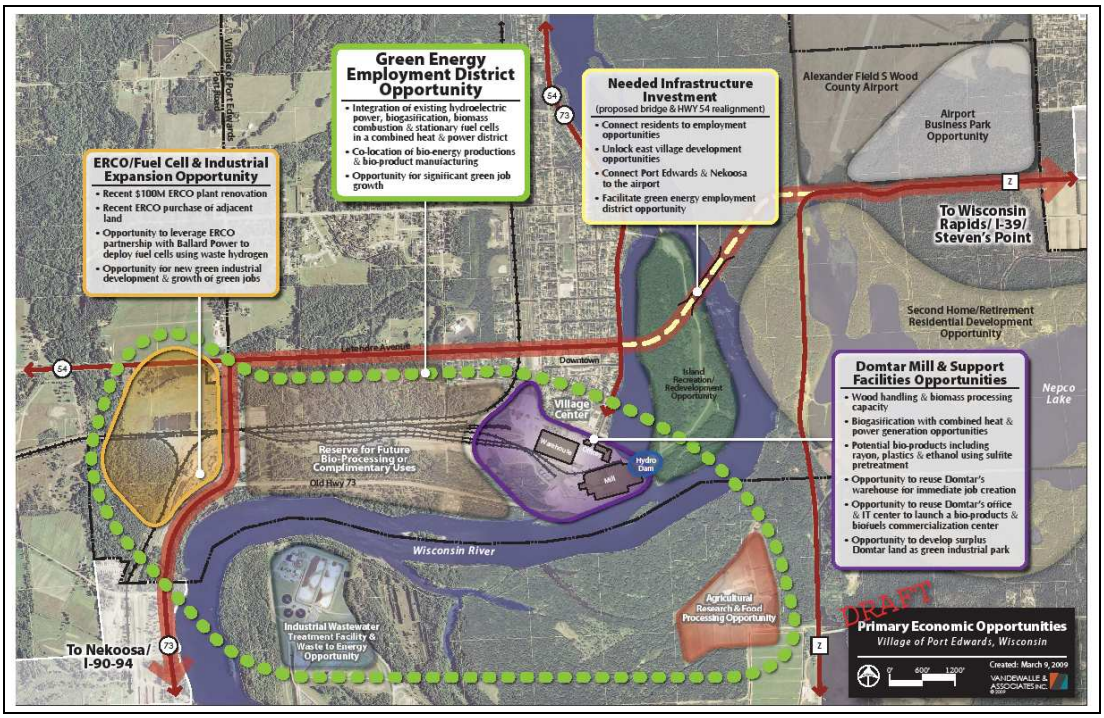
Port Edwards Economic Replacement and Mill Reuse Strategy

The Economic Importance of the Highway 54 Realignment for Port Edwards & the Tri-Cities Region:



A Key to Connecting the Region, Repositioning the Paper Industry, Unleashing the Bio-Economy, and Creating Green Job Growth in Central Wisconsin

Vandewalle & Assoicates

2009

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Introduction and Summary

The proposed realignment of U.S. Highway 54 to better connect the Wisconsin Rapids/Port Edwards/Nekoosa region (the Tri-Cities) is vital to the long term economic strength of the area and crucial to supporting emerging green economy opportunities in the Village of Port Edwards. The Village of Port Edwards and the larger region are facing serious economic threats with the statewide decline of the paper industry and the recent closure of the Domtar Mill in Port Edwards. Building the proposed bridge across the Wisconsin River and realigning Highway 54 to create a new east/west corridor through the region is essential to achieving regional economic development goals and vital to Port Edwards' efforts to bring the Domtar Paper Mill property back into productive use. The specific benefits of this infrastructure investment include:

