed Name Thomas Vitale Grand Traverse Conservation District - Parkland Steward	Signature 	Date 9/27/2016
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<input type="checkbox"/> D. SHORE PROTECTION PROJECTS (See EZ Guides and Sample Drawings 2, 3, and 17. Complete Sections 10A, B, and/or C.)			
➔ For bioengineering projects include the list of native plants/seeds, if available.			
Type and length (ft)	<input type="checkbox"/> bioengineering (ft)	<input type="checkbox"/> revetment (ft)	<input type="checkbox"/> riprap (ft) <input type="checkbox"/> seawall/bulkhead (ft)
Structure is <input type="checkbox"/> new <input type="checkbox"/> repair <input type="checkbox"/> replacement of an existing structure		Will the existing structure be removed? <input type="checkbox"/> No <input type="checkbox"/> Yes	
Proposed Toe Stone (linear feet)		Distance of project from adjacent property lines (ft)	
Distance of project from an obvious fixed structure (example - 50 ft from SW corner of house)			
For bioengineering projects indicate the structure type <input type="checkbox"/> brush bundles <input type="checkbox"/> coir log <input type="checkbox"/> live stakes <input type="checkbox"/> tree revetment <input type="checkbox"/> other			
<input type="checkbox"/> E. DOCK - PIER – MOORING PILINGS (See Sample Drawing 10)			
➔ Attach a copy of the property legal description, mortgage survey, or a property boundary survey report.			
Dock Type <input type="checkbox"/> open pile <input type="checkbox"/> filled <input type="checkbox"/> crib <input type="checkbox"/> floating <input type="checkbox"/> cantilevered <input type="checkbox"/> spring piles <input type="checkbox"/> piling clusters <input type="checkbox"/> other			
Is the structure within the applicant's riparian area interest area? <input type="checkbox"/> No <input type="checkbox"/> Yes ➔ Show parcel property lines on the site plan.			
Proposed structure dimensions (ft) length width		Use <input type="checkbox"/> private <input type="checkbox"/> public <input type="checkbox"/> commercial	
Dimensions of nearest adjacent structures (ft) length width		Distance of dock from adjacent property lines (ft)	
<input type="checkbox"/> F. BOAT WELL (See EZ Guide. Complete Sections 10A and 10B)			
Dimensions (ft) length width depth		Number of boats	
Type of sidewall stabilization <input type="checkbox"/> concrete <input type="checkbox"/> riprap <input type="checkbox"/> steel <input type="checkbox"/> vinyl <input type="checkbox"/> wood <input type="checkbox"/> other			
Volume of backfill behind sidewall stabilization (cu yd)		Distance of boat well from adjacent property lines (ft)	
<input type="checkbox"/> G. BOAT RAMP (See EZ Guide. Complete sections 10A, 10B, and 10C for mattress and pavement fill, dredge, and riprap)			
Type <input type="checkbox"/> new <input type="checkbox"/> existing <input type="checkbox"/> maintenance/improvement		Use <input type="checkbox"/> private <input type="checkbox"/> public <input type="checkbox"/> commercial	
Existing overall boat ramp dimensions (ft) length width depth		Type of construction material <input type="checkbox"/> concrete <input type="checkbox"/> wood <input type="checkbox"/> stone <input type="checkbox"/> other	
Proposed overall ramp dimensions (ft) length width depth		Proposed ramp dimensions (ft) below ordinary high water mark length width depth	
Number of proposed skid piers	Proposed skid pier dimensions (ft) length width		Distance of ramp from adjacent property lines (ft)
<input type="checkbox"/> H. BOAT HOIST – ROOFS (See EZ Guide)			
Type <input type="checkbox"/> cradle <input type="checkbox"/> side lifter <input type="checkbox"/> other		Located on <input type="checkbox"/> seawall <input type="checkbox"/> dock <input type="checkbox"/> bottomlands	
Hoist dimensions, including catwalks (ft) length width			
Area occupied, including cat walks (sq ft)		Distance of hoist from adjacent property lines (ft)	
Permanent Roof <input type="checkbox"/> No <input type="checkbox"/> Yes ➔ If Yes, how is the roof supported?		Maximum Roof Dimensions (ft): length width height	
<input checked="" type="checkbox"/> I. BOARDWALKS and DECKS in WETLANDS or FLOODPLAINS (See Sample Drawings 5 and 6. Complete Sections 12 and/or 13)			
➔ Provide a table for multiple boardwalks and decks proposed in one project; include locations and dimensions.			
Wetlands		Floodplains	
Boardwalk <input checked="" type="checkbox"/> on pilings <input type="checkbox"/> on fill	Deck <input type="checkbox"/> on pilings <input type="checkbox"/> on fill	Boardwalk <input type="checkbox"/> on pilings <input type="checkbox"/> on fill	Deck <input type="checkbox"/> on pilings <input type="checkbox"/> on fill
Dimensions (ft) length 1,400' width 4'	Dimensions (ft) length width	Dimensions (ft) length width	Dimensions (ft) length width
<input type="checkbox"/> J. INTAKE PIPES (See Sample Drawing 16) or OUTLET PIPES (See Sample Drawing 22)			
If outlet pipe, discharge is to <input type="checkbox"/> inland lake <input type="checkbox"/> stream, drain or river <input type="checkbox"/> overland flow <input type="checkbox"/> Great Lake <input type="checkbox"/> wetland <input type="checkbox"/> other			
Number of pipes	Pipe diameters and invert elevations	Does pipe discharge below the OHWM?	<input type="checkbox"/> No <input type="checkbox"/> Yes
		Is the water treated before discharge?	<input type="checkbox"/> No <input type="checkbox"/> Yes
Type <input type="checkbox"/> headwall <input type="checkbox"/> end section <input type="checkbox"/> other		Dimensions of headwall OR end section (ft) length width height	



12 Activities That May Impact Wetlands (See Sample Drawings 8 & 9). Complete other Sections as applicable.

- Locate your site and wetland information with the DEQ Wetlands Map Viewer at www.mcqi.state.mi.us/wetlands/

For information on the DEQ's Wetland Identification Program (WIP) visit www.mi.gov/wetlands.

- ➔ Provide a detailed site plan with labeled property lines, upland and wetland areas, and dimensions and volumes of wetland impacts.
- ➔ Complete the wetland dredge and wetland fill dimension information below for each impacted wetland area.
- ➔ Attach tables for multiple impact areas or activities.
- ➔ Attach at least one cross-section for each wetland dredge and/or fill area; show wetland and upland boundaries on the cross-section.

