Engineering Department
636-583-1805

City of Union

10 East Locust Street
Union, Missouri 63084

January 5, 2024

Dear Consultant,

The City of Union is requesting the services of a consulting engineering firm to perform the described professional services for the project included on the attached list. If your firm would like to be considered for these consulting services, you may express your interest by responding to the appropriate office, which is indicated in the attachments. Limit your letter of interest to no more than ten (10) pages. This letter should include any information which might help us in the selection process, such as the persons or team you would assign to each project, the backgrounds of those individuals, other projects your company has recently completed or are now active, and previous federally funded project experience.

It is required that your firm's Statement of Qualification (RSMo 8.285 through 8.291), Affidavit of Compliance with the federal work authorization program, and a copy of your firm's E-Verify Memorandum of Understanding (15 CSR 60-15.020) is submitted with your firm's Letter of Interest. These documents are not included in the total page count limit.

DBE firms must be listed in the MRCC DBE Directory located on MoDOT's website at www.modot.gov, to be counted as participation towards an established DBE Goal. We encourage DBE firms to submit letters of interest as prime consultants for any project they feel can be managed by their firm.

It is required that your firm be prequalified with MoDOT and listed in MoDOT's Approved Consultant Prequalification List, or your firm will be considered non-responsive.

If your firm would like to be considered for these consulting services, please deliver all letters by 2:00 P.M. CDT on February 9, 2024 to:

City of Union
Engineering Department
10 E Locust Street
Union, MO 63084

Submittals shall be clearly labeled **STBG - 6200(617) Denmark Road Phase 4**.

Sincerely,

James D Kelley

J.D. Kelley, P.E.
City Engineer

attachments

City of Union, MO / Denmark Road Phase 4	
Federal Aid Number	STBG - 6200(617)
Location	Denmark Road at Progress Parkway
Proposed Improvement	Intersection improvements, pavement repair, add ADA-compliant sidewalk and pedestrian improvements, lighting
Length	0.4 miles
Approximate Construction Cost	$745,786
DBE Goal Determination	10%
Consultant Services Requested	**Engineering responsibilities** may include but are not limited to preparation of Conceptual plans, Preliminary plans, Contract plans, and Right of Way plans. **Design services** may include but are not limited to surveying, geotechnical investigations, traffic studies and reports, ADA compliance survey, subsurface utility exploration, storm sewer design, intersection design, roadway design, public involvement, environmental and historic preservation services/permits, contract documents, assisting with the bidding process, utility coordination/permits, and traffic controls design, including preparation of PS&E and final documents. **Construction engineering** responsibilities may include but are not limited to work with contractor on behalf of the City, assist with preconstruction conference, construction inspection, inspection and testing construction materials, construction support, prepare change orders, review shop drawings and material submittals, be present during critical construction operations, work with City to do full time inspections and reporting and participate in final inspection.
Other Comments	No professional services OJT goal
Project Contact	J.D. Kelley, P.E. 10 E Locust St Union, MO 63084 636-583-1805 engineer@unionmissouri.gov
Deadline	2:00 P.M., CDT on Friday, February 9, 2023
Submittal Requirements	Letter of interest should not exceed ten (10) pages total. A page is defined as an 8-1/2 by 11 inches and printed on one side. Four (4) paper copies and an electronic version (pdf) on a USB flash drive shall be received by the deadline at the address above.

Pursuant to the Brooks Act for Consultant Selection, the qualifications will be scored based on the following criteria.

- Experience and technical competence (30 points)
- Past Performance (30 points)
- Capacity and Capability (25 points)
- Project approach (10 points)
- Proximity and familiarity with area (5 points)

QUALIFICATIONS

Qualifications are not limited to, but should include the following:

1) (30 max points). The specialized experience and technical competence of the firm with respect to the type of services required includes, but is not limited to:
   a) A brief description of the firm
   b) A list of key personnel involved in the work and any experience or expertise they have related to the type of work requested, and the role those key personnel will fulfill in the project.
   c) The office location of each key personnel.
   d) This summary should include the same specialized experience, technical competence and firm information for all associates or sub-consultants anticipated to be involved in providing services on the project on behalf of the firm.

2) (30 max points). The past performance of the firm (or firms) with respect to such factors as control of costs, quality of work, and ability to meet schedules including, but not limited to:
   a) A listing and description of similar projects that have been completed by the firm in the past five (5) years.
      i) At minimum, a list of the last five (5) similar projects completed by your firm, design time as per the Agreement vs. actual design time, engineer's estimated cost of construction, low bid, final construction costs and owner contact information (address, phone number and contact person for the agency)
   b) The estimated schedule for completion of the design requirements of this project
   c) A brief discussion of the firm's project approach and scope. Highlight any practical design and creative processes utilized in solving project problems to provide quality control and reduce construction costs on past projects.
   d) A description of the firm's processes that affect and control the project schedule, such as coordination with outside agencies (utility companies, permitting agencies, etc.)

3) (25 max points). The capacity and capability of the firm (or firms) to perform the work in question, including specialized services within the time limitations fixed for completion of the project including, but not limited to:
   a) It is understood that some firms do not employ all necessary in-house professional disciplines to accomplish a given project. A description of any arrangements/joint venture made with any other firm should be included.

4) (10 max points). Presentation of the firm's approach to the project, including but not limited to:
   a) Significant or unusual issues, problems, and difficulties it has identified that will influence the development of the project.
   b) The firm's understanding of special requirements, codes, and regulations pertinent to the project.
   c) The firm's internal quality assurance and quality control procedures.

5) (5 max points). The firm's proximity to and familiarity with the area in which the project is located including, but not limited to:
   a) The firm's sensitivity to citizen concerns and the need for sharing project information with the public and elected officials.

b) The familiarity of the firm with the project, including a discussion explaining the benefit the City of Union would gain by selecting the firm with regard to both the firm's anticipated technical approach on this project and overall participation as a project team member.

6) Include with the submittal, a clean, legible, active copy of an Affidavit of Compliance and a copy of the E-Verify MOU.

SELECTION PROCESS

Proposals received will be evaluated for adequacy of content for the items noted above by a review committee. The competency of all firms (including applicable subcontracted firms) will be reviewed and ranked as a whole. The committee will rank the firms and select the firm that they believe to be the best qualified and capable of performing the desired work. The City will then, for a basis for negotiations, prepare a detailed scope of services, with the highest ranked firm. If the City is unable to negotiate a satisfactory contract with the firm selected, negotiations with that firm shall be terminated and the City will begin negotiations with another qualified firm. The City does reserve the right to reject any or all responses, to request interviews for further information, or to cancel the project.

ANTICIPATED SCHEDULE

Below is the anticipated schedule of this project. All dates are considered approximate.

February 9, 2024	RFQ's due by 2:00 P.M.
February 2024	Selection committee ranks design firms based on qualifications
March 2024	Informal interviews
April 2024	Negotiate scope of work and price
May 2024	Submittal of contract to Board of Aldermen for authorization
May 2024	Contract execution
July 2024	Estimated Notice to Proceed

Project Application Form

Surface Transportation Block Grant Program

2023 Call for Projects

For the St. Louis Region

Road Project Type

Sponsoring Agency: City of Union

Project Title: Denmark Road Improvements Phase 4

Federal Amount Requested: $729,081.00

Applications Due: February 9, 2023 by 4:00 pm

EAST-WEST GATEWAY
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

November 2022

SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STP-S)
ROAD – PROJECT APPLICATION FORM

Please refer to the STP-S Project Development Workbook and the STP-S Scoring Criteria Guide for more information on the program requirements, available funding, and scoring criteria. The STP-S Project Development Workbook, STP-S Scoring Criteria Guide, and supplemental materials are available on the East-West Gateway Council of Governments (EWG) STP-S Call for Projects web page: http://www.ewgateway.org/transportation-planning/transportation-improvement-program/competitive-transportation-programs/call-for-projects-stp-s/

PLEASE NOTE:

This project application form is for the road project type. There are separate project application forms for the other project types, including: bridge, traffic flow, safety, active transportation, transit, and freight/economic development. If your agency is interested in applying for those project types, please obtain the application form from the EWG STP-S Call for Projects web page, or contact EWG staff for more information.

The call for projects begins on **November 4, 2022** and ends on **February 9, 2023** at 4:00 pm. Applications received after the deadline will not be accepted. Submit the completed application and necessary attachments electronically to EWG at stps@ewgateway.org. Save the electronic copy as a PDF file using the following format: 2023STPS_[Sponsor]_[Project Name].pdf. The electronic submission must include scanned signatures and attachments. Please submit one application per email. You will receive an email confirmation within one business day of submittal. If you do not receive confirmation or have questions about the application, contact EWG staff. The information provided in this application is public record.

APPLICATION FEE

An application fee is required for each project that is submitted for consideration. The application fee is ½ of one percent of the federal funds being requested. For example, a project sponsor requesting $800,000 in federal funding would be required to pay a $4,000 application fee. Counties make annual contributions to EWG and, as such, a credit equal to their annual contribution is applied against their application fee. Counties will be invoiced for any amount above the annual contribution credit.

The TIP Application Fee Payment Information Form must be included with the TIP application fee. This form is available on the STP-S Call for Projects web page. Application fees may be submitted by check via mail or through electronic funds transfer (EFT). Mailed application fees must be postmarked by February 9, 2023. For check payments, send the TIP Application Fee Payment Information Form and check to:

TIP Application
East-West Gateway Council of Governments
1 S. Memorial Drive, Suite 1600
St. Louis, MO 63102-2451

For EFT payments, send the TIP Application Fee Payment Information Form via email to tipappfees@ewgateway.org. EFT payments are due by February 16, 2023.

CONTACT INFORMATION

Jason Lange, TIP Coordinator
East-West Gateway Council of Governments
1 S. Memorial Drive, Suite 1600
St. Louis, MO 63102-2451
E-mail: stps@ewgateway.org

PROJECT CHECKLIST AND SUBMITTAL REQUIREMENTS

The evaluation and scoring of all projects will be based on the answers provided in the application and the attachments submitted.

The materials should be submitted in the following order.

Project Application:

- ☑ **Completed STP-S application**
- ☑ **Scanned required signatures –** Notification of Title VI & Nondiscrimination Requirements, Financial Certification of Matching Funds, Person of Responsible Charge Certification, Right-of-Way Acquisition Certification Statement, Policy on Reasonable Progress Certification (Missouri only).

Attachment A:

- ☑ **Project location map** – depict the location of the project on a base map such as a town road map, GIS map, aerial photo, or another base map suitable to clearly show the project's overall location. Provide on an 8 ½ x 11 page. Project location is used by EWG to determine:
  - geographic scale project categorization (i.e., 'within community' or 'outside community')
  - score for Environmental Justice
  - score for employment density
  - score for intermodal connections
- ☑ **Detailed cost estimate** – use Estimate of Project Costs excel file provided by EWG.
- ☐ **Letter of permission from facility owner** – provide if sponsor does not own roadway.
- ☐ **Letter of support from match source** – provide if individual, business, other local public agency, or other third-party is providing matching funds.
- ☐ **Coordination letter(s)** – provide if sponsor requires coordination with other agencies to implement the project (e.g., Bi-State Development, Madison County Transit District, St. Clair County Transit District).

Attachment B:

- ☑ **Photographs** – attach photo(s) of the current roadway.
- ☑ **Detailed map –** if applicable, provide a map showing:
  - locations of all proposed safety countermeasures along project limits (i.e., if chevrons are being added to a curve, mark the curve where the chevrons will be added)
  - transit routes along project limits
  - community resources along project limits (e.g., park/trail, full service grocery store, civic building, library, health center, recreation center))
  - schools (grades K-12 and college/university) located within ½ mile of project limits
  - freight facilities along project limits (e.g., intermodal freight facility, major freight generator, logistic center, manufacturing or warehouse industrial land, port facility)
- ☑ **Typical section** – show details of before and after roadway improvements.
- ☑ **Road condition –** use Road Condition Evaluation Form provided by EWG.

Attachment C:

- ☐ **Crash reports –** attach full crash reports for all fatal and serious injury crashes and up to 10 minor injury and/or property damage only crashes that coincide with the safety countermeasure within the project limits from 2016-2020. Redact any personal information (e.g., names, addresses, etc.). Crash reports are not required if the project has no safety countermeasures.

Attachment D: *(optional)*

- ☐ **Documentation of an approved or adopted plan, ordinance, and/or policy that supports the project –** do not attach entire plan documents, only include the necessary pages.
- ☐ **Letters of support –** endorsements or petitions from associations, boards, school districts, residents, businesses, etc. Only attach letters of support that pertain to specific project.
- ☐ **Documentation of public involvement process –** public meeting minutes, newspaper clippings, press announcements, etc.

