The I-5 Corridor

Is replacing the I-5 Interstate Bridges that cross the Columbia River a prudent decision?
Are there other more reasonable alternatives to the CRC Task Force recommendations?
Do some of these alternatives offer greater regional benefits and cost advantages when compared to replacing the I-5 Interstate Bridges that cross the Columbia River?

By Paul Edgar

The I-5 corridor is a contiguous north/south interstate corridor of National Importance, extending from Mexico to Canada. This strategic corridor however gets into trouble, when it cuts through the center of downtown Portland Oregon. Going into and through, urban Portland Oregon, it has only 2-and 3-lanes of capacity in many areas. Urban, Right-of-Way (ROW) constraints and the cost associated with making virtually any changes, has resulted in the inability to correct unacceptable designs problems to meet today's standards. We see significant problems with lane constraints, sharp curves and a much higher then average number of accidents then can be found with comparable sections of interstate highways and bridges within the State of Oregon.

A great deal of focus however, has been spent on one section of the I-5 corridor between Portland and Vancouver Washington, that in its self may only represents maybe 1-10th of the total problem. Approximately 130,000 of daily incidents of travel exist in the I-5 corridor between Portland Oregon and Vancouver Washington. This is some-what equal to incidents of travel generated from Wilsonville to the Marquam Bridge within the I-5 corridor in southwest Portland. The commuter hours are of critical importance, with their impacts on how they can extend the combine of the AM and PM peak period rush hours. This can create a virtual I-5 corridor lock-down, with high cost to business/commerce that extends out. It has also been estimated that the Level of Service (LOS) conditions of "F" that currently exist can extend to greater then 7-hours per day, based on 2005-time frame studies. It has been estimated that LOS "F" conditions are getting closer 8-to 9-hour per day in 2011. It has been published that the I-5 corridor between Portland and Vancouver could experience up to 14-hours of LOS conditions of "F" with up to 5-to 6-mile long backups, by 2030.

These projected I-5 corridor conditions will exist or become worse with a possible replacement of the current bridges with I-5 Columbia River Crossing, CRC Bridge Project. The south bound I-5 corridor conditions between Portland and Vancouver and through Portland Oregon will be made much worse with more vehicles induced into a significant choke point of the east bank section alone the Willamette River of the I-5 corridor with 2-and 3-lane capacity. This section of the I-5 corridor between the Fremont Bridge and including the Marquam Bridge in the center of Portland is a choke point that affects the critical corridor balance, much like the effect of a funnel and the limited capacity at its neck. Anything that will make this section of the I-5 corridor worse is unacceptable. A new higher capacity CRC Bridge that would induce more traffic into the I-5 is an example. A CRC Replacement Bridge could double the incidents of travel induced into the I-5 corridor and there is no-question that it would be problematic. With more vehicles induced into the corridor we will experience in addition to more congestion, more vehicle caused pollution, more localized health problems and a lower quality of life. Businesses and commerce will also be affected, too.

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A ominous serious side effect that is a direct result of creating a higher number of incidents of travel in the I-5 corridor as a result of putting in a very high capacity traffic inducing CRC I-5 bridge will be our inability to come up with additional financial resources necessary to subsequently fix the problems associated with this new CRC replacement bridge. There will probably be NO-funding left to make critically needed improvements through the rest of the State of Oregon, let alone solve the problems in the I-5 corridor through Portland Oregon, this region and virtually the whole State of Oregon will need.

When anyone takes a serious look at the I-5 corridor most anyone can find that it has far too many safety serious problems, structural urban impediments and physical choke points that are far greater than those identified with the I-5 Bridges that cross the Columbia River. With its 2-to 3-lane capacity design limitations and with far too many on and off ramps that create turbulence real solutions are hard to identify. Much of this I-5 corridor through Portland is not in compliance with current Federal Highway Administration codes.

Most all agree that this sections of the I-5 corridor along the Willamette River is too costly to change and/or replace. When you combine this section of the I-5 corridor with the high volume of traffic that feed from or to it from the I-5/I-84 interchange, solutions to the problems and the limited opportunities to address them, make finding cost effective solutions very difficult. Then add to it the conditions found on the immediately contiguous I-5 corridor associated with the Marquam Bridge and its narrow lanes, very sharp curves and high accident rates, this leads many to believe that alternatives have to be found, that reduce the need and use of the I-5 corridor through Portland Oregon.

