

# Executive Summary

This Executive Summary contains information to allow the reader to become acquainted with the Draft Environmental Impact Statement (DEIS) prepared for the Detroit River International Crossing Study (DRIC). The Executive Summary mirrors, in structure, the full DEIS. It contains the statement of the project’s purpose and need, a description of the alternatives analysis process, and the major conclusions on impacts for the Build and No Build Alternatives. Table S-8 at the end of the Summary provides, in one place, the key data on two dozen impact categories for each alternative. For more detail, the reader is referred to the DEIS and supporting technical reports.



Source: Federal Highway Administration

The Detroit River International Crossing (DRIC) Study looks at the social, economic and environmental costs of improving the busiest trade corridor between the United States and Canada (Figure S-1). The study involves the governments of the United States, Michigan, Canada and Ontario, proposing ways to help their economies and address defense and homeland security needs over the next 30 years.

Figure S-1  
Existing Detroit River International Crossings  
Detroit River International Crossing Study



Source: The Corradino Group of Michigan, Inc.

The purpose of the Detroit River International Crossing Study is, for the foreseeable future (i.e., at least 30 years from today), to:

- Provide safe, efficient and secure movement of people and goods across the U.S.-Canadian border in the Detroit River area to support the economies of Michigan, Ontario, Canada and the United States.
- Support the mobility needs of national and civil defense to protect the homeland.

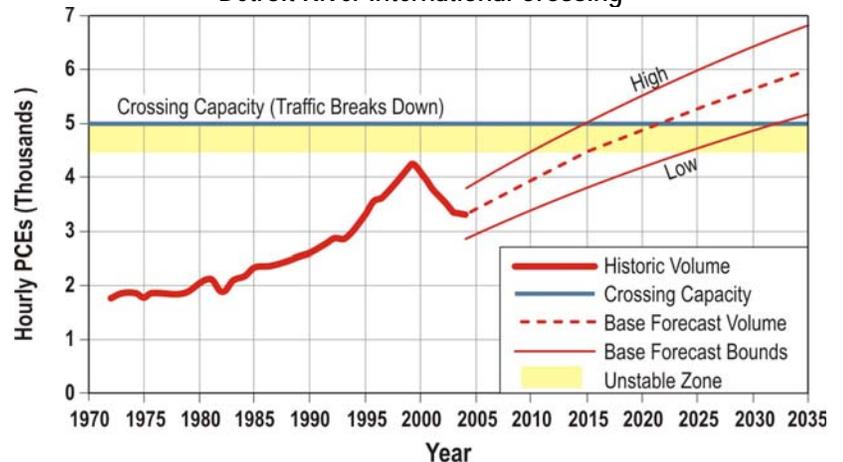
To address future mobility requirements (i.e., at least 30 years) across the U.S.-Canada border, there is a need to:

- Provide new border-crossing capacity to meet increased long-term demand;
- Improve system connectivity to enhance the seamless flow of people and goods;
- Improve operations and processing capability in accommodating the flow of people and goods; and,
- Provide reasonable and secure crossing options in the event of incidents, maintenance, congestion, or other disruptions.

Nine practical Build Alternatives have been identified to satisfy the new border crossing requirements. Each consists of three elements: an interchange connecting the plaza to the existing highway network, a Customs inspection plaza, and a bridge from the plaza that spans the Detroit River. This DEIS focuses on the issues/impacts on the United State’s side of the proposed new border crossing. Transboundary impacts are discussed in summary form. A Canadian-produced set of technical reports thoroughly documents the issues/impacts on the Canada side. Those are available on the project Web site ([www.partnershipborderstudy.com](http://www.partnershipborderstudy.com)).

Passenger car traffic across the border is projected to increase 57 percent over the next 30 years. Truck traffic is forecast to grow 128 percent. Detroit-Windsor area border crossings could overload as early as 2015 if high growth occurs, and by 2035, if traffic grows slowly (Figure S-2).

Figure S-2  
Travel Demand vs. Capacity:  
Combined Detroit River Crossings  
Detroit River International Crossing



Note: Figure S-2 is from the DRIC Travel Demand Forecast Working Paper (September 2005), prepared by the IBI Group. The Passenger Car Equivalent factor (PCE) used in that report, and in Figure S-2, is 3.0 cars per truck to account for the grade leading to and from the bridge.

Source: IBI Group

Studies indicate that there will be three kinds of capacity problems at the Detroit-Windsor border:

- 1) Along roads leading to the Ambassador Bridge and the Detroit-Windsor tunnel;
- 2) At Customs processing stations at the plazas; and,
- 3) On the crossings of the border themselves.

The planning, design and construction of any major international crossing takes time. So, even though small adjustments can be made to the plazas and adequate border crossing capacity today, it's wise to deal now with the future capacity of the crossing system described above.

## S.1 Purpose of the Document

This DRIC Draft Environmental Impact Statement (DEIS) analyzes issues and their impacts on the U.S. side of the border crossing system between Detroit, Michigan, and Windsor, Ontario (Figure S-3). It proposes alternatives that include:

- 1) The border crossing;
- 2) The plaza (where tolls are collected and Customs inspections take place); and,
- 3) The interchange connecting the plaza to I-75.

Figure S-3  
U.S. Area of Analysis for Crossing System  
Detroit River International Crossing Study



Source: The Corradino Group of Michigan, Inc.

## S.2 Analysis Process

The DEIS builds on the *Planning Needs and Feasibility Study Report* (P/N&F) (January 2004) prepared by the Border Transportation Partnership. The Partnership consists of the Federal Highway Administration (FHWA), the Michigan Department of Transportation (MDOT), Transport Canada (TC) and the Ontario Ministry of Transportation (MTO). The P/N&F Study found the need for additional transportation capacity in the Detroit-Windsor corridor. Hence, the Partnership began the environmental study phase.

This DEIS is required by the National Environmental Policy Act (NEPA) to advance a project from the feasibility stage to final design. After that, the next phases would involve acquiring right-of-way and building the project. Funds are available to finish this environmental study phase.

In keeping with NEPA, a formal Notice of Intent appeared in the *Federal Register* on March 24, 2003 (which records many federal government regulations and actions) announcing that this DEIS would be prepared.

This project is important to many federal agencies, so a number of them have joined FHWA as cooperating agencies: U.S. Army Corps of Engineers, U.S. Coast Guard, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, U.S. General Services Administration, U.S. Department of Homeland Security, and U.S. Department of State. On August 31, 2005, these and a larger group of state and local agencies attended a scoping meeting at Cobo Hall in Detroit. Others with an interest in the project, including elected officials and the public, also attended. Since then, more than 30 meetings have been held with various agencies. Additionally, the public has been engaged through a Local Advisory Council (community representatives, elected officials and interest groups) almost monthly since March 2005 to review and provide input to help shape the study process. Sixteen public workshops and 12 formal meetings have also been held to discuss the project and receive input. Dozens of other informal meetings have been held with citizens, interest groups, elected officials, and others.

The evaluation of alternatives is a U.S./Canada collaboration to make all decisions on an “end-to-end” basis. In other words, the alternatives analysis from the outset considered the impacts from a point at the freeway system in the U.S. to Highway 401 in Canada, with a crossing of the Detroit River between the two ends. And, while each of the U.S. and Canadian governments have laws and regulations to guide the specifics of their unique analysis processes, and to prepare appropriate documentation, the collaboration in evaluating the Illustrative Alternatives, choosing the set of Practical

Alternatives, and, eventually, selecting the Preferred Alternative, has been and will continue to be conducted on an end-to-end basis.

The DRIC analysis began with a “long list” of 51 Illustrative Alternatives in the U.S. (combinations of highway connectors, plazas and border crossings) (Figures S-4 and S-5) (Section 2 of this DEIS). Screening of them led to concentrating on six alternatives. Eventually, the process led to a recommendation in December 2005 to focus the analysis on an area in the U.S. between Zug Island and the Ambassador Bridge, known as Delray, and in Canada, between Broadway Boulevard to the vicinity of Brock Street in which the proposed bridge and plaza should be placed (Figure S-6).

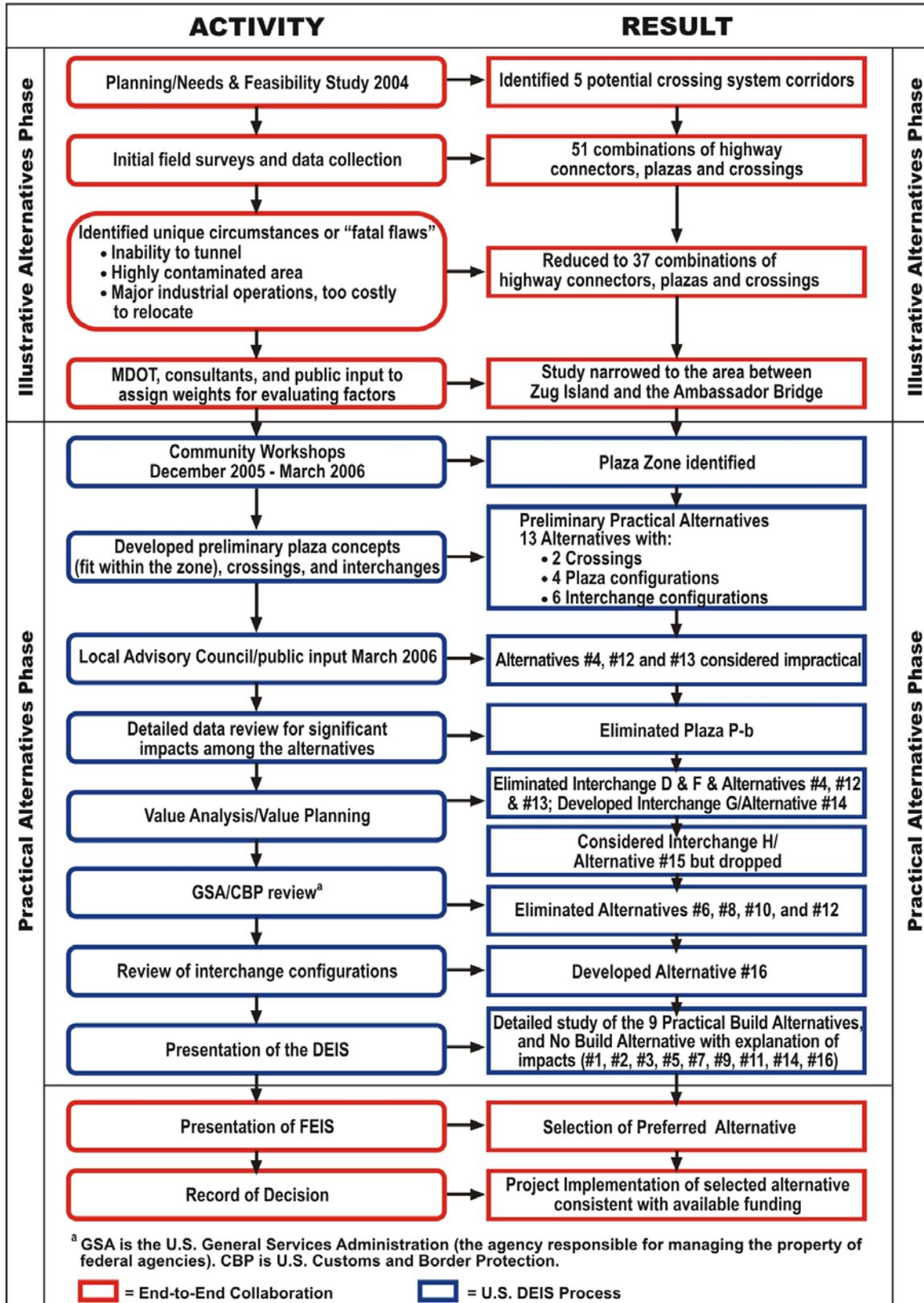
The analysis that began in December 2005 and extended to July 2007, developed and evaluated a list of preliminary Practical Alternatives. This involved the public (March 2005, December 2005 and June 2006), the General Services Administration (GSA) (the property owner of the federal government) and U.S. Customs and Border Protection (CBP) (an agency of the U.S. Department of Homeland Security), other federal cooperating agencies, state agencies, MDOT and the Partnership. Nine Practical Alternatives were selected as Build Alternatives to be fully analyzed and discussed in this DEIS. The No Build Alternative is also a Practical Alternative. It does not include a new crossing built by government. It does consider the proposal by the private-sector owners of the Ambassador Bridge to build a six-lane span to replace the existing, four-lane bridge as a variation of the No Build Alternative.

The nine Build Alternatives under consideration are listed on Table S-1 and shown in Figures S-7 and S-8. They involve crossing the river at one of three locations labeled X-10A, X-10B and X-11 (refer to Figure S-3). Two bridge types are considered for Crossings X-10B and X-11 – cable-stay and suspension (Figures S-9 and S-10). Only a suspension bridge is considered at Crossing X-10A as the span over the river is beyond the practical limits of a cable-stay bridge. All piers (foundations) supporting each of the three proposed bridges will be on land to avoid interference with navigation on the Detroit River. Each concept meets criteria of the U.S. Coast Guard for minimum clearance at the shorelines and center of the navigation channel.

