APPENDIX 2: INTERVIEW RESPONSES

This appendix is a comprehensive account of the responses we heard from each interview and focus group participant. The responses are grouped first by question and then by topic.

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QUESTION 1: OPPORTUNITIES FOR EXPANSION AND REINVESTMENT

What are the main opportunities you see for reinvestment and expansion by your business within the Portland Harbor industrial districts over the next 10 years?

HARBOR AREA GROWTH OUTLOOK

Predominant regional demand is for close-in land for expansion and relocation

Chicago and Sacramento are going to have many more available sites than Portland, and they are less expensive. But we're not Chicago - there is a unique market here. People here expect to be close-in and don't want cheaper sites that are far away. (industrial broker)

Ninety percent of the regional market for industrial land is for relocation and expansion. Most growth is coming from existing businesses, not new businesses. (industrial broker)

I've been involved in recruitment over the past few years. We didn't used to get a lot of different types of requests. In years past most of the new developments were distribution companies. Now, we get many different kinds of requests—the projects are much more diverse. We get lots of light industrial prospects. (property owner / representative)

Outlook by district

Lower Albina is built out. There is essentially no vacant land, only redevelopment opportunities. This is an advantageous location for river-dependent industries. We need to be located here for river access. Cargil, Dreyfus, K.F. Jacobson, and Ash Grove also take advantage of river access here. The river depth is good in our part of the harbor, and we have rail and are close to I-5 and I-84. All of these factors create a synergy for the district. (industrial association)

Swan Island has high levels of occupancy. There are approximately 200 businesses on the island. Most are not river-related, and growth has been primarily in companies that are not river-related, like UPS and Freightliner. Cascade General is a big player, though activity there has slowed down recently. They have diversified and are now doing much less river-related activity. For example, they are now cleaning tanker rail cars. UPS would like to continue growing on Swan Island—it is a good location for them—but they are challenged to find the room they need for expansion. We hear about demand for flex space and occasional stories about conversion of warehouse space in this area, but that has not been common. (industrial association)

Five years ago, there was no vacancy in the Northwest district. Now there is some vacancy, but not much. (industrial broker)

We see a lot of movement in terms of real estate within Guild's Lake. People are buying and selling and moving now. Things are picking up in the steel, construction and manufacturing industries. We see real estate signs pop up and go down frequently. (industrial association)

We have seen activity in Lower Guild's Lake recently because of building vacancy. (property owner / representative)

A galvanizing business recently left the Pearl and is now located near St. Helens and Vaughn, just inside the Guild's Lake area. A small sheet metal shop recently moved two blocks from Thurman to Vaughn to resolve parking and other location issues. I like to see companies staying in this area and moving into a bigger space within the district, rather than moving out of the area. (industrial association)

We used to hear about businesses that are moving outside of Portland because they are fed up with high taxes or timeline concerns. We don't hear this anymore. (industrial broker)

OUTLOOK BY SECTOR

Trucking and warehousing

Distribution facilities are the primary type of development occurring in Rivergate because of its access to the freeway, rail, and harbor. We expect that to continue. (marine terminal / port)

We moved into our Rivergate distribution facility in 1994. At that time, the building was 150,000 square feet. A year later we built Phase 2, adding 150,000 square feet. We thought then that the 300,000 square foot facility would last us 10 years, but four years later we added another 300,000 square feet (Phase 3 in 1999). In 2004, we added another 250,000 square feet to this facility (Phase 4). In 2005, we opened another distribution center in Kentucky. We moved some of our operations there. It is a different type of operation than here in Portland. (trucking / warehousing)

In 2004, we completed a new 500,000 sq. ft. facility in Rivergate. It has some excess capacity to grow into, which is nice. (trucking / warehousing)

We would like to substantially increase the capacity of our facility. We're currently conducting a feasibility study to see what can be done and how much it will cost. It's probably a 3-year project. We're trying to do it with the land we now have, but we may need more space for office, parking, etc. We just bought three buildings that make up the Swan Island Commerce Center. (trucking / warehousing)

We're a medium- to high-growth company in a low-growth market. Our plan is to grow 10 percent per year, which we've been doing. The increasing demand for our services will come from the population growth and the increasing diversity of product demand. We expect continued employee growth over the next 10 years. (trucking / warehousing)

From the 1920s to the 1960s, Oregon Transfer did everything having to do with transportation. In the late 1950s and 60s our firm was brought into the modern era. We began to focus on warehouse operations in the grocery products distribution business, which is where we still are today. Our warehouses are all food grade. The shift occurred with the grocery businesses migrating out of downtown in the 1960's, and since we were in the grocery business, we left too. (trucking / warehousing)

In the late 1980s and early 1990s, we began to lose business to the Bay Area as a result of trucking deregulation. Before deregulation, the major manufacturers had four west coast hubs; afterwards, deregulation made trucking cheap and led to consolidation. Firms then could have one distribution center serving 11 western states. People say you can cover entire United States with five warehouses – in the Northeast, Dallas, Atlanta, Chicago, and somewhere in California. This model worked well for a long time, but is now starting to change. Today, people are dealing with high fuel prices, increasing transportation

congestion, less availability of drivers, restricted hours of operations, etc, and they're saying that local distribution centers make sense again. You can't get products from San Francisco to Portland in a day anymore because of traffic. Firms are also moving out of San Francisco because of land prices, traffic, unions, etc. So we're talking to local firms again, and we're excited about that. (trucking / warehousing)

Big box retailers take a different view. They are moving towards big distribution centers on cheap land in rural locations on the Interstate highways. Wal-Mart's distribution facility in Hermiston is very functional, even though it's not near a population center. These firms don't need the city at all anymore. (trucking / warehousing)

For-hire distribution firms like us have room to expand. Here in Oregon we can take advantage of the state's looser weight and length laws on trucks. We can build bigger beverage loads on 53-foot long trucks and use fewer trucks. Oregon, Washington, Idaho, and Minnesota all have less strict weight and length laws. California's laws are very strict. (trucking / warehousing)

Last year our sportswear surpassed our outerwear sales, and it is now our biggest division. (trucking / warehousing)

Marine terminals

Bulk exports

Our bulk terminals at T-4 and T-5, which handle 8.5 million tons of cargo per year, all have growth plans over the next 10 years. Two of our bulk terminals need additional dock space to grow. We will also be expanding storage buildings there. We will be asking for a state goal exception to expand rail facilities at T-5. (marine terminal / port)

We are close to getting another tenant into the former Alcatel site at T-5, where an underwater cable manufacturer closed. The tenant expressed interest in using the dock, but it wasn't built for moving bulk material, so dock improvements may be needed. (marine terminal / port)

In terms of redevelopment, we want to get the vacant grain elevator at T-4 up and running. We are also buying (through condemnation) the former Marcom site south of T-4 to accommodate expansion of the Toyota auto facility. (marine terminal / port)

We are working to take advantage of opportunities for new fertilizer facilities that may trigger redevelopment. For example, we would like to be able to handle bulk fertilizer at T-2, so we are submitting plans to build dry, covered storage. (marine terminal / port)

Wheat in general is not a growth market. The region will export about 1 billion bushels of grain this year, which is the same as in the mid-1990s. However, our market share is growing. We have a pretty good business model and have made facility investments that competitors have not. Oregon farmers produce a lot of wheat and we handle 35-40 percent of it, as much as any of our competitors. (marine terminal / port)

We are considering \$5-30 million in investments at T-5 over the next 10 years, driven by bigger trains and the growth of our company's market share. We are looking at increasing our load-out speed and storage capacity. Ten years ago, the trains were only ½-mile long. Now, grain is delivered on mile-long unit trains with 110 cars each. There is a rapid turnover of inventory at the Portland facility. We have effective storage capacity of 75,000 tons and we export 3.5 million tons per year. We meet constantly to coordinate the train delivery schedule. If a train were to show up with the wrong kind of grain, we have no place to store it, and we would have to tell Burlington Northern that we can't take the train. I'm convinced we'll increase our storage capacity. (marine terminal / port)

Under the right circumstances we could significantly increase our capacity. We have some fairly sizeable projects we can do, which we have not done due to economic uncertainty. For example, eight years ago, we did a study on the possibility of a \$50 million expansion of our facility. This expansion was not done. (marine terminal / port)

Cargill would be a willing seller of the terminal they have downtown. The Dreyfus facility is antique—too small, slow, and does not have the ability to clean grain. Many vessel owners won't go to the Dreyfus facility. (marine terminal / port)

If the biggest grain company in the world can't make the vacant elevator at T-4 work, it is not likely that it would work for anyone else. (marine terminal / port)

Auto imports

We completed a \$40 million expansion project in 2004, which included this building, and we are already looking at expanding the building and land area. The facility was too small the day we opened it. It was built to handle 170,000 cars per year, but when we opened, we started at 220,000. We didn't forecast our growth rate correctly when we planned 7 years ago—we lost our lease on 40 acres of land in Long Beach, due to container expansion, which has driven the need for additional land here. (marine terminal / port)

We're now considering an additional \$12-15 million expansion. We recently expanded our 86-acre site, taking on a temporary, month-to-month lease on 16 acres adjacent to Lombard. We've striped that 16-acre lot, and we want it in our lease on a permanent basis. The former Marcom property is another possible expansion site. We're not counting on it, because we don't know when it will be available. We're interested in the 5 clean acres—they are in the right location for us. The ballpark figures for our expansion are \$7 million in land costs, \$12-15 million total. (marine terminal / port)

Our sales have increased every year since 1996 by an average 8-10 percent per year. Production grew by 10 ten percent in 2005 and we anticipate this continuing through 2008. Conservatively, the official numbers show us going flat in three years, but the trends have been steadily upward. We are currently receiving 12 ships per month, containing 1,200-1,600 cars per vessel, which averages out to 800 cars per day. This amount has increased significantly in the last year and will continue to increase. This year, we will process a ship every two days. In 2005 we moved 220,000 vehicles and we anticipate moving 250,000 this year and 270,000 in 2007. We intend to add at least 12 more production associates in March, and 6 or 8 more later this year. (marine terminal / port)

Toyota's model is for high-volume cars, like Corolla or Camry, to be built locally. For the North American market we want to maintain a ratio of 65 percent domestic production to 35 percent imports. But North American plants are running at 100 percent capacity, so we are currently at 60/40, and sometimes you see imported Corollas or Camrys. Also, pick-up trucks and the largest SUVs are only built in North America. Toyota has new plants in San Antonio, Texas and Ontario, California. We would like to hold the line at one million imports per year. Our focus at this facility is strictly on imports. Our other import terminals are in Long Beach, CA; Newark, NJ; and Jacksonville, FL. Adding post-production options at the import terminals is a growing trend. Scion lets people customize cars and we would like to expand this option to Toyota and Lexus. (marine terminal / port)

Containers

We are expanding our container terminal at T-6. We are also running out of auto storage space at T-6. We are going out to bid to pave another 40 acres there. We may need to change the tenant mix at T-6.

Vancouver is a natural place to move the autos. It's easier to move the autos than the containers. (marine terminal / port)

Port of Vancouver offers a release point for Portland, to some extent, as regional growth occurs. It makes sense for Portland to handle containers. On our side of the river the channel is not close to the shore, so we use have to use finger piers. This works well for autos and bulk conveyors—basically everything but containers and break bulk. So if container industry expansion leaves less room for autos in Portland, we'll provide a place for them, retaining jobs and businesses here in this region. Our two ports can and should be complementary and fit together well. In this way we will remain strong and viable as a region. (marine terminal / port)

I see growth in our community in a regional sense, because we have the rail and road crossroads, and a large workforce. Last year was the best we've ever had, and this year is going to be even better. Marine cargo will be increasing across Washington. Projections have Puget Sound container traffic doubling or even tripling in the coming years. (marine terminal / port)

The distribution centers in the suburbs are tied in to Portland's container operations. I pitch Portland's container operations all the time as a regional asset, but we're not as involved with distribution centers here. Seventy percent of our traffic is pass-through bulk cargo. So our roads aren't as clogged. We do a lot of marine and rail activity but don't rely on the roads as much for distribution. That could change in the future. Distribution uses may grow here. (marine terminal / port)

Railroads

Rail volume and employment growth

Are 3 percent growth projections for rail in the region realistic? No. Our annual volume rail traffic growth over the past few years has been in the double digits. In the future, we expect that the growth rate will be about 3 percent for bulks but higher for merchandise. (railroad)

We've been growing and hiring in every craft. We hired about 100 employees last year [in this district], half to replace retiring or departing employees, half due to growth. (railroad)

We can't play much of a role in long-haul moves, but have growth opportunity in taking advantage of short-haul business. From Eugene to Portland we've seen 8 percent growth this year. We've seen good growth in products not traditionally hauled by railroad. Our biggest increase recently has been in sawlogs from St. Helens headed to southern Oregon lumber mills along the I-5 corridor. These products used to only be shipped by trucks, but we are offering good rates. The old adage that rail is not able to compete in anything under 500-mile trips is changing. The short lines are able to do shorter trips, and the Class 1's are concentrating on even longer trips. (railroad)

Changing Class 1 rail business model

From our perspective, the main challenge is the limited capacity of Class 1 railroads and their shift in strategy to focus on revenue quality rather than getting new business or working with short lines. Over the last 10 years, we've seen a shift in the attitude and willingness of the Class 1 railroads to explore new opportunities, because they're at capacity. (railroad)

BNSF and UP are not looking for new business in the current economic market. In fact, they have been raising their rates to the point that it doesn't make economic sense for small companies to use them. The larger railroads don't want to deal with low-volume clients. A small company in Linnton is better off and has more opportunity for using rail services than a company at T-4 that has to deal directly with UP and BNSF.

We've had success in bulks because of the high volume. Bulk facilities can take a 110-car train, and they have room to store the train. They build their facilities to account for this type of space. We don't have space at our yards to store a 100-car train. Merchandise trains have to be smaller, so that we can sort the cars without having to build more track. The capacity issue is really big for us. It's important that we have room to put the trains when they're unloaded. We don't like to park trains on the main line because this causes all kinds of delays. The most crucial thing is to make sure the rail network around us stays fluid. We don't make money when traffic and equipment sits. For whoever gets business, capacity will help get cars there earlier. (railroad)

Manifest business is our priority. Burlington Northern Santa Fe is moving to mega centers. Sixty percent of their business is intermodal. They have a streamlined operation. Union Pacific, on the other hand, is a manifest railroad. We serve customers at both ends, and have more customers in general. This is expensive and there are more overhead costs. (railroad)

Rail investments

Our current capital projects in the Portland area include new rails and ties to maintain track structure, a UP/Port project to expand capacity at the Toyota site, and double tracking at the Hemlock Siding (185th). (railroad)

We are working to add capacity at Albina. Some trains go directly to the Portland Terminal Lake Yard. It is jointly owned by Burlington Northern Santa Fe and Union Pacific, building trains and doing work for both companies. (railroad)

Columbia Grain is adding 3 new lines of rail trackage on their site and can now handle 30 percent more freight. We would like to expand their capacity to add 7 or 8 new lines. Glacier NW may need to tear down buildings to handle more rail cars. Canpotex is also expanding rail trackage on their site. A project at Toyota is planned to add 2,000 feet of new track. (railroad)

The Washington Department of Transportation is funding the Vancouver Yard bypass, a new rail line around the yard. The project also includes a major street overpass. (marine terminal / port)

The Port is building a new rail line between the Rail Bridge and I-5 to access our terminals from the east. It will be routed around the Boise Cascade site, where mixed-use development is expected. The new line will eliminate many at-grade traffic crossings. (marine terminal / port)

Expanding markets for rail

Any company doing imports that needs rail access will also need water access. This is a strategic marketing opportunity for the harbor. Products like minerals, cement, tires and copper concentrate are a big import market now. Wind turbines need to be imported on ships. There is a big demand for expanding imports. (railroad)

Many cities don't have a good method for transporting waste and garbage. An intermodal facility would aid in the problem. Portland should look into that. (railroad)

We would like to gain access to more of UP and BNSF's lines to play a short-haul role. There are businesses that need short-haul accessibility that big railroads are walking away from, which strongly affects the economics of those companies. For example, the Cascade Steel Mill in McMinnville currently gets 30-60 carloads per month of scrap metal from Schnitzer near T-4. UP takes these scrap loads to the Brooklyn yard and we take it from there. We are under pressure to take over these loads because they are short haul

and UP doesn't want to participate. Cascade has trucks that they could use, but they want to retain rail use. We are working with UP to absorb their problems, such as not being able to get close enough to the terminal. We want to isolate UP from activity at T-4, and get greater access to these areas because our cost structure is very different than UP's, and we can do these short hauls much more cheaply. (railroad)

New barge or ocean transloading facilities to rail are being considered in St. Helens, and the Linnton property would be a great opportunity for similar development. A considerable amount of lumber, steel and paper products are transferred cross-dock between rail and barge. Mobil and BP get ethanol and other bulk stock petroleum products that could be received by rail. (railroad)

Manufacturing

Metals and equipment

We're building a pipe mill that will be operational in mid-2006. We exited the pipe business in Napa and are bringing it up here because shipping to Napa was expensive. With this new mill, we can make 80-foot lengths of pipe using a new technology that welds pieces together in a spiral rather than butting two adjacent pieces on end. The new mill uses Spiral Technologies equipment out of China. (manufacturing)

We're putting lots of money into Rivergate. We have \$1 billion in assets on our site, and the rolling mill may be an impetus for more investment. The mill has capacity to produce 1.2 million tons of steel per year. We will only produce about 850,000 tons this year, because the market isn't there for more. Pipeline projects have become our biggest customers. We already signed an order to make pipe for Kinder Morgan that will keep us busy to 2007. Orders for the fall amount to 800,000 tons of pipe, half of which will be produced here and half in Canada. Our customers are from all up and down the West Coast. The market for plate is different than pipe. Pipe we sell to end users but plate we sell to fabricators. The regional sheet-metal market is about 500,000 tons. And we're currently shipping steel for wind power generation tower construction to the upper Midwest. Making more towers for wind turbines locally would fit our work perfectly. That steel is an inch thick – that's a lot of steel! (manufacturing)

Building a new dock would be very beneficial to us. We have an old condemned dock that hasn't been used in 20 years. We have to import nearly a million tons of semi-finished steel per year. We have suppliers everywhere. We get slabs in now by ship at the Port of Portland docks or by rail. We would like to build a new cost-effective dock so that we can bring material straight into our site. The best dock for us would be a sheet piling dock, which I hear is bad for the fish. So the environmental concerns could make rebuilding the dock difficult. The existing dock is a finger pier and was never used for unloading unfinished steel. Each piece of unfinished steel can weigh 45 tons. (manufacturing)

If we can work out the economics, we may melt steel here again, which would bring 300 very high-paying jobs. We used to have 700 people here, but we shut down the melt shop in 2003. We had some tough years before 2004, so we lightened up and also lost some support staff. It would have cost more to upgrade the equipment in the melt shop and maintain it than to ship the slabs in. But we haven't ruled out the possibility of reopening the melt shop. It's something we plan to study over the next 2 years. The problem with restarting the melt shop is that electricity is now expensive in the Northwest. What happened to the cheap energy? I can't blame it on the salmon. (manufacturing)

We are looking to expand in places where there are opportunities to increase capacity for specific products. We're close to capacity here. We may need more land and employees. Our operation on Yeon, Plant 3, makes construction equipment—items such as buckets that dig dirt. This plant has grown 30 percent in the last 5 years. It's a good, viable plant and will stay competitive. Our production there is up 3-fold over 10 years ago. We are currently running 2 shifts, 3 sometimes, 24 hours a day, 6 days a week. It's possible

that we could expand this operation soon, maybe here in Portland, but it depends. In our company, economics drives the choices between manufacturing locations. (manufacturing)

We have a steel mill here and we intend to make it successful, which is why we keep modernizing our facilities. We'd like this mill to produce more. But we've put major investments elsewhere like Oakland, Tacoma, Atlanta, Rhode Island, etc. (manufacturing)

We've just made major investments in our Rivergate facility: we've redeveloped part of the dock; rehabilitated the container crane; done maintenance dredging; and added new equipment. We're always investing elsewhere as well. (manufacturing)

We just invested \$12-15 million in a new "mega shredder" that can process more scrap faster, which reduces our cost per ton. We also have mega shredders in Oakland, Tacoma, and Boston. The new shredder will double our capacity at this site, as long as we can get enough scrap. Transportation access is especially important for us in Portland, because this is a scrap deficient area. Currently we have to bring scrap in from elsewhere to feed the steel mill here. Scrap comes in via truck or barge, from Portland and all over the state, Montana, Idaho, eastern Washington, etc. We barge in scrap from Pasco. Most of our shredders have been or will be rebuilt to be bigger and more efficient. We compete for scrap metal. We want to move material through faster and use less space (our new shredder has about the same footprint as our current one). The mega shredder is also very energy efficient, which means we will spend less on power costs. With these savings, we can afford to pay more for the scrap. The higher price that we pay will allow us to attract scrap from a wider area. (manufacturing)

Cascade General was the original contractor working at the Portland Shipyard in the 1970s. When the Port decided to privatize the shipyard in the early 1990s, we negotiated to buy the site from the Port. At that time, the ship repair market was strong and Cascade General was doing well. Then the recession hit and there was a down cycle in ship repair. A lot of that work went overseas. Most of our private business went away, and the ship repair workload flipped to 75 percent government/military and 25 percent private. Overnight, our firm went from being a \$120 million company down to \$40 million, and employment went from about 1,000 down to 200. Then our partner, Cammell Laird, went bankrupt in 2001, and to avoid foreclosure on the property, we had to sell Dry Dock 4 to the Grand Bahama Shipyard, which put us out of debt. We were close to closing in 2002, but we started to diversify and bought other companies. Now our full-time workforce is on the rise. Our temporary workforce goes up and down with project activity—we're a job shop. We have only 75 employees now but will be increasing to 300 soon. Only 15 acres of our 60-acre site is currently being used for ship repair. (manufacturing)

One of the fields we have diversified into is processing wastewater to remove and sell industrial oils. This operation results in ten stable jobs and will net \$1 million in profit this year. We receive oily water by rail, about 25 cars per month. We treat it here and discharge the leftover water into the sanitary sewer. We have two facilities in California collecting wastewater and sending it north via rail to us. In California the wastewater is required to be treated as hazardous waste, so it is more expensive to process there than other places. To tap the Seattle market, we are also siting a collection facility for oily wastewater in Everett, WA, from where it will be sent by rail down to us for processing. Truck transportation between Seattle and Portland would make the operation too expensive, but rail will help keep us competitive. (manufacturing)

We're also looking into building barges here. The Midwest used to be cheaper than us and we couldn't compete much in the barge-building field, but now there is a tremendous opportunity because of Hurricanes Katrina and Rita. There is an aging inland barge fleet, and there are only two barge builders in the area, both of which are at capacity. Much of this is dependent on rail, because we need to bring in lots of raw materials via rail. (manufacturing)

We have a Connect Oregon proposal to decouple our dry dock from the pier, which will allow us to launch large objects onto barges. For example, Oregon Iron Works in Clackamas won a \$10 million contract to make a caisson for the Puget Sound Naval Shipyard. We will launch it for them from our floating dry dock. This is a niche we can fill. Our facility can handle large, long, or heavy items that need to be put together in one place and transported by barge to another place, things like dam gates and weirs or bridge girders—long steel structures that are too big for truck or rail. There is no other facility in the region where you can fabricate these large things on site and then roll them onto a barge and launch them. Plus, we are ideally suited for this type of work given the cluster of metals fabricators and transportation and manufacturing industries in Portland. (manufacturing)

Right now the sediment trans-load opportunity isn't economically feasible because of our rail access. Our 80# rail is in bad shape, and if we wanted to start moving heavy axle railcars on our track, it would need upgrades. We have a Connect Oregon proposal to upgrade our rail to 120#, extending to Albina Yard. We plan to do the improvements in stages. It's important to bring the track up if we want to grow. (manufacturing)

Portland isn't a hotbed for ship repair work. It never has been and never will be. But at some point in the economy, you have to build something. We have talked to the wind turbine guys and the biodiesel guys. We've talked to a lot of people with business ideas for parts of this site. For every 50 people you talk to with an idea, maybe one has really thought it through and has a decent business plan. You waste a lot of time with half-baked, undercapitalized ideas that will never get off the ground. Our conclusion is that we will have to home-grow it. (manufacturing)

Schnitzer is planning to convert its Columbia Business Park in Vancouver, along the Columbia River, into a retail and condominium complex. The business park is currently the home of the two largest sheet fabricators in this area, Thompson Metal Fabricators and Oregon Iron Works. Thompson and Oregon Iron Works will need to relocate. It would be great for us if they could find a site here. But they may end up relocating to Seattle if there are no industrial sites available in the Portland/Vancouver area. If the material ends up coming out of Seattle, it would really hurt us. (property owner / representative)

The company is owned by a family that lives here. We have historical roots and a lot of sunk costs in Portland from the investments we have already made here. Those are the main reasons we are in Portland today. That said, we get increasing pressure to be competitive in a global economy. So we are constantly evaluating. (manufacturing)

We have a large knowledge base here, with a lot of intellectual property (not patents). We also have unusual manufacturing advantages in Portland. In the future, we will be doing more intellectual functions here. The low tech products will move offshore and the products that are rich in intellectual property—high tech, highly-engineered products—will stay here. (manufacturing)

We are a Portland-based firm. We have ties here and we have made a decision to stay here. (manufacturing)

Other manufacturing

There has been demand for land by distribution-oriented companies for several years. In the last six months, we're also seeing requests for manufacturing sites. Manufacturing is coming back, even heavy manufacturing. We need to have available sites. (industrial broker)

We've grown every year that we've been in business. We are growing at approximately 15 percent per year. Portland is our main manufacturing and distribution location. Our original store is on Grand Avenue

and we have a Seattle store. We are hoping to open a store in the Bay Area soon, and we'd like to eventually have a couple stores in California. I still own the company, so we are not turning into Pottery Barn. (manufacturing)

With the growth we expect, we may see more trucks on the roads, but our product bulk and truck volume is really small. Our operation is all about the value added. We could go from a couple containers a month to about four or five, but that's not a big deal to worry about. I'd be more concerned with the number of our employees. It would be possible that we'll double the number of employees at this site, which could add to problems with congestion and parking. (manufacturing)

Our store is a retail store, but it's destination retail, so people put up with more difficulty to get there and find parking. Our products aren't sold through other retailers. We only sell them on our website, through our catalog, and out of our two stores. As a niche business, we're not as sensitive to some of the industry's competitive pressures, and we're not pinching pennies at every turn. The reasons we make decisions don't apply to all businesses. The lesson is, if you can't compete on these efficiencies, you've got to focus on niche firms like us that are taking advantage of the local creative class and quality of life advantages. (manufacturing)

We've invested a lot in this space and in our manufacturing process. This building should be sufficient to accommodate continued growth for quite some time. Right now it's underutilized. It's hard to imagine outgrowing this building in the next ten years, but you never know. At that point, it is difficult to say if we would eventually expand into a single larger facility. If the company gets that big, distribution becomes an issue, and it would start to make sense to expand in middle America. (manufacturing)

We've had a difficult time keeping suppliers for the glassware, as one after another keeps disappearing. Companies that make the old-fashioned glass are now going out of business, including the French glass company that we used forever. Now we don't know where we will get that glass from. Most of our plating is done at Eastside Plating in Southeast Portland. Ninety-five percent of the parts we use are manufactured specifically for us, and engineered here.