The difficulty of the section of the I-5 corridor from just south of the Going Street overpass, including areas that have the Freemont Bridge on/off ramps, Rose Quarter/Broadway Bridge on/off Ramps, I-84/I-5 Interchange on/off ramps, Morrison Bridge on/off Ramps, Marquam Bridge with its narrow lanes, sharp blind curves and heavy traffic to and from I-5/I-405/Highway-26 create a problem far greater than anything associated with the I-5 Bridges that cross the Columbia River. Attempting to plug a single hole in the dike of I-5 corridor problems with a CRC Project and leave no funds left to fix the bigger and more serious problems does not make sense. The total cost implications are beyond our financial ability to fix. These I-5 corridor problems, poor safety conditions and choke points, maybe impossible to correct and can be of greater significance than anything found with the I-5 Interstate Bridges and its bridge influence area associated with the Columbia River Crossing.

The Federal Government recently categorized the Marquam Bridge, following a federal survey of bridges across the United States as “Functionally Obsolete”. Further to the south in the I-5 corridor within Southwest Portland we find in addition to what has been identified, the very dangerous Terwilliger Curves, which is a very accident-prone section of the I-5 corridor. It has very sharp turns and even with significantly reduced speed limits and it still results in many accidents, where large trucks turn over, forcing the closure of the whole I-5 corridor through Portland Oregon.

When you combine all of the I-5 corridor problems with its poor safety/crash record, unfixable choke points, lack of adequate capacity to the number of vehicles that use it and couple with it, its congestion problems that help create toxic air quality problems, most people have come to the conclusion that the I-5 corridor through Portland is JUST BROKEN! We must find alternatives!

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Study after study has looked at this I-5 corridor Right-of-Way (ROW) and its problems. This urban I-5 corridor has limited options and alternatives. Politics adds to the problems of the I-5 corridor through Portland Oregon. The Bi-State I-5 Transportation and Trade Partnership Study group came to the conclusion and made the recommendation that the I-5 corridor through Portland should not be widened to greater then 3-lanes. However they suggested that something must be done to correct and alleviate the problems that result in a serious lack of freight mobility primarily looking at the section of the I-5 corridor north into Vancouver.

One of the many recommendations listed was to look at replacing the Interstate Bridges as part of a regional solution to the problems of ever growing congestion in the I-5 corridor. Many believe that politics and special interests took over this I-5 Bi-State Transportation and Trade Partnership Study Group with its findings. Many believe the I-5 T&T Partnership Study became an opportunity for a list of Christmas tree type recommendations, addressing regional problems of this vital north/south interstate corridor through Portland/Vancouver.

This Bi-State group did however have some immediate success. A Delta Park Widening Task Force and Columbia River Crossing Task Force were formed as by this I-5 Bi-State Transportation and Trade Partnership Study Group. The Delta Park Widening Task Force moved quickly and has now completed the widening of the I-5 corridor at Delta Park, eliminating a very significant choke point between Portland and Vancouver.

Also a Columbia River Crossing (CRC) Task Force was appointed to determine if it is reasonable and prudent to replace the Interstate Bridges on the I-5 corridor that cross the Columbia River. CRC Task Force subsequently has come up with a recommendation for a new replacement I-5 Bridge with 5-or 6-total lanes in total in each direction. This I-5 CRC Bridge Replacement Project includes Bridge Influence Area (BIA) improvements and High Capacity Mass Transit Facilities. It is estimated to have a price tag of approximately $3.5 to $10-Billion Dollars, when completely built out, if you include all interest and administration costs.

There are many problems associated with this I-5 corridor, Columbia River Crossing Task Force and its recommendations for a CRC Project and BIA improvements. Most of the problems are associated with its limited focus, where little analysis of any reasonable alternatives and solutions were sought or allowed. From the beginning nothing else was considered, no other alternatives, just a project to replace the I-5 Bridges and extend Light Rail into Vancouver.

