

Marquette Greenway Corridor Plan

Burns Harbor, Indiana



ACKNOWLEDGMENTS

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This report was made possible by
a Lake Michigan Coastal Program
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PLANNED ENVIRONMENT ASSOCIATES

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OVERVIEW



The Marquette Greenway is a regional non-motorized trail that will traverse 15 communities for approximately 50 miles from Calumet Park in Chicago, to the heart of New Buffalo, Michigan, directly touching a population of 120,000 people, and connecting to millions more. At completion, the Town of Burns Harbor (Town) will contain roughly 2.9 miles of the Marquette Greenway, creating a great amenity for the community and a resource that will require upkeep and management. As of this report, nearly 1.5 miles of trail has been constructed and is open for public use (SR-149 west to Portage).

Leveraging the Marquette Greenway's potential, including the proximity to the Indiana Dunes National Park, Little Calumet River and the proposed Westport

new urban development, we can encourage visitors to extend their stay in Burns Harbor and use these improvements as an economic development tool for the Town.

The Town recognizes the regional importance of project and the issues and opportunities presented to the community. As a result, the Town obtained a grant through the Lake Michigan Coastal Program of the Indiana Department of Natural Resources (IDNR), to develop this Corridor Plan and an O&M Manual under separate cover. The Town has identified a number of elements to address in the corridor planning process, some of which were included in the RFP. Local stakeholders were engaged to better understand the site, community and surroundings.

STAKEHOLDER & PUBLIC ENGAGEMENT



Stakeholder Day 1: September 13, 2022



Stakeholder Day 2: September 15, 2022

To provide an inclusive and collaborative planning process for Marquette Greenway in Burns Harbor, the project team developed a series of touch points with staff, key stakeholders and the general public to solicit feedback on the project.

The team hosted stakeholders interviews and site tours on September 13th & September 15th, 2022 at the Navajo trailhead and Fire Department office. The stakeholders provided great insight on project history, usage and visions for the future. Agencies engaged are listed below and a summary memo of the individual stakeholder meetings has been provided under separate cover.

Additionally, the project team has presented the project and process at all public Burns Harbor Redevelopment Commission meetings from August through December 2022.

FEEDBACK

Below are major notes and feedback from the stakeholder engagement process.

- All stakeholders strongly support the Marquette Greenway.
- Burns Harbor is in unique position for recreational tourism with proximity to Greenways & Blueways.
- Westport development provides a great opportunity for urban living and programming.
- Embrace connections to Little Calumet for water recreation such fishing, kayaking, etc.
- Access to the Linde dam provides a unique regional opportunity to extend the kayakability of the Little Calumet.
- Existing vegetation in western corridor has generally established as a good prairie with some invasives. Consider long-term development & maintenance strategies.
- Leverage the Marquette Greenway to better connect the Town with spur trails (Lakeland Park, south of I-94)

STAKEHOLDERS

Burns Harbor Redevelopment Commission
Burns Harbor Police Department
Burns Harbor Fire Department
Burns Harbor Street Department
Burns Harbor Parks Department
Shirley Heinze Land Trust
National Park Service
Cleveland-Cliffs, Inc.
Linde
NIPSCO
Indiana DNR
Town of Porter
Town of Portage
Indiana Dunes Tourism
Save the Dunes
Dunes Learning Center
NW Indiana Paddlers Assoc.
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Orbis Environmental Consulting