Alternative	Interchange	Plaza	Crossing
#1	A	P-a	X-10
#2	B	P-a	
#3	C	P-a	
#5	E	P-a	
#14	G	P-a	
#16	I	P-a	
#7	A	P-c	X-11
#9	B	P-c	
#11	C	P-c	

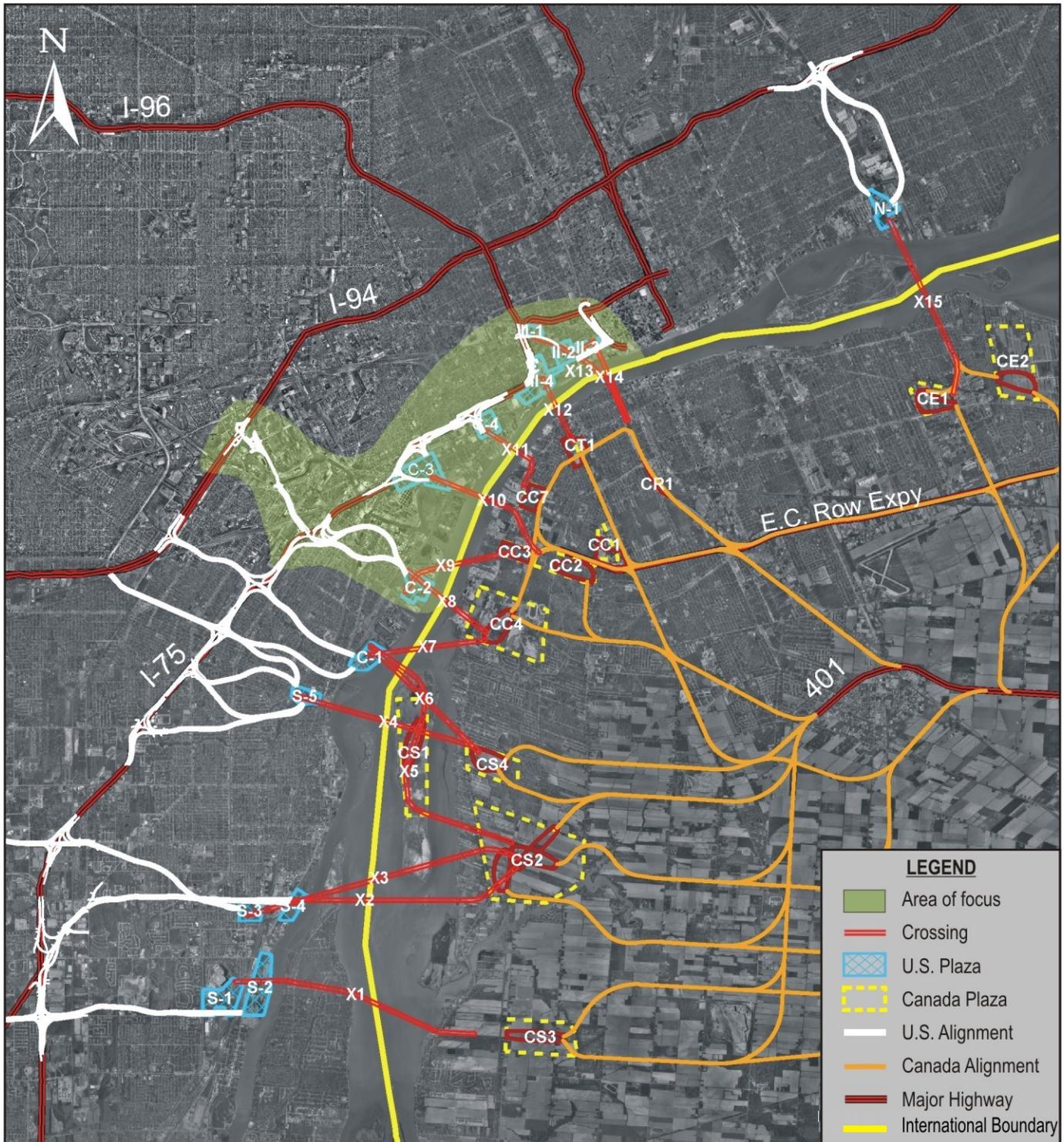
Source: The Corradino Group of Michigan, Inc.

Figure S-4  
 Alternatives Evaluation Process  
 Detroit River International Crossing Study



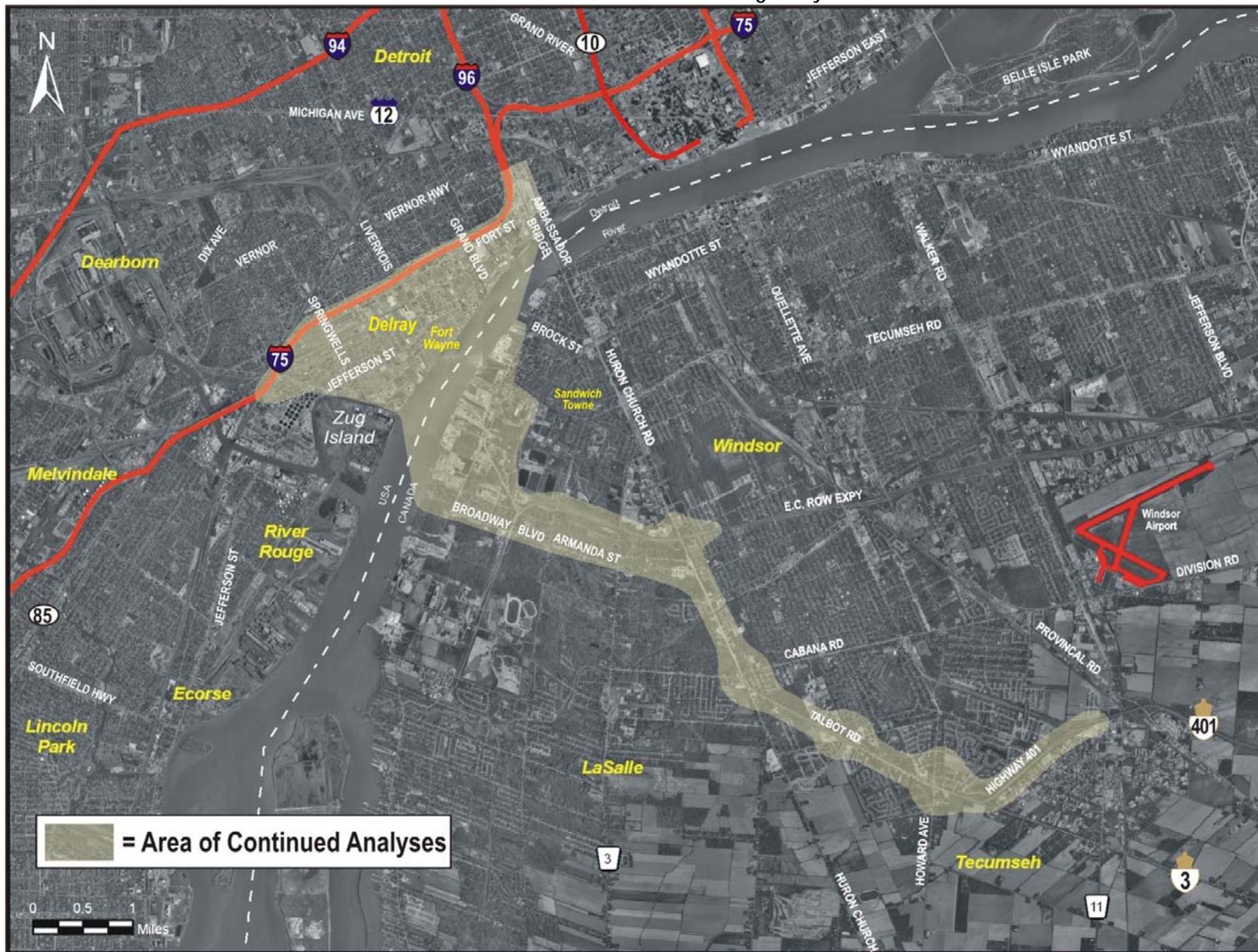
Source: Michigan Department of Transportation.

Figure S-5  
 Area of Focus Based on Weighted Performance Analysis  
 Detroit River International Crossing Study



Source: The Corradino Group of Michigan, Inc.

Figure S-6  
 Area of Continued Analyses  
 Detroit River International Crossing Study



Source: The Corradino Group of Michigan, Inc.

Figure S-7  
 X-10 Crossing Alternatives #1, #2, #3, #5, #14 and #16  
 Detroit River International Crossing Study

Alternative #1



Alternative #2



Alternative #3



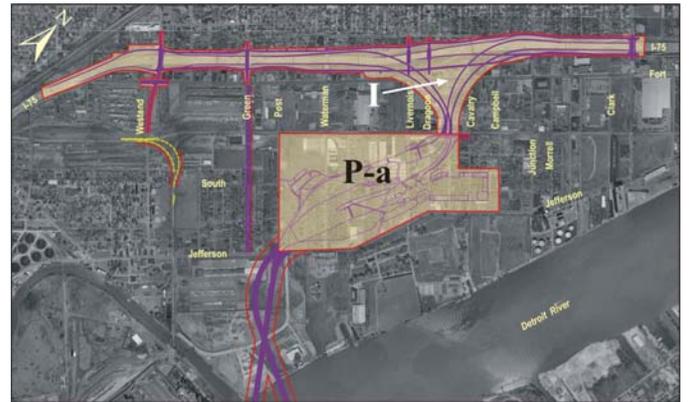
Alternative #5



Alternative #14



Alternative #16



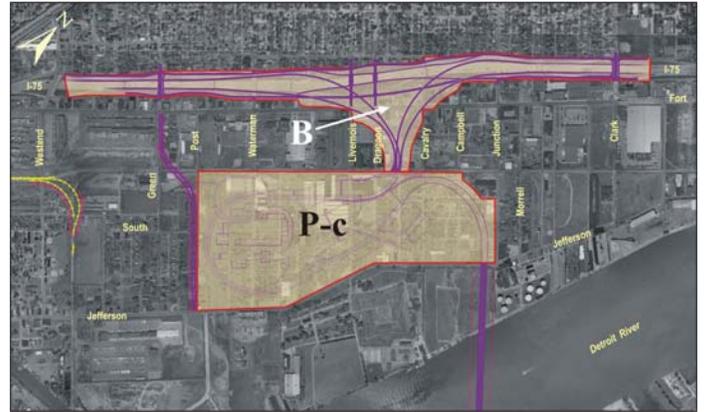
Source: The Corradino Group of Michigan, Inc. and Parsons Transportation Group

Figure S-8  
X-11 Crossing Alternatives #7, #9 and #11  
Detroit River International Crossing Study

Alternative #7



Alternative #9



Alternative #11



Source: The Corradino Group of Michigan, Inc. and Parsons Transportation Group

Figure S-9  
Cable-stay Bridge Concept Developed through Stakeholder Engagement Workshops  
Views from U.S. Looking Towards Detroit River  
Detroit River International Crossing Study

**Crossing X-10B**



**Crossing X-11**



Source: Parsons Transportation Group

Figure S-10  
Suspension Bridge Concept Developed through Stakeholder Engagement Workshops  
Views from U.S. Looking Towards Detroit River  
Detroit River International Crossing Study

**Crossings X-10A & B**



**Crossing X-11**



Source: Parsons Transportation Group

The two proposed plazas are shown on Figures S-11 and S-12. Their size is 150± acres to accommodate all functions of CBP and other federal and state agencies, plus functions such as toll collection, duty free shops, a utility corridor, and space for future flexibility.

Six alternative interchanges are being studied to connect the proposed plazas to I-75. Each focuses on the area along the freeway in the general location of the existing Livernois/Dragon interchange, which will be eliminated by the new interchange. Other modifications to I-75 interchanges at Clark and/or Springwells Streets are expected, depending on the Build Alternative selected. Changes are also expected to the seven street and five pedestrian/bicycle crossings of I-75. These changes are needed to meet all appropriate engineering criteria to connect the new interchange with I-75.

The remainder of this section summarizes the expected impacts of the No Build and Build Alternatives.

