

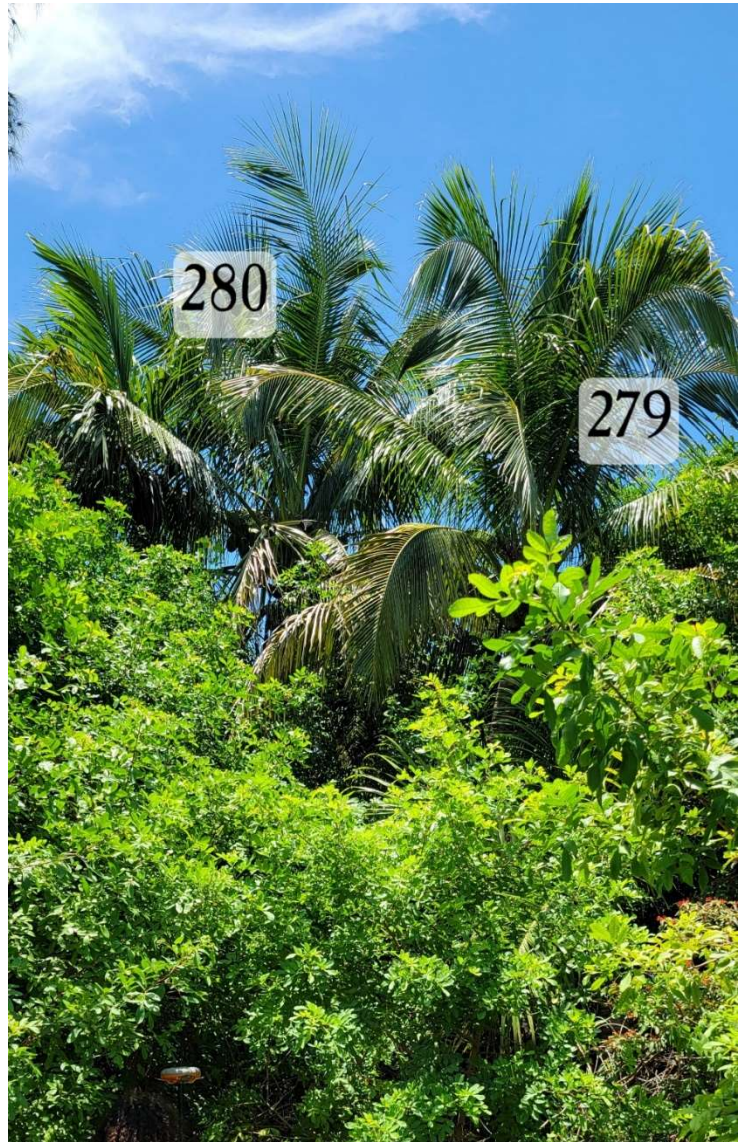
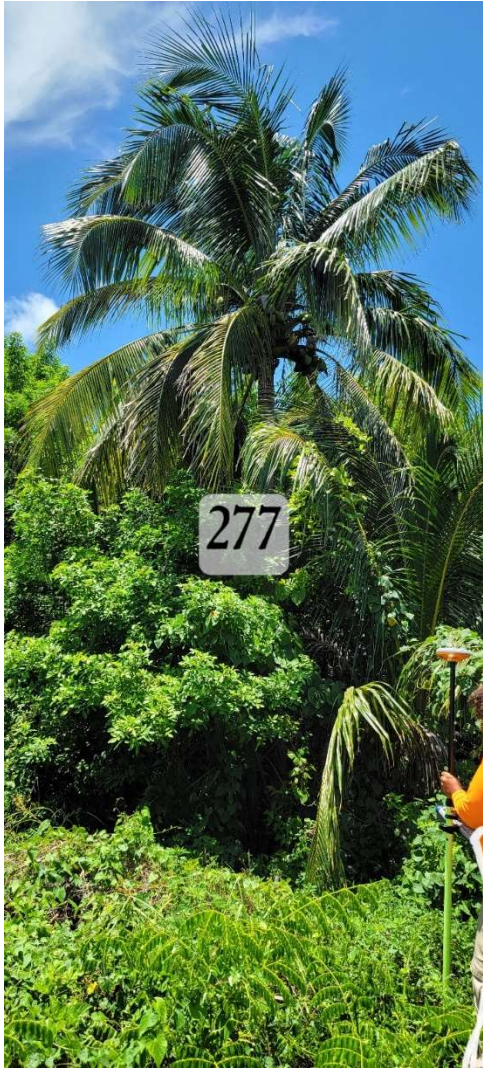






277 - 280











Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

JARED W. PERDUE, P.E.
SECRETARY

April 9, 2024

John McWilliams, P.E.
Kimley-Horn and Associates, Inc.
8201 Peters Road, Suite 2200, Plantation Florida 33324

Dear John McWilliams,

RE: Variance Committee Review to allow for **Category F Driveway**

Applicant/Property Owner: City of Hollywood Dept of Community & Economic Development
Broward County City of Hollywood State Road: SR 824 **Section:** 86018000 **MP:** 4.30

Access Class: 05 **Posted Speed:** 40 mph **SIS:** Influence Area

FDOT Ref. Project: FM 448400.1 -Hong Benitez-RESURFACING

Site Acreage: 34 Acres **Development Size:** 20 FP Gas Station with C. Market, 3,500 SF Fast-food Restaurant, 20,000 SF General Office, 100,000 SF Government Office, 665 Mid-rise Residential DU.

