



Ironton Truck Study

KYOVA Interstate Planning Commission

Ironton, Ohio
April 23, 2018



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Executive Summary

An Ohio River bridge crossing between Ironton, Ohio and Russell, Kentucky allows traffic to access Ironton and parts of southern Ohio via US 52 and SR 93 and access Russell and Ashland, Kentucky and parts of northeastern Kentucky and western West Virginia via US 23. A new Ohio River bridge crossing, Oakley C. Collins Memorial bridge, opened on November 23, 2016 providing a new connection between Ohio and Kentucky. With the opening this new bridge, the existing Russell-Ironton Bridge closed and traffic using the bridge was rerouted in Ironton from Adams Street to 2nd and Jefferson Streets. Existing truck travel patterns through Ironton may have been diverted with this new bridge approach location. This truck study analyzes impacts and conflicts with the existing infrastructure in Ironton with any new traffic, specifically truck, travel patterns that the bridge relocation may have caused.



Figure 0.1: Location Map

The truck turning movements showed that the right turn from 2nd Street to Park Avenue cannot be completed without significant encroachment onto the approach traffic headed westbound on Park Avenue with the existing intersection geometry. Additionally, the truck turning movement onto Park Avenue from 4th Street was investigated and was found to present the same issues

as the intersection with 2nd Street and Park Avenue with encroachment onto the westbound approach traffic on Park Avenue and limitations to curb radii improvements.

Modifications to the intersection of 2nd street/Park Avenue and the intersection of 4th Street/Park Avenue are recommended for each of these routes for the turning movements to/from Park Avenue. For the intersection of 2nd street/Park Avenue, the left-turn movement can be made within the existing geometry with modification to the location of the stop bar, sidewalks on Park Avenue, and the westbound lane for the northbound approach on 2nd Street. The characteristics of the site located on the southeast corner would allow for improvements to the curb radii that would accommodate the truck turning movement from the second approach lane. An approximately 30-foot corner radius is recommended at this location. The westbound approach stop bar would also need to be relocated back 9 feet to prevent encroachment into the approaching traffic by turning trucks.

For the intersection of 4th Street/Park Avenue, curb radii modifications are also recommended for one corner at the intersection of 4th Street at Park Avenue. The characteristics of the site located on the southeast corner would allow for improvements to the curb radii that would accommodate the truck turning movement from the second approach lane. An approximately 30-foot corner radius is recommended at this location.

Additionally, as a result of proposed development on the south side of 2nd Street between Adams Street and Jefferson Street, the city has requested an analysis for the appropriate number and location of the driveways as well as a proposed concept to visually improve this block of 2nd Street. Also, since the opening of the Oakley C. Collins Crossing in November 2016, a back-up of traffic coming from Kentucky at the Jefferson Street intersection has been observed.

To reduce the length of the traffic back-up on the bridge, the intersection geometry was proposed to be modified by providing a dedicated right-turn lane for the approach from 2nd Street to the right turn to Jefferson Street. This revised striping decreases the concerning queue lengths and does not impact the overall vehicle delay. As a result of this proposed change from the bridge approach, the intersection's northwest approach would need to be modified as well. This would shift the northwest bound traffic on 2nd street to the center of the roadway since through traffic from the bridge would be a shared through-left lane in the center of the roadway. This would eliminate the left turn lane for traffic turning left from southeast bound 2nd street to Jefferson street. The traffic travelling southeast on 2nd street would have a shared left-through-right lane at the Jefferson street intersection. With this change in the approach lanes, the block of 2nd Street between Jefferson Street and Adams Street would be able to accommodate on-street parking on both sides of 2nd Street. These improvements are shown in Figure 0.2 with parking, driveway locations, sidewalk improvements, tree lawns, and curb bump outs.



Figure 0.2: Proposed improvements on 2nd Street between Jefferson and Adams Street

Based on the analysis, KYOVA, the City of Ironton, and Lawrence County should prioritize the recommended improvements if funding is not immediately available for all improvements. These recommendations address the travel patterns in regards to the new river crossing including improvements at 2nd/Jefferson, 2nd street, 2nd/Park, 4th /Park. The recommended implementation priority is:

- 1) 2nd Street/Jefferson Street intersection restriping and 2nd street improvements (\$75,000 to \$125,000)
- 2) 2nd Street/Park Avenue intersection improvements (\$75,000 to \$125,000)
- 3) 4th Street/Park Avenue intersection improvements (\$150,000 to \$200,000)



1 Introduction

1.1 New Ohio River Bridge Crossing Truck Study

An Ohio River bridge crossing between Ironton, Ohio and Russell, Kentucky allows traffic to access Ironton and parts of southern Ohio via US 52 and SR 93 and access Russell and Ashland, Kentucky and parts of northeastern Kentucky and western West Virginia via US 23. The Ironton-Russell Bridge connecting Ironton, Ohio and Russell, Kentucky opened in 1922. A new Ohio River bridge crossing, Oakley C. Collins Memorial bridge, opened on November 23, 2016 providing a new connection between Ohio and Kentucky. The bridge carries 950 vehicles during the afternoon peak hour. According to projections from the KYOVA travel demand model, the average daily traffic (ADT) is projected to be 25,556 vehicles per day in the year 2040 with approximately 10% trucks.

With the opening this new bridge, the existing Russell-Ironton Bridge closed and traffic using the bridge was rerouted in Ironton from Adams Street to 2nd and Jefferson Streets. Existing truck travel patterns through Ironton may have been diverted with this new bridge approach location. This truck study analyzes impacts and conflicts with the existing infrastructure in Ironton with any new traffic, specifically truck, travel patterns that the bridge relocation may have caused. Recommendations for mitigations of any potential impacts will be developed. These recommendations also include coordination with the pedestrian, bicycle, and Park Avenue Traffic Study tasks to ensure that consideration is given to truck traffic impacts. Figure 1.1 shows the location of Ironton along the Ohio River in southern Ohio and in Lawrence County.

Figure 1.1: Location Map

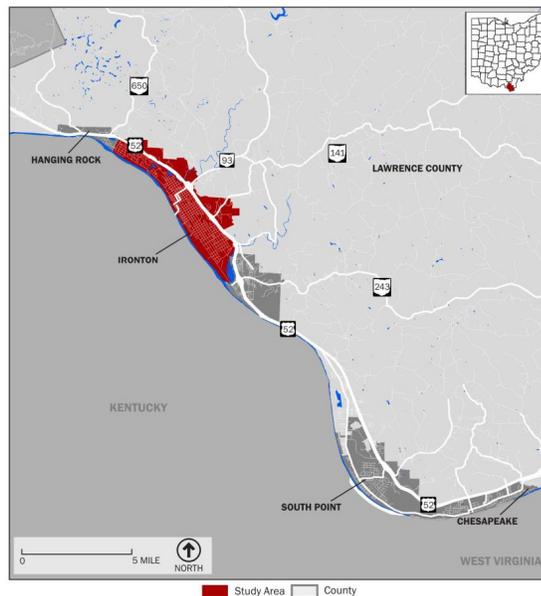


Figure 1.2 shows the location of the new Oakley C. Collins Memorial bridge within Ironton.



Figure 1.2: New Ohio River crossing location

The following methodology was used for this study:

- Review and document current and future conditions analysis

The current infrastructure conditions was observed and analyzed. Existing planning documents dealing with traffic circulation within the City of Ironton were researched

and reviewed including the Ironton Traffic Flow study, KYOVA 2040 Multi-Modal Transportation Plan, and the new bridge design plans. Previous and new truck movements were assessed. Engineers identified and undertook field studies, data collection and other research necessary to support the findings and recommendations. This included lane widths, on-street parking, and corner radii. Mobile LIDAR scanning was conducted that provided preliminary survey and design CAD files. Conflicts and deficiencies were documented according to truck design standards. Additionally the curbs, sidewalks, and streetscaping was examined in greater detail in the one block area between Adams Street and the new bridge approach on Second Street.

- Traffic analyses

Traffic analyses were conducted for the intersection of Jefferson Street and Second Street at the new bridge approach

- Recommended improvements

Recommendations were developed to address deficiencies in the systems for traffic flow.

- Stakeholder and Public Involvement

Stakeholder meetings and public participation was held to engage the residents of Ironton in this planning process. Notices were sent out and meetings were held to collect input on issues and potential solutions for better traffic flow.

- Recommended improvements and a strategic plan

A strategic plan for the implementation of improvements that included cost estimates and schedules was developed.



Figure 1.3: Bridge approach at 2nd Street and Jefferson Street intersection looking southeast

2 Truck Route Analysis

2.1 Review of Existing Conditions

A windshield-level survey was completed for the streets parallel to 2nd Street from 2nd Street to 9th Street and for perpendicular streets from Jefferson Street to Park Avenue. The following information was noted for each roadway segment.

- Lane widths
- Presence and intensity of on-street parking
- Roadway features (i.e. grade, traffic directions)
- Traffic control at each intersection

Mobile LIDAR was conducted for the City of Ironton that provided CAD files with roadway and sidewalk widths.

Ironton’s primary north-south roads are 2nd street and 3rd street. The primary east-west road is Park Avenue (SR 93). These are the current signed truck routes to US 52 on the west side of Ironton (Park Avenue) and the east side of Ironton (Marion Pike) from the new bridge location. Table 1 shows the current annual average daily traffic on those roadways.

Table 1: Roadway Characteristics

Roadway	Functional Class	Segments	AADT (2016)
2nd St	Minor Arterial	Vernon St to Union St	2,980
	Minor Arterial	Union St to Ellison St	3,528
3rd St	Minor Arterial	Marion Pike To Pleasant St	8,439
	Minor Arterial	Pleasant St to Spruce St	7,876
	Minor Arterial	Spruce St to Madison St	6,864
	Minor Arterial	Madison St to Adams St	9,271
	Minor Arterial	Adams St to Park Ave	5,281
SR-93/ Park Ave	Minor Arterial	East of US-52	6,616
	Minor Arterial	US-52 to 5th St	14,315
	Minor Arterial	5th St to 2nd St	6,069

2.1.1 Truck Turning Movement Design

The design standard for a WB-50 tractor-trailer truck was used to check whether truck turning movements could be completed at intersections. Locations evaluated include 3rd Street between the US 52 interchanges and the terminus of the Oakley C. Collins Bridge in Ironton at the intersection of 2nd Street and Jefferson Street. The CAD tool AutoTurn was used to determine feasibility of truck navigation at key intersections. Details of the WB-50 design vehicle are shown in Figure 2.1.

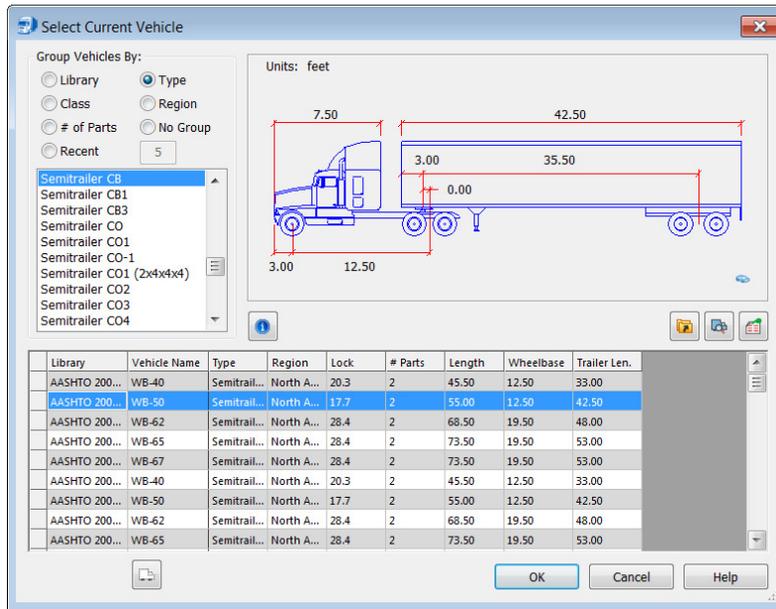


Figure 2.1: WB-50 Design Vehicle

2.1.2 Truck Route Access to/from US Highway 52

The current signed truck routes to US 52 on the west side of Ironton (Park Avenue) and the east side of Ironton (Marion Pike) from the new bridge location was reviewed for conflicts using the WB-50 tractor-trailer truck design standard.

To Marion Pike from Bridge

The existing route to Marion Pike is along 3rd Street. Adjusting this route for the new Oakley C. Collins Bridge location, adds a connection to 3rd Street from Jefferson Avenue between 2nd Street and 3rd Street. Key intersections along this route are 2nd Street at Jefferson Street, 3rd Street at Jefferson Street, and 3rd Street/Pike Street at Marion Pike. The route and turning movements are illustrated in Figure 2.2. The intersections with Jefferson Street were found to be sufficient and accommodate a right-turning truck. The intersection of 3rd Street at Marion Pike was found to be sufficient for left-turning vehicles. Truck turning path exhibits for these intersections are included in appendix A.

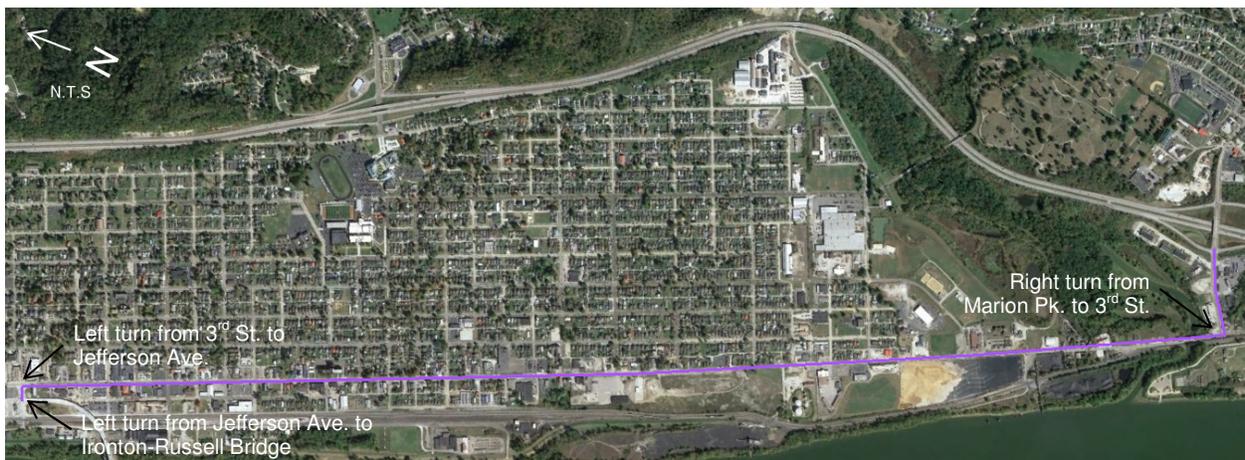
Figure 2.2. Truck Route to Marion Pike from Oakley C. Collins Memorial Bridge



To Bridge from US 52 East

For the path from US 52 to the Oakley C. Collins Memorial crossing, the same intersections were investigated for the opposite turning movements as shown on Figure 2.3. Each of the intersections was found to sufficiently accommodate a WB-50 with their existing geometry. These are a right-turn movement from Marion Pike to 3rd Street, a left-turn on 3rd Street to Jefferson Street, and a left-turn from Jefferson Street onto the bridge. Truck turning path exhibits for these intersections are included in the appendix A.

Figure 2.3. Truck Route to Oakley C. Collins Memorial Bridge from Marion Pike



To US 52 West (Ironton Hills Area) from Oakley C. Collins Memorial Bridge

The truck route through the City of Ironton from the Oakley C. Collins Memorial crossing is currently signed on 2nd Street, turning right onto Park Avenue and proceeding on Park Avenue to the interchange with US 52. Prior to the opening of the Oakley C. Collins Memorial crossing, traffic may come from the Ironton-Russell Bridge onto Adams Street and then turn left onto 4th Street to access Park Avenue. With the new Oakley C. Collins bridge, truck may also use 4th Street by turning right on Jefferson Street. Both the 2nd Street path and the 4th Street path are shown in Figure 2.4.

