WE BUILD STORIES

RYAN

5th Avenue Development
Combined Working Group Report
June 4, 2018

Table of Contents

SECTION 1

Executive Summary

EXECUTIVE SUMMARY

Through the Group Input process the City, Community and Ryan worked to identify topics requiring additional discovery prior to creating concepts for the development. The topics identified include: **Design, Land Use, Parking, Pedestrian Safety & Connectivity, Storm Water and Traffic & Transportation.** The community participants selected by the 5th Avenue Steering Committee on March 8, joined representatives from City Staff and Council, Ryan and industry experts to work through each topic in detail.

Ryan's goal was to complete a more in-depth analysis of the key issues (as identified through the Group Input process), in an effort to better inform the creation of the development concept(s).

Guiding Principles included:

- Seek balance in each Working Group between those with professional experience and those with personal experience (i.e. – area resident, commuter, storm water concerns, etc.).
- Focus on a quantitative analysis of relevant material without bias.
- Given the complexity, recognize there may not be a "flawless" solution.
- Recognize the Working Group product is not intended to be final, but rather it is intended to inform the development concept.

This document includes the following:

- A summary of the **Concept Principles** written by the Working Groups, which consolidates the working group product into key points guiding the creation of the development concept.
- The **Combined Working Group Narrative,** outlining each group's effort and conclusions.
- **Working Group Detail**, including meeting notes, engineering concepts, feasibility studies, market studies, survey data, links to relevant information, etc.

As we move forward, all of the information contained within this document will be used to guide and shape the creation of the development concept(s). Specifically, the information is intended to:

- Begin to bring focus to the scope of the development
- Address key functional concerns
- Provide context to the development's infrastructure needs and related costs

We sincerely appreciate the time the Working Group participants, Steering Committee, the community, City Staff and City Council have given to date. It is amazing to see the community's passion and engagement and we are excited to discover what lies ahead.

The Ryan Team

SECTION 2

Concept Principles

CONCEPT PRINCIPLES
Prepared by: Ryan Companies US, Inc.
June 4, 2018

DESIGN WG.

1. **Adherence to Naperville's Building Design Guidelines.**
   a) Notes:
      i) Focus on 4-sided design and high quality building materials
      ii) Enhanced public realm
      iii) Alignment with appropriate PUD principles, including setbacks, adjacencies, massing, etc.

2. **Incorporate Intelligent Design Practices.**
   a) Notes:
      i) Incorporate meaningful sustainability elements (LEED, dark-sky, solar, electric charging station, irrigation, etc. are all options)
      ii) Embrace the "spirit" of universal design standards
      iii) Provide for adaptable program elements to accommodate multiple uses for the same space.
      iv) Evaluate smart systems where appropriate (i.e. – Wi-Fi, street lighting control, etc.)

3. **Focus on Design Quality & Character.**
   a) Notes:
      i) The train station will continue to be the primary focal point
      ii) The design should provide appropriate transitions and complement the character of the neighborhoods while incorporating modern amenities.
      iii) The area should embody its role as the northern gateway to downtown Naperville.

LAND USE WG.

1. **Concept should consider market conditions and community input, including the related market studies, Group Input deliverable dated December 19, 2017, recent Land Use and Height survey and ongoing community input.**

2. **Support the continued operation of the area as a multi-modal transit hub, with the goal of organizing all modes of transportation efficiency and public safety.**
   b) Notes:
      i) Includes the train station, commuter parking and transit.

3. **Provide for a diverse mix of uses, including residential, commercial office, boutique retail, public space and parking.**
    a) Notes:
        i) **Residential.** Housing product should appeal to a variety of ages and incomes, including young professionals, empty-nesters, seniors, students and older adults.
        ii) **Commercial office**. Distinct from typical suburban office product, the office space will use smaller floor plates and create a more active and urban feel.
        iii) **Retail.** Focus on destination-oriented retail and dining concentrated along Washington Street.
        iv) **Public spaces.** In accordance with Naperville's Building Design Guidelines, buildings will frame special public spaces such as parks, plazas, outdoor seating, the streetscape, and most notably, the train station, combining amenities with safety for residents, commuters, employees, visitors and surrounding property owners.

STORM WATER WG.

1. **Implement best management practices per the City of Naperville and DuPage County storm water ordinances**.

2. **Consider area-wide storm water solutions.**
    a) Notes:
        i) Any storm water improvements should place a priority on the flooding of habitable structures, such as storm water runoff entering a habitable structure either over the top of foundation or through a basement window.

TRAFFIC WG.

1. **Intersection of 5th and Washington Street will likely need to accommodate west dual left turns and a north bound right turn lane. It is likely it will not require re-alignment.**
    a) Notes:
        i) Improves commuter ingress / egress at peak times.
        ii) The vast majority of parking permit holders reside south of train tracks.

2. **Concept should continue to study re-alignment options at the intersection at North and Washington.**
    a) Notes:
        i) Conversion of North Ave to two-way operation is important for multi-modal operation.
        ii) Intersection function is key considering potential uses for DCM/commuter lot
        iii) Pedestrian safety concerns given current geometry

3. **Pace and kiss-n-ride functions should be provided both north and south of the tracks.**
    a) Notes:
        i) Supports current Pace routes
        ii) Encourages distributed traffic patterns
        iii) Supports commuter access via kiss-n-ride

PARKING WG.

1. **Focus on commuter parking solutions that are balanced and efficient.**
    a) Notes:

i) The Burlington lot and DCM lot are well-suited for commuter parking; Kroehler lot is geometrically efficient in its current state.

2. **Concept should assume phasing (during construction) to limit off-site temporary parking demand**.

3. **Parking trends and potential future usage should be taken into consideration.**
   a) Notes:
      i) Adaptable parking structures require additional height and cost.
      ii) The Kroehler parking lot could offer flexibility should it remain commuter parking for the near term.

PEDESTRIAN SAFETY & CONNECTIVTY WG.

1. **Pedestrian safety and experience at existing rail crossings should be improved.**
   a. Notes:
      i) Includes east-side of Loomis (at-grade) crossing, Ellsworth tunnel and the Washington Street underpass.
      ii) Provide additional lighting beyond minimum security lighting, while observing dark sky compliance.
      iii) Wider spaces to accommodate pedestrians, bicycles, wheel chairs and stroller traffic

2. **Concept should consider a new pedestrian tunnel along the west side of Washington Street.**
   a. Notes:
      i) Addresses community concerns regarding limited options to safely cross the train tracks.
      ii) Subject to Metra / BNSF agreement and engineering.
      iii) Security and enhanced aesthetics should be considered.

3. **Concept should improve the 5th Avenue and Washington Street corridors along the development frontage.**
   a. Notes:
      i) Improvements could include the removal of on-street parking, enhanced pedestrian crossings, adding (pedestrian-scale) street lighting, additional landscaping, wider sidewalks, etc.
      ii) Consideration should be given to public safety operations, snow removal, larger greenspaces, landscape maintenance, traffic, etc.
      iii) Minimize street crossings, minimizing pedestrian/vehicular conflicts.

SECTION 3

Combined Working Group Narrative

COMBINED WORKING GROUP NARRATIVE
Prepared By:
5th Avenue Development Working Group Participants

Working Group (WG) participants were selected by the Steering Committee and, beginning in early April, the six groups conducted a series of five meetings (over a two-month period) focused on their relevant subject matter. Specific group activities included:

- Defining and reviewing existing conditions
- Engaging with technical consultants and professionals, reviewing and questioning technical studies and analysis
- Inviting and considering community feedback on the working group topic
- Identifying and collaborating on potential solutions
- Considering the work of other Working Groups and potential tradeoffs between the findings and recommendations of each group

WORKING GROUP OBJECTIVES

Ryan prepared an action plan for each WG and submitted the plans to the Steering Committee for review and approval at the April 11 meeting. Each plan included a key objective, listed below.

- **Design WG.** Establish a "baseline" narrative for the 5th Avenue design development that is functional, aesthetically pleasing and in line with the expectations of the City and community.

- **Land Use WG.** Focus on intended uses for the 5th Avenue development that are financially feasible, align with the City's goals and address the ideas / concerns provided by the community.

- **Parking WG.** Focus on potential parking improvements for the 5th Avenue development addressing current commuter parking and the project's potential parking needs.

- **Pedestrian Safety & Connectivity WG.** Focus on intended uses for the 5th Avenue development that are financially feasible, align with the City's goals and address the ideas / concerns provided by the community.

- **Storm Water WG.** Complete an analysis for the 5th Avenue development, addressing compliance with local ordinances for the new development and options to either solve or positively impact existing storm water conditions within the identified area.

- **Traffic & Transportation WG.** Focus on potential infrastructure solutions for the 5th Avenue Development areas that are financially feasible and functionally improve the multi-modal operations of the area.

The following narrative summarizes the effort of each group, along with the analysis completed and key findings and/or recommendations.

DESIGN AND LAND USE WORKING GROUPS

Members Design WG: Lauren Collander, Alyssa Faczek, Tim King, Cindi Swanson, Amy Emery, Allison Laff, Councilman Hinterlong, Jim McDonald, Curt Pascoe, Brett Bunke
Members Land Use WG: Rocky Caylor, Jeff Havel, Phil Meno, Scott Parrill, Katie Davis, Amy Emery, Allison Laff, Christine Jefferies, Jim McDonald, Curt Pascoe, Kyle Schott, Councilwoman Anderson

The Design and Land Use Working Groups focused on defining conceptual themes and ideas related to the potential development .The design group was careful not to push too far with design ideas and precedent imagery, while the land use group studied potential uses, but did not dictate location. The result of this effort is a narrative that will guide the discussion as we move into concept creation.

Analysis included:

- Office & retail market studies provided by CBRE (Appendix B)
- Residential Market Study prepared by Appraisal Research Counselors
- Naperville's Design Guidelines
- The 2009 5th Avenue Study
- Design Group Input Deliverable dated December 19, 2017
- Land Use Group Input Deliverable dated December 19, 2017
- 5th Avenue Land Use and Height survey (Appendix B)
- Review and discussion of "like-kind" developments (Appendix A)
- The City of Naperville's Analysis of Impediments of Fair Housing Report
- Universal Design: Housing for the Lifespan of People

The work product for these groups is a combined narrative that:

- creates a **Vision Statement** for the development
- identifies **Concept Principles**
- summarizes the **Market Studies** and the **Land Use & Height survey**
- establishes a set of desired **User Experience Outcomes**
- outlines a list of **Additional Considerations**

VISION STATEMENT

We envision this development as a vibrant, new mixed-use district. Designed to be accessible to all, transit-oriented and complementing the "best of Naperville," this new district's showcase character would have a draw of its own, while serving as an important gateway to the existing vibrant downtown district. Bold in concept and respectful of the surrounding context, the area would be more than a place to park and ride, it would become a welcoming destination to live, work, play and begin the exploration of Naperville.

USER EXPERIENCE OUTCOMES

Based on the above aspirations, users will experience a welcoming space that flexes to accommodate their needs depending on the day of the week, time of day, season, etc. With careful attention to design, the character and quality of the development will shine through. The area will cater to each user experience.

Specifically:

- **Visitors** arriving to Naperville will appreciate the welcome they receive. Design choices will clearly convey that you are entering the City through an important gateway that respects the destination-like feeling that is Naperville.

- Like visitors, **commuters** will appreciate the efficiency of travel to and from the train station, achieved in part due to exceptional wayfinding and accessibility design elements. Commuters will

also enjoy expanded access to convenient transportation choices allowing all to safely access the train station. Physical amenities like covered walkways, attractive lighting, and other elements that cannot be seen (e.g. sustainable building features, expanded wireless access, etc.) will benefit new and long-time commuters alike.

- New **employees and residents** within the 5th Avenue Development area will enjoy full access provided for all abilities, a unique combination of on-site amenities, and innovative and adaptable indoor and outdoor spaces. Design features will cater to the interests of residents of all ages who enjoy convenient access to the train and Downtown Naperville, but also call this area home.

- And finally, those living in **adjacent neighborhoods** will appreciate the attention given to the project's **design elements,** including varying roof lines and setbacks, building articulation, stepping back of upper stories, wrapping parking decks, etc. Furthermore, additional focus will be given to the development's **transitional areas** to protect the integrity and quality of life residents enjoy today. The design choices will seek to improve safety for families traveling to and through the area. New public spaces will foster interaction within the district to provide an even stronger feeling of community.

DESIGN – CONCEPT PRINCIPLES

The following principles, together with the community input received to date, will guide the creation of the design concept.

1. **Adherence to Naperville's Building Design Guidelines with a focus on the following:**
    a. 4-sided design
    b. High quality building materials
    c. An enhanced public realm
    d. Alignment with appropriate PUD principles, including setbacks, adjacencies, massing, etc.

2. **Focus on design quality & character.**
    a. **Train station.** The station will continue to be the primary focal point of the area. Clear sightlines and vistas to the site and supporting wayfinding elements will be carefully preserved and designed in recognition of the train station as a community center and destination. A central plaza celebrating and providing visual access to the train could be incorporated into the site plan.
    b. **Surrounding residential neighborhoods.** The design should provide appropriate transitions to the surrounding residential area and complement the character of the neighborhood while incorporating modern amenities.
    c. **Northern gateway.** The design should embody its role as the northern gateway to downtown Naperville.
    d. **High-quality asset.** Both the design and uses should make decisions to encourage the long term function of this development as a high-quality or investment grade asset. Specific attention should be given to :
        i. Building systems and maintenance
        ii. Life-cycle costs
        iii. Floor plate sizes
        iv. User amenities

3. **Incorporate intelligent design practices.** Renewal of the 5th Avenue area will create a destination for Naperville and cement its position at the forefront of thoughtful and intelligent design, by giving attention to the following:
    a. Meaningful sustainability elements (i.e. - LEED, dark-sky, solar, electric charging stations, irrigation, etc., are all options)

b. Embracing the spirit of universal / accessible design standards, including, but not limited to:
    i. Efficiency of use
    ii. Awareness
    iii. Understanding
    iv. Flexibility
c. Adaptable program elements to accommodate multiple uses of the same space
d. Efficiency of use (i.e., parking, transportation, etc.)
e. Evaluation of smart systems (i.e., Wi-Fi, street lighting control, etc.)

LAND USE – CONCEPT PRINCIPLES

The development will be successful if it is balanced, satisfies a number of diverse needs and enhances the quality of life for area residents, users and the community as a whole. As this is, most importantly, a transit hub, the needs of the commuters, especially parking, need to be met in an efficient and pleasant manner. The following principles are intended to shape this Transit-Oriented Development.

1. **Transit-Oriented Development.** The development will support the continued operation of the area as a multi-modal transit hub, with the goal of organizing all modes of transportation for greater efficiency and public safety than exists today.
    a. **Train Station:** While not included in the current scope, improvements to the station may be considered to enhance connectivity, way-finding, architectural presence and commuter experience.
    b. **Commuter Parking:** The current parking layout will be replaced with a combination of parking solutions with the goal of improving function (i.e. access/egress) and connection to the train station.
    c. **Transit (PACE, Kiss 'N Ride & Ride-share):** Locations for these transit functions will be provided on both the north and south sides of the tracks, with the majority of the services located near the train station (along the south side). Creating a separate transit zone / plaza will streamline station access and improve both the commuter experience and pedestrian safety.

2. **Diverse Mix of Uses.** Appropriate uses include residential, commercial office, boutique retail, public spaces and parking. A successful mix of uses will enhance the area for all users and reflect market conditions, economic realities and community input.

    a. **Residential**: Per the initial market study there is interest in and demand for a variety of housing types, including rental units (market rate & attainable), townhomes and condos. The goal is to appeal to a variety of ages and incomes, including young professionals, empty-nesters, seniors, students, etc.
        i. Preliminary residential market study (Appendix B) supports the potential for all of the following:
            1. Multi-family (rental): approximately 350 to 400 units (phased)
            2. Condominium (sale): approximately 30 to 50 units
            3. Townhome (sale): approximately 30 to 50 units

    b. **Commercial Office:** Distinct from suburban office product, the office space will use smaller floor plates and create a more active, urban feel where local businesses feel welcome. This product could be placed within more traditional spaces, as well as spaces that feel more retail in context.
        i. Preliminary office market study (Appendix B) suggests there is demand for transit oriented office space of approximately 75,000sf to 125,000sf total.

    c. **Retail:** The retail uses will likely be destination-oriented and serve the users in the area.

i. Preliminary retail market study (Appendix B) suggests the 5th Avenue development could justify up to 25,000sf of retail.
ii. Additional specialty use retail (grocer) could justify greater than 25,000 sf of retail, subject to location within the development area.

Public Spaces: In accordance with the *Naperville's Building Design Guidelines*, buildings will frame special public spaces such as parks, plazas, outdoor seating, the streetscape, and most notably, the train station, combining amenities with safety for all users.

LAND USE & HEIGHT SURVEY

The Land Use & Height survey was issued on March 13 to the following groups:

- **Engaged**: Individuals who signed up for the City's or the Ryan 5th Ave enewsletter
- **Commuters**: Individuals who signed up for the City's Commuter Connect enewsletter
- **Crossover**: Individuals who are on both the Engaged and Commuter lists
- **Resident sample**: Random sample of 5,000 Naperville mailing addresses
- **Opt-in**: Individuals who responded to the survey via the public link on the 5th Ave website

The survey remained open until May 11 with Ryan and City providing frequent reminders encouraging folks to take the survey.

GROUP	ENGAGED ONLY		COMMUTERS ONLY		CROSSOVER		RESIDENT SAMPLE	OPT-IN
METHOD	EMAIL		EMAIL		EMAIL		MAIL POSTCARD	WEBSITE
SENT	MARCH 13 & 28		MARCH 13 & 28		MARCH 13 & 28		MARCH 19	MARCH 13
COUNT	721		3,700		700		5,000	N/A
BOUNCE	14.3%	103	10.7%	396	15.4%	108	N/A	N/A
OPEN	57.0%	353	42.6%	1,408	44.8%	265	N/A	889
RESPONSE	209		315		91		84	646
RATE	33.8%		9.5%		15.4%		1.7%	N/A

* Response rates are determined by removing the bounced emails from the total sent.

At our May 24 WG meeting, the group reviewed the results of the survey as presented by Jeff Andreason (aQity). Please refer to Appendix B for additional detail. aQity will continue to review the survey results and will present their findings at the combined working group meeting (June 4), the steering committee meeting (June 12) and to City Council (June 19).

ADDITIONAL CONSIDERATIONS

- Metra should provide comment on the final concept relative to ridership.
- Any improvement to the existing train station will require direction from City Council.
- Should the concept propose commuter parking on the DCM / commuter lot, additional consideration should be given to the safety of pedestrians in the area.
- All market studies should be updated (when appropriate) to reflect current market conditions.

- As the concept evolves, all options for the location of the DuPage Children's Museum should be considered.

PARKING WORKING GROUP

Members: Mike Marek, Elizabeth Kelly, Andrew Wallace, Christopher Kuehner, Jen Louden, Councilwoman Obarski, Kyle Schott, Curt Pascoe, Jim McDonald

The Parking Working Group reviewed potential parking improvements for the 5th Avenue Development. These improvements addressed current commuter parking and contemplated parking to support new development. Along with parking consultant Kimley-Horn, the group focused on a multi-level analysis of existing parking conditions, parking structure design best practices, Transit Oriented Development (TOD) case studies and hypothetical parking deck placements. In doing so, opportunities for efficiency, consistency with desired traffic patterns and an overall enhanced commuter experience were identified.

Analysis included (Appendix C):

- The 2009 5th Avenue Study
- 2012 Naperville Metra Station Bus Depot and Commuter Access Feasibility Study
- Group Input Deliverable dated December 19, 2017
- Metra & Pace fact sheet
- Studies provided by Kimley-Horn including:
    - Parking Deck Case Studies
    - Parking: Best Practices
    - Technology and Future-Proof Design
    - Theoretical Parking Deck "Fit Test"
    - Temporary Parking Concepts
    - Alternative Transportation Solutions
- City of Naperville permit holder distribution map
- "Planning For The Future" – Ascent, Winter 2018 – Article referencing parking deck adaptability.

The work product for this group is a narrative that:

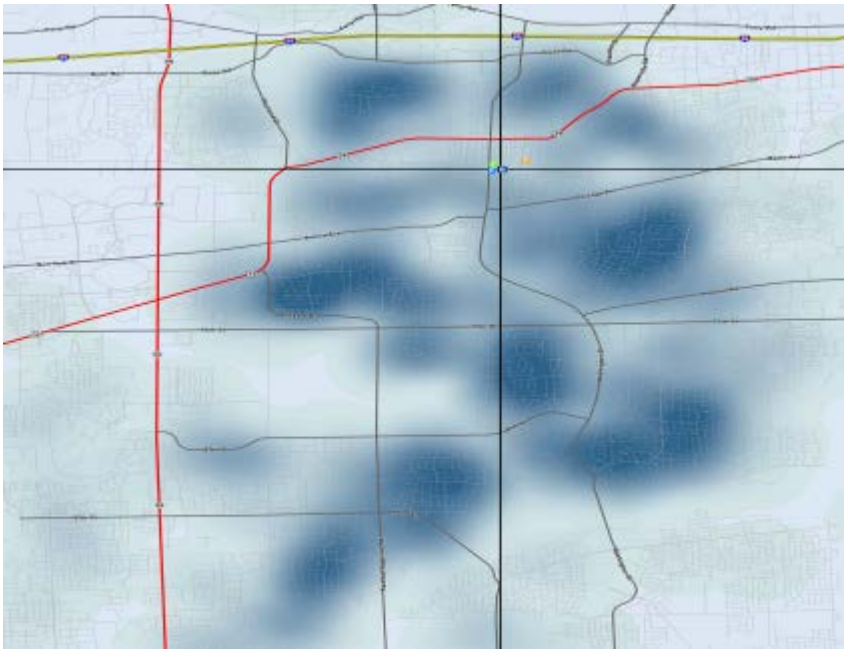
- Discusses **Existing Parking Concerns**
- Identifies **Concept Principles**
- Outlines **Additional Considerations**

EXISTING PARKING CONCERNS

Given community input and specific commuter experience the group discussed and identified existing parking concerns, which included the following:

- **Parking Supply**. Current commuter parking counts total 1,681, including Boecker daily stalls, and per the RFQ, commuter stall counts cannot be reduced.
- **Parking Demand**. Per community input, additional demand exists.
- **Parking Use/Operations.** The City currently offers quarterly permits and daily fee parking. Quarterly permit stalls are not fully occupied on a daily basis, while daily fee parking stalls are generally fully occupied early each morning. Quarterly permits do not accommodate current commuter trends such as telecommuting and carpooling/ridesharing. The limited permit types, combined with variability in parking occupancy, suggests potential for increased efficiency of existing permit spaces.

- **Parking Distribution.** The current distribution of commuter parking spaces is not balanced relative to the distribution of permit holder residences. This imbalance negatively impacts commute times and contributes to traffic congestion. Approximately 20% of the current 1,681 commuter stalls are located on the south side of the BNSF tracks, whereas 84% of the current permit holders, live on the south side of the tracks. Below is a heat map, generated by the City of Naperville, that illustrates permit holder locations.



Heat Map showing parking permit holder locations (Dots indicate train station)

CONCEPT PRINCIPLES

The following principles, together with the community input received to date, will guide the creation of the design concept. Specifically, these principles work to address parking concerns related to the 5th Avenue development that are efficient, balanced and adaptable for the future to ensure an enhanced parking experience for commuters and all other users.

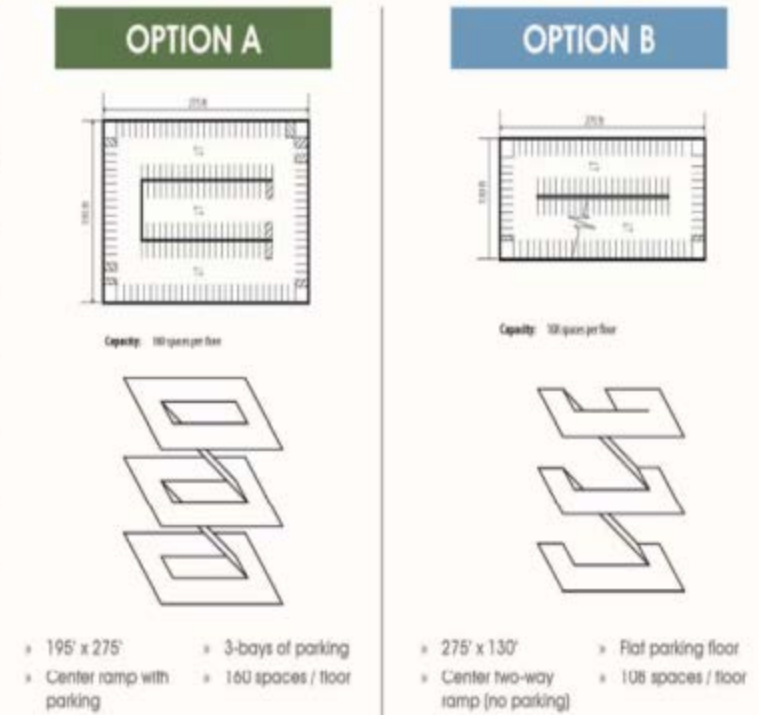
1. **Focus on commuter parking solutions that are balanced and efficient.** The group identified best practices related to parking deck design and then reviewed case studies of various parking decks noting how some practices (e.g. access points, guidance systems) were implemented. In addition, a theoretical parking deck "fit test" was completed identifying parking efficiency,(i.e. most stalls per square foot), at each lot.
    a. The Burlington lots are well suited for efficient commuter parking. Parking remaining in this area also corresponds to existing commuter habits.
    b. The DCM/commuter lot is well suited (geometrically) for commuter parking. Located on the south side of the BNSF tracks, this location provides for a right-out to southbound Washington Street, a movement cited by commuters as important to an efficient evening commute. It was noted that increased commuter parking at this location could present a pedestrian safety concern.

c. The Parkview lot is less efficient due to its depth (east/west) but the location allows for south side access. A right-in onto North Avenue is available for the morning commute that was noted as positive.
d. The Kroehler lot is (geometrically) efficient in its current state. Based on community input, placement of a parking deck at this location was noted as not favorable based on proximity to single family residences.
e. The Water Tower West lot can support commuter parking, however, the water tower placement impacts the efficient use of this site. This location provides a right-out to eastbound 5th Avenue and proximity to southbound Columbia Avenue, a route cited by commuters as a key alternative to Washington Street during the evening commute.

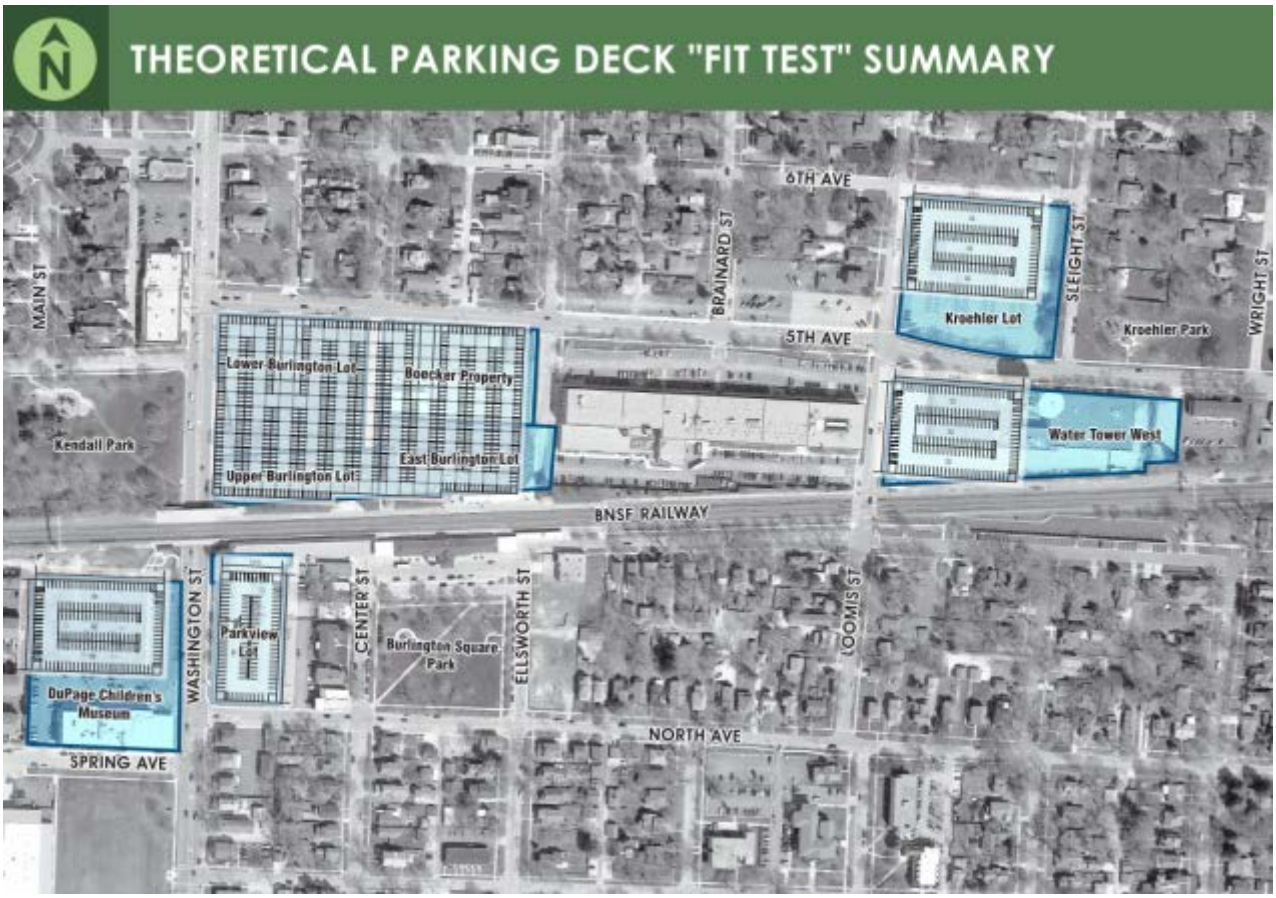
The information below summarized this parking analysis. Additional details are provided in Appendix C.

Location	Dimension	Option A (3-Bay)	Option B (2-Bay)
Lower Burlington Lot	±320' x ±275'	X	X X
East Burlington Lot	±320' x ±150'	No	X
Upper Burlington Lot	±400' x ±150'	No	X
Boecker Property	±315' x ±205'	X	X X
Kroehler Lot	±345' x ±330'	X	X X
Water Tower West (west of tower)	±645' x ±230'	X[1]	X[1]
DuPage County Children's Museum	±330' x ±400'	X	X X
Parkview Lot	±160' x ±305'	No	X

[1] Modified garage configuration without parking aisle on each end of the typical floor



Efficient Parking Design Options



Theoretical Parking Deck Fit Test

2. **Concept should assume phasing construction to limit off-site temporary parking demand.** The group studied multiple options for temporary parking (during construction), including
    a. Off-street parking at neighboring parks
    b. Local street parking
    c. Phased parking with the development
    d. Remote Parking

    Phased parking within the development area was identified as being the most beneficial to both the commuters and community due to the minimized impact to current commuter and neighborhood habits and existing infrastructure.

    The information below outlines potential options for temporary parking.

Temporary Parking Option at Water tower Lot

Phased Temporary Parking/Construction Brainstorming

3. **Parking trends and potential future usage should be taken into consideration.** Per the illustration below, the group studied potential parking trends and “future-proofing” parking structures through design.

"FUTURE-PROOF" DESIGN ELEMENTS

Concept site plan

Speed ramps located outside parking deck
Tri-Rail Beach Deck, Dania, FL

- Flat floor plates and speed ramps
- Stairs and elevators in center
- Greater floor-to-floor heights (i.e., 15-foot minimum rather than 10-12 feet typically provided)
- Transit stops and other mobility modes
- Pick-up/drop-off zones for Transportation Network Companies (e.g., Uber, Lyft)
- First floor commercial (e.g., utilities, waterproofing)

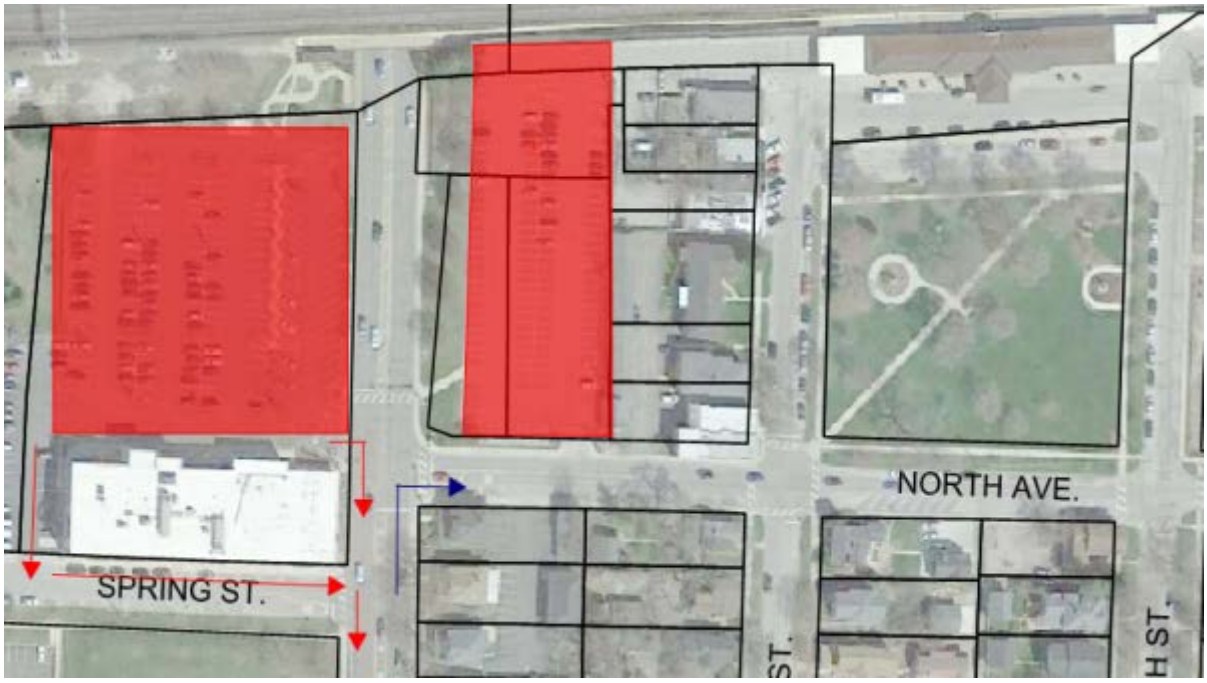
Taking this information into concept allows the development to be adaptable to future conditions and land uses should parking needs change.

a. Adaptable parking structures require additional height and cost, in order to be retrofitted for new uses in the future.
b. The Kroehler lot could offer flexibility should it remain a surface commuter parking lot in the near term.

Additional Considerations

The group believes it is important to note the following as additional considerations for concept creation

- Commuter parking should be distributed among multiple locations to minimize deck congestion and coordinate with various commuter routes.
- Permit holders reside primarily on the south side of the BNSF tracks. As such, south side parking options could reduce commute times and traffic on the north side of the tracks.



Map showing Southside parking at DCM and Parkview, with right out at DCM and right-in at North Avenue

- Ingress and egress patterns and their relation to existing and future traffic conditions, should be considered.
- In order to facilitate efficient ingress and egress, separation of commuter parking and alternative transportation modes (i.e. Pace Suburban Bus, kiss-n-ride, taxis, transportation network companies such as Uber & Lyft) should be considered.
- Technology (e.g. parking guidance systems, electronic message signs) is available to enhance the commuter experience.

Potential Technology Options

PEDESTRIAN SAFETY & CONNECTIVITY WORKING GROUP

Members: Patty King, Steve Purduski, Mary Lou Wehrli, Mary Mansfield, Kelly Dunne, Jen Louden, Kyle Schott, Jim McDonald

The Pedestrian Safety and Connectivity Working group reviewed potential infrastructure improvements for the 5th Avenue development that are practical and address the ideas/concerns provided by the community during group input sessions. Along with civil consultant Kimley-Horn, the group analyzed existing and potential pedestrian patterns, safety improvements and connectivity enhancements.

Analysis included (Appendix D):

- 2009 5th Avenue Study
- Group Input Deliverable dated December 19, 2017
- Metra & Pace fact sheet
- Studies provided by Kimley-Horn, including:
    - pedestrian routes
    - street crossing treatments
    - rail crossings options and analysis
    - Washington Street and 5th Avenue corridor improvements
- City of Naperville crash data for surrounding area (last 3-year period)
- Connectivity and Safety Matrix was built inclusive of pros/cons and a cost analysis

The work product for this group is a narrative that:

- Maps existing **Pedestrian Safety Concerns**
- Identifies **Concept Principles**
- Outlines **Additional Considerations**

PEDESTRIAN SAFETY CONCERNS

The group identified existing resident and commuter pedestrian patterns, along with published school routes for Ellsworth Elementary, St. Peter and Paul Elementary / Junior High and Washington Junior High. Given this input, Kimley-Horn created the Existing Route Map (Appendix D) illustrated below.

- Areas in blue represent existing pedestrian patterns
- Areas in red represent existing frontage without sidewalks
- Areas in yellow represent pedestrian crossing concerns, including:
    - Key intersections
    - Train platforms
    - Ellsworth Street Underpass
    - Loomis Street rail crossing
    - Washington Street underpass
    - With input from the Combined Working Groups, the group believes it is important to prioritize the potential intersection improvements.

*Existing Route Map/Intersection Map – Appendix D

Various crossing treatments were reviewed for applicability and potential benefits as shown in Appendix D and include:

- Stop sign control
- Pedestrian crossing signage (Standard and Increased Signage)
- Curb extensions and speed tables
- Rectangular rapid flashing beacons and in-pavement lighting.

CONCEPT PRINCIPLES

The following principles, together with the community input received to date, will guide the creation of the design concept. Specifically, these principles work to address pedestrian experience and enjoyment, which include feelings of comfort, safety and character; all of which can be enhanced through use of aesthetically pleasing materials, upgraded lighting and wayfinding, greenspace and landscaping, and public art where appropriate.

1. **Improve pedestrian safety and experience at existing rail crossings**. The group reviewed a number of case studies of various rail crossings in neighboring communities and identified the following options for the 5th Avenue development. All rail crossing improvements should accommodate a mix of pedestrian, bicycle, stroller and wheelchair traffic.
    a. **Loomis Street at-grade crossing** improvements including the addition of a pedestrian gate, sidewalk extension across BNSF tracks/right of way and ADA curb ramps along the east side of the street.
    b. **Ellsworth Street underpass** safety and aesthetic enhancements including but not limited to wall and ceiling resurfacing, waterproofing, new lighting and barrier walls.
    c. **Washington Street underpass** upgrades to finishes such as decorative metal panels/signage/public art at concrete walls and overpass steel as well as the addition of LED lighting under viaduct. Additional improvements were researched including structurally widening of the existing underpass; however, this was identified as not practical from a financial and coordination perspective.

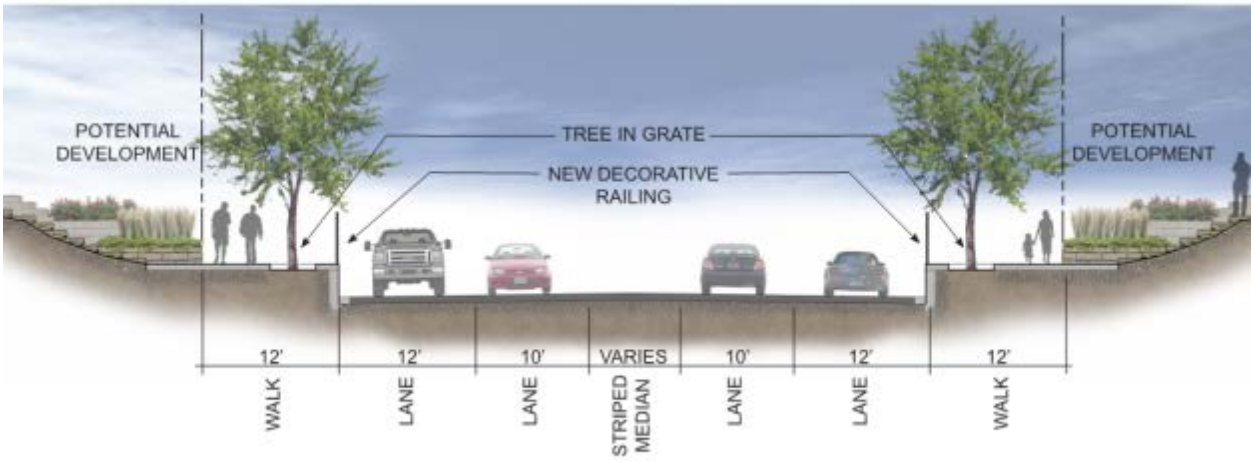
2. **Concept should consider a new pedestrian underpass west of Washington Street.**
    a. Community and working group members authored Tunnel Considerations (Appendix D) which provides considerations in favor of constructing a new underpass rail crossing including:
        i. Infrastructure and long-term planning goals
        ii. Safety
        iii. Usage
        iv. Accessibility
        v. Alternative to current sub-standard options
        vi. Overwhelming community support
    b. Review of an additional rail crossing included:
        i. Conceptual pedestrian underpass
            1. Cost Analysis $3-$5 Million
            2. Accommodates wheeled devices – universal design consideration.
            3. Benefits multiple pedestrian user types (commuter, neighborhood residents, students)
            4. Considers aesthetics and security, in addition to functionality.
            5. Similar projects have occurred recently in neighboring communities such as the City of Wheaton and the Village of Lombard.
            6. The “cow tunnel” was reviewed and not seen as a practical and financially viable alternative to construction a new underpass. Location lacks community support and not convenient to commuters.

Deerfield Road Pedestrian Underpass, Deerfield, IL

ii. Conceptual pedestrian overpass:
    1. Cost Analysis - $2-$4 Million
    2. While above grade options were reviewed, the group preferred an underpass alternative due to:
        a. Functional practicality – Overpass option was not seen as user-friendly from both a connectivity and accessibility standpoint due to the required use of stairs, elevators or long ramps.
            i. The group did note an overpass could be tied directly into development uses (linking structures), which may provide a practical benefit to those users.
        b. Neighborhood character (Height) – Minimum height of 23 feet (measured from tracks to bottom of structure) would be required by BNSF due to signalization line of site.

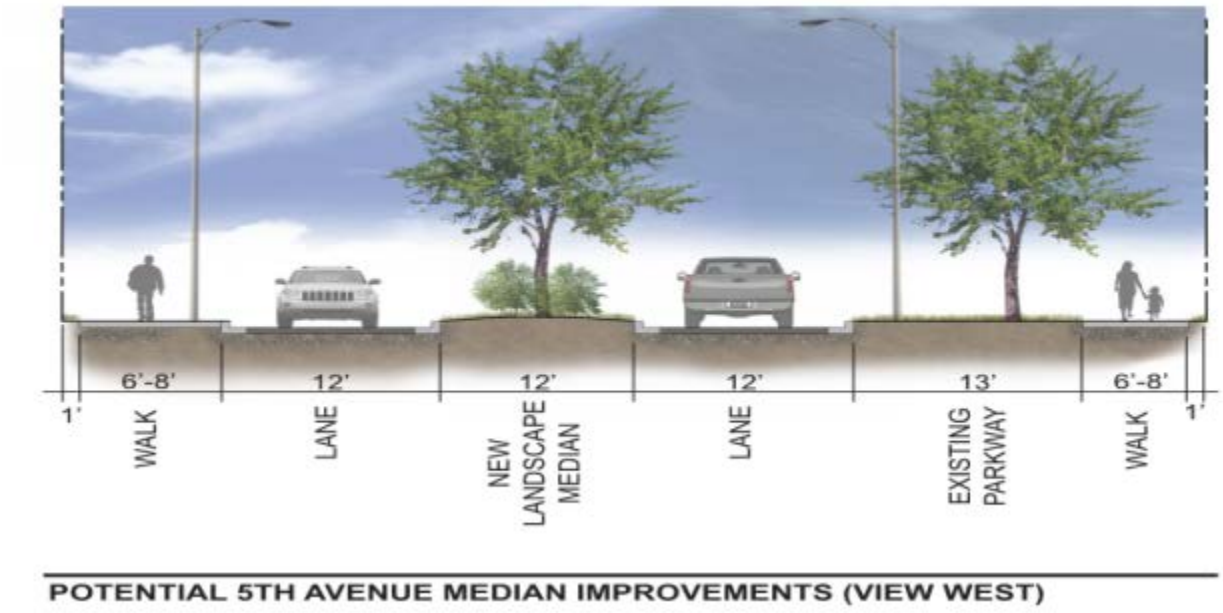
NOTE: Any proposed rail crossing is subject to Metra/BNSF agreement and engineering.

3. **Concept should improve the 5th Avenue and Washington Street corridors along the development frontage.**
    a. Improvements could include the removal of on-street parking, enhanced pedestrian crossings, adding (pedestrian-scale) street lighting, additional landscaping/hardscape and wider sidewalks.
    b. In addition to accommodating a variety of users (i.e. commuters, residents, students, visitors) and vehicular traffic, these corridors should act as pedestrian transitions to and from the development.
    c. Street crossings should be designed to minimize pedestrian/bicyclist and vehicular conflicts.
    d. Washington Street section improvements north and south of the BNSF tracks
        i. Wider sidewalks, added landscape and decorative railings on east and west sides of Washington Street would create an enhanced sense of comfort and safety.
        ii. Introduction of stepped retaining walls would provide more open space and an opportunity for mid-block entry into development, parks and possible future parking areas.



POTENTIAL WASHINGTON STREET SIDEWALK IMPROVEMENTS (VIEW NORTH FROM SOUTH OF BNSF OVERPASS)

    e. 5th Avenue section potential improvements
        i. Potential removal of 5th Avenue on-street parking in order to provide additional space and improve sight lines for pedestrians and vehicles.
        ii. Addition of a median – is not recommended by group due to emergency vehicle access, snow removal and maintenance and pedestrian visibility considerations.
        iii. Widening sidewalk along the north and south sides of 5th Avenue and reducing the width of the vehicle travel lanes/parking area to shorten pedestrian crossing distance.



POTENTIAL 5TH AVENUE MEDIAN IMPROVEMENTS (VIEW WEST)

Additional Considerations

The group believes it is important to note the following as additional considerations for concept creation.

- Commuter experience between train platforms, to/from neighborhoods and parking areas must be considered, including but not limited to:
    - Washington Street stairwells – upgrades or potential relocation.
    - Ellsworth Street underpass – aesthetic and/or accessibility improvements.
    - 4th Avenue sidewalk
    - 5th Avenue Station sidewalk
    - Routing through the development
    - Potential west underpass
- Utilize enhanced signage, wayfinding and/or technology where appropriate to improve safety and accessibility.
- Dedicated school routes should be maintained or improved.
- Pedestrian improvements should be coordinated with infrastructure geometries defined by traffic studies and guided by safety and user experience.
- Improvements should be located to benefit a maximum number of pedestrians, including commuters, residents, students, and visitors.
- From review of parking and traffic working group materials, the pedestrian working group notes that Kroehler Lot remaining as commuter parking offers pedestrian safety concerns due to high volume of pedestrians crossing 5th Avenue at Loomis Street during peak times.
- Improvements should be coordinated with future bicycle route plans considering both space and access.
- Neighborhoods of consideration
    - Park Addition
    - Pilgrim Addition
    - WHOA
    - ECHO
    - 5th Avenue Development Residents

STORM WATER WORKING GROUP

Members: Russ Alber, Christopher Drew, Dominic Nugent, Greg Scalia, Councilman Coyne, Councilwoman Gustin, Bill Novack, Andy Hynes, Curt Pascoe, Kyle Schott, Jim McDonald

The storm water working group convened to complete an analysis and engineering review for the 5th Avenue development; addressing compliance with local ordinances for the new development and options to solve/positively impact existing storm water conditions within the identified area.

Analysis included (Appendix E):

- Group Input Deliverable dated December 19, 2017
- Locations of storm water concern as identified by area residents
- DuPage County Storm Water Ordinance
- Conceptual storm water analysis by WBK Engineering dated April 16 and May 16, 2018

The work product for this group includes a narrative that:

- summarizes **Identified Storm Water Concerns**
- reviews **Local Ordinance Requirements**
- discusses **Conceptual Storm Water Solutions**
- identifies **Concept Principals**

IDENTIFIED STORM WATER CONCERNS

The group compiled and mapped areas of resident concern, received through the group input process, individual email, and local neighborhood canvassing by residents. Local and regional history of storm water design and storm water events were discussed. These areas were cross-referenced against existing topography and the City's existing storm water infrastructure. This produced 4 key areas of concern:

- Ellsworth Street Sag: A low point on Ellsworth Street north of 5th Avenue.
- Sleight Street Sag: A low point on Sleight Street north of 5th Avenue.
- Main Street Sag: A low point on Main Street north of 5th Avenue.
- 5th Ave & Eagle Street Convergence: A convergence of storm sewers near 5th and Eagle.

The topography and storm water utility geometry of these areas can be seen on the Existing Conditions Map (Appendix E).

LOCAL ORDINANCE REQUIREMENTS

Specific to the development, the design must meet local ordinance. These ordinances include the DuPage County Storm water Ordinance and the City of Naperville Ordinance. Current ordinances require storm water detention if impervious surfaces are increased by over ½ acre. Considering that existing conditions of the lots included within the Request for Qualifications (RFQ) are nearly all impervious surface, storm water detention specific to the development concept is unlikely to be required. However, this grants flexibility to the City in the design of area storm water improvements.

Storm water quality control must also be considered; final engineering of the design must meet quality requirements of the ordinances through Best Management Practices (BMPs). The group agrees the concept must consider these requirements, as noted in **Concept Principals.**

CONCEPTUAL STORM WATER SOLUTIONS

The group reviewed nine potential locations for area storm water improvements, to determine if detention was feasible from an engineering perspective. Locations included all 5th Avenue development lots, as well as other open spaces within the area. This analysis included a review of storm water utility routing, topography, and overland flow routes. Details are available in the Storm Water Feasibility Matrix, Storm Water Feasibility Map, and Outflow Map (Appendix E). From this discussion, four locations were determined viable from an engineering perspective:

- Kroehler lot (owned by City)
- Burlington lot (owned by City)
- Kendall Park (owned by City; Park District lease)
- Mill Street soccer fields (owned by CSD 203)

Wills Burke Kelsey Engineering (WBK) was directed by the City to begin conceptual storm water analysis at these locations. During this time, the City also began televising area storm sewers to check for blockages, which could affect existing drainage capacity. To date, no major blockages have been found. Upon completion of WBK's conceptual analysis, the group convened to review WBK's findings and prepare planning-level budgets. A summary of findings and budgets are available in the Storm Water Improvement Cost Analysis (Appendix E).

Within Park Addition, analysis suggests storm water in the area of the Sleight Street Sag may be positively impacted through underground detention vaults on the Kroehler lot combined with area storm sewer improvements. The use of vaults would allow for surface parking or multi-story development above.

Additionally, storm water in the area of the Ellsworth Street Sag may be positively impacted through underground detention vaults on the Burlington lot combined with area storm sewer improvements. The use of vaults would allow for multi-story development above.

The concept should include the flexibility to install these vaults as part of construction, as noted in **Concept Principals.**

Within Pilgrim Addition, storm water in the area of the Main Street Sag may be positively impacted through a storm water basin or vault in Kendall Park, combined with area storm sewer improvements. Conceptual calculations suggest a majority of Kendall Park must be converted under this scenario. It is unlikely this space could be utilized as active recreation, but would provide passive open green space. Installation of a vault within Kendall Park could allow for active recreation above; however, cost is increased significantly.

The Mill Street soccer fields could be repurposed to positively impact storm water in the area of the 5th Avenue and Eagle Convergence. Conceptual calculations suggest a majority of the soccer field must be converted under this scenario. It is unlikely this space could be utilized as active recreation, but would provide passive open space with native wetland vegetation. Installation of a vault within the fields could allow for active recreation above; however, cost is increased significantly.

The group notes that Kendall Park and the Mill Street soccer fields are not included in the 5th Avenue RFQ prepared by the City, and require support from CSD203 and the Naperville Park District for implementation. These users were not approached as part of the Working Group efforts.

It is important to consider that these distinct solutions serve distinct identified storm water concerns. These concepts are individual and separate. Implementation of one solution will have minimal benefit at other locations of concern. Please see the Storm Water Improvement Map (Appendix E) for an overall summary of conceptual improvement locations.

CONCEPT PRINCIPALS

1. **Implement best management practices per the City of Naperville and DuPage County storm water ordinances.**
   a) These may include both storm water quantity and quality control, based on final engineering of the development.

2. **Consider area-wide storm water solutions.**
   a) Notes:
      i) Per the City of Naperville, any storm water improvements should place a priority on the impact to habitable structures, such as storm water runoff entering a habitable structure either over the top of foundation or through a basement window.
      ii) Storm water solutions have been analyzed using the 10-year storm event.
      iii) If directed by Council, storm water detention on Kendall Park should be incorporated into a new vision of the entirety of the park as it relates to Pilgrim Addition and the 5th Avenue development. The park is not included in the scope of the 5th Avenue Development RFQ released by the City.
      iv) The Mill Street soccer fields are currently owned by CSD 203. No discussions with CSD 203 were held as part of Working Group efforts. The fields are not included in the scope of the 5th Avenue Development RFQ released by the City.

Other Considerations

- Localized solutions could be implemented to help alleviate storm water concerns.
- Conveyance of larger storms may be feasible; cost will increase significantly.

TRAFFIC & TRANSPORTATION WORKING GROUP

Members: David Gosse, Pat Pechnick, Gary Smith, Charlie Wilkins, Andy Hynes, Jen Louden, Councilwoman Gustin, Curt Pascoe, Kyle Schott, Jim McDonald

The Traffic & Transportation Working Group was focused on potential infrastructure solutions for the 5th Avenue development areas that are practical and functionally improve the multi-modal (vehicles, transit, pedestrians, bicycles) operations of the area. The group analyzed feasibility, concept geometry, planning level estimates, and pros / cons (for various options).

