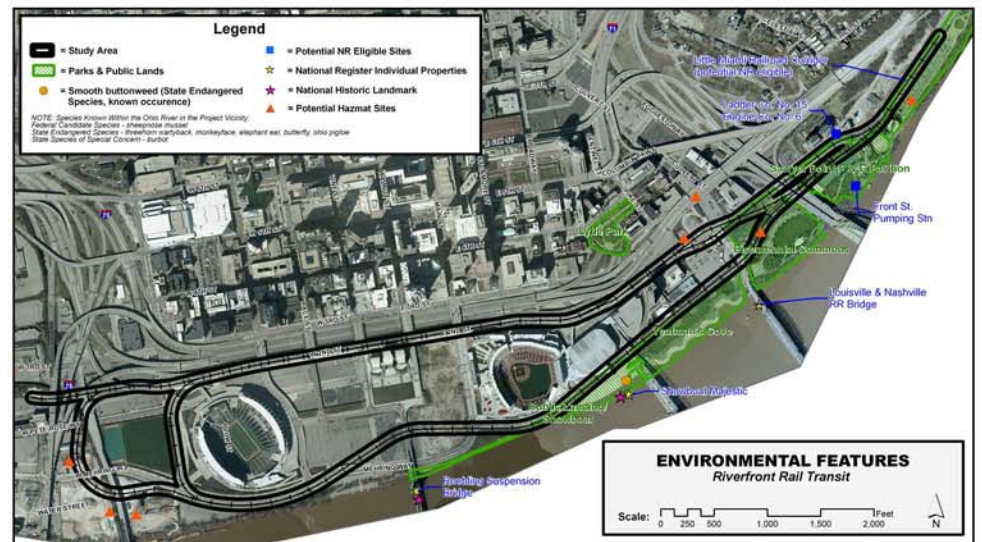
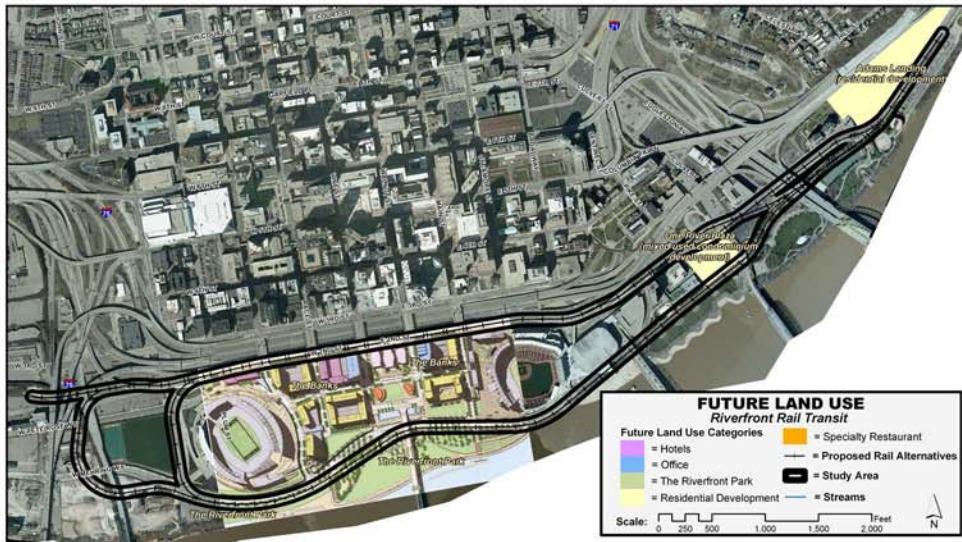
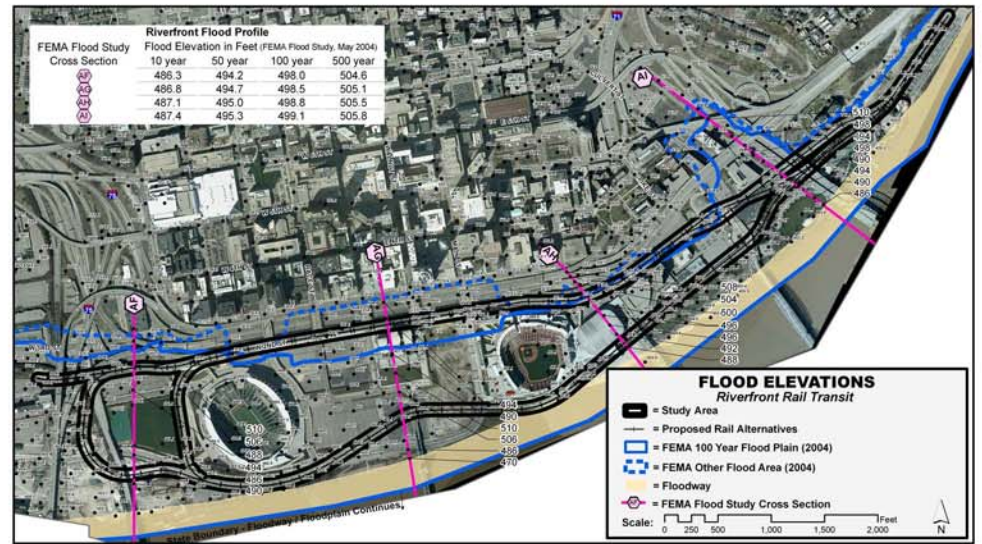
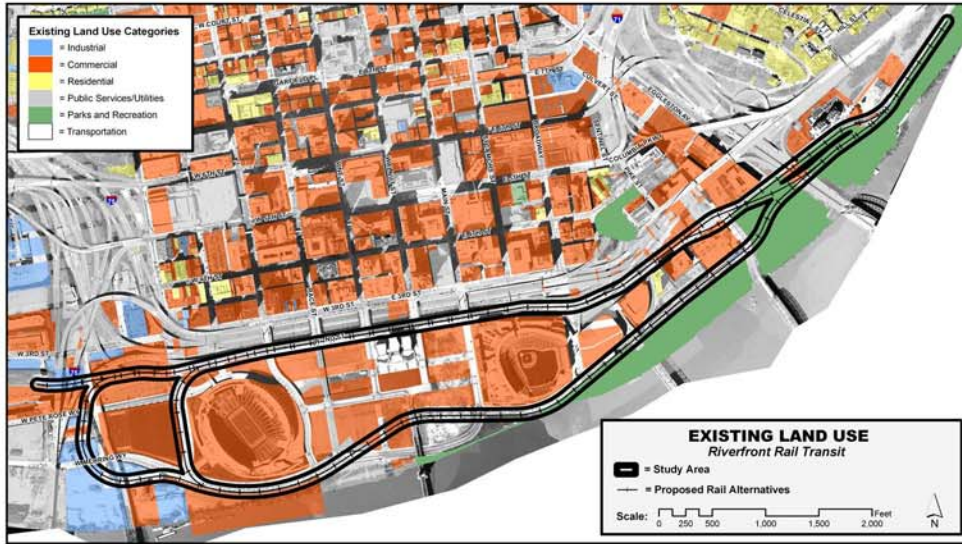




