APPENDIX A:
Meeting Notes

NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study
Miami-Dade Transit (MDT) Kick-off Meeting
June 13, 2012

The MDT kick-off meeting for *NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study* was held on Wednesday, June 13, 2012, at the MDT offices at the Overtown Transit Village. The attendees of the meeting were:

- Wilson Fernandez – Miami-Dade MPO
- Monica Cejas – MDT
- Bob Pearsall – MDT
- Derrick Gordon – MDT
- Joel Perez – MDT
- Hector Garnica – MDT-IT
- Karla Damian – MDT
- Greg Kyle – Kimley-Horn and Associates, Inc. (KHA)
- K.K. Saxena – KHA
- Jill Capelli – KHA
- Adrian Dabkowski – KHA

Kimley-Horn distributed several handouts during the course of the meeting including an agenda, origin-destination survey results for Bus Routes 27 and 97, iSurvey results for Bus Routes 27 and 97, and a project schedule. The following describes the pertinent discussion topics during the meeting.

- Overview of project and discussion of previous work.
    - Scope of work
        - Park-n-Ride concept plans
        - Exact station locations
        - Station footprint and right-of-way needs
        - National Environmental Policy Act (NEPA) Categorical Exclusion (CAT Ex) document
    - Previous work
        - MPO's 2010 Near-Term Implementation Plan
        - Final Environmental Impact Statement (FEIS) for 27th Avenue
        - Kittelson & Associates BRT Concept Evaluation

- MDT will provide APC information to Kimley-Horn (KHA).
    - KHA staff will visit MDT to obtain data.
        - KHA to coordinate with Bob Pearsall.
    - KHA will review bus survey information for Routes 27 and 97 to determine transit dependency riders versus choice riders.

- MDT stated that Bus Route 97 will be replaced by Route 297 (27th Avenue Orange Max)
    - The route will provide 15-minute peak period headways and 30-minute mid-day headways.
    - The new route will be extended to MIC with a new stop at the Brownsville station.
    - Some stops may be removed along the route.

- Park-n-Ride Lots
    - NW 215th Street Location
        - County's Planning and Zoning Department prepared a Highest and Best Use Study
            - Interest in hotel land use and transit oriented development (TOD).
            - Area residents not interested in more residential development.
            - Request for Proposal (RFP) circulating internally at MDT for developing parcel
                - Transit amenities are required.
        - Florida Department of Transportation (FDOT) funding available, approximately $5 million for a transit terminal. Initial RFP called for the following features.
            - 350 parking spaces
            - Eight (8) bus bays: four (4) for articulated buses and four (4) for standard buses
            - Two (2) bus bays for layovers
            - Comfort station for operators
            - Canopy over passenger waiting area
            - Potential local bus circulator access and 95 Express interim stop.
        - An area yet to be determined needs to be reserved for future extension of rail service.
        - Since 27th Avenue is under FDOT jurisdiction, coordination with FDOT will be required for access to the site, including driveway locations, median openings, and signalization.
    - NW 95th Street Location
        - MDT owns a three (3) acre parcel on the northwest quadrant of NW 95th Street and 27th Avenue.
            - An on-site library occupies approximately 1-acre of the parcel.
            - No funding has been identified for developing a park-n-ride lot at this location.
    - NW 119th Street Location
        - FDOT owns several parcels on the northeast quadrant of NW 119th Street and NW 27th Avenue.
        - The abandoned golf course on the north and south sides of NW 119th Street will be redeveloped. The developer will provide bus bays and space for bus shelters on NW 119th Street.

- NW 183rd Street Location
  - Potential Leasing opportunity at the Carol Mart.

- MDT has specific design criteria for Park-n-Ride lots and transit stations including
  - Passenger vehicle parking requirements, both short-term and long-term
  - Bicycle parking requirements
  - Motorcycle/scooter parking requirements
  - Kiss-n-Ride design

- Stations
  - The Biscayne Boulevard station design will be utilized, which is currently under development.
    - Station dimensions: 20 feet by 45 feet desirable to accommodate articulated buses.
  - Electrification will be provided for various amenities such as lighting, real-time passenger information, and ticket vending machines (TVM).

- Public Involvement
  - Corridor located within County Commission Districts 1, 2, and 3.
  - Coordination will be required with Cities of Opa-Locka and Miami Gardens.
  - MPO stated that two (2) meetings would be held with each, Opa-Locka and Miami Gardens. The first meeting would be an introduction to the project with the second meeting towards the end of the project, before the MPO Board.
    - The Miami Gardens Planning and Zoning Committee stated that the City wanted to be involved in the NW 215th Street TOD.
  - The project would be heard at the MPO Board as an action item.
  - The project may also be presented at Transportation Planning Council (TPC), Citizens Transportation Advisory Committee (CTAC), and Citizen's Independent Transportation Trust (CITT).
  - The Study Advisory Committee (SAC) would consist of the following agencies
    - MPO
    - Miami Dade County Public Works and Waste Management Department
    - FDOT
    - MDT
    - City of Opa-Locka
    - City of Miami Gardens
    - Broward County Transit (BCT) – as needed
    - Miami-Dade College – as needed
    - Miami International Airport (MIA) – as needed
- Technology
  - Background information
    - The countywide Advanced Traffic Management System (ATMS) is now complete.

- KHA to set direction for Transit Signal Priority (TSP).
    - MDT currently focused on implementing TSP on 6-7 corridors.
- The Computer Aided Dispatch/Automated Vehicle Locator (CAD/AVL) project has received bids and is in the selection process.
    - 2-year implementation process
- On board bus modems provide WiFi and real time location information that can be provided at stations, website, or mobile apps.
- Predicted arrival sign – real-time passenger information to be provided on standalone upright assembly.
- Kiosk have funding in place for seven (7) stations system wide.
    - Kiosks won't be provided at most stations along the NW 27th Avenue corridor
    - Potential location at NW 215th Street park-n-ride lot/terminal station
- Security for TVMs needs to be considered, such as at the Golden Glades Tri-Rail station.
- A Comfort Center similar to the facility at Kendall Drive and SW 162nd Avenue in the Kendall TownCenter, should be considered.

Next Steps/Action Items

- KHA to coordinate acquiring APC data with Bob Pearsall.
- KHA to review transit dependent ridership versus choice riders on NW 27th Avenue bus routes.
- MDT to provide KHA with parcel surveys of NW 215th Street and NW 95th Street parcels.
- MDT to provide Transit Design Criteria to KHA.

NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study
Study Advisory Committee (SAC) Kick-off Meeting
July 5, 2012

The SAC kick-off meeting for *NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study* was held on Wednesday, June 13, 2012, at the MDT offices at the Overtown Transit Village. The attendees of the meeting were:

- Wilson Fernandez – Miami-Dade MPO
- Larry Foutz – Miami-Dade MPO
- Monica Cejas – Miami-Dade Transit (MDT)
- Bob Pearsall – MDT
- Rolando Jimenez – Miami-Dade Public Works and Waste Management Department
- Adrian Dabkowski – Kimley-Horn and Associates, Inc. (KHA)
- Odalys Delgado – HNTB
- Jitender Ramchandani – HNTB

Kimley-Horn distributed several handouts during the course of the meeting including an agenda, origin-destination survey results for Bus Routes 27 and 97, iSurvey results for Bus Routes 27 and 97, and a project schedule. The following describes the pertinent discussion topics during the meeting.

- Overview of project and discussion of previous work.
    - Scope of work
        - Park-n-Ride concept plans
        - Exact station locations
        - Station footprint and right-of-way needs
        - National Environmental Policy Act (NEPA) Categorical Exclusion (CAT Ex) document
    - Previous work
        - MPO's 2010 Near-Term Implementation Plan
        - Final Environmental Impact Statement (FEIS) for 27th Avenue
        - Kittelson & Associates BRT Concept Evaluation

- MDT will provide APC information to Kimley-Horn (KHA).
    - KHA staff will visit MDT to obtain data.
        - KHA to coordinate with Bob Pearsall.
    - KHA will review bus survey information for Routes 27 and 97 to determine transit dependency riders versus choice riders.

- MDT stated that Bus Route 97 will be replaced by Route 297 (27th Avenue Orange Max)

- The route will provide 15-minute peak period headways and 30-minute mid-day headways.
- The new route will be extended to MIC with a new stop at the Brownsville station.
- Some stops may be removed along the route.

- Park-n-Ride Lots
  - NW 215th Street Location
    - County's Planning and Zoning Department prepared a Highest and Best Use Study
      - Interest in hotel land use and transit oriented development (TOD).
      - Area residents not interested in more residential development.
      - Request for Proposal (RFP) circulating internally at MDT for developing parcel
        - Transit amenities are required.
    - Florida Department of Transportation (FDOT) funding available, approximately $5 million for a transit terminal. Initial RFP called for the following features.
      - 350 parking spaces
      - Eight (8) bus bays: four (4) for articulated buses and four (4) for standard buses
      - Two (2) bus bays for layovers
      - Comfort station for operators
      - Canopy over passenger waiting area
      - Potential local bus circulator access and 95 Express interim stop.
    - An area yet to be determined needs to be reserved for future extension of rail service.
    - Since 27th Avenue is under FDOT jurisdiction, coordination with FDOT will be required for access to the site, including driveway locations, median openings, and signalization.
  - NW 95th Street Location
    - MDT owns a three (3) acre parcel on the northwest quadrant of NW 95th Street and 27th Avenue.
      - An on-site library occupies approximately 1-acre of the parcel.
      - No funding has been identified for developing a park-n-ride lot at this location.
  - NW 119th Street Location
    - FDOT owns several parcels on the northeast quadrant of NW 119th Street and NW 27th Avenue.
    - The abandoned golf course on the north and south sides of NW 119th Street will be redeveloped. The developer will provide bus bays and space for bus shelters on NW 119th Street.
  - NW 183rd Street Location
    - Potential Leasing opportunity at the Carol Mart.

- MDT has specific design criteria for Park-n-Ride lots and transit stations including
  - Passenger vehicle parking requirements, both short-term and long-term
  - Bicycle parking requirements
  - Motorcycle/scooter parking requirements
  - Kiss-n-Ride design

- Stations
  - The Biscayne Boulevard station design will be utilized, which is currently under development.
    - Station dimensions: 20 feet by 45 feet desirable to accommodate articulated buses.
  - Electrification will be provided for various amenities such as lighting, real-time passenger information, and ticket vending machines (TVM).

- Public Involvement
  - Corridor located within County Commission Districts 1, 2, and 3.
  - Coordination will be required with Cities of Opa-Locka and Miami Gardens.
  - MPO stated that two (2) meetings would be held with each, Opa-Locka and Miami Gardens. The first meeting would be an introduction to the project with the second meeting towards the end of the project, before the MPO Board.
    - The Miami Gardens Planning and Zoning Committee stated that the City wanted to be involved in the NW 215th Street TOD.
  - The project would be heard at the MPO Board as an action item.
  - The project may also be presented at Transportation Planning Council (TPC), Citizens Transportation Advisory Committee (CTAC), and Citizen's Independent Transportation Trust (CITT).
  - The Study Advisory Committee (SAC) would consist of the following agencies
    - MPO
    - Miami Dade County Public Works and Waste Management Department
    - FDOT
    - MDT
    - City of Opa-Locka
    - City of Miami Gardens
    - Broward County Transit (BCT) – as needed
    - Miami-Dade College – as needed
    - Miami International Airport (MIA) – as needed

<u>Next Steps/Action Items</u>

- KHA to review transit dependent ridership versus choice riders on NW 27th Avenue bus routes.
- MDT to provide KHA with parcel surveys of NW 215th Street and NW 95th Street parcels.
- MDT to provide Transit Design Criteria to KHA.

NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study
Transit Signal Priority (TSP) Discussion Meeting
August 1, 2012

A meeting was held on Wednesday, August 1, 2012 at the MPO office to discuss TSP at a County wide level, as well as along the Biscayne Boulevard and NW 27th Avenue corridors. The attendees included:

- Wilson Fernandez – Miami-Dade MPO
- Larry Foutz – Miami-Dade MPO
- Monica Cejas – MDT
- Frank Aira – Traffic Signals and Signs Division (TS&S)
- Hiram Hernandez – TS&S
- Nelson Berthin – TS&S
- Eloy Lee – TS&S
- Dave Osborne – Kimley-Horn and Associates, Inc. (KHA)
- Adrian Dabkowski – KHA
- Odalys Delgado – HNTB
- Jitender Ramchandani – HNTB

The following describes the pertinent discussion topics during the meeting.

- All new buses will have wireless local area network (Wi-Fi) communication capabilities.
- The implementation of the Computer Aided Dispatch (CAD)/Automatic Vehicle Location (AVL) system is ongoing. General intersection communication framework is in place County-wide and consists of:
    - Bus→MDT Central→ATMS Central→Intersection Controller
    - The required firmware is installed at all intersections.

- The Kendall Drive corridor and South-Dade Busway were discussed.
    - It was discussed that the Kendall Drive corridor is an EMS preemption system and not TSP system.
    - It was also discussed that the Busway is not a TSP system but runs within the "green-time" bands of Dixie Highway/US 1.

- TSP general parameters were discussed including:
    - Schedule maintenance vs. headway maintenance
    - Which buses will be allowed TSP, all buses vs. express buses
    - Operation methodology
        - Early green, extended green, and delay based TSP
    - Near-side versus far-side bus station location

        - It was discussed that locating the bus station on the near-side could result in false requests for priority when buses dwell at stations.
    - It was discussed that general system-wide parameters/rules needed to be established with specific parameters/rules varying corridor to corridor and intersection to intersection.

- TSP corridor priorities were discussed, which included the following ranking
    1. Kendall Drive
    2. NW 27th Avenue
    3. Biscayne Boulevard

    - It was also discussed that the CAD/AVL needed to be in place in order to implement TSP. The contract should be awarded in October/November 2012 and the project should be completed by the end of 2013.

- The group in general agreed to the following:
    - The Miami-Dade County TSP system should be based on headway maintenance and only available to express buses. However, the underlying CAD/AVL technology should be designed in a flexible manner to permit global changes in order to accommodate policy changes. Furthermore, the technology should allow for flexibility to incorporate early green, green extension, and delayed green. However, policy will determine which parameter will be incorporated.

<u>Next Steps/Action Items</u>

- KHA will coordinate with MDT's IT Department to determine general communication delay.
- KHA will prepare a white paper discussing TSP CON-OPS including general and detailed parameters to guide parameter selection/determination.

NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study
Florida Department of Transportation (FDOT)
NW 215th Street Park and Ride Facility Access Meeting
October 22, 2012

On Monday, October 22, 2012, a meeting was held with FDOT to discuss access to the NW 215th Street Park and Ride Facility for the *NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study* at the FDOT District Six offices. The attendees of the meeting were:

- Monica Cejas – Miami-Dade Transit (MDT)
- Kelly Cooper – Miami-Dade Citizen's Independent Transportation Trust (CITT)
- Kerry Glasgow – Miami-Dade CITT
- Jose Quintana – Florida Turnpike Enterprises (FTE)
- John Easterling – FTE
- Chris Dube – FDOT
- Ali Khalilahmadi – FDOT
- Rudy Garcia – FDOT
- Omar Meitin – FDOT
- Evelin Legcevic – FDOT
- Leefang Chow – FDOT
- Ramon Sierra – FDOT
- Greg Kyle – Kimley-Horn and Associates, Inc. (KHA)
- Adrian Dabkowski – KHA

Kimley-Horn presented a conceptual site plan for the NW 215th Street park and ride facility along with proposed access. The following describes the pertinent discussion topics during the meeting.

- MDT and KHA provided an overview of the bus rapid transit project and discussion of previous transit projects in the area.
    - MDT's purchase of the NW 215th Street parcel for purposes of a park and ride facility to serve as the northern terminus was discussed.

- NW 215th Street Park and Ride Facility
    - It was discussed that MDT desired to utilize the existing northbound u-turn/left-turn lane for access into the site. The turn lane has already been constructed and bisects the site into two nearly equal parcels, which is desirable for site plan development. However, FTE's limited access right-of-way line currently extends further south along NW 27th Avenue and would prohibit access at this location.
        - A full access median opening was also discussed at this location. FDOT stated that the minimum full access median spacing was 1320 feet and

only 330 feet is provided to the intersection to the north and 440 feet is provided to the intersection to the south.
        - FDOT stated that in order for a directional access (right-in/right-out and left-in), the driveway to the south (north Calder driveway) would need to be closed, to help satisfy the minimum 660 foot directional median spacing requirement.
    - FTE's stated the agency has a process for moving the limited access right-of-way line, and that the only way this could be accomplished is if other access options are determined not to be viable.
    - FTE stated that a potential viable option exists with relocating access south of the limited access right-of-way line along NW 27th Avenue.
    - FTE stated concerns about the northbound traffic at the intersection of NW 27th Avenue and County Line Road extending south beyond a full access connection at the park and ride facility.
- FDOT discussed an option for buses to enter the site on NW 27th Court via the signalized intersection at NW 211th Street and NW 27th Avenue. Southbound buses would exit the site via a right-in/right-out driveway along NW 27th Avenue. Northbound and eastbound buses would exit via a direct connection to the Homestead Extension of Florida's Turnpike (HEFT) northbound/eastbound off-ramp and utilize the signalized intersection at the HEFT northbound/eastbound off-ramp and NW 27th Avenue. Automobile access would be provided by a right-in/right-out along NW 27th Avenue.
    - This concept was later refined to provide both vehicle and bus access along NW 27th Avenue. A directional median opening with right-in/right-out and left-in south of FTE's limited access right-of-way line along NW 27th Avenue and to subsequently close the north Calder driveway.
- Another FDOT option discussed buses performing u-turn movements at the nearest signalized intersections to the north and south of the site from the outer or right-turn lanes with dedicated bus phases, similar to operations along Collins Avenue (SR A1A) on Miami Beach.

