

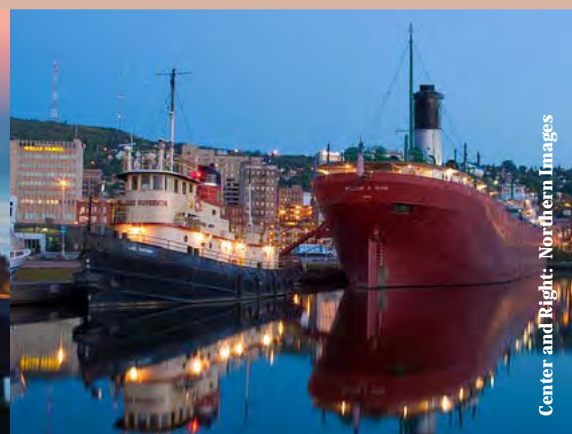
Arrowhead Region: A Portfolio of Transportation Assets



Source: Northern Images



Source: Ken Newhams



Center and Right: Northern Images

A Case Study of the Twin Ports Region of Duluth, Minnesota and Superior, Wisconsin

Twin Ports Area of Duluth-Superior: A Region Rich in Transportation Assets

With respect to transportation, the Twin Ports (Duluth, Minnesota and Superior, Wisconsin) come close to having it all: a bustling seaport, four Class I railroads, an Interstate highway, an airport whose runway can handle any plane flying today, a public transit system and miles of hiking and cycling trails. The challenge is to bring these assets together into a system that maximizes their economic development value and minimizes their impact on the environment and other community values.

Much of the task of meeting that challenge will fall to the Arrowhead Regional Development Commission (ARDC), a member of the nationwide network of 520 regional development organizations that provide administrative, program and technical assistance to more than 2,800 counties and 15,000 municipalities. The ARDC region is the largest service area of

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Minnesota's nine regional development commissions. Outside the Duluth-Superior metro area, its service region is rural. The region covers seven counties and contains 260 units of local government.

One of the most important forums for bringing transportation interests together is the Duluth-Superior Metropolitan Interstate Council (MIC), one of 385 metropolitan planning organizations (MPOs) across the nation. MIC was created under a joint agreement between ARDC and its Wisconsin counterpart, the Northwest Regional Planning Commission (NWRPC). MIC's policy board has 18 members, nine from each state, including representatives from the cities of Duluth, Superior and neighboring jurisdictions. Ron Chicka, a transportation planner for ARDC, is MIC's director; Sheldon Johnson, a member of the NWRPC staff, is its deputy director.



Source: ARDC / MIC



Outside the Twin Ports metro area, ARDC also supports the Northeast Minnesota Area Transportation Partnership (ATP), the rural-based transportation planning body composed of elected officials, engineers and planners across an eight-county area. Chartered to comply with the federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the ATP prioritizes how to spend about \$42 million a year of federal formula funds, subject to final approval by the Minnesota Department of Transportation (MnDOT).

Other planning groups meet regularly, and the ARDC participates in virtually all of them. For example, two technical advisory committees support the MIC. The Harbor Technical Advisory Committee has 30 members drawn from state and local governments, industry groups and federal agencies. A similar 18-member body called the Transportation Advisory Committee convenes representatives with expertise in all transport modes. In one respect, the ARDC's influence on road planning extends nationwide. (*See America's Byways sidebar on p. 12.*)

"We're the ones who bring the right people to the table," Chicka sums up. "We bring governmental and private entities together to talk through problems."

A History of Booms and Busts

From Florida to Alaska, wherever the economy has depended heavily on natural assets like oil, coal or beach front real estate, one sees bumper-sticker prayers for "one more boom" with a promise not to waste it. In northern Minnesota that prayer has been answered, and regional business and political leaders are trying hard to keep that promise.

The region's first boom began in the late 1860s, when rich iron ore deposits were discovered to the north and west of Duluth-Superior in an area known as "The Iron Range," or sometimes the "Mesabi Iron Range" after the largest of four deposits. By the beginning of the 20th century, Duluth is said to have had more millionaires per capita than any city in the nation, and its population hit a peak of about 120,000. (Duluth's population today is 87,000 and Superior's about 27,000. The entire Twin Ports metro area population totals about 150,000.)

After the highest grade ores were mined out, the area's economy sank. It revived in the 1950s with the development of a process for converting low-grade ores into easily marketed taconite pellets, which are about 65 percent iron. But another slump followed.



Source: Northern Images

According to Randy Lasky, Northspan’s president, more than \$5 billion in large-scale industrial projects are planned over the next five years. They include new and upgraded power plants, an integrated steel plant and multiple non-ferrous proposals.

