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Executive Summary

US 23 Access Management Plan

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Delaware County, Ohio

Submitted to

District 6
Ohio Department of Transportation
400 E. William Street
Delaware, OH 43015

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Executive Summary

An increasing volume of local traffic has created a conflict with through trips on US 23 in Delaware County. In response to this situation, the Ohio Department of Transportation (ODOT) has requested this study to establish an Access Management Plan specific for the Delaware County US 23 corridor according to the guidelines established by the ODOT *State Highway Access Management Manual*. The Delaware County US 23 Access Management Plan is in text form accompanied by a set of plan sheets illustrating the roadway details.

US 23, including the portion which lies in Delaware County, provides a vital connection in northern Ohio between Columbus and Toledo. It also serves as the major connecting highway between central and southern Ohio. This corridor serves an essential function as a commercial travel route, heavily used by trucks to carry goods through the state. Because of its statewide importance, US 23 has been designated as a "High Priority Corridor" in the Federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and has been included in the National Highway System (NHS). US 23 has also been designated as a "Macro Corridor" in the ACCESS OHIO plan prepared by ODOT. Macro Corridors, as defined in ACCESS OHIO, are "those corridors of statewide significance upon which rest the economic vitality of Ohio".

Creation of an Access Management Plan is the first step toward the goal of preserving the through highway capacity and safety of the US 23 corridor in Delaware County. The purpose of the Delaware County US 23 Access Management Plan is to improve or maintain the existing efficiency of the roadway system by relieving or preventing congestion before consideration of further widening or other roadway improvements. ACCESS OHIO identified corridors in the state as "requiring widening or other major improvements to ensure the interstate system will flow as freely in 30 years as it does today". US 23 was identified as one of these corridors requiring improvement. However, there are sections of US 23 that do not "flow freely" today. Unless access is controlled and managed properly and access management techniques utilized to control congestion today, any future improvement to the US 23 corridor would be compromised.

It is the intent of the Access Management Plan to serve as a common guide for ODOT and local agencies to establish future points of access and local roadway networks for the US 23 corridor and surrounding vicinity. It will also provide direction for implementing future US 23 access

management strategies and public road improvement projects, whether by private or public entities. The purpose and need for the Delaware County US 23 Access Management Plan is:

- to maintain the through traffic carrying capabilities of US 23
- to improve the existing roadway capacity and reduce congestion
- to accommodate projected traffic growth
- to improve traffic safety and reduce the potential for accident occurrence
- to reduce the adverse environmental impacts associated with severe traffic congestion.
- to provide a common guideline for public agencies when establishing future access points and connector roadways in the US 23 corridor area.
- to eliminate congestion as an impediment to regional trade

The Access Management Plan was developed through data collection efforts, data analyses, review of existing studies, zoning and land use plans, field investigations, and a public involvement program. The public involvement program included meetings with the general public, township representatives, City of Delaware and Delaware County representatives, along with informational meetings with major developers and owners of property along the US 23 study corridor. The public involvement program allowed all involved parties to gain an understanding of access management techniques and goals and exchange information while establishing a consensus to facilitate the successful implementation of the Access Management Plan.

The recommendations made in this study for the Delaware County US 23 corridor include both long term and short term options. Long term recommendations identify the location of parallel routes, backage, and frontage roads, addition of and length of some turn lanes, and potential new signal locations to insure an efficient coordinated traffic signal system. Short term recommendations identify options such as construction of drives to meet standards at locations with width access points, closing some existing median openings, provision of U-turn facilities, turn lane improvements, consolidation of multiple adjacent drives to a one point access via interconnecting drives, along with removal of and creation of right in/right out entry at other locations. The intent of these recommendations is to upgrade the road capacity to comply with access category requirements one better than the existing access category in areas which do not already comply with the requirements of an Access Category II highway. For example, given the existing conditions, US 23 between Powell Road and Orange Road is currently assigned an Access Category of 3 Low. Recommendations are made in this plan to comply over time with the requirements for an Access

Category 3 High roadway. The access management techniques and recommendations for the US 23 corridor are discussed in detail in this study and are shown on the Access Management Plan Sheets.

This study recommends one mile spacing of traffic signals along US 23 as desirable with an acceptable signal spacing of one-half mile and a minimum signal spacing in the southern, developed region of Delaware County of one-quarter mile signal spacing. The construction of backage or parallel roads is an important element of the Access Management Plan. Backage roads with good continuity are able to accommodate more local trips which would otherwise enter the US 23 arterial. In addition, such a backage road system allows a choice of entry points to the arterial. A choice of entry points will reduce the chance of overloading major intersections and will serve to distribute traffic within the corridor. As property develops and the backage roads recommended in this plan are constructed, the limited access designation should be re-evaluated and upgraded where it is possible to achieve Access Category II or Access Category III High standards.

