

**AGENDA  
BLOOMINGTON TRANSPORTATION COMMISSION  
REGULAR MEETING  
TUESDAY, DECEMBER 19, 2017 4:00 P.M.  
COUNCIL CHAMBERS, CITY HALL  
109 EAST OLIVE STREET  
BLOOMINGTON, ILLINOIS**

**1. CALL TO ORDER**

**2. ROLL CALL**

**3. PUBLIC COMMENT**

*A public comment period not to exceed thirty (30) minutes will be held during each Board and Commission meeting, as well as all regularly scheduled City Council meetings, Committee of the Whole meetings, meetings of committees and/or task forces (hereinafter "committees") created by the City Council, work sessions, and special meetings of the City Council. Nothing herein shall prohibit the combination of meetings, at which only one public comment period will be allowed.*

*Anyone desiring to address the Board, Commission, Committee or City Council, as applicable, must complete a public comment card at least five (5) minutes before the start time of the meeting. Public comment cards shall be made available at the location of the meeting by City staff at least 15 minutes prior to the start time of the meeting. The person must include their name, and any other desired contact information, although said person shall not be required to publicly state their address information. If more than five individuals desire to make a public comment, the order of speakers shall be by random draw. If an individual is not able to speak due to the time limitation and said individual still desires to address the individuals at a future meeting of the same type, said individual shall be entitled to speak first at the next meeting of the same type. (Ordinance No. 2015-46))*

**4. MINUTES:** Review and approve the minutes of the October 17, 2017 and November 28, 2017 regular meetings of the Bloomington Transportation Commission.

**5. REGULAR AGENDA**

- A. **TC-2017-03** – Consideration of a recommendation to City Council concerning a Motor Fuel Tax Resolution for an additional \$900,000 for intersection design, plans, construction documents, right-of-way, utility relocation, and construction for the intersection of Towanda Barnes Road and Ireland Grove Road.

**6. OLD BUSINESS**

- A. NONE

**7. NEW BUSINESS**

- A. NONE

**8. ADJOURNMENT**

For further information contact:

Philip Allyn, City Traffic Engineer

Department of Public Works

Government Center

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**MINUTES  
BLOOMINGTON TRANSPORTATION COMMISSION  
REGULAR MEETING  
TUESDAY, OCTOBER 17, 2017 4:00 P.M.  
COUNCIL CHAMBERS, CITY HALL  
109 EAST OLIVE STREET  
BLOOMINGTON, ILLINOIS**

**MEMBERS PRESENT:** Ms. Angela Ballantini, Ms. Jill Blair, Ms. Maureen (Reenie) Bradley, Ms. Katherine Browne, Mr. Michael Gorman, Ms. Elizabeth Kooba, Ms. Kelly Rumley

**MEMBERS ABSENT:** None

**OTHERS PRESENT:** Mr. David Hales, City Manager; Mr. Steve Rasmussen, Assistant City Manager; Assistant Chief Ken Bays, Police Department; Ms. Cherry Lawson, City Clerk; Mr. George Boyle, City Attorney; Mr. Jim Karch, Director of Public Works; Mr. Kevin Kothe, City Engineer; Mr. Philip Allyn, City Traffic Engineer; Mr. Bill Givens, Traffic Technician

**1. CALL TO ORDER:** Mr. Allyn called the meeting to order at 4:01 pm.

**2. SWEARING IN:** Ms. Lawson swore in/affirmed the members of the Transportation Commission.

**3. ROLL CALL:** Mr. Allyn called the roll. With seven members in attendance, a quorum was established.

**4. PUBLIC COMMENT:**

Mr. Hales addressed the Commission. He thanked the Commission Members for their willingness to serve. In this day and age, everyone is busy in their personal lives, friends, family and work. It's difficult for citizens to serve in an official capacity as the members are on the new Transportation Commission. The City has excellent staff of people that look forward to working with the Commission Members, supporting them, and making it your position as easy as possible. It won't always be easy, decisions won't always be black and white and can be challenging at times. There will be many people with varying opinions on what is right and wrong, what is best, what is not good, etc. It will take sacrifice of time and effort away from other pursuits, but their service will always be appreciated by the City as we know what goes into making good, professional decisions. Staff's Creed is to do the best professional work possible to analyze issues and problems, look at all appropriate options, layout pros and cons and consequences so that the Commission can make a good reasonable decision based on excellent data and research. Thank you for serving and best of luck.

Each Commissioner and Mr. Boyle gave a brief introduction and personal background.

**5. MINUTES:** N/A (No Previous Meeting)

## **6. REGULAR AGENDA**

### **A. Election of Chairman and Vice Chairman**

Mr. Allyn requested nominations for Commission Chairman: Mr. Gorman nominated Mr. Michael Gorman for Commission Chairman, Ms. Bradley seconded the motion. The motion was approved by the Transportation Commission by a unanimous vote via voice vote.

Mr. Allyn turned over the meeting to Mr. Gorman.

Mr. Gorman requested nominations for Commission Vice-Chairman: Ms. Blair nominated Ms. Elizabeth Kooba for Commission Vice-Chairman, Ms. Kooba declined the nomination. Ms. Bradley nominated Ms. Jill Blair for Commission Vice-Chairman, Ms. Kooba seconded the motion. The nomination was approved by the Transportation Commission by a unanimous vote via voice vote.

### **B. Approve 2017 and 2018 Meeting Dates.**

Mr. Allyn presented the proposed Commission Meeting schedule for the remainder of 2017 and all of 2018. Meetings are generally the third Tuesday of the month, with the exception of November 28, 2017.

Ms. Blair motioned to approve the meeting dates. Ms. Rumley seconded the motion. The motion was approved by the Transportation Commission by a unanimous vote via voice vote.

### **C. TC-2017-01 - Consideration of proposed City Code changes to Chapter 29 of the Bloomington City Code, "Motor Vehicles and Traffic":**

- 1. Section 116, 117, 118 (Inclusion of TNC's to references to Taxicabs)**
- 2. Section 148 (Public Carrier Stop locations)**
- 3. Section 153(a) (On-street Accessible Parking Stall Locations)**
- 4. Section 201(d) (Streets with Truck Traffic Prohibited)**

Mr. Allyn discussed the procedure behind this bulk code change. Staff implements changes to various traffic regulations on an emergency or experimental basis and monitors their effectiveness. Implemented minor routine type things can be legally enforced for 180 days and then need to be put into the city code if they are desired to remain. The next step is to have the Commission recommend the proposed changes to the Council, who would then vote to modify the City Code.

Mr. Allyn reviewed the proposed changes. The first group of modifications to Sections 116, 117, 118, and 148 are related to incorporating references to Transportation Network Companies (TNC's) that are similar to taxis. Additional changes to Section 148 pertain to the far north side of Main near Mulberry and Market. This area has been designated for taxi and TNC pickup and drop off during late weekend nights to help with traffic flow and pedestrian safety.

Mr. Allyn indicated the next group of changes are accessible handicap stalls. When requests for handicap stalls are received from residents, Staff will verify proper paperwork and identify a safe place to put the parking spot in front of the requester's home. Periodic reviews are done to verify that the spot is still needed and if it needs to be modified. The proposed Code changes include additions, deletions, or relocations that have been made.

Mr. Allyn reviewed the last group of Code modifications regarding Stewart Street between Evans and Main. A request to restrict truck traffic on that stretch was made due to a noticeable number of trucks using Stewart to access a business instead of the truck route on Lincoln preferred by the business. Stewart Street is 24 feet wide with parking on one side was not conducive to truck traffic. Staff reviewed the site, contacted the local residents and businesses that were affected, and concurred with the truck restriction. It was presented to the Staff Traffic Advisory Committee in effect at that time, who agreed to the restriction. It's been reviewed after implementation and is working effectively.

Ms. Rumley motioned to recommend that City Council Approve the proposed ordinance modifying Sections 116, 117, 118, 148, 153(a), and 201(d) of Chapter 29 (Motor Vehicles and Traffic) of the Bloomington City Code. Ms. Blair seconded the motion.

Ms. Bradley states she noticed in the pages of Code provided that the alley between Taylor and Olive is to be closed. Ms. Bradley indicated that one block of that alley is open to traffic. Mr. Allyn indicated that is the current Code passed in 1977, but it may not necessarily be the same in the field. These discrepancies are one of the types of things we are attempting to clean up. Mr. Boyle stated that because this change to the Code was not on the agenda, we cannot recommend modifying it at this time but that it could be placed on the agenda for a future meeting.

Mr. Gorman asks if any changes related to TNC's need to be made to Chapter 40? Mr. Allyn says most of the language in Chapter 40 was updated in 2015, but did not get added to the location restriction sections in Chapter 29. Mr. Boyle adds that the 1<sup>st</sup> ordinance was put in during 2015 and things have gone smoothly so far, but TNC use is increasing and future modifications may still be needed.

