CITY OF LAFAYETTE

LAFAYETTE TRAILS MASTER PLAN
LAFAYETTE, INDIANA

FINAL

Prepared By

BF&S Butler Fairman Seufert CIVIL ENGINEERS

December 2012

Butler Fairman & Seufert, Inc. (BF&S) is pleased to present the Lafayette Trails Master Plan to the citizens and administrators of the City of Lafayette, Indiana. This report is the product of a collaborative effort by city staff, BF&S design professionals, local utility staff, local bicycle clubs, and members of the community. It is intended to serve as a guide for future alternative transportation and recreational development within Lafayette and the city's connections to the surrounding communities.

Each trail's route was thoroughly researched and alternative routes were considered. Decisions were based on a process that consisted of a city-wide site, or route, inventory, analysis of those routes, design synthesis, cost analysis, and development of design standards before ultimately reaching the master plan stage. The resulting recommendations are the best solutions to initiating a city-wide trails system at this time. As the city grows and other opportunities present themselves, the Master Plan may need to be updated periodically. However, the initial Master Plan will serve as a long lasting foundation for future trail development.

BF&S is very appreciative to have been able to assist the City of Lafayette in this planning effort and looks forward to the implementation of these recommendations.

Respectfully submitted on the 3rd day of December 2012,

Butler, Fairman, & Seufert, Inc.

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City of Lafayette Mayor
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Jennifer Miller

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PROJECT*background*

The City of Lafayette, Indiana, in conjunction with the Tippecanoe County Area Plan Commission (TCAPC) has a goal to provide better alternative transportation options for the citizens of Lafayette and Tippecanoe County.

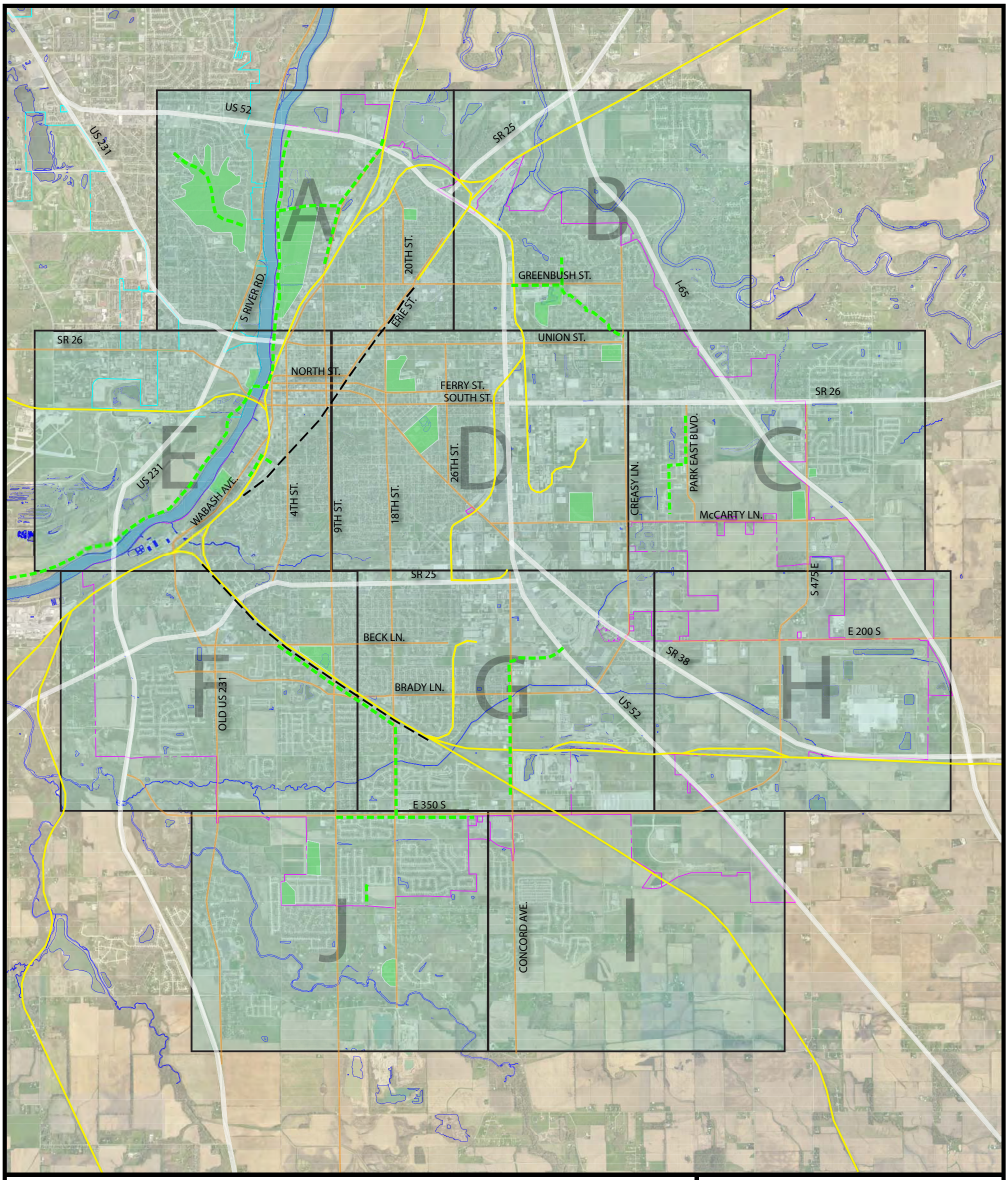
This growing need for alternative transportation has risen for several reasons. Personal economics, a movement to become a healthier society, and safety are all driving this trend. The high costs of owning, operating, and maintaining automobiles have the public searching for less expensive means of commuting and reaching everyday destinations. People are beginning to realize the need to exercise for their own physical and mental health. People want safe corridors for their children and themselves that are separated from automobile traffic. It is due to these reasons that Lafayette has determined a need for a comprehensive plan to guide the planning and design of trail corridors throughout the city.

Based upon the goals set out by the City of Lafayette and the needs of its citizens, the City of Lafayette identified thirty-three corridors for development, including a major loop trail around the city, a major north-south corridor, and a major east-west corridor. Due to existing constraints, it became apparent that not all routes could feasibly include separated multi-use trails. Therefore, proposed bike lanes and marked and signed shared roadways, also known as “sharrows,” were included in the plan to provide connectivity throughout the city. Sharrows are bicycle routes along existing city streets that include specific pavement markings that alert motorists to the likely presence of bicyclists. In all, these corridors measure approximately 64 miles of potential multi-use trail, plus 7.5 miles of potential sharrows and 8.25 miles of potential bike lanes.

The Lafayette Trails Master Plan is the first phase in the design process. The purpose of the Master Plan is to identify the feasibility, preferred trail layout, facility requirements, and design standards for each trail corridor. The Master Plan will help to lay the foundation for a universally accessible, multi-use trail system that connects parks, trails, schools, neighborhoods, and community resources (i.e. retail areas, post offices, libraries, and grocery stores) to one another.

Besides connecting local community destinations, the Master Plan will help to establish connections to existing and future regional trail systems. The entire greenway system will connect throughout the community to existing bike routes, trails and sidewalks. These connections include several links into the West Lafayette trail system as well as several connections into Tippecanoe County. One very important regional link is the connection along the abandoned railroad to the south of the city, where the Farm Heritage Trail could connect Lafayette into Colfax and beyond.

The following map illustrates the overall scope for the Lafayette Trails Master Plan.



LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- EXISTING TRAIL
- PARK
- ZOOM AREAS

Lafayette Trail Master Plan

Overall Scope

Inventory & Analysis

0 750 1500 3000 FEET

BF&S Butler Fairman Seufert CIVIL ENGINEERS

Prior to the development of a final Master Plan for each trail, each corridor was systematically examined through a planning process that included Site Inventory, Site Analysis, and Design Synthesis. In addition, public involvement was conducted at each stage to solicit and receive input. Public involvement included meetings with city officials, local utilities, commercial owners, special interest groups, and the general public. This information was incorporated into the study to establish the best route possible for each trail.

SITE INVENTORY

The Site Inventory consists of a survey of the corridors' physical characteristics. These characteristics can be either man-made or natural conditions observed in the field. Aerial photography as well as walking each corridor was employed to document their unique attributes.

Natural Conditions:

Naturally occurring amenities in the landscape are something to be both preserved and protected. Greenways are a unique opportunity to implement this, but care must be taken in the decision making process. Natural areas and wildlife habitats should always be treated sensitively. The project team observed the following natural conditions along the trail corridors.

- ***Wetlands -*** The National Wetlands Inventory maps indicated the presence of very few wetlands within the city limits of Lafayette. However, there were some areas with wetland features and these were verified and noted. Each trail will be constructed to minimize impacts to any existing wetlands and provide the necessary remediation. Approval will likely be required by the appropriate regulatory agencies.

- ***Slopes -*** Some areas were observed along the corridors having slopes steeper than 2:1. Many of these areas occur around waterways or along narrow public right-of-ways. Necessary steps will have to be taken to preserve these unique land forms from wind and water erosion during and after construction. In addition to creating challenges for trail construction, steep slopes may also pose safety concerns for trail users that need to be addressed during planning and design.

- ***Vegetation -*** Much of the area studied has already been cleared to create existing utility and transportation corridors or is along a roadway and is therefore open. The existing vegetation in many cases occurs only along an edge of the corridor and every effort shall be made to preserve this. However, in some situations, vegetation cannot be preserved. In these cases, we recommend replacing trees at a 5:1 ratio, which may be required by some governing agencies.

Man- Made Features:

The project team documented the man-made features along the corridors in order to understand the existing infrastructure and community resources that need to be considered.

- ***Existing Streets -*** There are many city streets and highways crossed by each corridor. Each crossing poses a challenge to maintaining a safe trail experience for users and care will have to be taken during the design process to accomplish this.

- ***Existing Railroads -*** Lafayette contains several active and abandoned railroad corridors. As is the case with streets, active railroads present crossing issues for trails. Some of the proposed trails will be parallel with and adjacent to active railroads, which will present

design challenges. Abandoned rail corridors can be an excellent place for trail development.

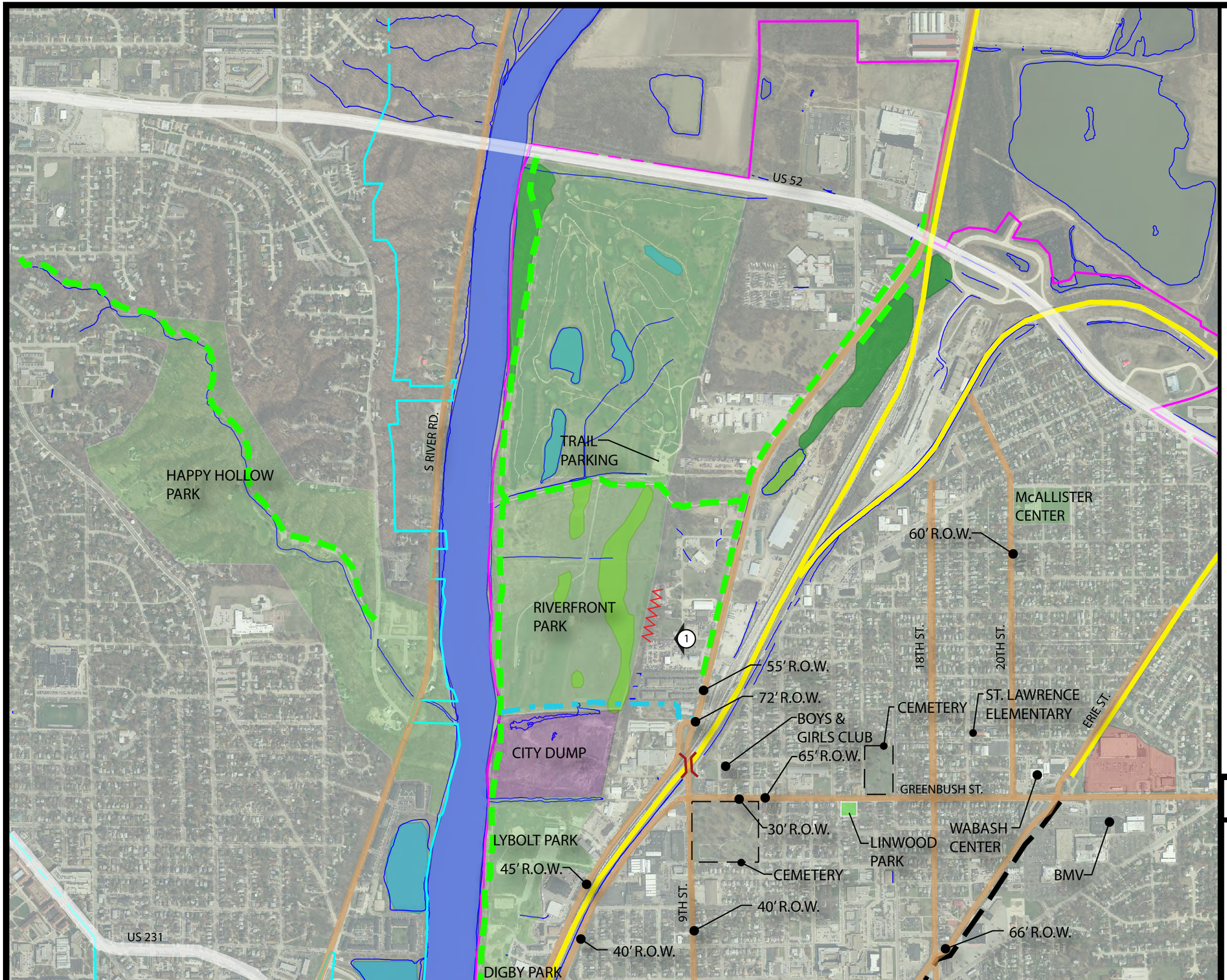
- ***Bridges -*** Several bridges were documented in the field in an effort to determine their impact on trail development. Crossing some of the creeks and sewer easements will be a difficult task due to the permitting. For this reason the location of existing bridges will be important. In other cases, railroad bridges may cause constraints to placing new pedestrian bridges for the trails.

- ***Parks, Schools, Libraries, Trails, Neighborhoods, Retail Areas, Malls -*** The connection of community resources through the means of alternative transportation is one of the primary reasons for trail development. The project team documented the type and location of each community resource located within the corridors and those within close proximity.

- ***Utilities –*** Several overhead utilities were located and should be taken into consideration when designing each specific trail. In some cases, the utility will not be able to be relocated and may cause some restrictions on the trail design.

- ***Land Ownership –*** Due to the number of corridors studied, there are many different types of land ownership located within and around them. The project team documented publicly owned, privately owned residential, privately owned industrial, railroad ownership, and utility owned land throughout the project areas. All privately owned, railroad owned, and utility owned land will require some sort of acquisition. Land acquisition can either be through purchase, easement or lease.

The following maps illustrate the Site Inventory for the Lafayette Trails Master Plan.



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- FRESHWATER FORESTED/SHRUB
- ESTUARINE AND MARINE DEEPWATER
- FRESHWATER POND
- MAJOR ROADS
- MINOR ROADS
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- STEEP SLOPES
- UTILITY EASEMENT
- BRIDGE
- PARK
- LOW-INCOME RESIDENTIAL
- CITY OWNED
- COMMERCIAL
- INDUSTRIAL
- EDUCATIONAL

Lafayette Trail Master Plan

Inventory

BF&S Butler Fairman Seufert CIVIL ENGINEERS

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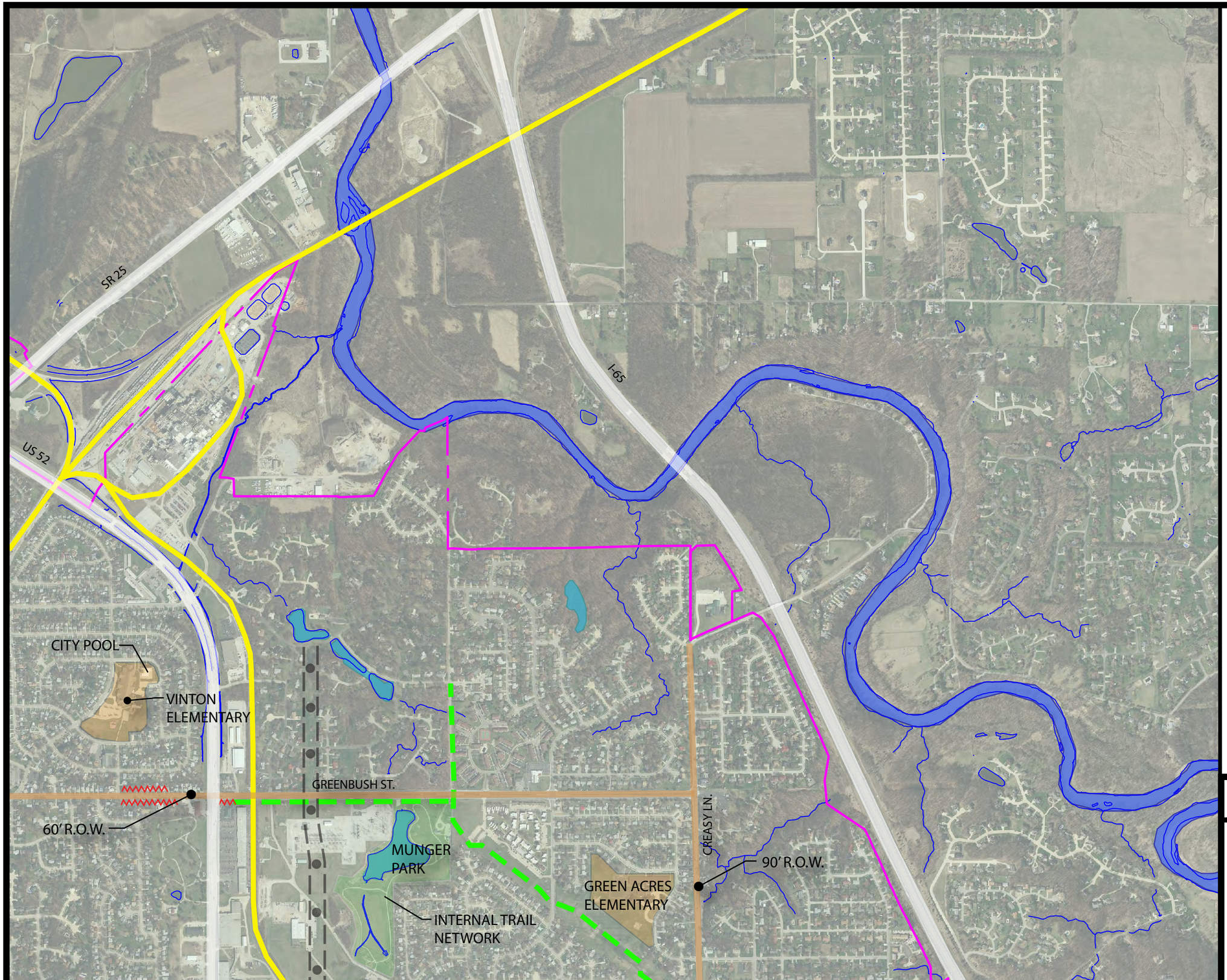
0 500 1000 2000 FEET
0 1 2 INCH



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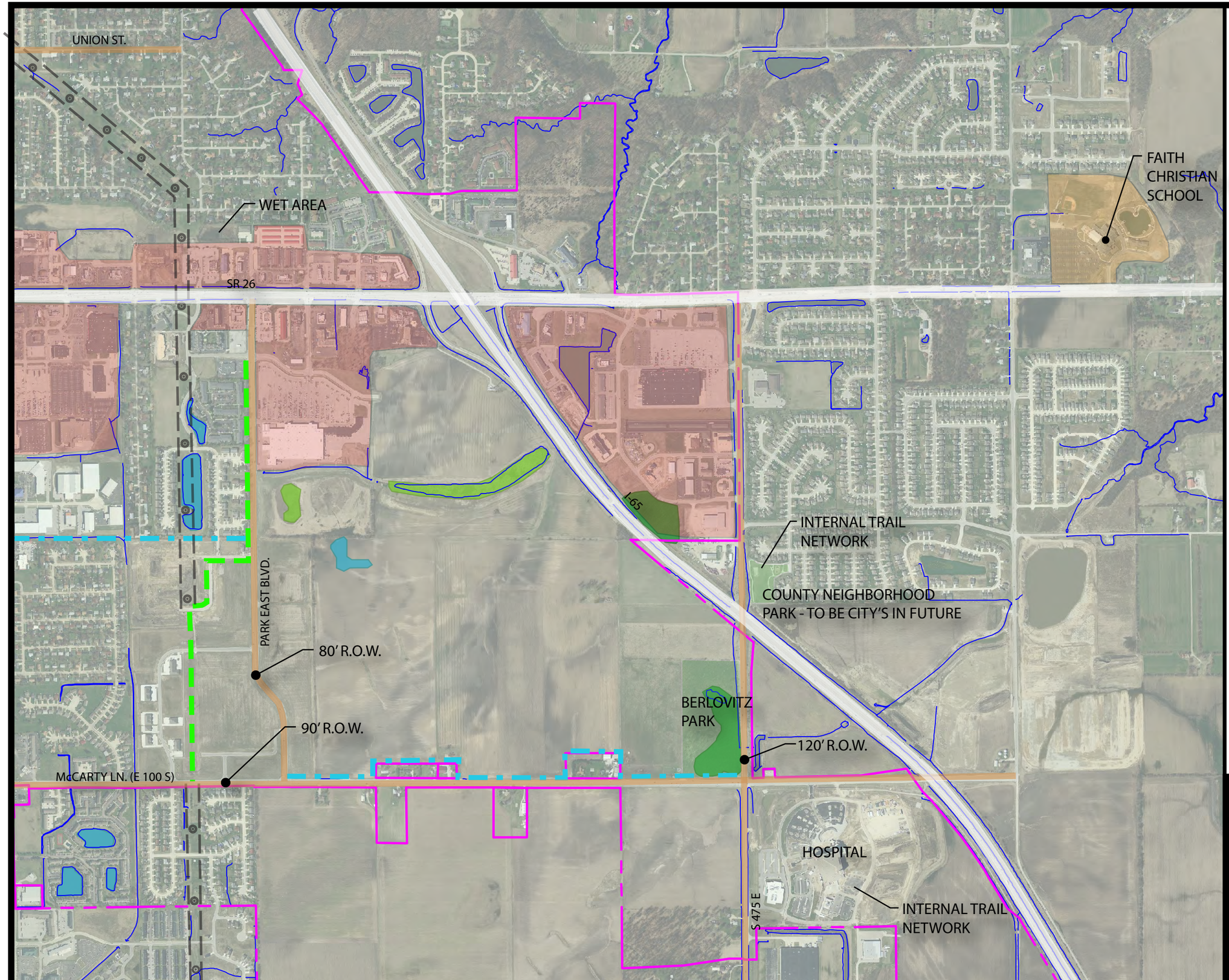

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Lafayette Trail Master Plan

Inventory

Butler Fairman Seufert CIVIL ENGINEERS

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MURDOCK ELEMENTARY
SUNNYSIDE MIDDLE SCHOOL
UNION ST.
MUNGER TRAIL
95' R.O.W.
McCAW PARK
ERIE ST.
NEW PARK
70' R.O.W.
POLES ON BOTH SIDES
UNDERPASS
MURDOCK PARK
LAFAYETTE CHRISTIAN SCHOOL
60' R.O.W.
FERRY ST.
HOME HOSPITAL
80' R.O.W.
TARGET
SOUTH ST.
SR 26
ST. MARY'S ELEMENTARY
3' STONE TRAIL
55' R.O.W.
PROPOSED INDOT CROSSING
26TH ST.
COLUMBIAN PARK
CATERPILLAR
SHOPPING AREA
CREASY LN.
18TH ST.
PARK AVE.
INTERNAL TRAIL NETWORK
57' R.O.W.
60' R.O.W.
MAIN ST.
US 52
CAT PARK
STATE ST.
McCARTY LN.
JEFFERSON HIGH SCHOOL
ALCOA
SR 38
FAIRGROUNDS

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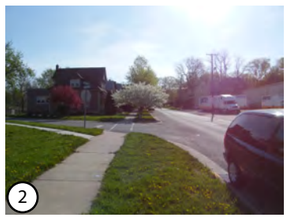

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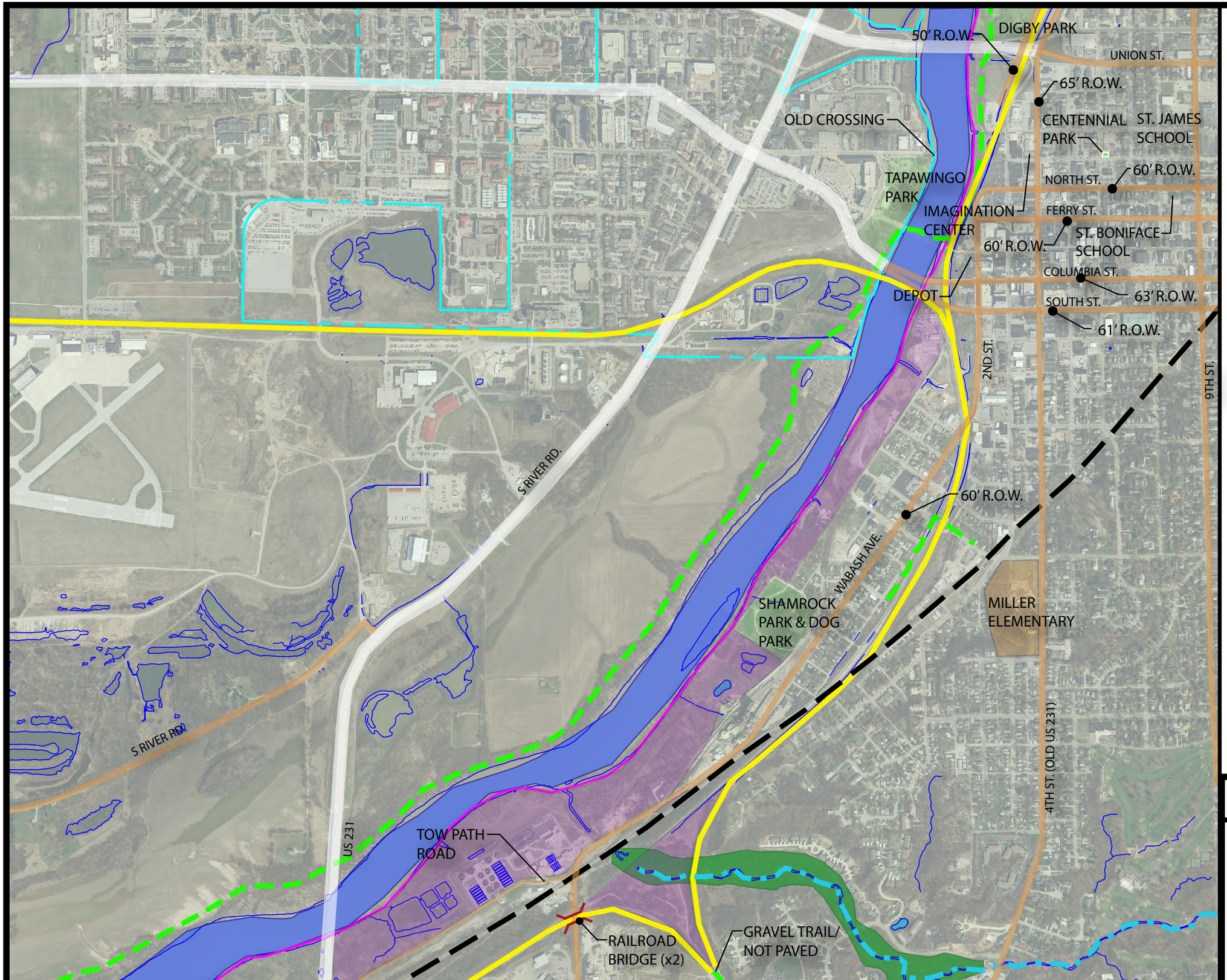

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TOW PATH ROAD
TEAL RD. (SR 25)
WABASH AVE.
SR 25
GRAVEL TRAIL/ NOT PAVED
BECK LN.
60' R.O.W.
HIGH DENSITY
ARMSTRONG PARK
GROCERY
INTERNAL TRAIL LOOPS
TWYCKENHAM BLVD.
OLD ROMNEY RD.
70' R.O.W.
OLD US 231
EARHART ELEMENTARY
9TH ST.
US 231
CR 350 S

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TECUMSEH MIDDLE SCHOOL
TEAL RD (SR 25)
60' R.O.W.
80' R.O.W.
BOYS & GIRLS CLUB
EDGELEA ELEMENTARY
KENNEDY CITY PARK
BECK LN.
60' R.O.W.
MIAMI ELEMENTARY
DETENTION PROJECT BY CITY
MALL
SR 38
90' R.O.W.
US 52
115' R.O.W.
TRAILER PARK - IVY TECH INDENDS TO BUY
IVY TECH
18TH ST.
60' R.O.W.
BRADY LN.
70' R.O.W.
40' R.O.W.
S 250 E. (CONCORD AVE.)
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CIVIL ENGINEERS

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100' R.O.W.

E 200 S

120' R.O.W.

120' R.O.W.

SR 38

200' R.O.W.

S 475 E

I-65

SUBARU

US 52

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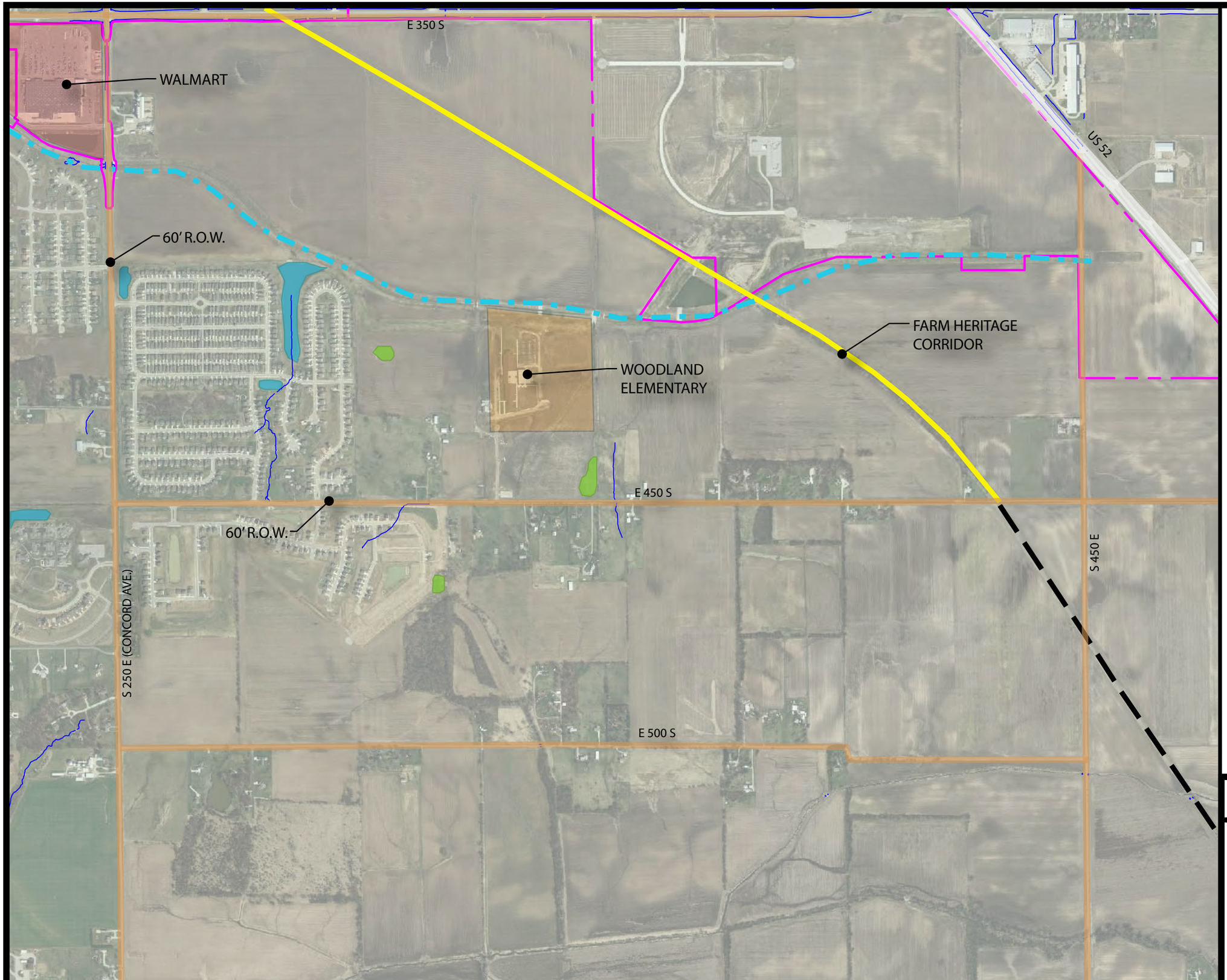

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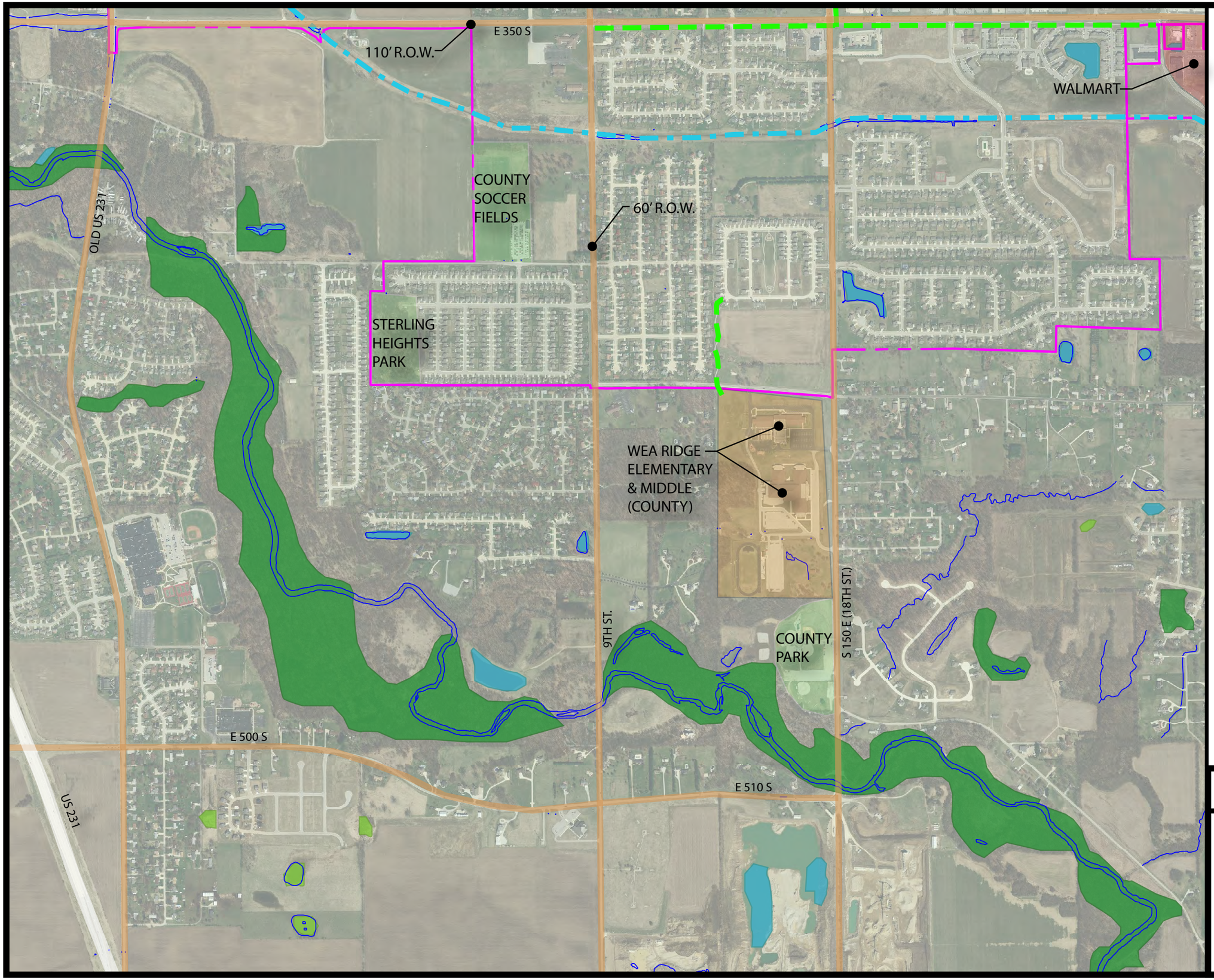

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SITE ANALYSIS

Site Analysis involved taking those elements that were documented during Site Inventory and reviewing them with regard to trail development. The characteristics of each corridor were evaluated based upon five categories:

- ***Connectivity*** – The possibility of links to community resources, such as parks, schools, and other points of interest.

- ***Pedestrian Safety*** – The ability to create appropriate separation from trains, automobiles, and steep slopes. Consideration was also given to the security of trail users and the properties through which the trail passes.

- ***Environmental Impact*** – The effect that trail development will have on streams, vegetation, wetlands, and riparian areas.

- ***Economics*** – The relative costs of trail development, including construction costs and land acquisition. Also, consideration of the positive economic impact on the community of Lafayette, including residential, commercial, and industrial, with the development of alternative transportation

- ***Trail Character*** – The nature of the trail within its environment with regard to providing a pleasant and inviting experience.

Opportunity and Constraints

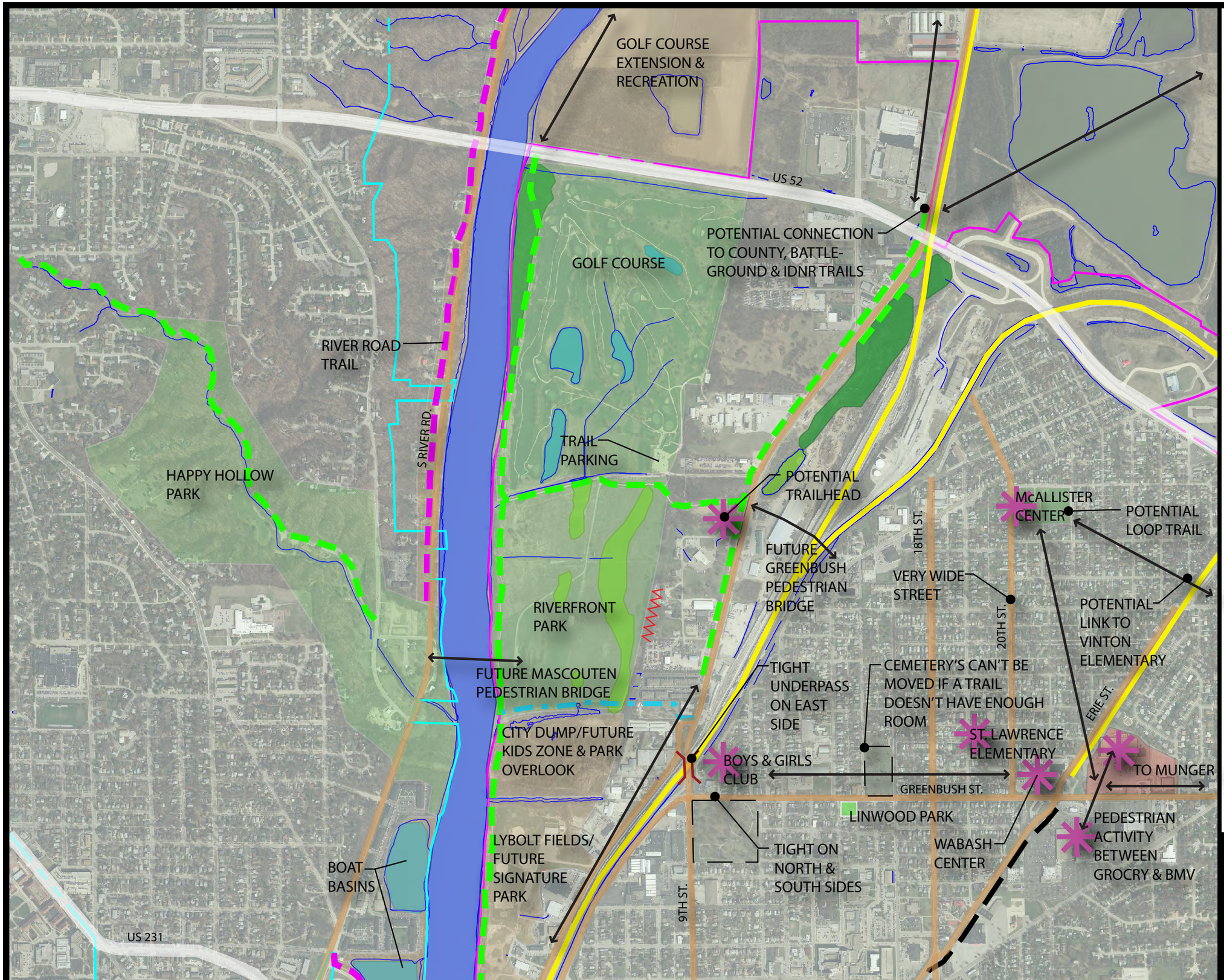
The analysis presented several opportunities for and constraints to the development of trails within the corridors. An example of an opportunity for a trail is its ability to link a neighborhood to a park, school, library, retail area, or other destination point. Another example would be an open corridor, such as the Duke Utility Corridor or abandoned railroad, which would provide an excellent location for the trail while limiting the amount of clearing required.

Examples of constraints would be 4-lane highway crossings, steep topography, heavily vegetated areas, and private property. These all act as deterrents to possible trail placement.

The following maps illustrate the Site Analysis for the Lafayette Trails Master Plan.

DESIGN SYNTHESIS

Design synthesis involved using the analyzed data and placing a tentative trail route. Decisions were made towards the best location based upon the opportunities and constraints, and locating trails in the most opportune areas while avoiding the more constrained areas. This resulted in a conceptual plan that could be discussed during the public involvement process. After discussing with city officials, local utilities, commercial owners, special interest groups, and the general public, a final plan was produced that would provide a solution that best fit the desires and needs of the majority of all parties involved.



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- EXISTING TRAILHEAD
- STEEP SLOPES
- UTILITY EASEMENT
- BRIDGE
- PARK
- PROPOSED WABASH RIVER ENHANCEMENT PARK USE
- CITY OWNED
- POTENTIAL COMMUNITY CONNECTION
- COMMUNITY DESTINATION POINT

CONNECTIVITY

Opportunities

> Abandoned railroad corridors provide potential connections for trails.
> Several parks and open spaces provide for positive connections through shared use paths.
> Several community destination points provide many important connections.

Constraints

> Greenbush Street at 9th Street is very tight and would limit connectivity.

PEDESTRIAN SAFETY

Opportunities

> Abandoned rail corridors provide for safe paths with minimal vehicular traffic.
> Existing trails provide a safe environment with little vehicular traffic.

Constraints

> Railroad and road crossings could become an issue.

ENVIRONMENTAL IMPACT

Opportunities

> Abandoned railroad corridors in place so minimal impact to the environment.
> Potential trails within existing park spaces.

Constraints

> Some steep slopes could be affected by the placement of a trail.

ECONOMICS

Opportunities

> Several trails already in place and on city property.

Constraints

> Some private property along corridors would require land acquisition.

TRAIL CHARACTER

Opportunities

> Existing trails give precedent for future trails.
> Street trails could bring life and character to the city streets.

Constraints

> Most of the trails are along city streets and wouldn't retain a natural look.

Lafayette Trail Master Plan

Analysis

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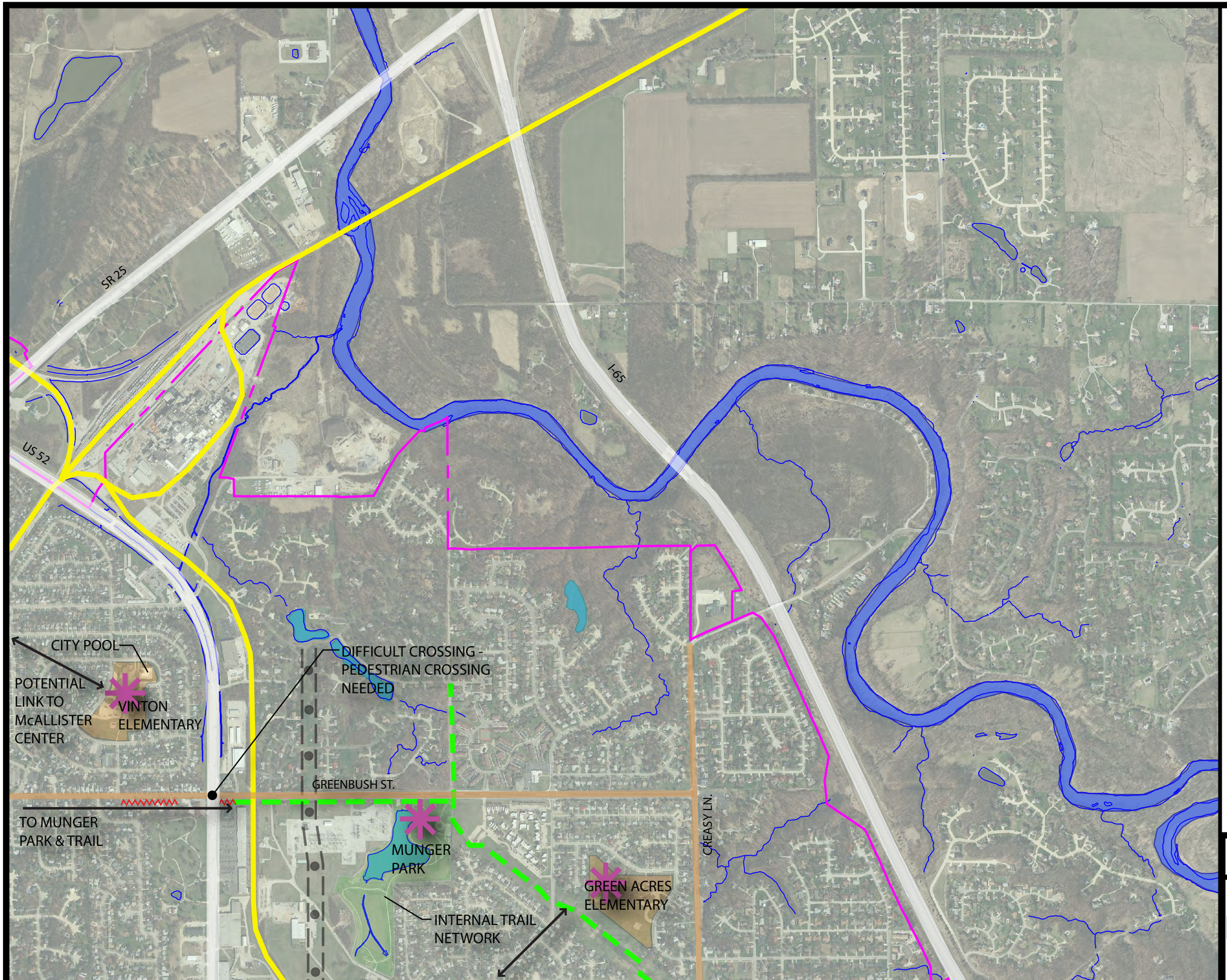

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- POTENTIAL COMMUNITY CONNECTION
- COMMUNITY DESTINATION POINT

CONNECTIVITY

Opportunities

> One road to existing trails gives a direct route into Munger Trail.
> Munger Park provides for positive connections through shared use paths.
> Community destination points provide many important connections.

Constraints

> Greenbush Street is very tight and would limit connectivity.
> Greenbush Street has some steep slopes and could limit accessibility.

PEDESTRIAN SAFETY

Opportunities

> Existing trails provide a safe environment with little vehicular traffic.

Constraints

> Major road crossing at US 52 could be a dangerous intersection.

ENVIRONMENTAL IMPACT

Opportunities

> Existing trails have less impact because they have already been constructed.

Constraints

> Steep slopes along Greenbush Street would need to be re-graded.

ECONOMICS

Opportunities

> Several trails already constructed.

Constraints

> Some private property along corridors would require land acquisition.

TRAIL CHARACTER

Opportunities

> Existing trails give precedent for future trails.
> Street trails could bring life and character to the city streets.

Constraints

> Most of the trails are along city streets and wouldn't retain a natural look.

Lafayette Trail Master Plan

Analysis

A B E D C F G H J I

Butler Fairman Seufert CIVIL ENGINEERS

0 500 1000 2000 FEET
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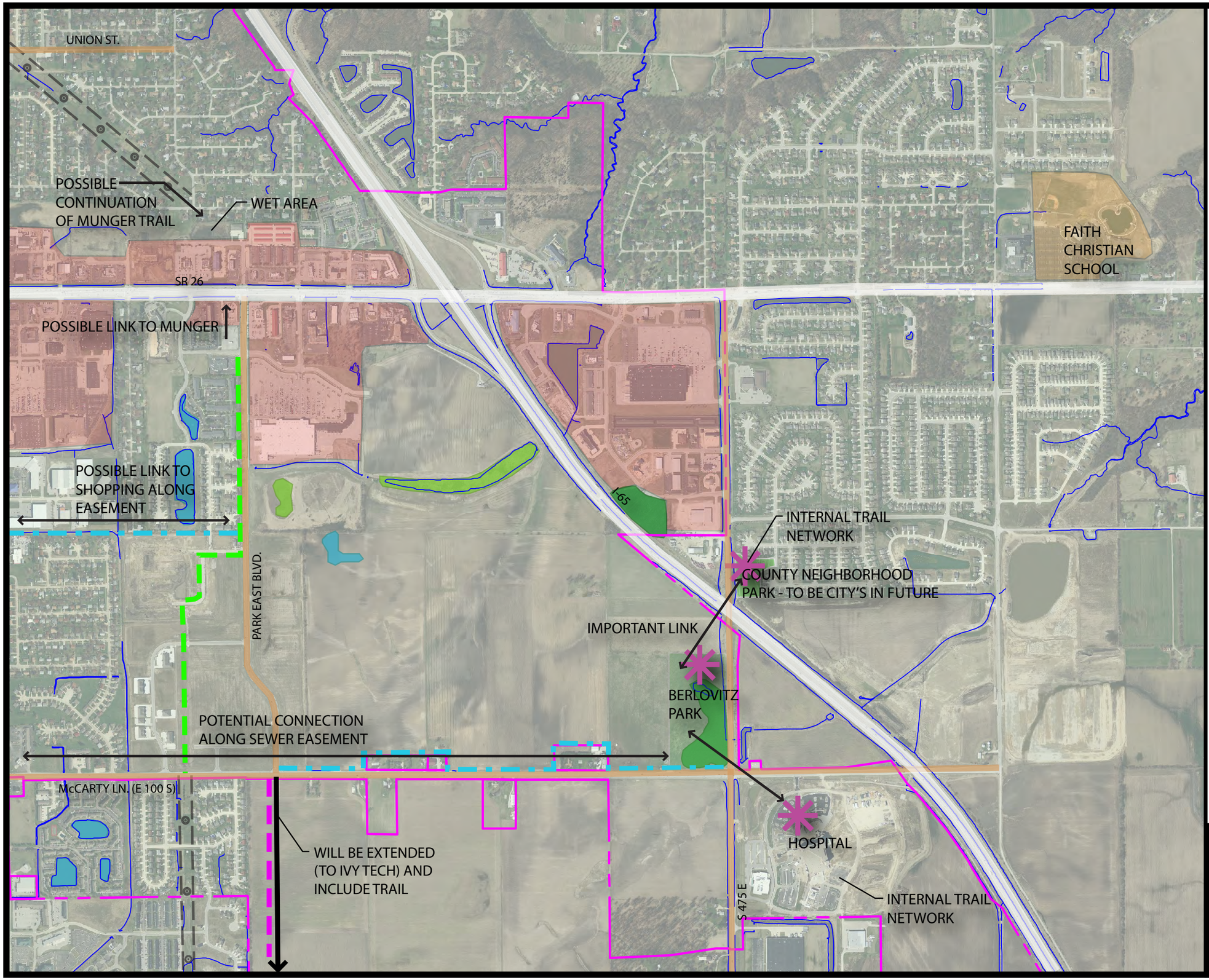

LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- FRESHWATER EMERGENT
- FRESHWATER FORESTED/SHRUB
- FRESHWATER POND
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- SEWER EASEMENT
- EXISTING TRAIL
- PROPOSED TRAIL
- EXISTING TRAILHEAD
- STEEP SLOPES
- UTILITY EASEMENT
- BRIDGE
- PARK
- COMMERCIAL
- EDUCATIONAL
- FUTURE ROAD
- POTENTIAL COMMUNITY CONNECTION
- COMMUNITY DESTINATION POINT

CONNECTIVITY

Opportunities

> Connecting existing Munger Trail & Park East Blvd. Trail.
> Potential connections to Berlovitz Park and the county park.
> Potential connections to Ivy Tech and shopping areas.

Constraints

> I-65 could create a barrier to the county park.

PEDESTRIAN SAFETY

Opportunities

> Existing trails provide a safe environment with little vehicular traffic.
> Utility Corridor gives opportunities of minimal vehicular traffic.

Constraints

> Major road crossing (SR 26 & I-65) could be a dangerous intersection.

ENVIRONMENTAL IMPACT

Opportunities

> No additional impact where utility and sewer easements are located.

Constraints

> Wet Area north of commercial could be an issue.

ECONOMICS

Opportunities

> Several trails already constructed.
> Several easements could have trail located within.
> Utility corridor could alleviate need for land acquisition from private owners.

Constraints

> Some private property along corridors would require land acquisition.

TRAIL CHARACTER

Opportunities

> Existing trails give precedent for future trails.
> Street trails could bring life and character to the city streets.
> Easements can provide natural character of the trails.

Constraints

> Trails within shopping areas wouldn't retain a natural look.

Lafayette Trail Master Plan

Analysis

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Butler Fairman Seufert CIVIL ENGINEERS

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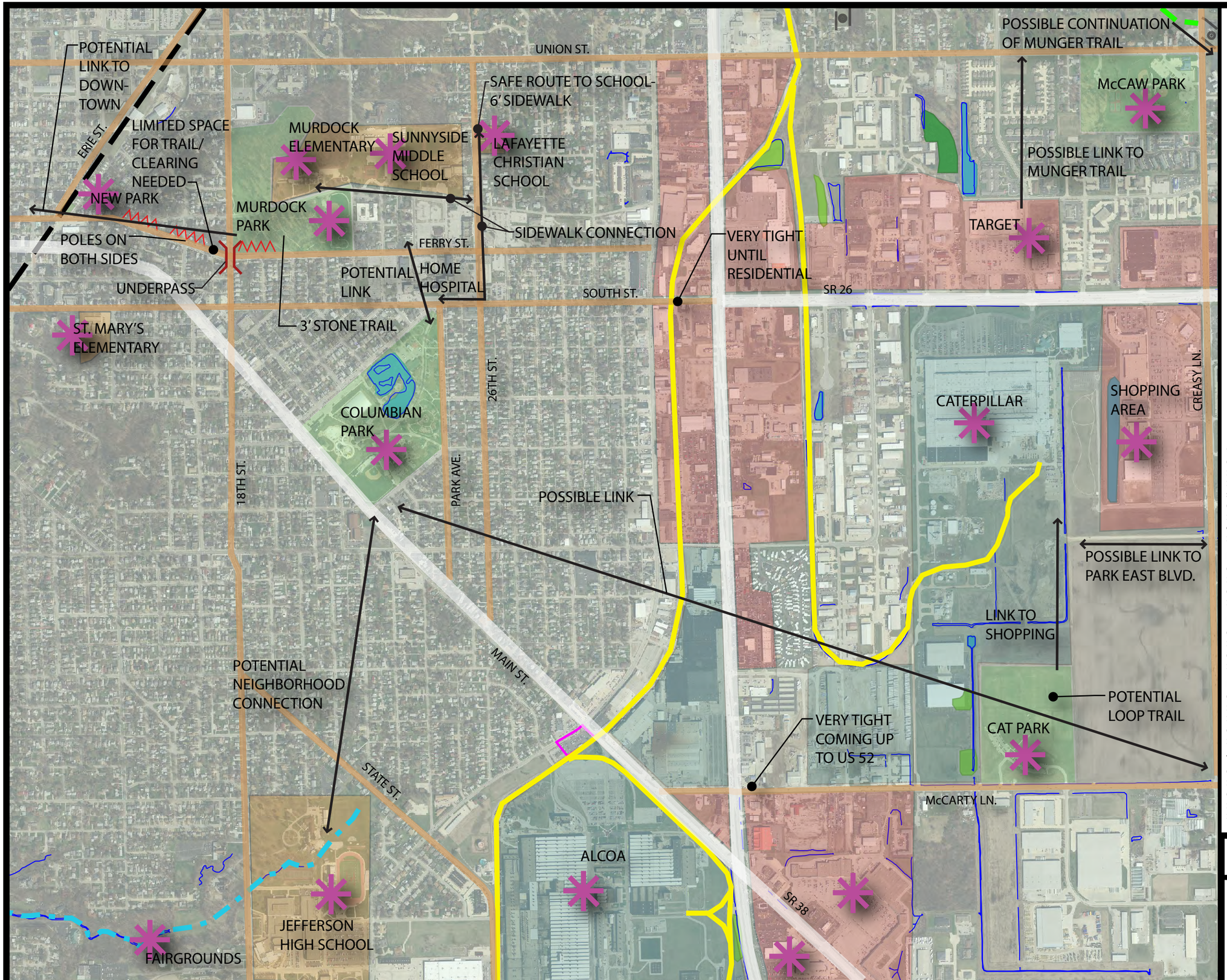

LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- FRESHWATER EMERGENT
- FRESHWATER FORESTED/SHRUB
- FRESHWATER POND
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- SEWER EASEMENT
- EXISTING TRAIL
- PROPOSED TRAIL
- EXISTING TRAILHEAD
- STEEP SLOPES
- UTILITY EASEMENT
- BRIDGE
- PARK
- COMMERCIAL
- INDUSTRIAL
- EDUCATIONAL
- POTENTIAL COMMUNITY CONNECTION
- COMMUNITY DESTINATION POINT

CONNECTIVITY

Opportunities

> Several community destination points provide many important connections.
> Several parks and open spaces provide for positive connections through shared use paths.

Constraints

> Residential areas and SR 26 at US 52 are very tight and seem difficult to construct a trail.
> Home Hospital grounds could restrict a trail to go through the property.

PEDESTRIAN SAFETY

Opportunities

> Several community destination points need safe routes.

Constraints

> Major roads (SR 26 & SR 38) could be a dangerous to cross.

ENVIRONMENTAL IMPACT

Opportunities

> Connections through parks with exisiting trails within.

Constraints

> Clearing of trees and brush on Ferry Street.

ECONOMICS

Opportunities

> Several parks and commercial areas could partner with the trail corridor.
> Utility corridor may alleviate need for land acquisiton from private owners.

Constraints

> Some private property along corridors would require land acquisition.

TRAIL CHARACTER

Opportunities

> Street trails could bring life and character to the city streets.

Constraints

> Trails within shopping areas wouldn't retain a natural look.
> Most of the trails are along city streets and wouldn't retain a natural look.

Lafayette Trail Master Plan

Analysis

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Butler Fairman Seufert CIVIL ENGINEERS

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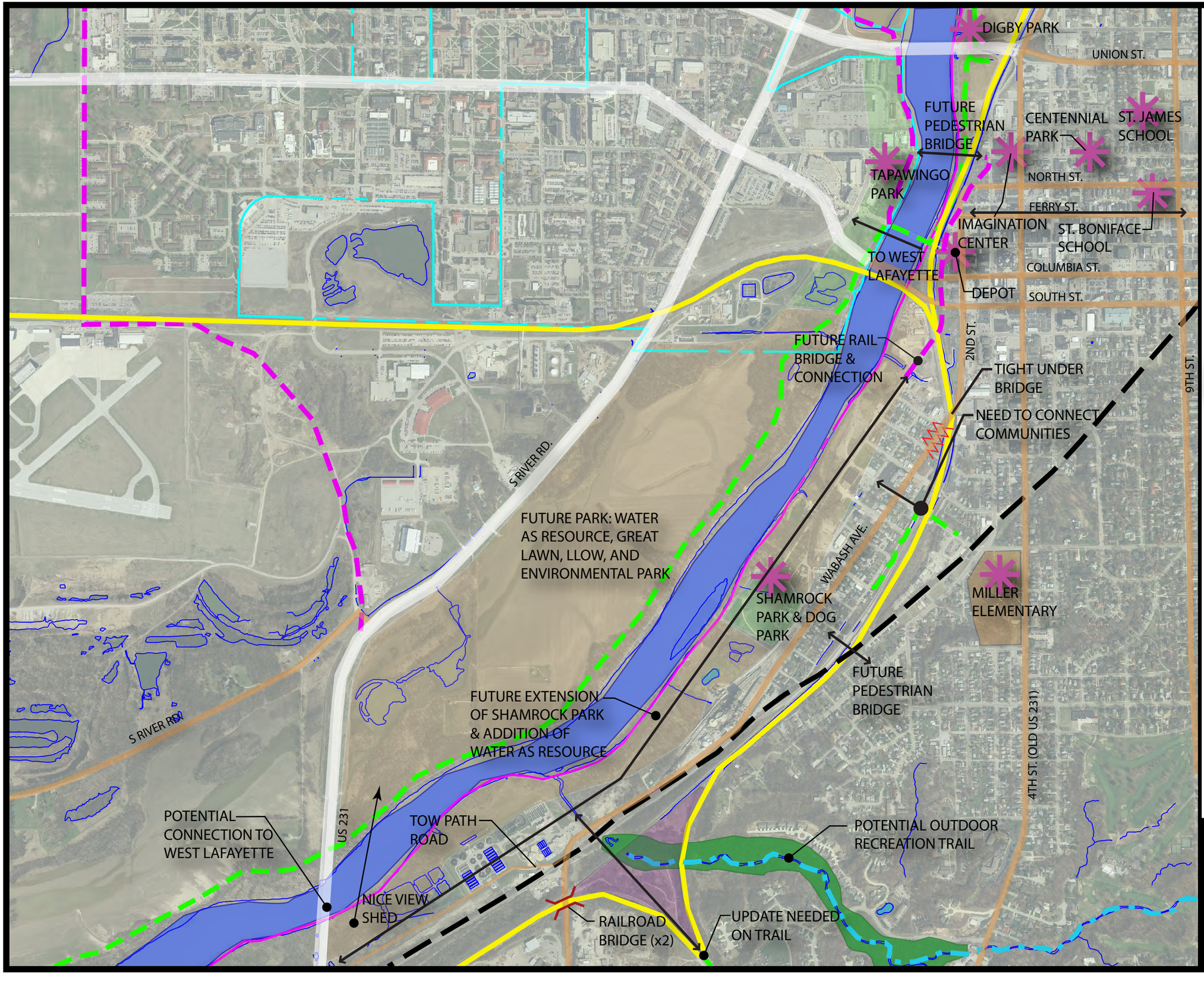

LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- FRESHWATER EMERGENT
- FRESHWATER FORESTED/SHRUB
- ESTUARINE AND MARINE DEEPWATER
- FRESHWATER POND
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- SEWER EASEMENT
- EXISTING TRAIL
- PROPOSED TRAIL
- STEEP SLOPES
- UTILITY EASEMENT
- BRIDGE
- PARK
- PROPOSED WABASH RIVER ENHANCEMENT PARK USE
- CITY OWNED
- EDUCATIONAL
- POTENTIAL COMMUNITY CONNECTION
- COMMUNITY DESTINATION POINT

CONNECTIVITY

Opportunities

> Several community destination points provide many important connections.
> Several parks and open spaces provide for positive connections through shared use paths.
> Abandoned railroad corridors provide potential connections for trails.

Constraints

> Downtown streets are limited on space and parking would be lost.

PEDESTRIAN SAFETY

Opportunities

> Several community destination points need safe routes.
> Abandoned rail corridors provide for safe paths with minimal vehicular traffic.

Constraints

> Several street crossings in the downtown area

ENVIRONMENTAL IMPACT

Opportunities

> Sewer easement has potential for outdoor recreation standards
> Abandoned railroad corridors in place so minimal impact to the environment.

Constraints

> May need to widen some roads in order to construct trail.

ECONOMICS

Opportunities

> Several parks and commercial areas could partner with the trail corridor.
> Corridor along River is owned by City

Constraints

> Some private property along corridors would require land acquisition.

TRAIL CHARACTER

Opportunities

> Street trails could bring life and character to the city streets.
> Sewer easements bring character and change to the trail corridors.

Constraints

> Downtown area would not retain a natural look.

Lafayette Trail Master Plan

Analysis

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Butler Fairman Seufert CIVIL ENGINEERS

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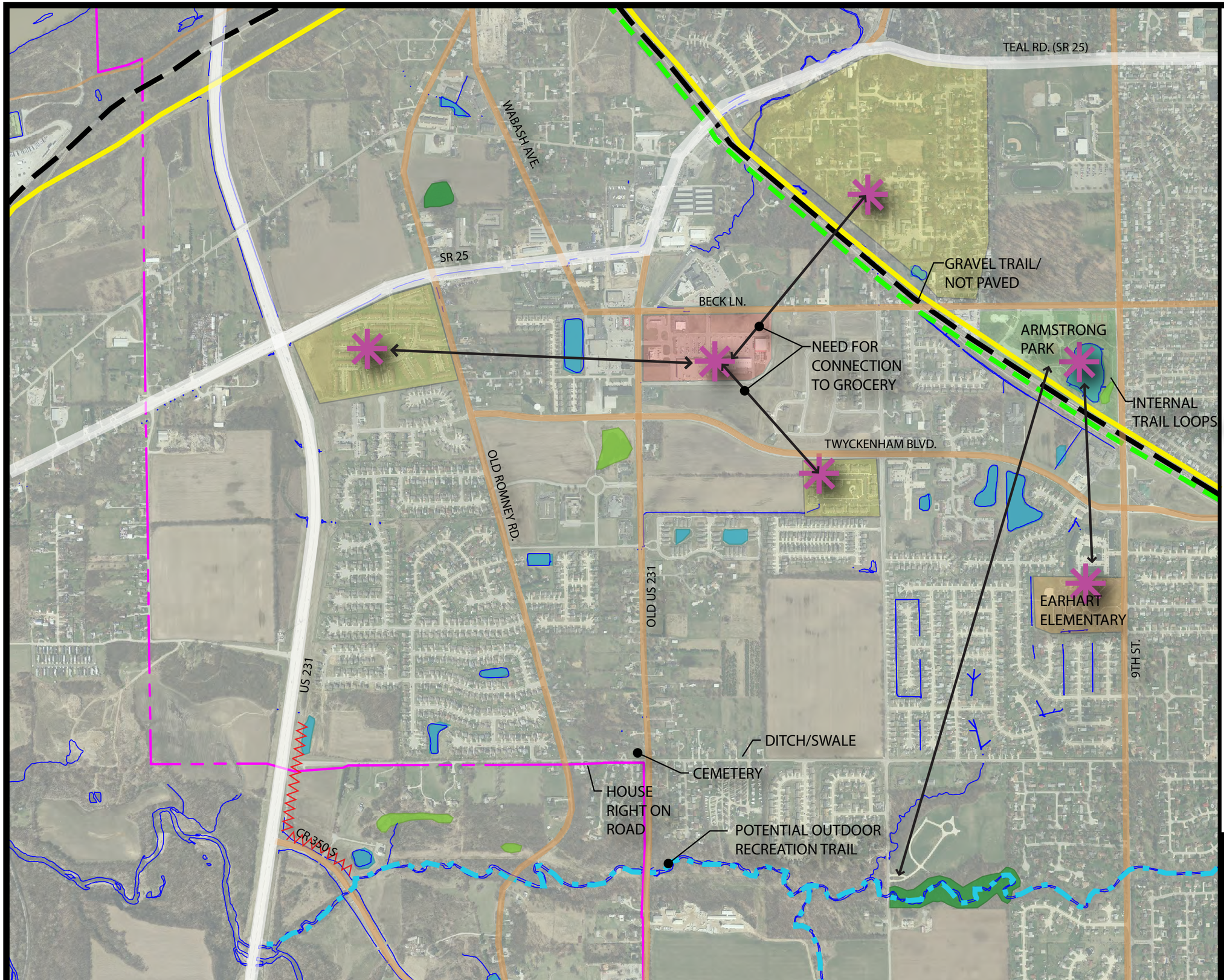

LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- FRESHWATER EMERGENT
- FRESHWATER FORESTED/SHRUB
- FRESHWATER POND
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- SEWER EASEMENT
- EXISTING TRAIL
- PROPOSED TRAIL
- EXISTING TRAILHEAD
- STEEP SLOPES
- UTILITY EASEMENT
- BRIDGE
- PARK
- LOW-INCOME RESIDENTIAL
- COMMERCIAL
- EDUCATIONAL
- POTENTIAL COMMUNITY CONNECTION
- COMMUNITY DESTINATION POINT

CONNECTIVITY

Opportunities

> Several community destination points provide many important connections.
> Armstrong Park provides for positive connections through shared use paths.

Constraints

> No direct route in connection to high density housing and other destinations.

PEDESTRIAN SAFETY

Opportunities

> Several community destination points need safe routes.
> Existing trails on rail corridors provide for safe paths with minimal vehicular traffic.

Constraints

> Limited access along roads could become an issue of safety.

ENVIRONMENTAL IMPACT

Opportunities

> Sewer easement has potential for outdoor recreation standards

Constraints

> Some steep slopes along potential routes.

ECONOMICS

Opportunities

> Increase property value in connecting to existing trail and park.

Constraints

> Some private property along corridors would require land acquisition.

TRAIL CHARACTER

Opportunities

> Street trails could bring life and character to the city streets.
> Sewer easements bring character and change to the trail corridors.

Constraints

> Trails along roads would not retain a natural look.

Lafayette Trail Master Plan

Analysis

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Butler Fairman Seufert CIVIL ENGINEERS

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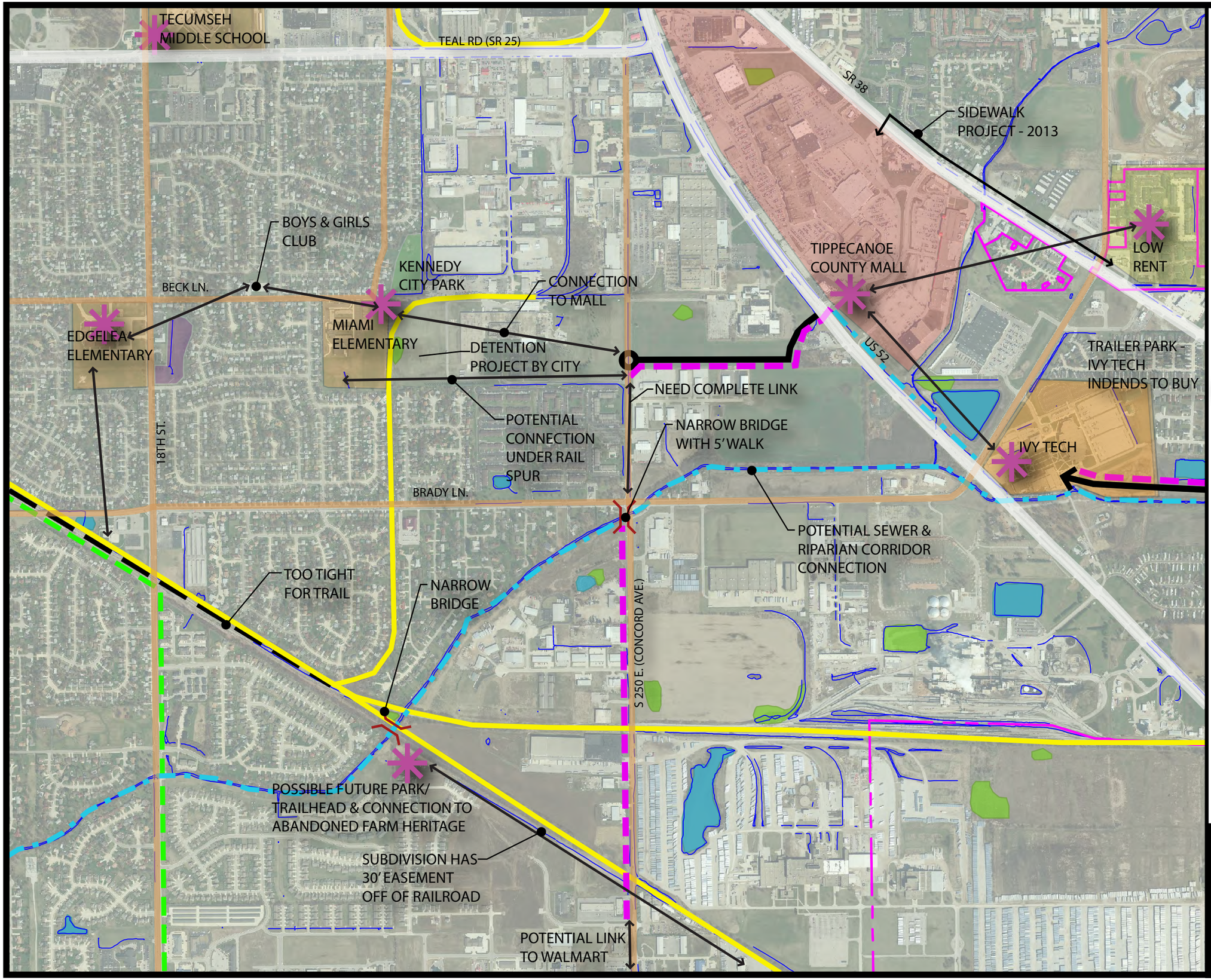

LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- FRESHWATER EMERGENT
- FRESHWATER POND
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- SEWER EASEMENT
- EXISTING TRAIL
- PROPOSED TRAIL
- EXISTING TRAILHEAD
- STEEP SLOPES
- UTILITY EASEMENT
- BRIDGE
- PARK
- LOW-INCOME RESIDENTIAL
- COMMERCIAL
- EDUCATIONAL
- FUTURE ROAD
- POTENTIAL COMMUNITY CONNECTION
- COMMUNITY DESTINATION POINT

CONNECTIVITY

Opportunities

> Several community destination points provide many important connections.
> Parks and existing trails provide for positive connections through shared use paths.

