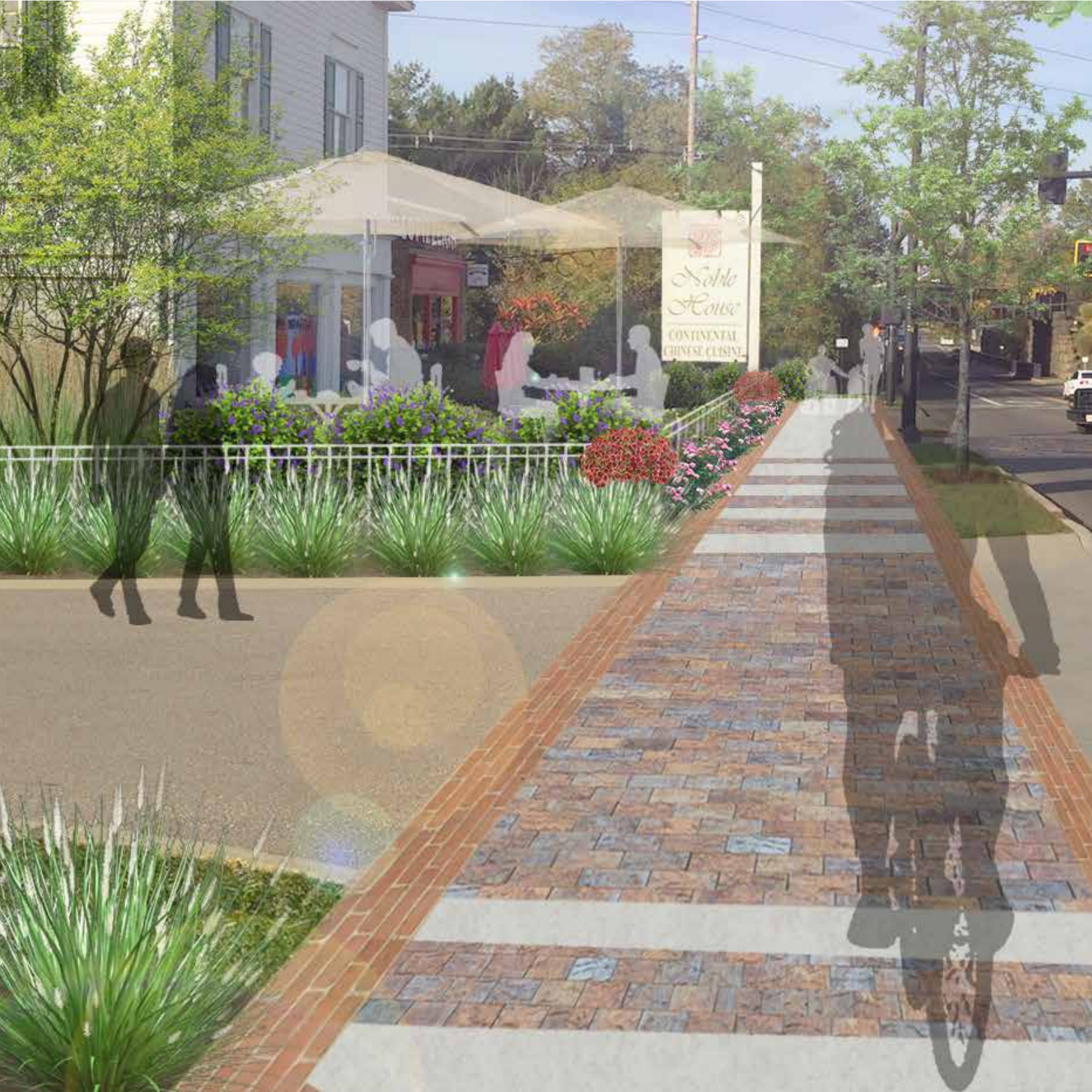


DOWNTOWN HUDSON TRAIL & GREENWAY

CONCEPT PLAN

November 10, 2017



PLAN CREATED FOR THE CITY OF HUDSON, OHIO
BY OHM ADVISORS



CONTENTS

00 | ACKNOWLEDGMENTS

01 | INTRODUCTION

- Executive Summary
- Project Process
- AMATS Connecting Communities Initiative
- Terminology

02 | EXISTING CONDITIONS

03 | CONCEPT DEVELOPMENT

- Guidelines
- Concept Development Workshop
- Option 1
- Option 2
- Option 3
- Option 4
- Route 91 Underpass
- Public Meeting
- Alignment Conclusions

04 | RECOMMENDATIONS

- Downtown Hudson Trail & Greenway Plan
- Recommendations

05 | IMPLEMENTATION

- Phases
- Cost Estimate
- Strategies

06 | APPENDIX

- Project Meeting Summaries
- Discovery Analysis

ACKNOWLEDGMENTS

Many thanks to everyone who contributed to this plan, which will cause a significant positive impact on the community of Hudson, when it becomes a reality:

THE CITIZENS OF HUDSON WHO PARTICIPATED IN THE PLANNING PROCESS

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01

INTRODUCTION

01.1 EXECUTIVE SUMMARY

01.2 PROJECT PROCESS

01.3 AMATS CONNECTING
COMMUNITIES INITIATIVE

01.4 TERMINOLOGY

INTRODUCTION

01.1 EXECUTIVE SUMMARY

In 2000, The City of Hudson completed the Hudson Parks Master Plan, which recommended implementing a network of trails to make Hudson a more cohesive community, and to link it with the surrounding region. Five of the trails were designated as Priority 1, (see [Figure 1](#), below) two of which connect in downtown Hudson, and comprise the Hudson Veterans Trail. The Veterans Trail, as shown in [Figure 2](#), connects downtown Hudson to the Summit Metroparks' Hike and Bike Trail, at the north and south ends of the Veterans Trail.

One of the biggest challenges is to determine how to best route the Veterans Trail through downtown Hudson in the Study Area shown on [Figure 2](#). This is the primary goal of this Downtown Hudson Trail and Greenway (DHTG) study; other goals and parameters of the study include:

1. Create a complete greenway, preferably via a continuous all-purpose trail, to provide a recreational and transportation facility.
2. Connect the current First and Main retail area to the proposed, adjacent Downtown Phase II development.
3. Route the trail through downtown, to realize full connectivity with the city's core amenities.
4. Contribute to downtown Hudson's viability by making the greenway a full amenity, unique to the City of Hudson, rather than simply an active transportation facility.

The Project Team engaged in a thorough process to assess existing conditions, develop and evaluate alternatives, and arrive at a preferred alignment that best meets the above-mentioned goals.

South End

Early in the project, it became clear that only one alignment is viable at the south end, starting at the study terminus of the Veterans Park parking lot, on the south side of Veterans Way. The route crosses Veterans Way, heads east to State Route 91, and under the railroad bridge. See [Figure 3](#).

Options

At this point, two options emerged: 1) continue north to State Route 303 and then west, parallel to 303, to opposite DO Summers, or 2) cross the stream, turn northwest, and run parallel to the stream, to the point opposite DO Summers. Option #1 is desirable, due to its high visibility, lower installation costs (relative to Option #2,) and funding that the City of Hudson has secured for SR 91 and SR 303 improvements. Option #1 is undesirable, due to the six vehicular driveways it crosses (safety issue,) and the lack of sufficient room for a full-width all-purpose trail. Option #2 is desirable, since the alignment does not cross driveways, and the path along the stream has potential to create a visually pleasing experience for trail users. Option #2 is undesirable, since there currently is little room between the parking lots and stream channel,



**FIGURE 1: HUDSON PARKS MASTER PLAN
PRIORITY 1 TRAILS**

INTRODUCTION

requiring either a significant loss of parking spaces or a costly reconfiguration of most of the parking lots to minimize that loss. Costly boardwalk(s) would also be necessary to maintain traffic flow around the neighboring businesses, and keep the trail out of the stream's floodplain. The Planning Team also developed a matrix to evaluate factors which affect the feasibility of implementing the options; Option #1 received a slightly higher score of 198, compared to Option #2's score of 194. Based on all of the considerations listed above, the Project Team determined Option #1 is the preferred alignment.

After the trail crosses Route 303 at DO Summers, the Project Team examined two options, to arrive at Village Way: Option #3: head west along Route 303, cross the stream, turn northwest, proceeding within the railroad property, to turn due north, west of the Cutler Real Estate offices. Option #4 proceeds north along Library Street, turns west between DO Summers and the Salon building, parallels the stream, and turns west to run along the south side of Village Way. Option #3 is desirable since it does not impact parking and could utilize stream restoration funding sources, but requires an easement and right-of-entry permit from the railroad, and necessitates the extension and realignment of the stream culvert. Option #4 is desirable since it, too, could capitalize on stream restoration funding sources, but its significant impact on parking and its circuitous route makes it less desirable than Option #3. Based on these considerations and a feasibility matrix score of 204 for Option #3 and 194 for Option #4, Option #3 is the preferred alignment.

North End

Only one alignment is clearly desirable, after crossing Village Way from Option #3: widen the existing library trail along the stream to 10', cross Clinton Street, continue along the stream, and turn west at Owen Brown Street, to connect to the study terminus at Owen Brown Street and Morse Road.

Recommendations

The Greenway Plan shown on page 29 shows the recommended alignment for the downtown portion of the Veterans Trail. Recommendations beyond the trail alignment include:

1. As demonstrated in the options discussion above, spatial constraints exist in multiple locations along the alignment. The proper balance between trail user safety/comfort and property owners' needs will have to be studied carefully, during the future design and engineering phase.
2. Use pavement treatments to integrate the trail into local context and to improve safety.
3. Prioritize pedestrians at street crossings, for improved visibility and safety, with tabled, specialty pavement crosswalks.
4. Incorporate elements and unique enhancements that make the trail a true community amenity. Examples include a trailhead in the green space adjacent to Faranacci Pizza, a gathering node at the southwest corner of State Routes 303 and 91, and interpretive signage along the trail that speaks to the history of Hudson. Site furnishings, and lighting will maximize trail users' comfort and sense of security. Wayfinding signage will express the city's brand, and create clarity with trail system mapping and directions to local and regional assets.
5. The trail will be an opportunity to increase the City of Hudson's commitment to sustainability. Green infrastructure can neutralize the trail's increase in impervious surface, and shade trees will reduce the urban heat island effect, reduce air pollution, and increase property values. Restoring the stream where the trail runs parallel to it, to a more naturalistic condition, could help reduce downstream flooding and increase water quality.
6. During the future design and engineering phase, the project team must determine who will maintain the trail and related improvements, assess that entity's maintenance capacity, and design within that capacity.

Next Steps

The trail can be phased in three segments, as denoted on the Downtown Hudson Veterans Trail Greenway Plan. In order to implement the recommendations of this study, the City of Hudson and Veterans Trail champions should prioritize those segments, determine the most appropriate funding sources to pursue, secure the funds, and commence the design & documentation stage, for construction.

INTRODUCTION

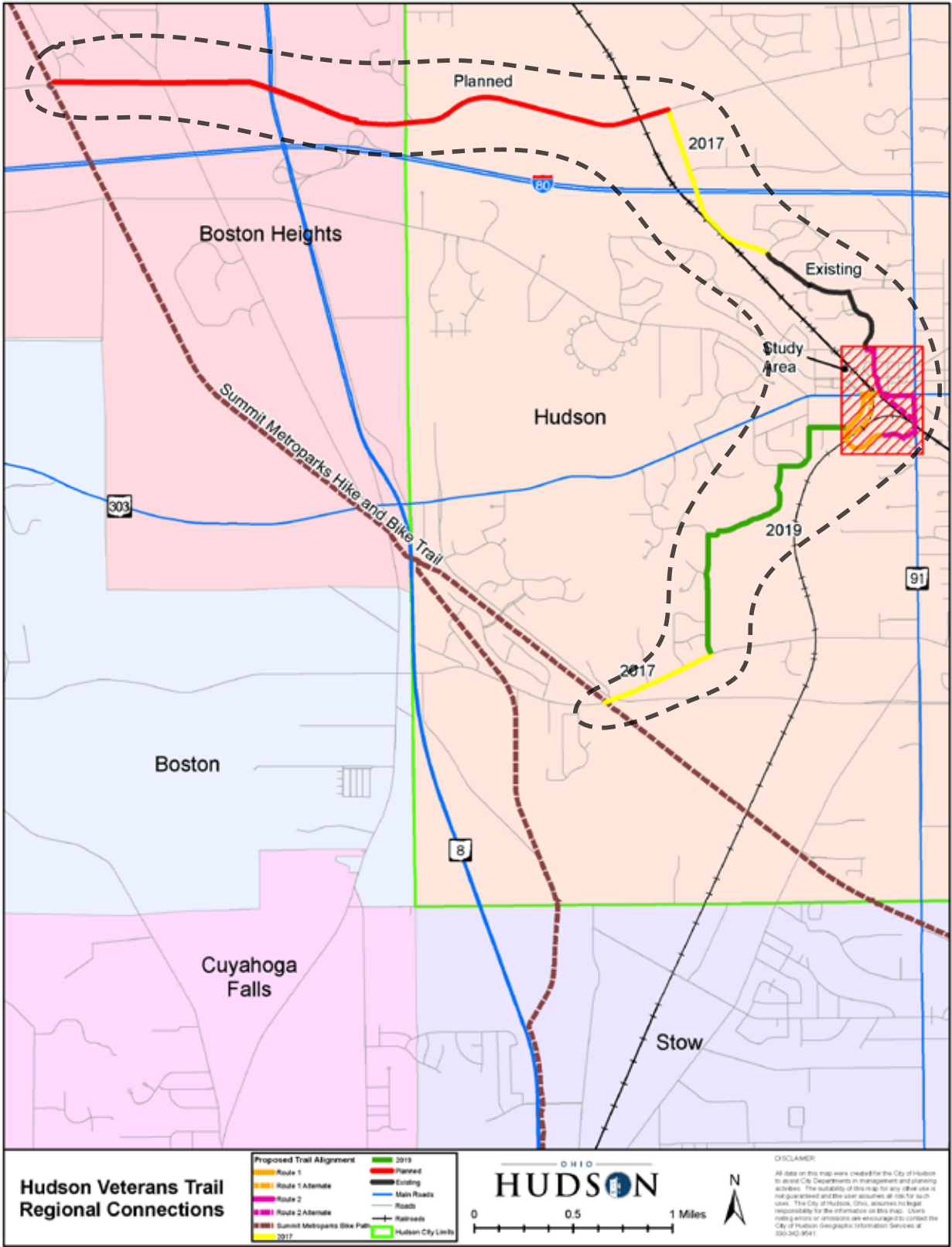
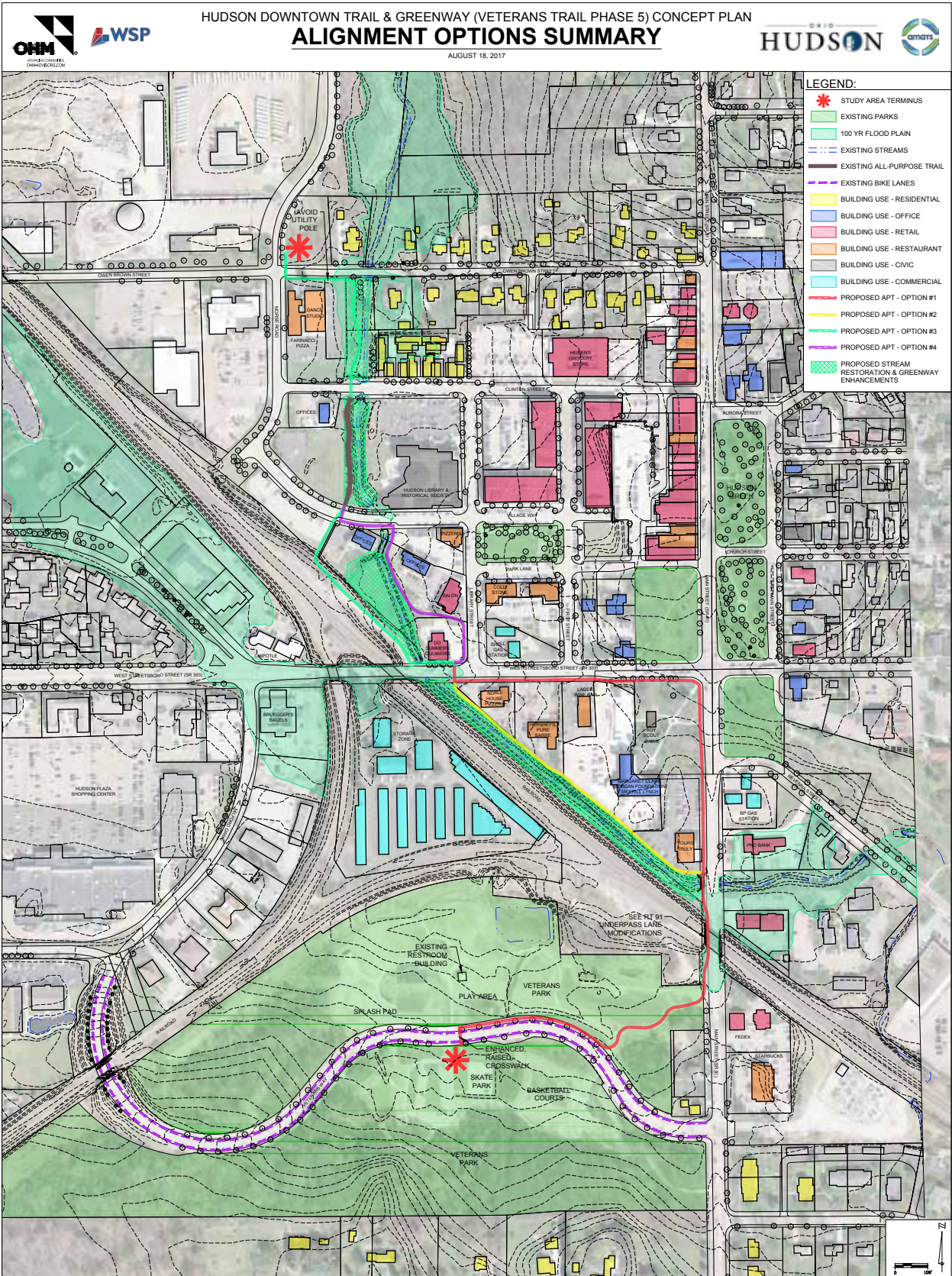