Has the DEQ conducted a wetland assessment for this parcel?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	➔ If Yes, provide a copy or WIP number:
Has a professional wetland delineation been conducted for this parcel?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	➔ If Yes, provide a copy with data sheets
Is there a recorded DEQ easement on the property?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	➔ If Yes, provide the easement number
Did the applicant purchase the property before October 1, 1980?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	➔ If Yes, provide documentation.
Is any grading or mechanized land clearing proposed?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	➔ If Yes, label the locations on the site plan.
Has any of the proposed grading or mechanized land clearing been completed?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	➔ If Yes, label the locations on the site plan

Proposed Activity	<input checked="" type="checkbox"/> boardwalk or deck (Section 10I)	<input checked="" type="checkbox"/> bridges and culverts (Section 14)	<input type="checkbox"/> designated environmental area
	<input type="checkbox"/> dewatering	<input type="checkbox"/> draining surface water	<input type="checkbox"/> driveway / road
	<input type="checkbox"/> fences (Section 10L)	<input type="checkbox"/> fill or dredge	<input type="checkbox"/> restoration
	<input type="checkbox"/> septic system	<input type="checkbox"/> stormwater discharge (Section 10J)	<input type="checkbox"/> other

FILL	Dimensions maximum length (ft) maximum width (ft)	Area <input type="checkbox"/> acres <input type="checkbox"/> sq ft	Average depth (ft)	Volume (cu yd)
REDGE	Dimensions maximum length (ft) maximum width (ft)	Area <input type="checkbox"/> acres <input type="checkbox"/> sq ft	Average depth (ft)	Volume (cu yd)

Spoils Disposal	Dredged or excavated spoils will be placed <input type="checkbox"/> on-site <input type="checkbox"/> landfill <input type="checkbox"/> USACE confined disposal facility <input type="checkbox"/> other upland off-site
	For disposal, provide a ➔ Detailed spoils disposal area location map and site plan with property lines. ➔ Letter of authorization from property owner of spoils disposal site, if disposed off-site.

Septic System	The proposed project will be serviced by: <input type="checkbox"/> public sewer <input type="checkbox"/> private septic system ➔ Show system on plans.	If a private septic system is proposed, has an application for a permit been made to the County Health Department? <input type="checkbox"/> No <input type="checkbox"/> Yes If Yes, has a permit been issued? <input type="checkbox"/> No <input type="checkbox"/> Yes ➔ Provide a copy of the permit.
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Describe the wetland impacts, the proposed use or development, and the alternatives considered:
The proposed boardwalk and footbridges will have minimal impact on the wetland and provide opportunities to further the education and enjoyment on the upper reaches of Miller Creek. The boardwalk is a pod system that does not require fill or excavating. Minimal excavating may be needed for footbridge base to maintain level.

Does the project impact more than 1/3 acre of wetland? No Yes
 ➔ If Yes, submit a Mitigation Plan with the type and amount of mitigation proposed. For more information go to www.mi.gov/wetlands

Describe how impacts to waters of the United States will be avoided and minimized:
Impacts will be minimal given the low impact design. Sensitive areas will be avoided. All work will be done by hand... no heavy mechanical equipment is to be used.

Describe how the impact to waters of the United States will be compensated. OR Explain why compensatory mitigation should not be required for the proposed impacts.
Compensatory mitigation for the proposed boardwalk is not required because this is an improvement to an already established trail system on public property.



14 Bridges and Culverts Including Foot and Cart Bridges. (See EZ Guides and Sample Drawings 5, 14A, 14B, 14C, 14D.)

- Complete other applicable Sections, including 10A-C.
A hydraulic analysis or hydrologic analysis may be required to fully assess impacts. → Attach hydraulic calculations.
- High Water Elevation - describe reference point and highest known water level above or below reference point and date of observation.
 - Attach additional sheets for multiple bridges and/or culverts.
 - Provide detailed site-specific drawings of existing and proposed Plan and Elevation View at a scale adequate for detailed review.
 - Provide all information in the boxes below; do not write in a reference to plan sheets. Show reference datum used on plans.

Stream Information	The site has a high water elevation (ft) <input type="checkbox"/> above or <input type="checkbox"/> below the Reference Point of _____ Date observed _____		
	Reference datum used <input type="checkbox"/> NGVD 29 <input type="checkbox"/> NAVD 88 <input type="checkbox"/> IGLD 85 (Great Lakes coastal areas) <input type="checkbox"/> other _____		
	Average stream width (ft) at the ordinary high water mark (OHWM) outside the influence of any ponding or scour holes around the structure	Upstream	8'
		Downstream	8'
	Cross-sectional area of primary channel (sq ft) _____ (See Sample Drawing 14C for more information)		
	The width of the stream where the water begins to overflow its banks. Bankfull width (ft) 10'		
	The invert of the stream 100-feet from structure (ft)	Upstream	
	Downstream		
Is the existing culvert perched? <input type="checkbox"/> No <input type="checkbox"/> Yes If Yes, provide a profile of the channel bottom at the high and low points for a distance of 200 feet upstream and downstream of the culvert.			

Complete this form for each bridge / culvert location.		Existing	Proposed
Bridge	Number of bridge spans		2
	Bridge type (concrete box beam, concrete I-beam, timber, etc.)		timber
	Bridge span (length perpendicular to stream) (ft)		20'
	Bridge width (parallel to stream) (ft)		6'
	Bottom of bridge beam (ft)	Upstream	
		Downstream	
	Stream invert elevation at bridge (ft)	Upstream	
		Downstream	
Bridge rise from bottom of beam to streambed (ft)		2'	
Culvert	Number of culverts		
	Culvert type (arch, bottomless, box, circular, elliptical, etc.)		
	Culvert material (concrete, corrugated metal, plastic, etc.)		
	Culvert length (ft)		
	Culvert <input type="checkbox"/> width <input type="checkbox"/> diameter (ft)		
	Culvert height prior to any burying (ft)		
	Depth culvert will be buried (ft)		
	Elevation of culvert crown (ft)	Upstream	
		Downstream	
	Higher elevation of <input type="checkbox"/> culvert invert OR <input type="checkbox"/> streambed within culvert (ft)	Upstream	
	Downstream		

Complete for both Bridges and Culverts	Entrance design (mitered, projecting, wingwalls, etc.)		
	Total structure waterway opening above streambed (sq ft)		
	Total structure waterway area below the 100-year elevation (sq ft) (if known)		
	Elevation of road grade at structure (ft)		
	Elevation of low point in road (ft)		
	Distance from low point of road to mid-point of bridge crossing (ft)		
	Length of approach fill from edge of bridge/culvert to existing grade (ft)		
	A Licensed Professional Engineer may certify that your project will not cause a harmful interference for a range of flood discharges up to and including the 100-year flood discharge. The "Required Certification Language" is found under "forms" on the "maps, forms and documents" link from the www.mi.gov/jointpermit page or a copy may be requested by phone, email, or mail. A hydraulic report supporting this certification may also be required.		
	Is Certification Language attached? <input type="checkbox"/> No <input type="checkbox"/> Yes		

3387 Veterans Dr
Traverse City MI 49684
231-933-1599
fax 933-3247

.....

