

# **Detroit River International Crossing Study**

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**The Best Alternative At This Time  
For Being Considered  
The Preferred Alternative**



# Detroit River International Crossing Study

## Build Alternatives Included in DRIC DEIS

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	

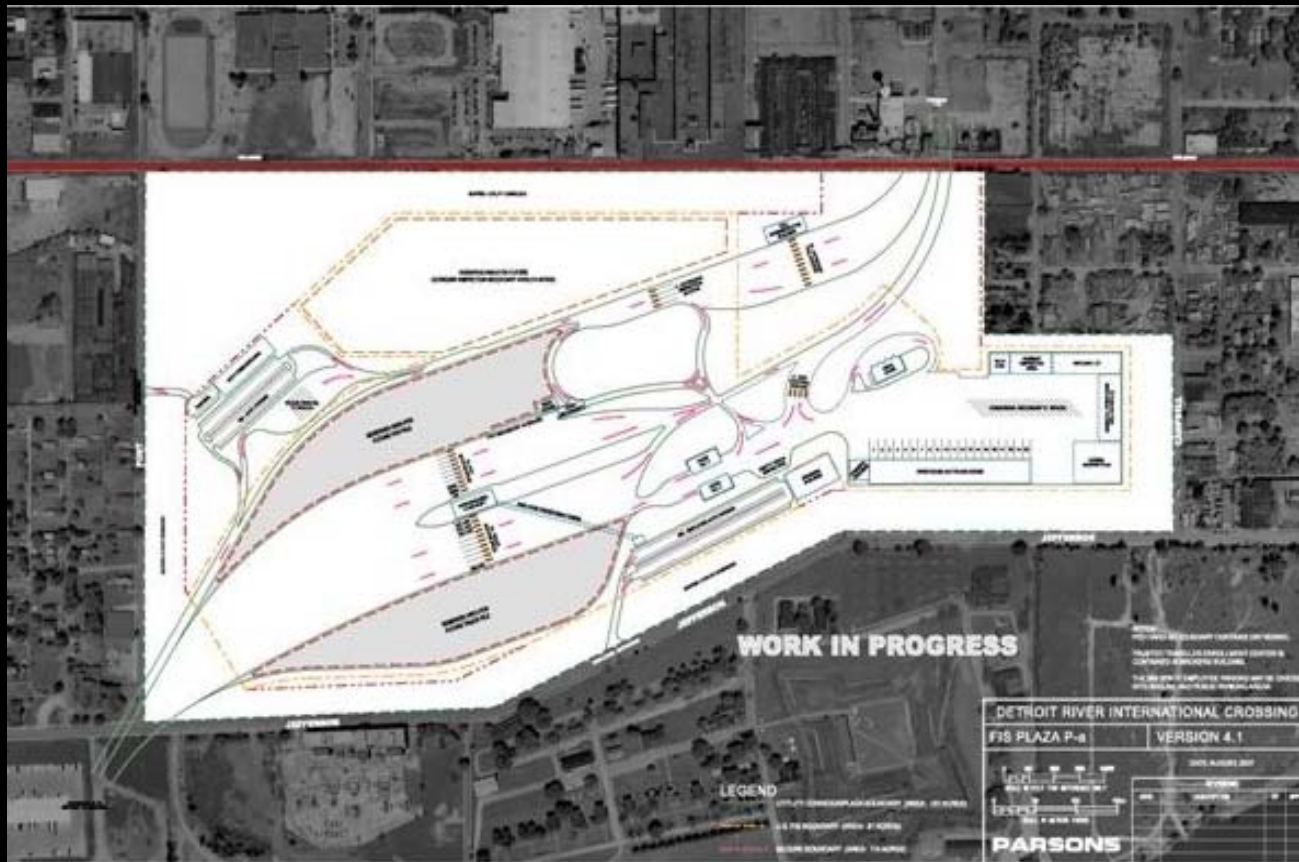
# Detroit River International Crossing Study