FIGURE 2: HUDSON VETERANS TRAIL REGIONAL CONNECTIONS

INTRODUCTION



01.2 PROJECT PROCESS

The study followed a systematic set of steps, in an attempt to incorporate all available information and input, for as comprehensive a plan as possible.

INTRODUCTION

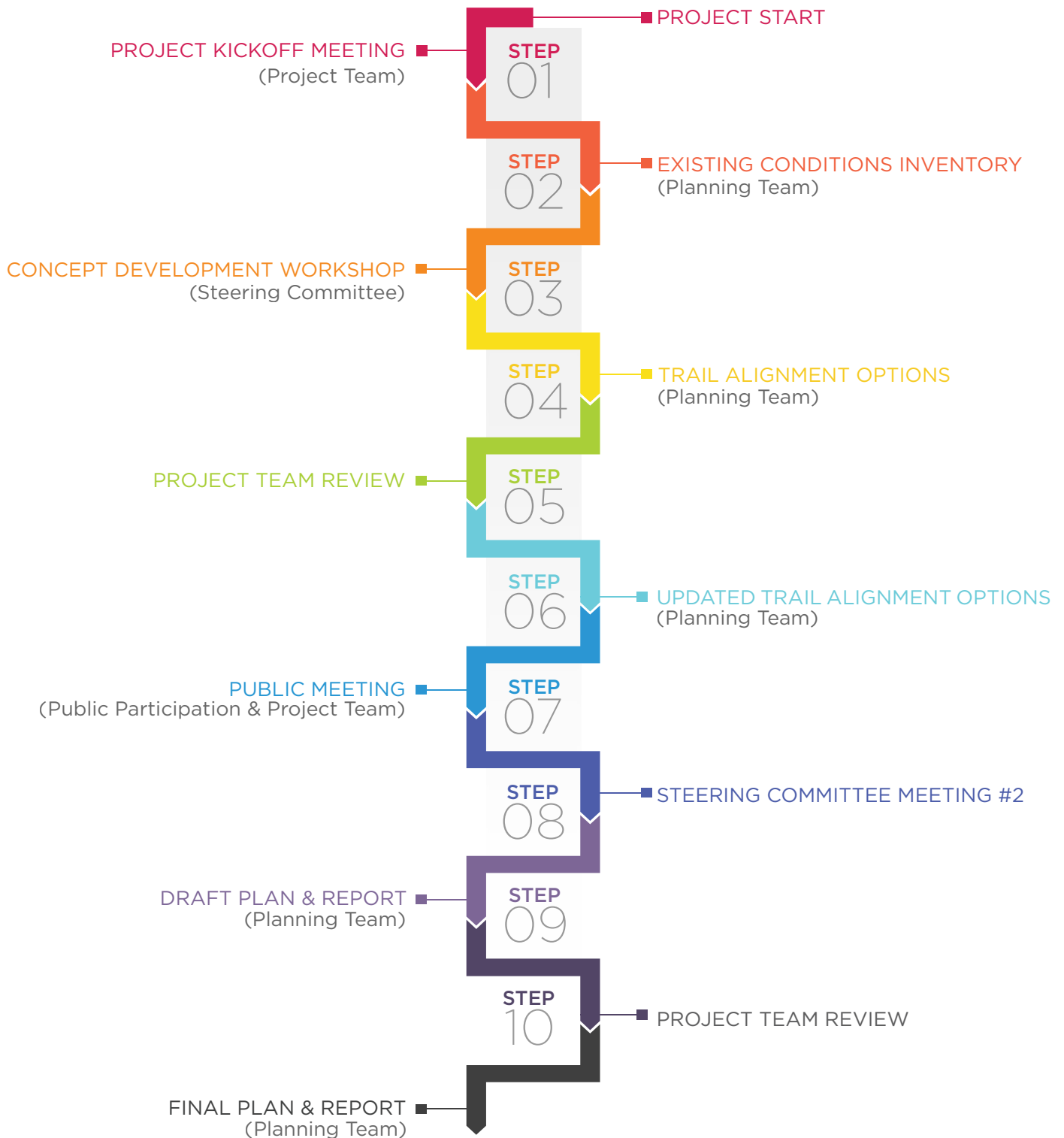


FIGURE 4

INTRODUCTION

01.3 AMATS CONNECTING COMMUNITIES INITIATIVE

The Akron Metropolitan Area Transportation Study's Connecting Communities Initiative aims to "...encourage incremental, small-scale, and practical modifications to the way that our transportation system and our built environment interact with one another..." in order that "...communities throughout (AMATS') region will become better, more interconnected places to live." The Downtown Hudson Trail & Greenway (DHTG) study aims to meet as many of the Connecting Communities Initiative's goals as possible:

1. Improve pedestrian planning and facilities through targeted investments.
2. Improve bicycle planning and facilities through targeted investments.
3. Enhance public transportation systems to meet the needs of current users and be attractive to new users.
4. Incorporate complete streets principles into land use and transportation decisions.
5. Implement land use policies that improve community cohesion and reduce urban sprawl.
6. Integrate environmental planning into land use and transportation planning.
7. Improve inter-agency coordination on regional planning.

01.4 TERMINOLOGY

When discussing non-motorized transportation (e.g. walking, hiking, running, bicycling, skating, cross-country skiing, roller blading) it is important to understand a number of concepts:

- **All Purpose Trail (APT)** - A path segregated from motorized traffic for use by all non-motorized traffic. APT's can be paved or unpaved.
- **Bike Lane** - A portion of a roadway that has been designated by signing, pavement striping, and other pavement markings for the exclusive use of bicyclists.
- **Bike Route / Bikeway** - Any combination of bicycle facilities which provide cyclists a designated route between destinations.
- **Buffered Bike Lane** - Bike Lanes with pavement markings that denote a buffer between the bike lane and the motor vehicle parking and driving lanes.
- **Facility** - Any built form of non-motorized transportation.
- **Right-of-Way (R.O.W.)** - The area along each roadway that is publicly owned and maintained. R.O.W. widths vary widely.
- **Separated Bicycle Facilities** - Formerly known as cycle tracks or protected bike lanes, these are exclusive bike facilities that combine the user experience of a separated path with the on-street infrastructure of a conventional bike lane. Separated bicycle facilities are physically separated from motor traffic and distinct from the sidewalk and usually are found in urban settings.
- **Sharrow** - Also known as Shared Lane Markings, sharrow pavement markings indicate a shared road condition for automobiles and cyclists. Where possible, travel lanes with sharrows should be wider than the standard lane width. Also, signage stating "bikes may use full lane" further designate the shared routes.
- **Sidewalks** - All walkways which run parallel to roadways and typically are within the R.O.W. serve pedestrians best (walking or running.)
- **Trail Head** - A loading and unloading point along an APT, which often provides parking, information about the trail and connecting facilities, trash receptacles, and sometimes includes restrooms, water, concessions, seating and bicycle maintenance stations.

01.4 TERMINOLOGY



ALL PURPOSE TRAIL



BIKE LANE



BIKE ROUTE / BIKEWAY



BUFFERED BIKE LANE



SEPARATED BICYCLE FACILITIES



SHARROW



TRAIL HEAD



02

EXISTING CONDITIONS

02.1 OVERVIEW

In order to understand the study's local and regional context, the planning team reviewed related studies and plans, within and near the city boundaries:

- Hudson Parks Master Plan, dated June, 2000
- Heights to Hudson Planning Study, 2011
- AMATS 2016 Bike Plan, dated July, 2016
- Heights to Hudson Trail Preliminary Engineering, 2017

The planning team documented current conditions within the study area by compiling Geographical Information System data, performing a series of walk-, bike-, and drive-throughs of the study area, and incorporating feedback from the Project Team and Steering Committee.

1. There is a rich, full complement of community assets in the study area: library, Town Hall and administrative offices, retail, restaurants, open space, historic greens, historical society, and single family residential.
2. The Norfolk Southern railroad line, crossing diagonally from the northwest to the southeast, slices across the study area, and creates the most significant barrier to the greenway alignment.
3. The stream running through downtown could be a visual and better environmental asset, if existing vegetation were managed and the waterway's banks were restored to a more natural condition.
4. Flooding has been an issue. The city has implemented flood management strategies, with more under design, but the stream's floodplain must be considered, when examining trail alignment options.
5. While sidewalks exist along most roadways, the overall transportation infrastructure and downtown layout is dominated by and defers to motorized vehicles.
6. Maintaining automobile parking capacity is a high priority in the city.
7. The city is examining ways to optimize vehicular flow and storage, and is in the middle of several studies:
 - A. Parking inventory and study
 - B. Intelligent signalization at State Routes 91 and 303
 - C. Traffic Study for Downtown Phase 2

Several more specific conditions are noted on [Figure 5](#).

In parallel, AMATS performed a Discovery Analysis, with similar and additional observations. A copy of the analysis is included in the appendix.

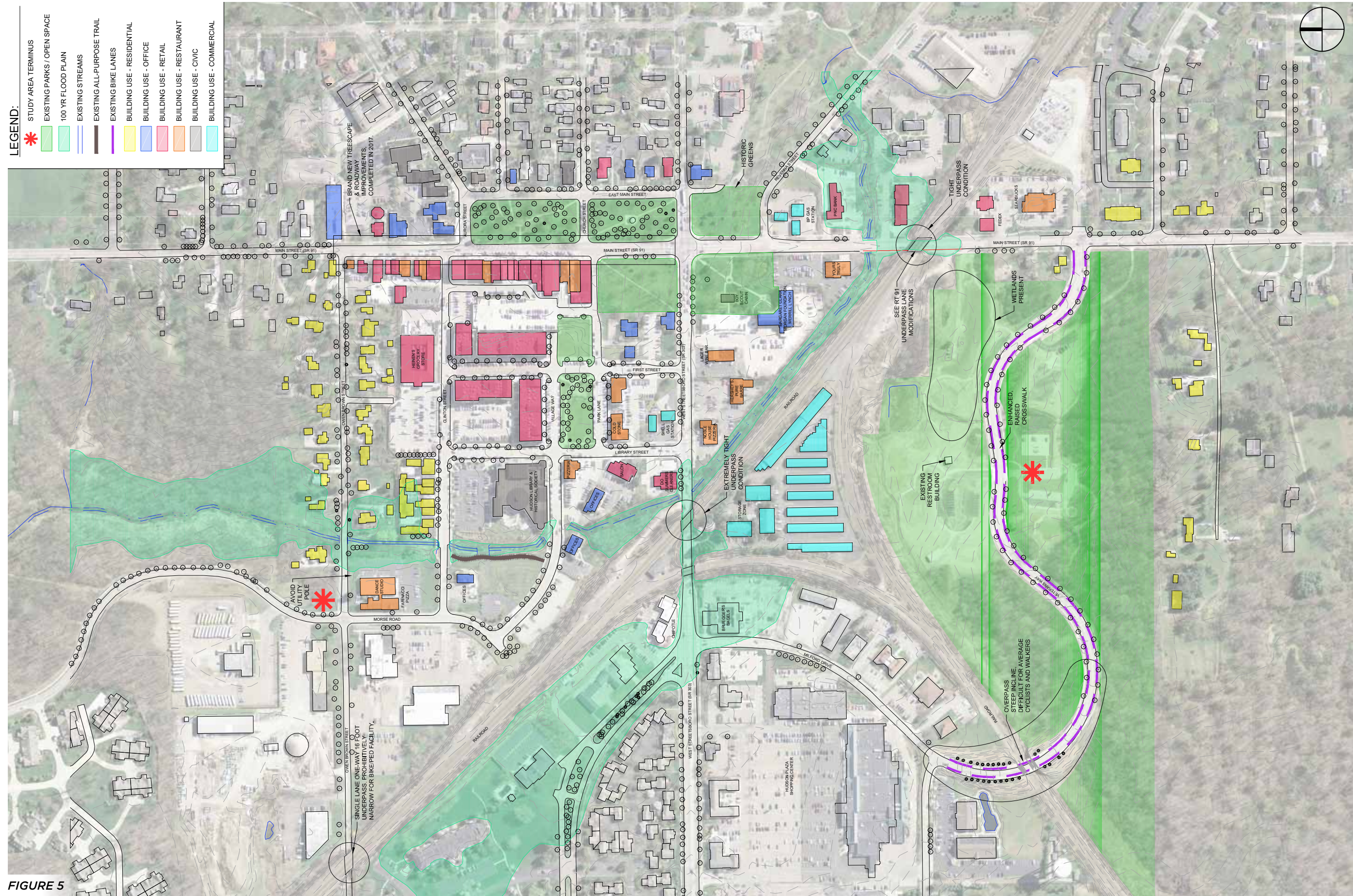


FIGURE 5

HUDSON DOWNTOWN TRAIL & GREENWAY (VETERANS TRAIL PHASE 5) CONCEPT PLAN

EXISTING CONDITIONS

AUGUST 18, 2017



03

CONCEPT DEVELOPMENT

- 03.1 GUIDELINES
- 03.2 CONCEPT DEVELOPMENT WORKSHOP
- 03.3 OPTION 1
- 03.4 OPTION 2
- 03.5 OPTION 3
- 03.6 OPTION 4
- 03.7 ROUTE 91 UNDERPASS
- 03.8 PUBLIC MEETING
- 03.9 ALIGNMENT CONCLUSIONS

CONCEPT DEVELOPMENT

03.1 GUIDELINES

Per the Project Process [Figure 4](#), the Concept Development Workshop followed the Existing Conditions assessment. Prior to discussing the workshop, however, some basic parameters must be understood.

