



Green Economy & Freight Initiative projects

Name of Project: Going to the Island Freight Improvement Project

Base project information

1. Corresponding RTP project number(s) for the nominated project.

RTP #10174

2. Project extent or area description.

The Going to the Island Project area encompasses the segment of N Going Street that runs between Interstate 5 and Swan Island in North Portland. This segment is approximately one mile in length and provides a crucial connection between to and from Swan Island. It includes the intersections of N Going Street at N Interstate Avenue, N Greeley Avenue, N Basin Avenue, and N Port Center Way.

3. Purpose and need statement

The purpose of this project is to improve access to a regionally significant industrial district (Swan Island), primarily via improvements along N Going Street. N Going Street is the only access road for trucks travelling to and from Swan Island, and links Swan Island to Interstate 5 as well as other industrial districts in the area via N Greeley Avenue.

The needs addressed with this project include:

- 1) Reducing travel times for trucks travelling to and from Swan Island and improving safety along the corridor by implementing intelligent transportation systems (ITS) including signal priority for trucks, traffic monitoring equipment, and other intersection improvements.
- 2) Improving safety and efficiency at the multi-modal intersection of N Going Street at N Interstate Avenue, which is an important intersection for light rail transit, bicycles, passenger vehicles, and pedestrians as well as the trucks that use this route for travel between Swan Island and I-5. Presently, there is no equipment for monitoring or evaluating the performance of this intersection.
- 3) Improving the connection for freight vehicles travelling between Swan Island and other industrial districts such as South Rivergate via N Greeley Avenue. N Greeley Avenue is an important route for bicycles and buses as well as trucks, and crosses N Going Street above-grade, with access between the two streets at two closely-spaced, unsignalized intersections.

4. Description of project design elements.

The Going to the Island project includes several elements which will improve the safety and efficiency of the N Going Street corridor:

1) Installation of hardware to improve the functioning of the intersection of N Interstate Avenue at N Going Street, allowing for trucks to be granted priority, and installation of a variable message sign on eastbound N Going Street west of interstate to warn of vehicle/train conflicts.

2) Installation of closed circuit television cameras and supporting hardware to allow for monitoring and management of traffic along the corridor at four locations:

1. N Greely Avenue at N Going Street
2. N Basin Avenue at N Leverman Street
3. N Lagoon Avenue at N Basin Avenue
4. N Going Street at N Basin Avenue

3) Other upgrades to several intersections of multimodal significance, including N Greeley Avenue at N Going Street, N Going Street at N Basin Avenue, and N Anchor Street at N Channel Avenue, providing real-time traveller information using Bluetooth data collection devices.

5. Description of post implementation measurement of project effectiveness (Metro staff is available to help design measurement methodologies for post-construction project criteria performance).

One of the key elements of this project is that it provides equipment for monitoring the performance of the N Going Street corridor between Swan Island and I-5. By utilizing equipment such as closed circuit television cameras and traffic counting equipment, the ITS solutions that are implemented through this project will allow for better analysis of the performance of this corridor and its key intersections than what is possible at present. This will inform decisions about signal timing and future safety and capacity improvement needs.

Additionally, through outreach to Swan Island business owners and stakeholders, TriMet, and the cycling community, the effect of the proposed upgrades on truck travel time and freight delay as well as impacts to other travel modes can be assessed and the ITS solutions and traffic management strategies can be adjusted accordingly.

Map of project area

1. Provide a map of the project consistent with instruction in Exhibit B

Project sponsor agency

1. **Contact information (name, e-mail, phone number) for:**

- Application lead staff: Peter Koonce, PBOT Division of Signals, Street Lights, and ITS; peter.koonce@portlandoregon.gov; 503-823-5382
- Project Manager/Engineer (or assigning manager): Willie Rotich

2. **Describe whether the lead agency has recently led or failed to deliver a federal aid transportation project, and how the agency currently has the technical, administrative and budget capacity to deliver the project.**

The Portland Bureau of Transportation is one of the few local agencies in the state that are fully certified by ODOT to deliver federal aid projects and has extensive experience with delivering such projects, from project development, through design engineering and construction. The bureau currently has the staff capable to provide all the administrative services related to project management and all technical services related to design engineering, and construction management. PBOT staff members are recognized nationally for expertise in areas related to the proposed projects including multi-modal traffic signal design, implementation of truck signal priority, and traffic management through ITS.

