

Susquehanna River Trail Feasibility Study:

Montoursville Borough to Borough of Muncy

Submitted To:



Lycoming County

Prepared By:



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I. Introduction

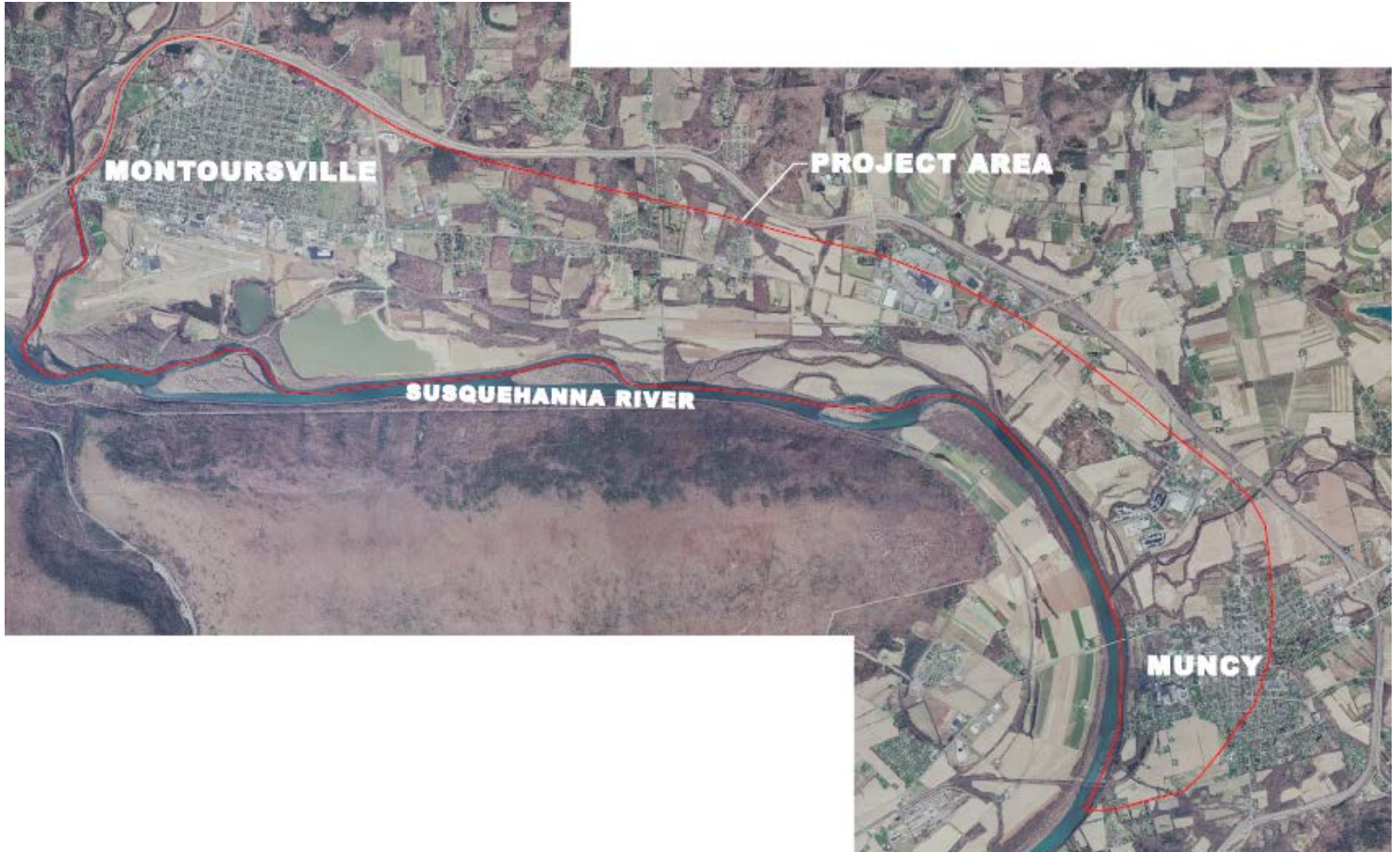
a. Report Objectives

Lycoming County hired Larson Design Group (LDG) to study the feasibility of a family-friendly trail that connects the Boroughs of Montoursville and Muncy. An ideal trail would be multi-functional, and would be utilized for both transportation and recreational purposes. Such a trail would serve multiple users, including pedestrians, joggers, bicyclists and others. Connections to residential developments, schools, recreational areas, and any business districts would be essential to the function of this trail. The objectives for this report are as follows:

- Determine the viability and constructability of a trail within a determined corridor.
- Identify various alternatives that take advantage of both the natural landscape and scenic features of the Susquehanna River and surrounding area.
- Recommend suitable future connections or trail heads at logical access points along the trail.
- Provide a preliminary construction cost estimate to assist the County in making an informed decision in choosing a corridor that meets both the needs and expectations of the trail users while maintaining an acceptable cost.

A project area location map is located on the next page. Additional figures, typical sections, and plan details are provided within the report.





b. Scope

This trail study is being performed through a contract with the Lycoming County Planning Commission. The goal of this contract is to provide assistance to the county in planning a pedestrian and bicycle project to meet its objectives of the Statewide Bicycle and Pedestrian Master Plan. This study will help move the trail initiative into the project development stage.

c. Partners

This trail study was initiated through the Lycoming County Planning Commission. Also having a cooperative involvement with the development of this study was: Jerry S. Walls, AICP, Professional Planner; SEDA-COG Joint Rail Authority.

II. Inventory and Analysis

a. Study Methodology

Alternatives for a corridor alignment were identified based on the recommendations of the Lycoming County Planning staff and consultants, aerial mapping / photography, and field views. The field views helped to identify geographical features, area property uses, environmental issues and other factors that will affect the construction of this project. Cultural and natural resource investigations were not involved in this study. Instead of determining a preferred alternative, an evaluation of several potential alternatives has been completed with the idea that a preferred alternative will be determined later in the design process based on the most appropriate trail facility, and a rational approach for construction based on funding, available right-of-way, and environmental considerations.

The alternatives for the corridor were broken up into a series of nodes and links. Individual cost estimates were developed for each link, which allows for a user-friendly way of estimating various alternatives with consideration given to phasing segments that can develop as stand-alone projects. A series of figures have been developed to help demonstrate the findings of this study. An alternative analysis matrix which summarizes the various segments is also included and is intended to be used as an analysis tool.

In accordance with AASHTO'S development of bicycle facilities guide, there are four types of bicycle facilities. The trail will utilize a combination of these based on the most appropriate facility for the area the trail is passing through. Descriptions of the various types of facilities are as follows:

- Share the Road
 - Utilizes an existing roadway or street designated by bicycle signs
 - Signage along this type facility makes the motorist aware of bicyclists in the area and helps to designate a preferred route through a high demand corridor
 - Facility needs to be well maintained by the responsible municipality

- Bicycle Lane
 - Separates the bicyclist from the motorist by designating a separate area creating adequate space on the roadway
 - Generally used in high demand areas where a distinct need can be served by their use
 - Bicycle safe drainage facilities, smooth roadway surfaces and traffic signals need to be bicycle user friendly with roadway maintenance being a top priority

Example of a Signed Shared Roadway



Example of Bike Lanes with On-Street Parking



- Shared Use Path
 - Independent trail facility on a separate alignment
 - Intended to serve the needs of both pedestrians and bicyclist
 - Usually constructed along rivers, historic canals, former or active right-of-ways, campuses, parks and other existing or planned recreational facilities.
 - Should encourage the users to operate according to the rules of the road.

- Rails-With-Trails
 - Specific type of shared use path
 - Located on or adjacent to an active or abandoned rail alignment
 - Fencing, concrete barrier or other divisor should be provided as a positive separation depending on the distance from the rails
 - Attractive option because it utilizes a corridor that is already in place
 - Transforms abandoned railroad corridors from a wasted space into a usable resource for the community
 - Railroad owners are sometimes hesitant to go into agreements for a rail-with-trail because it is seen as a safety liability. However, many rails-with-trails across the country can be used as case studies for demonstrating how these two entities can coexist safely.



Trail Bridges and Crossings:

Crossings of roadways, waterways and other physical obstacles can present some of the most challenging and expensive portions of a trail project due to permitting, design and construction issues. Waterway crossings can present permitting issues depending on the classification of waters and the environmental footprint the proposed structure will create. The necessary permits required will depend on the number of Federal, State and Local agencies having jurisdiction in the area. These permits can vary from minor applications to in-depth hydraulic models requiring coordination with the Federal Emergency Management Agency (FEMA) to determine flood plain impacts.

Typical methods proposed for trail project waterway crossings:

- Low flow pipe culverts
- Metal arch or Concrete box culverts
- Pre-fabricated structure
- Custom design structure



Low flow pipe culverts are a series of parallel pipes placed within the stream banks and covered with fill material to permit the stream to flow through. Although this type crossing utilizes a simple design being suitable for small creeks and streams it does not consider the blocking of the smaller pipe opening with debris. This type trail crossing will require greater maintenance.

Culverts constructed of either metal or concrete can be a more effective crossing because of their larger openings. Being more suitable for medium to larger waterways this type crossing permits most debris to flow through the culvert not blocking the opening therefore having better waterway maintenance. Prefabricated culverts are also available, which keep installation time and cost to a minimum.

Pre-fabricated structures are becoming the choice for many trails due to being more readily available and having a variety of different composition materials to select from to best blend with the site. These structures are suitable for small or very large spans where the waterway opening must be maintained. Although a foundation is required, this type crossing minimizes impacts to wetlands and other sensitive areas.

There could be special situations that may require a custom design structure usually constructed of steel or concrete beams with concrete deck. This type crossing is typical of very long spans and can be very expensive.

b. Corridor Analysis

Currently, Bicycle PA Route J connects these two communities via Broad Street in Montoursville, Lycoming Mall Drive, John Brady Drive, and Main Street in Muncy. Although these roadways are signed as a designated PA Bicycle Route, this route has characteristics that are not conducive to family bike riding. These constraints include long and steep grades, no positive separation from live traffic, and posted speed limits of 45 mph and above. Because of these features, only the experienced bicyclist utilizes this route on a routine basis. Upon investigation of this corridor, the challenges involved in constructing a shared-use-path from Montoursville to Muncy include:

- Topography
- Narrow roadways in the local road networks
- Right of Way

The existing terrain that lies between these Boroughs is long rolling hills. It would likely pose challenges to some trail users to navigate a route that follows this terrain. Slopes create a potentially unsafe situation and make the trail more arduous for the user and therefore may discourage people from using the trail.

There are many reasons why utilizing the local street network would be advantageous for developing a trail in this corridor. Not only are the majority of these streets flat, but a trail would create easy access points for many potential users of the trail and also provide designated routes for children to use while riding to/from the schools, parks, and recreation fields that lie within the network. However, the majority of the local streets are not wide enough to support bike lanes. Currently, on-street parking is present along these local streets, and introducing bike lanes into the street network would require altering or eliminating the on-street parking.

Right-of-way is perhaps the most important hurdle of all for any trail study. All routes that are not along the state road system will require acquisition of right-of-way. The flattest and most scenic trail locations would follow the shoreline of the Susquehanna River and the Lycoming Valley Railroad alignment. With the exception of pinch points such as structures and other obstacles, all trail facilities on this project will run parallel to but entirely outside of the existing railroad right-of-way, resulting in the encroachment of private property.

A figure has been created to rate the ridability of each alternative (Tab 3). The ridability rating of a segment is based on three metrics: comfort, safety and atmosphere. Comfort is an evaluation of whether or not a family would feel comfortable riding on the trail. This metric considers grade, the type of trail facility, and potential bicycle/vehicle conflicts. Safety refers to how well the trail facility will follow the design guidelines set forth in AASHTO's *Guide for the Development of Bicycle Facilities*. A facility that provides more than the minimum requirements is safer than one that does not. Also taken into consideration is the fact that certain trail facilities are inherently safer than others based on their ability to separate the trail user from potential conflicts. A trail facility along a road may be considered safe but not be considered comfortable to ride on (i.e., a bike lane along a busy road may meet safety guidelines, but may not be considered comfortable for families to ride on). Atmosphere is the third metric, and it takes into consideration the quality of user experience and the scenic value of the trail. Specifically, this judges whether or not the aesthetics of a trail segment would attract people to it. All of these metrics are subjective. Future public input should be sought to determine more precise values for the comfort and atmosphere of each trail segment.

For the purpose of this study, this corridor will be divided into three segments and referred to as the Susquehanna River Trail between Montoursville and Muncy.

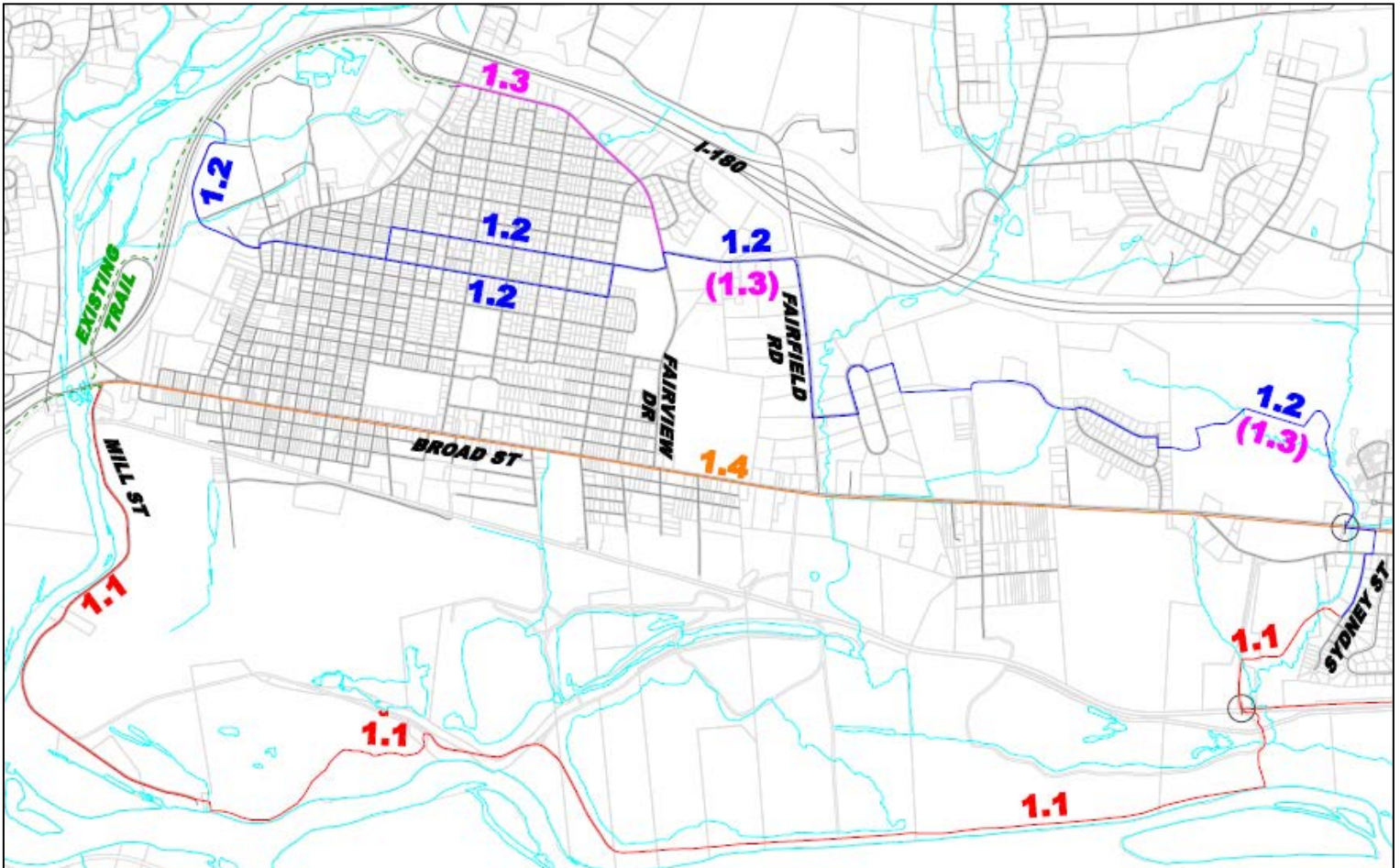
Susquehanna River Trail between Montoursville and Muncy:

The primary focus of this corridor study is the analysis of various proposed alternative multi-use trail facilities that would connect Montoursville Borough to the Borough of Muncy. Either combination of these alternatives could be the main greenway corridor running parallel to the north shoreline of the West Branch of the Susquehanna River. This corridor would expand the opportunities of the general public to further enjoy the natural resources of the Susquehanna Valley. The trail will consist of several segments with varying trail construction types as outlined in this study. The study is divided into the following segments that were determined by the physical terrain features, probable entrance and exit facilities, as well as logical breaks based on probable funding. Each of these segments has alternatives that can be used interchangeably with the other segments.

- **SEGMENT I:**
 - Mill Street to Sydney Street via River Corridor
 - Indian Park to Confair Boulevard via Street Network
 - Fairview Drive to Confair Boulevard via Street Network
 - Mill Street to Confair Boulevard via PA Bicycle Route J
- **SEGMENT II:**
 - Sydney Street to Lycoming Mall via Railroad Corridor
 - Confair Boulevard to Lycoming Mall via PA Bicycle Route J
- **SEGMENT III:**
 - Lycoming Mall to Future Park Site

Each segment in this report contains a location map that shows the various trail alternatives for the segment. Each alternative has an Alternate ID Number associated with it, which relates each description with the location map. Below each location map are the plan sheet numbers from Tab 6 which correspond to the segment. The Alternate ID Numbers shown in the report are also shown on the plan sheets. The Alternatives Analysis Matrix (Tab 2) associates the Alternate ID Number to the links that make up each alternative. These links correspond to the cost estimate in Tab 4, and are graphically displayed in the Bicycle Route Alternatives Location Map in Tab 3. The Bicycle Routes Alternatives Costs Map in Tab 3 utilizes the Alternate ID Numbers to visually display costs associated with each alternative.

SEGMENT I



(Tab 6 Plan Layout Sheets 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12)

Mill Street to Sydney Street:

(Alternate 1.1) The first segment of the Susquehanna River Trail will begin at the intersection of Mill Street and Broad Street and connect to an existing trail that runs from Loyalsock Township to Indian Park in Montoursville. The proposed trail will begin as a signed shared roadway and continue approximately 1.6 miles to a boat launch located at the end of Mill Street. Also located on this stretch of road are three recreational fields and an access road that leads to a Borough Park and a private field. The traffic volume of this road is low and would serve bicyclists well, but pedestrians would need to utilize the grass shoulder area. Share the Road signs as well as appropriate guide signage would be recommended for this stretch to alert vehicular traffic to the presence of bicyclists as well as guide users of the trail. Signs would be recommended at the ball fields and boat launch to promote the trail. These areas would also serve as access points for users who drive to the trail.

Proposed Trail Connection Point to Existing Trail at Mill Street



Proposed Trail Location on Mill Street

At the boat launch, the proposed trail will transition into a shared-use-path and continue along existing paths and access roads through fields and wooded areas. The trail will follow the north shore line of the river and be bordered on the northern side by the Lycoming Silica Sand ponds and farm fields. This stretch will run approximately 3.6 miles from the boat launch to the section of the Lycoming Valley Railroad facility just south of the Lycoming County Water and Sewer Authority (LCWSA) building. Although there are existing paths for much of this section to follow, the trail may have to run alongside these paths in areas where they are currently being used by the property owner. In either case, significant clearing and grubbing would be anticipated in this area, as well as a fence that would keep trail users off of Lycoming Silica Sand and private farm property. There is one stream crossing that will require a new structure if it is determined that the existing structure cannot be used. The proposed trail would include appropriate signage, and be paved 10' in width.

At this point the path will cross the railroad and continue alongside an access road for approximately 750' towards the LCWSA driveway. Before reaching the driveway the trail will curve eastward and follow the tree line for an additional 1800' towards the Tules Run Sewage Treatment Plant control building, tying into Sydney Street next to the building. This connection will promote ridership by providing access to newly constructed residential developments. It will also serve as the terminus point for the first segment. This section of trail will require fencing, signage, pavement markings, and appropriate safety measures for the railroad crossing.

Benefits of this trail segment:

- Connectivity to existing trail system.
- Access to commercial and retail district.
- Access to Montoursville neighborhoods.
- Access to recreational fields and boat launch.

Drawbacks of this trail segment:

- Acquisition of Right-of-Way.
- Possible structures for stream crossings.
- Railroad Crossing.

The total length of this segment is approximately 5.7 miles.

Indian Park to Confair Boulevard:

(Alternate 1.2) This alternative of the Susquehanna River Trail will begin in Indian Park and connect to an existing Indian Park trail at the I-180 trail underpass. This part of trail will be paved 10' in width and run approximately 0.5 miles through the park to Loyalsock Avenue, utilizing portions of an existing paved trail as well as an existing pedestrian bridge. Indian Park provides numerous recreational facilities and plenty of parking for potential users, and signs would be recommended in the park and parking lots to promote the trail.