Constraints

> Corridors along roads may have limited access.

PEDESTRIAN SAFETY

Opportunities

> Several community destination points need safe routes.
> Existing trails provide for safe paths with minimal vehicular traffic.

Constraints

> Crossings over US 52 and SR 38 could be dangerous intersections.

ENVIRONMENTAL IMPACT

Opportunities

> Sewer easement has potential for trail with minimal impact

Constraints

> May need to develop outside of right-of-way on streets.
> Active railroads may impose some constraint on where the corridor goes.

ECONOMICS

Opportunities

> Increase property value in connecting communities to trails.
> Commercial and educational areas could partner with trail corridor.

Constraints

> Some private property along corridors would require land acquisition.
> Active railroad could become an issue if crossing is needed.

TRAIL CHARACTER

Opportunities

> Streets can bring character to area and easements areas can bring a natural look.

Constraints

> Trails along roads would not retain a natural look.

Lafayette Trail Master Plan

Analysis

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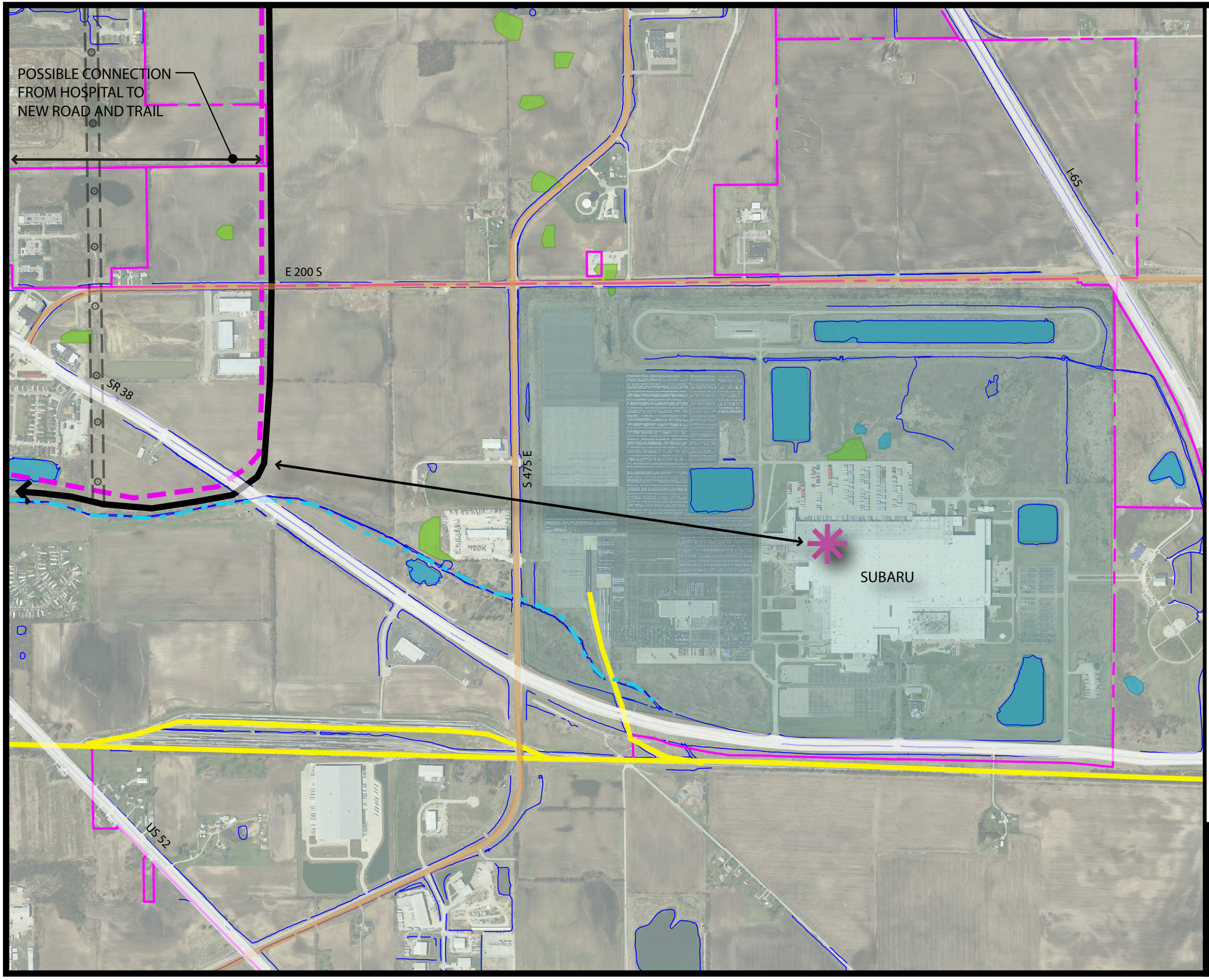

LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- FRESHWATER EMERGENT
- FRESHWATER POND
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- SEWER EASEMENT
- EXISTING TRAIL
- PROPOSED TRAIL
- EXISTING TRAILHEAD
- STEEP SLOPES
- UTILITY EASEMENT
- BRIDGE
- INDUSTRIAL
- FUTURE ROAD
- POTENTIAL COMMUNITY CONNECTION
- COMMUNITY DESTINATION POINT

CONNECTIVITY

Opportunities

> New road link to Ivy Tech from Park East Blvd.
> Link existing trail to proposed road/trail.

Constraints

> Major roads could restrain some connectivity.

PEDESTRIAN SAFETY

Opportunities

> Existing trails provide a safe environment with little vehicular traffic.

ECONOMICS

Opportunities

> Utility corridor may alleviate need for land acquisition from private owners.
> Only one link to proposed road on agricultural property.

Constraints

> Private property along corridors would require land acquisition.

TRAIL CHARACTER

Opportunities

> Existing trails give precedent for future trails.
> Sewer easement gives potential for a natural look for a trail.

Lafayette Trail Master Plan

Analysis

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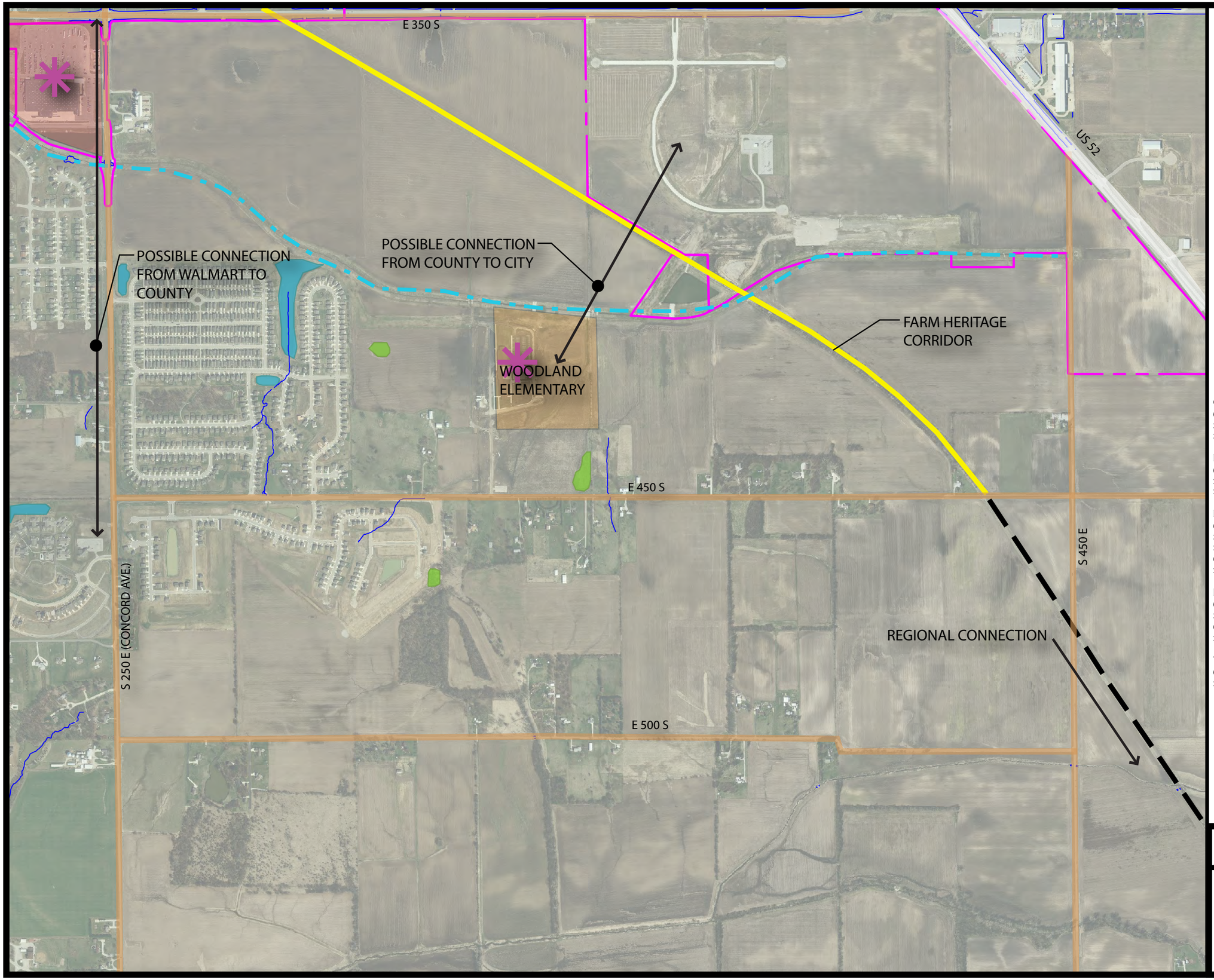

LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- FRESHWATER EMERGENT
- FRESHWATER POND
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- SEWER EASEMENT
- EXISTING TRAIL
- PROPOSED TRAIL
- EXISTING TRAILHEAD
- STEEP SLOPES
- UTILITY EASEMENT
- BRIDGE
- COMMERCIAL
- EDUCATIONAL
- POTENTIAL COMMUNITY CONNECTION
- COMMUNITY DESTINATION POINT

CONNECTIVITY

Opportunities

> Abandoned railroad corridors provide potential connections for trails.
> County school to the city.

PEDESTRIAN SAFETY

Opportunities

> Abandoned rail corridors provide for safe paths with minimal vehicular traffic.
> School connection on agricultural land and provides a safe route.

ENVIRONMENTAL IMPACT

Opportunities

> Abandoned railroad corridors provide minimal impact to the environment.
> Sewer easement provides minimal impact to environment.

Constraints

> May need to build through agricultural land.

ECONOMICS

Opportunities

> Abandoned rail corridor should be owned by Rail Company.

Constraints

> Some private property along corridors would require land acquisition.

TRAIL CHARACTER

Opportunities

> Abandoned rail corridor gives a natural and secluded look.

Lafayette Trail Master Plan

Analysis

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Butler Fairman Seufert CIVIL ENGINEERS

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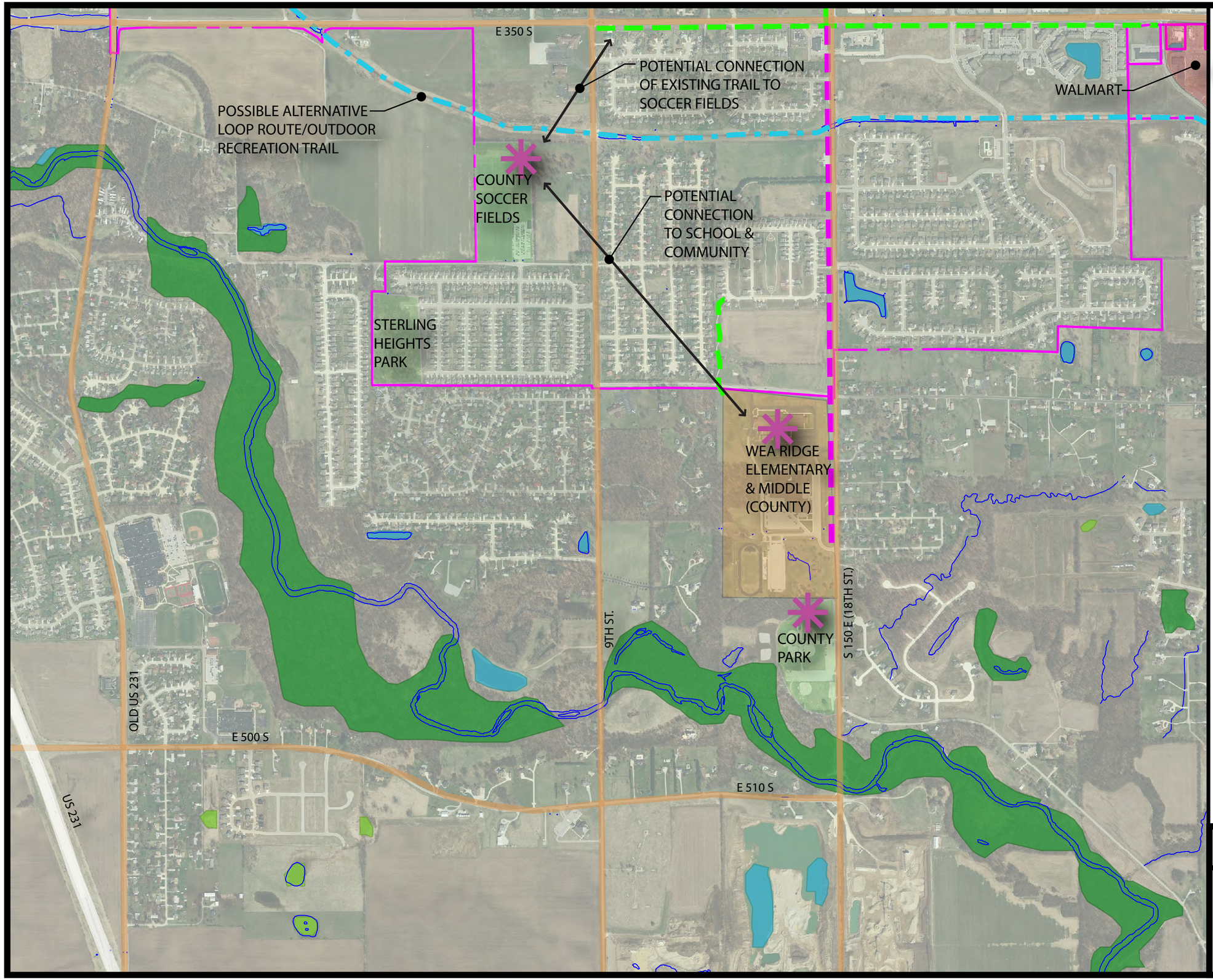

LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- FRESHWATER EMERGENT
- FRESHWATER FORESTED/SHRUB
- FRESHWATER POND
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- SEWER EASEMENT
- EXISTING TRAIL
- PROPOSED TRAIL
- EXISTING TRAILHEAD
- STEEP SLOPES
- UTILITY EASEMENT
- BRIDGE
- PARK
- COMMERCIAL
- EDUCATIONAL
- POTENTIAL COMMUNITY CONNECTION
- COMMUNITY DESTINATION POINT

CONNECTIVITY

Opportunities

> Several parks and open spaces provide for positive connections through shared use paths.
> Several community destination points provide many important connections.
> Existing trails encourage connections to other destinations.
> Connecting county parks and schools to the city.

Constraints

> Some streets may be too narrow or limit accessibility to connect trails.

PEDESTRIAN SAFETY

Opportunities

> Existing trails provide a safe environment with little vehicular traffic.

ENVIRONMENTAL IMPACT

Opportunities

> Sewer easement provides opportunities for minimal environmental impact
> Potential trails within existing park spaces.

ECONOMICS

Opportunities

> Several trails already in place.

Constraints

> Some private property along corridors would require land acquisition.

TRAIL CHARACTER

Opportunities

> Existing trails give precedent for future trails.
> Street trails could bring life and character to the city streets.
> Sewer easement could provide an interesting change of scenery for trails.

Lafayette Trail Master Plan

Analysis

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PUBLIC*involvement process*

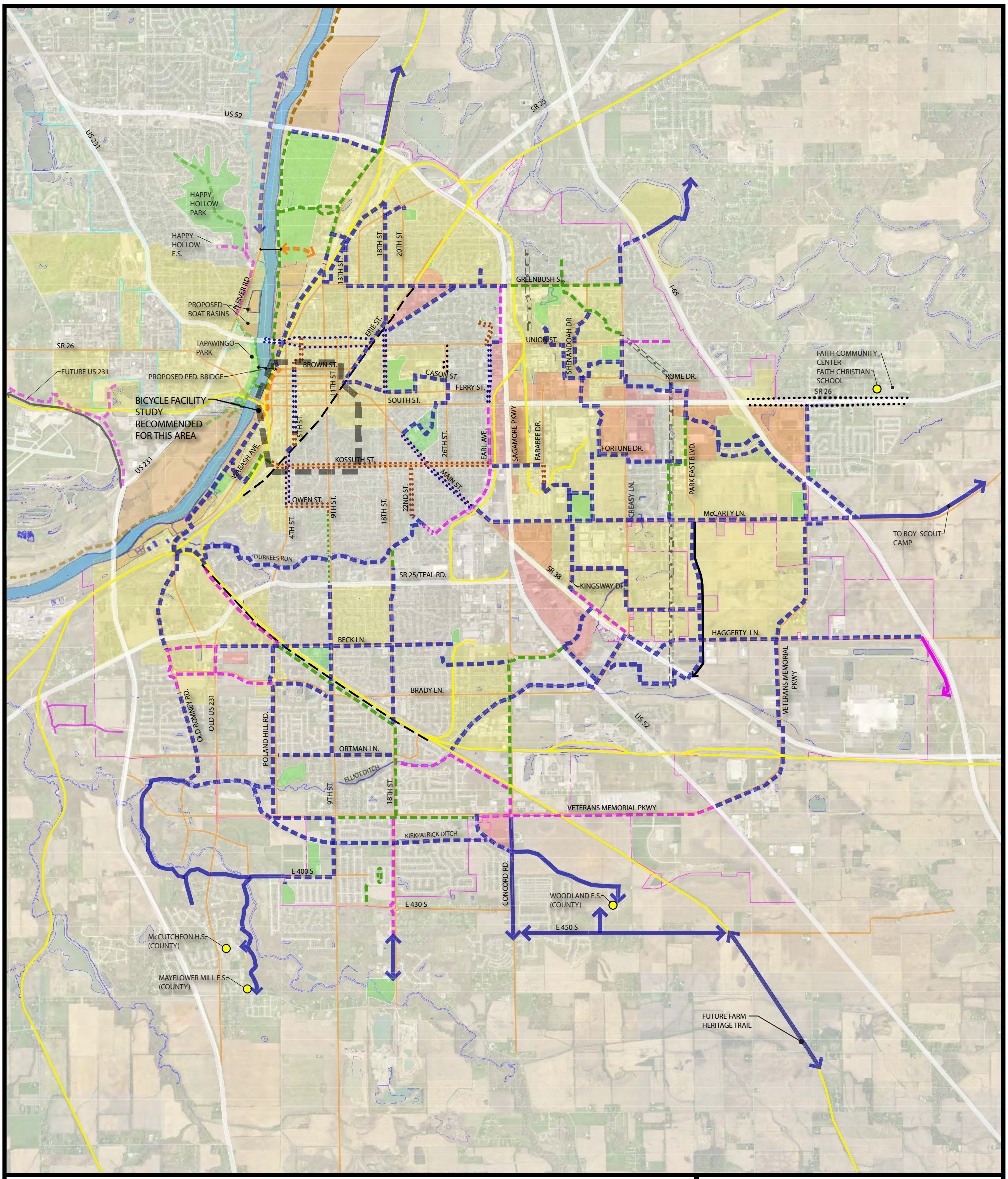
Summary of Meetings:

Several meetings were held with interested citizens, public officials, utility staff, commercial businesses, and special interest groups throughout the planning stages. Valuable information was gained during each meeting that helped guide the final Master Plan.
See meeting minutes in Appendix A.

Description	***Date***
Project Kick-off Meeting	*March 4, 2010*
Site Inventory (Walk individual corridors)	*April 14 - April 15, 2010*
Inventory and Analysis submittal	*May 17, 2010*
Inventory and Analysis Review (Review with City)	*December 1, 2010*
Stakeholders Meeting (9:00am) (Government stakeholders)	*December 1, 2010*
Stakeholders Meeting (10:30am) (Commercial/Support Group Stakeholders)	*December 1, 2010*
Stakeholders Meeting (1:00pm) (Industrial/Utility Stakeholders)	*December 1, 2010*
Preliminary Conceptual Review (10:00am) (Government stakeholders)	*February 17, 2011*
Public Meeting #1 (Presentation of conceptual plan)	*March 15, 2011*
Public Meeting #2 (Presentation of conceptual plan)	*March 17, 2011*
Public Comment Review Meeting (10:00am) (With Mayor and City Engineer)	*May 9, 2011*
Draft Master Plan Review Meeting (3:30pm) (With Mayor and City Engineer)	*May 19, 2011*
Draft Master Plan Completed	*December 9, 2011*
Meeting with City	*May 21, 2012*
Meeting with Mayor's Youth Council	*September 10, 2012*
Meeting with Mayor's Youth Council	*October 15, 2012*
Final Master Plan Complete (Review with Council Members)	*November 5, 2012*
Submittal of Master Plan to Council and City	*November 5, 2012*
Resolution of Approval of Master Plan	*December 3, 2012*

The resulting product of the thirty-three corridor study is a comprehensive master plan for thirty-three multi-use trails/bicycle facilities. The overall system completes a loop trail around the city connecting many neighborhoods to everyday destination points, a major north/south, and a major east/west route connecting Lafayette to the loop trail, as well as other destination points. The system also has thirty spur trails, connecting these three major trails to existing and future regional trails as well as schools, parks, commercial, industrial, residential and many other destination points. This will allow citizens to travel to West Lafayette and Tippecanoe County by alternative transportation, and will also help draw people from other communities into Lafayette.

The following maps are an overall view of the final master plan and all thirty-three routes.



LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- EXISTING TRAIL
- EXISTING TRAIL - NOT PAVED
- PLANNED TRAIL
- PROPOSED CITY TRAIL
- PROPOSED TRAIL BY OTHERS
- POTENTIAL PRIVATE TRAIL
- WABASH RIVER ENHANCEMENT TRAIL
- EXISTING BIKE LANE
- PROPOSED BIKE LANE
- PLANNED BIKE LANE
- SHARROW
- SIDEWALK (RECENTLY PAVED)
- FUTURE ROAD
- PROPOSED PEDESTRIAN BRIDGE STRUCTURE
- PARK
- COMMERCIAL
- PROPOSED WABASH RIVER ENHANCEMENT PARK USE
- LOW AND MODERATE INCOME AREAS
- SCHOOLS
- UTILITY EASEMENT

WEST LAFAYETTE LEGEND

- EXISTING TRAIL
- EXISTING TRAIL - NOT PAVED
- PLANNED TRAIL
- PROPOSED TRAIL

ABBREVIATIONS

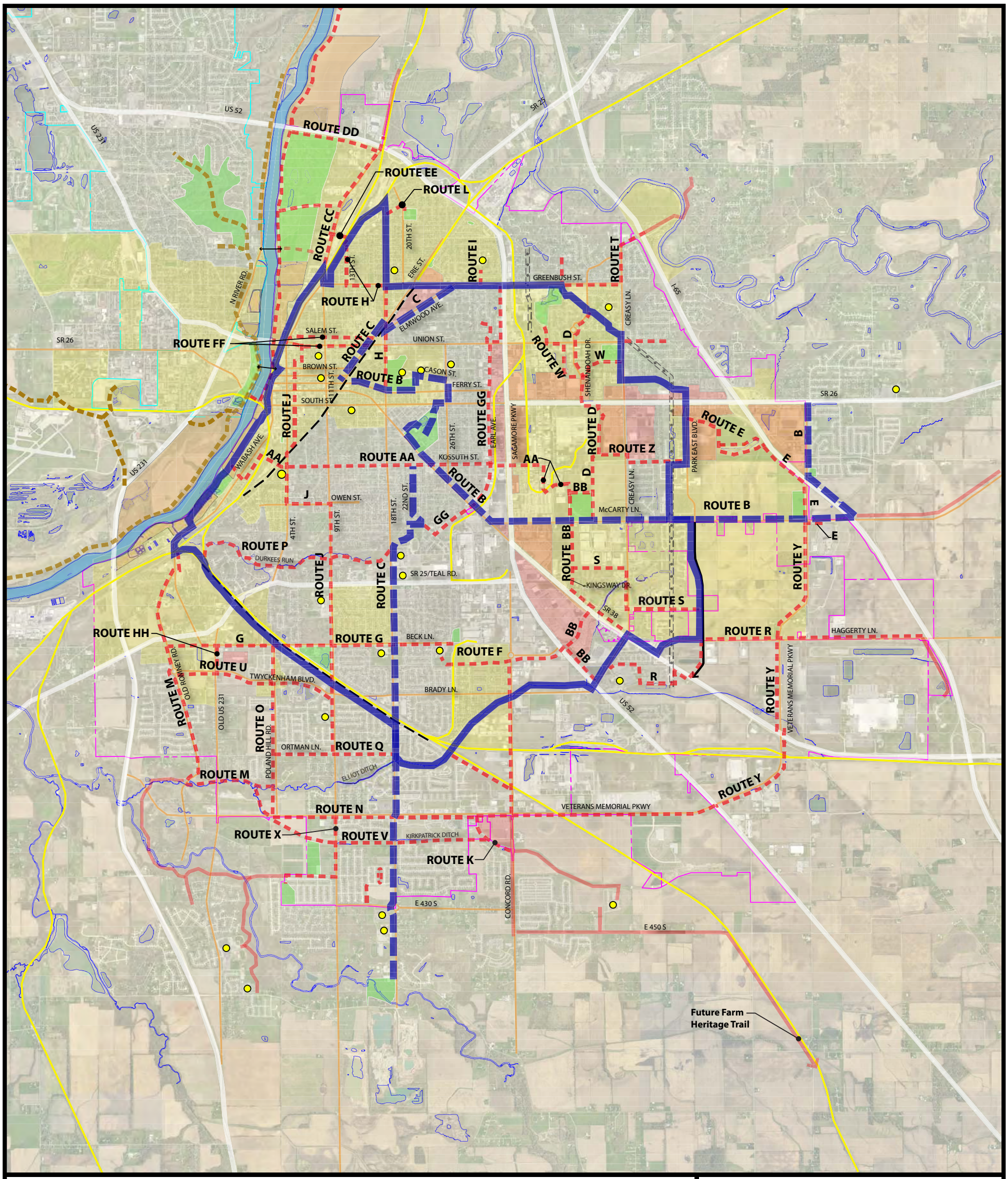
E.S. - ELEMENTARY SCHOOL
M.S. - MIDDLE SCHOOL
H.S. - HIGH SCHOOL
PED. - PEDESTRIAN

Lafayette Trail Master Plan

Overall Final Routes

0 750 1500 3000 FEET

BF&S Butler Fairman & Seufert CIVIL ENGINEERS



LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- OUTER CITY LOOP - ROUTE A
- PRIMARY TRAIL ROUTES - ROUTES B AND C
- SECONDARY TRAIL ROUTES/ CONNECTORS - ROUTES D THROUGH HH
- COUNTY/PRIVATE CONNECTOR ROUTES
- WEST LAFAYETTE TRAILS
- FUTURE ROAD
- PARK
- COMMERCIAL
- LOW AND MODERATE INCOME AREAS
- PROPOSED WABASH RIVER ENHANCEMENT PARK USE
- SCHOOLS
- UTILITY EASEMENT

ABBREVIATIONS
E.S. - ELEMENTARY SCHOOL
M.S. - MIDDLE SCHOOL
H.S. - HIGH SCHOOL
PED. - PEDESTRIAN

Lafayette Trail Master Plan

Overall Arterial Map

0 750 1500 3000 FEET

BF&S Butler Fairman Seufert CIVIL ENGINEERS

ROUTE A

The proposed Route A trail will be approximately 12.05 miles in length. The trail will begin with a proposed trailhead at the existing trail at Canal Road and Salem Street and will loop around the entire city of Lafayette, ending with the proposed Wabash River Enhancement Corporation (WREC) Trail which runs north/south along the river at downtown Lafayette and connects to West Lafayette with the John T. Myers Pedestrian Bridge and the proposed Brown Street Bridge.

Along Route A, it will connect to schools, parks, residential, 4 existing trails, 6 planned trails, 16 proposed spur trails, and some commercial areas. From the beginning of this overall loop to the end, it will connect to the following: existing Wabash Heritage Trail, Route CC, Route EE, Route H, Route L, Route C North, Route I, planned trail on Sagamore Parkway, existing Munger Trail, planned trail on Union at Creasy, Route W, Rotue E, existing Park East Boulevard Trail, Route B East, Route B Middle, Route S, Route R, planned trail on SR 38, Route BB, existing Concord Road Trail, planned trail along railroad at Brittney Chase, planned trail along railroad close to Wabash Avenue, Route P, Route M, Route AA, and proposed WREC Trail. This gives a main arterial route for trail users to connect to several amenities throughout Lafayette and also gives a large loop route for recreational users wanting to travel long distances. Due to funding limitations, Route A will be broken up into eight phases.

Route A North, Phase One is a ten-foot wide trail and will begin at the existing trail at Canal Road and Salem Street, where one of the bridges leading into West Lafayette is located. The trail will then head north along the west side of Canal Road to the point where Canal Road T's into North 9th Street. There are two points along Canal Road where building faces are right on the sidewalk and will require minimal curb removal and lane width reductions to accommodate the trail, which will also include minimal re-striping costs. The trail will then cross to the east side of North 9th Street and head south until Greenbush Street. Along North 9th Street, the slopes are very steep to the east and will require retaining wall along the trail. Additionally, below the railroad bridge there is minimal space for a trail and therefore the roadway will need to be reduced in width, including re-striping the road, to fit the trail through this section. At the intersection of North 9th Street and Greenbush Street, the trail will head east along the north side Greenbush Street to 10th Street. Route A North, Phase One ends at 10th Street and Greenbush Street.

Route A North, Phase Two is a ten-foot trail and will begin where Route A North, Phase One ends. The trail will head north on the west side of 10th Street until 10th Street veers to the east. Then the trail will follow along the open space between the railroad and the road to just before the Monon Monument at 18th Street. From Barbee Street and about 1100 feet beyond, retaining wall is needed due to slopes along the trail. At 18th Street, the trail will head south along the east side of 18th Street to the intersection of 18th Street and Greenbush Street. Along 18th Street the road width will be reduced to fit the trail. This area will include saw cutting the road, curb removal, new curb, asphalt excavation and patching. At the intersection of 18th Street and Greenbush Street, Route A North, Phase Two ends.

Route A North, Phase Three is a ten-foot trail and will begin where Route A North, Phase Two ends. At the beginning of this phase there are residential steps that tie into the back of sidewalk, so the road will need to be reduced in width in this area for a short distance to include a trail. The trail will follow along the south side of Greenbush Street, fronting many residential properties as well as the BMV before crossing over Sagamore Parkway to connect into the existing Munger Trail. Along this route, some fence relocation, fence removal and tree removal will be necessary. Additionally, between Erie Street and Elmwood Avenue there are two

parking lots that the trail passes through, which will require some tree removal, asphalt excavation and patching, plus re-striping for the parking spaces lost. Just east of Elmwood Avenue a short distance of removal and replacement of retaining wall will be needed before the road width is reduced due to steep slopes on the south side (residential) of the road. This road reduction will include saw cutting pavement, curb removal, new curb, asphalt excavation and patch. The trail then crosses over Sagamore Parkway with a level 3 crossing and connect into the existing trail. A minimal amount of retaining wall is needed in this area (Sagamore Parkway to existing trail) due to slopes. This is very important to connect people with a safe route across Sagamore Parkway since there is an existing trail in place, leading people into a very busy intersection. With the connection into the existing trail, Route A North, Phase Three ends.

From this point, the trail user can follow the existing trail east along Greenbush Street to Munger Park where Munger Trail heads south, meandering through the Duke Easement. The existing Munger trail ends at Creasy Lane, and this is where Route A East begins. This route begins with the need for removing an existing wall at the northwest corner of Creasy Lane and Union Street. A small amount of asphalt from the parking lot will need to be removed, as well as adding new retaining wall, to fit the ten-foot wide trail in this area. It then follows along the west side of Creasy Lane, heading south, and crosses the south side of Creasy Lane at Rome Drive. The trail then heads south along the east side of Creasy Lane to just north of the commercial property along the open field. Then the trail heads east along the north property line, crossing Britt Farm Road and connecting into the south side of Britt Farm Drive. A small connector trail is included in this phase, connecting to Rome Drive through the Duke Easement. Continuing east along Britt Farm Drive the trail will require a reduction in the road width until just before Brinker Street, including saw cutting the pavement, curb removal, new curb, asphalt excavation and patch. Route A East then travels south along the west side of Brinker Street, with the need to remove some trees, then travels across SR 26 and continues along the west side of Park East Boulevard connecting into the existing trail at Commerce Drive. Along the existing trail, a proposed minor trailhead is proposed at the apartment complex just south of commerce drive on the west side of Park East Boulevard. Route A East continues along the existing trail past the subdivision and through the open field until just north of McCarty Lane. Route A East will pick back up with proposed trail south to the north side of McCarty Lane. The trail will then head east to the west side of Park East Boulevard where it will cross McCarty Lane and head south through the open field, where the location of the future extension of Park East Boulevard is located. Route A East ends at the intersection of the future Park East Boulevard and Haggerty Lane.

Route A South, Phase One is both a ten-foot and eight-foot wide trail and will begin where Route A East ends. The trail will travel west along the north side of Haggerty Lane, where it will require some tree and brush removal, retaining wall and wood railing, until it T's into SR 38, where it will follow northwest along the north side of SR 38 to Creasy Lane. The trail will then head south along the northwest side of Creasy Lane, crossing over Sagamore Parkway and then following along the north side of Elliot Ditch. Once the trail crosses over Sagamore Parkway it will become an eight-foot trail, reducing the footprint along Elliot Ditch so that minimal clearing and mitigation is needed. At this point, there will be some removal and replacement of guardrail, as well as retaining wall to catch grade along Elliot Ditch. All necessary measures shall be taken to have minimal impact along Elliot Ditch. Route A South, Phase One, ends just before crossing Concord Road.

Route A South, Phase Two begins where Route A South, Phase One ends and is an eight-foot wide trail. At Concord Road the trail will have an at-grade crossing west across Concord Road, then south across Brady Lane. The trail will connect into the existing trail along the west side of

Concord Road, then just south of the bridge over Elliot Ditch, the trail will continue heading west along the south side of Elliot Ditch. Just as mentioned in Route A South, Phase One, minimal clearing and mitigation will be required and all necessary measures shall be taken to have minimal impact along Elliot Ditch. Approximately 200-feet before the active rail line, the trail will start to ramp down, and include wood railing, with handrail, for safety and accessibility of the trail user, to go below this rail line. Once the trail reaches the railroad, a proposed Con/Span structure will go below the railroad. The trail is going below the railroad due to the elevated railroad bridge, which would make it difficult, and very expensive, to ramp up and over the bridge. After going below the railroad the trail will begin to ramp back up to catch grade and in this area wood railing with handrail will be needed for accessibility purposes as well as trail safety, due to the slopes being steeper than 5%. In this area with the Con/Span structure, minimal wall will be needed to hold back the soil around the openings of the structure. Once the trail has reached the existing ground height, it will cross over the unused railroad corridor and connect into the planned trail which continues to follow along Elliot Ditch. At this point there is a possibility for a future trailhead and park on the north side of the subdivision at Brittney Chase. Once the trail has connected into the planned trail, Route A South, Phase Two ends. To stay on Route A, the trail user should then follow the planned trail west until it connects into the existing 18th Street Trail. From here the trail user should follow this existing trail as it heads north on 18th Street and then northwest along the abandoned and existing railroads up to Beck Lane. There is a planned trail to continue to follow these rail lines until the rail splits into a Y.

Route A West, Phase One will be a ten-foot wide trail and will begin where the proposed trail along the railroad ends. The trail will cross the railroad with an at-grade railroad crossing, connecting into the existing service drive. This will be used as a trail and service drive, as it has minimal use by vehicles. The trail will follow this service drive, heading north and then turn northwest when the drive splits. The trail will continue to follow along this drive and veer off and begin to ramp up (approximately 600 feet before it reaches the bridge) to be able to cross over the existing railroad line with a pedestrian bridge. Due to slopes, drainage, and vegetation cover, this area that ramps up and over the railroad, and back down, will require MSE wall along both sides of the trail for minimal clearing and effect on the surroundings. Also, because of the change in elevation, from the beginning of the trail ramping, to the height it needs to clear over the railroad, the trail will require the maximum slope accessible to all users, being 8.33%, with wood rail and handrails on both sides. Once the trail crosses over the railroad, it will have a steep ramp down to match back into the existing ground, and again will have a steep 8.33% slope with wood rail and handrail on both sides. The trail will then connect into the east side of Wabash Avenue, just south of the at-grade railroad crossing. At this point Route A West, Phase One ends.

Route A West, Phase Two begins where Route A West, Phase One ends and is a ten-foot wide trail. From here, the trail will follow along the east and south side of Wabash Avenue and will cross Wabash Avenue with a midblock crossing approximately 740-feet past the at-grade railroad crossing. A small amount of bollard and chain removal will occur just after this crossing as the trail follows along the northwest side of the road. Just past the wooded area before the access drive, the trail will head northwest for a short distance, then northeast to follow parallel to the river and along the overhead utility corridor, which is already cleared. In the event that additional clearing needs to take place, mitigation costs have been accounted for through this wooded area. The trail will cross over two small creeks with two pedestrian bridges and connect into the existing trail/access drive at Shamrock Park and continue as it crosses over Sanford Street. The trail will follow along the northwest side of Sycamore Street until it reaches the location where the Wabash River Enhancement Corporation (WREC) trail is proposed, just

north of Walnut Street. This location is just before Sycamore Street curves and is the end of Route A West, Phase Two.

The remaining connection of the Route A loop trail will be through the WREC trail which will begin where Route A West ends and is proposed to go over the existing railroad, follow along the east side of the railroad until Main Street where the Depot and John T. Myers Pedestrian Bridge is located. The WREC trail will then connect into the existing trail along the river, which follows north to the connection into Route A North, Phase One.

ROUTE B

The proposed Route B trail will be approximately 7 miles long, with an additional 1.75 miles of bike lane. This trail is the major east/west arterial route through the City and connects many amenities including, grocery, commercial, industrial, residential, schools, parks and the proposed spur trails. Route B gives many loop trail opportunities as it connects into the major Outer Loop, Route A, and the spur trails throughout the city. In order, from east to west, Route B connects to the planned McCarty Lane Trail, Route E, Route Y, Route A East, Route D, Route BB, planned Earl Avenue Trail, Route AA, and Route C North. Route B also gives the trail users the opportunity to connect east to Tippecanoe County and west to West Lafayette. The trail will begin at SR 26 and Veterans Memorial Parkway, heads south to McCarty Lane, then follows west until Main Street to Columbian Park and into the downtown area. Due to funding limitations, Route B will be broken up into five phases.

Route B East is a ten-foot wide trail, and the beginning of Route B, beginning with an at-grade crossing over SR 26, connecting into the southeast corner of Veterans Memorial Parkway and SR 26. This trail will head south along the east side of Veterans Memorial Parkway with a minor trailhead at the church and a crossing to connect into Meijer. Just south of this trailhead to Stable Drive, the ditch will need to be piped, and additionally because of the slopes in this area, wall will be needed on the back side of the proposed trail. The trail continues south along Veterans Memorial Parkway, connecting into the residential subdivision and the neighborhood park. From here the trail will follow parallel to I-65 to the north side of East 100 South (McCarty Lane), where the trail will direct itself west. There will be some additional wall in this area as the trail has to steepen to catch grade at East 100 South. Once the trail reaches East 100 South it will direct itself west to cross over I-65. In this area, the existing road bridge has a five-foot wide sidewalk and approximately twelve-foot travel lanes. It is proposed to remove the existing sidewalk in this area and replace with a trail. Coordination will need to happen to reduce the lane widths to ten-feet wide on the road to provide enough room for the trail. The trail will continue west, connecting into Route E and Veterans Memorial Parkway, and ending with a crossing across Park East Boulevard, connecting into Route A East.

Route B Middle, Phase One is a ten-foot wide trail and begins on the west side of Route A East, just west of the end of Route B East on the north side of McCarty Lane. Route B Middle, Phase One continues west along McCarty Lane, past CAT Park and the proposed shared use trailhead and across Sagamore Parkway. From Navco Drive for about 600 feet west, towards Sagamore Parkway, the paved ditch will be piped so the trail can continue along the north side of McCarty Lane. The trail will cross Sagamore Parkway on the north side of McCarty Lane, then cross McCarty Lane to the southwest corner of Sagamore Parkway and McCarty Lane. The trail will continue west along the south side of McCarty Lane to Main Street. Route B Middle, Phase One ends just east of the Main Street crossing.

Route B Middle, Phase Two begins where Route B Middle, Phase One ends. This trail begins with a level 3 crossing across Main Street. The trail will follow along the southwest side of Main

Street between the road and railroad at ALCOA. This section will be an 8-foot wide trail due to limited space with the railroad line that we are not able to relocate, as well as a roadside ditch that we need to continue to incorporate in some manner. In this area, the ditch will be piped, with inlets, for the distance of the trail, new curb will be located, and a 6' tall wrought iron safety fence will be on the railroad side of the trail to protect both the trail user and the rail line. The trail will continue along Main Street, have an at-grade railroad crossing, run along the car sales property, and the trail will end at South Earl Avenue. From South Earl Avenue to Scott Street, at Columbian Park, Route B Middle, Phase Two will be bike lanes, heading both northbound and southbound. At State Street, the bike lanes will end and this will be the end of Route B Middle, Phase Two.

Route B West, Phase One will begin where Route B Middle, Phase Two ends. The trail travels along the southeast side of Scott Street and will include low wall, due to the slopes between the parking and sidewalk, and tree removal. The trail will go to the second parking lot entrance where it turns south into Columbian Park. This existing parking lot will serve as a shared-use trailhead for this phase. The trail then heads south, across the first parking lot, possibly losing one or two parking spaces, and continues south through the open grass area, following along the road. It follows along the access road until the first railroad crossing, where it then follows the railroad that wraps around the freshwater pond, crosses another railroad, then crosses to the east side of Crescent Drive. It then follows along this drive, replacing the existing trees and replacing the existing sidewalk with a 10-foot trail, passing several park shelters before it exits Columbian Park at the three-way intersection of Scott Street, Park Avenue, and South Street. The trail will then cross Park Avenue and head east along the south side of South Street. At the 26th Street and South Street intersection, the trail will cross to the northeast corner. The trail will then and head north, along the east side of 26th Street, to Cason Street. Then the trail will cross to the west side of 26th Street, then north to the north side of Cason Street and head west along Cason Street. The trail will pass Sunnyside Middle School before it reaches 22nd Street where it will direct itself to the west side of 22nd Street, heading south. The trail will head south along 22nd Street to Murdock Park. Route B West, Phase One will end at the northwest corner of Ferry Street and 22nd Street.

Route B West, Phase Two will begin where Route B West, Phase One ends. The trail will head west along the north side of Ferry Street. This will include direct park access including a shared-use trailhead at Murdock Park. The trail will follow along Ferry Street in front of the park, under the 18th Street Bridge and in front of many residential homes. This trail will have to be eight-feet, and additionally, the area in front of the residential homes will require wall removal and new wall, being that there is limited space between the road and property lines, including steep slopes up to the homes. Route B West, Phase Two ends at the new park at Erie Street and Ferry Street, connecting directly into the beginning of Route C North, which will be discussed next.

ROUTE C

The proposed Route C trail will be approximately 3.5 miles long, with an additional 1 mile of sharrow. This trail is the major north/south arterial route through the City and connects many amenities including schools, parks, residential and the proposed spur trails. This also gives the trail user the opportunity to connect to the county on the north and south into the city. Route C gives many loop trail opportunities as it connects into the major Outer Loop, Route A, and the spur trails throughout the city. In order, from south to north, Route C connects to the existing 18th Street Trail, Route G, Route P, Route GG, Route AA, Route B West, Route FF, Route H, and Route A North. The trail will begin at the existing trail on 18th Street and the Railroad with a minor trailhead and it will continue north to Jefferson High School where it will follow along the

sewer easement to State Street where it crosses over and transitions to sharrows on both sides of 22nd street (northbound and southbound), which then connects into Route AA sharrows on Kossuth Street. The trail breaks as Route AA connects to Route B which gives a connection north to the continuation of Route C. This area is connected along Erie Street from Ferry Street to 18th Street, then along Elmwood from 18th Street to Greenbush Street. Due to funding limitations, Route C will be broken up into three phases.

Route C South, Phase One will be a ten-foot wide trail and begins at a proposed minor trailhead at the existing trail at 18th Street and the Railroad and begins with an at-grade railroad crossing on the west side of 18th Street. The trail heads north, passing Twyckenham Boulevard. The trail will then become an eight-foot wide trail due to limited space between residential homes and the roadway. Continuing north, crossing over several residential drives, the trail will pass Edgelea Elementary and just before Teal Road the trail has a midblock crossing approximately 300 lineal feet south of the intersection. This midblock crossing has been determined based on the east side of 18th Street, at this point, being more open with less residential crossings. The trail will continue north as a ten-foot wide trail along the east side of 18th Street, crossing over Teal Road into Tecumseh Middle School. Once connected into this existing sidewalk, Route C South, Phase One will end.

Route C South, Phase Two is a ten-foot wide trail and begins where Route C South, Phase One ends and continues northbound along the east side of 18th Street, connecting into the existing trail/wide sidewalk at Jefferson High School. At the end of this existing trail, Route C South, Phase Two will follow the sewer easement to the north of the high school and head northeast towards State Street. Once the trail reaches the open discus field, just north of the football stadium, the trail will no longer follow the sewer easement. The trail will follow north along the west side of the open field to the building at the north of the open field. From this point it will head east towards State Street along the northern side of the open field, and along the south side of the overhead utility lines. Once the trail reaches State Street, a level three crossing will be installed and the trail will travel a short distance on the north side of State Street until 22nd Street where it transitions into northbound and southbound sharrows and sidewalks. There is a short distance along both sides of 22nd Street where new sidewalks need to be installed. The sharrows tie into Route AA on Kossuth Street and this is the end of Route C South, Phase Two.

Route C North will be a ten-foot wide trail and begins at Ferry Street and Erie Street at the end of Route B West, Phase Two. This will begin at the new park where a shared use trailhead will be installed. The trail will follow along the east side of Erie Street, northeast towards 18th Street Street. At the beginning of the trail, there will be some fence relocation where the homes are located. Passing Cincinnati Street, the trail will be elevated along the back side of the existing wall, and will therefore need a short length of wood railing until it directs itself behind the business just south of Union Street. The trail needs to route itself behind this business because there isn't enough room for a trail to pass through without removing parking for that business. The trail will pass Route FF bike lanes and connect into Route H. At 18th Street, the trail will head south along the west side of 18th Street, crossing over 18th Street to the north side of Elmwood Avenue. Along Elmwood Avenue, there is opportunity to re-work the road, and therefore the existing curb is proposed to be removed so the trail can be extended into the road. New curb will be added after asphalt excavation and patch is done along the proposed trail. Because the trail will be coming into the roadway, the road will also need lanes to be re-striped. The trail will continue along the north side of Elmwood Avenue to Greenbush Street, connecting into Route A North, Phase 3. Route C North ends at the intersection of Greenbush Street and Elmwood Avenue.

ROUTE D

The proposed Route D trail will be approximately 2.25 miles long. This route gives many opportunities as it connects directly to two shopping areas, homes, industry, and a park. Route D is connected with five trails, one of which is the existing Munger Trail. This gives many options for loop trails and alternative transportation to work, home, and/or shopping. The trail will begin at the connection to Munger Trail and Shenandoah Drive and head south along the east side of Shenandoah Drive, crossing over several residential drives. Just north of the shopping area at Rome Drive would be the second trail intersection of Route W as the trail continues south towards SR 26. Just before crossing SR 26, a culvert or pipe extension is needed for the trail to successfully approach SR 26. A level 3 crossing will be placed across SR 26 for the trail user to have a safe crossing before getting to Caterpillar and other shopping areas. After crossing SR 26 the trail will travel eastward along the front of Caterpillar to just before the fence separating Caterpillar's parking and the Shopping Center's parking. The trail will then direct itself southward and follow along the open corridor between the two parking lots, and once reaching the pond continue south around the west side of the pond, on the outside of the fence. The trail will continue south, connecting into Route Z. The trail will then head west towards the east side of the drainage ditch, then direct itself southward, connecting to Route BB and CAT Park. Route D ends at the connection to Route B Middle, Phase One at McCarty Lane.

ROUTE E

The proposed Route E trail will be approximately 2.5 miles long. This route allows for a few loop trails, in addition to connections to shopping, three trails, a park and a hospital. The trail begins at the crossing of Park East Boulevard at the connection of Route A East and the existing trail. Route E crosses the road and travels east along the south side of Commerce Drive to the east end of Walmart, between the store and the farm field. The trail will then head south along the line of trees and farm field to the south end of the farm field. The trail will then head east and loop completely around Alexander Ross Pond. At the east end of the pond and the west side of I-65, the trail will then direct itself southeast towards Veterans Memorial Parkway. Once reaching Veterans Memorial Parkway the trail will head south along the west side of the road, passing by Berlovitz Park, where there will likely need to be mitigation or replacement of trees for the amount of trees and brush being removed. The trail will cross to the south side of McCarty Lane, passing Route B East, connect to Route Y, then cross to the east side of Veterans Memorial Parkway and connect into the existing drive into Clarian Arnett Surgery Center. Route D ends at the existing sidewalk at the surgery center.

ROUTE F

The proposed Route F trail will be approximately 1 mile long. This route allows for an east/west connection from the existing Concord Road Trail and Miami Elementary and also an indirect connection to Route G and Kennedy City Park. Route F begins where the existing roundabout and trail is located on Concord Road. This trail runs westward along the north side of Wire Plant Lane, crossing to the south side just before the road curves north. The trail will continue west along the north side of the row of trees, towards the active railroad. Because this is an active line and there is not an existing crossing, the trail will need to travel up and over the railroad with a pedestrian bridge. This trail will ramp 5% up and down and will have fill to ramp up, not wall. In the area that the trail is ramping up to get over the railroad, wood railing will be included as well as a small amount of wall (including wing walls) at the bridge. Once the trail connects into the existing grade, it will direct itself north towards Miami Elementary. At the school, the trail will end, connecting into the existing sidewalk system. Miami Elementary is the end of Route F.

ROUTE G

The proposed Route G trail will be approximately 2 miles. This route is very important as it allows for a connection to two parks, three schools, residential subdivisions, five trails and a safe connection to the grocery store. However, due to funding limitations, Route G will be broken up into two phases.

Route G, Phase One begins with a shared-use trailhead at Kennedy Park and heads west along the south side of Beck Lane, crossing over several residential drives, and a few commercial drives. This trail includes a short segment of existing trail in front of Miami Elementary, as well as a few areas of fence relocation and/or removal in the residential areas. Along the way, the trail will pass by Miami Elementary, residential subdivisions, the boys and girls club (with a level 2 crossing), Route C, Edgelea Elementary, Route J and Armstrong Park. Route G, Phase One ends at the southwest corner of Beck Lane and 9th Street, giving a safe connection and termination of phase one at Armstrong Park.

Route G, Phase Two begins where Route G, Phase One ends. This phase begins with a shared-use trailhead at Armstrong Park and heads west along the south side of Beck Lane, crossing over several commercial drives and requiring some fence relocation and removal just east of the railroad and existing trail. The trail connects into the existing trail along the railroad, Route O, First Assembly Christian Academy (with a level 2 crossing), the grocery store at the corner of Beck Lane and Old US 231, and lastly, the planned trail which heads directly west and also south along Old US 231. This is the end of Route G, Phase Two.

ROUTE H

The proposed Route H trail will be approximately 1.25 miles, with an additional 1.25 miles of bike lanes. This trail allows for a small loop trail connecting two points of Route A North and also Route C North, as well as connecting homes, Linwood Elementary, Linwood Park, the cemetery, Hannah Center & Park, Murdock Park, and Murdock Elementary. Route H begins at 13th Street, Burroughs Street, and Route A North, Phase Two. The trail will be ten-feet wide in this area and begins with a small segment of wall on both sides get down the steep slope to the road from Route A North, Phase Two. Along 13th Street there are steep slopes on the residential properties and therefore the road width will be reduced to have little to no impact on the residential properties. This will include curb removal, asphalt excavation, asphalt patch, and new curb. The trail follows along the east side of 13th Street south to Greenbush Street where it directs itself east along the south side of Greenbush Street. Once connecting into Greenbush Street the trail will transition to an eight-foot wide trail due to limited space between the residential properties and the road. There will also be tree removal, fence relocation, and some steep areas requiring retaining walls along Greenbush Street. The trail heads east towards 18th Street, connects into Route A North, Phase Two and Three, then directs itself south on the east side of 18th Street to Erie Street. In this area along 18th Street, the trail will transition back to a ten-foot wide trail, and again will reduce the road width to have little to no impact on the steep slopes of the residential properties. This will, again, include curb removal, asphalt excavation, asphalt patch, and new curb. Once the trail reaches 18th Street and Erie Street, it will switch to northbound and southbound bike lanes, passing by Route C North and connect into Murdock Park, just before the bridge. Route H ends at Murdock Park.

ROUTE I

The proposed Route I trail will be approximately 0.25 miles. This trail allows for a connection from Route A North, Phase Three to Vinton Elementary, and indirectly to the city pool. The trail begins with at the existing crossing at 29th and Greenbush to the east side of 29th Street and

heads north along the residential homes. Due to steep slopes there will be wall needed at the first two properties along 29th Street. From here the trail heads north to Vinton Street where the trail crosses onto the school property. The trail will replace the existing walk into the Elementary School and end at the basketball courts and playground.

ROUTE J

The proposed Route J trail will be approximately 1.75 miles, with an additional 1.6 miles of sharrow and 2 miles of bike lane. This route allows for a connection to several residential subdivisions, three schools, three parks, one country club, five trails, two sharrow routes, and several downtown amenities. However, due to funding limitations, Route J will be broken up into two phases.

Route J, Phase One is a ten-foot wide trail and begins at Ortman Lane and 9th Street, intersecting with Route Q. Along this route there will be a significant amount of sidewalk removal and some tree removal needed as well. The trail travels on the west side of 9th Street heading north until reaching Earhart Elementary. At this point there is an existing crossing (which will be redone) to the east side of 9th Street where the trail will follow and continue north. This was due to a more open landscape being able to fit a trail, as well as not having to tear out existing sidewalk to place new pavement in the same area. From this point the trail will head north to Twyckenham Boulevard, switch over to the west side of the road, connect to Route U, the existing trail and railroad and connect into Armstrong Park and Route G. Continuing north along the west side of 9th Street, Route J, Phase One will pass Central Catholic Jr/Sr High before it reaches Teal Road. After crossing to the north side of Teal Road, Route J, Phase One will end.

Route J, Phase Two begins where Route J, Phase One ends. This phase begins with the existing southbound bike lane and picks up with proposed sharrows at Cherokee Avenue. Along the existing bike lane the route connects into Route P and the Lafayette Country Club. At Owen Street, Route J picks back up with proposed eastbound and westbound sharrows west to 4th Street. At 4th Street the sharrows will transition back into bike lanes (north and south), heading north up to the abandoned railroad and passing by Miller Elementary and Route AA Sharrows. At this point there will be a short segment of trail directed northeasterly, through the abandoned railroad corridor, to Triangle Park, at 5th Street. There will be a shared-use trailhead at the park before this route continues north. Directly across from Triangle Park, there is a small side path that connects between two residential properties west to Fountain Street. In this area we suggest a complete street option be studied further to get a safe connection over to the Bauer Community Center and South Tipp Park. This is being suggested based on the fact that there is on-street parking on the north and south side of Fountain Street, so unless the city decides to take away on-street parking on at least one side of the road, a trail would not be able to fit in this area, connecting over to the community center and park. A complete street would consist of sidewalks on both sides of the road as well as some sort of bicycle facility, whether that is bike lanes or sharrows would be up to what is determined from the study. From the end of the trail to Triangle Park, there will be sharrows to Romig Street before transitioning back into bike lanes, heading north and south, along 5th Street, to Brown Street. From here the road doesn't have enough width to accommodate bike lanes, therefore sharrows will be incorporated from Brown Street to Cincinnati Street, head east to 6th Street, and then direct itself north, connecting into the eastbound and westbound Route FF bike lanes. At this point, Route J, Phase Two will end.

ROUTE K

The proposed Route K trail will be approximately 0.5 miles. This route serves as a connection to four different trails, creating a small loop trail around Walmart. The trail begins on the east side of Promenade Parkway, intersecting with Veterans Memorial Parkway, a planned trail, and the existing trail. The trail follows along the east (and north) side of Promenade Parkway until it T's into Concord Road (South 250 East). Along the way, the trail gives plenty of opportunity and connection into Walmart, it connects with Route V and at the end it has a street crossing which would connect this trail into the proposed Concord Road Trail (county portion). Route K ends at the crossing to the proposed Concord Road Trail.

ROUTE L

The proposed Route L trail will be approximately 0.25 miles. This route connects Route A North, Phase Two to the McAllister Center. The trail begins on the southeast corner of Schuyler Avenue and 18th Street and heads northeasterly to 20th Street where it crosses over and heads south on 20th Street, connecting into the McAllister Center with a shared use trailhead. Due to limited space between the road and property lines, Schuyler Avenue is being proposed to reducing the road width to include this ten-foot wide trail through this area. This will include sidewalk removal, curb removal, asphalt excavation, asphalt patching and new curb. Route L ends at the trailhead at the McAllister Center.

ROUTE M

The proposed Route M trail will be approximately 3 miles. This route connects to six trails, including one proposed county trail, two planned trails, several residential subdivisions, Tippecanoe County, and a cemetery. Due to funding limitations, Route M will be broken up into two phases.

Route M, Phase One begins at Poland Hill Road and Elliot Ditch and T's into Route O. This phase follows along the south side of Elliot Ditch and steps must be taken to retain as much vegetation and have as little impact as possible in this area of the trail so as to not disturb the waterway. Along the ditch, mitigation of all trees removed has been included in the cost and DNR regulations should be followed as to the specific rate of replacement. Part of this will be having a minimal width of trail, being eight-feet wide. Additionally, along Elliot Ditch, the trail should follow outdoor accessibility guidelines to the fullest extent possible. Since this is along a natural area, stone can be used to maintain a rugged and more natural look. Stone trails should only be used in areas where slopes permit, which would be less than 6% longitudinal slope. If slopes are steeper than 6%, asphalt should be used as these steep slopes would wash the stone away, leaving a trail that would not be accessible to all users. Based on the National Wetlands Inventory, this area of Elliot Ditch hasn't been labeled as a wetland of any kind; however this trail must still be constructed in a very conservative manner. As the trail follows along the south side of Elliot Ditch, there will need to be a small pedestrian bridge over the connection of Kirkpatrick Ditch and it will continue to follow along the ditch. The trail will make its way up to a level two crossing on Old US 231, continue west along the south side of Elliot Ditch and again makes its way back up to grade with another level 2. This crossing will require overhead flashers as well as ample road warning signs to protect the trail user. From this point the trail will follow along the west side of Old Romney Road, heading north. After the crossing of Old Romney Road, the trail will cross over Elliot Ditch and will require the existing road bridge to be widened, as well as a small amount of guardrail remove and reset. The trail will pass a possible county connection, have some tree removal, fence relocation, and pass residential homes. At Plantation Way, there will be tree removal, some retaining wall for the steep slopes on the south side of Plantation Way, and a small amount of fence removal for the trail to pass

through. The trail will continue along Old Romney Road, having some additional tree removal and a small amount of sidewalk removal before reaching Stockbridge Lane, where the planned trail is along Old Romney Road. At Stockbridge Lane, Route M, Phase One will end.

Route M, Phase Two begins where the planned trail ends, at Old Romney Road and SR 25. The trail will begin with a level 2 road crossing across SR 25. The trail will continue on the west side of Old Romney Road, passing residential homes and St. Mary's Cemetery before it reaches Wabash Avenue. The trail will cross Wabash and follow along the east side of the road until it reaches the railroad bridge and the existing trail. At this point, Route M, Phase Two will end. If the trail user desires to continue along a designated trail route, they can travel east along the existing trail until it connects into Route A West, Phase One. If the trail user desires to continue straight, they can for a short distance, until connecting into Route A West, Phase Two, just before the at-grade railroad crossing.

ROUTE N

The proposed Route N trail will be a ten-foot wide trail and be approximately 0.75 miles. This route connects to four trails, one being the existing trail along Veterans Memorial Parkway. Route N begins at 9th Street and Veterans Memorial Parkway with a crossing to the existing trail. The trail will head west along the south side of Veterans Memorial Parkway, connecting to Route X, Evangelical Covenant Church, Route O, and Route V. Just after the connection into Route O, there will be a length of new pipe and wood railing to successfully and safely get the trail connected into Route V. The trail will end at the intersection of Kirkpatrick Ditch, Route V and Veterans Memorial Parkway.

ROUTE O

The proposed Route O trail will be approximately 1.5 miles. This route connects to five trails, residential subdivisions, and a major trailhead. Route O begins at Veterans Memorial Parkway and Poland Hill Road with a Level 2 crossing across Veterans Memorial Parkway from Route N. The trail heads north along the west side of Poland Hill Road, connecting to Route M, crossing over Elliot Ditch and an unknown creek with two pedestrian bridges. As the trail continues north between the second pedestrian bridge and Ortman Lane, retaining wall and pipe will be needed along the front of the residential subdivision, due to limited space and steep slopes between the property and the road. Once reaching Ortman Lane there will be a major trailhead, at the northwest corner, which will connect Route O with Route Q and be a destination point for the community. The trail will continue north, needing some tree removal, and pass farm fields, residential homes, connect into Route U and the planned trail along Twyckenham Boulevard, and end at Poland Hill Road and Beck Lane, connecting into Route G. This is the end of Route O.

ROUTE P

The proposed Route P trail will be approximately 2.25 miles. This route connects to two trails, an existing bike lane, Jefferson High School, Fairgrounds, Lafayette Country Club, and residential subdivisions. Due to funding limitations, Route P will be broken up into two phases.

Route P, Phase One follows along the south side of Durkees Run Ditch and begins with a Level 2 crossing over 18th Street, connecting to Route C and Jefferson High School. The trail heads west along the south side of the ditch, connecting into the north side of the fairgrounds and continuing west connecting into residential areas. Along the ditch, steps must be taken to retain as much vegetation and have as little impact as possible in this area of the trail so as to not disturb the waterway. Along all of Route P, it appears that an area of trees will be removed and mitigation of all trees removed has been included in the cost and DNR regulations should be

followed as to the specific rate of replacement. Part of this will be having a minimal width of trail, being eight-feet wide. Additionally, along Durkees Run, the trail should follow outdoor accessibility guidelines to the fullest extent possible. Since this is along a natural area, stone can be used to maintain the rugged and more natural look. Stone trails should only be used in areas where slopes permit, which would be less than 6% longitudinal slope. If slopes are steeper than 6%, asphalt should be used as these steep slopes would wash the stone away, leaving a trail that would not be accessible to all users. Based on the National Wetlands Inventory, most of the area along Durkees Run hasn't been labeled as a wetland of any kind (only the portion west of 4th Street is labeled as freshwater/forested shrub wetland); however this trail must still be constructed in a very conservative manner for the sake of the wildlife habitat that has formed along the waterway. It then crosses over 9th Street and continues along the south side of the ditch, crosses over an unknown tributary with a pedestrian bridge, and then crosses over 4th Street. At this point, Route P, Phase One ends.

Route P, Phase Two begins where Route P, Phase One ends. From this point, the trail travels for a short distance along the west side of 4th Street to Saw Mill Road where the trail will head west along the south side of Saw Mill Road. The trail will follow the road around the bend, cross over Durkees Run with a pedestrian bridge, and then have a level 2 crossing on Saw Mill Road to connect back into the south side of the ditch until just before the railroad where the trail will head south to an at-grade railroad crossing, connecting into Route A West. At this point, Route P, Phase Two will end.

ROUTE Q

The proposed Route Q trail is a ten-foot wide trail and will be approximately 1.25 mile. This route connects to three trails, residential subdivisions, a church and a major trailhead. Route Q begins with a crossing at Ortman Lane and 18th Street which connects the existing 18th Street Trail. This trail follows along the north side of Ortman Lane and passes two homes before reaching an area of guardrail. In this area, the trail is proposed to follow along the north side of the guardrail, needing a pipe extension and some wood railing for the safety of trail users. From here, the trail continues past the church and more residential areas. Between 12th Street and 10th Street, the ditch will need to be piped to include the trail in this area without completely taking over the resident's front yards. Route Q passes over 9th Street as it intersects with Route J, and continues along the north side of Ortman Lane, passing more residential homes and residential drive crossings, before crossing over Poland Hill Road. At this point the trail will intersect with Route O and the major trailhead and will end Route Q.

ROUTE R

The proposed Route R trail is a ten-foot wide trail and will be approximately 3.5 miles. This route connects to three trails, a few residential properties, several farm fields, the National Guard building and Subaru. Route R begins on the north side of Haggerty Lane with a level 2 crossing to connect into the potential private trail within Subaru's property. The trail will head west along the north side of Haggerty Lane and will include ditch grading along Haggerty Lane for most of this trail segment. The trail will cross over Veteran's Memorial Parkway and intersect with Route Y. It will continue west and at the future road for Park East Boulevard and Route A East, the trail will cross over to the southwest corner of Haggerty Lane and Park East Boulevard. The trail will then head south along the west side of Park East Boulevard, cross over SR 38 with a level 3 crossing and run northwest along the south side of SR 38. For the segment along SR 38, ditch grading will be needed to fit the trail in. Just before the residential area, the trail will head southward to the edge of the properties and then travel west along the north side of F Lake to the western edge of the residential area. Then the trail will head north along the east property line of Ivy Tech, require a small amount of fence removal, then west

along the north property line of the school, requiring a small amount of fence removal, and connect into Creasy Lane and Route A South, Phase One. This will be the end of Route R.

ROUTE S

The proposed Route S trail will be approximately 1.75 miles. This trail will be ten feet wide and begin at Route A East and the future Park East Boulevard. The trail will head west towards St. Elizabeth Hospital and connect into the south side of the existing road through the hospital and cross over Creasy Lane. At this point the trail will become an eight-foot wide trail, which will replace the existing sidewalk, and head north. Along Creasy Lane, the trail will cross over a ditch, include removal and resetting of guardrail, and continue north to the open corridor between Creasy Court and Kepner Drive. The trail will then be a ten-foot wide trail and head west through the open corridor, remove a small amount of fence for the trail to pass through, and continue on the north side of the fence and Liberty Avenue, between the road and the drainage ditch, and connect into Route BB at approximately Kingsway Drive. This will be the end of Route S.

ROUTE T

The proposed Route T trail is a ten-foot wide trail and will be approximately 0.50 miles. This route connects to two trails, residential subdivisions and the county (Wildcat Creek), through a proposed county trail. Route T begins at the existing trail at Greenbush Street and Creasy Lane. The trail crosses over Greenbush Street and heads north along the west side of Creasy Lane, passing several homes, residential drives, replacing sidewalk and relocating fence before any residential drives. The trail continues north until Creasy Lane curves and turns into Eisenhower Road. The trail will continue along the west (north) side of the road and just after the residential crossing, and before the I-65 bridge, the trail will end with a minor trailhead, creating a safe end for all trail users. There will not be any trail access constructed by the city past this point, however, coordination is needed to continue this route over I-65 and into the county and Wildcat Creek. It is very important that a cooperative effort happen to give many connections and opportunities to the residents of Lafayette and Tippecanoe County. This route is one example of how this can happen.

ROUTE U

The proposed Route U trail is a ten-foot wide trail and will be approximately 0.75 miles. This route connects to two trails, residential subdivisions, and multi-family housing. Route U begins at Poland Hill Road and Twyckenham Boulevard at the planned trail and Route O. The trail heads east along the south side of Twyckenham Boulevard, replacing the existing sidewalk, and connects into Route J at the southwest corner of 9th Street and Twyckenham Boulevard. This will be the end of Route U.

ROUTE V

The proposed Route V trail is a ten-foot wide trail and will be approximately 2.5 miles. This route connects to five trails, residential subdivisions, and WalMart. Route V begins at Kirkpatrick Ditch and Route M. A small amount of mitigation will be needed where Kirkpatrick Ditch is wooded, at the beginning of the trail. The trail will follow south along the west side of Kirkpatrick Ditch, crossing over Veterans Memorial Parkway, which would include a culvert (or pipe extension) on the north and south side of the road, connecting into Route N, and continuing south along the ditch. Approximately half way between Veterans Memorial Parkway and 9th Street, the trail will switch from the south side of the ditch to the north side, with a small pedestrian bridge, and continue east along Kirkpatrick Ditch. This switch is being done because this route will follow along the sewer easement, and currently, that is the route the sewer easement takes. The trail will then connect into Route X, follow south along the west side of 9th

Street until just past the bridge, cross over 9th Street. In the area along 9th Street, the shoulder width will need to be reduced to fit the trail in along the bridge. This will include sidewalk removal, curb removal, asphalt excavation, asphalt patch, and new curb. After crossing over 9th Street, Route V will head east along the south side of Kirkpatrick Ditch, have a small amount of culvert (or pipe) over a drainage ditch which connects into Kirkpatrick Ditch, and continue towards 18th Street. This route will connect to the planned trail along 18th Street (heading south to Wea Ridge), cross over 18th Street, and follow north along the east side of 18th Street until just past the bridge where it will continue east along the north side of Kirkpatrick Ditch. The trail will cross over Regal Valley Drive and continue along the north side of the ditch until it reaches Promenade Parkway. There will be a Level 1 Crossing to connect into Route K and WalMart. This will be the end of Route V.