Four years ago, Dean Foods made investments here. They bought Nalleys pickles in Tacoma and brought the pickle business down here. They also expanded the pickle-curing tank yard by 500 tanks. In 2003, we moved into a new 250,000 square foot partially refrigerated distribution center. (manufacturing)

Bay Valley and Treehouse are looking to grow, mainly by acquisitions of other small specialized food companies. Currently our plant is not fully utilized for nine months of the year. If other firms are acquired, we could work on other products during those nine months. (manufacturing)

There is only one old dilapidated flour mill in Portland. I foresee that sometime in the next 10 years, someone will build a flour mill here in Portland, and it would be great if they could build it on our property. Though if I were a flour miller, I would find my own 120 acres, not necessarily on the river. I have already talked to a few millers about this. Over the next 10-20 years, flour millers need to find sites where they can use these mile-long "shuttle" trains because the railroads are trying to force all businesses to use the long trains. (marine terminal / port)

We don't expect any significant capacity and employment growth at the Portland plants. We will be expanding somewhere on the West Coast, but Portland isn't a good area to do it. The last time we increased our capacity at this facility was in 1998. However, we will be investing in facility improvements here to be better and faster. We increase the productivity of our production line every year. Our high tech workers today were using duct tape and hammers 15 years ago. Technology has changed incredibly and

has become a very important part of our production. We haven't laid off any employees in 11 years, and I don't think we'll have a lay-off again in the foreseeable future. (manufacturing)

Energy

An ultra low sulfur diesel fuel is coming into the marketplace and will change the way fuels are managed. We will have to be very careful not to contaminate it, so we will need additional capacity in order to keep the low sulfur fuel separate. We are looking to spend \$600,000 at Willbridge for a system to handle the non-usable product ("trans") when two fuels are mixed going through the pipeline. We will have to upgrade our facilities to handle the new fuel, and change the way we transport the fuel. We will need permits to do those upgrades. (marine terminal / port)

We just spent \$2.8 million replacing our dock lines under Front Avenue. This expenditure did not expand our capacity at all, but was done as a preventive measure, to ensure the integrity of the system. Also, only our company and Chevron have installed fuel vapor recovery systems on our docks. We probably need \$1 million in upgrades to our truck racks, but that is not in our budget. Also, at Willbridge we need to replace the old rail tracks with higher gauge tracks that are bigger and heavier. In all aspects, there is a need for renewal as well as expansion. (marine terminal / port)

Nobody knows at this time what the impact of the new low sulfur diesel fuel will be. The required changes will be major, because of the need to keep the fuel uncontaminated. The fuel companies, like Kinder Morgan, may need to eventually increase their storage capacity. (trucking / warehousing)

The fuel industry overbuilt oil tanks in the Northwest District in the 1950s and 1960s, so there is still overcapacity there now. However, more large-scale energy storage will be needed somewhere in the next 10 years. Alternative fuels like methanol gas could become a big energy source in the near future. It would be nice if Portland could be the distribution hub, although the fuel industry doesn't employ a lot of people. We should work to gain the image of the up and coming "energy capital of the Northwest." One way we can help create that image is to smooth out and speed up our permitting process for any energy companies that need to knock down old tanks and build new ones. (property owner / representative)

Paramount recently bought the Chevron asphalt facility and is moving to corner the market in this region. The company is planning a rail project at the facility, which is the only oil refinery in Oregon. Paramount's competition is in Vancouver, a company that has been criticized for spilling fuel. (property owner / representative)

Biofuels is a growing field. We have received a lot of inquiries about industrial development in that field. (marine terminal / port)

There is also an opportunity for us to move into a particular new petroleum product market that we are exploring. We want to handle it in Linnton, possibly by expanding southward onto the steel properties. The lack of water depth near our docks in Linnton is a constraint. The water depth has pushed at least one company that we know of to look at Vancouver. (marine terminal / port)

Consolidation by petroleum companies has not been a problem for us. We've had relationships with Kinder Morgan, Shell, and several other companies for a long time. We don't know what Valero Energy's plans are. (trucking / warehousing)

Heavy construction

In-water work

Fish passage work has been low for the past four years. Uncertainty about the removal of dams and then the war in Iraq has slowed down that work. There is a big backlog of fish passage work that will come back soon. In the meantime, handling dredge materials is a market opportunity for us. (property owner / representative)

You will need truck, rail and water access to deal with the waste from the dredging. (railroad)

The harbor cleanup could be a market opportunity for us. We are interested in trans-loading sediments from barge to rail. We have an agreement with a landfill operator that they'll de-water the sediment, we'll treat the wastewater, and then the sediment will be shipped via rail or barge to the landfill. (manufacturing)

Any construction on or near the water is good for our company. We did a little work on the CSO project for approximately \$500,000. We are currently building an international dock for Schnitzer Steel, a \$7 million project. (property owner / representative)

We would also like to relocate our dredge facility to the waterfront. (marine terminal / port)

LAND NEEDS AND INVESTMENTS

Ports preparing vacant land for development

We plan to develop about 500 acres of marine and industrial land at the Columbia Gateway site. The NEPA process is just beginning on this project. With site construction expected to begin in 2008, the land will be ready for use in 4 to 5 years. The Shoreline Management Act requires that the first 200 feet from the river be water-dependent and that the next 1,000 feet be water-related. Our deepwater channel ends at the railroad bridge. East of the bridge it is only 30 feet deep. (marine terminal / port)

The Port has also purchased the Rufener farm site, an adjacent property to the north. We will be developing the site from late next year to 2008 as a light industrial area. About 60 acres of the approximately 250-acre site currently has light industrial zoning. We don't yet have specific tenants lined up for the site. We would prefer manufacturing over warehousing there. (marine terminal / port)

We keep and lease out all of our property, unlike Portland which sells some property to companies and uses the profits to finance other projects. However, we foresee developing more aggressive growth plans in the future, and selling some property may make more sense to help finance those plans. (marine terminal / port)

A 113-acre vacant parcel is available near T-6. We would like the user to support the T-6 container business but it doesn't have to. We relaxed the standards recently, so it could be a manufacturer. The remaining vacant parcels are small (2-4 acres). Swan Island has the North Channel site between the shipyard and Freightliner, but we're in final negotiations with a tenant for that property so it's not available. Many sites have extra land that may look available, but it's not. (marine terminal / port)

We will be renegotiating our lease with the Port of Portland during 2006. That lease will expire in 2014. We need every inch of land we have now and would like to acquire more. We've discussed leasing the land south of us currently leased by STC Cable, but for our use the price would be too steep. We could

potentially put a flour mill on that land, connected to our other facilities. We also need more trackage internally. (marine terminal / port)

There are still opportunities to build in Rivergate. I refer firms there because it is easier to serve an industrial park than to send a local train to one individual site. (railroad)

Using brownfields and constrained sites

Our biggest opportunity for harbor area growth is from new development on brownfield sites, such as the former Linnton Plywood site in Linnton. This site has good land with water and rail access—it just needs to be cleaned up. (railroad)

Oregon Transfer just built a 400,000 square foot facility on a brownfield site close to I-5. And they're prudent. They wouldn't do it if it didn't work. That is a significant investment for a local business – a positive sign. (industrial broker)

We are relocating from sites in Oregon City and Vancouver to Portland Harbor. Finding a place that met our needs took several years. We purchased 7.5 acres directly under the St. John's Bridge. The new facility has a total of 40,000 square feet, of which 11,000 square feet are used as office space. (property owner / representative)

We were formerly located near St. Johns Towing, but we moved to our current site in April 2000, because we needed to be closer to the terminals, as well as I-5 and I-405. Our site was a design challenge. It is on a slope and it was very expensive to move the dirt and put in retaining walls. There are also underground springs, and we had to make sure they could continue to flow without obstructions. We purchased the property ahead of time and sat on it for a few years before building. We have room in the building for expansion, but we don't have enough room to park our trucks on the site. (trucking / warehousing)

If you don't plan to develop the vacant floodplain on your site, would you consider allowing it to be used in a mitigation bank? To meet balanced cut and fill requirements, other industries that wanted to fill floodplain could pay you for excavation at the floodplain on your site. We would certainly consider any economic proposal that is made to us. (property owner / representative)

We've had interest from top industrial developers, but right now we have no economic incentive to sell the site because of the cleanup and balanced-cut-and-fill issues and other development constraints. Biofuels or other fuels may be feasible at the site, although the tank farm would need to be rebuilt. We've also had interest by recyclers and numerous other firms, including some interested in using the site for other types of storage, such as cars, barges, or containers. (property owner / representative)

The eastern 20 acres of the property has a letter of "No Further Action Required" from the Oregon Department of Environmental Quality, and we are working to develop a cleanup plan for the balance of the property. Our hands are tied in terms of moving forward with redevelopment because short-term leases are challenging due to the cost of tenant improvements, and the tank farm no longer has permits to operate. Demolition is slated for 2007, but we may postpone it. (property owner / representative)

Our intention is to keep the property as one unit rather than divide it at the current time, but the company wants to retain the flexibility to subdivide and sell in the future. Currently, we don't want to jeopardize our ability to redevelop the rest of the property by doing something sooner on part of it. We've heard that the City may not allow subdivision of 50-acre parcels, but this site is already made up of several legal parcels. (property owner / representative)

Recently, the firms that have been relocating are also reinvesting – rehabilitating facilities or making investments in utilities. (property owner / representative)

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Using land more efficiently

We are working to use our land more efficiently—doing more business on less land. We have a very low inventory. We have reduced the dwell time of vehicles, so that the average vehicle is now here for only 2.5 days. All cars here are already sold to dealers. Cars are assigned when they arrive, and then they go. We turn over our inventory from production to delivery in 30 days. (marine terminal / port)

Right now we are reconfiguring this building to have more processing capacity. At 806,000 square feet, the building footprint is now maxed out on the site. We need to increase our total output from the current rate of 200,000 units to 500,000 units. Our streamlining project is costing us about \$40 million. This is a huge investment in terms of equipment and systems, and it is also a big risk. We are designing and building at the same time, and we should be live for January 2007. I could never conscientiously say that we want to continue expanding here, since most of our market is elsewhere, but we want to streamline our operation in Portland to be more efficient. We want to find a balance of capital vs. labor costs. We are a highly automated industry, where only about 70 percent of every item shipped is individually touched and wrapped. (trucking / warehousing)

I think there are opportunities for more jobs in these districts, because—depending on the type of industry—you can put a lot of people in buildings. Distribution is generally low job density—one or two employees per 10,000 square feet—but we are doing some value-added business which is much more labor intensive than traditional distribution. Multi-shift operations also offer opportunities for job growth. Our Swan Island facility is a 24-7 operation. Rivergate shuts down on weekends but has 3 shifts per day. (trucking / warehousing)

Our warehouse on Swan Island has room to expand vertically with higher racks. There is no more buildable space, but we have a 40-foot ceiling. We would need special equipment and we would have to add racking, but it would be cheaper than acquiring more land. (trucking / warehousing)

We currently have a 60 million gallon capacity for transportation fuels (gasoline, diesel, and aviation fuels). We foresee continuing expansion to handle a wider range of products. When we bought this operation, we purchased old tanks from Shell. For a while we have been investing in conversion of old, unused tanks to bring them back into use. Converting a tank may cost about \$1 million for a 50,000 barrel tank, while building a new tank costs \$2.5 to \$3 million. Now we have no more tanks that are convertible. And we have almost no room left to expand—just a small area along the riverfront on the other side of Front Avenue. To expand we would need to acquire more land or do as Chevron did a few years ago, replacing some of their tanks with taller ones. (marine terminal / port)

We may have to build an employee parking structure because of land constraints. Would a shared parking structure be feasible, given that Freightliner is also considering a structure on Swan Island? We haven't thought about it. We wouldn't necessarily be opposed to sharing a structure, but it would have to meet our needs. We would have to work out the issues of who owns it, who polices it, etc. The structure would have to be enormous in size. We are looking at two decks with 1,000 spots each. A four-story shared garage may be hard to build on fill. (trucking / warehousing)

We've looked into a parking structure. It wouldn't reduce flow much, but it would be very expensive to build, \$40-50 million. The land here is on fill, so we would have to go deep with piles to put a lot of weight on it. It may make sense sometime in the future, given that we are landlocked. In Newark, they did a serious study and found that it still makes sense to go find land. It hasn't crossed that line yet in terms of land prices where it makes sense to deck. Maybe in Long Beach it might make sense. (marine terminal / port)

The bulk facilities on the harbor are hemmed in and can't expand, so they are making investments to be more efficient with the land they already have. (industrial broker)

We have a co-tenancy agreement with Lampros Steel for warehouse space near Time Oil Road. Columbia Structural Tubing bought the property. The site also has some additional land, not just the warehouse, so there is landbanking going on too. (manufacturing)

Multi-story industrial facilities aren't feasible in the U.S. because trucks are 50 feet long. It is only possible in Japan, where land is \$100/square foot and trucks are smaller. (industrial developer)

Latent flex space demand

The classic definition of "industrial" might need to be updated to include more office space, because the designers of products are here, but the products might really be manufactured in China. Flex space is the answer. Flex space has better parking ratios and commands higher rental/lease fees – \$1.00/sf for flex space vs. \$.35/sf for warehouse space. Flex space is highly desired in close-in locations. (industrial developer)

To construct an office park with flex space would take ideally 20 acres, but 5 acres would work. We would put in double the parking for flex space versus heavy industrial. Another factor to think about is the surrounding environment. You don't want to build next to a dirty, noisy or stinky industrial area. (industrial developer)

There is demand for speculative development, but it tends to be a more flexible or institutional product. (industrial developer)

While many firms find that the older vacant buildings in the Northwest District don't fit their needs, others make it work. A rebar company leases two thirds of a structure in Northwest and the other third is leased to an artist who does large metal sculptures. But the building owners took four years to be willing to allow that creative solution. A few years ago, it was difficult to get landlords to invest in these types of solutions, but that is changing now. (property owner / representative)

Two large warehouses in Lower Albina are proposed to be converted into smaller flex spaces. Some firms aren't looking at the aspects of the space available, but are looking at the character and locational advantages, like the closeness to light rail transit and downtown. (property owner / representative)

Portland is a smaller tenant market. There are lots of companies that do things like food delivery or paper distributing. For example, Link Logistics is a company that does night shipping for Starbucks using small vans. These smaller, service-oriented companies need highly functional, small to medium sized buildings (10,000-20,000 square feet) with some storage. (industrial developer)

For example, a particular document-shredding operation wants to service a wider area. The harbor would be a perfect location for them, but there are few buildings that meet their needs. They have serious problems getting to the Gresham area. Locating their business in Northwest Portland or Swan Island is more central and gives easier access to Hillsboro and the western side of the region. Locations east of the

railroad in Rivergate put a business too far east, and there are mostly distribution firms out there. (industrial developer)

There is a gallery owner in NW Portland that wanted to buy a building to warehouse their product and support their shipping needs for products ordered off the internet. This was a case of a retailer needing an industrial building. The closest location they found was in Milwaukie, which was too far. (industrial developer)

The individual needs of firms are getting more unique. For example, one firm needed 36 feet of clear height and lots of power. There was only one building in the whole region that worked for them, because nearly all the buildings were only 27 feet high, which was the old clear height. They're looking to shear off the top of a building to increase its height so they can fit their equipment in. (property owner / representative)

Companies are getting more and more specialized in terms of their building needs. It used to be that you could build a big building and divide it up. Not anymore. There is a significant trend toward companies wanting their own site. A few years ago, everyone wanted to lease, now everyone wants to buy. (property owner / representative)

Headquarters office space needs

Our current facility is close to capacity, especially the offices. We own about 25 acres in Portland, not all of it contiguous, near Yeon from 24th-26th and Vaughn to Nicolai. We also lease 2 or 3 warehouses to store patterns for tooling. Where will we locate our support services—including engineering support, finance, legal, human resources—in the future when we need to expand? An early vision was to add a third floor to this building, but the settling of the building made the construction unfeasible. We are now leasing office space off of 26th Street and recently moved our HR staff there. (manufacturing)

As the company grows, our office needs will grow. Portland is a logical place to add administrative support because it has historically been our headquarters. Most of our expansion around the world has been organic growth and not acquisitions. (manufacturing)

We may look to consolidate our support services, because the headquarters doesn't necessarily need to be near our manufacturing facilities. We could build something new. However, having our engineers near the manufacturing has important synergistic effects. Our engineers do tests, experiments and field trials with products at the shop. If our engineering staff wasn't near the shop, we could lose quite a bit. (manufacturing)

TRANSPORTATION DEMAND

Freeway access

Everyone is freeway access oriented. (industrial broker)

Harbor access

Does the supply of multi-modal sites on the harbor exceed demand? That's hard to answer, because there are not very many clients that need multimodal access. We'd like to see more multimodal users, but they're not out there. (industrial broker)

The dock is a good asset, since it would be hard to get a new one approved, and many potential new owners may need a dock. While docks are expensive to maintain for future use, our dock is in excellent shape. (property owner / representative)

We were surprised when Advanced American Diving Service wanted the brownfield site they are moving to [taking advantage of river access]. (industrial broker)

We export pickles via Terminal 6 to Korea, Canada, etc. We also receive supplies from overseas. (manufacturing)

There are always dock issues since dock space is so limited along the river. Leasing dock space for vessel storage is a source of extra income for some land owners. (industrial association)

Rail access

Lately, requests for rail access have increased dramatically. Desire for rail access is tied to gas prices. There aren't that many that need water access—we have seen maybe one request a year—but we have had an economic downturn. (property owner / representative)

We can't think of many firms in this area that have required rail transportation – only lumber and paper companies. Maybe one firm a year has required water transportation. These are owner-user situations. (industrial developer)

Heavy manufacturers often don't need multimodal access. There are many sites that the railroads won't serve, and most clients just give up on rail. Only a few industries need water access, such as the bulk terminals and lumber reload. (industrial broker)

WORKFORCE DEMAND

Hiring needs

Asking about growth is an appropriate question, but hiring in the harbor area is more about the need to replace an aging workforce than business growth. The workforce at many companies is shrinking as output grows, due to productivity gains from new machinery and processes that make companies stronger. In a competitive market, modest growth is often cancelled out by gains in productivity. So the bigger issue is aging workforce. (human resources manager / representative)

We had 1,600 employees in 2000. By the end of 2005, we produced more product with less than 1,000 employees. (human resources manager / representative)

We have been around 20 years, and our senior employees are starting to retire at a rate of 3 to 4 percent each year. It has been difficult to replace the aging workforce with new workers. We're also anticipating substantial growth. (human resources manager / representative)

It depends on what type of industry it is. Some industries need highly educated, creative types while others need truck drivers and dock loaders. Some are growing faster than others. We need to talk to the range of firms about their specific needs. (human resources manager / representative)

Work Systems, Inc. has launched a comprehensive regional workforce audit. We're looking at current and projected labor pools and the training pipeline. We are focused on finding answers to the first two questions you've asked. (human resources manager / representative)

These are mature conversations on workforce that many of us around the table have been discussing for a while. We're delighted to see the City and Port engaged in these conversations. (human resources manager / representative)

Expanding temporary workforce

Many firms are using temporary staffing services now during their upswings. (human resources manager / representative)

Since September we've hired 100 employees, all temporary positions. Even temporary engineers and supervisors. But mostly production workers. In the four months since then we've had about 45 percent attrition among those workers, many of them leaving because they want permanent work. We hired to hedge against another layoff, but also for other reasons. Even with the high rate of unemployment, we're having trouble getting enough workers. Many people want to work for us and then find out they don't like the work. (human resources manager / representative)

We supply all of our new employees from a temp pool. They work their way up through the ranks, and about 10 to 15 percent move into permanent jobs. (human resources manager / representative)

Temporary agencies today are competing for workers by providing them with benefits. (human resources manager / representative)

Temporary workers are often better prepared to make long-term commitments, because they've had a chance to try other jobs and make sure this is a good fit before choosing. Many job seekers don't know what they want to do. (human resources manager / representative)

We've seen an increase in the last 3 to 5 years in staffing programs that place engineers in temporary positions. Lots of times they don't want to be permanent. They may like the freedom to move around, work with several firms, or work according to their personal schedule. Having temporary engineers is a big new thing. (human resources manager / representative)

The way that companies use temporary employees has evolved. Twenty five years ago if workers survived training, they would be hired. Now, we retain a certain percentage of our workforce as long-term flex staff (LTFS). They are eligible immediately for benefits through their temp agencies, so they have less urgency to convert to permanent work. It's also partly a commitment to the long-term workforce. (human resources manager / representative)

Reliance on immigrant labor pool

About 35 to 40 percent of our workforce speaks English as a second language, mostly Asian. It has been that way since day 1. Certain types of industry tend to attract certain ethnicities. A lot of workers encourage their friends to apply at the same firm. But you can also find people speaking 20 different languages on one shop floor. (human resources manager / representative)

The workforce in our shop is very diverse. A large portion of the employees speak English as a second language, or not at all. We teach English classes and are heavily involved in Workforce 21 and other blue collar labor force training. (manufacturing)

We usually use the International Refugee Center, which recruits and trains refugees and immigrants. We have a long history of hiring people with limited English-speaking skills. Much of our original workforce was Vietnamese, Cambodian and Laotian, and now we have some second generation employees. These employees don't necessarily have low skills but they often have limited English. Our jobs don't require much communication. We get a very diverse group of people, from highly educated Kurd engineers to people out of villages in the Sudan. At least fourteen languages from all over the world are spoken here. We used to teach English as a Second Language in-house, but now we contract it out. (manufacturing)

Is there any local or state program that works to reduce barriers to hiring foreign workers? No. Immigration and work visas are federally regulated. (human resources manager / representative)

Increasing demand for special skills and education

We want to hire skilled, higher educated people because we're reducing costs by decreasing management, and we're asking people to do more in their jobs. Even dock workers. (human resources manager / representative)

We are participating in Manufacturing 21, which is trying to site a new workforce training center. We would like it to be on Swan Island, but it will probably be in Clackamas near Oregon Iron Works. (manufacturing)

We have our own driving school because the skills we need are so specific. Truck driving changed in late 80's. Like many companies, we require our drivers to use computers in their trucks to manage customer information. (human resources manager / representative)

Drivers need to have experience to be hired here. We don't hire right out of driving schools because the drivers need experience. The job requires more than just driving – they need to use technology, too. Drivers need to not only have a commercial driving license, but be technologically proficient and trained in hazmat requirements. We've started doing in-house training on hazmat. Homeland Security requirements also affect our hiring abilities. A criminal background check is required on all employees, and there is often a waiting period to get a new hire cleared. (trucking / warehousing)

The availability of trained drivers is critical to our business. (trucking / warehousing)

QUESTION 2: CHALLENGES TO EXPANSION AND DEVELOPMENT

What harbor area challenges or barriers are significant enough to prevent reinvestment or expansion or to consider relocation? Please share specific experiences as well as perceptions of the harbor area.

