RANDALL ROAD PEDESTRIAN CROSSING FEASIBILITY STUDY

MAY 2009

VILLAGE OF ALGONQUIN

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INTRODUCTION

The Village of Algonquin has experienced significant population growth and physical expansion over the last twenty years. Randall Road in particular has become a major transportation corridor within the surrounding region and has also emerged as the main center for new commercial development in the Village. Randall Road is designed to facilitate the efficient circulation and flow of automobiles and between 40,000 to 45,000 vehicles travel each day along the Village's segment of Randall Road. Consequently, pedestrians and bicyclers are afforded few opportunities to safely cross Randall Road, which has become a physical barrier limiting bike trail connectivity and restricting pedestrian access to the many shops, offices, schools, and other public buildings located on or adjacent to the corridor.

The topic of pedestrian safety on Randall Road is brought up frequently by Village residents. The McHenry County Division of Transportation estimates that traffic will increase by approximately 50 percent to more than 60,000 vehicles per day in 2030. The road improvements and widening required to accommodate the projected traffic volumes will make crossing Randall Road on foot or bicycle more and more impractical. As the Village continues to grow to the west, this planning study was initiated to provide Village officials and staff with an understanding of the costs, challenges, and opportunities for making Randall Road a more hospitable environment for pedestrians.

Randall Road is a 4 to 6 lane major arterial route that runs north-south through the Village from Grandview Drive at the south end to Algonquin Road at the north end. Randall Road continues to the north through Lake in the Hills and to the south through Carpentersville and has a full interchange with the Jane Adams Memorial Tollway (I-90) in Elgin. Randall Road is under the jurisdiction of Kane County south of County Line Road and McHenry County north of County Line Road. Thus, all potential improvements would require approval of the respective County.

The five locations along Randall Road that were studied included the following:

1. Bunker Hill Drive / Huntington Drive
2. Mid block between Bunker Hill and Harnish Drive
3. Harnish Drive
4. County Line Road
5. Longmeadow Parkway

These five locations were determined at the first of two Public Open House meetings held on September 24, 2008 and confirmed by Village staff. The three basic types of improvements considered in this study are:

- At-grade crossing enhancements
- Overpass (bridge)
- Underpass (tunnel)

This study will investigate alternate pedestrian crossing improvements and evaluate them based on cost, constructability, aesthetics and effectiveness. This study will consider input from all interested parties including the Counties, residents, school districts, fire districts, businesses, police and Village staff. As mentioned, Public Open House meetings have been held to solicit input and comments from these groups.

COORDINATION

Over the past year a series of public open houses and stakeholder meetings with Village staff and representatives of McHenry County Division of Transportation (MCDOT) and Kane County Division of Transportation (KDOT) have been held to identify issues and preferences for pedestrian enhancements to Randall Road.

The Village held an initial public input session at Jacobs High School on September 24, 2008 to learn what types of pedestrian improvements that area residents and community members would like to see made to Randall Road. The public was notified by a notice in the *Northwest Herald* newspaper and residents, businesses, and other institutions such as the public library and schools near Randall Road received a letter or postcard from the Village inviting them to attend the open house. Numerous ideas for pedestrian enhancements were brainstormed at the meeting and overall there was public support for the Village to explore the options of adding an overpass, underpass, and/or surface-level improvements. The top three locations the public recommended the Village study were the intersections of Bunker Hill Drive, County Line Road, and Harnish Drive.

The Village shared the public's preferences for crossing locations and methods at a meeting with both counties in October 2008. In general, MCDOT and KDOT staff indicated their support for the concept of a grade-separated pedestrian crossing such as a bridge or tunnel, however, both counties stated that the potential for making surface-level improvements would be limited to the intersections where there are existing crosswalks. Bunker Hill Drive and County Line Road are the only two intersections that currently have crosswalk striping and pedestrian countdown timers.

This study analyzes the opportunities and costs for three alternative crossing methods (overpass, underpass, and surface-level improvements where possible) at five different locations along Randall Road. In addition to the three intersections that originally received the majority of public support—Bunker Hill Drive, County Line Road, and Harnish Drive—two additional locations are included in this study. Longmeadow Parkway was chosen for study as there are plans for that roadway to be extended in the future and carry a significant amount of regional traffic west to east across the Village from Huntley Road to IL Route 25. Additionally, a Mid-Block crossing location north of Harnish Drive and south of Bunker Hill Drive

has also been explored to examine the advantages and disadvantages of constructing a grade-separated crossing at a midpoint between signalized intersections.

The concept plans and cost estimates for the various pedestrian crossing alternatives outlined in this study were reviewed and discussed at a second stakeholder meeting between Village staff, representatives from the counties, and local fire district personnel in February 2009. There was general consensus from all parties that any of the options could feasibly be constructed subject to Village priorities and the costs/issues that are documented within this study's analysis of each alternative.

The Village presented a draft of this study and its findings at a second public open house meeting at Jacobs High School on March 18, 2009. Staff from the Village and Christopher Burke Engineering, Ltd. presented the pros and cons of all three pedestrian crossing methods that were analyzed and also provided a summary of the costs and benefits of adding crossings at each of the five locations. The public was asked to fill out a questionnaire and select their top choice for the type of crossing and specific location on Randall Road where they would like to see pedestrian improvements made. Overall, participants' preference for the location of a pedestrian crossing was almost evenly split amongst Bunker Hill/Huntington, Mid-Block between Bunker Hill and Harnish, and County Line Road; most people chose these locations for their proximity to the high school and shopping destinations. Regarding type of crossing, a majority of participants favored the overpass option, primarily for reasons of safety, ease of use, and lower estimated cost of construction when compared with an underpass.

EVALUATION OF CROSSING IMPROVEMENTS TYPES

In this section, the three types of crossing improvements are evaluated. First, the basic elements of each crossing type are reviewed and then the "pros" and "cons" are summarized. Because the issues associated with each type of improvement are similar for the different locations, this section evaluates the improvements by type and not by location. The next section will review specific issues by location.

OPTION 1 - AT GRADE ENCHANCEMENTS

BASIC ELEMENTS:

- ***PEDESTRIAN PUSH BUTTON SIGNALS WITH COUNTDOWN TIMERS***

  A pedestrian signal allows a safer way for pedestrians to cross the street at signalized intersections. The pedestrian signal is normally activated by a pedestrian detector push-button that causes the controller to operate a pre-programmed time sequence of steady "WALK" and flashing "DON'T WALK" signals.

  COUNTDOWN PEDESTRIAN SIGNAL HEAD

  Pedestrian signal indications consist of "WALK" and "DON'T WALK" signals or international symbols displaying a person walking for "WALK" and a hand for "DON'T WALK". The "WALK", or person walking symbol, is displayed in white, and the "DON'T WALK", or hand symbol, is displayed in orange. A "countdown" timer which coincides with the flashing "DON'T WALK" is added to inform the pedestrian how much time remains to exit the street.

- ***MODIFY SIGNAL TIMING TO ALLOW FOR PEDESTRIAN CROSSINGS***

  The clearance interval is based on the street width and pedestrian walking speed. If there is a large percentage of very young or elderly pedestrians using the crossing, the walking speed may be reduced. Depending on the amount of time required to allow pedestrians to clear the intersection, the timing of the vehicular signals may have to be modified, which may increase vehicle delay.

- ***IMPROVED PAVEMENT MARKINGS AND SIGNAGE***

  Bright reflective pavement markings and warning signage are also recommended to alert drivers of the pedestrian crossing.

PROS:

- ***RELATIVELY INEXPENSIVE/SIMPLE TO INSTALL***
  Many times the wiring and equipment can be installed on the existing signal poles and in the existing conduit and control cabinet. Cost ranges from $60,000 to $80,000 per crossing.

- ***NO CHANGES TO CURRENT PEDESTRIAN TRAFFIC PATTERNS REQUIRED***
  Pedestrians who currently cross the intersection at-grade will continue to cross at-grade.

- ***VERY COMMON/FAMILIAR TO MOST PEDESTRIANS***
  This is the most common type of pedestrian crossing. Most pedestrians are familiar with its mechanics and use.

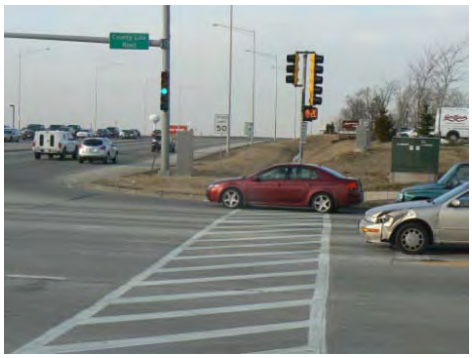
- ***NO CLIMBING REQUIRED***
  Pedestrians cross at grade.

PUSH BUTTON ACTIVATOR

CONS:

- ***DOES NOT COMPLETELY ELIMINATE POTENTIAL PEDESTRIAN/VEHICLE CONFLICT***
  Vehicles are allowed to turn right on red after making a complete stop at many intersections. This could pose a potential vehicle/pedestrian conflict.

- ***PEDESTRIAN MUST WAIT FOR SIGNAL***
  Pedestrians must wait for the "walk" signal before crossing the intersection. The potential wait time depends on the intersection's signal timing.



EXAMPLE OF VEHICLE LEGALLY MAKING RIGHT TURN THROUGH CROSS-WALK

- ***COUNTIES ARE AGAINST ANY NEW AT GRADE CROSSINGS***
  Because at-grade crossings do not completely eliminate the potential for vehicle/pedestrian conflicts, the Counties typically do not allow new at-grade crossings of their routes.

OPTION 2 – OVERPASS

BASIC ELEMENTS:

- ***APPROACHES (STAIRS, RAMPS, ELEVATOR)***
  In order for pedestrians to get to the main bridge which crosses the road, approach ramps, stairs or elevators are constructed. One or a combination of these may be provided, although stairs alone are not sufficient due to ADA requirements.

PEDESTRIAN OVERPASS – PREFABRICATED STEEL TRUSS WITH SECURITY FENCING

- ***MAIN SPAN OVER ROAD***
  The main span (or bridge) over the road is typically a single span, although for wider roads or skewed crossings a two or three span structure may be required. There are many types of pedestrian overpass structures (beam/girder, suspension/cable stayed, concrete slab, precast pretensioned beam, etc.) however, prefabricated steel trusses are the most common due to the cost and ease of installation.

- ***SUPPORTS/FOUNDATIONS***
  Depending on the number of spans in the superstructure, abutments and/or piers are constructed to support the main span(s). Piers and abutments may be used to support the approach ramps if built on structure. These piers and abutments are supported on below grade foundations commonly consisting of spread footing, driven piles or drilled concrete shafts.

PROS:

- ***HIGHLY VISIBLE TO POTENTIAL USERS***
  The pedestrian overpass is large and highly visible to motorists and pedestrians and therefore may promote its use.

- ***ELIMINATE POTENTIAL FOR PEDESTRIAN/VEHICLE CONFLICTS***
  The overpass basically eliminates the potential for vehicle/pedestrian conflicts by physically separating them.

PEDESTRIAN OVERPASS – ALGONQUIN ROAD

- ***PEDESTRIANS DO NOT HAVE TO WAIT TO CROSS***
  Because of the physical separation, pedestrians/bicyclists may cross the road at any time regardless of traffic flow.

- ***MAINTENANCE OF TRAFFIC DURING CONSTRUCTION***
  Most of the time consuming construction activities (foundations, piers and abutments) can be performed outside the limits of the road. Therefore, long term lane shutdowns are typically not required for an overpass. Once the abutments and piers are constructed, a crane will set the prefabricated truss bridge which generally would take one or two days requiring partial or full lane shutdowns.

CONS:

- ***HIGH COST***
  Depending on the geometrics of the road being crossed, existing utilities, soil conditions, type of structures, and aesthetic features, pedestrian overpasses typically range from $1,000,000 to $5,000,000. The overpasses in this study (with minimal aesthetic features) range from $2,500,000 to $3,000,000 in estimated cost.

PEDESTRIAN OVERPASS

- ***MAY REQUIRE SIGNIFICANT CHANGES TO PEDESTRIAN TRAVEL PATTERNS***
  Because approach ramps must meet ADA requirements and the overpass must meet roadway clearance requirements, their length is usually several hundred feet. If a straight ramp (parallel to the side road) is chosen, the entry/exit point of the ramp will be several hundred feet away from the roadway being crossed. This may require a change in pedestrian travel patterns for those who typically travel along/parallel to the main route to be crossed. Switch back type ramps, elevators, or combination ramps and stairs may alleviate this issue, however, would add significant cost to the project. Straight ramps are proposed in this study because there are currently no sidewalks along Randall Road and the straight ramps minimize impacts to and acquisition of adjacent property. The cost of an enclosed elevator/stair tower is similar to the cost of the elevated ramp system. However, the operating and maintenance costs are approximately $5,000 per year, per tower. Also, Public Works has indicated that it would not be possible to get their snow removal (or maintenance) equipment up the elevator and thus, a roof enclosure on the overpass would be required which would also add additional cost. Another

disadvantage to the elevator is that it would not allow bicyclists a continuous ride and would potentially deter them from using the bridge.

- ***MAY RESTRICT VISIBILITY TO ADJACENT BUSINESSES, SIDE ROADS, ETC.***
  The main span superstructure, piers, abutments and ramps are all above grade and therefore may block the view of nearby businesses and their signs. The overpass may also reduce roadway sight distance, however, for signalized intersections this should not pose a safety issue.

- ***POTENTIAL SAFETY ISSUE***
  Because the overpass crosses several lanes of traffic, there is the potential for people to throw items off the bridge at vehicles and pedestrians below. This potential problem can be minimized by the installation of fencing on the bridge and officer patrols around the bridge.

OPTION 3 -UNDERPASS

BASIC ELEMENTS:

- ***APPROACHES (STAIRS, RAMPS, ELEVATOR)***
  In order for pedestrians to get to the main tunnel which crosses the road, approach ramps, stairs or elevators are constructed. One or a combination of these may be provided, although stairs alone are not sufficient due to ADA requirements.

PEDESTRIAN UNDERPASS - TUNNEL

- ***MAIN TUNNEL UNDER ROAD***
  The main tunnel crossing under the road is typically either a precast or cast-in-place concrete box or arch type section which supports the soil and roadway above.

- ***POTENTIAL PUMP STATION***
  Because the floor of the tunnel is typically 10' or more below the roadway and surrounding grades, it is usually not possible to drain the tunnel via gravity. This is true for the locations in this study and a pump station will be required to drain the tunnels.

- ***LIGHTING/SECURITY CAMERAS***
  Because the tunnel is below grade and is sheltered from natural light, electric lighting is recommended and security cameras are also recommended to improve safety and deter graffiti.

PROS:

- ***ELIMINATES POTENTIAL FOR PEDESTRIAN/VEHICLE CONFLICTS***
  The underpass basically eliminates the potential for vehicle/pedestrian conflicts by physically separating them.

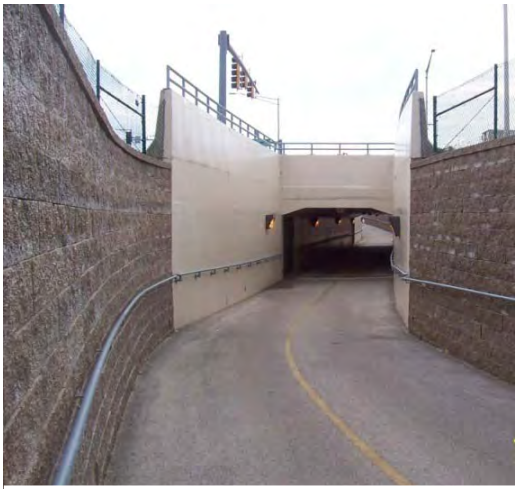
- ***PEDESTRIANS DO NOT HAVE TO WAIT TO CROSS***
  Because of the physical separation, pedestrians/bicyclists may cross the road at any time regardless of traffic flow.

PEDESTRIAN UNDERPASS - APPROACH RAMP

- ***DOES NOT REDUCE VISIBILITY TO ADJACENT BUSINESSES, SIDE ROADS, ETC*.**
  Because the tunnel and its approach ramps are below grade, this type of improvement does not block the view of the surrounding businesses, their signage and side road traffic.

CONS:

- ***HIGHEST COST***
  Depending on the geometrics of the road being crossed, existing utilities, soil conditions, type of structures, and aesthetic features, underpasses typically range from $1,500,000 to $10,000,000. The underpasses in this study (with minimal aesthetic features) range from $3,200,000 to $6,000,000 in estimated cost.



PEDESTRIAN UNDERPASS – APPROACH RAMP AND TUNNEL

- ***MAY REQUIRE SIGNIFICANT CHANGES TO PEDESTRIAN TRAVEL PATTERNS***
  Because approach ramps must meet ADA requirements and the underpass tunnel is at least 10' lower than the road, their length is usually several hundred feet. If a straight ramp (parallel to the side road) is chosen, the entry/exit point of the ramp will be several hundred feet away from the roadway being crossed. This may require a change in pedestrian travel patterns for those who typically travel along/parallel to the main route to be crossed. Switch back type ramps, elevators, or combination ramps and stairs may alleviate this issue, however, would add significant cost to the project. Straight ramps are proposed in this study because there are currently no sidewalks along Randall Road and the straight ramps minimize impacts to and acquisition of adjacent property. As discussed in the previous section, the initial cost of an enclosed stair/elevator tower is similar to the ramp system, however, negatives include increased operation/maintenance cost, difficulty in equipment access to tunnel for maintenance, and the elevator could be a deterrent to bicyclists.

- ***MOST CONFLICTS WITH EXISTING UTILITIES***
  Because the tunnel and its approaches are all below grade, this option has the highest potential for utility conflicts. These conflicts and the relocation of those utilities can delay construction and add significant cost to the project.

- ***MAINTENANCE OF TRAFFIC DURING CONSTRUCTION***

  Because the tunnels are typically constructed via open trench method, staging of the traffic above is required. Traffic would be shifted to one side of the road while half of the tunnel is constructed on the other side of the road. Once half of the tunnel is constructed, backfilled and pavement reconstructed, traffic is shifted to the other side of the road while the remaining half of the tunnel is constructed. This would require Randall Road to be restricted to one lane in each direction for several months during construction. This restriction would cause significant traffic delays and increased emissions.

- ***MAINTENANCE/DRAINAGE***

  Because stormwater must be mechanically pumped and electric lighting and security cameras are recommended, more maintenance is required than the overpass option.

- ***PERCEIVED SAFETY ISSUE***

  Because the tunnel is enclosed and below grade, there is a general perception that they are unsafe. By designing a wide well-lit tunnel with security cameras this perceived safety issue is minimized.

POTENTIAL CROSSING LOCATIONS AND IMPROVEMENTS

LOCATION 1 – BUNKER HILL DRIVE / HUNTINGTON DRIVE

This intersection is the northernmost of the 5 locations studied and was the most popular choice at the September 2008 and March 2009 public meetings. The location of the high school, retail centers and neighborhoods to the west and the residential neighborhood, fitness center and offices to the east generate pedestrian crossings at this location. Randall Road consists of the two thru lanes and a single left turn lane in each direction (6 total lanes) at this location. The concept designs and cost estimates included in this study will consider a potential future 9 lane sections that consists of 3 thru lanes, dual left turn lanes and a right turn lane in each direction.

OPTION 1 – AT-GRADE CROSSING ENHANCEMENTS (EST. 2009 COST = $70,000)

There is an existing signalized pedestrian crossing on the south approach of Randall Road. The proposed improvements would include signalized pedestrian crossings on the east and west approaches. McHenry County supports the proposed signalized pedestrian crossings based on preliminary discussions with their staff. The pedestrian signal improvements would be constructed under a permit issued by MCDOT. The estimated cost of the pedestrian signal improvements, including countdown pedestrian signal heads, pushbuttons, pavement markings and concrete work for accessible ramps is approximately $70,000.

