**CITY OF BATAVIA**

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**PLAN COMMISSION**

**AGENDA**

**Wednesday, January 4, 2017**

**7:00 PM**

**City Council Chambers - First Floor**

1. Call To Order
2. Roll Call
3. Items Removed/Added/Changed
4. Continued Public Hearing And Design Review For One Washington Place
   111-133 East Wilson Street and 20 North River Street
   1 N. Washington, L.L.C., applicant
   • Public Hearing: Amendments to the Zoning Map for the Downtown Building Height Overlay District and Planned Development Overlay District
   • Design Review

   Documents:

   PC ONE WASH PL 12-30-16 ATTACH.PDF
5. Other Business
6. Adjournment

Plan Commission
Tom Gosselin
Sara Harms
Joan Joseph
Tom LaLonde, Chair
Sue Peterson
Gene Schneider, Vice-Chair

# CITY OF BATAVIA

**DATE:** December 30, 2016

**TO:** Plan Commission

**FROM:** Joel Strassman, Planning and Zoning Officer

**SUBJECT:** Continued Public Hearing and Design Review for One Washington Place
111-133 East Wilson Street and 20 North River Street, 1 N. Washington, L.L.C., applicant

- **Public Hearing:** Amendments to the Zoning Map for the Downtown Building Height Overlay District and Planned Development
- **Design Review**

On December 7, 2016, the Plan Commission opened, took testimony and continued the public hearing for amendments to the Zoning Map-Planned Development Overlay, and opened and continued its Design Review, all for consideration of the proposed One Washington Place development. The hearing and Design Review will resume at the Plan Commission meeting on January 4, 2017. Please refer to the attached draft excerpt minutes of the December 7th Commission meeting for information on the presentation of the project, hearing attendee input, and Commission discussion. Also attached to this memo is a Question-Answer sheet, a compilation of questions raised at the hearing and responses to those questions.

New Information

The applicant has submitted revised plans. Changes include:

- Providing approximately 14,350 square feet of commercial space
- Providing 186 residential units – 94 of which are 2-bedroom
- Providing 350 parking spaces
- Delineating bicycle parking
- Altering some window sizes
- Removing the lower garage level vehicle doors
- Specification of exterior materials with alternate siding and wall shingles added in some areas
- Adding gables on the south elevation
- Specification of landscaping
- Building identification signage

On December 12th, the Historic Preservation Commission (HPC) reviewed the proposal, including the attached plans. The HPC was pleased with the overall architectural detailing, and noting that the tower at the Washington/Wilson corner that is designed to reflect the character of the former Church's bell tower. The corner height allows the tower to be more of a landmark than it was before. The HPC made specific mention of the good use of exterior materials and the positive impact the building will have to Washington Street, especially by replacing the former Church's parking lot. The HPC unanimously approved the building's Certificate of Appropriateness (COA).

Staff Analysis

Plan revisions retain the positive aspects of the proposal staff noted previously, and do not negatively affect its impact to the downtown. While both the parking required and supplied increased slightly, the changes have a negligible effect to the downtown from the findings of the commissioned parking, traffic, and economic impact studies. The revised Traffic Study prepared by James J. Benes and Associates is attached.

Staff echoes the positive HPC review regarding the building's design and use of materials. Proposed landscaping would accentuate the site and compliment the building and downtown. Lighting and street furniture would fit the character of those items currently in place in downtown.

Staff Recommendations

Staff recommends the Commission resume the hearing and design review. After all speakers have had an opportunity to speak and the Commission has received the information it wants, the Commission should close the hearing and conclude consideration of the Design Review.

After closing the hearing and concluding the design review, staff recommends the following for the **Amendments to the Zoning Map**:

1. Approving findings for the Amendments to the Zoning Map. A draft of these findings for the Commission's consideration is attached.
2. Recommend City Council approval of an Amendment to the Zoning Map to remove the DBH Overly for the subject properties.
3. Recommend City Council approval of an Amendment to the Zoning Map to add a Planned Development Overlay to the subject properties, in general conformance with the plans herein, with the following modifications to the Zoning Code and conditions:
    a. Modification to Zoning Code Sections 2.405.A and B to allow vision glass coverage and wall penetrations (entries) below required
    b. Modification to Zoning Code Table 4.204 to allow fewer than the required number of parking spaces
    c. Modification to Zoning Code Section 4.205.D to allow parking space and parking space and aisle geometry less than required
    d. Other minor Zoning Code modifications necessary to implement the project
    e. City acquisition of the property located at 113 East Wilson Street
    f. City Council approval of all demolition COAs for existing buildings/structures on the subject properties
    g. Final staff approval of building elevation and landscape plans

Regarding the **Design Review**, staff recommends:

1. Approving findings for the Design Review. A draft of these findings for the Commission's consideration is attached.
2. Approving the Design Review, in general conformance to the plans herein, subject to:
    a. City Council approval of the Planned Development Overlay
    b. Final staff approval of plans that may include changes to the Planned Development Overlay per City Council approval
    c. Other minor changes necessary to implement the project

Attachments

1. Draft Excerpt of Minutes of the December 7, 2016 Plan Commission meeting
2. Question-Answer sheet
3. Revised Traffic Study prepared by James J. Benes and Associates
4. Draft Findings – Amendments to the Zoning Map
5. Draft Findings – Design Review
6. Revised One Washington Place plans

c Mayor and City Council
Department Heads
Chris Aiston, C. C. Aiston, Consulting
Media

Draft Excerpt Minutes
Batavia Plan Commission, December 7, 2016

**One Washington Place, 111-133 East Wilson Street and 20 North River Street, 1 N. Washington, LLC, applicant**

- **Public Hearing: Amendments to the Zoning Map for the Downtown Building Height Overlay District and Planned Development Overlay District**
- **Design Review**

Buening discussed the process of the public hearing. He noted that this public hearing would be continued until January 4th to allow for further public testimony and answers to more complex questions that may be brought up tonight. Chair LaLonde added that there would be no action taken tonight and this would not be the last opportunity to discuss this topic.

**Motion:** To open the public hearing
**Maker:** Joseph
**Second:** Schneider
**Voice Vote:** 5 Ayes, 0 Nays, 1 Absent
Motion carried.

Rackow reported that this is a public private partnership with the City participating in the project. The site is 2.2 acres and it is zoned Downtown Mixed Use (DMU), which is what the downtown district is zoned. There is a Building Height Overlay District over portions of the property. The proposal would include a two-story public parking deck that would be partially in ground. The garage would allow for 348 parking spaces. This would be financed through the TIF District and a Special Service Area (SSA) would be put into place to provide additional funding if necessary. The proposal does include six additional spaces being added with on street public parking on State Street. The proposal would add commercial space on River and Wilson Street. The proposal would have 92 one-bedroom apartments and 93 two bedroom apartments in a four story building above the parking deck. There would be public courtyards, vehicle turnabout and parking area for emergency vehicles and pick up and drop off, and deliveries.

Rackow continued that one part of the request is a Zoning Map Amendment to remove the downtown building height overlay. Some of the current building frontages do comply with the height but because of the topography there are sections that are taller and sections that are under those height requirements. The other action related to the Zoning Map would be to amend the Zoning Map for a planned development overlay. There are five noted requests for relief:

1. Zoning Code Section 2.405.A for providing less than the required vision glass on street facing elevations. (Staff notes that much of the Wilson and River store fronts meet the requirements and residential frontages are only slightly less than required amounts.)
2. Zoning Code Section 2.405.B for not providing the required pedestrian building entrances every 75 feet along State Street and Washington Avenue.
3. Zoning Code Table Section 4.205 for providing parking space and aisle dimensions having minimums of approximately 8 feet by 17.5 feet and 22 feet, respectively, less than the required 9 feet by 18 feet and 24 feet, respectively.
4. Zoning Code Table 4.204 for providing 0 parking spaces where 402 is required. (Staff notes that because all 348 parking spaces are public and not exclusive to this development, the development is not providing the Code required parking.)

5. Zoning Code Table 2.404 to allow a maximum building height of approximately 81 feet where 50 is allowed. (This assumes removal of the DBH Overlay.)

Chair LaLonde swore in those who wanted to address the Plan Commission (PC).

Don McKay, Principal and President with Nagel Hartray Architecture, addressed the PC. He stated the firm has been in business for fifty years and he has been with the firm for thirty-two years. They do a lot of work in urban areas on sites similar to the one addressed here in Batavia where there are tight site constraints and unusual topography conditions. They have been working with Shodeen for fifteen years. McKay's presentation included the following:

- Aerial site image
- Site plan
- Topography and bedrock
- Four elevations of the building
- Lower garage and upper garage (three elevators, public access elevator access between the two floors of the parking garage)
- First Floor Residential/Upper Floors Residential
- Typical Unit Plans
- Landscape drawings
- Furnishing and Site Features

Chris Aiston, Economic Development Consultant, addressed the PC. He shared that he is President and CEO of CC Aiston Consulting, Ltd and has served the City of Batavia as its Economic Development Consultant since July 2013. His past experience includes: Kane County Economic Development Director; DeKalb County Planning and Zoning Director; and Economic Development Director for the City of Geneva and for the City of St. Charles. It should also be noted, for the record, that his principal roles with respect to this project are to act as an advocate, having shepherded the Redevelopment Agreement between the City and the developer in accordance with state TIF statues, and as the project manager in the creation of a proposed new Washington-Wilson TIF District, comprising all of the real estate subject to the proposed PUD zoning application.

From an economic development perspective, he finds at least three solid reasons why this project, in both its composition and size, makes very good sense for Batavia. They are: Its location; its efficient use of land; and its application of the State TIF Law.

First and foremost, the project is ideally located to create the greatest benefit to the City of Batavia. Siting this project at its proposed downtown location creates economic activity right in the City's central business district.

With respect to the project itself, the addition of 185 households, or "rooftops" in the shopping center vernacular, will increase sales of goods and services within the regional market place and, no doubt, in a significant way for the local business community as well. Think of your own spending patterns.

Yes, of course, you'll occasionally drive 15, 20 even 30 minutes to visit an exceptional restaurant or to shop at a particular store, whether be it a unique, independent retailer or larger store of national reputation and product lines. Additionally, purchasing big ticket items like automobiles and large appliances would naturally compel the buyer to "shop around", often traveling a half hour or more. But that said, most of your daily shopping trips, whether for groceries, medicine, general apparel or small house ware items, and trips to obtain personal services like going to the barber, to get your nails polished or pick up your dry cleaning, are within a 5-10 minute drive time. Where does 5-10 minute drive time

take the One Washington Place residents? Likely somewhere in Batavia - whether downtown, Randall Road or the various shops and small shopping centers scattered about the city's neighborhoods.

What of the additional commercial space? It is true that there are currently storefront vacancies in downtown Batavia. This begs the question as to why then would the City want to create additional commercial space at this time? He would suggest to you that a contrary position. It may not always be the amount of vacant space in a downtown that is indicative of its success but rather the amount of all available space for business to thrive, and for a commercial district to be established. To that end, this project will bring much needed additional commercial mass to the downtown, serving to bolster occupancies, and by extension, rental rates and property values, of other existing downtown commercial buildings. The project may also result in additional commercial building construction and occupancies, as absorption takes place. Like indoor malls, outdoor "lifestyle centers", or even neighborhood strip centers, downtowns thrive when there are sufficient amounts and varieties of commercial spaces. This context, often referred to as a commercial area's "critical mass" offers consumers the benefits of having expanded choices in product lines and services, being able to take multi-purpose trips and, in the end, enjoying a more efficient use of their time.

Secondly: The proposed redevelopment will result in efficiencies and economies of land use. This project is not development sprawl into the urban periphery but rather well-planned redevelopment and infill of the existing built-up environment. This project is not single user in type, with all the inherent redundancies in land cover and the increased traffic generated from single-user development patterns, but rather it is a mixed-use plan, co-locating residential with commercial, and public parking occupancies.

Turning briefly to parking, creating public parking assets in a city's downtown business district can be a very expensive proposition. Obviously, there are the actual construction costs, particularly when building a parking garage. But additionally, these projects tend to remove valuable real estate out of direct economic production and off the property tax rolls. Through implementing this redevelopment project plans, however, the city and developer are co-locating a 350-space public parking garage with a private development. The ground covered by an otherwise tax-exempt public asset is also being covered by a private real estate development, paying property tax and generating two critical components in any economic development plan, namely residents – read as the consumers of goods and services – and 13,850 SF of commercial space that will be occupied by businesses intending to provide such goods and services to these and other consumers.

The third reason for supporting the project: As a redevelopment proposal, One Washington Place is a textbook case for TIF. TIF law was created largely with the intent of causing the redevelopment of properties that are located within an already developed area, have or will likely become blighted and/or underutilized, and where one hasn't seen any real private investment, nor would such investment likely occur but for the municipal authorities vested under the TIF Act. These characteristics define the redevelopment site in its current state. Further, in this unique case, not only is the proposed redevelopment a public-private partnership financially, it also is one geographically. By creating a vertical subdivision, the vast amount of land will be owned and utilized by both investment entities, the private developer and the City of Batavia and its constituents.

Some will no doubt oppose this project on the grounds that it is just too big. Certainly the mass of the building alone will dramatically change the physical appearance of the downtown. However, he believes, like elsewhere in the western suburbs (Oak Park, Elmhurst, LaGrange, Wheaton, come to mind), that people will get used to the building mass and height over time and, while they do, the project will become an economic engine for the downtown like nothing this City has experienced before.

In more than thirty years of regional, urban and economic development planning he has personally participated in the development of dozens of projects causing real change to a given area's economy. These projects widely differed in type and locations, from the Illini Farms multi-million dollar hog confinement facilities in DeKalb County to forging the PUD entitlements and sales tax reimbursement program that secured the Geneva Commons project. However, the projects that stick in my mind as real game changers are those approved for and built on historic downtown properties, such as The Herrington Inn and accompanying Pump House (formerly a creamery and public works facilities); The interior and exterior improvements to St. Charles Arcade Theater, including the acquisition of and adaptive re-use plans for the adjacent, former sporting goods store to enhance the theater experience. In fact to date, the completed project of which I feel most proud is the public-private partnership that resulted in the redevelopment of the abandoned former Delnor Hospital and Seigle Lumber Yard properties along South Third Street in Geneva. These sites are now the Dodson Place commercial/residential buildings and the multi-level public parking deck along the Metra line. Securing necessary approvals for site design, PUD approval and the land swap incentive were challenging experiences.

Change can be difficult and challenging for any community but, if done right – including often in a big way – the change can be something very special and, in the case of the proposed One Washington Place, a possible "game-changer" for the downtown central business district.

Chris Aiston introduced Dave Burr of Rich Associates, who prepared a Parking Study for the City. Mr. Burr addressed the PC. He explained that Rich and Associates is a parking consulting design and engineering firm who has been in business since 1963. He has been with the firm since 1979. He gave a presentation on the brief analysis of the parking needs of the City of Batavia looking at One Washington Place and the influence area around the site (2 block radius around the site). The presentation included the following:

- Presentation agenda
- Aerial of the site
- Methodology
- Parking supply within the nineteen blocks
- Total Parking Supply
- City of Batavia – Zoning Code Requirements
- Parking Requirements per Zoning Ordinance (no distinction on how the parking should be provided, such as hours)
- Gross Surplus/ Deficit vs. Net Surplus/ Deficit
- Current Supply vs. Demand Using Existing Zoning Code Requirements
- Blocks that would have a deficit (existing conditions)
- Shared Parking
- Projected Parking Requirements by Use, City of Batavia Mixed Use Development
- Projected Development Shared Use Model City of Batavia Mixed Use Development – Existing
- Current Supply vs. Demand Using Shared-Use Values
- Existing Condition – Shared Use
- Existing Condition – Zoning Code
- Future Conditions with One Washington Place Project
- Future Demand vs. Supply using Shared-Use Analysis
- Future Condition with Development
- Future Condition Shared Use
- Existing Condition Shared Use

Mr. Burr presented the findings of the study to the Commission and presented an analysis of parking within the study area under the current Zoning Code requirements and under a Shared Use Model, which takes into account changes in demand from various uses throughout daily activity. Parking was reviewed under both scenarios. The conditions are improved with the additional public parking added to the site, despite the increase in demand, when using a Shared Use Analysis. The net deficit is improved by 30 or so spaces from the existing conditions.

The PC asked questions of the presenter. LaLonde inquired if parking displaced by the proposed project was included. Burr noted that revisions from the site along with increases in the demand were applied. Peterson asked if the on street parking was considered in the presentation. Burr answered the entire on street and off street parking in that nineteen-block area was considered.

Dr. Brian Richard, Northern Illinois University, Assistant Director of Community Economic and Workforce Development at the Center for Governmental Studies presented on the Economic Impacts of the Construction of a Mixed Use Development in Downtown Batavia. He shared that he has been doing economic analysis for economic development projects for about twenty years. The presentation included the following:

- Project Summary
- Economic Impacts of Construction (create new economic activity in the City, 2.5 year construction phase, 80 workers on the site on average, 80 jobs created in the local economy, total of 160 jobs created because of the construction project with total payroll of 23 million in direct and indirect payroll generated.)
- Potential Expenditures of Residential Tenants (14 million in total expenditures)
- Potential Sales of Commercial Tenants (2.7 million in sales, with an estimated $869,000 in payroll, based on industry averages).

Chair LaLonde asked how would the development impact the balance of the businesses in the downtown and the vacancy rates that we have. Richard stated that there are vacancies in the downtown and there is validity to Aiston's prediction that the more activity downtown there would be more likely to move in. From the academic viewpoint, these things are hard to predict. It is difficult to project what is going to come just from building storefronts. Retail activity generates additional retail activity because of foot traffic. Retail activity is based on foot traffic and the more varied shopping opportunities you could have within a business district the better.

Buening reported that staff has received the final report for the traffic impact. Buening gave a brief summary of the report. Overall, the report indicates the development itself would have a very small impact on the traffic operations on the Wilson Street corner and adjacent streets. The am peak hour they found would be from 7:15 AM and 8:15 AM and evening peak would be 4:45 PM and 5:45 PM. The morning peak generates a total of 96 trips in and out of the development for all of the uses. That gives you one and a half trips per minute during that peak hour. The PM peak has 117 trips, which equates to 2 trips per minute. Overall, during the peak hour that is not a significant impact on the adjacent roadways. Buening continued that trips would be distributed east and west on Wilson Street and north and south on River Street and Washington Avenue. The trips would be distributed throughout the roadway network as part of the development.

The mixed-use element of this project causes a reduction of the normal trip amount because it is in a downtown area and there is a mix of uses and people could walk to uses nearby. This development would have less of an impact of a single-family development or a typical apartment development. Most

of the impact would be by background development. This is background growth and development that happens as a natural situation in the community, such as the new development in Batavia as well as other areas. The 2024 projected study period shows that the worst impact would be eastbound Wilson, where the level of service would go from E to F. The level of service goes from A to F, F being the worst. However, this would happen whether the development happens or not. That increase happens just by virtue of the background traffic that is happening in the area. The City would have to look into improving this traffic situation as part of trying to improve the traffic flow regardless of whether this development went forward or not.

Buening continued that the study does give recommendations for things that could be done in regards to Wilson Street traffic and lesson impacts in general. One of the recommendations is to coordinate the traffic signal for Wilson Street and the various signals that are on there. They are coordinated but they may need to be recalibrated based on what traffic is happening in the area and what situations may be happening with new development and other impacts. The other suggestion that they have are to promote land uses that are complementary to the proposed development such as grocery stores, shopping, and other things that people might do. Also, they recommend adding or changing the bus routes to provide more service to the downtown area. Buening noted that staff will continue to review the study and if there is more information they would provide it at the January 4th meeting. Chair LaLonde noted that the report would be posted on the City's website for everyone to review.

Chair LaLonde opened the floor for public comments at 8:45pm. Chair LaLonde stated that public testimony would be taken until 9:30pm and the remainder of public comments would be taken at the January 4th continuance of this public hearing. Chris Aiston asked that those with questions to address the Commission first so that the consultants could answer them at this meeting. Aiston noted that several of the consultants live out of state. Chair LaLonde asked for those who had questions for the consultants specifically be the first to approach the Commission.

Laura O'Brien, 504 Young Avenue, stated that she has a lot of notes but she would wait until January 4th to discuss them. She asked the consultant in regards to the parking analysis, were employees for all these businesses taken into account because they need to park? There are other apartments in the downtown area and were they taken into account? She was confused with the office parking because in the east side of town she cannot think of many offices in that area that would have a parking need and she wondered where the numbers came from.

Burr answered that where the numbers came from is the City was asked to provide us with the parking supply but with the land use within the nineteen blocks and how much square footage was applied to office, retail, and residential. That is factored into the analysis. The Zoning requirement is you have to provide x number of spaces for 1,000 square feet which is designed to accompany visitors and employees. The analysis did reflect that.

O'Brien stated that she read the parking spaces are smaller than what we currently have to get more spaces. She has concerns about that in regards to preventing car dings. McKay answered that what she is referring to are a couple of isolated conditions in the parking garages relative to building structure, getting columns down to support the floors of the building. Out of the 348 spaces, we have fewer than a dozen that are smaller than the City requirements. O'Brien suggested that those smaller parking spots have signs attached to them promoting the parking of small cars only.

Michael Marconi,1N605 Turnberry Lane, Winfield and property owner in Batavia, asked about the parking garage pedestrian exits. McKay stated that there are pedestrian exits that would allow for access to Wilson Street. Marconi asked Richard about the statement for every one job that goes to work at that project is going to create one more job in the downtown. Richard answered that it would create one

more job in the region. Richard explained it comes from both the employee at the site spending their income at the local economy but also the construction company buying things in the local economy or hiring consultants. It is the combination of those two things. It is essentially one job but it is five percent at a business here and ten percent at a business there and they all total up to one job. It is based on industry averages. Marconi asked when you looked at the incomes of those who are coming to this project, was it based on incomes of people you think are going to come to Batavia or based on the potential asking price for those apartments. Richard stated that it was based on what the rental rates might be.

David Patzelt, 77 N First St, Geneva Shodeen Group, showed on the illustration the pedestrian accesses in and out of the parking garage. He explained that they are trying to provide access on all four walls of the parking site. Peterson asked if the walkway on Wilson Street has refuse bins. McKay stated that it would not be in the walkway. There is a separate refuse area that is enclosed that is beyond the pedestrian entryway into the garage. The refuse would be inside the building behind a door.

Joanne Gustafson, 1235 Nary Court, asked how many apartments are on each floor. McKay answered that there are about forty-five. She asked if this building had three residential floors you would have more parking spaces available and it would get rid of the variance for height. She noted that there is a gorgeous property on the river (Quarrystone Pond) which she observed is mostly vacant. In Wheaton, the high rises are removed from the lower commercial area and the high rises are set off and they don't envelop the commercial area. Her concerns are can we indeed fill 195 apartments when there are vacancies across the river. The traffic on a Saturday morning can take you twenty minutes from east of Route 31 to west of the river. She is not against the project but there are considerations that need to be made to ensure that we get people to live there and not have high vacancy rates, by cutting down the floors you get a better parking and traffic perspective, and this project is threatening the existing businesses by taking away parking. She would like to see the downtown grow but not be killed.

McKay spoke to the ability to rent the number of units that are being proposed. He stated that the developer would not be proposing the number of units to be proposed if he had any doubt of the ability to rent out those units. It is rooted in a financial report that makes the project worth doing.

She asked what is the time frame for renting all the apartments. Dave Patzelt stated that they anticipate a 24-month lease and the different parts of the development would be available for leasing at different periods of times. For example, the furthest north wing may open while construction is being completed on the furthest south wing. Gustafson asked about parking. Dave Patzelt stated that relative to parking, there are several aspects. There is a financial pro forma that goes with this. This is an ideal case of TIF and the reality is that the residential units and the property taxes that they are generating for the City are paying for the parking spaces. If you remove an apartment you remove an asset that is there to be able to pay for the parking spaces, so you would not be able to afford the number of parking spaces that the builder could provide. Gustafson stated that the plan is eliminating parking that is supporting current merchants and your plan requires an additional fifty to support the merchants produced from this development. She asked how are these proposed parking spaces going to support the current local businesses. Patzelt stated that the parking consultant that was hired by the City concluded that there is a net benefit of parking spaces once the garage is built to the community as a whole. Patzelt stated that the building is being built from the bottom up and the parking deck would be built in twelve and eighteen months.

Charlie Corey, 1311 Towne Avenue, stated that he went to a City Council meeting and heard the development is supposed to attract millennials and empty nesters. He asked as part of the lease agreement are the project residents going to have a reserved parking space for their cars. Aiston answered that the entire parking deck is public parking on a 24-hour basis. 200 permits for overnight

parking would be made available for residents in and out of the project. Corey asked why are there doors on the parking garage? McKay answered that they would be automatic garage doors and would be used to help with maintaining a comfortable climate in the units above. Corey asked about the City's liability if an accident occurs in the parking garage. Buening stated that it would be similar of what happens on the street. Corey asked if the fire department has been involved. Buening stated that they have and are satisfied with the building as proposed.

Sylvia Keppel, 1420 Becker Avenue, read a letter from Carl Dinwiddie to the Committee. The letter is below:

I don't support any variances on this property for the 1 North Washington project. The structure is too large for that location (bulky and too high). The architecture is not consistent with the styles of architecture in the City. The zoning should not be approved because the plan does not provide for enough parking. The location is an improper place for high-density housing. (4. Is the proposed zoning district and the development it allows compatible with the existing uses and zoning of nearby property?)

The building will take away the quality of life for homeowners to the North who live on Washington Street and the residences to the east all the way to Prairie Street.
(5. Is there evidence to suggest that property values will be diminished by the particular zoning restriction changes?)

Construction will be disruptive at the two already busy intersections at Route 25 and Wilson Street. Construction could last 3 to 5 years. These are euphemistically called "Construction delays" by construction companies.

Traffic flow in this area is already unacceptably jammed during morning and evening rush hours. A second bridge will not solve the problem as there are a limited number of east/west/north/south major roadways and a second bridge would just back up traffic on those roadways even more. Additional traffic generated by the additional residents of the project will add to the already overcrowded intersections described above.

The skyline of Batavia from both sides of the river will be irreparably destroyed forever.

Part of the project includes new commercial space and there is already a glut of vacant commercial property in Batavia all along Wilson Street, in the BEI shopping center (old Walgreens) and even on Randall Road and Fabyan Parkway. And there are vacancies in the shopping center near McDonalds.
(10. Is there a community need for the proposed zoning or use?)

Failure to have arms-length transactions to purchase property to give the property to a developer smacks of lack of ethics and morals on the part of Batavia's leadership. Pictures and personal viewing of the Frydendall property show that the property was in need of major repairs and therefore would not have commanded the price paid if the property was sold by a willing seller to a willing buyer in an arms-length transaction. Similarly, the price paid for the Fischer property without an internal appraisal (inside the building) by the City and paying a price for the property as if it was a functioning dental office completely defies logic when the city had already agreed to move all the dental equipment and set Fischer up in another office in another location. At best the City should have only paid for the building shell, especially since it is going to be torn down at taxpayer expense as is the Frydendall property. Again, adding insult to injury to the taxpayers price wise. And the fact that the purchase was brought to a City Council meeting without previously being discussed in a committee meeting smacks of more backdoor unethical deals with no transparency to the public.

(7. Does the proposed zoning change provide a greater relative gain to the public as compared to the hardship imposed on the individual property owner?) e.g. Expenses of property purchases to give to developer for $10, GO bonds to fund construction, interest on GO bonds, demolition costs, and environmental cleanup costs.

Similar conclusions can be drawn for the Larson Becker property due to failure to pay the real estate taxes – although this is not related to the 1 North Washington project except that the City wants to use part of the property to cover the loss of parking in our parking in our parking garage during construction for possibly for 3 to 5 years.

The fact that Batavia taxpayers are even being cheated out of rent revenue until closing due to the sweetheart deals given to Fischer and Frydendall, along with the fact that we will have to pay to tear down the buildings that we paid a premium for also makes this a rotten deal for the citizens and a sweetheart deal for Shodeen and opens the door for other developers to take Batavia citizens for a ride on the TIF gravy train.

I noticed a number of studies in Mr. Strassman's 57-page cover memo. However, there were professional studies before TIF 1 and TIF 3 were voted on and now for over 23 years, neither TIF has yet to generate one tax dollar back to relieve taxpayers' burdens to the other taxing bodies in the City. The two TIF failures were so great that now both TIFs have had to be extended. So much for the value of "professional" studies. The organizations that generate these studies are not on the hook or ultimately responsible for the success or failure of this project. We, the Batavia taxpayers are.

My last comment is more of a question. Why is this public hearing so late in the process? Big projects I've worked on identify the timing of critical items and approval of the zoning would be early in the critical path analysis. Good business would dictate that the amount of money and resources expended to date would not have taken place until the critical items were in place. It's beyond me how an agreement could have been signed before the Plan Commission had voted on the needed zoning. What gives here?

Sylvia Keppel provided her personal comments. She wanted to address the size of the building overlay. It is a very large building, so large that it needs an ordinance to be built in the downtown. It is a very nice building, but it would be nice for Chicago, not for Batavia. It is really big and you are cutting off the views for some residents. Keppel stated that she created a survey and placed it on Nextdoor.com for responses from local people. Within two days the survey garnered 216 responses. Keppel distributed copies of the survey questions and the responses to the Commission.

Keppel stated that the survey had three simple questions:

1. Do you think the proposed apartment complex is too big for Batavia, a good addition size-wise to the downtown, or I don't really care and trust my aldermen to decide. (72% of the responses stated that it was too big for Batavia
2. If you answered "Too big for Batavia, what would make it acceptable? Check all that apply:
    - Smaller height, no taller than the other buildings in downtown (40.63%)
    - Smaller footprint size, taking up less of the block (26.88%)
    - Nothing, I don't think high density apartments fit the character of that location at all (49.38% of the responses)
3. What would best describe your feelings and thoughts on the project as proposed?
    - 44% say I strongly oppose it
    - 19.91% state I somewhat oppose it
    - 5% didn't care either way
    - 13.43% say they somewhat support it

- 20% say I strongly support it

Keppel stated that even those that support the project would prefer to have a smaller height, based on their survey answers. She asked the Commission to consider the size when you are changing your zoning. Do you really want this in downtown Batavia? The quality of living and feel that the town has could just be as important to people as the economic impact. People really do care what happens to them and according to this survey a lot of people do not think that it fits.

Keppel asked what good does a Washington entrance do when you cannot park on Washington Street. Balconies are proposed to be on Wilson. She stated that unless there is something in the rental agreement that they could put nothing on the balconies, it could end up looking very sloppy with chairs and wind chimes. She asked the Commission to consider how that would look. She stated that she noticed that there was inconvenient pedestrian exits from the parking. She is thinking about the older population and people with young children that could be a very long walk to get from parking to the stores. She asked if resident elevators are accessible to the public. McKay answered no. Keppel asked if there was only one public elevator in the entire parking lot. McKay answered yes, for two levels of parking. He noted that there are also stairways to get to the different levels. Keppel asked the Commission to consider the convenience. Keppel stated that the City is hanging too much onto this development. This is primarily a residential development. There are not that many stores. A few more stores are not going to turn into a mall. The economic study does not emit much promise, all the economic study shows is what would be produced during the construction phase. Where people will spend their money is all speculation. She stated that she did not see in the economic study what is happening to retail. She asked if the impact of Amazon and internet sales were considered as part of the economic study. Keppel stated that the dentist and the insurance offices were functioning and in practice. There were no vacancies in those buildings. The Baptist Church was only vacant because the City made it so and they let it fall into ruin despite the historic significance. Keppel stated that she spoke to someone on the church council and was informed that they felt pressure to move. They were feeling the threat of eminent domain because at that time the City was talking about straightening Route 25. The Baptist congregation moved to property given to them by Shodeen in Geneva. After straightening Route 25 fell through the City decided to hold onto the property for a project such like this. Keppel stated that as for the parking, she understands that it would be paid back, but still fourteen million dollars in general obligation bonds for a 30 space gain using the shared parking analysis. That comes out to $450,000 per parking space. Is it worth it? If it were by code we would be losing 65 parking spaces. Keppel agreed with the other resident that spoke that the parking seems to be ample enough only for the complex residents and not commercial space. The City would be building a private enterprise parking facility and calling it public. As a citizen she objects to that. She asked who maintains the elevators, who pays for the electricity, who pays for the cleaning and maintenance of the parking garage. She assumes that it would fall onto the taxpayers. Keppel stated that she will reserve her traffic comments until she sees the traffic report.

