



TOWN OF PORTER

DOWNTOWN SIDEWALK IMPROVEMENTS

AUGUST 2016



ACKNOWLEDGEMENTS

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Photo 1-1. Lincoln Avenue Reconstruction Visualization.

INTRODUCTION

OVERVIEW

FOCUS AREA

PORTER'S LIVABLE CENTER

PORTER DOWNTOWN MASTER PLAN

TOWN OF PORTER SELF EVALUATION AND ADA TRANSITION PLAN

OVERVIEW

In June 2011, the Northwestern Indiana Regional Planning Commission (NIRPC) adopted the 2040 Comprehensive Regional Plan (CRP). This plan integrated transportation, land use, economic development, environmental management and social equity in NIRPC's planning territory of Lake, Porter and LaPorte counties. One portion of the CRP that NIRPC has focused on is the creation of Livable Centers. Livable Centers is a concept which defines a center for

the concentration of future growth within a community. The CRP defines Livable Centers as compact, mixed-use, walkable and transit-accessible areas with a wide choice of affordable housing options that are developed at a density and scale appropriate to their community, whether urban, suburban, or rural.

LIVABLE CENTER REPORT FOCUS AREA

This report focuses on a portion of the Downtown Porter Livable Center. The NIRPC CLC has defined the Downtown Porter Livable Center as the area between Waverly Road and Mineral Springs Road, between the Little Calumet River/US 20 on the North and the Michigan Central Railroad Tracks/Wood Street on the south. The focus area discussed in this report is the area bounded by Sexton Avenue on the west to Waverly Road on the east and Indiana Street to the north and the Michigan Central Railroad tracks to the south. Additionally, there are two “districts” defined for the report. These districts are defined below and shown in Figure 1-1:

The Business District

The Business District of Downtown Porter is Lincoln Street from Wagner Road to Porter Avenue and Francis Avenue from Lincoln Street to Rankin Street. The Business District is the main focus of Downtown Porter and is the destination for the Livable Center.

THE RESIDENTIAL DISTRICT

The Residential District comprises most of Downtown Porter. This district includes all of Franklin, Rankin, Beam, Michigan and Francis Streets from Sexton Avenue to Waverly Road. The Residential District also includes Lincoln Street from Porter Avenue to Waverly Road and Hageman Avenue, from Lincoln Street to the entrance of Hawthorne Park.

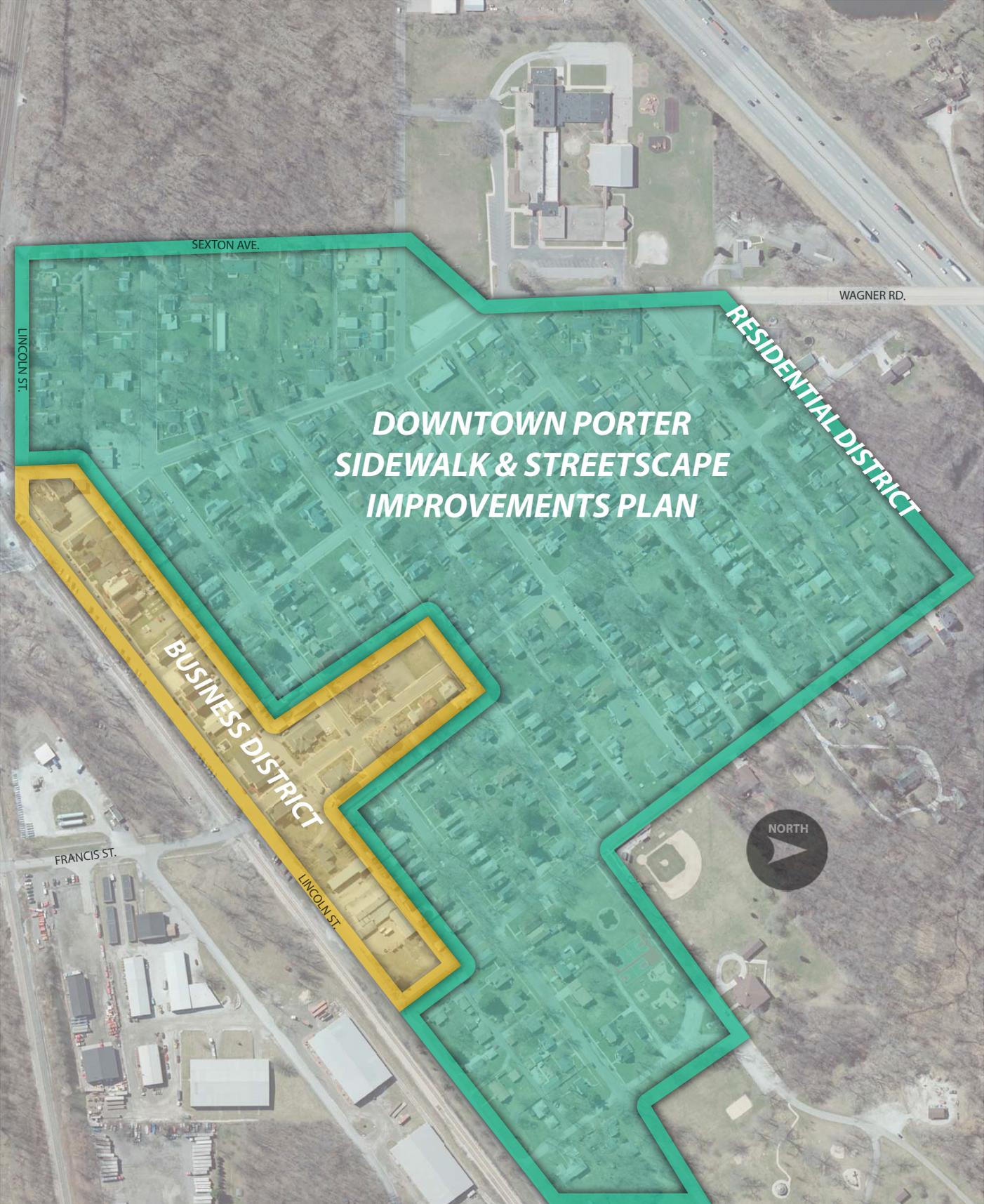


Figure 1-1. Focus Area.

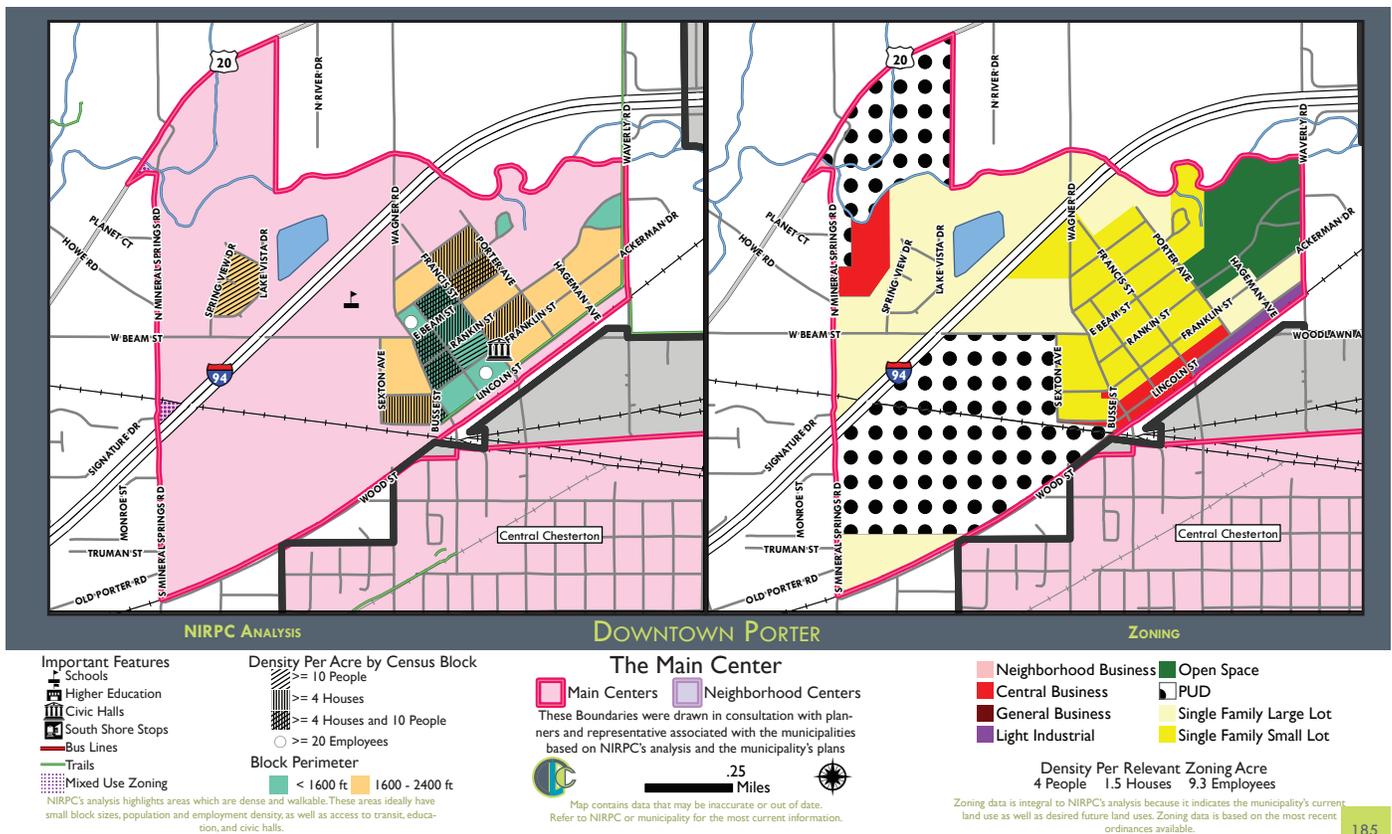
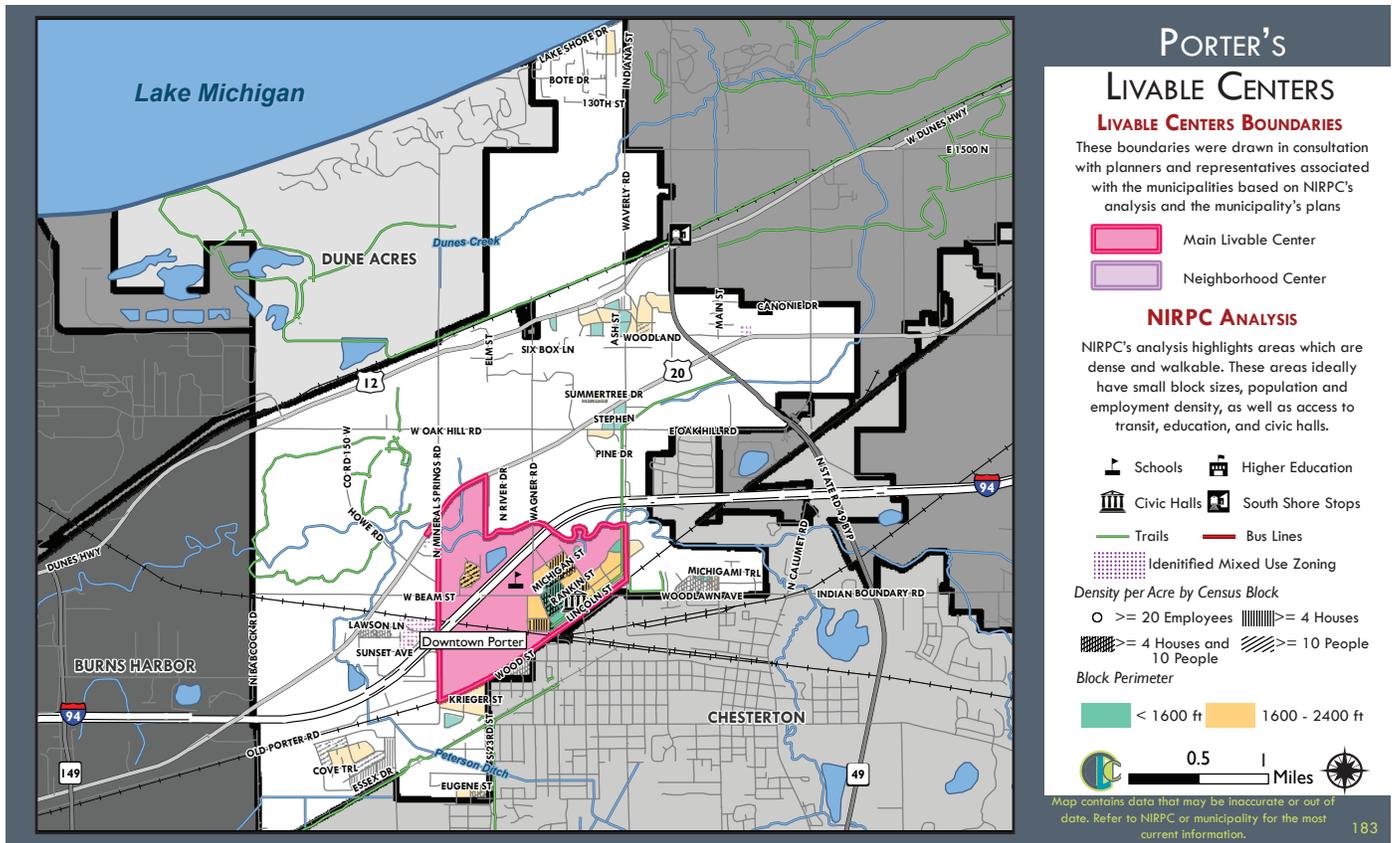


Figure 1-2. NIRPC Livable Centers.

PORTER'S LIVABLE CENTER

As part of NIRPC's 2013 Creating Livable Communities (CLC) report, the Town of Porter adopted "Downtown Porter" as its Livable Center. The area is roughly bounded by Mineral Springs Road to the west, Waverly Road to the east, the Little Calumet River to the north and the Michigan Central (Amtrak)/CSX Train tracks to the south (see Figure 1-2). This area is primarily single family residential, but also includes significant open space in Hawthorne Park, the Lincoln Street Central Business District and two significant Planned Unit Development zoned areas for future development. This Livable Center contains 429 acres and is home to 18% of Porter's population. Porter has a good network of sidewalks and has been working to develop a trail system to promote more alternative transportation access to the downtown.

The chapter of NIRPC's report specific to the Town of Porter can be found in the Appendix

PORTER DOWNTOWN MASTER PLAN

In December 2012, Porter completed a Downtown Master Plan funded through the Lake Michigan Coastal Grant Program. The Downtown Master Plan focused on Porter's Business District, defined as the area between Lincoln Street and Franklin Street from Wagner Road to Waverly Road. Data was collected through an online survey as to what amenities, attractions and future development Porter should target. Porter also conducted stakeholder meetings with business owners in the downtown focus area to garner their vision of downtown.