Attachment E:

- ☐ **ITS architecture consistency –** submit ITS Architecture Project Consistency Statement Form provided by EWG if project includes ITS elements or modifies existing ITS.

SPONSOR INFORMATION

Sponsoring agency:	City of Union						
Secondary sponsor agency (if applicable):							
Chief Elected Official/Chief Executive Director:							
Name:	Robert L. Schmuke	Title:	Mayor				
Street address:	1327 N. Washington						
City:	Union	State:	MO	County:	Franklin	ZIP code:	63084
Project contact:							
Name:	J.D. Kelly	Title:	City Engineer				
Agency:	City of Union						
Street address:	10 East Locust Street						
City:	Union	State:	MO	County:	Franklin	ZIP code:	63084
Phone Number:	636-583-3600 ext 1200	E-mail address:	engineer@unionmissouri.gov				
Application contact:							
Name:	David Christensen, P.E.	Phone Number:	314-220-7016				
E-mail address:	david@cochraneng.com						

PROJECT INFORMATION

Project title:

Project status:
- ☐ New project
- ☑ Continuation of STP-S/CMAQ/TAP project
- ☐ Add to existing non-federally funded project

Is this application request for a piece of a larger project (phase) or the entire length of project?
- ☑ Phase
- ☐ Full project

If project is a continuation of another project that was previously programmed in the TIP, provide TIP ID # of existing project and also explain this relationship:

This is the fourth and final phase of the Denmark Road Improvements, three previous phases:
- Phase 1 - STP-6200(605)
- Phase 2 - STP-6200(608)
- Phase 3 - STP-6200(613)

If this project is a phase of a full project, how many phases are left to complete the project? Briefly explain each phase (i.e., project limits and general improvements):

Phase 1 - pavement widening, resurfacing, and sidewalks. Progress Parkway to St. Andrews Drive. (Const. 2014)
Phase 2 - mini roundabout, sidewalks, bridge, resurfacing. St. Andrews Dr. to Grandview Farm Dr. (Const. 2018)
Phase 3 - resurfacing, new bridge replace low-water crossing. Grandview Farm Dr. to Birch Creek (Const. 2022)
+++See attached Phasing Map showing limits of each project.

Has your agency received federal funds for this specific road segment within the last 10 years?
☐ Yes ☑ No

If yes, when?

Year of original roadway construction or most recent reconstruction: 1995

Year of last roadway resurfacing: 1995

Does this project touch MoDOT or IDOT right-of-way?
☐ Yes ☑ No
If yes, a letter of support for this project is required from the state DOT.

Does the sponsoring agency own and maintain this facility?
☑ Yes ☐ No
If no, a letter of support for this project is required from the facility owner.

If no, who owns the facility?

ROADWAY INFORMATION				
Name of street or facility to be improved:	Denmark Road			
Project length (miles):	0.4 miles			
Project limits – north/west reference point, cross street, or intersection:	Prairie Dell Road			
Project limits – south/east reference point, cross street, or intersection:	Progress Parkway			
Federal functional classification of road (per EWG)[1]:	Major Collector			
Average roadway pavement condition (PASER):	5.0			
	CURRENT:		**PROPOSED:**	
Traffic volumes (AADT):	4,857	Year: 2023	5,000	Year: 2043
Identify source of AADT[2]:	City hired consultant to count veh.			
Speed limit of street (mph):	25		25	
Number of through lanes (both directions):	2		2	
Number of turn lanes:	0		0	
Two-way left turn lanes?	☐ Yes ☑ No		☐ Yes ☑ No	
Typical lane width (feet):	13		13	
Outside lane width (feet):	0		0	
Shoulder width (feet):	5		5	
On-street parking allowed?	☐ Yes ☑ No		☐ Yes ☑ No	
Curb and gutter?	☑ Yes ☐ No		☑ Yes ☐ No	
Sidewalks?	☐ One side ☐ Both sides ☑ None		☑ One side ☐ Both sides ☐ None	
Sidewalk width (feet):	0		5'	
Existing sidewalk surface condition[3]:	☐ Poor ☐ Fair ☐ Good ☐ Excellent ☑ None		n/a	
Estimated sidewalk to be built (square yards):	n/a		1,267 sy	
Sidewalk/roadway separation width (feet):	n/a		varies 2' to 4'	
On-road bicycle facility[4]?	☐ Yes ☑ No		☐ Yes ☑ No	
On-road bicycle facility width:				
Shared-use path/sidepath?	☐ Yes ☑ No		☐ Yes ☑ No	
Shared-use path/sidepath width (feet):			n/a	
Estimated shared-use path to be built (square yards):	n/a		0	
Number of new and/or reconstructed curb ramps:	n/a		0	

[1] EWG Functional Classification maps: http://www.ewgateway.org/transportation-planning/roadway-functional-classification/.
[2] If source is state DOT, use data from most recent available year. If source is a count conducted by the local agency, must be within five years.
[3] **Poor**: the sidewalk has deep cracking and buckling, poor drainage, or tree root damage). Impassable to mobility impaired pedestrians. **Fair**: the sidewalk contains cracks or an uneven and distressed surface. Hinders mobility of the average pedestrian. **Good**: the sidewalk is free from significant cracking, buckling, or gravel surfaces. Unlikely to hinder mobility of the average pedestrian. **Excellent**: the sidewalk is in like new condition and contains no cracking or buckling. Does not hinder mobility of the average pedestrian. **None**: no sidewalk is present.
[4] On-road bicycle facility includes: bike lanes (separated, buffered, and standard). **Shared-lane markings (sharrows) and share the road/bikes may use full lane signage are not bicycle facilities.** View the EWG Bicycle Planning Guide for a description on bicycle facilities: https://www.ewgateway.org/wp-content/uploads/2018/07/BicyclePlanningGuide_June2018.pdf.

LAND ACQUISITION INFORMATION

Status of right-of-way acquisition (all properties, permanent and/or temporary easements, Temporary Slope Construction License (TSCL), and other rights-of-way):

- ☐ All acquired or none needed
- ☐ In process
- ☑ Not started

If applicable, list the number of parcels to be acquired (all properties, permanent and/or temporary easements, TSCL, and other rights-of-way):

There is 60' of city ROW, therefore, it will not be necessary to acquire easements for construction for the sidewalk improvements. However, we do anticipate needing 4 parcels for the roundabout.

If any residential or commercial displacements are anticipated, give details on how many and if they are residential and/or commercial:

N/A

Right-of-way acquisition by:	City
Right-of-way condemnation by:	N/A

Will the project traverse any public property, such as a public park that has used federal funds (e.g., Land and Water Conservation Funds) in the past?

☐ Yes ☑ No ☐ Unknown

UTILITY COORDINATION

Note: *project sponsor must coordinate with utilities prior to construction.*

Will the project involve any coordination with utilities?

☑ Yes ☐ No

If yes, check the appropriate box to select the type of utility. Then give the names of the utility companies.

☐ Electric	
☐ Phone	
☐ Gas	
☑ Water	City of Union
☐ Cable TV	
☐ Storm sewer	
☐ Sanitary sewer	
☐	
☐	

Give details concerning potential utility conflicts, problems, or issues:

We anticipate water line associated with hydrants to be necessary to install the sidewalks.

Utility coordination completed by:	Consultant
Designed by:	Consultant
Inspected by:	Consultant

RAILROAD COORDINATION

Does the project traverse any property owned by a railroad?
☐ Yes ☑ No

Is there a railroad within 500' of project limits?
☐ Yes ☑ No

Name of railroad:	
Number of crossings impacted:	
Are the crossings active?	☐ Yes ☐ No
Width of crossing:	

What is the crossing type?
☐ Timber
☐ Rubberized
☐ Asphalt
☐ Concrete
☐ Other

Describe other:

PROJECT MAINTENANCE

List any regular maintenance tasks anticipated over the next 25 years:

Crack filling, pavement striping, pot hole patching, slab reaplacement, and snow removal.

Estimated annual cost to maintain facility and funding source(s):

Estimated annual cost to maintain the facility is approximately $985/year. This includes snow removal and crack filling. The City will use it's General Revenue for the funding source.

AMERICANS WITH DISABILITIES ACT

Under the 1990 Americans with Disabilities Act (ADA), Title II requires public entities with more than 50 employees to complete a self-evaluation and create an effective ADA transition plan[5].

Does your local public agency have more than 50 employees?
☑ Yes ☐ No

If yes, does your agency have an adopted ADA transition plan?
☐ Yes ☑ No

If your agency has an ADA transition plan, when was it adopted?	
If ADA transition plan is not adopted, when is it expected to be adopted?	2023

[5] FHWA Questions and Answers about ADA/Section 504: https://www.fhwa.dot.gov/civilrights/programs/ada/ada_sect504qa.cfm.

PROJECT DESCRIPTION

Define the **scope** and **specific elements** of the project. Describe current conditions / problems / issues that the project will address. Be as specific as possible.

Scope – this is the fourth and final phase of Denmark Road, specifically, the project consists of the following main components from Prairie Dell Road to Progress Parkway: 1) misc. slab repair; 2) ADA compliant sidewalks on the north side; 3) roundabout at the intersection of Denmark Road and Progress Parkway; 4) ADA compliant concrete driveway approaches; 5) lighting for the new roundabout; 6) restoration; and 7) pavement striping as necessary. It is anticipated that the new ADA compliant sidewalks will greatly improve the traveling public's ability to safely travel, walk or bike to and from home, work, parks, and businesses located in the City of Union.

Specific Elements:

A. Pavement Deterioration –

Miscellaneous concrete slab replacement preserves the life of the pavement. Deteriorated roadways increase the risk of vehicle crashes as drivers maneuver or stop in reaction to unexpected changes in pavement conditions, or as they experience a loss of traction because of worn pavements. Slab replacement for broken slabs reduces the pounding that vehicles take or in hitting potholes damages tires,
suspensions, and other mechanical systems. Concrete slab replacement will provide a smooth surface and add strength to the road, and will significantly improve safety for motorists traveling on Denmark Road.

B. Pedestrian Facility –

This project includes the construction of new 5' wide concrete pedestrian sidewalks, on the north side of Denmark Road. Currently, there are no sidewalks or pedestrian facility along this section of Denmark Road. The new construction will comply with the provisions of the American Disabilities Act (ADA) to remove physical barriers to the extent feasible. The sidewalks will increase pedestrian safety and improve vehicular traffic flow by reducing vehicle and pedestrian conflicts.

C. Improvements to improve dangerous intersection at Progress Parkway with a new single lane Roundabout -

The Walkable and Livable Communities Institute reports that personal injuries and fatalities plummet as much as 90 percent in modern roundabouts when compared to conventional intersections. Roundabouts cause drivers to slow down, ideally to less than 20 mph, which reduces the risks to both pedestrians and drivers. In addition, modern roundabouts are calmer and safer than conventional intersections and have been deemed a "proven safety counter-measure" by the U.S. Department of Transportation. See attached brochure.

COMMUNITY SUPPORT

Describe the public involvement activities to date on the proposed project:

PROJECT DEVELOPMENT SCHEDULE

Note: *many stages can occur concurrently.*

Activity Description	Start Date (MM/YYYY)	Finish Date (MM/YYYY)	Time Frame (Months)
Receive notification letter	10/2023	10/2023	1
Execute agreement (project sponsor and DOT)	11/2023	05/2024	5
Engineering services contract submitted and approved*	06/2024	11/2024	5
Obtain environmental clearances (106, CE2, T&E, etc.)	12/2024	03/2025	4
Public meeting/hearing			
Develop and submit preliminary plans	01/2025	03/2025	3
Preliminary plans approved	03/2025	04/2025	2
Develop and submit right-of-way plans	05/2025	06/2025	2
Review and approval of right-of-way plans	07/2025	08/2025	2
Submit and receive approval for notice to proceed for right-of-way acquisition (A-Date)*	09/2025	10/2025	2
Right-of-way acquisition	11/2025	05/2026	6
Utility coordination	07/2024	05/2026	14
Develop and submit PS&E	06/2026	09/2026	3
District approval of PS&E/advertise for bids*	10/2026	12/2026	2
Submit and receive bids for review and approval	01/2027	01/2027	1
Project implementation/construction	03/2027	12/2027	9

* Finish date must match fiscal year for each milestone shown in **bold** text.

FINANCIAL PLAN

Note: *federal participation for a phase of work must not exceed 80% in Missouri for all phases of work and 80% in Illinois for construction/construction engineering phase only. In Illinois, PE and right-of-way must be paid with local funds.*

Activity[6]	Starting Federal Fiscal Year[7]	Total Phase Cost	STP-S Funds Requested	Sponsor Share	Sponsor Share Percentage
PE / Planning / Environmental Studies	FY 2025	$ 89,494	$ 71,596	$ 17,899	20.00%
Right-of-Way (ROW)	FY 2026	$ 0			0.00%
Construction Engineering	FY 2027	$ 76,071	$ 60,857	$ 15,215	20.00%
Construction / Implementation	FY 2027	$ 745,786	$ 596,629	$ 149,157	20.00%
TOTAL PROJECT COST		$ 911,351	$ 729,081	$ 182,270	20.00%

Identify the source(s) of local matching funds (e.g., state DOT, city, county, county road board, county motor fuel tax, private entity), and the amount for each source:	The City's General Revenue Fund, current balance in this fund exceeds $1M.