Project Name & Address: Park Road Development - 1600 Park Road, Hollywood, FL 33021

AMRC Meeting Date: March 7, 2024

Request:

- **Driveway 1: Right-in/right-out access on the north side of SR 824, approximately 240 feet west of Park Road (South Project Driveway).**
- **Driveway 2: Right-in/right-out access on the north side of SR 824, approximately 555 feet west of Park Road (Southwest Project Driveway).**

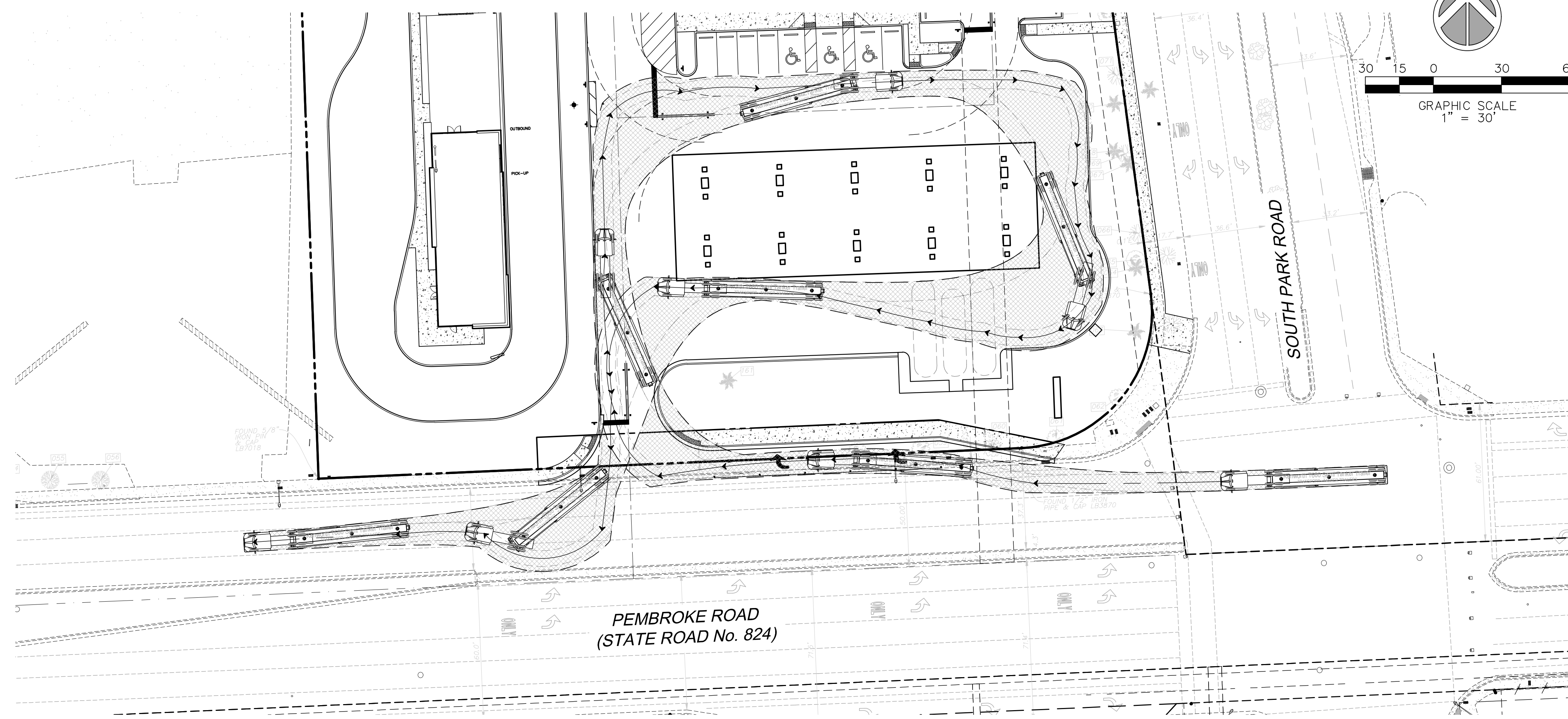
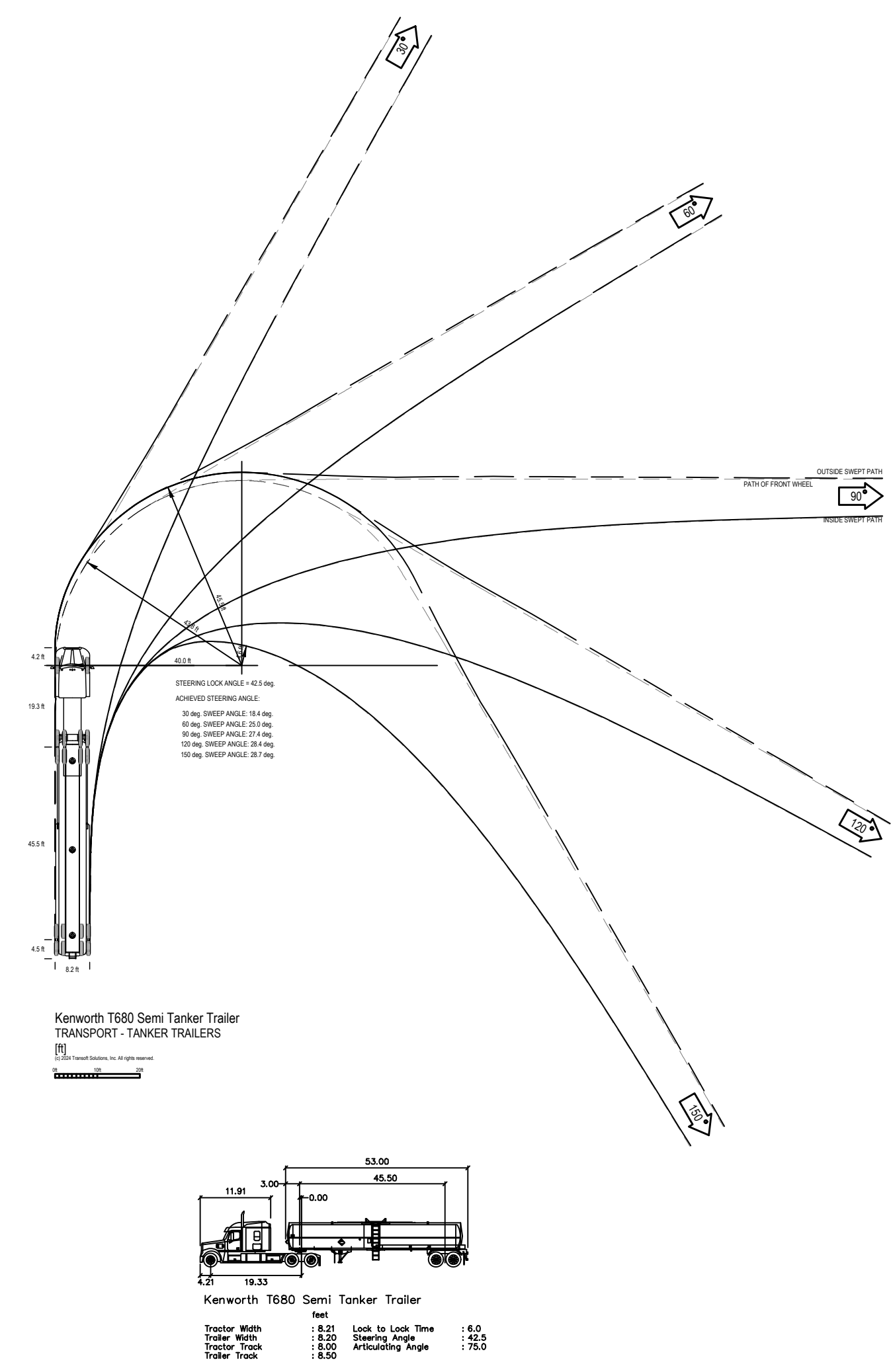
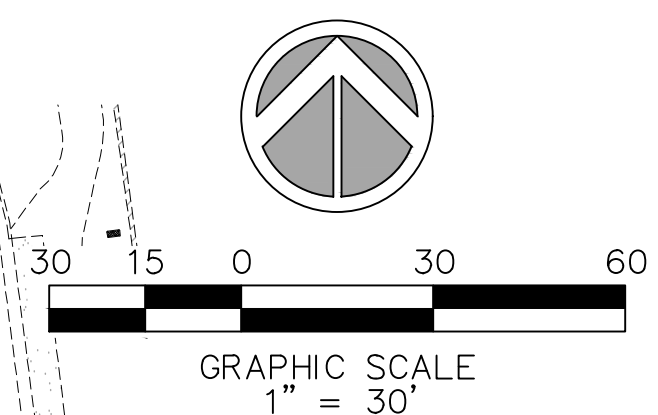
This request is: **Approved with Conditions**