Existing Indian Park Trail

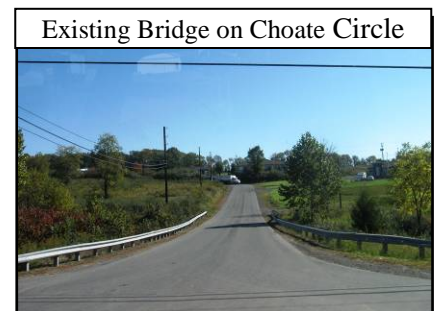


Proposed Bike Lanes Location on Weldon Street

The trail will then cross Loyalsock Avenue and continue through the local street network to Brushy Ridge Road. This section of trail will be a bike lane facility potentially along Weldon Street, Willow Street, Nicely Avenue, North Arch Street, and Fairview Drive. On-street parking along these streets would have to be altered to properly accommodate bike lanes. Once at Fairview Drive, the trail would travel approximately 200' and then proceed onto Brushy Ridge Road. This alternative also provides a designated route for students to use when riding their bicycles to McCall Middle School. Appropriate pavement markings and signage would be recommended in this area to guide trail users as well as vehicles. Additional bike lanes could be created along Tule Street, Walnut Street, and Mulberry Street as a low-cost approach to connecting additional fields and schools, as well as increase trail awareness around the neighborhood.



The trail will travel on Brushy Ridge Road for approximately 0.4 miles to Fairfield Road. Brushy Ridge Road will require shoulder rehabilitation to facilitate proper bike lane facilities. The path will then continue along the wide shoulder of Fairfield Road as a bike lane for approximately 0.5 miles before crossing over to Choate Circle. Although Fairfield Road has an approximate 5% slope, which is steeper than the recommended grade for the length of this stretch, the shoulder along Fairfield Road is wide enough to allow separation of the lower-speed and higher-speed users. The Fairfield Road crossings will require warning signs to alert the vehicular traffic to crossing bikes and pedestrians. Choate Circle is a low volume, no outlet roadway with a structure that is not wide enough to accommodate bike lanes. Once on Choate Circle, the trail will follow the roadway in a clockwise direction as a signed shared roadway facility for approximately 0.3 miles and then exit the roadway at a driveway that leads to a field. Once at the field, a 10' wide paved trail will continue through private fields for approximately 0.5 miles until reaching the neighborhood of Arlyne Lane. Obtaining right-of-way for this portion of trail is necessary, and fencing would be needed to prevent trespassing onto private property.



The trail will continue along Arlyne Lane for approximately 0.3 miles as a signed shared roadway facility and then transition into a shared-use-path once reaching Pamela Lane. The trail will then weave through a wooded, undeveloped area for approximately 1 mile before reaching Lycoming Mall Drive, approximately 500' west of Confair Boulevard. This wooded area will require heavy clearing and grubbing and may include stretches of steep grades and structures for stream crossings. This section of trail would be incorporated into any future developments in this area.



In the event that this segment is built in conjunction with *Alternate 2.1*, a connection could be made to the Lycoming Valley Railroad. This connection would require crossing Lycoming Mall Drive and continue through a wooded area for approximately 350' before connecting to Sydney Street. Once on Sydney Street, the trail would follow along the same configuration as described in *Alternate 1.1* until reaching the beginning point for *Alternate 2.1*. Because this connection would also

provide access to the residential development if *Alternate 2.2* is utilized, this connection has been included in the cost estimate for this alternative.

Benefits of this trail segment:

- Access to Indian Park.
- Connectivity to existing trail system.
- Access to Montoursville neighborhoods and neighborhood recreational fields.
- Access to McCall Middle School.

Drawbacks of this trail segment:

- User experience would be subjected to traffic and be less scenic as it passes through neighborhoods.
- Steep Grades.
- Acquisition of Right-of-Way.
- Possible structures for stream crossings.

The total length of this segment is approximately 5.1 miles.

Fairview Drive to Confair Boulevard:

(*Alternate 1.3*) This alternative of the Susquehanna River Trail will begin at the intersection of Fairview Drive and Loyalsock Avenue and connect to a trail that runs through Indian Park to Loyalsock Township. This section of trail will run approximately 0.8 miles along Fairview Drive to Brushy Ridge Road, and then continue to Lycoming Mall Drive as previously described (*1.2*). Due to the volumes and speed of vehicular traffic on Fairview Drive, a signed shared roadway facility is not recommended. Shoulder rehabilitation as well as appropriate pavement markings and signage would be required to create appropriate bike lane facilities. The Fairview Drive/Loyalsock Avenue intersection is a busy intersection that currently prohibits pedestrians from crossing Fairview Drive. This option would require a traffic signal upgrade as well as other upgrades to the intersection to allow safe passage of trail users. These may include new signal timings, signage, pavement markings, pedestrian signal heads, among other improvements.



Proposed Trail Location at Fairview Drive

Benefits of this trail segment:

- Connectivity to existing trail system.
- Access to Montoursville neighborhoods and neighborhood recreational fields.
- Access to McCall Middle School.

Drawbacks of this trail segment:

- Trail user must navigate through signalized intersection
- User experience would be subjected to traffic and be less scenic as it passes through neighborhoods.
- Steep Grades.
- Acquisition of Right-of-Way.
- Possible structures for stream crossings.

The total length of this segment is approximately 4.1 miles.

Mill Street to Confair Boulevard:

(Alternate 1.4) This alternative of the Susquehanna River Trail begins at the intersection of Fairview Drive and Loyalsock Avenue and connects to a trail that runs through Indian Park to Loyalsock Township. This section of trail will utilize existing PA Bicycle Route J (Broad Street, Lycoming Mall Drive) for approximately 3.6 miles to Confair Boulevard. Although this section is advantageous because it provides access to the shops and restaurants along Broad Street, the existing conditions of this facility are not conducive to family bicycle riding. Through this section there are no designated bike lanes, little or no shoulders, high traffic volumes, and several traffic signals. The most significant improvement to this section would include the addition of bike lanes, which will require reconfiguring the existing pavement markings and possibly having to reconfigure areas of on-street parking. Other enhancements would include signage, traffic signal adjustments, and bicycle parking facilities along Broad Street to accommodate trail users who may want to stop and make use of the stores and restaurants of Montoursville.

Benefits of this trail segment:

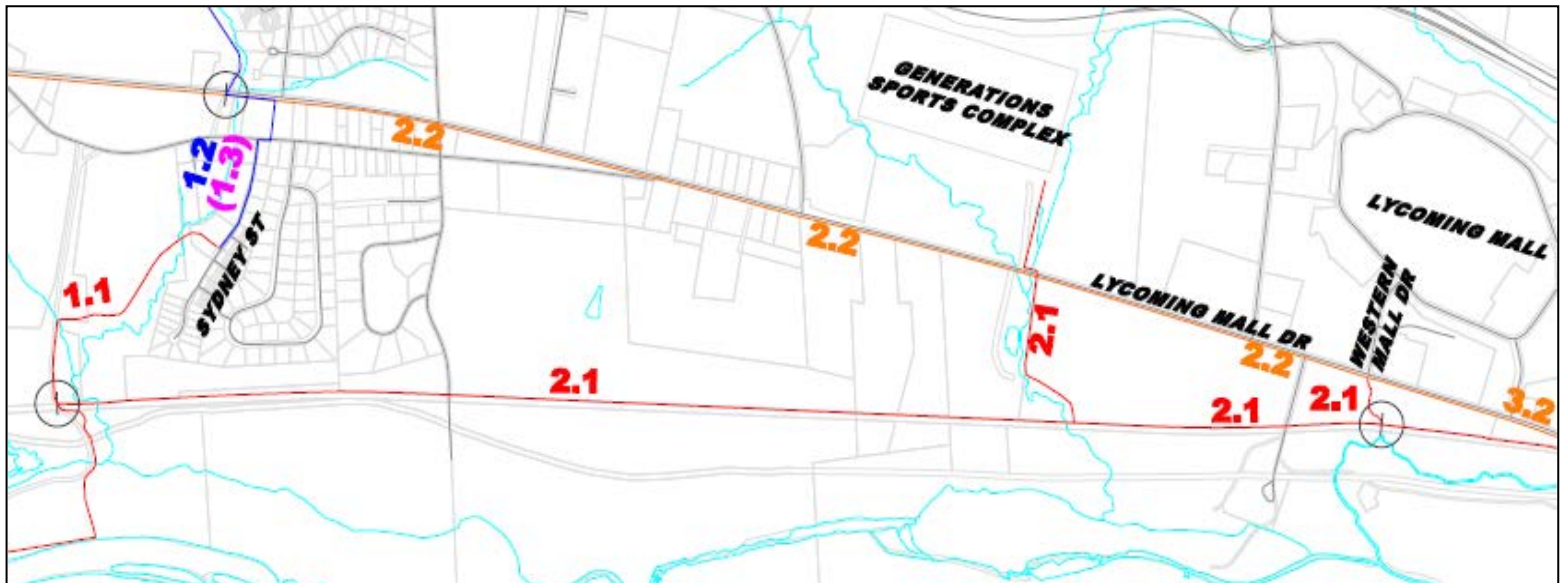
- Connectivity to existing trail system.
- Access to commercial and retail district.
- Access to Montoursville neighborhoods.

Drawbacks of this trail segment:

- Trail user must navigate through multiple signalized intersections
- User experience would be subjected to traffic and be less scenic as it progresses along Broad Street and Lycoming Mall Drive.

The total length of this segment is approximately 3.6 miles.

SEGMENT II



(Tab 6 Plan Layout Sheets 11, 12, 13, 14, 15, 16)

Sydney Street to Lycoming Mall:

(Alternate 2.1) The second segment of the Susquehanna River Trail will begin at the Sydney Street residential development connection and continue easterly towards the Lycoming Mall, parallel to the Lycoming Valley Railroad. This facility will be a shared-use-path configuration for 2.3 miles to Fort Muncy Nursery. This section of trail provides the residential areas two destinations to make use of: At approximately 1.8 miles the trail will have a connection to the recently developed Generations Sports Complex. The Generations Sports Complex is home to the STN Sports Dome, the Eastern Lycoming YMCA, as well as several outdoor ball fields. The STN Sports Dome is a 135,000 square foot multi-purpose sports facility, and is also the largest air-supported structure in North America. This connection will follow a power line bounded by woods and farm land for approximately 0.3 miles to Lycoming Mall Drive, directly across from the driveway for the sports complex. This crossing will need to be analyzed further to determine appropriate safety measure to promote safe crossings. Fencing will be placed along the connection to prevent trespassing onto private property. Once crossing the road, the trail will continue alongside the driveway of the complex as a shared-use-path and make connections to the facilities.



At the nursery, there will be an approximate 500' connection to the Lycoming Mall at Western Mall Drive. This connection will be the terminus point for this segment. Both of the destinations will be made bicycle friendly with appropriate signage, pavement markings, as well as bicycle parking facilities so users may safely leave their bicycles and utilize the stores, restaurants, and sports complex at their leisure. The Western Mall Drive signal will be upgraded to accommodate pedestrians and bicyclists crossing over to the mall. The Lycoming Crossing Complex is a retail shopping center that is located between the mall and sports complex on South. Lycoming Mall Road. Either connection could be utilized to reach this destination.

This segment of trail will border private farm land to the northern side and the railroad to the southern side. Stretches of wooded areas along this section will require clearing and grubbing. There are also areas of trail that will require either embankment or excavation. Fencing will be needed throughout this section to prevent trespassing onto private property. There is one stream crossing which will need to be investigated further to determine the need for a potential structure. If it is determined that a structure is needed, then the trail will utilize the existing railroad facility as a rail-with-trails configuration. The trail will also encroach onto the railroad right-of-way when it passes underneath Long Reach Lane. No railroad crossings are anticipated in this section of trail.



Proposed Trail Location along Railroad

Benefits of this trail segment:

- Connectivity to Generations Sports Complex and Lycoming Mall.
- Access to neighborhoods.

The total length of this segment is approximately 2.7 miles.

Confair Boulevard to Lycoming Mall:

(Alternate 2.2) The other alternative for the second segment of the Susquehanna River Trail will utilize the Bicycle PA Route J. This section will begin along Lycoming Mall Drive, approximately 500’ west of Confair Boulevard, and continue to Western Mall Drive at the Lycoming Mall. This section currently has shoulders that are wide enough to accommodate bike lanes.

However, to increase the awareness of the trail, bike legend pavement markings as well as appropriate bike lane signs will be added to this section. No additional connections will be required to provide access to the Generations Sports Complex and Lycoming Mall. The obstacles for this section are the existing grades of Lycoming Mall Drive and the traffic volume and speeds along the roadway. Currently, this section of Bicycle PA Route J does not carry a significant amount of ridership, and promoting this section as a family friendly facility will be difficult.



Generations Sports Complex

Other upgrades along this stretch include modifying the signals at Western Mall Drive and South Lycoming Mall Road to accommodate pedestrians and bicyclists crossing. The Lycoming Mall Drive crossings at the beginning of this segment as well as at the Generations Sports Complex will be analyzed further to determine appropriate safety measures that promote safe crossings. Possible safety measures include added signage, a flashing beacon warning system, traffic calming techniques, or other improvements.

Benefits of this trail segment:

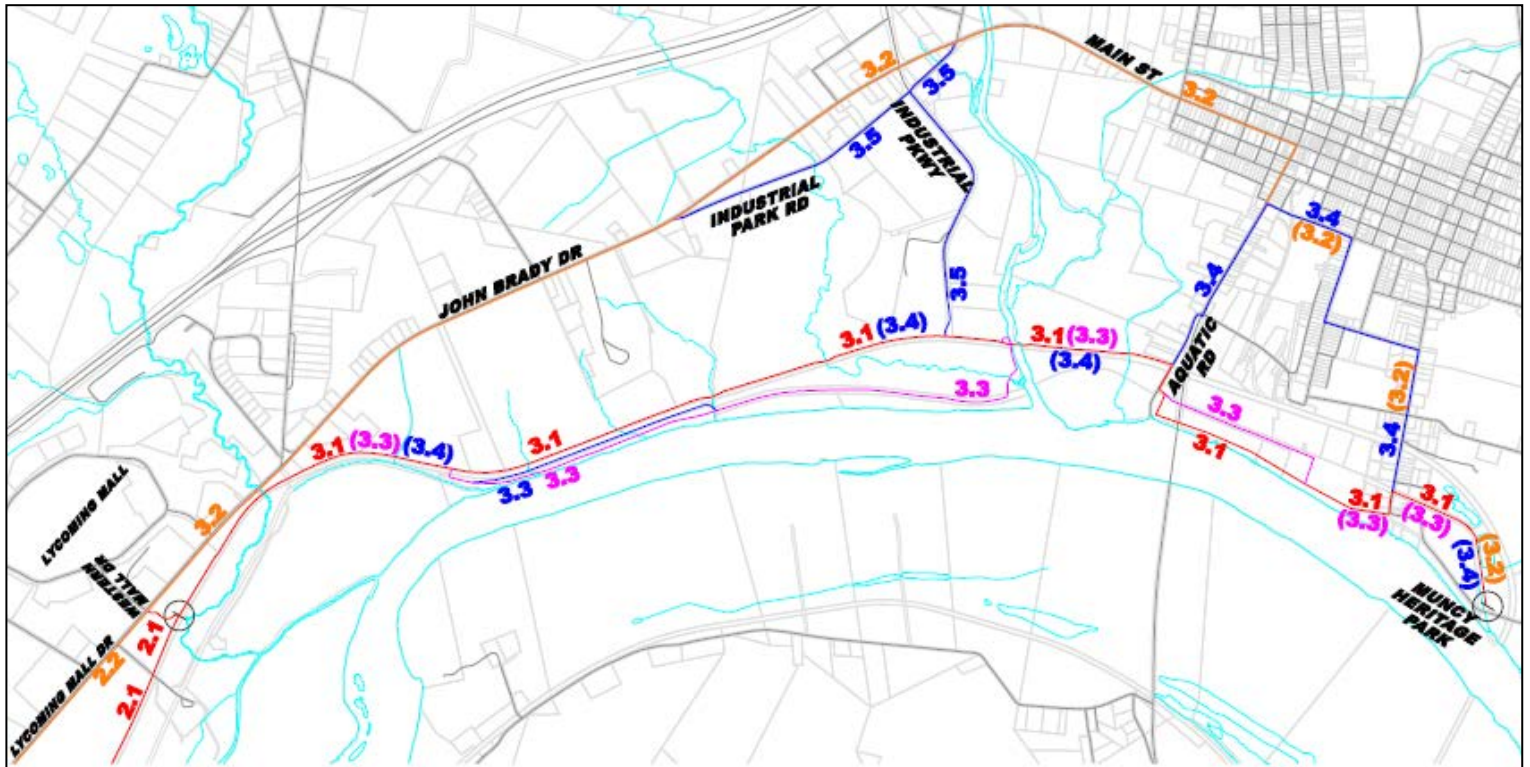
- Connectivity to Generations Sports Complex and Lycoming Mall.
- Access to neighborhoods.

Drawbacks of this trail segment:

- Steep Grades.
- User experience would be subjected to high-speed traffic and be less scenic as it progresses along Lycoming Mall Drive.

The total length of this segment is approximately 2.0 miles.

SEGMENT III



(Tab 6 Plan Layout Sheets 16, 17, 18, 19, 20, 21, 23, 24)

Lycoming Mall Connection to Muncy Heritage Park Site:

(Alternate 3.1) The third segment of the trail will begin at the Lycoming Mall and continue southeasterly to Muncy Heritage Park. The first alternative for this segment follows just outside the northern edge of the railroad right-of-way as a shared-use-path facility for approximately 2.8 miles until it reaches Aquatic Road. At the beginning of this section there is a stretch of trail where existing buildings on the nursery right-of-way will not allow the trail to continue. This will require the trail to either encroach onto the railroad right-of-way or utilize Lycoming Mall Drive for approximately 0.4 miles. Using Lycoming Mall Drive would also eliminate the need for a new structure over Carpenter’s Run. The remainder of this section of trail will be bounded by farmland and wooded areas to the northern side and the railroad on its southern side. Clearing and grubbing will be required throughout much of this section, and fencing will be needed to prevent trespassing onto private property. There are several small stream crossings that will be investigated further in the design process to determine whether encroaching onto the railroad right-of-way to utilize existing railroad structures will be required or not. At least one new structure will be needed.



There are two railroad bridge crossings that will require rehabilitation to facilitate trail use. Any section of trail that utilizes the railroad will assume a rails-with-trails configuration. Once at Aquatic Road, the trail will continue to the PFBC Muncy boat access area located a few hundred feet from the railroad. This boat access area will act as a trail head for this section, and signs would be recommended at this location to promote the trail. The trail will then parallel the Susquehanna River for 0.6 miles, following the tree line approximately 100' off of the shoreline before connecting to Pepper Street. The trail along the shoreline will proceed through wooded areas and farm lands and require significant clearing and grubbing. Obtaining right-of-way for this section of trail will be critical. Once on Pepper Street, the trail will continue approximately 200' as a shared roadway facility before reaching a walking trail that leads to the project's destination, the site of Muncy Heritage Park. Future coordination will be needed to determine whether the proposed walking trail can be utilized as a shared-use-path or if the trail will transition to a separate trail and continue 0.4 miles to the park. Signs would be recommended at the park to promote the trail.

Benefits of this trail segment:

- Access to PFBC Muncy boat access area.
- Access to Muncy Heritage Park

Drawbacks of this trail segment:

- Railroad crossing



Proposed Muncy Heritage Park
Location

The total length of this alternative is approximately 4.0 miles.

(Alternate 3.3) A parallel alternative for the trail is possible along the towpath of the old canal. This alternative would have the trail cross the railroad towards the river and continue along the existing canal right-of-way corridor for approximately 1.5 miles before reaching Muncy Creek. At this point, the trail will travel along the northern shoreline of Muncy Creek for approximately 800' before crossing under the existing railroad bridge and continuing on the railroad's northern side towards Muncy as previously described (3.1). The towpath in this area is not cleared and will require clearing and grubbing. A difference in the elevation between the railroad and towpath will require fill quantity to create a suitable grade. This alternative would require a small stream crossing as well as two additional crossings to reach the canal. These crossings will most likely requiring either a combination of pipes or an independent trail structure. In areas where the towpath may be subject to flooding, the trail alignment may curve and continue along the railroad's toe of slope. An advantage to this alternative is that it brings the trail to the southern side of the railroad. Currently, the land on the northern side of the railroad in this section is farmland. However, much of the farmland in this specific area is targeted as a potential industrial park with connections to the railroad. Moving the trail to the southern side eliminates the potential for conflicts with future development.

An option for the trail once it reaches the boat launch area involves utilizing an existing right-of-way corridor that continues through a field instead of running along the tree line the entire way. The trail alignment in this alternative is approximately 300' from the shore line and travels approximately 0.5 miles before turning back towards the tree line and then tying into Pepper Street and continuing as previously described. A potential drawback to this option is that the alignment would bisect a private property.

Benefits of this trail segment:

- Access to PFBC Muncy boat access area.
- Access to Muncy Heritage Park

Drawbacks of this trail segment:

- Railroad crossing

(Alternate 3.4) An additional alternative once the trail reaches Aquatic Road involves the trail becoming a signed shared roadway facility and following Aquatic Road for approximately 830' before reaching SR 405. Once at SR 405, the trail continues for approximately 0.3 miles to Sherman Street. SR 405 is part of Bicycle PA Route J and has shoulders to accommodate bike lanes. Once at Sherman Street, the trail will progress through the local Muncy street network to Pepper Street as a signed shared roadway facility and provide access to Muncy High School and ball fields. It would be necessary to alter the on-street parking along these streets in order to create the proper width to accommodate bike lanes. Appropriate pavement markings and signage would be recommended in this area to guide trail users as well as vehicles. Once on Pepper Street, the trail will proceed approximately 600' past the railroad and then connect to the proposed walking trail and continue as previously discussed. Signs would be recommended at the ball fields and park to promote the trail. These areas would also serve as access points for users who drive to the trail.