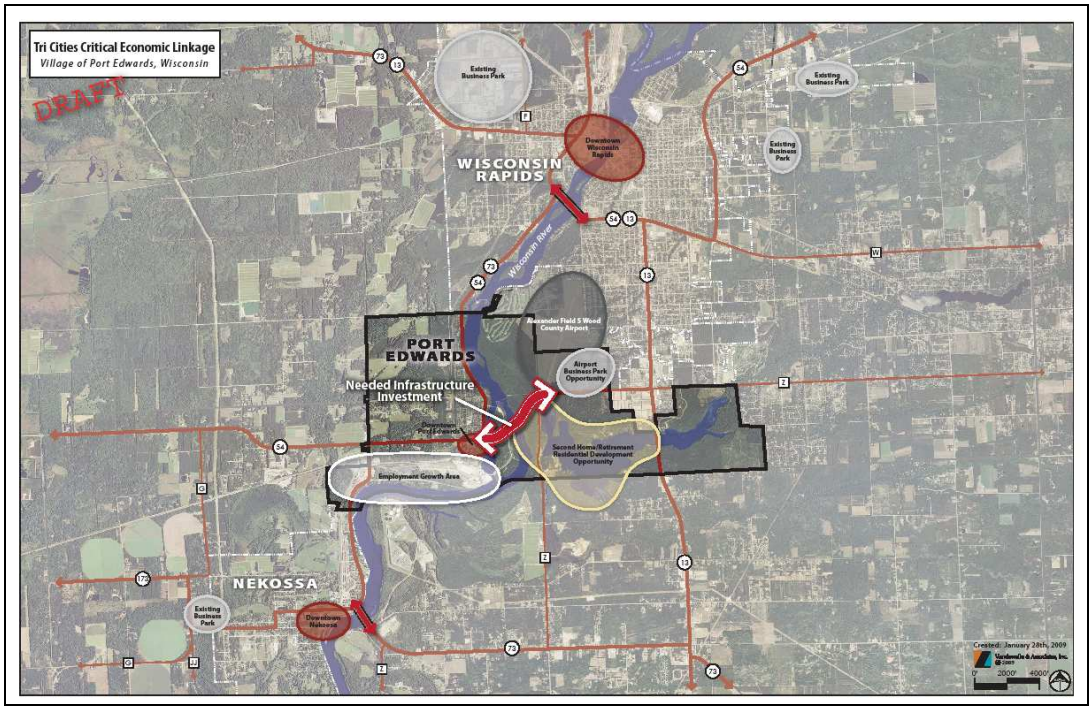
- Helping to unleash the potential of local assets ideally suited to creating renewable energy and bio-products in a green-powered employment district.
- Creating new job opportunities in response to the recent loss of over 500 mill jobs and the ongoing decline of one of the state's primary industries (pulp and paper).
- Unlocking new opportunities for residential and business development on the east side of Port Edwards
- Building an economically stronger, more-connected, more competitive region with greater access to employment opportunities.

This project is a critically needed piece of transportation infrastructure that will create short term jobs and facilitate longer term economic opportunities. The project is also vital to Port Edwards' plan to reuse a major paper facility and help refocus the paper industry's bio-processing capabilities on green energy and bio-products.

Realignment Project Overview

The Village of Port Edwards is a community of approximately 1,900 people but sits in the center of the larger Tri-Cities region and approximately 127,000 people living within 25 miles of downtown Port Edwards (ESRI). The Wisconsin River flows through the center of the region and bisects Port Edwards with the downtown, major employers and developed residential areas located on the west side of the River, but large areas of undeveloped land surrounding Nepco Lake located on the east side. Despite the high potential for growth and development on the Village's east side, the lack of a direct connection is a major obstacle. Currently, the nearest river crossings to the Village are three and a half miles north of Downtown at Highway 54 and the other is three and a half miles south at Highway 73.

Proposed Highway 54 Alignment and New Bridge through Port Edwards



Local and Regional Economic Development Context

Local and Regional Impacts of the Port Edwards Mill Closure

- 501 mill jobs lost and 800 support jobs
- ~$65 million in lost wages
- 10Mw reduction in power demand
- Long term loss of 1,700 mill jobs and 2,200 related jobs
- Dismantling of a complex supply chain
- Potential loss of $19million in property value (25% of Village Tax Base)
- $83,000 loss in water utility income
- $51,000 loss in water treatment income
- Doubling of students eligible for free/reduced lunches (20% to 38%)
- Family stress (19% increase in domestic violence)
- Loss of downtown businesses

Sources: WI Dept. Workforce Development, Alliant Energy, Village of Port Edwards, Wisconsin Rapids Family Center, Port Edwards School District

The Village of Port Edwards recently suffered a severe economic blow when the Domtar Pulp and Paper Mill (the Village's largest employer and land owner) laid-off its workforce and ceased operations in the spring of 2008 resulting in the loss of 501 jobs. The closure of the mill sent a shockwave through the community and the local economy. The most severe and direct impacts of the closure are felt by Port Edwards itself, but closing the facility was a regional economic loss with implications for Wisconsin's economy as a whole.