Mr. Boyle states that in addition to the 180 day trail period process, Section 7 of Chapter 29 also give the Traffic Engineer the authority to work with other City Officials including the Police to corporate in ways to carry out duties specified in the ordinance.

Mr. Gorman asks a question for future consideration: very few of the Connect Transit bus stops locations are listed as places where cars can be towed if parked. There are lots of stops around the City that would be beneficial to add to the Code. Mr. Gorman requested Staff review for a recommendation at a future meeting.

Mr. Gorman asked and the three sections relating to stop locations, handicap stalls, and truck bans. Mr. Gorman requested if they could be incorporated into GIS. He sees a benefit for police use in their vehicles. Mr. Bill Givens discusses that handicap spaces are being put in for major streets as resurfacing work is being completed. Minor streets will be included as time allows. The most reliable reference is City Code. Mr. Gorman also inquires about signs being included in GIS. Mr. Givens indicated that all City signs are currently inventoried using GIS for internal use, but that this information is not currently public. Mr. Gorman stated that the City Code may not be the most accessible way for the public to get information.



The motion was approved by the Transportation Commission by a vote of 7-0 with the following votes cast: Ms. Ballantini – yes, Ms. Blair – yes, Ms. Bradley – yes, Ms. Browne – yes, Mr. Gorman – yes, Ms. Kooba – yes, Ms. Rumley – yes.

**D. Open Meetings Act and Freedom of Information Act Presentation.**

Mr. Boyle discusses the acts listed. Both Acts apply to the Commissioners as public officials. The Legal department is available to answer any questions or discuss conflicts. Feel free to contact them. There are a number of gray areas and opinions on any topic and Legal is always willing to answer questions Commissioners may have. Mr. Boyle reminded everyone that within 90 days from the swearing in everyone must sign up and take a training on the Open Meetings Act at the Illinois Attorney General's website. Some items in these Acts can come as a surprise to new members. FAQs for both Acts are in the Commissioners binders. These Acts generally are called the sunshine laws as the public should be understand what is going on and what decisions are being made. The Commission is a public body so if there is a meeting that involves 3 or more members discussing public business, then it falls under the act. Subcommittee meetings also are subject to these Acts. There are specific requirements that must be followed pertaining to meeting notification, keeping of minutes, etc. Due to agenda requirements, items not on the agenda can be discussed, but no decisions can be made. Acts apply to email or other contemporaneous electronic communications when there are replies and ongoing discussions. It's safest to not partake in email or other electronic communications of public business when 3 or more commissioners are involved.

Ms. Blair asks about public business matters on Facebook and other social media sites. Mr. Boyle says it is a gray area. Facebook postings may fall on either side of the line. There is not a definitive answer. Best practice is to look at the article posted on the social media and make a note to bring up at the next meeting rather than commenting directly on the site. Mr. Gorman also commented that it's permissible to talk one on one with regard to the Open Meetings Act. Mr. Boyle confirmed.

Mr. Boyle indicated the Freedom of Information Act says that all public records used by the government are subject to the Act regardless of formation, format or the body who produced them. There are some exceptions, but generally the assumption of secrecy doesn't exist. Best practice is to not write something you would not want to see in the newspaper or the public to have access to. It applies to hard documents as well as emails, texts, or other electronic communications. It applies to content generated on public or private devices. If the document is in possession of the government, it is generally subject to the Act.

Mr. Gorman asks if training is available on FOIA. Mr. Boyle says no training is available as of his knowledge. The City does have a FOIA officer that has received a lot of training that can help with questions.

**7. OLD BUSINESS: N/A (No Previous Meeting)**

**8. NEW BUSINESS**

Mr. Allyn adds that each Commissioner received a binder with various information intended to be a quick reference. For example, it includes the meeting schedule, contact information for the

Commissioners, FAQs for the OMA and FOIA mentioned previously, city map, a list of helpful websites, and other information. Of particular note is a document that gives the Staff interpretation on where the responsibilities of Staff versus the Commission fall. Per the ordinance establishing the Commission, it's tasked with: the Commission looks at things at the Policy level rather than the detail level. This document contains examples of the types of matters that will be handled by the Staff or Commission level.

**9. ADJOURNMENT:** The meeting adjourned at 4:59 pm unanimously by voice vote; motioned by Ms. Rumley and seconded by Ms. Kooba.

Respectfully,

Philip Allyn  
City Traffic Engineer

**MINUTES  
BLOOMINGTON TRANSPORTATION COMMISSION  
REGULAR MEETING  
TUESDAY, NOVEMBER 28, 2017 4:00 P.M.  
COUNCIL CHAMBERS, CITY HALL  
109 EAST OLIVE STREET  
BLOOMINGTON, ILLINOIS**

**MEMBERS PRESENT:** Ms. Angela Ballantini, Ms. Jill Blair, Ms. Katherine Browne, Mr. Michael Gorman, Ms. Elizabeth Kooba, Ms. Kelly Rumley

**MEMBERS ABSENT:** Ms. Maureen (Reenie) Bradley

**OTHERS PRESENT:** Mr. Steve Rasmussen, Acting City Manager; Mr. George Boyle, City Attorney; Mr. Jim Karch, Director of Public Works; Mr. Philip Allyn, City Traffic Engineer; Mr. Austin Grammer, City Economic Development Coordinator; Mr. Eric Schmitt, McLean County Administrative Services Director; Mr. Jerry Stokes, McLean County Engineer

**1. CALL TO ORDER:** Mr. Gorman called the meeting to order at 4:00 pm.

**2. ROLL CALL:** Mr. Allyn called the roll. With six members in attendance, a quorum was established.

**3. PUBLIC COMMENT:**

Mr. Phil Reynolds, Old Town Township Roadway Supervisor, addressed the Commission. Traffic is increasing on TR 2100E and TR 1300N (Oakland Ave.) as residents of the subdivision avoid Ireland Grove Road increasing maintenance work required on their roads. Mr. Reynolds isn't sure whether the intersection changes will result in more people using Ireland Grove Road and fewer using the Township's roads. Mr. Reynolds would like to see the Transportation Commission be included in future development discussions on the east side to help minimize impacts to the Township.

Mr. Dick Biggs, resident of the White Eagle Subdivision, addressed the Commission regarding the Ireland Grove/Towanda Barnes intersection and the Ireland Grove/Streid intersection. Mr. Biggs supports the proposed improvements at Towanda Barnes with one concern: he is concerned about the effect on the intersection at Streid Drive. Mr. Biggs is a longtime resident of this immediate area and has watched the growth occur over the years and understands the future growth potential. Mr. Biggs often travels east on Ireland Grove to Benjamin Elementary and previously avoided the intersection by taking a significantly longer alternate route during bad weather, but after being in a crash recently, now uses this alternate route exclusively. A second crash occurred 3 weeks later resulting in several injuries. The intersection has several factors that make it difficult, including speeds and small gaps on Ireland Grove, sun glare in the morning, sight distance around other vehicles using the intersection, crossing multiple lanes, the curve to the east, and other factors. Concerns are documented in the Commission's packet in Items 8, 15 and 22 on pages B-69 through B-75.

**4. MINUTES:** Reviewed the minutes of the October 17, 2017 regular meeting of the Bloomington Transportation Commission.

**5. REGULAR AGENDA**

- A. TC-2017-02 – Consideration of a recommendation to City Staff to include intersection modifications at Fairway Drive and Empire Street (IL Route 9) with the resurfacing of Fairway Drive as part of the planned FY2019 Resurfacing Plan.**

Mr. Allyn introduced the intersection at Fairway Drive and Empire Street. The intersection of the frontage road is currently very close to Empire Street resulting in extremely short lanes between Empire and the frontage road as well as a full lane-width job in the through lanes across the frontage road intersection. This creates some safety issues with people turning at the frontage road intersection as well as people traveling southbound on Fairway who have to negotiate the lane shift.

The City hired a consultant to study the intersection and develop some options to improve the operations and safety. The study includes the following recommendations: install a raised median on the north leg from Empire to north of the frontage road creating right-in-right-out access to/from the frontage roads similar to the south leg of the intersection; lanes on the north leg would be reduced to a left turn lane and through-right lane, each of more adequate length; south of Empire the lane configuration stays the same, but has some minor alignment changes; spot sidewalk improvements are proposed to be added south of Empire to provide better connectivity to existing sidewalks and cross walks; bike lanes are proposed for both northbound and southbound as recommended in the City Bicycle Master Plan.

The changes are proposed to be completed as part of the FY2019 Resurfacing work on Fairway scheduled to be completed in 2018 from north of Robinhood to a yet to be determined point south of Washington.

The Study has been submitted to IDOT, who was in favor of the proposed changes and indicated approval to move forward.