GENERAL

Portland is a high cost location

The bigger challenge for us is maintaining a successful business model. My least expensive employee costs me \$25,000 per year. I compete with China, where employees cost \$1,000 per year. People wonder why they can buy products like ours at Home Depot for a quarter of the cost. We don't want to go off to China – we'd rather not be in business than do that. If we're not in business in ten years, it will be due to those issues, not because of location. This has been a great location for us. (manufacturing)

Other places, such as Mississippi, have much lower costs. We have moved production between plants based on competitiveness. Portland is a nice place, but being here is based on costs and advantages. The cost of labor, electricity, and natural gas are important. (manufacturing)

As we become more international, capital-efficient growth is more and more important to us. Building on a greenfield in the United States costs 25 percent more than it does in China, so building on a greenfield here just isn't capital-efficient. (manufacturing)

Big industrial users can get space 30 percent cheaper in other parts of the country. Quality of life in Portland evens out the playing field some, but Portland needs to be better and faster. (industrial developer)

The cost of property and the cost of rehabilitation and improvements on property are too high. Lease rates are already high and then improvements cost so much that it gets too expensive. For example, the new stuff in Rivergate is too expensive, but the old stuff is too expensive for what it is, especially when you factor in the cost of rehabilitation. (property owner / representative)

Our raw material unit costs are higher here than anywhere else in the country, because all of the raw materials need to be brought in. (manufacturing)

Small regional market

Our company is currently migrating toward a geographic market focus, putting facilities where the demand for the end product is. Traditionally, each plant in the company made a specific and different product and made it for the world market. A disadvantage of our facility here in the Northwest is that it's not near the end markets for our products. (manufacturing)

Portland is underutilized as a seaport. We have the transportation infrastructure, but it seems that population and market size are limiting. We should take some tips from Coors and Wendy's about how to thrive as the #3 player in the marketplace. That's our challenge. We need to refine and expand our market niche. Are we going to be the speediest or the most efficient? We need to pick an advantage and exploit it. (trucking / warehousing)

There's business here and there are economic opportunities – but it's not the growth market. There's little unique here. Our customer base isn't here. LA/Long Beach is there because of the population base. Portland relies on links to Chicago. All cities talk about their quality of life. You shouldn't necessarily push people to look at alternatives, because you might not like what they decide. They'll never look back. (manufacturing)

There's a tremendous imbalance of West Coast freight going north vs. south, resulting in empty backhauls. It's much cheaper to ship south than north and it is very competitive to get those hauls. (trucking / warehousing)

The bigger problem is the lack of backhaul opportunities. They run empty coming north, so we aren't competitive. We could go deeper into California if they had something to carry north. (manufacturing)

TRANSPORTATION CONSTRAINTS Road congestion and deficiencies

Congestion impacts

Congestion is the top infrastructure issue and constraint. Mobility is important to all businesses. Some metals companies are of the mindset that they would move if it were more cost-effective. (property owner / representative)

Congestion is a big cost for us. The longer it takes per run, the fewer runs we can make. The average load has a return of \$200, so our volume of loads is high. The purchase price of a new truck is about \$250,000. The capital invested in our business is significant. It is difficult to get the customer to understand how congestion impacts our costs, so we have to factor congestion into our rates. We start our drivers at 4 or 5 a.m. every morning, with staggered shifts so that our trucks are running 24/7. Most of our deliveries are within 30 miles of our facility. We start them early to avoid the congestion. In other urban areas, where congestion is worse, drivers must start even earlier. In Seattle, our drivers start at 1 a.m. with a similar schedule of staggered shifts. (trucking / warehousing)

Congestion affects us dramatically. We start delivering at 3-4 am to avoid peak hour congestion. Unfortunately the receiving community may not be available 24 hours a day. They expect deliveries during the peak, which we would like to avoid. So we need to find a solution to that mismatch. (trucking / warehousing)

Anything that reduces and constricts the movement of products coming in impacts us. We have to be able to move our trucks. Trucking problems create supply shortages. (trucking / warehousing)

Accessibility and congestion are critical issues to us, as a business and from a workforce standpoint. So the transportation infrastructure – roads, sidewalks, etc. – is important. (human resources manager / representative)

Transportation infrastructure and congestion is a big deal. If we don't have to worry about congestion, we can put more dollars toward training and other things. (human resources manager / representative)

I-5 and other freeway congestion

We have the same problems as everyone else in terms of congested roads: I-5, I-84, I-205, general central freeway loop delay. Thank God we don't go downtown much and we don't have to use I-405. (trucking / warehousing)

Road congestion is a significant issue, particularly the I-5 bottleneck. (marine terminal / port)

There is only one I-5 bridge into Portland, which results in congestion. (marine terminal / port)

The I-5 bridge is a bottleneck. We incur significant costs from delay there. We truck a lot of freight to Washington. (trucking / warehousing)

Heading east on the Banfield from I-5 is also a big bottleneck. There is a jet that leaves the Portland airport at 6:55 pm that we have to make from our facility in Tualatin. We leave at 5:20 pm and sometimes still miss the jet. (trucking / warehousing)

The traffic sucks, particularly on I-5. We lost an opportunity for tenants to come here—they backed out because of I-5. When your trucks need to go back and forth over the bridge, there's too much congestion. Thirty percent of our workforce lives in Clark County, and the commutes are almost an hour each way. There should be a water taxi over to Vancouver. We've thought about doing that. It would be faster than I-5 during rush hour. (manufacturing)

Highway 26 needs fixing. (manufacturing)

Truck conflicts through St. Johns

I'm dependent on the St. Johns Bridge, and it's a bottleneck. It would be nice to have another bridge across the Willamette so that we could draw on the workforce across the river. Steinfelds used to have a sauerkraut plant in Scappoose. It was the only one west of the Rockies. Since it shut down we've lost a lot of workforce. I wonder if people just don't want to do the commute—to drive the 45 minutes. (manufacturing)

There are community issues with freight movement through St. Johns. Truck access out of here to the south and west is difficult. Ideally we wouldn't have to go east for 30 minutes to go south via I-5. It would be nice to hook right into Highway 30 somehow. We don't want to go through the community, but there aren't other good routes. We send out about 50 trucks per day. About twenty of those trucks are headed to the nine Portland Metro Toyota dealers. We just started a truck car-carrying business at this facility, Toyota Transports, which delivers to dealerships in the South and the West. We also work with another trucking company that hauls for Honda and Hyundai as well. (marine terminal / port)

We're on a peninsula here and the only way in and out is the St. Johns Bridge. There's a huge conflict between trucks and bikes and residents in that area. They put in all this multifamily housing at the base of the bridge, and now they want to get trucks off the bridge! The ink is not even dry on the St. Johns Truck Strategy and they already want to change it. Truckers have come to terms with changes in the St. Johns truck strategy. The City is infilling more housing at the edges. There needs to be a better way to broadcast the story to policy makers. There is a group advocating for a study to put a bridge across at T-4. We'd reinforce that because there's a huge connection between the two sides of the river. Also, commuters from Vancouver to Washington County are trying to find routes. (manufacturing)

The big hang up for truck movement in the harbor is the St. John's Bridge. Traffic backs up there and it's very dangerous. (industrial broker)

Street deficiencies in the Northwest Industrial District

Traffic is a big deal, especially truck traffic in and out of the industrial area. Getting in and out of Plant 3, where employees are trying to go South on Yeon, is a problem, so shift changes are difficult. (manufacturing)

Condominiums being built on NW Front Avenue (Naito Parkway) will cause a traffic bottleneck. The buildings are planned to be 8 stories high, but there is talk of increasing the height to 22 stories. The resulting number of residents and vehicles will impact the industrial district in terms of access for employees and transporting products. Front Avenue currently functions as a freight route, whether it is designated that way or not. (industrial association)

The freight community is worried they'll lose Front Avenue as a North/South corridor and that they'll lose access to I-405 North or South. That type of thing happened with the Interstate Light Rail, so the freight community is scared it will happen elsewhere. For logistics, having a variety of options is important. (property owner / representative)

We need accessibility in this area to get our product in and out, so freight and specifically truck mobility is key for us. We don't load directly from the harbor, but we're linked to the terminals that rely on pipeline and tanker loading. Getting our trucks around is an ongoing problem for us. Getting to and from the Willbridge loading racks is difficult, but so is going just about everywhere else. We can't send our trucks down Balboa – it isn't allowed. (trucking / warehousing)

When we get busy, traffic backs up at the 61st Avenue crossing in front of the truck rack onto Front Avenue. Widening of the street may be needed. This is a dangerous spot because of some motorists that come barreling through along Front Avenue. (marine terminal / port)

We need to recognize Naito Parkway as a freight route. (industrial association)

We work around the road system. It could be better, but it's acceptable for now. Except that the entrance road to our Linnton facility needs a traffic signal. Waiting to get in and out of the facility hinders our productivity. St. Helens Road is an accident waiting to happen, especially on a sunny, summer day. We heard it would take either \$300,000 or a few fatalities before a traffic signal would be installed. (manufacturing)

Traffic on Nicolai is manageable. There's a lot of blue collar commuter traffic in the afternoons. (manufacturing)

The maintenance of streets in the area is good. However, street connectivity is an ongoing problem, especially in Northwest. (industrial developer)

The general road conditions on Front Avenue and in Guild's Lake are pretty bad, with many potholes. (property owner / representative)

We like being on the frontage road (off of NW Yeon) - it's convenient. (manufacturing)

Street deficiencies in the Swan Island Industrial District

Our main concern is traffic flow on and off Swan Island. There is only one way on and off, and there are a lot of people going up and down the hill. Traveling uphill the traffic congestion is an inconvenience and a cost. Going downhill, it's also a safety issue. I've seen traffic backed up onto I-5 at peak times (7:30am).

The introduction of the MAX line has caused significant traffic delays at the Going/Interstate intersection. When trying to get onto I-5 or turn left from Going onto Interstate to go north, you can be stuck there 2 or 3 cycles, sometimes more. We are a big part of the congestion. Between UPS and Freightliner we have a lot of folks coming and going. If we have a shift change at the same time it's total gridlock. We try to coordinate so that doesn't happen. It's also sometimes tough to make turns due to the traffic flow on and off the island. Is the Going Street Bridge wide enough? A fourth lane onto Greeley may help, but I haven't seen an issue there. (trucking / warehousing)

There is only one way on and off Swan Island. It gets choked up every day. (trucking / warehousing)

It's hard to get on and off Swan Island during shift changes, and that impacts when we ask our workers to be there. If it takes them an extra 45 minutes to get to work, it's a morale issue, and that's when they may go take a lower paying job that is easier to get to. (human resources manager / representative)

Yes, there are advantages to being located in the Harbor, but traffic congestion and the ability to move trucks is a big hindrance to reinvestment, especially around the Going/Greeley interchange. (property owner / representative)

Businesses on Swan Island are concerned about the Going Street overpass. PDOT is targeting it as an important seismic retrofit project. The railroad wants a clear span, which could be very expensive. The businesses are trying to figure out what to do. (industrial association)

Secondary access to Swan Island is a very important issue for businesses. (industrial association)

This little road carries a lot of traffic. When Freightliner comes off shift, it can be like the Indy 500 at the end of Basin Avenue. Drivers at times have come out three wide on this little two-lane road. It's a real safety problem--people have died! The police won't even come down here at 7am or 3pm. (trucking / warehousing)

Street deficiencies in Rivergate

In Rivergate, there aren't outstanding infrastructure issues—the Port of Portland takes care of it. The Columbia Corridor is in pretty good shape, too. (industrial broker)

Time Oil Road is a private road, and we and the adjacent property owners have to maintain it through an agreement. Although the maintenance and easement agreements are clear, it would be great if it could be a public street, because others use it. We wanted to dedicate it to the City, but the City has been unwilling to take it because it doesn't meet the City's standards. The City doesn't want to maintain it even though the road is in good shape. It was recently improved as the detour route for the Lombard overcrossing project. (property owner / representative)

Road design deficiencies for trucks mobility

No more tunnels! All hazmat trucks are restricted from going through tunnels, including the Sunset tunnel. If any new tunnels are built, it would be a huge problem for us, especially any tunnels on I-5. (trucking / warehousing)

We don't have any employees that bike to work. Bike lanes reduce truck mobility. Bike paths are a safety and security concern. There are trails in Forest Park for bike riders. (trucking / warehousing)

We don't have many problems with turning radii because we use short trailers which track well. Folks who use long trailers have more problems with turning radii. Trouble spots include Lombard turning south onto Interstate and Interstate onto I-5. (trucking / warehousing)

I am concerned about the loss of arterials for freight—Naito Parkway, Fessenden, Lombard—the lanes are being restricted. The freeways are congested because the arterials are being necked down and closed to trucks. (manufacturing)

Our major markets were along the I-5 corridor, but that is changing because of hypermarkets, such as Albertsons and Safeway. Now we are in neighborhoods a lot more. Consequently, mobility of our trucks through neighborhood streets has become very important. We use trucks with trailers to improve the turning radius to get through the streets. The public may not want to see a lot of trucks on the road and have trucks affecting their traffic flow, but they want our product to be available. Keeping roads clear, paved, and wide enough for our trucks to get in and out is what we need. (trucking / warehousing)

Truck weight restrictions aren't too much of a problem here. (manufacturing)

Freight-only lanes are worth looking at, but is it realistic to get capacity added just for trucks? I don't see it, although freight wouldn't be opposed. But we would want to ensure that they don't go the next step to saying, "Now you can't go anywhere else." (manufacturing)

At-grade rail crossings cause traffic backups

I hear a lot about Front Avenue. The railroad crossings cause traffic back-ups. I waited half an hour last week. (property owner / representative)

Something should be done about the at-grade rail crossings at Thurman and under the Steel Bridge. (manufacturing)

At-grade rail crossings on Columbia are a problem. Columbia Boulevard is adequate now but will be a problem with more growth in the future. (marine terminal / port)

Also, we have difficulties with at-grade rail delays. At our Rivergate facility we can get stopped two times by the same train. (trucking / warehousing)

When the train goes through and we get stuck, we have to go around on Time Oil Road. (manufacturing)

We use rail to some extent. We don't have a rail siding on our property, but we do business with the railroad through the Port. We have problems with the rail spur near our property. They use it at 6 am when people are coming to work, which causes delays. (manufacturing)

We use both BNSF and Portland & Western and have some congestion at their at-grade street crossings. (marine terminal / port)

Access to and from our facilities within T-4 is a problem. This is a Port issue, not a City issue. We're blocked in here all the time because of potash and soda ash trains. (marine terminal / port)

Railroad capacity and service

Regional rail system congestion

Union Pacific sometimes gets totally paralyzed and can't move. A great portion of the railroad tracks through the Gorge and the region are only single tracks, which really slows things down. (marine terminal / port)

UP is always on the ragged edge of having a service meltdown—from consolidation of old lines, decisions made elsewhere, and operating at capacity. They've had three meltdowns in the past six or seven years. What happens is gridlock, and trains don't move. There aren't enough locomotives locally to fix the gridlock, so they need to pull them from other areas of the country. UP congestion in Houston hurt us for 6 months last year and cost us millions of dollars – it's the network effect, and everyone is affected.

Trackage in the region was built by predecessors of UP and BNSF. It is now operated for their use except where they allow short lines access to it. The geography of how things are laid out—chopped up—in Portland makes rail movement in the region very inefficient and should make transportation investments a priority. (railroad)

Class 1 railroads are at capacity, rationing services

We are turning down business everyday. We are landlocked and have no room to expand. We can only grow now through operating efficiencies. So, we ask new or expanding customers if they have room at their facility to add capacity and expand rail infrastructure. We want to be able to drop their train on their site because Albina Yard does not have room to hold more cars. Albina Yard is designed to move cars through and is already operating beyond full capacity. Burlington Northern Santa Fe is at capacity too. (railroad)

For new customers, the rail infrastructure requirements are tougher than five years ago. We are looking at existing customers to see which can add capacity. We have similar concerns as Union Pacific, but it's not quite as bad. We just have to make sure we have capacity in the last mile when we look at new customers. Example: Gunderson uses the track across the street from them in Lake Yard to store their cars, but we would like to use that track ourselves. (railroad)

Last month Union Pacific announced they were doubling their rates. (manufacturing)

The shortlines have capabilities, but they are hamstrung by their leases. Pacific & Western railroad abandoned their Rex Hill line, so now the McMinnville trains have to go all the way down to Albany to get here. (manufacturing)

Increasing site needs for rail access

Unfortunately, it takes a lot of land for a siding—about 7,500-8,000 feet of clear track on a site. Some sidings are now 9,000 feet long. Grain and soda ash trains are now at least 100 cars long. Canpotex trains are 125 cars. (railroad)

Building loop tracks for mile-long unit trains is great. The less switching we have to do, the better. But we need a 120-acre site to do a loop track. We do not want to exceed 7.5 degrees curvature. (railroad)

If we could get industry away from our main lines to some extent, so we could get trains off and service them all day long, that would be great. We service Columbia Business Park (Schnitzer property in Vancouver), though it's a private switching operation. It is a very challenging place for us to service, since they're right off our main line. (railroad)

Rail availability is limiting marine expansion

Our biggest business problem is inbound rail infrastructure. You could create new business for us overnight, and increase our capacity, if sound investments were made in rail infrastructure. We are working with the Port of Portland and the railroad to improve these problems, but running a railroad is a tough business. Getting product shipped to our facility is a bigger problem than the demand for the grain. If we can't get the product here, it doesn't matter what the Chinese importers do. (marine terminal / port)

It's important for the railroads to deliver the right cars from the various shipping areas at the right time. We handle many different types of wheat. Soft wheat in the Pacific Northwest is different than the hard wheat from Montana and North Dakota. Due to infrastructure issues, the trains are not as flexible as the ships, and the trains sometimes determine our vessel rotation. The ships wait in Astoria and we call them in when we are ready. (marine terminal / port)

Union Pacific provides our rail service. We arm-twisted Union Pacific into allowing us to also use Burlington Northern, so we can now use both, but Burlington Northern's service is limited. Seventy percent of the product goes out by rail from this facility. When we first moved into this building in 2004, we were shipping 50 rail cars a day. In April, we expect to be shipping 80 loaded rail cars per day for the Midwest. (marine terminal / port)

Rail is a huge issue. Now that the channel will be deepened, road and rail are significant concerns on both sides of the river. As freight increases, our rail traffic from Tacoma will increase, and rail connections are more and more important. Steven's Pass, the primary double stacking line to Tacoma, is expected to reach capacity in 2011-12. River traffic here will increase because of that. That's why we're looking for better ways to get rail into the Port of Vancouver. (marine terminal / port)

Declining rail service to heavy industry

We have rail service, but it is poor. In the past and elsewhere, we've used rail, but it's untenable here and now. Any notion that you'll be able to easily incent cargo to move from one mode to another is bogus. We can't schedule production because the rail doesn't come on a regular basis. Trains can come in 3 days or 30 days. (manufacturing)

The Class I railroads don't want to be interrupted—they just want to hook and go. Plus, industrial unit trains used to be 50-100 cars; now they're looking at 200-300 cars. That's their business model. We need a different model for rail in this region. (manufacturing)

The delay of supplies coming in by rail can shut down our plant. It definitely affects our productivity. Our alternative is to use trucks, but it takes four trucks to equal one rail car. There is a big cost advantage to using rail. Sometimes the rail service is good, and sometimes it's worse. This has been going on for a long time. No one has any sway with the railroads. They're the only game in town. Our few rail cars are not a priority for them, and they don't really care about our business. I've seen the situation progressively decline in my time here. It's not easy to do the business they do, though. (manufacturing)

Rail access to our site is good, but we have problems with the railroads. It does not take long to get the rail cargo within twenty miles of here, but then the rail cars sit in Vancouver or Willbridge for a week due to back-ups, and we get charged for the cars just sitting there. When the rail cars are stalled, the only way to get our product here sooner is to get trucks up here from California to pick it up. Recently, we did forty truckloads in a week because the rail was held up. We average about three rail car switches a day. Mostly we work with Burlington Northern, but we also work with Union Pacific. (manufacturing)

Our biggest transportation issue is rail car availability. This is not an issue every month, but often. Rail access is in place, though we are putting in new rail lines, but it is service that is the issue. There was a rail

employee shortage a few years ago, and we spent a lot of time managing the rail service to make sure we could get it and when. Rail car availability continues to be a problem. (manufacturing)

It's really hard to work with the railroad and cobble rail service together. The Port spots cars for us twice a week and we go get them. We bought a machine to pull them into our yard. Class I operators – unless they're pulling 50-car trains to the middle of the country – they don't want anything to do with you. We're lucky we got them to do what they're doing now. But if we can give them 100 cars per week, it may make sense to them. We have been talking to a short line operator to get rail cars in and out of our facility, building trains to transfer to UP at Albina Yard. Potentially, the Port could contract with the short line operator for us. Our product isn't time-sensitive, so we can use rail. (manufacturing)

We don't send our product by ship, we use mostly trucks and some rail. In fact, we're moving more to trucks over rail, purely because of economics. If the economics shift, we could use rail more. A lot of our supplies come in from the Midwest. (manufacturing)

We're a huge rail user. The great majority of stuff in our warehouse comes by boxcar—they come directly to us. Our facility in North Rivergate gets 15 cars a day from Burlington Northern. It's difficult because they want all unit trains. If we could get more switches per day, we could increase our capacity. Third party switching could help us tremendously. At-grade rail delay is another problem. (trucking / warehousing)

We get rail, water and air packages. We are a time-sensitive customer, and the railroads are inundated with freight that is not time sensitive, so it's a challenge to make sure our stuff gets through on time. We are a huge rail user, though we're moving more and more to truck because the train is less reliable. We need to be able to remain competitive, and competition for rail service is affecting our business operations. This facility is not directly rail-served—only a few of our facilities around the country are. We drive to the rail yards to pick up our packages. We get 40-45,000 packages daily from Burlington Northern, the equivalent of 20-21 truckloads. The Union Pacific train from Los Angeles comes into Brooklyn Yard everyday with about 50,000 packages (26-30 truckloads). (trucking / warehousing)

Limited rail budget in Portland region for capacity expansion

We sunk \$2.4 billion into this railroad last year, \$1 billion just to keep the lights on. There's a limit to what we can spend on capital investments. When you run out of money, you draw the line. There are lots of worthy projects you can do, but money is the limiting factor. When we make decisions about capital projects, we model how we use the lines and how much delay can be reduced, to figure out the costs and benefits of each project. We participate enthusiastically in public/private projects, including the T-6 lead and Kalama. (railroad)

Union Pacific is double-tracking where we can across the country, such as from L.A. to El Paso at a cost of \$3 million per mile for 500 miles. We have a capital budget of \$3 billion for the entire 35,000 mile rail system, so we have a lot of projects that we just can't afford to do. Just to maintain the rail, tie, ballast and bridge costs half of our capital budget. (railroad)

Rail infrastructure deficiencies

There are many other projects that we would like to do:

We would like to extend grade separations and double-track the entire Kenton Line and Barnes yard. The Kenton Line, from Troutdale to Portland, is very important to the health of Portland and is a critical rail corridor.