The CRC Task Force identified and categorized out the problems associated congestion/the lack of capacity, the lack of safety and the structural integrity of the bridges associated with perceived seismic problems. The conditions of the rest of the I-5 corridor through Portland Oregon were buried and never considered significant. This was all about building bridge and having a very large make work transportation project, for all of the special interests. The costs and funding implications were not put to responsible tests. Environmental Justice was an after-thought. Public Involvement was orchestrated with care, to limit most any possibility to reflect anything else other then what the CRC Project Staff wanted.

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Many of us believe CRC Project does not come close to truly solving the regional transportation problems within a regional overview. We believe that it is an in-effectiveness use of resources and money. Most everyone knows that has closely followed this project that the CRC Project was to build a bridge and extend High Capacity Light Rail Transit (HCLRT) solution. Most everyone also knows that there are other more affordable solutions then CRC Project, with more positive impacts.

The CRC Task Force never truly took the steps to determine what regional impacts are of their recommendations, both positive and negative as part of the Bi-State regional solutions to problems identified within the Bi-State I-5 Transportation and Trade Partnership Study Group. For example, the CRC Task Force recommendations do not eliminate the I-5 corridor congestion and significant air quality problems found between Portland and Vancouver. The CRC recommendations do not solve and eliminate the problems and conditions that can bring regional freight mobility and our freight dependency of our economy to its knees. The CRC recommendations do not look at other options and alternatives outside of the very tight BIA. There are other alternative arterial corridors could result in the possibility of achieving equal to or better results for less money. The CRC Task Force has not looked at identifying all choke points in the I-5 corridor and determined what the net effect would be, if they were eliminated.

We have also come to understand, that David Evans Transportation Consulting Company, have gathered new and more accurate information on the incidents of travel in the I-5 corridor from the Marquam Bridge to Vancouver that seem to point to the fact that the contiguous I-5 corridor is in much worse condition, then what was presented in public testimony. This information was gathered on a contract from the CRC Task Force in the October 2005 time frame and given to the CRC Task Force Staff early after the first of the year 2006 in its raw form. This information was not used and/or presented in the CRC Task Force meeting and public presentations, when it could have had significant effects on decisions associated with how effective any improvements might be with the possible replacement of the Interstate Bridges and improvement within the BIA. There is reason to believe that the CRC Task Force Staff apparently withheld this information in an attempt guide the development of criteria and options that could include or exclude alternatives from consideration.

In an April 2006 CRC Task Force Meeting and Open Houses the CRC staff was presenting 2-hour LOS “F” conditions on the contiguous sections of the I-5 corridor in and through Portland and this was not true and they knew it. This more accurate information about the rest of the contiguous I-5 corridor problems and it changes the whole picture of how effective any targeted CRC Project and BIA improvement would be in solving the problems identified in the I-5 Bi-State Transportation and Trade Partnership Study recommendations.

There is more then adequate reason to believe that the CRC Task Force Staff withheld information in an attempt to control the flow and timing of information to the CRC Task Force members and public in an effort to present an agenda more favorable to their predetermined point of view and direction that they intend to lead everyone. This has lead to the elimination of opportunities for a fare and “Equal Context Sensible Solutions” from being evaluated as viable alternatives. This has prevented these viable alternatives and options from being included in the development of an effective “Environmental Impact Statement” process. To me and others, the CRC Task Force Project has not been managed in the best interest of the public and critical decision markers.

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It has been confirmed that this singular CRC Project might consume most of all of the next 20-years of our regions Federal Transportation Funding Dollars for this singular highway and transit project. This makes all of the considerations about the effectiveness of the CRC Project and how it fits into our regional priorities, even more important.

Because of the net effect that this project will have on all funding of all other listed transportation projects, we have a responsibility to place a greater level of scrutiny on the process and all decisions and stated benefits coming from the CRC Task Force Project. This means to me, that we must again review the CRC Task Force Charter, its deliberation and results to ensure that it effectively meets the needs of a greater regional perspective of the States of Oregon and Washington with a region wide benefit analysis. Too many other projects and priorities can and will be left out as a result of a project of this magnitude of the cost and with its limited funding earmarks and implications.