[6] **Illinois**: construction/construction engineering funds are available in FY 2027.
Missouri: preliminary engineering (PE) funds are available in FY 2024, right-of-way (ROW) in FY 2024 (only if PE is locally funded) OR FY 2025, and construction/construction engineering in FY 2026 (if ROW is scheduled for FY 2024) OR FY 2027.
[7] Fiscal years are federal fiscal years (October 1 through September 30).

SAFETY

Were there any crashes along project limits from 2016-2020? ***Note**: a project can still potentially receive partial points if it does not have crashes, but includes a preventive safety countermeasure.*

☑ Yes ☐ No

Total number of crashes by severity type along project limits:	
Fatal (K on the KABCO scale):	0
Serious injury (A on the KABCO scale):	0
Minor injury (B and C on the KABCO scale):	1
Property damage only (O on the KABCO scale):	5
Total number of crashes from 2016-2020 along project limits:	6

Does the project include safety countermeasure(s)?

☑ Yes ☐ No

If yes, identify the safety countermeasure(s) proposed, its Crash Modification Factor (CMF), and the CMF ID below (e.g., installation of safety edge treatment – CMF: 0.92 – CMF ID: 4303):

Countermeasure	**CMF**	**CMF ID**
Intersection Geometry	0.28	206

***Note**: a list of safety countermeasures and their CMFs is provided in Appendix C of the STP-S Scoring Criteria Guide. In addition, the FHWA Crash Modification Factors Clearinghouse provides a searchable database of safety countermeasures: http://www.cmfclearinghouse.org/.*

Describe how the proposed safety countermeasure(s) will address the crashes occurring along the project limits:

This project includes the conversion of a stop-controlled intersection into a single-lane roundabout. Modern roundabouts are calmer and safer than conventional intersections and have been deemed a "proven safety counter-measure" by the U.S. Department of Transportation. Stop-controlled intersections have 32 vehicle-to-vehicle conflict points. Whereas a roundabout has only 8 vehicle-to-vehicle conflict points.

Are there any undocumented safety issues?

☐ Yes ☑ No

If yes, describe the undocumented safety issue(s) and explain how the preventive safety countermeasure(s) will address the issue:

MULTIMODAL

Does the proposed project incorporate any of the following bicycle-related improvements?

- ☐ Separated bike lane/cycle track/protected bike lane
- ☐ Shared-use path/trail/arterial sidepath
- ☐ Buffered bike lane
- ☐ Standard bike lane (not buffered)
- ☐ Marked shared roadway (shared-lane markings, "sharrow")
- ☐ Paved shoulder
- ☐ Wayfinding or end of trip facilities
- ☐ Other
- ☑ None

Describe the bicycle-related improvements (including 'other') in detail:

Does the proposed project incorporate any of the following pedestrian-related improvements?

- ☑ New sidewalks (where none currently exist)
- ☐ Sidewalk spot slab improvements
- ☐ Sidewalk reconstruction
- ☐ Construction of new curb ramps (where none currently exist)
- ☐ Curb ramp reconstruction
- ☐ Sidewalk/roadway separation
- ☐ Wayfinding, furniture, or other end of trip facilities
- ☐ Pedestrian-scale lighting (e.g., glare shielded, lower height (12' to 16'), in-pavement)
- ☐ Other
- ☐ None

Describe the pedestrian-related improvements (including 'other') in detail:

Construct new ADA compliant sidewalks on north side of Denmark Road.

Approximately what percentage of the project limits includes new or reconstructed sidewalk or shared-use path?	100%

Does the proposed project incorporate any of the following intersection or crossing treatments?

- ☐ Pedestrian signals/push buttons
- ☐ Countdown timers
- ☐ Leading pedestrian interval (LPI)
- ☐ Bicycle signals or bicycle detection
- ☐ Rectangular Rapid-Flashing Beacon (RRFB)
- ☐ Pedestrian Hybrid Beacon (PHB or HAWK)
- ☐ Marked crosswalks (standard parallel crosswalk markings or brick crosswalk)
- ☐ High-visibility crosswalks (e.g., ladder, zebra, or continental crosswalk markings)
- ☐ Raised crosswalks
- ☐ Midblock crossings
- ☐ Pedestrian refuge islands
- ☐ Curb radius reduction
- ☐ Curb extension or bulb-outs
- ☐ Bicycle boxes
- ☐ Colored pavement crossings for bicycles lanes marked through intersection
- ☐ Other
- ☑ None

Describe the intersection or crossing treatments (including 'other') in detail and identify crosswalk locations:

If the project incorporates any safety, traffic calming, or design improvements, describe the improvements (e.g., improvements at a rail-grade crossing, intersection improvements, road diets, bulb-outs, raised median barriers, center islands, roadway markings, improved signage and signals):

Does the project improve access to transit stops, stations, park-and-ride lots, or other major transit facilities?

☐ Yes ☑ No

If yes, identify the bus route and/or transit facility:

Does the project incorporate improvements to existing transit stops or stations (e.g., 5' x 8' ADA landing pads, benches, shelters)?
☐ Yes ☑ No

If yes, identify the improvements:

Does the project provide direct access (i.e., adjacent) to a school (grades K-12 and college/university)?
☑ Yes ☐ No

Is the project within ½ mile of a school?
☑ Yes ☐ No

If yes, identify the school(s):

School Name	Proximity to Project
East Central College	☑ Direct ☐ Within ½ mile
	☐ Direct ☐ Within ½ mile
	☐ Direct ☐ Within ½ mile
	☐ Direct ☐ Within ½ mile

Does the project provide direct access (i.e., adjacent) to a community resource (e.g., park/trail, full service grocery store, civic building, library, health center, recreation center)?
☑ Yes ☐ No

If yes, identify all community resources (planned or existing) that the project directly serves:

Numerous businesses along this section of Denmark Road.

SYSTEM RELIABILITY

Does the project include management and operations strategies that optimize the performance of the road (e.g., ITS technologies, traffic operational improvements)?
☑ Yes ☐ No

If yes, explain the strategy and how it improves the reliability of the transportation system:

Modern roundabouts are calmer and safer than conventional intersections and have been deemed a "proven safety counter-measure" by the U.S. Department of Transportation. See attached brochure.

INTERMODAL CONNECTIONS

Is the project located within an industrial site area (per St. Louis Regional Freight Study)?

☐ Yes ☑ No

If yes, what is the name of the industrial site area (e.g., Broadway-Arsenal, Earth City, GM Plant)?

Is the project adjacent to or does it directly impact an intermodal freight facility, major freight generator, logistic center, manufacturing and warehouse industrial facility, or port facility?

☐ Yes ☑ No

If yes, identify the facility or major freight generator:

Identify any commercial vehicle countermeasures proposed, and explain how the project provides improvement to the movement of freight to and from the industrial site area, facility, or major freight generator:

ENVIRONMENT

Does the project incorporate any of the following green infrastructure improvements?

☐ Bioswales
☐ Rain gardens
☐ Pervious pavements
☐ Green bulb-outs
☐ Solar powered lighting fixtures
☐ Other
☑ None

Describe the green infrastructure improvements (including 'other') in detail:

NOTIFICATION OF TITLE VI & NONDISCRIMINATION REQUIREMENTS

Title VI

A recipient of any federal funds from the U.S. Department of Transportation ("DOT") must comply with federal statutes, regulations, executive orders, and other pertinent directives that govern nondiscrimination in federally assisted programs. Below is a list of the statutes and regulations that may apply to a recipient's program; however, other federal requirements regarding nondiscrimination may be imposed by DOT.

A. Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. §§ 2000d *et seq.*
B. All requirements imposed by or pursuant to the Code of Federal Regulations, Title 49: Transportation, Subtitle A: Office of the Secretary of Transportation, Part 21: *Nondiscrimination in Federally-Assisted Programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964.*

As part of federal requirements, a recipient of funds from DOT must ensure that it has written policies and procedures in place to ensure nondiscrimination in its programs, up to and including, developing a Title VI Plan.

Nondiscrimination

A recipient of any federal funds from the U.S. Department of Transportation ("DOT") must comply with federal statutes, regulations, executive orders, and other pertinent directives that govern nondiscrimination in federally assisted programs. Below is a list of the statutes and regulations that may apply to a recipient's program; however, other federal requirements regarding nondiscrimination may be imposed by DOT.

A. Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000d, and implementing regulations at 49 CFR Part 21 – *Nondiscrimination in Federally Assisted Programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act*.
B. The equal employment opportunity provisions of 49 U.S.C. § 5332 and Title VII of the Civil Rights Act of 1964, 42 U.S.C. §§ 2000e *et seq.*, and implementing regulations, including;
    1. 41 CFR Part 60 – *Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.*
C. Title IX of the Education Amendments of 1972, as amended, 20 U.S.C. §§ 1681 *et seq.*, and implementing regulations at 49 CFR Part 25 – *Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance*.
D. Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, and the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. §§ 12101 *et seq.*, and implementing regulations, including:
    1. 49 CFR Part 27—*Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance*.
    2. 49 CFR Part 37—*Transportation Services for Individuals with Disabilities (ADA)*.
    3. 36 CFR Part 1192 and 49 CFR Part 38—*Americans with Disabilities (ADA) Accessibility Specifications for Transportation Vehicles*.
    4. 28 CFR Part 35—*Nondiscrimination on the Basis of Disability in State and Local Government Services*.
    5. 28 CFR Part 36—*Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities*.
    6. 41 CFR Subpart 101 – 119—*Accommodations for the Physically Handicapped*.
    7. 29 CFR Part 1630—*Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act*.
    8. 47 CFR Part 64, Subpart F—*Telecommunications Relay Services and Related Customer Premises Equipment for the Hearing and Speech Disabled*.
    9. 36 CFR Part 1194—*Electronic and Information Technology Accessibility Standards*.

10. 49 CFR Part 609—*Transportation for Elderly and Handicapped Persons*.
11. Federal civil rights and nondiscrimination directives implementing those federal laws and regulations, unless the federal government determines otherwise in writing.

E. The Age Discrimination Act of 1975, as amended, 42 U.S.C. §§ 6101 *et seq*.

F. The Age Discrimination in Employment Act, 29 U.S.C. §§ 621 through 634, and implement regulations of the U.S. Equal Employment Opportunity Commission at 29 CFR Part 1625—*Age Discrimination in Employment Act*.

G. The Drug Abuse Office and Treatment Act of 1972, as amended, 21 U.S.C. §§ 1101 *et seq.*, the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970, as amended, 42 U.S.C. §§ 4541 *et seq.*, and the Public Health Service Act of 1912, as amended, 42 U.S.C. §§ 290dd through 290dd-2.

H. Executive Order 12898—Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 42 U.S.C. § 4321 note, and DOT Order 5620.3 at Federal Register Vol. 62 No. 18377—*Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*.

I. Executive Order 13166 – Improving Access to Services for Persons with Limited English Proficiency, 42 U.S.C. § 2000d – 1 note, and implementing policy guidance at Federal Register Vol. 70 No. 74087—*DOT Policy Guidance Concerning Recipients' Responsibilities to Limited English Proficiency (LEP) Person*.

By submitting its application as part of the TIP process and signing below, the Project Sponsor certifies that it has reviewed the federal requirements regarding nondiscrimination in federally assisted programs and believes that the Project Sponsor complies with the required policies and procedures.

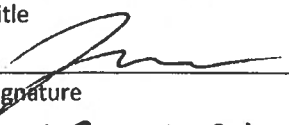
Also, the Project Sponsor acknowledges its understanding that if the Project Sponsor does not have the required policies and procedures in place prior to federal funds being obligated, then the Project Sponsor's project may become ineligible for federal funding.

JD Kelley

Name (print)

City Engineer

Title



Signature

1-20-2023

Date

FINANCIAL CERTIFICATION OF MATCHING FUNDS

This is to ensure sufficient funds are available to pay the non-federal share of project expenditures for the following project to be funded under the provisions of the Infrastructure Investment and Jobs Act (IIJA).

Project Title: Denmark Road - Phase 4

Local Match Amount: $182,270.00

Sponsoring Agency: City of Union

Chief Elected Official (or Chief Executive Officer):

Name (print): Robert L. Schmuke, Mayor

Signature: Robert L Schmuke

Date: 11/24/2023

Chief Financial Officer:

Name (print): Heather Keith, Finance Officer

Signature:

Date: 11/20/23

PERSON OF RESPONSIBLE CHARGE CERTIFICATION

The key regulatory provision, 23 CFR 635.105 – Supervising Agency, provides that the State Transportation Agency (STA) is responsible for construction of federal-aid projects, whether it or a local public agency (LPA) performs the work. The regulation provides that the STA and LPA must provide its full-time employee to be in "responsible charge" of the project.