Benefits of this trail segment:

- Access to PFBC Muncy boat access area.
- Access to Muncy Heritage Park
- Access to Muncy neighborhoods

Drawbacks of this trail segment:

- Railroad crossing

An alternative along the railroad between Aquatic Road and Pepper Street is not desirable due to the railroad facilities that are located on this stretch.

Lycoming Mall Drive to Muncy Heritage Park Site along Bicycle PA Route J:

(Alternate 3.2) Another alternative for Segment III involves utilizing Bicycle PA Route J (Lycoming Mall Drive, John Brady Drive Main Street) and the local street network of Muncy. This option would be significantly less expensive to develop and would not require the purchase of any right-of-way. Also, this section of Bicycle PA Route J does not have the undulating terrain that previous segments do. However, utilizing this option fails to create a family friendly atmosphere due to high traffic volumes and speeds, and may not significantly increase ridership through the corridor. The majority of this section currently has shoulders that are wide enough to accommodate bike lanes. However, to increase the awareness of the trail, bike legend pavement markings as well as appropriate bike lane signs would be added. Once on Pepper Street, the trail will continue as a signed shared roadway facility until it reaches the proposed walking trail.

Benefits of this trail segment:

- Access to Muncy Heritage Park
- Access to Muncy neighborhoods

Drawbacks of this trail segment:

- Railroad crossing
- User experience would be subjected to high-speed traffic and be less scenic as it progresses along Lycoming Mall Drive and John Brady Drive.

The total length of this segment is approximately 5.3 miles.

Additional Connections:

(Alternate 3.5) Utilizing Industrial Parkway and Industrial Park Road would create a connection to both alternatives for Segment III. This connection allows portions of both alternatives to be used together, and provides flexibility for the trail if obtaining right-of-way, costs, or other barriers result in a portion of these alternatives being impossible to build. This connection will begin approximately 0.6 miles northwest of the boat launch area on Aquatic Road. This portion of trail utilizes an existing gravel road and continues approximately 500' to Industrial Parkway. Upon reaching Industrial Parkway, the trail will become a signed shared roadway for approximately 0.7 miles and intersect Industrial Park Road. Once at Industrial Park Road, the trail will connect to John Brady Drive as a bike lane by either continuing left for 0.7 miles or right for 900' and then resume along Bicycle PA Route J. Industrial Parkway and Industrial Park Road are relatively flat, low volume roadways that would be suitable for a bicyclist. However, pedestrians would need to utilize the grass shoulder in this area.



c. Weighted Project Construction and Cost Analysis

A programming cost estimate, weighted trail rating analysis chart, and associated figures, shown on the following pages, has been developed to aid the county in applying for grant applications and planning for this project. The following assumptions were made when developing this estimate:

- Shared Use Path areas of the corridor will be constructed with a bituminous concrete base and surface.
- The Rails-With-Trails portion of the trail will be stabilized by constructing limestone siftings on subbase material.
- Any portion of trail within a flood zone will be constructed with a bituminous concrete base and surface.
- Shared Roadway Bicycle areas will have paved shoulder areas constructed where the pavement is not wide enough or has inadequate sight distance. Existing paved roadways with adequate width will not have pavement modifications.
- Minor waterway crossings will consider pipe installations.
- Major waterway crossings will consider pressure treated wood with the structure type being determined from information available on right-of-way, existing structure utilization, or new structure cost.

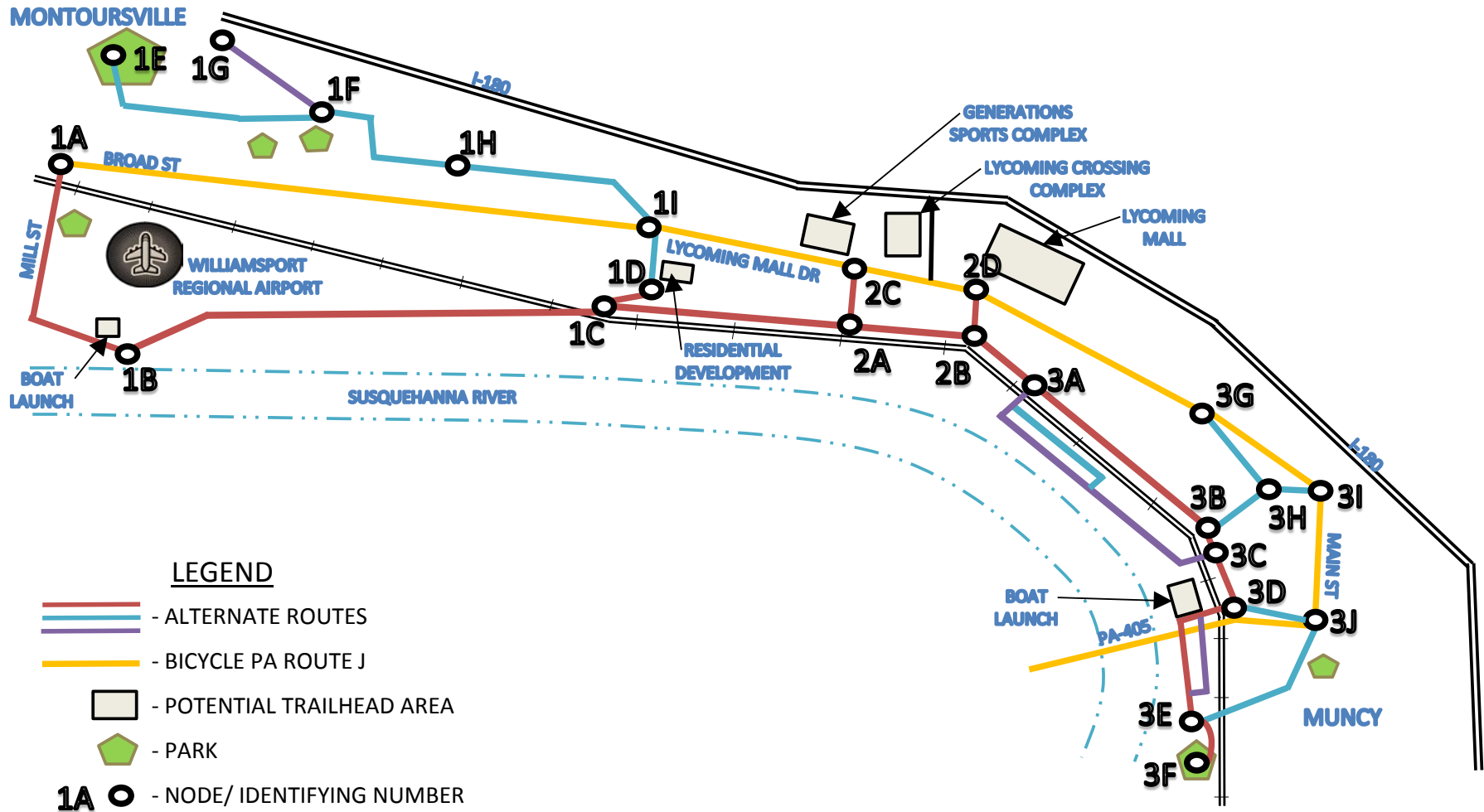
- Right-of-Way costs were developed based on a range of property values obtained for both commercial property and tillable farmland for the Borough of Muncy.

A 25% contingency has been added for unforeseen costs and final design items that were not evaluated for this study, such as the placement of bicycle-safe grates, mailbox relocations, etc. A 7% escalation per year has been used to cover increasing costs of material and labor. The total estimated cost for this trail corridor ranges from \$874,000 to \$5,608,000.

Segment Number	Segment Location	Segmented Section Information					Land Use Considerations					Potential Environmental Concerns	Trail Structure					Construction Cost Estimate with 7% Yearly Assumed Inflation							Weighted Trail Ratings				Comments	
		Alternate ID	Beginning Location	Ending Location	Links	Section Length (LF)	Potential Accesses	Number of Properties Impacted	Number of Railroad Crossings	Length of Railroad Shared Facility (LF)	Length of Roadway Shared Facility (LF)		Type of Surface	Assumed Excavation Quantity (CY)	Length of Fencing / Barrier (LF)	Number of Pipe Extensions	Number and Type of Structures	2008	2009	2010	2011	2012	2013	2014	2015	Safety / Comfort Rating (High = Best)	Probability Rating (High = Easier to Build)	Cost Rating (High < \$1m, Low > \$2m)		Overall Rating (Low, Low-Med, Med-Low, Med-High, High-Med, High)
1	Existing Trail to Residential Development	1.1	Mill Street	Sydney St	1A-1B, 1B-1C, 1C-1D	29880	4	3	1	600	8580	Floodplain, Wetlands, Archaeology	Asphalt/ Crushed Stone	7881	1000		1 Bridge (Independent Trail Structure)	\$1,267,000	\$1,356,000	\$1,451,000	\$1,553,000	\$1,662,000	\$1,778,000	\$1,902,000	\$2,035,000	High	Medium	Medium	High-Med	
		1.2	Indian Park	Confair Blvd (via street network)	1E-1F, 1F-1H, 1H-1I	27070	5	9		0	14230	Wetlands, Archaeology	Asphalt	4073	1800		2 Bridges (Culverts)	\$615,000	\$658,000	\$704,000	\$753,000	\$806,000	\$862,000	\$922,000	\$987,000	Medium	Medium	High	High-Med	
		1.3	Indian Park	Confair Blvd (via Fairview Dr)	1G-1F, 1F-1H, 1H-1I	21795	5	7		0	11825	Wetlands, Archaeology	Asphalt	3012	1800		2 Bridges (Culverts)	\$853,000	\$913,000	\$977,000	\$1,045,000	\$1,118,000	\$1,196,000	\$1,280,000	\$1,370,000	Medium	Medium	High	High-Med	
		1.4	Mill Street	Confair Blvd (via Broad St)	1A-1I	18880	3	0		0	18880		Asphalt	0	0			\$673,000	\$720,000	\$770,000	\$824,000	\$882,000	\$944,000	\$1,010,000	\$1,081,000	Low	Medium	High	Medium	
2	Residential Development to Lycoming Mall	2.1	Sydney St	Lycoming Mall	1C-2A, 2A-2B, 2A-2C, 2B-2D	15182	3	3		200	0	Potential Wetlands, Archaeology	Crushed Stone	5617	15182			\$2,155,000	\$2,306,000	\$2,467,000	\$2,640,000	\$2,825,000	\$3,023,000	\$3,235,000	\$3,461,000	High	Medium	Low	Medium	
		2.2	Confair Blvd	Lycoming Mall	1A-2C, 2C-2D	10620	4	0		0	10620		Asphalt	0	0			\$58,000	\$62,000	\$66,000	\$71,000	\$76,000	\$81,000	\$87,000	\$93,000	Low	High	High	Med-High	
3	Lycoming Mall to Muncy Heritage Park	3.1	Lycoming Mall	Muncy Heritage Park (Via RR Corridor)	2B-3A, 3A-3C (RED), 3C-3D, 3D-3E, 3E-3F	21170	4	18	1	2000	275	Within Floodplain, Potential Wetlands, Archaeology	Asphalt/ Crushed Stone	7833	21170		4 Bridges (2 Indep. Structures, 2 Rehabs)	\$1,620,000	\$1,733,000	\$1,854,000	\$1,984,000	\$2,123,000	\$2,272,000	\$2,431,000	\$2,601,000	High	Low	Medium	Medium	
		3.2	Lycoming Mall	Muncy Heritage Park (Via Shared Roadway)	2D-3G, 3G-3I, 3I-3J, 3J-3E, 3E-3F	27790	4	1	1	0	27790	Within Floodplain, Potential Wetlands, Archaeology	Asphalt	0	0			\$201,000	\$215,000	\$230,000	\$246,000	\$263,000	\$281,000	\$301,000	\$322,000	Medium	High	High	High-Med	
		3.3	Lycoming Mall	Muncy Heritage Park (Via RR/Towpath)	2B-3A, 3A-3C(PURPLE), 3C-3D, 3D-3E, 3E-3F	22155	4	12	3	1400	275	Within Floodplain, Potential Wetlands, Archaeology	Asphalt/ Crushed Stone	8197	22155			\$2,186,000	\$2,339,000	\$2,503,000	\$2,678,000	\$2,865,000	\$3,066,000	\$3,281,000	\$3,511,000	High	Low	Low	Med-Low	
		3.4	Lycoming Mall	Muncy Heritage Park (Via RR/Towpath)	2B-3C (RED), 3C-3D, 3D-3J, 3J-3E, 3E-3F	21110	4	14	1	2000	8300	Within Floodplain, Potential Wetlands, Archaeology	Asphalt/ Crushed Stone	7833	21170			\$ 1,026,000	\$1,098,000	\$1,175,000	\$1,257,000	\$1,345,000	\$1,439,000	\$1,540,000	\$1,648,000	High	Low	Medium	Medium	
		3.5	Trail Along RR Corridor	Trail Along Roadway Network	3B-3H, 3G-3H, 3H-3I	8250	2	0		0	8250		Asphalt	0	0			\$20,000	\$21,000	\$22,000	\$24,000	\$26,000	\$28,000	\$30,000	\$32,000	High	High	High	High	

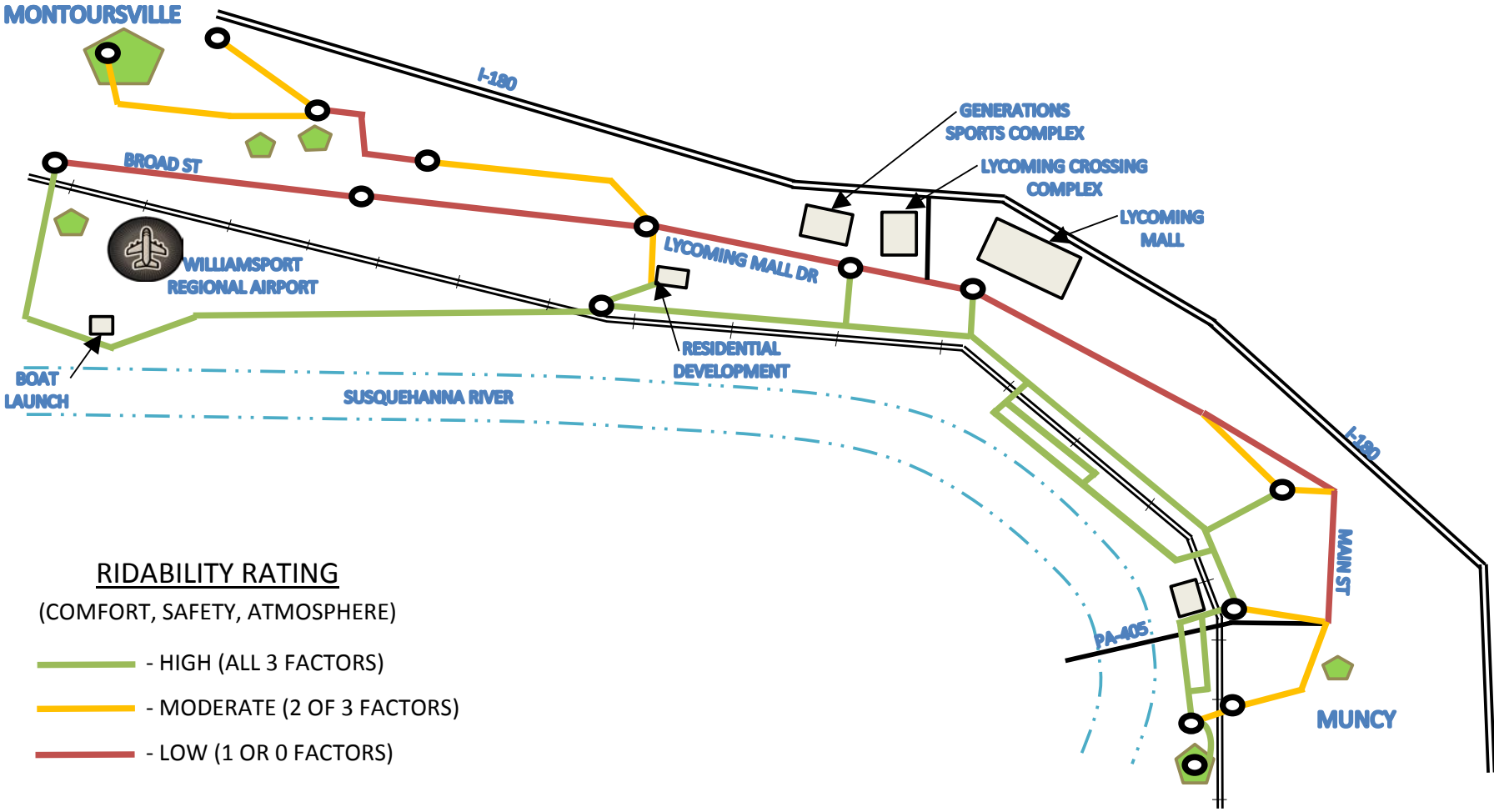
BICYCLE ROUTE ALTERNATIVES LOCATION MAP

NO SCALE



BICYCLE ROUTE RIDABILITY RATINGS MAP

NO SCALE



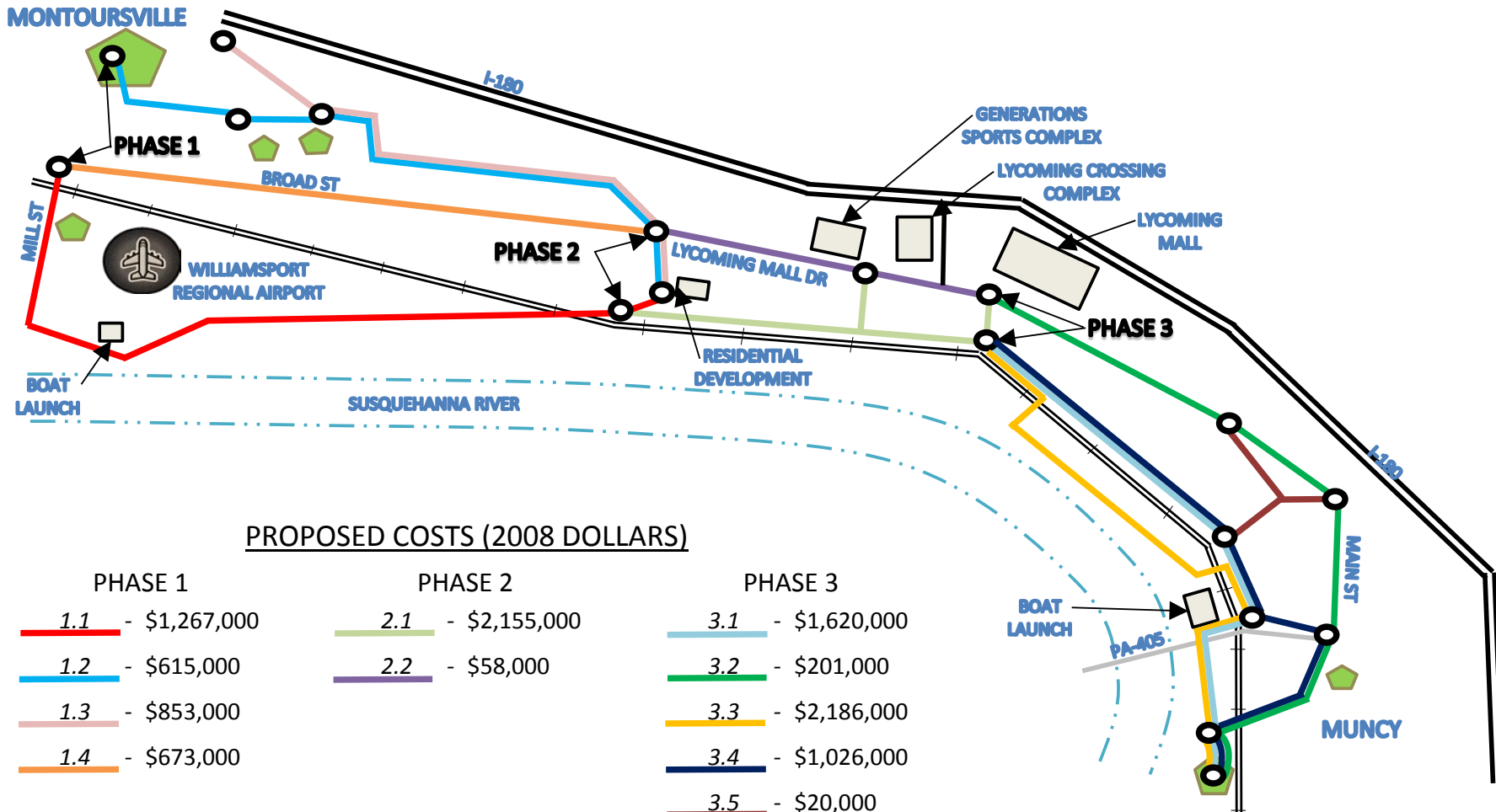
RIDABILITY RATING

(COMFORT, SAFETY, ATMOSPHERE)

- HIGH (ALL 3 FACTORS)
- MODERATE (2 OF 3 FACTORS)
- LOW (1 OR 0 FACTORS)