- There is currently a single track on the I-5 line at the Columbia Boulevard crossing. This needs to be expanded to a double track to alleviate the bottleneck.
- We need to add a turn line at I-84 for trains from Brooklyn Yard heading out east. Those trains currently have to go all the way into Albina Yard, and we would like to be able to just turn the corner. There is a warehouse right there that was built right before we merged with Southern Pacific.
- We have talked about building bypass lines around the yards to keep through-freight out of the yards.
 We would like to run trains all the way through Portland without having to bring trains into our yards.
 (railroad)

We could serve Swan Island better if we could move the intermodal facility out of the Albina Yard, tear down the freight house, and redesign the yard. We want to move the reload facilities from the freight house to the side of the hill where the intermodal is now located. Then the intermodal facility could be relocated to the Brooklyn Yard, or perhaps Troutdale. Wherever the intermodal facility is located, more trucks will go there and could overload the street system in that area, so you need to plan it well. (railroad)

The tracks on Swan Island are in bad shape. There is little capacity to hold cars on-site down there or room to add new tracks. And Going Street Bridge is a dangerous bottleneck. (railroad)

We currently have to slow down our trains when we get onto Burlington Northern's main line because we have to wait to be dispatched. (railroad)

We have problems on Front Avenue over the Steel Bridge because it has a 6 mph speed limit. The Steel Bridge is owned by UP. No new bridge would be built with a 6 mph design. We own other railroad bridges and they are all 35 mph. (railroad)

Rail infrastructure and ownership in this area is complicated. Some tracks are owned by Union Pacific, some by the Port or Burlington Northern, some are on City right-of-way. For example, where the tracks south of this site run on Bradford Street, the infrastructure is old and the responsibility for improvements is confusing, so no one does it. (marine terminal / port)

We can't comment yet on bi-directional running in the Gorge. We don't know enough about it. (railroad)

Underused rail spurs expensive to maintain

The South Guilds Lake spurs, such as near Portland Brewing (NW 31st and Industrial) and south of Nicolai (east of I-405), were built many years ago for small customers who have no room to expand. Most of the businesses aren't rail customers anymore, and most of the sidings are dead. We service a few small industrial customers, but the amount of maintenance the tracks require is significant. And that area is not really industrial anymore. Unlike T-6, this area was at its industrial peak 50 years ago. It's got one foot in the doorway to change, to redeveloping into something new. (railroad)

There's only a little activity on the rail spur near us – maybe a tanker once a week – and it makes maintaining the streets a big headache. Union Pacific and the City go back and forth over who should be responsible. The usage is so low that it's not worth the maintenance headaches. The tracks should be taken out of the streets. (manufacturing)

At-grade crossings impede rail mobility

We are trying to get a Columbia Boulevard overcrossing structure built at the Penn Junction crossing. All of our trains from the north (Seattle) and half the trains from The Dalles go across that one track. At Cully, we want to close the road crossing, but it is the only way wide loads can cross the tracks. An overpass built

there would help immensely. Grade separation at 11th Avenue is also being planned. An overcrossing has just been constructed at Lombard, which allowed us to add 3 new lines there. (railroad)

We are always concerned with at-grade crossings for safety and fluidity. Between Lincoln and 39th Street, for example. Since we built the new Lombard overpass, Leadbetter is less of a problem. However, where we cross Marine Drive, we're going to have more trains go over that, not fewer. That's 10 to 12 minutes of blockage every time. (railroad)

There are 68 at-grade rail crossings on Swan Island. It would be better if the crossings could be closed and a frontage road built. (railroad)

Shared-use agreements to improve service must make economic sense

Independent and neutral parties conducting third-party switching on the tracks can improve efficiency through bottleneck areas. The Port has entered into negotiations with another operator to do third-party switching in Rivergate. Third-party switching does work, but only if both railroads enter into it with the goal of maximizing efficiency. A good example of successful third-party switching cooperation is the Powder River Basin coalfields. (railroad)

Third-party rail could be helpful, but it would need to make economic sense. We are not sold on it yet. They would need to have the capacity to build trains and to handle unit trains. (railroad)

The concept of converting the Union Pacific and Burlington Northern lines along the Columbia Gorge into a shared one-way couplet would be difficult because of the loss of control over our destiny. The railroads already work together a lot. (railroad)

Rail-residential conflicts

Lack of forethought by building housing next to rail lines is of grave concern to us. It will limit our capacity to operate. I was out of the country from 1993 to 2000 and, when I returned, was struck by the amount of industrial land that had been converted to residential or commercial land. A lot of this former industrial land either had been served by rail or could potentially have been served by rail shippers. (railroad)

Boise Cascade just put out an RFP for development of a large site east of the Port between downtown and the waterfront. We think it will be mixed-use development. The City will be very interested and focused on what will be done with this site. Keeping a viable rail connection through that area is critical to us. The City would like to eliminate the berm carrying the east-west line and push the rail as far north as possible, but it can't go much further north due to engineering. They're also starting to understand the importance of this line and are now on board with getting to a workable rail design. We'd like to create a whistle-free zone, since we know this line will go through an area that will eventually be mixed use. There is also growing acceptance that nearby businesses and residents will have to live with the rail, and we will have to create sound barriers to minimize the noise. (marine terminal / port)

Federal Railroad Commission now requires engineers to blow whistle for a minimum of 15 seconds at crossings. We now get a lot of whistle complaints. It's hard to come up with regulations for a quiet zone. We get a lot of complaints here in Vancouver. (railroad)

The trains have to sound their whistle whenever they cross a road. Twenty hours a day they blow their whistles. When we build trains, the train goes back and forth and back and forth across the road. One train switch starts at 10 pm. We are working with the Port to establish a Quiet Zone but it will take a substantial capital investment, given that it is a Union Pacific mainline. Quiet Zones are complicated and require

physical barriers across the line. Is it something we can live with? I think so. Still, a Quiet Zone will only stop the whistles, not the switching noise from building trains. And the line is underused right now. Train traffic on it will only increase as time goes on and capacity issues worsen. (marine terminal / port)

We haven't had huge rail crossing issues along our lines, not like the problems UP has in Albina, or that BN has in Vancouver. Industrial operations are more forgiving than residential neighbors. (railroad)

There is talk about a "quiet zone" in St. Johns. We testified a year ago about growth on the St. John line, advising not to build condos near our lines. We are just going to be running more and more trains on them, and residents will complain. We are not going to allow any new at-grade crossings. Instead, we are pushing to close crossings. (railroad)

Harbor depth

Channel dredging

Dredging at the mouth and channel of the Columbia River is critical. Ships are getting bigger and they need to be able to get to and from our facilities. Twenty years ago, the maximum load size for a ship was 52,000 tons. Now the maximum load size is 60,000-62,000 tons requiring 40 foot draft. Ships sailing out of Vancouver, B.C. now have a maximum load size of 75,000 tons and 43 foot draft. In order to be competitive, we also need to be able to load 75,000 tons per ship. In the feed grain industry, Tacoma and Seattle load bigger shipments than Kalama, which is a big economic advantage. (marine terminal / port)

Channel deepening is a huge plus for attracting larger importers. Portland's greatest asset is that we're a gateway city, like Long Beach, Tacoma, and Seattle. But we haven't realized our potential due to restrictions. (trucking / warehousing)

You need to get the river dredged. We ship a lot of containers out of Portland. Mostly, they go through the Port, because it wouldn't pay for us to do it ourselves anymore. (manufacturing)

We maintain our slip, but maintenance dredging of the Willamette itself is a topic of discussion among folks doing business on the river. Shoaling in a variety of places could cause problems. (manufacturing)

We were really low on fuel in mid-December because ships could not cross the Columbia bar at the mouth of the river. (marine terminal / port)

Moorage dredging

The biggest infrastructure challenge we face is the draft alongside our dock. Our dock was last dredged in the early 1990s. In comparison, Chevron does maintenance dredging every other year. At a 0 river gauge, we have 27.5 feet at our Linnton dock (that's what we publish), but we can't guarantee that depth year-round. Thirty-two feet is a viable depth for us. We will look at deepening our dock to 32 feet in the next 10 years. (marine terminal / port)

Lack of reliable river depth has caused problems for us with regard to moving into the new markets. In contrast, Vancouver's harbor is 40 feet deep. I don't see us relocating, but I can see that, if people are going to put money down, they may want to locate in Vancouver. We are handling 40 percent of the volume inbound by marine. We handle marine products outbound over our dock, as well, which is unusual. (marine terminal / port)

There have been lots of press releases recently about the depth of the draft at the Port of Portland. People say that the Port of Vancouver is deeper, and is stealing away business from Portland. The Port of

Vancouver recently attracted a jet fuel project for the City of Portland and Klamath Air Base. They move a couple hundred gallons per month. A shipment of 100,000 barrels of caustic soda was also given to Vancouver. Although Vancouver only has a very small liquid dock, they have no problem with draft and move a lot of liquid through there. Both of these projects could have gone to Portland. Companies that have shallow docks, such as Kinder Morgan, are at a disadvantage because oceangoing vessels need a depth of 32 feet. The Willbridge facility has a 32 foot deep access. (property owner / representative)

Transit improvements, limitations, and costs

Swan Island and its businesses have encouraged mass transit, but we would be lucky if 5 percent of our employees used transit. We would like to follow Nike's lead; they've been very successful in inspiring transit use by employees. Swan Island has an active Transportation Management Association, and Lenny Anderson works hard to ensure the transit services to Swan Island are reasonable. Bus line #85 has increased its schedule and now that line services Swan Island all day, not just during commute hours. However, we are not a transit hub, so MAX users have to transfer at the Rose Quarter to get to Swan Island. And there is no bus service from Swan Island to Clark County because C-Tran stopped running. (industrial association)

We face major transit challenges in getting our employees here by public transit. We worked with Tri-Met to improve the frequency of buses and coordinate bus timing with shift changes, but all plant shifts start at different times. TriMet will only add buses if you can guarantee riders, and no one wanted to take on the liability for a shuttle bus. Maybe distribution firms need to band together to create a group to deal with this issue. If we could at least get a bus during the peak summer season, it would be helpful in our hiring efforts. (human resources manager / representative)

Lots of industrial workers don't come to work at the same time every day. Truckers don't know what their schedule will be until 2 hours before they have to be there, so it is hard for them to use mass transit. (industrial association)

On Swan Island, there has been an increase in employee mass transit ridership since the Interstate MAX opened. (industrial association)

Reactions vary about the benefit of the Interstate MAX. In Lower Albina, I haven't seen a noticeable increase in transit ridership since the MAX opened. I think the tracks should have been built on the hill on Vancouver Street or Williams, where the people are. The location of the tracks significantly decreased the capacity of Interstate Avenue for freight travel, which went from four lanes down to two. (industrial association)

There are no bus stops in this area. The closest bus, #17 that goes up NW 21st Avenue to St. Helens Road, stops too far away for our employees to ride. Getting Tri-Met buses to this area would help us get our employees here. (trucking / warehousing)

Transit service and use has gotten much better. A number of employees use transit – many part-time folks use the bus regularly, and some office employees use it occasionally. We work with Tri-met to try to get better service, but the nature of our business is such that it's not conducive to transit use. Our drivers are done when the truck is empty, which is a different time every day. The bus comes only every half hour. We have begun a shuttle bus for shift changes, which is helping. Running a private shuttle is our last resort because of the expense and issues related to insurance. (trucking / warehousing)

Our employees get free transit passes, and the bus drops them off right out front. But it is still difficult for people to take transit with the shift changes. (manufacturing)

Parking is a bit of a headache, but we do have some parking. We underwrite parking, transit passes and carpooling for employees to try to mitigate the impact on street parking. (manufacturing)

Transportation for workers is tough. It's hard to get people here [Rivergate], and then it's hard for them to get home. We lobbied TriMet and were able to get bus service out here on Saturdays but the ridership wasn't there. (manufacturing)

TIGHTENING LAND SUPPLY

I have four main impediments of concern: 1) land use conflicts; 2) how to pay for maintaining transportation infrastructure; 3) Superfund uncertainty – it's hard to reinvest when you don't know what will happen; 4) marketability of construction sites. (industrial association)

Lack of land is limiting growth

Few sites available for new development

Rivergate has only one more large parcel left. (marine terminal / port)

There isn't much available industrial land in the harbor area; we're landlocked. I'm concerned about that. There's only so much industrial land left. (trucking / warehousing)

Most of our clients don't want to lease, they want to buy, and they want land that has easy access to the freeway. Where is the land for them? The Schnitzer property has some available land, but other vacant sites, like Time Oil's 50-acre site, aren't deliverable. (industrial broker)

Our inventory of available properties is so low right now. Sometimes I look at properties that are for sale and there's only one or two out there. To be useful, sites need to be available and ready. If sites aren't ready to go, that property falls off the list. (property owner / representative)

It would be very helpful if we had a greater pool of properties to offer these firms. It's hard to find land that meets clients' needs. Larger parcels particularly. If a firm needs more than five acres, it's extremely hard to find a site. The majority of industrial inquiries are for land parcels that are larger than what we have. If the list of available properties were larger and more diverse, more new development would be able to occur. Projects that are staying in the region are going outside of Portland to places like Canby. (property owner / representative)

We would like to sell or lease some of our extra land, but we don't even know if someone could build on it due to brownfield concerns. (human resources manager / representative)

Lack of land is limiting business expansion

After we add the 21 new acres, we have nowhere to grow. There is no available vacant land nearby. We're a land hungry business, and we may eventually outgrow this location. After all, we have been seeing 8-10 percent growth annually. However, I don't think that's going to be a problem. One response is that we are moving our domestic product distribution to Seattle to allow more room for imports at our Portland site. (marine terminal / port)

If we were to do it all over again, we wouldn't put all of our facilities here. There's no land to expand onto in Rivergate, and it's a problem. We started in the 1970s and we were the only ones here then. Plus, as

Portland grows, transportation problems may get worse to the point that being here doesn't make sense. (manufacturing)

One of our constraints is the difference between the acreage we want versus what is available. There is not a lot of property left down here. We're landlocked. The Navy is on the other side of us, and we tried to buy some of their land, but the price was too high. There is also uncertainty about environmental contamination on some of the nearby properties we are interested in acquiring. When do you say, "Let's give up and go elsewhere?" We're very close to that. That's why our expansion isn't for sure a "Go". But even if we did move our operations to the land we have at 185th and Marine Drive, this facility on Swan Island wouldn't close. It would just be a smaller operation. (trucking / warehousing)

The major constraint is that there's no land out there. We have run out of space at our Rivergate facility. And what land is available is very, very expensive. Everyone says industrial land is most expensive here in Portland. The Port sells land for top dollar. One of our biggest issues now is lack of space to store our slabs. (manufacturing)

We ship product out from Linnton because our warehouse is there. At this facility we're constrained by acreage. We have to shuttle products from here to there constantly, 24 hours a day. (manufacturing)

This has been a great building and location for us. The building is structurally sound, and we didn't have problems rehabbing it when we bought it. It used to be a bag factory – they made potato and onion bags. But we did have a tough time finding a building large enough. Once we determined that we needed more than 60,000 square feet, it forced us to look outside of the Central Eastside. There were so few options that we almost said maybe we should go out to Tualatin. But we're here because we want to be in Portland – even though we paid more for being here. We wanted to stay in the city and remain close to our customers and employees. (manufacturing)

Most industrial land demand is for development-ready sites

Is a 6-month delivery time to make a site ready for development quick enough? It depends on the user. If 10-20 acres is needed, there are so few available sites that clients will wait longer. (industrial broker)

People typically won't wait longer than a year, but all sites have some constraints. Shoot for sites being shovel ready in 6-9 months. Also, certainty is important. You need to be able to work with the jurisdiction and know that it will keep its promises and nothing unexpected will crop up. (industrial broker)

A shovel-ready program can cut 6-12 months off the development process, and would not be a big deal to set up. We're currently working on a couple shovel-ready sites going to multiple owners. (industrial broker)

At the very least, cleanup needs to be able to happen within an acceptable time frame. (industrial broker)

Brownfield and Superfund constraints

Limited demand for harbor area's predominant supply of brownfield sites

Most prospective buyers don't want to deal with contamination. People pass up those sites to go further out. Cleanup is expensive. It may add another few dollars per square foot on top of land costs. Plus, cleanup takes time, 2-3 years sometimes. (industrial broker)

When we were searching for a building, we quickly learned that everything would hinge on environmental issues and finding someplace where I could protect myself from potential liability. For example, I had to sign a non-disclosure agreement to even come close to seeing what the conditions were at one site. There was

solvent contamination and, although it was obvious the contamination had originated from adjoining properties, there was no way to prove that in court. It was a great building that didn't hold any risk for my employees, but I consulted the best lawyers in town and they said I couldn't necessarily protect myself from future liability. It was a very sobering experience – here we were trying to bring in all of these jobs, and it was so difficult to find a clean property. When this building came up and it didn't have any ground contamination, we jumped on it. There are so few clean properties close-in. Even after all that, we found some contamination here last year. (manufacturing)

Brownfield sites are opportunities, not just constraints, but many companies don't see it that way. Many people walk away quickly when the brownfield issue comes up. One metal anodizing company has a policy not to touch a brownfield, but in the harbor all of the big sites are brownfields. Smaller companies don't seem to be as deterred by smaller brownfields. (property owner / representative)

A potential client wanted to use the former Time Oil property for biodiesel. Only half the site has received a "No Further Action" notice from DEQ and that half is in the floodplain, where development is restricted by balanced cut and fill requirements. So the client is looking across the river instead. (railroad)

Future liability for in-water Superfund cleanup is a development barrier

In 10 years, everybody within ¼- to ½-mile from the river may be sued to pay for the river cleanup, and will have to defend themselves in court. I tried to get a "get out of court free" prospective purchaser agreement for sediment liability, but they are not available, so I gave up. (industrial developer)

The potential liability for river cleanup is a big deal. It's too risky to know that you may have to spend hundreds of thousands of dollars defending yourself. The only recourse for those people identified as having contributed to the river problems is to sue everyone else to try to spread out the burden. Any site with contamination is uncertain and opens you up to potential liability. Superfund is a huge cloud and there's no reason for developers to take on the risk. The City could be very effective if it could work with the EPA to help defend property owners from suits. (industrial developer)

Superfund is complicated to explain and it's difficult for people to grasp the details, so they give up and decide to look elsewhere. The turn off is not just the liability, but the perception that goes along with the idea of "Superfund" – the sight, smells, and other negative images. (industrial developer)

On the other hand, when demand is great enough or there is a strategic reason for a user to locate on the harbor, the barriers of contamination will be overcome by users. For example, there was a situation in Tacoma next to Cargill. A property owner was working with the Department of Ecology to clean up the site. They had ten offers from tenants who needed to be there. Users that need a particular site will overcome contamination and liability concerns, but developers won't. (industrial developer)

While many companies may be okay looking at a brownfield, when you add in the Superfund uncertainty, it's too much. Superfund is a scary word. (property owner / representative)

The uncertainty and liability issues surrounding Superfund and brownfields are a big concern. We've seen deals terminated because people are scared when sites have existing outfalls. Maybe there could be some kind of insurance that's subsidized by the City so people are assured they won't have to pay for stuff they didn't do or spend legal fees and/or time proving they didn't do something. This represented a huge time and money cost for considering acquisition of the Marcom site. (marine terminal / port)

Other Superfund project challenges

We are a member of the Lower Willamette Group. It has been challenging for the industrial owners to find a balance with the Environmental Protection Agency (EPA) on issues such as cleaning up the river to drinking water standards. Also, EPA keeps changing its mind, such that the 2008 schedule for completion of the Record of Decision could go to 2009 or 2010. And remediation could take another ten years after that. (property owner / representative)

Since so much of the Port's money is tied up in Superfund cleanup, the Port has limited borrowing capacity. This impacts the investments we can make. We can't fund big investments on our own, like \$60 million for a grain terminal. We need to find partners or find other ways to fund big projects. We're spending \$3 million on rail investments. (marine terminal / port)

The Superfund site is a huge problem. One result is the inability to get permits to get work done on the water. We will want to expand our dock at some point, but it is looking like a 3-year process with no end in sight. It's something that we should be able to get through in a year. Superfund is a boon for attorneys and environmental consultants. (property owner / representative)

Superfund is a constraint because of the dredging questions related to it. It's possible that Superfund will expedite some of the permitting for dredging to deal with a "hot spot." (marine terminal / port)

Superfund is a double-edged sword – both a market opportunity and an impediment. Our liability is pretty limited, but property tax assessment decreases mean that there is no money in the urban renewal area to help us out. (manufacturing)

Other brownfield redevelopment challenges

Overcoming the uncertainties related to Superfund was a large hurdle in purchasing our site. We spent lots of time and energy doing our due diligence to understand the liability associated with it. DEQ declared it an Orphan Site, and because no one was representing the property, there was no one to clean it up. Although the site was lily-white clean, really, the cost was high because no one was managing the site. We worked out a Prospective Purchaser Agreement and Settlement Agreement with the owner, which is bankrupt. DEQ gets a settlement out of the sale of the property to us because of the uncollectible bills incurred by the assessment and cleanup. (property owner / representative)

Environmental concerns would be a challenge if we wanted to do redevelopment soon. We see the upland and waterfront parts of the property as separate cleanup sites. On the upland portion, we've done a good job characterizing the property. A risk assessment and feasibility study are underway and expected to be finished by the end of the year. On the waterfront portion, we are currently doing a source control investigation and feasibility study. Beach wells are showing that nothing is leaving the site and getting to the river. We're running a hydrogeologic model to look at tidal influences. Even if we had a tenant ready, that wouldn't make the process go any faster. Also, it is hard to enter into a purchasing agreement with property if there are remediation issues. It helps to have a good assessment and plan in place. (property owner / representative)

Looking at a particular vacant site on the harbor, people are interested in purchasing it, but the owner has unrealistic expectations that a buyer will take the brownfield liability away from them. (industrial broker)

New owners coming in are now responsible for clean up of their site. Only some firms can afford the expense of this clean up, and it is not always clear what the new owners have to do to get the site ready to build on. For example, Chevron and Conoco are both installing screens in the water to help in their clean

up, but this is a costly project and most companies can't afford the expense. If the public wants the river protected and to make sites ready for redevelopment, maybe public funds could be used to help pay for clean up. (property owner / representative)

Other site constraints

Environmental constraints

Going out Highway 30, it has become popular to build sites along the hillside, but you need relatively flat land to do it. We've had one site on a shallow slope of the hillside for five years, but we can't get rid of it at the \$4 per square foot price the seller is asking. It will cost \$2 per square foot to dig out the slope. If we dropped the price to \$2 per square foot, someone might be willing to pay to expand the flat area. (industrial broker)

The Schnitzer Steel land is great at this time, but is 3 feet below floodplain level and will be underwater someday, so people won't go there. Other sites down near the river also face this issue. (industrial developer)

Plus, you can't build tall buildings because you have to drive the pilings all the way to China! But we have already invested in the mill, so we are staying. (manufacturing)

Older, less efficient building and sites

Portland has a lot of bulkier, older buildings in the harbor, but modern, service-oriented firms don't need gigantic spaces, loading docks, or heavy industrial capabilities. The existing buildings that we have zoned for heavy industry exceed demand, and the existing building stock is not easy to rehab into more useful service-oriented configurations, like flex space. (industrial developer)

The lower Guild's Lake area was built for 28-foot trucks. Trucks are bigger now. Looking at a particular 15,000 square foot, dysfunctional building, if it were torn down, a larger parcel of land would be needed for staging in the yard area. (industrial broker)

We talked 20 years ago about creating superblocks in the Central Eastside. We created Produce Row, which was a success, and those buildings have never been vacant since. The parcels we currently have aren't big enough – a quarter block is much too small for an industrial user. In the Central Eastside, it's better to convert these old 3-story buildings that have no parking or loading capabilities, to other uses. They should not be zoned IG1. (industrial broker)

I've been touring all the vacant buildings in the Northwest District on a quarterly basis. Prospective tenants say this district is such a good location but the old industrial buildings don't work because of the improvements that need to be made. We hear that all the time. If the firm is leasing, it doesn't make sense to invest a lot in renovating the building. (property owner / representative)

Recently, a Los Angeles firm was considering a Northwest District location, but it didn't work for them – the ceilings were too low and they needed 40,000 square feet with loading docks. There are so many antique properties in the Northwest District. Often the ceiling heights aren't high enough. For many firms, the best place they can find without having to make a serious investment is in Gresham or another suburb. (property owner / representative)

Challenges of flex space development on small sites

No one has figured out how to meet demand for flex-space and smaller service-oriented buildings in this area, because making it work financially is difficult. Doing little one-offs isn't efficient. The challenge for developers is to find land available that is ready for building on, without all of the environmental problems and the uncertainty that accompanies the brownfields. When the brain damage is high, it's just as easy to build 150,000 square feet as it is to build 15,000 square feet. (industrial developer)

Risk of industrial land conversion

Industrial rezoning pressure

There is a trend of converting industrial land into condominium complexes. Every step in this direction decreases the opportunities for industry in the Portland/Vancouver area. Twenty years from now, areas like St. Helens and Scappoose will be attractive to industry because those areas can be built up without running into land use conflicts. The City, PDC and the Port should institute a plan for no net loss of industrial lands in the area. (property owner / representative)

The possibility of conversion of industrial areas to commercial and residential uses is a barrier to reinvestment. (industrial association)

We want positive support from the City that the leadership stands up and affirms that having industry here is a good thing. No one pays their hourly employees more than we do. And we have a big regional impact – lots of other firms are here because we are here. (manufacturing)

Apparently there is a purchaser in the wings for the Columbia Business Center. We don't know who it is. This site is approximately 240 acres and is zoned for heavy industry. The City wants to see the waterfront there developed as mixed use. (marine terminal / port)

I'd like to see the Linnton area maintained as industrial and expanded. The energy cluster will need more capacity if we're going to start handling greener fuels, which need to be kept separate. The viability of the industrial area is jeopardized by land use conflicts and safety and security issues. Other uses near hazardous cargo will create pressure to convert later. The railroad is also a driver of industry, and the existence of this key piece of infrastructure in this area is a good reason to keep residences away from our facilities. (marine terminal / port)

The issue of industrial vs. commercial uses in this area needs to be resolved. The Linnton neighborhood is proposing rezoning for housing in this area. It would be a tragedy if this land was converted to housing or commercial since land with these characteristics is so scarce. (railroad)

