City of Warrenville
Bikeway Implementation Plan – Phase II

November 15, 2010

Acknowledgements

Warrenville City Council

David L. Brummel, Mayor
Fred Bevier, Alderman- Ward 1
Stuart Aschauer, Alderman-Ward 1
Robert Wilson, Alderman-Ward 2
Bill Weidner, Alderman-Ward 2
Dan Leonard, Alderman-Ward 3
Matthew Wiesbrock, Alderman-Ward 3
Clare Barry, Alderman-Ward 4
David Kratz, Alderman-Ward 4

Warrenville Bicyclist and Pedestrian Advisory Commission

Alan Gard, Chairman
Scott Allen, Commissioner
Dan Lambert, Commissioner
Tom Jones, Commissioner
Jerry Sugrue, Commissioner
Bill Weidner, Council Liaison

City Staff

Jennifer McMahon
Assistant City Administrator

Consultant

Engineering Enterprises, Inc.

Table of Contents

Table of Contents (Cont'd)

EXECUTIVE SUMMARY

On December 1, 2008, the City of Warrenville adopted the Bikeway Implementation Plan as prepared by the Warrenville Bicyclists and Pedestrian Advisory Commission, with support from both the City Staff and Elected Officials. The main purpose of this report was to identify the key improvements necessary to provide more efficient and logical means of pedestrian and bicycle travel within the City. These improvements were collectively decided upon based on the value added to the existing City bikeway system, but also the regional significance and connectivity that they would provide.

In the summer of 2009, the City began the Bikeway Implementation Plan – Phase II which is presented in this document. The purpose of this phase of the bikeway implementation plan is to evaluate each project and determine the feasibility and estimates of cost associated with those projects. Additionally, where appropriate, potential hurdles and obstacles will be identified that may impact the implementation of the project.

The following report is prepared in a format similar to that of the Bikeway Implementation Plan, with the City broken down into the same geographical regions. Any project identified in the original report has been studied and the associated recommendations, detailed cost estimates and exhibits have been developed and included. Where appropriate, additional options for implementation have been identified and presented as “alternates” that could ultimately be studied in greater depth prior to moving into final design.

Ultimately, this report, in conjunction with the Bikeway Implementation Plan, will aid the City when moving forward in the implementation of the suggested Bikeway Plan. Utilizing the cost estimates and exhibits will facilitate the necessary preliminary engineering associated with any individual project and will allow the City to budget accordingly and submit for additional funding opportunities.

1. INTRODUCTION

1.1 2007 Bikeway Implementation Plan

The previously prepared Plan focused primarily on creating an inventory of the existing amenities within the City and identifying suitable locations for new bicycle and pedestrian facilities. The improvements were selected on the basis that they would create opportunities for more efficient movement of non-vehicular traffic, which would in turn promote increased bicycle use. The projected benefits of promoting bicycle use included a sense of community, reduced congestion and pollution, support of regional tourism, support of local businesses, access to schools and recreational facilities, and providing logical routes to encourage use. In determining the necessary improvements, various routes were identified based on logical termini and connectivity as well as the overall feasibility of the project. Most of the improvements were generally categorized as follows:

Dedicated On-Street Bicycle Lanes
Shared Lanes
Sidepaths
Bridges
Directional Signage and Striping
Intersection Improvements
Ancillary Amenities

The Plan also identified a hierarchy of project implementation and phasing; each project was ranked low, medium or high priority. Input was also gathered from the public and was a crucial element to ensure that all of the community had an opportunity to comment on the proposed improvements and provide suggestions for improvement.

Another goal of the Bikeway Implementation Plan was to create an inventory of the existing bicycle facilities. The development of a detailed list and a map of the local and regional trail systems, identified gaps in the system, and created a document that inventoried existing bikeway opportunities.

The document also suggested updates for the City Code, proposed potential locations for amenities such as parking, water, sanitary facilities, developing a maintenance plan and the need to coordinate with various regional groups and organizations. The need to partner and cooperate with other governing agencies was also identified. Although limited communication with other jurisdictional entities was made during the development of this stage of the report, further detail was developed that will facilitate the necessary contact with each of those entities moving forward.

1.2 Suggested Improvement Summary

The previous Plan identified regions within the City that had their own specific characteristics and needs. The improvements in those regions identified and the connectivity requirements from one region to another were addressed. Those regions are as follows:

1 - Cantera Area
2 - Galusha Area
3 - Old Town Area
4 - Butterfield-Batavia-IL59 Triangle
5 - Summerlakes Area
6 - Maple Hill Area
7 – Illinois Route 59 Recommendations
8 - Mack Road

Specific improvements in those regions were considered and an implementation plan for each region was developed. The implementation plan included suggested routes and exhibits that detailed the scope of the improvements. Since the development of the previous Plan and the beginning of the study period, the City has made significant efforts towards the implementation of the suggested improvements, having accomplished several of the improvements in various different areas. Each project that has been implemented will be discussed in the applicable sections later in this document. They will be identified as "existing" facilities on the overall map.

The projects for each region are summarized below and are grouped based on the regions listed above. Any modifications will be described in future sections, additionally various projects may have been combined if they appeared cohesive or were small portions of what could be logically combined into a larger project with termini that would facilitate obtaining funding. Below is the summary of the projects addressed in this report:

1 – Cantera Area:
1-1 – Warrenville Road Sidepath Extension – Virginia Road to Ferry Road - Completed
1-2 – Warrenville Road Shoulder/Sidepath Connection – East of Ferry Road
1-3 – Diehl Road – Sidepath Extension to West Branch Regional Trail
1-4 – Diehl Road & Winfield Road Intersection – Signal Timing and Striping

2 – Galusha Area:
2-1 – Galusha Road Sidepath – Winfield Road to Herrick Road
2-2 – Winfield Road Sidepath Widening – Warrenville Road to Galusha Road
2-3 – Herrick Road Bike Lanes – Galusha Road to Herrick Lake Forest Preserve

3 – Old Town Area:
3-1 – Ferry Road Sidepath Widening – Raymond Drive to West Branch of DuPage River
3-2 – Connections to New Butterfield Road Sidepath
3-3 – River Clean-up Trails
3-4 – Batavia Road at Butterfield Road Intersection
3-5 – Rockwell Street at Butterfield Road Intersection
3-6 – Pedestrian Bridge at the Warrenville History Museum
3-7 – Warrenville Road Sidepath (Old Town)
3-8 – Batavia Road Bike Lanes – Butterfield Road to Warrenville Road
3-9 – River Road Sidepath

4 – Butterfield – Batavia – IL59 Triangle:
4-1 – Timber Drive Shared Roadway – Meadow Drive to Batavia Road
4-2 – Meadow Drive Sidepath – Route 59 to Timber Drive

4-3 – Ferry Creek Bridge
4-4 – Butterfield Road Connection at Twin Pines

5 – Summerlakes Area:
5-1 – Mack Road Bike Lanes – Bristol to Route 59
5-2 – Continental Road Bike Lanes – Mack Road to Batavia Road
5-3 – Continental Road Bike Lanes – Batavia Road to Route 59
5-4 – Summerlakes Park Trails Connection
5-5 – Talbot Avenue Bike Lanes
5-6 – Butterfield Frontage Road Bike Lanes
5-7 – Barkley and Route 56 Intersection Improvements
5-8 – Sidepath at SW Corner of Route 56 and Route 59

6 – Maple Hill Area:
6-1 – Route 59 Sidepath – Mack Road to Willow Lane

7 – Illinois Route 59:
7-1 – Route 59 Intersection Improvements

8 – Mack Road:
8-1 – Mack Road East of Route 59 Bike Lanes

Of the projects referenced above, all but 3-9 –River Road were studied in the previous Plan. This study area was added as requested by the Advisory Commission due to the potential need to provide a logical connection to Bower Elementary. No additional routes were studied; however modifications or alternatives to each project above were considered when conducting field studies. Further, various improvements have been implemented and were not studied further.

The following sections contain a combination of the following data, based on the further analysis of each project:

Narrative – Description, Suggestions, Potential Obstacles
Alternatives (when appropriate or available)
Exhibits
Cost Estimates

2. PROPOSED BIKEWAY IMPROVEMENTS

2.1 Cantera Area

Per the findings of the Bikeway Implementation Study, adequate facilities are located on major roadways in the Cantera Area, however connectivity to other portions of the City and adjacent communities are somewhat circuitous and additional routes were identified for this purpose, as further discussed below. The majority of the existing sidepaths and sidewalks located in this area are under County jurisdiction; therefore the maintenance of these paths is not the responsibility of the City. Additionally, in many cases the City will need to work with the County for new path construction and other work within the County R.O.W.

2.1.1 Warrenville Road Sidepath Extension – Virginia Road to Ferry Road

Since the development of the initial Plan, this project has been implemented due to development in this region. This new 10-foot sidepath connects the existing sidepath at Virginia Road, to the termini of the Ferry Road sidepath at the intersection of Ferry Road and Warrenville Road. See Exhibit 1-1A for the limits of the recently completed construction.

2.1.2 Warrenville Road Shoulders/Sidepath Connection – East of Ferry Road

With the extension of the sidepath referenced in section 2.1.1, two major sidepaths (Ferry Road and Warrenville Road) both end at the southwest quadrant of the intersection. While the intersection is equipped to permit various pedestrian and bicycle crossings, the intended route for bicyclists heading east is not marked and may cause confusion. The appropriate solution would be to add sidepath extensions on the north and south side of Warrenville Road east of the intersection. These sidepaths should be terminated at the existing wide shoulders on Warrenville Road, with appropriate "Share the Road" signage to alert drivers to the presence of bicyclists on the roadway. See Exhibit 1-2A for the limits of construction and Exhibit 1-2B for the proposed cross section and 1-2C for the estimated cost associated with this improvement. Easement acquisition will be necessary on the south side of the roadway as depicted on Exhibits 1-2B and 1-2C. Coordination with DuPage County will be required to implement this improvement, as both roadways are under the County's jurisdiction at this intersection.

2.1.3 Diehl Road – Sidepath Extension to West Branch Regional Trail

A sidepath exists on the south side of Diehl Road, heading west to the West Branch of the DuPage River. Currently, this sidepath terminates at the existing bridge over Diehl Road and a segment of the sidepath heads southwest to the east bank of the river. No means are provided for crossing the river to access the West Branch Regional Trail, therefore a crossing is recommended. In the initial study, the concept of widening the crossing and adding an attached structure to the bridge was considered; while this option should continue to be explored during a Phase I Study, an alternative would be to construct a separate pedestrian bridge to connect the east and west banks. The benefits and potential conflicts of each alternative should be explored during Phase I Engineering. For the purposes of this report, a separate structure was evaluated and was the basis for the cost estimate included in the appendix. See Exhibit 1-3-A for the limits of construction and Exhibit 1-3-C for the estimated cost associated with this improvement.

The anticipated regional benefits and potentially high improvement costs associated with this suggested river crossing make this project an excellent candidate for applications towards receiving federal funding. Exhibit 1-3-B also shows an example of typical cross section associated with the proposed pedestrian crossing. It should be noted, that coordination with the Forest Preserve District of DuPage County and DuPage County will be required to ensure a cooperative effort in moving this project forward. The Phase I Study for this project is a key element in determining the exact environmental constraints involved in the construction of the structure and the identification of potential solutions.

2.1.4 Diehl Road and Winfield Road Intersection

As identified in the preliminary Plan, this intersection provides the necessary signage and pavement marking for bicycle and pedestrian use, however it was suggested that the signal timing and striping be evaluated. Since the initial Plan, the intersection was resurfaced and striping was installed to meet AASHTO and highway standards and the Manual for Uniform Traffic Control Devices.

Regarding the signal timing at this location, the City should contact the DuPage County Division of Transportation and request that the timing be verified. Settings within the signal controller cabinet at the intersection can be modified to ensure that the proper crossing times are provided to bicyclists and pedestrians.

2.2 Galusha Area

While some facilities currently exist in this area, as outlined in the initial Plan, logical connectivity to other areas is required. The findings of the Bikeway Implementation Study indicate that installing various segments of path will complete the routes and provide more logical termini as outlined below.

2.2.1 Galusha Road Sidepath

The initial Plan detailed the accommodation of an 8 – 10 foot sidepath in this area. A five-foot wide sidewalk was constructed on the south side of the roadway in lieu of the sidepath. As this facility does not meet standards or requirements for two-way bicycle travel it is still recommended that signage be added to Galusha Road from Winfield Road to Herrick Road to indicate the presence of bicycles on the pavement. See exhibit 2-1-A for the limits of the improvement and newly constructed sidewalk. The cost estimate shown in exhibit 2-1-C reflects the costs for the installation of signage along Galusha Road. In addition to the sidewalk recently constructed along Galusha Road, the City is currently investigating the feasibility of acquiring an easement to connect Hubble Middle School to West Avenue. This additional connection to the school property will reduce the amount of on-street travel for many pedestrians accessing the school site.

2.2.2 Winfield Road Sidepath Widening

Winfield Road has an adequate sidepath from Warrenville Road south to Diehl Road. The segment of sidewalk on the east side of Winfield Road from Warrenville Road to Galusha will require widening to adequately meet standards and requirements to accommodate two-way traffic. Removal of the existing sidewalk and widening the sidewalk to eight-feet will provide the proper width for two-way traffic. During field investigations, it was determined that easements would potentially be required from the private property owners along the east side of Winfield Road to complete the improvements; a detailed survey will be required to determine the feasibility of widening the existing sidewalk within the existing R.O.W. In addition, the relocation of various overhead utilities and fire hydrants will be required. While this may require a longer lead time and expenditures prior to construction to obtain the necessary easements and coordinate with the utility companies, it is the only logical location for a sidepath connecting the Galusha area to Warrenville Road. See Exhibit 2-2-A for the construction limits, Exhibit 2-2-B for the existing and proposed cross sections and exhibit 2-2-C for the estimated cost of the improvements. Coordination with DuPage County will be required to implement any improvements on this roadway, as Winfield Road is under the County's jurisdiction at this intersection.

Additionally along Winfield Road, improvements would be required from Butterfield Road north to Illinois Route 38 and into the Village of Winfield. Currently, a carriage path consisting of gravel screenings with intermittent paved sections is the only means of connection northerly along Winfield Road. In the future, the City should continue working with the County and adjacent communities to provide an improved riding surface to encourage travel along this section of roadway.

2.2.3 Herrick Road Bike Lanes

Herrick Road was recently reconstructed, with the necessary width to provide sufficient on-street bicycle facilities due to the presence of new wider shoulders. This provided an improved route from Galusha Road to the entrance of the Herrick Lake Forest Preserve. Coordination with the DuPage County Division of Transportation is required to complete the necessary signage. The costs for the sign additions are minimal; see Exhibit 2-3-A for the limits of construction, Exhibit 2-3-B for the existing and proposed cross sections and Exhibit 2-3-C for the estimated cost of the improvements.

2.3 Old Town Area

Various major bicycle facilities, including the Illinois Prairie Path and the West Branch Regional Trail are located within the Old Town Area. In addition to those major routes, multiple sidewalks sufficient for pedestrian travel are also present. The additional improvements outlined in the following sections are required to facilitate more efficient bicycle movement and improve access to the major bikeways within the Old Town Area. In addition to the first phase of the implementation study, the Old Town Sub-Area Plan as previously developed outlines the ultimate desired configuration of roadways and sidepaths within the redeveloped Old Town Area. Many required improvements may not be feasible until the reconfiguration of the Old Town Area occurs; as stand alone projects, the costs for land acquisition would be too costly to

justify only bicycle/pedestrian improvements. The key factor for bicyclist and pedestrian amenities in the Old Town Area will be to ensure that the plan is implemented as redevelopment occurs. While this is applicable to various improvements along the Warrenville and Batavia Road corridors through Old Town, there are also various improvements that can occur, which do not require redevelopment prior to implementation, which will be described in the following narrative.

2.3.1 Ferry Road Sidepath Widening

There is a ten-foot wide sidepath along the north side of Ferry Road from Raymond Drive west to the Illinois Prairie Path. East of the West Branch of the DuPage River, there is a sidepath along the south side of Ferry Road extending east to the Warrenville Road/Mill Street sidepath. Between those two sidepaths, Ferry Road has five-foot sidewalks that should be widened to eight feet to facilitate two way bicycle traffic.

In the original Bikeway Implementation Study, it was suggested that path would replace the existing sidewalk on the north side of Ferry, from Raymond Avenue to River Road, where it would cross at the existing River Road signal. East of the signal, the existing sidewalk along the south side of River Road would be replaced with an eight-foot sidepath east to the West Branch of the DuPage River.

East of River Road, it is anticipated that the path could be constructed such that it would fit within the existing DuPage County R.O.W. and would provide sufficient setback from the back of the curb of Ferry Road. Signage will be required at the bridge over the River, indicating the narrow width of the crossing; however it does not appear, because of cost, that widening the crossing would be feasible. The signal at the intersection of River Road and Ferry Road is currently equipped with push-button signals; therefore improvements would not be required to modify the traffic signal equipment. Wider ramps and curb and gutter removal and replacement will be required and recommended. The sidepath should cross north on the east side of the intersection, then west on the north side of the intersection to connect to the suggested widened sidewalk on the north side of Ferry Road.

On the north side of Ferry Road, west of the intersection with River Road, it is anticipated that the widening should occur to the north of the existing sidewalk. Further detailed surveys will be required to determine if a satisfactory amount of R.O.W. exists for this purpose, or if any easements currently exist that would allow for this construction. Due to the proximity to the back of the curb on Ferry, widening to the south of the sidewalk would create a less than ideal separation between the roadway and the sidepath.

In addition to the potential R.O.W. constraints, the existing sidewalk crosses a drainage way via a large box culvert. The headwall of this culvert is only 9.5 feet from the roadway guardrail. While this may not be ideal, widening the culvert would not be advisable due to the costs. Rather, the existing sidewalk should be widened to 7.5 feet by removing the existing 2.5 feet of grass area between the sidewalk and the culvert headwall. While this will result in a narrower path than desirable, it would be an improvement and would not require the City to invest in the high costs required to lengthen the culvert. See Exhibit 3-1-A for the proposed construction

limits, Exhibit 3-1-B for the existing and proposed cross sections and Exhibit 3-1-C for the estimate of construction costs. All improvements along Ferry Road as outlined in this section will require coordination with the County, as Ferry Road is under the County's jurisdiction throughout the City limits.

2.3.2 Connections to New Butterfield Road Sidepath

As a part of the upcoming widening of Route 56 (Butterfield Road), a new sidepath will be installed along the north side of the road. Currently the City is working with IDOT to plan the necessary connections to that path at various intersections throughout the widening limits. The City is currently working with IDOT during the development of final construction plans; while IDOT may not cover the costs for certain pedestrian or bicyclist accommodations, they will work with the City to provide the opportunity for such improvements. Currently, the State shows connections to the Butterfield Road Frontage Road, Batavia Road and Blackwell. See Appendix IV for the most recent set of plans related to the improvements along Butterfield Road (IL56). These plans indicate the proposed connections to various bicycle paths along the corridor.

2.3.3 River Clean-up Trails

The City has formally requested the Forest Preserve District of DuPage County create new trails along the West Branch of the DuPage river that will utilize various by-pass pumping and construction access roadways created on Forest Preserve District Property during the clean-up and restoration projects along the section of the West Branch of the DuPage River located between Route 56 and the Warrenville Grove Dam. As of the preparation of this report, the Forest Preserve District has not formally responded to the City's requests for the implementation of these new trail improvements. The City should continue to strongly advocate for the ultimate implementation of these trail improvements.

The by-pass pumping corridor for the clean-up project would be adjacent to the west bank of the DuPage River from Butterfield Road (Route 56) south to just north of Warrenville Road. The City has encouraged the District to implement these trails as the project completes in the future. The limits of the project are currently undefined as the final design plans for the clean-up and restoration project have not yet been finalized; however, the approximate limits are shown on Exhibit 3-3-A, with a suggested cross section shown on Exhibit 3-3-B and the potential cost estimates shown on 3-3-C. It should be noted that the exact route has not been determined and costs estimates are preliminary. The quantities are subject to change based upon the river clean-up project.

2.3.4 Batavia Road at Butterfield Road Intersection

The most recent set of preliminary engineering documents prepared by IDOT for the Butterfield Road (Route 56) widening indicate connectivity of all paths at this intersection. As that project moves forward, the necessary path construction, signal improvements and other amenities will be addressed at this location. Currently, the City is working with IDOT to establish the final amenities at this intersection; among the proposed amenities are pedestrian countdown signal heads, allowance for future streetlights, colored/patterned crosswalks and median refuge areas and colored/patterned sidewalk treatments at the intersection corners. See Appendix IV for the most recent version of the preliminary plans that detail the proposed geometry at this location.

2.3.5 Rockwell Street at Butterfield Road

IDOT has agreed to the City's request that the location and design of this intersection be reconfigured as part of the Route 56 reconstruction and expansion project. IDOT has agreed to incorporate the revised intersection improvements within the Route 56 R.O.W. into the engineering construction design drawings they are preparing for the Route 56 project. The City Council has committed to fund the design and construction of the Rockwell Street/Stafford Place/Prairie Path crossing realignment improvements as illustrated on the preliminary engineering design drawing attached as Exhibit 3-5-A. The City is currently preparing the final engineering design drawings and specifications for this work. The City will need to continue to coordinate with DuPage County DOT to finalize the ultimate design and location for the Prairie Path crossing of Rockwell Street and for a county contribution to the overall cost of this improvement.

2.3.6 Pedestrian Bridge at the Warrenville History Museum

Depending on the timeframe and expense related to the redevelopment of downtown, a pedestrian bridge crossing the West Branch of the DuPage River from the proposed Riverfront Park to the Warrenville History Museum would provide connectivity to the new Old Town District. Various outside elements will impact the construction of this bridge, including the timeline for redevelopment, land acquisition, adjacent construction and cost. Currently, there are two river crossings in the vicinity of this proposed pedestrian bridge, however the construction of this structure may be more cost effective than reconstructing the existing Warrenville Road bridge over the DuPage River and is a feasible option for providing logical routes with the Old Town area. For additional information regarding these improvements, refer to the Old Town Sub-Area Plan.

2.3.7 Warrenville Road Sidepath (Old Town)

Warrenville Road, from Winfield Road to Batavia Road, has intermittent bicycle facilities that do not provide consistent modes of travel along this length of roadway. The property at the southwest corner of the intersection of Winfield Road and Warrenville Road has a ten-foot concrete sidepath that ends at its west property line. The City of Warrenville has purchased and now owns all of the vacant non-Forest Preserve District Owned property between termination of this path and the existing north-south leg of the West Branch regional trail. Upon development of these parcels, this path should be continued (with construction either in an easement or via R.O.W. dedication) to continue westerly to join with the West Branch Regional Trail. A mid-block crossing currently exists for the West Branch Regional Trail, as it extends north through the City at Warrenville Road. In the north R.O.W. of Warrenville Road, there is a width of sidewalk from Winfield Road to Second Street, where the sidewalk merges with the West Branch Regional Trail and continues to the existing mid-block at-grade N-S crossing of Warrenville Road. Widening the sidewalk to eight feet on the north side of the Road from Winfield Road to Second Street would provide an alternate route until properties on the south side of the road are developed. When these properties develop, the construction of the sidepath could be the responsibility of the developer and incorporated into the site plans.

The most feasible improvements include constructing a sidepath in place of the existing sidewalk on the north side of the road; this improvement could be completed within the existing R.O.W.,

however any improvements would need to be coordinated through the County as Warrenville Road is under County jurisdiction in this area. The associated limits, proposed sections and costs and sections are located in exhibits 3-7-A, 3-7-B and 3-7-C respectively.

The Warrenville Road bridge over the West Branch of the DuPage River consists of four twelve foot lanes and 1.5 foot wide gutter areas with drainage grates. Without widening the bridge, there is insufficient width to install bicycle lanes; further, the sidewalk on each side of the bridge is six feet wide and is not separated from the vehicle lanes by a barrier wall, which also makes the sidewalk width insufficient for two-way bicycle traffic. If the bridge is reconstructed during redevelopment of the Old Town Area, widening the bridge deck to include a ten foot sidepath on one side should be considered. Any proposed improvements to the section of Warrenville Road covered in this section will need to be coordinated with the County as it is under County jurisdiction.

2.3.8 Batavia Road Bike Lanes

At 31' wide (as measured from the back of curb on one side of the road, to the back of the curb on the other side of the road), Batavia Road is wide enough for shared use of the roadway, based on the existing geometrics. Due to the current condition of the roadway, complete removal of the curb and gutter is required during the next scheduled rehabilitation. At that time, the City can review the most appropriate option for the treatment of bicycle travel on this road. Currently, the recommended solution would be to replace the existing curb and gutter with a smaller size curb and gutter to add an additional foot of paved area to the roadway. This would provide enough width to have four foot wide paved shoulders, a one foot wide gutter and two ten-foot travel lanes. See Exhibits 3-8-A, 3-8-B and 3-8-C for the associated project limits, typical sections and cost.

It is further suggested that a five foot sidewalk be constructed from 4th Street to Main Street on the east side of Batavia Road with proper pavement markings for crosswalks at each intersection. Completing these improvements will encourage pedestrians and bicyclists to cross at intersections rather than at the exact location of the Warrenville Grove parking lot (which is not located at an intersection and is on a curve with limited sight distance). The cost estimate shown on Exhibit 3-8-C reflects the curb removal and widening of the roadway for widened pavement and installation of a sidewalk on the east side of the road between 4th Street and Main Street.

2.3.9 River Road Sidepath

Bower Elementary School is on the east side of River Road, just north of Ferry Road. Upon construction of the new sidepath along River Road, there will be opportunities to extend off-road bicycle facilities north to the school. Currently, there is an existing five-foot sidewalk that could be widened to eight-feet wide to serve bicyclists and pedestrians. See Exhibits 3-9-A, 3-9-B and 3-9-C for the project limits, proposed cross section and cost estimate.

In addition to extending the sidepath north from Ferry Road to the southern limits of the school property, the City has also identified the need to extend the pedestrian and bicycle accommodations north to Cerny Park and west to Curtis Avenue As a preliminary stage of this potential extension, the City plans to coordinate with the school and other adjacent property

owners and stake holders as necessary to identify the possible alternatives for providing this connection.

Development of pedestrian/bicycle accommodations alternatives along River Road north of Cerny Park and Bower Elementary in this corridor should also be considered. Facilities in this corridor will provide logical connection between the Cerny Park and Old Town areas within the City. A future analysis will be required to evaluate alternatives for this corridor. Some suggested alternatives could consist of sidepath construction, on-road bike lanes (wide shoulders), and a possible pedestrian bridge over the DuPage River to connect to the West Branch Regional Trail. Close coordination with adjacent property owners (including DuPage County and the DuPage Forest Preserve District) will be required when evaluating the available alternatives.

2.4 Butterfield-Batavia-IL59 Triangle

Similar to other regions within the City, certain areas have good trail access and various destinations; connectivity is lacking to facilitate movement to other areas within the City. The following improvements were suggested in the Bikeway Implementation Study to create the necessary connections for improved routes.

2.4.1 Timber Drive Shared Roadway Meadow Drive to Batavia Road

As outlined in the previous Plan, Timber Drive has fairly low traffic volumes and meets the AASHTO Standards for a shared roadway; while a 14-foot lane is recommended for shared roadways, it is not required on roadways with lower traffic volumes. Providing shared road signage to alert motorists to the presence of bicyclists will efficiently convey bicycle traffic from Batavia Road to Meadow Lane. At the intersection of Timber Drive and Batavia Road, a refuge was constructed at the southeast corner of the intersection with a marked crossing on the east leg of the intersection to convey bicycle/pedestrian traffic north to the Batavia Road sidepath. The only remaining cost associated with this project is the installation of signs along the route. See Exhibits 4-1-A, 4-1-B and 4-1-C for the associated project limits, cross sections and estimate of cost.

2.4.2 Meadow Drive Sidepath

In the initial Plan, the feasibility of a shared roadway was explored; however there was still a major concern over the ability to provide an AASHTO approved crossing at Meadow Drive and Route 59. The existing parkway on Meadow Drive is approximately eight feet in width, which would facilitate the creation of an eight-foot sidepath in lieu of the existing five-foot wide sidewalk. Creating this sidepath would not only provide an improved crossing at Route 59, but continuing the path east to Timber Drive and west (on Continental) to Johnson Elementary School would provide a 3,000 foot long path that would provide an improved route across Route 59 with logical end points at Kiwanis Park and Johnson Elementary School; travel between those sites would not require on-street travel for younger bicyclists. While more costly, this option provides the best alternative for travel. Currently, the intersection at Route 59 is signalized; however, the signals will need to be modernized as a part of this project. The cost for the

signalization improvements are currently reflected in the cost estimate. Due to the high cost and connectivity benefits of this improvement, this project is a candidate for grant fund submittals. See Exhibits 4-2-A, 4-2-B and 4-2-C for the associated project limits, cross sections and estimates of cost.

2.4.3 Ferry Creek Bridge at Kiwanis Park

The bridge was installed in October 2008. The bridge was installed providing a needed connection from the Meadow Avenue/Timber Lane and Kiwanis Park to the Birchwood Drive on the opposite side of the creek. No additional improvements were recommended in this report.

2.4.4 Butterfield Road Connections

The first phase of the implementation Plan indicated desired connection locations to the new sidepath that will be constructed as part of the Butterfield Road (Route 56) widening project. See Appendix IV for the current version of the IDOT plans. Discussions between the City and IDOT are underway and may result in a modification to those plans.

2.5 Summerlakes Area

With multiple recreational sites within this area of the City and miles of bicycle routes currently available, minor improvement projects consisting of striping and signage will allow for increased use and direct bicyclists to the routes available. The following improvements outline the requirements needed for increased the use of existing pathways.

2.5.1 Mack Road Bike Lanes – Bristol to Route 59

West of Route 59, Mack Road has striped six-foot on-street parking lanes that currently also provide a delineated area for bicycle travel. Parking density and roadway traffic volumes can impact the effectiveness of such facilities; however, when appropriate this treatment is an effective method of serving the needs of bicyclists as well as motorists and property owners. As motorists are encouraged to utilize the space for parking, these delineated areas cannot be considered bike lanes; however, due to the low density of parking and traffic volumes for this segment of Mack Road, this is a suitable treatment and provides delineation for motorists.

The current striping ends at Bristol Lane and opportunities do not exist for additional striping on Mack Road east of Bristol Lane. Bicyclists must continue on the pavement without striped parking lanes for refuge. The addition of “Bike Route” signage along the entire stretch of Mack Road from Continental to Route 59 will be a suitable solution and will alert motorists to the presences of bicyclists. See Exhibit 5-1-A, 5-1-B and 5-1-C for the limits, cross section and cost estimate for this project.

2.5.2 Continental Drive Bike Lanes – Mack Road to Batavia Road

As identified in the initial Plan, Continental Drive, with 34 feet of pavement, currently supports on-street use, and striped lanes are in place. In addition to the existing striped lanes, various “Bike Route” signs have been placed at key locations. No additional improvements are

recommended for this portion of Continental Drive. It is suggested that the striping be included as part of the Public Works budget and street maintenance.

2.5.3 Continental Drive Bike Lanes – Batavia Road to Route 59

Similar to the portion of Continental Drive from Mack Road to Batavia Road, the existing parking lanes have the adequate width (or feet) to provide for on-street bicycle use. While this condition meets standards, an alternative should be considered for the portion of Continental Drive southeast of Johnson Elementary School to Route 59. Both the school and Summerlakes Park serve as a destination for various users, improving access will provide increased utilization from other areas within the City. Northwest of the school, has a higher density of residences, and does not provide opportunities for a separate sidepath. The southeast portion has a relatively low density of housing and a large parkway that can be utilized. By constructing a sidepath on the north side of Continental Drive in lieu of the existing sidewalk, bicyclists can be provided with more separation from traffic. This separation is beneficial because users may be younger, less experienced bicyclists that will feel more comfortable on a separate path. Due to the proximity to the school and the availability of R.O.W., this may be a logical alternate, as discussed in section 2.4.2. The City is currently in the process of beginning preliminary engineering for a detailed study of this project.

Additionally, providing the separation of the bicyclists further from Route 59 will provide for a seamless transition to a separated crossing at Route 59, which will be on the north leg of the intersection and will continue easterly to the new sidepath constructed in the north R.O.W. on Meadow Drive (see 2.4.2). See Exhibits 5-3-A, 5-3-B and 5-3-C for the limits, existing and proposed cross sections and estimate related to this project. This project cost includes the necessary re-striping and sidewalk widening to connect the termini of the new Continental Drive sidepath to the paths in Summerlakes Park.

2.5.4 Summerlakes Park Trails Connection

In the first phase of the Bikeway Implementation Study, the benefit to providing a connection to the trails within Summerlakes Park from the north, via the Johnson Elementary School parking lot, was identified. Currently, no coordination with the School District has taken place regarding the preferred method of accessing Summerlakes Park from Continental Drive; however the two options previously identified are feasible and should be reviewed. The sidewalk on the west side of the parking lot should be widened to eight feet connect to the trails that exit Summerlakes Park. This sidepath would lead north to Continental Drive, to begin the sidepath that extends southeast to Route 59 (as discussed in section 2.4.2). While this is the preferred method for connecting to Summerlakes Park, ultimately the school administrators will ultimately need to evaluate the options and select the appropriate option based on their preferred parking configuration. The costs associated with this project and all related exhibits were previously presented in Section 2.5.3.

2.5.5 Talbot Avenue Bike Lanes

Due to the extremely low volume of traffic, only minor signing would be required to facilitate more efficient on-street travel for bicyclists on this roadway. Due to limited R.O.W. and the current pavement width limitations, simply adding signs indicating that this is a bike route with

shared usage would be appropriate. Widening the roadway may provide little additional benefit due to the low volume of traffic and low speed. Due to the limited width of 20 feet, Talbot should be widened to 24 feet from Calumet north to Summerlakes Park to improve on-street bicycle travel. When development occurs on the east side of the roadway in this area, the roadway should be widened at that time. See exhibits 5-5-A, 5-5-B and 5-5-C for the limits of the project, the existing and proposed cross sections and the estimate of cost for this project. Currently, the roadway widening necessary for the portion of the roadway from Calumet to Summerlakes Park is not included in the estimate. The City has determined that it will require the developer of the adjacent vacant lot to either construct a 5' wide sidewalk along the Talbot Avenue frontage of the property (between Calumet Avenue and the north side of the northernmost commercial drive on Talbot Avenue when it is developed or make a financial contribution towards its future construction by the City. This improvement would provide improved separation for bicyclists and pedestrians as they enter the park. Regardless of which option the developer chooses, the City will still need to fund the link between the south edge of Summerlakes Park and the north end of the then new northern driveway to the property.

2.5.6 Butterfield Frontage Road Bike Lanes

At the intersection of Talbot and the Butterfield Frontage Road, the bike lanes should continue east on the frontage road, to the proposed sidepath that will be constructed with the Butterfield Road (Route 56) widening project. Minimal expenditure would complete this project, however timing should be considered during implementation. See Exhibits 5-6-A, 5-6-B and 5-6-C for the project limits, cross sections and estimate of cost.

2.5.7 Barkley and IL56 Intersection Improvements

The first phase of the implementation study indicated a signalized crossing at this location, which was also indicated on the Sub-Area Plan for this region of the City. The City will continue working with IDOT during the design of the Butterfield Road (Route 56) plans to determine the appropriate method for conveying bicycle traffic south of Butterfield Road (Route 56). If no crossing at Barkley is permitted, the path would cross south on the west side of Route 59 at the intersection of Butterfield Road (Route 56) and Route 59. The City has and continues to strongly advocate with IDOT for high quality pedestrian crossings with countdown signal heads at all 4 legs of the Route 59/Route 56 intersection.

2.5.8 Sidepath at SW Corner of IL56 and IL59

Similar to other projects identified in the initial Plan, this project was the result of one of the City's sub-area plan studies. Within the Rt. 59/Rt. 56 Sub-Area Plan, a new sidepath was identified at the southwest corner of this intersection. Construction of this sidepath, including the construction of a north-south side path connection between the south leg of Route 56/Barkley Avenue intersection and the Illinois Prairie Path, should not be considered a stand-alone project, but should be implemented when redevelopment occurs in this quadrant of the intersection.

2.6 Maple Hill Area

The Maple Hill Area has no access to the other facilities within the City, due to the absence of provisions along Route 59.

2.6.1 Illinois Route 59 Sidepath – Mack Road to Willow Lane

Sidepath construction along Route 59 will require going through an IDOT permitting process. The preliminary plan identified the need to provide improved bicycle access to the Maple Hill subdivision via a sidepath from Mack Road north to Willow Lane. This sidepath would be a minimum of eight feet wide and would be located on the west side of Route 59. Due to the limited R.O.W. and grade issues along Route 59 in this area, major improvements will be required to facilitate the installation of this path. This will increase the cost of this project. Culverts or bridge extensions will be required over two drainage ways and at a retaining wall to address excessive slope issues. There is also the potential need for R.O.W. acquisition or easements from various property owners along the route to accommodate the path. The owner of the property at northwest corner of Route 59 and Mack provided and recorded a 10-foot wide easement for future sidewalk along Route 59 frontage of their property (St. Nirankari Mission).

One alternative would be to work with IDOT to reduce the shoulder width, which would allow for additional space for the eight foot sidepath, or widen the shoulders for travel on the pavement. See Exhibits 6-1-A, 6-1-B and 6-1-C for the project limits, cross sections and estimate of cost. It should be noted that without a detailed survey and preliminary engineering analysis, the cost of this project is difficult to determine and could vary greatly. Moving through the preliminary design and permitting phases will identify the most cost-effective improvements and allow for coordination with IDOT for specific improvement elements.

2.7 Illinois Route 59

Route 59 extends north-south through the City and intersects various streets and bicycle routes as detailed in the following sections. Unlike Butterfield Road (Route 56), crossings are in place at major crossings as outlined below, and only minor improvements are required at these existing crossings as detailed in the following sections. In addition to improving the existing crossings, the development of major north-south bicycle and pedestrian facilities are required along this route.

It is the recommended that as development continues in this corridor, the City work with developers to construct a sidepath on one side of Route 59, and sidewalk on the opposite side of the road. The proposed location of this sidepath is as follows:

Willow Lane South to Mack Road – Sidepath – West; Sidewalk – East (see Sec. 2.6.1)
Mack Road South to Ferry Road – Sidepath – East; Sidewalk – West

In certain locations, it may be logical to install sidepath on each side of the roadway. These instances should be evaluated on a case-by-case basis and should be based on logical termini and the rate of development.

Currently, significant redevelopment or roadway projects will be required to initiate a significant sidepath implementation in this corridor. Therefore, no preliminary costs have been developed for these improvements, with the exception of those provided in Sec. 2.6.1.

2.7.1 Illinois Route 59 Intersection Improvements

Currently, all signalized intersections throughout the City will be addressed by improvements outlined in this report as follows:

Route 59 at Mack Road – Signing and striping bike lanes on each leg of Mack Road
Route 59 at Batavia Road – No improvements needed
Route 59 at Continental Drive – New sidepath on the north side of Continental Drive/Meadow Avenue
Route 59 at Route 56 – Improved east-west crossings upon completion of Route 56 project
Route 59 at Ferry Road – No improvements needed

In addition to the improvements detailed in various sections throughout this report for the Route 59 corridor, it is recommended that as development and/or redevelopment occurs that improvements to the bicycle and pedestrian accommodations are included in the planning process. A detailed study of this corridor will be required to develop the costs and obstacles associated with providing a continuous bicycle system along Route 59, however preliminarily it is suggested that Route 59 should have a sidepath on one side and a sidewalk on the opposite side of the road through the City limits. Based on a preliminary evaluation of obstacles and needs, it is suggested that the sidepath be constructed on the west side of the road from Mack Road north to Maple Hill (as outlined in Section 2.6.1), then continue on the east side of the road from Mack Road south to the Illinois Prairie Path and the connection to the path extending north from Ferry Road. Constructing sidewalks on the opposite side of 59 through the City will provide improved access between intersections where bicyclists and pedestrians can efficiently cross Route 59 at traffic signals.

2.8 Mack Road

West of Route 59, Mack Road provides connectivity to other City and regional bike paths via on-street parking/bike lanes. Various improvements would be required east of Route 59 as discussed in the following narrative.

2.8.1 Mack Road East of IL59

East of Route 59, Mack Road is a narrow roadway with travel lanes just over eleven feet in width. In addition to the narrow width of the roadway, the shoulders are currently narrow with approximately six feet from the edge of the pavement to the center of the roadside ditches. This narrow travel area coupled with traffic volumes of approximately 4,000 does not provide favorable conditions for shared use of the roadway. As Mack Road continues east of Route 59, it crosses the West Branch of the DuPage River and provides access to Blackwell Forest Preserve; for this reason, improvements to this roadway should be considered.

The width of the roadway, traffic volume and topography, all provide challenges when considering bicycle travel. The width of the structure over the river is wide enough to accommodate bicycle lanes via the wide shoulders, therefore it is recommended that widening the roadway by approximately four feet on each side to provide paved shoulders be selected as

the preferred alternative to serve as a bike route. A separate sidepath may be difficult to construct given the restrictions in the south R.O.W., and utilizing the existing structure via shoulders or a separate bike lane may be more economical than evaluating a separate structure for this crossing. Both options, however, should be considered moving forward towards implementation of any improvements; a detailed Phase I Study would further identify any complications and more detailed estimates involved with both alternatives. Both alternatives are shown in exhibit 8-1-A and 8-1-B. The cost estimates for each alternative are provided in exhibits 8-1-Ca and 8-1-Cb.

Coordination with Winfield Township and the Forest Preserve District of DuPage County will be required to facilitate this improvement. On most township roadways, the R.O.W. is typically prescriptive, not dedicated, which may add to the difficulty of completing this improvement. In conjunction with the township, the R.O.W. should be evaluated and explored thoroughly prior to adding bicycle lanes. Identifying the actual R.O.W. will factor into the determination of what is feasible on this roadway, without actual dedication or easements required from the property owners. Typically, prescriptive use will allow for the addition of wider shoulders (which would improve roadway travel for bicyclists) however the improvements are typically limited to the top of the backslope of the ditch. Detailed surveys will be required.

If the improvements are constructed in conjunction with a Winfield Township roadway improvement project, an intergovernmental agreement for cost sharing would likely need to be developed, as the City will have no other means to facilitate the improvement. If wider shoulders are installed, the bike lanes on the west side of Mack Road would continue east through the Route 59 intersection and over the river to a logical endpoint, which would ideally be the entrance to the Blackwell Forest Preserve trail system. As identified in the original phase of the study, that connection would provide connectivity and extend the trail further east and would provide little additional benefit until future improvements provide new opportunities.

3. SIGNING AND STRIPING

The original report identified the need to supply information and directional signage along major bike routes throughout the City. In this report, the individual cost estimates include the suggested signs to be installed with each project.

It should be noted that the signs provided for in this report are for marking routes and providing information to motorists. Actual way-finding signage, point-of-interest signage and kiosks for maps, have not been included in this report. Those signs are not typically required and are outside of guidance for placement. There is no true need for engineering elements when determining which signs to post.

Each individual project also includes allowances for cost in relation to the necessary striping for bike and crossings.

4. FUNDING SOURCES

The original implementation Plan serves as a guide for various funding sources for bicycle improvements available to municipalities in this portion of Illinois. No major additional funding sources are typically available, however having completed a City-wide study to determine the communities needs, the City is more likely to receive funds due to the preliminary studies.

Having identified improvements will ensure that as future development continues, the City will have the opportunity to work with developers so that the planned facilities are incorporated into new projects. By having planning documents that outline the City's plans for bicycle and pedestrian accommodations in new or redeveloped areas, it will be easier to implement those improvements. This plan will also serve as a mechanism to work with neighboring agencies to ensure that accommodations are provided for future City projects.

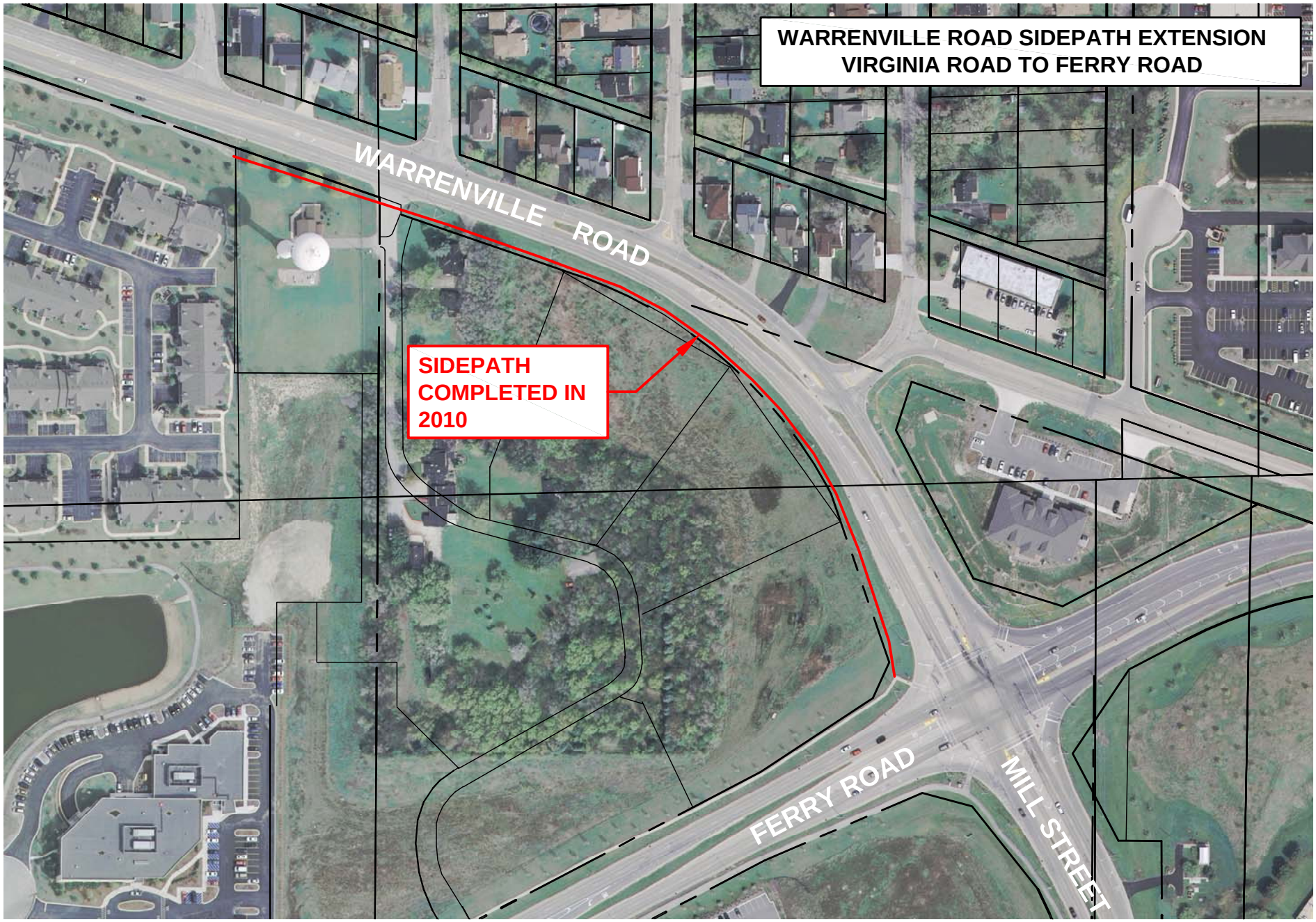
Most grant application processes require that a community complete an extensive amount of preparation to determine applicable projects associated exhibits and cost estimates. The Bikeway Implementation Plan contains this information and will exhibit the City's dedication to improving bicycle accommodations.

Additionally, completing this study provides information to determine the costs of each project; this will facilitate the identification of appropriate funding sources and provide information useful to the City's budgeting process. Expensive projects may not be feasible if grant opportunities or supplemental funding sources are not available. Identifying these projects and preparing grant applications will be crucial steps required for implementation. Additionally, smaller projects (such as signing or striping projects) may not be suitable for grant applications due to the additional costs associated with the required preliminary engineering and the extended timelines necessary to receive funding. In many cases, the requirements associated with certain funding sources can be quite costly and can take years to complete due to the additional agencies involved in the review. This should be taken into consideration when determining which projects to submit for funding opportunities.

BIKEWAY IMPLEMENTATION PLAN - PHASE II

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

APPENDIX I:
PROPOSED IMPROVEMENT AND PROJECT LIMIT EXHIBITS



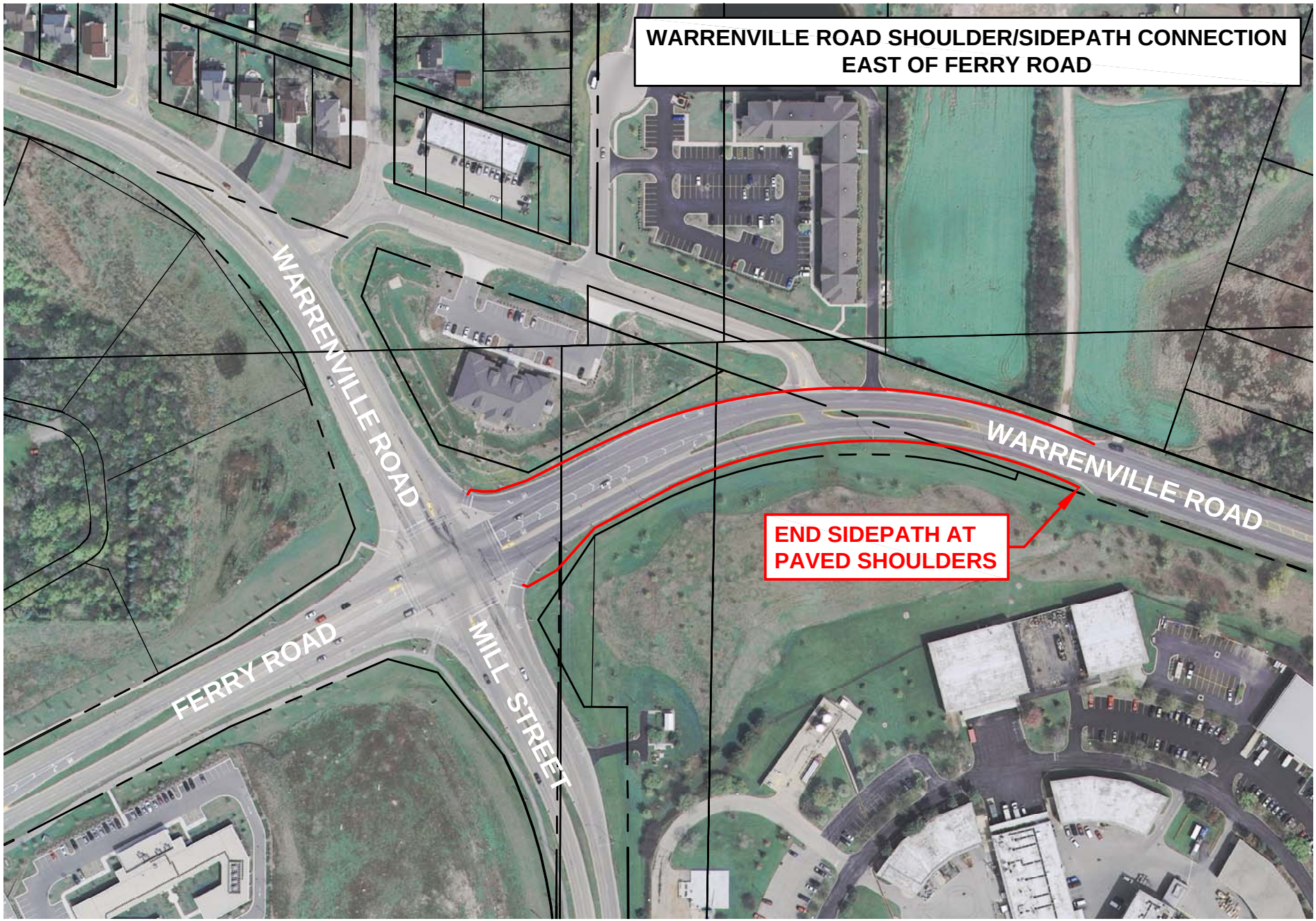
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=200'	CLN
DATE:	EXHIBIT NO:
8/05/09	1-1-A

Plotted: July 23, 2010 @ 7:56 AM By: Larry Nolan – Tab: EX 1-1-A (8.5x11) LS
Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01

WARRENVILLE ROAD SHOULDER/SIDEPATH CONNECTION EAST OF FERRY ROAD



N

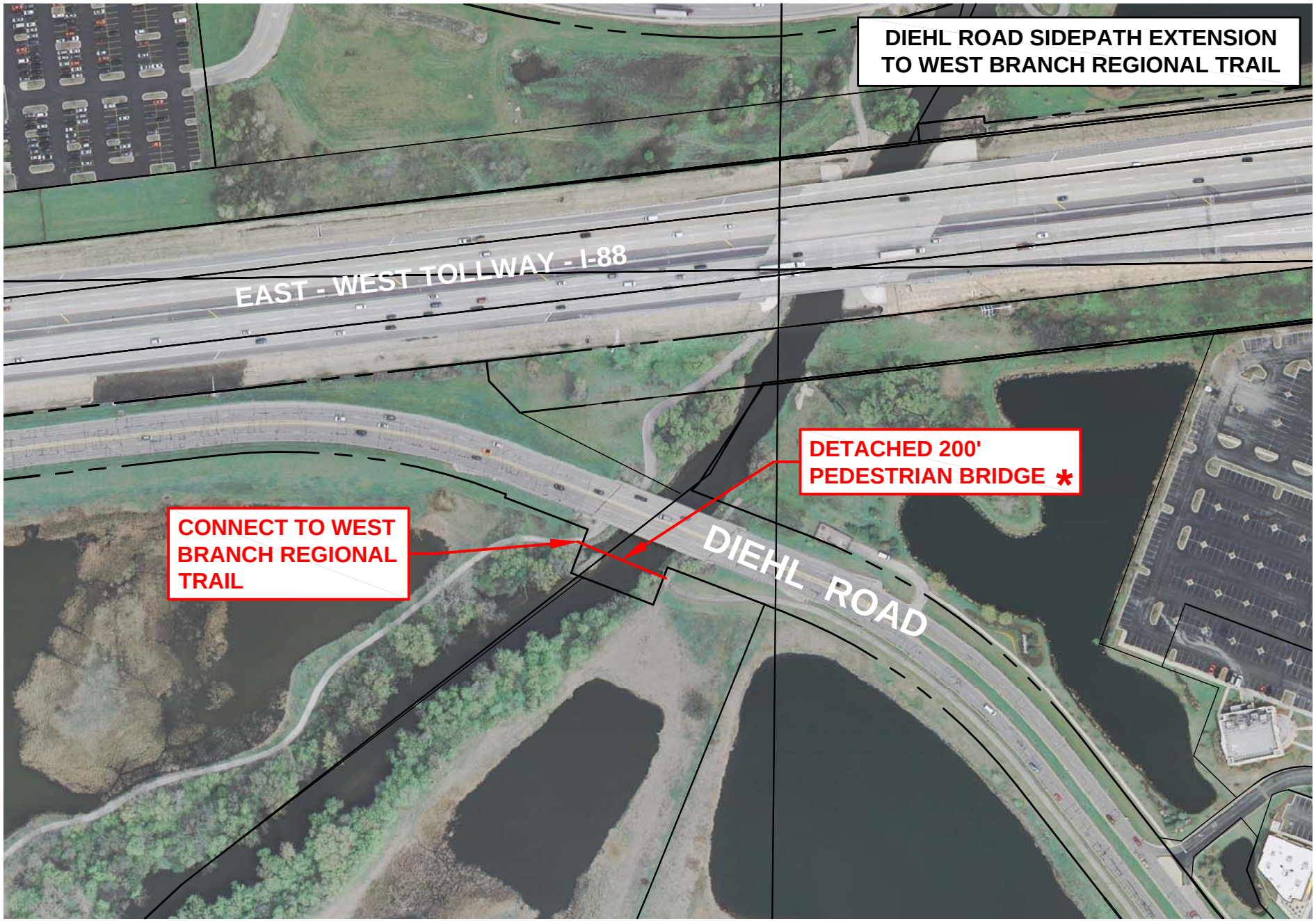
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=200'	CLN
DATE:	EXHIBIT NO:
8/05/09	1–2–A

Plotted: July 23, 2010 @ 7:59 AM By: Larry Nolan – Tab: EX 1–2–A (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901–EXHIBIT_01



* PENDING COST ANALYSIS AN ATTACHED STRUCTURE IS AN ALTERNATIVE.