<u>Next Steps/Action Items</u>

- FDOT to provide KHA with FDOT median closure procedure. MDT/MPO would need to initiate the process of closing the north Calder driveway.
- KHA to develop a conceptual plan for the option of closing the north Calder driveway and providing directional access to the park and ride facility (right-in/right-out and left-in) along NE 27th Avenue. A direct connection to the HEFT northbound/eastbound off-ramp will also be provided for northbound and eastbound buses.
- KHA will develop a second alternative for buses from the south to access the park and ride facility via NW 27th Court or NW 29th Avenue, with a right-in/right-out connection to NW 27th Avenue.

NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study
Study Advisory Committee (SAC) Meeting
November 19, 2012

On Monday, November 19, 2012, a SAC meeting was held for *NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study* at the MPO offices at Government Center. The attendees of the meeting were:

- Wilson Fernandez – Miami-Dade MPO
- Larry Foutz – Miami-Dade MPO
- Jay Marder – City of Miami Gardens
- Monica Cejas – Miami-Dade Transit (MDT)
- Kerry Glasgow – Miami-Dade Citizen's Independent Transportation Trust (CITT)
- Joshua Rak – Miami-Dade County Regulatory and Economic Resources (MDCRER)
- Helen Brown – MDCRER
- Rolando Jimenez – Miami-Dade Public Works and Waste Management Department
- Edward Schumann – Florida Department of Transportation (FDOT)
- Jeannine Gaslonde – FDOT
- John Garzia – FDOT
- Greg Kyle – Kimley-Horn and Associates, Inc. (KHA)
- Dave Osborne – KHA
- Adrian Dabkowski – Kimley-Horn and Associates, Inc. (KHA)

KHA distributed NW 215th Street park-and-ride access alternatives and NW 27th Avenue bus station locations. The following describes the pertinent discussion topics during the meeting.

- Concept of Operations (Con Ops)/Transit Signal Priority (TSP) and Queue Jumper
    - A brief overview the Con Ops was provided. It was also discussed that in a previous meeting with the County Traffic Signals and Signs (TS&S) Division, the group in general agreed that a headway maintenance system that is only available to express buses should be used.
        - Final determination and system specifics would be finalized in the design phase once the countywide Computer Aided Dispatch (CAD)/Automatic Vehicle Location (AVL) is deployed by the end of 2013.
    - Potential locations for queue jumpers were discussed and include
        - NW 199th Street northbound (from right-turn lane)
        - NW 119th Street northbound (from right-turn lane)
        - NW 103rd Street southbound (from right-turn lane)
        - NW 79th Street northbound (from right-turn lane) and southbound (convert outer lane to a right-turn lane to accommodate queue jump)
            - Additional analyses in design phase will be require for FDOT approval

- NW 215th Street Park-and-Ride Facility Access Alternatives
    - Nine (9) access alternatives were discussed. Attached is the access alternative matrix.
    - It was decided that Alternative 2B was the preferred alternative and that Alternative 2A is the back-up alternative.

- Finalizing Bus Station Locations
    - The bus station locations were discussed. Attached is the bus station matrix which notes the right-of-way required for implementation.

Next Steps/Action Items

- 215th Street Park-and-Ride Access Alternatives
    1. City of Miami Gardens to schedule meeting with Calder Casino and Race Course to discuss access options and potentially limit north Calder driveway to right-in-right-out access.
    2. KHA to coordinate meeting with FDOT and FTE to finalize access alternatives.
    3. KHA to work on preparing conceptual plan for Access Alternative 2B for MDT's meeting with the Florida Turnpike Enterprise on December 11.
- KHA to finalize report sections for TSP and bus station locations and send to MPO for review.
- Next SAC will include the Flagler Street corridor EBS kick-off meeting.

NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study
Calder Casino and Race Track
NW 215th Street Park and Ride Facility Access Meeting
December 4, 2012

On Tuesday, December 4, 2012, a meeting was held with Calder Casino & Race Track at the Calder Casino & Race Track administrative offices to discuss access to the NW 215th Street Park and Ride Facility for the *NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study*. The attendees of the meeting were:

- Wilson Fernandez – Miami-Dade Metropolitan Planning Organization (MPO)
- Kelly Cooper – Miami-Dade Citizen's Independent Transportation Trust (CITT)
- Jay Marder – City of Miami Gardens
- Austin Miller – Calder Casino & Race Track
- Greg Kyle – Kimley-Horn and Associates, Inc. (KHA)
- Adrian Dabkowski – KHA

Kimley-Horn presented a conceptual site plan for the NW 215th Street park and ride facility with proposed access. The following describes the pertinent discussion topics during the meeting.

- MPO, CITT, and KHA provided an overview of the bus rapid transit project and discussion of previous transit projects in the area.
    - MDT's purchase of the NW 215th Street parcel for purposes of a park and ride facility to serve as the northern terminus was discussed.

- NW 215th Street Park and Ride Facility
    - It was discussed that MDT desired to utilize the existing northbound u-turn/left-turn lane for access into the site (see Sheet Number 1, attached). The turn lane has already been constructed and bisects the site into two nearly equal parcels, which is desirable for site plan development. From a regulatory standpoint it was discussed that Florida Turnpike Enterprise's (FTE's) limited access right-of-way line currently extends further south along NW 27th Avenue and would prohibit access at this location. Additionally, it was discussed that a full access median opening would not meet Florida Department of Transportation (FDOT) access management criteria as only 330 feet is provided to the intersection to the north and 440 feet is provided to the intersection to the south, while the standard is 1,320 feet, and that neither FDOT nor FTE supported this alternative.

    - The preferred alternative (see Sheet Number A, attached) was presented to Calder Casino & Race Track. This alternative converts the north Calder driveway from an existing full access driveway to a right-in/right-out driveway.

- Calder Casino & Race Track stated that removal of full access driveway would limit future development on their property and is not viable to Calder.
- Calder was made aware that if they proposed future development on their property that they would have to complete a FDOT Significant Change determination assessment and would most likely have to re-permit the existing driveways. Calder was also made aware that the north full access driveway would most likely be required to be reconfigured as a limited access driveway, to either a right-in/right-out driveway or left-in, right-in/right-out driveway.

- Calder suggested exploring the option of integrating the park and ride facility with the Calder property. An option that could be explored would be to assess the feasibility of relocating a portion of the park and ride facility to the Calder frontage along NW 27th Avenue and including a portion of the Calder property in the RFP for joint development of the park and ride facility.

- An additional access alternative was discussed where the north Calder driveway would be relocated to align as the east leg of a new signalized intersection serving both the Calder development and the NW 215th Street park-and-ride facility. The meeting attendees were made aware that this proposed access configuration required a 50 to 70 percent FDOT access management variance and that the plan would be subject to FDOT variance committee hearing. The meeting attendees were also made aware that a variance committee hearing would only occur once engineering plans were submitted for permit and the process could last from 6 to 12 months before final determination was made.

Next Steps/Action Items

- KHA to develop a conceptual plan for the realignment of the north Calder driveway to serve as the east leg of a new signalized intersection serving both the Calder development and the NW 215th Street park-and-ride facility. The conceptual plan would be provided to Calder for review and comments.
- If Calder found the plan acceptable, a follow-up meeting with FDOT and FTE would be scheduled to discuss the plan feasibility.

Kimley-Horn and Associates, Inc.

1001 MICHIGAN AVENUE, SUITE 400, MIAMI BEACH, FL 33139
PHONE: 305-673-2025 / FAX: 305-673-4982
WWW.KIMLEY-HORN.COM CA 00000696

No.	REVISIONS	DATE	BY

KHA PROJECT
DATE
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

NW 215th Street Park and Ride Lot

LICENSED PROFESSIONAL
SEAL

CONCEPTUAL SITE PLAN

SHEET NUMBER
1

489 TOTAL PARKING SPACES

Plotted By:Pasken, Ken Sheet Set:Kha Layout:Layout1 November 29, 2012 11:20:10am M:\TEMP\VILA\BCT Bus Bay Standards\2012.11.20_Site Plan_KEN.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Kimley-Horn and Associates, Inc.

© 2012 KIMLEY-HORN AND ASSOCIATES, INC.

1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

CONCEPTUAL SITE PLAN

SHEET NUMBER

A

NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study
NW 215th Street Park and Ride Facility Conceptual Site Plan Conference Call
January 22, 2013

On Tuesday, January 22, 2013, a conference call was held to discuss conceptual site plan alternatives for the access to the NW 215th Street park-and-ride Facility for the *NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study*. The call attendees were:

- Jay Marder – City of Miami Gardens
- Kelly Cooper – Miami-Dade Citizen's Independent Transportation Trust (CITT)
- Monica Cejas – Miami Dade Transit (MDT)
- Nilia Cartaya - MDT
- Austin Miller – Calder Casino & Race Track
- Greg Kyle – Kimley-Horn and Associates, Inc. (KHA)
- Adrian Dabkowski – KHA

The following describes the pertinent discussion topics during the conference call.

- Kimley-Horn provided a brief summary of the previous access alternatives that were developed and the two (2) additional alternatives developed as a result of the December 4, 2012 meeting with Calder Casino & Race Track.
    - The two (2) additional alternatives, option 2A and option 4 are attached.
    - Option 2A provides directional access: right-in/right-out and left-in to the park-and-ride facility and maintains a full access Calder north driveway. Northbound and eastbound buses exit the park-and-ride facility onto the Homestead Extension of Florida's Turnpike (HEFT) eastbound off-ramp. This alternative requires a Florida Department of Transportation (FDOT) variance for the directional median opening spacing. Extensive coordination with Florida's Turnpike Enterprise (FTE) will also be required for crossing the FTE limited access right-of-way line at the HEFT off-ramp connection.
    - Option 4 creates a signalized intersection at the park-and-ride facility driveway and constructs a new driveway for the Calder facility to serve as the east leg of a new signalized intersection. This configuration serves both the Calder development and the NW 215th Street park-and-ride facility. This proposed access configuration requires a 50 to 70 percent FDOT access management variance and the driveway connection would be subject to FDOT variance committee hearing. The conference call participants were also made aware that a variance committee hearing would typically only occur once engineering plans were submitted for permit and the process could last from 6 to 12 months before final determination was made. As FTE's limited access right-of-way line is not crossed in this alternative, limited coordination with FTE will be required.
        - Calder stated that the cost of the new bridge to their site was a concern.

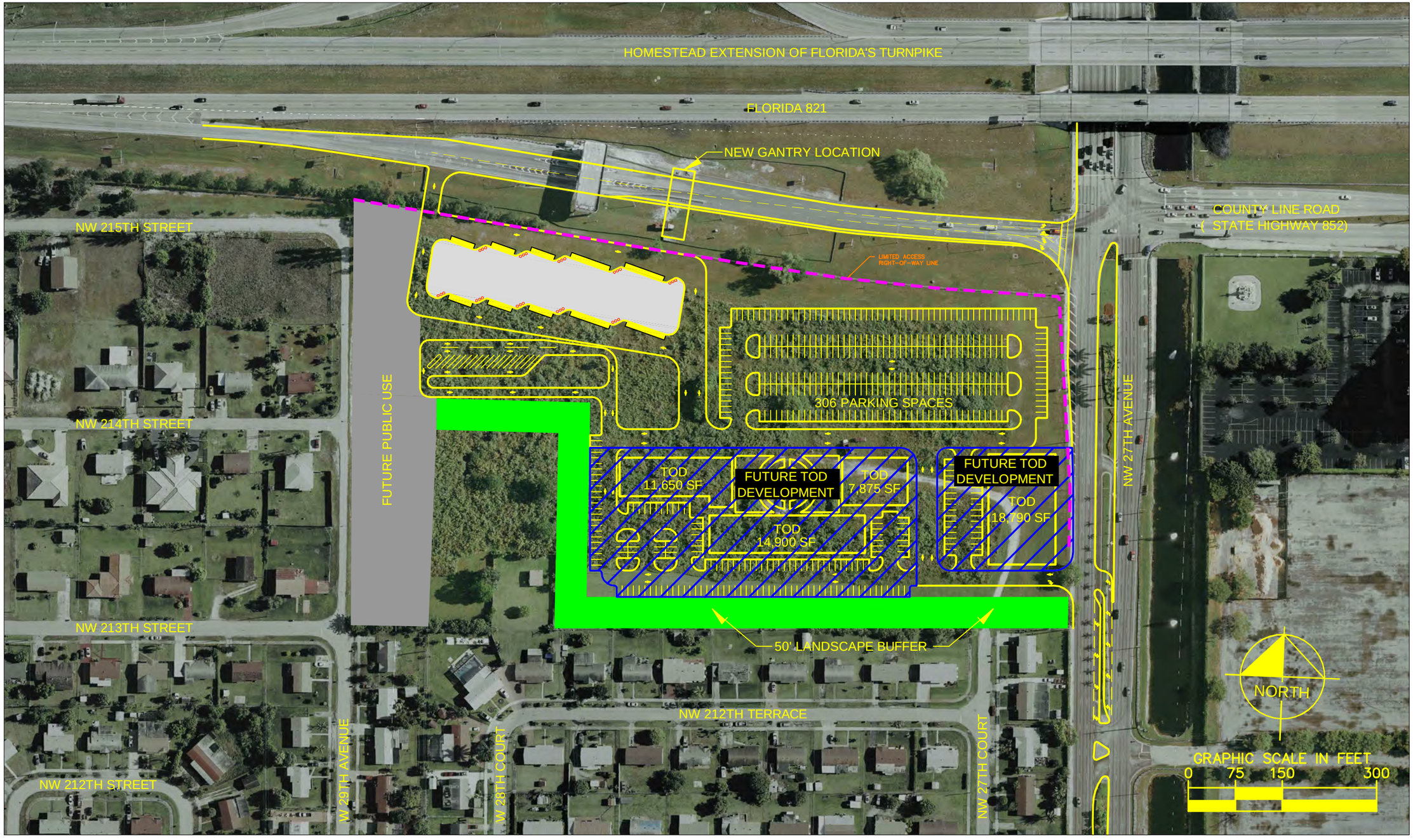
        - Calder will share the Option 4 concept with their design consultant.

- Project timeline was discussed. It was also discussed that the timeline did not include rezoning of the property which will be required and is approximately a 60 to 90 day process. It was also discussed that a public hearing would be necessary as part of the rezoning process.
    - Miami Gardens City Council would need to approve the site plan concept.

- A request for proposal (RPF) will be issued by MDT for joint development of the NW 215th Street park-and-ride facility and transit oriented development (TOD).
    - MDT has funds to construct the bus terminal and parking as a standalone project, if no interest is found for developing the TOD.
    - The RPF will include coordination with FDOT for permitting site access connections.
    - MDT will need to resolve access issues during the design phase of the project.
    - The project design phase is scheduled for fiscal year 2014.
    - The project requires FTA approval of the Categorical Exclusion (Cat Ex) to comply with National Environmental Policy Act (NEPA) requirements.

Next Steps/Action Items

- City of Miami Gardens to provide zoning application to MDT.
- MDT to revise project schedule to include rezoning at beginning of Design task.
- KHA to schedule follow-up meeting with FDOT.
- KHA to prepare preliminary costs of bridge to Calder site at proposed signalized intersection.



489 TOTAL PARKING SPACES

Plotted By: Pasken, Ken Sheet Set: Kha Layout: Layout1 January 24, 2013 07:25:32pm M:\TEMP\VILA\BCT Bus Bay Standards\2013.01.24_Site Plan_2A.dwg

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Kimley-Horn and Associates, Inc.

© 2012 KIMLEY-HORN AND ASSOCIATES, INC.

1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

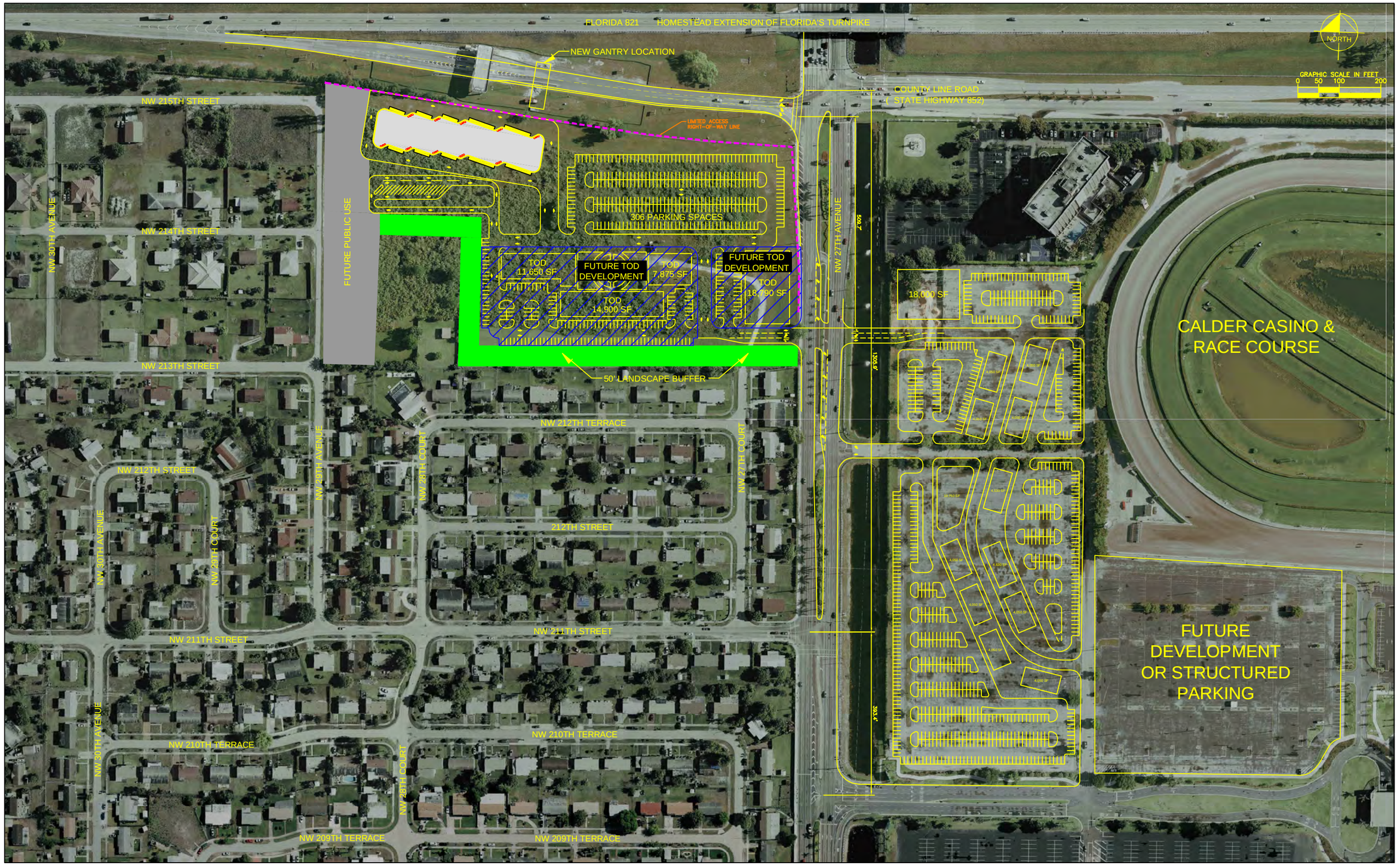
PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

CONCEPTUAL SITE PLAN
OPTION 2A

SHEET NUMBER

2A-1

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



No.	REVISIONS	DATE	BY

Kimley-Horn and Associates, Inc.