The pulp and paper industry has long been a key foundation of central and northern Wisconsin's workforce and economy, and this closure is the latest loss in an ongoing trend of downsizings and closings in the industry statewide. The closure of the Port Edwards Mill was the final step in a long term reduction in employment and production at the facility and when it closed in 2008 the total number of jobs at the Mill was already less than one third of its peak employment of 1,700 workers a decade ago.

The impacts of the mill's gradual decline and recent closure include direct economic impacts including lost jobs and wages, indirect economic impacts affecting supporting businesses and industries, and qualitative community impacts that could have profound long term effects on quality of life in the community.

The Paper Industry's Importance to Wisconsin's Economy

- Wisconsin is the nation's #1 paper producing state
- Papermaking employs 103,000 Wisconsin workers
- Papermaking indirectly supports another 125,000 jobs
- The industry produces $2.55 billion in annual wages to Wisconsin workers
- Pulp and paper generate $4.38 billion in economic activity statewide
- Wisconsin generates $12.4 billion in annual shipments of paper, lumber, and wood products

Sources: Wisconsin Paper Council, Energy Center of Wisconsin

Wisconsin's paper industry has been gradually cutting jobs and closing facilities in the face of global competition and falling demand for paper products. As this key industry continues to decline, Wisconsin is slowly losing a large and complex network of suppliers, facilities, technicians that work on every aspect of the industry. It is vital for the state to find new opportunities to refocus the industry's resources towards growing industry sectors.

Key Economic Benefits of the Highway 54 Bridge & Realignment

I: Unlocking Mill Site Reuse and Green Energy Opportunities

Not simply a transportation infrastructure project, the proposed highway realignment and bridge would help facilitate an effective response to the loss of the Port Edwards Mill and would help launch an innovative green energy project. The Village of Port Edwards recently launched a strategic planning effort focused on economic replacement and mill site reuse. This planning process is looking for opportunities to reposition the assets of the mill site and surrounding properties to bring them back into productive use.

Though the mill is currently not operating, the site's equipment, transportation connections, and supply chain remain intact and ready for reuse. As a major biomass processing facility with multiple systems for on-site renewable energy generation, the most exciting opportunity for the site is to reposition it for the production of bioenergy and other forest-based products. Further, with surrounding land available for industrial development, available high-quality warehousing and office facilities, a unique opportunity to commercialize hydrogen fuel cell technologies, and growing regional industries well-suited to this site, this area of Port Edwards presents a unique opportunity to create a green powered distributed energy district.

The assets of the Mill site and surrounding properties include:

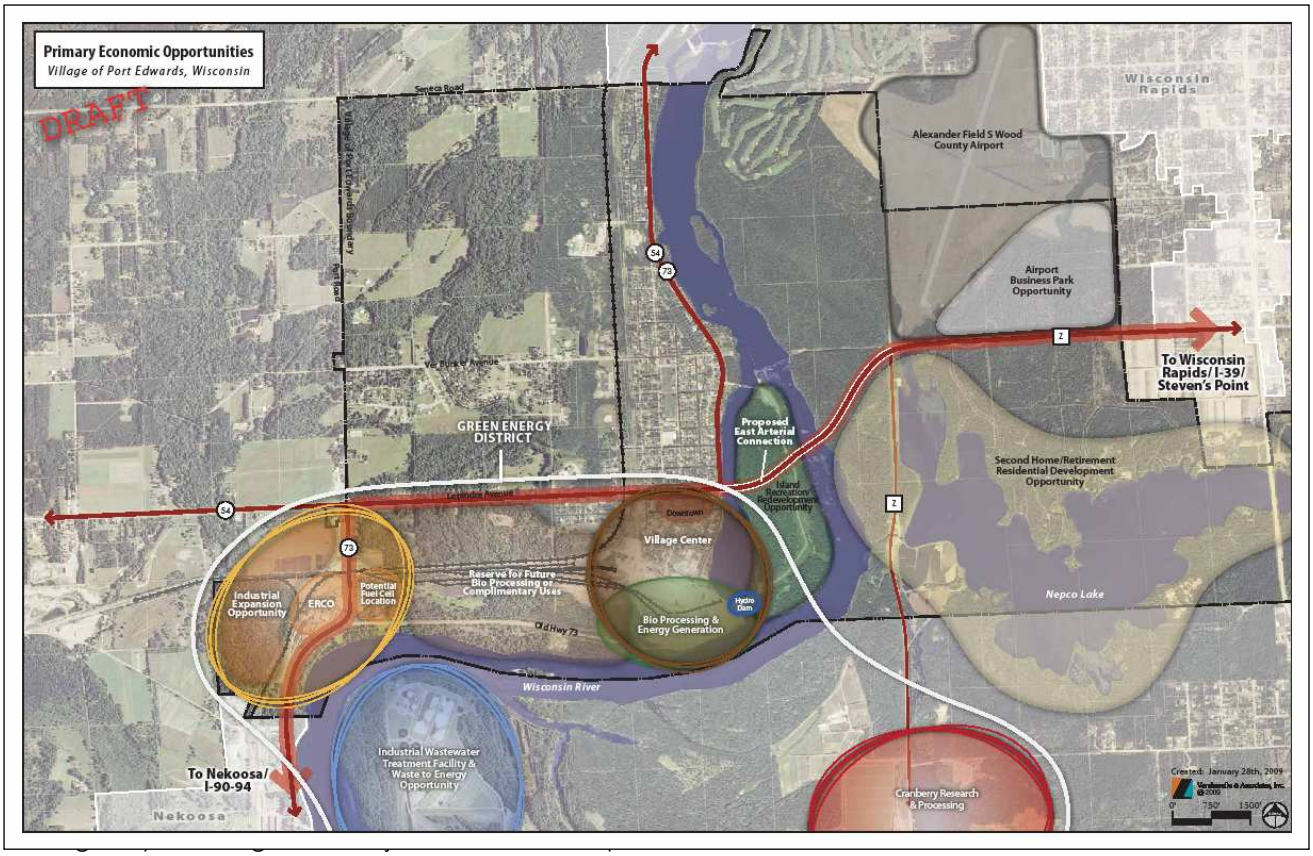
- **A Major Biomass Processing Facility**
  The Port Edwards Mill is essentially a large-scale bio-processing facility capable of breaking down raw timber into its most basic components quickly and efficiently. The Mill includes a debarking facility to remove bark from timber, a high-capacity chipper capable of reducing large logs to 1 inch chips in seconds, and chemical pulping digesters that separates the biomass into cellulose, hemicellulose, and lignin. The mill also includes boilers that are heated from excess wood and run turbines to generate power.

- **Existing On-site Hydro-Power Generation**
  Port Edwards is located along the Wisconsin River in a stretch that has the state's highest concentration of hydro-power generation facilities. The Domtar Corporation currently owns three hydro-electric dams that powered the Port Edwards and continue to power their Nekoosa Mill as well as excess electricity that is sold into the grid. Together, these three dams have a generating capacity of approximately 10Mw. One of these dams is immediately adjacent to the mill site and generates about 2.4Mw. The proximity of these dams and the ability to generate reliable green power on-site is a unique asset with the potential to attract industries interested that require highly reliable electricity or have an interest in branding the products as green powered.

- **Hydrogen Fuel Cell Electricity Generation Potential**
  An ERCO Worldwide Chemical Plant is located immediately adjacent to the Mill. ERCO is in the process of undergoing a $100 million dollar renovation of this facility and has long term plans for additional expansions. The plant uses large quantities of heat and power in its operations and produces hydrogen gas as a byproduct. This excess hydrogen is currently burned in the plant's boilers but presents a unique opportunity to co-located fuel cell electric generation on the site. ERCO is partnering with a major hydrogen fuel cell technology company called Ballard Power. This site in Port Edwards creates an exciting opportunity to be on the ground floor of an emerging ERCO/Ballard initiative focused on using waste hydrogen for fuel cell power generation.

- **Domtar Warehouse, Office, and Research Center**
  The Domtar mill property includes a state-of-the-art 300,000 square foot warehouse formerly used to store paper. The warehouse is a climate controlled facility with truck docks and rail access. The Mill's historic offices and new research center are also located on site providing a state of the art IT center and adjacent office space with the potential to be reused as an incubator or research center focused on the forestry, green energy, or bio-products sectors.