The Downtown Master Plan identified a number of improvement projects within the focus area and the corridors that provide connectivity and visibility of the downtown and to the major thoroughfares of US 12, US 20, Interstate 94 and Indiana 49, which run through the Town's limits. These improvements were proposed to accomplish the goals that were defined by the vision of key stakeholders. The goals that supported the vision of the downtown include:

- Entertain, by providing places, amenities and activities that would encourage visitors to stay longer, return more often and spend more money in downtown Porter,

- Connect everyone and everything within the Town and adjoining areas safely to the downtown,
- Beautify the arrival sequence to downtown Porter and improve the visual quality of the focus area,
- Sustain, by implementing physical enhancements and procedures that elevate Porter's environmental, economic and social sustainability, and
- Sell downtown Porter as a niche within the Duneland Community.

PORTER ADA TRANSITION PLAN

In 2012, Porter initiated a Town-wide Americans with Disabilities Act (ADA) Transition Plan to meet a federal mandate set forth in Section 504 of the Vocational Rehabilitation Act of 1973. During the process, Porter reviewed all sidewalks, curb ramps, and public buildings for ADA compliance. From these evaluations, a replacement program was developed. The downtown area was prioritized as the first area to begin replacements of non-complaint sidewalks and curb ramps. Although, there have been a number of crossing improvements; the replacement schedule defined in the plan has not been fully followed. As a portion of the CLC Program, Porter is dedicated to creating a pedestrian friendly downtown for all citizens by completing the improvements recommended in the plan. Areas of non-compliance in the downtown focus area can be found on page 14. A copy of the Town of Porter's ADA Transition Plan can be found on the Town's website or on file at Porter Town Hall.

Through the previous reports and studies, the Town of Porter has laid the groundwork in defining the vision for the future of downtown Porter by creating a more aesthetically pleasing area that is pedestrian friendly within the Livable Center and creating arrival sequences that draw visitors to downtown Porter. The Town plans on leveraging the efforts of the NIRPC CLC Report, Downtown Master Plan and ADA Transition Plan, guide Porter in implementing sidewalk and streetscape improvements that will enhance the Downtown Livable Center. This document is intended to prepare Porter for the next steps in the process of bringing their ideas to actual constructed projects.



Photo 2-1. Lincoln Avenue

PRELIMINARY SITE REVIEW

INTRODUCTION

EXISTING CONDITIONS

UTILITIES

RIGHT-OF-WAY

SIDEWALK CONDITIONS

ENVIRONMENTAL

TRUCK ROUTE

INTRODUCTION

To better assess the existing conditions of the focus area, preliminary right-of-way, environmental and utility reviews of the Livable Center were completed to identify potential challenges to completing improvements.

EXISTING CONDITIONS

Downtown Porter is generally a pedestrian friendly area. For the most part, there are sidewalks on both sides of the roadways. The sidewalk system does have a number of issues including areas that have heaved or settled due to tree roots, areas that exceed the allowable two percent cross slope, and areas that are missing sidewalks altogether. In some locations, utility poles, fire hydrants, and other utilities encroach into the sidewalks, creating pinch points.

Most of the curb ramps in downtown Porter do not meet the current ADA standards for pedestrian access routes. Figure 2-2 highlights a variety of accessibility issues within the focus area. For instance, Photo 2-3 illustrates an existing non-compliant sidewalk and ramp at Michigan Street. The sidewalk and ramp is only about three feet wide and is further limited by a retaining wall on the back side.

The current streetscape elements of downtown Porter are very basic. The business district has acorn style lighting spaced consistently on the north side of Lincoln from Wagner Road to the east side of Francis Street. The Business District currently has parallel parking on the north side of Lincoln Street and angled parking, for cars heading east, on the south side of the road. The street signs and stop signs are standard post mount signs, with no decorative features. There are no benches, landscape planters or other streetscape amenities in the business district.

The residential portion of downtown Porter does not include many site amenities. Porter utilizes NIPSCO power poles to provide lighting at intersections within downtown Porter. Parking in the Residential District is a combination of rear-loading garages and on-street parallel parking on both sides of the streets. Throughout downtown Porter, there are wayfinding signs that direct traffic to local destinations, including Porter Town Hall, Porter Police Station, Porter Fire Station, Hawthorne Park, Yost Elementary School, and Hageman Library. These signs were installed in conjunction with the other Duneland Chamber of Commerce communities, the Town of Chesterton and the Town of Burns Harbor, in order to create continuity in direction between the communities. There currently is no other wayfinding signage in Downtown Porter.

UTILITIES

There are a number of areas in the Livable Center where there are impediments to accessibility due to utilities. These include power poles, signs, and fire hydrants. These hazards should be relocated if possible, but none of the hazards create areas that make the sidewalks totally impassable.

In November 2015, Indiana Department of Transportation (INDOT), issued a design memorandum modifying the design standard for curb ramps. INDOT specifically used the memorandum to modify their design standards to incorporate Pedestrian Rights of Way Accessibility Guidelines (PROWAG). PROWAG requires new curb ramps, sidewalks and building accesses to be individually designed rather than constructed using standard details. Any future project having federal funding associated with it, must abide by these guidelines. Porter should commit itself to following these guidelines on all projects.

Conflicts with utility infrastructure such as fire hydrants, lighting, signage and transformers are addressed in PROWAG. For instance, the minimum clear width for pedestrian access routes is 4 feet, but if this minimum is used, a 5 foot by 5 foot passing area must be installed every 200 feet. The Livable Center has a number of areas where the minimum width will have to be used due to right-of-way constraints and the prohibitive costs of relocating utilities. In these locations, passing areas are recommended.

RIGHT-OF-WAY

Porter obtained rights-of-way for streets, sidewalks and utilities via subdivision plats from the early developments. The right-of-way widths vary in the different portions of the Livable Center. Widths of 40, 50 and 60 feet make it challenging to create a consistent typical cross section for truly complete streets within the downtown area. However, ample rights-of-way exists to construct a variety of improvements within the area.

See Figure 2-1 for existing right-of-way widths for the project area.



Figure 2-1. Right-of-Way Widths.

SIDEWALK CONDITIONS

Accessibility within the Livable Center is not without its challenges. Figure 2-2 highlights a variety of accessibility issues within the Center's downtown area. On this map, sidewalks are marked as compliant or non-compliant. The sidewalks were visually inspected. A compliant sidewalk is one that generally meets width, cross slope and running slope requirements for accessible routes. A sidewalk listed as compliant is not necessarily free from trip hazards, utility conflicts or smaller sections have compliance issues. A non-compliant sidewalk is one that has glaring issues for a large portion of that specific section.

One example of an existing non-compliant sidewalk and curb ramp is illustrated in Photo 2-2. This photo was taken at the intersection of Michigan Street and Pleasant Avenue. The sidewalk and ramp are only about three feet wide and is further limited by a retaining wall on the back side. There are also numerous non-compliant curb ramps that need to be modified to meet ADA standards. In general, the sidewalk network does not have many gaps, but these gaps should be targeted to be completed as a part of this project.

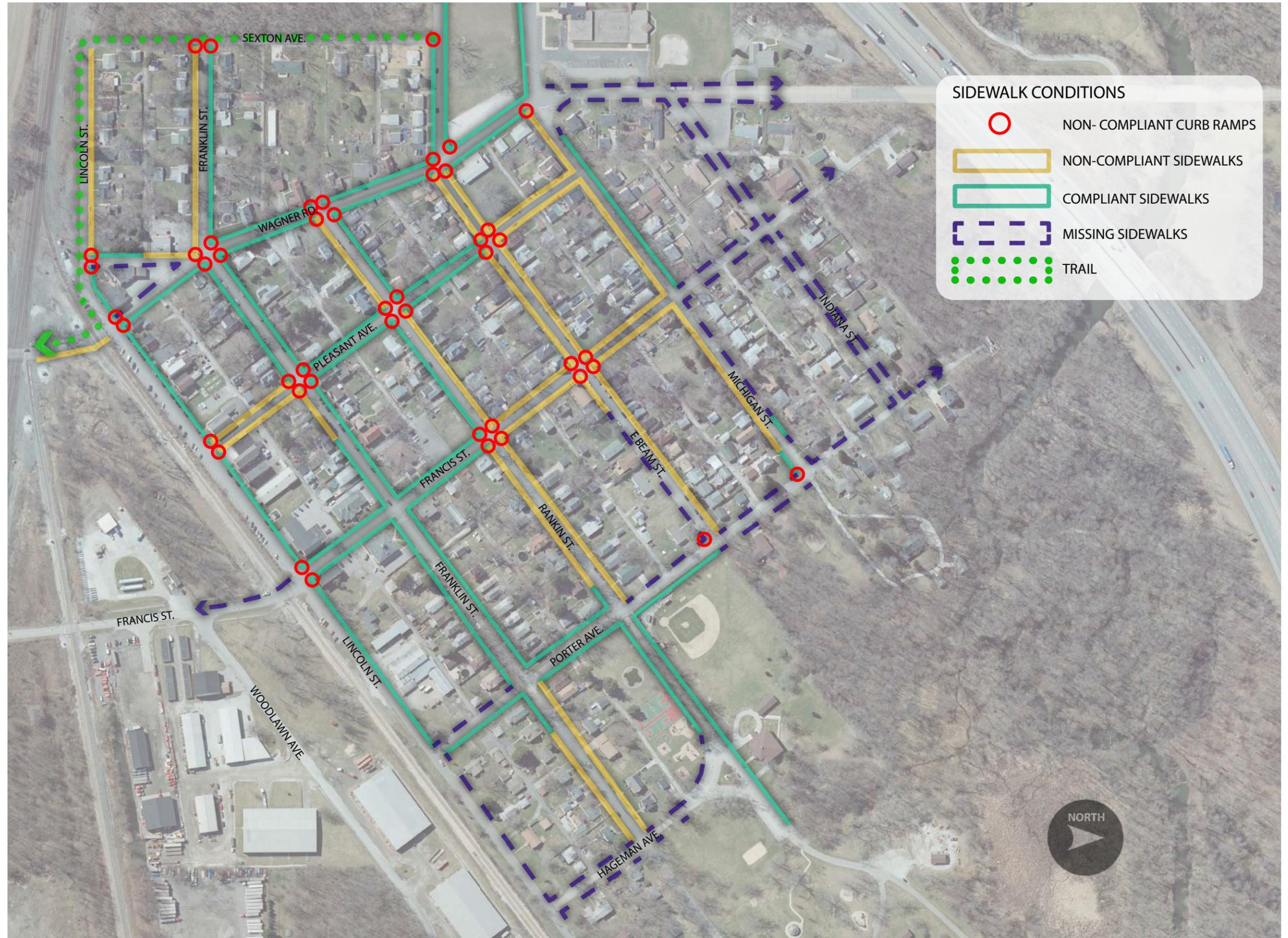


Photo 2-2. Michigan and Pleasant Hazards.

Figure 2-2. Sidewalk Conditions.

ENVIRONMENTAL

As part of this project, a preliminary Red Flag Investigation (RFI) was prepared by the Northwest Indiana Regional Planning Commission (NIRPC), dated January 15, 2015. The RFI noted the following potential environmental issues for consideration.

Wetlands – RFI noted wetlands on Sexton Ave. This area has been disturbed and developed and is not anticipated to include wetlands within the right-of-way. IDEM & USACE should be contacted if work is anticipated in this area, to understand what permit, if any, would be required.

Underground Storage Tanks (UST) – Three UST’s were noted in the RFI within the project limits. The USTs are located at:

- Beam St.& Wagner St.
- Lincoln Ave. & Wagner St.
- Francis St. & Franklin St.
- These UST’s have all been removed and documented

NPDES Facility – A facility was noted on the RFI at the intersection to Francis St. & Franklin St. This mapping location is the result of the mailing address for the Town of Porter Wastewater Department administrative facilities. No physical wastewater treatment facilities exist at this location.

Cultural Resources (Section 106) - According to the RFI, 25 historical features were noted in the area as referenced in the Indiana Historical Sites and Structures Inventory – Porter County Interim Report. As the project develops, the individual sites should be assessed and determined if any impacts will be made to the resources.

Ecological Information – As stated in the RFI, the Indiana Heritage Database (IDNR, March 2011) was reviewed and no threatened and/or endangered species have been documented in the area.

The level of environmental documentation and permitting will vary depending on funding source of the project. If projects are proposed within Town right-of-way and are funded using 100% local funds, no environmental documentation is anticipated, and standard construction permits would be required.

If state or federal funds are utilized, the projects are likely to require some level of environmental documentation utilizing the National Environmental Protection Agency (NEPA) process. If the projects are specifically

repair projects, it is anticipated a Programmatic Categorical Exclusion (CE) will be necessary, per the “Repair, Rehabilitation and Reconstruction of Roadways, Sidewalks and Curbs” stated in the INDOT Programmatic CE document dated January 23, 2012. The Programmatic CE also applies to the installation of new landscaping, pavement markings and the replacement of existing lighting, signage and safety features.

If state or federally funded projects are to be constructed that are anticipated to include new sidewalks, lighting, signage and safety features, or include the acquisition of right-of-way, the documentation required will likely be a CE level 1, or higher. If right-of-way acquisition is anticipated to be greater than 0.5 acres, the CE will be a level 2 or higher.

Additionally, impacting parks and historic sites such as those listed below could raise the CE level to 4, or potentially greater such as an Environmental Assessment (EA) or Environmental Impact Statement (EIS).

- Section 4(f) – Prairie Duneland/Cal Trail Connector, Hawthorne Park, and Section 106 sites
- Section 106 – Porter Assembly of God Church (Indiana St. & Michigan St.), 25 other Indiana Historical Sites and Structures identified.



Photo 2-3. Utility conflict example



3

Photo 3-1. Porter Avenue

PRELIMINARY DESIGN

FOCUS AREA DESIGN

DESIGN STANDARDS

FOCUS AREA DESIGN

A number of upgrades and improvements downtown Porter were recommended in the Downtown Master Plan and the ADA Transition Plan. Many of these are large projects, which are able to be broken down into smaller phases to make construction more flexible when various funds come available.

One of NIRPC's goals in the Creating Livable Centers program is to create activity areas that provide entertainment, basic consumer goods, and dining choices, that are within walking distance of a portion of the population. These amenities will help Porter improve their AARP Walkability Score, which is currently 47, and the Town's livability score, which is

currently 48. These numbers are comparable to other Northwest Indiana communities.

The Town has two major priorities for improving downtown Porter: improve existing infrastructure to allow better accessibility for all pedestrians and to implement new streetscape features to beautify the downtown.

The downtown typical cross sections that were developed for the Master Plan are still preferred. The only major change that was suggested was to create angled parking on the north side of Lincoln Street rather than the perpendicular parking. The following text is from the Downtown Master Plan for the basis for the Lincoln streetscape design.

DEFINING THE DISTRICTS

In the Downtown Master Plan, cross sections were laid out for Lincoln Street Streetscape Improvements. Two different “Districts” of Lincoln Street were defined: the Business District and the Residential District.