ROUTE W

The proposed Route W trail is ten-foot wide and will be approximately 1.25 miles. This route connects to three trails, two parks, some commercial and several residential subdivisions. Route W begins at Creasy Lane and the south side of McCaw Park, connecting into Route A East. The trail will travel west along the south property line of McCaw Park until it reaches the multi-family housing, where it will head south in the open corridor, connecting into the north side of Rome Drive. The trail will then head west along the north side of Rome Drive, intersecting with Route D and cross over Shenandoah Drive. The trail will head west until the freshwater pond where it will direct itself north, along the west side of this pond. The trail will require some fence relocation and possible mitigation of the wooded area, but mostly it will be outside of the fence as it travels north towards Union Street. Once the trail reaches the south side of Union Street it will head west and cross over 36th Street. Immediately following this crossing, the trail will cross over Union Street to the north side of the road, then continue west to Munger Park. Once the trail crosses over Munger Park it will direct itself north along the west side of the road. The trail will follow the road, include some plant removal and fence relocation, until it reaches the parking lot and will terminate with a shared-use trailhead and connection into the internal trail network of Munger Park.

ROUTE X

The proposed Route X trail will be approximately 1.25 miles. This route connects to three trails, one being a potential county trail, two churches, the county soccer fields and Sterling Heights Park. Route X begins at the southwest corner of Veterans Memorial Parkway and 9th Street, intersecting with Route N. From this point the trail follows south along the west side of 9th Street, passing two churches and connecting into Route V. The trail will be on the road side of the overhead power lines in most areas, except where space is limited. In these areas the trail will meander to the west side of the overhead lines. The trail will continue south past some homes, cross over East 400 South and head west along the south side of East 400 South past the western property line of the subdivision, cross over a residential drive and direct itself south into Sterling Heights Park. Route X will end once it connects into Sterling Heights Park.

ROUTE Y

The proposed Route Y is a ten-foot wide trail and will be approximately 3.25 miles. This route connects to three trails and has the potential to connect to Subaru. Due to funding limitations, Route Y will be broken up into four phases.

Route Y, Phase One begins with a connection into Route E at McCarty Lane and Veterans Memorial Parkway. The trail will head south along the west side of Veterans Memorial Parkway. Along all of phase one, there is a significant amount of right-of-way that needs to be acquired, and has been included in the cost because of the significant amount needed. This

has been determined because of the location of the road-side ditch and power poles, it seems better fit to locate the trail on the west side of the power poles and acquire a swath of land. In areas where the ditch appears to have steep slopes, wood railing has been accounted for to provide an additional safety for trail users. The trail will cross over Haggerty Lane and Route R, continue south to the north side of SR 38, then cross to the east side of Veterans Memorial Parkway. Interpretive signage has been included in this area, providing an opportunity to educate the trail users about Subaru and the impact it has on the city. Once the trail is on the east side of Veterans Memorial Parkway, Route Y, Phase One will end.

Route Y, Phase Two begins where Route Y, Phase One ends. The trail will continue south along the east side of Veterans Memorial Parkway with a CON/SPAN structure below SR 38. The trail will then require earthwork to catch grade back up to the railroad bridge and existing grade. This phase will also require erosion control measures for the steep slope off of the trail, including erosion control blanket and seed, as well as other landscaping, control any erosion. Route Y, Phase Two will end just north of the railroad bridge.

Route Y, Phase Three begins where Route Y, Phase Two ends. This phase will begin just north of the railroad bridge, where a bridge widening will be required. The bridge will be widened 15-feet and include a guardrail remove and reset. Route Y, Phase Three ends just south of the existing railroad, where the widening will end.

Route Y, Phase Four begins where Route Y, Phase Three ends. The trail will continue south along Veterans Memorial Parkway and will require re-grading, erosion control measures, wood railing and a small amount of land acquisition. As the trail continues along Veterans Memorial Parkway it will cross US 52 with a level 3 crossing, connecting into the planned trail and a proposed major trailhead at Veterans Memorial Parkway and US 52. Route Y, Phase Four will end at this major trailhead.

ROUTE Z

The proposed Route Z trail will be approximately 1 mile. This route connects to two trails, commercial, industrial and residential. This route begins at the intersection of Route D and Fortune Drive. The trail will head east along the south side of Fortune Drive, cross over Creasy Lane and head south along the east side of Creasy Lane. At the drainage ditch, the trail will head east along the north side of the ditch until it crosses Fairington Avenue. At this point the trail will head south along Fairington Avenue until it connects to the existing trail along Kettle Circle. Route Z will end at the connection into the existing trail.

ROUTE AA

The proposed Route AA trail will be approximately 1.25 miles, plus 4.25 miles of sharrow. This route connects to three trails, one bike lane, two sharrows, and several residential communities. Route AA begins with a ten-foot wide trail at the intersection of Sycamore Street, Bedford Street and Route A West. The trail jogs through the neighborhood to reach the existing trail and pedestrian bridge along Queen Street. The trail will head south along the west side of Bedford, cross the road and railroad tracks to the north side of the unknown road. Once the trail reaches Warehouse Street it will cross to the east side of the road and head south until Wabash Avenue. Once crossing Wabash Avenue the trail will travel southeast along the north side of Elm Street, cross over Queen Street and travel north along the east side of the road, connecting into the existing trail. Once the existing trail ends, after crossing over the railroads with the existing pedestrian bridge, a small portion of new sidewalk will be included before transitioning to east and westbound sharrows, which will begin along Smith Street, which turns into Kossuth Street. The route will continue east, connecting to Miller Elementary, Route J bike lanes, Route C

Sharrows, Route B Bike Lanes, and then connect into the planned trail along Earl Avenue. Once crossing Earl Avenue, Route AA will begin a ten-foot wide trail on the south side of Kossuth Street, until Farabee Court where the route will head south as sharrows for a short distance. Once the route ends at the cul-de-sac, Route AA will continue south as a trail, crossing over the railroad and following along the southeast side of the railroad until reaching the drainage ditch, where the trail will head east, and include wood rail, along the south side of the drainage ditch. Route AA will direct itself southward, continuing with wood rail, to connect into the northwest corner of CAT Park and Route BB. A minimal amount of fence removal will be needed in the area along the drainage ditch and connection into CAT Park. Route AA will end at the connection into CAT Park and Route BB.

ROUTE BB

The proposed Route BB is a ten-foot wide trail and will be approximately 2 miles. This route connects to six trails, the Tippecanoe County Mall, Ivy Tech, and several residential communities. Route BB begins at the northwest corner of Creasy Lane and Sagamore Parkway, connecting into Route A South, Phase One. This route follows northwest along the north side of Sagamore Parkway, crosses over the ditch with a small pedestrian bridge, connects into the existing trail, and continues to Maple Point Drive where the trail will then direct itself north, along the east side of the road. There will be sidewalk removal in this commercial area as the trail will go directly where the existing sidewalk is. The trail will follow along the road until SR 38 where it will cross over and connect into the planned trail. The planned trail follows west along the north side of SR 38 until Kingsway Drive. At Kingsway Drive, Route BB will pick back up and follow along the east side of the road, heading north until the road turns. A reduction in the road width will be necessary in this area as there are several mature trees that would be desirable to remain. There will be curb removal, asphalt excavation, asphalt patch, new curb and restriping of the roadway in this area of road reduction to include the trail. The road is currently 30 feet wide, and will be reduced by approximately 4 feet, leaving 26 feet for the roadway. Once the road turns right, the trail will cross over Liberty Avenue, connect into Route S, and follow along the sewer easement. There will be some coordination with the owner of this property as it is all fenced off. The trail will include a pedestrian bridge over the sewer easement and then follow along the east side of the easement until McCarty Lane where the gate will need to be removed and a Level 2 midblock crossing will occur. From this point the trail will intersect with Route B Middle, Phase One and travel east on this route for approximately 70 lineal feet before heading north along the west side of CAT Park, just east of the fence line. The trail will follow along the western edge of CAT Park until reaching the northern edge. Once reaching the north edge, approximately 1,300 lineal feet from McCarty Lane, the trail will connect into Route AA and then head east on the edge of the property until it reaches the eastern edge of CAT Park and intersects with Route D. This will be the end of Route BB.

ROUTE CC

The proposed Route CC trail will be approximately 0.25 miles. This route connects to two trails, light commercial and multi-family housing. This short segment is the connector between Route A North, Phase One and the Existing North 9th Street Trail. This route will replace existing sidewalk and there will be some relocations of light poles and fire hydrants. The route begins at Route A North at the northwest corner of North 9th Street and Greenbush Road/Canal Road. The trail follows along the west side of North 9th Street and heads north to the existing trail. Once intersecting with the existing trail, Route CC ends.

ROUTE DD

The proposed Route DD is a ten-foot wide trail and will be approximately 1 mile. This route connects to three trails, a golf course, and has the potential to connect to the county on the north side of Lafayette. Route DD begins with a major trailhead in the open land at North 9th Street and Sagamore Parkway and has a connection into the existing trail. From here, Route DD will follow west along the south side of Sagamore Parkway, leaving sufficient space between the trail and the road for the safety of vehicles and trail users. The trail will cross Duncan Road and continue west, having wood railing on the south side of the trail to protect the trail user from steep slopes, and be parallel to the line of trees, limiting the amount of clearing in this area. About 2/3 of a mile west of North 9th Street the trail will direct itself through the wooded area, adding clearing of trees and possible mitigation to the route. Once the trail starts heading south and clearing trees, retaining wall and wood railing will be needed to properly catch grade at the bottom of the steep slope where the trail connects into the existing Wabash Heritage Trail. The trail will end at the existing trail with an interpretive area of the Wabash River.

ROUTE EE

The proposed Route EE trail will be approximately 0.5 miles. This route connects to two trails and travels over the existing railroads between N. 9th Street and 13th Street. The trail begins at approximately 13th Street and Route A North, Phase Two and parallels Route A North with wall and rail on both sides of Route EE. The trail will head north and have a steep enough slope to get above the railroads to the west of the trail. Just before Underwood Street, the trail will turn west, where the pedestrian bridge will span over several railroad tracks (14-16 tracks) and then use the wooded lot to get back down to the existing grade on the other side of the tracks. The trail will require clearing in the wooded area before it reaches North 9th Street where a Level 3 Crossing occurs to tie into the existing trail. Once connected to the existing trail, Route EE ends.

ROUTE FF

The proposed Route FF will be approximately 2 miles of bike lanes. This route connects to West Lafayette, one sharrow route, and one trail. This route is proposed to be bike lanes along Union Street and Salem Street. The Union Street bike lane will begin at the city limits on Harrison Bridge (Salem Street), and continue east, passing the Route J sharrows and connect into Route C North. The Salem Street bike lane will begin at the connection to Route C North, head west towards West Lafayette, passing the Route J sharrows and ending at the city limits on Harrison Bridge (Salem Street). These routes will include re-striping the road to accommodate for the new bike lane striping.

ROUTE GG

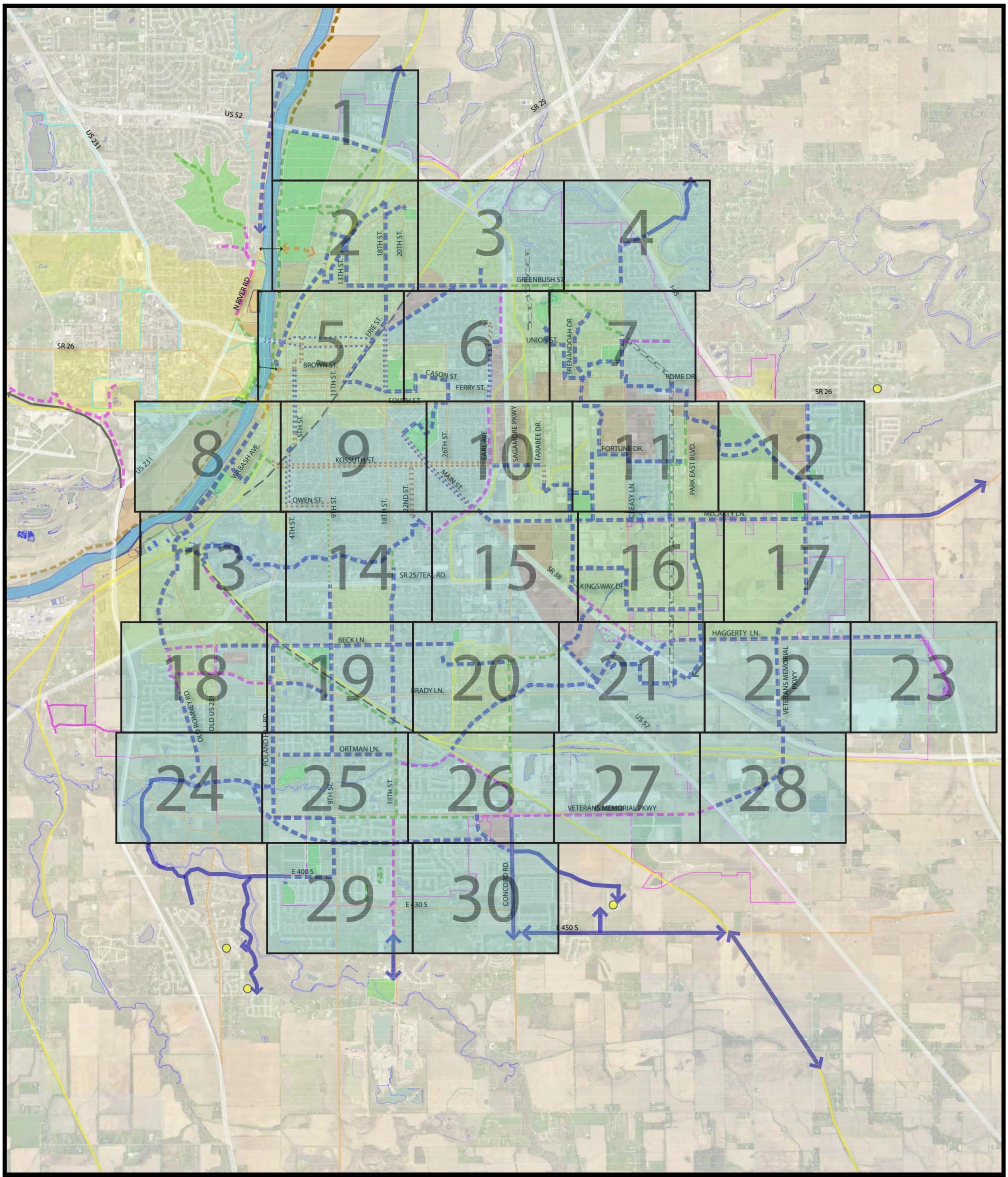
The proposed Route GG trail will be approximately 0.10 miles, with an additional 0.75 miles sharrow and 1.25 miles bike lanes. This route connects to three trails, two sharrows, one park, commercial, industrial and residential. Route GG begins at the northwest corner of Union Street and Sagamore Parkway, connecting into the planned trail along Sagamore Parkway and heads west to Earl Avenue. At this point a connection via sharrows, north along Hedgewood Drive and connecting into Hedgewood Park off of Beverly Lane, happens. At Union Street and Earl Avenue, Route GG transitions to north and southbound bike lanes along Earl Avenue. Where bike lanes are located, the road will need to be re-striped to accommodate these new lanes. The route continues south, connecting into the planned trail at Earl Avenue and South Street. The route continues as a planned trail until State Street and Earl Avenue. At State Street, planned bike lanes will connect the planned trail to Route C South, Phase Two, from Earl Avenue to approximately 22nd Street. This will be the end of Route GG.

OTHER DISCUSSION ON THESE ROUTES

Further communication with the county should be made in connecting to the county and beyond on a regional level. Coordination between plans needs to be made in order to continue a cohesive plan and to connect at the most needed points.

On a case by case basis, depending on the level of desire for a particular trail, more crossings may be needed to allow for safe crossings for trail users, especially in areas where children will be accessing the trail. Trail safety is a must, and therefore each trail should be looked at in further detail when it comes time to design and construct.

The following maps illustrate the proposed routes for the Lafayette Trails Master Plan.



LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- EXISTING TRAIL
- EXISTING TRAIL - NOT PAVED
- PLANNED TRAIL
- PROPOSED CITY TRAIL
- PROPOSED TRAIL BY OTHERS
- POTENTIAL PRIVATE TRAIL
- WABASH RIVER ENHANCEMENT TRAIL
- EXISTING BIKE LANE
- PROPOSED BIKE LANE
- PLANNED BIKE LANE
- SHARROW
- SIDEWALK (RECENTLY PAVED)
- FUTURE ROAD
- PROPOSED PEDESTRIAN BRIDGE STRUCTURE
- PARK
- COMMERCIAL
- PROPOSED WABASH RIVER ENHANCEMENT PARK USE
- LOW AND MODERATE INCOME AREAS
- SCHOOLS
- UTILITY EASEMENT

WEST LAFAYETTE LEGEND

- EXISTING TRAIL
- EXISTING TRAIL - NOT PAVED
- PLANNED TRAIL
- PROPOSED TRAIL

- FINAL ZOOM AREAS

ABBREVIATIONS

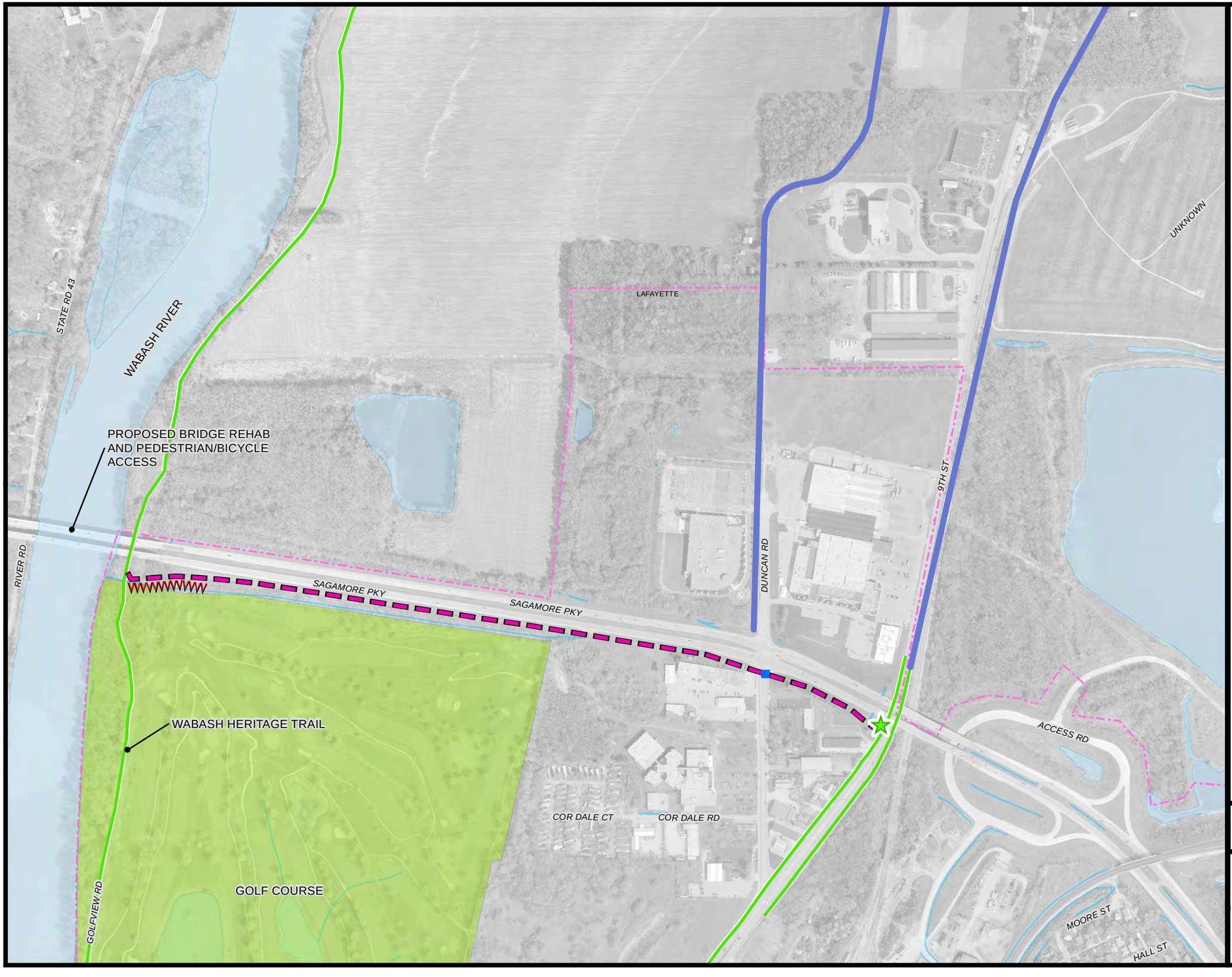
E.S. - ELEMENTARY SCHOOL
M.S. - MIDDLE SCHOOL
H.S. - HIGH SCHOOL
PED. - PEDESTRIAN

Lafayette Trail Master Plan

Overall Scope
Final Concept

0 750 1500 3000 FEET

Butler Fairman & Seufert
CIVIL ENGINEERS



Legend

- AT GRADE CROSSING - LEVEL 1
- Trailhead

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE DD
- ANTICIPATED TRAIL BY COUNTY
- RETAINING WALL
- Schools

TYPE

- PARK/OPEN LAND
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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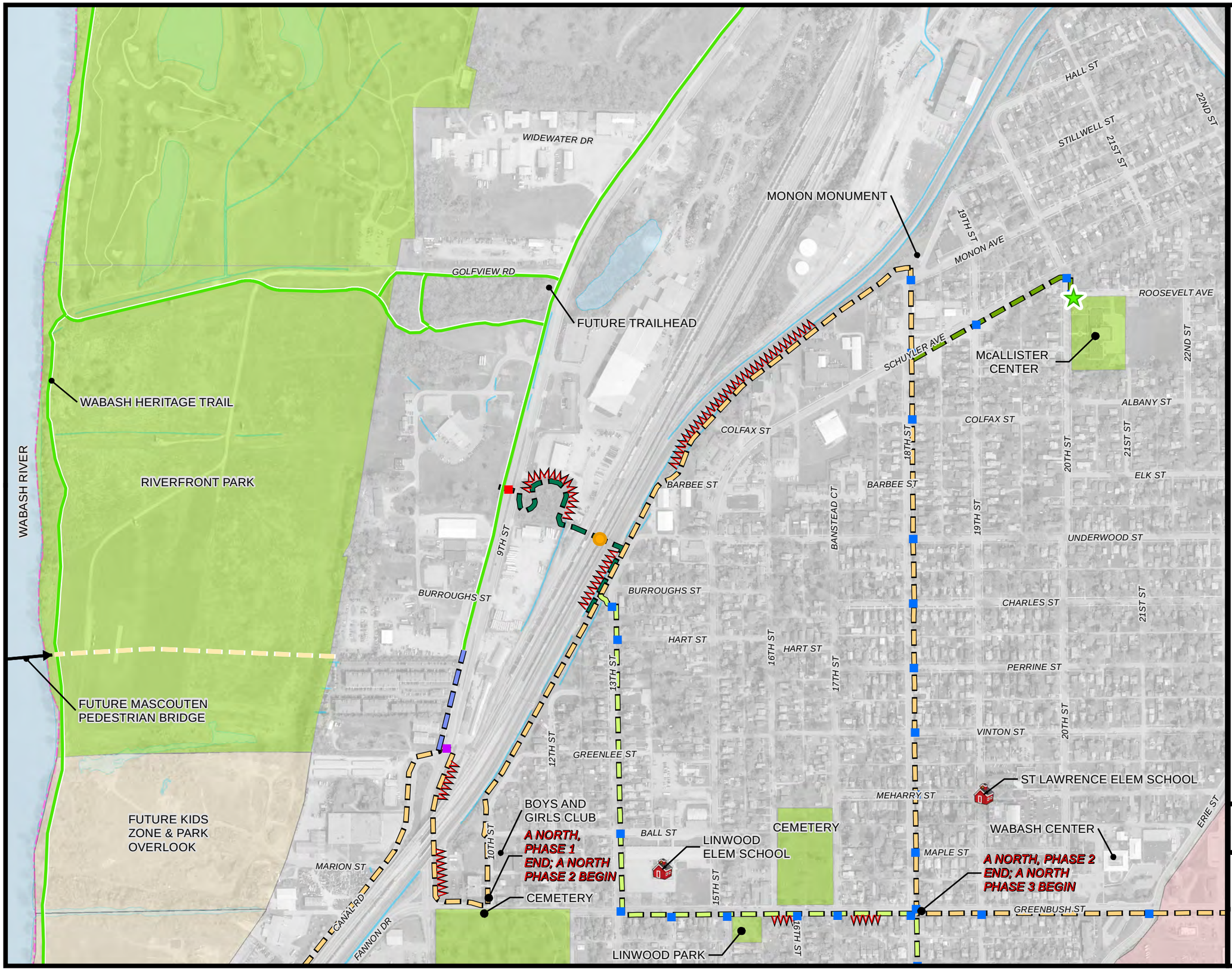

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- AT GRADE CROSSING - LEVEL 3
- PEDESTRIAN BRIDGE
- TRAILHEAD

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE A
- ROUTE CC
- ROUTE EE
- ROUTE H
- ROUTE L
- PROPOSED PEDESTRIAN BRIDGE
- RETAINING WALL
- WREC TRAIL
- Schools

TYPE

- WREC PARK
- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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BF&S Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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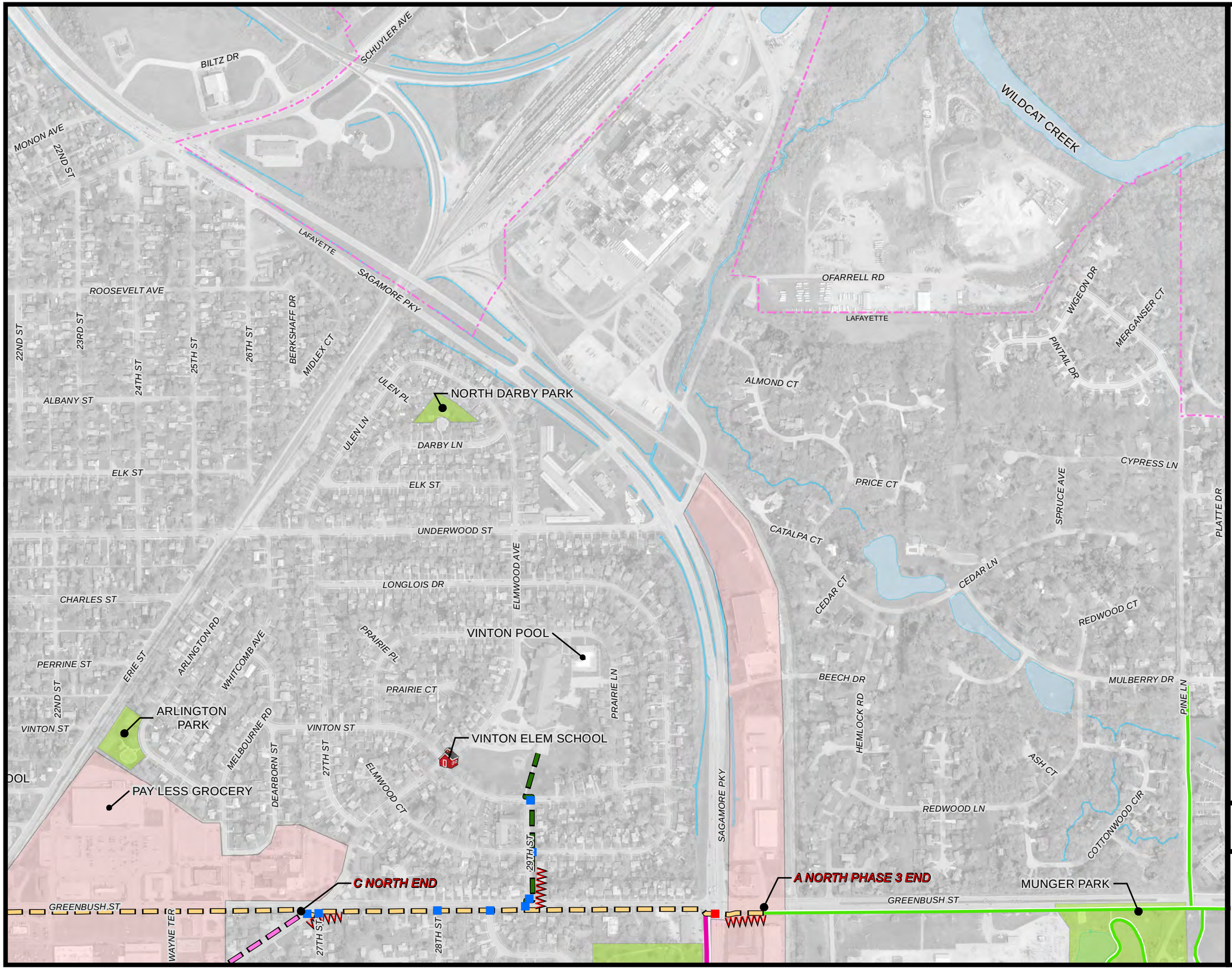
N W E S



Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 3

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE A
- ROUTE C
- ROUTE I
- TRAIL UNDER DEVELOPMENT
- RETAINING WALL
- Schools

TYPE

- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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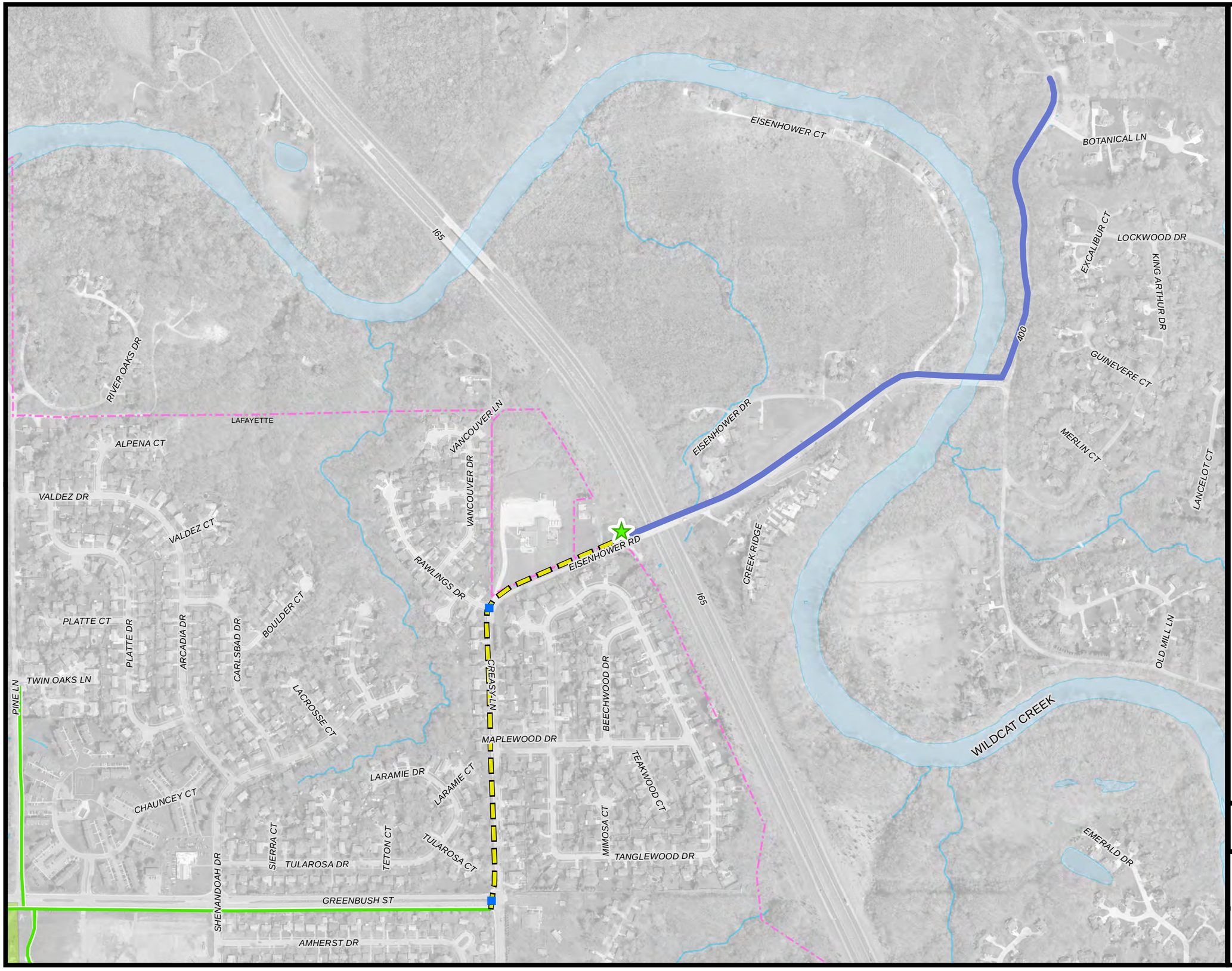
BF&S Butler Fairman Seufert Civil Engineers

0 125 250 500 Ft

CITY OF LAFAYETTE



Legend

- AT GRADE CROSSING - LEVEL 1
- Trailhead

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE T
- ANTICIPATED TRAIL BY COUNTY
- Schools

TYPE

- PARK/OPEN LAND
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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BF&S Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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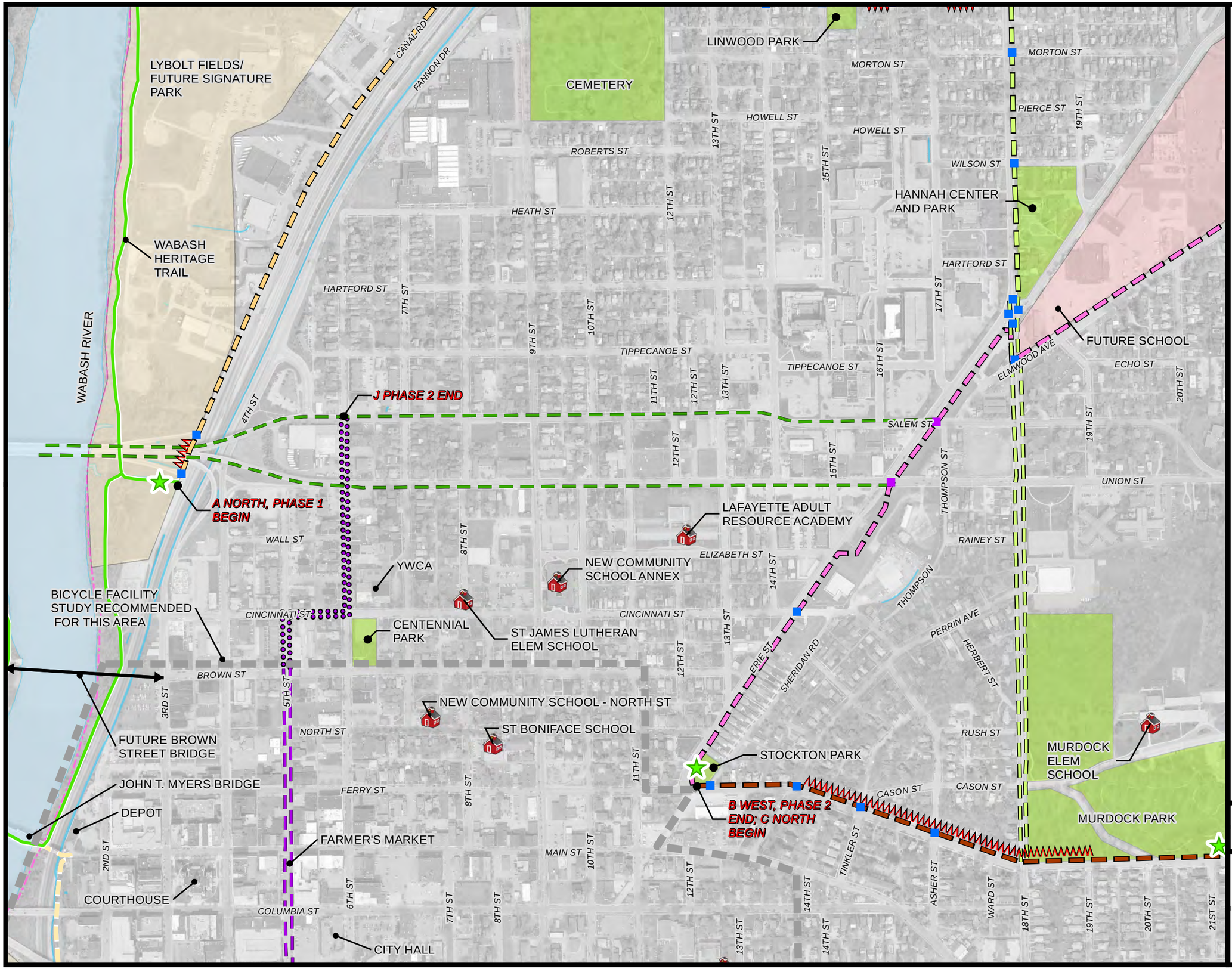

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- TRAILHEAD

TRAIL SYMBOLS

- DOWNTOWN STUDY AREA
- EXISTING TRAILS
- ROUTE A
- ROUTE B
- ROUTE C
- ROUTE FF - BIKE LANE-NW
- ROUTE H
- ROUTE H - BIKE LANE-NW
- ROUTE J - BIKE LANE-NW
- ROUTE J - SHARROWS
- PROPOSED PEDESTRIAN BRIDGE
- RETAINING WALL
- WREC TRAIL
- Schools

TYPE

- WREC PARK
- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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BF&S Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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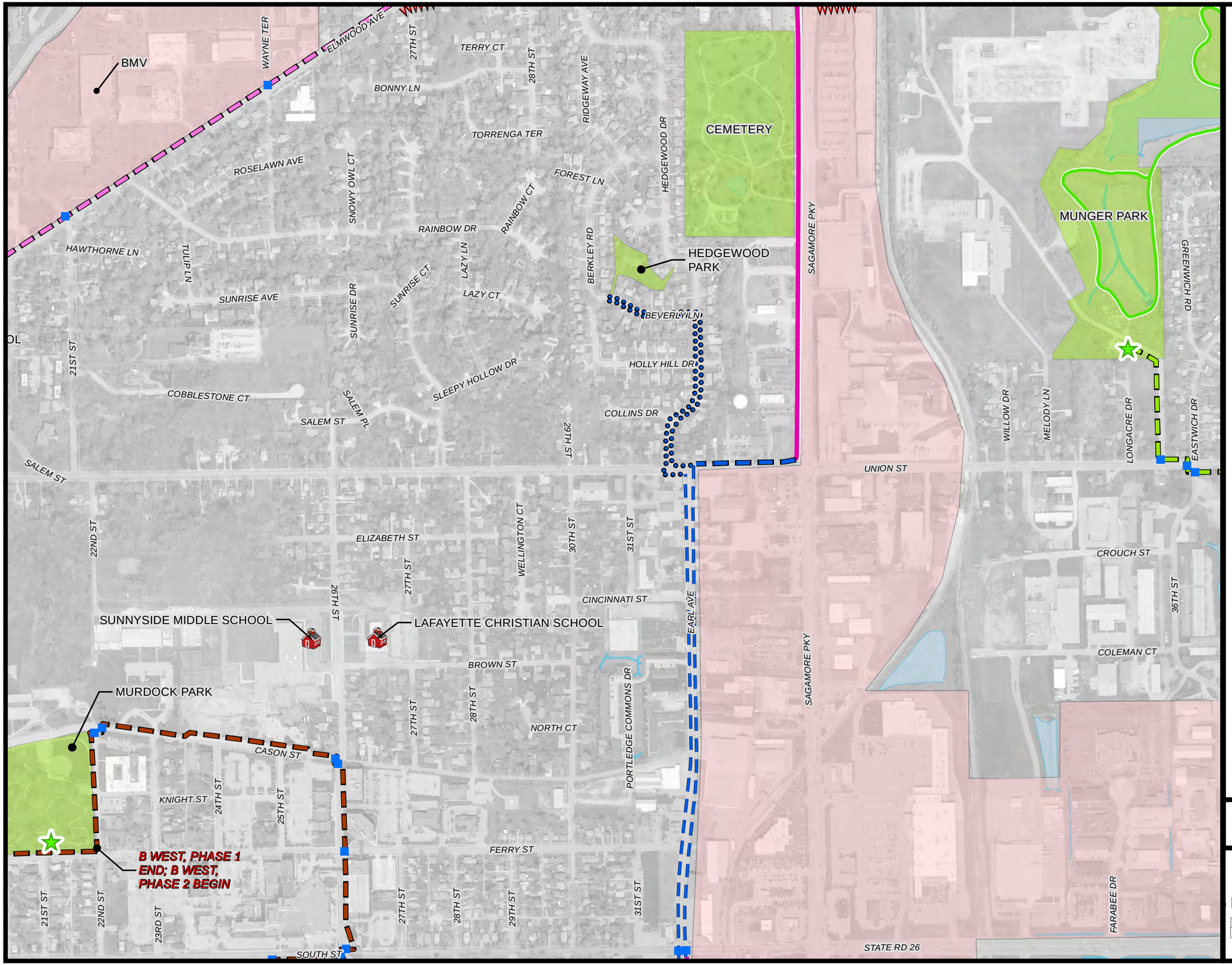

Legend

- AT GRADE CROSSING - LEVEL 1
- Trailhead

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE B
- ROUTE C
- ROUTE GG
- ROUTE GG - BIKE LANE-NW
- ROUTE GG - SHARROWS
- ROUTE W
- TRAIL UNDER DEVELOPMENT
- RETAINING WALL
- Schools

TYPE

- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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BF&S Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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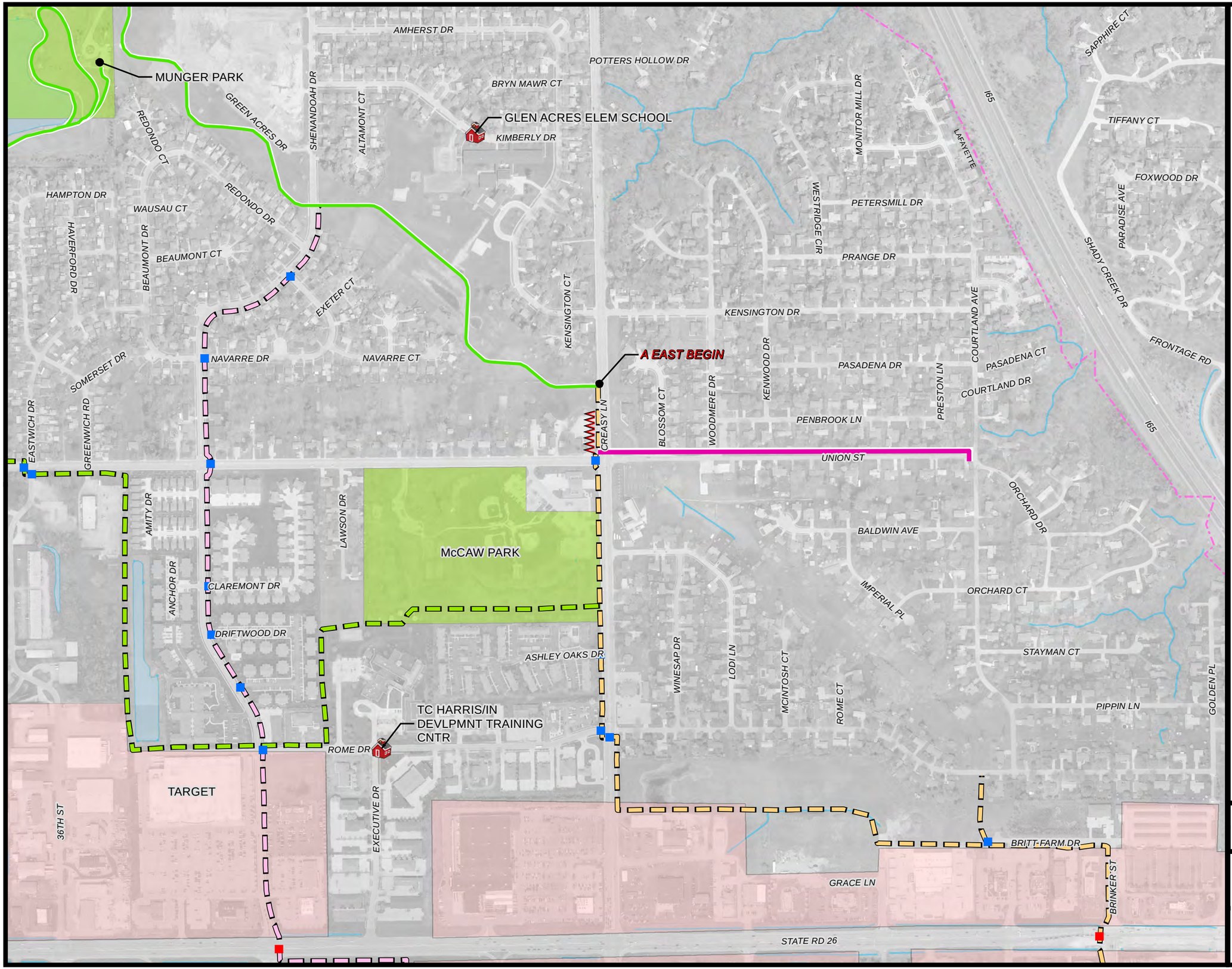

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 3

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE A
- ROUTE D
- ROUTE W
- TRAIL UNDER DEVELOPMENT
- RETAINING WALL
- Schools

TYPE

- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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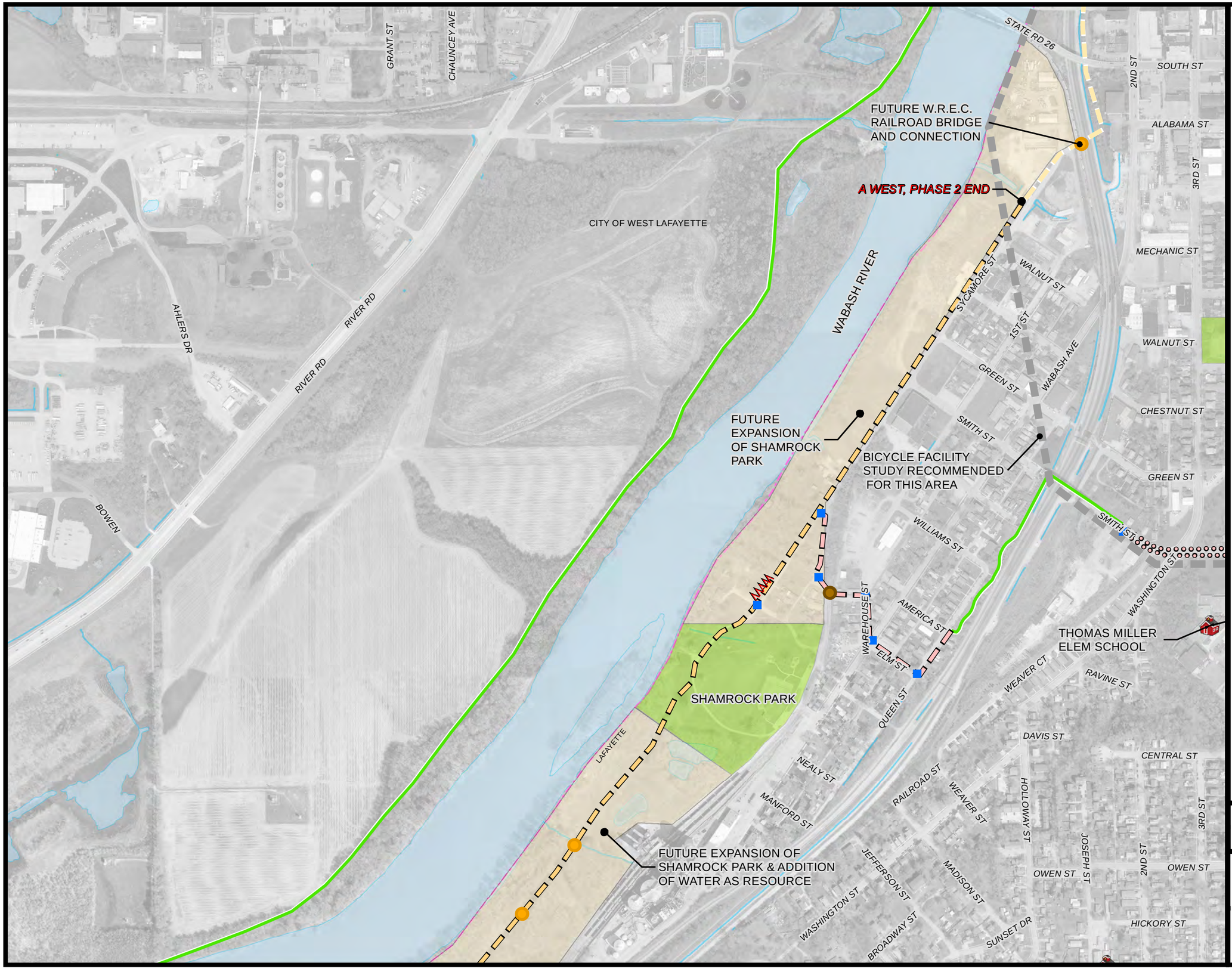
Lafayette Trails Master Plan



Legend

- 🟦 AT GRADE CROSSING - LEVEL 1
- ● AT GRADE RAILROAD CROSSING
- ● PEDESTRIAN BRIDGE

TRAIL SYMBOLS

- DOWNTOWN STUDY AREA
- EXISTING TRAILS
- ROUTE A
- ROUTE AA
- ○○○○ ROUTE AA - SHARROWS
- ΛΛΛΛ RETAINING WALL
- WREC TRAIL
- Schools

TYPE

- WREC PARK
- PARK/OPEN LAND
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

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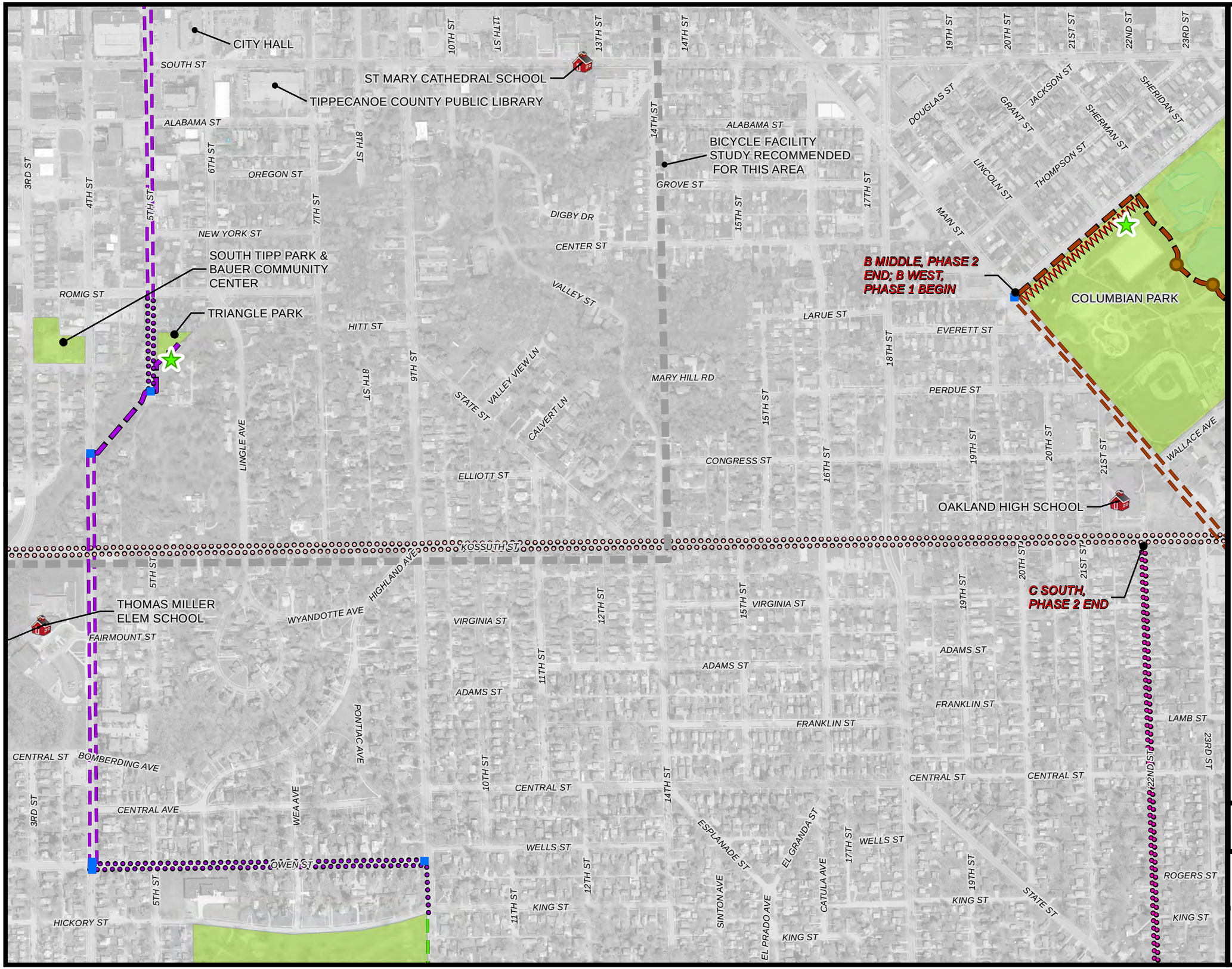

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE RAILROAD CROSSING
- TRAILHEAD

TRAIL SYMBOLS

- DOWNTOWN STUDY AREA
- EXISTING BIKE LANE
- ROUTE AA - SHARROWS
- ROUTE B
- ROUTE B - BIKE LANE-NW
- ROUTE C SHARROWS
- ROUTE J
- ROUTE J - BIKE LANE-NW
- ROUTE J - SHARROWS
- RETAINING WALL
- Schools

TYPE

- PARK/OPEN LAND
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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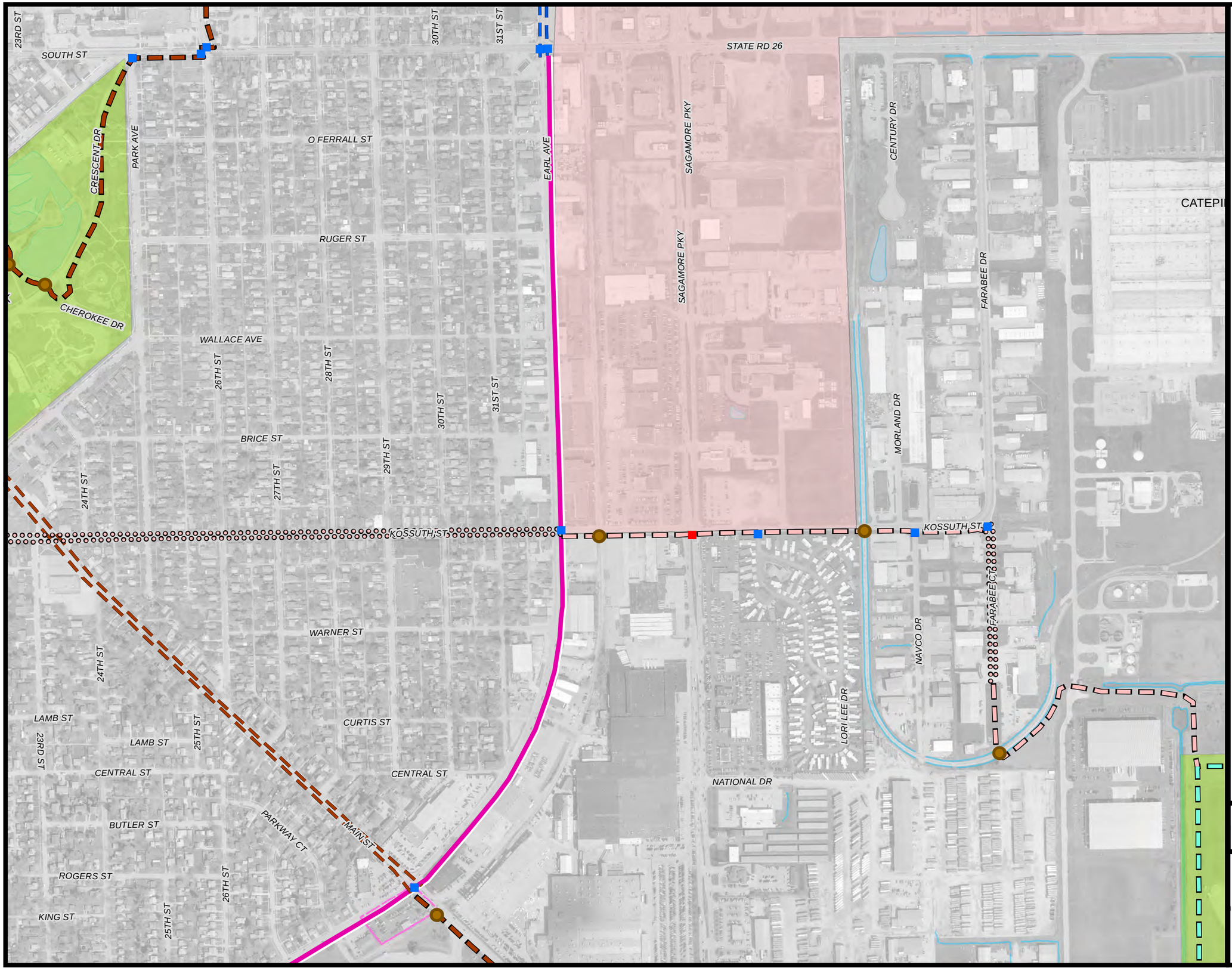

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 3
- AT GRADE RAILROAD CROSSING

TRAIL SYMBOLS

- ROUTE AA
- ROUTE AA - SHARROWS
- ROUTE B
- ROUTE B - BIKE LANE-NW
- ROUTE BB
- ROUTE GG - BIKE LANE-NW
- TRAIL UNDER DEVELOPMENT
- Schools

TYPE

- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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BF&S Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

0 125 250 500 Ft

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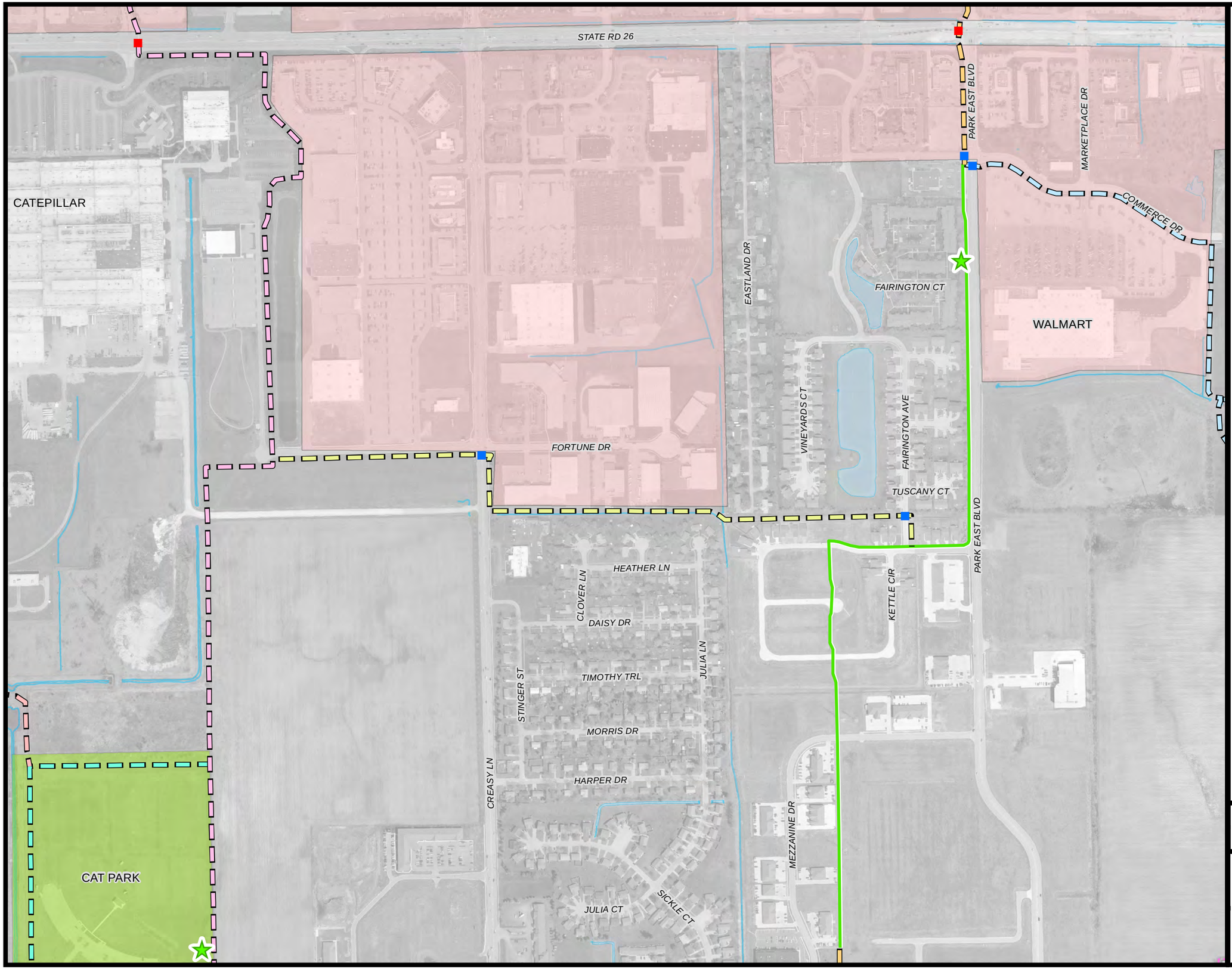

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 3
- TRAILHEAD

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE A
- ROUTE AA
- ROUTE BB
- ROUTE D
- ROUTE E
- ROUTE Z
- Schools

TYPE

- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman & Seufert Civil Engineers

CITY OF LAFAYETTE

0 125 250 500 Ft

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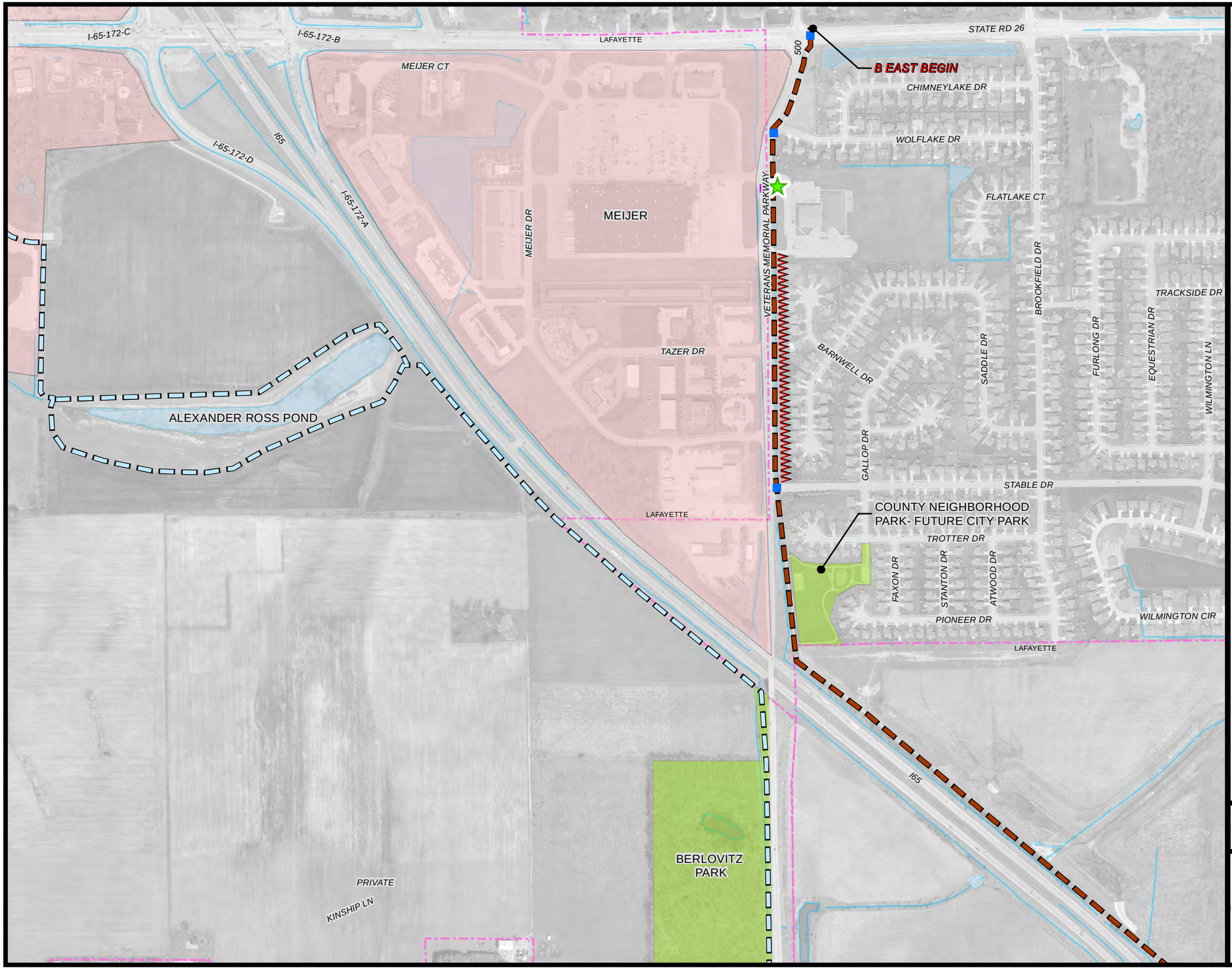

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- TRAILHEAD

TRAIL SYMBOLS

- ROUTE B
- ROUTE E
- RETAINING WALL
- Schools

TYPE

- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

0 125 250 500 Ft

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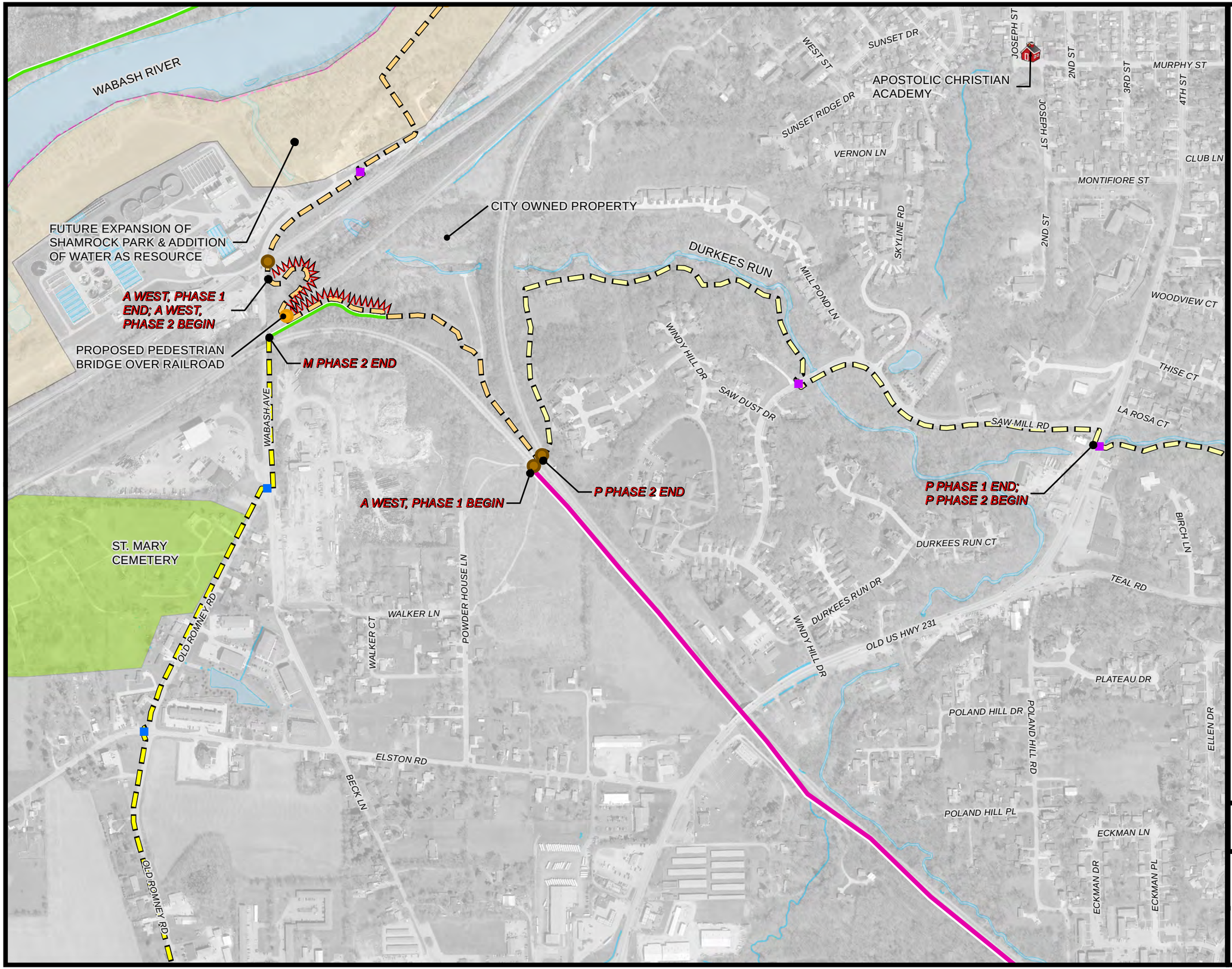

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- AT GRADE RAILROAD CROSSING
- PEDESTRIAN BRIDGE

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE A
- ROUTE M
- ROUTE P
- TRAIL UNDER DEVELOPMENT
- RETAINING WALL
- Schools

TYPE

- WREC PARK
- PARK/OPEN LAND
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

0 125 250 500 Ft

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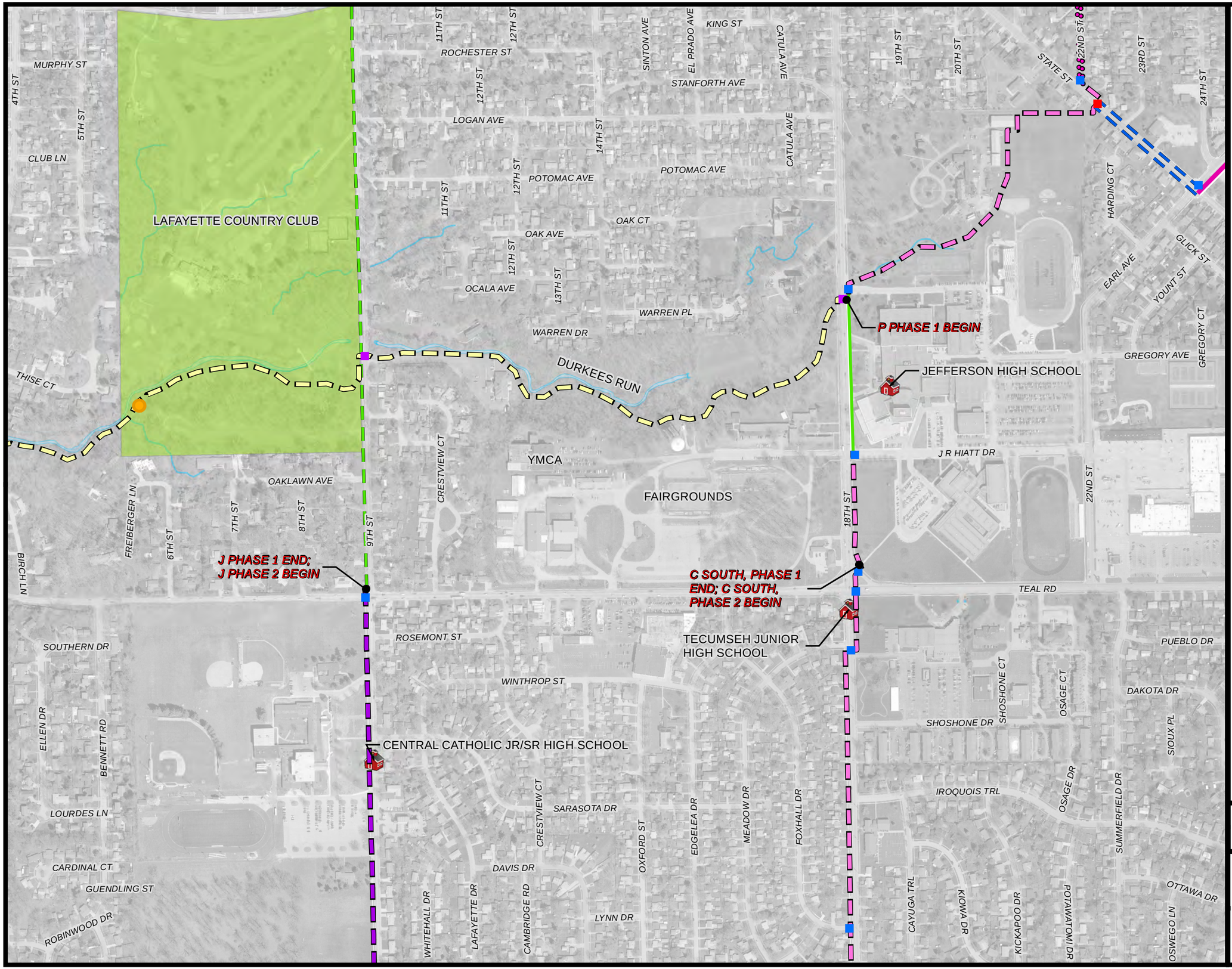