During that period, ARDC was involved in the creation of The Northspan Group, Inc., formed in 1986 to promote community and economic development throughout northern Minnesota and nearby areas. Northspan is committed to diversifying the region’s economy and squeezing more regional value out of its natural assets. Northspan’s largest current project is the Range Readiness Initiative (RRI), part of a strategy to make the region a manufacturing center.

According to Randy Lasky, Northspan’s president, more than \$5 billion in large-scale industrial projects are planned over the next five years. They include new and upgraded power plants, an integrated steel plant and multiple nonferrous proposals. These new and expanded firms are expected to bring in about 2,000 permanent jobs, plus several thousand construction jobs.

Lasky explains that many major manufacturers fabricate heavy equipment parts overseas and bring them to the United States by boat. ARDC, he says, will be studying “issues like zoning, safety, infrastructure and how to provide public services for an influx of workers.” Northspan’s Web site,

NorthlandConnection.com, offers a dynamic database that provides prospective employers and their workers with information on a wide range of economic and quality-of-life indicators. The site won a 2007 NADO Innovation Award.

“Duluth exists largely because it’s a transport hub near natural resources,” says Rob West, CEO of APEX, a business-based group also promoting economic diversification. “But it’s like a colonial economy. If you were here in the 1980s, this was a ghost town. Now China’s insatiable demand for raw materials has driven up the prices of commodities of all kinds. And we’re finally getting it in our heads, ‘Let’s not just ship them pellets. Let’s sell them some steel!’”

West cites seven economic categories in which northern Minnesota excels. In addition to forest products, mining and metallurgy, the list includes aerospace engineering, information technology applications, heavy equipment manufacturing and precision machining. As West emphasizes, the region’s transportation assets are integral to the development and growth of each of these sectors.

Gateway to the Sea

Lake Superior, the largest of the five Great Lakes, is about the size of the state of Maine. At its far western end, the St. Louis River has deposited a nine-mile-long peninsula that creates a natural harbor, sheltered from the main body of the lake. Duluth lies to the north of the river, while Superior is to the south.

“The reason the port is here is geography,” says Ronald L. Johnson, Trade Development Director for the Duluth Seaway Port Authority. “Native Americans came here in canoes. Now we do the same thing, just using bigger canoes.”

Much bigger. The Soo Locks (at Sault Ste. Marie) that connect Lake Superior to the other Great Lakes can handle bulk freighters up to 1,100 feet in length. Known as “lakers,” these big boats transport cargo to ports all along the St. Lawrence Seaway, a system of locks and canals that connect Lake Superior (602 feet above sea level) to the Atlantic Ocean. Lakers can transport as much cargo as six 100-car freight trains or 2,300 large tractor-trailer trucks. “Salties,”

which are similar in size but designed for high-seas transport, carry cargo to and from ports in Europe, the Middle East, Africa and Asia.

Although ice closes the Soo Locks for about two months every winter, Duluth-Superior ranks seventh in the nation with respect to export tonnage and is invariably in the top 20 with respect to total tonnage. During 2007, nearly 48 million tons of freight with a dollar value of more than \$2 billion moved through the Seaway port, inbound and outbound. Taconite and coal account in roughly equal proportions for about 80 percent of total tonnage. Grain accounts for about 10 percent more. The remaining 10 percent is general freight. About 2,000 local jobs are dependent on port operations.

A 2007 Great Lakes-St. Lawrence Seaway (GLSLS) Study commissioned by U.S. and Canadian government agencies and public authorities emphasized the potential of the GLSLS to alleviate pressure on rail and road networks. This would bring environmental benefits. Measured by fuel consumption per ton-mile (and hence by greenhouse





Source: ARDC / MIC

gas emissions), water-borne transport is seven to 10 times as efficient as trucks and two to three times as efficient as rail.

But the same study noted that the St. Lawrence Seaway is “more than half a century old and its infrastructure is beginning to show signs of age.” Plans to construct new locks parallel to the Soo Locks at Sault Ste. Marie have met repeated delays due to disagreements among the multiple governmental entities involved (U.S. and Canadian), particularly concerning how costs should be divided. *(See sidebar on p. 9 for a comment on this subject by Rep. James Oberstar (D-MN), Chairman of the U.S. House Transportation and Infrastructure Committee.)*

How other environmental issues will play out is even less clear. Global warming would benefit the port if it enabled the Soo Locks to stay open year-round. But any drop in Lake Superior’s water level might reduce the tonnage a deep-draft laker could accept, reducing revenue per shipment.