Figure 2.4. Truck Routes between Ironton-Russell Bridge and US 52 West



2nd Street/Park Avenue Intersection

The AutoTurn truck turning movements for a WB-50 showed that the right turn from 2nd Street to Park Avenue cannot be completed without significant encroachment onto the approach traffic headed westbound on Park Avenue with the existing intersection geometry. The close proximity of the building on the southeast corner does not allow for widening of the turning radii to accommodate the WB-50 truck path. This is shown in Figures 2.5 and 2.6.



Figure 2.5: Truck wheel path turning from 2nd St. to Park Ave.



Figure 2.6: Photo of 2nd St. and Park Ave. intersection looking southeast onto 2nd St.

4th Street/Park Avenue Intersection

The truck turning movement onto Park Avenue from 4th Street was investigated next and was found to present the same issues as the intersection with 2nd Street and Park Avenue with encroachment onto the westbound approach traffic on Park Avenue and limitations to curb radii improvements as shown in Figures 2.7-2.9.

The right-turn movement from northbound on 4th Street to Park Avenue was evaluated with the WB-50 design vehicle in AutoTurn. The 4th Street approach is one-way allowing for the turning movement to begin farther away from the corner.

Between the intersection of 2nd Street at Jefferson Avenue and 4th Street at Park Avenue, there would also be a truck turning movement from Jefferson Avenue to 4th Street. The right-turn movement from 2nd Street to Jefferson Street was found to be sufficient in the analysis. The left-turn movement from eastbound on Jefferson Avenue to northbound on 4th Street can be accomplished within the existing geometry. The truck turning paths are included in the Appendix A.



Figure 2.7: 4th St. looking northeast at Park Ave.



Figure 2.8: Park Ave. at 4th St. looking northeast

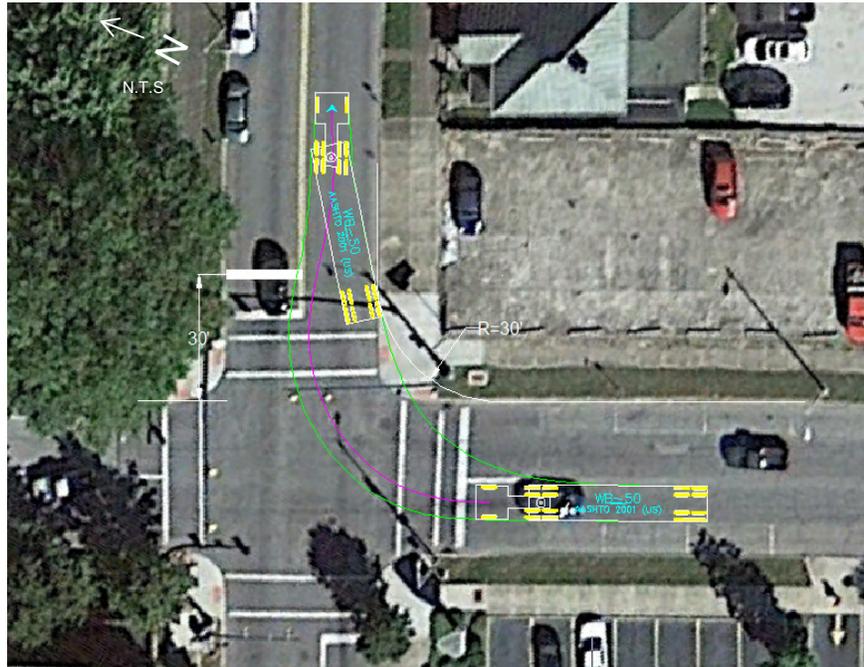


Figure 2.9: 4th Street at Park Avenue Truck Path

To Oakley C. Collins Memorial Bridge from US 52 West (Ironton Hills Area)

For traffic heading from US Highway 52 West to the Oakley C. Collins Memorial crossing, Park Avenue to 2nd Street was evaluated for suitability as a truck route. The left-turn movement can be made within the existing geometry. However, the truck's wheel path does impede traffic on Park Avenue in the northbound direction. Figure 2.10 shows the impeding truck wheel path for this intersection.

Figure 2.10. 2nd Street at Park Avenue Truck Path



Conflicts of Trucks turning from 2nd Street to Park Avenue



Figure 2.11: Location of traffic counts

Since conflicts of trucks turning from 2nd Street and 4th Street to Park Avenue were found as well as an observed back up on the bridge for traffic turning right onto Jefferson Street, traffic counts were collected in March, 2017 at the following intersections as shown in Figure 2:11:

- 2nd/Jefferson
- 4th/Jefferson
- 2nd/Park
- 4th/Park

Figure 2.12 shows the turning movement peak hour traffic counts at these intersections.

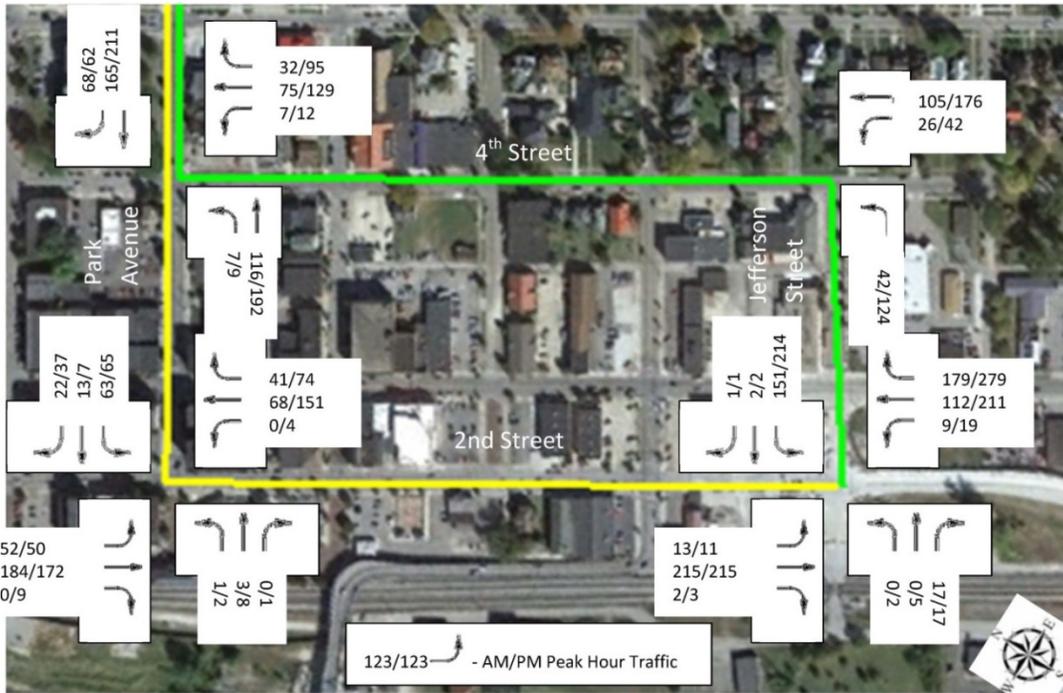


Figure 2.12: Turning movement peak hour traffic counts (March 2017)

3 Alternatives and Recommendations

Park Avenue Trucks

The signed truck route for access to US Highway 52 West (Ironton Hills Area) from the new Oakley C. Collins Memorial crossing location is north on 2nd Street and east on Park Avenue. The signed truck route from US Highway 52 West (Ironton Hills Area) to the bridge is recommended as west on Park Avenue and then south on 2nd Street. Modifications to the intersection of 2nd street/Park Avenue and the intersection of 4th Street/Park Avenue are recommended for each of these routes for the turning movements to/from Park Avenue.

2nd Street/Park Avenue Intersection

For traffic heading from US Highway 52 West (Ironton Hills Area) to the Oakley C. Collins Memorial crossing, Park Avenue to 2nd Street was evaluated to alleviate conflicts identified. Alternatives evaluated were to remove the left turn lane or to modify the stop bar location and width of sidewalk on Park Avenue.

The left-turn movement can be made within the existing geometry with modification to the location of the stop bar, sidewalks on Park Avenue, and the westbound lane for the northbound approach on 2nd Street. Figure 3.1 shows the truck wheel path for this intersection and the proposed stop bar location which is a maximum of 30 feet set back from the side street travel way and the proposed curb radius for the southeast corner. Removing the left turn lane would back up traffic through the Park Avenue and 3rd Street intersection.

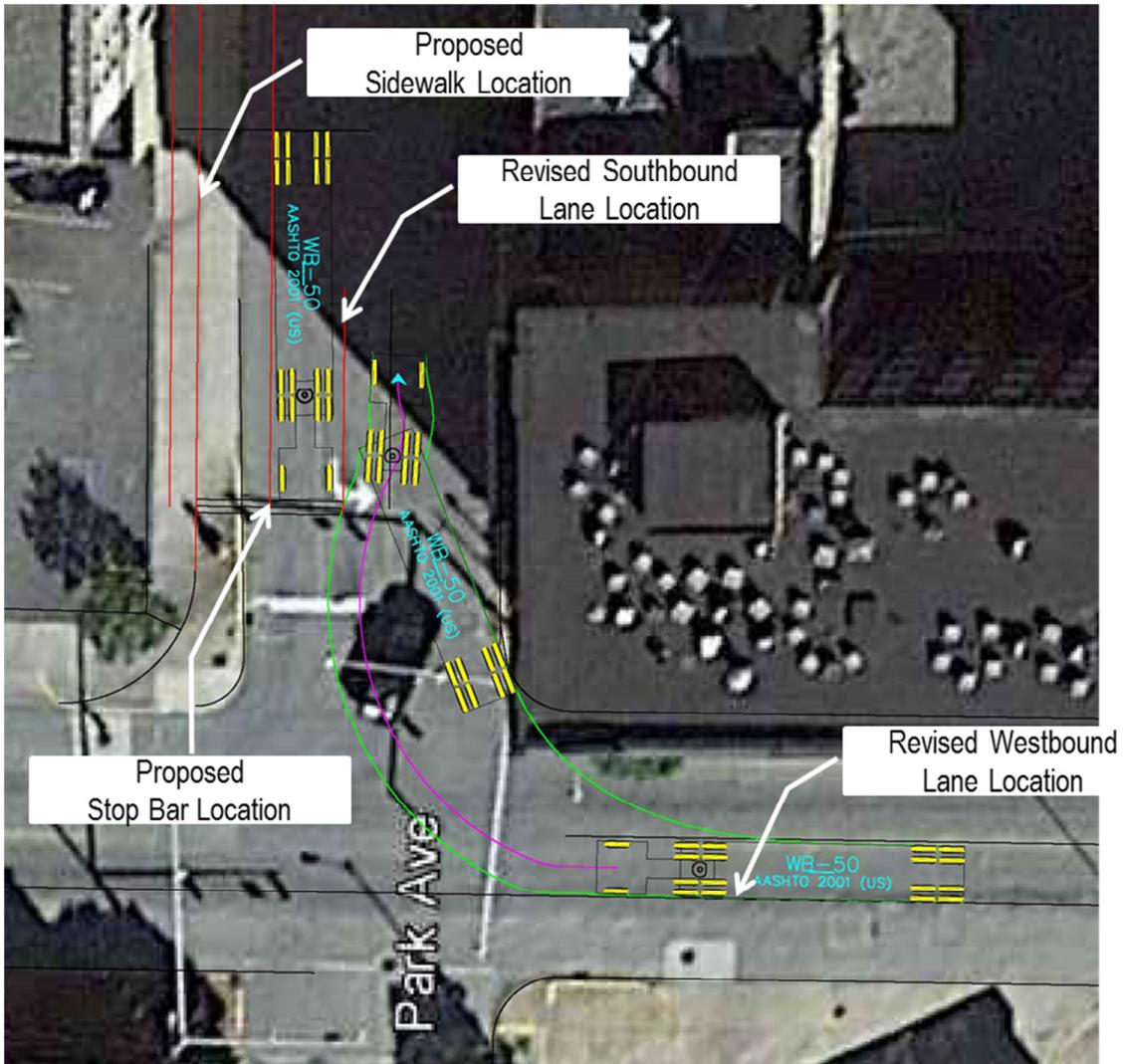


Figure 3.1: Recommended improvement for Park Ave. and 2nd Street Intersection

The characteristics of the site located on the southeast corner would allow for improvements to the curb radii that would accommodate the truck turning movement from the second approach lane. An approximately 30-foot corner radius is recommended at this location. The westbound approach stop bar would also need to be relocated back 9 feet to prevent encroachment into the approaching traffic by turning trucks.

Cost Estimates for these improvements is in the range of \$75,000 to \$125,000. This would include the cost of restriping to shift lanes on 2nd Street, restriping and moving the stop bar on Park Avenue, reducing the size of the sidewalk on Park Avenue, surveying, design, and construction engineering and inspection. Details of the cost estimates are shown in appendix B.

4th Street/Park Avenue Intersection for Alternative Route

Curb radii modifications are also recommended for one corner at the intersection of 4th Street at Park Avenue. Since the truck route will remain to be signed on 2nd street to Park Avenue, this improvement should be a secondary prioritization for the City, behind the improvements at the intersection of 2nd Street/Park Avenue. Alternatives were evaluated to adjust the turn radii or add a right turn lane and adjust the turn radii.

The characteristics of the site located on the southeast corner would allow for improvements to the curb radii that would accommodate the truck turning movement from the second approach lane. An approximately 30-foot corner radius is recommended at this location. Figure 3.2 shows the truck wheel path for this intersection, the proposed stop bar location, and proposed curb radius for the southeast corner. Adding a right turn lane would add additional cost and is not necessary for capacity.

Cost Estimates for these improvements is in the range of \$150,000 to \$200,000. This would include the cost of improving the radius on the corner, restriping for the stop bar on 4th Street, new sidewalk, relocating traffic signal pole, grading, right of way acquisition, surveying, design, and construction engineering and inspection. Details of the cost estimates are shown in Appendix B.



Figure 3.2: Recommended improvement for Park Ave. and 4th St. intersection

4 2nd Street

New development is anticipated on the south side of 2nd Street between Adams Street and Jefferson Street. This block of 2nd Street is highlighted in Figure 4.1.



Figure 4.1: 2nd Street Study Area between Jefferson Street and Adams Street

The existing land is used by a drive through convenience store, jewelry store, and fast food restaurant with seven drive curb cuts to 2nd Street, as shown in Figures 4.2 and 4.3. New development proposed on the properties is a commercial strip mall. A proposed drawing of the proposed development is shown in Figures 4.4 and 4.5.