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- AT GRADE CROSSING - LEVEL 3
- PEDESTRIAN BRIDGE

TRAIL SYMBOLS

- EXISTING TRAILS
- EXISTING BIKE LANE
- ROUTE C
- ROUTE C SHARROWS
- ROUTE GG - BIKE LANE-PLANNED
- ROUTE J
- ROUTE P
- TRAIL UNDER DEVELOPMENT
- Schools

TYPE

- PARK/OPEN LAND
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert Civil Engineers

CITY OF LAFAYETTE

0 125 250 500 Ft

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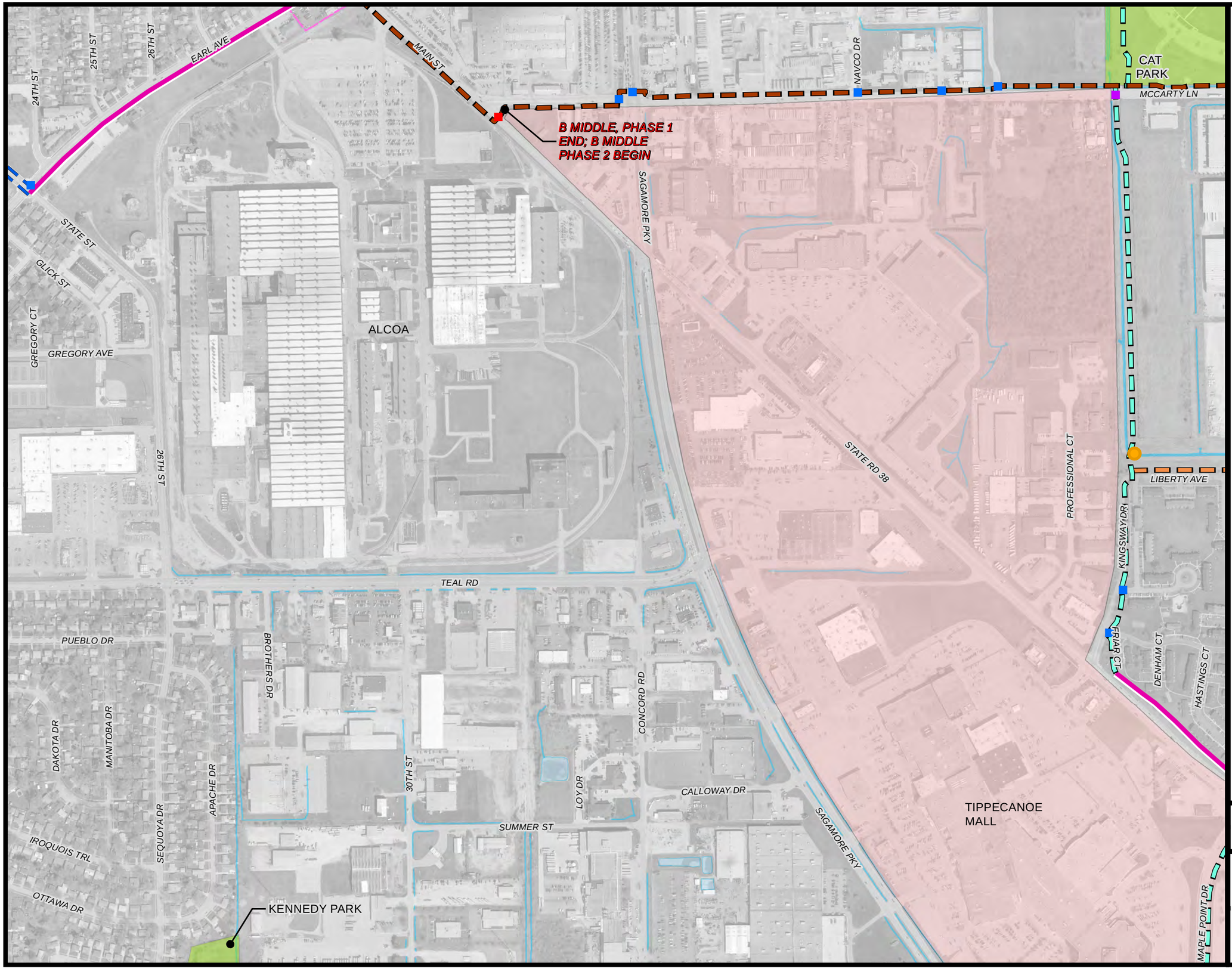

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- AT GRADE CROSSING - LEVEL 3
- PEDESTRIAN BRIDGE

TRAIL SYMBOLS

- ROUTE B
- ROUTE BB
- ROUTE GG - BIKE LANE-PLANNED
- ROUTE S
- TRAIL UNDER DEVELOPMENT
- Schools

TYPE

- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman & Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

0 125 250 500 Ft

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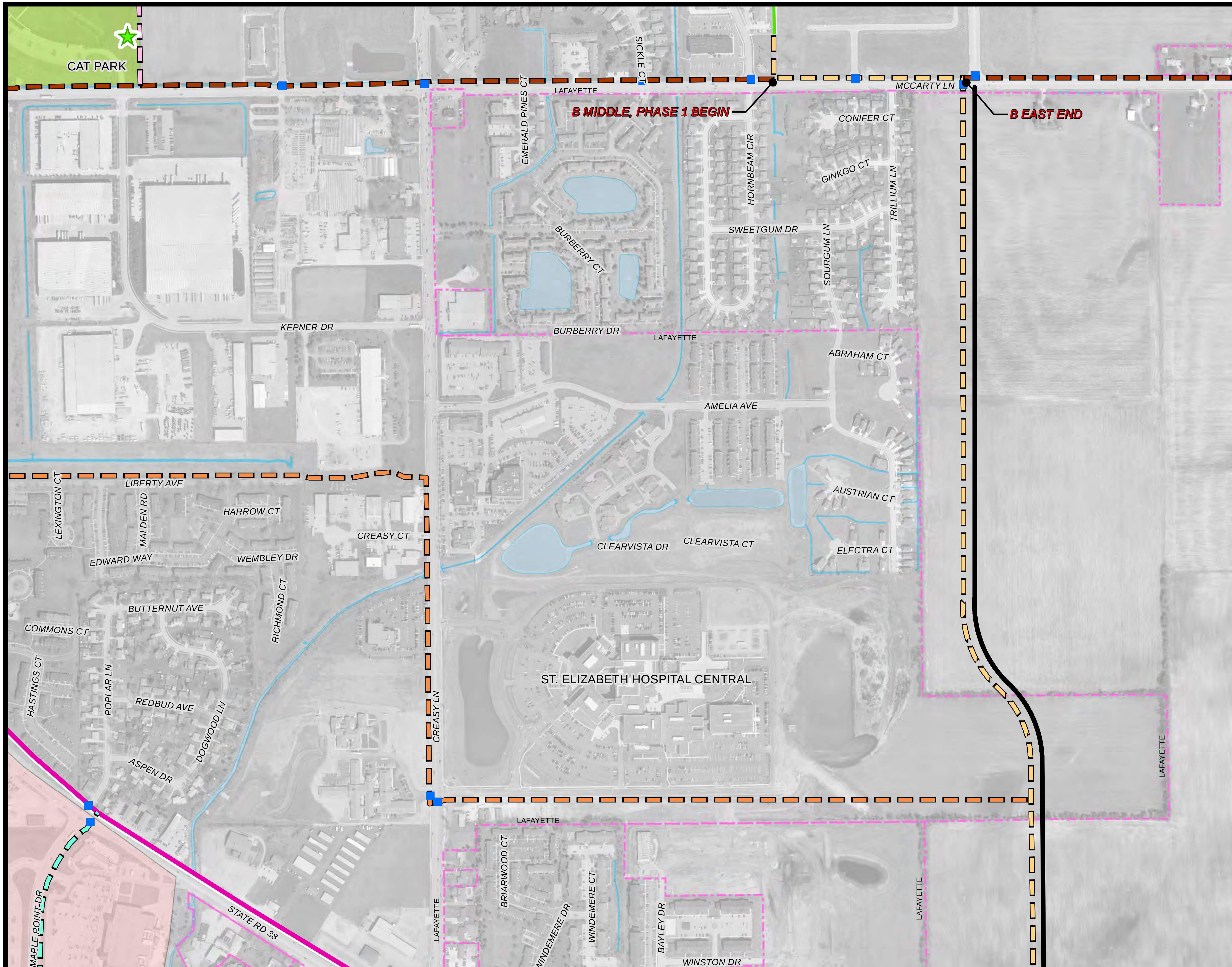

CAT PARK
LAFAYETTE
SICKLE CT
MCCARTY LN
B MIDDLE, PHASE 1 BEGIN
B EAST END
EMERALD PINES CT
CONIFER CT
HORNBEAM CIR
GINKGO CT
TRILLIUM LN
SWEETGUM DR
SOURGUM LN
BURBERRY CT
KEPNER DR
BURBERRY DR
LAFAYETTE
ABRAHAM CT
AMELIA AVE
LIBERTY AVE
LEXINGTON CT
MALDEN RD
HARROW CT
CREASY CT
AUSTRIAN CT
CLEARVISTA DR
CLEARVISTA CT
ELECTRA CT
EDWARD WAY
WEMBLEY DR
BUTTERNUT AVE
RICHMOND CT
COMMONS CT
HASTINGS CT
POPLAR LN
REDBUD AVE
DOGWOOD LN
ST. ELIZABETH HOSPITAL CENTRAL
CREASY LN
ASPEN DR
LAFAYETTE
LAFAYETTE
BRIARWOOD CT
WINDEMERE CT
WINDEMERE DR
BAYLEY DR
WINSTON DR
LAFAYETTE
STATE RD 38
MAPLE POINT DR
LAFAYETTE

Legend

- AT GRADE CROSSING - LEVEL 1
- Trailhead

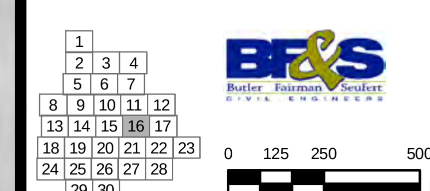
TRAIL SYMBOLS

- EXISTING TRAILS
- FUTURE ROAD
- ROUTE A
- ROUTE B
- ROUTE BB
- ROUTE D
- ROUTE S
- TRAIL UNDER DEVELOPMENT
- Schools

TYPE

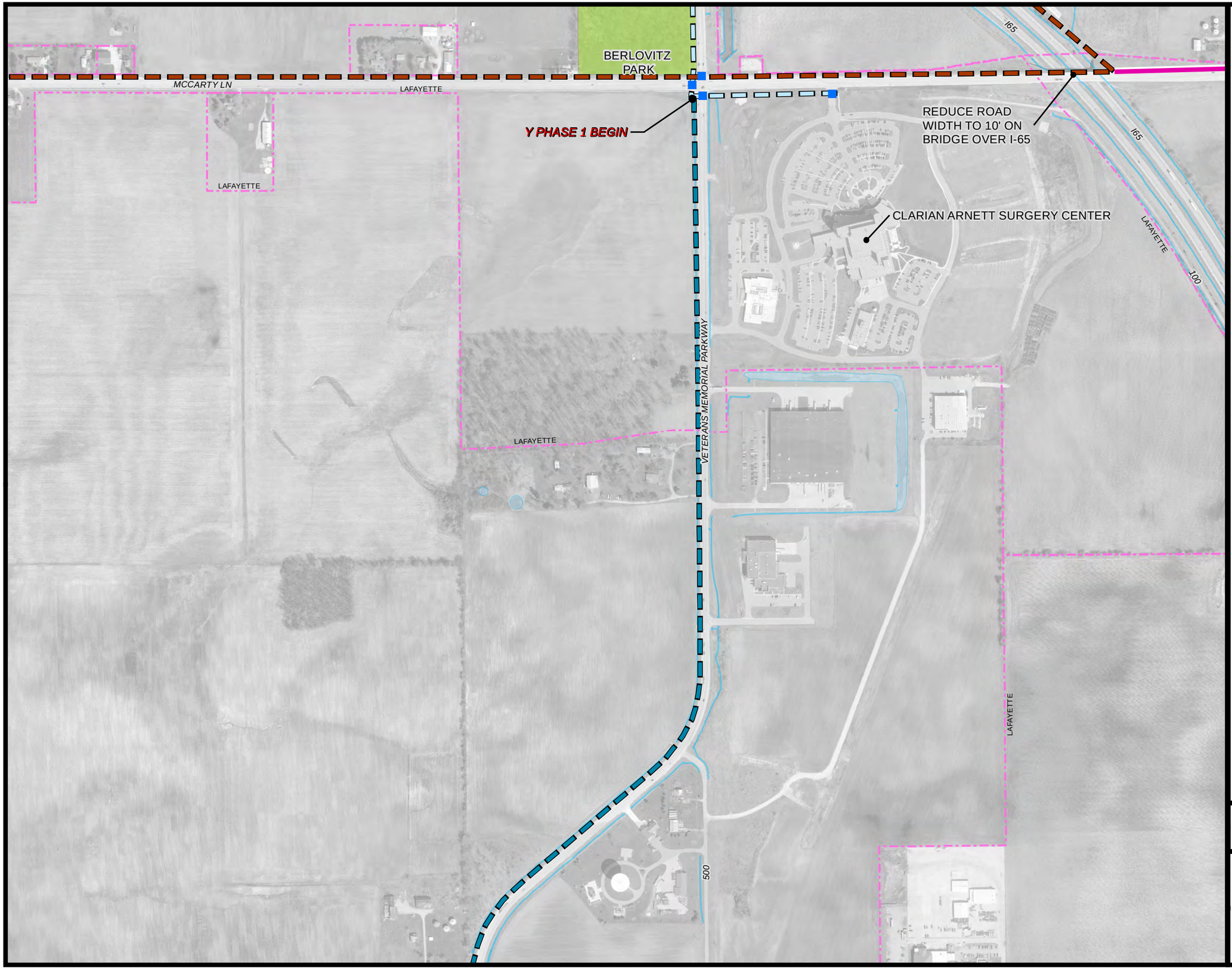
- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan



BF&S Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE



Legend

- AT GRADE CROSSING - LEVEL 1

TRAIL SYMBOLS

- ROUTE B
- ROUTE E
- ROUTE Y
- TRAIL UNDER DEVELOPMENT
- Schools

TYPE

- PARK/OPEN LAND
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

0 125 250 500 Ft

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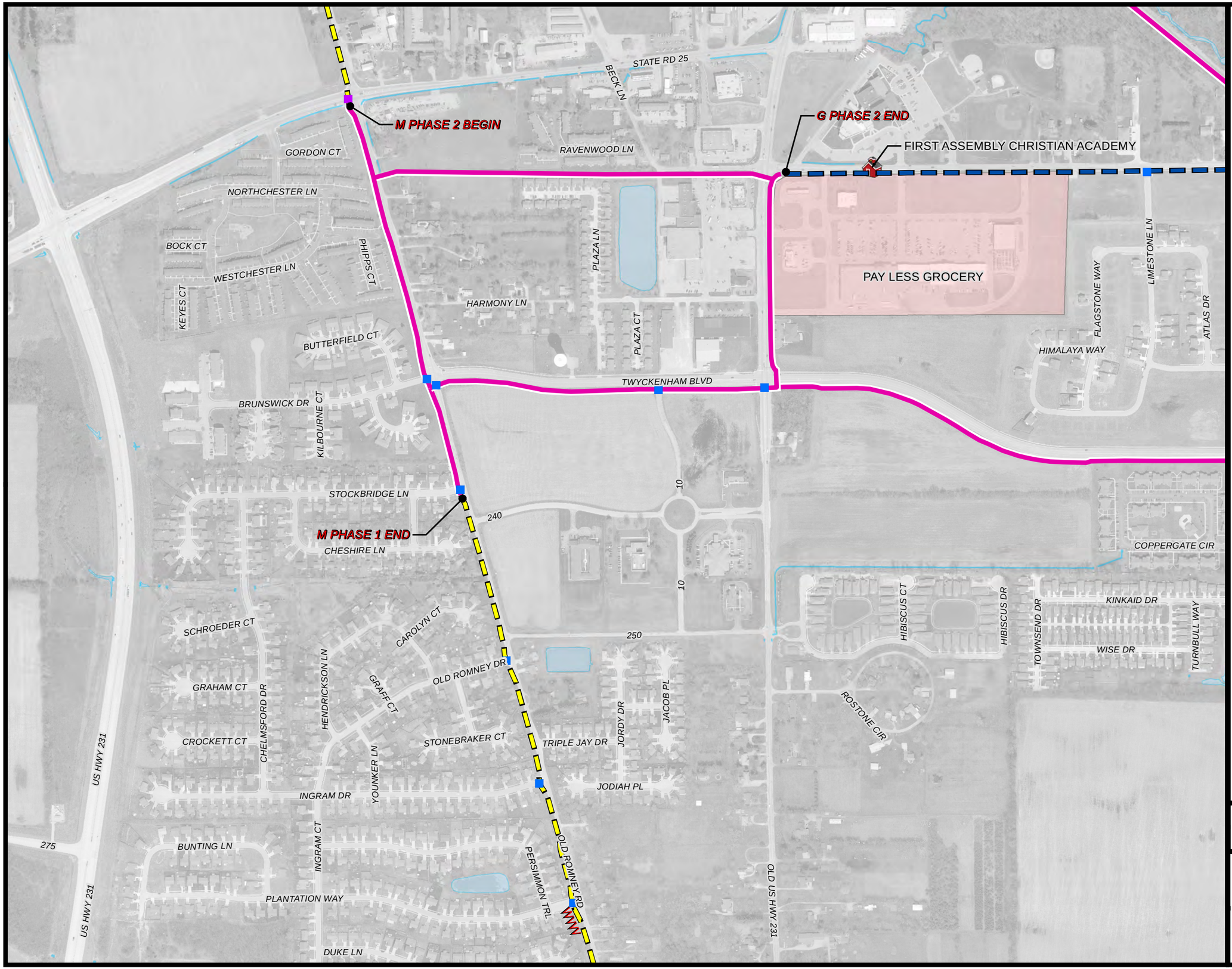

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2

TRAIL SYMBOLS

- ROUTE G
- ROUTE M
- TRAIL UNDER DEVELOPMENT
- RETAINING WALL
- Schools

TYPE

- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

0 125 250 500 Ft

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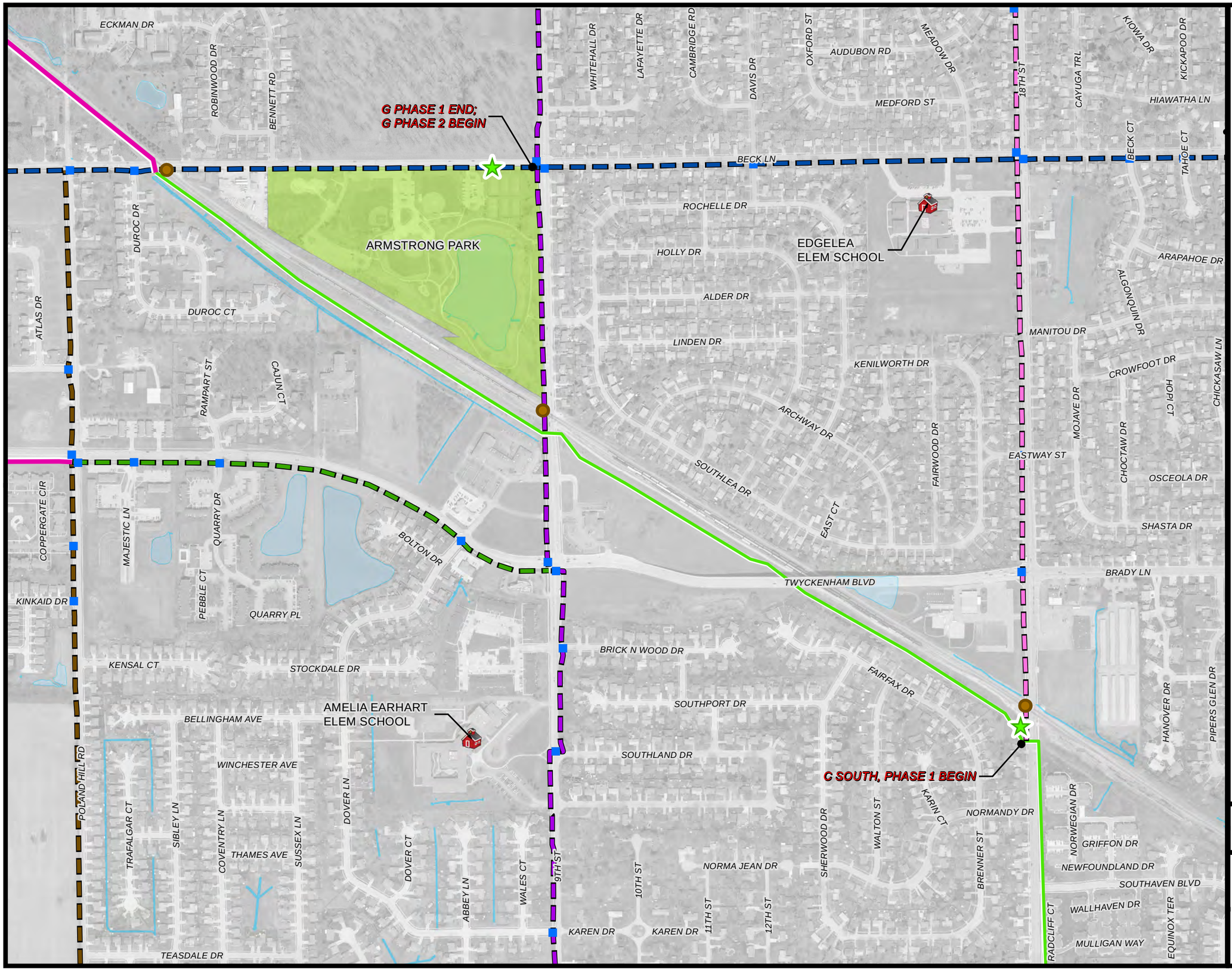

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE RAILROAD CROSSING
- TRAILHEAD

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE C
- ROUTE G
- ROUTE J
- ROUTE O
- ROUTE U
- TRAIL UNDER DEVELOPMENT
- Schools

TYPE

- PARK/OPEN LAND
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

0 125 250 500 Ft

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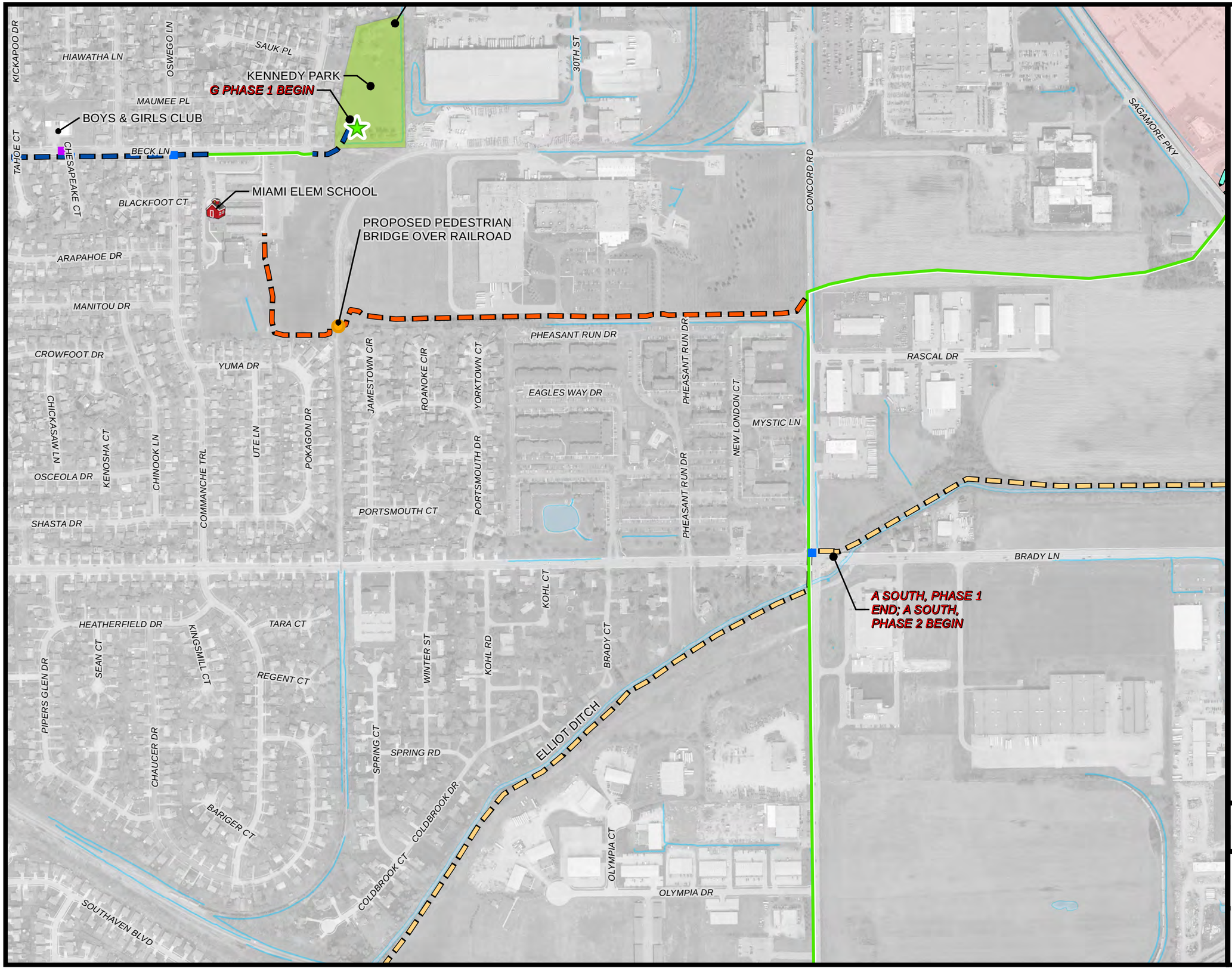

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- PEDESTRIAN BRIDGE
- TRAILHEAD

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE A
- ROUTE BB
- ROUTE F
- ROUTE G
- Schools

TYPE

- PARK/OPEN LAND
- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman & Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

0 125 250 500 Ft

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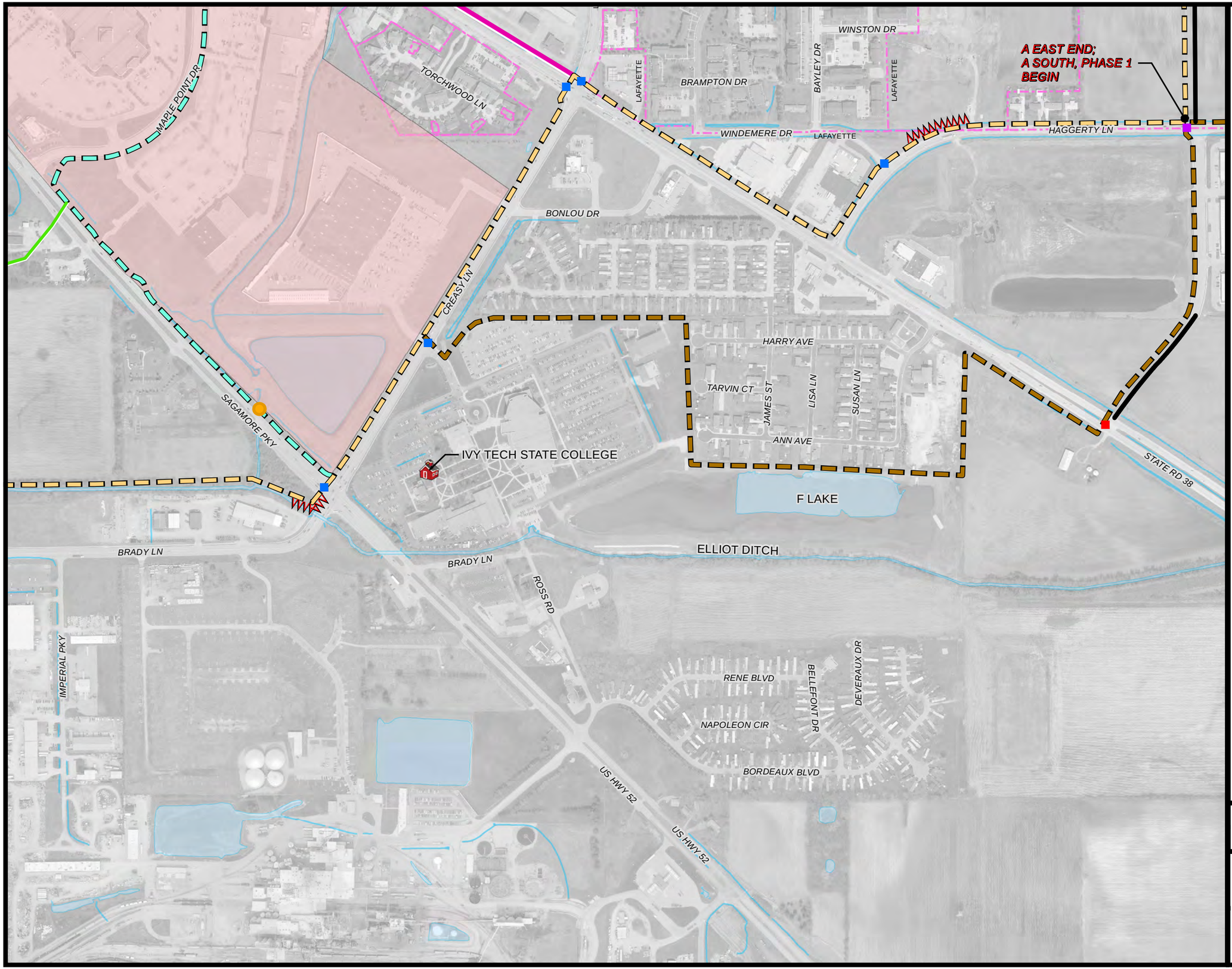

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- AT GRADE CROSSING - LEVEL 3
- PEDESTRIAN BRIDGE

TRAIL SYMBOLS

- EXISTING TRAILS
- FUTURE ROAD
- ROUTE A
- ROUTE BB
- ROUTE R
- TRAIL UNDER DEVELOPMENT
- RETAINING WALL
- Schools

TYPE

- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman & Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

0 125 250 500 Ft

N W E S

LAFAYETTE

HAGGERTY LN

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VETERANS MEMORIAL PARKWAY

FASTLINE DR

STATE RD 38

STATE RD 38

Y PHASE 1 END;
Y PHASE 2 BEGIN

PROPOSED CON/SPAN
STRUCTURE BELOW SR 38

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2

TRAIL SYMBOLS

- FUTURE ROAD
- ROUTE A
- ROUTE R
- ROUTE Y
- Schools

TYPE

- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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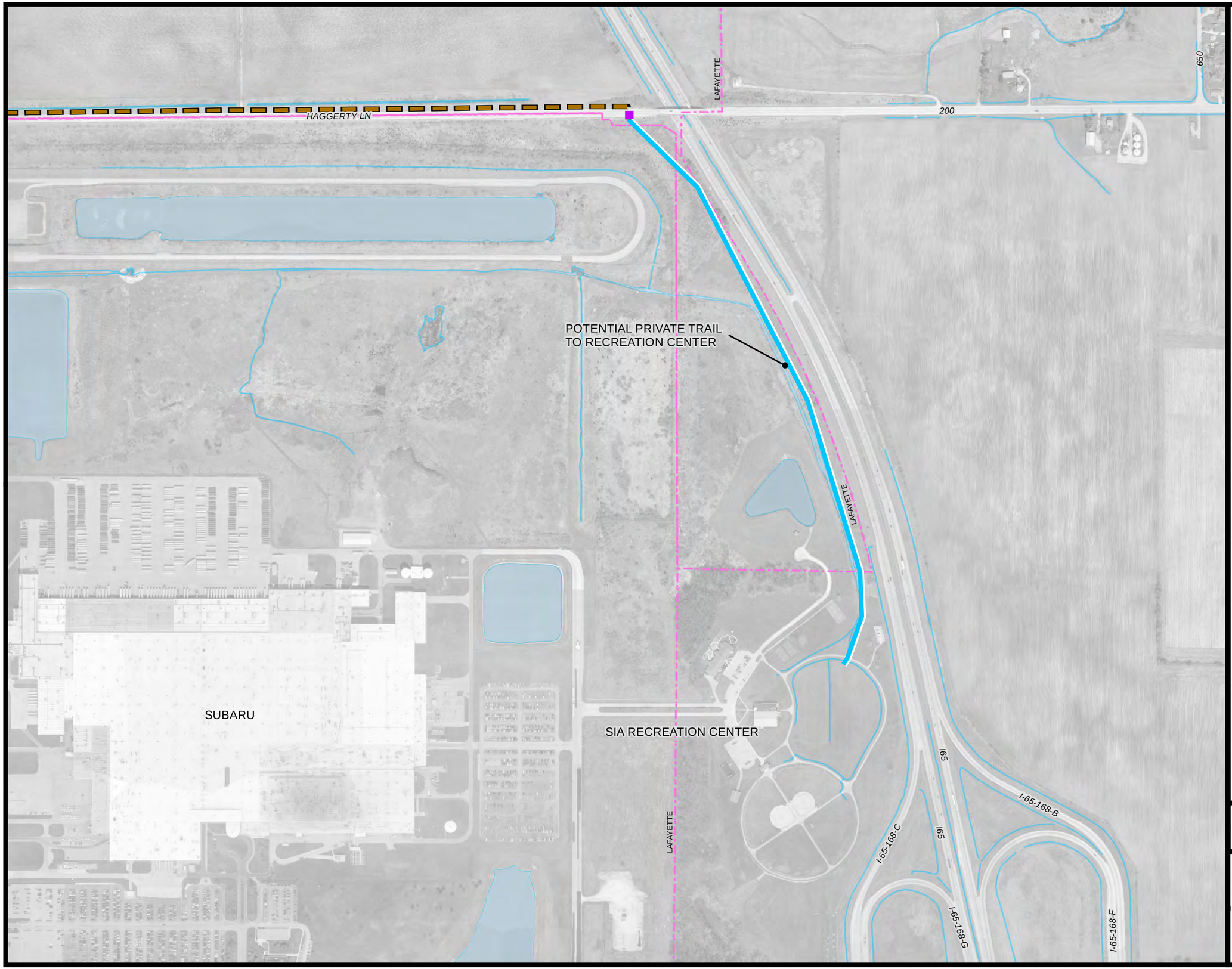

Legend

- AT GRADE CROSSING - LEVEL 2

TRAIL SYMBOLS

- ROUTE R
- POTENTIAL PRIVATE TRAIL
- Schools

TYPE

- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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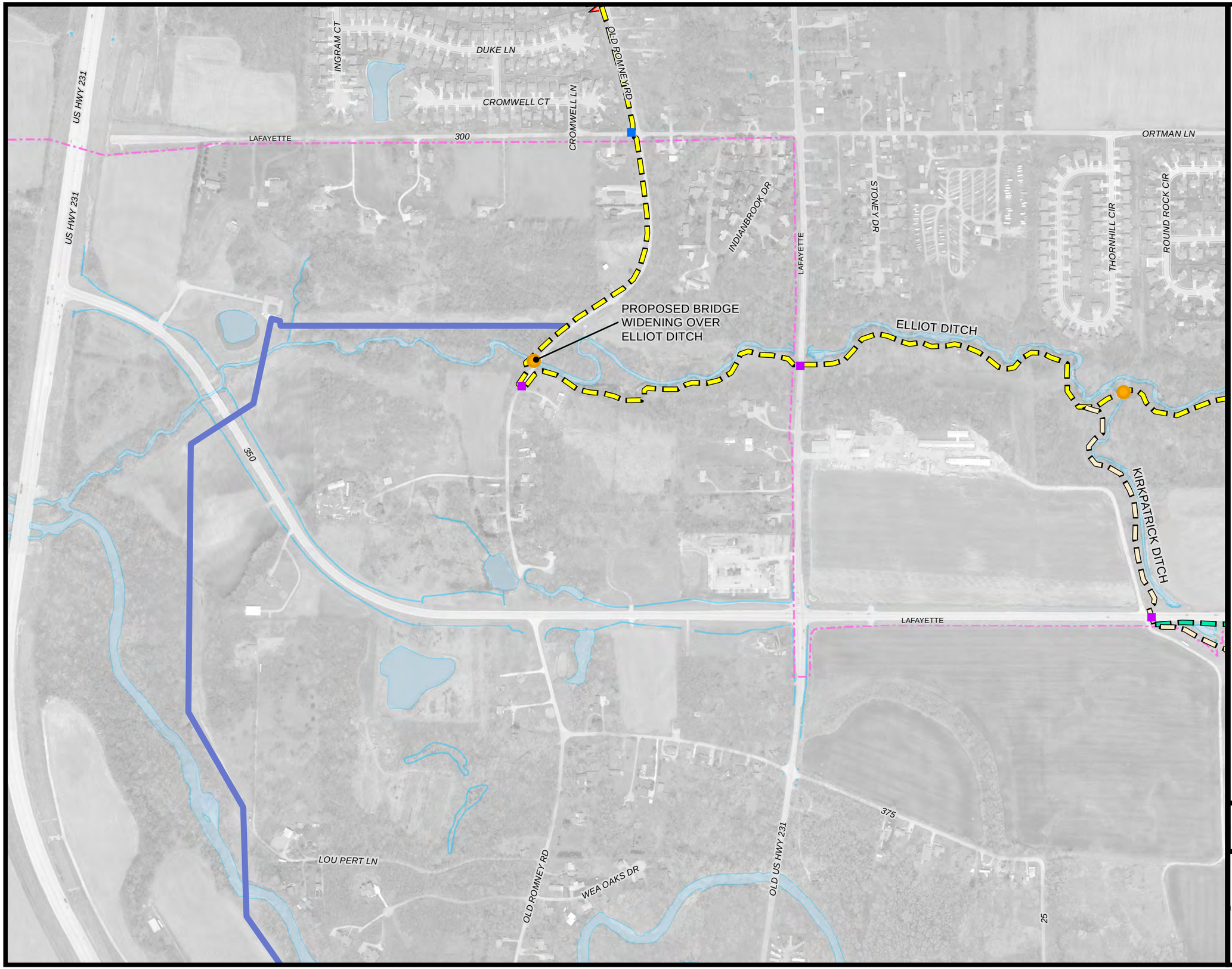

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- PEDESTRIAN BRIDGE

TRAIL SYMBOLS

- ROUTE M
- ROUTE N
- ROUTE V
- ANTICIPATED TRAIL BY COUNTY
- RETAINING WALL
- Schools

TYPE

- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert Civil Engineers

CITY OF LAFAYETTE

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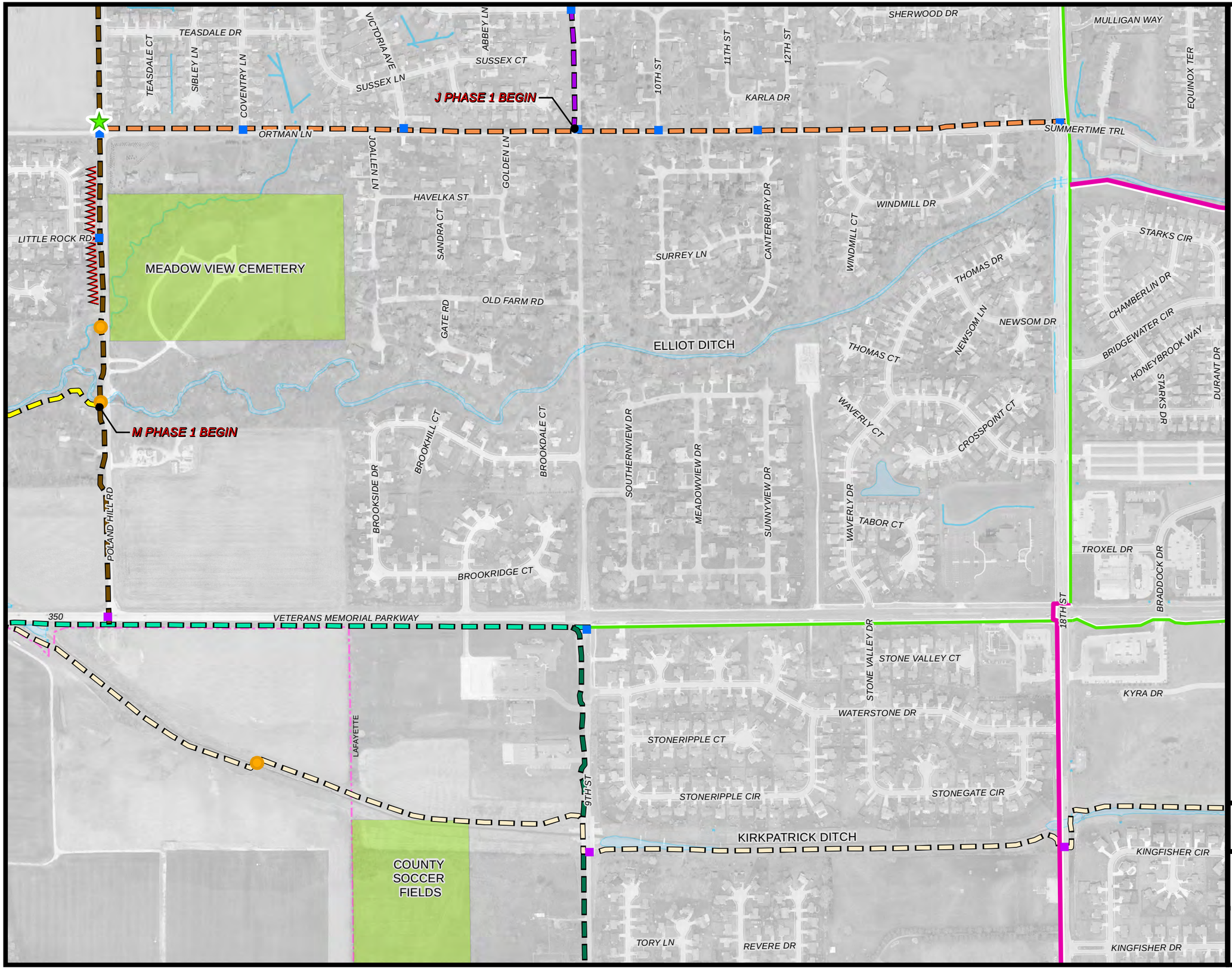

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- PEDESTRIAN BRIDGE
- TRAILHEAD

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE J
- ROUTE M
- ROUTE N
- ROUTE O
- ROUTE Q
- ROUTE V
- ROUTE X
- TRAIL UNDER DEVELOPMENT
- RETAINING WALL
- Schools

TYPE

- PARK/OPEN LAND
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

N W E S

PROPOSED CON/SPAN
STRUCTURE BELOW RAILROAD

A SOUTH,
PHASE 2 END

FUTURE PARK
AND TRAILHEAD
(BRITTNEY CHASE)

WALMART

SOUTHAVEN BLVD
DREXEL DR
EQUINOX TER
PLYMOUTH DR
WINTERSET DR
ELLIOT DITCH
BRIDGEWATER CT
GULFSTREAM LN
STEPHENSON DR
BOND DR
STARK'S CIR
RUNYON DR
CONCORD RD
BRADDOCK DR
BRIDGEWATER CIR
FINCASTLE WAY
QUEENCASTLE DR
DURANT DR
CLAYBROOK DR
DILLON DR
REMINGTON DR
RICKOVER CIR
OSBORN LN
DAUGHERTY DR
CLIBURN RD
REGAL VALLEY DR
IFCU WAY
IFCU DR
CHERYL LN
BUILDER DR
COUGILL LN
FAIRFIELD CT
VETERANS MEMORIAL PARKWAY
RAYMOND DR
KYRA BLVD
KYRA DR
NICHOLAS DR
SWEET VALLEY LN
KIRKPATRICK DITCH
PROMENADE PKY
KINGFISHER CIR
KINGFISHER DR
RUSHGROVE DR
KINGSBURY DR
LAFAYETTE
ENSLEY ST
AMETHYST CT
250

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2
- PEDESTRIAN BRIDGE

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE A
- ROUTE K
- ROUTE V
- TRAIL UNDER DEVELOPMENT
- ANTICIPATED TRAIL BY COUNTY
- Schools

TYPE

- COMMERCIAL
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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BF&S Butler Fairman & Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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N W E S

Legend

TRAIL SYMBOLS

- TRAIL UNDER DEVELOPMENT
- Schools

TYPE

- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman & Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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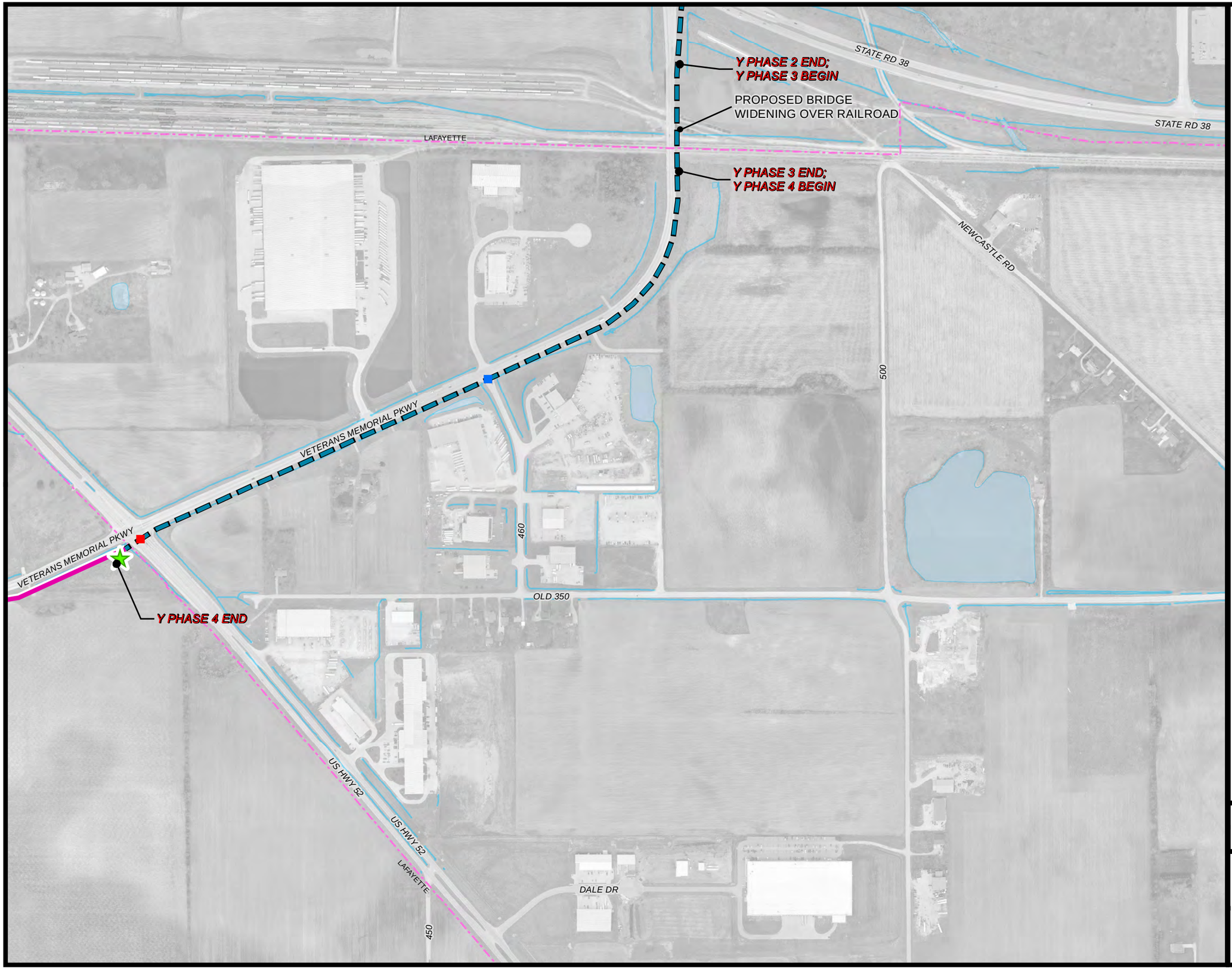

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 3
- TRAILHEAD

TRAIL SYMBOLS

- ROUTE Y
- TRAIL UNDER DEVELOPMENT
- Schools

TYPE

- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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BF&S Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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N W E S

COUNTY SOCCER FIELDS

STERLING HEIGHTS PARK

400

HARRINGTON DR

CHEYENNE DR

LOFTON DR

DENISON DR

LANGLEY DR

CALDER DR

BRAXTON DR

ROYCE DR

CHISHOLM TRL

STERGEN DR

LOBO CT

CACTUS CT

PRAIRIE DOG RD

CONCHO CT

BRAZOS CT

BRAZOS CIR

MESA CT

TAOS CT

BRAZOS TRL

WAGONWHEEL TRL

BUR OAK CT

BUR OAK LN

RED OAKS CT

RED OAKS LN

WEA VALLEY DR

100

TORY LN

REVERE DR

JOHN ADAMS ST

THOMAS JEFFERSON RD

PENNYPACKERS MILL RD

VALLEY FORGE RD

9TH ST

GEORGE WASHINGTON RD

WOLFSON WAY

IVANHOE ST

HOMERTON ST

CROFTON ST

CAMPION ST

NORCROSS WAY

430

LAFAYETTE

WEA RIDGE ELEM SCHOOL

WEA RIDGE RD

WEA RIDGE MIDDLE SCHOOL

18TH ST

150

KINGFISHER DR

ABBOTSBURY WAY

KYVERDALE DR

WHISPER VALLEY DR

COPPER VALLEY DR

CANYON CREEK DR

LAFAYETTE

RANDE LN

MENNEN LN

CRESTWOOD LN

NELSON LN

MASONS RIDGE RD

Legend

- AT GRADE CROSSING - LEVEL 1
- AT GRADE CROSSING - LEVEL 2

TRAIL SYMBOLS

- EXISTING TRAILS
- ROUTE X
- TRAIL UNDER DEVELOPMENT
- ANTICIPATED TRAIL BY COUNTY
- Schools

TYPE

- PARK/OPEN LAND
- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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Butler Fairman Seufert CIVIL ENGINEERS

CITY OF LAFAYETTE

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N W E S

Legend

TRAIL SYMBOLS

- ANTICIPATED TRAIL BY COUNTY
- Schools

TYPE

- Lafayette City Limits
- FRESHWATER POND / WATERWAY
- STREAM / DITCH

Lafayette Trails Master Plan

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PROJECT*design guidelines*

Due to the scope, overall size, and cost associated with the trails addressed in the Lafayette Trails Master Plan, it may take several years to complete each trail. Completion of all of the trails will likely take 25-30 years, or more. Therefore, it is important to establish a set of guidelines that will help maintain consistency throughout development.

The following recommended guidelines will help to establish quality standards for trail materials and trail facilities. Guidelines have been established for trail surface and width, trailheads and access points, trail bridges, trail and street intersections, trail and railroad intersections, separation from railroads, signage, site furnishings, and landscaping.

Project Design Objectives:

In order to maintain consistency of focus during the planning process, it was important to establish a set of goals and objectives for the implementation of each trail and the development of design guidelines. The Project Design Objectives for the Lafayette Trail Master Plan are:

Link community neighborhoods to parks, schools, libraries, existing regional trails, city interest points, and natural areas, thereby increasing citizens' opportunities to experience these resources.

Preserve environmental resources along the corridor through responsible development and ecologically sound design.

Provide universal access to recreational opportunities for all visitors and residents of Lafayette.

Provide trail users with a pleasant and safe experience.

Promote and educate citizens about unique features and resources in their community.

Establish a development strategy that assures quality and continuity of design along the entire trail system.

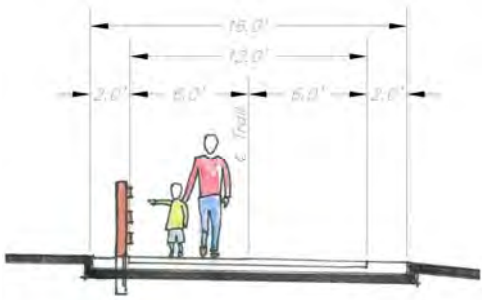
A multi-use trail will provide a safe way for people to enjoy the attractions of the community, get outdoors, enjoy greenspaces, and think about promoting stewardship of the environment.

This will not only increase bicycling safety and encourage fitness, but also improve the overall quality of life. The development of the Lafayette Trails shows that the city is committed to offering alternative transportation as well as promoting fitness and increasing recreation opportunities. The Trails will enhance the communities, make them more attractive, improve property values, and increase the tax base.

Multi-use Trail
Clear Creek Trail, Bloomington

TRAIL TYPE

It is recommended that each trail be a universally accessible multi-use path. The American Association of State Highway and Transportation Officials' (AASHTO) '*Guide for the Development of Bicycle Facilities (1999 & 2012)*' and Chapter 51 of the Indiana Department of Transportation (INDOT) Design Manual defines a multi-use path as an off-road, two-way facility designed for use by bicyclists, in-line skaters, wheelchair users, and pedestrians on exclusive right-of-way with minimal cross flow by motor vehicles. This means that the trails will have to be wide enough to accommodate two way travel for each type of use. In order to allow accessibility to each use, the trail surface must be adequate and slopes must follow guidelines developed by the US Access Board or regulations from the US Department of Justice. At the time this document was created there were several guidelines that apply: 1) Guidelines for Shared Use Paths; 2) Guidelines for Outdoor Developed Areas; and 3) Guidelines for Pedestrian Facilities in the Public Right-of-Ways. Although INDOT and AASHTO may not be required for all trails, it is recommended that these guidelines be followed on all trail applications.



Typical Trail Section

TRAIL WIDTH

AASHTO recommends a minimum width of 10 feet for shared used-paths, with 2-foot wide graded shoulders on either side of the trail. However, when a higher number of users are anticipated, at least a 12-foot wide trail with shoulders should be employed. This allows for two 6-foot wide lanes that will accommodate several different types of users.

Therefore, the design team recommends using a 10-foot wide trail (minimum) with 2-foot grass shoulders wherever possible. Only where absolutely necessary should an 8-foot trail with shoulders be implemented. This instance should only happen when the trail is considered a side path (a path that will have minimal traffic and isn't a through path) and/or when it is not feasible to fit a larger width of trail due to right-of-way or other limitations.

TRAIL SLOPE

It is important that the trail cross slope provide positive drainage, but not create a non-traversable slope for trail users or those in wheel chairs. For this reason all cross slopes shall be 2%. Trail shoulders create recovery areas for bicycle users and should not have cross slopes greater than 4%.

Side slopes beyond the shoulders should not be greater than 4:1. Steeper slopes are non-mowable and therefore create maintenance issues. Additionally, slopes steeper than 3:1 within 5 feet of the trail's edge must be protected.

Longitudinal trail slope should be no greater than 5% in most circumstances. The INDOT Design Manual gives more guidance on when it is permissible to exceed this guideline and appropriate mitigation techniques.

Multi-Use Trail
Lafayette, Indiana

TRAIL SURFACE

The primary concern with trail surfacing is accommodating a variety of trail users and providing accessibility. While crushed stone is less expensive to construct and is more forgiving for runners and walkers, it does not accommodate all trail users. It is non-traversable for in-line skaters and can be difficult for people in wheel chairs because not all stone trails meet the definition of firm and stable. Asphalt, on the other hand, can accommodate all types of users, and even though initial construction costs are higher, it lasts longer and requires less annual maintenance.

In order to preserve the asphalt, consideration should be given to using an oil sealant right after construction. One popular product is a bio based / soy bean product called RePlay. Regular treatment will help to keep the asphalt from becoming dry and rigid which can lead to failure and cracking. See the Trail Maintenance Section for further recommendation.

NATURAL AREAS / RUGGED TRAILS

This master plan identifies several trails that follow existing drainage features throughout the community. These areas are more natural and rugged in character. Due to this fact, it may be necessary to use standards that allow for steeper slopes, however, they must still be safe for bicyclists to negotiate and accessibility must be provided unless another route can be used to access areas that someone might want to get to. In these instances, it is important to use a combination of the US. Access Board's 'Guide for Outdoor Developed Areas' and AASHTO's 'Guide for the Development of Bicycle Facilities'.

Longitudinal Slope:

- 5% to 8.33% - 200 Feet Max. (length between landings)
- 8.33% to 10% - 30 Feet Max. (length between landings)

Cross Slope

- 2% Recommended
- 3% Maximum

Width:

- 8 Feet Minimum for Two Way Bike Travel

Resting/Landing Areas:

- Width - As wide as Trail
- Length - 10 Feet

Surface:

- Firm and Stable (As defined by US Access Board)
- Recommend Asphalt or Concrete for Slopes Greater than 5%
- Crushed Limestone (#73s)
    - Up to 5% (Stone will start to erode at slopes greater than 5%)
    - Limits Users of Trail
- Mulch or unreinforced dirt **would not** be acceptable

Trail Characteristics Signage (at Trailhead or Access Point) to include:

- *Length of Trail or Trail Segment*
- *Surface Type*
- *Typical and Minimum Trail Width*
- *Typical and Maximum Running Slope (Profile / Graph Showing Where Slopes Occur on Trail)*
- *Typical and Maximum Cross Slope (Graph Showing Location of Slopes on Trail)*

Construction

Environmentally sensitive construction techniques should also be considered for use in riparian zones and floodway areas well known to be periodically inundated by water and/or contain high quality vegetation. These techniques may include the use of small, light-weight equipment as well as increased erosion and sediment control measures

DNR PERMITTING PROCESS

Any proposed trail or bridge structure within the floodway of a river, stream or creek, that has a drainage area larger than one square mile (due to Lafayette's urban environment), requires an Indiana Department of Natural Resources (IDNR) Construction in a Floodway Permit. A trail section and multiple bridges constructed in a single phase can be constructed under one permit provided they all occur within the same tributary. Each additional phase will require a separate permit even if construction occurs along the same tributary.

Trail routing and design may be affected by DNR permitting and regulations in the following locations:

Route A South
1) Phase 1……..1 Permit
2) Phase 2……..1 Permit

Route A West
1) Phase 2……1 Permit

Route C South
1) Phase 2……1 Permit

Route M
1) Phase 1……..1 Permit

Route P
1) Phase 1……..1 Permit
2) Phase 2……..1 Permit

Route V
1) ……1 Permit

Route W
1) ……1 Permit

Route BB
1) ……..1 Permit

Route DD
1) ……..1 Permit

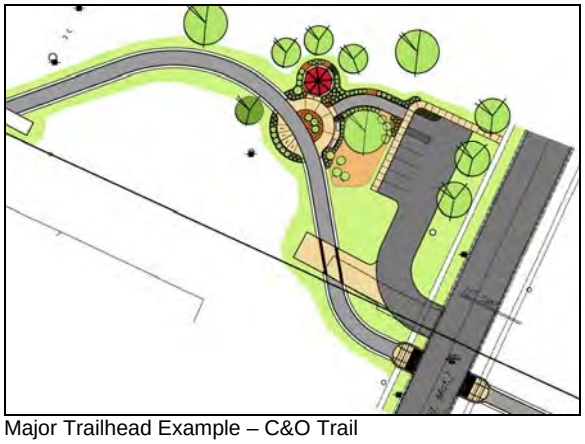
A Construction in a Floodway Permit typically takes 5-6 months to obtain and requires a $200 permit fee. Hydraulic modeling may be required to identify the impacts on the floodway. Boardwalk sections would also be covered under the permitting process. IDNR would consider the foundation spacing, the amount of fill required and the overall impacts to the floodway in analyzing the permit application.

OTHER PERMITS

There are several other permits that may be required in order to construct a trail. However, until actual construction documents are created it is hard to say which routes will require which permits. Below is a list of some of the more common permits that can be required.

1) Rule 5 – Required for any land disturbance over 1 acre.
2) US Army Corps of Engineers 404 Permits
   a. Nationwide - Any disturbance of a stream or navigable waterway below ordinary high water and less than 350 lineal feet in length. Typically for very small disturbances.
   b. Regional General - Any disturbance of a stream or navigable waterway below ordinary high water and less than 350 lineal feet in length.
   c. Individual – Any disturbance of a stream or navigable waterway below ordinary high water and over 1000 lineal feet in length.
3) IDEM Section 401 – Required any time an Army Corps 404 permit is required.

Major Trailhead Example - Erie Lackawanna Trail
in Griffith, Indiana



Major Trailhead Example – C&O Trail
In Merrillville, Indiana

Major Trailhead Example – C&O Trail
In Merrillville, Indiana

TRAIL SUPPORT FACILITIES:

Providing accessibility to all users at key locations throughout the city is important to the success of each trail. Along with accessibility, users require that the trail have certain facilities to meet the needs of its use. These support facilities can be broken down into four categories: *major trailheads, shared use trail heads, minor trail heads, and community access points*. In addition to these public facilities, partnerships should be developed between the city and local businesses to provide secure bicycle parking and other trail support facilities as a part of their building or property. This will not only enhance their business but it will also enhance the opportunities given to the trail users.

Major Trailheads:

Major trailheads provide the greatest amount of amenities to trail users and are recognizable points of access. They are like mini-parks alongside the trail that may include parking areas, shelters, restrooms, drinking fountains, benches, trash receptacles, picnic tables, bicycle racks, trail signage, trail access, and landscaping.

Due to the scope and type of facilities normally required for a major trailhead, it is difficult to locate them within the narrow constraints of a trail corridor. Typically it is necessary to find parcels of land adjacent to the corridor for development. These can be city-owned, such as parks or street right-of-way, or privately-owned properties that are created and operated with the owner's cooperation. These usually require the development of all new amenities for trail users' needs.

Potential *Route A Loop Trail Major Trailheads:*

1) Canal Road @ Existing Trail

Potential *Route O Major Trailheads:*

1) Ortman Lane & Poland Hill

Potential *Route Y Major Trailheads:*

1) Veterans Memorial Pkwy & Sagamore Pkwy

Potential *Route DD Major Trailheads:*

1) N. 9th St. & Sagamore Pkwy

Shared Use Trailhead Example - Twigg Rest Park
In Terre Haute, Indiana

Shared Use Trailhead Example – Friendship Gardens
In Plainfield, Indiana

Shared Use Trailheads:

Shared use trailheads are similar to major trailheads except they share amenities with other existing or potential uses. They are usually city owned and in many cases need only to have their amenities slightly upgraded in order to meet trail users' needs. These trailheads may or may not have existing shelters. This trailhead should be easily accessible from the trail, including amenities such as trash receptacles, bicycle racks, and benches.

Potential *Route B Shared Use Trailheads:*
1) Columbian Park
2) Murdock Park

Potential *Route C Shared Use Trailheads:*
1) Erie & Ferry @ Stockton Park

Potential *Route D Shared Use Trailheads:*
1) CAT Park

Potential *Route G Shared Use Trailheads:*
1) Kennedy Park
2) Armstrong Park

Potential *Route J Shared Use Trailheads*:
1) Triangle Park

Potential *Route L Shared Use Trailheads*:
1) McAllister Center

Potential *Route W Shared Use Trailheads:*
1) Munger Park

Minor Trailheads:

Minor trailheads are similar to major trailheads in that they provide amenities to serve trail users, but on a smaller scale. They usually occur more frequently and can be situated within the trail right-of-way. Minor trailheads are located between major trailheads and at certain trail intersections. Minor trailheads may provide benches, trash receptacles, bicycle racks, landscaping and signage, but usually will not provide parking.

Minor Trailhead Example – Clear Creek Trail in Bloomington, Indiana

Minor Trailhead Example – Whitelick Creek Trail in Plainfield, Indiana

Potential *Route A Loop Trail Minor Trailheads*:

1) Apartments @ Park East Blvd.

Potential *Route B Minor Trailheads:*

1) Veterans Memorial Pkwy @ Church (or Meijer)

Potential *Route C Minor Trailheads:*

1) 18th Street @ Railroad & Existing Trail

Potential *Route T Minor Trailheads:*

1) End of Trail on Eisenhower Road

Potential *Route X Minor Trailheads:*

1) Sterling Heights Park

Community Access Points:

The last type of trail support facility is the Community Access Point, which provides a minimal amount of amenities (perhaps a trail directory sign or wayfinding sign and a connector path). It is the most frequently occurring type of support facility and provides citizens of adjacent neighborhoods access to the trail. Community Access Points simply provide an informal and direct access between community and trail much like the driveway connects to the street.

They are important in fostering a community's adoption of the trail and getting trail users to respect the rights of private property owners by establishing designated points of access.

Locations of community access points should be determined in consultation with adjacent landowners and through the selection of logical places to enter the right-of-way from surrounding communities.

Potential *Route A Loop Trail Community Access Points:*

1) Canal Rd & N. 9th St Crossing
2) 13th St Crossing
3) Greenbush St & 18th St
4) Greenbush St & Elmwood Ave
5) Greenbush St & 29th St
6) Munger Park
7) Creasy Ln & Union St
8) Mezzanine Dr & McCarty Ln
9) Haggerty Ln & future Park East Blvd
10) SR 38 & Creasy Ln
11) Ivy Tech (Route R) & Creasy Ln
12) Sagamore Pkwy & Creasy Ln
13) Concord Rd & Brady Ln
14) End of Route A, South Ph. 2
15) Route P & A, West @ 2 Railroads
16) Shamrock Park
17) Sycamore St & Bedford St
18) End of Route A, West

Potential *Route B Community Access Points:*

1) Park East Blvd & McCarty Ln
2) Main St & Railroad

Potential *Route C Community Access Points:*

1) Beck Ln & 18th St
2) Lafayette Jeff High School & 18th St

Potential *Route D Community Access Points:*

1) Munger Trail & Shenandoah Dr

Potential Route E Community Access Points:

1) Park East Blvd & Commerce Dr
2) Veterans Memorial Pkwy & Hospital

Potential *Route F Community Access Points:*

1) Concord Rd & Existing Trail
2) Miami Elementary

Potential *Route G Community Access Points:*

1) Existing Trail & Railroad
2) Poland Hill Rd & Beck Ln

Potential *Route H Community Access Points:*

1) N/A

Potential *Route I Community Access Points:*

1) Vinton Elementary

Potential *Route J Community Access Points:*

1) Ortman Ln & 9th St
2) Twyckenham Blvd & 9th St
3) 9th St @ Existing Trail & Railroad

Potential *Route K Community Access Points:*

1) Veterans Memorial Pkwy & Promenade Pkwy
2) End of Route V & WalMart

Potential *Route L Community Access Points:*
1) 18th St & Schuyler Ave

Potential *Route M Community Access Points:*
1) N/A

Potential *Route N Community Access Points:*
1) 9th St & Veterans Memorial Pkwy
2) Poland Hill Rd (Route O) & Veterans Memorial Pkwy
3) Route V & End of Route N

Potential *Route O Community Access Points:*
1) Poland Hill Rd & Route M
2) Poland Hill Rd & Twyckenham Blvd

Potential *Route P Community Access Points:*
1) 9th St (Route J) & Route P

Potential *Route Q Community Access Points:*
1) Ortman Ln & 18th St

Potential *Route R Community Access Points:*
1) Haggerty Ln & Veterans Memorial Pkwy

Potential *Route S Community Access Points:*
1) Route S & Park East Blvd (Route A, East)
2) Liberty Ave & Kingsway Dr

Potential *Route T Community Access Points:*
1) Greenbush St & Creasy Ln

Potential *Route U Community Access Points:*
1) N/A

Potential *Route V Community Access Points:*
1) Route V & Route M
2) Route V & 9th St
3) Route V & 18th St (S 150 E)

Potential *Route W Community Access Points:*
1) Shenandoah Dr & Rome Dr

Potential *Route X Community Access Points:*
1) N/A

Potential *Route Y Community Access Points:*
1) N/A

Potential *Route Z Community Access Points:*
1) Route Z & Route D
2) Route Z & Existing Trail @ Kettle Cir

Potential *Route AA Community Access Points:*
1) N/A

Potential *Route BB Community Access Points:*
1) Maple Point Dr & Sagamore Pkwy
2) Maple Point Dr & SR 38
3) Route BB & McCarty Ln @ CAT Park

Potential *Route CC Community Access Points:*
1) N/A

Potential *Route DD Community Access Points:*
1) End of Route DD @ Existing Trail

Potential *Route EE Community Access Points:*
1) N. 9th St Crossing

Potential *Route FF Community Access Points:*
1) N/A

Potential *Route GG Community Access Points:*
1) N/A

Example of a Standard Bridge on the Monon Trail in Indianapolis, Indiana

Example of a Standard Bridge on the Monon Trail in Indianapolis, Indiana

Example of a Gateway Bridge on Tracy Trail in Greenwood, Indiana

BRIDGE DESIGN STANDARDS

All bridges will be designed for bicycle and pedestrian traffic. Due to maintenance and emergency needs the bridges will occasionally need to be used by light vehicular traffic, such as passenger vehicles and light trucks. Therefore, the structural design should be based on a five-ton vehicular loading.

Typically, the width of the finished deck surface is a minimum of 12 feet. This allows for a minimum 8-foot wide path with two foot shoulders on each side. The deck should be a structural concrete slab or timber decking spanning between superstructure members on all standard bridges. Timber decks are generally appropriate for renovated historic bridges.

All bridge railing should consist of tubular metal shapes, finished in the appropriate color. Color of bridges and bridge railing shall be based upon the color designated for the trail. Railings should be parallel with the trail centerline and 42 inches in height as recommended by AASHTO. The railing should be side mounted to the concrete bridge deck or the existing structure as indicated by each bridge's configuration. Where bridges cross roadways, an enclosure or high fence should be considered to prevent objects from falling onto the roadway below.

An approach barrier railing should be included at each end of each bridge. The approach barrier railing may consist of additional metal railing, wood railing, or stonewalls.

The approach pavement at the ends of the bridges should be a continuation of the trail pavement, with some variation based on each bridge configuration. Concrete approach slabs should be utilized where new construction dictates that the approaches are located on new fill material.

Example of a Gateway Bridge,
Dunn's Bridge, Porter County

Adaptive reuse of historic bridge structures should be considered wherever possible. The reuse of these structures presents opportunities for historic and cultural interpretation and provides an opportunity for a signature gateway bridge.

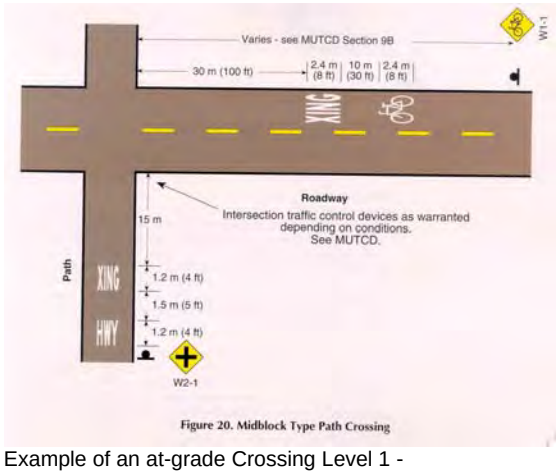
Example of a Street Crossing-
Monon Trail in Carmel, Indiana.

STREET INTERSECTION DESIGN

Each street intersection should be examined individually as each has unique characteristics. Uniformity in the use of traffic control devices is critical to encourage proper and predictable behavior by trail users. The *Manual on Uniform Traffic Control Devices* (MUTCD) shall be followed for size, shape, color and placement of signs on both the trail and the street. In addition, coordination with the City of Lafayette should ensure the proper design and layout of traffic control devices necessary to warn vehicular traffic on public streets of trail crossings.

Most street crossings will occur as at-grade except for a Con/Span Structure below SR 38. Traffic will have the right-of-way and trail users, at most crossings, will have to stop.

The team devised three different types of street crossing treatments to deal with the various at-grade crossings throughout Lafayette.