## Crossings



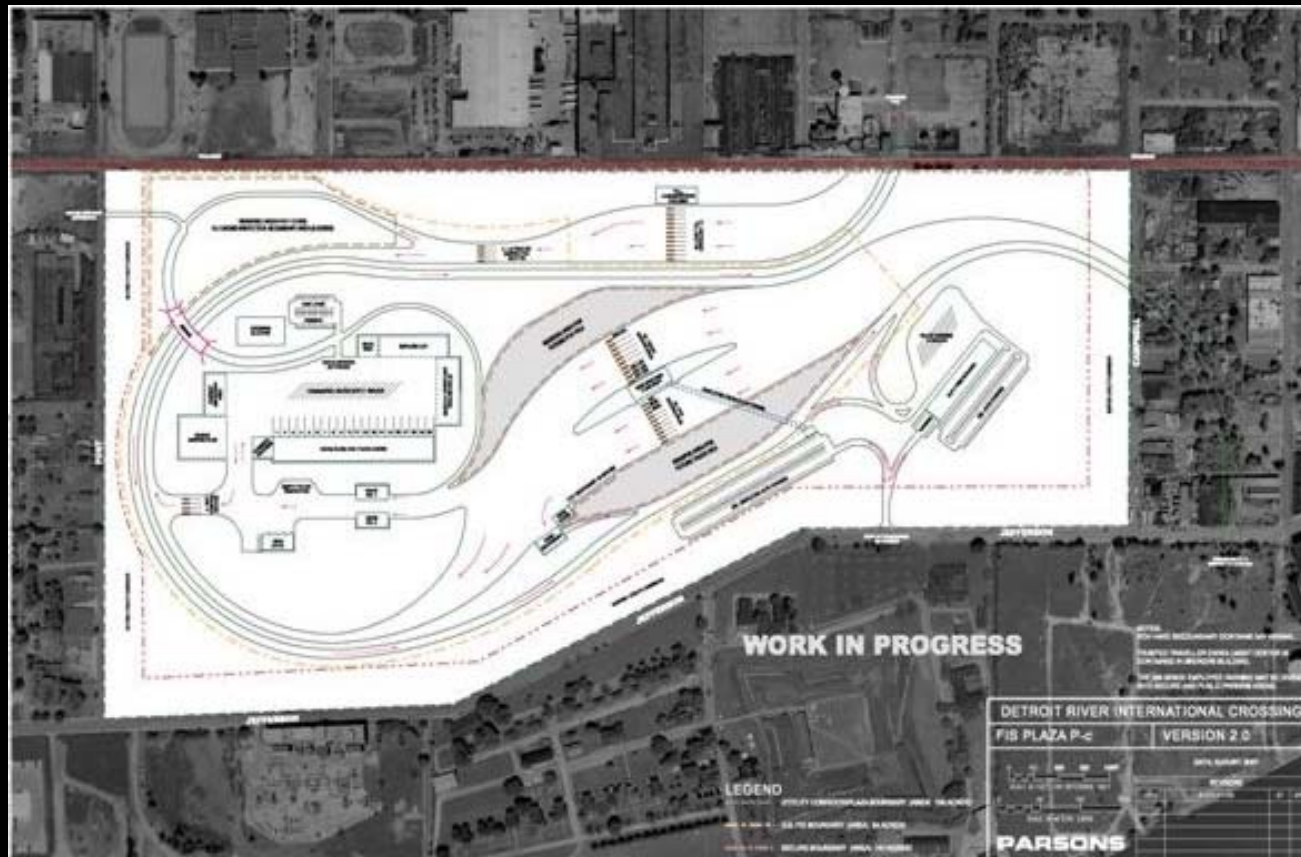
# Detroit River International Crossing Study

## Plaza P-a in U.S.



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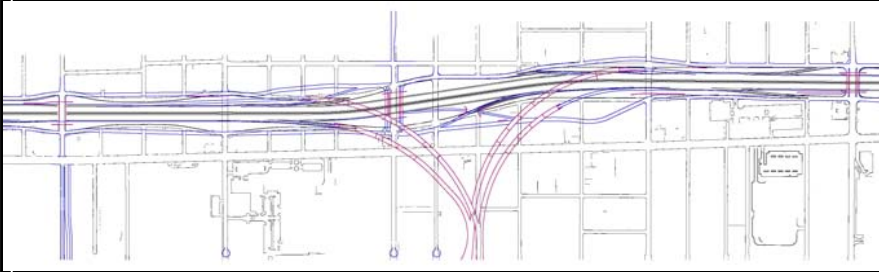
## Plaza P-c in U.S.



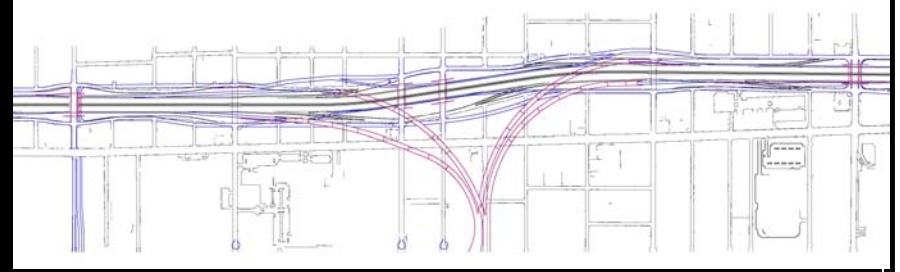
# Detroit River International Crossing Study

## U.S. Interchange with I-75

**Alternatives #1 and #7/Interchange A**



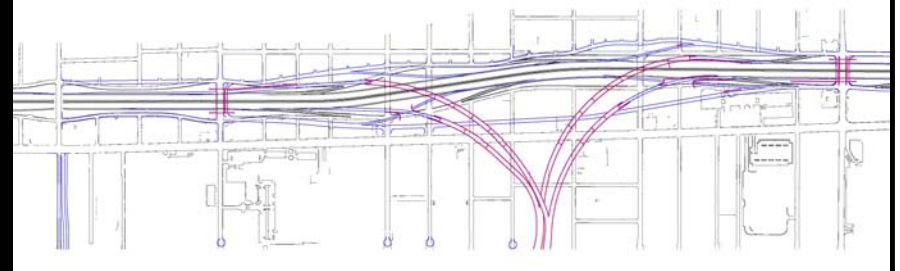
**Alternatives #2 and #9/Interchange B**



