

5. RED FLAG SUMMARY

The Red Flag Summary Report was prepared after a site visit with ODOT and OKI representatives on July 28, 2006. The report identified potential red flags in the study area that may warrant further study due to the potential for environmental or design issues. The key issues as identified in the report are summarized as follows. More detailed and additional information can be found in Appendix F, Red Flag Summary Report.

5.1. Environmental Justice

Executive Order 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*), issued February 11, 1994 requires federal agencies to identify and address disproportionately high and adverse health and environmental effects including the interrelated social and economic effects of programs, policies, and activities on minority and low income populations. Low income is defined as household income at or below the Department of Health and Human Services poverty guidelines. The 2000 poverty level for an individual is \$8,794. Minority is defined as a person who is Black, Hispanic, Asian American, American Indian, or Alaskan Native. As part of OKI's efforts to address Environmental Justice, and in accordance with OKI's *Policy for Environmental Justice* dated February 2003, consideration is also given to the Elderly Population, People with Disabilities, and Zero-Car Households. These five populations make up the Environmental Justice (EJ) Groups as defined in OKI's policy.

The EJ data and maps developed for this project are based on 2000 census block data for the EJ population groups within the Uptown area, specifically where the concentration of the EJ Population exceeds the regional average. Throughout the Uptown area, the EJ populations exceed the threshold for at least one of the EJ groups and many areas exceed the threshold for all EJ groups. See Figures 5 through 9 of Appendix F for maps detailing the exact location where the threshold is exceeded in the Uptown area.

5.2. Natural Environment

There are three federally listed endangered species in the study area: Indiana bat, bald eagle, and running buffalo clover. Although this is a heavily populated urban area, there still are numerous trees that could be designated as potential Indiana bat habitat. The extent of the habitat for this species and the others would be determined later in the project development process as alternatives are selected. There are no aquatic species in the study area, as there are not any streams or lakes present to support them. Detailed information on other non-endangered or threatened terrestrial species will also be determined later in the project development process.

No blue line streams are within the study area, although groundwater may occur in unconsolidated sand and gravel within 50 feet of the ground surface. Locally, shallow groundwater flow direction likely follows topography, generally towards intermittent streams and the Ohio River. Although no principal or blue line streams are in the area, ephemeral streams do exist. It will be determined later in the project development process whether these streams are jurisdictional and whether impacts are likely to occur and a permit would be required. No federally inventoried wetlands are within the study area limits; however, a

detailed determination of jurisdictional and isolated wetlands would be conducted later in the project development process.

5.3. Cultural Resources

Within the study area, there are seven historic structures and one historic district, Peebles Corner, listed in the National Register of Historic Places (NRHP). The locations of these resources are identified in Figure 5 of Appendix F. The historic resources are not limited to only those listed in the NRHP, as any resource considered to be “eligible” for the National Register is also protected under Section 106 of the National Historic Preservation Act. Most structures within the study area meet the first condition of eligibility being over 50 years old. Eligibility determinations will need to be done to determine, and avoid, impacts to eligible structures as alternates are developed. No known archaeological resources are within the limits of the study area. There are four cemeteries near the boundary of the study area and the locations of these are shown in Figure 5 of Appendix F.

5.4. Community Facilities

There are ten public recreational facilities within the study area. They are Eden Park, Evanston Playground, Fechheimer Park, Hauck Botanic Gardens, Highland Avenue Open Space, Hoyles Park, Ida Street Viaduct, Losantiville Triangle, Stowe Park, and Victory Park. The locations of these facilities are noted on Figure 4 of Appendix F.

Two high schools, Dohn Community High School and Walnut Hills High School, are located within the Study Area. The Union Institute, a privately operated post-secondary educational institution is located within the study area as well. There are no elementary schools located within the study area.

Numerous places of worship are located with the study area. Please refer to Figure 6 of Appendix F for the specific location of these places of worship.

5.5. Geotechnical Characteristics

The study area lies within the Till Plains section of the Central Lowland Physiographic Province. The area is characterized by rolling glacial uplands with steep hillsides along current or former streams. Surface features along the subject corridor have been greatly influenced by Illinoian-age glacial activity. Subsoils in the study area generally consist of glacial till and outwash material comprised primarily of clay. The thickness of the glacial till in the study area is generally less than 50 feet. The glacial till is underlain by shale and limestone of Middle- and Late-Ordovician-age. The U.S. Geological Survey (USGS) topographic map of the Cincinnati East, Ohio quadrangle indicates that elevation ranges between approximately 600 to 750 feet above mean sea level along the I-71 corridor in the study area, with higher elevations occurring towards the north (USGS, 1961). See Figure 11 in Appendix F for Soil Classifications in the Part B Study Area.

