



Detroit River International Crossing Study

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# **LAC/LAG/CCG Meeting**

## **Preliminary Assessment of Impacts**

November 29, 2006

# Detroit River International Crossing Study

## Detroit River International Crossing Practical Alternative #1

PRELIMINARY  
(AS OF 11/15/2006)



Alternative 1 – Preliminary Summary of Impacts

EVALUATION FACTOR	PERFORMANCE MEASURE	UNITED STATES SUMMARY				CANADIAN SUMMARY		
		INTERCHANGE	PLAZA	CROSSING		X-10A/PLAZA A	X-10B/PLAZA A	X-10B/PLAZA B1
				X-10A	X-10B			
PROTECT COMMUNITY NEIGHBORHOOD CHARACTERISTICS	TRAFFIC	STREETS CLOSED	8	14	0	0	9	12
	NOISE	FRONTLINE EXPOSURE (TOTAL RESIDENTIAL)	109	101	0	0	21 (receptors > 5dB increase)	23 (receptors > 5dB increase)
	POTENTIAL ACQUISITION	OCCUPIED RESIDENTIAL	184	151	0	0	67	36
		ACTIVE BUSINESSES	18	18	3	2	0	1
MAINTAIN CONSISTENCY WITH LOCAL PLANNING	PLACES OF WORSHIP/SCHOOLS	4-FIRST LATIN BAPTIST, DETROIT FRIENDS MEETING CHURCH, LANDMARK CHURCH, BEARD SCHOOL (PARIAL)	3-NEW DAY CHURCH, SAINT PAUL CHURCH, ALUNDAT LIFE CHURCH	0	0	1-SOCIAL FEATURE (INSTITUTIONAL)-ERIE WILDLIFE RESCUE	1-SOCIAL FEATURE (INSTITUTIONAL)-ERIE WILDLIFE RESCUE	1-SOCIAL FEATURE (INSTITUTIONAL)-ERIE WILDLIFE RESCUE
		OFFICIAL PLANS	CONSISTENCY	Yes	No	Yes	Yes	Yes
	ENVIRONMENTAL SITES AFFECTING PLAN IMPLEMENTATION	NUMBER	6	6	2	2	No (Plaza)	2
	ABOVEGROUND HISTORIC/ON NATIONAL REGISTER	NUMBER	0	0	0	0	6	8
PROTECT CULTURAL RESOURCES	POTENTIALLY ELIGIBLE FOR REGISTER STRUCTURES	NUMBER/SITE	2-OLIVET CHURCH, APART BUILDING	1-ST. PAUL A.M.E	0	0	N/A	N/A
	ARCHAEOLOGIC SITES	NUMBER	0	2	0	0	6	6
	PARKLANDS	NUMBER/SITE	0	1-RADEMACHER PARK	0	0	1- OJBWAY PARK (0.7 ha)	1- OJBWAY PARK (0.7 ha)
	SIGNIFICANT HABITAT (ED-Endangered / PL-Potential)	NUMBER/SITE	0	0	0	0	2.9 ha TALLGRASS PRAIRIE, 0.2 ha FISH, BUTLER'S GARTERSNAKE	2.9 ha TALLGRASS PRAIRIE, 0.2 ha FISH, BUTLER'S GARTERSNAKE
IMPROVE REGIONAL MOBILITY (Based to 2035 Volume)	2035 AVERAGE DAILY TWO-WAY CROSSING VOLUME (ADT)	2035 ADT	SEE CROSSING DATA	SEE CROSSING DATA	37,000	37,000	37,000	37,000
CONSTRUCTIBILITY (All System Components are Constructible)	KEY ISSUES	REFER TO INDIVIDUAL CROSSING COMPONENT	UTILITY RELOCATION, POTENTIAL CONTAMINATED SOILS	UTILITY RELOCATION, BRAIDED RAMPS	BRIDGE LENGTH /COMPLEXITY, CONTAMINATED SOILS	CONTAMINATED SOILS, UTILITIES	POWER STATION/UTILITIES, RAIL LINE	POWER STATION/UTILITIES, RAIL LINE
MAINTAIN AIR QUALITY	ONE HOUR CO CONCENTRATION HOTSPOTS	REFER TO GRAPHIC						