Analysis included (Appendix F):

- 2009 5th Avenue Study
- 2012 Naperville Metra Station Bus Depot and Commuter Access Feasibility Study
- Traffic Group Input Deliverable dated December 19, 2017
- Transportation Group Input Deliverable dated December 19, 2017
- Metra & Pace fact sheet
- Conceptual engineering geometry provided by Kimley-Horn

The work product for this group is a narrative that:

- summarizes **Potential Traffic Improvements** and **Multi-Modal Options**
- identifies **Concept Principles**

POTENTIAL TRAFFIC IMPROVEMENTS

As a starting point, the group investigated available right-of-way (ROW) for all traffic improvements recommended in the 2009 5th Avenue Study, as well as additional improvements suggested during Group Input sessions or Stakeholder Meetings. Improvements which would require the taking of private property were considered to be not feasible with no additional study.

Intersections with available ROW

- Washington & 5th
- Washington & 6th
- Columbia & 5th
- Columbia & North
- Loomis & 5th
- Ellsworth & North
- Washington & North

Intersections without available ROW

- Washington & Ogden
- Washington & Benton
- Loomis & Ogden
- Loomis & North
- Mill & 6th

The suggested improvements and planning-level estimates are available in the ROW Study Map and Traffic Improvement Feasibility Matrix (Appendix F).

For those intersections with available ROW, Kimley-Horn produced conceptual geometry and planning-level estimates, which the group reviewed. While reviewing these documents, the Working Group noted pros and cons of the various improvements. These comments are memorialized in the Traffic Feasibility Working Group Comments (Appendix F). In particular, the group aimed to take advantage of existing

infrastructure where possible, and to consider the character of neighboring uses when evaluating area traffic & transportation improvements.

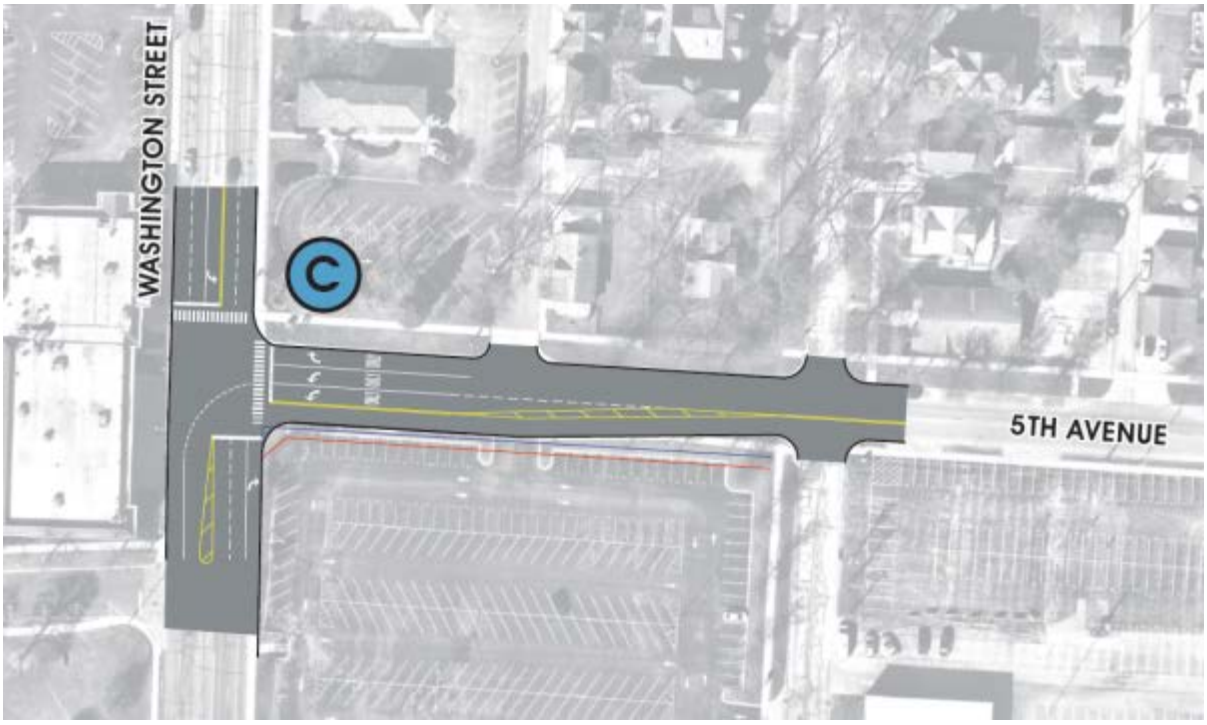
Key intersections included in this analysis are:

- 5th Avenue and Washington Street
- North Avenue and Washington Street

Reference the Traffic Improvement Concept Geometry, included in Appendix F.

5th Avenue and Washington Street

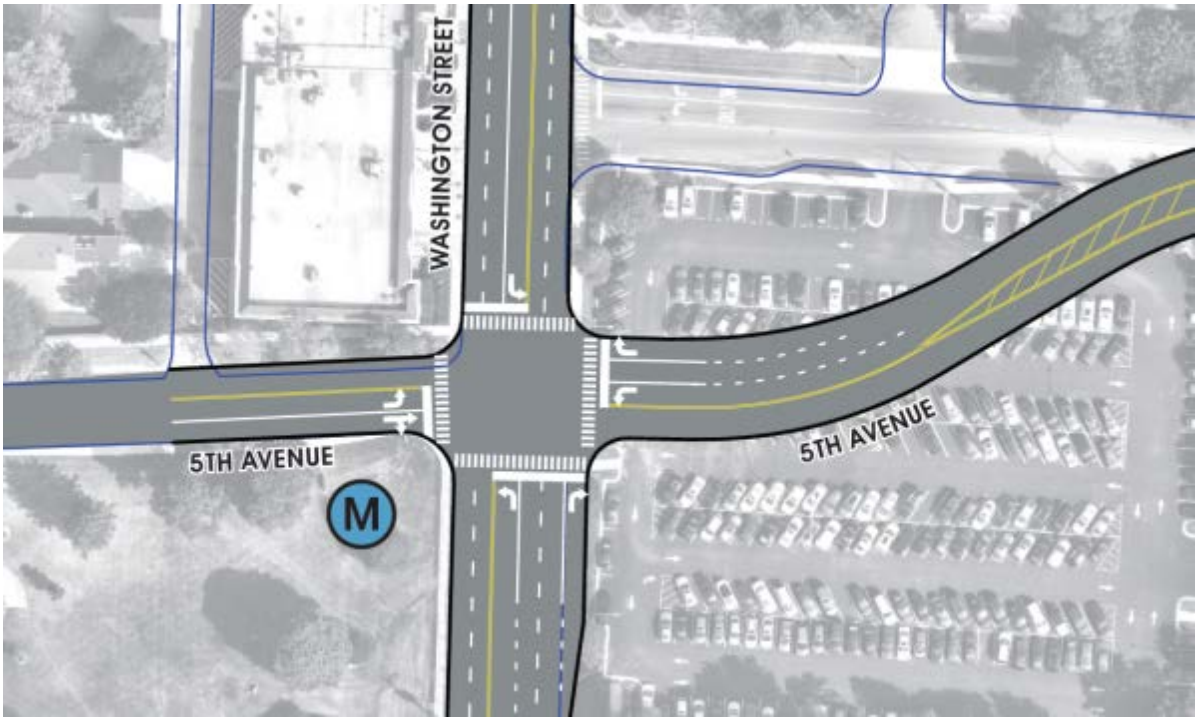
Two options at Washington and 5th Avenue were considered. Group members suggested introducing dual-left turn lanes from 5th Avenue to Washington Street, allowing for greater capacity during the PM peak hour. As the Parking Working Group discovered, the vast majority of commuter parking permit holders reside south of the tracks, resulting in a large number of left turns as this location. Should they be warranted, concept geometry by Kimley-Horn suggests that dual-left westbound turn lanes can be implemented on 5th Avenue without the taking of private land for right-of-way. Additionally, a northbound right-turn lane could be constructed.



The Working Group determined that the concept should assume dedication of right-of-way for these improvements from the Burlington lots, as noted in the **Concept Principles.**

Alternatively, the Group considered full realignment of 5th Avenue across Washington Street. While realigning the intersection is feasible, the group had the following concerns:

1. Increased access would simultaneously result in increased neighborhood traffic.
2. This design would eliminate signalized access from the existing BMO Bank drive-through tellers, which will not be feasible without BMO's support.
3. Realignment impacts the development & parking efficiency of the Burlington lots.

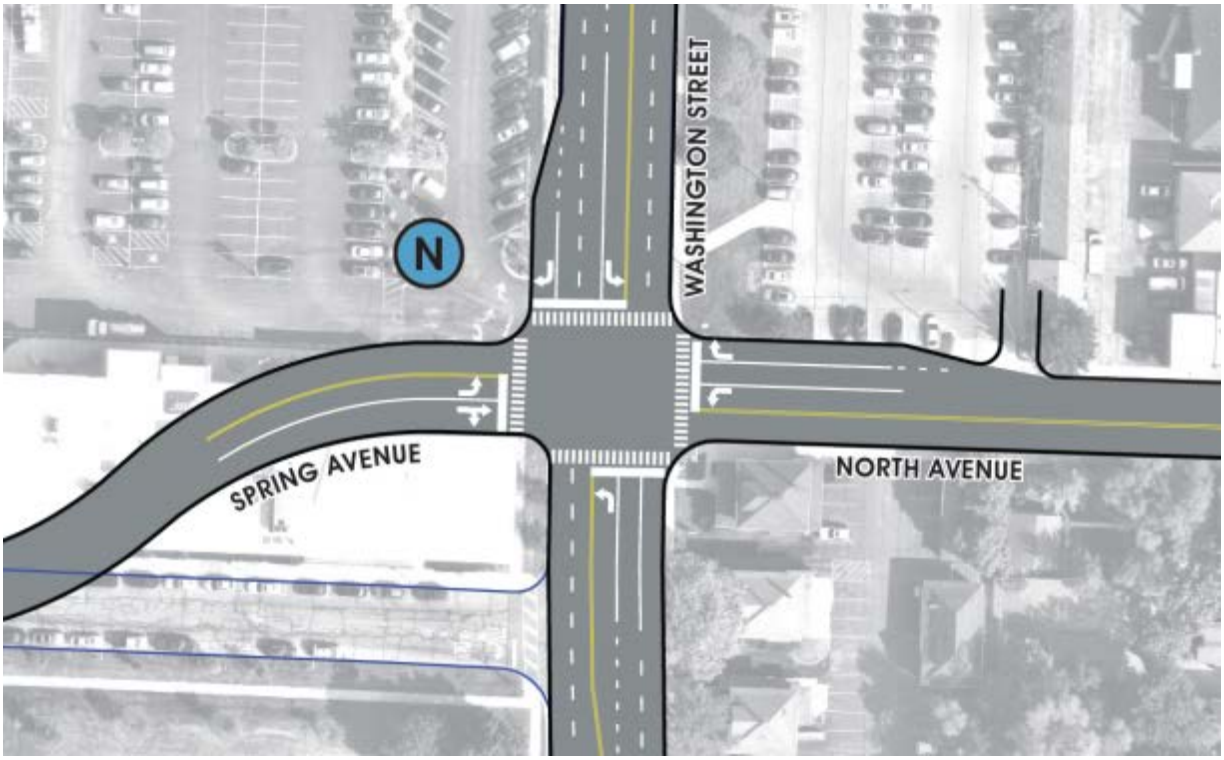


North Avenue & Washington Street

The intersection of North Avenue and Washington Street presents unique challenges due to the intersection configuration and traffic flow patterns. In addition to intersection improvements, the Group discussed opportunity to convert North Avenue into a two-way street, as recommended by the 2012 bus depot study. This conversion could improve traffic flow to the multi-modal bus depot and Children's Museum lot, while reducing neighborhood traffic on School Street. This two-way conversion would require the realignment of North Avenue.

The Working Group reviewed two alternatives provided by Kimley Horn. The first aligns North Avenue with the existing Children's Museum entrance, without the taking of private land for right-of-way. While improving traffic flow, this realignment could also improve pedestrian access and safety at the intersection by providing more typical geometry.

Alternatively, Spring Street could be routed to align with North Avenue. While this alignment streamlines access to Washington Street, it would require the relocation of the DuPage Children's Museum. Aligning Spring St. could also increase neighborhood traffic on Spring between Mill and Washington.



The present location of the museum has a significant impact on traffic and the functionality of the existing intersection. The Working Group determined investigation of these realignment options should continue throughout concept creation, as noted in **Concept Principles.**

MULTI-MODAL OPTIONS

The multi-modal aspect of the development is important to ongoing commuter access and City operations. The Working Group spent significant time discussing operations and options for the multi-modal depot, in particular the 2012 Naperville Metra station bus depot and commuter access feasibility study.

After Stakeholder Meetings with both Metra and Pace, Ryan created the Metra / Pace Fact Sheet (Appendix F) detailing facts and figures of multi-modal operation. Pace operates 20 routes which currently use the multi-modal at 5th Avenue. Seventeen routes arrive from the south, and 3 come from the north. These routes currently utilize the south and north sides of the station, respectively. The Working Group questions whether the bus depot can be consolidated onto the south side of the tracks, however, unless otherwise directed by Council, the concept should incorporate the same distribution of routes. Kimley Horn produced the Transit Design Requirements (Appendix F) detailing considerations of bus depot design.

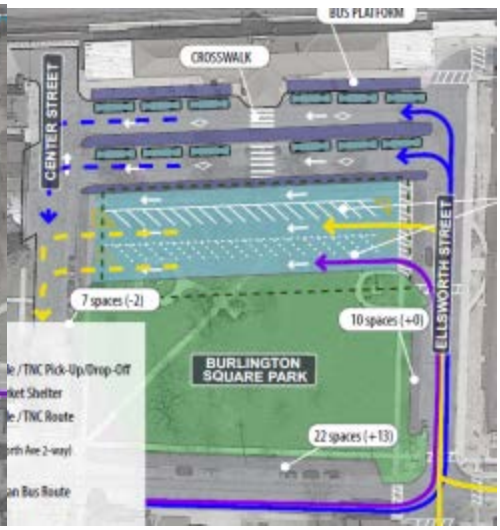
Metro C Line Bus Rapid Transit, *Brooklyn, MN*

SANDAG/MTS Light Rail Transit Blue Station, *San Diego, CA*

Kimley Horn produced Bus Depot Concept Sketches for the Parkview lot, Children's Museum lot, and expanded service at Burlington Square. The Working Group discussed pros, cons, and costs of these options at length, which are available in the Pace Bus Depot Location Analysis (Appendix F).

Parkview Lot

Children's Museum Lot



Burlington Square

Given the cost of construction, operations, and maintenance of an understructure depot at the Parkview lot or Children's Museum lot, City should consider keeping the bus depot open-air at Burlington Square. Additionally, it is important to note that future Pace routing, quantity of buses, and level of service is not determined by City. Pace funding is provided by a variety of sources, including County, State, and Federal dollars. Changes in funding could result in changes in services; City should select an option that maintains flexibility to respond to Pace's future level of service.

Kiss-n-ride function is equally important; according to a 2014 survey, commuter access to the station is as follows:

- 51% of riders drive themselves to the 5th Avenue station.
- 21% carpool or are dropped off via auto.
- 15% use public transit.
- 12% walk or bike to the station.
- 1% use other methods.

Burlington Square offers the City several options for Pace and kiss-n-ride service. Expanded kiss-n-ride could be provided, though with impacts to Burlington Square Park. The concept should consider multi-purpose uses for expanded hardscape areas, to increase the public amenity space around the bus depot. One example is a covered kiss-n-ride, providing a permanent home to the farmer's market. Other options could include basketball courts, outdoor event space, or food truck court.

The Working Group agrees that commuters must be given options for kiss-n-ride both north and south of the tracks. Kiss-n-ride areas should be considered in multiple locations; however, the Group acknowledges the additional cost of placing kiss-n-ride within a parking structure. The concept should consider a balance between distribution of multiple kiss-n-ride locations, and ability to enforce regulations.

Regardless of bus depot and kiss-n-ride locations, enforcement has emerged as a key factor for ongoing operations of any multi-modal design. As example; Group Input sessions noted that Pace buses idle and park on neighborhood streets. However, the current depot is designed to park 12 buses as requested by Pace. It is not known why buses are idling elsewhere. Both Pace buses and kiss-n-ride users require additional signage and enforcement to encourage smooth and functional operation.

CONCEPT PRINCIPLES

1. **Intersection of 5th and Washington Street will likely need to accommodate westbound dual left turns and a northbound right turn lane. It is likely it will not require re-alignment.**
   a) Notes:
      i) Improves commuter ingress / egress at peak times.
      ii) The vast majority of parking permit holders reside south of train tracks.
   b) The concept should assume right-of-way dedication from the Burlington lots for these improvements.

2. **Concept should continue to study re-alignment options at the intersection at North and Washington.**
   a) Notes:
      i) Conversion of North Ave to two-way operation is important for multi-modal operation.
      ii) Intersection function is key considering potential uses for DCM/commuter lot
      iii) Pedestrian safety concerns given current geometry

3. **Pace and kiss-n-ride functions should be provided both north and south of the tracks.**
   a) Notes:
      i) Supports current Pace routes
      ii) Encourages distributed traffic patterns
      iii) Supports commuter access via kiss-n-ride
      iv) Separate bus & kiss-n-ride traffic
   b) Separation of bus traffic and kiss-n-ride is important to ongoing function
   c) Enforcement under both existing and future conditions is critical

Additional Considerations

- 5th and Columbia had recommended improvements and signalization in the 2009 5th Avenue Study. However it is important to consider the character and context of the neighboring uses when evaluating area traffic improvements.
- Vehicular traffic on 6th from Mill to Washington was noted as a resident concern.
- Traffic improvements and potential realignments will impact existing traffic patterns and the daily habits of users.
- A traffic impact analysis (TIA) will be completed as part of the development review process, in accordance with staff requirements.

APPENDIX A

Design Details

DESIGN

TABLE OF CONTENTS

ADDITIONAL RELEVANT DOCUMENTS

Group Input Summary
Action Plan
Naperville Building Design Guidelines
2009 5th Avenue Study

Ryan Companies US, Inc.
111 Shuman Boulevard, Suite 400
Naperville, IL 60563

p: 630-328-1100
ryancompanies.com

MEETING AGENDA & NOTES

SUBJECT:	Design Working Group #1	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/3/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Lauren Collander	Amy Emery	Jim McDonald
	Alyssa Faczek	Allison Laff	Curt Pascoe
	Tim King	Councilman Hinterlong	Brett Bunke
	Cindi Swanson		

Introductions

Background Information

- Group Input Session
- 2009 5th Avenue Study

Working Group Action Plan

Design Narrative

- 222 Hennipen Case Study was reviewed as it relates to “Design Narrative”
- Delivery is key to the proposed direction
- This group should provide a recommendation of what the concept creation phase process will be.
- Need to confirm the “Design Process” with council.
- Downtown East example was reviewed.
- Discussed Naperville Design Code and sustainability
- Concern from city over presenting too many design options
- Discussed presenting mood imagery as part of the design narrative to start to create a user experience
- Group to think about what they want the narrative to address

Box Site Training Session

Ryan Companies US, Inc.
111 Shuman Boulevard, Suite 400
Naperville, IL 60563

p: 630-328-1100
ryancompanies.com

Open Discussion

Next Meeting Focus:

- City of Naperville Design Criteria
- Related Design Goals (i.e. Environmental, LEED, Accessibility, etc.)
- Review precedent images for uses identified within Land Use survey.

MEETING AGENDA & NOTES

SUBJECT:	Design Working Group #2	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/16/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Lauren Collander	Amy Emery	Jim McDonald
	Alyssa Faczek	Allison Laff	Curt Pascoe
	Tim King	Councilman Hinterlong	Brett Bunke
	Cindi Swanson		

Introductions
Walk through tasks as outlined in the Working Group Matrix

2007 Design Guidelines Set
- Building materials – quality
  - Brick and stone
  - Precast with color integration
  - Four-sided design
- Building massing and design
  - Avoid flat wall, articulation
  - Variation in materials
  - Step back upper levels in taller building
  - Pedestrian improvements
  - Window location/transparency
  - Base materials
- Service areas
  - Mechanical equipment placement integrated into design
  - Building access
- Work with brand identity within design guidelines
- Materials
  - Climate effects
  - Sustainability
- Pedestrian friendliness – see page 8
  - Frame public places that provides safety and comfort (?)
- LEED
  - Not required
  - Winter city design and solar access
    - Ability to expand our outdoor time
- Accessibility
  - State and federal levels required, no separate city code

Ryan Companies US, Inc.
111 Shuman Boulevard, Suite 400
Naperville, IL 60563

p: 630-328-1100
ryancompanies.com

- Think in the “spirit of the law” not the “letter of the law”
- Ryan did a walking tour with Cindi Swanson on 4/13

2009 5th Avenue Study
- References city wide design guidelines
- Largest focus is on height
  - Nothing talking than Kroehler building
  - Much of the land was designated as Mixed Use but the city doesn’t have this as a zoning classification
    - The footprint has since changed
- Studied was conducted due to the city moving out of the city building within 5th avenue
- Nothing was mentioned about the downtown plan

Design Narrative Deep Dive
- Reviewed RFQ as related to design
  - Goal is to be a gateway
  - Desired outcomes
- Group Input Session Design Feedback Topics – Accessibility, flexibility/future trends, master planning, community, function, sustainability, aesthetics
- Define the character of the community – outlined in the design guide

---

1. Master Plan Principles
- Community
- Create opportunities for people – focus on the train
- Establish connectivity

2. Intelligent Design
- Accessibility – “Spirit of the law”
- LEED Neighborhood Certification – walked through guidelines and potential scoring
  - Meaningful sustainability
  - Discussed other developments
    - Shorewood, WI
      - Use technologies to reduce impact
- Innovation – “Smart system”
- Adaptable design for public spaces such as parking decks

3. Design Quality and Character
- Terminated Vista (i.e. Dandelion fountain in downtown)
- Welcoming introduction
- “not a strip mall”
- Transition design – well designed public realm

4. User experience (hospitality)
- Define users and how they will use the space – Commuters, neighbors, shoppers
  - Pedestrian level design
  - Wired rating – telecommunication access
- Public spaces that fosters community interaction

MEETING AGENDA & NOTES

SUBJECT:	Design Working Group #3	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	5/3/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Lauren Collander	Amy Emery	Jim McDonald
	Alyssa Faczek	Allison Laff	Curt Pascoe
	Tim King	Councilman Hinterlong	Brett Bunke
	Cindi Swanson		

Introductions
Recap of what is going on in some of the other working groups

- Traffic - realignment of 5th, additional turn lanes, etc.
- Parking – Structure layout/lot location, temporary parking options
- Storm water – determining locations with flooding and possible solutions including vault (s)

Review Design Narrative Draft – Participant comments

- Universal design ideas need to start now, not later in the design process
    - Seven principals of universal design
- Group discussed how detailed do we want to get into design elements and style

Walked through sample development – The Good, The Bad and The Ugly

- Design should be purposeful and contextural (determined by scale, density, materiality)
- We need to remain open to design opportunities and the train station will continue to the be focal point of the area
- Remain consistent with Naperville Design Standards
- Assembly Row, Boston
    - Mix of old and modern styles
    - Varying styles from building to building
    - Community plaza

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MEETING AGENDA & NOTES

SUBJECT:	Design Working Group #4	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	5/14/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Lauren Collander	Amy Emery	Jim McDonald
	Alyssa Faczek	Allison Laff	Curt Pascoe
	Tim King	Councilman Hinterlong	Brett Bunke
	Cindi Swanson		

Introductions

Recap of the narrative writing process for some of the other Working Groups

Review Design & Land Use Narrative Draft
- Participant comments added to the narrative

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MEETING AGENDA & NOTES

SUBJECT:	Design Working Group #5	START TIME	4 PM
LOCATION:	Ryan Offices	END TIME:	5:30 PM
		DATE:	5/29/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Lauren Collander	Amy Emery	Jim McDonald
	Alyssa Faczek	Allison Laff	Curt Pascoe
	Tim King	Councilman Hinterlong	Brett Bunke
	Cindi Swanson		

Recap of what is going on in some of the other Working Groups
- Provided a high level overview of all Working Group narratives

Review Design & Land Use Narrative Draft
- Participant comments added to the narrative

Discussed the format of the Combined Working Group Meeting on June 4

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5th Avenue Development | Virtual Tours

Atlantic Station, Atlanta, Georgia

LACKING A COMMUNTIY FEEL

PARKING STRUCTURE

Atlantic Station | Design Quality & Character

VARIED HEIGHTS

Atlantic Station | Design Quality & Character

CHARACTER

Atlantic Station | User Experience

COMMUNITY SPACES

Assembly Row, Boston, Massachusetts

TRAIN PLAZA

Assembly Row | Masterplan Principles

TRAIN CONNECTIVITY

Assembly Row | Design Quality & Character

DESIGN VARIATION

Assembly Row | User Experience

HARDSCAPE

Smart Location and Linkage focuses on selection of sites that minimize the adverse environmental effects of new development and avoid contributing to sprawl and its consequences. Typical sprawl development—low-density, segregated housing and commercial uses located in automobile-dependent outlying areas—can harm the natural environment: it can consume forestland, destroy or fragment wildlife habitat, degrade water quality by draining wetlands and increasing rainwater runoff, pollute the air and emit greenhouse gases through increased automobile travel, and often displace agriculture from prime farmland to locations where food production requires more energy and chemical inputs. In addition to these direct environmental effects, leapfrog development (a land-use pattern in which new development does not connect coherently to existing development, often leaving haphazard tracts of undeveloped land) can also harm the environment indirectly by promoting additional development in previously undeveloped areas.

Increased automobile travel is one of the most damaging consequences of sprawl. People living and working in outlying areas tend to drive greater distances, spend more time driving, own more cars, face a greater risk of traffic fatalities, and walk less. Vehicle emissions contribute to climate change, smog, and particulate pollution, which all are harmful to human health and natural ecosystems. In addition, the parking and roadway surfaces required to support vehicular travel consume land and nonrenewable resources, disrupt natural rainwater flow, and enlarge urban heat islands.

Choosing a smart location can make a substantial difference. Transportation surveys conducted by many metropolitan planning organizations across the country show that residents of close-in locations may drive only a third to half as much, on average, as residents of the most far-flung locations in a metro region.

To reduce the effects of sprawl and create more livable communities, preference should be given to locations close to existing town and city centers, sites with good transit access, infill sites, previously developed sites, and sites adjacent to existing development. Selecting these sites avoids development of outlying greenfield sites. In addition, these sites often have utilities, roads, and other infrastructure in place, reducing the need to build new infrastructure and minimizing the expansion of impervious surfaces that increase harmful rainwater runoff. In the locations that perform better environmentally, the benefits can often be multiple and reinforcing: convenient transportation choices, such as buses, light rail, heavy trains, car and van pools, bicycle lanes, and sidewalks, are generally more available near downtowns, neighborhood centers, and town centers, which are also the locations associated with shorter automobile trips. Research has shown that living in a mixed-use environment within walking distance of shops and services encourages walking and bicycling, which improve cardiovascular and respiratory health and reduce the risk of hypertension and obesity.

An additional benefit of locations that require less driving is that households may be able to own fewer automobiles and cut transportation expenses. For commercial development, fewer automobiles may mean less investment in parking infrastructure, which can reduce the amount of land needed for a project and lower construction costs. Abundant transportation choices can increase the value and marketability of a neighborhood development as well. More than 14.6 million households are expected to prefer housing within a half-mile of rail transit stops by 2025—more than double the number of households living in such locations today[1].

Beyond the environmental damage caused by increased automobile dependence, fragmentation and loss of habitat to sprawl are major threats to many imperiled species. Selection of sites that are within or adjacent to existing development can minimize habitat fragmentation and also help preserve areas for recreation. Wetlands and floodplains tend to be biologically rich, and their conversion presents particularly serious environmental challenges: in addition to altering wildlife habitat, it can reduce water quality and increase the likelihood of flooding and associated consequences, such as erosion and loss of property. Left alone, these natural areas retain rainwater and floodwater for slow release into river systems and aquifers, and they protect lakes and streams by trapping sediment.

Another important concern is development intrusion onto prime agricultural lands, which typically require less fertilization and irrigation and are therefore the most resource efficient and environmentally sound locations for farming. Leapfrog patterns of development not only take these lands out of agricultural production but can also fragment farming communities and consequently reduce the economic viability of the local agricultural economy.

Many potential building sites in urban locations have been abandoned because of real or potential contamination from previous industrial or municipal activities. Remediation and reclamation of contaminated brownfield sites make them safer for the community and can also contribute to social and economic revitalization of depressed or disadvantaged neighborhoods. Development of these sites spares greenfields and makes use of existing infrastructure.

Finally, smart location choice also offers opportunities to repair the fabric of communities that are disjointed and sprawling. Suburban locations typically contain excellent redevelopment opportunities on grayfield sites, such as old airports, abandoned or underutilized shopping malls, and closed factories.

[1] *Center for Transit-Oriented Development, Hidden in Plain Sight: Capturing the Demand for Housing Near Transit (2004).*

Neighborhood Pattern and Design emphasizes the creation of compact, walkable, mixed-use neighborhoods with good connections to nearby communities. These vibrant neighborhoods provide many important benefits to residents, employees, and visitors and to the environment.

In particular, because compact neighborhoods use land and infrastructure efficiently, they avoid fragmentation of wildlife habitat and farmland loss, conserve economic resources, and slow the spread of low-density development across a region's landscape. Residents enjoy

convenient access to shops, services, and public spaces within walking and bicycling distance, and when people choose to drive, they take shorter automobile trips, saving time and avoiding emissions. Compact development also facilitates access to public transportation because transit becomes more economically viable when supported by higher concentrations of population.

In addition, the small block sizes associated with compact neighborhoods encourage walking and bicycling because of increased connectivity, shorter travel distances, slower automobile traffic, and a more inviting pedestrian environment. The slower traffic speeds typically found in dense developments also can reduce injury rates. The environmental and public health benefits that accompany increased transportation choices and reduced rates of driving are further discussed in the introduction to Smart Location and Linkage.

Features such as sidewalks and trails, street trees, inviting building façades, small setbacks, minimal parking lot area, and measures to slow automobiles also increase pedestrian activity. Public spaces, such as parks, plazas, and playing fields, can encourage social interaction and active recreation while helping control rainwater runoff and reducing urban heat island effects. Community gardens also promote social interaction and physical activity while increasing access to fresh, locally grown produce.

Communities with diverse housing types that accommodate a range of incomes, ages, and physical abilities permit residents to live closer to their workplaces, help the community retain residents, and allow families to remain in the neighborhood as their circumstances change over time.

A community's involvement in project design and planning can help the project complement adjacent neighborhoods, meet the needs of residents and workers, and nurture a cooperative relationship with the project's neighbors.

Green Infrastructure and Buildings focuses on measures that can reduce the environmental consequences of the construction and operation of buildings and neighborhood infrastructure. In the U.S., buildings account for large shares of energy consumption and water use. Globally, construction consumes a major part of the stone, gravel, sand, and virgin wood used in the world. Sustainable building technologies reduce waste and use energy, water, and materials more efficiently than conventional building practices.

Including certified green buildings in projects is one way to reduce negative environmental effects. These buildings achieve substantially better performance across a range of environmental measures, and in many cases the cost per square foot can be comparable to that of conventional buildings.

Energy efficiency is an essential strategy for reducing pollution and greenhouse gas emissions, which are possibly the most negative environmental consequences of building and infrastructure operation. Production of electricity from fossil fuels is responsible for air pollution, water pollution, and more than one-third of U.S. greenhouse gas emissions; hydroelectric generation plants can degrade river habitats; and nuclear power presents waste disposal problems and safety concerns. Building systems—electrical, lighting, heating, ventilation, air-conditioning, and others—can be designed to significantly reduce energy consumption compared with conventional designs and practices. The same gains are possible with neighborhood-scale infrastructure components like street lights, traffic signals, and water and wastewater pumps.

District heating and cooling systems are an example of neighborhood-scale infrastructure that can improve energy efficiency because large plants are typically more efficient than building-based equipment. District systems can also take advantage of waste heat from on-site energy generation, improving efficiency. On-site power generation is another energy management strategy for either individual buildings or neighborhood-scale installations. These systems reduce transmission losses, and they may increase power reliability and decrease energy costs by supplementing or replacing utility-supplied electricity. Use of renewable energy in onsite generation further reduces environmental harms.

Solar orientation can also reduce energy consumption in buildings through passive or active systems. And applications like photovoltaic systems can be scaled up to neighborhood levels. The environmental consequences of building construction can be lessened through the reuse of existing buildings. Reuse avoids the environmental effects associated with the extraction, manufacture, and transportation of raw materials, and it reduces the volume of construction and demolition waste, lowering disposal costs and extending landfill life. Reuse of existing components and infrastructure systems can also reduce the cost of construction.

Using materials with recycled content conserves raw materials and supports recycling of construction wastes so that they can be diverted from landfills. Many commonly used products are now available with recycled content, including metals, concrete, masonry, acoustic tile, carpet, ceramic tile, and insulation. Most recycled-content products exhibit performance similar to products containing only virgin materials and can be easily incorporated into building projects at little or no additional cost.

Conventional building practices typically alter watershed hydrology and impair local water resources and ecosystems. Changes to hydrology may deplete aquifers, reduce stream base flow, and cause thermal stress, flooding, and stream channel erosion. New developments can be designed to minimize changes to natural hydrology and stream health by reducing the velocity, volume, temperature, and pollutant content of rainwater runoff.

Urban heat islands are another consequence of standard development patterns and practices. The use of dark, nonreflective materials for parking, roofs, walkways, and other surfaces raises ambient temperatures when radiation from the sun is absorbed and transferred through convection and conduction back to surrounding areas. As a result, ambient temperatures in urban areas can be artificially elevated by more than 10°F (5.5°C) compared with surrounding undeveloped areas. This increases cooling loads in summer, requiring larger HVAC equipment and consuming additional electricity, which in turn exacerbates air pollution and contributes to the formation of smog.

Heat islands are also detrimental to wildlife habitat: plants and animals are sensitive to high temperatures and may not thrive when temperatures increase. Water use can also be reduced through improved design and technologies that conserve water and ease demands on water supply. Indoors, potable water consumption can be reduced by using low-flow plumbing fixtures and waterless urinals. Outdoor water use, primarily for landscape maintenance, accounts for a large share of U.S. water consumption and can be reduced through careful plant selection and landscape design. Wastewater can also be reused for landscape maintenance.

Water conservation protects the natural water cycle and saves water resources for future generations by reducing amounts withdrawn from rivers, streams, underground aquifers, and other water bodies. Another benefit of water conservation is reduced energy and chemical use at wastewater treatment facilities. In addition to conserving precious potable water, wastewater reuse reduces the amount of wastewater released into environmentally stressed streams and rivers and lessen demands on overburdened wastewater treatment systems.

Site design provides another opportunity to reduce the environmental consequences of development. Site plans should preserve the existing tree canopy and native vegetation to the extent possible while accommodating compact development. Preserving existing vegetation can reduce rainwater runoff, mitigate the urban heat island effect, reduce the energy needed for heating and cooling, and reduce landscaping installation and maintenance costs. Trees also reduce air pollution, provide wildlife habitat, and make outdoor areas more pleasant for walking and recreation.

The construction process itself is often damaging to site ecology, indigenous plants, and animal populations. This problem can be minimized by confining construction activities to certain areas on the site and restricting the development footprint. Protection of open space and sensitive areas through the use of strict boundaries reduces damage to the site ecology and preserves trees, native vegetation, and wildlife habitat. Construction can also cause soil erosion by wind and water, and soil that leaves the site can cause water and air pollution. Loss of topsoil may increase rainwater runoff, which pollutes nearby water bodies, and may necessitate use of more irrigation, fertilizer, and pesticides. These problems can be prevented by implementing an erosion and sedimentation control plan.

Innovation - Sustainable design strategies and measures are constantly evolving and improving. The purpose of this LEED category is to recognize projects for innovative planning practices and sustainable building features.

Occasionally, a strategy results in a project’s performance that greatly exceeds what is required in an existing LEED credit. Other strategies may not be addressed by any LEED prerequisite or credit but warrant consideration for their sustainability benefits. In addition, LEED is most effectively implemented as part of a cohesive team, and this category addresses the role of a LEED Accredited Professional in facilitating that process.

Regional Priority - Because some environmental issues are particular to a locale, volunteers from USGBC chapters and the LEED International Roundtable have identified distinct environmental priorities within their areas and the credits that address those issues. These Regional Priority credits encourage project teams to focus on their local environmental priorities.

USGBC established a process that identified six RP credits for every location and every rating system within chapter or country boundaries. Participants were asked to determine which environmental issues were most salient in their chapter area or country. The issues could be naturally occurring (e.g., water shortages) or man-made (e.g., polluted watersheds) and could reflect environmental concerns (e.g., water shortages) or environmental assets (e.g., abundant sunlight). The areas, or zones, were defined by a combination of priority issues—for example, an urban area with an impaired watershed versus an urban area with an intact watershed. The participants then prioritized credits to address the important issues of given locations.

The ultimate goal of RP credits is to enhance the ability of LEED project teams to address critical environmental issues across the country and around the world.

LEED v4 for Neighborhood Development Plan
Project Checklist

Project Name:
Date:

Yes	?	No				
21	**4**	**3**	**Smart Location & Linkage**			**28**
Y			Prereq	Smart Location		Required
Y			Prereq	Imperiled Species and Ecological Communities		Required
Y			Prereq	Wetland and Water Body Conservation		Required
Y			Prereq	Agricultural Land Conservation		Required
Y			Prereq	Floodplain Avoidance		Required
10			Credit	Preferred Locations		10
	2		Credit	Brownfield Remediation		2
7			Credit	Access to Quality Transit		7
2			Credit	Bicycle Facilities		2
2	1		Credit	Housing and Jobs Proximity		3
		1	Credit	Steep Slope Protection		1
	1		Credit	Site Design for Habitat or Wetland and Water Body Conservation		1
		1	Credit	Restoration of Habitat or Wetlands and Water Bodies		1
		1	Credit	Long-Term Conservation Management of Habitat or Wetlands and Water Bodies		1

Yes	?	No				
17	**15**	**5**	**Neighborhood Pattern & Design**			**41**
Y			Prereq	Walkable Streets		Required
Y			Prereq	Compact Development		Required
Y			Prereq	Connected and Open Community		Required
5	4		Credit	Walkable Streets		9
3	3		Credit	Compact Development		6
2	2		Credit	Mixed-Use Neighborhoods		4
1	2		Credit	Housing Types and Affordability		7
	1		Credit	Reduced Parking Footprint		1
		2	Credit	Connected and Open Community		2
1			Credit	Transit Facilities		1
		2	Credit	Transportation Demand Management		2
1			Credit	Access to Civic & Public Space		1
	1		Credit	Access to Recreation Facilities		1
1			Credit	Visitability and Universal Design		1
2			Credit	Community Outreach and Involvement		2
	1		Credit	Local Food Production (farmer's market)		1
1	1		Credit	Tree-Lined and Shaded Streetscapes		2
		1	Credit	Neighborhood Schools		1

Yes	?	No				
5	**13**	**12**	**Green Infrastructure & Buildings**			**31**
Y			Prereq	Certified Green Building		Required
Y			Prereq	Minimum Building Energy Performance		Required
Y			Prereq	Indoor Water Use Reduction		Required
Y			Prereq	Construction Activity Pollution Prevention		Required
1	1	3	Credit	Certified Green Buildings		5
1	1		Credit	Optimize Building Energy Performance		2
	1		Credit	Indoor Water Use Reduction		1
	2		Credit	Outdoor Water Use Reduction		2
1			Credit	Building Reuse (children's museum)		1
		1	Credit	Historic Resource Preservation and Adaptive Reuse		2
	1		Credit	Minimized Site Disturbance		1
2	2		Credit	Rainwater Management		4
	1		Credit	Heat Island Reduction		1
		1	Credit	Solar Orientation		1
		3	Credit	Renewable Energy Production		3
		2	Credit	District Heating and Cooling		2
		1	Credit	Infrastructure Energy Efficiency		1
	1	1	Credit	Wastewater Management		2
	1		Credit	Recycled and Reused Infrastructure		1
	1		Credit	Solid Waste Management		1
	1		Credit	Light Pollution Reduction		1

4	**2**	**0**	**Innovation & Design Process**			**6**
3	2		Credit	Innovation (1 pilot, 2 innovation)		5
1			Credit	LEED® Accredited Professional		1

2	**1**	**1**	**Regional Priority Credits**			**4**
1			Credit	Regional Priority Credit: Rainwater Management (up to 4 pts, 2 reqd)		1
		1	Credit	Regional Priority Credit: Renewable Energy (up to 3 pts, 2 reqd)		1
1			Credit	Regional Priority Credit: Walkable Streets (up to 9 pts, 4 reqd)		1
	1		Credit	Regional Priority Credit: Housing types & affordability (up to 7, 4 reqd)		1
			Credt	Regional Priority Credit: Housing & jobs proximity (up to 3 pts, 2 reqd)		
49	**35**	**21**	**PROJECT TOTALS (Certification estimates)**			**110**

Certified: 40-49 points, **Silver:** 50-59 points, **Gold:** 60-79 points, **Platinum:** 80+ points

APPENDIX B

Land Use Details

LAND USE

TABLE OF CONTENTS

ADDITIONAL RELEVANT DOCUMENTS

Ryan Companies US, Inc.
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MEETING AGENDA & NOTES

SUBJECT:	Land Use Working Group #1	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/9/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Rocky Caylor	Amy Emery	Jim McDonald
	Jeff Havel	Allison Laff	Curt Pascoe
	Phillip Meno	Christine Jeffries	Kyle Schott
	Scott Parrill		
	Katie Davis		

Introductions

Background Information

- Group Input Session
- 2009 5th Avenue Study
- Naperville Fair Housing Study
- Market Studies

Working Group Action Plan

- Background information
- Discussed areas of study
    - Current
    - Market Study
    - Land Use Survey Results

Land Use Narrative

- Reviewed the 5th Avenue Development RFQ guidelines
- Group may discuss land use recommendations by parcel
- Discussed patterns within the Group Input document as well as those comments which contrast the guidelines of the RFQ

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- Discussed how some of the other working groups will funnel into this group, such as parking and traffic.

Box Site Training Session

Open Discussion

Next Meeting Focus:

- Highlights - Naperville Fair Housing Study & 2009 5th Ave Study
- Preliminary Market Studies
- Group Input Breakdown

MEETING AGENDA & NOTES

SUBJECT:	Land Use Working Group #2	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/27/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Rocky Caylor	Amy Emery	Jim McDonald
	Jeff Havel	Allison Laff	Curt Pascoe
	Phillip Meno	Christine Jeffries	Kyle Schott
	Scott Parrill		
	Katie Davis		

Introductions

Highlight of the Naperville Fair Housing Study & 2009 5th Ave Study – Allison Laff

Review of Preliminary Market Studies (office, retail and residential) – Jim McDonald

Summary of 2017 Naperville AI study
- Discussion of affordable housing and the need for it in Naperville
- Opportunity to include affordable housing as part of this project

Brainstorming Session - All
- Successful mixed use developments bring together a variety of elements that work in concert with each other. Specifically,
  - **Train station / multi-modal**. *How do we embrace the train station, making it a focal point of the redevelopment?*
  - **Public spaces (hardscape / greenspace)**. The combination of buildings and public spaces define a place. *How do we create awesome public spaces within the development area.*
  - **Variety of uses**. A mix of uses in close proximity brings life and energy to a "place." *Given the existing Group Input information, what uses could be appropriate for the development area?* We understand we are waiting for the results of the LU & H survey.
  - **The Public Realm.** An active ground floor is important to engage pedestrians and create character. *How do we create a destination?*

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- **Transitional areas.** Pedestrian safety, pedestrian scale and neighborhood character are critical. *How do we weave this development into the existing neighborhood fabric?*

- **Parking**. Location and design will be critical to creating a livable, walkable and pedestrian focused experience. *How do we achieve a pedestrian experience in a commuter environment?*

Open Discussion

5th Avenue Development Survey

Topline Results

NOTE: Many questions test preferences for various potential land use options for the 5th Avenue Development area. These are tested on a 1-5 scale, where 1=Strongly Oppose and 5=Strongly Support. Topline results are summarized as "Top 2 Box" responses (4s and 5s combined, showing strong/not strong support), and "Bottom 2 Box" responses (1s and 2s combined, showing strong/not strong opposition). The average score on this 1-5 scale is also provided for easy comparisons.

Also, the base for each segment (n=x) shows the number of respondents who answered every question. This varies as some chose to leave certain questions blank. The **overall** number of respondents to the different surveys is summarized below:

- **n=300 Engaged** residents, which includes n=209 who appear on the City's and/or Ryan's Engaged contact databases alone, plus an additional n=91 who also appear on the City's Commuter database (identified as "Crossovers");
- **n=406 Commuters**, which includes n=315 who appear exclusively on the City's Commuter database, plus the additional n=91 Crossover respondents who appear on the Engaged resident list(s);
- **n=91 Crossovers** alone;
- **n=84 Naperville-wide residents** who were randomly sampled and invited to respond;
- **n=646 opt-in web survey respondents** who accessed the survey link on the 5th Avenue Development website. This is the one channel which allowed for multiple completions from an individual respondent.

Data collection ran from March 13th, through May 12th, 2018. Multiple reminder emails and newsletter notices were sent to non-respondents in the Engaged and Commuter databases to encourage their survey response.

HOUSING QUESTIONS

H1. Should housing be included as part of the 5th Avenue Development?

	Engaged (n=274)	Commuter (n=368)	Crossover* (n=84)	Community (n=76)	Web opt-in (n=594)
Yes	75%	50%	69%	64%	61%
No	25%	50%	31%	36%	39%

H1A. Why shouldn't housing be included as part of the 5th Avenue Development?

	Engaged	Commuter	Crossover*	Community	Web opt-in
Overcrowded, Too Much As Is (NET)	18%	30%	23%	18%	22%
Other needs with higher demand than housing	3	5	4	1	3
Would impact neighborhood feel/ property value	2	3	2	0	4
More parking is needed for commuters already	5%	15%	5%	7%	7%
Traffic concerns (too much already, safety, etc.)	5%	6%	3%	6%	8%

H2A. If housing were to be included in the 5th Avenue Development, which of the following would you like to see? (1-5 scale)

	Engaged (n=273)	Commuter (n=347)	Crossover* (n=82)	Community (n=73)	Web opt-in (n=544)
Townhomes					
Top 2 Box (T2B)	57%	52%	62%	58%	54%
Bottom 2 Box (B2B)	34	41	28	36	40
Mean (Average)	*3.3*	*3.0*	*3.4*	*3.1*	*3.0*
Condos (owned)					
Top 2 Box (T2B)	67%	64%	78%	66%	55%
Bottom 2 Box (B2B)	30	31	20	27	39
Mean (Average)	*3.5*	*3.4*	*3.8*	*3.5*	*3.1*
Apartments (rental)					
Top 2 Box (T2B)	30%	33%	38%	30%	27%
Bottom 2 Box (B2B)	66	63	60	63	67
Mean (Average)	*2.3*	*2.3*	*2.5*	*2.3*	*2.2*
Single family homes					
Top 2 Box (T2B)	47%	33%	42%	35%	42%
Bottom 2 Box (B2B)	48	63	52	56	52
Mean (Average)	*2.9*	*2.4*	*2.7*	*2.5*	*2.8*

H2A_Other housing options selected: Please specify. (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
Senior/ 55+ housing	8%	2%	5%	1%	3%
Affordable housing	5%	2%	7%	4%	2%
Special needs adults	1%	0%	1%	0%	0%

H3A. - If housing were to be included in the 5th Avenue Development, please indicate the types of housing markets you feel should be included

	Engaged (n=247)	Commuter (n=317)	Crossover* (n=74)	Community (n=77)	Web opt-in (n=487)
Affordable/ Workforce Housing (as defined by HUD)					
Top 2 Box (T2B)	23%	22%	30%	17%	19%
Bottom 2 Box (B2B)	72	73	64	76	76
Mean (Average)	*2.0*	*2.0*	*2.3*	*1.9*	*1.9*
Attainable/ Cost Effective					
Top 2 Box (T2B)	55%	48%	65%	53%	49%
Bottom 2 Box (B2B)	40	45	31	36	46
Mean (Average)	*3.1*	*2.9*	*3.4*	*3.1*	*2.9*
Independent Living (for seniors)					
Top 2 Box (T2B)	58%	42%	56%	53%	43%
Bottom 2 Box (B2B)	36	50	37	38	50
Mean (Average)	*3.2*	*2.7*	*3.2*	*3.1*	*2.7*
Market Priced Housing					
Top 2 Box (T2B)	77%	71%	77%	66%	69%
Bottom 2 Box (B2B)	18	24	16	24	26
Mean (Average)	*4.0*	*3.7*	*4.0*	*3.5*	*3.7*
Other housing markets					

SHOPPING/BUSINESSES

S1. Should shopping/service-oriented businesses be included as part of the 5th Avenue Development?

	Engaged (n=257)	Commuter (n=360)	Crossover* (n=79)	Community (n=75)	Web opt-in (n=549)
Yes	84%	80%	89%	89%	89%
No	16	20	11	11	11

S1A. Why shouldn't shopping/service-oriented businesses be included as part of the 5th Avenue Development? (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
There is no need, enough shopping already; fill existing empty retail space first	9%	7%	5%	4%	3%
Increased traffic/ congestion	3%	6%	3%	4%	3%
Focus needs to be on fixing parking problem, not adding to it	2%	4%	2%	7%	2%
Doesn't offer anything to the local area, should benefit residents/ commuters more	1%	1%	1%	0%	2%
Business doesn't do well in that area/ train station not a shopping center	1%	1%	0%	1%	0%

2A. Which of the following shopping/service-oriented businesses would you like to see?

	Engaged (n=260)	Commuter (n=355)	Crossover* (n=81)	Community (n=77)	Web opt-in (n=580)
Coffee shop					
Top 2 Box (T2B)	86%	89%	91%	82%	87%
Bottom 2 Box (B2B)	9	9	5	13	10
Mean (Average)	*4.3*	*4.3*	*4.4*	*4.0*	*4.2*
Restaurant/bar					
Top 2 Box (T2B)	79%	81%	83%	83%	82%
Bottom 2 Box (B2B)	15	15	11	10	16
Mean (Average)	*4.0*	*4.0*	*4.1*	*4.1*	*4.0*
Consumer service (dry cleaner, salon, etc.)					
Top 2 Box (T2B)	66%	60%	67%	55%	63%
Bottom 2 Box (B2B)	24	31	19	39	28
Mean (Average)	*3.6*	*3.3*	*3.7*	*3.1*	*3.4*
Boutique retail shops (housewares, clothing, floral, wine shop, etc.)					
Top 2 Box (T2B)	54%	43%	52%	53%	60%
Bottom 2 Box (B2B)	37	46	32	37	31
Mean (Average)	3.2	2.8	3.2	3.1	3.4
Small boutique grocer					
Top 2 Box (T2B)	65%	60%	68%	69%	70%
Bottom 2 Box (B2B)	26	32	21	21	23
Mean (Average)	*3.6*	*3.3*	*3.6*	*3.6*	*3.7*
Performing arts/entertainment space					
Top 2 Box (T2B)	43%	42%	48%	50%	57%
Bottom 2 Box (B2B)	52	54	41	43	38
Mean (Average)	*2.8*	*2.7*	*3.1*	*3.0*	*3.3*

S2A_Other shopping/service-oriented businesses selected: Please specify. (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
Community-Oriented (NET)	5%	3%	5%	1%	2%
Fitness offerings	2	1	3	0	0
Pharmacy	0	1	0	0	1
Educational (museums, class space, cultural center, art studio/makerspace, etc.)	1	0	0	1	0
Child/Youth services (daycare, mentoring, etc.)	1	1	1	0	0
Farmer's Markets	1	0	2	0	0
Office (NET)	2%	1%	0%	1%	1%
Office space	1	0	0	1	0
Co-working/shared office space	1	0	0	0	0
Mechanic/ auto repair	1%	1%	1%	1%	0%
Convenience store	0%	1%	0%	0%	1%
Small, locally owned businesses	1%	0%	0%	0%	0%

S3A. Which of the following community-oriented businesses would you like to see?

	Engaged (n=239)	Commuter (n=301)	Crossover* (n=72)	Community (n=64)	Web opt-in (n=479)
Daycare facility					
Top 2 Box (T2B)	50%	51%	50%	52%	48%
Bottom 2 Box (B2B)	42	40	42	40	43
Mean (Average)	*3.1*	*3.1*	*3.1*	*3.1*	*2.9*
Fitness or health club					
Top 2 Box (T2B)	54	51	58	35	53
Bottom 2 Box (B2B)	37	40	34	59	41
Mean (Average)	*3.1*	*3.0*	*3.2*	*2.5*	*3.1*
Medical or dental office					
Top 2 Box (T2B)	38%	29%	34%	34%	35%
Bottom 2 Box (B2B)	53	62	57	48	57
Mean (Average)	*2.7*	*2.3*	*2.6*	*2.7*	*2.5*
Pharmacy					
Top 2 Box (T2B)	40%	48%	47%	41%	46%
Bottom 2 Box (B2B)	51	44	42	44	48
Mean (Average)	*2.7*	*2.9*	*2.9*	*2.8*	*2.8*

S3A_Other community-oriented businesses selected: Please specify. (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
Community-Oriented (NET)	4%	1%	3%	2%	2%
Educational (museums, class space, cultural center, art studio/makerspace, etc.	4%	1%	2%	1%	1%
Child/ Youth services (daycare / mentoring, etc.)	1%	0%	0%	1%	0%
Retail/ Entertainment (NET)	2%	2%	3%	1%	3%
Entertainment (movie theater, bowling etc.)	0%	0%	2%	1%	0%
Vet/ doggy daycare	0%	0%	0%	0%	1%
Office (NET)	2%	0%	1%	1%	1%
Office space	1%	0%	0%	0%	0%
Bank	0%	0%	0%	1%	0%
Co-working/shared office space	1%	0%	1%	0%	0%

OFFICE SPACE

O1. Please indicate whether you support or oppose seeing office space (including corporate, boutique office, and/or co-working space) as part of the 5th Avenue Development.