The most prominent geotechnical concern in the Part B Study Area is landslide susceptibility. See Figure 12 in Appendix F for a map of potential landslide susceptibility provided by the City of Cincinnati. Two minor slides were repaired south of the Duck Creek Road exit during 1995 by applying shotcrete to the affected cut slope along northbound I-71.



Topography in the area is generally hilly, with the steepest slopes occurring along each side of I-71 and near intermittent streams. The I-71 corridor between Liberty (south) and Dana (north) Avenues is generally sloped in the southbound direction of traffic. The most significant slopes occur from Liberty Avenue to approximately 1.5 miles north towards Taft Avenue, where gradient is expected to be highest (USGS, 1961). The southern portion of the study area is located in area of uncontrolled man made fills. Most of the bridge and retaining wall structures within the study area are founded on steel H piles driven to rock at a depth of 20 to 40 ft.

5.6. Highway Traffic Noise

During April 2006, the FHWA published a paper describing the current three-part approach utilized in an effort to abate highway traffic noise in the United States. The three parts are: Noise-compatible development through effective land use planning and control (responsibility of local jurisdictions), control of noise emissions from the vehicles themselves (responsibility of private industry), and source control (responsibility of Federal, State, and local governments). The FHWA has established noise standards for different types of land use activities adjacent to highways. These standards require that for certain types of federally aided highway projects, states must conduct noise analyses to identify potential highway traffic noise impacts. If impacts are identified, noise abatement measures must be considered and implemented, if determined to be both reasonable and feasible. Among the various types of possible abatement measures, the construction of noise barriers is most commonly used. Specific standards for abatement of highway traffic noise are provided by 23 CFR Part 772 - Procedures for Abatement of Highway Traffic Noise and Construction Noise. The Ohio Department of Transportation's policy and procedures for abatement of highway traffic noise were published on October 22, 2001.

Measurement of existing ambient noise levels in the study area has not been performed as part of this project. The land uses in the study area include several sensitive noise receptors that could warrant possible abatement measures. If access improvement projects are recommended for further development, analysis of traffic and construction noise impacts will be undertaken during future steps of the Project Development Process.

5.7. Air Quality

In 1990, Congress amended the National Clean Air Act (CAA) to address the nations air pollution problems and to require coordination of federal transportation funding with efforts to meet the provisions of the act to improve air quality. The CAA established National Ambient Air Quality Standards for five pollutants: ozone, particulate matter, sulfur dioxide, nitrous oxides, and carbon monoxide. These pollutants are components of vehicle or "mobile source" emissions thus transportation projects increasing the capacity of the region's roadway networks are required to conform to meet the standards for these pollutants.

Subsequent amendments to the CAA revised how the United States Environmental Protection Agency (USEPA) designates non-attainment areas for ozone, carbon monoxide, and fine particulate matter (PM_{2.5}) and how areas are to be classified depending on the severity of their respective failure to meet these standards.



The USEPA designated Hamilton County, Ohio, as part of the overall metropolitan region, as a non-attainment area for annual fine particulate matter (PM_{2.5}) and ozone in 2004. Plans and programs required to meet new interim conformity requirements of 8-hour standard to be finalized by 2007.

OKI, as the regional MPO, is responsible for the air quality conformity determination for the region's Long Range Transportation Plan and Transportation Improvement Program.

Potential access improvement projects providing additional capacity to the roadway network will require analysis by OKI to determine the effect of the respective project's mobile source emissions on the region's conformity with the provisions of the CAA. It should be noted that a new full service interchange located at I-71 and East ML King Drive is included in the OKI Long Range Transportation Plan and has been incorporated into prior air quality conformity analysis.

5.8. Hazardous Materials

Approximately 56 potential hazardous materials sites exist in the study area including registered underground storage tank (UST) / leaking UST (LUST) sites, Resource Conservation and Recovery Act (RCRA)-Small Quantity Generator (SQG) sites, and unregistered sites such as back yard auto repair facilities. Also, offices and manufacturing facilities using regulated testing and monitoring equipment are present in the study area. See Figure 3 of Appendix F for more information on the location and names of these potential hazardous materials sites within the study area.