KEY NOTES

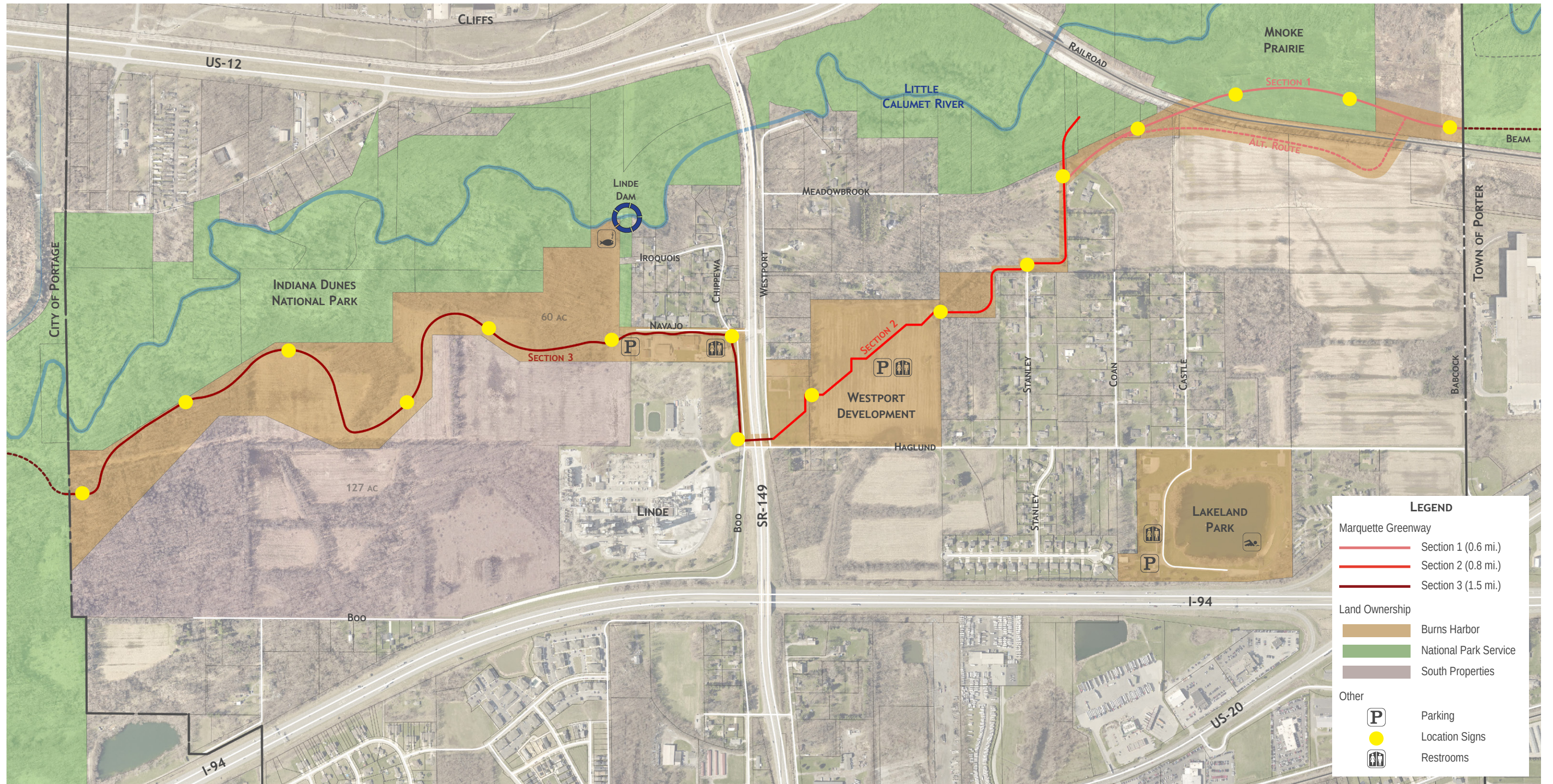
Strong stakeholder support
Unique proximity of greenways & blueways
Leverage Little Calumet River
Improve access to & around Linde dam
Good native ecology
Lakeland Park & south I-94 connections

ISSUES & OPPORTUNITIES



South Connector

OPERATIONS & MAINTENANCE



OPERATIONS & MAINTENANCE

LAND OWNERSHIP

The Operations Plan indicates lands that are held either by the Town or NPS. Per the general agreement of the Marquette Greenway, The Town of Burns Harbor will provide resources necessary for the maintenance, repairs and upkeep of the trail while on Town owned property. NPS will maintain trail segments on their lands within the Town. A Memorandum of Understanding (MOU) is being developed between the Town and NPS to define responsibilities.

Additionally, the western leg (Section 3) falls within a 60-acre town-owned parcel which contains a perpetual open space easement. This parcel is directly adjacent to NPS lands to the north and west, and a large vacant parcel to the south. The Town should continue to monitor the parcel to the south for potential synergies in natural resource management.

ALIGNMENT

At the time of this report, section 3 of the trail is constructed, section 2 is fully designed and will begin construction soon, while section 1 is still in planning and development. The Town has a preferred route which includes a pedestrian bridge over the railroad tracks and enters Mnoke Prairie in the National Park.

Due to potential funding sources, an alternate route has been identified in a dashed line. The final alignment will impact the Town’s maintenance requirements, depending on if the trail enters NPS lands or remains in Town owned right-of-ways.

PUBLIC ACCESS

The trail will remain open 24 hours a day, every day of the year, for recreation, travel and non-commercial fishing access. Policies should be coordinated with neighboring communities. Consider installing collapsible bollards at all driveway crossings to restrict vehicular access. Police & Street Dept. should have common keys for all bollards.