For many of us, the credibility of the CRC Task Force Staff and the involvement of the special interests have always been in question. We have watched has always appeared to be questionable efforts to massage the numbers and findings to express slanted views of facts. We came to these conclusions as a result of attending the CRC Task Force Meetings when we watched as they have suggested that a high percentage of the vehicles that cross the Columbia River exit the I-5 corridor within the limited scope of the BIA and we knew that was not the case. A published CRC/David Evans, incidents of travel and vehicle count information report on the I-5 corridor proved otherwise.

There was continual appearance that through the use of limited geographic boundaries, identified as part of the CRC Project and its Bridge Influence Area in the I-5 corridor, it allowed for the manipulation of numbers, in how effectively the CRC Project appeared to solve I-5 corridor congestion problems. What it appears they wanted was to included areas in the I-5 corridor like Delta Park Project. Benefits derived from this Delta Park Widening Project should not have anything to do with any benefits stated as coming from the replacing of the Interstate Bridges. The Delta Park Project was a completely separate project.

Currently 80% to 85% of the approximate 60,000-to 65,000-commuters in the I-5 corridor going north and south do not get on or off of the I-5 corridor in the "Bridge Influence Area" in each of the AM and PM rush hours in their commute, to and from work. They are part of commuters entering the I-5 corridor from Vancouver's SR-14 or SR-500 or further north in the I-5 corridor or from originations that make their entry into I-5 mix less important then those entry points. These commuters travel to their places of employment in Oregon, from all over the map.

These commuters have limited opportunities and choices to where they can connect to High Capacity Light Rail Transit (HC-Transit) methods. Approximately only 1% of commuters in I-5 corridor, between Portland and Vancouver are currently using the Express C-Trans type of High Capacity Rapid Transit Bus Service and/or a combination of Tri-Met Bus Service. Some of these buses connect to MAX Light Rail at the EXPO Center.

The numbers reflected in the CRC Project justification, that would benefit with the extension of MAX High Capacity Light Rail into Vancouver Washington are highly overstated and just do not represent reality. You have to get these working commuters from home to work in an affordable and reasonable manner that in a benefit analysis achieves and justifies the time and cost that it takes.

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In my estimation the HCLRT-Transit methods being proposed will not reduce in any way the forecasted congestion in the I-5 corridor between Portland and Vancouver. 98% of these commuters would end up relying on a car somewhere in this process of trying to use HC-Transit methods. Any attempted use of HC-Transit methods to get to a place of employment in Oregon at this time and with the projected recommendations coming from the CRC Task Force will result in significantly longer commutes beyond the threshold of what is acceptable. Studies have determined that when this threshold is exceeded, it just becomes unacceptable when compared to taking direct and timely routes that can be achieved with a car over commuting with HCLRT-Transit. Vanpools and buses also end up being much better solutions then HCLRT methods.

Knowledgeable people see their CRC recommendations as being without adequate justification and believe that other more affordable regional alternatives could have and should have been advanced. We must eliminate the problems on inadequate capacity in the I-5 corridor and if we cannot do that we must find alternatives to the I-5 corridor. We must not add to the congestion because that will result in killing people and businesses with congestion and un-acceptable higher levels toxic emissions.

The problems, opportunities and regional needs of the I-5 corridor and its stakeholders require balanced infrastructure investments. Anything short of that may not result in enough balanced environmental improvements. The needs of the people, businesses and taxpayers who are looking for a return of investment require greater oversight. If the CRC Projects also does not result in providing major gains in Freight Mobility, our economic engine of our region can be brought to a virtual halt. This is the major reason for stopping this current CRC Project, Plans and recommendations.

Just continuing to put all of our energy and money (approximately $130-Million in the 2011 time frame) into this one CRC I-5 Bridge replacement project, associated HCLRT and BIA improvements is un-wise. We must provide alternatives that will get a greater number of vehicles and trucks out of the I-5 corridor and failure to do that is wrong. There is just not enough capacity and the funding and combination of desire to expand the I-5 corridor to make the CRC Project viable.

