

**HAMILTON COUNTY ENGINEER'S**

**SCOPE OF SERVICE**

**1. PROJECT IDENTIFICATION:**

Road Name: HARRISON AVENUE & RYBOLT ROAD Road No: 457 & 148

Project No. 500511

**2. PROJECT INFORMATION:**

Limits: Harrison Avenue – westbound entrance/exit ramp of I-74 to Hearne Road; Rybolt Road – eastbound I-74 exit ramp to Harrison Avenue

Length: \_\_\_\_\_

**3. AGREEMENT BETWEEN CONSULTANT AND:**

Hamilton County

**ADDITIONAL PARTIES INVOLVED IN PROJECT:**

Green Township

**4. METHOD OF FINANCING:**

Engineering: Hamilton County road and bridge funds

Construction: Undetermined at this time; possibility of State safety funds.

**5. WORK PHASES INCLUDED IN AGREEMENT:**

The project shall include the total design of the improvements, including right-of-way. All design work is to be in full compliance with ODOT requirements. See additional information sheet.

**6. PLAN SCALES:**

PLAN: 1" = 20' Min.

PROFILE: Hor. 1" = 20' Min. Vert. 1" = 5' Min.

CROSS SECTIONS: Hor. 1" = 5' Min. Vert. 1" = 5' Min.

**7. JOURNALIZED SPEED LIMIT:**

Harrison Avenue – 40 mph

**8. NUMBER OF LANES/ TYPICAL SECTION:**

Number of Lanes:

See additional information and preliminary schematic.

Lane Widths:

Unless ODOT approves a design exception, all design work is to be in full compliance with ODOT requirements.

Pavement Section:

For areas of new roadway pavement and/or widening, the anticipated typical pavement section is eight (8) inches of Bituminous Aggregate Base, one and one-half (1 1/2) inches of Asphalt Concrete (Leveling course) and one and one-half (1 1/2) inches of Asphalt Concrete (Surface course). As part of the Stage 1 submittal, the Consultant shall utilize the information obtained from the geotechnical report and the ODOT L&D manual to verify that this typical section is adequate for the soil conditions present.

Salvage Existing Pavement: \_\_\_\_\_

In those areas where the existing pavement is to be salvaged, the Consultant shall recommend the pavement treatment necessary to rehabilitate/improve the existing pavement to a sufficient typical section based upon the pertinent design factors, such as the soil conditions of the area, traffic volumes, etc.

Curbs: \_\_\_\_\_ Report to Recommend: \_\_\_\_\_ **XX** \_\_\_\_\_

Type: As part of the Stage 1 submittal, the Consultant is to make a recommendation to the Engineer regarding curbs, i.e. whether the curbs are desired or may be necessitated by the detention requirements. If curbs are recommended, the Consultant shall also recommend the type of curb, i.e. vertical, curb & gutter, etc.

Shoulders/Berms: \_\_\_\_\_ Report to Recommend: \_\_\_\_\_

Type: \_\_\_\_\_

Safety Grading Criteria: \_\_\_\_\_ Partial: \_\_\_\_\_

Guardrail: \_\_\_\_\_ Type: \_\_\_\_\_

Median: \_\_\_\_\_

Clear Zone Grading: \_\_\_\_\_

Fencing: \_\_\_\_\_

Lighting: \_\_\_\_\_

**9. ALIGNMENT:**

Existing alignment is to be basically followed.

**10. PROFILE:**

Existing profile is to be followed as much as possible. Slight adjustments in profile may be required to establish/maintain drainage patterns.

**11. SIGNAGE:**

Phase A: \_\_\_\_\_

Phase B:  X

**12. SIGNALS:**

**Existing Signals:**

To be Modified:   X                        To be Replaced:   X  

Locations: Existing signals at Rybolt Road and Harrison Avenue and Harrison Avenue and the westbound I-74 ramp are to be modified as necessary by the improvements and the equipment to be totally replaced; existing signal at relocated Rybolt Road/Hearne Road and Harrison Avenue is to be modified as necessary by the improvements utilizing the existing equipment to the greatest extent possible.

**Proposed (New) Signals:**

Locations: \_\_\_\_\_

Phase A to recommend locations: \_\_\_\_\_

Signal Warrants: \_\_\_\_\_

Phase A:     \_\_\_\_\_

Phase B:     \_\_\_\_\_

Unless otherwise specified by the Engineer, ALL traffic signal improvements shall utilize Light Emitting Diode (LED) signal heads and signal lamp units.

**13. STRIPING:**

Phase A: \_\_\_\_\_

Phase B:   X  

Type: Thermoplastic pavement markings are to be used within three hundred (300) feet of the intersections. Painted pavement markings are to be used in other areas.