Due to the changes in access, especially to the north frontage road, Staff recommends having a Public Open House to discuss the project with the area stakeholders. Comments received at the Open House would be incorporated into the design if appropriate. If significant negative feedback is received, the project can return to the Commission for direction.

Mr. Gorman indicated that during a ride-along with a police officer, the officer indicated that drivers at this intersection are required to stop prior to the frontage road and not block the intersection. He inquired what the requirements would be with the new frontage road configuration. Mr. Allyn indicated that the stop signs on Fairway at the frontage roads would be removed, with the longer turn lanes. This would essentially result in the frontage roads functioning similarly to an entrance in the middle of a turn lane in which drivers on the frontage roads would yield to drivers on Fairway. Mr. Gorman suggested this as an education component at the Open House.

Mr. Gorman asked why there was no cross walk across the east leg of Empire. Mr. Allyn indicated that the improvements focused on connecting the existing pedestrian facilities, which currently cross only on the west side of Fairway. In addition, there is only sidewalk to the north on the west side of Fairway to which to connect. Mr. Gorman asked if sidewalk could be added to the west side along with additional cross walks across the east leg of Empire and the north leg of Fairway. Mr. Allyn indicated that this could be considered as part of the potential future larger project reconstructing Robinhood and Fairway into a roundabout. There is restricted Right-of-Way as well as utility and drainage conflicts on the east between Empire and Robinhood that will make installing sidewalk through this area significantly more expensive and difficult to construct. Mr. Karch added that there are differences between Gap Sidewalk work (filling in large sections without existing sidewalk) and Sidewalk Maintenance work. This requested addition would be Gap Sidewalk work. We only have City funding currently to complete maintenance work with one small Gap project each year and there are many locations in the community where Gap sidewalks are really needed. Staff will take this location under consideration.

Mr. Gorman indicated that his inquiry on incorporating the sidewalk stems from the City's Complete Streets Ordinance and the fact that this work is proposed as part of a resurfacing project and therefore all modes will be taken into full consideration. Mr. Allyn indicated that all users modes are being accommodated with in addition to the addition of bike lanes for bicycle users, since pedestrians are

currently already accommodated along the roadway via the sidewalk on the west side. In fact the proposed sidewalk to be added around Empire will increase the mobility of pedestrians even further. Mr. Gorman requested that a cost estimate be completed to construct sidewalk along the east side of Fairway between Empire and Robinhood to be brought back to the Commission for consideration.

Ms. Blair inquired if it was known how far into the future the roundabout option would be completed. Mr. Allyn indicated that there is currently no plan or budget to move forward with the roundabout option. It was suggested as something that could be done in the future to assist with access between the frontage roads and Empire since it would allow an easier U-turn at Robinhood, however the scope of work required for its construction would exceed what could be accomplished as part of the resurfacing project and the funding that is currently available. Staff will be monitoring the U-turns at this location and if problems arise, they will be addressed.

Ms. Rumley inquired about alley access to Harbor Freight. Mr. Allyn indicated that there is alley access at the north end of the Harbor Freight as well as the property immediately to the west. The raised median was purposely planned to stop south of this entrance to maintain access from Fairway to this alley.

Ms. Blair motioned to recommend That City Staff proceed with Public Involvement in the form of a Public Open House, and, pending positive feedback at the Open House, proceed with including the proposed modifications into the FY2019 resurfacing work. If significant negative feedback is received at the open house, modifications to the project will be evaluated for potential implementation prior to moving forward. Ms. Browne seconded the motion. The motion was approved by the Transportation Commission by a vote of 6-0 with the following votes cast: Ms. Ballantini – yes, Ms. Blair – yes, Ms. Bradley – yes, Ms. Browne – yes, Mr. Gorman – yes, Ms. Kooba – yes, Ms. Rumley – yes.

**B. TC-2017-03 – Consideration of a recommendation to City Council concerning a Motor Fuel Tax Resolution for an additional \$900,000 for intersection design, plans, construction documents, right-of-way, utility relocation, and construction for the intersection of Towanda Barnes Road and Ireland Grove Road.**

Mr. Allyn indicated the project began in 2014 as a joint project between the City and McLean County, with the County as the lead agency. Mr. Allyn introduced Mr. Jerry Stokes, County Engineer. Mr. Stokes gave a brief presentation on the history and current status of the project. There has been significant development (3,400 residences) along Towanda Barnes north of Route 9 (Empire) in the last 15 years. Much of this new development utilizes Towanda Barnes and Ireland Grove to access State Farm, Benjamin Elementary School, and Evans Junior High School creating significant backups to southbound Towanda Barnes (specifically right turning) in the morning hours and Ireland Grove in the evening hours. Design team developed idea to construct the southbound free-flow right turn lane to alleviate the congestion and approached IDOT about completing an interim Intersection Design Study based on a 10-year design rather than the typical 20-year design to construct just the free flow right. In addition, the west leg would be re-marked to provide a dual left turn lane and single through-right lane to help alleviate the Ireland Grove eastbound left turn congestion. Accident data was reviewed: in the past 5 years, there have been 36 crashes, including one fatality. This location is the highest crash history on the County Highway system, similar to the number seen at IL Route 9 and three times the number seen at other City-County intersections on Towanda Barnes.

Between 2014 and 2016, Unit 5 changed their school start times, condensing additional traffic into the peak hours and the Grove subdivision continued to develop resulting in traffic continuing to increase dramatically on the north, east, and west legs. In order to get approval IDOT of the IDS, updated traffic counts were obtained. These new counts showed that additional lanes were needed on both the east and west legs and IDOT required a full 20-year design rather than the interim 10-year design if State MFT funds were to be used for the project.

In addition to the congestion problems at the intersection, there are several other issues. To avoid backups, traffic cuts through the private, frontage road southwest of the intersection. Traffic also has been avoiding the intersection by traveling north from the Grove and Benjamin Elementary and Cornerstone Academy on Township Road 2100E which cannot adequately handle the increase in traffic resulting in failing pavement and unsafe curves and lane widths.

Other potential alternates have been considered. Conversations have been had with the schools to change their start times to move school traffic out of the commuter traffic peak, but this was not feasible due to the school bus staggered schedule needed for the District. The signal times have been tweaked to maximize efficiency, but isn't enough to solve the congestion without additional lanes.

Two options are presented for discussion: First, build the full IDOT approved intersection with 50/50 split between City and County as recommended by Staff. This would cost the City approximately \$900,000 in MFT funds. The second option is to use general funds (if they can be made available) rather than MFT funds. This would remove IDOT's requirement for all of the proposed improvements to be constructed. Instead, the free-flow right alone would be built under the 50/50 split with a City cost of approximately \$250,000. This would reducing the southbound congestion on the north leg. However, the congestion on the east leg would remain and traffic would likely continue to bypass the intersection utilizing TR 2100E.

Mr. Allyn reminded everyone that this intersection is one of the County's highest priorities and has one of the highest numbers of crashes on the County's Highway system. When the intersection is compared to other intersections within the City's roadway system, it ranks 117 out of 1,314 intersections with a recorded crash, which puts it in the top 9% when ranked by Crashes per million vehicles. When ranked by number of crashes, it falls at 62 out of 1,314, which is in the top 5%. When you remove intersections on a State Route and look at just City or City/County/Town intersections, this intersection ranks 10<sup>th</sup> overall.

Mr. Allyn mentioned this is the only major intersection on Towanda Barnes without a southbound right turn lane. There is a lot of other information available in the meeting Packet. Mr. Allyn indicated that the Staff recommendation was to do the MFT funded, IDOT approved project and explained the requirements for using MFT funds and typical projects in which they are generally most efficiently used. Mr. Allyn indicated that the requested \$900,000 in MFT funds is for the City's portion of the construction cost, as well as amounts for utility relocation, ROW acquisition, and a small remainder of the initial design engineering. The total construction cost is estimated to be \$1.6 million, which compares to \$7.3 million for the Towanda Barnes & Raab intersection.

Ms. Kooba expressed concerns about speeding and asked how this project addresses the speeding and related safety concerns. Mr. Allyn indicated that speeding is hard to solve with an intersection project. One method to control speeding is to increase enforcement, however, it's not practical to continuously have a police presence. In general, the easiest way is to provide traffic calming in the form of creating an urban environment with curb and gutter, buildings, trees along the road and other features that create a feeling of a tighter space. This naturally slows drivers down. A rural section with wide shoulders and open ditches surrounded by open fields creates a feeling of openness that makes drivers feel safer at higher speeds. When looking at Towanda Barnes specifically, it's a major thoroughfare for the east side of Bloomington whose purpose is to convey larger amounts of traffic from the north side to the south side and vice-versa. Speeding primarily happens between intersections. Since this project is limited to the intersection itself, there isn't really the ability to directly impact the speeding before or after the intersection. The purpose of the project is to reduce congestion at the intersection and address safety issues related to a poorly functioning and over capacity intersection. There may be some positive side effects on speeding realized. Namely, if drivers do not have to wait 5-10 minutes to get through the intersection, they hopefully will be less likely to speed once they are through the intersection in an attempt to make-up time.