Figure 4.2: 2nd Street looking southeast towards Jefferson Street



Figure 4.3: 2nd Street looking southwest towards Adams Street



Figure 4.4: Rendering of proposed new development on south side of 2nd Street between Adams Street and Jefferson Street

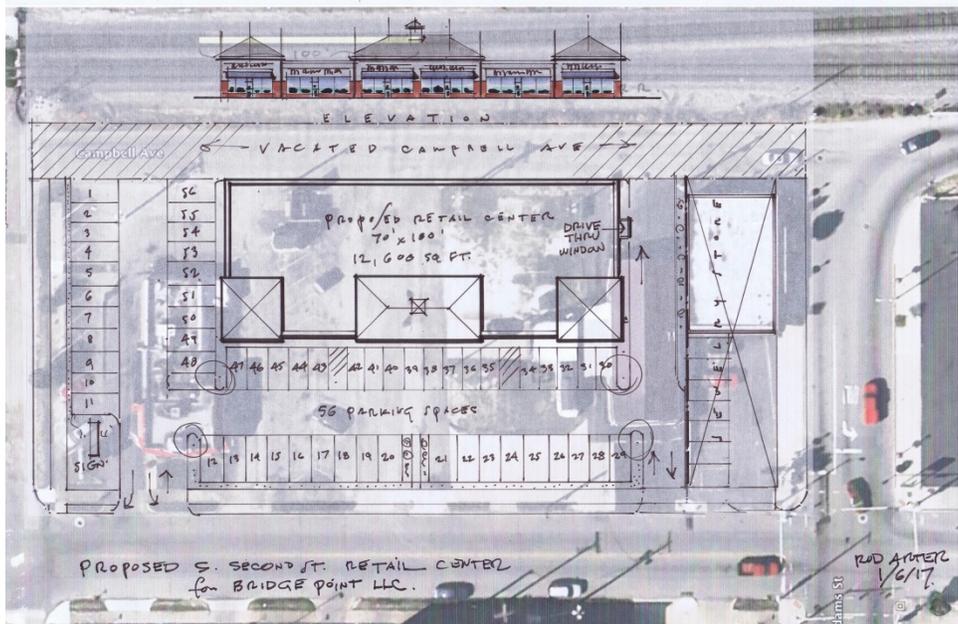


Figure 4.5: Plan concept of development along 2nd Street

The city has requested an analysis for the appropriate number and location of the driveways as well as a proposed concept to visually improve this block of 2nd Street. Also, since the opening of the Oakley C. Collins Crossing in November 2016, a back-up of traffic coming from Kentucky at the Jefferson Street intersection has been observed. This can be seen in Figure 4.6. An analysis was performed to determine the appropriate location of the driveways, beautification of the block as well as an

analysis to improve the 2nd Street/Jefferson Street intersection as part of these improvements. The traffic analysis for the intersection was conducted first. Peak period traffic counts were collected for the intersection of 2nd at Jefferson on March 15, 2017. The peak hour count data was used in a capacity analysis for this intersection during the average weekday morning and afternoon peak hours. The results are reported for the existing intersection laneage (Figure 4.7) and then for a proposed modified geometry (Figure 4.8) aiming to reduce the length of the queue on the bridge.



Figure 4.6: Photo looking southeast on 2nd Street to the Oakley C. Collins bridge at Jefferson Street



Figure 4.7: Existing geometry for 2nd St. and Jefferson St. intersection



Figure 4.8: Proposed modified geometry at 2nd St. and Jefferson St. intersection

To reduce the length of the traffic back-up on the bridge, the intersection geometry was proposed to be modified (Figure 4.8) by providing a dedicated right-turn lane for the approach from 2nd Street to the right turn to Jefferson Street. Table 2 below shows that the modified lanes at the intersection decreases the concerning queue lengths and does not impact the overall vehicle delay. As a result of this proposed change from the bridge approach, the intersection’s northwest approach would need to be modified as well. This would shift the northwest bound traffic on 2nd street to the center of the roadway since through traffic from the bridge would be a shared through-left lane in the center of the roadway. This would eliminate the left turn lane for traffic turning left from southeast bound 2nd street to Jefferson street. The traffic travelling southeast on 2nd street would have a shared left-through-right lane at the Jefferson street intersection. With this change in the approach lanes, the block of 2nd Street between Jefferson Street and Adams Street would be able to accommodate on-street parking on both sides of 2nd Street. This improvements is shown in Figure 4.9 with parking, driveway locations, sidewalk improvements, tree lawns, and curb bump outs.

Table 2: Peak Hour Capacity Analysis for Lane Alternatives

Peak Hour	Alternative	Parameter	2nd						Jefferson					
			Southeast			Northwest			Northeast			Southwest		
			L	T	R	L	T	R	L	T	R	L	T	R
AM	Existing	Delay (LOS)	6.2 (A)	5.2 (A)	5.4 (A)	6.2 (A)		-	-	28.1 (C)	12.6 (B)	9.4 (A)		
		Queue (ft.)	8	63	6	53		-	-	0	53	4		
	Modified	Delay (LOS)	5.2 (A)		4.6 (A)		5.3 (A)	-	-	28.1 (C)	12.6 (B)	9.4 (A)		
		Queue (ft.)	67		38		23	-	-	0	53	4		
PM	Existing	Delay (LOS)	7.9 (A)	4.6 (A)	4.9 (A)	7.4 (A)		18.9 (B)	19.9 (B)	25.5 (C)	18.5 (B)	15.4 (B)		
		Queue (ft.)	7	60	10	119		4	8	0	112	6		
	Modified	Delay (LOS)	5.9 (A)		5.9 (A)		7.2 (A)	16.5 (B)	17.4 (B)	22.7 (C)	12.8 (B)	12.1 (B)		
		Queue (ft.)	69		70		29	3	7	0	74	5		



Figure 4.9: Proposed 2nd Street improvements

Cost estimates for these improvements are in the range of \$75,000 to \$125,000. This would include the cost of restriping 2nd Street to add a northwest bound right turn lane, create a northwest bound through-left turn lane, remove southeast bound left turn lane, shift northwest bound through traffic, add parking, replace sidewalk, close driveways, and add tree lawn and trees. Details of the cost estimates are shown in Appendix B.

5 Public Involvement

Purpose and Goals of the Public Involvement Plan

The public involvement effort was created to promote two-way communication between the public and private sector stakeholders and the project team. The effort provided overall public awareness and promoted valuable stakeholder input, ultimately advancing the project and preferred improvements.

The public involvement effort included:

- Identifying key stakeholders and documenting their concerns.
- Involving these stakeholders at strategic points during the planning process.
- Providing easy to understand information regarding the project.
- Providing convenient ways for participants to supply input.
- Providing public involvement meeting and community meetings.

Work with Stakeholders and the Public

A description of the Committees, Public Meetings, and outreach efforts are summarized below.

Project Team

The project team was established with the primary purpose of managing the project and providing regularly scheduled review and input as the study progresses. The project team has communicated through e-mail and calls monthly. This committee provided technical expertise and administrative guidance to the project manager. The project team had the direct responsibility of managing the process and approving intermediate and final deliverables. The project team includes the following representatives:

- Max Francis, Planning Engineer, ODOT District 9
- Matt Selhorst, Project Manager, HDR Engineering
- Jody Sigmon, Transportation Planner, KYOVA
- Saleem Salameh, Deputy Executive Director/Technical Study Director, KYOVA
- Patrick Leighty, Lawrence County Engineer
- Dr. Bill Dingus, Executive Director, Lawrence County Economic Development Corporation
- Ralph Kline, Assistant Executive Director of Planning and Development, Ironton-Lawrence County Community Action Organization
- Pat Etchie, Mannik & Smith Group
- Michael Blau, Burton Planning Services

Advisory (Stakeholder) Committee

A cross-section of community representatives, were invited to serve on a committee which advised KYOVA throughout the study process to ensure the needs and concerns of the stakeholders are being addressed. Stakeholders are considered to be the business, civic, political and other groups to who outreach efforts for this project will be targeted. Table 3 provides a general listing of the key stakeholders

identified for the project(s). These stakeholders share the common interest of finding a resolution to the problems within the area.

Table 3: Advisory (Stakeholder) Committee Member Organization

Stakeholder Members	
City of Ironton Mayor Keith	Ohio DOT District 9
City of Ironton Street Department	KYTC
City of Ironton City Council Members	City of Chesapeake
Lawrence County Engineer	Village of South Point
Lawrence County Commissioners	Village of Proctorville
Lawrence County Economic Development Corporation	Village of Coal Grove
Greater Lawrence County Chamber of Commerce	Ironton-Lawrence County Community Action Organization
KYOVA Interstate Planning Commission	Ohio University-Southern Branch

July 18, 2017 Stakeholder Meeting

A stakeholder meeting was held July 18, 2017 at 12:00 pm at the Ironton Transit Center offices, 225 S. 2nd St. , Ironton, OH. There were approximately twelve (12) people in attendance and included members of the project team. The purpose of the meeting was to share the status of the project, and review the schedule. The meeting objectives included sharing the draft concepts and recommendations. A short presentation with an overview and status of the study findings were given first, then the stakeholders were asked to review the maps around the room and comment on the concepts. After the presentation, the Stakeholder group spent time reviewing concepts. They were able to ask questions of the project team as they provided comments.

Stakeholder comments summary -

Most comments were related to the bike plan update for Lawrence County and the City of Ironton such as evaluate the path under US 52 from Railroad Street to the Ironton Hill Shopping Center, evaluated paths in Proctorville near the fairgrounds, and talk to the State of Ohio about bikeway designations. The study team was requested to evaluate the new 2nd Street and Jefferson intersection. This intersection backs traffic onto the new bridge and also removed parking.

March 13, 2018 Stakeholder Meeting

A final stakeholder meeting for the Lawrence County Non-Motorized Study was held on Tuesday, March 13, 2018 at 11:00 a.m. at the Ohio University Proctorville Center. HDR presented the final draft reports and recommendations for the Truck Study, Park Avenue Study, and Ironton and Lawrence County Bicycle and Pedestrian Studies. Initial findings of the Ironton sidewalk assessment were also presented. During the presentation of the recommendations for each study, comments were provided by the attendees. Below is a summary of the comments received.

Truck Study:

- Add the cost for engineering (design) to the cost estimate of the improvements.
- Add a comment about promoting technology for the truck route in the final report.

Park Avenue study:

- Evaluate a continuous right turn lane from Park to EB US 52 entrance ramp.
- Place existing or new proposed on turn count figure for the signal warrants.

Lawrence County Bicycle and Pedestrian Study:

- Show the cost estimate of projects for Lawrence County.
- Break into the recommendations into areas for the County.

Ironton Bicycle and Pedestrian Study:

- Could Railroad street improvements be made to accommodate motorized wheelchairs also?
- There is an issue with safety crossing Park Avenue on the proposed 7th Street bike path.
- Examine the OVRDC interactive bike map that shows a proposed state bike route designation.
- Define the Multimodal zone as shown on the downtown Ironton map.
- Show existing vs proposed on the Ironton and Lawrence County improvements map.

Ironton Sidewalk Assessment:

- Define the recommendations by functional class.

Public Meeting

July 18, 2017 Public Meeting

A stakeholder meeting was held July 18, 2017 at 3:00 pm at the Ironton City Center, 301 South 3rd St., Ironton, OH. There were approximately five people in attendance from the public. The purpose of the meeting was for KYOVA to share the status of the project, review the draft concepts, and allow for comments. The meeting objectives included sharing the updated concepts, impacts, and costs. The public attendees were asked to take a look at the maps of the concepts around the room and comment on the concepts. They were able to ask questions of the KYOVA staff and project team.

Public Involvement comments summary –

Table 4 shows the comments that were received at the public meeting. Some comments applied to the bike plan studies and Park Avenue study.

Table 4: Public Involvement comments

No.	Comment	Study	Response
1	No 18 wheelers in DTWN causes issues with parking and traffic. Send to Vernon or Washington Street	Truck	Vernon and Washington Street not built to handle truck, too many residential properties
2	New commercial development not DTWN, route them to Coal Grove	Truck	Trip is too long for trucks to avoid
3	Trails - excellent idea. Use of existing trail @ Railroad St will increase current usage.	Bike	Addressed in other studies
4	3rd street traffic is an issue. Need additional parking.	Truck	Evaluating adding parking on 2 nd street.

5	Stop Light needed 9th/Park Ave. Bridge traffic is horrible. Crosswalk sign is not long enough to cross street. Traffic off bridge doesn't stop when turning right.	Park Ave.	Addressed in other studies
6		Truck	Evaluating modifying lanes at the 2 nd St. and Jefferson St. intersection
7	Not many trucks make a left hand turn off the bridge Crosswalk sign on 3rd street is not long enough to cross street. Traffic is an issue	Truck	Evaluating modifying lanes at the 2 nd St. and Jefferson St. intersection
8	Why a wide 3 lane turn to Madison instead of Park Ave?	N/A	
9		Park	Addressed in other studies
10	Why is there not a bike lane on the new bridge?	Truck	Width of bridge set by the state for construction
11	Damaged Sidewalks	Sidewalks	Addressed in other studies
12	No parking signs needed on 3 rd St. Parking issues on 3rd st. Traffic congestion going west on 3rd st	N/A	
13		N/A	
14	When will project be completed	Park	Addressed in other studies

Sign-in sheets, presentation from the meeting, and comment sheets are included in appendix C.

6 Implementation Plan and Schedule

Based on the previous analysis, KYOVA, the City of Ironton, and Lawrence County should prioritize the recommended improvements if funding is not immediately available for all improvements. These recommendations address the travel patterns in regards to the new river crossing including improvements at 2nd/Jefferson, 2nd street, 2nd/Park, 4th/Park. The recommended implementation priority is:

- 1) 2nd Street/Jefferson Street intersection restriping and 2nd street improvements (\$75,000 to \$125,000)
- 2) 2nd Street/Park Avenue intersection improvements (\$75,000 to \$125,000)
- 3) 4th Street/Park Avenue intersection improvements (\$150,000 to \$200,000)

Funding sources available for these improvements include the KYOVA MPOSTBG: Surface Transportation Block Grant Program, Appalachian Regional Council (ARC) funding grants, Community Development Block Grants (CDBG), and ODOT roadway paving program funds.

The following overview schedule (Table 5) for the implementation provides a guide for the development of the recommended improvements. Survey, geotechnical investigation, subsurface utility locations (SUL), plans (design/r/w), environmental clearance, utility coordination and clearance, and right of way acquisition may have to be conducted prior to construction and should be included in the cost estimate. Construction management, engineering, and inspection should also be included in the project cost estimate. The design of the intersection improvements should also consider incorporating new technology that allows for vehicles and trucks to connect to the frequency of the intersection traffic signals. This technology would enhance safety by providing information on safe stopping distances and collision avoidance.