Location

1. Describe how you identified the travel corridor or general area for the project and how regional and local data relevant to the project criteria support this location as your top priority(s). (See Appendix D of the Nomination Packet for criteria relevant to prioritizing project location)

Swan Island is a regionally significant industrial district, and home to many large employers such as Daimler Chrysler, Cascade General Inc., Parr Lumber, CH Murphy || Clark-Ullman Inc., and many others. With river access and Class 1 railroads, it is a key area for freight travelling through the Portland Metropolitan Area.

The only vehicular access between Swan Island and the rest of the region is provided by the N Going Street Corridor. The corridor is therefore a crucial link in the freight transportation system. At the same time, the corridor must accommodate other traffic that accesses the major employment centers on Swan Island via motor vehicles and buses. Complicating matters, this corridor intersects several other streets of regional significance such as Interstate Avenue, a key route for bicycles and LRT, and Greeley Avenue, an important freight route that is also heavily utilized by bicycles.

This travel corridor's importance for freight traffic and the unique mix of multiple travel modes with different safety and mobility needs make this location a very high priority for implementation of monitoring equipment and ITS solutions.

Highest priority criteria

1. Describe how the project will reduce freight delay.

As previously noted, Going Street provides the only access between Swan Island and the rest of the region, linking an important industrial district through connections with N Greeley Avenue, N Interstate Avenue, and I-5.

The project aims to reduce freight delay through the implementation of several ITS measures designed to maximize the efficiency of the corridor. By improving the intersections of N Going Street at N Interstate Avenue and others along the corridor, the effective capacity of the corridor is increased, therefore reducing delay not only for freight but also for other modes of transportation traveling along the corridor, as well as those intersecting the corridor.

For freight in particular, the delays at the intersection of N Interstate Avenue can be long, particularly during peak periods when LRT crossings are frequent. Using priority to allocate time dynamically to better

serve the safety and capacity needs of freight traffic, these delays can be significantly reduced with minimal impacts to other modes.

Additionally, the project will install traffic monitoring and counting equipment. This will provide essential information for traffic management along this corridor, leading to improved signal timing and better information available to dispatchers and drivers. Data from the monitoring equipment will be publicly available via ODOT's TripCheck service.

2. Describe how the project increases freight access to industrial lands, employment centers & local businesses, and/or rail facilities for regional shippers.

Swan Island is one of the most important industrial districts in the region, as a key hub connecting marine terminals, freight rail, and trucking, and as such is home to a large number of employers. As the only access road into and out of this district, this segment of N Going Street is a crucial link in the region's freight transportation system.

This project will ensure the continued efficiency of this link, while at the same time improving travel both along this link for freight access and across this link for other modes. In addition to freight vehicles, all employees of Swan Island companies must travel along this road either by private vehicle or by bus (two Tri-Met Bus Lines serve Swan Island via the intersection of N Going Street at N Greeley Avenue). The project aims to reduce truck-bus and truck-car conflicts along the link using the ITS solutions described previously.

Additionally, the intersection of N Going Street at N Greeley Avenue is an important node for freight vehicles as N Greeley Avenue constitutes the most direct route between Swan Island and other North Portland industrial districts. N Greeley Avenue provides a connection to N Lombard Street, which itself is an important freight route that runs between the Rivergate District and industrial areas in the vicinity of Portland International Airport.

By directly increasing freight access to Swan Island and improving key links and nodes between this district and other industrial districts throughout Portland, this project provides an excellent benefit-to-cost ratio for region-wide improvements to freight access.

3. Describe how the project contributes to "greening the economy" and how the project helps expand economic opportunities to Environmental Justice/underserved communities. (For the purposes of this allocation we are defining "greening the economy" to be initiatives that contribute to creating a low carbon, resource efficient, and socially inclusive economy)

The primary purpose of this project is to improve freight access to Swan Island in such a way that it is as environmentally friendly as possible. A key strategy to accomplish this is to utilize ITS solutions to ensure that trucks are moving to and from Swan Island with minimal slowing, idling, and stopping so that the heavy emissions associated with these activities are reduced. This will also slow the pavement degradation along the affected roads, reducing the frequency of necessary roadway maintenance and paving, which are activities that have high emissions associated with them. Further, ensuring that multi-modal intersections that serve trucks, LRT, bicycles, buses, and pedestrians can accommodate all modes with minimal delays for each is essential to ensuring continued "greenness" in the freight and shipping industries.