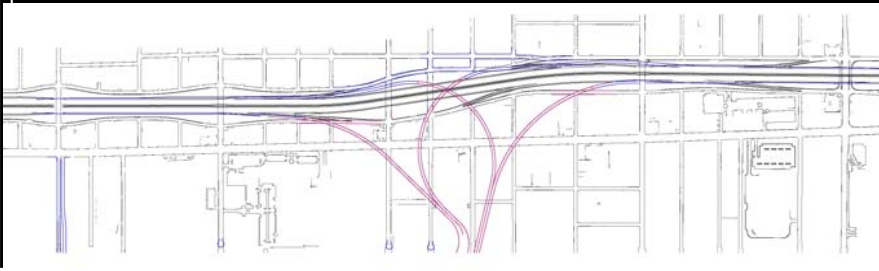
**Alternatives #3 and #11/Interchange C**



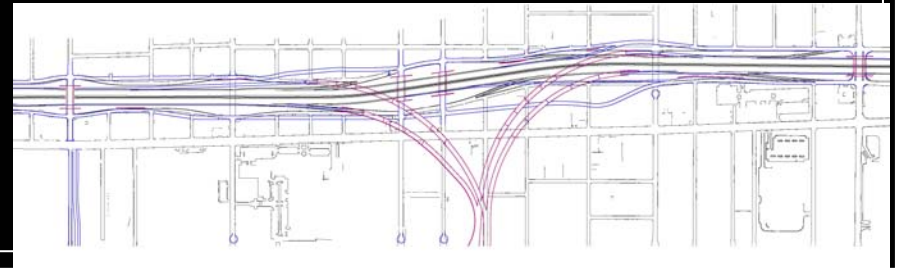
**Alternative #5/Interchange E**



**Alternative #14/Interchange G**



**Alternative #16/Interchange I**



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## X-10 Crossing Alternatives in U.S.

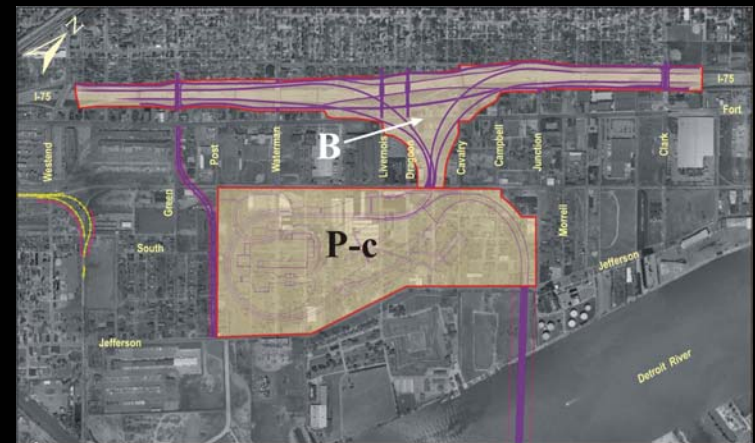
### #1, #2, #3, #5, #14 and #16



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## X-11 Crossing Alternatives in U.S.