Example of an at-grade Crossing Level 1 -
'Guide for the Development of Bicycle Facilities' – AASHTO 1999

At-Grade Road Crossing - Level 1:

- Used on local roads with a maximum of two lanes. Speed limit should be under 40 mph.
- Warning Signs of an upcoming intersection will be placed on the roadway based upon MUTCD standards.
- No Motor Vehicles signs placed facing the street at all trail intersections
- Stop sign along the trail placed approximately 10 feet from the edge of the street.
- Crosswalk pavement markings at crossing point.
- "Trail Xing" markings on the roadway

Example of an at-grade Crossing Level 2- Monon Trail in Carmel, Indiana

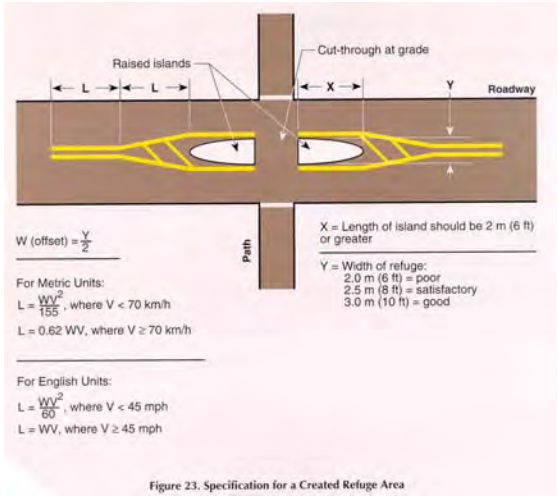


Figure 23. Specification for a Created Refuge Area

Example of a Midblock Crossing Level 3 – 'Guide for the Development of Bicycle Facilities' – AASHTO 1999

Example of a speed table

At-Grade Road Crossing - Level 2:

- Used on all roads with a maximum of two lanes and speed limit over 40 mph or greater.
- All treatments of a Level 1 Road Crossing apply
- In addition to Level 1, it is recommended that overhead flashers with signage be used, preferably with a motion activated warning signal. Flashers that are always on tend to be ignored or not noticed by the motorized vehicles because it isn't specific to if a trail user is in the area.

At Grade Road Crossing - Level 3:

- Used on all roads where there are more than two lanes of travel
- All treatments of a Level 2 Crossing apply
- In addition to Level 2, median refuge areas allow trail users to cross one direction of traffic at a time (additional street right-of-way may be required)
- If, and ONLY IF, a refuge island isn't feasible, speed tables are a secondary option.

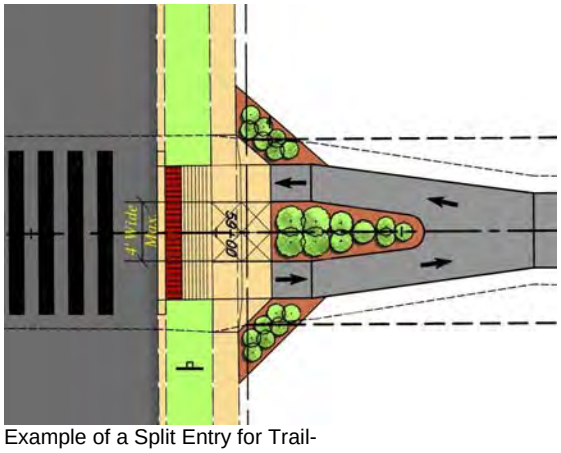
Trail Entry At Public Road Crossings

A public road crossing provides an opportunity to bring identity and attention to the trail. It also should provide plenty of room for users to cross without having conflicts with other users crossing in the opposing direction. Restricting vehicular access without restricting maintenance vehicles can also be a concern. The following is a list of options to consider based upon available right-of-way.

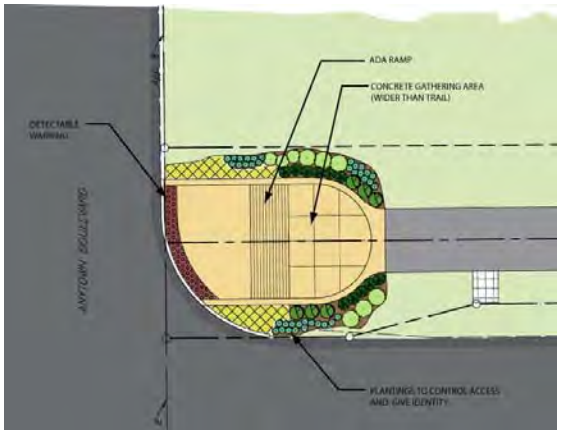
- Option 1: Split entry with a 4' wide median. The plantings shall be no taller than 6". This will allow for easy flow of trail traffic, while allowing maintenance vehicles access. See detail at right.

- Option 2: Concrete node without a bollard or central median. This option should be used if the area appears to be too narrow or there is not enough Right-of-Way for a split entry, and the risk of motor vehicles entering the trail is low.

- Option 3: Concrete node with bollard. If the area appears to be too narrow and it is believed that public vehicles might try to access the trail in that area, a bollard should be added. The bollard should be easy to collapse or remove and only used when absolutely necessary, as the bollard itself is an obstacle for tail users to negotiate around. See the Site Furnishings section for bollard type.



Example of a Split Entry for Trail-Munger Trail in Lafayette, Indiana



Example of a Concrete Node Entry without Bollard

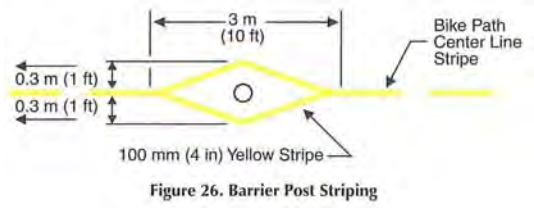


Figure 26. Barrier Post Striping

Example of a Bollard Location and Striping – 'Guide for the Development of Bicycle Facilities' – AASHTO 1999

Example of a Concrete Node Entry with Bollard

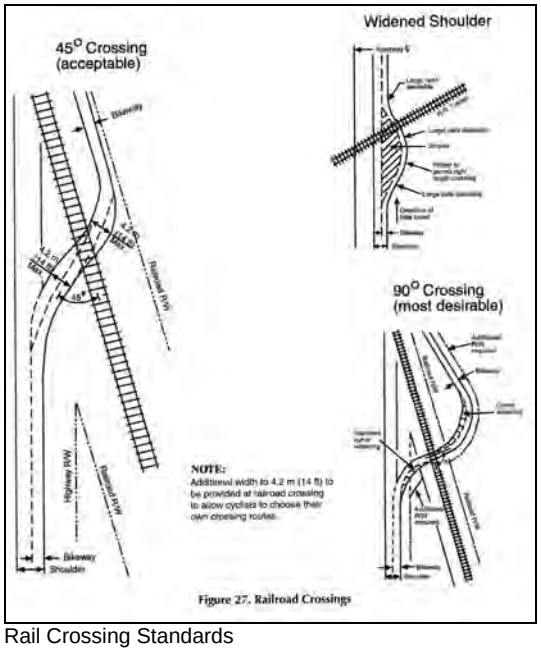
At Grade Commercial/Residential Crossing:

In addition to the three crossing types for public roads previously mentioned, side paths with numerous private drive crossings can pose a safety concern for the trail user. Drive crossings do not require that the user stop for each crossing, however, the vehicle is also not required to stop for the trail and care must be taken by both vehicles and trail users to watch out for one another. Additionally, private owners will need to be careful not to park their vehicles across the trail and to not place obstacles such as trash bags/containers on the trail. It is suggested that in areas where a trail must cross numerous private drives, consideration be given to marking the crossings to bring attention to these conflict areas. Several options are available:

1. An epoxy-modified, acrylic, waterborne coating has been successfully used for bike lanes in other large cities. There are several colors available and selection should be based upon the color choice that provides the most contrast and matches with the amenities/ color scheme selected along that particular trail.
2. Cabot Deck Stain is another option that might be considered on a trial basis. This coating has been used by the City of Portland, Oregon, to color neighborhood road intersections with less than 2,500 VPD. Go to www.cityrepair.org for more information.

Example of Epoxy Bike Coating on Asphalt

Existing Rubber Panel, Rail Crossing -
Amtrak Rail Line in Michigan City, Indiana



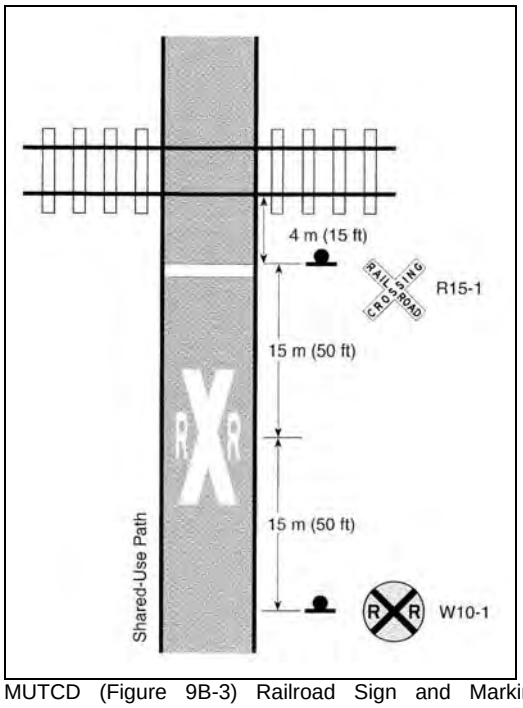
Rail Crossing Standards
'Guide for the Development of Bicycle Facilities' – AASHTO 1999

RAILROAD INTERSECTION DESIGN

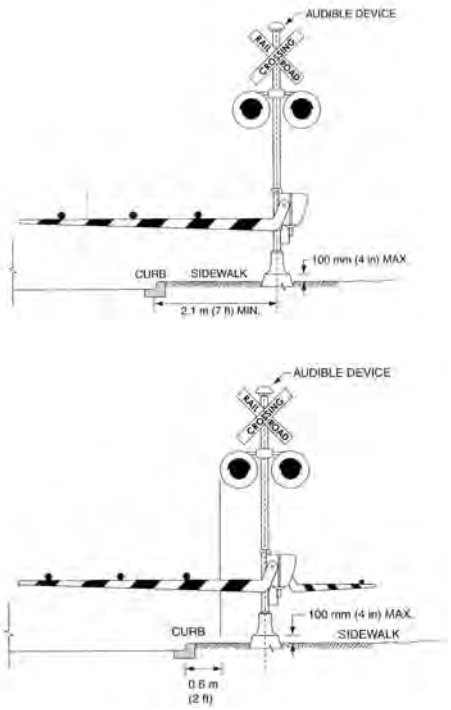
Due to the speed of train travel, sight distance needed to stop a train, and regulatory stipulations, it is recommended that wherever possible rail crossings occur at already existing road crossings. If an existing road crossing is not available then a bridge or tunnel may have to be utilized. Railroad crossings will follow the guidelines established in the Federal Highway Administration's 'Railroad-Highway Grade Crossing Handbook – 2nd Edition FHWA-TS-86-215', AASHTO, the MUTCD, and the requirements and specifications of the individual railroad companies.

It is advised to abide by the following treatments as a minimum for railroad crossings:

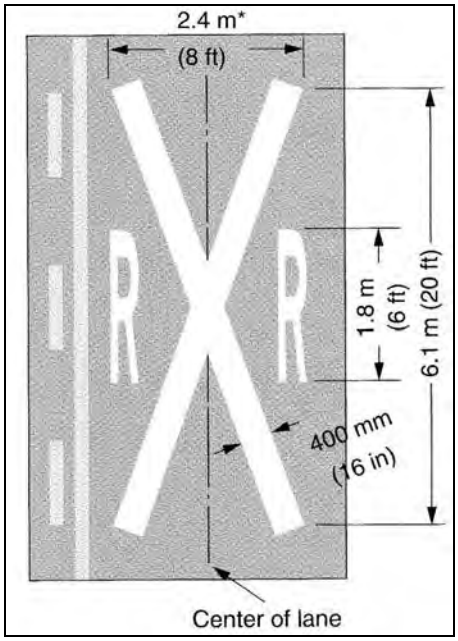
- A rubber panel crossing will be used with an asphalt approach.
- A rail warning sign shall be placed a minimum of 115 feet from the nearest rail
- A Crossbuck sign will be placed 15 feet from the nearest rail and shall have a sign denoting number of track crossings.
- Where existing gate arms are, a new pedestrian gate shall be placed if the path must go outside the post.
- A 24" stop bar will be placed approximately 15 feet from the nearest rail.
- The trail will have a minimum 45 degree skew from the center line of the rail with 90 degrees being desirable.
- The trail pavement width will be widened from 12 feet to 14 feet.
- Railroad pavement markings will be placed adjacent to the rail warning sign.



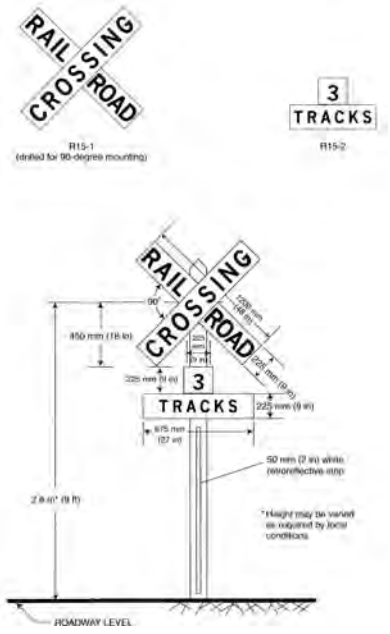
MUTCD (Figure 9B-3) Railroad Sign and Markings Locations for Shared-Use Paths



MUTCD (Figures 10D-3 and 10D-4) Typical Gate Arm Placement in Relation To Paths



MUTCD (Figure 8B-3) Pavement Markings for Rail Grade Crossings



MUTCD (FIGURE 8B-1) Rail Grade Crossing Crossbuck

RAILS WITH TRAILS

Railroad corridors, because of their linear nature and existing use as transportation corridors provide opportunities for trail placement. Abandoned rail corridors have already been successfully used for trail development in the past, but active rail corridors could also be used for this same activity provided proper design and spacing.

The U.S. Federal Railroad Administration's report, 'Rails-with-Trails: Lessons Learned', states that eight technical factors should be considered when determining trail design with regards to active railroad corridors. These eight design factors are:

1) The type of train using the corridor
2) Frequency of trains through the corridor
3) Speed of each train
4) Separation Technique
5) The topography adjacent to the rail line
6) Sight distance
7) Maintenance requirements (need for railroad personnel to access the property)
8) Historical problems (history of trespassing on the railroad property)

The following table should serve as a guideline for determining minimum trail separation based on these factors, however, final criteria will be determined by the railroad.

Rail Corridor Type	Minimum Separation
- High Density/ High Speed Lines (11 or more trains per day; maximum speed over 45 mph)	- Recommended: 25ft or more, with fence or other separation technique
- In constrained areas (e.g. cut/fill, bridges, trestles)	- Minimum: 15ft, with adequate separation technique
- Medium Density / Medium Speed Lines (less than 11 trains per day; maximum speed 45mph)	- Recommended: 25ft or more - Minimum: 15ft, with adequate separation technique
- In constrained areas (e.g. cut/fill, bridges, trestles)	- Minimum: 10ft, with fence or other separation technique
- Extensive history of trespassing (>100 persons per day)	- Minimum: 10ft, with fence or other separation technique
- Low Density/ Low Speed Branchlines (less than one train per day; maximum speed 35 mph)	- Recommended: 20ft or more - Minimum: 10ft, (trail to serve as maintenance access)
- In constrained areas (e.g. cut/fill, bridges, trestles)	- Minimum: 10ft, with fence or other separation technique

TRAIL SIGNAGE

There are many different issues to consider in the design of signs for a trail. Signs along the Lafayette trail system will need to serve a variety of purposes, including: providing traffic control along the trail, alerting users to potential hazards, identifying trail access points, providing historic information, providing educational information, indicating trail distance, and providing orientation on the trail and to surrounding communities.

Signs will need to be located so they are legible to trail users and must be constructed in methods and materials that are somewhat vandal resistant and easy to maintain.

The need for different types of signs must be balanced with the idea of creating a visually pleasing landscape in which to use the trail. The Lafayette trails will feature a system of signage to clearly communicate a variety of messages in a graphically consistent manner. The signage system is divided into the following categories: *Trail Traffic Signs, Trail Identity Signs, Trail Guidance and Interpretive Signs, and Mile Markers*.

Trail Traffic Signs:

The trail system will be a transportation corridor and, therefore, must have recognizable transportation signs that follow MUTCD guidelines. The trail traffic signs will include regulatory and warning signs, such as: STOP, YIELD, and TRAIL NARROWS signs.

The design of the trail traffic signs should be consistent from trail to trail and will feature an aluminum sheet of alloy and temper, recommended by the aluminum producer, not less than 0.100 inch thickness. The trail traffic signs shall have a reflective sheeting material and silkscreen paint. The posts shall consist of a 6061 Alloy Aluminum, have a 3 ½ inch overall diameter and a wall thickness of 0.375 inches. These aluminum posts are required because they have less maintenance costs long term, they will not rot at the base and they cannot be easily cut, like wood. The posts shall have a powder coating based upon the color designated for the trail it is on. Signs can have graphic information on one or both sides, reducing the overall number of signs needed. Signs should be placed 3 feet from the trail's edge and be mounted at a height of 5 feet.

Additionally, any trail traffic sign which is below a power line shall be of a 4" square, treated, wood post. Signs shall be a co-extruded HDPE sign board. These wooden posts shall only be under power lines as it will have more maintenance, a chance of rotting and can be easily cut. This has to be done under the power lines based on the requirements of Duke Energy because of the electricity that can charge from the power lines to posts, if the posts are aluminum.

Trail Identity Signs:

The Lafayette Trail system will have numerous points of access. It is important that these points of entry be identified for the public in an appropriate and consistent manner. The trail identity sign is intended to serve two functions: identify the main entry points to the trail and establish for the public a consistent and lasting identity for the trail. By selecting a consistent treatment for each trail it will help the trail user to know which trail they are currently on. Each sign should be designed to incorporate a unique feature of each trail. The City of Lafayette Park's logo should be incorporated into each sign and the identity sign should follow the same color scheme as the trail it is representing. The posts should be 4 inch overall diameter and made out of aluminum alloy with powder coating. The identity sign should be 9 feet to the bottom of the sign, minimum, to provide visibility and clearance. The signs should be visible by the public at trail and street intersections and at other significant access points.

Trail Guidance & Interpretive Signs:

Along the trail, there should be several different types of signs that provide the trail user with guidance information such as points of interest, trail support facilities, and orientation.

Trail guidance signs can be placed into two different categories. One type would be a directory sign which would show trail users how they can reach key destination points within the entire community. This sign would give an overall view of the entire trail system and would need to be 30"x42" in size to show enough detail. There should be a consistent layout for all these signs so they match and give a cohesive design throughout the trail system. Directory signs would typically be placed at major trailheads or key trail access points.

The second type of guidance sign is a wayfinding sign. This type of sign is a map indicating amenities that are within close proximity to your current location on the trail. These signs should be located at intersecting trails. A wayfinding sign should be at 24"x36" or smaller, but at a scale that shows much more detail than the directory signs. The image to the left shows a good example of this type of sign.

Interpretive signs are another type of sign that provide educational information to trail users and enhance the trail experience. These signs help to convey the historical, cultural, or ecological significance of certain points along the trail. Examples would be the importance of protecting wetlands or water bodies, geological formations unique to the area, or a historically significant feature within the Lafayette Community.

With all these functions, the materials that the signs are made of must be flexible enough to incorporate a variety of graphic information and, yet, be consistent in appearance and presentation. It is recommended that a high pressure laminate be used for the directory, wayfinding, and interpretive signs. High pressure laminates provide high quality graphics and longevity at a reasonable price. A ½" thick sign should be employed to avoid the use of a frame. As opposed to other types of signs, the high pressure laminate has a very clean print, a long guarantee time of 10 years, has a low replacement cost, does not have the hassles of a frame, and resists shattering. The interpretive signs and guidance signs should be mostly conveyed graphically, with minimal text and at a size that is readable without having to bend over too far to see.

Mile Markers:

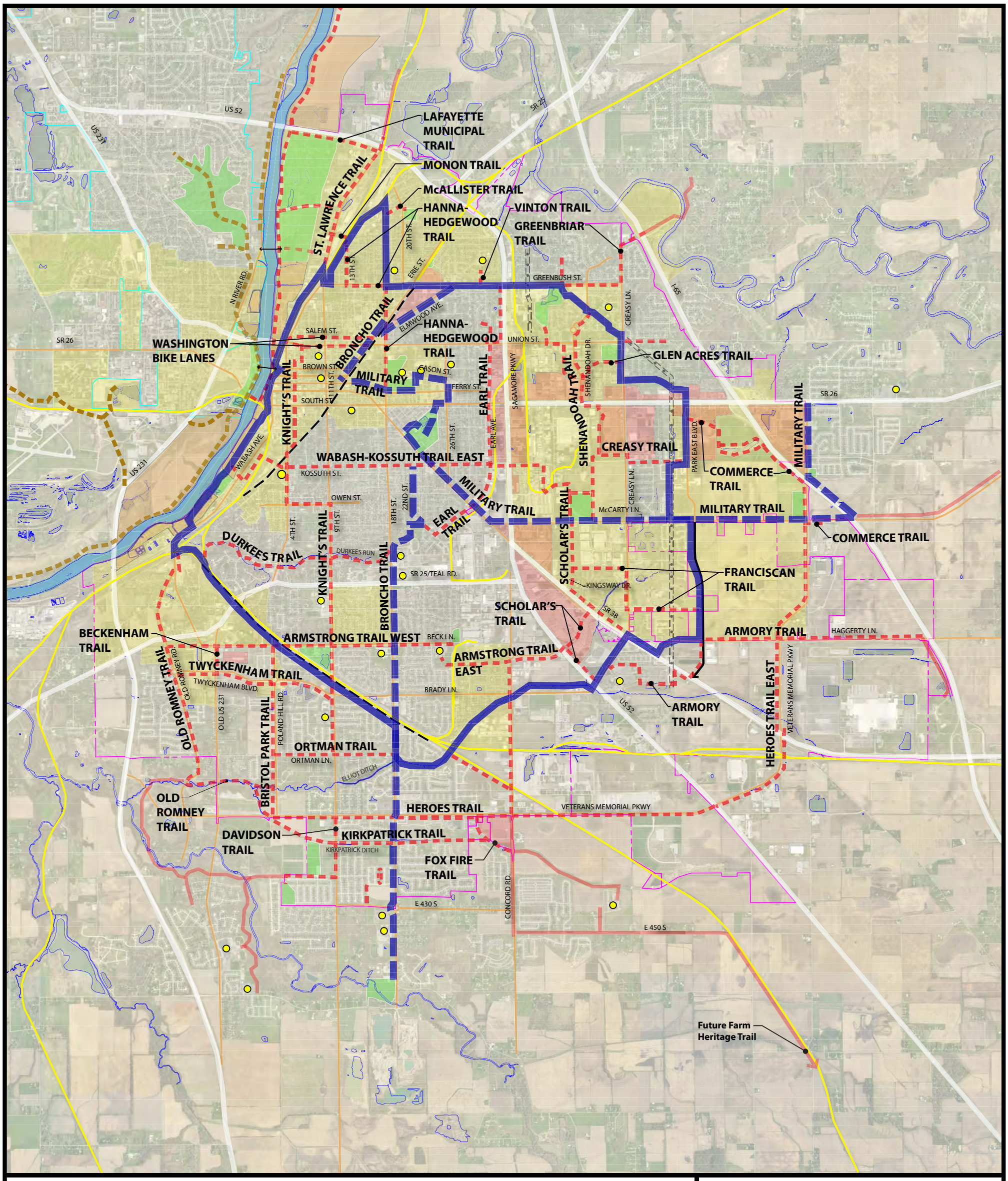
Mile markers provide orientation for trail users and emergency personnel as well as traveled distance along the trail. Distance along the trail should be marked in quarter-mile intervals or less by transverse pavement markings placed directly on top of the trail. Information included on the markers should be distance in miles and each trails logo. This type of mileage marker was chosen to be easily readable and reduce conflicts during routine maintenance such as mowing.

TRAIL NAMING

As part of the master planning process the City worked with the Mayor's Youth Council to come up with appropriate names for each trail segment that was identified. It seemed that this would be the best way to come up with names that were appropriate for the community and area that the segment runs through. Below is the list of names that corresponds to each segment on the map.

Segment on Map	*Name*
A	Star City Trail
B	Military Trail
C	Broncho Trail
D	Shenandoah Trail
E	Commerce Trail
F	Armstrong Trail East
G	Armstrong Trail West
H	Hanna-Hedgewood Trail
I	Vinton Trail
J	Knight's Trail
K	Fox Fire Trail
L	McAllister Trail
M	Old Romney Trail
N	Heroes Trail
O	Bristol Park Trail
P	Durkees Trail
Q	Ortman Trail
R	Armory Trail
S	Franciscan Trail
T	Greenbriar Trail
U	Twyckenham Trail
V	Kirkpatrick Trail
W	Glen Acres Trail
X	Davidson Trail
Y	Heroes Trail East
Z	Creasy Trail
AA	Wabash-Kossuth Trail East
BB	Scholar's Trail
CC	St. Lawrence Trail
DD	Lafayette Municipal Trail
EE	Monon Trail
FF	Washington Bike Lanes
GG	Earl Trail
HH	Beckenham Trail *(no cost associated)*

The following map is an overall view of the final master plan and all named routes.



LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- STAR CITY TRAIL
- PRIMARY TRAIL ROUTES
- SECONDARY TRAIL ROUTES/ CONNECTORS
- COUNTY/PRIVATE CONNECTOR ROUTES
- WEST LAFAYETTE TRAILS
- FUTURE ROAD
- PARK
- COMMERCIAL
- LOW AND MODERATE INCOME AREAS
- PROPOSED WABASH RIVER ENHANCEMENT PARK USE
- SCHOOLS
- UTILITY EASEMENT

ABBREVIATIONS
E.S. - ELEMENTARY SCHOOL
M.S. - MIDDLE SCHOOL
H.S. - HIGH SCHOOL
PED. - PEDESTRIAN

Lafayette Trail Master Plan

Overall Arterial Map

0 750 1500 3000 FEET

BF&S Butler Fairman Seufert CIVIL ENGINEERS

SITE FURNISHINGS

In addition to signage, the design of the trail system will include site furnishings to accommodate the needs of the trail users along the length of the entire trail. Amenities such as benches, informal seating areas, trash receptacles, bicycle racks, and bollards will be clustered together at major, minor, and shared-use trailheads.

Locations of amenities along trails will depend on the characteristics of each trail segment and should be addressed on a case by case situation. The purpose of most trails is to move people from various locations and for recreation. As such people are less likely to stop in between access points. Benches generally should be located at overlook points along trails where appropriate and where enough right-of-way exists. Trails located in sections of the city where there is a more elderly population or where there might be a need for people to stop more frequently may require benches to be placed in between access points. Trails located near hospitals may need to have benches placed more frequently if the hospital plans to use the trail for rehabilitation programs.

Along with trail signage, site furniture will be among the most frequently utilized elements along the trail, setting the tone for the overall image of the trail system in the minds of the users. It is important that design standards for the trails' site furnishings be established to ensure overall

consistency of design and trail image. The colors should be consistent with the trail color scheme that the furnishing is located along. Along with consistency of color, a consistent style of furnishings needs to be established and followed as trails begin to be constructed. With establishing a color and style to use throughout the trail it will minimize the amount of cost for the City of Lafayette because replacement parts can be stockpiled for ONE style of bench as opposed to FIVE styles. See the following product information for consistency in site furnishings.

For federally funded projects it will be important to use the information in this document to complete the proprietary selection form.

Bench (6' Bench, Surface Mount):

- Manufacturer: Wabash Valley
- Model #: ES520 [suggested rib pattern, however other patterns can be used, such as slat, perforated, or diamond, depending on the setting and style desired] or HR310
- Size: Six feet
- Color: Color to be based on designated trail color
- Installation: Surface Mount into concrete base in accordance with manufacturer's instructions.
- Option: Center Arm

Example of ES520 (R)
(This can be used in an urban, rural or park setting)

Example of HR310
(This is better fit in an urban setting, however if there is a presence of skateboarding, it may not be appropriate)

Trash Receptacle (32" Gallon Receptacle, Flare Top, Portable):

- Manufacturer: Wabash Valley
- Model #: FR400 (R), HR200 (M), or LR300 (R)
- Size: 32 Gallons
- Color: Color to be based on designated trail color
- Accessories:
  - Model #: FT105 (Lid) – Convex style to wick water away instead of water falling into trash can (with concave style) and causing it to be a heavy bag full of water
  - Model #: LR310 (32 Gallon Liner)
  - Model #: LR105 (Surface Mount Package)
- Installation: Surface Mount into concrete base in accordance with manufacturer's instructions

Example of FR400 (R)
(This can be used in an urban, rural or park setting. The rim is designed to catch trash being tossed into receptacle)

Example of HR200 (M)
(This model matches the HR310 bench and is best fit in an urban setting)

Bicycle Rack (36” Bike Loop):

- Manufacturer: Keystone Ridge Designs
- Model #: GV2E-4 or SN01-3
- Color: Color to be based on designated trail color
- Installation: In accordance with manufacturer’s instructions
- Style: Loop (supports bicycle in two spots)

Example of GV2E-4

Example of SN01-3

Bollard:

- Use: Only in problem areas where motorized vehicle access seems to be more prevalent
- Manufacturer: Maxiforce (Model #: MCSW-SS1-U) or TrafficGuard (Model #: DHB-SL)
- Installation: In accordance with manufacturer’s instructions
- Style: Maxiforce – Collapsible (with standard wrench)
- Style: TrafficGuard – Collapsible (with hydrant wrench)

Example of MaxiForce #MCSW-SS1-U

Example of TrafficGuard #DHB-SL

Drinking Fountain

- Manufacturer: Most Dependable Fountains, Inc.
- Model #: 2008SM
- Color: Color to be based on designated trail color
- Installation: In accordance with manufacturer’s instructions
- Style: Two fountain heights (one accessible) & dog bowl

Example of 2008SM

There will not be emergency call boxes incorporated into the trail system at this time. It is felt that due to advanced technology many people carry a cell phone and that it is possible to address safety through the use of a volunteer program (see page 53). It may be necessary to reevaluate this policy on a case by case scenario.

All site furnishings shall be accessible for all users. Benches shall have a back, armrests and a concrete pad wide enough for a wheelchair to sit next to the bench (wheel chair area shall be 2 ½ feet wide minimum). Depending on the location and determined by the City of Lafayette, some benches should also include a center armrest. Trash receptacles shall match the style of the benches. Bicycle racks shall be a "U-Shaped" rack or a bicycle bollard as these provide security while supporting a bicycle in two locations.

TRAIL LANDSCAPING

The Lafayette trail system, due to its overall length and diverse scenery, may require more landscaping in urban areas and less in rural areas. The presence of mature vegetative cover not only adds to the natural beauty of the trail experience, but also minimizes the amount of new landscaping necessary to improve the appearance of the trail system and screening of the trail from undesirable views and adverse adjacent trail conditions.

In areas along the trail where the appearance warrants improvement and no existing vegetation is present, plantings of trees, shrubs and ground cover should be considered to create a linear park effect alongside the trail. New plantings should also be used to identify and improve "entrances" to parks (trail access points) and street crossings.

In addition, plantings should be used to screen certain land uses adjacent to the corridor (such as business service areas and industrial sites) and to separate the trail from other improvements within the right-of-way (such as parking lots). Native plant material should be used where possible in an effort to keep landscape maintenance to a minimum and to maximize the ecological benefits of the plantings.

TRAIL LIGHTING

The Lafayette trail system is intended for use during daylight hours only; therefore it is not anticipated that the trail will need trail lighting. However, the installation of security lighting at trailheads, road crossings, bridges, and other activity areas should be considered if conditions warrant. Should conditions deem lighting to be necessary, there should be a standard lighting choice throughout all of the trail system. A great example of this is in Bloomington, Indiana where they have several trail systems and trailheads, all having similar lighting schemes.

TRAIL MAINTENANCE ISSUES AND SAFETY

Maintenance costs are expected to be a minimum for the first 5-10 years. Costs will vary depending on the amount of trail needing to be maintained and the location of the trail. On a typical mile-long trail, it could be $3,000 (plus or minus) per year in maintenance costs. Long term maintenance costs could consist of repairing any asphalt damage. Over 20 years it could be anticipated to spend approximately $10,000 to $20,000 on asphalt repair. The city or parks department should have a general maintenance fund set aside for this. Below is a list of general trail maintenance items to keep in mind during the upkeep of the trails:

- Treat any wooden railing at least every 5 years to keep from rotting
- Properly prune trees above trails and shoulders to maintain 12' of vertical clearance. Properly prune trees and shrubs to maintain at least 5' of horizontal clearance from trail pavement edge. Use horticultural accepted pruning techniques and do not "top" trees (do not

cut mid branch). Improper pruning can put stress on trees and cause more harm to the public in the long run.

- Properly prune any dead limbs out of trees to protect trail users. Remove any existing trees within close proximity that may die over time to protect trail users.
- Perform routine maintenance: mowing, clearing, trimming, vandalism repair, and litter control
- Edge pavement or shoulder periodically to prevent roots/vegetation from compromising pavement.
- Seal cracks in pavement every 2 years to prevent debris build up, water from entering base, and continued deterioration. Rubberized sealant is recommended
- Consider using a seal coat every 4 years to arrest deterioration, prevent water filtration, restore oils to upper surface, and prevent loss of fines

Trail maintenance costs could be reduced by utilizing local volunteers and other programs for simple tasks like litter removal and storm clean-up. A full time employee could be the designated volunteer coordinator and help manage resources and efforts. The Cardinal Greenway is a good example of where a volunteer system has been used to reduce maintenance costs and would be a good resource for how to make one successful. Also, boy scouts, community corrections programs, community service programs, and youth programs could be utilized to do these tasks. More stringent repairs, like sealing asphalt and repairing cracks should still be handled with city forces or a contractor.

Another area where volunteers can help reduce cost is through regular patrols of the trail systems. Since many trail users will use the system daily for recreational or commuting needs, they can monitor any unwanted behavior at the same time. Their responsibility would not be to address any unwanted behavior, but rather report it immediately to the proper authorities. In this way, the program can help to reduce the number of law enforcement officers that would need to be dedicated to the trail system and the need to install call boxes along the trails. Examples for places to find local volunteers would be local bicycle clubs, avid cyclists, trail advocates, etc.

ACCESSIBILITY

As mentioned previously, all new trail construction must follow guidelines developed by the US Access Board or regulations from the US Department of Justice. At the time this document was created there were several guidelines that applied: 1) Guidelines for Shared Use Paths; 2) Guidelines for Outdoor Developed Areas; and 3) Guidelines for Pedestrian Facilities in the Public Right-of-Ways.

Some of these accessibility standards have already been addressed in other sections of the design guidelines, but there are a few others to consider:

- Ramps – See Guidelines for Pedestrian Facilities in the Public Right-of-Ways
- Detectable warnings – See ADA Chapter 7: Communication Elements and Features, Section 705 and Guidelines for Pedestrian Facilities in the Public Right-of-Ways
- Push buttons (activation)/signalization standards – See Guidelines for Pedestrian Facilities in the Public Right-of-Ways
- Site amenities – See Accessibility Guidelines for Outdoor Developed Areas

ON-ROAD BICYCLE FACILITIES

Most of the facilities discussed in this plan are separated trails. However, there are several areas where these types of facilities will not work due to existing constraints. Therefore, it is necessary to use on-road facilities to make connections. For these facilities it is recommended that the design should follow guidelines set out in the NACTO Urban Bikeway Design Guide and the Chicago Bike Lane Design Guide.

At a minimum, bike lanes should be 5 feet wide and appropriately signed and marked. Shared roadways, or sharrows, should be marked and appropriately signed. More information can be found online at the following web addresses.

NACTO Urban Bikeway Design Guide: http://nacto.org/cities-for-cycling/design-guide/

Chicago Bike Lane Design Guide:
www.cityofchicago.org/content/dam/city/depts/cdot/bicycling/publications/bike_lane_design_guide.pdf

Examples of Bike Lane
Image from: www.nacto.org

Example of Sharrow
Image from: www.nacto.org

TRAIL*construction phasing & costs*

LAFAYETTE TRAILS MASTER PLAN: ROUTE A NORTH Phase 1 - Construction Cost Opinion 1.25 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.25	*Miles*	$ 240,000.00	$ 300,000.00
Sidewalk, Remove	2995.0	*SYS*	$ 15.00	$ 45,000.00
Restriping for Road Re-Work **[YELLOW CENTER LINE (DOUBLE)]**	980	*LFT*	$ 2.50	$ 2,500.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	111.0	*SYS*	$ 85.00	$ 9,500.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	2	*EA*	$ 5,000.00	$ 10,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	1	*EA*	$ 40,000.00	$ 40,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	15	*EA*	$ 2,000.00	$ 30,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD) **(4/CROSSING)**	12	*EA*	$ 500.00	$ 6,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	12	*EA*	$ 100.00	$ 1,200.00
Trail Identification Signage **(1/CROSSING)**	3	*EA*	$ 2,500.00	$ 7,500.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	5	*EA*	$ 500.00	$ 2,500.00
Major Trailhead @ Existing Trail on Canal Road	1	*LS*	$ 75,000.00	$ 75,000.00
Road Diet Along Canal Road				
Curb, Remove	490	*LFT*	$ 15.00	$ 7,400.00
Curb	490	*LFT*	$ 20.00	$ 9,800.00
Sawcut, Full Depth	490	*LFT*	$ 5.00	$ 2,450.00
Asphalt Excavation *(4,850 SFT)* ***[assumes an average of 1 foot depth]***	180	*CYS*	$ 55.00	$ 9,900.00
Asphalt Patching *(4,850 SFT)* ***[assumes an average of 6 inches deep with 6 inches of stone]***	360	*TON*	$ 90.00	$ 32,400.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.25	*Miles*	$ 6,000.00	$ 7,500.00
General Trail Landscape Work	1	*LS*	$ 20,000.00	$ 20,000.00
Fence Relocation	360	*LFT*	$ 10.00	$ 3,600.00
Retaining Wall, Remove	100	*LFT*	$ 50.00	$ 5,000.00
Modular Block Wall (includes Reinforcing and Excavation)	270	*SYS*	$ 400.00	$ 108,000.00
Earthwork	1	*LS*	$ 12,000.00	$ 12,000.00
Erosion Control	1	*LS*	$ 15,000.00	$ 15,000.00
Utility Relocations (approximately 16 overhead utility relocations plus 5 hydrant relocations)	1	*LS*	$ 185,000.00	$ 185,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 49,000.00	$ 49,000.00
Clearing ROW (3%)	1	*LS*	$ 31,000.00	$ 31,000.00
Contingency (15%)	1	*LS*	$ 157,000.00	$ 157,000.00
Total Estimated ROUTE A NORTH Phase 1 Construction Cost Opinion (1) (2)				***$ 1,199,300.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE A NORTH Phase 2 - Construction Cost Opinion 1.75 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.75	*Miles*	$ 240,000.00	$ 420,000.00
Sidewalk, Remove	1890.0	*SYS*	$ 15.00	$ 28,400.00
Restriping for Road Re-Work **[YELLOW CENTER LINE (DOUBLE)]**	6080	*LFT*	$ 2.50	$ 15,200.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	370.0	*SYS*	$ 85.00	$ 31,500.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	10	*EA*	$ 5,000.00	$ 50,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	13	*EA*	$ 2,000.00	$ 26,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	10	*EA*	$ 1,200.00	$ 12,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD) **(4/CROSSING)**	40	*EA*	$ 500.00	$ 20,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	40	*EA*	$ 100.00	$ 4,000.00
Trail Identification Signage **(1/CROSSING)**	10	*EA*	$ 2,500.00	$ 25,000.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	3	*EA*	$ 500.00	$ 1,500.00
Road Diet Along 18th Street				
Curb, Remove	3,040	*LFT*	$ 15.00	$ 45,600.00
Curb	3,040	*LFT*	$ 20.00	$ 60,800.00
Sawcut, Full Depth	3,040	*LFT*	$ 5.00	$ 15,200.00
Asphalt Excavation *(30,200 SFT)* ***[assumes an average of 1 foot depth]***	1,120	*CYS*	$ 55.00	$ 61,600.00
Asphalt Patching *(30,200 SFT)* ***[assumes an average of 6 inches deep with 6 inches of stone]***	2,215	*TON*	$ 90.00	$ 199,400.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.75	*Miles*	$ 6,000.00	$ 10,500.00
General Trail Landscape Work	1	*LS*	$ 35,000.00	$ 35,000.00
Fence Removal	10	*LFT*	$ 5.00	$ 50.00
Modular Block Wall (includes Reinforcing and Excavation)	490	*SYS*	$ 400.00	$ 196,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 18,000.00	$ 18,000.00
Utility Relocations (approximately 1 overhead utility relocations plus 3 hydrant relocations)	1	*LS*	$ 25,000.00	$ 25,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 66,200.00	$ 66,200.00
Clearing ROW (3%)	1	*LS*	$ 41,700.00	$ 41,700.00
Contingency (15%)	1	*LS*	$ 214,700.00	$ 214,700.00
Total Estimated ROUTE A NORTH Phase 2 Construction Cost Opinion (1) (2)				***$ 1,645,900.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE A NORTH Phase 3 - Construction Cost Opinion 1.25 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.25	*Miles*	$ 240,000.00	$ 300,000.00
Sidewalk, Remove	1375.0	*SYS*	$ 15.00	$ 20,700.00
Restriping for Road & Parking Lot Re-Work **[YELLOW CENTER LINE (DOUBLE), PARKING RE-STRIPING]**	3890	*LFT*	$ 2.50	$ 9,800.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	259.0	*SYS*	$ 85.00	$ 22,100.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	6	*EA*	$ 5,000.00	$ 30,000.00
Intersection Improvements @ - Level 3 (Median, Signal, Signage, Pavement Markings)	1	*EA*	$ 90,000.00	$ 90,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	15	*EA*	$ 2,000.00	$ 30,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	19	*EA*	$ 1,200.00	$ 22,800.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD) **(4/CROSSING)**	28	*EA*	$ 500.00	$ 14,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	28	*EA*	$ 100.00	$ 2,800.00
Trail Identification Signage **(1/CROSSING)**	7	*EA*	$ 2,500.00	$ 17,500.00
Directory Signage (1 @ MUNGER PARK)	4	*EA*	$ 2,500.00	$ 10,000.00
Mile Markers @ 1/4 mile intervals	5	*EA*	$ 500.00	$ 2,500.00
Road Diet Along Greenbush Street				
Curb, Remove	1,275	*LFT*	$ 15.00	$ 19,200.00
Curb	1,275	*LFT*	$ 20.00	$ 25,500.00
Sawcut, Full Depth	1,275	*LFT*	$ 5.00	$ 6,400.00
Asphalt Excavation *(12,750 SFT + 7,500 SFT for parking area)* ***[assumes an average of 1 foot depth]***	750	*CYS*	$ 55.00	$ 41,300.00
Asphalt Patching *(12,750 SFT + 7,500 SFT for parking area)*	1,485	*TON*	$ 90.00	$ 133,700.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.25	*Miles*	$ 6,000.00	$ 7,500.00
General Trail Landscape Work	1	*LS*	$ 40,000.00	$ 40,000.00
Fence Removal	30	*LFT*	$ 5.00	$ 150.00
Fence Relocation	170	*LFT*	$ 10.00	$ 1,700.00
Fence Gate Relocation	1	*LS*	$ 1,000.00	$ 1,000.00
Retaining Wall, Remove	65	*LFT*	$ 50.00	$ 3,300.00
Modular Block Wall (includes Reinforcing and Excavation)	80	*SYS*	$ 400.00	$ 32,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 15,000.00	$ 15,000.00
Utility Relocations (approximately 13 overhead utility relocations plus 1 misc. utility relocations)	1	*LS*	$ 140,000.00	$ 140,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 52,947.50	$ 52,947.50
Clearing ROW (3%)	1	*LS*	$ 33,356.93	$ 33,356.93
Contingency (15%)	1	*LS*	$ 171,788.16	$ 171,788.16
Total Estimated ROUTE A NORTH Phase 3 Construction Cost Opinion (1) (2)				***$ 1,317,100.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.

2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE A EAST - Construction Cost Opinion 2.75 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	2.75	*Miles*	$ 240,000.00	$ 660,000.00
Sidewalk, Remove	2315.0	*SYS*	$ 15.00	$ 34,800.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	333.0	*SYS*	$ 85.00	$ 28,400.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	8	*EA*	$ 5,000.00	$ 40,000.00
Intersection Improvements @ - Level 3 (Median, Signal, Signage, Pavement Markings)	1	*EA*	$ 90,000.00	$ 90,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	10	*EA*	$ 2,000.00	$ 20,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	36	*EA*	$ 500.00	$ 18,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	36	*EA*	$ 100.00	$ 3,600.00
Trail Identification Signage	9	*EA*	$ 2,500.00	$ 22,500.00
Directory Signage	3	*EA*	$ 2,500.00	$ 7,500.00
Mile Markers @ 1/4 mile intervals	11	*EA*	$ 500.00	$ 5,500.00
Road Diet Along Britt Farm Drive				
Curb, Remove	500	*LFT*	$ 15.00	$ 7,500.00
Curb	500	*LFT*	$ 20.00	$ 10,000.00
Sawcut, Full Depth	585	*LFT*	$ 5.00	$ 3,000.00
Asphalt Excavation *(5,000 SFT + 850 SFT for parking area)*	220	*CYS*	$ 55.00	$ 12,100.00
Asphalt Patching *(5,000 SFT + 850 SFT for parking area)*	430	*TON*	$ 90.00	$ 38,700.00
Minor Trailhead @ Apartments	1	*LS*	$ 15,000.00	$ 15,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	2.75	*Miles*	$ 6,000.00	$ 16,500.00
General Trail Landscape Work	1	*LS*	$ 40,000.00	$ 40,000.00
Retaining Wall, Remove	160	*LFT*	$ 50.00	$ 8,000.00
Modular Block Wall (includes Reinforcing and Excavation)	55	*SYS*	$ 400.00	$ 22,000.00
Earthwork	1	*LS*	$ 15,000.00	$ 15,000.00
Erosion Control	1	*LS*	$ 23,000.00	$ 23,000.00
Utility Relocations (approximately 4 overhead utility relocations plus 1 hydrant and 2 misc. utility relocations)	1	*LS*	$ 65,000.00	$ 65,000.00
Maintenance of Traffic	1	*LS*	$ 15,000.00	$ 15,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 61,100.00	$ 61,100.00
Clearing ROW (3%)	1	*LS*	$ 38,500.00	$ 38,500.00
Contingency (15%)	1	*LS*	$ 198,200.00	$ 198,200.00
Total Estimated ROUTE A EAST Construction Cost Opinion (1) (2)				***$ 1,518,900.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE A SOUTH Phase 1 - Construction Cost Opinion 2.00 Miles

Description	Qty	Unit	Unit Cost	Cost
8' Wide Asphalt Trail w/ 2' Shoulders	0.75	*Miles*	$ 190,000.00	$ 142,500.00
10' Wide Asphalt Trail w/ 2' Shoulders	1.25	*Miles*	$ 240,000.00	$ 300,000.00
Sidewalk, Remove	1285.0	*SYS*	$ 15.00	$ 19,300.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	148.0	*SYS*	$ 85.00	$ 12,600.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	4	*EA*	$ 5,000.00	$ 20,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	7	*EA*	$ 2,000.00	$ 14,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	4	*EA*	$ 1,200.00	$ 4,800.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	16	*EA*	$ 500.00	$ 8,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	16	*EA*	$ 100.00	$ 1,600.00
Trail Identification Signage	4	*EA*	$ 2,500.00	$ 10,000.00
Directory Signage	5	*EA*	$ 2,500.00	$ 12,500.00
Mile Markers @ 1/4 mile intervals	8	*EA*	$ 500.00	$ 4,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	2	*Miles*	$ 6,000.00	$ 12,000.00
General Trail Landscape Work	1	*LS*	$ 25,000.00	$ 25,000.00
Wood Railing, 42" Tall	445	*LFT*	$ 40.00	$ 17,800.00
Guardrail, Remove	25	*LFT*	$ 10.00	$ 250.00
Inlet **(1 EVERY 100 LFT NEW PIPE)**	1	*EA*	$ 2,000.00	$ 2,000.00
18" RCP	85	*LFT*	$ 40.00	$ 3,400.00
Modular Block Wall (includes Reinforcing and Excavation)	300	*SYS*	$ 400.00	$ 120,000.00
Mitigation Costs for Elliot Ditch	1.75	*ACRE*	$ 150,000.00	$ 262,500.00
Earthwork	1	*LS*	$ 50,000.00	$ 50,000.00
Erosion Conc	1	*LS*	$ 17,000.00	$ 17,000.00
Utility Relocations (approximately 2 misc. utility relocations)	1	*LS*	$ 20,000.00	$ 20,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 54,500.00	$ 54,500.00
Clearing ROW (3%)	1	*LS*	$ 34,400.00	$ 34,400.00
Contingency (15%)	1	*LS*	$ 176,800.00	$ 176,800.00
Total Estimated ROUTE A SOUTH Phase 1 Construction Cost Opinion (1) (2)				***$ 1,355,000.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE A SOUTH Phase 2 - Construction Cost Opinion 1.00 Miles 1 Bridge

Description	Qty	Unit	Unit Cost	Cost
8' Wide Asphalt Trail w/ 2' Shoulders	1.00	*Miles*	$ 190,000.00	$ 190,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	74.0	*SYS*	$ 85.00	$ 6,300.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	2	*EA*	$ 5,000.00	$ 10,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	8	*EA*	$ 500.00	$ 4,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	8	*EA*	$ 100.00	$ 800.00
Trail Identification Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	3	*EA*	$ 500.00	$ 1,500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1	*Miles*	$ 6,000.00	$ 6,000.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Con/Span Structure Under Railroad				
Proposed CON / SPAN Structure (80' L x 16' W x 12' H) @ **RR**	80	*LFT*	$ 7,000.00	$ 560,000.00
Wood Railing, 42" Tall (with handrail)*(185 LFT x 4 sides)*	740	*LFT*	$ 50.00	$ 37,000.00
MSE Wall with facing	2,640	*SFT*	$ 50.00	$ 132,000.00
Mitigation Costs for Elliot Ditch	1.55	*ACRE*	$ 150,000.00	$ 232,500.00
Earthwork	1	*LS*	$ 75,000.00	$ 75,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations (approximately # overhead utility relocations plus # hydrant relocations)	1	*LS*	$ 8,000.00	$ 8,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 65,000.00	$ 65,000.00
Clearing ROW (3%)	1	*LS*	$ 40,900.00	$ 40,900.00
Contingency (15%)	1	*LS*	$ 210,600.00	$ 210,600.00
Total Estimated ROUTE A SOUTH Phase 2 Construction Cost Opinion (1) (2)				***$ 1,614,600.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE A WEST Phase 1- Construction Cost Opinion 0.55 Miles 1 Bridge

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.55	*Miles*	$ 240,000.00	$ 132,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	1	*EA*	$ 2,000.00	$ 2,000.00
Mile Markers @ 1/4 mile intervals	2	*EA*	$ 500.00	$ 1,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.55	*Miles*	$ 6,000.00	$ 3,300.00
General Trail Landscape Work	1	*LS*	$ 5,000.00	$ 5,000.00
Pedestrian Bridge Over Railroad				
Proposed Bridge Structure [($1200 x LFT) x 1.5] @ **RAILROAD**	60	*LFT*	$ 1,800.00	$ 108,000.00
Wood Railing, 42" Tall (with handrail)	2,660	*LFT*	$ 50.00	$ 133,000.00
MSE Wall with facing	41,720	*SFT*	$ 40.00	$ 1,668,800.00
Fill for Wall	24,660	*CYS*	$ 18.00	$ 443,900.00
Mitigation Costs **(for trail over railroad and along wooded area with bridges)**	0.9	*ACRE*	$ 150,000.00	$ 135,000.00
Earthwork	1	*LS*	$ 20,000.00	$ 20,000.00
Erosion Control	1	*LS*	$ 8,000.00	$ 8,000.00
Utility Relocations (approximately 5 overhead utility relocations)	1	*LS*	$ 10,000.00	$ 10,000.00
Maintenance of Traffic	1	*LS*	$ 8,000.00	$ 8,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 133,900.00	$ 133,900.00
Clearing ROW (3%)	1	*LS*	$ 84,400.00	$ 84,400.00
Contingency (15%)	1	*LS*	$ 434,500.00	$ 434,500.00
Total Estimated ROUTE A WEST Construction Cost Opinion (1) (2)				***$ 3,330,800.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE A WEST Phase 2 - Construction Cost Opinion 1.50 Miles 2 Bridges

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.50	*Miles*	$ 240,000.00	$ 360,000.00
Asphalt Excavation *(5,750 SFT on existing trail in Shamrock Park)*	215	*CYS*	$ 55.00	$ 11,900.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING PLUS RR CROSSING)**	148.0	*SYS*	$ 85.00	$ 12,600.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	1	*EA*	$ 5,000.00	$ 5,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	1	*EA*	$ 40,000.00	$ 40,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	2	*EA*	$ 2,000.00	$ 4,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	2	*EA*	$ 1,200.00	$ 2,400.00
At Grade Railroad Crossing	2	*EA*	$ 40,000.00	$ 80,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	8	*EA*	$ 500.00	$ 4,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	8	*EA*	$ 100.00	$ 800.00
Trail Identification Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Directory Signage	4	*EA*	$ 2,500.00	$ 10,000.00
Mile Markers @ 1/4 mile intervals	5	*EA*	$ 500.00	$ 2,500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.5	*Miles*	$ 6,000.00	$ 9,000.00
General Trail Landscape Work	1	*LS*	$ 10,000.00	$ 10,000.00
Bollard and Chain Relocation	145	*LFT*	$ 20.00	$ 2,900.00
Fence Relocation	1,720	*LFT*	$ 10.00	$ 17,200.00
Fence Gate Relocation	3	*LS*	$ 1,000.00	$ 3,000.00
Modular Block Wall (includes Reinforcing and Excavation)	95	*SYS*	$ 400.00	$ 38,000.00
Pedestrian Bridge Over Creeks				
Proposed Bridge Structure [($1200 x LFT) x 1.5] (up to 120 LFT)	20	*LFT*	$ 1,800.00	$ 36,000.00
Proposed Bridge Structure [($1200 x LFT) x 1.5] (up to 120 LFT)	20	*LFT*	$ 1,800.00	$ 36,000.00
Wood Railing, 42" Tall	60	*LFT*	$ 40.00	$ 2,400.00
Mitigation Costs **(for trail over railroad and along wooded area with bridges)**	1.2	*ACRE*	$ 150,000.00	$ 180,000.00
Earthwork	1	*LS*	$ 35,000.00	$ 35,000.00
Erosion Control	1	*LS*	$ 15,000.00	$ 15,000.00
Utility Relocations (approximately 5 overhead utility relocations)	1	*LS*	$ 50,000.00	$ 50,000.00
Maintenance of Traffic	1	*LS*	$ 8,000.00	$ 8,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 49,100.00	$ 49,100.00
Clearing ROW (3%)	1	*LS*	$ 30,900.00	$ 30,900.00
Contingency (15%)	1	*LS*	$ 159,200.00	$ 159,200.00
Total Estimated ROUTE A WEST Construction Cost Opinion (1) (2)				***$ 1,219,900.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

TRAIL CONSTRUCTION PHASING AND COSTS

LAFAYETTE TRAILS MASTER PLAN: ROUTE B EAST - Construction Cost Opinion 2.75 Miles 1 Bridge

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	2.75	*Miles*	$ 240,000.00	$ 660,000.00
Sidewalk, Remove	2625.0	*SYS*	$ 15.00	$ 39,400.00
Curb, Remove	430	*LFT*	$ 15.00	$ 6,500.00
Curb	430	*LFT*	$ 20.00	$ 8,600.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	222.0	*SYS*	$ 85.00	$ 18,900.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	5	*EA*	$ 5,000.00	$ 25,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	1	*EA*	$ 40,000.00	$ 40,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	7	*EA*	$ 2,000.00	$ 14,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	7	*EA*	$ 1,200.00	$ 8,400.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	24	*EA*	$ 500.00	$ 12,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	24	*EA*	$ 100.00	$ 2,400.00
Trail Identification Signage	6	*EA*	$ 2,500.00	$ 15,000.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	11	*EA*	$ 500.00	$ 5,500.00
Minor Trailhead @ Church (or Meijer)	1	*LS*	$ 15,000.00	$ 15,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	2.75	*Miles*	$ 6,000.00	$ 16,500.00
General Trail Landscape Work	1	*LS*	$ 30,000.00	$ 30,000.00
Inlet **(1 EVERY 100 LFT NEW PIPE)**	14	*EA*	$ 2,000.00	$ 28,000.00
18" RCP	1,410	*LFT*	$ 40.00	$ 56,400.00
Fence Relocation	545	*LFT*	$ 10.00	$ 5,500.00
Modular Block Wall (includes Reinforcing and Excavation)	775	*SYS*	$ 400.00	$ 310,000.00
Restriping for Road Re-Align **[1000 LFT - YELLOW CENTER LINE (DOUBLE), 2 DASHED WHITE]**	4000	*LFT*	$ 2.50	$ 10,000.00
Earthwork	1	*LS*	$ 20,000.00	$ 20,000.00
Erosion Control	1	*LS*	$ 35,000.00	$ 35,000.00
Utility Relocations (approximately 1 overhead utility relocations plus 2 hydrant relocations)	1	*LS*	$ 20,000.00	$ 20,000.00
Maintenance of Traffic	1	*LS*	$ 15,000.00	$ 15,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 71,200.00	$ 71,200.00
Clearing ROW (3%)	1	*LS*	$ 44,800.00	$ 44,800.00
Contingency (15%)	1	*LS*	$ 230,800.00	$ 230,800.00
Total Estimated ROUTE B EAST Construction Cost Opinion (1) (2)				***$ 1,768,900.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE B MIDDLE Phase 1 - Construction Cost Opinion 1.75 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.75	*Miles*	$ 240,000.00	$ 420,000.00
Sidewalk, Remove	1935.0	*SYS*	$ 15.00	$ 29,100.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	333.0	*SYS*	$ 85.00	$ 28,400.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	9	*EA*	$ 5,000.00	$ 45,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	20	*EA*	$ 2,000.00	$ 40,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	3	*EA*	$ 1,200.00	$ 3,600.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	36	*EA*	$ 500.00	$ 18,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	36	*EA*	$ 100.00	$ 3,600.00
Trail Identification Signage	9	*EA*	$ 2,500.00	$ 22,500.00
Mile Markers @ 1/4 mile intervals	7	*EA*	$ 500.00	$ 3,500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.75	*Miles*	$ 6,000.00	$ 10,500.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Inlet **(1 EVERY 100 LFT NEW PIPE)**	8	*EA*	$ 2,000.00	$ 16,000.00
18" RCP	775	*LFT*	$ 40.00	$ 31,000.00
Culvert	45	*LFT*	$ 125.00	$ 5,700.00
Fence Removal	10	*LFT*	$ 5.00	$ 50.00
Fence Relocation	215	*LFT*	$ 10.00	$ 2,200.00
Fence Gate Relocation	1	*LS*	$ 1,000.00	$ 1,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 15,000.00	$ 15,000.00
Utility Relocations (approximately 4 overhead utility relocations plus 2 hydrant relocations)	1	*LS*	$ 50,000.00	$ 50,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 39,100.00	$ 39,100.00
Clearing ROW (3%)	1	*LS*	$ 24,600.00	$ 24,600.00
Contingency (15%)	1	*LS*	$ 126,600.00	$ 126,600.00
Total Estimated ROUTE B MIDDLE Phase 1 Construction Cost Opinion (1) (2)				***$ 970,500.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE B MIDDLE Phase 2 - Construction Cost Opinion 0.25 Miles Trail 1.75 Miles Bike Lane

Description	Qty	Unit	Unit Cost	Cost
8' Wide Asphalt Trail w/ 2' Shoulders	0.25	*Miles*	$ 190,000.00	$ 47,500.00
Sidewalk, Remove	115.0	*SYS*	$ 15.00	$ 1,800.00
Bike Lane Symbol **(EVERY 350 LFT)** ***(9,240 LFT)***	27.0	*EA*	$ 200.00	$ 5,400.00
Bike Lane Sign **(EVERY 350 LFT)**	27.0	*EA*	$ 150.00	$ 4,100.00
Restriping for Bike Lane **[YELLOW CENTER LINE (DOUBLE), BIKE LANE LINE]**	18480	*LFT*	$ 2.50	$ 46,200.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING PLUS RR CROSSING)**	148.0	*SYS*	$ 85.00	$ 12,600.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	2	*EA*	$ 5,000.00	$ 10,000.00
Intersection Improvements @ - Level 3 (Median, Signal, Signage, Pavement Markings)	1	*EA*	$ 90,000.00	$ 90,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	6	*EA*	$ 2,000.00	$ 12,000.00
At Grade Railroad Crossing	1	*EA*	$ 40,000.00	$ 40,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	12	*EA*	$ 500.00	$ 6,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	12	*EA*	$ 100.00	$ 1,200.00
Trail Identification Signage	4	*EA*	$ 2,500.00	$ 10,000.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	8	*EA*	$ 500.00	$ 4,000.00
Curb Removal	130	*LFT*	$ 15.00	$ 2,000.00
Curb	980	*LFT*	$ 20.00	$ 19,600.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.25	*Miles*	$ 6,000.00	$ 1,500.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Inlet **(1 EVERY 100 LFT NEW PIPE) (PLUS ONE BEEHIVE AT END)**	11	*EA*	$ 2,000.00	$ 22,000.00
18" RCP	980	*LFT*	$ 40.00	$ 39,200.00
Wrought Iron Style Fence (Aluminum), 6' Tall	980	*LFT*	$ 38.00	$ 37,300.00
Earthwork	1	*LS*	$ 5,000.00	$ 5,000.00
Erosion Control	1	*LS*	$ 5,000.00	$ 5,000.00
Utility Relocations (approximately 1 overhead utility relocations)	1	*LS*	$ 15,000.00	$ 15,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 23,300.00	$ 23,300.00
Clearing ROW (3%)	1	*LS*	$ 14,700.00	$ 14,700.00
Contingency (15%)	1	*LS*	$ 75,500.00	$ 75,500.00
Total Estimated ROUTE B MIDDLE Phase 2 Construction Cost Opinion (1) (2)				***$ 578,400.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE B WEST Phase 1 - Construction Cost Opinion 1.50 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.50	*Miles*	$ 240,000.00	$ 360,000.00
Sidewalk, Remove	2980.0	*SYS*	$ 15.00	$ 44,700.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	296.0	*SYS*	$ 85.00	$ 25,200.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	8	*EA*	$ 5,000.00	$ 40,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	12	*EA*	$ 2,000.00	$ 24,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	3	*EA*	$ 1,200.00	$ 3,600.00
At Grade Railroad Crossing	2	*EA*	$ 40,000.00	$ 80,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	32	*EA*	$ 500.00	$ 16,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	32	*EA*	$ 100.00	$ 3,200.00
Trail Identification Signage	8	*EA*	$ 2,500.00	$ 20,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	6	*EA*	$ 500.00	$ 3,000.00
Shared Use Trailhead @ Columbian Park	1	*LS*	$ 10,000.00	$ 10,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.5	*Miles*	$ 6,000.00	$ 9,000.00
General Trail Landscape Work	1	*LS*	$ 60,000.00	$ 60,000.00
Fence Relocation	890	*LFT*	$ 10.00	$ 8,900.00
Fence Gate Relocation	1	*LS*	$ 1,000.00	$ 1,000.00
Modular Block Wall (includes Reinforcing and Excavation)	270	*SYS*	$ 400.00	$ 108,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 13,000.00	$ 13,000.00
Utility Relocations (approximately 7 overhead utility relocations plus 2 hydrant relocations)	1	*LS*	$ 80,000.00	$ 80,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 46,800.00	$ 46,800.00
Clearing ROW (3%)	1	*LS*	$ 29,500.00	$ 29,500.00
Contingency (15%)	1	*LS*	$ 151,700.00	$ 151,700.00
Total Estimated ROUTE B WEST Phase 1 Construction Cost Opinion (1) (2)				***$ 1,162,600.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE B WEST Phase 2 - Construction Cost Opinion 0.75 Miles

Description	Qty	Unit	Unit Cost	Cost
8' Wide Asphalt Trail w/ 2' Shoulders	0.75	*Miles*	$ 190,000.00	$ 142,500.00
Sidewalk, Remove	1805.0	*SYS*	$ 15.00	$ 27,100.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	148.0	*SYS*	$ 85.00	$ 12,600.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	4	*EA*	$ 5,000.00	$ 20,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	2	*EA*	$ 2,000.00	$ 4,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	7	*EA*	$ 1,200.00	$ 8,400.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	16	*EA*	$ 500.00	$ 8,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	16	*EA*	$ 100.00	$ 1,600.00
Trail Identification Signage	4	*EA*	$ 2,500.00	$ 10,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	3	*EA*	$ 500.00	$ 1,500.00
Shared Use Trailhead @ Murdock Park	1	*LS*	$ 10,000.00	$ 10,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.75	*Miles*	$ 6,000.00	$ 4,500.00
General Trail Landscape Work	1	*LS*	$ 25,000.00	$ 25,000.00
Fence Removal	10	*LFT*	$ 5.00	$ 50.00
Fence Relocation	65	*LFT*	$ 10.00	$ 650.00
Retaining Wall, Remove	295	*LFT*	$ 50.00	$ 14,800.00
Modular Block Wall (includes Reinforcing and Excavation)	510	*SYS*	$ 400.00	$ 204,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 8,000.00	$ 8,000.00
Utility Relocations (approximately 8 overhead utility relocations plus 1 hydrant relocations)	1	*LS*	$ 85,000.00	$ 85,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 30,700.00	$ 30,700.00
Clearing ROW (3%)	1	*LS*	$ 19,400.00	$ 19,400.00
Contingency (15%)	1	*LS*	$ 99,500.00	$ 99,500.00
Total Estimated ROUTE B WEST Phase 2 Construction Cost Opinion (1) (2)				***$ 762,300.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE C SOUTH Phase 1 - Construction Cost Opinion 1.25 Miles

Description	Qty	Unit	Unit Cost	Cost
8' Wide Asphalt Trail w/ 2' Shoulders	1.00	*Miles*	$ 190,000.00	$ 190,000.00
10' Wide Asphalt Trail w/ 2' Shoulders	0.25	*Miles*	$ 240,000.00	$ 60,000.00
Sidewalk, Remove	2915.0	*SYS*	$ 15.00	$ 43,800.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING PLUS RR CROSSING)**	296.0	*SYS*	$ 85.00	$ 25,200.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	7	*EA*	$ 5,000.00	$ 35,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	4	*EA*	$ 2,000.00	$ 8,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	52	*EA*	$ 1,200.00	$ 62,400.00
At Grade Railroad Crossing	1	*EA*	$ 40,000.00	$ 40,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	32	*EA*	$ 500.00	$ 16,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	32	*EA*	$ 100.00	$ 3,200.00
Trail Identification Signage	7	*EA*	$ 2,500.00	$ 17,500.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	5	*EA*	$ 500.00	$ 2,500.00
Minor Trailhead @ Intersection of Existing Trail, New Trail and RR	1	*LS*	$ 15,000.00	$ 15,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.25	*Miles*	$ 6,000.00	$ 7,500.00
General Trail Landscape Work	1	*LS*	$ 35,000.00	$ 35,000.00
Fence Removal	15	*LFT*	$ 5.00	$ 75.00
Fence Relocation	85	*LFT*	$ 10.00	$ 850.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations (approximately 1 overhead utility relocations plus 4 hydrant relocations)	1	*LS*	$ 30,000.00	$ 30,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 31,500.00	$ 31,500.00
Clearing ROW (3%)	1	*LS*	$ 19,900.00	$ 19,900.00
Contingency (15%)	1	*LS*	$ 102,200.00	$ 102,200.00
Total Estimated ROUTE C SOUTH Phase 1 Construction Cost Opinion (1) (2)				***$ 783,200.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE C SOUTH Phase 2 - Construction Cost Opinion 0.75 Miles 1 Mile Sharrow

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.75	*Miles*	$ 240,000.00	$ 180,000.00
Sidewalk, 4" (5' x 380') - includes compacted aggregate	215.0	*SYS*	$ 50.00	$ 10,800.00
Sidewalk, Remove	390.0	*SYS*	$ 15.00	$ 5,900.00
Sharrow Pavement Marking **(4 PER MAJOR INTERSECTION + EVERY 250 LFT) -** ***(5280 LFT Sharrow)***	34	*EA*	$ 200.00	$ 6,800.00
Sharrow Signage **(2 PER INTERSECTION)**	6	*EA*	$ 150.00	$ 900.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	148.0	*SYS*	$ 85.00	$ 12,600.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	3	*EA*	$ 5,000.00	$ 15,000.00
Intersection Improvements @ - Level 3 (Median, Signal, Signage, Pavement Markings)	1	*EA*	$ 90,000.00	$ 90,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	2	*EA*	$ 2,000.00	$ 4,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	1	*EA*	$ 1,200.00	$ 1,200.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	16	*EA*	$ 500.00	$ 8,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	16	*EA*	$ 100.00	$ 1,600.00
Trail Identification Signage	4	*EA*	$ 2,500.00	$ 10,000.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals *(includes new trail, existing trail and sharrow)*	7	*EA*	$ 500.00	$ 3,500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.75	*Miles*	$ 6,000.00	$ 4,500.00
General Trail Landscape Work	1	*LS*	$ 30,000.00	$ 30,000.00
Earthwork	1	*LS*	$ 15,000.00	$ 15,000.00
Erosion Control	1	*LS*	$ 15,000.00	$ 15,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 21,800.00	$ 21,800.00
Clearing ROW (3%)	1	*LS*	$ 13,800.00	$ 13,800.00
Contingency (15%)	1	*LS*	$ 70,700.00	$ 70,700.00
Total Estimated ROUTE C SOUTH Phase 2 Construction Cost Opinion (1) (2)				***$ 541,600.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE C NORTH - Construction Cost Opinion 1.50 Miles

Description	Qty	Unit	Unit Cost		
10' Wide Asphalt Trail w/ 2' Shoulders	1.50	*Miles*	$ 240,000.00	$	360,000.00
Sidewalk, Remove	1965.0	*SYS*	$ 15.00	$	29,500.00
Restriping for Road Re-Work **[YELLOW CENTER LINE (DOUBLE)]**	7200	*LFT*	$ 2.50	$	18,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	222.0	*SYS*	$ 85.00	$	18,900.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	4	*EA*	$ 5,000.00	$	20,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	2	*EA*	$ 40,000.00	$	80,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	14	*EA*	$ 2,000.00	$	28,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	3	*EA*	$ 1,200.00	$	3,600.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	24	*EA*	$ 500.00	$	12,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	24	*EA*	$ 100.00	$	2,400.00
Trail Identification Signage	6	*EA*	$ 2,500.00	$	15,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$	2,500.00
Directory Signage	1	*EA*	$ 2,500.00	$	2,500.00
Mile Markers @ 1/4 mile intervals	6	*EA*	$ 500.00	$	3,000.00
Shared Use Trailhead @ Stockton Park	1	*LS*	$ 10,000.00	$	10,000.00
Road Diet Along Elmwood Avenue					
Curb Removal	3,600	*LFT*	$ 15.00	$	54,000.00
Curb	3,600	*LFT*	$ 20.00	$	72,000.00
Sawcut, Full Depth	3,600	*LFT*	$ 5.00	$	18,000.00
Asphalt Excavation *(16,800 SFT)* ***[assumes an average of 1 foot depth]***	625	*CYS*	$ 55.00	$	34,400.00
Asphalt Patching *(16,800 SFT)* ***[assumes an average of 6 inches deep with 6 inches of stone]***	1,235	*TON*	$ 90.00	$	111,200.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.5	*Miles*	$ 6,000.00	$	9,000.00
General Trail Landscape Work	1	*LS*	$ 65,000.00	$	65,000.00
Wood Railing, 42" Tall	318	*LFT*	$ 40.00	$	12,800.00
Fence Relocation	870	*LFT*	$ 10.00	$	8,700.00
Earthwork	1	*LS*	$ 10,000.00	$	10,000.00
Erosion Control	1	*LS*	$ 13,000.00	$	13,000.00
Utility Relocations (approximately 4 overhead utility relocations plus 1 hydrant relocations)	1	*LS*	$ 45,000.00	$	45,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$	10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 53,500.00	$	53,500.00
Clearing ROW (3%)	1	*LS*	$ 33,700.00	$	33,700.00
Contingency (15%)	1	*LS*	$ 173,400.00	$	173,400.00
Total Estimated ROUTE C NORTH Construction Cost Opinion (1) (2)				***$***	***1,329,100.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE D - Construction Cost Opinion 2.25 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	2.25	*Miles*	$ 240,000.00	$ 540,000.00
Sidewalk, Remove	1935.0	*SYS*	$ 15.00	$ 29,100.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	296.0	*SYS*	$ 85.00	$ 25,200.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	7	*EA*	$ 5,000.00	$ 35,000.00
Intersection Improvements @ - Level 3 (Median, Signal, Signage, Pavement Markings)	1	*EA*	$ 90,000.00	$ 90,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	5	*EA*	$ 2,000.00	$ 10,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	16	*EA*	$ 1,200.00	$ 19,200.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	32	*EA*	$ 500.00	$ 16,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	32	*EA*	$ 100.00	$ 3,200.00
Trail Identification Signage	8	*EA*	$ 2,500.00	$ 20,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	9	*EA*	$ 500.00	$ 4,500.00
Shared Use Trailhead @ CAT Park	1	*LS*	$ 10,000.00	$ 10,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	2.25	*Miles*	$ 6,000.00	$ 13,500.00
General Trail Landscape Work	1	*LS*	$ 25,000.00	$ 25,000.00
Culvert (or pipe extension)	25	*LFT*	$ 125.00	$ 3,200.00
Fence Removal	52	*LFT*	$ 5.00	$ 260.00
Fence Relocation	235	*LFT*	$ 10.00	$ 2,400.00
Earthwork	1	*LS*	$ 15,000.00	$ 15,000.00
Erosion Control	1	*LS*	$ 20,000.00	$ 20,000.00
Utility Relocations (approximately 4 overhead utility relocations)	1	*LS*	$ 40,000.00	$ 40,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 47,000.00	$ 47,000.00
Clearing ROW (3%)	1	*LS*	$ 29,600.00	$ 29,600.00
Contingency (15%)	1	*LS*	$ 152,400.00	$ 152,400.00
Total Estimated ROUTE D Construction Cost Opinion (1) (2)				***$ 1,168,100.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.