## S.3 Impacts

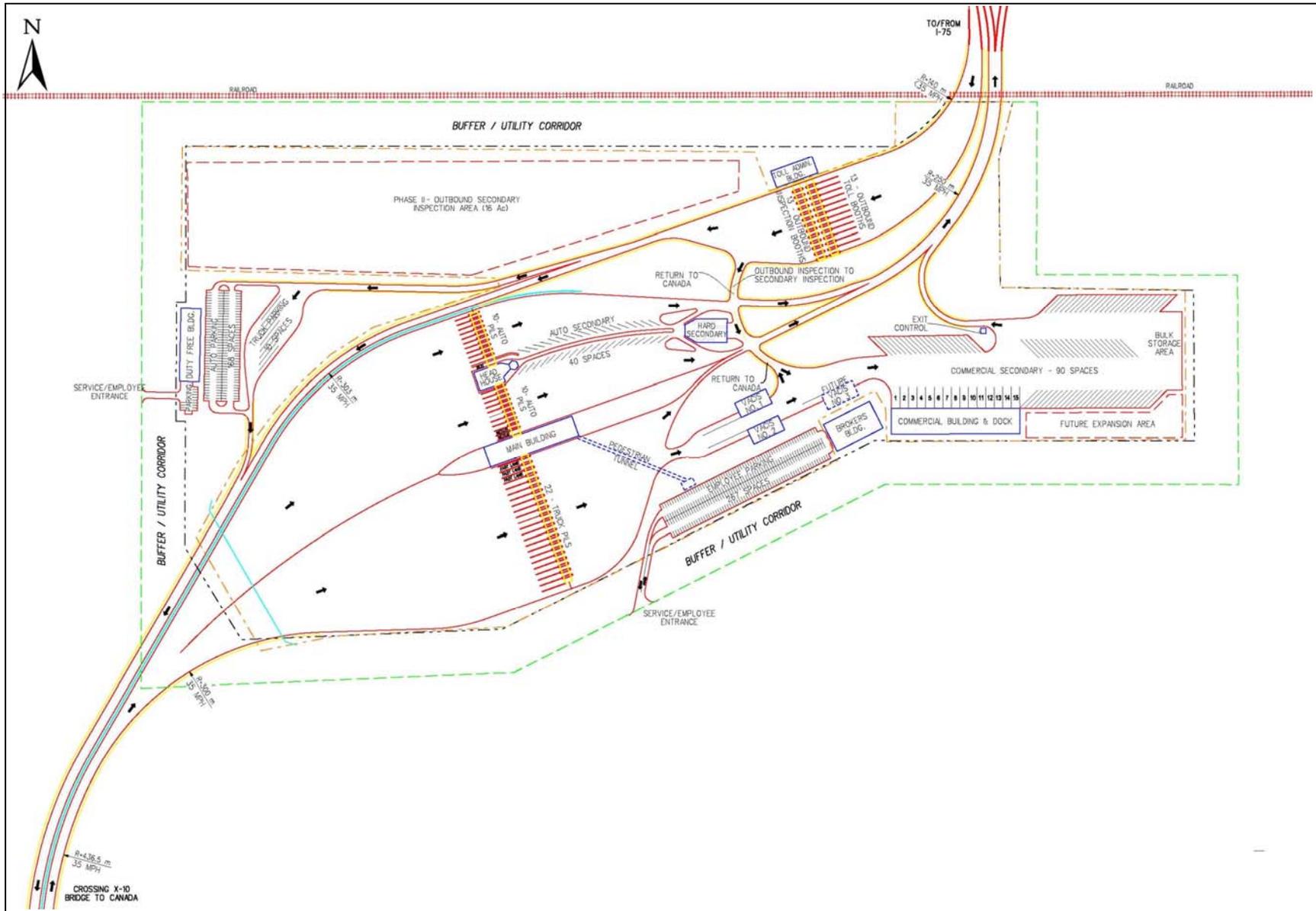
A table (S-8) summarizing the impacts that result from studying the No Build and nine Build Alternatives is presented at the back of this Executive Summary. Ways to reduce any environmental impacts are presented in Section 4 of this DEIS.

### S.3.1 Possible Relocations

#### No Build Alternative

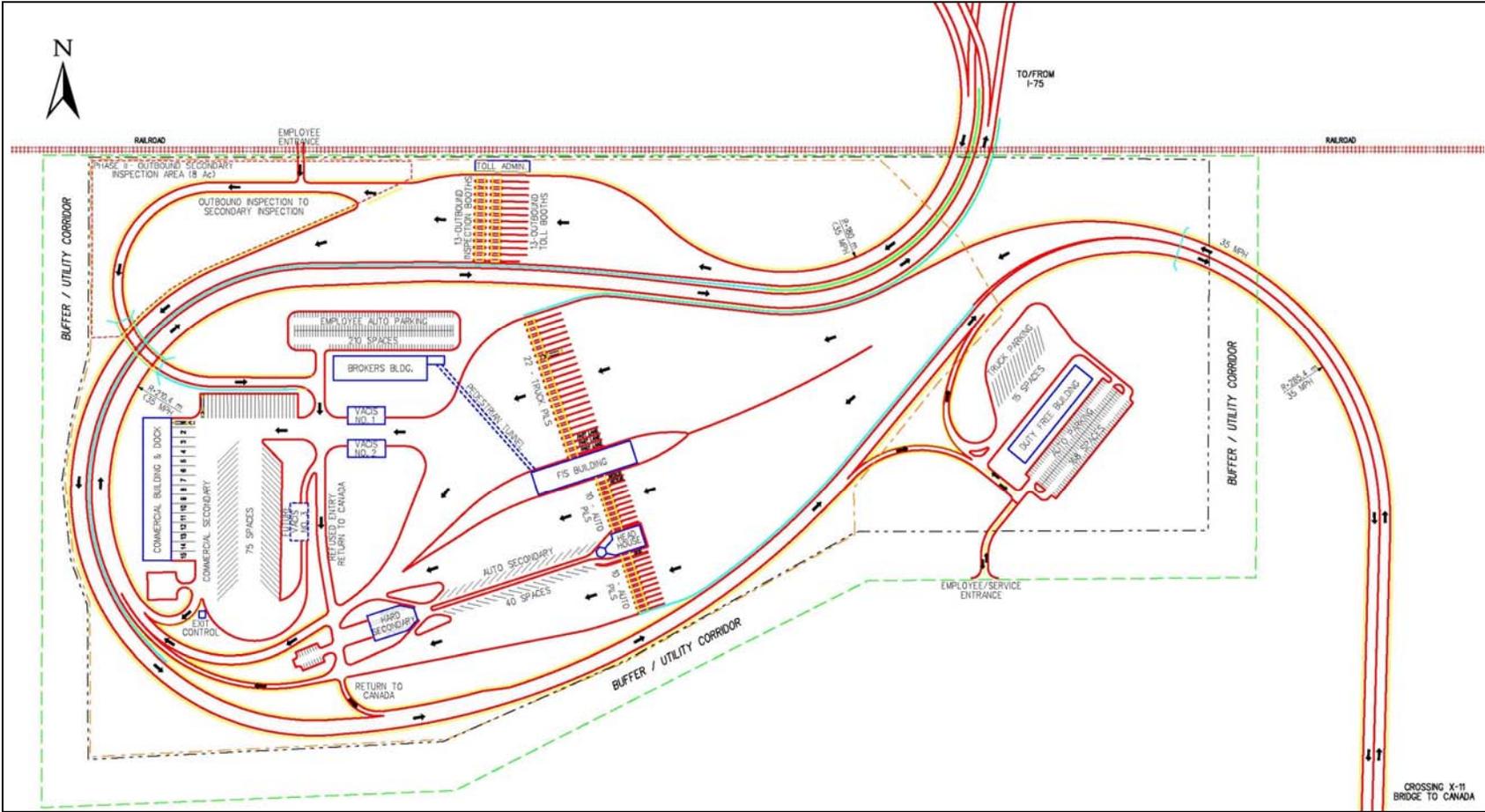
There will be no relocations or properties purchased with the No Build Alternative. The Delray community, however, will probably continue to lose housing. Since this study started in January 2005, 34 houses have burned down, a trend that isn't slowing as evidenced by the fact that 25 houses burned in 2007 alone. Also, industrial uses in Delray keep expanding. This continues to put pressure on the remaining Delray residents.

Figure S-11  
 Preliminary Alternative Plaza Layout P-a  
 Detroit River International Crossing Study



Source: The Corradino Group of Michigan, Inc. and Parsons Transportation Group

Figure S-12  
 Preliminary Alternative Plaza Layout P-c  
 Detroit River International Crossing Study



Source: The Corradino Group of Michigan, Inc. and Parsons Transportation Group

## Build Alternatives

The range of possible relocations is 324 to 414 dwelling units depending on the Build Alternative (single-family house and living units in apartments, duplexes/triplexes, etc.) (Table S-2). These include two apartment buildings (one north of I-75 and one south), with a total of 100 units. Up to 56 businesses could be relocated, depending on which Build Alternative is chosen. They provide between 685 and 920 jobs. The Conceptual Stage Relocation Plan (Appendix A) demonstrates there is an adequate supply of properties available to absorb the displacement of residential, commercial and non-profit property owners/organizations in the Wayne, Oakland and Macomb counties real estate market.

Table S-2  
Potential Relocations  
Detroit River International Crossing Study

	Description of Item	Build Alternatives								
		#1	#2	#3	#5	#7	#9	#11	#14	#16
Residential Units	Occupied	349	353	324	414	365	369	340	338	356
	Vacant	6	5	5	6	19	18	18	4	6
Residential Population <sup>a</sup>	Number	855	865	794	1,014	894	904	833	828	872
Business Units	Active	43	44	49	51	50	51	56	41	45
	Vacant	25	25	30	30	24	24	29	27	25
Estimated Employees	Number	685	690	740	790	865	870	920	685	690
Other Land Uses Affected	Schools	0	0	0	0	0	0	0	0	0
	Senior Service Facilities	0	0	0	0	0	0	0	0	0
	City/Government Facilities	3	3	3	4	3	3	3	2	3
	Places of Worship	6	7	7	5	6	7	7	6	6
	Medical Facilities	1	1	1	1	1	1	1	0	1
	State/Federal Government Facilities	2	2	2	2	2	2	2	1	2

<sup>a</sup> Calculated using average population per dwelling unit in Delray from the 2000 U.S. Census for Tracts 5235, 5236 and 5237.  
Source: The Corradino Group of Michigan, Inc.

Finally, a survey of old industrial sites (“brownfields”) indicates there are over 1,000 acres within five minutes drive of Delray to which affected businesses could be relocated.

The following standard procedure related to relocation will be followed:

*Compliance with State and Federal Laws* – Acquisition and relocation assistance and services will be provided by MDOT in accordance and compliance with Act 31, Michigan P.A. 1970; Act 227, Michigan P.A. 1972; Act 87, Michigan P.A. 1980, as amended; Act 367, Michigan P.A. 2006; Act 439, Michigan P.A. 2006; and, the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as amended. MDOT will inform individuals, businesses and non-profit organizations of the impact, if any, of the project on their property. Every effort will be made, through relocation assistance, to lessen the impact when it occurs.

### S.3.2 Adverse Impacts to Environmental Justice/ Title VI Population Groups

#### No Build Alternative

The No Build Alternative would see past trends continue in the Delray area which indicate an increase in minority population groups and low-income population groups. Industrial/commercial uses will continue to be mixed with residential uses. Communities are expected to be challenged as Michigan's economy changes, causing jobs and related income to be lost and, possibly, homes to become vacant (Section 3.1.4).

#### Build Alternatives

The Build Alternatives would have an adverse effect on all Environmental Justice (EJ) or Title VI population groups. The potential impacts are:

- Between 324 and 414 households would be relocated (Section 3.1.4 of the DEIS).
- Between 685 and 920 jobs may be relocated from the Delray area. Some are held by minorities and low-income people (Section 3.1.4 of the DEIS). This is particularly true for those businesses taking advantage of the Empowerment Zone, which allows them to gain tax credits when they employ people from the local area.

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#### Title VI of the 1964 Civil Rights Act:

Prohibits discrimination on the basis of race, color, sex and national origin in programs and activities receiving federal financial assistance.

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#### What does Executive Order 12898 cover?

The order states:

"...each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

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- Three cultural resources, which are eligible for listing in the *National Register of Historic Places*, such as the Berwalt Manor apartment building, would be lost (Section 3.9.2 of the DEIS).
- Up to seven places of worship would be lost (Section 3.1.4 of the DEIS).
- The CHASS (Community Health and Social Services) Center would be relocated. It serves the needy, low-income population, many of whom have no access to an automobile (Section 3.1.4).
- The Rademacher Recreation Center, although now closed, would be eliminated. So would Rademacher Park and one small playlot (Section 3.10.1 of the DEIS).
- Normal traffic patterns would be permanently disrupted and travel made more difficult because interchanges with I-75 would be closed/modified. A number of streets crossing I-75 would also be permanently closed (Section 3.5.3 of the DEIS).
- Three bus lines would be permanently rerouted by one to two blocks, depending on the specific route. The population affected has relatively low access to an automobile.
- Between two and four of the five pedestrian crossings of I-75 would be permanently removed (Section 3.5.6). MDOT will work with the community to re-establish pedestrian access in the area.

The proposed Practical Alternatives will not have a disproportionately high and adverse effect on minority population groups in the Delray Study Area. However, as the Practical Alternatives are further evaluated, disproportionately high and adverse effects on low-income population groups in the Study Area may become evident. Such impacts may include, but not be limited to, disruptions to community cohesion, possible isolation, and loss of economic vitality. These impacts will be further evaluated after MDOT completes interviews with property owners and tenants who may be displaced as a result of this project. If additional impacts are identified, they, and proposed mitigation measures, will be addressed in the FEIS.

### S.3.3 Jobs

#### No Build Alternative

Without a new border crossing, the opportunity for Michigan to attract 25,000 jobs in 2035 could be lost. This could result in tax loss to the State of Michigan of about \$500 million in 2035 alone. That's because of disruption in international trade caused by too little border crossing capacity. In addition, restructuring of the auto industry will mean a loss of jobs and tax revenues for the next eight to ten years. Arvin Meritor is the biggest employer (400+ jobs) in the Delray area. It, too, is experiencing difficulties because of changes in the auto industry which it services as a supplier.

Construction Will Create Jobs



Source: The Corradino Group of Michigan, Inc.

#### Build Alternatives

The continued decline in the Michigan economy will limit regional growth to the smallest in decades. In the face of this trend, a new river crossing between Detroit and Windsor could capture for Michigan 25,000 jobs (mostly in manufacturing) in 2035 alone because the additional border capacity will support basic industries which depend on it to transport the products they make. Another 3,350 new jobs could be created just because of the additional accessibility a new crossing provides (Section 3.2.2 of DEIS). The latter jobs would come from outside Michigan.