A variety of median treatments are currently in use along the US 23 corridor. The types include Two-Way-Left-Turn Lanes (TWLTL), grass medians and barrier medians. Closure of the majority of median breaks on US 23 , with some exceptions at low generating businesses, is recommended as part of the Access Management Plan. In coordination with the closure of median breaks, U-Turns should be allowed at major intersections to accommodate the eliminated left turn movements. The University of Dayton is currently conducting research to assist ODOT in determining a U-Turn configuration for arterial roadways which can be utilized uniformly across the state. Such accommodations for U-Turns have been implemented and work well in states such as Michigan. Providing for either grass or non-traversable medians with access to US 23 at specified locations, allowance of U-Turns at major intersections, formation of a supporting roadway network of backage roads, and spacing of signals will allow an efficient coordinated traffic signal system. This concept can easily be implemented in the less developed, rural areas in the northern area of the County. In the more developed areas of southern Delaware County, full implementation of this access management concept may be prevented by the presence of existing developments and other constraints.

Interconnection of commercial sites to avoid a continuing proliferation of driveways along US 23 is recommended. Connection of existing business drives by frontage roads or service drives to concentrate access at one driveway rather than three or four, or to provide access to a well spaced

intersection or signal is advocated. Specific locations, as noted on the Access Management Plan Sheets, to provide frontage or service drives include the following:

- Service/frontage road between business Drives north and south of Orangewick Drive.
- Service/frontage road between the 84 Lumber, Sunoco, and Wendy's to tie in to the signal provided at the McDonald's Drive, or as a longer range solution, to tie into Hills-Miller Road.
- Consideration of a formal service road connecting Hull Drive to the signal provided at the Wal-Mart Drive. The existing median break on US 23 at Hull Drive can then be closed.

There are some sections of road which would profit from the closure of drives to businesses which already have access to a signalized drive. Other wide, unstandard driveways to businesses should be constructed to ODOT standards. Specific locations requiring such measures include the following:

- The driveways to Schlotsky Deli and Special Tee Golf on Powell Road west of US 23 should be closed. These properties have access to the signals at Owenfield Drive & Powell Road and the Meijer Drive & US 23. Also, Neverland Drive, a private road, should be allowed right in, right out movements only as it accesses US 23 only a short distance north of the intersection of Powell Road. Neverland Drive has alternate access other than directly onto US 23 as it connects to the signal at Owenfield Drive & Powell Road and can also access the signal at the Meijer Drive & US 23.
- The driveway to Tim Hortons located just south of the US 23 signal at the Meijer Drive should be designated a right in/right out drive only, eliminating the existing inbound left turn movement.
- The Citgo Gas Station north of Hills-Miller Road should have its drives built to standards with a right-in/right-out access only on US 23 with a full movement drive on Hills-Miller Road.

A review of three years of accident history indicates that the section of US 23 between Panhandle Road and Hills-Miller Raod has the highest accident rate and the second highest percentage of drive-

related accidents in the corridor. To improve safety, a non traversable median is recommended for the section of US 23 extending north from the Pennsylvania Avenue merge ramp to Hills-Miller Road.

The intersections of US 23 & Powell Road and US 23 & SR 315 experienced the highest accident rates of the fourteen major intersections along the US 23 study corridor. These two intersections are included in the ODOT 1997 Highway Safety Program List, High Accident Location Identification System. Safety and roadway capacity at the intersection of US 23 & SR 315 could be improved by aligning the east and west approaches to allow for efficient signal operation. Further study of this intersection is recommended to determine the best method to do so.

By the year 2020, traffic is projected to increase along the US 23 study corridor causing many locations, especially in the southern area of the County, to operate at a poor level of service. Implementation of the Access Management Plan outlined in this study and shown on the Access Management Plan Sheets is estimated to improve the operation of this section of highway by one level of service. Additional improvements such as turn lanes at intersections and an additional through lane from south of the Franklin County Line to north of Lewis Center Road are recommended to further improve the operation of US 23 in the future.

This Access Management Plan includes a recommended system for public agencies to interact to achieve the goal of improving and preserving the Delaware County US 23 corridor. A joint use data base, accessible by all agencies, is recommended to record access permit restrictions, variances or exemptions, as well as other factors relating to access, land use or building changes. An Access Management Committee with representatives from ODOT District 6, City of Delaware, Delaware County and members from the Townships along the corridor should be formed and meet on a regular basis. The function of this committee will be not only to implement the recommended database program, but to routinely share information and discuss issues pertinent to the Access Management Plan. With cooperation between agencies and implementation of the recommendations contained in this study, development in Delaware County can progress as visualized by local agencies while preserving the through traffic function and safety of US 23.

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