Truck Parking Site Feasibility for the Krome Avenue Parcel

Technical Memorandum

Prepared for:

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List of Acronyms

Acre(s) (AC)

Florida Department of Transportation (FDOT)

Florida Master Site File (FMSF)

Fiscal Year (FY)

Geographical Information System (GIS)

General Use (GU)

Homestead Extension of Florida's Turnpike (HEFT)

Miami-Dade Transportation Planning Organization (TPO)

National Highway Freight Program (NHFP)

National Register of Historic Places (NRHP)

Other Surface Waters (OSW)

Project Development and Environmental Study (PD&E)

Right-of-Way (ROW)

South Florida Water Management District (SFWMD)

State Road (SR)

United States Numbered Highway (US)

United States Army Corps of Engineer (USACE)

United States Fish and Wildlife Service (USFWS)

Year of Expenditure (YOE)

Section 1: Introduction

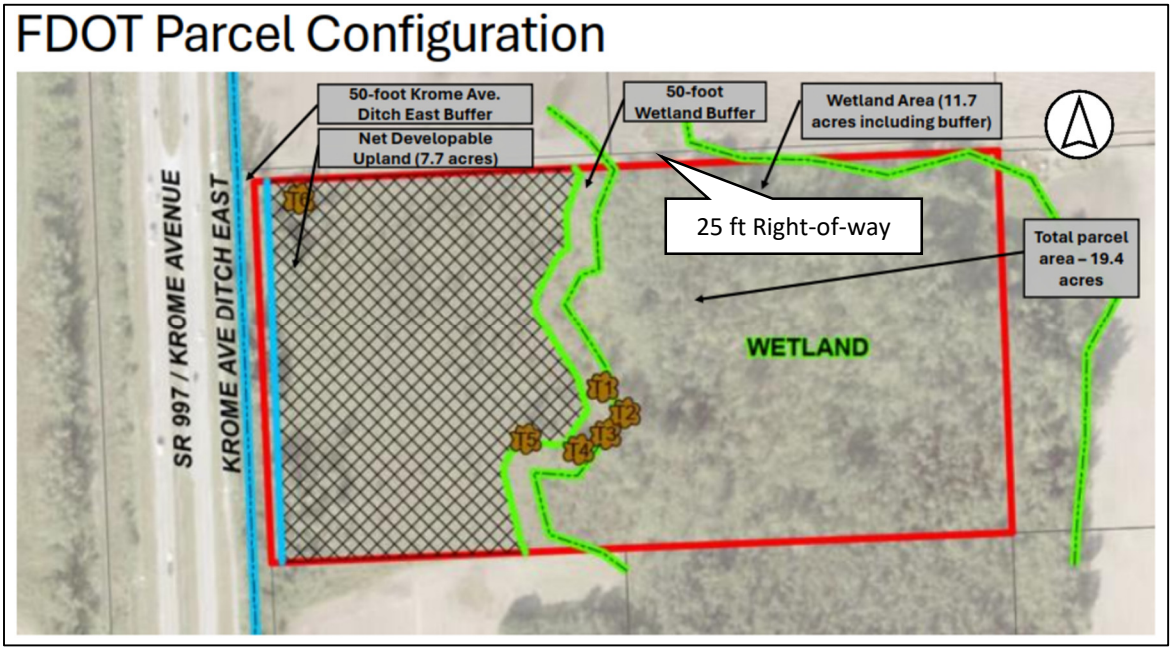
1.1 Project Description

The purpose of this technical memorandum is to support the Florida Department of Transportation (FDOT) - District Six in performing a feasibility screening analysis for the proposed truck parking site on SR-997/Krome Avenue ("Krome Avenue Parcel"). This truck parking would utilize an FDOT-owned parcel of 19.4 acres in size that has been identified for use as an Emergency Management site by FDOT's Maintenance Unit. The emergency management uses would include pre-storm readiness for staging of utility and other emergency response vehicles and post-storm debris removal storage. The intent is that the truck parking component could be configured in a manner that does not impair the emergency response functions and vice versa.

This technical memorandum and analysis assess the feasibility of providing a truck parking facility and related features on this parcel. This involves a three-phase process: Tier 1 (Preliminary Screening), Tier 2 (Potential Site Evaluation and Screening) and Tier 3 (Potential Site Conceptualization). These steps include a site vetting with qualitative assessment, screening of suitability, conceptual layouts, cost estimates, and environmental considerations.

The Krome Avenue Parcel is located on the east side of SR-997/Krome Avenue and approximately 2,646 feet north of SR-94/Kendall Drive in the SW 7200 block. 7.7 acres of net developable upland area available. Net developable upland is the portion of high land that can be utilized for development purposes. Situated to the east within the parcel footprint are defined wetlands and buffer (11.7 acres) as well as a ditch along the east side of SR-997/Krome Avenue defined as 'other surface water' (see Section 6 – Environmental Review). Land surrounding the site are agricultural in character. According to Miami-Dade County Appraiser Office mapping, there is a dedicated 22-foot right-of-way to the north which is aligned with theoretical section line for Sunset Drive/SW 72nd Street.

Figure 1-1 Krome Avenue Truck Parking Site Parcel



1.2 Project Need

Fifteen years ago, the Miami-Dade Transportation Planning Organization (TPO) determined a shortage of 10,195 intrastate and interstate truck parking spaces in the Comprehensive Parking Study for Freight Transport in Miami-Dade County (2010)[1], which would require approximately 1,202 acres to be developed as truck parking. Subsequently, the Florida Department of Transportation (FDOT) District Six conducted a "Truck Parking Implementation Master Plan" (2022-2024) in Miami-Dade County to provide direction for the future of the truck parking capacity countywide. The findings were subdivided into two parts as summarized below:

- ✓ The first part of the Master Plan focused on updating the available information regarding the existing truck parking supply and demand, inventorying existing legal and illegal truck parking supply countywide, and forecasting truck parking demand for the year 2045. This effort, completed in June of 2022, identified 112 truck parking supply facilities with 10,477 truck parking spaces in Miami- Dade County based on legal and informal truck parking availability. Most of this capacity is clustered in Medley, Hialeah, Opa-Locka, and Unincorporated Miami-Dade County, especially in the area bordering US-27, the Homestead Extension of Florida's Turnpike (HEFT), and Broward County, with only 8% of spaces being public.
- ✓ Demand was derived from StreetLight[2] truck Global Positioning System (GPS) sample data, while using methodologies ranging from truck sample to population expansion, as well as the conversion of stop duration-based truck parking events to daily demand in parking spaces. This study estimated a daily total demand of about 12,190 truck parking spaces countywide. This effort also included coordination with stakeholders for input into the study process.
- ✓ The second part of the Master Plan also focused on engineering analysis and considerations, identifying potential parcels based on aversion and attraction factors to satisfy a shortfall of approximately 3,390 truck parking spaces as estimated in the first part of this effort to minimize the practice of informal or unauthorized truck parking countywide. In addition, this part also evaluated the preliminary engineering needs and environmental characteristics of each parcel to determine feasibility, develop a list of sites and conceptual facilities, prioritize facilities based on a cost-benefit analysis, and developed an action plan and implementation strategies.
- ✓ The Master Plan developed a list of 15 recommended sites as potential truck parking facilities with conceptual site plans and cost estimates. Of these sites, one is owned by FDOT, ten (10) are government owned (by the State of Florida or Miami-Dade County), and four are privately owned.

The screening process used in the Truck Parking Implementation Master Plan was employed as part of the 'Krome Avenue Parcel' analysis to assess the new potential site as it was not included in the Master Plan and is further presented below. This site may not have been included due to the presence of wetlands on the property. Later, the site was identified by the District Six Maintenance Office as a potential emergency management support site. The Maintenance Office through an environmental analysis concluded that the site constituted a wetlands condition, but that the western part of the site was outside the wetlands footprint and could be for public uses. Coordination internally between the District Six Maintenance and Modal Development Offices led to the hybrid strategy of using the site for emergency management purposes when needed, and otherwise using the site for the truck parking function.

[1] Comprehensive Parking Study for Freight Transport in Miami-Dade County
[2] StreetLight Data

The recent Truck Parking Master Plan identified a significant need for additional truck parking across Miami-Dade County. The purpose of this study is to confirm that a truck parking site at Krome Avenue Parcel is feasible following the District's tiered screening approach, and that a truck parking use would be compatible with planned emergency management functions at the site. The study is not tasked with performing a subarea truck parking needs assessment, but rather to confirm that the site is feasible in contributing additional truck parking supply. It is noted that the Krome Avenue corridor traffic carries 31,500 daily vehicles (2024) with truck factor over 15%. An initiative by the Miami-Dade County Sheriff's Office a few years ago identified a substantial amount of unauthorized truck parking in the vicinity, and the Truck Parking Master Plan indicated only a small number of available truck parking spaces in this area of the county. The role of Krome Avenue as a north-south through truck bypass route is reinforced by its proximity to Redlands agricultural district which relies on trucking for agricultural production support as well as shipments of fruits, vegetables, and nursery/landscaping trees, shrubs and plants. All of these factors are indicative of the need for additional truck parking in the Krome Avenue corridor.

Section 2: Tier 1 Analysis Criteria and Results

A thorough literature review of relevant documents was performed for this truck parking feasibility technical memorandum. These documents supported the importance of truck parking implementation in Miami-Dade County, and the incremental needs due to the high dependence of local freight and logistics on the trucking industry. Further, in 2022, a "Truck Parking Implementation Master Plan Study in Miami-Dade County" (Master Plan) was completed by District Six to provide direction for the future of the truck parking transportation system countywide. The Master Plan recommended further evaluations of the most easily implementable truck parking sites.

Technical Memorandum #1: Tier 1 Analysis and Evaluation Criteria of the Master Plan summarized the vetting results from a preliminary feasibility evaluation of parcel candidates. The evaluation concentrated on long haul tractor trailer parking needs, rather than local truck parking needs primarily for drayage truckers. Based on this previous effort, an evaluation was conducted for the Krome Avenue Parcel and results from the site-specific Tier 1 Analysis are depicted in **Table 2-1**.

Table 2-1 Summary of Results resulting from Tier 1 Analysis

Tier 1 Criteria	Results from Preliminary Evaluation – Tier 1
Existing Zoning Code	General Use (GU)
Site Developed	Undeveloped
Located within the Urban Development Boundary (UDB)	No
Existing Land Use Designation	801 - Vacant Government owned or controlled Note: Parcel is owned by FDOT
Adopted Future Land Use Designation	Comprehensive Development Master Plan - AGRICULTURE
Adjacent Existing Land Use Compatibility	720 - Row and Field Cropland - Compatible
Adjacent Future Land Use Compatibility	AGRICULTURE - Compatible
Usable Acreage	7.7 acres
Nearest Driving Distance to Freeways	Florida Turnpike – 6.33 miles SR 836 – 9.36 miles
Nearest Driving Distance to Strategic Intermodal System (SIS)	SR-997/Krome Avenue - Adjacent
Nearest Driving Distance to Arterials	SR-997/Krome Avenue - Adjacent
Nearest Driving Distance to National Highway Freight Network	SR 826/Palmetto Expressway & SR 976/Bird Road – 9.53 miles
Access: based on the capacity of nearest arterial, distances to freeways, SIS roadways, and arterials, as well as existing conditions of surrounding roadway network	Good
Visibility from Freeway	Site is not visible from freeway
Arterial Truck Percent	SR-997/Krome Avenue: 11.9%

Near Major Freight Activity Areas, based on distance from identified major freight activity areas as defined in the Southeast Florida Regional Freight Plan 2014 Update	No Note: This site is located nearby the Redlands Agricultural District with significant local drayage trucking activity as well as tractor trailer movements for shipments of agricultural products within and outside of the south Florida region.
Land Value per Usable Area; cost feasibility as determined from the Miami-Dade County's Office of the Property Appraiser website	$96,695.88 per acre (based on 19.4 total acres)

The outcomes from this first analysis were positive overall. The land use and zoning are compatible, and the site is located on a major arterial. While it is located some distance from the National Highway Freight Network and standard urban freight distribution zones, the site is located on a busy trucking corridor with demonstrated truck parking needs. The parcel is located outside the UDB and will likely require an additional County review and approval in relation to the Comprehensive Development Master Plan. The positive outcomes from the Tier 1 Analysis justifies the advancement of the Krome Avenue Parcel to a more thorough Tier 2 Analysis.