This is an industrial sanctuary, but there is concern that another Pearl District could be built here. This impedes industrial investment because firms don't want to be next to a condo project. Many businesses feel constant pressure and uncertainty about the future of the harbor area, so they need to be able to trust that the City will not to rezone the land for something else. (human resources manager / representative)

The inner NW industrial area needs to remain an industrial area, not paved over. However, some of it should be leveled and redone, to use the sites more efficiently. Portland Meadows is a good place for industrial development. The PGE property in Harborton is really nice, with beautiful tanks and rails. (property owner / representative)

Companies on the harbor are changing. The smaller oil and gas companies have gone by the wayside. Marcom shipyard is gone now. Coppers Industries was dependent on the aluminum industry and is now gone. The area near that site is prime for redevelopment. (property owner / representative)

Central City expansion

We wonder what would happen if ESCO went to all offices at their facility. We don't have noxious fumes, so maybe it would be okay, but we'll have to worry about parking then. And, if the zoning changed and taxes went up, that might force us out. Foundries in urban areas are a thing of the past, generally, so how long will ESCO be there? Where do you draw the line? ESCO buffers us from economic development pressure right now. If they left and we became the edge of the industrial area, it could drive up property values. (manufacturing)

The market along Vaughn at the edge of the industrial district is more dynamic. Owners in that area see the property value advantages of that location for them. Flex space is being suggested as the right buffer along Vaughn. (industrial association)

Industrial companies in the Northwest District (south of Vaughn) are being pushed out by commercial and residential encroachment. What used to be an industrial sanctuary now has residential development. If a business there wants to expand their facility, it impacts the residents. An example is the post office trucks in the Pearl District. They were there when the residents moved in, but now the residents are complaining. (industrial association)

A machine shop operator in the Northwest District is getting pressure to move, but he owns the building and his land is now worth a lot more. It's his retirement fund—he can turn it into condos. Yes, business owners want the industrial sanctuary to protect their business, but down the road, it's nice for property owners to get better prices for the land than industrial zoning gets. (industrial association)

There were neighborhood struggles with the Northwest District Association (NWDA) and community members who were concerned about air pollution. (property owner / representative)

Some Lower Albina property owners express that they don't expect they will still be there 10-15 years from now. Folks don't feel forced out, but they see the writing on the wall because of the light rail stop and the activity on Russell. We hear the same thing from companies on the border of Vaughn, near the Pearl District. But the mindset in Lower Albina is much different than that in Guild's Lake. (property owner / representative)

Some industrial firms that own property east of Interstate in Lower Albina are okay with the direction the district is going because they can make a killing on their property. A chemical business wants to move over by KinderMorgan. They don't mind getting out. Their property will be a brownfield. However, some true industrial firms are scared to invest because, "This looks more like SoHo than an industrial area." There are concerns that new uses will hinder the 24-hour operating ability of the industries and undermine the viability of the area for industrial uses. There is even uncertainty about signing leases west of the Albina overcrossing. (property owner / representative)

Long-term costs of conversion

We need to not turn our backs on manufacturing. It's an important part of the economy. We need to restore and redevelop sites that are unused. When firms leave, a site shouldn't necessarily become a Starbucks. It's important to maintain an industrial sanctuary in the harbor. The investments are made there and there are tremendous spin-offs. In Oregon, there's nowhere else for industry to go, due to LCDC rules, and

because we need multimodal opportunities—barge, rail, and truck. We need places for heavy manufacturers—those that are "dirty, dangerous, or difficult". We also need more area for warehousing. We need to maintain a mix of different industry types. And we need space for all of them. (manufacturing)

When there is a supply problem, it definitely affects us. We've had terrible supply problems at certain times. Sometimes the problems result from delays further north along the pipeline. Sometimes the increasing diversity of products can cause a shortage, since each type of fuel needs separate storage and there is a lack of storage capacity and very little space for expansion. Having more product coming in would be great for us, but I don't think there are investments the City could make to improve supply. It's important to leave vacant industrial land available for future industrial expansion, because eventually the fuel terminals will need more capacity. One land improvement that would be helpful is cleaning up the brownfields. (trucking / warehousing)

If the workforce here concludes that there is no support for the working harbor, they will move as a block elsewhere – Linnton will be a signal to them. (manufacturing)

The McCormick & Baxter Superfund site isn't fully cleaned up. That site should stay industrial. (manufacturing)

Residential encroachment

Community issues are big for us, particularly as the area intensifies. We're across the river from 300 residents. Their complaints include noise, light, glare, perceptions of dust and other nuisance issues, both adjacent or across the river. It's mostly complaints from residences, not office uses, but we may eventually have issues with Adidas. (marine terminal / port)

Those houses out that window are new. They are right next to our facility and right on level with my yard lights. We operate here 20 hours a day, running a day and a night shift. Right now they aren't complaining, but the residents will forget who was here first eventually. We're also seeing residential growth right across the river in Linnton. (marine terminal / port)

The costs of environmental compliance for us are even higher because we are so close to the Pearl District. People are concerned about living near heavy industrial uses, and the noise and odors that result. Anywhere you go in the world there are environmental regulations. But residential encroachment means heightened scrutiny: people call DEQ and complain, so it increases regulatory costs. We're required to do better than compliance because of where we exist, even though our nearest townhouse neighbors don't complain. (manufacturing)

No one wants us here, the neighbors that is. Only the City wants us here. And neighborhood conflicts are only going to get worse. If we started a melt shop again, the neighbors will say, "What's that sound? You mean there's a steel mill over there?" (manufacturing)

We sometimes hear about residential conflicts with industry. Residents of Portland have a strong voice in this city. Proximity to a neighborhood is a deterrent for many businesses. Some industrial users are concerned about being targeted. This is a big issue and the more crowded it gets, the more it becomes an issue. (industrial broker)

On Swan Island, we get some pressure from the neighbors up on the bluff because of transportation and environmental issues, but all in all, the district is very compatible with the nearby residences. We have been working to provide better access to the river for pedestrians and bike riders. (industrial association)

I don't hear anything about bad smells or headaches from smells, being in an industrial area. I smell the coffee roaster sometimes, which is not pleasant. (manufacturing)

There is a disconnect in the public mind. They expect fresh fruits and vegetables at the store, but they do not understand that trucks are necessary to get the produce to the store. (industrial association)

I also see conflict here between heavy industry and folks that want to hike, fish, and boat. (manufacturing)

It hurts our business when residential uses are sited near our land. For example, in St. Johns the new residents are complaining about the trains, especially the night whistles. Meanwhile, the City asks industry to run more freight at night to reduce congestion. (manufacturing)

The changing neighborhood dynamics are a big problem. Firms want to expand and they either can't afford to in this location, there is no room for expansion on their current site, or their lease came due and the rates have increased. A lot of our business retention work is not in rebuilding or expanding businesses on their current sites, but getting them relocated somewhere else in Portland – not outside the area. (property owner / representative)

As I look at Portland, gentrification is a bigger factor there in comparison with Vancouver. Reclamation of T-1 in the Pearl District was a big thing. There is a natural buffer here between residential and industrial areas, so traffic and noise are not a big issue like in Portland. The industrial areas are not threatened by residential encroachment because they are at different ends of the city. That could change in the future. Most other West Coast ports have land use conflicts because water attracts people. Luckily, we have maintained a buffer. Condos and cranes are closer in Vancouver BC and Seattle. (marine terminal / port)

WORKFORCE CONSTRAINTS

Hiring challenges

Limited industrial labor pool

We're trying to hire right now and we're not getting applications. We wanted 300 applications and only got 200. Seventy five of those we invited didn't come to interviews. We pay \$20 per hour. We need people who can read and write English. We do have a high standard in terms of work ethic and reasoning ability. We have a lot of workers from Southeast Asian countries, but we haven't been able to tap into the Hispanic workforce significantly. We recently advertised in a Hispanic newspaper, but we only got three Hispanic applicants. We used to hire through OED (Oregon Employment Department), but now that we are a government contractor, we are guided by federal regulations and hoops. (marine terminal / port)

Workforce is a tough one. Getting qualified people here is hard. The workforce is aging and the schools aren't pumping workers out anymore. The kids have to figure out on their own that the field exists and get trained. (manufacturing)

The people in between the unskilled workers and the college educated are a very small pool. It's hard to find those with a high school education and some technical skills. Getting people for creative jobs is not a challenge for us. Getting people for industrial jobs is the challenge. (human resources manager / representative)

We have a skills divide. Hiring from the middle ground labor pool, workers with a high school education and some technical skills, is a struggle. (human resources manager / representative)

Getting good craftspeople is hard everywhere. We're starting to focus on kids at the high school level to get them interested early. We also have trouble finding folks that want to work in an industrial environment. And no one wants to work swing shifts or graveyard shifts. (manufacturing)

Hiring skilled labor is always a problem, particularly in manufacturing. We do our own training because it's such a unique field—there are not any places around town training people to make steel castings. We have very low turnover, but have done a lot of new hiring. We have a lot of employees that are near retirement, and we need to be prepared to backfill those losses. The whole metals industry has the same problem, including Freightliner and Gunderson. (manufacturing)

Firms even have trouble hiring for union jobs. (human resources manager / representative)

High school students see their options as either going to college or working in a Wal-Mart or McDonalds. No one gives voice to doing the kind of work we're talking about in manufacturing. (human resources manager / representative)

Kids need to be alerted to their full range of options, so they can get on track to get trained early on. (human resources manager / representative)

High school guidance and career counselors could play that role, and turn kids toward these types of jobs. Mentoring programs would be helpful. (human resources manager / representative)

One company recently hired workers from Louisiana out of a union hall, because they couldn't find enough trained welders locally. They paid for their relocation and housing expenses. Another company is rationing their product, because they can't find enough suitable workers. They would like to hire 40 people immediately and can't find them. (human resources manager / representative)

Our work is cyclical so good folks can go wherever they want. We import labor from the Gulf (welders) and Puget Sound. There are lots of people in the Gulf that go from job to job to job, so when we need people, we import them. They're good and cheaper than people here, but they are not a long-term solution. There are temp agencies that specialize in welders or pipe fitters. Most of our workers are Asian. (manufacturing)

There is competition for workers between the construction industry and manufacturing. These workers have gotten used to the ups and down of these markets, but some will also chase an extra nickel an hour. (human resources manager / representative)

It is also getting harder to retain drivers in the metro area because they have other options, such as seasonal construction jobs in the summer that pay a higher wage. (trucking / warehousing)

I know of a particular company that located in Wood Village because that's where most of their employees are. (industrial broker)

Drivers here typically start as part timers and then go full time. Under our contract with the Teamsters, we can hire three part timers for every full-time person we hire off the street. Part timers get full benefits as drivers. The average wage for part timers is \$9 per hour plus benefits. Full timers get \$23-\$24 per hour and benefits. For the past few years we have had challenges getting all the people we need. (trucking / warehousing)

Challenge of shift work and on-call hours

I don't think it's about pay—hours are a bigger issue. Local driving jobs are prime jobs, and we pay very well. (human resources manager / representative)

Our hiring problems are more about work environment issues. Some people hate 12-hour shifts, and they have family or child care issues with working the long shifts. (human resources manager / representative)

Sometimes people will trade a good, high-paying job for a lower paying job with better hours or days of the week. Some of our employees are on call, 24 hours a day, and they get called in the middle of the night, and on weekends. It's a lifestyle issue. They'll walk away for better hours. (human resources manager / representative)

Many companies run a 24/7 operation and require drivers to either do shift work or be available on call. (human resources manager / representative)

Improve "image" of industrial jobs and the harbor

The perception among younger people is that blue collar jobs aren't good, but that perception is not accurate. Our average shop wage is over \$40,000 with full benefits, tuition reimbursement, etc. We offer good family wage jobs. (manufacturing)

It is becoming harder to recruit in the trades. There is a need to improve the image and awareness of industrial jobs in the labor pool. These are high-wage, high-benefit, home-owning jobs that don't require a college education. Our society seems to discourage young people away from blue collar jobs, but we need these kinds of jobs. There is value to the community in preserving and expanding these jobs. We also need to value and encourage businesses that pay more than minimum wage. (industrial association)

The public perception of being a trucker isn't a healthy one, the driver pool is shrinking and creates a difficult situation for us as the workforce ages. Trucking is a good family-wage job. The average wage for our drivers is \$17.50 per hour – about \$56-60,000 per year. Add another \$4,000 per year for benefits, and they make a very good wage. Many of our drivers work 10-hour days, 5 days a week, totaling 50 hours a week. The hauls are mostly local, so the drivers can go home after their shift. We used to be a seasonal operation, and we need to change the perception to reflect that we are a reliable, year-round operation and that we offer a good, permanent salary. (trucking / warehousing)

An obvious action would be to change the image of the harbor a bit. The public's impression of the harbor is often "dirty, dangerous, and dead". Drive down St. Helens Road and that's what you see. The harbor is an important area for Portland – it's where rail, harbor, roads, and the pipeline all meet. It's the only place in this region where that happens. So, let's celebrate that unique meeting of infrastructure. Let's create a new, innovative image. Downtown has banners and silly stuff to create identity - that could happen in the harbor. These aren't just "family wage" jobs, they're "home-owning" jobs, "tax paying" jobs, "school supporting" jobs! (human resources manager / representative)

Educating the media would be time well spent. For example, a recent article in the newspaper talked about a possible ship-building operation and said the river is polluted. We all know the river bottom is polluted, not the water, but the image this statement conveys is that you shouldn't go near the water or you'll get sick. We need to change that image. (human resources manager / representative)

We need to market the industrial areas, because lots of people think they are rust buckets, when in truth they are viable and active areas. Education and marketing are key. Other than harbor employees or

nearby residents, people driving through the NW industrial area are there on weekends when it looks empty and vacant. This gives the impression that it is underused, that we are not an effective and valuable resource to the community. (industrial association)

I'm always amazed how people say "there's no industrial land left." I drive through the industrial areas and there is a ton of vacant land. Granted, much of it is on brownfield sites, and we need new resources to get them occupied. The amount of "For Lease" signs has also increased dramatically. The signs make it look like everyone's leaving, like the harbor is dead. (human resources manager / representative)

I'm a big proponent of eco-industrial development. We need a pilot "green" project to show what exciting things can happen and to show how the harbor can change. (human resources manager / representative)

Use of employment referral programs

We used to recruit job applicants through the state employment department until we learned that they were sending out the least qualified applicants for us to interview. They felt that their job was to get the most difficult people employed. They changed that policy, but we were victims in the past, so we wrote them off and never returned. (manufacturing)

Availability of workforce is a problem. We participated in a job fair last year with other metals companies—the Metals Expo. Our jobs are high family wage jobs with all the health and other benefits. This is our corporate headquarters so when our firm increases globally it increases employment here. (manufacturing)

We are just starting to tap into programs and initiatives to build our workforce. Many other companies in the Harbor have similar concerns. It would be great if we could band together and create a concerted effort on workforce issues. Our company's focus in 2006 is increasing our workforce. You can have the greatest streets, the greatest harbor, and all that, and I hope we do, but we also need to have the people to work here. (trucking / warehousing)

Training needs

Job readiness

We have trouble filling positions that pay really well. Lots of folks have issues why they are not hirable – criminal convictions or a drug problem – there is a huge methamphetamine problem in the workforce. Many do not have communication, customer service, or computer skills. (human resources manager / representative)

Hiring truck drivers is a huge challenge. They can make very good pay, but finding someone who doesn't have DUIs or a whole list of tickets on their license is difficult. We get a lot of applicants with commercial driver's licenses that still don't qualify because they have liabilities on their licenses. (human resources manager / representative)

English-as-a-second-language training

A lot of firms require applicants to have higher education and the ability to speak English. (human resources manager / representative)

Although a high percentage of federal grants go to providing ESL [English as a second language] training, not all ESL programs are useful on the job. We need shop-floor language programs. They often need to be customized. (human resources manager / representative)

Vocational skills training

Many employers have on-the-job training because they can't find people with the skills they need. (human resources manager / representative)

The new workforce coming in often doesn't meet industry criteria. For example, a civil engineer from Germany, who had worked there for years, needed to go back to school here to meet employer requirements. (human resources manager / representative)

Labor costs

Our biggest cost is steel. The second is labor. (manufacturing)

We hire seasonal workers at the state minimum wage. That is \$2.00 an hour more then our sister plants in Wisconsin. Portland is just perceived to be a high cost place to do business. (manufacturing)

The cost of worker's comp coverage used to be high in Oregon and now it's not. We're competitive with California now. (human resources manager / representative)

UTILITY COSTS

Power costs

Utility costs are a big deal to us. We are not competitive with Kalama and other areas due to our high utility costs. We are served by Portland General Electric. (marine terminal / port)

We use a lot of gas and electricity. We just added a second air furnace at Plant 3. The supply of electrical and natural gas is okay—it is always available—but the costs are high. Sewer costs are getting pretty high, now, too, and are beginning to factor into the equation. (manufacturing)

Energy costs are a big deal for us. We were PGE's largest user when our melt shop was running. If the melt shop were reopened, it wouldn't necessarily have to go in Portland. It could go in Columbia County if electricity were significantly cheaper. (manufacturing)

Kentucky electric rates are lower. (trucking / warehousing)

Stormwater and sewer fees

High storm water fees are a huge issue, but they're also bad everywhere in this area. (industrial broker)

Our stormwater costs are extremely high. On a property near T-4, the stormwater charge was \$20,000, based on the amount of impervious surface on the site, even though they're not discharging into the city storm drainage system. Some businesses are viewing these fees as a tax, because they are not tied to city services. Also, there's nothing you can do to eliminate or reduce the fee, such as by using pervious paving. (marine terminal / port)

People don't have to locate in Portland and high costs make us less competitive. The stormwater fee is so high that for cars at the auto terminals, if a car sits there for three days, we can actually trace back the price increase that is attributable to the fees. It is a measurable cost per car. Some businesses are saying they can't afford to operate here because of the stormwater fees. (marine terminal / port)

Stormwater fees are much higher here, but there are firms that self-select out of this area because of high costs they perceive. Our region is not cost-competitive with the rest of the country – we've got to accept that. But we also have to compensate by becoming faster at developing areas to accommodate businesses. Portland is not cost-competitive for stormwater, but other things make up for it. (industrial developer)

Sewer and water bills are killing us. We are only able to stay competitive because our volumes are so big and we have economies of scale. We don't even turn on our treatment plant until we have half a million gallons built up. (manufacturing)

Every day that we have to pay the fees hurts us. Fees here are the second highest in the nation, second only to Seattle. That's a factor in attracting new business here to diversify our plant. We have to compete with other facilities to attract new business. Headquarters factors the costs in, and if the fees are too high, they will produce product on the East Coast and ship it to California rather then have us produce it. (manufacturing)

After all we did creating a 130-foot wide greenway with bioswales to filter runoff, we're still paying the same stormwater fee at our facility as the guy down the street who runs a pipe straight into the river. (marine terminal / port)

We take issue with the stormwater fees and the requirement for retention ponds on sites with limited area. We have to build retention ponds for everyone else's water while the land down near the river is at a premium. We also have to pay the stormwater fees even though we're not using the City's system. (manufacturing)

We are battling wastewater and stormwater treatment issues—we are trying to find ways to conserve water and reduce costs. We even have an in-house Utilities Conservation Committee to work on it. Last year we spent almost \$1.5 million for utilities. We paid \$373,000 in sewer costs last year and \$290,000 in stormwater costs. We pay high rates for stormwater because we have a lot of paved surface, and then we pay surcharges for wastewater due to high TSF and BOD. This plant has done a lot to reduce BOD. (manufacturing)

More than half of the stormwater is handled on site. Part of it goes into the sewer. The part that falls on the tanks is assumed to be polluted and must be treated first. We have to pay the stormwater management fee for impervious surface, and we can't do anything about it. It's like a tax because it has nothing to do with the amount of rain that falls and goes into the city system. Dennis is working with the stormwater folks at the Bureau of Environmental Services. They say they have a discount program and we want to know how to take advantage of it. But because it's a new program it's confusing, and we're getting different stories from different folks. (manufacturing)

System development charges are a concern around the city. Stormwater discharge fees we hear about, too. (property owner / representative)

Telecommunications

Many of our tenants say that the limitations on telecommunications infrastructure in Rivergate are a problem. (marine terminal / port)

REGULATIONS AND PERMITTING

General permitting

Permitting frustration discourages investment

The City permit processing is tough, expensive and very demanding. When the \$50 million expansion we almost did was dropped, permitting was a big factor driving the bus. (marine terminal / port)

Permitting is a challenge: cumbersome, expensive, set up to raise every possible impediment to expansion or siting a facility. The burden is on the business and you have to mitigate any impact. Some of that is inherent to the fact that it is a public process. (industrial association)

We have over 200 facilities around the world, and we've found Portland to be the worst place for permitting. The environmental end is fairly easy, but the permitting through the City of Portland is terrible. We lose out to other plants within our own corporation because of the permitting process. By the time we can get a permit here, the opportunity is lost. (manufacturing)

We do the same permitting around the world, so we have a good benchmark of how long the permit process takes in different places. Five years ago, we moved a wall. It was a \$50,000 deal for which we needed a permit, and we got bounced from agency to agency. It took forever! It really shocked us. That was back when you were hearing this kind of story in the paper all the time. It's important that these processes be made more seamless. (manufacturing)

We are considering a building upgrade to bump out that wall about 8 feet and re-do the façade, which would cost \$500,000. We would also like to add plantings to reuse our runoff rather than have it go into the sewer. We still have to figure out how to do that within the regulations of the City. At this point we see permitting as likely to prevent us from doing this upgrade. (manufacturing)

Permitting difficulty depends on the project. BES can be a wild card. (industrial broker)

The Fire Bureau needs more sensitivity to the "different animals in the room." (industrial developer)

The last time we needed a permit was to install tanks and equipment in 1998. We were required to get about 60 signatures from the heads of different departments. We spent \$10,000 to hire someone to expedite the process. He said he could do it in six weeks. He did it in ten weeks. But it still beats the average time of six months! (manufacturing)

I hear about permitting challenges. Our expansion would require a full year of permitting. That's significant. (trucking / warehousing)

Public entities can provide more certainty for the private sector. Try to eliminate ambiguity and talk more between bureaus. On a ceiling tile project, a permit was issued and then the inspector wasn't sure that it met seismic requirements, so the project was held up for three weeks. We've heard over and over that permitting is getting streamlined, but it doesn't really seem to be getting better. (industrial broker)

I interviewed the Toyota developers, who do construction all over the country (Texas, Indiana, etc.), after their experience here. The City of Portland is far and away much more involved in the nitty gritty of every element of design and building review than anywhere else they have worked. They substantially underestimated costs by a couple hundred percentage points because design and building review was such a substantial cost. There's nowhere to go to get everything you need, to get definitive answers. Though they were very stoic about it, we had to intervene on their behalf several times with several different

bureaus. They actually reduced their own quality control people because they had so many people from the City inspecting every detail. In comparison, there are practically nonexistent reviews in some other locations. What I came away with is that at every step of the development process, Portland is over-involved in their business. It hasn't been a barrier to reinvestment, but the City is perceived as looking over a person's shoulder. There needs to be a different approach to development services, because this is part of the message that gets out about Portland being unfriendly to business. For example, their occupancy permit was held up because they didn't have a 6-foot snow load on their lights. It was lots of little things like that, but consistent over the 2-year project. And word about things like this gets out. How Portland comes across is not inviting or necessarily helpful. Maybe there could be a liaison, someone you can call to get the answers you need, to nudge the process along. (marine terminal / port)

The regulatory process for the Columbia Gateway property is another challenge. The National Environmental Policy Act (NEPA) process is complicated, but we work well with all agencies. I think the state agencies will follow the federal lead. At the local level, there is a city regulation called the Critical Habitat Ordinance that we will have to comply with. In addition, we need a Comprehensive Plan revision and a sub-area plan. (marine terminal / port)

Local permitting is improving and not harder than other cities

There are no noteworthy local regulatory issues that are barriers. The City has come a long way in helping us along the path. However, it is harder to get financing and permitting with speculative users. (industrial developer)

We have not noticed any big difference in permitting between Oregon City, Portland and Vancouver. We have never built anything in Vancouver prior to this, but the permitting may be easier there. We have been fortunate in the Portland area – what we want to do is allowed in the zone and we have no nearby neighbors. (property owner / representative)

Portland is no different than anywhere else when it comes to the time and red tape of development review and permitting. Is it good? No. However, since most of our clients are already from this area, they are accepting of the expense and the process. (industrial broker)

When we expanded, the overall cooperation from the City was good. Charles Auch did what he could to help. There was frustration on both sides, but that's natural with a project like this. One issue, though, is that the requirements for industrial facilities are "one size fits all". For example, we had to add bike racks, but almost no one rides a bike at our facility. We put them in, and they're empty. One size fits all isn't always the best approach. (manufacturing)