Salisbury & May Construction LLC

9-22-2016
Miller Creek Boardwalk
Garfield Township
Grand Traverse Soil Conservation District
Traverse City MI

RE: Proposed Board Walk

PROPOSAL

Total Cost for 1400 lf Boardwalk \$225,568.00

We propose to construct and install 1400 lf of floating boardwalk along path prepared by grand traverse county soil conservation district personnel

Cost to include 140, 10 ft x 4' sections of treated ground contact deck sections installed on 6x6 treated support beams Deck sections are constructed with 2x6 pt joist @ 24" o.c. and 2x6 pt decking with 2x4 rub rail Deck sections will be installed along designated trail provided by grand traverse county personnel and will be cleared of trees, stumps and brush by grand traverse county

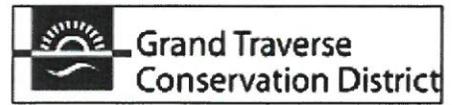
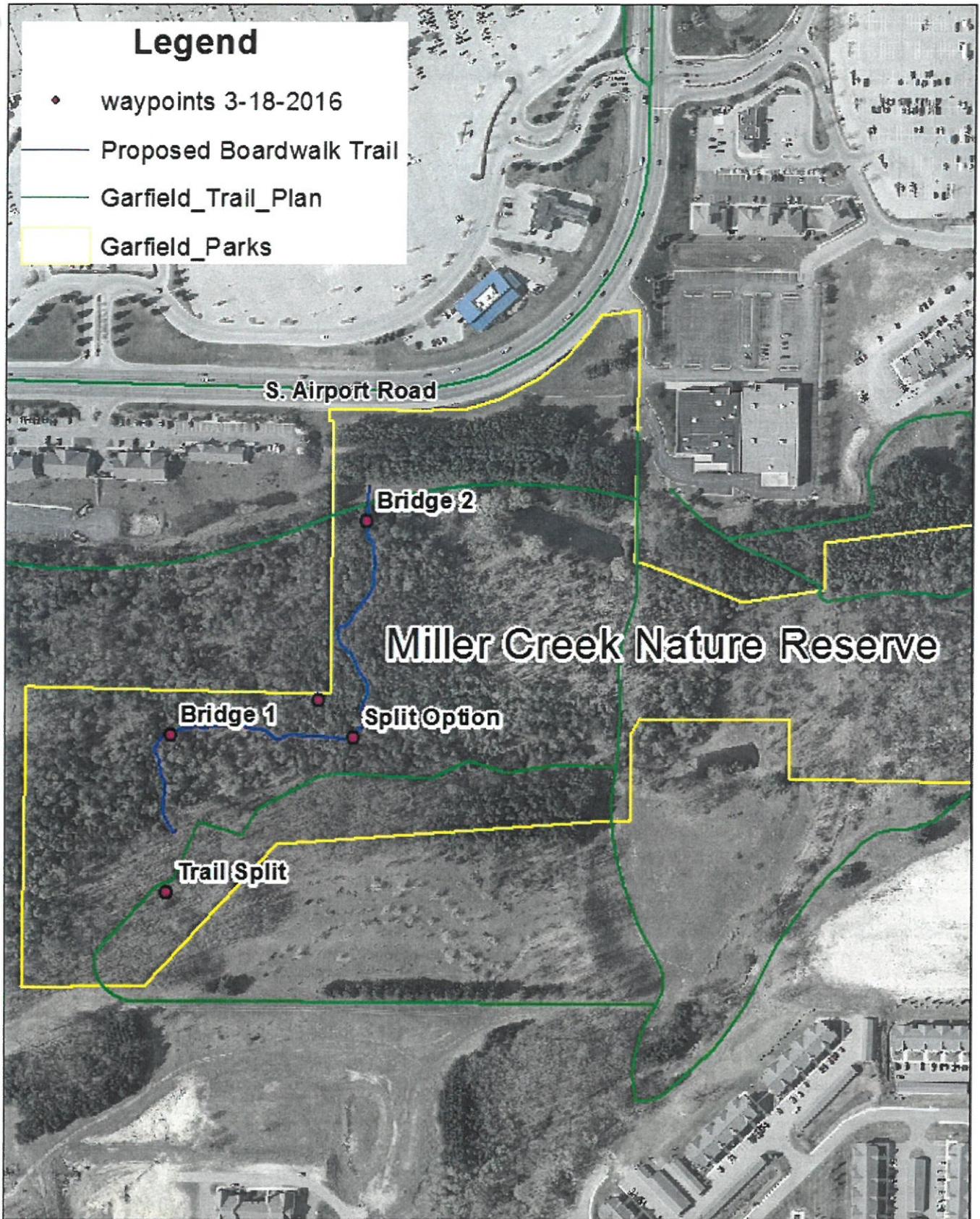
If additional sections are required an additional cost of \$1,611.00 per 10 ft section will be required

ACCEPTANCE OF PROPOSAL: _____

ACCEPTANCE OF PROPOSAL: _____

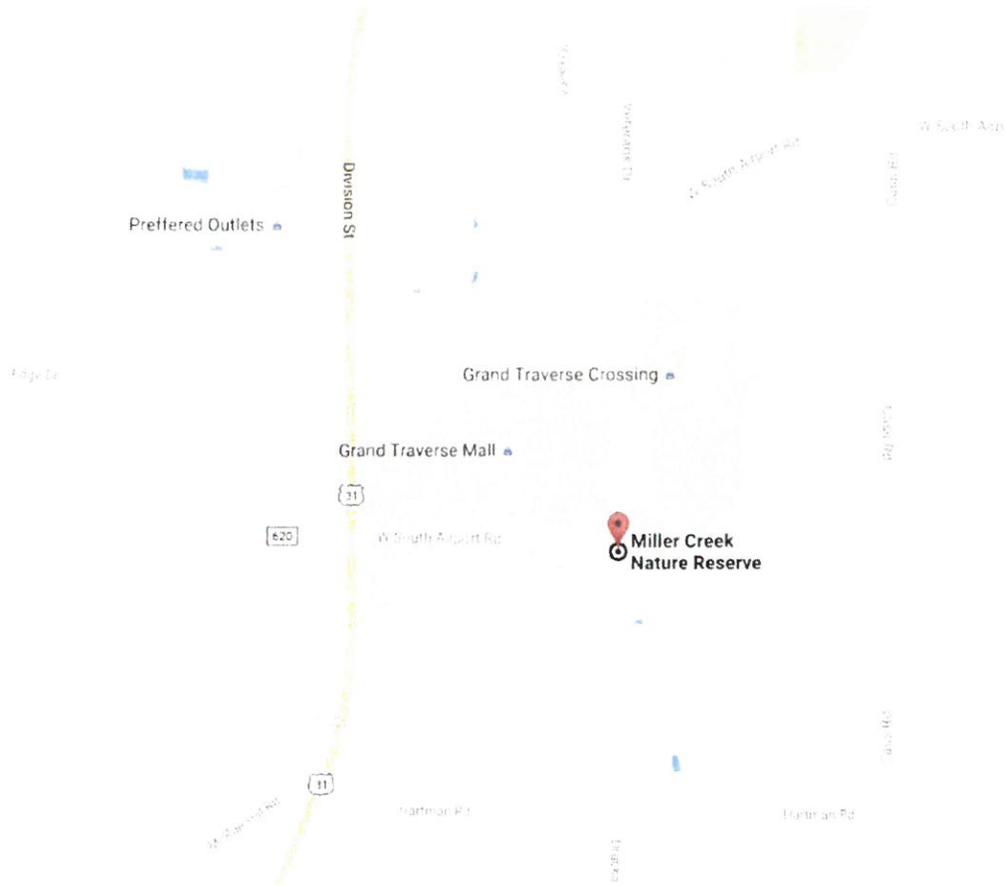
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Miller Creek Nature Reserve Proposed Boardwalk Trail - 2016