Meanwhile, the hottest environmental problem is the spread of non-native invasive species believed to come to the Great Lakes in the ballast water that empty or nearly empty ships take

on to maintain stability as they travel between ports. For example, zebra mussel colonies block pipelines and clog water intakes of municipal water supplies and hydroelectric plants. They and other non-native species have also been implicated in the spread of diseases that affect native fish and birds.

ARDC, MIC and other transportation and economic development groups must take issues like these into account, but global trade already brings local challenges. For example, high-value shipments (both in and out) of heavy machinery and machine parts—

High-value shipments of heavy machinery and machine parts—items like 100-foot-long wind turbine blades manufactured in Europe for wind farms in the American Midwest or oil-drilling equipment made in the U.S. and bound for Canada—already can be seen on local roads.

items like 100-foot-long wind turbine blades manufactured in Europe for wind farms in the American Midwest or oil-drilling equipment made in the U.S. and bound for Canada—already can be seen on local roads. ARDC works with state and local governments on issues like location of power lines and overhead traffic signals, road upgrades and permitting.

“It’s very difficult at the county commissioner level to comprehend requirements for global trade,” says Ronald Dvorak, an executive of xpedx, a Minneapolis-based, transport-oriented division of

International Paper Company. “ARDC has the ability to develop that dialogue.”

Four Class I Railroads and a Probable High-Speed Passenger Train

Beginning in the 1880s and for more than a century thereafter, railroad lines owned by U.S. Steel or corporate affiliates connected mines on the Iron Range with ports on Lake Superior, including the Twin Ports and Two Harbors (on the northern shore of Lake Superior).

Today the Duluth-Superior port cities are served by four Class I railroads: Burlington Northern Santa Fe (BNSF), Canadian National (CN), Canadian Pacific (CP) and Union Pacific (UP). (Class I lines are the long-haul giants. Seven such lines are chartered in the United States and two in Canada.) Collectively, the four railroads operate ten rail yards in the Twin Ports area. For reasons to be explained shortly, most of those began on the Duluth side of the St. Louis River and now are on the Superior side.

Bulk freight moves to and from loading docks at the port almost exclusively by train. But there is currently no facility in the area for transferring containerized freight from ships to trains or from trains to trucks. That may change within a few years. Dvorak notes that demand for “identity-preserved” products like wheat from farms that meet certain environmental standards are contributing to demand for containerization. *(For more on the prospects for intermodal freight handling in Duluth-Superior, see sidebar on p. 13.)*

The region’s first passenger rail line (connecting Duluth-Superior to Minneapolis-St. Paul) opened in 1870. As was true across most of the nation, passenger traffic peaked between 1910 and 1920. For the next 50 years, automobiles steadily replaced trains as personal transportation. The Duluth Union Depot closed in 1969. (The station now houses a railroad museum, exhibits by area cultural organizations and a nonprofit tourist train.) In 1975 Amtrak resumed



Source: Northern Images



Source: AEDC / MIC

service between the Twin Cities and the Twin Ports, but closed in 1985 due to low ridership.

However, passenger service between the Twin Ports and the Twin Cities is expected to resume in the near future. If this service materializes as expected, the economic impact on the Duluth-Superior area could be substantial. *(See passenger rail sidebar on p. 17 for more details.)*

The End of the Road for an Interstate Highway

Water and rail have shaped the Twin Ports' economy, but a protracted battle over the routing of an Interstate highway played an even greater role in Duluth's appearance today. That controversy is more than historical interest because it could foreshadow similar contentious debates during the next decade.

In the 1950s, President Dwight D. Eisenhower persuaded the U.S. Congress to authorize building the U.S. Interstate Highway system as a four-lane, divided, controlled-access system linking major cities for purposes of national defense. Duluth-Superior

was identified as the northern terminus of I-35, which runs north-south between Duluth-Superior and Laredo, Texas, on the Mexican border. Initial plans envisioned an elevated expressway running parallel to Duluth's waterfront. A new four-lane highway sounded like an economic development windfall, and in 1964 work began on the expressway's western approaches.

As it became clear that the plan involved removing homes and historic buildings along the new highway's path (almost a thousand homes were in fact razed or removed), many Duluth citizens started to raise objections. By 1970, as construction neared the western portions of downtown, a grass-roots organization launched a campaign against the freeway. The ensuing battle blocked construction for nearly 15 years. Finally, a public referendum gave voters a choice between two options, both of which stopped well short of the state and federal highway planners' original design. As a result, I-35 stops at Duluth's 26th Street, where it joins a two-lane road.