# EVALUATION SUMMARY

# LAND USE & ENVIRONMENTAL FEATURES



# PRELIMINARY IMPACTS AND COSTS

	North Alternatives			South Alternatives		Loop Alternatives (single track)			
	N-1	N-2	N-3	S-1	S-2	L-1	L-2	L-3-1	L-3-2
<b>Estimated Right-of-Way Requirements</b>									
<b>Greenspace (ac)</b>	0.03	1.0	0.03	1.5	1.5	0.9	0.9	0.9	0.9
<b>Parking (ac)</b>	2.2	1.4	2.1	1.4	0.3	2.2	2.1	1.5	1.5
<b>Existing ROW (ac)</b>	4.0	3.8	3.9	7.5	7.7	6.0	6.0	6.1	6.1
<b>Commercial / Industrial (ac)</b>	0.8	0.9	0.9	1.7	1.1	1.2	1.2	0.8	0.8
<b>Planned Development (ac)</b>	0	0	0.1	1.6	1.6	0.6	0.6	0.6	0.6
<b>Total Estimated ROW (ac)</b>	7.0	7.1	7.0	13.7	12.2	10.9	10.8	9.9	10.0
<b>Ecological and Cultural Features</b>									
<b>Floodplain (ac)</b>	6.0	6.0	6.1	13.4	11.8	10.1	10.1	9.2	9.2
<b>Wetlands (ac)</b>	0	0	0	0	0	0	0	0	0
<b>T&amp;E Species</b>	0	0	0	0	0	0	0	0	0
<b>Potential T&amp;E Species Habitat</b> (Indiana bat)	yes	yes	yes	yes	yes	yes	yes	yes	yes
<b>Parks – Existing and Planned</b> (# parks and lineal feet through parks)	2 parks / 1,150 lf	2 parks / 1,230 lf	2 parks / 1,250 lf	5 parks / 6,350 lf	5 parks / 5,600 lf	4 parks / 5,550 lf	4 parks / 5,550 lf	4 parks / 4,800 lf	4 parks / 4,800 lf
<b>Potential Hazmat Concern Sites</b>	1 site	1 site	1 site	2 sites	1 site	3 sites	2 sites	2 sites	1 site
<b>National Register Sites</b>	0	0	0	0	0	0	0	0	0
<b>Socioeconomic Factors and Costs</b>									
<b>Residential Displacement (#)</b>	0	0	1 planned bldg (One River Plaza)	0	0	0	1 planned bldg (One River Plaza)	0	1 planned bldg (One River Plaza)
<b>Comm / Indust Displacement (#)</b>	0	0	0	0	0	0	0	0	0
<b>Institutional Displacement (#)</b>	0	0	0	0	0	0	0	0	0
<b>Sensitive Noise Receptors (#)</b>	4	4	4	8	9	12	12	10	11
<b>Total Capital Costs</b> (excludes right-of-way and vehicles)	\$30.40M	\$39.32M	\$28.26M	\$41.07M	\$38.53M	\$38.52M	#36.40M	\$35.90M	\$33.78M