BICYCLE ROUTE ALTERNATIVES COSTS MAP

NO SCALE



PROPOSED COSTS (2008 DOLLARS)

PHASE 1

- 1.1 - \$1,267,000
- 1.2 - \$615,000
- 1.3 - \$853,000
- 1.4 - \$673,000

PHASE 2

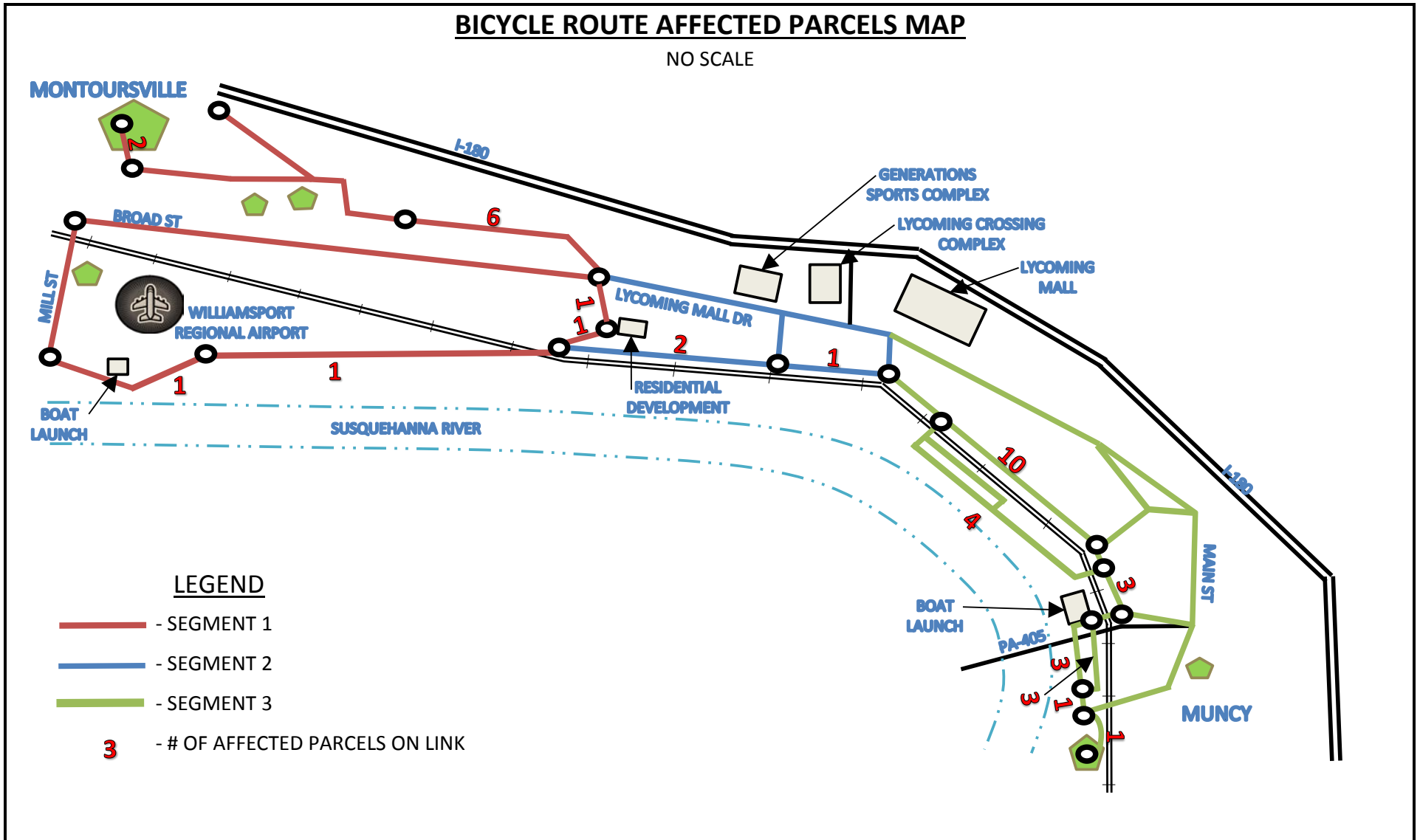
- 2.1 - \$2,155,000
- 2.2 - \$58,000

PHASE 3

- 3.1 - \$1,620,000
- 3.2 - \$201,000
- 3.3 - \$2,186,000
- 3.4 - \$1,026,000
- 3.5 - \$20,000

BICYCLE ROUTE AFFECTED PARCELS MAP

NO SCALE



TRAIL ALONG MILL ST 1A-1B

FROM BROAD ST TO BOAT LAUNCH

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SIGNED SHARED ROADWAY	PAINT					
	W/6"	LF	\$1.50	0	\$0.00	N
	BIKE LEGEND	EACH	\$200	0	\$0.00	N
	ARROW LEGEND	EACH	\$125	0	\$0.00	N
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$200.18	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$0.00	

Approximate Link Length:	8580	LF
Cost of Trail:	\$1,717.50	
Additional Costs:	\$0.00	
25% Contingency:	\$429.38	
TOTAL COST OF LINK:	\$2,146.88	

TRAIL ALONG SUSQUEHANNA RIVER 1B-1C
 FROM BOAT LAUNCH TO RAILROAD BY WATER AUTHORITY

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SHARED USE PATH	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1,095	\$16.43	1
	SHARE THE ROAD	SF	\$15	0	\$0.00	N
	PAVEMENT	SY	\$28	1111.11	\$31,111.08	1
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1
	ROW	LS	\$3,673	1	\$3,673.09	1
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$42,415.60	
	STRUCTURE	LS	\$50,000	2	\$100,000.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS	\$20,000	1	\$20,000.00	1
	OTHER	LS		1	\$0.00	1
					\$120,000.00	

Approximate Link Length: 18750 LF
 Cost of Trail: \$795,292.49
 Additional Costs: \$120,000.00
 25% Contingency: \$228,823.12
TOTAL COST OF LINK: \$1,144,115.62

TRAIL CONNECTION FROM RESIDENTIAL DEVELOPMENT 1C-1D

FROM WATER AUTHORITY TO SYDNEY STREET

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)	
SHARED USE PATH	PAINT						
	W/6"	LF	\$1.50	1000	\$1,500.00	1	
	BIKE LEGEND	EACH	\$200	1	\$200.00	1	
	ARROW LEGEND	EACH	\$125	1	\$125.00	1	
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N	
	SIGNS						
	BIKE ROUTE	SF	\$15	5	\$75.00	1	
	DESTINATION	SF	\$15	1	\$15.00	1	
	ARROW	SF	\$15	1.095	\$16.43	1	
	SHARE THE ROAD	SF	\$15	0	\$0.00	N	
	PAVEMENT	SY	\$28	0	\$0.00	N	
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	1111.11	\$16,666.65	1	
	EXCAVATION	CY	\$10	370	\$3,700.00	1	
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N	
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N	
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1	
	ROW	LS	\$3,673	1	\$3,673.09	1	
	BARRIER	LF	\$85	0	\$0.00	N	
	FENCING	LF	\$10	1000	\$10,000.00	1	
	\$37,971.17						
	STRUCTURE	LS		1	\$0.00	1	
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1	
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1	
	OTHER	LS		1	\$0.00	1	
	\$0.00						

Approximate Link Length:	2550	LF
Cost of Trail:	\$96,826.48	
Additional Costs:	\$0.00	
25% Contingency:	<u>\$24,206.62</u>	
TOTAL COST OF LINK:	\$121,033.10	

TRAIL ALONG RAILROAD 1C-2A
FROM WATER AUTHORITY TO LYCOMING MALL

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SHARED USE PATH	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	1	\$300.00	1
	SIGNS					
	BIKE ROUTE	SF	\$15	4	\$60.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095		1
	SHARE THE ROAD	SF	\$15	0	\$0.00	N
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	1111.11	\$16,666.65	1
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	5520	\$82,800.00	1
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1
	ROW	LS	\$4,591	1	\$4,591.37	1
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	1000	\$10,000.00	1
					\$121,958.02	
	STRUCTURE	LS	\$50,000	1	\$50,000.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS	\$25,000	1	\$25,000.00	1
OTHER	LS		1	\$0.00	1	
				\$75,000.00		

Approximate Link Length: 9245 LF
 Cost of Trail: \$1,127,501.88
 Additional Costs: \$75,000.00
 25% Contingency: \$300,625.47
TOTAL COST OF LINK: \$1,503,127.35

TRAIL ALONG ARROWHEAD PARK, MONTOURSVILLE STREET NETWORK 1E-1F

FROM PARK TO BRUSHY RIDGE RD

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
BIKE LANE	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	0	\$0.00	N
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$1,931.43	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$0.00	

Approximate Link Length:	9600	LF
Cost of Trail:	\$18,541.68	
Additional Costs:	\$0.00	
25% Contingency:	\$4,635.42	
TOTAL COST OF LINK:	\$23,177.10	

TRAIL ALONG WELDON ST, WILLOW ST, AND NICELY AVE 1F-1H

FROM WALNUT ST TO FAIRVIEW DR

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
BIKE LANE	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$2,025.18	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$0.00	

Approximate Link Length:	6390	LF
Cost of Trail:	\$12,940.87	
Additional Costs:	\$0.00	
25% Contingency:	\$3,235.22	
TOTAL COST OF LINK:	\$16,176.09	

TRAIL ALONG ROAD NETWORK AND UNDEVELOPED WOODED AREA 1H-1I

FROM BRUSHY RIDGE RD TO LYCOMING MALL DR

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SHARED USE PATH	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	1111.11	\$31,111.08	1
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1
	ROW	LS	\$4,591	1	\$4,591.37	1
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$43,427.62	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$0.00	

Approximate Link Length:	9630	LF
Cost of Trail:	\$418,208.01	
Additional Costs:	\$0.00	
25% Contingency:	\$104,552.00	
TOTAL COST OF LINK:	\$522,760.01	

TRAIL CONNECTION FROM ALTERNATE 1.2 TO 2.1 11-1D

FROM CONFAIR BLVD TO SYDNEY ST

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SHARED USE PATH	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	1111.11	\$16,666.65	1
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1
	ROW	LS	\$4,591	1	\$4,591.37	1
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$28,983.19	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$0.00	

Approximate Link Length:	1450	LF
Cost of Trail:	\$42,025.63	
Additional Costs:	\$0.00	
25% Contingency:	\$10,506.41	
TOTAL COST OF LINK:	\$52,532.04	

TRAIL ALONG FAIRVIEW DR 1G-1F

FROM LOYALSOCK AVE TO BRUSHY RIDGE RD

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
BIKE LANE	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	1111.11	\$31,111.08	1
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$36,836.26	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS	\$50,000	1	\$50,000.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$50,000.00	

Approximate Link Length:	4325	LF
Cost of Trail:	\$159,316.80	
Additional Costs:	\$50,000.00	
25% Contingency:	\$52,329.20	
TOTAL COST OF LINK:	\$261,646.00	

TRAIL ALONG BROAD ST 1A-1I

FROM MILL ST TO OLD CEMENT RD

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SIGNED SHARED ROADWAY	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$2,025.18	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS	\$500,000	1	\$500,000.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$500,000.00	

Approximate Link Length:	18880	LF
Cost of Trail:	\$38,235.30	
Additional Costs:	\$500,000.00	
25% Contingency:	\$134,558.83	
TOTAL COST OF LINK:	\$672,794.13	

TRAIL ALONG LYCOMING MALL RD 1I-2C
 FROM OLD CEMENT RD TO GENERATIONS SPORTS COMPLEX

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
BIKE LANE	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$2,025.18	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$0.00	

Approximate Link Length: 7490 LF
 Cost of Trail: \$15,168.56
 Additional Costs: \$0.00
 25% Contingency: \$3,792.14
TOTAL COST OF LINK: \$18,960.70

TRAIL ALONG RAILROAD 2A-2B
FROM WATER AUTHORITY TO LYCOMING MALL

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SHARED USE PATH	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	1	\$300.00	1
	SIGNS					
	BIKE ROUTE	SF	\$15	4	\$60.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095		1
	SHARE THE ROAD	SF	\$15	0	\$0.00	N
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	1111.11	\$16,666.65	1
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	5520	\$82,800.00	1
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1
	ROW	LS	\$4,591	1	\$4,591.37	1
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	1000	\$10,000.00	1
					\$121,958.02	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
				\$0.00		

Approximate Link Length: 3005 LF
 Cost of Trail: \$366,483.84
 Additional Costs: \$0.00
 25% Contingency: \$91,620.96
TOTAL COST OF LINK: \$458,104.81

TRAIL CONNECTION TO GENERATIONS SPORTS COMPLEX 2A-2C

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SHARED USE PATH	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	1	\$300.00	1
	SIGNS					
	BIKE ROUTE	SF	\$15	4	\$60.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095		1
	SHARE THE ROAD	SF	\$15	0	\$0.00	N
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	1111.11	\$16,666.65	1
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1
	ROW	LS	\$4,591	1	\$4,591.37	1
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	1000	\$10,000.00	1
					\$39,158.02	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
OTHER	LS		1	\$0.00	1	
				\$0.00		

Approximate Link Length: 2447 LF
 Cost of Trail: \$95,819.67
 Additional Costs: \$0.00
 25% Contingency: \$23,954.92
TOTAL COST OF LINK: \$119,774.59

TRAIL CONNECTION TO LYCOMING MALL 2B-2D

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SHARED USE PATH	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	1	\$300.00	1
	SIGNS					
	BIKE ROUTE	SF	\$15	4	\$60.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095		1
	SHARE THE ROAD	SF	\$15	0	\$0.00	N
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	1111.11	\$16,666.65	1
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1
	ROW	LS	\$36,731	1	\$36,730.95	1
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	1000	\$10,000.00	1
					\$71,297.60	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS	\$25,000	1	\$25,000.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
				\$25,000.00		

Approximate Link Length: 485 LF
 Cost of Trail: \$34,579.33
 Additional Costs: \$25,000.00
 25% Contingency: \$14,894.83
TOTAL COST OF LINK: \$74,474.17

TRAIL ALONG RAILROAD 2B-3A

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SHARED USE PATH	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	1	\$300.00	1
	SIGNS					
	BIKE ROUTE	SF	\$15	4	\$60.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095		1
	SHARE THE ROAD	SF	\$15	0	\$0.00	N
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	1111.11	\$16,666.65	1
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1
	ROW	LS	\$4,591	1	\$4,591.37	1
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	1000	\$10,000.00	1
					\$39,158.02	
	STRUCTURE	LS	\$75,000	1	\$75,000.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS	\$0	1	\$0.00	1
	OTHER	LS		1	\$0.00	1
				\$75,000.00		

Approximate Link Length: 4670 LF
 Cost of Trail: \$182,867.95
 Additional Costs: \$75,000.00
 25% Contingency: \$64,466.99
TOTAL COST OF LINK: \$322,334.93

TRAIL ALONG RAILROAD 3A-3C (RED)
FROM LYCOMING MALL TO INDUSTRIAL PARKWAY

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SHARED USE PATH	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	1	\$300.00	1
	SIGNS					
	BIKE ROUTE	SF	\$15	4	\$60.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095		1
	SHARE THE ROAD	SF	\$15	0	\$0.00	N
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	1111.11	\$16,666.65	1
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1
	ROW	LS	\$4,591	1	\$4,591.37	1
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	1000	\$10,000.00	1
					\$39,158.02	
	STRUCTURE	LS	\$75,000	1	\$75,000.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
RAILROAD SIGNAL UPGRADE	LS	\$0	1	\$0.00	1	
OTHER	LS		1	\$0.00	1	
				\$75,000.00		

Approximate Link Length: 7800 LF
 Cost of Trail: \$305,432.54
 Additional Costs: \$75,000.00
 25% Contingency: \$95,108.14
TOTAL COST OF LINK: \$475,540.68

TRAIL ALONG LYCOMING MALL RD 2C-2D
 FROM GENERATIONS SPORTS COMPLEX TO WESTERN MALL DR

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
BIKE LANE	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$2,025.18	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS	\$25,000	1	\$25,000.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$25,000.00	

Approximate Link Length:	3130	LF
Cost of Trail:	\$6,338.80	
Additional Costs:	\$25,000.00	
25% Contingency:	\$7,834.70	
TOTAL COST OF LINK:	\$39,173.50	

TRAIL ALONG LYCOMING MALL RD AND JOHN BRADY DR 2D-3G

FROM WESTERN MALL DR TO INDUSTRIAL PARK RD

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
BIKE LANE	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$2,025.18	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$0.00	

Approximate Link Length:	8930	LF
Cost of Trail:	\$18,084.81	
Additional Costs:	\$0.00	
25% Contingency:	\$4,521.20	
TOTAL COST OF LINK:	\$22,606.02	

TRAIL ALONG RAILROAD 3A-3C (PURPLE)

FROM LYCOMING MALL TO INDUSTRIAL PARKWAY

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)	
SHARED USE PATH	PAINT						
	W/6"	LF	\$1.50	1000	\$1,500.00	1	
	BIKE LEGEND	EACH	\$200	1	\$200.00	1	
	ARROW LEGEND	EACH	\$125	1	\$125.00	1	
	RR CROSSING LEGEND	EACH	\$300	1	\$300.00	1	
	SIGNS						
	BIKE ROUTE	SF	\$15	4	\$60.00	1	
	DESTINATION	SF	\$15	1	\$15.00	1	
	ARROW	SF	\$15	1.095		1	
	SHARE THE ROAD	SF	\$15	0	\$0.00	N	
	PAVEMENT	SY	\$28	1111.11	\$31,111.08	1	
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N	
	EXCAVATION	CY	\$10	370	\$3,700.00	1	
	FOREIGN BORROW EXCAVATION	CY	\$15	1380	\$20,700.00	1	
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00		
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1	
	ROW	LS	\$4,591	1	\$4,591.37	1	
	BARRIER	LF	\$85	0	\$0.00	N	
	FENCING	LF	\$10	1000	\$10,000.00	1	
						\$74,302.45	
	STRUCTURE (3 crossings @ canal)	LS	\$180,000	1	\$180,000.00	1	
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1	
	RAILROAD SIGNAL UPGRADE	LS	\$0	1	\$0.00	1	
	OTHER	LS		1	\$0.00	1	
					\$180,000.00		

Approximate Link Length:	8785	LF
Cost of Trail:	\$652,747.01	
Additional Costs:	\$180,000.00	
25% Contingency:	\$208,186.75	
TOTAL COST OF LINK:	\$1,040,933.76	

TRAIL ALONG RAILROAD 3C-3D

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)	
SHARED USE PATH	PAINT						
	W/6"	LF	\$1.50	1000	\$1,500.00	1	
	BIKE LEGEND	EACH	\$200	1	\$200.00	1	
	ARROW LEGEND	EACH	\$125	1	\$125.00	1	
	RR CROSSING LEGEND	EACH	\$300	1	\$300.00	1	
	SIGNS						
	BIKE ROUTE	SF	\$15	4	\$60.00	1	
	DESTINATION	SF	\$15	1	\$15.00	1	
	ARROW	SF	\$15	1.095		1	
	SHARE THE ROAD	SF	\$15	0	\$0.00	N	
	PAVEMENT	SY	\$28	0	\$0.00	N	
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	1111.11	\$16,666.65	1	
	EXCAVATION	CY	\$10	370	\$3,700.00	1	
	FOREIGN BORROW EXCAVATION	CY	\$15	5520	\$82,800.00	1	
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00		
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1	
	ROW	LS	\$4,591	1	\$4,591.37	1	
	BARRIER	LF	\$85	0	\$0.00	N	
	FENCING	LF	\$10	1000	\$10,000.00	1	
						\$121,958.02	
	STRUCTURE	LS	\$50,000	1	\$50,000.00	1	
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1	
	RAILROAD SIGNAL UPGRADE	LS	\$0	1	\$0.00	1	
	OTHER	LS		1	\$0.00	1	
						\$50,000.00	

Approximate Link Length:	2165	LF
Cost of Trail:	\$264,039.11	
Additional Costs:	\$50,000.00	
25% Contingency:	\$78,509.78	
TOTAL COST OF LINK:	<u>\$392,548.89</u>	

TRAIL ALONG AQUATIC RD AND SR 405 3D-3J

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SIGNED SHARED ROADWAY	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	4	\$60.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095		1
	SHARE THE ROAD	SF	\$15	1.25	\$18.75	1
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$1,918.75	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1	
OTHER	LS		1	\$0.00	1	
				\$0.00		

Approximate Link Length:	2610	LF
Cost of Trail:	\$5,007.94	
Additional Costs:	\$0.00	
25% Contingency:	\$1,251.98	
TOTAL COST OF LINK:	\$6,259.92	

TRAIL ALONG MUNCY ROAD NETWORK 3J-3E

(SHERMAN ST, PENN ST, PAINTER ST, PEPPER ST)

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)	
SIGNED SHARED ROADWAY	PAINT						
	W/6"	LF	\$1.50	1000	\$1,500.00	1	
	BIKE LEGEND	EACH	\$200	1	\$200.00	1	
	ARROW LEGEND	EACH	\$125	1	\$125.00	1	
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N	
	SIGNS						
	BIKE ROUTE	SF	\$15	4	\$60.00	1	
	DESTINATION	SF	\$15	1	\$15.00	1	
	ARROW	SF	\$15	1.095		1	
	SHARE THE ROAD	SF	\$15	1.25	\$18.75	1	
	PAVEMENT	SY	\$28	0	\$0.00	N	
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N	
	EXCAVATION	CY	\$10	0	\$0.00	N	
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N	
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N	
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N	
	ROW	LS	\$0	0	\$0.00	N	
	BARRIER	LF	\$85	0	\$0.00	N	
	FENCING	LF	\$10	0	\$0.00	N	
						\$1,918.75	
	STRUCTURE	LS		1	\$0.00	1	
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1	
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1	
	OTHER	LS		1	\$0.00	1	
					\$0.00		

