**C-R-S: HAM IR 75/IR 275 Interchange**

**PID: 120804**

**Scope Narrative**

**Project Description:**

Evaluate interchange alternative improvements for the system-to-system interchange of IR-75 and IR-275. Alternatives should also consider additional capacity improvements from the interchange north to Union Center Blvd.

Map

Description automatically generated

Consultant to perform the following tasks:

* Part 1: Complete Feasibility Study, NEPA Clearance, and IMS
* Part 2: Develop the additional capacity improvements from the interchange north to Union Center Blvd portion of the work as a design-bid-build project under existing PID 120804.
* Part 3: Potential Design-Build procurement support on the interchange improvement. This would include DB scope development and ATC and PTI review/support. A new PID will be created for this construction project. Also included will be responding to prebids as needed and updating the scope or preparing addendum documents as needed.

**FTP Site:** [ftp.dot.state.oh.us - /pub/Districts/D08/120804/](https://ftp.dot.state.oh.us/pub/Districts/D08/120804/)

* Previous Study files
* Safety Study files
* Existing Plans

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| --- | --- | --- | --- |
| 08C0717 | N/A | 1958 | Original construction of I-275 |
| 08C1456 | N/A | 1977 | Widening of I-275 |
| 08C2357 | PID 22386 | 2006 | Widening and deck replacements of I-275 |
| 08C0052 | N/A | 1958 | Original construction of I-75 |
| 08C1696 | PID 10751 | 2002 | Widening of I-75 |
| 08C4494 | PID 104408 | 2018 | Separation of I-75 SB ramp traffic to EB & WB I-275 |
| 08C3614 | PID 96421 | 2015 | Widened and extended the NB ramp from I-275 to I-75 |

**Stakeholders:**

Stakeholders identified at the time of project initiation are as follows:

* ODOT District Eight and Central Office
* SORTA/Metro
* Hamilton County Engineer’s Office
* Butler County Engineer’s Office
* Utilities within the project limits
* Emergency responders
* FHWA
* Environmental resource agencies (USACE, EPA, SHPO, USFW)

**Feasibility Study (FS):**

* The purpose of this study is to complete a FS to evaluate previously studied alternatives, as well as any new alternatives, in more detail. Alternatives to be analyzed: opening year (2031) and design year (2051):

1. No Build
2. SB I-75 to EB I-275 flyover ramp
3. Different flyover ramp or other innovative idea, if authorized.

* The study should also include alternatives that look at modifications to the entrance ramps from EB and WB I-275 to NB I-75 and an auxiliary lane north to the Union Center Blvd. exit. Minimize impacts to the mainline I-75 bridges north of the interchange. Additional lanes across the structures without widening should be accomplished provided a design exception for shoulder width is approved.

1. EB I-275 loop ramp to I-75 NB merges into the highway before the WB I-275 overpass bridge. Becomes 4th lane NB.
2. WB I-275 ramp to I-75 NB comes into the highway in its current location as a 5th lane (auxiliary lane) NB. Ends as drop lane to the Union Center Blvd exit.
3. Additional alternative/innovative idea, if authorized.

* Each alternative should include:
* Capacity analysis using TransModeler following the ODOT OATS manual. HCS can be utilized, if possible.
* Environmental impacts.
* MOT summary.
* Roadway or structural design issues, if any.
* ECAT analysis.
* Cost estimate.
* Right of way impacts, if any. District to provide the cost estimates. Provide request for right of way estimates 45 days prior to FS submittal.
* Utility impacts and costs, if any.
* Critical cross sections and typical sections.
* Construction limits.
* Include a Purpose and Need statement with an Existing and Future Conditions Analysis.
* Include alternatives considered and dismissed, including the No Build.
* Include a comparison matrix and summary of key pros/cons of each alternative, including how primary needs were met and to what level.
* Conclusion with preferred alternative.
* Next steps.