### #7, #9 and #11

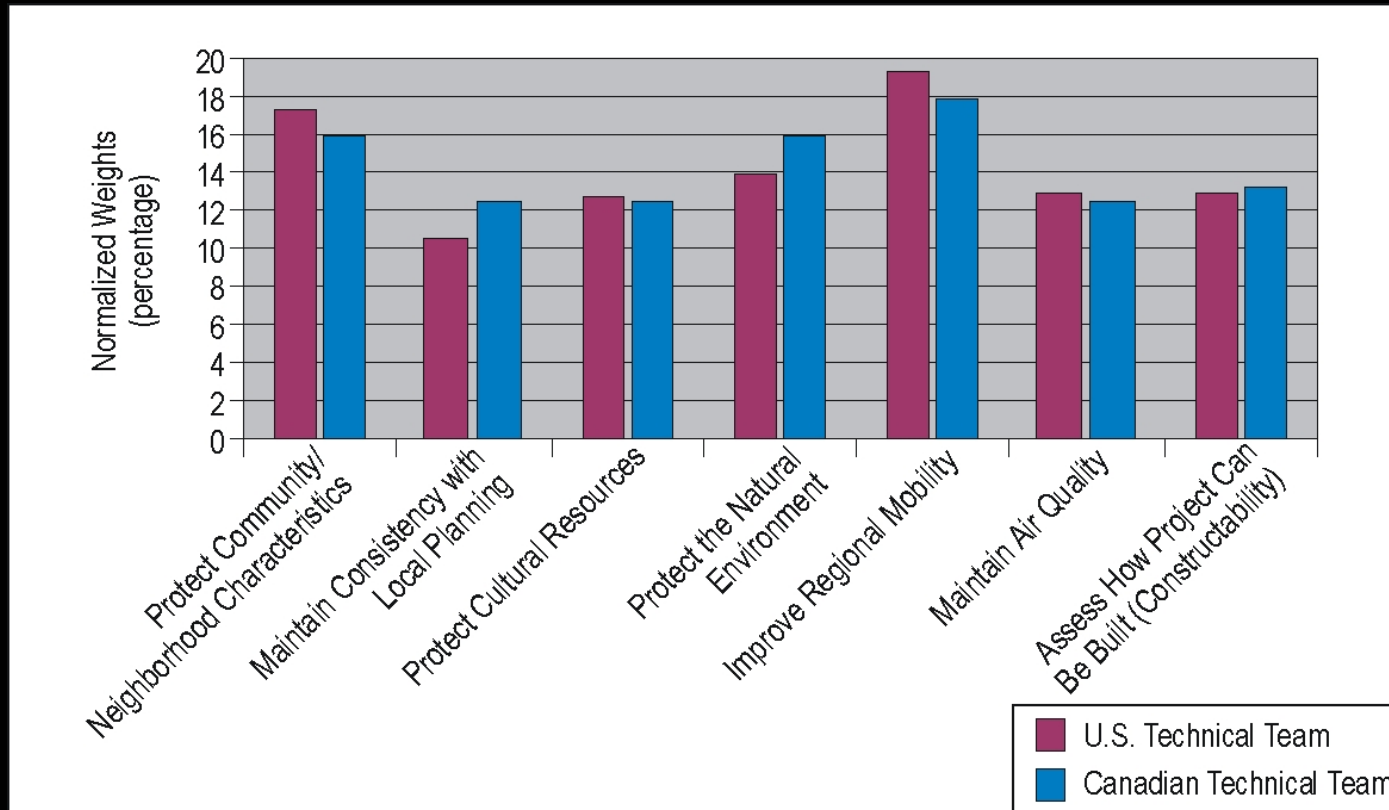




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## Evaluation Factor Weightings

### U.S. and Canadian Technical Teams



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*The Crossings*

## *Regional Mobility*

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- ❑ The X-10 Crossings are forecast to carry, in 2035, 15 to 50 percent more traffic than the X-11 Crossing.
- ❑ The X-10 Crossings are forecast to carry, in 2035, 50 to 60 % of the combined traffic carried by the proposed new crossing and the Ambassador Bridge. The X-11 Crossing, between 40 and 43% of the combined traffic.
  - ✓ This measure indicates the relief to be provided to the regional network, particularly Huron Church Road.

## *Potential Relocations*

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- ❑ The number of potential relocations of residential properties associated with the X-10 Crossings (0) are lower than the X-11 Crossing (21).
- ❑ The number of potential relocations of businesses associated with the X-10 Crossings (0) are lower than the X-11 Crossing (5).

# Detroit River International Crossing Study

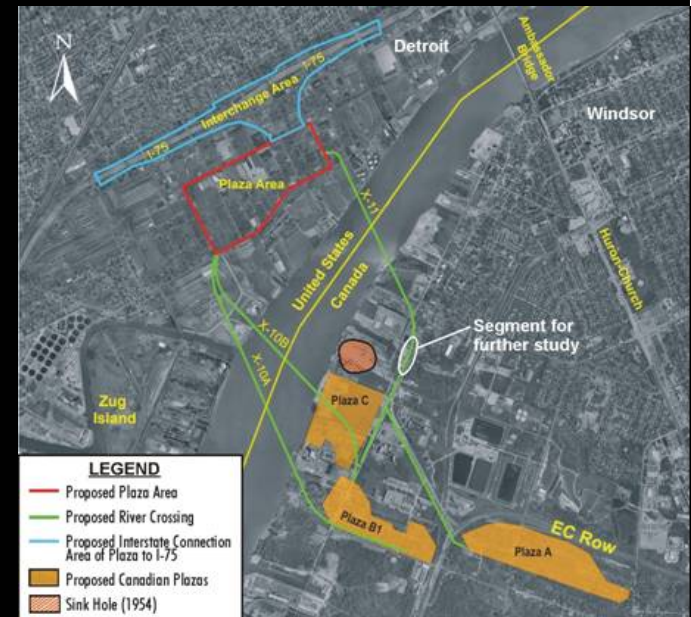
## *Potential Relocations in U.S.*

Alt.	Crossing	Active Relocation Units	Crossing	Plaza	Interchange	Gateway Boulevard	Railroad	Total
#1	X-10	Residential	0	143	182	17	7	349
		Business	0	18	18	7	0	43
#2	X-10	Residential	0	143	186	17	7	353
		Business	0	18	19	7	0	44
#3	X-10	Residential	0	143	157	17	7	324
		Business	0	18	24	7	0	49
#5	X-10	Residential	0	143	247	17	7	414
		Business	0	18	26	7	0	51
#7	X-11	Residential	21	155	182		7	365
		Business	5	18	18	9	0	50
#9	X-11	Residential	21	155	186		7	369
		Business	5	18	19	9	0	51
#11	X-11	Residential	21	155	157		7	340
		Business	5	18	24	9	0	56
#14	X-10	Residential	0	143	171	17	7	338
		Business	0	18	16	7	0	41
#16	X-10	Residential	0	143	189	17	7	356
		Business	0	18	20	7	0	45