**LEGEND**

- U.S. Plaza & Interchange Footprint
- Interchange & Local Streets
- Canadian Plaza A (X-10A)
- Canadian Plaza A (X-10B)
- Canadian Plaza B (X-10B)
- Crossing X-10A
- Crossing X-10B
- Existing Noise Level (Decibel dBA)
- CO: Carbon Monoxide Concentration (ppm) (2035 Peak hr - incl. 3.4ppm background)
- BU: # of Active Business Units
- RU: # of Occupied Residential Units



# Detroit River International Crossing Study

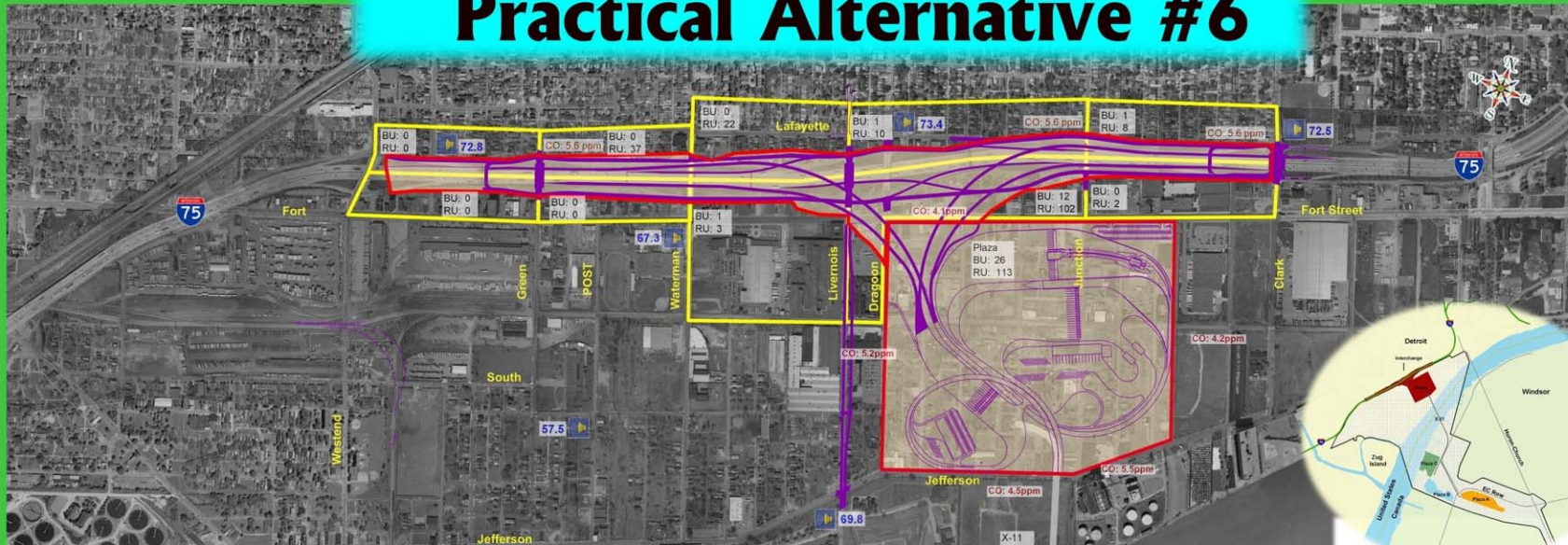
## Alternative 1 – Preliminary Summary of Impacts