Table 5: Implementation Schedule Overview

Tasks	Weeks	2 nd Street/Jefferson Street intersection restriping and 2 nd street improvements	2 nd Street/Park Avenue intersection	4 th Street/Park Avenue intersection
Survey	3	X	X	X
Geotechnical Investigations	3	X	X	X
SUL	3	X	X	X
Utility coordination	Ongoing	X	X	X
Design Stage 1 (Includes Survey, Geotech, and SUL time)	12	X	X	X
Preliminary right of way (ROW) plans	6			X
Environmental Clearance (time from start of project)	16-22	Depends on funding and footprint	Depends on funding and footprint	Depends on funding and footprint
Design Stage 2* (Includes review time of Stage 1 plans and Preliminary ROW if applicable)	12	X	X	X
Final ROW plans	4			X
Design Stage 3 (Includes review time of Stage 2 plans and Final ROW plans)	12	X	X	X
Utility Clearance	12	X	X	X
Final Plan Package	4	X	X	X
ROW Acquisition	26			X

*Design Stage 2 and 3 maybe combined to reduce time



Appendices

Appendix A. Truck turning analysis

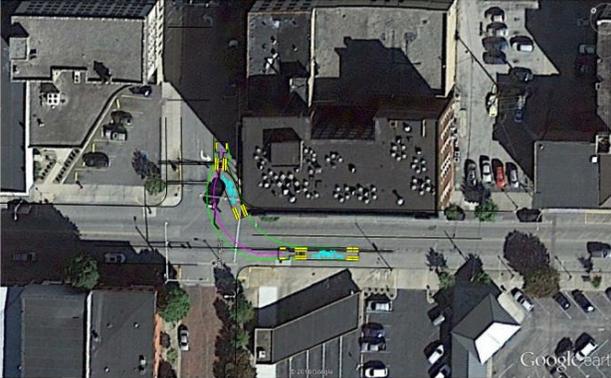
Truck travel from 2nd turning onto Park Ave with current striping



Location necessary (relocated stop bar) for truck turning onto 2nd from Park Avenue without opposing traffic conflicts



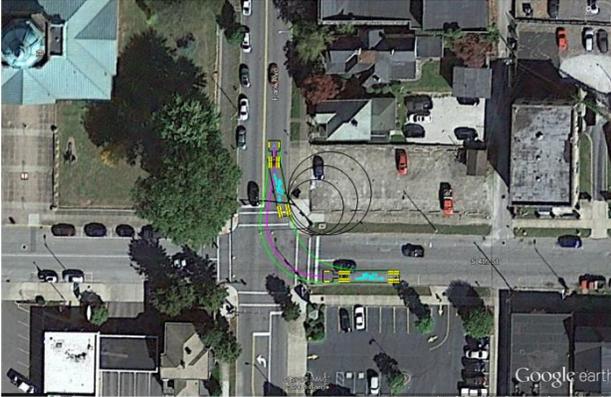
Location necessary for truck turning from 2nd onto Park Avenue without conflicts on Park Avenue (opposing traffic and building)



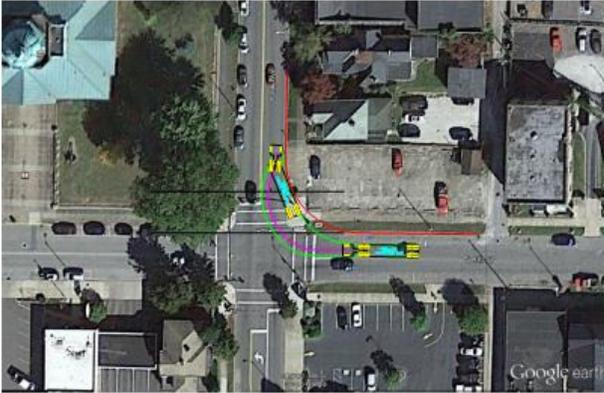
Truck travel with no conflict for truck turning to Park from 2nd by shifting sidewalk on Park to the west and lanes on 2nd to the south.



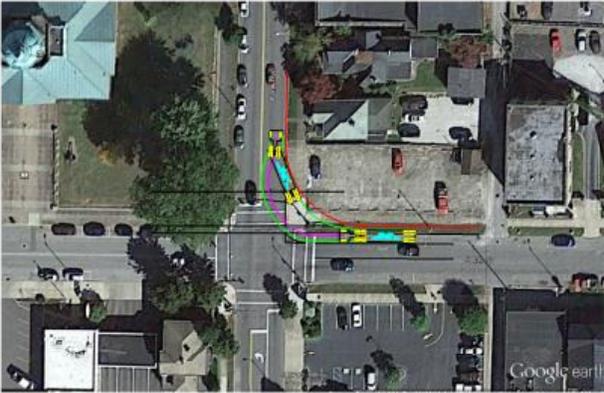
Location necessary for truck turning from 4th onto Park Avenue without conflicts on Park Avenue (opposing traffic and sidewalk)



Truck travel from 4th turning onto Park Ave with current striping and sidewalk



Truck travel from 4th turning onto Park Ave with a proposed right turn lane with current sidewalk





Appendix B. Cost Estimates

Description	Percent	4th at Park	2nd at Park		2 nd Street between Jefferson and Adams	
		Amount	Amount		Amount	
Roadway	10%	\$ 12,500.00		\$ 12,500.00		\$ 12,500.00
Erosion Control	2%	\$ 2,500.00		\$ 2,500.00		\$ 2,500.00
Drainage	10%	\$ 12,500.00		\$ 12,500.00		\$ 12,500.00
Pavement	40%	\$ 50,000.00		\$ 15,000.00		\$ 15,000.00
Maintenance of Traffic	10%	\$ 12,500.00		\$ 12,500.00		\$ 5,000.00
Lighting	2%	\$ 2,500.00				\$ -
Traffic Signal	20%	\$ 25,000.00				\$ -
Traffic Control Signs & Pavement Markings	1%	\$ 1,250.00		\$ 1,250.00		\$ 1,250.00
Incidentals	5%	\$ 6,250.00		\$ 6,250.00		\$ 6,250.00
	100%	\$ 125,000.00		\$ 62,500.00		\$ 55,000.00
Contingency	30%	\$ 37,500.00	\$ -	\$ 18,750.00	\$ -	\$ 16,500.00
Engineering	10%	\$ 12,500.00	\$ -	\$ 6,250.00	\$ -	\$ 5,500.00
Construction Cost		\$ 175,000.00		\$ 87,500.00		\$ 77,000.00
R/W Costs (0.01 acres)		\$ 5,000.00				

Appendix C. Stakeholder and PI meeting documentation

Appendix C. Stakeholder and PI meeting documentation

July 18, 2017 Public Involvement Meeting

Lawrence County Non-Motorized Transportation Studies
 Public Involvement Meeting
 Tuesday, July 18, 2017 | 3:00 pm - 6:00 pm

Ironton City Center,
 301 S. 3rd Street, Ironton, OH



FIRST & LAST NAME	MAIL ADDRESS, CITY & ZIP CODE	PHONE #	EMAIL ADDRESS
1. YONNELL DeKay Simmoff	612 South 3rd St. Ironton, Ohio 45638	740 550-9393	YKsdance@gmail.com
2. Sam Hargraves	2024 So. 10th St. Ironton, OH 45638 615 So. 5th St. Ironton, OH 45638 allen.breed@global.net	740 533 7801	sghargraves@irontonline.com
3. Carol Allen		740-550-5655	
4. PARRICK D. LEIGHTY	111 So. 4th St. Ironton, OH 45638	740-533-4317	pleighty@lawrencecountyengineer.org
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			



Lawrence County Transportation Studies Open House Public Involvement Meeting

The KYOVA Interstate Planning Commission is conducting transportation studies for Lawrence County and the City of Ironton. The studies are identifying short-term and long-term solutions that will address the truck movements within the City of Ironton following the opening of the new Ohio River crossing, the future of bicycle and pedestrian plans for the County and City of Ironton, and improvements to Park Avenue within the City of Ironton.

A public involvement meeting will provide valuable input and a unique perspective into the development of the plans. KYOVA would like to request your participation to provide input into draft concepts that have been developed. A public meeting will be held:

**Date: July 18, 2017
Time: 3:00 pm to 6:00 pm
Location: Ironton City Center,
301 South 3rd St.,
Ironton, OH**

The purpose of this meeting is to share the status of the process, review draft concepts, and address any concerns as we proceed forward. The meeting will be held in an open house format to allow you to review the information at your pace and to provide information and ask questions of the project team. No formal presentation will be scheduled during this time.

If you should have any questions about the meeting or project, please contact matt.selhorst@hdrinc.com.

LAWRENCE COUNTY TRANSPORTATION STUDIES PUBLIC OPEN HOUSE

WHAT TO DO AT THIS MEETING?

- Walk around and review information (open house)
- Ask questions and provide comments to staff
- No formal presentation
- Leave written comments or send in after meeting



Any Input or Questions?

Matt Selhorst
614-257-8353
Matt.selhorst@HDRinc.com



KYOVA Interstate Planning Commission

LAWRENCE COUNTY TRANSPORTATION STUDIES

Varies Studies of Transportation Issues in Lawrence County and Ironton

▪ **Tasks:**

1. Truck Mobility Study – Address any issues with opening of the new Ironton-Russell bridge
2. Lawrence County and City of Ironton Bicycle/Pedestrian Plan
3. Park Avenue Traffic Study – Develop short and long term improvements to improve safety and corridor operations for Park Avenue from 6th Street to US 52 ramps
4. Ironton Sidewalk Assessment – Assess for ADA compliance

▪ **Process for the studies:**

- Obtain public input
 - Stakeholder and Public Involvement - July 2017
- Finalize recommended improvements and stakeholder input
 - August 2017
- Finalize a strategic plan for implementation
 - September 2017

LAWRENCE COUNTY TRANSPORTATION STUDIES

TRUCK FLOW STUDY

- Existing conditions
 - Trucks to US 52 via 3rd Street,
 - Turns are ok
 - Trucks to US 52 via Park Street use 2nd Street or 4th Street
 - Turns at 4th/Park and 2nd/Park have conflicts
- Evaluated intersections
 - 2nd/Jefferson
 - 4th/Jefferson - No issues
 - 2nd/Park
 - 4th/Park



LAWRENCE COUNTY TRANSPORTATION STUDIES TRUCK FLOW STUDY

Turning Movement Peak Hour Traffic Counts (March 2017)

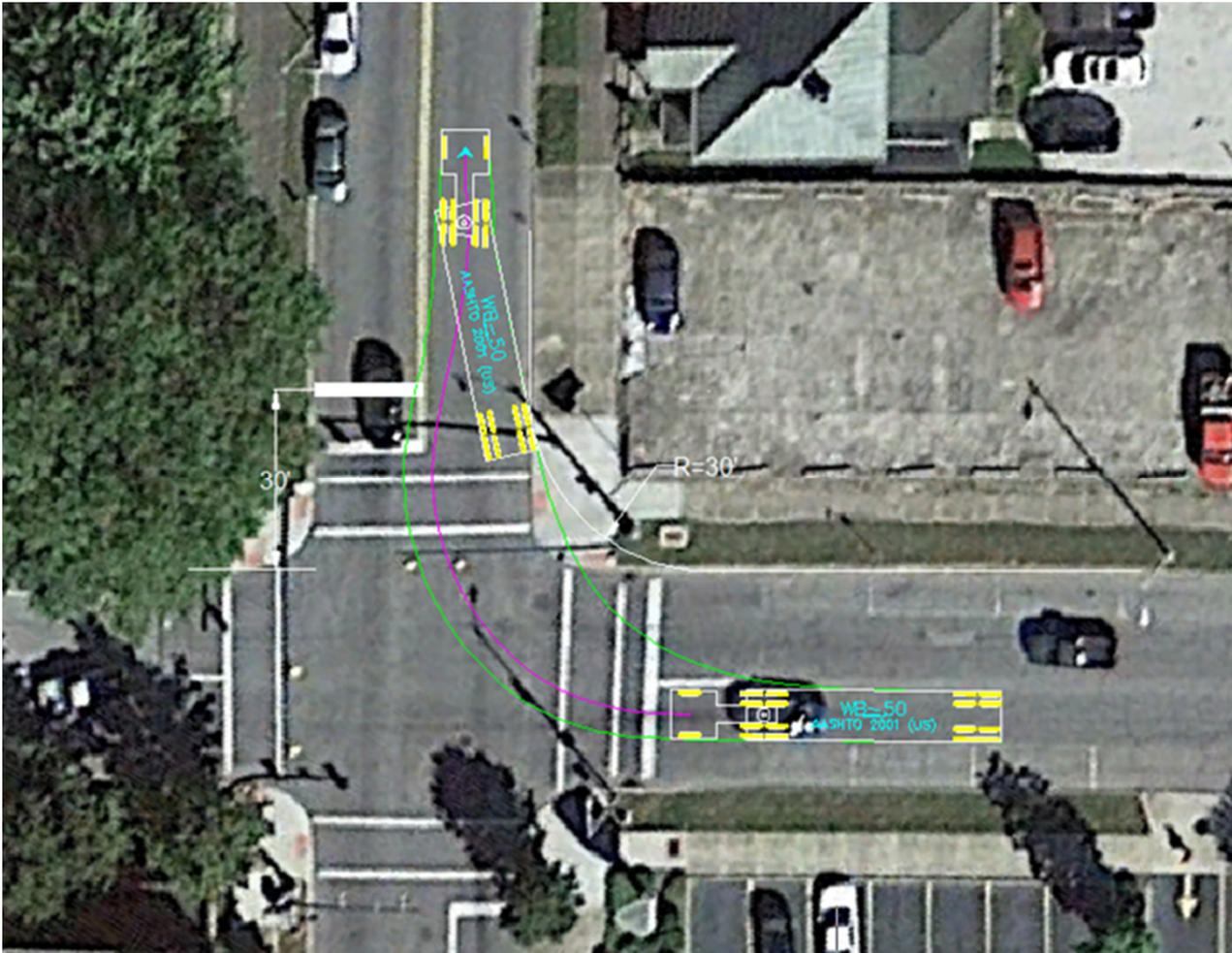




**PROPOSED
IMPROVEMENT FOR
TRUCKS TURNING
FROM 2ND STREET TO
PARK AVENUE:**

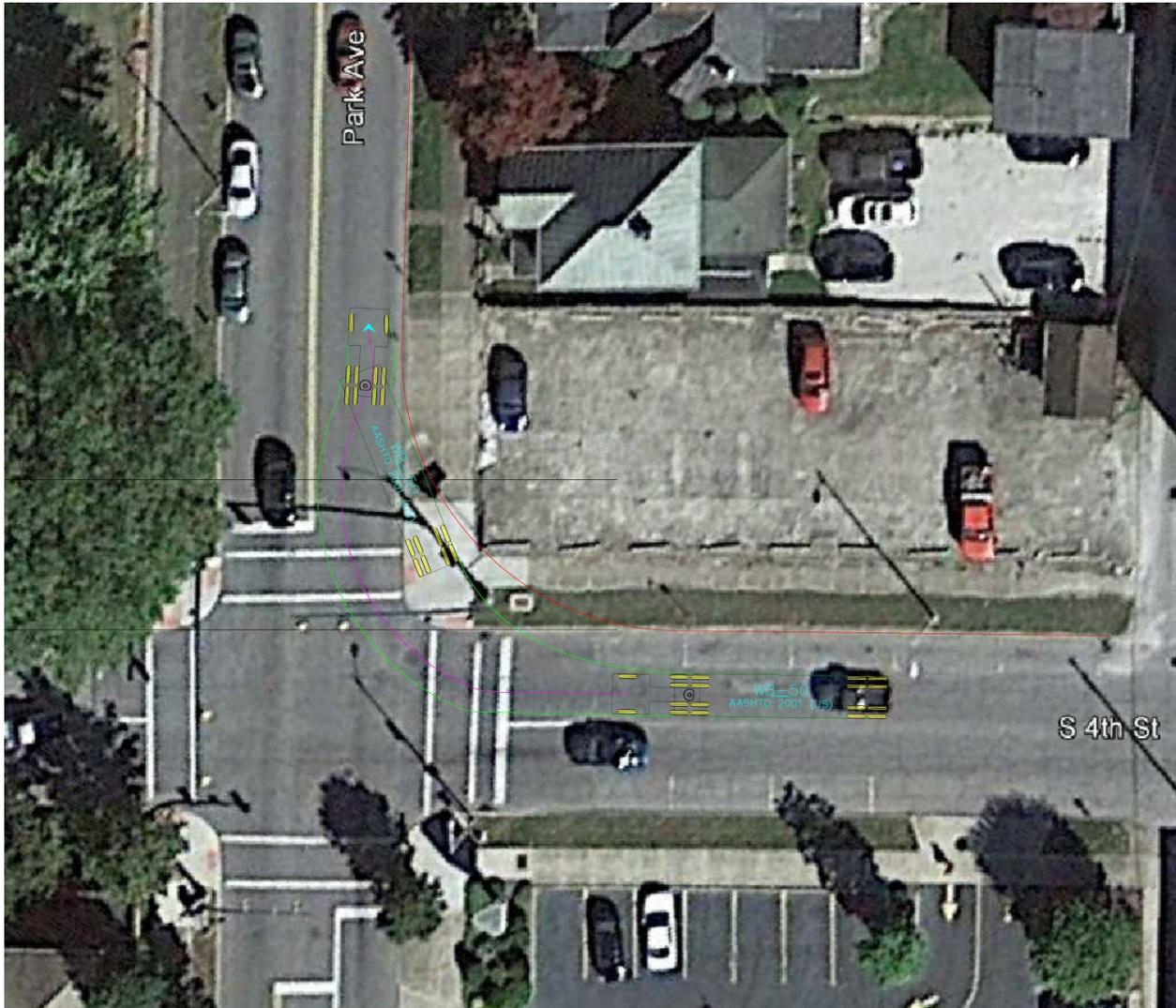
**MOVE STOP BAR BACK
AND SHIFT LANES AND
SIDEWALK RIGHT ON
PARK AVENUE**

**SHIFT LANES LEFT ON
2ND STREET**



**TRUCKS
TURNING FROM
4TH STREET TO
PARK AVENUE:**

**TRUCKS
CURRENTLY
NEED TO BE IN
THE FAR LEFT
LANE TO MAKE
TURN**



**PROPOSED
IMPROVEMENT
FOR TRUCKS
TURNING FROM
4TH STREET TO
PARK AVENUE:**

**ADJUST
SIDEWALK AND
PARKING LOT TO
MAKE RIGHT
TURN FROM
RIGHT LANE**



Existing lanes

2ND AND JEFFERSON STREET

Currently backs up to
120 ft. for the
through/right lane coming
from the new bridge