OPTION 2 – OVERPASS (EST. 2009 COST = $2,900,000)

The proposed overpass would be located on the south side of Bunker Hill Drive / Huntington Drive to tie into the existing 8' wide path. Per discussions with McHenry and Kane County the bridge will meet a minimum clearance height of 14' 9". The width of the bridge and approach structures will be 14' from rail to rail to meet American Association State Highway Transportation Officials (AASHTO) requirements for a two-way multi use path. The approaches to the main span are at 5% grade. This is the maximum grade allowed by ADA without landings and is generally considered traversable by bicyclists. The approach structure will be an embankment bound by retaining walls until it reaches +/- 5' above grade and they will be on structure. This will

open up site lines to vehicle traffic and to local business versus having the entire approach on embankment.

The main span will consist of a prefabricated steel truss bridge with a concrete deck. It will be approximately 140' from abutment to abutment to accommodate a potential 9-lane future cross-section of Randall Road as discussed previously.

To accommodate the new bridge, a new signal mast arm for northbound traffic will need to be installed to the south of the new bridge. The existing mast arm on the north side of the bridge will be visually obscured by the new bridge. The existing mast arm will remain for vehicles under or north of the new bridge.

A new easement or property acquisition will be required at the southeast corner of the intersection. Additional temporary construction easements may also be required as determined in the Phase II engineering process.

OPTION 3 – UNDERPASS (EST. 2009 COST = $3,200,000)

The proposed underpass would also be located on the south side of the intersection to meet with the existing 8' wide path. Per AASHTO requirements for a multi-use path, the underpass is shown as 14' wide with an 8' vertical clearance. The approaches are shown at 5% grade which is the maximum ADA slope without landings and is generally considered traversable by bicyclists. The approaches will consist of an asphalt (or concrete) path bound by retaining walls with railings at the top.

The tunnel underpass is shown as concrete arch structures built under the roadway. The length of the tunnel is shown as approximately 144' to accommodate a future 9-lane section as discussed previously. The tunnel will require a pump station for stormwater and will include lighting for safety.

The tunnel will be constructed in an open trench which will require staging and traffic control in halves.

Light poles, traffic signal poles and existing watermain will need to be removed and relocated to accommodate the tunnel.

A new easement or property acquisition will be required at the southeast and southwest corners. Additional temporary

construction easements may also be required as determined in Phase II engineering.

LOCATION 2 - MID BLOCK BETWEEN BUNKER HILL AND HARNISH DRIVE

This location is approximately 630' south of the Bunker Hill intersection. Similar to Location 1, the location of the high school, retail centers and neighborhoods to the west and the residential neighborhood, fitness center and offices to the east generate pedestrian crossings at this location. Randall Road consists of the two thru lanes in each direction and median at this location. The concept designs and cost estimates included in this study will consider a potential future section that consists of 3 thru lanes, in each direction and a 30' wide median.

OPTION 1 – AT-GRADE CROSSING ENHANCEMENTS

Not an option at this location. McHenry County does not support mid block pedestrian crossings on major arterials.

OPTION 2 – OVERPASS (EST. 2009 COST = $2,500,000)

The proposed overpass would be located approximately 630 feet south of Bunker Hill Drive / Huntington Drive. Per discussions with McHenry and Kane County the bridge will meet a minimum clearance height of 14' 9". The width of the bridge and approach structures will be 14' from rail to rail to meet AASHTO requirements for a two-way multi use path. The approaches to the main span are at 5% grade. This is the maximum grade allowed by ADA without landings and is generally considered traversable by bicyclists. The approach structure will be an embankment bound by retaining walls until it reaches +/- 5' above grade and they will be on structure.

The main span will consist of a prefabricated steel truss bridge with a concrete deck. It will be approximately 140' from abutment to abutment to accommodate a potential future cross-section consisting of 3 through lanes each direction plus a 30' median to accommodate dual left turn lanes at the intersection.

Beyond the touchdowns for the structure, a new path will need to be constructed to the east to tie into the Stonegate Road trail and the residential area and a new path will need to be constructed to the west to tie into Sherman Road, the high school and the Bunker Hill/Huntington trail.

A new easement or property acquisition will be required on both the east and west sides of the crossing. Additional temporary construction easements may also be required as determined in the Phase II engineering process.

OPTION 3 – UNDERPASS (EST. 2009 COST = $3,400,000)

The proposed underpass would also be located approximately 630' south of the intersection. Per AASHTO requirements for a multi-use path, the under pass is shown as 14' wide with an 8' vertical clearance. The approaches are shown at 5% grade which is the maximum ADA slope without landings and is generally considered traversable by bicyclists. The approaches will consist of an asphalt (or concrete) path bound by retaining walls with railings at the top.

The tunnel underpass is shown as concrete arch structures built under the roadway. The length of the tunnel is shown as approximately 144' to accommodate a future widened section as discussed previously. The tunnel will require a pump station for stormwater and will include lighting for safety.

The tunnel will be constructed in an open trench which will require staging and traffic control in halves.

Beyond the ramp for the tunnel, new path will need to be constructed to the east to tie into the Stonegate Road trail and the residential area and new path will need to be constructed to the west to tie into Sherman Road, the high school and the Bunker Hill/Huntington trail.

A new easement or property acquisition will be required east and west of Randall Road. Additional temporary construction easements may also be required as determined in Phase II engineering.

LOCATION 3 -HARNISH DRIVE

This intersection is in the middle of the 5 locations studied. The location of the retail development, high school, library, park and residential neighborhood to the west and the residential neighborhood, Village Hall and office/retail area to the east generate pedestrian crossings at this location. Randall Road consists of three thru lanes, dual lefts and single right turn lane in each direction (9 total lanes) at this location. The concept designs and cost estimates included in this study assume the current 9 lane section will not be widened in the future.

OPTION 1 – AT-GRADE CROSSING ENHANCEMENTS

This intersection was recently widened to add additional through and turn lanes for the shopping center on the west side of Randall Road. Based on CBBEL's discussions with MCDOT staff, they are not in favor of a pedestrian crossing on Randall Road at this intersection. The new intersection geometry was not designed to accommodate pedestrian crossings on the north or south approaches and there are currently no paved paths along Harnish Drive. In addition, the installation of pedestrian crossings on the north or south approaches would impact vehicle progression on Randall Road. The green time for the east and west approaches would have to be increased substantially to accommodate the required walk and pedestrian clearance intervals. Pedestrian crossings could be added to the east and west approaches (to cross Harnish) if so desired at approximately the same cost as the Huntington Road/Bunker Hill intersection.

OPTION 2 – OVERPASS (EST. 2009 COST = $3,000,000)

The proposed overpass would be located on the south side of Harnish Drive to avoid the multitude of utilities and business signs on the north side. Per discussions with McHenry and Kane County the bridge will meet a minimum clearance height of 14' 9". The width of the bridge and approach structures will be 14' from rail to rail to meet AASHTO requirements for a two-way multi use path. The approaches to the main span are at 5% grade. This is the maximum grade allowed by ADA without landings and is generally considered traversable by bicyclists. The approach structure will be an embankment bound by retaining walls until it reaches +/- 5' above grade and they will be on structure. This will open up site lines to vehicle traffic and to local business versus having the entire approach on embankment.

The main span will consist of a prefabricated steel truss bridge with a concrete deck. It will be approximately 170' from abutment to abutment to accommodate the 9-lane cross-section as discussed previously.

To accommodate the new bridge new signal mast arms for northbound and southbound traffic will need to be installed because existing mast arms will be visually obscured by the new bridge.

Beyond the touchdowns for the structure, new at grade paths will need to be constructed to the east and to the west.

A new easement or property acquisition will be required to the east and west of the intersection. Additional temporary construction easements may also be required as determined in the Phase II engineering process.

OPTION 3 – UNDERPASS (EST. 2009 COST = $3,200,000)

The proposed underpass would also be located on the south side of the intersection. Per AASHTO requirements for a multi-use path, the under pass is shown as 14' wide with an 8' vertical clearance. The approaches are shown at 5% grade which is the maximum ADA slope without landings and is generally considered traversable by bicyclists. The approaches will consist of an asphalt (or concrete) path bound by retaining walls with railings at the top.

The tunnel underpass is shown as concrete arch structures built under the roadway. The length of the tunnel is shown as approximately 160' to accommodate the 9-lane section as discussed previously. The tunnel will require a pump station for stormwater and will include lighting for safety.

The tunnel will be constructed in an open trench which will require staging and traffic control in halves.

Light poles, traffic signal poles and existing watermain will need to be removed and relocated to accommodate the tunnel.

Beyond where the approach paths for the structure meet existing grade, new path will need to be constructed to the east and to the west.

A new easement or property acquisition will be required at the east and west sides. Additional temporary construction easements may also be required as determined in Phase II engineering.

LOCATION 4 - COUNTY LINE ROAD

This intersection was the second most popular choice at the September 2008 and March 2009 public meetings. The location of the residential neighborhoods and retail development on the east and west and the offices on the east generate pedestrian crossings at this location. Randall Road consists of a 9 lane section that consists of 3 thru lanes, dual left turn lanes and a right turn lane in each direction. Additional future widening is not anticipated at this intersection.

OPTION 1 – AT-GRADE CROSSING ENHANCEMENTS

This intersection is under the jurisdiction of the Kane County Division of Transportation (KDOT). There are existing signalized pedestrian crossings with countdown timers on the east, south, and west approaches. Based on the field review, a new signalized pedestrian crossing on the north approach is not warranted.

OPTION 2 – OVERPASS (EST. 2009 COST = $3,100,000)

The proposed overpass would be located on the south side of the intersection to connect to the existing path. Per discussions with McHenry and Kane County the bridge will meet a minimum clearance height of 14' 9". The width of the bridge and approach structures will be 14' from rail to rail to meet AASHTO requirements for a two-way multi use path. The approaches to the main span are at 5% grade. This is the maximum grade allowed by ADA without landing and is generally considered traversable by bicyclists. The approach structure will be an embankment bound by retaining walls until it reaches +/- 5' above grade and they will be on structure. This will open up site lines to vehicle traffic and to local business versus having the entire approach on embankment.

The main span will consist of a prefabricated steel truss bridge with a concrete deck. It will be approximately 170' from abutment to abutment to accommodate the 9-lane cross-section.

To accommodate the new bridge new signal mast arms for northbound and southbound traffic will need to be installed because the existing mast arms will be visually obscured by the new bridge.

OPTION 3 – UNDERPASS (EST. 2009 COST = $6,000,000)

The proposed underpass would also be located on the south side of the intersection to meet into the existing 10' wide path. Per AASHTO requirements for a multi-use path, the under pass is shown as 14' wide with an 8' vertical clearance. The approaches are shown at 5% grade which is the maximum ADA slope without landings and is generally considered traversable by bicyclists. The approaches will consist of an asphalt (or concrete) path bound by retaining walls with railings at the top.

The tunnel underpass is shown as concrete arch structures built under the roadway. The length of the tunnel is shown as

approximately 160' to accommodate the 9-lane section. The tunnel will require a pump station for stormwater and will include lighting for safety.

The tunnel will be constructed in an open trench which will require staging and traffic control in halves.

Light poles, traffic signal poles and existing watermain will need to be removed and relocated to accommodate the tunnel.

The underpass will need to be constructed at a deeper elevation than the underpass at the other locations to accommodate the triple box culverts on the east side and the large sewer on the west side of Randall Road. The added depth and removal and replacement of utilities at this location add significant cost to this option.

LOCATION 5 - LONGMEADOW PARKWAY

This intersection is the southern most of the 5 locations studied. There is currently not a major need for improved pedestrian crossings; however, because of potential future development and transportation improvements, this intersection is being studied. Potential improvements would ideally be constructed as part of future intersection improvements, or roadway expansion. Randall Road consists of the two thru lanes, a single left turn lane, and a northbound right turn lane (6 total lanes) at this location. The concept designs and cost estimates included in this study will consider a future 9 lane section that consists of 3 thru lanes, dual left turn lanes and a right turn lane in each direction.

OPTION 1 – AT-GRADE CROSSING ENHANCEMENTS

Not studied. These improvements could be constructed at time of intersection improvements and would be similar to the countdown pedestrian signals at County Line Road. New at-grade crossing would need to be approved by Kane County.

OPTION 2 – OVERPASS (EST. 2009 COST = $2,800,000)

The proposed overpass would be located on the south side of the intersection. Per discussions with McHenry and Kane County the bridge will meet a minimum clearance height of 14' 9". The width of the bridge and approach structures will be 14' from rail to rail to meet AASHTO requirements for a two-way multi use path. The approaches to the main span are at 5% grade. This is the maximum grade allowed by ADA without landing and is generally considered traversable by bicyclists. The approach structure will

be an embankment bound by retaining walls until it reaches +/- 5' above grade and they will be on structure. This will open up site lines to vehicle traffic and to local business versus having the entire approach on embankment.

The main span will consist of a prefabricated steel truss bridge with a concrete deck. It will be approximately 150' from abutment to abutment to accommodate a potential 9-lane future cross-section as discussed previously.

A new easement or property acquisition may be required on both sides of the intersection. Additional temporary construction easements may also be required as determined in the Phase II engineering process.

OPTION 3 – UNDERPASS (EST. 2009 COST = $3,200,000)

The proposed underpass would also be located on the south side of the intersection. Per AASHTO requirements for a multi-use path, the under pass is shown as 14' wide with an 8' vertical clearance. The approaches are shown at 5% grade which is the maximum ADA slope without landings and is generally considered traversable by bicyclists. The approaches will consist of an asphalt (or concrete) path bound by retaining walls with railings at the top.

The tunnel underpass is shown as concrete arch structures built under the roadway. The length of the tunnel is shown as approximately 144' to accommodate a future 9-lane section as discussed previously. The tunnel will require a pump station for stormwater and will include lighting for safety.

The tunnel will be constructed in an open trench which will require staging and traffic control in halves.

A new easement or property acquisition will be required on both sides of the intersections. Additional temporary construction easements may also be required as determined in Phase II engineering.

CONCLUSIONS / RECOMMENDATIONS

This section summarizes the findings of this study.

OPTION 1 – AT GRADE CROSSINGS

Based on current conditions and County input, additional at-grade enhancements are warranted and recommended at the Bunker Hill location. In addition to the existing count-down pedestrian signal crossing of the south leg of Randall Road, new count-down pedestrian signals are planned to be installed this spring across Bunker Hill on both the east and west legs. These planned improvements do not preclude additional crossing improvements (overpass or underpass) in the future.

There are currently count-down pedestrian signal crossings on the east, west and south legs of the intersection of County Line Road and Randall Road. Although feasible, an additional crossing of Randall Road on the north leg is not warranted and would not be allowed by Kane County.

As previously mentioned, the Counties (especially McHenry) are not in favor of a new pedestrian crossing at Randall Road where none exist. Therefore, at-grade crossings improvements were not studied in detail at the other three locations. There is a potential for a future at-grade crossing at Longmeadow Parkway (Kane County). These improvements would be incorporated with future intersection improvements when this area is developed.

OPTION 2 – OVERPASS/BRIDGE

An overpass is feasible at all five locations studied. Advantages and disadvantages of this option were discussed in the previous section and the estimated cost ranges from $2,500,000 to $3,100,000. The mid-block location between Bunker Hill and Harnish offers a few advantages over the four intersection locations. Because it is not at an intersection it doesn't have the disadvantages of blocking the view of adjacent businesses. It also does not require the relocation of existing traffic signals and there is less potential for underground utility conflicts and thus, has the lowest estimated cost. The disadvantages of this location are: 1) that additional at-grade path would need to be constructed to tie the bridge into the existing sidewalks or paths to the east and west and 2) more property acquisition is required for this location since there is no existing Village owned right-of-way.

OPTION 3 – UNDERPASS/TUNNEL

An underpass is feasible at all five locations studied, however depending on existing site constraints, the estimated cost ranges from $3,200,000 to $6,000,000. The estimated cost is fairly consistent at $3,200,000 to $3,400,000 at four locations and jumps to $6,000,000 at County Line due to major drainage culverts at the intersection. The existing triple culverts that cross County Line and Randall Road cause the tunnel to be longer and deeper than the other locations. This causes the approach ramps to be longer with higher retaining walls, which also adds to the cost.

The following matrix summarizes the potential improvements:

		Bunker Hill	Mid-Block between Bunker Hill & Harnish	Harnish	County Line	Longmeadow
Option 1 At - Grade Improvements	Est. 2009 Cost *	$70,000				
	New Property Required	0 sf				
	Private Utility Relocation	None				
	Improved Safety	fair				
Option 2 Overpass	Est. 2009 Cost *	$2,900,000	$2,500,000	$3,000,000	$3,100,000	$2,800,000
	New Property Required	4,650 sf	22,400 sf	3,950 sf	0 sf	14,750 sf
	Private Utility Relocation	$$	$	$$	$$	$
	Improved Safety	very good	very good	very good	very good	very good
Option 3 Underpass	Est. 2009 Cost *	$3,200,000	$3,400,000	$3,200,000	$6,000,000	$3,200,000
	New Property Required	7,500 sf	17,300 sf	4,150 sf	0 sf	13,800 sf
	Private Utility Relocation	$$$	$	$$$	$$$	$$
	Improved Safety	very good	very good	very good	very good	very good

* Estimated based on 2009 average unit prices and does not include property acquisition or private utility relocations. Base design for overpass and underpass ~ additional architectural details will increase aesthetics and cost.

IMPLEMENTATION/FUNDING

Regarding an overpass or underpass, an improvement of this magnitude would no doubt be difficult for the Village to fund and construct alone. However, a project of this nature would be eligible for federal funding. Surface Transportation Program (STP), Congestion Mitigation Air Quality (CMAQ) or Illinois Transportation Enhancement Program (ITEP) funds could all potentially apply to these improvements. Additionally, we recommend that the study and potential overpass/underpass locations be incorporated into Counties' Phase I Report for the Randall Road Improvements. Once incorporated, the project(s) could be constructed with the Counties' roadway project or prior to, if the Village desires. The other benefit of including the potential crossings in the Counties' Phase I study is that it may eliminate or reduce the amount of Phase I Engineering that the Village has to fund. Improvements to Longmeadow Parkway could also be incorporated into the planned future extension of Longmeadow across the Fox River.

APPENDIX

1. LOCATION MAP

2. PROPOSED PLAN AND SECTIONS

    - 2a BUNKER HILL
    - 2b MID BLOCK BETWEEN BUNKER HILL AND HARNISH
    - 2c HARNISH
    - 2d COUNTY LINE
    - 2e LONGMEADOW

3. COST ESTIMATES

4. COORDINATION

5. PHOTOGRAPHS

    - 5a BUNKER HILL
    - 5b RANDALL
    - 5c HARNISH
    - 5d COUNTY LINE
    - 5e LONGMEADOW

Tab 1

LOCATION MAP

VILLAGE OF ALGONQUIN

RANDALL ROAD
PEDESTRIAN/BIKE CROSSING STUDY

Legend
- Schools
- Drinking Fountains
- Public Restrooms

Trails
- Publicly Maintained
- Privately Maintained
- Village Boundary
- Parking
- Potential Future Crosing

Lakewood
Frank Rd
Algonquin Rd
N Randall Rd
Crystal Lake Rd
Hanson Rd
Pyott Rd
PRAIRIE TRAIL
Klasen Rd
IL Route 31
Cary Algonquin Rd
Pioneer Rd
Getzelman Ter
MERRILL PIONEER PARK
Haegers Bend Rd
Start Dr
PRESIDENTIAL PARK
Highland Ave
Timberwood Ln
HOLDER PARK
Glacier Pkwy
YELLOWSTONE PARK
Cumberland Pkwy
Wentworth Dr
Tuscany Dr
Academic Dr
KELLIHER PARK
Fairway View Dr
Brookside Ave
Talaga Dr
Stonegate Rd
Bunker Hill Dr
Persimmon Dr
JAMES B. WOOD PARK
Goldenrod Dr
Wintergreen Ter
TED SPELLA PARK
Golden Eagle Dr
Harnish Dr
Huntington Dr N
Grandview Ct
STONEYBROOK PARK
Kirkland Dr
HIGH HILL PARK
JAYCEES FIELD
Terrace Dr
GASLIGHT PARK
W Surrey Ln
Huntington Dr
Meyer Dr
TOWNE PARK
Edward St
Front St
N Harrison St
RIVERFRONT PARK
Washington St
CORNISH PARK
Circle Dr
HILL CLIMB PARK
W End Dr
Lafox
River Dr
Eastgate Dr
Longwood Dr
Scott St
SNAPPER FIELD LIONS POOL
Souwanas Trl
FOX RIVER TRAIL
Compton Dr
ALGONQUIN LAKES PARK
Williams Rd
St Rt 25
IL Route 62
County Line Rd
Gaslight Dr
Springhill Dr
BRAEWOOD PARK
Hanson Rd
Edgewood Dr
Yorkridge Trl
Stonegate Rd
TUNBRIDGE PARK
Harnish Dr
Reserve Dr
Square Barn Rd
Boyer Rd
Willowbrook Dr
Randall Rd
Sleepy Hollow Rd
Wynnfield Dr
WILLOUGHBY FARMS PARK
Corporate Pkwy
Huntley Rd
Longmeadow Pkwy
Broadsmore Dr
Cooper Ln
BROADSMORE PARK
Stonegate Rd
IL Route 31

Disclaimer
This map is for analysis purpose only. It is not intended for navigation or location of infrastructure. The reliability of this map depends on the accuracy of its underlying data source which has not been verified.