Constructing any of the Build Alternatives would create between 8,939 and 10,416 direct jobs over the four years it will take to build the facilities (2010 through 2013). This would stimulate an additional 22,986 to 26,784 indirect jobs during the same period.

Bridge operations in 2035 would provide 775 permanent jobs estimated as follows: 400 at Customs and Border Protection; 200 brokers; 70 at tolls; 20 at maintenance; 75 at duty free; and, 10 in administration.

There would be significant gains in income taxes from the jobs and associated sales tax from construction spending. This would off-set the expected loss by the City of Detroit when property used by the DRIC project comes off the tax rolls – about \$500,000 to \$600,000 in property taxes each year. This loss does not assume any gain associated with those relocated by the DRIC to areas within Detroit.

### S.3.4 Land Use

#### No Build Alternative

The Delray area is expected to grow more industrial without a new crossing. If the current trends continue, vacant lots will increase in the residential area of Delray.

#### Build Alternatives

Despite the impact from the Build Alternatives, Delray has the potential to become a better place to live and work if a new crossing were built. This is because the Build Alternatives create opportunities that may encourage development.



Source: The Corradino Group of Michigan, Inc.

### S.3.5 Traffic

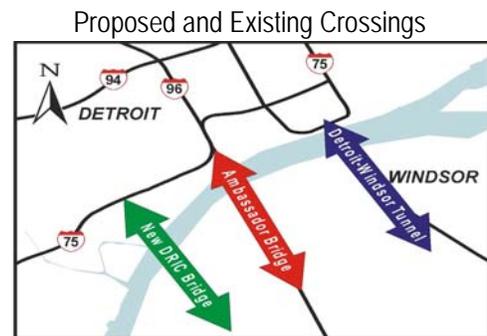
#### No Build Alternative

If nothing is done, traffic in the area will grow slowly on major roads, like I-75. On the other hand, traffic in the neighborhoods should improve with the previously-approved Ambassador Gateway Project expected to be completed in 2009. It will connect the Ambassador Bridge directly to I-75. That will reduce heavy truck traffic on local streets, especially in Mexicantown and along Fort Street (M-85). Also, the connection of Bagley Avenue will be reestablished by a new pedestrian crossing. This connection was severed by I-75 in the 1970s.

#### Build Alternatives

##### Vehicular Traffic Distribution

Alternatives #1, #2, #3, #5, #14 and #16 would carry in the 2035 PM peak hour 80 percent of the truck traffic and 60 percent of all traffic when compared to the Ambassador Bridge. Alternatives #7, #9 and #11 would carry about 25 percent less traffic in 2035 than the other DRIC alternatives and less traffic than the Ambassador Bridge in the 2035 PM peak. The difference in traffic among DRIC alternatives is primarily attributable to the difference in plaza configuration – the more complex the plaza layout, the lower the traffic.



Source: The Corradino Group of Michigan, Inc.

## Interchanges

Changes would occur along I-75 as a result of introducing the new DRIC crossing. All alternatives would remove the Livernois/Dragoon interchange (Figures S-7 and S-8). Alternatives #1, #2, #3, #7, #9, #11, #14 and #16 would remove half of the Clark Street interchange. Alternative #5 would remove the entire Clark Street interchange. All the Build Alternatives (except for #14 and #16) would remove half of the Springwells interchange. Parts of the lost access at the Clark and Springwells interchanges will be replaced with new ramps in new locations (Section 3.5.3 of the DEIS). Alternative #16 would rebuild the entire Springwells interchange. These changes are important to the local residential community and businesses that need access to I-75.

## Streets Crossing I-75

The changes along I-75 include removing cross streets. Of the seven that now exist, Alternatives #1, #3, #5, #7 and #11 would remove three. Alternatives #2, #9, #14 and #16 would remove two.

## Pedestrian/Bicycle-only Crossings of I-75

Alternative #14 would remove two of the five pedestrian/bicycle-only crossings now provided. Alternatives #1, #2, #7, #9 and #16 would remove four. Alternatives #3, #5 and #11 would each remove three. These cross streets and pedestrian/bicycle connectors are important to maintaining the cohesiveness of each part of the community split by I-75. Options for replacing the bicycle/pedestrian bridges will be reviewed following selection of the Preferred Alternative. Any replacement structures would meet Americans with Disabilities Act guidelines. This information will be included in the FEIS.

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### What is the Americans with Disabilities Act (ADA) Supposed to do?

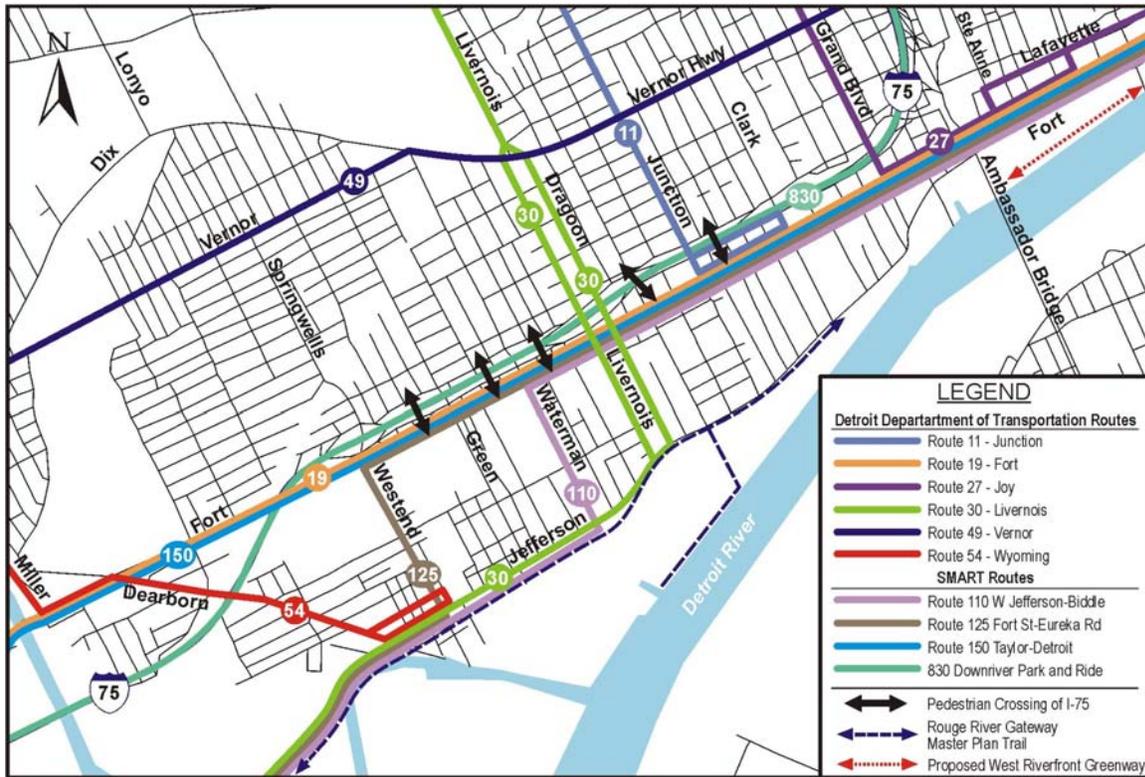
It is intended to make America more accessible to people with disabilities. To do so, guidelines are provided on buildings, sidewalks, street crossings, and the like. Curb cuts for wheelchairs and limits to how steep sidewalks can be are two examples.

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## Bus Routes

All Build Alternatives but #14 would affect Detroit Department of Transportation (DDOT) Bus Route 11/Junction. The proposal is to reroute it by a block, if Junction were closed. All Build Alternatives would cause rerouting around the plaza of DDOT Route 30/Livernois and SMART Route 110. Final resolution of any reroutings will have to be agreed upon by DDOT and SMART once a Preferred Alternative is chosen.

## Bus Routes and Pedestrian Links



Source: The Corradino Group of Michigan, Inc.

## S.3.6 Air Quality

### No Build Alternative

Air quality will improve under the No Build Alternative because of U. S. Environmental Protection Agency rules and regulations under the Clean Air Act and the National Ambient Air Quality Standards. Regional air quality will also improve because of the closings of old manufacturing plants due to the decline in the economy and a shift to more service-oriented industries. Local air quality conditions in the Mexicantown area at the Ambassador Bridge are expected to improve with opening of the Ambassador Gateway Project in 2009.

## Build Alternatives

As with the No Build Alternative, overall air quality will improve because of EPA rules and regulations. The Build Alternatives will aid in improving air quality by spreading the automotive traffic in Southwest Detroit and significantly reducing the number of heavy-duty diesel trucks within the neighborhoods. One-third to over one-half of the 2035 traffic from the Ambassador Bridge would switch to the new bridge. The Ambassador Bridge has Mexicantown as its neighbor to the east. The Delray neighborhood is located to the west of the new plaza. Mexicantown is an expanding, minority neighborhood. Splitting traffic between two bridges/plazas will thin out the pollution concentration in any one area.

North of I-75, in Southwest Detroit, the DRIC alternatives can reduce traffic on Livernois Avenue and Dragoon Street by changing the I-75 ramp system that now serves the one-way pair. Heavy-duty diesel truck traffic would be rerouted away from the densely residential area.

The study analyzed local “hot spots” and concluded that carbon monoxide (CO) and particulate matter (PM) standards would not be violated at this level. Further hot-spot analysis will be done during the Final Environmental Impact Statement (FEIS) after a Preferred Alternative is selected.

The Clean Air Act (CAA) states that regions must meet and maintain specific air quality standards. Southeast Michigan currently does not meet the standards for 8-hour ozone and fine particulate matter (PM<sub>2.5</sub>). The region also must prove that it is maintaining CO and small coarse particulate matter (PM<sub>10</sub>) at required levels. The regional planning organization has the responsibility to develop a transportation plan that helps meet the CAA air quality standards. The Southeast Michigan Council of Governments (SEMCOG) is the planning organization that is responsible for developing the transportation plan. Once a Preferred Alternative is selected, SEMCOG will perform the analyses necessary to ensure that CAA standards are met and the DRIC project can be included in the transportation plan.

MDOT has ways to control air pollution during construction. These include:

- Scheduling the use of construction equipment so it reduces pollution impacts around sensitive places like Southwestern High School;
- Using “clean” operating engines on construction equipment; and,
- Using ultra-low sulfur diesel fuel for off-road vehicles before EPA regulations require it.

## S.3.7 Noise

### No Build Alternative

Noise levels from traffic will not increase much with the No Build Alternative because traffic is not expected to change much. However, it should be noted that existing noise levels along the north side of I-75 are already high (70 dBA and above) and no noise walls exist there, nor are they proposed with the No Build Alternative. The exception is in and around Mexicantown with the opening of the Ambassador Gateway Project at the Ambassador Bridge in 2009. Traffic will be directly channeled from the Ambassador Bridge plaza onto I-75. International traffic that often makes its way through the neighborhood should be eliminated and noise levels should be reduced.

### Build Alternatives

Noise levels will improve in Mexicantown with completion of the Ambassador Gateway Project. They will not increase with the Build Alternatives for “sensitive receivers,” such as Southwestern High School and residences near the proposed DRIC crossing and plaza. Alternatives #3 and #11 would cause a reduction of noise north of I-75 because they would move I-75 and its service drive away from the residential area north of the freeway between Dragoon and Junction Streets. Possible noise wall locations were analyzed along the north side of I-75. The noise walls that could be built are listed in Table S-3. However, due to a possible increase in traffic on the service drives, the noise walls may not be effective. Noise walls on the residential side of the service drives would require an agreement with the City of Detroit and property owners, be proven effective, and have a reasonable cost before they would be built. This will continue to be evaluated in the FEIS once a Preferred Alternative is chosen.

Representative Michigan Noise Wall



Source: The Corradino Group of Michigan, Inc.

**Table S-3  
Practical Alternatives – Feasible and Reasonable Noise Walls  
Detroit River International Crossing Study**

	Location/Designation	Length (Feet)	Cost	Benefiting Receivers	Cost per Ben. Rec.
Alternatives #3 Interchange C	Springwells to Green Wall 1 – Along Service Drive	1400	\$777,000	23	\$33,800
	Alternative #5 Interchange E	Springwells to Green Wall 1 – Along Service Drive	1400	\$777,000	23
	Waterman to Livernois Wall 1 – Along Service Drive to Crawford	830	\$457,000	15 <sup>a</sup>	\$30,500
	Alternative #14 Interchange G	Springwells to Green Wall 1 – Btwn Service Drive and I-75 off-ramp	330	\$184,000	25 <sup>b</sup>
Wall 2 – Along Service Drive to Green		840	\$462,000		
Green to Waterman Wall 1 – Along Service Drive		1310	\$724,000	23	\$31,500
Waterman to Livernois Wall 1 – Along Service Drive to Crawford		1340	\$745,000	32 <sup>a</sup>	\$23,300
Dragoon to Junction Wall 1 – Along Service Drive Calvary to Junction		1110	\$615,000	16	\$38,400 <sup>c</sup>
Junction to Clark Wall 1 – Along Service Drive to Clark		1600	\$885,000	44	\$20,100
Alternative #16 Interchange I		Springwells to Green Wall 1 – Btwn Service Drive and I-75 off-ramp	330	\$184,000	25 <sup>b</sup>
	Wall 2 – Along Service Drive to Green	840	\$462,000		

<sup>a</sup> Counting Beard Early Childhood Center as ten benefiting receivers.

<sup>b</sup> Calculation combines Walls 1 and 2.