EMERGENCY RESPONSE

The Town has assumed responsibility for site security, law enforcement, structural fires and emergency medical response on the Marquette Greenway. Due to the Burns Harbor Police & Fire Departments close proximity to the trail, these departments will likely be the first responders for incidents on the trail in Portage and Porter.

For patrolling, (2) bicycles have been provided to the Police Dept. As the trail is fully developed and connected, the police may consider adding a 4-wheeler to aid in quick responses that may be a few miles from the police station in neighboring Porter or Portage.

Location signage or markers should be implemented along the trail for users to identify their precise location in emergency situations, especially in the segments away from nearby roads. The Operations Plan locates these signs at approximately 1/4 mile increments, which should be confirmed with police prior to implementation. The image below is an example of emergency response location sign.



Location Signage Example

MAINTENANCE

During the stakeholder engagement process, we met with both the Street & Parks Departments of the Town. Parks has a very limited annual budget and no full-time staff. The Street Dept has full-time staff, experience in asphalt maintenance, mowing and a close proximity to the trail. We recommend the long-term maintenance of Marquette Greenway to remain under the Street Dept. at this time.

The Redevelopment Commission alongside of the Street Department Commissioner should determine the appropriate employee for the daily (or appropriate frequency) site inspections as well as when the actions should occur (i.e. remove trash at opening or closing), refer to O&M Manual.

- Report unsafe conditions
- Litter cleanup & empty trash cans
- Report dead or dying plants
- Report vandalism & graffiti (remove immediately)
- Snow Removal (over 2” accumulation)

As the Marquette Greenway is further completed, expectations will be that the trail is cleared of snow and ice for all-year usage. Due to vehicle weight restrictions, a RTV (2022 Kubota RTV-X1100C, or similar) with a snow blower attachment should be provided to the Street Department for winter plowing and general maintenance needs throughout the year.

We’ve provided a rough estimate of staff hours needed to maintain the trail on an annual basis, per the requirements laid out in the O&M Manual.

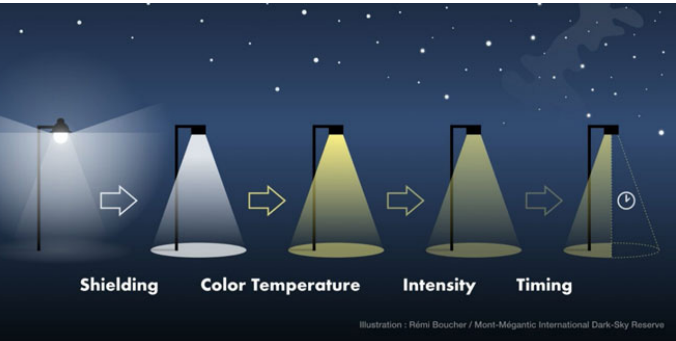
Marquette Greenway = 2.9 miles				
Type	Hr/Mile	#/Months	Mon/Year	Hours/Year
Mowing	1	6	8	140
Waste	1	20	12	696
Snow	2	8	4	186
Inspection	8	1	12	278
Maintenance	16	1	12	556
ESTIMATED TOTAL HOURS PER YEAR				1,856

PARKING

Vehicular parking for trail access will be limited to the parking lot at the western terminus of Navajo Trail and on any public parking spaces provided in the Westport development.

There are currently no posted restrictions for parking at the trailhead parking lot. As trail usage increases, the Town shall evaluate any vehicular parking restrictions (i.e. no overnight parking) in Town owned parking areas and need for additional parking areas.

Consider adding EV charging stations and lighting at parking areas to promote safety and access while respecting neighbors and park wildlife. Lighting fixtures should be low-voltage and dark sky compliant. Timers, motion sensors and dimming controls should be considered for the system.