Fortunately for Duluth, federal law at that time entitled cities at the end of an Interstate highway to qualify for grants in the event a highway stopped

short of its planned terminal point. Duluth-Superior and neighboring municipalities became eligible for over \$74 million, worth at least \$250 million in 2008 dollars.

This money gave ample scope for creative options. Most of Duluth perches on a hillside that circles several miles of the lake and its inner harbor. A world-class urban architect provided plans for extending stretches of a freeway along the lakeside through tunnels, rather than on elevated bridges— aesthetically, much like burying utility lines rather than stringing them on poles. This involved moving railroad terminals from Duluth to Superior and tearing down some old warehouses. Some of the federal funds went for moving historic buildings out of the freeway path, and some went for enclosed skywalks connecting downtown buildings—welcome during Minnesota winters.

The design of a new expressway along the north shore of Lake Superior from Duluth-Superior to Silver Bay, a distance of about 50 miles, led to similar controversies and similar resolutions. Rather than destroy views of the lake and remove historic mansions, MnDOT employed new technology to tunnel through hillsides. These projects, which included a rebuilt rose garden in Duluth, won the Federal Highway Administration's prestigious biennial "Excellence in Highway Design"



awards in three separate years: 1992, 1994 and 1998. City planners from around the U.S., as well as from Scandinavian nations, South Africa, Egypt and Japan, still visit Duluth to study its waterfront and roadway structures.

This short summary of a 15-year controversy barely suggests the passions involved. Political careers were destroyed and made. John Bray, a spokesperson for MnDOT District 1, conveys his enthusiasm for both the outcome and the process, which he describes as citizen activism at its finest. Bray says, "The people of Duluth stood up, and said, 'What you're proposing to do to our lake shore would be a disgrace!' It was more exciting than a bar fight, and the final result was beautiful."

U.S. Air Force Base Evolves into Commercial Airport

The Duluth International Airport (DLH), previously a U.S. Air Force base, is Minnesota's second-largest. It has a 10,152-foot main runway, almost the length of the runway at the Minneapolis-St. Paul (MSP) airport. Current commercial traffic totals about 15 scheduled flights per day, primarily to Minneapolis and Detroit. The terminal houses Monaco Air, a fixed-base operator, which runs the airport equivalent of a racing car pit stop for fueling and maintenance for intercontinental flights between Europe and cities on the U.S. West Coast. And DLH is still home base for the 148th Fighter Wing of the Minnesota Air National Guard.

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Interview with Chairman James L. Oberstar (D-MN), U.S. House Transportation and Infrastructure Committee



Congressman James L. Oberstar (D-MN) represents Minnesota's eighth Congressional District, including all or part of 18 counties in northeast Minnesota.

As a longtime member and now Chairman of the House Transportation and Infrastructure Committee, he has considerable interest in issues affecting all modes of the nation's transportation system. Chairman Oberstar responded to questions in a telephone interview.

Q Northeastern Minnesota enjoys strengths in almost every mode of freight transport—by land, water and air. What do you see as the region's most significant transportation and economic development challenges over the next decade?

Shortly after I was elected to Congress, I attended a steelworkers union meeting on the Iron Range. At the time the taconite industry was booming, but it was evident that the economy of the Range depended heavily on taconite. I suggested taking action to address this issue. When the meeting was over one older gentleman came up to me and said: "Those are some good ideas Jim, but we've got the iron ore up here, and as long as that lasts we are going to be fine."

In the 1980s, the Iron Range learned that no amount of high grade ore in the ground can protect a region which depends too heavily on one single industry. Since that time, we've worked hard to diversify our economy. The

people of northeast Minnesota know that you have to plan when times are good in order to be ready when times get tough.

The biggest challenge facing northeast Minnesota is building and maintaining the political will to invest in the infrastructure that keeps our economy growing. It takes real leadership to understand that maintaining our current infrastructure and planning for future expansion will create jobs and allow our economy to keep growing.

Q Strong demand for metals and other natural resources are bringing new jobs to the Mesabi Iron Range area. But booms and busts have characterized northeast Minnesota's economic history. What reasons are there to believe that things will be different this time?

Mining and natural resources based industries will always see boom and bust cycles, but we have made a great deal of progress in diversifying the region's economy to ease the impact of the down cycles. We used to say that Northeast Minnesota's economy was dependant on the three "Ts:" timber, taconite and tourism. But we have since learned that there are five "Ts:" timber, taconite, tourism, technology and transportation.