Data Source: Village of Algonquin
McHenry County
Kane County

Map prepared by:
Geographic Information Systems
Village of Algonquin
2200 Harnish Dr.
Algonquin, IL 60102
(847) 658-2700

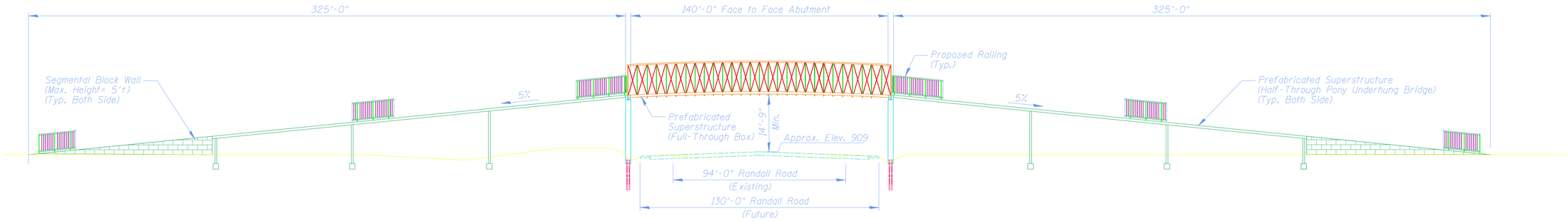
Last Updated on June 26, 2008

N

0 0.5 1 1.5 Miles

Tab 2a

PROPOSED PLAN AND SECTIONS
BUNKER HILL



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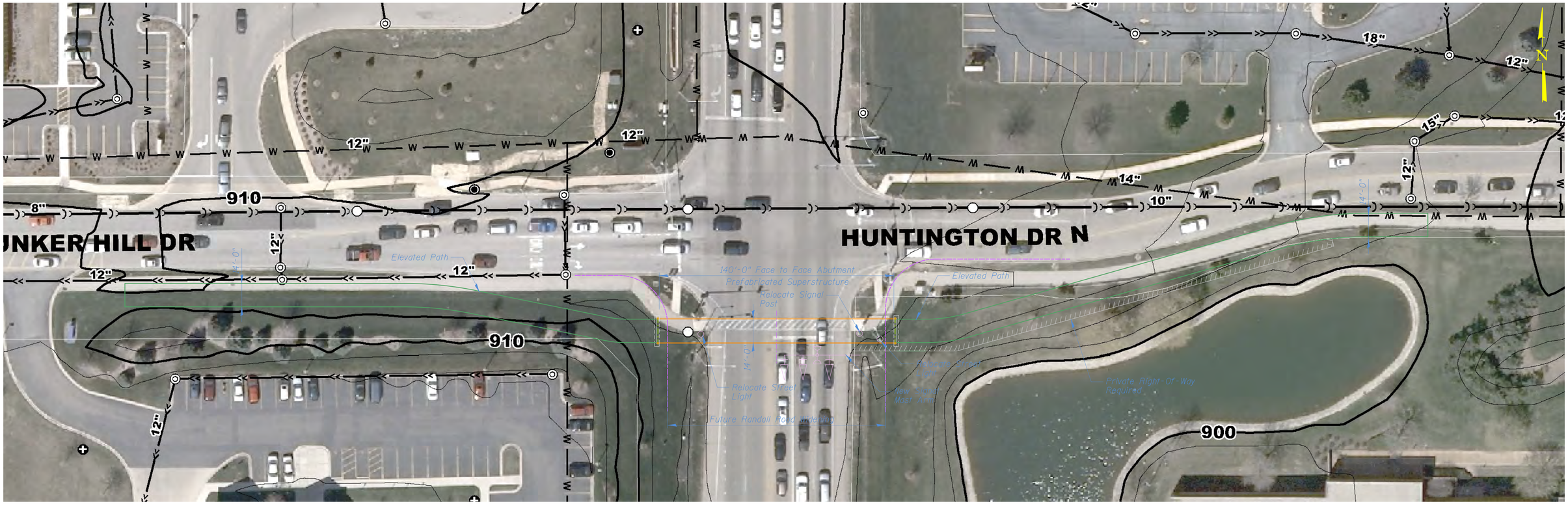

PLAN

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT:
Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

DSGN.	
DWN.	PDR
CHKD.	JGS
SCALE:	29'
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	OVERPASS

FILE NAME N:\ALGONQUIN\070273\070273.00017\Struct\070273-HTINGTON.SHT

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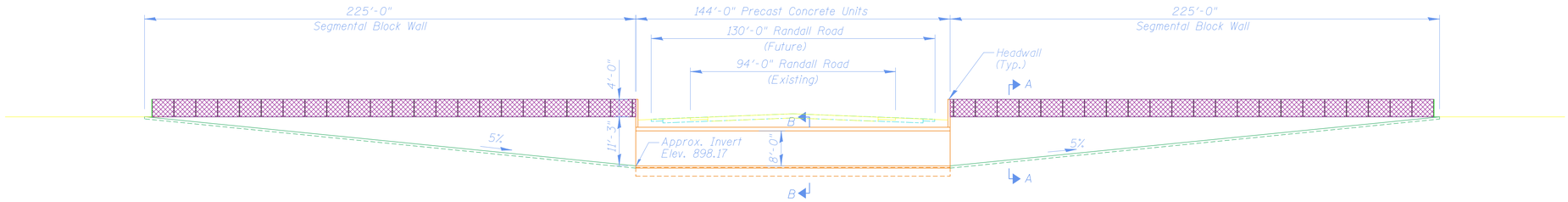
RANDALL AND BUNKER HILL
PROPOSED OVERPASS

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.



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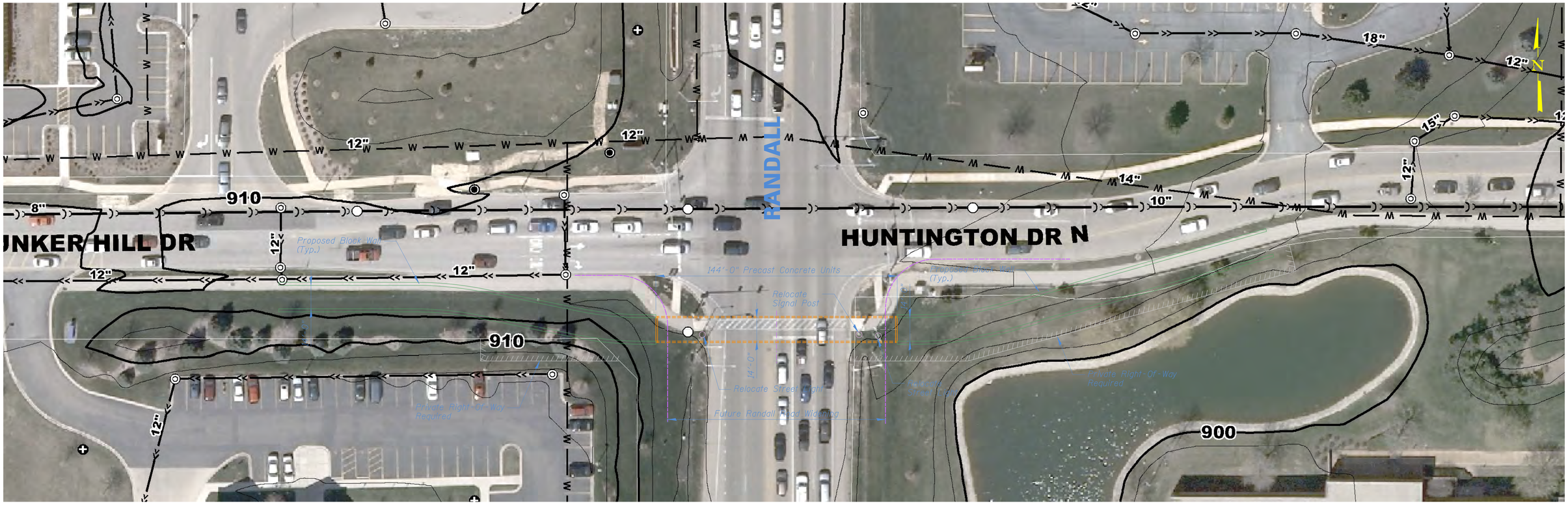

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CLIENT:
Village of Algonquin
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ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

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DWN.	PDR
CHKD.	JGS
SCALE:	29'
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CAD USER:	MCZUPOWS
MODEL:	UNDERPASS

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RANDALL AND BUNKER HILL
PROPOSED UNDERPASS

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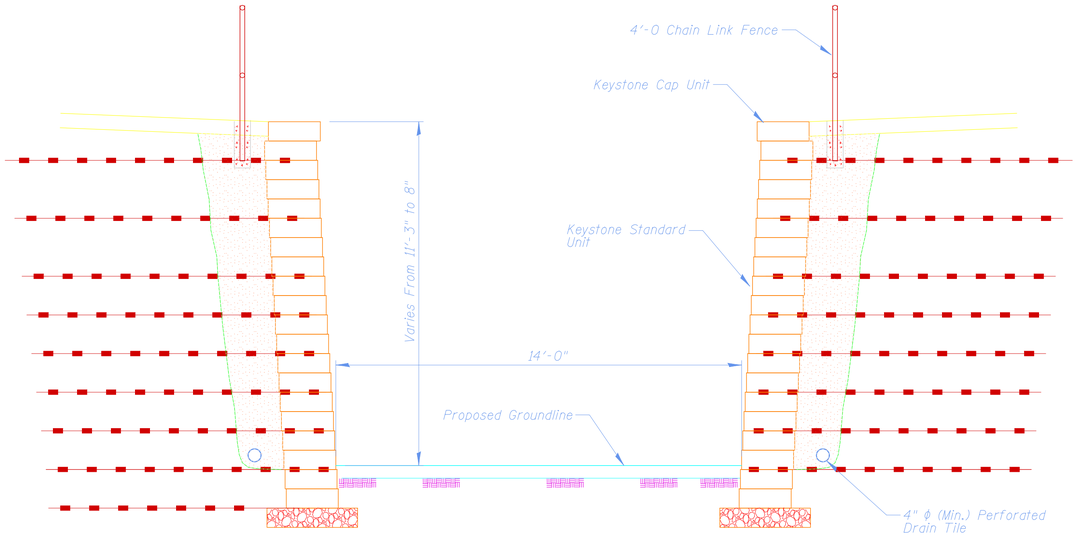
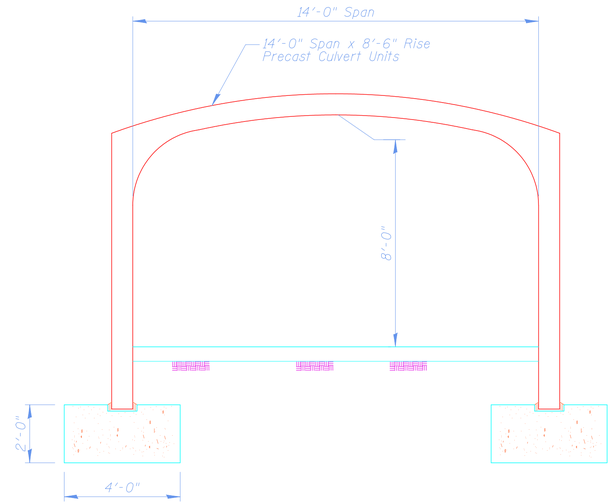


TUNNEL
SECTION A-A



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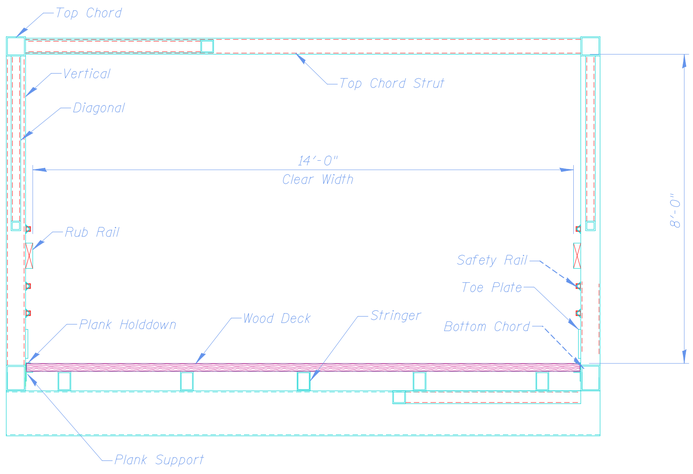
SECTION B-B



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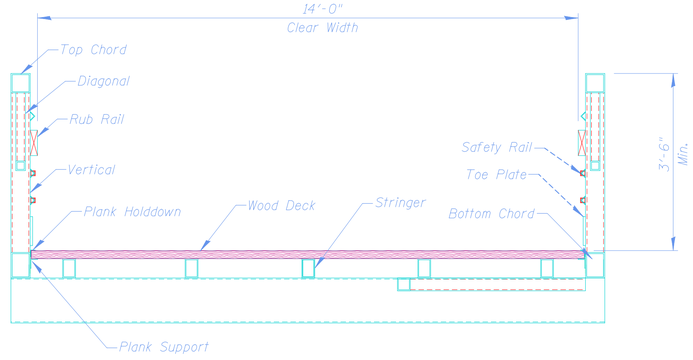

TYPICAL BRIDGE SECTION
(HALF-THROUGH PONY)

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Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

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DWN.	PDR
CHKD.	JGS
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MODEL:	SECTION

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TYPICAL SECTIONS
RANDALL AND BUNKER HILL

PROJ. NO.
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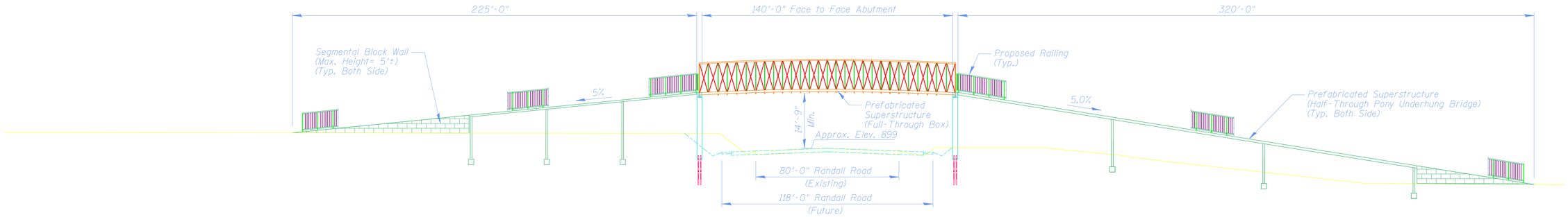
SHEET OF
DRAWING NO.

Tab 2b

PROPOSED PLAN AND SECTIONS
MID BLOCK BETWEEN BUNKER HILL AND HARNISH



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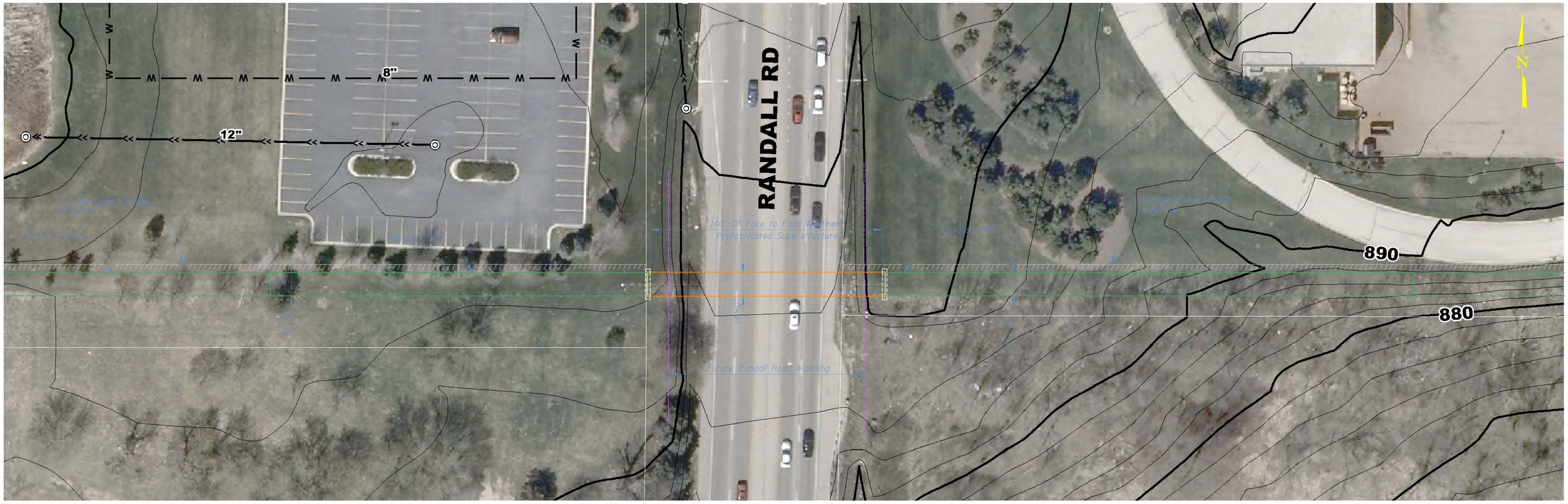

PLAN

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CLIENT:
Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

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DWN.	PDR
CHKD.	JGS
SCALE:	29'
PLOT DATE:	2/5/2010
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MODEL:	OVERPASS

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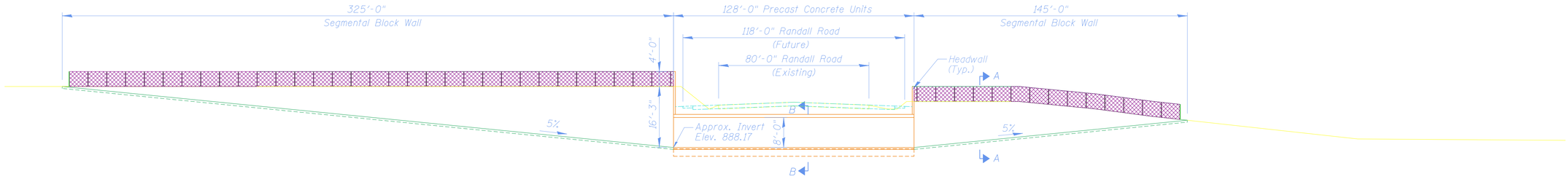
PROPOSED OVERPASS

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.