Working with the DEQ representatives on the Atofina site went surprisingly well. Because the site was complex, I think we got their best and brightest. (industrial developer)

Our construction manager said Portland had one of the easiest and most reasonable permitting and inspection processes in the country. He ran into one problem with skylights, something about weight bearing loads. But in general, he was very happy with the process. (marine terminal / port)

You always face problems with the City when building something, but permitting for our new building went fairly smoothly. Although it was a painful process, we only had to do it once. (trucking / warehousing)

When inter-bureau streamlining of permitting is working, the City also needs to publicize it. (industrial broker)

Greenway code

Greenway permitting

Waterfront permitting is our #1 issue. It represents a huge cost in terms of time and uncertainty. Plans to deepen the berth at one terminal were delayed for a year because we couldn't get the permits for deepening an existing berth. Our in-water work window was taken away. (marine terminal / port)

When we did our dock work, we missed the first very short in-water work window, because the process was so delayed. Portland has so many regulations, overlays, greenway setbacks, etc. We're required to plant trees where the crane needs to swing. On our dock-rebuild, the City staff person keeps suggesting that we remove the riprap and plant trees, which means there is lack of understanding on how you keep a stream bank together at a facility like this. We'll get there but it's adding cost. (manufacturing)

We did okay on the Greenway review. It took a lot of work, but there were no major surprises. (property owner / representative)

We've been asking for a rewrite of the Greenway standards for years and years, and years. The idea that you can balance all five of the ideas incorporated in River Renaissance is just false. The Portland Working Harbor is special and requires special dispensation. We need to educate permitters, have a "Working Harbor 101" class for them. (manufacturing)

There are big greenway hurdles. Back in 1998/99, I handled permits for Chevron, Cosco, and GATX for their joint projects. The permitting process was frustrating because the greenway standards are so high. The definition of what is river-dependent vs. non river-dependent seems entirely arbitrary. The process has gotten better recently. (property owner / representative)

Greenway permit processing did cause some delay of an environmental upgrade to replace two shared pipelines. The tree requirements also add extraneous costs, and the trees have now been eaten by beavers. (marine terminal / port)

Trail Access

It concerns us that trails may be required in this heavy industrial area. If you make it friendly to pedestrians, then it isn't friendly to industrial redevelopment anymore. (property owner / representative)

Areas with heavy industrial activity should not be pressured to accommodate a walking trail. We have serious safety and security concerns about using the Tillamook Overcrossing for a trail because Lower Albina is an active industrial area with rail traffic. The "concrete road" next to Albina Yard is not wide enough to accommodate trail access. (industrial association)

Is a public recreational area compatible with active industrial uses? There is very little recreation activity at the Swan Island parks after hours or on weekends. The Bureau of Parks & Recreation is looking for areas to build soccer fields and has explored a vacant site on the island. It might make sense to build a trail to improve access to these recreational areas and to the businesses. Waud Bluff Trail has been used informally forever. (industrial association)

Northwest Portland has similar trail conflict issues. Front Avenue is narrow and it would be difficult to fit a path or trail alongside, especially in front of Gunderson, where there are many rail crossings. (industrial association)

We are concerned about safety regarding trails through our facilities, because of the hazardous cargo that we handle. There needs to be a separation of uses due to safety and security. We love bike paths, but there is a place for them – not necessarily on industrial lands. It's dangerous to have people on our property – we've never allowed it. (marine terminal / port)

River-dependent use restriction

I'm marketing some vacant land on the Schnitzer property. It's useful heavy industrial land with rail access, but zoning requires that it be water-related. Not every company wants water access. Is it possible to get a variance for a non-water-related use? If you can't get a variance to free up the land, the property would have to go through a partition, which takes time and most clients don't have the stomach for it. One biofuel company likes the site but doesn't have the money. Another investor from San Bernardino is interested in mini-storage with boat access. Of my clients, 30 percent may want water access and the other 70 percent want heavy industrial sites with rail access. There are several properties with this water-related restriction - Time Oil, Atofina, etc. All of those sites also have some semblance of brownfield issues. (industrial broker)

The real river-related users are the bigger users. What about applying the river-related restriction to large sites only? The 5-7 acre sites are less apt for river-related use. (industrial broker)

Swan Island's greenway exemption is sunsetting. That's a cost they'll have to bear. (marine terminal / port)

Other regulatory challenges

Land-intensive requirements (e.g., landscaping, floodplain) are burdensome where land is scarce

Land is at a premium so the 10 percent greenspace requirement is challenging. I like the look of the landscaping, but we're trying to utilize every bit of land that we have. We would rather be able to meet the requirement off site—to build a park or something. (trucking / warehousing)

I've also heard grumbling about landscaping and trail requirements. The requirement for 15 percent landscaping in the IG zone is a barrier to development. One potential customer found land out on Airport Way, but the trail requirement made it unworkable and killed the deal. (property owner / representative)

The balanced-cut-and-fill requirements on the mapped floodplain at this site are a huge impediment for development and for selling the property. Offers received have been based on net developable land, which is a big question mark with balanced cut and fill. Why should we have to create wetlands on valuable industrial land? The floodplain level has changed with flooding in the last ten years. We believe that we should be allowed to import clean fill. (property owner / representative)

We've looked at putting another facility in Linnton, but it is located below the floodplain and would require 18 inches of fill before we could build on it. It's easier to make the investment somewhere else to avoid the permitting headaches. (manufacturing)

I think that our greenway improvements and process are a positive story. Toyota is proud of the work we did, going above and beyond the normal greenway requirements. It was an interesting process. Toyota is trying to position itself to be a good citizen, so we were looking for something positive to do down here, and we weren't sure what would be the right thing. Former Mayor Katz wanted a restored riverbank and Commissioner Saltzman wanted to see a green roof on an industrial building. We felt putting a green roof in the middle of 90 acres of asphalt would be cynical, so instead we designed the building to get LEED Gold certification. The roof is white to reduce the heat island effect. We use gray water to flush toilets. We created a 130-foot wide greenway setback for 1,600 feet along the riverbank. We also did extensive riverbank treatment that filters out stormwater into bioswales before it reaches the river. The Port did most

of the work. In the end everyone was happy and it was a win-win situation. We recently got a Salmon-Safe acknowledgement for our work. The total cost was about \$2 million and we lost four acres of developable land. (marine terminal / port)

The new regulations, like landscaping or environmental, are a burden for the industrial user. (property owner / representative)

There is more non-conforming development on these sites than conforming. It would take millions of dollars to make the development conforming. Requiring landscaping to mitigate non-conforming development is a fire issue near the tank farms, and it takes up valuable land that is already built out or needed for expansion. Instead, the City could help the property owners to clean up and beautify their sites, for example by painting tanks. (property owner / representative)

Aggressive new regulations

Metro's Goal 5 is a frightening new development. Their Goal 5 map encompasses a lot of this area and is floating out there as another "cloud." (industrial developer)

It is hard to rehabilitate the older buildings when there are so many new regulations (i.e., ADA accommodations, landscaping, etc.). Conforming with the new regulations is difficult and expensive. (industrial developer)

Interfacing with bureaucracy in terms of obtaining permits is an issue. It has percolated to the top of the public agenda, but we don't know that the process has improved. BES is talking about incorporating groundwater into the permitting process more, which could slow everything down. (industrial association)

We would like to build a trestle, but it is complicated because it will require in-water work and approval from the Corps of Engineers and the National Marine Fisheries Service. It will be more complicated if the Lamprey Eel is listed quickly as a protected species. (marine terminal / port)

Regulations don't really affect us much except for the new hours of service regulations, which are keeping drivers off the road. That hurts us. It means we need more drivers and more trucks. (trucking / warehousing)

Security requirements are way overblown. It costs a lot of money and requires special permits to put up the barbed wire fences, but it's not making the facilities any safer. Someone could still blow the plants up. The Coast Guard security money is being spent, but it feels like we are forced to provide security that does not do any good. (property owner / representative)

We have a facility plan that has been approved by Homeland Security. We just got approved for \$300,000 in matching funds from Homeland Security, but we have already spent more than that. The funds go towards security cameras, gates, razor wire, 24-7 security for the rack, and guards at the Wilbridge and Linnton facilities. All of our attempts to change the traffic flow at our truck rack to reduce traffic backups and improve safety have run up against security issues. (marine terminal / port)

Expensive environmental requirements

The cost of environmental permits and compliance with the Oregon Department of Environmental Quality (DEQ) is a concern. We sank \$1 million into environmental compliance at Plant 3 a few years ago, while the pollution tax credit program was up and running. We have good working relationships with the folks at DEQ and we want to comply, but compliance is expensive. (manufacturing)

The Department of Environmental Quality now requires vapor-recovery system controls on barge loading facilities. It's a huge expense and removes only a very small amount of pollution. Shell was going to do a \$1 million vapor recovery system in 2001, but did not do it because of the expense and the time involved with the permitting process. GATX has put in the system, though. (property owner / representative)

We have worked with turtle habitat issues. The Port put in a \$500,000 turtle tunnel. Also, setback and mitigation requirements are challenging for redevelopment. Potential setbacks due to salmon may also be an issue. (property owner / representative)

OTHER BUSINESS CLIMATE ISSUES

Mixed perceptions on business friendliness in Portland

Schnitzer Investment Company (distinct from Schnitzer Steel) is selling parcels at the international terminals site. The property has appreciated in value and they're selling land. They can make more money elsewhere, and they're sick of dealing with the City. Schnitzer Investment is significantly disinvesting in Oregon – it's a business climate-driven decision. (manufacturing)

I'm stunned that, when you go elsewhere, how much more they want you. You can tell just by looking at their websites. It's so much easier for private capital to flow to these other cities, such as Cincinnati, Toronto, Philadelphia, etc. These cities are killing themselves to get you to come to them. It is stunning how much several cities show that they want you as a new business. (industrial developer)

A good example of this is Memphis. Just try it sometime. Jump on Google and go to Memphis' Chamber of Commerce website. They give you the "Top Ten Reasons You Want to Come to Memphis". Then go to Portland's Chamber site. You have to break your back to figure out why Portland would want you. That's just reality. Now, you don't have to look like Memphis, and I don't want to be Memphis, but you also don't want an atmosphere where Columbia Sportswear moves to Hillsboro. (industrial developer)

There has always been a lot of mythology that Portland is anti-business. We've never felt that way – except when we were trying to get through a building permit. Some businesses are highly regulated. I meet with businesses that do deal with a lot of regulations and red tape, but we haven't experienced that. We don't run into bureaucrats trying to make our lives difficult. We also approach it differently. For example, we set high standards for ourselves on environmental issues. We're conscious of being part of the community so we get more support than hassles. Consequently, we spend very little time dealing with regulations. We're not even categorized as a waste generator. (manufacturing)

A metals company on Columbia Boulevard is moving their inbound shipping to the Port of Stockton. They first went to Vancouver, but that didn't work out so they negotiated with Stockton. They didn't even try Portland. This could have been a big gain for Portland because they bring in tons of pipe by both rail and ship. (property owner / representative)

Our problem is that we haven't been able to advertise ourselves enough in the past few years. We'd like to participate in the Working Waterfront Coalition and the Portland Business Alliance, but we're running very lean. Our staff is completely overworked and has no time to do the schmoozing. (manufacturing)

We haven't done our job of integrating into the political machine of local government. For a long time our work was generated in Washington, D.C., so we spent time lobbying national senators for Pentagon work. We haven't been putting in the time lobbying at the local level. For example, the ship-breaking proposal that made recent news: If we had done our work right, the first call the Oregon Employment and Community

Development Department would have made is to us. We could have done the work for them and brought them here. We've already got an agreement with one of their competitors in Texas to take that type of work, but it hasn't been financially feasible to bring it here because of the distance. We, as a firm, need to better plug ourselves into the local community, so we're not overlooked for these types of opportunities. (manufacturing)

Taxes

There is a negative connotation of Portland, a general perception that Portland is not business friendly. The extra tax in Multnomah County doesn't help. (property owner / representative)

Housing costs in the Portland area are not a problem. Oregon's state income tax, however, is a big deterrent to firms moving here. (industrial broker)

Another mythology in Portland is about the high tax burden. I'm not saying it's easy, but it would be nice to look at the big picture and know the actual landscape of fees and taxes, rather than just hearing the different sides. Every person has their point of view and can point to some facts to support it. In looking at taxes, fees and regulations, it's hard to say that it's more expensive to be here than in the suburbs or Arizona or anywhere else. It varies by business, but it is good for us as a company to be here. (manufacturing)

Some construction companies are talking about moving to Vancouver because of tax issues. (industrial association)

Property taxes are just nominal for us. But more big tax rates would be a major discouragement for our company. (marine terminal / port)

Oregon and Washington are very different in terms of doing business, both in fuel and road taxes, and truck drivers' licenses. But it's just part of doing business. Offering tax breaks for companies wanting to locate here could draw business. (trucking / warehousing)

Economic development incentives

There's not much money for incentives to entice people to invest in Portland. Enterprise zones and other tax deferrals are great, but they're not money today, they're money down the road. Other states have much bigger funding pools. (marine terminal / port)

We have had a good experience with the Business Energy Tax Credits program, because we can invest in the right technology and then sell the tax credits to a firm that can use them. The credits provide us with an incentive to invest in good technology. Other programs, like DEQ's stormwater program, are not set up to allow us to sell tax credits so public agencies can't use the program. This doesn't make sense, as half the waterfront is publicly owned. (marine terminal / port)

Property owners should have an incentive to get their properties shovel-ready. (marine terminal / port)

Mayor Potter visited Toyota and asked what the City did for Toyota, and Toyota said they got good ideas from the City. From their perspective, it was all requests, no incentives or help. Mayor Katz wanted a 200-foot greenway; Commissioner Saltzman wanted a green roof on an industrial building. Toyota used water from the roof to flush toilets and got LEED Gold certification. But when there are requests, there should be incentives. Maybe we could fund permit assistance using TIF or something. It's not always like that. The Canadians were pleasantly surprised that they don't have to have City Council hearing on their expansion

plans like they do in West Vancouver. But they may have a different experience when they try to build a dock. (marine terminal / port)

Money is a challenge. The dry dock conversion is \$1.5 million, which is a lot of money when you're only making that much a year. We've got to spend \$1.5 million to get a \$200,000 project that will lead to future projects. This way we'll build capacity and expertise. The rail project is \$700,000. We will pursue Enterprise Zone money on that too. This stuff is so speculative that it's hard to find lenders. (manufacturing)

Regarding the Enterprise Zone program, the application process itself works well. But the first time, we needed a map change to get into the enterprise zone, which was hard. We had to testify before City Council. It was a political process, with a 3:2 vote for us. (manufacturing)

Port of Portland relations with business

Some companies will not work on Port of Portland sites because dealing with the longshoremen is too much hassle, and becomes very expensive. This provides an opportunity for us to get greater use out of our dock. Large companies, such as Oregon Steel, don't have a choice; but smaller companies, like Harmer Steel in Linnton, use smaller facilities such as our dock. (property owner / representative)

The Port had proposed sites available for lease or rent, but the charge was more than we wanted to spend, and we wouldn't build equity with a lease. Therefore we were less interested in this arrangement. (property owner / representative)

I've talked to several firms that don't want to deal with the Port. They don't want to look in Rivergate at all. They say there are too many restrictions, that the parcels are too big, and that the Port is only interested in working with larger operations. (property owner / representative)

The Port had proposed sites available for lease or rent, but the charge was more than we wanted to spend, and we wouldn't build equity with a lease. Therefore we were less interested in this arrangement. (property owner / representative)

Perhaps the Port could be more nimble in leasing its sites. It could offer sites for rental on a limited basis, such as 6 months, for a cheaper price. It's better to get someone in there for a short time than to have sites sitting vacant. We get frequent requests for companies to come in and handle dredge materials and spoils, and would like to be able to offer sites to them at a certain price. (property owner / representative)

There are not many opportunities for firms like us to participate in most of the commodities that come into the Port of Portland. The Port's forte has always been bulk commodities, and there isn't much we can do for grain or potash, or even automobiles. (trucking / warehousing)

The Port shouldn't do things that compete directly with, and hurt, private facilities. We need to do things that support the region. (manufacturing)

Some issues we had with the Port were personality driven. Sometimes people don't mesh well. They worked through it. (marine terminal / port)

QUESTION 3: HARBOR ADVANTAGES

What are the primary advantages of the harbor area as an industrial location that should be reinforced?

TRANSPORTATION INFRASTRUCTURE

Multimodal access and West Coast trade gateway

The harbor is Oregon's gateway to the world.

We wanted to have both rail access and dock facilities close to the marine construction activity in Portland. (property owner / representative)

You've got it all here—rail, water, and road access, built out. I would like to see more container import business here in Portland. (property owner / representative)

There is great transportation access in this area with dock and rail. Athough we do not have an active spur on our property, there was at one time. And the City is making major investments in the area, with projects like the Lombard overcrossing. (property owner / representative)

Rail access, water access, close-in jobs, road infrastructure, quality of life, knowledgeable city staff. (marine terminal / port)

The harbor is where the infrastructure is: docks, railroad, roads, the petroleum pipeline. (industrial association)

All transportation modes come together here. (marine terminal / port)

Convergence is the key advantage of the harbor area. The four transportation facilities—marine, rail, truck, and pipeline—all come together here, which is very important. Having all four here is essential. Time Oil was not on the pipeline, which is why it closed. (marine terminal / port)

Having a concentration of multimodal activity in the harbor means that we can be very efficient. Access to the water is a great advantage. We've started to get more involved in rail/water transfers, mostly to barges, and would like to get involved in transfers in the harbor. We see this as a prime opportunity for, if not us, someone else. (railroad)

Connectivity to roads, rail and water in this area is a big advantage. (railroad)

Class 1 rail access to inland U.S.

Rail, rail. Rivergate is served by both Union Pacific and Burlington Northern, which gives us a huge advantage over others in the region. It's a unique treasure that we need to take care of. It was a big part of our decision to build in Rivergate. (trucking / warehousing)

Two thirds of our product comes in on rail and most of the rest by barge. Although truck access has vastly improved over the last 20 years, it is a minor portion of our business today. The only grain that come to us

by truck are from the Willamette Valley, and that grain market is only 10 percent of what it was 25 years ago. (marine terminal / port)

Rail is pretty good here, probably a wash with Seattle, because of intermodal rail improvements in Seattle. A strong container business generally means better rail service because the railroad makes a higher profit on containers than cars. (marine terminal / port)

The balance between the east and west movement of auto-carrying rail cars is out of whack everywhere. Here it probably works better than anywhere else in the country. (marine terminal / port)

Less congested West Coast seaport

The reason we stay in Portland is that it is the least congested major port on the west coast. We don't have to compete with containers. Portland's recent inability to attract the container business has been good for the car business. At other ports, they net a higher value per acre so they steal land from us. For us the cost per acre at Portland is much less than it would be at Long Beach or Newark. (marine terminal / port)

Portland has a less congested seaport than other West Coast cities. (trucking / warehousing)

River access

The river is critical to our economy. It's the reason Portland is even a city. Look how many cities are located on rivers. Historically, water has been and still is the cheapest form of transportation—one barge is equivalent to 100 trucks. For a lot of materials, you have to cross the ocean and get them by ship. Every time you transfer the material to a different mode, it adds costs. (industrial association)

We want to be near a port on the Columbia system, though not necessarily this port. It's good for us to be close to the docks when our vessels come through. Being close minimizes shipping costs. It would be nice to have our own dock, but there's a dock \$3.00/ton of steel away. (manufacturing)

Advanced American Construction recently moved to the harbor from Oregon City. They are a good example of a firm for whom the harbor location in Portland has a lot of advantages because they do heavy construction and in-water work. A couple years ago they toured the Linnton Plywood site because of its harbor location. (property owner / representative)

Some NINA members say the river is dead, but I disagree. A lot of my business comes from the river. (industrial association)

Freeway access

Everyone says they need access to I-5, even though that's where the congestion is. Access to I-205 and Airport Way is secondary. Access to I-84 is important to some firms. (property owner / representative)

The I-5 corridor is an important part of the industrial future for this region. (marine terminal / port)

Proximity to I-5 is one of the most important reasons why the Harbor is desirable. Proximity to the airport is also important for some. (industrial developer)

Three words: trucks, trucks, trucks! How do I get materials in and products out? Ever since the beginning of time, industry has located next to transportation hubs, so truck movement and flow is most important. (industrial broker)

INDUSTRY AGGLOMERATION

Industry clusters

Having a cluster of energy facilities here brings efficiencies for everyone, because we can trade fuels and share facilities. (marine terminal / port)

Proximity to the petroleum terminals and pipeline are extremely important to our company. (trucking / warehousing)

We get scrap from the metals manufacturers, so things that benefit them benefit us. (manufacturing)

Portland Harbor has a focus on bulk commodities, which benefits the wider region. We don't employ a lot of people here directly, but indirectly we create a lot of jobs. Our firm's annual revenues are close to \$1 billion, and our headquarters are right here in Portland. (marine terminal / port)

Our materials come from all over, but we also have some synergy in this area. We get lime from Ash Grove Cement, and sand for back dusting comes in by rail from Riddle, Oregon. (manufacturing)

At this location we're close to our cucumber crop, which is just four hours away at Skagit Valley in Washington. We also get some cucumbers from Sauvie Island, and some from out near Canby. (manufacturing)

I am part of the Working Waterfront Coalition and have attended about half of their meetings. It is a worthwhile group and I plan to continue being a part of it. (property owner / representative)

Large, diverse concentration of industry's customers and suppliers

There is a more diverse mixture of businesses in these areas versus suburban locations. There are also more complementary services (i.e., telecommunications, fiber optics, temporary employment agencies). (industrial developer)

The harbor is close to the markets that industry serves. (industrial association)

The core of our business is in the city because we serve old houses, so we didn't want to be located in the suburbs or in an industrial park. (manufacturing)

Firms also want to locate here because the market is bigger in the Portland area. They don't want to deal with crossing the river on the Interstate by locating in Vancouver, so they would rather pay the extra fees and deal with the congestion here. One firm had a better, cheaper site in Vancouver, but they moved to Portland because of the convenience of not having to move product over the bridge. (property owner / representative)

Railroads are like other infrastructure: concentrated density increases our efficiency. Using a local switching crew is more efficient than bringing in a crew from McMinnville. Getting more manufacturers into the Linnton area would be good for us and more cost effective for their business as well. Our Astoria district provides most of our business. The densest concentration of our customers is within the first five miles along Portland Harbor, including companies such as Trumble Asphalt, Mobile, British Petroleum (BP), and Harmer Steel. Morse Brothers there is developing a concrete plant and is considering rail. We've also had

some market shrinkage in this area since we took over the line in the 1990's from closure of the Linnton Plywood Mill. (railroad)

It is easier to support a centralized cluster of firms as long as they have the capacity. (railroad)

Rare location for heavy industry

Virtually all of Oregon's energy comes through this area. This infrastructure needs to be protected. It was built here, for better or worse. The decisions were made a long time ago. It won't be built elsewhere. I mean, we can't even site a black box generator anymore. (manufacturing)

There are not many places to do heavy materials handling; this area is precious. Look around the entire Metro area – there's not much land left. (railroad)

We are trying to take advantage of this facility because if you tried to build a place like this from scratch, you just couldn't do it today. Has this facility been used to its fullest extent? No way. The harbor in general is not being fully utilized from an industrial standpoint. But the thing is that you've got to find a business that is sustainable. (manufacturing)

Does it make sense for the harbor to remain primarily heavy industrial? Yes, except for Lower Albina. It is ill-equipped for continued heavy industrial use. If heavy industrial firms are investing in the harbor, then it clearly shows that there's a need. (property owner / representative)

Roots in Portland

The only reason we're here in Portland is our history here. We've been here a long time. It's inertia. But we also have a sense of commitment here and a desire to see it grow. I think that was what the fight over the Hollywood Fred Meyer store was about: this idea that "not in our hometown should we be denied having a modern store." (manufacturing)

We wouldn't want to move anywhere else. We've been here since the 1930s and we want to stay because of the investment we already have here. (manufacturing)

LOCATION

Central location in region

The central location of the harbor and its proximity to the central business district are important attributes. There are serious congestion problems getting from Gresham to Hillsboro, so there is strong demand for a central location. (industrial developer)

Location is important. Getting workforce to outlying areas is more of a challenge. (human resources manager / representative)

We have no use for being on the riverfront, it's just coincidental. For us, the advantage of this area is that the location and transportation access lower our freight costs. This area is near I-5 and the rail yards, which is important to us. We have 55 acres of land at 185th and Marine Drive, where we planned to expand earlier but decided against because of the higher freight costs there. Most of our packages are headed north-south rather then east-west. Even if we moved more functions to the 185th location, this facility on

Swan Island couldn't close. An airport location might be a toss-up with Swan Island for transportation costs, but land costs are higher there. (trucking / warehousing)

We need to reinforce the great location of the harbor. We are so central to the ability of keeping freight moving through the region. The diversity of transportation makes this area. (industrial broker)