THE BUSINESS DISTRICT

The Business District of the Lincoln Streetscape is Lincoln Street from Wagner Road to Porter Avenue and Francis Avenue from Lincoln Street to Rankin Street. The Business District is the main focus of downtown Porter and is the destination for the Livable Center. The streetscape project that was laid out in the Downtown Master Plan suggested realigning Lincoln Street and the parking stalls in the District. The proposed plan is to relocate the angle parking that is on the south side of Lincoln Street to the north side, which would prevent business goers from having to cross the road. Additionally, the existing acorn style street lights would be replaced with downlights to improve the lighting for vehicular and pedestrian traffic. Additional landscaping and streetscape amenities for the Business District will follow the Design Standards laid out in the next section.

THE RESIDENTIAL DISTRICT

The Residential District of the Lincoln Streetscape plan is Lincoln Street from Porter Avenue to Waverly Road and Hageman Avenue, from Lincoln Street to the entrance of Hawthorne Park. The Residential District, which would emulate the other portions of the residential areas of downtown Porter, would include sidewalks, curb and gutter, on-street parallel parking, and a landscaped buffer zone between the back of curb and the sidewalk. The Residential District in downtown Porter only has lighting at intersections in order to limit light pollution into private residences.

LINCOLN STREETScape

During the Downtown Master Plan project, typical cross sections that were developed for the Lincoln Street. These streetscape designs were created after surveying residents, business owners and visitors. The following text from the Downtown Master Plan describes the thought process behind the basis for the Lincoln streetscape design.

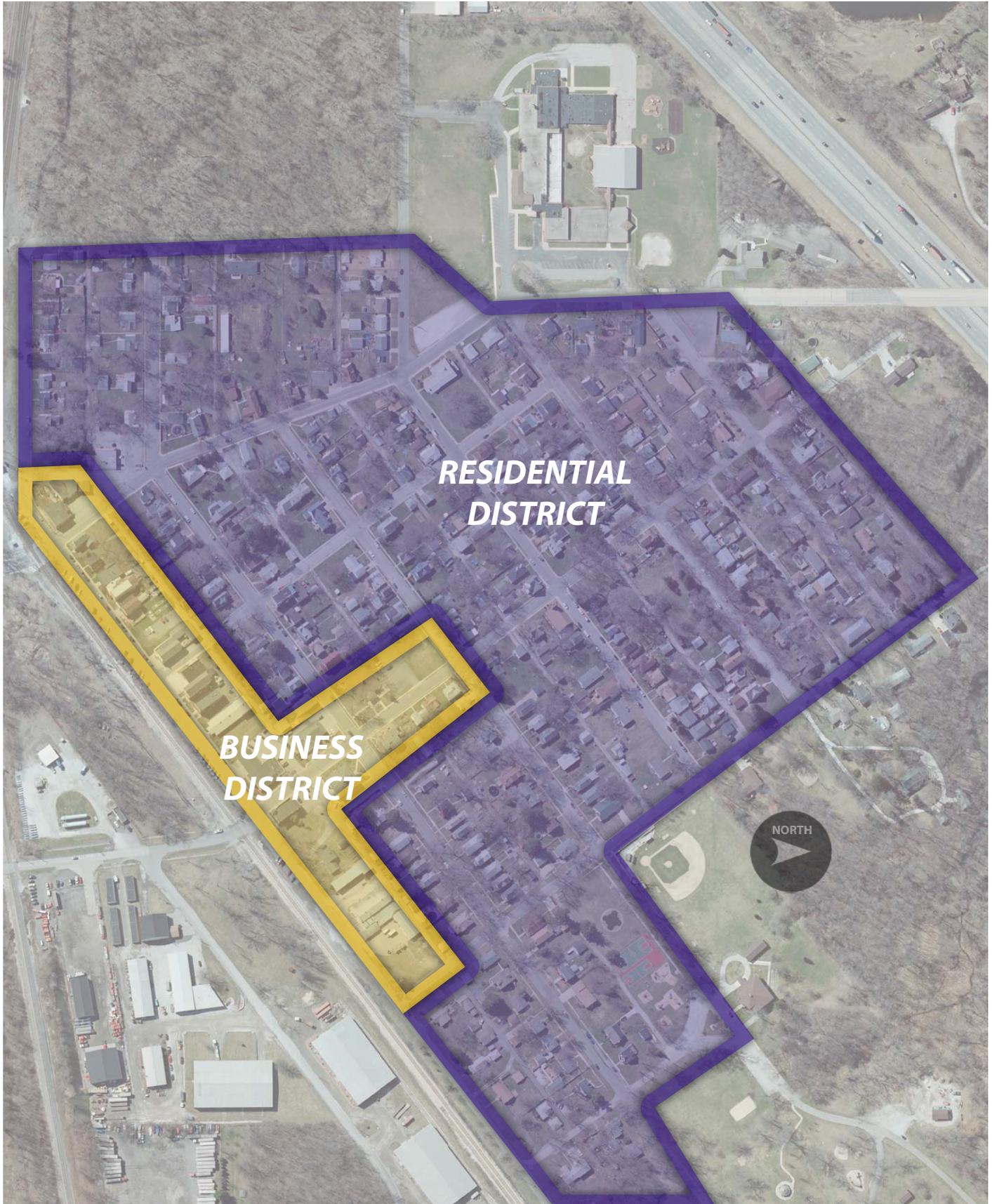


Figure 3-1. Districts Map.

STRENGTHEN THE CORE

A consistent theme supported during public input meetings was to strengthen the core business area of downtown, focused primarily on Lincoln Street. This should occur through the retention of and re-investment in existing businesses and the attraction of new and complementary ones that will diversify offerings to downtown visitors. High-visibility, under-achieving corners such as the Lincoln-Wagner-Busse triangle and northwest corner of Lincoln and Francis, could serve as a gateways from the south, complementing the municipal facilities to the north and anchoring the core. This strategy should be coupled with Lincoln Street beautification, streetscape, connectivity enhancements and strategic redevelopment that will strengthen the existing core and potentially expand it eastward to Porter Avenue and improve linkages between businesses and Hawthorn Park.

Concepts that illustrate this approach are included on the following pages and Figure 3-1 as well as strategies to leverage future Amtrak/high-speed rail improvements to achieve these and other related benefits for the downtown. Actions for design and implementation were also provided in the Downtown Master Plan.

ACTIONS

1. Expand and strengthen the core business district with a focus on Lincoln Street from Busse Avenue to Porter Avenue.
2. Reconfigure Lincoln Avenue as Porter's Main Street with aesthetic and functional streetscape improvements that accommodate daily business needs as well as special events.
3. Enhance the quality and connectivity of Hawthorn Park for both community recreation and a range of year-round special events.
4. Diversify the offerings to residents and visitors, including family dining and improved convenience and specialty retail.
5. Reconfigure parking to maximize the quantity and convenience for Lincoln Street businesses and residents.
6. Explore redevelopment of strategic parcels in the core area that may be for sale and/or not meeting their highest and best use.
7. Attract new and/or relocated existing businesses to the core area that would diversify and improve the business climate of downtown.

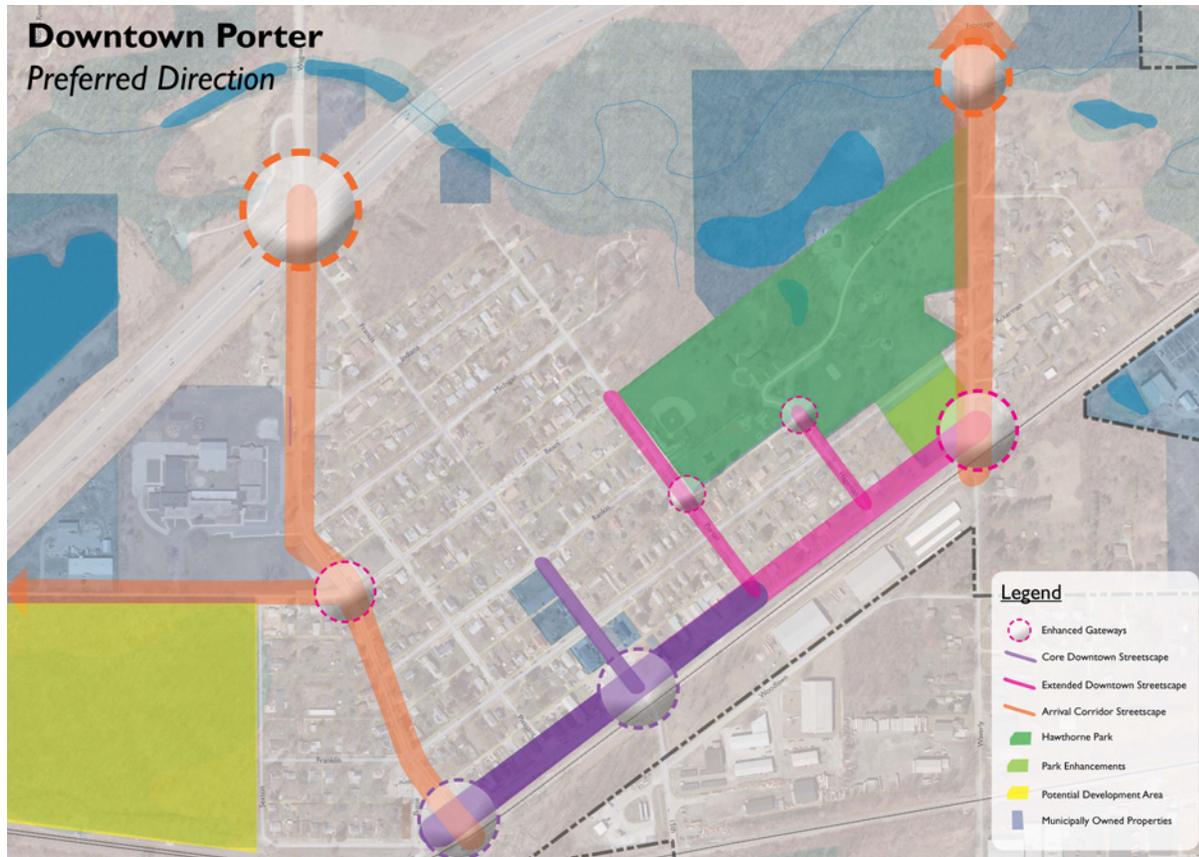


Figure 3-2. Preferred Plan - Downtown Porter Master Plan Report, 2012.

BUSINESS DISTRICT

LINCOLN STREETSCAPES

This study focused heavily on finding a balanced approach for the reconfiguration of Lincoln Street to address potential Amtrak/high-speed rail impacts on existing angled parking while better serving the existing business district with a more convenient and attractive streetscape. The preferred alternative for Lincoln Street is illustrated per Figure 3-4 through Figure 3-7.

The business district between Wagner Road and Porter Avenue will have the following elements:

- Angled parking is relocated to the north side of the street adjacent to businesses, reconfigured and expanded one block east to increase the total parking on Lincoln Street.
- Bump outs, along with improved, textured crosswalks.
- Sidewalks on the north side of Lincoln Avenue are widened to better accommodate pedestrian traffic, outdoor dining, and bumper and overhang from adjacent parked cars.
- Painted on-street bike routes or “sharrows” are included in each direction using vehicular travel lanes, creating a connection between the Orchard Pedestrian Trail and Brickyard/Dunes Kankakee Trail that connects directly to downtown businesses.
- Enhanced wayfinding, lighting, landscaping, site furnishings and associated urban design elements.
- Green infrastructure elements including permeable pavement parking bays, tree pits and stormwater planters.
- Enhanced visual and noise buffer to address adjacent rail road impacts.

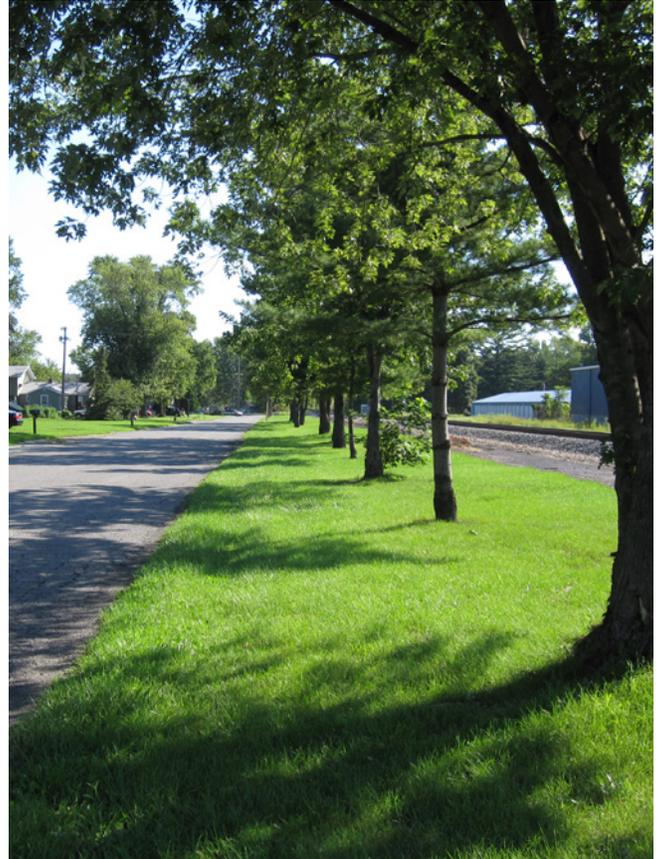


Photo 3-2. Lincoln Avenue streetscape.

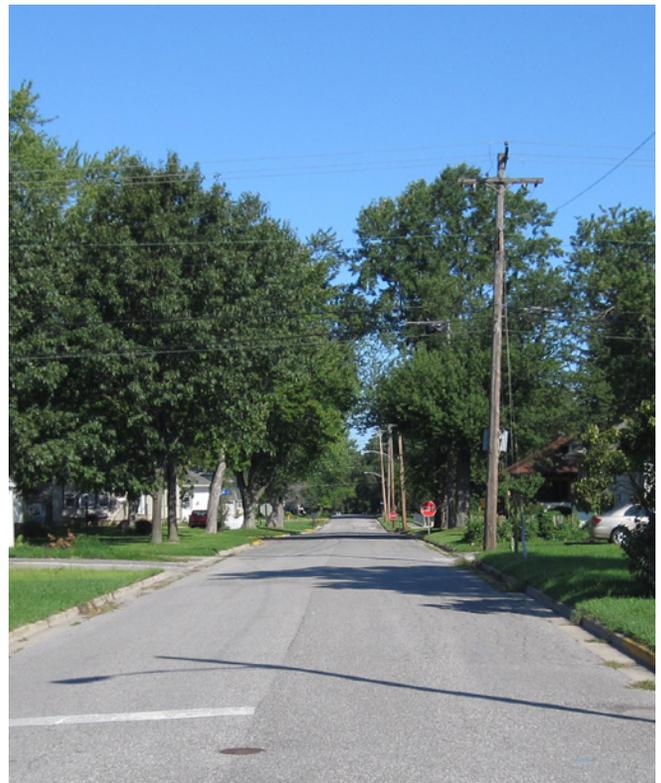


Photo 3-3. Porter Avenue at Lincoln Avenue.