© 2012 KIMLEY-HORN AND ASSOCIATES, INC.

1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT	
DATE	
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

LICENSED PROFESSIONAL

DATE:

CONCEPTUAL SITE PLAN
OPTION 4

SHEET NUMBER

4-1

NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study
Florida Department of Transportation (FDOT)
NW 215th Street Park-and-Ride Facility Access Meeting
February 14, 2013

On Thursday, February 14, 2013, a meeting was held with FDOT to discuss access to the NW 215th Street park-and-ride facility for the *NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study* at the FDOT District Six offices. The attendees of the meeting were:

- Wilson Fernandez – Miami-Dade MPO
- Monica Cejas – Miami-Dade Transit (MDT)
- Omar Meitin – FDOT
- Ali Al-Said – FDOT
- Ali Khalilahmadi – FDOT
- Lisa Colmenares – FDOT
- Jay Marder – City of Miami Gardens
- Austin Miller – Calder Casino & Race Track
- John Easterling (via phone) – Florida Turnpike Enterprises (FTE)
- Greg Kyle – Kimley-Horn and Associates, Inc. (KHA)
- Adrian Dabkowski – KHA

At the outset of the meeting, Kimley-Horn provided an overview of the enhanced bus service project along NW 27th Avenue. The following describes the pertinent discussion topics during the meeting.

- The NW 215th Street park-and-ride facility will serve as the end-of-the-line station for the NW 27th Avenue Enhanced Bus Service. MDT purchased the 14-acre parcel for the park-and-ride facility with Citizen's Independent Transportation Trust (CITT) funding. The NW 27th Avenue Enhanced Bus Service project is funded by local, state, and federal funding.

- Coordination with Calder Casino & Race Track was discussed. Calder Casino & Race Track is not receptive to the idea of closing the median opening at it's north driveway along NW 27th Avenue, as this driveway is actively used and is important to future development opportunities on the Calder property. A new access alternative for the NW 215th Street park-and-ride facility, Option 4, was developed as a result of coordinating with Calder Casino & Race Track.

- NW 215th Street Park-and-Ride Facility
    - At the previous October meeting with FDOT and FTE, Option 1, which develops a new full access intersection that aligns with the existing northbound left-turn lane to create a full access intersection, is the ideal access configuration for MDT. The northbound left-turn lane has already been constructed and it bisects the site into

two nearly equal parcels. However, FTE's limited access right-of-way line currently extends further south along NW 27th Avenue than the proposed driveway connection, which prohibits access at this location. FTE would prefer to relocate the driveway connection and the left-turn lane further south beyond the limited access right-of-way line.

- Two (2) access alternatives, Option 2A and Option 4, were presented. These alternatives are attached.

  - Option 2A provides directional right-in/right-out and left-in access to the park-and-ride facility and maintains the full access Calder north driveway. Northbound and eastbound buses exit the park-and-ride facility onto the Homestead Extension of Florida's Turnpike (HEFT) eastbound off-ramp. This alternative requires an FDOT access management variance for the directional median opening spacing and potentially a design variance for the left-turn lane accessing the site. Coordination and a permit with FTE will also be required to cross the FTE limited access right-of-way line at the proposed HEFT off-ramp connection.

    - FDOT stated concerns over the sub-standard left-turn lane, noting that queues could potentially extend and block through lanes on NW 27th Avenue.

  - Option 4 creates a signalized intersection at the park-and-ride facility driveway and constructs a new driveway for the Calder facility to serve as the east leg of a new signalized intersection. This configuration serves both the Calder development and the NW 215th Street park-and-ride facility. This proposed access configuration requires a 50 to 70 percent FDOT access management variance and the driveway connection would be subject to FDOT variance committee hearing. Since FTE's limited access right-of-way line is not crossed in this alternative, FTE permits are not required.

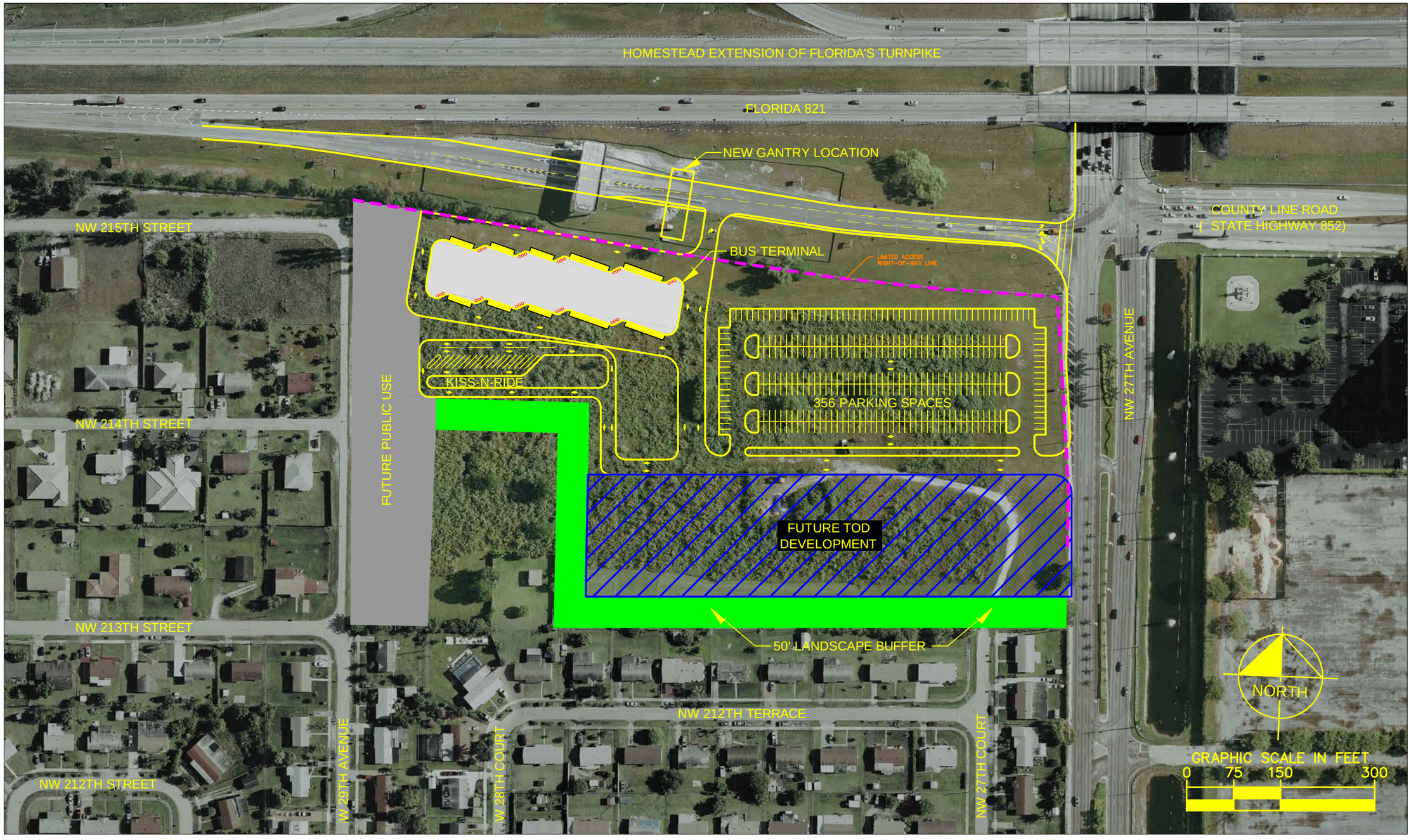
- FDOT stated that a modified Option 1, where directional (right-in/right-out and left-in) access is provided on NW 27th Avenue and a right-out onto the HEFT ramp for eastbound and northbound buses and passenger cars should be considered in place of Option 2A. Option 1 is attached.

- FDOT stated that a traffic study and signal warrant analysis would be required for final determination. It was explained that a traffic study and signal warrant analysis would be prepared as part of the design phase of the NW 27th Avenue Enhanced Bus Service project.

- Funding was discussed towards the end of the meeting. FDOT stated that if the project is funded by FDOT, the project may be permitted through the Local Agency Program (LAP).

Next Steps/Action Items

- Final access determination for the NW 215th Street park-and-ride facility will be made in the design phase of the project.



Plotted By:Pasken, Ken Sheet Set:Kha Layout:Layout1 February 20, 2013 06:11:12pm M:\TEMP\VILA\BCT Bus Bay Standards\2013.02.20_Site Plan_1.dwg

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Kimley-Horn and Associates, Inc.

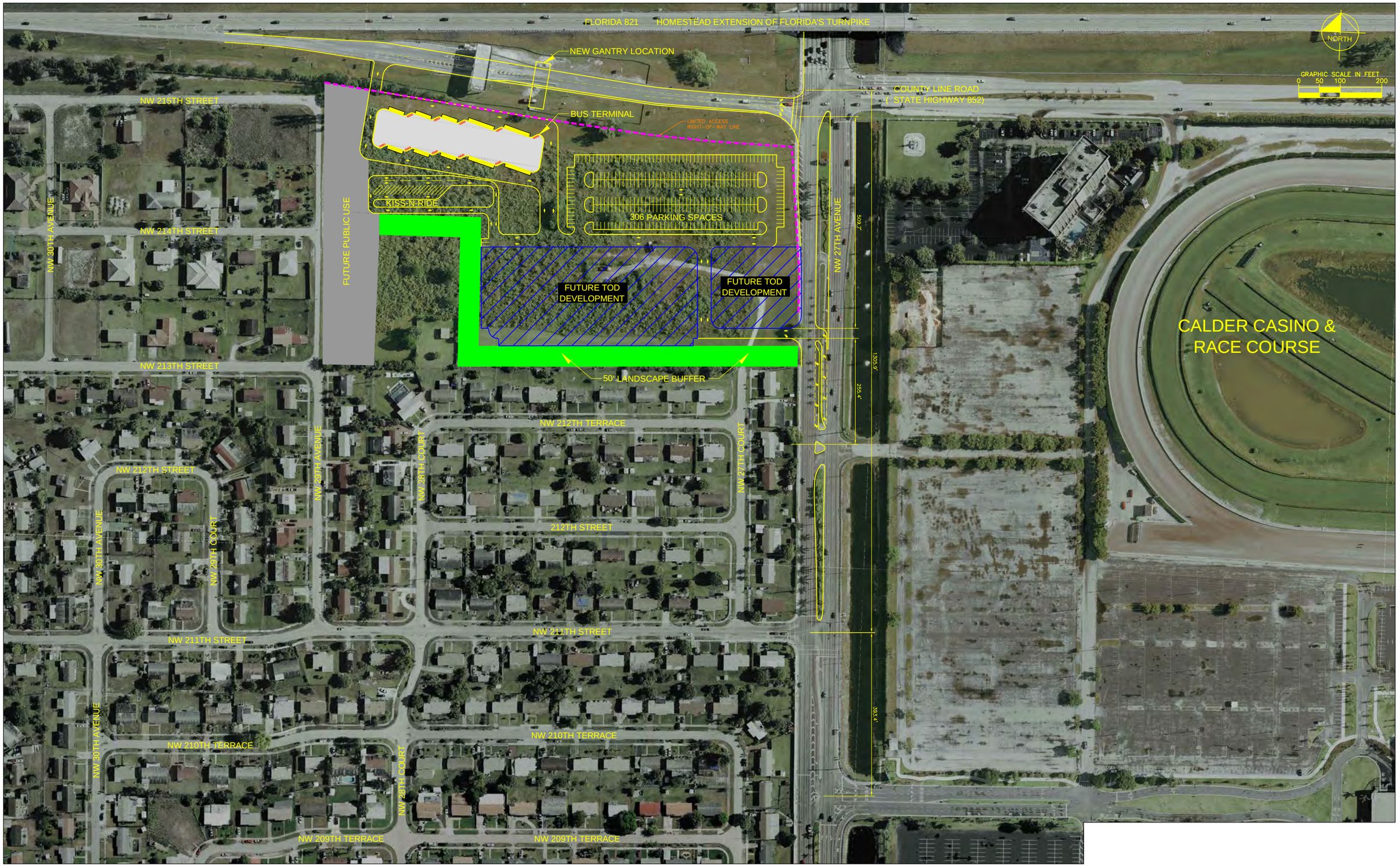
© 2013 KIMLEY-HORN AND ASSOCIATES, INC.

1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

CONCEPTUAL SITE PLAN
OPTION 1

SHEET NUMBER



This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

No.	REVISIONS	DATE	BY

Kimley-Horn and Associates, Inc.

© 2013 KIMLEY-HORN AND ASSOCIATES, INC.

1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT	
DATE	
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

LICENSED PROFESSIONAL

DATE:

CONCEPTUAL SITE PLAN
OPTION 2A

SHEET NUMBER

2A-2

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

No.	REVISIONS	DATE	BY

Kimley-Horn and Associates, Inc.
© 2013 KIMLEY-HORN AND ASSOCIATES, INC.
1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT	
DATE	
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

LICENSED PROFESSIONAL

DATE:

CONCEPTUAL SITE PLAN
OPTION 4

SHEET NUMBER

4-1

NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study
Study Advisory Committee (SAC) Meeting
March 1, 2013

On Friday, March 1, 2013, the final SAC meeting was held for *NW 27th Avenue Enhanced Bus Service Concepts and Environmental Study* at the MPO offices at Government Center. The attendees of the meeting were:

- Wilson Fernandez – Miami-Dade MPO
- Jesus Guerra – Miami-Dade MPO
- Jay Marder – City of Miami Gardens
- Arshad Viqar – City of Opa Locka
- Kelly Cooper – Miami-Dade Citizen's Independent Transportation Trust (CITT)
- Monica Cejas – Miami-Dade Transit (MDT)
- Eric Zahn – MDT
- Rolando Jimenez – Miami-Dade Public Works and Waste Management Department
- John Lafferty – Parsons Brinckerhoff
- Jitender Ramchandani – HNTB
- Greg Kyle – Kimley-Horn and Associates, Inc. (KHA)
- Adrian Dabkowski – Kimley-Horn and Associates, Inc. (KHA)

The following describes the pertinent discussion topics during the meeting.

- NW 215th Street Park-and-Ride Facility Access Alternatives
    - Three (3) access alternatives will be considered further in the design phase. The access alternatives are attached. These alternatives will require coordination with Florida Department of Transportation (FDOT) and Florida Turnpike Enterprise (FTE).
        - Option 1A provides directional right-in/right-out and left-in access at the existing northbound left-turn at the site and maintains the full access Calder north driveway. Northbound and eastbound bus traffic exits the park-and-ride facility onto the Homestead Extension of Florida's Turnpike (HEFT) eastbound off-ramp. This alternative requires an FDOT access management variance for the directional median opening on NW 27th Avenue. Coordination and a permit with FTE will also be required to cross the FTE limited access right-of-way line at the proposed HEFT off-ramp connection for buses.
            - A dedicated queue jump lane for buses at the intersection of the HEFT off-ramp and NW 27th Avenue was also discussed.
        - Option 2A provides directional right-in/right-out and left-in access to the park-and-ride facility and maintains the full access Calder north driveway.

Northbound and eastbound buses exit the park-and-ride facility onto the Homestead Extension of Florida's Turnpike (HEFT) eastbound off-ramp. This alternative requires an FDOT access management variance for the directional median opening on NW 27th Avenue and potentially a design variance for the left-turn lane accessing the site. Coordination and a permit with FTE will also be required to cross the FTE limited access right-of-way line at the proposed HEFT off-ramp connection for buses.

- Option 4 creates a signalized intersection at the park-and-ride facility driveway and constructs a new driveway for the Calder facility to serve as the east leg of a new signalized intersection. This configuration serves both the Calder development and the NW 215th Street park-and-ride facility. This proposed access configuration on NW 27th Avenue requires a 50 to 70 percent FDOT access management variance and the driveway connection would be subject to FDOT variance committee hearing. Since FTE's limited access right-of-way line is not crossed in this alternative, FTE permits are not required.

- Finalizing Bus Station Locations
  - The locations of full station (25 feet x 15 feet), slim station (26.25 feet x 8 feet), and required right-of-way square-footage was discussed.
  - Stations will be implemented in a phased approach. A minimal approach will be used. Therefore, the first phase will include only essential items while the second phase will include additional components.