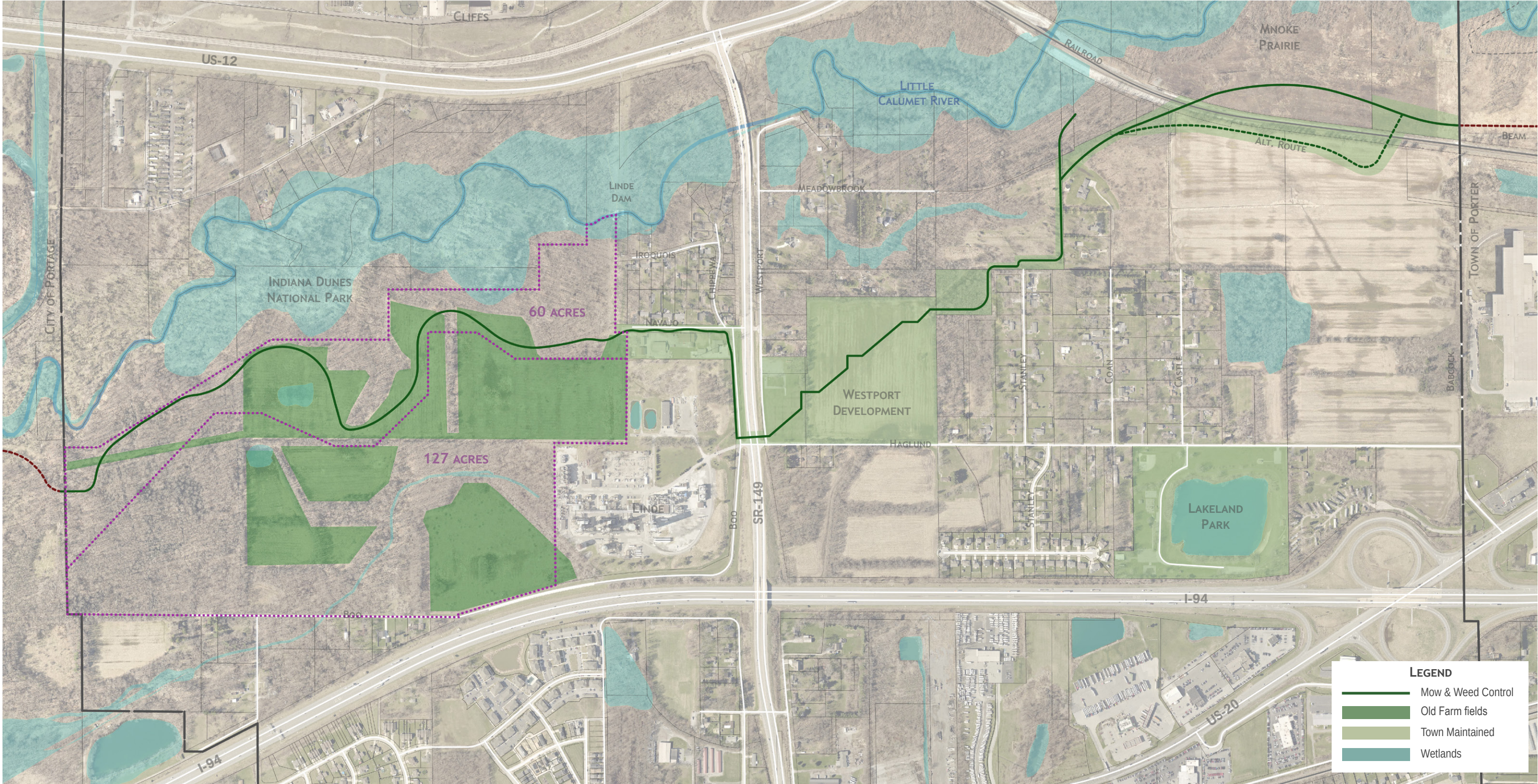


Dark Sky Compliant Lighting Diagram

KEY NOTES

- Streets Department to maintain
- Inter-governmental emergency response
- Location signage
- Snow removal (RTV Needed)
- Parking lot lighting
- Bollards at driveways

ECOLOGY



LANDSCAPE MANAGEMENT

Landscape management for the Marquette Greenway will primarily consist of native landscapes and mowing/maintaining clear zones along the trail.

The Town has currently partnered with Shirley Heinze Land Trust in the short-term natural resources and vegetation management of the 60-acres associated with the initial phase of construction. This site consists of previously cultivated lands that have been left unfarmed for approximately 30 years. The property is directly south of the Little Calumet River riparian woodland, owned and managed by NPS. There are additionally another 127-acres to the south which are vacant open lands with similar ecology and history of agriculture. As referenced before and in previous studies, the Town should continue to monitor these 127-acres to develop a cohesive ecological framework strategy. These strategies may consist of the following options which are further described

- Prairie Management & Enhancements
- Reforestation

Landscape management east of SR-149 will primarily consist of mowing and weed control. The majority of the trail will likely be through narrow easements, right-of-ways and NPS lands. Westport may contain native plantings in bioswales, landscape beds and other maintenance associated with the development.

Due to the Town’s limited resources and lack of experience in managing native landscapes and identifying native species, we recommend the Town partners with a land steward (similar to Shirley Heinze or NPS) develop a long-term maintenance agreement for the native landscape areas. In addition to invasive management, they can routinely visit the site to identify any rare and sensitive native plants and their locations for protection.