Often the residential areas located closest to industrial areas have higher-than-average populations of low-income and/or minority communities, and this is true of neighborhoods near Swan Island. The project is located in North Portland which contains a workforce population with a significantly higher and growing percentage of African-American (12 percent) and Latino populations (24 percent) and lower income households compared with the rest of Multnomah County, which has a 6 percent African-American and 10

percent Latino populations, respectively. Based on U.S. Bureau of Labor Statistics data, the manufacturing, wholesale trade, transportation and construction sectors provide primarily middle-income jobs and play an important equity role in stemming the erosion of middle-income jobs and widening income inequities.

The manufacturing and transportation sectors are a major source of middle-income and upward-mobility jobs for communities of color. In 2008, manufacturing and transportation sectors made up 18% of jobs held by people of color in Multnomah County, compared to 10% of the jobs held by white employees. This project will ensure the continued economic competitiveness of area employers.

High priority criteria

1. Describe any conflicts with freight/active transportation you've identified in your project area. How does the project design mitigate these conflicts?

The N Going Street corridor between I-5 and Swan Island intersects with two key bicycle routes: N Interstate Avenue and N Greeley Avenue. Both of these roads have continuous, marked bicycle lanes and are heavily utilized for commutes between North Portland and the Central City. As discussed, this project aims to mitigate the conflicts at these intersections through the use of ITS solutions that will reduce delay for all traffic in all modes at these intersections, and will increase safety for traffic intersecting N Going Street by ensuring that trucks on N Going are not served red indications when in the "dilemma" zone, which is the least safe time to do so due to difficulties in safely stopping.

Additionally, as the only roadway access to Swan Island, all transit access to Swan Island utilizes this link. Tri-Met Bus Lines #72 and #85 serve this area and access N Going Street through its intersection with N Greeley Avenue. These bus routes support walking trips along the corridor between bus stops and employment centers, and the ITS improvements associated with these projects will reduce delays and increase comfort for these walking trips. Further, the corridor supports other walking trips along and across it, particularly at the intersection of N Going Street at N Interstate Avenue, as it is close proximity to a Max Yellow Line train station. The project will improve safety of pedestrians at this intersection in the same ways as described above for bikes.

2. Does the project help reduce air toxics or particulate matter? Please explain.

The project will reduce particulate matter and other airborne pollutants by utilizing ITS to ensure the smoother flow of vehicles to and from Swan Island. The emissions from the large volume of freight vehicles travelling to and from the island can be reduced by ensuring that they are not unnecessarily served red indications, which increase emissions from the trucks as they slow to a stop, idle, and then accelerate to the 40 mph travel speed along the corridor. Reducing the instances of these truck stops will directly reduce these emissions. Additionally, the project indirectly will have a positive benefit on emissions in the area by ensuring that transit and bike access along and across the corridor is also managed as efficiently as possible, thereby reducing the number of private vehicle trips in accordance with the regions modal split goals.

3. Does the project help reduce impacts, such as noise, land use conflicts, emissions, etc. to Environmental Justice communities? Please explain.

North Portland contains a higher percentage of African-American, Latino and lower income households than the rest of Multnomah County. As an important regional freight hub, many of the communities in this area are directly impacted by the movement of trucks through the area to and from I-5. By improving the

operations of this corridor for freight vehicles, the impacts and emissions from trucks will be greatly reduced. Additionally, by ensuring that transit and active modes can safely and efficiently share the area roadways and intersections with the large numbers of freight vehicles using the corridor, the project ensures that these modes can continue to be competitive alternatives to private vehicles, reducing overall emissions and associated noise in the vicinity of N Going Street.

4. Describe how the project increases freight reliability.

As described previously, this project will utilize ITS solutions to maximize the efficiency of the only route into and out of Swan Island in addition to improving the performance of several important intersections on Swan Island. The monitoring equipment will ensure that City and ODOT staff are aware of any problems with the performance of the corridor, and the VMS provides a way for real-time communication of these issues to drivers. The signal improvements will ensure that control delay is minimal and predictable for vehicles travelling to and from Swan Island.