<sup>c</sup> This wall was included because, with a minor adjustment, it would meet the MDOT's per benefiting unit criterion of \$38,060.

Source: The Corradino Group of Michigan, Inc.

### S.3.8 Wetlands

#### No Build Alternative

The No Build Alternative will not affect any wetlands.

#### Build Alternatives

Only Alternatives #7, #9 and #11, with a crossing in the X-11 corridor, are expected to affect a very small amount (0.01 acres) of low-quality wetlands (Palustrine Emergent/ Persistent/Temporarily Flooded and Palustrine Scrub-Shrub/Broad-leaved Deciduous/Temporarily Flooded). If Alternative #7, #9, or #11 is selected, it will be replaced under the “moment of opportunity” arrangement where the mitigation is rolled into another mitigation project elsewhere in the state.

Wetland Area Affected – Corridor X-11



Source: The Corradino Group of Michigan, Inc.

### S.3.9 Threatened and Endangered Species

#### No Build Alternative

No harm to threatened and endangered species is expected with the No Build Alternative.

#### Build Alternatives

None of the Build Alternatives would harm threatened and endangered species. Surveys found no such species in the area.

### S.3.10 Cultural Resources – Aboveground

MDOT's and FHWA's responsibilities for cultural resources are governed by Section 106 of the National Historic Preservation Act and Section 4(f) of the Department of Transportation Act.

#### No Build Alternative

The current trends of deterioration, destruction and demolition can be expected to continue as evidenced by the decline of the former McMillan School in Delray. This will harm the historic value of the area where there are many cultural resources (Section 3.9.2).



Source: The Corradino Group of Michigan, Inc.



Source: The Corradino Group of Michigan, Inc.

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#### What is the National Historic Preservation Act (NHPA)?

Legislation passed in 1966 establishing the federal government's policy on historic preservation and the national historic preservation program through which that policy is implemented.

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#### What is Section 4(f)?

Section 4(f) of the Department of Transportation Act of 1966 states that no transportation project should be approved which required the "use" of any publicly owned land from a public park, recreation area, wildlife and waterfowl refuge, or historic site unless there is no feasible or prudent alternative to use of such land.

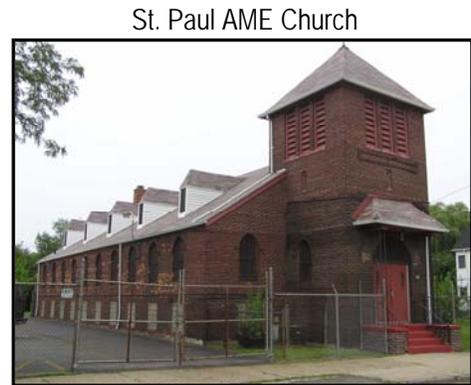
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## Build Alternatives

All Build Alternatives would remove three historic structures which are potentially eligible for listing on the *National Register of Historic Places*:

- Berwalt Manor Apartment Building;
- Kovacs Bar; and,
- St. Paul African Methodist Episcopal Church.

Alternative #5 would also remove the Detroit Savings Bank/George International Building. Alternatives #1, #2, #5, #7, #9 and #16, would affect part of the Beard School property, which is on the *National Register of Historic Places*.



Source: The Corradino Group of Michigan, Inc.

Traditional cultural properties would not be affected. If Native American sites are accidentally encountered during project construction, the Gun Lake Tribe and Hannahville Indian Community would be invited to consult, as applicable.

## S.3.11 Cultural Resources – Archaeological

### No Build Alternative

While there are a number of known archaeological resources in the area based on MDOT studies, no impacts on archaeological sites are expected with the No Build Alternative.

### Build Alternatives

None of the Build Alternatives would have an effect on any *prehistoric* archaeological sites. All alternatives would affect two *historic* archaeological sites from the late-1800s. Each is recommended for listing in the *National Register of Historic Places*.

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#### What are Prehistoric Archaeology and Historic Archaeology?

**Prehistoric archaeology** is the study of the past before historical records began. It deals with ancient cultures that did not have writing of any kind.

**Historic archaeology** is the study of the recent past, for which written documentation is available.

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## S.3.12 Parkland

### No Build Alternative

Past trends have seen the closing of a number of local parks and recreation facilities. The ongoing economic decline, forecast by SEMCOG to continue into the middle of the next decade, may hasten that trend under the No Build Alternative.

### Build Alternatives

The past trends cited above will also continue with the Build Alternatives. Additionally, all Build Alternatives would impact three recreational areas:

- South Rademacher Park at 6501 South Street is located in the plaza area with every DRIC alternative. It would be removed by the plaza which would occupy that space.
- South Rademacher Community Recreation Center at 6501 South Street is located in the plaza area with every DRIC alternative. The City of Detroit closed the Center in 2006. It would be removed by the plaza which would occupy that space.
- Post-Jefferson Playlot, 577 South Post, is located in the plaza area with every DRIC alternative. It would be removed by the plaza which could occupy that space. Its significance is under discussion among the Detroit Recreation Department, the Michigan Department of Transportation, and the Federal Highway Administration to determine whether it is protected by Section 4(f), the federal transportation regulations for publicly-owned parks and historic properties.

Rademacher Park and Recreation Center



Source: The Corradino Group of Michigan, Inc.

## S.3.13 Visual Conditions

### No Build Alternative

With the No Build Alternative, a new span of the Ambassador Bridge, as proposed by the Detroit International Bridge Company, would create a visual impact on the existing bridge. That impact must be addressed by the proponent in consultation with the State Historic Preservation Office. If the second span next to the Ambassador Bridge is not built, there would be no major visual changes in the study area.

## Build Alternatives

Fort Wayne, which is located between the X-10 and X-11 crossings, will get better exposure to drivers on the new bridge with all Build Alternatives. That, combined with good access of the Fort to the crossing's plaza, could increase the number of people who visit Fort Wayne.

Delray would be changed visually by the new crossing and connections to I-75. This could be positive as concepts are refined and the Context Sensitive Solutions (CSS) process continues during the project's design phase and CSS workshops continue in the community.

Cable-stay Bridge @ Crossing X-10B



Suspension Bridge @ Crossings X-10A & B



Source: Parsons Transportation Group

### S.3.14 Lighting

#### No Build Alternative

A continuation of past trends is expected with the No Build Alternative. They include night lighting from the Ambassador Bridge. A proposed second span of the bridge, if approved, would alter the existing night light pattern. On the other hand, street lighting in Delray is often in poor condition because of low maintenance. No change is expected.

#### Build Alternatives

Lighting of the Build Alternatives would affect the area west of Post Street, which has scattered residential use. Fort Wayne would receive more light at night. Consultation on the possible light intrusion into Fort Wayne will continue with the U.S. Department of Interior, the State Historic Preservation Office and the City of Detroit. Further discussions about bridge lighting will also be required to handle the needs of the Federal Aviation Administration and the United States Coast Guard. There will also be discussions with the U.S. Fish and Wildlife Service and the Michigan Department of Natural Resources to discuss lighting and its potential effect on migrating birds.

Cable-stay Night Rendering



Source: The Corradino Group of Michigan, Inc.

## S.3.15 Contaminated Sites

### No Build Alternative

A continuation of past trends is expected as federal and state clean-up rules are applied to contaminated sites when they are reused.

### Build Alternatives

Build Alternatives #7/9/11/16 would impact 21 contaminated sites. Build Alternatives #1/2/3/14 would affect 19. Build Alternative #5 would impact 17 contaminated sites. These sites are rated either medium or high in pollutants. They will require appropriate remediation as construction begins.

## S.3.16 Indirect/Cumulative Impacts

An indirect impact is caused by an action occurring later in time or farther removed in distance but happening in the reasonably foreseeable future. Cumulative effects result from the incremental impact of an action when added to other past, present and reasonably foreseeable future actions, regardless of what agency or person undertakes the action.

### No Build Alternative

Past trends will continue under the No Build Alternative, with further deterioration caused by the ongoing decline of the Michigan economy. The effects will be felt for the next eight to ten years, with continued losses of jobs and the abandonment of industrial sites. The economic downturn could actually improve air quality, when some polluting industries close. Positive changes in traffic and air quality will also occur in the area immediately around the Ambassador Bridge after the Ambassador Gateway Project is completed in 2009 (Tables S-4 and S-5).

### Build Alternatives

The conditions cited above for the No Build Alternative also apply to the Build Alternatives. However, because of improved accessibility provided by a new crossing, a small number of new jobs could be attracted to the study area in the vicinity of the I-94 interchange at Michigan/Wyoming Avenues. On the other hand, closing of the I-75 interchange at Livernois/Dragoon and closing streets crossing I-75 should reduce heavy

Table S-4  
Summary of U.S. Indirect Impacts  
The No Build Condition Versus the Build Condition  
Detroit River International Crossing Study

Category	No Build	All DRIC Build Alternatives
Traffic	Domestic traffic increases are expected to be relatively small. Positive effects will be experienced in Mexicantown and along Fort Street (M-85) with completion of Ambassador Gateway Project.	Domestic traffic increases are expected to be relatively small. Positive effects will be experienced in Mexicantown and along Fort Street (M-85) with completion of Ambassador Gateway Project.  The community north and south of I-75 will experience negative and positive indirect effects. <u>Negative:</u> More difficult for traffic to gain access to I-75 and move across it. <u>Positive:</u> Fewer trucks penetrating the area would reduce noise levels and improve air quality.
Economic Impacts	A continued jobs loss is expected in the SEMCOG region until about 2015 with relatively small net growth by 2030 compared to current conditions. In Wayne County and Detroit, a net loss in jobs can be expected, not just a loss of job growth.	A continued jobs loss is expected in the SEMCOG region until about 2015 with relatively small net growth by 2030 compared to current conditions. In Wayne County and Detroit, a net loss in jobs can be expected, not just a loss of job growth.  The change in accessibility associated with a new bridge would create 1,800 new jobs in Wayne County, with a small number of these locating in Southwest Detroit near the I-94/Wyoming Avenue interchange in the vicinity of the Livernois-Junction Yard intermodal (truck/rail) terminal. Oakland County could stand to gain 900 jobs near Novi. The SEMCOG region could gain 3,350 jobs (including those noted above). All these jobs would come from outside Michigan.
Land Use	Existing land use patterns are expected to continue with little change in the region. Expected losses of population and jobs in Wayne County and Detroit could lead to abandonment of some current land uses.	Existing land use patterns are expected to continue with little change in the region. Expected losses of population and jobs in Wayne County and Detroit could lead to abandonment of some current land uses.  Slightly offsetting this trend could be development associated with new jobs, noted above. They would require about 120 acres of land. There is enough brownfield space in Wayne County to accommodate the development. Other locations that could see additional jobs, like the I-96/I-696/I-275 interchange area in Oakland County, could absorb the development with no negative consequences foreseen.  The possibility that a "Welcome Center" will be part of this project has been mentioned at several public meetings. At this time a decision as to whether a "Welcome Center" will be included has not been made, and is subject to further study. If a Welcome Center is to be included, it will be addressed as part of the FEIS.
Air Quality	Pollution from mobile sources is expected to decrease because of cleaner engines and fuels. The forecast loss of jobs may close some polluting industries.	Pollution from mobile sources is expected to decrease because of cleaner engines and fuels. The forecast loss of jobs may close some polluting industries.  Sensitive receptors in the study area are not expected to be negatively impacted if development is properly located consistent with planning/zoning rules. Additional areas, particularly north of I-75 and near the Ambassador Bridge at Mexicantown, would benefit because of less truck traffic there.
Community Effects	Some housing rehabilitation can be expected to continue.  Industrial/commercial uses will continue to be mixed with residential uses. Both uses may degrade as forecast loss in jobs and population over the next eight to ten years can be expected to result in property abandonment in spots.	Some housing rehabilitation can be expected to continue.  Industrial/commercial uses will continue to be mixed with residential uses. Both uses may degrade as forecast loss in jobs and population over the next eight to ten years can be expected to result in property abandonment in spots.  Other indirect community effects of the proposed DRIC alternatives are discussed throughout this table.
Noises/Vibrations	No perceptible increases in noise and vibrations are expected overall. Some improvement is expected in Mexicantown with completion of Ambassador Gateway Project in 2009. Blasts from nearby room-and-pillar salt mining will continue to cause vibrations at annoyance levels in the area.	No perceptible increases in noise and vibrations are expected overall. Some improvement is expected in Mexicantown with completion of Ambassador Gateway Project in 2009. Blasts from nearby room-and-pillar salt mining will continue to cause vibrations at annoyance levels in the area, but the expansion potential towards Delray is reduced.  The introduction of noise-attenuating walls along I-75, where none exist now, would benefit the nearby community. No vibrations from the project would affect the area.
Cultural Resources	Continuation of past trends expected with some older structures being abandoned.  Potential exists in West Delray and in the area north of I-75 to protect the area's historical integrity and open an avenue to grant/loan programs for improving properties in historic districts identified in those two locations.	Continuation of past trends expected with some older structures being abandoned.  Potential exists in West Delray and in the area north of I-75 to protect the area's historical integrity and open an avenue to grant/loan programs for improving properties in historic districts identified in those two locations.  A positive and, at the same time, possibly negative indirect effect is possible on aboveground cultural resource sites in the study area that are on or recommended eligible for listing on the National Register of Historic Places. While several of these would not be directly impacted by the DRIC, care must be taken that "ripple-wave" development in the area not create a negative indirect impact on them. The FEIS will document the analysis and proposed mitigation for the Preferred Alternative.
Water Quality, Wetlands, Threatened and Endangered Species	Status quo is expected to be maintained, while recognizing some additional wetlands may form due to human activities at abandoned sites.	Recognizing no negative indirect effects are anticipated on wetlands, nor threatened and endangered species, some additional wetlands may form due to human activities. Further, government approvals of development that could be stimulated by building a new border crossing would avoid water quality impacts, ensuring proper treatment of water runoff/wastewater. Surface water runoff would decrease as there would be less total roofed/paved area.