Mowing and weed control directly along the trail have can continue to be provided by the Town’s Street Department. Detailed requirements for mowing and weed control are included in the O&M Manual.

PRAIRIE MANAGEMENT & ENHANCEMENTS

Following years of farming, the 60-acre parcel and the 127-acre parcel south the old fields have been left for natural succession for approximately 30 years. Many native prairie indicator species have been observed, but there is still a threat of non-native invasive species invading areas. Per the environmental assessment developed by Orbis Environmental Consulting for the 60-acre site in, “some of these native species also serve as a pollinator source for many insects of conservation concern such as Bombus fervidus (golden northern bumblebee) and numerous butterflies within the Hesperidae”.

Removing non-native woody species is a key landscape management need for to further establish the prairie. Removals can be done mechanically or with herbicides, by or with the assistance of a professional that can properly identify plant species. This is important as to not disturb any high-quality native species.

To enhance the ecosystem of the space, shrubs such as Corylus americanus (American hazelnut) can be installed to help create the shaded habitat for many lepidoptera species using the field for nectaring. Sparse use of large canopy trees along the trail (such as oaks) could provide future shade for trail users. Complementary native wildflowers can also be broadcast seeded onto the soil to increase the biodiversity. (Budget \$5K per acre)



American Hazelnut (Corylus americanus)

REFORESTATION

Another approach to consider would be a reforestation process on the old fields, to recreate an environment similar to that of pre-European settlement of the area. The area still contains both Dry-Mesic Upland Forest and Flatwood Forest communities on its northern edge, with a variety of native species:

- Oaks
- American Linden
- Black Cherry
- Hickory
- Pawpaw

Reforestation is typically done by hand planting native tree whips (or seedlings) that are typically 2-3 feet tall. The spacing and quantity of trees will depend on the species mixture selected.

Reforestation should be considered holistically between both the 60- and 127-acre parcels for a more cohesive ecosystem and economy of scale. We encourage further discussion between the Town, Shirley Heinze and NPS, if reforestation efforts are desired by the Town. (Budget \$10K per acre)

West Parcels		
Type	60 ac	127 ac
Old Farm Field	21	57
% of parcel	35%	36%

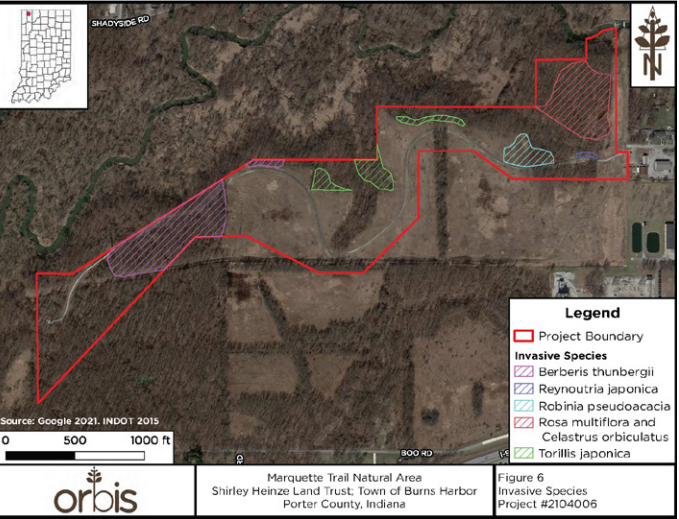


Reforestation

INVASIVES OF CONCERN

Through field reviews, there are a few noted invasive species in the area that should be addressed in the near future. These species have been mapped within the environmental assessment provided by Orbis.

- Japanese Barberry (Berbis thunbergii)
- Japanese Knotweed (Reynoutria japonica)
- Black Locust (Robina pseudoacacia)
- Multiflora Rose (Rosa multiflora)
- Oriental Bittersweet (Celastrus Orbiculatus)
- Japanese Hedge Parsley (Torlis japonica)