Proposed lanes

2ND AND JEFFERSON STREET

Revised lanes
will reduce
through traffic
back up by 50
ft. by removing
right turns into a
separate lane

PROPOSED REVISION TO 2ND STREET



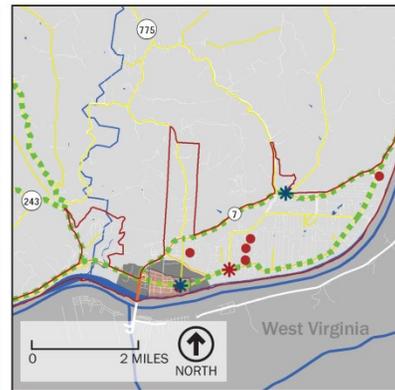
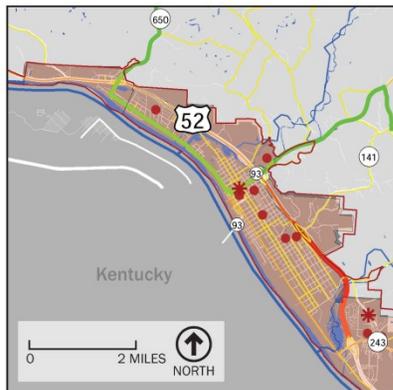
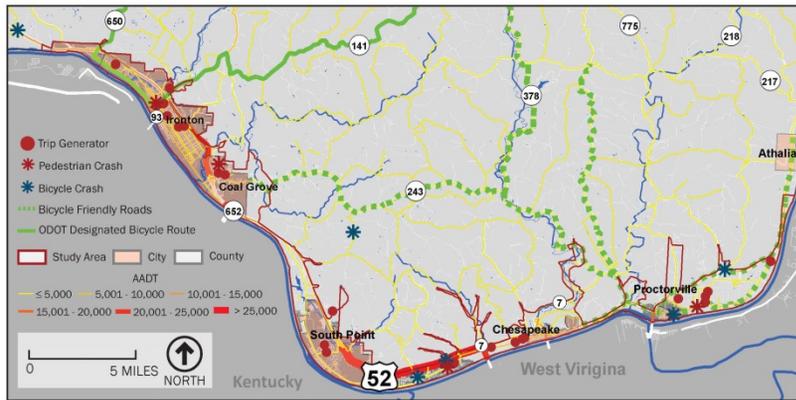
Lawrence County Bicycle & Pedestrian Plan | Existing Conditions



Walking Environment: Pedestrian facilities are lacking on most roadways in the study area, but sidewalks do exist in some parts of more urban areas, such as in the City of Ironton and the villages of Proctorville and Coal Run. Ironton has a robust sidewalk network, especially in the downtown area around Park Avenue. Residential neighborhoods east of Downtown also feature sidewalks.

Bicycling Environment: There are no signed and marked bicycle facilities within the study area.

Survey Results: In April and May 2017 a public survey was distributed to stakeholders in Lawrence County.



A bicycle-friendly route on SR-7 between SR-775 and Athalia (north and east of Proctorville)



"State Law: Stop to Pedestrians" sign in Ironton



ADA-compliant curb ramps in Ironton



Outdated curb ramp in Ironton



Wide sidewalk on Park Avenue



Parked cars on the sidewalk



Bicycle and pedestrian generator Ironton High School



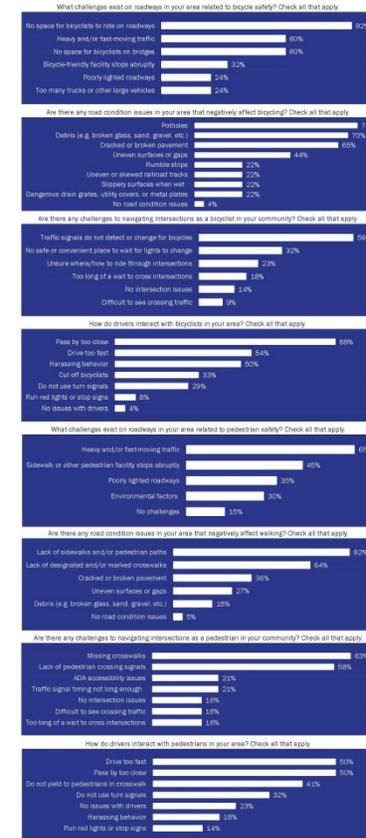
Bicycle and pedestrian generator Briggs Library - Eastern Branch (Proctorville)



Goat path on Park Avenue



Walking under the US-52 overpass



Lawrence County Bicycle & Pedestrian Plan | Recommended Facilities



The facility treatments shown here represent a sampling of some of the tools that are used to create safe and convenient multimodal networks in rural areas. Facility types are divided into three categories:

1 Mixed Traffic Facilities
Mixed traffic facilities do not separate different types of users; rather, all users share the same space and yield as necessary to accommodate other traffic. These facilities offer little protection for pedestrians and bicyclists from motor vehicles, and are generally appropriate on low-speed, low-volume roads.

2 Visually Separated Facilities
Visually separated facilities are directly adjacent to the motor vehicle travel area. They reserve space within the right-of-way for exclusive use by pedestrians and/or bicyclists. Typically, they are designated with pavement markings and signage but lack physical barriers. These facilities are best utilized on moderately busy roads with medium to high speeds.

3 Physically Separated Facilities
Physically separated facilities completely remove bicyclists, pedestrians, and other non-motorized users from the motor vehicle travel area. Some facilities, such as cycle tracks and side paths, remain part of the roadway network, while others, such as shared use paths, create a distinct network for non-motorized users. These facilities are generally much safer, narrowing the potential for conflict with motor vehicles.



YIELD ROADWAY/SHARED STREET

PROTECTION LEVEL	🛡️🛡️🛡️🛡️
INSTALLATION COST	\$\$\$
DURABILITY	🔗🔗🔗🔗
AESTHETICS	👁️👁️👁️👁️
USERS	🚶🚲🚗

Yield Roadway/Shared Street Benefits

- Less costly to build and/or maintain than fully paved cross sections.
- Connects local residential areas to destinations on the network.
- Limits impermeable surface area and minimizes stormwater runoff.
- Maintains aesthetic of narrow roads and uncurbed road edges.
- Encourages slow travel speed when narrower than 20 ft.
- Can support a larger tree canopy when located within wide unpaved roadside areas.
- Supports on-street or shoulder parking for property access.
- Low maintenance needs over time.

Application: In Lawrence County, yield roadways could be used in built-up urban areas on quiet streets, such as residential neighborhoods in Ironton and Proctorville.



BICYCLE BOULEVARD

PROTECTION LEVEL	🛡️🛡️🛡️🛡️
INSTALLATION COST	\$\$\$
DURABILITY	🔗🔗🔗🔗
AESTHETICS	👁️👁️👁️👁️
USERS	🚲🚗

Bicycle Boulevard Benefits

- Increases comfort for people bicycling by reducing motor vehicle operating speeds and volumes.
- Connects local residential roads to commercial corridors and community services such as schools.
- Improves conditions for pedestrians when implemented with sidewalks and enhanced pedestrian crossings.
- May reduce the incidence of serious injuries through reduced travel speeds.
- Improves the quality of life for residents through calmer traffic and safer crossings.
- Less visually impactful than separated facilities.

Application: In Lawrence County, bicycle boulevards could be used in built-up urban areas on quiet streets, such as residential neighborhoods in Ironton and Proctorville.



ADVISORY SHOULDER

PROTECTION LEVEL	🛡️🛡️🛡️🛡️
INSTALLATION COST	\$\$\$
DURABILITY	🔗🔗🔗🔗
AESTHETICS	👁️👁️👁️👁️
USERS	🚲🚗

Advisory Shoulder Benefits

- Provides a delineated but nonexclusive space available for biking on a roadway otherwise too narrow for dedicated shoulders.
- Minimizes potential impacts to visual or natural resources through efficient use of existing space.
- Functions well within a rural and small town traffic and land use context.
- May function as an interim measure where plans include shoulder widening in the future.
- Supports the natural environment through reduced paved surface requirements.

Application: Advisory shoulders could be installed on state routes with low to moderate volumes and speeds as an interim measure, before upgrading them to paved shoulders.



PAVED SHOULDER

PROTECTION LEVEL	🛡️🛡️🛡️🛡️
INSTALLATION COST	\$\$\$\$
DURABILITY	🔗🔗🔗🔗
AESTHETICS	👁️👁️👁️👁️
USERS	🚶🚲

Paved Shoulder Benefits

- Improves bicyclist experiences on roadways with higher speeds or traffic volumes.
- Provides a stable surface off the roadway for pedestrians and bicyclists to use when sidewalks are not provided.
- Reduces pedestrian "walking along roadway" crashes.
- Can reduce "bicyclist struck from behind" crashes, which represent a significant portion of rural road crashes.
- Provides advantages for all roadway users, by creating space for bicyclists, pedestrians, and motor vehicles.

Application: Walkable and bikeable shoulders should be provided on all state routes in Lawrence County where no other facilities exist, especially those routes routinely used by pedestrians and bicyclists.



BIKE LANE

PROTECTION LEVEL	🛡️🛡️🛡️🛡️
INSTALLATION COST	\$\$\$\$
DURABILITY	🔗🔗🔗🔗
AESTHETICS	👁️👁️👁️👁️
USERS	🚲

Bike Lane Benefits

- Provides additional separation distance between the sidewalk and motor vehicle travel area, if a sidewalk is present.
- Connects and completes bikeway networks through built-up areas.
- Provides a designated space on the roadway suitable for many skilled bicyclists within built-up areas of small communities.
- Can support school access by bicycle when configured as a wide bike lane on lower-speed, lower-volume streets.
- Provides additional visual cues to drivers that they should expect bicyclists on the roadway. This can be particularly useful when transitioning to a built-up area from a highway context.

Application: Bike lanes are recommended for urbanized areas in Lawrence County.



CYCLE TRACK

PROTECTION LEVEL	🛡️🛡️🛡️🛡️
INSTALLATION COST	\$\$\$\$
DURABILITY	🔗🔗🔗🔗
AESTHETICS	👁️👁️👁️👁️
USERS	🚲

Cycle Track Benefits

- Dedicates and protects space for bicyclists in order to improve perceived comfort and safety.
- Eliminates risk and fear of collisions with overtaking vehicles.
- Reduces risk of "dooring" compared to a bike lane and eliminates the risk of a doored bicyclist being run over by a motor vehicle.
- Prevents double-parking, unlike a bike lane.
- Low implementation cost by making use of existing pavement and drainage and by using parking lane as a barrier.
- Accommodates bicyclists of all confidence levels.

Application: In Lawrence County, cycle tracks could be used on major roads in heavy-traffic urban areas.



SHARED USED PATH/SIDEPATH

PROTECTION LEVEL	🛡️🛡️🛡️🛡️
INSTALLATION COST	\$\$\$\$
DURABILITY	🔗🔗🔗🔗
AESTHETICS	👁️👁️👁️👁️
USERS	🚶🚲

Shared Use Path Benefits

- Provides a dedicated facility for users of all ages and abilities.
- Provides, in some cases, access to areas that are otherwise served only by limited access roadways.
- Supports tourism through convenient access to natural areas or as an enjoyable recreational opportunity itself.
- Provides non-motorized transportation access to natural and recreational areas, which can especially help low-income people obtain access to recreation.
- Paths have a small footprint and can display a distinctly rural character.

Application: In Lawrence County, shared use paths and side paths are recommended for long-distance rural connections between urban areas.

Sidepath Benefits

- Completes networks where high-speed roads provide the only corridors available.
- Fills gaps in networks of low-stress local routes such as shared use paths and bicycle boulevards.
- Provides a more appropriate facility for users of all ages and abilities than shoulders or mixed traffic facilities on roads with moderate or high traffic intensity.
- Encourages bicycling and walking in areas where high-volume and high-speed motor vehicle traffic would otherwise discourage it.
- Maintains rural character through reduced paved roadway width compared to a visually separated facility.



SIDEWALK

PROTECTION LEVEL	🛡️🛡️🛡️🛡️
INSTALLATION COST	\$\$\$\$
DURABILITY	🔗🔗🔗🔗
AESTHETICS	👁️👁️👁️👁️
USERS	🚶

Sidewalk Benefits

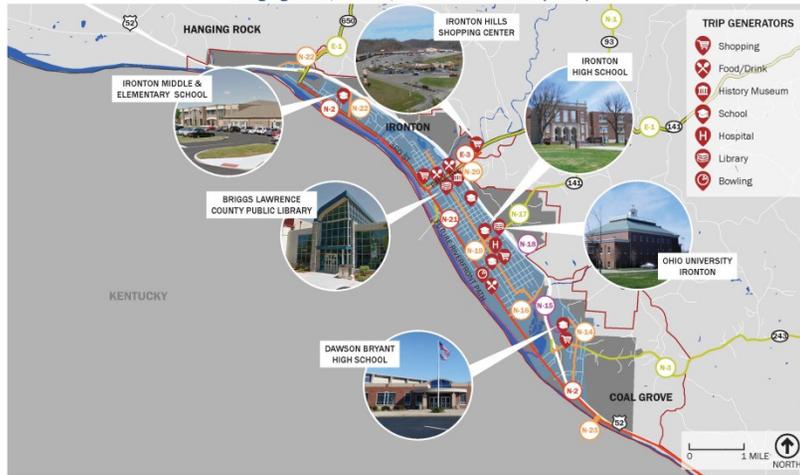
- Provides a dedicated place within the public right-of-way for pedestrians to safely travel and reduces pedestrian collisions in rural areas.
- Reduces "walking along roadway" crashes.
- May notably increase levels of walking in areas with high traffic speeds and/or volumes.

Application: Sidewalks are recommended for all streets in urban areas of Lawrence County.