## Detroit River International Crossing Study

# *Constructability*

- ❑ The brine well investigation indicates that:
  - ✓ All bridge foundations on both sides of the river are cleared from risk.
  - ✓ But, along the Canadian approach to Crossing X-11:
    - Additional investigation is needed to clear the crossing from risk.
    - Even if those investigations are undertaken, the resulting data may still indicate the risk may not be acceptable.



## *Constructability*

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- ❑ There would be extra cost associated with building the X-11 approach structure in Canada (as much as \$CAD260 million( w/ inflation)) and the time to assess the risk and build the facility is at least one year.

## *Constructability*

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- ❑ The estimated construction cost of the main span of the suspension bridge at Crossing X-10A (\$1.2 billion w/inflation) is significantly greater than the suspension bridges at Crossing X-10B (\$680 million w/inflation).
- ❑ The duration of 62 months to construct the main span of Crossing X-10A is over one year more than Crossings X-10B.



## Detroit River International Crossing Study

# *Other Evaluation Factors*

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- ❑ There are no significant differences among the crossings in the other evaluation factors.

## *Crossings Conclusions*

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- ❑ Crossing X-11 is not the best candidate at this time for being considered the Preferred Alternative.
  - ✓ Plaza P-c, in U.S. attached to Crossing X-11, therefore, is also not the best candidate at this time for being considered the Preferred Alternative.
  
- ❑ Crossing X-10A is not the best candidate at this time for being the considered the Preferred Alternative.

# **Detroit River International Crossing Study**

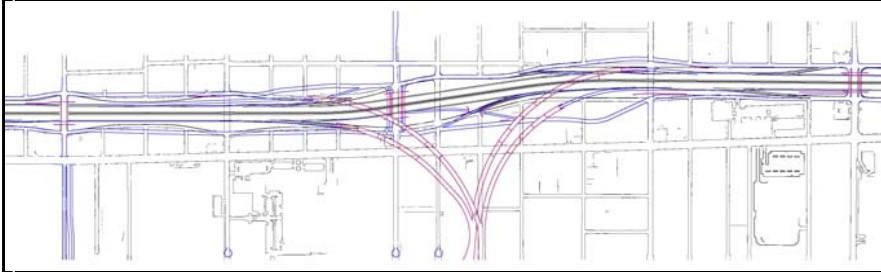
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*The Interchanges*

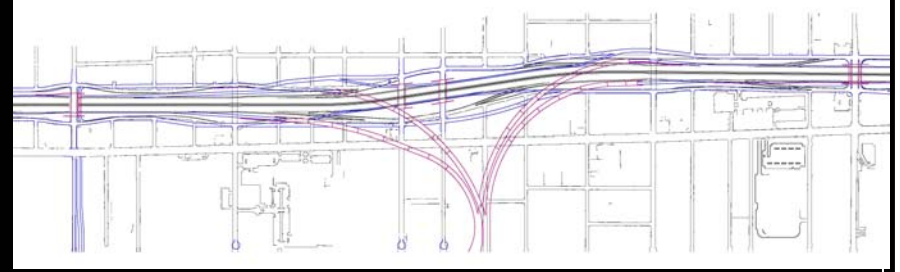
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## U.S. Interchange Alternatives with I-75

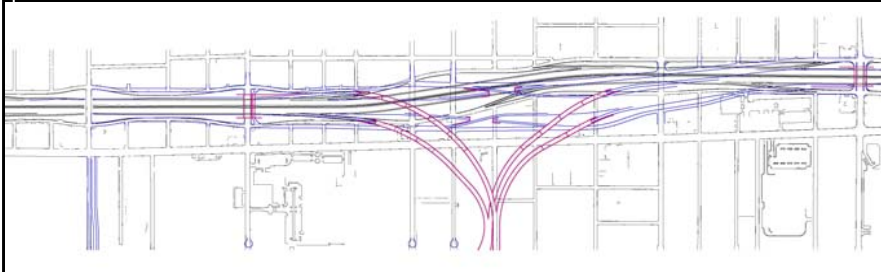
**Alternatives #1 and #7/Interchange A**



**Alternatives #2 and #9/Interchange B**



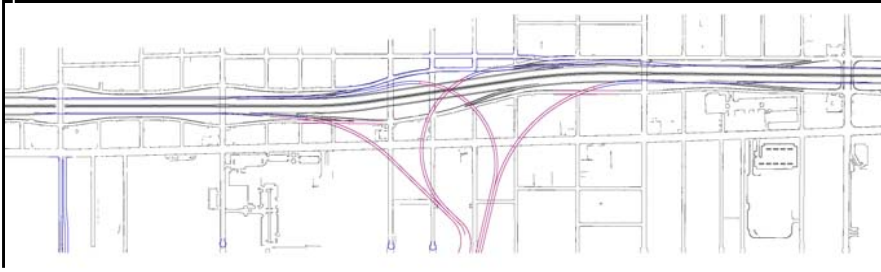
**Alternatives #3 and #11/Interchange C**