ACCESS FOR ALL

Improving the pedestrian access within the downtownDowntown Porter by filling in gaps between sidewalks is the most important and most easily obtainable goal to achieve early success in further developing a thriving Business District. For funding reasons, the Town has broken the downtown Porter area into two “regions,” defined below, that will be targeted for creating continuous ADA compliant sidewalks. Creating ADA pedestrian access routes will include filling in gaps in the sidewalk network, replacing non-compliant curb ramp crossings, and addressing areas of sidewalk that are currently not ADA compliant, including areas of trip hazards, utility conflicts, correcting pinch points and correcting cross slopes.

REGION 1: CORE DOWNTOWN

The Core Downtown Region makes up a majority of Downtown Porter. The region is bounded by Beam Street on the north, Lincoln Street on the south, Sexton Avenue to the west and Waverly Road to the east. The largest deficiency in Core Downtown sidewalk network is along Lincoln Street from Waverly Road to Porter Avenue. Filling this gap is also important because this sidewalk would connect the Town’s two multi-use trails to Downtown Porter. The other major gap in the core downtown, as defined in the master plan, is along Hageman Avenue from Lincoln Street to Franklin Street near the entrance to Hawthorne Park. There is also no sidewalk on the west side of the entrance of Hawthorne Park to the playground area or other features in the park. These improvements, including reconstructing the curb ramps and street crossings to meet current ADA standards, can be completed independently of a streetscape project. Potential layouts of these needed sidewalk connections are shown on Figure 2-2. By prioritizing the improvements previously defined core downtown area, the Town would instantly provide better accessibility to all residents, consumers and visitors of the Town.

REGION 2: MICHIGAN CONNECTION AND NORTH LIVABLE CENTER

The second region, the Michigan Connection and North Livable Center, is the area between Wagner Road and Porter Avenue, from Beam Street, north to the limits

of Downtown Porter, as defined by this report. This Region includes Yost Elementary School on the west and Hawthorne Park on the east. The largest need in this region is the correction of the currently non-compliant sidewalk along the south right-of-way of Michigan Street. The existing walkway is approximately three feet wide, with a retaining wall that occasionally protrudes into this access area. This route is a very important feeder route to Yost at the intersection of Michigan Avenue and Wagner Road. In order to prevent excessive realignment and reconstruction of Michigan, it is recommended that a new ADA compliant walk, which would be a continuation of the new sidewalk that was constructed from Pleasant Street to Francis Street, be constructed on the north side of the road from Francis Street to Porter Avenue and from Pleasant Street west to Wagner Road. During this phase of construction, the intersection of Wagner Road and Michigan Avenue should be reviewed to make this a pedestrian friendly area for crossings to Yost Elementary. During the construction of this gap, the Town should also work to continue sidewalk along Wagner Road to Indiana Street, where one of Porter’s landmark businesses, Wagner’s Ribs, resides. The construction of a sidewalk along Indiana Street, which currently does not exist, should be explored at this time to make the entire focus area walkable.

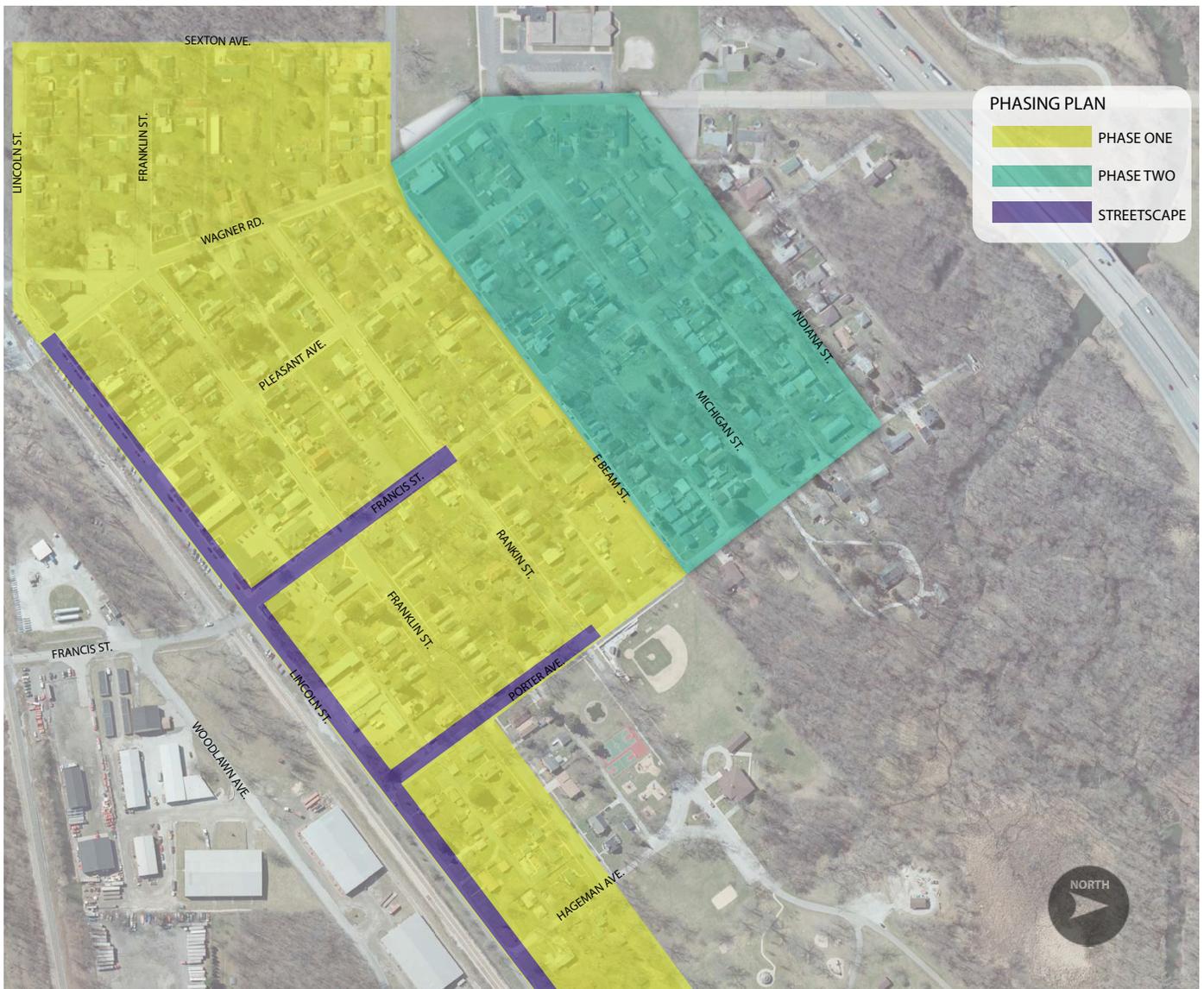


Figure 3-3. Phasing Plan.

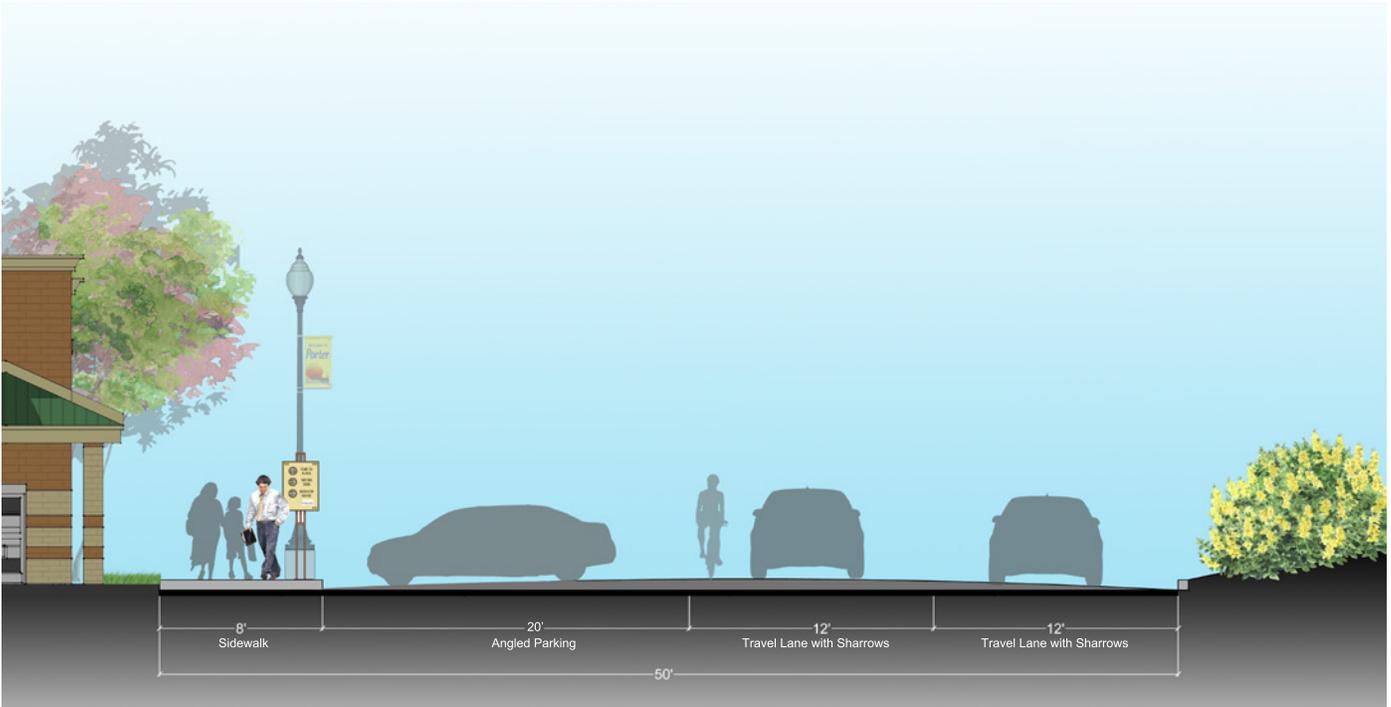


Figure 3-4. Lincoln Streetscape: Business District.

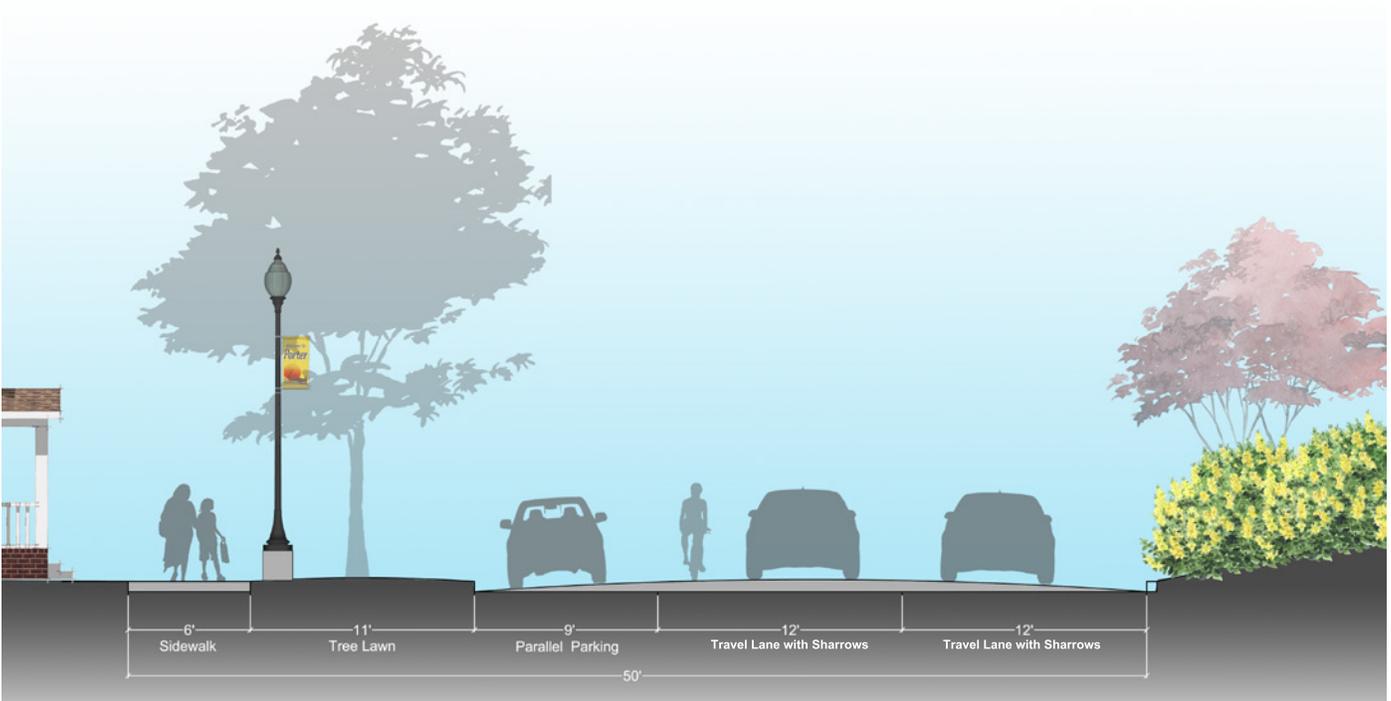


Figure 3-5. Lincoln Streetscape: Residential District.

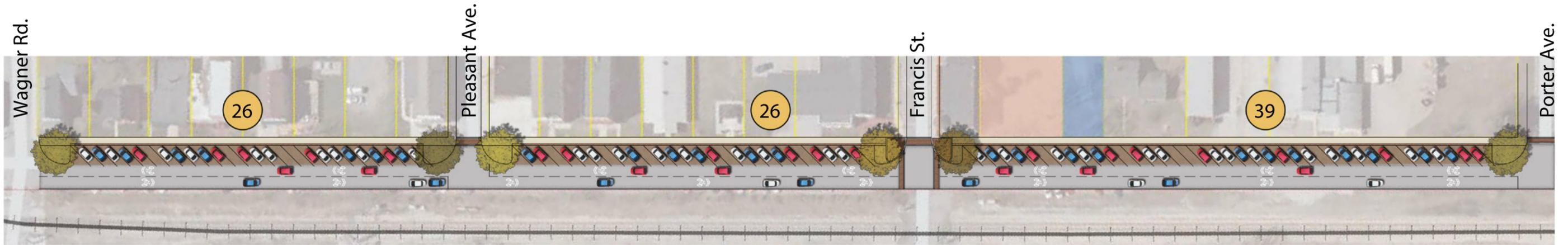


Figure 3-6. Lincoln Streetscape: West.



Figure 3-7. Lincoln Streetscape: East.



DESIGN GOALS

Setting design goals assists in the accomplishment of the defined vision of the stakeholders. There are key design goals that should be considered when designing comfortable pedestrian spaces for downtown Porter include:

- Entertain, by providing places, amenities and activities that would encourage visitors to stay longer, return more often and spend more money in downtown Porter,
- Connect everyone and everything within the Town and adjoining areas safely to the downtown,
- Beautify the arrival sequence to downtown Porter and improve the visual quality of the focus area,
- Sustain, by implementing physical enhancements and procedures that elevate Porter’s environmental, economic and social sustainability, and
- Sell downtown Porter as a niche within the Duneland Community.