**14. DELINEATION:**

Delineators: \_\_\_\_\_

RPMs:         X

**15. DRAINAGE:**

Drainage Criteria: State \_\_\_\_\_ County  X  Public Works \_\_\_\_\_  
Other \_\_\_\_\_

Phase A Preliminary Plan: \_\_\_\_\_

Existing: Surface \_\_\_\_\_ Closed \_\_\_\_\_

Proposed: Surface \_\_\_\_\_ Closed \_\_\_\_\_

Special Flood Hazard Area (SFHA): \_\_\_\_\_

Storm Water Pollution Prevention Plan: \_\_\_\_\_

Flood Plain Study Required: \_\_\_\_\_

Channel Change Study Required: \_\_\_\_\_

**16. BRIDGE CROSSINGS:**

Number of Bridges:  None  \_\_\_\_\_

Cross Roads: \_\_\_\_\_

Streams: \_\_\_\_\_

Supplemental Site Plan for Streams: \_\_\_\_\_

Culverts: \_\_\_\_\_

Alternates Required: \_\_\_\_\_

Railroads: \_\_\_\_\_

Railroad Location Plan: \_\_\_\_\_

Railroad Site Plan: \_\_\_\_\_

Pedestrian: \_\_\_\_\_

Mass Transit: \_\_\_\_\_

Other: \_\_\_\_\_

**17. MISCELLANEOUS DESIGN CONSIDERATIONS:**

Sidewalks:  As much as possible, grading adjacent to the curbs will be done to facilitate future sidewalks.

Bikeways: \_\_\_\_\_

Railroads: \_\_\_\_\_

Mass Transit: \_\_\_\_\_

Service Roads: \_\_\_\_\_

**18. RETAINING WALLS:**

Number of Retaining Walls: Walls may be required along both the north and south sides of Harrison Avenue.

Type(s) of Retaining Walls: Consultant to recommend.

Phase A: \_\_\_\_\_ Wall Justification: \_\_\_\_\_

Phase B: \_\_\_\_\_

Any wall over three (3) feet in height, as measured from the top of the footer to the top of the wall, **MUST** be engineered and a wall profile, indicating the height of the wall, and other pertinent wall details **MUST** be included in the plans. The plan view(s) or a detail for the wall **MUST** indicate the length of any tie-back systems that are required for the construction of the wall. **ALL** pre-manufactured walls, i.e. Keystone walls, **MUST** be designed in strict accordance with the Manufacturer's requirements.

**19. MAINTENANCE OF TRAFFIC:**

Maintenance of Pedestrian Traffic: \_\_\_\_\_

Maintenance of Railroad Traffic: \_\_\_\_\_

Maintenance of Vehicular Traffic: \_\_\_\_\_

Temporary Road(s): \_\_\_\_\_ Phase A to Recommend: \_\_\_\_\_

Temporary Road Plans & Notes by: County \_\_\_\_\_ Consultant \_\_\_\_\_

Detour Plan Prepared by: County \_\_\_\_\_ Consultant \_\_\_\_\_

At this time, it is presumed that construction is to be completed under traffic. To the satisfaction of and subject to the Engineer's review and approval, a tentative outline for the sequence of construction, a maintenance of traffic plan and/or maintenance of traffic notes in sufficient detail for the proper control of traffic through the project, especially involving ingress to and egress from the abutting properties within the project area shall be prepared.

As may be applicable during the preparation of the plans, the Consultant shall work with the Engineer to determine if alternative methods of handling traffic would be warranted and desirable during the construction of the project. These measures may include, but not be limited to, the detouring of all through traffic while maintaining local traffic or the maintaining of through traffic on a one-way only basis. If the Engineer authorizes other methods, the Consultant will work with the Engineer to determine if special restrictions are to be enforced during the implementation of the alternate measure(s), i.e. a total time duration, a daily time/hour restriction, etc. The Consultant will also work with the Engineer's Traffic Department to determine the detour route and prepare the necessary detour plan(s). As necessary for the alternative measures, the Consultant is to prepare a tentative outline for the sequence of construction, a maintenance of traffic plan and/or maintenance of traffic notes in sufficient detail for the proper control of traffic through the project, especially involving ingress to and egress from the abutting properties within the project area.

This item of work shall also include the preparation of any necessary plans that indicate temporary work zone pavement markings and/or signs that are to be included in the project, especially where the number of traveled lanes and/or the width of traveled pavement are to be decreased during construction.

All items of work relating to the maintenance of traffic are to be submitted with the final plan review submission.

**20. UTILITIES AND OTHER AGENCIES:**

Water	( XX )	Sanitary	( XX )
Electric	( XX )	Gas	( XX )
Telephone	( XX )	Cable TV	( XX )
Public Works	( XX )	ODOT	( XX )

Others: Level 3 Communications (fiber optics line)

**ALL** utility companies and other agencies, including any that may have facilities within the project limits and **ARE NOT** be listed above, shall be contacted. **ALL** existing facilities and utilities, including house connections, shall be indicated on the plans as required by Section 153.64 O.R.C. (H.B.538).

