



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:

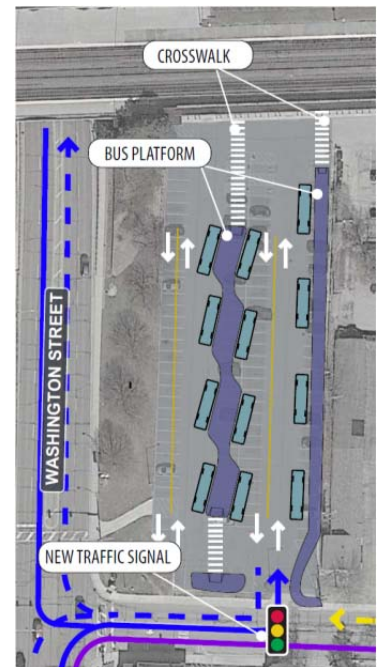
- Separates buses from kiss-n-ride traffic.
- Eliminates bus traffic (with two-way conversion of North Ave) on School and Ellsworth.
- Kiss-n-ride adjacent to station.
- Difficulty to expand/contract based on future Pace services
- Pace passengers protected from weather

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)



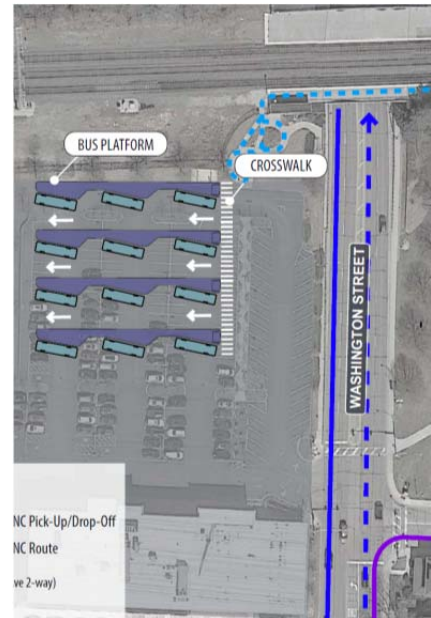
DuPage Children’s Museum – Planning-Level Budget \$4.0 – 6.0 Million

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

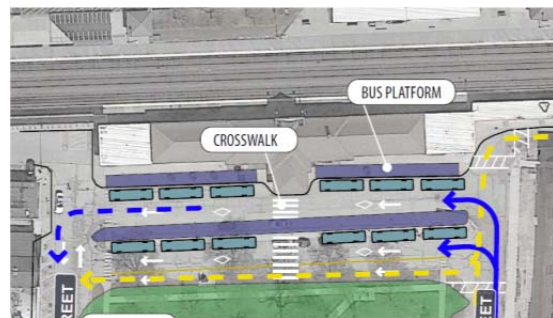
4th Avenue - Planning-Level Budget \$300,000 – 500,000

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:

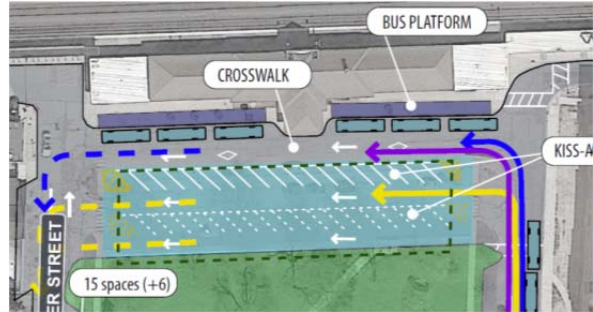
- Buses adjacent to station.
- Kiss-n-ride adjacent to station.
- Shortest ADA route.

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:

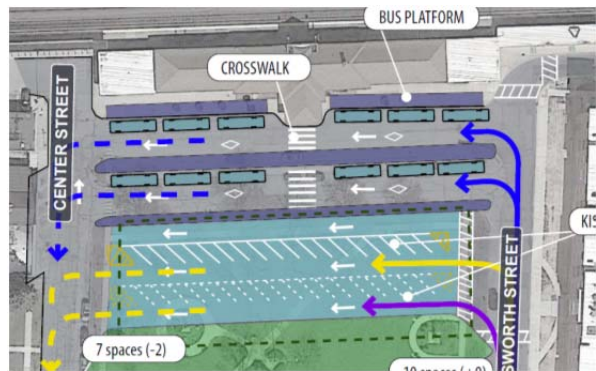
- Buses adjacent to station.
- Kiss-n-ride adjacent to station.
- Ample bus stacking to eliminate queuing on Ellsworth Street.
- Shortest ADA route.

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 and tear on brakes and tires and fuel costs shouldn't be the reason behind poor 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 repurpose 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.