FACILITY SELECTION

Since all-purpose trails (APT) serve the widest population of potential users (the goal is to create facilities that serve all users from 8 years old to 80 years old,) APTs are the most desirable facility for bike-ped applications. APT's, however, have certain limitations, including space requirements and cost to implement.

Where there is insufficient room to build an APT, and/or the expected demand or low safety need (e.g., a low-vehicle volume street in a residential neighborhood with an existing sidewalk,) does not justify the cost to build an APT, other options can be entertained, such as bike lanes, and sharrows.

DESIGN STANDARDS

Design standards are developed for the safety of the end user and those who may be affected by actions of the end user. All non-motorized facilities built with any involvement of federal dollars are required to adhere to the minimum standards set by the The Ohio Department of Transportation (ODOT) and the American Association of State Highway and Transportation Officials (AASHTO). In addition to the standards shown in the [Figure 6](#), below, and [Figure 7](#), the following requirements exist for APT's:

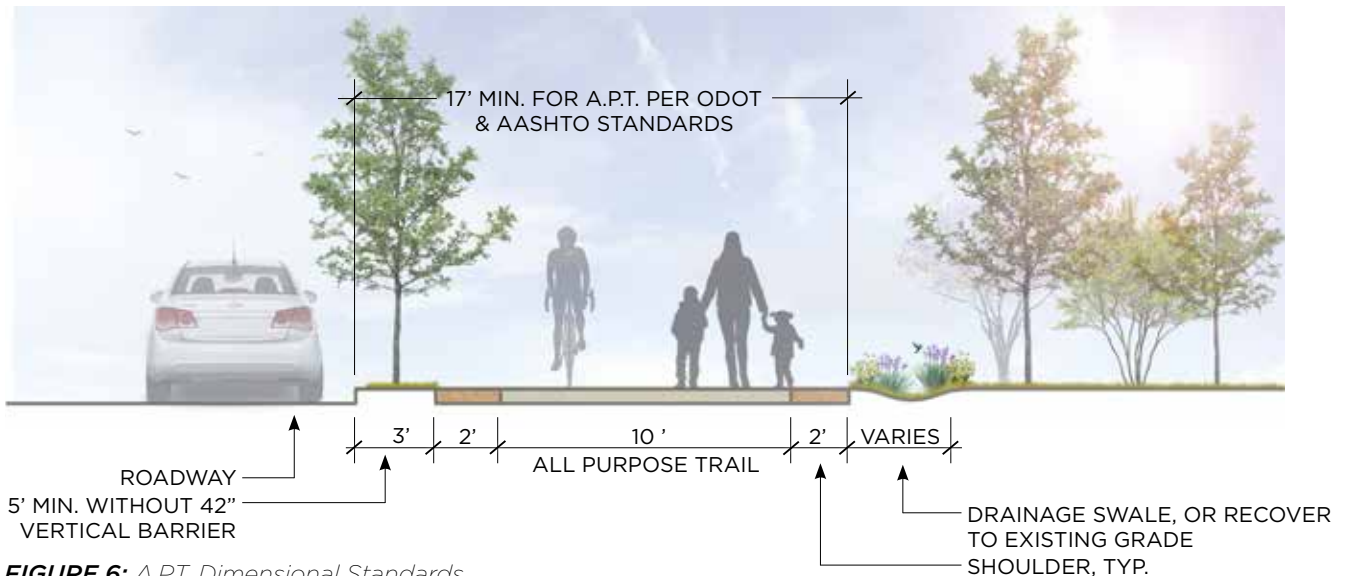
- Two-way bridge width: 14' min.
- Minimum deflection angle at 20MPH: 1°54'
- Maximum grade along APT: 5%
- Minimum side clearance: 3'

SIGHT DISTANCES

In order for in-line skaters and cyclists to have a chance to see and react to the unexpected, an APT should have adequate sight stopping distances. Sight distances apply not only to horizontal and vertical curves, but also visual obstructions at intersections. APT design must consider intersections with roads, other APT's, and driveways.

ODOT DESIGN EXCEPTIONS

Where existing conditions prevent the design from meeting all standards, the owner can submit a formal written Design Exception Request, with justification for not meeting the standards.



CONCEPT DEVELOPMENT

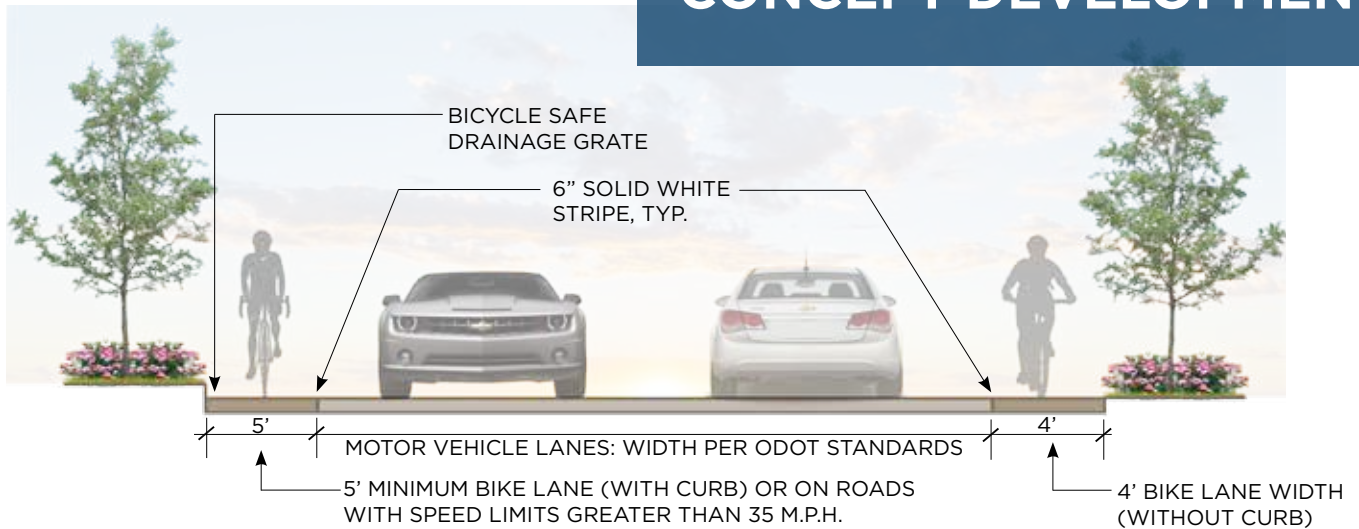


FIGURE 7: *Bike Lane Dimensional Standards*

A formal written Design Exception Request is required for the following conditions: APT width, bike lane width, bridge width, horizontal alignment (curve radius), grades, inadequate horizontal clearance (including lack of barrier or distance between a shared use path and a roadway), and inadequate vertical clearance.

03.2 CONCEPT DEVELOPMENT WORKSHOP

On July 24, 2017, the Steering Committee assembled at Town Hall, for a half-day workshop. After an introductory presentation, Active Transportation (AT) educational session, and discussion of workshop goals, the attendees split into three groups. Two groups performed a walking audit of the study area, and the other completed a biking audit of the study area, with the goal of understanding the existing conditions, and to begin discussing possible alignments.



The groups reassembled at the Town Hall, to brainstorm, vet, and map alignment options. Priorities were discussed, including the group's preference for a continuous all purpose trail, developed to a level similar to the Indianapolis Cultural Trail. Early alignment contenders included:

1. From the Owen Brown Street/Morse Road terminus, proceed east on Owen Brown to Route 91, and turn south on 91. The narrow Right of Way and numerous large existing trees on Owen Brown, along with just-completed new streetscape on 91 without room for an AT facility, however, make this an unfeasible option.
2. From the same terminus, proceed west on Owen Brown, through the existing underpass (or through a new, separate underpass,) then head south on Lennox Road, east on Atterbury Boulevard, south on Milford Drive, and east on Veterans Way. This option has low feasibility though because of the following:
 - A. It does not go through downtown.
 - B. There is not enough room for a vehicle and bicycle to fit through the existing Owen Brown railroad underpass.
 - C. A new underpass would be prohibitively expensive.
 - D. Widening sidewalks for a trail would significantly impact the East Case residential neighborhood.
 - E. The grades on the Veterans Way overpass are too steep for the average walker or cyclist to negotiate.
3. Everyone agreed it makes sense to travel along the stream, from Owen Brown and Morse, but when one

CONCEPT DEVELOPMENT

arrives at Village Way, several ideas emerged.

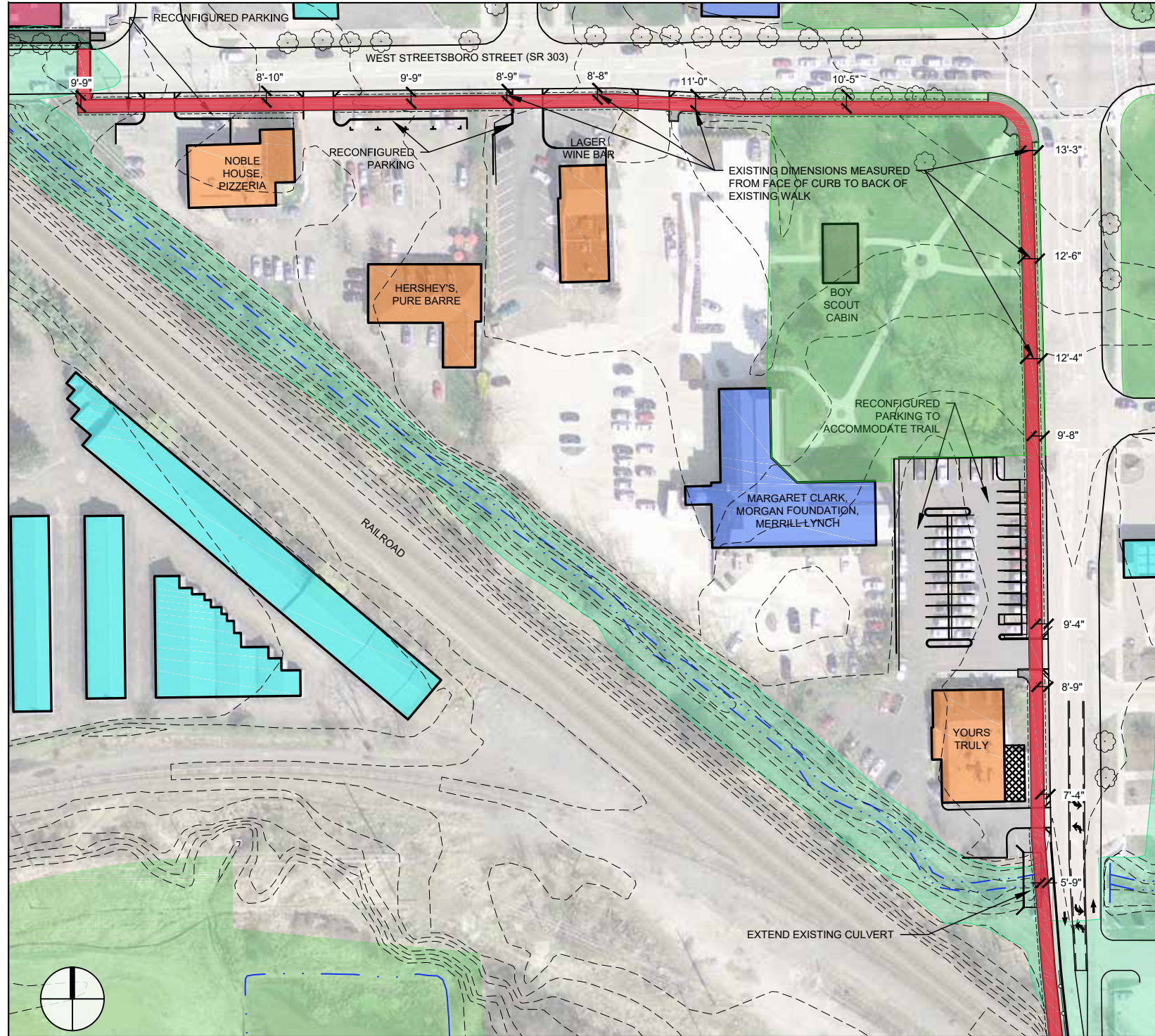
4. One idea navigated through the green spaces along Library Street and Park Lane to Route 91, however, sensitivity to altering the historic green at Park and 91. This option however, was deemed unfeasible due to the community's sensitivity to altering the historic green at Park and 91, and workshop participants decided introducing fast-moving bicycles in the calm passive space is undesirable.
5. Another option looked at looping out east from Route 91, utilizing the existing Colony Park bridge. However this, as with the Milford Drive concept, takes the route outside of the downtown core thereby not connecting with downtown completely, and would also significantly impact the single family neighborhoods.
6. Since traveling west on Owen Brown (and therefor connecting to Veterans Park from the west) was determined unfeasible, the alignment along Route 91 south of the railroad underpass, and into Veterans Park was set.

With the above considerations in mind, the Steering Committee arrived at preferred alignments for the north end, up to Route 303 and the south end, up to Route 91. Between the west end of Route 303 and the Route 91 underpass, the committee developed Options 1-4 as shown in the following exhibits.

After the workshop, the planning team analyzed the four options for their pro's and con's with a Feasibility Matrix. The matrix reviews each option by quantifying the existing conditions within criteria categories that impact APT development. The categories are sorted, and their scoring is weighted, from those with the most significant impact to least significant impact on APT development. These analyses are included with each alignment option.