	UNITED STATES SUMMARY						CANADIAN SUMMARY		
EVALUATION FACTOR	PERFORMANCE MEASURE		INTERCHANGE	PLAZA	CROSSING		X-10A/PLAZA A	X-10B/PLAZA A	X-10B/PLAZA B1
PROTECT COMMUNITY NEIGHBORHOOD CHARACTERISTICS	TRAFFIC NOISE	STREETS CLOSED	8	14	0	0	7	9	12
		FRONTLINE EXPOSURE (TOTAL RESIDENTIAL)	109	101	0	0	21 (receptors > 5 dB increase)	21 (receptors > 5dB increase)	23 (receptors > 5dB increase)
	POTENTIAL ACQUISITION	OCCUPIED RESIDENTIAL	184	151	0	0	67	70	36
		ACTIVE BUSINESSES	18	18	3	2	0	0	1
		PLACES OF WORSHIP/SCHOOLS	4-FIRST LATIN BAPTIST, DETROIT FRIENDS MEETING QUAKERS, OLD LANDMARK CHURCH, BEARD SCHOOL (PARTIAL)	3-NEW DAY CHURCH, SAINT PAUL CHURCH, ABUNDAT LIFE CHURCH	0	0	1-SOCIAL FEATURE (INSTITUTIONAL)-ERIE WILDLIFE RESCUE	1-SOCIAL FEATURE (INSTITUTIONAL)-ERIE WILDLIFE RESCUE	1-SOCIAL FEATURE (INSTITUTIONAL)-ERIE WILDLIFE RESCUE
MAINTAIN CONSISTENCY WITH LOCAL PLANNING	OFFICIAL PLANS	CONSISTENCY	Yes	No	Yes	Yes	No (Plaza)	No (Plaza)	Yes
	ENVIRONMENTAL SITES AFFECTING PLAN IMPLEMENTATION	NUMBER	6	6	2	2	0	2	5
PROTECT CULTURAL RESOURCES	ABOVEGROUND HISTORIC/ON NATIONAL REGISTER	NUMBER	0	0	0	0	6	6	8
	POTENTIALLY ELIGIBLE FOR REGISTER STRUCTURES	NUMBER/SITE	2-OLIVET CHURCH, APART BUILDING	1-ST. PAUL A.M.E	0	0	N/A	N/A	N/A
	ARCHAEOLOGIC SITES	NUMBER	0	2	0	0	6	6	6
	PARKLANDS	NUMBER/SITE	0	1-RADEMACHER PARK	0	0	1- OJIBWAY PARK (0.7 ha)	1- OJIBWAY PARK (0.7 ha)	1- OJIBWAY PARK (0.7 ha)
PROTECT THE NATURAL ENVIRONMENT	SIGNIFICANT HABITAT (ED-Endangered / PL-Potential)	NUMBER/SITE	0	0	0	0	2.9 ha TALLGRASS PRAIRIE, 0.2 ha FISH, BUTLER'S GARTERSNAKE	2.9 ha TALLGRASS PRAIRIE, 0.2 ha FISH, BUTLER'S GARTERSNAKE	2.9 ha TALLGRASS PRAIRIE, 0.2 ha FISH, BUTLER'S GARTERSNAKE
IMPROVE REGIONAL MOBILITY (Sized to 2035 Volumes)	2035 AVERAGE DAILY TWO-WAY CROSSING VOLUME (ADT)	2035 ADT	SEE CROSSING DATA	SEE CROSSING DATA	37,000	37,000	37,000	37,000	37,000
CONSTRUCTABILITY (All System Components are Constructable)	KEY ISSUES	REFER TO INDIVIDUAL CROSSING COMPONENT	UTILITY RELOCATION, POTENTIAL CONTAMINATED SOILS	UTILITY RELOCATION, BRAIDED RAMPS	BRIDGE LENGTH /COMPLEXITY, CONTAMINATED SOILS	CONTAMINATED SOILS, UTILITIES	POWER STATION/UTILITIES, RAIL LINE	POWER STATION/UTILITIES, RAIL LINE	POWER STATION/UTILITIES, RAIL LINE
MAINTAIN AIR QUALITY	ONE HOUR CO CONCENTRATION HOTSPOTS	REFER TO GRAPHIC					INCREASES IN PM2.5 AND NOx IN VICINITY OF CROSSING, APPROACH ROADWAY, AND PLAZA.		