	Engaged (n=255)	Commuter (n=311)	Crossover* (n=77)	Community (n=70)	Web opt-in (n=496)
Top 2 Box (T2B)	62%	52%	62%	41%	57%
Bottom 2 Box (B2B)	29	41	29	49	36
Mean (Average)	*3.7*	*3.2*	*3.7*	*2.9*	*3.4*

O1A. Why do you support/oppose office space as part of the 5th Avenue Development? (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
Support (NET)	44%	33%	38%	28%	30%
Good for area, economic boost, more jobs	7%	8%	8%	10%	7%
Convenient location by train station (e.g., for reverse commuters)	8%	6%	7%	6%	7%
Support mixed/ multi-use space, "live-work-play"	9%	2%	8%	4%	4%
Oppose (NET)	32%	32%	30%	38%	28%
There is no need, enough office space already/ fill existing space before adding new buildings; concerned it won't stay	17%	10%	14%	18%	9%
Increased traffic/ congestion (rush hour, etc.)	8%	10%	10%	6%	7%
Focus needs to be on fixing parking problem, not adding to it	4%	9%	6%	5%	4%
Doesn't offer anything to the local area, should be more community-focused (prefer other type of development i.e. retail)	2%	4%	2%	8%	7%

GREENSPACE

G1. Should greenspace be included as part of the 5th Avenue Development?

	Engaged (n=299)	Commuter (n=397)	Crossover* (n=90)	Community (n=84)	Web opt-in (n=636)
Yes	93%	82%	89%	92%	92%
No	7	18	11	8	8

G1A. Why shouldn't greenspace be included as part of the 5th Avenue Development?

Very few cases by survey group; open-ended summary results will be included in the full report.

G2A. If greenspace were to be included in the 5th Avenue Development, which of the following would you like to see?

	Engaged (n=278)	Commuter (n=349)	Crossover* (n=80)	Community (n=75)	Web opt-in (n=581)
Hardscape Features (benches, plazas, fire pit, art, fountains, etc.)					
Top 2 Box (T2B)	86%	77%	86%	86%	85%
Bottom 2 Box (B2B)	11	16	11	8	12
Mean (Average)	*4.2*	*3.9*	*4.1*	*4.2*	*4.1*
Public Greenspace (grass areas, gardens, etc.)					
Top 2 Box (T2B)	93%	83%	90%	92%	88%
Bottom 2 Box (B2B)	5	12	5	8	8
Mean (Average)	*4.5*	*4.1*	*4.3*	*4.4*	*4.3*
Children's Amenities (splash pad, playground, etc.)					
Top 2 Box (T2B)	47%	35%	43%	51%	57%
Bottom 2 Box (B2B)	45	60	49	44	37
Mean (Average)	*3.0*	*2.5*	*2.8*	*3.1*	*3.3*
Neighborhood/ Community Amenities (outdoor ice rink, fitness, bocce, etc.)					
Top 2 Box (T2B)	53%	41%	45%	42%	55%
Bottom 2 Box (B2B)	40	52	44	51	38
Mean (Average)	*3.2*	*2.7*	*3.0*	*2.8*	*3.2*
Walking/bike paths					
Top 2 Box (T2B)	86%	78%	83%	93%	84%
Bottom 2 Box (B2B)	11	18	14	7	11
Mean (Average)	*4.3*	*3.9*	*4.2*	*4.4*	*4.2*

G2A_Other greenspace selected: Please specify. (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
Gardens	2%	1%	2%	2%	1%
Focus on being eco-friendly and conservation	1%	0%	0%	1%	0%
Lots of trees, foliage	2%	0%	3%	0%	1%
Dog park, dog-friendly (provide waste bags/bins, off-leash area, etc.)	3%	0%	0%	0%	1%
Rooftop greenspace	2%	1%	1%	1%	1%
Flooding prevention	1%	0%	0%	2%	0%

G3_1. Which of these public space amenities would you use if provided within the 5th Avenue Development? Please select all that apply. (% Yes/Selected)

	Engaged (n=300)	Commuter (n=406)	Crossover* (n=91)	Community (n=84)	Web opt-in (n=646)
Farmers markets	84%	80%	82%	84%	86%
Outdoor fitness classes (yoga, tai-chi)	27%	17%	15%	21%	31%
Cultural (festival, fairs, concerts, etc.)	60%	58%	61%	64%	66%
Outdoor meeting/work space w/ WiFi	36%	29%	27%	37%	34%
Other public space amenities	9%	5%	8%	8%	6%

G3_1_Other public space amenities selected: Please specify. (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
Amenities for children/ youth (athletics, park, museum, playground, activity center, etc.)	1%	1%	1%	2%	1%
Gardens/ green space	2%	1%	1%	3%	1%
Dog-friendly spaces	1%	0%	0%	0%	0%
Paths (walking, biking)	0%	1%	1%	1%	0%
Indoor space	0%	0%	1%	1%	1%

PARKING (NOTE: This section regarding parking appeared first in the Commuter survey to increase relevance/interest in the survey.)

P1. There are currently 1,500 commuter spaces available within this development. Should additional commuter stalls be added?

	Engaged (n=276)	Commuter (n=391)	Crossover* (n=83)	Community (n=78)	Web opt-in (n=605)
Yes	59%	82%	70%	72%	65%
No	41	18	30	28	35

P2A. Please indicate which parking options you would like to see at the 5th Avenue Development.

	Engaged (n=281)	Commuter (n=389)	Crossover* (n=87)	Community (n=80)	Web opt-in (n=598)
Structured Parking (multi-level parking deck)					
Top 2 Box (T2B)	78%	81%	76%	71%	77%
Bottom 2 Box (B2B)	20	18	23	25	20
Mean (Average)	*3.9*	*4.1*	*3.9*	*3.7*	*4.0*
Surface lots					
Top 2 Box (T2B)	44%	74%	65%	48%	51%
Bottom 2 Box (B2B)	47	21	23	45	43
Mean (Average)	*3.0*	*3.9*	*3.7*	*3.1*	*3.1*
Street parking					
Top 2 Box (T2B)	24%	40%	38%	28%	33%
Bottom 2 Box (B2B)	71	54	57	62	61
Mean (Average)	*2.2*	*2.7*	*2.7*	*2.4*	*2.5*
Offsite parking with shuttles to the train station					
Top 2 Box (T2B)	57%	25%	38%	45%	52%
Bottom 2 Box (B2B)	38	70	56	48	44
Mean (Average)	*3.3*	*2.1*	*2.6*	*2.8*	*3.0*

P2A_Other parking options selected: Please specify. (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
Underground/ subterranean	7%	2%	5%	1%	3%
More spots for permit parking (waiting list too long, etc.)	1%	3%	0%	1%	2%
More bike-friendly; bike parking, rental (Divvy), etc.	3%	1%	1%	1%	1%
Specific parking locations (specific area, intersection, etc.)	3%	1%	3%	3%	1%
More efficient roadways/traffic patterns (reduce bottlenecks, add bus lanes, etc.)	1%	1%	2%	1%	1%
More spots for daily parking (non-commuter)	0%	1%	0%	1%	1%
Parking structures that are not too high/ large	2%	0%	0%	2%	0%

OVERALL SUMMARY

Q2A. Rank order your top three preferred land uses from the list below.

	Engaged (n=300)	Commuter (n=406)	Crossover* (n=91)	Community (n=84)	Web opt-in (n=646)
TOP (#1) CHOICE (note: %s do not total 100% as some left this question blank)					
Housing	20%	7%	14%	17%	15%
Shopping	6	3	5	13	11
Service businesses	4	1	0	1	5
Office space	2	0	0	4	2
Public greenspace/amenities	29	14	19	27	32
Parking	29	61	51	27	25
Included in TOP 3					
Housing	42%	27%	37%	39%	38%
Shopping	32	30	31	40	42
Service businesses	38	35	41	40	36
Office space	17	12	13	10	14
Public greenspace/amenities	74	62	63	71	72
Parking	56	81	72	61	56

Q3A. Are there any specific land uses you want to see in the 5th Avenue Development? (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
Parking (NET)	11%	22%	16%	8%	9%
Infrastructure (NET)	14%	7%	8%	9%	9%
Improved/ safer pathways; pedestrian passageways	1%	2%	4%	1%	2%
Better traffic patterns/ flow	4%	2%	3%	2%	2%
Transportation Hub (trains, buses, trolleys)	2%	1%	1%	2%	2%
Retail/ Entertainment (NET)	11%	8%	11%	13%	10%
General retail (shops/ services)	6%	4%	9%	3%	4%
Restaurants	3%	3%	3%	1%	4%
Entertainment/ culture (theater, concerts, art. Gallery, museum, etc.)	3%	1%	4%	6%	2%
Greenspace (NET)	10%	4%	3%	15	8%
Housing (NET)	7%	4%	9%	7%	4%
Office space (NET)	1%	1%	2%	0%	1%
No Changes (NET)	2%	1%	3%	1%	1%

Q3B. Are there any specific land uses you don't want to see in the 5th Avenue Development? (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
Housing (NET)	24%	22%	16%	17%	23%
Anti-housing in general	5%	8%	1%	1%	8%
High density/ multi-unit housing (apartments, condos, etc.)	8%	6%	6%	5%	8%
Affordable, low income housing (e.g. Section 8)	8%	6%	4%	8%	5%
Luxury housing/ "McMansions"/single family homes	3%	2%	2%	1%	2%
Features/ Misc. (NET)	29%	14%	18%	19%	16%
High-rise buildings (3+ stories)	15%	5%	1%	8%	9%
Don't add to traffic, area is already congested	12%	7%	10%	8%	4%
Retail/ Entertainment (NET)	18%	12%	15%	21%	15%
Anti-retail/ commercial space in general	5%	6%	4%	7%	5%
Entertainment (theater, performing arts center, etc.)	7%	3%	6%	6%	5%
Restaurants/ bars/ nightlife	3%	2%	2%	6%	1%
Parking-related (NET)	9%	9%	11%	10%	9%
Anything that isn't parking / reduces existing parking, keep commuter in mind	4%	6%	5%	2%	3%
Parking garages (congestion based on train schedule, not in residential areas, nothing too excessive, etc.)	2%	2%	3%	3%	3%
No more surface/ street parking	2%	1%	2%	1%	3%
Office (NET)	5%	7%	6%	11%	7%

Q4A. What is your maximum acceptable height for each lot?

	Engaged (n=295)	Commuter (n=394)	Crossover* (n=89)	Community (n=82)	Web opt-in (n=631)
LOT 1					
Up to 2 stories	60%	39%	44%	65%	47%
Up to 4 stories	26	33	35	21	33
Up to 6 stories	8	12	11	6	12
6+ stories	6	16	10	9	9
LOT 2					
Up to 2 stories	24%	25%	20%	35%	27%
Up to 4 stories	44	37	39	36	41
Up to 6 stories	21	20	25	16	20
6+ stories	11	18	16	13	12
LOT 3					
Up to 2 stories	47%	36%	34%	49%	41%
Up to 4 stories	32	33	39	34	36
Up to 6 stories	14	16	14	8	13
6+ stories	7	15	13	9	10
LOT 4					
Up to 2 stories	23%	28%	19%	37%	31%
Up to 4 stories	44	34	41	38	37
Up to 6 stories	23	21	23	12	19
6+ stories	11	17	17	13	13
LOT 5					
Up to 2 stories	33%	33%	31%	38%	37%
Up to 4 stories	39	32	35	46	36
Up to 6 stories	18	18	17	7	18
6+ stories	10	17	17	9	9
LOT 6					
Up to 2 stories	29%	28%	24%	32%	35%
Up to 4 stories	42	35	40	46	36
Up to 6 stories	16	17	15	10	17
6+ stories	13	20	21	12	12

Q5A. For the 5th Avenue Development, indicate how strongly you support/oppose accommodating higher or lower heights to:

	Engaged (n=225)	Commuter (n=273)	Crossover* (n=66)	Community (n=67)	Web opt-in (n=434)
Be uniform and consistent across the entire planning area					
Top 2 Box (T2B)	45%	60%	56%	58%	57%
Bottom 2 Box (B2B)	43	30	29	33	33
Mean (Average)	*3.0*	*3.5*	*3.4*	*3.5*	*3.4*
Provide scale transitions (e.g., additional height to buffer railroad noise/ activity from outlying neighborhoods)					
Top 2 Box (T2B)	82%	83%	86%	81%	77%
Bottom 2 Box (B2B)	13	10	7	10	14
Mean (Average)	*4.0*	*4.1*	*4.1*	*4.1*	*3.9*
Accommodate aboveground structured parking					
Top 2 Box (T2B)	75%	84%	74%	77%	72%
Bottom 2 Box (B2B)	21	13	21	18	23
Mean (Average)	*3.7*	*4.1*	*3.8*	*3.9*	*3.7*
Accommodate a rooftop amenity and greenspace at various levels					
Top 2 Box (T2B)	74%	72%	76%	74%	77%
Bottom 2 Box (B2B)	21	18	16	18	17
Mean (Average)	*3.8*	*3.8*	*3.9*	*3.8*	*3.9*
Support housing choices					
Top 2 Box (T2B)	50%	40%	49%	52%	47%
Bottom 2 Box (B2B)	35	49	35	34	43
Mean (Average)	*3.1*	*2.8*	*3.2*	*3.1*	*2.9*
Respect existing building heights in the vicinity (two-story residences, four-story commercial buildings)					
Top 2 Box (T2B)	80%	68%	70%	81%	77%
Bottom 2 Box (B2B)	15	25	24%	15%	18%
Mean (Average)	*4.1*	*3.7*	*3.7*	*4.2*	*4.0*
Ensure the development is financially feasible					
Top 2 Box (T2B)	81%	87%	85%	92%	87%
Bottom 2 Box (B2B)	12	7	8	6	8
Mean (Average)	*4.2*	*4.3*	*4.3*	*4.5*	*4.3*
Other accommodations					
% "Yes	22%	15%	17%	12%	15%

Q5A. Other height accommodations selected: Please specify. (NOTE: Top open-ended responses are shown below; %s are based on the total sample size for each survey group).

	Engaged	Commuter	Crossover*	Community	Web opt-in
Improve traffic flow/ congestion	3%	3%	2%	1%	4%
Aesthetically pleasing, fit the area's character	5%	1%	2%	2%	2%
Support the current needs for nearby residents/ commuters	3%	2%	2%	5%	1%
Paths (biking/ walking)	4%	1%	2%	1%	1%
No high-rise buildings (including parking garages; surface parking/ lots only)	3%	1%	0%	0%	1%
ADA compliance	1%	1%	1%	0%	1%

RESPONDENT INFO

Q6. Do you live in within the neighborhoods adjacent to the 5th Avenue Development (Park Addition, Pilgrim Addition, ECHO or WHOA)?

	Engaged (n=297)	Commuter (n=403)	Crossover* (n=89)	Community (n=84)	Web opt-in (n=654)
Yes	51%	10%	24%	15%	33%
No	49	90	76	85	67

Q7A. [IF YES TO Q6] Which neighborhood do you live in?

	Engaged (n=146)	Commuter (n=38)	Crossover* (n=20)	Community (n=13)	Web opt-in (n=203)
Park Addition	46%	37%	35%	15%	32%
Pilgrim Addition	14	16	20	8	19
ECHO	14	16	15	31	18
WHOA	10	13	15	15	10
Other	16	18	15	31	21

Most frequent "Other" Responses: Historic District (n=7); Naperville Station Townhomes (n=5); 5th Ave. Station Apartments (n=3); Columbia Estates (n=3); Yorkshire Manor (n=3)

Q7B. [IF NO TO Q6] How close do you live to the 5th Avenue Train Station?

	Engaged (n=143)	Commuter (n=357)	Crossover* (n=67)	Community (n=71)	Web opt-in (n=422)
Less than 1 mile	19%	7%	13%	15%	15%
1-5 miles	64	71	72	58%	70
6-10 miles	14	19	13	21	12
More than 10 miles	3	2	2	6	3

Q1. Which of the following best describes how often you use the 5th Avenue Metra Station?

	Engaged (n=209)	Commuter (n=405)	Crossover* (n=90)	Community (n=84)	Web opt-in (n=646)
Daily or almost daily (e.g., at least 5 days a week)	24%	56%	49%	23%	28%
At least a few times per week, but not daily	5	10	6	6	11
At least a few times a month	25	7	8	19	21
At least a few times per year	42	23	35	45	34
Never	4	4	2	7	6

Q8. In what year were you born?

	Engaged (n=279)	Commuter (n=377)	Crossover* (n=84)	Community (n=78)	Web opt-in (n=602)
Under 35 years old	3%	7%	7%	8%	14%
35-49	31	38	35	26	39
50-64	43	42	32	40	34
65+	23	13	26	26	13

Q9. Do you have children under the age of 18 in your home?

	Engaged (n=293)	Commuter (n=394)	Crossover* (n=89)	Community (n=82)	Web opt-in (n=638)
Yes	37%	53%	38%	31%	51%
No	63	47	62	69	49

LAND USE WORKING GROUP
KICK-OFF MTG
9-Apr-18

Request for Qualifications (RFQ 17-036)
dated February 22, 2017

"The primary purpose of this Request for Qualifications (RFQ) is to solicit qualifications from developers, who in conjunction with their development teams, ("Development Teams") are capable of redeveloping the area (or portions thereof) with one or more high-quality projects.

Successful redevelpment will:

reflect market conditions,

reflect economic realities, and

support commuter access to the train station,

all within the context of the community and neighborhood settings."

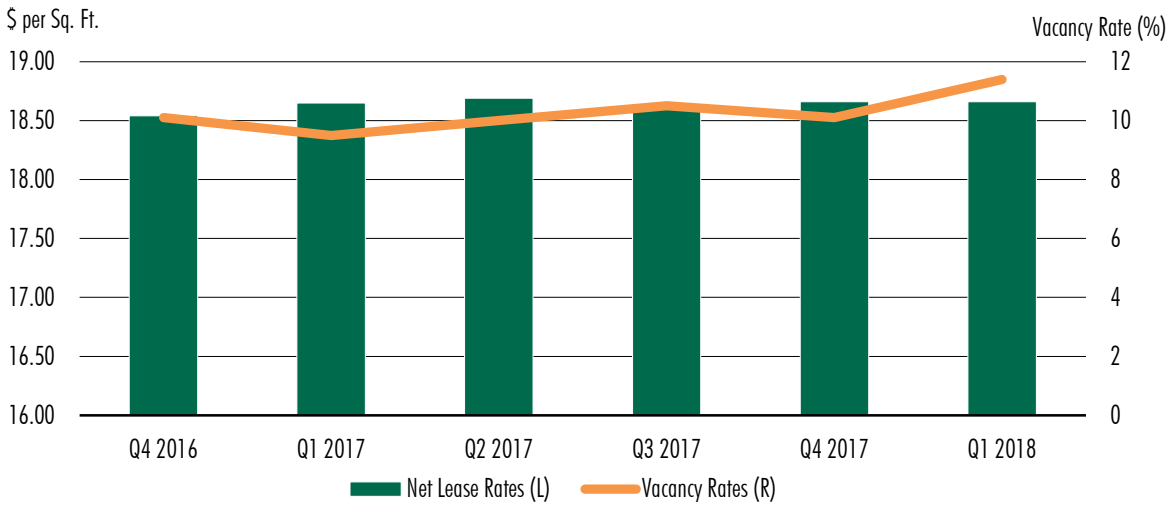
INITIAL OBJECTIVE (RFQ)	COMMUNITY INPUT	MARKET DEMAND / NEEDS
2009 5th Avenue Study	Group Input Info (to date)	Multi-family / Residential
Impediments to Fair Housing	Initial Survey	Office
	Land Use & Height Survey	Retail
		Community Space

Chicago Retail, Q1 2018

Store closures kick off the start of 2018

Vacancy Rate	Lease Rate	Neighborhood Vacancy	Power/Community Vacancy
11.4%	$18.66 PSF	16.3%	8.8%

Figure 1: Direct Vacancy Rate and Lease Rate



MARKET OVERVIEW

The retail news at the end of 2017 didn't provide much positivity going into the new year. Lists of big box closures began to surface, such as Sam's Club, Target, and Sears. Once 2018 began, Toys R Us made its announcement that it would close 380 stores nationwide. Landlords must continue to be creative when attempting to fill these spaces. To do so, they have turned to the "Five F's:" fitness, food, fashion, fun and furniture. Also, the popularity of online shopping continued. Select online retailers such as Warby Parker are setting up showroom type brick-and-mortar locations.

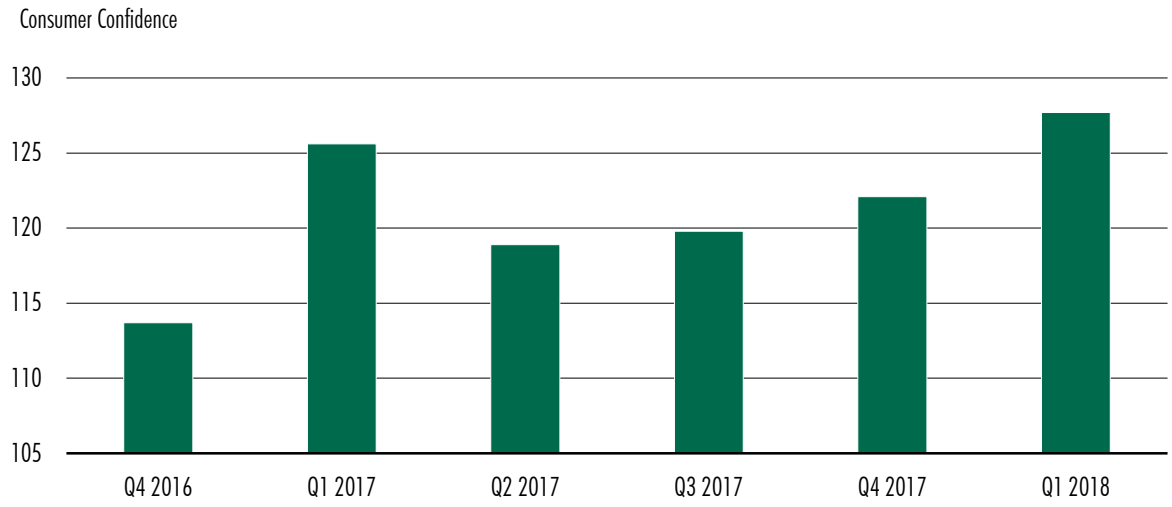
MARKET OVERVIEW CONT'D

Since the beginning of Q1 2018, the Chicago retail vacancy rate increased 130 basis points (bps) to 11.4%, and the average asking net rent has remained the same at $18.66 per sq.-ft. Small shop space continues to thrive due to the abundance of prospective tenants available within this size requirement. Junior box and big box space continue their vacancy struggle because of the ongoing store closures and the lack of active tenants within that size range that may fill these larger spaces.

Although, there has been absorption of retail space, it has occurred slowly and it has not been able to keep up with the increasing junior and big box store closures.

Crystal Lake, located in the far northwest submarket, has been active with new leasing and construction activity. This fall, the former 107,747-sq.-ft. Kmart located at 5846 Northwest Highway, will be leased by Steinhafels. Ulta and T.J. Maxx will both become the new occupants of the former Sports Authority at 6000 Northwest Highway. T.J. Maxx will relocate from Country Corners Shopping Center. New and planned construction is on the upswing. Mariano's is slated to open its 74,800-sq.-ft. store in early May, and will be located in the former Sears site at 105 Northwest Highway. Future construction will include new national tenants such as Pet Supplies Plus, which will be located at Main Street and Northwest Highway, and Popeye's Louisiana Kitchen which will be located at Route 14 and McHenry Avenue.

Grocery continues thrive despite the instability of the Chicago retail market. Pete's Fresh Market will open in the former Dominick's space in Matteson at Matteson Plaza, at the southwest corner of U.S. 30 and Governor's Highway. Tony's Fresh Market, has signed a lease at former Meijer space at 7111 Cermak Road in Berwyn.



NEW CASUAL DINING CHAIN TO OPEN

A new casual dining chain, Rock & Brews, will open its first restaurant this year in southwest suburban Orland Park. Two of the restaurant founders are Gene Simmons and Paul Stanley from the 1970's rock band Kiss.

The 6,000 sq.-ft. rock-themed casual dining restaurant will feature locally brewed craft beer on tap. Several other locations are planned as well as a corporate office over the next five-to-seven years around the Chicagoland area.

On a national level, the Consumer Confidence Index has decreased slightly since last quarter standing at 127.7. A reading above 90 points indicates a stable economy, while a reading of 100 points or more indicates strong growth.

NEW TO THE NEIGHBORHOOD

NOTEWORTHY NEW CONSTRUCTION

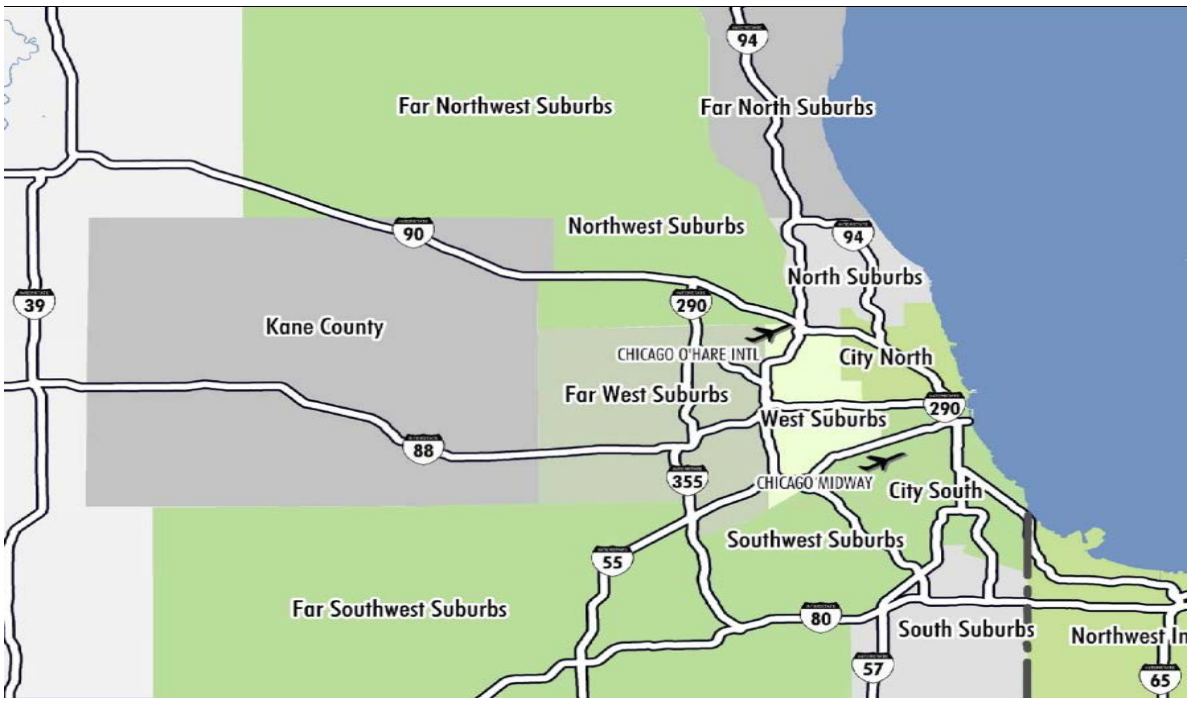
- Aldi, 2708 Showplace Drive, Naperville
- Panera-Route 59 and 75th Street
- Barry's Bootcamp, urban locations
- Pete's Fresh Market Center, Route 83 and Plainfield Road, Willowbrook

Figure 3: Top Lease Transactions

Tenant	Size (Sq. Ft.)	Address
The Dump	135,855	Former Wonder, Deerfield
Mall of India	115,751	Former Walmart, Naperville
Steinhafels	107,747	Former Kmart, Crystal Lake
At Home	104,782	Former Gander Mountain, Batavia
Tony's Fresh Market	71,000	Former Meijer, Berwyn
Advocate Medical	50,403	Former Sports Authority, Chicago
Park to Shop	50,000	Former Burlington, Aurora

Figure 4: Chicago Retail Statistics

Submarket	# of Properties	Gross Building (Sq. Ft.)	Vacant Area (Sq. Ft.)	Vacancy Rate (%)	Average Asking Lease Range ($/Sq.Ft./Yr)	
					LOW	HIGH
Far N.W. Suburbs	90	14,635,515	1,469,624	10.0	16.08	20.86
N.W. Suburbs	100	16,987,908	2,237,568	13.2	17.37	20.06
Far North Suburbs	39	6,909,408	613,470	8.9	13.61	17.62
North Suburbs	58	10,166,707	868,198	8.5	17.76	22.16
Far West Suburbs	143	23,079,050	3,464,546	15.0	15.27	17.60
West Suburbs	44	8,364,000	617,747	7.4	15.89	23.67
City North	68	9,489,798	586,713	6.2	19.27	22.98
City South	36	5,997,621	742,644	12.4	20.63	21.96
Far S.W. Suburbs	64	11,702,932	1,151,858	9.8	18.42	21.35
S.W. Suburbs	64	10,200,012	1,294,490	12.7	15.42	16.16
South Suburbs	50	7,168,121	1,429,174	19.9	15.59	20.19
Kane County	65	11,455,515	1,082,969	9.5	12.96	17.19
Total	821	136,156,587	15,559,001	11.4	16.96	20.37



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East-West Tollway Office, Q1 2018

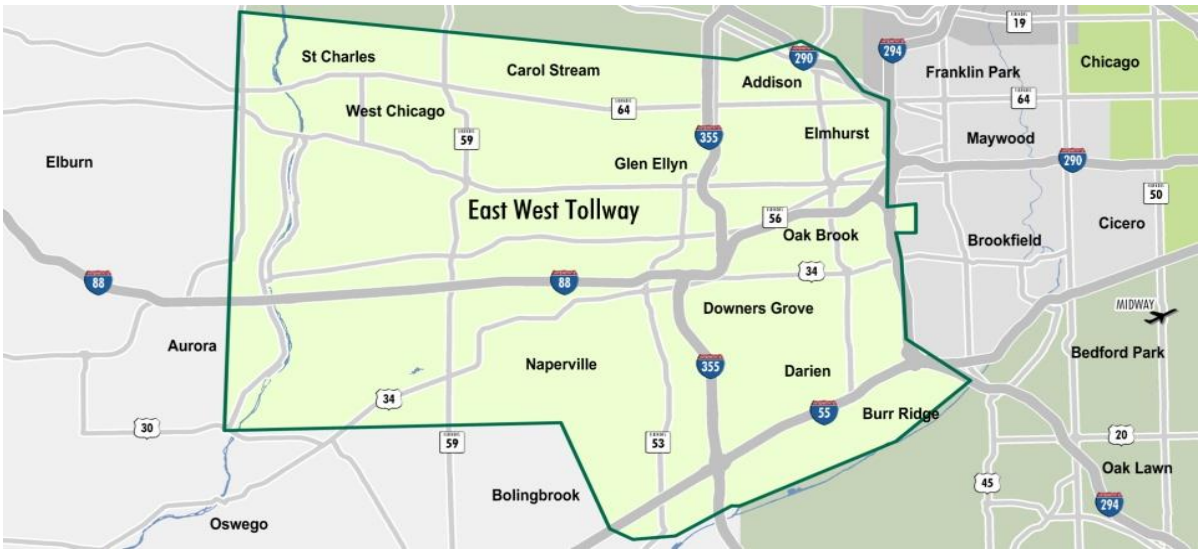
Direct Vacancy 16.6%

Lease Rate $23.14 PSF

Net Absorption -12,934 SF

Under Construction 0 SF

*Arrows indicate change from previous quarter.



QUICK FACTS

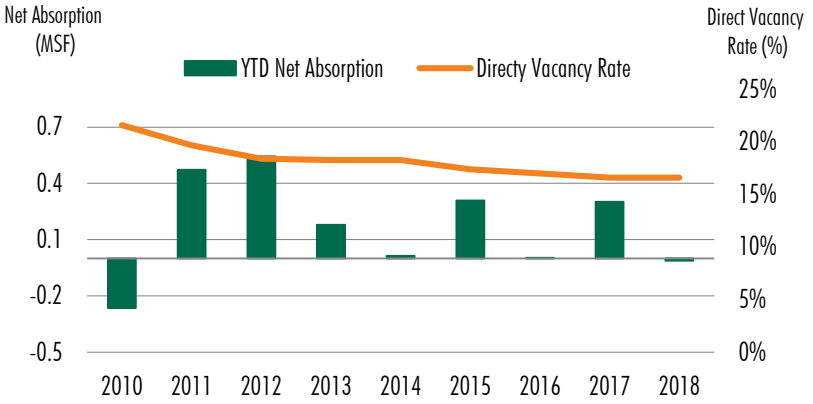
- Comprises 38.2% of the overall suburban market with 39.3 million square feet of office space in 455 buildings.
- Divided into two submarkets: east of I-355 and west of I-355. The west includes the cities of Lisle, Naperville, Aurora, and Warrenville. The east includes the cities of Oak Brook, Oakbrook Terrace, Downers Grove, Westchester, Westmont, Lombard and Hinsdale.
- The major transportation arteries of I-88 (Reagan Memorial Highway), I-294 and I-355 provide easy access to O'Hare International Airport, the north and northwest submarket and downtown Chicago.
- The East-West Tollway is known for its high concentration of corporate headquarters including Navistar and Nicor. These headquarters, along with the highly skilled labor pool and executive housing makes the East-West Corridor a desirable location to live and work.

Figure 1: East-West Tollway Statistics

Submarket	Rentable Building Area (SF)	Direct Vacant (SF)	Direct Vacancy Rate (%)	Sublease Vacancy Rate (%)	2018 Net Absorption	Gross Asking Rates PSF
EW Tollway	**39,262,218**	**6,526,590**	**16.6%**	**1.8%**	**(12,934)**	**$23.14**
Class A	12,272,961	1,578,327	12.9%	2.5%	97,406	$28.91
Class B	19,107,524	3,445,097	18.0%	1.8%	(69,430)	$22.72
Class C	7,881,733	1,503,166	19.1%	0.9%	(40,910)	$17.13
Eastern E-W	**24,164,503**	**4,004,210**	**16.6%**	**1.8%**	**170,989**	**$23.75**
Class A	8,488,355	1,101,431	13.0%	1.7%	95,043	$29.98
Class B	10,392,207	1,908,663	18.4%	2.5%	74,842	$23.19
Class C	5,283,941	994,116	18.8%	0.7%	1,104	$17.44
Western E-W	**15,097,715**	**2,522,380**	**16.7%**	**1.9%**	**(183,923)**	**$22.25**
Class A	3,784,606	476,896	12.6%	4.3%	2,363	$26.89
Class B	8,715,317	1,536,434	17.6%	1.0%	(144,272)	$22.16
Class C	2,597,792	509,050	19.6%	1.3%	(42,014)	$16.51
Suburban	**102,909,270**	**18,636,820**	**18.1%**	**1.3%**	**128,268**	**$23.08**
Class A	39,323,068	5,611,798	14.3%	2.0%	8,975	$28.40
Class B	40,824,915	8,370,885	20.5%	1.2%	31,099	$22.31
Class C	22,761,287	4,654,137	20.4%	0.4%	88,194	$17.10

Source: CBRE Research, Q1 2018.

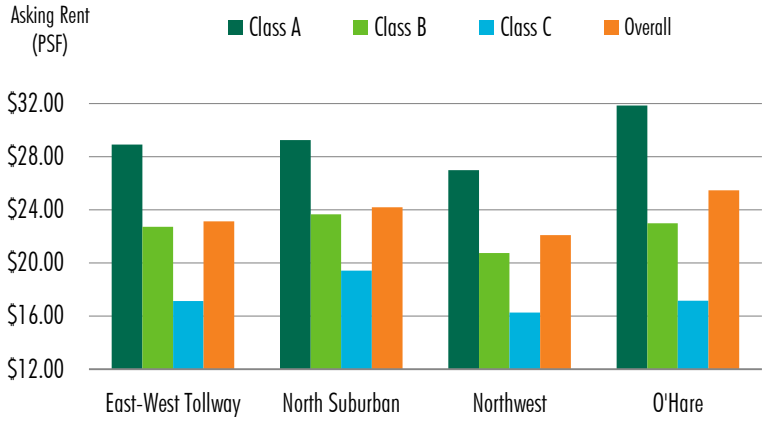
Figure 2: Net Absorption/Direct Vacancy Rate



Source: CBRE Research, Q1 2018.

- The East-West Tollway direct vacancy rate has remained largely consistent year-over-year, showing a decrease of 10 basis points, to 16.6%.
- Class B product saw direct vacancy decrease 100 basis points year-over-year, dropping to 18.0%.

Figure 3: Gross Weighted Asking Rates



Source: CBRE Research, Q1 2018.

- The Eastern East-West Tollway overall gross asking rate has increased by $0.32 year-over-year, reaching $23.75 per sq.-ft.
- The East-West Tollway overall gross asking rates have increased $0.53 year-over-year, reaching $23.14 per sq.-ft.

Figure 4: Top Lease Transactions – 2018

Tenant	Size (Sq. Ft.)	Address
T-Mobile Central LLC	54,492	1400 Opus Pl, Downers Grove
Edward-Elmhurst Healthcare	29,000	172 Schiller St, Elmhurst
Ocean Network Express (North America), Inc	22,317	377 E Butterfield Rd, Lombard
American Institutes for Research	17,070	1120 E Diehl Rd, Naperville

Source: CBRE Research, Q1 2018.

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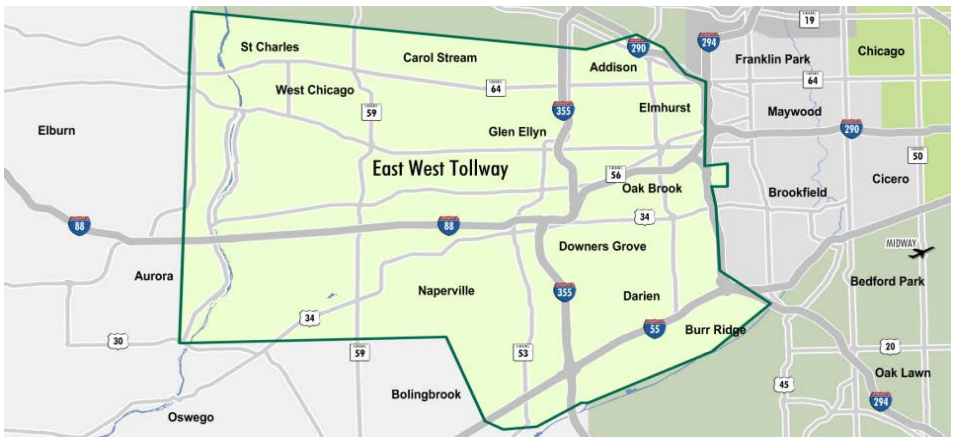
5th Avenue Station, Naperville Illinois



Retail:

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APPENDIX C

Parking Details

PARKING

TABLE OF CONTENTS

RELEVANT LINKS

Group Input Summary
Action Plan
Naperville Metra Station Bus Depot and Commuter Access Feasibility Study
2009 5th Avenue Study

Ryan Companies US, Inc.
111 Shuman Boulevard, Suite 400
Naperville, IL 60563

p: 630-328-1100
ryancompanies.com

MEETING AGENDA & NOTES

SUBJECT:	Parking Working Group #1	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/2/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Andrew Wallace	Jen Louden	Kyle Schott
	Christopher Kuehner	Councilwoman Boyd-Obarski	Curt Pascoe
	Michael Marek		
	Elizabeth Kelly		

Introductions

Background Information

- Review Community Engagement Plan
- Review Existing Commuter Parking Locations & Counts
- Input from Staff

Working Group Action Plan

- Parking Consultant Recommendation

Box Site Training Session

Open Discussion

- 4 residents, 3 commuters (multiple stops, years, etc.)
- (168) 190 E 5th Avenue Commuter Lot stalls not included in the 1515 total stall count in the original RFQ, as they were not in operation at the time.
- ~1700 spaces exist in total today
- Permit & daily fee usage could be considered; the City has data on permit and daily usage.
- The majority of commuters are coming from south of the tracks, while the lots are on the north side
- Door-to-door commute is considered; this includes walking time to the train, and under the tracks, in the morning if parked on the north side. Inbound trains are on the south tracks.

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Next Meeting Focus:

- Discuss Potential Case Studies
- Parking Ramp Best Practices
- Identify and Discuss Pertinent Information from:
- Group Input Session
- 2009 5th Avenue Study
- 2012 Naperville Metra station, bus depot and commuter access feasibility study
- Summary of Future Trends

MEETING AGENDA & NOTES

SUBJECT:	Parking Working Group #2	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/17/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Andrew Wallace	Jen Louden	Kyle Schott
	Christopher Kuehner	Councilwoman Boyd-Obarski	Curt Pascoe
	Michael Marek		Rory Fancler
	Elizabeth Kelly		Peter Lemmon

Recap Meeting #1 and what to expect during this meeting

Parking Consultant – Kimley-Horn Presentation

- Parking Ramp Case Studies
    - Provided local and national deck examples
- Ramp Design Best Practices
    - Typically do not go over 6-8 stories
    - No rule for the number of access points based on the number of parking stall
    - Recommended that the group familiarize themselves with the Geneva parking deck
    - Parking on the ramp vs. not
    - Discuss accessible parking options
- Future Trends in Ramp Design
    - Integrated transit stop and parking guidance systems discussed
- Introduce Theoretical Garage “Fit” Test
    - Discussed the Input Session notes with further categorization

Open Discussion

Group Homework

- Review “Fit” Test – Utilize Categorized Group Input and Knowledge of Best Practices to brainstorm ideas, comments and questions regarding location, count and size of parking areas.

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- If able, tour local parking ramps, such as Wheaton and Geneva that have transit oriented decks.

Next Meeting Focus:

- Fit Test Pros and Cons
- Cost Discussion
- Temporary Parking Matrix
- Commuter Deck Function

MEETING NOTES

SUBJECT:	Parking Working Group #3	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	5/1/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Andrew Wallace	Jen Louden	Kyle Schott
	Christopher Kuehner	Councilwoman Boyd-Obarski	Curt Pascoe
	Michael Marek		Rory Fancler
	Elizabeth Kelly		Peter Lemmon

Recap Mtg #2

Fit Test – Per Lot Brainstorming

- Burlington lot
  - Further from residential - pro
  - Close to station - pro
  - 4 bays wide – pro
  - Burlington pro traffic flow directs towards Washington not through neighborhoods
- Kroehler 5 bays wide - pro
- Kroehler con next to residents , con further from tracks, con pedestrians must cross 5th
- DCM lot could function as downtown overflow lot - south side of tracks - weekends. DCM could encourage SW folks to cut through neighborhoods to the west
- DCM pro close to station
- Park view pro south of tracks
- 1300 permit holders live South of tracks, 250 live North of tracks
- DCM pro right turns in PM rush hour - only location which solves this
- DCM con only 3 bays wide, residential to the west
- DCM would require realignment of streets somehow
- Water Tower
  - far from Metra station - added commute time walking
  - No adjacent residential
  - SE users would go to Columbia; right out in PM hours. Big block of users eat of Washington and south of Chicago.

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- Relocation of water tower possibly required
- Park view - likely need to make North 2-way in order to limit flow through the neighborhood
- A small, permanent ramp on Kendall would be a good location for commuters (west of Washington, PM right out) but most likely not positively received by the community as a whole.

Parking Consultant – Kimley-Horn Presentation

- Burlington Lot Deck Options/Commuter Deck Function – One level garage for commuters was discussed on Burlington lot (platform idea). Overall this was a positively received idea
    - Number of spots will be slightly lower than existing but will allow for minimum disruption to current parking practices.
    - Reviewed (3) options for access points.
    - Pace, Kiss and Ride, Uber would access the station via the platform surface, separating commuter parking and transit.
    - Concern of location of land use parking.
- Temporary Parking Options
    - Surface Lot
        - Burlington square not used by commuters
        - Kendall park gives right out PM movement
            - Kendall park has park programs on it
        - School district good for commuters - right out PM, but school owned green space
        - Temp parking - can the total amount be temporarily reduced (Becker property)
        - Potential to force some commuters to IL 59? Free stalls temporarily. Metra will cost them more however. 100-150 quarterly permits are still available.
        - No permanent parking in park spaces
    - Street Parking – Possible locations and counts of temporary street parking were reviewed
    - Transit Options – Reviewed options for remote parking and other transit options. Lisle station was discussed, but they currently have a wait list as well.

Open Discussion

- Staff to confirm if Boecker Lot parking count should be included in concept or not. Currently it is not a part of the 1,550 count in the RFQ. (Staff has confirm it is to be included in the concept for a total of roughly 1,700 spaces)

Next Meeting Focus:

- Cost Summary Discussion
- Draft Deliverable Review

MEETING NOTES

SUBJECT:	Parking Working Group #4	START TIME	4 PM
LOCATION:	Ryan Offices	END TIME:	5:30 PM
		DATE:	5/15/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Andrew Wallace	Jen Louden	Kyle Schott
	Christopher Kuehner	Councilwoman Boyd-Obarski	Curt Pascoe
	Michael Marek		Rory Fancler
	Elizabeth Kelly		Peter Lemmon

Recap Mtg #3

Deliverable Discussion

- Principles for Concept Creation – Concept Principles were reviewed. The group agreed with those that were laid out. It was requested that any other comments be provided prior to next meeting.
- Parking Summary Map and Costs – Map was discussed with the following comments
    - Exact Parking Counts were reviewed.
    - Consideration needs to be mad to the amount of parking at DCM Lot. While this is good for commuters, too many cars could cause a pedestrian safety issue with the number of students in the area.
    - Parkview and the Public Works Lot should be added to the map as they are viable options.
    - There will be additional operational costs the more parking is spread out.
- Temporary Parking Phasing was discussed as an important aspect to keeping the commuter experience positive during any future construction.
- Exhibits to be included in the deliverable were reviewed.

Executive Summary Discussion – Executive Summary was reviewed, edits were made during the discussion.

Open Discussion

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Next Meeting Focus:

- Deliverable Finalization

MEETING AGENDA & NOTES

SUBJECT:	Parking Working Group #5	START TIME	4 PM
LOCATION:	Ryan Offices	END TIME:	5:30 PM
		DATE:	5/31/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Andrew Wallace	Jen Louden	Kyle Schott
	Christopher Kuehner	Councilwoman Boyd-Obarski	Curt Pascoe
	Michael Marek		Rory Fancler
	Elizabeth Kelly		Peter Lemmon

Recap Mtg #4

- Explained documents that were uploaded to BOX and asked if there were any questions.
- Discussed that the Narrative provided last week had changed format and added further information

Deliverable Review/Finalization

- Parking Narrative was reviewed as a group. All comments were discussed and approved edits were made to the Narrative. A final version, along with all parking deliverable materials was uploaded to the BOX website.

Combined Working Group Meeting

- Format of the meeting was discussed. There was concern shared about the order of presentations. It was requested that we look into altering to start with Traffic/Parking and end with Land Use/Design as to follow an order of operation format.
- Presenters – Topics were given to Mike, Andrew and Elizabeth. Being some members were strong maybes are being able to attend, adjusts may need to be made on Monday.

Open Discussion

- Next steps related to concept creation were discussed specifically how we plan to deal with opposing concept principles between working groups.