**ALL** utilities and other agencies shall be furnished with the necessary copy/copies of the preliminary plans so that utility or agency may indicate and/or verify the location of any facility.

**ALL** utilities and other agencies shall be also be furnished with a copy of the final, detailed plans for final review and approval as necessary.



**24. RIGHT-OF-WAY AND EASEMENTS:**

Property Map	( )
Centerline Plat	( )
R/W Summary	( XX )
Final Right-of-way Plans	( XX )
R/W & Easement Descriptions	( XX )
Registered Land Plats & Descriptions	( XX )
Establishment Plat	( XX )
Establishment Descriptions	( XX )
Right-of-way Staking	( )

Approximate Number of Parcels \_\_\_\_\_

Preparation of Right-of-way, easement and Establishment descriptions and plans will be handled by an Amendment to the Agreement. As may be pertinent to the project, the preparation of the right-of-way and establishment plans and descriptions shall include clearing title to the Public Road Occupied (PRO) unless otherwise directed by the Engineer.

**25. TRAFFIC DATA:**

State \_\_\_\_\_ County \_\_\_\_\_ Consultant X \_\_\_\_\_

The County will supply information on existing counts if this information is currently on file. The Consultant shall determine if adjustments to these counts are warranted or if additional counts are required. The Consultant will be responsible for the adjustments or for the additional counts. The Traffic Department must approve all traffic data prior to use in design. Since the project involves the I-74 interchange, particularly the eastbound entrance ramp, ODOT certified traffic **MUST** be used for the design of the improvements.

**26. GEOTECHNICAL/SUBSURFACE INVESTIGATION:**

State \_\_\_\_\_ County   X   Consultant \_\_\_\_\_  
Other \_\_\_\_\_

Work to be completed as needed. The Consultant is to determine, in conjunction with the Engineer, the amount and type of work to be performed. The Consultant shall work with the geotechnical firm to ensure that the geotechnical information necessary for the design of the various components of the improvements, i.e. pavement section, retaining walls, is obtained. This information may include the determination of the CBR, the Attenburg limits and the moisture content of the soil. The Consultant will be responsible for establishing the required field control and for field locating the boring locations.

**27. PRIOR STUDIES:**

An Interchange Modification Study (IMS) and a safety study of the I-74 and Harrison Avenue interchange by TEC Engineering, Inc.

**28. PUBLIC HEARINGS/INFORMATIONAL MEETINGS:**

Public information meeting(s) may be scheduled.  
Consultant's Responsibility: Prepare the necessary exhibits and attend the meeting(s) if scheduled. Required Exhibits will show the proposed location of improvements, the proposed profile and critical and/or typical cross-sections and the preliminary Right-of-way.

## ADDITIONAL INFORMATION

### HARRISON AVENUE

### I-74 TO HEARNE ROAD

#### 500511

- 1) The preparation of all plans and the submittal of all plans for review must be in strict accordance with the pertinent ODOT regulations.
- 2) The Consultant is to prepare all request(s) for design exceptions to ODOT. Requests for design exceptions must be submitted with the Stage 1 submittals.
- 3) The Consultant must coordinate the design of the improvements on Harrison Avenue with the design of the proposed improvements on Rybolt Road and Hearne Road being completed by TEC Engineering, Inc.
- 4) The Consultant shall design the improvements in general compliance with the schematic plan. The number of lanes will generally be as follows:

#### Intersection of I-74 eastbound exit ramp and Rybolt Road:

I-74 ramp:	one right-turn lane and two left-turn lanes
Rybolt Road (south leg):	one southbound lane and two northbound lanes
Rybolt Road (north leg):	four northbound lanes ( <b>NO</b> southbound lanes)

#### Intersection of I-74 westbound entrance/exit ramp and Harrison Avenue:

I-74 ramp:	one northbound lane, one southbound left-turn lane and one southbound combined right-turn/left-turn lane
Harrison Avenue (west leg):	two westbound lanes, two eastbound through lanes and one eastbound left-turn lane to I-74 ramp
Harrison Avenue (east leg):	two eastbound lanes, two westbound through lanes and one westbound right-turn lane to I-74

#### Intersection of Rybolt Road, Harrison Avenue and I-74 eastbound entrance ramp:

Rybolt Road:	one left-turn lane, one combined left-turn & through lane and two right-turn lanes
Harrison Avenue (west leg):	two westbound lanes, three eastbound through lanes and one eastbound left-turn lane to I-74 eastbound entrance ramp
Harrison Avenue (east leg):	three eastbound lanes, two westbound through lanes and one westbound right-turn lane to I-74 eastbound entrance ramp