**Discipline specific scope items have been identified below.**

**Roadway:**

1. Follow ODOT’s L&D Manuals for geometrics.
2. The Design vehicle for this project shall be a WB-67.
3. Note where design exceptions may be required for lane width, shoulder width, etc.

**Traffic Control:**

1. Provide preliminary pavement marking plan for all alternatives for public presentation.
2. Provide preliminary guide sign plan for public presentation and for use in interchange modification study.
3. Provide continuous freeway lighting for mainline sections between interchanges and complete interchange lighting for the ramps.

**ITS:**

Existing fiber in the I-275 median barrier wall and exits the wall to make its way around the SW quadrant down into the I-75 median. See diagram below and in TIMS. A maintenance project in summer of 2024 will be installing a new fiber line through that area.

Project should install a new micro-duct conduit pathway from the existing camera pole in the median of I-75 to the northern project limits in order to interconnect multiple cameras and devices to the north.

Project may need to coordinate efforts with the queue warning system being installed on the I-275 WB to I-75 NB ramp.

Do not disturb existing ITS assets. Maintain and replace any infrastructure impacted by the project per ODOT standards and specifications.

**Certified Traffic:**

Certified traffic will be developed by the consultant. A coordination kickoff meeting will need to be scheduled with ODOT’s Office of Modeling and Forecasting. Prior to the kickoff meeting, the consultant will need to fill out the pre-meeting request form and pre-meeting checklist. Work with the District Certified Traffic District Coordinator.

**Traffic Analysis:**

1. Use TransModeler to analyze the No Build and Build alternatives for both the interchange improvement and the I-75 northbound improvements following the requirements in the OATS Manual. Open year will be 2031 and Design year will be 2051.
2. Provide a LOS and v/c chart comparing no build and build alternatives for open year and design year.

**Survey:**

Utilize existing survey information and lidar for feasibility study. For Part 2 and design, consultant to complete survey and set control points.

**Maintenance of Traffic:**

MOT summary shall be included with the FS outlining key differences between the alternatives. This summary shall also identify any lane/ramp closures that require MOTEC approval including an estimated duration of traffic impact.

**Geotechnical:**

Geotechnical summary shall be included with the FS outlining key differences between alternatives. Historic boring information can be obtained from TIMS. Part 2 and design will require borings.

**Drainage:**

Drainage summary shall be included with the FS outlining key differences between alternatives.

**Railroads:**

Work will occur on one bridge over a railroad but no work to the bridge itself is anticipated.

**Structures:**

The tables below provide the Bridge Structures and culverts that MAY be in the project limits. For the purpose of the Feasibility Study and the Design Build project, no work other than that which is needed to fulfill the Purpose and Need of the project is intended for the existing structure. If during the course of the project it becomes evident that maintenance work may be warranted given the refined project to that point, the consultant shall bring this to the District’s attention for further evaluation.

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| --- | --- | --- | --- |
| **Structure File No** | **Bridge Name** | **Feature Intersected** | **Facility Carried by Bridge** |
| 3111199 | HAM-00075-1697 | RMP;N I75 TO W I275 | RP NBIR75-WBIR275 |
| 3111229 | HAM-00075-1710 | TRIBUTARY MILL CREEK | IR 75 |
| 3111261 | HAM-00075-1747 | CRESCENTVILLE ROAD | CRESCENTVILLE ROAD |
| 0901415 | BUT-00075-0021L | NORFOLK SOUTHERN RR | IR 75 |
| 0901474 | BUT-00075-0021R | NORFOLK SOUTHERN RR | IR 75 NB |
| 0901504 | BUT-00075-0048L | MILL CREEK | IR 75 SB |
| 0901539 | BUT-00075-0048R | MILL CREEK | IR 75 NB |
| 0901571 | BUT-00075-0115 | IR-75 | ALLEN ROAD TR-126 |
| 3112276 | HAM-00275-2541 | CHESTERDALE ROAD | CHESTERDALE RD |
| 3112314 | HAM-00275-2572 | IR75;RAMPS | IR 275 |
| 3112365 | HAM-00275-2594L | RAMP=I75\*N-I275\*W | WB IR 275 |
| 3112454 | HAM-00275-2594R | RAMP=I75\*N-I275\*W | EB IR 275 |
| 3112489 | HAM-00275-2612L | NORFOLK SOUTHERN RR | WB IR 275 |
| 3112519 | HAM-00275-2612R | NORFOLK SOUTHERN RR | EB IR 275 |
| 3112543 | HAM-00275-2620L | MILL CREEK | WB IR 275 |
| 3112578 | HAM-00275-2620R | MILL CREEK | EB I-275 |