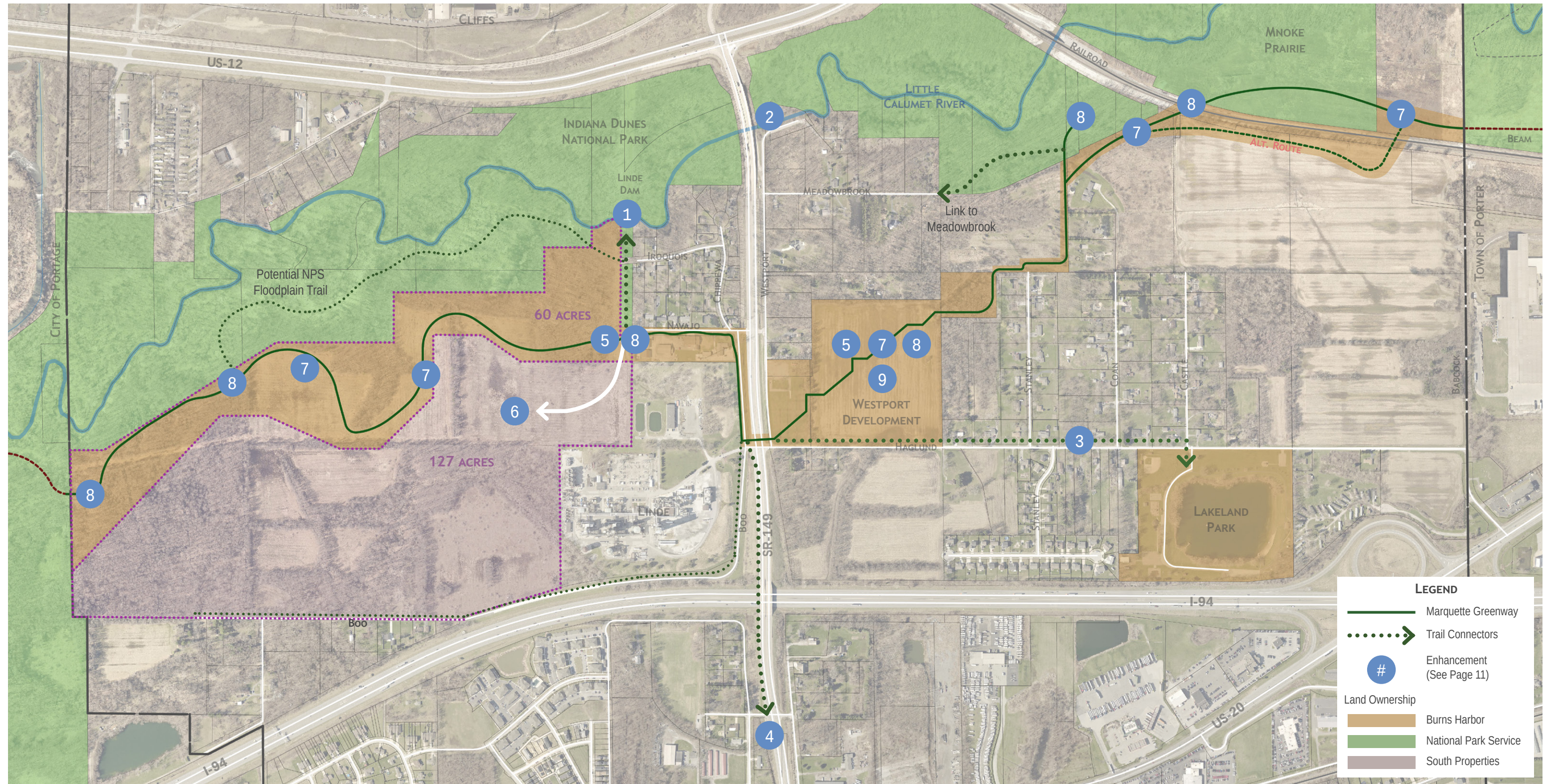


A few other toxic species were identified near the trail (Poison Ivy & Poison Hemlock). The Street Dept. should be able to identify and safely remove these species and others that may be hazardous to trail users. Refer to the O&M manual for more information on clear zones.

KEY NOTES

- Partner for native vegetation management
- Comprehensive strategy for west parcels
- Streets Department to mow & weed control
- Educate on toxic species identification

EXPANSION



EXPANSION

1 LINDE DAM

Developing a kayak portage and trail connection to the Marquette Greenway at the Linde dam was identified as a priority project with stakeholders. The corridor is owned by NPS with NIPSCO and Linde easements for major utilities. The Town currently mows the corridor which provides fishing access to the river. Safe and stable access to the river is needed, along with developing a kayak portage around the dam to extend the recreational use of the Little Calumet River.

A Chi-Cal Rivers Fund Grant was applied for by Shirley Heinze (in collaboration with the Town, NPS, Save the Dunes and NWIPA) to create a kayak portage around the dam, improve access to the Marquette Greenway (trail & stairs), along with landscape and habitat restorations. The project was not accepted in 2022 by the grant source and will be reapplied for in 2023, along with identifying other potential funding sources. (Budget \$400K)



Linde Dam

2 WESTPORT KAYAK LAUNCH

The northern terminus of Westport Road provides an opportunity for an ADA accessible kayak launch with some associated parking in the SR-149 right-of-way (under the roadway structure). This location would serve as a western terminus for kayakers with accessibility needs on the Little Calumet River prior to reaching the dam.