The undersigned employee(s) of the Project Sponsor will act as person of responsible charge. If at any point the employee leaves the LPA, the LPA is responsible for finding a suitable replacement and notifying EWG. If the person of responsible charge is found to not be a full-time employee of the LPA, it will result in the loss of federal funds for this project. One employee can act as person of responsible charge for all three phases. All three phases must be signed.

Person of Responsible Charge – Design Phase

Name (print): JD Kelley

Title: City Engineer Email: engineer@unionmissouri.gov

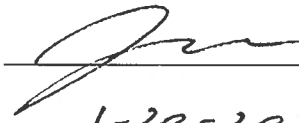
Signature: 

Date: 1-20-2023

Person of Responsible Charge – Right-of-Way Acquisition Phase

Name (print): JD Kelley

Title: City Engineer Email: engineer@unionmissouri.gov

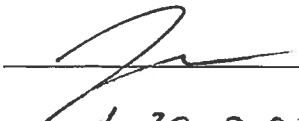
Signature: 

Date: 1-20-2023

Person of Responsible Charge – Construction/Implementation Phase

Name (print): JD Kelley

Title: City Engineer Email: engineer@unionmissouri.gov

Signature: 

Date: 1-20-2023

RIGHT-OF-WAY ACQUISITION CERTIFICATION STATEMENT

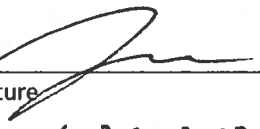
The State Department of Transportation and the Federal Highway Administration (FHWA) have the right and responsibility to review and monitor the acquisition procedures of any federally funded transportation project for adherence to The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. Those projects found in non-compliance may jeopardize all or part of their federal funding.

A. The Project Sponsor hereby certifies that any right-of-way, and/or permanent or temporary easements necessary for this project, obtained prior to this application, were acquired in accordance with The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

B. The Project Sponsor also certifies that any additional right-of-way, and/or permanent or temporary easements, subsequently required to complete the project, will be acquired according to The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

JD Kelley
Name (print)

City Engineer
Title


Signature

1-20-2023
Date

POLICY ON REASONABLE PROGRESS CERTIFICATION – MISSOURI SPONSORS ONLY

Following on the next page is a copy of the policy on reasonable progress adopted by the East-West Gateway Council of Governments Board of Directors.

The undersigned representative of the Project Sponsor hereby certifies that s/he has read this policy and understands its requirements. The representative acknowledges that failure to meet all of the reasonable progress requirements could result in federal funds being revoked and returned to the regional funding pool, as dictated by the policy.

JD Kelley

Name (print)

City Engineer

Title

Signature

1-20-2023

Date

POLICY ON REASONABLE PROGRESS – MISSOURI SPONSORS ONLY

Reasonable Progress

For projects or programs included in the Transportation Improvement Program (TIP), "reasonable progress" will have been made if the project has advanced to the point of obligating all federal funds programmed for that project in the current fiscal year, regardless of the phase of work (*i.e., preliminary engineering, right-of-way acquisition, or plans, specifications, and estimates*). If a project fails to obligate the programmed federal funds by September 30 of the current year, the funding will be forfeited and returned to the regional funding pot. Actual progress toward implementation is measured against the schedule submitted by the Project Sponsor in the project application.

Policy Procedures and Enforcement

Projects that do not obligate all federal funds by the Board-approved suspense date will be removed from the TIP and the federal funds associated with those projects will be returned to the regional funding pool for redistribution. The removal of projects from the TIP will require no further Board action and the sponsor will have to repay any federal funds already spent if the funding is forfeited.

If a project is realizing delays that will put the federal funding at risk of forfeiture (*i.e., not meet a September 30 deadline*), the Project Sponsor will have the opportunity to ask for consideration of a "one-time extension" in their project schedule. The one-time extension can only be requested for the implementation/construction phase of the project. The extension request will only be considered once a year, and has to be made before June 1 of the current fiscal year of the TIP.

To be considered for this extension the Project Sponsor has to demonstrate on all counts: a) the delay is beyond their control and the sponsor has done due diligence in progressing the project; b) federal funds have already been obligated on the project or in cases that no federal funds are used for PE and/or ROW acquisition, there has been significant progress toward final plan preparation; and c) there is a realistic strategy in place to obligate all funds.

One-time extensions of up to three (3) months may be granted by EWG staff and one-time extensions greater than three (3) months, but not more than nine (9) months, will go to the Board of Directors for their consideration and approval. Projects requesting schedule advancements will be handled on a case-by-case basis, subject to available funding, and are subject to the Board-adopted rules for TIP modifications.

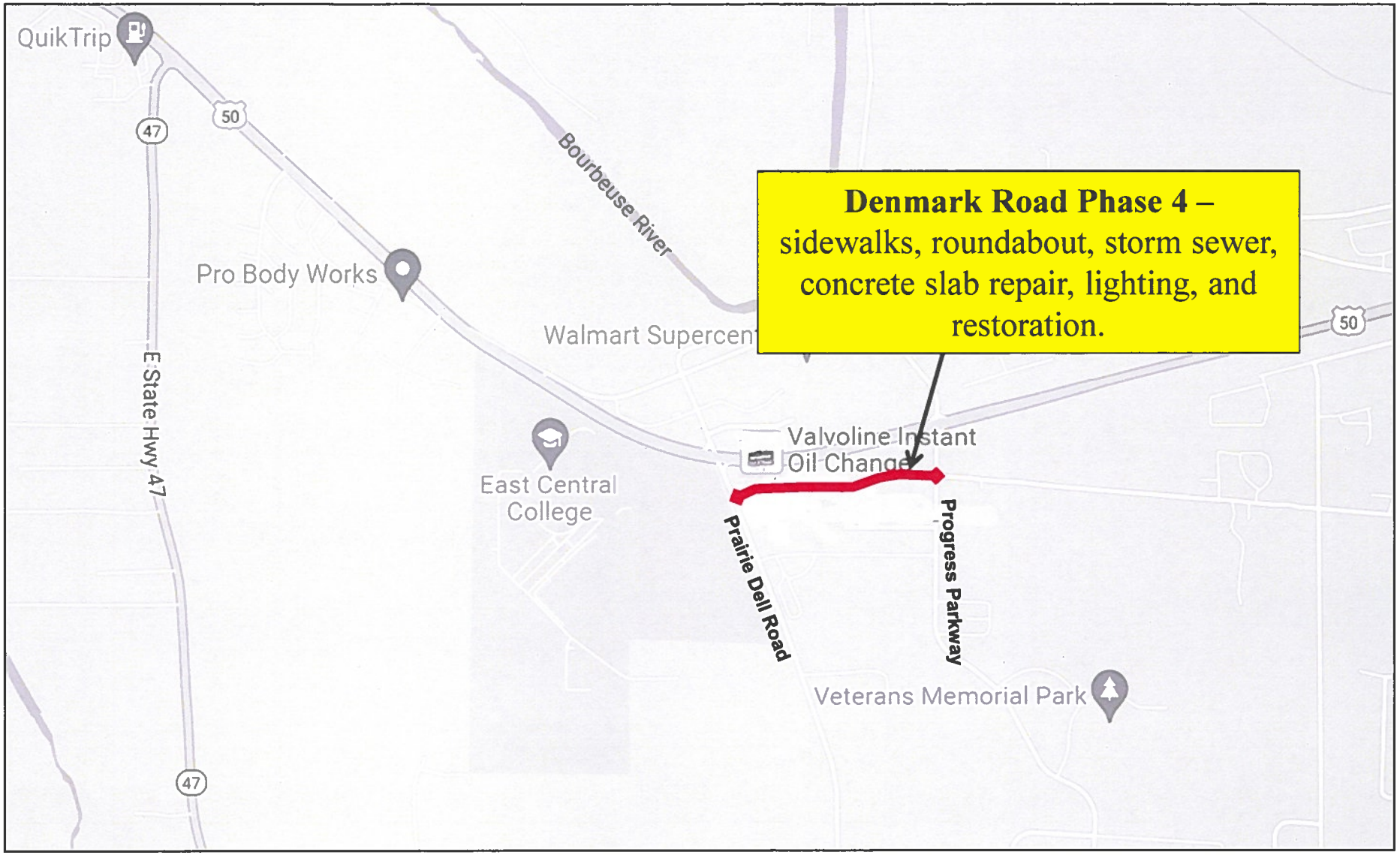
Project Monitoring

An extensive monitoring program has been developed to help track programmed projects and ensure that funding commitments and plans are met. Monthly tracking reports are developed and posted on the EWG website, utilizing project information provided by the Project Sponsor, IDOT, and MoDOT district offices. Additionally, project sponsors are contacted at least every three (3) months by EWG staff for project status updates.

City of Union – Project Location Map

STP Project:

- **Denmark Road Phase 4 – Prairie Dell Road to Progress Parkway**



Estimate of Project Costs

Project Sponsor:	City of Union
Project Title:	Denmark Road Improvement Project - Phase 4
Date:	1/14/2023

Specific Roadway Items

Item	Quantity	Unit	Unit Price	Amount
Removal of Improvements	1	LS	$60,000.00	$60,000.00
Concrete Sidewalks	11,400	SF	$7.00	$79,800.00
Type 5 Aggregate for Base (4")	2,100	SY	$5.00	$10,500.00
Concrete Pavement (8") (stamped red)	610	SY	$98.00	$59,780.00
Concrete Pavement (10 in. non-rein.)	2,100	SY	$85.00	$178,500.00
Raised Concrete Island 6" thick	3,500	SF	$6.00	$21,000.00
Concrete Vertical Curb	300	LF	$25.00	$7,500.00
Storm Sewer	250	LF	$85.00	$21,250.00
Concrete Slab Repair	800	SY	$75.00	$60,000.00
Lighting	4	EA	$6,500.00	$26,000.00
Restoration	1	LS	$25,000.00	$25,000.00
Pavement Striping	7,600	LF	$0.55	$4,180.00
Construction Mobilization	1	LS	$70,000.00	$70,000.00
Construction Traffic Control	1	LS	$25,000.00	$25,000.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
			SUBTOTAL	$648,510.00

Specific Bicycle Items

Item	Quantity	Unit	Unit Price	Amount
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
			SUBTOTAL	$0.00

Specific Pedestrian Items				
Item	Quantity	Unit	Unit Price	Amount
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
			SUBTOTAL	$0.00

Specific Transit Items				
Item	Quantity	Unit	Unit Price	Amount
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
			SUBTOTAL	$0.00

Miscellaneous Other Items				
Item	Quantity	Unit	Unit Price	Amount
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
				$0.00
			SUBTOTAL	$0.00

Construction Cost Total	$648,510.00
Contingency	$97,276.50
Inflation	
Preliminary Engineering	$89,494.38
Right-of-Way	$0.00
Construction Engineering/Inspection	$76,070.22
Project Total *	$911,351.10

* The project total cost should match the total cost reported in the project application.

Add lines as needed.

CONSTRUCTION COST ESTIMATE

STP Application - Due February 9, 2022

City of Union - Denmark Road Phase 4 Improvement Project

No.	Description	Unit	Quantity	Unit Cost	Cost
1	Removal of Improvements	LS	1	60,000.00	$60,000.00
2	Concrete Sidewalks	SF	11,400	7.00	$79,800.00
3	Type 5 Aggregate for Base (4")	SY	2,100	5.00	$10,500.00
4	Concrete Pavement (8") (stamped red)	SY	610	98.00	$59,780.00
5	Concrete Pavement (10 in. non-rein.)	SY	2,100	85.00	$178,500.00
6	Raised Concrete Island 6" thick	SF	3,500	6.00	$21,000.00
7	Concrete Vertical Curb	LF	300	25.00	$7,500.00
8	Storm Sewer	LF	250	85.00	$21,250.00
9	Concrete Slab Repair	SY	800	75.00	$60,000.00
10	Lighting	EA	4	6,500.00	$26,000.00
11	Restoration	LS	1	25,000.00	$25,000.00
12	Pavement Striping	LF	7,600	0.55	$4,180.00
13	Construction Mobilization	LS	1	70,000.00	$70,000.00
14	Construction Traffic Control	LS	1	25,000.00	$25,000.00

Project Notes:

1. Project length equals approx. 0.4 miles
2. Project Limits - Prairie Dell Road to Progress Pkwy
3. Roundabout at Progress Pkwy intersection
4. Construction 2026

Construction Sub-Total	$648,510
15% Contingency	$97,277
Design Engineering	$89,494
Construction Engineering	$76,070
Project Total =	**$911,351**
Federal Share @ 80% =	$729,081
Local Share @ 20% =	$182,270
EWGCC Application Fee (1/2% of Federal Funds Requested) =	$3,645

Denmark Road –
Looking Westbound towards Progress Parkway

Denmark Road –
Looking Westbound after Progress Parkway

Scope of Project Includes: sidewalks on north side, misc. concrete pavement slab replacement, restoration and striping.