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SIDEWALKS AND PAVING

Sidewalks in the downtown that are proposed to be eight feet wide should begin to incorporate a minimum two foot decorative band finish. One suggestion for finishing would be to draw from Porter’s history involving the former Brickyard, by having a two foot Brick Ribbon between a six foot sidewalk and the back of curb. This finish could be done with colored stamped concrete.

CURB RAMPS

Currently, any new curb ramp constructed in the Town of Porter has incorporated a Clay/Red color detectable warning tile. The Town should continue to keep the color of the tiles consistent to provide a uniform look town wide.

CROSSWALKS

Porter does not have many marked crosswalks at this time. For the existing crosswalks, the Town utilizes what is referred to as a Continental striping pattern, which is 24 inch bars, spaced approximately three feet apart. This design is the preferred method of crosswalk striping in the Indiana Manual of Uniform Traffic Control Devices because it has been found that this marking style is the most visible for motorists.

In the Downtown Business District, if the Town pursues the Lincoln Streetscape Project, other, more decorative crosswalk options should be explored. An idea that the Town should consider is continuing the Brickyard theme to the crosswalks. Two potential ways of doing this are with a multicolored, stamped concrete walkway through the intersection or inlaid thermoplastic crosswalks. These two options are shown in Photo 3-8 and Photo 3-9.

LIGHTING



Photo 3-4. Brick paver band. Photo 3-5. Stamped Concrete band.



Photo 3-6. Detectable warning tiles.



Photo 3-7. Crosswalk - Continental Striping Pattern.



Photo 3-8. Ennis TrafficScapes stamped asphalt with inlay.



Photo 3-9. Crosswalk - Brick.

acorn lamps with high-pressure sodium lamps. The current poles are not spaced consistently and range from fifty-five feet on center to eighty feet on center. The current lights include banner arms, as shown in Photo 3-10.

If the Town chooses to adopt a new light standard, the selection of lighting below are streamlined traditional styles that are LED, providing a sustainable, low-maintenance lamp and reduced energy costs. The lights shown below are all full cut-off, which helps direct the light only where it is needed and greatly reduces light pollution to surrounding areas.

Other options to consider for the primary roadways are banner arms similar to what is currently used or hanging planter baskets. The lighting standard in Photo 3-10 doubles as roadway lighting, with a larger arm and higher lumen light, and pedestrian lighting, with shorter arm and smaller lamp to direct light towards the sidewalk. The standard in Photo 3-11 is most similar to what is currently existing

but with an updated style and energy cost savings, but is meant more for pedestrian use than as roadway lighting. Photo 3-12 shows a smaller light standard that is meant for a combination of roadway and pedestrian lighting.

The correct light spacing should be determined by the height of the pole, lumens produced from the lamp, and the street width, with a desired one foot candle at one foot from grade level.

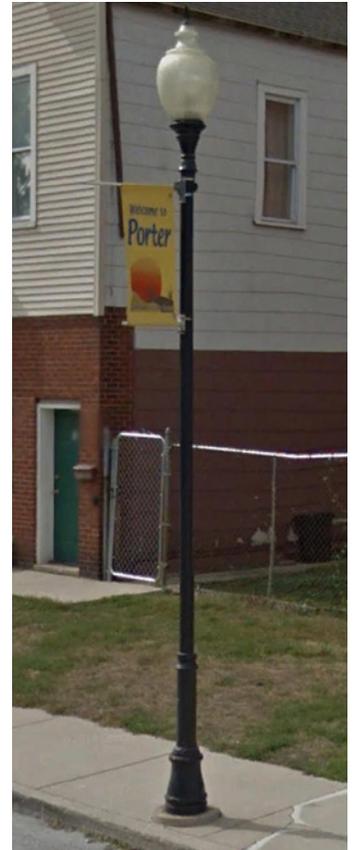


Photo 3-10. Existing lighting.



Photo 3-11. Sternberg Omega.



Photo 3-12. Sternberg Euro.



Photo 3-13. Philips Domus Small LED.

LANDSCAPING

Planters and hanging baskets should be considered to bring color and life to the downtown streetscape. All other trees should be planted in the parkways to avoid future issues with sidewalks.

The street trees should be planted no more than 30 feet on center. The shade trees should be planted 30 feet to 40 feet on center. The ornamental trees should be planted 20 feet on center, and where conflicts on the east side with overhead utilities. The trees chosen should be Indiana native species or other species that are non-invasive, tolerant of cold temperatures and drought, and tolerant of salt and other urban conditions.

The following is a list of trees that should not be planted:

- Silver Maple (*Acer saccharinum*)
- Ash species (*Fraxinus*)
- Quaking Aspen (*Populus tremuloides*)
- Lombardy Poplar (*P. nigra* 'Italica')
- Willow species (*Salix*)
- Eucalyptus species (*Eucalyptus*)
- Bradford Pear (*Pyrus calleryana*)
- Mulberry species (*Morus*)
- Black Walnut (*Juglans nigra*)
- Leyland Cypress (*Cupressocyparis leylandii*)
- Ginkgo (*Ginkgo biloba*)
- Sweet Gum (*Liquidambar styraciflua*)
- Mimosa (*Albizia julibrissin*)
- Honey Locust (*Gleditsia triancanthos*)
- Cottonwood (*Populus*)
- Basswood (*Tilia americana*)

Any tree or plant listed on the USDA Invasive Species List shall not be used. The Town could explore the possibility of developing a Downtown Landscape Ordinance.

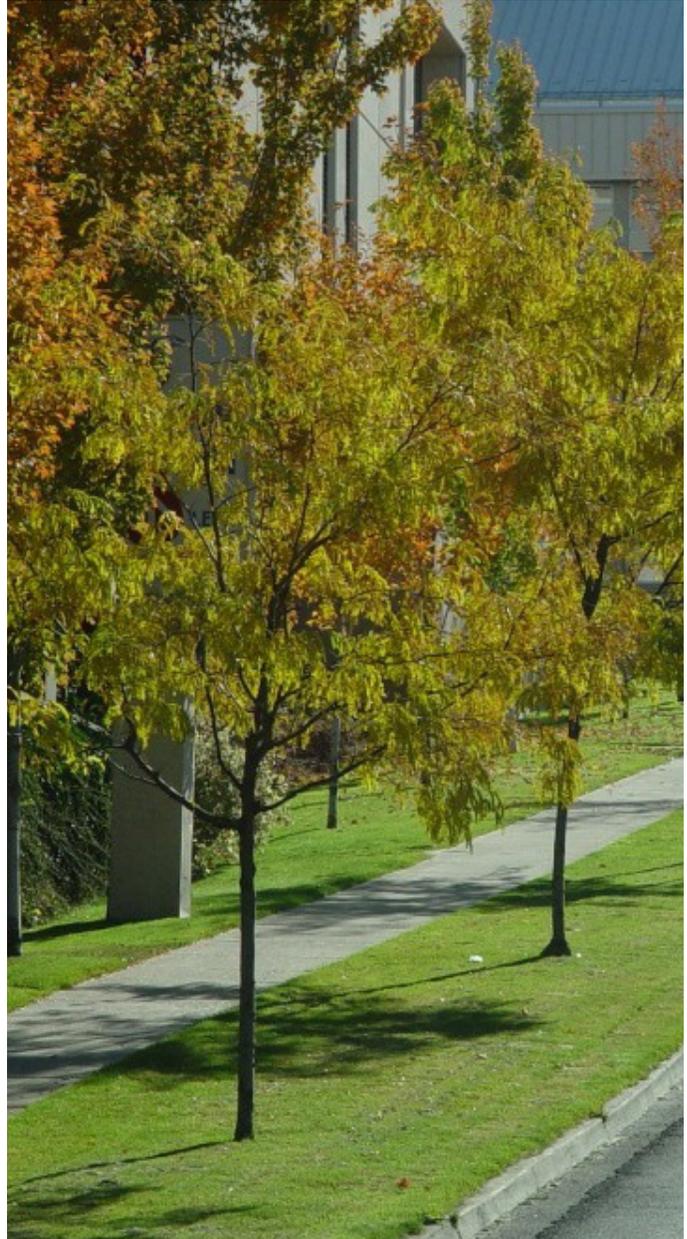


Photo 3-14. Parkway trees.



Photo 3-15. Hanging planter baskets.



Photo 3-16. Planters.



Photo 3-17. Duneland wayfinding.

DUNELAND WAYFINDING SIGNAGE

The Duneland Chamber of Commerce has a standardized wayfinding sign for the Towns of Burns Harbor, Chesterton and Porter. The existing signs direct people to public places such as public service buildings, parks and schools. The Town of Porter should continue to utilize this signage within the community. Porter could add additional signage at the points of entrance to the Town, which could direct patrons to local businesses.

DK TRAIL SIGNAGE

The Town has also developed a standard wayfinding sign for the Dunes-Kankakee Trail through the initial phases of construction. When Porter begins to upgrade the wayfinding on the Calumet Trail and the Porter Brickyard Trail, the style should be carried through to create a uniform look to provide less confusion for trail users.



Photo 3-18. Dunes Kankakee Trail wayfinding.

REGULATORY AND STREET SIGNAGE

Currently, Porter does not utilize any decorative sign posts for signs in the downtown corridors. Many communities have begun to incorporate decorative sign posts to match the street light posts in their business districts. As a part of the streetscape project, the Town of Porter should begin to incorporate these decorative posts along Lincoln Street from Wagner Road to Porter Avenue and Francis Street from Lincoln to Rankin Street to enhance the aesthetics of the corridor and distinguish the downtown from the surrounding neighborhood.



Photo 3-19. Decorative Regulatory and Street Signage.



Photo 3-20. Decorative Regulatory Signage.



Photo 4-1. Rankin Street

PHASING & IMPLEMENTATION

PHASING PLAN

IMPLEMENTATION STRATEGIES

OPINION OF PROBABLE CONSTRUCTION COST

PHASING PLAN

The improvements that will help develop the downtown focus area were broken up into phases, based upon relevance and availability of funding. The estimates of probable construction cost are included at the end of this chapter.

PHASE #1: CORE DOWNTOWN

The biggest need in the Downtown Livable Center, is to complete the connections in the core downtown, from Lincoln Street on the south, north to Beam Street from Wagner Road to Waverly Road. Completing the connections in the downtown include two items: filling in gaps in current pedestrian ways and improving existing pedestrian routes to meet the goals of the 2012 ADA Transition Plan. The largest gap that is currently present in the downtown is the missing sidewalk along

Lincoln Street from the Orchard Pedestrian Way, at Waverly Road to Porter Avenue. Another major missing link is on Hageman Avenue from Lincoln Street to Hawthorne Park.

The other minor gaps that are present in the core downtown are along Porter Avenue from Rankin Street to Beam Street and on the south side of Beam Street from Porter Avenue to Francis Street. Additionally, most of the curb ramps in the core downtown area are non-compliant curb ramps and will need to be replaced as a part of this phase. A number of hazards in the Pedestrian Access Route that will need to be evaluated and corrected during the construction. As a part of the Town's 2016 Paving Project, the curb ramps along Wagner Road and Lincoln Street are being replaced to meet current ADA/PROWAG standards.

The new sidewalks along Lincoln Street and Hageman Avenue would be constructed along the right-of-way in order to leave enough room between the five foot sidewalk and the roadway to come back in the future to install curb and gutter, landscaping and other streetscape elements.

PHASE #2: MICHIGAN STREET CONNECTION AND NORTH LIVABLE CENTER

Michigan Street currently has sidewalk on the south side of the road from Porter Avenue to Wagner Road, but the sidewalk is only three feet wide, with an adjacent retaining wall. This existing sidewalk does not meet the requirements for an accessible route. Yost Elementary School is located at the northwest quadrant of the intersection of Michigan Street and Wagner Road. The Town of Porter has constructed a fully ADA compliant portion of sidewalk from Pleasant Avenue to Francis Street on the north side of Michigan Street. The first component of this phase would be to extend the compliant sidewalk on the north side of Michigan east to Porter Avenue. One other large component of this phase would be to improve the crossing to the school on both the north and south sides of Michigan, where currently, there is only a crossing on the south side of the road, which is staffed with a crossing guard before and after school. Indiana Street currently lacks any sidewalk on either side of the roadway. This would be another construction project for this phase, in addition to the construction of an accessible pedestrian route on the east side of Wagner Road from Indiana Street to Michigan Street. The remaining curb ramps in the Livable Center would also be constructed under this project set.

PHASE #3: DOWNTOWN STREETScape

One of the main projects of the Downtown Master Plan was the streetscape improvements. The master plan outlined two different typical streetscape sections for the Downtown Business District. The core downtown streetscape is Lincoln Street from Wagner Road to Porter Avenue and Francis Street from Lincoln to Rankin Street. This streetscape includes widening of sidewalks to better accommodate pedestrian access, relocating the angled parking from the south side of the road, to the north side, adjacent to the businesses, and the addition of sharrows to the travel lanes to connect the Orchard Pedestrian Way to the Brickyard Trail, among other improvements. The largest current issue with completion of these streetscape features is the fact that Lincoln Street is an active truck route between Wagner Road and Francis Street. Because of the required turning radii for trucks, these streetscape elements are difficult to accomplish with the current traffic patterns. The Town is exploring their options for relocation of the truck route between US 20 and Woodlawn Avenue.

The second typical section is the extended downtown streetscape, which is Lincoln Street from Porter Avenue to Waverly Road, Porter Avenue from Lincoln Street to Beam Street, and Hageman Avenue from Lincoln Street to Franklin Street, which is also the entrance to Hawthorne Park. This section includes adding curb and gutter, a parking lane on the north side of the roadway, sharrows similar to the other portion of the streetscape, along with carrying the other streetscape enhancements through this corridor. This streetscape would be constructed in conjunction with or following the construction of Phase #1.

The additional streetscape enhancements for these typical sections will be designed to follow the design standards as laid out in Chapter 3 of this report.

IMPLEMENTATION STRATEGIES

There are a number of different funding sources for construction of the projects described in this section. The Town also should look to further leverage these funds as they become available. Below are potential funds sources for the Town of Porter to pursue in the future.

NIRPC CLC GRANTS

In 2014, the Town of Porter applied for and received a \$40,000 grant from NIRPC during the first phase of the Creating Livable Communities Grant program. The

initial phase was released for communities to create a guideline for projects in their local community centers. Future funding cycles for the NIRPC CLC Grants are anticipated to have construction funds for communities who have completed the planning phase, which this document serves as.

INDOT/FHWA

The Indiana Department of Transportation administers a number of different funding programs available through the Federal Highway Administration to perform transportation improvements in local communities. The Town should continue to monitor funding cycles for Highway Safety Improvement Projects (HSIP), Congestion Mitigation and Air Quality (CMAQ), Transportation Enhancements (TE), Safe Routes to School, and Surface Transportation Programs (STP). The eligibility requirements for the funding sources vary, but many of the projects are eligible under multiple programs.

LOCAL FUNDS

The Town of Porter has a dedicated portion of funds each year that is dedicated to improving accessibility and removing hazards from pedestrian ways. The

Town could potentially increase this annual funding by earmarking casino revenue sharing funds to improving sidewalks or using county block grant funds for meeting ADA compliance.