Workshop discussion included:

- Discussion on continuous path and not using the Village Way overpass
- Future overpass of rail spur needed to link Cascade Park to Veterans Park
- Maps/Plans should reference this need



| ESTIMATED PARKING QUANTITY IMPACTS | | |
|------------------------------------|-----------------------|---------------------------|
| OWNER | EXISTING PARKING QTY. | RECONFIGURED PARKING QTY. |
| NOBLE HOUSE | 18 SPACES | 14 SPACES |
| HERSHEY'S | 47 SPACES | 41 SPACES |
| LAGER WINE BAR | 31 SPACES | 30 SPACES |
| YOURS TRULY | 70 SPACES | 63 SPACES |
| TOTALS: | 166 SPACES | 148 SPACES |

| PRO'S: | CON'S: |
|---|--|
| CAN UTILIZE RT 91/RT 306 INTERSECTION ENHANCEMENT FUNDS FOR IMPLEMENTATION. | REQUIRES PROPERTY EASEMENTS / ACQUISITIONS. |
| LOWER INSTALLATION COSTS. | IMPACTS EXISTING PARKING. |
| HIGH TRAIL VISIBILITY. | REQUIRES RT91 EXISTING CULVERT TO BE EXTENDED. |
| | ALIGNMENT TRAVERSES 6 VEHICULAR DRIVES. |

Alignment Evaluation Matrix

Trail Segment: Option #1

Feasibility Points: 2 (Least Feasible Conditions) 4 6 8 10 (Most Feasible Conditions)

Categories:

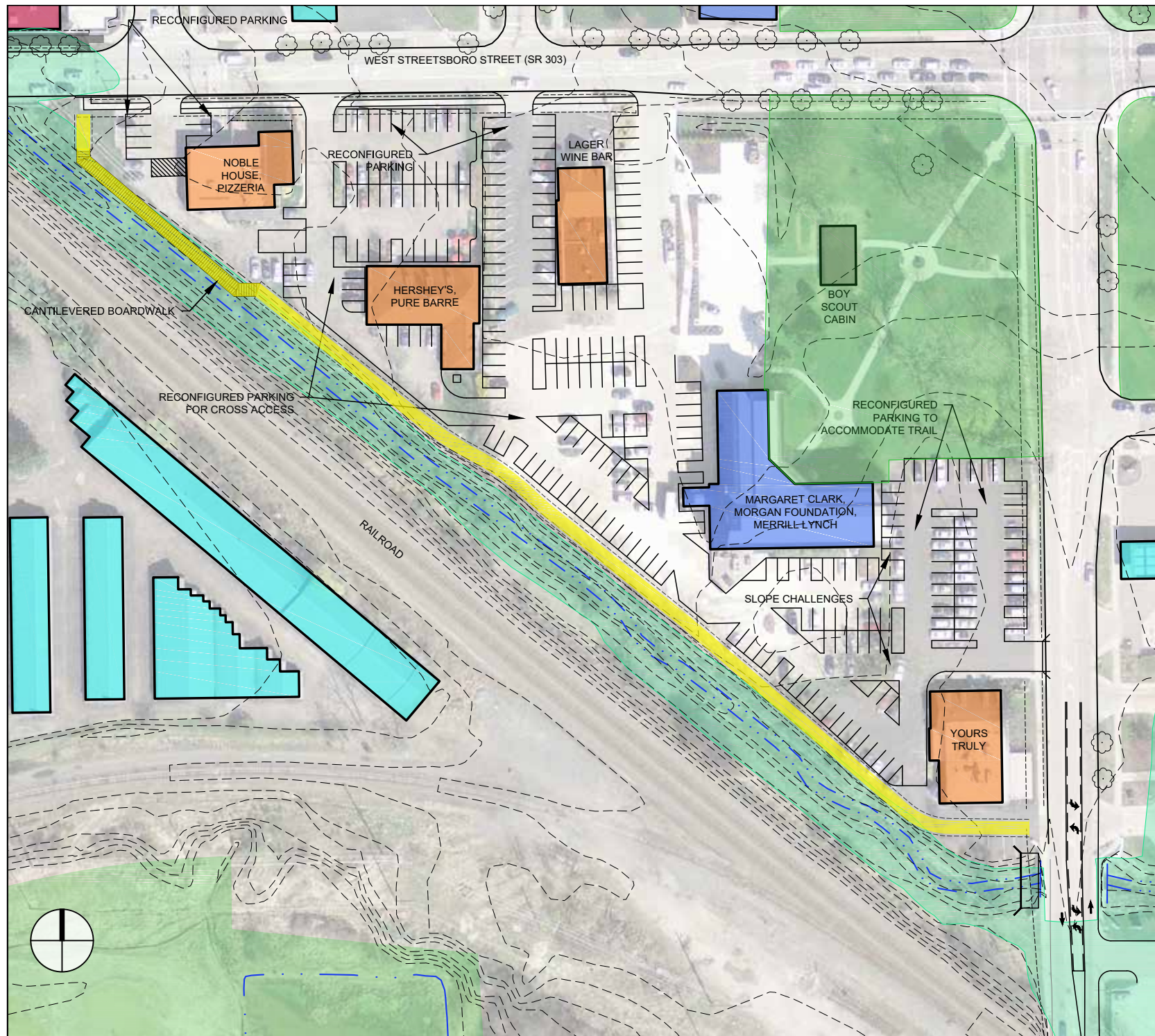
| Category | Score | Category Weighting | Total Feasibility Rating |
|--|-------|--------------------|--------------------------|
| 1 Average ROW Distance from Road Edge / Physical Space | 2 | 22 | 24 |
| 2 Safety - Number of Vehicular Crossings / Driveways | 4 | 20 | 24 |
| 3 Implementation Costs | 8 | 18 | 26 |
| 4 Fundability | 10 | 16 | 26 |
| 5 Ownership / Easements | 6 | 14 | 20 |
| 6 Parking Impacts | 2 | 12 | 14 |
| 7 Connects to Downtown Retail | 10 | 10 | 20 |
| 8 Trail Visibility | 10 | 8 | 18 |
| 9 Aesthetics / User Experience | 4 | 6 | 10 |
| 10 Environmental Restoration / Sustainability | 4 | 4 | 8 |
| 11 Historic Preservation | 6 | 2 | 8 |
| Total Feasibility Rating: | | | 198 |

LEGEND:

- STUDY AREA TERMINUS
- EXISTING PARKS / OPEN SPACE
- 100 YR FLOOD PLAIN
- EXISTING STREAMS
- EXISTING ALL-PURPOSE TRAIL
- EXISTING BIKE LANES
- BUILDING USE - RESIDENTIAL
- BUILDING USE - OFFICE
- BUILDING USE - RETAIL
- BUILDING USE - RESTAURANT
- BUILDING USE - CIVIC
- BUILDING USE - COMMERCIAL
- PROPOSED APT - OPTION #1
- PROPOSED APT - OPTION #2
- PROPOSED APT - OPTION #3
- PROPOSED APT - OPTION #4

TRAIL ALIGNMENT OPTION 1

03.4 OPTION 2



| ESTIMATED PARKING QUANTITY IMPACTS | |
|------------------------------------|---------------------------|
| EXISTING PARKING QTY. | RECONFIGURED PARKING QTY. |
| 311 SPACES | 309 SPACES |

| PRO'S: | CON'S: |
|---|---|
| SHARED PARKING SPACES AND CIRCULATION. | GRADING CHALLENGES / SLOPES WHEN CONNECTING PARKING LOTS. |
| ALIGNMENT DOES NOT TRAVERSE ANY VEHICULAR DRIVES. | REQUIRES MORE PROPERTY EASEMENTS / ACQUISITIONS THAN OPTION #1. |
| CAN UTILIZE STREAM RESTORATION FUNDING SOURCES. | IMPACTS EXISTING PARKING. |

Alignment Evaluation Matrix

Trail Segment: Option #2

Least Feasible Conditions Most Feasible Conditions

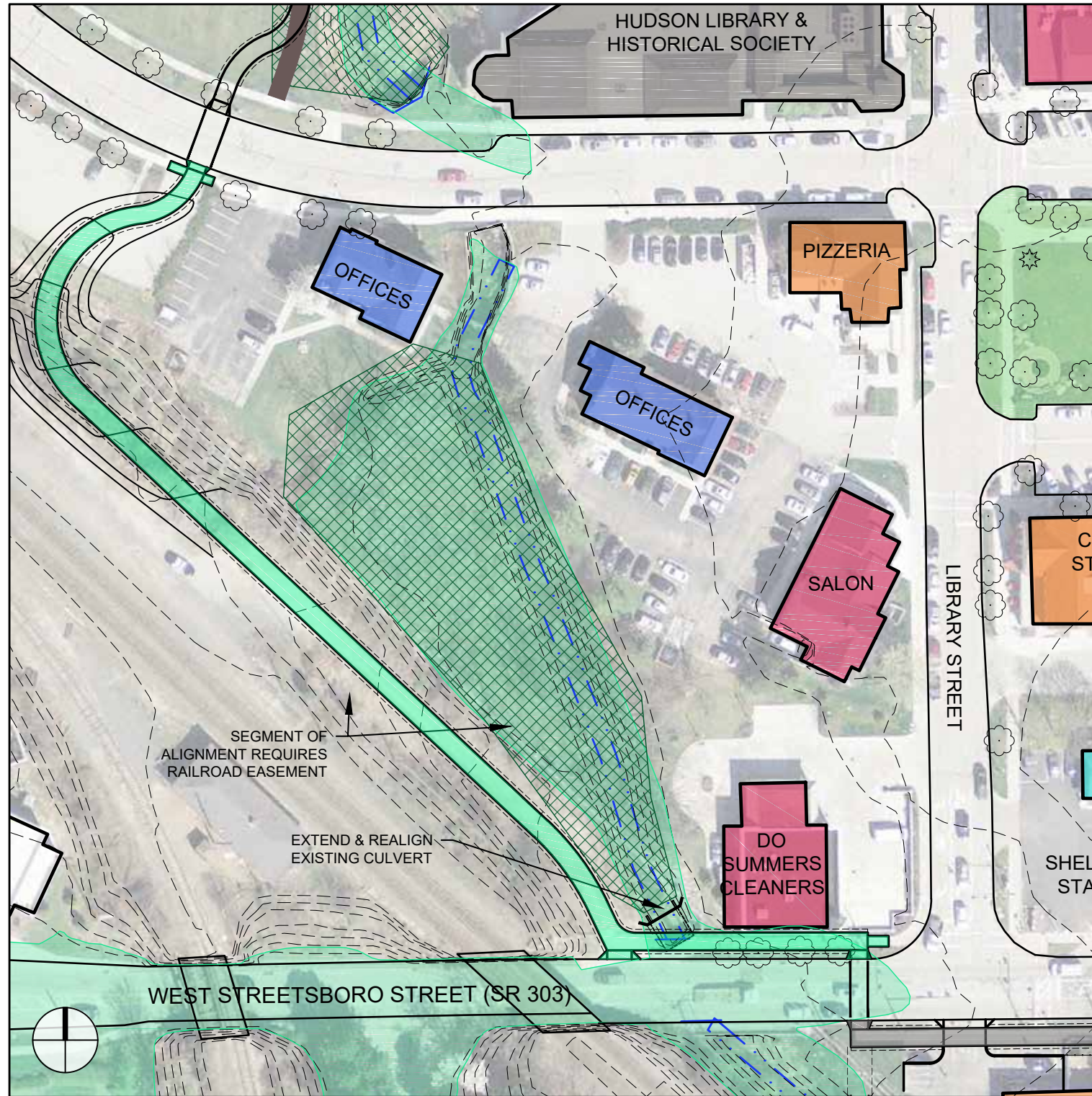
Feasibility Points: 2 4 6 8 10

| Categories: | Category Weighting | Total Feasibility Rating |
|--|--------------------|--------------------------|
| 1 Average ROW Distance from Road Edge / Physical Space | 22 | 28 |
| 2 Safety - Number of Vehicular Crossings / Driveways | 20 | 30 |
| 3 Implementation Costs | 18 | 20 |
| 4 Fundability | 16 | 22 |
| 5 Ownership / Easements | 14 | 16 |
| 6 Parking Impacts | 12 | 16 |
| 7 Connects to Downtown Retail | 10 | 16 |
| 8 Trail Visibility | 8 | 10 |
| 9 Aesthetics / User Experience | 6 | 14 |
| 10 Environmental Restoration / Sustainability | 4 | 10 |
| 11 Historic Preservation | 2 | 12 |
| Total Feasibility Rating: | | 194 |

LEGEND:

- STUDY AREA TERMINUS
- EXISTING PARKS / OPEN SPACE
- 100 YR FLOOD PLAIN
- EXISTING STREAMS
- EXISTING ALL-PURPOSE TRAIL
- EXISTING BIKE LANES
- BUILDING USE - RESIDENTIAL
- BUILDING USE - OFFICE
- BUILDING USE - RETAIL
- BUILDING USE - RESTAURANT
- BUILDING USE - CIVIC
- BUILDING USE - COMMERCIAL
- PROPOSED APT - OPTION #1
- PROPOSED APT - OPTION #2
- PROPOSED APT - OPTION #3
- PROPOSED APT - OPTION #4
- PROPOSED STREAM RESTORATION & GREENWAY ENHANCEMENTS

TRAIL ALIGNMENT OPTION 2



NO PARKING QUANTITY IMPACTS

| PRO'S: | CON'S: |
|---|--|
| CAN UTILIZE STREAM RESTORATION FUNDING SOURCES. | ALIGNMENT REQUIRES EASEMENT AND RIGHT OF ENTRY PERMIT FROM RAILROAD. |
| DOES NOT IMPACT EXISTING PARKING FACILITIES. | REQUIRES EXISTING SR 303 CULVERT TO BE EXTENDED & REALIGNED. |

Alignment Evaluation Matrix

Trail Segment: Option #3



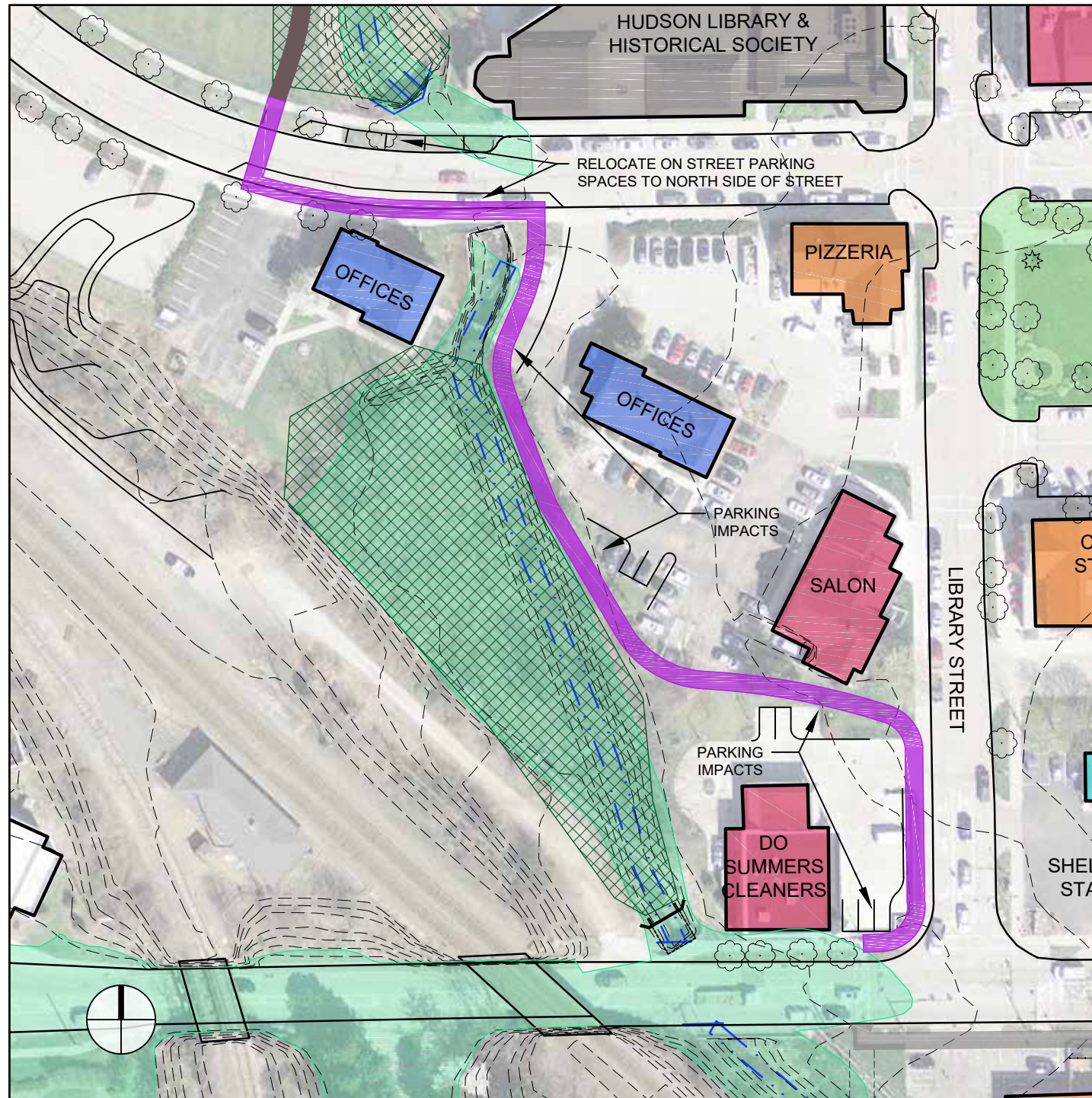
Categories:

| Category | Score | Category Weighting | Feasibility Rating |
|--|-------|--------------------|--------------------|
| 1 Average ROW Distance from Road Edge / Physical Space | 2 | 22 | 24 |
| 2 Safety - Number of Vehicular Crossings / Driveways | 10 | 20 | 30 |
| 3 Implementation Costs | 8 | 18 | 26 |
| 4 Fundability | 6 | 16 | 22 |
| 5 Ownership / Easements | 2 | 14 | 16 |
| 6 Parking Impacts | 10 | 12 | 22 |
| 7 Connects to Downtown Retail | 4 | 10 | 14 |
| 8 Trail Visibility | 4 | 8 | 12 |
| 9 Aesthetics / User Experience | 8 | 6 | 14 |
| 10 Environmental Restoration / Sustainability | 8 | 4 | 12 |
| 11 Historic Preservation | 10 | 2 | 12 |