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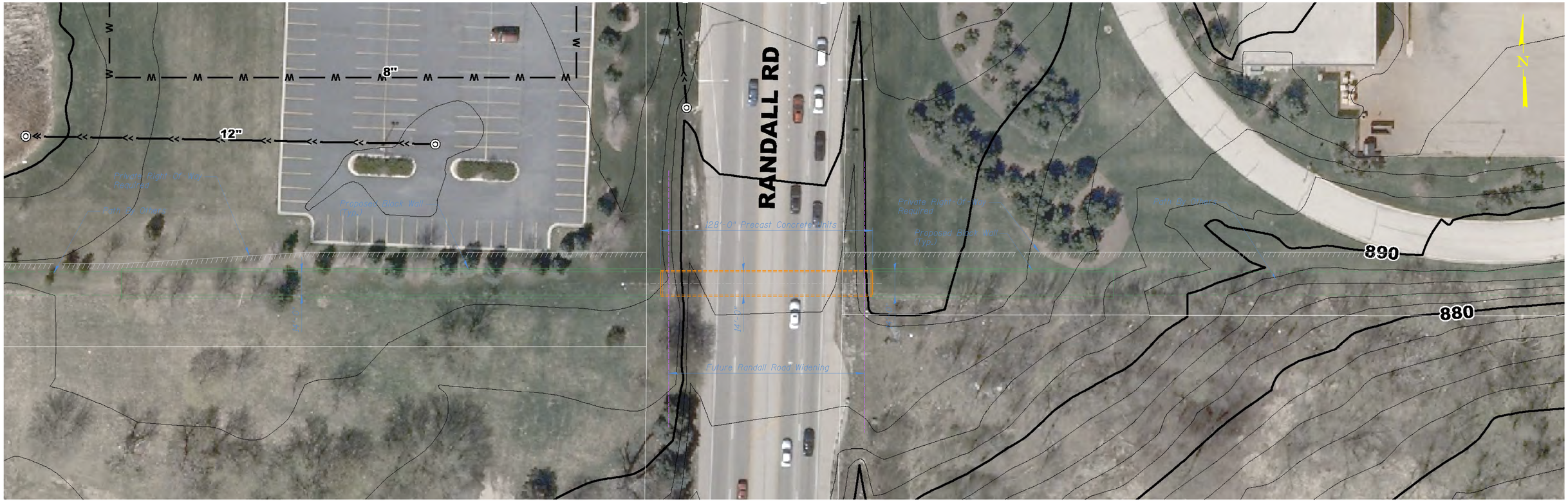

PLAN

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NO.	DATE	NATURE OF REVISION	CHKD.

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DWN.	PDR
CHKD.	JGS
SCALE:	29'
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	UNDERPASS

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RANDALL ROAD MID-BLOCK
PROPOSED UNDERPASS

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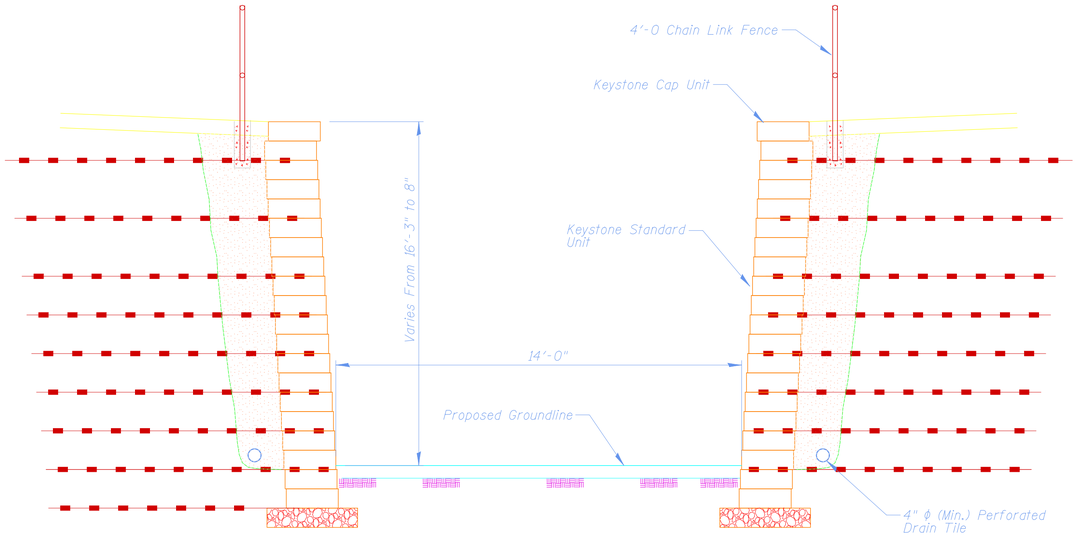
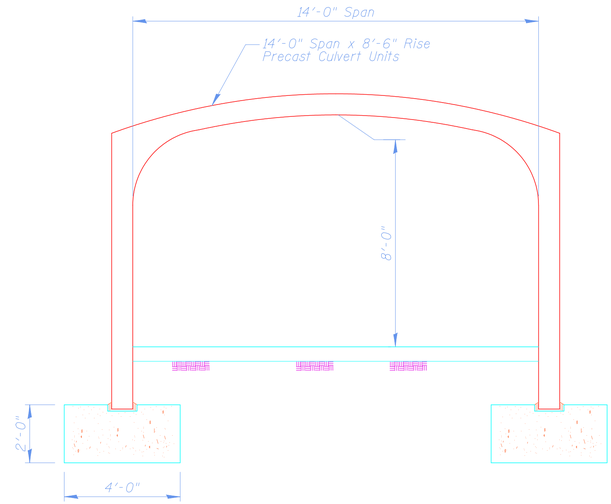


TUNNEL
SECTION A-A



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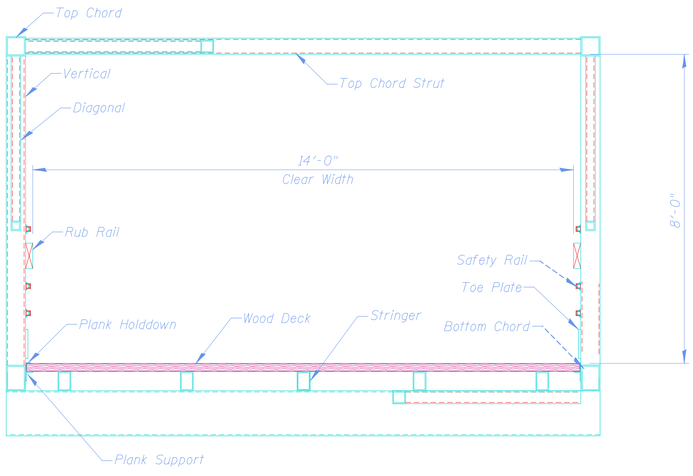

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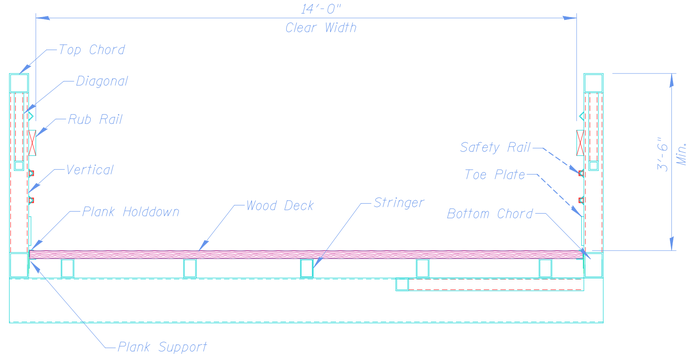

TYPICAL BRIDGE SECTION
(HALF-THROUGH PONY)

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ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

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DWN.	PDR
CHKD.	JGS
SCALE:	1"
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	SECTION

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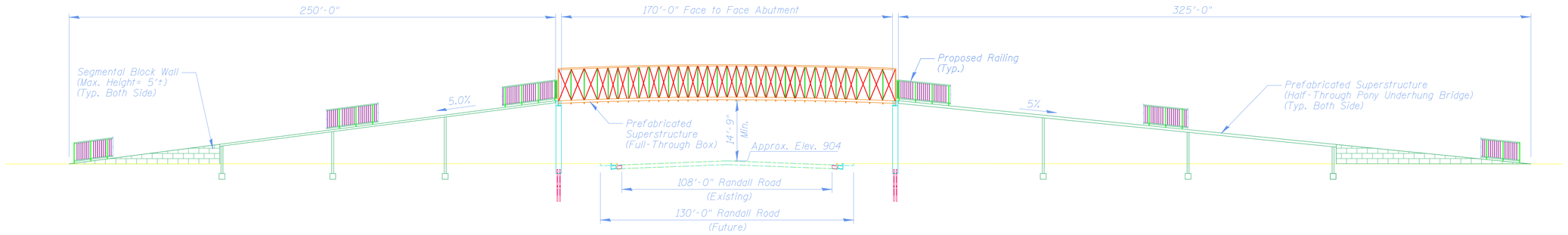
TITLE:
TYPICAL SECTIONS
RANDALL ROAD MID-BLOCK

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

Tab 2c

PROPOSED PLAN AND SECTIONS
HARNISH



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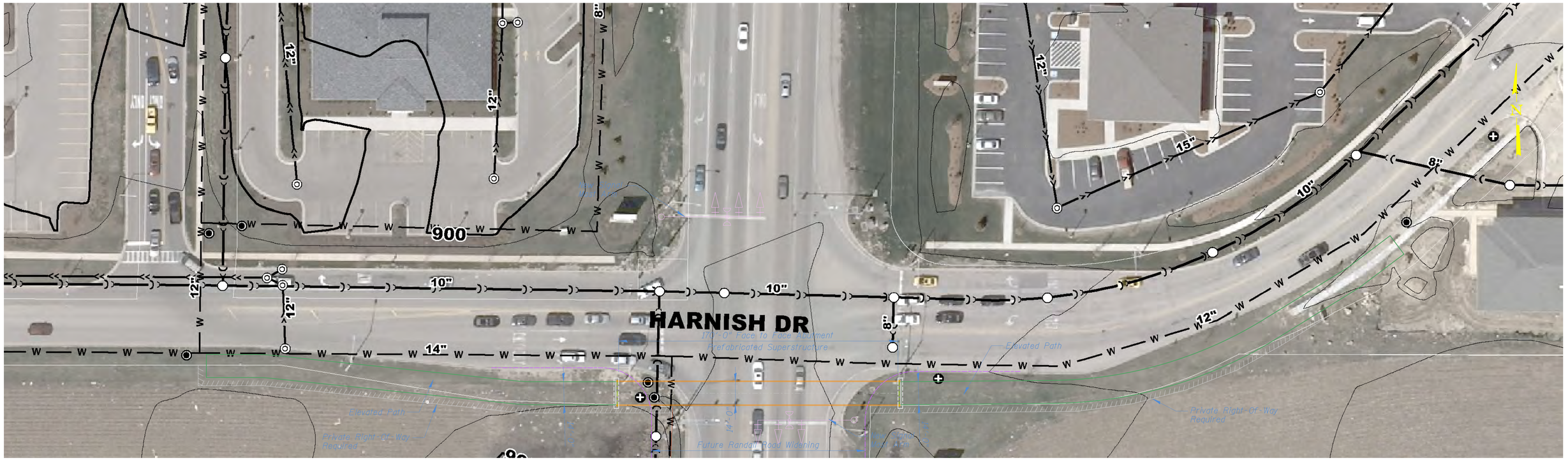

PLAN

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Rosemont, Illinois 60018
(847) 823-0500

CLIENT:

Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

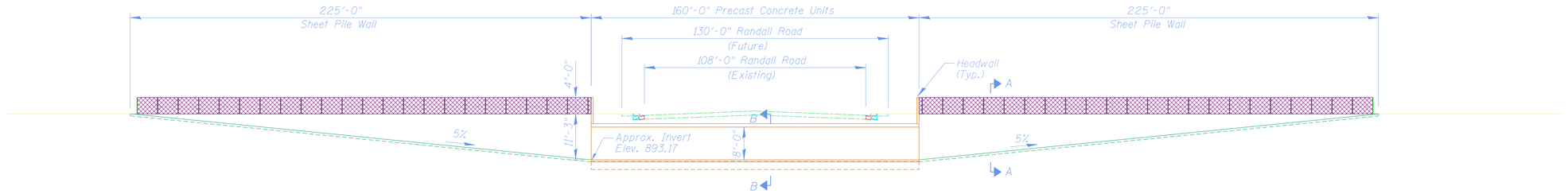
DSGN.	
DWN.	PDR
CHKD.	JGS
SCALE:	29'
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	OVERPASS

FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-HARNISH.SHT

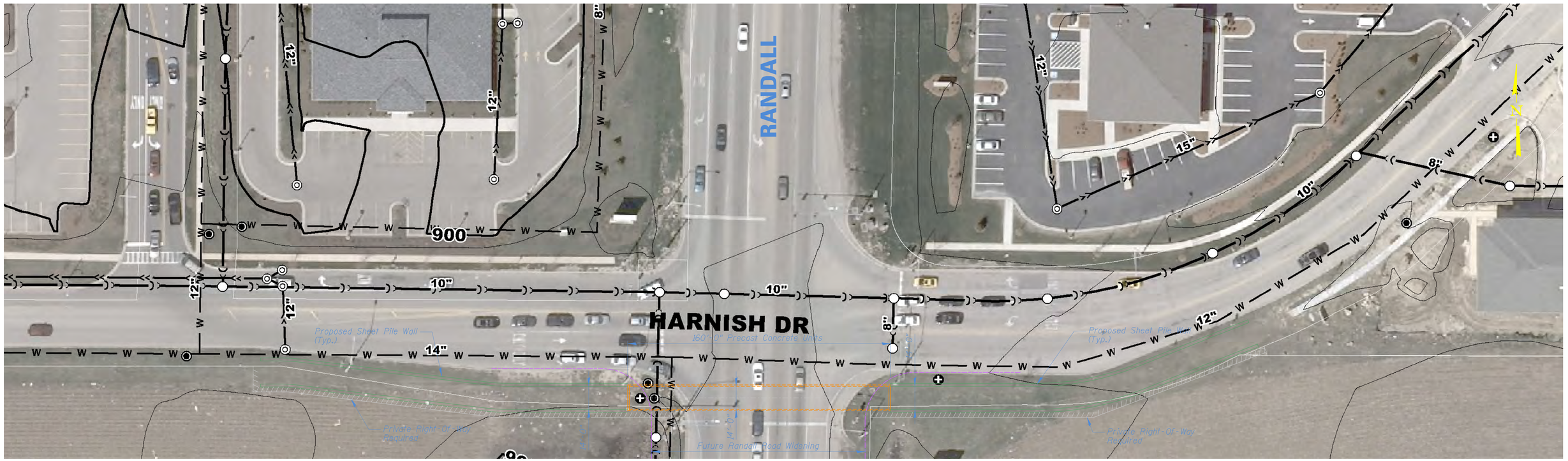
TITLE:

PLAN AND ELEVATION RANDALL AND HARNISH PROPOSED OVERPASS

PROJ. NO.	
DATE:	
SHEET	OF
DRAWING NO.	



ELEVATION



PLAN

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT:

Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-HARNISH.SHT

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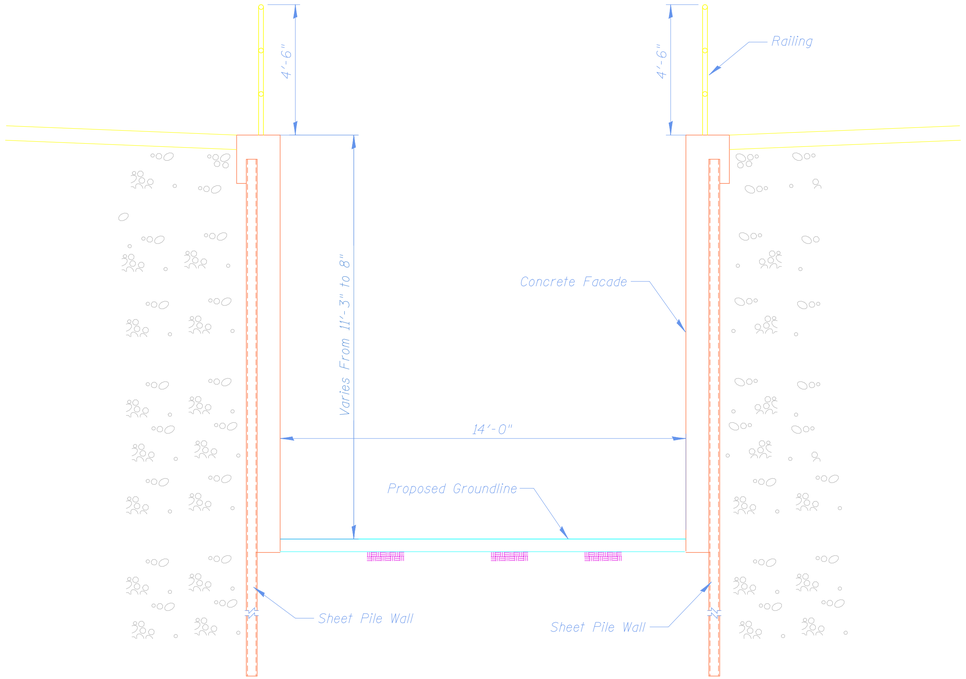
DWN.	PDR
CHKD.	JGS
SCALE:	29'
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	UNDERPASS

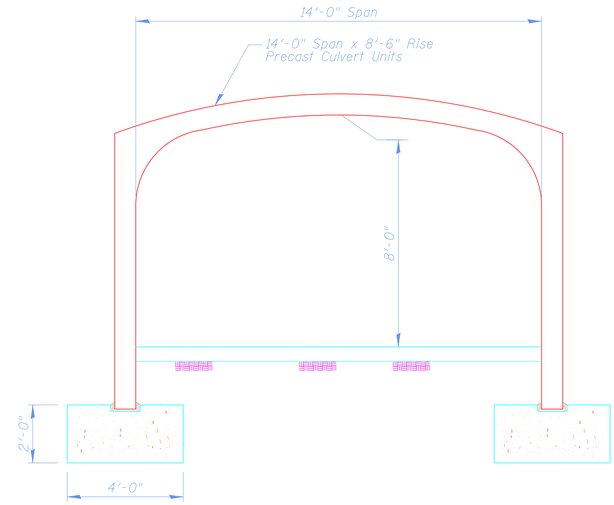
TITLE:

PLAN AND ELEVATION
RANDALL AND HARNISH
PROPOSED UNDERPASS

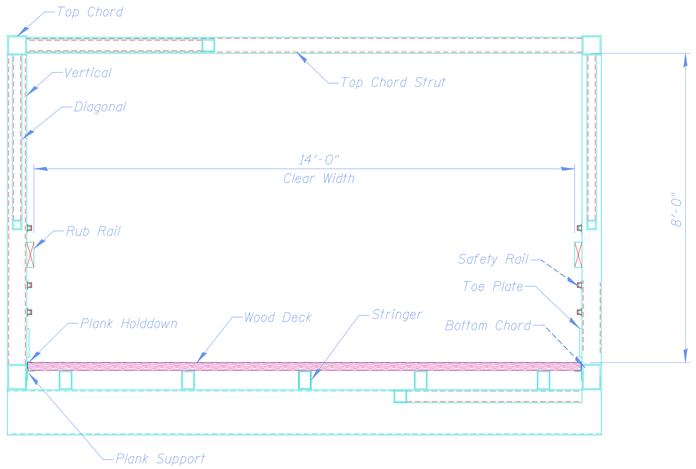
PROJ. NO.	
DATE:	
SHEET	OF
DRAWING NO.	