# SUMMARY OF THE EVALUATION METHOD

## GENERAL APPROACH

A *Stakeholder Work Group* of city, county, state, and regional representatives was actively involved in identifying goals for the riverfront and developing measures to evaluate proposed Riverfront Rail Transit alternatives.

This effort included review of ability to meet purpose and need as developed in the Eastern Corridor Tier 1 work, analysis of needs and impacts to activity centers along the riverfront, fit with land use, support of economic development, and minimizing environmental impacts.

The evaluation process was accomplished through a series of Stakeholder Work Group meetings held between 2004 and 2007.

## HOW THE EVALUATION WAS CONDUCTED

- The Stakeholder Work Group identified five discrete purpose and need elements, or *Goals*, for the Riverfront Rail Transit:
  - FEASIBILITY—Establish a viable rail transit connection.
  - SAFETY—Establish a safe rail transit connection.
  - QUALITY OF LIFE—Support and enhance activities, major destinations, venues, and events in and around downtown Cincinnati.
  - ECONOMIC VITALITY—Enhance the economic vitality and growth of Cincinnati.
  - FIT—Fit with, enhance, and be consistent with the intent of all relevant City and County plans, projects, and agreements.
- *Objectives* and *Performance Measures* for each goal were developed from which to assess how well each alternative performed relative to the identified goal.
- How well each alternative performed was assessed using a quantitative value (number) or qualitative rating (High, Medium, or Low), and then *Scored* on a scale of 1 to 10, indicative of how the alternative supported or did not support the performance metric.
- The scores were summed and averaged for the five goals, and then added to compute a *Total Score* for each alternative.
- The alternatives were *Ranked* by total score and this information was one tool used by the Stakeholder Work Group for identify a preliminary recommended alternative.

**Definitions of the Riverfront Rail Transit Goals, Objectives, Performance Measures, and the Stakeholder Work Group Evaluation Summary are presented on the next boards.**