Conditions / Comments:

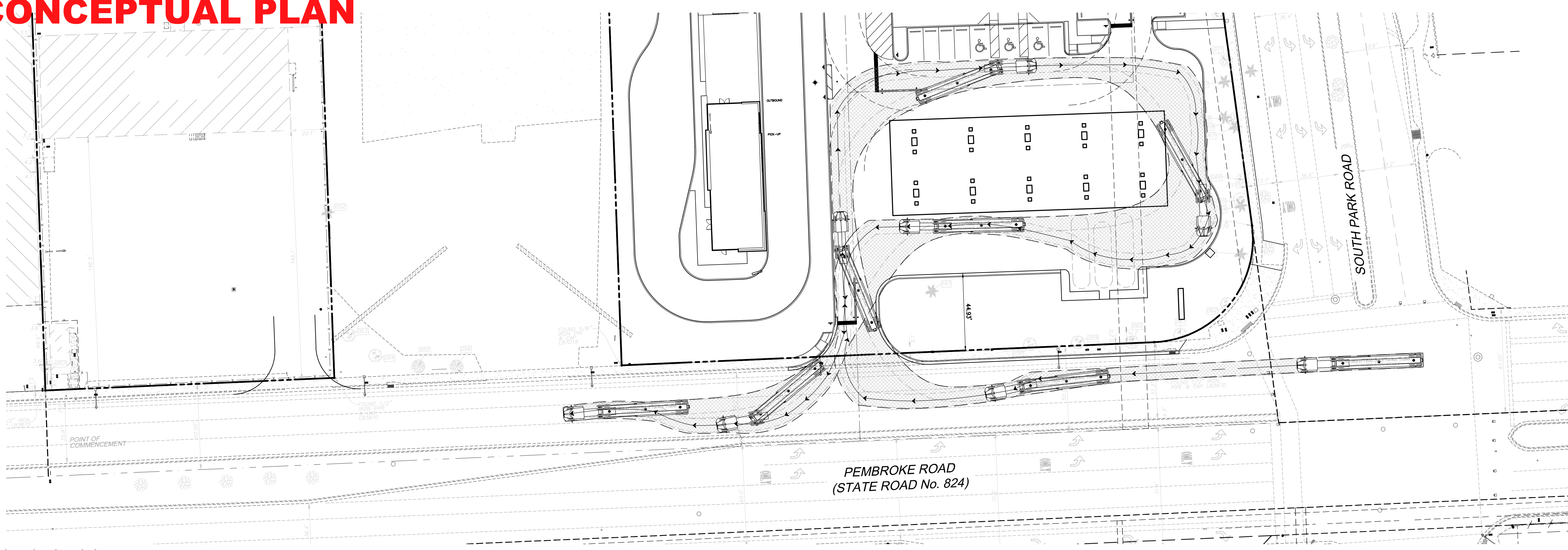
- A minimum driveway length of 45 feet, as measured from the ultimate right-of-way line to the first conflict point shall be provided.**
- If a gate is proposed, a minimum driveway length of 100 feet to the call box and/or gate house, and a turnaround area before the gate are required.**
- All existing driveways not approved in this letter must be fully removed and the area restored.
- Drainage mitigation is required for any impacts within FDOT right-of-way (i.e. increased runoff or reduction of existing storage).
- A Storm Water Pollution Prevention Plan must be submitted with the application if there will be more than one acre of "disturbed area" (as defined by the Florida Department of Environmental Protection (FDEP))
- If additional right-of-way is required to implement the proposed improvements, the applicant shall donate the right-of-way to the Department.