Chair LaLonde welcomed those who could not attend the continuance of the public hearing (January 4, 2017 at 7pm) to address the Commission. There were none. Chair LaLonde thanked all that spoke at tonight's meeting and encouraged everyone to attend the January 4th portion of the meeting.

**Motion:** To continue the public hearing to Wednesday, January 4, 2017
**Maker:** Joseph
**Second:** Schneider
**Voice Vote:** 5 Ayes, 0 Nays, 1 Absent
Motion carried.

**December 7, 2016 Public Hearing Questions**

**Q1: Were displaced parking spaces factored into the parking study?**

**A1:** Both the new and old demand and the new and old quantities of parking spaces were incorporated into the proposed conditions of the parking study.

**Q2: The Parking Study Shared Use Model assumes that the peak demands for parking will occur during different times?**

A2: The Parking Study estimates that 50% of resident parking spaces occupied by residents would become available during the day, when users such as offices, retail and services would see higher demands for parking use. As the workday ends, the Parking Study assumes parking demand for residential and restaurant parking would then increase. On weekends residents may be present, but uses such as offices will be lower. During weekends, there would be benefits expected from trip-linking, where a parking space may benefit customers visiting several establishments.

**Q3: Was on street parking included in the study?**

A3: All public on-street parking that was not significantly restricted was included in the Parking Study.

**Q4: How would the proposed project impact downtown vacancy rates?**

A4: Generally, one a certain mass of commercial space and activity is reached, a district or "mall" effect will occur where consumers find greater efficiencies in visiting that district or mall. He or she can find greater choices in purchasing products and services located in close proximity to one another. As vacancies in commercial building space within a given mall or downtown shopping district result in more vacancies (snowball effect in reducing foot traffic), so do increased occupancies result in further increased occupancies (similar snowball effect for increased foot traffic). In short, existing and the threat of additional downtown vacancies are largely due to the limited opportunities for consumer activity. People don't go to shop where there are few places to shop. Conversely, by creating more opportunities for commercial activity downtown – whether shopping, dining or getting one's hair cut or teeth cleaned – more people will likely choose downtown as a place to accomplish these consumer activities. Although hard to quantify precisely, this phenomenon has increasingly been in evidence over the past twenty-five years in Chicagoland.

**Q5: How would the density of the project impact the downtown vacancies? How would the additional commercial space impact the downtown?**

A5: See A4 above. Additionally, retail and restaurant enterprises chase residential rooftops. Where there is an increase in consumers/residents, the immediate market area most likely to benefit from the increase in such consumers becomes more attractive to retailers, restaurants and other businesses selling day-to-day products and services.

**Q6: Were employees for existing businesses taken into account in the parking study? Were other existing apartments taken into account in the parking study?**

A6: Employees are factored into the parking demand for each use. The shared use parking model also incorporates employee demand through the course of the day. The City's existing Zoning Code also assumes parking demand based on all users (residents, employees, and customers).

**Q7: Where did the number of offices come from on the east side?**

A7: City provided land uses for various blocks within the study (how much was devoted to each use) 26 to 28 apartments were accounted for.

**Q8: Parking spaces are smaller than what is currently provided, why? Is there a concern about vehicle damage? Aisle dimensions are also smaller?**

A8: There are isolated conditions in the garage, due to the placement of columns there are fewer than a dozen spaces which do not comply with zoning requirements. Aisle dimensions will all be 24 feet, meeting the minimum required by the Zoning Code.

**Q9: Is there an on-street entry to the parking garage (for pedestrians) from Wilson Street?**

A9: The plan includes two pedestrian entrances accessible from Wilson Street. One is just west of Washington Avenue and other is just north of the west retail space, in the walkway between the proposed building and the 109 East Street.

**Q10: For every one job the project is expected to generate, one job will be created in the downtown?**

A10: According to the NIU Center for Governmental Affairs Economic Impact and Activity Study, the project construction activity will generate one new job in the trade area (larger than just downtown) for every construction job. The study assumes a "multiplier effect," as activity and its impact on employment at one establishment generates activity and employment at other related activities. His multiplier effect is central to economic impact theory. The "indirect impact" on area employment from the project occurs because the direct impact (e.g. increased employment and purchase of goods and services required to construct the project itself) causes area businesses to benefit from the increased employment. For example, the development entity must purchase building materials (lumber, steel, appliances, toilets, etc.) as well as professional services (engineering, architectural, financial, etc). Further, the construction workers on the project purchase goods and services from area businesses during their employment period. These developer and worker purchases stimulate activity and employment demand at area businesses selling those products and services. At some point, depending on the magnitude of the project, there are also "induced" economic impacts, as businesses making these sales may ultimately find that their increase in sales will cause them to increase employment man-hours, hiring additional personnel, who in turn convert their income into additional area sales, and so on. The multiplier effect occurs with those jobs created in the long-term occupancy of the commercial space also, but to a lesser degree than at the construction activity's one-to-one ratio.

**Q11: When looking at the incomes on the project, is that based on the people that may come to Batavia or the price of the rent? If rents are lower will it reduce incomes expected?**

A11: Incomes used in the Economic Study are based on expectations on the probable rents. The CMAP Homes for a Changing Region Plan has indicated that high income rentals will have increased demand within the Batavia market and the larger region. Generally rental units are occupied by persons that can afford the rent.

**Q12: There will be refuse bins along the walkway to the garage?**

A12: There is an enclosed refuse area located near the public access door from the Wilson Street walkway. An enclosed refuse room is located in the upper garage level. Waste and recycling receptacles would be installed as typical in the downtown area.

**Q13: How many apartments on each floor?**

A13: Approximately 45 units per floor.

**Q14: Could the building height be shortened, removing one floor to reduce the number of residential units and better meet parking requirements?**

A14: No. The financial pro-formas including the projection to repay the cost to construct the garage are based on the proposed number of apartments. Reducing the number of apartments will reduce the income to construct the garage, and result in fewer parking spaces. It should be noted that the Comprehensive Plan seeks higher density in the downtown.

Q15: **How long will it take to get the building to full rental occupancy? Can the market absorb these units?**

A15: It is anticipated that the apartment building will be opened for leasing in phases as portions of the building are completed. The developer anticipates full rental occupancy within 24 months. The Developer, staff and CMAP Plan all believe that there is a shortfall in this type of residential living in Batavia.

**Q16: What is the proposed completion date for the Parking Deck?**

A16: Parking deck is expected to be completed within 12-18 Months

**Q17: What is the target demographic for rental customers with this project?**

A17: The developer anticipates interest in this project from millennials, young professionals, and empty nesters who are attracted to urban style living.

**Q18: Will lease agreements reserve or guarantee a parking space to residents?**

A18: The City's Redevelopment Agreement with the developer specifies issuance of up to 200 overnight parking passes to downtown residents, including those in this building. Residents obtaining passes must live in the DMU District and not have their own overnight parking (garages/driveways). Spaces will not be reserved for resident parking.

**Q19: Plans depict doors on the Parking Garage entrances, will there be exclusive access? By what means will general public be able to enter?**

A19: Upper level will likely have doors, as the space will be conditioned. The lower level may not have doors. Doors will be opened by a sensor (photo-sensor or pavement sensors). Consideration to keeping doors to the garage will assist in keeping both levels conditioned which also has benefits to long term maintenance of the garage.

**Q20: Will the City own the Parking Garage?**

A20: Yes.

**Q21: Who is responsible for damage to vehicles in the garage?**

A22: Like any other vehicle damage on public property, the person causing[LMN1] the damage is responsible.

**Q23: Is the Fire Department ok with the proposed building and their vehicles being able to access units with the proposed height?**

A23: Yes, the Fire Department has been involved with review of the proposed building plans and is satisfied with current plans.

**Q24**: **Why is the Public Hearing occurring so far into the process? (after the redevelopment agreement)**

A24: With the complexities of the Public–Private partnership of the proposed project, both the City Council and Developer wanted to assure that the financial aspects of the proposal were agreeable before proceeding. The City and Developer needed to determine financing of the project (review of TIF and proposed SSA) and agree to other terms that comprise the Development Agreement prior to any zoning entitlements being sought. This would be similar to a private developer coming to terms with a land owner or tenants prior to seeking zoning entitlements. As a public agency, these occurred in Open Meetings and Executive Sessions (Closed Sessions of Public Meetings), per the requirements under state law.

**Q25: Is this building too large for the location?**

A25: As with the raising of the Zoning Finding questions during the Public Hearing, this is a qualitative question, which the Plan Commission must consider in their review of the project and their ultimate recommendation to the City Council.

**Q26: What purpose do the Washington Avenue residential entrances serve without being able to park on Washington Avenue?**

A26: The Washington Avenue entrances provide a pedestrian entrance/exit for both the public (guests, deliveries, etc) and the residents of the building to access the building without entering the parking garage.

**Q27: Will the lease prohibit the storage of items on balconies?**

A27: The lease may prohibit the storage of items such as bicycles, grills, toys, etc on balconies. Items such as outdoor furniture are typically permitted.

**Q28: There does not appear to be convenient access to parking. How handicap accessible is the garage from the street? Is the only method of entrance and exit from one location?**

A28: There are numerous entrances and exits, including accessible, to the parking structure that exceed the building code requirement for a public parking structure. This includes access on almost all sides of the structure.

**Q29: Are resident elevators accessible to the public?**

A29: No. One elevator is public, for two levels of parking. There are several staircases also available in the garage.

**Q30: Has the Economic Impact Study considered the impact of online sales and been adjusted accordingly? How do we know where people will spend their money?**

A30: The Economic Impact Study uses accepted figured standards for generating expected jobs, sales and payroll. Impacts of national macro-economic trends such as online shopping would be factored into many of these figures.

**Q31: Wasn't the vacancy of this property caused by the City? (Forcing the Baptist Church out, prohibiting other churches from purchasing?)**

A31: The City did not force, but rather negotiated in an arm's length transaction and agreed to purchase the Baptist Church in July, 2005, while the Route 25 jog project was still being evaluated. The original intent was to purchase the property for the future construction. Phase 1 engineering studies were presented in October 2006, with conclusions that the proposal would result in worsening traffic conditions. In December 2006, the City Council determined not to pursue the project further. The church opened in their facility at Mill Creek in 2008. Study and a Request for Proposals occurred after 2008. A condition report was conducted in 2013 that found a number of deficiencies with the property that would be required to be repaired if sold to another group to open a church. The conditions of the property and the expenses needed to bring up the property up to Code would have provided significant hurdles for any other group taking the property. Additionally, transfer would have removed available public parking in the downtown.

**Q32: Is there enough parking for residents?**

A32: Yes. The developer's experience indicates that sufficient parking is provided. Parking information in other downtown areas suggest that sufficient parking is provided. The parking study and the professionals that prepared it also believe that there is sufficient parking.

**Q33: Who will maintain the elevators?**

A33: The elevator for public use in the garage will be maintained by the City. The private elevator for the residential ingress and egress will be maintained by the residential building owner.

**Q34: Who will be responsible for paying for electric for the garage? Who will be responsible for maintenance? And cleaning up after bar patrons?**

A34: Similar to any other public parking lot, the City will be responsible for utility costs and for maintenance. It should be noted that because this garage is "enclosed" there will also be some savings in maintenance such as snow removal, and snow storage. The City is responsible for providing cleanup on any public property. Ordinances regarding littering will apply to the garage as a public property.

**Q35: How were the income figures for the economic study determined?**

A35: The economic study was prepared by and reviewed by educated, well experienced professionals who used verifiable numbers based on the census data, demographics and economics common to this area of Batavia, Kane County, Illinois, and the Country.

# TRAFFIC STUDY FOR

# ONE NORTH WASHINGTON PLACE

# BATAVIA, ILLINOIS

December 2, 2016

Prepared for:

**The City of Batavia**

Prepared by:

**JAMES J. BENES AND ASSOCIATES, INC.**
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## A. INTRODUCTION

Shodeen Construction is proposing to redevelop about three quarters of the block bounded by Wilson Street, State Street, N. River Street and N. Washington Avenue (IL Route 25) in the Batavia central business district. Four existing buildings will be razed and existing parking lots along the south side of State Street will be removed to make way for the new land uses. The location of the redevelopment site is illustrated below.


According to the One North Washington Place Site Context Plan, prepared by Nagle Hartray Architecture and dated June 30, 2015, the proposed development will consist of a four floor mixed use building containing 171 apartment units, 14,650 square feet of retail space, and a two level parking garage with about 304 parking spaces. One curb cut will be removed on each of Wilson Street, N. River Street and N. Washington Avenue. Two curb cuts will be provided on State Street, one servicing each level of the parking garage. It is understood that parking supply has been analyzed separately, and is therefore not discussed in this study.

The planned development uses are intended to be complementary with existing downtown uses, with the goals of enhancing the vibrancy of the downtown, encouraging the use of alternate modes of transportation including walking, bicycling and transit, and reducing personal automobile trips by residents of the development.

This report contains existing traffic volume and operation information, expected trip generation from the site and an analysis of future traffic conditions after construction of the proposed redevelopment. The focus of this study is on traffic operations at the intersections along Wilson Street from North River Street to North Washington Avenue, which experiences high traffic volumes during peak hour traffic periods.

## B. EXISTING CONDITIONS

A field reconnaissance was conducted of the site vicinity to collect information on the existing road network, including traffic control devices, lane configurations, and existing traffic volumes. Existing land uses surrounding the site were also noted.

### *Surrounding Land Uses*

The proposed redevelopment site is located in the City of Batavia's central business district. Land uses adjacent to or across the perimeter streets are primarily commercial uses including several restaurants, a vacant gas station, dance studio, salon/spa, a bank, and service oriented uses. Commercial uses extend farther east and west along Wilson Street including the Batavia Plaza shopping center west of the Fox River. Land uses transition to residential uses north, east and south of the site.

### *Public Transit and Pedestrian/Bicycle Facilities*

Downtown Batavia is served by Pace Bus Route 802, providing access to the UP West and the BNSF Metra commuter stations in Geneva and Aurora respectively. This route also serves Waubonsee Community College, Presence Mercy Medical Center, Delnor Community Hospital and the Kane County Judicial Center.

The nearest Pace stop is located at the intersection of West Wilson Street and Batavia Avenue, about 1/3$^{rd}$ of a mile from the redevelopment site. The site is located within the Pace 596 Call-n-Ride service area.

The Fox River Trail is located half of a block west of the site along the both sides of the Fox River. A pedestrian/bicycle bridge crosses the river just north of State Street providing pedestrian and cyclist access to the Batavia Riverwalk and the west bank portion of the Fox River Trail.

### *Surrounding Roadways*

The following is a brief description of roadways in the immediate site vicinity. Figure 1 (Existing Traffic Control Devices and Travel Lanes) in the Appendix provides a diagram of existing roadway conditions.

<u>Wilson Street</u>

Wilson Street is a two-way, two lane east-west roadway, with a posted 25 mph speed limit in the vicinity of the site. Auxiliary turn lanes are provided at various intersections as described below. Parking lanes are provided on both sides of Wilson Street in the site vicinity.

Wilson Street is an arterial street under the jurisdiction of the City with the exception of the section from South River Street to North Washington Avenue which is designated IL Route 25, and is under the jurisdiction of the Illinois Department of Transportation (IDOT).

The Wilson Street intersection with South River Street is under traffic signal control. The eastbound and westbound approaches to the intersection each have a lane shared by through and right turn traffic movements and a separate left turn lane.

At its intersection with South Washington Avenue, Wilson Street has a wide single lane shared by through and right turn traffic movements on the eastbound approach and a wide single lane shared by through and left turn movements.

On the westbound approach, the pavement is wide enough for through traffic movements to bypass any vehicles waiting to turn left to South Washington, which allows the westbound approach to function as if a separate left turn lane was provided.

The Wilson Street intersection with N. Washington Avenue is under traffic signal control, and has separate lanes for through and left turn movements on the eastbound approach, and separate through and right turn lanes on the westbound approach.

North River Street

North River Street is a two-way, two lane north-south local street under City jurisdiction. The block adjacent to the redevelopment site is designed as a pedestrian friendly environment without delineation of boundaries between pedestrian and vehicular travel space. On street parking is prohibited along this block with the exception that four parking spaces are available just south of State Street. The posted speed limit is 20 mph.

On its southbound approach to Wilson Street, N. River Street is under stop sign control. Only right turns are permitted onto Wilson. Through traffic movements to S. River and left turns to Wilson Street are prohibited.

South River Street (IL Route 25)

South River Street is a two-way, two lane north-south arterial street under IDOT jurisdiction. On street parking is prohibited on S. River Street. The posted speed limit is 30 mph.

On its northbound approach to the traffic signal controlled intersection with Wilson Street, S. River Street has two travel lanes. The left lane is marked as a left turn lane, but is used by vehicles making left turns onto westbound Wilson Street and by vehicles making the small jog west to proceed north on N. River Street. The east lane serves as an exclusive right turn lane.

South Washington Avenue

South Washington Avenue is a two-way, two lane north-south local street under City jurisdiction. On street parking is prohibited on the block of S. Washington south of Wilson Street. The regulatory speed limit is 30 mph.

On its approach to Wilson Street, S. Washington is under stop sign control. Its single northbound lane is shared by left and right turn traffic movements.

North Washington Avenue (IL Route 25)

North Washington Avenue is a two-way, two lane north-south arterial street under IDOT jurisdiction. On street parking is prohibited adjacent to the redevelopment site. The posted speed limit is 30 mph.

On its southbound approach to the traffic signal controlled intersection with Wilson Street, N. Washington Avenue has separate left and right turn lanes.

***Existing Traffic Volumes***

Manual weekday morning and evening peak hour traffic counts were conducted at the intersections of South and North Washington Streets with Wilson Street, and River Street with Wilson Street.

The traffic counts were performed on Tuesday October 25 and Thursday October 27, 2016. Turning movements were recorded in 15 minute increments from 7:00 to 9:00 AM and from 4:00 to 6:00 PM. The counts included recording vehicle type and pedestrian volumes.

Existing peak hour traffic volumes are shown on Figure 2 in the Appendix. Summaries of traffic counts are also provided in the Appendix.

Counted traffic volumes departing one intersection do not exactly match the volumes arriving at the other intersection because the traffic counts at River Street and at Washington Avenue were performed on different days. There is always some day to day variation in traffic volumes. Multi-day traffic counts are not uncommon. It is accepted practice to adjust the lower of arriving or departing traffic volumes upward to balance the traffic flow between the intersections. The study analyses are thus based on the higher of the two days of counted traffic.

There is some variation in the times of the individual intersection peak hours. The fifteen minute increment traffic count data for all of the intersections were reviewed, and the peak hours for the Wilson Street corridor were determined to occur from 7:15 to 8:15 am and from 4:45 to 5:45 pm. The corridor peak hour traffic volumes, adjusted as previously discussed, were used in the analyses.

Batavia High School, located 1.25 miles west of the proposed development, generates traffic on Wilson Street. First bell at the school is at 7:35 am. The vast majority of morning high school traffic occurs 15 to 20 minutes before the first bell, therefore the morning school peak traffic period is accounted for in the traffic analyses. The end of school day is 2:30 pm, considerably offset from the commuter peak traffic period. After school activities spread out the traffic leaving school, and lower the end of school the peak traffic volume. Consequently, the evening peak traffic hour along Wilson Street, which includes commuters and some after school trips, is higher than at the end of classes.

## C. SITE TRAFFIC GENERATION

Peak hour traffic volumes generated by the proposed land uses were estimated using trip generation rates contained in Trip Generation Manual, 9th Edition, published by the Institute of Transportation Engineers (ITE).

Recognizing that there are trip reduction benefits for closely spaced complimentary land uses, the ITE Trip Generation Handbook provides procedures for estimating trip reductions for Mixed-Use developments and also for Urban Infill/Redevelopment. Use of straight ITE trip generation rates for individual land uses in a setting like downtown Batavia does not account for the synergy between the different land uses. Without detailed information on surrounding land use types and sizes, there is insufficient data to use the Mixed-Use methodology to account for trip reductions that can result due to walking or biking trips between the redevelopment site and nearby land uses.

The Urban Infill/Redevelopment methodology was used instead. The ITE Handbook provides data for mode of transportation share (personal vehicle, transit, walk and bike) based on studies performed nationwide for use when employing the Urban Infill/Redevelopment method. The site trips estimated using the ITE method yielded a 27% trip reduction in the evening peak hour based on the national surveys. Upon review of the analysis, it is our opinion that the available national study data likely overstates vehicle occupancy, transit and walk/bike trips for the Batavia redevelopment site. Instead, we elected to independently estimate site trip reduction for the *apartments only* based on the most recent available US Census data for the City of Batavia.

US Census commuting data for the city as whole indicates that 7% of residents work at home, 3% travel to/from work using public transit and 2% walk or bike. It is our opinion that the downtown business district location of the redevelopment encourages walking and transit trips, and likely will result in fewer personal vehicle commuter trips for downtown Batavia residents in comparison to the average for the entire City population. Nonetheless, we conservatively used the citywide averages.

The ITE land use type “Mid-Rise Apartments” (ITE Code 223) most closely matches the proposed apartment use. It was noted that ITE trip generation data for this use was collected in the late 1980’s, before on-line shopping, banking, video rentals, etc. became as prevalent as it is today. With the boom in ecommerce along with greatly improved electronic connectivity, and greater emphasis on non-personal motor vehicle modes of travel over the past decade, it is our opinion that some reduction in the Mid Rise apartment trip generation is also warranted to account for reductions in *non-commute trips*. Additionally, the ITE trip generation rates do not account for vehicular trip reductions due to walking trips between complementary land uses in the redevelopment area. Accordingly a total reduction to the ITE trip generate rate based apartment trips of 15% (12% City of Batavia non-personal vehicle commuter trips plus 3% walkability and/or shared trips between downtown land uses) was used for this study.

It is our opinion that the 15% adjustment used to estimate apartment site trips is reasonable and appropriate for this study. We also note that conservatively, no trip reductions were applied to the retail use trip generation.

The proposed retail space consists of two small spaces of 6,300 and 8,350 square feet each. The ITE Specialty Retail land use (Code 826) best matches and is appropriate for the proposed retail than the Shopping Center land use (Code 820). Specialty retail uses typically do not open until after the morning street peak hour, ITE does not provide morning street peak hour period trip generation rates for this land use category. Morning retail site trips were estimated using the ITE trip generation rates for a Shopping Center (Code 820), *conservatively* assuming that some stores could open during the morning peak hour.

Projected site peak hour trips are summarized below and shown on Figure 3 in the Appendix.

| PROJECTED SITE TRIPS | | | | | | |
|---|---|---|---|---|---|---|
| | AM Peak Hour | | | PM Peak Hour | | |
| | Enter | Exit | Total | Enter | Exit | Total |
| **171 Mid-Rise Apartments** | | | | | | |
| ITE Land Use Code 223 | 18 | 39 | 57 | 41 | 30 | 71 |
| 15% Trip Reduction | -3 | -6 | -9 | -6 | -5 | -11 |
| **Total Apartment Trips** | **15** | **33** | **48** | **35** | **25** | **60** |
| **14,645 s.f. Retail** | | | | | | |
| ITE Land Use Code 820 (Shopping Ctr.) | 30 | 18 | 48 | - | - | - |
| ITE Land Use Code 826 (Specialty Retail) | - | - | - | 25 | 32 | 57 |
| **Total Retail Trips** | **30** | **18** | **48** | **25** | **32** | **57** |
| **Apartment + Retail** | | | | | | |
| **Total Site Trips** | **45** | **51** | **96** | **60** | **57** | **117** |

## D. SITE TRAFFIC DISTRIBUTION AND ASSIGNMENT

Several factors influence the directions to and from which development traffic will travel on adjacent streets. The estimated trips entering and exiting the site were distributed to the surrounding road network based upon a review of the existing road network, the site access driveways, existing traffic patterns in the site vicinity and the relative ease or difficulty of travel routes to and from the site. The distribution of site traffic is shown in the following table.

| Directional Distribution of Site Trips | |
|---|---|
| Direction of Travel to/from | Percent of Site Trips |
| West on Wilson Street | 35% |
| South on S. River St. (IL-25) | 20% |
| East on Wilson Street | 30% |
| North/East on N. Washington/State | 15% |
| TOTAL | 100% |

## E. NON-SITE TRAFFIC GROWTH

Buildout of the redevelopment is projected to be completed in 2019. A future conditions analysis year of 2024 (time of completion plus 5 years) was selected to account for the period between opening and full occupancy of the development.

Future non-site traffic volumes were increased to account for normal growth of non-site (background) traffic due to ongoing regional and local development. The Chicago Metropolitan Agency for Planning (CMAP) provides population, households and employment projections to Year 2040 for the Chicago metropolitan area. The CMAP projections for the City of Batavia and adjacent surrounding communities were used as the basis to estimate the background traffic growth of existing non-site traffic. A growth rate of 1% per year was used to estimate non-site background traffic at year 2024. See Figure 4 in the Appendix.

## F. TRAFFIC OPERATIONS ANALYSES

### *Intersection Capacity Analyses*

Traffic operations at the development area intersections were analyzed under Existing conditions and year 2024 full occupancy (Total Traffic).

The analysis of existing conditions reflects traffic volumes, intersection traffic control devices and numbers of traffic lanes that currently exist on the area streets.

Total traffic conditions represent the anticipated design year traffic conditions including existing traffic, normal growth of existing traffic, plus additional traffic generated by the site redevelopment. See Figure 5 in the Appendix.

Traffic operations were evaluated using the procedures contained in the Highway Capacity Manual (HCM) published by the Transportation Research Board. Analyses were performed using the HCS 2010 software for analysis of unsignalized intersections.

The signalized intersections at River Street and at N. Washington Avenue are part of an interconnected traffic signal system along Wilson Street that also includes the intersection at Island Avenue. Due to the close proximity to the stop sign controlled N. River Street and South Washington Avenue approaches to Wilson Street, Synchro Version 9 analysis software was used to model the signal system.

The accepted way traffic engineers evaluate intersection performance is with the average length of time an approaching vehicle is delayed before crossing an intersection measured in seconds per vehicle. This is considered a more accurate metric of operation than determining the projected length of queues approaching an intersection, even if it is less visible to those waiting in line. The length of queues is important in evaluating the space provided for motorists to wait. Delay and queuing will be discussed in this report

Intersection Level of Service (LOS) is represented by the letter grades A (best) through F (worst). Design guidelines contained in the IDOT design manuals specify a minimum LOS “C” for minor arterials but a LOS “D” “may be used in heavily developed sections of metropolitan

areas". A LOS "D" is acceptable for collector and local streets. Wilson Street, North Washington Avenue and South River Street are designated minor arterials.

For all-way stop controlled intersections and signalized intersections, an overall intersection LOS is computed. For two-way stop controlled intersections, delay and LOS are computed only for traffic movements that are under stop control and those movements that must yield to opposing traffic.

The LOS at an intersection as defined in the Highway Capacity Manual is summarized in the following table.

| HCM Level of Service Criteria | | |
|---|---|---|
| | Signalized Intersections | Unsignalized Intersections |
| Level of Service | Average Control Delay (seconds/vehicle) | Average Control Delay (seconds/vehicle) |
| A | ≤ 10 | ≤ 10 |
| B | > 10 and ≤ 20 | > 10 and ≤ 15 |
| C | > 20 and ≤ 35 | > 15 and ≤ 25 |
| D | > 35 and ≤ 55 | > 25 and ≤ 35 |
| E | > 55 and ≤ 80 | > 35 and ≤ 50 |
| F | > 80 | > 50 |

The average control delay is the delay is experienced by a vehicle passing through the intersection, including stopped delay as well as time lost decelerating when approaching the intersection and accelerating when leaving the intersection. It is the *average* delay for the specified traffic movement, street approach or intersection as a whole. For intersection approach and overall intersection, the delay is the weighted average for all traffic movements. Because these are *average delays*, the actual delay experienced by any individual driver will vary.

***Stop Sign Controlled Intersections***

*North River Street/Wilson Street Intersection*

The stop sign controlled North River Street approach to Wilson Street currently operates at an acceptable Level of Service (LOS) "C" during both the morning and evening weekday peak hour periods. Under year 2024 projected Total Traffic conditions with full occupancy of the proposed mixed use development, the intersection will continue to operate at an acceptable LOS "C".

Under existing and future traffic conditions, the 95$^{th}$ percentile queuing on the southbound North River Street approach is one vehicle. The 95$^{th}$ percentile queue is the length of queued vehicles that would *not* be exceeded during 95% (57 minutes) of the peak hour period. In other words, the total duration of queues in excess of one vehicle is projected to occur for only 3 minutes during the peak hour.

A summary of the stop sign controlled intersection analyses is provided below.

| STOP SIGN CONTROLLED INTERSECTIONS CAPACITY ANALYSIS RESULTS① | | | | | | |
|---|---|---|---|---|---|---|
| **Intersection** | **Scenario** | **Peak Hour** | **Intersection Approach/Lane Configuration** | | | |
| | | | **Eastbound** | **Westbound** | **Northbound** | **Southbound** |
| **North River/Wilson** | | | Signalized | ② | N/A | R |
| | Existing | AM | -- | -- | -- | C – 1 |
| | | PM | -- | -- | -- | C – 1 |
| | 2024 | AM | -- | -- | -- | C – 1 |
| | Total Traffic | PM | -- | -- | -- | C - 2 |
| **S. Washington/Wilson** | | | ② | L | shared L/R | N/A |
| | Existing | AM | -- | B - 0 | D - 1 | -- |
| | | PM | -- | A – 0 | C - 1 | -- |
| | 2024 Build | AM | -- | B - 0 | D - 1 | -- |
| | Total Traffic | PM | -- | A – 0 | D - 1 | -- |

① *L or R = exclusive left or right turn lane. T = exclusive through lane. Shared L/T/R indicates the designated traffic movements share a lane. "B – 1" indicates the letter grade for the operations of the approach and the number of vehicles in the 95th percentile queue on the intersection approach. A value of 0 indicates the computed 95th percentile queue of stopped vehicles is less than 0.3 vehicles.*

② *Traffic movements on this approach do not stop or yield to conflicting traffic, therefore no LOS grade is provided.*

*South Washington Avenue/Wilson Street Intersection*

The stop sign controlled northbound approach to Wilson Street currently operates at LOS "D" during the morning peak hour, and at LOS "C", less than one second delay short of "D" during the evening peak hour. Upon full occupancy of the proposed development, the evening peak hour LOS drops to level "D", and the morning peak hour will remain at LOS "D". The left turn movement from Wilson Street currently operates at, and will continue to operate at acceptable LOS "B" during the morning and LOS "A" during the evening peak hours upon full occupancy of the proposed development. The 95th percentile queues on the S. Washington approach and for the west to southbound left turn movement were one vehicle length or less with the exception that the northbound queue increases to two vehicles during the evening peak hour under year 20204 Total traffic conditions.

This intersection is located 100 feet west of the signalized N. Washington/Wilson intersection. The left turn lane on the eastbound approach to North Washington Avenue extends through the S. Washington intersection. Vehicles entering and exiting S. Washington must cross the eastbound left turn lane for N. Washington. Left turn movements at this intersection were very low during peak periods.

It was observed that vehicle queues on the eastbound approach to N. Washington frequently extended west past S. Washington. Eastbound drivers sometimes left a gap to allow vehicles to turn left to and from S. Washington. When no gap was provided, vehicles turning left from S. Washington waited in the westbound Wilson through lane.