Section 3: Tier 2 Analysis Criteria and Results

The Tier 2 analysis assessed the proximity of the Krome Avenue Parcel to different key facilities including educational facilities, places of worship, medical facilities, emergency response, civic and government buildings, and cemeteries, among others within a one-mile radius[3] of the site. No educational facilities and historical sites were found within one-mile of the site. It is anticipated that truck parking implementation on the Krome Avenue Parcel would not have an impact on these key facilities. **Table 3-1** and **Table 3-2** summarize the outcome of the Tier 2 Analysis.

Table 3-1 Tier 2 Criteria Evaluation Outcome

Tier 2 Criteria	Results from Preliminary Evaluation – Tier 2
Proximity to medical facilities	No impact
Proximity to educational facilities	No impact
Proximity to religious institutions	No impact
Proximity to civic facilities and government buildings	No impact
Proximity to cemeteries	No impact
Proximity to parks and publicly used land	No impact

The Krome Avenue site was also evaluated for environmental, socioeconomical, and multimodal needs since such factors might be beneficial for advancing the implementation of a truck parking facility in this area. Additionally, such a review may also be necessary in preparation for future project phases. This evaluation is perhaps most critical when applying for federal funding and the National Highway Freight Program.

Table 3-2 Tier 2 Criteria Evaluation Outcome (continued)

Tier 2 Criteria	Results from Preliminary Evaluation – Tier 2
Proximity to historical/archaeological districts/sites	No impact
Proximity to railroad crossings	No
Impact wetlands	No
Located within flood zones	Yes
Located within a wellfield protection area	Yes
Located within or near a contaminated site	No
Located within or near a brownfield	No
Located within or near Bald eagle nesting areas	No
Located within or near West Indian Manatee Critical Habitat and State Manatee Protection Zone	No

[3] Sources: Miami-Dade County GIS Data and ArcGIS Data (Wellfield Protection Area | Open Data Hub Site, Contaminated Site | Open Data Hub Site, Brownfield | Open Data Hub Site), Eagle Nesting Locations Florida 1998 - 2017 | Florida Fish and Wildlife Conservation Commission, State Manatee Protection Zones in Florida | Florida Fish and Wildlife Conservation Commission, Florida Wood Stork Foraging Areas | Florida Department of Environmental Protection Geospatial Open Data, USA Fish and Wildlife Service Lands, Mitigation Bank Watersheds | Florida Department of Environmental Protection Geospatial Open Data, FWC Fish Stocking Locator View Navigation, Locations | U.S. Fish & Wildlife Service, Critical Habitat for Threatened & Endangered Species [USFWS], National Transportation Noise Map, USDOT Federal Highway Administration, SSOGis, Florida Department of Health Bureau of Vital Statistics and the U.S. Census American Community Survey (ACS) 5-year estimates.

Located within or near Wood stork	Yes
Located within a protected wildlife area	No
Located within or near Mitigation Bank Watershed	No
Located within or near Fish Hatcheries	No
Located within or near National Wildlife Refuge Lands	No
Located Near Endangered Species	No
Proximity to noise receptors	No
Multimodal Considerations	Low transit in the area, Low Bicycle and Pedestrian Prioritization Needs Note: The Krome Path is a 10-foot shared-use path on the east side of the roadway for bicyclists and pedestrians.
Vision Zero	Low number of injury intersections and segments within a 1-mile buffer of the site Note: Two (2) crashes reported in year 2022, with one (1) non-injury crash near intersection of SR-997/Krome Avenue and SR-94/Kendall Drive, although one (1) careless driver fatality within 30 days of crash was reported on SR-94/Kendall Drive near SW 172nd Avenue intersection
Socio-economic and Equity	Census tracts in the vicinity of the site experience 0.1% or less poverty level

The outcomes from the Tier 2 Analysis were positive overall. The Krome Avenue site has impact on wood stork habitat; however, does not have an impact on any of the other criteria, as depicted in **Table 3-2**. The positive outcomes from this analysis justified recommending advancing the Krome Avenue site to a more thorough Tier 3 Analysis, which includes preliminary cost estimates and preliminary site conceptualization, taking into consideration the following factors and constraints:

- ✓ Utilities
- ✓ Drainage
- ✓ Wetlands and mitigation
- ✓ Archaeological and cultural issues
- ✓ Zoning
- ✓ Land Use and the Urban Development Boundary (UDB)
- ✓ Development requirement

Section 4: Design Elements Review

In addition to the Tier 1 and Tier 2 Analysis, a more detailed examination of the existing design elements in the vicinity of the Krome Avenue site was conducted. This section summarizes the existing physical features collected through desktop reviews of available as-built plans of the roadways adjacent to the Krome Avenue site. The design elements identified for this additional analysis are presented for the purpose of advising future efforts. Modifications to the roadway network surrounding the Krome Avenue site may be needed to find effective solutions that balance the needs of all road users, if the implementation of truck parking facilities advances in the development process. These elements are but not limited to:

- ✓ Adjacent roadways and intersections
- ✓ Posted speed limit
- ✓ Road maintenance
- ✓ Context classification
- ✓ Parcels and right-of-way
- ✓ On-street parking
- ✓ Lighting
- ✓ Signage
- ✓ Drainage system
- ✓ Sight distance
- ✓ Turning radii
- ✓ Vertical clearance
- ✓ Weight restrictions
- ✓ Lane storage
- ✓ Merging/weaving
- ✓ Utility

4.1 Adjacent Roadways

For the purposes of this truck parking feasibility study, roadway evaluation and analysis have been performed to verify if the existing infrastructure can sustain higher percentages of truck traffic resulting from implementing a truck parking facility. Consequently, to perform this evaluation, nearby roads or areas of interest have been separated into four roadway segments or locations as seen in **Figure 4-1**.

Figure 4-1 Roadways Segments within or adjacent to the Study Area

These road segments or locations are listed as follows:

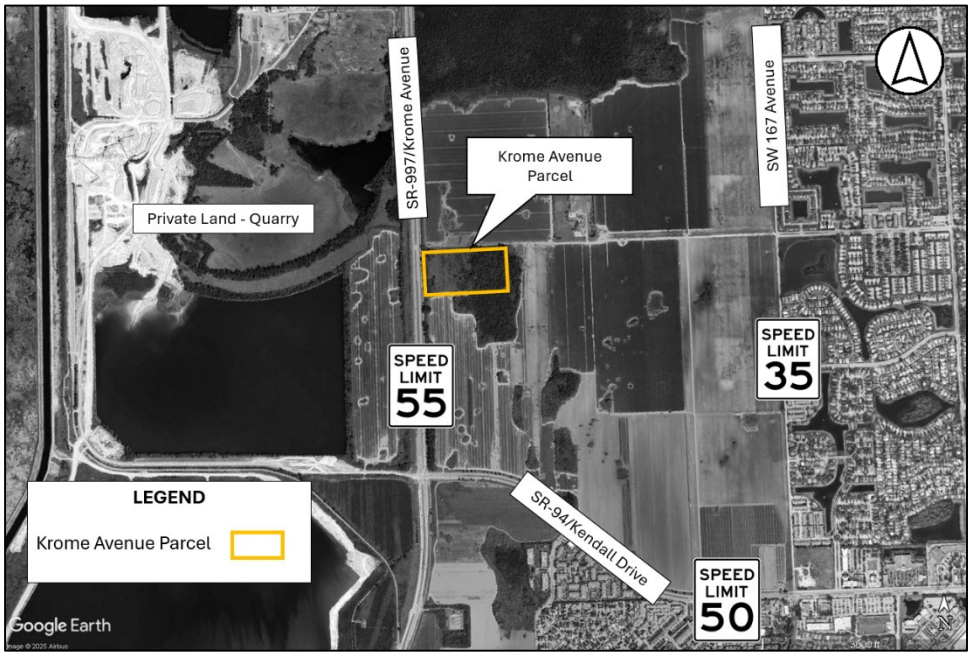
- ✓ SR-997/Krome Avenue, from near SW 72nd Street to SR-94/Kendall Drive
- ✓ SR-997/Krome Avenue, south of SR-94/Kendall Drive
- ✓ SR-94/Kendall Drive east of Krome Avenue
- ✓ Intersection of SR-997/Krome Avenue and SR-94/Kendall Drive

With residential neighborhoods located to the east of the proposed site, it is anticipated that the vast majority of truck traffic will utilize either SR-997/Krome Avenue or SR-94/Kendall Drive. To the north of SR-997/Krome Avenue lies US-27, State Road 836, and US-41 which provides for truck traffic to and from the west coast of Florida. To the east of SR-94/Kendall Drive lies the Florida Turnpike. These roadways are expected to provide the basic routes for access for truck traffic to/from the site. SW 167th Avenue was included due to its proximity to the Krome Avenue Parcel, but has no connectivity northward to the SW 40th Street/Bird Road arterial roadway and it serves a residential district; therefore, it is expected to have minimal truck traffic. West of SR-94/Kendall Drive is a private roadway.

4.2 Posted Speed

The posted speeds on SR-997/Krome Ave and nearby throughfares are depicted in **Figure 4-2**. Based on available data from the Florida Department of Transportation (FDOT) GIS Open Data Hub, roads that are part of the FDOT statewide system and adjacent to the "*Krome Avenue Parcel*" are SR-997/Krome Avenue and SR-94/Kendall Drive with a speed limit of 55 miles per hour and 50 miles per hour, respectively.

Figure 4-2 Posted Speed

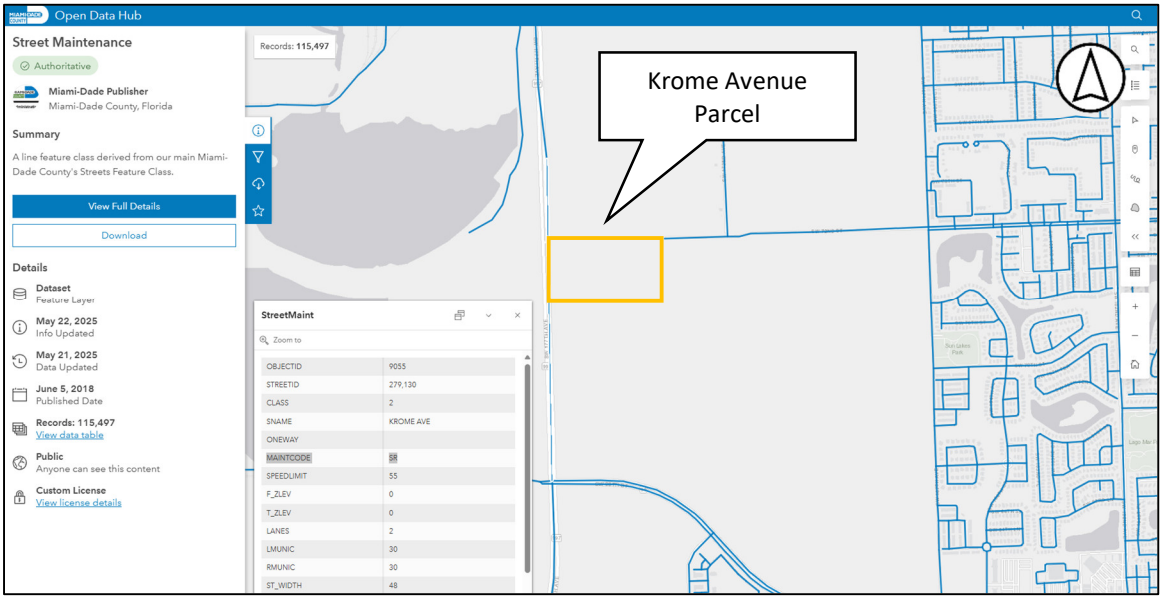


With regards to SW 167th Avenue, the speed limit is 35 mph since this road is a feeder/collector street and maintained by the County. Designing road improvements and accommodating truck traffic requires careful planning to ensure safety, efficient traffic flow, and the structural integrity of the road. Hence, any future implementation of a truck parking facility at this site needs to consider these posted speeds when designing changes to adjacent roads to ensure these match appropriate design criteria and other specific requirements.

4.3 Road Maintenance

Utilizing Miami-County GIS Open Data hub, SR-997/Krome Avenue and SR-94/Kendall Drive are both State Roads and maintained by Florida Department of Transportation. SW 167th Avenue is a County-owned and maintained roadway. Since the project area is located within Unincorporated Miami-Dade County, there are no roads maintained by local municipalities adjacent to the project site.

