SUMMARY OF PREVIOUS REPORTS

Prior to submission of the CAS, five reports regarding the I-75 Mill Creek Expressway project have been completed. The Public Involvement Plan was submitted April 2005, the Draft Purpose and Need report was submitted April 22, 2005, the Red Flag Summary was submitted April 27, 2005, the Existing and Future Conditions report was submitted May 2, 2005, and the Planning Study report was submitted June 10, 2005. Each of these documents provided the foundation for the creation and determination of the project's conceptual alternatives. These are provided on CD in Appendix 7. A brief summary of each report follows.

Public Involvement Plan

Objectives. The goal of the I-75 Mill Creek Expressway Public Involvement Plan (PIP) is to maintain the positive local success of the NSTI with active participation from stakeholders and the general public. Public involvement during a transportation planning study serves two basic purposes; it is necessary to disseminate information and to solicit input. It is important that the components of the Public Involvement Plan address both objectives. The Public Involvement Plan for the I-75 Mill Creek Expressway project was designed to:

- Solicit public input to identify problems and establish project objectives
- Provide the public with information on the progress of the study
- Provide information on the potential impacts and benefits of each alternative under consideration
- Solicit input for a preferred alternative

In order to achieve these goals, the Project Team proposes to use several methods during various stages of the PDP. Each method is described in detail below.

Implementation Committee. The Implementation Committee was formed in November, 2004, to utilize a technical and policy group of individuals who will represent the public and interested local agencies in the dissemination and collection of meaningful information, perspectives, alternatives, and general public issues. The meetings have been held periodically in conjunction with "milestone events" such as decisions and phase transitions.

To date, the following meetings have been held:

Implementation Committee Meetings		
Meeting Date	**Milestone Event**	**Location**
November 29, 2004	Project Kickoff	ODOT District 8
January 24, 2005	Purpose & Need Discussion	City of St. Bernard
March 14, 2005	P&N Submission and Existing & Future Conditions Discussion	City of St. Bernard
June 6, 2005	Planning Study Discussion	City of St. Bernard
November 14, 2005	Conceptual Alternatives Discussion	City of St. Bernard

The Implementation Committee includes personnel from ODOT Central Office, ODOT District 8, FHWA, Hamilton County Engineer's Office, City of Cincinnati, City of St. Bernard, Village of Elmwood Place, SORTA, OKI, University of Cincinnati, Cincinnati State Technical College, Mill Creek Conservancy District, and Uptown Consortium. Other interested parties have been added to the committee including all neighborhood groups located within the project area. Additional groups may be added to the committee, if necessary, to ensure that all viewpoints have been represented. ODOT and TranSystems collaborate on the agenda for each meeting, notifying committee members of meeting dates and preparing meeting materials and exhibits.

In addition to the regularly scheduled Implementation Committee meetings, the Project Team has met individually with interested parties to discuss the status of the project and to answer any questions or concerns. The meetings are listed below:

Community/Organization Meetings	
Meeting Date	**Location**
February 18, 2005	Ohio Rail Development Commission
March 24, 2005	City of Cincinnati Transportation Department
June 6, 2005	City of St. Bernard
August 29, 2005	SORTA
August 29, 2005	City of Cincinnati Parks Department
October 13, 2005	Village of Elmwood Place
October 20, 2005	City of Cincinnati Transportation Department
January 12, 2006	City of Cincinnati Transportation Department

Public Meetings. Public meetings were held on January 11 and 12, 2006, to present the Conceptual Alternatives from Step 5. This meetings were conducted in an open-house format at the Este Conference Center near the Village of Elmwood Place (January 11th) and at the St. Bernard City Hall (January 12th).

Following the public meeting, there was a two-week period for the public to submit comments on provided sheets or through the project website. Between the two meetings, there were over 200 attendees and over 60 comments were received (approximately 30 written and 30 verbal). A summary of the results of the public comment period is provided in the Public Input section of the document beginning on page 90.

Mailing List and Notifications. TranSystems has developed a public contact list that served as the basis for notifications and mailings. The list is updated throughout the process with the names and contact information from meeting attendance sheets and submitted comment forms. Included in this database is information such as property or business owner name and mailing address.