2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE E - Construction Cost Opinion 2.50 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	2.50	*Miles*	$ 240,000.00	$ 600,000.00
Sidewalk, Remove	600.0	*SYS*	$ 15.00	$ 9,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	148.0	*SYS*	$ 85.00	$ 12,600.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	4	*EA*	$ 5,000.00	$ 20,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	2	*EA*	$ 2,000.00	$ 4,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	16	*EA*	$ 500.00	$ 8,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	16	*EA*	$ 100.00	$ 1,600.00
Trail Identification Signage	4	*EA*	$ 2,500.00	$ 10,000.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	10	*EA*	$ 500.00	$ 5,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	2.5	*Miles*	$ 6,000.00	$ 15,000.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Mitigation Costs **(for trail along Berlovitz Park)**	0.75	*ACRE*	$ 150,000.00	$ 112,500.00
Earthwork	1	*LS*	$ 25,000.00	$ 25,000.00
Erosion Control	1	*LS*	$ 23,000.00	$ 23,000.00
Utility Relocations (approximately 2 overhead utility relocations)	1	*LS*	$ 20,000.00	$ 20,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 44,600.00	$ 44,600.00
Clearing ROW (3%)	1	*LS*	$ 28,100.00	$ 28,100.00
Contingency (15%)	1	*LS*	$ 144,600.00	$ 144,600.00
Total Estimated ROUTE E Construction Cost Opinion (1) (2)				***$ 1,108,000.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE F - Construction Cost Opinion 1.00 Miles 1 Bridge

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.00	*Miles*	$ 240,000.00	$ 240,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	4	*EA*	$ 2,000.00	$ 8,000.00
Trail Identification Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	4	*EA*	$ 500.00	$ 2,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1	*Miles*	$ 6,000.00	$ 6,000.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Pedestrian Bridge Over Railroad				
Proposed Bridge Structure [($1200 x LFT) x 1.5] @ **RAILROAD**	60	*LFT*	$ 1,800.00	$ 108,000.00
Wood Railing, 42" Tall	2,260	*LFT*	$ 40.00	$ 90,400.00
MSE Wall with facing	1,800	*SFT*	$ 50.00	$ 90,000.00
Fill for Wall	26,720	*CYS*	$ 18.00	$ 481,000.00
Earthwork	1	*LS*	$ 25,000.00	$ 25,000.00
Erosion Control	1	*LS*	$ 15,000.00	$ 15,000.00
Utility Relocations (approximately 2 overhead utility relocations)	1	*LS*	$ 30,000.00	$ 30,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 56,300.00	$ 56,300.00
Clearing ROW (3%)	1	*LS*	$ 35,500.00	$ 35,500.00
Contingency (15%)	1	*LS*	$ 182,600.00	$ 182,600.00
Total Estimated ROUTE F Construction Cost Opinion (1) (2)				***$ 1,399,800.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.

2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE G Phase 1 - Construction Cost Opinion 1.00 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.00	*Miles*	$ 240,000.00	$ 240,000.00
Sidewalk, Remove	2555.0	*SYS*	$ 15.00	$ 38,400.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	296.0	*SYS*	$ 85.00	$ 25,200.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	7	*EA*	$ 5,000.00	$ 35,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	1	*EA*	$ 40,000.00	$ 40,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	7	*EA*	$ 2,000.00	$ 14,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	40	*EA*	$ 1,200.00	$ 48,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	32	*EA*	$ 500.00	$ 16,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	32	*EA*	$ 100.00	$ 3,200.00
Trail Identification Signage	8	*EA*	$ 2,500.00	$ 20,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	4	*EA*	$ 500.00	$ 2,000.00
Shared Use Trailhead @ Kennedy Park	1	*LS*	$ 10,000.00	$ 10,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1	*Miles*	$ 6,000.00	$ 6,000.00
General Trail Landscape Work	1	*LS*	$ 30,000.00	$ 30,000.00
Fence Removal	10	*LFT*	$ 5.00	$ 50.00
Fence Relocation	165	*LFT*	$ 10.00	$ 1,650.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 8,000.00	$ 8,000.00
Utility Relocations (approximately 2 overhead utility relocations)	1	*LS*	$ 25,000.00	$ 25,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 29,400.00	$ 29,400.00
Clearing ROW (3%)	1	*LS*	$ 18,600.00	$ 18,600.00
Contingency (15%)	1	*LS*	$ 95,400.00	$ 95,400.00
Total Estimated ROUTE G Phase 1 Construction Cost Opinion (1) (2)				***$ 730,900.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE G Phase 2 - Construction Cost Opinion 1.00 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.00	*Miles*	$ 240,000.00	$ 240,000.00
Sidewalk, Remove	2845.0	*SYS*	$ 15.00	$ 42,700.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING, PLUS RR CROSSING)**	185.0	*SYS*	$ 85.00	$ 15,800.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	3	*EA*	$ 5,000.00	$ 15,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	1	*EA*	$ 40,000.00	$ 40,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	18	*EA*	$ 2,000.00	$ 36,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	1	*EA*	$ 1,200.00	$ 1,200.00
At Grade Railroad Crossing	1	*EA*	$ 40,000.00	$ 40,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	16	*EA*	$ 500.00	$ 8,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	16	*EA*	$ 100.00	$ 1,600.00
Trail Identification Signage	4	*EA*	$ 2,500.00	$ 10,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	3	*EA*	$ 2,500.00	$ 7,500.00
Mile Markers @ 1/4 mile intervals	4	*EA*	$ 500.00	$ 2,000.00
Shared Use Trailhead @ Armstrong Park	1	*LS*	$ 10,000.00	$ 10,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1	*Miles*	$ 6,000.00	$ 6,000.00
General Trail Landscape Work	1	*LS*	$ 30,000.00	$ 30,000.00
Fence Removal	10	*LFT*	$ 5.00	$ 50.00
Fence Relocation	225	*LFT*	$ 10.00	$ 2,250.00
Fence Gate Relocation	3	*LS*	$ 1,000.00	$ 3,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 8,000.00	$ 8,000.00
Utility Relocations (approximately 5 overhead utility relocations plus 1 hydrant and 1 misc. utility relocations)	1	*LS*	$ 60,000.00	$ 60,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 30,100.00	$ 30,100.00
Clearing ROW (3%)	1	*LS*	$ 19,000.00	$ 19,000.00
Contingency (15%)	1	*LS*	$ 97,700.00	$ 97,700.00
Total Estimated ROUTE G Phase 2 Construction Cost Opinion (1) (2)				***$ 748,400.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE H - Construction Cost Opinion (ROAD DIET) 1.25 Miles 1.25 Miles Bike Lane

Description	Qty	Unit	Unit Cost	Cost
8' Wide Asphalt Trail w/ 2' Shoulders	0.50	*Miles*	$ 190,000.00	$ 95,000.00
10' Wide Asphalt Trail w/ 2' Shoulders	0.75	*Miles*	$ 240,000.00	$ 180,000.00
Sidewalk, Remove	2720.0	*SYS*	$ 15.00	$ 40,800.00
Bike Lane Symbol **(EVERY 350 LFT)** ***(6600 LFT total [both ways])***	19	*EA*	$ 200.00	$ 3,800.00
Bike Lane Sign **(EVERY 350 LFT)**	19	*EA*	$ 150.00	$ 2,900.00
Restriping for Road Re-Work **[YELLOW CENTER LINE (DOUBLE)]**	3380	*LFT*	$ 2.50	$ 8,500.00
Restriping for Bike Lane **[YELLOW CENTER LINE (DOUBLE), BIKE LANE LINE]**	13200	*LFT*	$ 2.50	$ 33,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	592.0	*SYS*	$ 85.00	$ 50,400.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	16	*EA*	$ 5,000.00	$ 80,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	8	*EA*	$ 2,000.00	$ 16,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	13	*EA*	$ 1,200.00	$ 15,600.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	64	*EA*	$ 500.00	$ 32,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	64	*EA*	$ 100.00	$ 6,400.00
Trail Identification Signage	16	*EA*	$ 2,500.00	$ 40,000.00
Mile Markers @ 1/4 mile intervals	10	*EA*	$ 500.00	$ 5,000.00
Road Diet Along 13th Street & 18th Street				
Curb Removal	3,205	*LFT*	$ 15.00	$ 48,100.00
Curb	3,205	*LFT*	$ 20.00	$ 64,100.00
Sawcut, Full Depth	3,205	*LFT*	$ 5.00	$ 16,100.00
Asphalt Excavation *(25,350 SFT)* ***[assumes an average of 1 foot depth]***	940	*CYS*	$ 55.00	$ 51,700.00
Asphalt Patching *(25,350 SFT)* ***[assumes an average of 6 inches deep with 6 inches of stone]***	1,860	*TON*	$ 90.00	$ 167,400.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.25	*Miles*	$ 6,000.00	$ 7,500.00
General Trail Landscape Work	1	*LS*	$ 55,000.00	$ 55,000.00
Fence Relocation	485	*LFT*	$ 10.00	$ 4,900.00
Retaining Wall, Remove	60	*LFT*	$ 50.00	$ 3,000.00
Modular Block Wall (includes Reinforcing and Excavation)	80	*SYS*	$ 400.00	$ 32,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 18,000.00	$ 18,000.00
Utility Relocations (approximately 9 overhead utility relocations plus 3 hydrant and 2 misc. utility relocations)	1	*LS*	$ 120,000.00	$ 120,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 60,900.00	$ 60,900.00
Clearing ROW (3%)	1	*LS*	$ 38,400.00	$ 38,400.00
Contingency (15%)	1	*LS*	$ 197,500.00	$ 197,500.00
Total Estimated ROUTE H Construction Cost Opinion (1) (2)				***$ 1,514,000.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE I - Construction Cost Opinion 0.25 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.25	*Miles*	$ 240,000.00	$ 60,000.00
Sidewalk, Remove	410.0	*SYS*	$ 15.00	$ 6,200.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	148.0	*SYS*	$ 85.00	$ 12,600.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	4	*EA*	$ 5,000.00	$ 20,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	5	*EA*	$ 1,200.00	$ 6,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	16	*EA*	$ 500.00	$ 8,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	16	*EA*	$ 100.00	$ 1,600.00
Trail Identification Signage	4	*EA*	$ 2,500.00	$ 10,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	2	*EA*	$ 500.00	$ 1,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.25	*Miles*	$ 6,000.00	$ 1,500.00
General Trail Landscape Work	1	*LS*	$ 10,000.00	$ 10,000.00
Fence Relocation	20	*LFT*	$ 10.00	$ 200.00
Modular Block Wall (includes Reinforcing and Excavation)	120	*SYS*	$ 400.00	$ 48,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 3,000.00	$ 3,000.00
Utility Relocations (approximately 2 overhead utility relocations)	1	*LS*	$ 20,000.00	$ 20,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 11,500.00	$ 11,500.00
Clearing ROW (3%)	1	*LS*	$ 7,200.00	$ 7,200.00
Contingency (15%)	1	*LS*	$ 37,100.00	$ 37,100.00
Total Estimated ROUTE I Construction Cost Opinion (1) (2)				***$ 283,900.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE J Phase 1 - Construction Cost Opinion 1.50 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.50	*Miles*	$ 240,000.00	$ 360,000.00
Sidewalk, Remove	4180.0	*SYS*	$ 15.00	$ 62,700.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING, PLUS RR CROSSING)**	296.0	*SYS*	$ 85.00	$ 25,200.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	7	*EA*	$ 5,000.00	$ 35,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	8	*EA*	$ 2,000.00	$ 16,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	1	*EA*	$ 1,200.00	$ 1,200.00
At Grade Railroad Crossing	1	*EA*	$ 40,000.00	$ 40,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	28	*EA*	$ 500.00	$ 14,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	28	*EA*	$ 100.00	$ 2,800.00
Trail Identification Signage	7	*EA*	$ 2,500.00	$ 17,500.00
Directory Signage	3	*EA*	$ 2,500.00	$ 7,500.00
Mile Markers @ 1/4 mile intervals	6	*EA*	$ 500.00	$ 3,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.5	*Miles*	$ 6,000.00	$ 9,000.00
General Trail Landscape Work	1	*LS*	$ 35,000.00	$ 35,000.00
Guardrail, Remove and Reset	15	*LFT*	$ 30.00	$ 450.00
Fence Removal	20	*LFT*	$ 5.00	$ 100.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 13,000.00	$ 13,000.00
Utility Relocations (approximately 2 overhead utility relocations plus 1 hydrant and 4 misc. utility relocations)	1	*LS*	$ 50,000.00	$ 50,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 35,700.00	$ 35,700.00
Clearing ROW (3%)	1	*LS*	$ 22,500.00	$ 22,500.00
Contingency (15%)	1	*LS*	$ 115,600.00	$ 115,600.00
Total Estimated ROUTE J Phase 1 Construction Cost Opinion (1) (2)				***$ 886,300.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE J Phase 2 - Construction Cost Opinion 0.25 Miles 1.6 Miles Sharrow 2 Miles Bike Lane

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.25	*Miles*	$ 240,000.00	$ 60,000.00
Sidewalk, Remove	180.0	*SYS*	$ 15.00	$ 2,700.00
Sharrow Pavement Marking **(4 PER MAJOR INTERSECTION + EVERY 250 LFT) - *(8,465 LFT Sharrow)***	58	*EA*	$ 200.00	$ 11,600.00
Sharrow Signage **(2 PER INTERSECTION)**	12	*EA*	$ 150.00	$ 1,800.00
Bike Lane Symbol **(EVERY 350 LFT)** ***(10,500 LFT total [both ways])***	30	*EA*	$ 200.00	$ 6,000.00
Bike Lane Sign **(EVERY 350 LFT)**	30	*EA*	$ 150.00	$ 4,500.00
Restriping for Bike Lane **[YELLOW CENTER LINE (DOUBLE), BIKE LANE LINE]**	31500	*LFT*	$ 2.50	$ 78,800.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	185.0	*SYS*	$ 85.00	$ 15,800.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	5	*EA*	$ 5,000.00	$ 25,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	20	*EA*	$ 500.00	$ 10,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP	20	*EA*	$ 100.00	$ 2,000.00
Trail Identification Signage	5	*EA*	$ 2,500.00	$ 12,500.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	16	*EA*	$ 500.00	$ 8,000.00
Shared Use Trailhead @ Triangle Park	1	*LS*	$ 10,000.00	$ 10,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.25	*Miles*	$ 6,000.00	$ 1,500.00
General Trail Landscape Work	1	*LS*	$ 20,000.00	$ 20,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 25,000.00	$ 25,000.00
Utility Relocations (approximately 3 overhead utility relocations plus 1 hydrant relocations)	1	*LS*	$ 40,000.00	$ 40,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 18,100.00	$ 18,100.00
Clearing ROW (3%)	1	*LS*	$ 11,400.00	$ 11,400.00
Contingency (15%)	1	*LS*	$ 58,500.00	$ 58,500.00
Total Estimated ROUTE J Phase 2 Construction Cost Opinion (1) (2)				***$ 448,200.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE K - Construction Cost Opinion 0.50 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.50	*Miles*	$ 240,000.00	$ 120,000.00
Sidewalk, Remove	700	*SYS*	$ 15.00	$ 10,500.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	37.0	*SYS*	$ 85.00	$ 3,200.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	1	*EA*	$ 5,000.00	$ 5,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	5	*EA*	$ 2,000.00	$ 10,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	4	*EA*	$ 500.00	$ 2,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	4	*EA*	$ 100.00	$ 400.00
Trail Identification Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	2	*EA*	$ 500.00	$ 1,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.5	*Miles*	$ 6,000.00	$ 3,000.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 5,000.00	$ 5,000.00
Utility Relocations	1	*LS*	$ 15,000.00	$ 15,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 10,700.00	$ 10,700.00
Clearing ROW (3%)	1	*LS*	$ 6,700.00	$ 6,700.00
Contingency (15%)	1	*LS*	$ 34,500.00	$ 34,500.00
Total Estimated ROUTE K Construction Cost Opinion (1) (2)				***$ 264,500.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE L - Construction Cost Opinion 0.25 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.25	*Miles*	$ 240,000.00	$ 60,000.00
Sidewalk, Remove	485.0	*SYS*	$ 15.00	$ 7,300.00
Restriping for Road Re-Work **[YELLOW CENTER LINE (DOUBLE)]**	2260	*LFT*	$ 2.50	$ 5,700.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	111.0	*SYS*	$ 85.00	$ 9,500.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	3	*EA*	$ 5,000.00	$ 15,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, assume 25'x10')	5	*EA*	$ 2,000.00	$ 10,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	2	*EA*	$ 1,200.00	$ 2,400.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	12	*EA*	$ 500.00	$ 6,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	12	*EA*	$ 100.00	$ 1,200.00
Trail Identification Signage	3	*EA*	$ 2,500.00	$ 7,500.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	2	*EA*	$ 500.00	$ 1,000.00
Road Diet Along Schuyler Avenue & 20th Street				
Curb, Remove	1,130	*LFT*	$ 15.00	$ 17,000.00
Curb	1,130	*LFT*	$ 20.00	$ 22,600.00
Sawcut, Full Depth	1,130	*LFT*	$ 5.00	$ 5,700.00
Asphalt Excavation *(11,300 SFT)* ***[assumes an average of 1 foot depth]***	420	*CYS*	$ 55.00	$ 23,100.00
Asphalt Patching *(11,300 SFT)* ***[assumes an average of 6 inches deep with 6 inches of stone]***	830	*TON*	$ 90.00	$ 74,700.00
Shared Use Trailhead @ McAllister Center	1	*LS*	$ 10,000.00	$ 10,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.25	*Miles*	$ 6,000.00	$ 1,500.00
General Trail Landscape Work	1	*LS*	$ 25,000.00	$ 25,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 5,000.00	$ 5,000.00
Utility Relocations (approximately 3 overhead utility relocations)	1	*LS*	$ 35,000.00	$ 35,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 18,300.00	$ 18,300.00
Clearing ROW (3%)	1	*LS*	$ 11,600.00	$ 11,600.00
Contingency (15%)	1	*LS*	$ 59,300.00	$ 59,300.00
Total Estimated ROUTE L Construction Cost Opinion (1) (2)				***$ 454,400.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE M Phase 1 - Construction Cost Opinion 2.00 Miles 2 Bridges

Description	Qty	Unit	Unit Cost	Cost
8' Wide Asphalt Trail w/ 2' Shoulders (stone where slopes permit)	1.00	*Miles*	$ 190,000.00	$ 190,000.00
10' Wide Asphalt Trail w/ 2' Shoulders	1.00	*Miles*	$ 240,000.00	$ 240,000.00
Sidewalk, Remove	30.0	*SYS*	$ 15.00	$ 500.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	222.0	*SYS*	$ 85.00	$ 18,900.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	4	*EA*	$ 5,000.00	$ 20,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	2	*EA*	$ 40,000.00	$ 80,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	2	*EA*	$ 2,000.00	$ 4,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	24	*EA*	$ 500.00	$ 12,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	24	*EA*	$ 100.00	$ 2,400.00
Trail Identification Signage	6	*EA*	$ 2,500.00	$ 15,000.00
Mile Markers @ 1/4 mile intervals	8	*EA*	$ 500.00	$ 4,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	2	*Miles*	$ 6,000.00	$ 12,000.00
General Trail Landscape Work	1	*LS*	$ 45,000.00	$ 45,000.00
Modular Block Wall (includes Reinforcing and Excavation)	65	*SYS*	$ 400.00	$ 26,000.00
Fence Removal	50	*LFT*	$ 5.00	$ 250.00
Fence Relocation	100	*LFT*	$ 10.00	$ 1,000.00
Fence Gate Relocation	1	*LS*	$ 1,000.00	$ 1,000.00
Proposed Pedestrian Bridges Over Kirkpatrick Ditch				
Proposed Bridge Structure [($1200 x LFT) x 1.5] (up to 120 LFT) @ **KIRKPATRICK DITCH**	25	*LFT*	$ 1,800.00	$ 45,000.00
Wood Railing, 42" Tall	30	*LFT*	$ 40.00	$ 1,200.00
Proposed Bridge Widening Over Elliot Ditch				
Road Bridge Widening **(25 LFT x 15' WIDE)**	375	*SFT*	$ 100.00	$ 37,500.00
Guardrail, Remove and Reset	105	*LFT*	$ 30.00	$ 3,150.00
Mitigation Costs for Elliot Ditch	2.15	*ACRE*	$ 150,000.00	$ 322,500.00
Earthwork	1	*LS*	$ 60,000.00	$ 60,000.00
Erosion Control	1	*LS*	$ 30,000.00	$ 30,000.00
Utility Relocations (approximately 1 hydrant relocations plus other misc. utility relocations)	1	*LS*	$ 20,000.00	$ 20,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 59,900.00	$ 59,900.00
Clearing ROW (3%)	1	*LS*	$ 37,700.00	$ 37,700.00
Contingency (15%)	1	*LS*	$ 194,100.00	$ 194,100.00
Total Estimated ROUTE M Phase 1 Construction Cost Opinion (1) (2)				***$ 1,488,100.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE M Phase 2 - Construction Cost Opinion 1.00 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.00	*Miles*	$ 240,000.00	$ 240,000.00
Sidewalk, Remove	240.0	*SYS*	$ 15.00	$ 3,600.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	111.0	*SYS*	$ 85.00	$ 9,500.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	2	*EA*	$ 5,000.00	$ 10,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	1	*EA*	$ 40,000.00	$ 40,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	8	*EA*	$ 2,000.00	$ 16,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	10	*EA*	$ 1,200.00	$ 12,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	12	*EA*	$ 500.00	$ 6,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	12	*EA*	$ 100.00	$ 1,200.00
Trail Identification Signage	3	*EA*	$ 2,500.00	$ 7,500.00
Mile Markers @ 1/4 mile intervals	4	*EA*	$ 500.00	$ 2,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1	*Miles*	$ 6,000.00	$ 6,000.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations (approximately 10 overhead utility relocations)	1	*LS*	$ 110,000.00	$ 110,000.00
Maintenance of Traffic	1	*LS*	$ 15,000.00	$ 15,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 25,700.00	$ 25,700.00
Clearing ROW (3%)	1	*LS*	$ 16,200.00	$ 16,200.00
Contingency (15%)	1	*LS*	$ 83,400.00	$ 83,400.00
Total Estimated ROUTE M Phase 2 Construction Cost Opinion (1) (2)				***$ 639,100.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.

2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE N - Construction Cost Opinion 0.75 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.75	*Miles*	$ 240,000.00	$ 180,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	37.0	*SYS*	$ 85.00	$ 3,200.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	1	*EA*	$ 5,000.00	$ 5,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	2	*EA*	$ 2,000.00	$ 4,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	1	*EA*	$ 1,200.00	$ 1,200.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	4	*EA*	$ 500.00	$ 2,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	4	*EA*	$ 100.00	$ 400.00
Trail Identification Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	3	*EA*	$ 2,500.00	$ 7,500.00
Mile Markers @ 1/4 mile intervals	3	*EA*	$ 500.00	$ 1,500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.75	*Miles*	$ 6,000.00	$ 4,500.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Wood Railing, 42" Tall	115	*LFT*	$ 40.00	$ 4,600.00
Inlet **(1 EVERY 100 LFT NEW PIPE)**	6	*EA*	$ 2,000.00	$ 12,000.00
18" RCP	630	*LFT*	$ 40.00	$ 25,200.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 15,400.00	$ 15,400.00
Clearing ROW (3%)	1	*LS*	$ 9,700.00	$ 9,700.00
Contingency (15%)	1	*LS*	$ 49,800.00	$ 49,800.00
Total Estimated ROUTE N Construction Cost Opinion (1) (2)				***$ 381,500.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE O - Construction Cost Opinion 1.50 Miles 2 Bridges

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.50	*Miles*	$ 240,000.00	$ 360,000.00
Sidewalk, Remove	1070.0	*SYS*	$ 15.00	$ 16,100.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING & PED BRIDGES)**	333.0	*SYS*	$ 85.00	$ 28,400.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	6	*EA*	$ 5,000.00	$ 30,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	1	*EA*	$ 40,000.00	$ 40,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	2	*EA*	$ 2,000.00	$ 4,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	3	*EA*	$ 1,200.00	$ 3,600.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	28	*EA*	$ 500.00	$ 14,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	28	*EA*	$ 100.00	$ 2,800.00
Trail Identification Signage	7	*EA*	$ 2,500.00	$ 17,500.00
Directory Signage	3	*EA*	$ 2,500.00	$ 7,500.00
Mile Markers @ 1/4 mile intervals	6	*EA*	$ 500.00	$ 3,000.00
Major Trailhead @ Ortman Lane & Poland Hill	1	*LS*	$ 75,000.00	$ 75,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.5	*Miles*	$ 6,000.00	$ 9,000.00
General Trail Landscape Work	1	*LS*	$ 50,000.00	$ 50,000.00
18" RCP	610	*LFT*	$ 40.00	$ 24,400.00
Inlet **(1 EVERY 100 LFT NEW PIPE)**	6	*EA*	$ 2,000.00	$ 12,000.00
Modular Block Wall (includes Reinforcing and Excavation)	325	*SYS*	$ 400.00	$ 130,000.00
Fence Relocation	165	*LFT*	$ 10.00	$ 1,700.00
Proposed Pedestrian Bridges over Elliot Ditch and Creek				
Proposed Bridge Structure [($1200 x LFT) x 1.5] (up to 120 LFT) **@ ELLIOT DITCH**	50	*LFT*	$ 1,800.00	$ 90,000.00
Proposed Bridge Structure [($1200 x LFT) x 1.5] (up to 120 LFT) **@ CREEK**	40	*LFT*	$ 1,800.00	$ 72,000.00
Wood Railing, 42" Tall	120	*LFT*	$ 40.00	$ 4,800.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 15,000.00	$ 15,000.00
Utility Relocations (approximately 4 overhead utility relocations plus 2 hydrant relocations)	1	*LS*	$ 50,000.00	$ 50,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 54,100.00	$ 54,100.00
Clearing ROW (3%)	1	*LS*	$ 34,100.00	$ 34,100.00
Contingency (15%)	1	*LS*	$ 175,400.00	$ 175,400.00
Total Estimated ROUTE O Construction Cost Opinion (1) (2)				***$ 1,344,400.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE P Phase 1 - Construction Cost Opinion 1.25 Miles 1 Bridge

Description	Qty	Unit	Unit Cost	Cost
8' Wide Asphalt Trail w/ 2' Shoulders (stone where slopes permit)	1.25	*Miles*	$ 190,000.00	$ 237,500.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING & RR CROSSING)**	111.0	*SYS*	$ 85.00	$ 9,500.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	3	*EA*	$ 40,000.00	$ 120,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	1	*EA*	$ 2,000.00	$ 2,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	12	*EA*	$ 500.00	$ 6,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	12	*EA*	$ 100.00	$ 1,200.00
Trail Identification Signage	3	*EA*	$ 2,500.00	$ 7,500.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	5	*EA*	$ 500.00	$ 2,500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.25	*Miles*	$ 6,000.00	$ 7,500.00
General Trail Landscape Work	1	*LS*	$ 20,000.00	$ 20,000.00
Proposed Pedestrian Bridge Over Unknown Tributary				
Proposed Bridge Structure [($1200 x LFT) x 1.5] (up to 120 LFT) @ **UNKNOWN TRIBUTARY**	35	*LFT*	$ 1,800.00	$ 63,000.00
Wood Railing, 42" Tall	60	*LFT*	$ 40.00	$ 2,400.00
Mitigation Costs for Durkee's Run	2.35	*ACRE*	$ 150,000.00	$ 352,500.00
Earthwork	1	*LS*	$ 70,000.00	$ 70,000.00
Erosion Control	1	*LS*	$ 40,000.00	$ 40,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 47,900.00	$ 47,900.00
Clearing ROW (3%)	1	*LS*	$ 30,200.00	$ 30,200.00
Contingency (15%)	1	*LS*	$ 155,300.00	$ 155,300.00
Total Estimated ROUTE P Phase 1 Construction Cost Opinion (1) (2)				***$ 1,190,500.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE P Phase 2 - Construction Cost Opinion 1.00 Miles 1 Bridge

Description	Qty	Unit	Unit Cost	Cost
8' Wide Asphalt Trail w/ 2' Shoulders (stone where slopes permit)	1.00	*Miles*	$ 190,000.00	$ 190,000.00
Sidewalk, Remove	825.0	*SYS*	$ 15.00	$ 12,400.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING & RR CROSSING)**	74.0	*SYS*	$ 85.00	$ 6,300.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	1	*EA*	$ 40,000.00	$ 40,000.00
At Grade Railroad Crossing	1	*EA*	$ 40,000.00	$ 40,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	4	*EA*	$ 500.00	$ 2,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	4	*EA*	$ 100.00	$ 400.00
Trail Identification Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	4	*EA*	$ 500.00	$ 2,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1	*Miles*	$ 6,000.00	$ 6,000.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Proposed Pedestrian Bridge Over Durkee's Run				
Proposed Bridge Structure [($1200 x LFT) x 1.5] (up to 120 LFT) @ **SAW MILL RD**	50	*LFT*	$ 1,800.00	$ 90,000.00
Wood Railing, 42" Tall	60	*LFT*	$ 40.00	$ 2,400.00
Mitigation Costs for Durkee's Run	1.85	*ACRE*	$ 150,000.00	$ 277,500.00
Earthwork	1	*LS*	$ 70,000.00	$ 70,000.00
Erosion Control	1	*LS*	$ 40,000.00	$ 40,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 40,500.00	$ 40,500.00
Clearing ROW (3%)	1	*LS*	$ 25,500.00	$ 25,500.00
Contingency (15%)	1	*LS*	$ 131,400.00	$ 131,400.00
Total Estimated ROUTE P Phase 2 Construction Cost Opinion (1) (2)				***$ 1,006,900.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE Q - Construction Cost Opinion 1.25 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.25	*Miles*	$ 240,000.00	$ 300,000.00
Sidewalk, Remove	705.0	*SYS*	$ 15.00	$ 10,600.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	259.0	*SYS*	$ 85.00	$ 22,100.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	7	*EA*	$ 5,000.00	$ 35,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	1	*EA*	$ 2,000.00	$ 2,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	19	*EA*	$ 1,200.00	$ 22,800.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	28	*EA*	$ 500.00	$ 14,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	28	*EA*	$ 100.00	$ 2,800.00
Trail Identification Signage	7	*EA*	$ 2,500.00	$ 17,500.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	5	*EA*	$ 500.00	$ 2,500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.25	*Miles*	$ 6,000.00	$ 7,500.00
General Trail Landscape Work	1	*LS*	$ 30,000.00	$ 30,000.00
Wood Railing, 42" Tall	240	*LFT*	$ 40.00	$ 9,600.00
Inlet **(1 EVERY 100 LFT NEW PIPE)**	6	*EA*	$ 2,000.00	$ 12,000.00
18" RCP	550	*LFT*	$ 40.00	$ 22,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations (approximately 4 overhead utility relocations plus 4 hydrant relocations)	1	*LS*	$ 65,000.00	$ 65,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 30,400.00	$ 30,400.00
Clearing ROW (3%)	1	*LS*	$ 19,200.00	$ 19,200.00
Contingency (15%)	1	*LS*	$ 98,700.00	$ 98,700.00
Total Estimated ROUTE Q Construction Cost Opinion (1) (2)				***$ 756,200.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE R - Construction Cost Opinion 3.50 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	3.50	*Miles*	$ 240,000.00	$ 840,000.00
Sidewalk, Remove	415.0	*SYS*	$ 15.00	$ 6,300.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	222.0	*SYS*	$ 85.00	$ 18,900.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	3	*EA*	$ 5,000.00	$ 15,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	2	*EA*	$ 40,000.00	$ 80,000.00
Intersection Improvements @ - Level 3 (Median, Signal, Signage, Pavement Markings)	1	*EA*	$ 90,000.00	$ 90,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	8	*EA*	$ 2,000.00	$ 16,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	24	*EA*	$ 500.00	$ 12,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	24	*EA*	$ 100.00	$ 2,400.00
Trail Identification Signage	6	*EA*	$ 2,500.00	$ 15,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	14	*EA*	$ 500.00	$ 7,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	3.5	*Miles*	$ 6,000.00	$ 21,000.00
General Trail Landscape Work *(plus tree replacement at IVY TECH)*	1	*LS*	$ 40,000.00	$ 40,000.00
Fence Removal	40	*LFT*	$ 5.00	$ 200.00
Ditch Grading	7,190	*LFT*	$ 7.00	$ 50,400.00
Earthwork	1	*LS*	$ 15,000.00	$ 15,000.00
Erosion Control	1	*LS*	$ 30,000.00	$ 30,000.00
Utility Relocations	1	*LS*	$ 20,000.00	$ 20,000.00
Maintenance of Traffic	1	*LS*	$ 20,000.00	$ 20,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 65,300.00	$ 65,300.00
Clearing ROW (3%)	1	*LS*	$ 41,100.00	$ 41,100.00
Contingency (15%)	1	*LS*	$ 211,600.00	$ 211,600.00
Total Estimated ROUTE R Construction Cost Opinion (1) (2)				***$ 1,622,200.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE S - Construction Cost Opinion 1.75 Miles

Description	Qty	Unit	Unit Cost	Cost
8' Wide Asphalt Trail w/ 2' Shoulders	0.50	*Miles*	$ 190,000.00	$ 95,000.00
10' Wide Asphalt Trail w/ 2' Shoulders	1.25	*Miles*	$ 240,000.00	$ 300,000.00
Sidewalk, Remove	1050.0	*SYS*	$ 15.00	$ 15,800.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	74.0	*SYS*	$ 85.00	$ 6,300.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	2	*EA*	$ 5,000.00	$ 10,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	3	*EA*	$ 2,000.00	$ 6,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	8	*EA*	$ 500.00	$ 4,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	8	*EA*	$ 100.00	$ 800.00
Trail Identification Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	6	*EA*	$ 500.00	$ 3,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.5	*Miles*	$ 6,000.00	$ 9,000.00
General Trail Landscape Work	1	*LS*	$ 25,000.00	$ 25,000.00
Fence Removal	20	*LFT*	$ 5.00	$ 100.00
Guardrail, Remove and Reset	170	*LFT*	$ 30.00	$ 5,100.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 13,000.00	$ 13,000.00
Utility Relocations (approximately 1 overhead utility relocations)	1	*LS*	$ 15,000.00	$ 15,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 26,700.00	$ 26,700.00
Clearing ROW (3%)	1	*LS*	$ 16,800.00	$ 16,800.00
Contingency (15%)	1	*LS*	$ 86,500.00	$ 86,500.00
Total Estimated ROUTE S Construction Cost Opinion (1) (2)				***$ 663,100.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE T - Construction Cost Opinion 0.50 Miles 1 Bridge

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.50	*Miles*	$ 240,000.00	$ 120,000.00
Sidewalk, Remove	730.0	*SYS*	$ 15.00	$ 11,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING & PED BRIDGE)**	111.0	*SYS*	$ 85.00	$ 9,500.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	2	*EA*	$ 5,000.00	$ 10,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	1	*EA*	$ 2,000.00	$ 2,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	11	*EA*	$ 1,200.00	$ 13,200.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	8	*EA*	$ 500.00	$ 4,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	8	*EA*	$ 100.00	$ 800.00
Trail Identification Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	3	*EA*	$ 500.00	$ 1,500.00
Minor Trailhead @ End of Trail on Eisenhower Road	1	*LS*	$ 15,000.00	$ 15,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.5	*Miles*	$ 6,000.00	$ 3,000.00
General Trail Landscape Work	1	*LS*	$ 20,000.00	$ 20,000.00
Fence Relocation	750	*LFT*	$ 10.00	$ 7,500.00
Earthwork	1	*LS*	$ 25,000.00	$ 25,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations (approximately 6 overhead utility relocations)	1	*LS*	$ 65,000.00	$ 65,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 16,900.00	$ 16,900.00
Clearing ROW (3%)	1	*LS*	$ 10,700.00	$ 10,700.00
Contingency (15%)	1	*LS*	$ 54,800.00	$ 54,800.00
Total Estimated ROUTE T Construction Cost Opinion (1) (2)				***$ 419,900.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE U - Construction Cost Opinion 0.75 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.75	*Miles*	$ 240,000.00	$ 180,000.00
Sidewalk, Remove	1040.0	*SYS*	$ 15.00	$ 15,600.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	148.0	*SYS*	$ 85.00	$ 12,600.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	4	*EA*	$ 5,000.00	$ 20,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	1	*EA*	$ 2,000.00	$ 2,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	16	*EA*	$ 500.00	$ 8,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	16	*EA*	$ 100.00	$ 1,600.00
Trail Identification Signage	4	*EA*	$ 2,500.00	$ 10,000.00
Mile Markers @ 1/4 mile intervals	3	*EA*	$ 500.00	$ 1,500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.75	*Miles*	$ 6,000.00	$ 4,500.00
General Trail Landscape Work	1	*LS*	$ 10,000.00	$ 10,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations (approximately 3 hydrant relocations)	1	*LS*	$ 10,000.00	$ 10,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 15,100.00	$ 15,100.00
Clearing ROW (3%)	1	*LS*	$ 9,500.00	$ 9,500.00
Contingency (15%)	1	*LS*	$ 48,900.00	$ 48,900.00
Total Estimated ROUTE U Construction Cost Opinion (1) (2)				***$ 374,300.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE V - Construction Cost Opinion 2.50 Miles 1 Bridge

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	2.50	*Miles*	$ 240,000.00	$ 600,000.00
Sidewalk, Remove	100.0	*SYS*	$ 15.00	$ 1,500.00
Restriping for Road Re-Work **[YELLOW CENTER LINE (DOUBLE)]**	280	*LFT*	$ 2.50	$ 700.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING & PED BRIDGE)**	222.0	*SYS*	$ 85.00	$ 18,900.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	1	*EA*	$ 5,000.00	$ 5,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	4	*EA*	$ 40,000.00	$ 160,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	20	*EA*	$ 500.00	$ 10,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	20	*EA*	$ 100.00	$ 2,000.00
Trail Identification Signage	5	*EA*	$ 2,500.00	$ 12,500.00
Directory Signage	3	*EA*	$ 2,500.00	$ 7,500.00
Mile Markers @ 1/4 mile intervals	10	*EA*	$ 500.00	$ 5,000.00
Road Diet Along 9th Street				
Curb, Remove	140	*LFT*	$ 15.00	$ 2,100.00
Curb	140	*LFT*	$ 20.00	$ 2,800.00
Sawcut, Full Depth	140	*LFT*	$ 5.00	$ 700.00
Asphalt Excavation *(1400 SFT)* ***[assumes an average of 1 foot depth]***	55	*CYS*	$ 55.00	$ 3,100.00
Asphalt Patching *(1400 SFT)* ***[assumes an average of 6 inches deep with 6 inches of stone]***	105	*TON*	$ 90.00	$ 9,500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	2.5	*Miles*	$ 6,000.00	$ 15,000.00
General Trail Landscape Work	1	*LS*	$ 45,000.00	$ 45,000.00
Culvert (or pipe extension)	80	*LFT*	$ 125.00	$ 10,000.00
Mitigation Costs for Kirkpatrick Ditch & Elliot Ditch	0.5	*ACRE*	$ 150,000.00	$ 75,000.00
Proposed Pedestrian Bridge Over Kirkpatrick Ditch				
Proposed Bridge Structure [($1200 x LFT) x 2]	30	*LFT*	$ 2,400.00	$ 72,000.00
Wood Railing, 42" Tall	60	*LFT*	$ 40.00	$ 2,400.00
Earthwork	1	*LS*	$ 25,000.00	$ 25,000.00
Erosion Control	1	*LS*	$ 23,000.00	$ 23,000.00
Utility Relocations	1	*LS*	$ 10,000.00	$ 10,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 56,200.00	$ 56,200.00
Clearing ROW (3%)	1	*LS*	$ 35,400.00	$ 35,400.00
Contingency (15%)	1	*LS*	$ 182,300.00	$ 182,300.00
Total Estimated ROUTE V Construction Cost Opinion (1) (2)				***$ 1,397,600.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE W - Construction Cost Opinion 1.25 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.25	*Miles*	$ 240,000.00	$ 300,000.00
Sidewalk, Remove	905.0	*SYS*	$ 15.00	$ 13,600.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	148.0	*SYS*	$ 85.00	$ 12,600.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	4	*EA*	$ 5,000.00	$ 20,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	3	*EA*	$ 2,000.00	$ 6,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	1	*EA*	$ 1,200.00	$ 1,200.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	16	*EA*	$ 500.00	$ 8,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	16	*EA*	$ 100.00	$ 1,600.00
Trail Identification Signage	4	*EA*	$ 2,500.00	$ 10,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	5	*EA*	$ 500.00	$ 2,500.00
Shared Use Trailhead @ Munger Park	1	*LS*	$ 10,000.00	$ 10,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.25	*Miles*	$ 6,000.00	$ 7,500.00
General Trail Landscape Work	1	*LS*	$ 35,000.00	$ 35,000.00
Mitigation Costs for Freshwater Pond	0.6	*ACRE*	$ 150,000.00	$ 90,000.00
Fence Relocation	750	*LFT*	$ 10.00	$ 7,500.00
Earthwork	1	*LS*	$ 15,000.00	$ 15,000.00
Erosion Control	1	*LS*	$ 15,000.00	$ 15,000.00
Utility Relocations (approximately 6 overhead utility relocations plus 4 hydrant relocations)	1	*LS*	$ 80,000.00	$ 80,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 32,700.00	$ 32,700.00
Clearing ROW (3%)	1	*LS*	$ 20,600.00	$ 20,600.00
Contingency (15%)	1	*LS*	$ 106,000.00	$ 106,000.00
Total Estimated ROUTE W Construction Cost Opinion (1) (2)				***$ 812,300.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE X - Construction Cost Opinion 1.25 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.25	*Miles*	$ 240,000.00	$ 300,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	74.0	*SYS*	$ 85.00	$ 6,300.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	2	*EA*	$ 5,000.00	$ 10,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	2	*EA*	$ 2,000.00	$ 4,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	6	*EA*	$ 1,200.00	$ 7,200.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	8	*EA*	$ 500.00	$ 4,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	8	*EA*	$ 100.00	$ 800.00
Trail Identification Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	5	*EA*	$ 500.00	$ 2,500.00
Minor Trailhead @ Sterling Heights Park	1	*LS*	$ 15,000.00	$ 15,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.25	*Miles*	$ 6,000.00	$ 7,500.00
General Trail Landscape Work	1	*LS*	$ 10,000.00	$ 10,000.00
Earthwork	1	*LS*	$ 15,000.00	$ 15,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations (approximately 5 overhead utility relocations)	1	*LS*	$ 65,000.00	$ 65,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 23,700.00	$ 23,700.00
Clearing ROW (3%)	1	*LS*	$ 14,900.00	$ 14,900.00
Contingency (15%)	1	*LS*	$ 76,700.00	$ 76,700.00
Total Estimated ROUTE X Construction Cost Opinion (1) (2)				***$ 587,600.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE Y Phase 1 - Construction Cost Opinion 2.00 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	2.00	*Miles*	$ 240,000.00	$ 480,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING) (plus ending node)**	74.0	*SYS*	$ 85.00	$ 6,300.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	2	*EA*	$ 5,000.00	$ 10,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	3	*EA*	$ 2,000.00	$ 6,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	2	*EA*	$ 1,200.00	$ 2,400.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	8	*EA*	$ 500.00	$ 4,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	8	*EA*	$ 100.00	$ 800.00
Trail Identification Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	8	*EA*	$ 500.00	$ 4,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	2	*Miles*	$ 6,000.00	$ 12,000.00
General Trail Landscape Work	1	*LS*	$ 50,000.00	$ 50,000.00
Wood Railing, 42" Tall	4,830	*LFT*	$ 40.00	$ 193,200.00
Culvert (or pipe extension)	45	*LFT*	$ 125.00	$ 5,625.00
Land Acquisition for Farm Field	110,250	*SFT*	$ 0.50	$ 55,125.00
Land Acquisition for Commercial Property	19,950	*SFT*	$ 5.00	$ 99,750.00
Land Acquisition for Residential Property	14,250	*SFT*	$ 1.50	$ 21,375.00
Earthwork	1	*LS*	$ 45,000.00	$ 45,000.00
Erosion Control (includes cost for steep slopes - erosion control blanket and seed)	1	*LS*	$ 25,000.00	$ 25,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 20,000.00	$ 20,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 52,900.00	$ 52,900.00
Clearing ROW (3%)	1	*LS*	$ 33,300.00	$ 33,300.00
Contingency (15%)	1	*LS*	$ 171,400.00	$ 171,400.00
Total Estimated ROUTE Y Construction Cost Opinion (1) (2)				***$ 1,313,700.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE Y Phase 2 - Construction Cost Opinion 0.10 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.10	*Miles*	$ 240,000.00	$ 24,000.00
Mile Markers @ 1/4 mile intervals	1	*EA*	$ 500.00	$ 500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.1	*Miles*	$ 6,000.00	$ 600.00
General Trail Landscape Work	1	*LS*	$ 10,000.00	$ 10,000.00
Con/Span Structure Under SR 38				
Proposed CON / SPAN Structure (185' L x 16' W x 12' H) @ **SR 38**	185	*LFT*	$ 5,000.00	$ 925,000.00
Wood Railing, 42" Tall (with handrail)	270	*LFT*	$ 50.00	$ 13,500.00
Earthwork	1	*LS*	$ 40,000.00	$ 40,000.00
Erosion Control (includes cost for steep slopes - erosion control blanket and seed)	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 52,100.00	$ 52,100.00
Clearing ROW (3%)	1	*LS*	$ 32,900.00	$ 32,900.00
Contingency (15%)	1	*LS*	$ 169,000.00	$ 169,000.00
Total Estimated ROUTE Y Construction Cost Opinion (1) (2)				***$ 1,295,600.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE Y Phase 3 - Construction Cost Opinion 0.15 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.15	*Miles*	$ 240,000.00	$ 36,000.00
Mile Markers @ 1/4 mile intervals	1	*EA*	$ 500.00	$ 500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.15	*Miles*	$ 6,000.00	$ 900.00
General Trail Landscape Work	1	*LS*	$ 5,000.00	$ 5,000.00
Railroad Bridge Widening				
Road Bridge Widening **(600 LFT x 15' WIDE)**	9,000	*SFT*	$ 100.00	$ 900,000.00
Guardrail, Remove and Reset	880	*LFT*	$ 30.00	$ 26,400.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control (includes cost for steep slopes - erosion control blanket and seed)	1	*LS*	$ 5,000.00	$ 5,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 50,100.00	$ 50,100.00
Clearing ROW (3%)	1	*LS*	$ 31,600.00	$ 31,600.00
Contingency (15%)	1	*LS*	$ 162,600.00	$ 162,600.00
Total Estimated ROUTE Y Construction Cost Opinion (1) (2)				***$ 1,246,100.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE Y Phase 4 - Construction Cost Opinion 0.75 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.75	*Miles*	$ 240,000.00	$ 180,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING) (plus ending node)**	74.0	*SYS*	$ 85.00	$ 6,300.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	1	*EA*	$ 5,000.00	$ 5,000.00
Intersection Improvements @ - Level 3 (Median, Signal, Signage, Pavement Markings)	1	*EA*	$ 90,000.00	$ 90,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	4	*EA*	$ 2,000.00	$ 8,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	8	*EA*	$ 500.00	$ 4,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	8	*EA*	$ 100.00	$ 800.00
Trail Identification Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	3	*EA*	$ 500.00	$ 1,500.00
Major Trailhead @ Veterans Memorial Pkwy & Sagamore Parkway	1	*LS*	$ 50,000.00	$ 50,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.75	*Miles*	$ 6,000.00	$ 4,500.00
General Trail Landscape Work	1	*LS*	$ 25,000.00	$ 25,000.00
Wood Railing, 42" Tall	4,020	*LFT*	$ 40.00	$ 160,800.00
Land Acquisition for Farm Field	24,225	*SFT*	$ 0.50	$ 12,112.50
Earthwork	1	*LS*	$ 75,000.00	$ 75,000.00
Erosion Control (includes cost for steep slopes - erosion control blanket and seed)	1	*LS*	$ 70,000.00	$ 70,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 36,000.00	$ 36,000.00
Clearing ROW (3%)	1	*LS*	$ 22,700.00	$ 22,700.00
Contingency (15%)	1	*LS*	$ 116,600.00	$ 116,600.00
Total Estimated ROUTE Y Construction Cost Opinion (1) (2)				***$ 893,900.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE Z - Construction Cost Opinion 1.00 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.00	*Miles*	$ 240,000.00	$ 240,000.00
Sidewalk, Remove	240.00	*SYS*	$ 15.00	$ 3,600.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING & PED BRIDGE)**	74.0	*SYS*	$ 85.00	$ 6,300.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	2	*EA*	$ 5,000.00	$ 10,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	8	*EA*	$ 500.00	$ 4,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	8	*EA*	$ 100.00	$ 800.00
Trail Identification Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Mile Markers @ 1/4 mile intervals	4	*EA*	$ 500.00	$ 2,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1	*Miles*	$ 6,000.00	$ 6,000.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Earthwork	1	*LS*	$ 15,000.00	$ 15,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 5,000.00	$ 5,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 16,800.00	$ 16,800.00
Clearing ROW (3%)	1	*LS*	$ 10,600.00	$ 10,600.00
Contingency (15%)	1	*LS*	$ 54,500.00	$ 54,500.00
Total Estimated ROUTE Z Construction Cost Opinion (1) (2)				***$ 417,600.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE AA - Construction Cost Opinion 1.25 Miles 4.25 Miles Sharrow

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.25	*Miles*	$ 240,000.00	$ 300,000.00
Sidewalk, 4" (10' x 35')	40.0	*SYS*	$ 50.00	$ 2,000.00
Sidewalk, Remove	695.0	*SYS*	$ 15.00	$ 10,500.00
Sharrow Pavement Marking **(4 PER MAJOR INTERSECTION + EVERY 250 LFT) - *(22,440 LFT Sharrow)***	115.0	*EA*	$ 200.00	$ 23,000.00
Sharrow Signage **(2 PER INTERSECTION)**	70.0	*EA*	$ 150.00	$ 10,500.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING & RR CROSSINGS)**	555.0	*SYS*	$ 85.00	$ 47,200.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	10	*EA*	$ 5,000.00	$ 50,000.00
Intersection Improvements @ - Level 3 (Median, Signal, Signage, Pavement Markings)	1	*EA*	$ 90,000.00	$ 90,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	12	*EA*	$ 2,000.00	$ 24,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	6	*EA*	$ 1,200.00	$ 7,200.00
At Grade Railroad Crossing	4	*EA*	$ 40,000.00	$ 160,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	44	*EA*	$ 500.00	$ 22,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	44	*EA*	$ 100.00	$ 4,400.00
Trail Identification Signage	11	*EA*	$ 2,500.00	$ 27,500.00
Mile Markers @ 1/4 mile intervals	22	*EA*	$ 500.00	$ 11,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1.25	*Miles*	$ 6,000.00	$ 7,500.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Wood Railing, 42" Tall	1,730	*LFT*	$ 40.00	$ 69,200.00
Fence Removal	40	*LFT*	$ 5.00	$ 200.00
Earthwork	1	*LS*	$ 20,000.00	$ 20,000.00
Erosion Control	1	*LS*	$ 45,000.00	$ 45,000.00
Utility Relocations (approximately 6 overhead utility relocations)	1	*LS*	$ 75,000.00	$ 75,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 51,600.00	$ 51,600.00
Clearing ROW (3%)	1	*LS*	$ 32,500.00	$ 32,500.00
Contingency (15%)	1	*LS*	$ 167,300.00	$ 167,300.00
Total Estimated ROUTE AA Construction Cost Opinion (1) (2)				***$ 1,282,600.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE BB - Construction Cost Opinion 2.00 Miles 2 Bridges

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	2.00	*Miles*	$ 240,000.00	$ 480,000.00
Sidewalk, Remove	910.0	*SYS*	$ 15.00	$ 13,700.00
Restriping for Road Re-Work **[YELLOW CENTER LINE (DOUBLE)]**	1220	*LFT*	$ 2.50	$ 3,050.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING & PED BRIDGES)**	259.0	*SYS*	$ 85.00	$ 22,100.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	4	*EA*	$ 5,000.00	$ 20,000.00
Intersection Improvements @ - Level 2 (Overhead Flasher, Signage, Pavement Markings)	1	*EA*	$ 40,000.00	$ 40,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	8	*EA*	$ 2,000.00	$ 16,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	20	*EA*	$ 500.00	$ 10,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	20	*EA*	$ 100.00	$ 2,000.00
Trail Identification Signage	5	*EA*	$ 2,500.00	$ 12,500.00
Directory Signage	3	*EA*	$ 2,500.00	$ 7,500.00
Mile Markers @ 1/4 mile intervals	8	*EA*	$ 500.00	$ 4,000.00
Road Diet Along Kingsway Drive				
Curb, Remove	610	*LFT*	$ 15.00	$ 9,200.00
Roll Curb	610	*LFT*	$ 20.00	$ 12,200.00
Sawcut, Full Depth	610	*LFT*	$ 5.00	$ 3,100.00
Asphalt Excavation *(2440 SFT)* ***[assumes an average of 1 foot depth]***	90	*CYS*	$ 55.00	$ 4,950.00
Asphalt Patching *(2440 SFT)* ***[assumes an average of 6 inches deep with 6 inches of stone]***	180	*TON*	$ 90.00	$ 16,200.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	2	*Miles*	$ 6,000.00	$ 12,000.00
General Trail Landscape Work	1	*LS*	$ 25,000.00	$ 25,000.00
Fence Removal	20	*LFT*	$ 5.00	$ 100.00
Fence Gate Removal	1	*LS*	$ 1,000.00	$ 1,000.00
Fence Relocation	10	*LFT*	$ 10.00	$ 100.00
Proposed Pedestrian Bridges Over Unknown Ditches/Sewer Easements				
Proposed Bridge Structure [($1200 x LFT) x 1.5] (up to 120 LFT) @ **UNKNOWN DITCH**	100	*LFT*	$ 1,800.00	$ 180,000.00
Proposed Bridge Structure [($1200 x LFT) x 1.5] (up to 120 LFT) @ **UNKNOWN DITCH**	40	*LFT*	$ 1,800.00	$ 72,000.00
Wood Railing, 42" Tall	2,040	*LFT*	$ 40.00	$ 81,600.00
Earthwork	1	*LS*	$ 15,000.00	$ 15,000.00
Erosion Control	1	*LS*	$ 20,000.00	$ 20,000.00
Utility Relocations (approximately 1 overhead utility relocations)	1	*LS*	$ 15,000.00	$ 15,000.00
Maintenance of Traffic	1	*LS*	$ 25,000.00	$ 25,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 56,200.00	$ 56,200.00
Clearing ROW (3%)	1	*LS*	$ 35,400.00	$ 35,400.00
Contingency (15%)	1	*LS*	$ 182,300.00	$ 182,300.00
Total Estimated ROUTE BB Construction Cost Opinion (1) (2)				***$ 1,397,200.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE CC - Construction Cost Opinion 0.25 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.25	*Miles*	$ 240,000.00	$ 60,000.00
Sidewalk, Remove	370.0	*SYS*	$ 15.00	$ 5,600.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	4	*EA*	$ 2,000.00	$ 8,000.00
Trail Identification Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	2	*EA*	$ 500.00	$ 1,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.25	*Miles*	$ 6,000.00	$ 1,500.00
General Trail Landscape Work	1	*LS*	$ 3,000.00	$ 3,000.00
Earthwork	1	*LS*	$ 5,000.00	$ 5,000.00
Erosion Control	1	*LS*	$ 3,000.00	$ 3,000.00
Utility Relocations (approximately 2 overhead utility relocations plus 1 hydrant relocations)	1	*LS*	$ 25,000.00	$ 25,000.00
Maintenance of Traffic	1	*LS*	$ 3,000.00	$ 3,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 5,900.00	$ 5,900.00
Clearing ROW (3%)	1	*LS*	$ 3,800.00	$ 3,800.00
Contingency (15%)	1	*LS*	$ 19,100.00	$ 19,100.00
Total Estimated ROUTE CC Construction Cost Opinion (1) (2)				***$ 146,400.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE DD - Construction Cost Opinion 1.00 Miles

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	1.00	*Miles*	$ 240,000.00	$ 240,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING) (PLUS ONE AT EACH END)**	74.0	*SYS*	$ 85.00	$ 6,300.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	1	*EA*	$ 5,000.00	$ 5,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	4	*EA*	$ 500.00	$ 2,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	4	*EA*	$ 100.00	$ 400.00
Trail Identification Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	2	*EA*	$ 2,500.00	$ 5,000.00
Interpretive Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	4	*EA*	$ 500.00	$ 2,000.00
Major Trailhead @ N. 9th St. & Sagamore Parkway	1	*LS*	$ 75,000.00	$ 75,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	1	*Miles*	$ 6,000.00	$ 6,000.00
General Trail Landscape Work	1	*LS*	$ 20,000.00	$ 20,000.00
Mitigation Costs **(for ramp down to existing trail)**	0.5	*ACRE*	$ 150,000.00	$ 75,000.00
Wood Railing, 42" Tall	2,795	*LFT*	$ 40.00	$ 111,800.00
Modular Block Wall (includes Reinforcing and Excavation)	830	*SYS*	$ 400.00	$ 332,000.00
Earthwork	1	*LS*	$ 60,000.00	$ 60,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations	1	*LS*	$ 10,000.00	$ 10,000.00
Maintenance of Traffic	1	*LS*	$ 3,000.00	$ 3,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 48,500.00	$ 48,500.00
Clearing ROW (3%)	1	*LS*	$ 30,600.00	$ 30,600.00
Contingency (15%)	1	*LS*	$ 157,200.00	$ 157,200.00
Total Estimated ROUTE DD Construction Cost Opinion (1) (2)				***$ 1,204,800.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE EE - Construction Cost Opinion 0.50 Miles 1 Bridge

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.50	*Miles*	$ 240,000.00	$ 120,000.00
Sidewalk, Remove	47.00	*SYS*	$ 15.00	$ 800.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING & PED BRIDGE)**	74.0	*SYS*	$ 85.00	$ 6,300.00
Intersection Improvements @ - Level 3 (Median, Signal, Signage, Pavement Markings)	1	*EA*	$ 90,000.00	$ 90,000.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	4	*EA*	$ 500.00	$ 2,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	4	*EA*	$ 100.00	$ 400.00
Trail Identification Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Directory Signage	1	*EA*	$ 2,500.00	$ 2,500.00
Mile Markers @ 1/4 mile intervals	2	*EA*	$ 500.00	$ 1,000.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.5	*Miles*	$ 6,000.00	$ 3,000.00
General Trail Landscape Work	1	*LS*	$ 15,000.00	$ 15,000.00
Proposed Pedestrian Bridge Over Railroads				
Proposed Bridge Structure [($1200 x LFT) x 2] @ **RAILROAD**	300	*LFT*	$ 2,400.00	$ 720,000.00
Wood Railing, 42" Tall	2,015	*LFT*	$ 40.00	$ 80,600.00
MSE Wall with facing	23,865	*SFT*	$ 50.00	$ 1,193,250.00
Fill for Wall	6,000	*CYS*	$ 18.00	$ 108,000.00
Earthwork	1	*LS*	$ 50,000.00	$ 50,000.00
Erosion Control	1	*LS*	$ 10,000.00	$ 10,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 121,200.00	$ 121,200.00
Clearing ROW (3%)	1	*LS*	$ 76,400.00	$ 76,400.00
Contingency (15%)	1	*LS*	$ 393,200.00	$ 393,200.00
Total Estimated ROUTE EE Construction Cost Opinion (1) (2)				***$ 3,014,150.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE FF - Construction Cost Opinion 0.00 Miles 2 Miles Bike Lane

Description	Qty	Unit	Unit Cost	Cost
Bike Lane Symbol **(EVERY 350 LFT)** ***(10,560 LFT total [both ways])***	30	*EA*	$ 200.00	$ 6,000.00
Bike Lane Sign **(EVERY 350 LFT)**	30	*EA*	$ 150.00	$ 4,500.00
Restriping for Bike Lane **[WHITE DASHED CENTER LINE, BIKE LANE LINE]**	42240	*LFT*	$ 2.50	$ 105,600.00
Mile Markers @ 1/4 mile intervals	8	*EA*	$ 500.00	$ 4,000.00
Earthwork	1	*LS*	$ 5,000.00	$ 5,000.00
Erosion Control	1	*LS*	$ 15,000.00	$ 15,000.00
Utility Relocations	1	*LS*	$ 8,000.00	$ 8,000.00
Maintenance of Traffic	1	*LS*	$ 15,000.00	$ 15,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 8,200.00	$ 8,200.00
Clearing ROW (3%)	1	*LS*	$ 5,200.00	$ 5,200.00
Contingency (15%)	1	*LS*	$ 26,500.00	$ 26,500.00
Total Estimated ROUTE FF Construction Cost Opinion (1) (2)				***$ 203,000.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

LAFAYETTE TRAILS MASTER PLAN: ROUTE GG - Construction Cost Opinion 0.10 Miles .75 Miles Sharrow 1.25 Miles Bike Lane

Description	Qty	Unit	Unit Cost	Cost
10' Wide Asphalt Trail w/ 2' Shoulders	0.10	*Miles*	$ 240,000.00	$ 24,000.00
Sharrow Pavement Marking **(4 PER MAJOR INTERSECTION + EVERY 250 LFT) -** ***(3960 LFT Sharrow)***	20.0	*EA*	$ 200.00	$ 4,000.00
Sharrow Signage **(2 PER INTERSECTION)**	8.0	*EA*	$ 150.00	$ 1,200.00
Bike Lane Symbol **(EVERY 350 LFT)** ***(6,600 LFT total [both ways])***	19	*EA*	$ 200.00	$ 3,800.00
Bike Lane Sign **(EVERY 350 LFT)**	19	*EA*	$ 150.00	$ 2,900.00
Restriping for Bike Lane **[YELLOW CENTER LINE (DOUBLE), BIKE LANE LINE]**	13200	*LFT*	$ 2.50	$ 33,000.00
Special Conc. Pavement, 6" Thick **(18.5 SYS EACH - 2/CROSSING)**	185.0	*SYS*	$ 85.00	$ 15,800.00
Intersection Improvements @ - Level 1 (Signage, Pavement Markings)	5	*EA*	$ 5,000.00	$ 25,000.00
Intersection Improvements @ - Commercial Drive (Epoxy Coating, *assume 25'x10'*)	6	*EA*	$ 2,000.00	$ 12,000.00
Intersection Improvements @ - Residential Drive (Epoxy Coating, *assume 15'x10'*)	3	*EA*	$ 1,200.00	$ 3,600.00
Regulatory, Warning, & Guidance Signage (STOP, YIELD, STOP AHEAD)	20	*EA*	$ 500.00	$ 10,000.00
Regulatory, Warning, & Guidance Signage (NO MOTOR VEHICLES, CROSS TRAFFIC DOES NOT STOP)	20	*EA*	$ 100.00	$ 2,000.00
Trail Identification Signage	5	*EA*	$ 2,500.00	$ 12,500.00
Mile Markers @ 1/4 mile intervals	9	*EA*	$ 500.00	$ 4,500.00
Seeding ($6000 per mile)(assumes an average disturbance of 6 feet)	0.1	*Miles*	$ 6,000.00	$ 600.00
General Trail Landscape Work	1	*LS*	$ 8,000.00	$ 8,000.00
Earthwork	1	*LS*	$ 10,000.00	$ 10,000.00
Erosion Control	1	*LS*	$ 5,000.00	$ 5,000.00
Utility Relocations (approximately 3 overhead utility relocations plus 1 hydrant and 1 misc. utility relocations)	1	*LS*	$ 45,000.00	$ 45,000.00
Maintenance of Traffic	1	*LS*	$ 10,000.00	$ 10,000.00
Mobilization & Demobilization (5%)	1	*LS*	$ 11,700.00	$ 11,700.00
Clearing ROW (3%)	1	*LS*	$ 7,400.00	$ 7,400.00
Contingency (15%)	1	*LS*	$ 37,800.00	$ 37,800.00
Total Estimated ROUTE GG Construction Cost Opinion (1) (2)				***$ 289,800.00***

1. Cost opinion does not include costs for survey, design, land acquisition, and inspection.
2. Cost opinion is based on 2012 costs: Inflation is not included due to the uncertainty of when each trail will be built.

ROUTE A		
North Phase 1 Construction Cost	$	1,199,300.00
North Phase 2 Construction Cost	$	1,645,900.00
North Phase 3 Construction Cost	$	1,317,100.00
East Construction Cost	$	1,518,900.00
South Phase 1 Construction Cost	$	1,355,000.00
South Phase 2 Construction Cost	$	1,614,600.00
West Phase 1 Construction Cost	$	3,330,800.00
West Phase 2 Construction Cost	$	1,219,900.00
ROUTE B		
East Construction Cost	$	1,768,900.00
Middle Phase 1 Construction Cost	$	970,500.00
Middle Phase 2 Construction Cost	$	578,400.00
West Phase 1 Construction Cost	$	1,162,600.00
West Phase 2 Construction Cost	$	762,300.00
ROUTE C		
South Phase 1 Construction Cost	$	783,200.00
South Phase 2 Construction Cost	$	541,600.00
North Construction Cost	$	1,329,100.00
ROUTE D		
Construction Cost	$	1,168,100.00
ROUTE E		
Construction Cost	$	1,108,000.00
ROUTE F		
Construction Cost	$	1,399,800.00
ROUTE G		
Phase 1 Construction Cost	$	730,900.00
Phase 2 Construction Cost	$	748,400.00
ROUTE H		
Construction Cost	$	1,514,000.00
ROUTE I		
Construction Cost	$	283,900.00
ROUTE J		
Phase 1 Construction Cost	$	886,300.00
Phase 2 Construction Cost	$	448,200.00
ROUTE K		
Construction Cost	$	264,500.00
ROUTE L		
Construction Cost	$	454,400.00
ROUTE M		
Phase 1 Construction Cost	$	1,488,100.00
Phase 2 Construction Cost	$	639,100.00
ROUTE N		
Construction Cost	$	381,500.00
ROUTE O		
Construction Cost	$	1,344,400.00

ROUTE P		
Phase 1 Construction Cost	$	1,190,500.00
Phase 2 Construction Cost	$	1,006,900.00
ROUTE Q		
Construction Cost	$	756,200.00
ROUTE R		
Construction Cost	$	1,622,200.00
ROUTE S		
Construction Cost	$	663,100.00
ROUTE T		
Construction Cost	$	419,900.00
ROUTE U		
Construction Cost	$	374,300.00
ROUTE V		
Construction Cost	$	1,397,600.00
ROUTE W		
Construction Cost	$	812,300.00
ROUTE X		
Construction Cost	$	587,600.00
ROUTE Y		
Phase 1 Construction Cost	$	1,313,700.00
Phase 2 Construction Cost	$	1,295,600.00
Phase 3 Construction Cost	$	1,246,100.00
Phase 4 Construction Cost	$	893,900.00
ROUTE Z		
Construction Cost	$	417,600.00
ROUTE AA		
Construction Cost	$	1,282,600.00
ROUTE BB		
Construction Cost	$	1,397,200.00
ROUTE CC		
Construction Cost	$	146,400.00
ROUTE DD		
Construction Cost	$	1,204,800.00
ROUTE EE		
Construction Cost	$	3,014,150.00
ROUTE FF		
Construction Cost	$	203,000.00
ROUTE GG		
Construction Cost	$	289,800.00
TOTAL*construction cost opinion*		
Construction Cost	**$**	**55,493,150.00**

Funding Sources

There are various sources of funding available for the design, development and construction of trails and greenways. The following is a summary of some of the most often utilized sources.

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

The current federal highway bill, Moving Ahead for Progress in the 21st Century, or MAP-21, is a two year bill that will provide transportation funding from October 1, 2012, through September 30, 2014. MAP-21 combines several previous biking and pedestrian programs into one program known as the Transportation Alternatives Program (TAP). TAP includes the Recreational Trails Program (RTP), Transportation Alternatives (TA) activities (many of the projects and programs that were included in the former Transportation Enhancement [TE] program), and Safe Routes to School (SRTS). The following discussion is related to all of these programs. Information specific to each program is addressed in later sections.

If the State does not opt out of the RTP funding, the RTP funds are set aside, and the remaining TAP funds are divided equally into two categories. The first half is sub-allocated based on population, in which INDOT will distribute half of the TAP funds to communities according to their share of population within the state. These population categories are as follows:

- MPOs with populations greater than 200,000: INDOT will sub-allocate funds to Metropolitan Planning Organizations (MPOs). MPOs will distribute their funds through their own competitive application process.
- Other urbanized and rural areas: MAP-21 allows state DOT's to hold a competitive application process for communities to compete for these funds. INDOT is currently developing their process, including the possibility of sub-allocating to smaller MPOs.

The second half of the remaining TAP funds will be distributed state-wide by a competitive application process through INDOT, where population is not considered. Eligible entities include local governments, school districts, tribal governments, and public lands agencies. In MAP-21, the State has the ability to transfer funds both into and out of TAP for other transportation programs

Federal TAP funds provide 80% of the costs for preliminary engineering (survey, design, and construction documents), right-of-way (engineering, management, acquisition), construction, and construction supervision. The local agency is required to provide the matching 20%. The local match for TA funds can be obtained from various sources, such as budget appropriations, cash donations, right-of-way donations, and other grant sources, provided the other grant programs allow their funds to be used as a match for MAP-21 funds. Currently, Indiana has received approximately $21 million for funding the TAP program. Approximately $1 million is taken off the top and distributed to Recreational Trails Program, and the other $20 million is distributed to Transportation Alternatives and Safe Routes to School.

RECREATIONAL TRAILS PROGRAM (RTP)

As part of TAP, funding for the Recreational Trails Program (RTP) is set aside as a separate program. Each state has the option to "opt out" of the RTP. For 2013, the Governor has opted in, and will continue the RTP in Indiana.

This program is a federal financial assistance program administered through IDNR. It provides grants for 80% of the cost of land acquisition and/or development of multi-use recreational trail projects. Both motorized and non-motorized projects are eligible. The program is administered

at the federal level by the Federal Highway Administration (FHWA), but is operated at the state level by IDNR. Previously provided funds for individual projects have ranged from $10,000 to $150,000. Currently, Indiana has received approximately $1 million for RTP funding. All units of government and not-for-profit organizations with 501(c)(3) tax exempt status are eligible to participate. Applications are typically available in February and due back to IDNR by May 1 of each year.