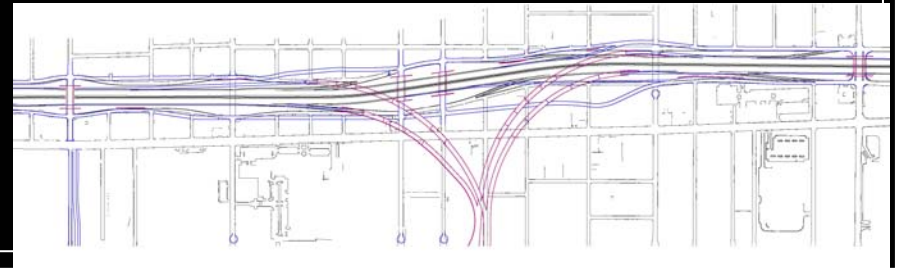
**Alternative #5/Interchange E**



**Alternative #14/Interchange G**



**Alternative #16/Interchange I**



## *Interchanges*

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- ❑ There is an important difference among interchange alternatives in the potential impact to properties on or eligible for the *National Register of Historic Places*, i.e., 4(f) properties.
- ✓ If there is a prudent and feasible alternative, 4(f) properties must be avoided.

## *Interchanges*

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- ❑ Alternative #3/Interchange C cannot avoid the Berwalt Building – a 4(f) property.
- ❑ Alternative #5/Interchange E cannot avoid the Berwalt Building and the Detroit Savings Bank – 4(f) properties



## *Interchanges*

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- ❑ Alternatives #3 and #5 would each impact about 25 businesses, a larger number than all other interchange alternatives (16 to 20 bu's).

## Detroit River International Crossing Study

### *Potential Relocations in U.S.*

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## *Interchanges*

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- ❑ “Protecting the neighborhood/community cohesion” is the second most-important evaluation factor.
  - ✓ Alternative #14/Interchange G would offer no roadway access across I-75 between Waterman and Clark Streets. Other interchange alternatives do better.
  - ✓ Alternative #14/Interchange G would not provide the same access to I-75 as the other interchange alternatives.

## *Interchanges*

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- ❑ Alternative #14/Interchange G would also have a lower ramp design speed than all other alternative interchanges.

# Detroit River International Crossing Study

## *Overall Conclusions*

- ❑ The alternatives receiving further evaluation are:

Alternative	Interchange	Plaza	Crossing
#1	A	P-a	X-10B
#2	B	P-a	
#16	I	P-a	



# *Engineering Review of Interchanges*

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## ❑ Key Issues:

- ✓ Local vehicular access to/from I-75
- ✓ Local vehicular access across I-75
- ✓ Springwells Interchange
- ✓ Service drive alignment at Berwalt Manor
- ✓ Pedestrian access across I-75

# *Engineering Review of Interchanges*

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- ❑ **Each workgroup examined:**
  - ✓ **Key stakeholders**
  - ✓ **Constraints**
  - ✓ **Issues**
  - ✓ **Needs/Desires**

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# *Engineering Review of Interchanges*

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**Local vehicular access to/from I-75**

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# *Proposed Hybrid Ramp System at Livernois/Dragoon*



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# *Engineering Review of Interchanges*