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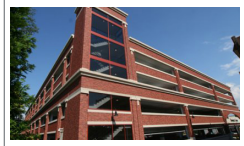
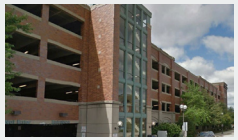
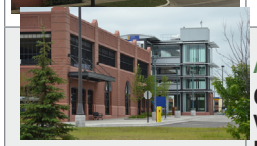
PARKING DECK CASE STUDY

	LOCATION	DESIGN PARAMETER	USE CONTEXT	PARKING STALLS	FLOORS	FOOTPRINT L X W (ESTIMATE)	ACCESS POINTS	SPACES / ACCESS	SPACES / FLOOR (AVERAGE)	WALK DISTANCE TO METRA STATION (MILES)
	NAPERVILLE Water Street	wrapped development	downtown	520	6	270' x 120'	1	520	86	N/A (downtown)
	NAPERVILLE Van Buren	architectural finish (original) wrapped development (addition)	downtown	792	6	315' x 115' (original) 260' x 90' (addition)	2	396	132	N/A (downtown)
	NAPERVILLE Central Parking Facility	basic finish	downtown	553	3	270' x 180'	2	277	184	N/A (downtown)
	DOWNERS GROVE Parking Deck	architectural finish	commuter / downtown	778	5	280' x 190'	2	389	155	0.2
	ELMHURST Addison Parking Deck	architectural finish (1st floor retail)	downtown	690	6	230' x 175'	1	690	115	N/A (downtown)
	ELMHURST Schiller Parking Deck	architectural finish (1st floor retail)	downtown	308	4	180' x 180'	2	154	77	N/A (downtown)
	ELMHURST Adell & Adelaide Parking Deck	basic finish	downtown	315	3	315' x 110'	2	158	105	N/A (downtown)

PARKING DECK CASE STUDY

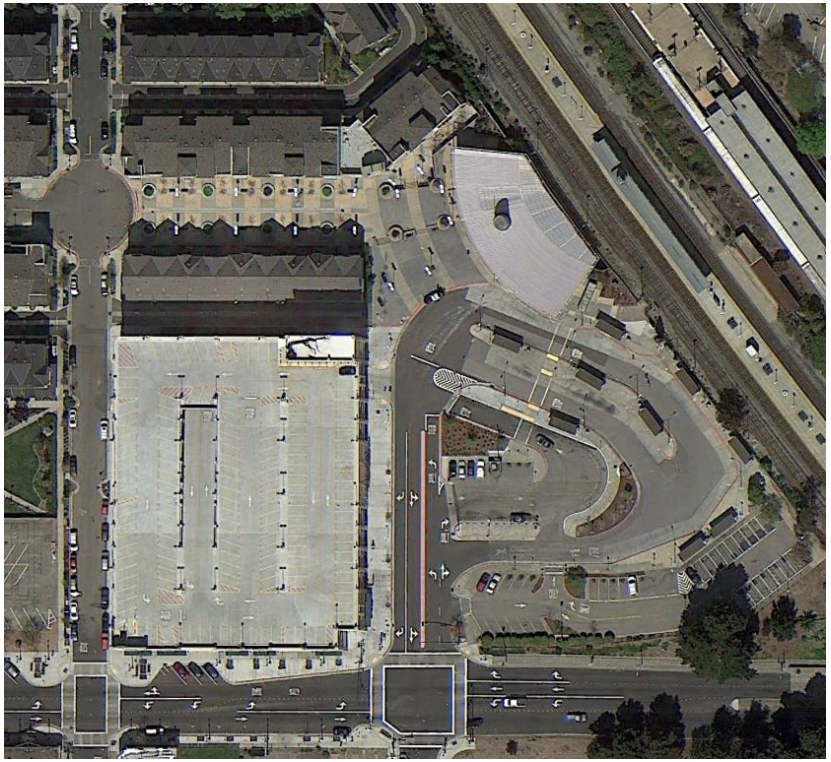
	LOCATION	DESIGN PARAMETER	USE CONTEXT	PARKING STALLS	FLOORS	FOOTPRINT L X W (ESTIMATE)	ACCESS POINTS	SPACES / ACCESS	SPACES / FLOOR (AVERAGE)	WALK DISTANCE TO METRA STATION (MILES)
	OAK LAWN Patriot Station	architectural finish	commuter / downtown	821	5	290' x 180'	1	821	164	across the street
	ORLAND PARK Main Street Triangle	architectural finish (1st floor retail)	downtown	540	5	270' X 180'	2	270	105	N/A (downtown)
	WHEATON Wheaton Place	architectural finish wrapped development	commuter / downtown	422	4	250' x 170'	3	140	105	0.2
	WHEATON Willow Avenue	architectural finish	commuter / downtown	378	4	225' x 160'	2	189	95	0.5
	ANOKA, MN Commuter Rail Transit Village (CRTV) Parking Facility	architectural finish	commuter	344	3	320' x 125'	1	344	114	connected to pedestrian overpass at station
	DANIA BEACH, FL Tri-Rail Beach Deck	architectural finish	commuter	378	4	405' x 125'	3	126	95	connected to station
	RICHMOND, CA BART Parking Deck	architectural finish	commuter	771	6	260' x 205'	2	385	128	0.05

CRTV PARKING FACILITY - ANOKA, MN

Key Design Features:

- Integrated Transit Stop and Multimodal Connectivity
- Parking Guidance System
- Ground-Level Commercial Space
- Connected Pedestrian Skyway

BART RICHMOND STATION - RICHMOND, CA



Key Design Features:

- Integrated Transit Stop
- Ground-Level Commercial Space
- Parking Guidance System
- Parking Payment Connected to Transit Fare System

PARKING: BEST PRACTICES

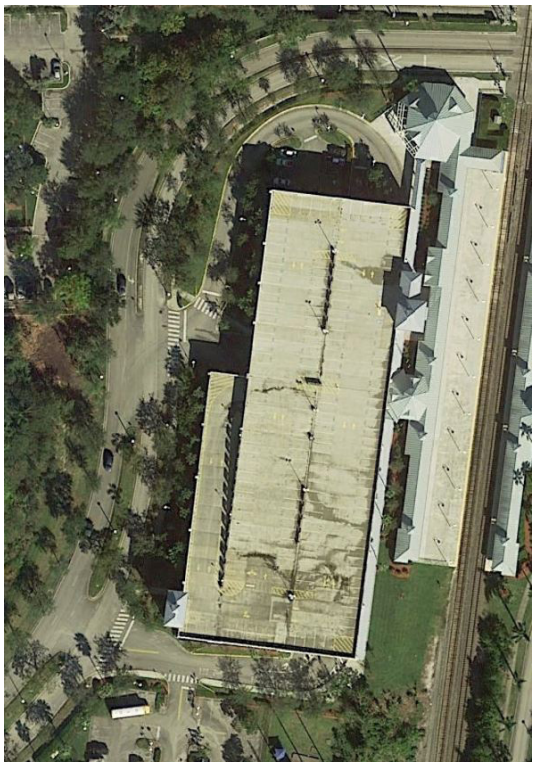
- » Number of Spaces
- » Parking Geometrics
- » Ramping
- » Efficiency
- » Layout and Configuration
- » Access (entry/exit)
- » Accessible Parking
- » Floor-to-Floor Height
- » Wayfinding and Signage

TECHNOLOGY AND "FUTURE-PROOF" DESIGN

SOLUTION	BENEFITS
Flat Floors / Increased Floor-to-Floor Height / Central Elevator & Stair Placement	» Repurpose for alternate use
Energy-Efficient Lighting	» Consistent lighting levels to enhance safety and security » Monitors energy use to increase efficiency and decrease cost » Decreases maintenance costs
Parking Guidance Systems and Wayfinding	» Reduce traffic circulation / congestion / emissions » Enhance user experience
Mobile Applications Occupancy Monitoring / Space Reservation	» Reduce traffic circulation / congestion / emissions » Enhance user experience
Access and Revenue Control	» Maintain traffic flow » Improve efficient revenue collection and enforcement » Enhance user experience
Pay-on-Foot Technology	» Maintain traffic flow » Improve efficient revenue collection » Enhance user experience
License Plate Recognition (LPR) Automated Vehicle Identification (AVI)	» Maintain traffic flow » Automatic parking fee processing » Automatic enforcement » Enhance user experience
Preferential Parking for Carpool / Vanpool	» Reduce parking demand
Rooftop Solar Farms	» Support community-wide sustainability initiatives » Reduce energy costs » Reduce impact to environment » Create shade for rooftop parking spaces
Electrical Vehicle Charging Stations	» Support community-wide sustainability initiatives » Reduce emissions

“FUTURE-PROOF” DESIGN ELEMENTS

Concept site plan



Speed ramps located outside parking deck
Tri-Rail Beach Deck, Dania, FL

- Flat floor plates and speed ramps
- Stairs and elevators in center
- Greater floor-to-floor heights (i.e., 15-foot minimum rather than 10-12 feet typically provided)
- Transit stops and other mobility modes
- Pick-up/drop-off zones for Transportation Network Companies (e.g., Uber, Lyft)
- First floor commercial (e.g., utilities, waterproofing)

ENERGY-EFFICIENT LIGHTING

Willow Avenue Parking Deck, Wheaton, IL

San Diego International Airport, San Diego, CA

LICENSE PLATE RECOGNITION (LPR) / AUTOMATED VEHICLE IDENTIFICATION (AVI)

Norfolk International Airport, Norfolk, VA

Norfolk International Airport, Norfolk, VA

ACCESS AND REVENUE CONTROL

Cape Fear Community College, Union Station Parking Deck

Charlotte Douglas International Airport Multiuse Parking Facility

PARKING GUIDANCE SYSTEM

Downtown San Jose, CA

Downtown San Jose, CA

Charlotte Douglas International Airport
Multiuse Parking Facility

ELECTRIC VEHICLE CHARGING STATIONS

Minneapolis-St. Paul International Airport, Minneapolis, MN

Pharmaceutical Facility Parking Deck, Research Triangle Park, NC

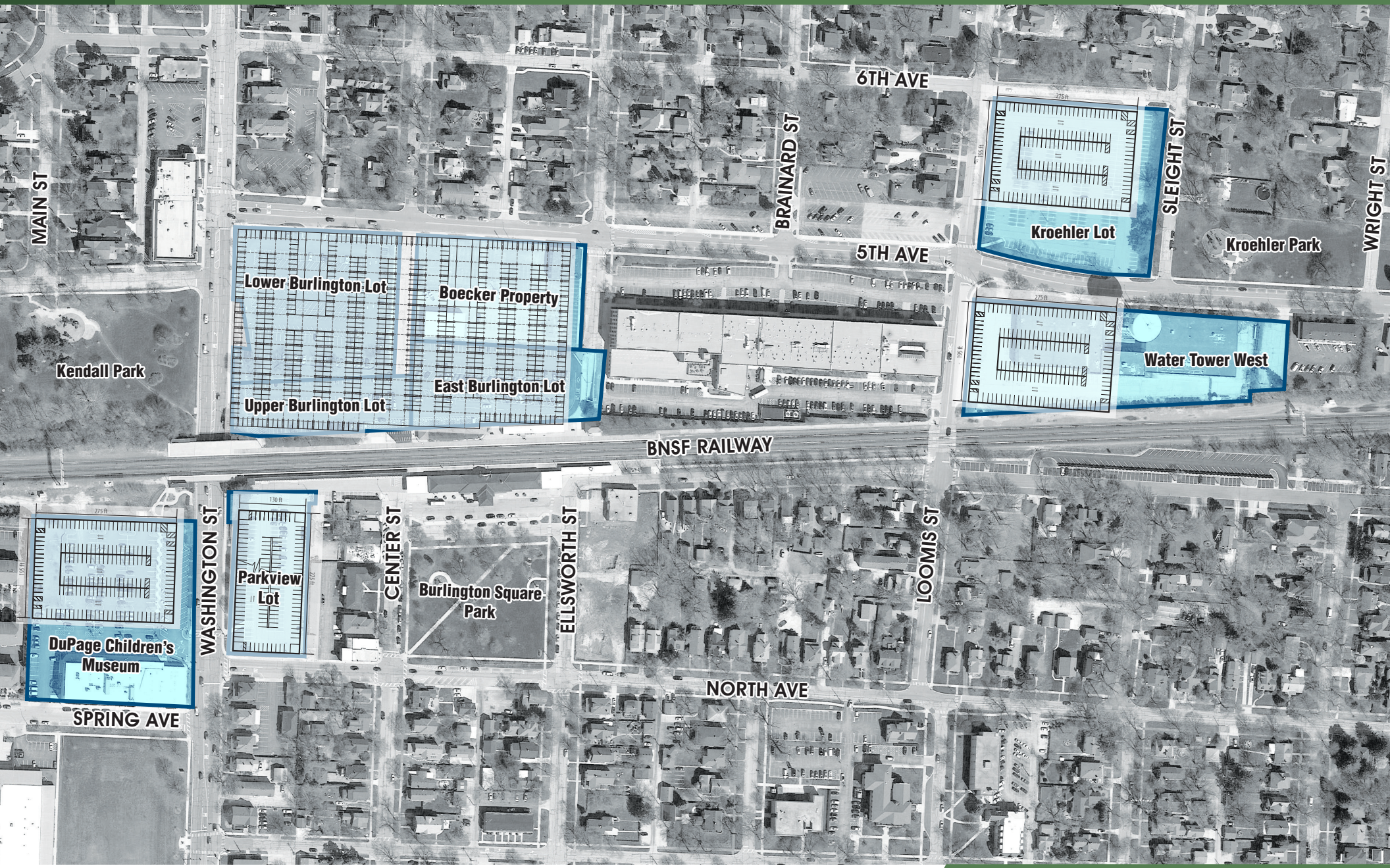
ROOFTOP SOLAR FARM

UNC-Chapel Hill, Bell Tower Parking Deck, Chapel Hill, NC

Bell Lexus, Scottsdale, AZ

North Carolina Department of Administration, Raleigh, NC

THEORETICAL PARKING DECK "FIT TEST" SUMMARY



NAPERVILLE - 5TH AVENUE REDEVELOPMENT

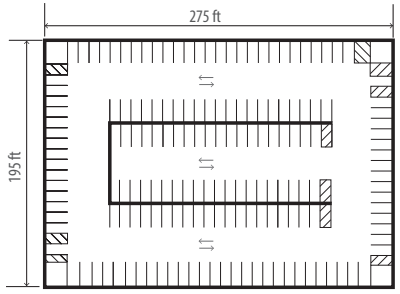
RYAN Kimley»Horn

THEORETICAL PARKING DECK "FIT" TEST

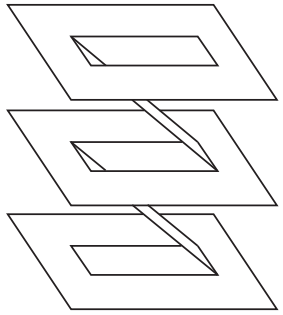
Location	Dimension	Option A (3-Bay)	Option B (2-Bay)
Lower Burlington Lot	±320' x ±275'	✕	✕ ✕
Upper Burlington Lot	±745' x ±150'	No	✕
Boecker Property	±315' x ±205'	✕	✕ ✕
Kroehler Lot	±345' x ±330'	✕	✕ ✕
Water Tower West (west of tower)	±645' x ±230'	✕[1]	✕[1]
DuPage County Children's Museum	±330' x ±400'	✕	✕ ✕
Parkview Lot	±160' x ±305'	No	✕

[1] Modified garage configuration without parking aisle on each end of the typical floor

OPTION A

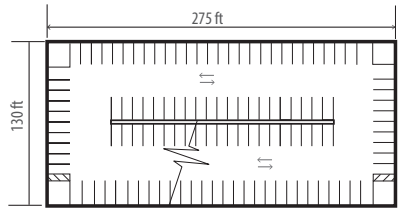


Capacity: 160 spaces per floor

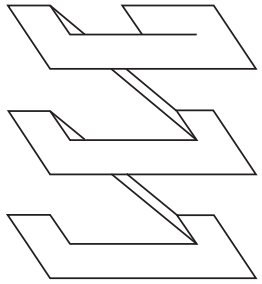


- » 195' x 275'
- » Center ramp with parking
- » 3-bays of parking
- » 160 spaces / floor

OPTION B



Capacity: 108 spaces per floor



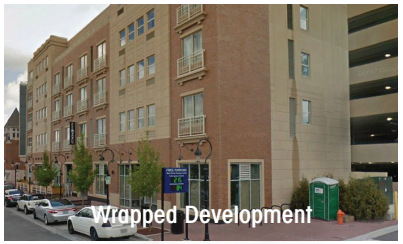
- » 130' x 275'
- » Center two-way ramp (no parking)
- » Flat parking floor
- » 108 spaces / floor

CONSTRUCTION COST SNAPSHOT

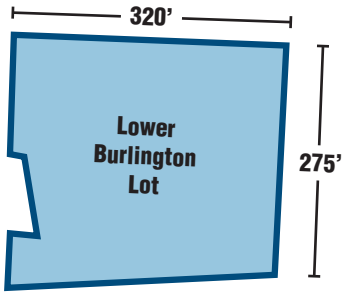
1. Basic Finish: $18,000 to $22,000 per space
2. Architectural Finish: $20,000 to $25,000 per space
3. Wrapped Development: $20,000 to $24,000 per space

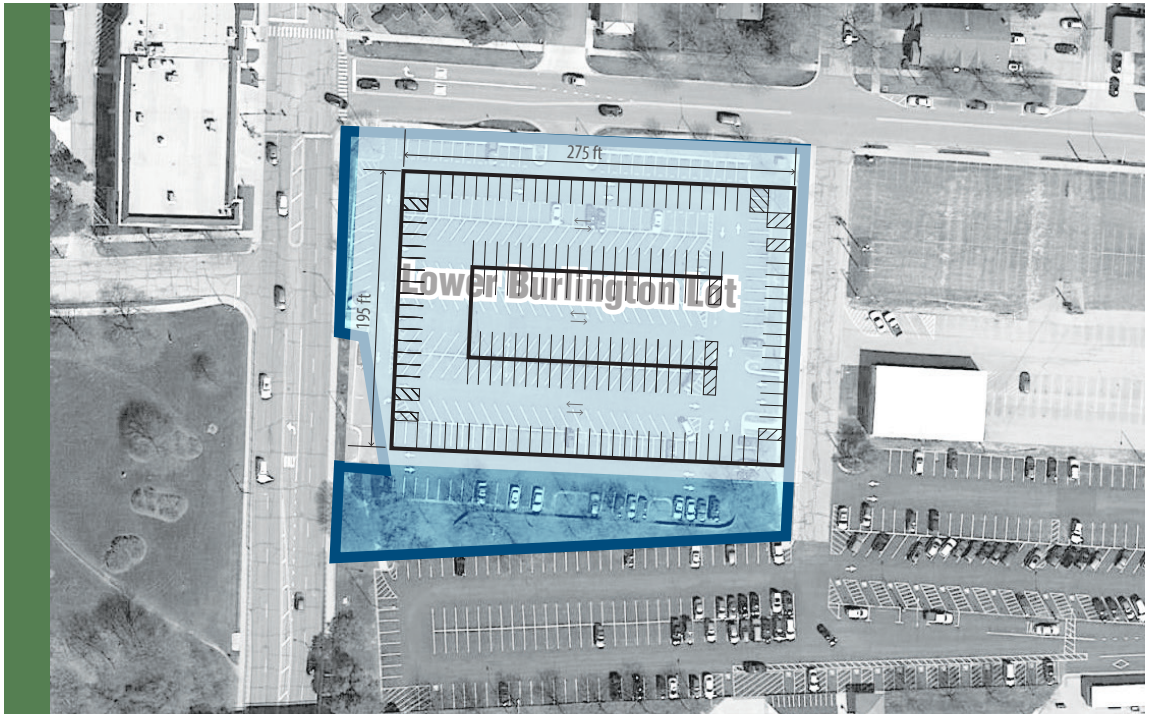

Basic Finish


Architectural Finish


Wrapped Development

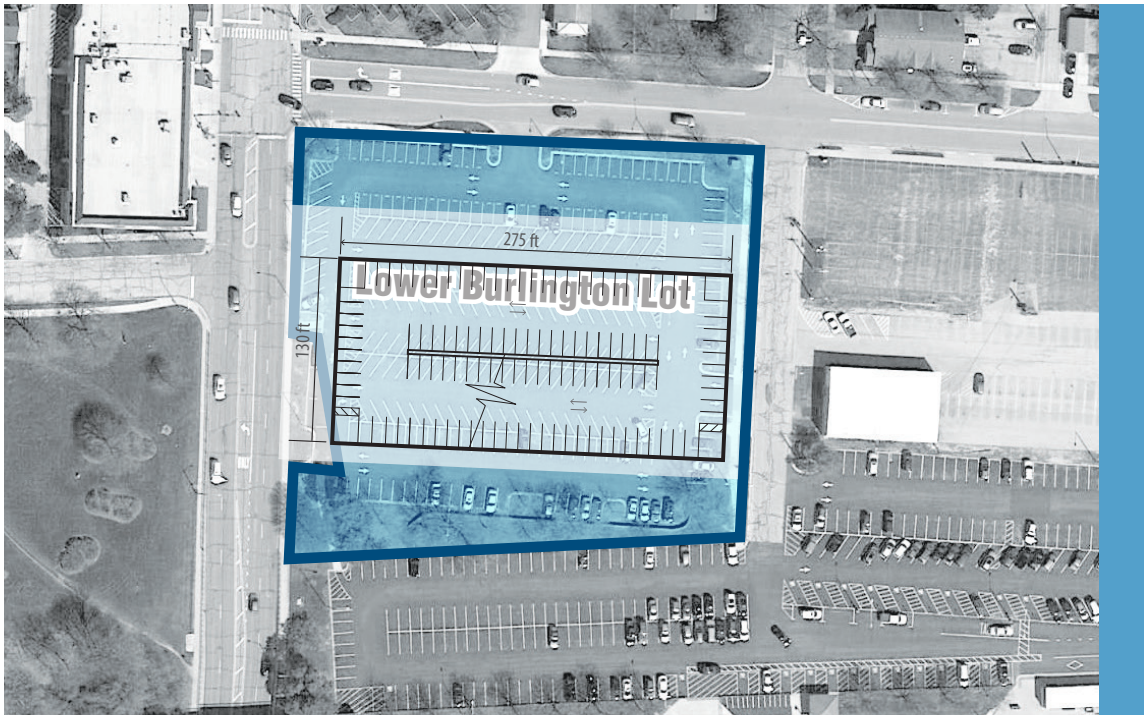
LOWER BURLINGTON LOT



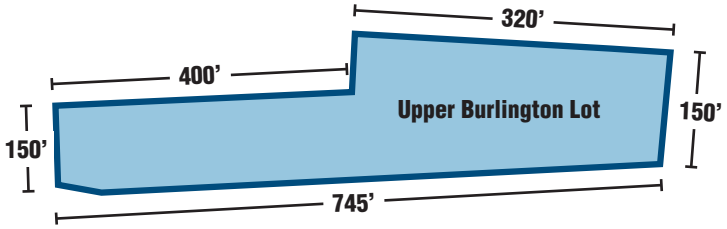


OPTION A

OPTION B

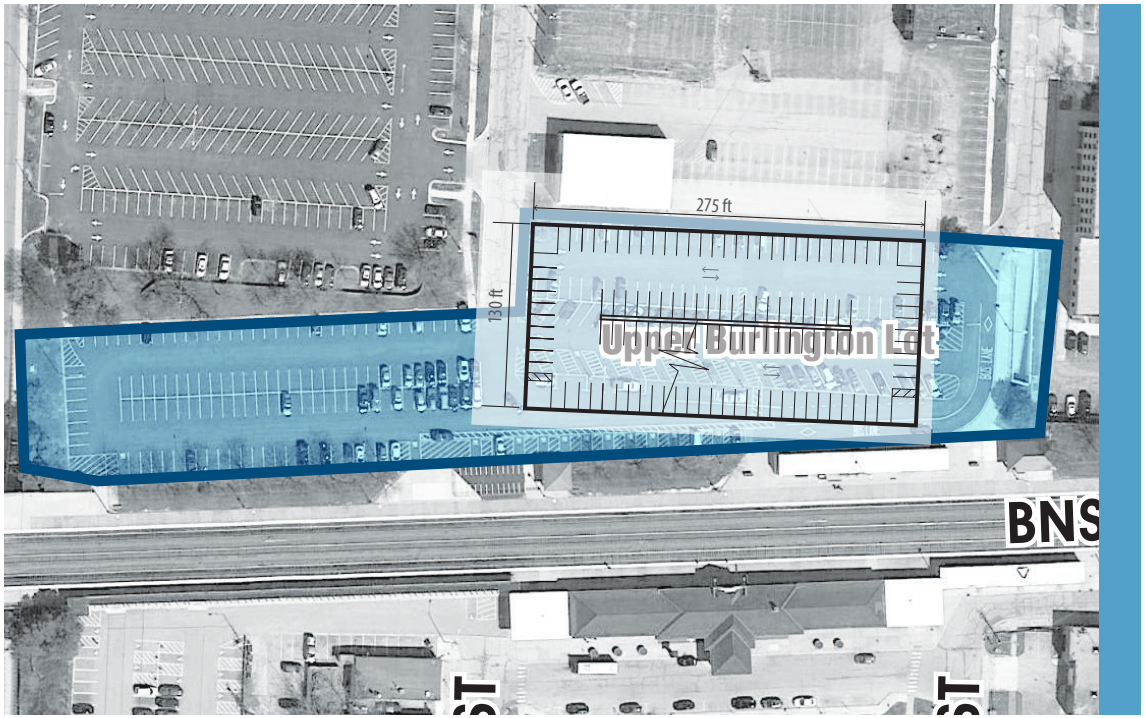


UPPER BURLINGTON LOT

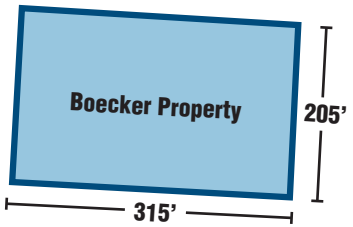


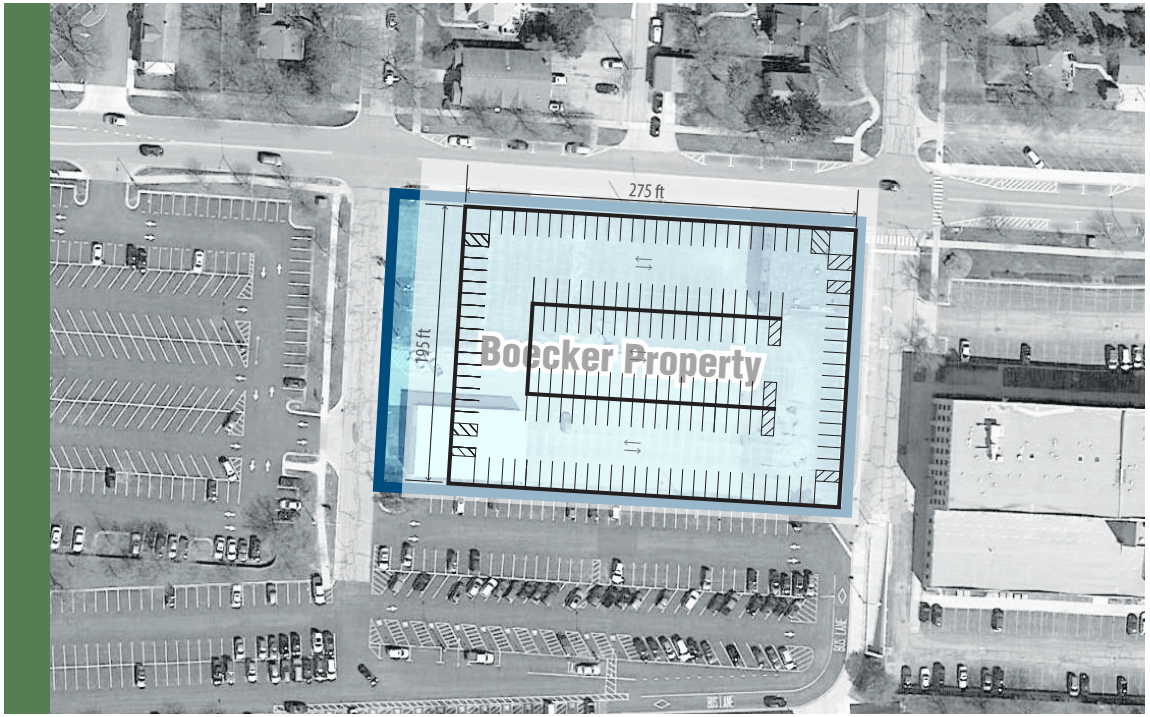
OPTION A

OPTION B



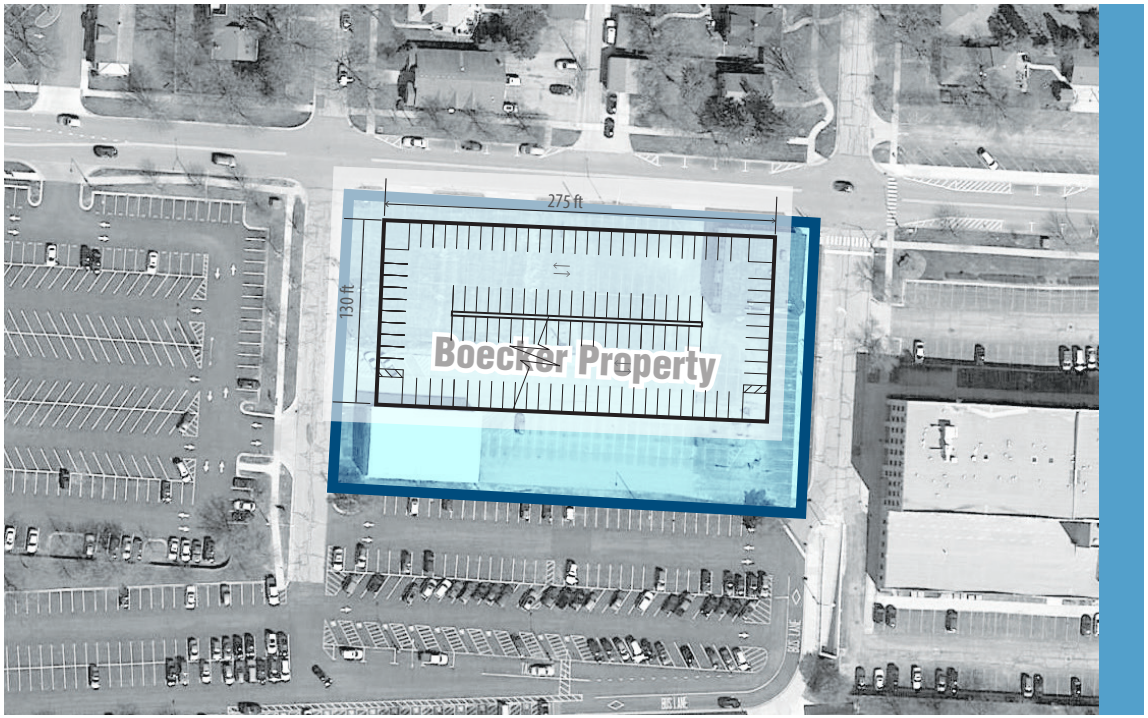
BOECKER PROPERTY



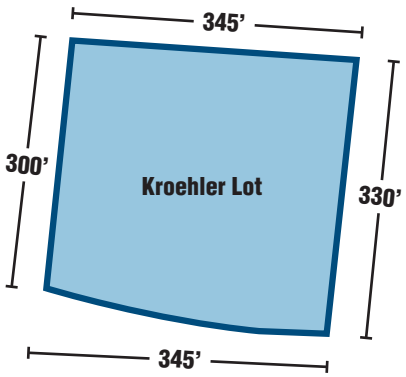


OPTION A

OPTION B

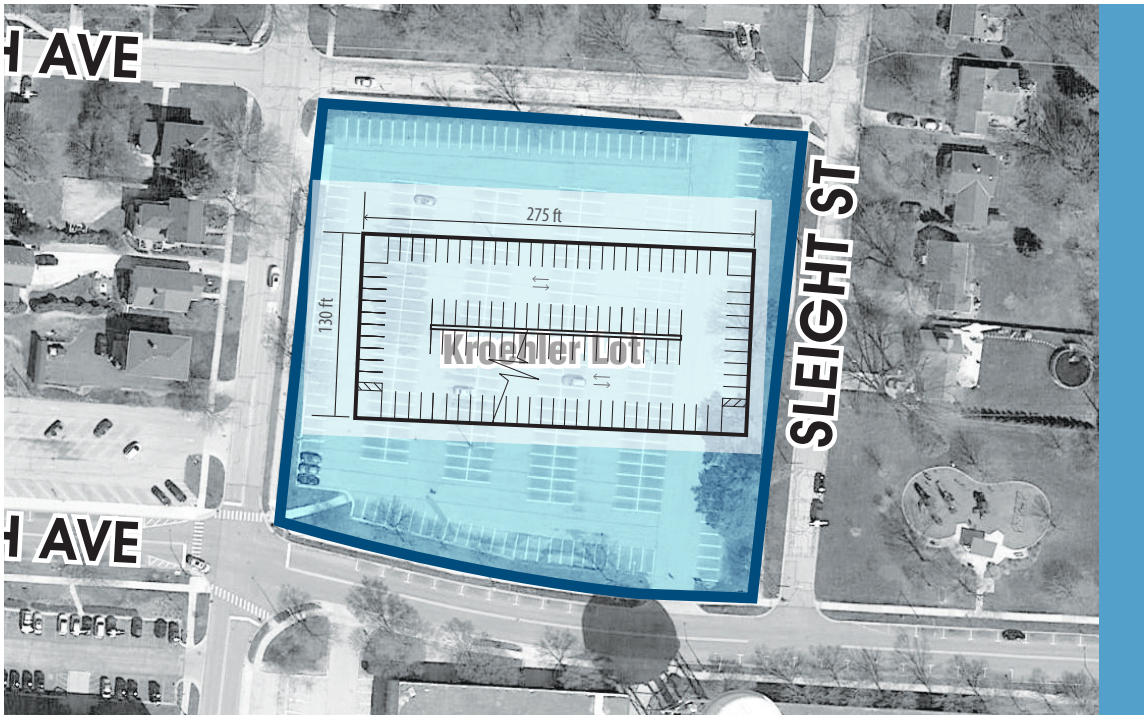


KROEHLER LOT

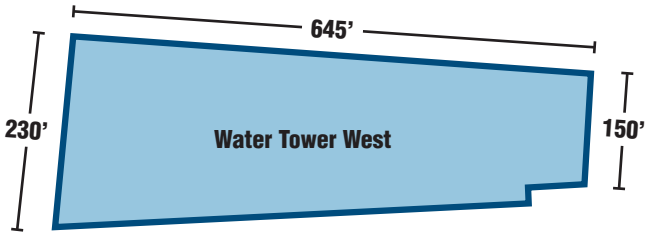


OPTION A

OPTION B

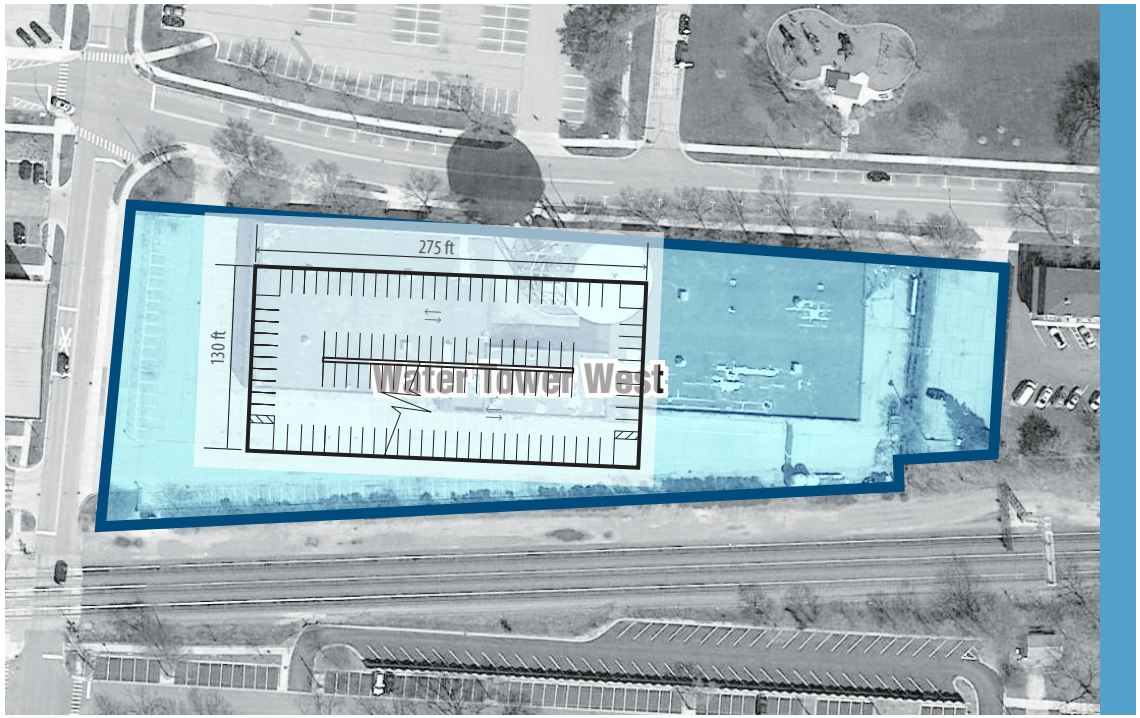


WATER TOWER WEST

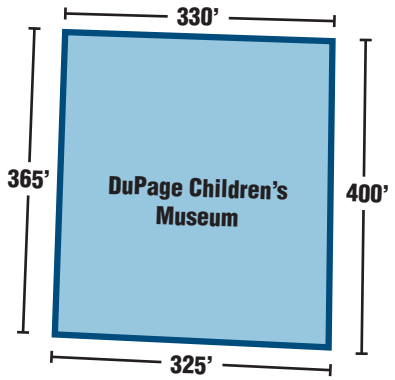


OPTION A

OPTION B

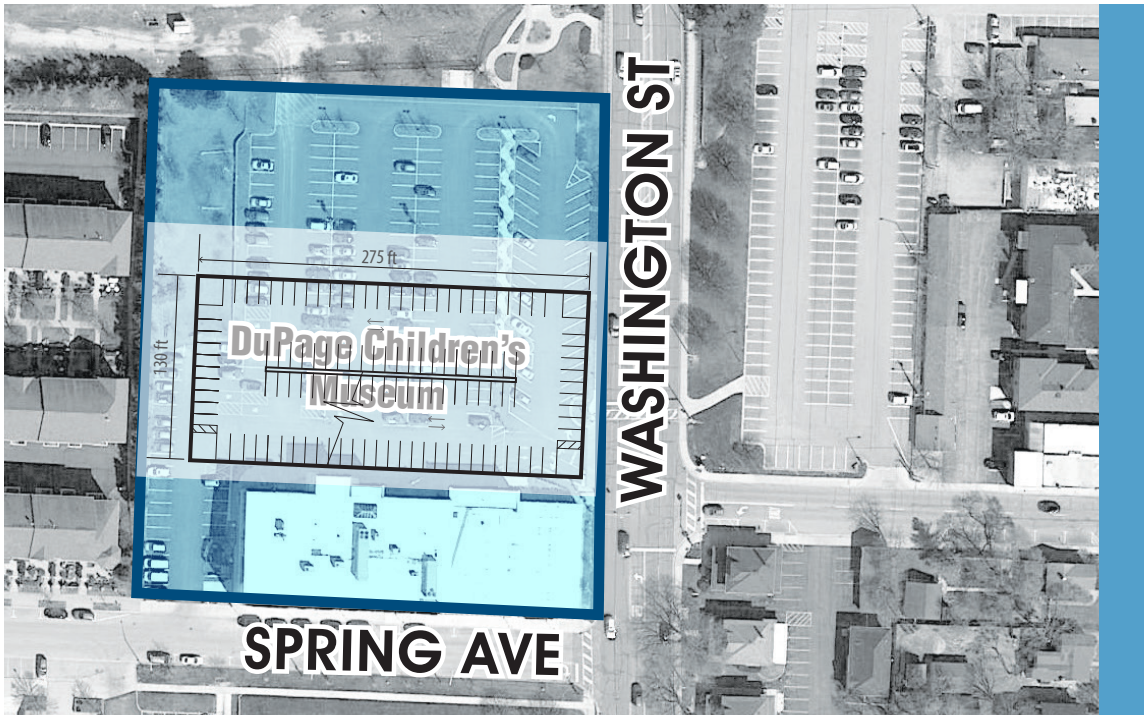


DUPAGE CHILDREN'S MUSEUM

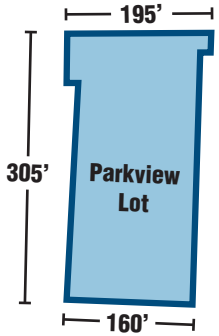


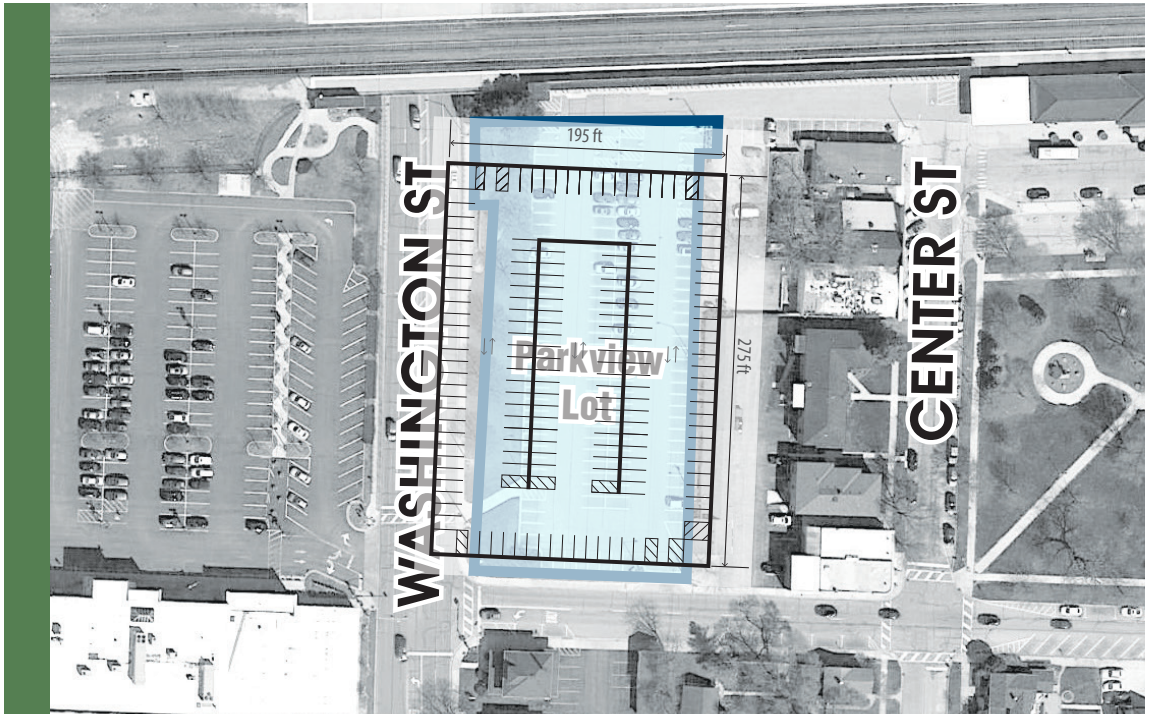
OPTION A

OPTION B



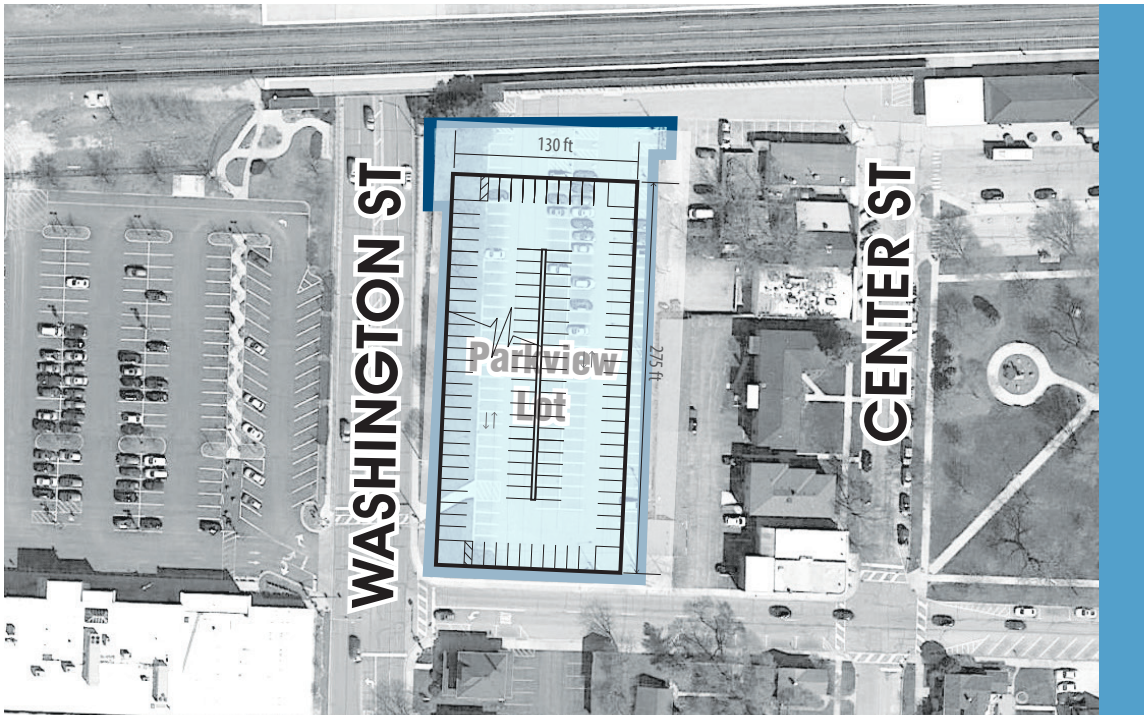
PARKVIEW LOT



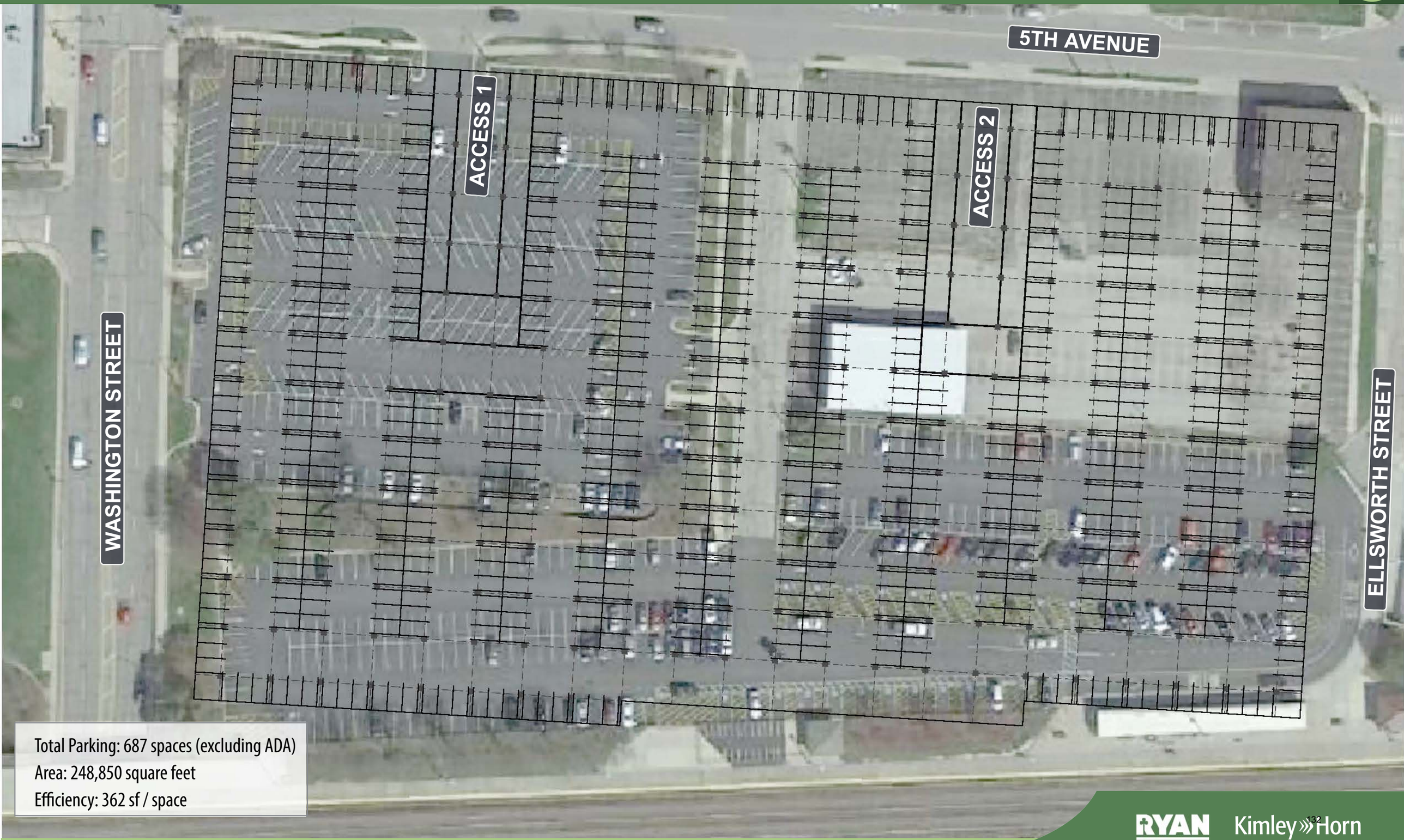


OPTION A

OPTION B



PARKING DECK CONCEPT A



Total Parking: 687 spaces (excluding ADA)
Area: 248,850 square feet
Efficiency: 362 sf / space

PARKING DECK CONCEPT B

Total Parking: 689 spaces (excluding ADA)
Area: 245,250 square feet
Efficiency: 356 sf / space

PARKING DECK CONCEPT C

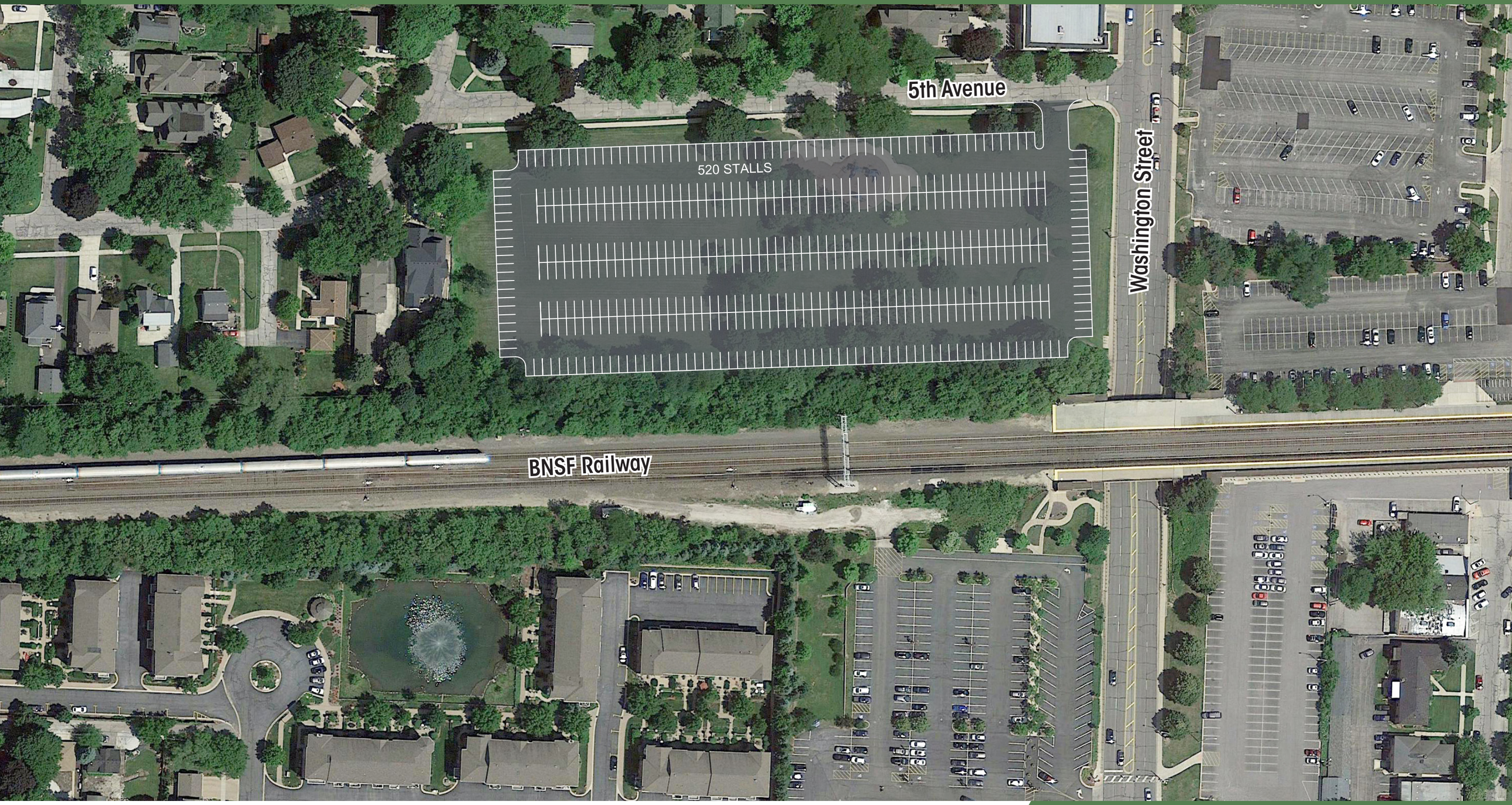
Total Parking: 675 spaces (excluding ADA)
Area: 237,600 square feet
Efficiency: 352 sf / space

TEMPORARY PARKING CONCEPT: OFF-STREET

BURLINGTON SQUARE PARK

RYAN Kimley»Horn

TEMPORARY PARKING CONCEPT: OFF-STREET



KENDALL PARK

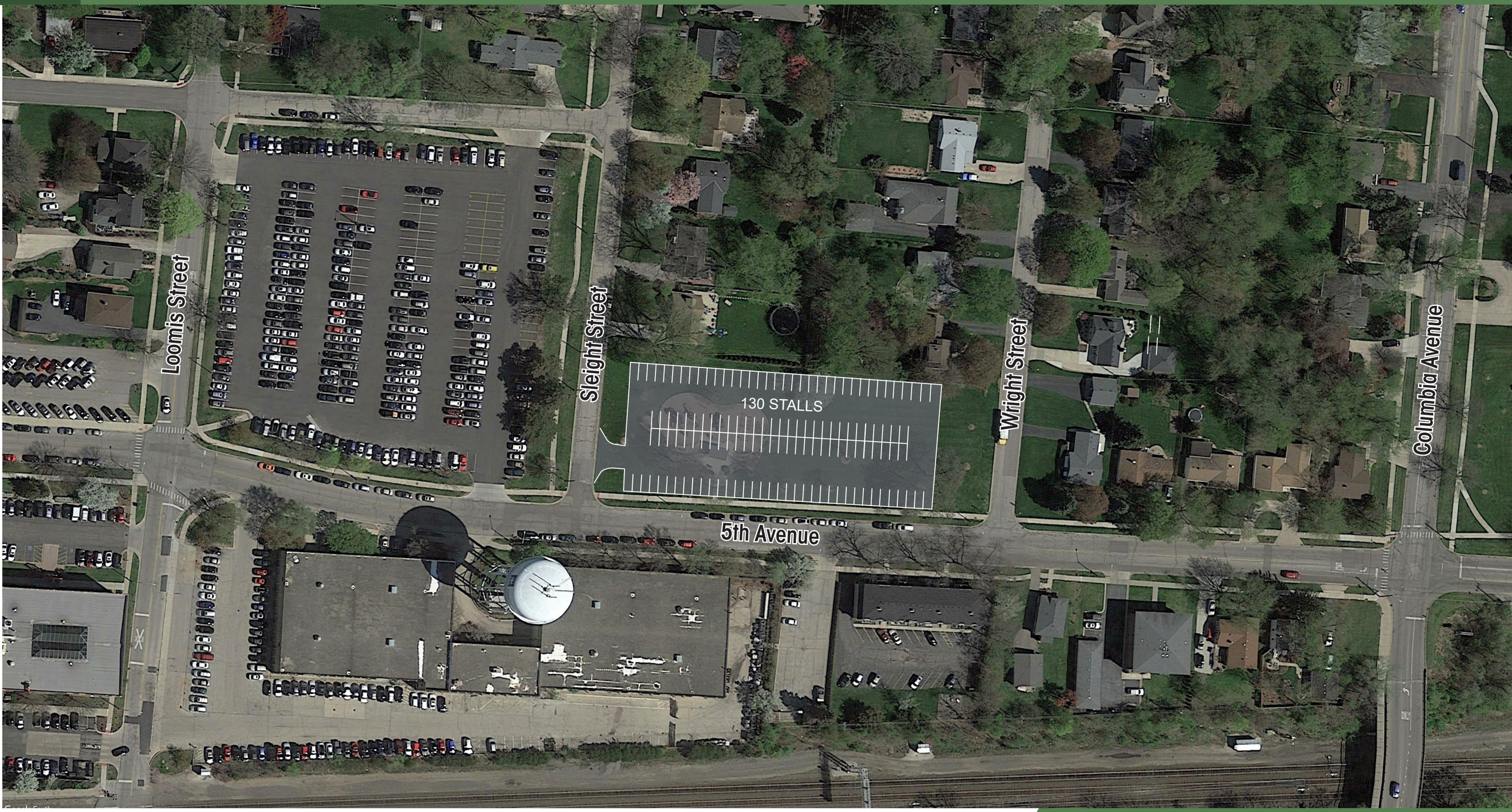
RYAN Kimley»Horn

TEMPORARY PARKING CONCEPT: OFF-STREET

WASHINGTON JR. HIGH SCHOOL

RYAN Kimley»Horn

TEMPORARY PARKING CONCEPT: OFF-STREET



KROEHLER PARK

RYAN Kimley»Horn

TEMPORARY PARKING CONCEPT: OFF-STREET

PARKING SUMMARY

EXISTING PARKING SUPPLY	115	SPACES
OPTION 3 PARKING SUPPLY	378	SPACES
NET INCREASE	**263**	**SPACES**

Source: Naperville Metra Station Bus Depot and Commuter Access Feasibility Study (March 2012), prepared by Traffic Analysis & Design, Inc. and Stanley Consultants, Inc.