4/05/2016 - T. Vitale

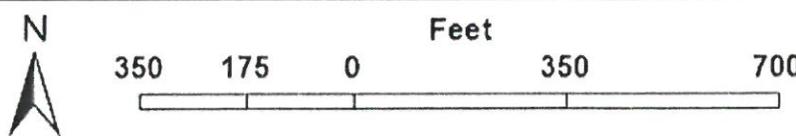
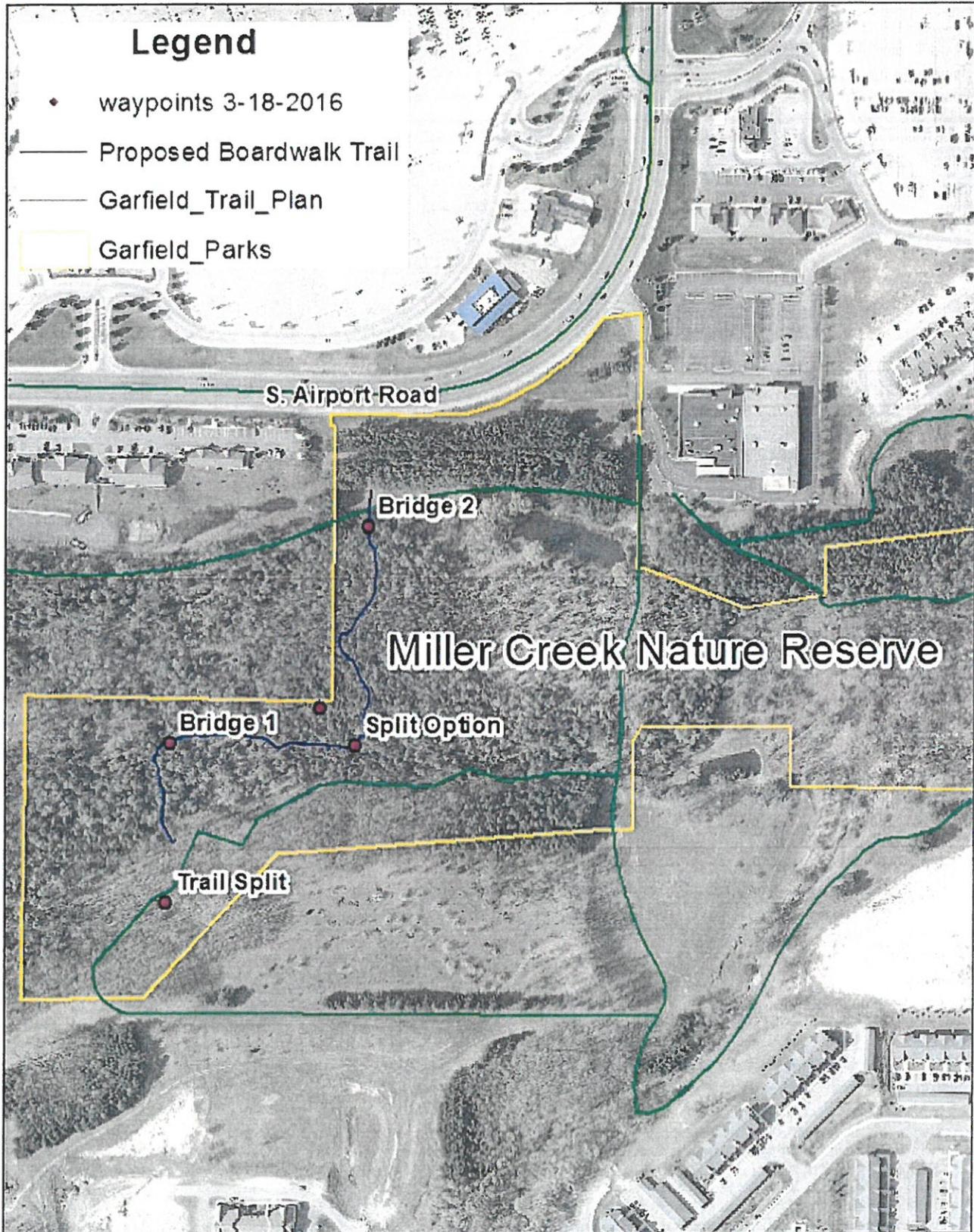
Miller Creek Nature Reserve – Garfield Township – Proposed Boardwalk



Images from Google Maps



Miller Creek Nature Reserve Proposed Boardwalk Trail - 2016



Miller Creek Nature Reserve – Garfield Township
Proposed Boardwalk – 2016



Stream Crossings for Footbridges



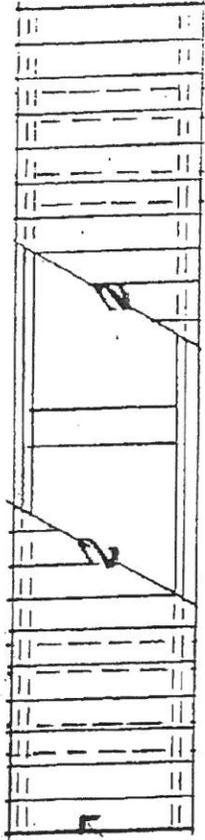


Proposed Boardwalk Route



TYPICAL BOARDWALK DESIGN

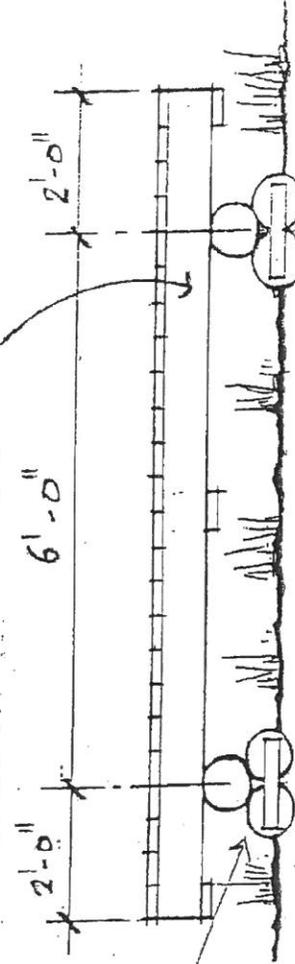
12'0"



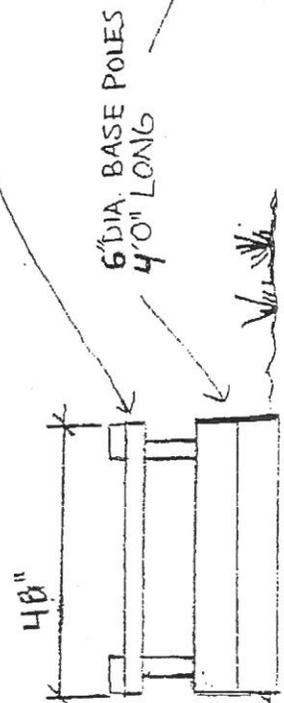
BOARDWALK - TOP VIEW
SCALE: 3/8" = 1'0"