On transportation, for example, Bergquist Industries in Big Fork, Minnesota manufactures electronic components for companies all over the world. The sensor plates for the horns of every Hyundai automobile are manufactured in Big Fork. The company uses the airport in Big Fork to ship its products directly to its customers.



As for technology, researchers at the University of Minnesota's Natural Resources Research Institute in Duluth are moving forward on projects that include an innovative use of taconite mining aggregate that builds stronger, longer-lasting roads, and patents on biochemical compounds. Cirrus Design is developing a new jet aircraft for the general aviation market.

The region will continue to work hard to provide new, more cost efficient production techniques that will keep Minnesota products competitive in the global marketplace.

Q Northeast Minnesota is highly dependent on Great Lakes shipping. Can you comment on the costs and benefits of addressing infrastructure needs along the St. Lawrence Seaway?

I envision a rebirth of shipping on the Great Lakes and the nation's inter-coastal waterways. Last year, the Port of Duluth saw its most profitable year ever. The American Wind Energy Association estimates that \$10 billion was invested in new wind power installations last year, much of it in the nation's heartland of Minnesota, the Dakotas and Iowa. The St. Lawrence Seaway was the most economical and easiest way to move these huge machines to their final destinations. Congress is moving ahead with new programs to encourage the development of a new class of vessel to move freight on our nation's inter-coastal waterways. In December, we passed legislation to authorize the construction of a second lock at Sault Ste. Marie.

Q If the high-speed passenger rail link between Duluth and Minneapolis begins operations by 2012, as expected, how do you assess its likely impact on the region's economy?

This rail line will bring visitors to Duluth and further stimulate the region's tourism industry. It will also allow people to work in the Twin Cities metro area and live further out, allowing for more commuters to move in and out of the city without adding to traffic congestion on our roads. Past experience has shown that development follows the construction of commuter lines like this one.

Q You have been a strong supporter of bikeways and walkways. Why are these low-tech or no-tech pathways so important to you and to the communities you serve?

Bike and foot paths promote a healthy lifestyle and give people more options for getting around. With gas at \$4 a gallon, it makes sense to design our communities so it's possible to walk or bike instead of drive. If we could convert just ten percent of all the trips that are taken by automobile each day to walking, biking or mass transit, we would save the equivalent of all the oil we import from Saudi Arabia in a year, 550 million barrels.

Q The Arrowhead Regional Development Commission (ARDC) researches transportation projects, provides planning assistance, and often tries to bring stakeholders representing different constituencies together. How would you assess its track record?

ARDC has an excellent track record. It understands the value of planning and moving forward with a regional vision for success. When Congress created the National Scenic Byways Center, I made certain that ARDC became the lead agency in setting up and running this organization. I knew ARDC had the expertise and vision to embrace a national project of this caliber.

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The presence of a large airport only modestly busy for a field its size helped to attract the region's most dramatic manufacturing industry success story. Cirrus Design, an airplane design and manufacturing company, moved its headquarters from Wisconsin to Duluth in 1994 and now employs about 1,250. Cirrus is now the market leader in single-engine, propeller-driven aircraft, and the company is developing a five-seat jet model. Such relatively low-cost "very light jets" are expected to play a major role in the future of business aviation, as they may help companies save time and reach markets where there is no commercial air service.

Predicting the volume of future air traffic in northern Minnesota involves considerable uncertainty. In April 2008, Delta Air Lines Inc. and Northwest Airlines Corp. announced plans to merge, subject to federal regulatory approval. Delta executives plan to move the new company's combined corporate headquarters to Atlanta, with Minneapolis remaining a hub city.

When describing the Duluth airport, Brian Ryks, manager of the Duluth Airport Authority sounds like the owner of a large, old house: All that space

One major bike and pedestrian walkway was a by-product of the burst of creativity unleashed by the I-35 highway extension controversy.

is wonderful, and the neighborhood is great. But keeping the place up is expensive. "Our biggest challenge is that this is a large facility with aging infrastructure," Ryks sums up. "We're self-sustaining without operating subsidies, but we don't generate the revenue for needed improvements."

The Airport Authority, jointly with the city of Duluth, has requested more than \$5.7 million in state funding to assist with planning, design and steps toward construction of new terminal facilities. The proposal states that the airport already accounts for approximately 4,500 public and private sector jobs and generates over \$1.3 billion in economic impact for the region.

Transport on a Human Scale

One major bike and pedestrian walkway was a by-product of the burst of creativity unleashed by the I-35 highway extension controversy. The decision to build tunnels, not an elevated expressway, along the waterfront generated 144,000 cubic yards of rock and construction debris. The excavated rock was used to create a wider beach front running parallel to the expressway that became Lakewalk—a 3-mile pedestrian boardwalk and paved bike trail.