Westbound Wilson Street does not have a separate left turn lane at S. Washington Avenue. The westbound lane however, is 16 feet wide at the intersection. During the peak traffic hours, it was observed that in most cases, queued vehicles waiting to turn left to S. Washington did not block westbound traffic flow because the wide lane allowed through traffic to bypass the stopped vehicles.

### *Traffic Signal Controlled Intersections*

*South River Street/Wilson Street Intersection*

The signalized S. River Street intersection with Wilson Street currently operates, and will continue to operate at an acceptable LOS "C" during the weekday morning peak hour, with or without the redevelopment. The existing eastbound through/right turn lane 95$^{th}$ percentile queue approaches the intersection at Island Avenue. This queue is projected to increase by two vehicles under the projected Total Traffic conditions. Changes in 95$^{th}$ percentile queueing on all other approaches have minimal impact. All year 2024 Total Traffic individual traffic movements LOS remain unchanged from the existing conditions LOS during the morning peak hour.

During the existing evening peak hour, the S. River Street/Wilson Street intersection operates at an overall LOS "D". However, the eastbound approach operates at less than acceptable LOS "E", with the 95$^{th}$ percentile queue extending west from River Street through the intersection at Island Avenue. The remaining traffic movements operate at an acceptable LOS "D" or better. It is noted that queuing on the westbound approach was observed to frequently extend to N. Washington Avenue.

Under the 2024 Total Traffic scenario, the eastbound approach LOS is projected to drop to LOS "F", with an increase in queuing of about 7 vehicles during the evening peak hour. The westbound approach left turn movement is projected to decline from LOS "D" to "E" with an increase in queuing of about 5 vehicles. Overall, the intersection will still remain at LOS "D".

A 2024 No-Build scenario analysis was performed for the evening peak hour to evaluate the intersection with normal background traffic growth and without redevelopment generated traffic growth. Background growth alone causes 98% of the projected additional eastbound delay in the 2024 Build scenario. The increase in eastbound delay and queueing due to the mixed use redevelopment is minimal. Since there is no change in LOS during the morning peak hour from Existing to 2024 Total Traffic conditions, the morning peak hour was not evaluated for the No Build scenario.

Only 29% of the increase in westbound left turn delay and drop in LOS from "D" to "E" results from the mixed use redevelopment. The major contributing factor to the increase in westbound left turn movement delay is also background traffic growth.

*North Washington Street/Wilson Street Intersection*

Overall, the signalized N. Washington Avenue intersection with Wilson Street currently operates, and will continue to operate at an acceptable LOS "B" during the weekday morning and evening peak hours, with or without the redevelopment. The maximum projected increase in 95th percentile queuing from Existing to year 2024 Total Traffic conditions for any traffic movement is one vehicle on the eastbound approach during the morning peak hour, and one vehicle on the westbound approach during the evening peak hour.

All individual traffic movements at this intersection operate at an acceptable LOS "D" or better, with the exception of the southbound Washington to eastbound Wilson left turn movement which operates at LOS "E" under Existing and year 2024 Total traffic conditions. The long delays on the southbound approach result from the majority of green signal time being assigned to the Wilson Street approaches. During the morning peak hour 81% of the signal cycle was allocated to the Wilson Street approaches and 74% was allocated during the evening peak hour. The total increase in delay experienced by drivers from existing to Total Traffic conditions is 2 additional seconds.

The proposed mixed use development is projected to have minimal impact on traffic operations at the N. Washington Avenue intersection with Wilson Street.

**SIGNALIZED INTERSECTIONS CAPACITY ANALYSIS RESULTS①**

| Intersection | Scenario | Peak Hour | Overall Intersection LOS | Intersection Approach, Lane Configuration & LOS② | | | |
|---|---|---|---|---|---|---|---|
| | | | | East bound | West bound | North bound | South bound |
| **South River St. & Wilson St.** | | | | L & T/ R | L & T/R | L/T & R | Stop Sign |
| | Existing | AM | C | C | B | C | |
| | | PM | D | E | C | C | |
| | 2024 No Build | AM | -- | -- | -- | -- | |
| | | PM | D | F | C | C | |
| | 2024 Total Traffic | AM | C | C | B | C | |
| | | PM | D | F | C④ | C | |
| **N. Washington Ave. & Wilson St.** | | | | L & T/R | L & T & R | No South Leg | L & T & T/R |
| | Existing | AM | B | A | A | | B |
| | | PM | B | A | A | | C③ |
| | 2024 Total Traffic | AM | B | A | A | | C |
| | | PM | B | A | B | | C③ |

① *L or R = exclusive left or right turn lane. T = exclusive through lane. L/T/R indicates the designated traffic movements share a lane.*

② *LOS letter grade provided is the overall approach LOS.*

③ *Southbound approach left turn lane operates at LOS E.*

④ *Westbound approach left turn lane operates at less than 1 second of delay from LOS E under No Build, and is projected to operate at LOS E under Build scenario.*

## G. SUMMARY OF FINDINGS AND RECOMMENDATIONS

The proposed One North Washington Place is a mixed use redevelopment of about ¾ of the block bounded by North River Street, North Washington Street, State Street and Wilson Street in the City of Batavia's central business district. Access to the development will be provided via two driveways to State Street.

Wilson Street and IL Route 25 (N. Washington, S. River and Wilson between the two) are both minor arterial streets. Wilson Street in particular experiences high peak hour traffic volumes and queuing of vehicles during the weekday morning and evening peak hour periods. About 85% of the vehicular traffic generated by the development is projected to travel on Wilson Street. Accordingly an evaluation of the traffic impacts of the proposed development was performed for the section of Wilson Street from North River Street to North Washington Street.

Traffic analyses were performed for the following scenarios:

- Year 2016 Existing Conditions
- Year 2024 Total Traffic Conditions (under full occupancy of the redevelopment site)

Additional traffic analyses were performed during the evening peak for the South River Street/Wilson Street intersection under a Year 2024 No Build scenario to evaluate the intersection with normal background traffic growth and without redevelopment generated traffic growth.

The following is a summary of the findings and recommendations of this traffic study:

1. The stop sign controlled **North River Street** approach to Wilson Street will be minimally impacted by the proposed redevelopment. The current acceptable intersection Level of Service (LOS) will not change and there will be minimal change in vehicular queuing on the N. River Street approach to Wilson Street.

2. The overall operation of the traffic signal controlled approaches to the **South River Street/Wilson Street** intersection are at an acceptable LOS "D" or better during the weekday morning and evening peak hour periods. However the eastbound approach, specifically the eastbound through traffic movement, currently operates at a less than acceptable LOS "E" during the evening peak hour, and is projected to decline to LOS "F" under the 2024 Total Traffic scenario which includes development traffic. The eastbound approach currently experiences long queues during the peak hours, which can extend west of the Island Avenue/Wilson Street intersection. Eastbound queuing is projected to increase under Year 2024 Total Traffic conditions. The westbound approach left turn traffic movement is projected to experience a drop in LOS from "D" to "E" with increased queuing during the evening peak hour period.

   A Year 2024 No-Build scenario was performed to evaluate the intersection during the evening peak hour with normal background traffic growth and without the proposed redevelopment. The evaluation of the No-Build scenario demonstrated that the increase in delay and queuing due to the mixed used redevelopment is minimal. The increases in delay and queuing, and decline in LOS is due primarily to the normal background growth of traffic on area streets.

3. The stop sign controlled **South Washington Avenue** approach to Wilson Street will be minimally impacted by the proposed redevelopment. Few vehicles turn to and from S. Washington Avenue during the peak hour periods.

4. The overall operation of the traffic signal controlled approaches to the **North Washington Avenue/Wilson Street** intersection are at an acceptable LOS "B" or better during the weekday morning and evening peak hour periods. During the evening peak hour under existing and Total Traffic conditions, the southbound approach left turn movement operates at LOS "E" due to the long green signal time assigned to serve the much larger east-west traffic volumes. New traffic generated by the proposed redevelopment will have minimal impact in operations and queuing at this intersection.

5. The traffic analyses indicate that ***the proposed redevelopment will have a low impact on traffic operations on the Wilson Street corridor***. The primary cause of declines in LOS and increases in queuing at the intersections is the normal background growth of non-site traffic. Recognizing that long vehicular queues and less than acceptable Levels of Service currently exist for certain traffic movements we recommend consideration of the following actions.

    a. As should be done with any coordinated traffic signal system, a periodic review of traffic signal timings along the Wilson Street corridor should be performed. Traffic patterns change over time, and it is good practice to periodically review and adjust system timings to optimize operations under ever changing conditions.

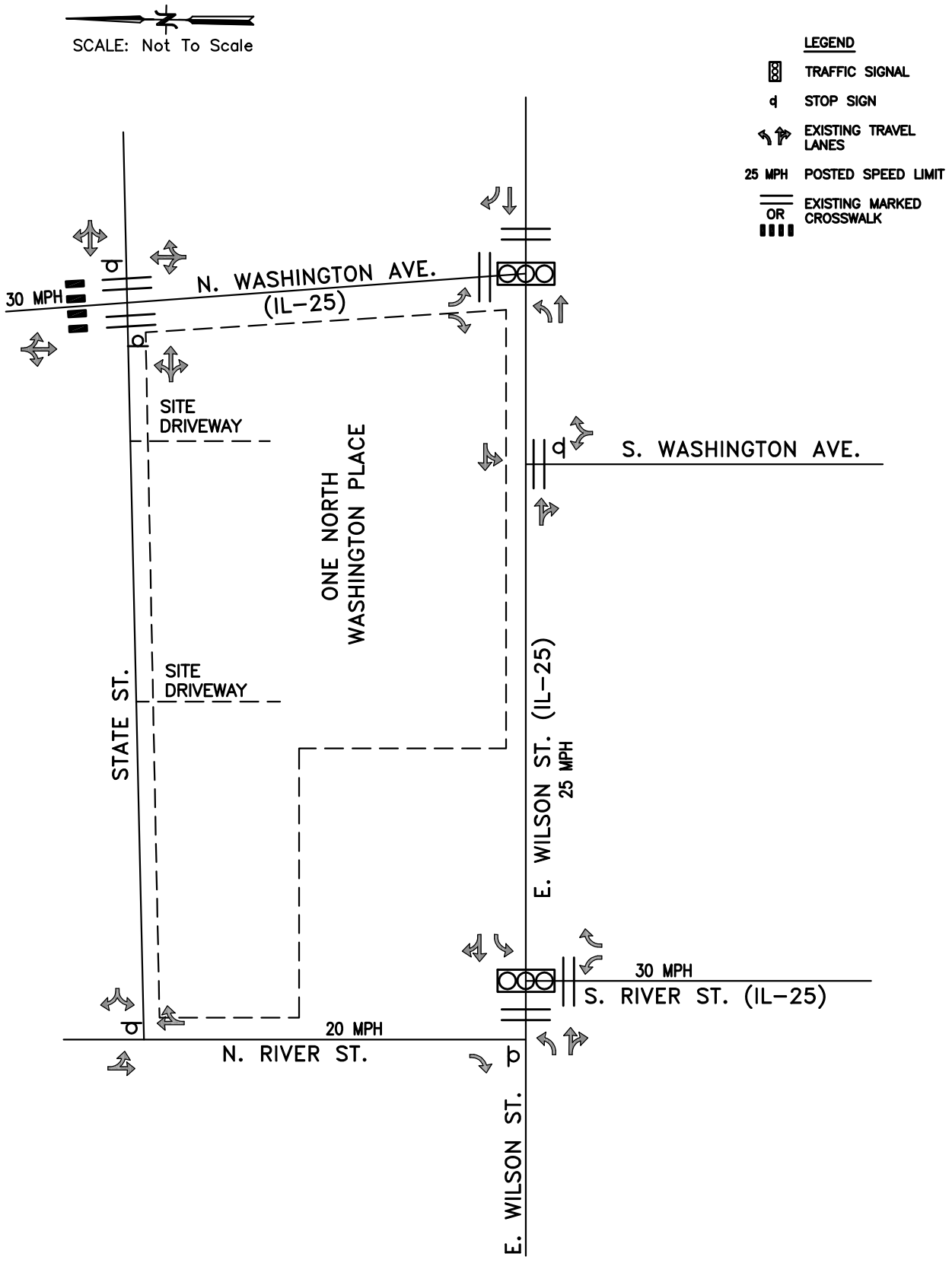
    b. The proximity of a variety of land uses in district the can contribute to reductions in personal vehicle trips and increases in walking, bicycle and transit trips. To further the potential for personal vehicle trip reductions, we suggest the following:

        i. Encourage downtown development or redevelopment with land uses complementary to the proposed residential component, such as local grocery stores, that can create a synergy between the uses and reduce vehicular trips.

        ii. Investigate the possibility of adding or changing the Pace bus routes to provide regular and more convenient service to the portion of downtown east of the Fox River.

--End--

# APPENDIX

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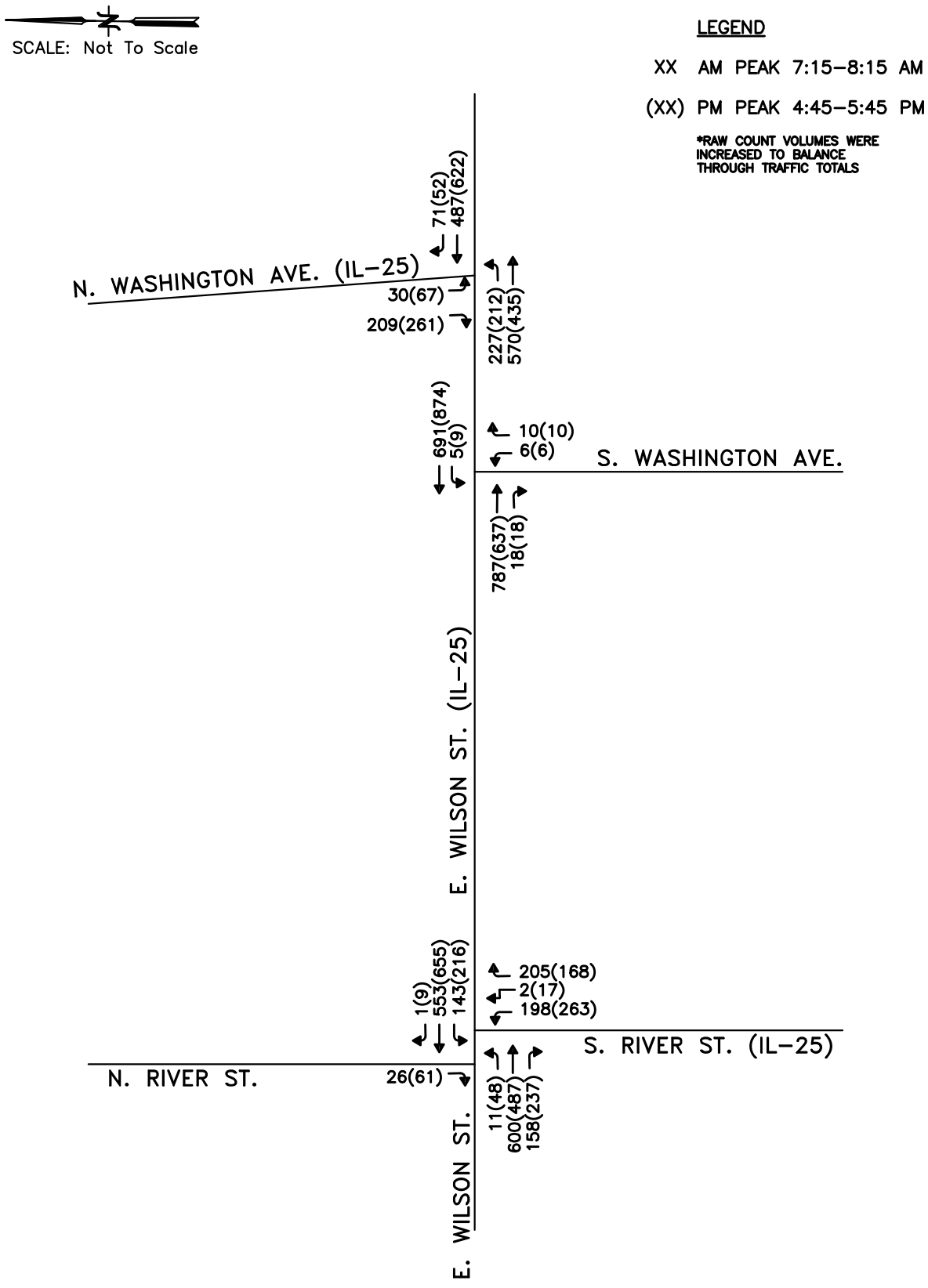
EXISTING TRAFFIC CONTROL DEVICES AND TRAVEL LANES

FIGURE 1

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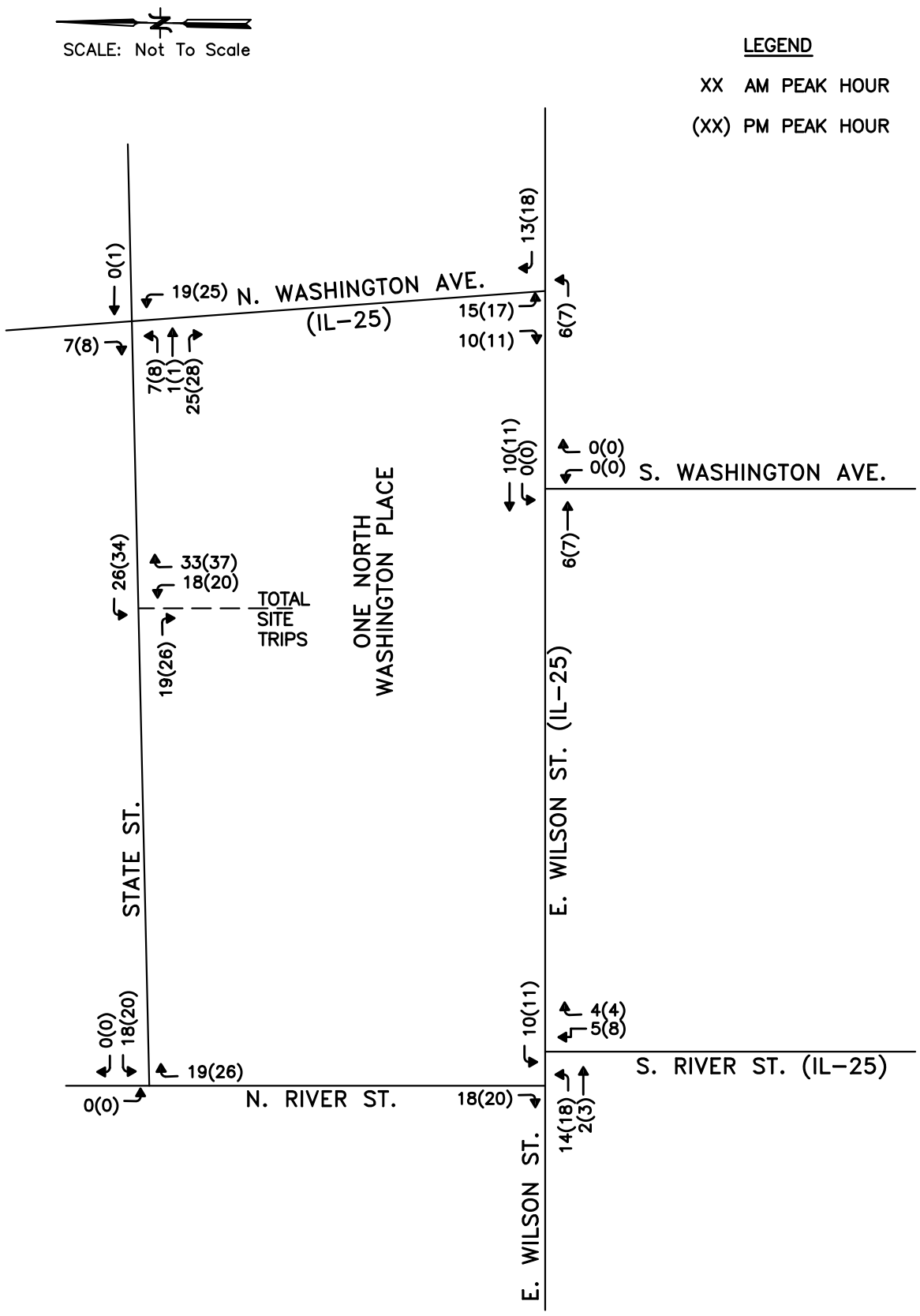
EXISTING
E. WILSON CORRIDOR
PEAK HOUR TRAFFIC VOLUMES*

FIGURE 2

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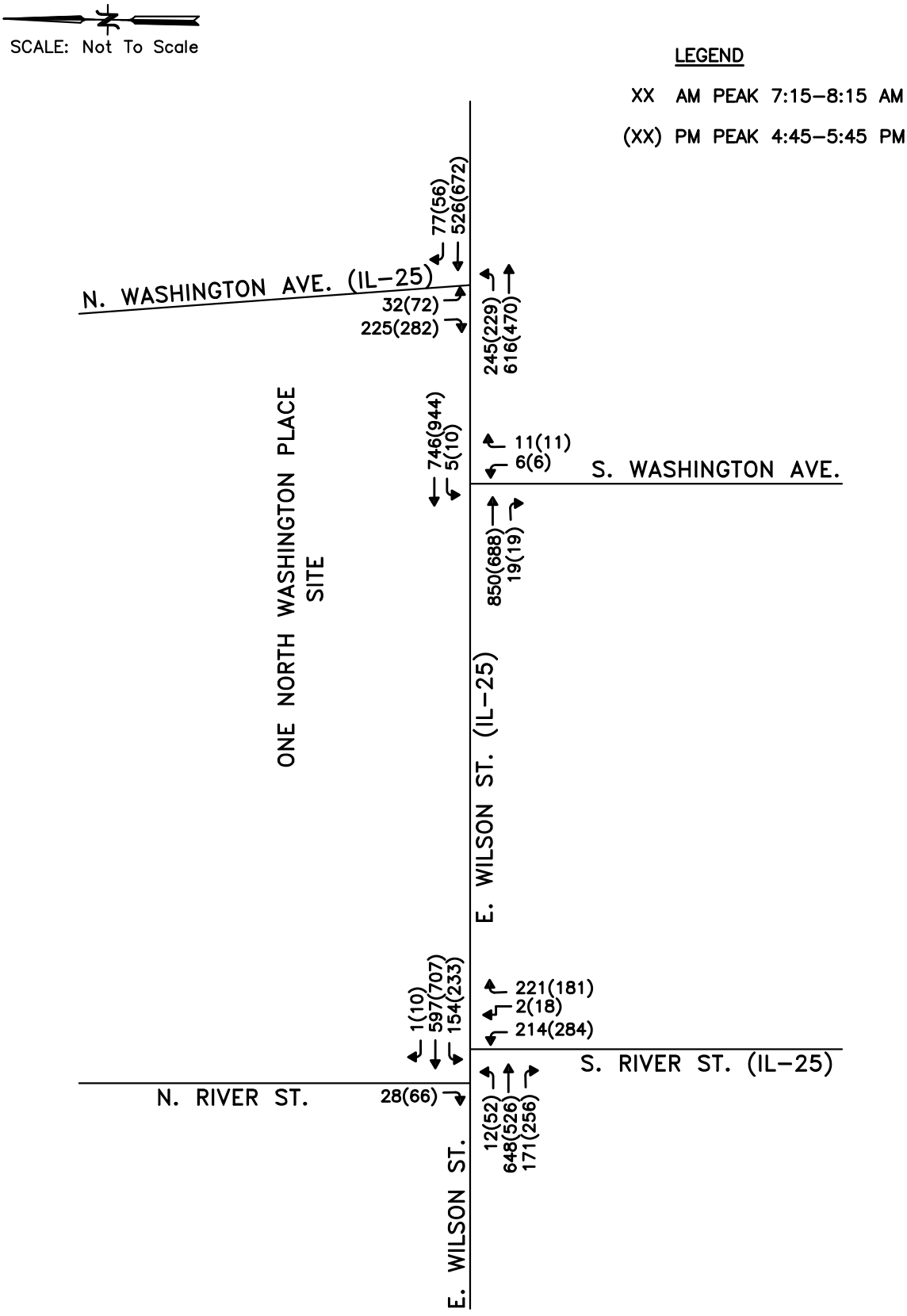
SITE TRAFFIC

FIGURE 3

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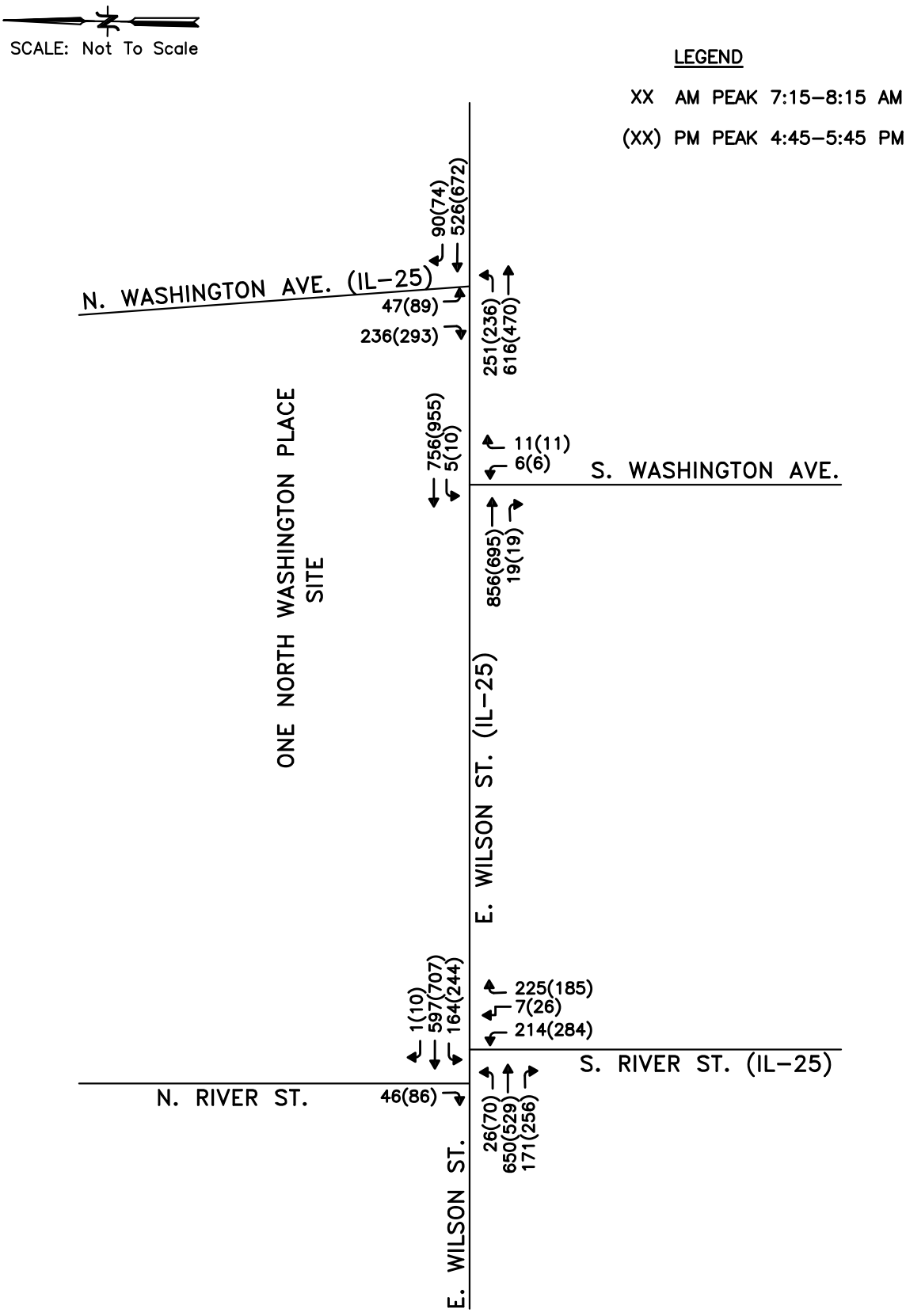
YEAR 2024
NON SITE TRAFFIC

FIGURE 4

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YEAR 2024
TOTAL TRAFFIC

FIGURE 5

# HCS 2010 Two-Way Stop-Control Report

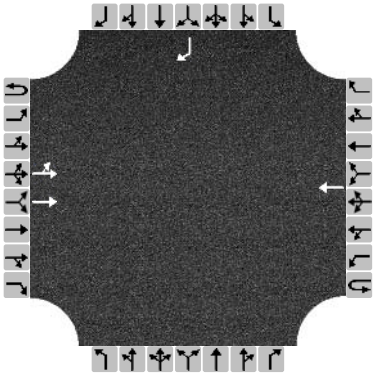
## General Information

| | |
|---|---|
| Analyst | JJB & A |
| Agency/Co. | JJB & A |
| Date Performed | 11/16/2016 |
| Analysis Year | 2016 |
| Time Analyzed | Existing AM Peak |
| Intersection Orientation | East-West |
| Project Description | One N Washington Place |

## Site Information

| | |
|---|---|
| Intersection | N. River/E. Wilson |
| Jurisdiction | Batavia |
| East/West Street | E. Wilson |
| North/South Street | N. River |
| Peak Hour Factor | 0.85 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 | | 7 | 8 | 9 | | 10 | 11 | 12 |
| Number of Lanes | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | | 0 | 0 | 0 | | 0 | 0 | 1 |
| Configuration | | LT | T | | | | T | | | | | | | | | R |
| Volume, V (veh/h) | | 0 | 769 | | | | 751 | | | | | | | | | 26 |
| Percent Heavy Vehicles (%) | | 5 | | | | | | | | | | | | | | 4 |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | | | | | | | | | 0 | | |
| Right Turn Channelized | | No | | | | No | | | | No | | | | No | | |
| Median Type/Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 4.1 | | | | | | | | | | | | | | 6.2 |
| Critical Headway (sec) | | 4.20 | | | | | | | | | | | | | | 6.28 |
| Base Follow-Up Headway (sec) | | 2.2 | | | | | | | | | | | | | | 3.3 |
| Follow-Up Headway (sec) | | 2.25 | | | | | | | | | | | | | | 3.34 |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | 0 | | | | | | | | | | | | | | 31 |
| Capacity, c (veh/h) | | 740 | | | | | | | | | | | | | | 336 |
| v/c Ratio | | 0.00 | | | | | | | | | | | | | | 0.09 |
| 95% Queue Length, $Q_{95}$ (veh) | | 0.0 | | | | | | | | | | | | | | 0.3 |
| Control Delay (s/veh) | | 9.9 | | | | | | | | | | | | | | 16.8 |
| Level of Service, LOS | | A | | | | | | | | | | | | | | C |
| Approach Delay (s/veh) | | 0.0 | | | | | | | | | | | | 16.8 | | |
| Approach LOS | | | | | | | | | | | | | | C | | |

# HCS 2010 Two-Way Stop-Control Report

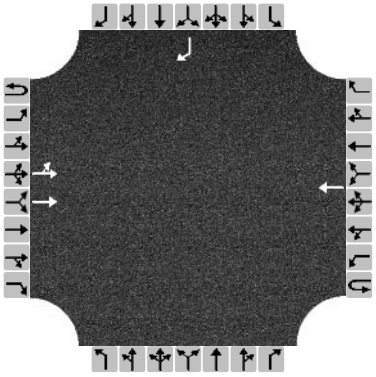
## General Information

| | |
|---|---|
| Analyst | JJB & A |
| Agency/Co. | JJB & A |
| Date Performed | 11/16/2016 |
| Analysis Year | 2016 |
| Time Analyzed | Existing PM Peak |
| Intersection Orientation | East-West |
| Project Description | One N Washington Place |