Ms. Blair asked if any traffic analysis was completed with Vale Church relocating to Ireland Grove to the west of this intersection. Mr. Karch indicated that while traffic impact analysis is typically required for a new development, there was not a formal analysis completed for the Vale relocation. Since the property use (church) has its peak times on Sunday mornings which do not overlap with the busy times on Ireland Grove, and because Ireland Grove's five current lanes at that location provide plenty of capacity, it is unlikely to have any negative traffic impacts to the City's infrastructure.

Ms. Ballantini indicated that capital improvements are typically easy to fund initially. What is the plan for future maintenance? Mr. Allyn indicated that Ireland Grove is currently maintained by the City and Towanda Barnes is currently maintained by the County. This will continue in the future.

Mr. Gorman asked if a roundabout would be a better alternate for this intersection rather than expanding it in its currently form. Was a roundabout considered? Mr. Allyn indicated that the initial driver for the project was the southbound right turn lane and the eastbound left (improved with the marking change to dual left turn lanes) and the focus was placed there on completing a smaller, interim improvement. At that time, it wasn't feasible to reconstruct the entire intersection as a roundabout to solve the one movement. Roundabouts are a great tool for many locations, but likely not the right solution for this intersection. It would require a dual lane roundabout, which would be more difficult for drivers to "learn" in this area where drivers are not as familiar with them, and the initial risk would be high given the relatively high traffic volumes at the intersection. The best experience comes with starting with single-lane roundabouts in an area to allow drivers to gain familiarity. Mr. Gorman agrees that a dual lane roundabout would be needed based on traffic volume per federal guidelines. Since the Council referring this project to the Commission specifically to review whether the money is being spent wisely, he wants to see an analysis of a roundabout at this location to help determine whether the proposed improvements are the best option. He agrees that there will be a period of changing driver behavior and expectations, but believes that it may potentially be a better long-term solution and would like to at least review it. Ms. Brown indicated that she believes that the speeding issue and learning to use a roundabout are both predicated on driver behavior change and is less convinced by the arguments based on crash data since it's hard to know the causes of the crashes. She believes that the presence of right turn lanes at the other intersections along Towanda Barnes lead to driver expectation for a turn lane at this intersection and the addition of the free-flow right is predictable and would help drivers feel more comfortable.

Ms. Rumley requested asking the Police to increase enforcement in the area for a period of time and monitor the results on speeding. Mr. Stokes indicated that the County Sheriffs do monitor Towanda Barnes as a whole and utilize radar trailers when possible. Mr. Allyn indicated that Staff is working to complete a speed study on Ireland Grove between Streid and Towanda Barnes in the next month or two and will also request additional enforcement by the Police. Mr. Gorman visited the area several weeks ago with the County Board representative for this area and noticed multiple red light running occurrences that appeared to be related to congestion frustration. It was clear that speed and red light running are both problems and additional enforcement would be helpful. However, safety gains due to enforcement are often shorter term gains and an engineered solution is likely needed. He is concerned that with the free-flow right turn lane drivers won't attempt to even slow down, and safety won't be improved, so he is worried to see that configuration in an area with higher speeds and poor driver behavior. Mr. Allyn indicated that the free flow right will have a relatively tight radius that will require drivers to slow down: it's designed for travel speeds around 20 mph, and drivers will not be able to negotiate it at 45 mph. In addition, the free flow right will reduce congestion, reducing rear end and other related crashes.

Mr. Gorman indicated that during his site visit, which was on a Friday, he saw significant back up of at least 2-3 cycles on the east leg, he did not see any vehicles on the north, south, or west legs that took more than one cycle to pass the intersection. Ms. Kooba reaffirmed that as a daily commuter in the area, the backup on Ireland Grove is a regular occurrence. Mr. Allyn indicated that he couldn't speak to Mr.

Gorman's personal experience, but the backups have been well documented both in regular visits by City and County Staff and on video. Mr. Allyn also mentioned one of the contributing factors to the backups on Ireland Grove in the morning is that Unit 5 no longer buses from the west half of the Grove to Benjamin Elementary and more parents are now dropping off at the school. This results in more condensing of traffic into the smaller time period as they no longer leave for work before the busy time.

Mr. Gorman asked about impacts if the motion was delayed a month or two. Mr. Allyn indicated that due to the schools, it would be advantageous for as much of the construction as possible to occur during the summer. To accomplish that, the project would need to be bid early enough to allow construction to start in May. A delay of two or three months would impact that start, a one month delay will probably not. The next Commission Meeting would be in December, meaning it wouldn't go to Council until January.

Ms. Kooba asked about the traffic volumes at the other Towanda Barnes intersections and requested a crash per volume ratio for comparison of the intersections rather than just the crash numbers provided.

Mr. Gorman reiterated the desire for an analysis on roundabout feasibility. Mr. Allyn asked Mr. Karch if the City in the past has had any discussions with our local IDOT District 5 Staff regarding roundabouts. Some Districts are pro-roundabout, some of very anti-roundabout and their opinion will greatly influence whether MFT money would be allowed to be spent on a roundabout at this location. Mr. Karch indicated that District 5 has been resistant to roundabouts and other newer design ideas as they tend to be more conservative in their preferences. Mr. Karch also mentioned that some basic analysis could be completed, but that there is no funding for a larger scale study is available currently. Mr. Allyn indicated that based on those comments, it sounded like general funds would be needed for a roundabout, which wouldn't be prohibitive, but would require additional budget consideration. Mr. Gorman asked for verification that roundabouts typically cost less. Mr. Allyn indicated that it depends entirely on the specifics of the location. For intersections where the choice is a single lane roundabout or installing new signals and multiple turn lanes, the roundabout is usually cheaper. In this location, where there is already traffic signals and five lanes of pavement on three of the four legs, the proposed widening is likely cheaper since the dual lane roundabout will require replacing a significant amount of pavement both within the circle area and to install curbing, speed calming approaches.

Ms. Browne requested a summary of points quantifying the expected increase in intersection efficiency and safety with the changes. Mr. Allyn indicated that Staff could run several traffic models comparing before and after conditions and provide that comparison of vehicular delay to show the expected congestion reduction. It would be harder to provide quantitative predictive numbers for the safety component. Ms. Browne would like whatever information would be possible to provide context. She also indicated concern with the distance between the free-flow right merging on Ireland Grove and the potential new signal at Streid Drive. Mr. Allyn indicated that there would be over half a mile of separation, so there should not be any conflicts.

Ms. Rumley also requested information related to the years in which right turn lanes were installed at the Towanda Barnes intersections at Raab, Empire, and GE Road and the crash rates before and after.

Mr. Gorman indicated that there was an apparent consensus to delay a decision until additional requested information was presented to ensure that the right long term solution is obtained given the large amount of money being requested to be spent. The specific information requested was reviewed.

Mr. Gorman asked if the Ireland Grove project will impact Streid Drive. Mr. Allyn indicated that there should not be a noticeable change in volume at the Streid intersection due to the changes at Ireland Grove. Mr. Gorman asked about a change in grouping on vehicles on Ireland Grove and the presence of gaps. Mr. Allyn responded that a large part of the problem at Streid right now is a lack of gaps. Currently, at Ireland Grove, there is a constant queue of vehicles waiting to make the southbound right. Any gaps



created by excess green time on other conflicting movements (northbound left, westbound through) are being filled by vehicles turning red on red from the southbound right. The free-flow right should allow the vehicles to maintain their grouping created at the Oakland signal as they make the southbound right, thereby not filling the gaps at the end of the other movements. There should not be a significant difference at Streid due to the proposed changes at Ireland Grove.

Ms. Blair motioned to delay this discussion until the December Commission meeting to allow staff to gather additional data and information. Ms. Kooba seconded the motion. The motion was approved via unanimous voice vote.

## **6. OLD BUSINESS: N/A (No Previous Meeting)**

## **7. NEW BUSINESS**

### **A. INFORMATION – Ireland Grove Road and Streid Drive traffic signal improvements.**

Mr. Allyn indicated that there have been a number of complaints at this intersection both related to safety and the ability to turn from Streid onto Ireland Grove. Traffic signals have been requested. Staff counted traffic volumes at the intersection and reviewed past crash data. The crash history for the past five years was presented. There has been a history of 1-2 crashes per year except for 2014, when there were no crashes.

Mr. Allyn stated the Manual on Uniform Traffic Control Devices (MUTCD, the federal standard for all things traffic control) provides warrants or guidelines for when traffic signals should be considered. Mr. Allyn proceeded to describe the nine warrants and how they are applied. Warrants 1-3 are based on vehicle volumes, Warrant 4 is based on pedestrian volumes, Warrants 5-9 are based on special conditions (School Crossing, Railroad Crossing, signal coordination, etc.) with Warrant 7 pertaining to crash rate.