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Source: A. Crane

America's Byways Resource Center

The Arrowhead Regional Development Commission (ARDC) has a large backyard—over 22,000 square miles in northeast Minnesota. Its service area is even larger, extending across more than 3.5 million square miles of territory anywhere within the United States. That's because of the America's Byways Resource Center in Duluth.

In partnership with the Federal Highway Administration (FHWA), ARDC provides support for the National Scenic Byways Program. This is a grassroots collaborative effort to recognize, preserve and enhance part of the nation's heritage roads with intrinsic scenic qualities or special cultural, historic or recreational values. Since 1992, FHWA has provided more than \$300 million in funding for byway projects in all 50 states, Puerto Rico and the District of Columbia.

The U.S. Secretary of Transportation currently recognizes 126 such highways in 44 states. For example, the Blue Ridge Parkway in Virginia and North Carolina is one of 99 roads designated as National Scenic Byways. Among the All-American Roads are California's Route 1 Big Sur Highway and the Alaska Marine Highway, consisting of about 8,800 miles of coastal scenic routes to be traveled by ferry.

The Resource Center is in Duluth because, in 1996, ARDC was assisting local officials with plans to secure recognition of the Edge of the Wilderness Byway near the northwestern edge of the ARDC's service area. Success on that project led to requests for advice from other groups. In response, the ARDC staff proposed a center that could offer conferences, technology, publications and personal contacts with local groups around the nation. The 1998 TEA-21 transportation bill authorized the creation of the Resource Center.

"ARDC as an organization had a culture that favored entrepreneurship," says Michelle Johnson, whose efforts led to the creation of the Resource Center and who now serves as its director. "Ideas were always

welcomed. The ethic was to provide as much service as we could. When one of our customers asked for something, the answer was usually, 'Yes.'"

America's Byways Resource Center is unique, but the culture of entrepreneurship need not be, says Henry Hanka, now special projects manager for the Resource Center and a former ARDC executive director. "Look

In partnership with the Federal Highway Administration (FHWA), ARDC provides support for the National Scenic Byways Program. This is a grassroots collaborative effort to recognize, preserve and enhance part of the nation's heritage roads with intrinsic scenic qualities or special cultural, historic or recreational values.

at the wall in the boardroom of ARDC," Hanka says. "It's one innovation award after another. That speaks to the organization's service orientation. The message we'd want to send to anyone is, 'It's possible. It's possible for staff to come up with an idea that would be wonderful to implement.'"

America's Byways Resource Center maintains a Web site, bywaysresourcecenter.org, as an educational and informational resource for the byway community. FHWA operates and maintains two Web sites. The first is byways.org, aimed at travelers and the media. A second Web site, bywaysonline.org, provides information about grants, designations, forums and national marketing administered by the FHWA National Scenic Byways Program.

Intermodal Freight Handling—Coming Soon?

An intermodal freight-transfer facility in the Duluth-Superior area looks like an idea whose time is on the way. Rising fuel costs and congestion are causing both shippers and trucking companies to re-think the economics of long-haul truck shipments. And Duluth-Superior already has much of the necessary transportation infrastructure in the form of four Class I railroads and an Interstate highway, not to mention maritime docks.



Source: ARDC / MTC

“You have a kind of perfect storm in terms of modal shift,” says Richard D. Stewart, a transportation professor at the University of Wisconsin-Superior and

director of the university-based Transportation and Logistics Research Center. He’s referring to the combined impact of fuel prices likely to reach or exceed \$6 per gallon within a few years, congestion near cities that even on Interstates can slow traffic to a crawl, and regulations that shrink the pool of eligible truck drivers and restrict their driving times. As a result, truckers are reducing their drayage range (the road distance from an intermodal rail siding to a customer’s warehouse) to about 250 miles.

A profitable intermodal transfer facility needs at least 50,000 “lifts” (lifting a container on or off a railroad flat car) per year—preferably 100,000. In 2002, when Stewart studied the feasibility of an intermodal facility to serve a corridor between the Twin Ports and Chicago, the numbers were not quite good enough. “When we completed that report,” he says, “gas was at about a buck-eighty a gallon. It’s more than doubled that. What was marginally attractive then is more than attractive now. If you had intermodal service between

the Twin Ports and Chicago, you’d probably see a line-up of people to put trucks on it.”

Railroad companies, however, have a different perspective because long-haul freight provides their highest profit margins. “In a period of high demand for rail services,” Stewart says, “there’s little incentive for railroads to build ‘terminals of dreams.’ They will build the terminals that shippers are interested in having.”