PRIVATE FUNDS

As new businesses open in the Livable Center, the Town should work with the developers to make improvements to the existing infrastructure to improve the accessibility and aesthetics of the business and surrounding areas.

OTHER FUNDS

There are a number of other funding sources that available for the Town to pursue including grants from the Northwest Indiana Regional Development Authority (RDA) and the Lake Michigan Coastal Grant Program, among other programs that may come up in the future.

OPINION OF PROBABLY CONSTRUCTION COSTS

The exhibit (Figure 4-2) provides an opinion of probably construction, design, and engineering costs, that align with the project phasing previously stated. Full breakdown of costs are included within the Appendix.

Project	Planning Costs	Engineering Costs	Construction Costs	Total Project Costs
Phase 1 - Core Downtown				
Lincoln Street and Hageman Avenue Sidewalks		\$ 22,594	\$ 225,938	\$ 248,531
Core Downtown Pedestrian Improvements		\$ 50,125	\$ 501,250	\$ 551,375
Phase 2 - Michigan Street Connection and North Livable Center				
Michigan Street Sidewalk		\$ 9,594	\$ 95,938	\$ 105,532
North Livable Center Pedestrian Improvements		\$ 16,594	\$ 165,937	\$ 182,531
Wagner Road and Michigan Street Intersection Improvement Study	\$ 40,000			\$ 40,000
Indiana Street Sidewalk		\$ 23,625	\$236,250.00	\$ 259,875
Phase 3 - Downtown Streetscape				
Lincoln Street Streetscape		\$ 200,778	\$ 2,007,775	\$ 2,208,553
Francis Street Streetscape		\$ 7,625	\$ 76,250	\$ 83,875
Hageman Street Streetscape		\$ 13,150	\$ 131,500	\$ 144,650
	\$40,000	\$344,084	\$3,440,838	\$3,824,921

Figure 4-1. Summary of Project Phasing Costs.



Photo Appendix-1. Rankin Street

APPENDIX

NIRPC CREATING LIVABLE COMMUNITIES

NIRPC RED FLAG INVESTIGATION

PHASING BREAKDOWNS

Overview

Porter is located in Porter County, is about 45 miles from Downtown Chicago and about 16 miles from Downtown Gary. According to the 2010 Census, the town's population is 4,858. Porter's general boundary is Lake Michigan on the north, the Indiana Dunes National Lakeshore on the east, Chesterton to the south, and Burns Harbor to the west.

Livable Center

Due to its small size, the Town of Porter had one identified center: the downtown area.

DOWNTOWN PORTER (DOWNTOWN CENTER)

The northern boundary of Porter's livable center is US 20 and the Little Calumet River. The center's eastern boundary is Waverly Road, while the southern boundary follows the Amtrak rail line from Waverly Road to Porter Junction and then continues straight through the junction, following the CSX line to the western boundary at Mineral Springs Road. The total acreage of the center is 429 acres.

Population:

857 people (18% of Porter's population) live within the livable center. Population density is about 4 people per acre.

Housing:

The total housing is 337 units (approximately 17% of Porter's total housing). Housing density is 1.5 units per acre.

Jobs:

Total employment within the center is 261 with a density of 9.3 employees per acre.

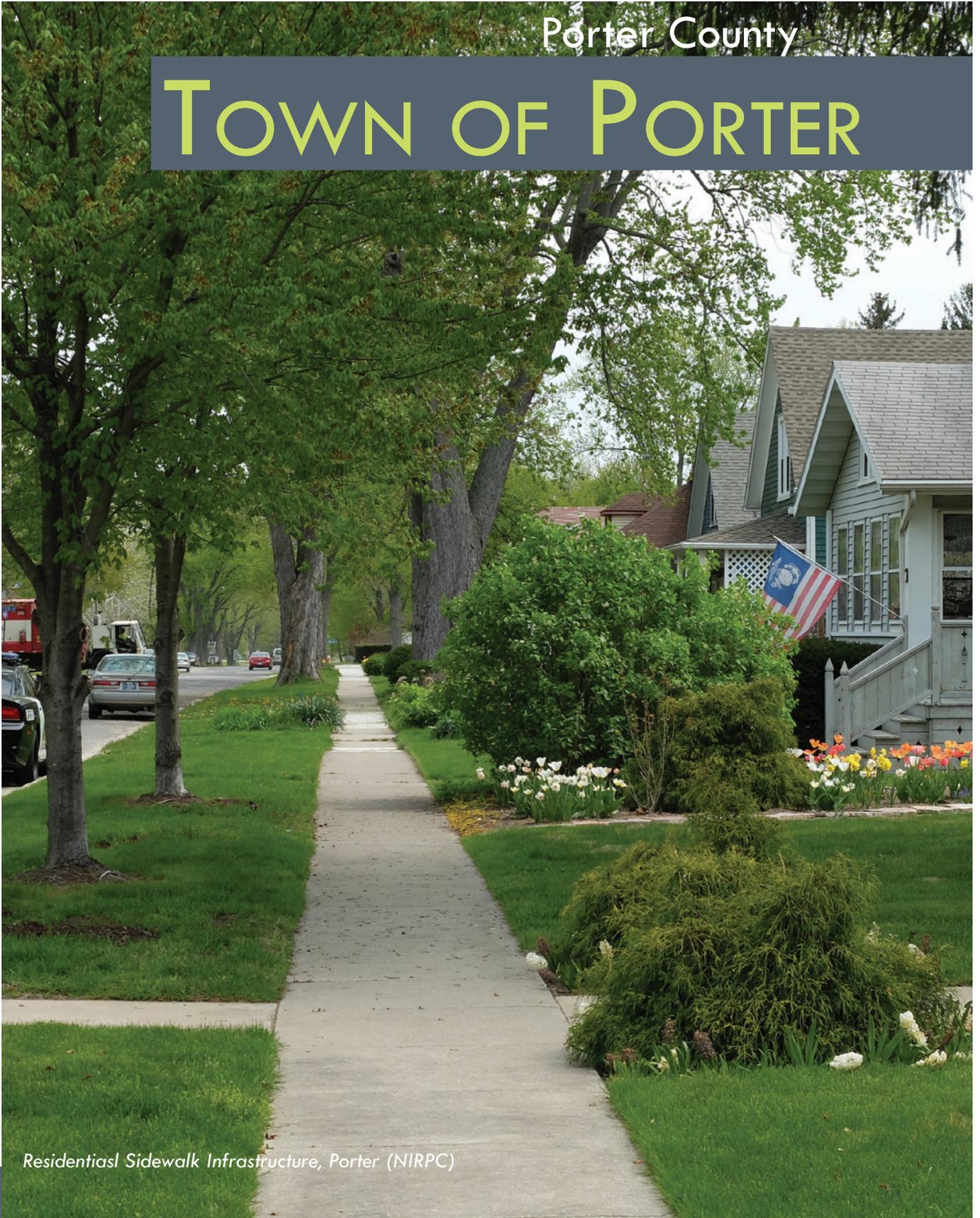
As the downtown center for the Town of Porter, there are the traditional civic uses that one would expect, including Town Hall, the police and fire departments, the public library, schools, and city parks. This center contains the town's main commercial corridor along Lincoln Street as well as residential neighborhoods.

Mobility

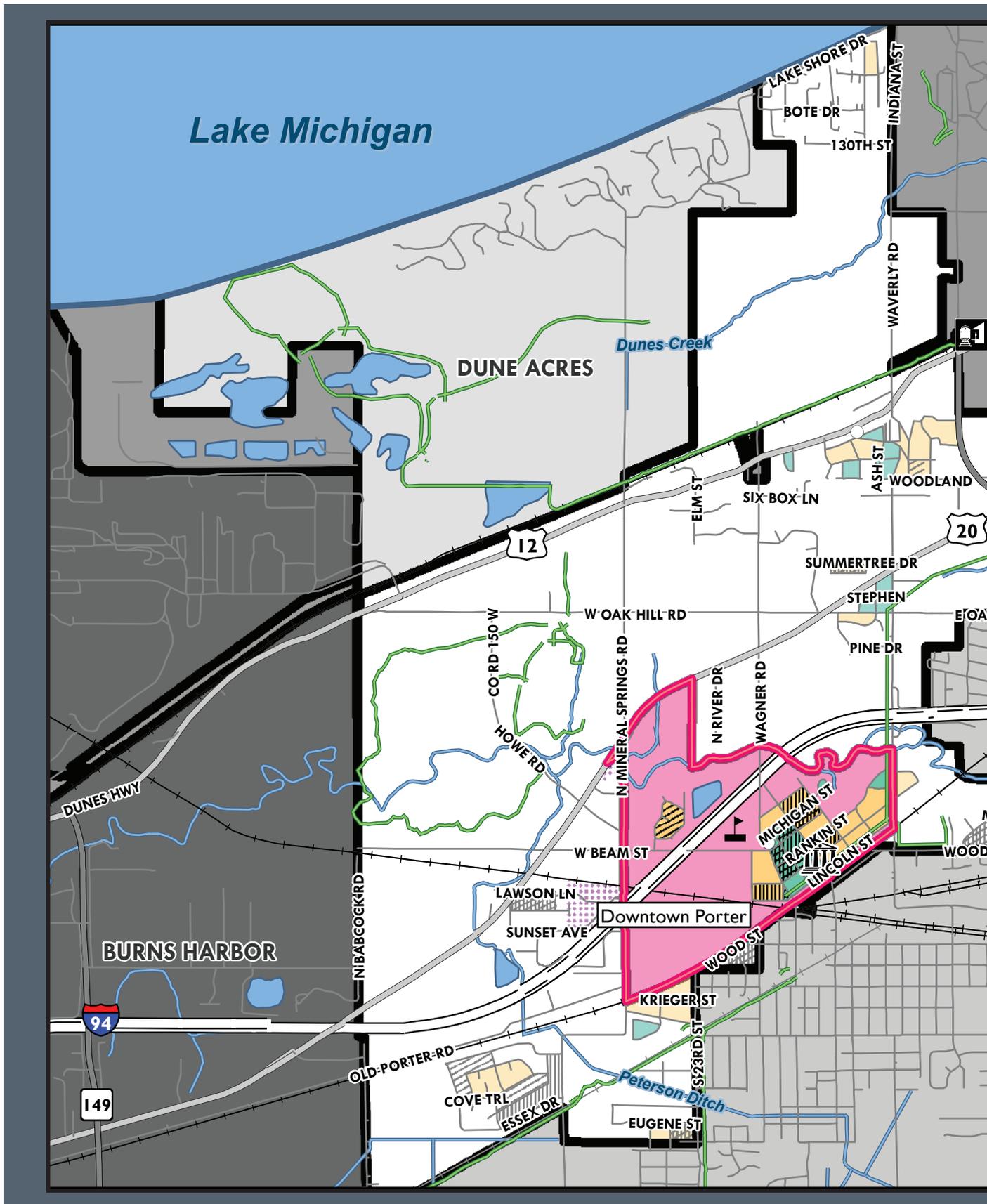
The center has denser residential development placed on short blocks with sidewalks. Additionally, ongoing trail development into the center of town has created strong alternative transportation connections.

Porter County

TOWN OF PORTER



Residential Sidewalk Infrastructure, Porter (NIRPC)



PORTER'S

LIVABLE CENTERS

LIVABLE CENTERS BOUNDARIES

These boundaries were drawn in consultation with planners and representatives associated with the municipalities based on NIRPC's analysis and the municipality's plans



Main Livable Center



Neighborhood Center

NIRPC ANALYSIS

NIRPC's analysis highlights areas which are dense and walkable. These areas ideally have small block sizes, population and employment density, as well as access to transit, education, and civic halls.



Schools



Higher Education



Civic Halls



South Shore Stops



Trails



Bus Lines



Identified Mixed Use Zoning

Density per Acre by Census Block

○ ≥ 20 Employees ||||| ≥ 4 Houses

▨ ≥ 4 Houses and 10 People ▨ ≥ 10 People

Block Perimeter



< 1600 ft



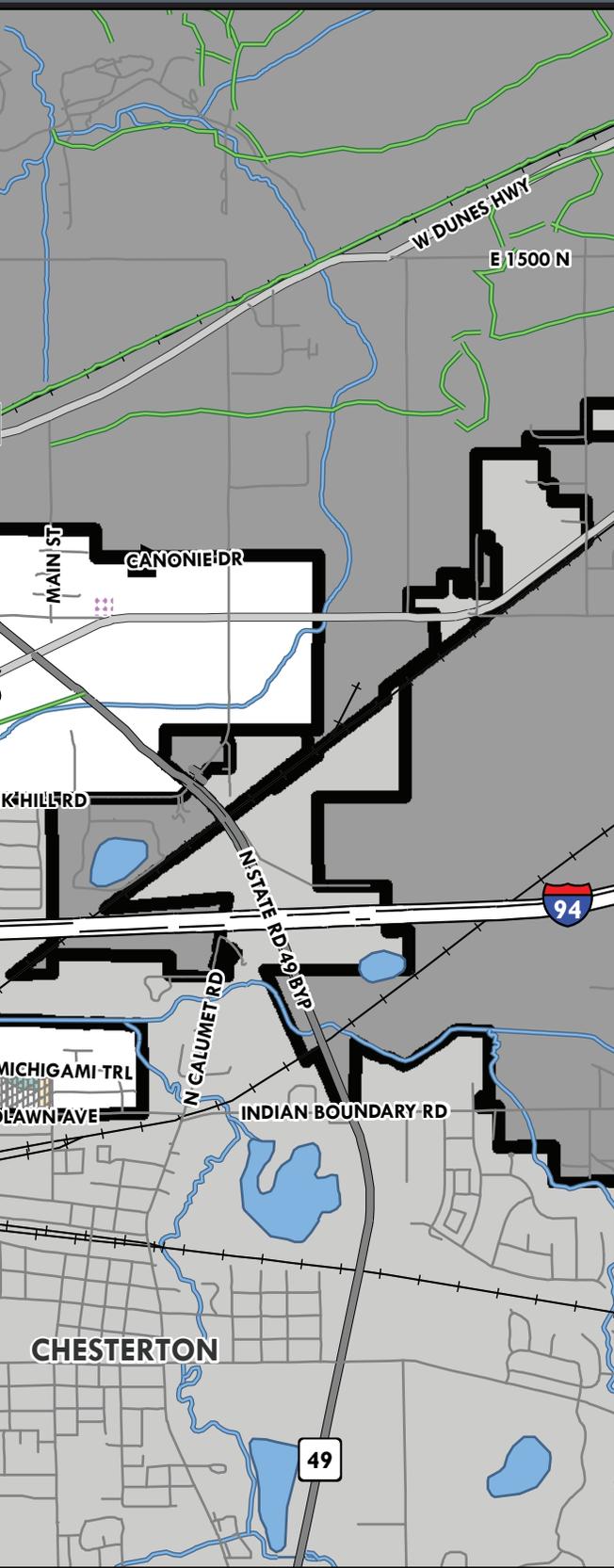
1600 - 2400 ft



0.5

1

Miles



Map contains data that may be inaccurate or out of date. Refer to NIRPC or municipality for the most current information.