Mr. Allyn reviewed the application of each warrant to the Streid Drive intersection. Warrant 1 requires that traffic volumes reach a minimum threshold for at least eight hours during a typical day, it was met for 11 hours. Warrant 2 requires that traffic volumes reach a minimum threshold for at least four hours during a typical day, it was met for seven hours. Warrant 3 requires that traffic volumes reach a minimum threshold for at least one hour during a typical day, it was met for five hours. The volume-based warrants were all met by a significant margin.

Mr. Allyn indicated that there are currently no improvements planned or budgeted for this intersection. Given that signals are warranted by a reasonable amount, Staff worked to identify possible interim solutions with a reasonable cost. One idea that is being pursued is the installation of signal heads on span wires rather than more costly mast arms. This would allow for a cheaper installation that could be modified more easily in the future. Long term plans call for Abraham Road to be realigned to line up with Streid Drive.

Photos were reviewed of an initially temporary installation of span wire signals at a State intersection in Peoria (IL Route 40/Knoxville Ave. and the IL Route 6 Off-Ramp) that has remained in place due to its successful operation. Similar span wire signals will be installed at Streid as a pilot project that, if successful, may become a tool to be used in other similar situations around the City.

The City has a contact with Bodine Electric to assist with signal related work that the City Staff do not have the equipment to completed, such as setting mast arms, boring conduits, etc. The intent is to have Bodine set the poles and anchors and run the span wires. The remaining signal equipment (heads, controller, etc.) will be purchased using funds currently budgeted for equipment replacement. City Electricians would install the remaining equipment and completing the wiring. Both the Bodine contract and the equipment budget have adequate funds remaining to complete this work and still keep a

contingency amount for the rest of the fiscal year. It is currently anticipated that these signals could be online as early as Spring of 2018.

Ms. Blair asked if the signals would always be red-green-yellow or if they could be switched back to stop signs on Streid during the night and other low-volume periods. Mr. Allyn indicated that they would be programmed similar to regular signals where Ireland Grove will have a green signal unless a vehicle is detected on Streid, so there shouldn't be any periods where cars are stopped for a red light on Ireland Grove with no cars on Streid.

Mr. Gorman expressed he is very much in favor of the concept and the solution finding funding is a great proposal from staff. He agreed that with the future realignment of Abraham, it would be a temporary solution and that it doesn't make sense to construct permanent equipment that would need to be replaced. This different, fiscally responsible approach is appreciated.

Mr. Allyn also added that as a pilot project, we are also exploring using some newer signal technology. For example since new signal heads are now LED's that require considerably less power, we are trying to incorporate all low-voltage equipment, which would be safer to work around and in the event of a vehicle crash, as well as potentially incorporating solar panels for the power source, and new detection types. One concern relates to snow not being able to melt off the lower powered LED heads. Since LED's have become the standard everywhere for new installations, this is something that is an on-going concern at other locations as well. Mr. Karch pointed out that State law requires an intersection to be treated as an all way stop in the event that signals are not visible, and that would be the case at this location as well as others were this to occur. Heads being on spans wires with some movement may also help knock snow off heads before it freezes.

The intersection will be monitored closely to ensure satisfactory performance.

**8. ADJOURNMENT:** The meeting adjourned at 5:38 pm unanimously by voice vote; motioned by Ms. Kooba and seconded by Ms. Blair.

Respectfully,

Philip Allyn  
City Traffic Engineer

**CITY OF BLOOMINGTON  
REPORT FOR THE TRANSPORTATION COMMISSION  
DECEMBER 19, 2017**

| CASE<br>NUMBER: | SUBJECT:                                                                                                                                                                                                                                                                        | ORIGINATING FROM:                    |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| TC-2017-03      | Potential Intersection Modifications at<br>Towanda Barnes Rd. & Ireland Grove Rd.                                                                                                                                                                                               | City Council<br>(10/23/2017 Meeting) |
| REQUEST:        | Recommendation to City Council regarding a Motor Fuel Tax Resolution for an additional \$900,000 for intersection design, plans, construction documents, right-of-way, utility relocation, and construction for the intersection of Towanda Barnes Road and Ireland Grove Road. |                                      |
|                 |                                                                                                                                                                                                                                                                                 |                                      |
|                 |                                                                                                                                                                                                                                                                                 |                                      |

**STAFF RECOMMENDATION: Approval**

**Staff recommends the Transportation Commission pass the following motion recommending:**

- A. That City Council approve the Motor Fuel Tax Resolution for an additional \$900,000 for intersection design, plans, construction documents, right-of-way, utility relocation, and construction for the intersection of Towanda Barnes Road and Ireland Grove Road and the Mayor and City Clerk be authorized to execute the necessary documents.**

**1. ATTACHMENTS:**

- a. Location Map**
- b. Roundabout Alternate Feasibility Summary**
- c. Towanda Barnes Average Daily Traffic Volumes**
- d. Towanda Barnes Intersections Crash Rate Comparison**
- e. Intersection Capacity Comparison - Build versus No-Build**

**2. BACKGROUND AND SUPPLEMENTAL INFORMATION:**

This item was previously Tabled at the November 28, 2017 Transportation Commission Meeting with a request for additional information. See the packet from that meeting for the previously provided information and project history. The following information was specifically requested:

1. *Would a roundabout be a better overall solution for this intersection?* Roundabouts have many benefits as traffic control devices and are a good fit for many intersections but are not always the best option for every situation. Attached is a summary of the advantages and disadvantages of reconstructing a roundabout at this intersection of Ireland Grove and Towanda Barnes as compared to the currently designed modifications to the signalized intersection. To function adequately, the roundabout will need to be constructed with three lanes and will still need the southbound free-

flow right bypass lane. Note the roundabout's higher construction cost, project delay, additional significant preliminary and design engineering costs, and additional utility relocation needs. It does not appear that a roundabout would be a preferable alternative in this location.

In addition, please see the attached Capacity Comparison Table discussed below. Preliminary Analysis was completed for an assumed two-lane roundabout, with the southbound right turn bypass remaining. With this bypass included, the roundabout appears to function acceptably in the AM peak hour. However, in the PM peak period, the heavy eastbound left turn lane movement does not have enough lanes to serve the volume and effectively overpowers the roundabout by not allowing gaps for the other legs. It appears that a three-lane roundabout would be required, significantly increasing the construction cost and the complexity for drivers.

2. *Can the Police increase enforcement to help control speeding?* The City completed a speed study on Ireland Grove between Streid Drive and Towanda Barnes Road in early December. Two locations were measured. At the first (between Streid and Tullamore), the 85<sup>th</sup> Percentile Speed (the speed at which 85% of drivers are driving at or below) was determined to be greater than 62 miles per hour with 61% of drivers exceeding 55 mph. At the second location (between Tullamore and Glenbridge), the 85<sup>th</sup> Percentile Speed was determined to be 61 miles per hour with 45% of drivers exceeding 55 mph. This shows that while drivers are slowing down as they pass the developed area (golf course, Subway, Pony Fields, etc.) and approach the Towanda Barnes intersection, there is still an unusually high violation rate and speeds are high as drivers pass Streid Drive. Engineering Staff met with the Police Department and reviewed the data and the Police will be increasing enforcement in this area via their STEP program. The effects will be monitored moving forward.
3. *What are the traffic volumes at the other intersections on Towanda Barnes and how does the crash rate at Ireland Grove compare when ranked by crashes per volume?* Attached are two Figures:
  - a. See the attached map showing the most recent Average Daily Traffic at various locations along Towanda Barnes (blue) as well as the major cross roads (red), generally collected in 2015. Volumes shown are the total vehicular volume in both directions of travel.
  - b. See the attached table converting the crash numbers for multiple major intersections along Towanda Barnes as provided by the County into Crashes per 1 million vehicles at the intersection. Rates are calculated using the most current ADT information available, generally collected in 2015.
4. *How much more efficient does the intersection become with the proposed modifications?* Rough Capacity Analysis was completed for the AM and PM peak hours for the intersection in its current configuration for both the 2016 counted traffic volumes and the projected 2037 Design Year traffic volumes. These values should generally reflect the current performance, as well as the performance in the 2037 Design Year without any other changes between now and then. These results are

presented in the attached table along with the analysis results for the proposed improvements for the design year. Also included in this table is Preliminary Capacity Analysis for a roundabout option.