- Enhanced Operating Strategies Concept of Operations (Con Ops)/Transit Signal Priority (TSP) and Queue Jumper
  - A brief overview of the Con Ops objectives was provided. It was also discussed that in a previous meeting with the County Traffic Signals and Signs (TS&S) Division, the group in general agreed that a headway based logic system that is only available to express buses should be used.
    - Final determination and system specifics would be completed in the design phase once the countywide Computer Aided Dispatch (CAD)/Automatic Vehicle Location (AVL) is deployed by the end of 2013.
  - Potential locations for queue jumps was discussed and include
    - NW 199th Street northbound (from right-turn lane)
    - NW 119th Street northbound (from right-turn lane)
    - NW 103rd Street southbound (from right-turn lane)
    - NW 79th Street northbound (from right-turn lane) and southbound (convert outer lane to a right-turn lane to accommodate queue jump)
      - Additional analyses in design phase will be required for FDOT approval.

- Environmental Documentation Summary – National Environmental Protection Act (NEPA)
    - It was discussed that a Categorical Exclusion (Cat Ex) applies to this project as the project consists of Intelligent Transportation System (ITS) deployment, buses utilizing existing facilities, and implementation of bus transfer stations.
    - The Cat Ex identified two (2) issues associated with the NW 215th Street Bus Terminal and Park-and-Ride facility:
        - Vibration during construction
            - Noise and vibration study required per FTA criteria due to proximity of single-family residences.
            - The study determined that the operation of the facility would not result in noise or vibration impacts.
            - During construction noise levels will not result in a significant impact. However, vibration levels will be above annoyance threshold but below the damage threshold.
                - Contractor will be required to implement a Vibration Control Plan to reduce construction vibration.

        - Contamination
            - Seven (7) potential contamination sites
                - Six (6) near proposed bus stations
                    - Minimal ground disturbance required for station construction not expected to present significant risk.
                - NW 215th Street Park-and-Ride Facility
                    - Phase 1/Limited Phase 2 ESA completed in 2010
                    - Soil and groundwater contaminated with arsenic above cleanup target levels.
                    - Previous owner required to submit Site Assessment Report (SAR) by County's Regulatory and Economic Resources (RER) Department.
                    - Open file on site at RER.

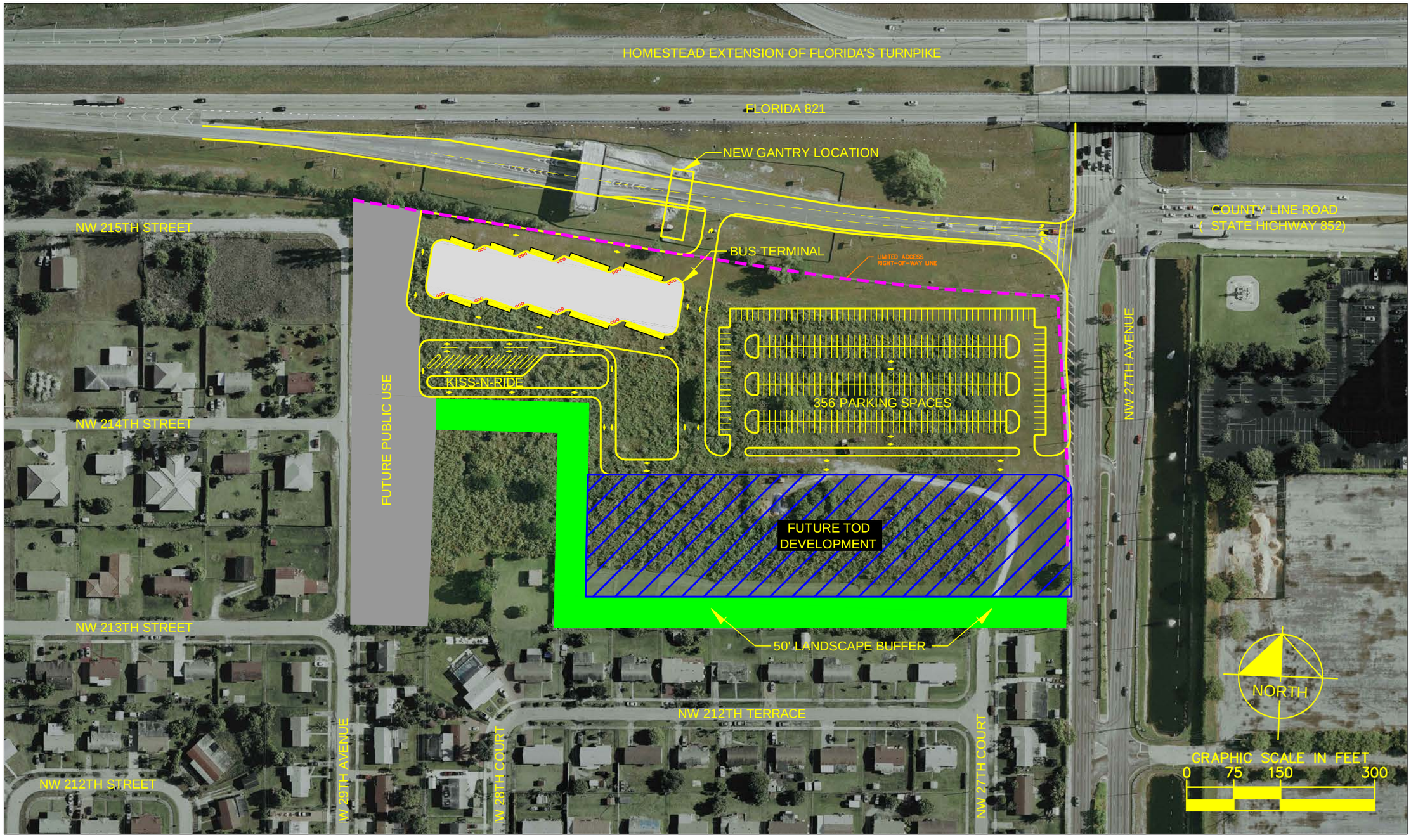
- Minimum rapid bus service/enhanced bus service criteria were discussed. The following provides a summary of the agreed minimums.
    - Bus headway: 15 minutes for Phase 1 deployment. 10 minutes for Phase 2 deployment.
    - TSP: headway based logic to avoid bunching of buses, provided throughout a corridor at all signalized intersections.
    - Queue Jump: Phase 2 implementation
    - Buses: articulated buses will be used. These buses will be wrapped and branded with rapid logos and only be used for specific enhanced bus routes.
    - Branding: red buses and wireless internet (Wi-Fi)
    - Station Design

- Pad provided for full or slim station design in Phase 1. Minimal station shelter provided in Phase 1. Full or slim station will be provided as part of Phase 2.
- Real-time passenger information: provided as Phase 1.
- Station spacing: One (1) mile average.
- Off-Board Fare: cashless system. Ticket vending machine provided in station marker.
- Fare: $2.35 premium rapid
- Park-and-Ride facility: Phase 2 implementation
- Terminal: Phase 2 implementation, provided at a minimum of one end.

Remaining Steps

- Complete Draft Documented Cat Ex
    1. Comments to be provided by MDT and MPO
    2. Revise Cat Ex document
    3. Submit Cat Ex to Federal Transit Administration (FTA)
    4. Address FTA comments and resubmit for approval

- Finalize project report



Plotted By:Pasken, Ken Sheet Set:Kha Layout:Layout1 February 20, 2013 06:11:12pm M:\TEMP\VILA\BCT Bus Bay Standards\2013.02.20_Site Plan_1.dwg

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Kimley-Horn and Associates, Inc.

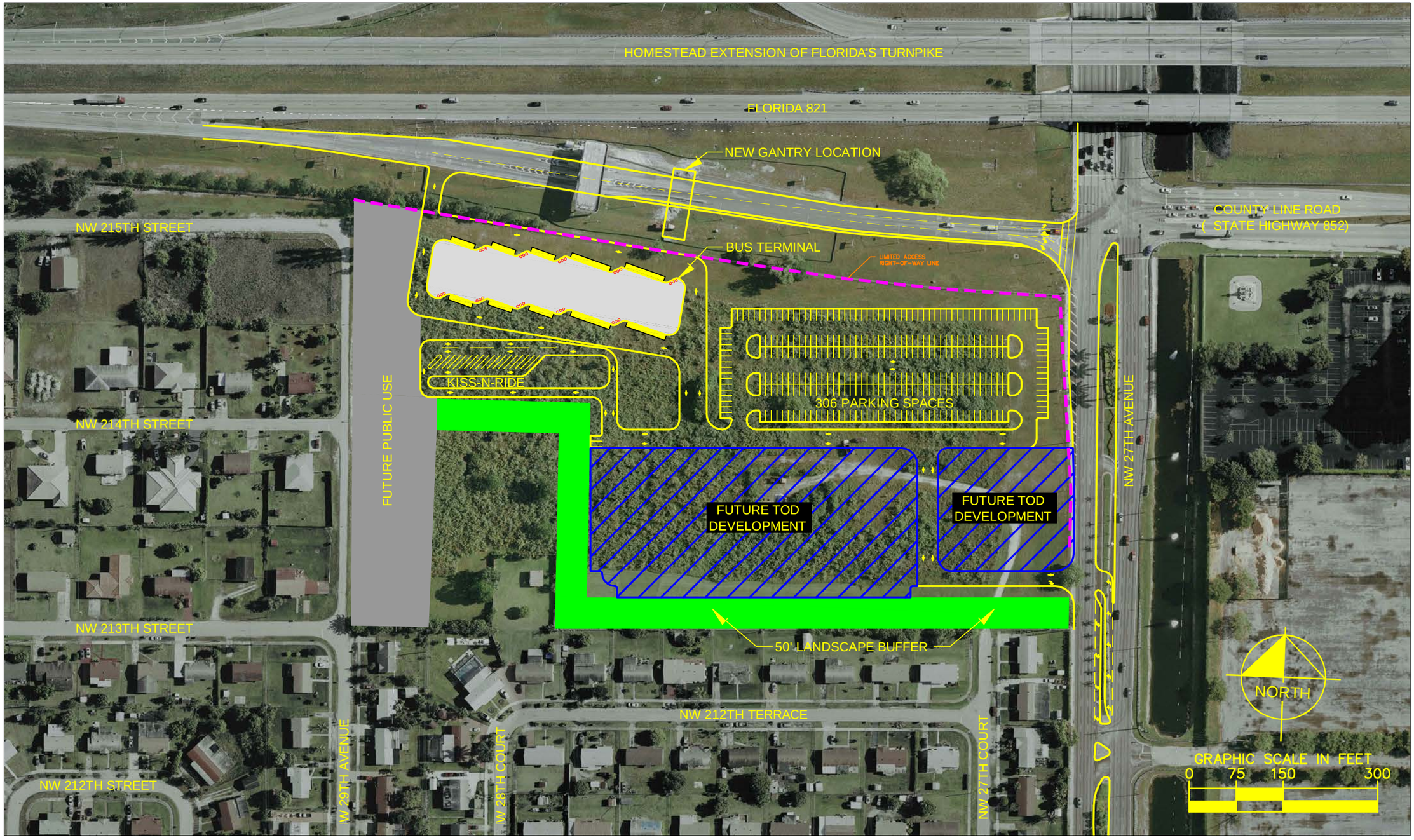
© 2013 KIMLEY-HORN AND ASSOCIATES, INC.

1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

CONCEPTUAL SITE PLAN
OPTION 1A

SHEET NUMBER



Plotted By: Posken, Ken Sheet Set: Kha Layout: Layout1 February 13, 2013 05:59:05pm M:\TEMP\VILA\BCT Bus Boy Standards\2013.02.13_Site Plan_2A.dwg

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Kimley-Horn and Associates, Inc.

© 2013 KIMLEY-HORN AND ASSOCIATES, INC.

1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

CONCEPTUAL SITE PLAN
OPTION 2A

SHEET NUMBER

2A-1

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

No.	REVISIONS	DATE	BY

Kimley-Horn and Associates, Inc.
© 2013 KIMLEY-HORN AND ASSOCIATES, INC.
1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT	
DATE	
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

LICENSED PROFESSIONAL

DATE:

CONCEPTUAL SITE PLAN
OPTION 4

SHEET NUMBER

4-1

APPENDIX B:
NW 215th Street Park-and-Ride Facility Alternative Access

Access Alternatives

NW 27TH AVENUE
Enhanced Bus Service Concepts

No.	REVISIONS	DATE	BY

Kimley-Horn and Associates, Inc.
1691 MICHIGAN AVENUE, SUITE 400, MIAMI BEACH, FL 33139
PHONE: 305-673-2025 FAX: 305-673-4882
WWW.KIMLEY-HORN.COM CA 00000596

KHA PROJECT	
DATE	
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

NW 215th Street Park and Ride Lot

LICENSED PROFESSIONAL

DATE:

CONCEPTUAL SITE PLAN

SHEET NUMBER

1

NW 27TH AVENUE
Enhanced Bus Service Concepts

Kimley-Horn and Associates, Inc.
1691 MICHIGAN AVENUE, SUITE 400, MIAMI BEACH, FL 33139
PHONE: 305-673-2025 FAX: 305-673-4682
WWW.KIMLEY-HORN.COM CA 00000696

NW 215th Street Park and Ride Lot

CONCEPTUAL SITE PLAN

SHEET NUMBER 2A

NW 27TH AVENUE
Enhanced Bus Service Concepts

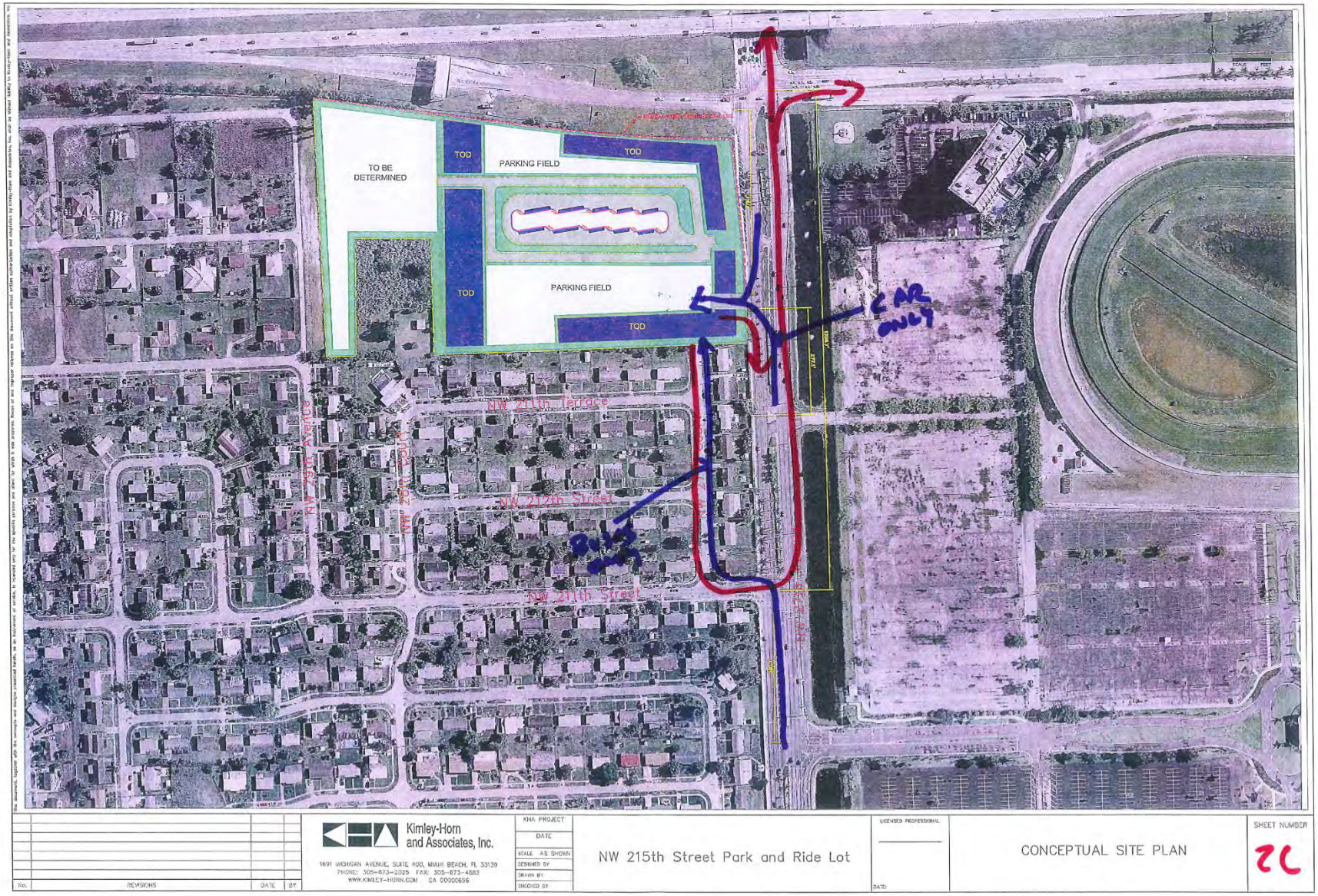
Kimley-Horn and Associates, Inc.
1691 MICHIGAN AVENUE, SUITE 400, MIAMI BEACH, FL 33139
PHONE: 305-673-2025 FAX: 305-673-4582
WWW.KIMLEY-HORN.COM CA 00000696

NW 215th Street Park and Ride Lot

CONCEPTUAL SITE PLAN

SHEET NUMBER 2B

NW 27TH AVENUE
Enhanced Bus Service Concepts



Kimley-Horn and Associates, Inc.
1691 MICHIGAN AVENUE, SUITE 400, MIAMI BEACH, FL 33139
PHONE: 305-673-2025 FAX: 305-673-4582
WWW.KIMLEY-HORN.COM CA 00000696