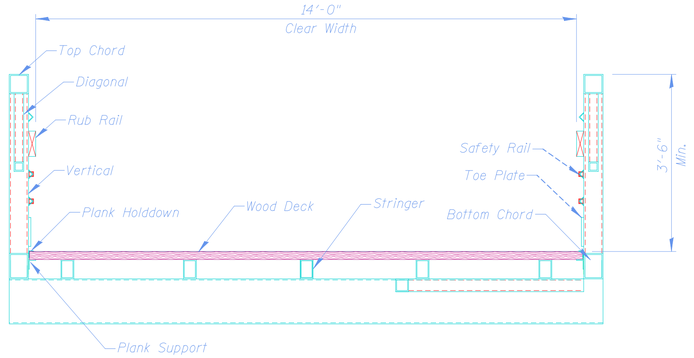
TUNNEL
SECTION A-A



TUNNEL
SECTION B-B



TYPICAL BRIDGE SECTION
(FULL-THROUGH BOX)



TYPICAL BRIDGE SECTION
(HALF-THROUGH PONY)

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT:
Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

DSGN.	
DWN.	PDR
CHKD.	JGS
SCALE:	1"
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	SECTION

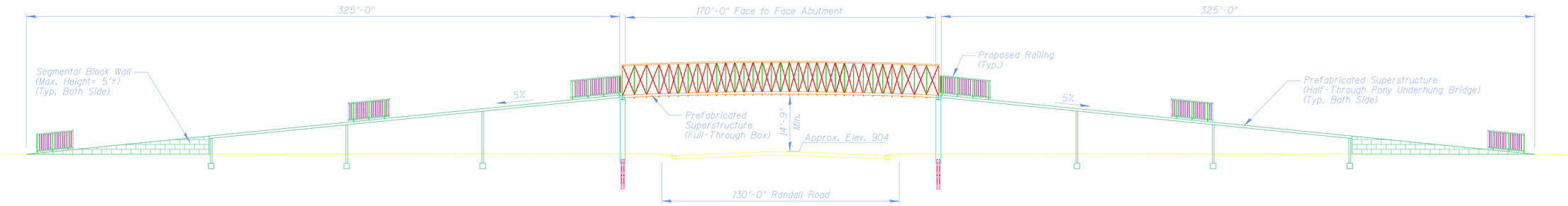
FILE NAME N:\ALGONQUIN\070273\070273.00017\Struct\070273-HARNISH.SHT

TITLE:
TYPICAL SECTIONS
RANDALL AND HARNISH

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

Tab 2d

PROPOSED PLAN AND SECTIONS
COUNTY LINE



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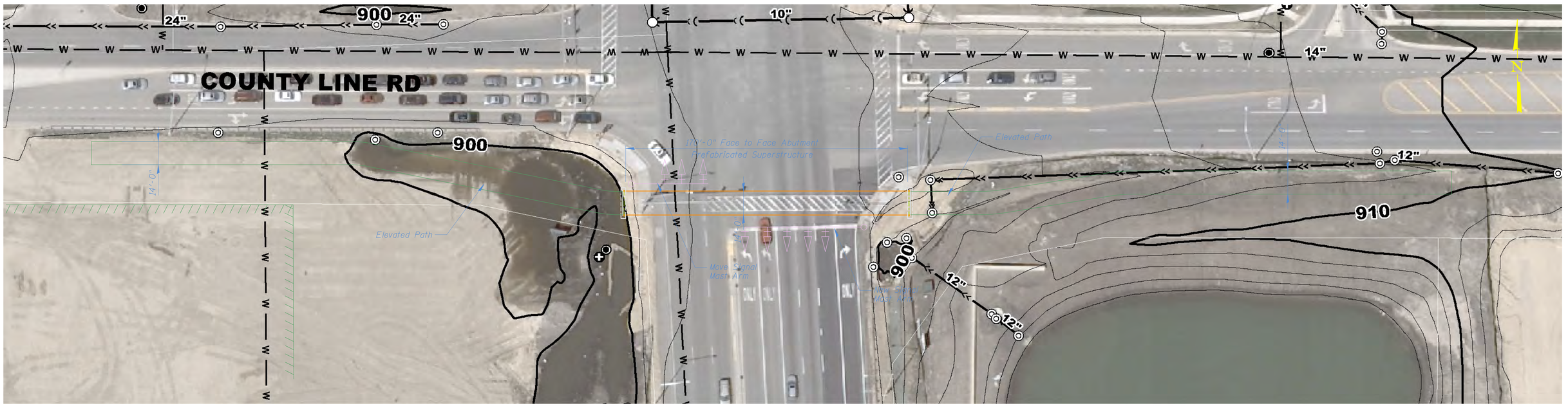

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(847) 823-0500

CLIENT:

Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

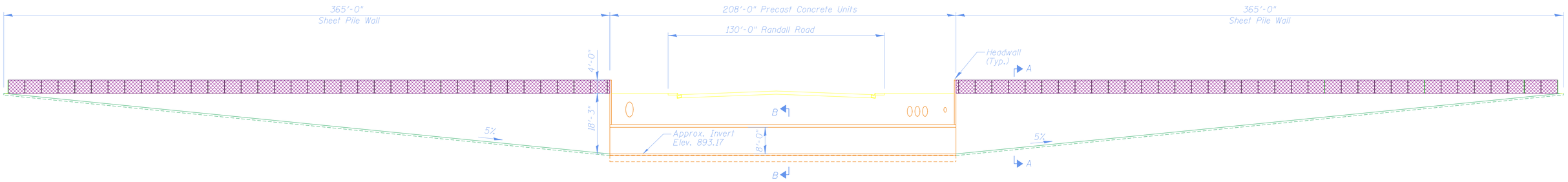
FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-CNTYLINE.SHT

DSGN.	
DWN.	PDR
CHKD.	JGS
SCALE:	29'
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	OVERPASS

TITLE:

PLAN AND ELEVATION
RANDALL AND COUNTY LINE
PROPOSED OVERPASS

PROJ. NO.	
DATE:	
SHEET	OF
DRAWING NO.	



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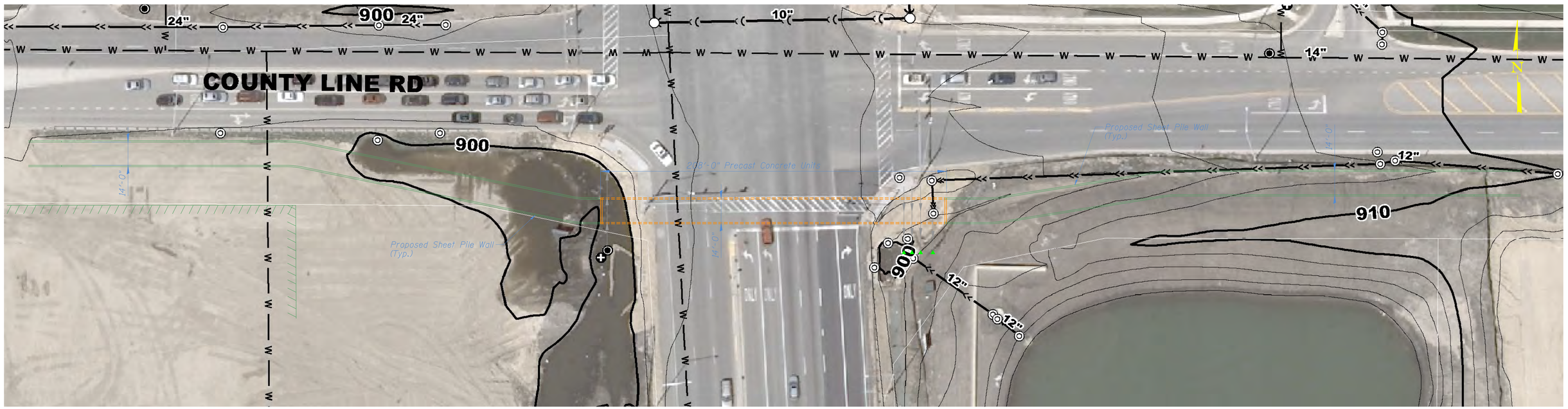


PLAN

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT:

Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

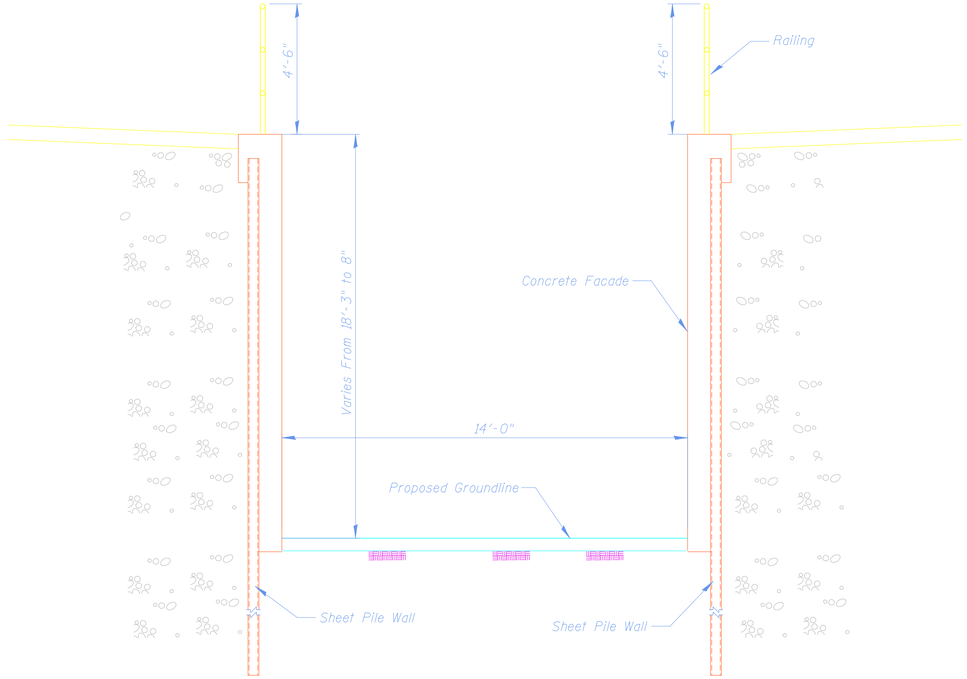
DSGN.	
DWN.	PDR
CHKD.	JGS
SCALE:	29'
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	UNDERPASS

FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-CNTYLINE.SHT

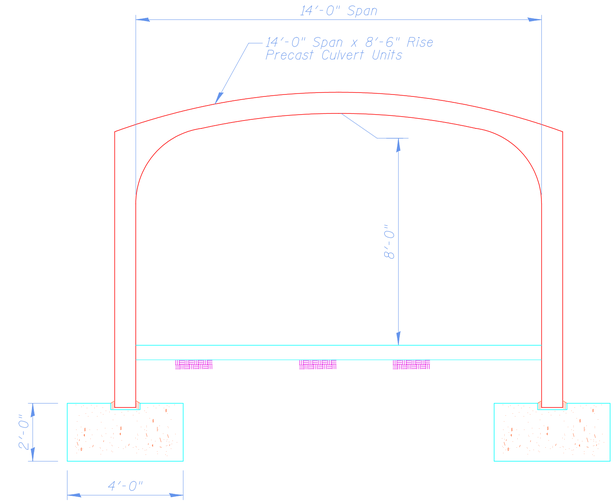
TITLE:

PLAN AND ELEVATION
RANDALL AND COUNTY LINE
PROPOSED UNDERPASS

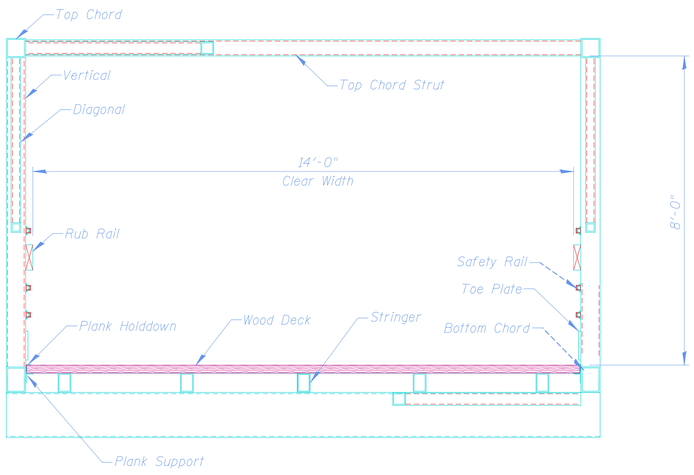
PROJ. NO.	
DATE:	
SHEET	OF
DRAWING NO.	



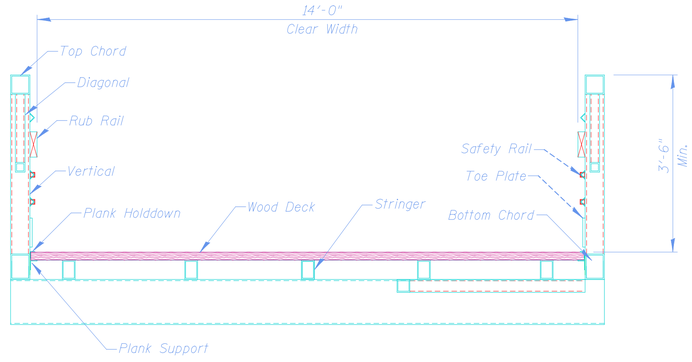
TUNNEL
SECTION A-A



TUNNEL
SECTION B-B



TYPICAL BRIDGE SECTION
(FULL-THROUGH BOX)



TYPICAL BRIDGE SECTION
(HALF-THROUGH PONY)

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9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT:
Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

DSGN.	
DWN.	PDR
CHKD.	JGS
SCALE:	1"
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	SECTION

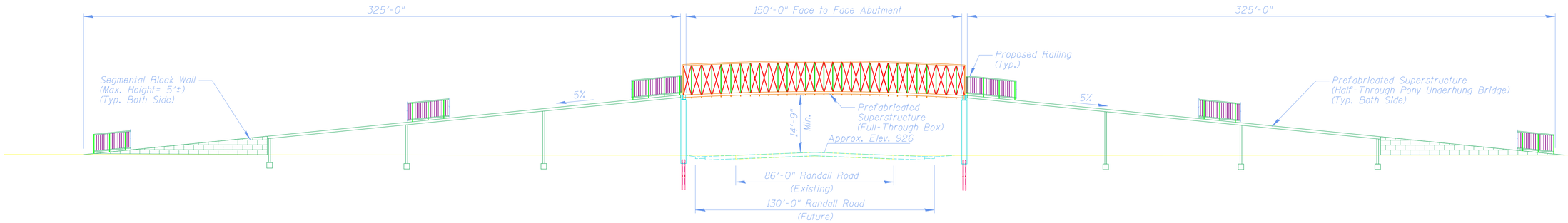
FILE NAME N:\ALGONQUIN\070273\070273.00017\Struct\070273-CNTYLINE.SHT

TITLE:
TYPICAL SECTIONS
RANDALL AND COUNTY LINE

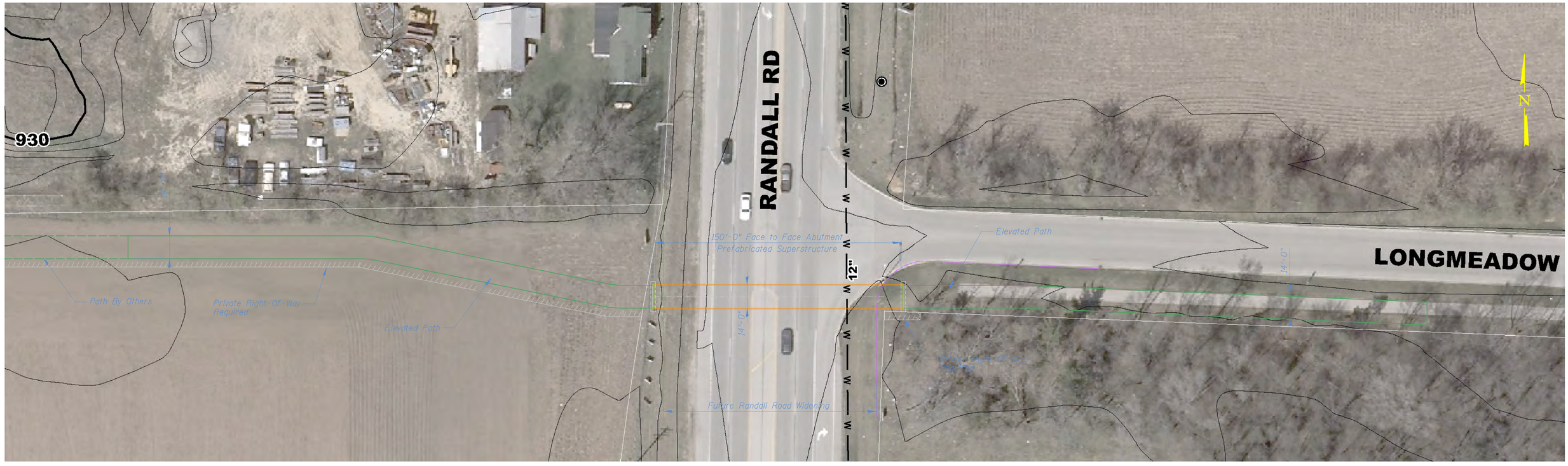
PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

Tab 2e

PROPOSED PLAN AND SECTIONS
LONGMEADOW



ELEVATION



PLAN

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT:

Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

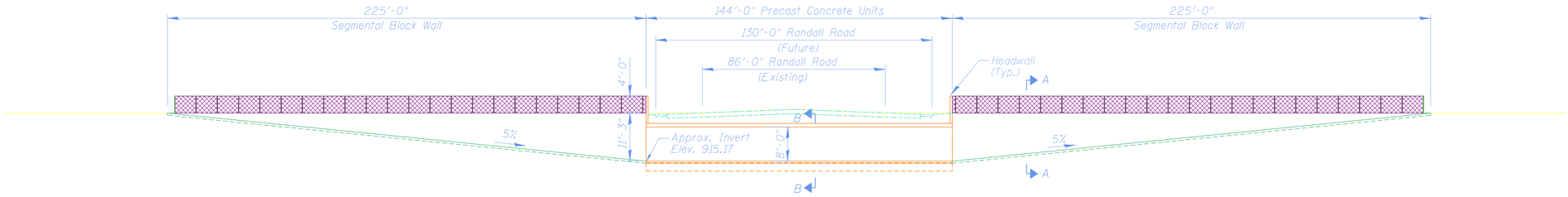
DSGN.	
DWN.	PDR
CHKD.	JGS
SCALE:	29'
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	OVERPASS

FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-LMEADOW.SHT

TITLE:

PLAN AND ELEVATION
RANDALL AND LONGMEADOW
PROPOSED OVERPASS

PROJ. NO.	
DATE:	
SHEET	OF
DRAWING NO.	