Comments:

Please note that the dimensions between driveways are measured from the near edge of pavement to near edge of pavement and dimensions between median openings are measured from centerline to centerline unless otherwise indicated.



CONCEPTUAL PLAN



K:\PROJECTS\20-xxx\20-4027\dwg_4027exh-fdold.dwg 4/3/2024 7:50 AM L1 Sun-Tech Engineering, Inc. (NAS) Sun-Tech Engineering, Inc. (NAS)

FILE: K:\PROJECTS\20-xxx\20-4027\dwg_4027exh-fdold.dwg
 PLOT DATE: 4/3/2024 7:50 AM BY: Miguel A. Sosa
 LAYOUT: [EXH-2]

4577 Nob Hill Road, Suite 102
 Sunrise, FL 33351
 www.suntecheng.com
 Certificate of Auth. #7057LB 7019
 Phone (954) 777-3123
 Fax (954) 777-3114

STE Sun-Tech Engineering, Inc.
 Engineers - Planners - Surveyors

NO.	DATE	DESCRIPTION

FLORIDA
 CITY OF HOLLYWOOD
PARK ROAD
AUTOTURN FUEL TANKER TRUCK

DATE: MARCH 2024
 SCALE: 1"=30'
 DESIGNED BY: M.G.
 DRAWN BY: M.A.S
 JOB #: 20-4027

CLIFFORD R. LOUTAN
 LICENSE
 No. 56890
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

Date: April 2, 2024

This item has been digitally signed and sealed by CLIFFORD R. LOUTAN, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

SHEET No.
EXH-2

Transaction Identification Data, for which the Company assumes no liability as set forth in Commitment Condition 5.e.:

Issuing Agent: Leopold Korn, P.A.
Issuing Office: 18851 NE 29th Avenue, Suite 410,
Aventura, FL 33180
Issuing Office's ALTA® Registry ID:
Loan ID Number:
Commitment Number: 11640100
Issuing Office File Number: L200261
Property Address: 1600 S Park Road
Hollywood, FL 33021 FL
Revision Number: Rev A, 06/13/2014, sw

SCHEDULE A

I:\work\REAL\Park Road Development\City of Hollywood\Title\Commitment\CMT-4.docx

1. Commitment Date: 06/07/2024 at 8:00 AM
2. Policy to be issued:
 - A. 2021 ALTA Owner's Policy with Florida Modifications
Proposed Insured: Park Road Development, LLC, a Florida limited liability compan
Proposed Amount of Insurance: \$3,240,000.00
The estate or interest to be insured: Fee
 - B. 2021 ALTA Loan Policy with Florida Modifications
Proposed Insured: Lender with contractual obligations under a loan agreement with the proposed purchaser
Proposed Amount of Insurance: \$10,000.00
The estate or interest to be insured: Fee
3. The estate or interest in the Land at the Commitment Date is: *(Identify each estate or interest covered, i.e., fee, leasehold, etc.)*

Fee Simple
4. The Title is, at the Commitment Date, vested in: *(Identify vesting for each estate or interest identified in Item 3 above)*

City of Hollywood, a municipal corporation, pursuant to Instruments recorded in Deed Book 462, Page 101; Official Records Book 2697, Page 340; Official Records Book 3657, Page 35; and Official Records Book 7693, Page 149
5. The Land is described as follows in Exhibit "A" attached hereto and made part hereof.

Countersigned:

By: 

Authorized Officer or Agent

C170B09

ALTA Commitment for Title Insurance (7-1-21) w-FL Mod

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SCHEDULE B, PART I Requirements

All of the following Requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.
2. Pay the agreed amount for the estate or interest to be insured.
3. Pay the premiums, fees, and charges for the Policy to the Company.
4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.
 - A. Duly executed Warranty Deed from City of Hollywood, a municipal corporation, Grantor, to Park Road Development, LLC, a Florida limited liability company, Grantee, conveying the land described on Schedule A hereof.

TOGETHER with acceptable proof of authority of person(s) executing documents on behalf of the City of Hollywood. Together with a resolution of the grantor attached to the deed authorizing conveyance of the land described in Schedule A to the Proposed Insured herein.

NOTE: Section 270.11, Florida Statutes provides that all deeds from any local government automatically reserves interests in phosphates, minerals, metals and petroleum.

In the event that it is desired to release the automatic reservation and/or the right of entry, this Commitment will be subject to such further requirements and/or exceptions as the Company may then deem necessary.

- B. Duly executed Mortgage from Park Road Development, LLC, a Florida limited liability company, Mortgagor, to Proposed Lender, Mortgagee, encumbering the land described on Exhibit A hereof.