NW 215th Street Park and Ride Lot

CONCEPTUAL SITE PLAN

SHEET NUMBER 2C

NW 27TH AVENUE
Enhanced Bus Service Concepts

NW 27TH AVENUE
Enhanced Bus Service Concepts

No.	REVISIONS	DATE	BY

Kimley-Horn and Associates, Inc.
1691 MICHIGAN AVENUE, SUITE 400, MIAMI BEACH, FL 33139
PHONE: 305-673-2025 FAX: 305-673-4682
WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT
DATE
SCALE AS SHOWN
DESIGNED BY
DRAWN BY
CHECKED BY

NW 215th Street Park and Ride Lot

LICENSED PROFESSIONAL
DATE

CONCEPTUAL SITE PLAN

SHEET NUMBER
3A

NW 27TH AVENUE
Enhanced Bus Service Concepts

Kimley-Horn and Associates, Inc.
1691 MICHIGAN AVENUE, SUITE 400, MIAMI BEACH, FL 33139
PHONE: 305-673-2025 FAX: 305-673-4882
WWW.KIMLEY-HORN.COM CA 00000695

NW 215th Street Park and Ride Lot

CONCEPTUAL SITE PLAN

SHEET NUMBER 3B

NW 27TH AVENUE
Enhanced Bus Service Concepts

Kimley-Horn and Associates, Inc.	KHA PROJECT	NW 215th Street Park and Ride Lot	CONCEPTUAL SITE PLAN
1691 MICHIGAN AVENUE, SUITE 400, MIAMI BEACH, FL 33139 PHONE: 305-673-2025 FAX: 305-673-4882 WWW.KIMLEY-HORN.COM CA 00000696	DATE SCALE AS SHOWN DESIGNED BY DRAWN BY CHECKED BY	LICENSED PROFESSIONAL DATE:	SHEET NUMBER 3C

No.	REVISIONS	DATE	BY

NW 27TH AVENUE
Enhanced Bus Service Concepts

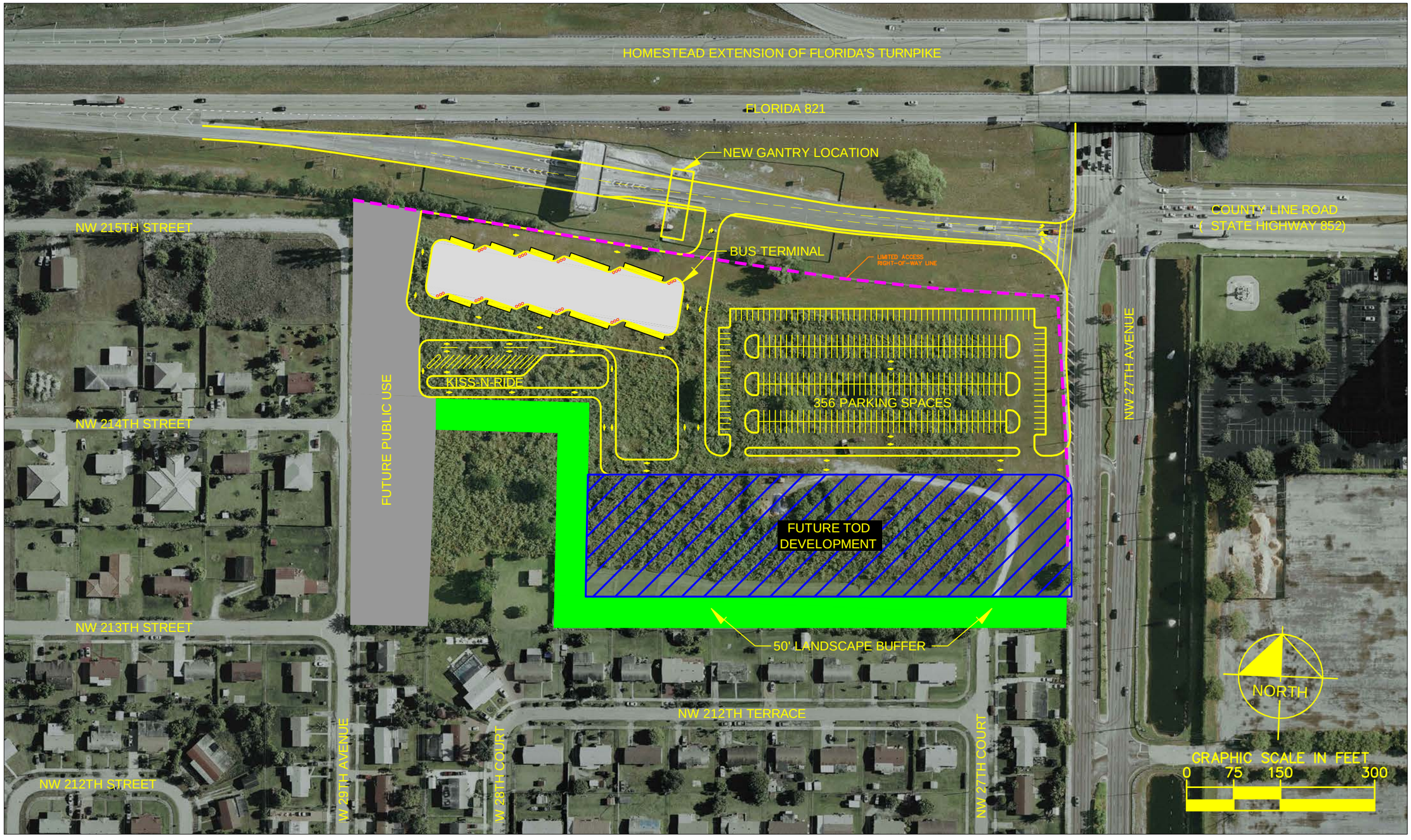
Kimley-Horn and Associates, Inc.
1691 MICHIGAN AVENUE, SUITE 400, MIAMI BEACH, FL 33139
PHONE: 305-673-2025 FAX: 305-673-6082
WWW.KIMLEY-HORN.COM CA 00000699

NW 215th Street Park and Ride Lot

CONCEPTUAL SITE PLAN

3D

Conceptual Site Plans



Plotted By:Pasken, Ken Sheet Set:Kha Layout:Layout1 February 20, 2013 06:11:12pm M:\TEMP\VILA\BCT Bus Bay Standards\2013.02.20_Site Plan_1.dwg

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Kimley-Horn and Associates, Inc.

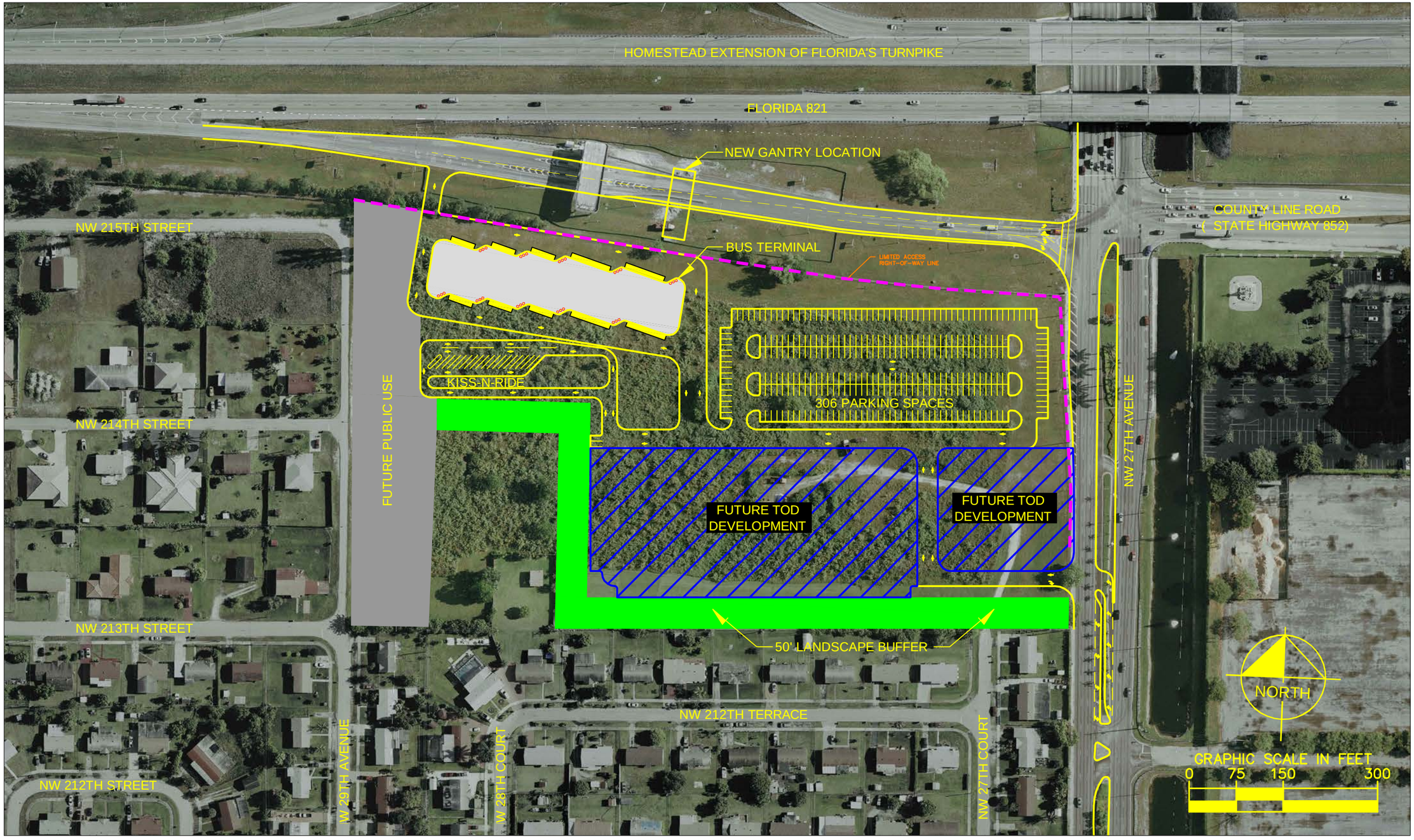
© 2013 KIMLEY-HORN AND ASSOCIATES, INC.

1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

CONCEPTUAL SITE PLAN
OPTION 1A

SHEET NUMBER



Plotted By: Posken, Ken Sheet Set: Kha Layout: Layout1 February 13, 2013 05:59:05pm M:\TEMP\VILA\BCT Bus Boy Standards\2013.02.13_Site Plan_2A.dwg

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Kimley-Horn and Associates, Inc.

© 2013 KIMLEY-HORN AND ASSOCIATES, INC.

1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

CONCEPTUAL SITE PLAN
OPTION 2A

SHEET NUMBER

2A-1

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

No.	REVISIONS	DATE	BY

Kimley-Horn and Associates, Inc.

© 2013 KIMLEY-HORN AND ASSOCIATES, INC.

1221 BRICKELL AVENUE, SUITE 400, MIAMI, FL 33131
PHONE: 305-673-2025 FAX: 305-535-7760
WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT	
DATE	
SCALE	AS SHOWN
DESIGNED BY	
DRAWN BY	
CHECKED BY	

PARK AND RIDE TRANSIT TERMINAL
NW 215TH STREET AND NW 27TH AVENUE

LICENSED PROFESSIONAL

DATE:

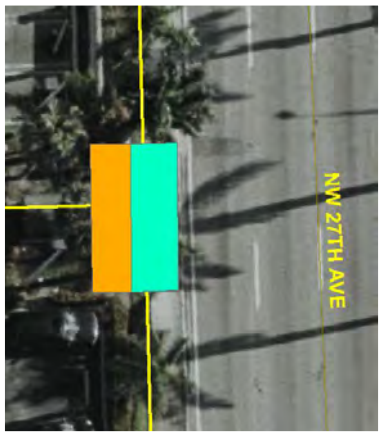
CONCEPTUAL SITE PLAN
OPTION 4

SHEET NUMBER

6

APPENDIX C:
Station Location Summary

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan



- Existing bus stop
- 5′ sidewalk
- 13′ landscape/transformer area
- 440′ from intersection

- Existing bus stop
- 10′ sidewalk
- 10′ grass area
- 350′ from intersection

Legend:
- 8′ x 25′ Station
- 15′ x 25′ Station

NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

NW 215 Street

NW 199 Street

NW 183 Street

NW 175 Street

NW 160 Street

Sesame Street

Ali Baba Avenue

NW 135 Street

NW 113 Street/MDC

NW 103 Street

NW 95 Street

NW 79 Street

NW 62 Street/
MLK Station

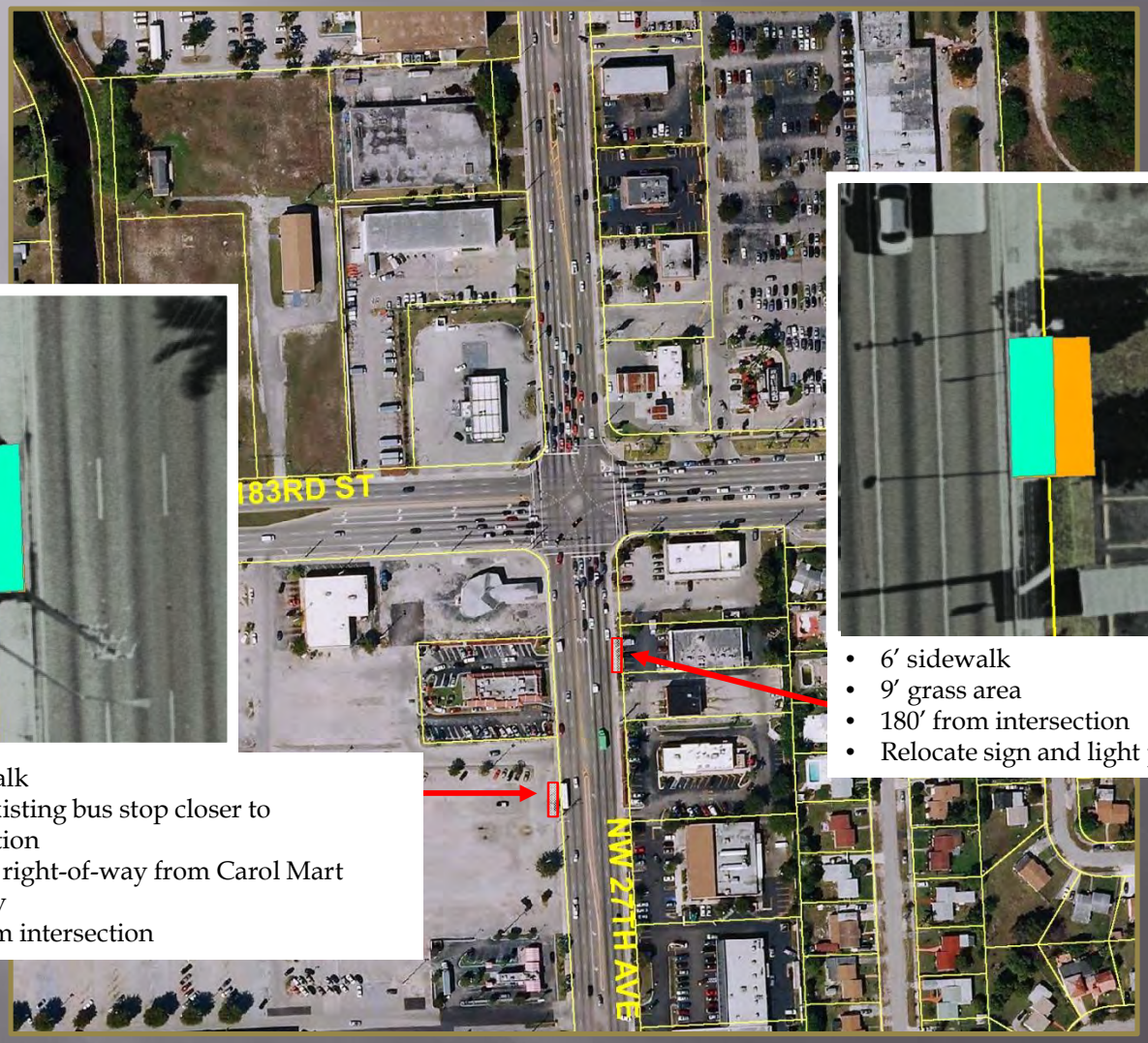
NW 54 Street/
Brownsville Station

NORTH
MAP NOT TO SCALE

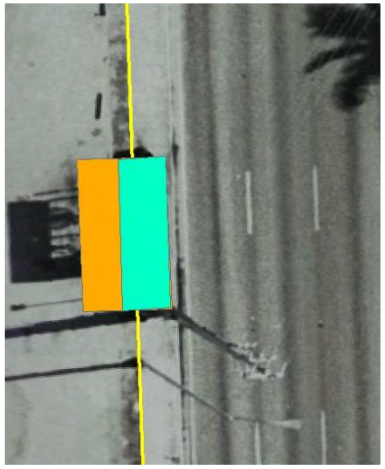
Southbound Bus Station (Far Side)

Northbound Bus Station (Near Side)

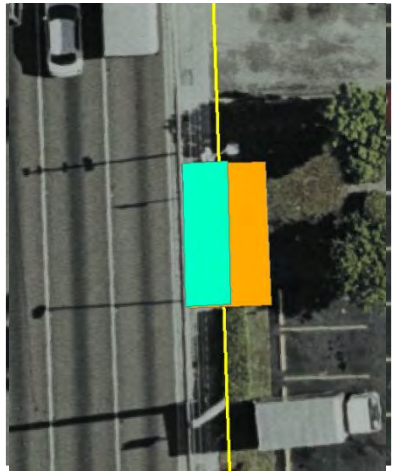
NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan



NORTH
MAP NOT TO SCALE



- 6′sidewalk
- Move existing bus stop closer to intersection
- Acquire right-of-way from Carol Mart Property
- 350′ from intersection



- 6′ sidewalk
- 9′ grass area
- 180′ from intersection
- Relocate sign and light pole

Legend:
- 8′ x 25′ Station
- 15′ x 25′ Station

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

Southbound Bus Station (Far Side)

Northbound Bus Station (Near Side)

NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

- 6′ sidewalk
- Sidewalk not provided south of existing bus stop
- Use frontage road if needed
- 15′ width station would required using frontage road
- 150′ from intersection

- 6′ sidewalk
- 7′ grass area
- 150′ from intersection

NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

Legend:
- 8′ x 25′ Station
- 15′ x 25′ Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

NW 215 Street

NW 199 Street

NW 183 Street

NW 175 Street

NW 160 Street

Sesame Street

Ali Baba Avenue

NW 135 Street

NW 113 Street/MDC

NW 103 Street

NW 95 Street

NW 79 Street

NW 62 Street/
MLK Station

NW 54 Street/
Brownsville Station

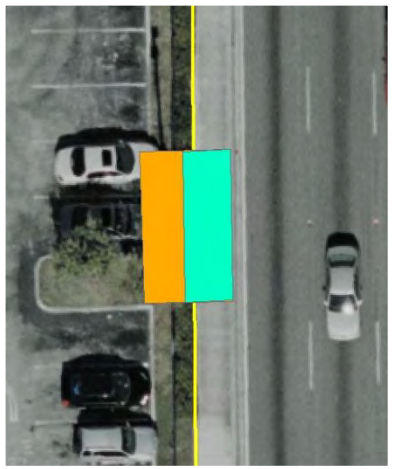
NORTH
MAP NOT TO SCALE

Southbound Bus Station (Far Side)

Northbound Bus Station (Near Side)

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

NORTH
MAP NOT TO SCALE



- 6′ sidewalk
- Use existing landscaped area fronting Walgreens
- Acquire right-of-way from Walgreens
- 180′ from intersection

- 6′ sidewalk
- 26′ grass area
- 135′ from intersection

Legend:
- 8′ x 25′ Station
- 15′ x 25′ Station

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

Southbound Bus Station (Far Side)

Northbound Bus Station (Far Side)

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

Unsignalized location
- 6′ sidewalk
- 13′ landscaped area
- Acquire right-of-way from Family Dollar
- 100′ from intersection

Unsignalized location
- 6′ sidewalk
- 16′ grass area
- 375′ from Sesame St

NORTH
MAP NOT TO SCALE

Legend:
- 8′ x 25′ Station
- 15′ x 25′ Station

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

Rapid NW 27 Ave

NW 215 Street

NW 199 Street

NW 183 Street

NW 175 Street

NW 160 Street

Sesame Street

Ali Baba Avenue

NW 135 Street

NW 113 Street/MDC

NW 103 Street

NW 95 Street

NW 79 Street

NW 62 Street/
MLK Station

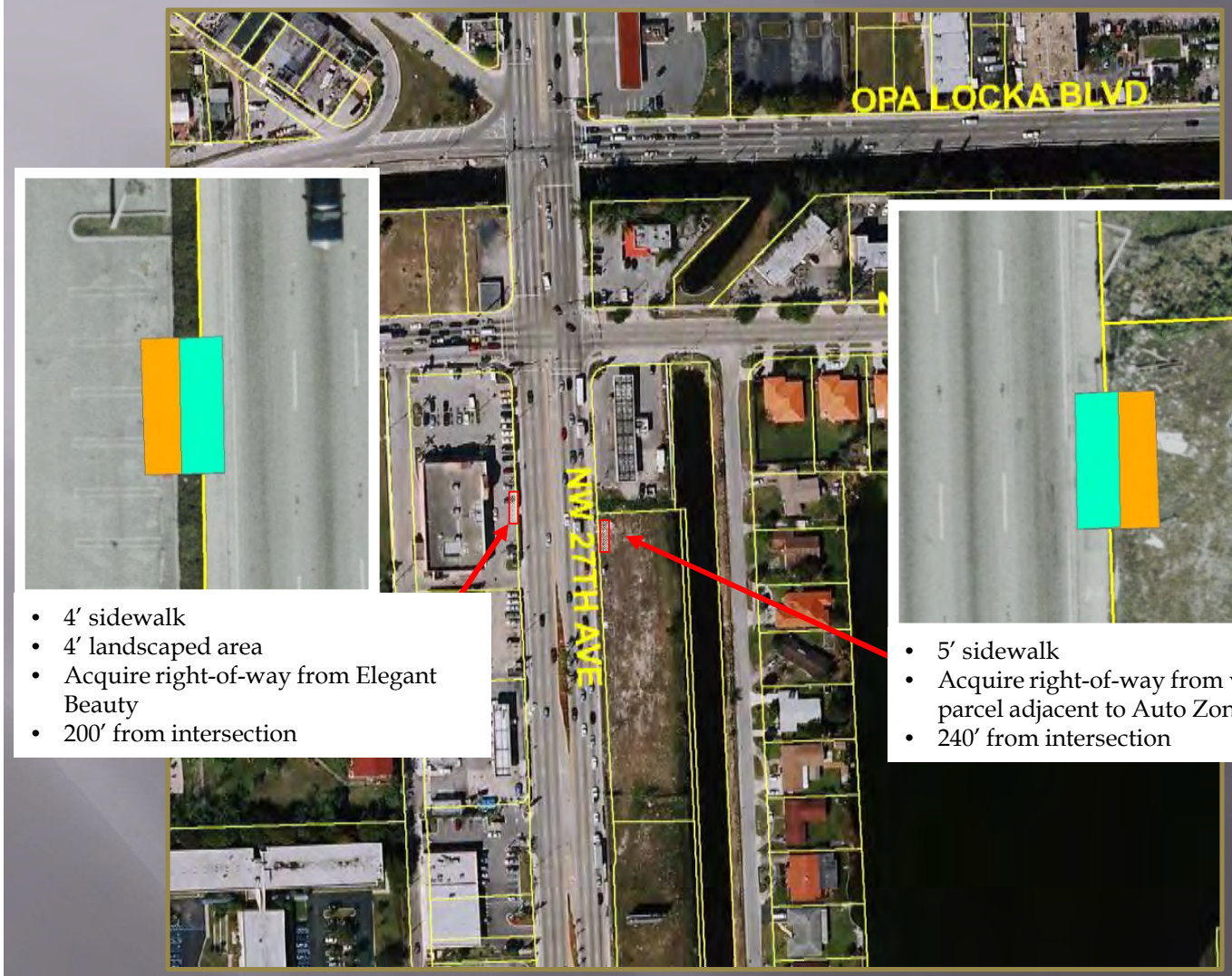
NW 54 Street/
Brownsville Station

NORTH
MAP NOT TO SCALE

Southbound Bus Station (Far Side)

Northbound Bus Station (Far Side)

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan



NORTH
MAP NOT TO SCALE

- 4′ sidewalk
- 4′ landscaped area
- Acquire right-of-way from Elegant Beauty
- 200′ from intersection

- 5′ sidewalk
- Acquire right-of-way from vacant parcel adjacent to Auto Zone
- 240′ from intersection

Legend:
- 8′ x 25′ Station
- 15′ x 25′ Station

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

NW 215 Street

NW 199 Street

NW 183 Street

NW 175 Street

NW 160 Street

Sesame Street

Ali Baba Avenue

NW 135 Street

NW 113 Street/MDC

NW 103 Street

NW 95 Street

NW 79 Street

NW 62 Street/
MLK Station

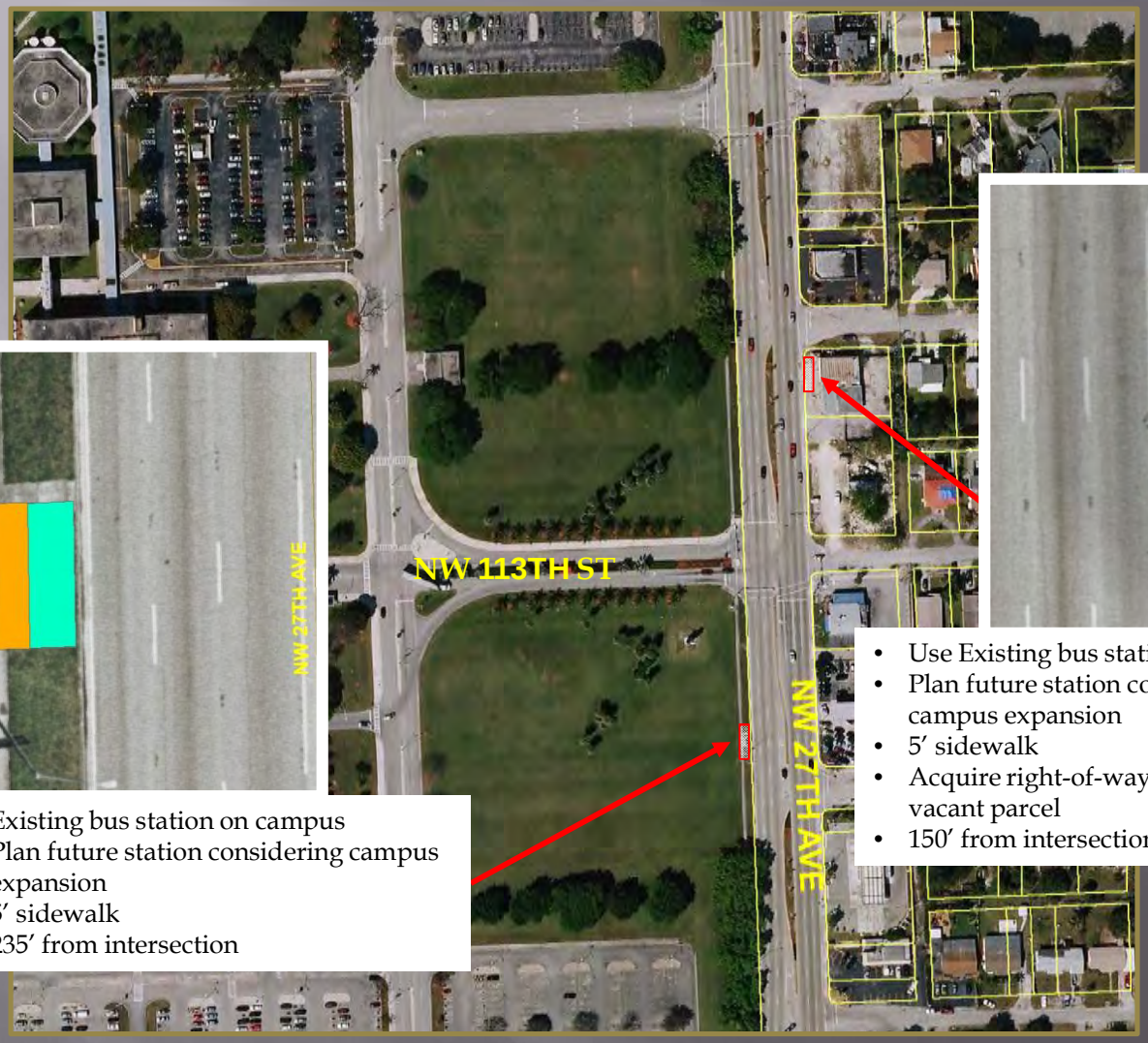
NW 54 Street/
Brownsville Station

NORTH
MAP NOT TO SCALE

Southbound Bus Station (Far Side)

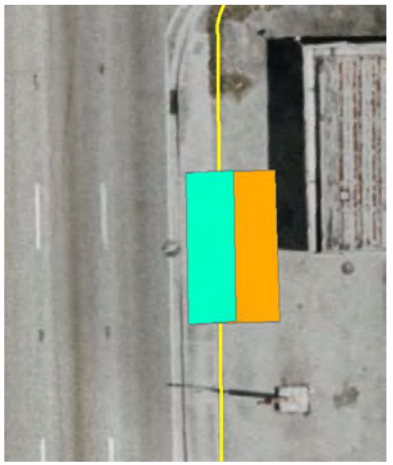
Northbound Bus Station (Near Side)

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan



NORTH
MAP NOT TO SCALE

- Existing bus station on campus
- Plan future station considering campus expansion
- 5′ sidewalk
- 235′ from intersection



- Use Existing bus station on campus
- Plan future station considering campus expansion
- 5′ sidewalk
- Acquire right-of-way from adjacent vacant parcel
- 150′ from intersection

Legend:
- 8′ x 25′ Station
- 15′ x 25′ Station

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

Southbound Bus Station (Far Side)

Northbound Bus Station (Far Side)

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

- Existing bus stop
- 17′ to travel lane from back of sidewalk
- 300′ from intersection

- Existing bus stop
- Acquire right-of-way from Marine retail store
- 95′ between driveways
- 240′ from intersection

NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

Legend:
- 8′ x 25′ Station
- 15′ x 25′ Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

NW 215 Street

NW 199 Street

NW 183 Street

NW 175 Street

NW 160 Street

Sesame Street

Ali Baba Avenue

NW 135 Street

NW 113 Street/MDC

NW 103 Street

NW 95 Street

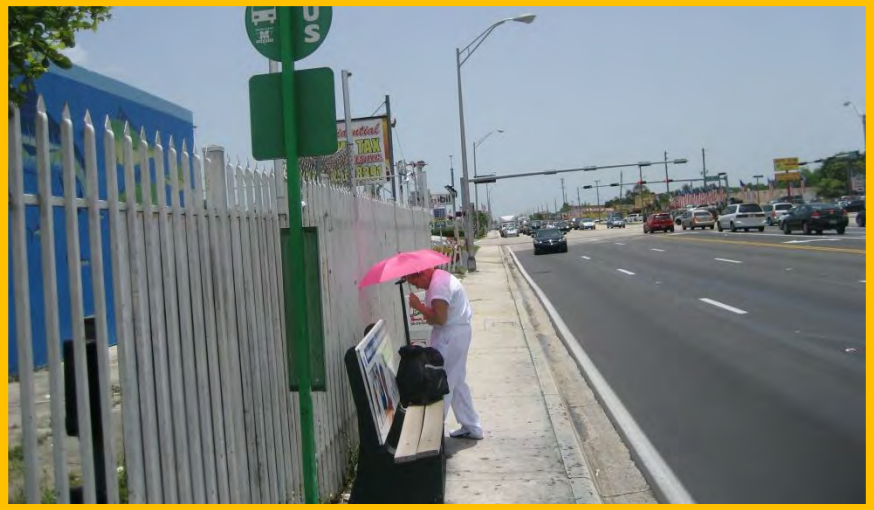
NW 79 Street

NW 62 Street/
MLK Station

NW 54 Street/
Brownsville Station

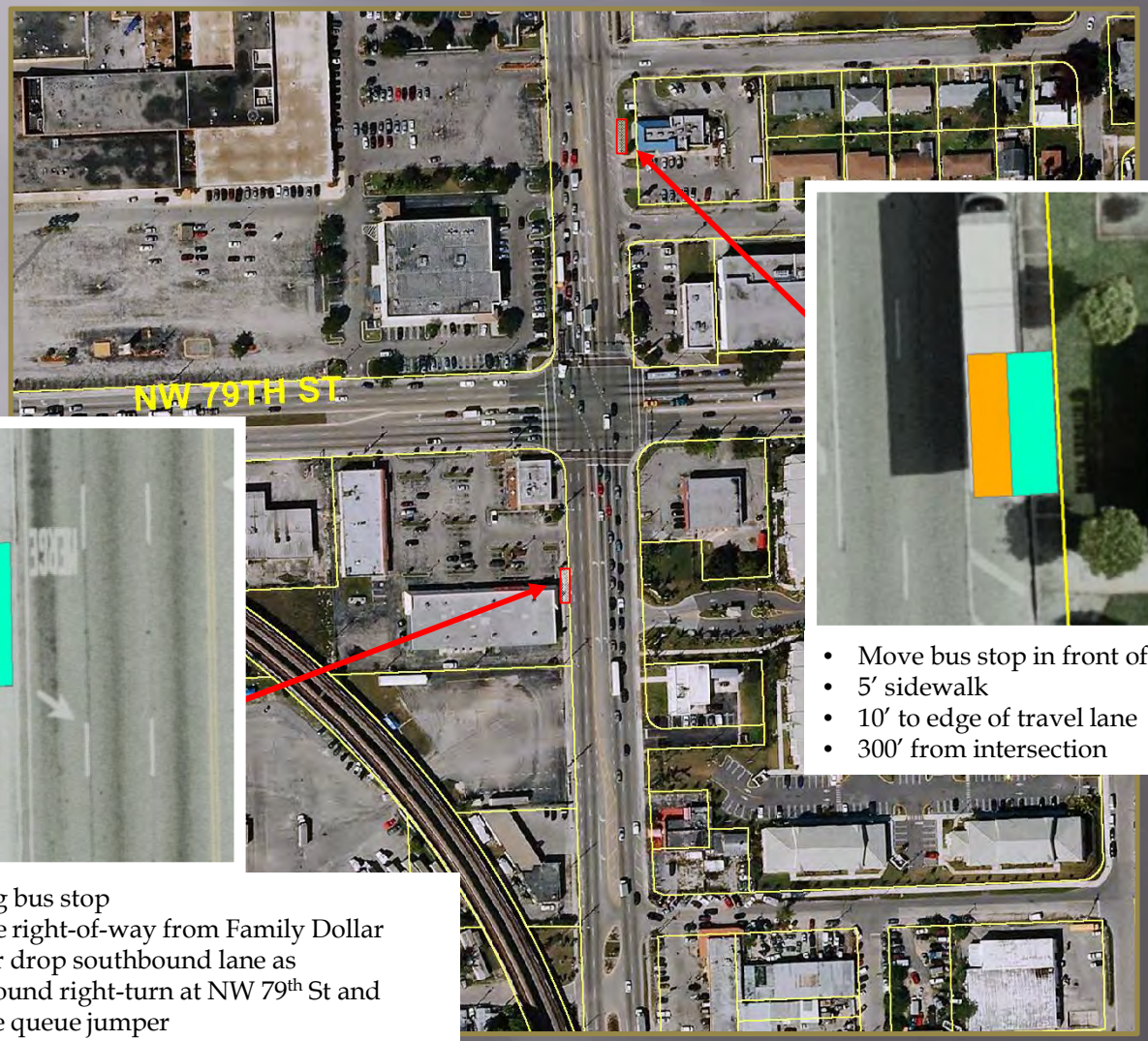
NORTH
MAP NOT TO SCALE

Southbound Bus Station (Far Side)