The scope of this project was also included in the Chi-Cal Rivers Fund Grant noted above, which was not accepted in 2022. (Budget \$50K)

3 LAKELAND PARK CONNECTOR

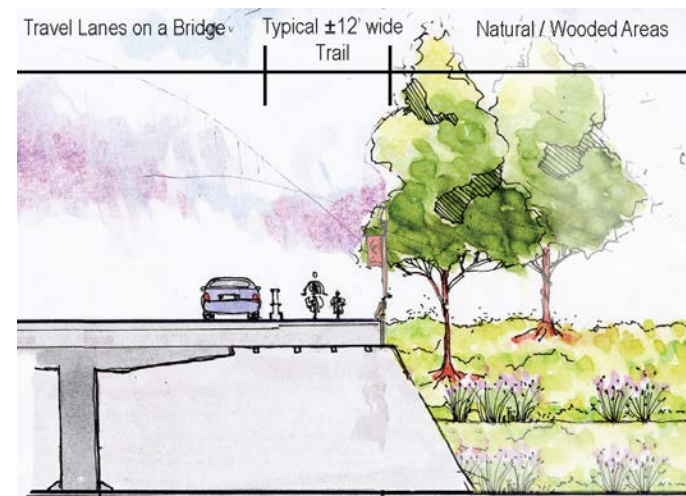
Lakeland Park's 29-acres and a lake is the gem of the Town's Park Department. The park holds numerous summer programs, community events and provides a wide range of recreational activities (softball, soccer, playgrounds, swimming, fishing, etc.).

A minimum 8-foot wide shared pedestrian and bicycle trail should be extended along the north side of Haglund Road from the Westport development to the park. This will help provide a safe, healthy and family-friendly way to connect these great amenities of the Town. Approximately 0.4 mile of trail will be needed.

Through Porter County GIS review, it appears the Town does not have a right-of-way along Haglund Road, which may need to be acquired in order to install the trail. (Budget \$200K, does not include land acquisition, if required).

4 SOUTH CONNECTOR

While the Marquette Greenway well connects the northern portion of Town, a large population of Burns Harbor lives south of I-94. A bike-pedestrian trail along SR-149 has been previously studied by the Town and should remain a long-term goal for connecting all residents to the Marquette Greenway.



SR-149 Trail (2014 Downtown Sub-Area Plan)

5 RESTROOMS & WATER

Restroom facilities and water are a basic human need that will have to be provided to daily users and commuters of the Marquette Greenway. The Westport development will include a Community Center that will accommodate these needs in the eastern portion of the trail.

The Town should consider a restroom and water fountain at the Navajo trailhead to support the western trail users and fishermen that frequent the area. Portable restrooms could be installed at anytime, while a built structure with plumbing should be considered long-term. A pre-fabricated facility similar to the image below may be a cost-effective options for the Town. Storage space should be included within the structure for maintenance needs.



Pre-Fabricated Restroom (Public Restroom Company)

6 CAMPING

Car camping in the western parcels was discussed with the stakeholders. This could provide a unique experience for visitors while generating revenue for the Town. Stakeholders felt there is a regional need for additional camping near the Indiana Dunes.

Due to the division of the western parcels, the Town would need to engage the owner of the 127-acre parcel to provide access and space required. Assume roughly (8-10 campsites/acre). The inclusion of utilities and the identification of which Town department (or outsource) would operate the facility will be needed, as well.

7 SHADE

As a large portion of the corridor traverses prairies with few large trees, additional shade opportunities should be considered. Ideally, provide shade and seating spaces at 0.1 to 0.25-mile increments. Specimen trees could be planted for future shade, or small structures similar to below could be added. (Budget \$750/tree; \$15-30K/shelter)



Shade Shelter (Poligon Structures)

8 OVERLOOKS & SEATING

The Town developed nice seating and gathering spaces at each end of the western trail. As trail use increases, consider adding individual benches along the trail. Additionally, overlooks to stop and get off the trail would create great seating areas, photo opportunities and educational awareness of the natural areas. An overlook associated with the railroad bridge in Section 1 could become an iconic location on the Marquette Greenway. (Budget \$25K per overlook).

9 TOWN CENTER

The Westport development will bring a new Town Center to Burns Harbor, with residential, commercial and retail spaces along with a new Town Hall, Community Center and civic plaza. Westport will serve as a central hub of activities and economic growth for the community. The incorporation of the Marquette Greenway into the development helps promote a healthy quality of life and should be very attractive for residential and commercial demands.