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| --- | --- | --- |
| **Conduit File Number** | **CRS** | **Special Designation** |
| 1832170 | BUT-75-0.025 | Mainline |
| 1832171 | BUT-75-0.144 | Mainline |
| 1807848 | BUT-75-0.671 | Mainline |
| 1842068 | BUT-75-0.894 | Mainline |
| 1849653 | BUT-75-0.901 | Mainline |
| 1821286 | BUT-75-1.576 | Mainline |
| 1815618 | BUT-75-2.275 | Mainline |
| 1842061 | BUT-75-2.362 | Mainline |
| 1842062 | BUT-75-2.470 | Mainline |
| 1842063 | BUT-75-2.558 | Mainline |
| 1821289 | BUT-75-2.733 | Mainline |
| 1882776 | HAM-275-25.245 | Mainline |
| 1856146 | HAM-275-25.529 | Mainline |
| 1856128 | HAM-275-26.145 | Mainline |
| 1856155 | HAM-31119-0.483 | Ramp to the Right |
| 1867711 | HAM-31119-0.588 | Ramp to the Right |
| 1800189 | HAM-31119-0.590 | Ramp to the Right |
| 1856145 | HAM-31120-0.298 | Mainline |
| 1856151 | HAM-31120-0.660 | Ramp to the Right |
| 1867714 | HAM-31121-0.629 | Ramp to the Left |
| 1808178 | HAM-31122-0.145 | Ramp to the Right |
| 1856154 | HAM-31122-0.151 | Ramp to the Right |
| 1867712 | HAM-31122-0.236 | Ramp to the Right |
| 1856156 | HAM-31122-0.239 | Ramp to the Left |
| 1856153 | HAM-31123-0.173 | Ramp to the Right |
| 1868581 | HAM-31124-0.074 | Ramp to the Left |
| 1856149 | HAM-31125-0.472 | Ramp to the Left |
| 1867713 | HAM-31490-0.238 | Ramp to the Left |
| 1856150 | HAM-31490-0.272 | Ramp to the Left |
| 1867704 | HAM-75-15.495 | Mainline |
| 1867705 | HAM-75-15.751 | Mainline |
| 1867706 | HAM-75-15.900 | Mainline |
| 1867707 | HAM-75-15.910 | Mainline |
| 1867708 | HAM-75-16.038 | Mainline |
| 1867709 | HAM-75-16.041 | Mainline |
| 1867430 | HAM-75-16.213 | Mainline |
| 1867431 | HAM-75-16.617 | Mainline |
| 1868582 | HAM-75-16.785 | Mainline |
| 1868583 | HAM-75-17.018 | Mainline |

**Pavements:**

No additional pavement analysis is needed for the FS. Pavement composition will be provided by ODOT.