Contact for RTP:
Bob Bronson
State & Community Outdoor Recreation Planning Section
Division of Outdoor Recreation
Indiana Department of Natural Resources
402 W. Washington Street, Room W271
Indianapolis, IN 46204
317-232-4075
bbronson@dnr.in.gov
www.state.in.us/dnr/outdoor

TRANSPORTATION ALTERNATIVES (TA)

Under MAP-21, eligible activities included in the former Transportation Enhancement (TE) program are now referred to as Transportation Alternatives (TA) activities, and are included in TAP funding that remains after RTP funds are set aside. Although some former TE eligible activities are not included in TA, the activities most closely related to the development of trails, greenways, and bike/pedestrian facilities are still eligible. These activities include: on-road and off-road facilities for pedestrians, bicyclists, and other non-motorized forms of transportation; developing safe routes for non-drivers; conversion of abandoned railroad corridors for trails; and, historic preservation and rehabilitation of historic transportation facilities.

At this time, the new federal guidelines for the implementation and use of TA funds are being reviewed. The details for the State's program and process for acquiring and using the funds is being developed. In recent years, approximately $16 million to $20 million in TE funds were available annually in Indiana. At this time, Indiana has received approximately $20 million to be split between TA and Safe Routes to School. The process for applying for the funds and the funding cycle has not yet been determined.

Contact for TA Funds:
Kathy Eaton-McKalip
LPA/MPO& Grants Administration
Indiana Department of Transportation
100 N. Senate Ave. IGCN 955
Indianapolis, IN 46204
keaton-mckalip@indot.in.gov

Michael Cales
Local Programs Specialist
Indiana Department of Transportation
100 N. Senate Ave. IGCN 808
Indianapolis, IN 46204
317-232-3021
mcales@indot.in.gov

SAFE ROUTES TO SCHOOL (SRTS)

The Indiana Safe Routes to School (SRTS) program is based on the federal programs designed to make walking and bicycling to school safe, more convenient, and routine, providing a true option for school travel. Growing areas of emphasis of the program are the physical activity, environmental, and social benefits of walking and biking. INDOT is responsible for administering SRTS as part of the TAP. Both infrastructure projects and non-infrastructure projects, such as encouragement, education, and enforcement, are eligible. Kindergarten through 8th grade is the primary focus and these projects should help improve access for children with physical disabilities.

The funding for SRTS is part of the TAP funds that remain after the RTP funds are set aside. In the past, the maximum infrastructure improvement project award was $250,000. At this time, Indiana has received approximately $20 million to be split between TA and SRTS. The process for applying for the funds and the funding cycle has not yet been determined.

Contact for SRTS:

Michael O'Loughlin
Indiana Department of Transportation
100 N. Senate Ave. IGCN. 955
Indianapolis, IN 46204
317-232-5653
moloughlin@indot.in.gov

CONGESTION MITIGATION & AIR QUALITY IMPROVEMENT PROGRAM (CMAQ)

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) is a federal financial assistance program administered through the U.S. Department of Transportation (USDOT) in consultation with the Environmental Protection Agency (EPA). The funds are set aside for projects that encourage the reduction of smog-producing emissions in communities that fall below the EPA minimum standard for air quality (not in attainment). Under MAP-21, CMAQ funds will require a 20% local match. Currently the Tippecanoe County Area Plan Commission (TCAPC) does not receive funds for CMAQ as they are still in attainment.

Contact for CMAQ:

Tippecanoe County Area Plan Commission (TCAPC)
Sallie Dell Fahey, Executive Director
Tippecanoe County Area Plan Commission
20 North 3rd Street
Lafayette, IN 47901
(765) 423-9242
FAX: (765) 423-9154
sfahey@tippecanoe.in.gov
www.tippecanoe.in.gov/apc

FEDERAL TRANSIT ADMINISTRATION (FTA)

Recent information has also been conveyed that funds from Federal Transit Administration (FTA) for CityBus in Lafayette can be used to build sidewalks within a certain distance of bus stops. More research should be done on this option, especially since funding has become more limited and this could help offset some of the costs for this trail network. Specific information regarding if a trail can classify, like a wide sidewalk, and the distance to the bus stop, should be further investigated to confirm whether this option can be used or not.

Contact for FTA

Tippecanoe County Area Plan Commission (TCAPC)
Sallie Dell Fahey, Executive Director
Tippecanoe County Area Plan Commission
20 North 3rd Street
Lafayette, IN 47901
(765) 423-9242
FAX: (765) 423-9154
sfahey@tippecanoe.in.gov
www.tippecanoe.in.gov/apc

SURFACE TRANSPORTATION PROGRAM (STP) & HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

The Surface Transportation Program (STP) provides funding that may be used by States and localities for projects to preserve and improve the conditions and performance on Federal-aid projects. Eligible projects include highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. Therefore, any pedestrian or bicycle facility that has been previously funded by federal-aid can use this funding to "preserve and improve the conditions and performance." Eligible activities that relate to multi-use trails are as follows: fringe and corridor parking facilities and programs, bicycle transportation and pedestrian walkways, ADA sidewalk modifications; transportation alternatives; and recreational trails projects. TCAPC has historically received an STP allocation of approximately $4.0 million annually. The *Metropolitan Transportation Plan for 2040: Completing Our Streets* reserves 10% of the MPO's annual allocation of STP funds for stand-alone bicycle and pedestrian projects.

Similarly, under MAP-21 there appear to be opportunities for bicycle and pedestrian facilities funding in the Highway Safety Improvement Program (HSIP). Traffic and accident data would need to support the development of bicycle and pedestrian facilities as a means to improve overall safety. Historically, the TCAPC has received an HSIP allocation of approximately $305,000 annually.

Contact for STP and HSIP

Tippecanoe County Area Plan Commission (TCAPC)
Sallie Dell Fahey, Executive Director
Tippecanoe County Area Plan Commission
20 North 3rd Street
Lafayette, IN 47901
(765) 423-9242
FAX: (765) 423-9154
sfahey@tippecanoe.in.gov

LAND AND WATER CONSERVATION FUND (LWCF)

Land and Water Conservation Fund (LWCF) is a federal financial assistance program administered through IDNR. It provides matching grants for 50% of the cost of land acquisition and/or development of outdoor recreation sites and facilities. Funds for this program come primarily from federal off-shore oil lease receipts. The program is administered at the federal level by the National Parks Service (NPS), but is operated at the state level by IDNR. Individual projects typically receive $10,000 to $200,000 in funds. Only legally established park boards with an approved 5-year Park and Recreation Master Plan are eligible to participate. Applications are available on or after March 1 and are required to be submitted or post-marked by June 1 of each year.

Contact for LWCF:

Bob Bronson
State & Community Outdoor Recreation Planning Section
Division of Outdoor Recreation
Indiana Department of Natural Resources
402 W. Washington Street, Room W271
Indianapolis, IN 46204
317-232-4075
bbronson@dnr.in.gov
www.state.in.us/dnr/outdoor

WABASH RIVER HERITAGE CORRIDOR FUND (WRHCF)

The Wabash River Heritage Corridor Fund (WRHCF) is a fund dedicated to enhancing the river corridor. The grant's main priority is to provide sites and facilities for river users to camp along the river, however public access to the river and trails is also a priority for this funding program. Grant requests can be from $25,000 to $150,000. IDNR should be contacted first to ensure that the project is eligible to receive the funding.

Contact for WRHCF:

Bob Bronson
State & Community Outdoor Recreation Planning Section
Division of Outdoor Recreation
Indiana Department of Natural Resources
402 W. Washington Street, Room W271
Indianapolis, IN 46204
317-232-4075
bbronson@dnr.in.gov

PRIVATE FOUNDATIONS

There are a number of foundations and trust funds which support the planning and development of trails and greenways, in the interest of conservation, preservation, and outdoor recreation. Although many of them fund only nonprofit organizations, some will assist local public agencies. A few of these organizations include:

1. Kodak American Greenways Awards through the Conservation Fund
   www.conservationfund.org/?article=2106
2. Nina Mason Pulliam Charitable Trust
   http://www.ninapulliamtrust.org/index.php/grant-information/
3. Robert Wood Johnson Foundation's Active Living by Design program
   http://www.activelivingbydesign.org/what-we-do/albd-grant-program

CORPORATE SPONSORSHIP

In addition to the federal and private foundation options, corporate sponsorship presents another opportunity for funding. As trails and roadways are developed, especially in close proximity to businesses or industries, there are opportunities for corporations to sponsor trails. Sponsorships can be direct financial support of construction activities for trails, trailheads, specific trail or trailhead amenities, or even trail maintenance. The donation of land for the development of trails is also an excellent method of corporate support that can become a sponsorship opportunity. Sponsorship often includes granting naming rights to the sponsor for the items or areas that were financed or donated. Contacting adjacent or area corporations should be considered for these types of sponsorships.

APPENDIX *A1*

Lafayette Citywide Trails Master Plan
Kickoff Meeting
March 4, 2010

Jason Griffin opened the meeting, held at 9:00 am in the City of Lafayette's Board of Works Meeting Room. Those in attendance were:

Jenny Miller	Lafayette Eng. Dept.	765-807-1056	jmiller@lafayette.in.gov
Robert Foley	Lafayette Eng. Dept.	765-807-1046	rfoley@lafayette.in.gov
Crystal Joshua	Lafayette Eng. Dept.	765-807-1036	cjoshua@lafayette.in.gov
Ted Bumbleburg	Lafayette Parks Dept.	765-807-1503	tbumbleburg@lafayette.in.gov
Belinda Kiger	Lafayette Parks Dept.	765-807-1583	bkiger@lafayette.in.gov
Alan Hamersly	Butler, Fairman and Seufert	317-713-4615	ahamersly@bfsengr.com
Jason Griffin	Butler, Fairman and Seufert	317-713-4615	jgriffin@bfsengr.com
Sharon Dougherty	Butler, Fairman and Seufert	317-713-4615	sdougherty@bfsengr.com
Ryan Smith	Butler, Fairman and Seufert	765-423-5602	rsmith@bfsengr.com

Jenny Miller reminded everyone that the date was March 4th, National Hiking Day. The group discussed that the secret code name for the plan would hence forth be known as the Lafayette "March Forth" Plan.

The Notice to Proceed date was discussed as being January 4, 2010. The project dates in the contract were pushed back a month. The following dates were discussed as milestones for the project:

5/15	Inventory and Analysis
8/1	Preliminary Route Review
10/15	Master Plan Review
12/15	Final Document Review

Jenny Miller indicated that she would like to be able to apply for TE funding this fall (2010). A route will need to be identified in time to apply for funding.

The group discussed possible stake holders:

Wabash River Enhancement Corporation (contact, Stan Lambert)
Area Plan Commission
County Parks (contact, Alan Nail)
Soil and Water Conservation District (?)
West Lafayette Parks, Joe Payne
Purdue, John Collier
River City Cycling
Running Clubs

BF&S Butler Fairman Seufert Civil Engineers
8450 WESTFIELD BLVD., SUITE 300
INDIANAPOLIS, IN. 46240
317 713-4615
FAX 317 713-4616

The Group Discussed Goals:

Safe recreation corridors
Connect to all schools (safe routes)
Connect to all major parks
Create destinations
Economic development
Make the trail accessible for all ages and abilities
Make regional connections
Make neighborhood connections
Make connections to W. Lafayette trails system
Make connections to county

Ted indicated that he would get BF&S a copy of the newest Parks 5-year Master Plan.

The County Parks has a large scale master plan.

WREC has a well developed master plan and this plan will need to tie into it.

The Lafayette bus depot is being re-developed an this plan should tie into it to create multi-modal transportation opportunities

The state will develop and build a US 52 crossing for Munger

The group looked at and identified some potential routes and existing trails on an aerial map that BF&S supplied.

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These notes are the recollection of the writer. If any adjustments or corrections are required, please notify Butler, Fairman & Seufert within 5 business days so that an addendum may be issued.

BF&S Butler Fairman Seufert
8450 WESTFIELD BLVD., SUITE 300
INDIANAPOLIS, IN. 46240
317 713-4615
FAX 317 713-4616

Cc: All attendees

BF&S Butler Fairman Seufert
8450 WESTFIELD BLVD., SUITE 300
INDIANAPOLIS, IN. 46240
317 713-4615
FAX 317 713-4616

APPENDIX *A2*

Lafayette Citywide Trails Master Plan
Stakeholder Meetings
December 1, 2010

Stakeholder Meeting 1 – Government Stakeholders

Attendees: See attached meeting attendance record

Time: 9:10am – 10:40am

Minutes: Jason Griffin opened the meeting and indicated that the reason for the meeting was to discuss multi-use trails and connections in Lafayette, IN. The group discussed that the City of Lafayette had received a TE grant to complete a Citywide Trails Master Plan and that it was being administered through the Indiana Department of Transportation. Jason Griffin introduced the Butler, Fairman, and Seufert team and then everyone individually introduced themselves. A question was asked regarding the type of trails the master plan was to address. It was discussed that the trail would accommodate pedestrians, rollerbladers, and bicycle traffic. The goal was to provide both recreational and alternative transportation routes. Sharon Dougherty presented information on the inventory and analysis. Sharon then presented the potential route plan and the group systematically started from the northwest most quadrant and worked towards the south to discuss the route plan. Several suggestions were made and the attached revised route plan is based upon comments from the first, second and, third stakeholder meeting.

A question was asked on whether the trail plan was intended for recreation or alternative transportation? The trail is intended to be both. Typically the majority of people using a trail for alternative transportation do not use the trail at the same time that the majority of the recreational activity is going on. For example quite a few people use the Monon to commute to and from work. A few people will use the trail for recreational purposes in the morning, but most of them will come home from work, change, and then use the trail for recreation. A majority of the people using the trail for alternative transportation will use the trail in the morning and late afternoon. This is not to say that there isn't overlap, but a trail can serve both purposes.

Due to the size of the group, the discussion of the potential route plan was only able to cover the northern half of the city. A suggestion was made that the group should meet again and discuss the southern routes before any public meeting is held.

These notes are the recollection of the writer. If any adjustments or corrections are required, please notify Butler, Fairman & Seufert within 5 business days so that an addendum may be issued.

Cc: All attendees

BF&S Butler Fairman Seufert CIVIL ENGINEERS
8450 WESTFIELD BLVD., SUITE 300
INDIANAPOLIS, IN. 46240
317 713-4615
FAX 317 713-4616

BF&S Butler Fairman Seufert CIVIL ENGINEERS

MEETING ATTENDANCE RECORD

MEETING #1

PROJECT: 4945 - Lafayette Trail Master Plan

DESCRIPTION: Government stakeholders 9am - ~~10:30~~ 10:40

DATE: 12.1.2010

NAME	ORGANIZATION	E-MAIL ADDRESS	TELEPHONE	FAX
Doug Poad	Area Plan Commission	dpoad@tippecanoe.in.gov	423-9242	423-9154
Kevin Little	Lafayette School Corp	klittle@lsc.k12.in.us	772-4790	772-4795
John Collier	Purdue University	jdcollier@purdue.edu	494-6882	496-1579
Gary D Henriott	B.O.W.-Lafayette	ghenriott@henriott.com	429-5606 x222	423-2599
Ken Larson	Ivy Tech	klarson@ivytech.edu	269-5128	269-5294
Lou Perdue	Ivy Tech	lperdue@ivytech.edu	269-5126	269-5294
Pennie Ainsworth	W.L. Parks & Recreation	painsworth@wl.lafayette.in.gov	775-5113	775-5249
Cindy Murray	City Clerk-Laf-(BOW)	cmurray@lafayette.in.gov	807-1021	807-1024
Allen Nail	Tipp. County Parks	anail@tippecanoe.in.gov	463-2306	463-2805
Ted Bumbleburg	LAF. PARKS	tbumbleburg@lafayette.in.gov	807-1503	807-1513
Joe Bumbleburg	Bell Law-Laf Parks	jbumbleburg@bal-law.com	742-9046	742-1966
Mike Smith	BF&S	msmith@BFSENGR.COM	~~423~~ 423 5602	742-5321
John Metzinger	City Bus	john@gocitybus.com	423-2666	742-4729
Mark Mitts	Clinton APC/Friend of Boone Co. Trail	Zoning@clintonco.com	765-659-6302	
Stanton Lambert	Wabash River Enhancement Corp	slambert@lafayette.in.gov	765.420.3505	same
SALLIE FAHEY	AREA PLAN COMM.	sfahey@tippecanoe.in.gov	423-9242	423-9154
Jenny Miller	City Engineer			
Crystal Joshua				
Sharon Dougherty	BF&S	sdougherty@bfsengr.com	317 713-4615	
Jason Griffin	BF&S	jgriffin@bfsengr.com	317-713-4615	

Stakeholder Meeting 2 – Commercial & Support Group Stakeholders

Attendees: See attached meeting attendance record

Time: 10:45am – 11:45am

Minutes: Jason Griffin opened the meeting and indicated that the reason for the meeting was to discuss multi-use trails and connections in Lafayette, IN. The group discussed that the City of Lafayette had received a TE grant to complete a Citywide Trails Master Plan and that it was being administered through the Indiana Department of Transportation. Jason Griffin introduced the Butler, Fairman, and Seufert team and then everyone individually introduced themselves. Some members of the first stakeholder group stayed on with the second group to have further discussions. It was discussed that the trail would accommodate pedestrians, rollerbladers, and bicycle traffic. The goal was to provide both recreational and alternative transportation routes. Sharon Dougherty presented information on the inventory and analysis. Sharon then presented the potential route plan and the group quickly went through the northern half of the city and previous comments made in an effort to get to discussions on the southern routes.

A few questions were asked concerning the plan. Does the plan look at the city streets and where sharrows should be used.? It was explained that the scope of the plan was for the masterplaning of multi-use trails, but that where appropriate we could make recommendations on the best way to connect to the trail system. A question was asked concerning access to commercial development east of SR 52 along SR 26. Do you think something is needed along SR 26 because most people will not ride along the proposed route south of here and then up to this area? It was explained that INDOT was in charge of SR 26 in this area. Unfortunately, INDOT has just upgraded this area and they are not likely to add bike lanes at this time. We can recommend that INDOT include these at a future date, but it is unlikely this will happen anytime soon. INDOT, however, will be upgrading the signal at the crossing of SR 52 to include pedestrian signalization.

The attached revised route plan is based upon those comments from the first, second and, third stakeholder meeting. The group was informed of the next steps for the master plan. BF&S will perform a preliminary environmental study on the preliminary routes and then create a preliminary concept plan. The preliminary concept plan will be presented to the public and then a preliminary cost estimate will be prepared along with phasing. The final document will contain the final recommended plan along with standards.

These notes are the recollection of the writer. If any adjustments or corrections are required, please notify Butler, Fairman & Seufert within 5 business days so that an addendum may be issued.

Cc: All attendees

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MEETING ATTENDANCE RECORD

MEETING # 2

PROJECT: 4945 Lafayette Trail Master Plan
DESCRIPTION: Commercial / Support Group 10:45
DATE: 12.1.2010

NAME	ORGANIZATION	E-MAIL ADDRESS	TELEPHONE	FAX
Stewart Frescas	WL Bike-Ped Committee	alembic@purdue.edu	765-423-1109	
	Centennial steering com			
Zoe Nezl	Virtuous Cycles	virtuouscycles@gmail.com	765 203 8279	
BRIAN STOCKWELL	Clarian Health	bstockwell@clarianhealth.com	765-838-6242	765-448-7656
David Lahr	9th St. Hill Assoc.	lahrandlahr@aol.com	765-747-6986	—
Sandy Lahr	9th St. Hill Neigh Assoc	"	"	
Lisa Decker	St. Elizabeth	lisa.decker@ssfhs.org	502-4470	
Kevin Klinker	City Council	kklinker@lafayette.in.gov	477-4727	

Stakeholder Meeting 3 – Industrial & Utility Group Stakeholders

Attendees: See attached meeting attendance record

Time: 1:00pm – 2:00pm

Minutes: Jason Griffin opened the meeting and indicated that the reason for the meeting was to discuss multi-use trails and connections in Lafayette, IN. The group discussed that the City of Lafayette had received a TE grant to complete a Citywide Trails Master Plan and that it was being administered through the Indiana Department of Transportation. Jason Griffin introduced the Butler, Fairman, and Seufert team and then everyone individually introduced themselves. It was discussed that the trail would accommodate pedestrians, rollerbladers, and bicycle traffic. The goal was to provide both recreational and alternative transportation routes. Sharon Dougherty presented information on the inventory and analysis. Sharon then presented the potential route plan and the group quickly went through the routes and previous comments made.

Gary McNamee form Duke did not see any problems at this time with the future proposed routes presented. He asked that the same rules and guidelines used on the first phase of Munger Trail apply to any other trails within their easements.

A question was asked as to what the typical section of the trail would be? It was explained that the typical section would be 1.25" of surface over 2" of intermediate over 6" of No. 53 stone. This would make the total depth 9.25". In some rare occasions when bad soil is encountered, then another 6" of No. 53 stone may be needed. This would make the total depth 1'- 3.25".

The group agreed that as each individual trail is ready for design, then utility coordination needs to be undertaken. However, based upon the typical section discussed, it seemed like the proposed routes would not affect any underground facilities. Care will be needed to avoid utility poles and place any proposed trails in such a location that it affects the least amount of utility poles and above ground facilities.

The attached revised route plan is based upon those comments from the first, second and, third stakeholder meeting. The group was then informed of the next steps for the master plan. BF&S will perform a preliminary environmental study on the preliminary routes and then create a preliminary concept plan. The preliminary concept plan will be presented to the public and then a preliminary cost estimate will be prepared along with phasing. The final document will contain the final recommended plan along with standards.

These notes are the recollection of the writer. If any adjustments or corrections are required, please notify Butler, Fairman & Seufert within 5 business days so that an addendum may be issued.

Cc: All attendees

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MEETING ATTENDANCE RECORD

MEETING # 3

PROJECT: 4945 – Lafayette Trail Master Plan
DESCRIPTION: Industrial / Utility Stakeholders 1– 2pm.
DATE: 12.1.200

NAME	ORGANIZATION	E-MAIL ADDRESS	TELEPHONE	FAX
KERRY SMITH	LAF WATER	KSMITH@LAFAYETTE.IN.GOV	807-1700	807-1701
Jerry Shutters	Comcast	Jerry_Shutters@cable.comcast.com	765-455-5935	
Ted Foster	Frontier	ted.foster@ftr.com	765 423-3531	
Cindy Kerker	TIPMONT	CKERKER@TIPMONT.ORG	765 404-0636	
Gary McNamee	Duke Energy	gary.mcnamee@dukeenergy.com	812-447-2351	812-375-2014
Alisa Pate	Vectren	apate@vectren.com	765-449-5606	
Jason Lucas	Vectren	jlucas@vectren.com		
Brad Talley	LAF WASTEWATER	btalley@lafayette.in.gov	807-1800	807-1810

APPENDIX *A3*

Lafayette Citywide Trails Master Plan
Public Meeting
March 15, 2011

Location: Ivy Tech College, Ivy Hall Building

Attendees: See attached meeting attendance record

Time: 7:05pm – 9:30pm

Minutes: Mayor Tony Roswarski opened the meeting and discussed the need for the trail system and the benefits that go along with it for the city of Lafayette. He then turned the meeting over to Jason Griffin where he discussed the agenda for the night, the need for the plan, the definition of a shared use trail, concerns of trails, the project schedule (what we have done and where we are going), the process we've taken to get where we are today for the public meeting, the scope of the project (with opportunities and constraints), and the goals set out by the city. He then introduced Sharon Dougherty and she discussed the basic layout of the master plan and the major routes we have introduced for comment. From this point she indicated we would have a five minute break and then meet at the end of the room for one-on-one discussions about questions on the trail system. See attached presentation and public comment.

A follow-up meeting with the mayor and city engineer was scheduled and had to clarify all questions and/or concerns by the public, and the following responses (in red) have been derived from those meetings

Elliot Ditch

1. **Jim Bollock** – Elliot Ditch is a floodplain. How would we put a trail over this? This is a natural barrier between the two neighborhoods and if the trail is put down we lose that barrier and all the trees would be gone. Kids already cut across yards to get to the other side by bridges that have been built over the ditch and this would open the door for them to go through yards more. It would be better to route this trail along the street in front of the homes (from 18th to Poland Hill) as it is wide enough and wouldn't take away from the natural wildlife. This would also create a good connection for children who otherwise couldn't really get from neighborhood to neighborhood. Have you looked at the 9th Street improvement plan that is an expanded 2 lane between Beck Lane and 350? What is the process for trading a utility easement to a trail easement?
   We would not put a trail over Elliot Ditch. In this situation there is an existing sanitary sewer easement along the ditch and this is the where the trail would be located. We would have to purchase a trail easement over the utility easement from each property owner. However, the city has identified an alternative route. The trail is now proposed along Ortman Lane from 18th Street to Poland Hill, then back south along Elliot Ditch to Old Romney Road. We have looked at the 9th Street Improvement Plan which is from 300 to Veterans Memorial Highway as a 3 lane road, however it does not apply to our master plan as we do not have trail in this area. The reason for no trail in this area is because even after the road is widened there still isn't enough width to place a trail.

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2. **Mark and Linda Eastman –** Need sidewalks along 300S to 9th to Poland Hill. Concern with trail on Elliot Ditch; very steep eroding banks, deep water, and contaminated water. Kirkpatrick ditch has flash flooding; redundant with 350S Trail. Why are you missing the link north of 350S at Concord? Need something from Old Romney east along 25 since people walk it now and it is very unsafe. Remove loop from Twyckenham Blvd north to 25, west to 231, south to Elliot Ditch, east to Old Romney Road, and north to 300S. Remove connection from mall to Ivy Tech along US 52. Add connection from Park East to County along 200S and connect from SR38 and north to 200S along Veterans Memorial Parkway. Add option to Wildcat Creek (refer to attached map). Much of the banks and corridors are lined with invasives. They need maintenance now and if invasive are removed it will erode the bank. Maintenance is an issue.
   A proposed trail has been added along 300S from 18th to Poland Hill. The missing link north of 350S at Concord is now in place, this was an error in the previous plan. As far as SR 25 is concerned, there is currently a plan to update the road and add sidewalks, although we are unsure when this will happen. The loop has been removed along 231 and now only connects areas that can be accessed for those residents. We are keeping the connection from the mall to Ivy Tech along 52 as this connects two major destinations. Connections along 200S and Veterans Memorial Parkway have been added. An option to Wildcat Creek has been added along Eisenhower Road from Creasy Lane. Also, when trails are built along steep banks or anything that has or would potentially have an erosion problem, systems can be designed that take care of this through permanent or temporary erosion control blankets, native seeding and native saplings.
3. **Citizen –** There are criminal concerns along Elliot Ditch. There have been crime problems in the past that have been eliminated. Don't want to see this started up again.
   Thank you for your concerns. In our experience trails do not add to crime and actually help with regulating it. However, due to space and privacy concerns an alternative route has been found. *See response #1.*
4. **Citizen –** There are water safety concerns along the Elliot Ditch, especially in high flow conditions. How are we proposing to protect children?
   See response #1 and #3. Whenever there are heavy rains or flooding occurs, it is the responsibility of the trail user to know the safety of the trail. In a case where it is known to flood, there could be signs posted before entering the trail that notify the trail user that the trail is closed during rain events.
5. **Citizen –** Would like to see the Elliot Ditch trail moved to Ortman Lane since there are three east/west trails in this vicinity.
   See response #1.

Orchard Heights

6. **Bill Bombassaro –** His residence is in Orchard Heights and he is in favor of the trail system. He is an avid runner and currently uses Munger Trail as well as running cross country through the existing utility easement. His concerns are that the roads are narrow in the neighborhood and very little side sidewalk. He is afraid that connection along Union would not be safe due to traffic and not having any bicycle/pedestrian facility. He would like to see a few more connections made through perhaps existing easements. He supplied pictures of perhaps a few locations that might work (large side yards). He saw something similar done in Valparaiso, Indiana with privacy fence to screen the single

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family houses. He additionally submitted an email with views of areas where he would like to see access. (See attached email and exhibits)
Due to the concerns of several property owners with using the Duke Easement, this trail has been relocated east along Union and then south along Courtland (with bike lanes and sidewalks, instead of trail), into the commercial area.

7. **Lonnie Madden (42 Imperial Place) –** Concerned with Orchard Heights trail in Duke Easement. People will jump the fence and it will become a pool liability, there will be a lack of privacy, and the neighbors' dogs will bark. You should use the sidewalk on Creasy and add sidewalk to 26 to avoid the utility corridor.
   See response #6.
8. **Angela Graves –** You should use sidewalks along Creasy. Don't connect "low income" neighborhoods through their neighborhood. This is not a good idea. There is bad drainage in this corridor. This won't be safe and secure.
   See response #6.
9. **Maurie and Jane Penney –** Concerned that trail will be close to house due to zigzag. No privacy; no screening allowed by Duke. Original plan presented to park board was along Creasy to McCarty.
   See response #6.

<u>Other Areas of Concern</u>

10. **Greg Small (resident and local business person) –** I am "tickled pink" that Lafayette has undertaken this plan. I think it is great. My only comment is that I would like to see a connection to the neighborhoods northeast of the city/ I-65. Near Wildcat Creek there are several trails that could be linked to. Possibly look at Eisenhower Rd.
    See response #2.
11. **Citizen** – Have you looked at the cost per user? Brown Street Bridge would be about $60/user. You need to do a cost analysis and see if it's worth it to have all these trails. Where are your priorities? Schools or trails? All these schools are being closed and teachers are being fired, but you are putting money into trails. You need to get your priorities straight.
    Thank you for your concerns. The priorities for this project are for trails. Most of the funding for these facilities would come from federal dollars and this would allow the city to still have money to support other interests. A preliminary cost estimate will be the next step in the master plan process and this will be spread out over at least 20 years.
12. **Rick Cornstable** – On long distance trails there seems to be a lot of trash along the trail. Would this be a problem here and is there any way to put trash receptacles intermittently?
    The trail system is being planned so that they will either connect to existing parks that already have support facilities, such as trash receptacles, or trailheads with support facilities will be added at major access points.
13. **Citizen** – All connections are great to see. As far as US 52 goes, there has been word that it could be taken over by the city. Can we show some kind of trail along 52 on this plan?
    Given that US 52 is such a highly traveled road and a main thoroughfare through Lafayette it would not be safe to route a trail along this road.

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14. **Citizen –** The problem with this plan is you haven't planned for programming for the uses. You aren't planning to reach out to the youth and program for support of this use. Once the baby boomers pass this won't be used because there isn't an outreach to children. We need a support system, outreach for families, and outreach for youth. Will there be any connection to Wildcat Creek? This needs to be a living document, and as things change or standards change- this document needs to change as well. I want to see that DNR, County, and W. Lafayette are involved and see them at these public meetings. We need an erosion control plan because there seem to be a lot of trails that are put in and then the erosion is horrible; worse than before. You need to look at the hiking club – how many people, what are their ages? Will there be enough use for all of these trails? You should look at Battleground trail and see what are the age groups, how many people, what issues are they having? Mary Cutler is the contact for this area. You should use this as a case study since it's in this area. Who will maintain this trail and where will the funds to maintain this trail be coming from? There should be a website on updates for this project and conversations on any issues with the trails available through the city (Like Facebook or Twitter). You also need to connect to Delphi and Canal System as well as Battleground Trail.
    It is not in the scope of this project to do outreach programs or programming for the uses of the trails. The city will have to coordinate this with local schools, parks, and non-for profit groups to get this outreach to the citizens. There will be a connection to Wildcat Creek. Since this is a master plan, it has to be a living document as standards change and opportunities become available. Erosion control is dealt with on a case by case basis and is addressed within the design of all trails. Local support groups were invited to attend stakeholder meetings. Several bike organizations attended these meetings. While the hiking club is more than welcome to lend its support and be involved, they were not contacted due to this trail master plan being for paved trails (not rustic). This will be maintained by the parks department and funding will come from the parks departments' budget. Some of the maintenance might be able to be done with volunteers. Once the plan is completed, it will be added to the city and the county's GIS website. The scope of this master plan is only for trails within the city limits. Several connections are made in the direction of Delphi and Battleground, but this will be up to the county to determine route.
15. **Citizen** – Avid cyclist and I love the plan. My main concern is a fatality that happened to a little girl at 25/Teal Rd and Old 231. People from the high density apartments walk to the grocery and there is no safe route. Suggest connecting the loop trail to the trail along Beck Lane through the utility easement. No sidewalks in this area.
    See response #2. The connection to the grocery will be from Twyckenham Boulevard.
16. **Citizen** – Great Plan. Why isn't there a trail connecting to St. Elizabeth's Hospital on Creasy Lane, north of SR 38? There are no sidewalks and many elderly people walking on the side of the road – too dangerous, need sidewalks or trail.
    There are existing sidewalks along Creasy to connect people to the trail along St. Elizabeth's Hospital or they can travel along Park East Boulevard to connect to the hospital.
17. **Citizen** – Can we continue Kirkpatrick Ditch out to Woodland Elementary? There aren't sidewalks and no safe way for the kids to connect neighborhoods.
    Tippecanoe County will need to look at these connections as it is outside the city limits.
18. **Citizen** – There is a dangerous intersection by Wea Ridge and we need safe crossings and routes to connect kids to other neighborhoods.

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The City is currently designing/developing a trail that connects into Wea Ridge Schools. Signalized crossings will be upgraded to meet Accessibility Standards within Public Right-of-Ways. This is in addition to the existing trail connection from the north. Due to the number of neighborhoods located to the east, it would not be feasible to add signalized crossings at each entrance. Also, because of the limit of scope of this master plan, it is suggested that the city work with the school and neighborhoods to develop a safe routes to school master plan to address all concerns.

19. **John Meluck** – Don't use 18th, 9th and Greenbush. Need to stay off busy streets. There aren't enough crosswalks across major roads, even recent ones.
    18th, 9th and Greenbush are all major routes within this master plan. Most routes will not be on street and will be separated from the motor vehicles. Crosswalks can be added in to help the trail user safely connect to areas that don't have trails.
20. **Citizen** – How are we going to get trails on N. 9th Street?
    From SR 25/Teal Road to Owen Street a bike lane has been located on the east side of 9th Street, heading north. At Owen Street, the bike lane turns west as a trail to 4th Street. At this point the trail switches back to bike lanes going into downtown. The trail doesn't continue north on 9th Street due to the limited width. With the trail cutting over to 4th Street it gives users the opportunity to have a direct connection to the library, one of the many amenities this master plan desires to connect to.
21. **Citizen** – Would like to see a dirt path as opposed to paved surfaces for a more natural aesthetic.
    As dirt paths are very nice and more aesthetic at times, the scope of this project is to provide trails that accommodate the widest range of users and alternative transportation. Paved trails will accommodate rollerbladers, bikers, walkers, joggers, stroller pushers, and even those in wheelchairs. Paved trails also require less yearly maintenance.
22. **Citizen** – Would like to see the trails have outdoor recreation goals, would like to see natural trails as opposed to transportation type trails.
    See response #20.
23. **Citizen** – Would like to see appropriate signage and bike lanes on the streets (No bike signage on trails).
    Due to the fact that these trails provide alternative transportation, we are required to provide the appropriate safety and warning signs. Every effort will be made to keep these to a minimum. The scope of this project only covers multi-use trails. The city is planning to do a bike facility plan which would incorporate bike lanes throughout Lafayette.
24. **Citizen** – Include libraries in the identified locations/destinations.
    Done.
25. **Citizen** – Would like to see trails along Rohrman's property along SR 26 and Orchard Heights.
    Done.
26. **Citizen** – Have we considered partnerships with the railroad to have a bridge go over the railroad along N 9th Street?
    This section is covered in the Wabash River Enhancement Corporation. We will show a bridge for cost purposes though.
27. **Citizen** – Can we show the sidewalk overlays in GIS and how that matches up with our currently identified potential trail locations?
    We will include this in our final document and the preliminary trail system is already on the GIS.

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28. **Citizen** – Trails along ditches need to be left natural. Nature trails needed!
    See response #20.
29. **Greg Shaner** – He is in favor of the trail system. He is with Tree Lafayette and would like to help with vegetating the trails. He has worked with the City Forester to provide tree plantings around the Lafayette area.
    Thank you for your offer to help. Coordination will need to be made when construction plans for each individual trail is implemented to plant trees along the trails.
30. **Perry Brown (LCC) –** In favor of the trail system, but needs to know what the long term costs to the city would be. Would like to have costs for maintenance and police.
    The next step will be to create a preliminary cost estimate. The mayor and the city engineer would also like to have several very small workshops with a few councilors at a time to address their concerns and as well any concerns that their constituents might have.

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CIVIL ENGINEERS

MEETING ATTENDANCE RECORD

PROJECT: LAFAYETTE TRAIL MASTER PLAN
DESCRIPTION: PUBLIC INPUT MEETING
DATE: MARCH 15, 2011

NAME	ORGANIZATION	E-MAIL ADDRESS	TELEPHONE	FAX
Steve Fischer	City of Lafayette - Engineering	sfischer@lafayette.in.gov	807-1038	
Crystal Joshua	City of Lafayette - Engineering	CJOSHUA@LAFAYETTE.IN.GOV	807-1236	
GREG LEHMAN	PLI ATHLETICS	GREGLEHMAN66@MSN.COM	426-6002	
Angela Graves	personal	pushgraves@AOL	447-0435	
Ellie Haan	personal		742-6449	
Bob Haan	personal		742-6449	
RICK BOKYARD	PERSONAL	RICKBOKYARD60@GMAIL	742-6021	
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Charles Gish	Self		563-3674	
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LON HEIDE	L.C.C.	LONHEIDE@MSN.COM	474-1776	
PERRY E BROWN	LCC	PERRYEBROWN@MSN.COM	418-7907	
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GREG SMALL	"	SMALL@GREGANDBOB.COM	427-1165	

Butler Fairman Seufert
CIVIL ENGINEERS

MEETING ATTENDANCE RECORD

PROJECT: LAFAYETTE TRAIL MASTER PLAN
DESCRIPTION: PUBLIC INPUT MEETING
DATE: MARCH 15, 2011

NAME	ORGANIZATION	E-MAIL ADDRESS	TELEPHONE	FAX
Cody Robertson			742 0950	
PAM BOLYARD	PERSONAL		765-474-6021	
Stewart Frescas	WC Bike-Ped Committee	alembic@purdue.edu	423-1109	
Mauric & Jane Denney	personal		427-0687	
Ann + Gregg Todd	Orchard Hgts	aatodd415@msn.com	447-4222	
Sara Peel	WREC	speel@lafayette.in.gov	337-9100	
TED Bumbleburg	LAF. PARKS	tbumbleburg@lafayette.in.gov	8071500	
JUSTIN MACK	JOURNAL & COURIER	JMACK@JCONLINE.COM		
JULIE COLE	SIA	julie.cole@subaru-sia.com	419-6278	
JIM PETERSON	—	—	423-1325	
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JOHN HOWLAND	ERNA	john_howland@yahoo.com	765 4046004	
BRAD SHOCKNEY	IU HEALTH	bshockney@iuhealth.org	765-484-5193	
John Melech		jpmel@frontier.com	765 448 4113	
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Geo. & Gina Buechle	Personal	buechlegc@comcast.net		
Rick Cornstuble	Laf City Council	rickcornstuble@aol	474 4638	
LARRY ROSE	Tree Lafayette	larry@treelafayette.org	447 7508	
BILL BOMBASSARO	WABASH RIVER RUNNERS CLUB	wjbnd71@hotmail.com	449-1315	
DESIREE SHEN CHUANG	VIRTUOUS CYCLES / IU		714-4794	

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CIVIL ENGINEERS

MEETING ATTENDANCE RECORD

PROJECT: LAFAYETTE TRAIL MASTER PLAN
DESCRIPTION: PUBLIC INPUT MEETING
DATE: MARCH 15, 2011

NAME	ORGANIZATION	E-MAIL ADDRESS	TELEPHONE	FAX
Lonnie Maddux	orchard heights		448-4643	
Zoe Neal	Virtuous Cycles	Virtuouscycles@gmail.com	807-6557	
Luci Neal	"	"	807-6557	
Jim Bozlock	Homeowner	J_Bozlock@comcast.net	474-3004	

Lafayette Citywide Trails Master Plan
Public Meeting
March 17, 2011

Location: Holiday Inn City Centre, Grand Ball Room

Attendees: See attached meeting attendance record

Time: 7:00pm – 9:30pm

Minutes: Mayor Tony Roswarski opened the meeting and discussed the need for the trail system and the benefits that go along with it for the city of Lafayette. He then turned the meeting over to Jason Griffin where he discussed the agenda for the night, the need for the plan, the definition of a shared use trail, concerns of trails, the project schedule (what we have done and where we are going), the process we've taken to get where we are today for the public meeting, the scope of the project (with opportunities and constraints), and the goals set out by the city. He then introduced Sharon Dougherty and she discussed the basic layout of the master plan and the major routes we have introduced for comment. From this point she indicated we would have a five minute break and then meet at the back of the room for one-on-one discussions about questions on the trail system. See attached presentation and public comment.

A follow-up meeting with the mayor and city engineer was scheduled and had to clarify all questions and/or concerns by the public, and the following responses (in red) have been derived from those meetings

Elliot Ditch

1. **Kim** – You cannot have my yard. I'm not in favor. Not in my backyard, I'm not moving! Why would you propose to take private property? Elliot Ditch is not a good location and I am not okay with a trail going in my backyard. Please consider to re-route to Ortman Lane.
   The trail that was originally along Elliot Ditch is now relocated to Ortman Lane from 18th Street to Poland Hill.
2. **Jeff and Terry Vester** – Issues with Elliot Ditch: significant loss of property, not convinced about crime (think it will happen), safety hazard/issue if heavy rain happens (trail would flood very quickly).
   See response #1.
3. **Wilbur Tarter of 50 Thomas Ct (765-477-2438)** – He came to the engineer's office to voice his concern about drug problems along Elliot Ditch. Someone drowned in the past and she had drugs in her. They have busted up the drug activity and he doesn't want to encourage any new drug activity.
   Thank you for your concerns. In our experience, trails do not increase crime or drug activity. Due to people being more visible within the corridor by trail users, crime will go down or they will get caught. However, due to space and privacy concerns the trail has been relocated. See response #1.

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FAX 317 713-4616

Orchard Heights

4. **Cary Cline –** Existing trail – what is the total that we have at this time? How much is too much? Have we lost a project because we didn't have enough trails? Nitehawk trails are little used on the west side.
   As of the March 17 meeting there were a total of approximately 80 miles of proposed trail, including 7 miles of existing and 8.25 miles of planned. These numbers may vary a bit as we have changed some of the routes. The right distance of trails is something that needs to be determined by each municipality and the needs of its citizens. The trails currently proposed in this plan makes vital and safe connections to libraries, schools, parks, grocery stores, and goods and services. As gas prices increase and people look for ways to become healthier, people will look for alternative ways to get to reach these amenities. It is our belief that the right length is based upon the connections needed within the community.
5. **Citizen –** Drainage issues. Close to houses. Look at utilities (sanitary sewer)
   Several citizens indicated that they had concerns with this route. The trail has now been re- routed east along Union and then south along Courtland (with bike lanes and sidewalks, instead of trail), into the commercial area.
6. **Citizen –** Storm holding pond to prevent flooding at Park East & SR 26 (north of shops). Narrow between houses and restaurants.
   This appears to be a wetland just north of the Chili's. The trail would not interfere with the wetland. Britt Farm drive already has a sidewalk. This could be removed to gain some width and Britt Farm Drive could be narrowed. The current width is 28 feet gutter to gutter. This would indicate a 14 foot lane and could be reduced to a 12 foot lane. Removing 4 feet from the road and then the 4 foot walk would result in a 8 foot wide trail.
7. **Citizen –** Look at taking Munger Trail south on Creasy Lane and then east behind shops or along 26 to Park East.
   See response #5.

Other Areas of Concern

8. **Phyllis and Michael Hunt** – At 9th and Kossuth there is an old bicycle bridge (Highland Park) and is a very nice feature. Can you incorporate this into the plan? How is it physically possible to put an 8' trail along Brown Street? This is a main artery for the city bus; therefore a road diet doesn't seem to be possible. Centennial Historic District is a National Register area. There is a plan for future development and growth. Contact to Sallie Fahey and Ryan O'Gara for plans. Or contact Jackie Turner from Ratio Architects. 427 and 425 5th Street are the protected homes. There should be collaboration between both plans to incorporate this trail. It is terrific to have this trail throughout the historic neighborhood, just concerned of how it can be done with street widths.
   The only bridge we were able to find around 9th and Kossuth (in Highland Park) is a bridge within that neighborhood. While this bicycle bridge may be a nice feature, it appears that it is an internal bridge. In order to access this feature it would become out of the way to route a trail through this neighborhood. As there are many limitations within the downtown area due to street widths, trees, and that it historic, we are leaving the downtown area to be planned in a future bicycle facilities plan. We will have several trails end at the downtown area but not follow through. There are sidewalks

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throughout all of downtown to give that access and bicycles would be covered in the bicycle plan which will be completed soon.

9. **Citizen –** Are there any connections we can make across US 52 between Kossuth Street and Union Street? It seems like it's an open area with minimal connections.
   The only intersecting road between Kossuth Street and Union Street along US 52 is South Street. It has been determined that South Street/26 is not a safe or feasible route for a trail.
10. **Liz Rausch –** At the abandoned railroad (along Erie St.), if a trail was put it in would be stop and go. There wouldn't be any speed to gain throughout this area and the trail user would have to stop every 75 feet. There have been things built on top of this railroad in the downtown area and no longer is owned by the railroad, but instead the railroad sold the property to each individual homeowner. This would be impossible to put a trail in this area and it would not be supported. Please look at seriously for reconsideration. Dennis Carson has the redevelopment plan for the railroad. Also refer to the newspaper article on the railroad re-use plan from November 1994.
    There is no longer a trail along the abandoned corridor south of Ferry Street.
11. **Councilman –** Can there be doggie stations along the trail?
    Doggie stations can be placed along the trail. Within the final master plan there is a section for design standards and this can be a recommendation within this section so that all trails get built with the same furnishings.
12. **David Howell (Lafayette Jeff Cross Country) –** He is in favor of the trail system. He currently has to bus the cross country team to training spots around the city and there are only a few. He is looking for new training spots and hopes the trail system will help. It would best if there were 3-5 mile loops they could use.
    There are several loop trails incorporated throughout this master plan.
13. **Gail Brock –** Had several questions concerning the trail system. She will discuss them with her coffee group and then send in her comments.
    OK.
14. **J. Keith Henry –** He is a supporter of the trail system, but he felt that there needed to be better connection to commercial along SR 26. He suggested the possibility of using the Railroad corridor and industrial property north of the intersection of 26 and 52 to create a crossing of 52. Possibly consider a bridge.
    At this time it is not feasible to connect to the commercial along SR 26 or through the railroad corridor.
15. **Margy Deverall –** She attended the Mia Burke presentation in Indianapolis. She would like to see a bike-way plan to supplement the trail plan. She is not sure how you can do one without the other. Wants to see more bike lanes and thinks most accomplished bikers will ride on road. She suggested that there are a lot of parallel roads to the proposed trail routes that could be used for bike boulevards.
    This is 100% true. The city is planning to do a bike facility plan in the near future. It will become a supplement to this master plan when it is complete.

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CIVIL ENGINEERS

MEETING ATTENDANCE RECORD

PROJECT: Lafayette Trail Master Plan
DESCRIPTION: Public Input Meeting
DATE: March 17, 2011

NAME	ORGANIZATION	E-MAIL ADDRESS	TELEPHONE	FAX
Nathl SLAVEN			447-2913	
Jeff + Terry Vester		javesterc@msn.com		
Margie Niles	Glen Acres Neighborhood Assoc.		447-9179	
Jerri Parks	Glen Acres Neighborhood Assoc	Jerin913@aol.com	447-4322	
Kelly Keck			447-3832	
Donny L. McDaniel	Candidate City Council	USSMcDaniel@AOL.com	420-0535	
MELVIN STEWART			423-1972	
LIZ RAUSCH	Home Owner		742-8475	
Lois Maickel	Home Owner	lmaickel@comcast.com	474-3865	
Denny Cerson	City of Lafayette	dcerson@lafayette.in.gov	807-1090	
Cary Cline		mcline4462@aol.com	447-0356	
Liz Solberg	citizen	jlsolberg@earthlink.net	743-5905	
BARBARA HUDDLESTON	LAND OWNER	huddleston.barbara@gmail.com	765 404 8981	
SHAE HUDDLESTON	"	"	"	"
J. Keith Heron	Business Manager	Secretary@meroungroup.com	765-491-5998	
ROBERT PARKS		BDP2052@AOL.COM	765-446-2052	
Nick Crow		nckcrow@gmail.com	317-439-4003	
Mark Bowman	Homeowner	bowmanmd@purdue.edu	474-4304	
Pauline Shen	homeowner	pauline@wildshen.com		
KEVIN KLINKER	Laf. City Council	kevinmklinker@gmail.com	449-1408	

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CIVIL ENGINEERS

MEETING ATTENDANCE RECORD

PROJECT: Lafayette Trail Master Plan
DESCRIPTION: Public Input Meeting
DATE: March 17, 2011

NAME	ORGANIZATION	E-MAIL ADDRESS	TELEPHONE	FAX
Melody Delph		mcD25@frontier.com	449-1422	
Ted Bumbleburg	LAF. PARKS			
Steve Fischer	City of Lafayette (Engr)			
David Howell	Lafayette Jeff ~~XC~~	dhowell@lsc.k12.in.us	586 0569	
Bob Downing	City Council		447-6059	
Ken McGlothlin	ORCHARD Heights	mcleroy55@yahoo.com	447-5141	
Janey McGlothlin	Orchard Heights		447-5141	
Stewart Fresses		epicycler2@gmail.com	423-1109	
Margy Deverall	City ECDevel	mdeverall@lafayette.in.gov	807-1097	
Rick Counts	City Council			
Phyllis Hunt	Historic Centennial 'Hood		742-6704	
Michael O. Hunt	" " "	huntm@purdue.edu	742-6704	
Barb Bowman	Homeowner - Laf.	tiggerlovesmom@hotmail.com	474-4304	
Mike Smith	BF&S	MSmith@BFSENGR.COM	479-0104	
Sharon Dougherty	BF&S	sdougherty@Bfsengr.com	317.713.4615	

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CIVIL ENGINEERS

MEETING ATTENDANCE RECORD

PROJECT: Lafayette Trail Master Plan
DESCRIPTION: Public Input Meeting
DATE: March 17, 2011

NAME	ORGANIZATION	E-MAIL ADDRESS	TELEPHONE	FAX
Gail Brock	Ellsworth Romig Neighborhood	gail_brock@comcast.net	765-418-2838	—
Rosemary Overman		rosemary2od@comcast.net	765-447-2094	

LAFAYETTE CITYWIDE TRAILS MASTER PLAN

Public Meeting Date: March 17, 2011

Be assured your comment will be included in the official project file if forwarded by March 31, 2011.

Name: (Please use ink pen and print) Barbara Bowman

Address: 3563 Canterbury Drive
Lafayette, IN 47909

COMMENTS: Overall, I am in favor of expanding the trail system throughout Lafayette. We are close to the Armstrong Park trail and have used it often for biking and walking.

My objection is with the section of trail that follows Elliott Ditch between S. 9th St. and S. 18th St. Our house fronts Elliott Ditch and because of the angle of the ditch, our backyard is shallower than our neighbors up- and downstream. Depending on the easement taken, we could lose almost half our yard in spots. We would have to install a tall privacy fence which would block one of the features we liked when we bought this house, namely the tree-lined waterway. Alternate routes are available (Ortman Ln. + S. 9th St.) - please reconsider this stretch.

Thank you!

Please provide your comments in one of the following ways:

- Leave this comment sheet with the presenters tonight
- Drop off this comment sheet at the Lafayette City Engineering Dept. (20 North 6th St.)
- E-mail a copy of this comment sheet to: BFS@BFSengr.com
- Fax this comment sheet to: Jason Griffin at BF&S at (317) 713-4616
- Mail this comment sheet to: Jason Griffin at BF&S (see address and fold-and-send outline on the opposite side of this sheet)

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LAFAYETTE CITYWIDE TRAILS MASTER PLAN

Public Meeting Date: March 15, 2011

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Name: (Please use ink pen and print) BRIAN SHOCKNEY

Address: 4514 Buckhorn Lane
Lafayette, IN 47909

COMMENTS: The trail system will provide a great future for Lafayette & the Tippecanoe County area. I would request information regarding Berlovitz Park and how I.U. Health Arnett can assist in getting the park and the trail to the Hospital moving forward.
The group @ I.U. Health Arnett is interested in assisting & fund raising toward matching grants for this area and connection.
Thank You for your good work!

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LAFAYETTE CITYWIDE TRAILS MASTER PLAN

Public Meeting Date: March 15, 2011

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Name: (Please use ink pen and print) Christy Snyder

Address: 608 Stockdale Dr.
Lafayette, IN 47909

COMMENTS:

- Like the overall proposed trail plans
- We live near existing trail that runs past Armstrong Park and enjoy trail use very much as we have young children and feel safer travelling those trails versus city streets
- Feel that certain, more secluded areas — the stretch between 9th and Beck for example — that could benefit from emergency call boxes
- Might consider additional access (if possible) near apartment complexes located in un-walkable areas, for example, along S.R. 25 / Old Romney Road
- Could also enhance bike lanes throughout town to create connections with trail plans, and create more bike parking in areas serviced by trails / bikepaths / pedestrian traffic (ie downtown, parks etc)

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Thank you!

LAFAYETTE CITYWIDE TRAILS MASTER PLAN

Public Meeting Date: March 15, 2011

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Name: (Please use ink pen and print) DESIREE SHEN CHUANG

Address: 346 SYLVIA STREET
WEST LAFAYETTE, IN 47906

COMMENTS: Integrating physical activity as a part of everyday transportation is critical for the health & well-being of our communities. From a health perspective, the built surroundings is a major factor in influencing behaviors and the choice to engage in physical activity. I feel that trail systems & roadways should promote cycling as bicycle transportation is an ideal form of human locomotion. Furthermore, air quality & noise pollution could be reduced as well as traffic congestion. Particularly, as a mother, my concerns are for the safety of my child on the road & encouraging youths to engage in bicycle commuting. I suggest integrating pedestrian & bicyclist awareness as a part of driving licensure as well as "traffic gardens" or traffic school for youths (to teach alternatives in transportation as well as responsible driving early in life) as demonstrated in other countries (ex. Utrecht, Netherlands). Bike boulevards & more signs are an improvement as well.

Please provide your comments in one of the following ways:

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LAFAYETTE CITYWIDE TRAILS MASTER PLAN

Public Meeting Date: March ~~17~~ 15, 2011

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Name: (Please use ink pen and print) JOHN HOWLAND

Address: 616 NEW YORK ST.
LAFAYETTE 47901

COMMENTS: 1) MANY of the properties next to the old rail bed have bought those lots from the city. They are now private property.
2) With the existing greenway, trash and vandalism are already a problem, only to get worse with increased access.
3) The proposed trail from 3rd St to Greenbush does not take into account the improvements already made.
4) Short 6th has potential for housing projects, improving the neighborhood, the trail would stop that.
5) Having a bike path that crosses over a dozen roads, at a 45° angle, is a recipe for disaster.
6) Should the city take private property for this project, what will the liability to those owners be, for upkeep, cleaning, shoveling, and vandalism?
7) Why was the KOSSUTH PATH, AND the 9th STREET HILL PATH NOT on the map printed in the paper?

Please provide your comments in one of the following ways:

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8) Who are the "Stake holders" who helped with this plan?

Jason G. Griffin, R.L.A.
Landscape Architect

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Indianapolis, IN 46240-5920
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F 317.713.4616
E jgriffin@BFSEngr.com

www.BFSEngr.com

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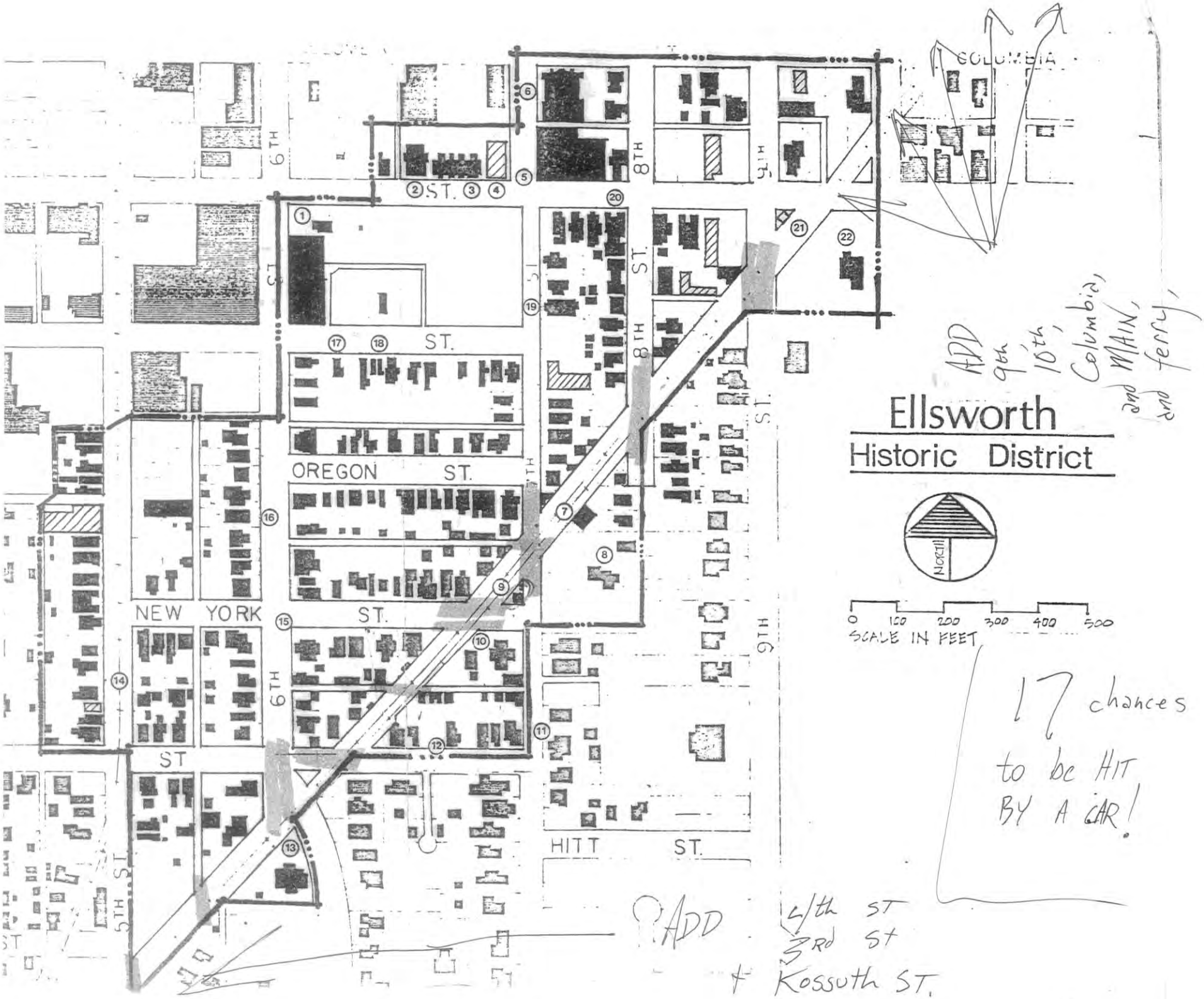
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SCALE IN FEET
ADD 9th, 10th, Columbia, and MAIN, and ferry,
17 chances to be HIT BY A CAR!
?ADD 4/th ST 3rd ST + Kossuth ST.

LAFAYETTE CITYWIDE TRAILS MASTER PLAN

Public Meeting Date: March 17, 2011

Be assured your comment will be included in the official project file if forwarded by March 31, 2011.

Name: (Please use ink pen and print) Liz Raysch (Elizabeth)

Address: 642 New York
Lafayette IN 47901

COMMENTS:

See attached

Please provide your comments in one of the following ways:

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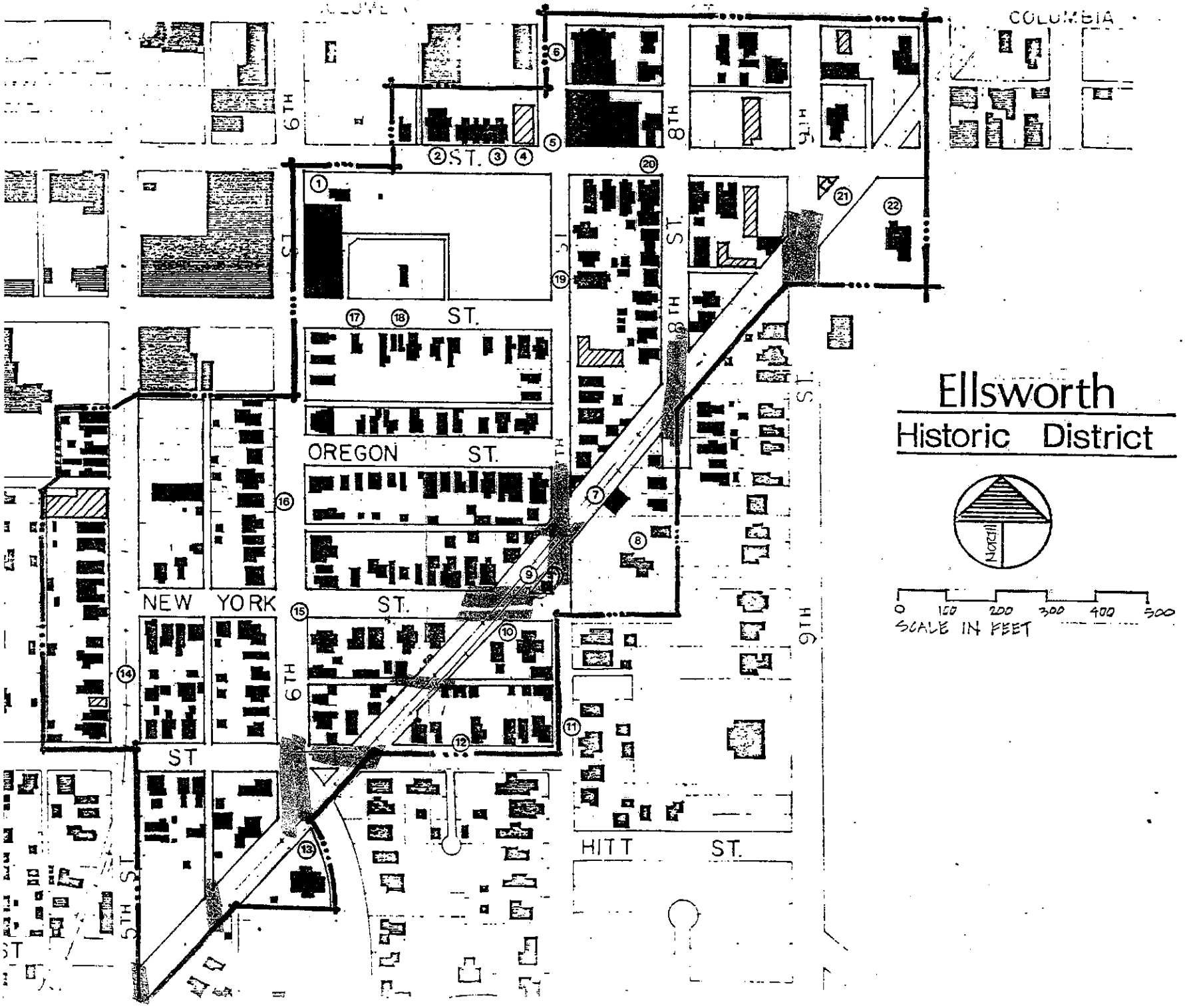
- Proposed Trail between 5th Street & 9th Street on what was the railroad corridor.

1) Between 5th Street & 9th street with the current proposal there are 9-10 potential interaction between pedestrians & vehicle's between streets & alleys (see attached highlighted in purple)
2) Has a review of the public meetings document from when the rail corridor was moved been done? There was extensive discussion regarding a rails to trail at that time – final decision was the purpose of the rail corridor move was to decrease the number of vehicle and train interactions. You are now looking at replacing that with strollers, bikes, skate boards, etc and vehicle.
3) This will hurt my property value. This is not my backyard or side yard, but my front yard
4) Portions of the proposed land is privately owned – with a sewer easement. Is the city going to purchase the land back from me since I will no longer have any private use of the property? Sewer Easement is all underground, so that I still have the actual land to use.
5) My current understanding is that a "sewer easement" does not allow for any other public use of the land.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Historic District
North
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SCALE IN FEET

Norfolk Southern Rail Reuse Study

News Update

Special Edition | City of Lafayette Community Development Department | November 1, 1994

Final Community Meeting for the Reuse Plan

The Lafayette Community Development Department and the City of Lafayette would like to thank and congratulate the citizens who have been an active part of this conceptual planning process which began over 6 months ago. It was your input that has guided our research and design efforts. Citizen input has truly shaped the final draft conceptual plans which we present tonight for the final public meeting. Your comments and suggestions, recorded tonight, will provide us with guidance in fine tuning the overall corridor plan into a final preferred alternative for the Norfolk Southern Rail Corridor Reuse Plan.

The Final Concept Reuse Plan maps presented tonight represent refinements made to the Concept Alternatives as presented in the last series of public meetings held September 26th, 27th & 29th. During those meetings, the consultant team described a series of reuse options. They then proceeded to integrate the most desirable elements of each option into a single reuse concept based on the discussion and feedback at those meetings.

The resulting combination yielded two primary Focus Areas within the context of a general scheme providing an easement for below ground utilities and private reuse opportunities. The Final Concept Reuse Plan maps depict these Focus Areas in detailed color graphics while illustrating the general scheme of the reuse plan with less emphasis.

Other objectives accomplished through the reuse plan though not reflected in the Focus Area graphics include specific traffic mitigation enhancements, two limited trail segments, preservation of portions of the entire corridor for long term drainage improvements, selective areas of private land expansion, and neighborhood stabilization & revitalization through the introduction of over 50 new single family housing sites.

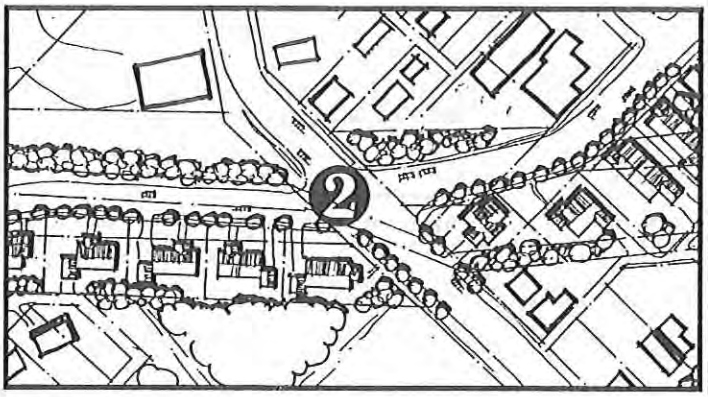
The key elements of the Focus Areas are illustrated and discussed below for your convenience. Please feel free to approach the graphics at the end of the presentation to get a closer look and do not hesitate to offer your opinions and insight toward further refining this draft version of the Final Concept Reuse Plan for the Norfolk Southern Rail Corridor.

Other Questions & Comments

If you should have any questions or comments regarding the Norfolk Southern Rail Reuse Study please contact Sherry McLauchlan, Director of Lafayette's Community Development Department at (317) 742-1145 or David Wenzel, HNTB Corporation's Director of Planning at (317) 636-4682.

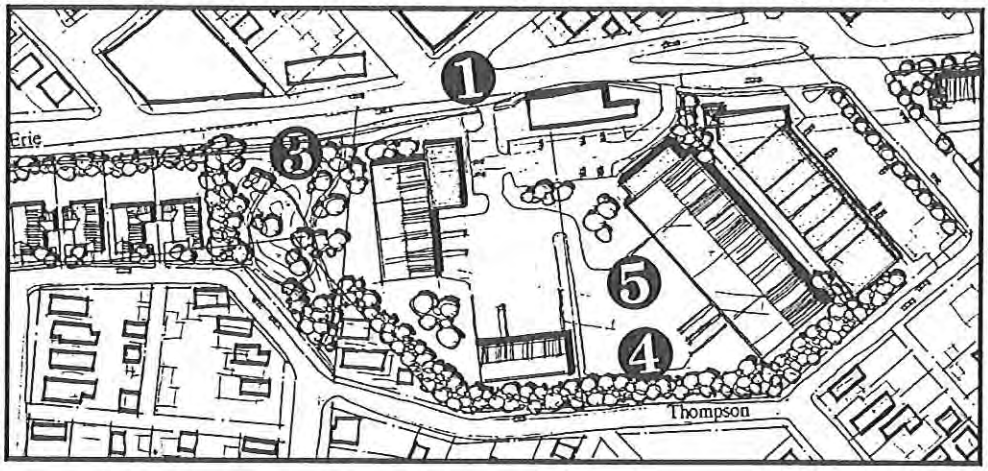
Thank you again for your interest & participation!

The area depicted at right is located between Holloway & 6th Street at the southern end of the corridor study area. This segment of the map illustrates a potential realignment of Washington Street and Third Street at the Smith Street intersection. This realignment accomplishes three objectives identified during the public workshops by:



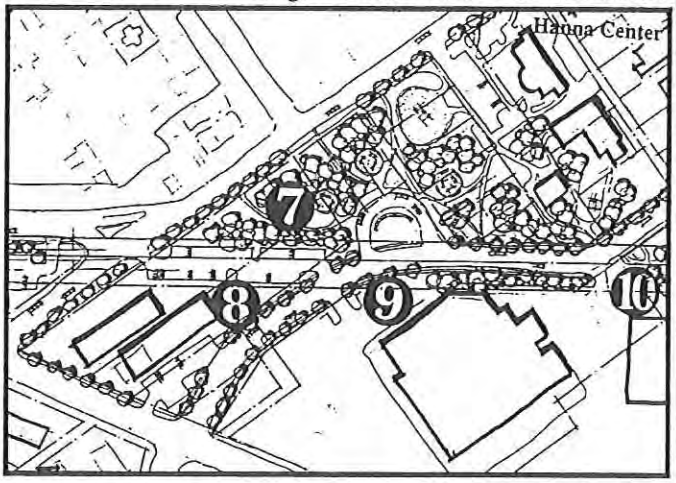
- providing maximum opportunity for single-family lot development;
- providing for an efficient and safe transportation network; and,
- providing for the long term extension of sanitary sewage& storm drainage utilities to southern residences currently unserviced by these city utilities.

This illustration depicts potential reuse opportunities located between Ferry & Union Streets in the central portion of the corridor study area. This segment of the map illustrates the transition of land uses along the corridor to demonstrate the effect of buffering and orientation on the compatibility of these adjacent activities. The major elements of this area include:



- new housing development opportunities compatible with historic district standards along Sheridan Street;
- a 1.25 acre open space & periodic detention pond acting as a buffer zone; and,
- an approximately 6 acre redevelopment site for commercial & warehousing activities.

The final excerpt depicts the Hanna Center/19th Street Reconnection at the northern end of the corridor study area. This segment of the map illustrates a potential extension of 19th Street through to Elmwood. The connection accomplishes three objectives identified during the public workshops by:



- providing for needed expansion opportunities for the Hanna Center & daycare facilities;
- providing more efficient and safe loading & parking access to businesses oriented to Elmwood & 18th Streets; and,
- providing for the extension of storm drainage utilities to alleviate storm drainage problems from Greenbush & the Market Square Shopping Center.

LAFAYETTE CITYWIDE TRAILS MASTER PLAN

Public Meeting Date: March 15, 2011

Be assured your comment will be included in the official project file if forwarded by March 31, 2011.

Name: (Please use ink pen and print) Lois Maickel

Address: 3567 Canterbury Dr.

COMMENTS: This is a quiet residential community. I have lived here 33 yrs and value my property. I feel this trail should not run between 9th & 18th along Elliot Ditch. Our backyard goes into Elliot Ditch, some neighbors have planted trees, put up fences and/or improved the area leading to the ditch.