N

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=200'	CLN
DATE:	EXHIBIT NO:
8/05/09	1–3–A

Plotted: July 23, 2010 @ 8:01 AM By: Larry Nolan – Tab: EX 1–3–A (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901–EXHIBIT_01

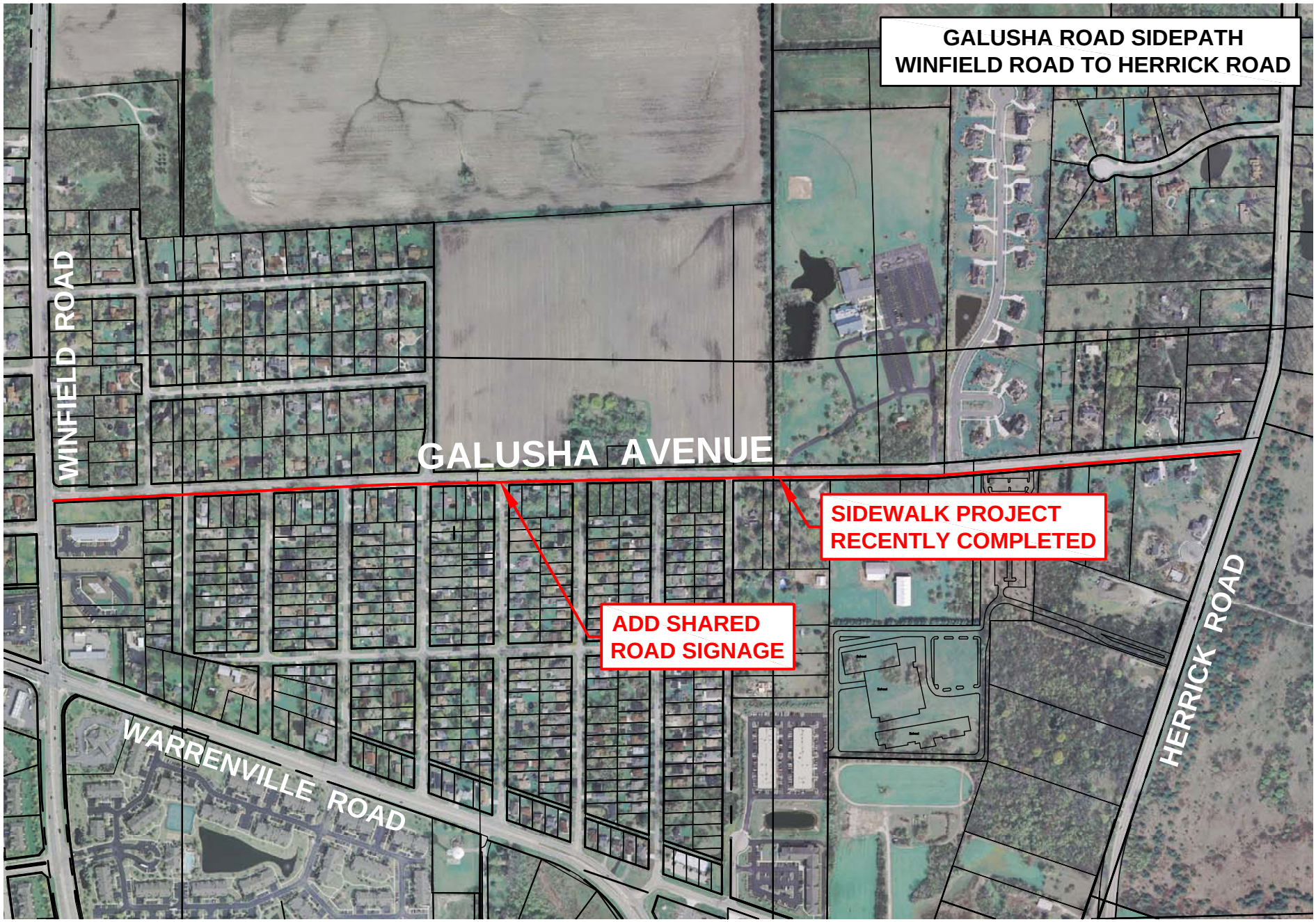
N

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=200'	CLN
DATE:	EXHIBIT NO:
8/05/09	1-4-A

Plotted: March 1, 2010 @ 12:25 PM By: Larry Nolan – Tab: EX 1-4-A (8.5x11) LS
Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01 CLN



N

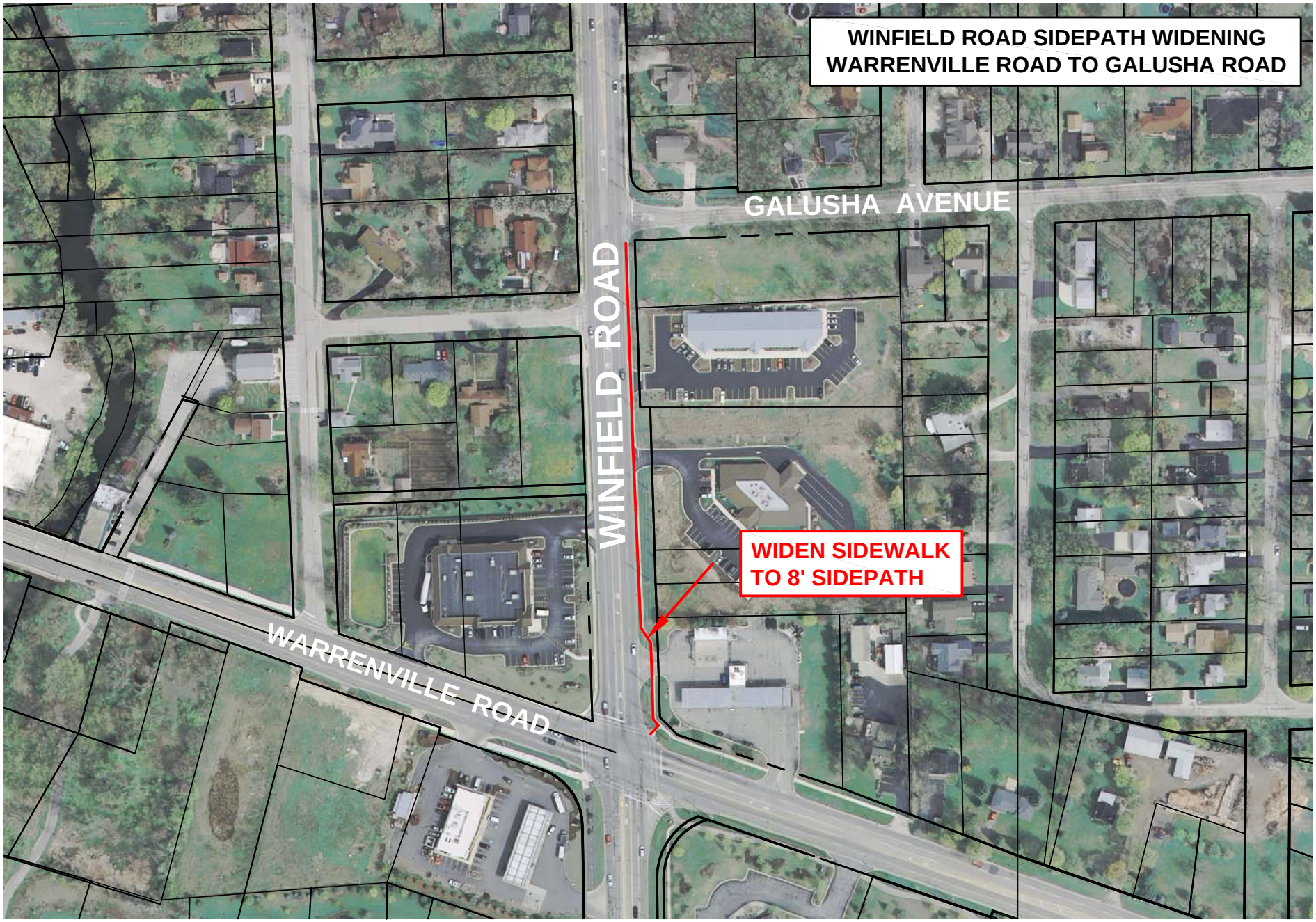
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=600'	CLN
DATE:	EXHIBIT NO:
8/05/09	2-1-A

Plotted: July 23, 2010 @ 8:03 AM By: Larry Nolan – Tab: EX 2-1-A (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01



N

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=200'	CLN
DATE:	EXHIBIT NO:
8/05/09	2-2-A

Plotted: March 1, 2010 @ 12:27 PM By: Larry Nolan – Tab: EX 2-2-A (8.5x11) LS

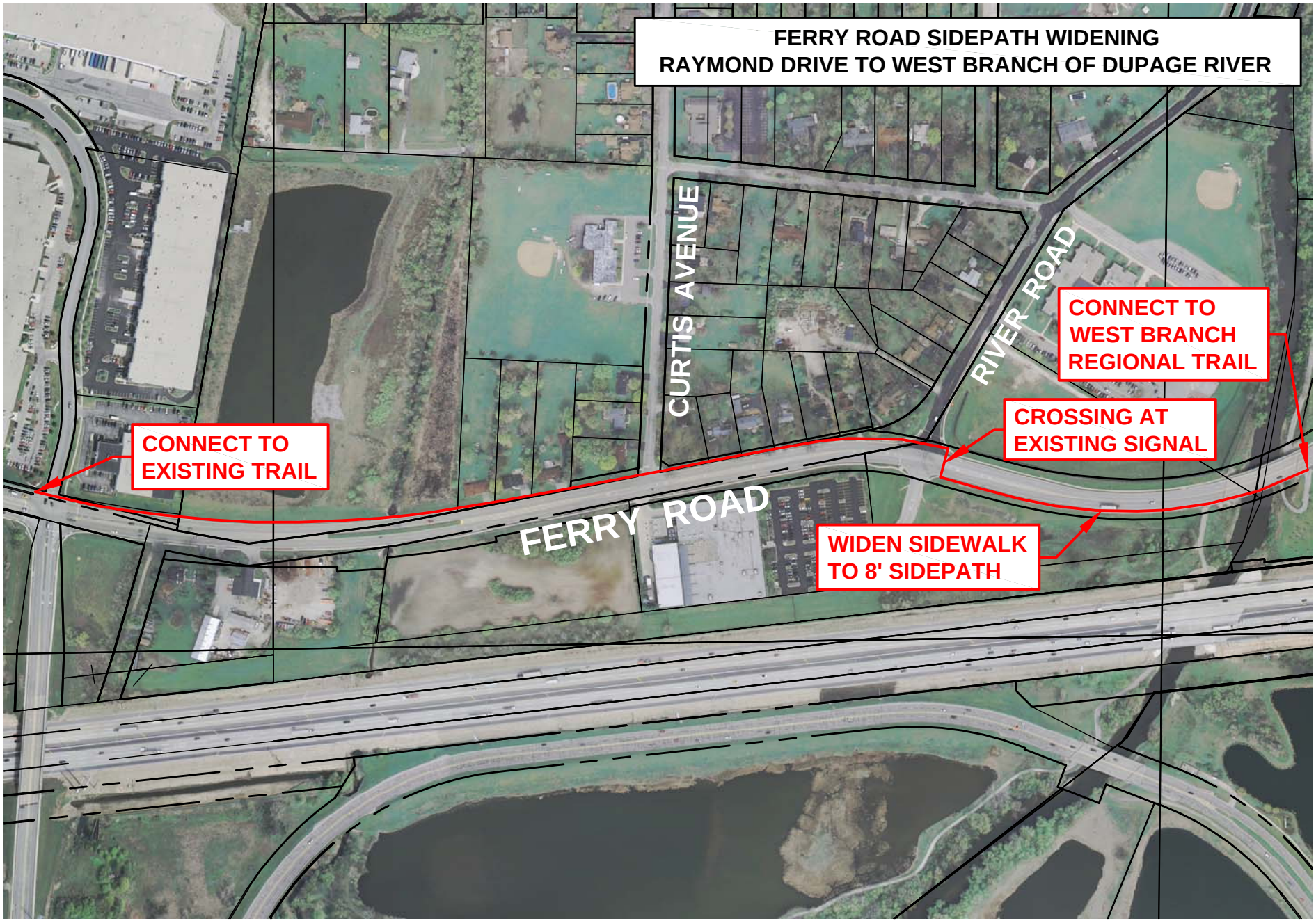
Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01 CLN

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1"=400'	CLN
DATE:	EXHIBIT NO:
8/05/09	2-3-A

Plotted: March 1, 2010 @ 12:29 PM By: Larry Nolan – Tab: EX 2-3-A (8.5x11) PT
Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01 CLN



N

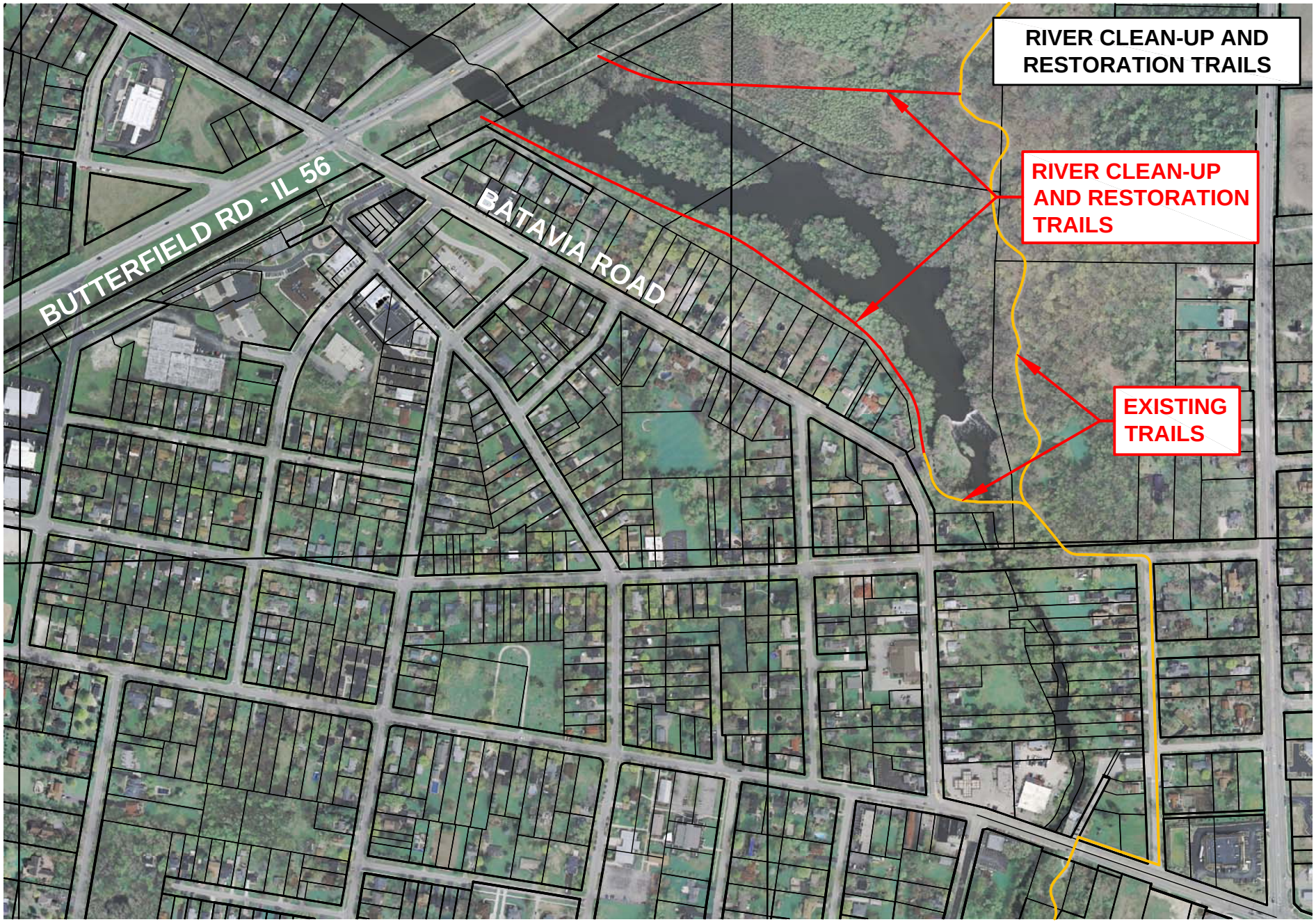
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=400'	CLN
DATE:	EXHIBIT NO:
8/05/09	3-1-A

Plotted: July 23, 2010 @ 8:05 AM By: Larry Nolan – Tab: EX 3-1-A (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01



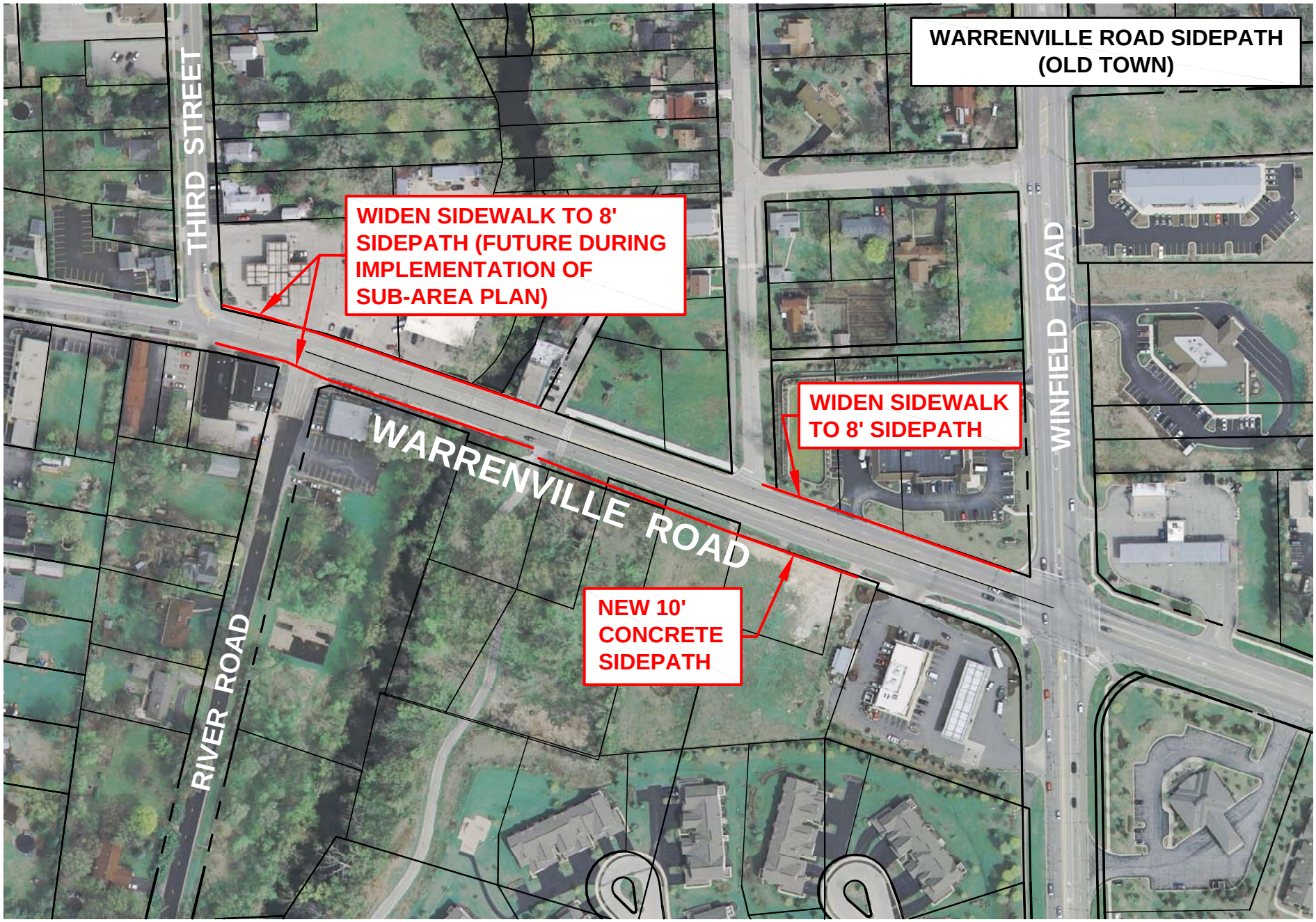
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=500'	CLN
DATE:	EXHIBIT NO:
8/05/09	3-3-A

Plotted: July 23, 2010 @ 8:08 AM By: Larry Nolan – Tab: EX 3-3-A (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01

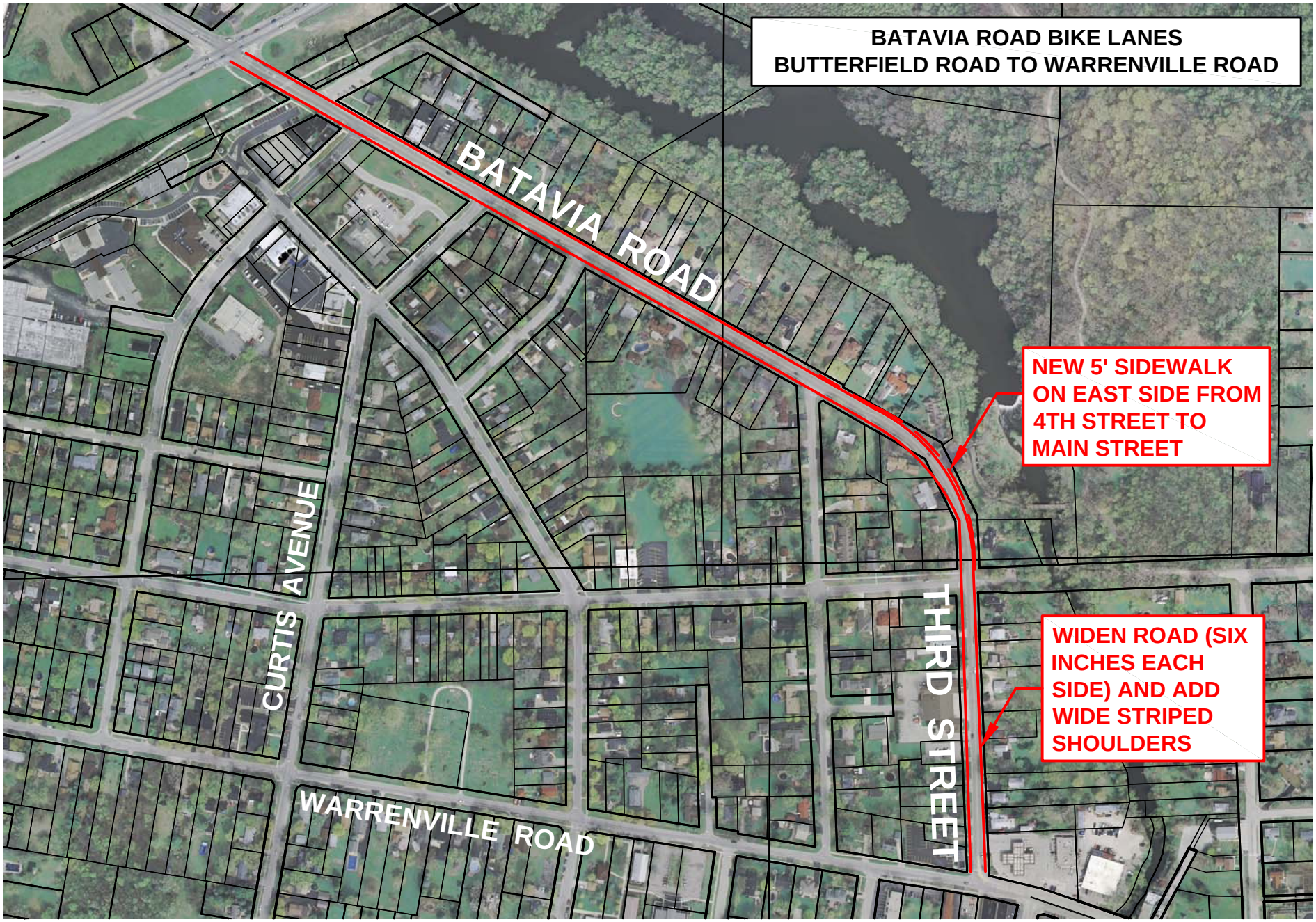


BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1"=200'	CLN
DATE:	EXHIBIT NO:
8/05/09	3-7-A

Plotted: July 23, 2010 @ 8:09 AM By: Larry Nolan – Tab: EX 3-7-A (8.5x11) LS
Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01



N

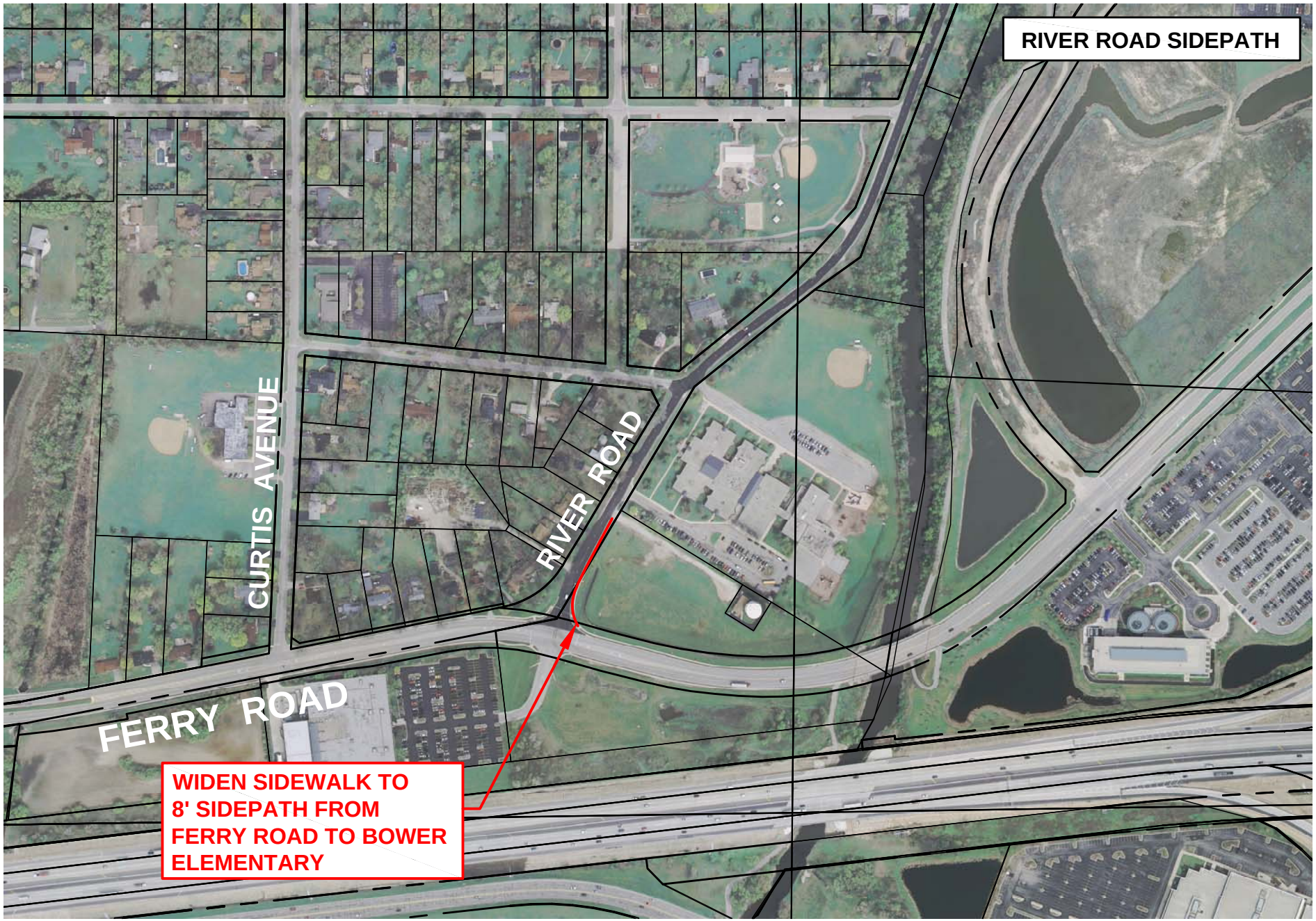
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=400'	CLN
DATE:	EXHIBIT NO:
8/05/09	3-8-A

Plotted: July 13, 2010 @ 4:28 PM By: Kris Pung – Tab: EX 3-8-A (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01



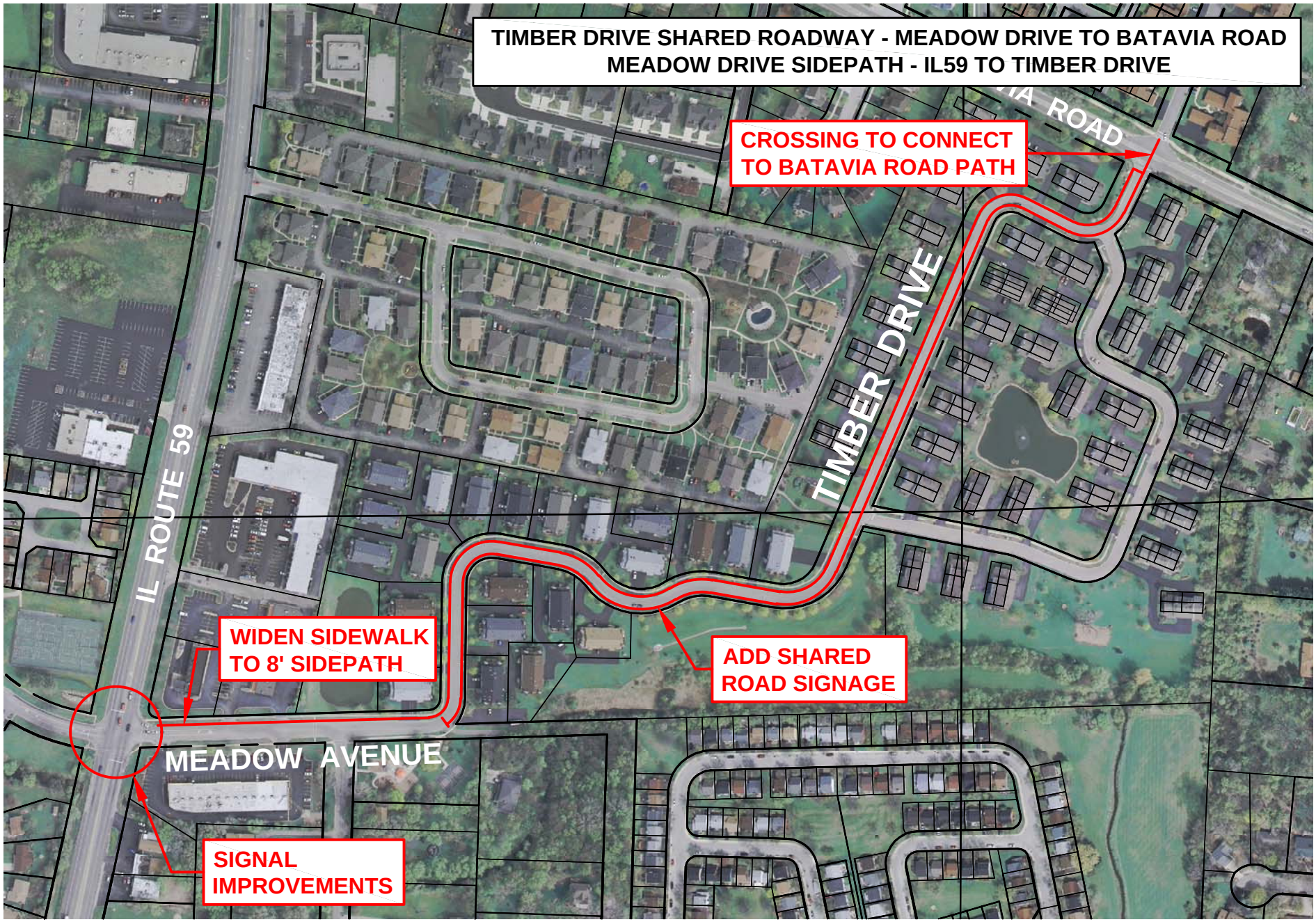
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=400'	CLN
DATE:	EXHIBIT NO:
8/05/09	3-9-A

Plotted: March 1, 2010 @ 12:36 PM By: Larry Nolan – Tab: EX 3-9-A (8.5x11) LS
Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01 CLN

TIMBER DRIVE SHARED ROADWAY - MEADOW DRIVE TO BATAVIA ROAD
MEADOW DRIVE SIDEPATH - IL59 TO TIMBER DRIVE



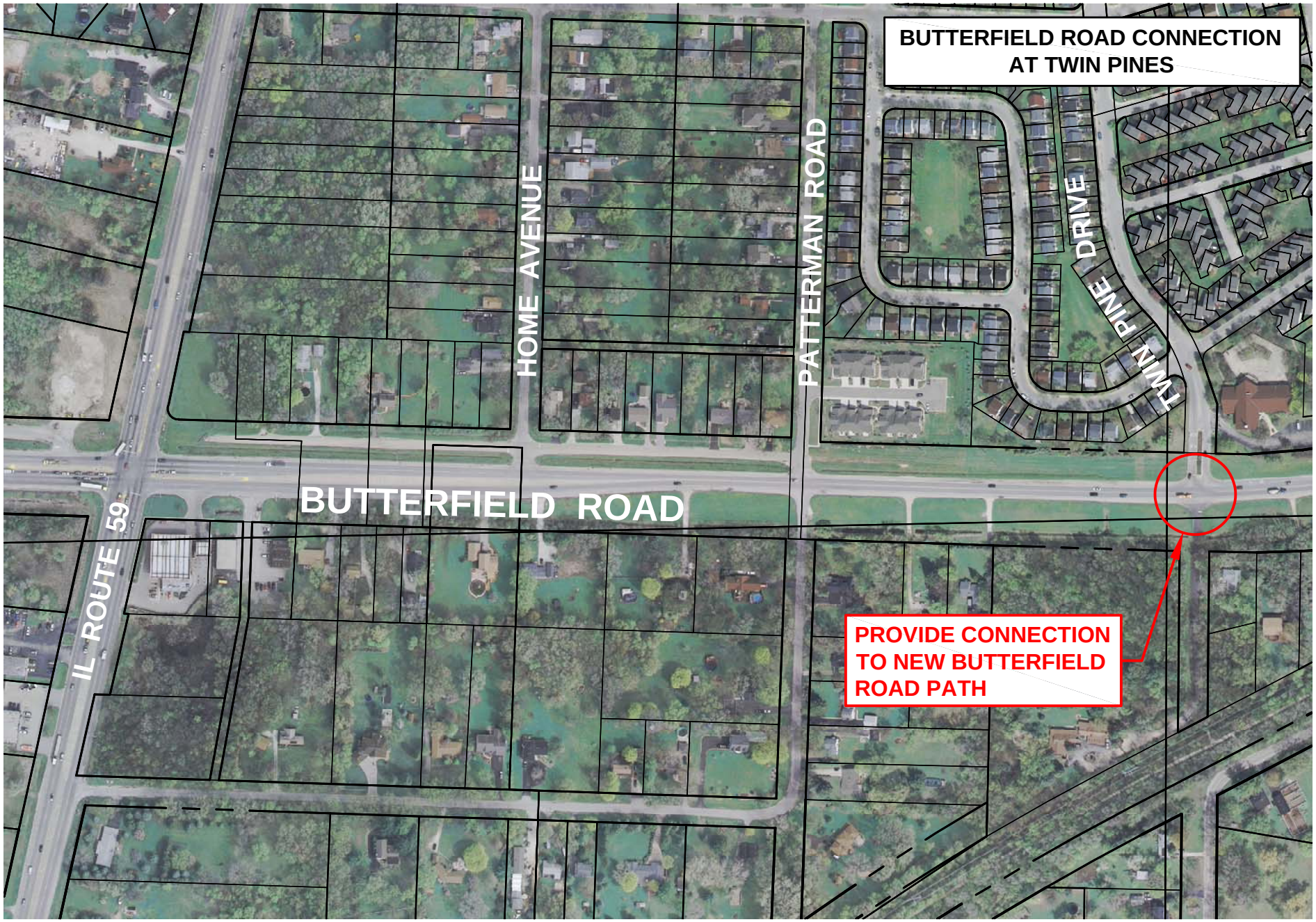
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1"=300'	CLN
DATE: 8/05/09	EXHIBIT NO: 4-1-A & 4-2-A

Plotted: July 23, 2010 @ 8:11 AM By: Larry Nolan – Tab: EX 4-1-A 4-2-A (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01



N

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=300'	CLN
DATE:	EXHIBIT NO:
8/05/09	4-4-A

Plotted: March 1, 2010 @ 12:38 PM By: Larry Nolan – Tab: EX 4-4-A (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01 CLN

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=300'	CLN
DATE:	EXHIBIT NO:
8/05/09	5-1-A

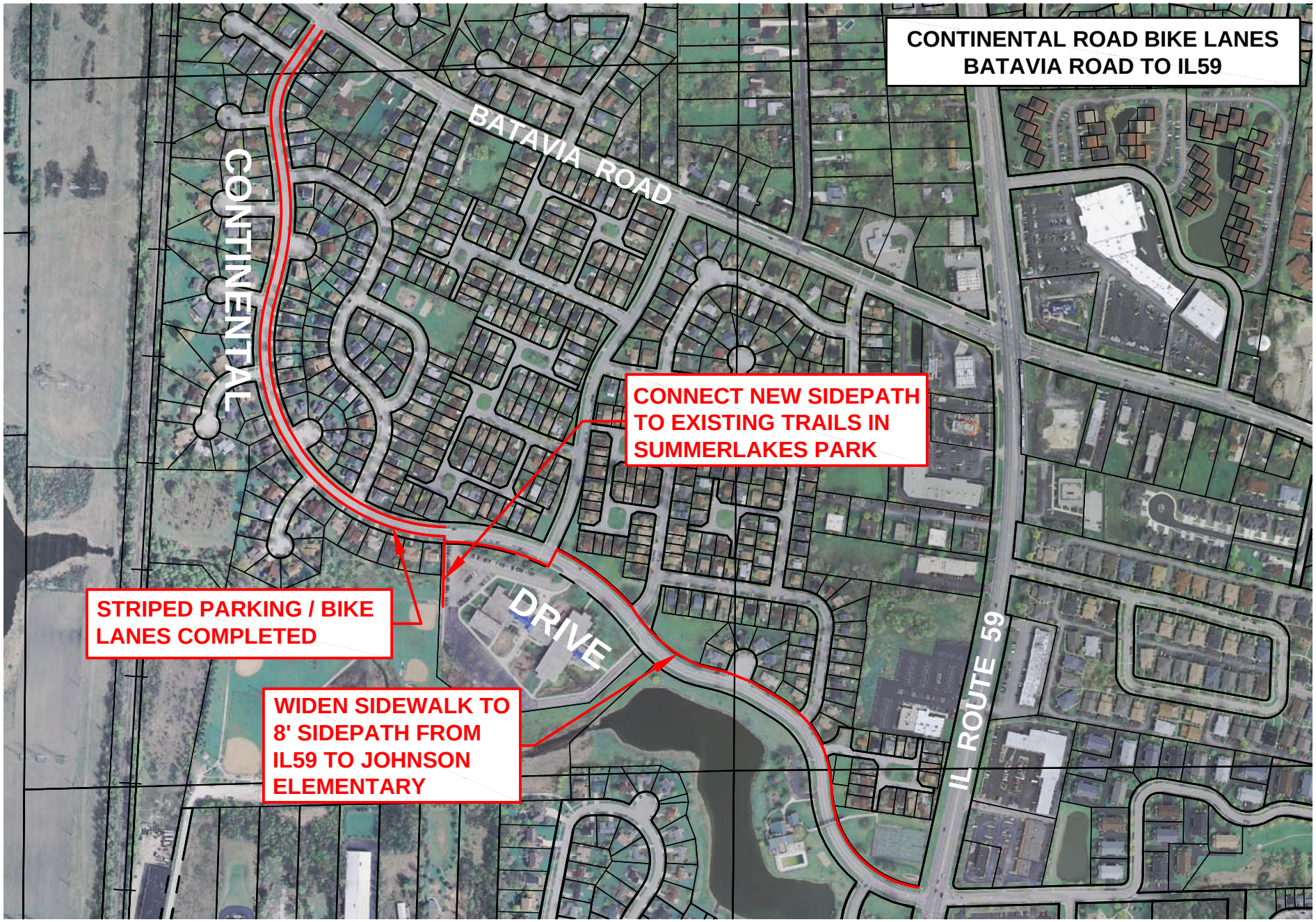
Plotted: July 23, 2010 @ 8:12 AM By: Larry Nolan – Tab: EX 5-1-A (8.5x11) LS
Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1"=300'	CLN
DATE:	EXHIBIT NO:
8/05/09	5-2-A

Plotted: March 1, 2010 @ 12:40 PM By: Larry Nolan – Tab: EX 5-2-A (8.5x11) PT
Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01 CLN



N

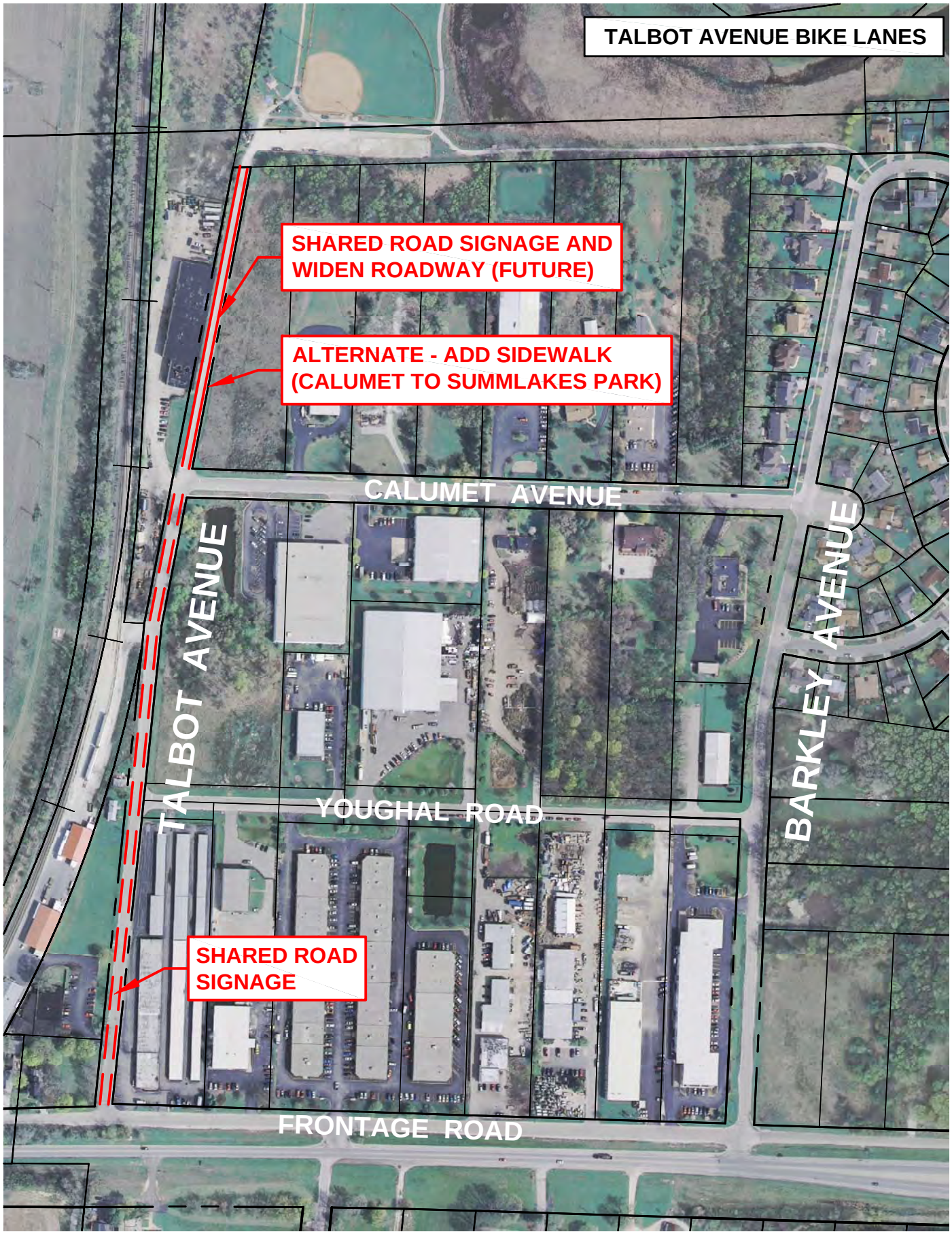
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=500'	CLN
DATE:	EXHIBIT NO:
8/05/09	5-3-A

Plotted: July 23, 2010 @ 8:14 AM By: Larry Nolan – Tab: EX 5-3-A (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01



BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1"=300'	CLN
DATE:	EXHIBIT NO:
8/05/09	5-5-A

Plotted: July 23, 2010 @ 8:16 AM By: Larry Nolan – Tab: EX 5-5-A (8.5x11) PT
Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01

* SEE APPENDIX 4 FOR MOST RECENT GEOMETRY PROPOSED BY IDOT.