Website. A project website was created and became active in April of 2005 (www.i75millcreekexpressway.com). The website provides all project related public information to the widest distribution of interested parties around the clock. Users will find an array of information on the project including the following key items: about the project, members, schedule, archive, alternatives, related links, news releases/updates and feedback and e-mail contact. TranSystems is responsible for the development, hosting, and maintenance of the project website including updating site content on an as needed basis and responding to feedback and e-mails daily.

Project Logo. TranSystems, with the input and cooperation of the Implementation Committee, developed a project logo to be used throughout the duration of the study. With numerous other ODOT projects along I-75 within Hamilton County and Southwest Ohio, the project logo is intended not only to add an aesthetic impact to all documents, but to create a unique identity for this project.

Project Newsletters, Fact Sheets and Reports. The project team has created project newsletters that update the stakeholders and general public of meetings, respond to their questions, and provide a schedule for the near future. All of the project newsletters are available on the project website as Adobe Acrobat files. In addition, the Public Library of Cincinnati and Hamilton County has additional copies available to be checked out in the periodical department. All other completed documents including the Public Involvement Plan, Draft Purpose and Need Statement, Existing and Future Conditions Report and Planning Study Report are available on the project website. Copies of the newsletters are provided in Appendix 1.

Mobile, Informational Study Display. An eight-foot by seven-foot mobile display that illustrates the study area, goals and proposed improvements has been circulated to various public locations throughout the study area. The display locations have been coordinated with the help of the Implementation Committee. To date, two versions of the mobile display have been shown. The

first version included detail about the project background and the second version focused on the Step 4 "concepts." The locations of the display have included:

First Version (Project Background)

- St. Bernard City Hall – May 10, 2005 to May 26, 2005
- Public Library of Cincinnati and Hamilton County, Northside Branch – May 26, 2005 to June 6, 2005
- Public Library of Cincinnati and Hamilton County, Downtown Branch – June 6, 2005 to June 29, 2005

Second Version (Step 4 "concepts")

- Public Library of Cincinnati and Hamilton County, Downtown Branch – August 17, 2005 to September 23, 2005
- St. Bernard City Hall – September 23, 2005 to October 20, 2005
- Elmwood Place Village Hall – October 20, 2005 to November 14, 2005

Public Contacts. Contact information for ODOT and consultant members of the project team is provided on Newsletters, notification letters, and mobile display materials. Phone calls and e-mails are taken by both ODOT and consultant staff, with the consultant maintaining a summary of inquiries received. As of February 1, 2006, e-mail, written and phone contacts have been received from approximately 100 individuals.

Modifications to the Plan. A Public Involvement Plan is never final until the project is complete. The approaches being used for this project will be examined during the progress of the work and adjusted as necessary for future steps. For instance, if the project team is not receiving appropriate representation from certain neighborhoods or communities, particularly in light of Environmental Justice populations in this area, additional methods will be employed.

Draft Purpose and Need

The Draft Purpose and Need document (see Appendix 7) contains the written determination of the problems and establishes a need for the project. It provides the underlying data to support the creation of alternatives in the following steps of the PDP. The project purpose and the identified needs are summarized as follows:

Project Purpose. The purpose of the I-75 Mill Creek Expressway study is to efficiently serve existing and future traffic volumes, reduce the number and severity of collisions, and correct substandard physical conditions that contribute to these problems. Data collection and technical analyses performed for the Draft Purpose and Need Statement revealed substantial traffic, safety, and physical deficiencies within the existing roadway corridor.

Traffic. Traffic counts were collected within the I-75 Mill Creek Expressway study area on Tuesdays, Wednesdays and Thursdays during October and November 2004 to get an accurate representation of normal weekday traffic. Traffic for the at-grade intersections was collected using turning movement counts; while ramp traffic was collected using portable machine counters. Mainline volumes were determined from the Thru the Valley project and carried through the I-75 Mill Creek Expressway study area.

The AM and PM peak hours were identified from the traffic counts and used in the 2004 analyses for the study area. Year 2030 volumes were obtained using the OKI regional travel demand model assignments, using a hybrid mix of the ratio and additive methods. The 2004 peak hour volumes were adjusted to reflect the design hour volumes in Year 2030. For at-grade intersections, these volumes were then adjusted to maintain balanced flow through the respective corridors.