We have lost track of the focus of the original I-5 Transportation and Trade Partnership Study and its recommendations. We have watched the special interests prevent our region from identifying real transportation solutions of greater regional importance.

We must take steps to reduce vehicular traffic in the I-5 corridor, not increase it. A new 5-or 6-lane wide CRC Replacement Interstate Bridge, will double the current capacity and induce more traffic into this environment. Most any responsible Transportation Planner will understand that you cannot introduce 5-or 6-lanes of traffic connecting into 2-or 3-lanes of inter-connecting freeways that are networked together in the Portland/Vancouver region. To introduce a new dramatically higher number of vehicles into the I-5 corridor from the Vancouver will result in creating an out of balance condition in the whole of the Portland freeway grid. It will also result in placing greater stress through out this inter-connected grid of local arterials and city streets.

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We have experience in how problems ripple when a freeway corridor is reduced or shutdown and how we all scramble to find alternatives. We know that most all of our action will result in bringing the flow of people and commerce to an almost a dead stop. Most of the 60,000-to 65,000-daily commuters coming from Vancouver have limited choices and options with only two major north - south interstate bridge crossings available to them. Just a little hiccup can bring most people and most all freight mobility to a dead stop. Most people also realize that all of the multi-mode methods like; PED, Bike, HC-Transit methods including HCLRT cannot solve the problems of the lack of capacity that is a direct result of increases in population and changes where families have moved away from The City of Portland to the suburbs like the City of Vancouver and north Clark County Washington. We find the same thing in Oregon, with Washington and Clackamas Counties Current land use considerations with existing Urban Growth Boundaries have resulted in creating this exodus to the suburbs with lower costs and perceived better schools and transportation planning must now change to compensate for this dramatic change, where people and their jobs are not always close together.

Most People know that we have significant Industrial Areas/Zones in north Portland, like the Rivergate Industrial Area including Terminals 2 and 4. We also have major heavy rail switchyards and the Northwest Industrial Area that provide important economic base for employment. Traffic, people and commerce going into and coming out of these industrial areas are vital to our economy with hundreds of thousands of excellent family wage jobs at stake. What happens here is critical to this State, our region and Portland Oregon? It also affects the United States of America, as we are a major gateway port, to the world. This activity also brings great stress on our heavy rail freight mobility capabilities. The economic impact that comes from the integration of our maritime activity connected to freight terminal, to our rail capabilities, to our tucks, to our businesses and to our people who depend on this economic engine running is amazing. When pieces and parts of it get out of balance or out of sync the system fail as a whole. This cannot exist without all pieces in balance with each other. When our transportation system fails it destroys our ability to compete locally and in an America and in the world as whole today.

So what are my solutions to these problems?
What are the opportunities that were not addressed by the CRC Task Force?

First, I believe that we must address the need to create alternatives to the I-5 corridor that achieve a decrease reliance on its use. The real constraints and physical characteristics of the I-5 corridor through the City limits of Portland exceeds exceed its ability to even handle current levels of use.

In addition to the I-5 corridor, we have the I-205 corridor with its choke points and capacity restraints. However with the I-205 corridor there exists most of the needed Right of Way to expand its capacity. By eliminating its choke points and affordably widening it, the I-205 corridor can filter away traffic and result in significant reductions in I-5 corridor congestion. Its design characteristics make it much safer, flat, straight, without dangerous curves found on I-5 and with adequate Right-of-Way enabling it to be expanded. It is a significantly more affordable corridor to widen when compared to the urban I-5 corridor.

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Common Sense tells us that with meaningful redirection of vehicles to I-205 corridor we could reduce congestion in the I-5 corridor. Just designating the I-205 corridor as the Primary Interstate Freight/Truck Corridor through our region and with it a few affordable improvements that eliminate constraints and choke points, we could make that happen.