LEGEND:

- STUDY AREA TERMINUS
- EXISTING PARKS / OPEN SPACE
- 100 YR FLOOD PLAIN
- EXISTING STREAMS
- EXISTING ALL-PURPOSE TRAIL
- EXISTING BIKE LANES
- BUILDING USE - RESIDENTIAL
- BUILDING USE - OFFICE
- BUILDING USE - RETAIL
- BUILDING USE - RESTAURANT
- BUILDING USE - CIVIC
- BUILDING USE - COMMERCIAL
- PROPOSED APT - OPTION #1
- PROPOSED APT - OPTION #2
- PROPOSED APT - OPTION #3
- PROPOSED APT - OPTION #4
- PROPOSED STREAM RESTORATION & GREENWAY ENHANCEMENTS

TRAIL ALIGNMENT OPTION 3



Alignment Evaluation Matrix

| Categories: | Trail Segment: Option #4 | | Category Weighting | Feasibility Rating |
|--|--------------------------------|--------------------------|--------------------|--------------------|
| | Least Feasible Conditions | Most Feasible Conditions | | |
| | Feasibility Points: 2 4 6 8 10 | | | |
| | <17 | >17 | | |
| 1 Average ROW Distance from Road Edge / Physical Space | 2 | | 22 | 24 |
| 2 Safety - Number of Vehicular Crossings / Driveways | 4 | | 20 | 24 |
| 3 Implementation Costs | | 6 | 18 | 24 |
| 4 Fundability | | 6 | 16 | 22 |
| 5 Ownership / Easements | 4 | | 14 | 18 |
| 6 Parking Impacts | 2 | | 12 | 14 |
| 7 Connects to Downtown Retail | | | 10 | 18 |
| 8 Trail Visibility | | | 8 | 16 |
| 9 Aesthetics / User Experience | | 6 | 6 | 12 |
| 10 Environmental Restoration / Sustainability | | 6 | 4 | 10 |
| 11 Historic Preservation | | | 2 | 12 |
| Total Feasibility Rating: | | | 194 | |

LEGEND:

- STUDY AREA TERMINUS
- EXISTING PARKS / OPEN SPACE
- 100 YR FLOOD PLAIN
- EXISTING STREAMS
- EXISTING ALL-PURPOSE TRAIL
- EXISTING BIKE LANES
- BUILDING USE - RESIDENTIAL
- BUILDING USE - OFFICE
- BUILDING USE - RETAIL
- BUILDING USE - RESTAURANT
- BUILDING USE - CIVIC
- BUILDING USE - COMMERCIAL
- PROPOSED APT - OPTION #1
- PROPOSED APT - OPTION #2
- PROPOSED APT - OPTION #3
- PROPOSED APT - OPTION #4
- PROPOSED STREAM RESTORATION & GREENWAY ENHANCEMENTS

| ESTIMATED PARKING QUANTITY IMPACTS | | |
|------------------------------------|-----------------------|---------------------------|
| OWNER | EXISTING PARKING QTY. | RECONFIGURED PARKING QTY. |
| OFFICE BUILDING | 32 SPACES | 24 SPACES |
| DO SUMMERS CLEANERS | 11 SPACES | 5 SPACES |

| PRO'S: | CON'S: |
|---|--|
| CAN UTILIZE STREAM RESTORATION FUNDING SOURCES. | IMPACTS EXISTING PARKING |
| | LESS DIRECT & MORE PEDESTRIAN AND VEHICULAR INTERFACE THAN OPTION #3 |

TRAIL ALIGNMENT OPTION 4

CONCEPT DEVELOPMENT

03.7 ROUTE 91 UNDERPASS

South of Yours Truly, lane modifications are necessary to accommodate the proposed all-purpose trail along SR 91 and under the railroad bridge. An initial concept was developed in compliance with ODOT design standards. This configuration requires restriction of the Fussy Cleaners driveway access on the east side of SR91 to right in/right out only. Given the multiple other destinations served by the Fussy Cleaners driveway, the Steering Committee felt it is important to maintain full movement access. The preferred design concept shown below maintains full movement access and requires design exceptions for the length of the southbound merge taper and the lane widths within the transition segment between the PNC driveway and the north edge of the railroad underpass. The roadway configuration to the north and south of the transition segment complies with ODOT design standards. The design exceptions that will allow the full movement access at the Fussy Cleaners driveway are:

1. Southbound merge taper length of 75 feet rather than the design standard of 125 feet.
2. 11 foot wide travel lanes (at their narrowest point), rather than the design standard of 12 feet.

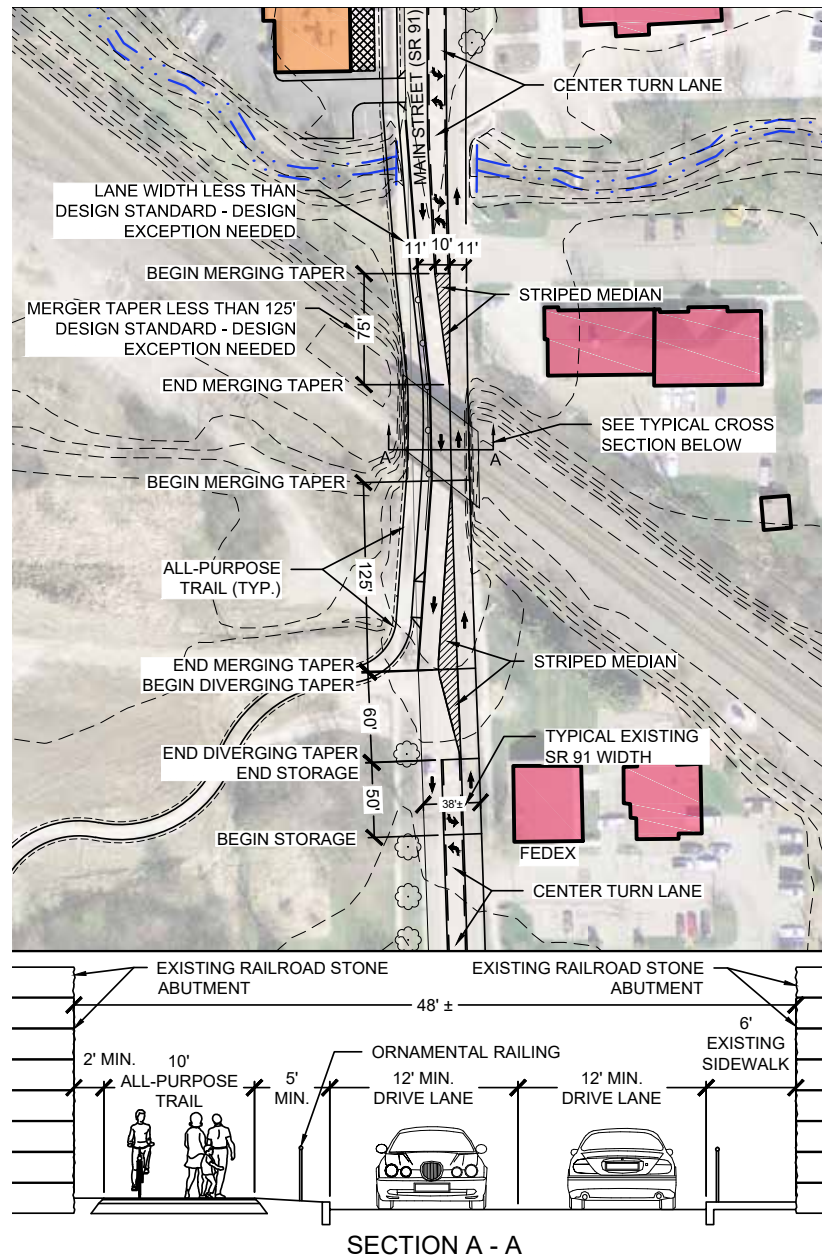


FIGURE 8: Railroad Underpass Lane Modifications

CONCEPT DEVELOPMENT

03.8 PUBLIC MEETING

On August 21, 2017, the Project Team held a public meeting to present the project goals, the process completed to date, the proposed alignment options, and to request feedback. The attendees provided verbal comments, which were recorded in the meeting minutes and by using sticky dots to vote for their preferred options.



OPTION 1



OPTION 2



OPTION 3



OPTION 4

03.9 ALIGNMENT CONCLUSIONS

On September 11, 2017, the Steering Committee met to review and evaluate the project progress, review and evaluate the options development and evaluation, and provide final input on the preferred alignment.

OPTION 1 VS. 2: Based on the Pro/Con assessment, and feasibility analyses, neither alignment option appears to be a clear favorite. The recommended option is #1, due to its high visibility along State Routes 303 and 91, the opportunity to leverage funding the city secured for enhancements to the 303/91 intersection, and its interface with the fronts of the adjacent commercial and office buildings.

OPTION 3 VS. 4: Based on the Pro/Con assessment, and feasibility analyses, option 3 is the preferred alignment.

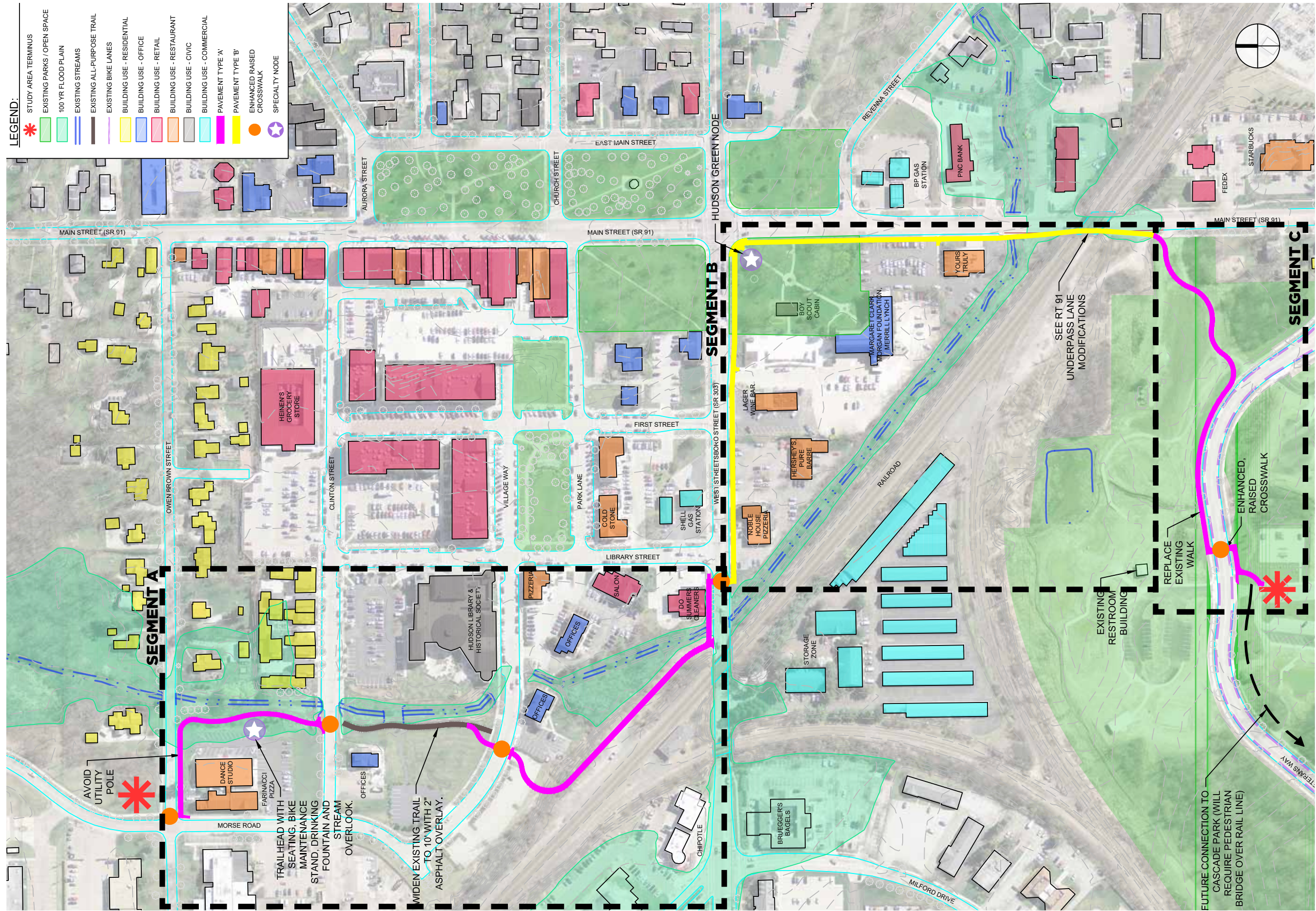
04

RECOMMENDATIONS

04.1 DOWNTOWN HUDSON TRAIL &
GREENWAY PLAN

04.2 RECOMMENDATIONS





DOWNTOWN HUDSON TRAIL & GREENWAY (VETERANS TRAIL PHASE 5) CONCEPT PLAN

DOWNTOWN HUDSON TRAIL & GREENWAY PLAN

RECOMMENDATIONS

In addition to the alignment itself, there are multiple recommendations to consider, related to the greenway:

1. **RIGHT-OF-WAY:** Along Routes 303 and 91 (Segment B,) the trail will encroach upon several private properties which will necessitate either acquisition or easements along with the reconfiguration, and the loss of some parking spaces.
2. **PAVEMENT TREATMENTS:** Context-sensitive design dictates that Segment B should receive a treatment different from Segments A and C. Segments A and C move through more naturalized, open space conditions currently, and Segment B is in a more urban setting, with multiple vehicular drive crossings. Therefore, a 10' wide asphalt trail (Pavement Type 1, per Figure 9) is an appropriate material for Segments A and C .