Source: The Corradino Group of Michigan, Inc.



Table S-5  
 Summary of U.S. [Cumulative](#) Impacts  
 The No Build Condition Versus the Build Condition  
 Detroit River International Crossing Study

Category	No Build	All DRIC Build Alternatives
Mobility	Completion of the Ambassador Gateway Project, which will directly connect the Ambassador Bridge to I-75, will favorably alter circulation patterns in a large portion of the study area.	Completion of the Ambassador Gateway Project, which will directly connect the Ambassador Bridge to I-75, will favorably alter circulation patterns in a large portion of the study area.  Negative effects could occur if induced development is not guided by proper government approvals. If properly guided, a mix of compatible uses and no congestion is foreseen.
Land Use	A continuation of past trends is expected, at best. Potential for population and employment decline in Detroit and Wayne County may lead to continued abandonment of land uses.	A continuation of past trends is expected, at best. Potential for population and employment decline in Detroit and Wayne County may lead to continued abandonment of land uses.  Land use change associated with "ripple-wave" development of the DRIC will likely be minimized by applying planning principles that exist in all communities to ensure they are compatible with neighborhood uses.
Air Quality	Pollution from mobile sources is expected to decrease. Continued loss of jobs and population throughout region over next eight to ten years could lead to closing of polluting industries.	Pollution from mobile sources is expected to decrease. Continued loss of jobs and population throughout region over next eight to ten years could lead to closing of polluting industries. Proper location of new development, consistent with existing planning/zoning rules, would also help control pollution as a cumulative effect of the DRIC project.
Cultural Resources	A continuation of past trends is expected with some older structures being abandoned.	A continuation of past trends is expected with some older structures being abandoned.  Adverse impacts with new development stimulated by the DRIC will likely be prevented by applying local controls and proper planning.
Community Effects	Communities are expected to be challenged as the continued slump in the economy will likely cause businesses and homes to be left vacant as jobs and related income are lost. Even so, some housing rehabilitation can be expected to continue.	Communities are expected to be challenged as the continued slump in the economy will likely cause businesses and homes to be left vacant as jobs and related income are lost. Even so, some housing rehabilitation can be expected to continue.  A new crossing can be expected to stimulate some development. There are large and small tracts of land throughout the study area in locations compatible with industrial, logistics and transportation-related land uses. This re-use would minimize, if not totally avoid, negative impacts on community cohesion of such development. Housing rehabilitation would likely continue.
Noise	No perceptible increases are expected, overall. Some change could occur in spots if the downturn in the economy causes continued abandonment of noise-generating industrial/commercial uses.	Traffic volumes and noise levels would increase if economic development conditions improve with a new crossing. Negative community impacts can be avoided with care by the developer/builder and government agencies in locating this development away from sensitive uses.
Water Quality, Wetlands, Threatened and Endangered Species	A continuation of past trends is expected. Some wetlands may develop incidental to human activity on abandoned sites.	A continuation of past trends is expected. Some wetlands may develop incidental to human activity on abandoned sites. Nonetheless, no negative wetlands and/or water quality impacts are foreseen. Some positive effects could occur if brownfield sites are remediated for new development.

Source: The Corradino Group of Michigan, Inc.



truck traffic in the community. But, more complicated traffic patterns will come with changes in streets that cross I-75 and changes to the interchanges that now serve the freeway. Nonetheless, the overall air quality in the surrounding communities will improve because of improved vehicle engines and fuels and other state and federal requirements, even if more development results from the Build Alternatives (Tables S-4 and S-5).

Cultural resources in the community not affected by the DRIC are more likely to be protected. That's because historic properties would be blended into redevelopment plans and new historic districts would be identified. Historic properties within recognized districts are eligible for loans and grants which would enable restoration and preservation of these properties.

In the region, indirect and cumulative traffic and air quality impacts are not expected to increase. The same is true of water quality, wetlands, and impacts on threatened and endangered species. At the regional level, no negative indirect and cumulative cultural resources impacts are foreseen provided local controls and proper planning are applied.

The DRIC project has the potential to respond in a positive way to past and expected future trends by:

- Building on the transportation and industrial strength of the study area;
- Making improvements to push unwanted truck traffic out of residential areas;

In addition to those items, MDOT, in partnership with FHWA, is exploring a number of concepts by which enhancements may be made to the Delray area as it becomes the "host community" for the DRIC project. These concepts include partnering with the private sector and with other government agencies in areas such as job training, small business development, improving and replacing housing stock, and other community enhancing amenities. Depending on comments from stakeholders and community leaders, these concepts may continue to be studied and refined as the study moves toward the selection of the Preferred Alternative, which will be addressed in the FEIS.

None of this potential is diminished by two other river crossing proposals: a new six-lane Ambassador Bridge; or, the proposed Detroit River Tunnel Partnership's truck-only tunnel. Neither proposal would significantly reduce the projected traffic on the proposed DRIC crossing.

### S.3.16.1 Transboundary Impacts

The Transboundary/Canadian impacts are summarized in Table S-6. There is more variation in impacts among the alternatives in Canada because the three proposed alternative plazas are significantly different from one another. The approach road proposals feeding all plazas also vary from a tunnel to an at-grade facility.

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#### What are Transboundary Impacts?

These are impacts that are “reasonably foreseeable” that occur across a border as a result of proposed “actions” by federal agencies in the United States.

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### S.3.17 Safety and Security

#### No Build Alternative

A continuation of past trends in the Delray area is expected under the No Build Alternative. This is not expected to be positive based on statistics on emergency services responses and crime.

#### Build Alternatives

No negative safety and security impacts are expected as a result of the implementation of the Build Alternatives. Compliance with federal and state homeland security requirements would be a part of any Build Alternative. The presence of these security forces, plus additional lighting and activity associated with the new crossing, may improve the safety and security of the Delray area.

### S.3.18 Soil/Geological Resources

#### No Build Alternative

The No Build Alternative could see expansion of room-and-pillar mining of salt at depths of about 1,000 feet below the ground surface on the western edge of Delray. This is known through communications with the mining operators.

#### Build Alternatives

Both crossings in the U.S. are clear of the risk of sinkholes forming. The Border Partnership would take steps, in cooperation with other agencies, to limit extraction of mineral resources in a prescribed area around the new bridge and plaza to protect them. The potential costs of this limitation are not now defined. They will be in the FEIS. Such cost would be associated with all Build Alternatives.

Table S-6  
 Summary of U.S. Transboundary/Canadian Impacts  
 The No Build Versus Build Condition  
 Detroit River International Crossing Study

Category	No Build	DRIC in Canada
Mobility	Acceleration of negative consequences is expected as congestion in the Huron Church Road corridor causes spillover traffic to disrupt surrounding communities.	All alternatives would improve overall traffic operations for Huron Church Road and the surrounding area without need for local infrastructure improvements. The new crossing would reduce by almost 30 percent the amount of international truck traffic in the Huron Church Road corridor north of E.C. Row Expressway.
Economic Impacts	A continuation of past trends due to the economic downturn of auto and related industries is expected.	Changes in accessibility would benefit the Windsor/Essex County area. These changes would influence development as guided by local governing bodies.
Land Use	A continuation of past trends is expected but with acceleration of negative consequences as congestion in the Huron Church Road corridor causes spillover traffic to disrupt surrounding communities.	Land use conversion to respond to increased economic development would be expected with improved accessibility in Windsor/Essex County. Local municipalities will determine the nature and extent of such development.
Air Quality	Changes in engines and fuels are expected to, at least, partially offset possible air pollution increases in communities surrounding Huron Church Road that will realize increased spillover traffic from a congested corridor to the Ambassador Bridge.	Increases in particulate matter are forecast in the vicinity of all proposed plazas. But, all DRIC alternatives would likely have no discernible difference in air quality among them in residential areas of Sandwich Towne.
Cultural Resources	No impacts to designated heritage features. Possible future development in Brighton Beach Industrial Park could impact (displace or disrupt) one cultural landscape.	No impact to designated heritage features. Potential impact to the area of high archaeological potential (Petit Cote French Settlement) and potential of displacement/disruption to cultural landscapes (Brighton Beach and Sandwich Towne).
Community Effects	<p>Pedestrian movements along/across Huron Church Road, where schools, senior housing, shopping and a host of other community attractions exist, will be impacted by the increased traffic/congestion.</p> <p>Noise increases are expected in sensitive areas as spillover traffic from Huron Church Road infiltrates surrounding communities.</p>	<p>Plaza traffic is not expected to cause high noise impacts. Homes are usually 600 feet or more from all plazas. Crossing X-11 will impact 100 households with increased noise. Mitigation will be defined once a Preferred Alternative is chosen.</p> <p>The areas of south and west Windsor and LaSalle would benefit from having international traffic removed from local streets.</p> <p>The new access road would have an aesthetic impact on the surrounding community. Plaza A and Crossing X-11 are expected to have the greatest effect on neighborhoods.</p>
Water Quality, Wetlands, Threatened and Endangered Species	Continuation of past trends is expected, including positive efforts to protect wetlands and threatened and endangered species. Also, unwanted and often unexpected pollution impacts on water bodies as associated with industrial operations are to be expected.	<p>Continuation of past trends is expected, including positive efforts to protect wetlands and threatened and endangered species. Also, unwanted and often unexpected pollution impacts on water bodies as associated with industrial operations are to be expected.</p> <p>Plaza C/Crossing X-11 is expected to have a relatively low impact. Plaza B1/Crossing X-10B, Plaza A/Crossing X-10A and Plaza B and B1 via Ojibway Parkway are expected to have a moderate impact. Crossing X-10 and Plazas B and B1 would encroach on the Ojibway Black Woods Environmentally Sensitive Area.</p> <p>Plaza A/Crossing X-11 via Brighton Beach, Plaza A/Crossing X-11 and Plaza A/Crossing X-10A are expected to displace more provincially rare vegetation communities and species.</p> <p>Plaza A/Crossing X-11 via Ojibway Parkway would have fewer impacts to natural features than Plaza A/Crossing X-11 via Brighton Beach.</p>
Geotechnical	Brine well development in the crossing corridors stopped years ago and is not expected to resume.	Crossing X-10B is cleared from risks of deep brine wells. The approach to the bridge of Crossing X-11 cannot be cleared without additional investigations. Even if they are undertaken, they may still be insufficient to consider the risk to be acceptable because the approach to the Crossing X-11 bridge in Canada passes over the eastern end of the former solution mining brine well field and a subsurface anomaly that appears to be a brine-filled cavity, rubble zone and disturbed rock mass.

Source: The Corradino Group of Michigan, Inc.



In Canada, Crossing X-10B is cleared of the risk of sinkholes forming. But, Crossing X-11 cannot be cleared without additional investigations. Even if they are undertaken, they may still be insufficient to consider the risk to be acceptable because the approach to the Crossing X-11 bridge in Canada passes over the eastern end of the former solution mining brine well field and a subsurface anomaly that appears to be a brine-filled cavity, rubble zone and disturbed rock mass.

### **S.3.19 Permits**

#### **No Build Alternative**

Permits would not be needed under the No Build Alternative except that implementation of the Ambassador Bridge second span would require permit approval.

#### **Build Alternatives**

A list of permits needed for implementing the Build Alternatives is in Table 3-32 of this DEIS. The process of securing permits will begin once the Record of Decision (ROD) is issued by FHWA.

### **S.3.20 Energy**

#### **No Build Alternative**

If a second span of the Ambassador Bridge were built, it would require a large amount of energy and materials to be used. Apart from building a second span, the No Build Alternative would not require an increase in the use of energy and materials over time. At the point that border crossing capacity is reached, delay and idling at the border would increase and worsen over time if a new crossing is not built. Congestion means increased energy use.

#### **Build Alternatives**

The Build Alternatives would require use of a large amount of energy and materials to be constructed. The Build Alternatives would be built using technological advances and materials to minimize long-term energy use. When border capacity is reached, a new crossing would eliminate congestion due to lack of capacity, which would result from the No Build condition.

## S.3.21 Cost

### No Build Alternative

The cost exposure of the No Build Alternative is the \$31 million authorized to prepare the DEIS, FEIS and ROD. This includes the cost of the geotechnical investigations (drilling) that were part of this study.

### Build Alternatives

The U.S. cost of the combined bridge, plaza, interchange, utilities and associated property acquisition ranges from \$1.277 billion for Alternative #14, with a cable-stay bridge, to \$1.488 billion for Alternative #16, with a suspension bridge. Total costs for other Build Alternatives fall between these two values. The itemized costs of Alternatives #14 and #16 are shown in Table S-7.