2x6 Deck Boards w/
1/4" SPACE BETWEEN

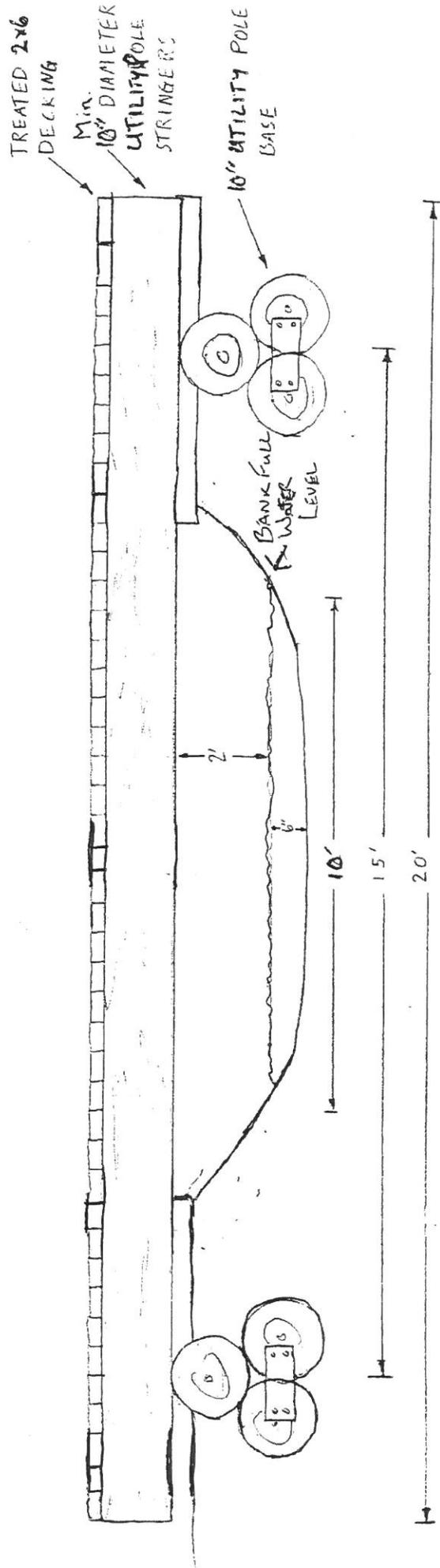
2 x 6 WOOD STRINGERS



BOARDWALK - SIDE VIEW SECTION
SCALE: 3/8" = 1'0"

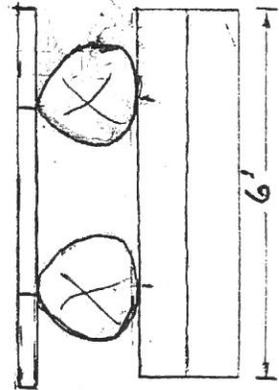


BOARDWALK - END VIEW
SCALE: 3/8" = 1'0"



CONSTRUCTION NOTES:

- DESIGN IS TYPICAL OF EXISTING FOOTBRIDGES ON SITE
- DIMENSIONAL LUMBER TO BE TREATED FOR GROUND CONTACT
- ALL FASTENERS TO BE HOT DIPPED GALVANIZED



FOOTBRIDGE SITE PLAN (TYPICAL)
 MILLER CREEK NATURE RESERVE
 GRAND TRAVERS COUNTY
 GARFIELD TOWNSHIP
 T27N., R14W. SEC 21

SEEDS

Ecology + Education + Design

Youth Conservation Corps

Since 2009



Quote

Date: June 3, 2016
 Valid Until:
 Quote #:
 Customer ID:

Customer:

GTCD
 Tom Vitale
 tvitale@gtcdd.org
 231-941-0960/231-258-7535

Project Description

GTCD Miller Creek Boardwalk
 1300 feet x 4 foot to be constructed in two 650 sections

SEEDS submitter signature: Bill Watson

Line Total	Discount explained if appropriate
Labor/Trail Corridor Prep and Clearing/Materials Staging/Construction = 3 weeks	
2x6x8 Treated Lumber 1300 x \$5.55 Decking	
2x6x10 Treated Lumber 390 x \$7.40 Stringers	
6x6x8 Treated Lumber 65 x \$23.65 Pod	
4x6x8 Treated Lumber 22 x \$15.85 Feet	
2x4x12 Treated Lumber Rub Rail 270 x \$6.15	
Fasteners/Hardware	
(if constructed out of locust = materials/hardware would be \$30,250)	
\$17,400.00	
\$7,215.00	
\$2,886.00	
\$1,537.25	
\$348.70	
\$1,660.50	
\$2,200.00	
Subtotal	\$33,247.45
Discount	
Total	\$33,247.45

Special Notes and Instructions

Once signed, please Fax, mail or e-mail it to the provided address.

Once the described deliverable is complete, we will provide an invoice that is payable upon receipt. We are an insured organization and are happy to provide information.

Above information is not an invoice and only an estimate of services/goods described above.
Payment will be collected according to the Terms and Conditions described in this quote.

Please confirm your acceptance of this quote by signing this document

Signature
Print Name
Date

If you have any questions concerning this quote, contact Bill Watson at 231-409-0868

Thank you for your business!

Po Box 2454, Traverse City, MI. 49685

Office phone and fax # 231-947-0312 or email bwatson@ecoseeds.org

This is an Agreement, by and between SEEDS (a Michigan nonprofit organization), located at 934 E Eight St, Traverse City, Michigan 49686 and the Customer Named above, (hereinafter referred to as "Client").

RECITALS

Client desires to utilize the consulting services of SEEDS who agrees to provide such services on the terms and conditions set forth herein.

TERMS

Engagement. Client engages SEEDS to perform the consulting services set forth in this proposal (hereinafter referred to as "Services"). Services other than those set forth in the proposal shall be performed only pursuant to a written addendum to this Agreement signed by both SEEDS and the Client. Unless otherwise specified in such addendum, additional Services shall be rendered by SEEDS subject to the terms and conditions of this Agreement.

Compensation. Client shall pay SEEDS for services rendered according to Quote and the attached terms and conditions.

Client's Authorized Agent. The Client has appointed the person named below as the authorized agent of the Client for purposes of this Agreement. As such, the agent is duly authorized and shall be responsible for the execution of any document pertaining to this Agreement or any amendment hereof, and for approving all change orders, addenda, and additional Services to be performed by SEEDS, if any.

Terms and Conditions. The terms and conditions of this Agreement shall include the provisions printed on the reverse side hereof and are hereby incorporated into this Agreement by reference.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement on the date indicated above.

TERMS AND CONDITIONS

1. This proposal will be considered null and void if project authorization is not received within 30 days of the date of proposal.