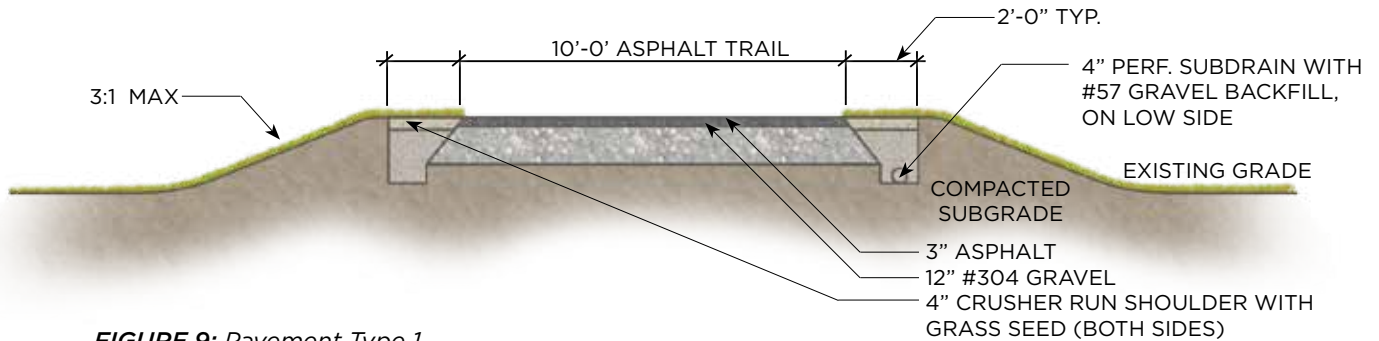


FIGURE 9: Pavement Type 1

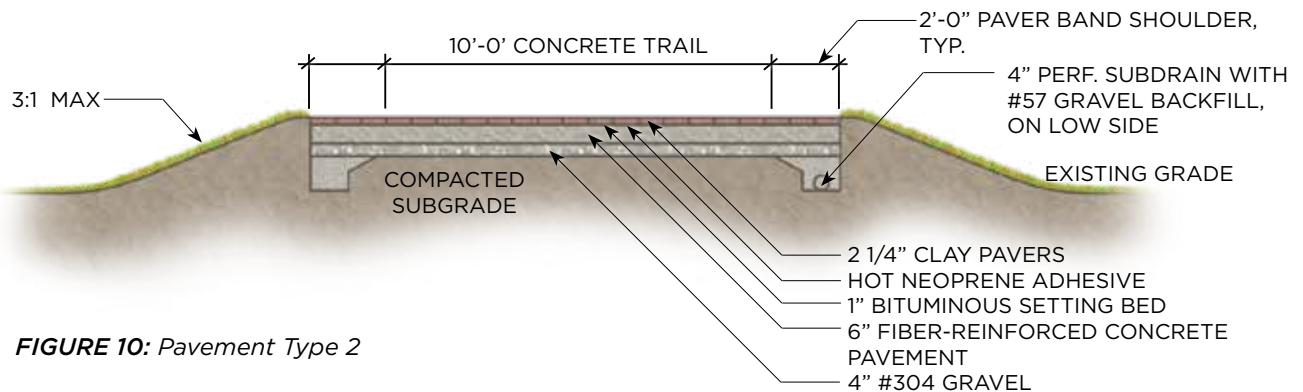


FIGURE 10: Pavement Type 2

The more visible setting of Segment B, with higher chances for mixed pedestrian and bicycle traffic, calls for a higher-end finish, and wider trail. Per Figures 10 and 11, Pavement Type 2 utilizes concrete for the 10' wide trail, with a 2'-wide brick paver band on each side, serving as the trail's shoulders. This effectively makes the trail 14' wide for mixed bike-ped traffic. This wider trail and higher pavement finish may also be appropriate for segment A, after the phase II development is completed.

RECOMMENDATIONS

At each vehicular drive crossing, the trail becomes a solid field of pavers, to raise motorists' awareness they are driving through a pedestrian zone. As one approaches the driveway crossing on the trail, perpendicular paver bands notify trail users that a vehicular crossing is ahead, as indicated in Figure 11.

3. SEGMENT B PREFERRED

DIMENSIONS: Figure 12 shows the preferred dimensions for segment B. The proper balance between trail user, safety and comfort, and adjacent property owners' needs will be determined during the engineering phase.

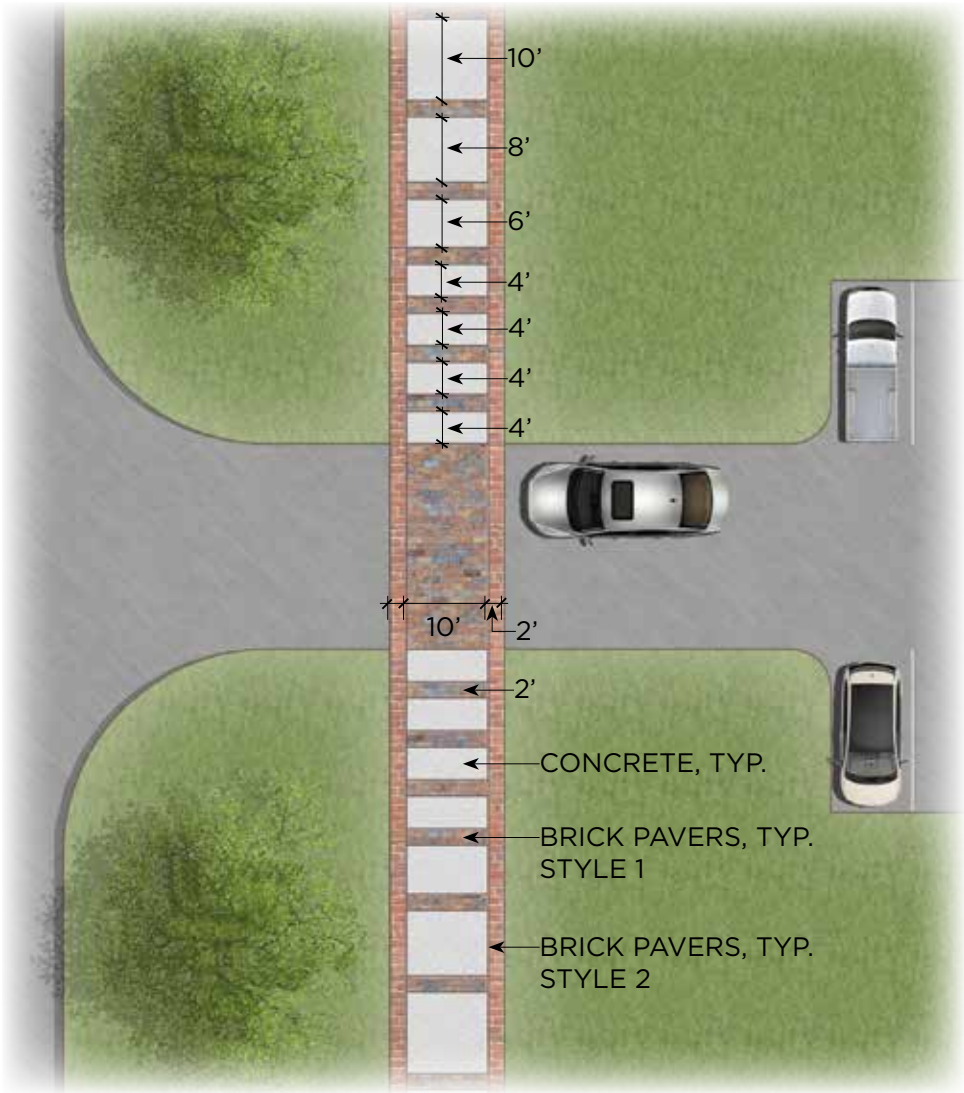


FIGURE 11: Pavement, Type 2 Plan View

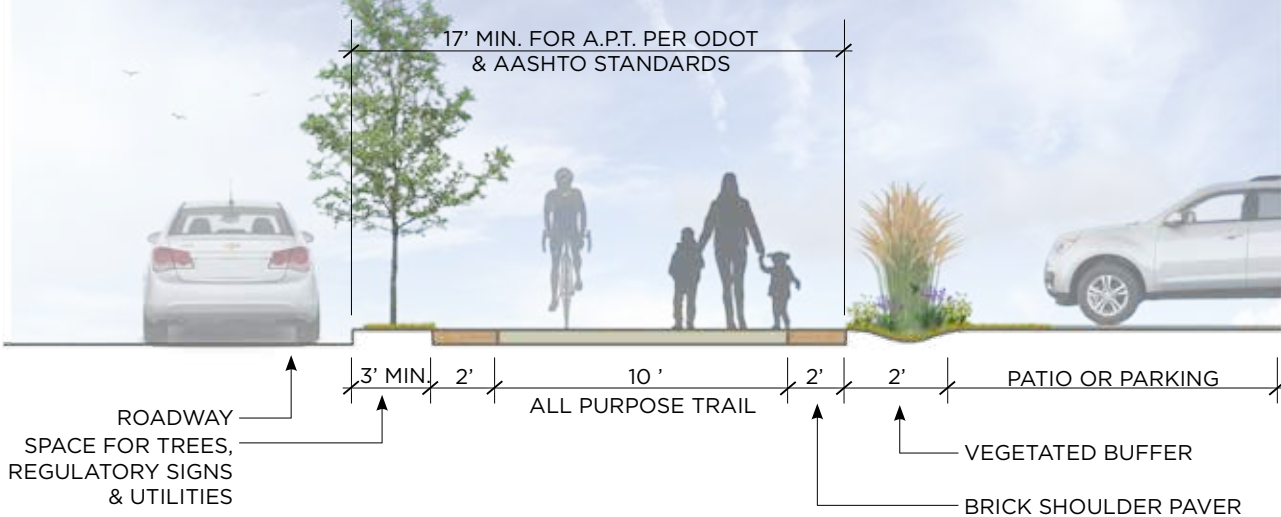


FIGURE 12: Trail Segment Typical Section

RECOMMENDATIONS

3. NON-STANDARD IMPROVEMENTS:

- a. West of the library: Widen the existing trail to 10' (add 2' to west side, and add 2" asphalt top coat).
- b. Veterans Park: Widen the section of existing sidewalk that coincides with the trail alignment to a 10' concrete trail.

4. STREET CROSSINGS: At points where the trail crosses a street, the trail should be prioritized, through a raised, specialty pavement crosswalk.

5. TRAILHEAD: An opportunity exists at the open space directly east of the dance studio and Farinacci Pizza building to create a trailhead. Amenities could include a publicly-accessible restroom, water bottle filler/drinking fountain, a bike maintenance station, a kiosk with information on local bike shops, dining and other destinations, a phone charging station, and an outdoor gathering space/dining area, overlooking a restored stream.

6. STREAM RESTORATION: Although the proposed trail alignment parallels the existing stream for three blocks, the stream is currently ignored as a visual asset. In addition, flooding is an issue in Hudson. As such, stormwater management funding could be leveraged for trail construction funding, the city should consider integrating stormwater improvements and stream restoration in parallel with the trail implementation. The project should investigate the potential for storm detention or water quality treatment in the floodplain area northwest of DO Summers, to compensate for the impervious surface added by the trail.

7. GREEN INFRASTRUCTURE: If the stream improvements are not feasible, consider implementing bioretention for water quality control in areas adjacent to the trail.

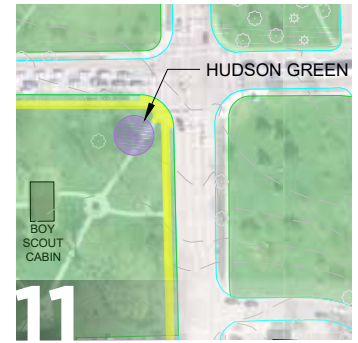
8. TREES: Trees add property value, environmental benefits, and human comfort. Install shade trees along the length of the trail, where existing trees do not exist.

9. LIGHTING: During the design stage, study the photometric need for pedestrian-scale pole lights. If necessary, specify a historic fixture, in the flavor of downtown Hudson.



RECOMMENDATIONS

10. **HUDSON GREEN NODE:** The intersection of State Routes 303 and 91 is a significant point in the downtown area, but there is little signifying a sense of arrival at that location. This node could be transformed into a small plaza with public art suitable for the local context, or an appropriately-scaled information kiosk for visitors to Hudson, or signage about the historic Boy Scout cabin and all of the Hudson Green quadrants.



11. **ALTERNATE ROUTE:** During Stakeholder Meeting #2, a participant suggested the trail could meander through the Boy Scout Cabin Green. This alternate alignment is shown in the top right image.



12. **SITE FURNISHINGS:** Benches, trash receptacles, and bike racks, in the same palette as the city's recently-completed Main Street streetscape, and placed in the right locations, will provide another layer of trail amenities, adding to the livability of downtown Hudson.



13. **HISTORY WALK:** Hudson is rich in history. Celebrate it and educate trail users with a series of mini-nodes with interpretive signs along the trail.

14. **WAYFINDING SIGNAGE:** A brand and logo developed for either the Veterans Trail or Hudson's overall trail system, with the related signage, would not only direct trail users to local businesses, but would also help trail users and non-users immediately identify the trail as uniquely Hudson.



15. **INFORMATION KIOSK:** Information kiosks can be utilized on the trail to offer maps and written directions, highlight key points of interest within the City of Hudson, including local restaurants, arts and entertainment opportunities, shopping and other integral public amenities.

16. **BIKE PARKING:** Opportunities exist to not only provide simple bike racks, but more architectural bike parking features in high traffic areas within the downtown fabric. Covered bike structures shelter bikes in situations of inclement weather and can be designed in such a way so as to match the preferred traditional design vernacular within the community.



RECOMMENDATIONS

17. **MAINTENANCE:** When the city moves forward with the preparation of design and construction documents, evaluate not only the cost of construction, but the project's full life cycle cost, to ensure adequate funds are set aside for regular maintenance. Maintenance includes, but is not limited to regular sweeping, repainting pavement markings, crack sealing or repaving asphalt surfaces, replacing damaged items, vegetation management, and snow removal. Based on a 2014 Rails to Trails Conservancy survey, maintenance on asphalt trails costs \$2,000 per mile.



05

IMPLEMENTATION

05.1 PHASES

05.2 COST ESTIMATE

05.3 STRATEGIES

05.1 PHASES

The Planning Team divided the trail into three segments, based on the types of area the segments are in (less urban vs. more urban,) relative lengths, and anticipated funding sources. These can be used to break implementation down into more manageable sizes or be funded more easily, with different sources.

05.2 COST ESTIMATE

The figures below are a summary of schematic-level design and construction costs estimated for each trail segment. General assumptions include:

1. Right of Way acquisition or unknown underground infrastructure is not included.
2. General Conditions and Maintenance of Traffic are included.
3. Soft costs, including design, engineering, construction administration, and construction inspection are included.

Segment A: \$1,100,000

Segment B: \$800,000

Segment C: \$600,000

IMPLEMENTATION

05.3 STRATEGIES

The table below summarizes the funding sources available for this type of project. The City of Hudson should also consider other funding strategies; possibilities include:

1. Utilizing environmental restoration/enhancement funds to cover a portion of adjacent trail development. This could apply to nearly the entire length of trail Segment A (stream and floodplain) and Segment C (wetland).
2. Since the trail will add value to the future Phase 2 development, requiring the development to fund a portion or all of Segment A (and possibly other segments,) as a condition of plan approval is an option.
3. Since the city has secured funding for improvements at State Routes 303 and 91, working within the funder’s parameters and budget could allow some or all of trail Segment B to be included in the intersection improvements project.