Table S-7  
Estimate of Construction and Related Costs  
(Base Cost in Millions of 2007 U.S. Dollars with Inflation Then Added)<sup>a</sup>  
Detroit River International Crossing Study

	Lowest Cost (millions) Crossing X-10, Alternative #14 with Cable-stay Bridge	Highest Cost (millions) Crossing X-10, Alternative #16 with Suspension Bridge
Bridge (U.S. Cost Only)	\$282	\$344
Plaza	150	150
Interchange	167	204
Utilities	145	183
<b>Subtotal</b>	<b>\$744</b>	<b>\$881</b>
Property	\$171	\$183
<b>Subtotal</b>	<b>\$915</b>	<b>\$1,064</b>
Fees (Management, final design and permits, construction engineering)	\$149	\$176
Inflation <sup>a</sup>	\$213	\$248
<b>Total<sup>b</sup></b>	<b>\$1,277</b>	<b>\$1,488</b>

<sup>a</sup> To be spread to each construction phase for Preferred Alternative to translate total costs to year of expenditure.

<sup>b</sup> Cost to limit extraction of minerals to protect the DRIC crossing/plaza is not now known. It will be included in the FEIS. Such costs are associated with all Build Alternatives.

Source: The Corradino Group of Michigan, Inc.

## S.3.22 Short-term Use of Environment

### No Build Alternative

In the context of a major transportation improvement, short-term use of the environment means use of resources such as fossil fuels, building materials, petroleum, and the like,

for a few years, not for an indefinite period. The No Build Alternative without a second span of the Ambassador Bridge will not involve direct use of resources. If the second span were constructed, there would be some trade-offs between short-term benefits and long-term impacts. The main trade-offs and commitments for the short-term benefits include commitment of additional land for transportation uses and consumption of some mineral and petroleum resources during construction. The short-term and long-term effects of the proposed second span of the Ambassador Bridge are considered consistent with the maintenance and enhancement of the long-term productivity of the local and regional area.

## **Build Alternatives**

This DRIC project is a result of local, regional, statewide, and national comprehensive planning. Present and future border crossing needs are reflected in the DRIC alternatives that address the proposed project's purpose and need. As with building a second span of the Ambassador Bridge, it is concluded that the short-term impacts and use of resources by the Build Alternatives would be consistent with the maintenance and enhancement of long-term productivity for the local area (Southeast Michigan), the State of Michigan, the United States and Canada.

### **S.3.23 Irreversible and Irretrievable Commitment of Resources**

#### **No Build Alternative**

The No Build Alternative would result in MDOT's spending \$31 million to prepare the DRIC DEIS, FEIS and ROD.

If a second span of the Ambassador Bridge is built, considerable amounts of fossil fuels, labor and construction materials will be used. If a second span is not built, a continuation of past trends in the use of these resources is expected.

#### **Build Alternatives**

Implementation of each Build Alternative would involve the commitment of a range of natural, physical, human, and fiscal resources. Land that would be used for expansion/construction of the proposed new border crossing system is an irreversible commitment.

Considerable amounts of fossil fuels and construction materials would be used for this project. Large amounts of labor and natural resources would be used to make construction materials. Their use would not have an adverse effect upon the supply.

Construction of each Build Alternative would require a substantial expenditure of state, federal, local and private funds. The commitment of these resources would result in improved border crossing system redundancy, providing improved efficiency, safety, and time savings. These are expected to outweigh the commitment of these resources.

### S.3.24 Community Enhancement

#### No Build Alternative

Trends show a continuing decline of the residential area and an increase of industrialization. This will not enhance Delray as a community as evidenced by the condition of the area today (see Section 3.1.2). Nonetheless, the DRIC public engagement process helped the community craft a cohesive vision of the area. The concepts generated could be used to influence the City of Detroit's Master Plan and future development of the area.

#### Build Alternatives

With the Build Alternatives, MDOT, in partnership with FHWA, is exploring a number of concepts by which enhancements may be made to the Delray area as it becomes the "host community" for the DRIC project. These concepts include partnering with the private sector and with other government agencies in areas such as job training, small business development, improving and replacing housing stock, and other community enhancing amenities. Depending on comments from stakeholders and community leaders, these concepts may continue to be studied and refined as the DRIC process moves toward the selection of the Preferred Alternative, which will be addressed in the FEIS.

The remainder of this document has additional, detailed information to support this summary. Table S-8 presents a listing of these issues.

Fort Street



Source: The Corradino Group of Michigan, Inc.

**Table S-8  
Summary of Impacts  
Detroit River International Crossing Study**

Issue	Alternative		No Build	#1, #2, #3, #16	#5	#7, #9, #11	#14	
	Description/Units							
Environmental Justice/ Title VI	Impacts	<ul style="list-style-type: none"> <li>Trends indicate increased population of Delray by minority and low-income people.</li> </ul>		<ul style="list-style-type: none"> <li>The proposed project will have an adverse impact on all EJ and Title VI population groups in the study area. The potential impacts to all population groups are: <ul style="list-style-type: none"> <li>Between 324 and 414 households would have to relocate.</li> <li>Between 685 and 920 jobs would be relocated from the Delray area. Some are held by minorities and low-income people. This is particularly true for those businesses taking advantage of the Empowerment Zone, which allows them to gain tax credits when they employ people from the local area.</li> <li>All alternatives would take the <i>National Register</i> recommended eligible Berwalt Manor, Kovacs Bar, and the St. Paul AME Church.</li> <li>The CHASS Center would be relocated. It serves the needy, low-income population with little access to an automobile.</li> <li>With #2, #9, and #16, seven places of worship would be lost; with #11 and #14, six would be lost; and, with Alternative #5, five would be lost.</li> <li>The Rademacher Center, although closed by the City of Detroit, would be eliminated. So, would Rademacher Park and one small playlot.</li> <li>Normal traffic patterns would be disrupted and travel would be more difficult because interchanges with I-75 will be closed/modified and a number of streets crossing I-75 would be closed.</li> </ul> </li> <li>Three bus lines would be rerouted. The population affected has relatively low access to an automobile.</li> <li>Between two and four of the five pedestrian crossings of I-75 would be removed.</li> <li>The proposed Practical Alternatives will not have a disproportionately high and adverse effect on minority population groups in the Delray Study Area. However, as the Practical Alternatives are further evaluated there may be disproportionately high and adverse effects on low-income population groups in the Study Area. Such impacts may include, but not be limited to, disruptions to community cohesion, possible isolation, and loss of economic vitality. These impacts will be further evaluated after MDOT completes interviews with property owners and tenants who may be displaced as a result of this project. If additional impacts are identified, these impacts and proposed mitigation measures will be addressed in the FEIS.</li> </ul>				
Relocations	Residential Units	Occupied	0	324 to 356	414	340 to 369	338	
		Vacant	0	5 to 6	6	18 to 19	4	
	Residential Population	Number	0	794 to 872	1,014	833 to 904	828	
	Business Units	Active	0	43 to 49	51	50 to 56	41	
		Vacant	0	25 to 30	30	24 to 29	27	
	Estimated Employees	Number	0	685 to 740	790	865 to 920	685	
	Other Land Uses Affected	Schools		0	0	0	0	0
		Senior Service Facilities		0	0	0	0	0
		City/Government Facilities		0	3	4	3	2
		Places of Worship		0	6 to 7	5	6 to 7	6
Medical Facilities			0	1	1	1	0	
State/Federal Government Facilities			0	2	2	2	1	
Community Services			0	0	0	0	0	
Land Use		<ul style="list-style-type: none"> <li>Trends indicate continued industrialization at cost of remaining residential area that now exists.</li> </ul>		<ul style="list-style-type: none"> <li>Delray has the potential to capitalize on its strategic location with revitalization of the areas adjacent to the new crossing.</li> </ul>				
Traffic	2035 AM Peak (two-way)	Ambassador Bridge: 2,901	DRIC: 2,068 60% AMB: 1,357 40%	DRIC: 2,038 60% AMB: 1,383 40%	DRIC: 1,340 40% AMB: 1,952 60%	DRIC: 2,068 60% AMB: 1,357 40%		
	2035 Middy Peak (two-way)	Ambassador Bridge: 2,628	DRIC: 1,734 57% AMB: 1,284 43%	DRIC: 1,758 58% AMB: 1,267 42%	DRIC: 1,075 37% AMB: 1,815 63%	DRIC: 1,734 57% AMB: 1,284 43%		
	2035 PM Peak (two-way)	Ambassador Bridge: 3,668	DRIC: 2,497 57% AMB: 1,873 43%	DRIC: 2,582 59% AMB: 1,801 41%	DRIC: 1,970 46% AMB: 2,278 54%	DRIC: 2,497 57% AMB: 1,873 43%		
	I-75 Interchanges	<ul style="list-style-type: none"> <li>No effect except the opening of the Ambassador Gateway Project connecting the Ambassador Bridge directly to I-75.</li> </ul>	<ul style="list-style-type: none"> <li>The Livernois-Dragoon interchange will be removed.</li> <li>#1, #2, #3: Half of Clark and half of Springwells removed.</li> <li>#16: Split interchange at Clark. Parts of the lost access will be replaced with new ramps in new locations.</li> </ul>	<ul style="list-style-type: none"> <li>The Livernois-Dragoon interchange will be removed.</li> <li>All of Clark and half of Springwells removed.</li> <li>Parts of the lost access will be replaced with new ramps in new locations.</li> </ul>	<ul style="list-style-type: none"> <li>The Livernois-Dragoon interchange will be removed.</li> <li>Half of Clark and half of Springwells removed.</li> <li>Parts of the lost access will be replaced with new ramps in new locations.</li> </ul>	<ul style="list-style-type: none"> <li>The Livernois-Dragoon interchange will be removed.</li> <li>Half of Clark removed.</li> <li>Parts of the lost access will be replaced with new ramps in new locations.</li> </ul>		
	I-75 Cross Streets	<ul style="list-style-type: none"> <li>None affected.</li> </ul>	<ul style="list-style-type: none"> <li>#1, #3: Three of seven removed.</li> <li>#2, #16: Two of seven removed.</li> </ul>	<ul style="list-style-type: none"> <li>Three of seven removed.</li> </ul>	<ul style="list-style-type: none"> <li>#7, #11: Three of seven removed.</li> <li>#9: Two of seven removed.</li> </ul>	<ul style="list-style-type: none"> <li>Two of seven removed.</li> </ul>		
	Pedestrian Crossings	<ul style="list-style-type: none"> <li>Reconnection of Bagley Street with Ambassador Gateway Project pedestrian bridge.</li> </ul>	<ul style="list-style-type: none"> <li>#1, #2, #16: Four of five removed.</li> <li>#3: Three of five removed.</li> <li>Options for replacement of the bicycle/pedestrian bridges will be reviewed following the selection of the Preferred Alternative. Any replacement structures would meet Americans with Disability Act guidelines. This information will be included in the FEIS</li> </ul>	<ul style="list-style-type: none"> <li>Three of five removed.</li> <li>Options for replacement of the bicycle/pedestrian bridges will be reviewed following the selection of the Preferred Alternative. Any replacement structures would meet Americans with Disability Act guidelines. This information will be included in the FEIS</li> </ul>	<ul style="list-style-type: none"> <li>#7, #9: Four of five removed.</li> <li>#11: Three of five removed.</li> <li>Options for replacement of the bicycle/pedestrian bridges will be reviewed following the selection of the Preferred Alternative. Any replacement structures would meet Americans with Disability Act guidelines. This information will be included in the FEIS</li> </ul>	<ul style="list-style-type: none"> <li>Two of five removed.</li> <li>Options for replacement of the bicycle/pedestrian bridges will be reviewed following the selection of the Preferred Alternative. Any replacement structures would meet Americans with Disability Act guidelines. This information will be included in the FEIS</li> </ul>		
	Transit	<ul style="list-style-type: none"> <li>Continuation of past trends, which include higher fares, reduced service.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of past trends, which include higher fares, reduced service.</li> <li>DDOT Route 11/Junction rerouted via Vernor to Clark, pending discussions with DDOT.</li> <li>DDOT Route 30/Livernois rerouted around plaza, pending discussions with DDOT.</li> <li>SMART Route 110 rerouted around plaza, pending discussions with SMART.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of past trends, which include higher fares, reduced service.</li> <li>DDOT Route 11/Junction rerouted via Vernor to Clark, pending discussions with DDOT.</li> <li>DDOT Route 30/Livernois rerouted around plaza, pending discussions with DDOT.</li> <li>SMART Route 110 rerouted around plaza, pending discussions with SMART.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of past trends, which include higher fares, reduced service.</li> <li>DDOT Route 11/Junction rerouted via Vernor to Clark, pending discussions with DDOT.</li> <li>DDOT Route 30/Livernois rerouted around plaza, pending discussions with DDOT.</li> <li>SMART Route 110 rerouted around plaza, pending discussions with SMART.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of past trends, which include higher fares, reduced service.</li> <li>DDOT Route 11/Junction rerouted via Vernor to Clark, pending discussions with DDOT.</li> <li>DDOT Route 30/Livernois rerouted around plaza, pending discussions with DDOT.</li> <li>SMART Route 110 rerouted around plaza, pending discussions with SMART.</li> </ul>		



Table S-8 (continued)  
Summary of Impacts  
Detroit River International Crossing Study