Figure 4-3 Street Maintenance



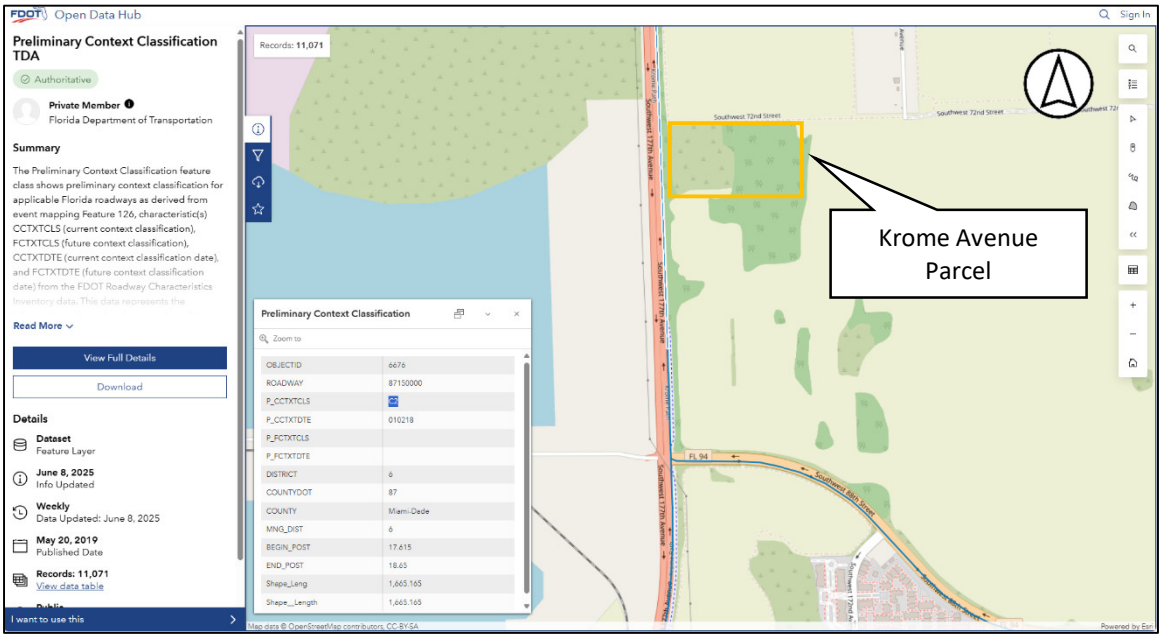
Maintaining roads that experience significant truck traffic requires careful planning and proactive measures to ensure their longevity and safety. The heavy loads and stress imposed by trucks can accelerate wear and tear, leading to deteriorating road conditions if not managed effectively. Hence, identification of road maintenance agencies is useful for any coordination for implementation of future project phases.
Balancing road maintenance and heavy truck traffic requires a multi-faceted approach that involves engineering expertise, budget planning, effective enforcement, and ongoing collaboration between transportation agencies, local authorities, and the trucking industry. This road ownership information will be useful for any further stakeholder coordination necessary if the implementation of the truck parking facility moves forward in the development process.

4.4 Context Classification

Based on FDOT GIS Open Data hub and Preliminary Context Classification TDA layer provided by the District Six Roadway Design office, SR-997/Krome Avenue is considered a C2-Rural and SR-94/Kendall Drive is considered a C3R – Suburban Residential. According to FDOT, context classification "describes the general characteristics of the land use, development patterns, and connectivity along a roadway"[4]. The context classification roadway system is comprised of eight context classifications for all non-limited access state roadways, and it informs key design elements such as design speeds, lane widths, as well as type of bicycle, pedestrian, transit, and freight facilities that ought to be included in any roadway design concept.

[4] Context Classification Guide 2022_lo-res.pdf (nflroads.com)

Figure 4-4 Context Classification



Managing truck traffic on urban roads presents unique challenges as well due to the mix of pedestrians, cyclists, passenger vehicles, and commercial vehicles in densely populated areas. Prioritizing safety, efficient traffic flow, and the needs of all road users is essential for creating successful urban road designs that accommodate truck traffic. Urban roads often have limited space. Thus, if the implementation of the truck parking facility moves forward in the development process, balancing the needs of all road users while promoting safety and efficiency will be crucial for the success this type of land use at the Krome Avenue Parcel.

4.5 Right-of-Way (ROW)

Available ROW information for the roadways adjacent to the Krome Avenue Parcel was reviewed as part of this truck parking feasibility study to evaluate if additional accessibility improvements need to be contemplated to develop the site. Many corridors have limited ROW, making the possibility of widening difficult.

The proposed northern driveway will be developed within the existing available Right-of-Way (ROW) (see Concepts). Limited ROW and accommodating truck traffic on roads can present significant challenges in terms of traffic flow, safety, and infrastructure maintenance. Fortunately, the proposed location and space available for the Krome Avenue site does not propose any issues as it currently stands.

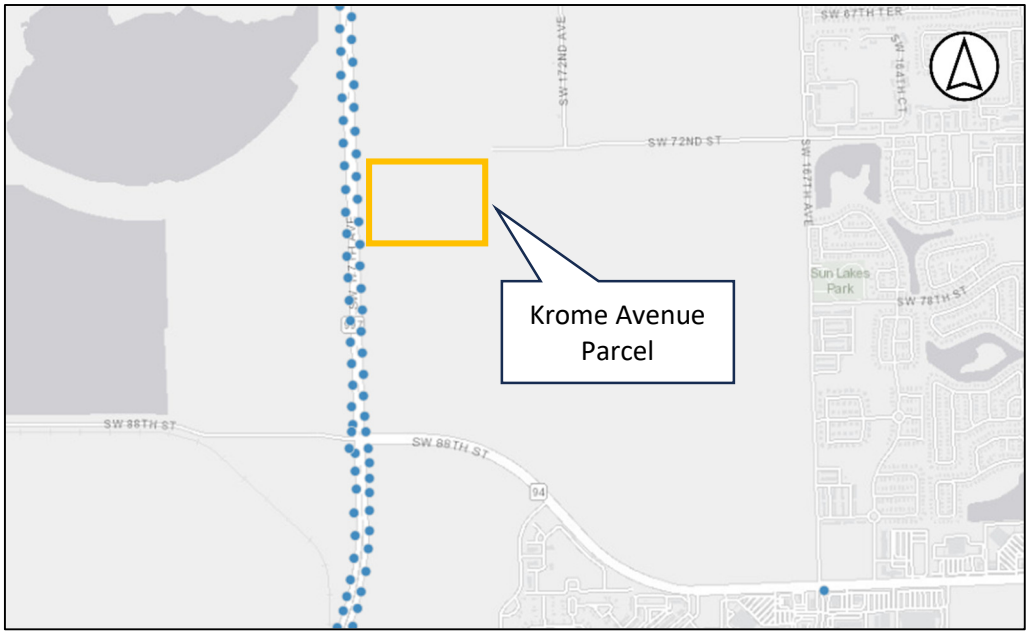
4.6 On-Street Parking

On-street parking is not an issue at the Krome Avenue Parcel. In the future, any truck parking on the roadway shoulder would be prohibited. When such practice takes place, it can overcrowd the roadway border area complicating visibility sight lines and traffic safety. No issues are foreseen regarding truck parking within the Krome Avenue right-of-way.

4.7 Lighting

Based on the Miami-Dade County Streetlight Inventory, it was observed that SR-997/Krome Avenue is well lit throughout the corridor. Designing effective lighting solutions enhances safety and visibility on both the roadway and truck parking site with uniform lighting distribution to minimize glare and dark spots and creating a safe environment. High-mast lighting to the illumination standards for highway rest areas are proposed around the site perimeter and in the site interior if necessary is proposed for the Krome Avenue Parcel.

Figure 4-5 Roadway Lighting Locations



4.8 Signage

Roadway signage such as posted speed limit and route directional signs are present along all corridors within the study area. Proper signage is essential for managing truck traffic effectively and safely on roadways. Clear and well-placed signage helps guide truck drivers, informs other road users, and reduces the potential for accidents or conflicts. For instance, it is worthwhile mentioning that if the Krome Avenue Parcel is planned to be developed, installing wayfinding signage will need to be further evaluated for truck drivers to easily locate the parking site in the future. These signs, and all others following future truck routes leading to the Krome Avenue Parcel, need to be well-maintained, visible, and placed in locations where they can be easily seen by truck drivers and other road users.

4.9 Drainage

Proper drainage is essential for maintaining the structural integrity of roads, especially in areas with heavy truck traffic. Ensuring effective drainage helps prevent road damage, erosion, and safety hazards. A review of the existing drainage system found that the study area vicinity within Miami-Dade County is under the jurisdiction of the South Florida Water Management District (SFWMD). Conceptually, the proposed site drainage infrastructure consists of perimeter swales within the parcel on the north, west and south sides of the developed area. Four grate inlets are proposed in the interior of the paved area with conduits feeding

this runoff to the perimeter swales. Outer sections of the paved areas would drain over the paved surface to the perimeter swales. The specific drainage design would occur later in the project development process. It is anticipated that "Best Management Practices" (BMPs) and standard FDOT drainage guidelines will be followed to address stormwater management, erosion control, and sediment reduction to protect the surrounding environment.

4.10 Existing Design Elements Pertinent to Truck Movement

4.10.1 Sight Distance

Sight distance is a critical factor in road safety, particularly for areas with truck traffic. It refers to the distance a driver can see ahead on the road, which directly affects their ability to perceive and react to potential hazards, obstacles, and other road users. Due to the larger size and longer stopping distances of trucks, ensuring adequate sight distance is even more crucial.

The site would be considered a new development, and therefore no sight distance issues can be identified or observed at this time. As this project advances towards development, further evaluation will be required to enhance safety approaching this potential truck parking site. Adequate sight distance allows truck drivers to detect hazards, such as vehicles, pedestrians, and obstacles, well in advance, giving them more time to react. Proper sight distance is also essential for truck drivers to safely overtake slower vehicles, ensuring they have a clear view of oncoming traffic. Adequate sight distance at intersections is crucial as well for trucks to navigate turns and crossroads safely, preventing collisions with other vehicles. Given the open environment along the SR-997/Krome Avenue roadway border, no significant driveway access sight distance issues are anticipated. Within the proposed truck parking site, truck speeds will be relatively low and with proper turning radius accommodations.

4.10.2 Truck Turn Radii

Truck turn radii into and out of the new potential Krome Avenue site was completed using the AutoTurn© analysis tool. All concepts were developed to provide for suitable truck maneuvering on the site and on driveways connecting to Krome Ave, and the analysis completed are included in **Appendix A.**

4.10.3 Vertical Clearance

No issues were identified regarding potential conflicts with any vertical clearances within the surrounding area.

4.10.4 Weight Restrictions

The Florida Truck Lane Restrictions Interactive Map[5] showed that there is no weight restriction in the study area on state-owned facilities. Hence, implementing a truck parking facility on this site will not conflict with current local road ordinances. SR-997/Krome Avenue was recently rebuilt with appropriate consideration of the relatively high truck traffic percentages.

4.10.1 Lane Storage

Lane storage requirements for freight requires a systematic traffic evaluation to determine if the left turn and/or right-turn storage lengths have sufficient length to accommodate motor carries storage without blocking through lanes. Any deficiencies can be mitigated by either extending turn lengths or modifying traffic signal timings. This may be evaluated further once the site development is further advanced.

[5] https://www.fdot.gov/traffic/traf-incident/truck-lane-restrictions

4.10.2 Merging/Weaving

Desktop review shows that there were no prevalent areas where truck merging and weaving movements could be considered critical, seeing as the proposed site is located well north of the intersection of SR-997/Krome Avenue and SR-94/Kendall Drive in an undeveloped area with ample time of maneuvering northbound to the right lane, and southbound as well from the intersection of SR-997/Krome Avenue and SW 88th Street.

4.11 Utilities

A list of the most typical and common utility providers within the area along with contact information are provided below.

Table 4-1 Utility Contacts

Item	Utility Company	Contact Person	Phone
1	COMCAST Cable	Ricardo Davidson	786-586-8505
2	Florida City Gas	Michael Bobb	561-755-0172
3	Miami-Dade County Department Transportation and Public Works	Octavio Vidal	305-412-0891 Ext: 201
4	AECOM	Thomas Miller	305-470-5757 Ext: 7352
5	Florida Power & Light	Edgar Aguilar	386-586-6403
6	Miami Dade Water Sewer	Maria Capote	786-268-5329
7	AT&T Distribution	Dino Farruggio	N/A

Section 5: Tier 3 Analysis: Conceptual Site Layout and Cost Estimate

5.1 Site Overview

The Krome Avenue Parcel shown previously in **Figure 1-1** is 19.4 acres in size and fronts along SR-997/Krome Avenue. An environmental analysis performed by FDOT for the parcel determined that the east portion of the site is a wetland area comprising 11.7 acres to include the wetlands and a 50-foot buffer separating the wetlands from the 7.7 acre remainder of the site which is developable. In addition, the ditch along the east side of SR-997/Krome Avenue was found to be considered "other surface waters". In the near term, the site would be used only for emergency management uses as discussed.