## Site Information

| | |
|---|---|
| Intersection | N. River/E. Wilson |
| Jurisdiction | Batavia |
| East/West Street | E. Wilson |
| North/South Street | N. River |
| Peak Hour Factor | 0.93 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

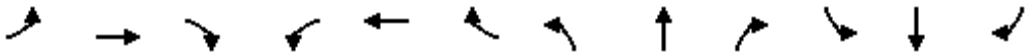
| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 | | 7 | 8 | 9 | | 10 | 11 | 12 |
| Number of Lanes | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | | 0 | 0 | 0 | | 0 | 0 | 1 |
| Configuration | | LT | T | | | | T | | | | | | | | | R |
| Volume, V (veh/h) | | 0 | 772 | | | | 918 | | | | | | | | | 61 |
| Percent Heavy Vehicles (%) | | 1 | | | | | | | | | | | | | | 0 |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | | | | | | | | | 0 | | |
| Right Turn Channelized | | No | | | | No | | | | No | | | | No | | |
| Median Type/Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 4.1 | | | | | | | | | | | | | | 6.2 |
| Critical Headway (sec) | | 4.12 | | | | | | | | | | | | | | 6.20 |
| Base Follow-Up Headway (sec) | | 2.2 | | | | | | | | | | | | | | 3.3 |
| Follow-Up Headway (sec) | | 2.21 | | | | | | | | | | | | | | 3.30 |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | 0 | | | | | | | | | | | | | | 66 |
| Capacity, c (veh/h) | | 699 | | | | | | | | | | | | | | 301 |
| v/c Ratio | | 0.00 | | | | | | | | | | | | | | 0.22 |
| 95% Queue Length, $Q_{95}$ (veh) | | 0.0 | | | | | | | | | | | | | | 0.8 |
| Control Delay (s/veh) | | 10.2 | | | | | | | | | | | | | | 20.3 |
| Level of Service, LOS | | B | | | | | | | | | | | | | | C |
| Approach Delay (s/veh) | | 0.0 | | | | | | | | | | | | 20.3 | | |
| Approach LOS | | | | | | | | | | | | | | C | | |



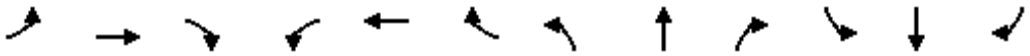
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 11 | 600 | 158 | 143 | 553 | 1 | 198 | 2 | 205 | 0 | 0 | 0 |
| Future Volume (vph) | 11 | 600 | 158 | 143 | 553 | 1 | 198 | 2 | 205 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 100 | | 0 | 0 | | 115 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 0 | | | 105 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 1.00 | | | 1.00 | | | | | | | |
| Frt | | 0.969 | | | | | | | 0.850 | | | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.953 | | | | |
| Satd. Flow (prot) | 1678 | 1703 | 0 | 1646 | 1733 | 0 | 0 | 1678 | 1495 | 0 | 0 | 0 |
| Flt Permitted | 0.418 | | | 0.143 | | | | 0.953 | | | | |
| Satd. Flow (perm) | 738 | 1703 | 0 | 248 | 1733 | 0 | 0 | 1678 | 1495 | 0 | 0 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | No |
| Satd. Flow (RTOR) | | 25 | | | | | | | 225 | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 20 | |
| Link Distance (ft) | | 72 | | | 213 | | | 305 | | | 397 | |
| Travel Time (s) | | 2.0 | | | 5.8 | | | 8.3 | | | 13.5 | |
| Confl. Peds. (#/hr) | | | 1 | 1 | | 2 | | | | | | |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 4% | 4% | 4% | 6% | 6% | 0% | 8% | 0% | 8% | 0% | 0% | 0% |
| Adj. Flow (vph) | 12 | 659 | 174 | 157 | 608 | 1 | 218 | 2 | 225 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 12 | 833 | 0 | 157 | 609 | 0 | 0 | 220 | 225 | 0 | 0 | 0 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | pt+ov | | | |
| Protected Phases | | 2 | | 1 | 6 | | 3 | 8 | 8 1 | | | |
| Permitted Phases | 2 | | | 6 | | | | | | | | |
| Detector Phase | 2 | 2 | | 1 | 6 | | 3 | 8 | 8 1 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | | | |
| Minimum Split (s) | 22.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | | | |
| Total Split (s) | 66.0 | 66.0 | | 10.0 | 76.0 | | 24.0 | 24.0 | | | | |
| Total Split (%) | 66.0% | 66.0% | | 10.0% | 76.0% | | 24.0% | 24.0% | | | | |
| Maximum Green (s) | 61.5 | 61.5 | | 5.5 | 71.5 | | 19.5 | 19.5 | | | | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | | 0.0 | | | | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | | 4.5 | | | | |
| Lead/Lag | Lag | Lag | | Lead | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | | | |
| Recall Mode | C-Min | C-Min | | None | C-Min | | Min | Min | | | | |
| Walk Time (s) | 7.0 | 7.0 | | | 7.0 | | | 7.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | 11.0 | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | 0 | | | 0 | | | | |
| Act Effct Green (s) | 57.4 | 57.4 | | 67.4 | 67.4 | | | 23.6 | 33.6 | | | |
| Actuated g/C Ratio | 0.57 | 0.57 | | 0.67 | 0.67 | | | 0.24 | 0.34 | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| v/c Ratio | 0.03 | 0.84 | | 0.64 | 0.52 | | | 0.56 | 0.35 | | | |
| Control Delay | 7.9 | 25.7 | | 23.0 | 11.6 | | | 41.8 | 5.3 | | | |
| Queue Delay | 0.0 | 2.2 | | 0.0 | 0.6 | | | 0.0 | 0.0 | | | |
| Total Delay | 7.9 | 27.9 | | 23.0 | 12.2 | | | 41.8 | 5.3 | | | |
| LOS | A | C | | C | B | | | D | A | | | |
| Approach Delay | | 27.6 | | | 14.4 | | | 23.3 | | | | |
| Approach LOS | | C | | | B | | | C | | | | |
| Queue Length 50th (ft) | 3 | 364 | | 47 | 254 | | | 130 | 0 | | | |
| Queue Length 95th (ft) | 10 | 539 | | 69 | 86 | | | #213 | 54 | | | |
| Internal Link Dist (ft) | | 1 | | | 133 | | | 225 | | | 317 | |
| Turn Bay Length (ft) | | | | 100 | | | | | 115 | | | |
| Base Capacity (vph) | 453 | 1056 | | 244 | 1239 | | | 395 | 651 | | | |
| Starvation Cap Reductn | 0 | 114 | | 0 | 298 | | | 0 | 0 | | | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | | 0 | 0 | | | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | | 0 | 0 | | | |
| Reduced v/c Ratio | 0.03 | 0.88 | | 0.64 | 0.65 | | | 0.56 | 0.35 | | | |

## Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 21.8 Intersection LOS: C
Intersection Capacity Utilization 71.5% ICU Level of Service C
Analysis Period (min) 15
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: S River/IL-25/N River Departure



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 48 | 487 | 237 | 216 | 655 | 9 | 263 | 17 | 168 | 0 | 0 | 0 |
| Future Volume (vph) | 48 | 487 | 237 | 216 | 655 | 9 | 263 | 17 | 168 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 100 | | 0 | 0 | | 115 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 0 | | | 105 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 0.98 | | | 1.00 | | | | | | | |
| Frt | | 0.951 | | | 0.998 | | | | 0.850 | | | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.955 | | | | |
| Satd. Flow (prot) | 1745 | 1711 | 0 | 1728 | 1814 | 0 | 0 | 1814 | 1615 | 0 | 0 | 0 |
| Flt Permitted | 0.347 | | | 0.120 | | | | 0.955 | | | | |
| Satd. Flow (perm) | 637 | 1711 | 0 | 218 | 1814 | 0 | 0 | 1814 | 1615 | 0 | 0 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | No |
| Satd. Flow (RTOR) | | 26 | | | 1 | | | | 150 | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 20 | |
| Link Distance (ft) | | 72 | | | 213 | | | 305 | | | 397 | |
| Travel Time (s) | | 2.0 | | | 5.8 | | | 8.3 | | | 13.5 | |
| Confl. Peds. (#/hr) | | | 11 | 11 | | 3 | | | | | | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 49 | 497 | 242 | 220 | 668 | 9 | 268 | 17 | 171 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 49 | 739 | 0 | 220 | 677 | 0 | 0 | 285 | 171 | 0 | 0 | 0 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | pt+ov | | | |
| Protected Phases | | 2 | | 1 | 6 | | 3 | 8 | 8 1 | | | |
| Permitted Phases | 2 | | | 6 | | | | | | | | |
| Detector Phase | 2 | 2 | | 1 | 6 | | 3 | 8 | 8 1 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | | | |
| Minimum Split (s) | 22.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | | | |
| Total Split (s) | 76.0 | 76.0 | | 22.0 | 98.0 | | 42.0 | 42.0 | | | | |
| Total Split (%) | 54.3% | 54.3% | | 15.7% | 70.0% | | 30.0% | 30.0% | | | | |
| Maximum Green (s) | 71.5 | 71.5 | | 17.5 | 93.5 | | 37.5 | 37.5 | | | | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | | 0.0 | | | | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | | 4.5 | | | | |
| Lead/Lag | Lag | Lag | | Lead | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | | | |
| Recall Mode | C-Min | C-Min | | None | C-Min | | Min | Min | | | | |
| Walk Time (s) | 7.0 | 7.0 | | | 7.0 | | | 7.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | 11.0 | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | 0 | | | 0 | | | | |
| Act Effct Green (s) | 68.2 | 68.2 | | 86.1 | 86.1 | | | 44.9 | 62.8 | | | |
| Actuated g/C Ratio | 0.49 | 0.49 | | 0.62 | 0.62 | | | 0.32 | 0.45 | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| v/c Ratio | 0.16 | 0.87 | | 0.79 | 0.61 | | | 0.49 | 0.21 | | | |
| Control Delay | 20.0 | 42.8 | | 38.2 | 21.3 | | | 43.9 | 6.0 | | | |
| Queue Delay | 0.0 | 15.7 | | 0.3 | 0.8 | | | 0.0 | 0.0 | | | |
| Total Delay | 20.0 | 58.5 | | 38.6 | 22.1 | | | 43.9 | 6.0 | | | |
| LOS | B | E | | D | C | | | D | A | | | |
| Approach Delay | | 56.1 | | | 26.1 | | | 29.7 | | | | |
| Approach LOS | | E | | | C | | | C | | | | |
| Queue Length 50th (ft) | 24 | 557 | | 107 | 459 | | | 213 | 11 | | | |
| Queue Length 95th (ft) | 49 | 742 | | 145 | 341 | | | 325 | 56 | | | |
| Internal Link Dist (ft) | | 1 | | | 133 | | | 225 | | | 317 | |
| Turn Bay Length (ft) | | | | 100 | | | | | 115 | | | |
| Base Capacity (vph) | 329 | 895 | | 323 | 1211 | | | 581 | 849 | | | |
| Starvation Cap Reductn | 0 | 157 | | 7 | 253 | | | 0 | 0 | | | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | | 0 | 0 | | | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | | 0 | 0 | | | |
| Reduced v/c Ratio | 0.15 | 1.00 | | 0.70 | 0.71 | | | 0.49 | 0.20 | | | |

## Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 37.9 Intersection LOS: D
Intersection Capacity Utilization 79.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: S River/IL-25/N River Departure

# HCS 2010 Two-Way Stop-Control Report

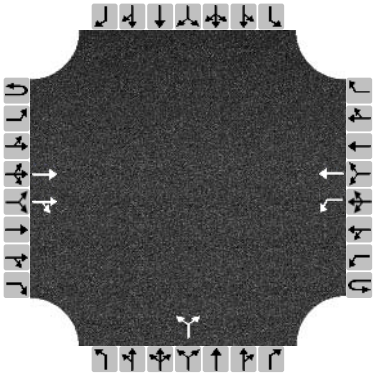
## General Information

| | |
|---|---|
| Analyst | JJB & A |
| Agency/Co. | JJB & A |
| Date Performed | 11/16/2016 |
| Analysis Year | 2016 |
| Time Analyzed | Existing AM Pk |
| Intersection Orientation | East-West |
| Project Description | One N Washington Place |

## Site Information

| | |
|---|---|
| Intersection | S. Washington/E. River |
| Jurisdiction | Batavia |
| East/West Street | E. Wilson |
| North/South Street | S. Washington |
| Peak Hour Factor | 0.83 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 | | 7 | 8 | 9 | | 10 | 11 | 12 |
| Number of Lanes | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Configuration | | | T | TR | | L | T | | | | LR | | | | | |
| Volume, V (veh/h) | | | 787 | 18 | | 5 | 691 | | | 6 | | 10 | | | | |
| Percent Heavy Vehicles (%) | | | | | | 7 | | | | 0 | | 0 | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | | | | | 0 | | | | | | |
| Right Turn Channelized | | | No | | | | No | | | | No | | | | No | |
| Median Type/Storage | | | Undivided | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 4.1 | | | | 7.5 | | 6.9 | | | | |
| Critical Headway (sec) | | | | | | 4.24 | | | | 6.80 | | 6.90 | | | | |
| Base Follow-Up Headway (sec) | | | | | | 2.2 | | | | 3.5 | | 3.3 | | | | |
| Follow-Up Headway (sec) | | | | | | 2.27 | | | | 3.50 | | 3.30 | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 6 | | | | | 19 | | | | | |
| Capacity, c (veh/h) | | | | | | 675 | | | | | 158 | | | | | |
| v/c Ratio | | | | | | 0.01 | | | | | 0.12 | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 0.0 | | | | | 0.4 | | | | | |
| Control Delay (s/veh) | | | | | | 10.4 | | | | | 30.9 | | | | | |
| Level of Service, LOS | | | | | | B | | | | | D | | | | | |
| Approach Delay (s/veh) | | | | | | 0.1 | | | | 30.9 | | | | | | |
| Approach LOS | | | | | | | | | | D | | | | | | |

# HCS 2010 Two-Way Stop-Control Report

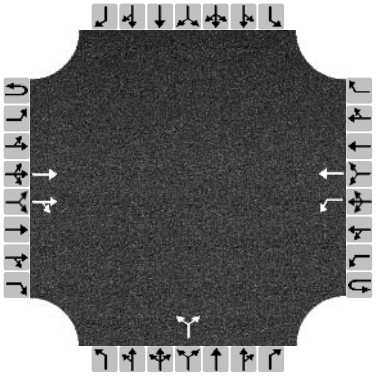
## General Information

| | |
|---|---|
| Analyst | JJB & A |
| Agency/Co. | JJB & A |
| Date Performed | 11/16/2016 |
| Analysis Year | 2016 |
| Time Analyzed | Existing PM Peak |
| Intersection Orientation | East-West |
| Project Description | One N Washington Place |

## Site Information

| | |
|---|---|
| Intersection | S. Washington/E. River |
| Jurisdiction | Batavia |
| East/West Street | E. Wilson |
| North/South Street | S. Washington |
| Peak Hour Factor | 0.93 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

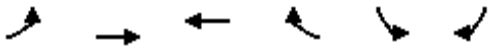
| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 | | 7 | 8 | 9 | | 10 | 11 | 12 |
| Number of Lanes | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Configuration | | | T | TR | | L | T | | | | LR | | | | | |
| Volume, V (veh/h) | | | 637 | 18 | | 9 | 874 | | | 6 | | 10 | | | | |
| Percent Heavy Vehicles (%) | | | | | | 1 | | | | 0 | | 0 | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | | | | | 0 | | | | | | |
| Right Turn Channelized | | | No | | | | No | | | | No | | | | No | |
| Median Type/Storage | | | Undivided | | | | | | | | | | | | | |

## Critical and Follow-up Headways

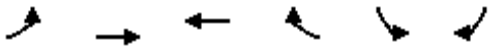
| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 4.1 | | | | 7.5 | | 6.9 | | | | |
| Critical Headway (sec) | | | | | | 4.12 | | | | 6.80 | | 6.90 | | | | |
| Base Follow-Up Headway (sec) | | | | | | 2.2 | | | | 3.5 | | 3.3 | | | | |
| Follow-Up Headway (sec) | | | | | | 2.21 | | | | 3.50 | | 3.30 | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 10 | | | | | 17 | | | | | |
| Capacity, c (veh/h) | | | | | | 895 | | | | | 202 | | | | | |
| v/c Ratio | | | | | | 0.01 | | | | | 0.08 | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 0.0 | | | | | 0.3 | | | | | |
| Control Delay (s/veh) | | | | | | 9.1 | | | | | 24.4 | | | | | |
| Level of Service, LOS | | | | | | A | | | | | C | | | | | |
| Approach Delay (s/veh) | | | | | | 0.1 | | | | 24.4 | | | | | | |
| Approach LOS | | | | | | | | | | C | | | | | | |



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 227 | 570 | 487 | 71 | 30 | 209 |
| Future Volume (vph) | 227 | 570 | 487 | 71 | 30 | 209 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | | 65 | 125 | 125 |
| Storage Lanes | 1 | | | 1 | 1 | 0 |
| Taper Length (ft) | 100 | | | | 140 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 1.00 | | | 0.97 | 1.00 | |
| Frt | | | | 0.850 | | 0.850 |
| Flt Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1616 | 1701 | 1701 | 1446 | 1662 | 1487 |
| Flt Permitted | 0.354 | | | | 0.950 | |
| Satd. Flow (perm) | 601 | 1701 | 1701 | 1405 | 1657 | 1487 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 64 | | 249 |
| Link Speed (mph) | | 25 | 25 | | 30 | |
| Link Distance (ft) | | 112 | 341 | | 418 | |
| Travel Time (s) | | 3.1 | 9.3 | | 9.5 | |
| Confl. Peds. (#/hr) | 3 | | | 3 | 1 | |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Heavy Vehicles (%) | 8% | 8% | 8% | 8% | 5% | 5% |
| Adj. Flow (vph) | 270 | 679 | 580 | 85 | 36 | 249 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 270 | 679 | 580 | 85 | 36 | 249 |
| Turn Type | pm+pt | NA | NA | Perm | Perm | Perm |
| Protected Phases | 5 | 2 | 6 | | | |
| Permitted Phases | 2 | | | 6 | 4 | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 1.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 6.0 | 22.5 | 22.5 | 22.5 | 14.0 | 14.0 |
| Total Split (s) | 6.0 | 81.0 | 75.0 | 75.0 | 19.0 | 19.0 |
| Total Split (%) | 6.0% | 81.0% | 75.0% | 75.0% | 19.0% | 19.0% |
| Maximum Green (s) | 1.5 | 76.5 | 70.5 | 70.5 | 14.5 | 14.5 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min | C-Min | C-Min | None | None |
| Walk Time (s) | | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 82.2 | 82.2 | 68.4 | 68.4 | 8.8 | 8.8 |
| Actuated g/C Ratio | 0.82 | 0.82 | 0.68 | 0.68 | 0.09 | 0.09 |

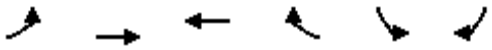


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| v/c Ratio | 0.46 | 0.49 | 0.50 | 0.09 | 0.25 | 0.70 |
| Control Delay | 5.8 | 6.8 | 10.6 | 3.1 | 45.0 | 16.4 |
| Queue Delay | 0.8 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 6.7 | 7.9 | 10.6 | 3.1 | 45.0 | 16.4 |
| LOS | A | A | B | A | D | B |
| Approach Delay | | 7.5 | 9.6 | | 20.0 | |
| Approach LOS | | A | A | | B | |
| Queue Length 50th (ft) | 47 | 187 | 146 | 4 | 22 | 0 |
| Queue Length 95th (ft) | m70 | 208 | 285 | 22 | 46 | 53 |
| Internal Link Dist (ft) | | 32 | 261 | | 338 | |
| Turn Bay Length (ft) | | | | 65 | 125 | 125 |
| Base Capacity (vph) | 589 | 1400 | 1217 | 1023 | 241 | 429 |
| Starvation Cap Reductn | 125 | 452 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.58 | 0.72 | 0.48 | 0.08 | 0.15 | 0.58 |

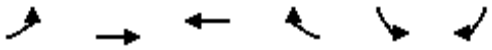
| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 100 | | | |
| Actuated Cycle Length: 100 | | | |
| Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.70 | | | |
| Intersection Signal Delay: 10.1 | | Intersection LOS: B | |
| Intersection Capacity Utilization 53.6% | | ICU Level of Service A | |
| Analysis Period (min) 15 | | | |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: E Wilson & N Washington (IL25)



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 212 | 435 | 622 | 52 | 67 | 261 |
| Future Volume (vph) | 212 | 435 | 622 | 52 | 67 | 261 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | | 65 | 125 | 125 |
| Storage Lanes | 1 | | | 1 | 1 | 0 |
| Taper Length (ft) | 100 | | | | 140 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | 0.96 | 1.00 | 0.97 |
| Frt | | | | 0.850 | | 0.850 |
| Flt Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1728 | 1818 | 1818 | 1546 | 1728 | 1546 |
| Flt Permitted | 0.324 | | | | 0.950 | |
| Satd. Flow (perm) | 589 | 1818 | 1818 | 1485 | 1721 | 1503 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 18 | | 290 |
| Link Speed (mph) | | 25 | 25 | | 30 | |
| Link Distance (ft) | | 112 | 341 | | 418 | |
| Travel Time (s) | | 3.1 | 9.3 | | 9.5 | |
| Confl. Peds. (#/hr) | 5 | | | 5 | 1 | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 236 | 483 | 691 | 58 | 74 | 290 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 236 | 483 | 691 | 58 | 74 | 290 |
| Turn Type | pm+pt | NA | NA | Perm | Perm | Perm |
| Protected Phases | 5 | 2 | 6 | | | |
| Permitted Phases | 2 | | | 6 | 4 | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 1.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 6.0 | 22.5 | 22.5 | 22.5 | 14.0 | 14.0 |
| Total Split (s) | 18.0 | 103.0 | 85.0 | 85.0 | 37.0 | 37.0 |
| Total Split (%) | 12.9% | 73.6% | 60.7% | 60.7% | 26.4% | 26.4% |
| Maximum Green (s) | 13.5 | 98.5 | 80.5 | 80.5 | 32.5 | 32.5 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min | C-Min | C-Min | None | None |
| Walk Time (s) | | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 119.2 | 119.2 | 105.7 | 105.7 | 11.8 | 11.8 |
| Actuated g/C Ratio | 0.85 | 0.85 | 0.76 | 0.76 | 0.08 | 0.08 |



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| v/c Ratio | 0.41 | 0.31 | 0.50 | 0.05 | 0.51 | 0.74 |
| Control Delay | 5.6 | 5.3 | 9.1 | 4.2 | 72.5 | 18.2 |
| Queue Delay | 0.9 | 1.2 | 0.4 | 0.0 | 0.0 | 0.3 |
| Total Delay | 6.6 | 6.5 | 9.5 | 4.2 | 72.5 | 18.5 |
| LOS | A | A | A | A | E | B |
| Approach Delay | | 6.5 | 9.1 | | 29.5 | |
| Approach LOS | | A | A | | C | |
| Queue Length 50th (ft) | 59 | 155 | 214 | 8 | 66 | 0 |
| Queue Length 95th (ft) | m76 | m174 | 389 | 26 | 114 | 91 |
| Internal Link Dist (ft) | | 32 | 261 | | 338 | |
| Turn Bay Length (ft) | | | | 65 | 125 | 125 |
| Base Capacity (vph) | 611 | 1547 | 1372 | 1125 | 399 | 571 |
| Starvation Cap Reductn | 178 | 801 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 272 | 0 | 0 | 43 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.55 | 0.65 | 0.63 | 0.05 | 0.19 | 0.55 |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 140 | | | |
| Actuated Cycle Length: 140 | | | |
| Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.74 | | | |
| Intersection Signal Delay: 12.1 | | Intersection LOS: B | |
| Intersection Capacity Utilization 60.6% | | ICU Level of Service B | |
| Analysis Period (min) 15 | | | |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: E Wilson & N Washington (IL25)

# HCS 2010 Two-Way Stop-Control Report

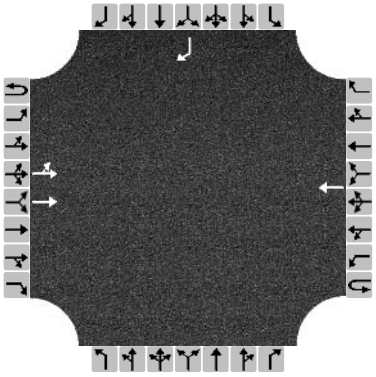
## General Information

| | |
|---|---|
| Analyst | JJB & A |
| Agency/Co. | JJB & A |
| Date Performed | 11/16/2016 |
| Analysis Year | 2016 |
| Time Analyzed | 2024 Total Traffic AM Pk |
| Intersection Orientation | East-West |
| Project Description | One N Washington Place |

## Site Information

| | |
|---|---|
| Intersection | N. River/E. Wilson |
| Jurisdiction | Batavia |
| East/West Street | E. Wilson |
| North/South Street | N. River |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 | | 7 | 8 | 9 | | 10 | 11 | 12 |
| Number of Lanes | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | | 0 | 0 | 0 | | 0 | 0 | 1 |
| Configuration | | LT | T | | | | T | | | | | | | | | R |
| Volume, V (veh/h) | | 0 | 847 | | | | 811 | | | | | | | | | 46 |
| Percent Heavy Vehicles (%) | | 5 | | | | | | | | | | | | | | 4 |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | | | | | | | | | 0 | | |
| Right Turn Channelized | | No | | | | No | | | | No | | | | No | | |
| Median Type/Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 4.1 | | | | | | | | | | | | | | 6.2 |
| Critical Headway (sec) | | 4.20 | | | | | | | | | | | | | | 6.28 |
| Base Follow-Up Headway (sec) | | 2.2 | | | | | | | | | | | | | | 3.3 |
| Follow-Up Headway (sec) | | 2.25 | | | | | | | | | | | | | | 3.34 |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | 0 | | | | | | | | | | | | | | 48 |
| Capacity, c (veh/h) | | 760 | | | | | | | | | | | | | | 350 |
| v/c Ratio | | 0.00 | | | | | | | | | | | | | | 0.14 |
| 95% Queue Length, $Q_{95}$ (veh) | | 0.0 | | | | | | | | | | | | | | 0.5 |
| Control Delay (s/veh) | | 9.7 | | | | | | | | | | | | | | 16.9 |
| Level of Service, LOS | | A | | | | | | | | | | | | | | C |
| Approach Delay (s/veh) | | 0.0 | | | | | | | | | | | | 16.9 | | |
| Approach LOS | | | | | | | | | | | | | | C | | |

# HCS 2010 Two-Way Stop-Control Report

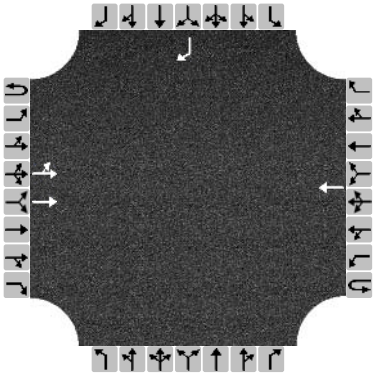
## General Information

| | |
|---|---|
| Analyst | JJB & A |
| Agency/Co. | JJB & A |
| Date Performed | 11/16/2016 |
| Analysis Year | 2016 |
| Time Analyzed | 2024 TT PM Pk |
| Intersection Orientation | East-West |
| Project Description | One N Washington Place |

## Site Information

| | |
|---|---|
| Intersection | N. River/E. Wilson |
| Jurisdiction | Batavia |
| East/West Street | E. Wilson |
| North/South Street | N. River |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

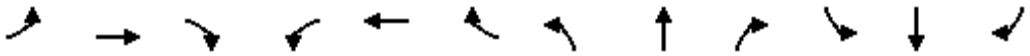
| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 | | 7 | 8 | 9 | | 10 | 11 | 12 |
| Number of Lanes | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | | 0 | 0 | 0 | | 0 | 0 | 1 |
| Configuration | | LT | T | | | | T | | | | | | | | | R |
| Volume, V (veh/h) | | 0 | 855 | | | | 991 | | | | | | | | | 86 |
| Percent Heavy Vehicles (%) | | 1 | | | | | | | | | | | | | | 0 |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | | | | | | | | | 0 | | |
| Right Turn Channelized | | No | | | | No | | | | No | | | | No | | |
| Median Type/Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 4.1 | | | | | | | | | | | | | | 6.2 |
| Critical Headway (sec) | | 4.12 | | | | | | | | | | | | | | 6.20 |
| Base Follow-Up Headway (sec) | | 2.2 | | | | | | | | | | | | | | 3.3 |
| Follow-Up Headway (sec) | | 2.21 | | | | | | | | | | | | | | 3.30 |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | 0 | | | | | | | | | | | | | | 91 |
| Capacity, c (veh/h) | | 666 | | | | | | | | | | | | | | 280 |
| v/c Ratio | | 0.00 | | | | | | | | | | | | | | 0.33 |
| 95% Queue Length, $Q_{95}$ (veh) | | 0.0 | | | | | | | | | | | | | | 1.4 |
| Control Delay (s/veh) | | 10.4 | | | | | | | | | | | | | | 24.0 |
| Level of Service, LOS | | B | | | | | | | | | | | | | | C |
| Approach Delay (s/veh) | | 0.0 | | | | | | | | | | | | 24.0 | | |
| Approach LOS | | | | | | | | | | | | | | C | | |