	<p>2. The Client hereby authorizes the above-described services and agrees to pay SEEDS at the stated price unless another basis of charge is indicated. The Client will pay SEEDS for work outlined above. The Client will be invoiced and, except as noted within these terms and conditions, payment is due within 30 days of the date of invoice. A service charge of 1.5% per month will be added to past due accounts. Accounts 30 days past due are subject to the Michigan Mechanic's Lien Law.</p>
	<p>3. Client agrees to pay SEEDS within thirty (30) days after receipt of an invoice.</p>
	<p>4. SEEDS agrees to perform in accordance with a standard of care generally exercised by other environmental and facilitation consultants within this state acting under similar circumstances and conditions.</p>
	<p>5. SEEDS' relationship to the Client is that of an independent contractor and not that of a partner, joint venture, or employee of the Client.</p>
	<p>6. The Client is to provide copies of all sampling and testing data regarding relevant engineering or environmental studies, which may have been previously performed. SEEDS may be required to utilize sampling, analysis, engineering and other studies prepared by the Client or other consultants. The Client understands that unless otherwise stated in the proposal or this agreement, SEEDS shall not verify or validate, nor shall it be liable for the completeness or accuracy of such data or studies or for claims, fines or penalties arising from the use thereof.</p>
	<p>7. SEEDS will use reasonable efforts to maintain confidentiality and not divulge information regarding the proposal, services or its report, except to the Client, parties designated by the Client in writing, or as required by law. Information that is in the public domain shall not be deemed confidential.</p>
	<p>8. Client in no way grants SEEDS, its employees, consultants, agents, representatives, contractors and subcontractors, for the purpose of performing all activities, studies and research the right at any time to enter the Site.</p>
	<p>9. SEEDS and the Client agree that acceptance by SEEDS of its responsibility under this agreement does not in any way impose upon SEEDS the obligations, responsibility, or liabilities of an owner or operator of the Site.</p>
	<p>10. The Client and SEEDS recognize that professional standards and ethics govern the performance of SEEDS' services under this agreement. If circumstances arise which, in SEEDS' opinion, preclude it for professional or ethical reasons from continuing such performance, SEEDS shall advise the Client of that fact. The parties shall immediately attempt to arrive at a mutually satisfactory solution. If this cannot be done to both parties' satisfaction, either party may terminate this agreement. If so, the Client shall compensate SEEDS in accordance with these terms and conditions.</p>
	<p>11. The Client bears full responsibility for any fines, penalties or administrative actions that may be incurred due to non-compliance with Federal or State reporting requirements that may be the results of any delays or actions by the Client or any suspension or termination of performance between the Client and SEEDS as defined within these terms and conditions.</p>
	<p>12. The Client may at any time, after providing ten days written notice, suspend further performance by SEEDS. SEEDS may, after providing written notice ten days in advance, suspend further performance if, at any time, payments by the Client for services rendered by SEEDS are not made in accordance with established payment terms. SEEDS may continue suspension of performance until payment is received for all services rendered by SEEDS prior to the date of suspension. Suspension of performance for a period exceeding 30 days for any reason, shall at the sole option of SEEDS result in termination or renegotiation of project scope of work, services provided, terms and conditions, schedule, and estimated costs prior to renewal of project activities and services. All suspensions shall extend the time schedule for performance in a mutually satisfactory manner, but at a minimum, the extension shall equal the duration of the suspension.</p>
	<p>13. The Client, at its sole discretion, may terminate, upon ten days written notice, the authorized project or any subsequent change order. SEEDS may, at its sole discretion and upon 10 days prior written notice, may terminate the authorized project or any subsequent change order.</p>
	<p>14. The Client shall pay SEEDS promptly within 15 days from receipt of invoice for services performed and charges incurred prior to the effective date of suspension or termination, plus suspension or termination charges.</p>
	<p>15. The Client and SEEDS acknowledge that differences, including but not limited to interpretation and opinion with respect to regulatory and technical issues, may arise between regulatory agencies and SEEDS as consultant for the Client during or after completion of the proposed services.</p>

	<p>16. If a dispute arises out of this agreement and if it cannot be settled through direct discussions, the parties agree to submit this dispute to mediation by a professional mediator selected by the parties. If all or any portion of the dispute remains unsettled, the parties agree to submit any unresolved controversy to arbitration. The parties further agree that a judgment upon the award rendered by the arbitrator(s) may be entered in the appropriate Circuit Court of the State of Michigan. The obligation to mediate and arbitrate disputes arising from this agreement shall survive termination of this agreement.</p>	
	<p>17. The proposal, project acceptance form and these terms and conditions constitute the full agreement between SEEDS and the Client.</p>	

Action Water Sports

988 West Commerce Drive
Traverse City, MI 49685
(231) 943-3434

Repair Estimate

Conservation Department

Estimate No 46
Date 3/02/16

Reg No	YR	Make	Model	Serial No
Engine	HP	Serial No	Trailer	

Problem No	Problem Description
1	

Floating dock 6'x30' straight out with 12' x 12' platform to the side. Also open rail design around the perimeter. The railing will be placed at 18" and 36" high.

*Pricing does not include anchoring system.
Payable By Customer

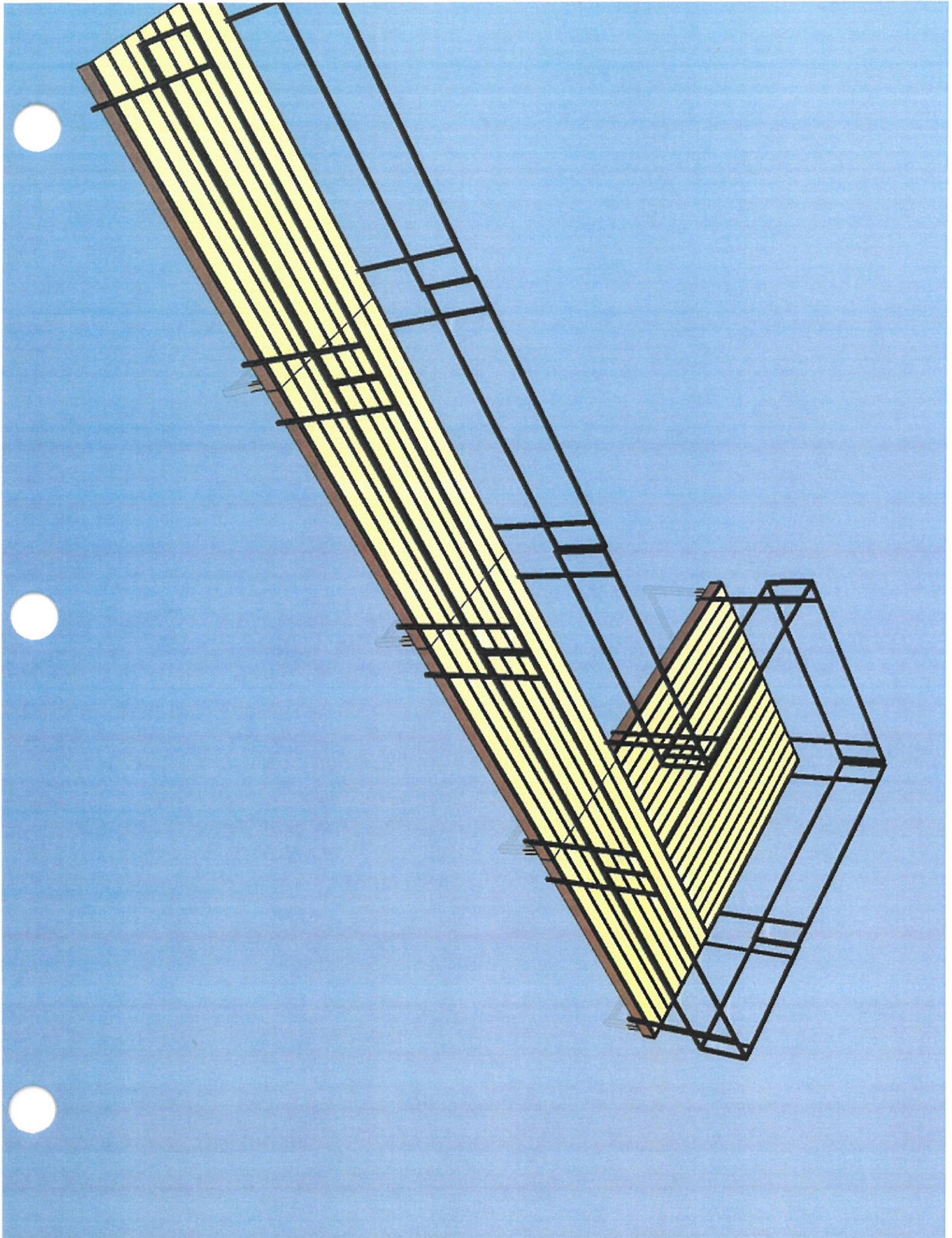
Part No	Make	Description	Qty	Price Each	Total
FLOATING DOCK	SUM	30X6 OUT WITH 12X12 PLATF	1.00	21,450.00	21,450.00
ANCHORING		Est cost on anchor system	1.00	2,500.00	2,500.00
Parts Sub Total					23,950.00