The Company will require the following as to Park Road Development, LLC, a Florida limited liability company: ("LLC"):

- i. Proof that the LLC was in existence in its state of organization at the time it acquired title and that the LLC is currently in good standing.
- ii. Present for review a true and complete copy of the articles of organization and operating agreement of the LLC and any amendments thereto.
- iii. Record an affidavit from the person executing the proposed mortgage on behalf of the LLC certifying: (a) the name and state of organization of the LLC; (b) whether the LLC is member managed or manager-managed; (c) the identity of the member or manager and the person authorized to execute the mortgage; and (d) neither the LLC nor any member signing the mortgage have filed bankruptcy since the LLC acquired title.
- iv. If the member or manager of the LLC is also a business entity, present proof of the entity's good standing and the appropriate entity documents to establish signing authority.

SCHEDULE B, PART I Requirements

If the proposed mortgage will be executed by anyone other than a member or manager, those portions of the operating agreement or other documentation evidencing the authority of the signatory must be attached as an exhibit to the affidavit.

5. An Affidavit in form acceptable to Chicago Title Insurance Company ("Company") and executed by or on behalf of the current record owner(s) of the subject property stating that: (A) there are no parties in possession of the subject property other than said current record owner(s); (B) there are no encumbrances upon the subject property other than as may be set forth in this Commitment; (C) there are no unrecorded assessments which are due and payable and; (D) there have been no improvements made to or upon the subject property within the last ninety (90) day period for which there remain any outstanding and unpaid bills for labor, materials or supplies for which a lien or liens may be claimed must be furnished to the Company, or, in lieu thereof, an exception to those matters set forth in said Affidavit which are inconsistent with or deviate from the foregoing requirements will appear in the policy or policies to be issued pursuant to this Commitment.
6. Satisfactory survey, in conformity with the minimum technical standards for land surveys, certified to the Company, and/or its agent, dated no more than 90 days prior to the closing of the subject transaction, disclosing the nature and extent of any encroachment, encumbrance, violation, variation or adverse circumstance affecting the Title to the Land. Additional requirements and/or exceptions will be made for any such matters disclosed.
7. Proof of payment of any outstanding assessments in favor of Broward County, Florida, any special taxing district and any municipality. NOTE: If this requirement is not satisfied the following exception will appear on Schedule B:

Any outstanding assessments in favor of Broward County, Florida, any special taxing district and any municipality.
8. Proof of payment of service charges for water, sewer, waste and gas, if any, through the date of closing. NOTE: If this requirement is not met the following exception will appear on Schedule B:

Any lien provided for by Florida Statutes in favor of any city, town, village or port authority for unpaid service charges for service by any water, sewer, waste or gas system supplying the insured land or service facilities.
9. The Proposed Policy Amount(s) must be disclosed to the Company, and subject to approval by the Company, entered as the Proposed Policy Amount. An owner's policy should reflect the purchase price or full value of the Land. A loan policy should reflect the loan amount or value of the property as collateral. Proposed Policy Amount(s) will be revised and premiums charged consistent therewith when the final amounts are approved.
10. For each policy to be issued as identified in Schedule A, Item 2, the Company shall not be liable under this Commitment until it receives a designation for a Proposed Insured, acceptable to the Company. As provided in Commitment Condition 4, the Company may amend this Commitment to add, among other things, additional exceptions or requirements after the designation of the Proposed Insured.
11. The search did not disclose any open mortgages or deeds of trust of record, therefore the Company reserves the right to require further evidence to confirm that the property is unencumbered, and further reserves the right to make additional requirements or add additional items or exceptions upon receipt of the requested evidence.
12. Issuing agent must obtain from the Company or perform themselves a title update three (3) business days prior to closing, to verify that no adverse matters or defects appear in the public records.

SCHEDULE B, PART I Requirements

NOTE: Effective July 1, 2023, the Conveyances to Foreign Entities Act in sections 692.201 - 692.205, Florida Statutes (the "Act"), limits and regulates the purchase, sale and ownership of Florida real property by certain buyers who are associated with "foreign countries of concern," specifically the People's Republic of China, the Russian Federation, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Republic of Cuba, the Venezuelan regime of Nicolás Maduro and the Syrian Arab Republic. In connection with the purchase of real property, the Act requires each buyer to provide an affidavit confirming the purchaser is in compliance with the Act. Any loss or damage resulting from a violation of the Act is excluded from coverage under the terms of the Policy.

NOTE: Starting January 1, 2024, section 695.26 (1)(c), F.S., provides that no instrument conveying, assigning, encumbering or otherwise disposing of an interest in real property which is executed or acknowledged in Florida shall be recorded by the clerk of court unless the post office address of each witness is legibly printed, typed or stamped upon the instrument. If an instrument containing one or more witnesses is recorded, the witnesses' addresses, as well as their names, should appear below their signatures. A business address may be used.

SCHEDULE B, PART II Exceptions

Some historical land records contain Discriminatory Covenants that are illegal and unenforceable by law. This Commitment and the Policy treat any Discriminatory Covenant in a document referenced in Schedule B as if each Discriminatory Covenant is redacted, repudiated, removed, and not republished or recirculated. Only the remaining provisions of the document will be excepted from coverage.