# Detroit River International Crossing Study

## Detroit River International Crossing Practical Alternative #6

PRELIMINARY  
(AS OF 11/15/2006)



Alternative 6 – Preliminary Summary of Impacts

EVALUATION FACTOR	UNITED STATES SUMMARY					CANADIAN SUMMARY		
	PERFORMING MEASURE	INTERCHANGE	PLAZA	CROSSING X-11		X-11(CEG/C-G)/ PLAZA A	X-11/ PLAZA B	X-11/ PLAZA C
PROTECT COMMUNITY NEIGHBORHOOD CHARACTERISTICS	TRAFFIC	STREETS CLOSED	8	14	0	3/4	16	5
	NOISE	FRONTLINE EXPOSURE (TOTAL RESIDENTIAL)	109	95	0	180 (receptors >5dB increase)	180 (receptors >5dB increase)	180 (receptors >5dB increase)
	POTENTIAL ACQUISITION	OCCUPIED RESIDENTIAL	184	113	0	72/67	38	37
		ACTIVE BUSINESSES	15	26	0	9/9	9	13
MAINTAIN CONSISTENCY WITH LOCAL PLANNING		SIGNIFICANT OTHER	4-FIRST LATIN BAPTIST, DETROIT FRIENDS MEETING QUAKERS, OLD LANDMARK CHURCH, BEARD SCHOOL (PARTIAL)	1-FAITH TABERNACLE CHURCH	0	1-SOCIAL FEATURE (INSTITUTIONAL)-FIRE WILDLIFE RESCUE	1-SOCIAL FEATURE (INSTITUTIONAL)-FIRE WILDLIFE RESCUE	1-SOCIAL FEATURE (INSTITUTIONAL)-FIRE WILDLIFE RESCUE
	OFFICIAL PLANS AFFECTING PLAN	CONSISTENCY	YES	YES	YES	NO (Plan A)/YES	YES	YES
	ENVIRONMENTAL SITES	NUMBER	6	7	3	11/2	11	12
	ABOVEGROUND HISTORIC/NATIONAL REGISTER	NUMBER	0	0	0	8/8	9	9
PROTECT CULTURAL RESOURCES	POTENTIALLY ELIGIBLE FOR REGISTER STRUCTURES	NUMBER/SITE	2-OLIVET CHURCH, APART BUILDING	2-ROBERTS BRASS MFG., DETROIT SAVINGS BANK	1-MISTERSKEY	N/A	N/A	N/A
	ARCHAEOLOGIC SITES	NUMBER	0	2	1	6/6	6	6
	PARKLANDS	NUMBER/SITE	0	1-DETROIT CITY PARK	0	1-OJIBWAY PARK (0.7 ha)	1-OJIBWAY PARK (0.7 ha)	1-OJIBWAY PARK (0.7 ha)
	SIGNIFICANT HABITAT	NUMBER/SITE	0	0	0	2.9 ha TALLGRASS PRAIRIE, 0.2 ha FISH, BUTLER'S GARTERSNAKE, ENCROACH BLACK OAK WOODS	2.9 ha TALLGRASS PRAIRIE, 0.2 ha FISH, BUTLER'S GARTERSNAKE, ENCROACH BLACK OAK WOODS	0.9 ha TALLGRASS PRAIRIE, 0.7 ha FISH, BUTLER'S GARTERSNAKE
PROTECT THE NATURAL ENVIRONMENT								
IMPROVE REGIONAL MOBILITY (Sized to 2035 Volumes)	2035 AVERAGE DAILY TWO-WAY CROSSING VOLUME (ADT)	2035 ADT	SEE CROSSING DATA	SEE CROSSING DATA	32,000	32,000	32,000	32,000
CONSTRUCTABILITY (All System Components are Constructible)	KEY ISSUES	REFER TO INDIVIDUAL CROSSING COMPONENT	UTILITY RELOCATION, POTENTIAL CONTAMINATED SOILS	SIGNIFICANT SEWER RELOCATION, POTENTIAL CONTAMINATED SOILS, RAILWAY RELOCATION	CONTAMINATED SOILS	STERLING FUELS, POWER STATION/UTILITIES, RAIL LINE	STERLING FUELS, POWER STATION/UTILITIES, RAIL LINE	STERLING FUELS, POWER STATION/UTILITIES, RAIL LINE
MAINTAIN AIR QUALITY	ONE HOUR CO CONCENTRATION HOTSPOTS			REFER TO GRAPHICS		INCREASES IN PM2.5 AND NOX IN VICINITY OF CROSSING, APPROACH ROADWAY, AND PLAZA.		