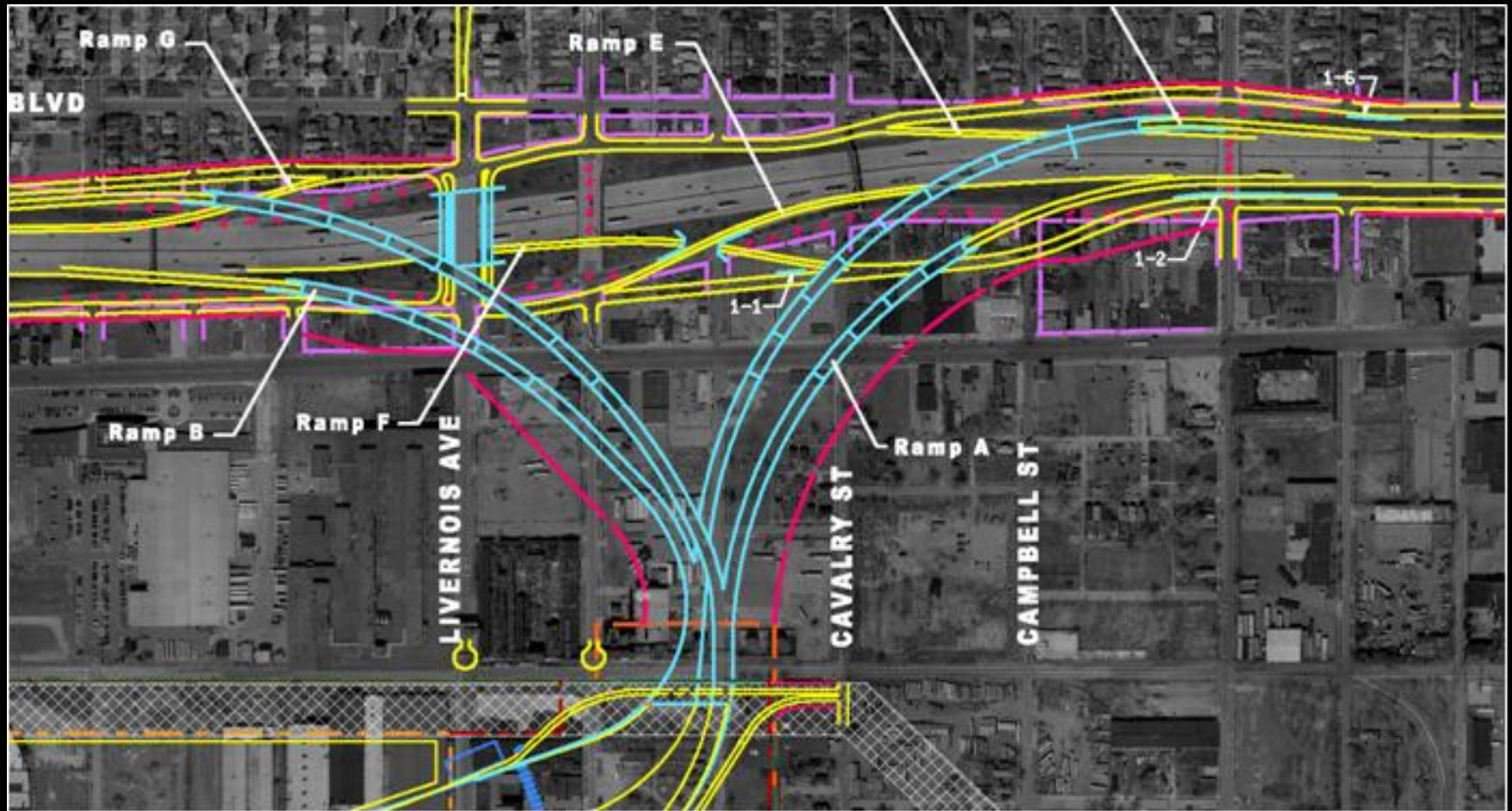
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**Local vehicular access across I-75**



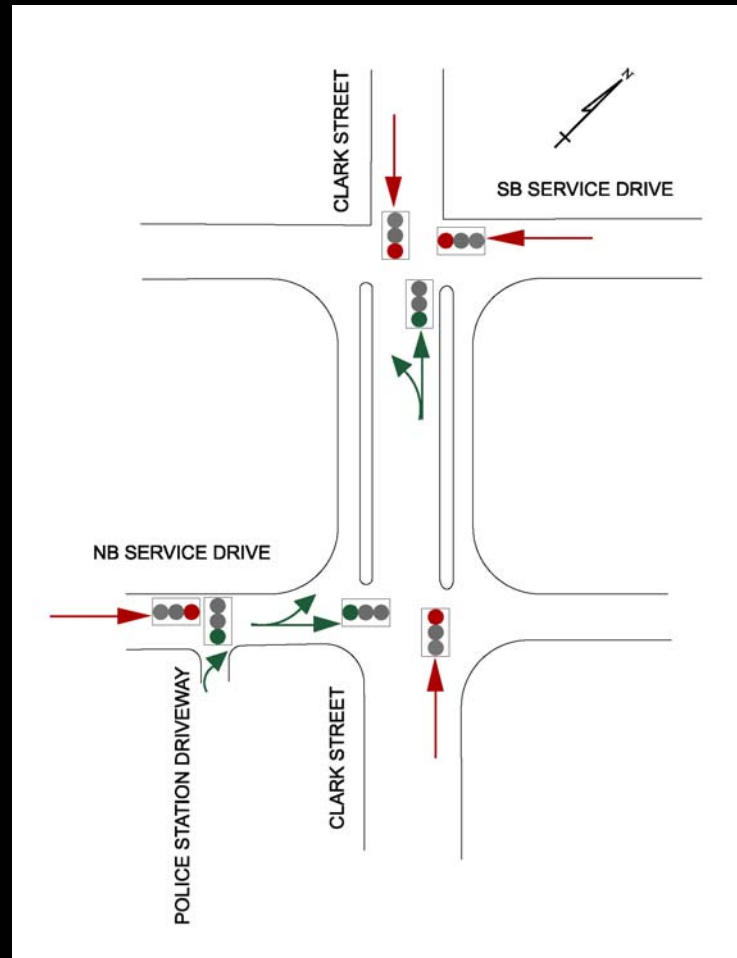
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## *Cross I-75 Access at Livernois/Dragoon*