The Policy will not insure against loss or damage resulting from the terms and conditions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed insured acquires for value of record the estate or interest or mortgage thereon covered by this form.
2. Taxes and assessments for the year 2024 and subsequent years, which are not yet due and payable.
3. Standard Exceptions:
 - A. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land.
 - B. Rights or claims of parties in possession not shown by the public records.
 - C. Any lien, or right to a lien, for services, labor, or materials heretofore or hereafter furnished, imposed by law and not shown by the public records.
 - D. Taxes or assessments which are not shown as existing liens in the public records.
4. Any claim that any portion of the insured land is sovereign lands of the State of Florida, including submerged, filled or artificially exposed lands accreted to such land.
5. Any lien provided by County Ordinance or by Chapter 159, Florida Statutes, in favor of any city, town, village or port authority for unpaid service charges for service by any water, sewer or gas system supplying the insured land.
6. Easement in favor of Florida Power & Light Company, filed January 22, 1964, recorded in Official Records Book 2740, Page 294, of the Public Records of Broward County, Florida.
7. Easement in favor of Florida Power & Light Company, filed January 26, 1977, recorded in Official Records Book 6886, Page 140, of the Public Records of Broward County, Florida.
8. Easement in favor of Florida Power & Light Company, filed April 15, 1977, recorded in Official Records Book 6987, Page 234, of the Public Records of Broward County, Florida.
9. Resolution R-94-483 by the City Commission of the City of Hollywood, to execute/grant easement to Broward County, filed December 6, 1994, recorded in Official Records Book 22899, Page 697, of the Public Records of Broward County, Florida.
10. Ordinance No. 2007-37 by Broward County, adopting amendment, re: Land Use Plan, filed December 26, 2007, recorded in Official Records Book 44936, Page 1402, of the Public Records of Broward County, Florida.

SCHEDULE B, PART II Exceptions

11. Existing unrecorded leases and all rights thereunder of the lessees and of any person or tenant claiming by, through or under the lessees.
12. Reservations in favor of City of Hollywood, Florida, of an undivided 3/4 interest in and to all phosphates, minerals and metals, together with an undivided one-half interest in and to all petroleum, in, on or under the surface of the insured land, as contained in that certain Deed, recorded _____, 2022, under Instrument Number _____, of the Public Records of Broward County, Florida, created pursuant to Section 270.11, Florida Statutes.

[Policy preparer note: fill in the blank lines with the recording information of the deed of conveyance from The City of Hollywood, Florida.]

For 2023 Tax Year Parcel/ID #
514220-00-0040, No Taxes Due
514220-00-0140, No Taxes Due
514220-00-0150, No Taxes Due
514220-00-0170, No Taxes Due
514220-04-0010, No Taxes Due

NOTE: Exception 1 above shall be deemed deleted as of the time the settlement funds or proceeds of the loan to be secured by the insured mortgage, as applicable, are disbursed by the Company or its authorized agent. Neither the Company nor its agent shall, however, be under any duty to disburse any sum except upon a determination that no such adverse intervening matters have appeared of record or occurred.

NOTES ON STANDARD EXCEPTIONS:

Item 3A will be deleted from the policy(ies) upon receipt of an accurate survey of the Land acceptable to the Company. Exception will be made for any encroachment, setback line violation, overlap, boundary line dispute or other adverse matter disclosed by the survey.

Items 3B, 3C, and 3D will be deleted from the policy(ies) upon receipt of an affidavit acceptable to the Company, affirming that, except as disclosed therein (i) no parties in possession of the Land exist other than the record owner(s); (ii) no improvements have been made to the Land within 90 days prior to closing which have not have been paid for in full; and (iii) no unpaid taxes or assessments are against the Land which are not shown as existing liens in the public records. Exception will be made for matters disclosed in the affidavit.

NOTE: All recording references in this form shall refer to the public records of Broward County, Florida, unless otherwise noted.

NOTE: In accordance with Florida Statutes section 627.4131, please be advised that the insured hereunder may present inquiries, obtain information about coverage, or receive assistance in resolving complaints, by contacting Chicago Title Insurance Company, 13800 NW 14th Street, Sunrise, FL 33323; Telephone 954-217-1744.

Searched By: suzanne.wilson@fnf.com 954.308.3064

EXHIBIT "A"

PARCEL 1 and 2:

PARCEL A: The East 1/2 of the SE 1/4 of the NW 1/4 of the NW 1/4 of Section 20, Township 51 South, Range 42 East;

PARCEL B; The SW 1/4 of the NE 1/4 of the NW 1/4, and the NW 1/4 of the SE 1/4 of the NW 1/4 of Section 20, Township 51 South, Range 42 East, excepting therefrom that portion lying East of the following described line:

Beginning at a point on the West boundary line of the East 1/4 of the NW 1/4 of Section 20, Township 51 South, Range 42 East, 506.64 feet North of the center of the SE 1/4 of the NW 1/4 of said Section 20, thence Northerly to a point 11.0 feet, more or less, North of the North boundary of the SE 1/4 of NW 1/4 of Section 20 and 17.54 feet West of the East boundary of the West 1/2 of NE 1/4 of NW 1/4 of Section 20, thence Northerly 153.88 feet on a curve to the right having a datum of;

1=2° - 17' - 34" R
R = 3845' D = 1° 30'
T = 76.90 Arc - 153.88'

Continuing on the tangent 46.07' to a point of curve, thence Northerly 177.93 feet on a curve to the left having a datum of:

1 = 6° - 19' - 27" L
R = 1612' D = 30 - 30'
T = 89.05' Arc - 177.93'

Thence northerly on the tangent 12.78' to a point of curve. Thence Northerly 198,07 feet on a curve to the right having a datum of:

1 = 9° - 41' - 30"
R = 1171' D = 5° - 00' - 00"
T = 99.28' Arc 198.07'

Thence Northerly on the tangent line 77.0 feet more or less to the North boundary of the South 1/2 of the NE 1/4 of NW 1/4 of said Section 20.

EXCEPTING THEREFROM Lot 2 in Block 1 of HOLLYWOOD GOLF HEIGHTS, according to the Plat thereof, recorded in Plat Book 11, page 13 of the Public Records of Broward County, Florida.