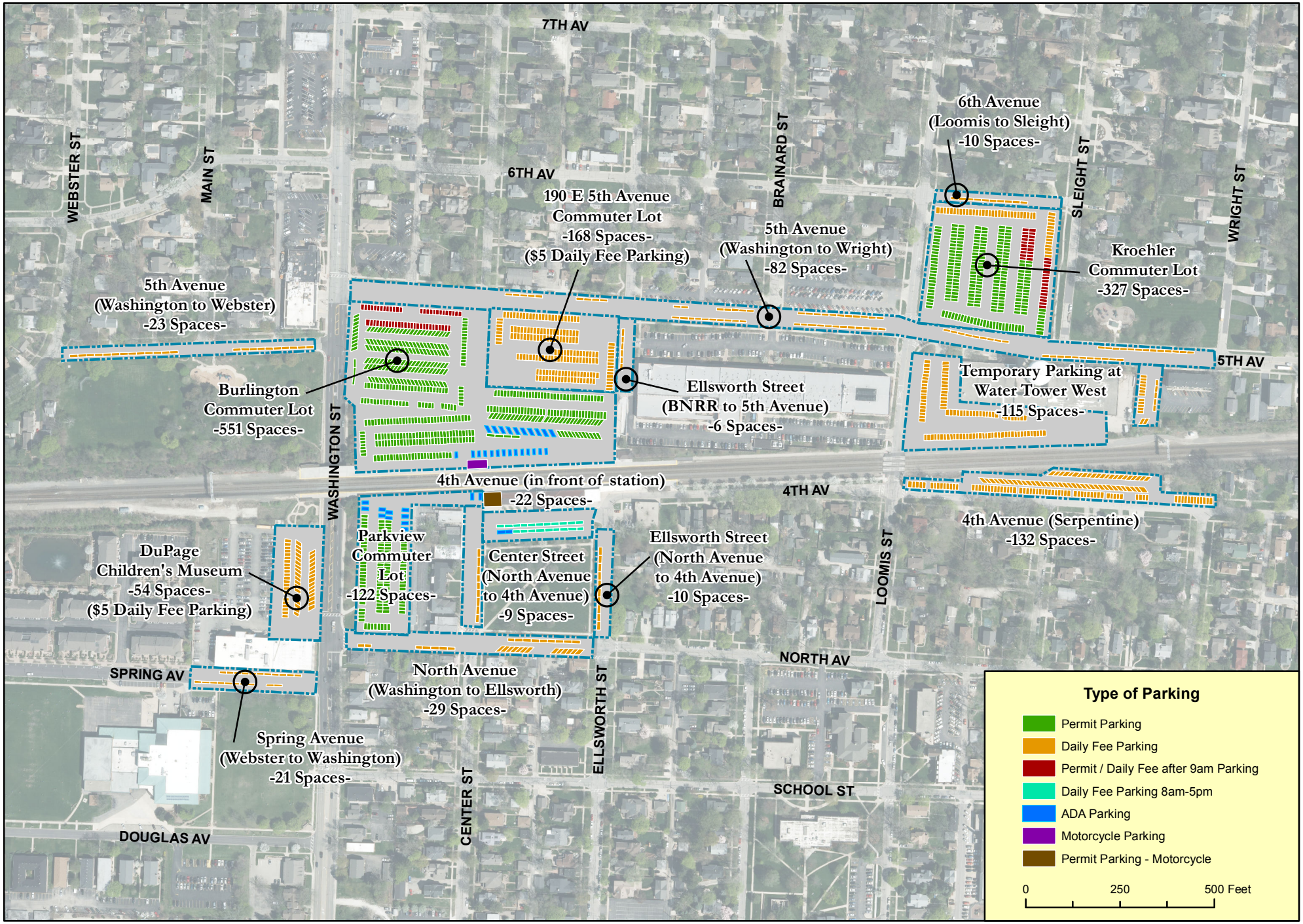
TEMPORARY PARKING CONCEPT: LOCAL STREETS

TEMPORARY PARKING CONCEPT: LOCAL STREETS

TEMPORARY PARKING CONCEPT: LOCAL STREETS

ALTERNATE TRANSPORTATION SOLUTIONS

- Redirect Commuters to Route 59 Lot
- Pace Suburban Bus
- New Park-and Ride Along Existing Transit Route(s)
- Temporary Remote Parking Lot(s) with Shuttle
- Carpool Program (e.g., Scoop)
  - Priority Carpool Parking
  - Guaranteed Ride Home Program
- Transportation Network Company (e.g., Uber, Lyft)
- Parking Attendants / Valet Parking
- Shared Parking with Adjacent Uses (e.g., church)
- Increase Bike Parking / Bike Share Program



Transportation, Engineering and
Development Business Group
Questions Contact (630) 420-6100
www.naperville.il.us
May 2017

City of Naperville
Naperville Metra Station Parking Locations

N W E S

5th Avenue - Existing Commuter Parking

Location	Lot	Count	Affected by Development	Development Count
1	Children's Museum	54	Yes	54
2	Parkview Commuter Lot	122	Yes	122
3	Burlington Commuter Lot	551	Yes	551
4	Boeker Parking Lot	168	Yes	168
5	Kroehler Commuter Lot	327	Yes	327
6	6th Avenue	10	Maybe	10
7	Water Tower	115	Yes	115
8	5th Avenue Street (East)	82	Maybe	82
9	5th Avenue Street (West)	23	No	0
10	Ellsworth Street (North)	6	Maybe	6
11	Ellsworth Street (South)	10	Maybe	10
12	4th Avenue (Serpentine)	132	No	0
13	4th Avenue (Station)	22	Maybe	22
14	North Avenue Street	29	Maybe	29
15	Center Street	9	Maybe	9
16	Spring Aveune	21	Maybe	21
	Total	**1681**	**Total**	**1526**

Transportation, Engineering and
Development Business Group
www.naperville.il.us
Date: 5/22/2018

City of Naperville

Commuter Lot Permit Holder Distribution

Legend

- P Burlington Lot
- P Kroehler Lot
- P Parkview Lot
- Quadrant Boundary

Permit Holder Breakdown by Quadrant

Quadrant	Burlington	Kroehler	Parkview	Total
Southwest	394	184	115	693
Northeast	74	37	8	119
Southeast	337	217	68	622
Northwest	87	38	9	134

PLANNING FOR THE FUTURE

As the service life of parking structures lengthen, technology and demographic changes could impact the buildings' usefulness. Can they be adapted for other uses? Will they need to be?

— Craig A. Shutt

HIGH CLEARANCE
The Ash Skyline Plaza in Fort Wayne, Ind., which combines seven stories of parking with first-floor retail and some office space, created 15-ft clearance on the first level to accommodate a bank's drive-through window. Higher clearances make it easier to adapt levels to commercial needs. Photo: Coreslab.

As precast concrete producers find creative methods to extend the service life of parking structures, this added resiliency and prolonged life cycle could prove to be a double-edged sword. While durability decreases maintenance and operating costs, it could make the structure obsolete if parking supply exceeds demand, or supply is not located where needed. With many technological advances and generational mindsets offering the potential to alter people's relationships with their automobiles, the industry is considering whether it needs to adapt, and in what form.

"Conversations about the future need and format of parking are not yet prevalent, but interest in these ideas is growing," says Anne Ellis, founder and CEO of Ellis Global in Washington, D.C., an AEC (architecture, engineering, and construction) technology and innovation consultant. "The conversation about adapting parking facilities to future needs currently is taking place among thought leaders rather than early adopters. In large part, that's because it's still unclear what trends will predominate and shape the future of parking."

The variety of trends coming to the fore makes it clear that assumptions about transportation, especially for short distances, are evolving, notes Sanjay Pandya, a parking practice builder and senior project manager with Kimley-Horn, a planning consultancy in Pleasanton, Calif. These trends include the steady movement of people into city centers, millennials' lessened interest in owning a car, the growth of car-sharing services, and cities putting more emphasis on pedestrian activities and providing and encouraging more public transportation, including light rail.

ADAPTING SPACES
The RWJ Fitness& Wellness Center in New Brunswick, N.J., includes levels of parking above and beside the commercial and retail space. Such designs offer potential for later adaptation to other uses if they are designed for that flexibility and future trends reduce parking demand. Photo: TimHaahs.

MOVEMENT TO URBAN CENTERS

"There has been a mass migration from suburbia to urban centers," says *The Parking Professional* magazine. In 2013, 2.3 million more people lived in metro areas than the previous year, according to U.S. Census Bureau data.

"The shift in population to America's metro areas has been increasing since 2010 with the economic recovery," says Jim Lewis, director of sales for architectural façade systems of Clark Pacific. Even so, suburban areas remain dominant, aided by people in rural areas moving to suburban centers. "America remains a largely suburban nation," according to a 2016 report by the Urban Land Institute.

The key lies in demographics, as those moving to urban centers are young professionals and baby boomers, who want easy access to entertainment. The growth of ride-sharing services, public transportation, and an emphasis on pedestrian access has lessened the need for them to own cars. Millennials have been less likely to obtain driver's licenses than previous generations, and they take fewer and shorter car trips, using alternative means of transportation. "Driving is not a social activity, which lessens their interest when there are other options for transportation." says Lewis.

The rise of transportation network companies (TNCs) has dramatically expanded the number of people who leave their cars at home and use ride-hailing apps to move short distances. At Dallas-Fort Worth International Airport in Texas, for instance, parking revenue was up in the first six months of the current fiscal year compared to last year, but it was nearly $4 million lower than projected, in part because of TNCs, according to Jenni Bergal at Pew Center.

FUNCTION DISGUISED
The new parking structure at Baylor University in Waco, Texas, features a façade design that disguises the building's function and smoothly blends in retail space. Adapting parking structures for future uses will require adapting exteriors to reflect those purposes. Photo: Carl Walker, a division of WGI.

AUTONOMOUS CARS' IMPACT

A significant game-changer could be the autonomous car, which dominates auto headlines today. Self-driving cars might not only drive passengers to a destination, they might then drive themselves away to be parked at a far location, explains Ellis. That could drastically change parking needs at large-volume sites such as airports and congested theater or entertainment districts.

"If drivers don't need parking in close proximity to their destination, which is often in congested areas with low supply and sky-high pricing, they might choose to use their own vehicle, which self-parks to transport them to events rather than take TNCs or public transportation," Ellis says. In essence, their own car, in which they're comfortable, could be used as a taxi service, parking miles away at a low rate and returning as soon as needed.

That could also change the type of parking needed. "If you are parking cars that self-park and can be retrieved automatically, you can use a more efficient parking layout than one requiring people to have access to the cars," Ellis points out. Self-parking vehicles can be parked closer together, and stair towers and elevators facilitating pedestrian access may not be necessary. "Designing parking structures for machines will be different than designing for people who control machines."

'Designing parking structures for machines will be different than designing for people who control machines.'

Some technology analysts predict subscription-based, on-demand vehicles will bring about the end of individual car ownership. But that scenario was challenged in a recent survey of building owners, developers, analysts, planners, designers, builders, and code officials conducted by Ellis Global for PCI. "Automated vehicles will be the death of mass transit," said one respondent. "We will need more parking, not less, as vehicles diversify in type and size."

The true unknown is what one respondent called the "personal connection" that people have to their cars and their personal spaces. "People use cars for storing and transporting things," notes

Photo: Carl Walker, a division of WGI.

Ellis. "They want to use their own car seats that they know were installed competently and by someone they trust. Individual modes of transport will be with us for a long time."

Some point to other examples of technological advances that were predicted to generate rapid changes in society, such as electronic books that would eliminate printed books. The tactile sensations and pricing, among other factors, have kept e-books from dominating the market. Likewise, despite much talk of the "paperless office," paper producers are still producing products.

Certainly, the recent Apple Park project in Cupertino, Calif., indicates the current state of requirements, regardless of new technologies. Apple's new precast concrete facility provides 11,000 parking spaces for 14,000 workers, because the city requires that many in its employee/parking ratio. Apple built more square footage to park employee cars than for office space. "Does that make sense for future needs?" *Curbed* magazine . "If companies don't require that much parking space, what will they do with it in the future?"

In some instances, companies are building their offices atop parking structures, using it as a base when footprints are tight. The Celgene headquarters in Summit, N.J., is one such project to take that approach, adding columns into the lower parking levels to support the steel-structured office levels above. (For more on this project, see the Overview article in this issue.) For such projects, being able to adapt those lower levels for office or commercial space in the future may provide significant benefits.

ADAPTING TO NEW USES

Mixed-use projects that incorporate parking levels especially need to consider future needs. Building flexibility for other purposes into these spaces could keep them useful and generate revenue that continues to keep the project successful even if parking needs decline. But can parking structures, with their unique design profile, durable construction, and specialized functions, adapt to other uses? Some say they can be adapted, but it will be easier if that need for adaptability is acknowledged upfront.

Other benefits to adapting unused parking space include the increases in property value if changes create higher value land usage, tax credits, and other advantages gained from sustainable adaptability rather than tearing down structures, and the added revenue that can be generated within the structure if new services are added—even minor adaptations such as turning one level into a refueling station and car wash, as many of the consolidated rental car facilities at airports now include.

"The tactics needed to adapt the function of parking structures are not a new design and construction consideration. These tactics have been employed previously," Ellis says. "But what is new is the concept of adapting for a future impacted by autonomous vehicles. There are many things that can be done to accommodate future scenarios."

'The tactics needed to adapt the function of parking structures are not a new design and construction consideration.'

Consider the electric vehicle. Many parking structures have added electrical infrastructure, she notes, to charge electric vehicles and to access solar panels that generate electricity to run the facility and more. Some are adding conduits, floor height, and space for future electrical needs.

Warehouses have long been adapted for residential units, notes Lewis, because their basic structure is durable and appealing, which is similar to what parking structures can offer. But the adaptations will be more extensive. "Substantial changes are needed to convert a space built for cars into one for humans, whether for housing, office space, or retail," he says. "But it can be done if they are designed for that adaptation from the start."

LMN Architects, for example, has announced plans for the 1.2-million-ft^2 skyscraper at 4th and Columbia Street in Seattle, Wash., that will include 840 residential units, 160,000 ft^2 of office space, 30,000 ft^2 of retail, and 400 parking spaces. That includes four floors of aboveground parking that can be converted to residential units.

"I feel we do have the responsibility, if the parking uses do change, to design to be able to adapt to that change," John Chau, a partner at the firm, told Wired.com in November 2016. The project is still being reviewed and won't open until 2019 or later.

Aiding this adaptability function for the project is that Seattle has already changed its parking minimums to reduce space requirements for projects near public transportation. More such changes by cities will be needed to encourage design changes if car usage drops and many of those in use remain on the street or park much further from the actual destination, eliminating the need for nearby parking for those vehicles.

Designers at Arrowstreet in Boston, Mass., also have considered the impact of new technologies on parking designs. By the time parking structures being permitted today are built, self-parking cars and autonomous vehicles likely will be a reality, notes Amy Korte, design partner. The firm's planners are forecasting a two-pronged approach to adapting to design needs.

PHASED EVOLUTION
Designers at Arrowstreet in Boston anticipate two phases of changes to parking structures in the coming years as autonomous vehicles become more popular. Renderings: Arrowstreet.

Phase 1, until 2025 or so, will include adjusting upper floors to create "hyper-efficient" parking layouts for autonomous cars while leaving lower levels more accessible. Phase 2, beginning in about 2025 and continuing for 10 years, will allow adaptation of upper floors to other uses, while lower floors will be re-laid out for autonomous cars that recharge as they wait for use. (For more on these concepts, see the renderings.)

Standalone projects offer different challenges than mixed-use projects that offer parking, Korte notes. "Standalone projects must evolve to address new technologies impacting user and fleet requirements. Most likely, they will be built more often on the outskirts of town, where cars will go to recharge until needed."

Arrowstreet is working on a design for a mixed-use structure in Boston's Seaport district using these concepts. The design for the residential/hotel/retail/parking building, which was permitted in 2014, was reengineered to adapt to anticipated changing parking needs. The initial plan, calling for three levels of below-grade parking for 643 cars, was revamped to offer one story of parking with a 15.5-foot ceiling. That height will allow stackers to be used, creating space for between 200 to 460 cars in a more efficient design.

"The goal is to design with short-term flexibility with higher ceiling heights to accommodate stackers if needed, or allow adaptation to other uses," Korte explains. The project is planned for completion in 2020. The changes saved costs, she adds, as it will save construction time and material by requiring fewer levels to be built. "We don't anticipate this change in design will add costs."

Their design already has been adapted. The plan provides space on the first floor to serve as pickup and queuing area for cars, but it's been redesigned to add space. "We realized there would need to be more space based on the multiple needs for parking in the mixed-use building." Currently, the plan is to use valets to transport cars to parking spaces.

WAYS TO ADAPT

Parking structures feature unique design elements that challenge their ability to adjust to other uses. But those restrictions aren't overwhelming. Some of the key areas to examine when considering future uses for excess parking spaces, according to Pandya, include:

- **Higher floor-to-floor heights.** By increasing ceiling heights to 15 ft on the first floor and 12 ft on upper floors, buildings can meet needs for commercial/retail space and ceiling heights of 9 ft and higher for office space with heating, ventilation, and air conditioning (HVAC) equipment added.
- **Removable interior ramps.** Floor framing can be designed to allow ramps to be easily eliminated to separate floors more effectively.

- **More accessibility.** Pandya suggests adding a 30-ft-wide light well between parking bays to provide space for future stair and elevator towers within each level. Placing perimeter stair and elevator cores outside of the building's footprint can facilitate removal of these structures, if needed, so better entries can be created.
- **Support for vertical expansion**. Columns, walls, and foundations can be designed to allow new levels to be added for residential or commercial space.
- **Higher floor loading.** Residential and commercial space requires higher design live loads than parking structures. A typical parking structure has a minimum-allowed live load of 40 lb/ft^2, but other uses might require 50 to 100 lb/ft^2, Lewis notes. Taking these considerations into account during the design phase can add flexibility for later adaptations.
- **Level flooring.** Parking structures typically offer sloped floors to aid vehicle circulation and drainage. This slope can be mitigated by providing additional floor drains.
- **Capabilities for new services**. Plan for future electrical services, HVAC, plumbing, and fire-protection services, including sprinklers. Allowing for electrical and mechanical chases that will accommodate duct work and cabling will make adjustments easier to any function, Pandya explains.

Many precast concrete producers report already being involved with projects that incorporate some of these tactics for adaptations. More than half, for instance, reported to Ellis Global that they have worked on projects in which higher live loads and increased floor-to-floor heights were provided. Other features in projects they have been involved with included flat floors, ability to reconfigure spaces, removable external ramps, and transformable façade systems. For more details, see Chart 1.

Many precast concrete producers report already being involved with projects that incorporate some of these tactics for adaptations.

At the same time, precast concrete producers indicated they have worked on projects that incorporated new technologies that are growing in popularity. More than half, for instance, said they have worked on designs that provided upgraded electrical capabilities to recharge electric vehicles. More than half also said they have assisted with designs to incorporate additional parking technologies of various kinds. Other high-scoring technologies included automated car-parking systems and autonomous parking systems designed for driverless cars. For more details, see Chart 2.

Although these changes may sound daunting (that is, expensive), they all can be accomplished without drastic alterations to plans. Precast concrete producers estimate that the alterations to structural designs would add about 10% to 15% to current pricing. "A low price point is important, because owners and developers don't want to boost their budget without some idea that the premium will pay off down the road," Ellis notes.

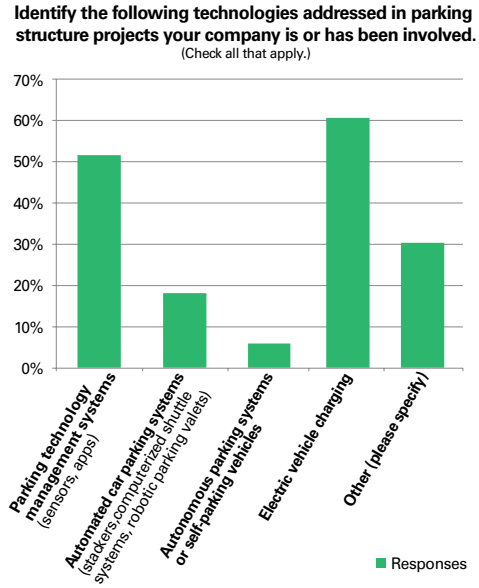


CHART 1. PRODUCERS INVOLVED
Precast concrete producers reported they had been involved with parking structure projects that incorporated a variety of new technologies, according to a recent survey by Ellis Global for PCI.

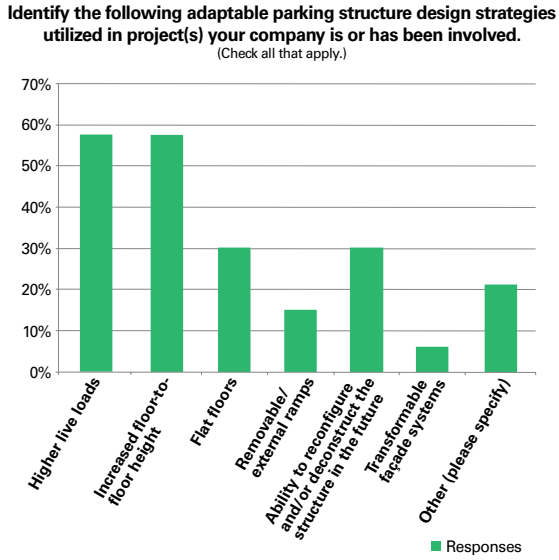


CHART 2. FEATURES INCLUDED
Parking structure designs often include features that make them more easily adapted to other uses in the future, according to respondents in a recent survey by Ellis Global for PCI.

FORECASTING CHANGE

The problem facing developers is that they must commit today to plans for a future that is rapidly evolving in ways no one fully comprehends yet. "There is neither clarity nor consistency concerning the potential impact of the autonomous vehicle on the built world," Ellis says.

BLENDING SPACES
The Zaragon West student resident in Ann Arbor, Mich., includes parking for 40 cars on levels two and three, behind a façade that blends with the rest of the building's residential nature. Such placement can add benefits when adapting space to other uses, if the parking levels were designed with that potential. Photo: maconochie photography.

That creates risks for developers. "Our buildings may be designed for a design life of 50 years or more, the investment period in the rate-of-return analyses may be shorter—7 to 10 years is common," she explains. "Cities and industry need to begin looking at ways they can smooth the connection between technology and those looking to build to suit future needs."

Regulatory and enabling infrastructures must be adapted and adopted to ease the path forward for those in the construction industry, she says. "AVs [autonomous vehicles] will require changes to regulatory standards, including building codes, legal, and insurance frameworks. These changes will take years to develop and adopt across many building jurisdictions in the United States."

That means reviewing current standards and generating an industry consensus and voice, with guidance and standards on matters outside current industry norms, she says. Cost information on each design alteration and more information on how they can fit into the existing International Building Code are required.

"The best people to understand how to adapt our cities, infrastructure network, and buildings to accommodate any changes are the planners, designers, builders, and regulators. They need to be part of the dialogue. Technology people seem to be discussing it, but few in the design industry are looking at it closely yet. I believe the first impact that autonomous cars and demographic trends will have will be seen on parking structures, but we don't know where and how much that will be."

These trends will evolve in stages, initially with the early adopters followed by a rise in popularity that makes these changes grow. Whether that will follow the trend line of growth in hybrid and electric cars, or be slower (or faster), can't be determined. "It will happen step by step, but how fast those steps come could be surprising," Ellis says. She anticipates the initial deployment of autonomous cars that will begin to impact parking structure uses will come in the next 10 years.

Key indicators may provide clues to the force of the impacts, she notes. "Look to what the tech giants—Apple, Google, IBM, Tesla, etc.—are building and what technologies they are investing in." The caveat there, as seen at the new Apple headquarters, is that even large technology companies are restricted by what local zoning and building ordinances require, especially if they lag behind even the most recent codes.

She also suggests keeping abreast of TNC investments, as well as news of improvements to electric vehicles and battery advancements, which could enhance electric car appeal. City, state, and federal officials, including state departments of transportation, also need to be part of the discussion, to encourage changing policies and increasing incentives to prepare for the future as developments arise.

One good sign, as shown in the design concepts by LMN, Arrowstreet, and others, is that awareness of the potential for adaptive reuse has begun to appear and make its way into conceptual plans. "Awareness of these concepts is growing among planners and owners," says Ellis. "Now, it has to make its way to architects, engineers, contractors, and suppliers. The diversity of A/E/C perspectives will help ensure the approaches are constructible and cost-efficient."

Those conversations should include precast concrete producers, she stresses. "Precast producers know how to be efficient and effective, and they are involved in a large majority of the decisions on parking structures. They know how to meet owners' needs and create efficient designs. We need more discussions about what those needs are and what the future holds for parking structures during the service life of those being planned today. We need to help our clients plan and prepare for the future."

- Employees on Naperville's trains, from conductors to ticket managers, are BNSF employees. While Metra owns the engines and train cars, all tracks and other equipment are owned by BNSF.

- The BNSF line is the busiest of the Metra system, providing 20% of all passenger trips in 2015.

- According to a 2014 survey, commuter access to the station is as follows:
    - 51% of riders drive themselves to the 5th Avenue station.
    - 21% carpool or are dropped off via auto.
    - 15% use public transit.
    - 12% walk or bike to the station.
    - 1% use other methods.

  System-wide, 52% of riders drive to their Metra station.

- System wide, Metra ridership decreased 2.2% in 2017 from 2016, while the BNSF line ridership decreased 0.6%.

- Metra sees an increase in commuters riding 2-3 days per week, rather than 5 days per week. Monthly pass sales dropped 5.3% in 2017, while ten-ride tickets increased 6.5%.

- Addition or removal of trains on a Metra line requires a system-wide study to document compliance with the Title VI of the Civil Rights Act of 1964.

- Most trains in the Metra system are 10-cars long; only 1 track at Union Station can support an 11-car train.

- When not in use, Metra stores trains and cars in yards downtown and in Aurora. Presently, these yards are at capacity.

- Metra is investing $350,000,000 in Positive Train Control (PTC). This federally-mandated system will result in another level of safety for train operation. Once installed, it is expected to add $20,000,000 per year in operating costs, approximately $0.25 per ticket sold.

- Metra expects to be implementing PTC until 2020.

- Due to the implementation of PTC, Metra has published a new schedule for the BNSF line. This proposed schedule includes changing an AM inbound local train to an express train from the Naperville station.

- Weekday station boarding at Naperville, and total BNSF line ridership, has remained steady for the past 10 years:

Weekday Station Boardings Over Time			
	Fall 2006	Spring 2014	Fall 2016
Aurora	2,180	2,107	1,936
Route 59	5,001	5,793	5,874
Naperville	3,734	4,112	4,002
Total BNSF Line	**55,439**	**54,686**	**54,751**

- There is no wait for quarterly permits at the Route 59 station, since 2010. Quarterly permits are available.

- There are 1,840 people on the downtown station wait lists. Of these, 333 already have a permit but have applied for a different location.

- The City completes monthly counts of available commuter parking at the Naperville station. Average usage of daily fee spaces is 99%, and permit spaces is 88%.

- Pace operates 20 bus routes which serve the Naperville station. Seventeen of these 20 routes come from south of 5th Avenue.

- In 2012, the City completed the *Naperville Metra Station Bus Depot and Commuter Access Feasibility Study.* This study investigated various local options for a bus depot. Federal funding was applied, and denied, for this project.

APPENDIX D

Pedestrian Safety & Connectivity Details

PEDESTRIAN SAFETY & CONNECTIVITY

TABLE OF CONTENTS

RELEVANT LINKS

Group Input Summary
Action Plan
Naperville Metra Station Bus Depot and Commuter Access Feasibility Study
2009 5th Avenue Study
Pace Design Guidelines

Ryan Companies US, Inc.
111 Shuman Boulevard, Suite 400
Naperville, IL 60563

p: 630-328-1100
ryancompanies.com

MEETING AGENDA & NOTES

SUBJECT:	Pedestrian Safety/Connectivity Working Group #1	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/12/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Patty King	Jen Louden	Curt Pascoe
	Mary Mansfield	Andy Hynes	Kyle Schott
	Steve Purduski		
	Mary Lou Wehrli		

Introductions

Background Information

- Group Input Session
- 2009 5th Avenue Study
- Pace Design Guidelines
- 2012 Bus Depot Study

Working Group Action Plan

Group reviewed the goals and action plan

Discussed the Working Group activity Matrix

Commuter and Pedestrian Route Review

- Discussed widening of the sidewalks surrounding the Washington bridge
- Discussed the possibility of aligning 5th and Spring/North
- Commuters will always take the most direct route from point A to B, even it if means walking through brush
- Possibility of opening a tunnel that would go under the tracks from Kendall Park and align with Main St. All group members appeared to be supportive of this
- Difficult to cross Washington at any point in the area as is

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- Pedestrian routes on the north side of the tracks are busiest at Loomis and 5th - commuter and school traffic

Box Site Training Session

Open Discussion

Next Meeting Focus:

- Pedestrian Priorities Map
- Review/Discuss Potential Improvements

MEETING AGENDA & NOTES

SUBJECT:	Pedestrian Safety/Connectivity Working Group #2	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/25/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Patty King	Jen Louden	Curt Pascoe
	Mary Mansfield	Kelly Dunne	Kyle Schott
	Steve Purduski		Rory Fancler
	Mary Lou Wehrli		Peter Lemmon

Introductions and Recap Mtg #1

- Multiple members heard positive comments from Park Addition residents regarding the closure and cul-de-sac of Sleight north of 5th Ave.

Kimley-Horn Presentation Documents were distributed.

Background Information – Updated on BOX

- Group Input Session - Pending
- 2009 5th Avenue Study – Pedestrian Filtered
- Pace Design Guidelines – Pedestrian Filtered
- 2012 Bus Depot Study – Pedestrian Filtered

Kimley-Horn Presentation

- Pedestrian Priorities Map
    - Commuter and School Routes reviewed
    - Some designated walk routes go west to Mill St. for Pilgrim Addition
    - NCC routes and connections were discussed.
    - KHA to update map as W side of Sleight and Wright do have sidewalks.
    - Loomis and North – Realignment and Safety were discussed.
- Crossing Treatments/Safety Improvements

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- Yield to Pedestrians sign was installed at Scholl and Washington. Residents to see a benefit.
- Additional Options – Zig Zag pavement markings before walk, school crossing and speed zone signs.
- Need an at-grade crossing option at Loomis/tracks added to this discussion document.

- Rail Crossing Treatments – KHA to update tunnel photo to accurately reflect the $3-5 Million price point.
- Rail Crossings – Case Studies
  - ADA via ramps (not stairs)
  - Incorporate elevators/stair towers of pedestrian bridges into buildings for cost efficiency.

5th Ave and Washington Cross Sections – KHA will general street cross sections for review.

Open Discussion

- Reviewed street realignments being discussed in the traffic working group.
- Concern over landscaping buffer along Washington. 5' minimum or just use 10' of hardscape.
- KHA to add a page to the presentation regarding upgrading the Washington underpass (bridge treatments, not sidewalk improvements.)
- Arlington Heights tunnel cost?

Next Meeting Focus:

- Connectivity Improvement Matrix
- Practical Safety Improvements and Costs

MEETING AGENDA & NOTES

SUBJECT:	Pedestrian Safety/Connectivity Working Group #3	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	5/10/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Patty King	Jen Louden	Curt Pascoe
	Mary Mansfield	Kelly Dunne	Kyle Schott
	Steve Purduski		Rory Fancler
	Mary Lou Wehrli		Peter Lemmon

Recap Mtg #2

Working Group Update

- Parking – Podium Option and Preferred Parking Locations
- Traffic/Transportation

Connectivity and Safety Improvement Matrix

- Pros/Cons
- Costs
- Washington St. and 5th Avenue Cross Sections

Discuss Pedestrian Working Group Deliverable

Next Meeting Focus:

- Draft Deliverable Review

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MEETING AGENDA & NOTES

SUBJECT:	Pedestrian Safety/Connectivity Working Group #4	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	5/24/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Patty King	Jen Louden	Curt Pascoe
	Mary Mansfield	Kelly Dunne	Kyle Schott
	Steve Purduski		Rory Fancler
	Mary Lou Wehrli		Peter Lemmon

Recap Mtg #3

Draft Deliverable Review

- Concept Principles
  - WG Comments Received
  - Principles vs. Summary Information
- Working Group Summary Review
- Back Up Documentation Review

Combined Working Group Deliverable Discussion

Combined Working Group Meeting

- Format
- Presenters

Open Discussion

Next Meeting Focus:

- Final Deliverable Review
- Combined Working Group Meeting

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MEETING AGENDA & NOTES

SUBJECT:	Pedestrian Safety/Connectivity Working Group #5	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	5/29/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Patty King	Jen Louden	Curt Pascoe
	Mary Mansfield	Kelly Dunne	Kyle Schott
	Steve Purduski		Rory Fancler
	Mary Lou Wehrli		Peter Lemmon

Recap Mtg #4

Final Pedestrian Deliverable Review

- Working Group Members went through the working group narrative and concept principles, line by line, editing as necessary.
- Additional notes were made and the revision was sent out for final comment on 5/30/18

Combined Working Group Deliverable Discussion

- A high level review of each working group deliverable was completed.
- Working group member questions were discussed.

Combined Working Group Meeting

- Format – Panel Discussion with Ryan acting as facilitator.
- Presenters – Working group member presenters were identified. Further information on exact presentation materials will be given to the group by 5/31/18.

Open Discussion

- Additional discussion regarding the next steps, including the concept process.

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CONSIDERATIONS IN FAVOR OF CONSTRUCTING A NEW UNDERPASS CONNECTING KENDALL PARK AND THE DCM LOT

Addressing the combined function of Washington Street vehicular traffic and pedestrian passage is critical to ensuring the overall success of the proposed 5th Avenue Development. The 5th Avenue Development has the potential to be a first-class example of a transit-oriented development for the rest of the country, but the potential of the project will not be fulfilled without complete and safe integration into the existing neighborhoods.

When considering a new pedestrian tunnel along the west side of Washington Street, the following should be given consideration.

- **Infrastructure and long term planning goals.** Municipalities that have constructed pedestrian tunnels in the past 10 years include Lombard, Wheaton, Western Springs, West Chicago, Highland Park, Berkley, Bellwood and Glen Ellyn. Naperville should be on the forefront of this trend and should not forego an opportunity to modernize our infrastructure in a manner that is consistent with a more pedestrian and bicycle friendly future that will be less reliant on automobiles and will emphasize public health and reduced vehicle emissions.

- **Safety.** Multiple pedestrians have already been hit by vehicles on the west side of Washington Street, and one child was killed at the intersection of 5th and Washington. The development will bring more cars and residents into the area. A potential parking garage at the DCM lot will increase the potential for collisions unless a safe alternative to cross the train tracks on the west side of Washington Street is provided.

- **Usage.** Currently, pedestrians utilize Mill Street or the pedestrian crossing options on the east side of Washington Street (i.e., east sidewalk at Washington Street viaduct, Ellsworth Street underpass, Loomis Street at-grade crossing). It is anticipated that a new tunnel connecting Kendall Park and the current DCM lot would redirect existing pedestrian traffic to the new safe, comfortable, and convenient route and increase pedestrian activity in the area. In order to further evaluate the need and benefits associated with the tunnel, an analysis of existing pedestrian activity and future usage of the new tunnel should be completed which could include demographics such as school enrollment, population density, Metra ridership/mode share and future parking locations . This study should capture pedestrian and bicycle activity for residents, students, and commuters.

- **Accessibility.** A new tunnel connecting Kendall Park and the current DCM lot would provide safe and accessible passage for wide segments of Naperville's population, including, but not limited to:

    - Local students who would be able to walk and bike to Washington Jr. High and Naper School, likely reducing the number of parents driving children to school.
    - Bicyclists from the immediate and surrounding neighborhoods.

- Safe and practical access across the train tracks for people with disabilities.
- A new tunnel with improved bicycle storage options at either end would provide commuters with convenient and streamlined access to the stairs to the train station.
- Access to local business and amenities on both the north and south side of the train tracks, including but not limited to Kendall Park, the proposed 5th Avenue Development, the downtown shopping and dining district, Jewel and business at Mill and 5th, including DeEtta's, EndureIt Sports, the Alive Center, etc.

- **Alternative to Current Sub-Standard Options.** An open and well-lit tunnel separate from any vehicular traffic would be far superior to the current options to cross the train tracks, for reasons including, but not limited to the following:

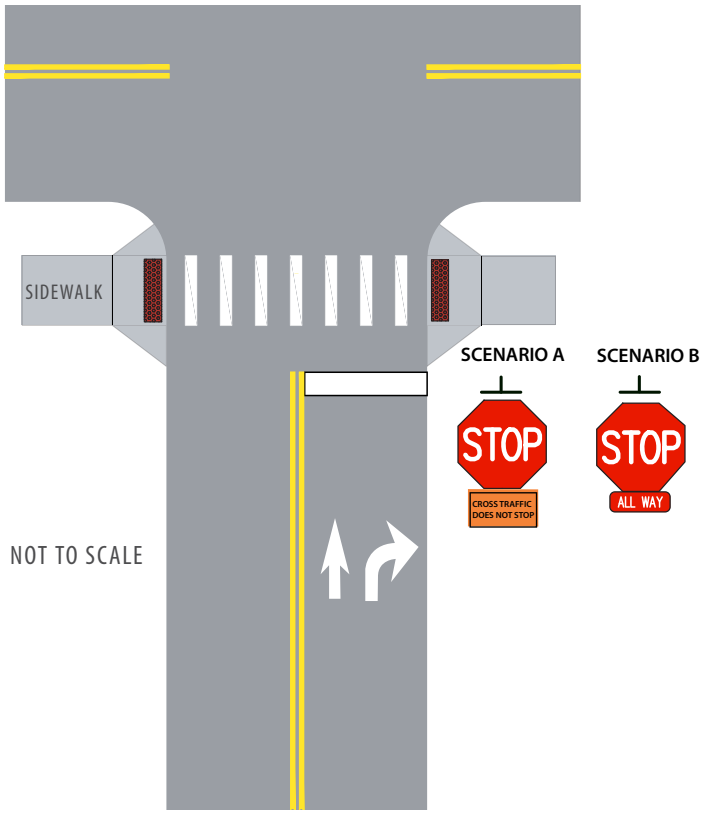
  - Mill Street – A very narrow and enclosed sidewalk with concerns regarding safety, lighting, flooding and zero parkway between the street and sidewalk on the south end of the underpass.
  - Washington Street – Steep and narrow sidewalks and pedestrian congestion makes passage difficult for bicyclists, strollers and wheelchairs, and impossible if a pedestrian is walking down the sidewalk from the other direction.
  - Loomis Street – At-grade crossing is unsafe and freight trains can cause unforeseen delays.
  - Naper Blvd. – Impractical and unsafe.

- **Overwhelming Support.** A tunnel connecting Kendall Park to the DCM lot is overwhelmingly supported by Pilgrim's Addition, Naperville Station, WHOA and the Naperville Bicycle Club. A tunnel at this location would provide safety, access and connectivity, and would eliminate the need for re-opening the "cow tunnel" at Webster Street. Connecting Kendall Park to the DCM lot would literally and figuratively bring the neighborhoods together, and would strengthen Naperville's status as a forward-thinking community that cares about its people and its commerce.

PEDESTRIAN SAFETY & CONNECTIVITY: KEY ROUTES & INTERSECTIONS

PEDESTRIAN SAFETY & CONNECTIVITY: CROSSING TREATMENTS

A Intersection Crossing: Stop Sign Control



APPLICATION

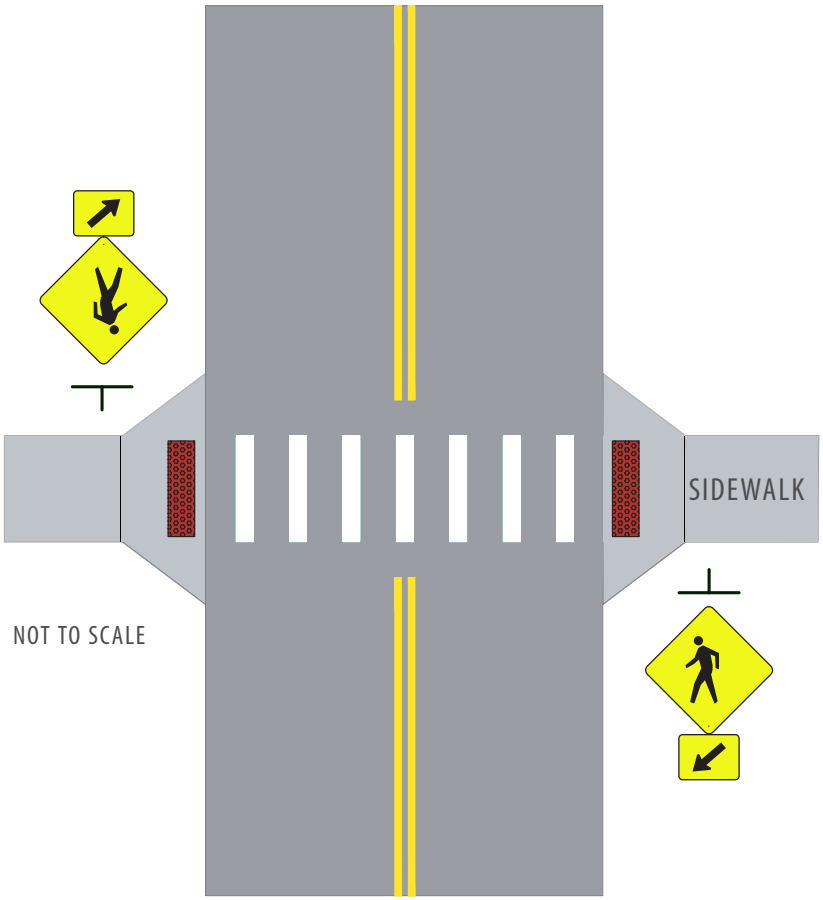
- Crash history
- Observed conflicts
- Limited visibility on one or more approaches

CONSIDERATIONS

- At two-way stop, stop sign should be placed on the lower-volume street
- Stop signs should not be used as speed control or traffic calming
- May be supplemented with "Stop Ahead" signage

PEDESTRIAN SAFETY & CONNECTIVITY: CROSSING TREATMENTS

B Midblock Crossing: Standard Treatment



APPLICATION

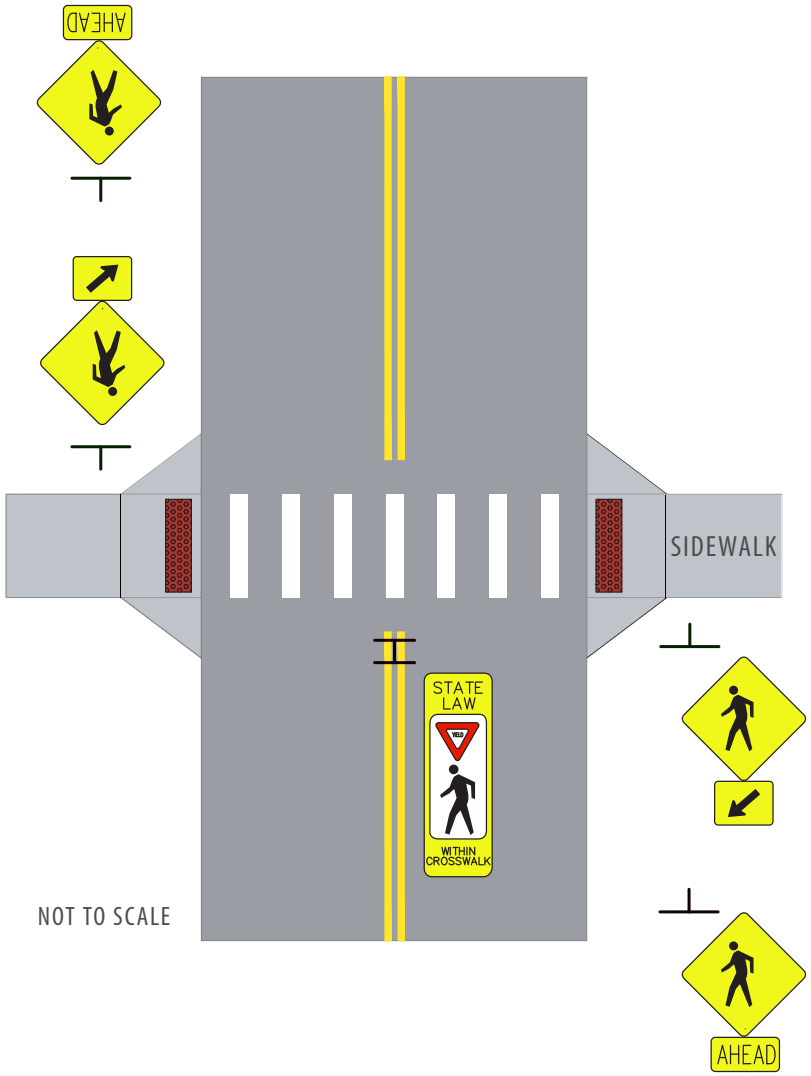
- Facilitate crossings where there is consistent pedestrian demand
- Create a direct route to key destinations
- Locate away from nearest side street or driveway so that drivers turning onto the primary street notice pedestrians

CONSIDERATIONS

- Difficult to use safely for pedestrians with visual impairments (unable to determine gap in traffic or stopped traffic) compared to a stop condition
- Multi-lane crossings should provide a median or refuge island
- Review pedestrian visibility (e.g., onstreet parking, lighting)
- Provide advance crosswalk warning signs for vehicle traffic

PEDESTRIAN SAFETY & CONNECTIVITY: CROSSING TREATMENTS

C Mid-Block Crossing: Increased Signage



APPLICATION

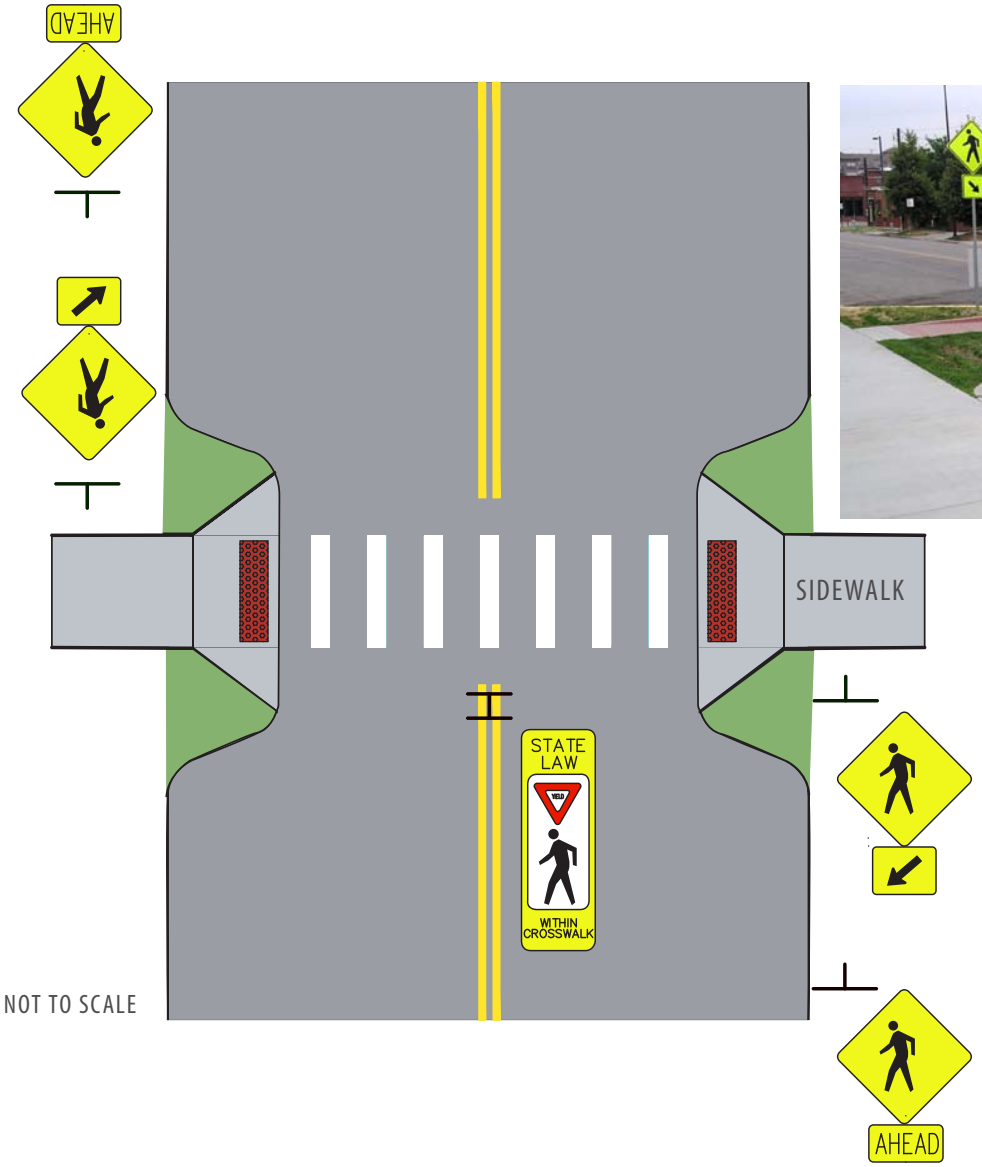
- Facilitate crossings where there is consistent pedestrian demand
- Create a direct route to key destinations
- Locate away from nearest side street or driveway so that drivers turning onto the primary street notice pedestrians
- Encourage motorist compliance

CONSIDERATIONS

- Difficult to use safely for pedestrians with visual impairments (unable to determine gap in traffic or stopped traffic) compared to a stop condition
- Multi-lane crossings should provide a median or refuge island
- Review pedestrian visibility (e.g., onstreet parking, lighting)

PEDESTRIAN SAFETY & CONNECTIVITY: CROSSING TREATMENTS

D Mid-Block Crossing: Curb Extensions



APPLICATION

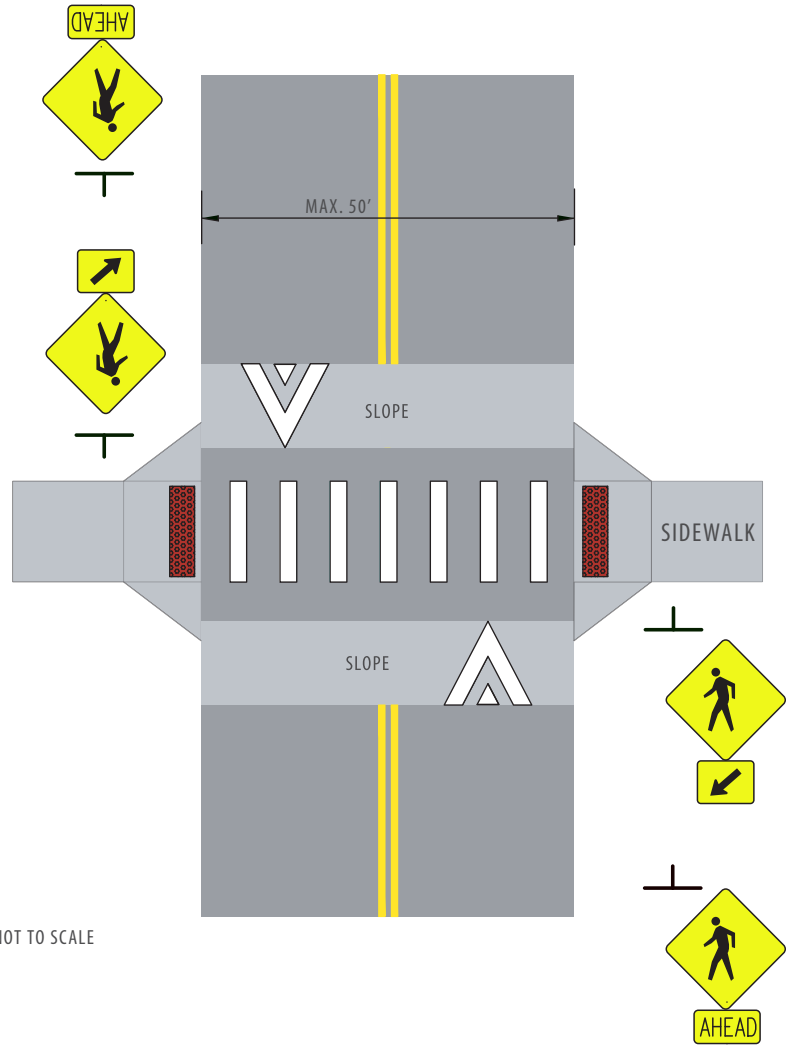
- Enhance visibility of pedestrians
- Reduce crossing distance
- Facilitate crossings where there is consistent pedestrian demand
- Create gateway to lower speed area
- Reduce speed of turning vehicles

CONSIDERATIONS

- Difficult to use safely for pedestrians with visual impairments (unable to determine gap in traffic or stopped traffic) compared to a stop condition
- Must be designed to accommodate drainage
- May require fire hydrant relocation

PEDESTRIAN SAFETY & CONNECTIVITY: CROSSING TREATMENTS

E Mid-Block Crossing: Speed Table



NOT TO SCALE

APPLICATION

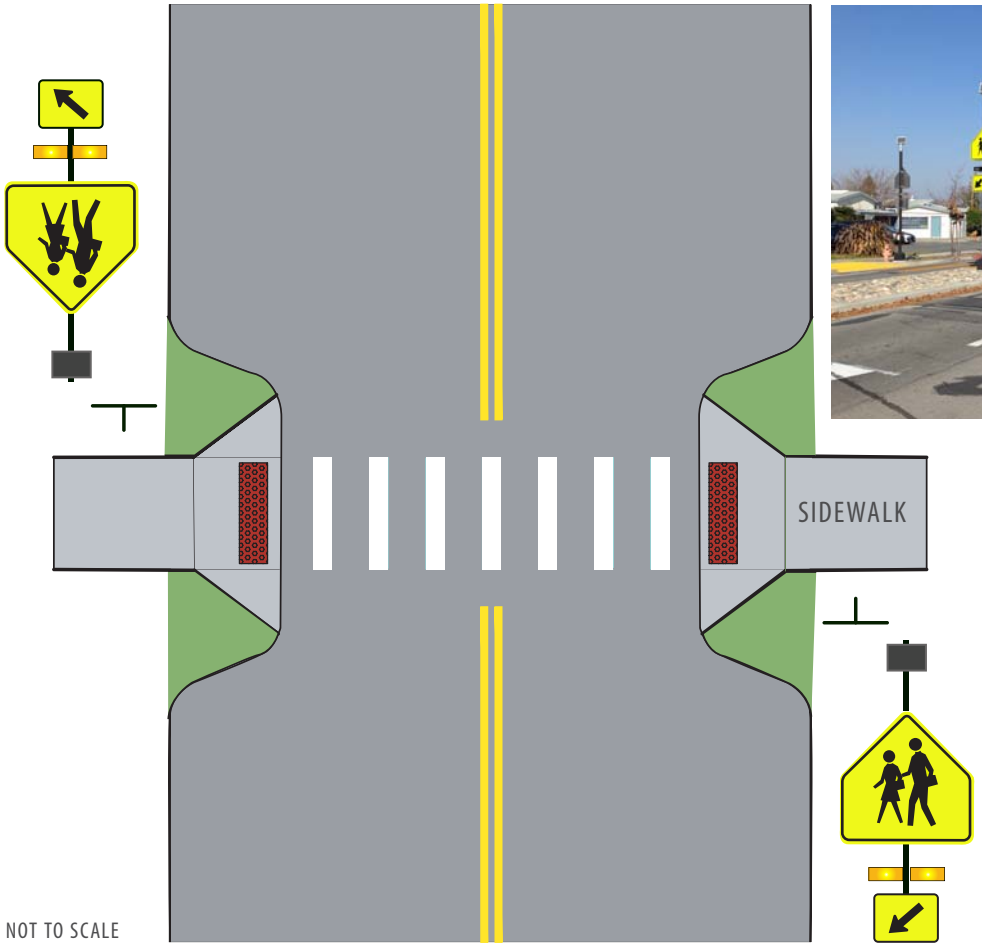
- Enhance visibility of pedestrians
- Traffic calming device
- Create gateway to lower speed area