To provide access to the site, driveways at the northwest and southwest corners of the parcel would connect to SR-997/Krome Avenue. The southern driveway would be a right-turn-in/right-turn-out configuration. The northern driveway would align an existing median opening on SR-997/Krome Avenue with full access and egress between the site and the north and south legs of SR-997/Krome Avenue. Construction of this driveway could include a northbound U-turn lane and a southbound left turn lane. Beyond the development of these two access connections, there would be no further immediate site development.

Access management provisions were initially developed by the FDOT District 6 Design Office and refined in cooperation with them. The median opening at virtual SW 72nd Street was constructed as part of the recent Krome Avenue improvements. Turning lane requirements are proposed to meet all applicable FDOT access management requirements. The District Maintenance Office in coordination with the Design Office are taking the lead in developing the site access for its initial use for the emergency management purposes of pre-event vehicle staging and post-event debris management. The intent of the Maintenance Office is that site preparation for utility truck staging and/or debris removal storage would be included within an emergency management contract, which would include hauling, processing and temporarily storing debris from any severe storm events.

Further improvement of the site for the proposed truck parking is currently anticipated to occur as follows based on current funding allocations:

- PD&E (Planning) Phase: FY 28-29
- Design Phase: FY 30-31
- Construction Phase: FY 31-32

The current shared use improvement strategy for the site would be to install concrete pavement over most of the developable site area, leaving margins for perimeter drainage swales. The concrete pavement would be designed for regular truck loadings for durability, especially considering the emergency management functions. The eastern border of the paved area adjacent to the wetlands buffer would be configured to prevent any stormwater runoff from the paved area into the wetlands area with grading and or curbing. In the project permitting and approval process, it is possible that approving agencies may require additional drainage provisions, but that is unknown at this early stage.

The paved area would be striped for truck parking as discussed in the next subsection. In the event of the need for emergency management use, a sufficient area would be set aside for the pre-storm function of staging utility trucks or other emergency response vehicles. This segregation could be accomplished with

traffic cones, saw horses, construction barrels or other means. Based on further discussion and coordination, this segregation could extend to designation of separate driveways for each site use. If there is a need to use a part or all of the site for debris management, then part or all of the truck parking would be restricted for the duration of that activity.

The current District Six model for truck parking facilities on FDOT-owned parcels is a long-term lease instrument wherein the contractor would be responsible for permitting, design, and construction of the site improvements followed by operation of the site for truck parking to include site management, routine operational maintenance, and site security. Since there is a cost to this arrangement, it is presumed that the contractor would charge and collect a fee for the truck parking to cover its costs to include a business margin. FDOT may participate in the project by providing funding for the design and/or construction of the property, so that the parking fee would reflect only operational costs, not developmental costs. The long-term lease would address all these considerations in the project development and operational arrangement, including the contingency for loss of the truck parking functionality associated with severe storm events. Specific commitments to the above-described project delivery mechanism have not yet been confirmed and are subject to further analysis in the planning phase of the project development.

5.2 Conceptual Site Layouts

The Krome Avenue Parcel truck parking site layouts for both the 45-degree and 90-degree configurations are shown in **Figures 5-1 to 5-4**.