OVERVIEW

### LEGEND

- U.S. Plaza & Interchange Footprint
- Interchange & Local Streets
- Canadian Plaza A
- Canadian Plaza B
- Canadian Plaza C
- Crossing X-11
- Existing Noise Level (Decibel dBA)
- CO: Carbon Monoxide Concentration (ppm) (2035 Peak hr - incl. 3.4ppm background)
- BU: # of Active Business Units
- RU: # of Occupied Residential Units



# Detroit River International Crossing Study

## Alternative 6 - Preliminary Summary of Impacts

EVALUATION FACTOR	UNITED STATES SUMMARY					CANADIAN SUMMARY		
	PERFORMING MEASURE		INTERCHANGE	PLAZA	CROSSING X-11	X-11(CEG/C-G)/ PLAZA A	X-11/ PLAZA B	X-11/ PLAZA C
PROTECT COMMUNITY NEIGHBORHOOD CHARACTERISTICS	TRAFFIC	STREETS CLOSED	8	14	0	3/4	16	5
	NOISE	FRONTLINE EXPOSURE (TOTAL RESIDENTIAL)	109	95	0	180 (receptors >5dB increase)	180 (receptors >5dB increase)	180 (receptors >5dB increase)
	POTENTIAL ACQUISITION	OCCUPIED RESIDENTIAL	184	113	0	72/67	38	37
		ACTIVE BUSINESSES	15	26	0	9/9	9	13
		SIGNIFICANT OTHER	4-FIRST LATIN BAPTIST, DETROIT FRIENDS MEETING QUAKERS, OLD LANDMARK CHURCH, BEARD SCHOOL (PARTIAL)	1-FAITH TABERNACLE CHURCH	0	1-SOCIAL FEATURE (INSTITUTIONAL)-ERIE WILDLIFE RESCUE	1-SOCIAL FEATURE (INSTITUTIONAL)-ERIE WILDLIFE RESCUE	1-SOCIAL FEATURE (INSTITUTIONAL)-ERIE WILDLIFE RESCUE
MAINTAIN CONSISTENCY WITH LOCAL PLANNING	OFFICIAL PLANS	CONSISTENCY	YES	YES	YES	NO (Plaza A)/YES	YES	YES
	ENVIRONMENTAL SITES AFFECTING PLAN	NUMBER	6	7	3	11/2	11	12
PROTECT CULTURAL RESOURCES	ABOVEGROUND HISTORIC/ON NATIONAL REGISTER	NUMBER	0	0	0	8/8	9	9
	POTENTIALLY ELIGIBLE FOR REGISTER STRUCTURES	NUMBER/SITE	2-OLIVET CHURCH, APART BUILDING	2-ROBERTS BRASS MFG, DETROIT SAVINGS BANK	1-MISTERSKEY	N/A	N/A	N/A
	ARCHAEOLOGIC SITES	NUMBER	0	2	1	6/6	6	6
	PARKLANDS	NUMBER/SITE	0	1-DETROIT CITY PARK	0	1 - OJIBWAY PARK (0.7 ha)	1 - OJIBWAY PARK (0.7 ha)	1 - OJIBWAY PARK (0.7 ha)
PROTECT THE NATURAL ENVIRONMENT	SIGNIFICANT HABITAT	NUMBER/SITE	0	0	0	2.9 ha TALLGRASS PRAIRIE, 0.2 ha FISH, BUTLER'S GARTERSNAKE	2.9 ha TALLGRASS PRAIRIE, 0.2 ha FISH, BUTLER'S GARTERSNAKE, ENCROACH BLACK OAK WOODS	0.9 ha TALLGRASS PRAIRIE, 0.7 ha FISH, BUTLER'S GARTERSNAKE
IMPROVE REGIONAL MOBILITY (Sized to 2035 Volumes)	2035 AVERAGE DAILY TWO-WAY CROSSING VOLUME (ADT)	2035 ADT	SEE CROSSING DATA	SEE CROSSING DATA	32,000	32,000	32,000	32,000
CONSTRUCTABILITY (All System Components are Constructible)	KEY ISSUES	REFER TO INDIVIDUAL CROSSING COMPONENT	UTILITY RELOCATION, POTENTIAL CONTAMINATED SOILS	SIGNIFICANT SEWER RELOCATION, POTENTIAL CONTAMINATED SOILS, RAILWAY RELOCATION	CONTAMINATED SOILS	STERLING FUELS, POWER STATION/UTILITIES, RAIL LINE	STERLING FUELS, POWER STATION/UTILITIES, RAIL LINE	STERLING FUELS, POWER STATION/UTILITIES, RAIL LINE
MAINTAIN AIR QUALITY	ONE HOUR CO CONCENTRATION HOTSPOTS		REFER TO GRAPHICS			INCREASES IN PM2.5 AND NOX IN VICINITY OF CROSSING, APPROACH ROADWAY, AND PLAZA.		