Potential Funding Sources

| Description & Link | Eligible Applicants | Categories | Match |
|--|---|---|---------|
| Advanced Transportation and Congestion Management Technologies Deployment Initiative | | | |
| This program provides funding to develop model deployment sites for large scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment. These model deployments are expected to provide benefits in the form of: reduced traffic-related fatalities and injuries, reduced traffic congestion and improved travel time reliability, reduced transportation-related emissions, optimized multimodal system performance, improved access to transportation alternatives, including for underserved populations, public access to real time integrated traffic, transit, and multimodal transportation information to make informed travel decisions, cost savings to transportation agencies, businesses, and the traveling public; or other benefits to transportation users and the general public. https://www.grants.gov/custom/viewOppDetails.jsp?oppid=282433 | Counties, Metroparks, Municipalities, Port Authorities, Sewer Districts, Transit Agencies | Communications Equipment, Computer Hardware/Software, Intelligent Transportation Systems, Mobility Management, Safety, Transit, Transit Capital | 50% |
| Rural Transportation Assistance Program (5311 b3) | | | |
| Federal and State funds are used to assist with operating and capital expenses in the provision of general public transportation services in rural and small urban areas. Section 5311 funds can be used for up to 50% of the net project cost of operating expenses and up to 80% of the cost of capital projects. State General Revenue funds, through the Ohio Public Transportation Grant Program, are also available to provide up to 30% of eligible operating costs and up to 10% of the costs of capital projects. https://www.dot.state.oh.us/Divisions/Planning/Transit/Pages/Rural.aspx | Counties, Municipalities, Non Profits, Transit Agencies | Communications Equipment, Computer Hardware/Software, Intelligent Transportation Systems, Mobility Management, Transit, Transit Capital, Transit Center Facility, Transit Operating, Vehicles | 20%-50% |
| TIGER | | | |
| The Transportation Investment Generating Economic Recovery Program (TIGER) provides funding for innovative, multi-modal and multi-jurisdictional transportation projects that promise significant economic and environmental benefits to an entire metropolitan area, a region, or the nation. https://www.transit.dot.gov/funding/grants/transportation-investment-generating-economic-recovery-tiger-program | Counties, Municipalities, Port Authorities, Transit Agencies | Bike/Pedestrian, Bikeways, Bridge, Pedestrian, Road, Road/Bridge, Transit, Transit Capital, Transit Center Facilities | 20% |
| AMATS Resurfacing Program | | | |
| Resurfacing projects on non-state routes using AMATS STP funds | Communities within the AMATS region. | Principal and minor arterials, urban collectors and major rural collectors that are not on a state route. | 20% |

| Transportation Alternatives (TA Set-Aside) | | | |
|---|---|--|---------------------|
| <p>The Fixing America's Surface Transportation (FAST) Act replaced the former Transportation Alternatives Program (TAP) with a set-aside of funds under the Surface Transportation Block Grant Program (STBG). For administrative purposes, the Federal Highway Administration (FHWA) will refer to these funds as the TA Set-Aside.</p> <p>https://www.fhwa.dot.gov/environment/transportation_alternatives/</p> | <p>Local Governments, Regional Transportation Authorities, Transit Agencies, Natural Resource or Public Land Agencies, School Districts, Local Education Agencies or Schools, Tribal Governments, Nonprofit Entities responsible for the administration of local transportation safety programs, Other Local or Regional Governmental Entity with responsibility for or oversight of transportation or recreational trails.</p> | <p>All projects and activities that were previously eligible under TAP, encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity.</p> | <p>0-20%</p> |
| Community Facilities Direct Loan and Grant Program in Ohio | | | |
| <p>This program provides affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community in a primarily rural area, and does not include private, commercial or business undertakings.</p> <p>https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program/oh</p> | <p>Public bodies, Community-based non-profit corporations, Federally recognized Tribes</p> | <p>Health care facilities, Public facilities, Public safety services, Educational services, Local food systems, Utility services, Community support services</p> | <p>Not Provided</p> |
| Connecting Communities Planning Grants | | | |
| <p>The purpose of Connecting Communities is to guide integrating land use and transportation to promote a region that balances environmental, social and economic concerns by improving coordination between land use and transportation. Connecting Communities utilizes a regional planning process to explore strategies to increase transportation choices and accessibility, help communities make collaborative, informed decisions to coordinate development, reduce environmental impacts and improve regional connectivity.</p> <p>http://amatsplanning.org/planning/initiatives/connecting-communities/</p> | <p>Local AMATS communities, regional transit authorities and county park districts.</p> | <p>Alternative transportation (pedestrian infrastructure, bicycle facilities, public transportation), complete streets, land use and design</p> | <p>0%</p> |
| FY 2016 – FY 2019 EDA Planning Program and Local Technical Assistance Program Funding Opportunity No. EDA-HDQ-TA-HDQ-2016-2001759 | | | |
| <p>Under the Planning program EDA assists eligible recipients in creating regional economic development plans designed to build capacity and guide the economic prosperity and resiliency of an area or region. As part of this program, EDA supports Partnership Planning Investments to facilitate the development, implementation, revision, or replacement of Comprehensive Economic Development Strategies (CEDS), which articulate and prioritize the strategic economic goals of recipients' respective regions.</p> <p>https://www.grants.gov/web/grants/view-opportunity.html?oppld=280447</p> | <p>Non Profits, Institutions of higher education, County governments, City or township governments, State governments</p> | <p>Economic Development</p> | <p>Not Provided</p> |

**FY 2017 Economic Development Assistance Programs - Application submission and program requirements for EDA's Public Works and Economic Adjustment Assistance programs.
Funding Opportunity No. EDAP-2017**

| | | | |
|--|---|-----------------------------|---------------------|
| <p>The Economic Development Administration's (EDA's) mission is to lead the Federal economic development agenda by promoting innovation and competitiveness, preparing American regions for economic growth and success in the worldwide economy. EDA fulfills this mission through strategic investments and partnerships that create the regional economic ecosystems required to foster globally competitive regions throughout the United States. EDA supports development in economically distressed areas of the United States by fostering job creation and attracting private investment. Specifically, under the Economic Development Assistance programs (EDAP) Notice of Funding Availability (NOFA), EDA will make construction, non-construction, and revolving loan fund investments under the Public Works and Economic Adjustment Assistance (EAA) Programs. Through this NOFA, EDA will also designate a portion of its EAA funding to support communities and regions that have been negatively impacted by changes in the coal economy (Assistance to Coal Communities, or ACC 2017). Grants made under these programs will leverage regional assets to support the implementation of regional economic development strategies designed to create jobs, leverage private capital, encourage economic development, and strengthen America's ability to compete in the global marketplace. Through the EDAP NOFA, EDA solicits applications from rural and urban communities to develop initiatives that advance new ideas and creative approaches to address rapidly evolving economic conditions. https://www.grants.gov/web/grants/view-opportunity.html?oppid=294771</p> | <p>County governments, Non Profits, City or township governments Special district governments, State governments Public and State controlled institutions of higher education</p> | <p>Economic Development</p> | <p>Not Provided</p> |
|--|---|-----------------------------|---------------------|

Surface Transportation Program (includes CMAQ, TA, TLCI funds)

| | | | |
|--|---------------------------------|---|------------|
| <p>STP funds are the most versatile and may be used for any project that is recommended in or consistent with the AMATS Regional Transportation Plan. STP funds can be used on any federal-aid roadway classified above a local road or a rural minor collector and bridge projects on any public road</p> | <p>Counties, Municipalities</p> | <p>Highway projects and bridge improvements (construction, reconstruction, rehabilitation, resurfacing, restoration, and operational), transportation system management, public transit capital improvement projects, commuter rail, carpool projects, bus terminals and facilities, bikeways, pedestrian facilities and planning studies</p> | <p>20%</p> |
|--|---------------------------------|---|------------|

**Community Development Block Grant
State Administered CDBG and the Neighborhood Stabilization Program**

| | | | |
|---|---------------------------------|---|---------------|
| <p>Federal funding through Housing and Urban Development (HUD) for public facilities: road resurfacing, crosswalks, street lights, traffic/pedestrian signals, barrier removal for handicap accessibility (e.g., sidewalks, curb ramps), and street furniture. The annual CDBG appropriation is allocated between states and local jurisdictions called "non-entitlement" and "entitlement" communities respectively. Entitlement communities are comprised of central cities of Metropolitan Statistical Areas (MSAs); metropolitan cities with populations of at least 50,000; and qualified urban counties with a population of 200,000 or more (excluding the populations of entitlement cities). States distribute CDBG funds to non-entitlement localities not qualified as entitlement communities. Check HUD's, County's, or City's website to see if funding is eligible in your location. https://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs</p> | <p>Counties, Municipalities</p> | <p>Bike/Pedestrian, Bikeways, Bridge, Pedestrian, Road, Road/Bridge, Safety</p> | <p>Varies</p> |
|---|---------------------------------|---|---------------|

| Congestion Mitigation and Air Quality Improvement Program | | | |
|--|---|---|--------------|
| <p>Congestion Mitigation and Air Quality (CMAQ) funds can only be used for projects that help reduce traffic congestion and improve air quality. These funds may be used for traffic signal upgrade projects, bus replacements, bike facilities, intelligent transportation system improvements, transit center and Park-N-Ride construction.</p> <p>https://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/2013_guidance/</p> | Counties, Metroparks, Municipalities, Port Authorities, Transit Agencies | Bike/Pedestrian, Bikeways, Communications Equipment, Computer Hardware/Software, Congestion, Intelligent Transportation Systems, Pedestrian, Road, Road/Bridge Safety, Traffic Signal Upgrade, Transit Capital, Transit Center Facility, Vehicles | 0%-25% |
| Mobility on Demand Sandbox Program | | | |
| <p>This program provides funding for new service options in combination with available technologies that allow for greater individual mobility.</p> <p>https://www.transit.dot.gov/research-innovation/mobility-demand-mod-sandbox-program.html</p> | Non Profits, Transit Agencies | Communications Equipment, Computer Hardware/Software, Intelligent Transportation Systems, Mobility Management, Planning, Transit, Transit Capital | 80% |
| Capital Investment Grant (5309) | | | |
| <p>FTA's primary grant program for funding major transit capital investments along separate corridor lines, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit. It requires steps over several years to be eligible.</p> <p>https://www.transit.dot.gov/funding/grants/capital-investment-grants-5309</p> | Counties, Municipalities, Port Authorities, Transit Agencies | Transit, Transit Capital, Transit Center Facility, Vehicles | 40% |
| Building Blocks for Sustainable Communities | | | |
| <p>Many communities around the country are asking for tools to help them achieve their desired development goals, improve quality of life, and become more economically and environmentally sustainable. In response to this demand, EPA developed the Building Blocks for Sustainable Communities Program in 2011. Building Blocks for Sustainable Communities provides quick, targeted technical assistance to selected communities using a variety of tools that have demonstrated results and widespread application.</p> <p>https://www.epa.gov/smartgrowth/building-blocks-sustainable-communities</p> | Local, county, or tribal governments, or nonprofit organizations that have the support of the local government on whose behalf they are applying. | Sustainable Communities | Not Provided |
| Community Development Block Public Infrastructure Grant Program | | | |
| <p>Community Development Block Public Infrastructure Grant Funds are granted to local government applicants for both economic development loan and public infrastructure projects. Public off-site infrastructure funds are retained as a grant by the local government. In the case of a loan, the local government grantee loans the funds to the beneficiary business for fixed asset financing projects and the funds are repaid to the local government Revolving Loan Fund.</p> <p>https://development.ohio.gov/cs/cs_edl.htm</p> | Counties, Municipalities | Bike/Pedestrian, Bikeways, Bridge, Community Water System Improvements, Environmental, Pedestrian, Road, Road/Bridge, Sewer Construction, Storm Water Improvements, Wastewater Treatment Plant Improvements | Not Provided |
| Jobs & Commerce | | | |
| <p>Businesses, with a sponsoring local government, can request grant funding for infrastructure improvement and access projects that help create and/or retain jobs.</p> <p>https://www.dot.state.oh.us/Divisions/JobsAndCommerce/Pages/default.aspx</p> | Counties, Municipalities | Bike/Pedestrian, Pedestrian, Road, Road/Bridge | Not Provided |

| Safety Program | | | |
|---|---|---|--------|
| <p>ODOT's Highway Safety Program sets aside \$2M annually to support bicycle and pedestrian-related funding requests. This money will likely flow from the Active Transportation Plan and these funds will be in addition to the requests that ODOT receives for bike/pedestrian infrastructure included in road safety improvements. It also provides \$1 million dollars in funding to upgrade safety signage on Ohio's Township Roadways. Townships are invited to apply for the safety funding based on the following criteria: Ranked among the top townships with above average, system wide crash rates based on their previous five years crash history, and Have not previously received a Township Sign Safety Grant under this program.</p> <p>http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/Pages/LocalFundingOpportunities.aspx</p> | Municipalities | Bike Safety Program, Bike/Pedestrian, Bikeways, Safety | 0%-20% |
| Small Government Program | | | |
| <p>The program provides grants and loans to villages and townships with populations in the unincorporated areas of less than 5,000 in population.</p> <p>http://www.pwc.state.oh.us/OPWCO/overview.html?m=</p> | Municipalities | Bike/Pedestrian, Bikeways, Bridge, Community Water System Improvements, Environmental, Pedestrian, Road, Road/Bridge, Sewer Construction, Wastewater Treatment Plant Improvements | N/A |
| State Capital Improvement Program-District 1 (Cuyahoga County) | | | |
| <p>The State Capital Improvement Program (SCIP) assists local communities in financing local public infrastructure improvements. Eligible applicants are counties, cities, villages, townships, and water and sanitary districts. Eligible projects are for improvements to roads, bridges, culverts, water supply systems, wastewater systems, storm water collection systems, and solid waste disposal facilities.</p> <p>http://www.countyplanning.us/services/grant-programs/state-capital-improvement-program/</p> | Counties, Municipalities, Sewer Districts | Bridge, Community Water System Improvements, Road, Road/Bridge, Sewer Construction, Storm Water Improvements, Wastewater Treatment Plant Improvements | 0%-50% |
| Amish Buggy Program | | | |
| <p>Provides funding for transportation improvement projects on priority state routes and off-road trails adjacent to priority state routes that improve safety for motorists and horse drawn vehicles. The priority state routes were identified and selected based on ODOT buggy/motorized vehicle crash data.</p> <p>http://www.dot.state.oh.us/Divisions/Planning/ProgramManagement/MajorPrograms/Pages/AmishBuggy.aspx</p> | Counties, Municipalities | Bike/Pedestrian, Bikeways, Road, Road/Bridge Safety | 20% |
| County Highway Safety Program | | | |
| <p>The County Safety Program provides funds to counties, through the County Engineers, for safety related improvements, on county maintained roadways. The County Engineers Association of Ohio (CEAO) serves as program manager for project selection and administration.</p> <p>http://www.ceao.org/ews/CEAO/pt/sp/home_page</p> | Counties | Congestion, Planning, Safety, Traffic Signal Upgrade | 20% |