Denmark Road –
Heading Westbound

Scope of Project Includes: sidewalks on north side, misc. concrete pavement slab replacement, restoration and striping.

Denmark Road –
Heading Westbound

Scope of Project Includes: sidewalks on north side, misc. concrete pavement slab replacement, restoration and striping.

Denmark Road –
Looking Westbound towards Roundabout at Prairie Dell

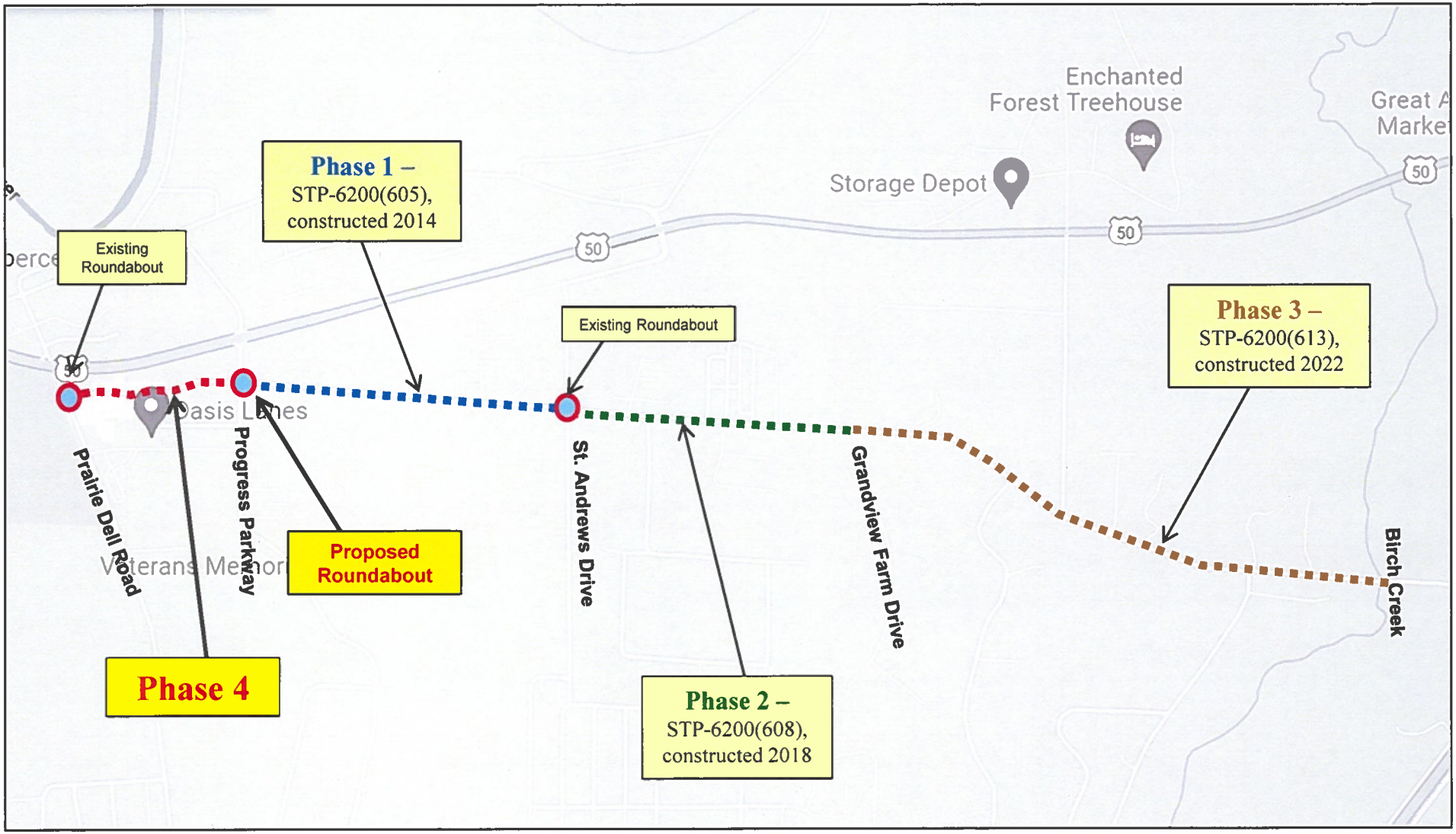
Scope of Project Includes: sidewalks on north side, misc. concrete pavement slab replacement, restoration and striping.

Denmark Road –
Looking Westbound towards Roundabout at Prairie Dell

City of Union – Denmark Road Phasing Plan

STP Projects:

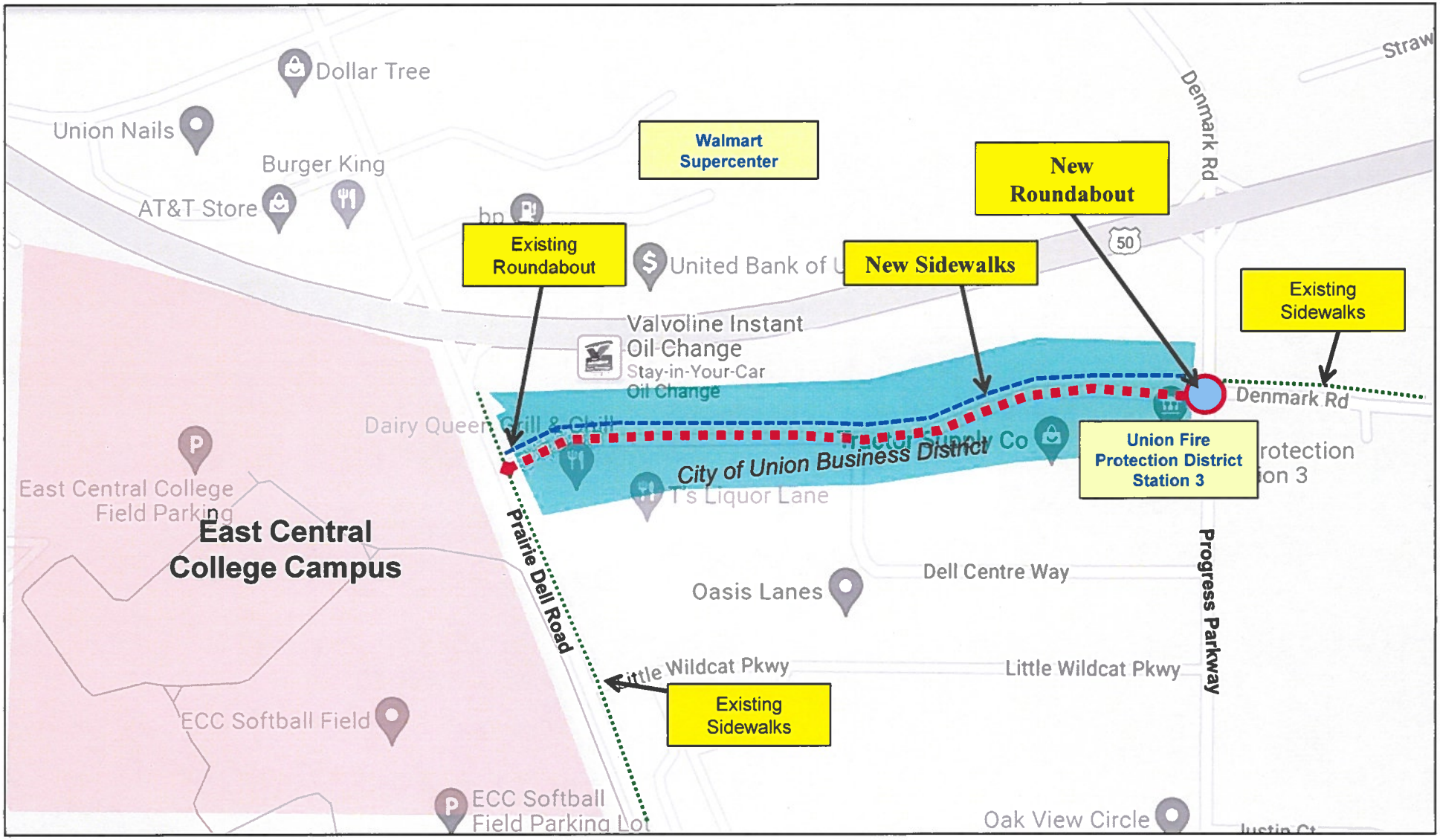
- **Phases 1 thru 4**



City of Union – Detailed Map

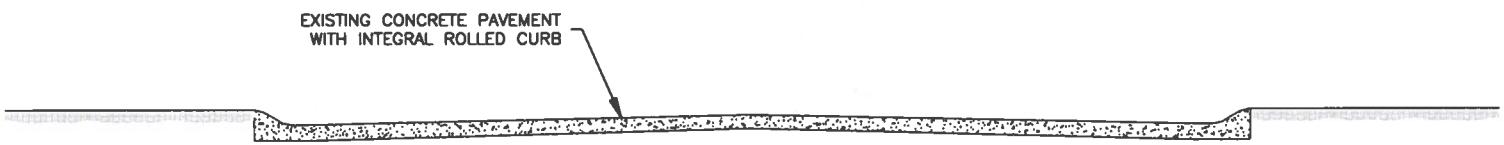
STP Project – Denmark Road Phase 4

- Transit Routes, Activity Centers, and Schools



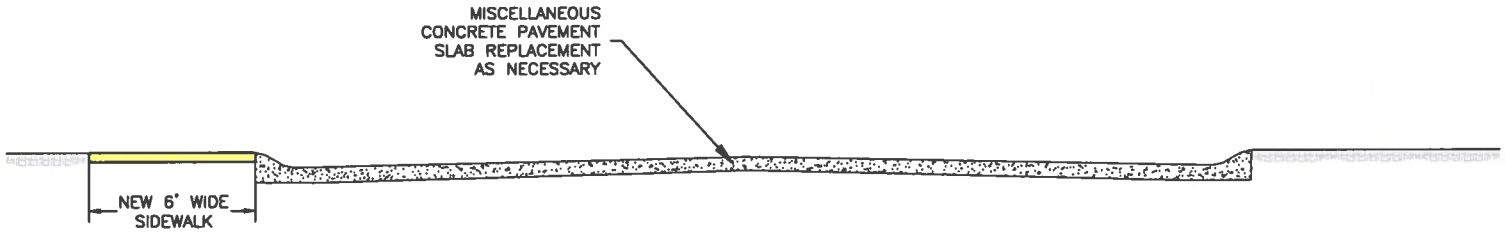
TYPICAL ROADWAY SECTIONS

PRAIRIE DELL ROAD TO PROGRESS PARKWAY



EXISTING ROADWAY SECTION

NO SCALE



NEW ROADWAY SECTION

NO SCALE

737 RUDDER ROAD
FENTON, MISSOURI 63026
TEL: (314) 842-4033
FAX: (314) 842-9957
OCHRAN
• Architecture
• Civil Engineering
• Construction Inspection & Testing
• Geotechnical
• Land Surveying
• Site Development

DENMARK ROAD PHASE 4 IMPROVEMENTS
UNION, MISSOURI

Road Condition Evaluation Form

East-West Gateway Council of Governments (EWG) uses the Pavement Surface Evaluation and Rating (PASER) Manual to evaluate pavement condition. This visual rating system developed by the University of Wisconsin Transportation Information Center uses ratings ranging from 1 (failed) to 10 (excellent). If sponsors are unfamiliar with PASER, they are encouraged to review the PASER manuals online:

Asphalt Manual: https://epd.wisc.edu/tic/wp-content/uploads/sites/3/2019/12/Asphalt-PASER_02_rev13.pdf
Concrete Manual: https://epd.wisc.edu/tic/wp-content/uploads/sites/3/2019/12/Concrete-PASER_02_rep15.pdf

INSTRUCTIONS:
The first evaluation should be performed at the beginning of the project limits, with subsequent evaluations occurring at a uniform distance each 1/8 mile (660 feet) along the roadway until reaching the other end of the limits. If the project is less than 3/8 mile (1,980 feet), conduct three evaluations at a **uniform distance (e.g., a 1/4 mile project would include three evaluations, spaced 440' apart).** If the project is greater than one mile in length, conduct at least eight evaluations at a uniform distance (e.g., a 1 ½ mile project would include eight evaluations, **spaced 990' apart).**