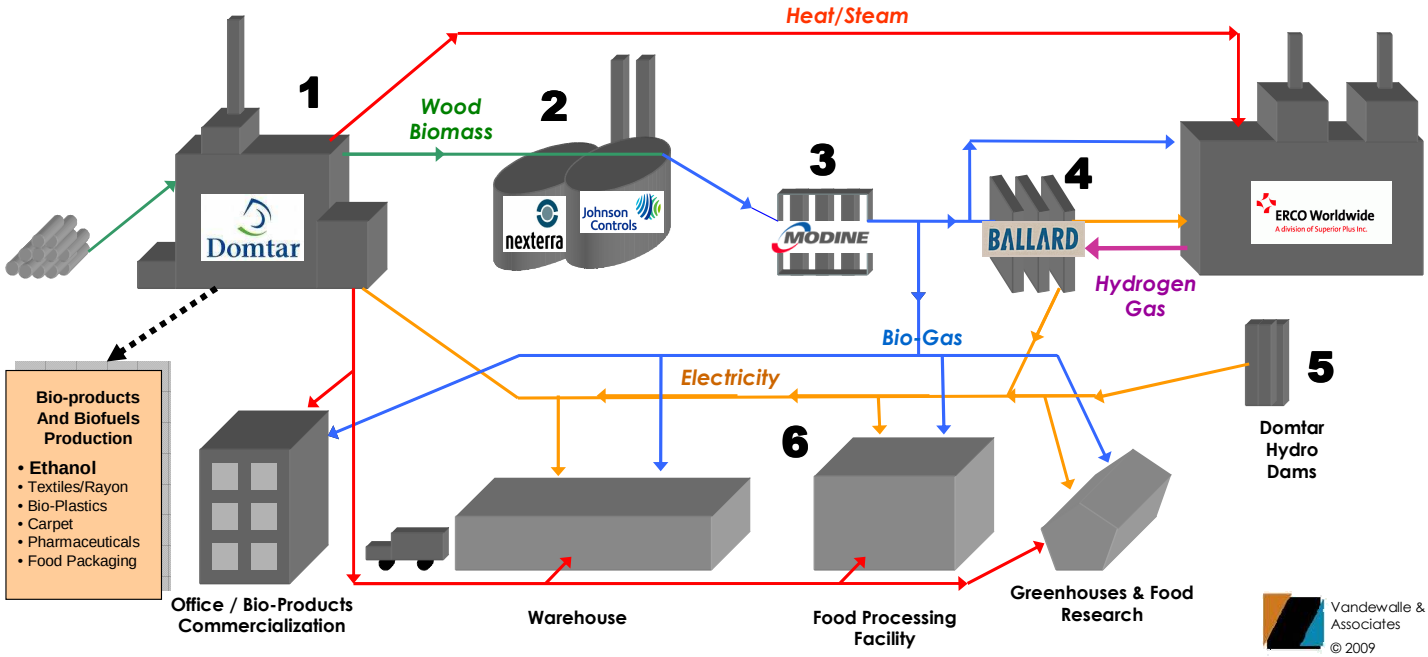
- **Rail Access**
  The Mill has direct access to rail spurs serving the facility and is connected to a Canadian National mainline.



Few sites have this unique combination of opportunities for renewable energy generation. This potential for on-site green power combined with emerging regional economic clusters creates an exciting opportunity to co-located complementary uses within a green power district. For example, the region's large logistics and food processing industries could potentially use the currently vacant state-of-the-art Domtar warehouse. The fuel cell power generation would produce pure, deionized warm water as a byproduct and this could be used by within a cranberry processing plant or research greenhouses.

Port Edwards Green Energy Employment District Concept

1. **Wood Handing System -** Utilization of the Mill's debarking, chipping, boilers, and storage capacity
2. **Gasification System** - Utilization of Nexterra and Johnson Controls technology to generate and distribute bio-gas used as a natural gas replacement throughout the district
3. **Biogas Distribution and Thermal Management** - Utilization of Wisconsin-based expertise in heat management, piping systems, and energy distribution
4. **Fuel Cell Power -** Employ Ballard Power stationary fuel cells to convert ERCO's waste hydrogen to electricity
5. **Hydro-Electric Power -** Distribute electricity from the existing on-site hydro dams to users in the district
6. **End Users** - Use vacant land adjacent to the mill to attract employers interested in on-site sources of carbon-neutral energy. Target Central Wisconsin's large food processing sector. Lease the Domtar warehouse to fill the region's unmet need for quality storage space. Utilize the existing office and IT center to launch a bio-economy business incubator



Port Edwards' location in the center of the state, close to both university-based bio-energy research centers as well as the state's existing biomass processing facilities make this an ideal location for a bio-industry business incubator or research center. The fact that this entire district can be powered by a mix of on-site renewable systems enhances excitement and interest in the project.