5. *Can Staff provide years in which right turn lanes were installed at Towanda Barnes and Raab Road, GE Road, and Empire and the crash rates before and after the changes?* Right turn lanes were added to most of the intersections along Towanda Barnes at the same time the road was widened from 2 lanes to 5 lanes. This widening was accomplished in four County construction projects spread out between 2001 and 2016, starting at the south end at US Route 150 and continuing to north of Raab Road and a widening project along Empire that extended noticeably far to the north and south by the State around 1996. As a result, changes in crash rates due specifically to the addition of right turn lanes cannot be determined for most of the intersections along Towanda Barnes. The exception is at Oakland Avenue where northbound and southbound right turn lanes were added in 2008 along with eastbound and westbound left turn lanes on Oakland and this intersection is thus included. Note that ADT's increased significantly from year to year during this period due to the rapid growth on the east side of Bloomington-Normal and counts were not obtained every year. For comparison sake, the ADT closest to the year in the middle of each crash data range was generally used. In addition, since most of these construction projects spanned multiple years, the accident data ranges do not start exactly with the year of construction in order to eliminate crashes that may have occurred during construction traffic control. Finally, most years between 1996 and 2015 there was a major construction widening and/or pavement reconstruction project going somewhere along Towanda Barnes. The construction traffic control that drivers would have to negotiate is not typical and may skew the crash numbers. Below is the best information available:
  - a. At Oakland, Towanda Barnes was widened from 2 lanes to 5 lanes around 2002, and northbound and southbound right turn lanes and eastbound and westbound left turn lanes were added in 2008. From 2003-2007, there were 9 crashes, or about 0.392 crashes per million vehicles. From 2009-2013, there were 9 crashes, or about 0.379 crashes per million vehicles.
  - b. The intersection at GE Road was upgraded around 2003. Complete crash data is not available for 1998-2002. From 2004-2008, there were 19 crashes, or about 0.795 crashes per million vehicles.
  - c. The intersection at Empire/IL Route 9 was upgraded around 1996. Complete crash data is not available for either 1991-1995, or 1998-2002.
  - d. The Raab Road intersection was just completed in 2016, so post-construction crash data is not available. Complete preconstruction crash data is not readily available since this intersection is located in the Town of Normal.

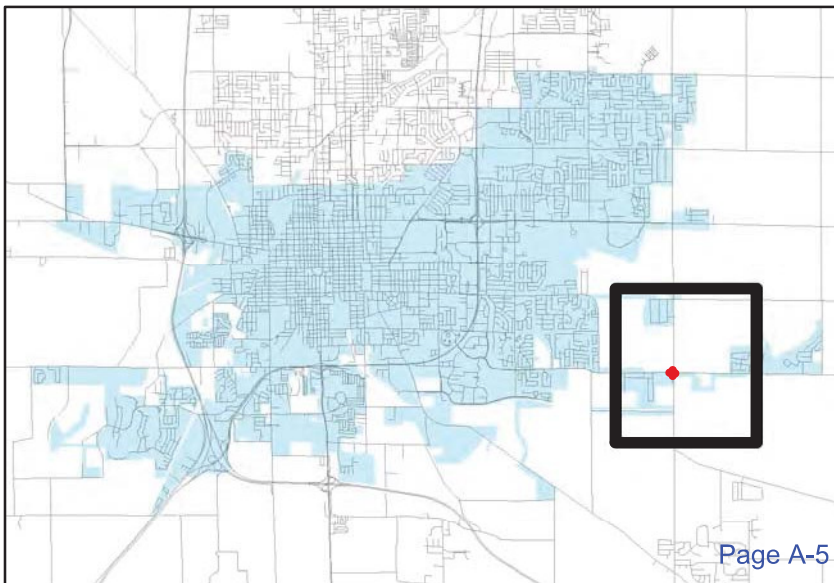
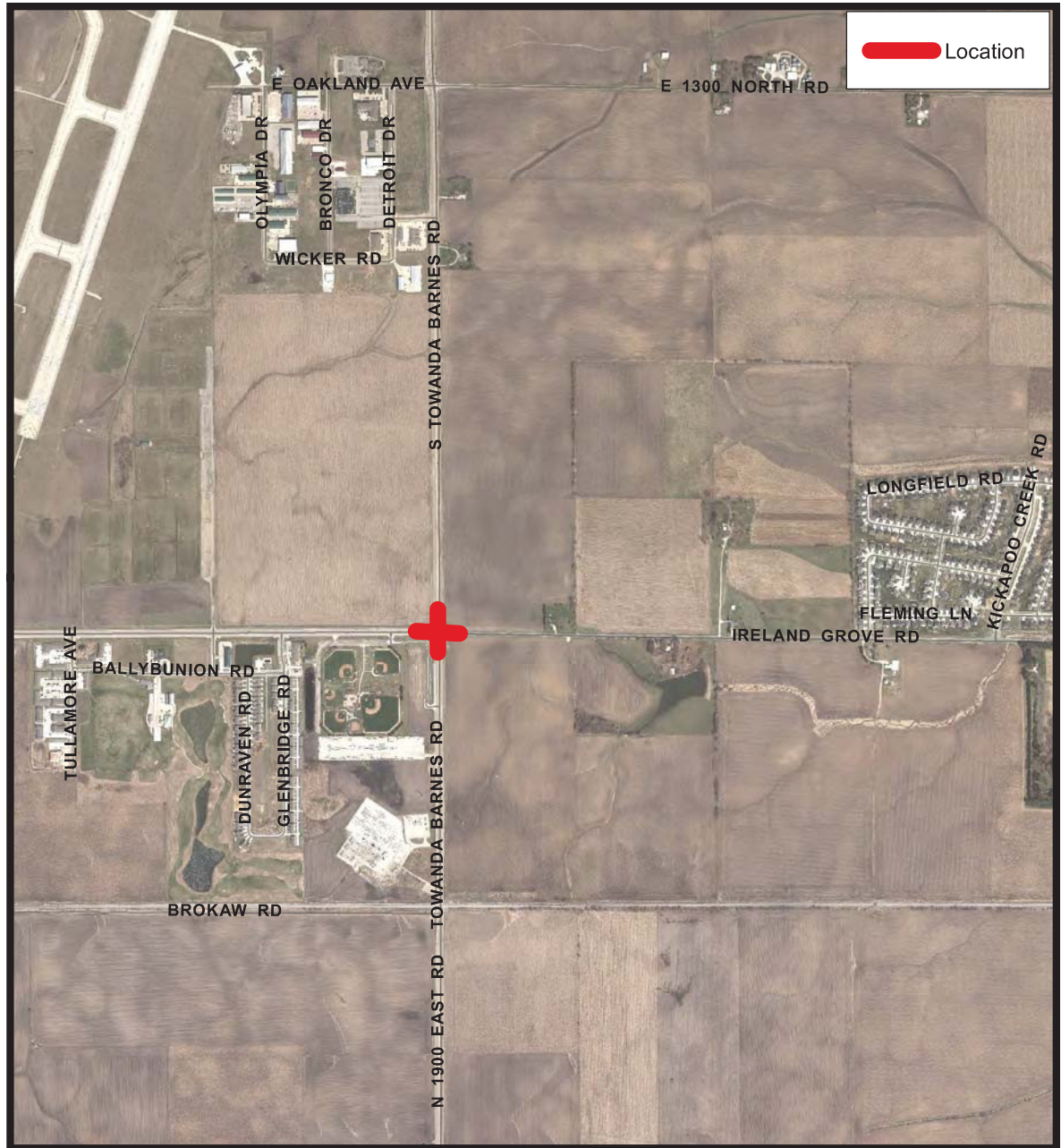
**3. STAFF RECOMMENDATION:**

Staff recommends the Transportation Commission pass the following motion recommending:  
That City Council approve the Motor Fuel Tax Resolution for an additional \$900,000 for intersection design, plans, construction documents, right-of-way, utility relocation, and construction for the intersection of Towanda Barnes Road and Ireland Grove Road and the Mayor and City Clerk be authorized to execute the necessary documents.