Many of the firms that are moving into Portland's industrial areas are coming from other locations with more congestion problems and commercial and residential gentrification. They are growing their operations and they want to stay in Portland, because their customers are here and Portland has workforce advantages. The Harbor is a central area that allows a firm to draw on the region's workforce. So firms look around and realize that leaving Portland for the suburbs doesn't make sense logistically. A good example is a company currently moving from Mississippi Avenue to Lombard Place, so they don't have to worry about losing their workforce to a long commute. (property owner / representative)

The harbor is in the hub of the metro area. It's centrally located and it's close to our workforce. Twenty to thirty percent of Freightliner's employees live in northeast Portland. Many of Madden Fabrication's employees come from northeast Portland as well. (industrial association)

Harbor districts

The industrial land here is a unique and finite resource, like a wilderness area. Many companies are river-related, and many that aren't are here to be close to key firms that are river-related. Much of the land is already constrained by environmental issues, size, and proximity to transportation. If we give the industrially-zoned land up now for trails and recreational facilities, it will be impossible to convert it back to industrial land in the future. Twenty years down the road we may need that land. I don't understand why open space on the harbor in Guild's Lake is being considered. (industrial association)

Fifty years ago, there were many timber and aluminum facilities on the harbor. Over time, these industries have declined and have been replaced by others. We still have the metals industry. Today, new industries are wanting to locate in Lower Albina for the same reasons: the area is a nexus for the regional and the national transportation system. This setting would be difficult, or impossible, to recreate somewhere else. (industrial association)

The whole Rivergate area is a prime industrial location that is close-in and accessible. (property owner / representative)

We don't have trouble with trucking around here [Rivergate]. It's pretty isolated, so it doesn't have as much traffic as other places. (manufacturing)

Vancouver's advantage is the availability of more industrial land. Columbia Gateway is the largest contiguous heavy industrial site available in the metro area. The Ridgefield Corridor in northern Clark County is also a significant opportunity for industrial development. There is agricultural land in mid-county as well that could be good industrial land in the future. (marine terminal / port)

Our cars don't get anything on them that harms them while they are sitting in our lots here. Because we are so far inland, they don't get covered in "stack ash" from ships. We don't have to wash our cars here like we do in other places. (marine terminal / port)

The topography is flat. (property owner / representative)

WORKFORCE

Advantageous labor pool

We have a large and sufficiently mature workforce. (marine terminal / port)

The education level of our shop and office workers is better in Portland than in many other places—in terms of basic math skills, for example. We hire many of our engineers from Oregon State University, University of Portland, University of Oregon, etc. This is a good place to recruit people. Having a good quality of life helps too. (manufacturing)

We do have ample workforce to draw on here in a populous area. It's way better than being stuck out in the middle of nowhere, where it's tough to find people. It's hard all over the country to get people trained and retain them. We haven't had problems getting seasonal workers. (manufacturing)

Most of our workforce lives in the central core of Portland, so that was another factor in our decision to locate here. It's easier from this location to recruit and retain assembly workers. We compete with high tech firms in Hillsboro for our two labor pools, assembly and customer service workers, and we have the edge because of our location. Except it was harder to compete during the tech boom, because those companies were offering stock options to people just to answer the phones! But, in general, our location gives us a competitive advantage. We're closer to affordable housing – although it has gotten less affordable in the last few years – and we're better served by public transit. We offer good benefits, but unskilled workers come in at approximately \$10 per hour, so the commute cost factors in. There is a bus stop nearby. (manufacturing)

We haven't had a problem finding people. Folks here like having their afternoons free. Also union members seem to expect to go to work at crazy hours. (manufacturing)

Quality of life attracts workers

The quality of life in Portland makes up for some of the barriers. (industrial developer)

You can go anywhere in this country and, typically, see emptied out downtowns, neighborhoods that lack vibrancy, and miles of homogenized commercial strips. I recently drove nine miles through a city in Idaho before I saw one business that could be independently owned. I think Portlanders forget how cool it is that we have these quirky, independent businesses and restaurants and neighborhoods of old houses. My daughter is in school at Sarah Lawrence and all her friends are moving to Portland. Not as a third choice after San Francisco and Seattle, either. I may be the last to realize what the young creatives know. Gritty industrial areas are part of what is wonderful here. Preserve the riverfront. Building a Home Depot at the end of the Burnside Bridge represents the worst instincts. What makes Portland cool is that it's different, unique, independent and quirky. We have to realize what advantages we have and not throw them out. The mass is never going to be there for certain kinds of things. (manufacturing)

The river is a unique amenity – something we should take advantage of more. (human resources manager / representative)

You can't beat the climate. We don't have any snow removal costs. We have good neighbors. (manufacturing)

Good location to attract executives

Another factor is that executives live in the West Hills and they want to be close to their facilities, so a northwest location is ideal for executives. Those making the location decisions are often willing to pay a little more to be located closer into downtown Portland. (industrial developer)

It is easy to recruit management in Portland, due to relatively affordable housing in the area and a fairly easy commute. The commute time to work and the airport in Portland is the best of any major city on the west coast (a 45-minute commute is rare here, but is common in other cities). However, there are firms that aren't even looking at Portland or Seattle because of housing costs, even though Portland's costs are still better than Seattle, San Francisco or Los Angeles. I hear about managers' housing choices way more than employees'. Some managers say that if there is a problem with employees finding affordable housing, they will just hire other workers. (industrial developer)

You find out where the president of a company lives, and that is where you should start looking at sites. (industrial broker)

INDUSTRIAL SANCTUARIES

Commitment to industrial land base

The fact that we've committed this area for industrial use is a powerful message and selling point. (property owner / representative)

Portland has done a pretty good job of protecting places like this. In lots of cities, these places are in the middle of nowhere or have been converted to other uses. (manufacturing)

The industrial sanctuary is very important to us. Land use conflicts to our south cause some problems for us. Encroachment is a threat. If the sanctuary erodes, that would seriously affect our business. (manufacturing)

One strength of Portland's land use policy has been its commitment to the industrial sanctuary idea. And we've held onto it until very recently. That sanctuary policy served us well and helped our manufacturing in comparison to other communities. (manufacturing)

If we can continue to preserve industrial land, we'll have a competitive advantage for the future. It's very important to hold onto our industrial land because who knows what opportunities will be out there in 10-15 years. Maybe the City should also be considering new sanctuary areas for industrial growth off I-5. (manufacturing)

Separation from housing

This is the only plant we have [of 15 in the U.S.] that is in a protected industrial area. Many of our other plants around the country have been encroached upon by residential development. They'll never be able to expand, and they have frequent neighborhood meetings to work out issues with the residents. A protected industrial sanctuary is the biggest thing we've got going for us here. We make noise, we're a brownfield, we're an industrial facility – luckily, we're in the midst of other industrial users that don't care. (manufacturing)

The area is fairly well-buffered from neighborhoods, which is perceived to be a good thing, although there is more sensitivity now. (industrial developer)

Since this is not a residential area and is free from housing congestion, it allows us to operate 24/7. This is critical to our business. In order to deal with the congestion on the roads, we need to have the ability to work "off" hours. We need to keep this area non-residential. Spend the time to get input from everyone on what makes the harbor a workable place, and develop a consensus on what it takes to make an area work for industry. This area is our strength. (trucking / warehousing)

Some room to grow in Portland

We've got to look at some of these contaminated sites, particularly the super sites. The Atochem site is a fantastic location. Brownfields and Superfund sites have lots of potential, but no one wants to touch them because of the liability issues. (railroad)

Another advantage at Portland is that it has some extra capacity that other cities don't have. It is a shame about the longshoremen and the underuse of T-2. It is a beautiful facility. (railroad)

QUESTION 4: PRIORITIES FOR PUBLIC INVESTMENT

A. TYPES OF INVESTMENTS

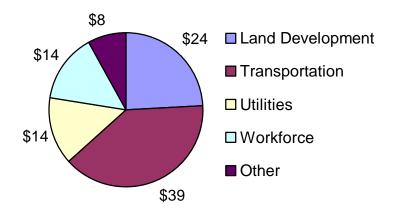
Assume that local governments have a hypothetical budget of \$100 to spend on the following types of public investments in the harbor industrial districts over ten years. If the priority is to encourage industrial retention, expansion, and development, how much should be spent on each type and why?

\$ redevelo	land development (e.g., urban renewal, marine terminals, brownfield cleanup/opment);
\$	transportation (e.g., streets, highways, railroad);
\$	utilities (e.g., sewer, stormwater, water);
\$	workforce (e.g., education, training);
\$	others. Please specify

The average results by type of interviewee are as follows:

		How would you spend \$100 of public funding				
		Land				
	Respondents	Development	Transportation	Utilities	Workforce	Other
Industrial Developers	4	44	38	15	4	1
Industrial Brokers	3	30	43	17	7	3
Industrial Associations	3	32	28	10	15	15
Property Owners	6	38	31	11	5	14
Marine Terminals & Ports	6	27	42	8	6	18
Railroads	4	24	65	4	1	6
Trucking & Warehousing	8	20	46	6	21	6
Manufacturing	14	11	30	27	28	4
Overall Average		24	39	14	14	8

Interviews with some businesses included two to five managers responsible for different aspects of the business, some of which responded to question #4 differently. Since each respondent represents different expertise, the averages calculated above give equal weight to each respondent, whether in the same business or a different business. If the averages were calculated differently, counting only one averaged response for each business, the total results would have varied only slightly, as follows: land development, 27; transportation, 40; utilities 11; workforce, 13; other, 8. The range of "other" responses are included below.



Preface comments

How will comments be interpreted and used?

My numbers on priorities mainly allocate the level of effort, not necessarily the level of public funding. (industrial broker)

I am critical of the City's "if money is no object..." way of determining priorities. We need to know what the full amount is to make choices – money is an object. (industrial association)

What good will come out of this exercise? What will the city do with these numbers? (industrial association)

Plan strategically for harborwide needs

One of my concerns is that there are lots of programs in place, many fingers in the pie, and no overriding strategy in place to pull it all together. So things are done piecemeal. (trucking / warehousing)

It is forward-looking for the City to attempt to balance industrial needs with the rest of the demands on the river (trails, boat launches). Let's not forget that industry is important to the overall functioning of our society. (marine terminal / port)

Why \$41 of \$100 should be spent on transportation

Need robust transportation system

Transportation is critical for businesses, for the Port. A robust transportation system keeps our region competitive. Plus, congestion is a very high cost to businesses, so an efficient transportation system is attractive. Also, transportation is one of the major roles of the public sector. Who is going to invest in someone else's road? Wetland mitigation could be handled regionally. (marine terminal / port)

We need to creatively build on the infrastructure we already have. Transportation is the biggest complaint I hear about. (property owner / representative)

Street infrastructure is a tremendously important piece of the puzzle. The rail infrastructure is what it is. If you can't move goods around, then there are no jobs and you don't need workers. (marine terminal / port)

My top pick is highways and railroads. We've got to do something about getting over these bridges. Even in terms of the trucking industry, we have to look at the bridges to allow them to get from Washington to Oregon and back. Rail can't help trucks if the trucks can't move. (railroad)

I'm on the freight committee and this is the first time the City has given a hoot about freight movement. We're finally getting to talk about curb radii, lane widths, etc. Usually it's just about curb extensions and bike lanes. (trucking / warehousing)

Land development and transportation are both priorities to us. Which is more important? – it's the chicken and the egg problem. Congestion is a big problem for the economic viability of this region. (railroad)

Transportation infrastructure must come first because it does not do any good to have land ready if the transportation infrastructure is not there. (railroad)

You've heard me talk about transportation already. (marine terminal / port)

The public sector should do things the private sector can't. We can't build roads. (industrial developer)

Transportation funding gap

The transportation needs far exceed what is budgeted. The system is not failing yet, but it will not support projected demands in the future. I don't want to see investment limited in the harbor area because of a constrained transportation system. (industrial association)

Where do we find the money to do all this stuff without increasing taxes? (trucking / warehousing)

Would the freight community support tolls as a funding source for major improvements? There is some support for toll bridges, but the devil is in the details. What will it include? Just I-5 or also I-205? Some Vancouver commuters think they should get a deduction on their taxes if they have to pay a toll. Freight is willing to pay its fair share in order to get through faster, but we don't want to pay for the commuters. I don't necessarily agree with tolling the I-5/I-405 loop. I've heard of tolls being proposed there to meet social engineering goals, acting as a stick to incent people to take other modes of transportation. (manufacturing)

Would the freight community support higher gas taxes, possibly indexed to inflation, to pay for more road improvements? Raising gas taxes is a sore issue because the trucking community has been split on it. Business isn't necessarily opposed to an increase. We need to get to the natural threshold levels. There are efforts to find alternative funding besides the gas tax. Also, we don't want to give free rides to hybrids or others. Washington has creatively applied the gas tax to particular projects. (manufacturing)

We have to keep freight moving somehow. But how do we find the money to maintain the transportation infrastructure? (industrial association)

Funding is a big deal. It will be a challenge to get funding for huge, long-term infrastructure improvements. It is unclear what we will contribute and what the State of Washington and the customers will be able to contribute. The gas tax is limited to highways. However, the state's nickel tax from a few years ago is funding the Vancouver Yard Bypass. (marine terminal / port)

The Port tries to be self-sustaining—our customers like that. We get some property tax funding. We've received some federal funds for developing the Columbia Gateway and Rufener sites, but may need to look at general obligation bonds for additional funding. (marine terminal / port)

Rail

The ability to get product to our doors is essential, so investment in the rail infrastructure is most important to our company. We advocate full buildout – wherever you can put rail yards, put them. Once the space is gone, and there is no room for expansion of the trains, the opportunity is lost. Trains are not getting smaller. In fact, Union Pacific is already adding trackage for 150-car trains. (marine terminal / port)

Rail infrastructure needs work. The state of the rail system impacts the whole state. (marine terminal / port)

Rail needs to be on the list of priorities. There is a huge freight bottleneck in this region, both east-west and north-south. We don't know what public investment should be made in this direction, but we need to make a public effort to look at the problem, elevate the conversation, and provide leadership. (industrial association)

Rail - We currently do not use rail as a transportation option. Due to the limited number of rail users on this side of the river (Linnton area), it is not cost effective. Rail access is not useful if it is just as expensive as trucking. (property owner / representative)

Rail is a big issue. We need to make rail access easier. In some of our negotiations with firms looking for sites, if we could have gotten rail access on the parcel, we would have had takers. (property owner / representative)

Figuring out the railroad mess is important. (trucking / warehousing)

Rail needs do not appear to be a big problem on Swan Island. We only see a half-dozen rail cars 3-4 times a week dropped off for Cascade General. Freightliner sees about the same amount of rail activity. Freightliner also has a relationship with UP to pick up several dozen containers daily at Albina yard. (industrial association)

General rail efficiencies would help. Efficiencies are needed in more than a big project. We don't know the specifics of what they need to do. In Willbridge they drop off rail cars that sit there through the weekend, since there are no weekend crews anymore. There are four switches between Eugene and Portland, each switch requiring its own crew. (manufacturing)

Rail problems aren't unique to the Portland. (manufacturing)

You didn't bring any locomotives with you, did you? (railroad)

Competitive channel depth

How should we, particularly the Port, position Portland to handle post-Panamax ships? We need to anticipate what it will take to keep Portland competitive as a seaport in the global market. Should we continue to be a niche port or something bigger? (industrial association)

Making sure the harbor can compete is critical to our business. (marine terminal / port)

Regional highway system outside the harbor

Freight access to the southern part of the region and the Sunset Corridor also need to be considered. The Sellwood Bridge issue is a challenge. (industrial association)

Street projects can be economic catalysts

You can trace three great industrial districts in Portland back to transportation projects in the last 15 years: the extension of Airport Way; the overpasses in Rivergate; and Going Street access to Swan Island. (industrial developer)

Streets

Truck access in Rivergate is good, especially with recent improvements to the bridge. We haven't had issues with getting through St. Johns. (manufacturing)

Roads - We have no concerns in this area. Highway 30 is adequate for our needs. If we were a production facility, however, it would be difficult because street access into the site is not very good. (property owner / representative)

Why \$24 of \$100 should be spent on <u>land</u> <u>development</u>

Land is key

Land is key. You need to have available land. (manufacturing)

If you want to grow an industrial base, you need to have land. It could be old industrial land that redevelops. Unfortunately, a lot of industrial land is also converting to residential. (marine terminal / port)

We originally wanted to put all the money into transportation, but decided to put \$20 into land development. If we take care of land development and transportation, the other pieces will come with it. (railroad)

Invest in brownfield cleanup

My allocation to land development is meant mainly for brownfield and Superfund. (marine terminal / port)

The challenge is to free up brownfield sites. Someone needs to acquire or condemn them, assemble the parcels, and clean them up. (industrial broker)

Transportation and brownfields are the two biggest issues to address. (industrial broker)

Land development is so important for brownfield redevelopment. (railroad)

I think we need to invest now in environmental cleanup to ensure land for future business and societal opportunities for the next generation. (industrial association)

This money should go towards cleanup of contaminated sites. (trucking / warehousing)

I like idea of expanding industrial land availability by cleaning up brownfields, even though they would not be available to us because of food grade issues. (trucking / warehousing)

The only land development I would want to put money towards is figuring out what to do with our landfill in Willbridge. It's a closed landfill that we may want to consider for development sometime. (manufacturing)

Now that we have a building where we don't have worries about brownfields, I can say this, to put the money in transportation and workforce. If I put my civic hat on – yes, brownfields are also a big deal. (manufacturing)

Don't subsidize brownfield cleanup

I see land development as being a self-regulated by the private sector, driven by high demand. The businesses already here have what they need in terms of land. It is not necessary for government to get involved in brownfield cleanup. Cleanup costs should be incorporated into the price of the land. (industrial association)

There are private investors willing to clean up brownfields. The problem is that the owners are greedy and are asking too much money. It's a market issue, not a public investment issue. Public money should not be invested in brownfields. Owners often want full price for the land when it will take another \$2 or more per square foot to make the property work. The owners need to wake up or decide to leave the property to their heirs. (industrial broker)

The public sector can't and probably shouldn't have a major role in brownfield redevelopment on private sites. (manufacturing)

Harbor Superfund project

There's no quick fix that you can do on the Superfund project. (industrial broker)

As for Superfund, the City is asleep at the wheel and needs to realize that they are a polluter, too. They will have to pay a lot—just look around the country. (manufacturing)

Urban renewal

NOT urban renewal. (manufacturing)

Cross out urban renewal. Invest in port terminals. (railroad)

I don't think urban renewal is a tool that works in industrial areas by definition, because it depends on raising property values to generate tax increment funding. So I'm putting the bulk of the money into transportation. (manufacturing)

Land development is a priority. It's important because it gives us a bigger pool of sites to draw from. I vote for using more urban renewal money on industrial development. We are doing that in the Willamette Industrial Urban Renewal Area. (property owner / representative)

Vacant land development

New developments at Rufener and Columbia Gateway are important land development opportunities. (marine terminal / port)

T-4 redevelopment

The Port could give Union Pacific Terminal 4 for their intermodal. But if I were an investor, I wouldn't do that. Instead I would find 200 acres somewhere, probably in Washington (maybe Longview), and spend \$50 million to do it right. (marine terminal / port)

Land bank

Some thought has to be put into a land bank for future river-dependent needs and expansion. (industrial association)

Why \$13 of \$100 should be spent on utilities

Utilities in good shape

The utility services in the Portland area are affordable, reliable, and of excellent quality. (industrial association)

Utilities here are well established. (marine terminal / port)

Don't know utility needs

I don't know what kind of utility upgrades we might need. I'm running in the dark there. (industrial association)

I don't know what utility upgrades are needed, but we should put money in reserve for replacement projects. (industrial association)

I don't know if this is a barrier or not. I don't have a lot of visibility on it, but I am sure there's some need out there. (railroad)

What about the solid waste situation in Portland? Where does it go? Does our landfill have adequate capacity for growth? You should think about that because down the road it could be an important issue for recruiting industries. (manufacturing)

Sewer and stormwater

We had an existing stormwater outfall at our site that is big enough for our needs. If we hadn't, this would have been a huge investment for no payoff. (property owner / representative)

Sewer and stormwater utilities here need attention. (trucking / warehousing)

I'd spend my utilities money on projects to deal with stormwater runoff. (manufacturing)

CSO really scares me – it's a bottomless pit. (manufacturing)

The Big Pipe will come down this street and we're worried about how that will affect traffic. We'll be under construction at the same time. It will be a huge mess. (trucking / warehousing)

Utilities are such a high cost to us. We heard the City was thinking of spreading out the BOD surcharge among more users. Currently, restaurants are not billed. Only the top 80 users are monitored and billed, and the other users don't pay. (manufacturing)

In the Fall the leaves from street trees plug the gutters and the streets flood. What a mess! (trucking / warehousing)

Energy

Water and energy are important commodities. (manufacturing)

Telecommunications

We are getting a high speed internet system in the near future, with a T1 line. (property owner / representative)

Two of our buildings communicate via antenna. The other two buildings don't have that capability, but we wish they did. We would like ethernet because we have a lot of data we need to send back and forth. (trucking / warehousing)

Telephone service is not very good; we have chronic problems with service. (manufacturing)

Utilities are part of land development

Utilities go along with the new developments at Columbia Gateway and Rufener. (marine terminal / port)

Why \$13 of \$100 should be spent on workforce

Workforce is high and increasing priority

Everything starts with workforce. If we don't have the workforce, we won't be successful. If the workforce isn't there, no one will invest in a location. (manufacturing)

I think that workforce is the most important issue. We've spent a lot of money on workforce training: we work with all the local workforce training programs, we've used some state grants, and we even have an apprenticeship program through PCC. Our plant's technology has gone from 40 years old to state-of-the-art. It's hard to find people with the skills to keep those processes running. It's very technical now. The wage range at our plant is \$14-27 per hour. (manufacturing)

Several of us here went through this list and these numbers reflect our group results. Some of us would have spent \$50 on workforce since it is such a huge issue. (trucking / warehousing)

Given that the issues are less about infrastructure and more about the high number of employees, I would probably divide the money between transportation and workforce. (manufacturing)

Education is important. (trucking / warehousing)

Workforce is important but other resources are already addressing it

Workforce is low on the list, not because it's unimportant, but because it has other sources of funding. There are lots of outside entities to help with this already. However, this is a priority for some employers. I don't want to downplay the workforce. If other resources dry up, like federal programs and the local community colleges, then the workforce will need more money. (property owner / representative)

Having a well-trained labor force is important, and getting enough truck drivers and rail employees have been issues recently. However, I'm not sure I see more workforce investment being as critical. We've been very involved in workforce development. Our community college has been a leader. I think our region has a sufficient workforce available. There are shortages of workers at times, but I think we will be okay. (marine terminal / port)

We should put a little bit into workforce, but I think the workforce development programs are too administration-heavy and that the industry needs should be provided by the private sector. (manufacturing)

Workforce is important, but I can't visualize what the City would do about it. (manufacturing)

The education system and workforce training programs are not a problem. The local community colleges are doing a good job. (industrial association)

Workforce is not an issue for us. (manufacturing)

Mixed importance of training among industries

We have to train our workers ourselves anyway, so the workforce training programs don't help us. (railroad)

We are not seeing a problem in workforce training. We get low skilled people and train them ourselves on the job. There is no generic program that teaches the skills we need, because the skills are so specialized. (railroad)

I don't feel that industrial labor, like material handlers, equipment operators, and forklift drivers, needs to be that highly skilled. (property owner / representative)

The importance of workforce depends on the employee base and skill level of the company. (industrial broker)

We need our seasonal workforce to be technologically competent, but they don't need to have much education. They just need to be able to follow instructions, get around equipment safely, etc. Language is a challenge to some extent. We work with the State and Work Systems, Inc., as well as other employment agencies. (manufacturing)

We work a lot with the school system. The bulk of our part-time folks are recruited off of local college campuses. We have had students in zoology and botany that ended up staying after they graduate. We have a school-to-work program for high school students—we even have a study room for them. We also have tuition reimbursement programs. At other locations, we have programs for people on welfare. (trucking / warehousing)

Languages are a big issue for us. We have trouble hiring and most applicants only speak English as a second language. (trucking / warehousing)

Education is a regional economic priority because of high tech

Education is an economic development priority in the region for a different reason than workforce access. It is because high tech and R&D industries flourish near universities. (industrial broker)

Education and training systems have deficiencies

I see money being invested into workforce training and community colleges, but those programs are not meeting the needs of employers. Larger employers do their own training programs, and smaller companies cannot afford to train their employees. (industrial association)

Are there still any trade programs offered in the high schools for students that can't afford, or just aren't going on to, additional schooling? The Metals Industry Consortium is working to implement training programs in schools to build a future workforce. (industrial association)

Need a different model. (manufacturing)

We would like to see more students who are choosing a vocational track coming out of high school with a strong foundation in the basics of math and English. (manufacturing)

Provide workforce amenities and needs

We could use more amenities for employees in Rivergate. Things like daycare, restaurants, quick-stops, and better transit service. Daycare nearby would really help our workforce. If you want to draw people out there, you gotta have daycare. We could also use some blue collar (affordable, family style, fast food) restaurants here so that employees don't have to go all the way to Delta Park and back on lunch break. (trucking / warehousing)

Amenities for workers should include mass transit. We have mass transit but the bus schedule is bad. There is no bus service on the weekends at all. A lot of temporary employees use the bus. (trucking / warehousing)

We've heard from the Port that it's not their vision to provide amenities in Rivergate. The Port has not paid attention to the humanistic side of things. Though we do have the walking paths along the lakes. Our employees use them and enjoy them. Of course there are no sidewalks on Leadbetter. (trucking / warehousing)

Affordable housing is another big issue. As we move into the future with a lot of energy issues, we should be encouraging shorter commutes. When I hire someone, if they live in Beaver Creek, I know the commute will be so miserable they won't be working for me in a year. (manufacturing)

Why \$9 of \$100 should be spent on other priorities

Business assistance and incentives

There needs to be an incentive, a return on their investment, for companies to want to move into specific areas of Portland. There should also be specific reasons for directing companies to certain areas, not citywide money available for firms to come here. (industrial broker)

Looking at the URA, some areas there are still the most expensive location alternatives, and incentives are minor in comparison. Incentives are rarely a driver. (industrial broker)

I think incentives make sense help to create jobs.