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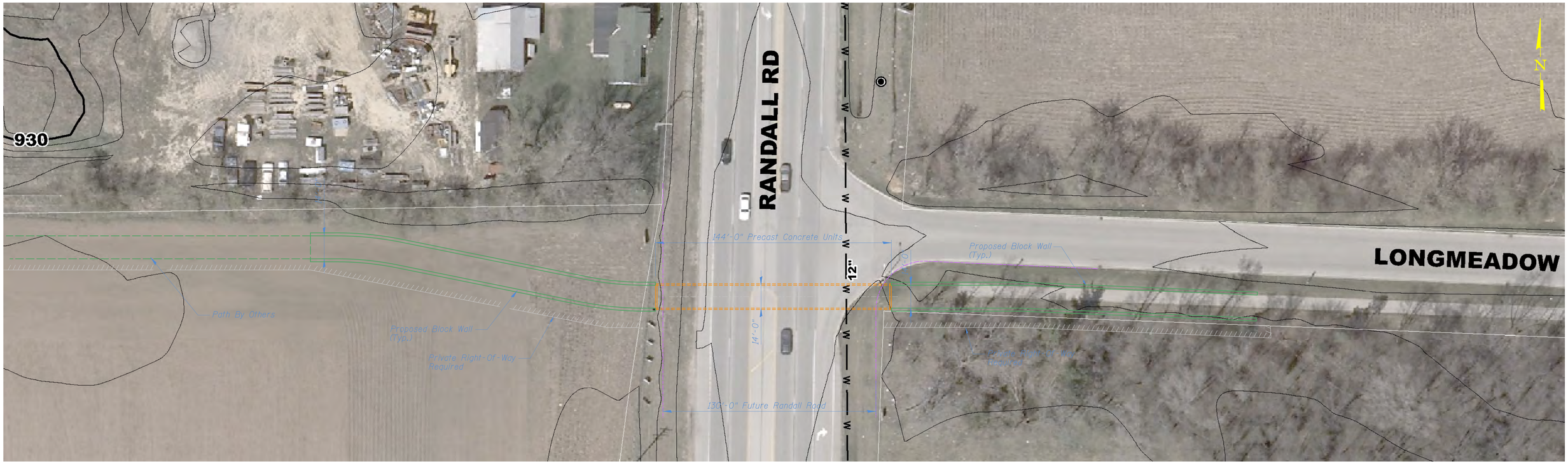

PLAN

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9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT:

Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

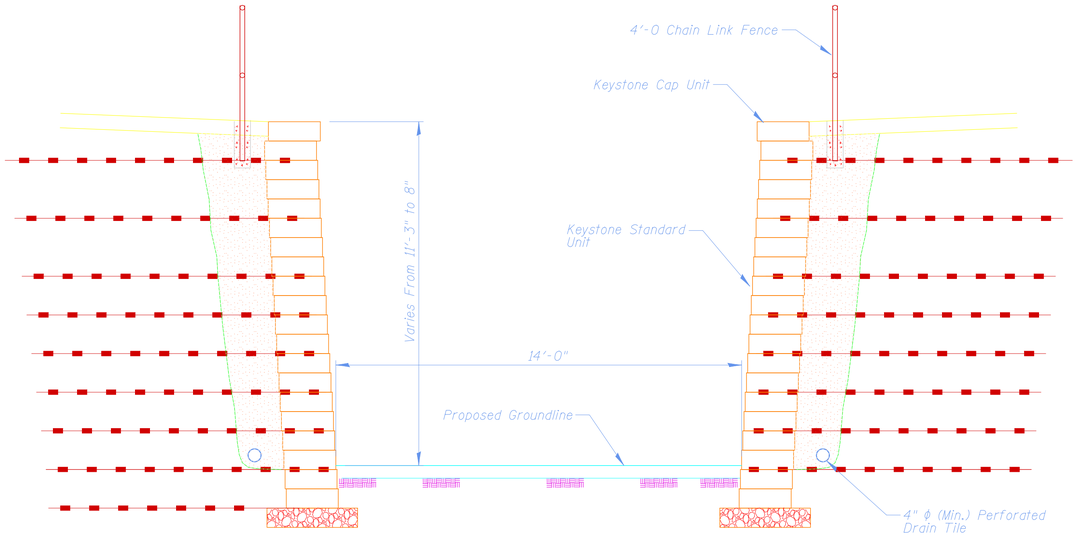
FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-LMEADOW.SHT

DSGN.	
DWN.	PDR
CHKD.	JGS
SCALE:	29'
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	UNDERPASS

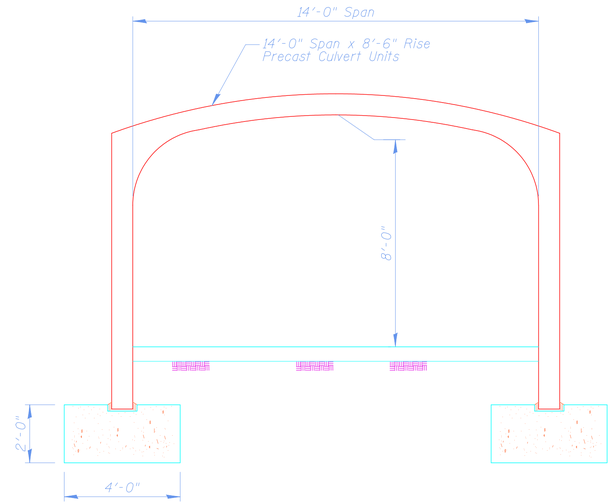
TITLE:

PLAN AND ELEVATION
RANDALL AND LONGMEADOW
PROPOSED UNDERPASS

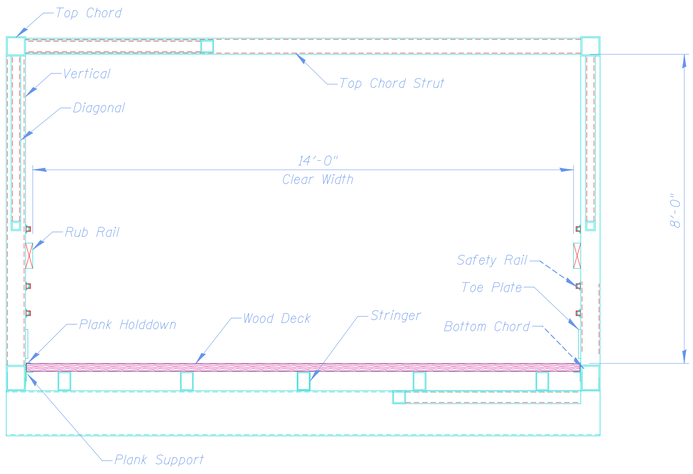
PROJ. NO.	
DATE:	
SHEET	OF
DRAWING NO.	



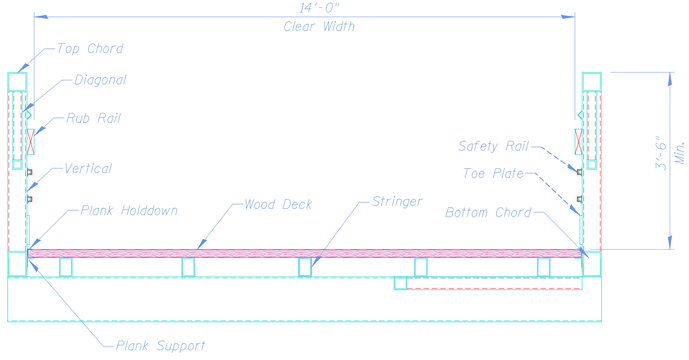
TUNNEL
SECTION A-A



TUNNEL
SECTION B-B



TYPICAL BRIDGE SECTION
(FULL-THROUGH BOX)



TYPICAL BRIDGE SECTION
(HALF-THROUGH PONY)

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
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CLIENT:
Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

DSGN.	
DWN.	PDR
CHKD.	JGS
SCALE:	1"
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	SECTION

FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-LMEADOW.SHT

TITLE:
TYPICAL SECTIONS
RANDALL AND LONGMEADOW

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

Tab 3

COST ESTIMATES

Proposed Overpass - South Side of Bunker Hill Over Randall Road
Project Name: Concept Construction Cost- Algonquin Pedestrian Path
Project No.: 070273.00017
Date: 11/03/08

Pedestrian Bridge Over Randall Road (14 ft wide x 140 ft long)

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Prefabricated Steel Bridge Superstructure (Full - Through Box)	SQ FT	1960	$165.00	$323,400.00
Concrete Deck	SQ FT	1960	$25.00	$49,000.00
Abutment/Wingwalls	EACH	2	$75,000.00	$150,000.00

SUBTOTAL = $522,400.00
20 % MISC ITEMS = $104,480.00
TOTAL = $626,880.00

Elevated Pedestrian Path and Retaining Walls East and West of Randall

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Pedestrian Steel Bridge Superstruture (Half - Through Pony - Underhung)	SQ FT	6300	$100.00	$630,000.00
Concrete Deck	SQ FT	6300	$25.00	$157,500.00
Support Towers and Foundations	EACH	6	$50,000.00	$300,000.00
Proposed Path Between Block Walls	SQ FT	2800	$20.00	$56,000.00
Segmental Block Walls and Backfill	SQ FT	1270	$100.00	$127,000.00
Proposed Railing at Block Walls	FOOT	400	$75.00	$30,000.00
Landscape Clearing/Restoration	L. SUM	1	$20,000.00	$20,000.00

SUBTOTAL = $1,320,500.00
20% MISC. ITEMS = $264,100.00
TOTAL = $1,584,600.00

Miscellaneous Items

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Mast Arm Assembly and Foundation	LSUM	1	$60,000.00	$60,000.00
Relocate Light Poles	EACH	2	$10,000.00	$20,000.00
Relocate Signs	EACH	1	$500.00	$500.00
Sidewalk Removal	SQ FT	275	$4.00	$1,100.00
Removal of Existing Path	SQ YD	650	$15.00	$9,750.00
Traffic Control and Protection	LSUM	1	$30,000.00	$30,000.00

SUBTOTAL = $121,350.00
20% MISC. ITEMS = $24,270.00
TOTAL = $145,620.00

GRAND TOTAL = $2,357,100.00
PHASE 1 ENGINEERING (7%) = $164,997.00
PHASE 2 ENGINEERING (7%) = $164,997.00
PHASE 3 ENGINEERING (7%) = $164,997.00

PROJECT TOTAL = $2,852,091.00

Note: Cost does not include property easements, acquisitions, or private utility relocations. Estimate is provided with no geotechnical information. Costs reflect estimated 2009 prices.

Proposed Underpass - South Side of Bunker Hill Under Randall Road
Project Name: Concept Construction Cost- Algonquin Pedestrian Path
Project No.: 070273.00017
Date: 11/03/08

Pedestrian Path Under Randall Road (14 ft wide x 144 ft long)

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
14' x 8' Precast Culvert Units, with Foundations and Backfill	FOOT	144	$1,800.00	$259,200.00
Class D, Type IV Patch	SQ YD	250	$75.00	$18,750.00
Combination Curb and Gutter Removal and Replacement	FOOT	50	$30.00	$1,500.00
Earth Excavation	CU YD	1935	$50.00	$96,750.00
Temporary Steel Sheet Piling	SQ FT	8300	$30.00	$249,000.00
Pump Station	LSUM	1	$100,000.00	$100,000.00
Lighting / Security Cameras	LSUM	1	$100,000.00	$100,000.00
Traffic Control and Protection	LSUM	1	$100,000.00	$100,000.00

SUBTOTAL =	$925,200.00
20 % MISC ITEMS =	$185,040.00
TOTAL =	$1,110,240.00

Lowered Pedestrian Path and Retaining Walls East and West of Randall

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Segmental Block Walls and Backfill	SQ FT	6000	$125.00	$750,000.00
Proposed Railing at Block Walls	FOOT	900	$75.00	$67,500.00
Earth Excavation	CU YD	3260	$50.00	$163,000.00
Proposed Path	SQ FT	8320	$20.00	$166,400.00
Landscape Clearing/Restoration	L. SUM	1	$30,000.00	$30,000.00

SUBTOTAL =	$1,176,900.00
20% MISC. ITEMS =	$235,380.00
TOTAL =	$1,412,280.00

Miscellaneous Items

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Adjust 12" Watermain	FOOT	40	$250.00	$10,000.00
12" Storm Sewer Relocation	FOOT	85	$100.00	$8,500.00
Manhole for Storm Sewer Relocation	EACH	1	$5,000.00	$5,000.00
Relocate Light Poles	EACH	2	$10,000.00	$20,000.00
Relocate Signs	EACH	1	$500.00	$500.00
Relocate Signal Post	EACH	1	$20,000.00	$20,000.00
Sidewalk Removal	SQ FT	275	$4.00	$1,100.00
Removal of Existing Path	SQ YD	465	$15.00	$6,975.00

SUBTOTAL =	$72,075.00
20% MISC. ITEMS =	$14,415.00
TOTAL =	$86,490.00

GRAND TOTAL =	$2,609,010.00
PHASE 1 ENGINEERING (7%) =	$182,630.70
PHASE 2 ENGINEERING (7%) =	$182,630.70
PHASE 3 ENGINEERING (7%) =	$182,630.70
PROJECT TOTAL =	**$3,156,902.10**

Note: Cost does not include property easements, acquisitions, or private utility relocations. Estimate is provided with no geotechnical information. Costs reflect estimated 2009 prices.

Proposed Overpass - Over Randall Road

Project Name: Concept Construction Cost- Algonquin Pedestrian Path
Project No.: 070273.00017
Date: 11/03/08

Pedestrian Bridge Over Randall Road (14 ft wide x 140 ft long)

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Prefabricated Steel Bridge Superstructure (Full - Through Box)	SQ FT	1960	$165.00	$323,400.00
Concrete Deck	SQ FT	1960	$25.00	$49,000.00
Abutment/Wingwalls	EACH	2	$75,000.00	$150,000.00

SUBTOTAL =	$522,400.00
20 % MISC ITEMS =	$104,480.00
TOTAL =	$626,880.00

Elevated Pedestrian Path and Retaining Walls East and West of Randall

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Pedestrian Steel Bridge Superstruture (Half - Through Pony - Underhung)	SQ FT	5355	$100.00	$535,500.00
Concrete Deck	SQ FT	5355	$25.00	$133,875.00
Piers	EACH	6	$50,000.00	$300,000.00
Proposed Path Between Block Walls	SQ FT	2275	$20.00	$45,500.00
Segmental Block Walls and Backfill	SQ FT	1030	$100.00	$103,000.00
Proposed Railing at Block Walls	FOOT	325	$75.00	$24,375.00
Landscape Clearing/Restoration	L. SUM	1	$10,000.00	$10,000.00

SUBTOTAL =	$1,152,250.00
20% MISC. ITEMS =	$230,450.00
TOTAL =	$1,382,700.00

Miscellaneous Items

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Traffic Control and Protection	LSUM	1	$30,000.00	$30,000.00
				$0.00

SUBTOTAL =	$30,000.00
20% MISC. ITEMS =	$6,000.00
TOTAL =	$36,000.00

GRAND TOTAL =	$2,045,580.00
PHASE 1 ENGINEERING (7%) =	$143,190.60
PHASE 2 ENGINEERING (7%) =	$143,190.60
PHASE 3 ENGINEERING (7%) =	$143,190.60
PROJECT TOTAL =	**$2,475,151.80**

Note: Cost does not include property easements, acquisitions, or private utility relocations. Estimate is provided with no geotechnical information. Costs reflect estimated 2009 prices.

Proposed Underpass - Under Randall Road

Project Name: Concept Construction Cost- Algonquin Pedestrian Path
Project No.: 070273.00017
Date: 11/03/08

Pedestrian Path Under Randall Road (14 ft wide x 128 ft long)

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
14' x 8' Precast Culvert Units and Backfill	FOOT	128	$1,800.00	$230,400.00
Class D, Type IV Patch	SQ YD	230	$75.00	$17,250.00
Combination Curb and Gutter Removal and Replacement	FOOT	50	$30.00	$1,500.00
Earth Excavation	CU YD	2320	$50.00	$116,000.00
Temporary Steel Sheet Piling	SQ FT	9950	$30.00	$298,500.00
Pump Station	LSUM	1	$100,000.00	$100,000.00
Lighting	LSUM	1	$100,000.00	$100,000.00
Traffic Control and Protection	LSUM	1	$75,000.00	$75,000.00

SUBTOTAL = $938,650.00
20 % MISC ITEMS = $187,730.00
TOTAL = $1,126,380.00

Lowered Pedestrian Path and Retaining Walls East and West of Randall

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Segmental Block Walls and Backfill	SQ FT	8900	$100.00	$890,000.00
Proposed Railing at Block Walls	FOOT	940	$75.00	$70,500.00
Earth Excavation	CU YD	5500	$35.00	$192,500.00
Proposed Path	SQ FT	8375	$20.00	$167,500.00
Landscape Clearing/Restoration	L. SUM	1	$20,000.00	$20,000.00

SUBTOTAL = $1,340,500.00
20% MISC. ITEMS = $268,100.00
TOTAL = $1,608,600.00

Miscellaneous Items

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
				$0.00
				$0.00

SUBTOTAL = $0.00
20% MISC. ITEMS = $0.00
TOTAL = $0.00

GRAND TOTAL = $2,734,980.00
PHASE 1 ENGINEERING (7%) = $191,448.60
PHASE 2 ENGINEERING (7%) = $191,448.60
PHASE 3 ENGINEERING (7%) = $191,448.60

PROJECT TOTAL = $3,309,325.80

Note: Cost does not include property easements, acquisitions, or private utility relocations.
Estimate is provided with no geotechnical information. Costs reflect estimated 2009 prices.

Proposed Overpass - South Side of Harnish Over Randall Road

Project Name: Concept Construction Cost- Algonquin Pedestrian Path
Project No.: 070273.00017
Date: 11/03/08

Pedestrian Bridge Over Randall Road (14 ft wide x 170 ft long)

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Prefabricated Steel Bridge Superstructure (Full - Through Box)	SQ FT	2380	$185.00	$440,300.00
Concrete Deck	SQ FT	2380	$25.00	$59,500.00
Abutment/Wingwalls	EACH	2	$75,000.00	$150,000.00

SUBTOTAL = $649,800.00
20 % MISC ITEMS = $129,960.00
TOTAL = $779,760.00

Elevated Pedestrian Path and Retaining Walls East and West of Randall

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Pedestrian Steel Bridge Superstruture (Half - Through Pony - Underhung)	SQ FT	5575	$100.00	$557,500.00
Concrete Deck	SQ FT	5575	$25.00	$139,375.00
Piers	EACH	6	$50,000.00	$300,000.00
Proposed Path Between Block Walls	SQ FT	2480	$20.00	$49,600.00
Segmental Block Walls and Backfill	SQ FT	1125	$100.00	$112,500.00
Proposed Railing at Block Walls	FOOT	354	$75.00	$26,550.00
Landscape Clearing/Restoration	L. SUM	1	$15,000.00	$15,000.00

SUBTOTAL = $1,200,525.00
20% MISC. ITEMS = $240,105.00
TOTAL = $1,440,630.00

Miscellaneous Items

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Mast Arm Assembly and Foundation	EACH	2	$50,000.00	$100,000.00
Additional Business Signage	LSUM	1	$10,000.00	$10,000.00
Sidewalk Removal	SQ FT	2800	$4.00	$11,200.00
Traffic Control and Protection	LSUM	1	$30,000.00	$30,000.00

SUBTOTAL = $151,200.00
20% MISC. ITEMS = $30,240.00
TOTAL = $181,440.00

GRAND TOTAL = $2,401,830.00
PHASE 1 ENGINEERING (7%) = $168,128.10
PHASE 2 ENGINEERING (7%) = $168,128.10
PHASE 3 ENGINEERING (7%) = $168,128.10

PROJECT TOTAL = $2,906,214.30

Note: Cost does not include property easements, acquisitions, or private utility relocations. Estimate is provided with no geotechnical information. Costs reflect estimated 2009 prices. At this location, gas lines, AT&T lines, and ComEd lines will have to be relocated.