Respectfully submitted,

Philip Allyn, PE, PTOE  
City Traffic Engineer





## Roundabout Feasibility Review

Intersection of Ireland Grove Road and Towanda Barnes Road, Bloomington, IL

| Points of Comparison     | Intersection As Proposed (Traffic Signals)                                                                                                                                                                                                                                                                                        | Roundabout Intersection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Proposed Improvements    | <p>Construction of the following via pavement widening:</p> <ul style="list-style-type: none"> <li>- Free-flow southbound right turn lane</li> <li>- Eastbound right turn lane</li> <li>- Westbound right turn lane, second through lane, and full length left turn lane</li> <li>- Minor traffic signal modifications</li> </ul> | <p>Construction of three-lane roundabout required for satisfactory functionality:</p> <ul style="list-style-type: none"> <li>- Removal and Replacement of existing pavement for hundreds of feet to the north and south to provide speed control curves and three receiving lanes on the northbound direction of the north leg</li> <li>- Pavement widening on the east leg reduced a couple hundred feet compared to the Signal option</li> <li>- Free-flow southbound right turn bypass lane still required to accommodate southbound right vehicles</li> <li>- Lighting of the intersection and the approaches within the limits of the splitter islands</li> </ul>                                      |
| Vehicle Safety           | Proposed improvements will reduce congestion which should improve congestion related safety such as rear-end crashes and reduce red-light running. However, there will be significantly more potential conflict points and higher speeds (and thus severity) within the intersection itself compared to a roundabout.             | There will be an initial "learning period" for drivers during which crashes may increase. Three-lane roundabouts are VERY uncommon in the United States. Significantly decreased number of potential conflict points for traffic compared to signalized intersection. Red-light-running will be eliminated, however less severe crashes may increase (lane change and failure to yield sideswipes). Lower speeds at the intersection should decrease crash severity. Studies have shown roundabouts have lower rates of injury crashes. However, while severity should still be lower, a three-lane roundabout should not be expected to have the same crash reduction of a single or dual lane roundabout. |
| Pedestrian Accommodation | Due to lack of pedestrian need at this time, pedestrian accommodations are not currently included. As the area develops and pedestrian need increases, crosswalks and pedestrian signal equipment can be added with minimal effort and cost.                                                                                      | Due to lack of pedestrian need at this time, pedestrian accommodations would not be included. However, splitter islands would be constructed with depressed curbs at future crosswalk locations to reduce reconstruction. Provide pedestrians and bicyclists refuge when crossing roadway. Pedestrians only have to watch for traffic in one direction at a time.                                                                                                                                                                                                                                                                                                                                           |



## Roundabout Feasibility Review

Intersection of Ireland Grove Road and Towanda Barnes Road, Bloomington, IL

| Points of Comparison          | Intersection As Proposed (Traffic Signals)                                                                                                                                                                                                                   | Roundabout Intersection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Traffic Capacity/Delay</b> | Proposed design is expected to accommodate projected 20 year peak hour traffic volumes. Some traffic will still be required to come to a complete stop at intersection when there is no conflicting traffic causing unnecessary delay during off peak hours. | During off-peak times, delay will be reduced as vehicles will not be required to stop when there is no conflicting traffic. However, dual-lane roundabout will not function during the PM peak times due to the overwhelming eastbound left volumes. Three-lane roundabout required for acceptable operation likely not practical due to cost, increased difficulty in navigation, and reduced safety benefits.                                                                                           |
| <b>Construction Budget</b>    | \$1.6 million<br>- Cost primarily consists of widening and resurfacing the existing pavement, so almost all of the existing pavement will remain in place                                                                                                    | \$2.5 million to \$3.5 million<br>- Construction limits to north and south will be extended to provide speed control curves<br>- Due to changes in alignment and cross slopes, pavement removal and replacement will be significantly increased<br>- Lighting required to be added to all four legs for the length of the splitter islands as well as additional lighting at the roundabout<br>- Increased costs for staging and traffic control to keep intersection open to traffic during construction |
| <b>Design Costs</b>           | Construction plans are complete and ready to be advertised for construction bids. No additional preliminary or design engineering costs are anticipated.                                                                                                     | All preliminary and design engineering will need to be completed for a new design estimated to be approximately \$150,000 to \$200,000.                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Utility Impacts</b>        | Minor relocations required (Estimated to cost approximately \$30,000).                                                                                                                                                                                       | In addition to similar minor relocations required for the Signalized option, relocation of the existing transmission pole in the northeast quadrant will be required (Estimated total utility relocations costs of approximately \$150,000)                                                                                                                                                                                                                                                               |
| <b>Construction Staging</b>   | Construction would be staged to keep intersection open during construction.                                                                                                                                                                                  | A roundabout would be more difficult and expensive to keep open to traffic during construction than a traditional intersection. Likely not practical to close the intersection due to the heavy commuter volumes on these two arterial roads and lack of close detour route.                                                                                                                                                                                                                              |

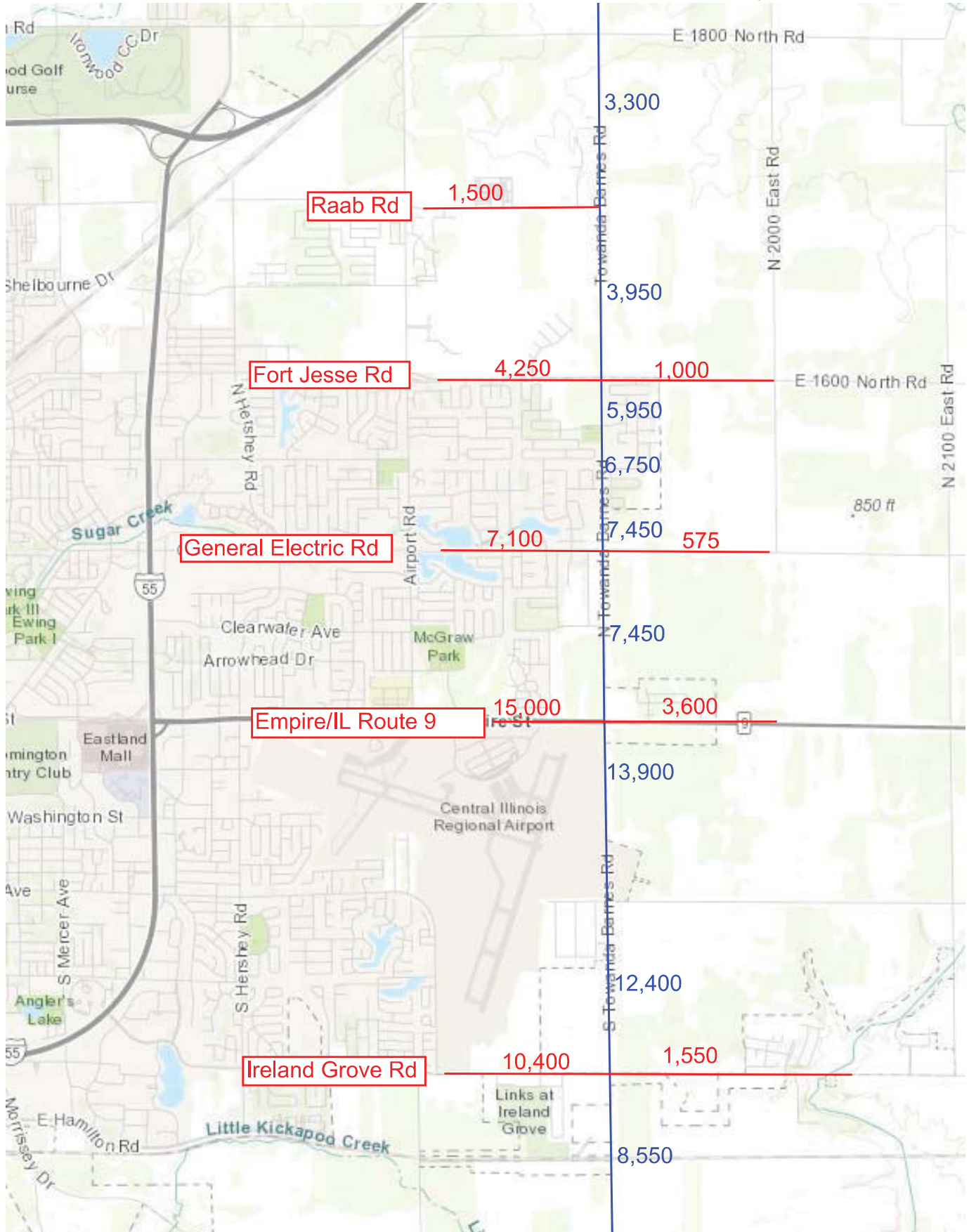
## Roundabout Feasibility Review

Intersection of Ireland Grove Road and Towanda Barnes Road, Bloomington, IL

| Points of Comparison          | Intersection As Proposed (Traffic Signals)                                                                                                                                                                                    | Roundabout Intersection                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction Schedule         | Project is currently targeted for construction during the summer/fall of 2018, pending completion of ROW acquisition and funding authorization by the City and the County.                                                    | The project will essentially be re-started from the beginning. Preliminary engineering (Intersection Design Study) will need to be redone and approved by IDOT (if MFT funds are used) and completely new design plans and construction documents will need to be completed. New ROW acquisition documents will need to be completed and negotiations restarted. This process will likely delay construction two years until the summer/fall of 2020. |
| Right-of Way                  | A small amount of ROW is needed.                                                                                                                                                                                              | More ROW will be required than the Signal option. ROW needed in the southwest quadrant may impact the viability of that property.                                                                                                                                                                                                                                                                                                                     |
| Environmental & Pollution     | Increased vehicle idling, starting and stopping will increase noise, fuel consumption and vehicle emissions.                                                                                                                  | Continual motion of vehicles through the intersection decreases delay, starting and stopping, which decreases fuel consumption and vehicle emissions. Center island presents opportunity for environmentally friendly landscaping.                                                                                                                                                                                                                    |
| Public Perception & Awareness | Drivers more familiar with traffic patterns. Very little public education required.                                                                                                                                           | Potentially, aesthetically pleasing landscaping could be added to center island and splitter islands to create a "gateway" into the Bloomington area. Although modern roundabouts are striped and signed to be intuitive to drivers, public education will likely be required, since they are not prevalent in this area, especially with a three-lane roundabout.                                                                                    |
| Future Costs                  | Current traffic signal maintenance costs (electricity, etc.) will continue. Other maintenance costs should be similar to those for a roundabout. Future cost to add pedestrian and/or bicycle accommodations should be minor. | Current traffic signal maintenance costs (electricity, etc.) will be eliminated, however costs due to increased roadway lighting will be added. Other maintenance costs should be similar to those for a roundabout. Future cost to add HAWK signals required at each crosswalk when pedestrian accommodations are added will be significant and increase maintenance costs further.                                                                  |