Currently, the access from this site to Wisconsin Rapids, the Wood County Airport, and other regional destinations is limited by the lack of a nearby bridge. The proposed realignment of Highway 54 and new bridge connection across the River will be an important step to unlocking the full potential of this area.

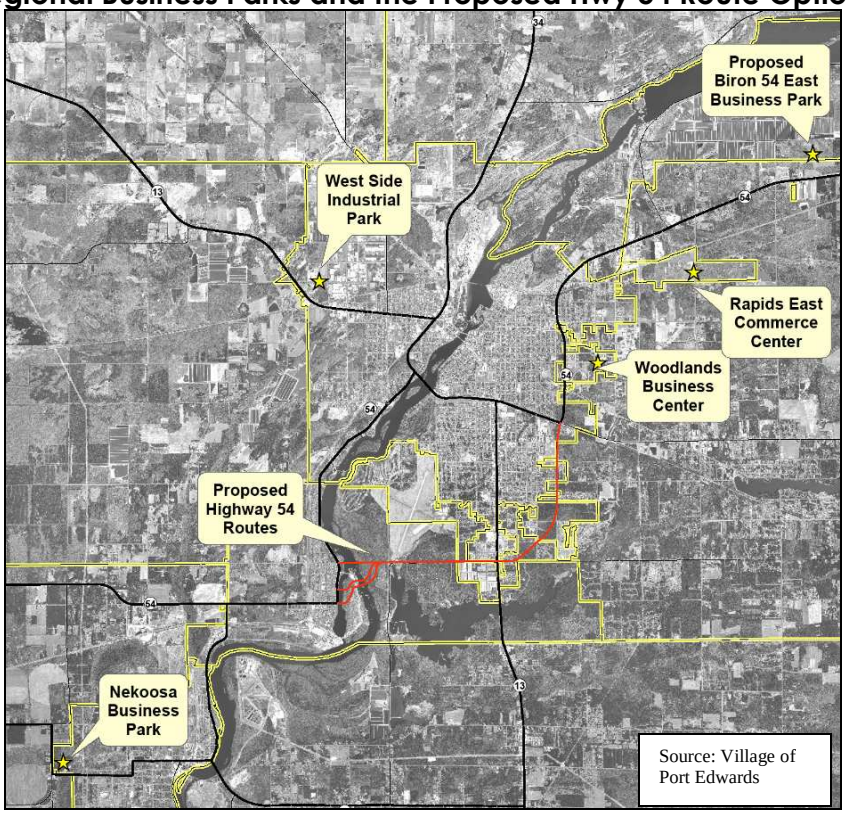
II: Linking Residents to Employment Centers

The communities of the Tri-Cities region are economically integrated and interdependent with residents of the region often living and working in different jurisdictions. According to 2000 Census data, 72% of Port Edwards residents work outside of the Village and 45% of all residents of the Tri-Cities region commute to a different jurisdiction for work. With this level of cross commuting between communities, having a transportation infrastructure that provides access to jobs and links between employment centers is crucial to the long term economic strength of the region.

Currently, there is no access across the Wisconsin River anywhere between Highway 73 to the south and the current Highway 54 bridge to the north. This limited access across the River strains the ability of residents to access job opportunities. For example, the highest rates of residential growth in the area are on the east side of the river south of Wisconsin Rapids. However, a key new business growth opportunity is located in the Nekoosa Business Park, and this park has not been able to attract development due to the limited access to the site. Similarly, Port Edwards and Nekoosa residents have constrained access to the employment centers in Wisconsin Rapids due to the lack of a central bridge.

The following map highlights business parks in the region as well as the proposed options for the Highway 54 realignment and new bridge. As the map shows, this project would provide a valuable connection between the region's residents and key employment opportunities.