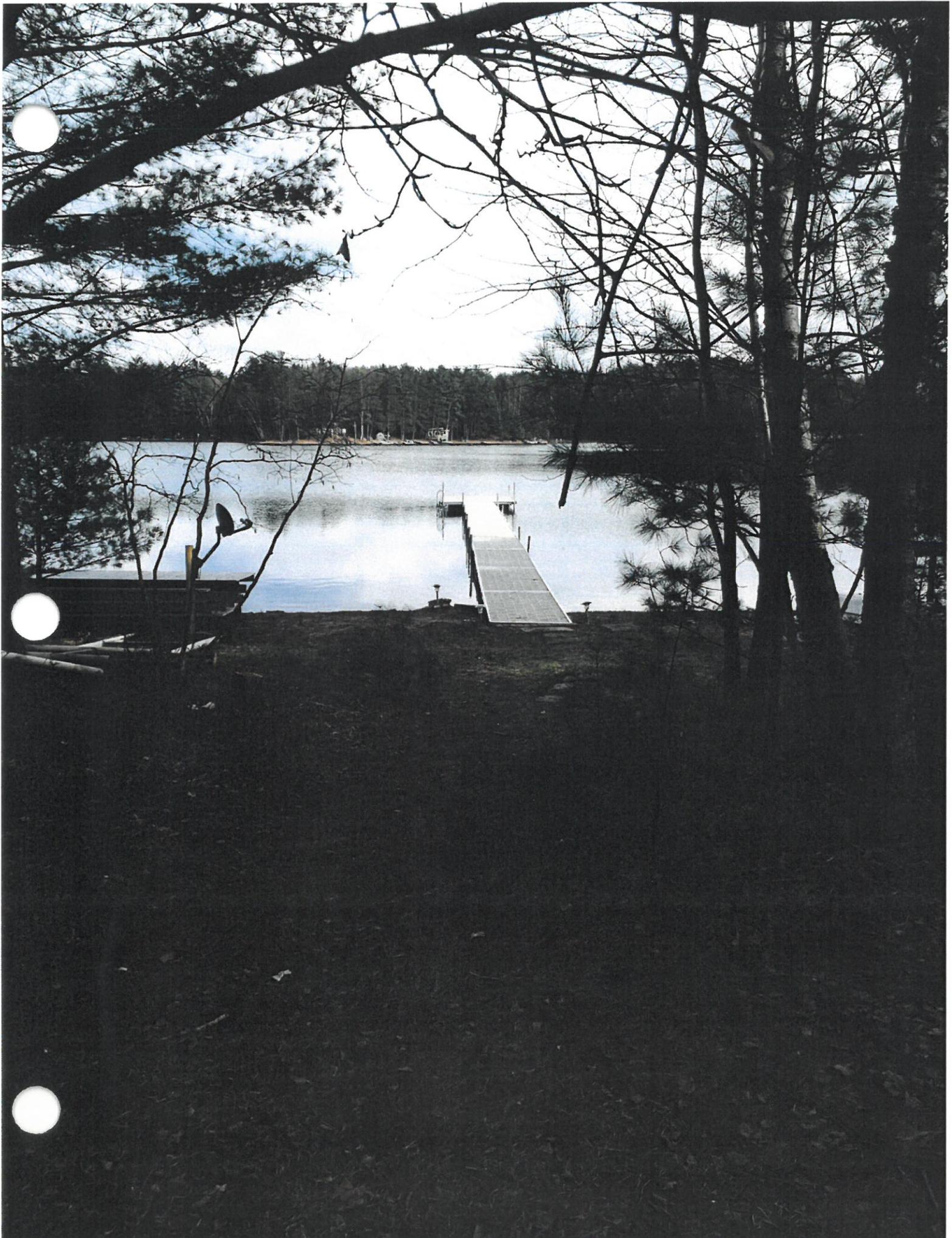
Repair Estimate Summary

The above is an estimate based upon our inspection, and does not cover any additional parts or labor which may be subsequently discovered during the repair process. Occasionally, after repairs have commenced, damaged or broken parts are discovered which are not evident during the initial inspection. Prices on this estimate are good for thirty (30) days from the date of this estimate.

Parts Total	23,950.00
Labor Total	0.00
Shop Supplies	0.00
Sub Total	23,950.00
Sales Tax	1,437.00
Grand Total	25,387.00
Total Deductable	0.00
Paid By Warranty	0.00
Internal Paid By Dealer	0.00
Price Adjustments	0.00
Paid	0.00
Balance Due By Customer	25,387.00







Twin Bay Docks and Products, Inc

982 E Commerce Drive

231-943-8420

Estimate

Date	Estimate No.
5/10/2016	1735

Ace Marine & Salvage, LLC
 Kyle Thompson
 2530 NE Silver Lake Rd
 Traverse City, MI 49685