Intersection of relocated Rybolt Road and Harrison Avenue:

Harrison Avenue (west leg): three westbound lanes, one eastbound right-turn lane to relocated Rybolt Road, two eastbound through lanes and one eastbound left-turn lane into private drive

Harrison Avenue (east leg): two eastbound lanes, one westbound left-turn lane to relocated Rybolt Road, two westbound through lanes and one westbound combination through and right-turn lane into private drive

- 5) As noted in the Scope, the existing pavement is to be salvaged to the greatest extent possible. As may be necessary, the Consultant shall determine and field mark the locations where pavement cores are to be taken. The County will arrange for a testing company to take the pavement cores.
- 6) In those areas where the existing pavement is to be salvaged, the Consultant shall recommend the pavement treatment necessary to rehabilitate/improve the existing pavement to a sufficient typical section based upon the pertinent design factors, such as the soil conditions of the area, traffic volumes, etc.
- 7) As necessary, the Consultant shall work with the geotechnical firm to ensure that the soil data that is necessary for the design of the various components of the improvements, i.e. pavement section, retaining walls, is obtained. This information may include the determination of the CBR, the Attenburg limits and the moisture content of the soil.
- 8) The existing attenuators, maintained by ODOT, are to be replaced.
- 9) The Consultant shall note that the Engineer intends to submit this project for ODOT safety funds. The Consultant must determine a schedule for the design of the project and program the project with ODOT. The Engineer will schedule a meeting with ODOT to discuss the programming of the project after a Consultant is selected. The Consultant will be required to attend the meeting with ODOT.
- 10) If during the programming of the project with ODOT, the County assumes responsibility for the acquisition of right-of-way and easements, the following shall also apply to the project.

Right-of-way and Establishment plans and descriptions:

The project will include the researching of all right-of-way information and ownership information from all available sources including but not limited to County road records, Commissioners' journals and records of other County offices to the extent necessary to provide an accurate basis for the right-of-way plans.

Property ownership data for the right-of-way plan development shall be based on a search of County records conducted no more than six (6) months prior to preliminary right-of-way plan submission.

Within fourteen (14) days prior to the submission of the final right-of-way tracings, an in-depth field review of the plan shall be conducted to assure that no topographic features, structures or utilities have been changed or omitted.

In addition, no more than fourteen (14) days prior to the submission of the final right-of-way tracings, the property ownership data shall be checked and verified and copies of the deeds for any new ownership transactions that impact the project shall be submitted to the Engineer. The actual date that the ownership data was checked and verified shall be contained in the submittal letter.

Descriptions shall be prepared on 8-1/2" X 11" letter size sheets, using letter quality printing on the final submissions. Descriptions shall be written so as to conform to the format designated by the County, samples to be furnished by the Engineer upon request. Descriptions shall be written so as to read in a clockwise direction, unless otherwise approved by the Engineer. Parcel designations for parcels to be acquired shall conform to the Engineer's requirements.

The right-of-way plans shall indicate/contain the following information for each parcel: Owner's name, Property Address, Auditor's information, Deed reference, Project Parcel number and Area of tract to be acquired. In cases where an Owner's Summary Sheet is to be prepared, the Auditor's information, Deed reference and Area of tract to be acquired may be shown on the Summary Sheet instead of the plans.

The name(s) of the owner(s) shall be shown on the above items **EXACTLY** as indicated on the pertinent deeds. Unless otherwise approved by the Engineer, each parcel, as indicated by the Auditor's plats or Auditor's tax information, shall be treated as a separate, individual parcel in the preparation of the right-of-way/easement documents and plans.

In cases where the deed distance on a property line is different than the calculated project distance on that line, the right-of-way plans and the descriptions shall indicate/contain both the deed distance and the calculated distance. The area(s) calculated for the proposed right-of-way take or easement shall be based upon the deed distance.

In cases where the affected property is a Registered Land parcel, the right-of-way plans and the descriptions shall indicate/contain both the Registered Land bearings and the project bearings. If the parcel is affected by a permanent right-of-way acquisition, including clearing of PRO, a plat and description(s) of the parcel(s) **MUST** be prepared in accordance with the Hamilton County Registered Land rules, regulations and requirements.

Unless **otherwise approved** by the Engineer, the construction plans and the right-of-way plans **MUST** be separate plans. Unless **otherwise approved** by the Engineer, the right-of-way plans shall consist of screened mylars of the construction plans on which the necessary right-of-way and/or easement information has been indicated.

A copy of **ALL** deeds, surveys, record plats and/or other documents that were used to determine the existing right-of-way and/or property lines and were used as the basis for the preparation of the project descriptions **MUST** be furnished to the Engineer.