Approximate Link Length:	6300	LF
Cost of Trail:	\$12,088.13	
Additional Costs:	\$0.00	
25% Contingency:	<u>\$3,022.03</u>	
TOTAL COST OF LINK:	\$15,110.16	

TRAIL ALONG RIVER/FARM 3D-3E

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SHARED USE PATH	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	1	\$300.00	1
	SIGNS					
	BIKE ROUTE	SF	\$15	4	\$60.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095		1
	SHARE THE ROAD	SF	\$15	0	\$0.00	N
	PAVEMENT	SY	\$28	1111.11	\$31,111.08	1
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	370	\$3,700.00	1
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1
	ROW	LS	\$5,510	1	\$5,509.64	1
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	1000	\$10,000.00	1
					\$54,520.72	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
				\$0.00		

Approximate Link Length: 4300 LF
 Cost of Trail: \$234,439.10
 Additional Costs: \$0.00
 25% Contingency: \$58,609.78
TOTAL COST OF LINK: \$293,048.88

TRAIL THROUGH WOODS 3E-3F

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)	
SHARED USE PATH	PAINT						
	W/6"	LF	\$1.50	1000	\$1,500.00	1	
	BIKE LEGEND	EACH	\$200	1	\$200.00	1	
	ARROW LEGEND	EACH	\$125	1	\$125.00	1	
	RR CROSSING LEGEND	EACH	\$300	1	\$300.00	1	
	SIGNS						
	BIKE ROUTE	SF	\$15	4	\$60.00	1	
	DESTINATION	SF	\$15	1	\$15.00	1	
	ARROW	SF	\$15	1.095		1	
	SHARE THE ROAD	SF	\$15	0	\$0.00	N	
	PAVEMENT	SY	\$28	1111.11	\$31,111.08	1	
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N	
	EXCAVATION	CY	\$10	370	\$3,700.00	1	
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N	
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00		
	CLEARING AND GRUBBING	LS	\$2,000	1	\$2,000.00	1	
	ROW	LS	\$0	1	\$0.00	1	
	BARRIER	LF	\$85	0	\$0.00	N	
	FENCING	LF	\$10	1000	\$10,000.00	1	
						\$49,011.08	
	STRUCTURE	LS		1	\$0.00	1	
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1	
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1	
	OTHER	LS		1	\$0.00	1	
						\$0.00	

Approximate Link Length:	2235	LF
Cost of Trail:	\$109,539.76	
Additional Costs:	\$0.00	
25% Contingency:	\$27,384.94	
TOTAL COST OF LINK:	<u>\$136,924.70</u>	

TRAIL ALONG INDUSTRIAL PARKWAY 3B-3H

FROM RAILROAD TO INDUSTRIAL PARK RD

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
SIGNED SHARED ROADWAY	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	0	\$0.00	N
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
	\$1,931.43					
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
	\$0.00					

Approximate Link Length:	3700	LF
Cost of Trail:	\$7,146.27	
Additional Costs:	\$0.00	
25% Contingency:	<u>\$1,786.57</u>	
TOTAL COST OF LINK:	\$8,932.84	

TRAIL ALONG INDUSTRIAL PARK RD 3G-3H

FROM JOHN BRADY DR TO INDUSTRIAL PARKWAY

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)	
BIKE LANE	PAINT						
	W/6"	LF	\$1.50	1000	\$1,500.00	1	
	BIKE LEGEND	EACH	\$200	1	\$200.00	1	
	ARROW LEGEND	EACH	\$125	1	\$125.00	1	
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N	
	SIGNS						
	BIKE ROUTE	SF	\$15	5	\$75.00	1	
	DESTINATION	SF	\$15	1	\$15.00	1	
	ARROW	SF	\$15	1.095	\$16.43	1	
	SHARE THE ROAD	SF	\$15	0	\$0.00	N	
	PAVEMENT	SY	\$28	0	\$0.00	N	
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N	
	EXCAVATION	CY	\$10	0	\$0.00	N	
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N	
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N	
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N	
	ROW	LS	\$0	0	\$0.00	N	
	BARRIER	LF	\$85	0	\$0.00	N	
	FENCING	LF	\$10	0	\$0.00	N	
						\$1,931.43	
	STRUCTURE	LS		1	\$0.00	1	
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1	
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1	
	OTHER	LS		1	\$0.00	1	
						\$0.00	

Approximate Link Length:	3650	LF
Cost of Trail:	\$7,049.70	
Additional Costs:	\$0.00	
25% Contingency:	<u>\$1,762.43</u>	
TOTAL COST OF LINK:	\$8,812.13	

TRAIL ALONG INDUSTRIAL PARK RD 3H-3I

FROM INDUSTRIAL PARKWAY TO SR 405

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)	
BIKE LANE	PAINT						
	W/6"	LF	\$1.50	1000	\$1,500.00	1	
	BIKE LEGEND	EACH	\$200	1	\$200.00	1	
	ARROW LEGEND	EACH	\$125	1	\$125.00	1	
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N	
	SIGNS						
	BIKE ROUTE	SF	\$15	5	\$75.00	1	
	DESTINATION	SF	\$15	1	\$15.00	1	
	ARROW	SF	\$15	1.095	\$16.43	1	
	SHARE THE ROAD	SF	\$15	0	\$0.00	N	
	PAVEMENT	SY	\$28	0	\$0.00	N	
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N	
	EXCAVATION	CY	\$10	0	\$0.00	N	
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N	
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N	
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N	
	ROW	LS	\$0	0	\$0.00	N	
	BARRIER	LF	\$85	0	\$0.00	N	
	FENCING	LF	\$10	0	\$0.00	N	
						\$1,931.43	
	STRUCTURE	LS		1	\$0.00	1	
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1	
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1	
	OTHER	LS		1	\$0.00	1	
						\$0.00	

Approximate Link Length:	900	LF
Cost of Trail:	\$1,738.28	
Additional Costs:	\$0.00	
25% Contingency:	\$434.57	
TOTAL COST OF LINK:	\$2,172.85	

TRAIL ALONG JOHN BRADY DR 3G-3I
FROM INDUSTRIAL PARK RD TO INDUSTRIAL PARK RD

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
BIKE LANE	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$2,025.18	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$0.00	

Approximate Link Length:	4470	LF
Cost of Trail:	\$9,052.53	
Additional Costs:	\$0.00	
25% Contingency:	\$2,263.13	
TOTAL COST OF LINK:	\$11,315.67	

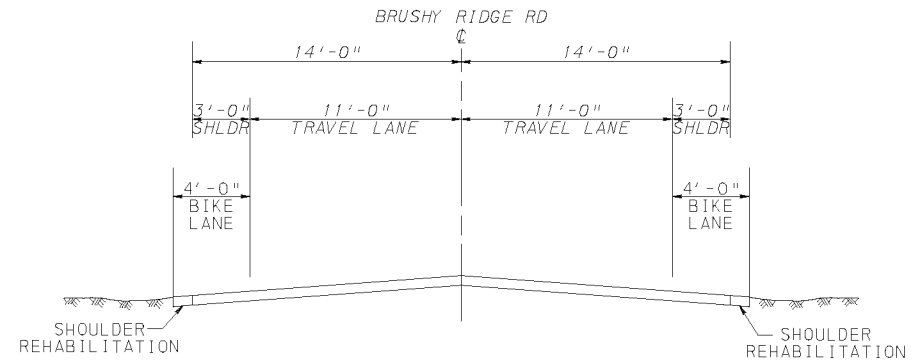
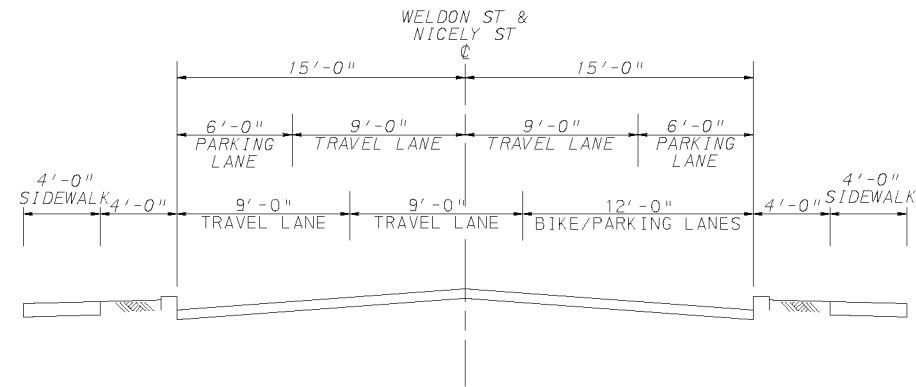
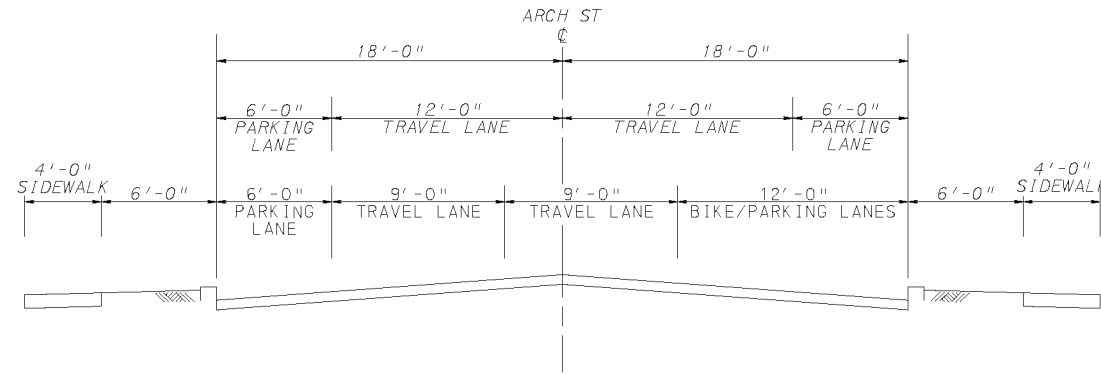
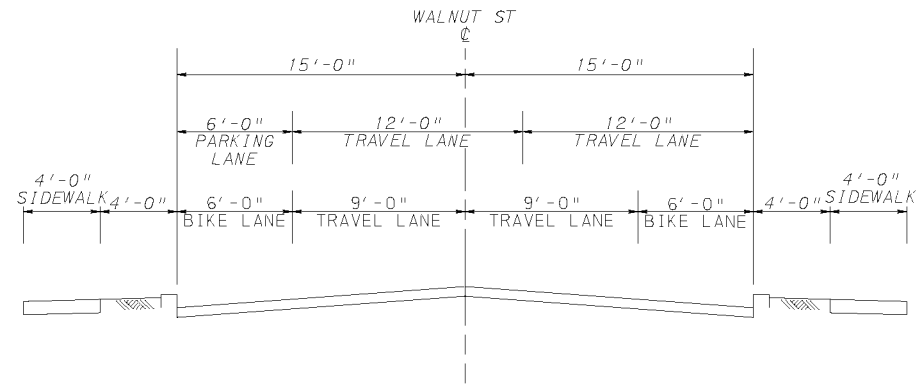
TRAIL ALONG MAIN ST AND SR 405 3I-3J

FROM INDUSTRIAL PARK RD TO SHERMAN ST

FACILITY TYPE	ITEMS	UNIT	UNIT PRICE	QUANT/ 1000'	PRICE/ 1000'	USED? (Y=1/N)
BIKE LANE	PAINT					
	W/6"	LF	\$1.50	1000	\$1,500.00	1
	BIKE LEGEND	EACH	\$200	1	\$200.00	1
	ARROW LEGEND	EACH	\$125	1	\$125.00	1
	RR CROSSING LEGEND	EACH	\$300	0	\$0.00	N
	SIGNS					
	BIKE ROUTE	SF	\$15	5	\$75.00	1
	DESTINATION	SF	\$15	1	\$15.00	1
	ARROW	SF	\$15	1.095	\$16.43	1
	SHARE THE ROAD	SF	\$15	6.25	\$93.75	1
	PAVEMENT	SY	\$28	0	\$0.00	N
	CRUSHED STONE AGG. (8" DEPTH)	SY	\$15	0	\$0.00	N
	EXCAVATION	CY	\$10	0	\$0.00	N
	FOREIGN BORROW EXCAVATION	CY	\$15	0	\$0.00	N
	ROCK SLOPE PROTECTION (R-6)	CY	\$38	0	\$0.00	N
	CLEARING AND GRUBBING	LS	\$2,000	0	\$0.00	N
	ROW	LS	\$0	0	\$0.00	N
	BARRIER	LF	\$85	0	\$0.00	N
	FENCING	LF	\$10	0	\$0.00	N
					\$2,025.18	
	STRUCTURE	LS		1	\$0.00	1
	TRAFFIC SIGNAL UPGRADE	LS		1	\$0.00	1
	RAILROAD SIGNAL UPGRADE	LS		1	\$0.00	1
	OTHER	LS		1	\$0.00	1
					\$0.00	

Approximate Link Length:	5855	LF
Cost of Trail:	\$11,857.40	
Additional Costs:	\$0.00	
25% Contingency:	\$2,964.35	
TOTAL COST OF LINK:	\$14,821.75	

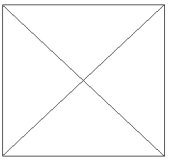
MONTOURSVILLE TO MUNCY: SEGMENT I



TYPICALS THROUGH THE MONTOURSVILLE NEIGHBORHOODS

SUSQUEHANNA RIVER TRAIL	
GENERATIONS SPORTS COMPLEX	7.9 MI
LYCOMING MALL	8.4 MI
MUNCY	13.2 MI

POTENTIAL DESTINATION SIGN AT MILL STREET



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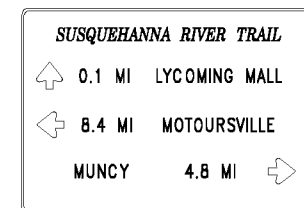
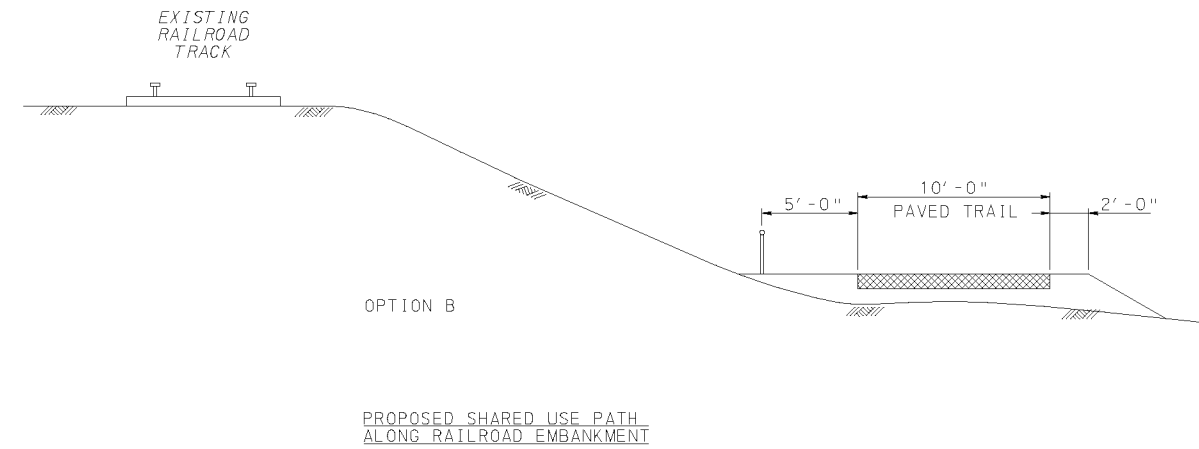
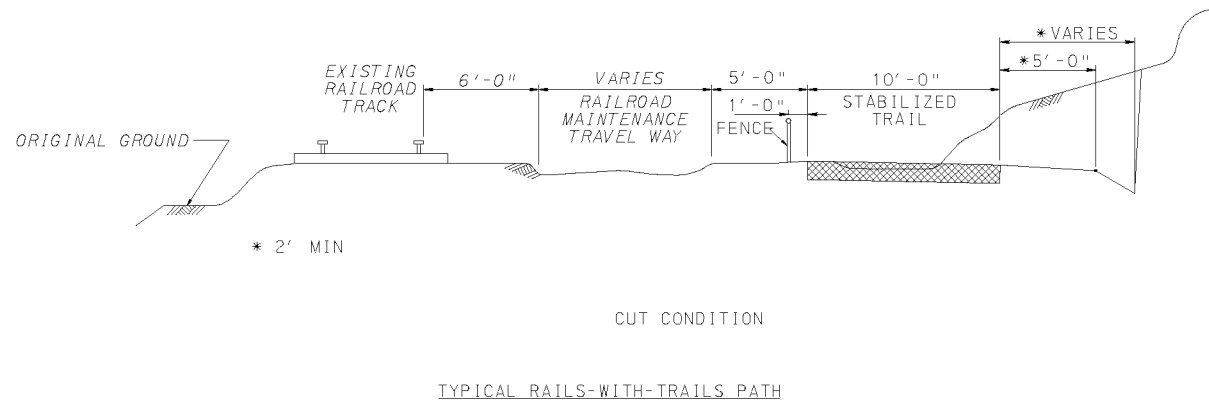
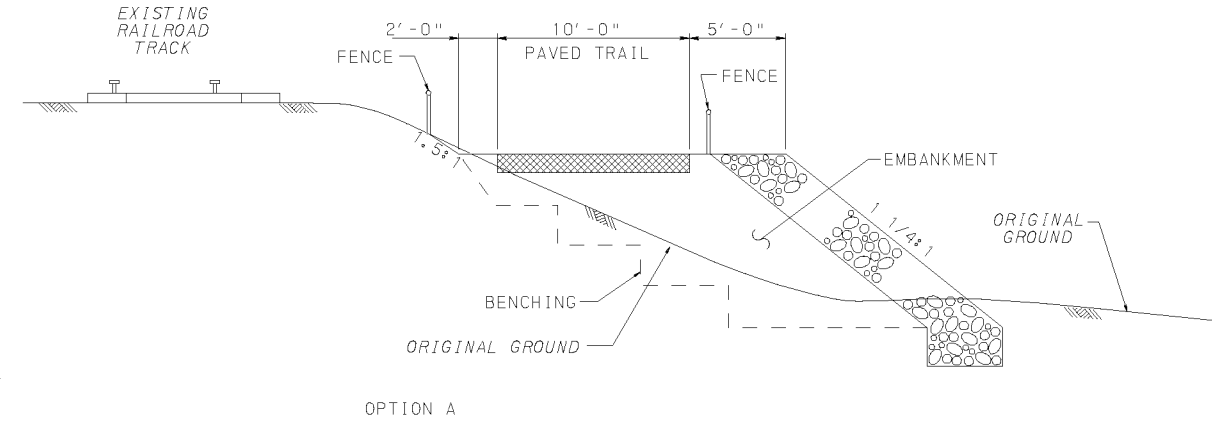
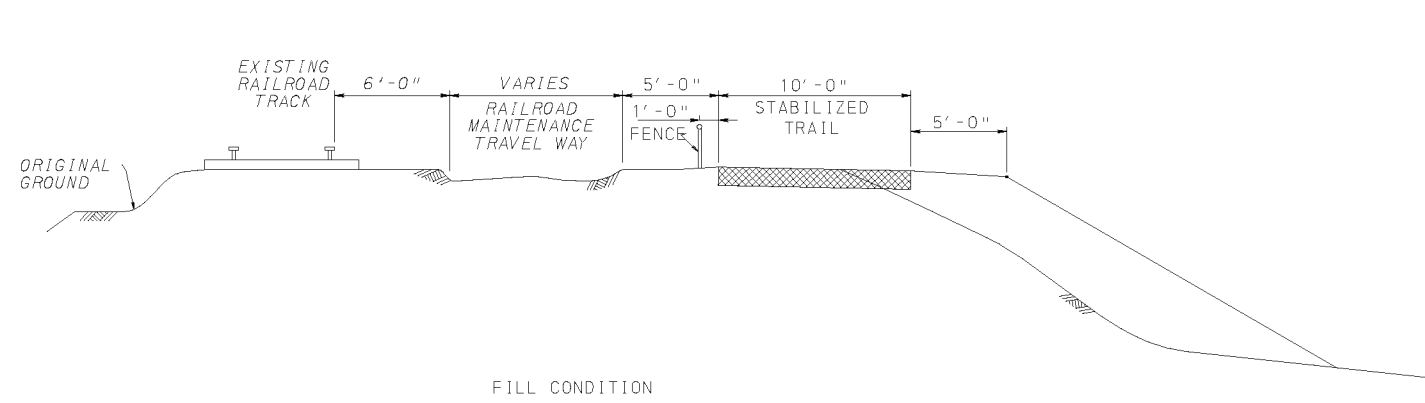
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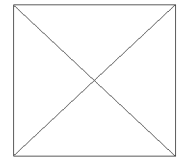