# Detroit River International Crossing Study

**DRAFT**

FOR DISCUSSION PURPOSES ONLY  
11-15-06

## Detroit River International Crossing Study Evaluation of Practical Alternatives Supporting Data - Alternative 01

				Interchange	Plaza	Crossing X10A	Crossing X10B
Evaluation Factor	Performance Measure Category		Description/Units				
Protect The Natural Environment	Surface Water	Floodplain	Number/Acres	0	0	3	0
		Surface Run Off	Acres	10	164	0	0
		Primary Streams <sup>1</sup>	Number/Specify	0	0	1: Detroit R.	1: Detroit R.
		Secondary Streams <sup>2</sup>	Number/Specify	0	0	0	0
		Other Water-crossings	Number/Specify	0	0	0	0
	Groundwater	Municipal Wells	Number	0	0	0	0
		Water In-takes	Number/Specify	0	0	0	0
		Wetlands	Acres	0	0	0	0
	Significant Habitat	Fens / Bogs	Number/Acres	0	0	0/0	0/0
		Endangered Species <sup>3</sup>	Potential Species	0/0	0	0/0	0/0
		Designated Wildlife Refuges	Number/Acres	0	0/0	0/0	0/0
		Prime/Unique Farmland	Farmland	0	0	0	0
	Mineral Resources	Salt /Limestone	Type/Specify	Salt	Salt	Salt	Salt

### Notes:

1: Primary Streams are classified as water courses with an average width greater than 50ft/15m

2: Secondary streams are classified as water courses with an average width less than 50ft/15m.

3: Based on preliminary site investigation of the plaza sites (viewing from public access points), none of the plant or animal species listed as endangered species within the quads for this region are expected to occur within the boundaries of the plazas .

The crossings includes open portions of the Detroit River and nearshore areas where threatened, endangered, and special concern species are known to have been present. A summary of species with a potential to be present is provided below. This analysis and site investigation are preliminary in nature.

1 animal species listed by the State as Threatened is known to spawn upstream of the crossing corridor at Zug Island. 7 animal species listed by the State as Threatened, Endangered, or Special Concern have the potential to be present within specific habitats within or near the crossing corridor.

## Detroit River International Crossing Study

# Range of Potential Impacts

## Occupied Dwelling Units

Crossing	U.S.			Canada		
	Interchange	Plaza	Crossing	Crossing + Plaza A	Crossing + Plaza B	Crossing + Plaza C
X-10	171-233	151	0	67-70	36	NA
X-11	29-190	113-168	0-16	67-72	38	37

# Detroit River International Crossing Study

## Range of Potential Impacts

### Active Business Units

Crossing	U.S.			Canada		
	Interchange	Plaza	Crossing	Crossing + Plaza A	Crossing + Plaza B	Crossing + Plaza C
X-10	18-25	18	2-3	0	1	NA
X-11	17-25	18-26	0-3	5	5	10