Figure 5-1 Concepts: Option A – 45 Degree Angle, North-South

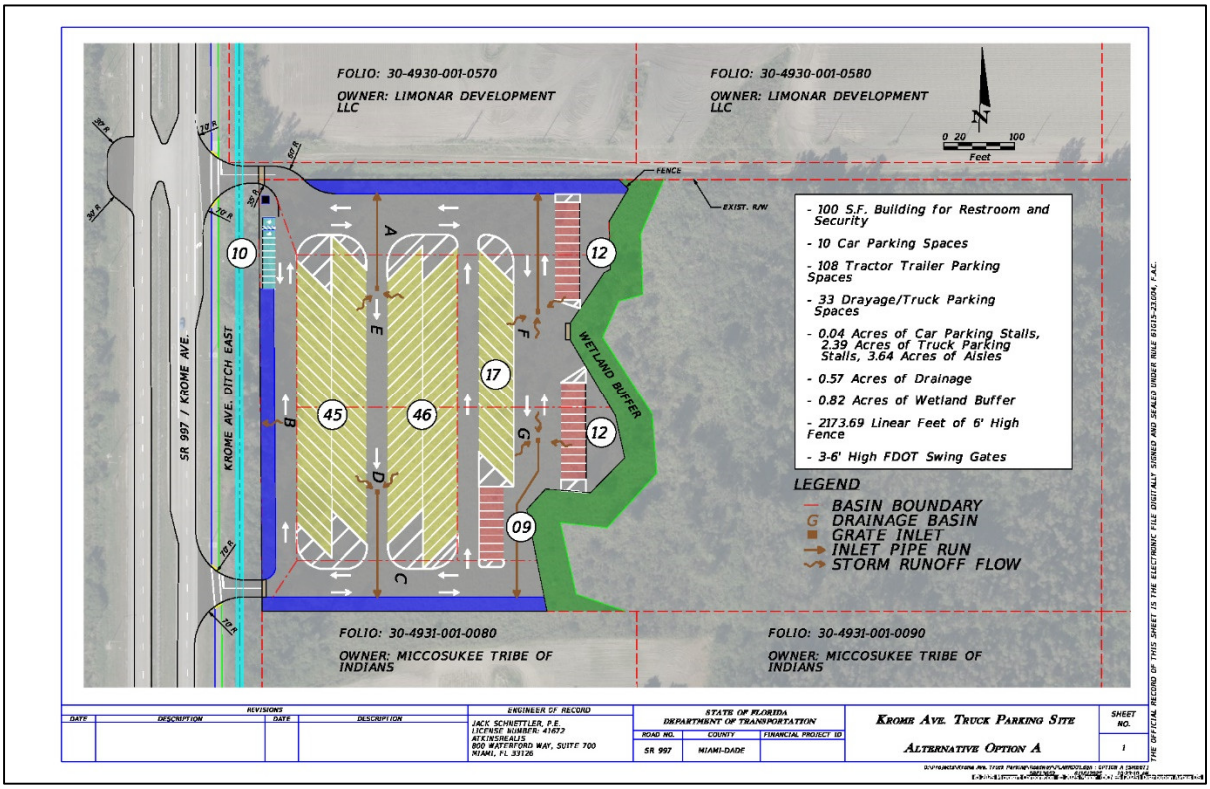


Figure 5-2 Concepts: Option B – 90 Degree Angle, North-South

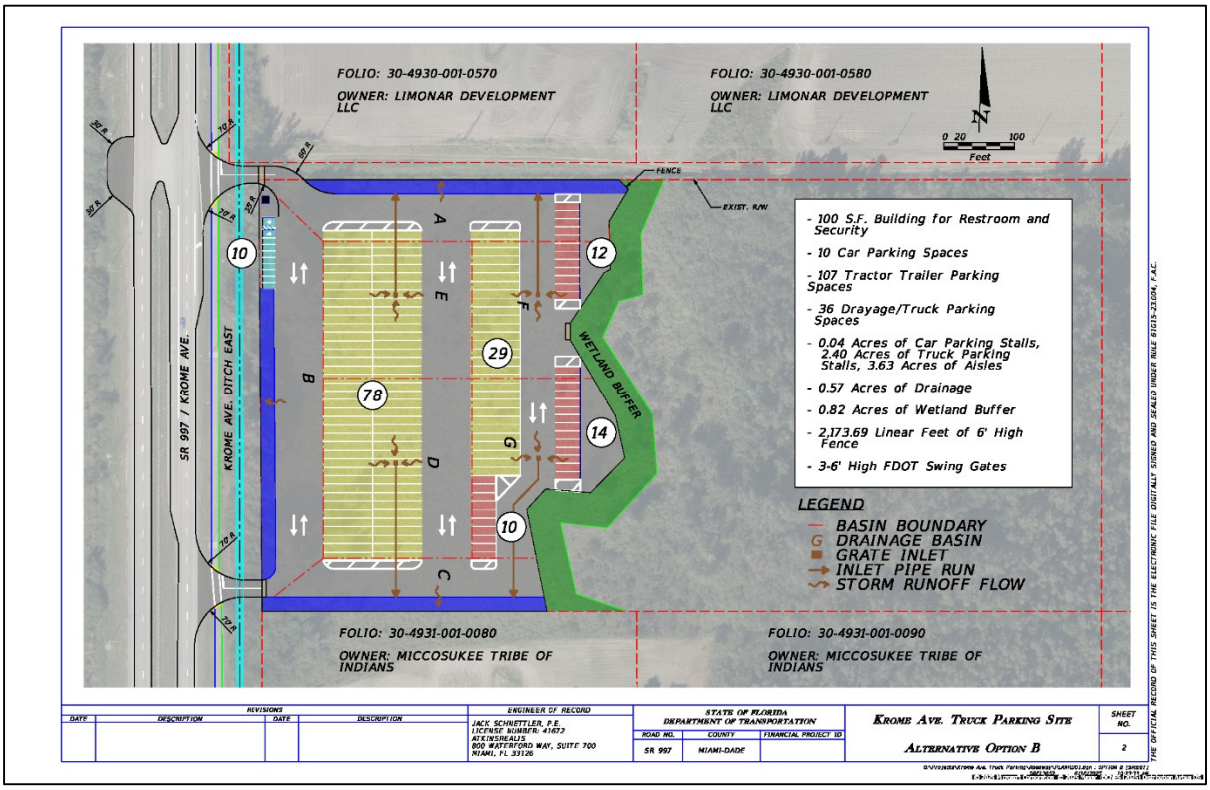


Figure 5-3 Concepts: Option C – 45 Degree Angle, East-West

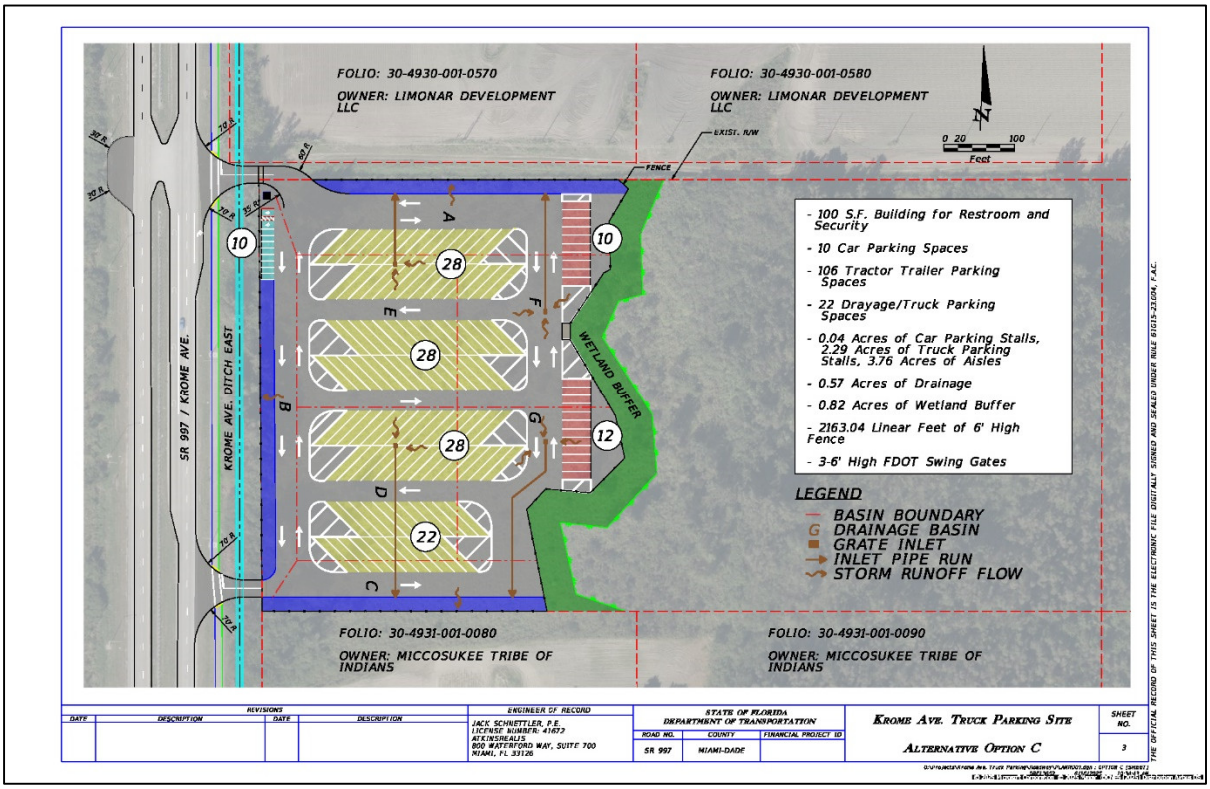
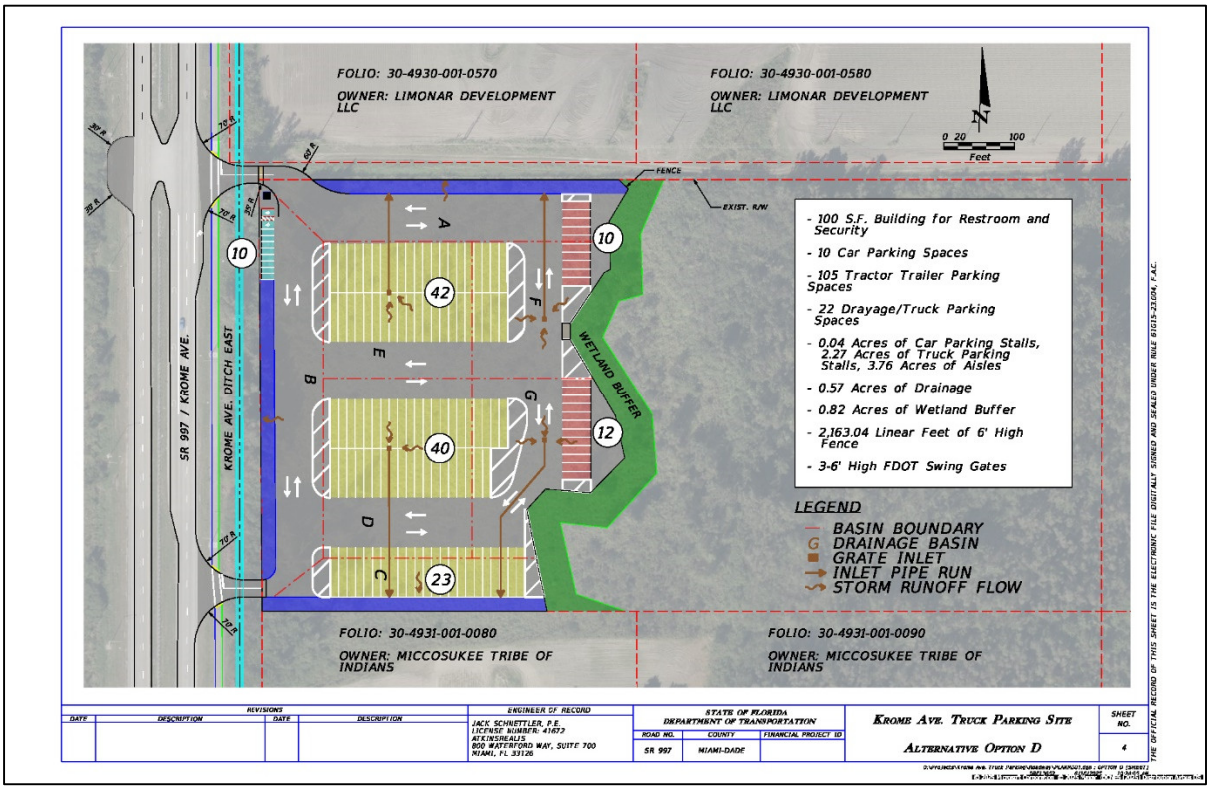


Figure 5-4 Concepts: Option D – 90 Degree Angle, East-West



- The layouts show the full use of the site for truck parking, with the understanding that truck parking would be restricted or possibly eliminated for those periods where the site is in use for emergency response activities including debris management and utility truck staging pre-storm.
- Minimal amenities are shown for routine truck parking:
    - A small building is shown for security personnel and monitoring of entering traffic.
    - The building could include a restroom.
    - Alternatively, portable outdoor toilets could be provided.
    - There would be no other amenities for drivers.
    - This is not unlike what was observed at a commercial lot in the northwest county outside of the Urban Development Boundary.
- The ends of the parking bays are shown as paved striped areas for better compatibility with emergency response activities.
- Drayage truck parking could be increased by a few spaces with the layouts following more closely to the wetland boundary.
- It might be possible as well to flex part of the site for either kind of truck depending on demand patterns, but this would require some advance setup with traffic cones and/or other devices to organize the flex area for either type of truck parking.
- A summary of truck parking spaces provided by the four options is shown in Table 5-1.

Table 5-1 Summary of Truck Parking Spaces by Option

Parking Space Summary			
Option	Spaces		
	Tractor Trailer	Drayage Truck	Total
A	108	33	141
B	107	36	143
C	106	22	128
D	105	22	127

- Drainage is shown as a perimeter swale with sheet flow over a paved parking area to the swales.
- The site would have a 6-foot perimeter fence for security purposes.
- Two 6-ft. high double-swing gates are shown at the two driveways for site security. A third is shown for access to the wetland buffer and the eastern part of the FDOT parcel.
- Site Access:
    - The north driveway utilizes the existing SR-997/Krome Avenue median opening for complete access to and from all compass points. This would include a new southbound left turn lane which is not shown.
    - The south driveway has been shown at the south end of the property rather than as proposed in the site schematic prepared by the Design Office for the Maintenance site.
    - It is considered that the gate for this driveway would normally be closed for truck parking access. It may be useful for emergency response operations.
    - A single access point for truck parking should be workable. As a reference, the Florida 595 Truck Stop facility in Broward County has over 300 spaces with only a single two-lane access road.
- Emergency Operations:
    - It is presumed that in advance of storm events when the site could be used for prepositioning/staging of utility trucks, truck parking could become limited.
    - In the event of post-storm debris management operations, truck parking would also be restricted to the extent needed.
    - The intent is that a fully paved site would be compatible with both operations. It may be necessary to refurbish truck parking striping more often than usual, depending on the frequency of the site use for emergency operations.
    - Following use for emergency operations, the paved area should be cleared of small debris, machine-brushed to clear all other debris remnants, and restriped to the extent necessary to restore damaged pavement markings.

5.2.1 Access Points

Below in **Figures 5-5 to 5-9** are the original and proposed FDOT access points for the site driveways, followed by new proposed access point concepts.