The analysis determined that by 2030, nearly all of I-75 through the study area is projected to function at Level of Service F in the AM or PM design hour, or both.

Safety. The portion of the I-75 corridor under study has been documented as a congested freeway with a history of high accident frequency. In order to evaluate safety concerns, the project team obtained traffic crash information from ODOT's Office of Roadway Safety and Mobility and the Ohio Department of Public Safety (ODPS). The crash information included ODOT and OH-1 reports for all crashes occurring between 2001 and 2003 within the study area. Furthermore, Safety Hot Spots were also identified using Data from the Office of Roadway Safety and Mobility. The Hot Spot locations are based on having 200 or more accidents within two mile segments over a three year period, regardless of traffic volume and other factors. In addition, segments of the project area were located on ODOT's Office of Roadway Safety and Mobility High Crash Lists (HCLIS list), which is used to identify high hazard locations.

I-75 within the study area experiences a crash rate of 3.697 accidents per million vehicle miles traveled (acc/mvmt). On I-74, the crash rate is 3.022 acc/mvmt. For SR 562, the crash rate is 2.951 acc/mvmt. These rates are more than twice the statewide average rate for facilities of their type. The high crash rates contribute to congestion levels even higher than those expected based upon traffic volumes alone.

The entire project area, including segments on I-74, I-75 and SR 562 appear on ODOT's Safety Hot Spot list. Additionally, many segments on these routes appear on the HCLIS list. The segment on I-74 from SLM 18.49 to 18.99 ranks first on that list and the segment on SR 562 from SLM 0.56 to 1.06 ranks second.

Physical Condition. Since the I-75 Mill Creek Expressway construction dates from the 1950's and 1960's, lower speed curves, left-hand exit ramps, poor lane continuity, and undesirable service

ramp locations are prevalent throughout the corridor. These substandard physical conditions contribute to accidents and to congestion problems.

The existing mainline I-75 consists of four lanes each way south of the I-74 interchange, and three lanes each way to the north. A number of deficiencies such as horizontal and vertical curvature and stopping sight distance are present. The median shoulder is narrow (under 10') in most places. The minimum shoulder width for interstate routes per the *Location and Design Manual* is 15' for three or more lanes each direction. Another criterion that has proven to be an issue on urban freeways of similar age is vertical clearance under overhead structures.

The interchanges throughout the project area lack proper storage, additionally, several have inadequate sight distance and/or insufficient acceleration and deceleration lengths. In addition, one of the ramps includes a left-hand exit and another is a systems interchange which includes local access ramps.

Existing and Future Conditions Report

The Existing and Future Conditions report documents the existing and future conditions within the study area, Red Flag issues and results of up to date traffic, safety and roadway analysis. In addition, a detailed analysis of the study area is included (*see Study Area section for detailed description*); with additional sections discussing the land use, project setting (including community setting and characteristics) and socioeconomic characteristics. Relevant portions of the Existing and Future Conditions Report have been repeated in the Conceptual Alternatives Summary where needed to provide context. The full document may be found in Appendix 7.

Red Flag Summary

A Red Flag Summary (found in Appendix 7) was developed in order to document the critical issues that would need to be addressed in the development and evaluation of alternatives. On January 10, 2005, the Red Flag site visit was conducted with ODOT staff and project consultants. Those in attendance were: ODOT District 8, CTL Consultants and TranSystems Corporation.

Additional Red Flag Summary research at the Ohio Historical Preservation Office identified numerous cultural and historical resources within the study area. A total of 59 historic properties (eligible or listed within the National Register of Historic Places) are present. Of that total, eight have been razed, five are NRHP listed, three are NRHP eligible (one of which has been razed). In addition, there a several historic districts for which NRHP criteria have not been applied.

The study area also includes eleven parks, recreational areas and playgrounds. Four noteworthy cemeteries, St. John's Cemetery, Wesleyan Cemetery, Vine Street Hill Cemetery and Spring Grove Cemetery, are partially or totally included in the study area. Also of note is the Western Hills

Viaduct, a historic bridge (SFN# 3137082) that spans the Mill Creek Valley and connects the Clifton and South Fairmount neighborhoods of Cincinnati.