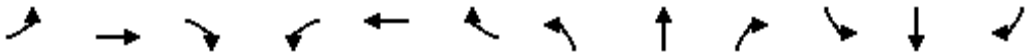


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 26 | 650 | 171 | 164 | 597 | 1 | 214 | 7 | 225 | 0 | 0 | 0 |
| Future Volume (vph) | 26 | 650 | 171 | 164 | 597 | 1 | 214 | 7 | 225 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 100 | | 0 | 0 | | 115 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 0 | | | 105 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 1.00 | | | 1.00 | | | | | | | |
| Frt | | 0.969 | | | | | | | 0.850 | | | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.954 | | | | |
| Satd. Flow (prot) | 1678 | 1703 | 0 | 1646 | 1733 | 0 | 0 | 1682 | 1495 | 0 | 0 | 0 |
| Flt Permitted | 0.408 | | | 0.133 | | | | 0.954 | | | | |
| Satd. Flow (perm) | 721 | 1703 | 0 | 230 | 1733 | 0 | 0 | 1682 | 1495 | 0 | 0 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | No |
| Satd. Flow (RTOR) | | 25 | | | | | | | 237 | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 20 | |
| Link Distance (ft) | | 72 | | | 213 | | | 305 | | | 397 | |
| Travel Time (s) | | 2.0 | | | 5.8 | | | 8.3 | | | 13.5 | |
| Confl. Peds. (#/hr) | | | 1 | 1 | | 2 | | | | | | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 4% | 4% | 4% | 6% | 6% | 0% | 8% | 0% | 8% | 0% | 0% | 0% |
| Adj. Flow (vph) | 27 | 684 | 180 | 173 | 628 | 1 | 225 | 7 | 237 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 27 | 864 | 0 | 173 | 629 | 0 | 0 | 232 | 237 | 0 | 0 | 0 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | pt+ov | | | |
| Protected Phases | | 2 | | 1 | 6 | | 3 | 8 | 8 1 | | | |
| Permitted Phases | 2 | | | 6 | | | | | | | | |
| Detector Phase | 2 | 2 | | 1 | 6 | | 3 | 8 | 8 1 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | | | |
| Minimum Split (s) | 22.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | | | |
| Total Split (s) | 66.0 | 66.0 | | 10.0 | 76.0 | | 24.0 | 24.0 | | | | |
| Total Split (%) | 66.0% | 66.0% | | 10.0% | 76.0% | | 24.0% | 24.0% | | | | |
| Maximum Green (s) | 61.5 | 61.5 | | 5.5 | 71.5 | | 19.5 | 19.5 | | | | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | | 0.0 | | | | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | | 4.5 | | | | |
| Lead/Lag | Lag | Lag | | Lead | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | | | |
| Recall Mode | C-Min | C-Min | | None | C-Min | | Min | Min | | | | |
| Walk Time (s) | 7.0 | 7.0 | | | 7.0 | | | 7.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | 11.0 | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | 0 | | | 0 | | | | |
| Act Effct Green (s) | 58.4 | 58.4 | | 68.4 | 68.4 | | | 22.6 | 32.6 | | | |
| Actuated g/C Ratio | 0.58 | 0.58 | | 0.68 | 0.68 | | | 0.23 | 0.33 | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| v/c Ratio | 0.06 | 0.86 | | 0.74 | 0.53 | | | 0.61 | 0.37 | | | |
| Control Delay | 8.3 | 26.7 | | 30.8 | 12.2 | | | 44.3 | 5.4 | | | |
| Queue Delay | 0.0 | 3.3 | | 0.0 | 0.7 | | | 0.0 | 0.0 | | | |
| Total Delay | 8.3 | 30.0 | | 30.8 | 12.9 | | | 44.3 | 5.4 | | | |
| LOS | A | C | | C | B | | | D | A | | | |
| Approach Delay | | 29.4 | | | 16.8 | | | 24.6 | | | | |
| Approach LOS | | C | | | B | | | C | | | | |
| Queue Length 50th (ft) | 6 | 382 | | 53 | 273 | | | 139 | 0 | | | |
| Queue Length 95th (ft) | 18 | 585 | | #109 | 91 | | | #240 | 55 | | | |
| Internal Link Dist (ft) | | 1 | | | 133 | | | 225 | | | 317 | |
| Turn Bay Length (ft) | | | | 100 | | | | | 115 | | | |
| Base Capacity (vph) | 443 | 1056 | | 235 | 1239 | | | 380 | 647 | | | |
| Starvation Cap Reductn | 0 | 114 | | 0 | 302 | | | 0 | 0 | | | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | | 0 | 0 | | | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | | 0 | 0 | | | |
| Reduced v/c Ratio | 0.06 | 0.92 | | 0.74 | 0.67 | | | 0.61 | 0.37 | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 100 | | | |
| Actuated Cycle Length: 100 | | | |
| Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green | | | |
| Natural Cycle: 90 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.86 | | | |
| Intersection Signal Delay: 23.7 | | Intersection LOS: C | |
| Intersection Capacity Utilization 77.2% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |
| # 95th percentile volume exceeds capacity, queue may be longer. | | | |
| Queue shown is maximum after two cycles. | | | |

Splits and Phases: 6: S River/IL-25/N River Departure

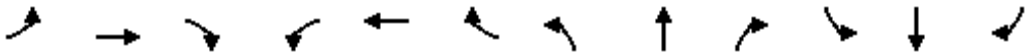


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 70 | 529 | 256 | 244 | 707 | 10 | 284 | 26 | 185 | 0 | 0 | 0 |
| Future Volume (vph) | 70 | 529 | 256 | 244 | 707 | 10 | 284 | 26 | 185 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 100 | | 0 | 0 | | 115 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 0 | | | 105 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 0.98 | | | 1.00 | | | | | | | |
| Frt | | 0.951 | | | 0.998 | | | | 0.850 | | | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.956 | | | | |
| Satd. Flow (prot) | 1745 | 1711 | 0 | 1728 | 1814 | 0 | 0 | 1816 | 1615 | 0 | 0 | 0 |
| Flt Permitted | 0.334 | | | 0.087 | | | | 0.956 | | | | |
| Satd. Flow (perm) | 613 | 1711 | 0 | 158 | 1814 | 0 | 0 | 1816 | 1615 | 0 | 0 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | No |
| Satd. Flow (RTOR) | | 25 | | | 1 | | | | 149 | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 20 | |
| Link Distance (ft) | | 72 | | | 213 | | | 305 | | | 397 | |
| Travel Time (s) | | 2.0 | | | 5.8 | | | 8.3 | | | 13.5 | |
| Confl. Peds. (#/hr) | | | 11 | 11 | | 3 | | | | | | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 71 | 540 | 261 | 249 | 721 | 10 | 290 | 27 | 189 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 71 | 801 | 0 | 249 | 731 | 0 | 0 | 317 | 189 | 0 | 0 | 0 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | pt+ov | | | |
| Protected Phases | | 2 | | 1 | 6 | | 3 | 8 | 8 1 | | | |
| Permitted Phases | 2 | | | 6 | | | | | | | | |
| Detector Phase | 2 | 2 | | 1 | 6 | | 3 | 8 | 8 1 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | | | |
| Minimum Split (s) | 22.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | | | |
| Total Split (s) | 76.0 | 76.0 | | 22.0 | 98.0 | | 42.0 | 42.0 | | | | |
| Total Split (%) | 54.3% | 54.3% | | 15.7% | 70.0% | | 30.0% | 30.0% | | | | |
| Maximum Green (s) | 71.5 | 71.5 | | 17.5 | 93.5 | | 37.5 | 37.5 | | | | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | | 0.0 | | | | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | | 4.5 | | | | |
| Lead/Lag | Lag | Lag | | Lead | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | | | |
| Recall Mode | C-Min | C-Min | | None | C-Min | | Min | Min | | | | |
| Walk Time (s) | 7.0 | 7.0 | | | 7.0 | | | 7.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | 11.0 | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | 0 | | | 0 | | | | |
| Act Effct Green (s) | 69.7 | 69.7 | | 89.9 | 89.9 | | | 41.1 | 61.3 | | | |
| Actuated g/C Ratio | 0.50 | 0.50 | | 0.64 | 0.64 | | | 0.29 | 0.44 | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| v/c Ratio | 0.23 | 0.93 | | 0.90 | 0.63 | | | 0.60 | 0.24 | | | |
| Control Delay | 21.8 | 49.3 | | 59.9 | 20.1 | | | 49.1 | 7.2 | | | |
| Queue Delay | 0.0 | 44.0 | | 0.7 | 1.0 | | | 0.0 | 0.0 | | | |
| Total Delay | 21.8 | 93.3 | | 60.6 | 21.1 | | | 49.1 | 7.2 | | | |
| LOS | C | F | | E | C | | | D | A | | | |
| Approach Delay | | 87.5 | | | 31.2 | | | 33.5 | | | | |
| Approach LOS | | F | | | C | | | C | | | | |
| Queue Length 50th (ft) | 35 | 631 | | 138 | 488 | | | 257 | 21 | | | |
| Queue Length 95th (ft) | 70 | #915 | | #272 | 269 | | | 365 | 71 | | | |
| Internal Link Dist (ft) | | 1 | | | 133 | | | 225 | | | 317 | |
| Turn Bay Length (ft) | | | | 100 | | | | | 115 | | | |
| Base Capacity (vph) | 313 | 886 | | 297 | 1211 | | | 532 | 809 | | | |
| Starvation Cap Reductn | 0 | 153 | | 4 | 245 | | | 0 | 0 | | | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | | 0 | 0 | | | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | | 0 | 0 | | | |
| Reduced v/c Ratio | 0.23 | 1.09 | | 0.85 | 0.76 | | | 0.60 | 0.23 | | | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 140 | | | |
| Actuated Cycle Length: 140 | | | |
| Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green | | | |
| Natural Cycle: 75 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.93 | | | |
| Intersection Signal Delay: 52.5 | | Intersection LOS: D | |
| Intersection Capacity Utilization 85.7% | | ICU Level of Service E | |
| Analysis Period (min) 15 | | | |
| # 95th percentile volume exceeds capacity, queue may be longer. | | | |
| Queue shown is maximum after two cycles. | | | |

Splits and Phases: 6: S River/IL-25/N River Departure



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 52 | 526 | 256 | 233 | 707 | 10 | 284 | 18 | 181 | 0 | 0 | 0 |
| Future Volume (vph) | 52 | 526 | 256 | 233 | 707 | 10 | 284 | 18 | 181 | 0 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 |
| Storage Length (ft) | 0 | | 0 | 100 | | 0 | 0 | | 115 | 0 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 0 | | | 105 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 0.98 | | | 1.00 | | | | | | | |
| Frt | | 0.951 | | | 0.998 | | | | 0.850 | | | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.955 | | | | |
| Satd. Flow (prot) | 1745 | 1711 | 0 | 1728 | 1814 | 0 | 0 | 1814 | 1615 | 0 | 0 | 0 |
| Flt Permitted | 0.330 | | | 0.092 | | | | 0.955 | | | | |
| Satd. Flow (perm) | 606 | 1711 | 0 | 167 | 1814 | 0 | 0 | 1814 | 1615 | 0 | 0 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | No |
| Satd. Flow (RTOR) | | 26 | | | 1 | | | | 150 | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 20 | |
| Link Distance (ft) | | 72 | | | 213 | | | 305 | | | 397 | |
| Travel Time (s) | | 2.0 | | | 5.8 | | | 8.3 | | | 13.5 | |
| Confl. Peds. (#/hr) | | | 11 | 11 | | 3 | | | | | | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 1% | 0% | 0% | 0% | 0% | 0% | 0% |
| Adj. Flow (vph) | 53 | 537 | 261 | 238 | 721 | 10 | 290 | 18 | 185 | 0 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 53 | 798 | 0 | 238 | 731 | 0 | 0 | 308 | 185 | 0 | 0 | 0 |
| Turn Type | Perm | NA | | pm+pt | NA | | Prot | NA | pt+ov | | | |
| Protected Phases | | 2 | | 1 | 6 | | 3 | 8 | 8 1 | | | |
| Permitted Phases | 2 | | | 6 | | | | | | | | |
| Detector Phase | 2 | 2 | | 1 | 6 | | 3 | 8 | 8 1 | | | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | | | |
| Minimum Split (s) | 22.5 | 22.5 | | 9.5 | 22.5 | | 9.5 | 22.5 | | | | |
| Total Split (s) | 76.0 | 76.0 | | 22.0 | 98.0 | | 42.0 | 42.0 | | | | |
| Total Split (%) | 54.3% | 54.3% | | 15.7% | 70.0% | | 30.0% | 30.0% | | | | |
| Maximum Green (s) | 71.5 | 71.5 | | 17.5 | 93.5 | | 37.5 | 37.5 | | | | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | | | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | | | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | | 0.0 | | | | |
| Total Lost Time (s) | 4.5 | 4.5 | | 4.5 | 4.5 | | | 4.5 | | | | |
| Lead/Lag | Lag | Lag | | Lead | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | | | |
| Recall Mode | C-Min | C-Min | | None | C-Min | | Min | Min | | | | |
| Walk Time (s) | 7.0 | 7.0 | | | 7.0 | | | 7.0 | | | | |
| Flash Dont Walk (s) | 11.0 | 11.0 | | | 11.0 | | | 11.0 | | | | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | 0 | | | 0 | | | | |
| Act Effct Green (s) | 70.0 | 70.0 | | 89.6 | 89.6 | | | 41.4 | 61.0 | | | |
| Actuated g/C Ratio | 0.50 | 0.50 | | 0.64 | 0.64 | | | 0.30 | 0.44 | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| v/c Ratio | 0.18 | 0.92 | | 0.87 | 0.63 | | | 0.57 | 0.23 | | | |
| Control Delay | 20.4 | 48.0 | | 53.6 | 21.3 | | | 48.2 | 6.9 | | | |
| Queue Delay | 0.0 | 44.5 | | 0.7 | 1.2 | | | 0.0 | 0.0 | | | |
| Total Delay | 20.4 | 92.5 | | 54.3 | 22.4 | | | 48.2 | 6.9 | | | |
| LOS | C | F | | D | C | | | D | A | | | |
| Approach Delay | | 88.0 | | | 30.3 | | | 32.7 | | | | |
| Approach LOS | | F | | | C | | | C | | | | |
| Queue Length 50th (ft) | 25 | 612 | | 123 | 501 | | | 249 | 19 | | | |
| Queue Length 95th (ft) | 54 | #910 | | #241 | 343 | | | 354 | 66 | | | |
| Internal Link Dist (ft) | | 1 | | | 133 | | | 225 | | | 317 | |
| Turn Bay Length (ft) | | | | 100 | | | | | 115 | | | |
| Base Capacity (vph) | 310 | 889 | | 301 | 1211 | | | 536 | 813 | | | |
| Starvation Cap Reductn | 0 | 159 | | 6 | 260 | | | 0 | 0 | | | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | | 0 | 0 | | | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | | 0 | 0 | | | |
| Reduced v/c Ratio | 0.17 | 1.09 | | 0.81 | 0.77 | | | 0.57 | 0.23 | | | |

## Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 52.0 Intersection LOS: D
Intersection Capacity Utilization 84.5% ICU Level of Service E
Analysis Period (min) 15
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: S River/IL-25/N River Departure

# HCS 2010 Two-Way Stop-Control Report

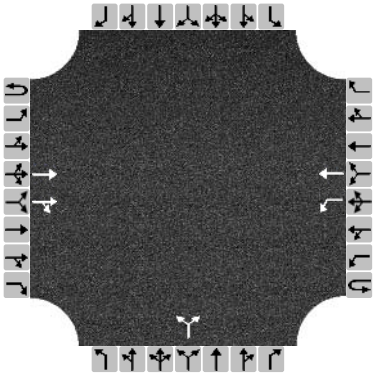
## General Information

| | |
|---|---|
| Analyst | JJB & A |
| Agency/Co. | JJB & A |
| Date Performed | 11/16/2016 |
| Analysis Year | 2016 |
| Time Analyzed | 2024 Total Traffic AM Pk |
| Intersection Orientation | East-West |
| Project Description | One N Washington Place |

## Site Information

| | |
|---|---|
| Intersection | S. Washington/E. River |
| Jurisdiction | Batavia |
| East/West Street | E. Wilson |
| North/South Street | S. Washington |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 | | 7 | 8 | 9 | | 10 | 11 | 12 |
| Number of Lanes | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Configuration | | | T | TR | | L | T | | | | LR | | | | | |
| Volume, V (veh/h) | | | 856 | 19 | | 5 | 756 | | | 6 | | 11 | | | | |
| Percent Heavy Vehicles (%) | | | | | | 7 | | | | 0 | | 0 | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | | | | | 0 | | | | | | |
| Right Turn Channelized | | | No | | | | No | | | | No | | | | No | |
| Median Type/Storage | | | Undivided | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 4.1 | | | | 7.5 | | 6.9 | | | | |
| Critical Headway (sec) | | | | | | 4.24 | | | | 6.80 | | 6.90 | | | | |
| Base Follow-Up Headway (sec) | | | | | | 2.2 | | | | 3.5 | | 3.3 | | | | |
| Follow-Up Headway (sec) | | | | | | 2.27 | | | | 3.50 | | 3.30 | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 5 | | | | | 18 | | | | | |
| Capacity, c (veh/h) | | | | | | 705 | | | | | 189 | | | | | |
| v/c Ratio | | | | | | 0.01 | | | | | 0.10 | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 0.0 | | | | | 0.3 | | | | | |
| Control Delay (s/veh) | | | | | | 10.1 | | | | | 26.0 | | | | | |
| Level of Service, LOS | | | | | | B | | | | | D | | | | | |
| Approach Delay (s/veh) | | | | | | 0.1 | | | | 26.0 | | | | | | |
| Approach LOS | | | | | | | | | | D | | | | | | |

# HCS 2010 Two-Way Stop-Control Report

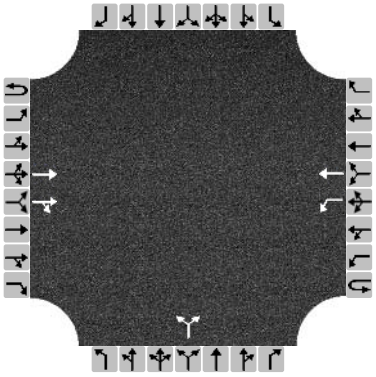
## General Information

| | |
|---|---|
| Analyst | JJB & A |
| Agency/Co. | JJB & A |
| Date Performed | 11/16/2016 |
| Analysis Year | 2016 |
| Time Analyzed | 2024 Total Traffic PM Pk |
| Intersection Orientation | East-West |
| Project Description | One N Washington Place |

## Site Information

| | |
|---|---|
| Intersection | S. Washington/E. River |
| Jurisdiction | Batavia |
| East/West Street | E. Wilson |
| North/South Street | S. Washington |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

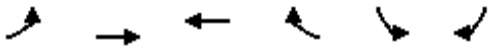
| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 | | 7 | 8 | 9 | | 10 | 11 | 12 |
| Number of Lanes | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Configuration | | | T | TR | | L | T | | | | LR | | | | | |
| Volume, V (veh/h) | | | 695 | 19 | | 10 | 955 | | | 6 | | 11 | | | | |
| Percent Heavy Vehicles (%) | | | | | | 1 | | | | 0 | | 0 | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | | | | | 0 | | | | | | |
| Right Turn Channelized | | | No | | | | No | | | | No | | | | No | |
| Median Type/Storage | | | Undivided | | | | | | | | | | | | | |

## Critical and Follow-up Headways

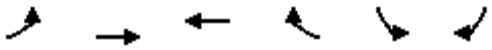
| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 4.1 | | | | 7.5 | | 6.9 | | | | |
| Critical Headway (sec) | | | | | | 4.12 | | | | 6.80 | | 6.90 | | | | |
| Base Follow-Up Headway (sec) | | | | | | 2.2 | | | | 3.5 | | 3.3 | | | | |
| Follow-Up Headway (sec) | | | | | | 2.21 | | | | 3.50 | | 3.30 | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 11 | | | | | 18 | | | | | |
| Capacity, c (veh/h) | | | | | | 859 | | | | | 182 | | | | | |
| v/c Ratio | | | | | | 0.01 | | | | | 0.10 | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 0.0 | | | | | 0.3 | | | | | |
| Control Delay (s/veh) | | | | | | 9.2 | | | | | 27.0 | | | | | |
| Level of Service, LOS | | | | | | A | | | | | D | | | | | |
| Approach Delay (s/veh) | | | | | | 0.1 | | | | 27.0 | | | | | | |
| Approach LOS | | | | | | | | | | D | | | | | | |



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 251 | 616 | 526 | 90 | 47 | 236 |
| Future Volume (vph) | 251 | 616 | 526 | 90 | 47 | 236 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | | 65 | 125 | 125 |
| Storage Lanes | 1 | | | 1 | 1 | 0 |
| Taper Length (ft) | 100 | | | | 140 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 1.00 | | | 0.97 | 1.00 | |
| Frt | | | | 0.850 | | 0.850 |
| Flt Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1616 | 1701 | 1701 | 1446 | 1662 | 1487 |
| Flt Permitted | 0.368 | | | | 0.950 | |
| Satd. Flow (perm) | 624 | 1701 | 1701 | 1405 | 1657 | 1487 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 75 | | 248 |
| Link Speed (mph) | | 25 | 25 | | 30 | |
| Link Distance (ft) | | 112 | 341 | | 418 | |
| Travel Time (s) | | 3.1 | 9.3 | | 9.5 | |
| Confl. Peds. (#/hr) | 3 | | | 3 | 1 | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 8% | 8% | 8% | 8% | 5% | 5% |
| Adj. Flow (vph) | 264 | 648 | 554 | 95 | 49 | 248 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 264 | 648 | 554 | 95 | 49 | 248 |
| Turn Type | pm+pt | NA | NA | Perm | Perm | Perm |
| Protected Phases | 5 | 2 | 6 | | | |
| Permitted Phases | 2 | | | 6 | 4 | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 1.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 6.0 | 22.5 | 22.5 | 22.5 | 14.0 | 14.0 |
| Total Split (s) | 6.0 | 81.0 | 75.0 | 75.0 | 19.0 | 19.0 |
| Total Split (%) | 6.0% | 81.0% | 75.0% | 75.0% | 19.0% | 19.0% |
| Maximum Green (s) | 1.5 | 76.5 | 70.5 | 70.5 | 14.5 | 14.5 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min | C-Min | C-Min | None | None |
| Walk Time (s) | | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 81.9 | 81.9 | 68.1 | 68.1 | 9.1 | 9.1 |
| Actuated g/C Ratio | 0.82 | 0.82 | 0.68 | 0.68 | 0.09 | 0.09 |

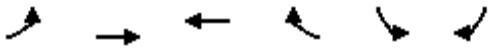


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| v/c Ratio | 0.44 | 0.47 | 0.48 | 0.10 | 0.33 | 0.69 |
| Control Delay | 5.6 | 7.1 | 10.3 | 2.8 | 47.0 | 16.0 |
| Queue Delay | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 5.6 | 8.1 | 10.3 | 2.8 | 47.0 | 16.0 |
| LOS | A | A | B | A | D | B |
| Approach Delay | | 7.4 | 9.2 | | 21.1 | |
| Approach LOS | | A | A | | C | |
| Queue Length 50th (ft) | 49 | 200 | 141 | 3 | 30 | 0 |
| Queue Length 95th (ft) | m78 | m234 | 298 | 26 | 62 | 70 |
| Internal Link Dist (ft) | | 32 | 261 | | 338 | |
| Turn Bay Length (ft) | | | | 65 | 125 | 125 |
| Base Capacity (vph) | 603 | 1395 | 1215 | 1025 | 241 | 428 |
| Starvation Cap Reductn | 0 | 471 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 23 | 0 | 0 | 3 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.44 | 0.70 | 0.46 | 0.09 | 0.20 | 0.58 |

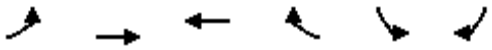
| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 100 | | | |
| Actuated Cycle Length: 100 | | | |
| Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.69 | | | |
| Intersection Signal Delay: 10.2 | | Intersection LOS: B | |
| Intersection Capacity Utilization 57.0% | | ICU Level of Service B | |
| Analysis Period (min) 15 | | | |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: E Wilson & N Washington (IL25)



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 236 | 470 | 672 | 74 | 89 | 293 |
| Future Volume (vph) | 236 | 470 | 672 | 74 | 89 | 293 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 |
| Storage Length (ft) | 0 | | | 65 | 125 | 125 |
| Storage Lanes | 1 | | | 1 | 1 | 0 |
| Taper Length (ft) | 100 | | | | 140 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | 0.96 | 1.00 | 0.97 |
| Frt | | | | 0.850 | | 0.850 |
| Flt Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1728 | 1818 | 1818 | 1546 | 1728 | 1546 |
| Flt Permitted | 0.311 | | | | 0.950 | |
| Satd. Flow (perm) | 566 | 1818 | 1818 | 1485 | 1721 | 1503 |
| Right Turn on Red | | | | Yes | | Yes |
| Satd. Flow (RTOR) | | | | 24 | | 308 |
| Link Speed (mph) | | 25 | 25 | | 30 | |
| Link Distance (ft) | | 112 | 341 | | 418 | |
| Travel Time (s) | | 3.1 | 9.3 | | 9.5 | |
| Confl. Peds. (#/hr) | 5 | | | 5 | 1 | 2 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 248 | 495 | 707 | 78 | 94 | 308 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 248 | 495 | 707 | 78 | 94 | 308 |
| Turn Type | pm+pt | NA | NA | Perm | Perm | Perm |
| Protected Phases | 5 | 2 | 6 | | | |
| Permitted Phases | 2 | | | 6 | 4 | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 1.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 6.0 | 22.5 | 22.5 | 22.5 | 14.0 | 14.0 |
| Total Split (s) | 18.0 | 103.0 | 85.0 | 85.0 | 37.0 | 37.0 |
| Total Split (%) | 12.9% | 73.6% | 60.7% | 60.7% | 26.4% | 26.4% |
| Maximum Green (s) | 13.5 | 98.5 | 80.5 | 80.5 | 32.5 | 32.5 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| Lead/Lag | Lead | | Lag | Lag | | |
| Lead-Lag Optimize? | Yes | | Yes | Yes | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min | C-Min | C-Min | None | None |
| Walk Time (s) | | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Flash Dont Walk (s) | | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 117.9 | 117.9 | 104.0 | 104.0 | 13.1 | 13.1 |
| Actuated g/C Ratio | 0.84 | 0.84 | 0.74 | 0.74 | 0.09 | 0.09 |

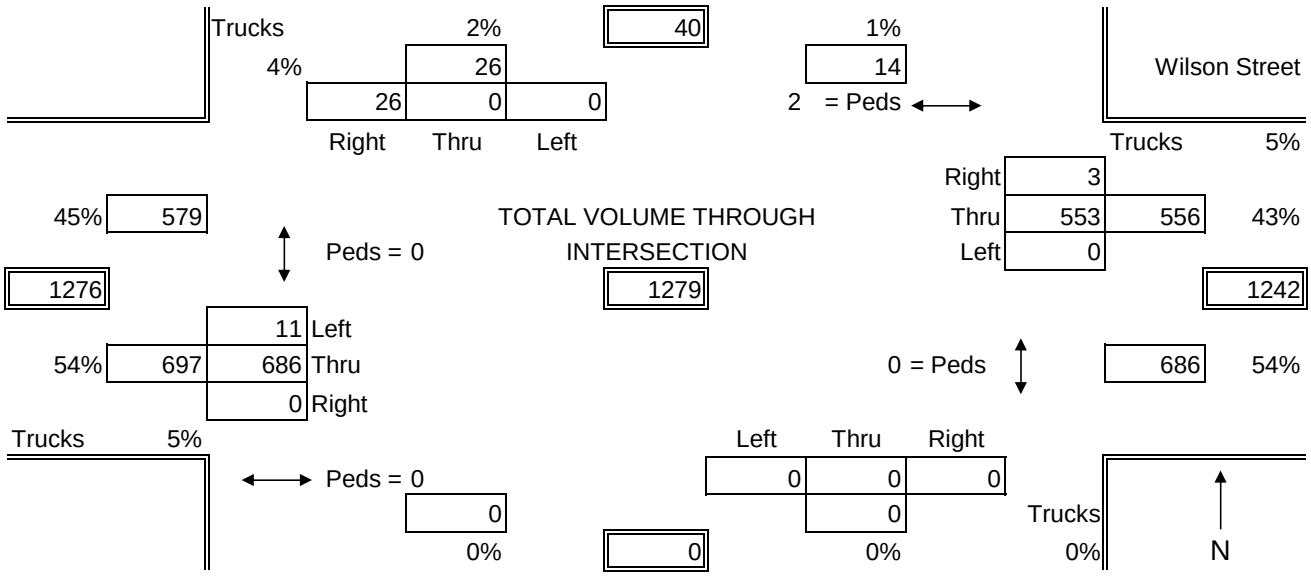


| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---|---|---|---|---|---|---|
| v/c Ratio | 0.45 | 0.32 | 0.52 | 0.07 | 0.58 | 0.74 |
| Control Delay | 5.9 | 5.7 | 10.1 | 4.4 | 74.6 | 16.9 |
| Queue Delay | 1.0 | 1.3 | 0.5 | 0.0 | 0.0 | 0.3 |
| Total Delay | 6.9 | 6.9 | 10.6 | 4.4 | 74.6 | 17.2 |
| LOS | A | A | B | A | E | B |
| Approach Delay | | 6.9 | 10.0 | | 30.6 | |
| Approach LOS | | A | B | | C | |
| Queue Length 50th (ft) | 65 | 185 | 238 | 12 | 84 | 0 |
| Queue Length 95th (ft) | m69 | m139 | 416 | 33 | 139 | 93 |
| Internal Link Dist (ft) | | 32 | 261 | | 338 | |
| Turn Bay Length (ft) | | | | 65 | 125 | 125 |
| Base Capacity (vph) | 588 | 1530 | 1350 | 1109 | 399 | 585 |
| Starvation Cap Reductn | 155 | 786 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 271 | 0 | 0 | 45 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.57 | 0.67 | 0.66 | 0.07 | 0.24 | 0.57 |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 140 | | | |
| Actuated Cycle Length: 140 | | | |
| Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green | | | |
| Natural Cycle: 60 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.74 | | | |
| Intersection Signal Delay: 13.1 | | Intersection LOS: B | |
| Intersection Capacity Utilization 65.3% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: E Wilson & N Washington (IL25)

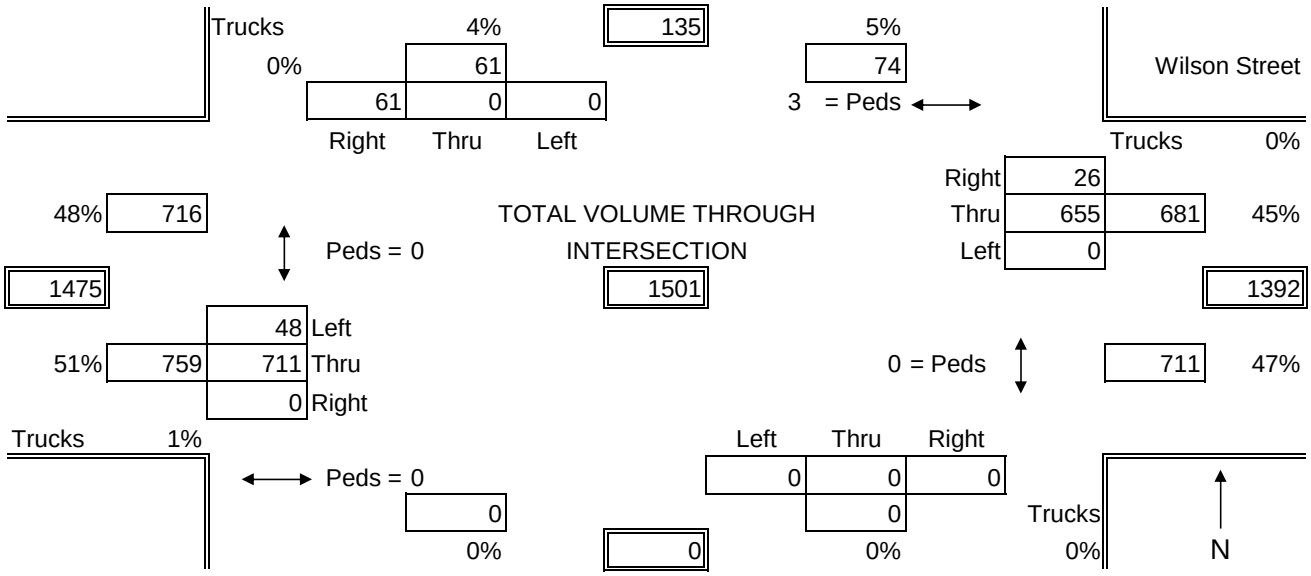



October 27, 2016
7:15 - 8:15 AM

North River Street

PHF = 0.85

MORNING PEAK HOUR VOLUMES




October 27, 2016
4:45 - 5:45 PM

North River Street

PHF = 0.93

EVENING PEAK HOUR VOLUMES

## EXISTING TRAFFIC VOLUMES

Wilson Street
North River Street
System Peak Hours

## SUMMARY OF VEHICLE COUNTS
## MORNING PEAK PERIOD

Observer: JAJ & PMT Date: October 27, 2016 Day: Thursday City: Batavia, Illinois
East-West Street: Wilson Street North-South Street: North River Street

| Time Begins A.M. | EASTBOUND | | | | WESTBOUND | | | | Total East West | NORTHBOUND | | | | SOUTHBOUND | | | | Total North South | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Total | Left | Thru | Right | Total | | Left | Thru | Right | Total | Left | Thru | Right | Total | | |
| 7:00 | 0 | 143 | | 143 | | 67 | 0 | 67 | 210 | | | | 0 | | | 4 | 4 | 4 | 214 |
| 7:15 | 1 | 155 | | 156 | | 106 | 0 | 106 | 262 | | | | 0 | | | 5 | 5 | 5 | 267 |
| 7:30 | 3 | 179 | | 182 | | 107 | 1 | 108 | 290 | | | | 0 | | | 3 | 3 | 3 | 293 |
| 7:45 | 6 | 202 | | 208 | | 127 | 2 | 129 | 337 | | | | 0 | | | 5 | 5 | 5 | 342 |
| 8:00 | 1 | 150 | | 151 | | 213 | 0 | 213 | 364 | | | | 0 | | | 13 | 13 | 13 | 377 |
| 8:15 | 6 | 205 | | 211 | | 130 | 2 | 132 | 343 | | | | 0 | | | 7 | 7 | 7 | 350 |
| 8:30 | 9 | 163 | | 172 | | 94 | 4 | 98 | 270 | | | | 0 | | | 2 | 2 | 2 | 272 |
| 8:45 | 10 | 124 | | 134 | | 135 | 1 | 136 | 270 | | | | 0 | | | 2 | 2 | 2 | 272 |
| Total | 36 | 1321 | 0 | 1357 | 0 | 979 | 10 | 989 | 2346 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 41 | 41 | 2387 |
| Peak Hour | 16 | 736 | 0 | 752 | 0 | 577 | 5 | 582 | 1334 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 28 | 28 | 1362 |
| System Pk Hr | 11 | 686 | 0 | 697 | 0 | 553 | 3 | 556 | 1253 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 26 | 26 | 1279 |