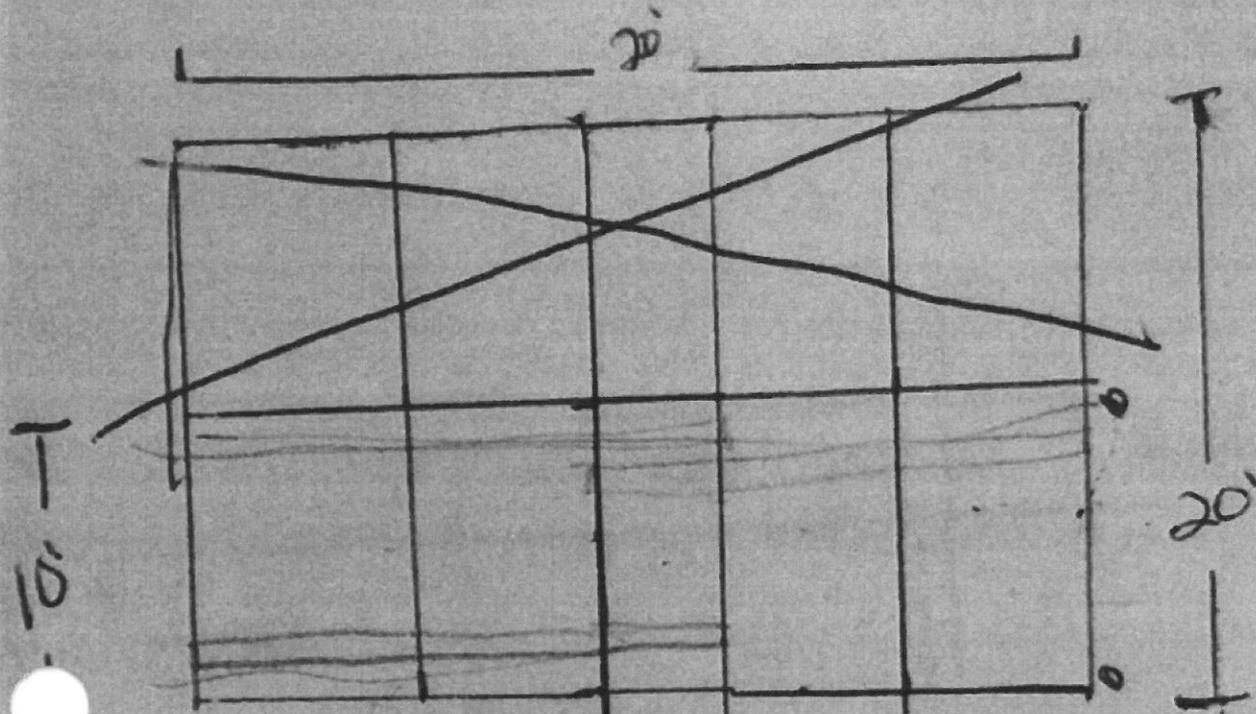
		Project	
Description	Qty	Rate	Total
48" x 10' Vinyl w/Aluminum Rails (BROWN)	1	650.00	650.00T
2'-4' Dock Leg, Adjusts to 36" to 40" to 48" width.	1	151.00	151.00T
8' End Cap	2	116.00	232.00T
Starter Section Brackets	1	42.00	42.00T
One Section Floating Dock with (2) 12' Poles, 2 Brackets, (1) 12 X 48 X 96 Float. BROWN	6	1,163.50	6,981.00T
72 L F HAND RAIL	1	1,872.00	1,872.00T
Subtotal			9,928.00
Boat Show Discount		-10.00%	-992.80
		Sales Tax (6.0%)	\$536.11
		Total	\$9,471.31

Phone #

231-943-8420

Dock & hoist Layout

Lake Side



- (7) sections "Floating"
- (1) Hinged Starter section

All sections:
4' x 10'

- (10) 10' Hand rails
- (2) 8' Hand rails

Shore Side

Subject: FW: Beacon Hills Park

From: Chuck Korn <ckorn@garfield-twp.com>
Date: July 18, 2016 at 9:19:24 AM EDT
To: Mike <Steadys@charter.net>
Subject: RE: Beacon Hills Park

Mike,

I am copying Brian Van Den Brand, the P & R Commission staff person, and requesting that the Park and Rec. Commission make a recommendation to the Township Board. I am sure input from residents will be considered.

Thanks,

Chuck

From: Mike [<mailto:Steadys@charter.net>]
Sent: Monday, July 18, 2016 9:15 AM
To: Chuck Korn
Subject: Beacon Hills Park

Hi Chuck,

After discussing with the neighbors, we all agree that we would like to request some assistance and guidance from the Township to implement some basic rules for the beach area at Beacon Hills from the Parks and Recreation body.

These rules we believe would make the park a more safe and manageable property for years to come. We also would like to request some assistance if funds are available from time to time to maintain this property.

Thank you for your help

Mike S

231-714-7445

5060 Highland Drive
Traverse City, Michigan 49685

**Garfield Township Parklands Draft
2017 Work Plan and Budget**

*The Conservation District is to further seek outside funding sources to assist with cost.

Parkland	Activity	Total	Outside	Township
		Cost	Funding	Cost
GT Commons				
	Habitat management / Forestry	4,320.00		5,280.00
	Navigational signs	2,000.00		2,000.00
	Retaining wall along tributary of Kids Creek to minimize erosion at bridge crossing	5,000.00	Center funds?	5,000.00
	Trail/Bike Plan and Implementation	10,000.00		10,000.00
	Relocate Barns Trailhead	10,000.00		10,000.00
	Train Plan Consultant	50,000.00		50,000.00
Arbors/Miller Creek				
	Habitat management / Forestry	4,840.00		4,840.00
	Fishing platform	15,000.00		15,000.00
	Trailhead Construction (Hanson parcel)	50,000.00		50,000.00
	Four picnic tables for new trailhead	1,000.00		1,000.00
	Poison ivy treatment	200.00		200.00
	Trail Work (Aldi -> Arbors, fishing pond)	6,000.00		6,000.00
	Signage	2,000.00		2,000.00
BVNP (YMCA)				
	Habitat management / Forestry	3,680.00		3,680.00
	Miller Creek Connector	25,000.00		25,000.00
	Pickleball (or as part of required cash match for grant)	37,500.00		37,500.00
	Templeton parcel improvements	50,000.00		50,000.00
	Signage	500.00		500.00
Silver Lake Park				
	Habitat management / Forestry	1,280.00		1,280.00
	Navigational signage	1,500.00		1,500.00
	Two Park Benches	600.00		600.00
	Poison Ivy Treatment (dog park)	200.00		200.00
	Boardwalk to Silver Lake ???	10,000.00		10,000.00
Kids Creek Park				
	Habitat management / Forestry	2,260.00		2,260.00
	Investigate cold water draw-off and repair (if feasible for \$\$)	5,000.00		5,000.00
	Stock pond with bluegill	1,300.00		1,300.00
	Signage	200.00		200.00
	Control weeds in pond (2x)	1,500.00		1,500.00
	Trail Improvements (To maintain universal access)	1,500.00		1,500.00
	Mower rental for trails	500.00		500.00
	Connector to Buffalo Ridge Trail	15,000.00		15,000.00
	Water mill - structure demolition and possible relocation	???		
General				
	Maintenance supplies	1,000.00		1,000.00
	Seasonal labor & overhead	7,500.00		7,500.00
Boardman River				
	Local Unit Support for Boardman River	25,000.00	20,000.00	5,000.00

Contracted Expenses (Grand Traverse Conservation District Contract)			????	
Consultants - Engineers, Architects, Etc				10,000.00
Utilities, Monthly Expenses, Garbage, Cleaning	Cleaning \$125/month; Elec: ~\$400/month; Garbage ~\$240/month all Water: \$11.50/month			10,000.00
Homeless camp cleanup (for dumpsters)				2,000.00
Maintenance - Snow Removal, Overseeding, Fertilization				30,000.00
Equipment Rental, Tool Fees, Etc				3,000.00
Construction and Land				
	COST-SHARE FUNDING		20,000.00	
	TOWNSHIP TOTAL			