Priority criteria

1. Is the project of an innovative or unique nature such that it is not eligible or typically funded with large, traditional transportation funding sources such as state trust fund pass through to local agencies, local bridge program, or large state funding programs or have any other significant sources of funds? Please explain.

There are limited funding sources available for this type of freight improvement project. The ITS solutions and other improvements proposed in this project would not be eligible for funding under the ConnectOregon program or through other sources. This project will also set the stage for future freight priority projects. Earlier work on North Columbia have had success, but this particular location has significant partners in Daimler and other companies that have a vested interest in improving freight mobility.

2. Will this nomination leverage other funds or prepare a project to compete for discretionary funding that may otherwise not come to the region? Describe any opportunities you have identified.

This project is working in tandem with Going to the River, an ongoing effort of the City to bundle investments in bicycle, pedestrian, transit and transportation demand management (TDM) projects to optimize access to one of the state's largest employment centers: Swan Island in North Portland.

Additionally, this project will work in tandem with the South Rivergate Freight Improvement Project, which has also been proposed for Metro's Green Economy and Freight Initiative funding, to improve access to key regional industrial districts.

3. Describe how the project may help reduce the need for highway expansion.

By leveraging ITS solutions to increase the efficiency of the corridor, this project will increase the effective capacity of an important link for freight and other vehicles without expanding or widening any roads or intersections in this corridor. Additionally, improving the intersections to accommodate demand from other modes such as LRT, buses, and bicycles ensures that alternative modes of transportation remain competitive for travelling through the region. Much of the bicycle and transit traffic that crosses the N Going Street Corridor is travelling to and from the central city along a route parallel to I-5. Ensuring that this traffic can be accommodated through other modes will maintain or reduce traffic levels along I-5, reducing any need for expansion of this or other highways.

4. Describe any multi-modal elements included in the design of your project.

This project includes important multimodal aspects as it improves the safety and efficiency of several intersections that serve transit and active transportation. By reducing the potential for freight vehicles to be stopped at the intersection, there will be less potential for crashes to occur when these vehicles are turning, which is often a problem for people at the intersection.

The intersection of N Interstate Avenue at N Going Street is an important one for many modes of transportation. In addition to forming part of the only access to and from Swan Island for motor vehicles and trucks, the Max Yellow Line runs along the North Interstate corridor.

Process

1. Describe the planning process that led to the identification of this project and the process used to identify the project to be put forward for funding consideration. (Answer should demonstrate that the process met minimum public involvement requirements for project applications per Appendix A)

The project was identified as a result of extensive outreach and collaboration conducted by the City of Portland with the Portland Freight Committee as well as local Stakeholders. The project is identified in Metro's Transportation System Management and Operations plans as one of significance, and ongoing research conducted by Portland State University in collaboration with the City has shown that significant reductions in emissions are possible through targeted use of truck priority. The Oregon Solutions Project Team was also involved in identifying the scope and importance of the N Going Street Corridor to the local and regional economy.

The identification of the project also leveraged public-private partnerships that the City has worked to solidify. In particular, Daimler Chrysler, a major employer on Swan Island, has collaborated with the City to conduct research on opportunities to improve freight access to the area and has identified the ITS solutions proposed in this project as the most important mitigative measure in reducing freight delay and improving access.

2. Describe how you coordinated with regional or other transportation agencies (e.g. Transit, Port, ODOT, Metro, Freight Rail operators, ODOT Region 1, Regional Safety Workgroup, and Utilities if critical to use of right-of-way) and how it impacted the project location and design.

As described above, the project was identified through a collaborative effort that included the PBOT, the Portland Freight Committee, and other agencies. ODOT's motor carrier division recognizes the importance of this corridor as it provides the only link between the state's highway system and Swan Island, and other valuable input was received from the Oregon Governor's Office and the Oregon Solutions Project Team in identifying the N Going Street corridor as a crucial link to maintain the state's economic competitiveness.

As the project is implemented, the City of Portland will collaborate closely with TriMet regarding the signal design and operation at the intersection of N Going Street at N Interstate Avenue and the operation of buses along the corridor. The project is also recognized as one of significance by the area freight rail operators UP and BNSF and by the Port of Portland, as each of these depends heavily upon trucks travelling to and from Swan Island to connect to the heavy marine and rail freight traffic in the area.