Street Grid:

The older traditional center of Porter generally has a strong street grid with short blocks that offer good connectivity. However, I-94, the river, railroads, and former industrial sites force an abrupt end to this grid system, though the two Planned Unit Developments within this center can help create and maintain the existing connectivity and street grid structure that currently exists. The residential area of Porter's livable center consists of smaller blocks, predominantly 1,600-2,400 feet in perimeter, served by alleys built through the center of the blocks, which largely eliminates the presence of driveways and excessive curb cuts. This configuration, generally more urban in form, allows for more walkable neighborhoods that create fewer conflicts between pedestrians and motor vehicles.

Traffic Conflict:

The most major traffic conflicts are between motor vehicles and trains. Due to the high volume of rail traffic, traffic can back up at crossings, leading to impaired access to areas such as the Lincoln Street Commercial Corridor.

Walkability:

Along the Lincoln Street Commercial Corridor, sidewalks are located on the north side of the street, providing easy walking access to the businesses located along the corridor. These sidewalks connect into the overall sidewalk network of the town, making it easy to walk from the residential area of the center to Lincoln Street. Nearly the entire residential area of the center has sidewalks, with the handful of blocks located north of Michigan Street being a notable exception. On the east side of this section is Hawthorne Park, which provides public open space.

Parking:

There is a small amount of off-street parking provided by some of the businesses, parking is primarily on-street; parallel parking on the north side in front of the businesses, and angle spots occupying the space on the south side between the street and the rail line.

Land Use/Buildings

The main commercial corridor along Lincoln Street mainly consists of restaurants and bars, though there are some offices, shops, and a bank located there as well. This development is on the north side of the street, with Amtrak's rail line running parallel along the south side. The corridor is about two blocks in length. The buildings on this corridor are from a mix of eras, though they look to be predominantly from the turn of the last century. While the residential area near the Lincoln Street Commercial Corridor is developed in a more traditionally urban form, the residential developments contained in the areas west of I-94 are different in character. There is a typical suburban subdivision with a single access point off of a main road and curvilinear streets and cul-de-sacs. There are sidewalks, but only within the development. These homes



have garages with driveways oriented toward the street as opposed to a system of alleys. The setbacks of the houses are largely consistent Just to the west of that subdivision is low density development on large lots with no sidewalks, similar to development in unincorporated or rural areas. The houses are set back from the road at varying distances and the entire area has a much lower density.

Porter’s livable center also features two areas zoned as Planned Unit Developments (PUDs). Located west of downtown Porter, one is planned to be predominantly based around residential use, while the other will be based around commercial uses. The northern PUD is the commercial development. Based around a current small amount of commercial activity, this PUD corresponds with Porter’s plans to create gateways into the town from US20. This area is planned to have various commercial functions that will attract travelers along US20 while also serving the population to the south. As the town’s trail system expands, there will be greater non-motorized connectivity from this site south and east into town as well as north into the Indiana Dunes National Lakeshore. The southern PUD, planned for a former brickyard site, will provide greater residential opportunities in close proximity to the Lincoln Street corridor. Residents of this PUD will be able to easily take advantage of what the town has to offer through the easy connectivity and close proximity that the site provides. While the development of this PUD was put on hold due to the recent recession, it is hoped that plans will be revived soon as the housing market continues to recover and consumers seek new options.

Open Space/Landscaping

There is one small parcel of “formal” open space located next to the bank, with at least two other “informal” open spaces in other locations. Streetscaping or landscaping is done by the business, though the town has installed decorative streetlamps. A few establishments also have patios or sidewalk seating. This helps bring life to the street and sidewalk. The buildings generally have a small setback with a strip of landscaping between the building and sidewalk.

On the east side of the older residential section is Hawthorne Park, which provides public open space.

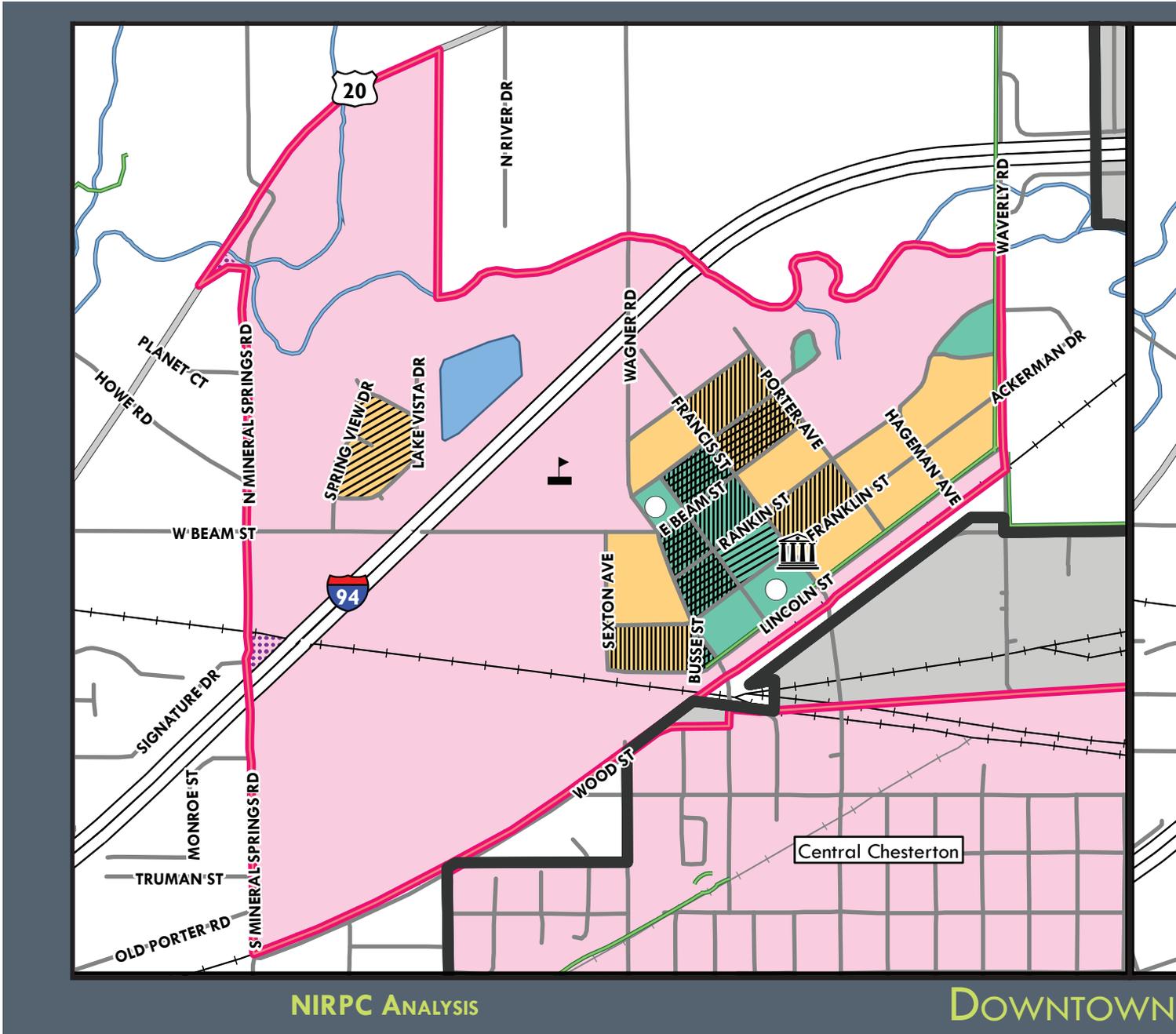


Street Grid:
Downtown
Porter
(NIRPC)



Downtown
Porter
Commercial
Building
(NIRPC)





NIRPC ANALYSIS

DOWNTOWN

Important Features

- Schools
- Higher Education
- Civic Halls
- South Shore Stops
- Bus Lines
- Trails
- Mixed Use Zoning

Density Per Acre by Census Block

- ≥ 10 People
- ≥ 4 Houses
- ≥ 4 Houses and 10 People
- ≥ 20 Employees

Block Perimeter

- < 1600 ft
- 1600 - 2400 ft

NIRPC's analysis highlights areas which are dense and walkable. These areas ideally have small block sizes, population and employment density, as well as access to transit, education, and civic halls.

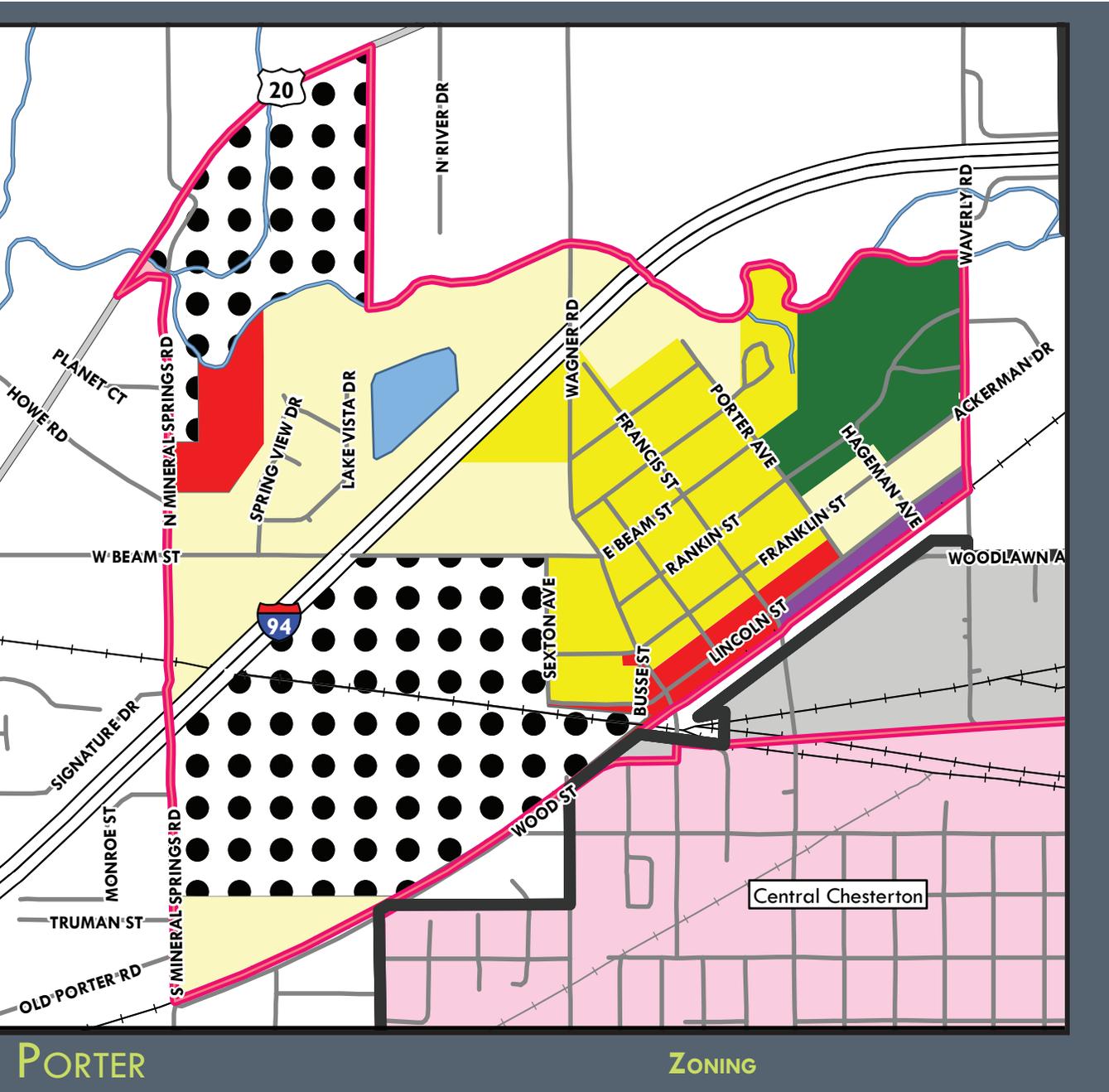
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These Boundaries were drawn in co...
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based on NIRPC's analysis and the...



Map contains data that may be inaccur...
Refer to NIRPC or municipality for the m...



Center
 Neighborhood Centers
 consultation with plan-
 with the municipalities
 the municipality's plans

0.25
 Miles
 orate or out of date.
 most current information.



- | | |
|--|--|
| Neighborhood Business | Open Space |
| Central Business | PUD |
| General Business | Single Family Large Lot |
| Light Industrial | Single Family Small Lot |

Density Per Relevant Zoning Acre
 4 People 1.5 Houses 9.3 Employees

Zoning data is integral to NIRPC's analysis because it indicates the municipality's current land use as well as desired future land uses. Zoning data is based on the most recent ordinances available.



NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION

Together We Make The Difference

6100 Southport Road, Portage, Indiana

Fax Messages (219) 763-6060
(219) 762-1653

On the Internet www.nirpc.org
E-mail Messages nirpc@nirpc.org

January 15, 2015

Re: Town of Porter
Sidewalk & Streetscape Improvements
Porter County
Des No 1400578

Dear Mr. Hendrix,

The Northwest Indiana Regional Planning Commission's Environmental Department has completed a Red Flag Investigation to help determine what impacts may exist within the project boundary of downtown Porter. Using the INDOT Red Flag Investigation map service resulted in the following findings.

Infrastructure			
Religious Facilities	1	Recreational Facilities	1
Airports	0	Pipelines	0
Cemeteries	0	Railroads	0
Hospitals	0	Trails	1
Schools	0	Managed Lands	1

One religious facility, the Porter Assembly of God Church, is shown between Indiana St. and Michigan St. within northern portion the project boundary. The Prairie Duneland/Calumet Trail Connector is shown to follow the outskirts of the project boundary on the southwest side of town. Hawthorne Park, which is shown both as a recreational facility and managed land, is the closest infrastructure to the proposed sidewalks.

Water Resources			
Canal Routes- Historic	0	Canal Structures- Historic	0
Wetland Line	0	Floodplain-DFIRM	0
Rivers and Lakes	0	Wetlands	1
Wetland Points	0	Lakes- Impaired	0
Streams- Impaired	0	Cave Entrance Density	0
Sinkhole Areas	0	Karst Springs	0
NWI Line	0	Sinking Stream Basins	0

The only water resource concern that is shown in the project area is a wetland located adjacent to Sexton Avenue.

Mining/Mineral Exploration			
Oil/Gas Wells	0	Mines- Underground	0
Mines- Surface	0		
Petroleum Fields	0		

There are no mining/mineral exploration concerns located within the project boundary.

Hazmat Concerns			
CFO	0	Construction Demolition Waste	0
Industrial Waste Sites	0	LUST	0
Open Dump Waste Sites	0	NPDES Pipe Locations	0
NPDES Facilities	1	Corrective Action Sites	0
Restricted Waste Sites	0	Septage Waste Sites	0
Solid Waste Landfills	0	Superfund Sites	0
Tire Waste Sites	0	UST	3
VRP	0	Brownfields	0
Waste Transfer Stations	0	Waste Treatment Storage Disposal	0
Manufactured Gas Plant	0	State Cleanup Site	0
Etiological Waste Site	0	Lagoon	0

There are three underground storage tanks and one NDPEs facility (Porter WWTP) shown within the project boundary. None are directly adjacent to the proposed sidewalks.