Towanda Barnes Volumes  
Cross Road Volumes

Agenda Item A  
Towanda Barnes Daily Traffic Volumes



## Agenda Item A

| <b>Crash Rate Summary Analysis</b><br>Towanda Barnes Intersections |                   |                        |                            |
|--------------------------------------------------------------------|-------------------|------------------------|----------------------------|
| Cross Street                                                       | Number of Crashes | Intersection Total ADT | Crash Rate per 1M Vehicles |
| Raab Road                                                          | 11                | 4,250                  | 1.418                      |
| Fort Jesse Road                                                    | 12                | 7,575                  | 0.868                      |
| GE Road                                                            | 12                | 11,288                 | 0.583                      |
| Empire (IL Rte 9)                                                  | 36                | 19,975                 | 0.988                      |
| Ireland Grove Road                                                 | 36                | 16,450                 | 1.199                      |

| Capacity Summary Analysis - AM Peak Hour    |                                    |          |                                       |          |                                             |          |                                            |          |
|---------------------------------------------|------------------------------------|----------|---------------------------------------|----------|---------------------------------------------|----------|--------------------------------------------|----------|
| Towanda Barnes & Ireland Grove Intersection |                                    |          |                                       |          |                                             |          |                                            |          |
| Movement                                    | NO IMPROVEMENTS<br>2016 (Existing) |          | NO IMPROVEMENTS<br>2036 (Design Year) |          | PROPOSED IMPROVEMENTS<br>2036 (Design Year) |          | DUAL-LANE ROUNDABOUT<br>2036 (Design Year) |          |
|                                             | Delay (sec)                        | LOS      | Delay (sec)                           | LOS      | Delay (sec)                                 | LOS      | Delay (sec)                                | LOS      |
| Eastbound Left                              | 33.1                               | C        | 34.0                                  | C        | 37.3                                        | D        |                                            |          |
| Eastbound Through                           | 43.6                               | D        | 151.5                                 | F        | 33.2                                        | C        |                                            |          |
| Eastbound Right                             |                                    |          |                                       |          | 11.5                                        | B        |                                            |          |
| <b>Eastbound Approach</b>                   | <b>38.7</b>                        | <b>D</b> | <b>102.3</b>                          | <b>F</b> | <b>31.8</b>                                 | <b>C</b> | <b>6.4</b>                                 | <b>A</b> |
| Westbound Left                              | 25.1                               | C        | 25.5                                  | C        | 31.6                                        | C        |                                            |          |
| Westbound Through                           | 93.3                               | F        | 567.8                                 | F        | 52.5                                        | D        |                                            |          |
| Westbound Right                             |                                    |          |                                       |          | 20.9                                        | C        |                                            |          |
| <b>Westbound Approach</b>                   | <b>90.9</b>                        | <b>F</b> | <b>546.2</b>                          | <b>F</b> | <b>43.5</b>                                 | <b>D</b> | <b>12.3</b>                                | <b>B</b> |
| Northbound Left                             | 39.9                               | D        | 162.3                                 | F        | 40.7                                        | D        |                                            |          |
| Northbound Through                          | 34.4                               | C        | 66.0                                  | E        | 42.1                                        | D        |                                            |          |
| Northbound Right                            | 34.5                               | C        | 66.7                                  | E        | 42.5                                        | D        |                                            |          |
| <b>Northbound Approach</b>                  | <b>36.6</b>                        | <b>D</b> | <b>105.1</b>                          | <b>F</b> | <b>41.6</b>                                 | <b>D</b> | <b>12.7</b>                                | <b>B</b> |
| Southbound Left                             | 37.2                               | D        | 251.2                                 | F        | 43.2                                        | D        |                                            |          |
| Southbound Through                          | 180.2                              | F        | 444.8                                 | F        | 43.4                                        | D        |                                            |          |
| Southbound Right                            | 1,825.2                            | F        | 2,967.2                               | F        | 43.6                                        | D        |                                            |          |
| <b>Southbound Approach</b>                  | <b>1,280.4</b>                     | <b>F</b> | <b>2,083.8</b>                        | <b>F</b> | <b>43.3</b>                                 | <b>D</b> | <b>3.0</b>                                 | <b>A</b> |
| <b>Overall Intersection</b>                 | <b>519.9</b>                       | <b>F</b> | <b>923.7</b>                          | <b>F</b> | <b>40.7</b>                                 | <b>D</b> | <b>8.0</b>                                 | <b>A</b> |

| Capacity Summary Analysis - PM Peak Hour    |                                    |          |                                       |          |                                             |          |                                            |          |
|---------------------------------------------|------------------------------------|----------|---------------------------------------|----------|---------------------------------------------|----------|--------------------------------------------|----------|
| Towanda Barnes & Ireland Grove Intersection |                                    |          |                                       |          |                                             |          |                                            |          |
| Movement                                    | NO IMPROVEMENTS<br>2016 (Existing) |          | NO IMPROVEMENTS<br>2036 (Design Year) |          | PROPOSED IMPROVEMENTS<br>2036 (Design Year) |          | DUAL-LANE ROUNDABOUT<br>2036 (Design Year) |          |
|                                             | Delay (sec)                        | LOS      | Delay (sec)                           | LOS      | Delay (sec)                                 | LOS      | Delay (sec)                                | LOS      |
| Eastbound Left                              | 30.3                               | C        | 37.1                                  | D        | 52.6                                        | D        |                                            |          |
| Eastbound Through                           | 39.6                               | D        | 225.0                                 | F        | 53.1                                        | D        |                                            |          |
| Eastbound Right                             |                                    |          |                                       |          | 19.4                                        | B        |                                            |          |
| <b>Eastbound Approach</b>                   | <b>34.3</b>                        | <b>C</b> | <b>130.3</b>                          | <b>F</b> | <b>41.6</b>                                 | <b>D</b> | <b>170.6</b>                               | <b>F</b> |
| Westbound Left                              | 38.5                               | D        | 38.8                                  | D        | 32.2                                        | C        |                                            |          |
| Westbound Through                           | 47.0                               | D        | 265.4                                 | F        | 32.1                                        | C        |                                            |          |
| Westbound Right                             |                                    |          |                                       |          | 27.4                                        | C        |                                            |          |
| <b>Westbound Approach</b>                   | <b>46.6</b>                        | <b>D</b> | <b>254.2</b>                          | <b>F</b> | <b>29.8</b>                                 | <b>C</b> | <b>69.5</b>                                | <b>F</b> |
| Northbound Left                             | 55.4                               | E        | 164.1                                 | F        | 29.2                                        | C        |                                            |          |
| Northbound Through                          | 44.1                               | D        | 59.5                                  | E        | 35.8                                        | D        |                                            |          |
| Northbound Right                            | 44.2                               | D        | 61.0                                  | E        | 36.4                                        | D        |                                            |          |
| <b>Northbound Approach</b>                  | <b>47.6</b>                        | <b>D</b> | <b>90.1</b>                           | <b>F</b> | <b>34.1</b>                                 | <b>C</b> | <b>123.6</b>                               | <b>F</b> |
| Southbound Left                             | 36.9                               | D        | 257.9                                 | F        | 40.5                                        | D        |                                            |          |
| Southbound Through                          | 184.2                              | F        | 478.6                                 | F        | 47.8                                        | D        |                                            |          |
| Southbound Right                            | 189.7                              | F        | 488.7                                 | F        | 47.8                                        | D        |                                            |          |
| <b>Southbound Approach</b>                  | <b>167.6</b>                       | <b>F</b> | <b>441.0</b>                          | <b>F</b> | <b>45.6</b>                                 | <b>D</b> | <b>10.9</b>                                | <b>B</b> |
| <b>Overall Intersection</b>                 | <b>82.0</b>                        | <b>F</b> | <b>240.6</b>                          | <b>F</b> | <b>41.6</b>                                 | <b>D</b> | <b>97.4</b>                                | <b>F</b> |