Regional Business Parks and the Proposed Hwy 54 Route Options



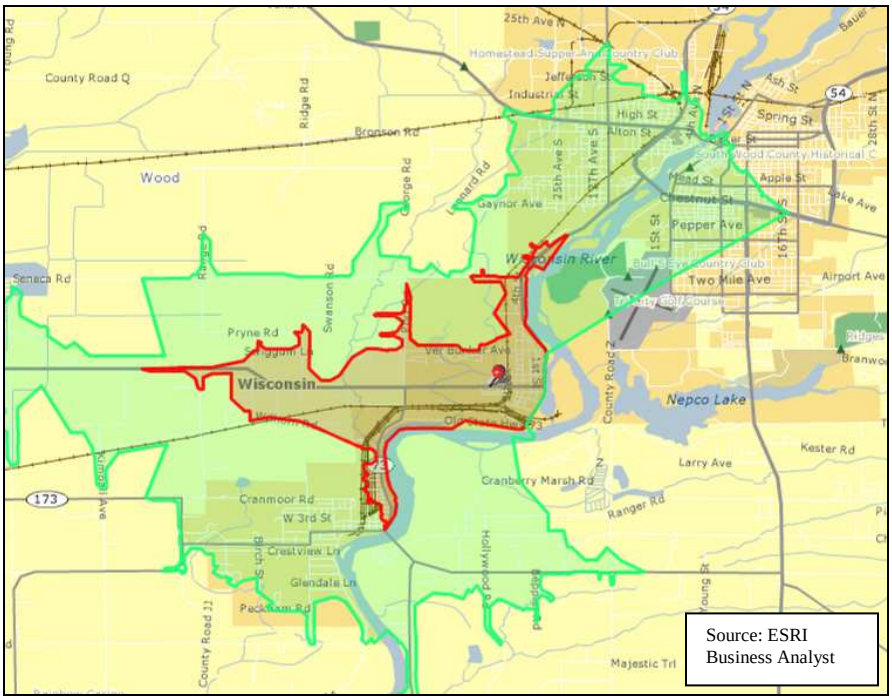
III: Creating East Village Development Opportunities

The Port Edwards village boundaries include land on both sides of the Wisconsin River. However, currently there is no direct route to connect these two sides of the community. Most of the Village's residents and businesses are located on the west side of the river and the east side area is primarily vacant land. Creating the new bridge and connecting the Village would open up a number of new development opportunities for the community. For one, the bridge would give both Port Edwards and Nekoosa more convenient access to the Wood County Airport and create the opportunity for building a business park along the south side of the airport. In addition to being adjacent to the airport, this business park would be centrally located in the region and provide needed employment opportunities for the growing areas south of Wisconsin Rapids, as well as the older communities of Nekoosa and Port Edwards.

In addition to creating business development opportunities, the proposed bridge would also unlock the potential of new residential growth in the Village along the shore of Nepco Lake. The land along Nepco Lake has the potential to support high quality second home and retirement home development that could help attract new residents to the region and bring new economic growth and opportunities. With an older population and limited opportunities for employment, attracting and retaining retiring baby boomers will be a key to maintaining this regions economy and the land surrounding Nepco Lake provides an excellent opportunity to build housing with the type of amenities that this demographic is looking for. However, in order for lakefront projects to work, better access to these properties is needed and a connection across the River is critical.

The following map highlights five and ten minute drive times from downtown Port Edwards. As the map shows, the Village is currently disconnected from its land east of the river and access to Nepco Lake and the airport is difficult. Additionally, getting to Port Edwards from the south side of Wisconsin Rapids is currently difficult as well.

5 and 10 Minute Drive Times from Downtown Port Edwards



Conclusion

The proposed realignment of Highway 54 is critical to local and regional economic development in Port Edwards and the Tri-Cities Region. In the short term, this investment will help provide jobs in a region that has recently suffered major job losses. In the longer term, this transportation corridor will better connect the region, open up new development opportunities, and help Port Edwards launch an exciting initiative to reuse their closed Mill site and adjacent property by creating a green-powered business district.

The pulp and paper industry has historically been the backbone of the regional economy in Port Edwards and its neighboring communities. However, as the recent closure of the Port Edwards Mill has harshly demonstrated, the region and the state are now facing a steep decline in this important industry. Fortunately, the Village and regional economic development leaders are taking innovative approaches to leveraging the area's assets to sustain its economy. The proposed Highway 54 realignment project is essential to the success of these efforts.