# DEFINITION OF GOALS, PERFORMANCE OBJECTIVES AND MEASURES

Riverfront Rail Transit Goals	Performance Objectives	Performance Measure Definition
<b>1.0 FEASIBILITY</b> – Establish a viable rail transit connection from the Boathouse to the Riverfront Transit Center.	1.1 Minimize Capital Costs	1.1.1 Total Capital Costs (\$) <i>(lowest is best)</i> 1.1.2 Annualized Capital Costs (based on useful life of all rail infrastructure and facilities, exclusive of vehicles) (\$) <i>(lowest is best)</i>
	1.2 Minimize Operating Costs	1.2.1 Relative Composite Operating Cost 1.2.1.1 Number of stations (#) <i>(lowest is best)</i> 1.2.1.2 Length of alignment (#) <i>(lowest is best)</i> 1.2.1.3 Need for supervision to protect pedestrians (H, M, L) <i>(lowest is best)</i> 1.2.2 Revenue Generated – <i>Deferred to future assessment</i> 1.2.2.1 Ridership (#) <i>(highest is best)</i> – <i>Deferred to future assessment</i>
	1.3 Minimize Property Acquisition Issues	1.3.1 Difficulty of Acquisition Factor 1.3.1.1 Private ownership issues (H, M, L) <i>(lowest is best)</i> 1.3.1.2 Value of current land use (H, M, L) <i>(lowest is best)</i> 1.3.1.3 Percent of property in public ownership and available for reuse (#) <i>(highest is best)</i> 1.3.1.4 Pre-existing agreements and commitments not consistent with rail (H, M, L) <i>(lowest is best)</i> 1.3.1.5 Cost and difficulty of replacement (H, M, L) <i>(lowest is best)</i> 1.3.2 Cost of Property 1.3.2.1 Acquisition, relocation, and replacement costs (H, M, L) <i>(lowest is best)</i> 1.3.2.2 Grant repayments (H, M, L) <i>(lowest is best)</i>
	1.4 Maximize Comfort and Quality of Ride	1.4.1 Number of Curves Less than 500 feet (#) <i>(lowest is best)</i> 1.4.2 Length of Grades Greater than 2 percent (#) <i>(lowest is best)</i>
	1.5 Minimize Quantity of Structural Elements	1.5.1 Length of New Structures Required (#) <i>(lowest is best)</i> 1.5.2 Length of Retaining Walls Required (#) <i>(lowest is best)</i>
	1.6 Minimize Travel Time on the Train	1.6.1 Travel Time—based on distance and speed (#) <i>(lowest is best)</i>
	1.7 Minimize Restricted Travel	1.7.1 Yearly Frequency of Restricted Access to the Riverfront Transit Center Due to Flooding (#) <i>(lowest is best)</i> 1.7.2 Yearly Frequency of Restricted Access to the Riverfront Transit Center Due to Special Events (H, M, L) <i>(lowest is best)</i>
	1.8 Minimize Physically Constrained Locations along the Alignment	1.8.1 Number of physically constrained locations requiring significant reconfiguration or reconstruction (#) <i>(lowest is best)</i>
	<b>2.0 SAFETY</b> – Establish a safe rail transit connection from the Boathouse to the Riverfront Transit Center.	2.1 Maximize Pedestrian Safety
2.2 Maximize Vehicular Safety		2.2.1 Number of projected driveway crossings (#) <sup>1</sup> <i>(lowest is best)</i> 2.2.2 Number of projected roadway crossings (#) <sup>1</sup> <i>(lowest is best)</i> <sup>1</sup> <i>(assumes that approximate volume of vehicles is relatively consistent, regardless of location)</i>

# DEFINITION OF GOALS, PERFORMANCE OBJECTIVES AND MEASURES

Riverfront Rail Transit Goals	Performance Objectives	Performance Measure Definition
<b>3.0 QUALITY OF LIFE</b> – Support and enhance existing and planned activities, major destinations, venues, and events in and around downtown Cincinnati.	3.1 Maximize Enjoyment of Riverfront	3.1.1 Loss of gathering space and staging space for special events and park features (H, M, L) <i>(lowest is best)</i> 3.1.2 Amount of access to special events (H, M, L) <i>(highest is best)</i> 3.1.3 Amount of intrusion into park on a day-to-day basis (H, M, L) <i>(lowest is best)</i> 3.1.4 Amount and convenience of access to entertainment venues (H, M, L) <i>(highest is best)</i> 3.1.5 Preservation and enhancement of views of the river and the City (H, M, L) <i>(highest is best)</i>
	3.2 Minimize Negative Environmental Impacts	3.2.1 Amount of noise generated, includes squealing on curves, number of residences impacted (H, M, L) <i>(lowest is best)</i> 3.2.2 Amount of negative visual impact, includes consideration of need for fencing, lights, stations, and elevated sections (H, M, L) <i>(lowest is best)</i> 3.2.3 Amount of pollution generated by the train (determined by amount of idling, accelerations, length of track, and number of stations) (H, M, L) <i>(lowest is best)</i>
<b>4.0 ECONOMIC VITALITY</b> – Enhance the economic vitality and growth of the City of Cincinnati.	4.1 Maximize Economic Development Benefits	4.1.1 Amount of developable area lost (H, M, L) <i>(lowest is best)</i> 4.1.2 Amount of spin off development (should include consideration of pedestrians and development around stations) (H, M, L) <i>(highest is best)</i>
	4.2 Maximize Effective Connections for Downtown Workers	4.2.1 Number of Ohio jobs within a 10 minute walk (#) <i>(highest is best)</i>
	4.3 Maximize Connections to Intercity Rail Station	4.3.1 Obstacles or negative impact on rail transit access to intercity rail station (H, M, L) <i>(lowest is best)</i>
	4.4 Minimize Impact on Residential Development	4.4.1 Quality of buffer between rail and residences (factor of distance, elevation differences, buffering materials) (H, M, L) <i>(highest is best)</i>
<b>5.0 FIT</b> —Fit with, enhance, and be consistent with the intent of all relevant City and County plans, projects, and agreements such as the Central Riverfront Park, Sawyer Point, The Banks, the Riverfront Transit Center, and the abandonment of the Riverfront Running Track.	5.1 Maximize Implementation of Riverfront Master Plan	5.1.1 Consistency with Riverfront Master Plan and design standards (H, M, L) <i>(highest is best)</i> 5.1.2 Impediments to implementation of the park (H, M, L) <i>(lowest is best)</i> 5.1.3 Impacts to existing funding commitments (H, M, L) <i>(lowest is best)</i>
	5.2 Maximize Alignment with Other Applicable Agreements and Policies	5.2.1 Meets the intent of the rail abandonment (H, M, L) <i>(highest is best)</i> 5.2.2 Meets the intent of the City's agreement with SORTA regarding the Riverfront Running Track (H, M, L) <i>(highest is best)</i> 5.2.3 Meets the intent of land use deed restrictions, State and Federal grant assurances, and public access and use of the riverfront (Sawyer Point, Bicentennial Commons, Paddlewheel Park) (H, M, L) <i>(highest is best)</i>