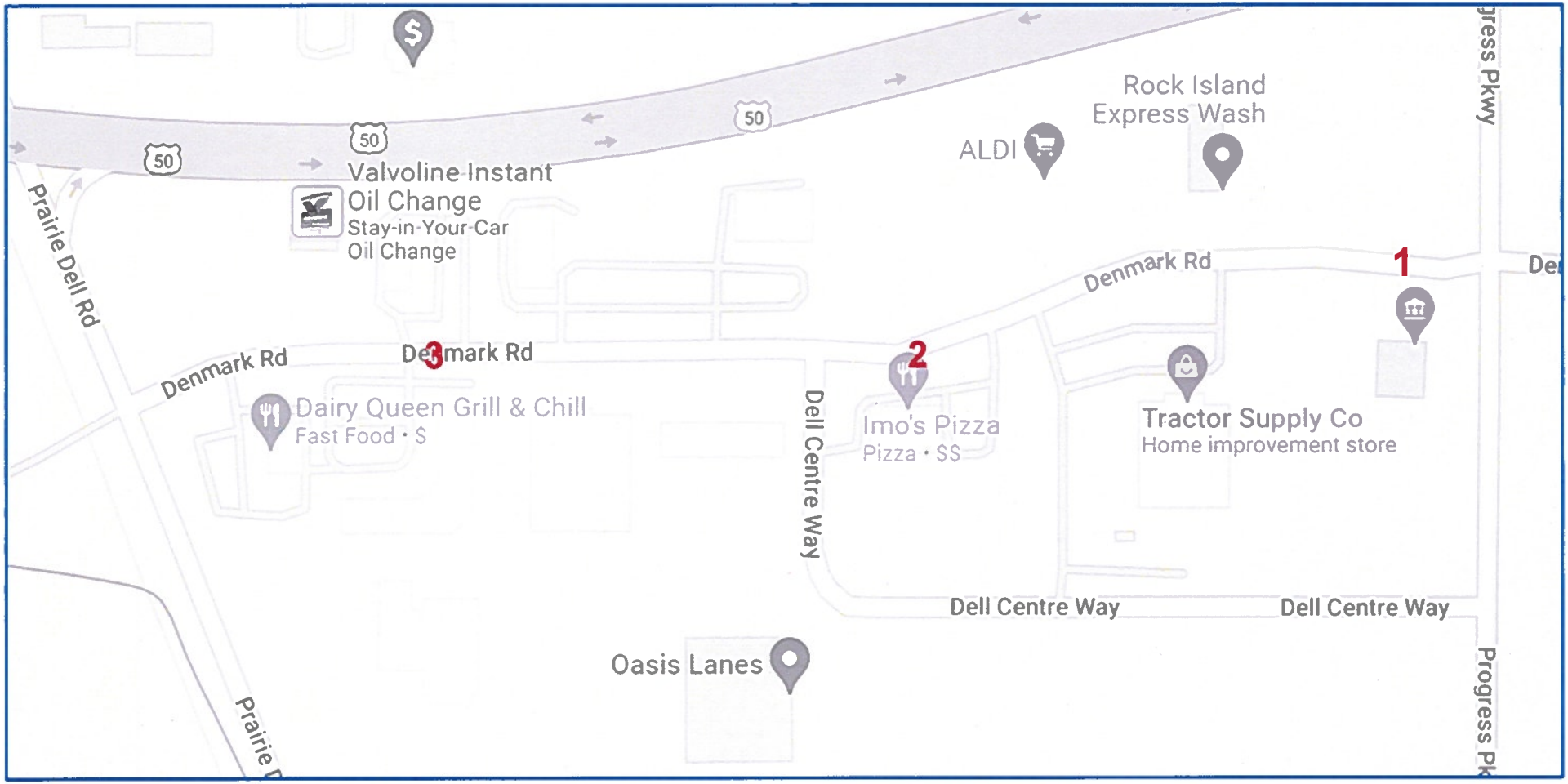
Record the PASER rating for each location in the table below. Individual location ratings must be whole numbers. If multiple roadways are within the project limits, simply list the new roadway name in the column on the left. You may attach another sheet with additional locations if needed. Attach an evaluation sheet for each location (see next pages), a picture of each location, and a map showing all evaluation locations. Select the evaluation sheet that matches the surface type (asphalt or concrete).

Roadway Name	Location #	Distance from start point	PASER Rating
Denmark Road	1	START	4
Denmark Road	2	650'	5
Denmark Road	3	1,300'	6
	4		
	5		
	6		
	7		
	8		
	9		
	10		
	11		
	12		
	13		
	14		
	15		
	16		
		AVERAGE PASER:	5.0

City of Ballwin – Denmark Road Phase 4

PASER Rating – Concrete Pavement Evaluation

Segment Location Map



Concrete Evaluation Sheet
(Provide this page for each location.)

Roadway Name: Denmark Road Date: 1/14/23

Evaluation Location #: 1 Distance from Start Point: 0 Location PASER Rating (whole number 1-10): 4

Check all that apply:

- [x] Wear & Polishing
- [x] Meander Cracks
- [ ] Shallow Reinforcing
- [ ] Spalling
- [ ] Pavement Settling or Heave
- [ ] Curb/Shoulder Deformation
- [ ] Scaling
- [ ] Map Cracking
- [x] Blowups
- [ ] Corner Cracks
- [x] Utility Repairs
- [x] Transverse Slab Cracks
- [ ] D-Cracks
- [ ] Pop-outs
- [ ] Faulting
- [ ] Manhole/Inlet Cracks

Comments:

Joints and cracks show moderate to severe spalling. Pumping and faulting of joints with fair ride. Needs some full depth repairs to correct surface defects.

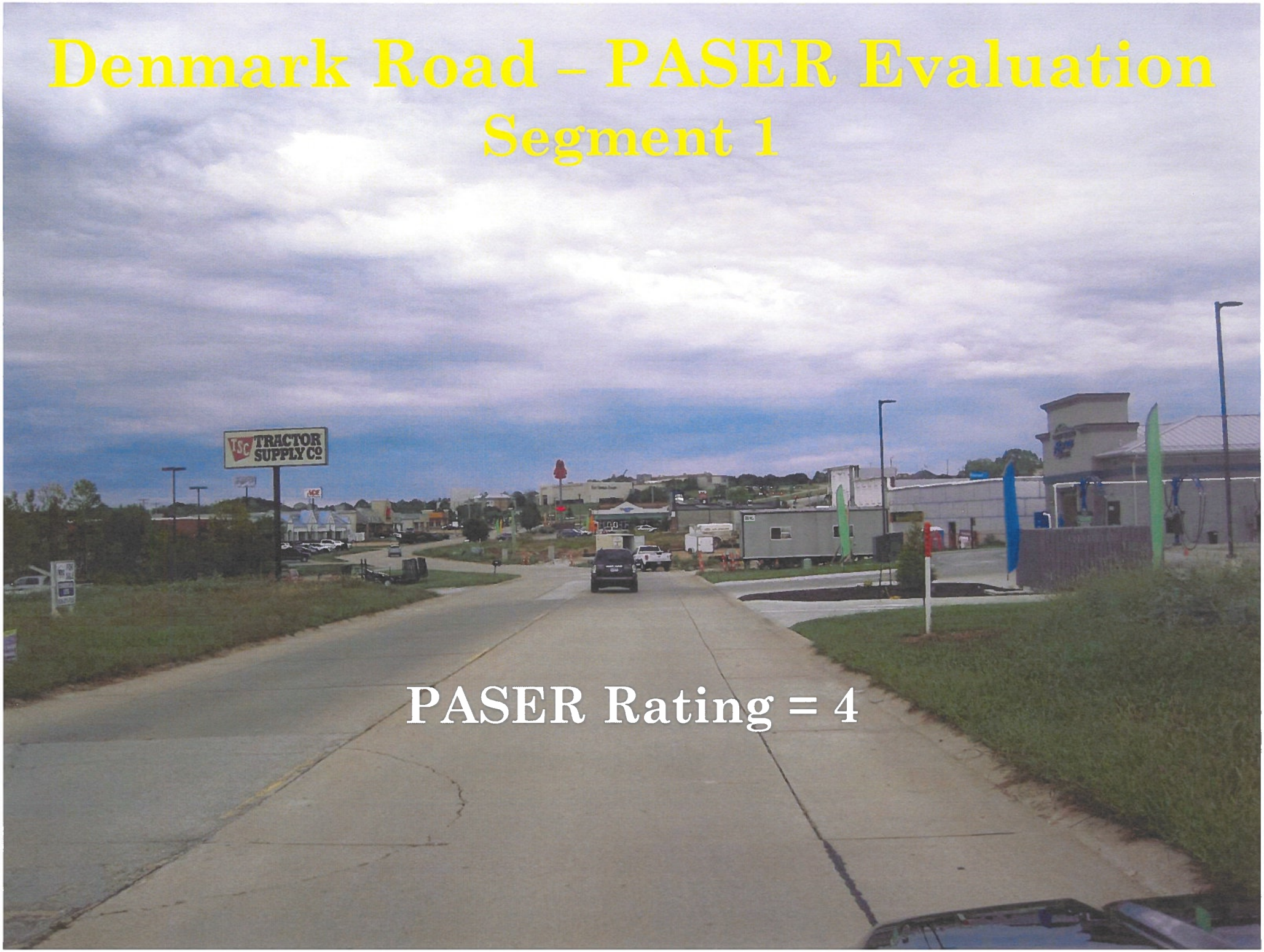
Drainage:

Good

Comments:

The cross slope of the pavement and longitudinal grade is sufficient for drainage.

Denmark Road – PASER Evaluation
Segment 1



PASER Rating = 4

Concrete Evaluation Sheet
(Provide this page for each location.)

Roadway Name: Denmark Road Date: 1/14/23

Evaluation Location #: 2 Distance from Start Point: 650' Location PASER Rating (whole number 1-10): 5

Check all that apply:

- [x] Wear & Polishing
- [x] Meander Cracks
- [ ] Shallow Reinforcing
- [ ] Spalling
- [ ] Pavement Settling or Heave
- [ ] Curb/Shoulder Deformation
- [ ] Scaling
- [ ] Map Cracking
- [ ] Blowups
- [ ] Corner Cracks
- [ ] Utility Repairs
- [x] Transverse Slab Cracks
- [ ] D-Cracks
- [ ] Pop-outs
- [ ] Faulting
- [ ] Manhole/Inlet Cracks

Comments:

First signs of joints spalling and faulting. Pumping and faulting of joints with fair ride. Needs some full depth repairs to correct surface defects.

Drainage:

Good

Comments:

The cross slope of the pavement and longitudinal grade is sufficient for drainage.

Denmark Road – PASER Evaluation
Segment 2

PASER Rating = 5

Concrete Evaluation Sheet
(Provide this page for each location.)

Roadway Name: Denmark Road Date: 1/14/23

Evaluation Location #: 3 Distance from Start Point: 1,300' Location PASER Rating (whole number 1-10): 6

Check all that apply:

- [x] Wear & Polishing
- [x] Meander Cracks
- [ ] Shallow Reinforcing
- [ ] Spalling
- [ ] Pavement Settling or Heave
- [ ] Curb/Shoulder Deformation
- [ ] Scaling
- [ ] Map Cracking
- [ ] Blowups
- [ ] Corner Cracks
- [ ] Utility Repairs
- [x] Transverse Slab Cracks
- [ ] D-Cracks
- [ ] Pop-outs
- [ ] Faulting
- [ ] Manhole/Inlet Cracks

Comments:

Needs general joint and crack sealing. Showing first signs of joints spalling and faulting. Pumping and faulting of joints with fair ride. Needs some full depth repairs to correct surface defects.