N

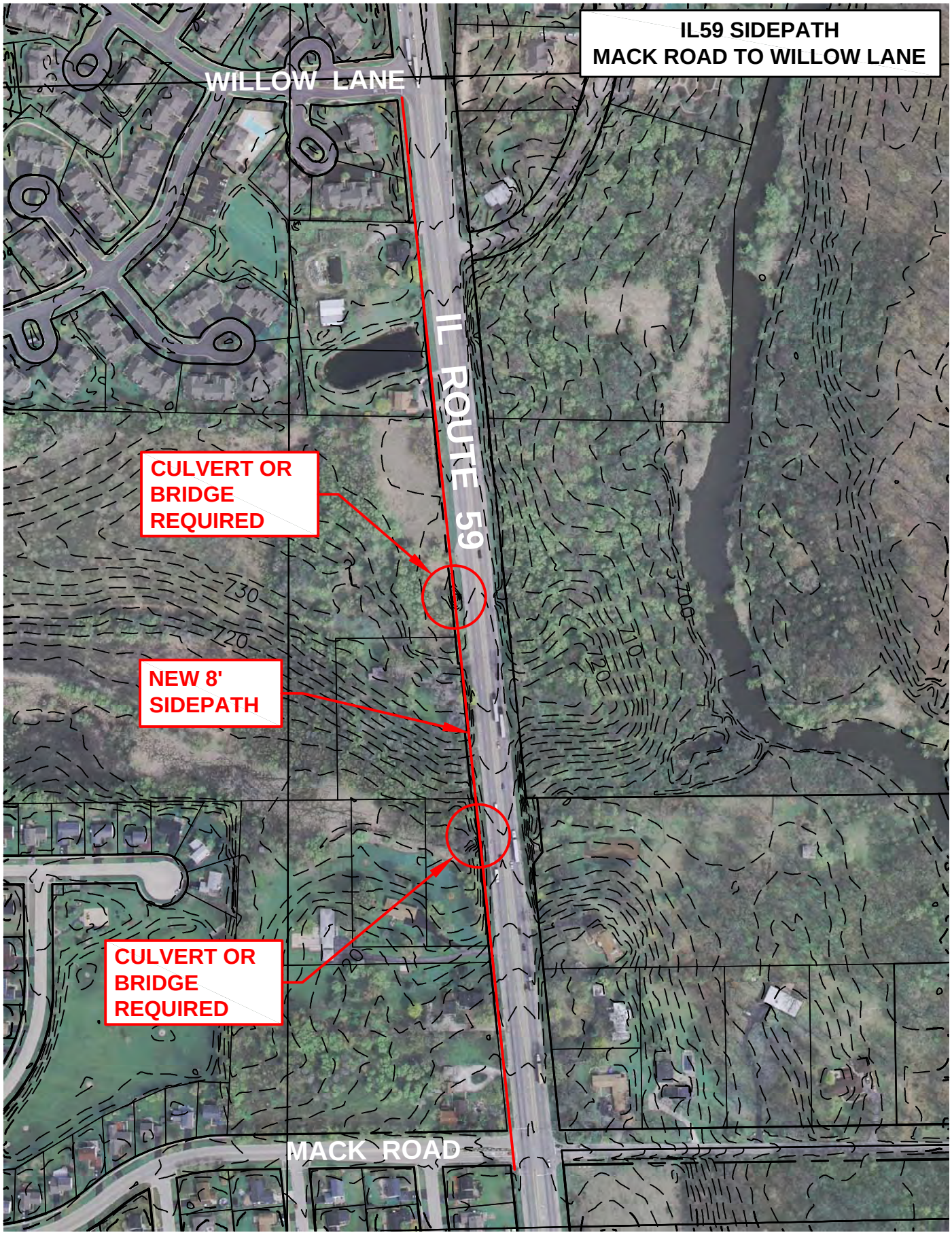
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1"=500'	CLN
DATE: 8/05/09	EXHIBIT NO: 5-6-A

Plotted: July 13, 2010 @ 4:32 PM By: Kris Pung – Tab: EX 5-6-A (8.5x11) PT

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01



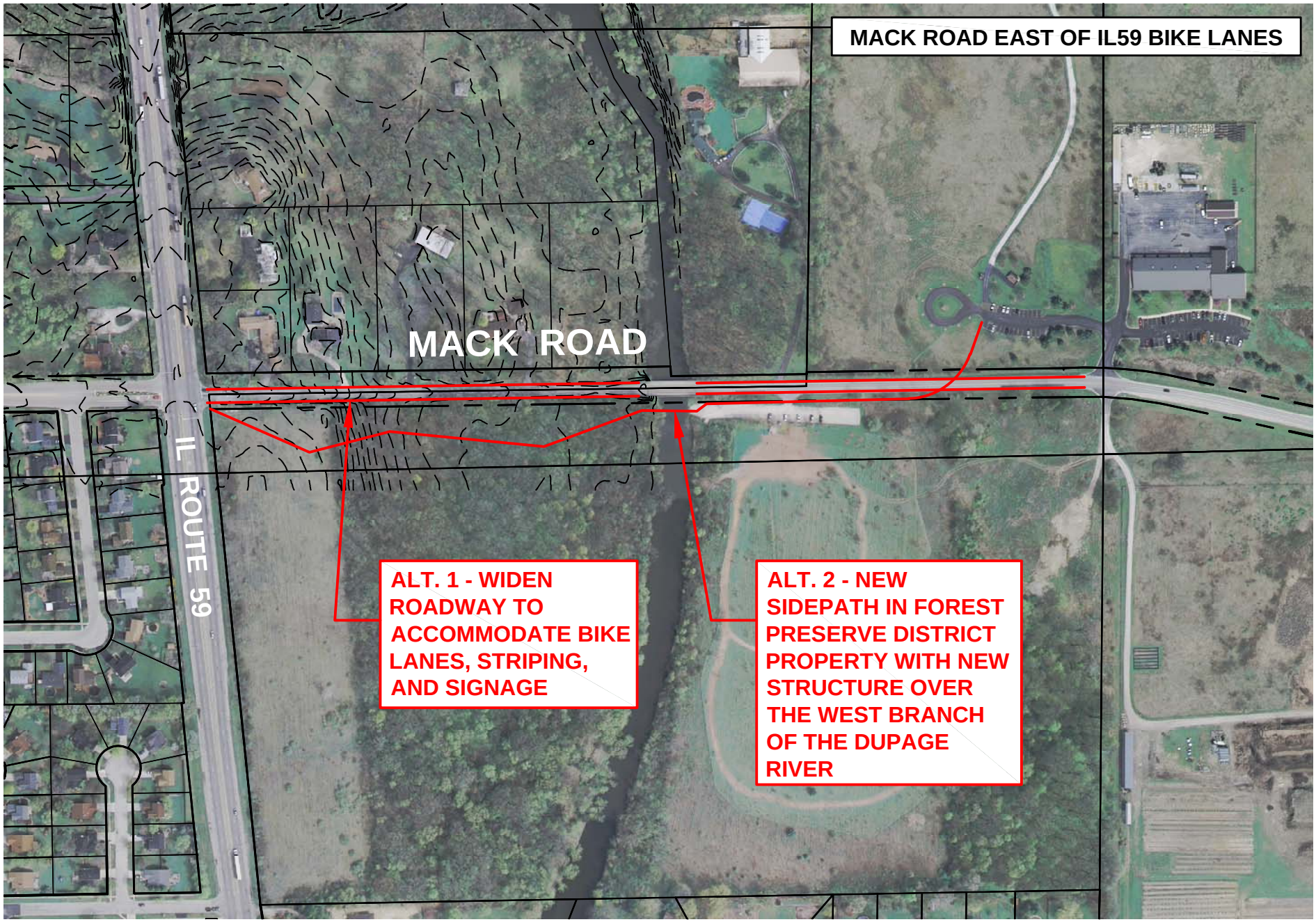
BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1"=300'	CLN
DATE:	EXHIBIT NO:
8/05/09	6-1-A

Plotted: July 23, 2010 @ 8:17 AM By: Larry Nolan – Tab: EX 6-1-A (8.5x11) PT

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01



N

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
1'=300'	CLN
DATE:	EXHIBIT NO:
8/05/09	8-1-A

Plotted: July 13, 2010 @ 4:33 PM By: Kris Pung – Tab: EX 8-1-A (8.5x11) LS

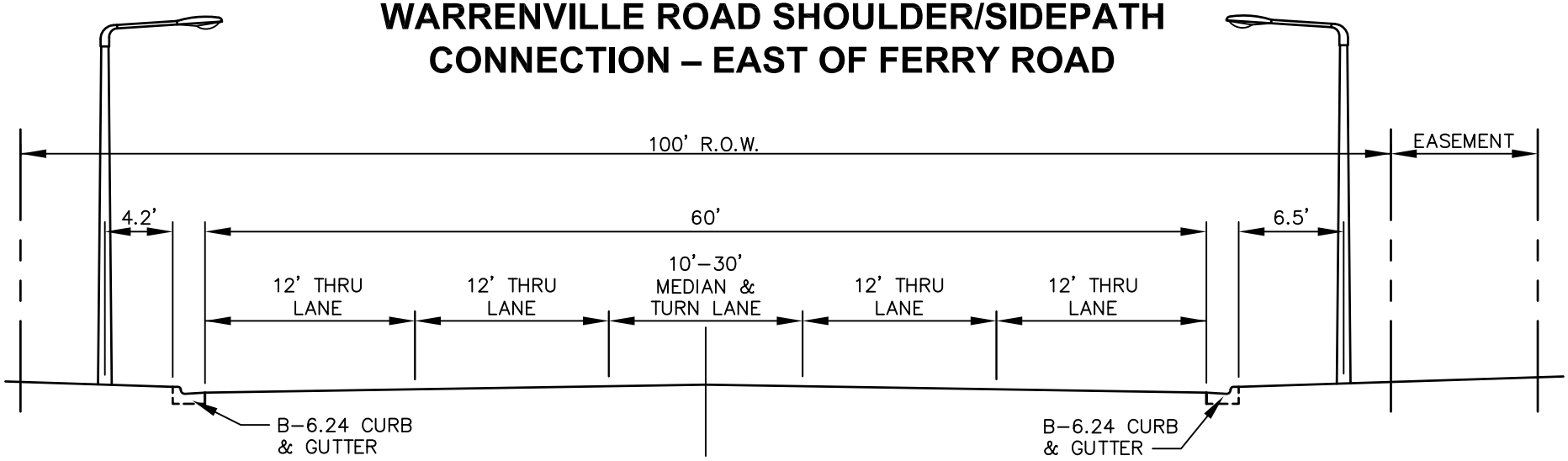
Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_01

BIKEWAY IMPLEMENTATION PLAN - PHASE II

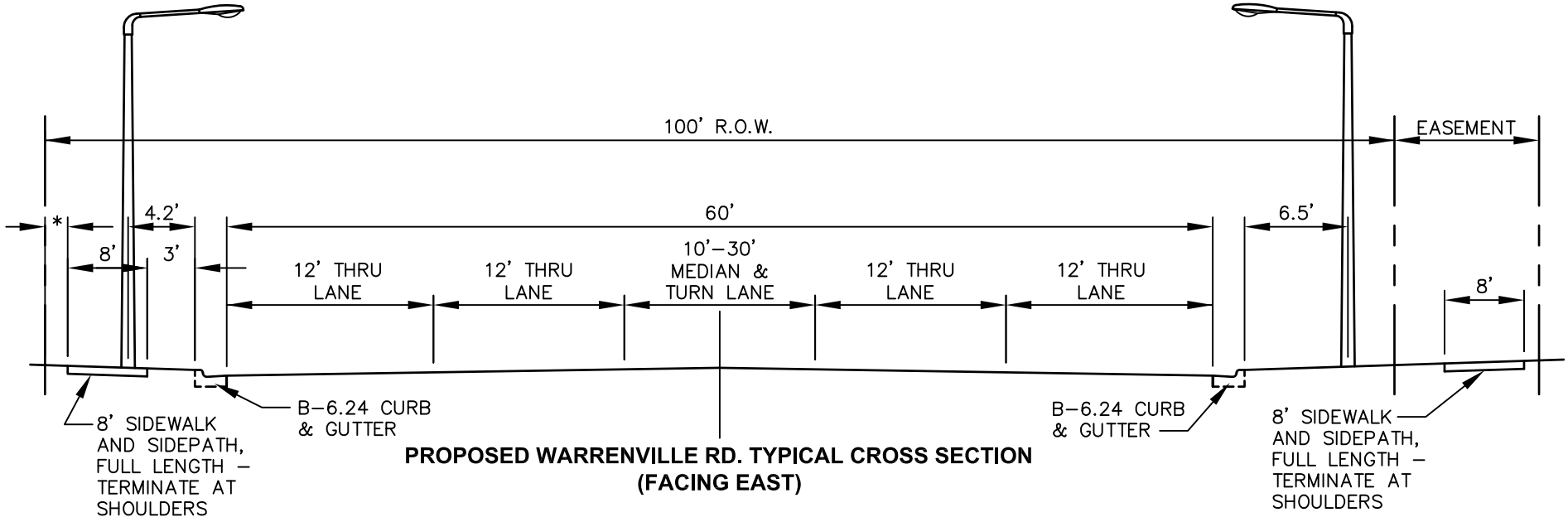
CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

APPENDIX II:
TYPICAL CROSS SECTION EXHIBITS

WARRENVILLE ROAD SHOULDER/SIDEPATH CONNECTION – EAST OF FERRY ROAD



EXISTING WARRENVILLE RD. TYPICAL CROSS SECTION (FACING EAST)



PROPOSED WARRENVILLE RD. TYPICAL CROSS SECTION (FACING EAST)

* VERIFY DISTANCE FROM R.O.W. TO EDGE OF EXIST. SIDEWALK

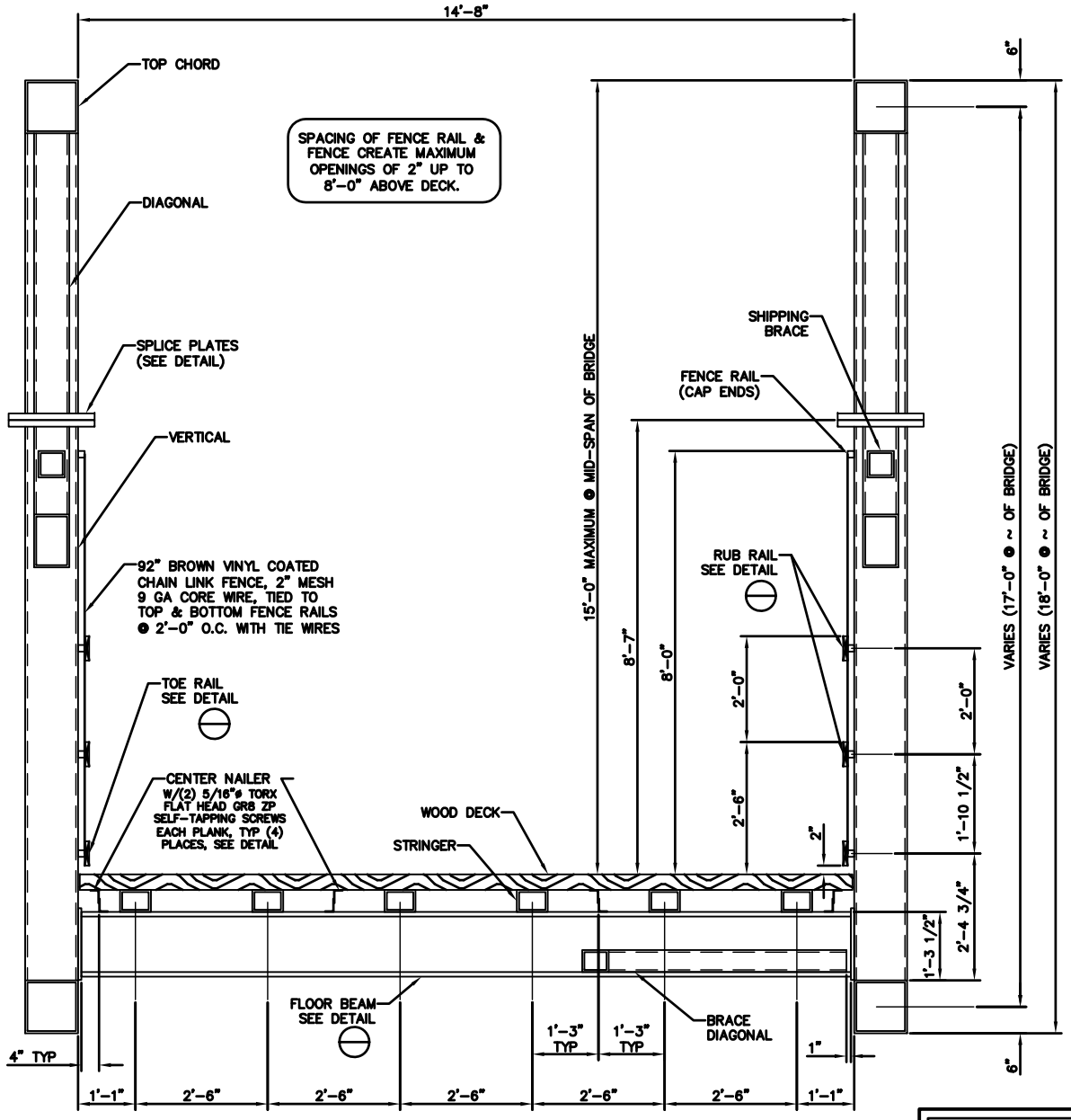
** COORDINATION WITH THE COUNTY REQUIRED FOR ALL IMPROVEMENTS DUE TO JURISDICTIONAL LIMITATIONS.

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	1–2–B

DIEHL ROAD – SIDEPATH EXTENSION TO WEST BRANCH REGIONAL TRAIL



⊖ BRIDGE SECTION

NOTES:

1) FINAL DIMENSIONS TO BE DETERMINED DURING FINAL DESIGN. THIS DRAWING IS SCHEMATIC ONLY.

2) HANDRAIL STYLE AND HEIGHT TO BE DETERMINED BY OWNER.

3) DECK MATERIAL (CONCRETE OR TIMBER) TO BE DETERMINED BY OWNER.

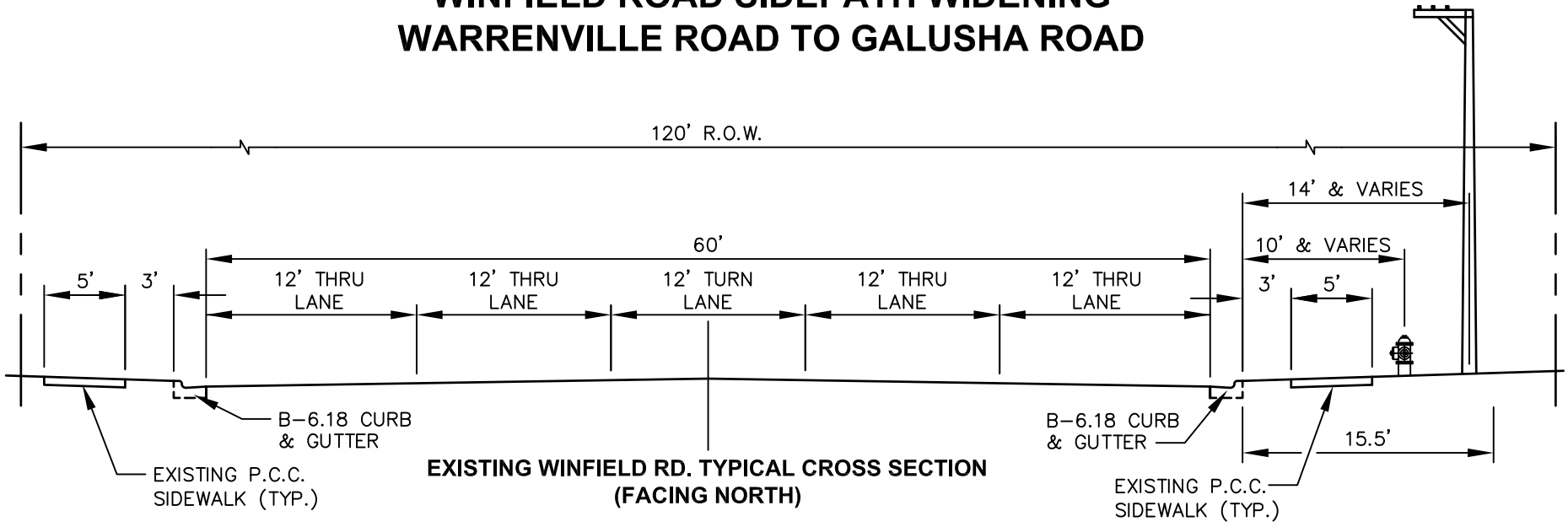
** COORDINATION WITH THE FOREST PRESERVE DISTRICT REQUIRED FOR ALL IMPROVEMENTS DUE TO JURISDICTIONAL LIMITATIONS.

BIKEWAY IMPLEMENTATION PLAN

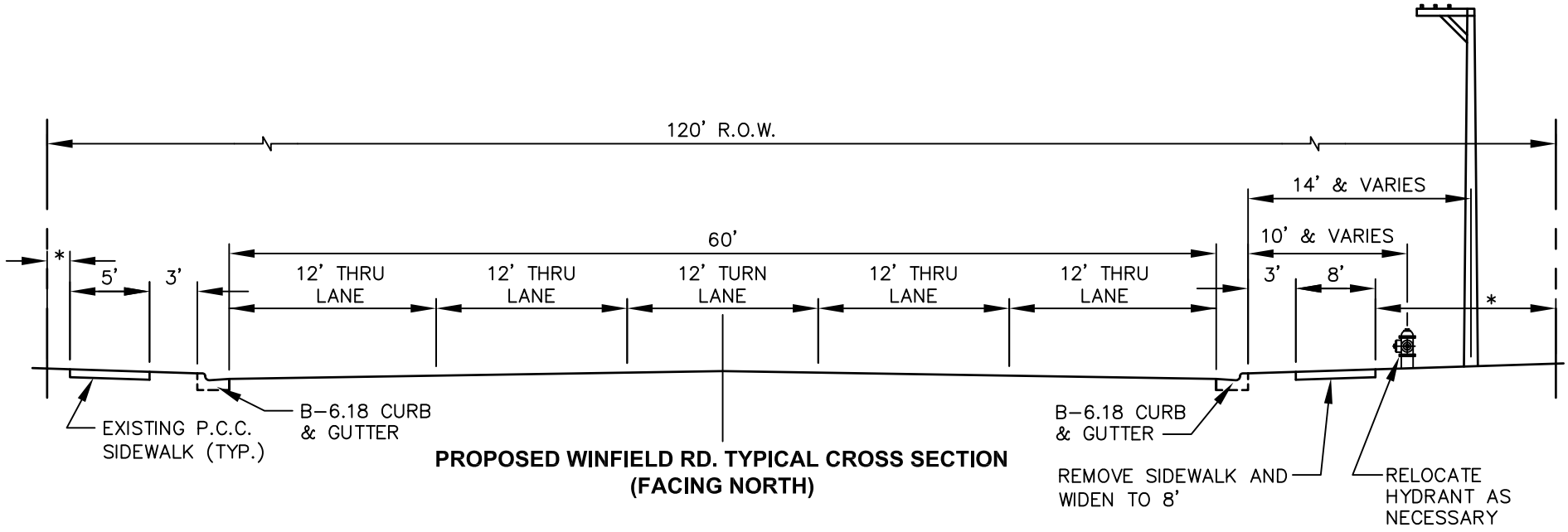
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	1-3-B

WINFIELD ROAD SIDEPATH WIDENING
WARRENVILLE ROAD TO GALUSHA ROAD



EXISTING WINFIELD RD. TYPICAL CROSS SECTION (FACING NORTH)



PROPOSED WINFIELD RD. TYPICAL CROSS SECTION (FACING NORTH)

* VERIFY DISTANCE FROM R.O.W. TO EDGE OF EXIST. SIDEWALK POTENTIAL EASEMENTS REQUIRED

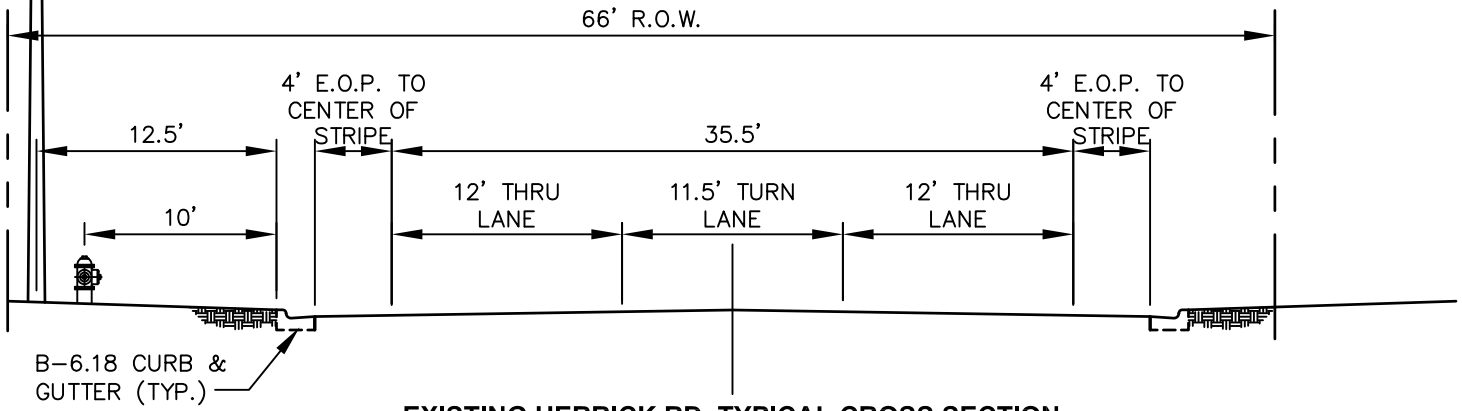
** COORDINATION WITH THE COUNTY REQUIRED FOR ALL IMPROVEMENTS DUE TO JURISDICTIONAL LIMITATIONS.

BIKEWAY IMPLEMENTATION PLAN

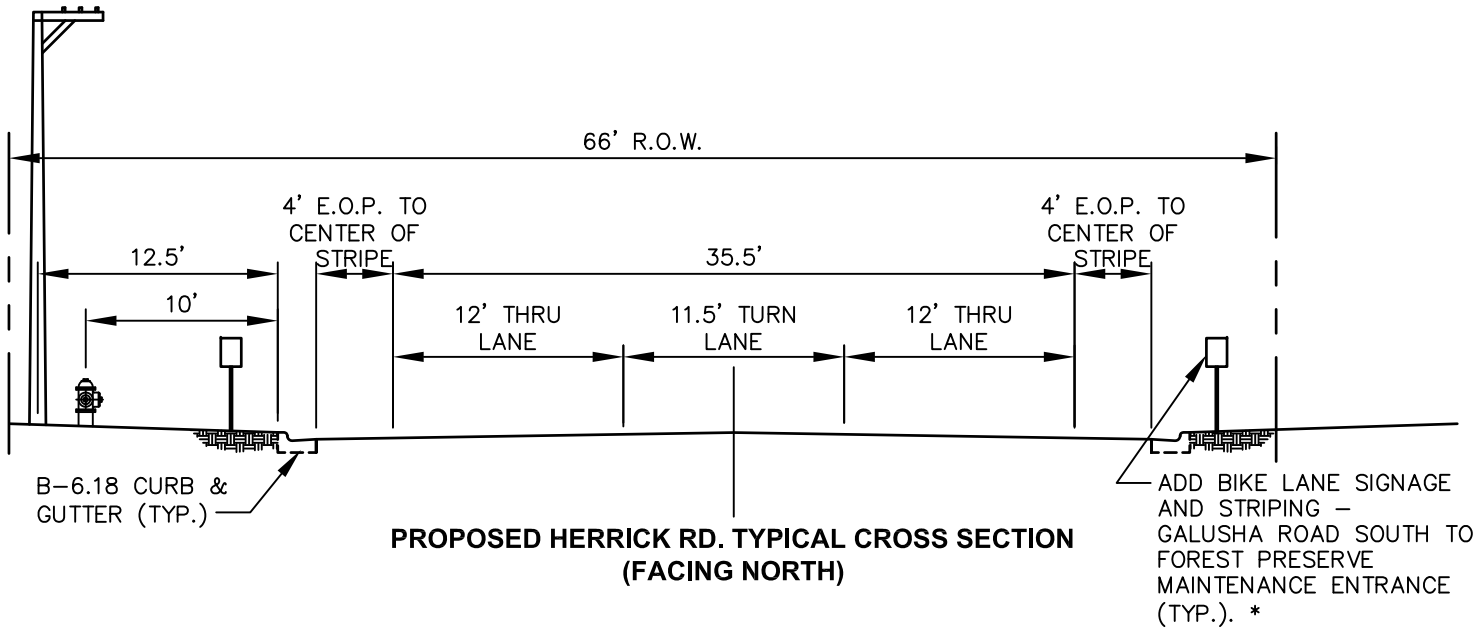
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	2-2-B

HERRICK ROAD BIKE LANES – GALUSHA ROAD TO HERRICK LAKE FOREST PRESERVE



EXISTING HERRICK RD. TYPICAL CROSS SECTION (FACING NORTH)



PROPOSED HERRICK RD. TYPICAL CROSS SECTION (FACING NORTH)

* COORDINATE WITH COUNTY FOR SIGNAGE AND STRIPING REQUIREMENTS.

BIKEWAY IMPLEMENTATION PLAN

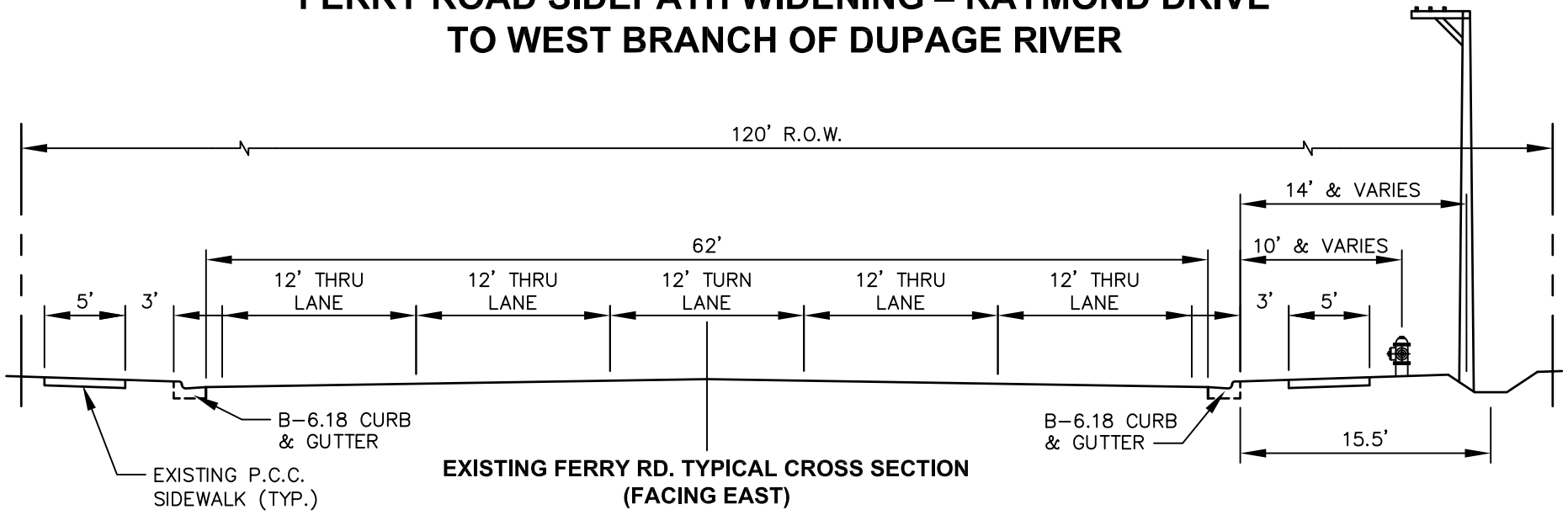
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	2–3–B

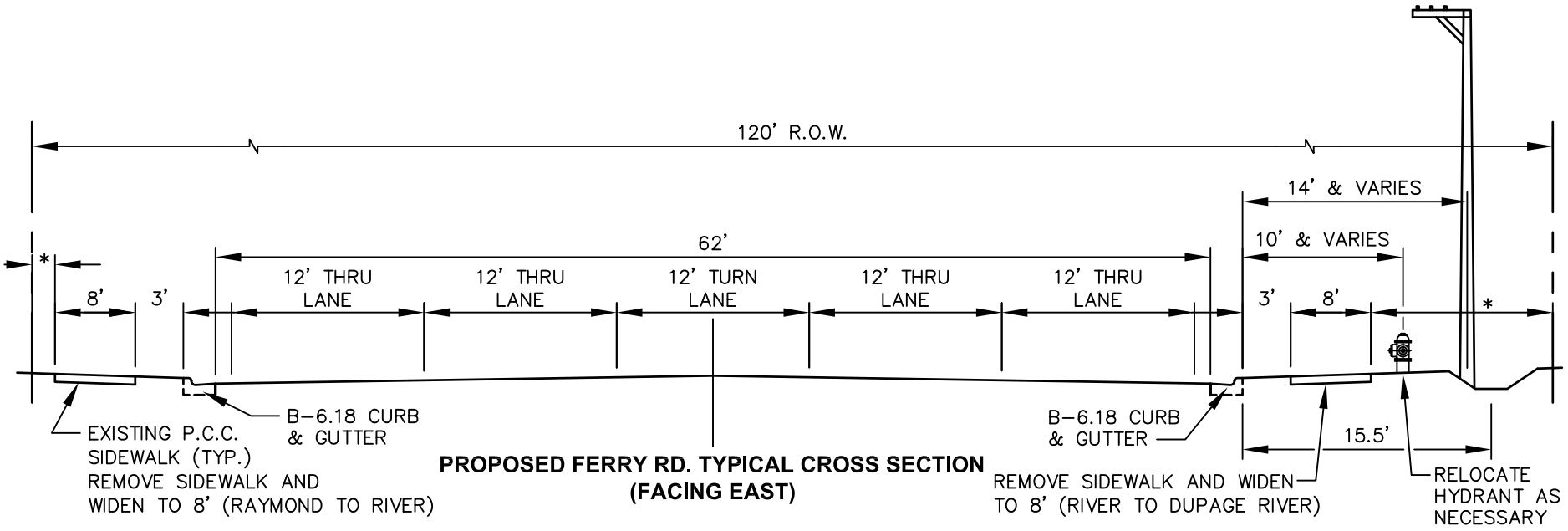
Plotted: July 13, 2010 @ 3:05 PM By: Kris Pung – Tab: EX 2–3–B Herrick Rd. (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901–EXHIBIT_02

FERRY ROAD SIDEPATH WIDENING – RAYMOND DRIVE TO WEST BRANCH OF DUPAGE RIVER



EXISTING FERRY RD. TYPICAL CROSS SECTION (FACING EAST)



PROPOSED FERRY RD. TYPICAL CROSS SECTION (FACING EAST)

* VERIFY DISTANCE FROM R.O.W. TO EDGE OF EXIST. SIDEWALK

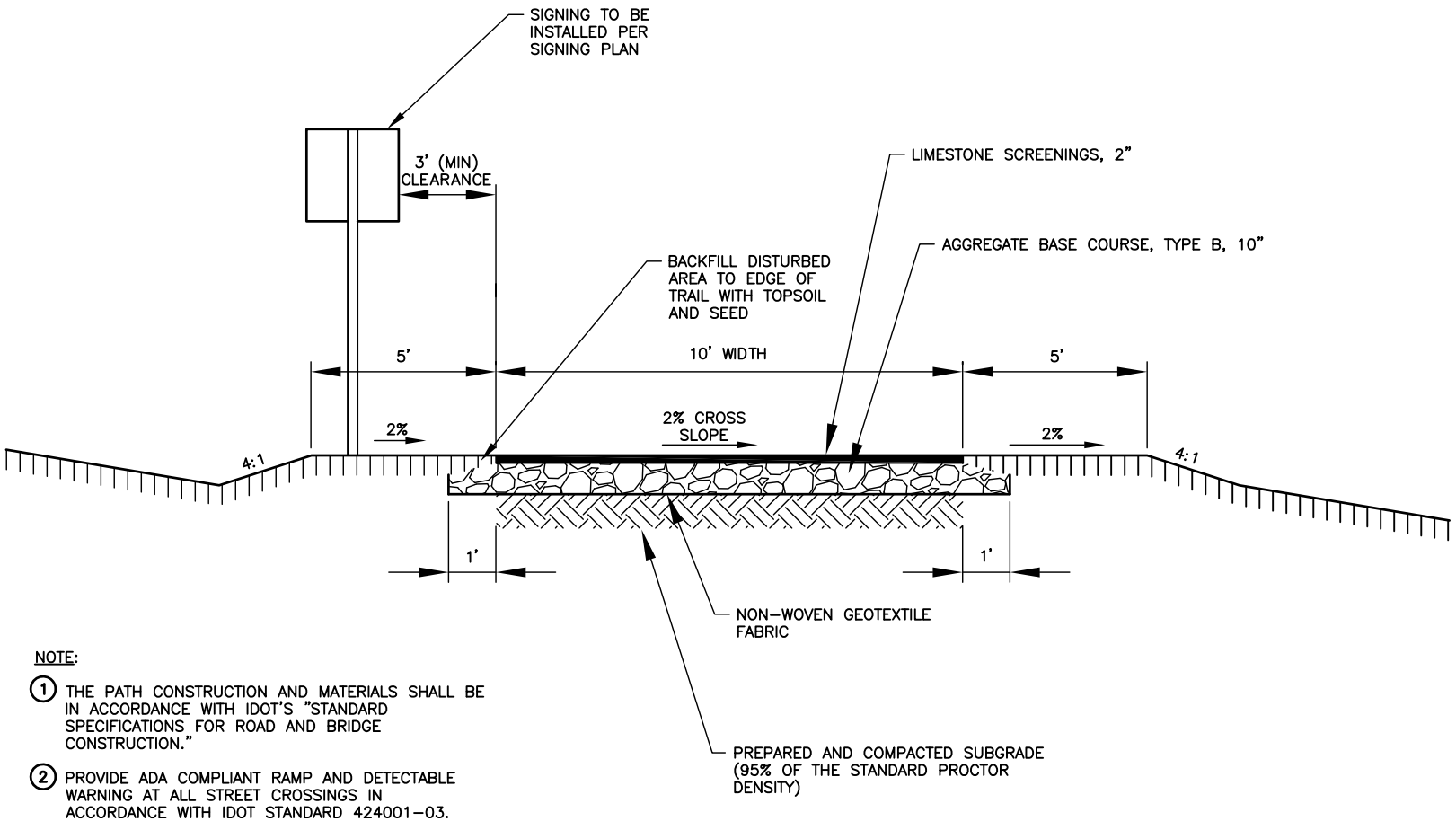
** COORDINATION WITH THE COUNTY REQUIRED FOR ALL IMPROVEMENTS DUE TO JURISDICTIONAL LIMITATIONS.

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	3-1-B

RIVER CLEAN-UP AND RESTORATION TRAILS



NOTE:

1. THE PATH CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH IDOT'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION."
2. PROVIDE ADA COMPLIANT RAMP AND DETECTABLE WARNING AT ALL STREET CROSSINGS IN ACCORDANCE WITH IDOT STANDARD 424001-03.

TYPICAL CROSS SECTION

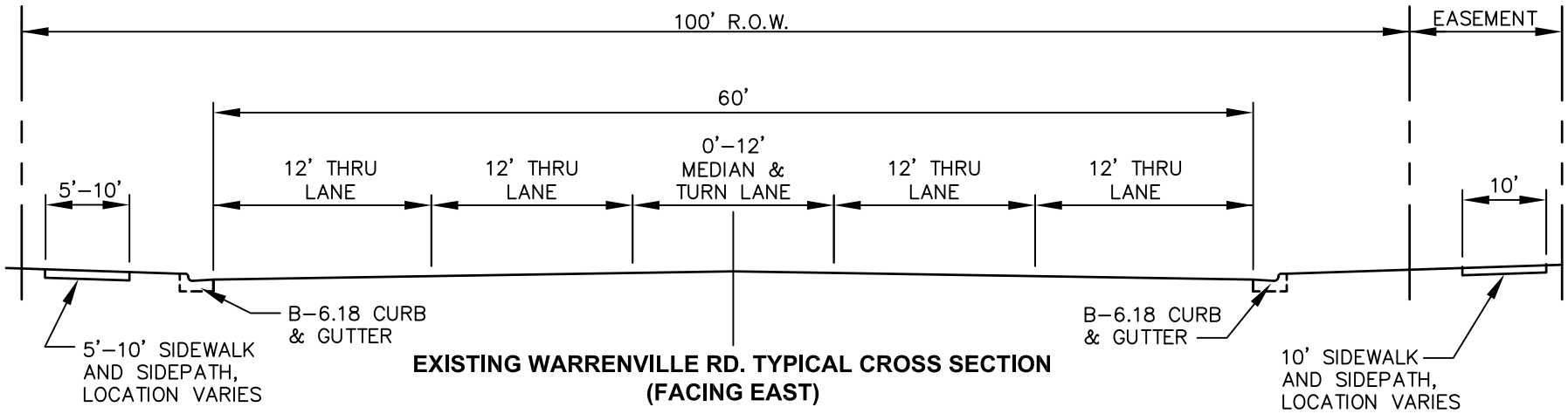
* COORDINATION WITH FOREST PRESERVE DISTRICT REQUIRED FOR ALL WORK DUE TO JURISDICTIONAL LIMITATIONS.

BIKEWAY IMPLEMENTATION PLAN

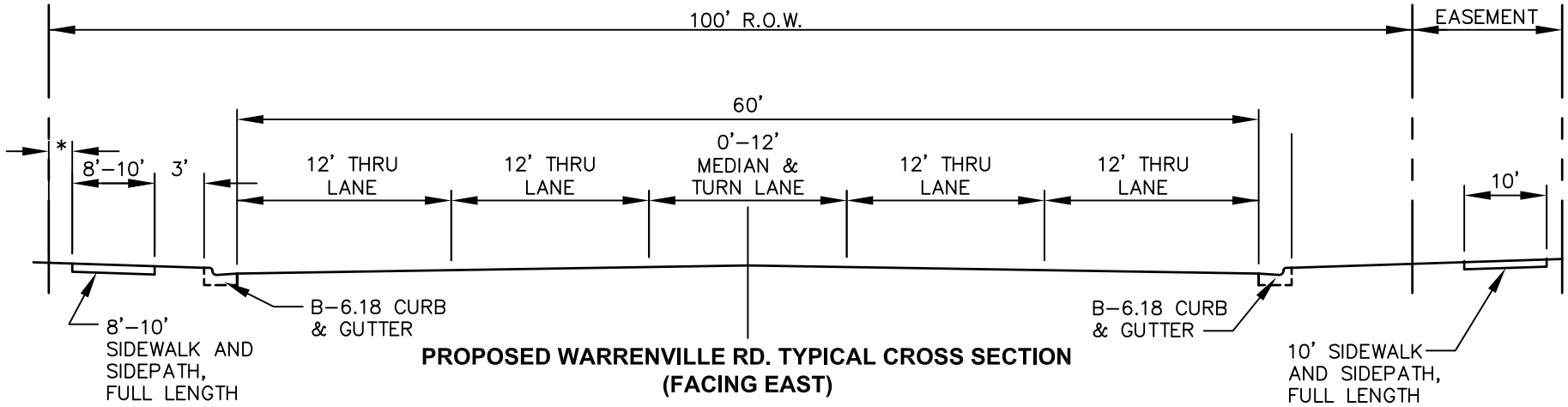
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	3-3-B

WARRENVILLE ROAD SIDEPATH
(OLD TOWN)



EXISTING WARRENVILLE RD. TYPICAL CROSS SECTION
(FACING EAST)



PROPOSED WARRENVILLE RD. TYPICAL CROSS SECTION
(FACING EAST)

* VERIFY DISTANCE FROM R.O.W. TO EDGE OF EXIST. SIDEWALK

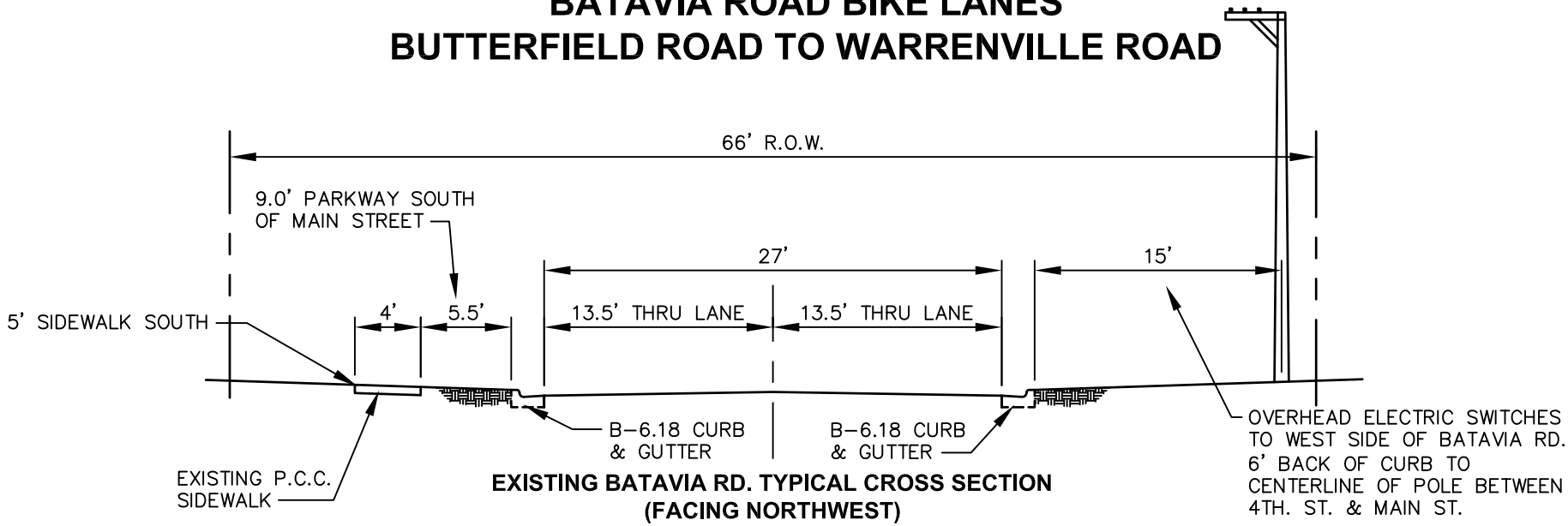
** COORDINATION WITH THE COUNTY REQUIRED FOR ALL IMPROVEMENTS DUE TO JURISDICTIONAL LIMITATIONS.

BIKEWAY IMPLEMENTATION PLAN

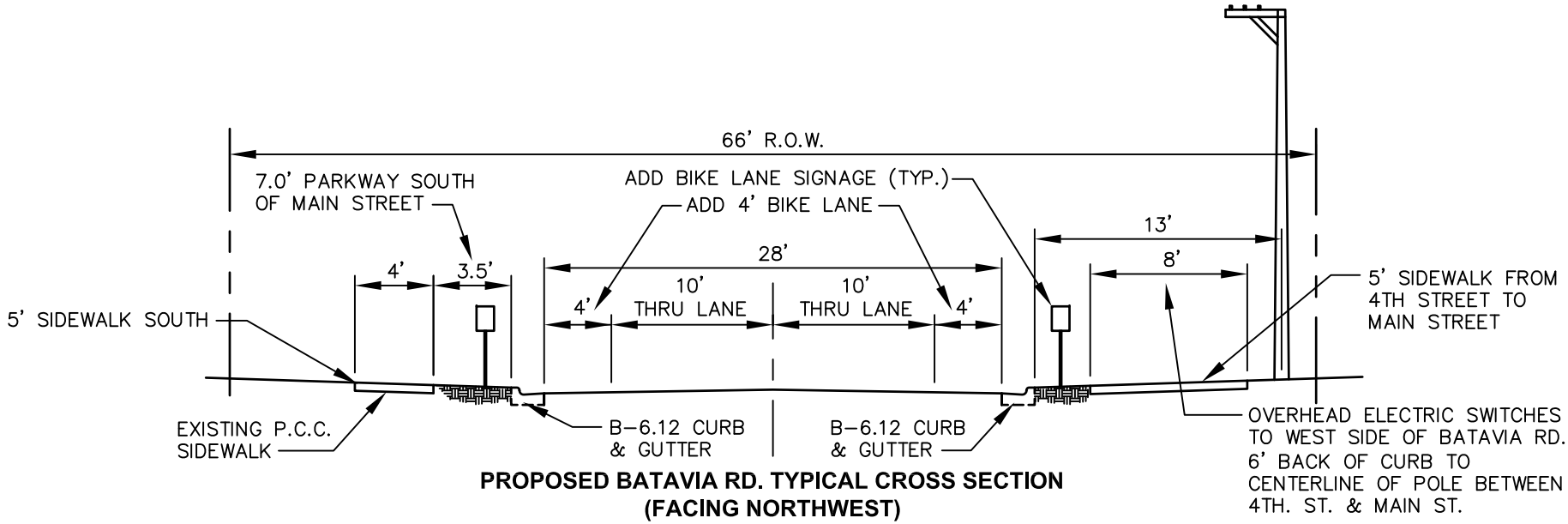
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	3–7–B

BATAVIA ROAD BIKE LANES
BUTTERFIELD ROAD TO WARRENVILLE ROAD



EXISTING BATAVIA RD. TYPICAL CROSS SECTION
(FACING NORTHWEST)



PROPOSED BATAVIA RD. TYPICAL CROSS SECTION
(FACING NORTHWEST)

WIDEN ROADWAY BY 2' ON EACH SIDE.
CREATE 4' BIKE LANE.

BIKEWAY IMPLEMENTATION PLAN

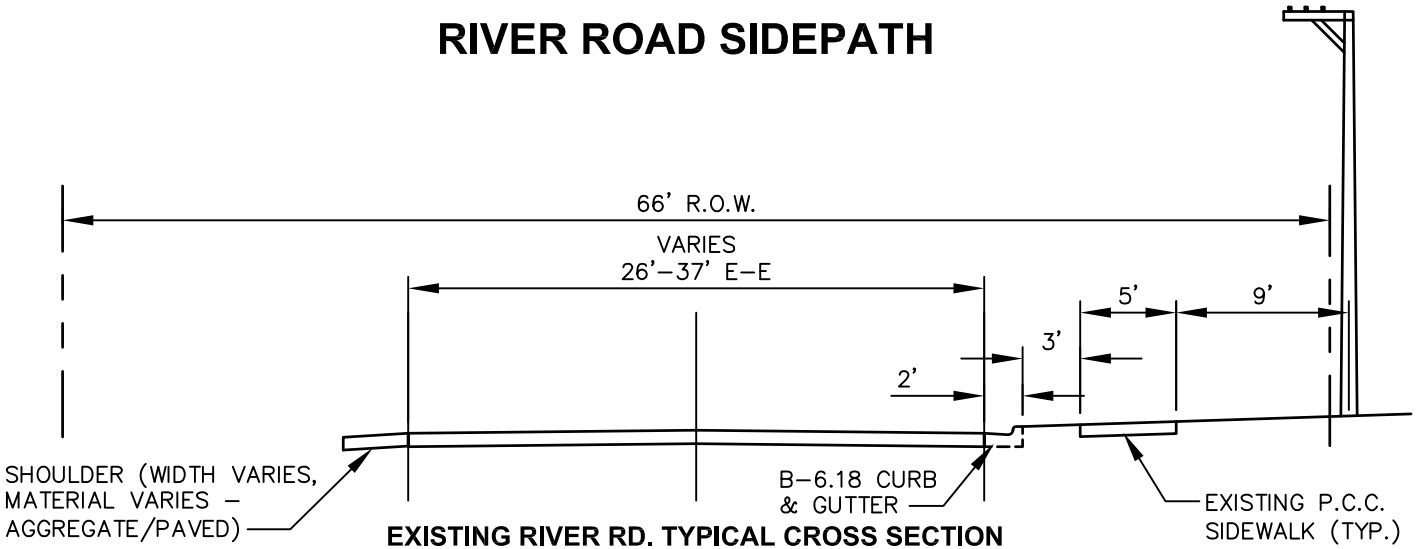
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	3-8-B

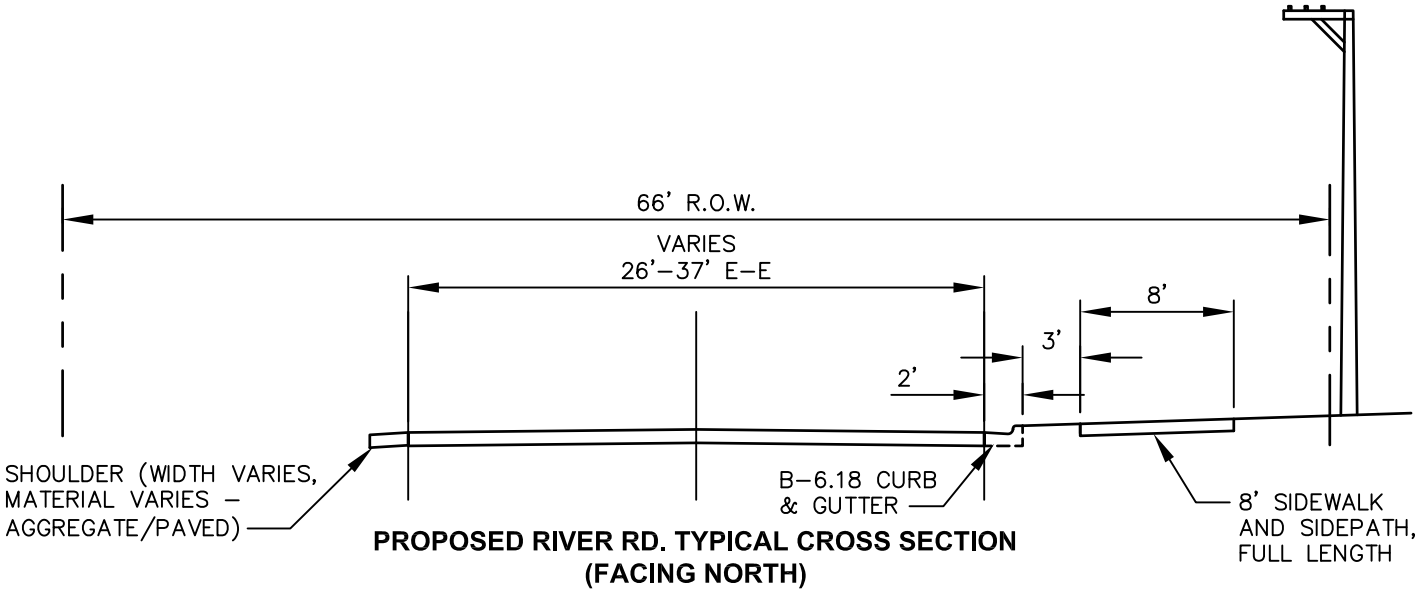
Plotted: July 13, 2010 @ 3:09 PM By: Kris Pung – Tab: EX 3-8-B Batavia Rd.. (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_02

RIVER ROAD SIDEPATH



EXISTING RIVER RD. TYPICAL CROSS SECTION
(FACING NORTH)



PROPOSED RIVER RD. TYPICAL CROSS SECTION
(FACING NORTH)

** COORDINATION WITH THE COUNTY REQUIRED FOR ALL IMPROVEMENTS DUE TO JURISDICTIONAL LIMITATIONS.

BIKEWAY IMPLEMENTATION PLAN

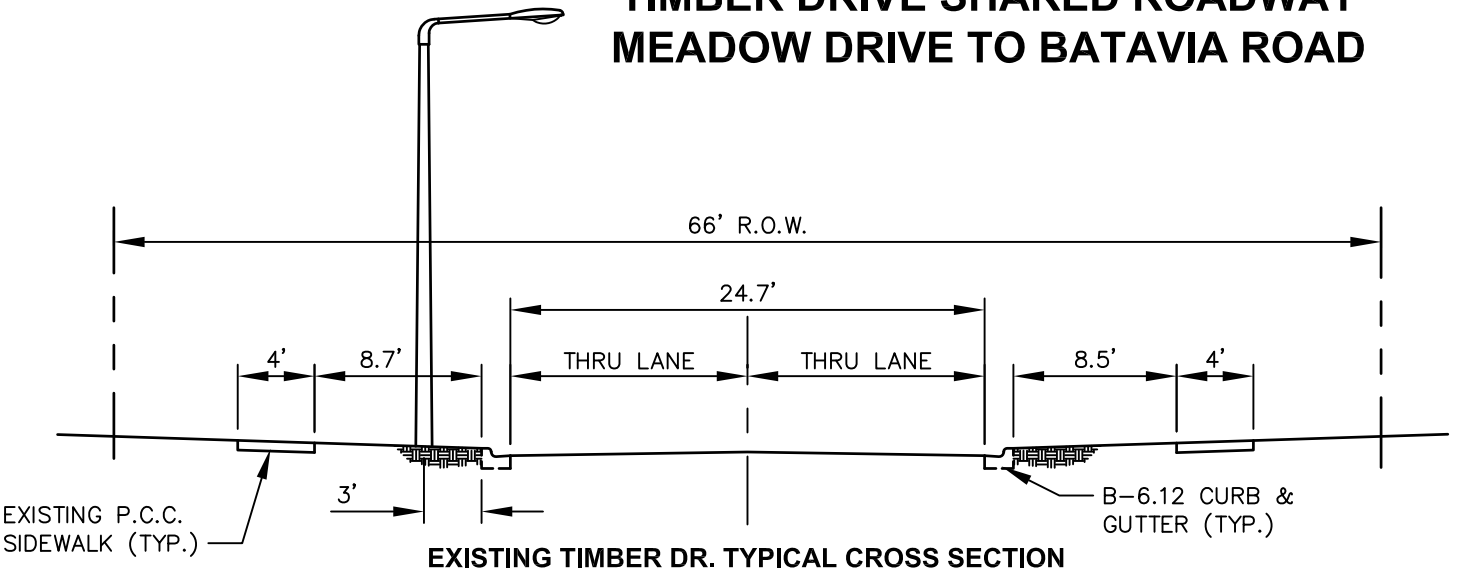
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	3–9–B

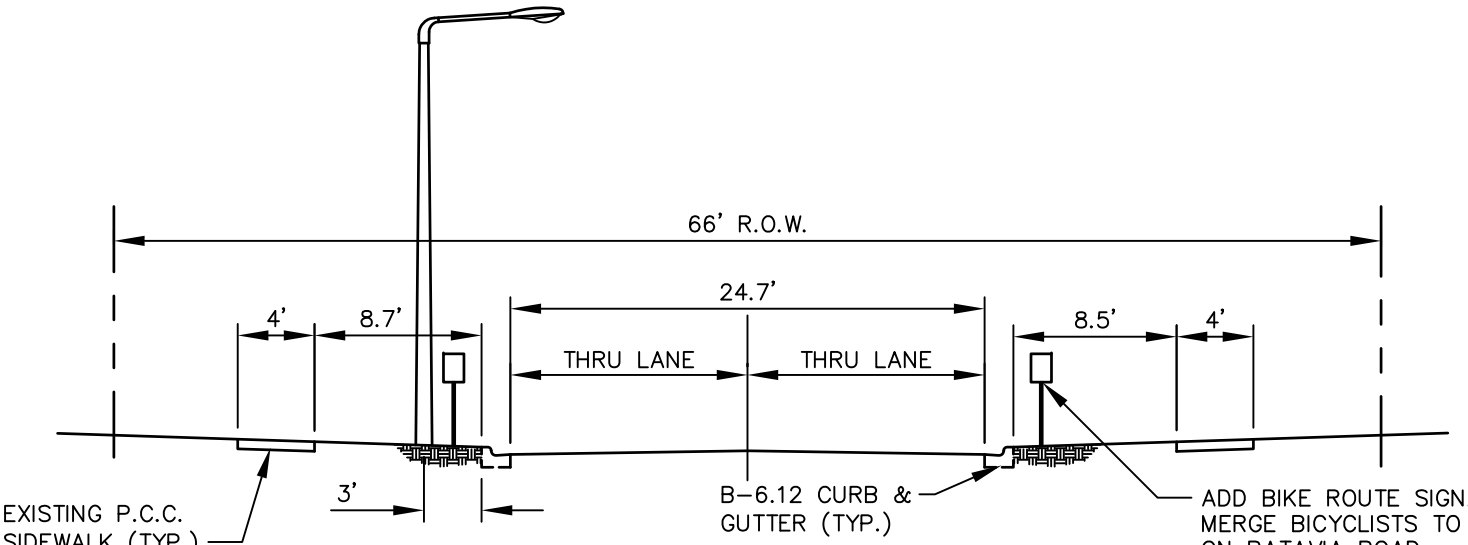
Plotted: July 13, 2010 @ 3:09 PM By: Kris Pung – Tab: EX 3–9–B River Rd (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901–EXHIBIT_02

TIMBER DRIVE SHARED ROADWAY
MEADOW DRIVE TO BATAVIA ROAD



EXISTING TIMBER DR. TYPICAL CROSS SECTION
(FACING NORTHEAST)



PROPOSED TIMBER DR. TYPICAL CROSS SECTION
(FACING NORTHEAST)

BIKEWAY IMPLEMENTATION PLAN

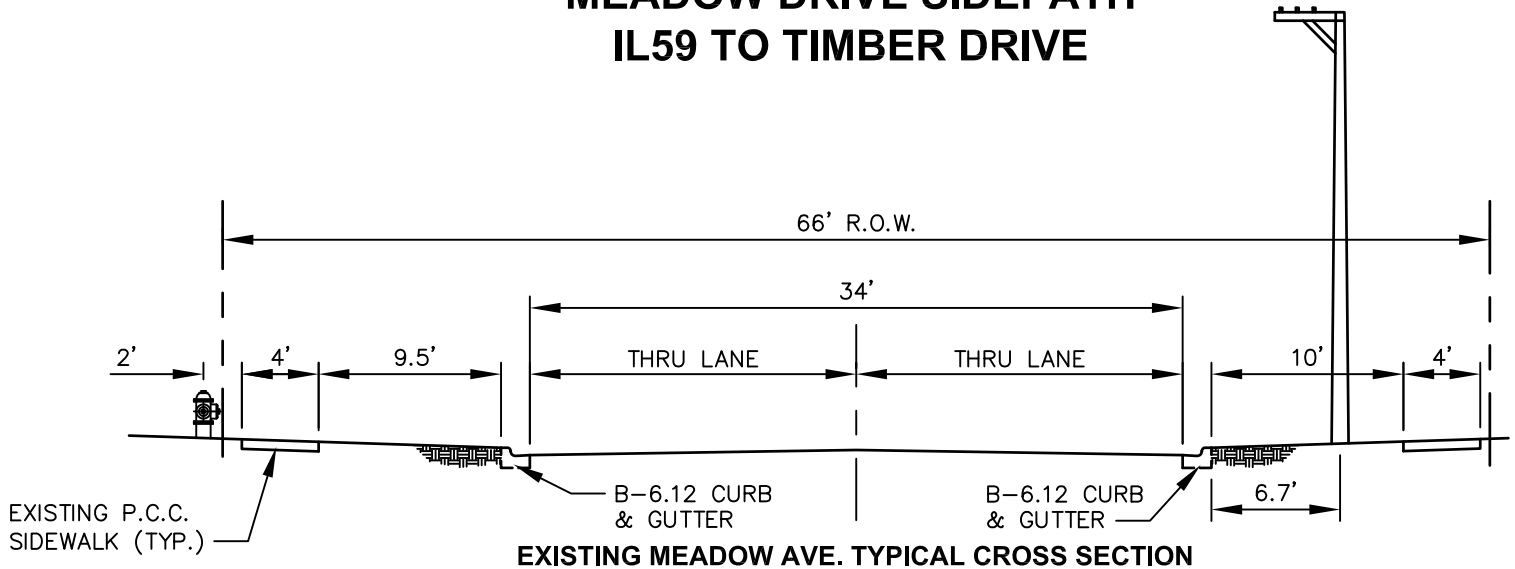
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	4-1-B

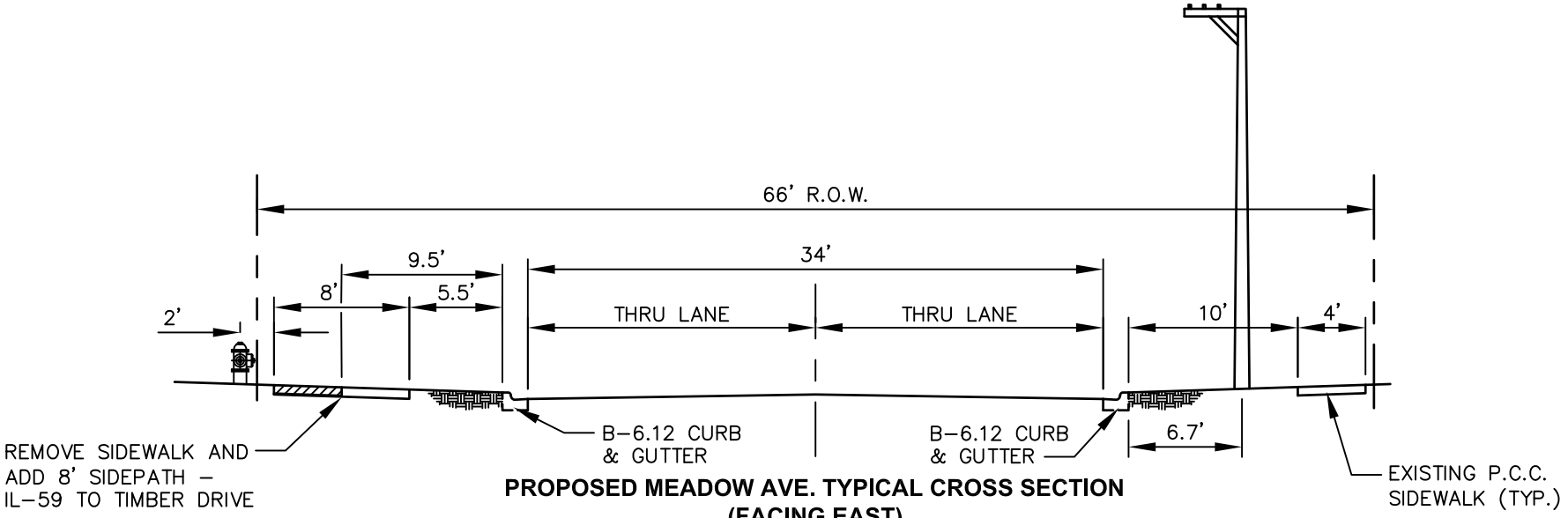
Plotted: July 13, 2010 @ 3:09 PM By: Kris Pung – Tab: EX 4-1-B Timber Dr. (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_02

MEADOW DRIVE SIDEPATH
IL59 TO TIMBER DRIVE



EXISTING MEADOW AVE. TYPICAL CROSS SECTION
(FACING EAST)



PROPOSED MEADOW AVE. TYPICAL CROSS SECTION
(FACING EAST)

- AT IL ROUTE 59 AND MEADOW, MODERNIZE TRAFFIC SIGNALS AND PROVIDE CROSSING TO CONTINENTAL DRIVE.