Figure 5-5 Original FDOT Access Point

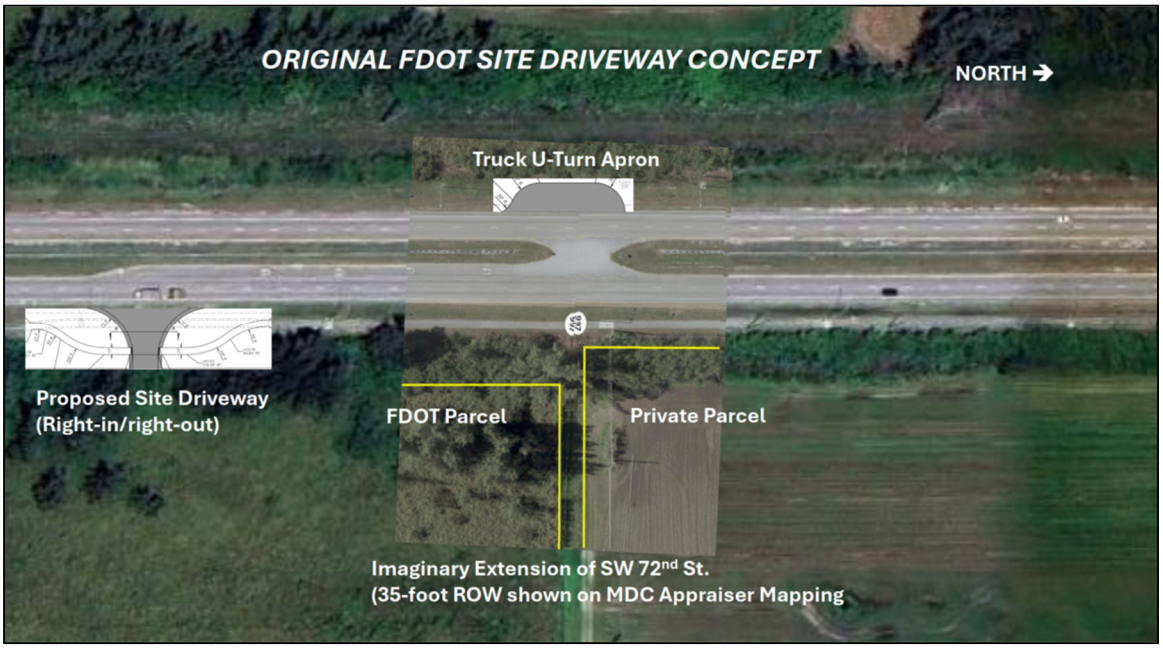


Figure 5-6 Suggested Site Access – Option A

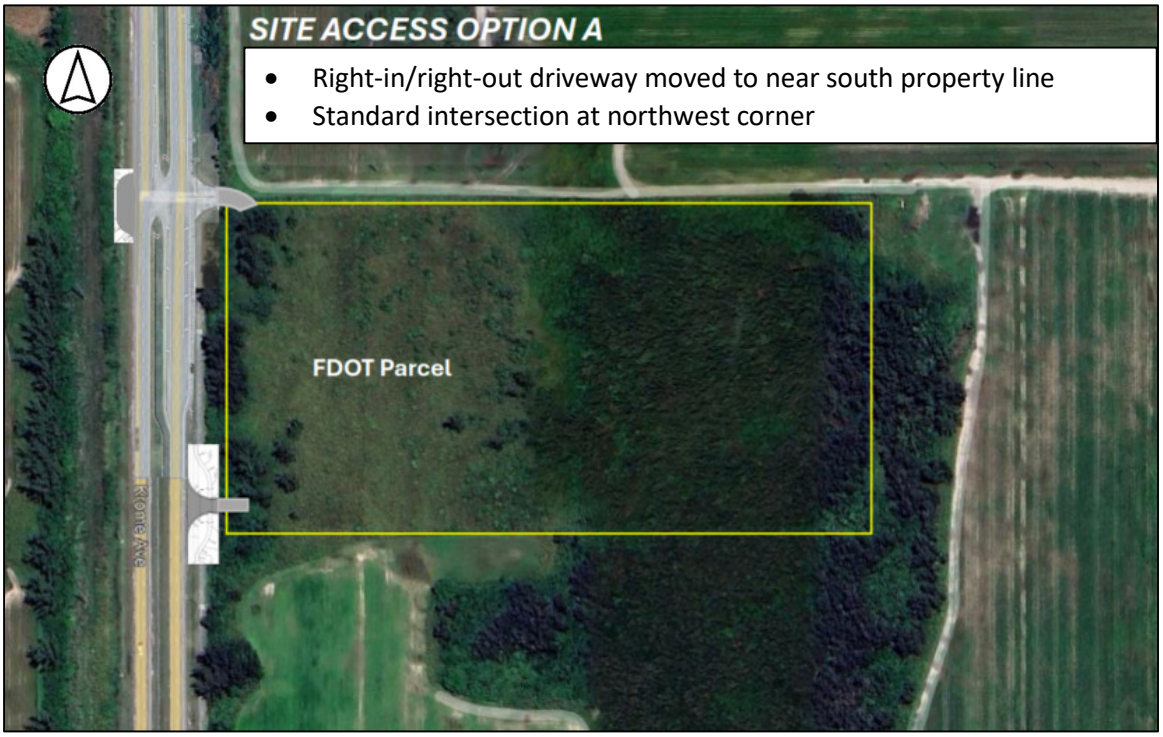


Figure 5-7 Suggested Site Access – Option A

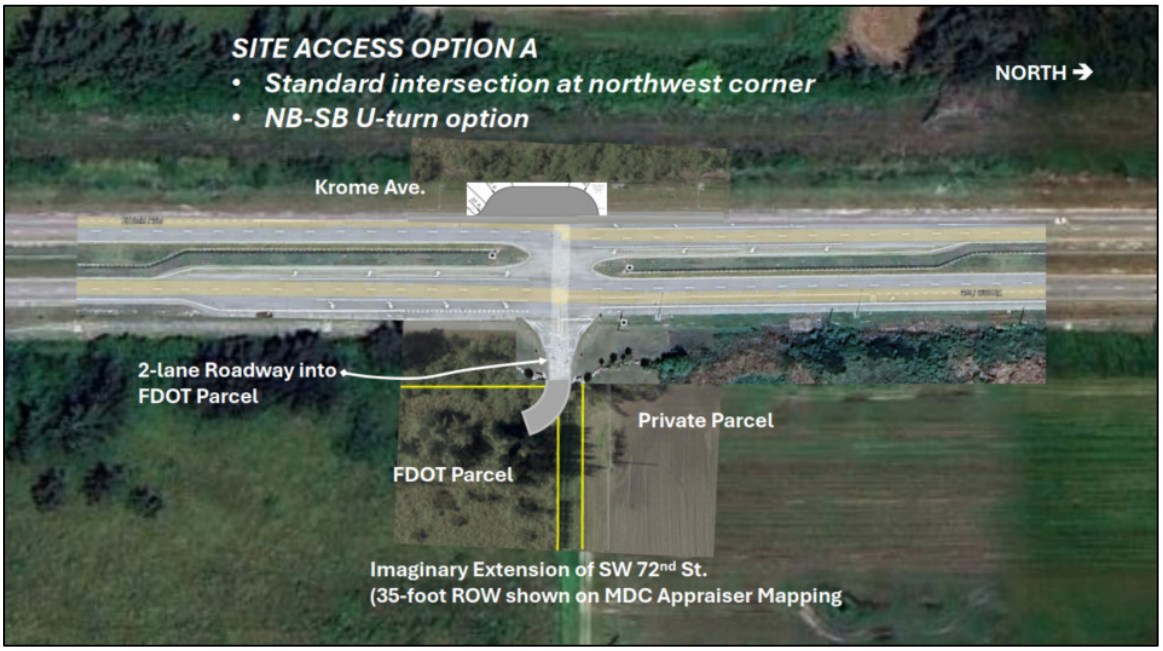


Figure 5-8 Suggested Site Access – Option B

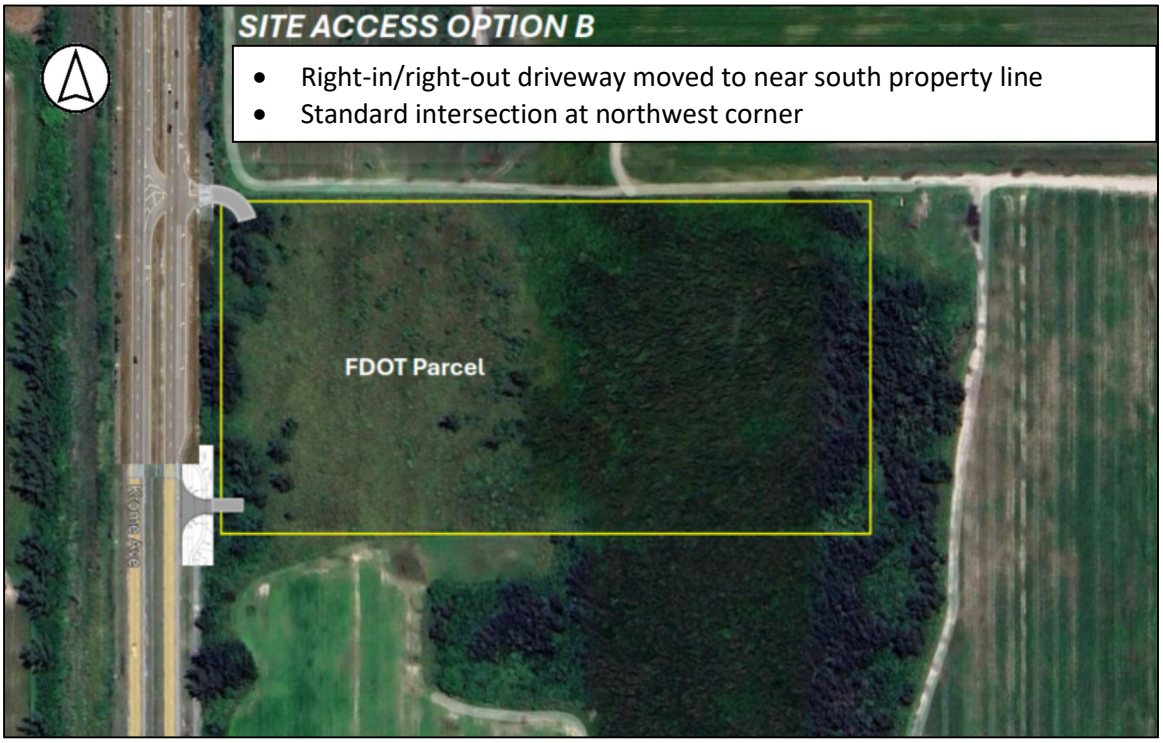
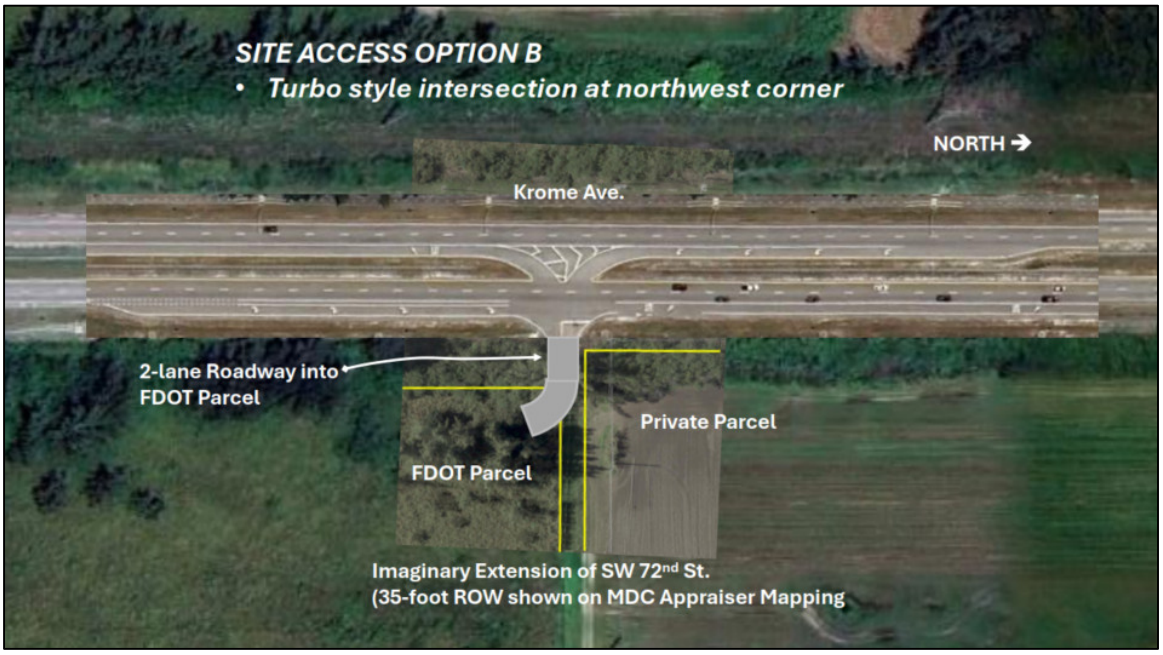


Figure 5-9 Suggested Site Access – Option B



5.3 Capital Costs Estimates

Table 5-2 presents the 2025 conceptual cost estimate for the new proposed truck parking facility. This estimate includes the cost of the two driveway connections and associated turn lanes since it has not been determined that those improvements would be funded through the Maintenance Office.

Table 5-2 2025 Conceptual Cost Estimate

Krome Ave. Truck Parking Site (7200 Block South) ***FM #: TBD***

TOTAL PROJECT COST SUMMARY

Prepared: May 14, 2025

Item	Item Description	Quantity	Unit Cost	Unit	Total
	SITE PREPARATION				
0110 1 1	Site Clearing & Grubbing	7.70	$ 244,585.62	AC	$ 1,883,309.27
0120 1	Excavation - Assume 2 ft. over entire site	24,845.30	$ 29.14	CY	$ 723,992.04
0120 6	Fill - Assume 3 ft. over entire site	37,267.90	$ 13.63	CY	$ 507,961.48
	Landscaping	1.00	$ 131,672.72	EA	$ 131,672.72
	DRAINAGE				
425-1-551	Inlets, DT BOT, TYPE C, <10 ft.	4.00	$ 8,342.19	AC	$ 33,368.76
430-175-124	Pipe Culv. Optional Matl., Round, 24 in S/CD	1,000.00	$ 204.11	LF	$ 204,110.00
	Outfall, Type D	4.00	$ 2,500.00	EA	$ 10,000.00
0120 1	Excavation (Swale Grading)	3,177.80	$ 28.29	CY	$ 89,899.96
570-1-2	Performance Turf, Sod	1,733.30	$ 8.15	SY	$ 14,126.40
	PAVEMENT (Concrete assumed for all onsite pavement.)				
160 4	Type B Stabilization (12")	34,364.00	$ 9.64	SY	$ 331,268.96
0285 704	OBG 4 Type B-12.5 Only (4")	34,364.00	$ 51.42	SY	$ 1,766,996.88
350 3 5	Concrete Pavement Slab (9")	34,364.00	$ 194.55	SY	$ 6,685,516.20
542-70	Bumper Guards, Concrete	151.00	$ 608.75	EA	$ 91,921.25
	Driveways	6,000.00	$ 27.25	SF	$ 163,500.00
	SB Left Turn/NB Right Turn Lane on Krome Ave. (500 ft. each)	2.00	$ 163,500.00	EA	$ 327,000.00
	SIGNING AND MARKING				
700-1-11	Krome Ave. Guide Signing and Entry Sign Single Post Sign, F&I GM, <12 SF	5.00	$ 500.00	EA	$ 2,500.00
	Site Signing and Markings	7.10	$ 2,241.09	AC	$ 15,911.74
	LIGHTING, CCTV, ITS				
715-19-12	High Mast Light Pole, Complete	8.00	$ 119,539.30	EA	$ 956,314.40
715-X	Conduit, Pull/Splice Box, Dist'n. System	1.00	$ 57,000.00	EA	$ 57,000.00
682-X	CCTV Cameras/ITS	7.70	$ 85,000.00	AC	$ 654,500.00
	FENCING AND GATES				
550-10-231	Perimeter Fence	2,174.00	$ 48.28	LF	$ 104,960.72
	Access Gates (6-ft. high, 25 ft. wide)	3.00	$ 1,500.00	EA	$ 4,500.00
	SITE BUILDING				
	Water/Electric (for site/building)	1.00	$ 85,000.00	LS	$ 85,000.00
	Facilities building (10 ft. x 10 ft.)	100.00	$ 318.30	SF	$ 31,830.00
				SUBTOTAL	**$ 14,877,160.78**
	10% PD&E				$ 1,487,716.08
	20% Design				$ 2,975,432.16
	Geotech - 15% of Design Total				$ 446,314.82
	Survey -15% of Design Total				$ 446,314.82
	5% Maintenance of Traffic				$ 743,858.04
	10% CEI				$ 1,487,716.08
	7% Mobilization				$ 1,041,401.25
	10% Unknown/Contingency (applied to all)				$ 2,350,591.40
				TOTAL	**$ 25,856,505.43**

Table 5-3 presents the programmed cost of the project based on the conceptual cost estimate, proposed scheduling of the project development process, and cost escalation to the year of expenditure (YOE).