| Clean Ohio Green Space Conservation Fund | | | |
|---|--|---|---------------------|
| <p>This program is dedicated to environmental conservation including acquisition of green space and the protection and enhancement of river and stream corridors. Grant recipients agree to maintain the properties in perpetuity so that they can be enjoyed and cherished for generations to come.</p> <p>http://www.pwc.state.oh.us/GSCdefault.html?m=</p> | <p>Counties, Metroparks, Municipalities, Non Profits, Port Authorities, Sewer Districts, Transit Agencies</p> | <p>Bike/Pedestrian, Bikeways, Environmental, Natural Habitat Preservation and Restoration, Pedestrian, Resilience Efforts, Storm Water Improvements</p> | <p>Varies</p> |
| Safe Routes to School Program | | | |
| <p>The purpose of Safe Routes to School is to encourage and enable students in grades k-8 to walk or ride their bicycle to school. Projects can be either engineering (improved crossings, sidewalks, etc.) or non-engineering (education and encouragement programs). The responsibility of a safe route to school is ultimately shared by the user, government agencies, elected officials, schools, and safety advocates.</p> <p>http://www.dot.state.oh.us/Divisions/Planning/ProgramManagement/HighwaySafety/ActiveTransportation/Pages/SRTS.aspx</p> | <p>Municipalities, Non Profits, School Districts</p> | <p>Bike Safety Program, Bike/Pedestrian, Bikeways, Helmets, Pedestrian, Pedestrian Safety, Program Planning, Road, Road/Bridge, Safety</p> | <p>0%</p> |
| State Infrastructure Bank Loan and Bond Programs | | | |
| <p>The revolving loan program makes direct loans to any public entity. The program assists with all levels and modes of transportation projects within the state.</p> <p>http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/Documents/ProgramResourceGuide.pdf</p> | <p>Any public entity, such as counties, cities, villages, townships, boards or commissions, regional transit and port authorities</p> | <p>Any transportation related project eligible under Federal Title 23, including highway and transit, as well as aviation, rail, and intermodal facilities.</p> | <p>N/A</p> |
| Economic Development Loan and Public Infrastructure Grant Program | | | |
| <p>Eligible activities include provision of financial assistance, through eligible units of general local government, for public off-site infrastructure improvements and fixed asset financing for land, building, machinery and site preparation directly and primarily related to the creation, expansion or retention of a particular business that results in job creation and retention for persons of low- and moderate-income.</p> <p>https://development.ohio.gov/cs/cs_edl.htm</p> | <p>Counties must apply on behalf of villages and townships; counties may also apply on behalf of cities within their jurisdiction.</p> | <p>Economic development loan and public infrastructure projects</p> | <p>Not Provided</p> |
| ODNR Land and Water Conservation Fund | | | |
| <p>This program provides funding for acquisition, development, and rehabilitation of recreational areas.</p> <p>http://realestate.ohiodnr.gov/outdoor-recreation-facility-grants</p> | <p>Counties, Metroparks, Municipalities, Port Authorities</p> | <p>Bike/Pedestrian, Bikeways, Environmental, Natural Habitat Preservation and Restoration, Pedestrian</p> | <p>50%</p> |
| ODNR Natureworks Grants | | | |
| <p>This program provides funding for acquisition, development, and rehabilitation of recreational areas.</p> <p>http://realestate.ohiodnr.gov/outdoor-recreation-facility-grants</p> | <p>Counties, Municipalities</p> | <p>Bike/Pedestrian, Bikeways, Environmental, Natural Habitat Preservation and Restoration, Pedestrian, Resilience Efforts</p> | <p>25%</p> |
| ODNR Recreational Trails Program | | | |
| <p>Includes development of urban trail linkages, trailhead & trailside facilities, acquisition of easements & property, development and construction of new trails.</p> <p>https://development.ohio.gov/cleanohio/RecreationalTrails/</p> | <p>Counties, Metroparks, Municipalities, Non Profits, Port Authorities</p> | <p>Bike Safety Program, Bike/Pedestrian, Bikeways, Pedestrian, Pedestrian Safety Program</p> | <p>20%</p> |

| Ohio State Infrastructure Bank (SIB) | | | |
|--|--|---|--------------|
| The Ohio State Infrastructure Bank provides loans to fund highway, rail, transit, intermodal, and other transportation facilities and projects which produce revenue to amortize debt while contributing to the connectivity of Ohio's transportation system and further the goals such as corridor completion, economic development, competitiveness in a global economy, and quality of life. http://www.dot.state.oh.us/Divisions/Finance/Pages/StateInfrastructureBank.aspx | Counties, Municipalities, Port Authorities, Transit Agencies | Bike/Pedestrian, Bikeways, Bridge, Congestion, Freight, Pedestrian, Road, Road/Bridge, Safety, Traffic Signal Upgrade, Transit, Transit Capital, Transit Center Facility, Vehicles | N/A |
| Urban Paving Program | | | |
| The ODOT Urban Paving Program provides funds to cities for surface treatment and resurfacing projects located on State and U.S. Routes within city corporation limits. Eligible projects are those that have a Pavement Condition Rating (PCR) of 55 or worse according to ODOT's Pavement Condition Rating System. http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/Documents/ProgramResourceGuide.pdf | Counties, Municipalities | Bridge, Road, Road/Bridge | 20% |
| Clean Ohio Trails Fund | | | |
| This program improves outdoor recreational opportunities by funding trails for outdoor pursuits including land acquisition for a trail, trail development, trailhead facilities, engineering and design. https://development.ohio.gov/cleanohio/ | Counties, Metroparks, Municipalities, Non Profits, Port Authorities | Bike/Pedestrian, Bikeways, Environmental, Natural Habitat Preservation and Restoration, Pedestrian | 25% |
| GAR Foundation | | | |
| http://garfoundation.org/ | High-functioning organizations working at scale in the Akron Community, Programs areas Organizations or programs that benefit Akron, OH residents, and Organizations that have been recognized as tax-exempt under Section 501(c)(3) | Economic and Workforce Development | Not Provided |
| Eaton Corporation Charitable Fund | | | |
| The Eaton Charitable Fund is dedicated to supporting programs that improve the quality of life in communities where the company operates. The Fund gives primary consideration to requests for programs located in an Eaton community, recommended by an Eaton manager and where our employees demonstrate leadership involvement. Programs selected for funding will have clearly defined objectives, measurable end results, and provide a positive return on our investment. http://www.eaton.com/ecm/groups/public/@pub/@eaton/@corp/documents/content/98065570.pdf | Communities within where the company operates. | Arts and culture, education, health, cancer, housing, disaster relief, human services, and community development. Special emphasis is directed toward organizations with which employees of Eaton are involved. | Not Provided |

| Goodyear Community Support | | | |
|---|--|--|--------------|
| Goodyear's grant program is designed to utilize resources to build and support collaborative programs within our community investment focus areas. Our key focus areas reflect the global and local nature of our business and where Goodyear can make the greatest impact including: promoting safe mobility to make our communities stronger (safe); inspiring people to reach their potential in school and prepare for careers (smart); and, reducing waste and conserving energy for our planet (sustainable). https://corporate.goodyear.com/en-US/responsibility/community/community-support.html | Organizations that demonstrate competency and effectiveness | Promoting safe mobility to make our communities stronger (safe), and reducing waste and energy conservation (sustainable). | N/A |
| Rockefeller Foundation Grants | | | |
| The Rockefeller Foundation works to spread the benefits of globalization to more people in more places around the world. Funding inquiries must fit within four core issue areas: Advance Health, Revalue Ecosystems, Secure Livelihoods & Transform Cities. Within the Transform Cities issue is a focus on pushing the U.S. over the tipping point toward transportation planning and infrastructure policy that serves the needs of 21st century America. https://www.rockefellerfoundation.org/ | Counties, Metroparks, Municipalities, Non Profits, Port Authorities, School Districts, Sewer Districts, Transit Agencies | Bike Safety Program, Bike/Pedestrian, Bikeways, Community Water System Improvements, Environmental, Helmets, Intelligent Transportation Systems, Mobility Management, Pedestrian, Pedestrian Safety Program, Planning, Resilience Efforts, Storm Water Improvement, Transit, Transit Center Facility | N/A |
| The George Gund Foundation | | | |
| The Foundation's guidelines reflect our long-standing interests in the arts, economic development and community revitalization, education, environment and human services because these areas embrace most of the major issues that any community must address. While we continue to organize much of our work within these program areas, there is increasing awareness that many issues and, therefore, many grant proposals do not fit neatly into one program category. Indeed, the work of a growing number of nonprofit organizations brings together aspects of several of our core interests, and, as a result, we are becoming ever more interdisciplinary in our approach. https://gundfoundation.org/ | Counties, Metroparks, Non Profits, Port Authorities, School Districts, Sewer Districts, Transit Agencies | Bike Safety Program, Bike/Pedestrian, Bikeways, Environmental, Helmets, Natural Habitat Preservation and Restoration, Nutrient Reduction, Pedestrian, Planning, Resilience Efforts, Storm Water Improvement | N/A |
| The People For Bikes Community Grant Program | | | |
| People For Bikes Community Grant Program supports bicycle infrastructure projects and targeted advocacy initiatives that make it easier and safer for people of all ages and abilities to ride. http://www.peopleforbikes.org/pages/grant-guidelines | Counties, Metroparks, Municipalities, Non Profits, Port Authorities, Sewer Districts, Transit Agencies | Bike/Pedestrian, Bikeways, Bridge, Road, Road/Bridge | 50% |
| State Farm Insurance Good Neighbor Citizenship® Company Grants | | | |
| Strong neighborhoods are the foundation of a strong society. State Farm is committed to maintaining the vibrancy of our communities by assisting nonprofits that support: affordable housing, first time homeowners, neighborhood revitalization, financial literacy, job training, and small business development. Through community outreach and community development grants and investments, State Farm gives back to the neighborhoods it serves and helps develop stronger neighborhoods by reinvesting in the community. https://www.statefarm.com/about-us/community/education-programs/grants-scholarships/company-grants | Programs conducted by Municipal, county, state or federal government entities that align with State Farm's charitable focus. | Affordable Housing, Job training, Neighborhood Revitalization, Financial Literacy, First Time Homeownership | Not Provided |

NOTE: In addition to the above funding sources & opportunities, additional funding sources to consider from the local community are the Hudson Community Foundation, Margaret Clark Morgan Foundation, Kiwanis, and The Rotary Clubs of Hudson.



06

APPENDIX

06.1 PROJECT MEETING SUMMARY

06.2 DISCOVERY ANALYSIS

06.1 PROJECT MEETINGS SUMMARY

The following meetings took place, over the course of the project:

| <u>WHAT</u> | <u>WHEN</u> | <u>WHO</u> |
|--------------------------------------|--------------------|---|
| 1. Kickoff Meeting | June 27, 2017 | Project Team |
| 2. Concept Development Workshop | July 24, 2017 | Project Team & Steering Committee |
| 3. Public Meeting | August 21, 2017 | Project Team & General Public |
| 4. Steering Committee Update | September 11, 2017 | Project Team & Steering Committee |
| 5. Yours Truly Owner Meeting | August 23, 2017 | Art Shibley, Greg Hannan & Kris McMaster |
| 6. Margaret Clark Morgan Foundation | August 25, 2017 | Greg Hannan , Rick Kellar & Kris McMaster |
| 7. 30 West Streetsboro Owner Meeting | September 8, 2017 | Greg Hannan & Dennis Wagner |

06.2 DISCOVERY ANALYSIS

AMATS performed an existing condition analysis of the study area, and summarized its findings in the document below and on the following pages.

CONNECTING COMMUNITIES

2016 Planning Grant

Discovery Document

Preliminary Design for Veterans Trail – Downtown Phase

November 18, 2016



Purpose: The purpose of the discovery phase is to identify the primary needs in the Connecting Communities Planning Grant study area. This document will be used as a foundation and resource throughout the Planning Grant Process highlighting key concerns for Veterans Trail.

AMATS staff visited the study area several times in October and November, 2016 to identify and photograph concerns in the corridor.

The main issues or problems for pedestrians and bicyclists are:

- The downtown section of the study area creates obstacles to safely navigating to the trails to the north and south
- Narrow railroad underpasses on St Rt 303 and St Rt 91
- St Rt 91 and St Rt 303 have high traffic volumes
- The hill on Veterans Way at Milford has a steep incline for novice cyclists and families and includes poor visibility in several locations

CONNECTING COMMUNITIES

2016 Planning Grant

Downtown Hudson

Downtown Hudson has many businesses for residents to patronize, but also serves as a regional destination and employment center. Because of this, the downtown is almost always full of people and cars. With many sidewalks leading to downtown, as well as trails just on the outskirts of the downtown, there is a need to improve the existing infrastructure.

Railroad underpasses

Although sidewalks and cars run under the railroads overhead, the sidewalks prove to be difficult to navigate for more than one person, let alone a bicyclist. There is a need to widen this path for all users, but a limit to the right of way due to the railroad bridge supports.

High Traffic Volumes on St Rt 91 and 303

The City of Hudson has several projects ongoing to help ease the congestion of the vehicles using St Rt 91 and St Rt 303, but no improvements will be made for bicyclists and pedestrians. In order to truly make the connections to downtown for residents, these corridors must have improved infrastructure for all users.

Veterans Way Hill

Although seasoned cyclists and pedestrians may find the hill to be an enjoyable challenge, most families see this hill as an obstacle. From St Rt 303, turning down Veterans Way is the best way to get to Veterans Park. From here, there is no way around the hill but up. Also, the top of the hill does not provide clear lines of sight, which will need to be improved if it will be the direct route for the regional trail connection.

CONNECTING COMMUNITIES

2016 Planning Grant

Downtown Hudson

The top picture was taken while standing in the parking lot of a business just off of Owen Brown. The road in view is Clinton Street and the trail that picks up there connects to Village Way.

The bottom picture is the view of Village Way looking east in front of the library. On this day it was observed that there were 15 open parking spaces on the street during an afternoon.



CONNECTING COMMUNITIES

2016 Planning Grant

Obstacles in Downtown Hudson

The railroad goes over Owen Brown and causes the road to narrow here. It is difficult to get cars through at the same time. There is currently no room for pedestrians or cyclists. A signal here to allow one car to pass at a time might allow for the addition of a trail.

This is Brandywine Creek and it runs through downtown Hudson behind the dry cleaners as well as the library.

Access management and high traffic volumes make it difficult to imagine a trail successfully being constructed here.



CONNECTING COMMUNITIES

2016 Planning Grant

Rail Underpasses on St Rt 303

The rail underpasses on St Rt 303 limit the amount of right-of-way to dedicate to sidewalks. As a result, the current walkways are too narrow for two people to walk through side-by-side. This area could benefit from the turn lane for the storage business being eliminated.



CONNECTING COMMUNITIES

2016 Planning Grant

Rail Underpasses on St Rt 303

The rail underpasses on St Rt 303 limit the amount of right-of-way to dedicate to sidewalks. As a result, the current walkways are too narrow for two people to walk through side-by-side. This area could benefit from the turn lane for the storage business being eliminated.



CONNECTING COMMUNITIES

2016 Planning Grant

St Rt 91

The section of St Rt 91 in our study area is highly congested, with an ADT of almost 23,000 vehicles. This section of roadway has two through lanes with a turn lane for the multiple business along the way. Although this may be the best option for connecting a trail to Veterans Park, the railroad underpass and Brandywine Creek limit the right-of-way in these areas.

It is important to note that the turn lane extends the entire section of roadway, although it seems unnecessary for all of it. Also, the walkways under the railroad are present on both sides of the street. Although the railroad bridge supports themselves can't be moved, the sidewalks could be widened and the turn lane eliminated to benefit the project.



CONNECTING COMMUNITIES

2016 Planning Grant

Veterans Way hill

Veterans Way hill is a deterrent for most users coming from either the west or the east, even though there are bike lanes and sidewalks on each side of the road. The hill itself is steep to navigate and provides limited visibility.

The top picture is looking up the hill from Milford Road.

The middle picture is halfway up the hill. Notice that visibility is limited due to the curve of the road.

The bottom picture was taken at the crest of the Veterans Way hill, looking toward Milford Road. The cyclists cannot see what is coming at the bottom of the hill.



CONNECTING COMMUNITIES

2016 Planning Grant

Veterans Park

There are amenities here at Veterans Park for everyone. A playground, a skate park, and an exercise path are popular to the residents of Hudson. Connecting from the Veterans Trail to the north of downtown, through downtown to here would benefit the residents of the city as well as regional visitors to the trails.