Issue	Alternative					
	Description/Units	No Build	#1, #2, #3, #16	#5	#7, #9, #11	#14
Jobs	State	<ul style="list-style-type: none"> <li>Michigan would not attract 25,000 jobs in 2035.</li> </ul>	<ul style="list-style-type: none"> <li>Michigan could attract 25,000 jobs in 2035, mostly in manufacturing and related sectors.</li> </ul>			
	Region	<ul style="list-style-type: none"> <li>Continued decline in Michigan economy limiting growth.</li> </ul>	<ul style="list-style-type: none"> <li>Continued decline in Michigan economy limiting growth.</li> <li>Possible gain of 3,352 jobs due to improved border crossing access alone.</li> </ul>			
	Construction	<ul style="list-style-type: none"> <li>Continued decline in economy limiting growth. This could be offset if second span of Ambassador Bridge is built.</li> </ul>	<ul style="list-style-type: none"> <li>Continued decline in economy limiting growth.</li> <li>Gain of 8,939 to 10,416 direct jobs.</li> <li>Gain of 22,986 to 26,784 indirect jobs.</li> </ul>			
	Bridge Operations	<ul style="list-style-type: none"> <li>Possible increase if second span of Ambassador Bridge is built.</li> </ul>	<ul style="list-style-type: none"> <li>775 permanent jobs at new crossing: 400 at Customs; 200 brokers; 70 at tolls; 20 at maintenance; 75 at duty free; and, 10 in administration.</li> </ul>			
Tax Base	Tax Revenue	<ul style="list-style-type: none"> <li>Continued decline with loss of jobs/income taxes and loss in real estate values.</li> <li>Possible gain if second span of Ambassador Bridge is built in income and sales taxes due to new construction jobs and expenditures, respectively.</li> </ul>	<ul style="list-style-type: none"> <li>Continued decline with loss of jobs/income taxes and loss in real estate values.</li> <li>Loss of \$500,000 to \$600,000 in annual property taxes to City of Detroit. This loss does not assume any offset associated with those relocated to areas within Detroit.</li> <li>Gain of income and sales taxes due to new construction jobs and construction expenditures, respectively.</li> <li>Potential gain of \$500 million in 2035 if 25,000 jobs are attracted.</li> </ul>			
Air Quality	Pollution Trends	<ul style="list-style-type: none"> <li>Measures taken by EPA will continue to improve air quality.</li> <li>Continued decline in economy may have unintended consequences of closing polluting plants/industries.</li> <li>Air quality in Mexicantown would improve with completion of Gateway Project.</li> </ul>	<ul style="list-style-type: none"> <li>Measures taken by EPA will continue to improve air quality.</li> <li>Continued decline in economy may have unintended consequences of closing polluting plants/industries.</li> <li>No violation of carbon monoxide and particulate matter hot-spot standards.</li> <li>Mobile Source Air Toxics are split between new bridge and Ambassador Bridge.</li> <li>All alternatives are the same from a regional perspective.</li> </ul>			
Noise	Plaza and Crossing	<ul style="list-style-type: none"> <li>No perceptible increases.</li> </ul>	<ul style="list-style-type: none"> <li>No negative effect on sensitive receivers.</li> </ul>			
	Interchanges/I-75 (Refined analysis to be performed on Preferred Alternative.)	<ul style="list-style-type: none"> <li>Existing noise levels along I-75 exceed criteria. No perceptible increases in future.</li> <li>Some improvement near Mexicantown and Fort Street (M-85) with opening in 2009 of Ambassador Gateway Project at Ambassador Bridge.</li> </ul>	<ul style="list-style-type: none"> <li>Existing noise levels along I-75 exceed criteria.</li> <li>Some improvement near Mexicantown and Fort Street (M-85) with opening in 2009 of Gateway Project at Ambassador Bridge.</li> <li>No negative effect on sensitive receivers.</li> <li>#1, #2, #16: Further analysis required of installation of noise walls.</li> <li>#3: 1,400 linear feet of feasible/reasonable walls.</li> </ul>	<ul style="list-style-type: none"> <li>Existing noise levels along I-75 exceed criteria.</li> <li>Some improvement near Mexicantown and Fort Street (M-85) with opening in 2009 of Gateway Project at Ambassador Bridge.</li> <li>No negative effect on sensitive receivers.</li> <li>2,230 linear feet of feasible/reasonable walls.</li> </ul>	<ul style="list-style-type: none"> <li>Existing noise levels along I-75 exceed criteria.</li> <li>Some improvement near Mexicantown and Fort Street (M-85) with opening in 2009 of Gateway Project at Ambassador Bridge.</li> <li>No negative effect on sensitive receivers.</li> <li>#7, #9: Further analysis required of installation of noise walls.</li> <li>#11: 1,400 linear feet of feasible/reasonable walls.</li> </ul>	<ul style="list-style-type: none"> <li>Existing noise levels along I-75 exceed criteria.</li> <li>Some improvement near Mexicantown and Fort Street (M-85) with opening in 2009 of Gateway Project at Ambassador Bridge.</li> <li>No negative effect on sensitive receivers.</li> <li>6,530 linear feet of feasible/reasonable walls.</li> </ul>
Wetlands		<ul style="list-style-type: none"> <li>Status quo maintained while recognizing additional wetlands may form due to human activities at abandoned sites.</li> </ul>	<ul style="list-style-type: none"> <li>No wetland impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No wetland impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Impact of 0.01 acres of low-quality wetland.</li> </ul>	<ul style="list-style-type: none"> <li>No wetland impacts.</li> </ul>
Threatened and Endangered Species		<ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No impacts.</li> </ul>			
Cultural Resources	Aboveground	<ul style="list-style-type: none"> <li>Continuation of past trends with some older structures being abandoned and, potentially, destroyed.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of past trends with some older structures being abandoned and, potentially, destroyed.</li> <li>4(f) impacts to four sites with #1, #2 and #16; three sites with #3.</li> <li>Exposure of Fort Wayne could improve visitation.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of past trends with some older structures being abandoned and, potentially, destroyed.</li> <li>4(f) impacts to five sites.</li> <li>Exposure of Fort Wayne could improve visitation.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of past trends with some older structures being abandoned and, potentially, destroyed.</li> <li>4(f) impacts to three sites with #11; four sites with #7 and #9.</li> <li>Exposure of Fort Wayne could improve visitation.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of past trends with some older structures being abandoned and, potentially, destroyed.</li> <li>4(f) impacts to three sites.</li> <li>Exposure of Fort Wayne could improve visitation.</li> </ul>
	Archaeological	<ul style="list-style-type: none"> <li>No impacts.</li> </ul>	<ul style="list-style-type: none"> <li>No adverse effects on prehistoric archaeological sites.</li> <li>Impact likely to two historic sites recommended for <i>National Register</i>.</li> <li>Memorandum of Agreement with the State Historic Preservation Office required for archaeological sites.</li> </ul>			
Parkland		<ul style="list-style-type: none"> <li>Continuation of past trends with some decline possible as ability to preserve existing facilities is negatively affected by the economic decline.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of past trends with some decline possible as ability to preserve existing facilities is negatively affected by the economic decline.</li> <li>4(f) impacts to three recreational resources: <ul style="list-style-type: none"> <li>Rademacher Park</li> <li>Rademacher Center</li> <li>Post-Jefferson Playlot</li> </ul> </li> </ul>			
Visual Conditions		<ul style="list-style-type: none"> <li>Visual impacts if second span of Ambassador Bridge is built. Otherwise, no change in visual conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Visual impacts if second span of Ambassador Bridge is built.</li> <li>New bridge, plaza, I-75 interchange added to visual landscape.</li> <li>Delray visual landscape will be altered. Context Sensitive Solutions work during design phase may cause positive change.</li> </ul>			



Table S-8 (continued)  
Summary of Impacts  
Detroit River International Crossing Study

Issue	Alternative		No Build	#1, #2, #3, #16	#5	#7, #9, #11	#14
	Description/Units						
Lighting			<ul style="list-style-type: none"> <li>Continuation of past trends. Street lighting is often in poor condition.</li> <li>Second span of Ambassador Bridge could introduce new lighting if it is built.</li> </ul>	<ul style="list-style-type: none"> <li>Second span of Ambassador Bridge could introduce new lighting if it is built.</li> <li>Plaza would affect the area west of Post Street.</li> <li>Fort Wayne may experience increased night lighting.</li> <li>Consultation on bridge lighting necessary during design phase to balance the navigational lighting needs of the Federal Aviation Administration, and U.S. Coast Guard with the U.S. Fish and Wildlife Service, the latter in regards to possible bird strikes at the new bridge.</li> </ul>			
Contaminated Sites			<ul style="list-style-type: none"> <li>Continuation of past trends with cleanup when abandoned sites are reused.</li> </ul>	<ul style="list-style-type: none"> <li>#1, #2 and #3: 19 contaminated sites, and #16: 21 contaminated sites rated medium or high in pollutants, would be acquired with some remediation necessary.</li> </ul>	<ul style="list-style-type: none"> <li>17 contaminated sites, rated medium or high in pollutants, would be acquired with some remediation necessary.</li> </ul>	<ul style="list-style-type: none"> <li>21 contaminated sites, rated medium or high in pollutants, would be acquired with some remediation necessary.</li> </ul>	<ul style="list-style-type: none"> <li>19 contaminated sites, rated medium or high in pollutants, would be acquired with some remediation necessary.</li> </ul>
Indirect/Cumulative Impacts			Refer to Tables S-4 and S-5	Refer to Table S-4 and S-5			
Transboundary Impacts			Refer to Table S-6	Refer to Table S-6			
Safety and Security			<ul style="list-style-type: none"> <li>Continuation of past trends. Crime is high in Delray.</li> </ul>	<ul style="list-style-type: none"> <li>Compliance needed with federal and state homeland security provisions.</li> <li>Presence of federal and state homeland security forces, plus lighting and activity of new crossing, could improve safety and security of Delray.</li> </ul>			
Soil/Geologic Resources (Salt)			<ul style="list-style-type: none"> <li>Expansion of room-and-pillar salt mining is possible along the west edge of Delray.</li> </ul>	<ul style="list-style-type: none"> <li>No brine well or other geologic restrictions to crossing system in U.S.</li> <li>In Canada, Crossing X-10B is cleared of the risk of sinkholes forming. Crossing X-11 cannot be cleared without additional investigations. Even if they are undertaken, they may still be insufficient to consider the risk to be acceptable because the approach to the Crossing X-11 bridge in Canada passes over the eastern end of the former solution mining brine well field and a subsurface anomaly that appears to be a brine-filled cavity, rubble zone and disturbed rock mass.</li> <li>Mineral extraction would be limited to protect the bridge and plaza area.</li> </ul>			
Permits			<ul style="list-style-type: none"> <li>None required without second span. Many permits needed with second span but not a Presidential Permit.</li> </ul>	<ul style="list-style-type: none"> <li>All needed permits would be secured once the Record of Decision is executed.</li> </ul>			
Energy			<ul style="list-style-type: none"> <li>If the second span of the Ambassador Bridge is built, it will require use of a large amount of energy and materials.</li> <li>Continuation of past trends with improvements in energy use only as new technology provides.</li> </ul>	<ul style="list-style-type: none"> <li>Construction will require use of large amount of energy and materials.</li> <li>Project would be built to minimize long-term energy use.</li> <li>Efficiencies in plaza design and operation would contribute to minimizing long-term energy costs.</li> </ul>			
Cost <sup>a</sup>			<ul style="list-style-type: none"> <li>State expenditure limited to \$31 million to prepare DEIS and FEIS, which includes the geotechnical investigation program.</li> </ul>	#1: \$1,353; \$1,443 <sup>b</sup> #2: \$1,366; \$1,456 #3: \$1,320; \$1,409 #16: \$1,390; \$1,488 Most Cost to limit extraction of minerals to protect the DRIC crossing/plaza is not now known. It will be included in the FEIS.	\$1,353; \$1,443 <sup>b</sup> Cost to limit extraction of minerals to protect the DRIC crossing/plaza is not now known. It will be included in the FEIS.	#7: \$1,339; \$1,434 <sup>b</sup> #9: \$1,353; \$1,448 #11: \$1,336; \$1,431 Cost to limit extraction of minerals to protect the DRIC crossing/plaza is not now known. It will be included in the FEIS.	Least \$1,277; \$1,366 <sup>b</sup> Cost to limit extraction of minerals to protect the DRIC crossing/plaza is not now known. It will be included in the FEIS.
Community Enhancements			<ul style="list-style-type: none"> <li>Trends indicate continued decline of residential area and increased industrialization with no additional incentives beyond those of Renaissance Zone and Empowerment Zone.</li> </ul>	<ul style="list-style-type: none"> <li>MDOT, in partnership with FHWA is exploring a number of concepts by which enhancements may be made to the Delray area as it becomes the "host community" for the DRIC project. These concepts include partnering with the private sector and with other government agencies in areas such as job training, small business development, improving and replacing housing stock, and other community enhancing amenities. Depending on comments from stakeholders and community leaders, these concepts may continue to be studied and refined as the DRIC process moves toward the selection of the Preferred Alternative, which will be addressed in the FEIS.</li> </ul>			
Governance			<ul style="list-style-type: none"> <li>State government to continue pursuing legislative agenda formed by the Border Partnership to take advantage of creative ways to implement transportation projects.</li> </ul>	<ul style="list-style-type: none"> <li>Alternative models being studied. Decision by time ROD is signed.</li> <li>New state legislation is needed to:               <ul style="list-style-type: none"> <li>Enter into agreement with Canada.</li> <li>Construct crossing.</li> <li>Charge tolls at the facility.</li> </ul> </li> </ul>			

<sup>a</sup> Cost in millions 2007 dollars.

<sup>b</sup> Cable-stay bridge cost is shown first; suspension bridge cost is shown second.

Source: The Corradino Group of Michigan, Inc.