PARCEL C: That portion of the NE 1/4 of the SE 1/4 of the NW 1/4 of Section 20, Township 51 South, Range 42 East, more particularly described as follows:

Starting at a property corner which is the center of the SE 1/4 of the NW 1/4 of said Section 20 as the point of beginning; thence northerly on and along the West line of the NE 1/4 of the SE 1/4 of the NW 1/4 a distance of 506.6 feet; thence Southerly on a straight line to meet the South line of the NE 1/4 of the SE 1/4 of the NW 1/4 of said Section 20 at a point 50.22 feet East of the point of beginning; thence Westerly on and along the South line of the NE 1/4 of the SE 1/4 of the NW 1/4 of said Section 20, a distance of 50.22 to the point of beginning.

PARCEL 3:

C170B09

ALTA Commitment for Title Insurance (7-1-21) w-FL Mod

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Exhibit "A"

Lot #2 in Block 1 of HOLLYWOOD GOLF HEIGHTS, a subdivision of land in Broward County, Florida, according to a plat of said subdivision recorded in the office of the Clerk of Circuit Court in and for said county in Plat Book 11, page 13.

PARCEL 4:

The East One-half (E1/2) of the Southwest quarter (SW 1/4) of the Southeast quarter (SE 1/4) of the Northwest quarter (NW 1/4), less the East 30 feet thereof, and the West one-half (W 1/2) of the Southeast quarter (SE) of the Southeast quarter (SE 1/4) of the Northwest quarter (NW 1/4), less the West 30 feet thereof, all in Section 20, Township -51 South, Range 42 East, said lands situate, lying and being in Broward County, Florida.

PARCEL 5:

The west quarter (W 1/4) of the southwest quarter (SW 1/4) of the southeast quarter (SE 1/4) of the northwest quarter (NW 1/4) of Section 20, Township 51 South Range 42 East, said land being situated in Broward County, Florida, the said parcel being two and one-half (2 1/2) acres, more or less, together with the improvements located thereon.

**PARK ROAD
SURFACE WATER MANAGEMENT CALCULATIONS (PRE)
PROJECT No. 20-4027**

HORIZONTAL SURFACE LAND USE BREAKDOWN			GRADING PARAMETERS (NAVD)	
LAND USE	AREA	PERCENT	FROM	TO
BUILDING	0.72	3%	14.00	18.00
PVMT LOW	1.44	5%	5.25	11.00
PVMT HIGH	7.17	25%	11.00	16.00
GREEN	18.94	67%	8.00	17.00
TOTAL	28.27	100%		

STAGE-STORAGE CALCULATIONS

Stage (ft-NAVD)	Area (acres)			Total	Volume (ac-ft)	
	PVMT LOW (LINEAR)	PVMT HIGH (LINEAR)	GREEN (LINEAR)		Site Storage	Total Provided
1.50	0.00	0.00	0.00	0.00	0.00	0.00
2.00	0.00	0.00	0.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	0.00	0.00	0.00
3.00	0.00	0.00	0.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	0.00	0.00	0.00
4.00	0.00	0.00	0.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	0.00	0.00	0.00	0.00
5.50	0.06	0.00	0.00	0.06	0.02	0.02
6.00	0.19	0.00	0.00	0.19	0.08	0.08
6.50	0.31	0.00	0.00	0.31	0.20	0.20
7.00	0.44	0.00	0.00	0.44	0.39	0.39
7.50	0.56	0.00	0.00	0.56	0.64	0.64
8.00	0.69	0.00	0.00	0.69	0.95	0.95
8.50	0.81	0.00	1.05	1.87	1.59	1.59
9.00	0.94	0.00	2.10	3.04	2.82	2.82
9.50	1.06	0.00	3.16	4.22	4.64	4.64
10.00	1.19	0.00	4.21	5.40	7.04	7.04
10.50	1.31	0.00	5.26	6.58	10.04	10.04
11.00	1.44	0.00	6.31	7.75	13.62	13.62
11.50	1.44	0.72	7.37	9.52	17.94	17.94
12.00	1.44	1.43	8.42	11.29	23.14	23.14
12.50	1.44	2.15	9.47	13.06	29.23	29.23
13.00	1.44	2.87	10.52	14.83	36.20	36.20
13.50	1.44	3.59	11.57	16.60	44.06	44.06
14.00	1.44	4.30	12.63	18.37	52.80	52.80

Project Location Hydraulic Details

Design Water Level= 1.50 NAVD
Allowable Discharge = 0 cfs

Design Storm Rainfall Amounts--(in.)

Storm Frequency	SFWMD		
	1 hr	24 hr	72 hr
5 year	3.2		
10 year		8.50	
25 year			14.50
100 year			17.00

Soil Storage Calculation

A. Total Pervious Area = 18.94 acres

B. Depth to Water Table = 11.0 feet
If depth to water table is greater than 4 ft, use 4 ft.

C. From SFWMD Permit Information Manual, Vol. IV, Figure E-1, For 'Developed/Compacted Flatwoods', the Cumulative Available Soil Storage is:

Sp = 6.75 inches
D. Site Soil Storage = Sp x (Pervious Area/Total Area)
= 4.52 inches
E. Runoff Curve Number = $1000 / (S + 10)$
CN = 68.86

Water Quantity Calculations

A. Calculate the Runoff in Inches.

$Q = \frac{(\text{Rainfall} - 0.2 \times \text{Soil Storage})^2}{(\text{Rainfall} + 0.8 \times \text{Soil Storage})}$
Q_{5yr-1hr} = 0.77 inches
Q_{10yr-1day} = 4.76 inches
Q_{25yr-3dy} = 10.20 inches
Q_{100yr-3dy} = 12.57 inches

B. Calculate the Runoff Volume

V = Q x Project Area (1 ft / 12 in)
V_{5yr-1hr} = 1.82 ac-ft
V_{10yr-1day} = 11.22 ac-ft
V_{25yr-3dy} = 24.03 ac-ft
V_{100yr-3dy} = 29.60 ac-ft