BIKEWAY IMPLEMENTATION PLAN

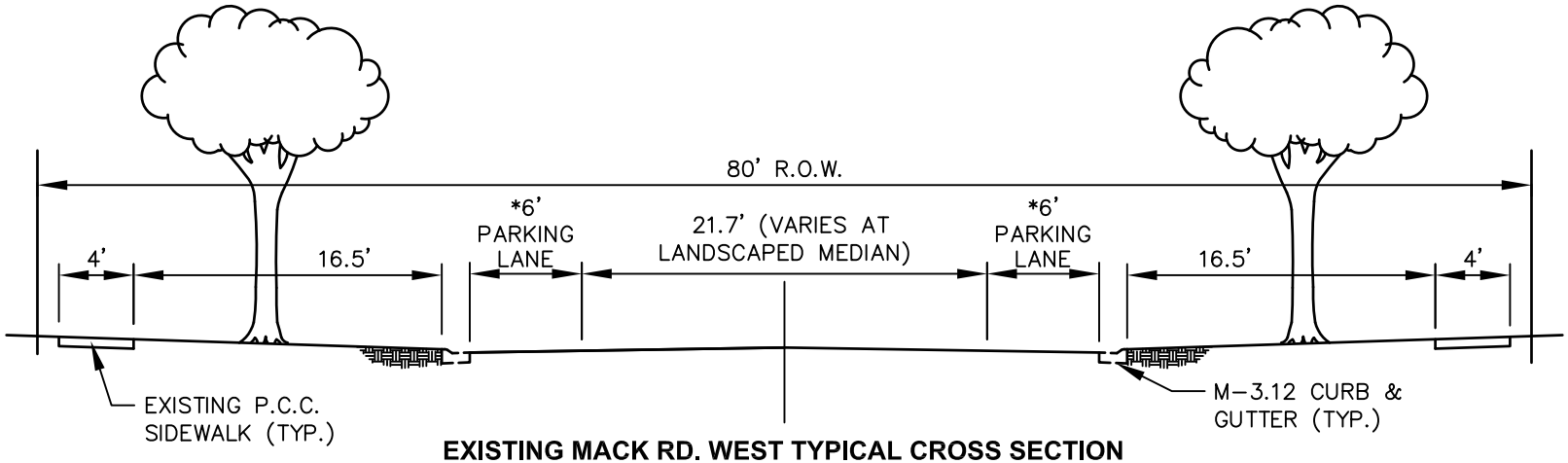
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 - www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	4-2-B

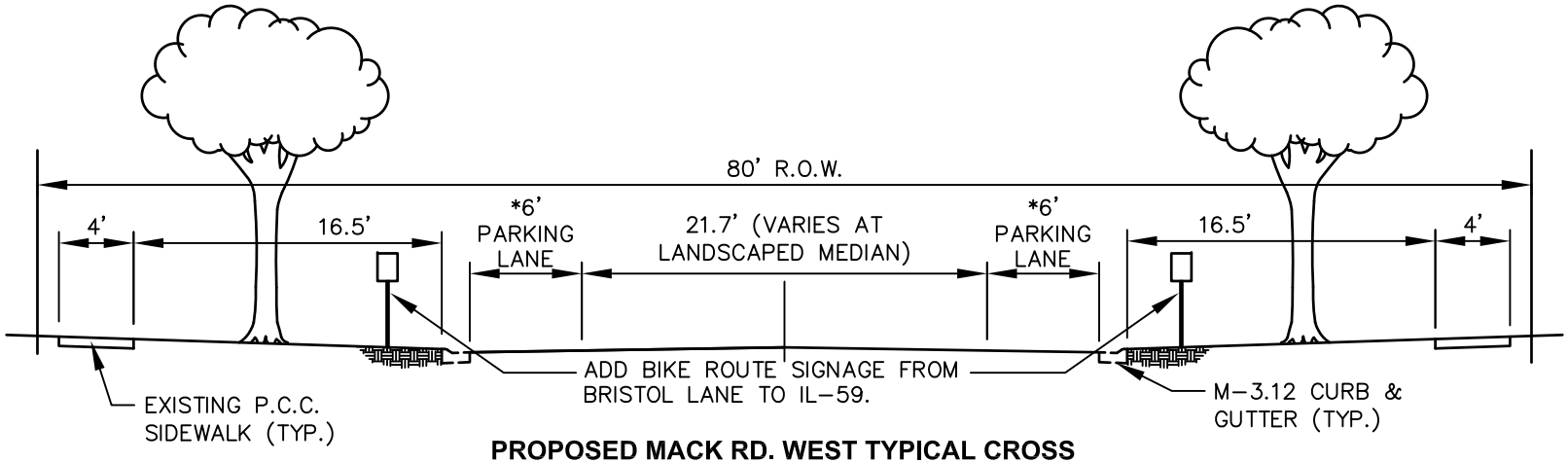
Plotted: July 13, 2010 @ 3:09 PM By: Kris Pung - Tab: EX 4-2-B Meadow Ave. (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_02

MACK ROAD BIKE LANES
BRISTOL TO IL59



EXISTING MACK RD. WEST TYPICAL CROSS SECTION (FACING EAST)



PROPOSED MACK RD. WEST TYPICAL CROSS SECTION (FACING EAST)

* PARKING LANES END AT BRISTOL LANE

BIKEWAY IMPLEMENTATION PLAN

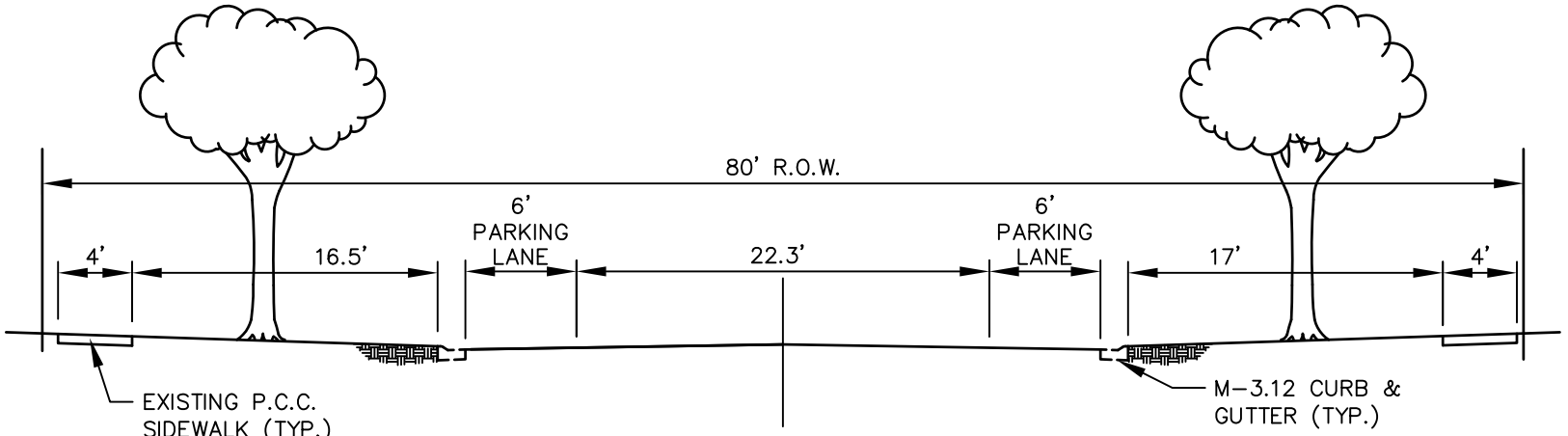
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	5-1-B

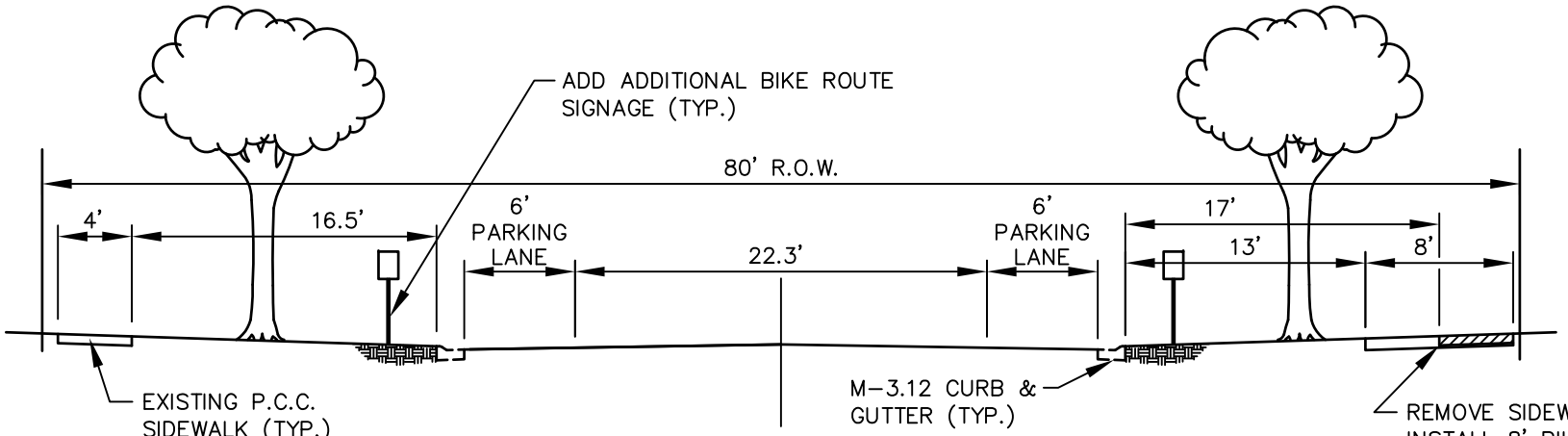
Plotted: July 13, 2010 @ 3:10 PM By: Kris Pung – Tab: EX 5-1-B Mack Rd. West (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_02

CONTINENTAL ROAD BIKE LANES
BATAVIA ROAD TO IL59



EXISTING CONTINENTAL DR. NORTH TYPICAL CROSS SECTION
(FACING NORTH)



PROPOSED CONTINENTAL DR. NORTH TYPICAL CROSS SECTION
(FACING NORTH)

BIKEWAY IMPLEMENTATION PLAN

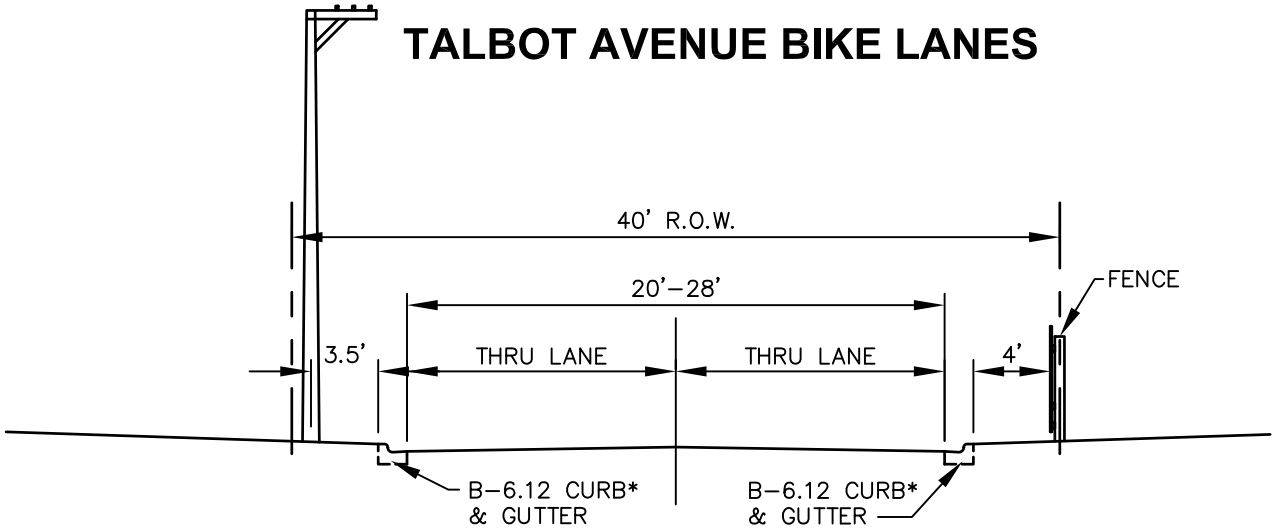
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	5-3-B

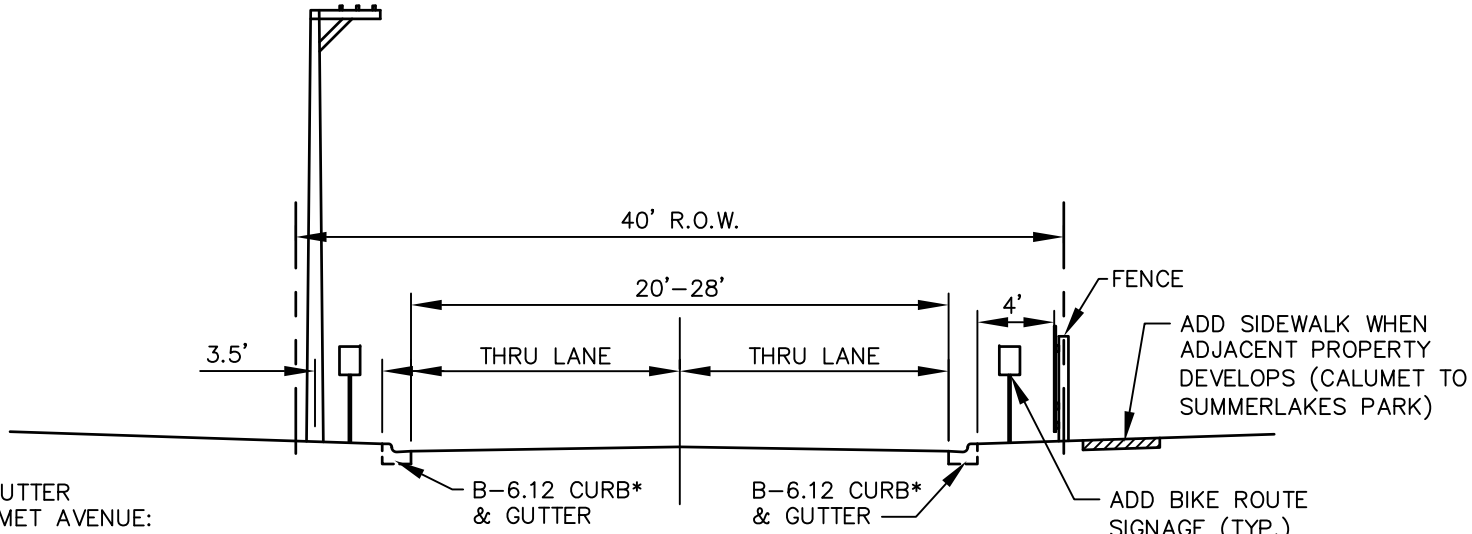
Plotted: July 13, 2010 @ 3:10 PM By: Kris Pung – Tab: EX 5-3-B Continental Dr. North (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901-EXHIBIT_02

TALBOT AVENUE BIKE LANES



EXISTING TALBOT AVE. TYPICAL CROSS SECTION
(FACING NORTH)



PROPOSED TALBOT AVE. TYPICAL CROSS SECTION
(FACING NORTH)

* NO CURB AND GUTTER NORTH OF CALUMET AVENUE: ROADWAY REDUCES IN WIDTH TO APPROX. 20'; NO POTENTIAL FOR STRIPED BIKE LANES NORTH OF CALUMET AVENUE.

BIKEWAY IMPLEMENTATION PLAN

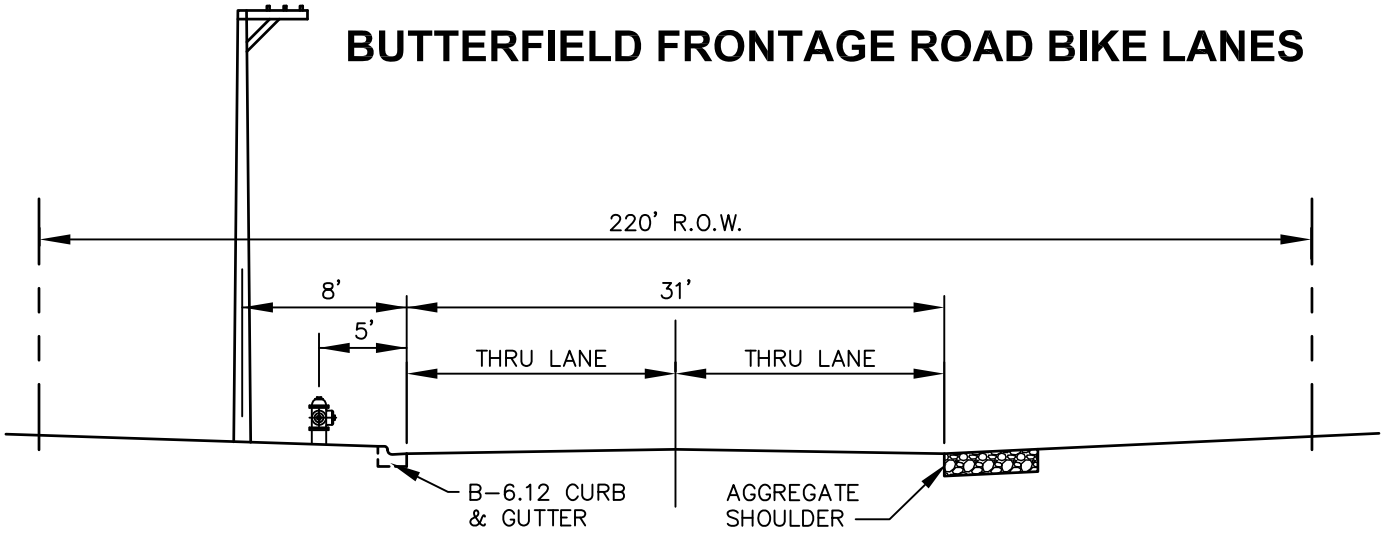
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	5–5–B

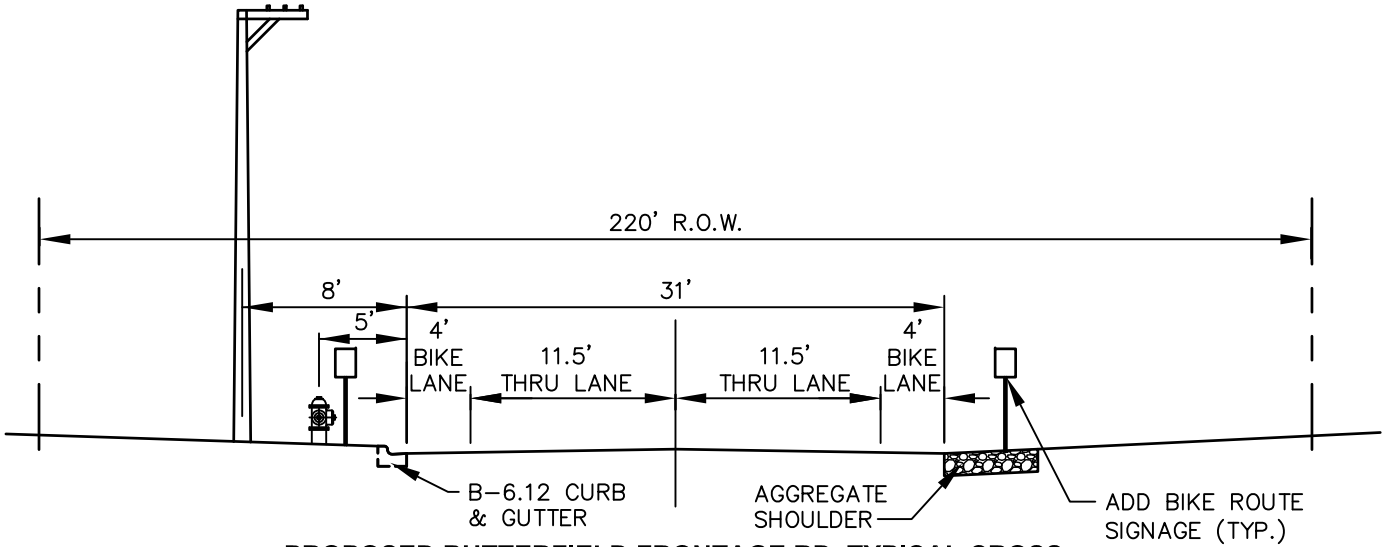
Plotted: July 13, 2010 @ 3:10 PM By: Kris Pung – Tab: EX 5–5–B Talbot Ave. (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901–EXHIBIT_02

BUTTERFIELD FRONTAGE ROAD BIKE LANES



EXISTING BUTTERFIELD FRONTAGE RD. TYPICAL CROSS SECTION (FACING EAST)



PROPOSED BUTTERFIELD FRONTAGE RD. TYPICAL CROSS SECTION (FACING EAST)

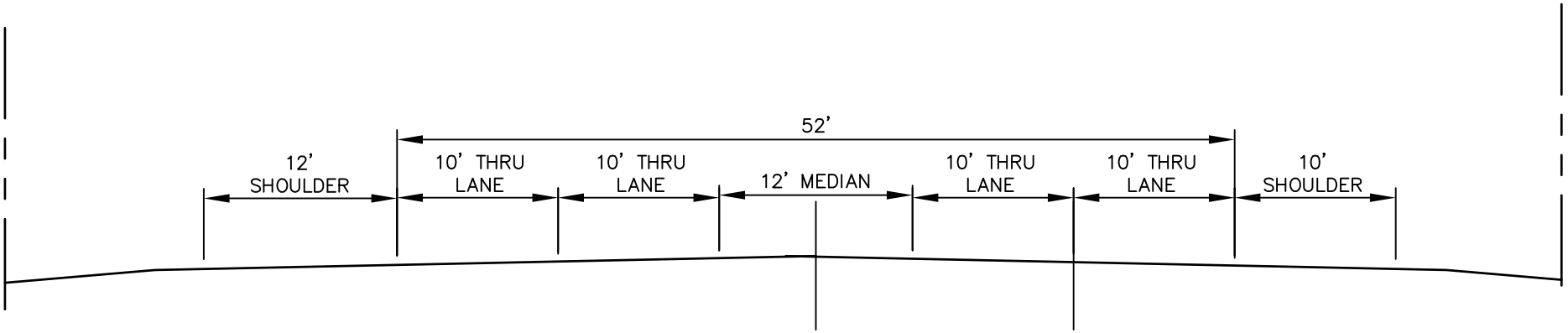
* COORDINATION WITH IDOT REQUIRED DURING ROUTE 56 WIDENING PROJECT.

BIKEWAY IMPLEMENTATION PLAN

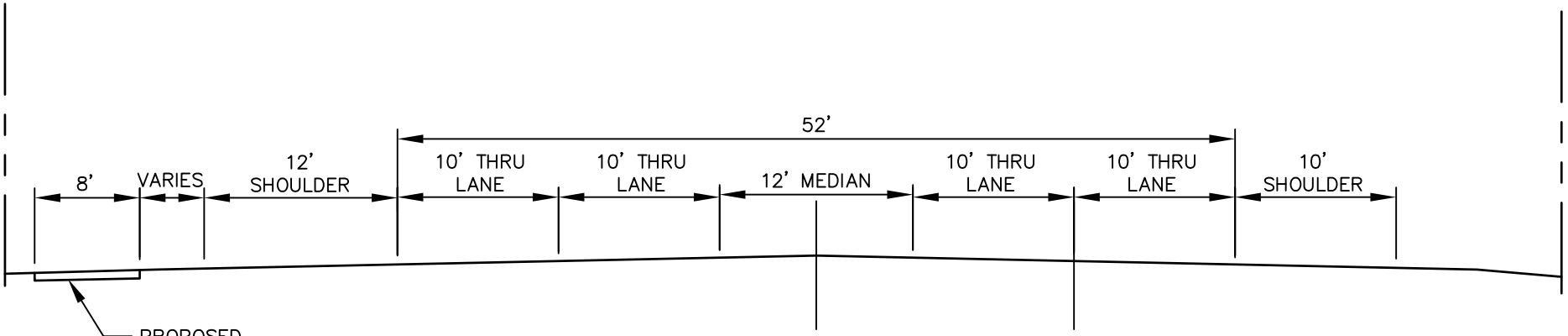
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	5-6-B

IL59 SIDEPATH
MACK ROAD TO WILLOW LANE



EXISTING IL59 TYPICAL CROSS SECTION
(FACING NORTH)



PROPOSED IL59 TYPICAL CROSS SECTION
(FACING NORTH)

* COORDINATION WITH IDOT REQUIRED FOR ALL WORK DUE TO JURISDICTIONAL LIMITATIONS.

BIKEWAY IMPLEMENTATION PLAN

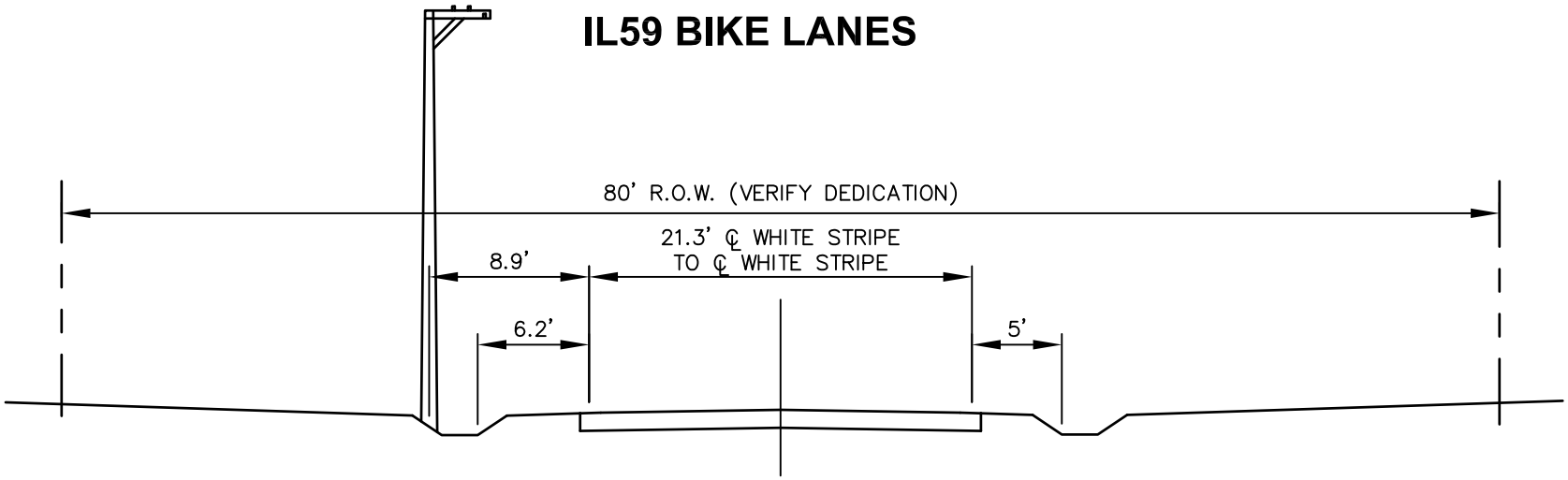
Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	6–1–B

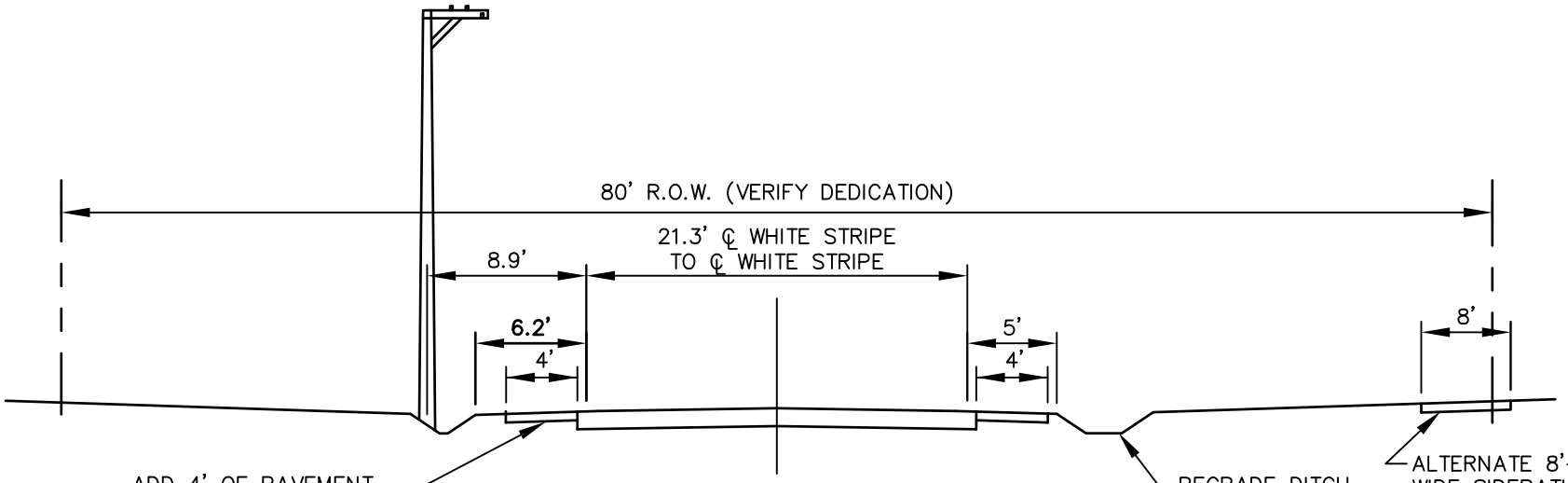
Plotted: July 13, 2010 @ 3:11 PM By: Kris Pung – Tab: EX 6–1–B IL59 (8.5x11) LS

Path: H:\SDSKPROJ\WV0901\DWG\DWG EXHIBIT\WV0901–EXHIBIT_02

MACK ROAD EAST OF IL59 BIKE LANES



EXISTING MACK RD. EAST TYPICAL CROSS SECTION (FACING EAST)



PROPOSED MACK RD. EAST TYPICAL CROSS SECTION (FACING EAST)

* COORDINATION WITH TOWNSHIP OR FOREST PRESERVE DISTRICT REQUIRED FOR ALL WORK DUE TO JURISDICTIONAL LIMITATIONS.

BIKEWAY IMPLEMENTATION PLAN

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, Illinois 60554
630.466.6700 – www.eeiweb.com

SCALE:	DRAWN BY:
N.T.S.	CLN
DATE:	EXHIBIT NO:
9/29/09	8–1–B

BIKEWAY IMPLEMENTATION PLAN - PHASE II

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

APPENDIX III:
ESTIMATE OF COST EXHIBITS

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 1-2-C
WARRENVILLE ROAD SHOULDER/SIDEPATH CONNECTION – EAST OF FERRY ROAD
TOTAL LENGTH - 950 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	700	$ 24,500.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	90	$ 3,600.00
4	TREE REMOVAL	EACH	$ 600.00	0	$ -
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	1,900	$ 3,800.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	480	$ 3,840.00
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	96	$ 4,800.00
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	300	$ 10,500.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	1,700	$ 3,400.00
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	1,000	$ 20,000.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	900	$ 900.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	300	$ 24,000.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	1,600	$ 9,600.00
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	1	$ 15,000.00
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	2	$ 1,000.00
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	200	$ 200.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	2	$ 1,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	0	$ -
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	1	$ 5,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	1	$ 5,000.00
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**136,140.00**
CONTINGENCY (10%)	**$**	**13,700.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**149,840.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**15,000.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**15,000.00**
TOTAL ESTIMATED PROJECT COST	**$**	**179,840.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 1-3-C
DIEHL ROAD – SIDEPATH EXTENSION TO WEST BRANCH REGIONAL TRAIL
TOTAL LENGTH - 500 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	200	$ 7,000.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	0	$ -
4	TREE REMOVAL	EACH	$ 600.00	4	$ 2,400.00
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	2,000	$ 4,000.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	0	$ -
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	0	$ -
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	100	$ 3,500.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	340	$ 680.00
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	200	$ 4,000.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	200	$ 200.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	60	$ 4,800.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	500	$ 3,000.00
19	TREE REPLACEMENT	EACH	$ 500.00	10	$ 5,000.00
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	2,000	$ 2,000.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	1	$ 500.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	0	$ -
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	3	$ 15,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	300	$ 30,000.00
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	1	$ 400,000.00
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	80	$ 100,000.00
34	PERMITTING	L SUM	$ 5,000.00	0	$ -
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**582,080.00**
CONTINGENCY (10%)	**$**	**58,300.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**640,380.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**64,100.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**64,100.00**
TOTAL ESTIMATED PROJECT COST	**$**	**768,580.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 2-1-C
GALUSHA ROAD SIDEPATH – WINFIELD ROAD TO HERRICK ROAD
TOTAL LENGTH - 5350 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	0	$ -
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	0	$ -
4	TREE REMOVAL	EACH	$ 600.00	0	$ -
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	0	$ -
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	0	$ -
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	0	$ -
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	0	$ -
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	0	$ -
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	0	$ -
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	0	$ -
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	0	$ -
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	0	$ -
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	0	$ -
24	PATH SIGNING (D11-1)	EACH	$ 500.00	8	$ 4,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	0	$ -
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	0	$ -
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	0	$ -
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**4,000.00**
CONTINGENCY (10%)	**$**	**400.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**4,400.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**500.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**500.00**
TOTAL ESTIMATED PROJECT COST	**$**	**5,400.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 2-2-C
WINFIELD ROAD SIDEPATH WIDENING – WARRENVILLE ROAD TO GALUSHA ROAD
TOTAL LENGTH - 840 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	300	$ 10,500.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	4,250	$ 8,500.00
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	150	$ 6,000.00
4	TREE REMOVAL	EACH	$ 600.00	4	$ 2,400.00
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	840	$ 1,680.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	800	$ 6,400.00
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	160	$ 8,000.00
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	140	$ 4,900.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	750	$ 1,500.00
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	440	$ 8,800.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	400	$ 400.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	130	$ 10,400.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	1,000	$ 6,000.00
19	TREE REPLACEMENT	EACH	$ 500.00	4	$ 2,000.00
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	1	$ 15,000.00
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	2	$ 6,000.00
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	2	$ 1,000.00
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	500	$ 500.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	4	$ 2,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	0	$ -
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	1	$ 5,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	1	$ 5,000.00
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**111,980.00**
CONTINGENCY (10%)	**$**	**11,200.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**123,180.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**12,400.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**12,400.00**
TOTAL ESTIMATED PROJECT COST	**$**	**147,980.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 2-3-C
HERRICK ROAD BIKE LANES – GALUSHA ROAD TO HERRICK LAKE FOREST PRESERVE
TOTAL LENGTH - 670 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	0	$ -
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	0	$ -
4	TREE REMOVAL	EACH	$ 600.00	0	$ -
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	0	$ -
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	0	$ -
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	0	$ -
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	0	$ -
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	0	$ -
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	0	$ -
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	0	$ -
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	0	$ -
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	0	$ -
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	750	$ 750.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	0	$ -
25	PATH SIGNING (R3-17)	EACH	$ 500.00	2	$ 1,000.00
27	PATH SIGNING (W11-1)	EACH	$ 500.00	2	$ 1,000.00
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	0	$ -
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	0	$ -
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**2,750.00**
CONTINGENCY (10%)	**$**	**300.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**3,050.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**400.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**400.00**
TOTAL ESTIMATED PROJECT COST	**$**	**3,850.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 3-1-C
FERRY ROAD SIDEPATH WIDENING – RAYMOND DRIVE TO WEST BRANCH OF DUPAGE RIVER
TOTAL LENGTH - 3780 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	1,300	$ 45,500.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	19,000	$ 38,000.00
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	135	$ 5,400.00
4	TREE REMOVAL	EACH	$ 600.00	2	$ 1,200.00
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	3,780	$ 7,560.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	720	$ 5,760.00
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	144	$ 7,200.00
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	590	$ 20,650.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	3,360	$ 6,720.00
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	1,960	$ 39,200.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	1,700	$ 1,700.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	580	$ 46,400.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	200	$ 3,000.00
18	RESTORATION	SQ YD	$ 6.00	6,600	$ 39,600.00
19	TREE REPLACEMENT	EACH	$ 500.00	2	$ 1,000.00
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	2	$ 6,000.00
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	150	$ 150.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	4	$ 2,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	0	$ -
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	1	$ 5,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	1	$ 5,000.00
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**287,040.00**
CONTINGENCY (10%)	**$**	**28,800.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**315,840.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**31,600.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**31,600.00**
TOTAL ESTIMATED PROJECT COST	**$**	**379,040.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 3-3-C
RIVER CLEAN-UP TRAILS
TOTAL LENGTH - 3800 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	1,200	$ 42,000.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	0	$ -
4	TREE REMOVAL	EACH	$ 600.00	0	$ -
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	7,600	$ 15,200.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	0	$ -
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	0	$ -
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	750	$ 26,250.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	4,230	$ 8,460.00
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	2,470	$ 49,400.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	2,200	$ 2,200.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	0	$ -
16	LIMESTONE SCREENINGS	TON	$ 20.00	500	$ 10,000.00
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	400	$ 6,000.00
18	RESTORATION	SQ YD	$ 6.00	4,700	$ 28,200.00
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	0	$ -
24	PATH SIGNING (D11-1)	EACH	$ 500.00	4	$ 2,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	0	$ -
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	0	$ -
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	2	$ 10,000.00
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**199,710.00**
CONTINGENCY (10%)	**$**	**20,000.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**219,710.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**22,000.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**22,000.00**
TOTAL ESTIMATED PROJECT COST	**$**	**263,710.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 3-7-C
WARRENVILLE ROAD SIDEPATH (OLD TOWN)
TOTAL LENGTH - 1280 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	600	$ 21,000.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	2,720	$ 5,440.00
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	135	$ 5,400.00
4	TREE REMOVAL	EACH	$ 600.00	6	$ 3,600.00
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	2,990	$ 5,980.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	720	$ 5,760.00
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	144	$ 7,200.00
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	270	$ 9,450.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	1,516	$ 3,032.40
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	890	$ 17,800.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	800	$ 800.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	270	$ 21,600.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	1,500	$ 9,000.00
19	TREE REPLACEMENT	EACH	$ 500.00	6	$ 3,000.00
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	2	$ 30,000.00
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	2	$ 1,000.00
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	250	$ 250.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	4	$ 2,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	2	$ 1,000.00
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	1	$ 5,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	0	$ -
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**158,312.40**
CONTINGENCY (10%)	**$**	**15,900.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**174,212.40**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**17,500.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**17,500.00**
TOTAL ESTIMATED PROJECT COST	**$**	**209,212.40**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 3-9-C
RIVER ROAD SIDEPATH
TOTAL LENGTH - 1000 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	400	$ 14,000.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	2,050	$ 4,100.00
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	105	$ 4,200.00
4	TREE REMOVAL	EACH	$ 600.00	5	$ 3,000.00
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	1,000	$ 2,000.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	560	$ 4,480.00
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	112	$ 5,600.00
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	160	$ 5,600.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	890	$ 1,780.00
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	520	$ 10,400.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	500	$ 500.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	160	$ 12,800.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	1,700	$ 10,200.00
19	TREE REPLACEMENT	EACH	$ 500.00	5	$ 2,500.00
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	1	$ 7,500.00
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	1	$ 3,000.00
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	1,100	$ 1,100.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	4	$ 2,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	0	$ -
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	1	$ 5,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	1	$ 5,000.00
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	1	$ 10,000.00

SUB-TOTAL CONSTRUCTION COSTS	**$**	**114,760.00**
CONTINGENCY (10%)	**$**	**11,500.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**126,260.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**12,700.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**12,700.00**
TOTAL ESTIMATED PROJECT COST	**$**	**151,660.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 3-8-C
BATAVIA ROAD BIKE LANES – BUTTERFIELD ROAD TO WARRENVILLE ROAD
TOTAL LENGTH - 4560 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	$ 2.00	900	$ 1,800.00
2	CONSTRUCTING TEST STRIP	EACH	$ 1,500.00	1	$ 1,500.00
3	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	$ 10.00	72	$ 720.00
4	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	$ 70.00	1,130	$ 79,100.00
5	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	$ 80.00	82	$ 6,560.00
6	DETECTABLE WARNINGS	SQ FT	$ 30.00	48	$ 1,440.00
7	HOT-MIX ASPHALT DRIVEWAY PAVEMENT REMOVAL	SQ YD	$ 10.00	656	$ 6,560.00
8	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	$ 2.50	10,800	$ 27,000.00
9	COMBINATION CURB AND GUTTER REMOVAL	FOOT	$ 10.00	6,450	$ 64,500.00
10	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 35.00	60	$ 2,100.00
11	SIDEWALK REMOVAL AND REPLACEMENT	SQ FT	$ 7.00	4,750	$ 33,250.00
12	CLASS C PATCHES, TYPE I, 10 INCH	SQ YD	$ 120.00	28	$ 3,360.00
13	CLASS C PATCHES, TYPE II, 10 INCH	SQ YD	$ 110.00	89	$ 9,790.00
14	CLASS C PATCHES, TYPE III, 10 INCH	SQ YD	$ 100.00	45	$ 4,500.00
15	CLASS C PATCHES, TYPE IV, 10 INCH	SQ YD	$ 90.00	313	$ 28,170.00
16	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	$ 1.00	2,000	$ 2,000.00
17	INLETS TO BE ADJUSTED WITH NEW TYPE 11 FRAME AND GRATE	EACH	$ 1,000.00	17	$ 17,000.00
18	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (SPECIAL)	FOOT	$ 25.00	6,200	$ 155,000.00
19	MOBILIZATION	L SUM	$ 14,500.00	1	$ 14,500.00
20	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	$ 3,300.00	1	$ 3,300.00
21	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	$ 1,100.00	1	$ 1,100.00
22	CHANGEABLE MESSAGE SIGN	CAL MO	$ 1,100.00	2	$ 2,200.00
23	SHORT - TERM PAVEMENT MARKING AND REMOVAL	FOOT	$ 2.00	325	$ 650.00
24	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	$ 5.00	50	$ 250.00
25	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	$ 0.50	7,000	$ 3,500.00
26	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	$ 1.00	300	$ 300.00
27	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	$ 2.00	200	$ 400.00
28	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	$ 5.00	40	$ 200.00
29	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	$ 65.00	40	$ 2,600.00
30	SANITARY MANHOLES TO BE ADJUSTED	EACH	$ 500.00	3	$ 1,500.00
31	TEMPORARY INFORMATION SIGNING	SQ FT	$ 20.00	55	$ 1,100.00
32	MEDIAN REMOVAL AND REPLACEMENT	SQ FT	$ 8.00	510	$ 4,080.00
33	PORTLAND CEMENT CONCRETE DRIVEWAY REMOVAL AND REPLACEMENT	SQ YD	$ 60.00	227	$ 13,620.00
34	BRICK DRIVEWAY REMOVAL AND REPLACEMENT	SQ FT	$ 15.00	232	$ 3,480.00
35	RECESSED REFLECTIVE PAVMENT MARKER	EACH	$ 25.00	55	$ 1,375.00
36	HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 3"	SQ YD	$ 30.00	656	$ 19,680.00
37	RESTORATION	SQ YD	$ 10.00	1,400	$ 14,000.00

HOT-MIX ASPHALT DRIVEWAY PAVEMENT, 3"

RESTORATION

B-TOTAL CONSTRUCTION COSTS	**$ 532,185.00**
CONTINGENCY (10%)	**$ 53,300.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$ 585,485.00**
PHASE II ENGINEERING (APPROX. 10%)	**$ 58,600.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$ 58,600.00**
TOTAL ESTIMATED PROJECT COST	**$ 702,685.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 4-1-C
TIMBER DRIVE SHARED ROADWAY – MEADOW DRIVE TO BATAVIA ROAD
TOTAL LENGTH - 2600 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	0	$ -
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	0	$ -
4	TREE REMOVAL	EACH	$ 600.00	0	$ -
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	0	$ -
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	0	$ -
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	0	$ -
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	0	$ -
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	0	$ -
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	0	$ -
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	0	$ -
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	0	$ -
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	0	$ -
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	0	$ -
24	PATH SIGNING (D11-1)	EACH	$ 500.00	6	$ 3,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	2	$ 1,000.00
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	0	$ -
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	0	$ -
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**4,000.00**
CONTINGENCY (10%)	**$**	**400.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**4,400.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**500.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**500.00**
TOTAL ESTIMATED PROJECT COST	**$**	**5,400.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 4-2-C
MEADOW DRIVE SIDEPATH – IL59 TO TIMBER DRIVE
TOTAL LENGTH - 610 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	200	$ 7,000.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	2,490	$ 4,980.00
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	105	$ 4,200.00
4	TREE REMOVAL	EACH	$ 600.00	2	$ 1,200.00
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	610	$ 1,220.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	560	$ 4,480.00
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	112	$ 5,600.00
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	100	$ 3,500.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	550	$ 1,100.00
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	330	$ 6,600.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	300	$ 300.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	100	$ 8,000.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	700	$ 4,200.00
19	TREE REPLACEMENT	EACH	$ 500.00	2	$ 1,000.00
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	130	$ 130.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	2	$ 1,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	2	$ 1,000.00
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	1	$ 5,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	0	$ -
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**60,510.00**
CONTINGENCY (10%)	**$**	**6,100.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**66,610.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**6,700.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**6,700.00**
TOTAL ESTIMATED PROJECT COST	**$**	**80,010.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 5-1-C
MACK ROAD BIKE LANES – BRISTOL TO IL59
TOTAL LENGTH - 530 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	0	$ -
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	0	$ -
4	TREE REMOVAL	EACH	$ 600.00	0	$ -
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	0	$ -
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	0	$ -
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	0	$ -
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	0	$ -
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	0	$ -
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	0	$ -
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	0	$ -
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	0	$ -
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	0	$ -
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	0	$ -
24	PATH SIGNING (D11-1)	EACH	$ 500.00	0	$ -
25	PATH SIGNING (R3-17)	EACH	$ 500.00	4	$ 2,000.00
27	PATH SIGNING (W11-1)	EACH	$ 500.00	0	$ -
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	0	$ -
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	0	$ -
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**2,000.00**
CONTINGENCY (10%)	**$**	**200.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**2,200.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**300.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**300.00**
TOTAL ESTIMATED PROJECT COST	**$**	**2,800.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 5-3-C
CONTINENTAL ROAD BIKE LANES – BATAVIA ROAD TO IL59
TOTAL LENGTH - 5350 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	1,100	$ 38,500.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	10,700	$ 21,400.00
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	240	$ 9,600.00
4	TREE REMOVAL	EACH	$ 600.00	3	$ 1,800.00
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	2,650	$ 5,300.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	1,280	$ 10,240.00
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	256	$ 12,800.00
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	210	$ 7,350.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	2,950	$ 5,900.00
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	1,730	$ 34,600.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	1,500	$ 1,500.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	510	$ 40,800.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	4,500	$ 27,000.00
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	6,500	$ 6,500.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	4	$ 2,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	2	$ 1,000.00
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	1	$ 5,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	1	$ 275,000.00
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	1	$ 60,000.00
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	1	$ 5,000.00
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**571,290.00**
CONTINGENCY (10%)	**$**	**57,200.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**628,490.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**62,900.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**62,900.00**
TOTAL ESTIMATED PROJECT COST	**$**	**754,290.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 5-5-C
TALBOT AVENUE BIKE LANES
TOTAL LENGTH - 2300 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	0	$ -
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	0	$ -
4	TREE REMOVAL	EACH	$ 600.00	0	$ -
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	0	$ -
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	0	$ -
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	0	$ -
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	0	$ -
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	0	$ -
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	0	$ -
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	0	$ -
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	0	$ -
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	0	$ -
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	0	$ -
24	PATH SIGNING (D11-1)	EACH	$ 500.00	6	$ 3,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	0	$ -
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	0	$ -
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	0	$ -
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**3,000.00**
CONTINGENCY (10%)	**$**	**300.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**3,300.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**400.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**400.00**
TOTAL ESTIMATED PROJECT COST	**$**	**4,100.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 5-6-C
BUTTERFIELD FRONTAGE ROAD BIKE LANES
TOTAL LENGTH - 1400 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	0	$ -
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	0	$ -
4	TREE REMOVAL	EACH	$ 600.00	0	$ -
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	0	$ -
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	0	$ -
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	0	$ -
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	0	$ -
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	0	$ -
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	0	$ -
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	0	$ -
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	0	$ -
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	0	$ -
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	2,800	$ 2,800.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	0	$ -
25	PATH SIGNING (R3-17)	EACH	$ 500.00	4	$ 2,000.00
27	PATH SIGNING (W11-1)	EACH	$ 500.00	1	$ 500.00
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	0	$ -
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	0	$ -
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	0	$ -

SUB-TOTAL CONSTRUCTION COSTS	**$**	**5,300.00**
CONTINGENCY (10%)	**$**	**600.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**5,900.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**600.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**600.00**
TOTAL ESTIMATED PROJECT COST	**$**	**7,100.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 6-1-C
IL59 SIDEPATH - MACK ROAD TO WILLOW LANE
TOTAL LENGTH - 2420 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	1,000	$ 35,000.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	30	$ 1,200.00
4	TREE REMOVAL	ACRE	$ 15,000.00	0.5	$ 7,500.00
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	4,120	$ 8,240.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	160	$ 1,280.00
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	32	$ 1,600.00
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	760	$ 26,600.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	2,690	$ 5,380.00
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	1,570	$ 31,400.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	1,400	$ 1,400.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	470	$ 37,600.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	2,420	$ 36,300.00
18	RESTORATION	SQ YD	$ 6.00	6,800	$ 40,800.00
19	TREE REPLACEMENT	EACH	$ 500.00	20	$ 10,000.00
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	1	$ 15,000.00
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	4	$ 12,000.00
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	0	$ -
24	PATH SIGNING (D11-1)	EACH	$ 500.00	0	$ -
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	RETAINING WALL	SQ FT	$ 50.00	7,000	$ 350,000.00
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	3	$ 15,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	300	$ 30,000.00
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 500,000.00	1	$ 500,000.00
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	80	$ 100,000.00
34	PERMITTING	L SUM	$ 5,000.00	1	$ 5,000.00
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	1	$ 10,000.00

SUB-TOTAL CONSTRUCTION COSTS	**$**	**1,281,300.00**
CONTINGENCY (10%)	**$**	**128,200.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**1,409,500.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**141,000.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**141,000.00**
TOTAL ESTIMATED PROJECT COST	**$**	**1,691,500.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 8-1-Ca
MACK ROAD EAST OF IL59 BIKE LANES
TOTAL LENGTH - 2050 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	800	$ 28,000.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	30	$ 1,200.00
4	TREE REMOVAL	EACH	$ 600.00	0	$ -
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	2,050	$ 4,100.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	160	$ 1,280.00
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	32	$ 1,600.00
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	240	$ 8,400.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	0	$ -
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	0	$ -
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	960	$ 19,200.00
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	900	$ 900.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	10	$ 200.00
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	400	$ 30,000.00
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	160	$ 12,800.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	100	$ 600.00
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	4,100	$ 4,100.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	0	$ -
25	PATH SIGNING (R3-17)	EACH	$ 500.00	2	$ 1,000.00
27	PATH SIGNING (W11-1)	EACH	$ 500.00	1	$ 500.00
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	2	$ 10,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0	$ -
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	0	$ -
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 400,000.00	0	$ -
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	0	$ -
34	PERMITTING	L SUM	$ 5,000.00	1	$ 5,000.00
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	1	$ 10,000.00

SUB-TOTAL CONSTRUCTION COSTS	**$**	**138,880.00**
CONTINGENCY (10%)	**$**	**13,900.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**152,780.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**15,300.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**15,300.00**
TOTAL ESTIMATED PROJECT COST	**$**	**183,380.00**

BIKEWAY IMPLEMENTATION PLAN

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

PRELIMINARY ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST

EXHIBIT 8-1-Cb
MACK ROAD EAST OF IL59 SIDEPATH AND BRIDGE ALTERNATE
TOTAL LENGTH - 1900 LF

PAY ITEM INFORMATION #	DESCRIPTION	UNIT	UNIT COST	QUANTITY	COST
1	EARTH EXCAVATION	CU YD	$ 35.00	800	$ 28,000.00
2	SIDEWALK REMOVAL	SQ FT	$ 2.00	0	$ -
3	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	$ 40.00	30	$ 1,200.00
4	TREE REMOVAL	ACRE	$ 15,000.00	1	$ 15,000.00
5	PERIMETER EROSION BARRIER	FOOT	$ 2.00	1,900	$ 3,800.00
6	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	$ 8.00	160	$ 1,280.00
7	DETECTABLE WARNINGS	SQ FT	$ 50.00	32	$ 1,600.00
8	POROUS GRANULAR EMBANKMENT	TON	$ 35.00	380	$ 13,300.00
9	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	$ 2.00	2,120	$ 4,240.00
10	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 10 INCH	TON	$ 20.00	1,240	$ 24,800.00
11	AGGREGATE SUB-BASE COURSE, TYPE B, CA-6, 12 INCH	TON	$ 20.00	0	$ -
12	BITUMINOUS MATERIALS (PRIME COAT)	GAL	$ 1.00	1,100	$ 1,100.00
13	AGGREGATE (PRIME COAT)	TON	$ 20.00	0	$ -
14	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	$ 75.00	0	$ -
15	HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50	TON	$ 80.00	250	$ 20,000.00
16	LIMESTONE SCREENINGS	TON	$ 20.00	0	$ -
17	GRADING AND SHAPING DITCHES	FOOT	$ 15.00	0	$ -
18	RESTORATION	SQ YD	$ 6.00	3,200	$ 19,200.00
19	TREE REPLACEMENT	EACH	$ 500.00	0	$ -
20	POWER POLE RELOCATION	L SUM	$ 15,000.00	0	$ -
21	FIRE HYDRANT RELOCATION	EACH	$ 3,000.00	0	$ -
22	UTILITY ADJUSTMENTS	EACH	$ 500.00	0	$ -
23	THERMOPLASTIC PAVEMENT MARKINGS	FOOT	$ 1.00	750	$ 750.00
24	PATH SIGNING (D11-1)	EACH	$ 500.00	4	$ 2,000.00
25	PATH SIGNING (R3-17)	EACH	$ 500.00	0	$ -
27	PATH SIGNING (W11-1)	EACH	$ 500.00	2	$ 1,000.00
28	TRAFFIC CONTROL AND PROTECTION	L SUM	$ 5,000.00	2	$ 10,000.00
29	TRAFFIC SIGNAL MODERNIZATION	EACH	$ 275,000.00	0.25	$ 68,750.00
30	TEMPORARY SIGNAL	EACH	$ 60,000.00	0	$ -
31	EARTH EXCAVATION FOR STRUCTURES	CU YD	$ 100.00	300	$ 30,000.00
32	FURNISH AND PLACE PREFABRICATED STEEL PEDESTRIAN BRIDGE	EACH	$ 250,000.00	1	$ 250,000.00
33	STRUCTURAL CONCRETE	CU YD	$ 1,250.00	80	$ 100,000.00
34	PERMITTING	L SUM	$ 5,000.00	1	$ 5,000.00
35	EASEMENT ACQUISITION	L SUM	$ 10,000.00	1	$ 10,000.00

SUB-TOTAL CONSTRUCTION COSTS	**$**	**611,020.00**
CONTINGENCY (10%)	**$**	**61,200.00**
TOTAL CONSTRUCTION COST WITH CONTINGENCY	**$**	**672,220.00**
PHASE II ENGINEERING (APPROX. 10%)	**$**	**67,300.00**
PHASE III ENGINEERING AND MATERIAL TESTING (APPROX. 10%)	**$**	**67,300.00**
TOTAL ESTIMATED PROJECT COST	**$**	**806,820.00**

BIKEWAY IMPLEMENTATION PLAN - PHASE II

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

APPENDIX IV:
IDOT PRELIMINARY PLANS - BUTTERFIELD ROAD (IL56) WIDENING

CITY OF WARRENVILLE

NE ¼ SECTION 33 - 39 - 9

N

GR1

STA. 88+80 TO STA. 92+17.5. LT.
TBT, TY 1 (SPL) TAN - 1 EA
SPBGR TY A, 6 FT POST - 37.5 FT
SPBGR W-BEAM AT QUARTER-POST SPACING
6 FT POST - 50 FT
SPBGR TY. A, 6 FT POST - 150 FT
TBT, TY 1 (SPL) TAN - 1 EA

POLYMERIZED HOT-MIX ASPHALT
SURFACE COURSE, MIX "F", N90
POLYMERIZED LEVELING BINDER
(MACHINE METHOD), IL-4.75, N50
P.C.C. BASE COURSE, 12"

HMA PAVEMENT, 13"

(A) EXISTING PAVEMENT TO REMAIN
SY - HMA SURFACE REMOVAL, 2½"
TON - POLYMERIZED HMA SURFACE COURSE, MIX 'F', N90, 1¾"
TON - POLYMERIZED HMA LEVELING BINDER (MACH. METH.), IL-4.75, N50, ¾"
120 SY - CLASS D PATCHES, T2, 10"
100 SY - CLASS D PATCHES, T3, 10"
110 SY - CLASS D PATCHES, T4, 10"

90+00.00
81.97' LT

BEGIN SECTION (58&59) WRS-3
STA. 90+00

E.J. & E. RAILROAD

SPBGR W-BEAM AT QUARTER-POST SPACING, 6 FT. POSTS

GR1

EXIST. R.O.W.