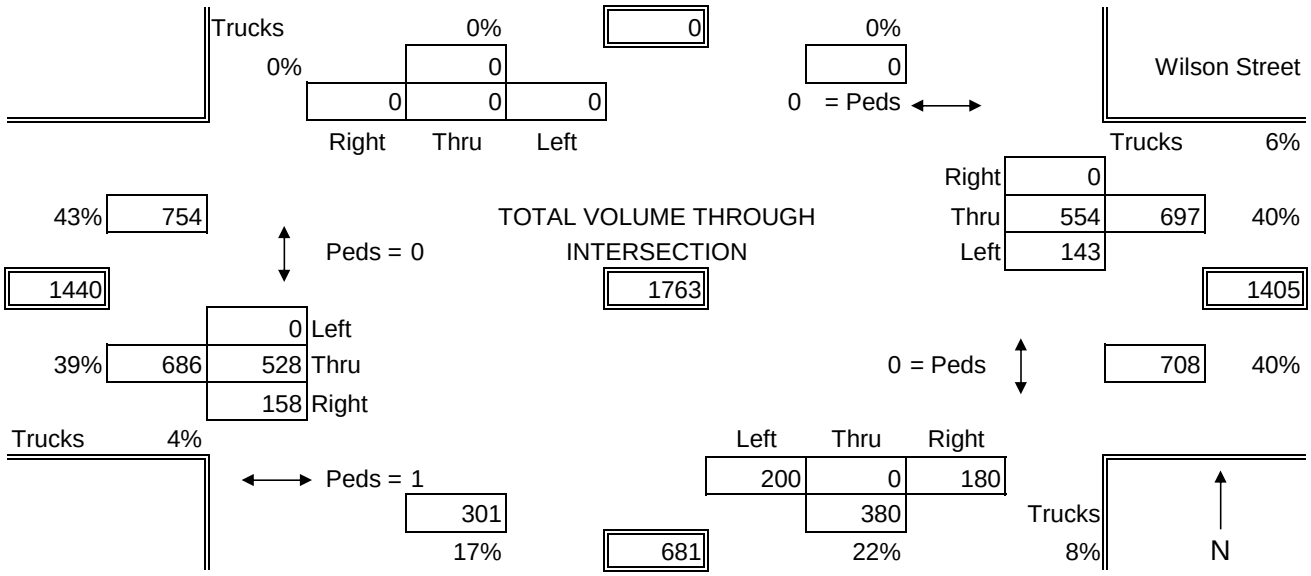
Peak Hour Factor 0.90
7:15 - 8:15 System Peak Hour Factor 0.85

## SUMMARY OF VEHICLE COUNTS
## EVENING PEAK PERIOD

Observer: JAJ & PMT Date: October 27, 2016 Day: Thursday City: Batavia, Illinois
East-West Street: Wilson Street North-South Street: North River Street

| Time Begins P.M. | EASTBOUND | | | | WESTBOUND | | | | Total East West | NORTHBOUND | | | | SOUTHBOUND | | | | Total North South | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Total | Left | Thru | Right | Total | | Left | Thru | Right | Total | Left | Thru | Right | Total | | |
| 4:00 | 11 | 141 | | 152 | | 156 | 4 | 160 | 312 | | | | 0 | | | 10 | 10 | 10 | 322 |
| 4:15 | 4 | 132 | | 136 | | 156 | 4 | 160 | 296 | | | | 0 | | | 4 | 4 | 4 | 300 |
| 4:30 | 15 | 150 | | 165 | | 163 | 2 | 165 | 330 | | | | 0 | | | 11 | 11 | 11 | 341 |
| 4:45 | 15 | 163 | | 178 | | 163 | 5 | 168 | 346 | | | | 0 | | | 14 | 14 | 14 | 360 |
| 5:00 | 5 | 197 | | 202 | | 147 | 6 | 153 | 355 | | | | 0 | | | 18 | 18 | 18 | 373 |
| 5:15 | 18 | 176 | | 194 | | 189 | 3 | 192 | 386 | | | | 0 | | | 16 | 16 | 16 | 402 |
| 5:30 | 10 | 175 | | 185 | | 156 | 12 | 168 | 353 | | | | 0 | | | 13 | 13 | 13 | 366 |
| 5:45 | 20 | 158 | | 178 | | 149 | 4 | 153 | 331 | | | | 0 | | | 18 | 18 | 18 | 349 |
| Total | 98 | 1292 | 0 | 1390 | 0 | 1279 | 40 | 1319 | 2709 | 0 | 0 | 0 | 0 | 0 | 0 | 104 | 104 | 104 | 2813 |
| Peak Hour | 48 | 711 | 0 | 759 | 0 | 655 | 26 | 681 | 1440 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 61 | 61 | 1501 |
| System Pk Hr | 48 | 711 | 0 | 759 | 0 | 655 | 26 | 681 | 1440 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 61 | 61 | 1501 |

Peak Hour Factor 0.93
4:45 - 5:45 System Peak Hour Factor 0.93

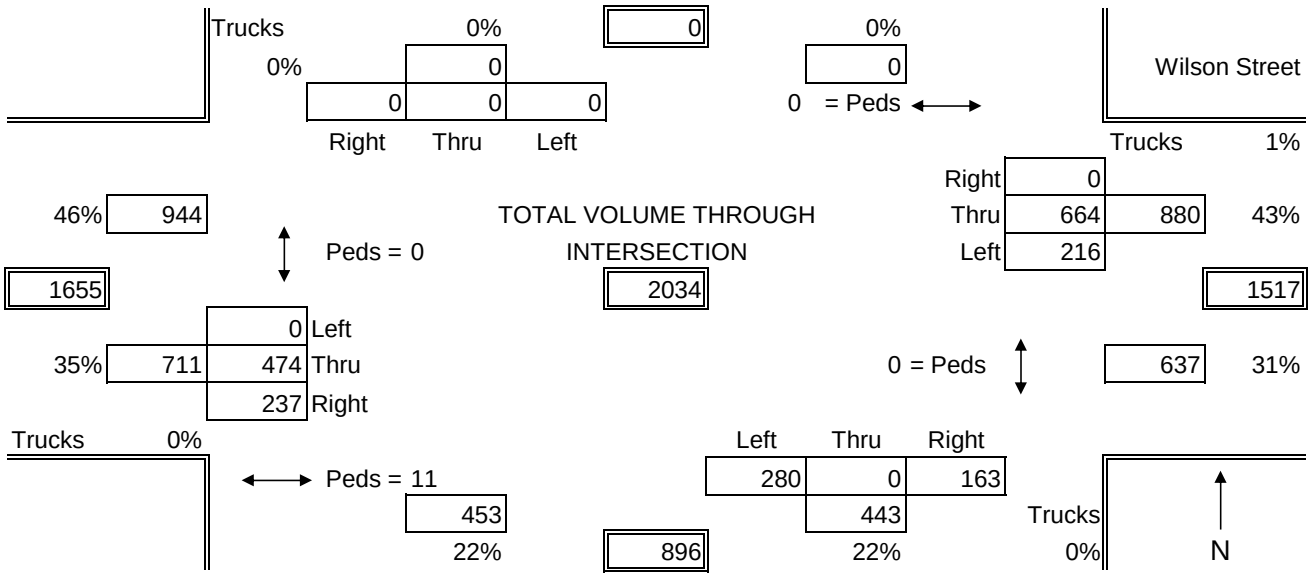



October 27, 2016
7:15 - 8:15 AM

South River Street (IL Rte 25)

PHF = 0.91

MORNING PEAK HOUR VOLUMES




October 27, 2016
4:45 - 5:45 PM

South River Street (IL Rte 25)

PHF = 0.98

EVENING PEAK HOUR VOLUMES

## EXISTING TRAFFIC VOLUMES

Wilson Street
South River Street (IL Rte 25)
System Peak Hours

## SUMMARY OF VEHICLE COUNTS
## MORNING PEAK PERIOD

Observer: JAJ & PMT Date: October 27, 2016 Day: Thursday City: Batavia, Illinois
East-West Street: Wilson Street North-South Street: South River Street (IL Rte 25)

| Time Begins A.M. | EASTBOUND | | | | WESTBOUND | | | | Total East West | NORTHBOUND | | | | SOUTHBOUND | | | | Total North South | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Total | Left | Thru | Right | Total | | Left | Thru | Right | Total | Left | Thru | Right | Total | | |
| 7:00 | | 97 | 46 | 143 | 33 | 67 | | 100 | 243 | 26 | | 45 | 71 | | | | 0 | 71 | 314 |
| 7:15 | | 112 | 43 | 155 | 30 | 106 | | 136 | 291 | 29 | | 52 | 81 | | | | 0 | 81 | 372 |
| 7:30 | | 133 | 46 | 179 | 42 | 107 | | 149 | 328 | 55 | | 55 | 110 | | | | 0 | 110 | 438 |
| 7:45 | | 170 | 32 | 202 | 41 | 128 | | 169 | 371 | 54 | | 46 | 100 | | | | 0 | 100 | 471 |
| 8:00 | | 113 | 37 | 150 | 30 | 213 | | 243 | 393 | 62 | | 27 | 89 | | | | 0 | 89 | 482 |
| 8:15 | | 168 | 37 | 205 | 26 | 131 | | 157 | 362 | 60 | | 52 | 112 | | | | 0 | 112 | 474 |
| 8:30 | | 126 | 37 | 163 | 30 | 95 | | 125 | 288 | 60 | | 46 | 106 | | | | 0 | 106 | 394 |
| 8:45 | | 100 | 24 | 124 | 18 | 135 | | 153 | 277 | 47 | | 33 | 80 | | | | 0 | 80 | 357 |
| Total | 0 | 1019 | 302 | 1321 | 250 | 982 | 0 | 1232 | 2553 | 393 | 0 | 356 | 749 | 0 | 0 | 0 | 0 | 749 | 3302 |
| Peak Hour | 0 | 584 | 152 | 736 | 139 | 579 | 0 | 718 | 1454 | 231 | 0 | 180 | 411 | 0 | 0 | 0 | 0 | 411 | 1865 |
| System Pk Hr | 0 | 528 | 158 | 686 | 143 | 554 | 0 | 697 | 1383 | 200 | 0 | 180 | 380 | 0 | 0 | 0 | 0 | 380 | 0.91 |

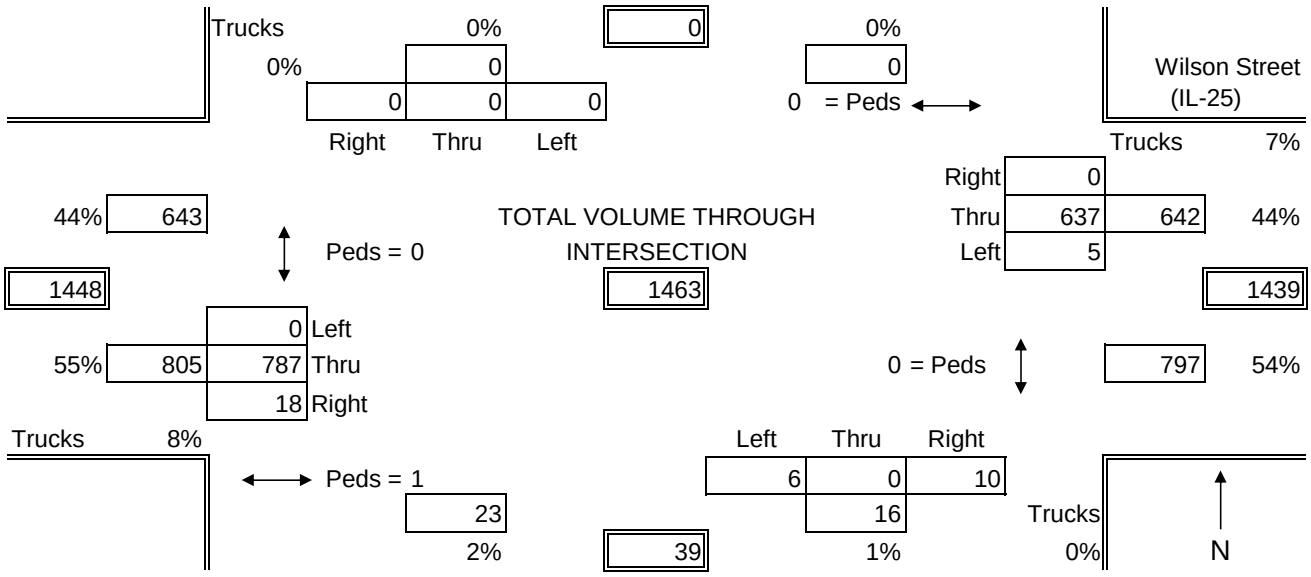
Peak Hour Factor 0.97
7:15 - 8:15 System Peak Hour Factor 0.91

## SUMMARY OF VEHICLE COUNTS
## EVENING PEAK PERIOD

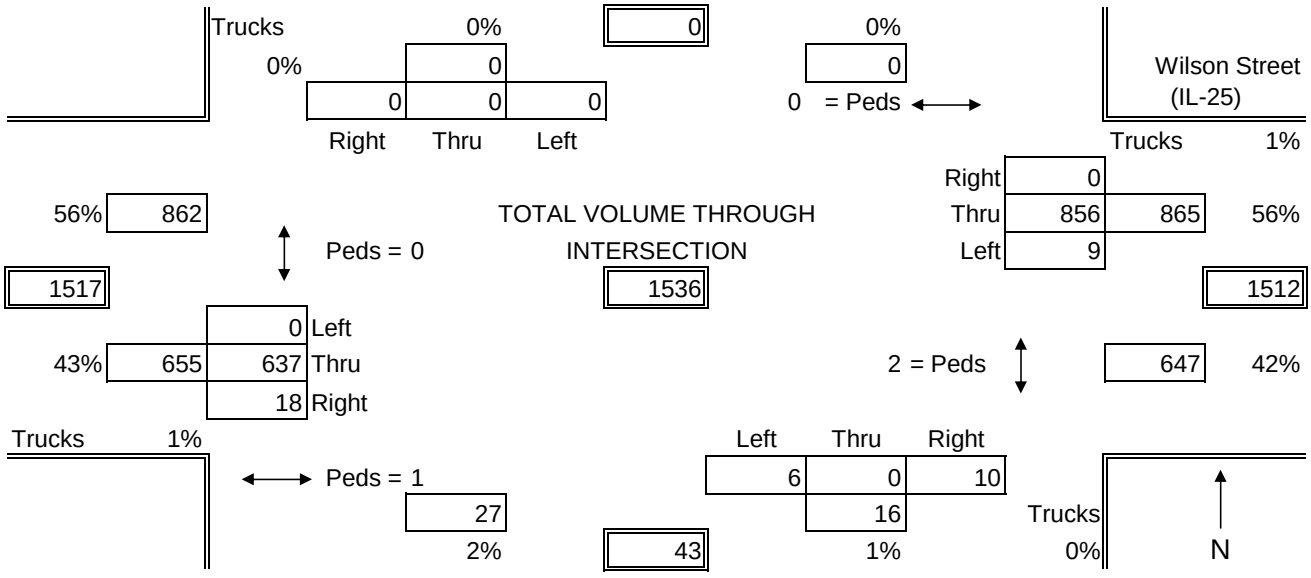
Observer: JAJ & PMT Date: October 27, 2016 Day: Thursday City: Batavia, Illinois
East-West Street: Wilson Street North-South Street: South River Street (IL Rte 25)

| Time Begins P.M. | EASTBOUND | | | | WESTBOUND | | | | Total East West | NORTHBOUND | | | | SOUTHBOUND | | | | Total North South | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Total | Left | Thru | Right | Total | | Left | Thru | Right | Total | Left | Thru | Right | Total | | |
| 4:00 | | 90 | 51 | 141 | 52 | 160 | | 212 | 353 | 79 | | 38 | 117 | | | | 0 | 117 | 470 |
| 4:15 | | 81 | 51 | 132 | 54 | 158 | | 212 | 344 | 64 | | 35 | 99 | | | | 0 | 99 | 443 |
| 4:30 | | 106 | 44 | 150 | 47 | 163 | | 210 | 360 | 79 | | 44 | 123 | | | | 0 | 123 | 483 |
| 4:45 | | 112 | 51 | 163 | 57 | 163 | | 220 | 383 | 70 | | 40 | 110 | | | | 0 | 110 | 493 |
| 5:00 | | 138 | 59 | 197 | 51 | 148 | | 199 | 396 | 77 | | 47 | 124 | | | | 0 | 124 | 520 |
| 5:15 | | 110 | 66 | 176 | 47 | 191 | | 238 | 414 | 57 | | 34 | 91 | | | | 0 | 91 | 505 |
| 5:30 | | 114 | 61 | 175 | 61 | 162 | | 223 | 398 | 76 | | 42 | 118 | | | | 0 | 118 | 516 |
| 5:45 | | 108 | 50 | 158 | 41 | 153 | | 194 | 352 | 47 | | 29 | 76 | | | | 0 | 76 | 428 |
| Total | 0 | 859 | 433 | 1292 | 410 | 1298 | 0 | 1708 | 3000 | 549 | 0 | 309 | 858 | 0 | 0 | 0 | 0 | 858 | 3858 |
| Peak Hour | 0 | 474 | 237 | 711 | 216 | 664 | 0 | 880 | 1591 | 280 | 0 | 163 | 443 | 0 | 0 | 0 | 0 | 443 | 2034 |
| System Pk Hr | 0 | 474 | 237 | 711 | 216 | 664 | 0 | 880 | 1591 | 280 | 0 | 163 | 443 | 0 | 0 | 0 | 0 | 443 | 2034 |

Peak Hour Factor 0.98
7:15 - 8:15 System Peak Hour Factor 0.98




MORNING PEAK HOUR VOLUMES




EVENING PEAK HOUR VOLUMES

## EXISTING TRAFFIC VOLUMES

Wilson Street
South Washington Avenue
System Peak Hour

## SUMMARY OF VEHICLE COUNTS
## MORNING PEAK PERIOD

Observer: JAJ, PMT, SMP Date: October 25, 2016 Day: Tuesday City: Batavia, Illinois
East-West Street: Wilson Street North-South Street: South Washington Avenue

| Time Begins A.M. | EASTBOUND | | | | WESTBOUND | | | | Total East West | NORTHBOUND | | | | SOUTHBOUND | | | | Total North South | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Total | Left | Thru | Right | Total | | Left | Thru | Right | Total | Left | Thru | Right | Total | | |
| 7:00 | | 168 | 0 | 168 | 2 | 150 | | 152 | 320 | 0 | | 2 | 2 | | | | 0 | 2 | 322 |
| 7:15 | | 191 | 5 | 196 | 0 | 239 | | 239 | 435 | 3 | | 5 | 8 | | | | 0 | 8 | 443 |
| 7:30 | | 228 | 9 | 237 | 3 | 146 | | 149 | 386 | 3 | | 2 | 5 | | | | 0 | 5 | 391 |
| 7:45 | | 215 | 4 | 219 | 2 | 145 | | 147 | 366 | 0 | | 2 | 2 | | | | 0 | 2 | 368 |
| 8:00 | | 153 | 0 | 153 | 0 | 107 | | 107 | 260 | 0 | | 1 | 1 | | | | 0 | 1 | 261 |
| 8:15 | | 166 | 0 | 166 | 0 | 126 | | 126 | 292 | 0 | | 4 | 4 | | | | 0 | 4 | 296 |
| 8:30 | | 121 | 1 | 122 | 1 | 145 | | 146 | 268 | 2 | | 1 | 3 | | | | 0 | 3 | 271 |
| 8:45 | | 126 | 1 | 127 | 0 | 179 | | 179 | 306 | 2 | | 1 | 3 | | | | 0 | 3 | 309 |
| Total | 0 | 1368 | 20 | 1388 | 8 | 1237 | 0 | 1245 | 2633 | 10 | 0 | 18 | 28 | 0 | 0 | 0 | 0 | 28 | 2661 |
| Peak Hour | 0 | 802 | 18 | 820 | 7 | 680 | 0 | 687 | 1507 | 6 | 0 | 11 | 17 | 0 | 0 | 0 | 0 | 17 | 1524 |
| System Pk Hr | 0 | 787 | 18 | 805 | 5 | 637 | 0 | 642 | 1447 | 6 | 0 | 10 | 16 | 0 | 0 | 0 | 0 | 16 | 1463 |

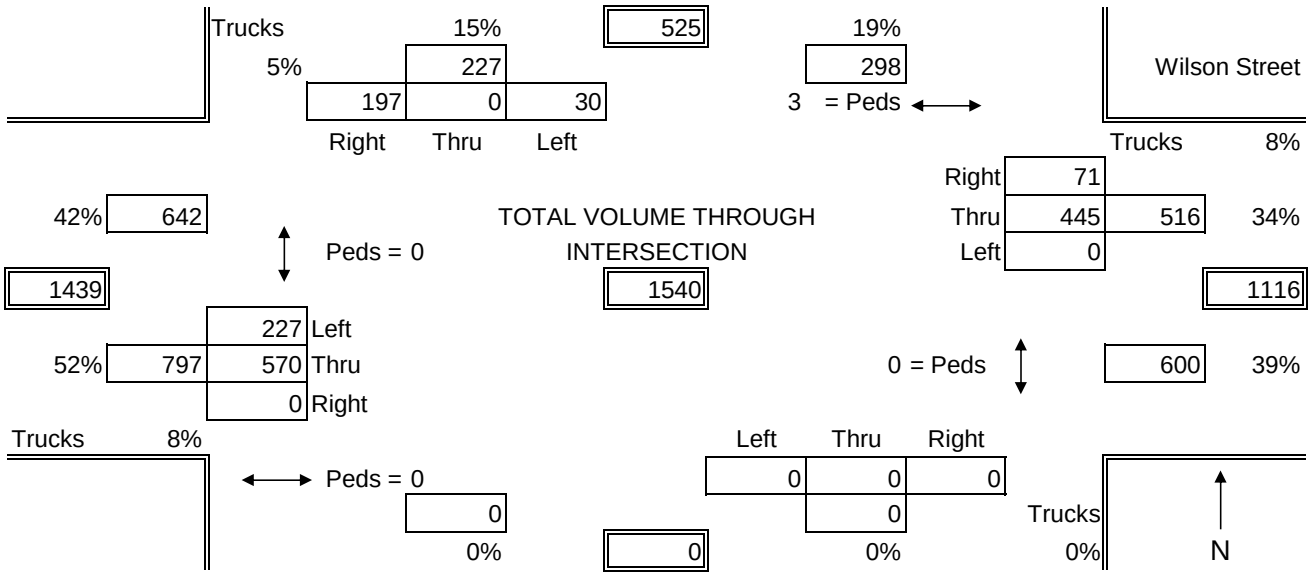
Peak Hour Factor 0.86
7:15 - 8:15 System Peak Hour Factor 0.83

## SUMMARY OF VEHICLE COUNTS
## EVENING PEAK PERIOD

Observer: JAJ, PMT, SMP Date: October 25, 2016 Day: Tuesday City: Batavia, Illinois
East-West Street: Wilson Street North-South Street: South Washington Avenue

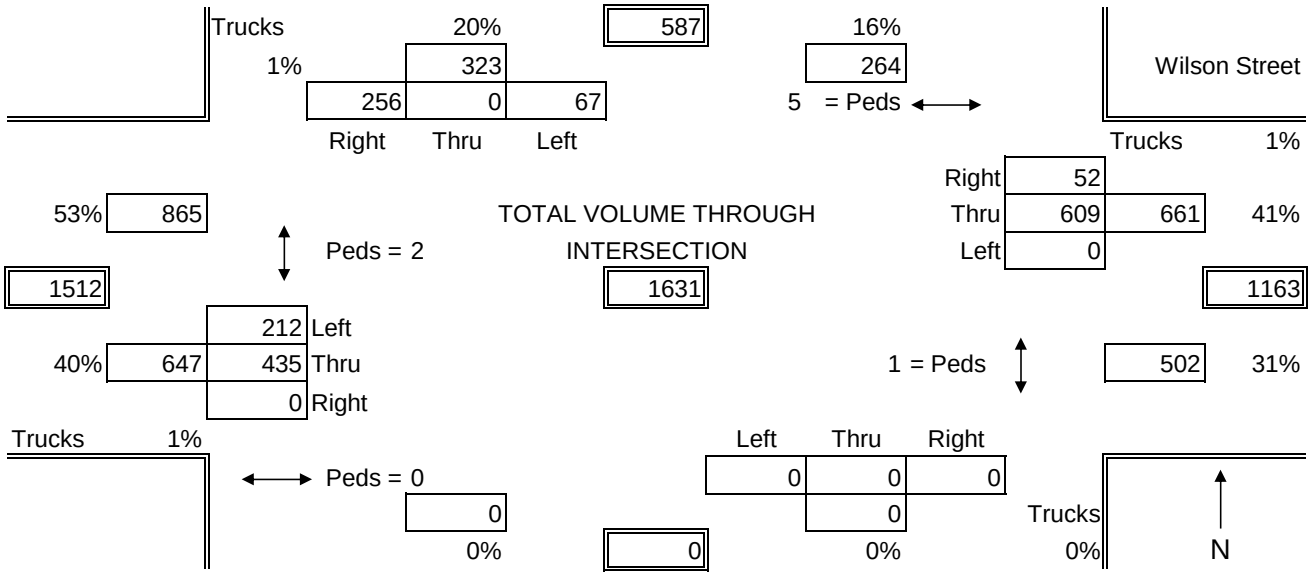
| Time Begins P.M. | EASTBOUND | | | | WESTBOUND | | | | Total East West | NORTHBOUND | | | | SOUTHBOUND | | | | Total North South | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Total | Left | Thru | Right | Total | | Left | Thru | Right | Total | Left | Thru | Right | Total | | |
| 4:00 | | 161 | 4 | 165 | 4 | 199 | | 203 | 368 | 3 | | 1 | 4 | | | | 0 | 4 | 372 |
| 4:15 | | 159 | 2 | 161 | 4 | 182 | | 186 | 347 | 0 | | 1 | 1 | | | | 0 | 1 | 348 |
| 4:30 | | 156 | 2 | 158 | 1 | 223 | | 224 | 382 | 1 | | 3 | 4 | | | | 0 | 4 | 386 |
| 4:45 | | 145 | 2 | 147 | 3 | 210 | | 213 | 360 | 1 | | 2 | 3 | | | | 0 | 3 | 363 |
| 5:00 | | 159 | 7 | 166 | 2 | 216 | | 218 | 384 | 1 | | 3 | 4 | | | | 0 | 4 | 388 |
| 5:15 | | 156 | 6 | 162 | 2 | 205 | | 207 | 369 | 2 | | 3 | 5 | | | | 0 | 5 | 374 |
| 5:30 | | 177 | 3 | 180 | 2 | 225 | | 227 | 407 | 2 | | 2 | 4 | | | | 0 | 4 | 411 |
| 5:45 | | 147 | 6 | 153 | 4 | 237 | | 241 | 394 | 0 | | 1 | 1 | | | | 0 | 1 | 395 |
| Total | 0 | 1260 | 32 | 1292 | 22 | 1697 | 0 | 1719 | 3011 | 10 | 0 | 16 | 26 | 0 | 0 | 0 | 0 | 26 | 3037 |
| Peak Hour | 0 | 639 | 22 | 661 | 10 | 883 | 0 | 893 | 1554 | 5 | 0 | 9 | 14 | 0 | 0 | 0 | 0 | 14 | 1568 |
| System Pk Hr | 0 | 637 | 18 | 655 | 9 | 856 | 0 | 865 | 1520 | 6 | 0 | 10 | 16 | 0 | 0 | 0 | 0 | 16 | 1536 |

Peak Hour Factor 0.95
4:45 - 5:45 System Peak Hour Factor 0.93




October 25, 2016
North Washington Avenue (IL Rte 25)
7:15 - 8:15 AM
PHF = 0.84

MORNING PEAK HOUR VOLUMES




October 25, 2016
North Washington Avenue (IL Rte 25)
4:45 - 5:45 PM
PHF = 0.90

EVENING PEAK HOUR VOLUMES

## EXISTING TRAFFIC VOLUMES

Wilson Street
North Washington Avenue (IL Rte 25)
System Peak Hour

## SUMMARY OF VEHICLE COUNTS
## MORNING PEAK PERIOD

Observer: JAJ, PMT, SMP Date: October 25, 2016 Day: Tuesday City: Batavia, Illinois
East-West Street: Wilson Street North-South Street: North Washington Avenue (IL Rte 25)

| Time Begins A.M. | EASTBOUND | | | | WESTBOUND | | | | Total East West | NORTHBOUND | | | | SOUTHBOUND | | | | Total North South | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Total | Left | Thru | Right | Total | | Left | Thru | Right | Total | Left | Thru | Right | Total | | |
| 7:00 | 49 | 121 | | 170 | | 117 | 13 | 130 | 300 | | | | 0 | 5 | | 35 | 40 | 40 | 340 |
| 7:15 | 54 | 142 | | 196 | | 188 | 12 | 200 | 396 | | | | 0 | 11 | | 51 | 62 | 62 | 458 |
| 7:30 | 58 | 172 | | 230 | | 97 | 16 | 113 | 343 | | | | 0 | 5 | | 52 | 57 | 57 | 400 |
| 7:45 | 65 | 152 | | 217 | | 87 | 20 | 107 | 324 | | | | 0 | 4 | | 60 | 64 | 64 | 388 |
| 8:00 | 50 | 104 | | 154 | | 73 | 23 | 96 | 250 | | | | 0 | 10 | | 34 | 44 | 44 | 294 |
| 8:15 | 46 | 124 | | 170 | | 93 | 20 | 113 | 283 | | | | 0 | 5 | | 33 | 38 | 38 | 321 |
| 8:30 | 35 | 87 | | 122 | | 115 | 22 | 137 | 259 | | | | 0 | 10 | | 31 | 41 | 41 | 300 |
| 8:45 | 32 | 95 | | 127 | | 146 | 17 | 163 | 290 | | | | 0 | 18 | | 33 | 51 | 51 | 341 |
| Total | 389 | 997 | 0 | 1386 | 0 | 916 | 143 | 1059 | 2445 | 0 | 0 | 0 | 0 | 68 | 0 | 329 | 397 | 397 | 2842 |
| Peak Hour | 226 | 587 | 0 | 813 | 0 | 489 | 61 | 550 | 1363 | 0 | 0 | 0 | 0 | 25 | 0 | 198 | 223 | 223 | 1586 |
| System Pk Hr | 227 | 570 | 0 | 797 | 0 | 445 | 71 | 516 | 1313 | 0 | 0 | 0 | 0 | 30 | 0 | 197 | 227 | 227 | 1540 |

Peak Hour Factor 0.87
7:15 - 8:15 System Peak Hour Factor 0.84

## SUMMARY OF VEHICLE COUNTS
## EVENING PEAK PERIOD

Observer: JAJ, PMT, SMP Date: October 25, 2016 Day: Tuesday City: Batavia, Illinois
East-West Street: Wilson Street North-South Street: North Washington Avenue (IL Rte 25)

| Time Begins P.M. | EASTBOUND | | | | WESTBOUND | | | | Total East West | NORTHBOUND | | | | SOUTHBOUND | | | | Total North South | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Total | Left | Thru | Right | Total | | Left | Thru | Right | Total | Left | Thru | Right | Total | | |
| 4:00 | 54 | 108 | | 162 | | 143 | 21 | 164 | 326 | | | | 0 | 14 | | 60 | 74 | 74 | 400 |
| 4:15 | 55 | 105 | | 160 | | 120 | 12 | 132 | 292 | | | | 0 | 8 | | 66 | 74 | 74 | 366 |
| 4:30 | 50 | 109 | | 159 | | 151 | 18 | 169 | 328 | | | | 0 | 27 | | 73 | 100 | 100 | 428 |
| 4:45 | 44 | 103 | | 147 | | 143 | 16 | 159 | 306 | | | | 0 | 13 | | 70 | 83 | 83 | 389 |
| 5:00 | 56 | 106 | | 162 | | 152 | 9 | 161 | 323 | | | | 0 | 13 | | 66 | 79 | 79 | 402 |
| 5:15 | 47 | 112 | | 159 | | 155 | 6 | 161 | 320 | | | | 0 | 13 | | 52 | 65 | 65 | 385 |
| 5:30 | 65 | 114 | | 179 | | 159 | 21 | 180 | 359 | | | | 0 | 28 | | 68 | 96 | 96 | 455 |
| 5:45 | 41 | 107 | | 148 | | 162 | 21 | 183 | 331 | | | | 0 | 13 | | 79 | 92 | 92 | 423 |
| Total | 412 | 864 | 0 | 1276 | 0 | 1185 | 124 | 1309 | 2585 | 0 | 0 | 0 | 0 | 129 | 0 | 534 | 663 | 663 | 3248 |
| Peak Hour | 209 | 439 | 0 | 648 | 0 | 628 | 57 | 685 | 1333 | 0 | 0 | 0 | 0 | 67 | 0 | 265 | 332 | 332 | 1665 |
| System Pk Hr | 212 | 435 | 0 | 647 | 0 | 609 | 52 | 661 | 1308 | 0 | 0 | 0 | 0 | 67 | 0 | 256 | 323 | 323 | 1631 |

Peak Hour Factor 0.91
4:45 - 5:45 System Peak Hour Factor 0.90

# 1 Washington Place Zoning Map Amendment Findings

1. All required public notice has been conducted in accordance with applicable state and local laws;

   **Finding:** The applicant executed the notice mailing and posting of the properties pursuant to the City Code. Staff requested, and the hearing notice was also published in the Daily Herald within the specified time.