Cultural Resources

Based upon the Indiana Historic Sites and Structures Inventory- Porter County Interim Report, there are 25 historical features shown within the project boundary.

Ecological Information

Based upon Indiana Heritage Database data obtained from the DNR from a March 2011 request, no element occurrences have been documented within the project area.

Conclusions

The results of our Red Flag Investigation show there are a few potential environmental features/concerns located within the project area. The most numerous are the cultural resources located throughout town. The water resource concerns appear to be avoided by limiting the work area within Hawthorne Park. If any work is to be done near the wetland area shown along Sexton Avenue, we would strongly recommend coordinating with IDEM and the US Army Corps of Engineers to determine if any permits are required. Our analysis was based upon information made available through the INDOT Red Flag Investigation map service, the DNR Natural Heritage Database, and cultural/historical data spatially represented from the county interim reports by NIRPC. If you should have any questions please do not hesitate to contact me directly.

Sincerely,



Kathy Luther
Director of Environmental Programs

Red Flag Investigation - Infrastructure

Town of Porter

Des. No. 1400578, Sidewalk & Streetscape Improvements

Porter County, Indiana



Source: Esri, DigitalGlobe, GeoEye, Earthstar (USA), USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



	Religious Facility		Recreation Facility		Project Area
	Religious Facility		Pipeline		Half Mile Radius
	Indiana Map		Railroad		Interstate
	Airport		Trails		State Route
	Cemeteries		Managed Lands		US Route
	Hospital		County Boundary		Local Road
	School				

Red Flag Investigation - Water Resources

Town of Porter

Des. No. 1400578, Sidewalk & Streetscape Improvements

Porter County, Indiana



Sources: 0.075 0.0375 0 0.075 Miles
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

NWI - Point	Wetlands	Project Area
Karst Spring	Lake - Impaired	Half Mile Radius
Canal Structure - Historic	Lake	Interstate
NWI - Line	Floodplain - DFIRM	State Route
Stream - Impaired	Cave Entrance Density	US Route
NPS NRI listed	Sinkhole Area	Local Road
River	Sinking-Stream Basin	
Canal Route - Historic	County Boundary	

Red Flag Investigation - Mining/Mineral Exploration

Town of Porter

Des. No. 1400578, Sidewalk & Streetscape Improvements

Porter County, Indiana



0.075 0.0375 0 0.075 Miles

Sources:
Non Orthophotography Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

 Petroleum Well	 County Boundary	 Interstate
 Mine - Surface	 Project Area	 State Route
 Mine - Underground	 Half Mile Radius	 US Route
 Petroleum Field		 Local Road

Red Flag Investigation - Hazardous Material Concerns Town of Porter Des. No. 1400578, Sidewalk & Streetscape Improvements Porter County, Indiana



Source: Esri, DigitalGlobe, GeoEye, Iacubed, USDA, USGS, AEX, Getmapping, Aerotri, IGN, IGP, swisstopo, and the GIS User Community

<ul style="list-style-type: none"> Brownfield RCRA Corrective Action Sites Confined Feeding Operation Construction/Demolition Site Infectious/Medical Waste Site Leaking Underground Storage Tank Manufactured Gas Plant NPDES Facilities NPDES Pipe Locations Open Dump Waste Site 	<ul style="list-style-type: none"> RCRA Generator/TSD Restricted Waste Site Septage Waste Site Solid Waste Landfill State Cleanup Site Superfund Tire Waste Site Underground Storage Tank Voluntary Remediation Program Waste Transfer Station 	<ul style="list-style-type: none"> Institutional Controls County Boundary Project Area Half Mile Radius Interstate State Route US Route Local Road
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This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

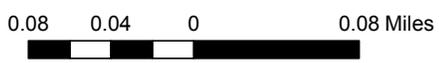
Sources:
Non Orthophotography
 Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
 Map Projection: UTM Zone 16 N Map Datum: NAD83

Red Flag Investigation - Cultrual Resources
Town of Porter
Des. No. 1400578, Sidewalk & Streetscape Improvements
Porter County, Indiana



Legend

- ProjectArea
- New Walks
- PorterCounty
- NatlRegPoints
- HistoricDistricts





Phase 1 - Core Downtown
TOWN OF PORTER, PORTER COUNTY, INDIANA
 PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Date: 3/24/2016
 Revised:
 SEH Job: PORTT

Lincoln Street and Hageman Avenue Sidewalk Construction					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	60,000.00	\$ 60,000.00
2	SIDEWALK, CONCRETE, 5 IN.	SYS	1,100	60.00	\$ 66,000.00
3	CURB RAMPS W/ DETECTABLE WARNING	EA	6	3,500.00	\$ 21,000.00
4	DRIVE APRON, 6 IN.	SYS	250	75.00	\$ 18,750.00
5	LANDSCAPE RESTORATION	LS	1	12,000.00	\$ 12,000.00
SUB-TOTAL					\$177,750.00
25% CONTINGENCY					\$44,437.50
SECTION TOTAL					\$222,187.50

Core Downtown Pedestrian Improvements					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	40,000.00	\$ 40,000.00
2	SIDEWALK, CONCRETE, 5 IN., NEW CONSTRUCTION	SYS	750	60.00	\$ 45,000.00
3	SIDEWALK, CONCRETE, 5 IN., REMOVE AND REPLACE	SYS	1,400	70.00	\$ 98,000.00
4	CURB RAMPS, REMOVE AND REPLACE	EA	44	4,500.00	\$ 198,000.00
5	CROSSWALK STRIPING	LS	1	5,000.00	\$ 5,000.00
6	LANDSCAPE RESTORATION	LS	1	15,000.00	\$ 15,000.00
SUB-TOTAL					\$401,000.00
25% CONTINGENCY					\$100,250.00
SECTION TOTAL					\$501,250.00

NOTES:

- This engineer's opinion of probable construction cost has been prepared based upon the Draft Porter Downtown Sidewalk Improvements Report
- This engineer's opinion of probable construction cost has been prepared based upon the engineer's experience as a design professional and is furnished for information only. It does not constitute a guarantee of actual construction costs.
- This engineer's opinion of probable construction cost does not include any professional design fees or permit fees.
- This engineer's opinion of probable construction cost does not include construction supervision or inspection costs
- Construction Engineering, Mobilization and Demobilization, Clearing of Right of Way, and Maintaining Traffic assumed to be 10% of construction cost; where not listed such costs are assumed in the Lump Sum Unit Cost.



Phase 2 - Michigan Street Connection and North Livable Center
TOWN OF PORTER, PORTER COUNTY, INDIANA
 PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Date: 3/24/2016

Revised:

SEH Job: PORTT

Michigan Street Sidewalk					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	30,000.00	\$ 30,000.00
2	SIDEWALK, CONCRETE, 5 IN.	SYS	350	60.00	\$ 21,000.00
3	CURB RAMPS W/ DETECTABLE WARNING	EA	4	3,500.00	\$ 14,000.00
6	LANDSCAPE RESTORATION	LS	1	10,000.00	\$ 10,000.00
SUB-TOTAL					\$75,000.00
25% CONTINGENCY					\$18,750.00
SECTION TOTAL					\$93,750.00

North Livable Center Pedestrian Improvements					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	30,000.00	\$ 30,000.00
2	SIDEWALK, CONCRETE, 5 IN., NEW CONSTRUCTION	SYS	350	60.00	\$ 21,000.00
3	SIDEWALK, CONCRETE, 5 IN., REMOVE AND REPLACE	SYS	500	75.00	\$ 37,500.00
4	CURB RAMPS, REMOVE AND REPLACE	EA	5	4,500.00	\$ 22,500.00
5	CROSSWALK STRIPING	LS	1	5,000.00	\$ 5,000.00
6	LANDSCAPE RESTORATION	LS	1	15,000.00	\$ 15,000.00
SUB-TOTAL					\$131,000.00
25% CONTINGENCY					\$32,750.00
SECTION TOTAL					\$163,750.00

Indiana Street Sidewalk					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	30,000.00	\$ 30,000.00
2	SIDEWALK, CONCRETE, 5 IN., NEW CONSTRUCTION	SYS	1167	60.00	\$ 70,000.00
3	CURB RAMPS, NEW CONSTRUCTION	EA	10	3,500.00	\$ 35,000.00
4	DRIVE APRON, 6 IN.	SYS	300	80.00	\$ 24,000.00
4	CROSSWALK STRIPING	LS	1	5,000.00	\$ 5,000.00
5	LANDSCAPE RESTORATION	LS	1	15,000.00	\$ 15,000.00
SUB-TOTAL					\$179,000.00
25% CONTINGENCY					\$44,750.00
SECTION TOTAL					\$223,750.00

NOTES:

1. This engineer's opinion of probable construction cost has been prepared based upon the Draft Porter Downtown Sidewalk Improvements Report
2. This engineer's opinion of probable construction cost has been prepared based upon the engineer's experience as a design professional and is furnished for information only. It does not constitute a guarantee of actual construction costs.
3. This engineer's opinion of probable construction cost does not include any professional design fees or permit fees.
4. This engineer's opinion of probable construction cost does not include construction supervision or inspection costs
5. Construction Engineering, Mobilization and Demobilization, Clearing of Right of Way, and Maintaining Traffic assumed to be %10 of construction cost; where not listed such costs are assumed in the Lump Sum Unit Cost.
6. For Pedestrian Improvements, it was assumed that 10% of Total LFT of Sidewalk will be replaced for non-compliant sidewalks

Phase 3 - Downtown Streetscape
TOWN OF PORTER, PORTER COUNTY, INDIANA
PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Date: 3/31/2016

Revised:

SEH Job: PORTT

Downtown Streetscape - Lincoln Street					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	150,000.00	\$ 150,000.00
2	PERMEABLE PAVERS	SFT	23,400	12.00	\$ 280,800.00
3	SIDEWALK, CONCRETE, 5 IN.	SYS	1,250	60.00	\$ 75,000.00
4	MILL AND RESURFACE	SYS	55,142	10.00	\$ 551,420.00
5	FULL DEPTH PAVEMENT	SYS	13,950	20.00	\$ 279,000.00
6	CURB	LFT	5,000	15.00	\$ 75,000.00
7	SIGNAGE AND PAVEMENT MARKINGS	LS	1	20,000.00	\$ 20,000.00
8	LIGHTING	LS	1	75,000.00	\$ 75,000.00
9	LANDSCAPING AND SITE AMENITIES	LS	1	100,000.00	\$ 100,000.00
SUB-TOTAL					\$1,606,220.00
25% CONTINGENCY					\$401,555.00
SECTION TOTAL					\$2,007,775.00

Downtown Streetscape - Francis Street					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	6,000.00	\$ 6,000.00
2	SIGNAGE AND PAVEMENT MARKINGS	LS	1	5,000.00	\$ 5,000.00
3	LIGHTING	LS	1	25,000.00	\$ 25,000.00
3	LANDSCAPING AND SITE AMENITIES	LS	1	25,000.00	\$ 25,000.00
SUB-TOTAL					\$61,000.00
25% CONTINGENCY					\$15,250.00
SECTION TOTAL					\$76,250.00

Downtown Streetscape - Hageman Avenue					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	10,000.00	\$ 10,000.00
2	SIDEWALK, CONCRETE, 5 IN.	SYS	670	60.00	\$ 40,200.00
3	SIGNAGE AND PAVEMENT MARKINGS	LS	1	5,000.00	\$ 5,000.00
4	LIGHTING	LS	1	25,000.00	\$ 25,000.00
5	LANDSCAPING AND SITE AMENITIES	LS	1	25,000.00	\$ 25,000.00
SUB-TOTAL					\$105,200.00
25% CONTINGENCY					\$26,300.00
SECTION TOTAL					\$131,500.00

TOTAL	\$2,215,525
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NOTES:

- This engineer's opinion of probable construction cost has been prepared based upon the Draft Porter Downtown Sidewalk Improvements Report
- This engineer's opinion of probable construction cost has been prepared based upon the engineer's experience as a design professional and is furnished for information only. It does not constitute a guarantee of actual construction costs.
- This engineer's opinion of probable construction cost does not include any professional design fees or permit fees.
- This engineer's opinion of probable construction cost does not include construction supervision or inspection costs
- Construction Engineering, Mobilization and Demobilization, Clearing of Right of Way, and Maintaining Traffic assumed to be %10 of construction cost; where not listed such costs are assumed in the Lump Sum Unit Cost.



Phase 4 - Downtown Streetscape
TOWN OF PORTER, PORTER COUNTY, INDIANA
 PRELIMINARY ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Date: 3/31/2016

Revised:

SEH Job: PORTT

Downtown Streetscape - Lincoln Street					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	150,000.00	\$ 150,000.00
2	PERMEABLE PAVERS	SFT	23,400	12.00	\$ 280,800.00
3	SIDEWALK, CONCRETE, 5 IN.	SYS	1,250	60.00	\$ 75,000.00
4	MILL AND RESURFACE	SYS	55,142	10.00	\$ 551,420.00
5	FULL DEPTH PAVEMENT	SYS	13,950	20.00	\$ 279,000.00
6	CURB	LFT	5,000	15.00	\$ 75,000.00
7	SIGNAGE AND PAVEMENT MARKINGS	LS	1	20,000.00	\$ 20,000.00
8	LIGHTING	LS	1	75,000.00	\$ 75,000.00
9	LANDSCAPING AND SITE AMENITIES	LS	1	100,000.00	\$ 100,000.00
SUB-TOTAL					\$1,606,220.00
25% CONTINGENCY					\$401,555.00
SECTION TOTAL					\$2,007,775.00

Downtown Streetscape - Francis Street					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	6,000.00	\$ 6,000.00
2	SIGNAGE AND PAVEMENT MARKINGS	LS	1	5,000.00	\$ 5,000.00
3	LIGHTING	LS	1	25,000.00	\$ 25,000.00
3	LANDSCAPING AND SITE AMENITIES	LS	1	25,000.00	\$ 25,000.00
SUB-TOTAL					\$61,000.00
25% CONTINGENCY					\$15,250.00
SECTION TOTAL					\$76,250.00

Downtown Streetscape - Hageman Avenue					
Item #	Item	Unit	Total Quantity	Unit Cost	Total Cost
1	CONSTRUCTION ENGINEERING MOBILIZATION AND DEMOBILIZATION CLEARING OF RIGHT OF WAY MAINTAINING TRAFFIC	LS	1	10,000.00	\$ 10,000.00
2	SIDEWALK, CONCRETE, 5 IN.	SYS	670	60.00	\$ 40,200.00
3	SIGNAGE AND PAVEMENT MARKINGS	LS	1	5,000.00	\$ 5,000.00
4	LIGHTING	LS	1	25,000.00	\$ 25,000.00
5	LANDSCAPING AND SITE AMENITIES	LS	1	25,000.00	\$ 25,000.00
SUB-TOTAL					\$105,200.00
25% CONTINGENCY					\$26,300.00

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