BUTT JOINT
MEET EXISTING

+67.5

50'

22'±

23'±

P.C. STA. 91+52.68

3.3'R

2' STUB (TYP.)

P.G.L.

90+00.

3,600'R

A

218'

50'

+37

GR2

SPBGR W-BEAM AT QUARTER-POST SPACING, 6 FT. POSTS

℄ IL. RTE. 56

L 85+00

90+00.00
136.27' RT

COMB. CONCRETE CURB & GUTTER, TYPE B-6.24

28'±

FRONTAGE ROAD

15,937.8'R

95+15
11.85' LT

95+00

RAMP NOSE, 6'

200'R

5'R

3600'R

93+80.83
2.45' LT

CORRUGATED MEDIAN
SEE NOTE 1

COMB. CONCRETE CURB & GUTTER, TYPE B-6.24

95+77.79
9.64 RT

P.R.C. STA. 94+77.90
21.46' RT

EXIST. R.O.W.

+15

HMA PAVEMENT, 13"

EXIST. R.O.W.

COMB. CONCRETE CURB & GUTTER, TYPE B-6.12

30'±

+15
11' LT

CURVE 1

P.G.L.

HMA PAVEMENT, 13"

GRASS MEDIAN

+99.31

8,000'R

24'

P.G.L.

24'

24' VAR.

VARIES

218'

MATCHLINE 99+00

97+17.34
13.77 RT

97+48.84
38.11 RT

12'

C.L.

VARIES

COMB. CONCRETE CURB & GUTTER, TYPE B-6.24

EXIST. R.O.W.

CURVE 1
PI STA. = 95+35.20
△ = 2° 45' 18" (RT)
D = 0° 21' 37"
R = 15,906.90'
T = 382.52'
L = 764.89'
E = 4.60'
e = N.C.
T.R. = N.A.
S.E. RUN = N.A.
P.C. STA. = 91+52.68
P.T. STA. = 99+17.57

POLYMERIZED HOT-MIX ASPHALT
SURFACE COURSE, MIX "F", N90
POLYMERIZED LEVELING BINDER
(MACHINE METHOD), IL-4.75, N50
P.C.C. BASE COURSE, 12"

HMA PAVEMENT, 13"

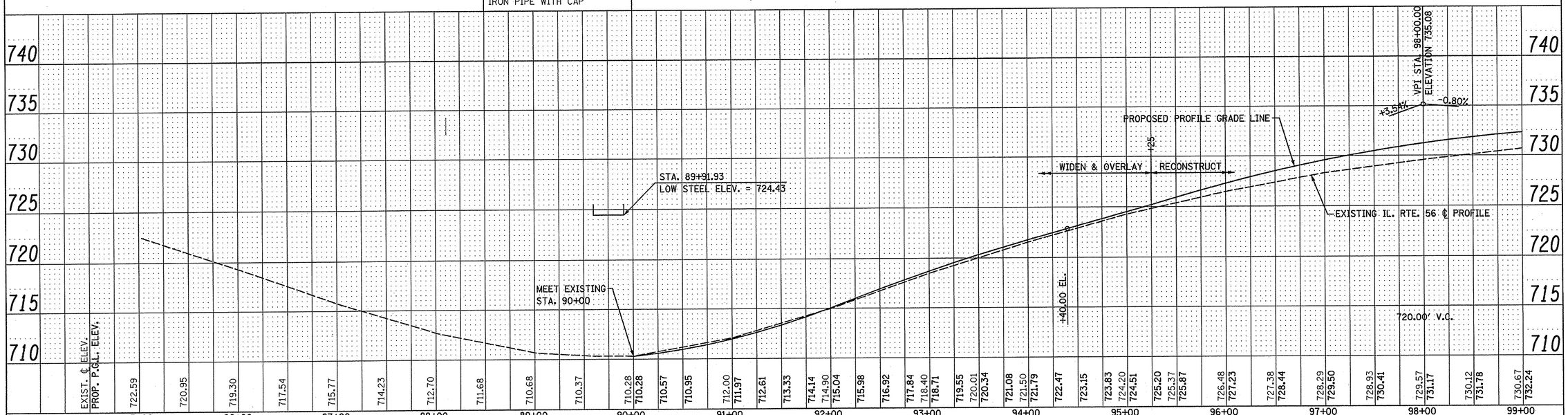
+76.1

NOTE:
1. REMOVE EXISTING AND TEMPORARY PAVEMENT AND CONSTRUCT CORRUGATED MEDIAN IN STAGE II.

GR2

STA. 87+37 TO STA. 90+74.5. RT.
TBT, TY 1 (SPL) TAN - 1 EA
SPBGR TY A, 6 FT POST - 150 FT
SPBGR W-BEAM AT QUARTER-POST SPACING
6 FT POST - 50 FT
SPBGR, TY. A, 6 FT POST - 37.5 FT
TBT, TY. 1 (SPL) TAN - 1 EA

CP 101 ELEV. 730.89
STA. 100+30.88 43.85' RT.
IRON PIPE WITH CAP



FILE NAME = D162420-sht-plnprf01.dgn	DESIGNED - S.J.P.	REVISED -	
PLOT DATE = 2/18/2010	DRAWN - B.K.	REVISED -	
PLOT SCALE = 50.000 ' / IN.	CHECKED - M.P.	REVISED -	
	DATE - FEBRUARY 2010	REVISED -	

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

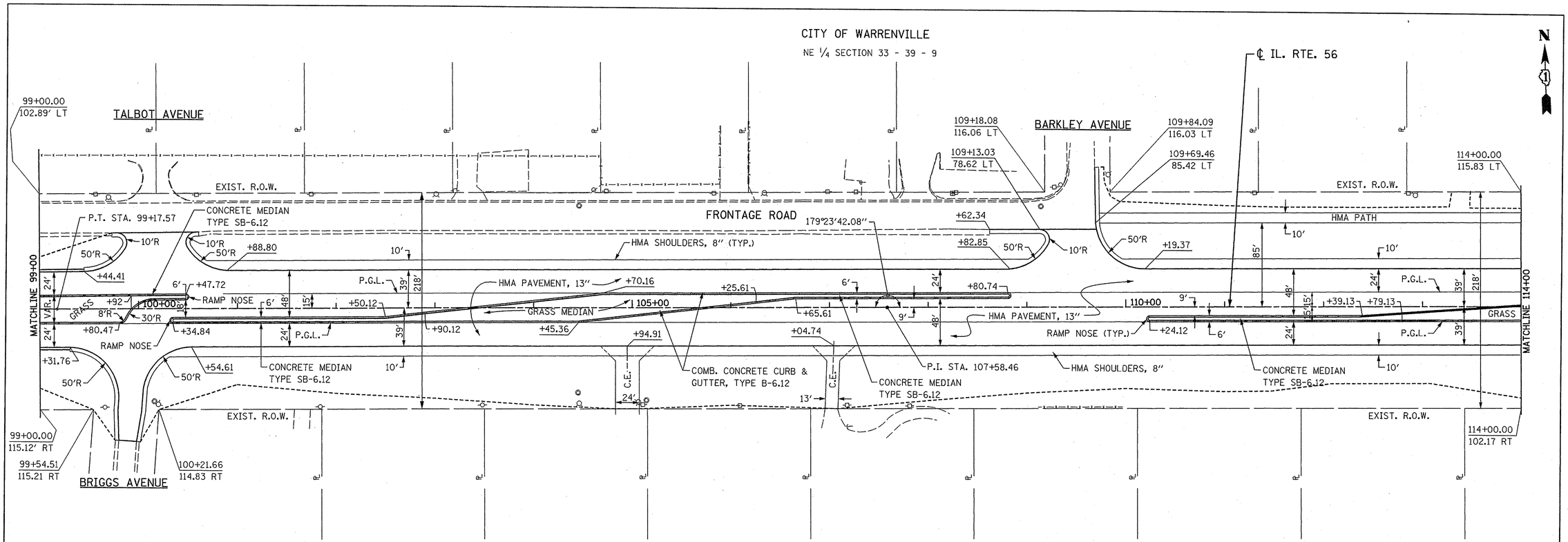
ROADWAY PLAN AND PROFILE
IL. RTE. 56

SCALE: 1" = 50' | SHEET NO. 1 OF 12 SHEETS | STA. 90+00 TO STA. 99+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		19
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CITY OF WARRENVILLE

NE ¼ SECTION 33 - 39 - 9

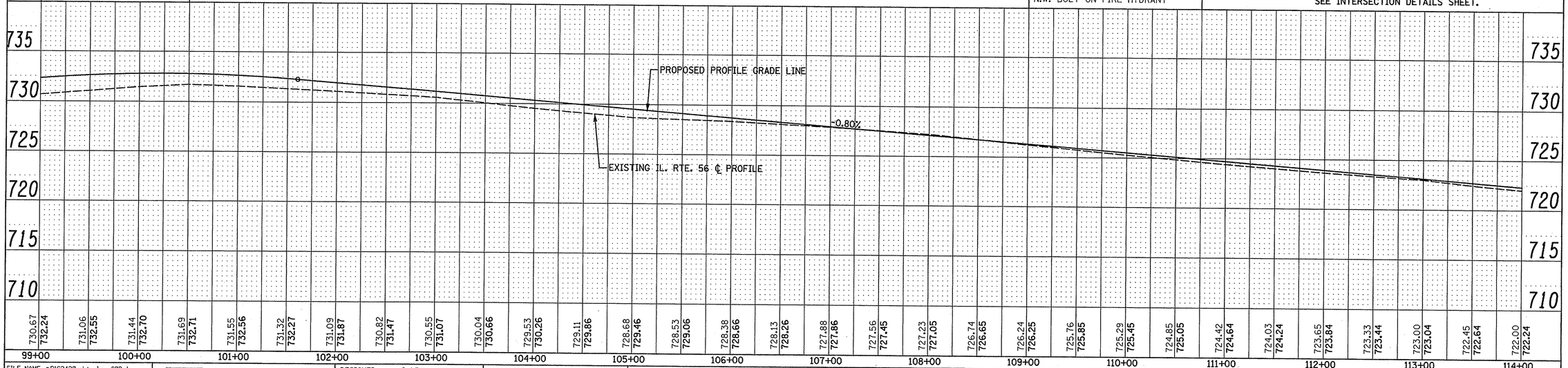


SE ¼ SECTION 33 - 39 - 9

CP 101 ELEV. 730.89
STA. 100+30.88 43.85′ RT.
IRON PIPE WITH CAP

CRA 15 ELEV. 723.54
STA. 109+82.02 132.88′ LT.
N.W. BOLT ON FIRE HYDRANT

NOTE: FOR TALBOT AVENUE, BARKLEY AVENUE AND BRIGGS AVENUE INTERSECTIONS, SEE INTERSECTION DETAILS SHEET.



FILE NAME = D162420-sht-plnprf02.dgn	DESIGNED - S.J.P.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
PLOT DATE = 2/18/2010	DRAWN - B.K.	REVISED -	ROADWAY PLAN AND PROFILE IL. RTE. 56
PLOT SCALE = 50.000 ′ / IN.	CHECKED - M.P.	REVISED -	SCALE: 1″ = 50′ | SHEET NO. 2 OF 12 SHEETS | STA. 99+00 TO STA. 114+00
CHRISTIAN-ROGE & ASSOCIATES, INC. ENGINEERS-PLANNERS-SURVEYORS 211 WEST WACKER DRIVE CHICAGO, ILLINOIS 60606 PHONE: (312)372-2023 FAX: (312)372-5274	DATE - FEBRUARY 2010	REVISED -	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		8D
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CITY OF WARRENVILLE

NE ¼ SECTION 33 - 39 - 9 | NW ¼ SECTION 34 - 39 - 9

115+99.13

HMA PAVEMENT, 13" | P.C.C. PAVEMENT, 10¼" (JOINTED) & P.C.C. SHOULDERS, 10¼"

COMB. CONCRETE CURB & GUTTER, TYPE B-6.12

EXIST. R.O.W.

HMA PATH

10'

+00, 85' LT. | +00, 88' LT.

115+99.13
15.00 LT
HMA SHOULDERS, 8"

P.G.L.

179°59'59.975"

+18.20

115+00

GRASS

+58.20

113+98.74
15.00 RT

P.I. STA. 116+35.08

P.G.L.

MATCHLINE 114+00

85' | 218' | 39' | 51' | 60'

116+15.35
39.00' RT

P.C.C. SHOULDERS, 10¼"

118+35.72
51.00' RT

4'

NE ¼ SECTION 33 - 39 - 9

SE ¼ SECTION 33 - 39 - 9

EXIST. R.O.W.

℄ IL. RTE. 56

3 CENTER CURVE
200'R - 50'R - 200'R
5' OFFSET

121+33.36
132.53 LT

121+13.31
115.48 LT

121+17.31
83.45 LT

CONCRETE MEDIAN TYPE SB-6.12

120+84.99
56.67 LT

+27, 88' LT.

120+33.79
50.00 LT

118+83.79
39.00' LT

P.C.C. SHOULDERS, 10¼"

+40.99

RAMP NOSE (TYP.)

100'R

3'R

120+00

+60.80

P.C.C. PAVEMENT, 10¼" (JOINTED)

15' | 15' | 24' | 6' | 9'

120+34.32
51.00 RT

NW ¼ SECTION 34 - 39 - 9

SW ¼ SECTION 34 - 39 - 9

DuPAGE COUNTY BENCHMARK

120+34.04
102.25 RT

120+55.57
124.08' RT

120+84.18
97.39' RT

2 CENTER CURVE
50'R - 200'R
5' OFFSET

PROPOSED R.O.W.

120+81.24
148.94' RT

IL. RTE. 59

515+00

36' | 60' | 35' | 51' | 51'

122+39.25
148.97 LT

STA. 121+60.24 ℄ IL RTE. 56 =
STA. 517+06.24 ℄ IL RTE. 59

PROPOSED R.O.W.

122+54.26
123.53 LT

122+53.27
115.41 LT

122+36.30
97.42' LT

2 CENTER CURVE
200'R - 50'R
5' OFFSET

35' | 24' | 6' | 15' | 15' | 10'

HMA PATH

+00.46

122+86.17
51.00 LT

79°18'30"

3'R

100'R

+58.68

+78.47

+05.87

+34.34

P.G.L.

STA. 124+00 TO STA. 124+81.96
CONC. MEDIAN TY. M-2.12

EXIST. R.O.W.

FRONTAGE ROAD

COMB. CONCRETE CURB & GUTTER, TYPE B-6.12

127+01.96
39.00 LT

P.C.C. SHOULDERS, 10¼"

P.C.C. PAVEMENT, 10¼" (JOINTED)

P.G.L.

MATCHLINE 129+00

4' | 51' | 60' | 9' | 15' | 15' | 24' | 6'

125+00

+60.46

179°49'31"

GRASS

+00.46

+25.98

+87.64

+58.95

+91.95

30' | 35'(TYP.) | C.E. | 39.4' | C.E.

P.C.C. SHOULDERS, 10¼"

COMB. CONCRETE CURB & GUTTER, TYPE B-6.24

P.E. | 12' | P.E. | 12' 13' | P.E. | P.E. | 13'

10' | 10' | 24' | 39' | 218'

EXIST. R.O.W.

122+04.11
78.45 RT

122+49.23
50.00 RT

123+99.23
39.00 RT

122+06.21
102.64 RT

121+88.06
127.54' RT

CONCRETE MEDIAN TYPE SB-6.12 (TYP.)

P.I. STA. 126+33.92

WARRENVILLE FIRE STATION

PROPOSED R.O.W.

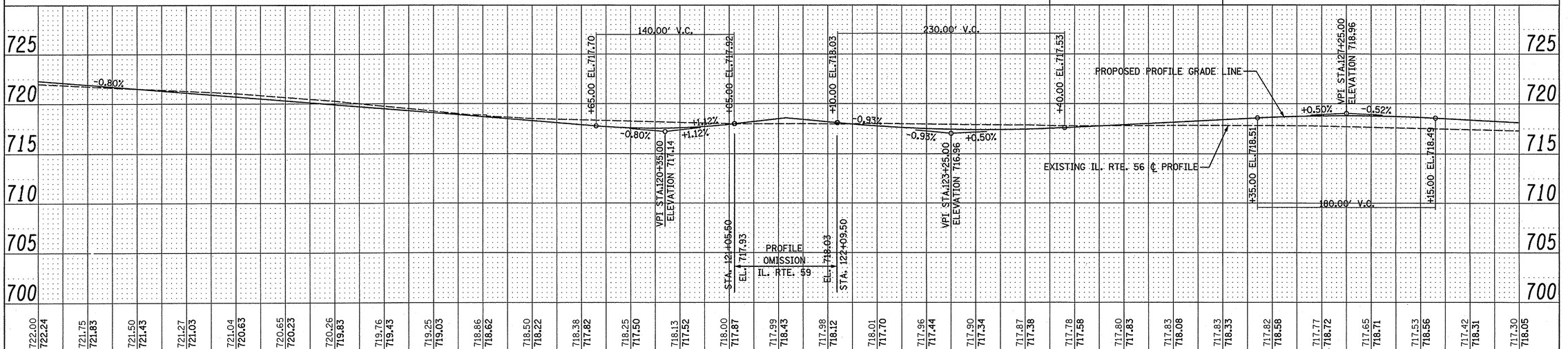
2 CENTER CURVE
200'R - 50'R
5' OFFSET

HMA PAVEMENT, 13" | P.C.C. PAVEMENT, 10¼" (JOINTED) & P.C.C. SHOULDERS, 10¼"

113+98.74

BM 464 ELEV. 716.77
STA. 124+87.58 54.15' RT.
"□" ON LIGHT POLE BASE

NOTE: FOR IL. RTE. 59 INTERSECTION, SEE DETAILS AND ELEVATIONS SHEET.



FILE NAME = DI62420-sht-plnprf03.dgn	DESIGNED - S.J.P.	REVISED -	
PLOT DATE = 2/18/2010	DRAWN - B.K.	REVISED -	
PLOT SCALE = 50.000 ' / IN.	CHECKED - M.P.	REVISED -	
	DATE - FEBRUARY 2010	REVISED -	

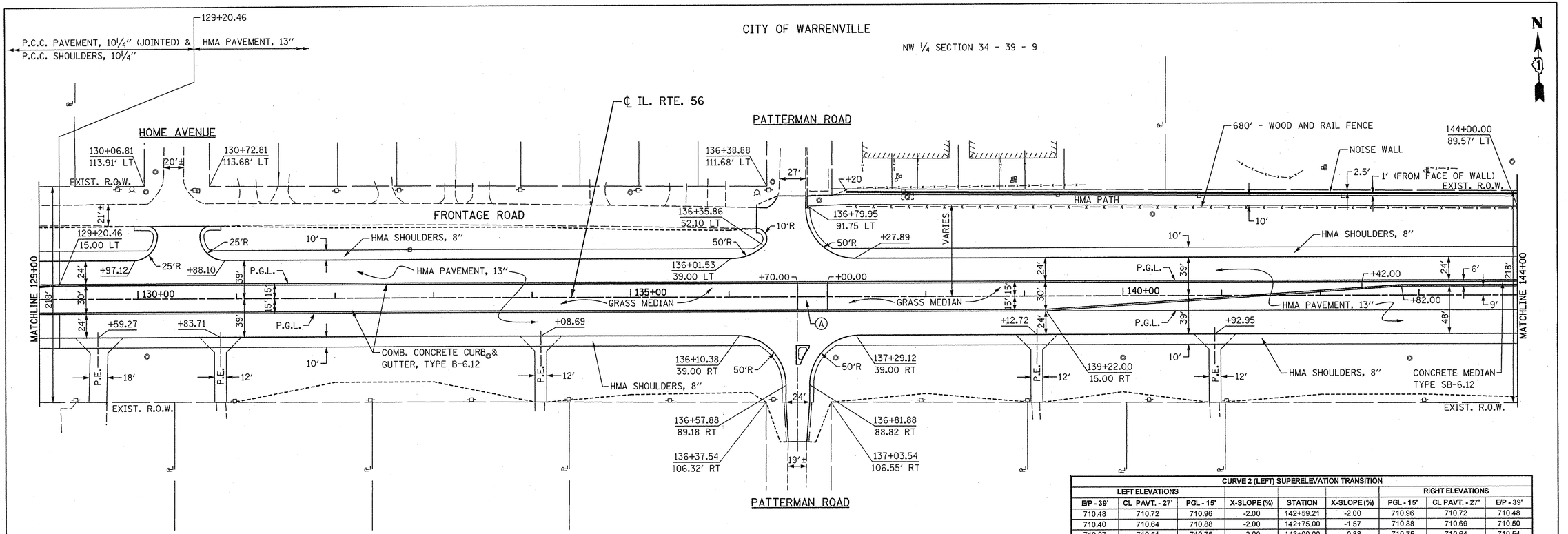
CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
IL. RTE. 56

SCALE: 1" = 50' | SHEET NO. 3 OF 12 SHEETS | STA. 114+00 TO STA. 129+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		81
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



CURVE 2 (LEFT) SUPERELEVATION TRANSITION								
LEFT ELEVATIONS						RIGHT ELEVATIONS		
E/P - 39'	CL PAVT. - 27'	PGL - 15'	X-SLOPE (%)	STATION	X-SLOPE (%)	PGL - 15'	CL PAVT. - 27'	E/P - 39'
710.48	710.72	710.96	-2.00	142+59.21	-2.00	710.96	710.72	710.48
710.40	710.64	710.88	-2.00	142+75.00	-1.57	710.88	710.69	710.50
710.27	710.51	710.75	-2.00	143+00.00	-0.88	710.75	710.64	710.54
710.14	710.38	710.62	-2.00	143+25.00	-0.19	710.62	710.60	710.57
710.10	710.34	710.58	-2.00	143+31.82	0.00	710.58	710.58	710.58
710.01	710.25	710.49	-2.00	143+50.00	0.50	710.49	710.55	710.61
709.88	710.12	710.36	-2.00	143+75.00	1.19	710.36	710.50	710.65
709.75	709.99	710.23	-2.00	144+00.00	1.88	710.23	710.46	710.68
709.73	709.97	710.21	-2.00	144+04.43	2.00	710.21	710.45	710.69
709.69	709.94	710.19	-2.09	144+07.82	2.09	710.19	710.44	710.69
709.48	709.79	710.10	-2.57	144+25.00	2.57	710.10	710.41	710.72
709.24	709.61	709.99	-3.14	144+45.82	3.14	709.99	710.37	710.74

FILE NAME = DI62428-sht-plnpr04.dgn
PLOT DATE = 2/18/2010
PLOT SCALE = 50.000 ' / IN.

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

DESIGNED - S.J.P.	REVISED -	
DRAWN - B.K.	REVISED -	
CHECKED - M.P.	REVISED -	
DATE - FEBRUARY 2010	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
IL. RTE. 56

SCALE: 1" = 50' | SHEET NO. 4 OF 12 SHEETS | STA. 129+00 TO STA. 144+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		82
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

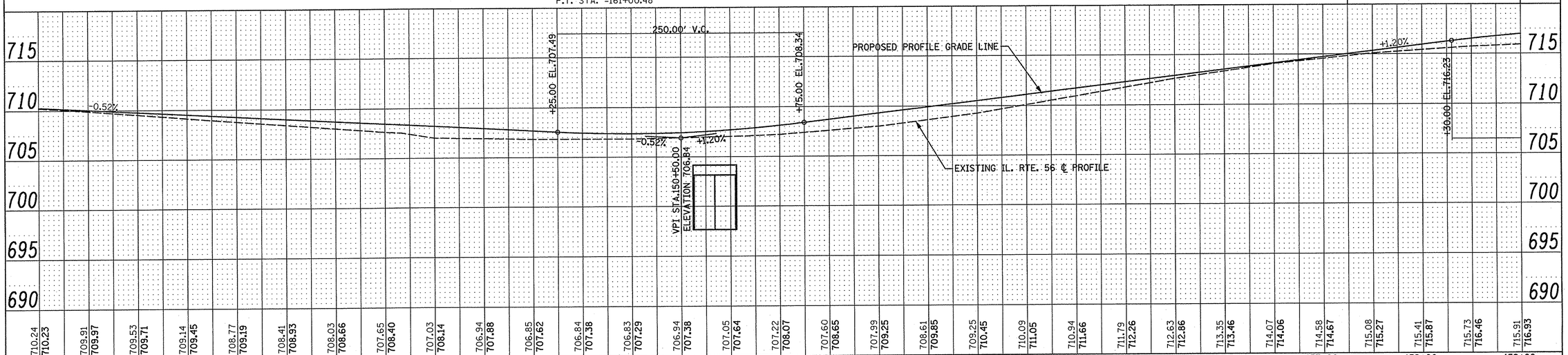
CITY OF WARRENVILLE
NE 1/4 SECTION 34 - 39 - 9
NW 1/4 SECTION 35 - 39 - 9
SE 1/4 SECTION 34 - 39 - 9

N

100' - WOOD AND RAIL FENCE
TWIN PINES DRIVE
145+25.19 114.43' LT
145+36.52 87.17' LT
NOISE WALL
EXIST. R.O.W.
HMA PATH
145+96.99 109.00' LT
145+85.26 92.02 LT
℄ IL. RTE. 56
FERRY CREEK
100' - WOOD AND RAIL FENCE, 4'
CONCRETE MEDIAN TYPE SB-6.24 (SPECIAL)
COMB. CONC. CURB & GUTTER, TYPE B-6.24
WILLIAMS ROAD
155+24.00 109.02 LT
155+88.79 109.02' LT
155+61.66 91.44 LT
155+27.19 71.71 LT
154+81.35 39.00 LT
151+80.52 15.00 LT
155+90.54 51.00 LT
158+04.89 51.00 LT
COMB. CONCRETE CURB & GUTTER, TYPE B-6.24
MATCHLINE 144+00
MATCHLINE 159+00
HMA PAVEMENT, 13"
RAMP NOSE (TYP.)
P.C. STA. 144+07.82
WEBSTER STREET
145+64.05 89.19 RT
145+40.65 89.24 RT
145+21.44 109.01' RT
144+00.00 108.94' RT
145+85.56 114.68' RT
146+90.06 121.80' RT
147+85.55 124.36' RT
148+80.88 130.45' RT
148+74.71 15.00 RT
150+50.96 39.00 RT
150+48.09 135.81' RT
152+65.37 51.00 RT
154+26.03 51.00 RT
153+18.40 134.39' RT
154+53.04 92.48 RT
155+40.61 39.00 RT
154+95.94 68.79 RT
154+86.96 108.98' RT
HMA SHOULDERS, 8"
CURVE 2
PI STA. =152+72.86
Δ =29° 07' 26" (LT)
D =1° 43' 14"
R =3,330.00'
T =865.04'
L =1,692.66'
E =110.52'
e =3.14%
T.R. =72.61'
S.E. RUN =114'
P.C. STA. =144+07.82
P.T. STA. =161+00.48
151+89.90 132.22' RT
151+89.90 142.73' RT
153+36.48 142.94' RT
PROPOSED TEMP. EASMENT
℄ RELOCATED PRIVATE DRIVE
(SEE DETAILS ON SHEET NO. 197)
WARRENVILLE ROAD
CONCRETE MEDIAN TYPE SB-6.24 (SPECIAL)

NOTE: FOR TWIN PINES DRIVE, WEBSTER STREET, WILLIAMS ROAD AND WARRENVILLE ROAD INTERSECTIONS, SEE INTERSECTION DETAILS SHEET.

CRA 17 ELEV. 716.25
STA. 162+63.33 108.81' LT.
"□" ATOP CURB



FILE NAME =DI62420-sht-plnprf05.dgn
PLOT DATE =2/18/2010
PLOT SCALE=50.000 ' / IN.

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

DESIGNED - S.J.P.		REVISED -
DRAWN - B.K.		REVISED -
CHECKED - M.P.		REVISED -
DATE - FEBRUARY 2010		REVISED -

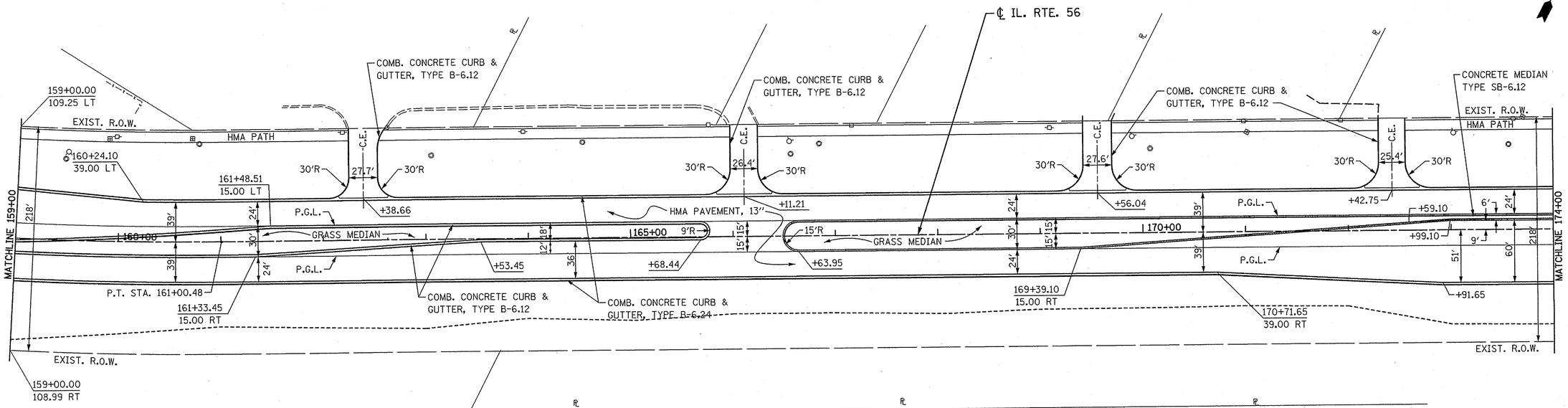
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
IL. RTE. 56

SCALE: 1" = 50' | SHEET NO. 5 OF 12 SHEETS | STA. 144+00 | TO STA. 159+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		03
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

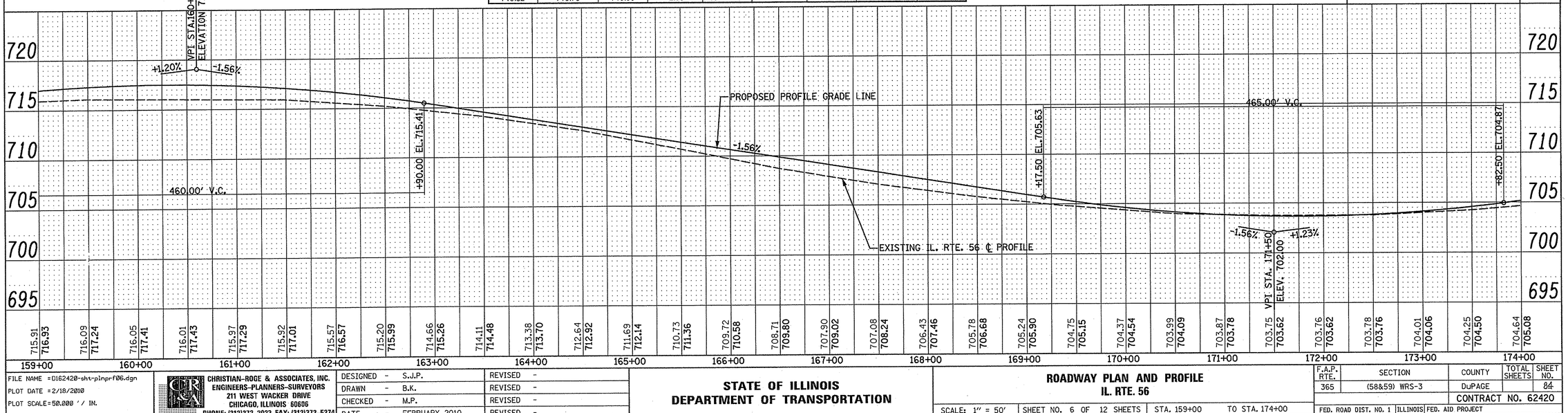
NW 1/4 SECTION 35 - 39 - 9
CITY OF WARRENVILLE



CURVE 2
PI STA. =152+72.86
Δ =29° 07' 26" (LT)
D =1° 43' 14"
R =3,330.00'
T =865.04'
L =1,692.66'
E =110.52'
e =3.14%
T.R. =72.61'
S.E. RUN =114'
P.C. STA. =144+07.82
P.T. STA. =161+00.48

CURVE 2 (LEFT) SUPERELEVATION TRANSITION								
LEFT ELEVATIONS						RIGHT ELEVATIONS		
E/P - 39'	CL PAVT. - 27'	PGL - 15'	X-SLOPE (%)	STATION	X-SLOPE (%)	PGL - 15'	CL PAVT. - 27'	E/P - 39'
716.66	717.03	717.41	-3.14	160+62.48	3.14	717.41	717.79	718.16
716.71	717.04	717.38	-2.80	160+75.00	2.80	717.38	717.71	718.05
716.79	717.04	717.29	-2.11	161+00.00	2.11	717.29	717.54	717.80
716.79	717.04	717.29	-2.09	161+00.48	2.09	717.29	717.54	717.79
716.79	717.03	717.27	-2.00	161+03.87	2.00	717.27	717.51	717.75
716.69	716.93	717.17	-2.00	161+25.00	1.42	717.17	717.34	717.51
716.53	716.77	717.01	-2.00	161+50.00	0.73	717.01	717.09	717.18
716.33	716.57	716.81	-2.00	161+75.00	0.04	716.81	716.81	716.82
716.32	716.56	716.80	-2.00	161+76.48	0.00	716.80	716.80	716.80
716.09	716.33	716.57	-2.00	162+00.00	-0.65	716.57	716.50	716.42
715.82	716.06	716.30	-2.00	162+25.00	-1.34	716.30	716.14	715.98
715.52	715.76	716.00	-2.00	162+49.09	-2.00	716.00	715.76	715.52

CRA 18 ELEV. 703.64
STA. 173+03.39 92.89' LT.
S. BOLT ON FIRE HYDRANT



FILE NAME =D162420-sht-plnprf06.dgn
PLOT DATE =2/18/2010
PLOT SCALE=50.000 ' / IN.

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

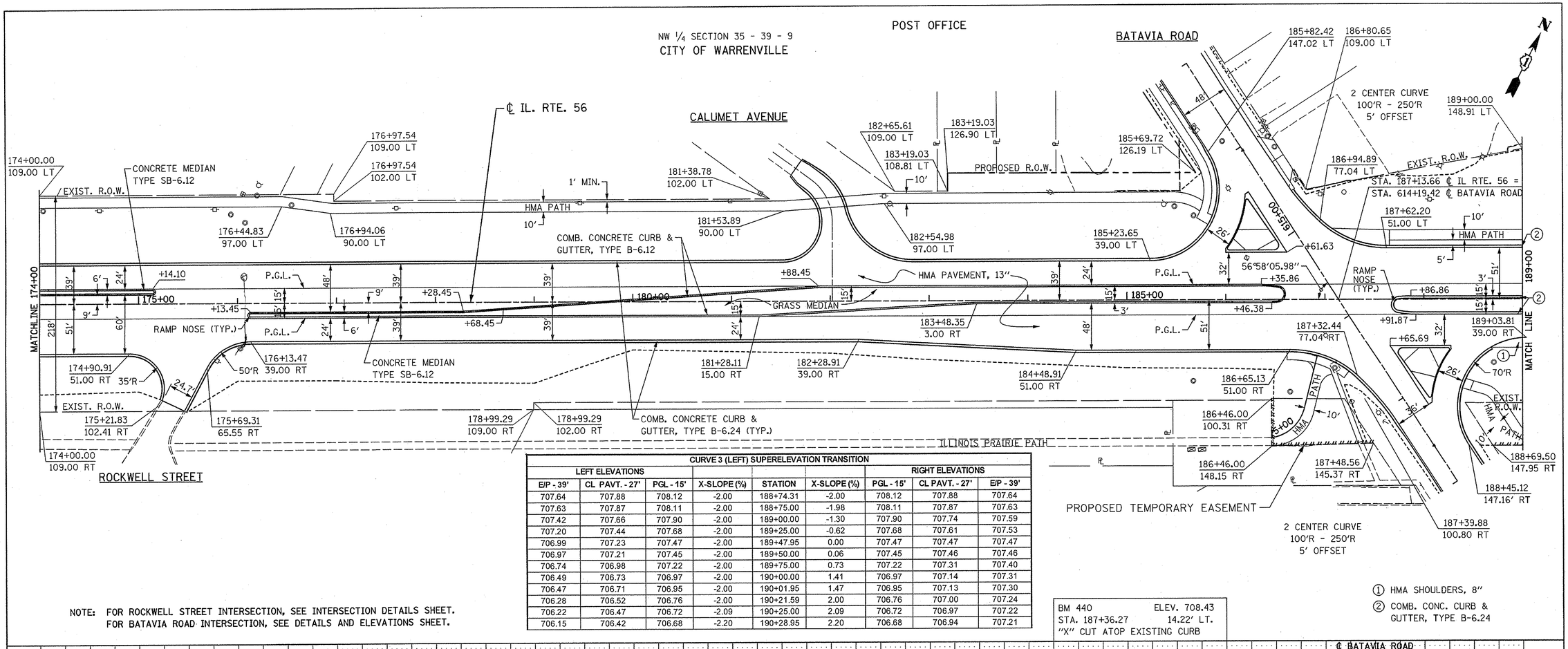
DESIGNED	S.J.P.	REVISED -
DRAWN	B.K.	REVISED -
CHECKED	M.P.	REVISED -
DATE	FEBRUARY 2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
IL. RTE. 56

SCALE: 1" = 50' | SHEET NO. 6 OF 12 SHEETS | STA. 159+00 | TO STA. 174+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		84
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

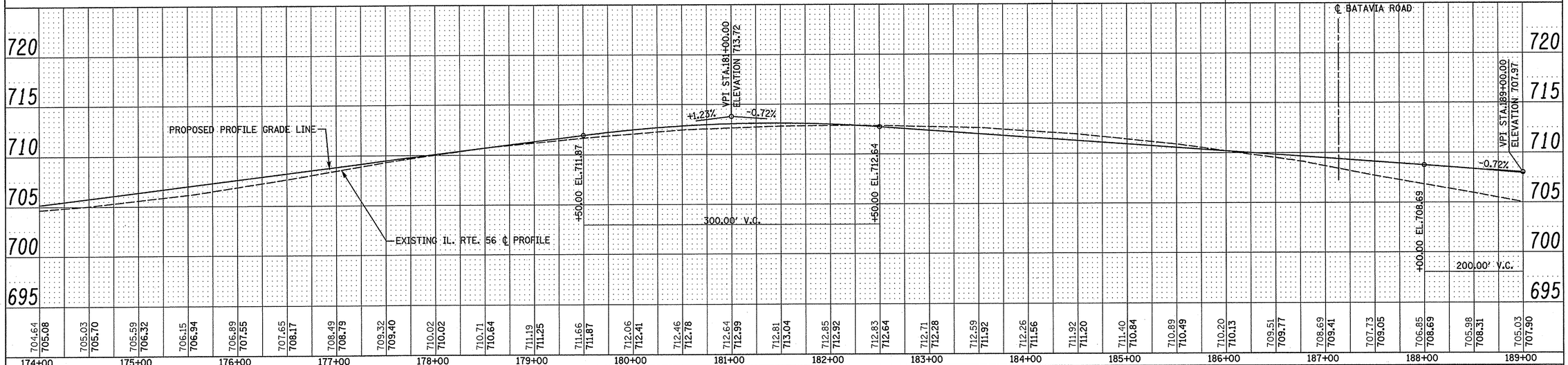


CURVE 3 (LEFT) SUPERELEVATION TRANSITION								
LEFT ELEVATIONS						RIGHT ELEVATIONS		
E/P - 39'	CL PAVT. - 27'	PGL - 15'	X-SLOPE (%)	STATION	X-SLOPE (%)	PGL - 15'	CL PAVT. - 27'	E/P - 39'
707.64	707.88	708.12	-2.00	188+74.31	-2.00	708.12	707.88	707.64
707.63	707.87	708.11	-2.00	188+75.00	-1.98	708.11	707.87	707.63
707.42	707.66	707.90	-2.00	189+00.00	-1.30	707.90	707.74	707.59
707.20	707.44	707.68	-2.00	189+25.00	-0.62	707.68	707.61	707.53
706.99	707.23	707.47	-2.00	189+47.95	0.00	707.47	707.47	707.47
706.97	707.21	707.45	-2.00	189+50.00	0.06	707.45	707.46	707.46
706.74	706.98	707.22	-2.00	189+75.00	0.73	707.22	707.31	707.40
706.49	706.73	706.97	-2.00	190+00.00	1.41	706.97	707.14	707.31
706.47	706.71	706.95	-2.00	190+01.95	1.47	706.95	707.13	707.30
706.28	706.52	706.76	-2.00	190+21.59	2.00	706.76	707.00	707.24
706.22	706.47	706.72	-2.09	190+25.00	2.09	706.72	706.97	707.22
706.15	706.42	706.68	-2.20	190+28.95	2.20	706.68	706.94	707.21

NOTE: FOR ROCKWELL STREET INTERSECTION, SEE INTERSECTION DETAILS SHEET.
FOR BATAVIA ROAD INTERSECTION, SEE DETAILS AND ELEVATIONS SHEET.

BM 440 ELEV. 708.43
STA. 187+36.27 14.22' LT.
"X" CUT ATOP EXISTING CURB

① HMA SHOULDERS, 8"
② COMB. CONC. CURB & GUTTER, TYPE B-6.24

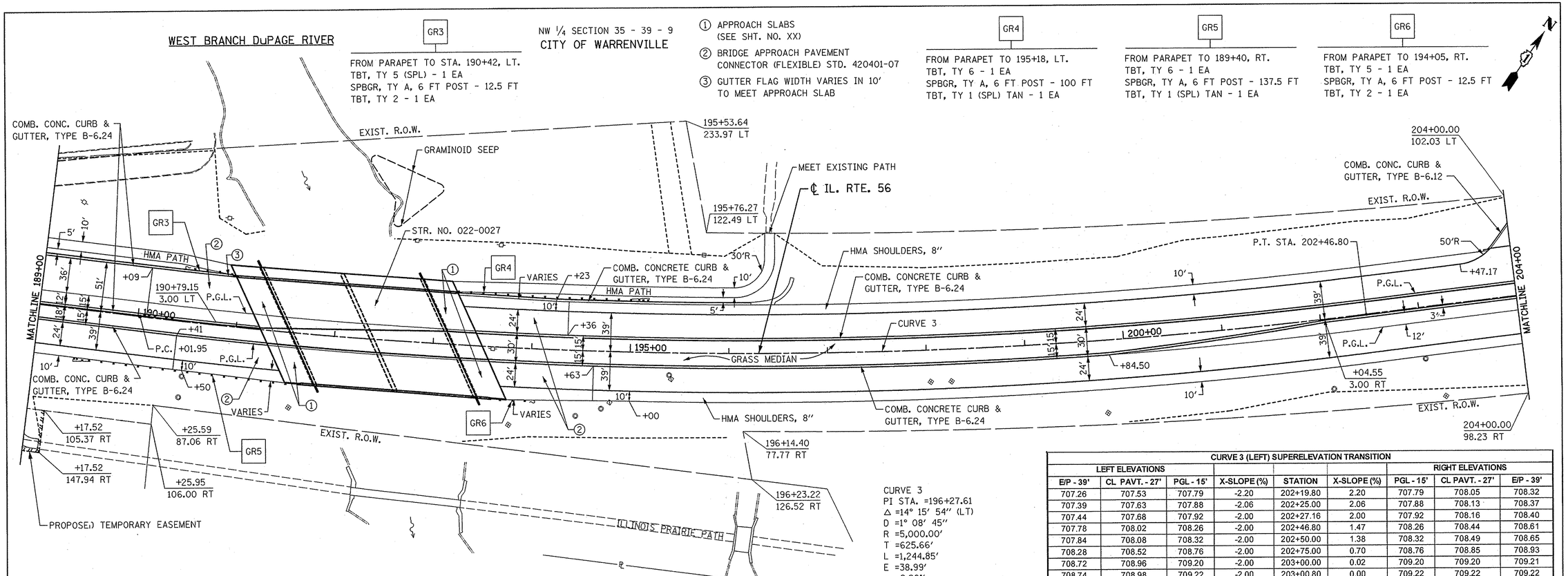


FILE NAME = D162420-sht-plnprf07.dgn	CHRISTIAN-ROGE & ASSOCIATES, INC. ENGINEERS-PLANNERS-SURVEYORS 211 WEST WACKER DRIVE CHICAGO, ILLINOIS 60606 PHONE: (312)372-2023 FAX: (312)372-5274	DESIGNED - S.J.P.	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
PLOT DATE = 2/18/2010		DRAWN - B.K.	REVISED -	
PLOT SCALE = 50.000 ' / IN.		CHECKED - M.P.	REVISED -	
		DATE - FEBRUARY 2010	REVISED -	

ROADWAY PLAN AND PROFILE
IL. RTE. 56

SCALE: 1" = 50' | SHEET NO. 7 OF 12 SHEETS | STA. 174+00 TO STA. 189+00

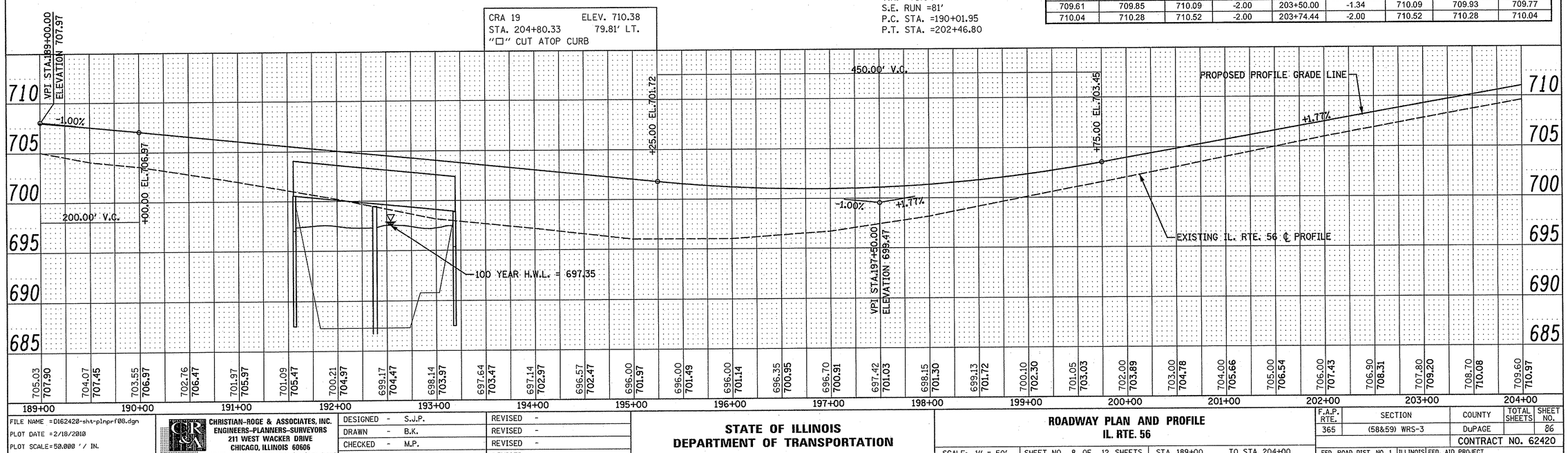
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		85
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



CURVE 3
PI STA. =196+27.61
△ =14° 15' 54" (LT)
D =1° 08' 45"
R =5,000.00'
T =625.66'
L =1,244.85'
E =38.99'
e =2.20%
T.R. =73.64'
S.E. RUN =81'
P.C. STA. =190+01.95
P.T. STA. =202+46.80

CURVE 3 (LEFT) SUPERELEVATION TRANSITION

LEFT ELEVATIONS						RIGHT ELEVATIONS		
E/P - 39'	CL PAVT. - 27'	PGL - 15'	X-SLOPE (%)	STATION	X-SLOPE (%)	PGL - 15'	CL PAVT. - 27'	E/P - 39'
707.26	707.53	707.79	-2.20	202+19.80	2.20	707.79	708.05	708.32
707.39	707.63	707.88	-2.06	202+25.00	2.06	707.88	708.13	708.37
707.44	707.68	707.92	-2.00	202+27.16	2.00	707.92	708.16	708.40
707.78	708.02	708.26	-2.00	202+46.80	1.47	708.26	708.44	708.61
707.84	708.08	708.32	-2.00	202+50.00	1.38	708.32	708.49	708.65
708.28	708.52	708.76	-2.00	202+75.00	0.70	708.76	708.85	708.93
708.72	708.96	709.20	-2.00	203+00.00	0.02	709.20	709.20	709.21
708.74	708.98	709.22	-2.00	203+00.80	0.00	709.22	709.22	709.22
709.17	709.41	709.65	-2.00	203+25.00	-0.66	709.65	709.57	709.49
709.61	709.85	710.09	-2.00	203+50.00	-1.34	710.09	709.93	709.77
710.04	710.28	710.52	-2.00	203+74.44	-2.00	710.52	710.28	710.04



FILE NAME =D162420-sht-plnprf08.dgn
PLOT DATE =2/18/2010
PLOT SCALE=50.000 ' / IN.

