

3. UPDATES TO THE PRELIMINARY ENVIRONMENTAL MITIGATION STRATEGY AND ENVIRONMENTAL COMMITMENTS

The preliminary environmental mitigation strategy and preliminary environmental commitments for the project were described in Chapter 8 of the Draft EIS, and are summarized below. *Updates based on new information received and comments obtained during the Draft EIS review period are depicted in italics.*

3.1. PRELIMINARY ENVIRONMENTAL MITIGATION STRATEGY

Chapter 8 of the Draft EIS describes how river crossing and greenspace and corridor preservation in the Eastern Corridor were recognized as important issues by the public and resource agencies during the MIS phase of the project, through the land use vision process, and into the Tier 1 work program. Since the beginning of project development, it has been noted that emphasis be placed on avoidance, minimization and mitigation of impacts to environmentally sensitive resources in the area, and there is expectation by the project stakeholders, local communities, and resource agencies that this commitment for mitigation be carried forward into more detailed development in Tier 2. As such, commitment is made to develop an environmental mitigation plan for the project during the Tier 2 work program in conjunction with more detailed alignment development, preferred alternative selection, permit preparation, agency coordination, and stakeholder and public input efforts. The project mitigation plan will be consistent with state and federal requirements, and may be in part administered at the local level in conjunction with other local preservation, mitigation or enhancement plans, with a combination of local, state and/or federal funding, as applicable.

Key components of the Eastern Corridor environmental mitigation plan, described in Chapter 8 of the Draft EIS, include six components: address project impacts; integrate mitigation with local programs; establish multi-jurisdictional and multi-agency participation; provide opportunity for a diverse funding source, using locally available resources as well as traditional transportation funding; and exemplify proactive environmental stewardship.

These six components are being incorporated in the project implementation framework currently being developed, as described in Section 4 of this Final EIS, and will be carried forward into the Tier 2 work for further refinement. Current work has focused on the development of a green infrastructure plan for the area, as described below.

Green Infrastructure Concept Master Plan

A green infrastructure joint planning effort is currently underway in the Eastern Corridor, administered under local jurisdiction. This work is as a continuation of land use efforts established by the Eastern Corridor Major Investment Study and Eastern Corridor Land Use Vision Plan, and is being coordinated with the Eastern Corridor Tier 1 program. The local green infrastructure plan will dovetail with and provide opportunity to expand upon project-level compensatory mitigation efforts specific to transportation actions outlined in this FEIS. Recent work has included the establishment of a Green Infrastructure Planning Committee, through resolution of the Hamilton County Transportation Improvement District, for the purpose of developing a consensus green infrastructure plan for the Little Miami River Plains Focus Area. This joint planning effort builds on recommendations for this focus area from the Eastern Corridor Land Use Vision Plan, and provides a tool for the continued coordination of land use, green infrastructure and transportation planning elements within the Eastern Corridor. The Green Infrastructure Concept Master Plan,

completed by the Committee in February 2005, will be used by local communities in guiding future land use planning and community development, and will provide context for the refinement of alternatives and mitigation planning in the Eastern Corridor transportation investment area during Tier 2.

Key components of the Green Infrastructure Concept Master Plan (February 2005) include the following:

- *A Green Infrastructure Concept map depicting priority economic and community development, environmental protection and preservation, and transportation improvement needs identified for the area by the Committee;*
- *Identification of natural resource, community and cultural resource priorities for the Little Miami River Plains Focus Area and associated values;*
- *Identification of preliminary mitigation opportunities within the Eastern Corridor transportation investment area for riparian corridors, wetlands, cultural resources, and link with local projects;*
- *Description of preliminary measures for protecting values identified for the area, including protection measures and net benefit for: agriculture; communities and neighborhoods; geology; cultural resources; parklands, greenspace and recreation; scenic quality; water quality; and wildlife, fish and habitat - for use by local communities and in further Eastern Corridor project development;*
- *An implementation and funding strategy outline jointly developed by agencies with local jurisdiction; and*
- *Identification of key next steps for coordination and implementation of the Green Infrastructure Concept Master Plan within the Eastern Corridor.*

Overall, the green infrastructure plan is a continuation of environmental stewardship and context sensitive planning efforts being developed for the Eastern Corridor. This effort began with the MIS recommendation for development of a land use vision plan, continued into the Tier 1 work program through consideration and support of land use in alternatives development, and will continue in future planning as recommendations from the Master Plan guide protection and enhancement activities in the Little Miami River Plains of the Eastern Corridor and the planning efforts of local jurisdictions.