We must also reduce our dependence on moving freight with trucks. Too much freight comes and goes from our ports and large businesses that could and should use an alternative freight movement method like Heavy Rail. We must expand our use of Heavy Rail System just to stay competitive in the world marketplace. Studies show that our Heavy Rail infrastructure in and through Portland is inadequate and directly results in making our region less competitive. We have significant Heavy Rail Choke Points like the BNSF RR Bridge that crosses the Columbia River. This very old swing type design RR Bridge was built in 1907. Its swing design and location of the channel have very negative effects on river freight and river safety. It limits how and when maritime barge/freight movement on the Columbia River happens. It also increases the number of bridge lifts experienced on I-5 with the Interstate Bridges. Most every agrees that this old RR Bridge must be replaced.

The Obama Passenger Rail Initiatives compound the need to replace this very old RR Bridge. This passenger rail initiative creates greater use on shared Heavy Rail capacity. What we have in Rail Capacity on the BNSF RR Bridge will not allow for this passenger rail initiative to work. The lack of capacity and constraints of this old swing RR Bridge must be corrected. The least expensive choice is to build a new replacement Rail Road Bridge side by side with the current one.

In doing so, we can easily achieve a quadrupling of Heavy Rail Capacity in and through Portland. The benefits would result in reductions in the use of trucks carrying freight in and out of our ports. This would make us much more competitive in the world marketplace. It would enable the concurrent use of this capacity with Rail Passenger movement. This again would reduce our need to use other modes of travel like; cars, bus, trucks and air. An example is that it would improve opportunities to expand rail use and take advantage of commuter rail opportunities like Tri-Mets, WES service.

In replacing the old BNSF RR Bridge we will also have an opportunity to properly align the maritime - river channel that would allow for barge/river freight traffic to exist with greater safety. This would be made possible with the alignment of I-5 Interstate Bridge high spot and a new BNSF RR Bridge and the best navigation channel which does not exist at this time.

With a replacement of the BNSF RR Bridge, there is an opportunity to where a second deck could be engineered. Envision it, to be much like the Steel Bridge in Portland that crosses the Willamette River giving us heavy and passenger rail on a lifting lower deck and conventional Multi-Mode truck, car bus, LRT, PED and bike activities on the second deck.

With a replacement of the BNSF RR Bridge, we also have an opportunity to develop a new alternate Westside North Portland Street corridor that aligns its self with the BNSF Rail corridor through north Portland. This new corridor would create again a critically needed new alternative to the continued use of the highly congested I-5 corridor. It would achieve significant reductions in I-5 corridor truck traffic.

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This type alternative arterial corridor would become a Bi-State Multi-Mode corridor and would directly connect critical employment areas like; the Port of Portland's River Gate, Portland's NW Industrial are and the Port of Vancouver. With the last Federal Highway Funding Package coming out of congress, this is a perfect fit for the "Corridors of the Future" authorizations in the SAFETEA-LU, which provides for grants to move ahead on this specific type of opportunity.

With a replacement of the BNSF RR Bridge it also creates an opportunity to even extend High Capacity LRT-MAX into Vancouver Washington on this same bridge at a lower over-all opportunity cost, if the citizens of Clark County were to choose that they want it. There could be space to include within the design where that option - opportunity where it could happen much like what is being done in Portland, with Steel Bridge where heavy and passenger rail on the lower deck and HC-LRT are on the upper deck with cars, busses, trucks, PED and bikes, at little extra expense.

By putting Light Rail into Clark County within a Heavy Rail Bridge Replacement Project a lot of the opportunity costs are reduced. There could be a possibility of eliminating the need for a divisive vote of the citizens of Clark County and the State of Washington, to approve a new "Bi-State Transit Taxing Authority" whereas an Oregon Based entity (Tri-Met) would probably have majority control and authority to tax Washingtonian's. This truly would be very hard sell in the State of Washington and its citizens to get that approved. It simply gets HCLRT-MAX into downtown Vancouver by looping around the EXPO Center on this new multi-mode bridge with stops on Hayden Island and the next stop in downtown Vancouver all run by Tri-Met with its operation totally funded by passenger fares.

Approximately 1,000 to 1,200 or more trucks come out of the Port of Vancouver everyday connecting on to the I-5 corridor with a very high majority heading south into and/or through Oregon. By redirecting much of this traffic away from the I-5 corridor and on to this new bridge and corridor we can eliminate significant corridor congestion.