## Detroit River International Crossing Study

# Range of Potential Impacts

## Historic Site on National Register of Historic Places

Crossing	U.S.			Canada		
	Interchange	Plaza	Crossing	Crossing + Plaza A	Crossing + Plaza B	Crossing + Plaza C
X-10	0	0	0	6	8	NA
X-11	0	0-1	0-1	6-8	6-9	6-9

## Detroit River International Crossing Study

# Range of Potential Impacts

## Frontline Noise Exposure – Residential Units

Crossing	U.S.			Canada		
	Interchange	Plaza	Crossing	Crossing + Plaza A	Crossing + Plaza B	Crossing + Plaza C
X-10	88-109	101	0-4	21	23	NA
X-11	28-109	72-105	0-4	18-21	15	18

Detroit River International Crossing Study

## Range of Potential Impacts

### Historic Structures Potentially Eligible for National Register of Historic Places

Crossing	U.S.			Canada		
	Interchange	Plaza	Crossing	Crossing + Plaza A	Crossing + Plaza B	Crossing + Plaza C
X-10	2-5	1-3	0	6	1	NA
X-11	2-5	1-4	1	8	9	9



# Detroit River International Crossing Study

## Range of Potential Impacts

### Active Parklands Units

Crossing	U.S.			Canada		
	Interchange	Plaza	Crossing	Crossing + Plaza A	Crossing + Plaza B	Crossing + Plaza C
X-10	0	1	0	1	1	NA
X-11	0	1	0	1	1	1

An aerial photograph of the Detroit skyline and the Detroit River. The city's skyscrapers are visible on the left, and the river flows along the bottom and right. A green and blue horizontal bar is positioned above the table.

# Detroit River International Crossing Study

## Range of Potential Impacts

### Average Daily Two-way Traffic (2035)

Crossing	Two-way ADT
X-10	30,100 to 37,400
X-11	24,200 to 32,000

# Detroit River International Crossing Study

## Range of Potential Impacts

### Constructability Issues

Crossing	U.S.			Canada		
	Interchange	Plaza	Crossing	Crossing + Plaza A	Crossing + Plaza B	Crossing + Plaza C
X-10	<ul style="list-style-type: none"><li>•Utility Reloc.</li><li>•Contamination</li></ul>	<ul style="list-style-type: none"><li>•Utility Reloc.</li><li>•Braided Ramps</li></ul>	<ul style="list-style-type: none"><li>•Bridge Length</li><li>•Contamination</li></ul>	<ul style="list-style-type: none"><li>•Power Station</li><li>•Rail Line</li></ul>	<ul style="list-style-type: none"><li>•Power Station</li><li>•Rail Line</li></ul>	<ul style="list-style-type: none"><li>•Sterling Fuels</li><li>•Power Station</li></ul>
X-11	<ul style="list-style-type: none"><li>•Utility Reloc.</li><li>•Contamination</li></ul>	<ul style="list-style-type: none"><li>•Utility Reloc.</li><li>•Rail Line</li></ul>	<ul style="list-style-type: none"><li>•Utility Reloc.</li><li>•Contamination</li></ul>	<ul style="list-style-type: none"><li>•Power Station</li><li>•Sterling Fuels</li></ul>	<ul style="list-style-type: none"><li>•Sterling Fuels</li><li>•Rail Line</li></ul>	<ul style="list-style-type: none"><li>•Sterling Fuels</li><li>•Power Station</li></ul>



# Detroit River International Crossing Study

## Range of Potential Impacts

### Constructability Issues

Crossing	U.S.			Canada	
	Interchange	Plaza	Crossing	Crossing + Plaza A	Crossing + Plaza B
X-10	Utility Reloc. Contamination	Utility Reloc. Braided Ramps	Length Contamination	Power Station Rail Line	Power Station Rail Line
X-11	Utility Reloc. Contamination	Utility Reloc. Rail Line	Length Contamination	Power Station Sterling Fuel	Sterling Fuel Rail Line

# Detroit River International Crossing Study

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Questions/Comments