BIKEWAY FEASIBILITY STUDY
TRAIL ALTERNATE MAPPING
JERSEY SHORE TO WILLIAMSPORT
LYCOMING COUNTY, PA

MONTOURSVILLE TO MUNCY: SEGMENT II



POTENTIAL DESTINATION SIGN
AT LYCOMING MALL CONNECTION



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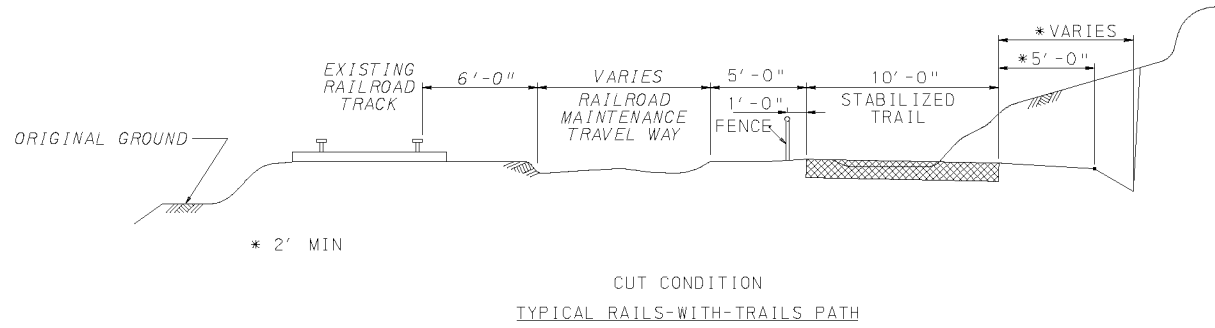
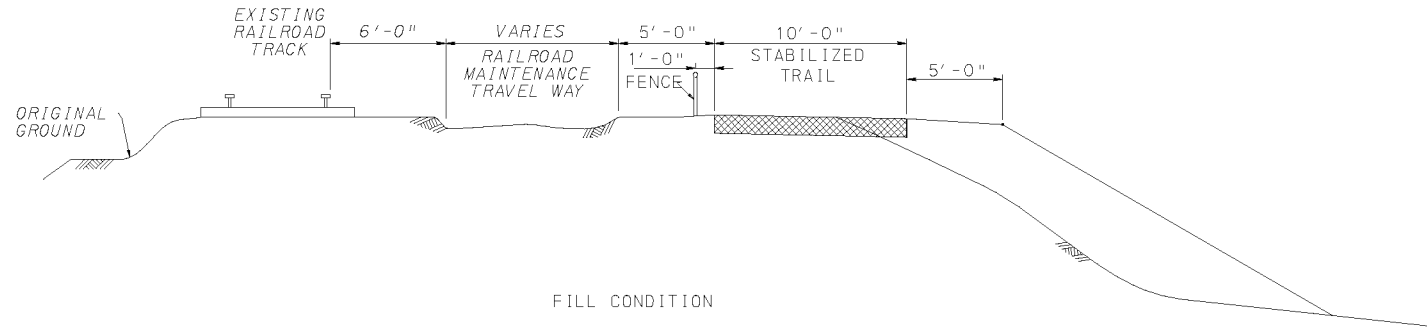
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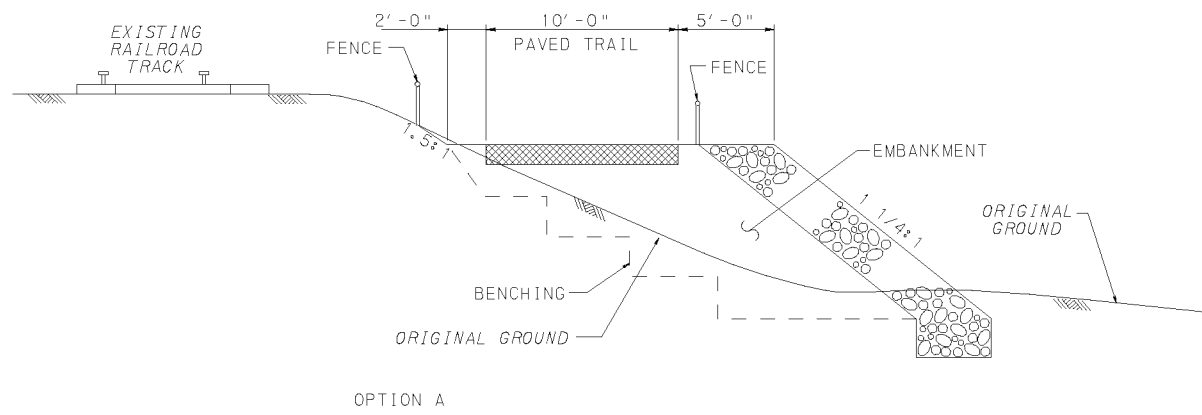
BIKEWAY FEASIBILITY STUDY

TRAIL ALTERNATE MAPPING
JERSEY SHORE TO WILLIAMSPORT
LYCOMING COUNTY, PA

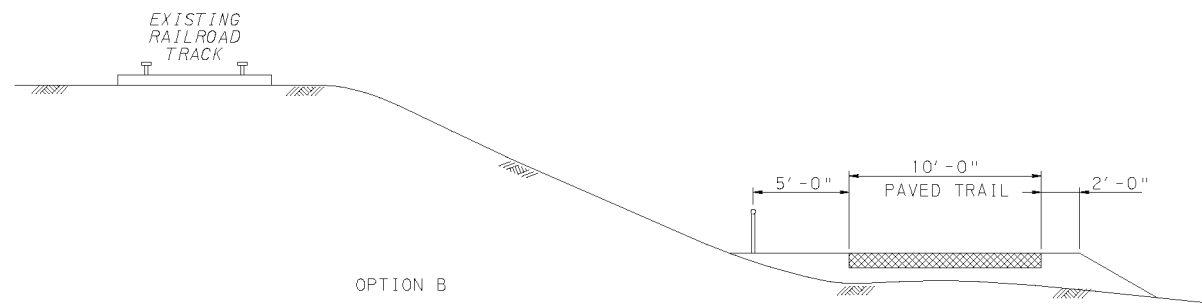
MONTOURSVILLE TO MUNCY: SEGMENT III



TYPICAL RAILS-WITH-TRAILS PATH

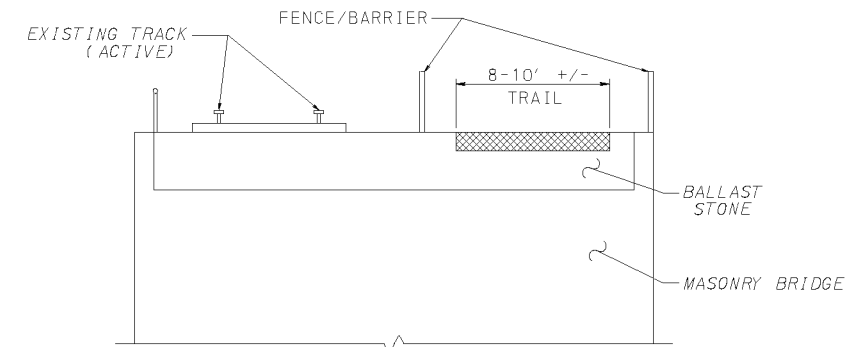


OPTION A

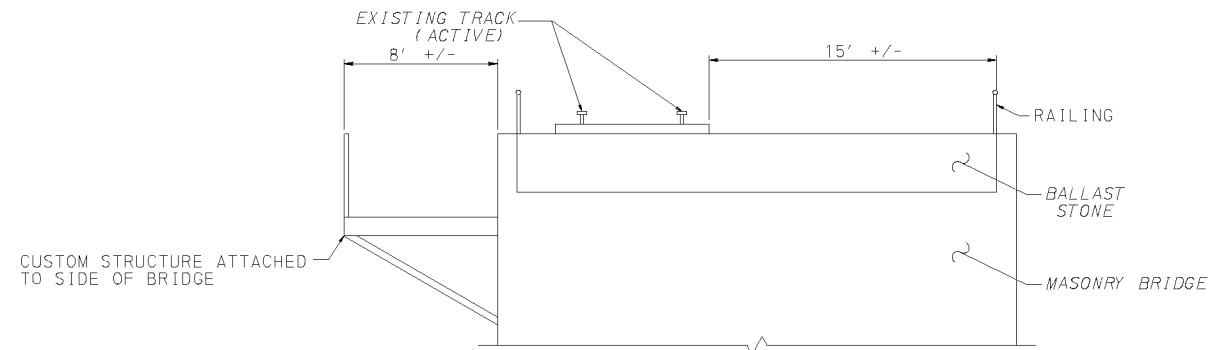


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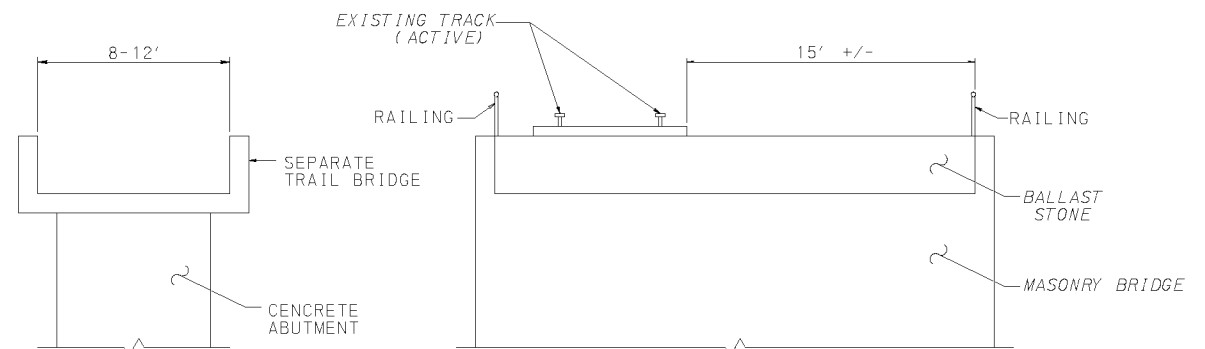
PROPOSED SHARED USE PATH
ALONG RAILROAD EMBANKMENT



OPTION A

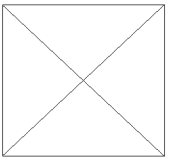


OPTION B



OPTION C

PROPOSED RAILS WITH TRAILS FOR CREEK CROSSINGS



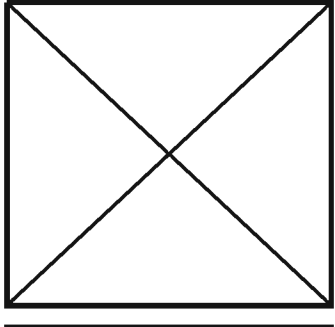
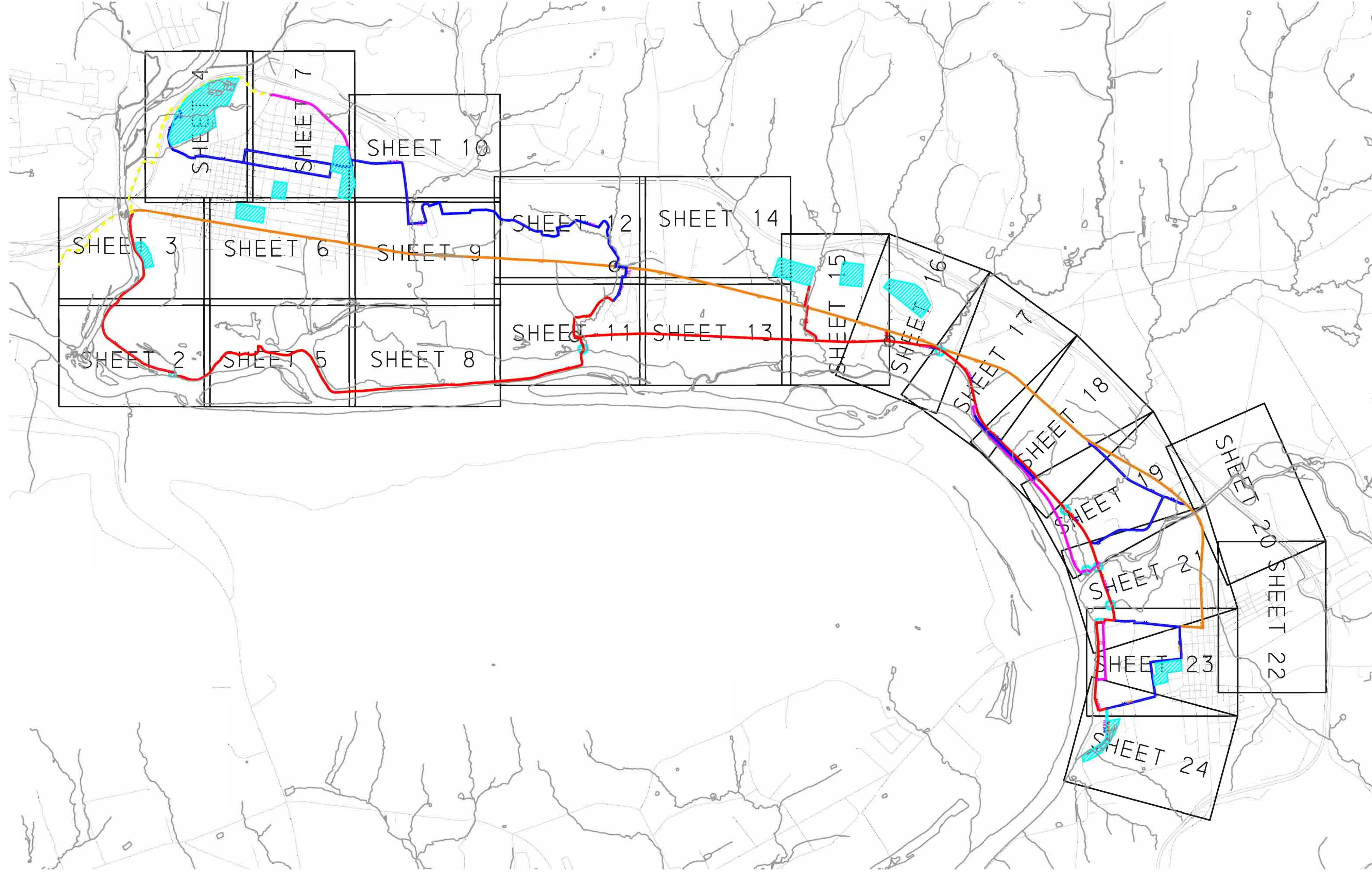
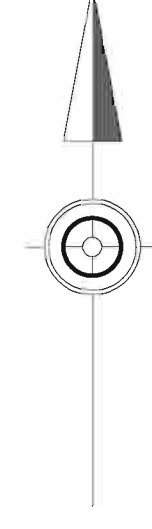
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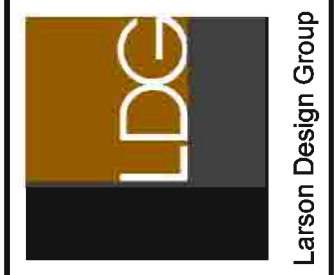
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1/6/2009 L:\Highway\5039-106 Bikeway Study - PART 2\423 - Schematic Trail Design and Details\typical.s.dgn

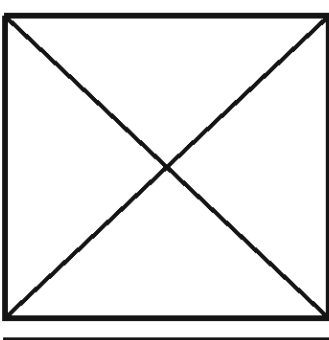


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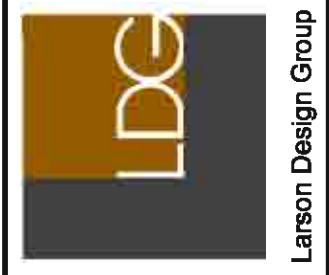
SEE SHEET 3

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SEE SHEET 5

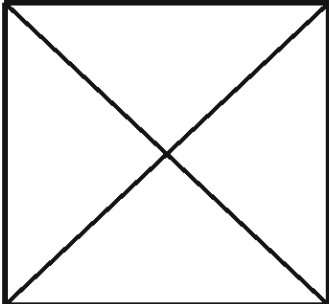
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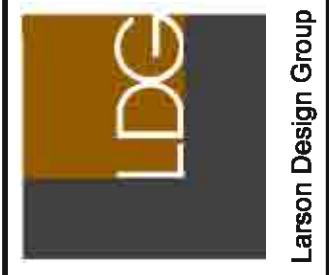
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XXXX-XXX



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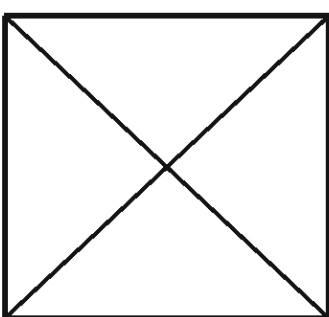


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SEE SHEET 6 SEE SHEET 3

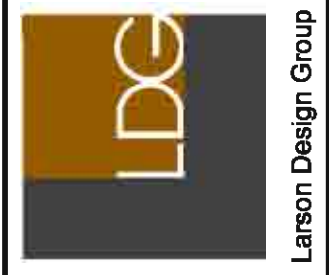
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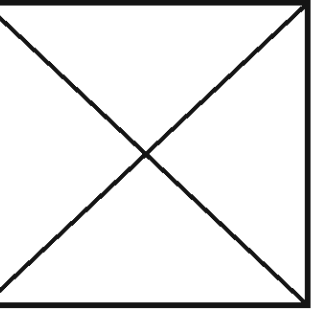


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SEE SHEET 2

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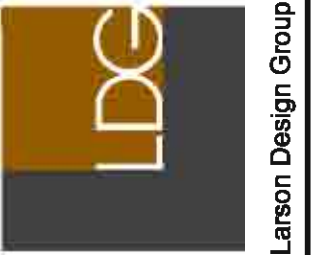
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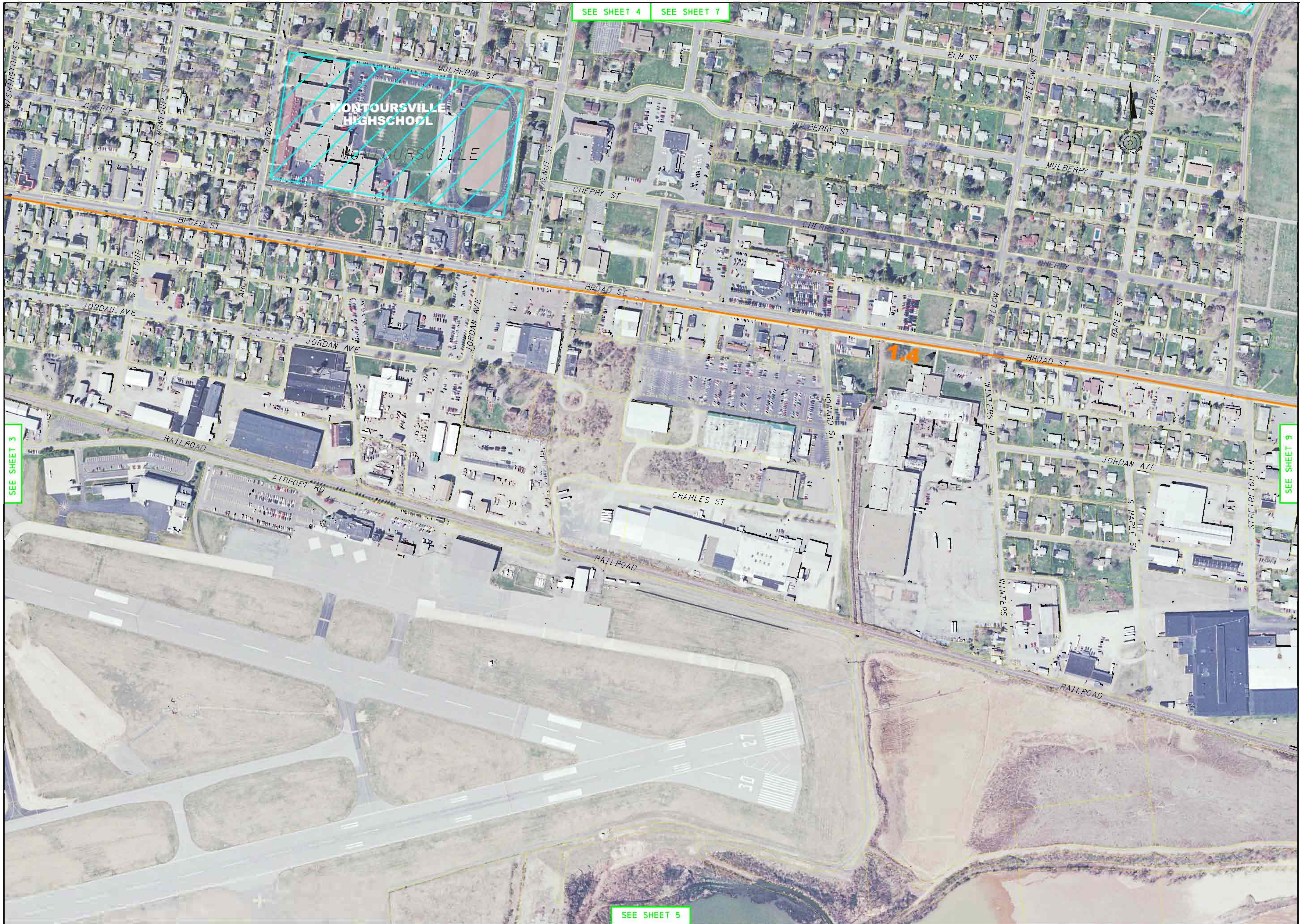
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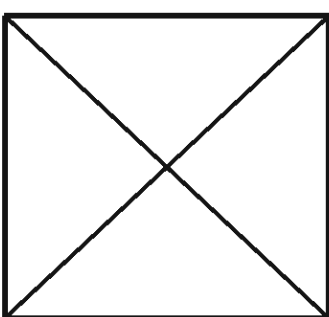