## Detroit River International Crossing Study

# *Cross I-75 Access at Livernois/Dragoon*



Detroit River International Crossing Study

# *Engineering Review of Interchanges*

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## **Springwells Interchange**

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# *Full Urban Diamond Interchange at Springwells*



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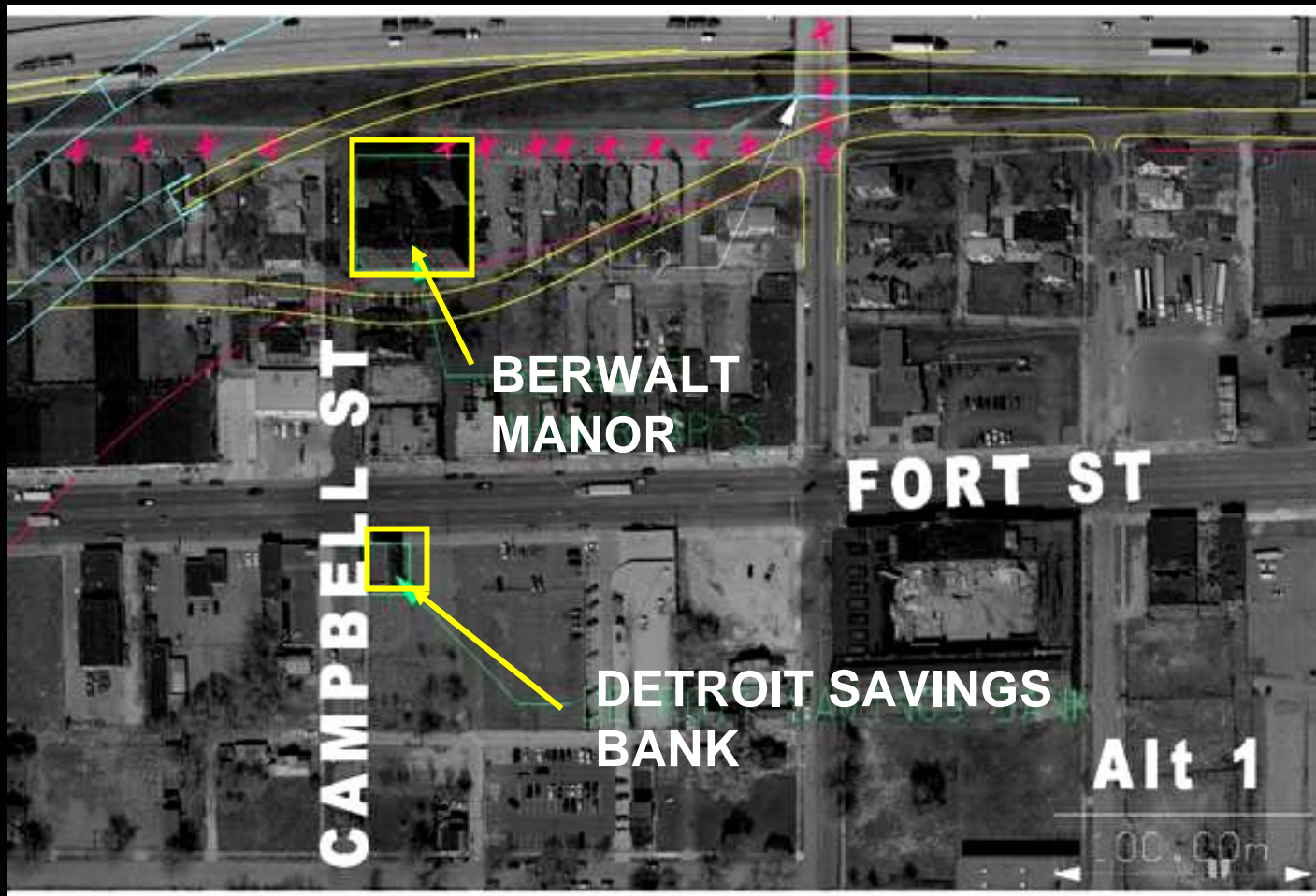
# *Engineering Review of Interchanges*

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**Service Drive alignment  
at Berwalt Manor**

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*Interchange A Modified  
at Berwalt Manor*



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# *Engineering Review of Interchanges*

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**Pedestrian access across I-75**

# Detroit River International Crossing Study

## *Pedestrian Access Across I-75*







## *Overall Conclusions*

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- ❑ The best candidate at this time for the Preferred Crossing Alternative is identified as X-10B.
- ❑ Because Plaza P-a is associated with this crossing it is the best candidate at this time for being the Preferred Alternative.
- ❑ The best U.S. Interchange at this time is a hybrid of the elements of Interchange A, Interchange B, and Interchange I. Some elements are still being refined.

## Detroit River International Crossing Study

### *Next Steps*

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- ❑ Continue collaboration with Canadian Team.
- ❑ Continue collaboration with U.S. Federal/State agencies.
- ❑ Complete FEIS/ROD/Access Justification.