This is an example of how a new alternate arterial corridor like this can play a major role in eliminating the need for trucks to take capacity out of the I-5 corridor. This will improve safety for all within both the I-5 and new alternative corridor. This would enable commercial – commerce type traffic to flow directly across the Columbia River and in and out of employment areas eliminating their impacts on congestion and the creation greater toxic emissions. Each of the major roadways that would intersects/connects with the new North Portland Street alternate multi-mode arterial corridor would find improved connections to move freight and passenger vehicles away from the I-5 corridor. Marine Drive, Columbia Blvd, and Lombard are examples of the major intersecting streets and arterials that would be addressed.

With this new replacement BNSF RR Bridge and this new arterial corridor, when extended to the Westside of the Willamette River it will create important alternatives to the use of the I-5 corridor, inter-city streets. This would have enormous benefit on reducing incidents of truck travel on the Historic St. Johns Bridge and in and through the St John's Town Center. Currently studies are being made to identify solutions that would redirect traffic away from the Historic St. Johns Bridge, St. Johns Town Center. There are far too many inter-connecting City Streets that are currently being used for major freight activity corridors that go through St John's Town Center. It is also not hard to envision that this new alternate multi-mode arterial corridor could achieve an 80% reduction in this activity. At the same time it is again not hard to envision that a new arterial corridor could

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reduce out year use I-5 corridor for commercial truck commerce subsequently reducing over-all congestion when combined with peak period Transportation Demand Management (TDM) methods and incentives on this activity.

This new alternative multi-mode interstate arterial can be built in a Public/Private Partnership. Entities like; BNSF, Union Pacific RR, Tri-Met, City of Portland, Port of Portland, PDC, ODOT, Multnomah County, Clark County, City of Vancouver, Port of Vancouver, WSDOT, Maritime and River Navigation Interests, Trucking Interests, Portland Business Alliance, Federal New Starts Transit monies, and the Federal Highway Administration. It may or may not include the need for placing tolls to fund the building of this alternative to replacing the Interstate Bridges with a CRC Project. But for most all commuters it would mean that there would not be a need to place tolls on the I-5 bridges and/or the I-205 Bridge to get back and forth across the Columbia River.

Placing regressive TOLLS on the primary north/south I-5 and I-205 corridors this will hurt low-income people and will create an environment that will result in significant negative impacts to the local economy on both sides of the Columbia River. The projected tolls are very regressive and to many and they will be seen as nothing more, then an additional Tax. The loss of this disposal income will make it very difficult for many of these families to continue to live in Clark County.

Another very affordable opportunity exists that can virtually double the number of vehicles that use and cross the current I-5 Bridges. What we find right now is that the capacity is reduced by turbulence with lane changes and people preparing them-selves to turn right immediately after crossing the bridges. An example is the far right lane of south bound vehicles achieves approximately only 30% of the incidents of travel when compared to the far left lane. The center lane achieves approximately only 60% of the far left lane. If vehicle traffic was directed away from this design flaw that permits this turbulence problem to exist, we could effectively double the total amount of vehicles that can cross the I-5 Bridges. This would also eliminate approximately 80% of the reported accidents that happen on these I-5 Bridges.

An example of this is accomplished by eliminating all of the on and off ramps to Hayden Island from and to the I-5 corridor, replacing them with new access bridges to and from Hayden Island with the connection coming from Marine Drive. This has been identified within the CRC Project and can be done independently of the CRC Project. We should also look at relocating the on and off ramps coming from and going to State Route-14 in Vancouver. This SR-14 connection to the I-5 corridor immediately before and after leaving the I-5 Bridges needs to be changed. When those improvements are coupled with a 4-lane and sometime 5-lane I-205 corridor and a new Alternate Westside Bi-State Multi-mode Arterial corridor, we can achieve the most prudent use of our limited transportation investment dollars in the long and short term. We can achieve the greatest positive effect on reducing area wide congestion and saving our environment and at the same time achieve the best possible positive impact on our economy.

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This analysis was initially prepared as part of research from taking classes on transportation and transit methods and solution in 2006 and presented as a class report, at Portland State University.