Proposed Underpass - South Side of Harnish Under Randall Road
Project Name: Concept Construction Cost- Algonquin Pedestrian Path
Project No.: 070273.00017
Date: 11/03/08

Pedestrian Path Under Randall Road (14 ft wide x 160 ft long)

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
14' x 8' Precast Culvert Units and Backfill	FOOT	160	$1,800.00	$288,000.00
Class D, Type IV Patch	SQ YD	310	$75.00	$23,250.00
Combination Curb and Gutter Removal and Replacement	FOOT	50	$30.00	$1,500.00
Earth Excavation	CU YD	2150	$50.00	$107,500.00
Temporary Steel Sheet Piling	SQ FT	9000	$30.00	$270,000.00
Pump Station	LSUM	1	$100,000.00	$100,000.00
Lighting / Security Cameras	LSUM	1	$100,000.00	$100,000.00
Traffic Control and Protection	LSUM	1	$100,000.00	$100,000.00

SUBTOTAL = $990,250.00
20 % MISC ITEMS = $198,050.00
TOTAL = $1,188,300.00

Lowered Pedestrian Path and Retaining Walls East and West of Randall

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Railing	LIN FT	900	$75.00	$67,500.00
Steel Sheet Piling	SQ FT	10500	$35.00	$367,500.00
Concrete Wall Facade	SQ FT	6900	$50.00	$345,000.00
Formliner Façade	SQ FT	6900	$20.00	$138,000.00
Earth Excavation	CU YD	1780	$50.00	$89,000.00
Proposed Path	SQ FT	8540	$20.00	$170,800.00
Landscape Clearing/Restoration	L. SUM	1	$15,000.00	$15,000.00

SUBTOTAL = $1,192,800.00
20% MISC. ITEMS = $238,560.00
TOTAL = $1,431,360.00

Miscellaneous Items

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
10" Storm Sewer Relocation	FOOT	110	$100.00	$11,000.00
Manhole for Storm Sewer Relocation	EACH	1	$5,000.00	$5,000.00
Sidewalk Removal	SQ FT	2075	$4.00	$8,300.00

SUBTOTAL = $24,300.00
20% MISC. ITEMS = $4,860.00
TOTAL = $29,160.00

GRAND TOTAL = $2,648,820.00
PHASE 1 ENGINEERING (7%) = $185,417.40
PHASE 2 ENGINEERING (7%) = $185,417.40
PHASE 3 ENGINEERING (7%) = $185,417.40

PROJECT TOTAL = $3,205,072.20

Note: Cost does not include property easements, acquisitions, or private utility relocations. Estimate is provided with no geotechnical information. Costs reflect estimated 2009 prices. At this location, gas lines, AT&T lines, and ComEd lines will have to be relocated.

Proposed Overpass - South Side of County Line Over Randall Road

Project Name: Concept Construction Cost- Algonquin Pedestrian Path
Project No.: 070273.00017
Date: 11/03/08

Pedestrian Bridge Over Randall Road (14 ft wide x 170 ft long)

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Prefabricated Steel Bridge Superstructure (Full - Through Box)	SQ FT	2380	$185.00	$440,300.00
Concrete Deck	SQ FT	2380	$25.00	$59,500.00
Abutment/Wingwalls	EACH	2	$75,000.00	$150,000.00

SUBTOTAL = $649,800.00
20 % MISC ITEMS = $129,960.00
TOTAL = $779,760.00

Elevated Pedestrian Path and Retaining Walls East and West of Randall

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Pedestrian Steel Bridge Superstruture (Half - Through Pony - Underhung)	SQ FT	6300	$100.00	$630,000.00
Concrete Deck	SQ FT	6300	$25.00	$157,500.00
Piers	EACH	6	$50,000.00	$300,000.00
Proposed Path Between Block Walls	SQ FT	2800	$20.00	$56,000.00
Segmental Block Walls and Backfill	SQ FT	1270	$100.00	$127,000.00
Proposed Railing at Block Walls	FOOT	400	$75.00	$30,000.00
Landscape Clearing/Restoration	L. SUM	1	$10,000.00	$10,000.00

SUBTOTAL = $1,310,500.00
20% MISC. ITEMS = $262,100.00
TOTAL = $1,572,600.00

Miscellaneous Items

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Mast Arm Assembly and Foundation	EACH	2	$50,000.00	$100,000.00
12" Storm Sewer Relocation	FOOT	270	$100.00	$27,000.00
Manhole for Storm Sewer Relocation	EACH	1	$5,000.00	$5,000.00
Removal of Existing Path	SQ YD	365	$15.00	$5,475.00
Traffic Control and Protection	LSUM	1	$40,000.00	$40,000.00

SUBTOTAL = $177,475.00
20% MISC. ITEMS = $35,495.00
TOTAL = $212,970.00

GRAND TOTAL = $2,565,330.00
PHASE 1 ENGINEERING (7%) = $179,573.10
PHASE 2 ENGINEERING (7%) = $179,573.10
PHASE 3 ENGINEERING (7%) = $179,573.10

PROJECT TOTAL = $3,104,049.30

Note: Cost does not include property easements, acquisitions, or private utility relocations. Estimate is provided with no geotechnical information. Costs reflect estimated 2009 prices.

Proposed Underpass - South Side of County Line Under Randall Road

Project Name: Concept Construction Cost- Algonquin Pedestrian Path
Project No.: 070273.00017
Date: 11/03/08

Pedestrian Path Under Randall Road (14 ft wide x 208 ft long)

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
14' x 8' Precast Culvert Units and Backfill	FOOT	208	$1,800.00	$374,400.00
Class D, Type IV Patch	SQ YD	375	$75.00	$28,125.00
Combination Curb and Gutter Removal and Replacement	FOOT	50	$30.00	$1,500.00
Earth Excavation	CU YD	3100	$50.00	$155,000.00
Temporary Steel Sheet Piling	SQ FT	12500	$30.00	$375,000.00
Pump Station	LSUM	1	$100,000.00	$100,000.00
Lighting / Security Cameras	LSUM	1	$100,000.00	$100,000.00
Traffic Control and Protection	LSUM	1	$100,000.00	$100,000.00

SUBTOTAL = $1,234,025.00
20 % MISC ITEMS = $246,805.00
TOTAL = $1,480,830.00

Lowered Pedestrian Path and Retaining Walls East and West of Randall

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Railing	LIN FT	1460	$150.00	$219,000.00
Steel Sheet Piling	SQ FT	26465	$35.00	$926,275.00
Concrete Wall Facade	SQ FT	15275	$50.00	$763,750.00
Formliner Façade	SQ FT	15275	$20.00	$305,500.00
Earth Excavation	CU YD	4200	$50.00	$210,000.00
Proposed Path	SQ FT	12460	$20.00	$249,200.00
Landscape Clearing/Restoration	L. SUM	1	$10,000.00	$10,000.00

SUBTOTAL = $2,683,725.00
20% MISC. ITEMS = $536,745.00
TOTAL = $3,220,470.00

Miscellaneous Items

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Relocate Mast Arm Assembly	LSUM	1	$60,000.00	$60,000.00
Adjust 12" Watermain	FOOT	40	$250.00	$10,000.00
Triple Culvert Extension / New Headwall	LSUM	1	$75,000.00	$75,000.00
12" Storm Sewer Relocation	FOOT	270	$100.00	$27,000.00
Manhole for Storm Sewer Relocation	EACH	1	$5,000.00	$5,000.00
Removal of Existing Path	SQ YD	365	$15.00	$5,475.00

SUBTOTAL = $182,475.00
20% MISC. ITEMS = $36,495.00
TOTAL = $218,970.00

GRAND TOTAL = $4,920,270.00
PHASE 1 ENGINEERING (7%) = $344,418.90
PHASE 2 ENGINEERING (7%) = $344,418.90
PHASE 3 ENGINEERING (7%) = $344,418.90

PROJECT TOTAL = $5,953,526.70

Note: Cost does not include property easements, acquisitions, or private utility relocations. Estimate is provided with no geotechnical information. Costs reflect estimated 2009 prices.

Proposed Overpass - South Side of Longmeadow Over Randall Road
Project Name: Concept Construction Cost- Algonquin Pedestrian Path
Project No.: 070273.00017
Date: 11/03/08

Pedestrian Bridge Over Randall Road (14 ft wide x 150 ft long)

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Prefabricated Steel Bridge Superstructure (Full - Through Box)	SQ FT	2100	$165.00	$346,500.00
Concrete Deck	SQ FT	2100	$25.00	$52,500.00
Abutment/Wingwalls	EACH	2	$75,000.00	$150,000.00

SUBTOTAL = $549,000.00
20 % MISC ITEMS = $109,800.00
TOTAL = $658,800.00

Elevated Pedestrian Path and Retaining Walls East and West of Randall

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Pedestrian Steel Bridge Superstruture (Half - Through Pony - Underhung)	SQ FT	6300	$100.00	$630,000.00
Concrete Deck	SQ FT	6300	$25.00	$157,500.00
Piers	EACH	6	$50,000.00	$300,000.00
Proposed Path Between Block Walls	SQ FT	2800	$20.00	$56,000.00
Segmental Block Walls and Backfill	SQ FT	1270	$100.00	$127,000.00
Proposed Railing at Block Walls	FOOT	400	$75.00	$30,000.00
Landscape Clearing/Restoration	L. SUM	1	$15,000.00	$15,000.00

SUBTOTAL = $1,315,500.00
20% MISC. ITEMS = $263,100.00
TOTAL = $1,578,600.00

Miscellaneous Items

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Relocate Light Poles	EACH	1	$10,000.00	$10,000.00
Relocate Signs	EACH	1	$500.00	$500.00
Removal of Existing Path	SQ YD	250	$15.00	$3,750.00
Traffic Control and Protection	LSUM	1	$30,000.00	$30,000.00

SUBTOTAL = $44,250.00
20% MISC. ITEMS = $8,850.00
TOTAL = $53,100.00

GRAND TOTAL = $2,290,500.00
PHASE 1 ENGINEERING (7%) = $160,335.00
PHASE 2 ENGINEERING (7%) = $160,335.00
PHASE 3 ENGINEERING (7%) = $160,335.00

PROJECT TOTAL = $2,771,505.00

Note: Cost does not include property easements, acquisitions, or private utility relocations. Estimate is provided with no geotechnical information. Costs reflect estimated 2009 prices. Overhead lines on the east side of Longmeadow will have to be relocated.

Proposed Underpass - South Side of Longmeadow Under Randall Road

Project Name: Concept Construction Cost- Algonquin Pedestrian Path
Project No.: 070273.00017
Date: 11/03/08

Pedestrian Path Under Randall Road (14 ft wide x 144 ft long)

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
14' x 8' Precast Culvert Units and Backfill	FOOT	144	$1,800.00	$259,200.00
Class D, Type IV Patch	SQ YD	295	$75.00	$22,125.00
Combination Curb and Gutter Removal and Replacement	FOOT	50	$30.00	$1,500.00
Earth Excavation	CU YD	1900	$50.00	$95,000.00
Temporary Steel Sheet Piling	SQ FT	8300	$30.00	$249,000.00
Pump Station	LSUM	1	$100,000.00	$100,000.00
Lighting	LSUM	1	$100,000.00	$100,000.00
Traffic Control and Protection	LSUM	1	$100,000.00	$100,000.00

SUBTOTAL = $926,825.00
20 % MISC ITEMS = $185,365.00
TOTAL = $1,112,190.00

Lowered Pedestrian Path and Retaining Walls East and West of Randall

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Segmental Block Walls and Backfill	SQ FT	6000	$125.00	$750,000.00
Proposed Railing at Block Walls	FOOT	900	$75.00	$67,500.00
Earth Excavation	CU YD	3260	$50.00	$163,000.00
Segmental Block Walls	SQ FT	1270	$55.00	$69,850.00
Proposed Path	SQ FT	8320	$20.00	$166,400.00
Landscape Clearing/Restoration	L. SUM	1	$30,000.00	$30,000.00

SUBTOTAL = $1,246,750.00
20% MISC. ITEMS = $249,350.00
TOTAL = $1,496,100.00

Miscellaneous Items

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
Adjust 12" Watermain	FOOT	40	$250.00	$10,000.00
Relocate Light Poles	EACH	1	$10,000.00	$10,000.00
Relocate Signs	EACH	1	$500.00	$500.00
Removal of Existing Path	SQ YD	165	$15.00	$2,475.00

SUBTOTAL = $22,975.00
20% MISC. ITEMS = $4,595.00
TOTAL = $27,570.00

GRAND TOTAL = $2,635,860.00
PHASE 1 ENGINEERING (7%) = $184,510.20
PHASE 2 ENGINEERING (7%) = $184,510.20
PHASE 3 ENGINEERING (7%) = $184,510.20

PROJECT TOTAL = $3,189,390.60

Note: Cost does not include property easements, acquisitions, or private utility relocations. Estimate is provided with no geotechnical information. Costs reflect estimated 2009 prices.

Tab 4

COORDINATION

Randall Road Pedestrian Crossing
September 24, 2008 Public Input Meeting

Meeting Attendance

Resident Attendance	46
Media	4
Volunteers	12
Village staff	3
Village Board	4
Kane County	2
Algonquin/LITH Fire District	1
Christopher Burke Engineering	1
Total attendance	**73**

Small Group Sessions

1) Is there a need for pedestrian enhancements crossing Randall Road?

Group 1
- Yes!

Group 2
- Absolutely

Group 3
- Definitely

Group 4
- Yes

Group 5
- Absolutely

2) Where should the pedestrian crossing be located?

Group 1
- County Line Road (3)
- Algonquin Road (4)
- Harnish Drive (3)
- Bunker Hill/Huntington (4)
- Stonegate Road (1)
- Commons Drive (3)
- Corporate Parkway (0)

Group 2
- Bunker Hill/Huntington (7)
- County Line (6)
- Longmeadow Parkway (0)
- Harnish Drive (3)
- Algonquin Road

Group 3
- Bunker Hill (10)
- Harnish (2)
- County Line (4)
- Algonquin (0)
- Longmeadow (0)

Group 4
- Bunker Hill (6)
- County Line (5)
- Enhance All Intersections (6)
- Harnish Drive (1)
- North/South Crossing (0)
- Longmeadow (0)

Group 5
- Bunker Hill (7)
- County Line (4)
- Harnish (5)
- Longmeadow (0)
- Commons Drive (0)

3) What type of crossing should be made?

Group 1
- Pedestrian bridge (9)
- Improved existing crossings (8)
  - More signage
  - Wider crossing
  - Buffer area
  - Additional crossings
  - Connected/additional sidewalks
- Underpass (0)

Group 2
- Bridge (7)
- Underpass (1)
- Enhancements (8)
  - Pedestrian light
  - No turn on red
  - Operational gates, recognize pedestrians
  - Better placement of signs
  - Light usage (specialty)
  - Longer light count downs (numbers)

Group 3
- Bridge (9)
- Enhanced crosswalks (4)
  - Lighted
  - All cars stop
- Tunnel (3)

Group 4
- Enhance existing (7)
- Bridge-covered/enclosed (6)
- Tunnel (0)

Group 5
- Bridge (7)
- Tunnel (1)
- Crossing Guards at peak times (interim) (2)
- Enhanced crossing (0)
  - Median "safe zone" in middle for pedestrian
- Trolley service (interim) (6)

4) What type of funding sources should be considered?

- Special tax assessment
- Get money from businesses (donations/fees)
- Take money from bucket that finances road improvements
- Impact fees from developers/new businesses
- Federal/state/county
- Municipal bonds
- Grants
  - Safe routes to school
  - CMAQ grant
  - STP program
- Politian's
- Pedestrian I-pass
- Healthcare organizations (sponsor/adopt)
- Fundraisers
- Gas tax
- Temporary sales tax increase
- Village of Algonquin
- Car stickers
- Transfer tax
- Environmental Groups
- Red Light Enforcement (use fines)
- Special Service Area
- Advertising

5) Would you be willing to pay for pedestrian enhancements:

	YES	NO
A) through a sales tax increase?	2+1+6+5+1= **15**	9+7+5+5+7= **33**
B) through a property tax increase?	2+1+1+0+0= **4**	5+7+10+10+8= **40**

Summary of Group Preferences

Group 1 Preferences (Judi):
Algonquin Road
Bunker Hill/Huntington
Overpass
Improve existing

Group 2 Preferences (Sara):
Bunker Hill
Enhancements to existing

Group 3 Preferences (John):
Bunker Hill
Bridge

Group 4 Preferences (Nancy):
Bunker Hill
Enhance all intersections
Enhance Existing
Bridge

Group 5 Preferences (William):
Bunker Hill
Bridge
Interim solutions

Overall Summary of Preferences

Location Summary

Bunker Hill/Huntington	34
County Line	22
Harnish Drive	14
Algonquin Road	4
Commons Drive	3
Stonegate Road	1
Longmeadow Parkway	(future planning)
Total Votes	**78**

Type Summary

Bridge	32
Enhance existing	26
Tunnel	12
Interim	8
Total Votes	**78**

Possible Study Options:

- Bunker Hill Bridge
- Enhancements to existing intersections
- Interim options
- Bunker Hill, County Line, Harnish do bridge, tunnel, enhancements

Pros and cons, cost estimate, preliminary design and preliminary engineering, land requirements (maybe eliminate tunnel idea? Menu choices for enhancement options)
Future planning—put in crossing at Longmeadow in our study so state has to do it?

Reasons for a pedestrian crossing:

- Ease of movement
- Link schools, library, shopping centers, and parks
- Health reasons
- Cost of gas
- Safety
- Need several crossings
- School children
- High volume of traffic
- High speed
- Width of road
- Economic benefits

Other comments:

- Connect sidewalks
- Complete trail connections
- Evaluate need for pedestrian crossing on Randall (due to volume of traffic)
- Construct before someone gets hurt
- North/south sidewalks along Randall to connect crossings
- Art work on overpass
- Gateway to community
- Communication board on bridge

Examples:

Buffalo Grove bridge—Deerfield Pkwy/Route 83
Route 22 tunnel for golf carts
Crystal Lake-Route 14

Randall Road Pedestrian Crossing
March 18, 2009 Second Public Input Meeting

Meeting Attendance

Resident Attendance	64
Media	2
Volunteers	1
Village staff	3
Village Board	4
Kane County	1
Algonquin/LITH Fire District	1
Christopher Burke Engineering	1
Total attendance	77

1. **Where should the pedestrian crossing be located?**

   Bunker Hill/Huntington **22** County Line Road **20**

   Midblock (between Bunker Hill and Harnish) **20** Longmeadow Parkway **0**

   Harnish Drive **4**

2. **Which of the following best describes the reason you choose the above location?**

   School **31** Trail connection **5** Shopping **18**

   Proximity to home **9** Estimated cost **5** Other Library **5**

3. **What type of crossing should be constructed?**

   Overpass/Bridge **41** Underpass/Tunnel **14** Surface Level **11**

4. **Which best describes the reason you choose the above crossing type?**

   Cost **14** Safety **31** Aesthetics/appearance **6**

   Ease of use **30** Other School **1**

5. **Please provide any additional comments regarding the Randall Road Pedestrian Study.**

- Overpass promote bike use rather than car

- Not necessary because of cost and time is would take to construct
- Good idea but costly
- Use a hover craft
- Midblock would benefit school and shopping
- Underpass is the worst idea
- Glad Village is addressing the issue
- At grade crossing is a death wish, Randall Road is a raceway
- Pedestrian crossing would benefit students
- Enclosed bridge, oasis type facility would create jobs
- County Line crossing would help shoppers navigate between the two shopping centers
- Midblock overpass would aid school students as well as being the lowest cost
- Concerned about the liability and risk of inviting pedestrians to mix with high volume of vehicle traffic near Randall Road
- Village should consider other high priority issues (traffic, safety, planning, etc) first, this is not a big enough benefit to entire community for the cost involved
- Improve traffic flow on Randall Road with longer turn lanes at major roads.
- Pedestrian crossing would promote "green" living
- Midblock would help students with easy access to school and entertainment
- Install surface improvements as soon as possible to increase safety
- Will there be sidewalks installed along Randall Road to access the bridge?
- Can the bridge be built so nothing can be thrown from it?
- Improve access to Randall Road through better sidewalk and path approaches on east and west sides
- Underpass poses safety concerns
- Proximity to school will increase use of tunnel/bridge
- Support overpass for safety, at grade is not safe
- Waste of money for bridge or underpass
- Not convinced of the need, increased cars does not mean increased pedestrians. Area is designed for automobiles.
- Would love to be able to ride bike to and from school
- Impact on vehicle traffic?
- Pedestrian crossing would be useful for Jacobs High School cross country and track teams who cross Randall Road
- Safety concern about tunnel
- Bridge would increase use due to visibility
- Promote the "going green movement"
- Midblock provide access to school and shopping
- Consider future development on Randall Road
- Support bridge because less construction and cost
- Mid-block exactly between everything
- Provide alternative transportation options (save money on gas)
- Prefer surface-level rather than bridge
- Pedestrian crossing at County Line would promote walkability to shopping centers and increase business at the Algonquin Commons and Galleria
- Overpass would decrease traffic at intersections

- Would more than one crossing be built?
- Underpass great for people such as mothers with strollers and bikers
- Promote businesses with pedestrian crossing at County Line
- Harnish Drive location would provide access to schools and there are no surface-level crossings at that intersection
- Concern of tax increase to pay for crossing
- Harnish does not have trail connections on east and west sides of Randall
- A bridge should have a ramp access for strollers, bikes, and wheelchairs
- Consider lowering the speed limit on Randall Road to 35 mph
- No sidewalk on Harnish leading to the library
- Install flashing lights in crosswalk at County Line, like they have in Downtown Wisconsin Dells
- Eliminate Harnish intersection idea now that road enhancements have made it very dangerous for traffic and pedestrians
- Midblock with trails that would connect from Stonegate to Eagle Drive would allow access to shopping and library
- Provide pedestrian access between Galleria and Algonquin Commons at Commons Drive

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 West Higgins Road Suite 600 Rosemont, Illinois 60018 TEL (847) 823-0500 FAX(847) 823-0520

October 13, 2008

Mr. David Strahl
AT & T Illinois
2000 E. AT & T Center Drive
Location 2G34
Hoffman Estates, IL 60196

Subject: Randall Road Pedestrian Crossings
(CBBEL Project No. 07-0273-00017)

Dear Mr. Strahl:

We have been hired by the Village of Algonquin to study potential pedestrian crossing over Randall Road. As those crossings may consist of a bridge or underpass it will be very important to know the locations of the utilities. Please send us the locations of your facilities at the five locations on Randall Road indicated on the attached location map.