3.2. UPDATED ENVIRONMENTAL COMMITMENTS

The Tier 1 Draft EIS included a preliminary summary of environmental commitments for the project for further development in Tier 2. Commitments were updated based on public and agency input and new information obtained during the Draft EIS comment period, and are presented in Table 7 below. Environmental commitments will continue to be developed and updated as the project progresses through Tier 2, detailed design, agency review, and permit application. *Updates to information presented in the draft document are shown in italics.*

Table 7. Updated Environmental Commitments

Environmental Feature/Category	Commitment(s) for Further Development in Tier 2
Little Miami River	<p>Minimization of adverse impacts to the Little Miami River are of special concern for the Eastern Corridor project, and development of specific mitigation measures, and agency coordination and approval, will be required due to its Exceptional Warmwater Habitat and state and national scenic river designations.</p> <p>The Eastern Corridor project involvement with the Little Miami River may require resource agency coordination in accordance with the following: Section 404 and Section 401 of the 1972 Federal Clean Water Act (as amended in 1977); Section 7 of the National Wild and Scenic Rivers Act; Section 1517.16 of the Ohio Revised Code (ODNR scenic rivers approval); and/or Section 4(f) involvement under the 1966 U.S. Department of Transportation Act (coordination with U.S. Coast Guard determined that Section 9 bridge permit [Rivers and Harbor Act] is not needed; see Draft EIS).</p> <p>Commitment is made in this Tier 1 environmental document to complete all required coordination, evaluation and permit application applicable to the Little Miami River during Tier 2.</p> <p>Commitment is also made to clear span the Little Miami River crossing area for shared roadway/transit use.</p> <p>In addition, commitment is made to further evaluate and develop (in Tier 2) mitigation measures for the Little Miami River. It is expected that a mitigation strategy will be consistent with state and federal requirements, and may be in part administered at the local level in conjunction with other local preservation, mitigation or enhancement plans, with a combination of local, state and/or federal funding, as applicable.</p> <p>Strategies under consideration at this time (based on Tier 1 resource agency coordination and stakeholder and public input), including the following:</p> <ul style="list-style-type: none"> • Stream mitigation such as restoration, preservation or other measures within the Little Miami River watershed, which may include land acquisition, placement of conservation easements or other measures (to be determined during the 404/401 permit process). • Controlled access throughout this section of relocated SR 32, with no new access points through the Little Miami River crossing area (except for recreational purposes). • <i>Further project development conducted in Tier 2 will include evaluation of reasonable measures to avoid/minimize impacts to the 100-year flood event, in coordination with ODNR, NPS and/or other appropriate agencies.</i> • Develop stringent Best Management Practices for implementation during bridge construction (such as sediment and erosion control practices, project phasing, minimization of vegetation clearing, etc.) <i>and coordinate/comply with appropriate state, federal and local agency requirements (including ODNR Scenic Rivers) and local planning/zoning ordinances.</i> Include application of ODOT’s Construction and Materials Specifications for temporary sediment and erosion controls (Item 207; ODOT, 2002) and adherence to the project Stormwater Pollution Prevention Plan (SWPP), <i>with particular attention given to drainage ways that could convey sediment-laden waters to the Little Miami River.</i> NPDES storm water permit application and coordination with OEPA will be conducted for the project for compliance with the Clean Water Act and current provisions of the Ohio Water Pollution Control Act (ORC Chapter 6111) per ODOT’s Construction and Materials Specifications for environmental protection (Item 107.19; ODOT, 2002). • <i>Minimize removal of riparian vegetation within 120 feet of the Little Miami River OHW or within 50 feet of tributaries to extent practicable, and reforest disturbed areas with native vegetation.</i>