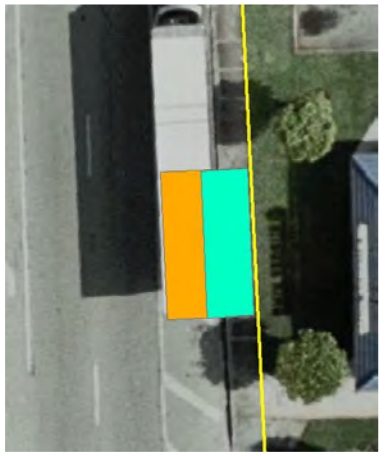


Northbound Bus Station (Far Side)

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan



- Existing bus stop
- Acquire right-of-way from Family Dollar Store or drop southbound lane as southbound right-turn at NW 79th St and provide queue jumper
- 220′ from intersection



- Move bus stop in front of Burger King
- 5′ sidewalk
- 10′ to edge of travel lane
- 300′ from intersection

NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

Legend:
- 8′ x 25′ Station
- 15′ x 25′ Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

NW 215 Street

NW 199 Street

NW 183 Street

NW 175 Street

NW 160 Street

Sesame Street

Ali Baba Avenue

NW 135 Street

NW 113 Street/MDC

NW 103 Street

NW 95 Street

NW 79 Street

NW 62 Street/
MLK Station

NW 54 Street/
Brownsville Station

NORTH
MAP NOT TO SCALE

Southbound Bus Station (Far Side)

Northbound Bus Station (Far Side)

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

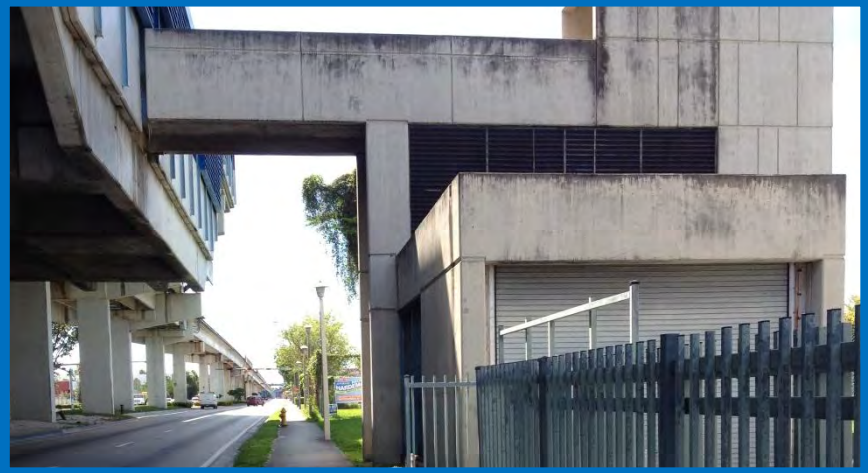
- No station. Stop in roadway under Metrorail Station.
  - Elevator will need to be repaired and access to station opened.
- Option for bus to pull into station

- No station. Stop in roadway under Metrorail Station.
- Need to construct pad to connect to sidewalk
- Option for bus to pull into station

NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

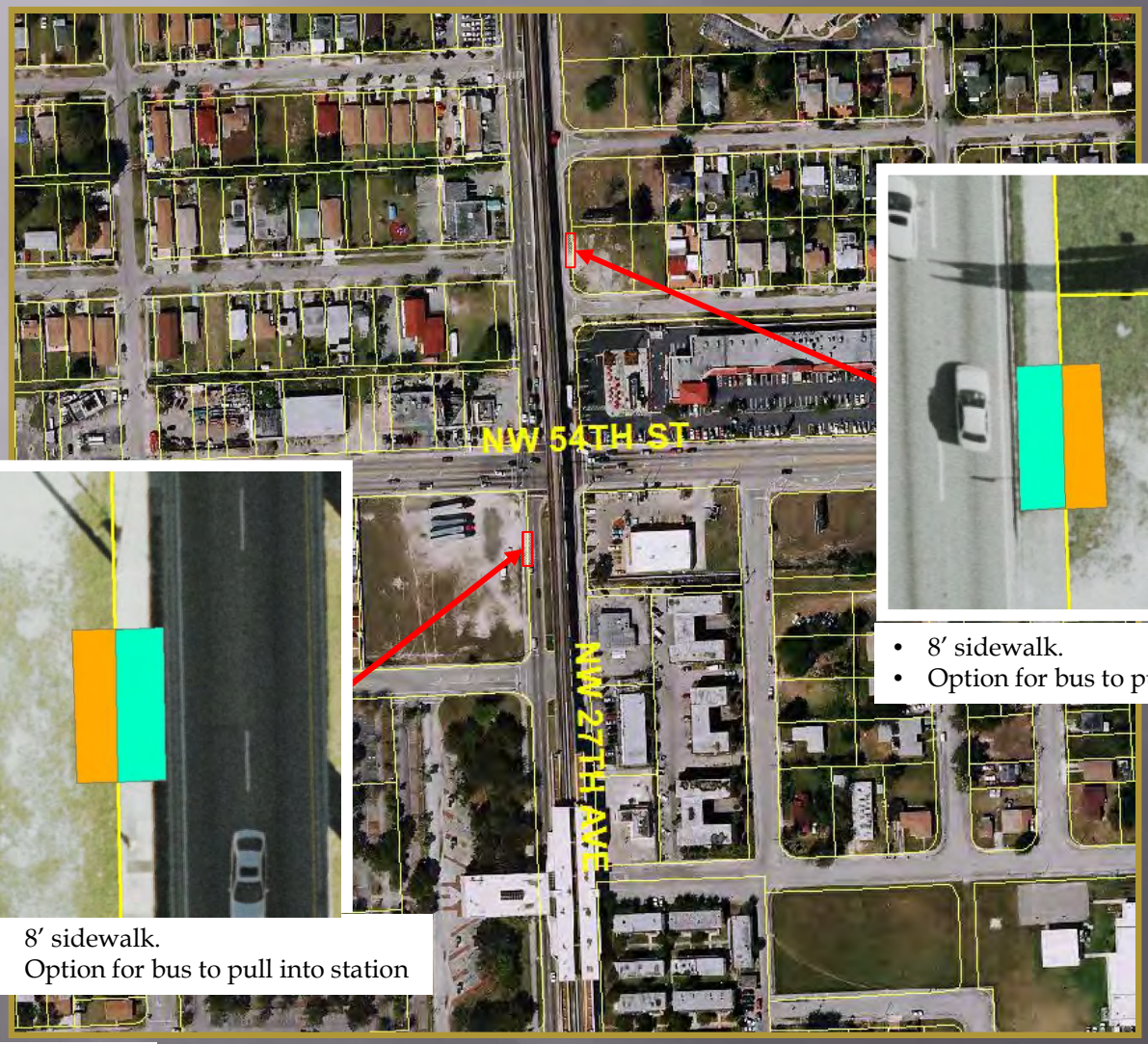


Southbound Bus Station

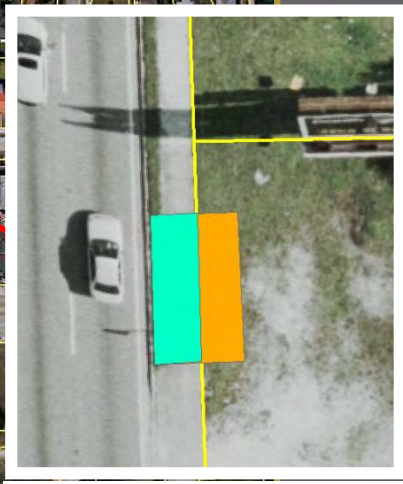
Northbound Bus Station

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan



- 8′ sidewalk.
- Option for bus to pull into station



- 8′ sidewalk.
- Option for bus to pull into station

NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

Legend:
- 8′ x 25′ Station
- 15′ x 25′ Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

NW 215 Street

NW 199 Street

NW 183 Street

NW 175 Street

NW 160 Street

Sesame Street

Ali Baba Avenue

NW 135 Street

NW 113 Street/MDC

NW 103 Street

NW 95 Street

NW 79 Street

NW 62 Street/
MLK Station

NW 54 Street/
Brownsville Station

NORTH
MAP NOT TO SCALE

Southbound Bus Station

Northbound Bus Station

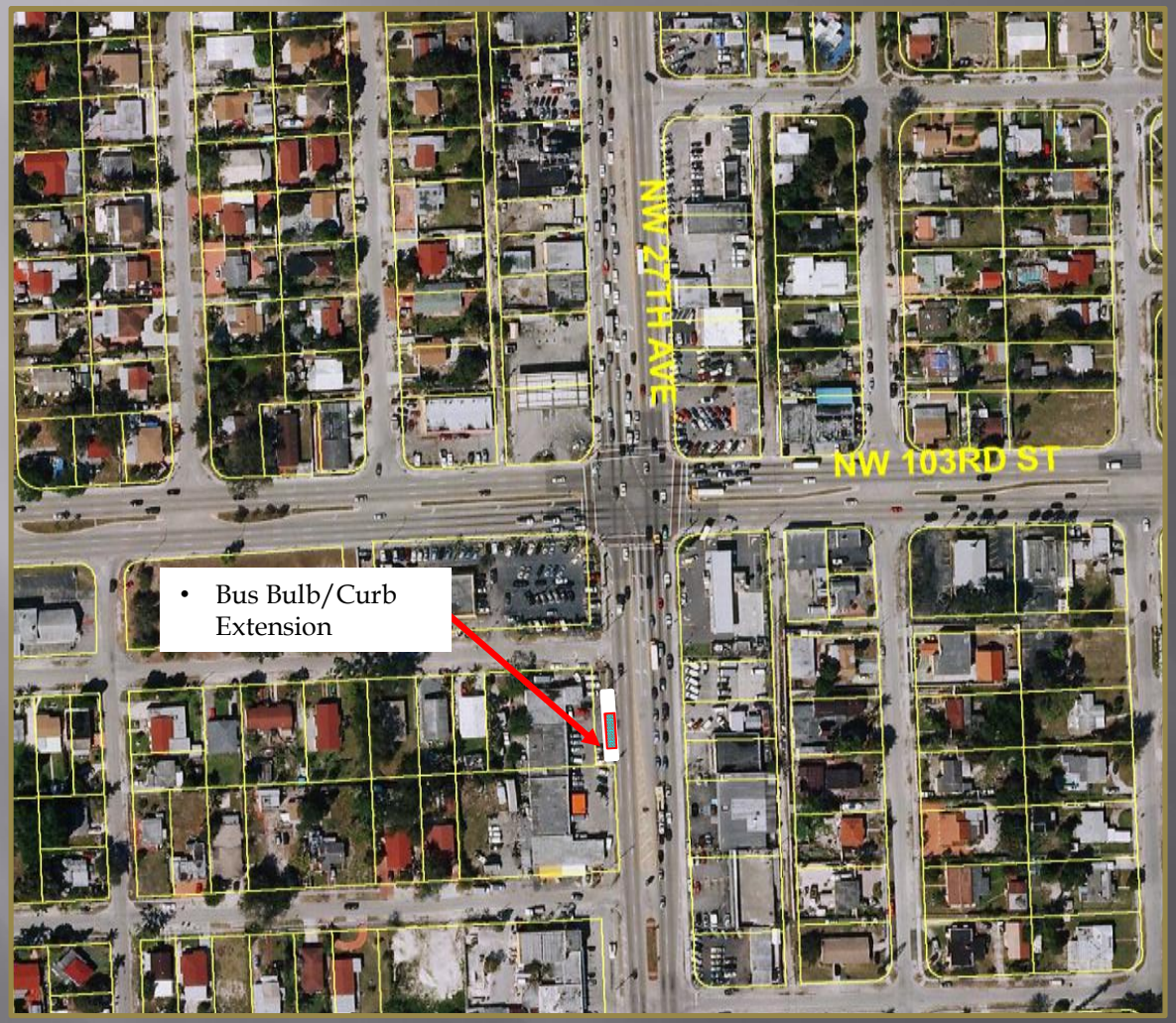
APPENDIX D:
Bus Bulb/Curb Extension and Queue Jump/Queue Bypass Locations

Bus Bulb/Curb Extension Locations

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

Rapid NW 27 Ave

Potential Bus Bulb/Curb Extension Locations



NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

Potential Bus Bulb/Curb Extension Locations

NORTH
MAP NOT TO SCALE

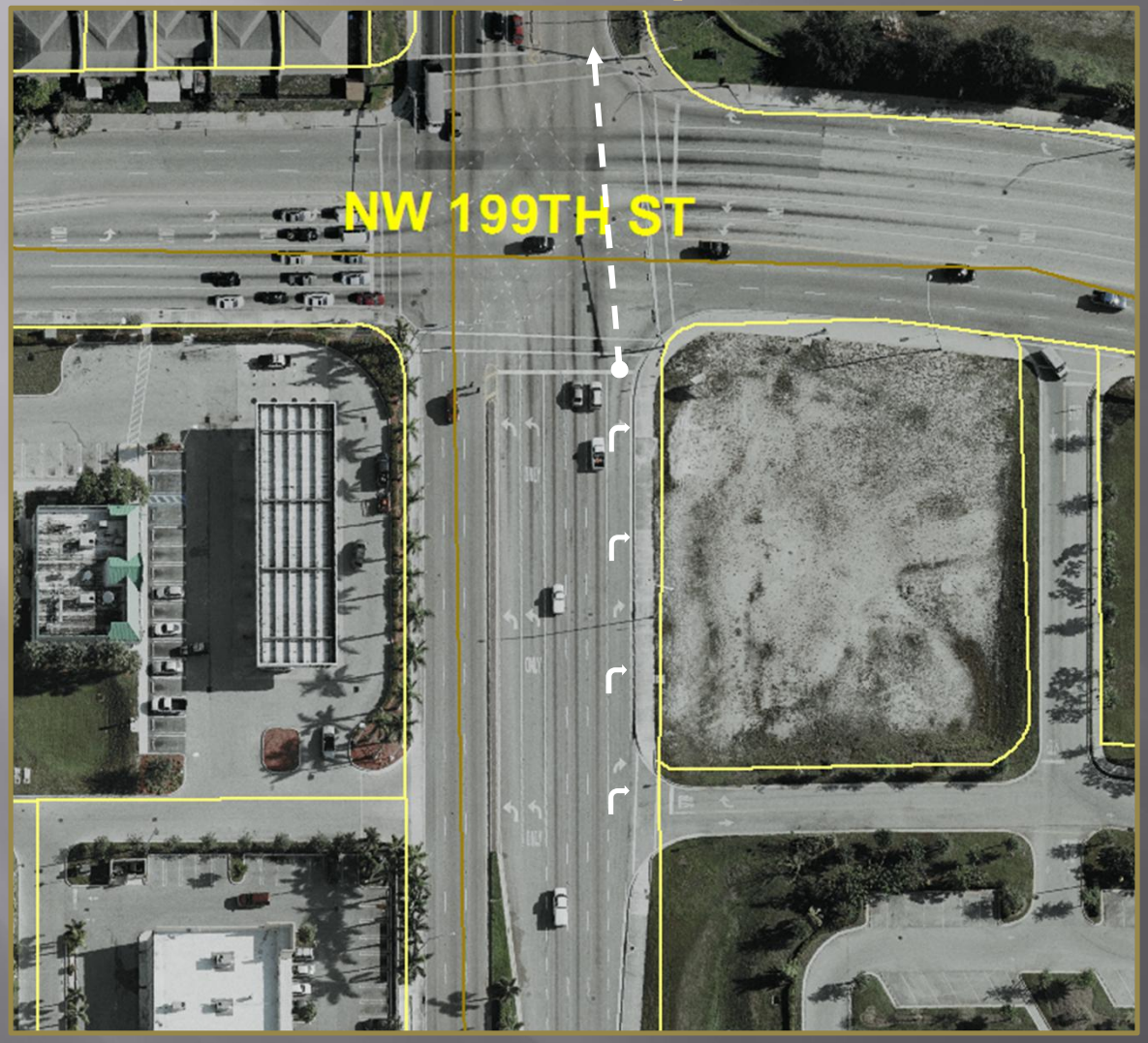
- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