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

DESIGNED - S.J.P.		REVISED -
DRAWN - B.K.		REVISED -
CHECKED - M.P.		REVISED -
DATE - FEBRUARY 2010		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
IL. RTE. 56

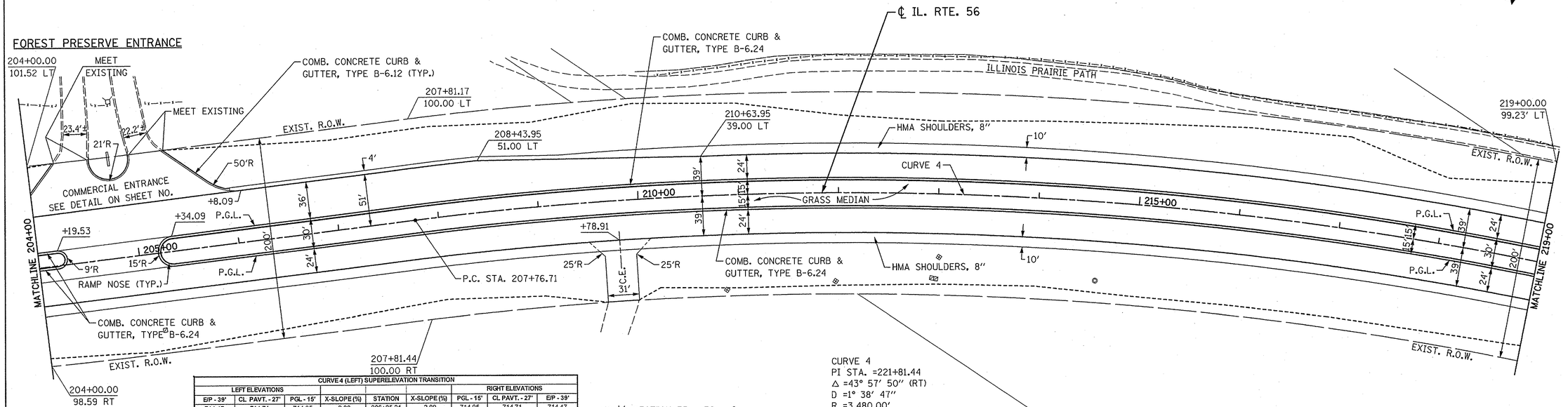
SCALE: 1" = 50' | SHEET NO. 8 OF 12 SHEETS | STA. 189+00 | TO STA. 204+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		86

CONTRACT NO. 62420

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

SE ¼ SECTION 26 - 39 - 9
CITY OF WARRENVILLE



CURVE 4 (LEFT) SUPERELEVATION TRANSITION

LEFT ELEVATIONS						RIGHT ELEVATIONS		
E/P - 39'	CL PAVT. - 27'	PGL - 15'	X-SLOPE (%)	STATION	X-SLOPE (%)	PGL - 15'	CL PAVT. - 27'	E/P - 39'
714.47	714.71	714.95	-2.00	206+25.21	-2.00	714.95	714.71	714.47
715.07	715.23	715.39	-1.34	206+50.00	-2.00	715.39	715.15	714.91
715.67	715.75	715.83	-0.68	206+75.00	-2.00	715.83	715.59	715.35
716.28	716.28	716.28	-0.02	207+00.00	-2.00	716.28	716.04	715.80
716.29	716.29	716.29	0.00	207+00.71	-2.00	716.29	716.05	715.81
716.87	716.80	716.72	0.64	207+25.00	-2.00	716.72	716.48	716.24
717.47	717.32	717.16	1.31	207+50.00	-2.00	717.16	716.92	716.68
718.07	717.84	717.60	1.97	207+75.00	-2.00	717.60	717.36	717.12
718.10	717.86	717.62	2.00	207+76.21	-2.00	717.62	717.38	717.14
718.11	717.87	717.63	2.01	207+76.71	-2.01	717.63	717.39	717.15
718.67	718.36	718.04	2.63	208+00.00	-2.63	718.04	717.72	717.41
719.02	718.66	718.30	3.02	208+14.71	-3.02	718.30	717.94	717.58

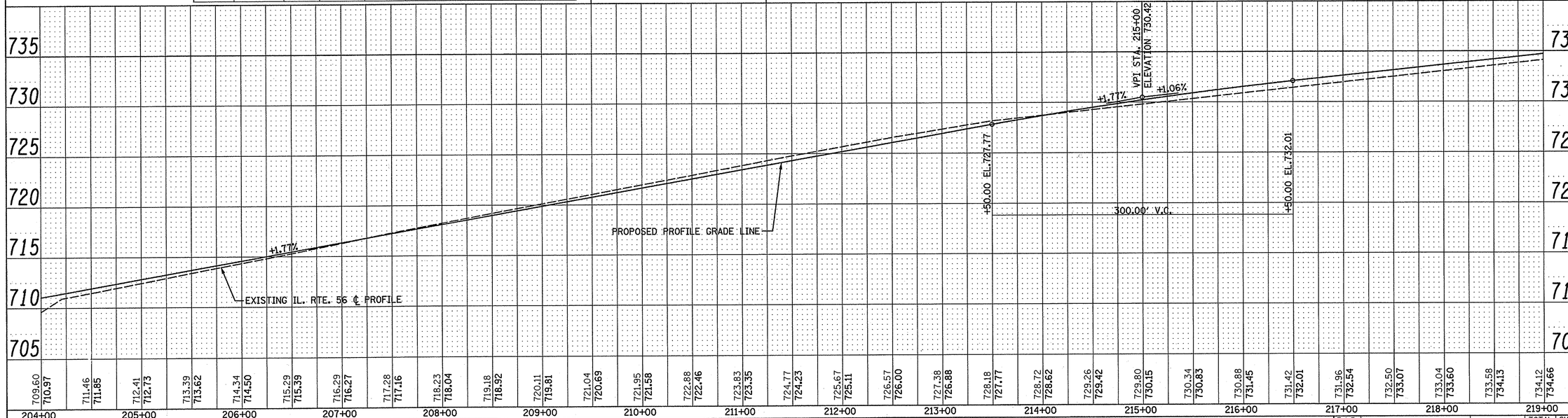
NE ¼ SECTION 35 - 39 - 9

CURVE 4
PI STA. =221+81.44
Δ =43° 57' 50" (RT)
D =1° 38' 47"
R =3,480.00'
T =1,404.73'
L =2,670.25'
E =272.82'
e =3.02%
T.R. =75.49'
S.E. RUN =114'
P.C. STA. =207+76.71
P.T. STA. =234+46.96

NOTE: FOR FOREST PRESERVE ENTRANCE INTERSECTION, SEE INTERSECTION DETAILS SHEET.

CRA 20 ELEV. 721.77
STA. 210+85.15 68.01' LT.
½" IRON PIPE

CP 105 ELEV. 731.40
STA. 217+42.20 33.98' RT.
¾" IRON PIPE W/CAP



FILE NAME =D162420-sht-plnpr-f09.dgn
PLOT DATE =2/18/2010
PLOT SCALE=50.000 ' / IN.

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

DESIGNED	-	S.J.P.	REVISED -
DRAWN	-	B.K.	REVISED -
CHECKED	-	M.P.	REVISED -
DATE	-	FEBRUARY 2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
IL. RTE. 56

SCALE: 1" = 50' | SHEET NO. 9 OF 12 SHEETS | STA. 204+00 | TO STA. 219+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		87

CONTRACT NO. 62420

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

CITY OF WARRENVILLE

SE 1/4 SECTION 26 - 39 - 9

NE 1/4 SECTION 26 - 39 - 9

SE 1/4 SECTION 26 - 39 - 9

℄ IL. RTE. 56

COMB. CONCRETE CURB & GUTTER, TYPE B-6.24

219+00.00
99.90' LT

EXIST. R.O.W.

10'

39'

24'

5'

5'

200'

MATCHLINE 219+00

220+00

GRASS MEDIAN

+55.37

P.G.L.

HMA SHOULDERS, 8"

10'

EXIST. R.O.W.

219+00.00
100.36' RT

+67.46
39.00 RT

COMB. CONCRETE CURB & GUTTER, TYPE B-6.24

+79.68

+47.16
39.00 LT

HMA SHOULDERS, 8"

HMA PAVEMENT, 13"

+19.68

225+00

+87.46
51.00 RT

CONCRETE MEDIAN TYPE SB-6.24 (SPECIAL)

2 CENTER CURVE
40'R - 250'R
7' OFFSET

24'

6'

9'

4'

51'

+89.15

CURVE 4

RAMP NOSE (TYP.)

226+91.87
51.00 RT

226+94.04
100.30 LT

226+93.34
104.44 LT

227+56.93
99.72 LT

2 CENTER CURVE
40'R - 200'R
5' OFFSET

+64

227+43.33
56.32 LT

226+95.54
50.00 LT

PROPOSED R.O.W.

6'

6'

60'

35'

720+00

227+32.82
88.17 RT

228+92.15
127.65 RT

228+92.43
99.76 LT

2 CENTER CURVE
40'R - 200'R
5' OFFSET

228+77.41
86.39 RT

229+16.15
51.00 LT

80°45'19"

CONCRETE MEDIAN TYPE SB-6.24 (SPECIAL)

COMB. CONCRETE CURB & GUTTER, TYPE B-6.24

232+50.87
51.00 LT

EXIST. R.O.W.

60'

6'

9'

4'

230+00

+21.47

229+28.83
50.00 RT

HMA PAVEMENT, 13"

+00.42

+71.92

51'

5'

15'

24'

P.G.L.

39'

200'

MATCHLINE 234+00

228+77.21
56.18 RT

230+80.58
39.00 RT

10'

228+66.94
100.25 RT

EXIST. R.O.W.

COMB. CONCRETE CURB & GUTTER, TYPE B-6.12

234+00.00
100.44 RT

HMA SHOULDERS, 8"

STA. 228+05.21 ℄ IL RTE. 56 =
STA. 720+64.63 ℄ WINFIELD ROAD

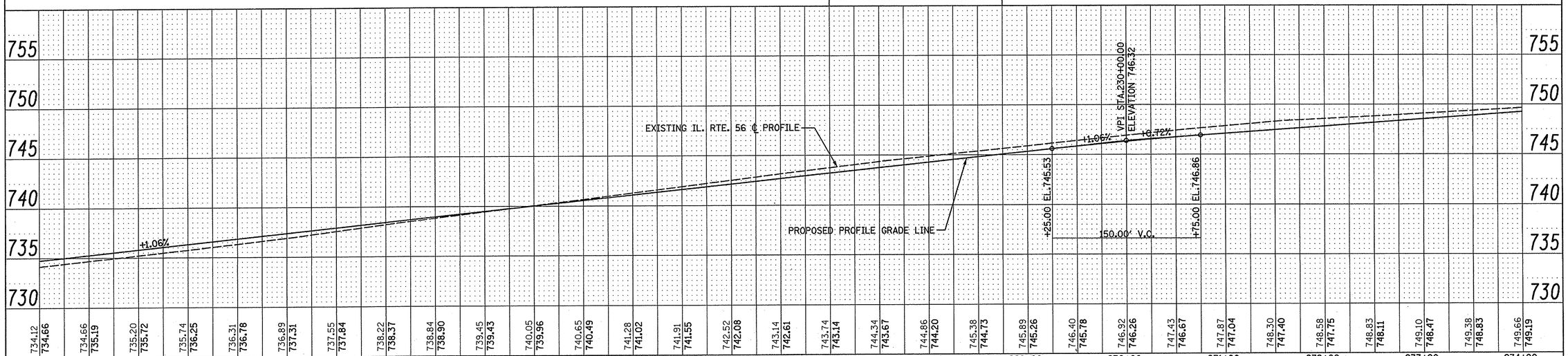
2 CENTER CURVE
40'R - 200'R
5' OFFSET

WINFIELD ROAD

CURVE 4
PI STA. =221+81.44
△ =43° 57' 50" (RT)
D =1° 38' 47"
R =3,480.00'
T =1,404.73'
L =2,670.25'
E =272.82'
e =3.02%
T.R. =75.49'
S.E. RUN =114'
P.C. STA. =207+76.71
P.T. STA. =234+46.96

BM 423 ELEV. 745.78
STA. 228+78.05 19.63' RT.
"□" CUT IN T.S. FOUNDATION

NOTE: FOR WINFIELD ROAD INTERSECTION, SEE DETAILS AND ELEVATIONS SHEET.



FILE NAME = D162420-sht-plnprf10.dgn	DESIGNED - S.J.P.	REVISED -
PLOT DATE = 2/18/2010	DRAWN - B.K.	REVISED -
PLOT SCALE = 50.000 ' / IN.	CHECKED - M.P.	REVISED -
	DATE - FEBRUARY 2010	REVISED -

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
IL. RTE. 56

SCALE: 1" = 50' | SHEET NO. 10 OF 12 SHEETS | STA. 219+00 TO STA. 234+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		88
		CONTRACT NO. 62420		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CURVE 5
PI STA. =251+32.09
Δ =11° 05′ 20″ (LT)
D =0° 27′ 37″
R =12,450.00′
T =1,208.53′
L =2,409.51′
E =58.52′
e =N.C.
T.R. =N.A.
S.E. RUN =N.A.
P.C. STA. =239+23.56
P.T. STA. =263+33.07

NW ¼ SECTION 25 - 39 - 9

CITY OF WARRENVILLE

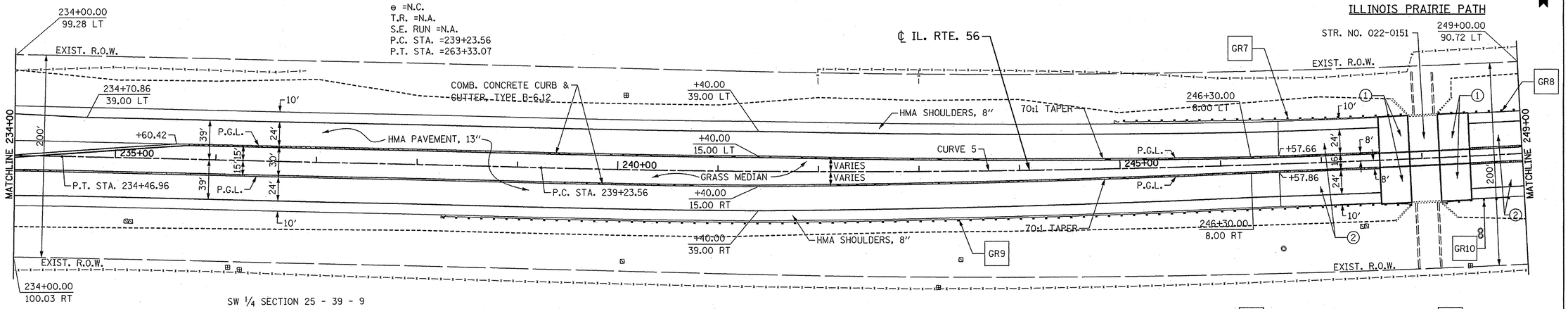
GR7
FROM PARAPET TO STA. 244+95, LT.
TBT, TY 2 - 1 EA
SPBGR, TY A, 6 FT POST - 262.5 FT
TBT, TY 5 - 1 EA

GR8
FROM PARAPET TO STA. 249+25.7, LT.
TBT, TY 6 - 1 EA
SPBGR, TY A, 6 FT POST - 125 FT
TBT, TY 1 (SPL) TAN - 1 EA

① APPROACH SLABS (SEE SHT. NO. XX)
② BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) STD. 420401-07

N

ILLINOIS PRAIRIE PATH



SW ¼ SECTION 25 - 39 - 9

GR9
FROM PARAPET TO STA. 238+25, RT.
TBT, TY 6 - 1 EA
SPBGR, TY A, 6 FT POST - 875 FT
TBT, TY 1 (SPL) TAN - 1 EA

GR10
FROM PARAPET TO STA. 248+94.4, RT.
TBT, TY 2 - 1 EA
SPBGR, TY A, 6 FT POST - 50 FT
TBT, TY 5 - 1 EA

CURVE 4 (LEFT) SUPERELEVATION TRANSITION

LEFT ELEVATIONS						RIGHT ELEVATIONS		
E/P - 39′	CL PAVT. - 27′	PGL - 15′	X-SLOPE (%)	STATION	X-SLOPE (%)	PGL - 15′	CL PAVT. - 27′	E/P - 39′
749.97	749.61	749.25	3.02	234+08.96	-3.02	749.25	748.89	748.53
749.99	749.68	749.37	2.60	234+25.00	-2.60	749.37	749.06	748.75
750.01	749.77	749.53	2.01	234+46.96	-2.01	749.53	749.29	749.05
750.01	749.77	749.53	2.00	234+47.46	-2.00	749.53	749.29	749.05
750.01	749.78	749.55	1.93	234+50.00	-2.00	749.55	749.31	749.07
750.03	749.88	749.73	1.27	234+75.00	-2.00	749.73	749.49	749.25
750.06	749.98	749.91	0.61	235+00.00	-2.00	749.91	749.67	749.43
750.07	750.07	750.07	0.00	235+22.96	-2.00	750.07	749.83	749.59
750.07	750.07	750.08	-0.05	235+25.00	-2.00	750.08	749.84	749.60
750.09	750.17	750.26	-0.72	235+50.00	-2.00	750.26	750.02	749.78
750.11	750.27	750.44	-1.38	235+75.00	-2.00	750.44	750.20	749.96
750.13	750.37	750.61	-2.00	235+98.46	-2.00	750.61	750.37	750.13

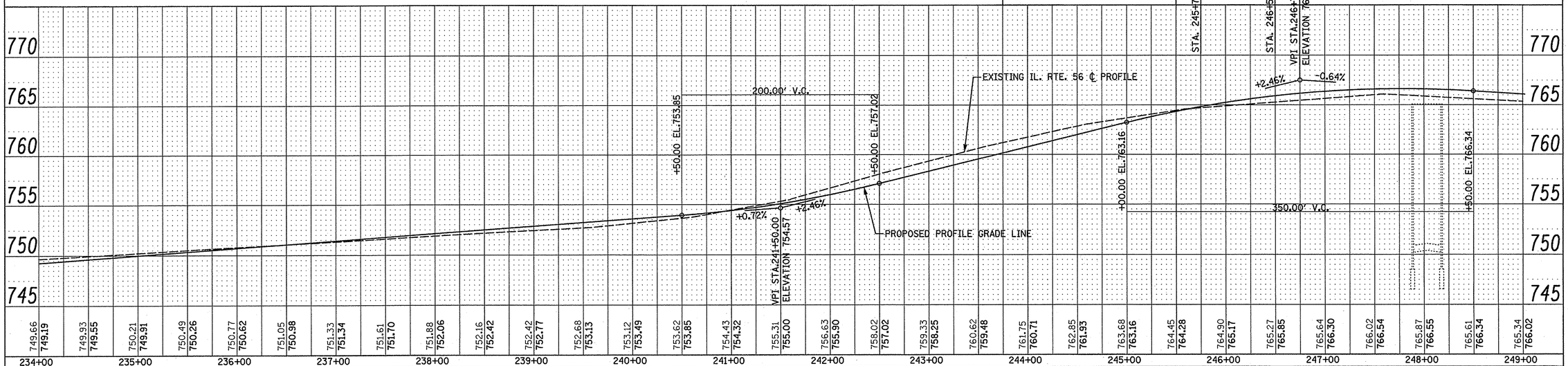
WEST BOUND S.E. TRANSITIONS & PROFILE ADJUSTMENT TO MEET EXISTING BRIDGE DECK
STA. 246+50 TO STA. 249+50, LEFT

DESCRIPTION	STATION	PGL ELEV.	E.O.P. ELEV.	SHLD. X-SLOPE (%)
NORMAL CROWN	246+50	765.85	765.37	
	246+75	766.11	765.63	
	247+00	766.31	765.83	
	247+25	766.45	765.97	-4.0% (NORMAL)
MEET PGL ELEV.	247+50	766.54	766.06	-2.0%
	247+75	766.71	766.23	0.0%
BRIDGE DECK	247+88	766.77	766.29	+2.0%
BRIDGE DECK	248+18	766.83	766.35	+2.0%
	248+50	766.25	765.77	0.0%
	248+75	766.02	765.54	-2.0%
MEET PGL ELEV.	249+00	765.91	765.43	-4.0% (NORMAL)
	249+25	765.61	765.13	
NORMAL CROWN	249+50	765.25	764.77	

NOTE: SEE NEXT SHEET FOR EASTBOUND S.E. TRANSITIONS.

BM 416 ELEV. 767.34
STA. 248+17 44′ RT.
"□" CUT IN WINGWALL

EAST BOUND S.E. TRANSITION & PROFILE ADJUSTMENT
WEST BOUND S.E. TRANSITION & PROFILE ADJUSTMENT SEE TABLE



FILE NAME =D162420-sht-plnprfl1.dgn
PLOT DATE =2/18/2010
PLOT SCALE=50.000 ′ / IN.

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

DESIGNED	- S.J.P.	REVISED -
DRAWN	- B.K.	REVISED -
CHECKED	- M.P.	REVISED -
DATE	- FEBRUARY 2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
IL. RTE. 56

SCALE: 1″ = 50′ | SHEET NO. 11 OF 12 SHEETS | STA. 234+00 TO STA. 249+00

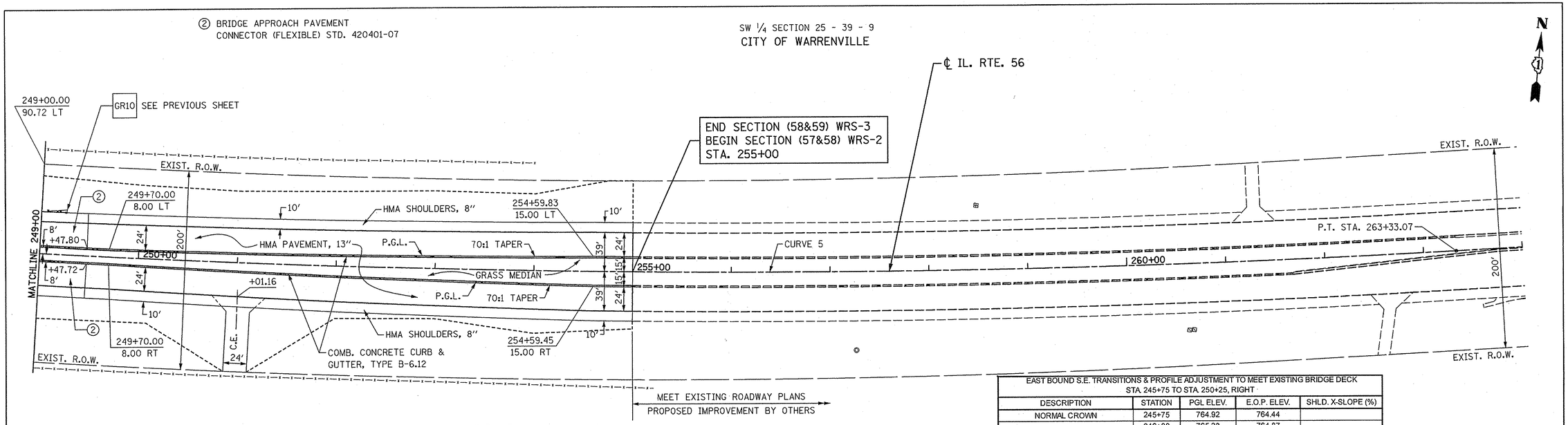
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		89

CONTRACT NO. 62420

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

② BRIDGE APPROACH PAVEMENT
CONNECTOR (FLEXIBLE) STD. 420401-07

SW ¼ SECTION 25 - 39 - 9
CITY OF WARRENVILLE

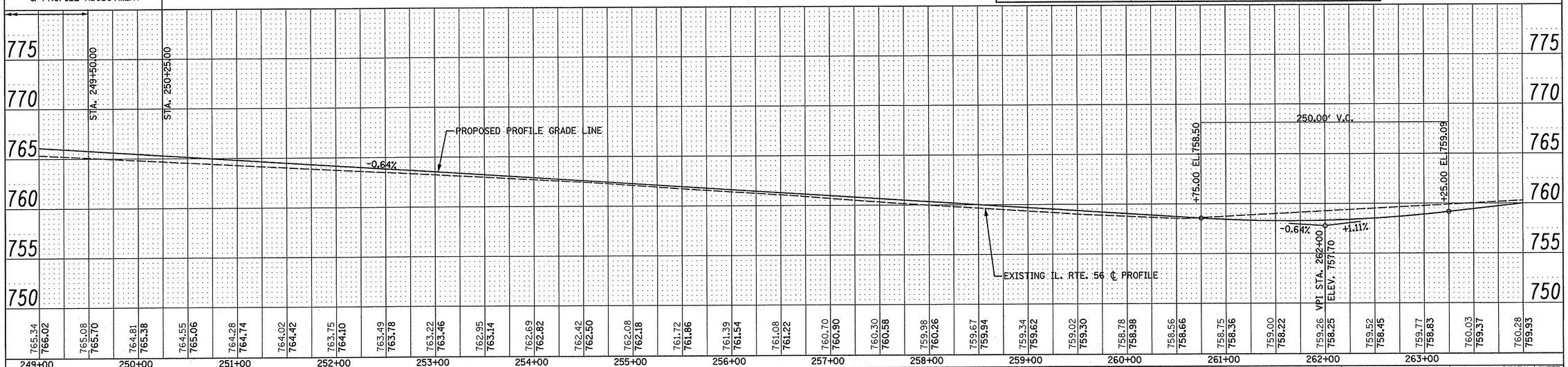


CURVE 5
PI STA. =251+32.09
Δ =11° 05' 20" (LT)
D =0° 27' 37"
R =12,450.00'
T =1,208.53'
L =2,409.51'
E =58.52'
e =N.C.
T.R. =N.A.
S.E. RUN =N.A.
P.C. STA. =239+23.56
P.T. STA. =263+33.07

EAST BOUND S.E. TRANSITIONS & PROFILE ADJUSTMENT TO MEET EXISTING BRIDGE DECK
STA. 245+75 TO STA. 250+25, RIGHT

DESCRIPTION	STATION	PGL ELEV.	E.O.P. ELEV.	SHLD. X-SLOPE (%)
NORMAL CROWN	245+75	764.92	764.44	
	246+00	765.23	764.87	
	246+25	765.50	765.26	
	246+50	765.74	765.62	
MEET PGL ELEV.	246+75	765.93	765.93	
	247+00	766.12	766.24	
	247+25	766.31	766.55	
	247+50	766.47	766.83	4.00 (NORMAL)
	247+75	766.56	766.94	3.00
BRIDGE DECK	247+88	766.59	766.97	2.10
BRIDGE DECK	248+18	766.65	767.03	2.10
	248+25	766.64	767.02	3.00
	248+50	766.59	766.95	4.00 (NORMAL)
	248+75	766.49	766.73	
	249+00	766.34	766.46	
	249+25	766.14	766.14	
	249+50	765.91	765.79	
	249+75	765.68	765.44	
	250+00	765.45	765.09	
NORMAL CROWN / MEET PGL ELEV.	250+25	765.22	764.74	

EAST BOUND S.E. TRANSITION & PROFILE ADJUSTMENT



FILE NAME =D162420-sht-plnprf12.dgn
PLOT DATE =2/18/2010
PLOT SCALE=50.000 ' / IN.

CHRISTIAN-ROGE & ASSOCIATES, INC.
ENGINEERS-PLANNERS-SURVEYORS
211 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606
PHONE: (312)372-2023 FAX: (312)372-5274

DESIGNED	- S.J.P.	REVISED -
DRAWN	- B.K.	REVISED -
CHECKED	- M.P.	REVISED -
DATE	- FEBRUARY 2010	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY PLAN AND PROFILE
IL. RTE. 56

SCALE: 1" = 50' | SHEET NO. 12 OF 12 SHEETS | STA. 249+00 TO STA. 255+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(58&59) WRS-3	DuPAGE		90
		CONTRACT NO. 62420		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT

BIKEWAY IMPLEMENTATION PLAN - PHASE II

CITY OF WARRENVILLE, DUPAGE COUNTY, ILLINOIS

APPENDIX V:
ORIGINAL BIKEWAY IMPLEMENTATION REPORT

CITY OF WARRENVILLE
BIKEWAY IMPLEMENTATION PLAN

Acknowledgements

Warrenville City Council
David L. Brummel, Mayor
Fred Bevier, Alderman, Ward 1
Stuart Aschauer, Alderman, Ward 1
Dave Schultz, Alderman, Ward 2
Bill Weidner, Alderman, Ward 2
Dan Leonard, Alderman, Ward 3
Matthew Wiesbrock, Alderman, Ward 3
Clare Barry, Alderman, Ward 4
Christopher Halley, Alderman, Ward 4

Warrenville Bicyclists and Pedestrian Advisory Commission
Alan Gard, Chair
Bob Duerr, Commissioner
Barry Glicklich, Commissioner
Tom Jones, Commissioner
Jerry Sugrue, Commissioner
Bill Weidner, Council Liaison

Staff
Jennifer McMahon, Assistant City Administrator

Plan Commission Support: November 6, 2008
Community Development Committee Approval: November 24, 2008
City Council Approval and Adoption: December 1, 2008

Table of Contents

Executive Summary

The purpose of the City of Warrenville Bikeway Implementation Plan is to promote increased bicycle use by improving conditions in order to provide a safer, more enjoyable bicycling experience. To accomplish this, a review of the existing context of the Warrenville bikeway system was performed. Problem areas and opportunities for improvement were identified and short-term and medium-term improvements to key intersections, existing routes, route gaps, and new facilities were identified.

Warrenville is a crossroads for several regional trails. Existing sidepaths and Illinois Prairie Path and Forest Preserve District of DuPage County trails form a supporting infrastructure for a citywide bikeway. However, there are a number of areas in the City that do not have adequate access to these existing routes. Most Warrenville residential streets are appropriate for cycling as-is. Therefore, the Commission determined that an arterial system would be an appropriate design for the City. It would be a system of streets, sidewalks, and paths with designated major cycling routes serving as the arterial routes. Quiet residential streets known as "collectors" would feed these arterial routes. Connectors between major routes would also be important considerations where gaps between major routes exist so that bicycles could traverse obvious and effective interconnections.

A review was performed to inventory the existing bicycling infrastructure and to determine areas of deficiencies. The review identified six major areas for improvement. They include a better connection between Cantera and the rest of Warrenville, the need for a north-south route along the western edge of the City, and improved signage along designated bike routes. Recommendations for facility improvements of deficient areas are provided. These are based on Bicycle Level of Service and Sidepath Suitability Score analysis, feasibility and cost.

Besides infrastructure improvements, education and enforcement are important aspects of a bikeway plan that increase safety. Education is important to ensure that both motorists and cyclists are aware of the traffic rules and regulations that pertain to cycling. Education can be provided through the Annual Bike Rodeo as well as in-school programs and written materials distributed to the public. Enforcement ensures that motorists and cyclists obey those rules and regulations. The police department should set the same enforcement priorities with cyclists as they do with motorists.

Recommendations concerning other general subjects such as wayfinding signage, hydration and bike parking facilities are also included.

1. Introduction

1.1 Background

Warrenville is surrounded by Blackwell, Warrenville Grove, and Herrick Lake Forest Preserves. Trails and paths cross the City, including the nationally recognized Illinois Prairie Path; the West Branch of the DuPage River is the City's most prominent natural element. Fermilab provides additional bikeways, connections, and open space.

Residents and bicyclists from surrounding communities use these amenities; therefore, it is important that citywide planning includes routes for bicyclists within its scope. As indicated in the City's 2005 Community Survey, the 2006 Old Town/Civic Center Sub-Area Planning Process, and the 2007 Strategic Plan, many residents and officials desire to improve, expand, and better identify pathways within the City.

In response to this input, the community formed the Warrenville Bicyclist Advisory Committee in 2005. The Committee's mission was to encourage bicycling, offer safety education, gather citizen input on bicycling amenities, and make bicycling-related recommendations to the City Council.

In 2006, the Mayor created the Warrenville Bicyclist and Pedestrian Advisory Commission, effectively replacing the Committee. The new Commission's purpose was to support, encourage, and promote safe bicycling and walking throughout the City through capital improvements, expanded amenities, special events, and the development of related programs. The Commission is responsible for addressing both bicyclist and pedestrian issues, but because a City Sidewalk Plan currently exists, the Commission initially focused on creating a City of Warrenville Bikeway Implementation Plan, which is one of its primary objectives.

The Commission's goals include the following:

- Recommend specific interactions with community organizations, municipalities, and other agencies in order to improve the safety of and connectivity and access to the Warrenville bikeway system
- Promote bicycle safety through community events such as the annual Bicycle Rodeo
- Gain designation as a Bicycle Friendly Community by creating a comprehensive City of Warrenville Bikeway Implementation Plan, which is an important prerequisite
- Improve directional and informational signage

1.2 Purpose

The purpose of the City of Warrenville Bikeway Implementation Plan is to promote increased bicycle use by improving conditions in order to provide a safer, more enjoyable

bicycling experience. More specifically, the Commission intends the Plan to help direct the following:

- Promote a sense of community and togetherness by providing links between all neighborhoods, government facilities, parks, shopping areas, and regional bikeway facilities
- Reduce congestion and pollution by providing an alternative means of transportation
- Support regional tourism by providing facilities, destinations, parking, and connections between regional trails
- Support Warrenville's commercial establishments by guiding residents and visitors downtown and to other shopping areas
- Provide safe, accessible bike and pedestrian access to schools, recreational facilities, and other neighborhoods
- Increase overall safety for bicyclists and pedestrians with a minimum effect on motorists

Many City streets are already suitable for bicycle traffic and will require little or no improvement. Others may benefit from the addition of striped bike lanes, improved intersections, additional signage, or increased maintenance of facilities. Recommended improvements, if implemented, will increase safety for bicyclists and motorists alike.

1.3 Scope

The City of Warrenville Bikeway Implementation Plan encompasses the following elements:

- A comprehensive bicycle trail map for Warrenville that shows existing, planned, and recommended routes
- A description of communitywide needs, such as new or improved intracommunity bike routes, increased safety on City streets, additional facilities for bicyclists, connections to surrounding communities, and the installation of additional bicycle racks, all elements that will collectively help to promote both work-related and recreational trips
- Priorities for recommended routes based on development cycles, usage, and interactions with current plans with the understanding that further analysis, designing, cost estimates, and planning are necessary
- Strategies to address education, enforcement, public relations, and bicycle-related facilities and to improve the effectiveness of the Plan by incorporating awareness into City events

1.4 Goals

The overarching goals for the Plan are to offer recommendations that the City may use to make informed decisions to improve bicycling opportunities within the community and to strengthen connections to existing trails, including those in Fermilab, the Forest Preserve District of DuPage County, and the Illinois Prairie Path trail systems.

The Plan includes the following specific goals:

- Review the existing context of the Warrenville bikeway system
- Identify problem areas and opportunities for improvement
- Identify short-term and medium-term improvements to key intersections, existing routes, route gaps, and new facilities
- Provide infrastructure recommendations for signs, restrooms, drinking water, emergency medical care, and rest areas
- Recommend policies, ordinances, and facilities that will increase safety using 1999 American Association of State Highway and Transportation Officials Guidelines for Developing Bicycle Facilities and the Manual on Uniform Traffic Control
- Formulate consensus-based improvement plans for routes that meet American Association of State Highway and Transportation Officials (AASHTO), Illinois Department of Transportation, and DuPage County Department of Transportation standards and local needs
- Develop an approach to funding recommended improvements and to identify specific grants to be pursued, recognizing that the possible need for cost estimates for each segment to support grant requests and project implementations
- Formulate priorities for the design and construction of proposed bike-route improvements
- Incorporate plans for recommended bike-route improvements into the transportation, land-use, and development plans of other units of government where appropriate
- Establish dates for periodic reviews and updates of the City of Warrenville Bikeway Implementation Plan

1.5 How Was the Plan Developed?

1.5.1 Inventory and Analysis of Existing Bicycling Conditions

The development of the Plan focused on emphasizing the interconnectivity of the system with adjacent communities as well as local and regional trails systems. The first step in the planning process generated a Comprehensive Trail Map (Section 4), which shows existing routes within Warrenville. The next step inventoried and analyzed the City's existing bicycling facilities and their conditions. This inventory included a Bicycle Level of Service (BLOS) analysis and a Sidepath Suitability Score (SSS) analysis, which are both discussed in detail in Appendix I.

Using this as a basis, and considering planned roadway and environmental improvement projects, sub-area development plans, and expected development within the City limits, the Advisory Commission outlined a proposed draft of improvements and additions to the Comprehensive Trail Map.

1.5.2 Public Input

Throughout the process, the Warrenville Bicyclist and Pedestrian Advisory Commission considered public input a valuable resource for ideas, concerns, and support. In order to best use public input, the Commission executed the following tasks:

- Worked with City staff and the Warrenville City Council
- Held several public meetings to elicit public feedback on the findings and recommendations outlined in the Plan
- Posted a copy of the Plan on the City's website along with survey forms to provide a means for persons who could not attend the public meetings to offer comments about the Plan.
- Incorporated existing public input from Warrenville's 2005 Community Survey, 2007 Old Town/Civic Center Sub-Area Plan, 2007 Strategic Plan, and 2006 Bicyclist Advisory Committee citizen survey
- Requested input from the League of Illinois Bicyclists
- Presented the Plan to the Warrenville Planning Commission, received and incorporated suggestions from the Commission and obtained their official support

2. Existing and Planned Bikeways

2.1 Viewing the Plan in a Regional Context

One key goal for the Plan is to improve individuals' abilities to bicycle within the community and to strengthen connections to regional trails and adjacent communities. To do so, the Plan needs to develop within the context of existing and planned regional trails in the area. Regional trails in DuPage County are maintained and coordinated by the DuPage County government.

For many years, DuPage County officials have planned bike routes throughout the county. The intention is to develop an interconnecting regional pathway network for recreation, transportation, and shopping. Many of the feasibility studies are complete. The proposed routes, when complete, will consist of a variety of bikeways. Concrete sidewalks, limestone trails, asphalt paths, and on-the-road shoulders and on-street bicycle lanes will combine to provide connectivity to the regional trail systems. Additional information regarding the County's Plan is posted at the following website: http://www.dupageco.org/bikeways/generic.cfm?doc_id=446.

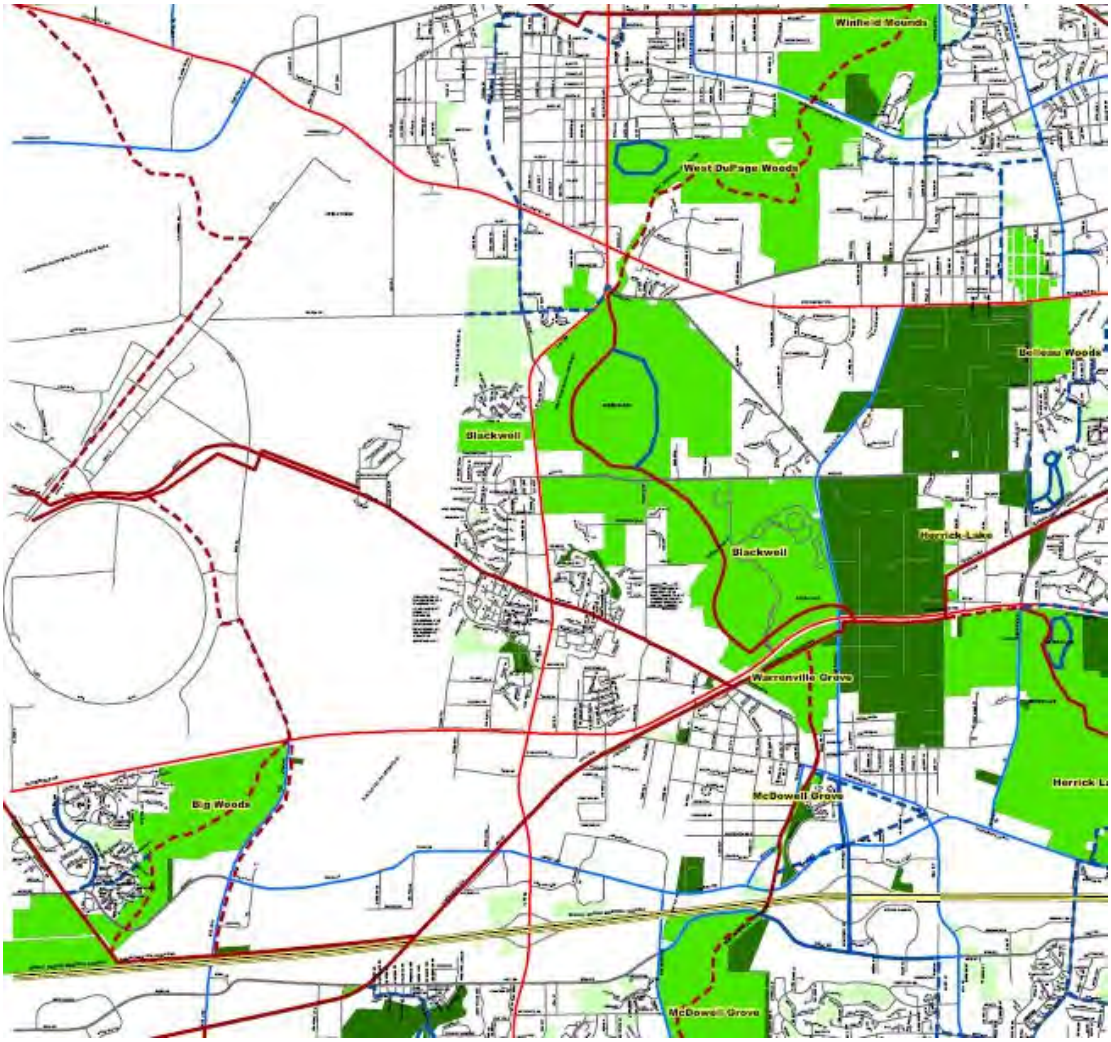
The following regional trails most directly affect Warrenville:

- Illinois Prairie Path
- The West Branch Regional Trail
- The DuPage Technology Corridor Trail
- Forest Preserve District of DuPage County trails through Blackwell and Herrick Lake forest preserves

Other trails further from Warrenville include the following:

- Southern DuPage County Regional Trail
- Salt Creek Trail
- North Central DuPage Regional Trail

The following map from the DuPage County Department of Transportation provides an excerpted view of current and planned regional bicycle routes in the Warrenville area. The solid dark red lines are existing trails; the dashed dark red lines are proposed trails.



2.2 Source Data

The planning and analysis process included collecting data to inventory existing regional and Warrenville bikeway networks. The Commission also determined the locations of new or changing bikeways. The latter effort was critical to understand and integrate regional bicycle-planning efforts that affect Warrenville. This inventory consisted of the following elements:

- A field survey
- Bicycle Level of Service analysis
- Sidepath Suitability analysis
- A review of existing transportation and planning data
- Meetings with groups such as the Warrenville Bicyclist and Pedestrian Advisory Commission, the Forest Preserve District of DuPage County, the DuPage County Division of Transportation, Warrenville City staff, local bicyclist organizations, and the public

2.3 Existing Warrenville Bikeways

A variety of bikeways exist in Warrenville. Many of the routes are sidepaths along arterial and collector streets. A sidepath is an 8- to 10-foot-wide trail that is parallel to, but separated from, a roadway. These bikeways include the Illinois Prairie Path as well as the West Branch Regional Trail, which links to several forest-preserve systems. Other routes, such as along Continental Drive, have on-street bike routes. All of these bikeway facilities create Warrenville's existing bikeway system.

2.3.1 Diehl Road

There is a sidepath along the south side of Diehl Road between the West Branch of the DuPage River and Mill Street.

2.3.2 Winfield Road

There is a sidepath along the west side of Winfield Road between Diehl Road and Warrenville Road.

2.3.3 Ferry Road – Naperville Section

A sidepath exists on the north side of Ferry Road from Raymond Avenue to the Illinois Prairie Path bridge over Ferry Road just west of Route 59. East of Raymond Avenue, it becomes a standard sidewalk.

2.3.4 Ferry Road – Warrenville Section

A sidepath exists on the south side of Ferry Road from the West Branch of the DuPage River to Mill Street.

2.3.5 Herrick Road

For most of the distance between Warrenville and Butterfield roads, there is a 7-foot-wide striped shoulder suitable for cycling. At Butterfield Road, the shoulder ends about 100 feet short of the intersection.

2.3.6 Warrenville Road

For most of Warrenville Road east of Mill Street, there is a wide, paved shoulder on either side of the road. Bicyclists use this route for traveling from Warrenville to Naperville, Lisle, and Downers Grove.

2.3.7 Batavia Road

A sidepath along Batavia Road extends to Fermilab. At the east end, it connects with the Illinois Prairie Path and with sidewalks along Batavia Road through Warrenville. At the

west end, it connects with a sidepath through Fermilab, which connects to a sidepath along Kirk Road, which in turn connects to the Batavia Spur of the Illinois Prairie Path.

2.3.8 Mack Road

From Route 59 to Continental Drive, bicyclists use a 7-foot-wide striped shoulder, which motorists use for parking. Note that roads with this type striped shoulder need to have very low parking occupancy so that bicyclists are not tempted to weave in and out of the shoulder.

2.3.9 Continental Drive

From Mack Road to Batavia Road, bicyclists use a 7-foot-wide striped shoulder, which motorists use for parking.

2.3.10 Summary

Many of these routes are isolated paths and do not have formal connections to other routes or areas of the City. Significant gaps exist within the local bikeway system that this Plan addresses. Those gaps create difficulties for local bicyclists in accessing desirable areas of the City or connecting to regional trail systems.

2.4 Proposed Warrenville Trails

2.4.1 Butterfield Road Trail

IDOT plans to widen Butterfield Road to four lanes from Naperville Road to Route 59. A bike sidepath is part of the engineering design for this project and would run along the north side of Butterfield Road from Naperville Road to Barkley Avenue.

This expansion includes the possibility to interconnect with the existing Blackwell Forest Preserve trail system, which has a short spur that dead-ends just short of Butterfield Road, a short distance east of the DuPage River. Connecting the two would provide access to the southern section of Blackwell without having to enter through either the main automobile entrance on Butterfield Road or the trail entrance at Butterfield and Winfield roads.

2.5 Existing Regional Trails

2.5.1 The Illinois Prairie Path

The 61-mile Illinois Prairie Path extends from Cook County through DuPage County and into eastern Kane County. Each year, more than 400,000 hikers, dog walkers, joggers, bicyclists, cross-country skiers, horseback riders, and other self-propelled outdoor adventurers use the trail, which is open every day of the year. The trail surface is mostly crushed limestone with some short distances of asphalt. Drinking fountains and

restrooms are conveniently stationed along the path. There is no fee to use the trail, which the DuPage County Department of Transportation maintains with assistance from an active group of volunteers.

The main stem of the path has its eastern terminus at First Avenue in Maywood. From Maywood, the path extends west 15 miles to Volunteer Park in Wheaton, where it forks. The 14-mile northwesterly fork connects to the Fox River Trail in Elgin. The 13-mile northeasterly fork connects to the Fox River Trail in Aurora.

Two segments called "spurs" extend from the two main forks. The Geneva Spur splits from the Elgin fork and extends 11 miles through West Chicago to connect with the Fox River Trail in Geneva. The Batavia Spur splits from the Aurora fork and extends 6 miles into Batavia.

Access to the Illinois Prairie Path, including parking, is available in every city and village through which the trial passes. Users can access the main trail and the segments that fork toward Aurora and Elgin from Wheaton at Volunteer Park. They can access the Elgin branch from Timber Ridge Forest Preserve in West Chicago and Pratt's Wayne Woods Forest Preserve in Wayne. Trail users can reach the Aurora branch from Herrick Lake Forest Preserve in Wheaton or from Blackwell or Warrenville Grove forest preserves in Warrenville.

In Warrenville, parking for the Illinois Prairie Path is available at the southwest corner of Winfield and Butterfield roads and in downtown Warrenville on Batavia Road just east of Butterfield Road. The trail passes through downtown Warrenville in front of the library. Near the library there are picnic benches, a water fountain, and a portable toilet.

2.5.2 Blackwell Trails

Blackwell Forest Preserve adjacent to the north border of Warrenville has a 6.3-mile crushed-limestone trail system, which the Forest Preserve District of DuPage County maintains. Bicyclists, hikers, and cross-country skiers can park on the north side of Butterfield Road in the forest preserve's main lots, which are near picnic areas, shelters, a family campground, flush toilets, vending machines, and boat-rental building, or in the lot near McKee Marsh on the north side of Mack Road. Both locations offer access to the West Branch Regional Trail.

Blackwell's trail system connects to the Illinois Prairie Path, to trails at Herrick Lake and Warrenville Grove forest preserves, and to the West Branch Regional Trail, which leads to McDowell Grove Forest Preserve. The developing West Branch Regional Trail will eventually extend north and south along the West Branch of the DuPage River for about 24 miles. As mentioned above, the trail system has a spur that ends just short of Butterfield Road, a short distance east of the DuPage River.

2.5.3 Fermi National Accelerator Laboratory Trails

Fermi National Accelerator Laboratory, which the U.S. Department of Energy operates, straddles western DuPage and eastern Kane counties and features about 30 miles of asphalt roads, trails, and paths. Trail users may enter the lab from 6 a.m. to 8 p.m. every day of the week; however, the property is closed to visitors if there is a security alert.

Bicyclists can enter Fermilab from Warrenville on the east or from Batavia on the west. From the east, the entrance is located on Batavia Road west of Route 59; a small parking lot is on the north side of Batavia. From the west, the entrance is at Pine Street east of Kirk Road; there is adequate parking near the visitor center.

Bicyclists can travel through Fermilab on either roads or on a sidepath along Batavia Road and reconnect with the Illinois Prairie Path. Bicyclists exiting west at Pine Street and Kirk Road can turn south on the sidewalk on the west side of Kirk Road and within a mile reunite with the Batavia Illinois Prairie Path spur. Some continue west on Pine Street at the far end of Fermilab to take a more direct route to the Fox River Trail. Riders pedaling east can parallel Batavia Road on an 8-foot-wide path and reunite with the Illinois Prairie Path east of the intersections at Batavia and Butterfield roads in Warrenville.

2.5.4 Fox River Trail

The 35-mile-long Fox River Trail follows the Fox River from Crystal Lake in McHenry County through St. Charles, Geneva, Batavia, and Aurora in Kane County and to Oswego in Kendall County, although conceptual plans exist to extend the trail to Yorkville. The Forest Preserve District of Kane County maintains the Fox River Trail system, which is a locally and regionally popular bikeway. North of Crystal Lake, the trail veers away from the river and becomes the Prairie Trail.

From Warrenville, bicyclists can access the Fox River Trail via the westbound Illinois Prairie Path using either the Aurora or Batavia branches or by going through Fermilab using the Batavia Road sidepath.

2.5.5 Herrick Lake Trails

Herrick Lake Forest Preserve in Wheaton has a 6.5-mile crushed-limestone trail system, which the Forest Preserve District of DuPage County maintains. The main entrance is on the south side of Butterfield Road, 1 mile west of Naperville Road and 0.25 mile east of Herrick Road. The south parking lot is located on the east side of Herrick Road, 0.25 mile south of Butterfield Road.

The National Parks Service has recognized Herrick Lake's trail system as a National Recreation Trail, an exemplary trail of local and regional significance and a featured part of America's national system of trails. There are several marked looped trails and connections at Herrick Lake as well as a 1-mile trail that circles the lake. The system connects with Danada Forest Preserve trails to the east. A 1.5-mile path extends west,

paralleling Butterfield Road, and links with both Blackwell Forest Preserve trails and with the Illinois Prairie Path near Warrenville Grove Forest Preserve.

From the northwest corner of the forest preserve, bicycles can reach the Illinois Prairie Path via a sidepath along the west side of Wiesbrook Road, which connects to the Illinois Prairie Path 0.5 mile north at the south end of the grounds at Wheaton-Warrenville South High School.

2.5.6 McDowell Grove Trails

McDowell Grove Forest Preserve in Naperville has a 6.3-mile trail system of mostly crushed limestone with some short distances of asphalt. The Forest Preserve District of DuPage County maintains the trail system.

McDowell Grove is near the south boundary of Warrenville on the east side of Raymond Drive south of Interstate-88. The main entrance and parking area is on Raymond Drive 0.3 mile south of Diehl Road and about 1 mile north of Ogden Avenue.

The McDowell Grove trail is part of the West Branch Regional Trail. About 5 miles pass through mature woodlands and open fields along the banks of the West Branch of the DuPage River. An important 1.8-mile trail connects McDowell Grove to the Cantera corporate area and to pathways near Diehl Road and Interstate-88.

A 1.5-mile trail extends south from the turnaround at the south end of the McDowell Grove parking lot on the east side of Raymond Drive. It is a 10-foot-wide limestone trail for about 1.25 miles.

2.5.7 Great Western Trail DuPage County

The eastern trailhead of the Great Western Trail is in Villa Park 1 block north of the Illinois Prairie Path at Villa Avenue. The western trailhead is north of Kline Creek Farm in Timber Ridge Forest Preserve in West Chicago. The trail extends 11.4 miles through DuPage County and is mostly crushed limestone with some short distances of asphalt.

Parking for the Great Western Trail is available along Villa Avenue in downtown Villa Park. There is a small parking area at Churchill Woods Forest Preserve on the east side of Swift Road in Glen Ellyn about 0.25 mile north of St. Charles Road. At the west end of the Great Western Trail, parking is available at Kline Creek Farm on the west side of County Farm Road about 0.25 miles south of the trail in Winfield.