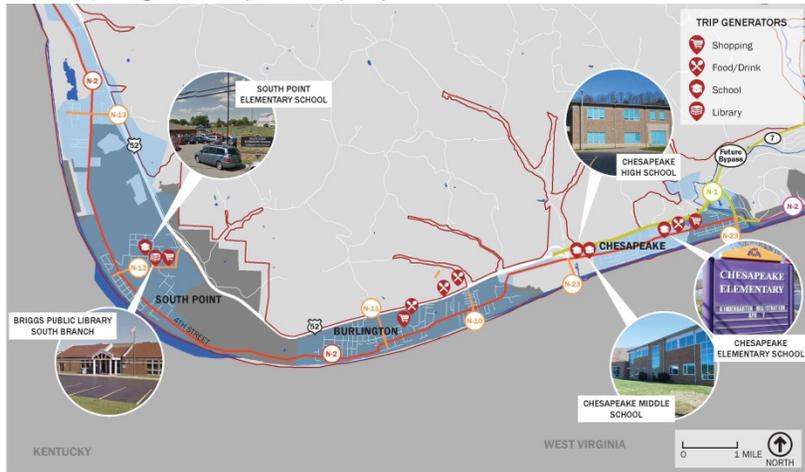
Lawrence County Bicycle & Pedestrian Plan | Preliminary Concept Routes



Hanging Rock, Ironton, & Coal Grove Concept Map



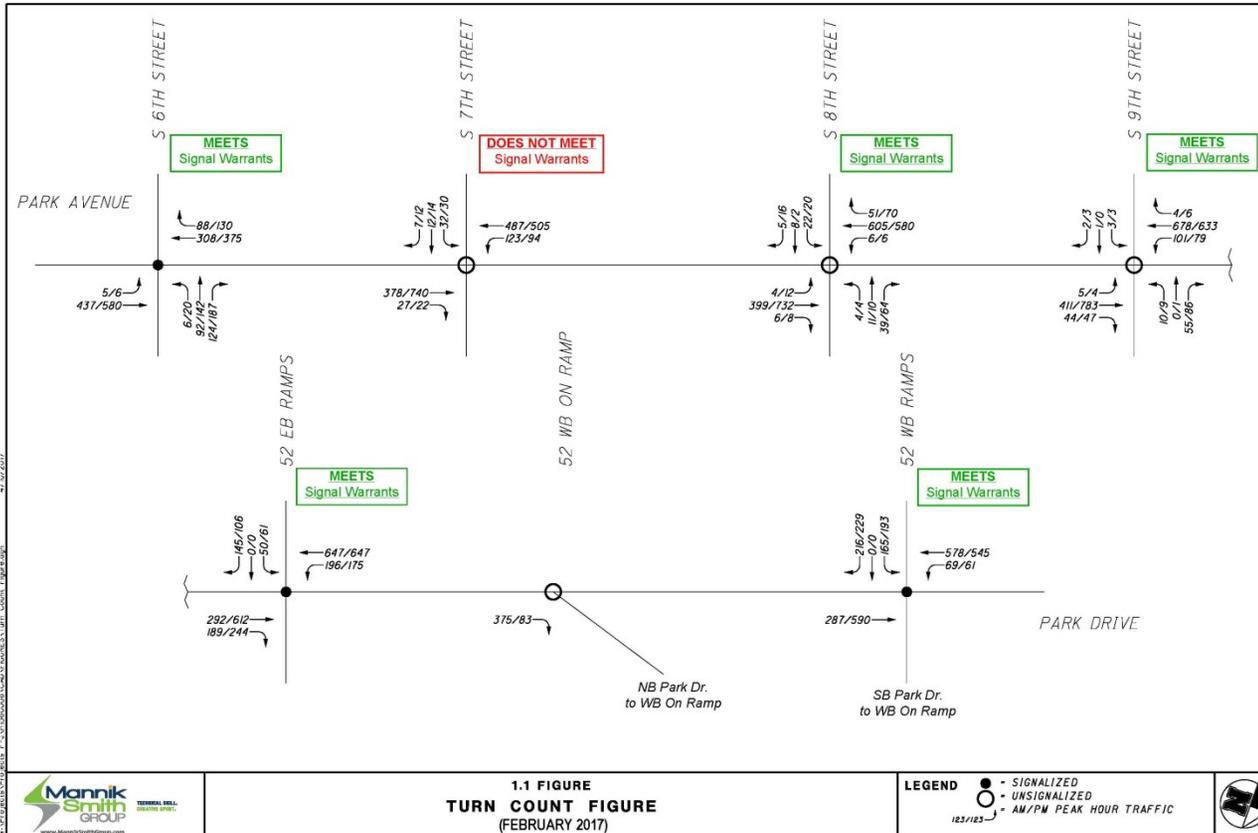
South Point, Burlington, & Chesapeake Concept Map



Proctorville Concept Map

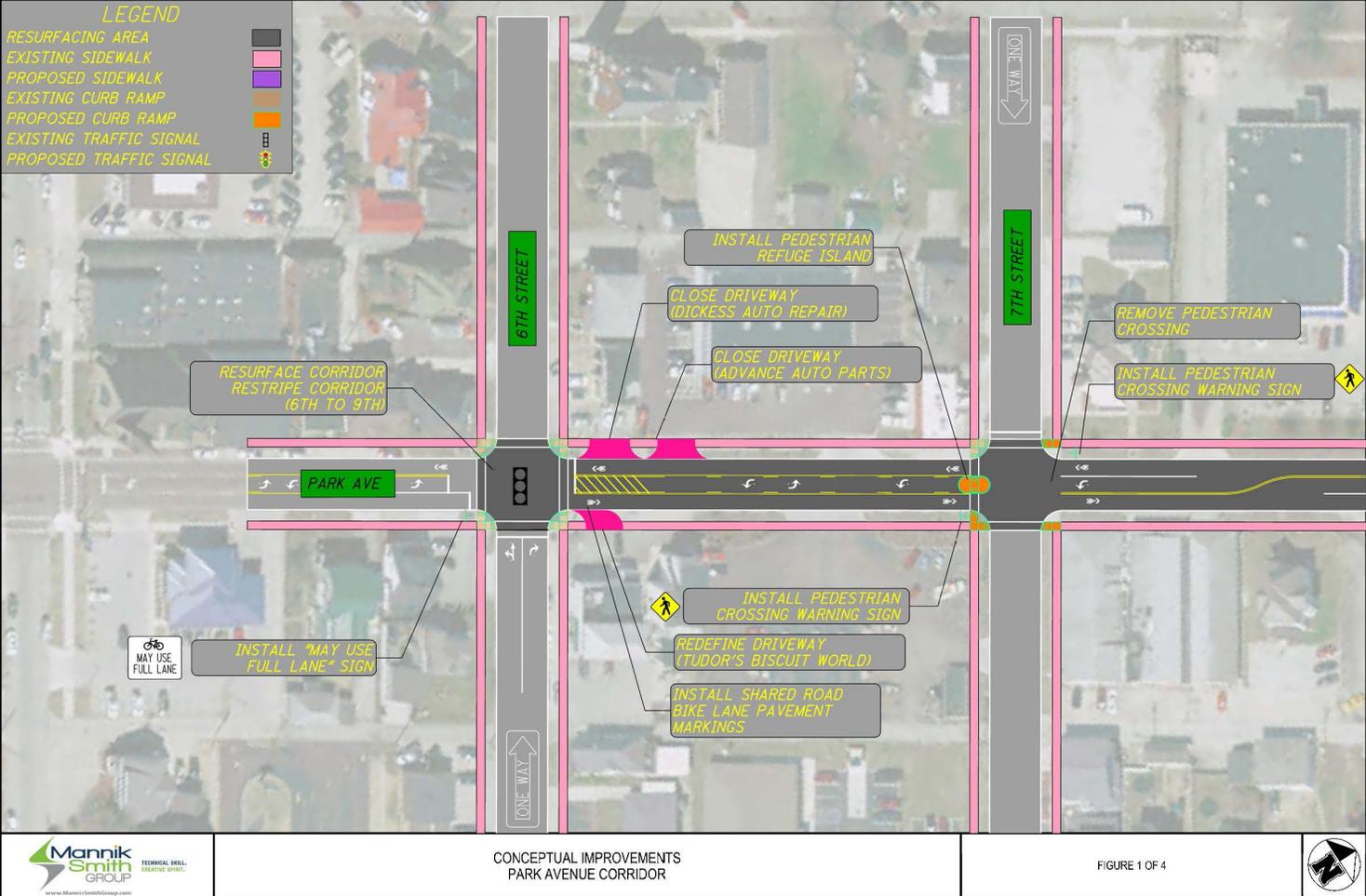


PARK AVENUE TRAFFIC STUDY

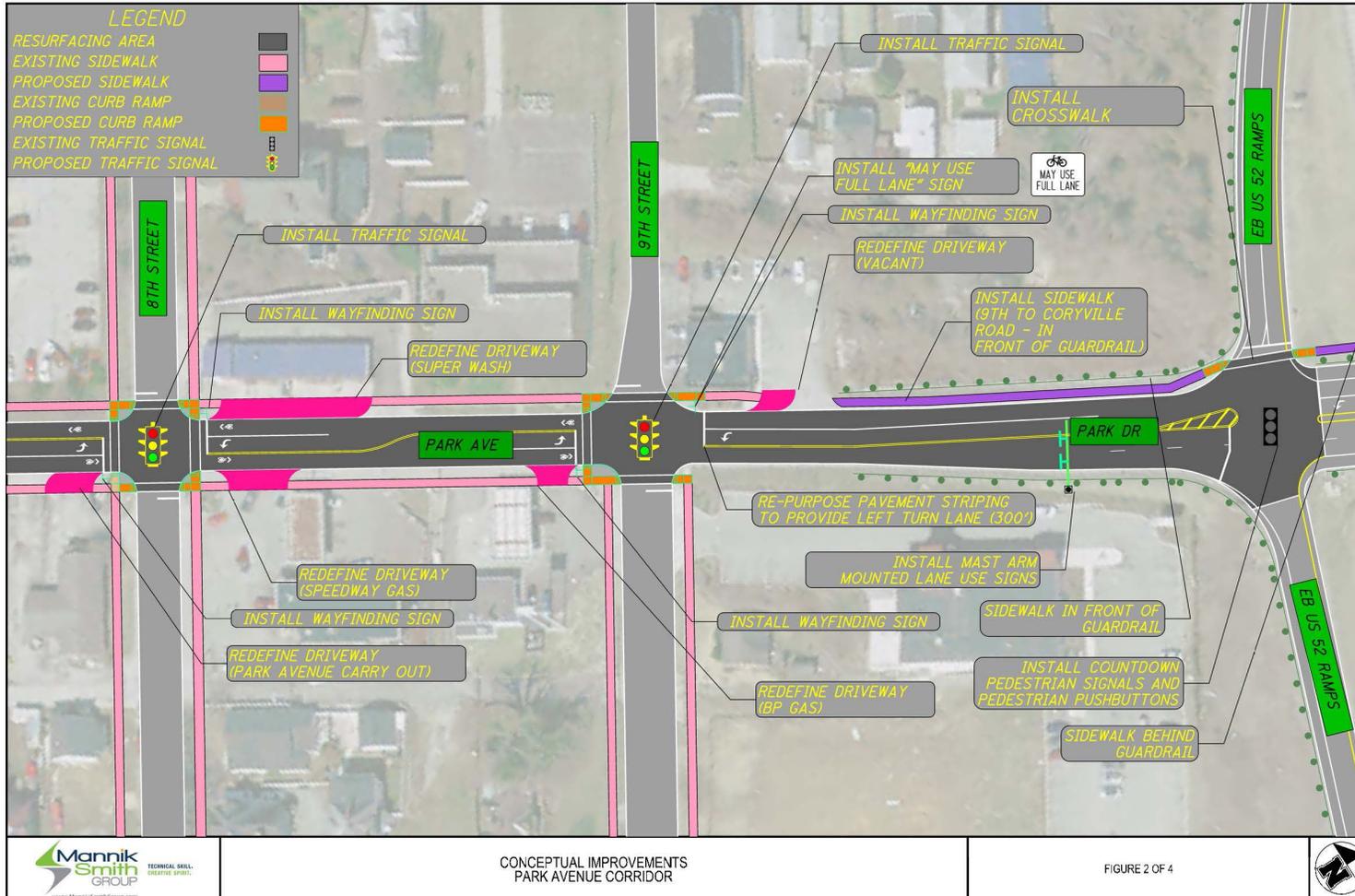


- Traffic signals warranted at 6th, 8th, 9th street, and US 52 ramp intersections
- Crash rates are greater than the statewide average
- Side streets currently operate with a delay (up to 1.2 minutes)
- Projected to have a delay of up to 13 minutes