CONSIDERATIONS

- Difficult to use safely for pedestrians with visual impairments (unable to determine gap in traffic or stopped traffic) compared to a stop condition
- Use of distinctive materials may require additional maintenance but highlight and define the speed table
- Typically preferred by emergency response over speed humps
- Existing City of Naperville policy prohibits speed tables and speed humps

PEDESTRIAN SAFETY & CONNECTIVITY: CROSSING TREATMENTS

F Mid-Block Crossing: Rectangular Rapid Flashing Beacon



NOT TO SCALE

APPLICATION

- Increase driver yielding rates to pedestrians
- Lower cost alternative to traffic signal

CONSIDERATIONS

- Requires FHWA permission for use
- Regular use of RRFBs could decrease effectiveness; should be used at key uncontrolled intersections only
- To minimize glare during nighttime conditions, an automatic signal dimming device should be used

PEDESTRIAN SAFETY & CONNECTIVITY: CROSSING TREATMENTS

G Mid-Block Crossing: In-Pavement Lighting

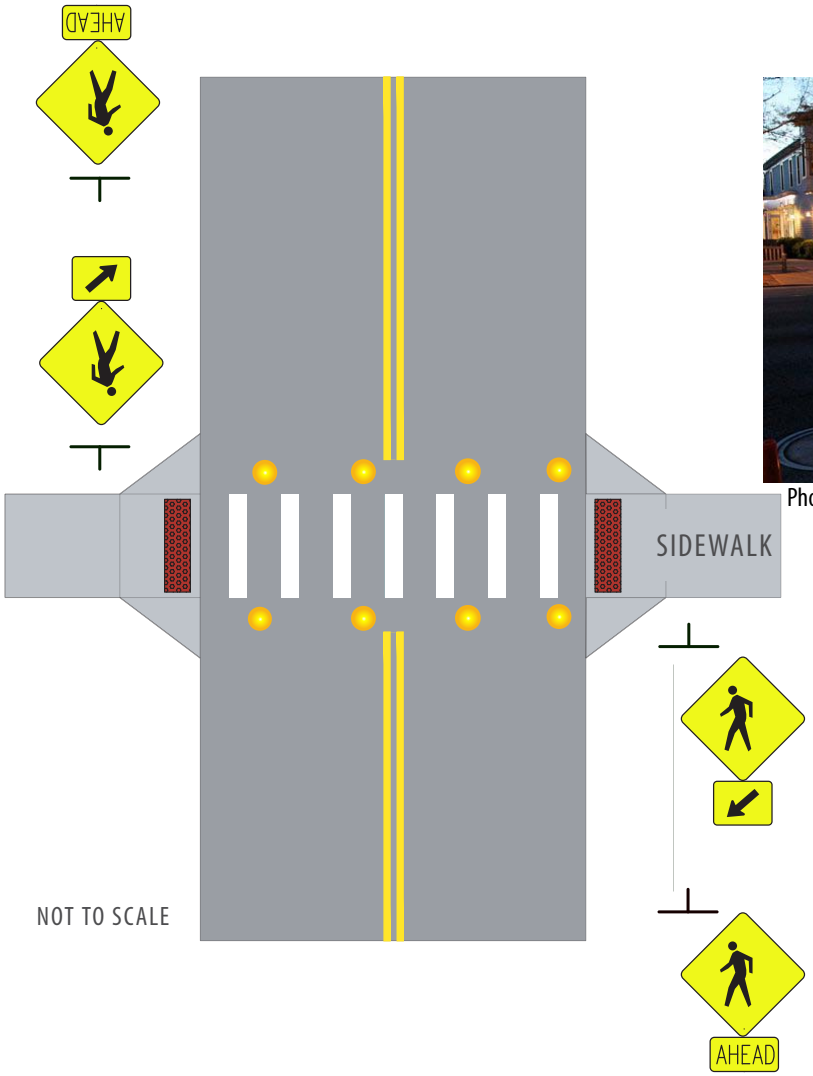


Photo Credit: Lightguard Systems

APPLICATION

- Encourage motorist compliance
- Enhance visibility of crosswalk

CONSIDERATIONS

- Difficult to use safely for pedestrians with visual impairments (unable to determine gap in traffic or stopped traffic) compared to a stop condition
- Actuated by pedestrian, lights may be misinterpreted as control device

PEDESTRIAN SAFETY & CONNECTIVITY: RAIL CROSSING TREATMENTS

A Railroad Crossing: Re-Open Cow Tunnel

Photo Credit: Naperville Cow Tunnel, Chicago Tribune

CONSIDERATIONS

- Potential for significant utility conflicts and unknown risks
- ADA access (e.g., elevator or ramp)
- Stormwater drainage
- Amtrak, BNSF, and Metra coordination required for shutdowns during construction
- Amtrak/BNSF/Metra service disruptions during construction (could require 48- to 72-hour shutdown)
- Security concerns associated with a tunnel (e.g., limited visibility)
- High-level review suggests the structural integrity of the cow tunnel may require repairs
- Cost to modernize and repurpose to current code could exceed cost of a new underpass
- Available right-of-way limitations

PEDESTRIAN SAFETY & CONNECTIVITY: RAIL CROSSING TREATMENTS

B Railroad Crossing: Construct New Underpass

Photo: Deerfield Road Pedestrian Underpass, Deerfield, IL

CONSIDERATIONS

- Security concerns associated with a tunnel (e.g., limited visibility)
- ADA access (e.g., elevator or ramp)
- Stormwater drainage
- Amtrak, BNSF, and Metra coordination required for shutdowns during construction
- Amtrak/BNSF/Metra service disruptions during construction (could require 48- to 72-hour shutdown)

COST ESTIMATE: $3-5 million

- Structure is not temperature controlled except at elevators (if provided in lieu of ramps)
- Considers precast box culverts
- Assumes 10 foot clear dimension inside of the tunnel.
- Excludes site civil and utilities

PEDESTRIAN SAFETY & CONNECTIVITY: RAIL CROSSING TREATMENTS

C Railroad Crossing: Construct New Pedestrian Overpass / Skyway

Photos: Anoka CRTV Pedestrian Bridge, Anoka, MN

CONSIDERATIONS

- Create sense of security and desired level of service
- Opportunity to integrate with development or parking deck
- Site impacts and coordination with BNSF, Metra, and Amtrak for closures during construction
- ADA access (e.g., elevator or ramp)
- Aesthetics and height
- Maintain conductor line of sight to signal stations

COST ESTIMATE: $2.5-4 million

- Structure is not temperature controlled except at elevators
- Assumes a pre-engineered steel truss; minimal architectural features
    - 70-foot span and 12-foot wide truss
- Includes hydraulic elevator at each headhouse
- Reflects headhouse elevation to allowed for the required clear height between top of rail and bottom of bridge structure
- Excludes site civil and utilities

RAIL CROSSINGS: CASE STUDIES

Photo Credit: Rendering of pedestrian tunnel at Lombard Metra Station, Village of Lombard

LOMBARD METRA STATION - UNDERPASS (COMPLETED)

- Construction initiated in Spring 2014, completed in Summer 2015
- Included new ADA ramps and stairs to the platform and tunnel and construction of roof canopies over the platform
- Removed at-grade crossing
- Construction cost (estimate): $8.1 million + $1.6 million platform rehabilitation
- Coordination with Metra and Union Pacific Railroad

Photo: Aerial view of pedestrian underpass adjacent to the Wheaton College stadium (former Chase Street right-of-way)

WHEATON COLLEGE - UNDERPASS (COMPLETED)

- Included new ADA ramps and stairs to the tunnel
- Removed existing Chase Street at-grade crossing
- Cost estimate roughly $3 million
- Coordination with Metra and Union Pacific Railroad

RAIL CROSSINGS: CASE STUDIES

Photo Credit: Rendering of pedestrian overpass at Glen Ellyn Metra Station, Village of Glen Ellyn

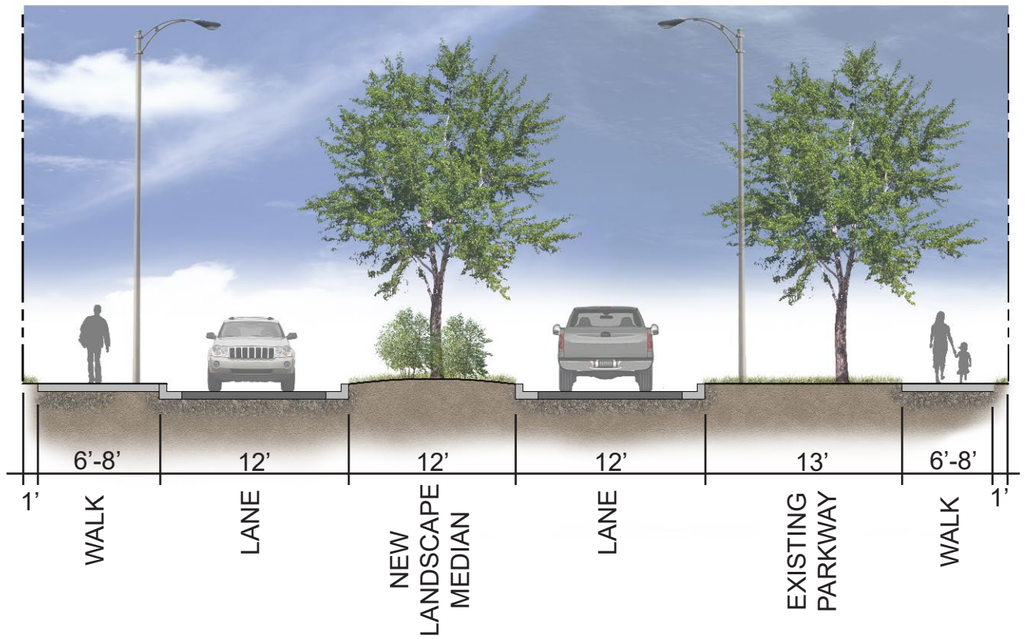
GLEN ELLYN METRA STATION - OVERPASS (CONCEPT)

- Village completed feasibility study to evaluate overpass and underpass alternatives
- ADA access to be provided by elevator or ramp
- Preliminary construction cost estimate roughly $3 million
- Coordination with Metra and Union Pacific Railroad

Photo Credit: Rendering of pedestrian overpass concept at Mundelein Metra Station, Village of Mundelein

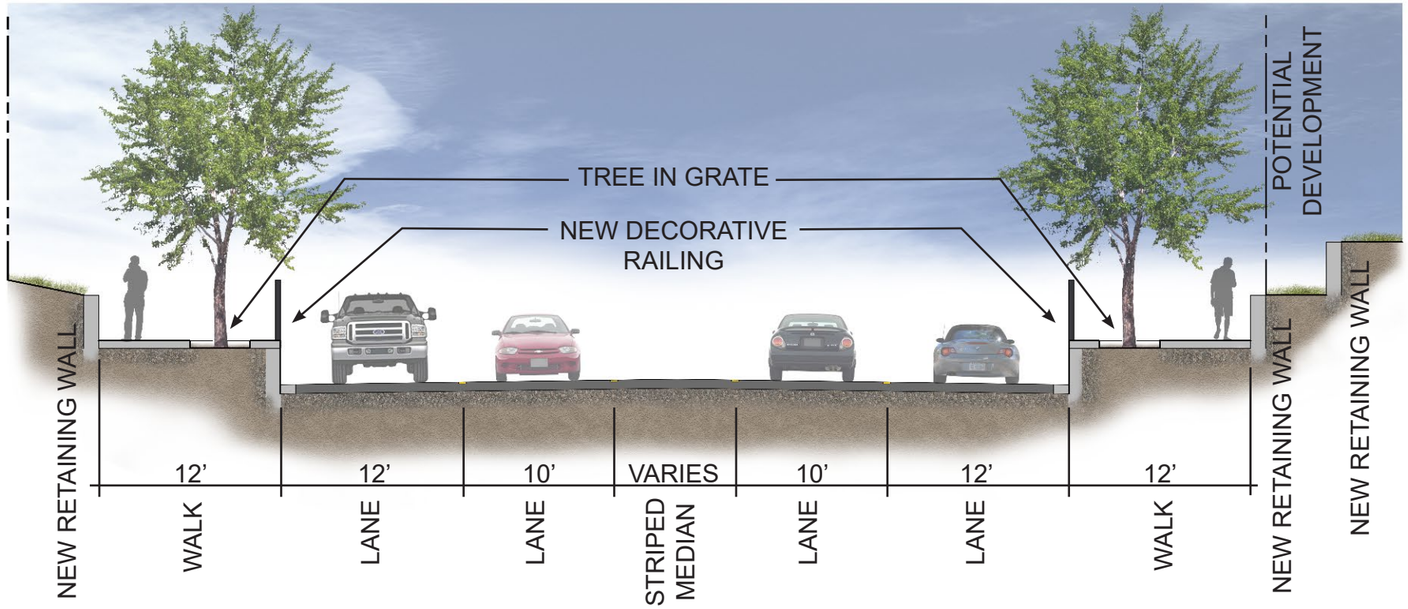
MUNDELEIN METRA STATION - OVERPASS (CONCEPT)

- 24-feet tall with a tower on each side of the tracks
- Includes stairs, ramps, elevators, and canopies covering walkways
- Preliminary construction cost estimate roughly $5 million
- Construction anticipated early 2019
- Coordination with Metra and Canadian National



POTENTIAL 5TH AVENUE MEDIAN IMPROVEMENTS (VIEW WEST)

NOTE: 66’ RIGHT-OF-WAY.
ASSUMES EXISTING OUTER CURBS TO REMAIN.



POTENTIAL WASHINGTON STREET SIDEWALK IMPROVEMENTS (VIEW NORTH)

NOTE: DIMENSIONS BASED ON WASHINGTON STREETSCAPE INCLUDED IN 5TH AVENUE STUDY ADOPTED BY NAPERVILLE CITY COUNCIL ON DECEMBER 1, 2009.
SIDEWALK WIDTHS MAY VARY (MINIMUM 6’ CLEAR).

5th AVENUE REDEVELOPMENT | NAPERVILLE, IL

RYAN COMPANIES
MAY, 2018

Kimley»Horn

0 5 10 180 N

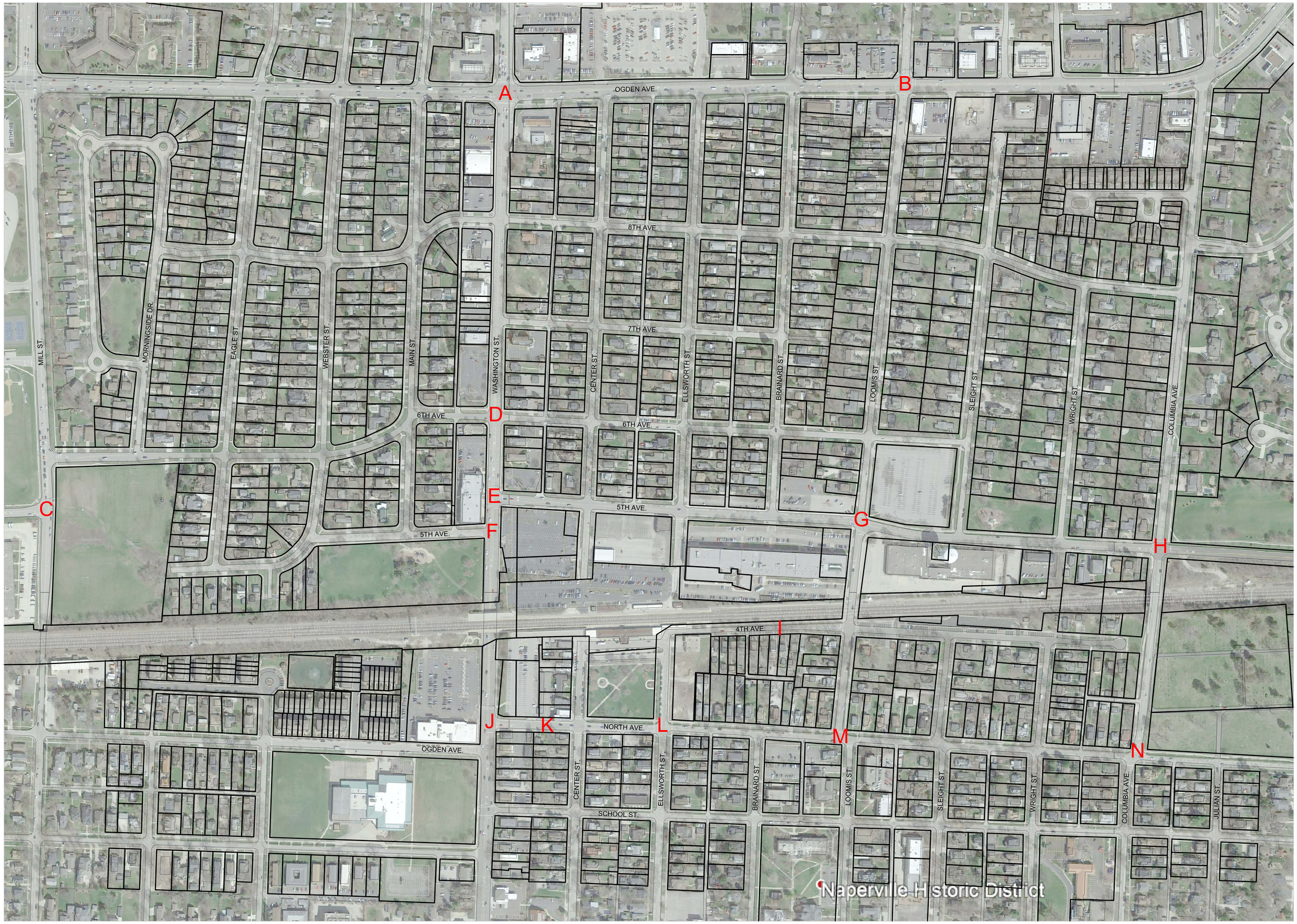
	Pedestrian Improvement	Design Elements	Construction Cost (Planning-Level Estimate)[1]	Notes
UNSIGNALIZED INTERSECTION CROSSING				
A	Stop Sign Control	Stop Sign	$1,000	assumes installation of one sign in each direction of travel
		Crosswalk / Stop Bar	$1,500	assumes continental/ladder crosswalk across two-lane cross-section and standard stop bar on on two intersection approaches
		ADA Curb Ramps	$10,000	assumes two ADA curb ramps and truncated domes/detectable warning material includes demolition and restoration
			$12,500	
MID-BLOCK CROSSING				
B	Standard Treatment	Pedestrian Crossing Sign	$1,000	assumes installation of one sign in each direction of travel
		Advance Pedestrian Crossing Warning Sign	$1,000	assumes installation of one advance warning sign in each direction of travel
		Crosswalk	$1,500	assumes continental/ladder crosswalk across two-lane cross-section
		ADA Curb Ramps	$10,000	assumes two ADA curb ramps and truncated domes/detectable warning material includes demolition and restoration
			$13,500	
C	Increased Signage	In-Pavement Sign	$500	assumes bi-directional sign
		Advance Pedestrian Crossing Warning Sign	$1,000	assumes installation of one advance warning sign in each direction of travel
		Crosswalk	$1,500	assumes continental/ladder crosswalk across two-lane cross-section
		ADA Curb Ramps	$10,000	assumes two ADA curb ramps and truncated domes/detectable warning material includes demolition and restoration
			$13,000	

	Pedestrian Improvement	Design Elements	Construction Cost (Planning-Level Estimate)[1]	Notes
D	Curb Extensions	Pedestrian Crossing Sign	$1,000	assumes installation of one sign in each direction of travel
		Advance Pedestrian Crossing Warning Sign	$1,000	assumes installation of one advance warning sign in each direction of travel
		Crosswalk	$1,500	assumes continental/ladder crosswalk across two-lane cross-section
		ADA Curb Ramps	$10,000	assumes two ADA curb ramps and truncated domes/detectable warning material includes demolition and restoration
		Curb Extensions	$10,000-$15,000	includes curb extension on each side of the roadway excludes utility or fire hydrant relocation excludes drainage modifications
			$23,500-$28,500	
E	Speed Table	Pedestrian Crossing Sign	$1,000	assumes installation of one sign in each direction of travel
		Advance Pedestrian Crossing Warning Sign	$1,000	assumes installation of one advance warning sign in each direction of travel
		Crosswalk	$1,500	assumes continental/ladder crosswalk across two-lane cross-section
		ADA Curb Ramps	$10,000	assumes two ADA curb ramps and truncated domes/detectable warning material includes demolition and restoration
		Speed Table	$40,000	excludes drainage modifications assumes concrete speed table
			$53,500	
F	Rectangular Rapid Flashing Beacon (RRFB)	RRFB Signage	$15,000-$20,000	includes RRFB in each direction of travel
		Advance Pedestrian Crossing Warning Sign	$1,000	assumes installation of one advance warning sign in each direction of travel
		Crosswalk	$1,500	assumes continental/ladder crosswalk across two-lane cross-section
		ADA Curb Ramps	$3,000	assumes two ADA curb ramps and truncated domes/detectable warning material includes demolition and restoration
		Curb Extensions	$10,000-$15,000	excludes drainage modifications
			$30,500-$40,500	

	Pedestrian Improvement	Design Elements	Construction Cost (Planning-Level Estimate)[1]	Notes
G	In-Pavement Lighting	In-Pavement Lighting	$30,000-$40,000	assumes two-lane cross-section installation required on both sides of crosswalk for entire length of crosswalk includes pedestrian pushbutton activation
		Advance Pedestrian Crossing Warning Sign	$1,000	assumes installation of one advance warning sign in each direction
		Crosswalk	$1,500	assumes continental/ladder crosswalk across two-lane cross-section
		ADA Curb Ramps	$10,000	assumes two ADA curb ramps and truncated domes/detectable warning material includes demolition and restoration
			$42,500-$52,500	
BNSF RAIL CROSSING / UNDERPASS				
H	Loomis Street At-Grade Crossing	Pedestrian Gate	$200,000-$250,000 (total)	assumes new rail crossing signal equipment
		Sidewalk Extension Across BNSF Tracks / Right-of-Way		excludes drainage; excludes railroad logistics (e.g., flagger, closure)
		ADA Curb Ramps		assumes ADA curb ramp connection to future sidewalk along east side of Loomis Street north of BNSF tracks and truncated domes/detectable warning material includes demolition and restoration
I	Ellsworth Street Underpass	General Safety and Aesthetic Enhancements	$2.25-$3.75 million	assumes resurfacing of the walls and ceiling assumes blindside waterproofing from inside the tunnel for the walls and ceiling to mitigate water leakage issues (note: this waterproofing system is not effective in stopping water leakage; alternative waterproofing systems would require closure of the tracks for up to 72 hours for installation) assumes new lighting in the tunnel assumes new barriers on the walls leading to the tunnel on the north side of the tracks excludes mechanical ventilation of the tunnel assumes construction would not disrupt train traffic

	Pedestrian Improvement	Design Elements	Construction Cost (Planning-Level Estimate)[1]	Notes
J	Washington Street Underpass	Reconstruct Bridge for Enhanced Washington Street Streetscape / Sidewalk[2]	$5.5-$7.0million	reflects bridge replacement in the same location assumes bridge would be approximately 90' long x 85' wide (extended length to accomodate wider pedestrian path) bridge width is assumed to remain the same as existing condition excludes shoofly for temporary train service excludes raising profile of train tracks or lowering Washington Street (existing bridge is posted for 14'-5" of vertical clearance) excludes utility relocations
J2	Washington Street Underpass	Enhance Washington Street Bridge Finishes/Aesthetics Only	$250,000-$500,000	Decorative Metal Panels along concrete walls and over road way inclusive of dimensional lettering and panel lighting. LED lighting under viaduct.
K	Re-Open Cow Tunnel		$3.0-$5.0 million	structural integrity of the cow tunnel would likely require repairs cost to modernize and repurpose to code could exceed cost of a new underpass.
L	New Underpass	Precast Box Culvert	$3.0-$5.0 million	assumes structure is not temperature controlled except at elevators (if provided in lieu of ramps) 10-foot clear dimension inside the tunnel excludes site civil and utilities
M	Pedestrian Overpass / Skyway	Pre-Engineered Steel Truss Hydraulic Elevator at each Headhouse	$2.5-$4.0 million	reflects 70-foot span and 12-foot wide truss assumes structure is not temperature controlled except at elevators (if provided in lieu of ramps) headhouse elevation to allow for the required clear height between top of rail and bottom of bridge structure excludes site civil and utilities reflects minimal architectural features
5th Avenue Improvements - Washington to Sleight				

	Pedestrian Improvement	Design Elements	Construction Cost (Planning-Level Estimate)[1]	Notes
	Median Improvements	New between block medians with landscaping from Washington to Sleight.	$617,500	Reflects $325/LF Cost - Saw Cutting, Asphalt removal, new median/curb, mill/resurface roadway, restriping and landscape
	Pedestrian Lights	City of Naperville Standard Street Lighting	$596,600	Reflects 314/LF
			$1,214,100	
Washington Avenue Improvements - 5th to North				
	Sidewalk Improvements	New sidewalk, retaining wall detail with landscape from 5th Ave. to North Aenue on the East and West sides of Washington. Widening under brindge not inclued.	$1,789,200	Reflects $2,100/LF Cost - Saw Cutting, Concrete removal, new concrete sidewalks, hardscape retaining walls, landscaping and decorative railings.
	Pedestrian Lights	City of Naperville Standard Street Lighting	$267,528	Reflects 314/LF
			$2,056,728	
[1] Assumes the pedestrian crossing improvement is included with a comprehensive project in lieu of individual small-scale improvement projects.				
[2] For purposes of this planning-level cost estimate, assumed dimensions of Washington Street streetscape included in the 5th Avenue Study, adopted by Naperville City Council on December 1, 2009.				


A
B
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L
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N
OGDEN AVE.
8TH AVE.
7TH AVE.
6TH AVE.
5TH AVE.
4TH AVE.
NORTH AVE.
SCHOOL ST.
MILL ST.
MORNINGSIDE DR.
EAGLE ST.
WEBSTER ST.
MAIN ST.
WASHINGTON ST.
CENTER ST.
ELLSWORTH ST.
BRAINARD ST.
LOOMIS ST.
SLEIGHT ST.
WRIGHT ST.
COLUMBIA AVE.
JULIAN ST.
Naperville Historic District

APPENDIX E

Storm Water Details

STORM WATER

TABLE OF CONTENTS

ADDITIONAL RELEVANT DOCUMENTS

Group Input Summary
Action Plan
Naperville Storm Water Viewer
Naperville Storm Water Ordinance Page

Ryan Companies US, Inc.
111 Shuman Boulevard, Suite 400
Naperville, IL 60563

p: 630-328-1100
ryancompanies.com

MEETING AGENDA & NOTES

SUBJECT:	Stormwater Working Group #1	START TIME	4 PM
LOCATION:	Ryan Offices	END TIME:	5:30 PM
		DATE:	4/2/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Russ Alber	Bill Novak	Curt Pascoe
	Christopher Drew	Ray Fano	Kyle Schott
	Dominic Nugent	Andy Hynes	Councilwoman Gustin
	Greg Scalia	Councilman Coyne	

Introductions

- Councilwoman Gustin joined the Group

Background Information

- Reviewed Storm Water Map of Resident Complaints (Group Input). Group noted that all complaints were north of the tracks.
- Reviewed City's Storm Water Infrastructure Online. This interactive maps shows storm sewers and connection points throughout the City.
- Group discussed history of design and flooding in the area. Staff noted that through the 1970s, smaller pipes were often used to increase overland flows.
- Group reviewed existing topographic and discussion of different causes of flooding concerns.

Working Group Action Plan

- Group reviewed the goals and action plan

Update from City Staff

- Staff confirmed that WBK Engineering is studying the Park and Pilgrim Addition drainage areas, and potential improvements and locations for stormwater infrastructure improvements
- City is currently TVing pipes in the Park and Pilgrim neighborhoods, looking for obstructions or broken/collapsed structures. To date, none have been found.

Box Site Training Session

Open Discussion

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Naperville, IL 60563

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Next Meeting Focus:

- Review and identify storm water design requirements for new development
- City Consultant update
- Overland Flow Map

MEETING AGENDA & NOTES

SUBJECT:	Stormwater Working Group #2	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/18/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Russ Alber	Bill Novak	Curt Pascoe
	Christopher Drew	Ray Fano	Kyle Schott
	Dominic Nugent	Andy Hynes	Councilwoman Gustin
	Greg Scalia	Councilman Coyne	

Introductions

Review of Previous Meeting

Update Map of Resident Complaints

- Reviewed map of resident complaints against map of stormwater infrastructure and topography.
- Identified suspected reasons for localized flooding (sags, capacity, overland flows, etc.)

Outflow Routes

- Reviewed graphic of outflow routes; where each lot in the 5th Avenue development connects to the City infrastructure, and the routing of those pipes to their eventual discharge.

Development Requirements

- City staff gave an overview of the history of stormwater ordinances in the City of Naperville & DuPage County
- City noted that any new development is subject to the current stormwater ordinance
- Current ordinance considers both water quantity and water quality, each with separate triggers and requirements.
- City discussed the use of Adaptive Storm Water storage, its intended goals and relationship to the current ordinance

Update from City Staff

- Staff had received a draft report from WBK, but City staff had questions and additional research for the consultant to complete.

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Open Discussion

- Group noted this is a complex and technical topic, with various causes and potential solutions.
- Care and time must be taken to communicate final designs and proposals to the community at large.

Next Meeting Focus:

- Review Draft Storm Water Matrix
- Review City consultant deliverable

MEETING NOTES

SUBJECT:	Stormwater Working Group #3	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/30/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Russ Alber	Bill Novak	Curt Pascoe
	Christopher Drew	Ray Fano	Kyle Schott
	Dominic Nugent	Andy Hynes	Councilwoman Gustin
	Greg Scalia	Councilman Coyne	

Review of Previous Meeting

Update Map of Resident Complaints

Overflow Routes

Development Requirements

Update from City Staff – Bill Novak provided clarification of two areas overland flow direction. Curt to update map.

Stormwater Matrix – Potential Improvements inside and outside the Development were reviewed.

- Narrative and map of each location and it's ability to help storm water was explained and reviewed. Edits made based on group discussion.
- Questioned to the group if this deliverable was appropriate for public consumption. Response of the group was yes.
- Bill Novak provided some additional direction of other options to be placed into the matrix.
- Model Shows crossover of resident comment and model flooding at Sleight Sag, Ellsworth Sag, Main St. Sag, 5th and Eagle.
- Does the city have a definition of flooding? – Bill Novak commented that any flooding into the structure. Habitable structures take higher priorities.
- One solution may not provide relief for all areas.
- Bill Novak will get a ball park storage requirement (1, 10, 20 acre feet?) for 5th and Eagle improvement. It is a very large volume and improvements at Burlington and Kendall park may benefit the area slightly but will not solve the issue. Cost is close to $250K per acre foot for vault storage (Kyle/Curt to review).
- Outflow Map was reviewed during the discussion
- Viable Solutions include

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- Kroehler Lot – 8th and Sleight (Vault or Pond)
- Burlington Lot – Ellsworth and possible 5th/Eagle if there were maybe 10-20 acre feet of storage. (Vault)
- Kendall Park – 5th/Eagle and Possibly the Main sag (Vault or Pond)

- 5th/Eagle and Main St. Sag are the hardest areas to solve.

100 Year Flood Map – Was reviewed as part of the Stormwater Matrix

Consultant Update / Interim Results – Results are still pending

Consultant Deliverables – **NEXT MEETING DATE WILL BE BASED ON THE CITY CONSULTANT'S DATE FOR DELIVERABLE RESULTS. DATE PENDING.**

Open Discussion

- Conceptual Vault Design at various lots was discussed.
- Reviewed parking fit test to identify effect of parking on the "viable solution" lots.
- Reviewed North and Washington intersection options to further understand the impact of parking on the Children's Museum lot.
- Team to start cost estimates for various options.

Next Meeting Focus:

- Review City consultant deliverable
- Discussion of cost estimates

MEETING AGENDA & NOTES

SUBJECT:	Storm Water Working Group #4	START TIME	10 AM
LOCATION:	Ryan Offices	END TIME:	11:30 AM
		DATE:	5/25/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Russ Alber	Bill Novak	Curt Pascoe
	Christopher Drew	Ray Fano	Kyle Schott
	Dominic Nugent	Andy Hynes	Councilwoman Gustin
	Greg Scalia	Councilman Coyne	

Storm Water Conceptual Analysis

- Reviewed the conceptual analysis & findings by WBK
  - Kroehler lot, Burlington lots, Kendall Park, Mill St. soccer fields
  - Noted Kendall Park is too small to address the concerns around 5th and Eagle
- Discussed proposed options (pond vs vault) and impacts to concept and existing land uses
- Compared costs of various options
- Reviewed deliverables for the Working Group product

Next Steps

- Review storm water working group narrative
- Review final planning-level budgets

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MEETING AGENDA & NOTES

SUBJECT:	Storm Water Working Group #5	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	5/31/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	Russ Alber	Bill Novak	Curt Pascoe
	Christopher Drew	Ray Fano	Kyle Schott
	Dominic Nugent	Andy Hynes	Councilwoman Gustin
	Greg Scalia	Councilman Coyne	

Storm Water Improvement Budgets

- Reviewed the storm water improvement planning-level budgets
- Compared costs between surface detention and underground vaults
- Discussed operation of proposed storm water improvements; multi-purposes uses, etc.
- Discussed use of 10-year storm event for conceptual analysis

Working Group Narrative

- Reviewed and modified the storm water working group narrative
- Discussed the Concept Principals, and added Additional Considerations to the narrative

Next Steps

- Discussed format and intention of the June 4th Combined Working Group meeting
- Brainstormed key topics to share during the panel session

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10TH AV
OGDEN AV
8TH AV
7TH AV
6TH AV
5TH AV
4TH AV
NORTH AV
SPRING AV
DOUGLAS AV
BOX CAR AV
SCHOOL ST
PEARSON CR
MORNINGSIDE DR
WEBSTER ST
MAIN ST
WASHINGTON ST
CENTER ST
LOOMIS ST
SLEIGHT ST
WRIGHT ST
COLUMBIA ST
WINDHAM LN
PLANK
BNRR
NORTH ST
EAGLE ST
BRAINARD ST
ELLSWORTH ST
G RAIL DR
MILL ST
N
Contours
Contours
Discharge Point
FES Outlet
Headwall
NPDES Outfall
Other
Outlet Box
Standard Outlet
Unknown
Structures
Catch Basin
FES Inlet
Inlet
Inlet Box
Manhole Closed Lid
Manhole Open Lid
Roof Drain Inlet
Headwall
Unknown
Fitting
Bend
Connector
Cross
L
Other
T
Y
Weirs
Weirs
Channels
Ditch
Paved
Stream
Conduit
Below-Grade
Culverts
Below-Grade
Storm Hookups
Storm Hookups
Reservoirs
Wet
Dry
Tank
Water Quality
Overflow
Overflow
0
150
300
600
900
1,200
Feet

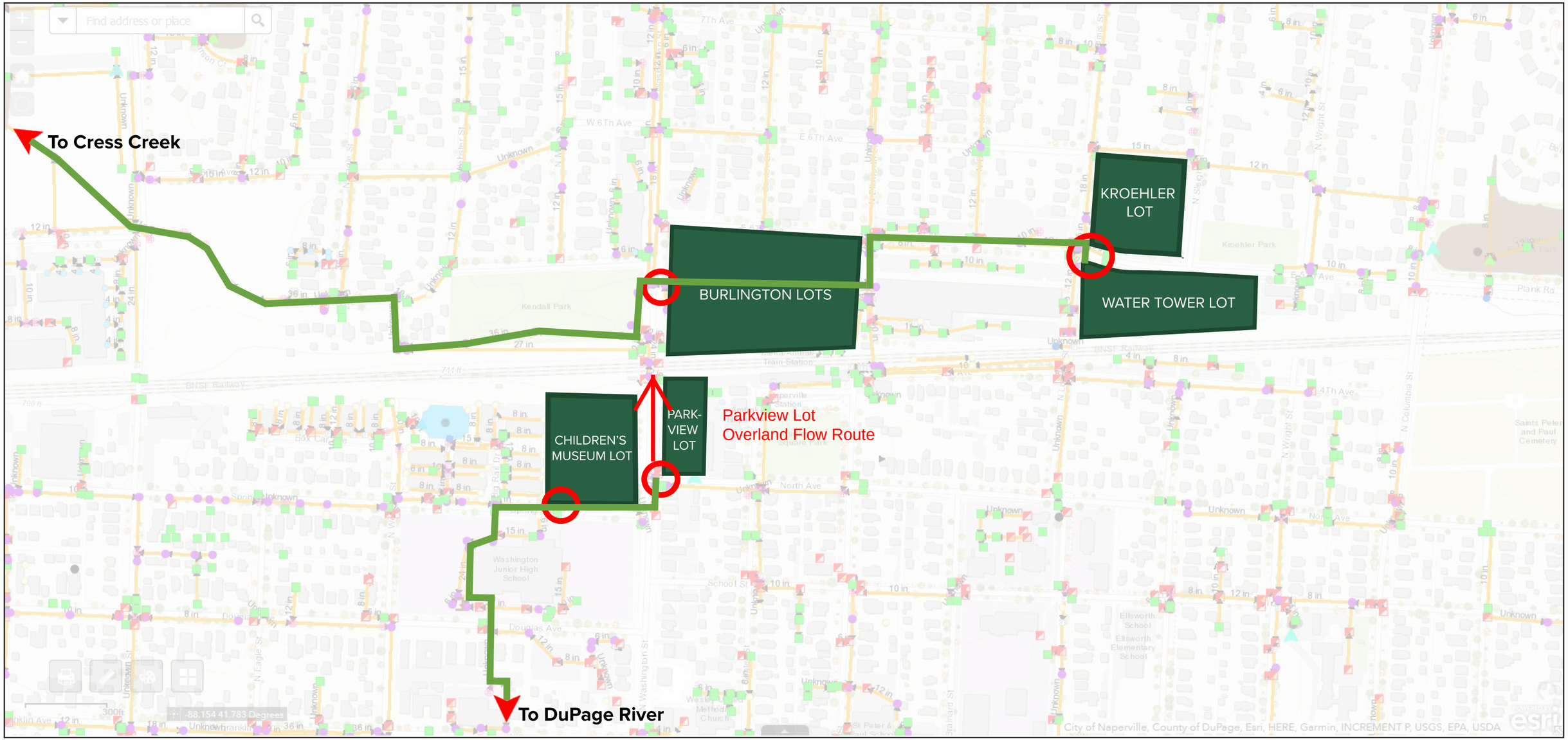
Potential Improvements Within Development

Location	Potential Improvement	Downstream of Flooding	Land Owner	Topographic Limitations	Receiving Water	Potential Benefit to Park Addition	Potential Benefit to Pilgrim Addition	Notes
A	Pond or vault on Burlington lot	Yes	City	Development would probably preclude a stormwater pond. A vault would be required.	Cress Creek	Most - Ellsworth Sag benefits	Very minimal; depends on size of storage of vault	Upsizing of pipes in Park Addition required. Up to 1.3 ac-ft there is no benefit to Pilgrim Addition.
B	Pond or vault on Kroehler lot	Downstream of Sleight, not Ellsworth	City	None	Cress Creek	Most - Sleight sag only	Very minimal	Will benefit 8th and Wright but not Ellsworth. New pipes from Kroehler to Sleight sag required.
C	Pond or vault on water tower lot	Downstream of Sleight, not Ellsworth	City	None	Cress Creek	Most - Sleight sag only	Very minimal	Will benefit 8th and Wright but not Ellsworth. New pipes needed from Kroehler to Sleight sag. Kroehler will be less expensive than the water tower lot.
D	Expand pond or vault on DCM lot	No	City	None	West Branch of DuPage River	None	None	Separate watershed from flooding concerns
E	Pond or vault on Parkview lot	No	City		Cress Creek and West Branch of DuPage River	None	None	Storm sewer drains to West Branch while the overland flow route goes to Cress Creek. Would only provide benefit in major storms and possibly an inefficent spend of dollars.

Potential Improvements Outside Development

	Potential Improvement	Downstream of Flooding	Land Owner	Topographic Limitations	Receiving Water	Potential Benefit to Park Addition	Potential Benefit to Pilgrim Addition	Notes
F	Pond or vault on Kendall Park	Yes	City	Pipes are very deep; extensive amount of earth cut required for a detention pond; an underground solution is also an option.	Cress Creek	Only if done in conjunction with storm sewer upsizing in Park Addition to Ellsworth sag	Most - 10-20 AC-FT estimate of volume to serve 5th and Eagle area. Would have to connect pipe to Main St sag to reduce flooding at that location.	This storage will not benefit the roadway sag areas on Main St and Webster Street without pipe upsizing, but could provide relief for the 5th Avenue and Eagle Street area. Separate storage and pipes to the Main St. sag would be required to remediate flooding in that area.
G	Pond or vault on Mill St. soccer fields	Yes	CSD 203	Shallow depth of pipes limit available storage; perhaps 3-4' deep. It will require significant earth export on the south side of soccer fields for a detention pond.	Cress Creek	None	Could provide storage if conveyance improvements are done upstream.	For this location to be an option, it has to be demonstrated that extra flow can be conveyed from Kendall Park to the soccer fields without impacting homes along 5th Avenue. The property would have to be acquired from CSD 203.
H	Upsize pipes west of Mill St. to Cress Creek	Yes	CSD 203	Pipes are very shallow and may not be able to be upsized.	Cress Creek	None	Minimal	Not compliant with DuPage County Stormwater Ordinance; Would increase flooding downstream.
I	Expand pond in Miledje Square (Morningside Dr.)	Yes	Naperville Park District	Overflow is to Morningside and 6th Avenue.	Cress Creek	None	Very minimal	This storm sewer does not discharge through the Mill St. soccer fields; the overflow route goes to Morningside and 6th.


Untitled Map
Pearson Cir
Morningside Dr
W 8th Ave
N Main St
E 8th Ave
E 7th Ave
E 6th St
E 6th Ave
W 6th Ave
E 5th Ave
W 5th Ave
N Eagle St
N Center St
Mill St
N Washington St
N Loomis St
Boxcar Ave
Big Rail Dr
North Ave
Spring Ave
N Webster St
N Ellsworth St
Center St
Brainard St
N Wright St
Douglas Ave
N Ewing St
I
H
G
F
A
B
C
D
E
Naperville Historic District


To Cress Creek
KROEHLER LOT
BURLINGTON LOTS
WATER TOWER LOT
CHILDREN'S MUSEUM LOT
PARK-VIEW LOT
Parkview Lot
Overland Flow Route
To DuPage River
City of Naperville, County of DuPage, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA


Mill Street Soccer Fields
Kendall Park
Burlington Lots
Kroehler Lot
MILL ST
MORNINGSIDE DR
EAGLE ST
WEBSTER ST
WASHINGTON ST
CENTER ST
BRAINARD ST
LOOMIS ST
WRIGHT ST
COLUMBIA AVE
7TH AVE.
6TH AVE.
5TH AVE.
4TH AVE
NORTH AVE.
SPRING ST.
SCHOOL ST.
ELLSWORTH ST.
SLEIGHT ST.
JULIAN ST.

Storm Water Improvement Cost Analysis

Area	Improvement Description	Volume (Acre-Feet)	Planning-level Budget	Notes
Ellsworth Street Sag	Stormwater detention vault on the Burlington lot	1.3	$1.2 - $1.7M	Assumes development above the vault
Sleight Street Sag	Stormwater detention vault on Kroehler lot	1.9	$1.6 - $2.2M	Assumes surface parking above the vault
Main Street Sag	Convert Kendall Park to surface detention pond	7.7	$1.5 - $2.0M	Permanent detention basin
Main Street Sag	Convert Kendall Park to stormwater detention vault	7.7	$5.5 - $6.5M	Assumes active recreation above the vault
5th & Eagle Convergence	Convert Mill St. soccer fields to surface detention pond	22.0	$2.5 - $3.5M	Excludes cost to purchase property from CSD203
5th & Eagle Convergence	Convert Mill St. soccer fields to stormwater detention vault	22.0	$12.5 - $13.5M	Excludes cost to purchase property from CSD203

Notes:

Assumes a reasonable level of dry utility conflict

Does not assume wholesale replacement of sanitary and watermain along storm sewer routes

Does not assume mill and overlay of streets

Assumes conveyance of 10-year storm for improvements

APPENDIX F

Traffic & Transportation Details

TRAFFIC AND TRANSPORTATION

TABLE OF CONTENTS

ADDITIONAL RELEVANT DOCUMENTS

Group Input Summary – Traffic
Group Input Summary - Transportation
Action Plan
Naperville Metra Station Bus Depot and Commuter Access Feasibility Study
2009 5th Avenue Study

MEETING AGENDA & NOTES

SUBJECT:	Traffic / Transportation Working Group #1	START TIME	2 PM
LOCATION:	Ryan Offices	END TIME:	3:30 PM
		DATE:	4/5/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	David Gosse	Jen Louden	Curt Pascoe
	Patrick Pechnick	Andy Hynes	Kyle Schott
	Gary Smith	Councilwoman Gustin	
	Charlie Wilkins		

Introductions

- Andy Hynes will be joining the group from staff in lieu of Kelly Dunne

Background Information

- Group Input information was noted and placed on BOX website
- 2009 5th Avenue Study was noted and placed on BOX website

Working Group Action Plan

Box Site Training Session

Feasibility Study

- The Working Group reviewed a Feasibility Matrix of recommendations from the 2009 5th Avenue study, 2012 bus depot study, and other ideas.
- Feasibility included available right-of-way (no taking of private property) and financial viability (no replacing bridges)
- Staff noted that none of the major traffic recommendations from the 5th Avenue Study have been implemented to date

Open Discussion

- Group discussed the potential for one way traffic changes in the neighborhoods to help traffic.
- Group noted this would require input from residents and North Central College

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- Mill and 6th operations were discussed; it creates a large traffic issue in the morning and afternoon. Buses are permitted to park on 6th for soccer games which adds to the issue.
- Ryan is holding meetings with Steering Committee members on Park and Pilgrim Addition traffic concerns. These notes will be shared with the Working Groups once complete.
- Center/5th and Ellsworth/5th were discussed as areas that are currently not traffic controlled and there may be benefit to adding control.

Next Meeting Focus:

- Conceptual Improvements
- 2012 Naperville Metra station, bus depot, and commuter access feasibility study.
-

MEETING AGENDA & NOTES

SUBJECT:	Traffic / Transportation Working Group #2	START TIME	4 PM
LOCATION:	Ryan Offices	END TIME:	5:30 PM
		DATE:	4/18/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	David Gosse	Jen Louden	Curt Pascoe
	Patrick Pechnick	Andy Hynes	Kyle Schott
	Gary Smith	Councilwoman Gustin	
	Charlie Wilkins		

Introductions

- Rory Fancler, Peter Lemmon of Kimley Horn joined the group

Recap Previous Meeting – No Questions of Comments on what was discussed during the last meeting.

- Right-of-Way Study
- 2009 5th Avenue Study
- Working Group Action Plan

Traffic Improvement Sketches

- Kimley Horn, traffic consultant, was introduced
- Kimley Horn traffic improvement deliverables were distributed.
- Discussion why the Working Group is focusing on the 2009 5th Ave study recommendations instead of new conditions for the new development.
- It was discussed that the 2009 5th Ave study is our starting point in a process of identifying and investigating potential traffic improvements. Final designs and reports will be needed as part of future phases of community engagement.
- Traffic Improvement Sketches were reviewed and discussed
- Pros and cons of individual traffic improvements were discussed as they may impact commuter, resident, and pedestrian experiences in different ways.
- Peak traffic times were discussed.

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2012 Metra & Bus Depot Study

- Study was reviewed, including bus depot recommendations
- Question was asked if the study should be re-reviewed by PACE/Metra to bring up to date; both PACE and Metra are Key Stakeholders and receive regular updates.
- Discussion about broadening the reach of the study, as several parcels in the 5th Avenue RFQ were not discussed in the 2012 bus depot study.

Group Homework

- Review Traffic Improvement sketches and provide Pros and Cons for each.
- Review Pace study and provide Pros and Cons for each.

Next Meeting Focus:

- Roadway Cost Discussion
- PACE Layouts
- Core Functional Components

MEETING AGENDA & NOTES

SUBJECT:	Traffic / Transportation Working Group #3	START TIME	4 PM
LOCATION:	Ryan Offices	END TIME:	5:30 PM
		DATE:	4/18/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	David Gosse	Jen Louden	Curt Pascoe
	Patrick Pechnick	Andy Hynes	Kyle Schott
	Gary Smith	Councilwoman Gustin	
	Charlie Wilkins		

Recap Previous Meeting
- Traffic Improvement Sketches
- 2012 Metra & Bus Depot Study
- Uber, Lyft & Kiss N Ride

Working Groups Update
- Discussed findings from other Working Groups as they affect traffic & transportation.

New Traffic Improvement Sketches
- Kimley Horn produced additional traffic sketches based on ideas and input from the previous meeting.

Roadway Cost Discussion
- Questions about planning-level cost estimates were discussed.

PACE Layouts
- The working group reviewed and discussed pros and cons of various Pace bus depot layouts. Designs included both those from the 2012 bus depot study and new layouts generated by Kimley Horn.

Core Functional Components
- Core functional components are high-level guidelines, helping to determine traffic and transportation goals for concept design. These components will be reviewed and potentially included in the Design Narrative created by the Design Working Group. The components were reviewed, discussed, and commented on by working group members.

Open Discussion

Next Meeting Focus:
- o Review Final Sketches
- o Review Draft Deliverable

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MEETING AGENDA & NOTES

SUBJECT:	Traffic / Transportation Working Group #4	START TIME	2:00 PM
LOCATION:	Ryan Offices	END TIME:	4:00 PM
		DATE:	05/16/18

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	David Gosse	Jen Louden	Curt Pascoe
	Patrick Pechnick	Andy Hynes	Kyle Schott
	Gary Smith	Councilwoman Gustin	
	Charlie Wilkins		

Multi-Modal Estimates

- Reviewed the planning level estimates prepared by Kimley Horn.
- Discussed additional costs for bus depots with structure above – HVAC, lighting beyond those of typical commuter parking structures. Operational & maintenance costs of an understructure bus depot were also noted to be higher than an open-air depot.
- Acknowledged that City does not have full control over the future level and quantity of Pace bus services; does this affect level of investment City should invest?
- Talked about opportunities to use open-air kiss-n-ride or bus depots as multi-purpose space outside of weekdays and peak hours, such as a covered Farmer's Market, basketball courts, or other uses. Is this a better use of funds vs. understructure bus depot?

Pros & Cons

- Discussed other traffic flow patterns for the bus depot at Burlington Square
    - North Ave one-way westbound for all bus traffic; eliminate bus traffic on Ellsworth.
    - Gated access to bus lanes or roads
- Reviewed North Ave realignment at Washington Street; this would limit Parkview bus capacity below the 12 buses requested by Pace.
- Noted that Parking Working Group has identified the DCM lot of well-suited for commuter parking.

Principles for Concept Creation

- Reviewed draft of Principles for Concept Creation

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Next Steps

- The 5th working group meeting is required; goal is to review final deliverable and narrative. Scheduled for May 30th.
- June 4th is the combined Working Group presentation at City Hall; Working Group members are encouraged to attend.

Open Discussion

- Enforcement has been noted as an ongoing requirement, both under existing and proposed conditions, regardless of configuration or location.
- Current designated bus lanes allow for 12 Pace buses to queue at the depot; why are they parking and idling on neighborhood streets?
- Discussed kiss-n-ride function. If buses remain at Burlington Square, should kiss-n-ride be located on another lot? How would kiss-n-ride function as “5 Minute Parking” within a commuter ramp? Can this be enforced?

MEETING AGENDA & NOTES

SUBJECT:	Traffic / Transportation Working Group #5	START TIME	2:00 PM
LOCATION:	Ryan Offices	END TIME:	4:00 PM
		DATE:	05/30/2018

FROM:	5th Avenue Development Team
PHONE:	630-328-1105
EMAIL:	5th.Ave@ryancompanies.com

TO	David Gosse	Jen Louden	Curt Pascoe
	Patrick Pechnick	Andy Hynes	Kyle Schott
	Gary Smith	Councilwoman Gustin	
	Charlie Wilkins		

Narrative

- Reviewed and redlined the traffic and transportation section of the Combined Working Group Narrative.
- Added Additional Considerations to the narrative and Concept Principals.
- Weighed pros and cons of distributed kiss-n-ride locations; enforcement, cost within parking structures, separated kiss-n-ride from Pace buses.

Next Steps

- June 4th is the combined Working Group presentation at City Hall; Working Group members are requested to attend.
- Working Group members will be asked to participate and answer questions in a panel-like forum; if comfortable doing so.

Open Discussion

- Discussed potential for future people-mover or light rail in Naperville; how would this affect the 5th Avenue development area?