SEE SHEET 4 SEE SHEET 7

SEE SHEET 3

SEE SHEET 9

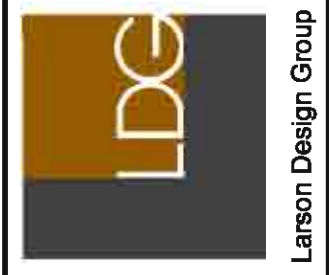
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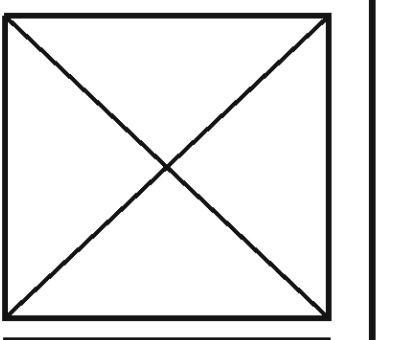
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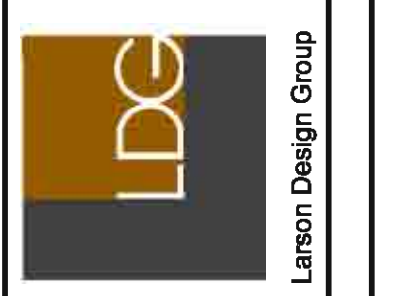
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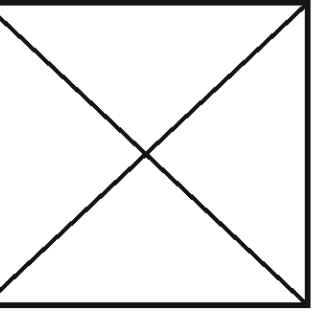
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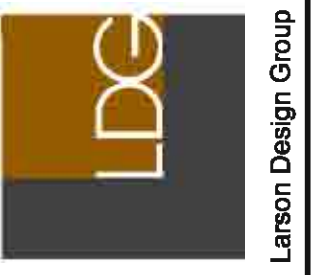
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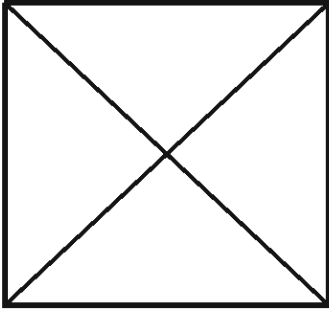
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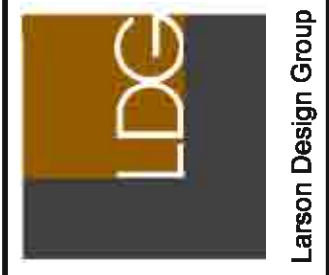
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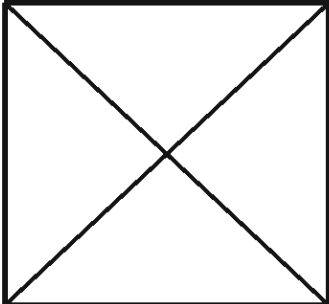
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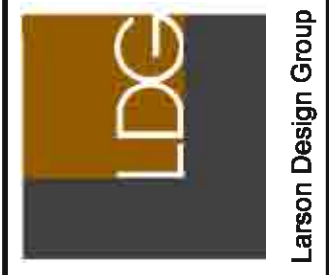
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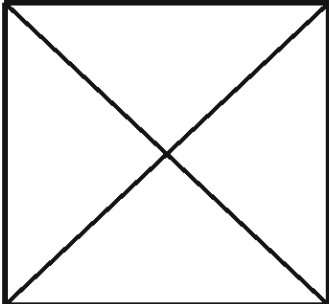
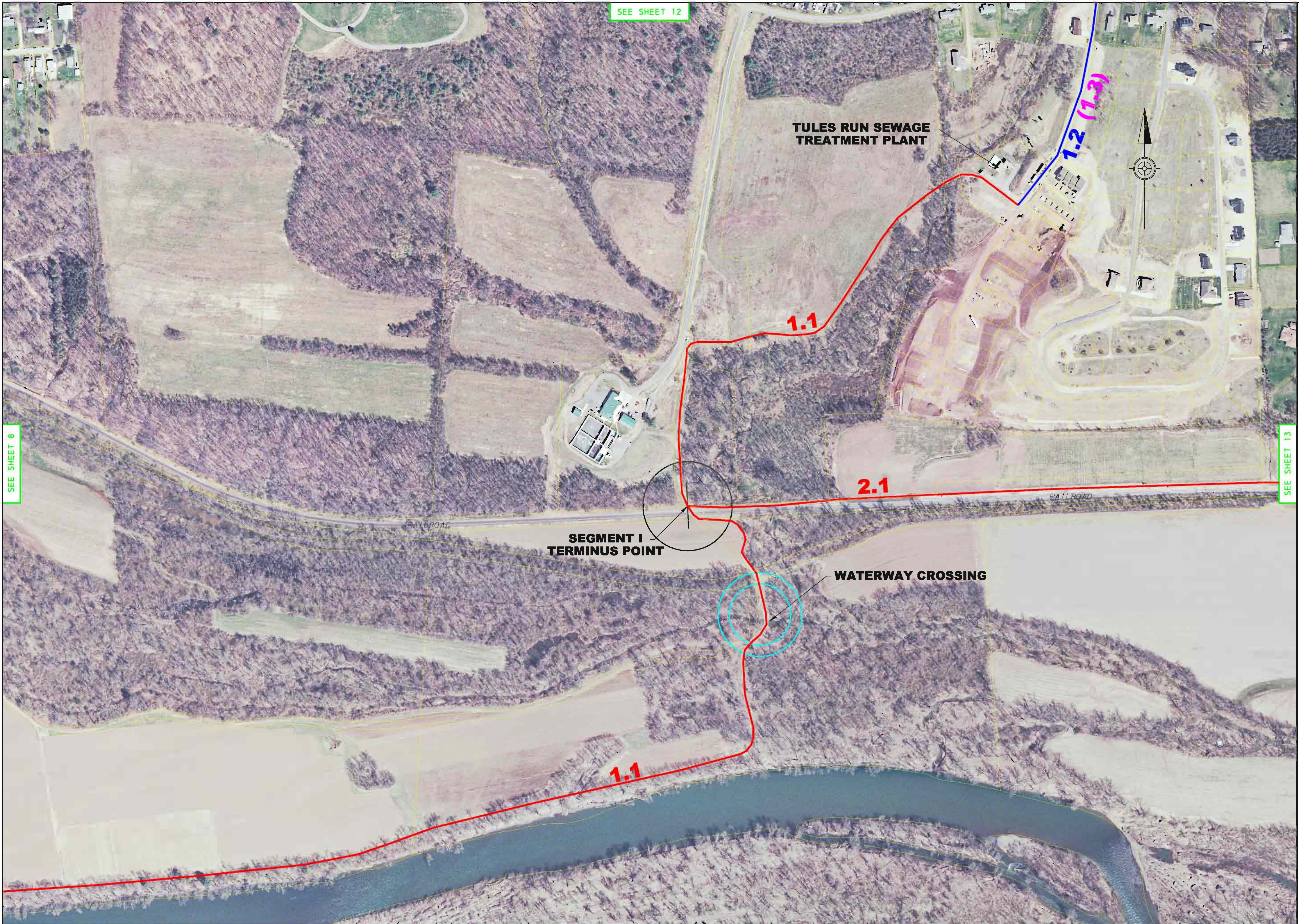
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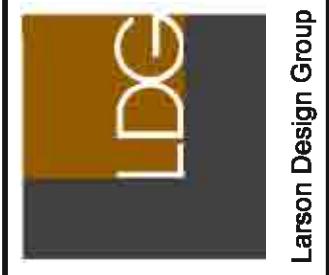
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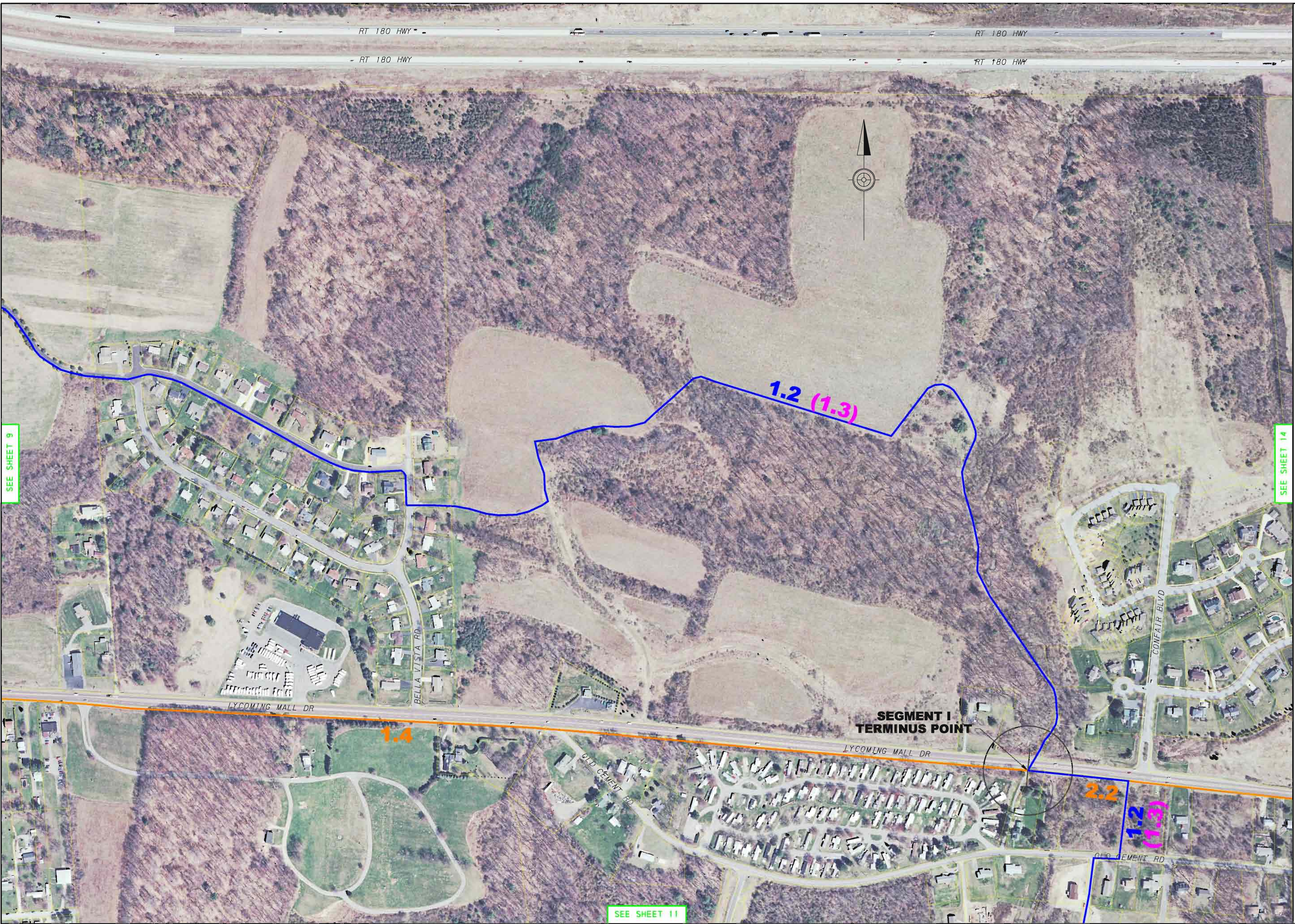
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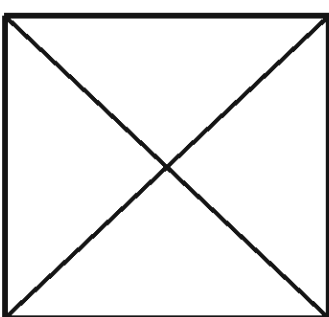
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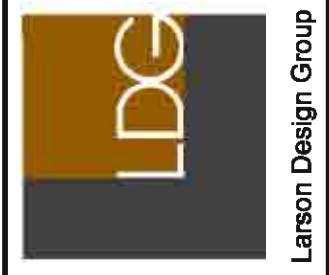
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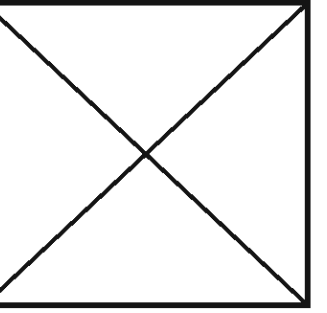
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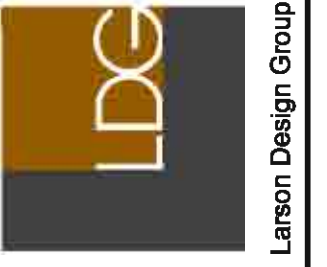
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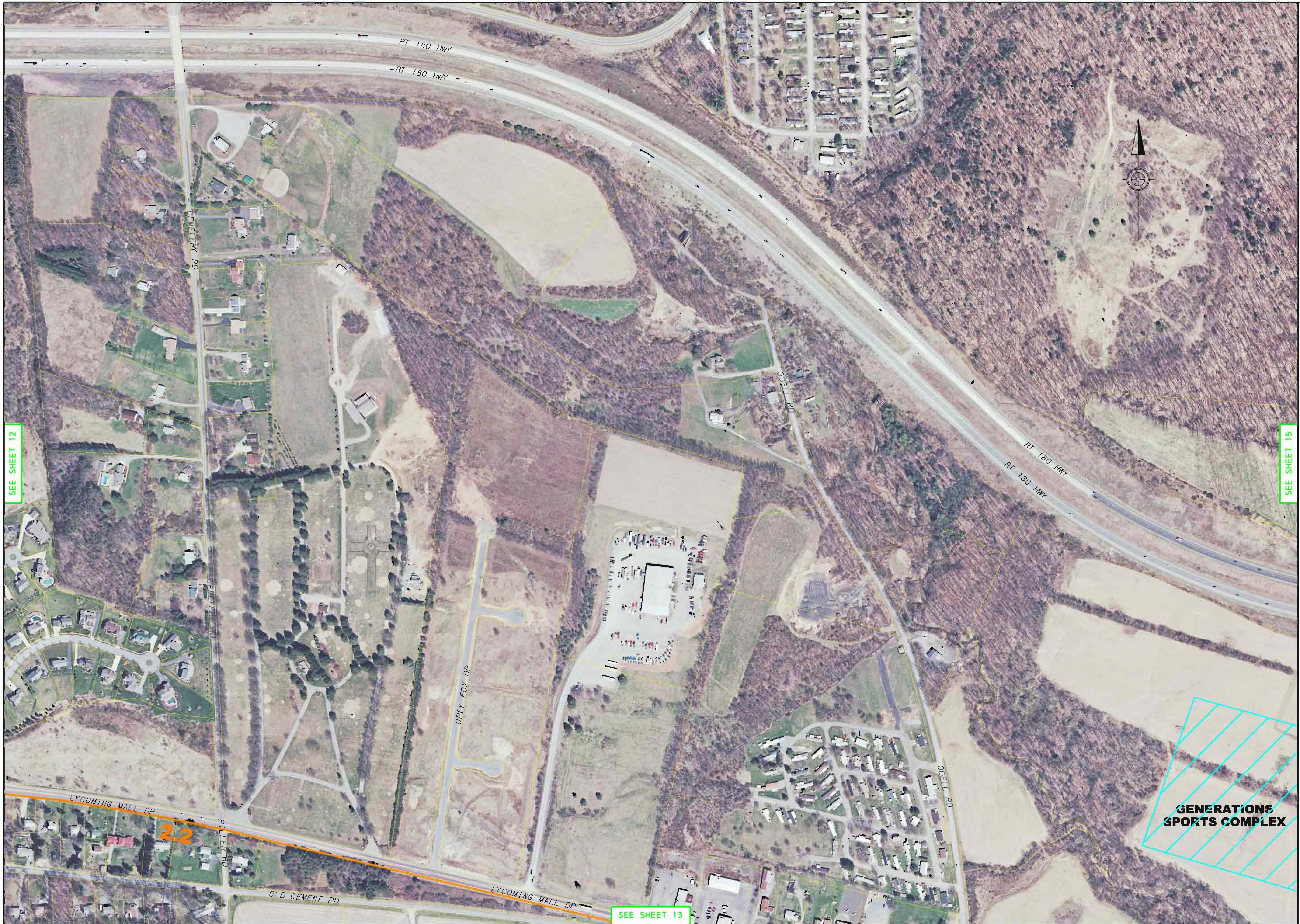
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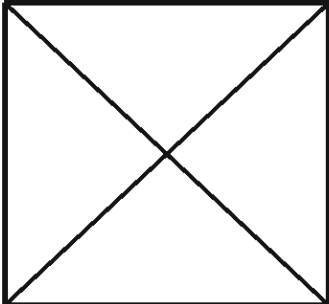
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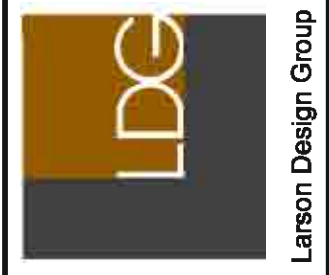
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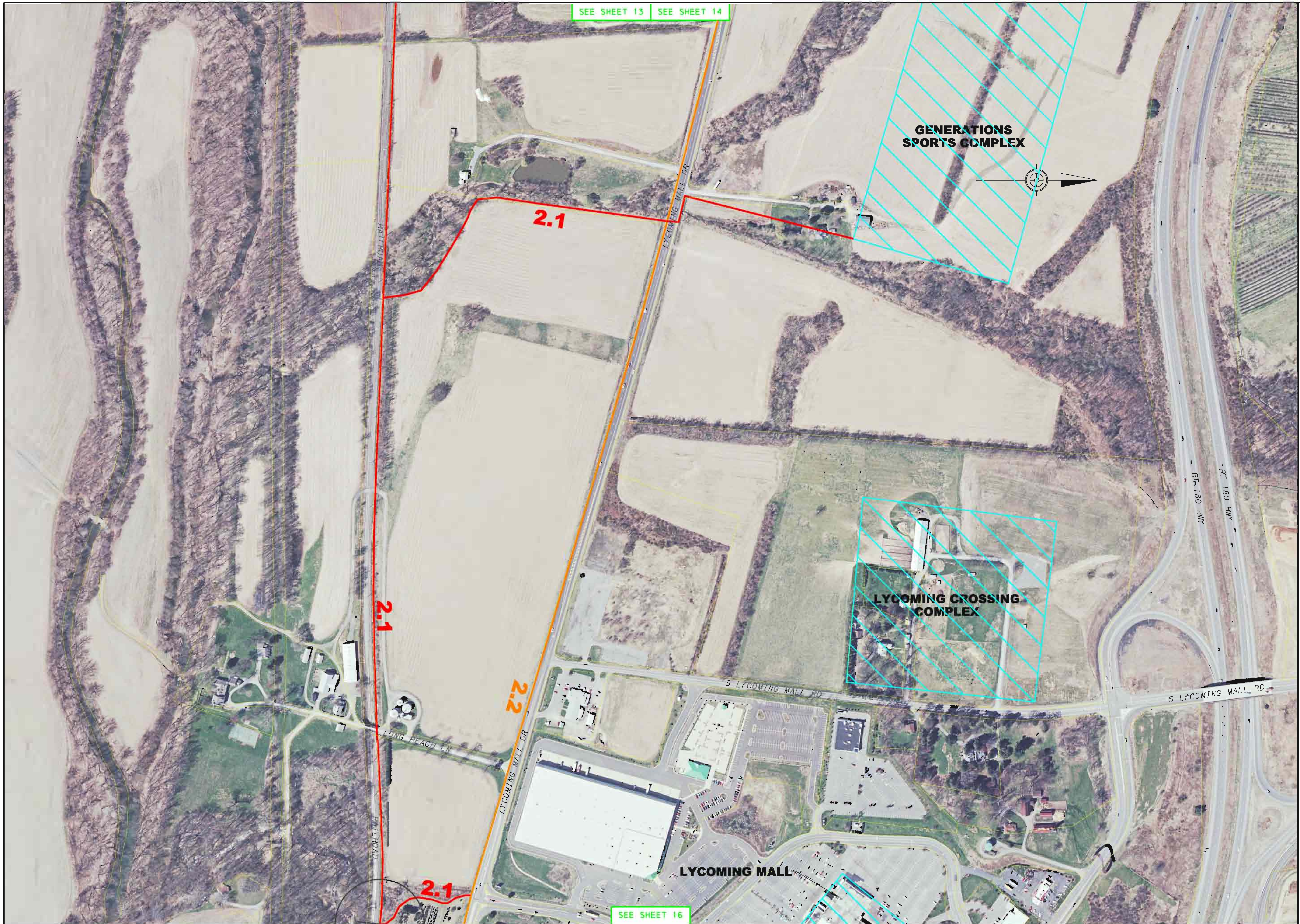
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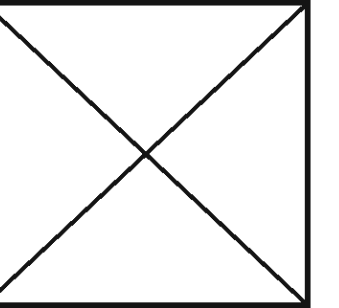
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**LYCOMING CROSSING
COMPLEX**