Table 5-3 Programmed Cost

Assumptions	PROJECT COST ESTIMATE - FY2025				SUMMARY of COSTS in YEAR of EXPENDITURE (YOE) (@ 3%/year escalation)						
	Phase	FY 2025 Costs	10% Contingency	TOTAL	FY 2028	FY 2029	FY 2030	FY 2031	FY 2031	FY 2032	TOTAL (YOE)
	Phase 22 (PD&E)										
10% of Subtotal - Capital	**PD&E Phase**	**$1,487,716.08**	**$148,771.61**	**$1,636,487.69**	**$868,074.89**	**$894,117.14**					**$1,762,192.03**
	Phase 32 (Design)										
20% of Subtotal - Capital	**Design - Basic**	$2,975,432.16	$297,543.22	$3,272,975.37							
15% of design	**Geotechnical**	$446,314.82	$44,631.48	$490,946.31							
15% of design	**Survey**	$446,314.82	$44,631.48	$490,946.31							
	SUBTOTAL - Design	**$3,868,061.80**	**$386,806.18**	**$4,254,867.98**			**$2,394,445.70**	**$2,466,279.07**			**$4,860,724.77**
	Phase 52 (Construction)										
From updated estimate	**Capital Cost - Basic**	$14,877,160.78	$1,487,716.08	$16,364,876.86							
5% of Capital Cost - Basic	**MOT**	$743,858.04	$74,385.80	$818,243.84							
7% of Capital Cost - Basic	**Mobilization**	$1,041,401.25	$104,140.13	$1,145,541.38							
	SUBTOTAL - Capital	**$16,662,420.07**	**$1,666,242.01**	**$18,328,662.08**					**$10,942,690.52**	**$11,270,971.24**	**$22,213,661.76**
	Phase 62 (CEI)										
10% of Capital Cost - Basic	**CEI**	**$1,487,716.08**	**$148,771.61**	**$1,636,487.69**					**$977,025.94**	**$1,006,336.72**	**$1,983,362.66**
	Phase 43 (ROW Purchase)										
	ROW Acquisition	**$0.00**	**$0.00**	**$0.00**							**$0.00**
	TOTAL	**$23,505,914.03**	**$2,350,591.40**	**$25,856,505.43**	**$868,074.89**	**$894,117.14**	**$2,394,445.70**	**$2,466,279.07**	**$11,919,716.46**	**$12,277,307.96**	**$30,819,941.23**

Section 6: Environmental Review

Previously, an environmental field investigation and site visit report was conducted and completed by AECOM (May 2024) for FDOT including site description, field investigation with results, and discussion of the Krome Avenue Parcel. This environmental review section should be considered as an extension to that report.

A desktop review of the site was conducted for wetlands and other surface waters (OSWs), protected species habitat, environmental permitting requirements, and historic resources. Based on the site assessment conducted in April 2024 and past evaluations, the approximately 7.7-acre portion of the parcel to be developed as a parking area is upland with the vegetation makeup consisting of dense coverage of elephant grass (Cenchrus purpureus) with scattered occurrences of exotic and/or nuisance tree species such as Australian pine (Casuarina spp.), Brazilian pepper (Schinus terebinthifolia), and Javanese bishopwood (Bischofia javanica). A forested wetland was identified in the 11.7-acre eastern portion of the parcel with a buffer of greater than 50 feet from the proposed development within the parcel as shown on **Figure 1-1**.

Access to the parcel is proposed to be provided via two culverted two-lane driveways as depicted on **Figures 5-1** to **5-4**. It is anticipated that FDOT District Six will pursue necessary approvals for these two planned access driveways as part of the initial use of the site for emergency management purposes. These driveways will impact the Krome Avenue Ditch East which runs along the east side of SR-997/Krome Avenue and is characterized as an OSW. Perimeter stormwater management swales are proposed to treat the additional impervious surface area for the parking lot.

The stormwater management system, additional impervious surface, and any impacts to the Krome Avenue Ditch East are anticipated to require an Environmental Resource Permit (ERP) Individual Permit from South Florida Water Management District (SFWMD). Because there are no wetland impacts and the Krome Avenue Ditch East is considered an upland cut conveyance ditch, a US Army Corps of Engineer (USACE) Section 404 permit is not anticipated to be required. The SFWMD permit may take between 6 to 9 months to obtain. Mitigation is not anticipated as there is no functional loss to the upland cut conveyance ditch due to the culvert installation which will allow the ditch to continue conveying water as it currently does. As more than 1 acre of soil disturbance is anticipated, coverage under the FDEP NPDES general permit with an associated stormwater pollution prevention plan (SWPPP) is anticipated to be required and will be the responsibility of FDOT or its assignment to the construction contractor.

The project site is located within U.S. Fish and Wildlife Service (USFWS) Core Foraging Area for the wood stork (Mycteria americana) and consultation areas for the American crocodile (Crocodylus acutus), Everglades snail kite (Rostrhamus sociabilis plumbeus), and Florida bonneted bat (Eumops floridanus). The project is within the South Florida range of the eastern indigo snake (Drymarchon corais couperi). No suitable habitats for the American crocodile and Everglades snail kite are within the proposed truck parking site; therefore, the project will have “no effect” on the American crocodile or Everglades snail kite. The wood stork may utilize the shallow banks of the Krome Ave Ditch East as suitable foraging habitat (SFH). The impact to SFH is anticipated to be less than 0.5 acre. Using the Wood Stork Effect Determination Key (Pathway: A>B), the project “may affect, not likely to adversely affect” the wood stork. The subject area is within suitable habitat for the Eastern indigo snake (Drymarchon couperi), a species listed as threatened by the FWC and the USFWS. Based on the Eastern Indigo Snake Programmatic Effect Determination Key (South Florida) (Pathway: A>B>C>D), the proposed project may affect, and likely to adversely affect the Eastern indigo snake.

The parcel is within the USFWS consultation area and urban area for the Florida bonneted bat. Florida bonneted bats may roost in tree cavities within the subject area. Based on field review and limited roosting survey conducted in April 2024, upland trees were investigated in accordance with the 2019 USFWS Guidelines for potential roosting habitat for the Florida bonneted bat. A total of six (6) Australian pines were identified as meeting the size guidelines of 33 feet in height and 8 inches in diameter at breast height (DBH). However, no cavities suitable for bat roosting were observed, and no other evidence of bat use was observed. Based on the Florida Bonneted Bat Key (Pathway: 1a>2b>13b), the proposed project will have "no effect" on the Florida bonneted bat.

A review of the Florida Master Site File (FMSF) review was conducted to determine if resources considered eligible for listing on the National Register of Historic Places (NRHP) are present in the project area. One linear resource group (SR-997/Krome Avenue) was identified within 50 meters of the project site. SR-997/Krome Avenue was determined to not be eligible for listing on, or potentially eligible for listing on the NRHP. See **Appendix B** for the FMSF Results. Additional reviews for cultural or tribal resources may be required during design.

Additional coordination is expected to be required with the Miami-Dade County Department of Regulatory and Economic Resource (RER) for regulatory approvals related to the site land use and planned site improvements, given the parcel location in Unincorporated Miami-Dade County and outside the Urban Development Boundary. Initially, this may need to occur when the site it planned to be used for emergency management purposes only. Further coordination would be needed several years for advancement of site design and construction, which could be initiated during the PD&E Phase.

Section 7: Conclusions

The Krome Avenue parcel was not originally included in the FDOT canvas of candidate truck parking sites as part of the truck parking master plan work, likely due to the wetlands designation. However, this designation does not apply to the entire site, allowing the uplands area on the site to be advanced as a truck parking site in coordination with an occasional use of the parcel for emergency management functions. The proposed truck parking facility will help to address the well-documented shortfall of truck parking across Miami-Dade County. There are 7.7 acres of upland area available for site development. The 11.7 acres of wetlands and adjacent 50-foot buffer area would be unaffected by site development, including segregation from the stormwater management for the developed area.

The parcel was screened through the three-tier analysis process conducted in the truck parking master plan for other candidate sites. The review documented in this technical memorandum found that the site satisfied the screening criteria in the Tier 1 and Tier 2 reviews and was warranted to be advanced to the Tier 3 stage for further analysis and detailing of conceptual layouts in coordination with the emergency management uses.

Four concepts were developed involving the orientation (north-south and east-west) and configuration (90-degree and 45-degree). It was found that Option A which includes the north-south orientation, and 45-degree angle truck parking spaces provided the highest number of tractor trailer parking spaces, provides best movement for vehicles throughout the site, and the eastern portion of the site could be easily shared with maintenance management. Therefore, this concept was identified as the preferred layout. However, the other three layouts tested could also be easily implemented by alternate parking space striping. Because the improvement footprint is identical for all four layout options considered, the capital cost for all four is the same. The concrete pavement cross-section was selected to provide a durable surface for the truck axle loads and types of site activity anticipated for both site functions.

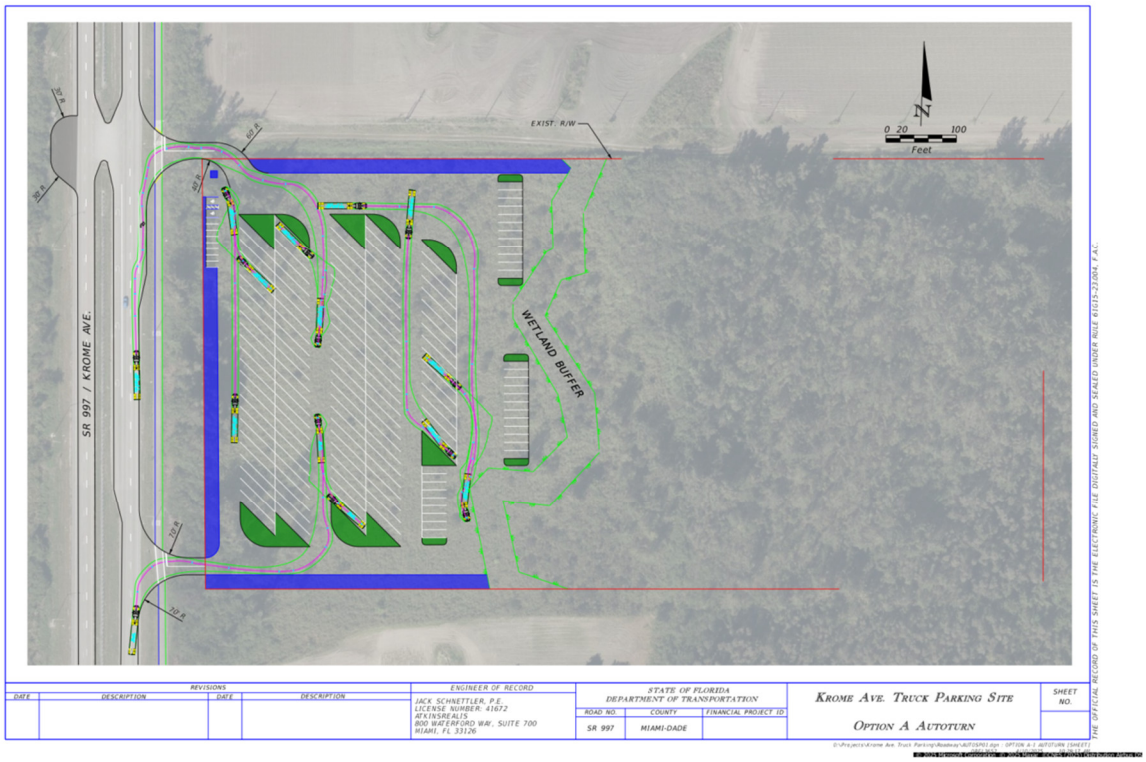
Access would be provided by a right-turn-in/right-turn-out driveway near the southwest corner of the property, and a full access connection at the northwest corner of the parcel at an existing median opening on SR-997/Krome Avenue. The improvements, besides the paved area, would include perimeter drainage swales with grate inlets in the parking area, high-mast lighting to rest area standards, and a small building for site management and security.

Based on coordination with District Six Maintenance Office which is spearheading the use of the site for emergency management purposes, discussions have confirmed that truck parking on the parcel may need to be partially or fully restricted under severe tropical storm events when the site could be used for pre-storm staging of utility trucks and other emergency management vehicles or post-storm for processing of debris generated by storm events.