The trail, which connects the east and west sides of the county, is mostly flat and constructed of limestone screenings maintained by the DuPage County Department of Transportation. With the exception of the bridge over Interstate-355, most crossings are unprotected for hikers and bikers. At its western terminus, trail use can continue along the Illinois Prairie Path Elgin Spur or Geneva Spur or enter Kane County at Leroy Oakes

Forest Preserve in St. Charles, from which the trail extends through Wasco, Lily Lake, and Virgil, ending in Sycamore.

2.5.8 Chicagoland Bicycle Map

This map, developed by Chicagoland Bicycle Federation, a nonprofit advocacy group that represents bicyclists in northeastern Illinois, is currently in its fourth edition. The map recommends routes for bicycling from one area of Chicagoland to another. Local cyclists recommend the routes based on traffic speed and volume, the width of outside lanes and shoulders, intersection layouts, and pavement conditions. Many of the recommended routes are not "ideal," but local cyclists have judged them as the best in each area.

2.6 Proposed Regional Trails

2.6.1 West Branch Regional Trail – A Partially Built Project

Upon completion, the West Branch Regional Trail will be 24 miles of crushed limestone with short stretches of asphalt. It will extend from the north end of DuPage County to Will County, generally following the West Branch of the DuPage River.

From the southern DuPage County, there are access points at Pioneer Park and McDowell Grove Forest Preserve in Naperville, at Warrenville Grove and Blackwell forest preserves in Warrenville, at West Branch Forest Preserve in Bartlett, and at Mallard Lake Forest Preserve in Hanover Park. There will be additional access points when the trail is completed.

The West Branch Regional Trail will extend through 12 DuPage County forest preserves, 16 community parks, and several historic and cultural sites. The planned multipurpose trails will provide links to existing and future trails, which will form a network of trail systems through neighboring communities.

For more details on the West Branch Regional Trail, contact DuPage County at (630) 681-2221, or visit: http://www.dupageco.org/bikeways/generic.cfm?doc_id=447 - 6.

2.6.2 DuPage Technology Corridor Trail — Proposed

The Plan's intent was to create a 16-mile north-south trail on DuPage County's western border to link the Elgin and Batavia spurs of the Illinois Prairie Path through Fermilab into the DuPage Technology Park, DuPage Airport, and Pratt's Wayne Woods and Big Woods forest preserves. The proposed trail will provide links to Wayne, West Chicago, St. Charles, Batavia, Aurora, Geneva, Warrenville, Bartlett, and Naperville.

According to DuPage County's Web site, "The next step in the development process would be to undertake the detailed engineering needed to define the specific trail route. While development of the concept Plan was coordinated by the DuPage County

Department of Economic Development and Planning, like all regional trail projects in the county, implementation will require several agencies working together in partnership to construct the trail. Project partners identified as part of the planning process thus far include DuPage County, Fermi National Accelerator Laboratory, DuPage Technology Park, DuPage Airport Authority, the FPDDC, Wayne Township, Village of Wayne and the City of West Chicago. A specific schedule for implementation has not been developed, and it is expected the trail will be implemented over several years."

More information is available by contacting Deborah Jan Fagan, DuPage County Trail System Coordinator, at (630)-407-6883 or visiting: http://www.dupageco.org/bikeways/generic.cfm?doc_id=447#tech.

2.6.3 Northeastern Illinois Greenways and Trails Implementation Program

The Northeastern Illinois Planning Commission and Openlands Project developed this report and adopted it in June 1997. The regional map, an update to a 1992 study, depicts existing and proposed major open spaces and trails and provides recommendations for new and revised greenway and trail corridors and linkages.

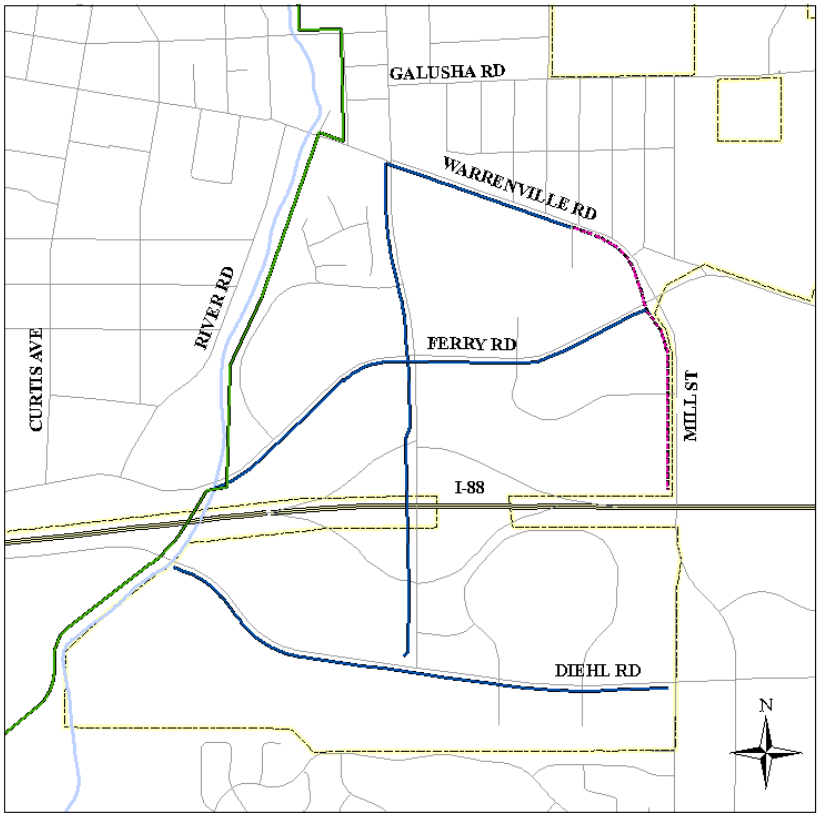
3. Major Findings from Existing Bikeway Inventory

Warrenville is a crossroads for several regional trails. Existing sidepaths and Illinois Prairie Path and Forest Preserve District of DuPage County trails form a supporting infrastructure for a citywide bikeway. However, as the map in Section 4 shows, there are a number of areas in the City that do not have access to these existing routes. The Warrenville Bicyclist and Pedestrian Advisory Commission identified six major areas for improvement:

- Access to Cantera, which is isolated from the rest of Warrenville
- Access to the Galusha Road area, which is isolated from the rest of Warrenville
- Access from the Old Town area to regional trails
- Access from the Butterfield-Batavia-Route 59 Triangle area to regional trails
- Access to the Illinois Prairie Path for the Summerlakes neighborhood
- A Maple Hill access route to Warrenville's bikeway system

This section of the Plan will discuss the findings, and the following section will expand those findings into recommendations. See Section 4, Warrenville Bikeway System Recommendations. The overall map located at the beginning of Section 4 provides a legend for the color-coding of bike facilities in this section's maps.

3.1 Cantera Area



While the major streets in Cantera have sidepaths, the area is isolated from the rest of Warrenville's bikeways, attractions, and City center. The only connection is at Ferry Road and the Forest Preserve District of DuPage County's West Branch Regional Trail along the east side of the DuPage River. Thus, a cyclist wanting to go to Cantera would have to travel east on the Illinois Prairie Path, ride to the West Branch Regional Trail in Warrenville Grove Forest Preserve just west of Winfield Road, proceed south to Ferry Road, travel east on Ferry Road to Winfield Road, and then ride south on Winfield Road to Diehl Road.

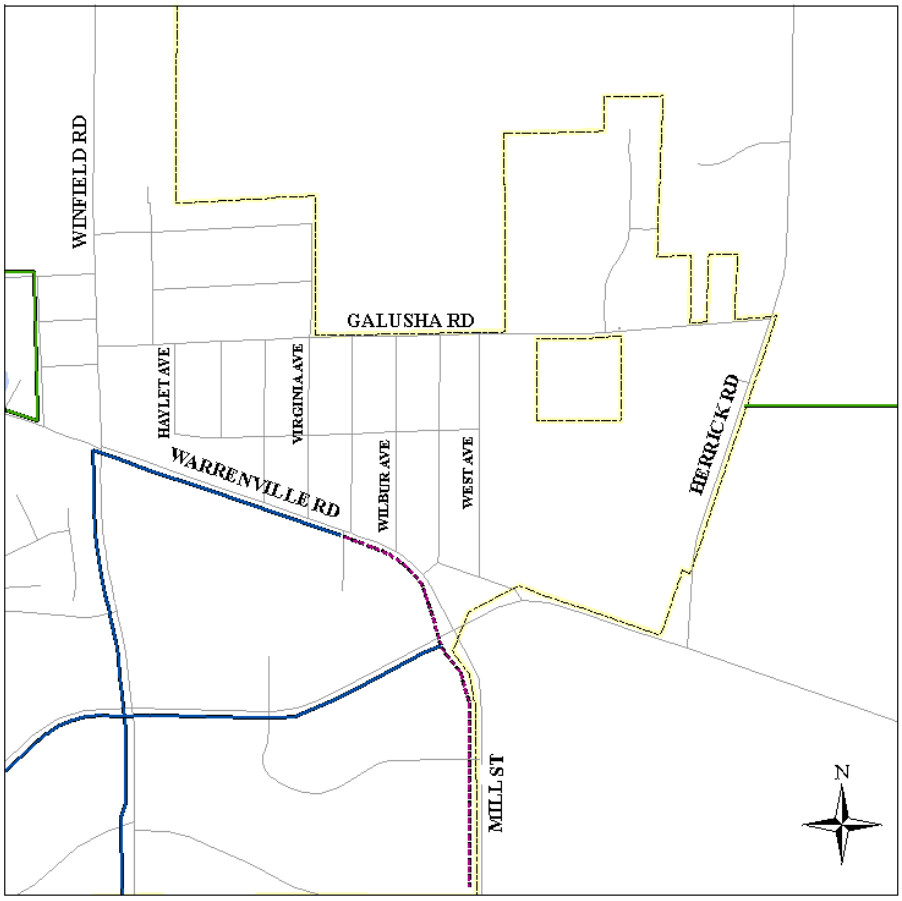
A more obvious connection would be at Winfield and Warrenville roads, but no sidepaths or shoulders exist along Warrenville Road toward Batavia Road.

The sidepath along Diehl Road continues west but stops at the bridge over the DuPage River. A cyclist could cross the bridge to get to the West Branch Regional Trail but would need to ride across the bridge without an escape route due to the lack of a shoulder or a sidepath on the bridge. Once over the bridge, there is no connection to the trail that runs along the river under the bridge.

The immediate area around the Warrenville Road, Mill Street and Ferry Road intersection contains no sidepaths or paved shoulders yet is a critical part of an interconnected trail system. Cyclist wanting to go west on Warrenville Road and connect to Cantera or the West Branch Regional Trail along the river must ride a section of the road with a 45 mph speed limit in a car travel lane.

Bicycle parking has been provided and planned near almost every existing and proposed restaurant, hotel, shopping, entertainment, and service facility in Cantera. Some offices complexes also provide safe and convenient bike racks for those commuting on bicycles.

3.2 Galusha Area



The Galusha Road area is essentially isolated from existing cycling facilities. Access to or from the Illinois Prairie Path is a 4-foot-wide sidewalk along the east side of Winfield Road between Warrenville and Butterfield roads.

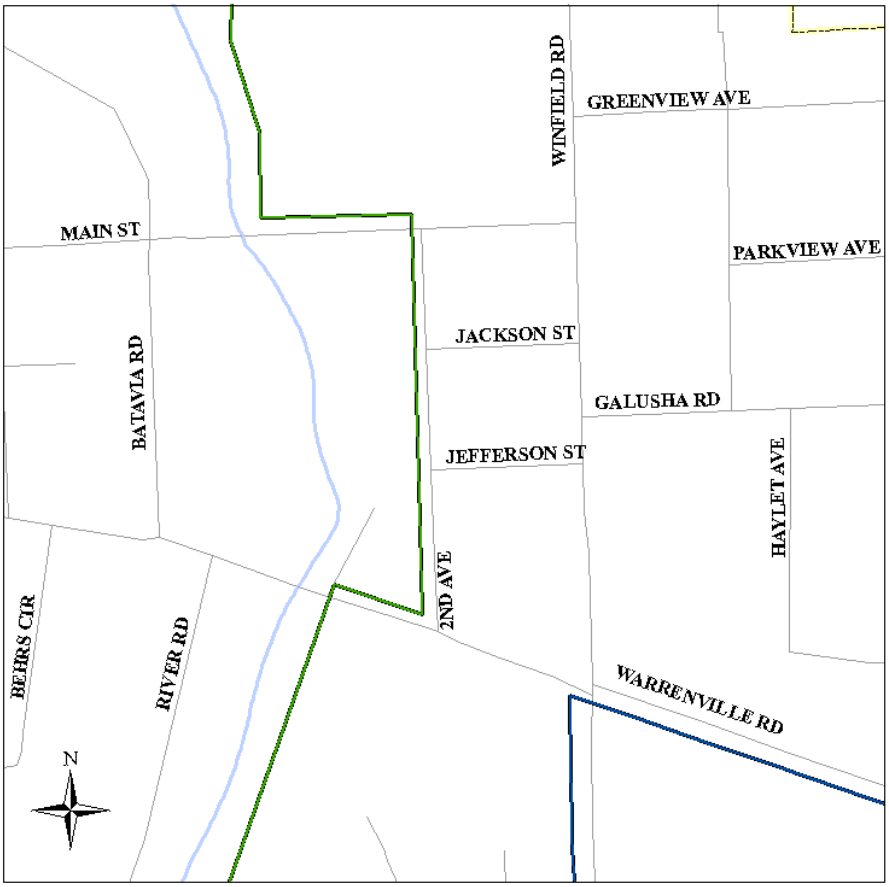
Access to the Warrenville Grove Forest Preserve is through the Warrenville and Winfield Roads intersection, not a bicycle-friendly intersection. This also provides access to a southern route to Naperville along the east side of the DuPage River also known as the West Branch Regional Trail. There is a crosswalk across Warrenville Road just east of the river.

Access to Herrick Lake Forest Preserve is also limited. A gravel service road connects Herrick Road several hundred yards south from Galusha Road with the trails in the preserve. Bicyclists also use Herrick Road as a north-south bikeway from some of the Cantera east-west routes, especially from Warrenville Road. In many cases, "road bicyclists" use Warrenville Road to access other routes, but few recreational bicyclists use these routes because of access, traffic, road conditions, and crossings.

Although there is an east-west route north of this area along Butterfield Road on the Illinois Prairie Path, there is neither an adequate east-west passage through the Galusha Road area nor an adequate crossing at Herrick or Winfield roads near Galusha Road.

This will become a larger issue with the construction of the District 200 middle school, which will create additional car and bicycle traffic, including students who bike to school. Commission members have observed large numbers of bicycles at the existing middle school facility.

3.3 Old Town Area



The Old Town area connects to the Illinois Prairie Path and the Batavia Road sidepath along its north, but connections along the east and south are lacking.

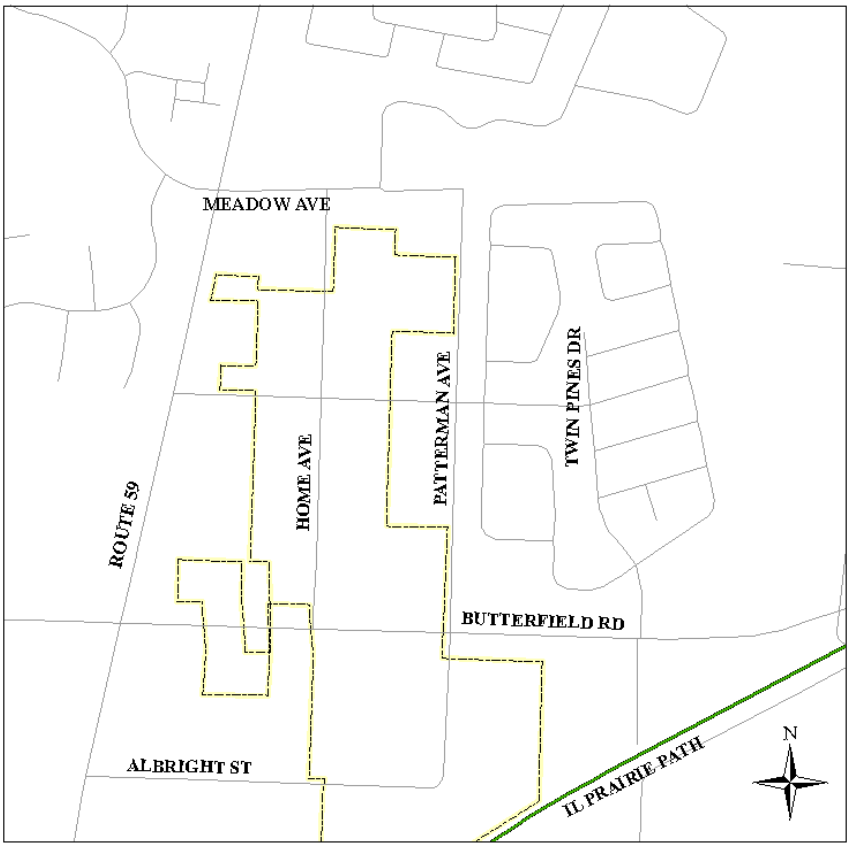
The stretch of Warrenville Road between Batavia and Winfield roads (owned by DuPage County) is key to providing a connection between Batavia Road, Warrenville Road, the Galusha Road area, the Cantera sidepaths, and the West Branch Regional Trail. It is used by bicyclists heading east at the end of Batavia Road, those traveling south on Second Street from Warrenville Grove Forest Preserve, those traveling north from Cantera on Winfield Road, and those traveling east or west on Warrenville Road.

Unfortunately, this section of Warrenville Road has no paved shoulders. There is a sidewalk between Batavia Road and First Avenue on the north side, but it is narrow and in poor condition. From First Avenue to Second Avenue, a wide sidepath exists on the north side of Warrenville Road as part of the West Branch Regional Trail. From Second Avenue to Winfield Road, there is a standard sidewalk on the north side.

On the southwest corner of Warrenville and Winfield roads, there is a sidepath within the boundaries of the gas-station property, but there are no facilities for bicycles west of that property.

This area, addressed in the adopted Old Town/Civic Center Subarea Plan, will become very attractive to bicyclists as it makes its transformation. The Plan includes bicycle and pedestrian bridges, paths, parking, and other facilities. This problem could be resolved during that transformation; however, there needs to be some near-term relief for bicyclists.

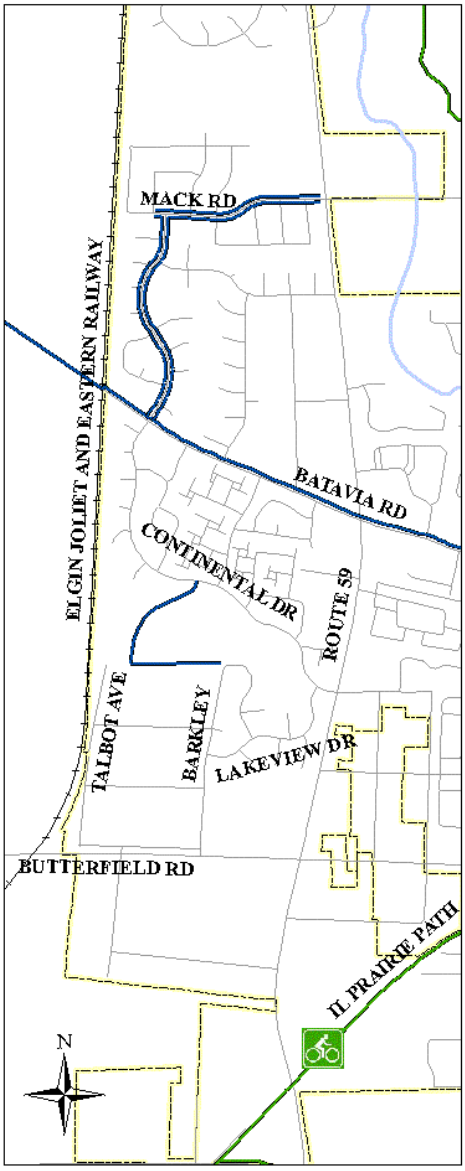
3.4 Butterfield-Batavia-Route 59 Triangle Area



Cyclists from the Home Avenue / Twin Pines Drive area have stated that they cut across Butterfield Road at Twin Pines Drive, an uncontrolled intersection across a high-speed highway, to get to this section of the Illinois Prairie Path. In about 2002, the City performed a traffic study at this intersection to determine if it met the criteria for a traffic light installation. It did not and IDOT refused to install a traffic light. Without a light or crosswalk at the Twin Pines Drive intersection, a dangerous situation exists.

IDOT plans to widen Butterfield Road in the area of this intersection. Once completed, the situation will become a larger safety issue.

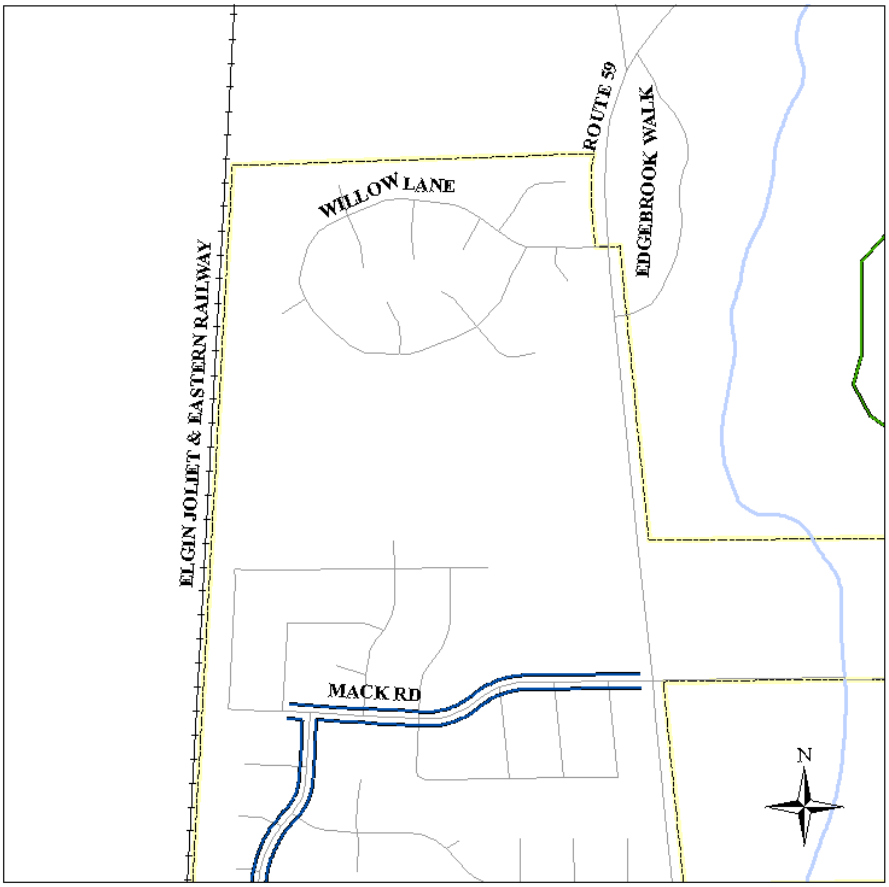
3.5 Summerlakes Area



For the Summerlakes area, cyclists have direct access only to the Batavia Road sidepath. While the white-edged line on Continental Drive north of Batavia Road provides a BLOS A-rated route to the sidepath, the section south of Batavia Road has only B-rated routes.

The only identified access to the Illinois Prairie Path is at Batavia and Butterfield roads. Cyclists from the Summerlakes subdivision who want to travel southwest toward Aurora on the Illinois Prairie Path have to travel east along Batavia Road to Butterfield Road and then back west along the Illinois Prairie Path. The alternative is to ride west through Fermilab, south along Kirk Road, and then east on the Batavia Spur to connect to the Aurora Branch of the Illinois Prairie Path.

3.6 Maple Hill Area



The Maple Hill area of Warrenville is isolated from existing bikeways and trails in Warrenville. Bicyclists can only access Warrenville pathways and the Illinois Prairie Path by riding along the east or west side of Route 59 on the paved shoulder. At the Mack Road and Route 59 signaled intersection, bicyclists can turn west on Mack Road to Continental Avenue. From this location, a cyclist can connect to the established Warrenville bikeway system and travel on marked roadways to Batavia Road.

Access to Blackwell Forest Preserve trails is also limited and can only be gained by crossing Route 59 at the Mack Road signal. From that intersection, bicyclists experience a narrow road without a shoulder, sidewalk, or pathway. Few recreational bicyclists use these routes because of access, traffic, crossings, and road conditions on both Route 59 and Mack Road. There are not any painted crosswalks or walk signals at Route 59 and Mack Road.

4. Warrenville Bikeway System Recommendations

The existing Warrenville bikeway system is a combination of on- and off-road facilities. As described, this includes collector streets, designated and marked streets, wide sidewalks, and specific sidepaths. The routes connect some areas of the City to each other and provide important regional connections to surrounding communities and regional trails.

Many of the residential streets in Warrenville have traffic volumes that are low enough to be suitable in an "as-is" condition for cycling. Therefore, the Warrenville Bicyclist and Pedestrian Advisory Commission determined that an arterial system would be the appropriate design for the City. It would be a system of streets, sidewalks, and paths with designated major cycling routes fed by quiet residential streets known as "collectors" for the arterial routes. Connectors between major routes would also be important considerations where gaps between major routes exist so that bicycles could traverse obvious and effective interconnections.

In determining the location of potential routes, the Commission reviewed existing bicycle facilities in the City. This initial step, outlined in Section 3, identified areas where gaps occurred in arterial routes or where adequate collectors did not exist. It also identified deficits in existing routes, such as key linkages, signage, and intersection and other improvements.

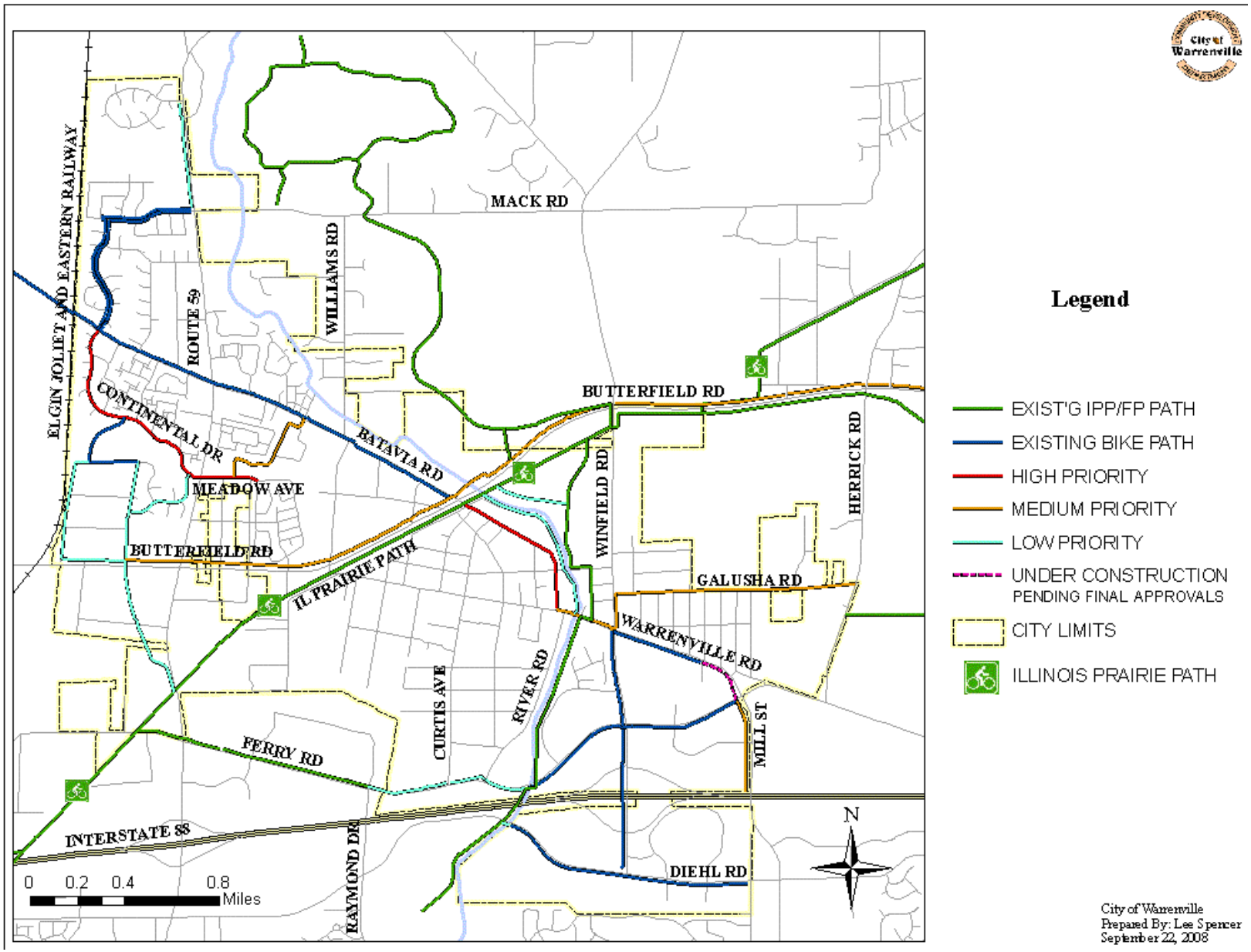
The Commission then discussed and analyzed various methods for improving the inadequacies. As a result, it recommended specific improvements for each identified area and made general recommendations for planned and ongoing developments.

Choosing an appropriate bicycle facility involves both public input and technical recommendations. Depending on the situation, the best technical choice may be an on- or off-road improvement or signs for route that may already be adequate. Two planning tools were employed in this Plan to objectively assess existing conditions: the Bicycle Level of Service, which measures on-road suitability, and the Sidepath Suitability Score, which rates bicycling on a sidewalk or sidepath.

Later, the Commission used these tools to gauge the feasibility — and the resulting benefits — of different bicycle facility options. These analyses considered bicycle usage, traffic speed, traffic volume, pavement condition, lane width, and the presence of on-road bike lanes, paved shoulders, or other bikeway options, such as sidewalks and specific bikeway or pedestrian paths. These tools are further described in Appendix I.

In general, more experienced and traffic-tolerant cyclists prefer roads that have a BLOS rating of C or better. More casual cyclists may be comfortable on roads that are B or better. The least traffic-tolerant may bike only on A roads or on trails and sidewalks. Other bikeway plans have called for a design policy with a minimum level of C for all roads and B for roads with high latent demand, those near important destinations, major through routes, etc. In the case of Warrenville's Plan, since only arterial routes are specifically addressed, recommendations are based on achieving a B rating or better.

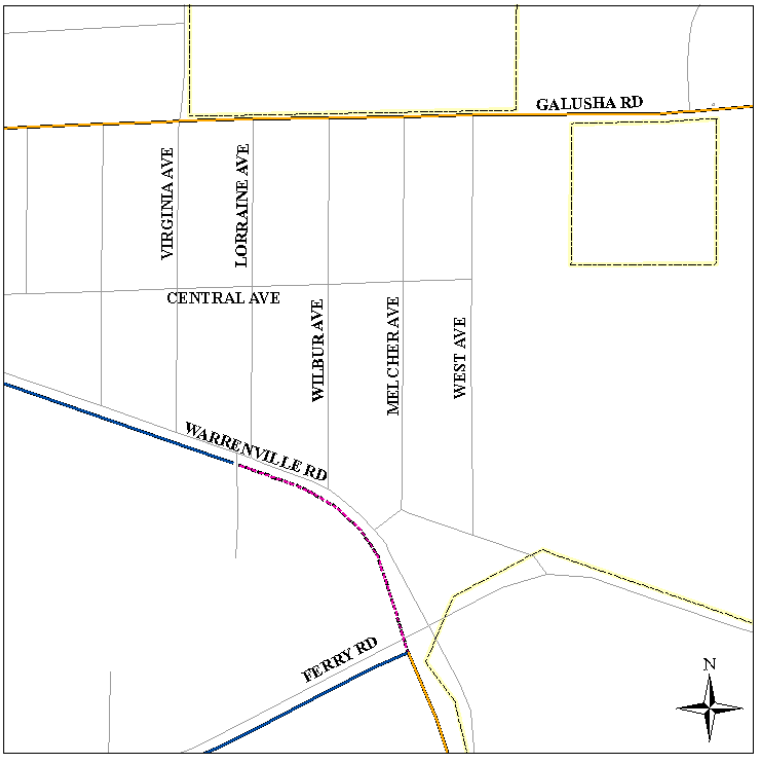
As discussed in Appendix I, sidepaths are generally not recommended over on-road bicycle facilities because of two major concerns: the lack of visibility between motorists and cyclists and the lack of connections to other facilities at the end, which results in cyclists who tend to travel the wrong way on a street. However, in some instances in Warrenville, a sidepath is the only feasible improvement. For example, Winfield Road north of Warrenville Road lacks a shoulder and has high traffic volumes and relatively high traffic speeds. Students going to or from the Hubble Middle School may use that route. Clearly, an on-road facility on Winfield Road would not be appropriate. In cases where a sidepath is recommended, the Sidepath Suitability Score was used to ensure that the proposed path had an appropriate rating. Engineering designs of any new sidepaths should pay particular attention to the visibility, should ensure that crossings are clearly marked, and that the ends of the sidepaths connect with other bicycling facilities.


MACK RD
WILLIAMS RD
ROUTE 59
ELGIN JOLIET AND EASTERN RAILWAY
CONTINENTAL DR
BATAVIA RD
MEADOW AVE
BUTTERFIELD RD
IL PRAIRIE PATH
BUTTERFIELD RD
WINFIELD RD
HERRICK RD
GALUSHA RD
WARRENVILLE RD
CURTIS AVE
RIVER RD
MILL ST
FERRY RD
INTERSTATE 88
RAYMOND DR
DIEHL RD
0 0.2 0.4 0.8 Miles
N
Legend
EXIST'G IPP/FP PATH
EXISTING BIKE PATH
HIGH PRIORITY
MEDIUM PRIORITY
LOW PRIORITY
UNDER CONSTRUCTION
PENDING FINAL APPROVALS
CITY LIMITS
ILLINOIS PRAIRIE PATH
City of Warrenville
Prepared By: Lee Spencer
September 22, 2008

4.1 Cantera Area

These recommendations would establish a more direct connection for bicyclists while encouraging them to see Cantera as a destination. Bicycle parking should remain an important aspect of any new development process to ensure that cyclists have safe areas to secure their bicycles when visiting Cantera destinations.

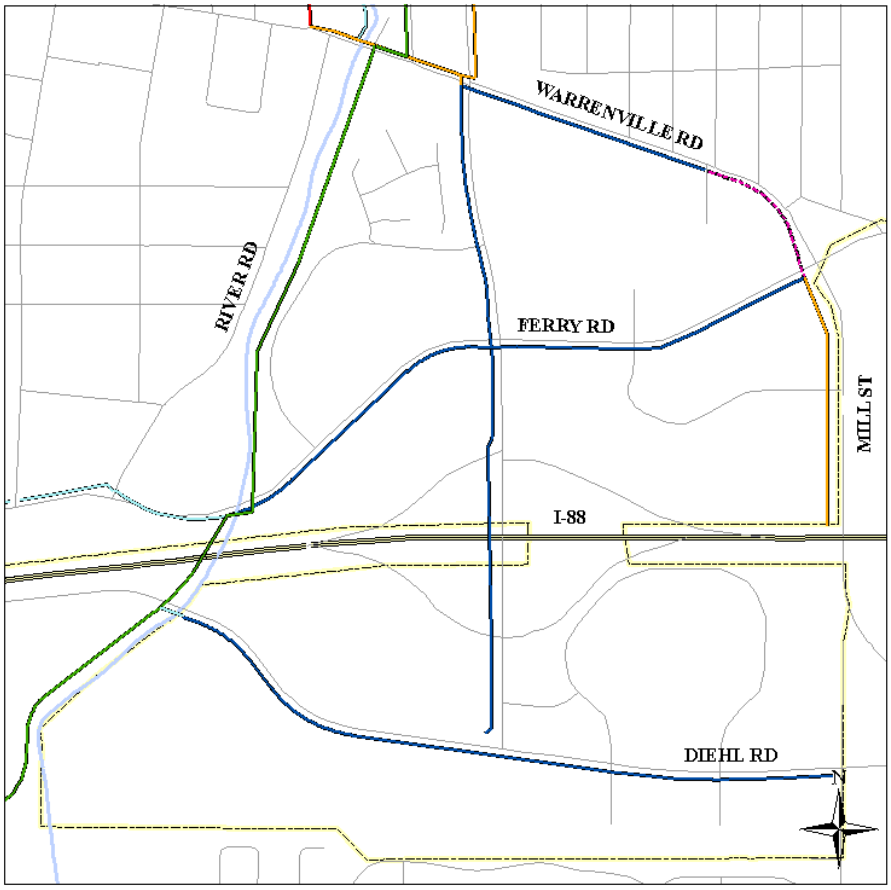
4.1.1 Warrenville Road



The sidepath along the south side of Warrenville Road east of Winfield Road ends at Virginia Avenue. From there, cyclists traveling east have to ride in the car-travel lanes. The sidepath should be continued from Virginia Avenue to the intersection with Mill Street. With a crossing at Ferry Road, this path would connect with the existing sidepath on the south side of Ferry Road. Note that this sidepath extension is included in the site plan for the new hotel on the northwest corner of the Warrenville-Ferry-Mill intersection. The crossing at Village Green Boulevard should be striped as well as the crossing with Lorraine Avenue and any future entrances. These improvements would raise the Suitability Score from a 12, not suitable, to a 5, most suitable.

Adding a sidepath eastward from the Warrenville-Ferry-Mill intersection would connect those sidepaths with the existing wide paved shoulders on Warrenville Road to the east.

4.1.2 Diehl Road Bridge



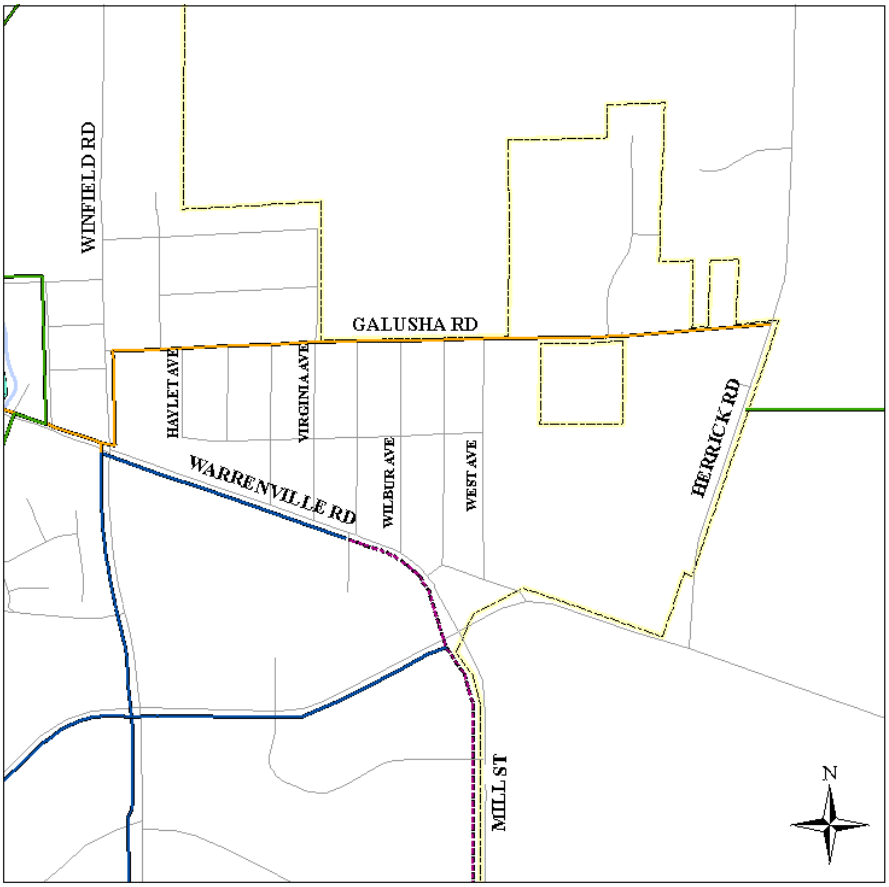
Adding an attached sidepath on the south side of the existing bridge over the DuPage River would provide a connection between the southern portion of Cantera and the West Branch Regional Trail. By taking the trail north, cyclists could connect with the Old Town area via the proposed sidepath at Ferry Road (see 4.3.1), at Warrenville Road, or the Illinois Prairie Path.

As work on the West Branch Regional Trail progresses, more long-distance cyclists will use it. An easy connection with the Diehl Road sidepath will encourage them to visit restaurants, stores, and the movie theater along Diehl Road.

4.1.3 Diehl and Winfield Roads Intersection

There is a properly marked crosswalk across Diehl Road on the west side of the intersection; however, the markings are in poor condition and barely visible. They should be repainted and a maintenance schedule established. The crosswalk lights at the intersection should be checked to ensure that they are properly timed. This intersection is under the jurisdiction of and maintained by DuPage County.

4.2 Galusha Area



4.2.1 Galusha Road

Warrenville considered constructing a sidepath from Herrick Road to Winfield Road on the south side of Galusha Road. This would create a link between the Galusha Road area and the rest of Warrenville and the Illinois Prairie Path.

Residents along Galusha Road raised questions concerning the proposed sidepath. The two main questions concerned whether the width could be reduced from 10 feet to 5 feet and whether the sidepath would be better situated on the north side of Galusha Road.

A sidepath is used for two-way traffic. Sidepaths are generally constructed with a 10-foot width so that cyclists traveling in opposite directions can pass without risk of collision. That 10-foot width also allows a cyclist to safely pass a pedestrian or another cyclist. The suggested 5-foot width does not provide sufficient width for those cases. It should be noted that the Batavia Road sidepath is 8 feet wide and demonstrates that such a width is adequate for the number of users seen in Warrenville. Therefore, the proposed sidepath could be reduced to 8 feet wide, but a 5-foot-wide design is not recommended.

The suitability of a sidepath is determined by a number of factors, including the number of street crossings and driveways within a given distance, the adequacy of crossing markings, and the connectivity of the end of sidepath to other cycling facilities. There are 12 driveways and eight crossings between Winfield Road and West Avenue on the south side. On the north side, there are 13 driveways and two street crossings. It should be noted that the driveways and street crossings on the north side are located over a shorter stretch of road than on the south side. A higher density of crossings tends to lower the suitability rating.

As noted in sections 4.2.2 and 4.2.3, the Plan recommends that provisions be made to connect the Galusha Road sidepath to the Old Town area and the trails in Herrick Lake Forest Preserve. Thus, the Galusha Road sidepath was intended to be part of a wider network of interconnecting cycling paths.

Entering the above factors into the Sidepath Suitability algorithm yields a score of 2 for the north route and 3 for the south, essentially the same rating. However, two factors favor a sidepath on the south side. First, a north route would require most cyclists to cross Galusha Road twice. Since it is anticipated that students would use the sidepath for access to the new middle school, it would be preferable to reduce or eliminate the number of times Galusha Road needs to be crossed. Secondly, the setback of the houses on the north side of Galusha Road seems on average to be less than on the south side. Locating a sidepath on the north would have a greater impact on the front yards of those houses. For these reasons, a sidepath along Galusha be located on the south side of the street appears preferable.

In response to residents' concerns, the City Council decided to install a sidewalk instead of a sidepath along Galusha Road. Therefore the recommended improvement for Galusha Road is to designate it as a bicycle route since it has a 'B' BLOS rating and install appropriate signage.

It is possible that a southeast access path to the Hubble Middle School may be developed. That could provide the possibility of an alternate route for a sidepath servicing the Galusha Road area. The alternate route would be on the north side of Warrenville Road and run east from Winfield Road to about West Avenue, and connecting to the existing sidewalk east of Lorraine Avenue. From there, it could pass through the industrial park north of Warrenville Road and Mill Street and then to the school access path. Having the bike path cross the school property to Herrick Road would establish a connection to the trails at Herrick Lake Forest Preserve. The exact path of the school access path is uncertain, so this route may have to be modified accordingly.

4.2.2 Winfield Road

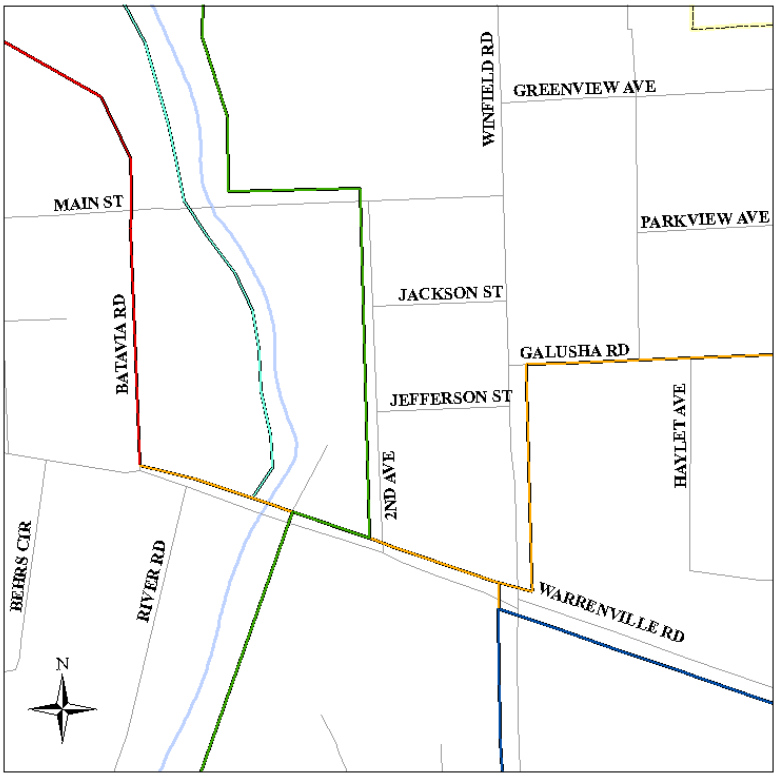
Widening the existing sidewalk to 8 to 10 feet to create a sidepath on the east side of the Winfield Road from Galusha Road to Warrenville Road would provide a connection to Cantera, the West Branch Regional Trail, and the Old Town area via Warrenville Road. The crossings at the entrances to the three businesses located along the sidepath segment

should be striped. These improvements would raise the Suitability Score from a 7, somewhat suitable, to a 4, most suitable.

4.2.3 Herrick Road

Working with the DuPage County Department of Transportation could create a sidepath or a marked shoulder along Herrick Road, either from the gravel service road that leads to the Herrick Lake Forest Preserve trail system 300 feet south of Galusha Road or to the existing Forest Preserve entrance to the north.

4.3 Old Town Area



4.3.1 East-West Sidepath Along Ferry Road

There is an existing sidepath along the south side of Ferry Road between Mill Street and the DuPage River that connects with the West Branch Regional Trail along the river. A sidepath also exists along the north side of Ferry Road from the Illinois Prairie Path to Raymond Avenue. Widening the sidewalk between the two sidepaths would provide residents on the south end of Warrenville access to the West Branch Regional Trail, westbound Illinois Prairie Path, and the Cantera area. The proposed route includes the following elements:

- From Raymond Avenue to River Road, the sidewalk on the north side should be widened to 8 to 10 feet.

- The light at the Ferry and River roads intersection would provide a safe crossing to the south side of Ferry Road.
- From River Road to the River, the sidewalk on the south side of Ferry should be widened to 8 to10 feet.

4.3.2 Incorporation of Existing Sub-Area Plans

In April 2007, the Warrenville City Council adopted the City of Warrenville Old Town/Civic Center Sub-Area Plan to improve two specific areas. The Plan was developed by the City staff and the Community Development Committee with support of community members and was recommended to the council by a group of outside consultants and the Sub-Area Planning Commission after being reviewed by residents. The Plan envisions "enhancements within and along the Butterfield Road right-of-way that improve bicyclist, pedestrian, and vehicular access to the District and provide it with a distinct identity."

The Sub-Area Plan is described in detail in a 132-page, two-volume final report with detailed diagrams showing alternatives plans, which are included in miniature below.

Figure 1
Sub Area Plan Diagram

Figure 1 shows the areas involved with the Sub-Area Plan. The Sub-Area Plan is significant to the City of Warrenville Bikeway Implementation Plan in that it details the concepts of bicycle traffic within the two planning areas. It also describes the expected outcomes of several aspects of the both the DuPage River cleanup and restoration projects and the Butterfield Road widening project with regards to crossing at the DuPage River and the Batavia and Butterfield roads intersection.

Within the Plan, certain assumptions need to be confirmed and expanded and managed for the Batavia Road area between Butterfield and Warrenville roads, including the following:

- Creation of the Butterfield Road sidepath as described in section 2.4.1
- Connection of the Blackwell Forest Preserve to the Butterfield Road sidepath at the DuPage River
- Connection to a new north-south path on the west side of the DuPage River onto the existing north-south path on the east side of the DuPage River at Warrenville Road, which would be created from the access road needed for the river cleanup and restoration
- Development of a path along the DuPage River north of Butterfield Road that may be provided as the result of the river cleanup and that could connect with the Forest Preserve District of DuPage County's Cenacle property
- Planned intersection crossing at Batavia and Butterfield Roads and Rockwell Street and Butterfield Road
- New bridge crossing the DuPage River near the proposed parking lot by the Warrenville History Museum

Both the Planning Commission and its consultants attempted to address some of these issues with the following diagram.

Figure 2
Sub Area Planning Trail View

Although this diagram shows pedestrian and bicyclist trails, it does not address implementation of those facilities, which will need to be monitored and managed as the development of the sub-area progresses.

Several potential grant sources are available to fund infrastructure improvements of the type recommended in the Sub-Area Plan. Grant sources are described in section 6 of this Plan.

4.3.3 Warrenville Road

There are several recommendations depending on the section of road:

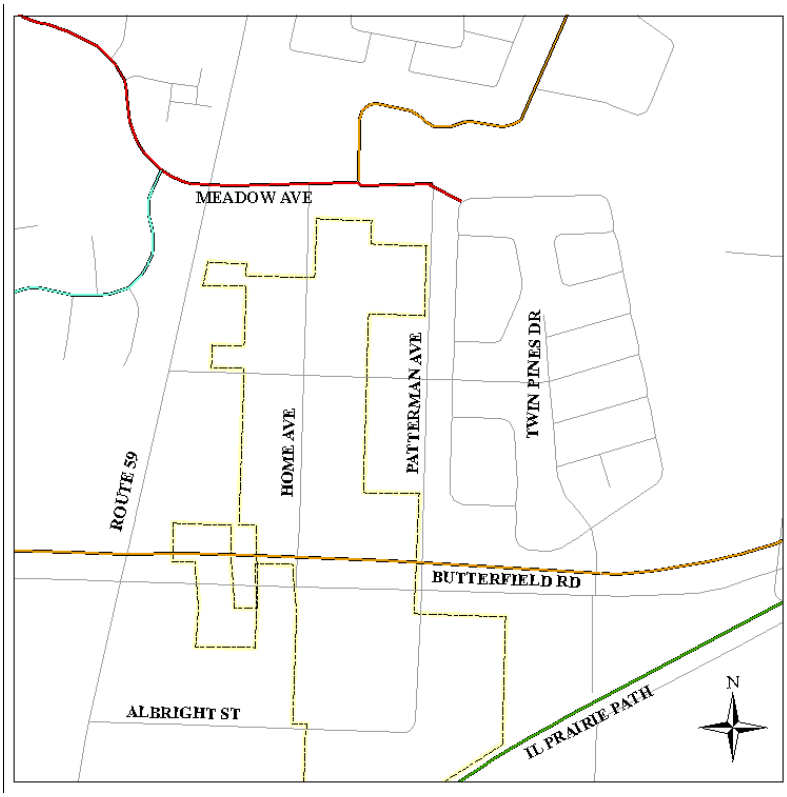
- Butterfield Road, the Illinois Prairie Path, to Batavia Road. This section has recently been rebuilt, but there is an inadequate right-of-way for a sidepath or designated on-road bike lanes. Batavia Road to Winfield Road
- The Old Town Sub-area Plan recommends a traffic circle for the intersection with Batavia Road. The addition of a bike lane around the outside of the circle with a widened sidepath on the north and south side of Warrenville Road from Batavia Road to Winfield Road would provide a proper connection between Batavia Road, Warrenville Road, the Galusha Road area, the Cantera sidepaths, and the West Branch Regional Trail

4.3.4 Batavia Road

Many road cyclists use Batavia Road between Butterfield and Warrenville roads. Adding a 4-foot bike lane without parking along both sides of the road would raise the BLOS rating from 'C' to 'B'. Lane markings should follow the AASHTO Guide for the Development of Bicycle Facilities, and the striping should connect to the bikeway system at Batavia Road's eastern end, where it intersects with Warrenville Road to provide access to Cantera, eastern routes on Warrenville Road, and the West Branch Regional Trail. In order to complete this link from Batavia Road, additional striping and sidepath improvements will be needed along Warrenville Road from Batavia to Winfield roads.

A crosswalk is also needed at the Warrenville Grove Forest Preserve parking lot so that bicyclists, as well as pedestrians, using the sidewalk along Batavia Road can easily access the Forest Preserve trails. However, given that the entrance is located on a curve, careful consideration as to the feasibility, exact location and best design of such a crossing will be required.

4.4 Butterfield-Batavia-Route 59 Triangle Area



4.4.1 Meadow Avenue and Timber Drive

Meadow Avenue and Timber Drive could provide a route for cyclists in this area to connect to the Batavia Road sidepath or Summerlakes Park via the wide shoulders on Continental Road. Timber Drive is not wide enough to allow for a striped shoulder on either side, but traffic volume is low enough that the BLOS score for the road is a 'B' and is thus suitable for cycling. The road should be signed to indicate that it is a bike route. At the east end of Timber Drive, a marked crosswalk should be added across Batavia Road to provide a connection to the Batavia Road sidepath.

Although Meadow Avenue is 35 feet wide, for 200 feet on the west end, it is marked as two travel lanes with a turning lane for left turns onto Route 59. Thus the area is not wide enough to add wide marked shoulders or bike lanes on the street. There are sidewalks on either side of the street, but they are only 3 feet wide. These same conditions exist at the east end of Continental Drive on the west side of Route 59. One possible treatment for the intersection would be to use sharrows markings on the right side of the through lanes to guide cyclists through the intersection and to warn motorists that cyclists may be in the lane. The marking would be in conjunction with "Share the Road" signs. Further investigation would be required to determine the most feasible design for the intersection at Meadow Avenue, Continental Drive and Route 59.