BRANDING

COMMUNITY IDENTITY



The Burns Harbor region historically consisted of marshes (specifically along the Little Calumet), swamps, sand savannas and sand prairies, with scattered areas of various forest types. Various Native American tribes resided in the area for centuries prior to the forced removal from Indiana in 1838.

The Town of Burns Harbor is heavily rooted in the steel industry. European settlers moved into the area in the 1830s and by the mid-1870s most of the land in historic Burns Harbor was cleared and put under cultivation. The 1950s & 1960s saw the establishment of Bethlehem Steel and Port of Indiana, which spurred local conservation efforts leading to the development of the Indiana Dunes National Lakeshore in 1968.

Through the contention between industry and ecology, the Town was officially established in 1967. The balance between these two often competing uses is a key part of the Town's identity and future. The Town has embraced the motto "The Art of Green Living".

The stakeholder engagement process noted that one of the most unique elements of Burns Harbor's Marquette Greenway is its close proximity to the Little Calumet River. This expands the recreational opportunities to include both land and water-based activities.

EVENTS

Community events are a great way to provide inclusive recreation and entertainment opportunities for the residents and visitors of Burns Harbor, along with providing the Town a potential revenue source to help maintain and enhance the corridor.

The Westport development will provide a centralized location for an outdoor event space, as shown in the conceptual rendering below. Other trail based events such as 5K runs could be held here due to the parking, restrooms and other amenities within the development.

The western and eastern sections of the Marquette Greenway provide great opportunities for outdoor education. The Town should continue to collaborate with the stakeholders in organizing events. Many of the stakeholder groups can independently organize these events, which helps promote awareness of the trail while minimizing the Town's resources.



Westport Concept Rendering (Holladay Properties)



Burns Harbor Footloose 5K

PUBLIC ART & SIGNAGE

Public art & monument signage is a common method to integrate branding and identity of a community within an area. The Americans for the Arts defines the need for public art as;

"Public art is a distinguishing part of our public history and our evolving culture. It reflects and reveals our society, adds meaning to our cities and uniqueness to our communities. Public art humanizes the built environment and invigorates public spaces. It provides an intersection between past, present and future, between disciplines, and between ideas. Public art is freely accessible."

Public art and signage should incorporate local steel as much as possible to reflect the Town's history. Outdoor steel should be galvanized, powder coated or Corten steel to withstand the elements. Art should also reflect the local environment and the Town's motto, "The Art of Green Living". To the right is an example of this type public art, but the Town should look at custom designs by working with potential donors, sponsors and local artists.

The Town's most iconic element for visitors are the large towers of the Linde facility. Linde provides seasonal lights on the tower, but would be willing to collaborate with the Town on additional lighting effects. Custom painting of the towers were studied by Linde and determined to be extremely costly.



Public Art Example



Monument Signage Example



Linde Towers

KEY NOTES

- Promote the greenways & blueways
- Embrace "Art of Green Living"
- Integrate steel industry history
- Leverage Westport for community events
- Continue collaboration with key stakeholders



Navajo Trailhead



Trail Section 3

NEXT STEPS

While this report represents the culmination of the corridor planning process, in reality it serves as a launching pad for the future of Burns Harbor and the Marquette Greenway. Grounded on stakeholder input and a better understanding of the corridor's ecological history, the plan presents a vision for enhancing and maximizing the potential for current and future generations to enjoy.

Upon presentation of the draft plan to the Redevelopment Commission (RDC) November 9, 2022, this report will be made available to the public for further review and comment. Based on the input received and any direction provided by the Town, appropriate revisions will be made to the plan for approval and adoption by the RDC. It is anticipated that the final master plan will be presented to the RDC at the December 2022 meeting for formal adoption. Once adopted, this master plan will be used to help guide the future development of the Marquette Greenway as funding permits.

With total projected costs far exceeding available Town funds, implementation of this master plan can only occur through a phased approach. Multiple funding sources, both existing and new, will be required to fully develop this plan.

Schematic design plans should be developed for each development phase as funding becomes available. These plans will make any necessary refinements to the site and facility plans envisioned within this report, taking into consideration the budget, surveys, soil conditions, regulations, and other factors that were not part of the scope of this master plan.

NEXT STEPS

- Continue pursuit of Linde dam improvements & Westport kayak launch
- Coordinate O&M budget and equipment with Streets Department
- Implement emergency response location signage with Police Department
- Collaborate with NPS & Shirley Heinze on holistic native landscape strategies
- Advance MOU between Town & NPS
- Pursue branding, marketing and awareness of the trail & Westport development