Concerned about - loseing privacy, strangers going thru backyards, dogs and what they leave behind. Noise from biking groups, water bottles, wrappers and other trash.

9th to 18th can be reached by the trail along the track, there is no need to go thru backyards

Please provide your comments in one of the following ways:

I strongly oppose this proposed trail.

- Leave this comment sheet with the presenters tonight
- Drop off this comment sheet at the Lafayette City Engineering Dept.
- (20 North 6th St.)
- E-mail a copy of this comment sheet to: BFS@BFSengr.com
- Fax this comment sheet to: Jason Griffin at BF&S at (317) 713-4616
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Put side walks along 9th St. if you plan to widen and redo that intersection at 9th & 300 South.

Put a side walk along 300 South

Butler Fairman Seufert CIVIL ENGINEERS

LAFAYETTE CITYWIDE TR[illegible]S MASTER PLAN

Public Meeting Date: March 15, 2011

Be assured your comment will be included in the official project file if forwarded by March 31, 2011.

Name: (Please use ink pen and print) ROBERT MODLIN

Address: 3559 Canterbury DR. LAF 47909

COMMENTS: I Am utterly opposed to a trail created in my own backyard. The privacy + beauty of Eliot Creek (ditch) was #1 force in our deciding to move here ~ 8 yrs ago. I do not want anything to change my appreciation of this Peaceful and Private location.

Please provide your comments in one of the following ways:

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LAFAYETTE CITYWIDE TRAILS MASTER PLAN

Public Meeting Date: March 15, 2011

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Name: (Please use ink pen and print) ZOE NEAL

Address: 632 Main Street
Lafayette, IN 47901

COMMENTS: Very pleased that cycling infrastructure is on the agenda. As the owner of a bicycle shop + avid cyclist, ~~I support improvement~~ I am very interested in the topic. My experience with current ten foot wide segregated pathways is that frequent cross street make path use inconvenient as cyclists are forced to relinquish right of way upon paths (opposed to riding on streets). Where cross street density is high, on-street bike paths may better serve cyclists.

Please provide your comments in one of the following ways:

- Leave this comment sheet with the presenters tonight
- Drop off this comment sheet at the Lafayette City Engineering Dept.
- (20 North 6th St.)
- E-mail a copy of this comment sheet to: BFS@BFSengr.com
- Fax this comment sheet to: Jason Griffin at BF&S at (317) 713-4616
- Mail this comment sheet to: Jason Griffin at BF&S (see address and fold-and-send outline on the opposite side of this sheet)

BF&S
Butler Fairman Seufert
CIVIL ENGINEERS

Fax: 317-713-4616

From: Mitchell, John (Bob) [mailto:mitchell@purdue.edu]
Sent: Tuesday, March 15, 2011 9:18 PM
To: Andrew Ondecker
Subject: Lafayette Citywide Trails Master Plan

After expressing my views at tonight's meeting, I thought I'd put in writing my concerns.
My focus is on the Elliot Ditch being considered for a trail, which would be in my and 6 other neighbor's backyards.

- Elliot ditch currently separates the subdivisions of Canterbury Farms and Southern Meadows and is a natural barrier. By making the ditch a trail allows animal and human traffic to now pass between these two areas. We removed a bridge that crossed the ditch when we moved into our house in the late 1980's because of all the foot and bicycle traffic going through our yard.
- The area acts as a storm sewer drain for run-off. At least two times since we've lived here have we seen the ditch flood into our yards. One time the force of the water blew the manhole cover off of the storm sewer in my neighbor's backyard and water shot backwards towards his home. Am concerned that covering the ditch will lessen the drainage that is needed during these major downpours that happen every 20 years.
- Am concerned about privacy. This will encourage traffic through an area that currently has zero traffic. We have very limited traffic inside Canterbury Farms because it is a circle with a single outlet onto Ortman Lane (300 S).
- Putting a ditch will remove the large trees that line the ditch banks and give such a scenic backdrop to our homes. I've seen many ducks use this area for mating in the spring. They even come walking up into our front yard.
- This area is very dark and would need lighting for safety at night.
- Our utilities easement runs along Elliot ditch for telephone, cable and power. Concerned that the trail will push this easement even further into our yards.
- Propose that the Elliot Ditch trail be routed to Ortman Lane (300 S). That area is wide enough up to the church from 18th St. and would add a sidewalk path where there is none currently to that road.

Thank you for allowing us to express our comments.
Bob
--
Bob Mitchell, Manager of IT Services
Department of Botany and Plant Pathology
Purdue University
915 W. State Street
West Lafayette, IN 47907-2054
Email: mitchell@purdue.edu
Phone: 765-494-4659, FAX: 765-494-0363
WWW: http://www.ag.purdue.edu/btny

Jason Griffin

From: Jenny Miller [jmiller@lafayette.in.gov]
Sent: Thursday, March 17, 2011 8:37 AM
To: Jason Griffin
Subject: Fwd: Proposed Park Trail

Begin forwarded message:

From: Tony Roswarski <troswarski@lafayette.in.gov<mailto:troswarski@lafayette.in.gov>>
Date: March 17, 2011 8:01:36 AM GMT-04:00
To: Jenny Miller <jmiller@lafayette.in.gov<mailto:jmiller@lafayette.in.gov>>
Cc: Dennis Carson <dcarson@lafayette.in.gov<mailto:dcarson@lafayette.in.gov>>
Subject: Fwd: Proposed Park Trail

Info, you might want to pas this on the BFS. Also I am out on Park East this morning. We need to make a note to try and get a trail along Park East instead of sidewalks. I feel like we are missing a great opportunity, same thing along Creasy, we could have a trail from pavilions around the corner and down to Cat. Park, but people are putting in sidewalks as it develops instead of a trail.

Mayor Tony Roswarski
City of Lafayette
765.807.1002

Begin forwarded message:

From: Jeffrey Vester
<<mailto:jeffvester@hotmail.com>jeffvester@hotmail.com<mailto:jeffvester@hotmail.com>>
Date: March 16, 2011 9:52:19 PM EDT
To: Bob Downing
<<mailto:bdowning@lafayette.in.gov>bdowning@lafayette.in.gov<mailto:bdowning@lafayette.in.gov
>>
Cc: Tony Roswarski
<<mailto:troswarski@lafayette.in.gov>troswarski@lafayette.in.gov<mailto:troswarski@lafayette.
in.gov>>, Cindy Murray
<<mailto:cmurray@lafayette.in.gov>cmurray@lafayette.in.gov<mailto:cmurray@lafayette.in.gov>>
Subject: Proposed Park Trail

Bob:

It came to my attention tonight that the city is planning a park trail in our back yard. I heard that there was a meeting last night regarding plans for a proposed park trail. However, no one has ever mentioned to us that the trail is to come through our back yard and take some our property. I am upset that no one contacted us that we may have a vested interest in attending these meetings to voice our opinions. Terry and I will be attending the meeting tomorrow, Thursday, night regarding this trail.

It does not make sense to us to have a trail go through our backyard. We have been told that a good portion of our property will be taken for this project. We will be having people walking through the back of our house. We will not be able to enjoy sitting in our yard, unless we put up a privacy fence which will cost us money. We feel that this is going to increase crime in our area. If lights are put in, this will affect the country feel that we

now enjoy. Depending on the amount of property taken, I will lose space for our garden. The area that is being proposed is basically in a flood zone. This area floods whenever we get good rains. We will not be able to let our dog stay in our back yard and play. She will be constantly barking at the people walking through our yard.

When we purchased our house, it had been on the market for a long time. This was even before the housing bust that occurred a few years ago. The biggest problem in selling this house involved the power lines behind our house. Now, with the addition of the trail, it will be even more difficult to sell this house. Therefore, if this proposal gets accepted, we may be forced to sell this house that we love before the trail gets constructed and probably will move out of Lafayette. This is something that we do not want to do.

In summary, Bob, Terry and I are extremely disappointed in not being notified by anybody in the city of Lafayette that this proposal is being considered and it would involve taking of our property. We think that anytime something is going to affect your property, the property owner should be notified. We were not. This has the appearance of a project being planned and decided upon before the affected public has a chance to voice their opinions. Granted, you can say that there were meetings regarding a project, but if the people do not know what is being planned affects them, then that meeting is a farce.

As you know, this is an election year. The people of this neighborhood will remember what is going to be decided, and will voice their opinions in November.

Thank you,

Jeff and Terry Vester

From: j_bollock@comcast.net [mailto:j_bollock@comcast.net]
Sent: Monday, March 28, 2011 9:19 PM
To: Andrew Ondecker
Subject: Lafayette Citywide Trails Master Plan

From: Jim and Lori Bollock, 3555 Canterbury Dr., Lafayette, IN 47909

Comments: We attended your public input meeting at Ivy Tech. We wish to submit objection to a trail being placed in our backyard and Canterbury farms subdivision. We purchased our home in 1997 based on the fact that Canterbury farms has low vehicle traffic, the beautiful tree line along the back of our property and the privacy and seclusion.

During the meeting, the presentation mentioned concerns of homeowners about a trail plan. The attempt was made to pursuade the audience that property values and privacy were non factors. This position lacked any evidence to support the statement that property values would not decrease. The old statement of perception is reality applies in this situation. If we as homeowners perceive that our privacy has been decreased the adding a trail to our property, than that is reality. To imply anthing else is insulting.

The eight properties along Elliott ditch have a utility easement. We purchased these properties with the understanding that access may be needed to maintain the utilities, such as the Elliott ditch sewer lining project that was done a couple years ago. This easment is not a public path through our properties. Any attempt to acquire a trail easement will be met with resistence.

We support the concept of trails in the city of Lafayette, but consideration of individual properties rights needs to be taken into account. Since this area of town lacks sidewalks along both 9th street (between Dover Lane and Veterans Memorial Parkway) and Ortman Lane, we would propose that a dual purpose trail/sidewalk be considered for these streets.

We hope these comments will be taken into consideration on your plans.

Regards,
Jim and Lori Bollock

Jason Griffin

From: Jenny Miller [jmiller@lafayette.in.gov]
Sent: Wednesday, March 16, 2011 10:04 AM
To: 'Jim Bollock'
Cc: Jason Griffin; Ryan Smith; Crystal Joshua
Subject: RE: Lafayette Trail Plan

Jim

We would definitely not enclose Elliott Ditch. If we put the trail through it would be over the existing sanitary sewer easement and we would have to purchase trail easement over the utility easement from each property owner. There would be a very public process for moving forward with that section. I'll let Sharon know that enclosing Elliott Ditch is not an option, nor practical given the watershed it encompasses.

Jenny

From: Jim Bollock [mailto:j_bollock@comcast.net]
Sent: Tuesday, March 15, 2011 10:44 PM
To: Tony Roswarski
Cc: Jenny Miller; jbollock@roeing.com
Subject: Lafayette Trail Plan

Tony:

Thanks for organizing a public session on the Lafayette trail plan.

In speaking with Sharon of Butler, Fairman & Seufert, there appeared to be some uncertainty of how the trail along Elliott ditch would be done between 9th and 18th streets. Sharon seemed to think that this stretch would be tiled and the trial would be placed within existing ditch. Please clarify this plan.

Jenny also commented that our section of Elliott ditch is classified as utility easement. What is involved in getting it changed to trail easement? Is there some type of notification to property owners along this path?

Thanks,

Jim

Jason Griffin

From: Bill Bombassaro [wjbnd71@hotmail.com]
Sent: Monday, March 28, 2011 10:33 AM
To: Jason Griffin
Subject: Lafayette Trail - Orchard Heights Access
Attachments: Imperial Place Trail Access Request Option 4.pdf; Imperial Place Trail Access Request Option 1.pdf; Imperial Place Trail Access Request Option 2.pdf; Imperial Place Trail Access Request Option 3.pdf

Jason,

Here are street views of the area where I would like to see trail access for residents of the northern portions of Orchard Heights. Google Earth does not have street views of the Valparaiso neighborhood where I have seen a trail segment between single-family houses, but those houses are much closer to each other than the area of my request.

Bill Bombassaro

From: Schultz, Mary G [mailto:schultm@purdue.edu]
Sent: Tuesday, July 26, 2011 1:06 PM
To: Crystal Joshua
Subject: trail master plan

Hi Crystal,

I was just given a copy of the Lafayette Trail Master Plan by a neighbor who was showing me the intention to take our back yards to build a trail along Elliott Ditch. She did also say that this idea, at least for now, has been scrapped. I just want to state that I would be very much opposed to such a move as it completely defeats the reason we purchased our home. We did not want a park running through our backyard and the proposed amount of land that would be taken would have us walking off our deck and onto the trail. Elliott Ditch is not kept clean and therefore is not all that attractive or safe for kids to be playing in and that is what will happen.

Our children in this area actually have to ride the bus to Earhart school (2 blocks away). Money better spent would be to add sidewalks south of Earhart school to Ortman Lane and finish the sidewalk on Ortman Lane to 9th St. This would save the city money in busing these children to school and provide a much safer walking area for the entire community.

Thanks you for your time,

Mary

Mary Schultz

Fink Meadow resident

Lafayette Citywide Trails Master Plan
Official Response to Mailed in Public Comments
May 12, 2011

1. **Barbara Bowman –** *The proposed route will no longer be along Elliot Ditch from 18th Street to Poland Hill. It is now being routed along Ortman Lane.*
2. **Brian Shockney –** *Thank you very much for your generous offer. The city will be in contact with you to discuss these ideas and how to coordinate the development of this trail section.*
3. **Christy Snyder –** *Emergency call boxes are being considered as a part of certain routes. As the trails are developed, call boxes will be installed on a case by case decision. The master plan has tried to make as many connections as possible to both neighborhoods and apartment complexes. The city is planning a follow up study to this plan. A bicycle facility study will look at adding bike lanes, bike boulevards, and shared roads to strengthen the city's alternative transportation plan. The next phase of this project will look at adding design guidelines and bike parking for the trail system.*
4. **Desiree Shen Chaung –** *These are all really good suggestions and the city will need to look at programs which could address these. The city might even be able to bring in an outside advocacy group like Bicycle Indiana to help teach some safety classes and the city staff/ park staff on how to put on their own bicycle safety courses. While these programs are not within the scope of this master plan, a section could be added to address recommended steps as the city moves forward with its alternative transportation facilities.*
5. **John Howland –** *The abandoned railroad corridor, south of Ferry, is no longer being used as a proposed trail route. The city and parks department will handle upkeep, cleaning, shoveling and repairing any vandalism along the trail system. A volunteer program may also be added to help with maintenance issues and has been successfully implemented in other locations. The Kossuth Street trail and 9th Street trail were not printed in the paper because the master plan is an ongoing process . This was not an attempt to hide anything, and the route was presented at both public meetings. The updated map was then provided to the media afterwards. Additionally, maps and comment sheets were provided for the public to take home and several options were given for returning these to the city or the consultant. There were many stakeholders involved in the development of this plan including government entities, no-for profits, commercial owners, industrial/utilities, and local bicycling groups.*
6. **Liz Rausch –** *See response #5. Additionally, while the trail is being re-routed for safety reasons, we would again emphasize that trails do not hurt property values, but actually increase them. While every case is unique, front yards are usually already considered semi-public space because people can already pass by via a road or a sidewalk.*
7. **Lois Maickel –** *See response #1.*
8. **Robert Modlin –** *See response #1.*
9. **Zoe Neal –** *See response #3.*
10. **Bob Mitchell –** *See response #1.*
11. **Mary Schultz** – *Thank you for your comments. See the response to #1.*

BF&S Butler Fairman Seufert CIVIL ENGINEERS
8450 WESTFIELD BLVD., SUITE 300
INDIANAPOLIS, IN. 46240
317 713-4615
FAX 317 713-4616

Lafayette Trail Master Plan

Public Input Meeting

March 15, 2010 & March 17, 2011

Butler Fairman Seufert
CIVIL ENGINEERS

Agenda

- Need for the Plan
- Definition of a Shared Use Trail & Concerns Involved with Them
- Schedule and Process
- Scope of the Plan
- Goals
- Preliminary Conceptual Plan
- 5 minute Break
- Comments & Questions

Need for the Plan

- Be ready for funding opportunities when they present themselves
- Provide safe recreational opportunities for citizens (healthy living)
- Make the city more attractive as a place to work, live and visit as the city continues to experience growth
- Provide safe alternative transportation to the widest range of users possible (make connections)
  - Schools
  - Jobs
  - Goods and services (grocery, food, retail)
  - Parks
  - Neighborhoods
  - West Lafayette and Tippecanoe County

Need for the Plan

- Environmental Benefits
  - Air Quality
  - Water Quality
  - Preserve Natural Resources and Cultural Resources
- Coordination with other agencies (new bridges, new roads, etc.)

Shared Use Trail

- 12 feet maximum to 8 feet minimum
- Typically asphalt
- Separated from road
- Not on-street bike lanes
- Not a sidewalk
- Non-motorized users (pedestrians, bicycles, skaters, etc.)

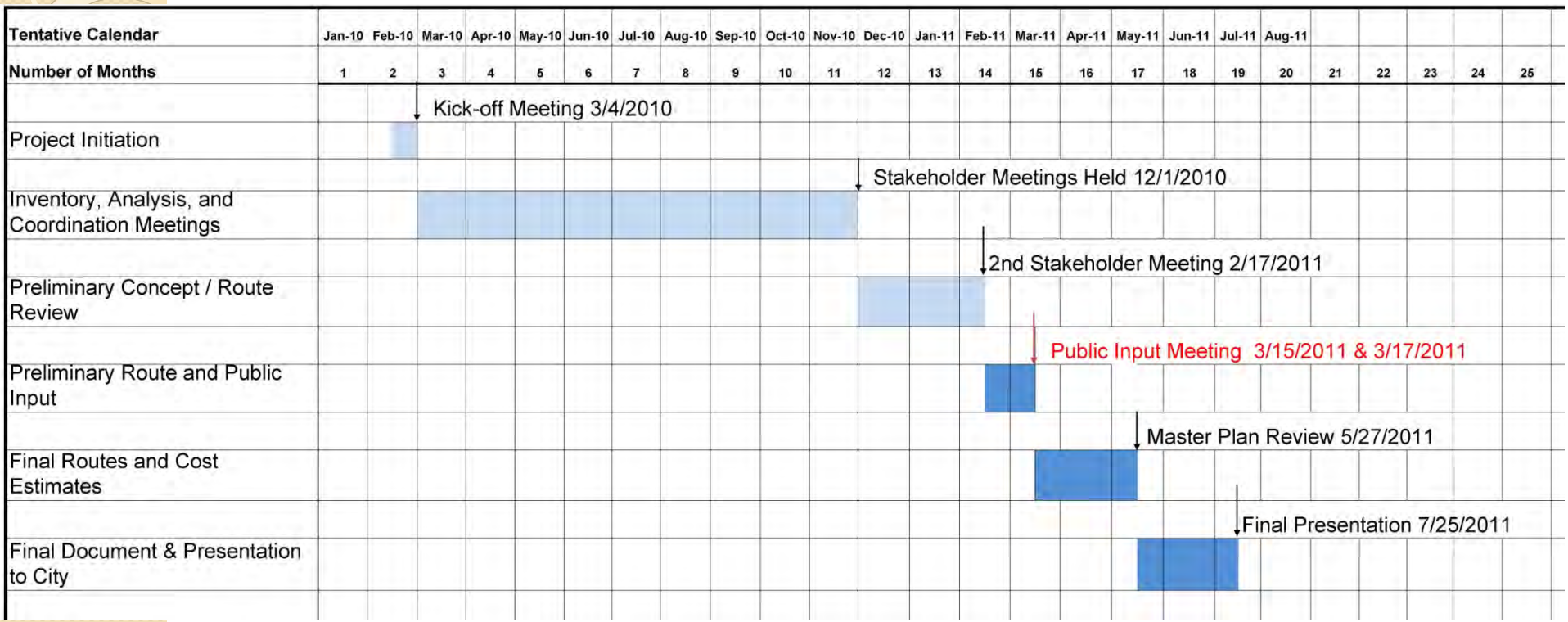
Concerns

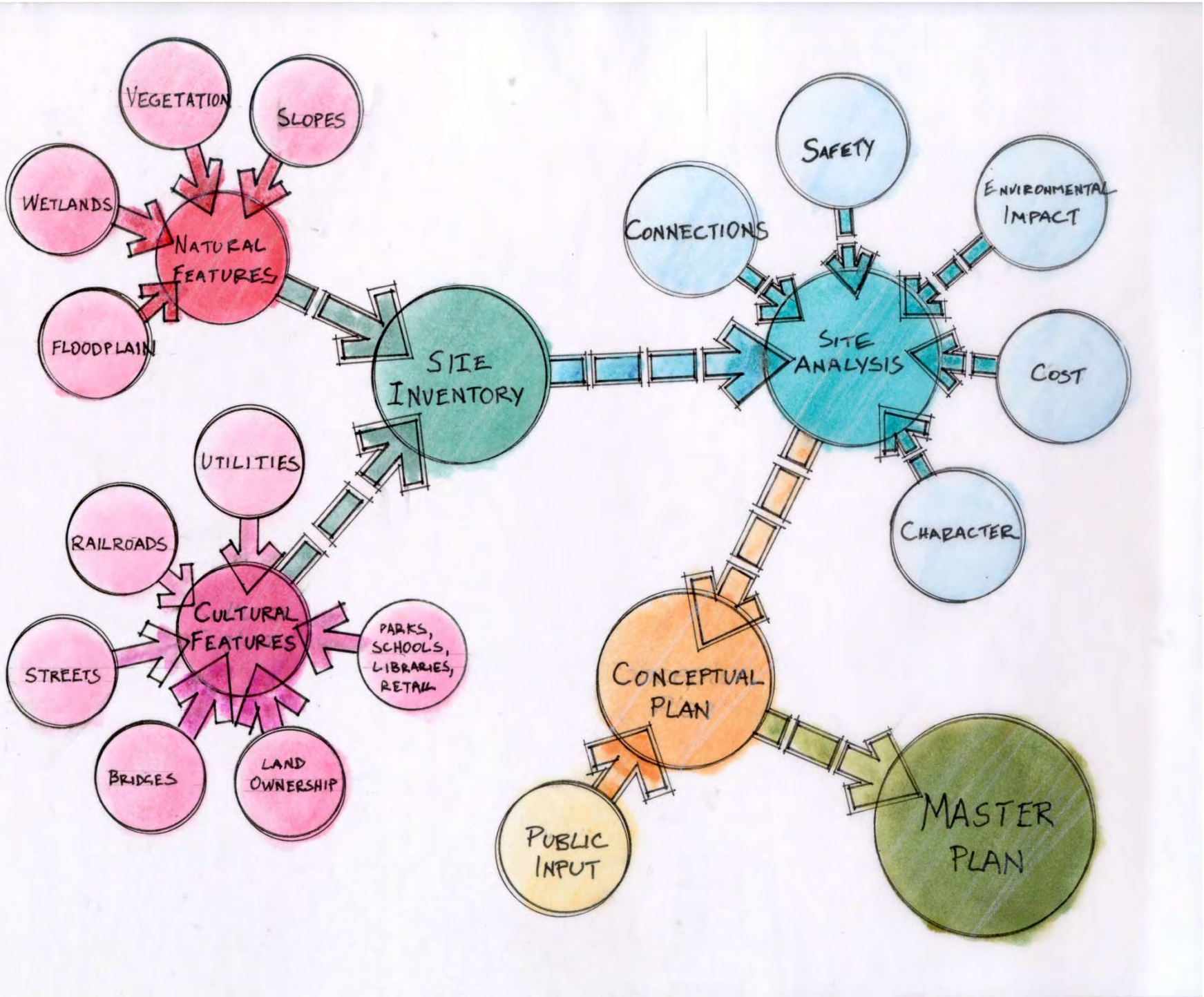
- Safety/Crime

Concerns

- Privacy
- Property values
  - Commercial
  - Private

Project Schedule




VEGETATION
SLOPES
WETLANDS
NATURAL FEATURES
FLOODPLAIN
SITE INVENTORY
UTILITIES
RAILROADS
CULTURAL FEATURES
STREETS
PARKS, SCHOOLS, LIBRARIES, RETAIL
BRIDGES
LAND OWNERSHIP
SAFETY
CONNECTIONS
ENVIRONMENTAL IMPACT
SITE ANALYSIS
COST
CHARACTER
CONCEPTUAL PLAN
PUBLIC INPUT
MASTER PLAN

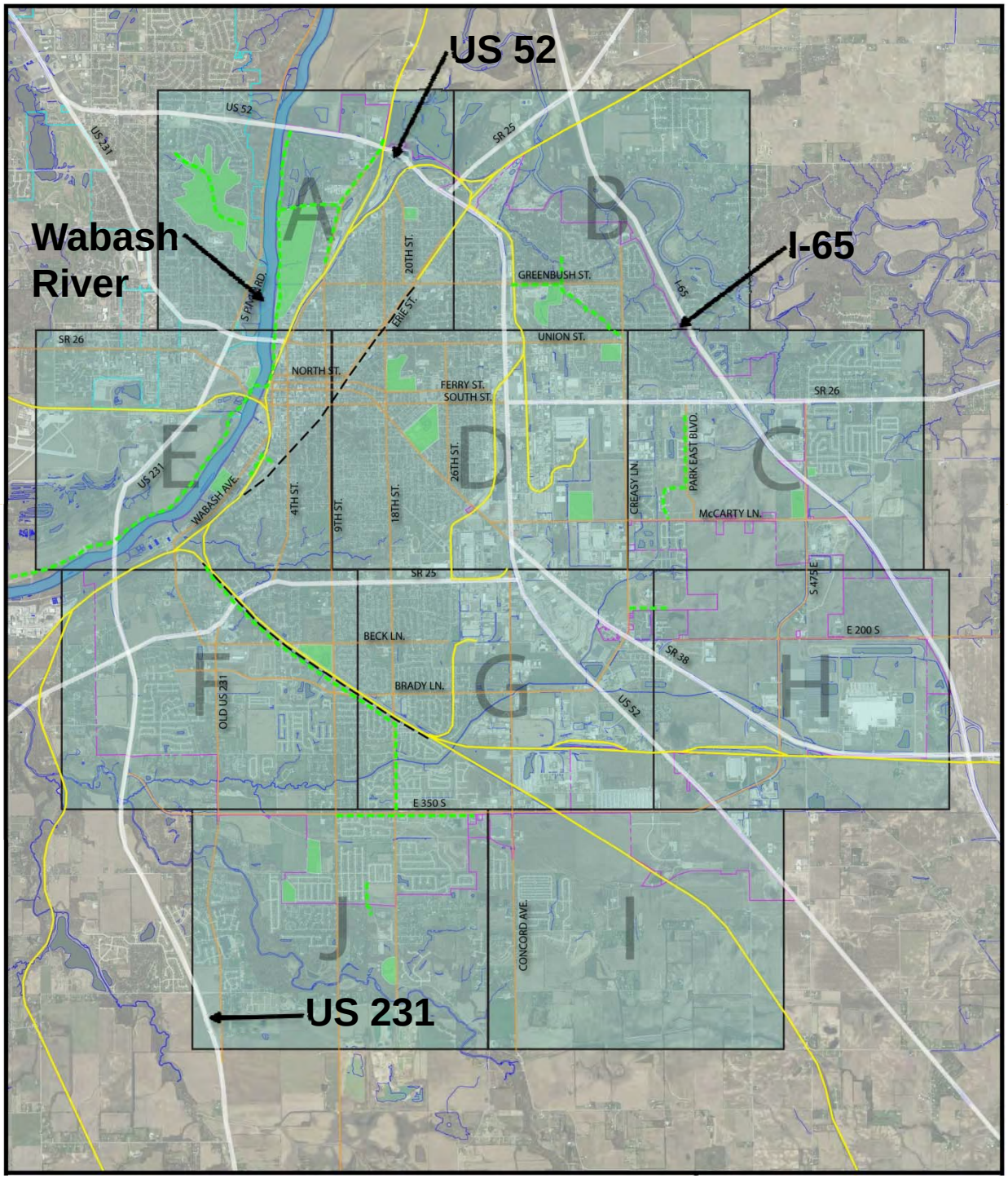
Scope

<u>Opportunities</u>

- Opportunities along abandoned rail corridors
- Positive connections & destination points (parks, schools, commercial)
- Several existing and planned trails
- Safe connections to existing trails
- Add character to city streets
- Utility corridors

<u>Constraints</u>

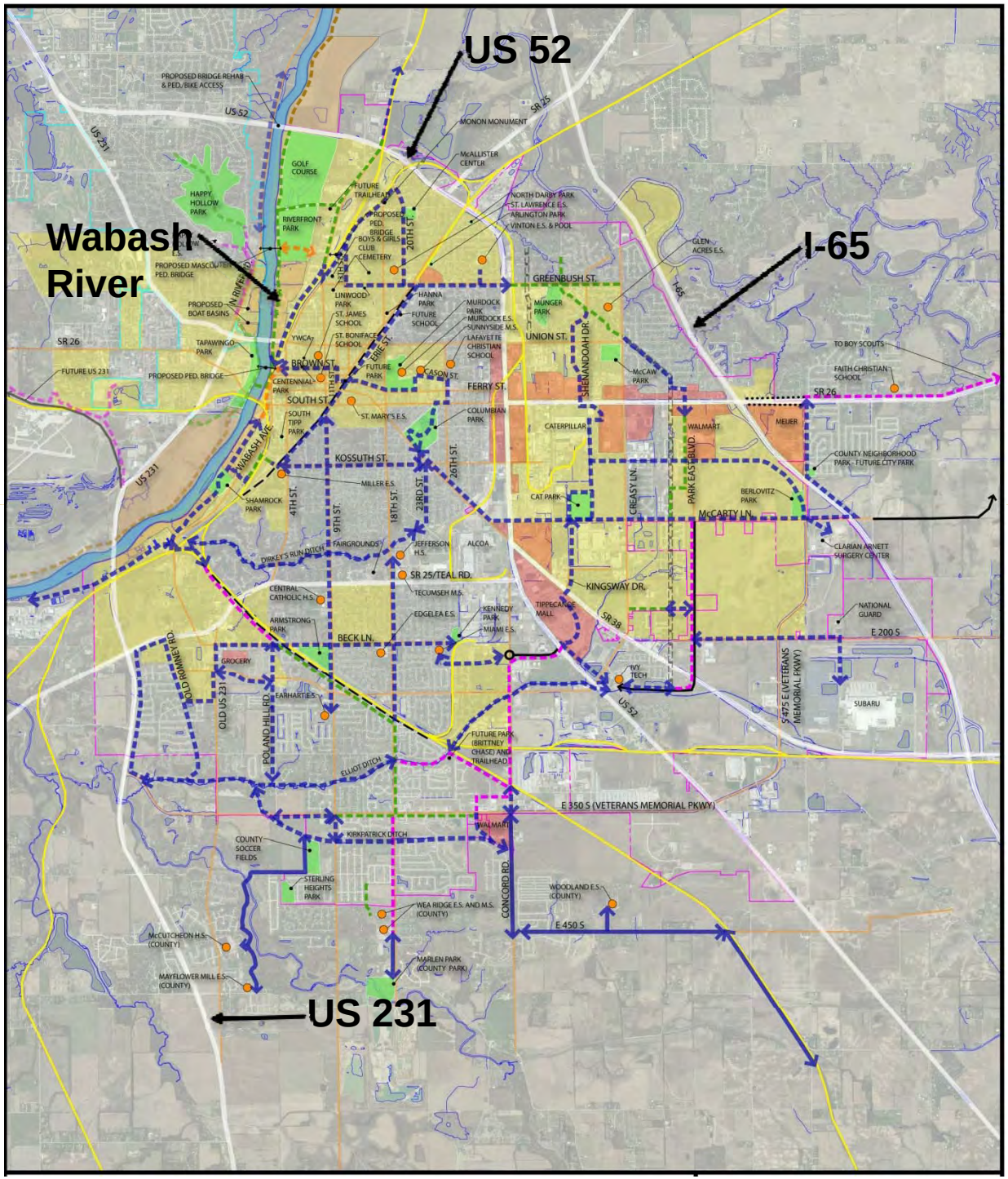
- Narrow Streets
- Steep Slopes
- Road Crossings
- Clearing of forested areas
- Active railroad crossings



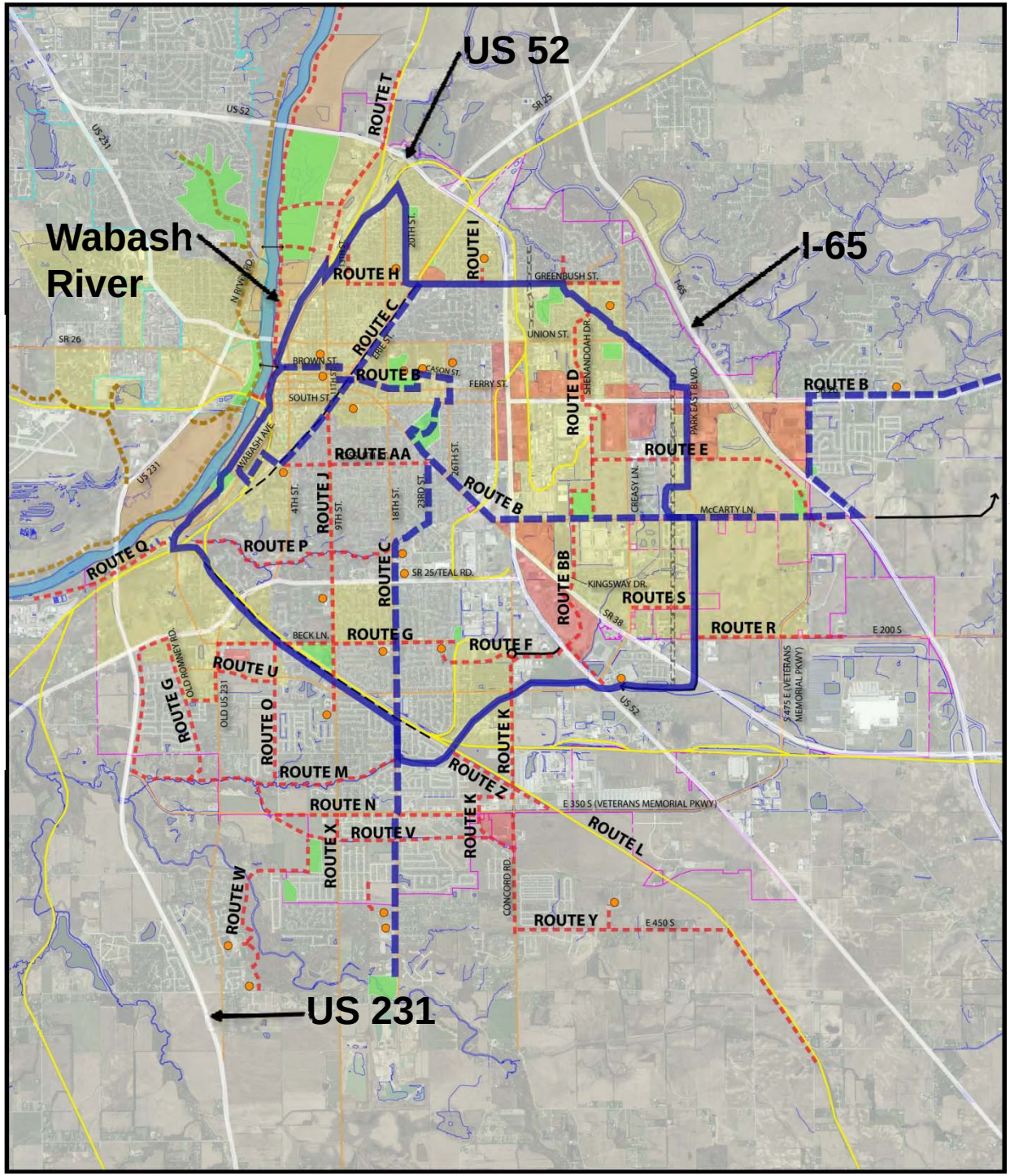
Goals

- Safe recreation corridors
- Connect to all schools (safe routes)
- Connect to all major parks
- Create destinations
- Every person in the city within a ½ mile of a trail
- Economic development
- Make the trail accessible for all ages and abilities
- Make regional connections
- Make neighborhood connections
- Make connections to W. Lafayette trails system
- Make connections to county

Master Plan


US 52
Wabash River
I-65
US 231
LEGEND
LAFAYETTE CITY LIMITS
WEST LAFAYETTE CITY LIMITS
WATER
MAJOR ROADS
MINOR ROADS
ACTIVE RAILROAD CORRIDOR
ABANDONED RAILROAD CORRIDOR
EXISTING TRAIL
EXISTING TRAIL - NOT PAVED
PLANNED TRAIL
PROPOSED CITY TRAIL
PROPOSED TRAIL BY OTHERS
WABASH RIVER ENHANCEMENT TRAIL
SIDEWALKS
FUTURE ROAD
PARK
COMMERCIAL
PROPOSED WABASH RIVER ENHANCEMENT PARK USE
LOW AND MODERATE INCOME AREAS
SCHOOLS
UTILITY EASEMENT
WEST LAFAYETTE LEGEND
EXISTING TRAIL
EXISTING TRAIL - NOT PAVED
PLANNED TRAIL
PROPOSED TRAIL
FUTURE ROAD

Trail Arterial Plan



LEGEND

- LAFAYETTE CITY LIMITS
- WEST LAFAYETTE CITY LIMITS
- WATER
- MAJOR ROADS
- MINOR ROADS
- ACTIVE RAILROAD CORRIDOR
- ABANDONED RAILROAD CORRIDOR
- OUTER CITY LOOP - ROUTE A
- PRIMARY TRAIL ROUTES - ROUTES B AND C
- SECONDARY TRAIL ROUTES/ CONNECTORS - ROUTES D THROUGH T
- WEST LAFAYETTE TRAILS
- FUTURE ROAD
- PARK
- COMMERCIAL
- LOW AND MODERATE INCOME AREAS
- PROPOSED WABASH RIVER ENHANCEMENT PARK USE
- SCHOOLS
- UTILITY EASEMENT

Review/Questions/Comments

APPENDIX *B*

REFERENCES

1. “Non-motorized Vehicle Use Facility”, INDOT Design Manual, Chapter 51
2. “Guide for the Development of Bicycle Facilities” AASHTO, 2012
3. “Accessibility Guidelines for Outdoor Developed Areas” U.S. Architectural and Transportation Barriers Compliance Board, Sept. 1999
4. Americans with Disabilities Act Accessibility Guidelines (ADAAG), Code of Federal Regulations, 28 CFR Part 36, July 1, 1994
5. “Manual on Uniform Traffic Control Devices” Millennium Edition
6. “Indiana Design Manual, Part 5, Road Design, Volume 2” INDOT
7. “Rails-with-Trails: Lessons Learned” U.S. Department of Transportation, Federal Railroad Administration, April 1, 2002
8. “Railroad – Highway Grade Crossing Handbook” Second Edition; FHWA-TS-86-215
9. “LRFD Bridge Design Specifications” Second Edition, AASHTO, 1998
10. “Standard Specifications for Highway Bridges” AASHTO, 2002
11. AASHTO Greenbook

APPENDIX *C*

Preliminary Environmental Study for the City of Lafayette Trails Master Plan

Location of Project Area

Butler, Fairman and Seufert, Inc. have been contracted by the City of Lafayette to perform a preliminary environmental study for the proposed Trail System in the City of Lafayette, Indiana. The project area is located approximately 60 miles northwest of Indianapolis, Indiana and specifically as follows:

U.S.G.S. Lafayette West, Indiana 7.5' Quadrangle
Sections 9, 17, 16, 20, 21, 30, 29, 28, 31, 32, 33
Township 23N
Range 4W

Sections 6, 5, 4
Township 22N
Range 4W

U.S.G.S. Romney, Indiana 7.5' Quadrangle
Sections 7, 8, 9, 18, 17, 16
Township 22N
Range 4W

U.S.G.S. Lafayette East, Indiana 7.5' Quadrangle
Sections 15, 22, 23, 26, 25, 34, 35, 36
Township 23N
Range 4W

Sections 30, 31
Township 23N
Range 3W

Sections 3, 2, 1
Township 22N
Range 4W

U.S.G.S. Stockwell, Indiana 7.5' Quadrangle
Sections 10, 11, 15, 14, 13
Township 22N
Range 4W

This document has been prepared anticipating the use of federal funds for these trails, thus requiring coordination with the federal, state and/or local agencies having jurisdiction in the area. This coordination must come early in project development. If only local funds are used in the development of these projects, then only those agencies deemed necessary will be contacted and not all steps discussed in this report will be required.

Description of a Trail

The trail projects will include 8 – 12-foot wide asphalt trails with 2-foot shoulders, mile markers and safety and identification signage. Many of these trails may include trailheads with additional signage, bike racks, trash receptacles, etc.

The trail system was given a simple alphabetical name in order to easily separate them for discussion purposes. It is likely as these trail alignments develop into projects, they will be given specific names. The distances listed in each trail section are approximate and are only meant to be used as a means of identifying the trail route.

Trail Sections

Route A: Route A will be approximately 12 miles in length and will begin in downtown Lafayette. This trail will provide the main city loop. Due to its length and complexity, this route has been subdivided into the north, east, south and west sections.

Route A North: Route A North begins at the north end of N. 18th Street and follows N. 18th Street south to Greenbush Street. At Greenbush Street the trail will turn east at continue along Greenbush Street to Sagamore Parkway (US 52). The trail will cross Sagamore Parkway and then connect to the existing Munger Trail. Some of the potential environmental issues along Route A North include three underground storage tanks, three leaking underground storage tanks and two industrial waste sites. In addition, there is the potential for impacts to historic properties as some the residences along Greenbush are greater than fifty years old.

Route A East: Route A East begins where the north section connects to Munger Trail. Route A East will begin at Munger Trail along Greenbush and follow Munger Trail southeast for approximately 3,500 feet to Creasy Lane. The trail will follow along Creasy Lane for 1,900 feet and cross at Rome Drive. Then the trail will follow along the east side of Creasy Lane for 415 feet to the north side of the properties, and then head east along the northern property line to Britt Farm Drive. At Britt Farm Drive and Brinker Street the trail will head south along the west side of Brinker Street for 450 feet and intersect with SR 26. At SR 26 the trail will continue south and cross SR 26 near Park East Blvd. The trail will follow Park East Blvd. for 2,800 feet to Kettle Lane. The trail will then turn west for 1,300 feet before turning back south and following a utility easement to McCarty Lane. At McCarty Lane the trail will turn east and follow McCarty Lane for 1,000 feet before turning south and continuing 5,000 feet to Haggerty Lane. Some of the environmental issues that may be faced with this portion of Route A include possible wetland impacts.

Route A South: Route A South begins where the east section terminates at Haggerty Lane. The trail will turn west at Haggerty Lane and continue along E CR 20 S for 1,700 feet to SR 38. The trail will turn northwest and follow SR 38 to Creasy Lane. The trail will turn southwest and follow Creasy lane to Elliot Ditch. The trail will then turn west and follow Elliot Ditch to S. 18th Street. The trail will turn north for 0.37 mile before intersecting an abandoned railroad corridor. The trail will then turn northwest and follow this corridor to the Wabash River where this section of Route A ends. The potential environmental issues facing this portion of Route A include potential impacts to Elliott Ditch, Unnamed Tributary to Dirkey's Run Ditch, Dirkey's Run Ditch and potential wetlands along the alignment. In addition to stream and wetland impacts there is one mapped leaking underground storage tank and one National Pollutant Discharge Elimination System (NPDES) in the project area.

Route A West: Route A West begins where the south section terminates near the Wabash River. Route A West connects Route A South with Route A North by following along the Wabash River. The potential environmental issues associated with this portion of Route A include impacts to the Wabash River floodplain and historic resources impacts since the trail will pass by the historic buildings downtown and specifically the National Register of Historic Places listed Big Four Depot. There are also seven underground storage tanks, six leaking underground tanks, two industrial waste sites and two cleanup sites mapped along the proposed Route A West alignment.

Route B: Route B will be approximately 7 miles in length and begins at Erie Street and Ferry Street. At Ferry Street the trail will head east and to N. 22rd Street. The trail will turn north at N.

23rd Street and continue north to Cason Street. The trail will turn east at Cason Street and continue east to N. 26th Street. The trail will turn south at N. 26th Street and continue south to South Street (SR 26). The trail will then turn west and continue west for approximately 450 feet and then turn south and enter into Columbian Park. The trail will weave through Columbian Park and exit at the southwest corner at Main Street (SR 38). The route will turn southeast at Main Street as bike lanes to Earl Avenue. The route will continue southeast as a trail to McCarty Lane. The trail will turn east at McCarty Lane and continue along McCarty Lane to I-65. The trail will pass over I-65 and then turn northwest and follow I-65 for approximately 0.53 mile before turning north and following Veterans Memorial Parkway north to SR 26. After crossing SR 26, the trail will terminate. The primary potential impacts from Route B are to historic properties. Route B will pass through the Jefferson Historic District, Main Street Historic District, Perrin Historic District and the Scott Street Pavilion in Columbian Park. All of these resources are listed on the National Register of Historic Places. Along with the presence of historic resources there are seven leaking underground storage tanks, one underground storage tank, two industrial waste sites, one brownfield and two cleanup sites located at various places along the route.

Route C: Route C will be approximately 3.5 miles in length and begins at Greenbush Street and Elmwood Avenue and follows southwest along Elmwood Avenue to N. 18th Street. For 170 feet the route will follow north along 18th Street, then follow southwest along Erie Street to Ferry Street. The first half of the trail will terminate at Erie Street and Ferry Street and pick back up at 22nd Street and Kossuth Street. Route C will follow south along 22nd Street to State Street. For 130 feet the trail will follow southeast along State Street, then cross and follow along the northern edge of Jefferson High School. The trail will meander through the Jefferson High School property to 18th Street and will follow south along 18th Street to the railroad tracks just south of Twyckenham Boulevard. The trail will terminate at this point. These routes pass through the Jefferson Historic District and the Main Street Historic District. All of these resources are listed on the National Register of Historic Places. In addition to historic resources, the route may cause impacts to Elliott Ditch, Durkees Run Ditch and the Wea Creek floodway, three underground storage tanks, and two leaking underground storage tanks.

Route D: Route D begins at Munger Trail and Shenandoah Drive. The trail will follow Shenandoah Drive south to southwest to SR 26. The trail will cross SR 26 and turn east at the Caterpillar campus. The trail will continue east for 700 feet and then turn south following along a parking lot and pond for 0.45 mile and then turn west just past Fortune Drive for 380 feet. The trail will then turn south at a drainage ditch and continue south along the ditch for 0.56 mile to McCarty Lane where it will terminate. Route D has one cleanup site, on industrial waste site and potential wetlands along the corridor.

Route E: Route E begins at Park East Boulevard and Commerce Drive and follows Commerce Drive east past Walmart. The trail then follows south along the farm field to Alexander Ross Pond where the trail will make a loop around the pond. The trail will then follow southeast along I-65 to Veterans Memorial Parkway where it will follow south, crossing McCarty Lane and heading east to the Clarian Arnett Surgery Center. There are potential and wetland impacts along this alignment.

Route F: Route F will serve as a connecting trail for Route G and Route K. Route F begins at Beck Lane near Comanche Trail (road) and Miami Elementary School. The trail will begin at Beck Lane and turn south and follow the elementary school grounds south for 1,000 feet and then turn east following the school grounds for 725 feet where the trail will cross a railroad track and enter onto the Rea Wire Magnet Co. grounds. The trail will continue east from the railroad

track for 2,500 feet and terminate at Concord Road. There is one leaking underground storage tank, two underground tanks and potential wetlands along this trail corridor.

Route G: Route G begins Beck Lane and Old US 231. The trail will turn east and continue along Beck Lane for two miles before terminating at Kennedy Park. There are two voluntary remediation program sites located along Route G.

Route H: Route H begins at N. 13th Street and railroad tracks. The trail follows N. 13th Street south to Greenbush Street. At Greenbush Street the trail turns east and continues east to N. 18th Street. At this point the trail turns south along 18th Street to Erie Street, then transitions to bike lanes and continues south to Murdock Park where Route H terminates. There is one industrial waste site located along this route alignment.

Route I: Route I begins at Greenbush Street and N. 29th Street. The trail acts a spur trail from Route A North and follows N. 29th Street for 600 feet north and terminates at the Vinton Elementary School grounds. There are no significant environmental impacts known on this route.

Route J: Route J begins as sharrows at 6th Street and Salem Street. The sharrows go south to Cincinnati Street, then west on Cincinnati to 5th Street. Then the sharrows turn south to Brown Street, then transition back to bike lanes and continue south to the abandoned rail corridor. The route then becomes a trail for 835 feet heading southwest to 4th Street and continues south as bike lanes to Owen Street. At Owen Street the route continues east as sharrows to 9th Street, the nsouth to Teal Road as existing bike lane. Then the route continues south as a trail along 9th Street for 1.5 miles (7,920 feet) before passing the Earhart Elementary School grounds just south of Twyckenham Blvd. The trail portion terminates at Ortman Lane. Route J passes through the Highland Park Neighborhood Historic District, Downtown Lafayette Historic District, Ellsworth Historic District, Centennial Neighborhood Historic District, Main Street Historic District, and the Park Mary Historic District. This district is listed on the National Register of Historic Places. There is one underground storage tank, two leaking underground storage tanks, one industrial waste site, and possible wetland impacts located along the route alignment.

Route K: Route K begins at Promenade Parkway and Veterans Memorial Parkway near Walmart Shopping Center and continues southeast along an open ditch to Concord Road. The trail crosses Concord Road and continues southeast along the open ditch for 4,800 feet before terminating at the Woodland Elementary School. There is potential to impact the open drain that is along this route.

Route L: Route L begins at the intersection of N. 18th Street and Schuyler Avenue. The trail will follow Schuyler Avenue northeast for 940 feet to N. 20th Street. The trail will then follow N. 20th Street South for 125 feet and terminate at the McAllister Center. There is one leaking underground storage tank and two underground storage tanks known on this route.

Route M: Route M begins at Wabash Avenue, Route A, and the overhead railroad tracks 2,300 feet south of the Wabash River. The trail will follow Wabash Avenue south for 830 feet, then cross and go south on Old Romney Road for 1.97 miles (10,400 feet) to Elliot Ditch. The trail will then turn east and continue along Elliot Ditch for 4,900 feet where it will terminate at Poland Hill Road. Route M may impact Elliot Ditch and potential adjacent wetlands. There is recorded one underground storage tank located along this route.

Route N: Route N begins at Veterans Memorial Parkway and Kirkpatrick Ditch and follows Veterans Memorial Parkway for 0.5 miles (2,640 feet) to S. 9th Street. At S. 9th Street the trail merges with an existing trail along the south side of Veterans Memorial Parkway that terminates at the Walmart Shopping Center parking lot. There are no significant environmental impacts known on this route.

Route O: Route O begins at Poland Hill Road and Veterans Memorial Parkway and continues north along Poland Hill Road to Beck Lane. There is a potential for wetlands along this alignment, Elliot Ditch impacts, and the presence of the Meadow Hills Cemetery.

Route P: Route P begins at Durkees Run Ditch and the railroad tracks at Route A and follows Durkees Run Ditch for 0.57 mile (2,990 feet), crosses Saw Mill Road and follows the road around to 4th Street where it then continues along Durkees Run Ditch for 1.15 miles (6,070 feet) to S. 18th Street where it terminates with Route C. Route P may impact the forested riparian corridor along Durkees Run Ditch and any adjacent wetlands to the ditch. In addition, one leaking underground storage tank and one brownfield are located along the trail alignment.

Route Q: Route Q begins at the intersection of Ortman Road and Poland Hill Road. The trail will follow Ortman Road for 1 mile (5,280 feet) east to 18th Street where it will terminate. A small tributary to Elliot Ditch may be impacted by the trail.

Route R: Route R begins at the Ivy Tech Entrance and Creasy Lane and heads east through the campus to SR 38 where the trail will cross at the future Park East Boulevard and follow north to Haggerty Lane. The trail then continues east along Haggerty Lane for 1.88 miles and then turns south and terminates at the northeast corner of the Subaru Factory. Route R may potentially impact wetlands that area present along the corridor.

Route S: Route S is a 1.75 mile connection between Route A East and Route BB. The trail begins at Route A East by St. Elizabeth Hospital Central and continues west along the existing internal road, crossing Creasy Lane, heading north just past Creasy Court to the open corridor and then continuing west, terminating at Route BB. The trail is located 0.75 mile from McCarty Lane and 0.25 mile from Haggerty Lane. Route S may potentially impact wetlands and possible drainage ditch impacts along the corridor.

Route T: Route T begins at the Greenbush Street and Pine Lane intersection, where Route A turns south. Route T begins as a short spur on Pine Lane, goes south to Greenbush Street, and turns east along Greenbush Street to Creasy Lane. The trail will then turn north and follows Creasy Lane as it turns northeast and becomes Eisenhower Road. The trail will end just before I-65. There are no significant environmental impacts known on this route.

Route U: Route U is a connection trail between Route O and Route J. The trail is 0.75 mile long and begins at Old US 231 and Twyckenham Boulevard and continues east along Twyckenham Boulevard to 9th Street. There are some potential wetlands including retention ponds located along this route.

Route V: Route V begins at the confluence of Elliot Ditch and Kirkpatrick Ditch and follows Kirkpatrick Ditch for 2.5 miles until terminating at Promenade Parkway (Route K). Route V may impact the forested area near the confluence of Elliot Ditch and Kirkpatrick Ditch along with Kirkpatrick Ditch.

Route W: Route W begins at the southern end of Munger Park near the intersection of Union Street and Longacre Drive. The trail will continue east along Union Street for 750 feet where it will turn south and continue for 1,500 feet along an easement that borders a detention pond. The trail will turn east at the south end of the pond and intersect Shenandoah Drive in 660 feet. The trail will continue east for 380 feet, and then turn north for 640 feet. It will then turn east for 1500 feet before terminating at McCaw Park. There is one recorded leaking underground storage tank and possible wetland impacts near this route alignment.

Route X: Route X is a connection trail between Route N and Sterling Heights Park. Route X begins at Veterans Memorial Parkway and heads south for 0.5 mile, passing Route V. The trail will then turn west on CR 400 for 0.45 mile to Sterling Heights Park where the trail will terminate. There are possible wetland impacts near this route alignment.

Route Y: Route Y begins at the intersection of McCarty Lane and Veterans Memorial Parkway. The trail will follow Veterans Memorial Parkway south for 3 miles before it terminates at US 52. There are no significant environmental impacts known on this route.

Route Z: Route Z begins at Route D and Fortune Drive and heads east past Creasy Lane for one mile and connects into an existing trail at Fairington Avenue, near Park East Boulevard, where the trail will terminate. There are possible drainage ditch impacts along the trail alignment.

Route AA: Route AA begins at Sycamore Drive near the Wabash River and Shamrock Park. The trail will head southeast towards the existing trail and pedestrian bridge at Queen Street, cross over the railroad and continue east along Smith Street/Kossuth Street to Earl Avenue as sharrows. The trail will then cross over Earl Avenue and transition into a trail to Farabee Court. It will then follow south along Farabee Court, around the railroad tracks for 530 feet to the open corridor just northwest of CAT Park. The trail will then head east along the open corridor for 635 feet, then south for 445 feet connecting into Route BB and the northwest corner of CAT Park. This trail passes through the Hilltop Historic District and the Highland Park Neighborhood Historic District. The Highland Park District is on and the Hilltop District is eligible for the National Register of Historic Places. There are also four underground storage tanks, one leaking underground storage tank, one industrial waste site, one cleanup site, possible wetland impacts and Wabash River floodway impacts located along the trail alignment.

Route BB: Route BB begins at Creasy Lane and Sagamore Parkway. The trail will follow Sagamore Parkway northwest for 0.42 mile to Maple Point Drive. The trail will then follow Maple Point Drive for 0.4 mile and then turn northwest and follow northwest SR 38 to Kingsway Drive. The trail will follow Kingsway Drive north for 0.2 mile and then continue north past the road's bend and begin to follow a drainage ditch north for 0.4 mile to McCarty Lane. The trail will continue along the west edge of CAT Park to the north edge and head east along the north edge of the park, terminating at Route D. There are two industrial waste sites, one underground storage tank, two possible drainage ditch impacts, and possible wetland impacts located along the trail alignment.

Route CC: Route CC begins at N. 9th Street Road and Greenbush Road and follows N. 9th Street Road north to US 52. At US 52 the trail begins to follow the railroad corridor north out of the City of Lafayette. Route CC may cause impacts to the Wabash River floodplain. It also has one underground storage tank, one composting facility, one solid waste land fill and one Superfund site located along the trail alignment.

Route DD: Route DD begins at the Wabash River and will follow Sagamore Parkway east for 4,400 feet to 9th Street. This trail will be in the floodway of the Wabash River. There is one volunteer remediation site and one underground storage tank mapped along this route.

Route EE: Route EE begins at the intersection of Route A, where 13th Street and Burroughs street meet. Route EE follow 13th Street for 400 feet north to Underwood Street. The trail then turns west will cross over the railroad lines with a new pedestrian bridge. The trail will then terminate at 9th Street. The trail will pass through a narrow portion of the Wabash River floodplain. Also, two leaking underground storage tanks and one underground storage tank are mapped in the project area.

Route FF: Route FF begins at the middle of the Harrison Bridge over Wabash River, connecting into West Lafayette. This route continues east on Union Street as bike lanes, connecting into Erie Street. Along Salem Street, the bike lanes continue west from Erie Street to the middle of the Harrison Bridge. This route passes through the Centennial Historic District and the Park Mary Historic District. There are also three leaking underground storage tanks and two underground storage tanks located along this route alignment.

Route GG: Route GG begins at Union Street and Sagamore Parkway and follows Union Street west for 560 feet to Earl Avenue. A small section of sharrows connects north to Hedgewood Park. At Union Street and Earl Avenue the route follows south along Earl Avenue to State Street, then turns northwest along State Street, terminating just before 22nd Street at Route C. There are four industrial waste sites, two leaking underground storage tanks, and four underground storage tanks located along this route alignment.

Right-of-Way

Permanent

Land acquisition will be required for some the proposed trail alignments. Many of these alignments were chosen to maximize connectivity to existing, proposed and future trail routes. Several of these routes are along drainage easements, utility corridors and railroad corridors which minimize the need for land acquisition on those trails. Several others will be along roadway right-of-way and may in some cases fall within that existing road right-of-way. An approximate 40-foot width of permanent right-of-way will be required throughout the length of each trail. For the purpose of this study, a 20-foot right-of-way width will be required along all existing railroad corridors. All trails on utility easements will not require additional right-of-way assuming a lease agreement is made with that utility provider. An abandoned railroad corridor right-of-way will be assumed that the property has reverted to the adjacent property owner and that a 40-foot width of new permanent right-of-way will be required, excluding any portions owned by the City of Lafayette. The following table indicates if any part of the route will likely require new permanent right-of-way:

Trail Route	R/W Yes or No	Trail Route	R/W Yes or No
Route A	Yes	**Route Q**	No
Route B	Yes	**Route R**	Yes
Route C	Yes	**Route S**	Yes
Route D	Yes	**Route T**	No
Route E	Yes	**Route U**	No
Route F	Yes	**Route V**	No

Route G	Yes	**Route W**	Yes
Route H	No	**Route X**	Yes
Route I	Yes	**Route Y**	No
Route J	Yes	**Route Z**	No
Route K	Yes	**Route AA**	Yes
Route L	Yes	**Route BB**	Yes
Route M	No	**Route CC**	No
Route N	No	**Route DD**	Yes
Route O	Yes	**Route EE**	Yes
Route P	Yes	**Route FF**	No
		Route GG	Yes

Temporary

It is likely that temporary right-of-way will be required for each of these projects during the construction phase in order to store equipment and provide adequate access.

Special Design Features

There is no special design features anticipated.

Temporary Runaround

There is no temporary runaround needed.

Detour

There is no detour route needed.

Traffic Generating

The traffic levels on intersecting streets are not anticipated to increase as a result of this project.

Land Use in General Area

The trail routes are found primarily with urban areas connecting residential neighborhoods to area parks, schools, commercial areas and some industrial sites. Some of the trails extend outside of the City of Lafayette and will become Tippecanoe County amenities. In this area it is suburban with primarily residential areas and some agriculture fields and forests.

Farmland Conversion Impacts

As is required by the Farmland Protection Policy Act, the Natural Resources Conservation Service (NRCS) will be coordinated with for each project. As part of this coordination, a Farmland Conversion Impact Rating Form will be completed. Each of these projects is likely to receive a point value of less than 160 points since there is very little farmland on these routes, therefore, these trails are not anticipated to have significant impact to farmland.

Relocations

There are no relocations anticipated as a result of these trail projects.

Topography

The topography of the area is generally flat to gently rolling. Topographical features include Elliot Ditch, Durkees Run Ditch, Kirkpatrick Ditch, manmade structures, fencerows, roadways, bridges, utility lines and railroad corridors.

Geology

The Indiana Geological Survey (IGS) will be contacted for each project. The IGS will provide comments indicating if any unusual and/or problematic geographic, geologic, geophysical or topographic features exist within the project limits. The IGS will also indicate if any existing or potential mining resources have been identified in a project area and if any active or abandoned mineral resource extraction sites area located nearby. The City of Lafayette and surrounding area is not located in the State's known Karst region. In addition, the preliminary desk review and field investigation did not reveal the presence of any problematic geological features or any known mineral resource sites that may pose as issues to a project.

Wetlands

The Wabash River, Elliot Ditch, Durkees Run Ditch, Kirkpatrick Ditch and any associated tributaries and other drainage features are located within the project limits. These are riverine wetlands. Some impacts may occur to these resources as a result of trail construction. According to the U.S. Fish and Wildlife Service National Wetland Inventory Map, there are some palustrine wetlands located throughout the City of Lafayette and surrounding areas. Some of these wetlands are located along sections of trail routes. The majority of these wetlands have not been field verified to confirm or deny their existence. If a trail route should impact any of these existing wetlands, wetland delineation must be performed to determine the boundaries of the wetlands and the potential impacts that will occur. Any proposed impacts to riverine or palustrine wetlands require authorization under the Clean Water Act from the U.S. Army Corps of Engineers (USACE) and the Indiana Department of Environmental Management (IDEM). All wetland delineation reports and permit applications must be submitted and approved prior to any construction activities by the aforementioned agencies. The Louisville District of the USACE has jurisdictional authority in this region in Indiana and will have final authority as to the determination of appropriate permitting and potential mitigation scenarios.

Terrestrial/Aquatic Ecology

There is a variety of vegetation types and habitats that occur throughout the City of Lafayette. These habitats range from urban environments with only street trees and some landscape features to forested riparian corridors and emergent wetlands. These varieties in habitat type provide food, shelter and protection for rearing young to an assemblage of organisms. These include but are not limited to raccoon, opossum, squirrels, chipmunks, song birds, birds of prey, scavenging birds, waterfowl, various amphibians and reptiles and some larger mammals such as deer, coyote and fox. The vegetation required to support these animals ranges from full canopy forests composed of sugar maple, various oak species and sycamores to park-like habitat with stands of individual trees and very little understory or herbaceous layers. Urban roadside trees provide habitat for squirrel and song birds primarily. Open water ponds and emergent wetlands provide habitat for water fowl and amphibians. These habitats are composed of various sedges, rushes, cattail and some aquatic vegetation. The riverine systems support the largest number of species with aquatic fauna such as fish, amphibians and

water fowl along with other bird species and mammals that use the river corridors to forage for food and provide shelter.

The Indiana Department of Natural Resources (DNR) and the U.S. Fish and Wildlife Service (USFWS) will be coordinated with on each project to determine if any plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project's vicinity. The City of Lafayette and Tippecanoe County is located within the range of the federally endangered Indiana bat (*Myotis sodalis*), Clubshell (*Pleurobema clava*), Fanshell pearlymussel (*Cyprogenia stegaria*) and the candidate species Eastern massasauga (*Sistrurus c. catenatus*), Rayed bean (V*illosa fabalis*) and the Sheepnose (*Plethobasus cyphus*). There is very little habitat to support any of these species within the City of Lafayette.

Drainage

The City of Lafayette is located in the United States Geological Survey (USGS) 8-Digit Hydrologic Unit Code 05120108. This is the Middle Wabash-Little Vermillion Watershed which has a drainage area of 2,230 square miles. The streams located within the City of Lafayette within the study area drain into this watershed. Below is the list of waterways in or near the study areas and their associated drainage areas according to the *Drainage Area of Indiana Streams* (Hoggatt, 1975).

Stream Name	Drainage Area (square miles)
Wabash River	7,267 mi^2
Elliot Ditch	18.7 mi^2
Durkees Run Ditch	Not Available
Kirkpatrick Ditch	Not Available
Wea Creek	161 mi^2

Permits

Any bridge structures including pipes or culverts that are placed in the streams listed above or in any water feature present will likely require an IDEM Section 401 Water Quality Certification and a USACE Section 404 Regional General Permit prior to construction. Any placement of fill, dredging or other earth moving activities that take place within the boundaries of any stream or wetlands will also require the aforementioned permits. In addition, a Certificate of Approval for Construction in a Floodway will be required from the DNR for any construction projects that occur in the floodway of the above listed streams. An IDEM Rule 5 permit will also be required for any project that disturbs more than one acre of ground.

Any other special permits such as a U.S. Coast Guard permit will be determined from coordination with the agencies on a project by project basis.

Floodplain Encroachment

The placement of any trails or trail stream crossings will be designed to have affective capacities such that backwater surface elevations are not expected to significantly increase. As a result there will be no significant adverse impacts on natural and beneficial floodplain values; there will be no change in flood risks; and there will be no significant increase in potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it will be determined that the encroachments are not significant. All trail projects that occur in a

floodway must be reviewed by the DNR Technical Services Section to determine if the project complies with the Flood Control Act.

Noise Analysis

In accordance with current Indiana Department of Transportation (INDOT) and Federal Highway Administration (FHWA) guidelines regarding noise impacts, all trail facilities are exempt from noise analysis review. For the same reason, trail projects are exempt from construction noise impacts.

Air Quality

The projects are located in Tippecanoe County. This county currently in attainment for all criteria pollutants and these trail projects are not of regional significance for air quality. In addition, all pedestrian and bicycle facilities are considered exempt from conformity analysis. Therefore, the conformity procedures of 40 CFR 93 does not apply.

Section 106 of the NHPA

The DNR Division of Historic Preservation and Archaeology (DHPA) will be coordinated with on each project. The DHPA will provide information on any potential historic buildings, structures, districts, objects, or archaeological resources within the area of potential effect for each trail segment.

Historic Properties

The National Register of Historic Places and the Tippecanoe County Interim Report list several resources that are present throughout the City of Lafayette and Tippecanoe County. Between the lists there are eleven identified historic features in the study area. These include the following:

Name of Resource	Trail Route That May Cause Impact
Big Four Depot	Route A West
Centennial Neighborhood Historic District	Route B, Route J and Route HH
Downtown Lafayette Historic District	Route J
Hilltop Historic District (Interim Report)	Route AA
Ellsworth Historic District	Route C and Route J
Highland Park Neighborhood Historic District	Route J and Route AA
Jefferson Historic District	Route B and Route C
Main Street Historic District	Route B, Route C and Route J
Park Mary Historic District	Route J and Route HH
Perrin Historic District	Route B and Route HH
Scott Street Pavilion	Route B

There are other listed historic properties that are near some of the trail routes but were determined not be directly impacted. For each project, a recommended finding and

determination of effect to any of these and potentially other historic properties will be provided by the DHPA. This finding will be submitted to INDOT and/or FHWA for formal approval. Once a formal finding has been made, the determination and finding will be submitted to all Consulting Parties for a 30-day review and comment period. Once this 30-day period ends, and as long as no objections to the finding are received, the Section 106 Legal Notice will be published allowing for the public to have 30 days to comment on the finding. If not comments are received, then all requirements that the project has under Section 106 of the National Historic Preservation Act (NHPA) will have been fulfilled.

Archaeological Resources

In addition to the review of historic properties, an archaeological investigation must be performed for each project in order to comply with Section 106. These investigations include a formal records review and field reconnaissance. If a potential archaeological site is discovered, then a subsurface reconnaissance is performed. A report is generated from these investigations and submitted to INDOT and the DHPA for review and approval. Once approved, the report is included in the rest of the Section 106 Documentation that will receive a formal determination and finding as previously described.

If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law requires that work stop and that the discovery be reported to the DHPA within two (2) business days.

Natural Areas

There are no protected wildlife refuges, conservation areas or any other specially designated wildlife habitat in the project.

Economic Effect

It is anticipated that the funding for the construction of these trails will come from established accounts so there will not be a raise in local taxes or assessments. All construction funds will come from Federal grants and/or the City of Lafayette. Some local jobs may be available as a result of these projects.

Social Effect and Environmental Justice

There will be no permanent adverse effect to the established community. The projects are intended to be a benefit to the community by providing a safe alternative transportation network and recreational facility throughout the City of Lafayette.

Title IV of the Civil Rights Act of 1964 and the subsequent legislation require Federal agencies to ensure that none of their programs discriminates on the basis of race, color, national origin, age, gender, handicap/disability, or religion. The President's Executive Order 12898 on February 11, 1994 and the President's Memorandum of Environmental Justice in Minority Populations and Low Income Populations has the intent to ensure that the Federal departments and agencies identify and address any disproportionately high adverse human health or environmental effects resulting from the policies, programs, and activities on minority populations and low-income populations. It is unlikely that the proposed projects will not have disproportionately high or adverse human health or environmental affects upon any known minority or low-income populations. However, a detailed population analysis will be performed

for each trail segment to determine the impact if any to any low-income or minority population that the trail may affect.

Hazardous Waste Sites

The Red Flag Investigation was completed on March 11, 2011 by Neal Bennett, Environmental Scientist, with Butler, Fairman & Seufert, Inc. Several potentially hazardous sites were identified along trail routes or with the routes' vicinity. A site inspection on April 27, 2011 for each of the trail routes did not show any evidence of hazardous materials within the vicinity of the projects. However, a Phase I Initial Site Assessment (ISA) may be required for certain trails that will be constructed near known hazardous waste sites. If the ISA indicates a potential issue, a Preliminary Site Investigation (PSI) will be recommended to determine the amount of impact. Soil borings and groundwater, if encountered, will be collected from the parcel in question and lab tested for the presence of contaminant consistent with past operations or activities at that site. This type of investigation reduces the risk of purchasing potentially contaminated property and then becomes liable for its remediation.

4(f) Involvement

Some of the proposed trail routes will use land from publicly owned parks and recreation areas and potentially historic buildings. Since trails will be an enhancement to the parks and recreation areas the project will not be converting these lands to a non-park use. Therefore, Section 4(f) impacts will not occur to those properties. However, if a trail project takes land from a historic property, then a Section 4(f) impact will occur and complete Section 4(f) finding from INDOT/FHWA would be required before the environmental review could be approved.

6(f) Involvement

The project will not involve any properties acquired with or improved by the Land Water Conservation Fund. The DNR Division of Outdoor Recreation will provide comments in their early coordination response letter. The National Park Service may also provide any information regarding 6(f) resources in their response to Early Coordination. However at this time, no Section 6(f) resources occur in the project area.

Mitigation of Impacts

The DNR and USFWS will indicate ways to reduce the loss of fish, wildlife and botanical resources as a result of the trail projects. Mitigation measures will be included in the environmental document for each trail project and should be implemented into the construction of each trail segment.

Public Involvement

Each trail segment will be evaluated and all of those that require over 0.5 acre of new permanent right-of-way, the opportunity for a public hearing will be offered during the public involvement stage of project development. A legal notice will be published offering the public the opportunity to hold a hearing. If a sufficient number of people respond to the notice, a formal hearing will be held. All public involvement procedures will be reviewed and approved by INDOT Public Hearings Office prior to final environmental document approval.

Early Coordination

The following individuals/agencies will be contacted to provide comments and information on the proposed project:

Indiana Department of Natural Resources
- Division of Fish and Wildlife
- Division of Historic Preservation and Archaeology

U.S. Fish and Wildlife Service
National Park Service
Environmental Protection Agency
Natural Resources Conservation Service
Indiana Department of Transportation
- Office of Aviation
- Public Hearings Office
- Cultural Resources Section

Indiana Geological Society
U.S. Coast Guard
U.S. Army Corps of Engineers
Indiana Department of Environmental Management
Tippecanoe County Surveyors Office
Tippecanoe County Historian
Tippecanoe County Historical Society
Indiana Landmarks (formerly Historic Landmarks Foundation of Indiana)
Lafayette Historic Preservation Commission
Wabash Valley Trust for Historic Preservation