Queue Jump/Queue Bypass Locations

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

Rapid NW 27 Ave

Potential Queue Jumper Location



NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

Rapid NW 27 Ave

Potential Queue Jumper Location

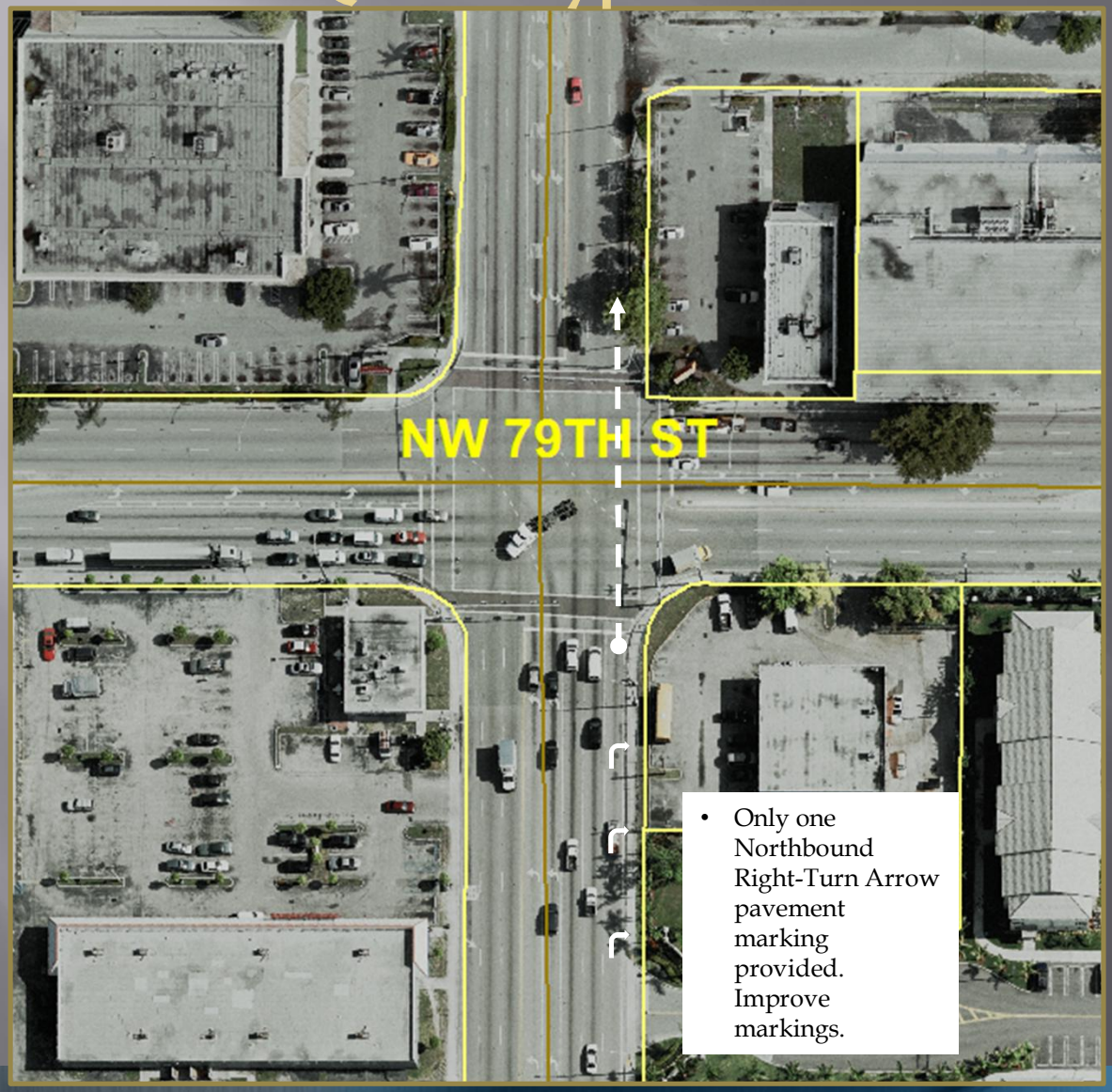
NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 119 Street
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

NW 27TH AVENUE
Enhanced Bus Service Concepts and Environmental Plan

Rapid NW 27 Ave

Potential Queue Bypass Location



NORTH
MAP NOT TO SCALE

- NW 215 Street
- NW 199 Street
- NW 183 Street
- NW 175 Street
- NW 160 Street
- Sesame Street
- Ali Baba Avenue
- NW 135 Street
- NW 113 Street/MDC
- NW 103 Street
- NW 95 Street
- NW 79 Street
- NW 62 Street/ MLK Station
- NW 54 Street/ Brownsville Station

APPENDIX E:
NW 215th Street Park-and-Ride
Opinion of Probable Cost

June 2013

Park and Ride Transit Terminal

NW 215th Street & NW 27th Avenue
Miami Gardens, Florida

Engineer's Opinion of Probable Construction Cost

(Conceptual)

Prepared by:
Kimley-Horn and Associates, Inc.
1221 Brickell Avenue, Suite 400
Miami, Florida 33131

Kimley-Horn and Associates, Inc.

SUMMARY

NO.	DESCRIPTION	AMOUNT
1	SITE[1]	$ 1,560,150.00
2	ARCHITECTURAL[1]	$ 86,687.20
3	BUILDING[1]	$ 445,867.70
4	SITE LIGHTING / SITE ELECTRICAL[1]	$ 85,000.00
5	LANDSCAPING/ IRRIGATION[1]	$ 25,000.00
6	WATER / SEWER[1]	$ 123,400.00
7	SIGNAGE[1]	$ 8,000.00
8	VEHICLE BRIDGE OVER CANAL[2]	$ 1,914,151.00
9	SOUTHBOUND LEFT TURN LANE AT TRANSIT TERMINAL DRIVEWAY[2]	$ 75,000.00
10	SIGNALIZATION[2]	$ 300,000.00
11	MISCELLANEOUS[1]	$ 864,700.00
12	CONTINGENCY (30%)	$ 1,646,386.77
	TOTAL	**$ 7,134,342.67**

SITE COST: $ 3,198,804.90
SITE COST WITH CONTINGENCY: $ 4,158,446.37
ROADWAY COST: $ 2,289,151.00
ROADWAY COST WITH CONTINGENCY: $ 2,975,896.30

NOTE: The Consultant has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Consultant at this time and represent only the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

1 - INCLUDED AS SITE COST.
2 - INCLUDED AS ROADWAY COST.

Kimley-Horn and Associates, Inc.

SITE[3]

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
1.1	SITE DEMOLITION	LS	1	$ 25,000.00	$ 25,000.00
1.2	EROSION AND SEDIMENT CONTROL	LS	1	$ 25,000.00	$ 25,000.00
1.3	6' HIGH WALL	LF	1,200	$ 75.00	$ 90,000.00
1.4	CONCRETE SIDEWALK (4" - 6" THICK, INCL. LIMEROCK BASE)	SY	5,390	$ 35.00	$ 188,650.00
1.5	6" CONCRETE CURB AND GUTTER TYPE "D"	LF	10,500	$ 20.00	$ 210,000.00
1.6	ASPHALT PAVEMENT	SY	21,000	$ 5.00	$ 105,000.00
1.7	8" LIMEROCK BASE	SY	21,000	$ 10.50	$ 220,500.00
1.8	TYPE B STABILIZATION 12"	SY	21,000	$ 5.00	$ 105,000.00
1.9	MODIFICATION TO EXIST. LANEAGE, CURB AND GUTTER, AND MEDIANS[4]	LS	1	$ 50,000.00	$ 50,000.00
1.10	PAVEMENT MARKINGS	LS	1	$ 6,000.00	$ 6,000.00
1.11	SITE FILL[4]	CY	32,000	$ 6.00	$ 192,000.00
1.12	EROSION AND SEDIMENT CONTROL	LS	1	$ 25,000.00	$ 25,000.00
1.13	EXFILTRATION TRENCH	LF	1,900	$ 120.00	$ 228,000.00
1.14	DRAINAGE STRUCTURES	EA	20	$ 4,500.00	$ 90,000.00
				TOTAL	**$ 1,560,150.00**

NOTE: The Consultant has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Consultant at this time and represent only the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

3 - COST OF ENVIRONMENTAL REMEDIATION, IF NEEDED, IS NOT INCLUDED.
4 - BASED ON THE USGS TOPOGRAPHIC MAP, APPROXIMATING SITE ELEVATION AT 6 FT, NGVD. BY FEMA FLOOD CRITERIA, FINISHED FLOOR ELEVATION MUST BE 8 FT. AN AVERAGE FILL OF 1.5 FT WAS USED FOR CALCULATION PURPOSES ON THIS OPC.

Kimley-Horn and Associates, Inc.

ARCHITECTURAL[5]

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
2.1	GLASS BLOCK				$ 8,549.20
2.2	WINDOWS				$ 900.00
2.3	DOORS				$ 1,250.00
2.4	ROOF WATER PROOFING				$ 2,380.00
2.5	HVAC				$ 10,000.00
2.6	PLUMBING				$ 6,108.00
2.7	ELECTRICAL				$ 30,000.00
2.8	INTERIOR FINISHES				$ 27,500.00
				TOTAL	**$ 86,687.20**

5 - THESE VALUES ARE BASED ON THE 344TH STREET P-N-R FACILITY.

Kimley-Horn and Associates, Inc.

BUILDING[6]

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
3.1	REGULAR EXCAVATION	CY	101	$ 7.10	$ 717.10
3.2	CONCRETE- SLAB ON GRADE. (f'c = 4000psi)	CY	225	$ 225.00	$ 50,625.00
3.3	CONCRETE- FOOTINGS. (f'c= 4000psi)	CY	35	$ 375.00	$ 13,125.00
3.4	CONCRETE- COLUMS & CONC. WALLS. (f'c= 4000psi)	CY	71	$ 1,550.00	$ 110,050.00
3.5	CONCRETE- BUS SHELTER ROOF SLAB. (f'c= 4000psi)	CY	169	$ 755.00	$ 127,595.00
3.6	CONCRETE- SLAB & BEAMS. (f'c= 4000psi)	CY	36	$ 975.00	$ 35,100.00
3.7	STEEL- FOOTINGS	LB	5,196	$ 1.30	$ 6,754.80
3.8	STEEL- COLUMNS, WALL, SLAB	LB	45,358	$ 1.40	$ 63,501.20
3.9	WELDED WIRE FABRIC 6x6- W-1.4xW1.4	LB	136	$ 1.20	$ 163.20
3.10	PREMOLDED EXPANSION JOINT	LF	339	$ 42.00	$ 14,238.00
3.11	MASONRY	SF	684	$ 9.60	$ 6,566.40
3.12	6 MIL POLYETHYLENE VAPOR BARRIER	SY	72	$ 6.00	$ 432.00
3.13	PREFABRICATED GUARD BOOTH	EA	1	$ 17,000.00	$ 17,000.00
				TOTAL	**$ 445,867.70**

6 - THESE VALUES ARE BASED ON THE 344TH STREET P-N-R FACILITY.

Kimley-Horn
and Associates, Inc.

SITE LIGHTING / SITE ELECTRICAL

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
4.1	ELECTRICAL SERVICE (INCL. PAD-MOUNTED TRANSFORMER)[7]	LS	1	$ 10,000.00	$ 10,000.00
4.2	LIGHTING POLE	EA	10	$ 5,000.00	$ 50,000.00
4.3	ONSITE CONDUIT	LS	1	$ 10,000.00	$ 10,000.00
4.4	COMMUNICATION SERVICE TO SITE	LS	1	$ 15,000.00	$ 15,000.00
				TOTAL	**$ 85,000.00**

NOTE: The Consultant has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Consultant at this time and represent only the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

7 - THIS ASSUMES THAT THERE IS EXISTING ELECTRICAL SERVICE AT THE PROPERTY LINE THAT CAN BE UTILIZED FOR THIS PROJECT.

Kimley-Horn
and Associates, Inc.

LANDSCAPING/IRRIGATION

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
5.1	LANDSCAPING	LS	1	$ 15,000.00	$ 15,000.00
5.2	IRRIGATION	LS	1	$ 10,000.00	$ 10,000.00
				TOTAL	**$ 25,000.00**

NOTE: The Consultant has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Consultant at this time and represent only the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn and Associates, Inc.

WATER / SEWER[8]

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
6.1	WATER SERVICE (INCL. TAP, PIPE, AND METER BOX)	LS	1	$ 3,000.00	$ 3,000.00
6.2	SANITARY SEWER SERVICE (INCL. TAP AND 25' LENGTH OF PIPE)	LS	1	$ 4,500.00	$ 4,500.00
6.3	ON-SITE WATER MAIN[9]	LF	700	$ 15.00	$ 10,500.00
6.4	ON-SITE SEWER MAIN[9,10]	LF	700	$ 22.00	$ 15,400.00
6.5	FIRE HYDRANTS	EA	2	$ 45,000.00	$ 90,000.00
				TOTAL	**$ 123,400.00**

NOTE: The Consultant has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Consultant at this time and represent only the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

8 - THESE LINE ITEMS HAVE BEEN INCLUDED FOR INFORMATIONAL PURPOSES. NO COST CAN BE REASONABLY ASSIGNED DUE TO LACK OF KNOWLEDGE OF EXISTING UTILITIES IN THE VICINITY OF THE PROPERTY.
WATER & SEWER ASSUMPTIONS:
9 - OFFSITE WATER AND SEWER SERVICES ARE AVAILABLE ALONG ADJACENT ROADWAYS AND OFFSITE WATER AND SEWER UPGRADES WILL NOT BE REQUIRED.
10 - THE EXISTING LIFT STATION SERVING THIS PROPERTY HAS CAPACITY TO SERVE THIS PROJECT. UPGRADES TO THE EXISTING LIFT STAION WILL NOT BE REQUIRED, THERE IS SUFFICIENT DEPTH TO INSTALL GRAVITY SEWER.

Kimley-Horn
and Associates, Inc.

SIGNAGE

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
7.1	SIGNAGE	LS	1	$ 8,000.00	$ 8,000.00
				TOTAL	**$ 8,000.00**

NOTE: The Consultant has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Consultant at this time and represent only the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn
and Associates, Inc.

VEHICLE BRIDGE OVER CANAL

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
8.1	THREE SECTION BRIDGE	LS	1		$ 1,914,151.00
				TOTAL	**$ 1,914,151.00**

Signalized Intersection Cost for NW 215th Street Park-and-Ride Facility Driveway and New North Calder Driveway
Planning Level Project Cost Estimates

Proposed Project	FY 2012 Bridge Cost (per square-foot)[2]	FY 2013 Inflation Factor(2)	FY 2013 Bridge Cost (per square-foot)[2]	Bridge Cross Section Width (Feet)	Bridge Length (Feet)	Bridge Square-Footage	Bridge Cost	Intersection Signalization Total	Calder Intersection Signalization Contribution	Mobilization (10%)	SubTotal	Scope Contingency/ Project Unkown (10%)	Total Construction Cost	PE Design (10%)	CEI (10%)	Total Project Cost (Present Day $$)
Calder New North Driveway									**25%**							
3-Lane Bridge Alternative	$145	1.033	$149.79	52	145	7,540	$1,129,379	$350,000	$87,500	$121,688	**$1,338,567**	$133,857	**$1,472,423**	$220,864	$220,864	**$1,914,151**

Note: (1) Based on FDOT Generic Cost Per Mile Models 2/1/11.

(2) Based on FDOT Bridge Costs 3/4/11, Concrete Deck/Pre-stressed Girder - Continuous Span.

(2) Based on FDOT FY 2013 Inflation Factor.

(3) Does not include environmental mitigation costs.

Bridge Costs

A highway bridge is defined as any span of 20 feet or more in length. Not all bridges go over bodies of water. Overpasses and ramps that are part of highway interchanges are bridges too. A large proportion of the statewide highway construction budget, usually in excess of 20%, is devoted to bridge construction. Typically, the FDOT completes between 100 and 200 bridges each year. As a rule of thumb, bridges from 20 to 45 feet in length are short span bridges. Bridges from 45 to 150 feet are medium span bridges, and those extending over 150 feet are long span bridges.

Bridge construction costs increased rapidly in the mid-2000s. As with other categories of construction, costs per square foot have tended to decline or stabilize over the last few years.

New Construction

(Cost per Square Foot)

Bridge Type	**Low**	**High**
Short Span Bridges:		
Reinforced Concrete Flat Slab Simple Span*	$112	$160
Pre-cast Concrete Slab Simple Span*	$80	$150
Reinforced Concrete Flat Slab Continuous Span*	NA	NA
Medium and Long Span Bridges:		
Concrete Deck/ Steel Girder - Simple Span*	$100	$138
Concrete Deck/ Steel Girder - Continuous Span*	$125	$173
Concrete Deck/ Pre-stressed Girder - Simple Span	$67	$140
Concrete Deck/ Pre-stressed Girder - Continuous Span	$85	$145
Concrete Deck/ Steel Box Girder – Span Range from 150' to 280' (for curvature, add a 15% premium)	$110	$160
Segmental Concrete Box Girders - Cantilever Construction, Span Range from 150' to 280'	$145	$175
Movable Bridge - Bascule Spans and Piers	$1,450	$2,000
* Increase the cost by twenty percent for phased construction.		

Kimley-Horn
and Associates, Inc.

SOUTHBOUND LEFT TURN LANE AT TRANSIT TERMINAL DRIVEWAY

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
9.1	SOUTHBOUND LEFT TURN LANE	LS	1		$ 75,000.00
				TOTAL	**$ 75,000.00**

Kimley-Horn
and Associates, Inc.

SIGNALIZATION

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
10.1	SIGNALIZATION	LS	1		$ 300,000.00
				TOTAL	**$ 300,000.00**

Kimley-Horn
and Associates, Inc.

MISCELLANEOUS

ITEM NO.	DESCRIPTION	UNIT	QTY.	UNIT PRICE AVERAGE	AMOUNT
11.1	MAINTENANCE OF TRAFFIC, MOBILIZATION	10.00%	1	$ 180,200.00	**$ 180,200.00**
11.2	PERFORMANCE AND PAYMENT BOND	2.00%	1	$ 36,000.00	**$ 36,000.00**
11.3	DESIGN AND PERMITTING	15.00%	1	$ 270,200.00	**$ 270,200.00**
11.4	CONSTRUCTION, ENGINEERING, INSPECTION	15.00%	1	$ 270,200.00	**$ 270,200.00**
11.5	PROVIDING UNIFORMED OFF-DUTY POLICE OFFICER	6.00%	1	$ 108,100.00	**$ 108,100.00**
				TOTAL	**$ 864,700.00**

NOTE: The Consultant has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Consultant at this time and represent only the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.