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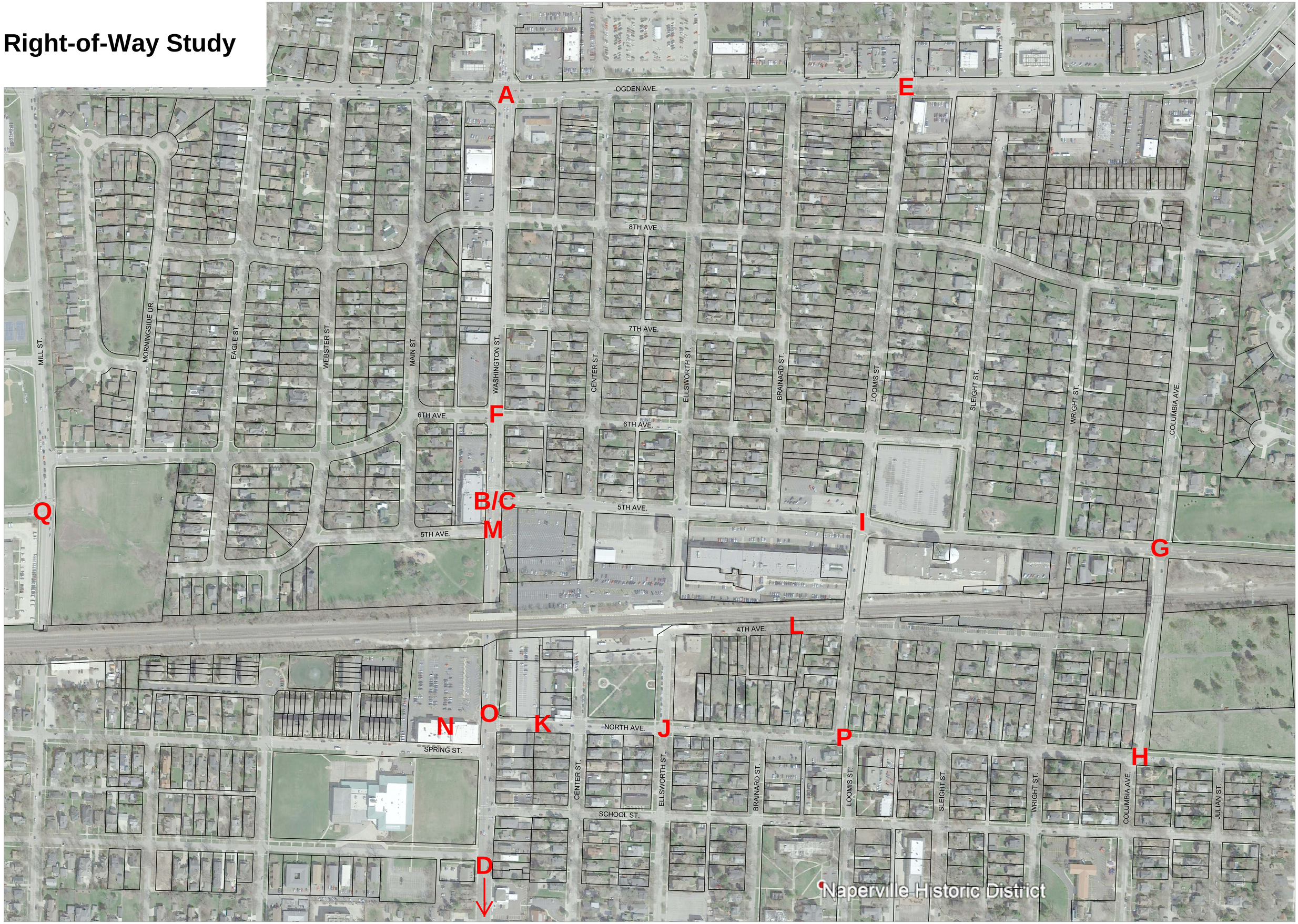
Right-of-Way Study



Traffic Improvement Feasibility Matrix

Location	Intersection	Proposed Improvement	Right-of Way Available	Financially Feasible	Jurisdiction	Construction Cost (Planning-Level Estimate)	Notes
	Signalized Intersections						
A	Washington/Ogden Ave	Add additional through and turn lanes	No	N/A	IDOT		
B	Washington/5th Ave	Add NBR lane	Yes	TBD	City	$200,000	excludes dry utility relocation; excludes onsite demolition (as required)
C	Washington/5th Ave	Dual WBL lanes	Yes	TBD	City	$150,000	assumes use of existing right-of-way and Lower Burlington Lot (excludes right-of-way acquisition cost); includes street light relocation (1), widening, and signal pole relocation; excludes dry utility relocation (if applicable
D	Washington/Benton Ave	Add SBR lane	No	N/A	City		
		Add NBT lane	No	N/A			
E	Loomis/Ogden Ave	Add additional through lanes on Ogden	No	N/A	IDOT		
F	Washington/6th Ave	Maintain geometry and signalize	Yes	TBD	City	$350,000	excludes dry utility relocation (if applicable); signal cost estimate reflects Washington Street interconnect; assumes right-of-way acquisition not required for traffic signal equipment
	All Way Stop-Controlled Intersections						
G	Columbia/5th Ave	Add EBR lane	Yes	TBD	City	$100,000	excludes dry utility relocation
		Add NBR lane	Yes	No			
		Maintain geometry and signalize	Yes	TBD		$250,000	excludes dry utility relocation (if applicable); assumes right-of-way acquisition not required for traffic signal equipment
H	Columbia/North Ave	Add WBR lane	Yes	TBD	City	$100,000	excludes dry utility relocation
		Add SBR lane	No	N/A			
I	Loomis/5th Ave	TBD	TBD	TBD	City		
	Two-Way Stop Controlled Intersections						
J	Ellsworth/North Ave	Add WB Stop Sign	Yes	TBD	City	$500	stop sign warrant required prior to installation per City of Naperville requirements
	Traffic Pattern Conversions						
K	North Avenue	Convert to two-way street	Yes	TBD	City	$250,000	assumes mill and overlay; includes conversion to two-way street between Washington Street and Ellsworth Street
L	4th Avenue	Convert to one-way WB	Yes	TBD	City	$325,000	assumes mill and overlay; includes conversion to one-way westbound between Loomis Street and Ellsworth Street; reflects modifications to radius/curb at Loomis Street
	Intersection Realignment						
M	Washington/5th Ave	Move the east leg of 5th south to align	Yes	TBD	City	$1 - 1.2 million roadway $100,000 temporary signal $350,000 new signal	excludes dry utility relocation (if applicable); excludes onsite demolition; signal cost estimate reflects Washington Street interconnect
N	Washington/Spring/North	Move Spring north to align with North Ave	Yes	TBD	City	$1 - 1.2 million roadway $100,000 temporary signal $350,000 new signal	excludes dry utility relocation (if applicable); signal cost estimate reflects Washington Street interconnect
O	Washington/North	Move North north to align with DuPage Children's Museum Access	Yes	TBD	City	$400,000 roadway $100,000 temporary signal $350,000 signal	includes signal modification, temporary signal, widening, and signal pole relocation; excludes dry utility relocation; assumes use of existing right-of-way and Parkview Lot (excludes right-of-way acquisition cost)
P	Loomis/North	Align Loomis across North Ave	No	N/A	City		
Q	Mill / 6th Ave	Align 6th across Mill St.	No	N/A	City		

Additional notes from Working Group members:
(Letters correspond to the Traffic Improvement Feasibility Matrix and Right-of-Way Study)

A: Washington Street and Ogden Avenue

City Comment:
This intersection was included in the City's 2027 Roadway Improvement Plan, which projected capacity improvements on City arterials. Improvements identified for Washington at Ogden include a right turn lane and additional thru lane on the north (southbound) approach and an additional thru lane and second left turn lane on the south (northbound) approach. The additional turn lane was not included in the recommended improvements due to the land acquisition that would be required. IDOT coordination will be required for any improvements to the intersection.

Ryan Response:
This intersection cannot be expanded without the taking of private property and has been excluded from the cost study.

David Gosse Comment:
Identified as not feasible/no right-of-way.

Ryan Response:
This intersection cannot be expanded without the taking of private property and has been excluded from the cost study.

B/C: Washington Street and 5th Avenue

City Comment:
Thru traffic may block the turn lane; however, this concept should be further evaluated.

Ryan Response:
Noted. Detailed traffic studies and design will be required to determine the feasibility of the northbound right turn lane.

Pat Pechnick Comment:
Dual left turn lanes (WB to SB) can be provided on 5th without the need to align the intersection. Left turn (NB to WB) peak hour restrictions can be implemented at 5th - west leg.

Ryan Response:
Detailed geometry and survey data will be needed to determine if westbound (WB) to southbound (SB) dual-lefts can be provided within existing right-of-way, should they be warranted. This is being investigated conceptually by Kimley-Horn. Restricting northbound (NB) to westbound (WB) left turns onto 5th Ave will limit access to on-street commuter stalls and Pilgrim Addition; consideration should be given to traffic patterns within Pilgrim Addition while discussing implementing peak hour restrictions.

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David Gosse Comment:
Pro: Improved through- flow on Washington, to the extent turning cars can pull into the turn lane to wait while pedestrians cross. Longer turn lane possible if the upper and lower Burlington lots are re-graded?
If 5th is not re-routed, is turn-lane long enough?

Ryan Response:
Right of way dedication can be considered from the Burlington lots, if necessary, to accommodate traffic improvements. A detailed traffic study will determine the length of turn lane required; feasibility will need to be confirmed with study results.

D: Washington Street and Benton Avenue

City Comment:
The addition of a southbound right turn lane is not feasible due to the building placement at the corner. This intersection improvement was discussed during the development approval process for the building and the City decided not to pursue the right-of-way. Land acquisition required to support a northbound thru lane would challenging.

Ryan Response:
This intersection cannot be expanded without the taking of private property and has been excluded from the cost study.

David Gosse Comment:
Identified as not feasible/no-right-of way.

Ryan Response:
This intersection cannot be expanded without the taking of private property and has been excluded from the cost study.

E: Loomis Street and Ogden Avenue

City Comment:
This project would require support by IDOT. Land acquisition required to support the improvements would be challenging.

Ryan Response:
This intersection cannot be expanded without the taking of private property and has been excluded from the cost study.

David Gosse Comment:
Identified as not feasible/no right-of-way.

Ryan Response:
This intersection cannot be expanded without the taking of private property and has been excluded from the cost study.

F: Washington Street and 6th Avenue

City Comment:
Signalization of this intersection must meet warrants. Staff does not believe that warrants will be met. If it met warrants, the added signal and turning movements would significantly impact the level of service on Washington. A signal would also encourage additional traffic on 6th Avenue within the neighborhood.

Ryan Response:
It is understood that a signal at this location would affect traffic patterns in the Pilgrim and Park Addition neighborhoods, and needs further evaluation if warrants would be met.

Pat Pechnick Comment:
The road narrows north of 6th St, so Washington needs to be widened to provide a SB to EB left turn lane. The corner radii need to also be improved to accommodate turning vehicles with no encroachments. A B-40 vehicle (Bus) should be considered given the stop condition that a traffic signal creates.

Ryan Response:
Detailed geometry and survey data will be needed to determine if improvements can be provided within existing right-of-way. Any improvements would be required to meet design standards as approved by City.

David Gosse Comment:
Pros: Improved pedestrian safety. Second (although unnecessary) access point to/from the neighborhood. Cons: Second signal in two blocks will delay NB traffic. Incentive for commuters to cut through the neighborhood to avoid the two lights at 5th and 6th. Adding controlled intersections (four-way stops) throughout Park Addition would dissuade/calm through traffic.

Ryan Response:
City would need to confirm if the Washington Street corridor signal system can be timed to reduce/eliminate additional delays on Washington. Neighborhood traffic should be considered; this signal may increase traffic on 6th. Park and Pilgrim Addition currently have 2-way alternating stop signs; 4-way stops would be required to meet City warrants.

Charlie Wilkins Comment:
Agree that this would be unnecessary. Pilgrim's Addition is not "landlocked" as has been contended. If need to travel W or N from neighborhood, can turn use left-turn lanes at Mill/Ogden and Washington/Ogden. Afraid that signal at Washington/6th will be invitation for more drivers to cut through neighborhood.

Ryan Response:
Ryan had received input from individual residents in Pilgrim Addition that they felt landlocked as pedestrians; some noted residents cross Washington at un-signalized intersections at 6th or 8th in lieu of using the signal at 5th. A light at Washington and 6th was discussed to provide additional pedestrian crossings. Neighborhood traffic should be considered; this signal may increase traffic on 6th.

G: Columbia Street and 5th Avenue

City Comment:
Signalization of the intersection must meet warrants. Staff believes that this location would likely meet warrants; however, a signal at this location would be out of character. In addition, the signal may have a negative impact during off-peak times. A northbound right turn lane may require land acquisition from the BNSF and modifications to the bridge. An eastbound right turn lane should be completed within the existing right-of-way due to being adjacent to a residential property. Any improvements at this intersection must consider the vertical geometry challenges.

Ryan Response:
This improvement was recommended by the 2012 5th Avenue study; it is understood that warrants must be met. Detailed geometry and survey data will be needed to definitely determine if improvements can be provided within existing right-of-way. Due to the bridge modifications required, the northbound right turn lane has been excluded from the cost study.

Pat Pechnick Comment:
The EB to SB right turn lane shown is substandard and it is highly questionable if it can be implemented without right-of-way. The corner radii all need to be adjusted to accommodate vehicle movements particularly buses without encroachment. Signalizing the intersection (if it met warrants) is not recommended as the severity of crashes will only increase from a four-way stop condition.

Ryan Response:
Detailed geometry and survey data will be needed to definitely determine if improvements can be provided within existing right-of-way. Any improvements would be required to meet design standards as approved by City.

David Gosse Comment:
Add EBR lane: Pro: Increase traffic flow, to help alleviate backups during evening commuter rush. Con: Increase contention among cars stopped at the four stops – five or six cars could be attempting to cross at the same time. This intersection is already difficult if cars come from all directions at once. The hills make it hard to assess who has right-of-way.

Add NBR lane: Con: Increase contention among cars stopped at the four stops – five or six cars could be attempting to cross at the same time. Not sure this is warranted by any traffic demands. NB left turn lane already provides easy path for the morning commuter rush.

Maintain geometry and signalize: Pro: Reduce contention to accommodate multiple turn lanes. Optimized signal timing during rush hour (long greens for traffic to/from 5th Ave) could increase through-put. Con: Stoplight is unnecessary at most times of day. Would cause unnecessary delays during off-peak hours and encourage “race from the light” mentality. Perhaps concerns could be addressed by implementing a flashing red at most hours of the day.

Ryan Response:
Noted. Improvements would need to meet City standards, including for vertical sight lines. The northbound right (NBR) turn lane would require the widening of the Columbia bridge over the BNSF tracks, and has been excluded from the study. A signal would need to meet warrants; City can confirm if a “flashing red” treatment is allowed during off-peak hours.

Charlie Wilkins Comment:
Agree that adding dedicated EBR and/or NBR lane would increase contention. Intersection already contentious for motorists as is. Another Naperville intersection with dedicated left-turn lanes, River Rd. at Jefferson, is further proof that 4-way stops with dedicated turn lanes can be difficult to maneuver.

Ryan Response:
Improvements would need to meet City standards. Staff would need to confirm if added turn lanes would be acceptable without a signal also being provided at this location.

H: Columbia Street and North Avenue

City Comment:
A southbound right turn lane should be completed within the existing right-of-way due to being adjacent to a residential property. The existing and projected level of service at this intersection should be evaluated to determine if improvements are a priority.

Ryan Response:
Due to limited right-of-way and the residential property mentioned, the southbound right turn lane has been excluded from the cost study.

Pat Pechnick Comment:
Not really seeing the problem it is solving as this would remove a tree line and only speed up traffic to Columbia @ 5th where it will be stopped. If anything, it acts to meter the flow of traffic in this residential area.

Ryan Response:
This improvement was recommended in the 2012 5th Avenue study to "improve the intersection level of service to LOS C during the AM peak hour. The westbound right-turn lane would have minimal effect in the PM peak hour as the westbound right-turn volume is considerably less than during the AM peak hour, reflecting commuter traffic patterns." This improvement would impact 3-5 trees under 6" in diameter.

David Gosse Comment:
Add WBR lane: Reduce queuing during rush hours? Con: Expense. Not sure this is warranted by traffic demands.

Add SBR lane: Identified as not feasible/no right-of-way.

Ryan Response:
The westbound right (WBR) turn lane was identified in the 2012 study as it "would improve the intersection level of service to LOS C during the AM peak hour. The westbound right-turn lane would have minimal effect in the PM peak hour as the westbound right-turn volume is considerably less than during the AM peak hour, reflecting commuter traffic patterns." Warrants would need to be confirmed prior to final approvals. The planning-level estimate for this work is $100,000; decisions on improvements shall be made by Council.

I: Loomis Street and 5th Avenue

Pat Pechnick Comment:
This is already a north-south raceway. Adding a signal with one at Odgen would not be conducive to the context of the neighborhood and would further emphasize a raceway environment opposite of traffic calming. It would be doubtful if it would meet any warrant and highly doubtful that the ICC would allow being so close to the BNSF crossing as this is one of the few remaining at-grade crossings in the area.

Ryan Response:
Improvements, if any, to this intersection have not been determined. Any proposed signals at this intersection would have to meet both City warrants and ICC requirements.

David Gosse Comment:
Something probably needs to be done here to ease rush-hour delays caused by pedestrians, but likely less necessary if Kroehler lot is no longer parking.

Ryan Response:
Improvements, if any, to this intersection have not been determined. Concepts and final traffic improvements will take into consideration proposed pedestrian patterns and routes.

J: Ellsworth Street and North Avenue

City Comment:
Installation of a Stop sign on North Avenue at Ellsworth Street must meet warrants.

Ryan Response:
This improvement was recommended in the 2012 5th Avenue study and must meet warrants.

David Gosse Comment:
Not familiar enough with traffic patterns to comment.

Ryan Response:
This improvement was recommended in the 2012 5th Avenue study and must meet warrants.

K: North Avenue Two-way Conversion

City Comment:
Conversion of North Avenue from one-way to two-way was contemplated as part of the 2008 study to improve bus access to the station area. Proposed land uses and corresponding circulation needs must be considered when evaluating a potential conversion to determine the possible benefits.

Ryan Response:
Agreed. Two-way conversation of North Avenue will be dependent on many factors, including final concept and the potential realignment of North Avenue. Future investigation is warranted in the concept phase.

David Gosse Comment:
Not familiar enough with traffic patterns to comment.

Ryan Response:
Noted. Final designs must include traffic studies to identify proposed traffic patterns.

L: 4th Avenue Conversion to WB

City Comment:
The change in direction of 4th Avenue from eastbound to westbound was contemplated to provide additional kiss-n-ride zones. Proposed land uses and corresponding circulation needs must be considered when evaluating a potential conversion to determine the possible benefits.

Ryan Response:
Agreed. Any modifications to the existing Pace bus depot and kiss-n-ride zones will have an impact on this improvement and its benefits.

David Gosse Comment:
Pro: Provides second ingress to the kiss-n-ride and/or shared ride drop off at the station. Con: Residents on 4th will be forced to route through the train station, past standing cars dropping people at the station.

Ryan Response:
Noted. Some iterations of the bus depot concept in the 2012 study included converting Ellsworth to a two-way street; this could be considered if 4th Avenue is converted. Doing so would allow residents of 4th Avenue to avoid traveling through the bus depot itself.

Charlie Wilkins Comment:
Con: Will lead to queuing directly in front of 4th Ave. homes.

Ryan Response:
This improvement was suggested in the 2012 bus depot study, which noted "While buses would not queue on neighborhood streets, kiss-and-ride activity would be relocated to 4th Avenue between Ellsworth Street and Loomis Street. Feedback with neighbors along 4th Avenue indicated opposition to this kiss-and-ride staging concept."

M: Washington Street and 5th Avenue Realignment

City Comment:
The realignment may result in improved traffic flow to and from the station area and could improve pedestrian connectivity. The realignment may promote additional traffic through Pilgrim's Addition. The alley will need to be extended to realigned 5th Avenue to maintain access to the businesses and residences. Bank access will need to be addressed.

Ryan Response:
Noted. It is expected this realignment would allow for westbound to southbound dual left turn lanes, should they be warranted. This realignment could limit exiting options of drive-through customers of the existing BMO bank. Coordination with the bank is critical. A fully improved 4-way signalized intersection could improve pedestrian connectivity and safety across Washington Street.

Pat Pechnick Comment:
Realigning the east leg of 5th Ave to create a four-way intersection will result is worse operating condition than maintaining a 3-legged intersection with restricted movements to/from the west leg. In addition, providing a substandard right turn lane (NB to EB) may result in potential safety issues for drivers and pedestrians as vehicles will be stopped partially in the taper and the short turn lane serves very little purpose as northbound vehicles stopped by a red light will prohibit any vehicles from entering the turn lane and those that do may be blocked by pedestrians which may

trap vehicles in the taper subject to rear end collisions. Keeping drivers focused of what's in front of them in a short distance where reaction time is also short is most important.

Ryan Response:
The existing intersection at 5th and Washington is not a 3-legged intersection; BMO customers exiting the bank tellers create the 4th leg. This signal currently operates as a split-phase signal which reduces efficiency. A detailed traffic study will be required to determine existing and proposed levels of service (LOS) with this improvement, as well as required turn lane lengths.

David Gosse Comment:
Pro: Simple traffic flow avoids bank drive thru. Increase access to Pilgrim Addition and Mill St. Improve pedestrian experience, and reduce contention between pedestrians and traffic. Con: Increase traffic in Pilgrim Addition. Decrease efficiency of 5th/Washington intersection? Depending on use, the land north of the re-aligned 5th Ave could be a buffer between development on the Burlington lots and the neighborhood.

Ryan Response:
This realignment could limit exiting options of drive-through customers of the existing BMO bank. Coordination with the bank is critical. This signal currently operates as a split-phase signal which reduces efficiency; however, efficiency of the realigned intersection would need to be determined by a traffic study prior to final design. The realignment would create a new parcel approximately 0.6 acres in size north of 5th Avenue.

N: Washington Street and Spring Avenue/North Avenue

City Comment:
Realignment would allow better signal phasing by eliminating the existing split-phase at North Avenue, would provide more turn lane storage and improve pedestrian access. Access to and from Spring Avenue will be improved; however, this may result in more traffic on Spring between Washington and Mill.

Ryan Response:
Noted. Ryan is also investigating if North Avenue can be aligned (shifted north) with the Children's Museum entrance. This alignment poses engineering challenges but may reduce traffic on Spring between Washington and Mill.
Pat Pechnick Comment:
Realigning the intersection with Spring Ave poses similar problems as 5th Ave. It will always be more efficient to operate 3 legged intersections esp., when restricted movements are currently in place. The offset direction at both North Ave and 5th Ave are in a favorable orientation as no turns between the two compete for limited space.

Ryan Response:
The existing signal at Washington & North is not a 3-legged intersection; the Children's Museum entrance is the 4th leg of the intersection. Due to the offset between North Avenue and the museum entrance, this signal currently operates as a split-phase signal which reduces efficiency.

David Gosse Comment:
Pro: Simple traffic flow. Con: Increase traffic west-bound on Spring. Expensive, for minimal benefit. Not sure this is warranted by any traffic demands. Spring street is quiet. Increased traffic would be a hazard to pededstrians.

Ryan Response:
Noted; the goal of realignment of this intersection is to provide intuitive traffic flow to the Children's Museum site and North Avenue. Elimination of the existing split-phase signal may have significant benefits for commuter and development traffic patterns. Realigning Spring Street with North Avenue would require the relocation of the Children's Museum. Pedestrian traffic routes across both Washington Street and Spring Street must be considered if traffic patterns are modified.

O: Washington Street and North Avenue Realignment
No comments received

P: Loomis Street and North Avenue Realignment

City Comment:
Any potential benefits of realignment would need to be weighed against the acquisition of private property.

Ryan Response:
Due to the lack of available right-of-way, this improvement was excluded from the cost study.

David Gosse Comment:
Identified as not feasible/no right-of-way.

Ryan Response:
Due to the lack of available right-of-way, this improvement was excluded from the cost study.

Q: Mill Street and 6th Avenue Realignment

City Comment:
This would require acquisition of school property that is currently actively used as playing fields. The realignment could result in improved traffic operations, particularly during the morning peak. However, these need to be weighed against the acquisition.

Ryan Response:
Due to the lack of available right-of-way, this improvement was excluded from the cost study.

David Gosse Comment:
Identified as not feasible/no right-of-way.

Ryan Response:
Due to the lack of available right-of-way, this improvement was excluded from the cost study.

Naperville Metra Station Bus Depot and Commuter Access Feasibility Study

City Comment:
With regard to the 2012 bus depot study, it's important to remember that when we started to do final design Pace had some concerns with layouts that were included. Ultimately their design guidelines that they provided should dictate the design of any new facilities, not the 2012 study.

Ryan Response:
Noted. Bus depot location, design, and detail must be approved by Pace.

Pat Pechnick Comment:
This study is outdated, so the recommendations may not be applicable since no redevelopment was included at the time. PACE's desire to retain bus loading and unloading to the north for maintenance concerns of tire and brake wear is reaching, esp when the City can tell PACE where they need to go for pick up and drop off passengers. A centralized depot for all is good planning and avoids passenger/customer confusion. Since the majority of service is from the south, it should be placed south of the BNSF tracks.

Ryan Response:
The 2012 5th Avenue study is being used as a reference, to incorporate the knowledge and effort City has previously invested in the area. As a Key Stakeholder, Pace has met with the City and Ryan. Pace has indicated that 17 of 20 routes utilize the Burlington bus depot south of the tracks, and 3 routes utilize the Burlington lot north of the tracks. Pace has requested that this distribution be maintained. Ryan cannot comment if Council has the authority to change Pace routes or depot locations. However, modifications, if any, to the Pace bus depot will determine if capacity could exist for additional buses at a single location.

Boulevard Design of 5th Avenue (presented from Pedestrian Safety & Connectivity WG)

City Comment:
Implementing a boulevard design on 5th Avenue needs to be further evaluated. This has potential negative impacts on maintenance and emergency response.

Ryan Response:
Understood. Any improvements would be required to meet design standards as approved by City.

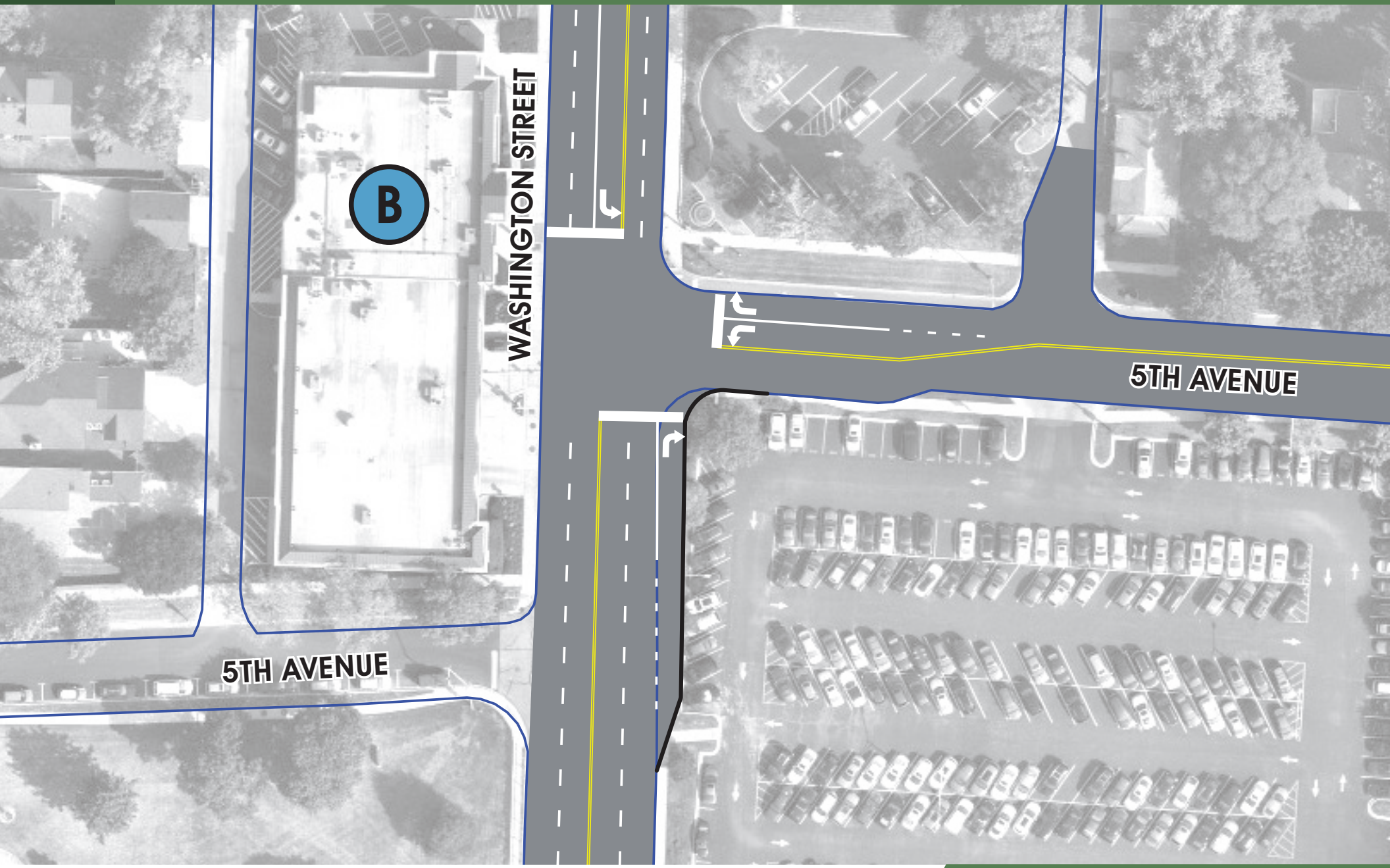
PRELIMINARY INTERSECTION IMPROVEMENT SUMMARY

NAPERVILLE - 5TH AVENUE REDEVELOPMENT

RYAN Kimley»Horn

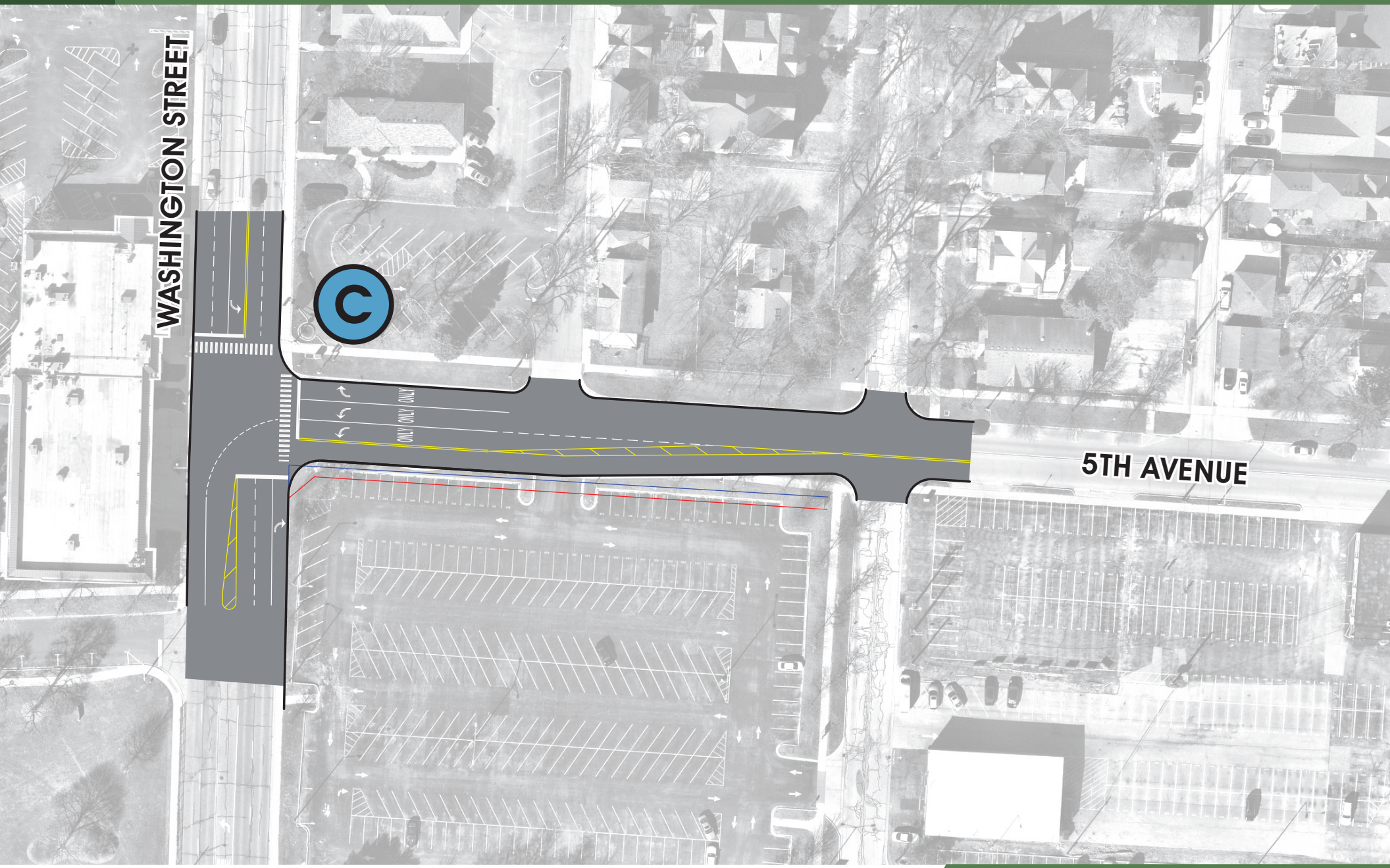
WASHINGTON STREET / 5TH AVENUE

Add Right-Turn Lane on South Leg



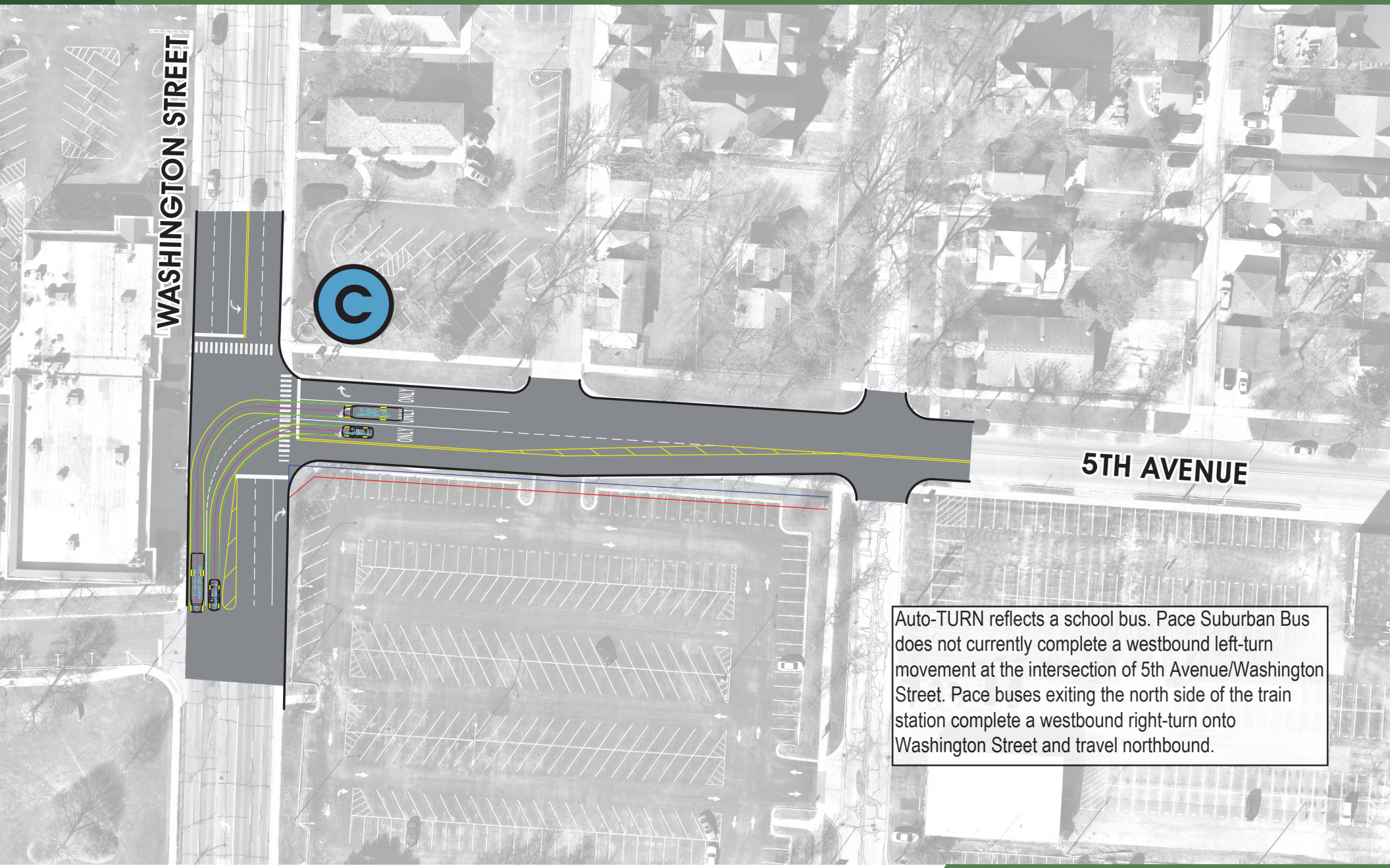
WASHINGTON STREET / 5TH AVENUE

Install Dual Westbound Left-Turn Lanes, Add Right-Turn Lane on South Leg



WASHINGTON STREET / 5TH AVENUE

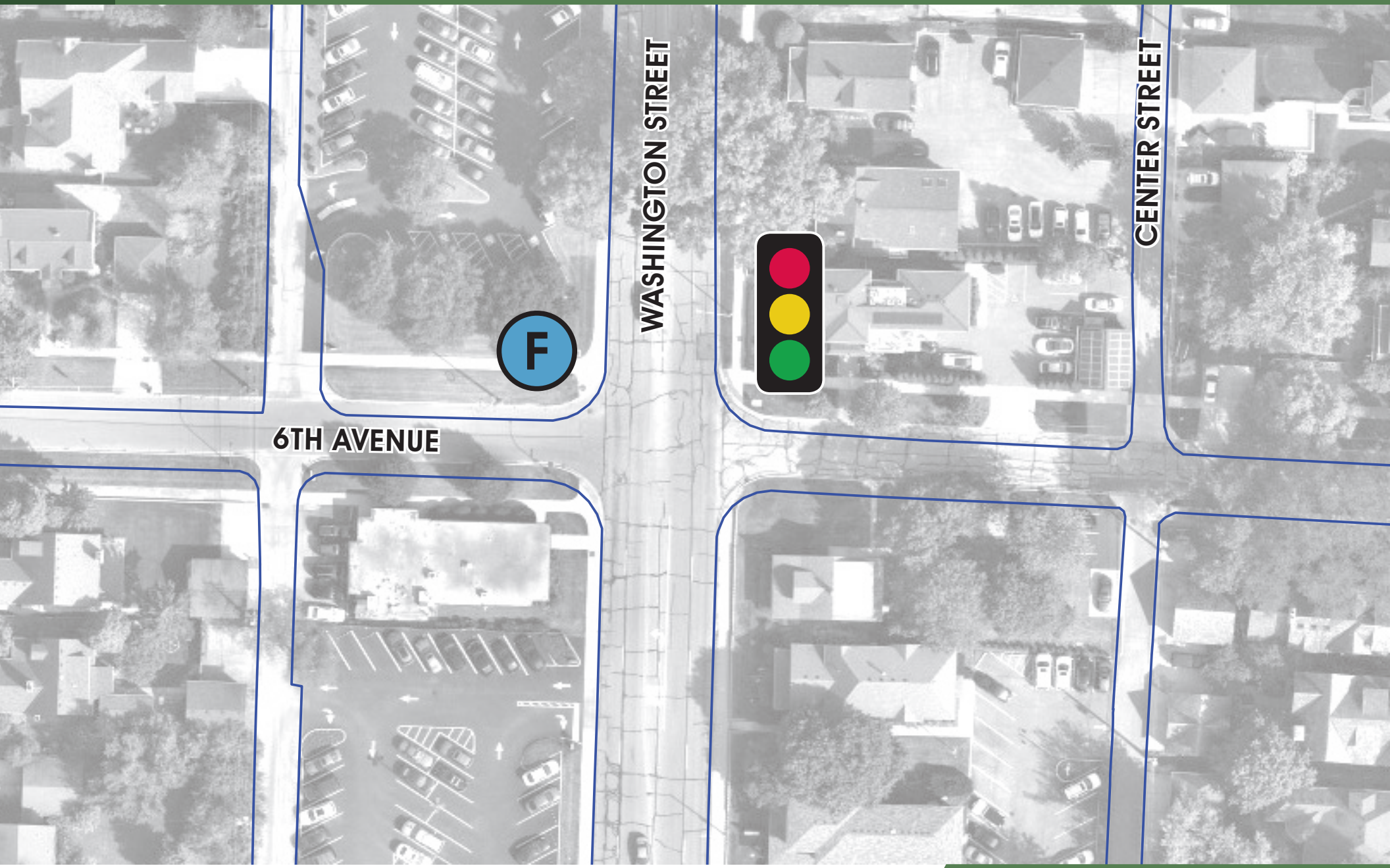
Install Dual Westbound Left-Turn Lanes, Add Right-Turn Lane on South Leg



Auto-TURN reflects a school bus. Pace Suburban Bus does not currently complete a westbound left-turn movement at the intersection of 5th Avenue/Washington Street. Pace buses exiting the north side of the train station complete a westbound right-turn onto Washington Street and travel northbound.