2. All required public meetings and hearings have been held in accordance with applicable state and local laws.

   **Finding:** With the hearing being conducted and concluded, this finding will be met.

3. The extent to which the proposed amendment to the Official Zoning Map conforms generally to the goals and policies of the Comprehensive Plan and Comprehensive Plan Land Use Map.

   **Finding:** The proposed amendment to the Zoning Map to remove the Downtown Building Height Overlay (DBH) District for the subject property would allow for the proposed planned development/overlay to be considered, and would be consistent with several goals and policies of the Comprehensive Plan that encourage downtown redevelopment with taller buildings containing residences including rentals, and development of public facilities. The Plan also identifies sites of obsolete buildings for redevelopment, and for public-private partnerships in redevelopment. The downtown is identified as having opportunity for dense housing, and such housing can add to the City's mix of housing types.

4. Is the proposed zoning district and the development it allows compatible with the existing uses and zoning of nearby property?

   **Finding:** The subject property will remain in the Downtown Mixed Use (DMU) District, as will all adjacent property. The proposed planned development, having a mix of commercial, residential, and public facility uses, would be compatible with nearby land uses.

5. Is there evidence to suggest that property values will be diminished by the particular zoning restriction changes?

   **Finding:** There is no evidence to suggest that property values will be diminished by removing the DBH Overlay.

6. If any property values are diminished, does the diminishment promote the health, safety, morals, or general welfare of the public?

   **Finding:** There is no evidence to suggest any property value diminishment.

7. Does the proposed zoning change provide a greater relative gain to the public as compared to the hardship imposed on the individual property owner?

   **Finding:** The zoning change will remove a property right for taller buildings. The Zoning Code does, however, provide other mechanisms to seek approval for buildings taller than allowed in the DMU

District, as is proposed with the concurrent planned development overlay. Removing the DBH District simplifies the zoning relief approval process for both the property owner and developer of the property.

8. Is the subject property is suitable for the zoned purpose?

   **Finding:** The property is suitable for allowed uses in the DMU District and the property would remain zoned DMU.

9. Has the length of time the property has been vacant as zoned been excessive, considering the context of land development in the area in the vicinity of the subject property?

   **Finding:** The subject property includes several individual developed properties; some have been unused for a period of time, but this condition is common to many parts of downtown. The proposed amendment will facilitate redevelopment of the entire property, readying the site for redevelopment and occupancy.

10. Is there a community need for the proposed zoning or use?

    **Finding:** The City has identified a need to diversify the types of residences in the City, including adding rental units. The proposed amendment would facilitate redevelopment of the property with such residences.

# 1 Washington Place Design Review Findings

1. The project is consistent with applicable design guidelines.

   **Finding:** The project balances the requirements of the Zoning Code, as modified, with the Plan Commission's Multifamily Design Guidelines and Standard Design Review Criteria for Commercial Projects. Where possible, softening landscaping is provided, as are identity-giving characteristics compatible with its downtown context. Common open space is provided, including passive and active recreation amenities. Entry details, signage, and subject to staff approval, mechanical screenings and lighting fixtures will fit the development and downtown.

2. The project conforms to the Comprehensive Plan, and specifically to the Land Use, Urban Design, and Environment Elements.

   **Finding:** The project conforms generally to these Elements of the Comprehensive Plan.

3. The project is consistent with all applicable provisions of the Zoning Code, as modified by the planned development overlay.

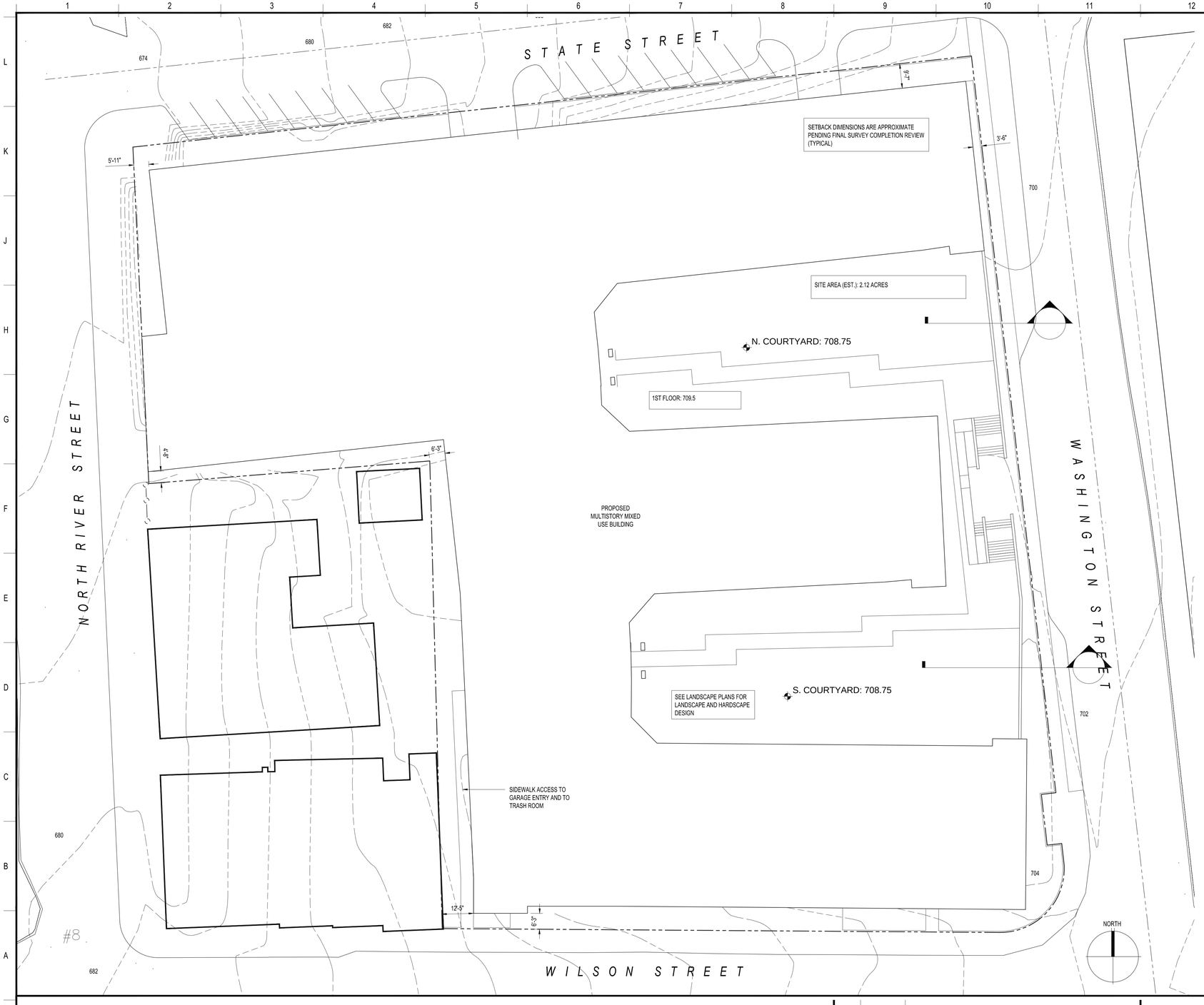
   **Finding:** The project, as designed and conditionally approved including modifications to the Zoning Code through the planned development overlay, will be consistent with all provisions of the Zoning Code.

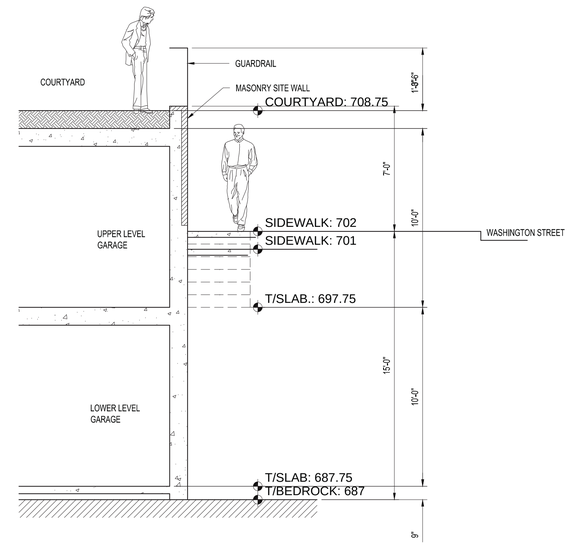
4. The project is compatible with adjacent and nearby development.

   **Finding:** The project, as designed and conditionally approved, is compatible with adjacent and nearby uses. The project has received Historic Preservation Commission approval of a Certificate of Appropriateness.

5. The project design provides for safe and efficient provision of public services.

   **Finding:** The project would increase the amount of public parking in the downtown, and reduce the deficit of all parking in the vicinity. City utilities and emergency services can serve the proposed development, and adjacent streets would not be overburdened with increased pedestrian and vehicle traffic.




**PARTIAL SITE SECTION ALONG WASHINGTON STREET**
SCALE 1/4" = 1'-0"


PROJECT DATA

186 RESIDENTIAL UNITS: (92) 1-BEDROOM + (94) 2-BEDROOM

ABOUT 350 GARAGE PARKING SPACES

ABOUT 14,350 SF OF RETAIL SPACE: 4,850 SF ON N. RIVER STREET + 9,500 SF ON WILSON STREET

| | | |
|---|---|---|
| Dec. 1, 2016 | REVISED PER STAFF REVIEW COMMENTS | |
| Nov. 9, 2016 | ISSUED FOR ZONING APPROVAL | |
| Project no.: | Drawn by: DM | Checked by: |

nagle hartray architecture

# ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

SITE PLAN
Scale: 1" = 20'

A1


**SOUTH ELEVATION (WILSON STREET)**


**EAST ELEVATION (WASHINGTON STREET)**

NOTES:

| | | |
|---|---|---|
| Dec. 1st, 2016 | REVISED PER STAFF REVIEW COMMENTS | |
| Nov. 9th, 2016 | ISSUED FOR ZONING APPROVAL | |
| Project no.: | Drawn by: DM | Checked by: |

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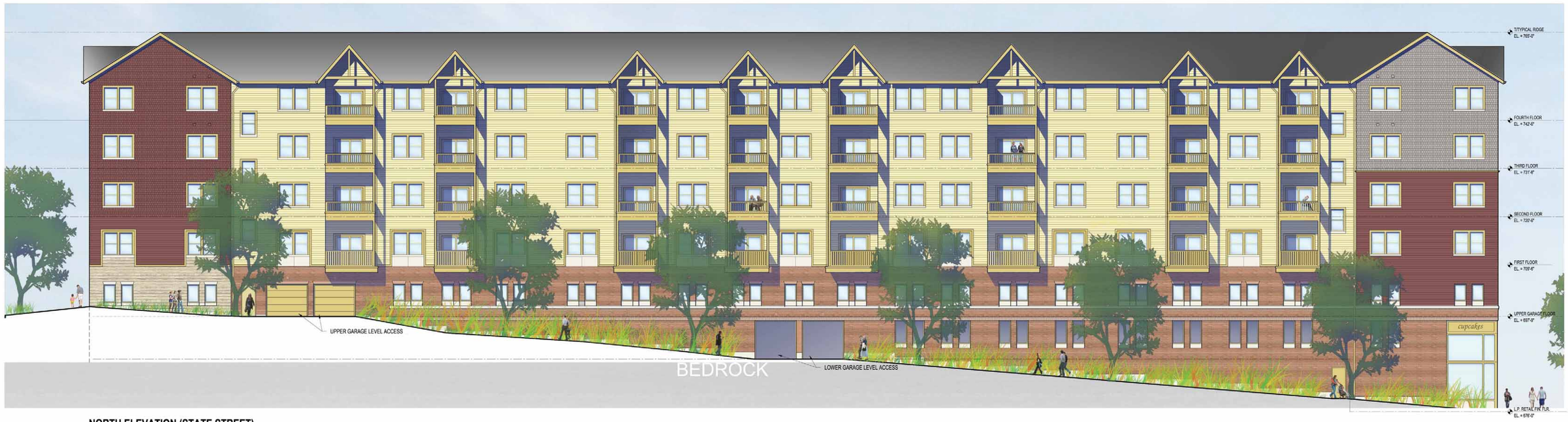
ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

EAST & SOUTH ELEVATIONS
Scale: 3/32" = 1'

A2




**NORTH ELEVATION (STATE STREET)**


**WEST ELEVATION (RIVER STREET)**

NOTES:

| | | |
|---|---|---|
| Dec. 1st, 2016 | REVISED PER STAFF REVIEW COMMENTS | |
| Nov. 9th, 2016 | ISSUED FOR ZONING APPROVAL | |
| Project no.: | Drawn by: DM | Checked by: |

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ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

NORTH & WEST ELEVATIONS
Scale: 3/32" = 1'

A3


| GARAGE PARKING & RETAIL AREA SUMMARY | |
|---|---|
| **PARKING** | |
| LOWER GARAGE | 189 |
| UPPER GARAGE | 161 |
| TOTAL GARAGE PARKING | 350 |
| | |
| **RETAIL AREA** | |
| WILSON STREET | 9,500 |
| RIVER STREET | 4,850 |
| TOTAL RETAIL AREA | 14,350 |

| | | |
|---|---|---|
| | Dec. 1, 2016 | REVISED PER STAFF REVIEW COMMENTS |
| | Nov. 9, 2016 | ISSUED FOR ZONING APPROVAL |
| Project no.: | Drawn by: DM | Checked by: |

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# ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

LOWER GARAGE FLOOR PLAN
Scale: 1" = 20'

*(for reference only)*

A4


| | | |
|---|---|---|
| | Dec. 1, 2016 | REVISED PER STAFF REVIEW COMMENTS |
| | Nov. 9, 2016 | ISSUED FOR ZONING APPROVAL |
| Project no.: | Drawn by: DM | Checked by: |

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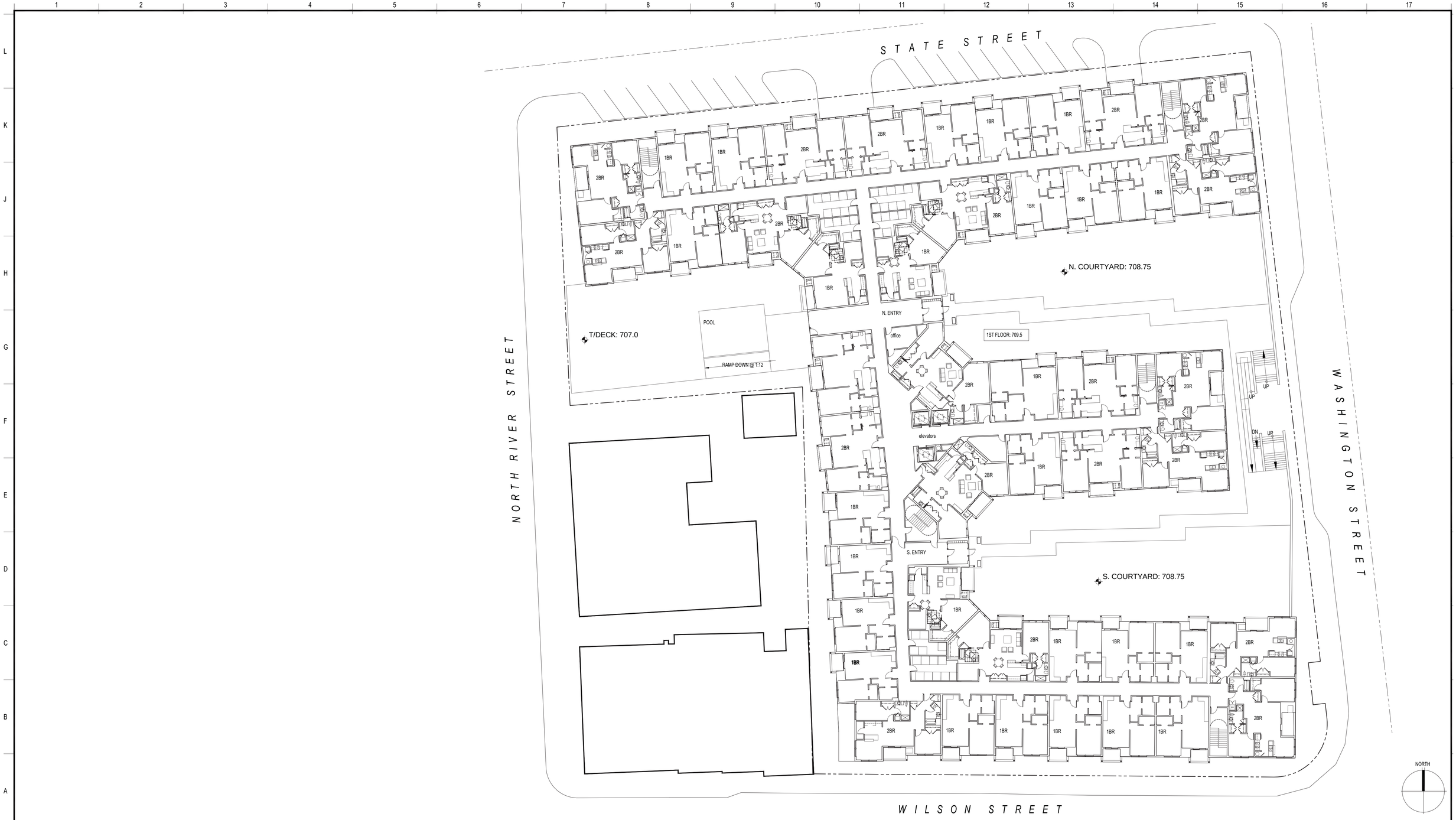
# ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

UPPER GARAGE FLOOR PLAN
Scale: 1" = 20'

*(for reference only)*

A5




| | | |
|---|---|---|
| Dec. 1, 2016 | REVISED PER STAFF REVIEW COMMENTS | |
| Nov. 9, 2016 | ISSUED FOR ZONING APPROVAL | |
| Project no.: | Drawn by: DM | Checked by: |

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# ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

RESIDENTIAL FLOOR 1
Scale: 1" = 20'

*(for reference only)*

A6


| | | |
|---|---|---|
| | Dec. 1, 2016 | REVISED PER STAFF REVIEW COMMENTS |
| | Nov. 9, 2016 | ISSUED FOR ZONING APPROVAL |
| Project no.: | Drawn by: DM | Checked by: |

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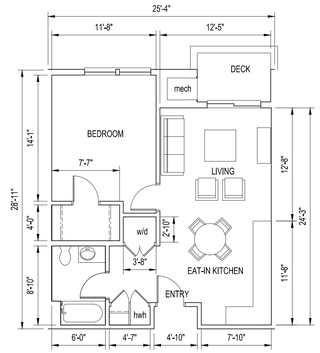
# ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

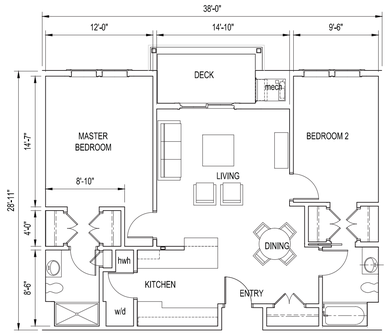
RESIDENTIAL FLOORS 2-4
Scale: 1" = 20'

*(for reference only)*

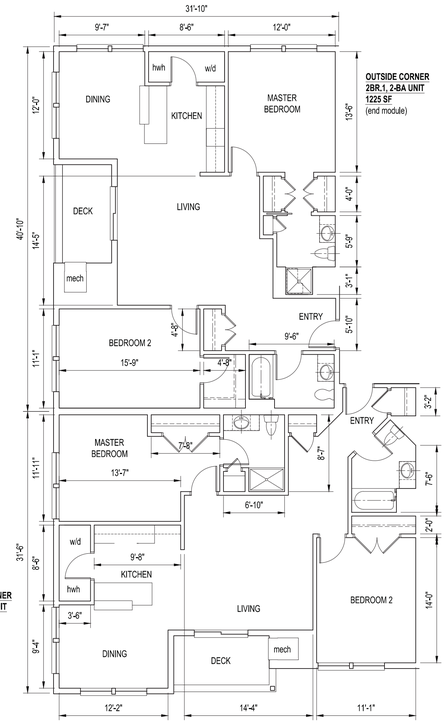
A7



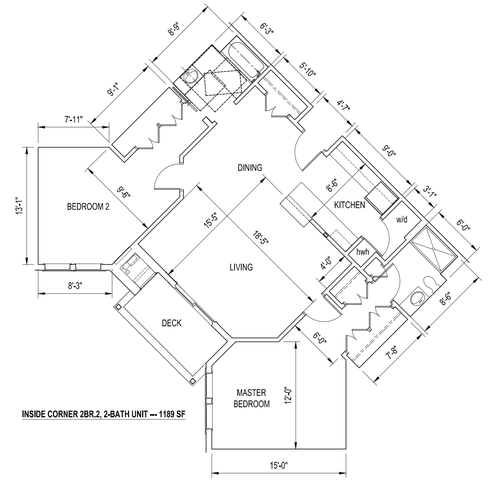

**INTERIOR 1-BEDROOM, 1-BATH UNIT — 689 SF**
(3 per 76 feet)



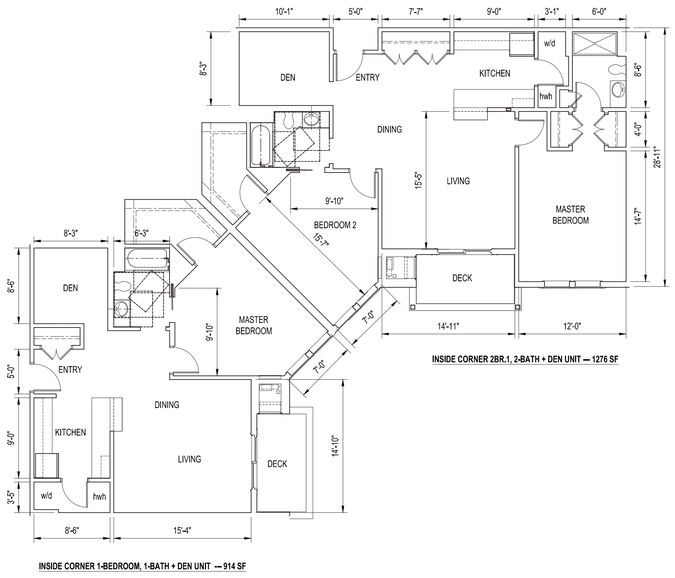

**INTERIOR 2-BEDROOM, 2-BATH UNIT — 1047 SF**
(2 per 76 foot)




**OUTSIDE CORNER 2BR.1, 2-BA UNIT 1225 SF**
(end module)




**INSIDE CORNER 2BR.2, 2-BATH UNIT — 1189 SF**




**INSIDE CORNER 2BR.1, 2-BATH + DEN UNIT — 1276 SF**

**INSIDE CORNER 1-BEDROOM, 1-BATH + DEN UNIT — 914 SF**




**INSIDE CORNER 2BR.3, 2-BATH UNIT — 1260 SF**

**OUTSIDE CORNER 2BR.2, 2-BA UNIT 1195 SF**
(end module)

| RESIDENTIAL AREA SUMMARY CHART | | | |
|---|---|---|---|
| **UNIT TYPE** | **UNIT AREA** | **QUANTITY** | **TOTAL RENTABLE AREA** |
| 1BR INTERIOR | 689 | 83 | 57,187 |
| 1BR INSIDE CORNER | 914 | 9 | 8,226 |
| 2BR INTERIOR | 1047 | 34 | 35,598 |
| 2BR.1 INSIDE CORNER | 1276 | 15 | 19,140 |
| 2BR.2 INSIDE CORNER | 1189 | 4 | 4,756 |
| 2BR.3 INSIDE CORNER | 1260 | 4 | 5,040 |
| 2BR.1 OUTSIDE CORNER | 1225 | 16 | 19,600 |
| 2BR.2 OUTSIDE CORNER | 1195 | 20 | 23,900 |
| **TOTAL** | | **185** | **173,447** |
| GROSS BUILDING AREA (4 RESIDENTIAL FLOORS) | | | 210,452 |
| RENTABLE/GROSS RATIO | | | 82% |

| | | |
|---|---|---|
| | Dec. 1, 2016 | REVISED PER STAFF REVIEW COMMENTS |
| | Nov. 9, 2016 | ISSUED FOR ZONING APPROVAL |
| Project no.: | Drawn by: DM | Checked by: |

nagle hartray architecture

# ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

UNIT PLANS
Scale: 1/8" = 1'-0"

*(for reference only)*

A8

## Suggested Plant Material List

1 North Washington Place

| Symbol | Key | Botanical Name | Common Name | Size |
|---|---|---|---|---|
| **Canopy Tree** | | | | |
| | AR | Acer rubrum 'Armstrong' | Red Maple | 3" cal./BB |
| | AS | Acer x freemanii | Marmo Maple | 3" cal./BB |
| 6 | AM | Acer miyabei 'Morton' | State Street Maple | 3" cal./BB |
| 6 | CC | Carpinus caroliniana | Ironwood | 3" cal./BB |
| 2 | CO | Celtis occidentalis 'Chicagoland' | Chicagoland Hackberry | 3" cal./BB |
| 2 | GT | Gleditsia tricanthos "Inermis' | Skyline Honeylocust | 3" cal./BB |
| | PC | Pyrus calleryana 'Chanticleer' | Chanticleer Pear | 3" cal./BB |
| | QB | Quercus bicolor | Swamp White Oak | 3" cal./BB |
| | QR | Quercus rubra | Red Oak | 3" cal./BB |
| | SR | Syringa reticulata | Japanese Tree Lilac | 6' ht./BB |
| | TC | Tilia cordata | Greenspire Littleleaf Linden | 3" cal./BB |
| 1 | UJ | Ulmus 'Morton Glossy' | Triumph Elm | 3" cal./BB |
| **Evergreen Tree** | | | | |
| 3 | PM | Pseudotsuga menziesii | Douglas Fir | 8' ht./BB |
| | PN | Pinus nigra | Austrian Pine | 8' ht./BB |
| **Understory Tree** | | | | |
| | AC | Amelanchier canadensis | Shadblow Serviceberry | 8' ht./BB |
| 3 | CC | Cercis canadensis | Eastern Redbud | 8' ht./BB |
| | CA | Cornus alternifolia | Pagoda Dogwood | 6' ht./BB |
| | ML | Magnolia x loebneri 'Merrill' | Merrill Loebner Magnolia | 6' ht./BB |
| | MA | Malus species | Crabapple | 8' ht./BB |
| 1 | SR | Syringa reticulata | Japanese Tree Lilac | 8' ht./BB |
| **Deciduous / Evergreen Shrubs** | | | | |
| | AM | Aronia melanocarpa 'Eastland' | Black Chokeberry | 24" ht./BB |
| 49 | BC | Buxus 'Wintergreen' | Wintergreen or Green Velvet Boxwood | 24" ht./BB |
| 12 | BP | Buxus Pyrmidal | Pyrmidal Boxwood (Shape oval) | 36" ht./BB |
| 50 | CS | Cornus sericea 'Isanti' | Redtwig Dogwood | 24" ht./BB |
| 6 | HV | Hamamelis vernalis | Witchhazel | 36" ht./BB |
| 36 | HL | Hydrangea paniculata 'Jane' | Little Lime Hydrangea | 24" ht./BB |
| | JC | Jumiperis chinesis 'Kalley' | Compact Pfitzer Juniper | 18" ht./BB |
| | KJ | Kerria japonica | Japanese Kerria | 24" ht./BB |
| | RHO | Rhododendron PJM | PJM Rhododendron | 24" ht./BB |
| | RR | Rosa x 'Nearly Wild' | Nearly Wild Shrub Rose | 2 gal. |
| 22 | RA | Ribes alpinum "Green Mound' | GM Alpine Currant-Compact | 24" ht./BB |
| 46 | RR | Rugosa Rosa 'Frau Dagmar Hastrup' | Shrub Rose | 5 gal. |
| | RG | Rhus glabra 'Grow-Low' | Grow-Low Sumac | 5 gal. |
| 40 | SP | Syringa patula 'Miss Kim' | Lilac | 24" ht./BB |
| | TH | Taxus x media 'Everlow' | Everlow Yew | 24" ht./BB |
| 53 | TU | Taxius x media 'Upright' | Upright Yew | 24" ht./BB |
| 31 | VT | Viburnum trilobum 'Compacta' | Compact Cranberrybush Viburnum | 24" ht./BB |
| 44 | VD | Viburnum dentatum | Arrowwood Viburnum | 24" ht./BB |
| 6 | WF | Weigela florida | Weigela | 24" ht./BB |
| **Perennials** | | | | |
| 170 | EPB | Echinacea purpurea 'Bravado' | Purple Coneflower | 1 gal. |
| 120 | HSW | Hemerocallis 'Summer Wine' | Daylily | 1 gal. |
| | Hosta | Hosta 'Sub&Substance' | Hosta | 1 gal. |
| 212 | Hosta | Hosta 'Royal Standard' | Hosta | 1 gal. |
| 24 | LSP | Liatris spicata 'Kobold' | Gayfeather | 1 gal. |
| | PF | Perovskia Filigran | Russian Sage | 1 gal. |
| 146 | RFG | Rudbeckia fulgida 'Goldstrum' | Black-eyed Susan | 1 gal. |
| | SAJ | Sedum 'Autumn Joy' | Sedum | 1 gal. |
| 72 | SAL | Salvia sylvestris 'East Friesland' | Salvia | 1 gal. |
| **Ornmental Grasses** | | | | |
| 78 | CAC | Calamagrostis acutiflora 'KF' | Feather Reed Grass | 5 gal. |
| 6 | MSG | Miscanthus sinensis 'Gracilimus' | Maiden Grass | 5 gal. |
| | MSZ | Miscanthus sinensis 'Zebra' | Maiden Grass | 5 gal. |
| | PVI | Panicum virigatum | Red Switchgrass | 1 gal. |
| 72 | PAL | Pennisetum alopecuroides 'Hameln' | Dwarf Fountain Grass | 1 gal. |
| **Groundcover** | | | | |
| | EFC | Euonymus fortuni 'Coloratus' | Purple Leaf Wintercreeper | Flats |
| | PAC | Pachysandra terminalis | Japanese Spurge | Flats |
| 9 flats | SED | Sedum kamtschaticum | Yellow Stonecrop | Flats |
| | ANN | Annuals in all Pots | Annuals | |
| 4 flats | VM | Vinca minor | Periwinkle | Flats |
| see plan | Sod | Turf (Sod) | | |