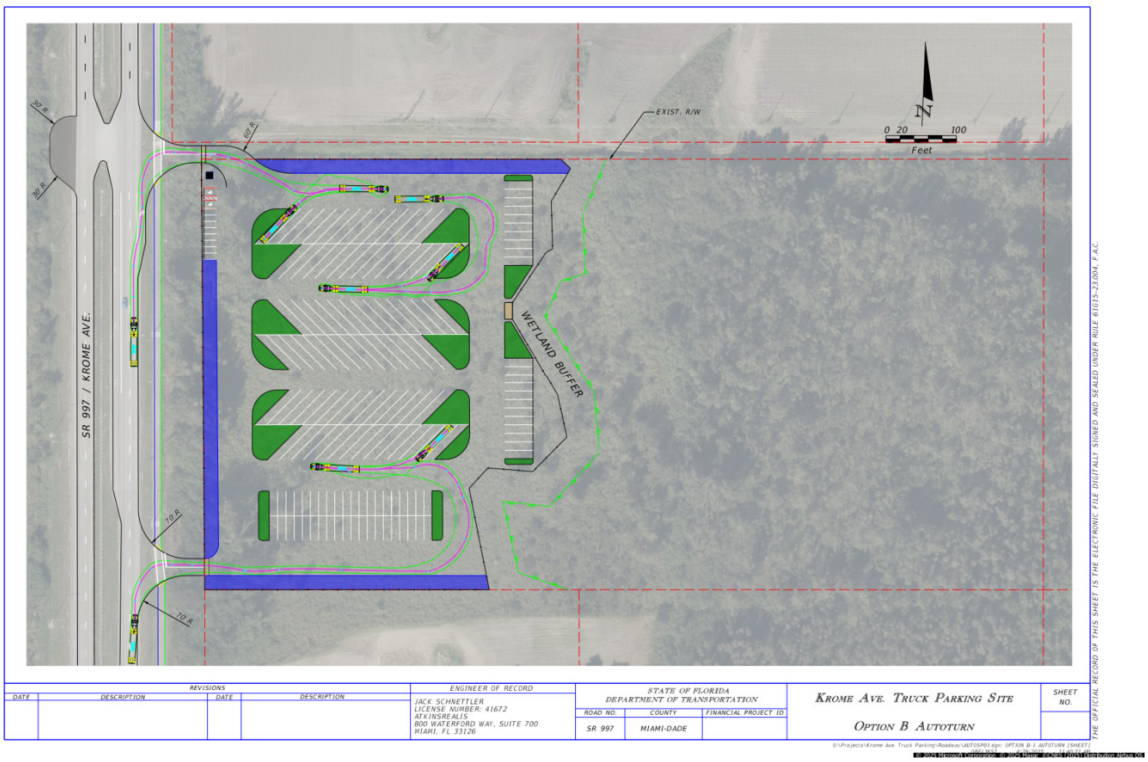
Based on the parcel layouts, the 2025 conceptual capital cost estimate of the facility is $14,877,160.78. When allowances for the PD&E Phase, the Design Phase, maintenance of traffic, construction engineering and inspection, mobilization, and 10% contingency are included, the estimated total cost of project development is $25,856,505.43 in 2025 dollars. Given its location on the recently improved SR-997/Krome Avenue corridor (which is recommended as a Critical Rural Freight Corridor throughout this segment) used by trucks as a bypass of more congested urban area north-south routes to the east and its proximity to the large and active Redlands agricultural district, this proposed truck parking site is expected to make an important contribution to the supply of truck parking in Miami-Dade County.

APPENDIX A: Truck Turn Radii - Autoturn

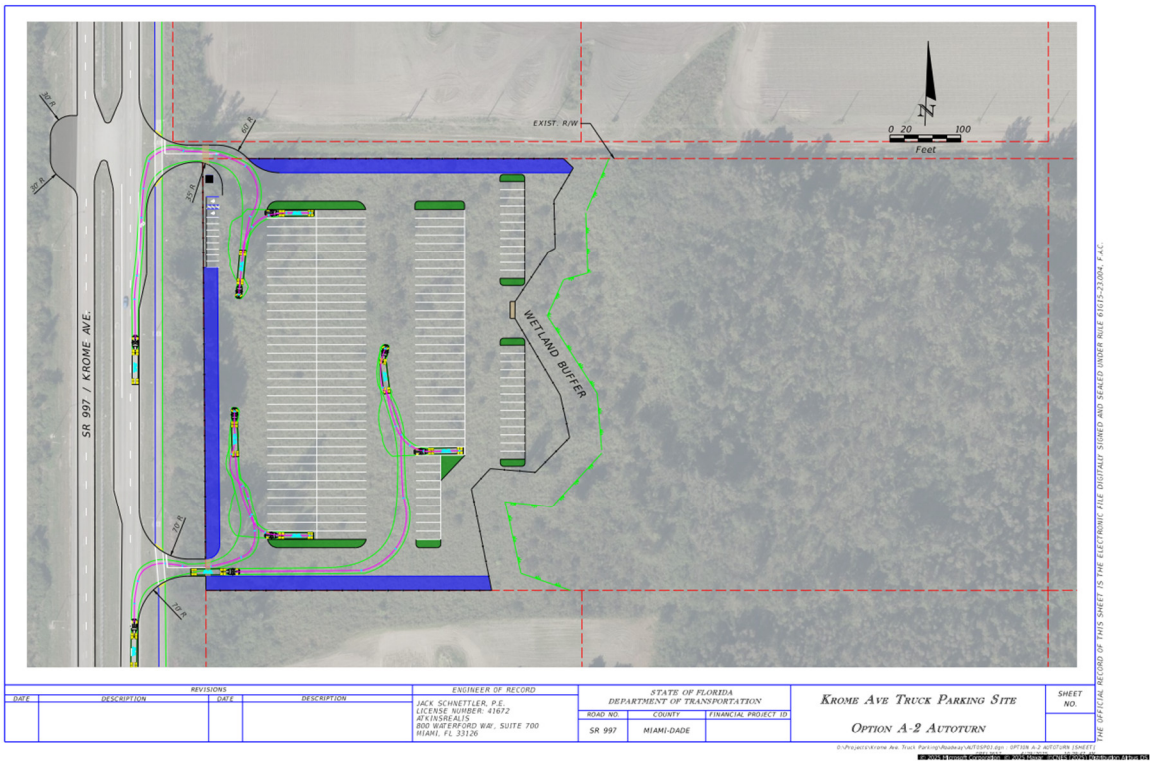
Autoturn: 45 Degree Angle – Option A



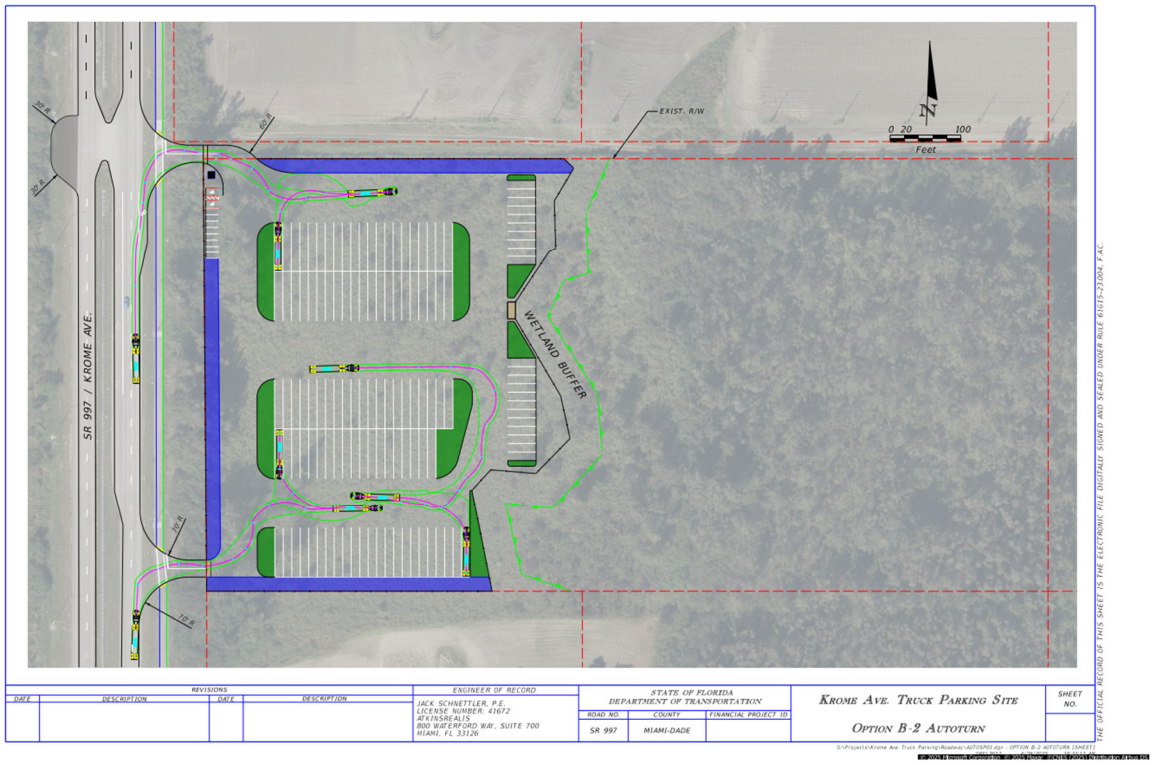
Autoturn: 45 Degree Angle – Option B



Autoturn: 90 Degree Angle – Option A

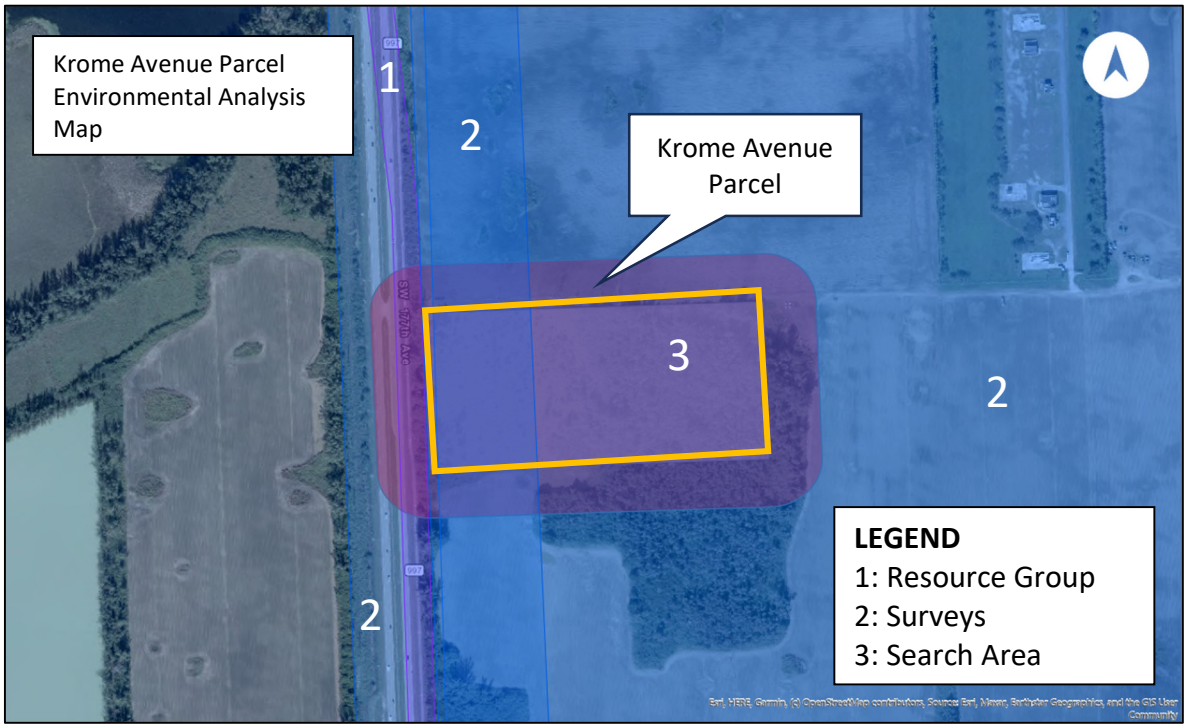


Autoturn: 90 Degree Angle – Option B



APPENDIX B: Florida Master Site File (FMSF) Results

Krome Avenue Parcel - Environmental Aerial Site Overview



Florida Master Site File

Created: 2/3/2025

Manuscript Roster

Total=4

MS#	Title	Publication Information	Year
12178	A Cultural Resource Assessment Survey of Krome Avenue (SW 177th Avenue) from SW 136th Street (Howard Drive) to US 27/SR25/ Okeechobee Road in Miami-Dade County	Janus Research, 1300 N Westshore Blvd, Ste 100, Tampa. Submitted to Florida Department of Transportation, District 6 Environmental Management Office, Miami, Florida	2004
5418	Phase I Archaeological Resources Assessment Survey of the Pelican Overseas Holding, Inc. Property Unincorporated Miami Dade County, Florida	HISTORIC PRESERVATION SERVICES, INC., POMPANO BEACH. Submitted TO CAS ENGINEERING, INC., MIAMI	1998
2127	Dade County historic survey, Phase II: final report.	Historic Preservation Division, Department of Community and Economic Development, Metropolitan Dade County, Miami.	1989
340	Dade County Archaeological Survey Interim Report	Metro-Dade Historic Preservation Division, Miami.	1980

1 of 1

Florida Master Site File

AR=0
SS=0
CM=0
RG=1
BR=0
Total=1

Created: 2/3/2025

Cultural Resource Roster

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
DA09603	RG	Krome Ave		Linear Resource - 0 Contrib Resources	Not Eligible	

Page 1 of 1

APPENDIX C: Meetings and Presentations