Building Airport Way made sense to create an opportunity for new business. (industrial broker)

I really question the use of limited public funds for incentives. Money should go into infrastructure first. Using public dollars to relocate a hospital across the road into Portland doesn't make sense. (industrial broker)

Coordination among ports/cities

This is one region. We are very supportive of regional coordination, and we need to continue a good working relationship with Portland. The idea of merging the Port of Vancouver with the Port of Portland has been brought up, mostly from Portland. Vancouver is not as optimistic about the possibility, partly from concerns that we will be swallowed up. We would also have to resolve the problems of different tax systems, labor unions, etc. In the last few years, we have been working together on a lot of projects, and

we've come a long way. It doesn't make sense for us to compete with each other. Regardless of whether we merge or not, we should work together. (marine terminal / port)

Coordination among cities. (industrial association)

Are you talking to the Port of Vancouver? You should pool your resources and coordinate investments with them. (trucking / warehousing)

Does the City of Portland interact with other city governments, such as Seattle or San Francisco? It's an opportunity. (industrial broker)

Safety

We've had three major floods. A 9.0 earthquake is expected sometime in the future. Hazmat and fire safety are also concerns in the industrial areas. We need to put some money into emergency preparation and protection from disasters. (industrial association)

Flood control is a big issue. Also, insurance rates. (trucking / warehousing)

Target industries

Portland used to be more of a world class heavy industrial area. There aren't any big machine shops here anymore. It would be great to try to get more manufacturing in Portland again, such as high quality machine shops and high tech, though I don't have much confidence that it's going to happen. We could target firms like Tube Turns and Northwest Pipe that bring in product and add value. They are making something, not just holding or storing something. (property owner / representative)

If we have money to spend, what can we do to add value for a couple of our key sectors? For example, could we become the west coast hub for electronics recycling? Or, there has been a lot of news recently about ship breaking, asking could you do it here? They could be asking about ship breaking, "Can we do it right?" This would be a good opportunity for Portland if we want to create something unique. Figure out what others are not doing. Portland needs to find its niche. (manufacturing)

B. TOP PRIORITY PROJECTS

What three specific projects from these categories do you think would be most effective catalysts for private industrial investment in these districts?

Freeway and street transportation

I-5 projects

The I-5 bridge and rail issues immediately come to mind. Transportation is critical. (marine terminal / port)

It would be great to wave a magic wand and fix things on I-5. This should be the priority project. (industrial broker)

The money for transportation should be heavily weighted to roads, including the I-5 bridge and Delta Park. This I-5 thing is killing us. (trucking / warehousing)

A big issue is the I-5 / I-84 interchange. Also, we need to build another bridge across the Columbia to Vancouver. (industrial association)

Spending \$6 billion on an I-5 tunnel in the Central Eastside would be frivolous. We could get so much more out of our money if it was spent on other things. (industrial association)

A new I-5 bridge would be nice. Sometimes our cucumbers from Washington are held up, which is a problem because cucumbers are fresh produce. If they bake in the sun for two hours longer, it makes a difference in terms of the quality. We want our customers to be able to enjoy a good, crisp pickle. (manufacturing)

The biggest project is I-5 and the bridge congestion solutions. (property owner / representative)

I-5 is a bottleneck. It affects commuters and businesses. (marine terminal / port)

I-5 is a bottleneck in the Metro area. The I-5 bridge needs to be fixed. (marine terminal / port)

You've got to talk about the I-5 bridge project and the I-5 corridor widening project. Also, the I-5/I-84 interchange is the most congested interchange in the state. Distribution centers need good freeway access. You're not going to be able to site an industrial facility without reasonable interstate access. (trucking / warehousing)

The I-5/I-84 interchange is a specific problem. (trucking / warehousing)

I-5 at Delta Park and bridge. (trucking / warehousing)

I-5 northbound and bridge. (trucking / warehousing)

The I-5/I-84 interchange is terribly congested, and it's not even on the docket to be improved. (manufacturing)

Freight corridor designation and truck design improvements

Creating designated freight corridors in these areas would be a huge selling point. Truck design improvements in the industrial districts are also important. A project with impact to freight and transportation would be seen as a big win for the freight community, and would show our commitment to heavy industry. (property owner / representative)

Transit improvements

Decrease single-occupancy vehicle use. Expand the bicycle and transit systems to increase freight capacity. (trucking / warehousing)

St. Johns truck improvements or a new bridge

The St. John's Bridge is a problem. I'd love to see a new bridge. A Westside bypass bridge is really needed; one should have been built 20 years ago. (property owner / representative)

Some roads, particularly the St. Johns Bridge, are a barrier to redevelopment along the harbor. The best solution would be St. Johns street improvements to get to the bridge or even a whole new bridge from Rivergate to the Northwest Portland area. It is surprising how many folks use this route. It is hard to move freight across the bridge and make all the turns through St. Johns. (industrial developer)

We need a bypass around St. Johns, so that we can head south. Perhaps another bridge would be best, so trucks don't clobber St. Johns. (marine terminal / port)

We need to find an alternative route from the north to the harbor. The St. Johns Bridge is a problem. One major reason we moved here was to avoid using the St. John's Bridge. Now we can use I-405 instead. (trucking / warehousing)

Leadbetter overcrossing / extension

Extending Leadbetter would be a good project. The fact that there is only one route for ingress and egress is a major concern. (trucking / warehousing)

Another important project is the at-grade rail crossing at Leadbetter. (trucking / warehousing)

Directional signage to large warehouse/distribution facilities in Rivergate

Putting up directional signage would be a great project. Invariably we get drivers that haven't been here before and it's so complicated to get here. It takes us forever to explain to trucks how to get here. Since the Port won't allow us to put a sign on Marine Drive, the trucks go right by. (trucking / warehousing)

Yeon Avenue and Guild's Lake access to I-405

Faster and easier access to I-405 from Guild's Lake is very important. This would really benefit the region. (industrial developer)

Perhaps we should limit access to St. Helens and Yeon. We need to manage the access on St. Helens Road by configuring driveways to keep the traffic flowing quickly. ODOT owns the highway, so that is not a formula for a quick solution. (industrial developer)

Front Avenue and Highway 30

Front Avenue (Naito Parkway) and Highway 30 both need to be improved.

Naito Parkway. (marine terminal / port)

Naito Parkway should be a marquee show road for Portland but currently it's extremely potholed and in very bad shape. (marine terminal / port)

Traffic lights to frontage roads in Linnton

A traffic light is needed in Linnton. I don't like having trucks lined up and down the road in front of other businesses. (manufacturing)

Swan Island access to I-5

Getting to and from Swan Island is difficult due to congestion.

Intersection of Interstate and Going. (trucking / warehousing)

Going Street bridge. (trucking / warehousing)

The Going Street bridge / secondary access to Swan Island is a high priority. It's scary that there's only one way in and out of there. (trucking / warehousing)

Secondary access to Swan Island (trucking / warehousing)

Basin Avenue congestion (trucking / warehousing)

Columbia Boulevard

Upgrade Columbia Boulevard through Rivergate to I-5. (marine terminal / port)

Also, there is congestion on I-5 south of Marine Drive. The improvements to the Columbia Boulevard interchange have had positive results. (industrial developer)

Burgard-Lombard improvements

Burgard Bridge is weight-limited. (trucking / warehousing)

Driveway intersection improvements and signalization at T-4/Schnitzer site. (manufacturing)

URA funding on facility-specific infrastructure (trucking / warehousing)

Facility infrastructure improvements are needed. Through URAs, enterprise zones, etc., give me money for facilities-specific projects so that I can get creative. (manufacturing)

Rail transportation

Rail service improvement

Improve railroad service. (manufacturing)

We would like to see improvements in the rail service. But what? How? What can we do to get Union Pacific and Burlington Northern to get their act together? Railroads are making record profits despite being poorly organized. So what will incent the railroads to make changes if they can profit without doing anything? The government has a few points of leverage with the railroads, including Connect Oregon, the tracks that are on City right-of-way, and the permitting process. (manufacturing)

We need a better strategy for rail. We need real service. (manufacturing)

Rationalize and expand UP yard space

Moving our intermodal yard is our first priority, and it would spark harbor business. But where should we move it? Putting it at Brooklyn Yard would not improve our intermodal capacity very much, and we need to think about future growth and expansion. We also need additional contiguous acres as a buffer just to keep nearby development away so that we do not get "squeezed." We say now that we need 200 acres for an intermodal facility, but in order to allow for growth to continue to occur, 200 acres may only be half of what we will need in the future. Also, we are getting larger ships into Portland already, so we need to take that into account. (railroad)

The Reynolds site in Troutdale is 800 acres. It is the perfect location, because it has rail and water access and we could get enough land. We would like to zone 100 acres of it for intermodal, but Troutdale does not

want the facility there. The trucking companies will not be happy if we move the intermodal facility because many are on Swan Island and they do not want to go on big roads to get to us. (railroad)

Much of our congestion in Portland is because UP still hasn't rationalized the conflict between their intermodal and manifest facilities. It would help us immensely if UP could deal with, and resolve, this issue. About 20 percent of the time when we show up at the Brooklyn yard with a train, there is no room and we are told to go home, which destroys our efficiency and undermines our cost basis. It's important to us for UP to consolidate all manifest switching traffic to one yard to improve velocity. One option would be to get the intermodal facility out of Albina and move all of their manifest traffic from Brooklyn. (railroad)

Kenton line double-tracking

Many projects can be done to this entire line. As mentioned earlier, this is a critical rail line to the health of Portland. We would like to double-track the entire length. Overcrossings would add capacity. Ten years from now, if there is any growth and expansion in the harbor, this line must be improved. (railroad)

Eastward Turn at I-84

A new rail line is needed for trains coming from Brooklyn to turn eastward at I-84. (railroad)

Vancouver Yard bypass

For rail, our priority is the Vancouver Yard bypass. Developing Ramsey Yard and double tracking on the Slough Bridge Lead in Rivergate are also important for us. The Steel Bridge could be improved from the current 6 mph limit to 30-35 mph. (railroad)

One priority for the next 10 years is construction of the Vancouver Yard bypass. This is an important thing for both Union Pacific and BNSF to ease congestion. We are currently revisiting the design, trying to get additional capacity with two new lines going around the yard. (railroad)

Ramsey and South Rivergate Yards

Ramsey Yard is planned but not up and running yet. It will be a great facility for us. If we could interchange with Union Pacific at Ramsey Yard instead of on the main line, we could save dwell time on cars by a day on each end. Right now we bring trains from Canada in three days and give them to Union Pacific at Rivergate and they wait a half day or longer to deliver them. So getting Ramsey up and running is very important. We have a lot of old interchange agreements, and often they don't make sense in terms of efficiency. It is how it is because it is how it was. For example, 90 percent of the traffic that we interchange at Barnes goes to Rivergate anyway. We talked to Union Pacific about just interchanging at Rivergate, but there's no space to switch in Rivergate. Again, Ramsey Yard would be a good solution. (railroad)

We need some additional track capacity in key places. We are working cooperatively with the Port to develop the infrastructure to handle increasing bulk traffic. For example, double tracking on the Slough Bridge Lead, near South Rivergate and T5, is important. When we pull the train out of Columbia Grain, they have to inspect it, and we can't bring another train in while it's waiting. Any grain that we can't store in Portland, we stage in, or between here and Pasco, which is 24 hours away. We'd like to double track the Slough bridge lead to avoid this 24-hour gap between when they call for it and when they get it. (railroad)

This yard [South Rivergate] needs to be expanded to 7 or 8 tracks. (railroad)

Grade separation in a new way, like Alameda Corridor

We should look into grade separation in a different way. It makes sense to me to separate commercial rail and truck traffic like in the Alameda Corridor. (railroad)

Protecting and preserving rail capacity is huge. Addressing rail conflicts with roads and pedestrians to allow rail to move through Portland. Grade separation is a big concern. We just built a \$20 million rail crossing on Lombard in Rivergate. The biggest issue in St. John's is unprotected rail crossings with the main line through areas with recreational green space and residential housing proposed. (marine terminal / port)

Relocate underused spur lines

We should cluster industry in certain areas, creating relocation opportunities for heavy industry. We should also choose areas for building housing – let housing go where the market demand is, but relocate the industry to the Port or somewhere else. On the west side we've got a few customers that don't appear likely to have much of a rail future. Relocation of tracks from these areas would help us. Property values will create change, like has happened in the NW 12th Street area where there are a lot of legacy buildings. (railroad)

Rehabilitation of the Astoria Line

We are starting to apply for federal and state funding, perhaps funding from Connect Oregon or federal earmarks, to rehabilitate the Astoria line starting at Mile 10. Strategically, the Astoria Line is one of the most important secondary links in Oregon. It connects to water, rail, and industrial land. As Portland expands, the land along the Astoria line is being sought by commercial companies. The condition of our current tracks is relatively good. (railroad)

Third-party rail switching

A third party rail switching operator could help with service but I'm not sure it would help with the pricing. (property owner / representative)

We are served by Burlington Northern but switched by Union Pacific. We do not receive good service from Union Pacific since we are not a direct customer. Burlington Northern doesn't pay enough to make Union Pacific give us good service. Third-party switching would be great. It would be helpful if the City could assist in moving this project along. (marine terminal / port)

I'd love to see third party switching put in Rivergate. We were successful at getting third party switching here in Milwaukie, and it has helped immensely. (trucking / warehousing)

Third-party trackage and switching (manufacturing)

Public / private funding partnerships for rail improvements

A public/private deal, like the one cut between the Port and Bechtel to build the red line light rail from Gateway to the airport, was wonderful and ought to be done more often. The perception is that this project was done in the blink of an eye. The Port has land in Rivergate and should do other public/private rail partnerships. (industrial broker)

Rail-truck transload facility (manufacturing)

There is an opportunity to create intermodal facility here, using models such as "team track," "reload," or "pay as you go." They are becoming more prevalent. It is expensive for a business to put a spur on their property, and the railroads don't want to deal with small rail users. Creating a slick intermodal facility would

be financially feasible and would be great. Two sites where it could work are the Time Oil or Rivergate sites. Smaller facilities could even work on 4-5 acre sites serving a group of users that only need a few cars a month. They're out there, and they are currently driving across town to get rail service. (industrial broker)

Swan Island rail

The Port should spend money on rail. There is no rail on Swan Island. I can't imagine folks wanting waterfront property that's not rail-served. (manufacturing)

Marine transportation

Columbia River channel deepening

We still need to finish deepening the channel. The primary beneficiary of that work is Terminal 6 at the Port of Portland. (marine terminal / port)

Maintenance dredging

Today a lot of fuel is coming in by ship and more and more product will arrive via ship in the future. We can't handle the ships, so thus far we have been lightering the product to barges on the Columbia, which is a risky practice. The day a hose breaks on that lightering operation, the operation will not be sustainable. Also, the lightering process adds costs. It's critical that we be able to handle the ships. It would be great if we could get 38-40 feet at our moorage, but realistically, it will be difficult enough to get 32 feet. Other companies may be interested in expanding in Linnton if the draft were deeper. Our firm needs more shoreline capacity, in addition to a deeper draft. (marine terminal / port)

Upland disposal of dredge spoils can be very expensive--\$400 per cubic yard. Public investment to support upland disposal would be very helpful. A nearby disposal facility could make it more cost effective. (marine terminal / port)

Maintenance dredging is a barrier, and the City will have a role down the road in terms of the navigation channel and berths, because the City must at least protect its own facilities, such as fire boat stations and the sea wall. I see the City getting more involved, raising questions and concerns and then more. (marine terminal / port)

Help us Build a New Dock

The biggest benefit to us would be to show us how to build a new dock. If we're not going to reopen the melt shop, we'll be importing a million tons of steel here forever. We would like to pursue help from PDC on this issue. The dock would need to be 500 feet long and extend 50 feet out into the water as a sheet pile dock. I've heard it's bad for fish because there's no shade for them, but we could make shade for fish elsewhere on our property. (manufacturing)

Developable land

Clarify and limit Superfund liability

Some kind of Superfund liability protection for in-water cleanup. People are getting letters from EPA saying they have to hire an attorney to defend themselves. (marine terminal / port)

River cleanup liability is a political issue. The congressional delegation could work to exempt new owners from in-water Superfund liability. (industrial developer)

If we can occupy the vacant industrial land that has been rehabilitated, that would really help. We could work with DEQ and EPA on the Superfund issue – that will go on for years and it creates such uncertainty. If the City could help add pressure to that situation, it would be helpful. (human resources manager / representative)

Removing the environmental uncertainty would help the area immensely. We need to eliminate that cloud. (industrial developer)

Get Superfund project done sooner

Getting the Superfund project done sooner would be helpful. It's been a long road already. We don't have any income coming in from the property, and Superfund is costing us \$500,000 a year. (property owner / representative)

The biggest difference would be movement on the Superfund issue. Building confidence that this will be resolved--action taken and the clean-up done--would make a huge difference. So far, there is a lot of talk and not a lot of action. A sound plan needs to be put in place, something that would not be overturned in court. The cloud of uncertainty needs to be removed that is keeping clean-up work from getting done. (property owner / representative)

The biggest difference would be movement on the Superfund issue. (property owner / representative)

Brownfield cleanup streamlining

Streamlining the approval process for our remediation plans would help us remove the above ground tanks, and make this property available for redevelopment sooner. (property owner / representative)

A showcase brownfield cleanup project

We need a catalyst showcase example of brownfield cleanup to help encourage more of it. Redevelopment of the Atofina site would be great. For firms that want to relocate, it's better to have a good inventory to show them. (property owner / representative)

Site certification or site assistance program

I could build speculative developments on Highway 30, but I would need to spend less time figuring out how to make it work. PDC and DEQ should look into sites that are unavailable and spend some time figuring out how to make it easy for a developer to develop this land in a short time frame. They could get sites prepped and primed and deal with issues on the front end so that we could run with them. We know what we want to build now, but have no idea what the market will be like 2 years from now. We need to be able to work quickly. It shouldn't be that hard to work out these issues. (industrial developer)

Government has the political power to pull together all the regulations and red tape and put all these piecemeal issues together and work them out to make a site ready to develop. A certified site status program could take the uncertainty out of it. It would be great if I could deliver warehouses in a short amount of time, by having the sites prepped and primed. This does not take as much public money, but it does take 75 percent of the effort. You have to be fast to develop today. If you can't deliver product when they want it, they will look elsewhere. If a building is unavailable for 18 months, they will look elsewhere. (industrial developer)

Streamlining the development process can be even more useful with 3-acre sites than big sites. The smaller the site, the faster you have to be able to develop. Users think ahead in proportion to their size requirements. One rule of thumb was that the size of the site divided by 1000 is the number of weeks a firm thinks ahead. That is probably divided in half nowadays. A 50,000 square foot user used to think ahead a year, but now that is probably reduced to six months. (industrial developer)

A lot of legwork is required to figure out what can and can't be done at a site. A central clearinghouse of information would be very helpful, so you could find out what properties are available, how big they are, how much they cost, etc. (property owner / representative)

We expect some degree of regulating, but businesses want certainty, want to know what they can and can't do and want to be able to get from A to B quickly and easily. Sometimes regulations are identical in two cities, but the interpretation is different. It would be great to have a timeline and have the government help you through the process to make it easier. (manufacturing)

Certified site program like done on state level. (marine terminal / port)

City involvement in the development process. (marine terminal / port)

Land Assembly

A 3-acre site is economically feasible, but there are headaches that would need to be resolved. A 4- to 8-acre site for construction of a 40,000-79,000 square foot facility would be ideal. Be a safety net for the private sector. Nobody wants to assemble lots and work through the Superfund regulations. (industrial developer)

Land assembly in Northwest would help properties to redevelop. The buildings don't have to be that big. (industrial developer)

Industrial reuse of former Linnton Plywood site

New industrial development in Linnton / NW (marine terminal / port)

We would like to see business development in the Linnton area - companies that would use rail shipping services. Industrial redevelopment of the various brownfield sites on the west side of the harbor, perhaps with warehouse/distribution facilities, would also be a benefit. (railroad)

Eliminate balanced cut and fill requirements. (property owner / representative)

Workforce

Manufacturing 21 Center for Manufacturing and Infrastructure Engineering

Manufacturing 21 Coalition is working to develop the "Center for Manufacturing and Infrastructure Engineering," a facility for workforce training, R&D, and other support services for the metals industry and other manufacturers in the region. They have not yet committed to a site and there are competitors across the region. (human resources manager / representative)

The City and PDC should make sure the manufacturing center wins the land they want. If not, the center will go someplace else. You should try to get it here. (human resources manager / representative)

Build the workforce training center that Manufacturing 21 is pushing. (manufacturing)

Cross-industry training

We could move generic industrial training programs from the PCC Rock Creek Campus to the industrial area, so that firms like Gunderson and ESCO could more take advantage of it. I believe in cross-industry focus for any training program for long-term success. (human resources manager / representative)

We need to get all employers to identify what the cross-industry skills are and bring in PCC to provide training. Convening a group to facilitate this discussion would be a good use of public funds. (human resources manager / representative)

Manufacturing 21 is facing the problem of how to get related groups to work together on many of the same issues that each is now facing separately. There are lots of local and regional discussions already going on, and they're very similar. We need to bring those discussions together and convert them into something more cohesive. We want to do a summit in the Fall of 2006 to develop a cohesive manufacturing agenda that can be taken to the 2007 legislative session. We need a simple, short list of action items. The harbor should be part of that discussion. (human resources manager / representative)

There has to be a way to do crossover training. The problem is that the training programs are splintered. (human resources manager / representative)

A cross-industry training program can help build people's real skills related to our business, like how to drive a forklift. In recent years, a similar program was started but then mothballed. (human resources manager / representative)

In order to encourage building local skills specific to our business, we need to have a robust business. (human resources manager / representative)

High school vocation and training

We need a first class training center for high school kids. Do they have an official apprentice program for these kids in high school?

Reach grades 4-8

We have to fund programs in the public schools for the 4th through 8th grades, before kids enter high school. That's where they learn the possibilities for careers. We need to get the industries out talking to career counselors in schools. Some of that infrastructure is in place in the Business Education Compact, but not all schools are signed up. (human resources manager / representative)

Day care

Could companies band together and create a daycare center? We provide a large daycare benefit that employees don't use because they can't find good daycare nearby. Putting a daycare center in the industrial area may be a problem, but we need to at least provide it nearby. (human resources manager / representative)

Amenities for workers (trucking / warehousing)

Utilities

Utility discount program

Consider some type of investment in utilities through a Systems Development Charge discount program, maybe to apply in the industrial districts citywide. (property owner / representative)

Utilities are very important, especially for food-related companies. I think we should subsidize system development charges as an incentive to development. (property owner / representative)

CSO project

Combined sewer overflow. (trucking / warehousing)

The City signed up for this huge project and needs to pay for it. (marine terminal / port)

Other project priorities

Reroute trail around industry

Reroute greenway trail around industrial sites. (property owner / representative)

Eliminating the requirement for a path on industrial locations is a good idea. We want to do the right thing environmentally and we all like to use trails, but there is a better place for them. (property owner / representative)

New flour mill. (marine terminal / port)

Emergency preparation

Getting out of this area during an emergency is a risk. We worry about fire and landslides here. (trucking / warehousing)

QUESTION 5: ADDITIONAL COMMENTS AND SUGGESTIONS

Do you have other experiences or suggestions to add that could help set priorities for public investments or actions in the harbor area?

The few responses to this question were incorporated into those of the other questions. In most cases, responses to question #5 at the end of the interviews expanded on previous comments or added afterthoughts that related specifically to previous questions.