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	<ul style="list-style-type: none"> • <i>Cross tributaries of the Little Miami River with clear span structures whenever possible.</i> • <i>Place navigational markings or other appropriate measures along the river during construction to alert canoeists and other users that construction activities are occurring in the area.</i> • <i>Continue coordination with ODNR and NPS regarding threshold criteria for protection of water quality and values for which the river was designated, for use in Tier 2 to evaluate avoidance of impacts.</i> • <i>Conduct studies in Tier 2 following ODOT's Specifications for Subsurface Investigations, ODOT's Geotechnical Engineering Design Checklists and/or other appropriate analyses, to identify underlying conditions in the Little Miami River valley to be used in bridge location and design, and use this information to develop appropriate measures for accounting for channel activity and potential impacts.</i> • <i>Identify environmentally sensitive features in and along the Little Miami River (such a wetlands, special aquatic features, important geologic features, cultural resources, high quality riparian and riverbank areas, etc) as areas to be avoided during construction, including borrow and waste site selection and construction staging.</i> • <i>Evaluate using a watershed-level mitigation strategy that addresses impervious surface as it relates to stream degradation, incorporates greenspace and habitat preservation, restores disturbed areas such as brownfields, links with the planning efforts of local watershed and conservation groups, and uses watershed techniques and land suitability analyses for developing the various components of the mitigation plan.</i>
Other Streams	<p>Site-specific stream impacts <i>and water quality impacts</i> will be determined on a project-by-project basis during Tier 2 of the Eastern Corridor study, and site-specific stream avoidance, minimization and mitigation measures <i>and surface water quality protection measures</i> will be evaluated as the project progresses through the NEPA process and detailed design in Tier 2. A final stream mitigation plan (as necessary for a Tier 2 project) will be developed as part of the 404/401-permit application process.</p>
Floodplains	<p>For Tier 2 projects involving floodplain encroachment, coordination with the appropriate local floodplain coordinator will be conducted during detailed design to assure that proposed structures meet local floodplain requirements for design and minimization/mitigation. Mitigation of floodplain impacts (as necessary) will be incorporated into project plans during detailed design based on this coordination and other agency review. All floodplain permits will be obtained prior to project construction. <i>Project plans will include notes to avoid storage of fuels and other potentially hazardous materials in the Little Miami River floodplain during construction, and disposal of excavated materials above the 100-year floodplain.</i></p>
Sole Source Aquifer (BVAS) and Public Water Supplies	<p>Requirements of the federal Safe Water Drinking Act pertaining to sole source aquifers will continue to be satisfied throughout the project. During Tier 2 of the Eastern Corridor study, a Preliminary Screening Report will be prepared on a project-by-project basis, where warranted, and submitted to USEPA, and specific measures for protecting aquifer resources and public water supplies will be identified. Commitment is made to evaluate and develop the utmost protection measures during all remaining phases of a project, including detailed design, construction and operation and maintenance.</p>
Wetlands	<p>Detailed wetland delineations and site specific wetland impacts (including isolated wetland determinations) will be conducted on a project-by-project basis during Tier 2 of the Eastern Corridor study, and site specific wetland avoidance, minimization and mitigation measures will be evaluated as the project progresses through the NEPA process and detailed design in Tier 2. A final wetland mitigation plan (as necessary for a Tier 2 project) will be developed as part of the 404/401-permit application process.</p>
Threatened and Endangered Species	<p>Field surveys to determine the occurrence of populations or potential habitat for federal and state listed species will be conducted in Tier 2 on a project-by-project basis,</p>

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	specifically for Indiana bat, running buffalo clover and bald eagle. All required coordination and mitigation will be conducted as necessary for compliance with provisions of the Fish and Wildlife Coordination Act (48 stat. 401, as amended; 16 USC 661 et seq.), Section 7 of the Endangered Species Act of 1973, as amended, and the U.S Fish and Wildlife Service’s Mitigation Policy. Specific avoidance and minimization measures will be developed following agency coordination, and incorporated into final project plans, as necessary. <i>Coordination with ODNR regarding occurrence of bald eagle nests in the project vicinity will continue to be conducted through Tier 2 work.</i>
Fish and Wildlife	<i>Measures will be developed to avoid/minimize impacts to wildlife habitat, especially along the Little Miami River, and to avoid/minimize habitat fragmentation. Consideration will be given to avoid in-stream work (if it is needed) between April 15 to June 15 to reduce impacts to fish reproduction. Appropriate studies will be conducted, as necessary, to determine occurrence of mussels, and appropriate measures will be developed to avoid and minimize impacts on populations and habitat. Tier 2 work will also include evaluation of appropriate strategies for protecting wildlife following FHWA guidelines and agency input, such as evaluation of wildlife crossings, creation of transition habitat, fencing strategies, controlling invasive species, vegetation plantings and/or other appropriate measures.</i>
Parkland	Avoidance and minimization of encroachment on public parks and Section 4(f) and Section 6(f) evaluations will be further developed in Tier 2 on a project-by-project basis. Appropriate mitigation will be developed, as necessary, based on resource agency and local park district coordination during the Section 4(f) and 6(f) processes.
Hazardous Material Concern Sites	Environmental site assessment screenings (and any other required assessments) will be conducted in Tier 2 on a project-by-project basis. Unavoidable encroachment on an identified hazardous site will be mitigated according to all applicable federal, state and local requirements and agency coordination.
Land Use	Commitment is made through all remaining phases of projects carried forward into Tier 2 to consider, to the extent practicable, the goals and priority items identified through the Eastern Corridor Land Use Visioning process <i>and recommendations from the Eastern Corridor Green Infrastructure Concept Master Plan</i> , and to coordinate with the appropriate local jurisdictions for fit with local plans and requirements.
Farmland	<i>Measures will be developed during Tier 2 work to minimize loss of existing agricultural land and impacts to existing infrastructure (irrigation systems, wells, etc.) to the extent practicable, such as: follow existing property lines as much as possible; minimize construction limits through agricultural areas; provide sufficient access to agricultural remnants (avoid creating landlocked parcels); and take measures to avoid, to the extent possible, impacting existing irrigation system and private wells. Existing agricultural landforms (such as fence lines, tree lines, drainage features) will be incorporated into the project landscaping to the extent practicable.</i>
National Register Properties (Individual or District)	Commitment is made for Tier 2, on a project-by-project basis, to avoid impacts to known National Register properties to the extent practicable, and as necessary, additional field study will be conducted (such as for the Hahn Archaeological District), a Section 4(f) evaluation will be prepared and appropriate mitigation will be developed following coordination with resource agencies during the Section 4(f) process.
Other Historic or Archaeological Resources	Phase I field studies (and any other required assessments) will be conducted in Tier 2 on a project-by-project basis for compliance with Section 106 requirements, and Section 4(f) evaluation (avoidance, minimization and mitigation) will be conducted, as necessary; temporary structures or staging areas used during the construction period will avoid known cultural resource sites.
Potential Displacements (residential and/or commercial)	Projects carried forward into Tier 2 will be further developed to the extent practicable to minimize displacement of residences and businesses. Acquisition and relocation for all parties displaced by a project will be conducted in accordance with all applicable state and federal laws.