Most of the tonnage through the Twin Ports is bulk freight. There’s relatively little containerization, but that’s changing, even for grain and paper products. In addition, new containerization facilities opened in 2007 at Prince Rupert, British Columbia, a port near the northern end of Canada’s Pacific coast. The Canadian National railroad connects that port to U.S. markets via Chicago. Duluth-Superior lies roughly halfway between Chicago and Winnipeg, the last intermodal stop on the Canadian portion of that route.

Currently, freight from Asian markets reaching Chicago by rail is likely to travel from there to Minneapolis by truck. Stewart estimates that off-loading Minneapolis-bound freight in Duluth-Superior would reduce hauling time by about 24 hours and save significant quantities of fuel. “We could capture not only immediate Twin Ports cargo, but all of the Twin Cities market,” Stewart says. “Suddenly our catchment area goes from roughly one-quarter of a million people in the area around Duluth-Superior to around 4.3 million, and growing.”

Making a Duluth-Superior intermodal facility a reality will require agreements among three sets of decision-makers: shippers, carriers and governments. The Arrowhead Regional Development Commission will play a role in planning a transportation infrastructure with traffic flows that minimize congestion. Stewart suggests that planners may also find ways to reward shippers and carriers whose operations minimize adverse environmental impacts.

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One especially ambitious project is the 130-mile-long Mesabi Trail. At the end of 2007, over 90 miles had been completed. It winds through forests (often on land restored from mining operations) and 25 small communities. Snowmobiles are permitted on some sections, but most of it is a non-motorized trail.

Another partially completed trail, the Gitchi-Gami, will run for 86 miles along a North Shore highway. MnDOT engaged ARDC to plan the trail, which will be maintained by the Minnesota Department of Natural Resources. Bray, speaking for MnDOT, emphasizes that the trail makes it easier for residents in small communities along the highway to come together. “Before, to travel two blocks you had to drive or take your life in your hands,” he says. “Now you can walk. I don’t characterize it as a ‘recreational’ trail at all. It’s the North Shore sidewalk.”

The Duluth Transit Authority began installing bike racks on their buses in 1988, and by 1995 had equipped their entire bus fleet with racks. Projects like bikeways and walkways are far from an afterthought to Duluth-Superior planners. At a recent MIC meeting, Ron Chicka’s summary of a new state transportation plan stimulated a short, sober dialogue. But the local officials and others present spent more time discussing whether plans to pave a hiking trail would jeopardize the flow of water through adjacent wetlands.

Deciding How to Put It All Together

In short, most of the infrastructure for an integrated transportation structure already exists. The challenge is to take full advantage of potential synergies. “Right now, Duluth-Superior sits at a pivotal point in its history,” says Richard D. Stewart, a professor in the Department of Business and Economics at the



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Source: Northern Images

University of Wisconsin-Superior and director of the university-based Transportation and Logistics Research Center. “It has always been a transportation hub. That’s why it was created. What we lack is a coherent vision about how to bring these entities together into one transportation hub.”

On the passenger side, Stewart envisions a transportation hub where cruise ships and marine ferries connect with trains, buses and airport shuttles. Travelers will be able to move “seamlessly” from one mode to another and easily complete tasks like rent cars and clear customs. The logistical challenge extends well beyond that, however, to issues like preserving green space valued by both visitors and residents. Stewart also notes potential conflicts between moving people and moving freight and, even trickier, between moving freight and patterns of residential and commercial real estate development.

If global warming continues, less severe winters and the region’s abundance of fresh water may attract even more tourists and permanent residents to the Duluth-Superior area. One appealing feature of

the Duluth-Superior harbor is that it is a working waterfront where large ships come and go regularly. The projects that have enhanced its attractiveness have also enhanced its value as commercial and residential real estate. This could lead to conflicts similar to those that stalled I-35 expansion for over 15 years.

“You have groups, largely outside developers, wanting to build condominiums on the waterfront,” Stewart says. “Any future ARDC leader is going to enter an ever-growing battle between those who want jobs on the waterfront and those who want this to be residential space. Once you gentrify that waterfront property, you’ll never get it back.”

As an example of the political variables involved, consider that Wisconsin’s constitution limits the taking of water or waterfronts under a “public trust” doctrine. The only exceptions are for marine commerce or public recreation—not office buildings or condos. About 95 percent of the Superior-side waterfront is public trust land. Minnesota has no such restriction. “Without forethought and planning,”

Stewart says, “you might, maybe 10 to 20 years from now, have no ships coming into the port at Duluth. All the maritime freight traffic will be in Superior.”