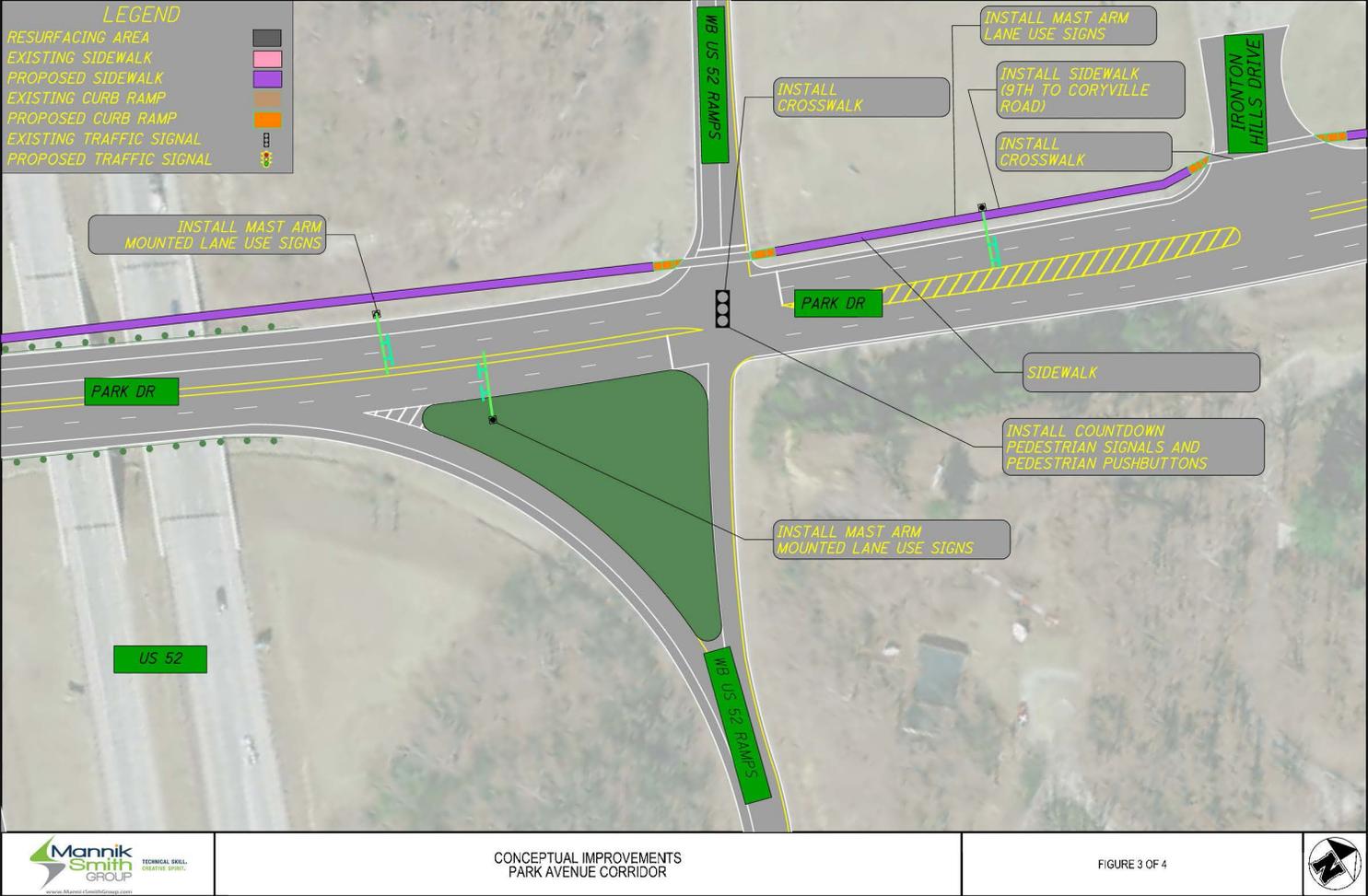
PARK AVENUE CONCEPTS



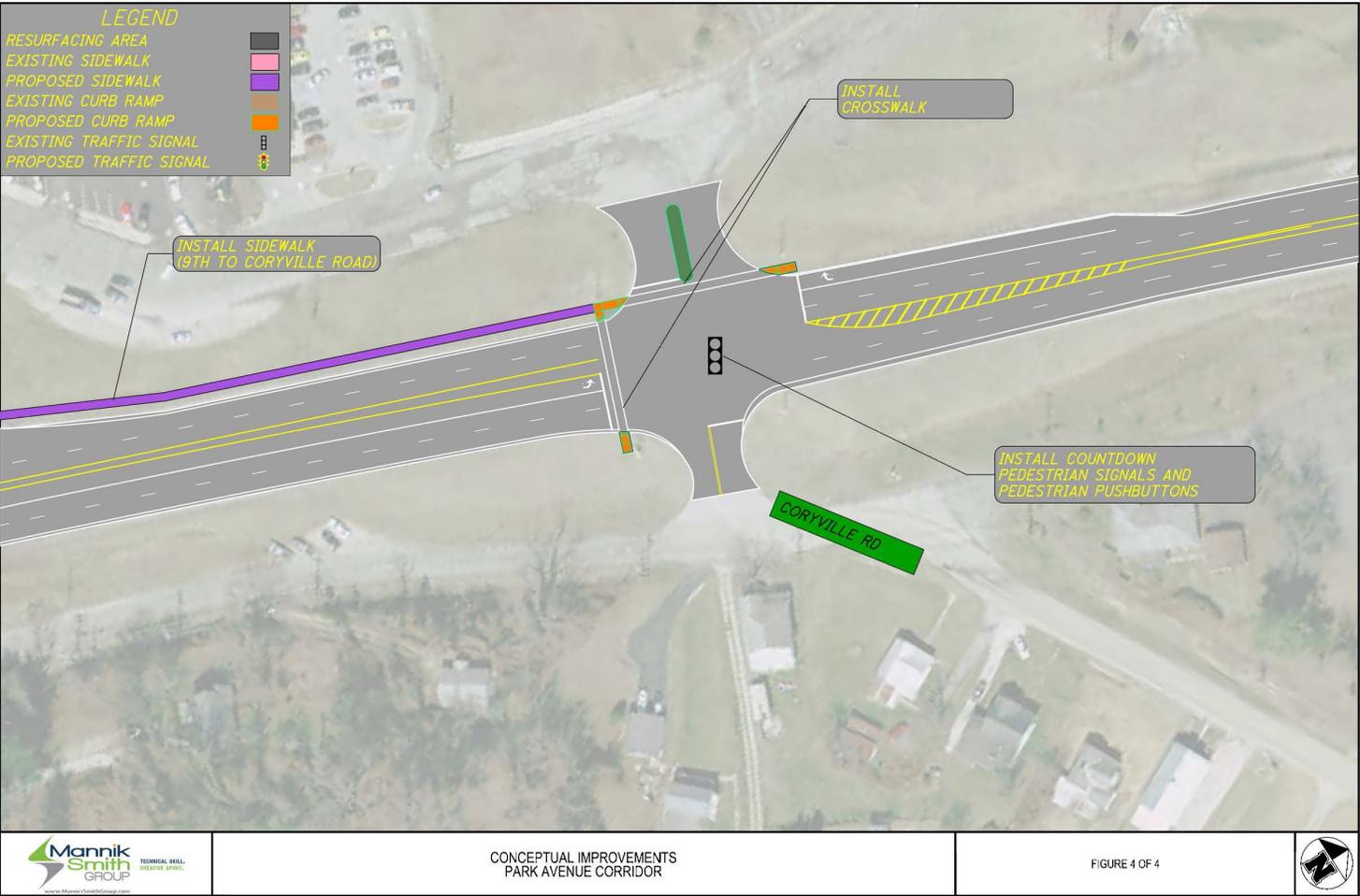
PARK AVENUE CONCEPTS



PARK AVENUE CONCEPTS

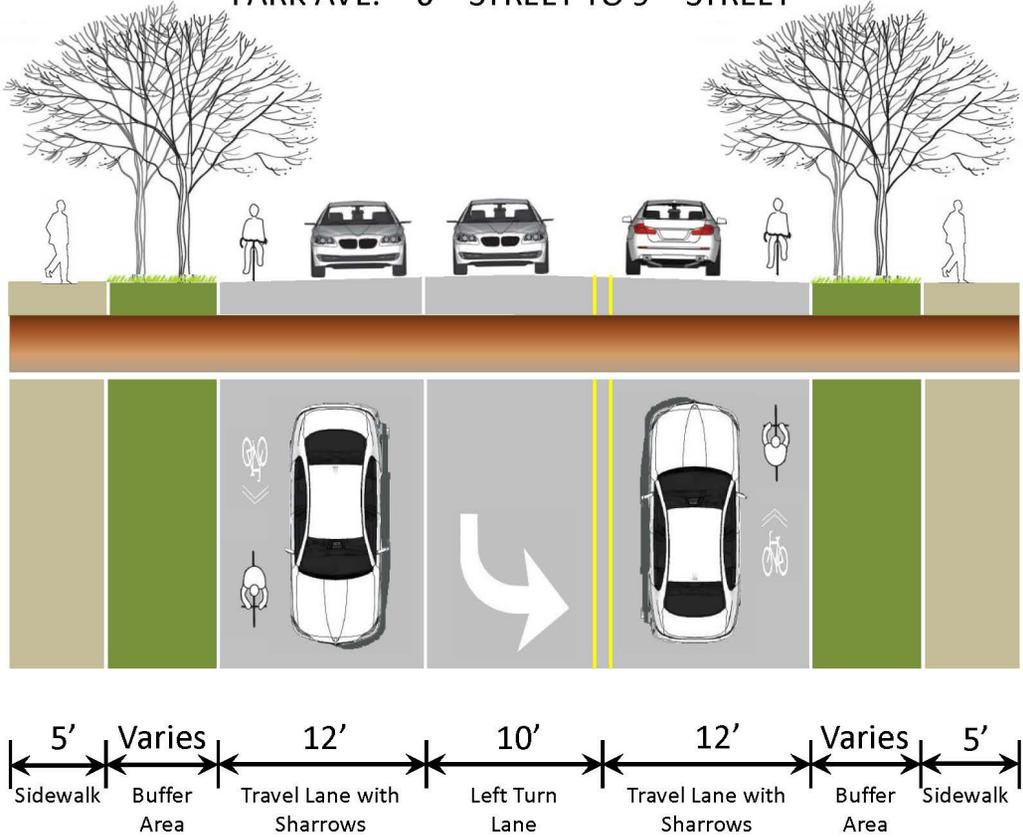


PARK AVENUE CONCEPTS



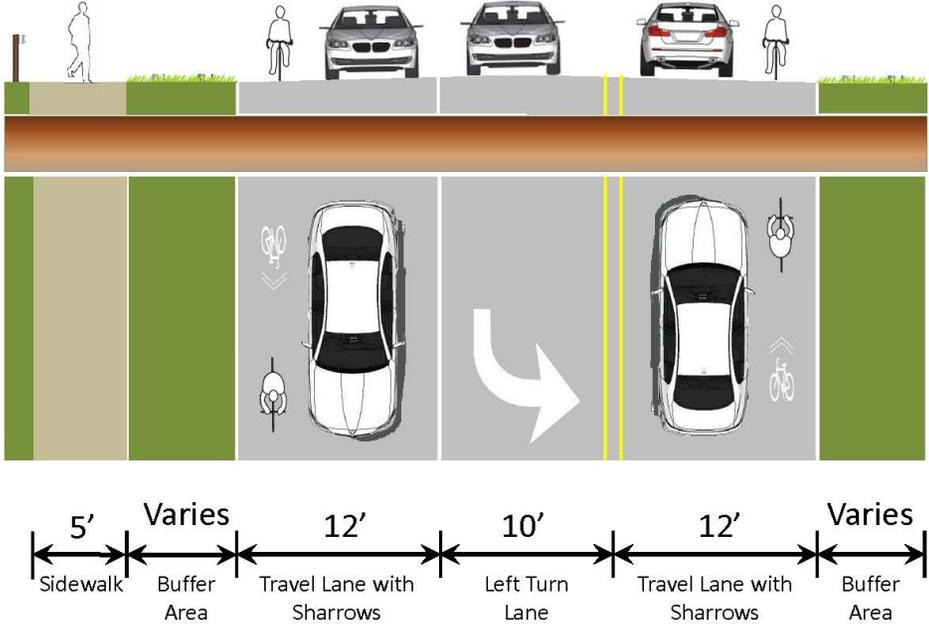
PARK AVENUE CONCEPTUAL SECTION

PROPOSED TYPICAL SECTION
PARK AVE. – 6TH STREET TO 9TH STREET



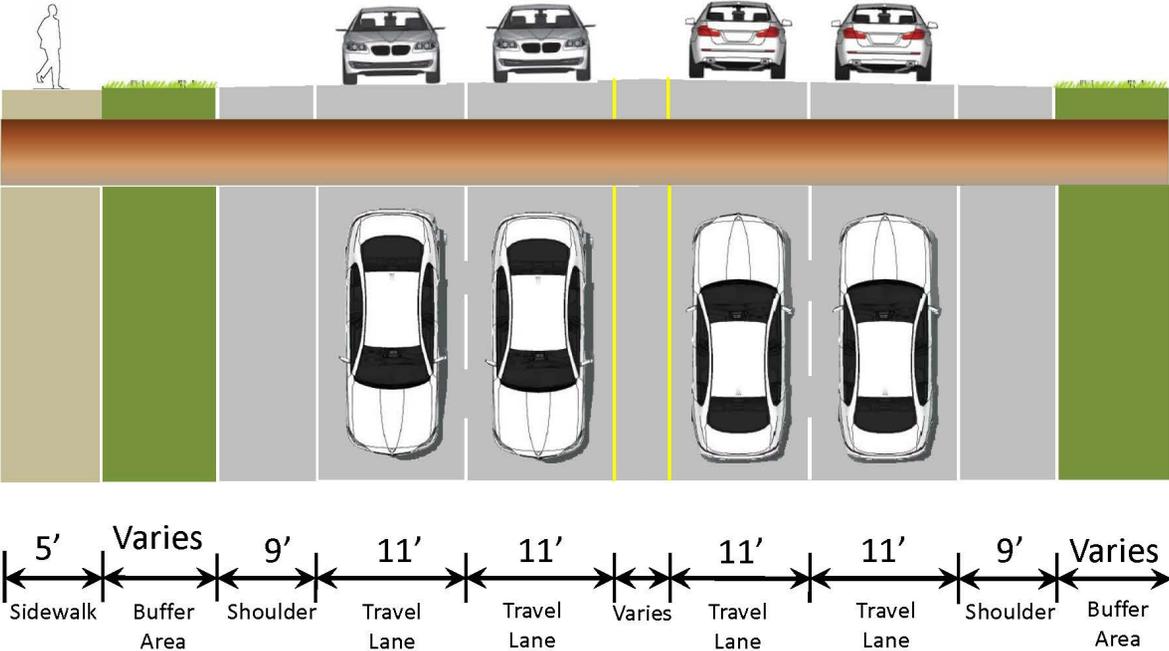
PARK AVENUE CONCEPTUAL SECTION

PROPOSED TYPICAL SECTION
PARK AVE. – 9TH STREET TO US 52 EASTBOUND RAMP



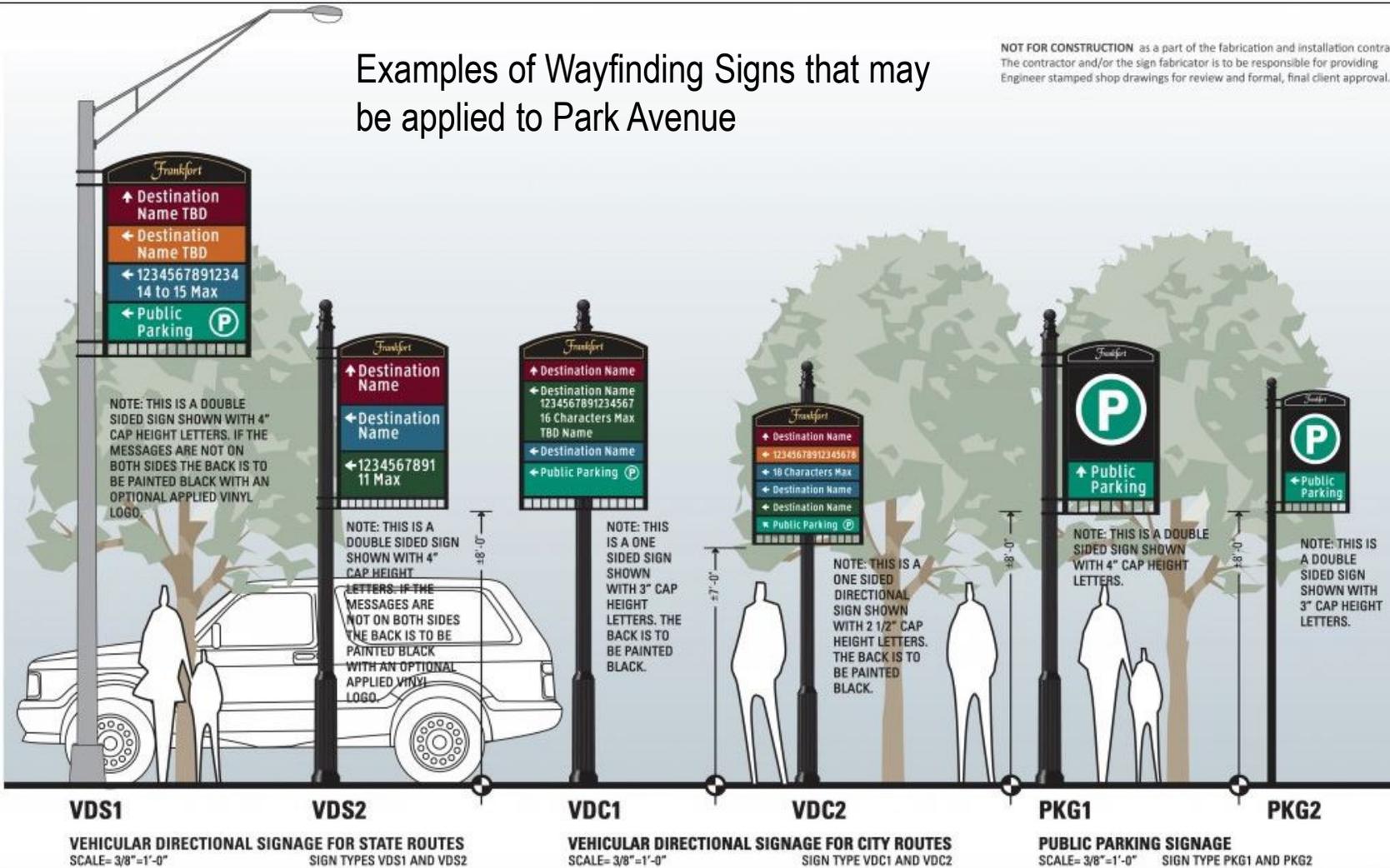
PARK AVENUE CONCEPTUAL SECTION

PROPOSED TYPICAL SECTION
PARK DR. (SR 93) – US 52 WESTBOUND RAMP
TO IRONTON HILLS DR.



Examples of Wayfinding Signs that may be applied to Park Avenue

NOT FOR CONSTRUCTION as a part of the fabrication and installation contract. The contractor and/or the sign fabricator is to be responsible for providing Engineer stamped shop drawings for review and formal, final client approval.