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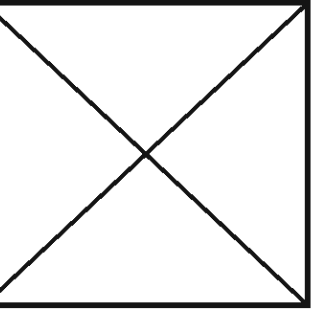
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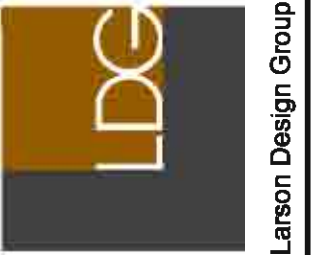
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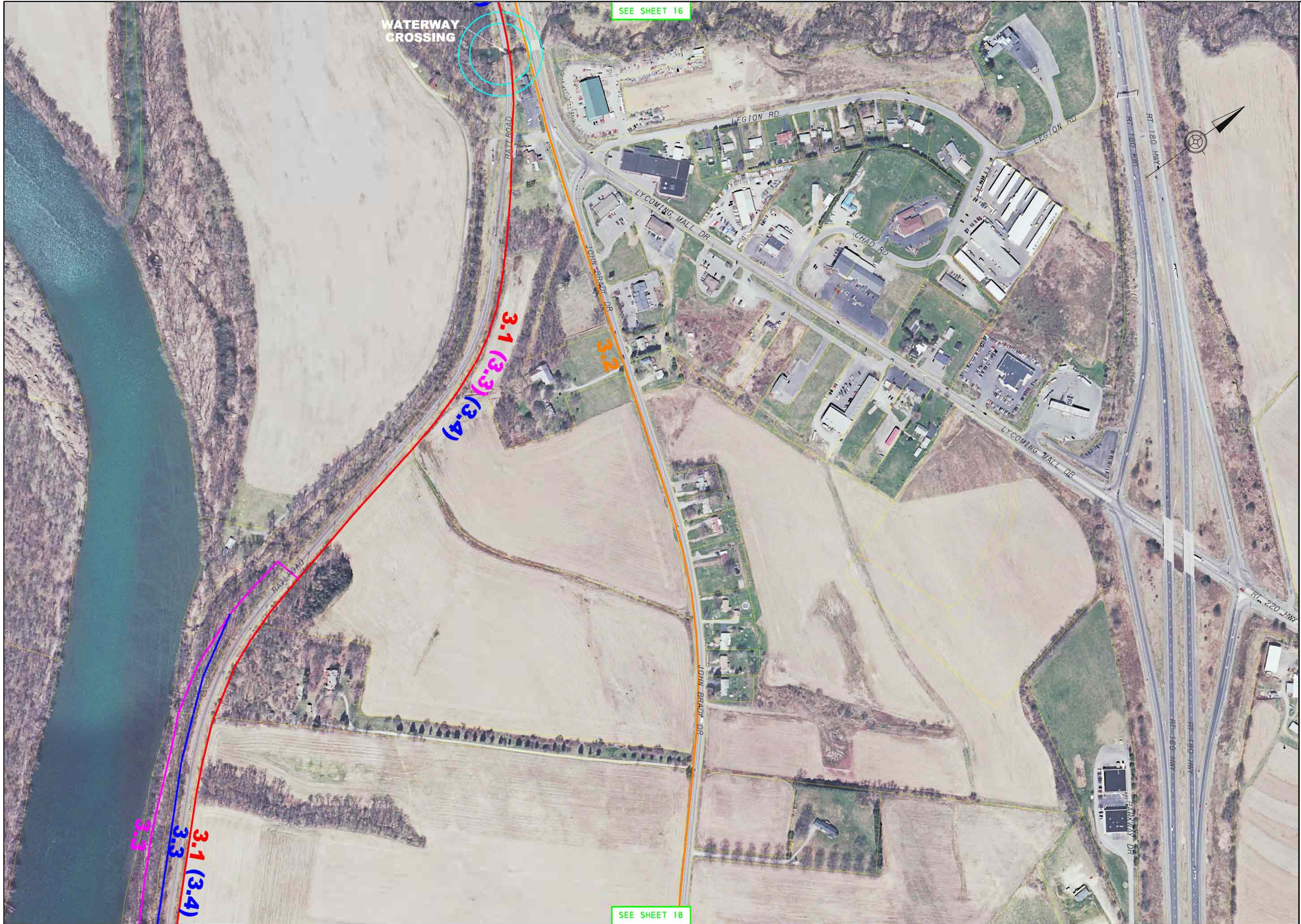
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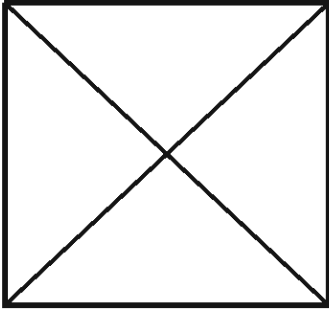


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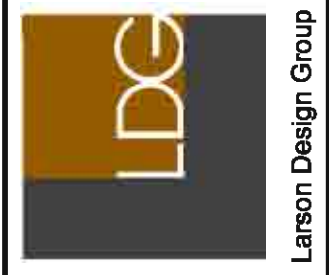
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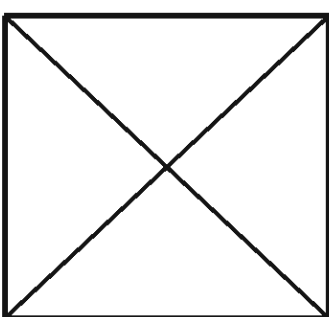


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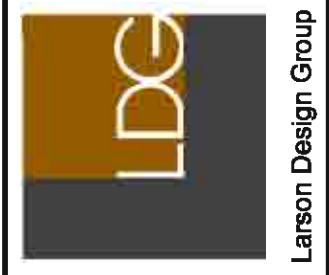
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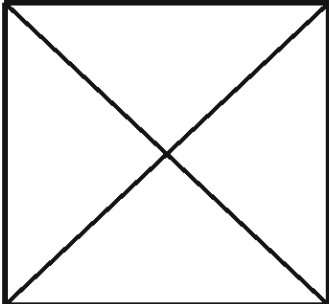
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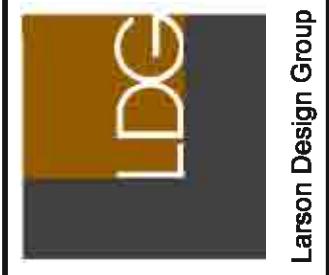
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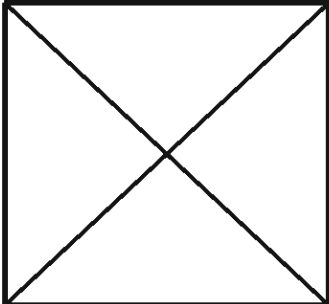
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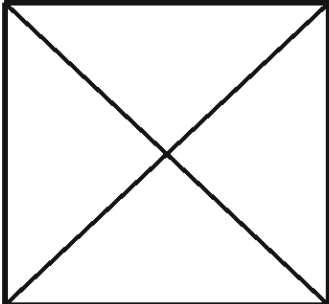
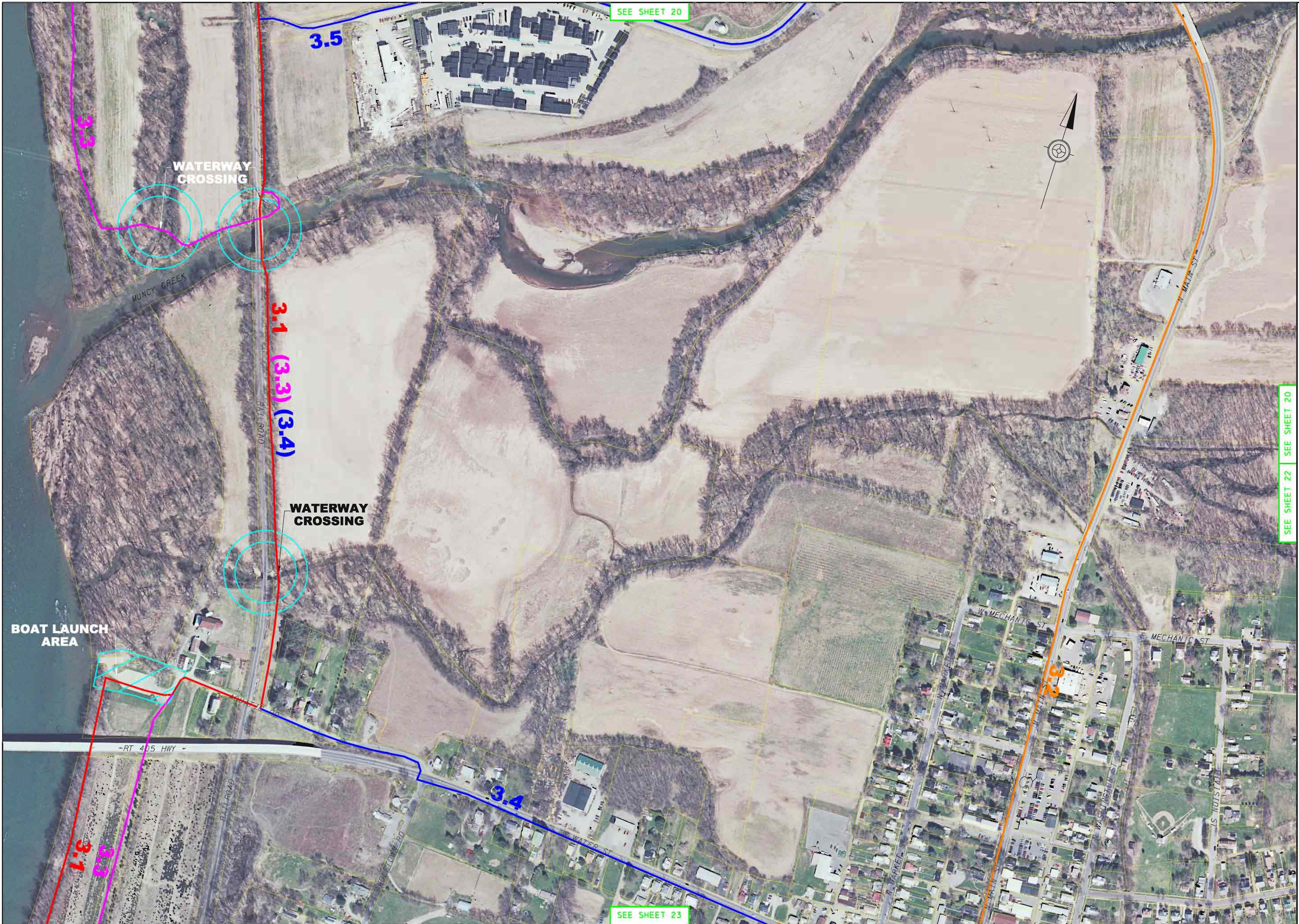
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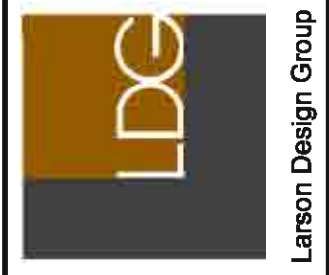
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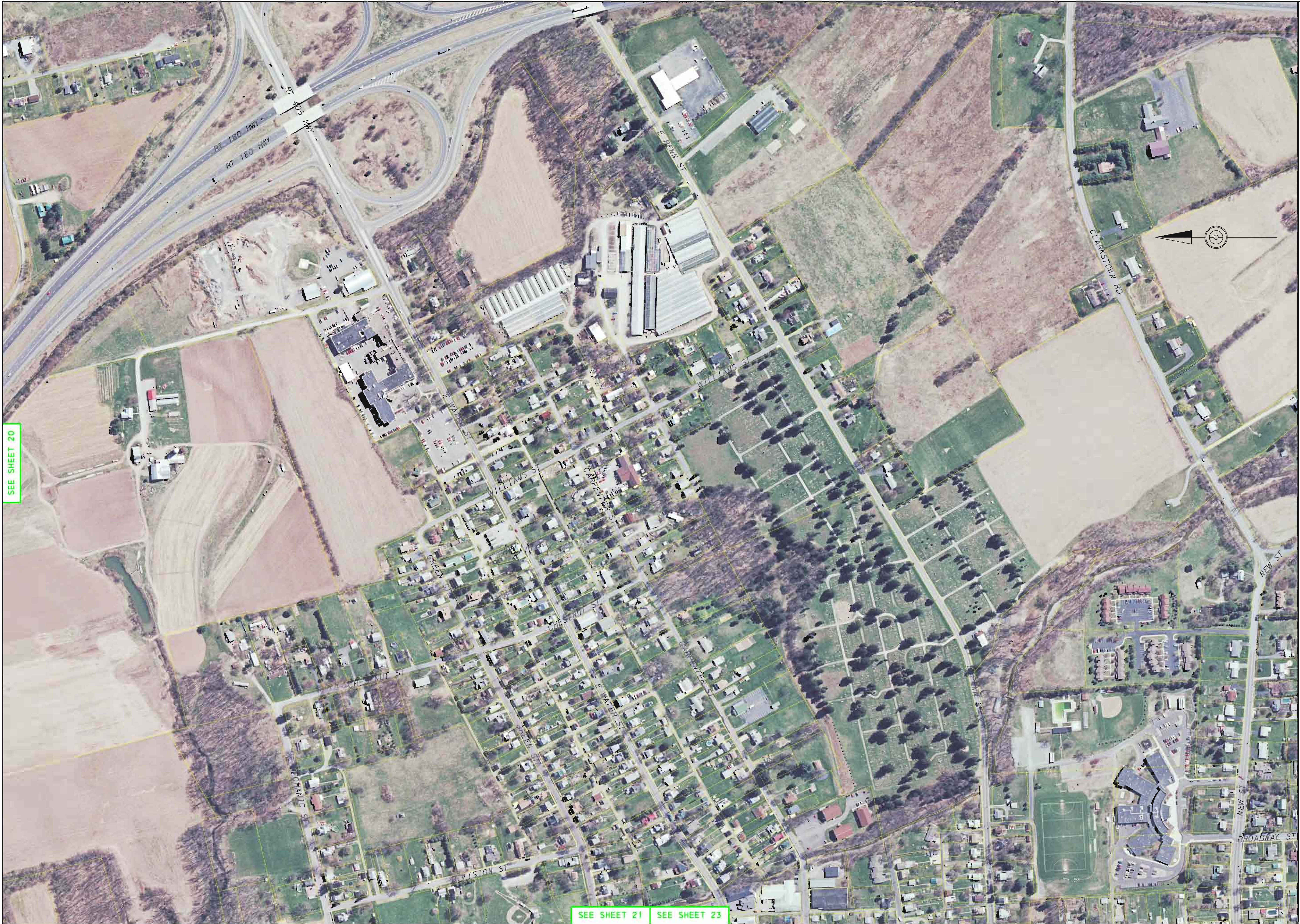
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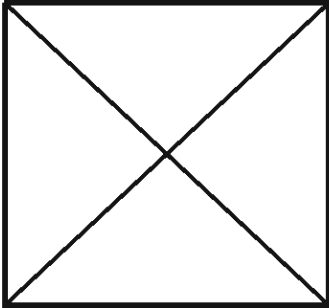
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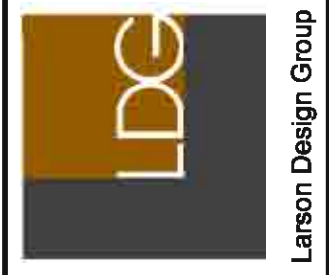
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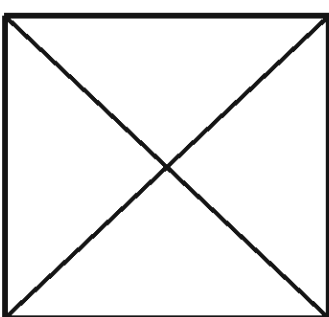
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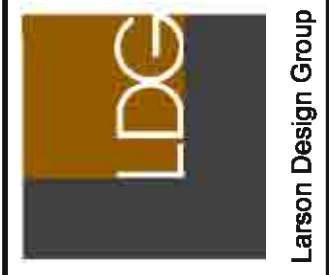
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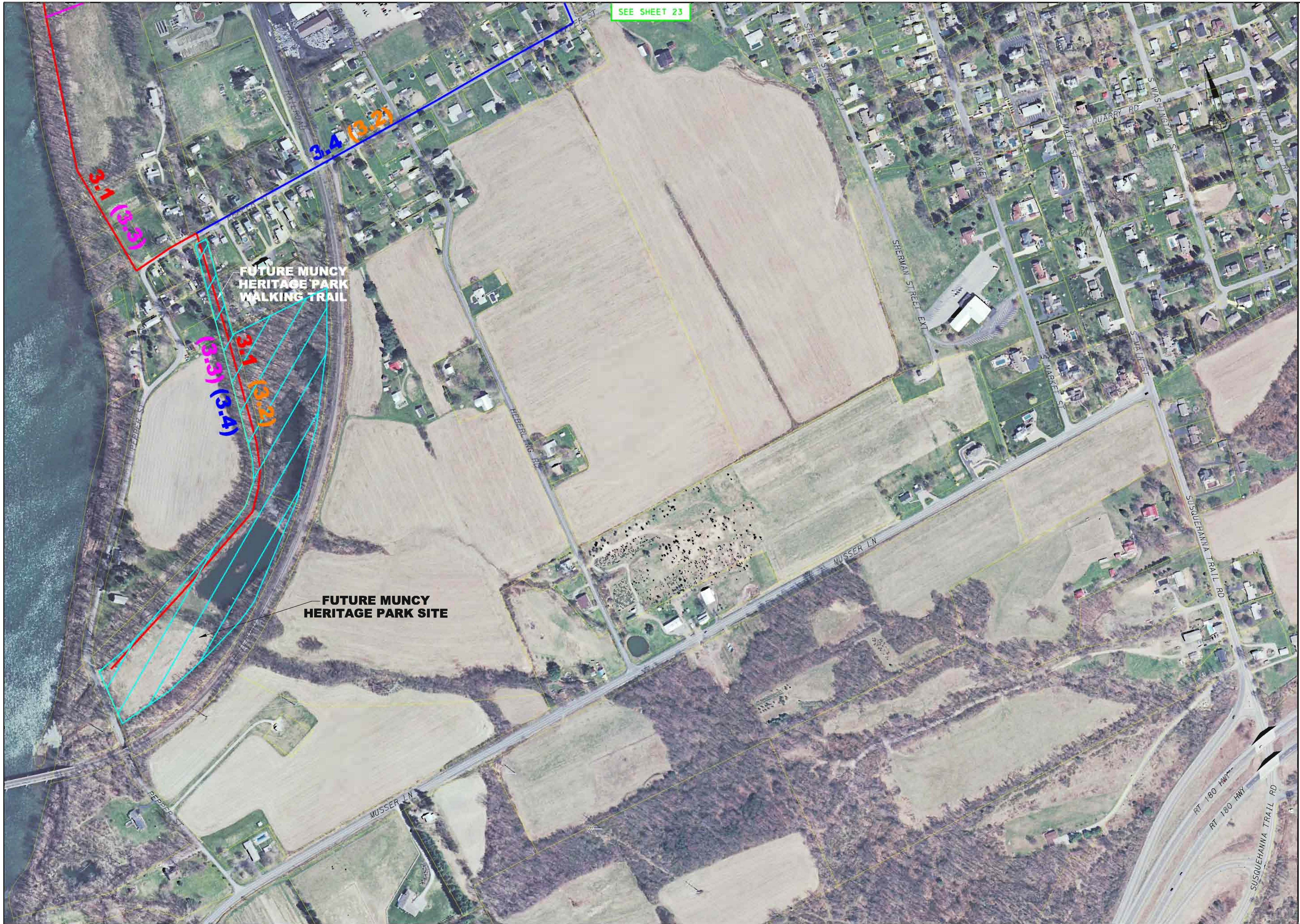
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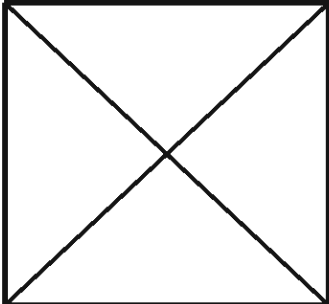


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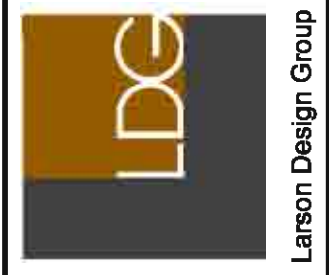
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