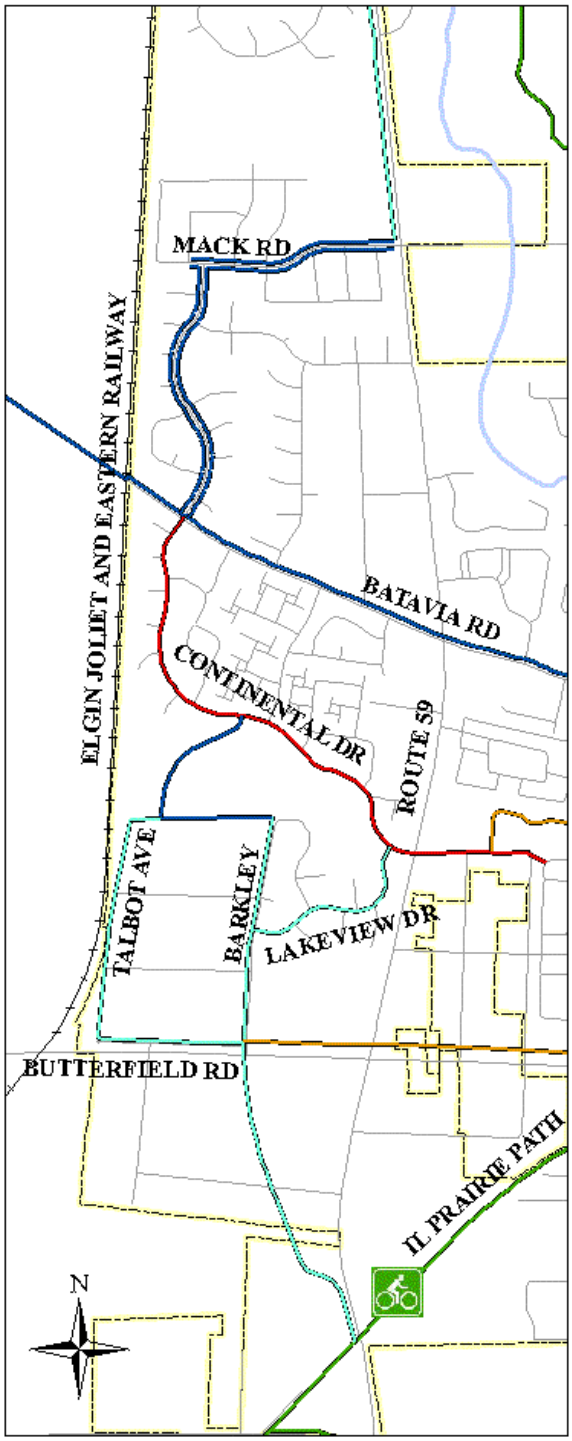
4.4.2 Ferry Creek Bridge

Adding a bridge over Ferry Creek would link the Candlewood Lane area to Kiwanis Park and the Meadow Avenue-Timber Drive route. The original Illinois Prairie Path bridge over the West Branch of the DuPage River was acquired and installed for this use.

4.4.3 Butterfield Road

The potential sidepath along Butterfield Road, when expanded, would provide another route for cyclists to reach the Illinois Prairie Path at Batavia Road or Summerlakes Park to the west. The sidepath would be accessed via Home Avenue, Patterman Road or Twin Pines Drive.

4.5 Summerlakes Area



4.5.1 North-South Bicycle Route

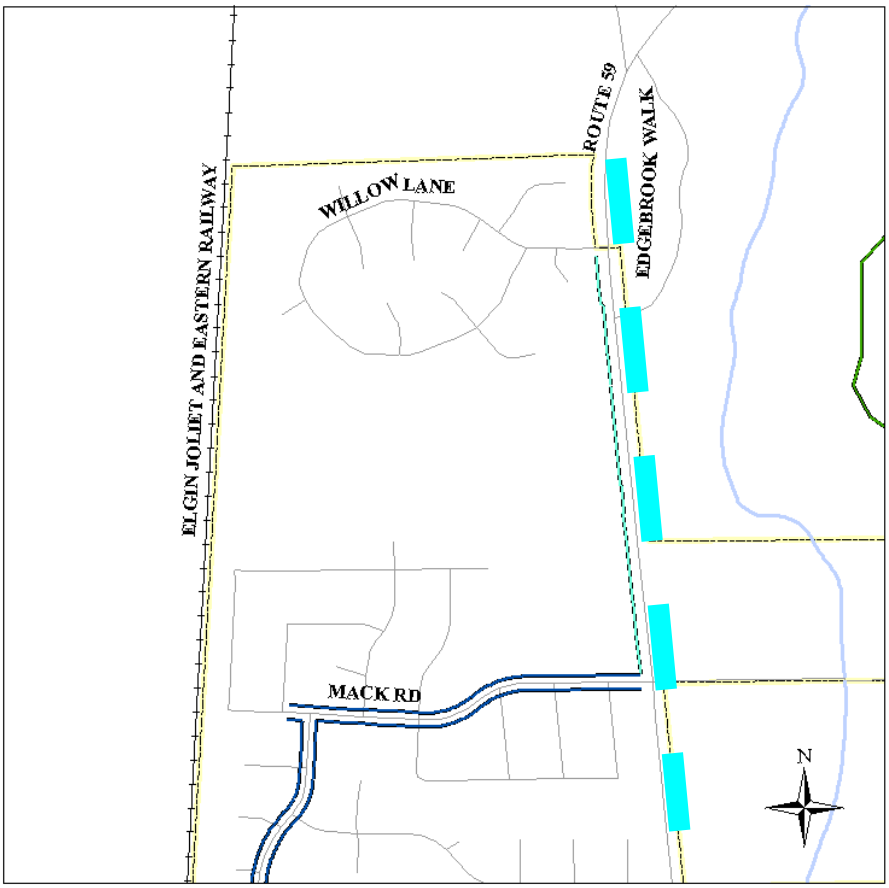
As described in section 3.5, the only existing and specified access to the Illinois Prairie Path for the Summerlakes area is at Batavia and Butterfield roads. The Committee thought it desirable to provide an access route to the path that does not require cyclists to travel so far east in order to ride west.

A north-south route within the Summerlakes area would resolve this issue. The proposed route is as follows:

- Mack Road from Route 59 to Continental
  The road is striped on both sides with white edge lines designating 7-foot parking lanes that have a low percentage of parking. This road has an 'A' BLOS rating. Residents can use collector roads to access Mack Road.
- Continental Road from Mack Road to Batavia Road
  This road is striped on both sides with white edge lines designating 7-foot parking lanes that have a low percentage of parking. This road has an existing 'A' BLOS rating.
- Improved Crossing at Continental and Batavia Roads
  The intersection is already striped with crosswalks, so the addition of signage indicating a bicycle crossing should be sufficient.
- Continental Road from Batavia Road to Route 59
  This road has an 'A' BLOS rating. Striping on both sides with white-edge lines designating 7-foot parking lanes would provide a more defined area for cycling and raise the comfort level of cyclists. Again, access to this route for local residents would be through connecting streets south of Batavia Road. Residents east of the school would use the proposed striping on Continental Road heading west to the school.
- Access Summerlakes Park Trails via Johnson School Parking Lot
  There is a sidewalk between the park trails and the sidewalk along Continental Drive. If used as a bike path, it would need to be widened to 8 to 10 feet and have an added curb cut at the west entrance to the parking lot. An alternative would direct cyclists through the parking lot itself. The curb cut would be required between the path and the parking lot. Signage will be an important part of this portion of the route to direct cyclists along the route. Since this section would connect to the Summerlakes Park trail, coordination with the Warrenville Park District would be required.
- Multiuse Trails through Summerlakes Park
  These trails connect the parking lot at Johnson School with Talbot and Barkley avenues.
- Talbot Avenue
  This street has very low traffic volumes and a 'B' BLOS rating. Adding a 3-foot-wide striped shoulder on both sides would maintain a 12-foot travel lane and improve the BLOS rating. The addition of bike route signage is recommended.
- IDOT-Proposed Sidepath on North Side of Butterfield Road
  Currently, the Butterfield Road frontage road could be used with the addition of 3-foot striping. It currently has a BLOS rating of 'B'.

- Proposed crosswalk at Barkley and Route 56
  A traffic signal would be installed with a marked crosswalk and pedestrian lights. This is indicated in the City's Sub-area Plan for the southwest corner of Butterfield Road and Route 59
- Path to the Illinois Prairie Path Before Ferry Road
  Part of this path is already part of the City's Sub-area Plan for the southwest corner of Butterfield Road and Route 59.

4.6 Maple Hill Area

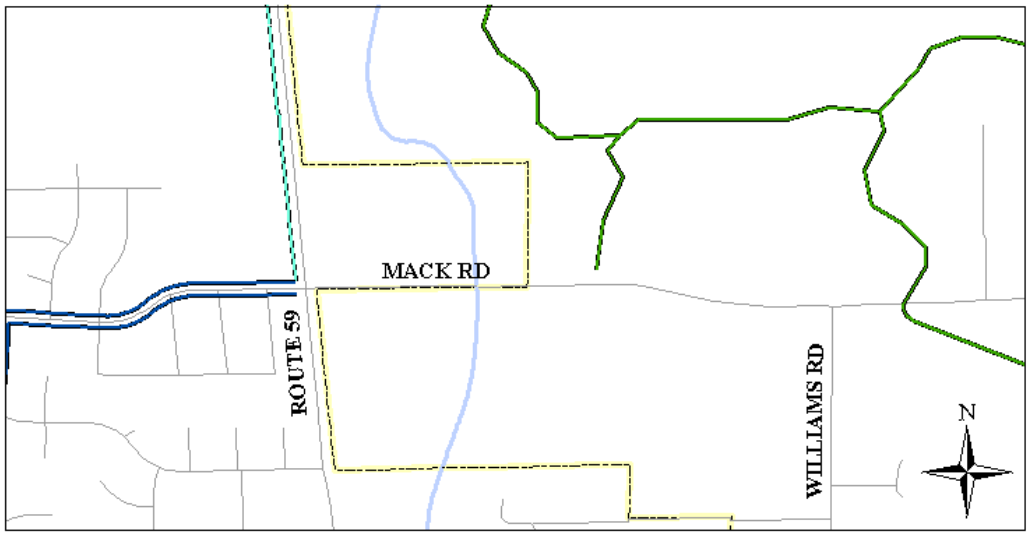


The Maple Hill area is separated from the Fox Hollow area by a portion of the Blackwell Forest Preserve. There is an informal path that leads north from the end of Avon Drive. The forest-preserve ground consists of wetlands, making it difficult to get approval for an official path. Even if a path were feasible through the preserve, there would be nowhere along the south edge of Maple Hill that would not place the path in a resident's backyard. The only possible route for a bicycle facility would be to create a sidepath along the west side of Route 59 between Willow Lane and Mack Road. Route 59 is under the jurisdiction of and maintained by IDOT. Additional studies and negotiations with IDOT would be needed to determine the feasibility of such a route.

4.7 Route 59 Recommendations

This Plan recommends improvements at all crossings from sidepaths, painted bike lanes, and any businesses that will cater to bicyclists along Route 59. This will require collaboration with IDOT, the agency responsible for maintenance of the road.

4.8 Mack Road



Although the section of Mack Road east of Route 59 is outside of Warrenville, cyclists traveling to Blackwell Forest Preserve and points east use that road extensively. It is recommended that Warrenville coordinate with the Forest Preserve District of DuPage County and with Winfield Township to establish either a sidepath or a safer on-road facility for cyclists.

5. General Recommended Updates to City Code

5.1 Signage

Signing the Warrenville bikeway system is an important step in encouraging the use of bikes for transportation. A well-signed system helps cyclists find the most efficient and safest routes, which in turn encourages people to bicycle. The Manual on Uniform Traffic Control Devices provides a comprehensive guide for the use of signs, pavement markings, and traffic signals. Part 2, Guide Signs, and Part 9, Traffic Control for Bicycle Facilities, provide information related to bicycle operation on both roadways and multiuse paths.

Bike route signs should be located every ¼ mile, at all turns, and at all major signalized intersections along a bike route.

The City of Warrenville Bikeway Implementation Plan will focus on three specific aspects of signage:

- Way-finding and location
- Information
- Automotive traffic

For the first and second aspects, Warrenville should create and integrate signage for a mapping system consistent with the vision of the City.

5.1.1 Way Finding and Location

Way finding and location are used to position riders within the Warrenville bicycle system. These signs include showing a specific location on a map ("You Are Here"), mile markers, and distance and directional markers denoting destinations. The latter would be at key crossroads.

This type of sign helps the bicyclist or traveler identify their location. For Warrenville, this type of sign should consist of signage that allows riders to clearly know where they are, clearly understand where they are going, understand route alternatives, and locate resources and facilities.

This system could also be integrated into paper and online systems. The paper system would consist of large maps with "you are here" designations and would be strategically positioned at all major bicycle route entrances to the City as well as at major designations within the City such as; the Warrenville Historical Museum, City Hall, the Warrenville Public Library, and the Warrenville Park District Recreation Center. The online system would be made available on the City's website, http://www.warrenville.il.us/.

The maps should have a combination of roads and routes that are marked by a legend designating shared use, specific use, and surfaces. The maps should also have a way for the user to define distance to and from different locations within the City. These maps should include points of interest as well as landmarks.

There are several options for these maps and all are used by different trail systems:

- Vertical versus diagonal
- Paper under plastic versus vinyl
- Relief versus flat versus textured
- Wood versus metal or other material
- Physical design
- Contemporary
- Rustic

The signs at entrances to the City also serve as welcome messages, defining Warrenville as friendly to bicyclists.

5.1.2 Informational Signs

This Plan suggests another option by providing information to bicyclists regarding locations and resources within Warrenville, including restrooms, water fountains, vending machines, tire air, picnic areas, merchants that allow access to restrooms, restaurants, repair facilities, scenic locations and historic landmarks. This type of signage should be consistent with the map signs and with other signs within the community and should provide information about the rules of the road.

In most cases, directional signs could be as simple as arrows on a post. Sections of signs for merchants could be self-supporting through donations or other arrangements provided by the merchants.

5.1.3 Automotive and Traffic Signs

These signs, which are similar to traditional traffic signs and markings, have two target audiences: motorists and bicyclists. For motorists, the signs signal to be on the lookout for bicyclists and to recognize that Warrenville has a bicycle-friendly system, which will attract additional residents and visitors to the City's trail system.

For bicyclists, these signs signal that paths are designed for bicycle and shared use. A series of signs could clearly designate Warrenville bicycle routes, including joint-use roads, trails or paths, and sidewalks. Sign specifics would be based on BLOS ratings and the Chicago Bicycle Route Plan, and would include icons that are permanently marked on joint-use streets, where applicable. The Manual on Uniform Traffic Control Devices (MUTCD) from the US Department of Transportation provides information on the various types of signs.

The City should provide signs that direct bicyclists to parks, public restrooms, hydration facilities, and bike-related retail stores. To avoid excessive signs, signs should note a limited number of features, and mileages should be limited to one-mile increments.

Suggestions for crosswalks, places where trails cross streets, include the following:

- "Use Caution" painted on multiuse trails at hazardous intersections
- Removal of visual obstructions
- Display of "Bicycle Crossing" signs 250 feet before arterial crossings to warn motorists, including possible addition of green reflector strips on signposts, especially in high-traffic areas, such as schools, the Batavia Road crossing at Williams Road, and other community destinations
- Railroad signage

The majority of the Warrenville bikeway system is on shared-use roadways. Standard signs for these routes should include destination signs displayed in conjunction with "Bike Route" signs at regular half-mile intervals along bikeways. The bike-and-chevron image exhibited can be used on roadways with high amounts of on-street parking and bicycle traffic.

5.2 Drinking Water and Toilets

Where possible, the City should provide amenities like drinking water and toilets for bicyclists and pedestrians. Drinking water facilities are important for bicyclists; they not only help to replenish fluids but also serve as starting and ending points and intermediate rest areas. A drinking fountain may be appropriate in some cases, but bicyclists also need a way to fill water bottles and hydration packs, through the use of an auxiliary spigot or faucet. Hydration also goes beyond water, and vending machines or convenience stores could provide commercial beverages.

In Warrenville, several places on public property could serve as vending locations, including the library and the Warrenville Park District Recreation Center. The Recreation Center has vending machines that offer these beverages.

Consideration should be given when replacing or adding fountains in City parks, and constructing new way stations or pavilions. The new fountains should provide a faucet or other means to allow easy filling of water bottles and hydration packs. Hydration options, with the proper directional signs, could also be added near features like bike racks, portable toilets, picnic tables, and parking lots.

5.3 Bicycle Parking

Bicycle parking is important to encourage bicycling as an alternative mode of transportation. The City has provided parking at public buildings and restrooms and should encourage retail establishments to provide parking as well. Warrenville should create a development ordinance to specify the amount of bicycle parking that should be provided per land use and other parking requirements. The City Code of the City of Naperville provides an example of such an ordinance.

Adult commuters and others prefer the continuous wave-type Type II rack design for long-term, secure parking. This type is appropriate at locations like offices, public-

transportation stations, schools, colleges, and libraries. As shown on the right, a Type II rack locks a bike at two locations on the frame.

A Type III rack, shown to the right, is the least secure design. These racks are not recommended since they can damage a bike if the bike tips over while the front wheel is in the rack.

(Sources: SAA Image, www.bicyclinginfo.org, www.pedbikeimages.org)

5.4 Maintenance

Because bicycle tires are narrower and more easily punctured than automobile tires, bicycle routes require more maintenance than streets. Bicycle routes, lanes, and off-street paths require more frequent sweeping to remove glass, gravel, and other debris. Additionally, drainage grates that could catch bicycle tires need to be replaced, and landscaping at intersections along paths must be trimmed to maintain adequate sight distances. Striping and other on-street markings must be regularly repainted to maintain legibility, including pavement striping on all four segments intersection crosswalks. Cyclists should be encouraged to report roadway hazards to the Public Works Department. Funding will need to added to the Public Works Department budget to support maintenance.

5.5 Coordinate with Regional Planning Organizations

Numerous local and regional bicycle-planning efforts exist for bikeways within the Warrenville planning area. The Warrenville Bicyclist and Pedestrian Advisory Commission made every attempt to review these plans, incorporate them into its Plan, and, where possible, suggest improvements or other modifications. In many cases, these modifications need to be coordinated with the individual planning group. Efforts with the greatest affect on Warrenville's bikeway system include the following:

DuPage County	Aurora	Forest Preserve District of DuPage County
West Chicago	Naperville	Chicagoland Bicycle Federation
Wheaton	Fermilab	League of Illinois Bicyclists
Illinois Prairie Path	Winfield	IDOT

The Commission recommends that the City communicate regularly with these organizations.

5.6 Outside of Scope

5.6.1 Signaled Intersections

While there are numerous signalized intersections within the City limits of Warrenville, none are wholly within the City's jurisdiction: At least one road is controlled by the county or the state. The City should work with the appropriate agency to ensure that signal timing and intersection markings are appropriate and adequately maintained.

6. Funding Sources

6.1 Introduction

Funding assistance for bicycle facilities and maintenance projects is generally available from state and federal governments, which recognize the need to establish programs to assist local governments and public agencies with funding diverse transportation projects that include a bicycle component. Funding is also available through local budgets and land-dedication requirements.

The level of funding-assistance requirements and grant-administration methods varies by program. Several that provide funding are listed below. Local governments are generally required to provide a percentage of matching funds to participate in state and federal funding programs. The three most reliable sources of bicycle funding assistance are the Congestion Mitigation and Air Quality Improvement Program, the Illinois Transportation Enhancement Program, and the Illinois Bicycle Path Grant Program. The National Recreational Trails Program is also a reliable source but gives priority to other non-motorized uses (e.g., equestrian, hikers), and is typically only used when certain conditions or environments exist, such as a rail crossing or a natural area.

6.2 Federal Funding Sources

Congestion Mitigation and Air Quality Improvement Program

This program is administered by the Chicago Metropolitan Agency for Planning and targets projects that reduce congestion and improve air quality. Funds are administered through the Chicago Area Transportation Study; applications are due in January. The annual allocation for bicycle projects in northeastern Illinois in the past few years has been between 5 and 7 million dollars. Funded projects generally involve bike facilities that parallel major roadways or projects that increase the availability of parking facilities for bicycles and promote the use of bicycles over automobiles (80% federal or state, 20% local matching funds). CMAQ uses selection criteria related to cost divided by population/employment density of a buffer area around the project. Indications are that projects in the range of $150,000 - $300,000 would be appropriate for Warrenville's size. The cost would include basic project costs as well as administrative costs.

Illinois Transportation Enhancement Program

The program allocates resources to well-planned projects that provide and support alternate modes of transportation, enhance transportation systems through preservation of visual and cultural resources, and improve the quality of life for communities. Eligible projects include bicyclist and pedestrian facilities, "streetscaping," and landscaping. Federal reimbursement is available for up to 50 percent of the cost of right-of-way and easement acquisitions and 80 percent of the cost for preliminary engineering, utility relocations, construction engineering, and construction costs. Application cycles for this program have been irregular in recent years. The deadline for grant submittals will be announced after the next Federal Transportation Act is passed.

Surface Transportation Program
The program provides flexible funding for certain road, sidewalk, and trail improvements. The DuPage Mayors and Managers Conference administers the program and provides a portion of the funding.

Safe Routes to School
This relatively new program, administered by IDOT, is still in its initial stages. The scope of available grant funding covers projects that enhance pedestrian and bicycle safety along routes potentially used by children to travel to school. The program is limited for grades K-8.

6.3 Illinois Funding Sources

Illinois Bicycle Path Grant Program
This program was created in 1990 to financially assist eligible units of government to acquire, construct, and rehabilitate public, nonmotorized bicycle paths and related support facilities. Grants are available to any local government agency having statutory authority to acquire and develop land for public bicycle-path purposes. Financial assistance up to 50 percent of approved project costs is available. Maximum grant awards for development projects are limited to $200,000 per annual request; no maximum exists for acquisition projects. Revenue for the program comes from a percentage of vehicle title fees collected pursuant to Section 3-821(f) of the Illinois vehicle code. Applications for grant assistance must be received by the Illinois Department of Natural Resources by March 1 of each year. (50 percent state, 50 percent local)

6.4 Local Funding Sources

Capital Improvements and Budget
Bicycle-facility improvements can be funded through Warrenville's capital improvements budget, depending on the facility. If the facility is a path through a park, the money should come from the Warrenville Park District. Improvements to the roadways to accommodate bicycles such as signs, paved shoulders, or re-striped roads should be done by the Public Works Department and come from the City's general fund.

Local Dedications from Developers
Land-dedication ordinances may require developers to dedicate for public use the future right-of-way for a greenway corridor pedestrian walkway or bike trail and to develop the trail through the corridor as it crosses their development. By indicating the future greenways and trails on the official map, the dedication may be required prior to final action on a subdivision or a development requiring planning action.

Tax Increment Financing
Warrenville has used this locally permissible municipal financing technique. The program allows a municipality to acquire and prepare property for redevelopment and

make needed public improvements. The City is currently working on establishing a third TIF district to implement the Old Town/Civic Center Plan, which includes a number of trails.

7. Education, Enforcement and Encouragement

In addition to creating infrastructure improvements, it is also important to provide education, law enforcement, and encouragement so cyclists can use the bikeway system safely. Education involves instructing not only cyclists but also motorists about the rules of the road as they pertain to cycling. Law enforcement relates to City codes and ordinances that improve the cycling infrastructure and provide enforcement for those rules when violations occur. Cyclists can be encouraged to ride with information on bike routes and with facilities such as bike racks, drinking water, and restrooms.

7.1 Education

A bicyclist who understands the rules of the road is more likely to be a safe bicyclist. In Illinois, bicycles are classified as vehicles and must follow the same traffic laws as automobiles. A motorist who understands that bicycles are vehicles and treats them as such is more likely to drive safely around bicyclists. In Warrenville, bicyclists and motorists must be aware that they may encounter each other around any turn or at any intersection. Focused educational efforts are necessary to make motorists and bicyclists aware of this reality so they may operate their respective vehicles safely. An effective, ongoing educational initiative has a different message and technique for delivery for each audience it is trying to reach. Warrenville can target three groups: children and their parents, adults, and motorists.

Children are quick learners and will copy what they see. Basic bike-safety courses will reach most children if offered through public and private elementary schools in Warrenville. The Illinois Department of Transportation offers a pamphlet, "Kids on Bikes in Illinois," which is geared toward children ages 9 to 11. Physical education teachers can present this pamphlet, which increases children's cycling abilities, teaches the rules of the road, and helps them to avoid dangerous situations. Some communities in Illinois offer bicycle-safety education during popular, optional summertime classes, such as Safety Town or Safety Camp, which are coordinated by civic groups like the Junior Women's League and are conducted by law enforcement officers.

Park and recreation departments around the state sponsor bike-safety classes that are taught by instructors certified by the League of American Bicyclists. A course for children in kindergarten through third grade covers bike and helmet fit, safety, and basic bike-handling skills. A course for children in fourth, fifth and sixth grades teaches basic traffic laws, in-depth bike handling, group riding, and safe route selection. It includes on-road riding to test students' comprehension and to allow for practice of the skills learned in the classroom as well as parking lot exercises. The Chicagoland Bicycle Federation (www.biketraffic.org) or the League of Illinois Bicyclists (www.bikelib.org) can provide a list of instructors.

Specific initiatives for children have included classroom programs within District 200 elementary schools presented by Jill Braselton, an injury prevention specialist at Central DuPage Hospital, and a Safety Town exhibit and instructional sessions at the annual Warrenville Bicycle Rodeos. It is anticipated that these activities will be continued and augmented going forward.

Adult cyclists are much more difficult to reach with a safety message. The League of American Bicyclists offers safety classes for this age group, but most adults believe they know how to ride a bike, despite riding in the wrong direction on the road or ignoring stop signs. Effective ways to educate adults include point-of-sale safety information, presentations at bike-club meetings, and organized bike rides that emphasize bike safety, such as helmets, stopping at stop signs, riding on the right, correct lane position, signaling, etc. Public education campaigns, discussed below, are also effective. Efforts can also be made to work with organized cycling clubs to remind them of safe group-biking behaviors and regulations, using law enforcement when needed, as described below.

New motorists can learn about bike safety during driver's education classes, provided the instructor has the necessary information. Other motorists can learn about bike safety through public-information campaigns. Senior centers often sponsor safe-driving classes.

Specific initiatives targeting public education of adult drivers and bicyclists have included a newspaper column by Tom Jones in local Warrenville newspapers distributed to all City households as well as activities at the City's bicycles rodeos.

Ideas for public-information campaigns include the following:

- Publicize safe-driving tips during the main bicycle season via newspaper articles, public-service announcements, the City's website, etc.
- Distribute bike-safety materials from the Illinois Department of Transportation
- Ask service groups, injury-prevention groups, or local hospitals to sponsor and staff bike-safety booths at public events or to sponsor a bike-safety fair
- Ask the DuPage County Public Health Department to hold a summer safety fair and to include bike-safety materials and demonstrations
- Ask libraries to display and distribute safety materials and encourage them to purchase educational videotapes and books about bike safety and maintenance

- Distribute bike-safety materials in locations such as at City Hall, the Police Station, the Recreation Center, motor-vehicle registration offices, and bike shops
- Install signs to identify bike routes and warn motorists of cyclists at crossings

7.2 Law Enforcement

Law enforcement officers play an important role in educating bicyclists and motorists about safety. Officers have the greatest effect when they set a good example, speak to young people in a school environment, or demonstrate safety practices to children. By involving law enforcement in delivering the bicycle-safety message to motorists and bicyclists, officers are more apt to see that their responsibility includes the enforcement of laws that promote bike safety.

The WBPAC has heard from a number of citizens complaining that bicyclists do not obey traffic laws. Examples cited were bicyclists impeding traffic by riding several abreast, or running through red lights and stop signs. These behaviors result in safety hazards as well as create a negative image of bicyclists. Officers can reinforce bicycle-safety messages by stopping bicyclists they observe ignoring the rules of the road. A verbal or written warning is very effective, in some instances a ticket is appropriate. Along with a warning or ticket, officers should be encouraged to give the cyclist information about Illinois' bike laws and about the proper way to share the road with motorists.

By stopping motorists who exhibit dangerous driving practices around bicyclists, an officer is helping to prevent a future tragedy. Such a stop is a "teachable moment," and the officer can give the motorist information about sharing the road with bicyclists.

Officers patrolling periodically on bicycles provide heightened public awareness of bicyclists and provide a real-life bicyclist perspective to the enforcement community. The Police Department is investigating the installation of bike racks on police cars to facilitate bike patrols.

The League of Illinois Bicyclists offers law enforcement agencies several resources to help them train officers on bicycling issues, educate motorists and bicyclists about safe bicycling, and enforce traffic laws. The league has developed a PowerPoint presentation, "Safe Roads for Bicycling," which law enforcement agencies can watch and download to inform officers about bicycling issues. The league has also developed a traffic-violation warning pamphlet, which officers can share with motorists and bicyclists to make roads safe for bicycling. It also offers law enforcement agencies Illinois bike-law cards with excerpts from the Illinois Vehicle Code, including the state's new 3-foot safe-passage law, posted at www.bikelib.org/enforcement/bikelawcard2007.pdf, as well as the traffic-violation warning pamphlet, which is posted at:
http://www.bikelib.org/enforcement/policebikepamphlet2007.pdf.

Specific initiatives targeting enforcement have included the following:

- Hiring an officer who is a certified-bicycle instructor
- Initiating periodic bicycle patrols within the community

- Bicycle Rodeo activities
- Promotion of the City's bicycle-registration program at special events and through the City's newsletter

A meeting was held in the spring of 2008 between Ed Barsotti, Executive Director of LIB, along with other LIB members, and the Warrenville Police Department for the purpose of presenting the traffic violation warning pamphlet along with related materials. This presentation should be repeated at appropriated intervals to ensure that the Police Department is up-to-date on current bicycle regulations.

7.3 Encouragement

Encouragement can only occur after a strong foundation of education and law enforcement. A bicyclist who understands how to safely maneuver in traffic is more likely to feel comfortable riding on the road and to use a bicycle more frequently. If cyclists know that the community's roadway-maintenance practices take cycling into consideration, they will be more likely to use their bicycles for more trips. Bicyclists who believe that law enforcement will protect them and motorists will operate their bicycles in a safe manner.

One way that Warrenville can encourage new bicyclists is to offer safety classes. It can promote family rides by suggesting bike routes that appeal to all ages and skill levels via the distribution of a City bike map. By posting signs for bicycle routes and trails and incorporating this information in City maps and on its Web site, Warrenville would heighten awareness of bicycle resources within the community. The City's public library has already added cycling books, magazines, helpful Web sites, and other resources to its existing offerings.

The City can also take advantage of the opportunity to interact with the public during holiday celebrations such as Independence Day; at events like street dances, night rides, bicycle rodeos, and intercommunity activities; and via the City's public-access television channel, City and bike rodeo Web sites, and downloadable and printed maps.

As an employer, Warrenville can encourage employees to bike to work by providing information about bicycle commuting, installing bicycle parking, offering incentives. Showers have already been made available in City offices.

The City can also participate with groups to sponsor "Bike Week" in early summer to encourage people to ride their bikes at least once during that week to a nearby destination. The Chicagoland Bicycle Federation can help by providing information about how to plan a Bike Week.

8. References

The following documents provide additional background material and context for this Plan.

The City of Chicago Bike Lane Handbook

The AASHTO Guide for the Development of Bicycle Facilities
The AASHTO Manual on Uniform Traffic Control Devices (MUTCD)

The Geneva Bikeway Implementation Plan:
http://www.geneva.il.us/CommunityDevelopment/bike/bike.htm

League of Illinois Bicyclist enforcement brochures
http://www.bikelib.org/enforcement/bikelawcard2007.pdf
http://www.bikelib.org/enforcement/policebikepamphlet2007.pdf

Appendix I Bicycle Level of Service and Sidepath Suitability Score

Bicycle Level of Service Analysis

Selected roads in Warrenville that showed potential for bikeway facilities and marked on Warrenville's Trail Map were inventoried with a Bicycle Level of Service (BLOS) analysis. The analysis rates a road's perceived "comfort level" or a range of typical experiences for adult bicyclists who share a roadway with motorized traffic. Ratings of 'A' through 'F' are given, with A exhibiting the best conditions for bicyclists and F exhibiting the worst. Key factors in the BLOS rating are traffic speed, average daily traffic count, pavement condition, lane width and the presence of on-road bike lanes or paved shoulders. The ratings are intended to assist a bicyclist in selecting roads that match his or her experience and skill level. Analyses may also be used to assess how a roadway improvement will impact bicyclists and can help ensure a basic level of service is incorporated into roadway design and reconstruction.

BLOS analysis is an emerging national standard for quantifying the "bike-friendliness" of a roadway. While motorist "level-of-service" indices relate to traffic capacity, BLOS measures indicate bicyclist comfort level for specific roadway geometries and traffic conditions. Associated with the A through F grades are numbers related to each of the factors that are considered in the analysis. Roadways with a better (lower) score are more attractive and usually safer for cyclists. The BLOS analysis for Warrenville, with the corresponding number and letter scores, is included in this appendix.

BLOS evaluation may be useful in several ways:

- A bicycle map can be produced for the public to assist them in route selection.
- The most appropriate routes for inclusion in the community bicycle network can be identified.
- "Weak links" in the network can be determined, and sites needing improvement can be prioritized.
- Alternate treatments for improving bike-friendliness of a roadway can be evaluated.
- Policies can encourage or require road project designs to improve BLOS rating, or to achieve specific levels.

Landis et al.[1] developed the BLOS (1997) model by measuring cyclist reaction to actual field courses. The measure has been used on over 200,000 miles nationwide by agencies including the Illinois Department of Transportations and DuPage County (bike maps) and the Chicago Area Transportation Study.

The BLOS model reflects the effect on bicycling suitability or "compatibility" due to factors such as roadway width, bike lane widths and striping combinations, traffic volume, pavement surface conditions, motor vehicles' speed and type and on-street

[1] Landis, Bruce W. "Real-Time Human Perceptions: Toward a Bicycle Level of Service" Transportation Research Record 1578, Transportation Research Board, Washington DC 1997

parking. The BLOS is used to analyze mid-block cross-sections, but not intersections. Striped-off space used by cyclists - including paved shoulders, bike lanes, and sparsely-occupied parking - is one factor that has a major affect on the score.

In general, more experienced and traffic-tolerant cyclists prefer roads rated C or better. More casual cyclists may be comfortable on B or better roads. The least traffic-tolerant may bike only on A roads, or just trails and sidewalks. A good bicycle accommodation design policy might call for a minimum level of C for all roads and B for roads with high latent demand (near important destinations, major through routes, etc.)

Bicycle Level of Service Chart and Results
BLOS analysis of existing conditions was performed on Warrenville roads identified as major existing cycling routes and on other roads that might be considered for the bikeway network due to destination or connection needs.

A particular road's characteristics can change frequently over its course. Some smoothing of the data was done to reduce the number of distinct segments. Road cross-sections were rated away from intersections, where characteristics frequently change. The only intersection effect considered was the narrowing of some specific shoulders due to long turn lanes.

The following BLOS chart shows the results of the analysis. The first three lines of the chart show the upper traffic volume limits to achieve a particular level of service for a typical residential street in Warrenville. The remaining lines refer to roads for which recommendations are made in Section 4. While some of the recommendations do not increase the BLOS letter designation, they do reduce the BLOS rating number and provide for improved separation of motorists and cyclists and a resultant increase in comfort level of cyclists.

Some general observations can be made from the results. Many of the recommended roads are already adequate for route designation, perhaps through a standardized signage system. Other roads will be more challenging and will require more extensive improvements. For some roads, a sidepath trail may be appropriate.

A more detailed look at specific routes is included in Section 4 of this Plan.

Bicycle Level of Service Chart															
			Existing Conditions												
Road Name	From	To	Lanes	Traffic Data		Speed limit	Width of Outside Lane		% Occupied On-street Parking		Pavement condition	Existing Bicycle LOS		New Bicycle LOS		Recommended Improvement
				Volume	Trucks				OSPA			Score	Grade	Score	Grade	
				ADT	HV	SP_p	W_t	W_l			PC_t					
			#	ADT	%	mph	ft	ft	N/EB	S/WB	1..5		A..F		A..F	
Road Name	**From**	**To**	**Ln**	**ADT**	**HV**	**Spd.**	**Wt**	**Wl**	**OSPA-N/E**	**OSPA-S/W**	**PCt**	**BLOS**	**BLOS grade**	**BLOS**	**BLOS grade**	
Residential St.			2	260	0	25	13.0	0	0	0	4.0	**1.49**	**A**	**1.49**	**A**	
Residential St.			2	1,900	0	25	13.0	0	0	0	4.0	**2.50**	**B**	**2.50**	**B**	
Residential St.			2	13,700	0	25	13.0	0	0	0	4.0	**3.50**	**C**	**3.50**	**C**	
Rt. 59	Mack Rd.	Ferry Rd.	4	40,500	6	45	18.0	6	0	0	3.0	**3.80**	**D**	**3.80**	**D**	
Batavia Rd.	Warrenville Rd.	Butterfield Rd.	2	8,200	0	35	15.0	0	0	0	4.5	**3.11**	**C**	**2.43**	**B**	Add 4-foot bike lane.
Mack Rd.	Rt. 59	Continental Dr.	2	850	0	25	18.0	6	5	5	4.0	**0.20**	**A**	**0.20**	**A**	
Continental Dr.	Mack Rd.	Batavia Rd.	2	650	0	25	18.0	6	5	5	4.0	**0.06**	**A**	**0.06**	**A**	
Continental Dr.	Batavia Rd.	Rt. 59	2	500	0	25	18.0	0	5	5	4.0	**1.13**	**A**	**0.00**	**A**	Add 7-foot striping.
Lakeview Dr.	Continental Dr.	Barkley Ave.	2	400	0	25	10.0	0	5	5	4.0	**2.10**	**B**	**2.10**	**B**	Designate bike route.
Barkley Ave.	Lakeview Dr.	Butterfield Rd.	2	200	0	25	14.0	0	5	5	4.0	**1.29**	**A**	**0.81**	**A**	Add 3-foot striping.
Talbot Ave	Summerlakes Pk.	Butterfield Rd.	2	550	5	25	15.0	0	5	5	4.0	**2.34**	**B**	**1.83**	**B**	Add 3-foot striping.
Butterfield Frontage	Talbot Ave	Rt. 59	2	300	5	25	15.0	0	5	5	4.0	**2.03**	**B**	**1.52**	**B**	Add 3-foot striping.
Meadow Ave.	Rt. 59	Timber Dr.	2	700	0	25	15.0	0	5	5	4.0	**1.78**	**B**	**1.27**	**A**	Add 3-foot striping.
Timber Dr.	Meadow Ave.	Batavia Rd.	2	400	0	21	13.0	0	5	5	4.0	**1.41**	**A**	**1.41**	**A**	Designate bike route.
Galusha Rd.	Winfield Rd.	Herrick Rd.	2	1,500	0	25	12.5	0	0	0	4.0	**2.44**	**B**	**2.44**	**B**	Designate bike route.
Ferry Rd.	Raymond	DuPage River	4	19,000	5	45	15.0	0	0	0	4.0	**4.54**	**E**	**4.54**	**E**	Widen sidewalk.
Mack Rd.	Rt. 59	Winfield	2	4,000	1	40	15.0	0	0	0	4.0	**3.08**	**C**	**3.08**	**C**	

Wt is pavement width from center line to edge (including parking and shoulders); **Wl** is pavement width of striped parking or paved shoulders.

Sidepath Suitability Score - Off-Road Measure

While the BLOS is a measure of on-road bicycling conditions, the Sidepath Suitability Score rates a sidewalk or sidepath as a place to bike.

Sidepaths are biking/walking paths located immediately adjacent to a roadway, much like a wide sidewalk. Sidepaths have many operational problems and they are generally not recommended. Operational problems with sidepaths include:

- Unless they are constructed on both sides of the road, sidepaths require one direction of bicycle traffic to ride against motor vehicle traffic, contrary to normal rules of the road.
- When the path ends, bicyclists traveling against traffic will tend to continue to travel on the wrong side of the street.
- Likewise, bicyclists approaching a shared use path often travel on the wrong side of the street to get to the path.
- Wrong-way travel by bicyclists is a major cause of bicycle/automobile crashes and should be discouraged at every opportunity.
- At intersections, motorists entering or crossing the roadway often will not notice bicyclists approaching from their right, as they are not expecting contra-flow vehicles.
- Motorists turning to exit the roadway may likewise fail to notice the bicyclist. Even bicyclists coming from the left often go unnoticed, especially when sight distances are limited.

Gauging the relative risk can assist decision-making and intersection design on new and existing sidepaths. The Sidepath Suitability Score methodology can help with these assessments, and the evaluation can be used to:

- Rate existing conditions
- Rate the effect of safety improvements on existing sidewalks or sidepaths
- Consider the feasibility of a new sidepath - is this an appropriate place for an off-road bike trail? What can be done to minimize intersection conflicts?

At present, no nationally accepted sidepath suitability index exists. The League of Illinois Bicyclists developed the SP Score algorithm for the North Aurora Non-Motorized Transportation Plan (2001), using design issues described in the AASHTO Guide for the Development of Bicycle Facilities. The factors considered in the Sidepath Suitability Score include intersection traffic; continuity; curb cuts; width and pedestrian use; crosswalks; and path/road separation at intersections.

Sidepath Suitability Score analysis was done for existing and possible future sidewalks and trails along proposed bikeway routes. The information needed to calculate current conditions on existing sidewalks was collected through field surveys. Additional feasibility analysis considered the effect of reasonable improvements, such as better crosswalk marking, filling sidewalk gaps and widening (where feasible and desirable).

Feasibility analysis of locations without existing sidewalks assumed the best possible intersection design and other sidepath parameters. The hypothetical Sidepath Suitability Score of improved existing sidewalks and retrofitted new sidewalks (or sidepaths) were used in detail in the facility selection for specific routes.

The following chart displays scores for existing and proposed sidepaths. Each side of the road is treated independently. In a few cases, a sidewalk segment may have short gaps that are not specifically shown, but sidewalk gaps and ends dramatically worsen the score.

Generally, results show that while bicycling on sidewalks along some roads is suitable, some sidewalks have lower suitability. In most cases, relatively simple improvements can reduce these risks somewhat, to the benefit of those who will bike on sidewalks no matter what the road condition. One of the most significant improvements is to ensure that all driveway and street crossing are clearly striped and signed. However, a detailed comparison between the "best possible" Sidepath Suitability Score and BLOS ratings must be done to recommend the appropriate on-road or off-road bikeway improvements for the proposed routes. Together with public and staff input, the right choices can be made and prioritized.

While improvements to some sidepath sections are recommended in this report, it must be stressed that bicycling on the sidewalk has actually been shown to be less safe than bicycling on the road. Sidepaths were recommended in cases where riding on the road was clearly not a preferred option, due to a combination of the road width, traffic volumes and the expected type of cyclist. Children or adults who ride on the sidewalk need to be aware of the hazards that cross streets and driveways present to sidewalk cyclists.

Sidepath Suitability Score Chart																		
				Existing Conditions														
Segment	From (W/N)	To (E/S)		SW width	Speed (mph)	Volume (ADT)	Segment Length (miles)	Resid drives	Minor Xings	Major Xings	Ped usage	SW gaps or ends?	SW Missing curbcuts?	Marked Xwalks	Xing set backs	Existing SP Score	New SP Score	Recommended Improvements
Batavia	Fermilab	Rt. 59	N/W	8	25	3700	0.7	9	4	1	low	no	no	some	not close enough	6	5	
			S/E	0	25	3700	0.7	0	0	0	low	no	no	none	not close enough	---	---	
Batavia	Rt. 59	Williams	N/W	8	35	6200	0.5	3	7	0	low	no	no	some	not close enough	8	7	
			S/E	0	35	6200	0.5	0	0	0	low	no	no	none	not close enough	---	---	
Batavia	Williams	Butterfield	N/W	0	35	10200	0.5	0	0	0	low	no	no	none	not close enough	---	---	
			S/E	8	35	10200	0.5	10	2	0	low	no	no	all	not close enough	8	8	
Warrenville	Batavia	Winfield	N/W	3	35	11300	0.3	0	1	0	low	no	no	none	not close enough	8	6	
			S/E	0	35	11300	0.3	0	1	0	low	yes	no	none	not close enough	---	---	
Warrenville	Winfield	Virginia	N/W	0	40	13000	0.3	0	0	0	low	no	no	none	not close enough	---	---	
			S/E	8	40	13000	0.3	2	1	0	low	yes	no	none	not close enough	12	5	extend to Mill St.
Warrenville	Virginia	Mill	N/W	0	45	13000	0.3	0	0	0	low	no	no	none	not close enough	---	---	
			S/E	0	45	13000	0.3	0	0	0	low	yes	no	none	not close enough	---	7	add path
Winfield	Galusha	Warrenville	N/W	4	40	25600	0.2	3	0	0	low	no	no	none	not close enough	9	6	Widen to 8 ft.
			S/E	0	40	24000	0.2	0	0	0	low	no	no	none	not close enough	---	---	
Ferry	Raymond	DuPage River	N/W	3	45	19400	0.6	8	1	0	low	no	no	all	not close enough	8	7	Widen to 8 ft.
			S/E	0	45	18000	0.6	0	0	0	low	no	no	none	not close enough	---	---	
Galusha	Winfield	West	N/W	0	25	1500	0.6	13	2	0	low	no	no	all	not close enough	---	4	
			S/E	0	25	1500	0.6	12	8	0	low	no	no	all	not close enough	---	5	

Appendix II: Bikeway System Background

Methodology for Selecting the Bike Route and the Facility Type

The American Association of State Highway and Transportation Officials states, "All (roads and) highways should be designed and constructed under the assumption that they will be used by cyclists." A basic tenet of this report is that bikes belong as part of a shared use transportation system. Cycling is an efficient and effective means of travel that improves individual health (via increased activity levels) and community health by reducing air and noise pollution.

Selecting Bike Routes

A successful network of bike routes has the following characteristics:

- Convenient, accessible and safe
- Comprehensive access to most destinations for most cyclists
- Connectivity
- Citywide and regional coverage

Selecting Bike Facilities

Bike facilities listed in order of increasing design complexity include the following:

- Shared-use roadways
- Bike lanes and wide curb lanes
- Sidepaths

Shared-Use Roadways

The majority of Warrenville's bikeway system is on shared-use roadways. Streets with less than a 5,000 average daily traffic count qualify for shared use. On shared-use roadways, attention should be given to the following design features:

- Bicycle safe drainage and bridge expansion joints
- Smooth pavement
- Adequate sight distances
- Signal timing and detector systems that respond to bicycles

Bike Lanes and Wide Curb Lanes

Cyclists can be accommodated on arterial roadways even when vehicle traffic volumes are high. Wide curb lanes without bike lane markings, paved shoulders and bike lanes are cost effective ways of increasing bicycle safety on roadways with high traffic volumes.

A bicycle lane and a wide curb lane can both accommodate cyclists who are confident in traffic and benefit pedestrians. The benefits of an on-road bicycle accommodation include the following:

- Reduction of bicyclist-pedestrian conflicts
- Encouragement for cyclists to ride in the direction of traffic
- Riding with the flow of traffic reduces crash rates at intersections, where the vast majority of car-bike crashes occur.

- Buffer between motor-vehicle space and pedestrian area
- Additional negotiating room for motorists entering roadway
- Property proximity to motorized traffic to prevent collection of debris that may puncture bicycle tires

Fourteen feet of usable lane width is recommended for shared use in a wide curb lane. Usable width is defined as the width from the edge stripe to the lane stripe or from the longitudinal joint of the gutter pan to the lane stripe. The gutter pan width is part of the "usable width. Re-striping the remaining lanes and the left-hand turn lane, making them narrower, can often create wide curb lanes.

When adequate lane width is available, average daily traffic volumes are the determining factor as to whether a shared-use roadway is recommended versus a bike lane. Roadways that have up to a 5,000 average daily traffic count can function well as a shared-use facility. On roads with a 5,000 to 10,000 average daily traffic, a bike lane should be considered; when over the daily count is over 10,000, a bike lane should be installed. Note that in some cases in this bike plan, the addition of striping has been recommended although the traffic count falls below the 5,000 cited above. It was felt that adding the striping would provide an additional comfort level for cyclists at a relatively low cost. The narrowing of travel lanes resulting from the striping has the additional benefit of tending to reduce actual traffic speeds (traffic calming).

Sidepaths

Sidepaths are biking and walking paths located immediately adjacent to a roadway, much like a wide sidewalk. Sidepaths have many operational problems and are generally not recommended. The operational problems have been previously described in the section on the Sidepath Suitability Score in Appendix I.

For the above reasons, bikeways other than sidepaths are usually better suited to accommodate bicycle traffic along roadway corridors, depending upon traffic conditions. Shared-use paths should not be a substitute for achievable street improvements even when the path is located adjacent to the roadway because many bicyclists will find it less convenient to ride on these paths compared with the streets, particularly for utility trips. In this plan, sidepaths have been recommended only when on-street improvements have been deemed not feasible.

The American Association of State Highway and Transportation Officials recommends that sidepaths be closer to the parallel road at intersections so motorists can more easily see and consider bicyclists during their approaches. The vehicular stop line should be in back of the sidepath crossing; cyclists must not weave through stopped traffic when crossing. This factor is included in the Sidepath Suitability Score spreadsheet as 'Xing setbacks'.

Detailed information regarding bicycle facility design can be found in American Association of State Highway and Transportation Officials Guide for the Development of

Bicycle Facilities, 1999. Detailed design guidelines for bike-lane development can be found in the Bike Lane Design Guide, which is available at http://www.bicyclinginfo.org.

Bikeway System Definitions

The following are terms used in the Warrenville bikeway discussion.

American Association of State Highway and Transportation Officials (AASHTO) Guidelines for Developing Bicycle Facilities, 1999: This guide provides information to planners and designers on developing all types of bicycle facilities, and provides guidelines on size, spacing, color and location of bicycle signage and other facilities.

Arterial: Signalized streets that serve primarily through traffic and provide access to abutting properties as a secondary function.

Average Daily Traffic Count: The number of vehicles that pass a particular point on a roadway during a period of 24 consecutive hours averaged over a period of 365 days. Unless specified otherwise, the count includes volume in both directions.

Bicycle Facilities: A general term denoting improvements and provisions made by public agencies to accommodate or encourage bicycling, including parking and storage facilities, and shared roadways not specifically designated for bicycle use.

Bicycle Path or Bike Path: See Multiuse Path

Bike Lane without Parking: A portion of a roadway that has been designated by striping, signing and pavement markings for preferential or exclusive use by bicyclists. One 5-foot bike lane should be located on each side of the street and bicyclists must travel in the direction of traffic. The American Association of State Highway and Transportation Officials does permit a 4-foot bike lane. The photo to the right shows a bike lane without parking. (Source: http://safety.fhwa.dot.gov)

Bikeway: A generic term for any road, street, path or way that in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Collector: A surface street that provides land access and traffic circulation within residential, commercial and industrial areas.

Crosswalk: That part of a roadway at an intersection that is included within the extensions of the lateral lines of the sidewalks on opposite sides of the roadway, measured from the curb line, or in the absence of curbs from the edges of the roadway, or in the absence of a sidewalk on one side of the roadway, the part of the roadway included within the extension of the lateral lines of the sidewalk at right angles to the centerline. Also included in this definition is any portion of a roadway at an intersection or elsewhere that is distinctly indicated for pedestrian crossing by lines or other markings on the surface.

Designated Bicycle Route: A system of bikeways designated by the jurisdictional authority with appropriate directional and informational route markers with or without specific bicycle route numbers. Bicycle routes, which might be a combination of various types of bikeways, should establish a continuous routing. A Bike Route can be thought of more as a planning term than a specific facility.

Grate: A framework of latticed or parallel bars that prevents large objects from falling through a drainage inlet but permits water and some sediment to fall through the slots. Bicycle tires can get caught in poorly placed grate openings.

Gutter: A trough or dip used for drainage purposes that runs along the edge of the street and curb.

Intersection: The crossing of two (2) or more highways or bikeways.

Local Road: Road that serves individual residences or businesses, and/or distributes traffic within a given urban or rural area.

Multiuse Path (or Trail): A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either located within the highway right-of-way or within an independent alignment. Pedestrians, bicyclists, equestrians, skaters, wheelchair users, joggers, and other non- motorized users might also use multiuse paths.

MUTCD: The "Manual on Uniform Traffic Control Devices" approved by the Federal Highway Administration as a national standard for placement and selection of all traffic control devices on or adjacent to all highways open to public travel.

Pavement Markings: Painted or applied lines or legends placed on a roadway surface for regulating, guiding or warning traffic.

Roadway: The portion of the road, including shoulders, intended for vehicular use.

Shared-Use Roadway: A roadway that is shared by bicyclists and automobiles without any special striping or roadway improvements. The roadway is wide enough and traffic speed and volume low is enough that bikes and cars can coexist. This is the most common type of facility. Bicycle routes should have signs indicating that cyclists may be on the road

Sharrow marking

Sharrow: A painted, on-road marking to indicate a shared motorist/bicycle lane. The sharrow indicates where the bicyclist should be positioned in the lane.

Shoulder: The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use and for lateral support of sub- base, base and surface courses.

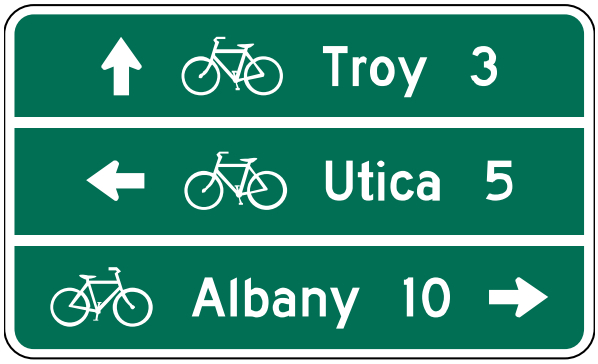
Sidepath: A bike path built within the right-of-way of a street. The two-way path often only runs along one side the road, which can create a number of traffic conflicts.

Sidewalk: The portion of a street or highway right-of-way designed for preferential or exclusive use by pedestrians. Some young and/or inexperienced cyclists use sidewalks, but this is not recommended.

Signed Shared Roadway (Signed Bike Route): A shared roadway that has been designated by signing as a preferred route for bicycle use

Terrace: The portion of the public right of way located between the street and the sidewalk. Terraces are usually planted with grass or have some type of landscape design feature, such as trees or pedestrian amenities.

Wayfinding: Signs placed along a designated bike route to assist bicyclists (and motorists) in finding popular destinations.



White Edge Line: A 7- or 8-foot paved area along the road edge, as shown on the right, with a 4-inch white stripe to delineate where parked cars and bicyclists should be located in relation to the drive lane. This treatment has been implemented on Mack Road and Continental Drive between Mack and Batavia Roads.

Wide Curb Lane: An outside or curb lane greater than 12 feet to better accommodate bicycles and automobiles. 14 feet of usable lane is the preferred width. The photo below shows bicyclists using wide curb lane.
(Source: www.bicyclinginfo.org)