An additional issue noted by the Red Flag Summary is the age of the existing infrastructure. Due to the age and condition of the existing bridges, it is anticipated that all bridges on or over I-75 will be replaced as a part of the project, with two noteworthy exceptions. The Ludlow Viaduct and the Paddock Road bridges do not require replacement and consideration should be given to avoiding impacts to these structures.

Planning Study Report Summary

In Step 3 of the Project Development Process, the Project Team and Implementation Committee developed several Conceptual Alternative Solutions ("concepts") to address the identified needs. These concepts were developed by the project team, reviewed by ODOT, and presented to the Implementation Committee on March 14, 2005. The team met with geometric design specialists from ODOT's Office of Roadway Engineering Services on March 16, 2005, to obtain opinions on the interchange concepts. In addition, the team met with the City of Cincinnati on March 24, 2005, to discuss each interchange area in more detail.

In addition to tight physical constraints, such as the existing railroad facilities and the channelized Mill Creek, the I-75 Mill Creek Expressway study area includes numerous community issues. The area contains several community parks and recreational facilities, state parks, churches, schools and several noteworthy cemeteries. In addition, several emergency service locations are sited within the study area. Currently, thirteen of the fifteen census tracts within the study area have a higher unemployment rate than the Cincinnati Metropolitan Area (Cincinnati/Hamilton CMSA). The study area contains a higher number of minority persons, persons living below the poverty level and those with disabilities compared to the region as a whole. The needs of the community and the potential impacts to important social, economic and environmental resources were considered in evaluation of solutions to address the transportation needs, in addition to safety, mobility, and cost factors. For more detail on the evaluation factors, please refer to the *Planning Study Report* included in Appendix 7.

The conceptual alternative solutions for the project were divided into several areas. Options were developed for I-75 itself, referred to as the I-75 Mainline, and then for each of the interchange locations. The alternatives considered for each of these areas are listed below. Those options recommended for further work are the subject of this Conceptual Alternatives Study and will be discussed in more detail in subsequent sections of this report. More information on those options that were not carried forward can be found in the Planning Study Report in Appendix 7.

I-75 Mainline Concepts – Recommended for Further Work from Step 4 of the PDP.

I-75-NB – No Build: This concept would involve no improvements other than routine maintenance. No capacity improvements would be made.

I-75-A – Four-Lane Continuity with Auxiliary Lanes: This concept would involve adding a fourth lane on the outside in each direction north of I-74. Auxiliary lanes will be added at select locations based on need.

I-75-B – Five-Lane Continuity: This concept would involve providing five continuous freeway lanes through the study area, adding one lane in each direction south of I-74 and two lanes in each direction north of I-74.

I-75-C – Four-Lane Continuity with Elevated Express Lanes: This concept would involve providing four lanes at-grade through the study area, adding one through lane in each direction north of I-74, plus the construction of elevated express lanes.

I-75 Mainline Concepts – Considered and Dismissed during Step 4 of the PDP.

Several concepts were considered for the I-75 mainline, however, they were removed from further analysis because they do not adequately address freeway capacity issues addressed in the project purpose, are cost prohibitive or due to substantial property impacts. The dismissed concepts are as follows:

- I-75-1 Existing 4 / 3 Lanes plus Collector-Distributor System
- I-75-2 Existing 4 / 3 Lanes plus Elevated Express Lanes
- I-75-3 Existing 4 / 3 Lanes plus Elevated Reverse Flow Special Designation Lanes
- I-75-4 Existing 4 / 3 Lanes plus Elevated Reverse Flow Lanes
- I-75-5 Four Lane Continuity plus Collector-Distributor System
- I-75-6 Four Lane Continuity plus Frontage Roads
- I-75-7 Four Lane Continuity plus Express Lanes
- I-75-8 Four Lane Continuity plus Reverse Flow Lanes
- I-75-9 Four Lane Continuity plus Elevated Reverse Flow Lanes
- I-75-10 Four Lane Continuity plus Elevated Reverse Flow Special Designation Lanes
- I-75-11 Four Lane Continuity Double Stack Plus Collector-Distributor System
- I-75-12 Four Lane Continuity plus Elevated Truck Lanes
- I-75-13 Five Lane Continuity Double Stack
- I-75-14 Five Lane Continuity Dual Divided Freeway
- I-75-15 Five Lane Continuity with Separated Truck Lanes
- I-75-16 Six Lane Continuity with Separated Truck Lanes

Interchange Concepts Recommended for Further Work from Step 4 of the PDP.