We appreciate your prompt assistance in this matter.

Sincerely,

Jason G. Souden, PE
Head, Civil Engineering Design Department

cc: Ben Mason – Village of Algonquin

JGS/mk
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CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 West Higgins Road Suite 600 Rosemont, Illinois 60018 TEL (847) 823-0500 FAX(847) 823-0520

October 13, 2008

Daniel Maloney
Comcast Cable Communications, Inc.
1500 McConner Parkway
Schaumburg, IL 60173

Subject: Randall Road Pedestrian Crossings
(CBBEL Project No. 07-0273-00017)

Dear Mr. Maloney:

We have been hired by the Village of Algonquin to study potential pedestrian crossing over Randall Road. As those crossings may consist of a bridge or underpass it will be very important to know the locations of the utilities. Please send us the locations of your facilities at the five locations on Randall Road indicated on the attached location map.

We appreciate your prompt assistance in this matter.

Sincerely,

Jason G. Souden, PE
Head, Civil Engineering Design Department

cc: Ben Mason – Village of Algonquin

JGS/mk
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CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 West Higgins Road Suite 600 Rosemont, Illinois 60018 TEL (847) 823-0500 FAX(847) 823-0520

October 13, 2008

Craig Whyte
NICOR Gas
300 West Terra Cotta Avenue
Crystal Lake, IL 60014

Subject: Randall Road Pedestrian Crossings
(CBBEL Project No. 07-0273-00017)

Dear Mr. Whyte:

We have been hired by the Village of Algonquin to study potential pedestrian crossing over Randall Road. As those crossings may consist of a bridge or underpass it will be very important to know the locations of the utilities. Please send us the locations of your facilities at the five locations on Randall Road indicated on the attached location map.

We appreciate your prompt assistance in this matter.

Sincerely,

Jason G. Souden, PE
Head, Civil Engineering Design Department

cc: Ben Mason – Village of Algonquin

JGS/mk
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CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 West Higgins Road Suite 600 Rosemont, Illinois 60018 TEL (847) 823-0500 FAX(847) 823-0520

October 13, 2008

Dean Breuer
Com-Ed
123 Energy Avenue
Rockford, IL 61109

Subject: Randall Road Pedestrian Crossings
(CBBEL Project No. 07-0273-00017)

Dear Mr. Breuer:

We have been hired by the Village of Algonquin to study potential pedestrian crossing over Randall Road. As those crossings may consist of a bridge or underpass it will be very important to know the locations of the utilities. Please send us the locations of your facilities at the five locations on Randall Road indicated on the attached location map.

We appreciate your prompt assistance in this matter.

Sincerely,

Jason G. Souden, PE
Head, Civil Engineering Design Department

cc: Ben Mason – Village of Algonquin

JGS/mk
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VILLAGE OF ALGONQUIN
PUBLIC WORKS DEPARTMENT

– M E M O R A N D U M –

DATE: Monday, December 08, 2008

TO: Michele Zimmerman

FROM: BobMitchard
Shawn M. Hurtig

SUBJECT: *Pedestrian Crossing alternates review (Randall Road)*

Michele,
Please find below my comments, concerns, and issues, on the subject project. This project was reviewed per your direction. Should you have any questions, comments, or concerns, with the content of this review memo, please do not hesitate to contact me.

PAGE	ISSUE
Misc.	This review is a preliminary review, and does not address any specifications, details, or engineering design
County Line	Underpass would be recommended due to several sight line issues a bridge would cause. However, in either case the relocation of a major storm line would have to be contended with. Issues include: 1st a triple culvert is under the path of this crossing. 2nd a large junction chamber is located on the SW corner of this intersection. 3rd, the water services for the Men's Warehouse would be located under built up path. Good news is that the south east corner of this intersection has a lot of construction space.
Bunker Hill	The best option is the mid-block tunnel or bridge. This would however require a significant amount of property easement or dedication in order to make the path connections. In either case this location has the most amount of space for construction, and has limited utilities to contend with. The next best option would be the south side connection tunnel. Once again this allows for the maximum amount of construction space with limited utility rework. The underpass would be recommended over the bridge due to several sight line issues a bridge would cause. The widening of the east leg of this intersection would need to be considered all the way through the Rolls Drive intersection. The least favorable option at this intersection would be the north side.
Harnish Drive	The amount of utility work in the NW corner of this intersection is daunting. A deep sewer, watermain, Various Comed, AT&T, & Comcast equipment and a monument sign all point to this being a very difficult location. The south side of this intersection if far more inviting, with potential to avoid all utilities outside of a few ComEd transformers. The underpass would be recommended over the bridge due to several sight line issues a bridge would cause.
Longmeadow	The future of this intersection will have a large impact on the installation of this pedestrian crossing. It is not recommended that this pedestrian crossing be considered at this time, as there is little to no foot traffic at this location, and the pending full intersection improvements.

Respectfully submitted,

Shawn M. Hurtig
Public Works Project Manager

Tab 5a

PHOTOGRAPHS
BUNKER HILL

PLAN SHOWING LOCATIONS WHERE PHOTOS TAKEN

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

CLIENT:
Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.

FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-HTINGTON.SHT

DSGN.	
DWN.	PDR
CHKD.	JGS
SCALE:	29'
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	PLAN

TITLE:
EXISTING CONDITIONS
RANDALL AND BUNKER HILL
PHOTOGRAPH LOCATIONS

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

PHOTO 22

PHOTO 23

PHOTO 24

PHOTO 25

PHOTO 26

PHOTO 27

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Rosemont, Illinois 60018
(847) 823-0500

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Village of Algonquin
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ALGONQUIN, ILLINOIS 60102

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DSGN.	
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PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	PICTURES
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TITLE:

EXISTING CONDITIONS
RANDALL AND BUNKER HILL
PHOTOGRAPHS

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

Tab 5b

PHOTOGRAPHS
RANDALL

PLAN SHOWING LOCATIONS WHERE PHOTOS TAKEN

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
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CLIENT:
Village of Algonquin
2200 HARNISH DRIVE
ALGONQUIN, ILLINOIS 60102

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CHKD.	JGS
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CAD USER:	MCZUPOWS
MODEL:	PLAN

FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-RANDALL.SHT

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EXISTING CONDITIONS
RANDALL ROAD MID-BLOCK
PHOTOGRAPH LOCATIONS

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

PHOTO 16

PHOTO 17

PHOTO 18

PHOTO 19

PHOTO 20

PHOTO 21

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FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-RANDALL.SHT

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CHKD.	JGS
SCALE:	1"
PLOT DATE:	2/5/2010
CAD USER:	MCZUPOWS
MODEL:	PICTURES

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EXISTING CONDITIONS
RANDALL ROAD MID-BLOCK
PHOTOGRAPHS

PROJ. NO.
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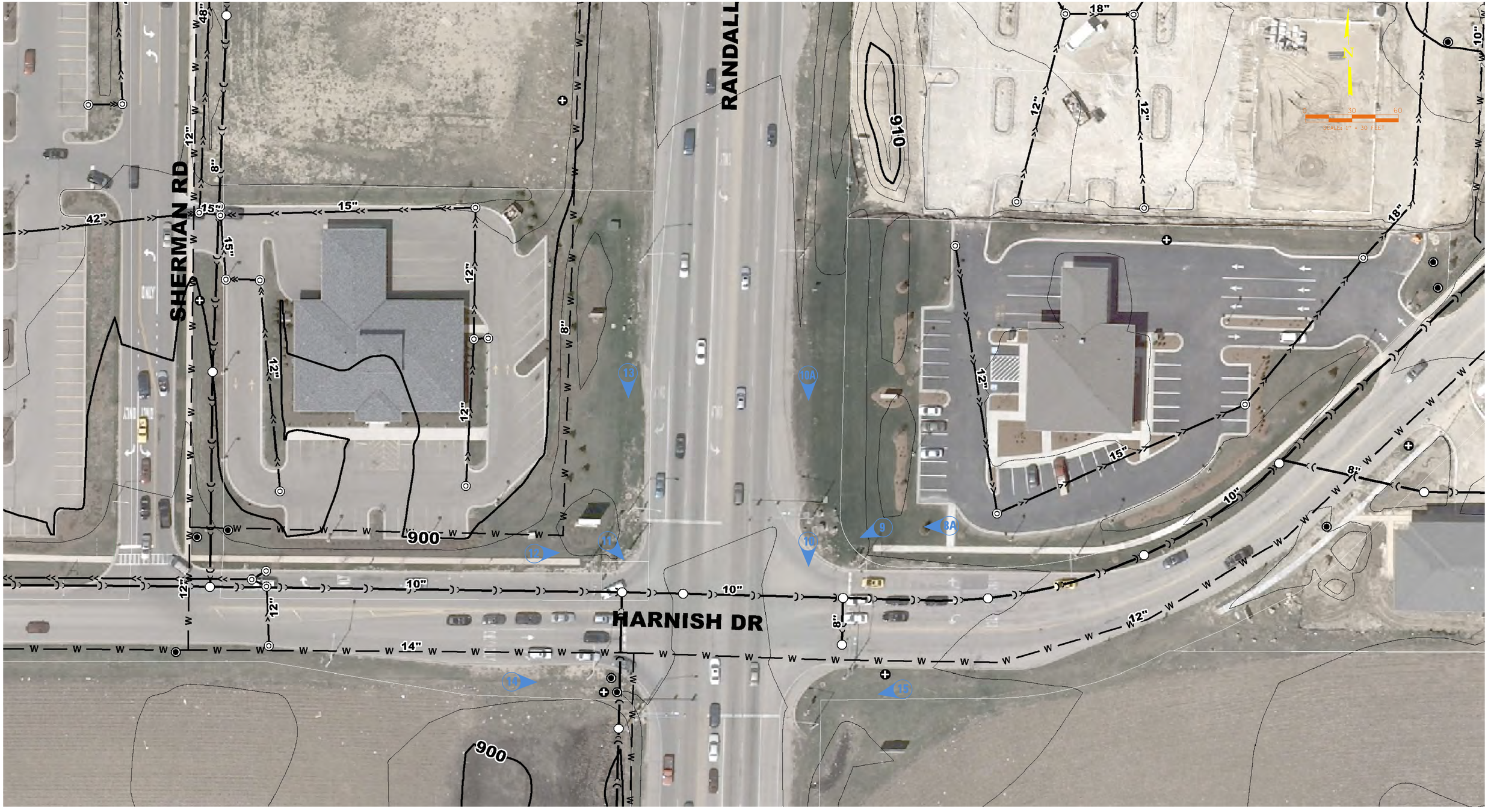
SHEET OF
DRAWING NO.

Tab 5c

PHOTOGRAPHS
HARNISH



PLAN SHOWING LOCATIONS WHERE PHOTOS TAKEN

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MODEL:	PLAN

FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-HARNISH.SHT

TITLE:
EXISTING CONDITIONS RANDALL AND HARNISH PHOTOGRAPH LOCATIONS

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

PHOTO 8A

PHOTO 9

PHOTO 10

PHOTO 10A

PHOTO 11

PHOTO 12

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MODEL:	PICTURES

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TITLE:

EXISTING CONDITIONS RANDALL AND HARNISH PHOTOGRAPHS

PROJ. NO.	
DATE:	
SHEET	OF
DRAWING NO.	

PHOTO 13

PHOTO 14

PHOTO 15

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(847) 823-0500

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EXISTING CONDITIONS
RANDALL AND HARNISH
PHOTOGRAPHS

PROJ. NO.
DATE:
SHEET OF
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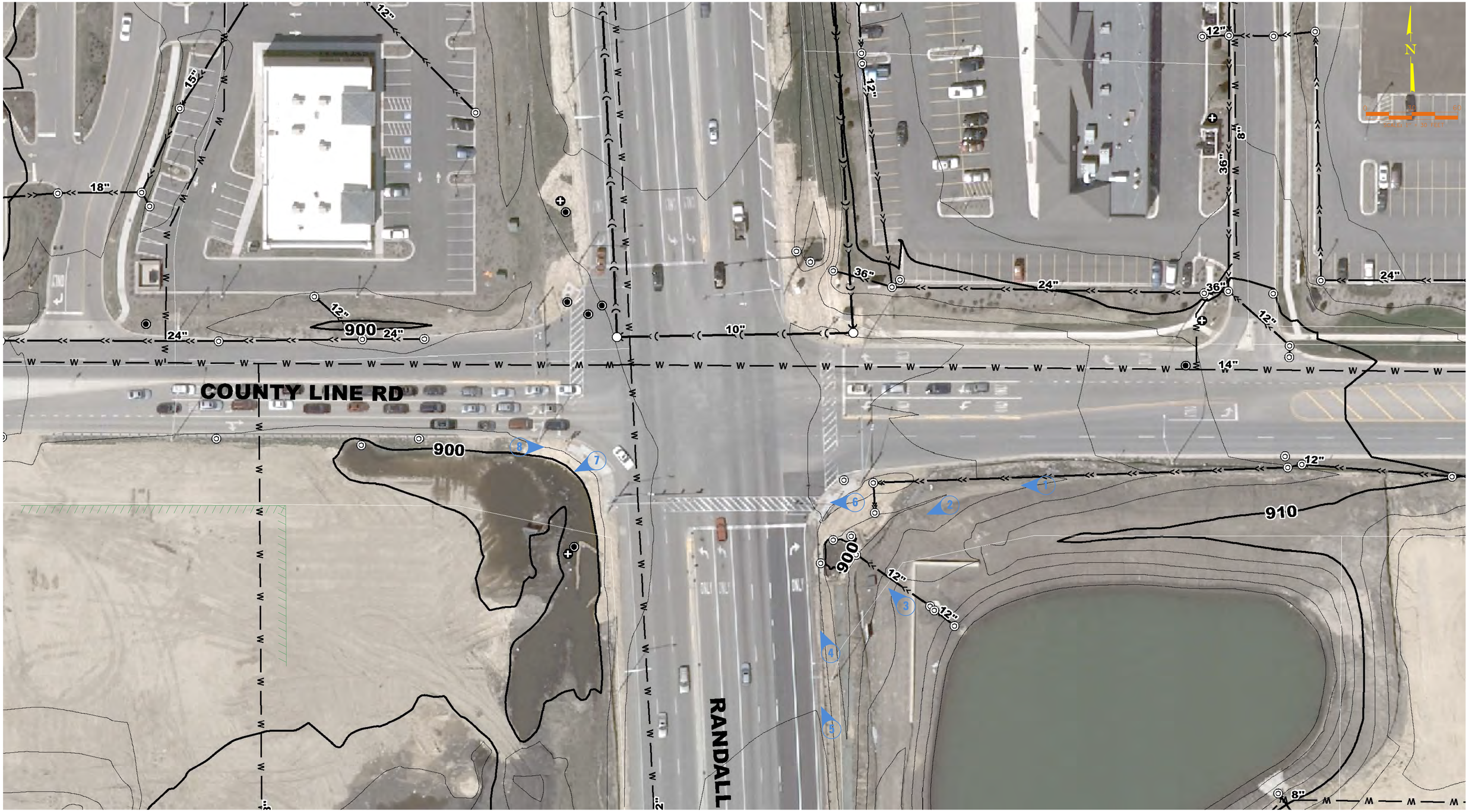
Tab 5d

PHOTOGRAPHS
COUNTY LINE



PLAN SHOWING LOCATIONS WHERE PHOTOS TAKEN

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

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Village of Algonquin
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ALGONQUIN, ILLINOIS 60102

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CAD USER:	MCZUPOWS
MODEL:	PLAN

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EXISTING CONDITIONS RANDALL AND COUNTY LINE PHOTOGRAPH LOCATIONS

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

PHOTO 1

PHOTO 2

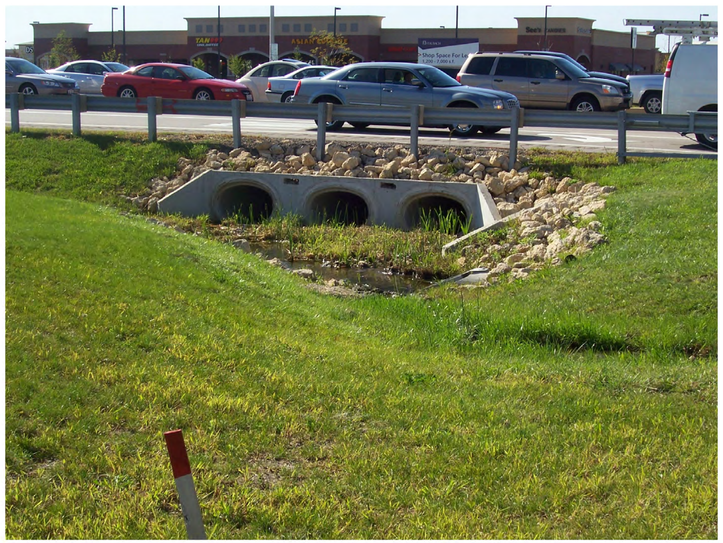

PHOTO 3

PHOTO 4

PHOTO 5

PHOTO 6

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Rosemont, Illinois 60018
(847) 823-0500

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CAD USER:	MCZUPOWS
MODEL:	PICTURES

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TITLE:

EXISTING CONDITIONS
RANDALL AND COUNTY LINE
PHOTOGRAPHS

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

PHOTO 7

PHOTO 8

CHRISTOPHER B. BURKE ENGINEERING, LTD.
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(847) 823-0500

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TITLE:
EXISTING CONDITIONS
RANDALL AND COUNTY LINE
PHOTOGRAPHS

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

Tab 5e

PHOTOGRAPHS
LONG MEADOW

PLAN SHOWING LOCATIONS WHERE PHOTOS TAKEN

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(847) 823-0500

CLIENT:
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CHKD.	JGS
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CAD USER:	MCZUPOWS
MODEL:	PLAN

FILE NAME: N:\ALGONQUIN\070273\070273.00017\Struct\070273-LMEADOW.SHT

TITLE:
EXISTING CONDITIONS
RANDALL AND LONGMEADOW
PHOTOGRAPH LOCATIONS

PROJ. NO.
DATE:
SHEET OF
DRAWING NO.

PHOTO 1

PHOTO 2

PHOTO 3

PHOTO 4

PHOTO 5

CHRISTOPHER B. BURKE ENGINEERING, LTD.
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EXISTING CONDITIONS
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PHOTOGRAPHS

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