Drainage:

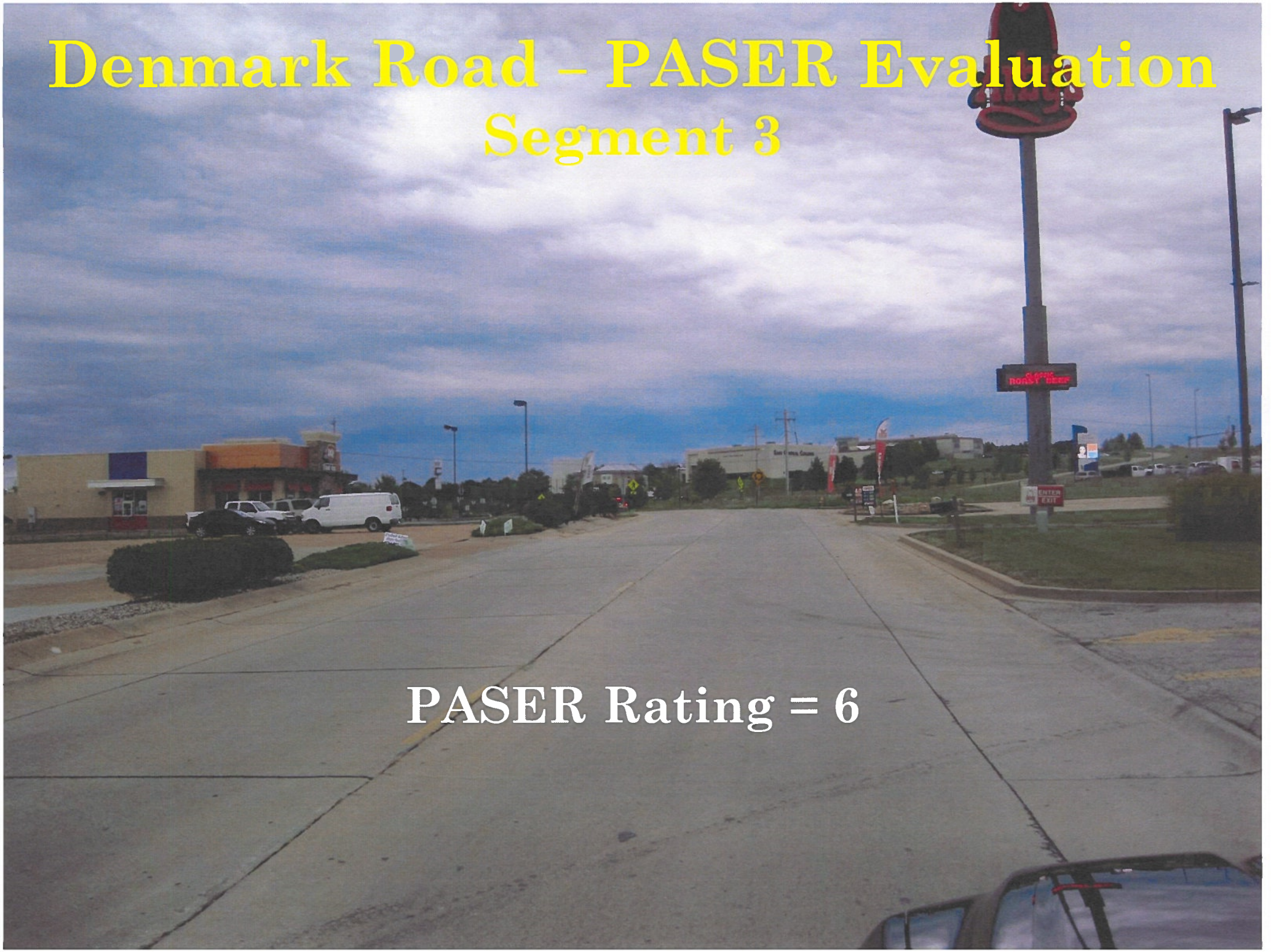
Good

Comments:

The cross slope of the pavement and longitudinal grade is sufficient for drainage.

Denmark Road – PASER Evaluation

Segment 3



PASER Rating = 6

Modern Roundabouts | A LIVABILITY FACT SHEET

Every day in the U.S. more than 20 people are killed at traffic intersections, and many more are seriously injured.[1]

Roundabouts — circular intersections that move traffic counterclockwise around a central island — can help reduce these deaths and injuries. Modern roundabouts are calmer and safer than conventional intersections and have been deemed a "proven safety counter-measure" by the U.S. Department of Transportation.[2]

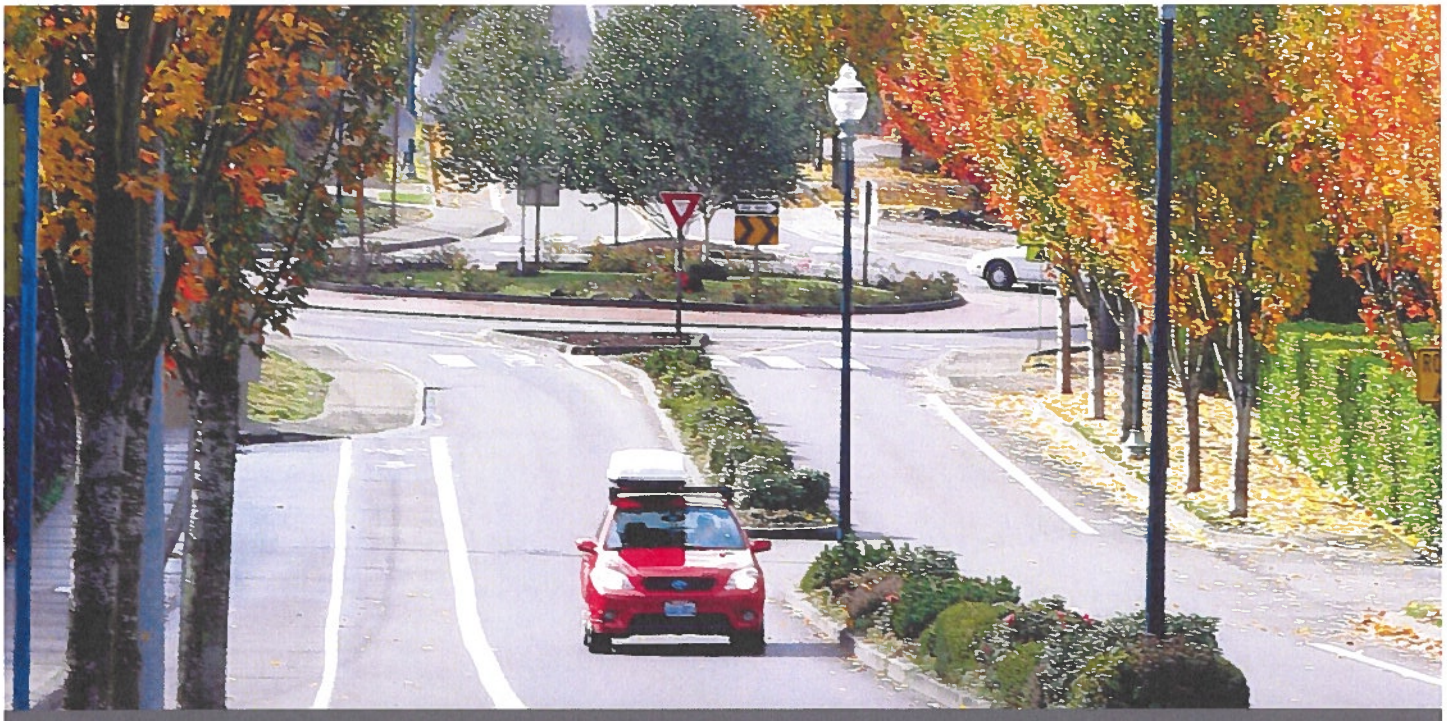
Roughly the size of a baseball diamond or infield, modern roundabouts differ from rotaries or traffic circles, which can be as big as the entire outfield. Roundabouts feature lower, safer vehicle speeds. They can be 80 feet across with single lanes carrying 25,000 vehicles a day or larger at 200 feet, with double lanes and 45,000 vehicles a day.[3]

Personal injuries and fatalities plummet as much as 90 percent in modern roundabouts when compared to conventional intersections.[4] Roundabouts cause drivers to slow down, ideally to less than 20 mph, which reduces the risks to both pedestrians and drivers.

Because roundabouts can handle 30 to 50 percent more traffic than conventional intersections, they reduce travel delays.[5] Since roundabouts can be designed to be aesthetically pleasing, they help create a sense of place.

By January 2014, roundabouts graced more than 2,000 intersections in the U.S., with more planned.[6] Given their safety and placemaking benefits, roundabouts should be considered for many more of the three million intersections in the U.S.

Modern roundabouts are calmer and safer than conventional intersections and have been deemed a "proven safety counter-measure" by the U.S. Department of Transportation.



Vehicle speeds on Grandview Drive in University Place, Wash., often reached or exceeded 50 mph. After the installation of modern roundabouts, vehicle crashes dropped from one every nine months to zero in 14 years.

AARP Real Possibilities

Walkable and Livable Communities Institute

Myth-Busting!

"Roundabouts require too much land."

Roundabouts, which can be installed on virtually any size street, range from single-lane mini-roundabouts to two lanes or more.[7] A single-lane roundabout can be as narrow as 80 feet in diameter, measuring across the circle from the outside edges of the vehicle lanes.

Also, a well-placed roundabout can keep a road from needing to be widened, saving up to 10 million dollars per mile in land and construction costs.[8]

"The public will object to using a roundabout."

Before several two-lane modern roundabouts were installed in Bellingham, Wash., only one in three people surveyed by the Insurance Institute for Highway Safety supported the creation of a roundabout.

Once the roundabout was built, the numbers reversed, and 70 percent of respondents became supportive.[9] In another study conducted by the Institute, support for six different roundabouts went from a low of 22 percent to a high of 87 percent five years after installation.[10] Building one roundabout in a community is usually all it takes to convince most people of their benefits.

"Fire trucks, snowplows, buses and semis can't use roundabouts."

A "truck apron" in the center of a roundabout can accommodate emergency vehicles, buses, snow equipment and large trucks, including those with wheel-base lengths of 50 or more feet.

"Roundabouts aren't safe for bicyclists and pedestrians."

By using space to pause on the "splitter island," pedestrians need to watch only one direction of traffic at a time, which simplifies the task of crossing the street. The low vehicle speeds through a roundabout — which can be as low as 15 mph — also allow more time for drivers and pedestrians to react to one another, which reduces the chance and consequences of error. A bicyclist can be given the option of riding in the lane of slow-moving cars or crossing as a pedestrian.[11]

"Roundabouts hurt business."

The lower the speed of traffic through an area, the easier it is to park a car, walk, bicycle and locate and approach a business. Since roundabouts are also quieter than conventional intersections, any outdoor seating nearby is more enjoyable.

In Golden, Colo., retail sales increased 60 percent after the addition of a string of roundabouts — and that was during the 1989 recession. Sales in Golden outpaced those of all other cities in the state.[12]

"Roundabouts aren't good for older adults."

By 2025, about 25 percent of all drivers in the United States will be over the age of 65. Forty percent of all car crashes that involve drivers over the age of 65 occur at intersections.[13]

As we age, we lose our ability as drivers to judge left-turn gaps.[14] Roundabouts don't require those decisions, and they eliminate head-on and right-angle crashes. When collisions do occur, they are generally at lower speeds and less harmful.

"Pedestrians with limited vision can't cross roundabouts."

A known issue with roundabouts and other street crossings — such as mid-block crossings and right-turn slip lanes — is that it's difficult for pedestrians with limited vision to determine when traffic has stopped and it is safe to cross. Solutions are being sought to address this problem.[15, 16]

1. U.S. Department of Transportation's Federal Highway Administration (FHWA) (n.d.), safety.fhwa.dot.gov. Modern Roundabouts: A Safer Choice. http://safety.fhwa.dot.gov/intersection/roundabouts/fhwasa10023/transcript/audio_no_speaker/
2. U.S. DOT FHWA (n.d.), safety.fhwa.dot.gov. Proven Safety Countermeasures. http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_005.htm
3. U.S. DOT FHWA (n.d.), fhwa.dot.gov. Roundabouts: An Informational Guide. http://www.fhwa.dot.gov/publications/research/safety/00067/000674.pdf
4. U.S. DOT FHWA (n.d.), safety.fhwa.dot.gov. http://www.fhwa.dot.gov/resourcecenter/teams/safety/teamsafe_rndabout.pdf
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6. U.S. DOT FHWA (February 2010). Technical Summary: Mini Roundabouts. http://safety.fhwa.dot.gov/intersection/roundabouts/fhwasa10007/fhwasa10007.pdf
7. American Road and Transportation Builders Association (n.d.), ARTBA.org: electronic references. http://www.artba.org/faqs/#20
8. Insurance Institute for Highway Safety (February 2013). Public Opinion, Traffic Performance, the Environment, and Safety after the Construction of Double-Lane Roundabouts. Retrieved Feb. 3, 2014, http://www.iihs.org/frontend/iihs/documents/masterfiledocs.ashx?id=2033
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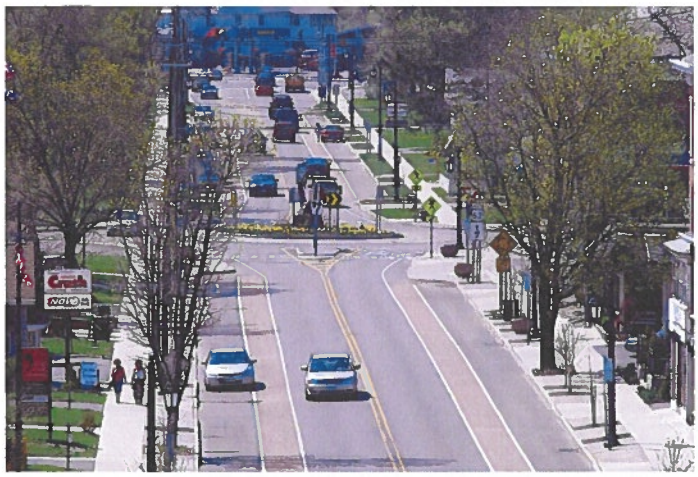
10. City of Golden and LSC Transportation Consultants, Inc. (April 2006). Development Opportunities: Golden, Colorado Case Study. http://lscdenver.com/Papers/Minnesota%20Revised%202006.pdf
11. U.S. FHWA. (n.d.) Modern Roundabouts: A Safer Choice. http://safety.fhwa.dot.gov/intersection/roundabouts/fhwasa10023/transcript/audio_no_speaker/
12. National Cooperative Highway Research, Transportation Research Board, National Academies of Science. Roundabouts in the United States, Program Report 572. http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_572.pdf

How To Get It Right



In Hamburg, N.Y., a series of roundabouts on Route 62 helps calm traffic and create a sense of place.