These challenges, while complex, are widely recognized. At least in principle, everyone seems to accept that shippers and carriers make business decisions with only minimal attention to local, state or even national boundaries. Northspan’s Randy Lasky emphasizes that his group’s Web site includes data from both the ARDC counties in Minnesota and the NWRPC counties of Wisconsin. He also mentions that some business development organizations that preceded APEX no longer exist. “Maybe they weren’t regional enough,” Lasky says.

Rob West, the APEX CEO, emphasizes that developing a diverse manufacturing base reduces any chance of returning to a time when Duluth’s millionaires and miners had totally different stakes in the region’s future. “Our mission is to create wealth, widely shared,” West says. “We’re not talking about creating wealth on the backs of people who get \$8 an hour.”

Everyone mentions quality-of-life issues. “Like much of the country,” says Tom Cutruvo, executive director

of the Duluth Economic Development Authority, “Duluth has gone through a significant transition from an industrial economy into a service-center economy. A lot of the people who left want to come back. They want to come to a place that’s attractive and clean. Now there’s more focus on neighborhoods, and how transportation affects that.”

John Bray, MnDOT’s spokesperson, suggests that the region’s most important asset may well be its commitment to widespread community involvement, demonstrated during the I-35 controversy and strengthened over the years by multiple institutional channels for tapping the ideas of diverse constituencies.

Bray emphasizes that broad-based organizations like MIC and the ATP, both supported by ARDC, produce more innovative ideas and reach better decisions than MnDOT or any single agency could ever achieve alone. “It’s a pretty dynamic situation,” Bray says. “At the end of the day we [MnDOT] are a highway agency. Things like ports, airports and pedestrian-friendly streets aren’t highways. I would characterize ARDC as sort of like a magnet. There’s stuff over here and stuff over there. They bring it all together.”

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Intercity Connections for the Future: Making High-Speed Rail Options A Reality

Even if your crystal ball is cloudy, two predictions look like safe bets: Fuel prices will continue to climb, and the frequency of airline flights to non-hub cities will decline. These prospects could be bad news for areas like northeast Minnesota, where tourism is an important contributor to the economy.

Those same factors, however, make the economics of a high-speed train connection between Duluth-Superior and Minneapolis-St. Paul, a distance of about 160 miles, look far more attractive than in the recent past. Rail passenger service between the Twin Ports and the Twin Cities ended in 1985.



Roughly a decade ago, the Arrowhead Regional Development Commission (ARDC), the Minnesota Department of Transportation (MnDOT), and their many partners began studying the feasibility of restoring service.

In 2000, a report considered three options involving relatively modest upgrades to existing track and a fourth

option for a high-speed train connection that would shave at least a half hour off the driving time at Interstate highway speeds. All were rejected because ridership seemed unlikely to be strong enough to justify high initial capital costs.

It now looks like the high-speed option is about to become reality, says Bob Manzoline, executive director

of the St. Louis and Lake Counties Regional Railroad Authority. "The design work is done," Manzoline says. "Site analysis begins this summer. Construction should begin in 2010, and our expected timetable for trains to start running is probably 18 months after that in 2012."

In general, higher speeds attract more riders and hence generate more revenue. But higher speeds also entail higher capital costs, primarily for the sophisticated infrastructure needed to manage tight schedules and to ensure safety at approximately 170 grade-level crossings. Manzoline says that the most cost-effective choice appears to be a 110-mph train making eight trips per day. The estimated capital costs will be just over \$360 million (2006 dollars).

This level of service is expected to generate an annual operating revenue surplus of between \$1.2 and \$4.6 million. The investment is expected to create 13,800 jobs along the corridor with a total economic impact of somewhere between \$1 billion and \$2 billion. The Twin Ports are expected to gain a combined total of 2,100 to 2,800 jobs, and Hinckley, a casino site half way between Minneapolis and Duluth-Superior, is expected to gain nearly as many.

"We're the gateway to northeast Minnesota from the Midwest," says Tom Cutruvo, executive director of the Duluth Economic Development Authority. "We're 90 miles away from spectacular scenery [the Boundary Waters Canoe Area along the U.S.-Canada border] that National Geographic called 'one of 100 places to visit before you die.'" Cutruvo adds that Duluth's convention center is already gaining popularity, and he expects that the combination of easy air access to Minneapolis-St. Paul and 110-mph rail access to Duluth will be "a transformational change for Duluth." It will, Cutruvo says, "change how people think about Duluth and how Duluth thinks about itself."

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