LAWRENCE COUNTY TRANSPORTATION STUDIES IRONTON SIDEWALK INVENTORY AND ASSESSMENT

- Assessing the current condition of curb ramps and sidewalks in Ironton Central Business District
 - Collected width of roadway and sidewalks, curb ramps, detectable warnings
 - Reviewing for American Disabilities Act (ADA) compliance
- Area of Analysis
 - Etna St to Spruce St
 - Spruce St to Kemp Ave from 7th to 11th
- Analysis on-going, Please provide input/comments on problematic areas



COMMENT SHEET

July 18, 2017

Lawrence County Transportation Studies



Please provide any comments you have concerning the Lawrence County Transportation Studies in the space below or on a separate sheet of paper. You may present this sheet at this meeting or by mailing it or any other comment form to HDR (Attention: Matt Selhorst), 2800 Corporate Exchange Drive, Suite 100, Columbus, OH, 43231. You may also submit your comments via email at: matt.selhorst@hdrinc.com

NAME: YVONNE DeKay Sinnott TELEPHONE: (740) 740-1111

ORGANIZATION (if applicable): YVONNE DeKay School of DANCE (52 years)

STREET ADDRESS: 1612 South 3RD Street

CITY, STATE, ZIP: FRONTON, Ohio 45638

EMAIL: YDKSDANCE@gmail.com

COMMENTS:

2nd Street Truck Study: Why did we get a WIDE 3 LANE to turn on to Madison St. Should Have a 3 LANE to PARK AVE. to TURN Right to Highway 52 "Dah!"

Park Avenue Traffic Study: Always Backed up During Business hours

Lawrence County Bike/Pedestrian Study: Why No Bike Lane on New Bridge Do The people not have A SAY So?

Fronton Bike/Pedestrian Study: SOME PEOPLE ARE Still WALK AND Riding Bikes ACROSS the New Bridge But They do Not have much space, it LOOKS DANGEROUS!

Fronton Sidewalk Study: All SIDEWALKS AND Streets IN FRONTON Need to be REPAIRED to many pot holes and CRACKS. Somefolk have Busted their Tires.

Please provide any general comments on transportation:

How About NO PARKING AROUND my AND 2 other Business' to PARK, Muffler Shop, 2nd St. Auto, YVONNE DeKay School of DANCE.

This sheet can be folded in thirds, taped or stapled, and mailed without an envelope. First Class Postage is required.

COMMENT SHEET

July 18, 2017



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NAME: YVONNE DeKAY Sinnott TELEPHONE: (740) 550-9393
ORGANIZATION (if applicable): YVONNE DeKAY School of DANCE (52 years)
STREET ADDRESS: 612 South 3rd Street
CITY, STATE, ZIP: FRONTON, Ohio 45638
EMAIL: ydksdance@gmail.com

COMMENTS:

~~3rd St Traffic Study~~
~~2nd Street Truck Study:~~ ON 3rd Street from Adams to MONROE No Parking Allowed Why? If going East from Adams St. The TURN LANE Should Be Left to Enter CVS,
~~Port Avenue Traffic Study:~~ If going West on 3rd St. from Quincy St. The TURN LANE Should be Left into Dollar General.
~~Lawrence County Bike/Pedestrian Study:~~ This issue is Making Backupped Traffic During Business hours. "Dah!"
~~Ironton Bike/Pedestrian Study:~~ Why did I Not get The 15' WIDE Alley behind my Building As We Agreed upon? Now Where do I go to Load in and out?
Where do my Customers PARK?
My inconveniences have been Overwhelming (After 15 years. for
~~Ironton Sidewalk Study:~~ When Will you Clean-up And get All Grounds Around Looking Nice?

Please provide any general comments on transportation:

Why ARE the Lights at KySIDE of BRIDGE Held So Long 2 minutes ??

COMMENT SHEET

July 18, 2017



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NAME: JOE UNGER TELEPHONE: 740.532.5954

ORGANIZATION (if applicable): IRON FURNACE RAIL TRAIL

STREET ADDRESS: 304 SOUTH 3RD STR.

CITY, STATE, ZIP: IRONTON, OH 456.38

EMAIL: JOEUNGER@ROADRUNNER.COM

COMMENTS:

2nd Street Truck Study: Please do not allow 18 wheelers into the downtown, they are 1/3 the length of a city block, which is a nightmare in our small, parallel parking, downtown. Please route the trucks down Vernon or Washington Sts. towards

Park Avenue Traffic Study: the new commercial development @ the Hotel/Frisch's/Brewery. Do not allow them to come downtown. Or Route them thru to Coal Grove.

Lawrence County Bike/Pedestrian Study: _____

Ironton Bike/Pedestrian Study: Bike Trail is excellent but you will increase usage a hundred fold if you use the existing trail that begins @ Railroad St., goes through Iron Trails Municipal Park, underneath US52 and arrives at the

Ironton Sidewalk Study: back door of the Ironton Hills Shopping Center. This route connects the Mall to the downtown and the Riverfront without bicyclists having to traverse the heavily congested interchange @ US52 & SR93.

Please provide any general comments on transportation: _____

COMMENT SHEET

July 18, 2017

Lawrence County Transportation Studies



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NAME: Kathy Linville

TELEPHONE: 7405324125

ORGANIZATION (if applicable): _____

STREET ADDRESS: 1807 So 8th St

CITY, STATE, ZIP: IRONTON OH 45638

EMAIL: KCLI@ROADRUNNER.COM

COMMENTS:

2nd Street Truck Study: _____

Park Avenue Traffic Study: _____

Lawrence County Bike/Pedestrian Study: _____

Ironton Bike/Pedestrian Study: The traffic flow is terrible on 3rd Street from the new bridge. Trying to turn into CVS or the Dollar General store is difficult. My biggest worry is trying to
Ironton Sidewalk Study: take my daughter into Yvonne Dekay School of Dance. We no longer have parking and it is terrible trying to get across the road even if you are using the crosswalks.
Please provide any general comments on transportation: I am really concerned for the safety of our children and parents attempting to get into the studio. I hope someone does not have to be injured before something is done. Thank you.

This sheet can be folded in thirds, taped or stapled, and mailed without an envelope. First Class Postage is required.

COMMENT SHEET

July 18, 2017

Lawrence County Transportation Studies



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NAME: Cheryl Pleasant

TELEPHONE: 740-533-0444

ORGANIZATION (if applicable): _____

STREET ADDRESS: 1217 So. 9th St.

CITY, STATE, ZIP: Ironton, OH 45638

EMAIL: pleasantlady_0@yahoo.com

COMMENTS:

~~2nd Street Traffic Study:~~ _____

Park Avenue Traffic Study: A stop light on 9th + Park Ave should be installed.

I live on 9th + it's almost impossible to turn left! Since businesses have been put in at the beginning of those blocks - traffic is terrible - it's

~~Lawrence County Bike/Pedestrian Study:~~ Hard to come down the hill + turn left onto 9th.

Sometimes I go down to 6th St. where there's a light to get to 9th on Park Ave!

Ironton Bike/Pedestrian Study: The traffic around the bridge is the worst yet - you can

1) not cross the street in the time the signal lights give you. The traffic coming off the bridge that turns right do not have to stop most of them don't

~~Ironton Sidewalk Study:~~ even ~~you~~ slow down, there's children trying to cross the

street going to the dance studio - the light system in that inters needs to be changed before someone gets killed.

Please provide any general comments on transportation:

COMMENT SHEET

July 18, 2017

Lawrence County Transportation Studies



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NAME: Sandra Bester

TELEPHONE: 740 354-9655

ORGANIZATION (if applicable): _____

STREET ADDRESS: 78 Scott Ave

CITY, STATE, ZIP: Franklin Furnace, Ohio 45629

EMAIL: rbester@roadrunner.com

COMMENTS:

2nd Street Truck Study: There are not that many trucks that make a left hand turn after coming off the Fronton-Russell bridge into Fronton.

Park Avenue Traffic Study: _____

Fronton Pedestrian

Lawrence County Bike/Pedestrian Study: The cross walk for third street by Yvonne DeKay's does not stay green long enough plus cars block it. It is very

Ironton Bike/Pedestrian Study: hard to get across 3rd street. Something needs to be done about the traffic back up on third street and the traffic coming off

Ironton Sidewalk Study: of the bridge into Fronton. There is no parking spaces for Yvonne DeKay's dance studios on third street and that the bridge has opened

Please provide any general comments on transportation: something needs to be done about the traffic and parking situation.

Appendix C. Stakeholder and PI meeting documentation

July 18, 2017 Stakeholder Meeting

Lawrence County Non-Motorized Transportation Studies
 Stakeholder Meeting
 Tuesday, July 18, 2017 | 12:00 pm

Ironton Transit Center,
 225 2nd Street, Ironton, OH



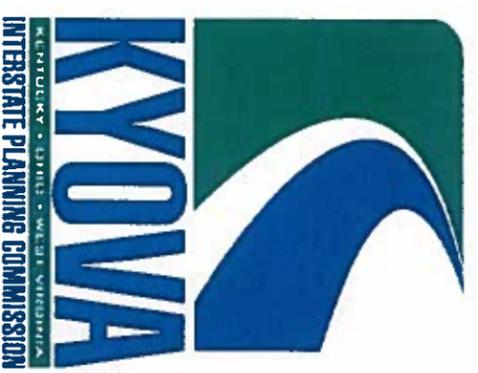
FIRST & LAST NAME	MAIL ADDRESS, CITY & ZIP CODE	PHONE #	EMAIL ADDRESS
1. Mark Dickess	City of Ironton - 301 S. 3 rd St, Ironton 45638	740-442-0458	benefits@ironton-ohio.com
2. Shuley Ayer	Chamber of Commerce 214 Mainline Road Rt. 44	740-517-4552	shuley@lawrencecountyohio.org
3. Rick Hill	# 1610 116th	740-532-3534	RKHill@lcaoo.org
4. Selam Salameh	KYOVA IRC	304-523-7434	ssalameh@kyovairpc.org
5. Jody Sigman	KYOVA IPC	304-523-7434	jsigman@kyovairpc.org
6. PATRICK D. LEIGHTY	111 50 4 th STREET, Ironton OH 45638	740-533-4317	pleighty@lawrencecountyengineer.org
7. Adam Riehl	0410 UNIVERSITY SOUTHERN 1804 Liberty Ave., Ironton, OH	740.533.4618	riehl@ohio.edu
8. Mike Pennington	City of Ironton - ST. Supt. 301 So. 3 rd	740 534-4098	Irontonstreet@SBCglobal.net
9. Erthang Wild	KYOVA		bwild@kyovairpc.org
10. Matt Selhorst	HDR		
11. Pat Ethix	MSC		
12. Dr. Bill Dinger	Lawrence Co. Economic Development Corp		
13.			
14.			
15.			

Appendix C. Stakeholder and PI meeting documentation

March 13, 2018 Stakeholder Meeting

Lawrence County Non-Motorized Transportation Studies
 Stakeholder Meeting
 Tuesday, March 13, 2018 | 11:00 am

OU Proctorville Center,
 111 Private Drive 516, Proctorville, OH



	FIRST & LAST NAME	MAIL ADDRESS, CITY & ZIP CODE	PHONE #	EMAIL ADDRESS
1.	SALEEM SALAMEH	KYOVA	304.583.7434	ssalameh@kyovapc.org
2.	Nicole Pennington	Ohio University	740-533-4610	penningj@ohio.edu
3.	Stephanie Burdham	Ohio University	740.867.6761	blackst@ohio.edu
4.	Jody Sigman	KYOVA	304-523-7434	JSigman@kyovapc.org
5.	Ralph Kline	ILCOG	740-532-3594	Rkline@ilco.org
6.	Bethany Wild	KYOVA		bwild@kyovapc.org
7.	Matt Selhart			
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				



Lawrence County Non-Motorized Transportation Studies Recommendations

Truck Study

- 2nd Street/Jefferson Street intersection restriping and 2nd street improvements (\$75,000 to \$125,000)
- 2nd Street/Park Avenue intersection improvements (\$75,000 to \$125,000)
- 4th Street/Park Avenue intersection improvements (\$150,000 to \$200,000)

Park Avenue Traffic Study

- Park Avenue Recommendations (\$1,242,000)
 - Roadway resurfacing (6th Street to 9th Street)
 - Signal timing improvements
 - Shared use bike lane, along with “sharrow” pavement markings
 - Addition of left turn lanes at the intersections of 6th, 7th, and 8th Street,
 - Install a traffic signal at the intersections of 8th Street
 - Right in/Right out of 9th Street
 - Install pedestrian signal heads and push buttons
 - Replace and new sidewalks
 - Close or redefine driveways
 - Mast arm lane use signs
 - Pedestrian refuge island at the 7th Street intersection

Lawrence County Bicycle/Pedestrian Study

- Various bikepath, signing, and striping projects

Ironton Bicycle/Pedestrian Study

- Various bikepath, signing, and striping projects (approx.\$8,350,000)

Ironton Sidewalk Study

- Curb Ramps Improvements
 - Replace due to Slope Issues: 70
 - Replace due to Truncated Domes: 268
 - Replace due to Poor Condition Alone: 5
 - Maintain Existing: 136

Meeting Minutes

Project: KYOVA Lawrence County Non-Motorized Study
#10048105

Subject: Stakeholder Meeting #2

Date: Tuesday, March 13, 2018

Location: Ohio University Proctorville Center

Attendees:	Saleem Salameh, KYOVA Nicole Pennington, OU Stephanie Burcham, OU Jody Sigmon, KYOVA	Bethany Wild, KYOVA Ralph Kline, ILCAO Matt Selhorst, HDR
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A final stakeholder meeting for the Lawrence County Non-Motorized Study was held on Tuesday, March 13, 2018 at 11:00 a.m. at the Ohio University Proctorville Center. HDR presented the final draft reports and recommendations for the Truck Study, Park Avenue Study, and Ironton and Lawrence County Bicycle and Pedestrian Studies. Initial findings of the Ironton sidewalk assessment were also presented. A draft plan for the sidewalk assessment is scheduled to be completed by the end of March 2018. During the presentation of the recommendations for each study, comments were provided by the attendees. Below is a summary of the comments received. These comments will be addressed by mid-April 2018. Some responses to comments that are currently addressed in the draft reports are shown below in grey. 10 hard copies and an electronic copy (including all files) of each study will be submitted to KYOVA for their distribution.

Truck Study:

- Add the cost for engineering (design) to the cost estimate of the improvements.
 - Cost for engineering (design) has been already included in the cost estimate of the improvements.
- Add a comment about promoting technology for the truck route in the final report.

Park Avenue study:

- Evaluate a continuous right turn lane from Park to EB US 52 entrance ramp.
- Place existing or new proposed on turn count figure for the signal warrants.

Lawrence County Bicycle and Pedestrian Study:

- Show the cost estimate of projects for Lawrence County.
- Break into the recommendations into areas for the County.
 - The maps in exhibits 5.3-5.6 currently breakdown the county into four (4) areas but the final report will include four separate list of recommendations that match the exhibits 5.3-5.6.

March 13, 2018

Ironton Bicycle and Pedestrian Study:

- Could Railroad street improvements be made to accommodate motorized wheelchairs also?
- There is an issue with safety crossing Park Avenue on the proposed 7th Street bike path.
 - The Park Avenue study is recommending a refugee island. This will be evaluated to determine if this is enough for the safety of bicycle and pedestrians.
- Examine the OVRDC interactive bike map that shows a proposed state bike route designation.
 - This is currently shown on page 5 of the Lawrence County plan.
- Define the Multimodal zone as shown on the downtown Ironton map.
 - This is currently defined and referenced on page 36 and page 47 of the report. Pedestrian improvements proposed on proposed bikeway routes create multimodal corridors. The 17-block area could be designated as a multimodal zone, intended for bicycle and pedestrian use.
- Show existing vs proposed on the Ironton and Lawrence County improvements map.

Ironton Sidewalk Assessment:

- Define the recommendations by functional class.