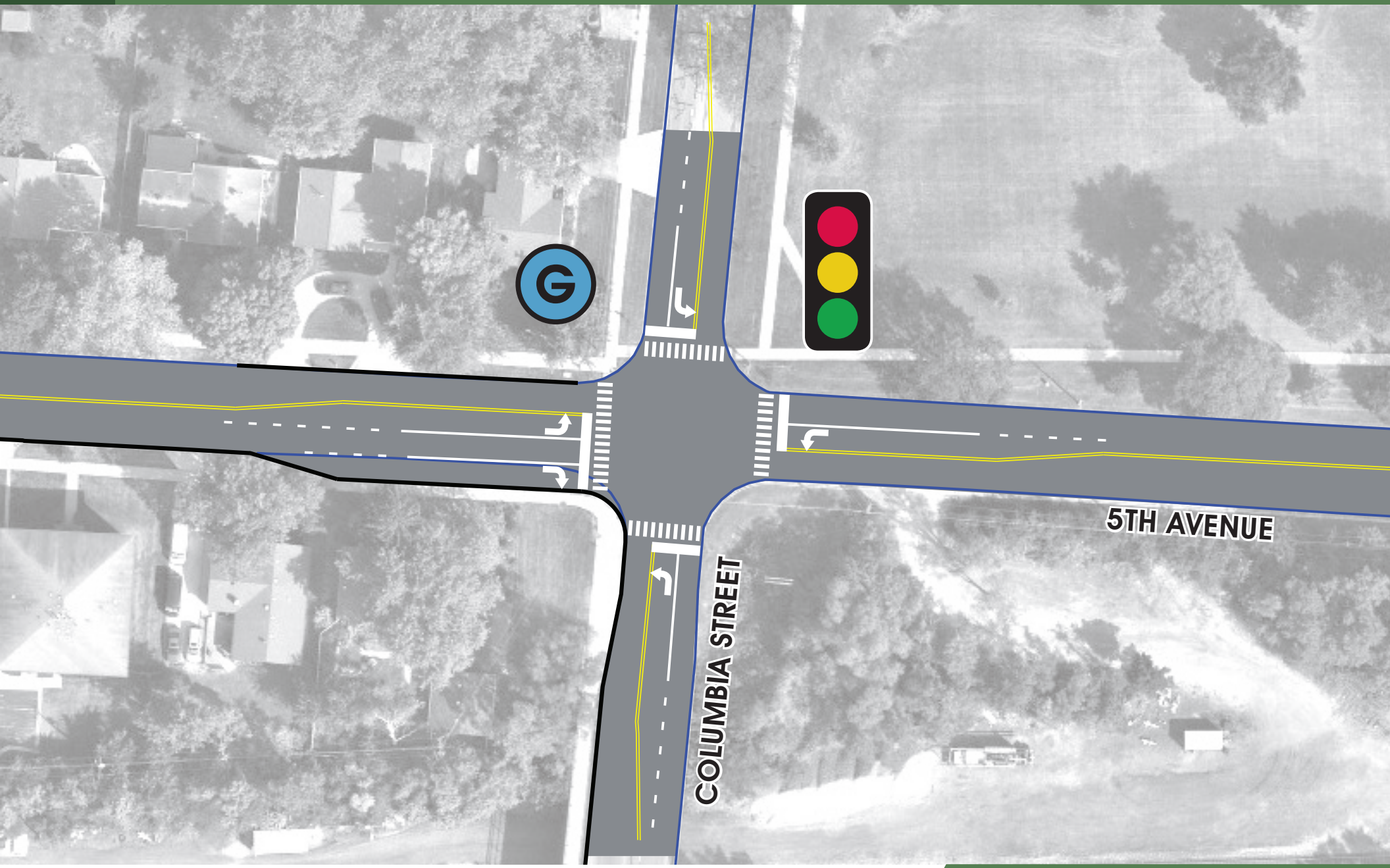
WASHINGTON STREET / 6TH AVENUE

Install Traffic Signal



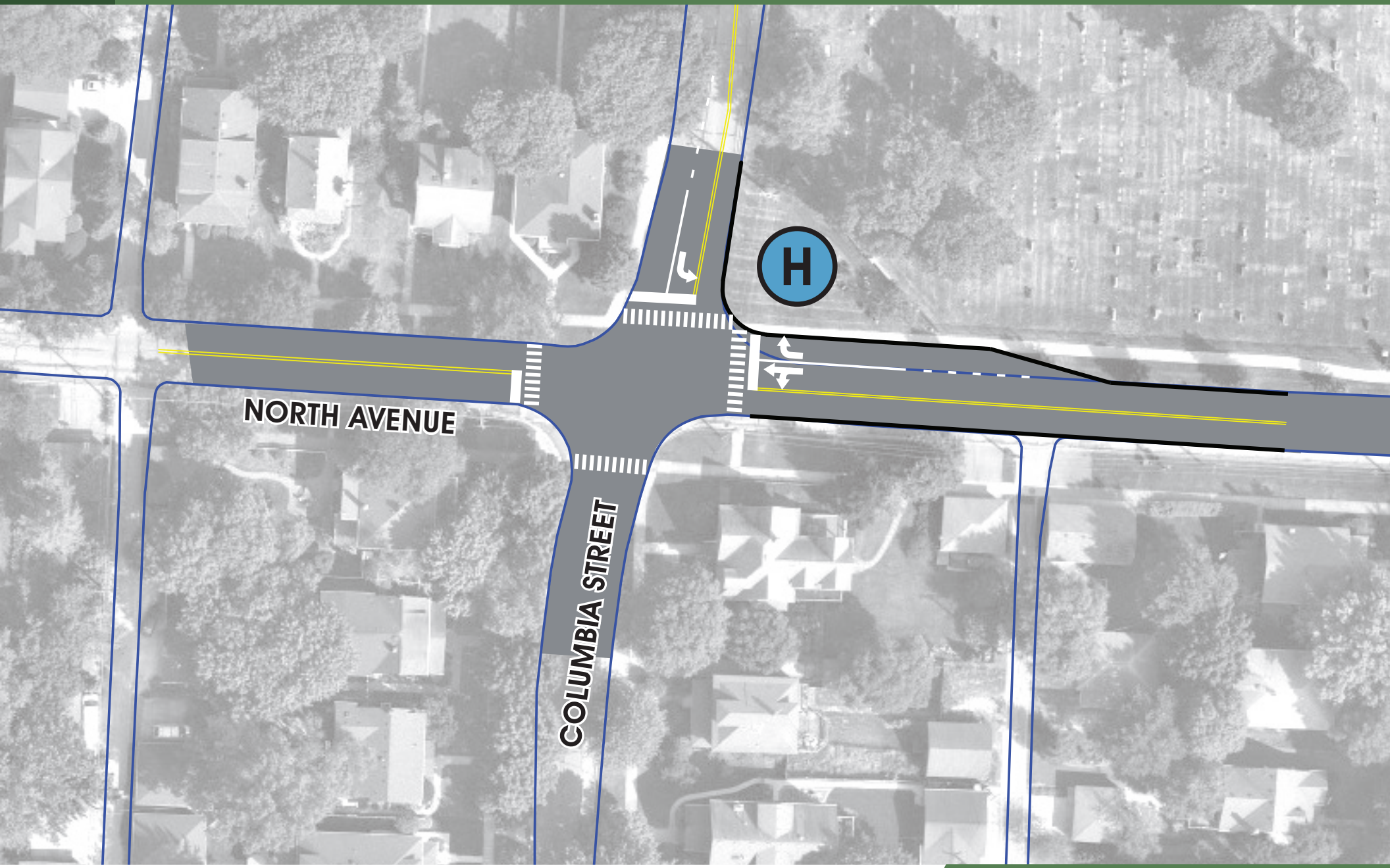
COLUMBIA STREET / 5TH AVENUE

Install Right-Turn Lane on West Leg, Install Traffic Signal



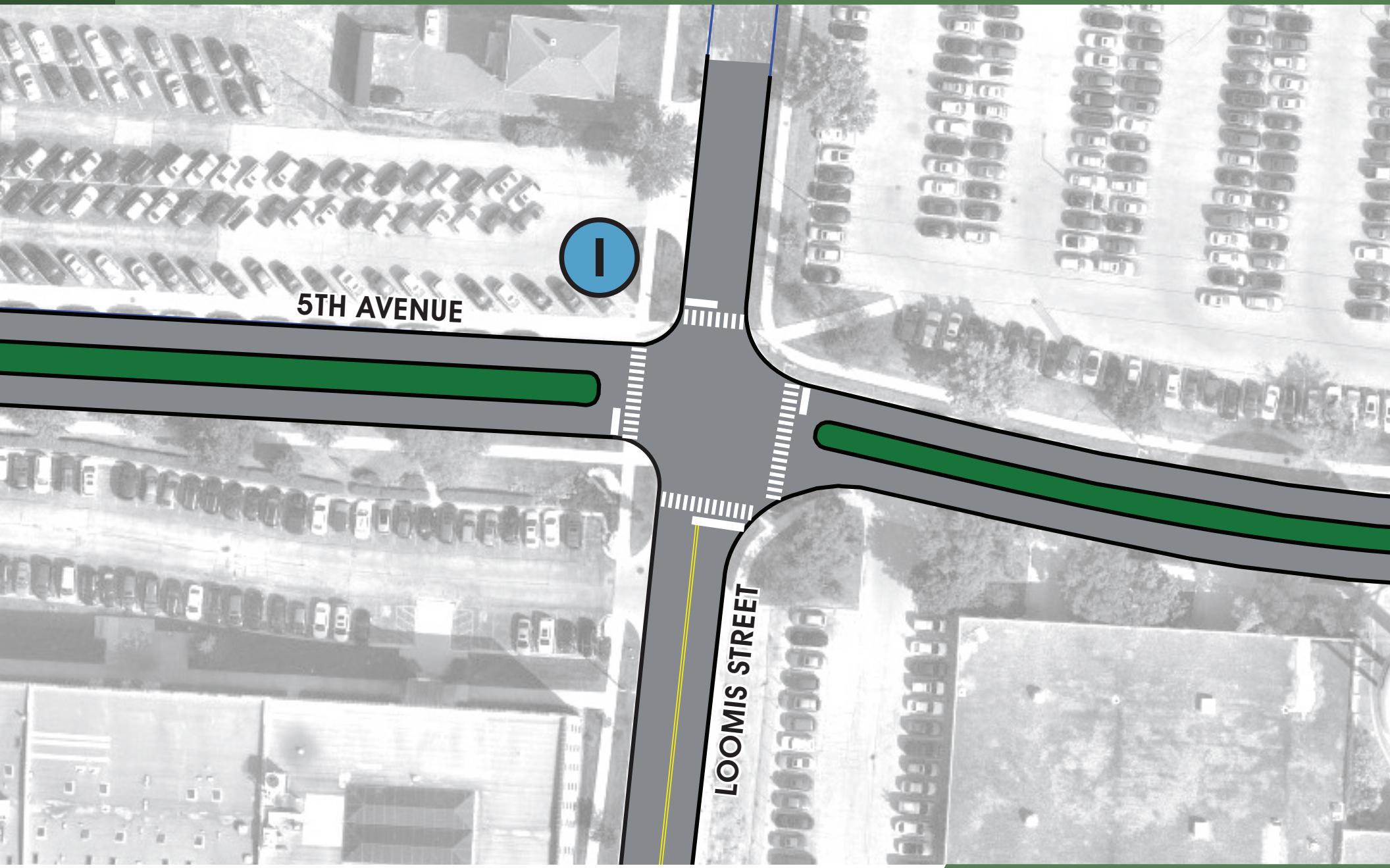
COLUMBIA STREET / NORTH AVENUE

Install Right-Turn Lane on East Leg



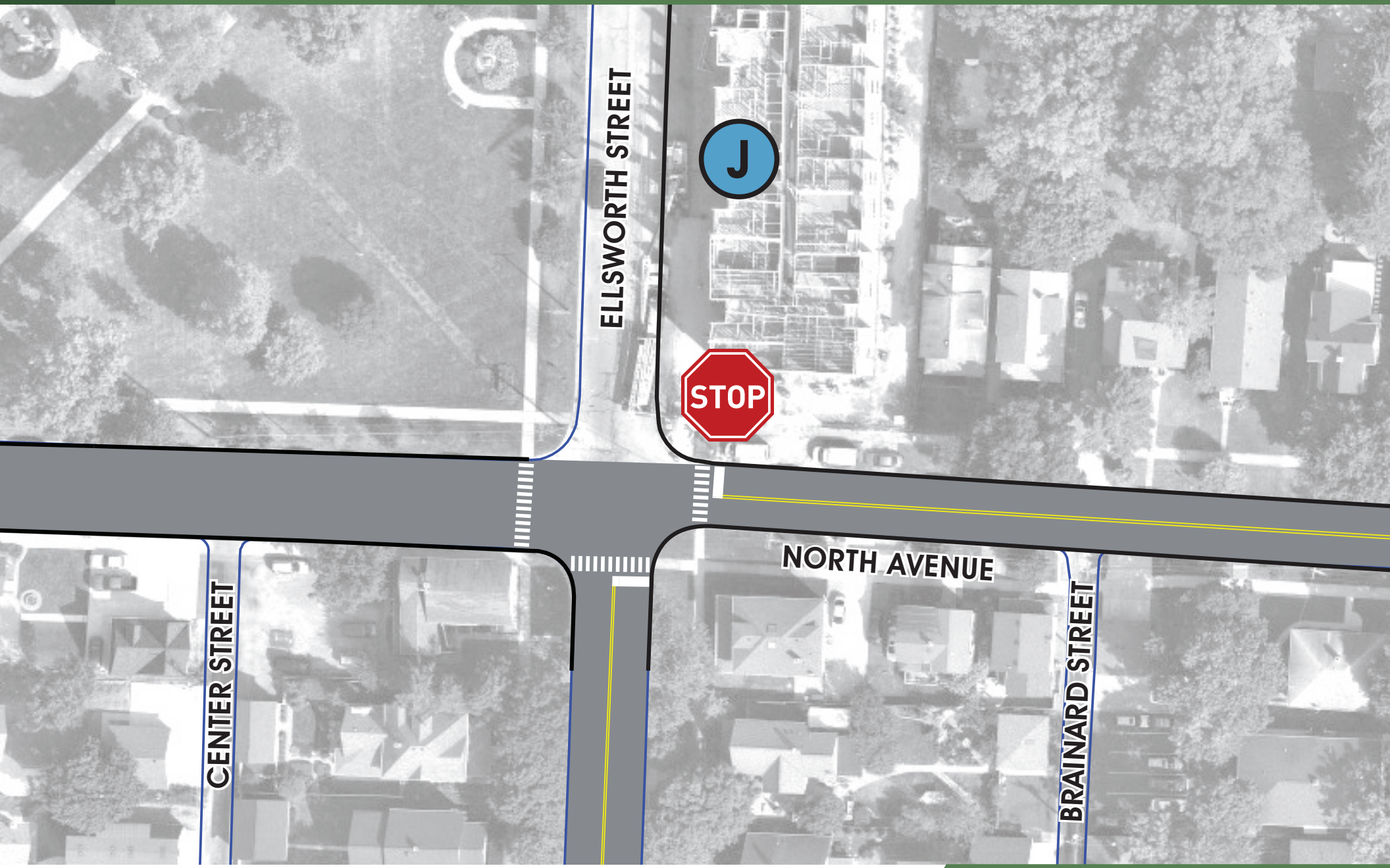
LOOMIS STREET / 5TH AVENUE

Coordination with other Working Groups and concept required

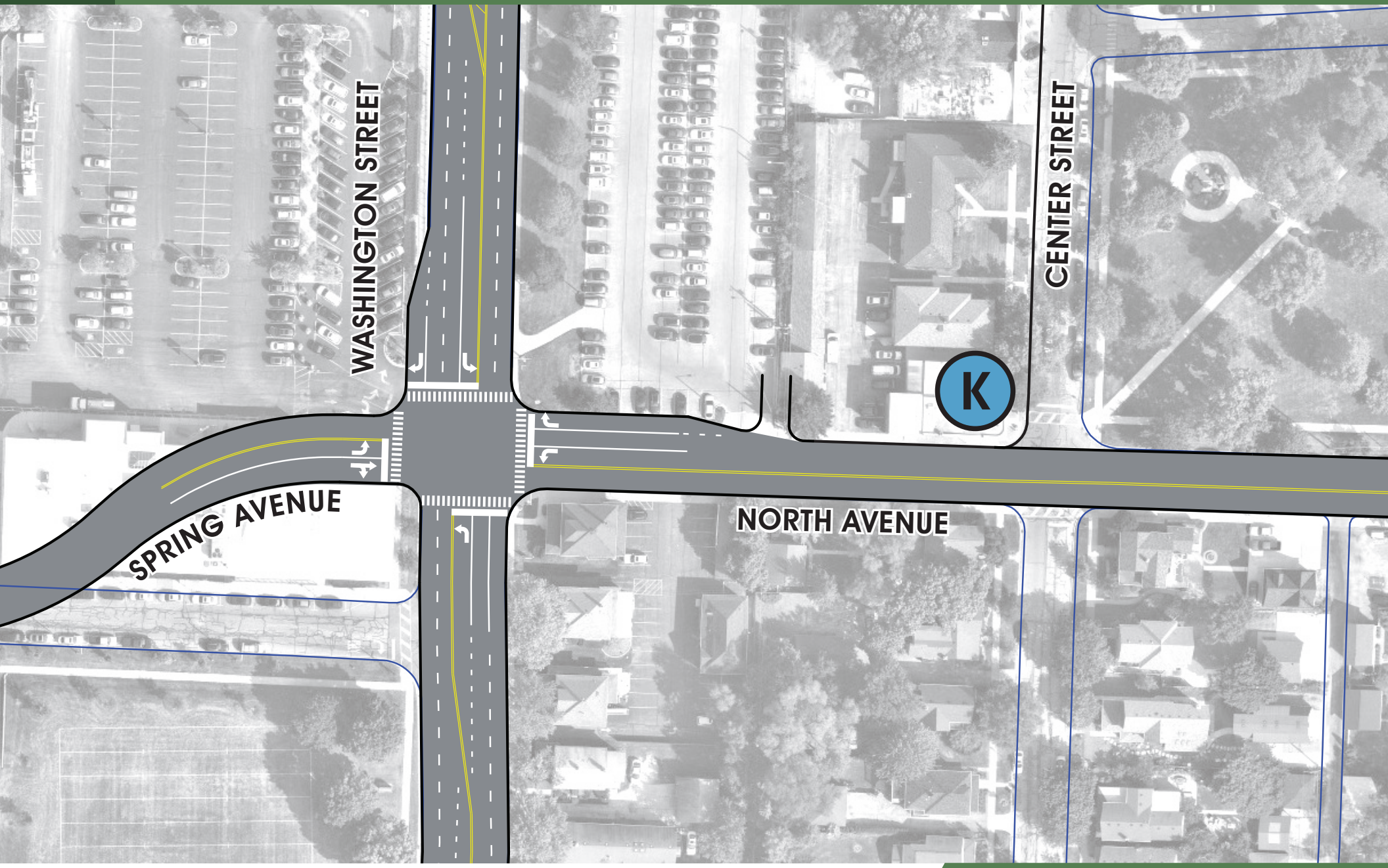


ELLSWORTH STREET / NORTH AVENUE

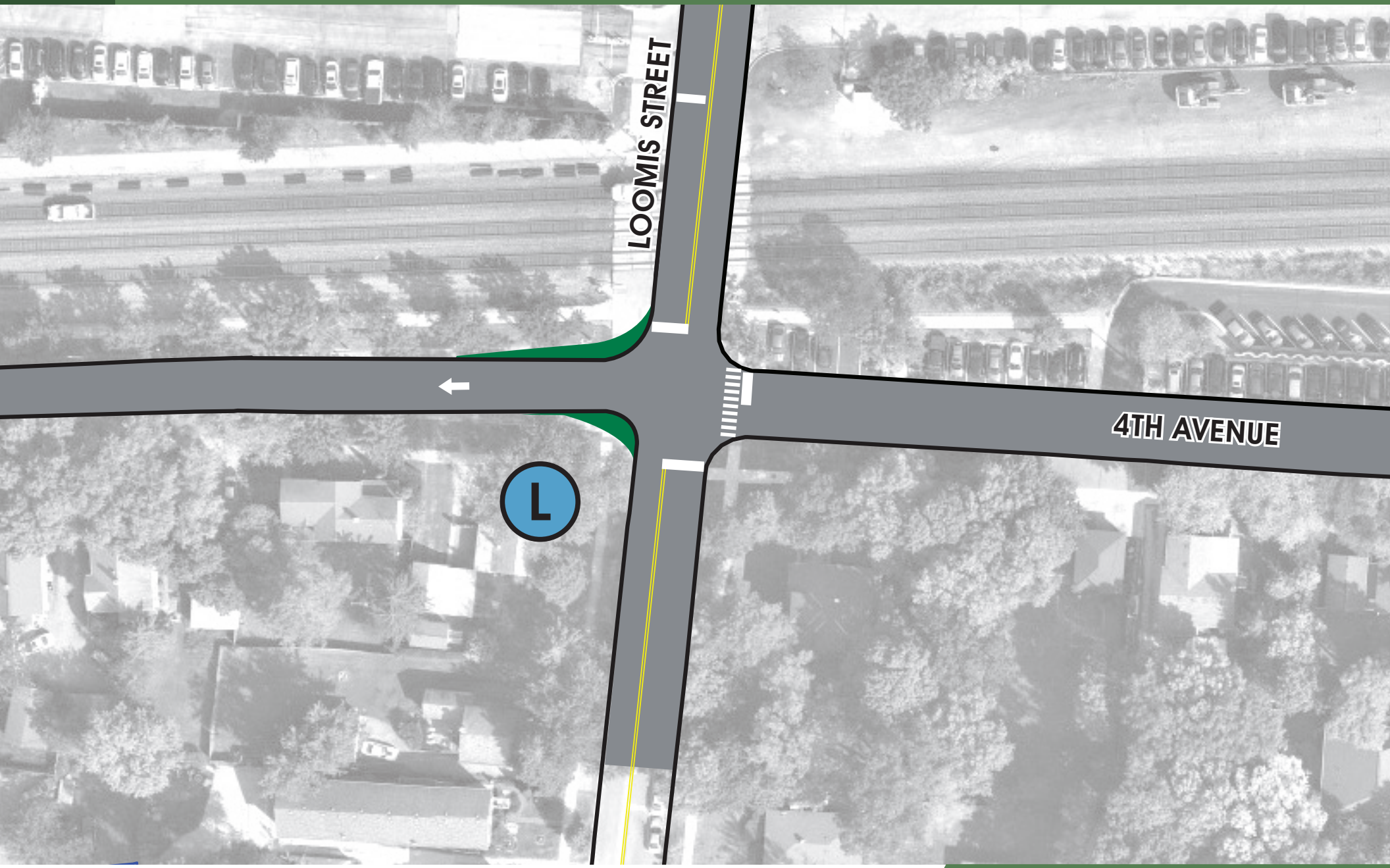
Install Westbound Stop Sign



NORTH AVENUE
Convert to Two-Way Street

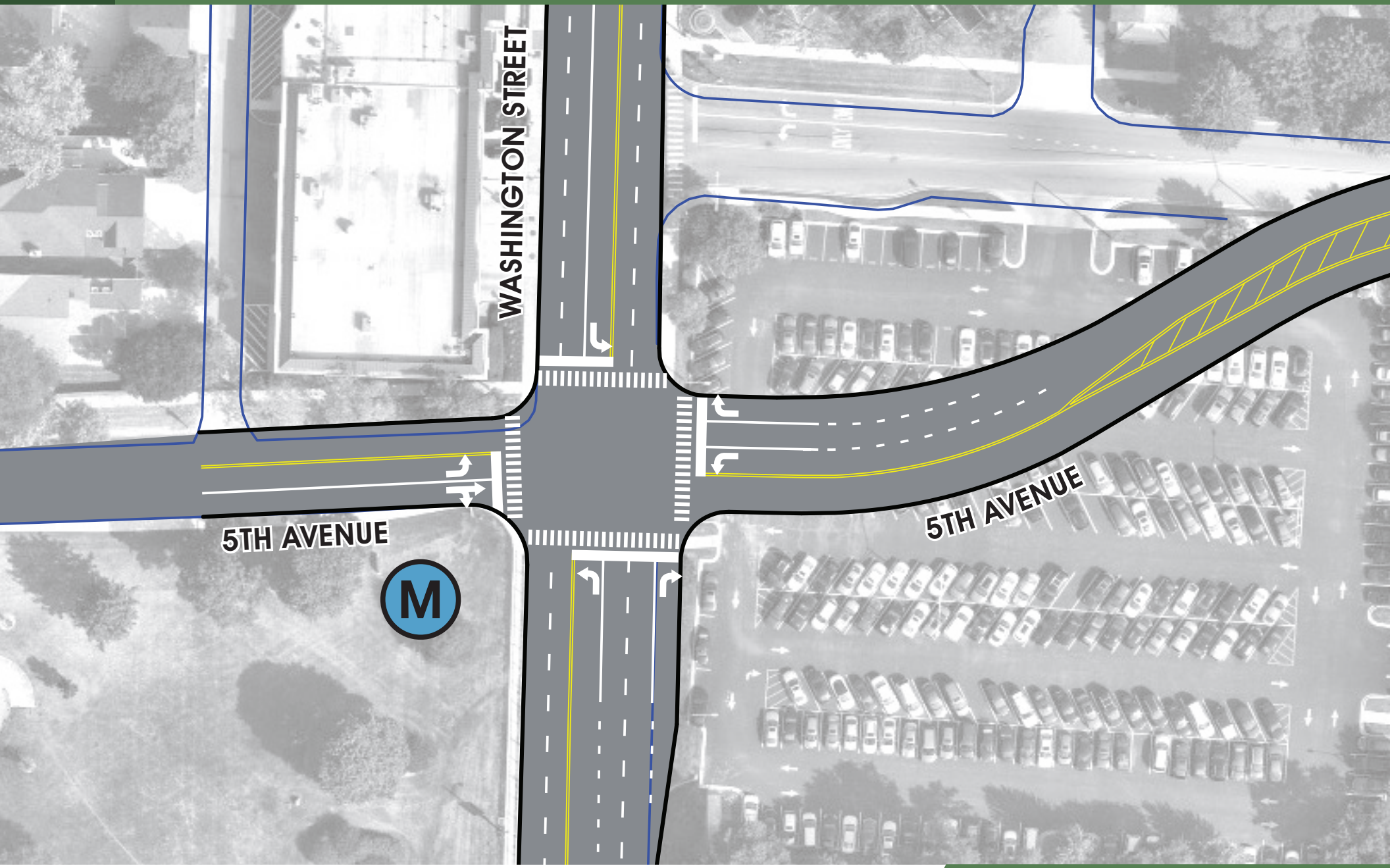


4TH AVENUE
Convert to One-Way Westbound



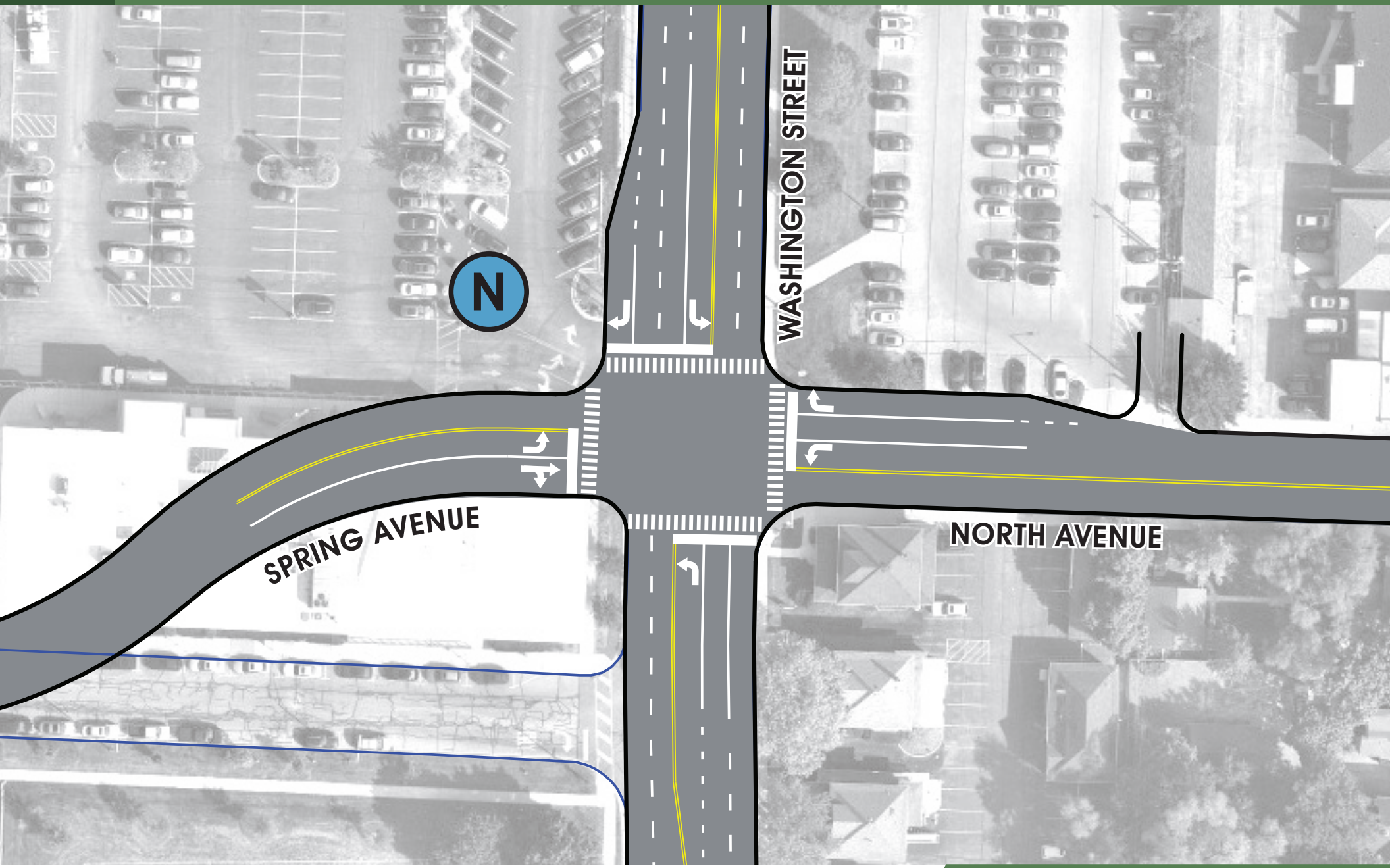
WASHINGTON STREET / 5TH AVENUE

Align East Leg of 5th Avenue with West Leg



WASHINGTON STREET / NORTH AVENUE / SPRING AVENUE

Align Spring Avenue with North Avenue



WASHINGTON STREET / NORTH AVENUE

Realign North Avenue to DuPage Children's Museum

- Employees on Naperville's trains, from conductors to ticket managers, are BNSF employees. While Metra owns the engines and train cars, all tracks and other equipment are owned by BNSF.

- The BNSF line is the busiest of the Metra system, providing 20% of all passenger trips in 2015.

- According to a 2014 survey, commuter access to the station is as follows:
    - 51% of riders drive themselves to the 5th Avenue station.
    - 21% carpool or are dropped off via auto.
    - 15% use public transit.
    - 12% walk or bike to the station.
    - 1% use other methods.

  System-wide, 52% of riders drive to their Metra station.

- System wide, Metra ridership decreased 2.2% in 2017 from 2016, while the BNSF line ridership decreased 0.6%.

- Metra sees an increase in commuters riding 2-3 days per week, rather than 5 days per week. Monthly pass sales dropped 5.3% in 2017, while ten-ride tickets increased 6.5%.

- Addition or removal of trains on a Metra line requires a system-wide study to document compliance with the Title VI of the Civil Rights Act of 1964.

- Most trains in the Metra system are 10-cars long; only 1 track at Union Station can support an 11-car train.

- When not in use, Metra stores trains and cars in yards downtown and in Aurora. Presently, these yards are at capacity.

- Metra is investing $350,000,000 in Positive Train Control (PTC). This federally-mandated system will result in another level of safety for train operation. Once installed, it is expected to add $20,000,000 per year in operating costs, approximately $0.25 per ticket sold.

- Metra expects to be implementing PTC until 2020.

- Due to the implementation of PTC, Metra has published a new schedule for the BNSF line. This proposed schedule includes changing an AM inbound local train to an express train from the Naperville station.

- Weekday station boarding at Naperville, and total BNSF line ridership, has remained steady for the past 10 years:

Weekday Station Boardings Over Time			
	Fall 2006	Spring 2014	Fall 2016
Aurora	2,180	2,107	1,936
Route 59	5,001	5,793	5,874
Naperville	3,734	4,112	4,002
Total BNSF Line	**55,439**	**54,686**	**54,751**

- There is no wait for quarterly permits at the Route 59 station, since 2010. Quarterly permits are available.

- There are 1,840 people on the downtown station wait lists. Of these, 333 already have a permit but have applied for a different location.

- The City completes monthly counts of available commuter parking at the Naperville station. Average usage of daily fee spaces is 99%, and permit spaces is 88%.

- Pace operates 20 bus routes which serve the Naperville station. Seventeen of these 20 routes come from south of 5th Avenue.

- In 2012, the City completed the *Naperville Metra Station Bus Depot and Commuter Access Feasibility Study.* This study investigated various local options for a bus depot. Federal funding was applied, and denied, for this project.

KISS-AND-RIDE / TNC / TRANSIT

- North and South of Tracks
  - Kiss-and-Ride
    - Passenger-side loading/unloading
    - 15-minute spaces during commute periods
  - Transportation Network Companies (e.g., Uber, Lyft, taxi)
    - Passenger-side loading/unloading
    - Designated staging and loading area (e.g., curb, parking lot)
  - Transit
    - Maintain 3 buses on north side of tracks
    - Locate in close proximity to the platform
    - Separation from other modes (preferred)

TRANSIT: PACE SUBURBAN BUS

- Parallel Design
  - Buses stacked end-to-end along curb
    - 40 feet per 35-foot bus
  - Bypass lane should be considered
    - 70 feet per 35-foot bus
  - Designated spaces for each route not provided

Metro C Line Bus Rapid Transit, *Brooklyn, MN*

TRANSIT: PACE SUBURBAN BUS

- Sawtooth Design
  - Angled parking bays
    - 60 feet per 35-foot bus
  - Provides designated spaces for each route
  - Pedestrian refuge area provided between angled bays

SANDAG/MTS Light Rail Transit Blue Station, *San Diego, CA*

Pace Bus Depot Location Analysis

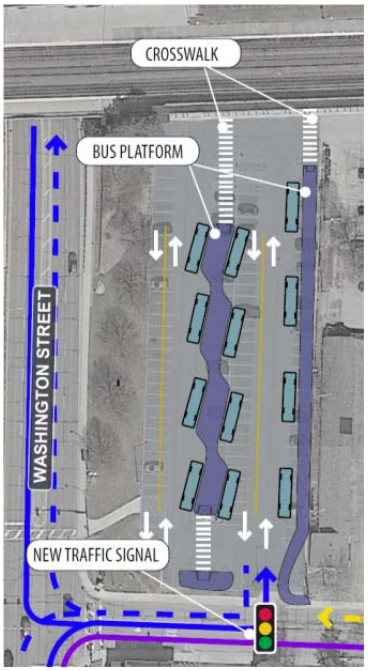
Key Notes

1. Options refer to conceptual sketches prepared by Kimley Horn.
2. The depot is assumed to accommodate Pace routes as they currently exist: 17 routes on the south, and 3 on the north, unless otherwise directed by Council.
3. Designs assume maximum queue is 12 buses, as directed by Pace.
4. Pace has not approved any of the designs or locations; their input is critical.
5. Estimated costs are for planning purposes only, and are subject to final design.

Parkview Lot - Planning-Level Budget $3.0 – 5.0 Million

Pros:

- Separates buses from kiss-n-ride traffic.
- Eliminates bus traffic (with two-way conversion of North Ave) on School and Ellsworth.
- Kiss-n-ride adjacent to station.
- Difficulty to expand/contract based on future Pace services
- Pace passengers protected from weather



Cons:

- Buses further from train station.
- Longer ADA route compared to existing conditions.
- Vertical integration of uses may be difficult.
- Perception of security & aesthetics of an understructure depot.
- Realigning North Ave would reduce bus capacity below Pace requirements
- Lifecycle (operational and maintenance) costs higher compared to an open-air depot.

Notes:

- Assumes development above the bus depot.
- Signal on North Ave required.
- Pace reviewed this location as part of the 2012 bus depot feasibility study.
- Estimate excludes dry utility relocation; includes pavement rehabilitation, pedestrian accommodations, signing and striping, and electrical improvements; structure is presented as per floor cost (assumes parking prototype option B) and includes ventilation and lighting; assumes exterior ramp for structure (cost excluded)

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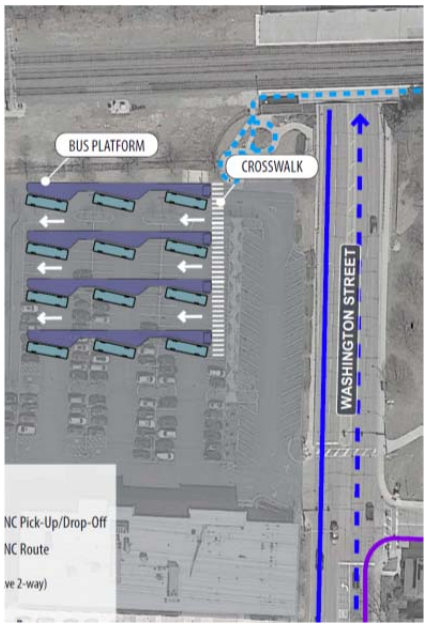
p: 630-328-1100
ryancompanies.com

DuPage Children's Museum – Planning-Level Budget $4.0 – 6.0 Million

Pros:

- Separates buses from kiss-n-ride traffic.
- Allows for a right-out onto Washington for southbound buses in the PM.
- Kiss-n-ride adjacent to station.
- Eliminates bus traffic on School and Ellsworth.
- Pace passengers protected from weather



Cons:

- Buses further from train station.
- Long ADA route may require vertical transportation (ramps/elevator) on west side of Washington.
- If not relocated, Children's Museum traffic will conflict with bus traffic. This creates a safety concern and limits proximity of parking to the museum.
- AM northbound left turn stacking may affect signal function and access to Spring Ave.
- Vertical integration of uses may be difficult.
- Perception of security & aesthetics of an understructure depot.
- Difficulty to expand/contract based on future Pace services
- Lifecycle (operational and maintenance) costs higher compared to an open-air depot.

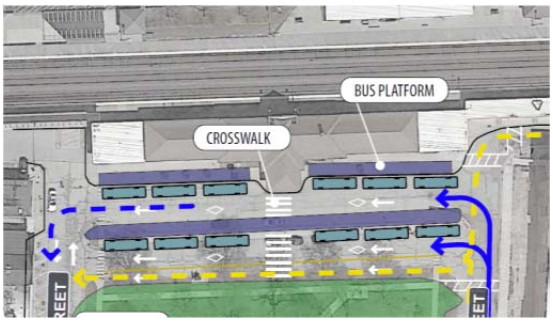
Notes:

- Cost assumes development above the bus depot.
- Pace has not reviewed or commented on this location as it affects routes.
- Estimate excludes dry utility relocation; includes pavement rehabilitation, pedestrian accommodations, signing and striping, and electrical improvements; structure cost is presented as per floor cost (assumes parking prototype option A) and includes ventilation and lighting

4th Avenue - Planning-Level Budget $300,000 – 500,000

Pros:

- Separates buses from kiss-n-ride traffic.
- Buses adjacent to station.
- Shortest ADA route.



Cons:

- Additional kiss-n-ride traffic & activity on 4th Avenue.
- Kiss-n-ride is moved further from platforms.
- Loomis rail crossing gates, when lowered, could block access to westbound 4th Avenue.

Notes:

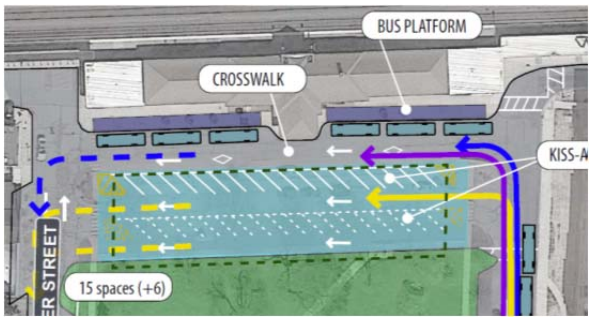
- Requires conversion of 4th Avenue to one-way westbound.
- Two-way conversion of North Avenue could reduce bus traffic on School and Ellsworth.
- Estimate excludes dry utility relocation; includes pavement rehabilitation, pedestrian accommodations, bus platforms, signing and striping, and electrical improvements;

includes kiss-and-ride improvements to 4th Avenue; excludes modifications to Center Street and Ellsworth Street; excludes North Avenue two-way conversion

Burlington Square - Planning-Level Budget $500,000 – 1.2 Million

Pros:

- Buses adjacent to station.
- Kiss-n-ride adjacent to station.
- Shortest ADA route.



Cons:

- Bus and kiss-n-ride traffic not fully separated.
- Bus stacking remains along Ellsworth.

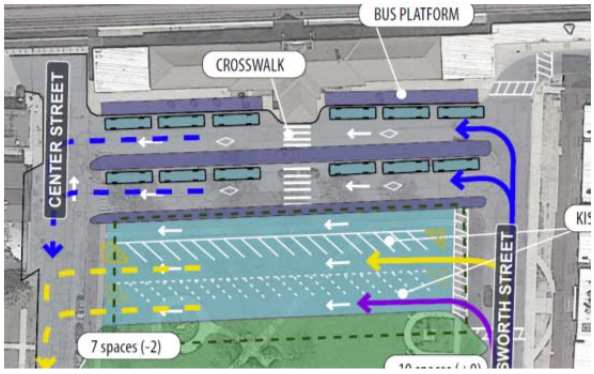
Notes:

- Kiss-n-ride could be covered to provide permanent farmer's market location; planning-level budget $800,000. Other multi-purpose uses can be considered.
- Two-way conversion of North Avenue could reduce bus traffic on School and Ellsworth.
- Estimate excludes dry utility relocation; includes pavement rehabilitation, pedestrian accommodations, bus platforms, signing and striping, and electrical improvements; excludes modifications to Center Street and Ellsworth Street; excludes North Avenue two-way conversion; approximately 13,500 square-foot Farmer's Market shelter at $60/sf would be an additional $800,000.

Burlington Square Alternate - Planning-Level Budget $500,000 – 1.2 Million

Pros:

- Buses adjacent to station.
- Kiss-n-ride adjacent to station.
- Ample bus stacking to eliminate queuing on Ellsworth Street.
- Shortest ADA route.



Cons:

- Bus and kiss-n-ride traffic not fully separated.
- Encroaches on Burlington Square Park.

Notes:

- Kiss-n-ride could be covered to provide permanent farmer's market location; planning-level budget $800,000. Other multi-purpose uses can be considered.
- Two-way conversion of North Avenue could reduce bus traffic on School and Ellsworth.
- Estimate excludes dry utility relocation; includes pavement rehabilitation, pedestrian accommodations, bus platforms, signing and striping, and electrical improvements; excludes modifications to Center Street and Ellsworth Street; excludes North Avenue two-way conversion; approximately 13,500 square-foot Farmer's Market shelter at $60/sf would be an additional $800,000.

Additional notes from Working Group members:

Key Notes:

Pat Pechnick Comment:
Their [Pace] input should not be construed as having the final say unless they are contributing funding. The minimal incremental citing of wear an tear on brakes and tires and fuel costs shouldn't be the reason behing poorr land use planning.

Ryan Response:
Ryan does not have the authority to relocate the Pace depot or Pace routes. Coordination and communication with Pace is necessary to ensure future Pace level of service to the City of Naperville and its residents is maintained, unless otherwise directed by Council.

Parkview Lot:

Pat Pechnick Comment:
[As related to a bus depot with development above]
A bus depot should be open air and not understructure. Idling buses affect immediate air quality and the vision of a dark dingy low ceiling height terminal doesn't fit within the context of the surrounding neighborhood which may attract vagrants.

Ryan Response:
An at-grade bus depot with a building above would require ventilation designed accordingly, in consideration of air quality for bus passengers as well as users in the building above. Aesthetic concerns of a dark and low-ceiling height terminal can be addressed with lighting and increased ceiling heights, respectively.

David Gosse Comment:
[As related to a bus depot with development above]
Capacity will be constrained by the size of the space, once adopted. Space will be hard to re-purpose if needs change. Closed space may be less pleasant for commuters if it is dark and dirty. Idling buses will make air quality a problem, and may make it impossible to maintain a clean welcoming space. Closed, sheltered space will almost certainly attract loiterers and vagrants, which will detract from the commuter experience and be a safety risk for the neighborhood.

Ryan Response:
An at-grade bus depot with a building above may be harder to repurpose. If implemented, the concept could take into consideration findings from the Parking Working Group regarding the repurposing of parking garages. If at-grade (with building above), the depot could be an open-air concept without walls, however, mechanical ventilation may still be required. Aesthetic concerns of a dark and low-ceiling height terminal can be addressed with lighting and increased ceiling heights, respectively.

DuPage Children's Museum

David Gosse Comment:
It doesn't necessarily separate buses from cars, if the museum lot is used either as a commuter or retail/office parking garage.

Ryan Response:
Correct; the lot could have other commuter or private land uses. This could result in buses and cars sharing internal circulation routes.

David Gosse Comment:
Arguably, kiss-n-ride should be on the museum parking lot, with bus depot at the station. This would get the greater majority of people (bus riders) dropped as close as possible to the station, and reduce the vertical integration problems. Meanwhile, a little extra car traffic on the museum lot would not be the same type of traffic problem as would be for buses mixed with parking traffic.

Ryan Response:
Kiss-n-ride could be implemented on the museum lot with development above. Traffic should be considered given the higher volume of kiss-n-ride vehicles compared to Pace buses. Intersection function of North/Spring/Washington will be important. It is reasonable to assume that some commuters may use the museum lot today for pick up and drop off, particularly if coming from west of Washington St.

David Gosse Comment:
[As related to ADA routes]
Note that this [a bus depot on the museum lot] would not be as great a concern if kiss-n-ride was placed on the museum lot, because the north side drop off is likely to be close to the tracks and more accessible to ADA compliant ramps under the tracks. Kiss-n-riders can choose where to make the drop. Bus riders are stuck with wherever the bus drops them.

Ryan Response:
Placing a bus depot on the museum lot does result in a longer ADA route than current conditions, particularly when the Ellsworth tunnel must be used. A proposed Core Functional Component is to maintain kiss-n-ride facilities on both sides of the tracks. Doing so would allow kiss-n-ride users to avoid the Ellsworth tunnel or other pedestrian rail crossings.

4th Avenue

Pat Pechnick Comment:
Northbound traffic will not be able to access 4th Ave when the gates are down, so drivers may chose to instead not use a formal kiss and ride designated drop off area.

Ryan Response:
If 4th Avenue is converted to a westbound one-way street, kiss-n-ride users driving north would turn left onto 4th Avenue from Loomis. If traffic on Loomis was blocked by a train with gates down, users may not be able to make the turn onto 4th Avenue. As one potential solution, the City could consider adding a northbound left turn lane at this location.

David Gosse Comment:
Dumping 4th Ave traffic into the Burlington Square area does not truly separate kiss-n-ride traffic from bus traffic. It also leaves room for kiss-n-ride people to drop off in front of the station, which they will do if they see open space.

Ryan Response:
Westbound 4th Avenue traffic would exit south on Ellsworth, while Pace buses would travel north on Ellsworth. This would create a condition where Pace buses must turn left into the loading berths across kiss-n-ride departing traffic. Regardless of bus depot location, enforcement may be needed to prevent kiss-n-ride users from stopping in designated bus lanes.

David Gosse Comment:
[As related to the 4th Avenue kiss-n-ride concept]
This is a serious detriment to the neighbors, regardless whether they are owner-occupied or rentals. 4th Ave is narrow even for a one-way street. Cars pulling in and out of drop-off stalls parallel to the flow of traffic would be a significant problem. Back-ups at the airports are severe, even with more space and extra lanes to work with.

Ryan Response:
This improvement was suggested in the 2012 bus depot study, which noted "While buses would not queue on neighborhood streets, kiss-and-ride activity would be relocated to 4th Avenue between Ellsworth Street and Loomis Street. Feedback with neighbors along 4th Avenue indicated opposition to this kiss-and-ride staging concept." 4th Avenue is approximately 20' wide; should a vehicle stop to parallel park, it would block traffic until fully parked.

David Gosse Comment:
4th Ave will be inaccessible if traffic backs up on Loomis while the RR crossing gates are down.

Ryan Response:
If 4th Avenue is converted to a westbound one-way street, kiss-n-ride users driving north would turn left onto 4th Avenue from Loomis. If traffic on Loomis was blocked by a train with gates down, users may not be able to make the turn onto 4th Avenue. As one potential solution, the City could consider adding a northbound left turn lane at this location.

Burlington Square

David Gosse Comment:
The differences between the 4th Ave and the two Burlington Square concepts is only in the location of the kiss-n-ride. We should consider all options for kiss-n-ride, independent of the location of the bus depot. The parkview lot and the museum lot both could serve as spots for kiss-n-ride. Either would more effectively segregate cars from buses, and would leave the space in front of the station dedicated for bus traffic.

Ryan Response:
The kiss-n-ride could be located independently of the bus depot on the Parkview or Museum lots with development above. Similar to the Pace bus depot, final traffic patterns and geometries should be considered when reviewing these options.

David Gosse Comment:
Diagonal stalls would greatly improve capacity and experience for drop-offs and pick-ups. This would also encourage kiss-n-ride drivers to be in the right place and leave the bus platform for the buses.

Ryan Response:
Diagonal stalls could help prevent loading/unloading vehicles from blocking lanes of traffic, when compared to parallel stalls. Additionally, Uber and Lyft vehicles are identified by their license plates. Facing vehicles towards the station may help riders locate their designated vehicle.

David Gosse Comment:

They [Pace & kiss-n-ride vehicles] would be separated where they park, which currently seems to be the place of greatest contention.

Ryan Response:
This concept intends to limit the use of bus lanes by kiss-n-ride vehicles. However, enforcement may be needed to prevent kiss-n-ride users from stopping in designated bus lanes.

David Gosse Comment:
[As it relates to a covered farmer's market]
This is a very attractive idea, and one that would substantially improve the neighborhood experience at minimal relative cost.

Ryan Response:
Given the limited off-peak hour uses of the bus depot and kiss-n-ride facilities, it is important to investigate multi-purpose uses of these neighborhood areas.

Burlington Square Alternate

David Gosse Comment:
They [Pace & kiss-n-ride vehicles] would be separated where they park, which currently seems to be the place of greatest contention.

Ryan Response:
This concept intends to limit the use of bus lanes by kiss-n-ride vehicles. However, enforcement may be needed to prevent kiss-n-ride users from stopping in designated bus lanes.

David Gosse Comment:
Could encroachment be limited by using only a single row of diagonal stalls? In terms of capacity, would that improve on today's configuration? Instead of pull-through stalls, could pull-in, back-out configuration be used?

Ryan Response:
This concept provides approximately 19 diagonal stalls with a single row, and 38 with two rows of diagonal stalls. Currently there are 11 designated parallel parking stalls for kiss-n-ride functions.

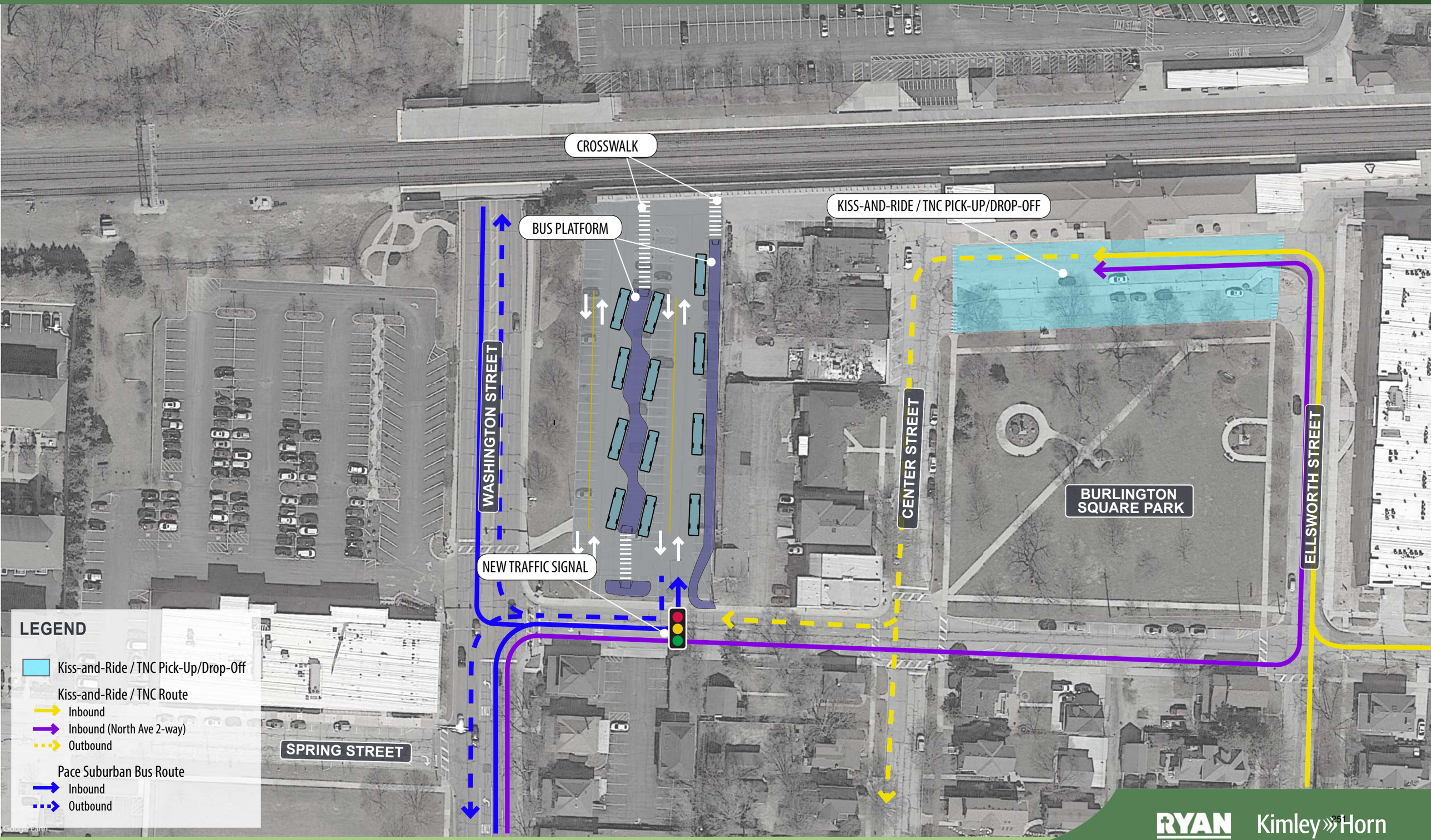
David Gosse Comment:
Input or study on the use of Burlington Square Park might be helpful. This is one of very few green spaces within the neighborhood south of the tracks and east of Washington. But, knowing how the space is used might make it easier to assess whether taking some space from the park would be a detriment to the neighborhood.

Ryan Response:
Any impacts to Burlington Square Park for transportation improvements would need to be reviewed and approved by the City and Park District.

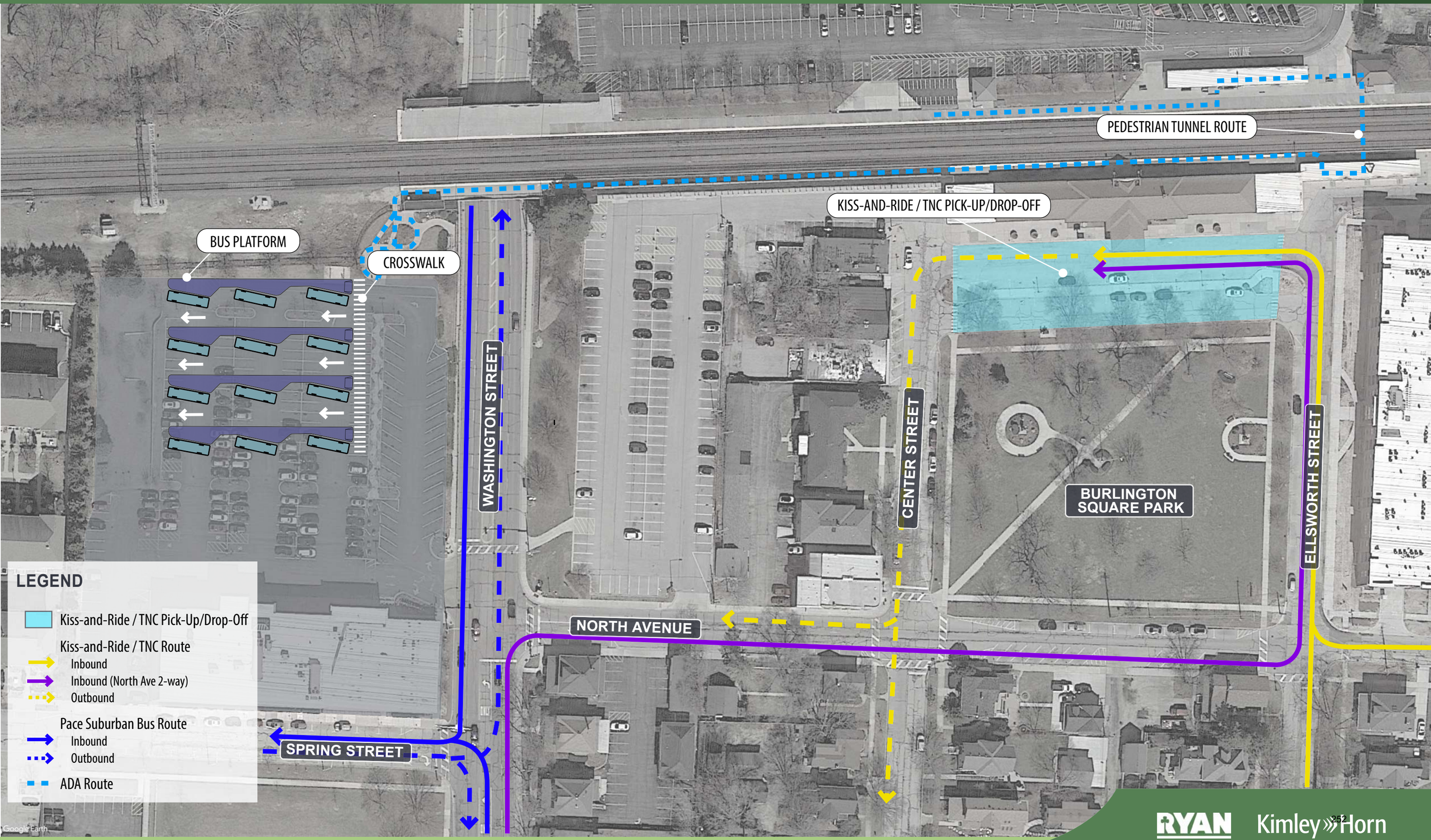
David Gosse Comment:
[As it relates to a covered farmer's market]
This is a very attractive idea, and one that would substantially improve the neighborhood experience at minimal relative cost.

Ryan Response:
Given the limited off-peak hour uses of the bus depot and kiss-n-ride facilities, it is important to investigate multi-purpose uses of these neighborhood areas.

BUS DEPOT CONCEPT: PARKVIEW LOT



BUS DEPOT CONCEPT: DUPAGE CHILDREN'S MUSEUM



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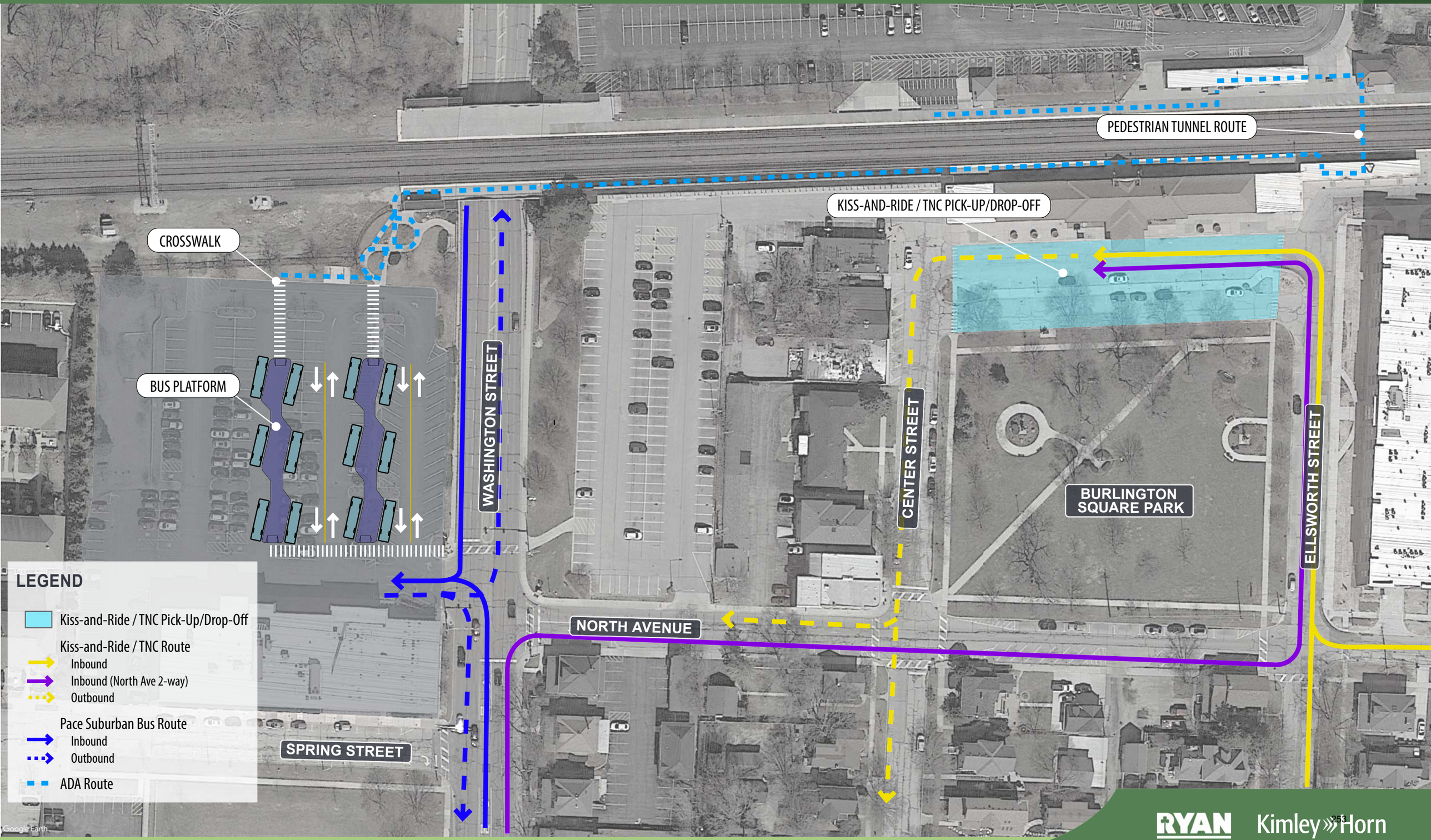

BUS DEPOT CONCEPT: 4TH AVENUE

KISS-AND-RIDE / TNC PICK-UP/DROP-OFF (24 spaces)

BUS PLATFORM

CROSSWALK

4TH AVENUE

CENTER STREET

15 spaces (+6)

ELLSWORTH STREET

19 spaces (+9)

BURLINGTON SQUARE PARK

22 spaces (+13)

LOOMIS STREET

NORTH AVENUE

LEGEND

- Kiss-and-Ride / TNC Pick-Up/Drop-Off
- Kiss-and-Ride / TNC Route
  - Inbound
  - Inbound (North Ave 2-way)
  - Outbound
- Pace Suburban Bus Route
  - Inbound
  - Outbound

BUS DEPOT CONCEPT: BURLINGTON SQUARE

BUS PLATFORM

CROSSWALK

4TH AVENUE

KISS-AND-RIDE / TNC PICK-UP/DROP-OFF (19-38 spaces)

15 spaces (+6)

19 spaces (+9)

22 spaces (+13)

CENTER STREET

BURLINGTON SQUARE PARK

ELLSWORTH STREET

NORTH AVENUE

LOOMIS STREET

BUS LANE

TAXI STAND

LEGEND

- Kiss-and-Ride / TNC Pick-Up/Drop-Off
- Farmer's Market Shelter

Kiss-and-Ride / TNC Route
- Inbound
- Inbound (North Ave 2-way)
- Outbound

Pace Suburban Bus Route
- Inbound
- Outbound

RYAN Kimley»Horn

BUS DEPOT CONCEPT: BURLINGTON SQUARE ALTERNATE

BUS PLATFORM

CROSSWALK

4TH AVENUE

CENTER STREET

KISS-AND-RIDE / TNC PICK-UP/DROP-OFF (19-38 spaces)

ELLSWORTH STREET

LOOMIS STREET

7 spaces (-2)

10 spaces (+0)

BURLINGTON SQUARE PARK

22 spaces (+13)

NORTH AVENUE

LEGEND

- Kiss-and-Ride / TNC Pick-Up/Drop-Off
- Farmer's Market Shelter
- Kiss-and-Ride / TNC Route
  - Inbound
  - Inbound (North Ave 2-way)
  - Outbound
- Pace Suburban Bus Route
  - Inbound
  - Outbound

RYAN Kimley»Horn