This roadway approaching a roundabout in San Diego, Calif., reduces the distance people must cross.

For modern traffic roundabouts to be effective, it's important they're done right:

■ Adopt a roundabout-first policy

Whenever a roadway project includes reconstructing or constructing an intersection, analyze the feasibility of using a roundabout instead. This approach is recommended by the U.S. Department of Transportation's Federal Highway Administration and backed by the Insurance Institute for Highway Safety.[17]

■ Embrace a public process and build support

Since roundabouts can be a new idea, elected leaders and agency staff may need to seek public support first, to inspire approval and navigate implementation.

For example, community advocates can print this fact sheet, talk to neighbors, build community support and then meet with decision makers, news outlets, experts and others to discuss the benefits of roundabouts. Agency staff can engage the public in a meaningful process, hosting interactive design workshops to build public acceptance and understanding.

■ Design for speeds lower than 20 mph

Fast-moving vehicles kill people and divide places. A pedestrian hit by a vehicle at 20 mph has a 90 percent chance of survival while the odds of surviving a 40 mph impact are only 10 percent.[18]

Good roundabout design ensures that drivers slow down to 15 or 20 mph. This protects pedestrians, reduces pollution and noise and creates a more pleasant neighborhood.

■ Keep dimensions tight

To keep traffic calm and therefore safe for all roadway users, roundabouts should feature context-appropriate design elements that reduce speed. Examples include tight entry and exit turn radii, narrow entry and circulatory lanes, appealing but non-distracting landscaping, a truck apron for large vehicles and splitter lanes to help pedestrians cross two or more traffic lanes.

■ Make it beautiful

An aesthetically pleasing roundabout can create a sense of place, frame a neighborhood, establish an entry point into a business district or neighborhood and serve as a canvas for public art or a garden.

13. Owsley, C. (2004). Driver Capabilities in Transportation in an Aging Society: A Decade of Experience. Technical Papers and Reports from a Conference: Bethesda, MD.; November 7-9, 1999. Washington, D.C.: Transportation Research Board
14. Pedestrian Access to Roundabouts: Assessment of Motorists' Yielding to Visually Impaired Pedestrians and Potential Treatments to Improve Access, FHWA. http://www.fhwa.dot.gov/publications/research/safety/pedbike/05080/
15. Skene, M., Jacobson, M., Havercroft, D., Boan, J. (n.d.). Considerations for Accommodating Visually Impaired Pedestrians at Roundabouts, Institute for Transportation Engineers. http://www.ite.org/Membersonly/annualmeeting/2010/AB10H1002.pdf
16. Smart Transportation Guide, Planning and Designing Highways and Streets that Support Sustainable and Livable Communities. Chapter 6. http://www.state.nj.us/transportation/community/mobility/pdf/smarttransportationguidebook2008.pdf
17. Ibid
18. Federal Highway Administration (FHWA). Proven Safety Countermeasures. http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_0

Success Stories

San Diego, California: La Jolla Boulevard

A string of five roundabouts has allowed the city to reduce the road from five vehicle lanes to two, while also cutting travel time, adding on-street parking, attracting new businesses and still moving 23,000 vehicles a day.

The number of people walking went up, noise pollution plummeted and the increase in walking, bicycling and street life is bringing new business to retailers.

Hamburg, New York: Route 62

By the 1990s, business had declined along the Route 62 commercial district. Empty storefronts pushed shoppers away to malls and big box stores. The road was generally congested and hazardous for cyclists and pedestrians.

A state plan emphasized wider roads and signalized intersections. But a group of residents banded together as the "Route 62 Committee" and created a new vision for Route 62 based on walkability and calmer traffic. Roundabouts have reduced the number and severity of crashes, congestion has been eased and emissions from idling cars have been reduced.

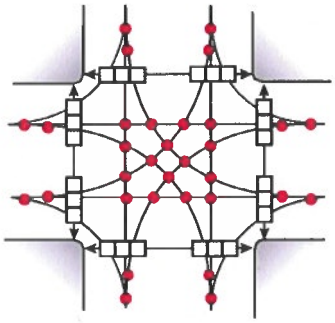
Bradenton Beach, Florida: Bridge Street

One pedestrian was being killed every year at the intersection of Bridge Street and North Gulf Drive. With 18,000 cars and trucks moving daily, the traffic separated residents and visitors from the beach. People could see the beach, but they could not walk to it without taking severe risks.

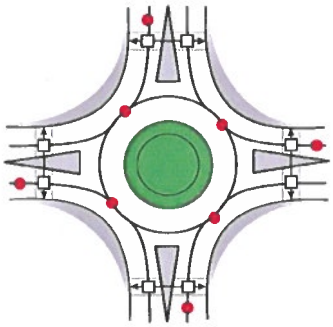
A roundabout was built and the police chief reports there hasn't been a recorded crash of any type since. With many more people walking to the beach, parking eased, and the roundabout became one of the nation's first to kick-start downtown reinvestment, which is now bustling with pedestrians, new homes and retail activity.

HOW IT WORKS

As these illustrations demonstrate, roundabouts harbor far fewer potential conflict points than conventional intersections, making streets safer for all users.



- 32 vehicle-to-vehicle conflict points
- 24 vehicle-to-person conflict points



- 8 vehicle-to-vehicle conflict points
- 8 vehicle-to-person conflict points

RESOURCES

1. **Roundabouts,** FHWA. http://safety.fhwa.dot.gov/intersection/roundabouts/
2. **Technical Summary: Roundabouts,** FHWA. http://safety.fhwa.dot.gov/intersection/roundabouts/fhwasa10006/fhwasa10006.pdf
3. **Technical Summary: Mini Roundabouts,** FHWA. http://safety.fhwa.dot.gov/intersection/roundabouts/fhwasa10007/fhwasa10007.pdf
4. **Roundabouts: An Informational Guide,** FHWA, Lee August Rodegerdts, National Research Council (U.S.). Transportation Research Board, National Cooperative Highway Research Program, American Association of State Highway and Transportation Officials, 2010
5. **Geocoded National Roundabout Database.** http://roundabouts.kittelson.com/
6. **Roundabout Benefits,** Washington State Department of Transportation. http://www.wsdot.wa.gov/safety/roundabouts/
7. **Insurance Institute for Highway Safety.** http://www.iihs.org/
8. **Proven Safety Countermeasures,** FHWA. http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_0

AARP LIVABLE COMMUNITIES

Mail: 601 E Street NW, Washington, DC 20049
Email: livable@aarp.org
Online: aarp.org/livable

WALKABLE AND LIVABLE COMMUNITIES INSTITUTE

Mail: 2023 E. Sims Way #121, Port Townsend, WA 98368
Email: community@walklive.org
Online: walklive.org

DENMARK ROAD TRAFFIC COUNT REPORT

UNION, MO

ADT = 4,857

Location Map

Not to Scale

COCHRAN

•Civil Engineering
•Land Surveying
•Architecture
•Site Development
•General Consulting
•Master Planning

737 Rudder Road, Fenton, MO 63026

JANUARY, 2023

Denmark Road

Union, MO

ADT = 4,857

Site Code: 00000001
Station ID:

Latitude: 0' 0.000 South

Start	16-Jan-23		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	Direction 1	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction	Direction
12:00 AM	*	*	2	4	2	2	2	3	2	9	8	41	3	58	3	20
01:00	*	*	1	0	0	2	0	0	1	1	0	8	4	6	1	3
02:00	*	*	0	0	0	1	0	0	2	1	1	0	1	8	1	2
03:00	*	*	2	1	1	4	0	2	0	1	0	2	2	1	1	2
04:00	*	*	1	3	0	3	1	4	2	10	0	1	1	2	1	4
05:00	*	*	11	21	12	17	11	18	7	18	4	9	5	4	8	14
06:00	*	*	24	72	22	49	24	50	24	66	10	8	6	11	18	43
07:00	*	*	95	172	61	157	86	199	85	188	34	55	10	25	62	133
08:00	*	*	89	130	86	234	83	143	92	130	81	92	35	59	78	131
09:00	*	*	131	155	97	**318**	105	154	119	168	169	208	109	112	122	186
10:00	*	*	144	175	91	198	143	171	149	174	171	257	133	199	138	196
11:00	**181**	**206**	**184**	**205**	**181**	288	**149**	**211**	**189**	**238**	**209**	**292**	**146**	**252**	**177**	**242**
12:00 PM	**206**	237	**192**	**271**	**167**	287	164	205	170	**306**	**241**	**298**	**267**	279	**201**	**269**
01:00	150	258	168	240	137	**314**	128	194	171	282	204	278	169	262	161	261
02:00	151	231	148	215	119	218	149	231	152	272	205	262	139	**280**	152	244
03:00	142	230	144	225	139	194	152	215	177	271	164	242	149	248	152	232
04:00	126	**269**	174	238	142	204	143	**252**	**205**	232	168	207	136	200	156	229
05:00	164	223	158	237	127	191	**174**	242	194	296	167	258	125	218	158	238
06:00	85	176	127	186	96	145	119	179	180	249	142	231	93	126	120	185
07:00	45	109	79	130	53	119	80	116	104	209	103	178	49	107	73	138
08:00	40	76	41	115	27	70	34	123	97	131	64	108	27	76	47	100
09:00	24	42	19	62	15	86	26	91	60	131	56	84	11	65	30	80
10:00	5	20	4	52	10	23	7	21	31	73	24	49	11	25	13	38
11:00	0	8	1	8	1	4	1	5	13	29	11	36	2	4	4	13
Lane	1319	2085	1939	2917	1586	3128	1781	2829	2226	3485	2236	3204	1633	2627	1877	3003
Day	3404		4856		4714		4610		5711		5440		4260		4880	
AM Peak	11:00	11:00	11:00	11:00	11:00	09:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00
Vol.	181	206	184	205	181	318	149	211	189	238	209	292	146	252	177	242
PM Peak	12:00	16:00	12:00	12:00	12:00	13:00	17:00	16:00	16:00	12:00	12:00	12:00	12:00	14:00	12:00	12:00
Vol.	206	269	192	271	167	314	174	252	205	306	241	298	267	280	201	269

Denmark Road

Union, MO

ADT = 4,857

Site Code: 00000001
Station ID:

Latitude: 0' 0.000 South

Start Time	23-Jan-23 Direction 1	Direction	Tue Direction	Direction	Wed Direction	Direction	Thu Direction	Direction	Fri Direction	Direction	Sat Direction	Direction	Sun Direction	Direction	Week Average Direction	Direction
12:00 AM	1	8	*	*	*	*	*	*	*	*	*	*	*	*	1	8
01:00	2	0	*	*	*	*	*	*	*	*	*	*	*	*	2	0
02:00	0	5	*	*	*	*	*	*	*	*	*	*	*	*	0	5
03:00	0	0	*	*	*	*	*	*	*	*	*	*	*	*	0	0
04:00	1	2	*	*	*	*	*	*	*	*	*	*	*	*	1	2
05:00	7	23	*	*	*	*	*	*	*	*	*	*	*	*	7	23
06:00	24	51	*	*	*	*	*	*	*	*	*	*	*	*	24	51
07:00	66	**158**	*	*	*	*	*	*	*	*	*	*	*	*	66	**158**
08:00	**88**	155	*	*	*	*	*	*	*	*	*	*	*	*	**88**	155
09:00	32	43	*	*	*	*	*	*	*	*	*	*	*	*	32	43
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12:00 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Lane	221	445	0	0	0	0	0	0	0	0	0	0	0	0	221	445
Day	666		0		0		0		0		0		0		666	
AM Peak	08:00	07:00													08:00	07:00
Vol.	88	158													88	158
PM Peak																
Vol.																
Comb. Total	4070		4856		4714		4610		5711		5440		4260		5546	
ADT	ADT 4,857		AADT 4,857													