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Community Cohesion and Services	<p>Measures will be developed during Tier 2 work to locate transportation corridors and transit hubs to optimize community cohesion to the extent practicable. Design strategies to reinforce sense of place will be considered, such as: gateways into historic communities and/or the Little Miami River area; roadway landscaping and aesthetics such as placement of special lighting, signage and/or sidewalk design through communities; and aesthetic noise wall design. Public input will be obtained through the design phase to assure transportation plans are consistent with community needs and expectations to the extent possible. During project construction, noise control measures will be developed according to FHWA's Procedures for Abatement of Highway Traffic Noise and Construction Noise, and air quality impacts will be minimized during construction by strictly adhering to ODOT's specifications for Environmental Protection and Dust Control. A maintenance of traffic plan will be developed and implemented following: ODOT's Location and Design Manual and ODOT's Construction and Materials Specifications Manual, with particular attention regarding: maintaining fire protection/police emergency routing; proper signage and adequate safety measures for bike/pedestrian paths adjacent to or crossed by the construction corridor; and proper signage and adequate safety/traffic flow for vehicular traffic through the construction corridor.</p>
Environmental Justice	<p>As in Tier 1 of the Eastern Corridor study, identified environmental justice populations/communities in the project area will continue to be addressed through the public involvement and impact assessment process for all projects carried forward into Tier 2 in accordance with Executive Order 12898 and the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) Policy for Environmental Justice (OKI 2001).</p>
Air Quality	<p>The project is located in the Cincinnati Air Quality Control Region under local metropolitan planning organization jurisdiction (OKI), and is in OKI's recently adopted FY 2004-2007 Transportation Improvement Plan (TIP). The TIP is consistent with the currently adopted regional long-range transportation plan (2030 Regional Transportation Plan), which is in conformity regarding air quality. Based on this, no individual air quality analysis is expected to be required for the proposed project alternatives carried forward into Tier 2.</p>
Noise Associated with Roadway Improvements	<p>For projects carried forward into Tier 2 that contain highway components, detailed noise analyses will be conducted in accordance with the Federal Highway Administration (FHWA) Title 23 Code of Federal Regulations Part 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise", FHWA guidance entitled "Highway Traffic Noise Guidance Policies and Written Noise Policies" (June 12, 1995), and the Ohio Department of Transportation Policy No. 21-001 (P) (October 22, 2001) and Standard Procedures No. 417-001 (SP) (September 17, 2001). Highway noise abatement measures, if required, will be developed during the detailed design phase of a project and included in the final project plans.</p>
Noise and Vibration Associated with Rail Transit	<p>For projects carried forward into Tier 2 that contain rail and bus transit components, detailed noise and vibration analyses will be conducted in accordance with Federal Transit Administration guidelines and methodologies (Transit Noise and Vibration Impact Assessment, April 1995). Noise and/or vibration abatement measures, if required, will be developed during the detailed design phase of a project and included in the final project plans.</p>
Visually Sensitive Resources	<p>For projects carried forward into Tier 2 that contain visually sensitive resources (as identified in Chapters 4 and 5 of the Draft EIS), visual impact assessment will be conducted following FHWA guidelines (Visual Impact Assessment for Highway Projects, Office of Environmental Policy, undated; Publication No. FHWA-HI-88-054), and mitigation will be developed, as necessary based on assessment findings and agency coordination. Visual mitigation measures, if required, will be developed during detailed design following ODOT's Aesthetic Design Guidelines and public and agency input, and included in the final project plans.</p>