**Environmental:**

1. Fieldwork for Level 1 ESR will be conducted prior to the feasibility study, but the Level 1 ESR will not be submitted till after Stage 1 plans are available to accurately document impacts.
2. Each alternative should consider environmental impacts.
   1. Stream and wetland locations along with lengths/areas within the study area.
   2. Tree impacts that are over 100 feet from edge of pavement (EOP), any PMRT over 100 feet from EOP, and any tree impacts over 100 feet from EOP and with 50 feet of a stream with a drainage area 1 square mile or more.
3. A Virtual Open House Meeting (no live Q&A session) will be held on PublicInput shortly after the feasibility study is submitted. VPI will have the following requirements:
   1. Website will be live at start of VPI notifications being sent out.
   2. Advertisement posted in Cincinnati Enquirer.
   3. Letters to Stakeholders (adjacent property owners, local service providers, nearby local government administrators, Cincinnati USA Regional Chamber)
   4. At least three renderings showing overall size/footprint of each build alternative at the interchange. Example would be looking west on I-275 seeing the flyover cross I-275.
   5. Cross section renderings showing existing and alternative(s) when there are lane width changes or changes in lane usage.
   6. Comment period will be for 45 days starting on the date of advertisement.
4. Feasibility study will include a PI section and include relevant comments from the public during the VPI comment period.
5. Environmental tasks will be scoped in Part 1 after the preferred alternative is selected and will be a Mod.
   1. ODOT will complete the Section 106-Cultural Resources scoping request form.

**Real Estate:**

No right of way is anticipated to be needed for these improvements.

**Utilities:**

1. Provide cost estimates for reimbursable utilities.
2. Complete utility coordination as noted below:

Consultant to try to avoid utility conflicts throughout design while holding to the scope of work. If utility conflicts cannot be avoided, they should be minimized. Consultant to provide a copy of the OUPS ticket information to ODOT PM (if applicable). Up to date utility contacts shall be identified for the AER. Utility contact information can be requested by consultant from ODOT PM. If OUPS and OGPUPS ticket are more than two (2) years old, a design non-marking ticket shall be requested to obtain most up to date Utility Members List. The ticket does not need to be submitted to obtain the Utility Members List.

Consultant to provide a utility set of plans with the utility lines shown in color using the most recent version of ODOTcadd\_UTPen.tbl with the AER. This file is found in the standard ODOTcadd executable file that can be downloaded from the [CADD services webpage](http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/CADD_Services/Standards/Pages/Files.aspx). Additionally, Consultant to prepare a summary of potential utility conflicts with the AER. Summary to be provided to Utility Companies with the AER as well. Summary to include, but not limited to station and offset of conflict, type of conflict (direct, decreased cover, proximity, etc.), utility owner (if known) and utility type. Consultant to use District 8's 'standardized' letter for sending AER and plans to Utility Companies for review and comment. Consultant to provide the ODOT PM a copy of all Utility Correspondence. Consultant to compile Utility Company responses and forward to the ODOT PM. Final compilation of utility correspondence is due 35 days after AER submission to utilities

A “no response” from a utility on a plan submission review cannot be considered as “no comment”, “no conflicts” and/or “a confirmation of the consultant’s findings” from the utility. A written response (email is sufficient) must be received from the utility verifying that they have no comments, no conflicts and/or they agree with the conflicts identified by the consultant.

Consultant to review the Utility Company responses and evaluate. The evaluation of the responses shall include validating that a conflict does exist or that a utility may remain in place. If a conflict does exist, consultant should provide an evaluation of the feasibility of potential resolutions. A disposition of utility status will be completed in future design submittals under a separate consultant contract.

**Project Management:**

* Part 1: Complete Feasibility Study, NEPA Clearance, and IMS
* Part 2: Develop the additional capacity improvements from the interchange north to Union Center Blvd portion of the work as a design-bid-build project under existing PID 120804.
* Part 3: Potential Design-Build procurement support on the interchange improvement. This would include DB scope development and ATC and PTI review/support. A new PID will be created for this construction project. Also included will be responding to prebids as needed and updating the scope or preparing addendum documents as needed.

**Funding:**

This project will utilize a combination of federal and state funds through the TRAC program. Plan splits will not be required at this time.

**Schedule:**

The preliminary schedule for this work is as follows:

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| --- | --- |
| **Milestone** | **Date** |
| Authorized Design Consultant | 2/3/2025 |
| FS Submitted | 8/1/2025 |
| FS Complete | 10/1/2025 |
| Interchange Study Submitted | 1/1/2026 |
| Interchange Study Complete | 3/2/2026 |