Note: Qualitative assessment (e.g., high, medium, low) of performance of alternatives assigned by City members of the Stakeholder Working Group (approximately 70%). Quantitative metrics assigned by Project Technical Team.

# WORK GROUP EVALUATION SUMMARY

GOAL	RANK	WHY – EVALUATION RESULTS SUMMARY
1 – FEASIBILITY	1. North Alternative 2. Loop Alternative 3. South Alternative	<ul style="list-style-type: none"> <li>• North has lower relative capital and operating costs</li> <li>• North has fewer property acquisition issues (less impact to protected parkland, commercial/industrial properties and planned development)</li> <li>• North and Loop have most direct connection and shorter travel time from Boathouse to Riverfront Transit Center (RTC)</li> <li>• North and Loop minimize restricted travel to Riverfront Transit Center due to flooding and special events on the riverfront (direct connection to RTC)</li> </ul>
2 – SAFETY	1. North Alternative 2. South Alternative 3. Loop Alternative	<ul style="list-style-type: none"> <li>• North maximizes pedestrian and vehicular safety by:               <ul style="list-style-type: none"> <li>○ minimizing need of pedestrians to cross tracks (shorter length and mostly located outside heavy pedestrian-use park areas)</li> <li>○ minimizing number of projected roadway crossings (2 to 3 times as many roadway crossings for South and Loop compared to North)</li> </ul> </li> </ul>
3 – QUALITY OF LIFE	1. North Alternative 2. South & Loop Alternatives	<ul style="list-style-type: none"> <li>• North minimizes intrusion into the park on a day-to-day basis</li> <li>• North minimizes negative environmental impacts (fewer sensitive noise receptors and potential air quality impacts due to shorter length)</li> <li>• North minimizes loss of gathering space and staging space for special events and park features (mostly located outside heavy pedestrian-use park areas)</li> <li>• North provides access to CBD, but less access (fewer stations) to special events and entertainment venues along the riverfront compared to South and Loop</li> </ul>
4 – ECONOMIC VITALITY	1. North Alternative 2. Loop Alternative 3. South Alternative	<ul style="list-style-type: none"> <li>• North minimizes the amount of developable area lost (mostly located along existing transportation corridor)</li> <li>• North minimizes obstacles or negative impacts on rail transit access to proposed intercity rail station (direct connection to west through RTC)</li> <li>• North and Loop provide access to the greatest the number of jobs within a 10 minute walk from all stations</li> <li>• South minimizes impact on residential development (provides greater buffer)</li> </ul>
5 – FIT	1. North Alternative 2. South & Loop Alternatives	<ul style="list-style-type: none"> <li>• North maximizes consistency with Riverfront Master Plan and design standards (mostly outside of planned development boundary)</li> <li>• North minimizes impacts to planned Central Riverfront Park, including existing permit and funding commitments</li> <li>• North maximizes the intent of the rail abandonment, agreement with SORTA regarding Riverfront Running Track, and park land use deed restrictions</li> </ul>