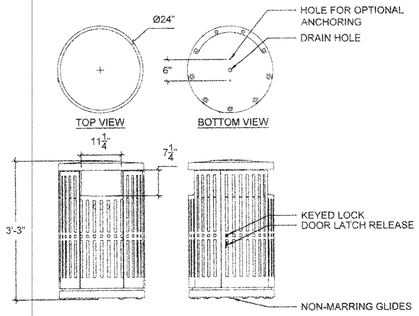
ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

LANDSCAPE PLANS
Scale: 1"=20'
October 21, 2016
11 - 22 - 16 (Revision)

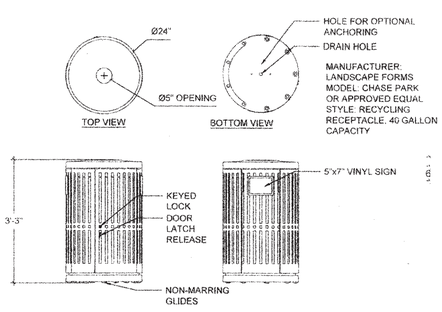
L1

LDC Planners Landscape Architects 630.330.6053

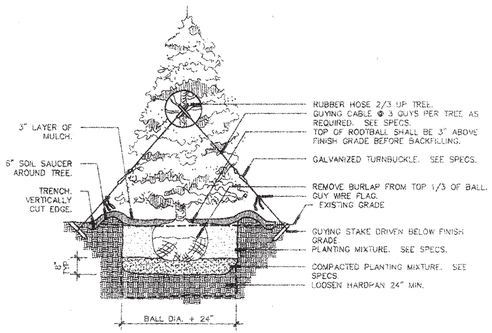
MANUFACTURER: LANDSCAPE FORMS
MODEL: CHASE PARK
OR APPROVED EQUAL
STYLE: SIDE OPENING, 36 GALLON
CAPACITY



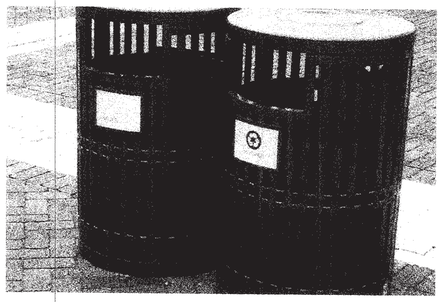

Trash Receptacle Detail



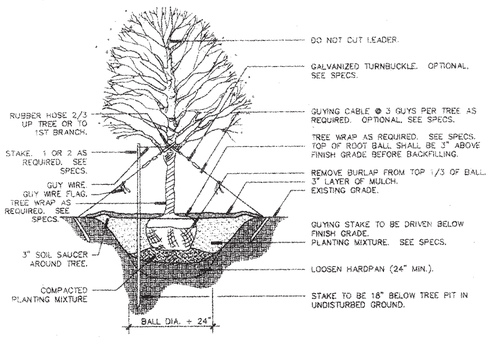

Recycling Receptacle Detail




Evergreen Tree Detail



Trash & Recycling Receptacles



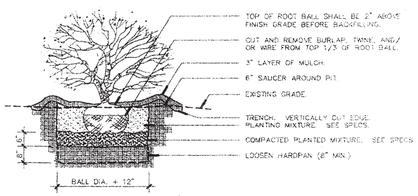

Deciduous Tree Detail

## Planting Notes

1. The Contractor shall verify all existing conditions and dimensions in the field prior to bidding and report any discrepancies to the architect/owner.
2. All planting techniques and methods shall be consistent with the latest edition of "Horticulture Standards of Nurserymen, Inc.," and as detailed on this drawing. Discrepancies shall be reported immediately to the Landscape Architect.
3. All plant material shall be subject to inspection and approval. The Landscape Architect reserves the right to reject any plants, which fail to meet the inspection. All rejected material shall be removed and replaced by the contractor.
4. Substitution from the specified list will be accepted only when satisfactory evidence in writing is submitted to the Landscape Architect, showing that the plant specified is not available. Requests for approval of substitute plant material. Only those substitutions of at least equivalent size and having essential characteristics similar to the originally specified material will be approved. Acceptance or rejection of substituted plant materials will be issued in writing by the Landscape Architect.
5. Guy and stake deciduous/evergreen trees if conditions warrant, or as requested by the Landscape Architect. (Refer to planting details specifications)
6. All shrub, perennial, and groundcover beds shall be mulched with a minimum of 3" of shredded hardwood bark.
7. All plant material shall be guaranteed for one year.
8. The contractor shall be entirely responsible for all damages to water pipes, drains, sewers, streets, pavements, sidewalks, or other structures of any kind encountered during the progress of work, and shall be liable for damages to public or private property resulting there from.
9. The contractor shall be responsible for notifing all public and private utility companies 48 hours prior to any excavation, 1-800-892-1234. Cost of replacement and repair of existing utilities damaged as a result of contractor's operations shall be the contractor's responsibility.
10. All Shade/Evergreen Trees shall be planted a minimum of 6' from all stormwater manholes, stormwater lines, tiles, and underdrains.
11. All detention basins are dry basin ponds and are designed to drain down within 72 hours after storm event. All wet mesic prairie plantings, as shown on engineering plans, are designed to be inundated with water during a storm event.



Precast Planter Detail




Shrub Detail

Planter w/ Annual Plantings

## Suggested Plant Material List

1 North Washington Place

| Symbol | Key | Botanical Name | Common Name | Size |
|---|---|---|---|---|
| **Canopy Tree** | | | | |
| | AR | Acer rubrum 'Armstrong' | Red Maple | 3" cal./BB |
| | AS | Acer x freemanii | Marmo Maple | 3" cal./BB |
| 6 | AM | Acer miyabei 'Morton' | State Street Maple | 3" cal./BB |
| 6 | CC | Carpinus caroliniana | Ironwood | 3" cal./BB |
| 2 | CO | Celtis occidentalis 'Chicagoland' | Chicagoland Hackberry | 3" cal./BB |
| 2 | GT | Gleditsia tricanthos "Inermis' | Skyline Honeylocust | 3" cal./BB |
| | PC | Pyrus calleryana 'Chanticleer' | Chanticleer Pear | 3" cal./BB |
| | QB | Quercus bicolor | Swamp White Oak | 3" cal./BB |
| | QR | Quercus rubra | Red Oak | 3" cal./BB |
| | SR | Syringa reticulata | Japanese Tree Lilac | 6' ht./BB |
| | TC | Tilia cordata | Greenspire Littleleaf Linden | 3" cal./BB |
| 1 | UJ | Ulmus 'Morton Glossy' | Triumph Elm | 3" cal./BB |
| **Evergreen Tree** | | | | |
| 3 | PM | Pseudotsuga menziesii | Douglas Fir | 8' ht./BB |
| | PN | Pinus nigra | Austrian Pine | 8' ht./BB |
| **Understory Tree** | | | | |
| | AC | Amelanchier canadensis | Shadblow Serviceberry | 8' ht./BB |
| 3 | CC | Cercis canadensis | Eastern Redbud | 8' ht./BB |
| | CA | Cornus alternifolia | Pagoda Dogwood | 6' ht./BB |
| | ML | Magnolia x loebneri 'Merrill' | Merrill Loebner Magnolia | 6' ht./BB |
| | MA | Malus species | Crabapple | 8' ht./BB |
| 1 | SR | Syringa reticulata | Japanese Tree Lilac | 8' ht./BB |
| **Deciduous / Evergreen Shrubs** | | | | |
| | AM | Aronia melanocarpa 'Eastland' | Black Chokeberry | 24" ht./BB |
| 49 | BC | Buxus 'Wintergreen' | Wintergreen or Green Velvet Boxwood | 24" ht./BB |
| 12 | BP | Buxus Pyrmidal | Pyrmidal Boxwood (Shape oval) | 36" ht./BB |
| 50 | CS | Cornus sericea 'Isanti' | Redtwig Dogwood | 24" ht./BB |
| 6 | HV | Hamamelis vernalis | Witchhazel | 36" ht./BB |
| 36 | HL | Hydrangea paniculata 'Jane' | Little Lime Hydrangea | 24" ht./BB |
| | JC | Jumiperis chinesis 'Kalley' | Compact Pfitzer Juniper | 18" ht./BB |
| | KJ | Kerria japonica | Japanese Kerria | 24" ht./BB |
| | RHO | Rhododendron PJM | PJM Rhododendron | 24" ht./BB |
| | RR | Rosa x 'Nearly Wild' | Nearly Wild Shrub Rose | 2 gal. |
| 22 | RA | Ribes alpinum "Green Mound' | GM Alpine Currant-Compact | 24" ht./BB |
| 46 | RR | Rugosa Rosa 'Frau Dagmar Hastrup' | Shrub Rose | 5 gal. |
| | RG | Rhus glabra 'Grow-Low' | Grow-Low Sumac | 5 gal. |
| 40 | SP | Syringa patula 'Miss Kim' | Lilac | 24" ht./BB |
| | TH | Taxus x media 'Everlow' | Everlow Yew | 24" ht./BB |
| 53 | TU | Taxius x media 'Upright' | Upright Yew | 24" ht./BB |
| 31 | VT | Viburnum trilobum 'Compacta' | Compact Cranberrybush Viburnum | 24" ht./BB |
| 44 | VD | Viburnum dentatum | Arrowwood Viburnum | 24" ht./BB |
| 6 | WF | Weigela florida | Weigela | 24" ht./BB |
| **Perennials** | | | | |
| 170 | EPB | Echinacea purpurea 'Bravado' | Purple Coneflower | 1 gal. |
| 120 | HSW | Hemerocallis 'Summer Wine' | Daylily | 1 gal. |
| | Hosta | Hosta 'Sub&Substance' | Hosta | 1 gal. |
| 212 | Hosta | Hosta 'Royal Standard' | Hosta | 1 gal. |
| 24 | LSP | Liatris spicata 'Kobold' | Gayfeather | 1 gal. |
| | PF | Perovskia Filigran | Russian Sage | 1 gal. |
| 146 | RFG | Rudbeckia fulgida 'Goldstrum' | Black-eyed Susan | 1 gal. |
| | SAJ | Sedum 'Autumn Joy' | Sedum | 1 gal. |
| 72 | SAL | Salvia sylvestris 'East Friesland' | Salvia | 1 gal. |
| **Ornmental Grasses** | | | | |
| 78 | CAC | Calamagrostis acutiflora 'KF' | Feather Reed Grass | 5 gal. |
| 6 | MSG | Miscanthus sinensis 'Gracilimus' | Maiden Grass | 5 gal. |
| | MSZ | Miscanthus sinensis 'Zebra' | Maiden Grass | 5 gal. |
| | PVI | Panicum virigatum | Red Switchgrass | 1 gal. |
| 72 | PAL | Pennisetum alopecuroides 'Hameln' | Dwarf Fountain Grass | 1 gal. |
| **Groundcover** | | | | |
| | EFC | Euonymus fortuni 'Coloratus' | Purple Leaf Wintercreeper | Flats |
| | PAC | Pachysandra terminalis | Japanese Spurge | Flats |
| 9 flats | SED | Sedum kamtschaticum | Yellow Stonecrop | Flats |
| | ANN | Annuals in all Pots | Annuals | |
| 4 flats | VM | Vinca minor | Periwinkle | Flats |
| see plan | Sod | Turf (Sod) | | |

ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

LDC
Planners
Landscape
Architects
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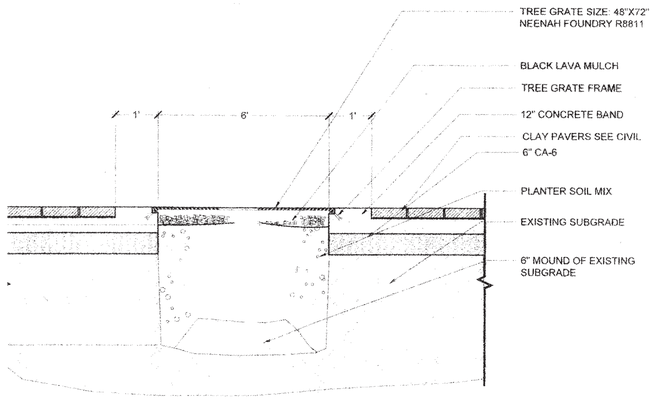
LANDSCAPE DETAILS
October 20, 2016
11 - 22 - 16 (Revision)

L2

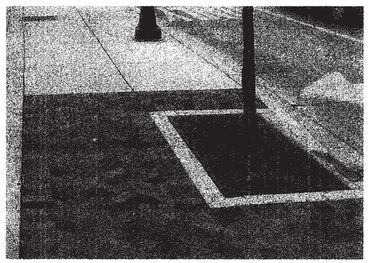
Street Tree w/ Iron Grate & Brick Treatment



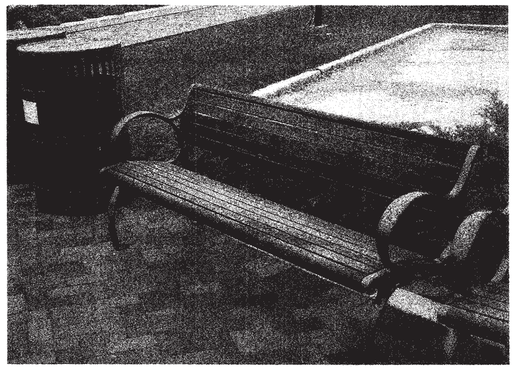

Tree Grate Detail

Pedestrian Street Light

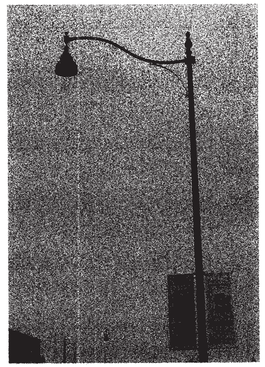
Street Light Brick Treatment



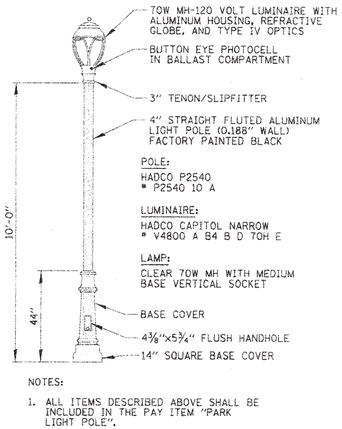
Street Tree w/ Iron Grate & Brick Treatment



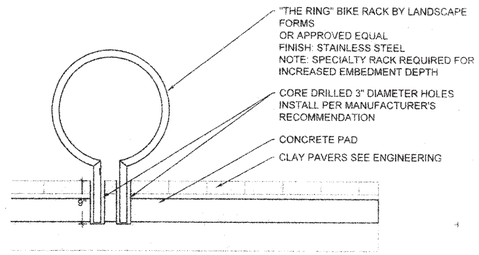
Bench Detail



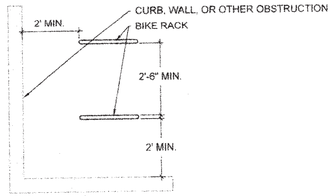
Street Light



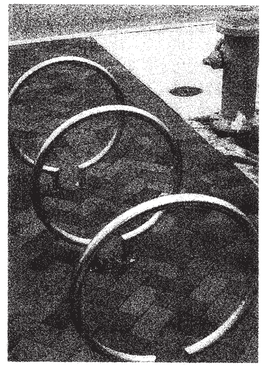

Pedestrian Street Light Detail



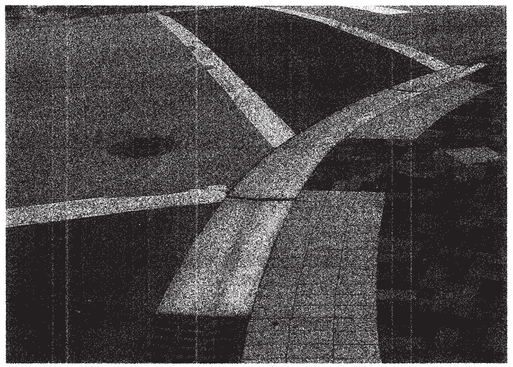

Bike Rack Section




Bike Rack Plan View



Bike Rack



Stamped Asphalt Cross-Walk & Brick Handicapped Ramp

ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

LDC
Planners
Landscape
Architects
630.330.6053

LANDSCAPE DETAILS
October 20, 2016

L3

## Suggested Plant Material List

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| Symbol | Key | Botanical Name | Common Name | Size |
|---|---|---|---|---|
| **Canopy Tree** | | | | |
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| | AS | Acer x freemanii | Marmo Maple | 3" cal./BB |
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| 6 | CC | Carpinus caroliniana | Ironwood | 3" cal./BB |
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| 2 | GT | Gleditsia tricanthos "Inermis' | Skyline Honeylocust | 3" cal./BB |
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| | QB | Quercus bicolor | Swamp White Oak | 3" cal./BB |
| | QR | Quercus rubra | Red Oak | 3" cal./BB |
| | SR | Syringa reticulata | Japanese Tree Lilac | 6' ht./BB |
| | TC | Tilia cordata | Greenspire Littleleaf Linden | 3" cal./BB |
| 1 | UJ | Ulmus 'Morton Glossy' | Triumph Elm | 3" cal./BB |
| **Evergreen Tree** | | | | |
| 3 | PM | Pseudotsuga menziesii | Douglas Fir | 8' ht./BB |
| | PN | Pinus nigra | Austrian Pine | 8' ht./BB |
| **Understory Tree** | | | | |
| | AC | Amelanchier canadensis | Shadblow Serviceberry | 8' ht./BB |
| 3 | CC | Cercis canadensis | Eastern Redbud | 8' ht./BB |
| | CA | Cornus alternifolia | Pagoda Dogwood | 6' ht./BB |
| | ML | Magnolia x loebneri 'Merrill' | Merrill Loebner Magnolia | 6' ht./BB |
| | MA | Malus species | Crabapple | 8' ht./BB |
| 1 | SR | Syringa reticulata | Japanese Tree Lilac | 8' ht./BB |
| **Deciduous / Evergreen Shrubs** | | | | |
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| 49 | BC | Buxus 'Wintergreen' | Wintergreen or Green Velvet Boxwood | 24" ht./BB |
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| 50 | CS | Cornus sericea 'Isanti' | Redtwig Dogwood | 24" ht./BB |
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| 36 | HL | Hydrangea paniculata 'Jane' | Little Lime Hydrangea | 24" ht./BB |
| | JC | Jumiperis chinesis 'Kalley' | Compact Pfitzer Juniper | 18" ht./BB |
| | KJ | Kerria japonica | Japanese Kerria | 24" ht./BB |
| | RHO | Rhododendron PJM | PJM Rhododendron | 24" ht./BB |
| | RR | Rosa x 'Nearly Wild' | Nearly Wild Shrub Rose | 2 gal. |
| 22 | RA | Ribes alpinum "Green Mound' | GM Alpine Currant-Compact | 24" ht./BB |
| 46 | RR | Rugosa Rosa 'Frau Dagmar Hastrup' | Shrub Rose | 5 gal. |
| | RG | Rhus glabra 'Grow-Low' | Grow-Low Sumac | 5 gal. |
| 40 | SP | Syringa patula 'Miss Kim' | Lilac | 24" ht./BB |
| | TH | Taxus x media 'Everlow' | Everlow Yew | 24" ht./BB |
| 53 | TU | Taxius x media 'Upright' | Upright Yew | 24" ht./BB |
| 31 | VT | Viburnum trilobum 'Compacta' | Compact Cranberrybush Viburnum | 24" ht./BB |
| 44 | VD | Viburnum dentatum | Arrowwood Viburnum | 24" ht./BB |
| 6 | WF | Weigela florida | Weigela | 24" ht./BB |
| **Perennials** | | | | |
| 170 | EPB | Echinacea purpurea 'Bravado' | Purple Coneflower | 1 gal. |
| 120 | HSW | Hemerocallis 'Summer Wine' | Daylily | 1 gal. |
| | Hosta | Hosta 'Sub&Substance' | Hosta | 1 gal. |
| 212 | Hosta | Hosta 'Royal Standard' | Hosta | 1 gal. |
| 24 | LSP | Liatris spicata 'Kobold' | Gayfeather | 1 gal. |
| | PF | Perovskia Filigran | Russian Sage | 1 gal. |
| 146 | RFG | Rudbeckia fulgida 'Goldstrum' | Black-eyed Susan | 1 gal. |
| | SAJ | Sedum 'Autumn Joy' | Sedum | 1 gal. |
| 72 | SAL | Salvia sylvestris 'East Friesland' | Salvia | 1 gal. |
| **Ornmental Grasses** | | | | |
| 78 | CAC | Calamagrostis acutiflora 'KF' | Feather Reed Grass | 5 gal. |
| 6 | MSG | Miscanthus sinensis 'Gracilimus' | Maiden Grass | 5 gal. |
| | MSZ | Miscanthus sinensis 'Zebra' | Maiden Grass | 5 gal. |
| | PVI | Panicum virigatum | Red Switchgrass | 1 gal. |
| 72 | PAL | Pennisetum alopecuroides 'Hameln' | Dwarf Fountain Grass | 1 gal. |
| **Groundcover** | | | | |
| | EFC | Euonymus fortuni 'Coloratus' | Purple Leaf Wintercreeper | Flats |
| | PAC | Pachysandra terminalis | Japanese Spurge | Flats |
| 9 flats | SED | Sedum kamtschaticum | Yellow Stonecrop | Flats |
| | ANN | Annuals in all Pots | Annuals | |
| 4 flats | VM | Vinca minor | Periwinkle | Flats |
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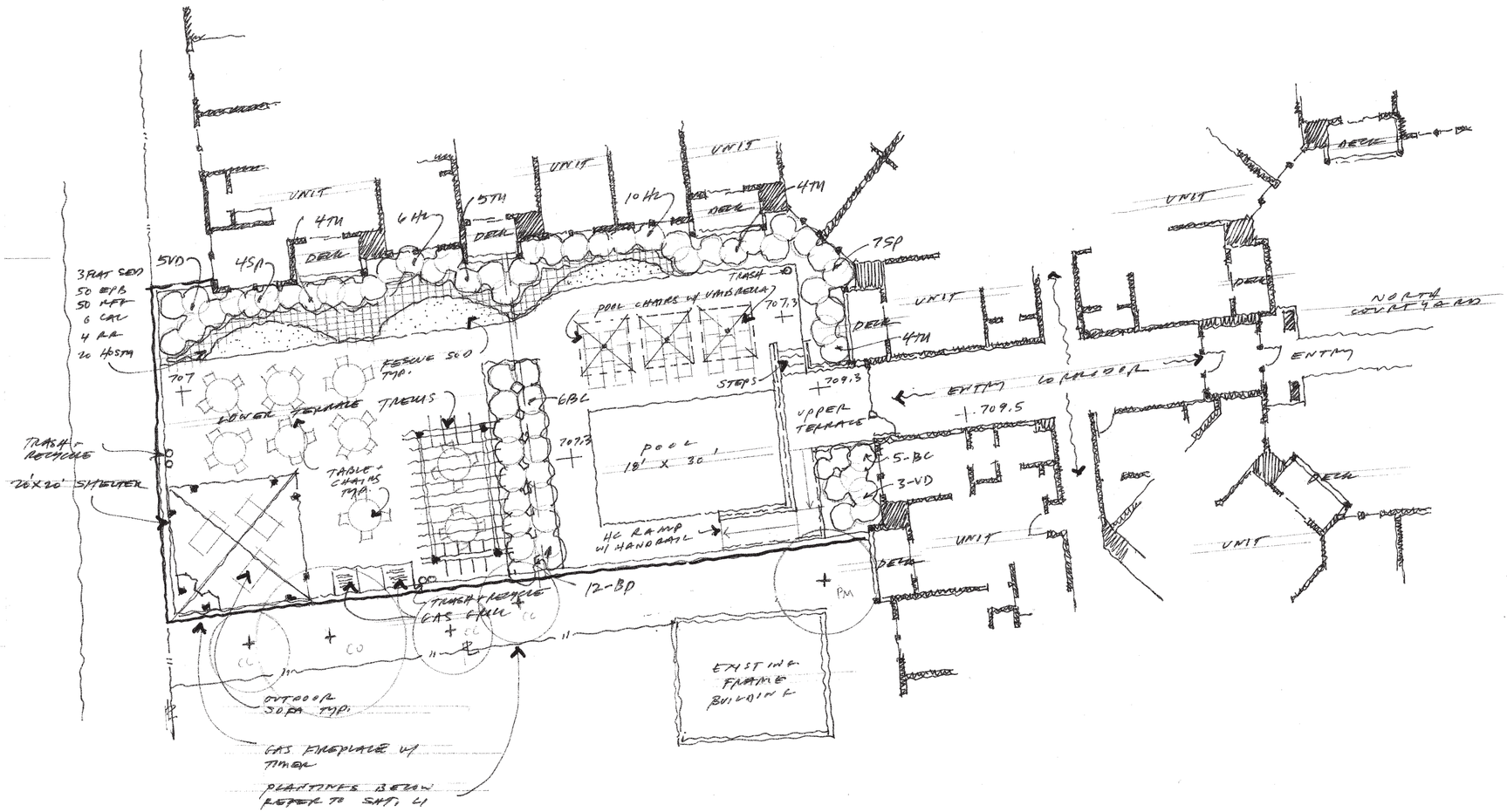


## POOL TERRACE ENLARGEMENT

SCALE: 1" = 10'-0"

**ONE NORTH WASHINGTON**
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

LANDSCAPE DETAILS
October 20, 2016
11 - 29 - 16 (Revision)

**L4**

LDC Planners Landscape Architects
630.330.6053


## Suggested Plant Material List

1 North Washington Place

| Symbol | Key | Botanical Name | Common Name | Size |
|---|---|---|---|---|
| **Canopy Tree** | | | | |
| | AR | Acer rubrum 'Armstrong' | Red Maple | 3" cal./BB |
| | AS | Acer x freemanii | Marmo Maple | 3" cal./BB |
| | AP | Acer platanoides 'Columnare' | Columnar Norway Maple | 3" cal./BB |
| | CO | Celtis occidentalis 'Chicagoland' | Chicagoland Hackberry | 3" cal./BB |
| | GT | Gleditsia tricanthos "Inermis' | Skyline Honeylocust | 3" cal./BB |
| | PC | Pyrus calleryana 'Chanticleer' | Chanticleer Pear | 3" cal./BB |
| | QB | Quercus bicolor | Swamp White Oak | 3" cal./BB |
| | QR | Quercus rubra | Red Oak | 3" cal./BB |
| | SR | Syringa reticulata | Japanese Tree Lilac | 6' ht./BB |
| | TC | Tilia cordata | Greenspire Littleleaf Linden | 3" cal./BB |
| | UJ | Ulmus 'Morton Glossy' | Triumph Elm | 3" cal./BB |
| **Evergreen Tree** | | | | |
| | PM | Pseudotsuga menziesii | Douglas Fir | 8' ht./BB |
| | PN | Pinus nigra | Austrian Pine | 8' ht./BB |
| **Understory Tree** | | | | |
| | AC | Amelanchier canadensis | Shadblow Serviceberry | 8' ht./BB |
| | CC | Cercis canadensis | Eastern Redbud | 8' ht./BB |
| | CA | Cornus alternifolia | Pagoda Dogwood | 6' ht./BB |
| | ML | Magnolia x loebneri 'Merrill' | Merrill Loebner Magnolia | 6' ht./BB |
| | MA | Malus species | Crabapple | 8' ht./BB |
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| **Deciduous / Evergreen Shrubs** | | | | |
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| | BC | Buxus 'Wintergreen' | Wintergreen or Green Velvet Boxwood | 24" ht./BB |
| | BP | Buxus Pyrmidal | Pyrmidal Boxwood | 36" ht./BB |
| | CS | Cornus sericea 'Isanti' | Redtwig Dogwood | 24" ht./BB |
| | HV | Hamamelis vernalis | Witchhazel | 36" ht./BB |
| | HL | Hydrangea paniculata 'Jane' | Little Lime Hydrangea | 24" ht./BB |
| | JC | Jumiperis chinesis 'Kalley' | Compact Pfitzer Juniper | 18" ht./BB |
| | KJ | Kerria japonica | Japanese Kerria | 24" ht./BB |
| | RHO | Rhododendron PJM | PJM Rhododendron | 24" ht./BB |
| | RR | Rosa x 'Nearly Wild' | Nearly Wild Shrub Rose | 2 gal. |
| | RA | Ribes alpinum "Green Mound' | GM Alpine Currant | 24" ht./BB |
| | RR | Rugosa Rosa 'Frau Dagmar Hastrup' | Shrub Rose | 5 gal. |
| | RG | Rhus glabra 'Grow-Low' | Grow-Low Sumac | 5 gal. |
| | SP | Syringa patula 'Miss Kim' | Lilac | 24" ht./BB |
| | TH | Taxus x media 'Hinsdale' | Hinsdale Yew | 24" ht./BB |
| | TU | Taxius x media 'Upright' | Upright Yew | 24" ht./BB |
| | VT | Viburnum trilobum 'Compacta' | Compact Cranberrybush Viburnum | 24" ht./BB |
| | VD | Viburnum dentatum | Arrowwood Viburnum | 24" ht./BB |
| | WF | Weigela florida | Weigela | 24" ht./BB |
| **Perennials** | | | | |
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| | HSW | Hemerocallis 'Summer Wine' | Daylily | 1 gal. |
| | Hosta | Hosta 'Sub&Substance' | Hosta | 1 gal. |
| | Hosta | Hosta 'Royal Standard' | Hosta | 1 gal. |
| | LSP | Liatris spicata 'Kobold' | Gayfeather | 1 gal. |
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| | SAL | Salvia sylvestris 'East Friesland' | Salvia | 1 gal. |
| **Ornmental Grasses** | | | | |
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| | MSG | Miscanthus sinensis 'Gracilimus' | Maiden Grass | 5 gal. |
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| **Groundcover** | | | | |
| | EFC | Euonymus fortuni 'Coloratus' | Purple Leaf Wintercreeper | Flats |
| | PAC | Pachysandra terminalis | Japanese Spurge | Flats |
| | SED | Sedum kamtschaticum | Yellow Stonecrop | Flats |
| | VM | Vinca minor | Periwinkle | Flats |
| | Sod | Turf (Sod) | | |

ONE NORTH WASHINGTON
Batavia, Illinois
ONE NORTH WASHINGTON, LLC, Developer

LDC Planners Landscape Architects 630.330.6093

LANDSCAPE PLANS
Scale: 1"=20'
October 21, 2016
11-29-16 (REVISION)

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