The no-build option was carried forward at each location for comparison, even though it would fail to meet the goals of the purpose and need.

HOPPLE

HOP-A – Tight Urban Diamond Interchange (TUDI): This concept would involve reconstructing the existing interchange as a tight diamond, narrowing the median of I-75, relocating Hopple Street to grade-separate the Central Parkway intersection, and constructing a connector road from Central Parkway to MLK Drive.

HOP-B – Offset Roundabout Diamond Interchange: This concept would involve reconstructing the Hopple Street interchange as an offset roundabout diamond.

I-74

I-74-A – Fully Directional Interchange with Local Access: This concept would reconstruct the I-74/I-75 interchange to provide higher speed directional ramps to and from I-75 north, closing the existing ramps at Dreman and Colerain Avenues, and improving access to Colerain Avenue and Central Parkway.

I-74-B – Fully Directional Interchange with No Local Access: This option would reconstruct the I-74/I-75 interchange to bring this system-to-system interchange up to current standards.

COLERAIN/BEEKMAN

COL-A – Low Impact Improvement/Full Movement Interchange: This option would involve minor changes to the existing Colerain interchange to provide for full movements to I-74.

COL-B – Double Roundabout Diamond Interchange (DRDI): This concept would involve reconstruction of the existing Colerain system interchange as a double roundabout diamond.

MITCHELL

MIT-A – Tight Urban Diamond Interchange (TUDI): This option would involve reconstruction of the current Mitchell interchange as a tight diamond.

NORWOOD LATERAL (SR 562)

NOR-A – Modified Interchange with Additional Ramp Lanes: This concept would involve construction of an additional ramp lane on the Norwood Lateral (SR 562) to and from the north on I-75.

TOWNE

TOW-A – Interchange Closed: This concept would involve closing the Towne Street interchange and removal of the ramps.

PADDOCK

PAD-A – Low Impact Spot Improvements: This concept would involve minor improvements to the ramp intersections with Paddock Road to improve turn lane lengths and signal timing.

PAD-B – Double Roundabout Diamond Interchange (DRDI): This option would involve realigning the ramps and reconstructing the intersections with Paddock Road as modern roundabouts.

Interchange Concepts Considered and Dismissed during Step 4 of the PDP.

Several concepts were considered for the interchanges, however, they were removed from further analysis because they do not address poor operation issues addressed in the project purpose, being cost prohibitive and that they have substantial property impacts. The dismissed concepts are as follows:

- HOP-1 Diamond with Fly-Over Loop (NSTI Alternative D)
- HOP-2 Single Point Urban Interchange (SPUI)
- HOP-3 Single Roundabout Diamond Interchange (SRDI)
- HOP-4 Double Roundabout Diamond Interchange (DRDI)
- HOP-5 Diamond with I-75 SB Exit Ramp North of I-74
- HOP-6 Diamond with Bates Avenue Ramp to I-74
- HOP-7 – Diverging Diamond Interchange (DDI)
- HOP-8 – Three Quadrant Diamond Interchange
- I-74-1 Directional Ramps with Elmore Street Access (NSTI Alternative A)
- I-74-2 Directional Ramps Plus Colerain Avenue Access (NSTI Alternative C)
- COL-1 Single Point Urban Interchange (SPUI)
- MIT-1 Double Roundabout Diamond Interchange (DRDI)
- MIT-2 Single Roundabout Diamond Interchange (SRDI)
- MIT-3 Partial Cloverleaf Interchange (NSTI Alternative B)
- MIT-4 – Single Point Urban Interchange (SPUI)
- MIT-5 – Diverging Diamond Interchange (DDI)
- PAD-1 Diamond Interchange with Collector-Distributor System (NSTI Alternative B)
- PAD-2 Single Point Urban Interchange (SPUI)