C. Using the stage-storage chart and the runoff volumes calculated above, the corresponding stages can be interpolated.

Stage_{5yr-1hr} = 8.59 ft
Stage_{10yr-1day} = 10.66 ft
Stage_{25yr-3dy} = 12.07 ft
Stage_{100yr-3dy} = 12.53 ft

**PARK ROAD
 SURFACE WATER MANAGEMENT CALCULATIONS (POST)
 STE PROJECT #20-4027**

HORIZONTAL SURFACE LAND USE BREAKDOWN			GRADING PARAMETERS (NAVD)	
LAND USE	AREA	PERCENT	FROM	TO
BUILDING	5.82	21%	13.00	13.50
PVMT	11.11	39%	10.00	12.75
LAKE	0.51	2%	1.50	13.50
LAKE BANK	0.23	1%	1.50	7.00
DRY RET.	0.97	3%	2.50	13.50
DRY RET. BANK	0.80	3%	2.50	9.00
SIDEWALK	1.83	6%	10.00	13.50
GREEN	6.61	23%	8.00	13.00
POOL/DECK	0.39	1%	12.50	13.50
TOTAL	28.27	100%		

STAGE-STORAGE CALCULATIONS

Stage (ft-NAVD)	Area (acres)								Volume (ac-ft)	
	PVMT (LINEAR)	SIDEWALK (LINEAR)	GREEN (LINEAR)	LAKE BANK (LINEAR)	DRY RET. BANK (LINEAR)	LAKE (VERTICAL)	DRY RET. (VERTICAL)	Total	Site Storage	Total Provided
1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.00	0.00	0.00	0.00	0.02	0.00	0.51	0.00	0.53	0.26	0.26
2.50	0.00	0.00	0.00	0.04	0.00	0.51	0.00	0.55	0.53	0.53
3.00	0.00	0.00	0.00	0.06	0.06	0.51	0.97	1.60	1.31	1.31
3.50	0.00	0.00	0.00	0.08	0.12	0.51	0.97	1.69	2.14	2.14
4.00	0.00	0.00	0.00	0.10	0.18	0.51	0.97	1.77	3.00	3.00
4.50	0.00	0.00	0.00	0.13	0.25	0.51	0.97	1.85	3.90	3.90
5.00	0.00	0.00	0.00	0.15	0.31	0.51	0.97	1.93	4.85	4.85
5.50	0.00	0.00	0.00	0.17	0.37	0.51	0.97	2.02	5.84	5.84
6.00	0.00	0.00	0.00	0.19	0.43	0.51	0.97	2.10	6.87	6.87
6.50	0.00	0.00	0.00	0.21	0.49	0.51	0.97	2.18	7.94	7.94
7.00	0.00	0.00	0.00	0.23	0.55	0.51	0.97	2.26	9.05	9.05
7.50	0.00	0.00	0.00	0.23	0.62	0.51	0.97	2.33	10.20	10.20
8.00	0.00	0.00	0.00	0.23	0.68	0.51	0.97	2.39	11.37	11.37
8.50	0.00	0.00	0.66	0.23	0.74	0.51	0.97	3.11	12.75	12.75
9.00	0.00	0.00	1.32	0.23	0.80	0.51	0.97	3.83	14.48	14.48
9.50	0.00	0.00	1.98	0.23	0.80	0.51	0.97	4.49	16.56	16.56
10.00	0.00	0.00	2.64	0.23	0.80	0.51	0.97	5.15	18.98	18.98
10.50	2.02	0.26	3.31	0.23	0.80	0.51	0.97	8.10	22.29	22.29
11.00	4.04	0.52	3.97	0.23	0.80	0.51	0.97	11.04	27.07	27.07
11.50	6.06	0.78	4.63	0.23	0.80	0.51	0.97	13.98	33.33	33.33
12.00	8.08	1.05	5.29	0.23	0.80	0.51	0.97	16.92	41.05	41.05
12.50	10.10	1.31	5.95	0.23	0.80	0.51	0.97	19.87	50.25	50.25
13.00	11.11	1.57	6.61	0.23	0.80	0.51	0.97	21.80	60.67	60.67
13.50	11.11	1.83	6.61	0.23	0.80	0.51	0.97	22.06	71.63	71.63

Project Location Hydraulic Details

Design Water Level = 1.50
 Allowable Discharge = 0 cfs

Design Storm Rainfall Amounts--(in.)

Storm Frequency	SFWMD		
	1 hr	24 hr	72 hr
5 year	3.2	7.25	
10 year		8.50	
25 year			14.50
100 year			17.00

Soil Storage Calculation

- A. Total Pervious Area = 8.61 acres
- B. Depth to Water Table = 7.49 feet
 If depth to water table is greater than 4 ft, use 4 ft.
- C. From SFWMD Permit Information Manual, Vol. IV, Figure E-1, For 'Developed/Compacted Flatwoods', the Cumulative Available Soil Storage is:
- Sp = 6.75 inches
- D. Site Soil Storage = $Sp \times (\text{Pervious Area} / \text{Total Area})$
 = 2.06 inches
- E. Runoff Curve Number = $1000 / (S + 10)$
 CN = 82.95

Water Quantity Calculations

- A. Calculate the Runoff in Inches.
- $Q = (\text{Rainfall} - 0.2 \times \text{Soil Storage})^2 / (\text{Rainfall} + 0.8 \times \text{Soil Storage})$
- $Q_{5yr-1hr} = 1.61$ inches
 $Q_{5yr-1dy} = 5.26$ inches
 $Q_{10yr-1dy} = 6.45$ inches
 $Q_{25yr-3dy} = 12.29$ inches
 $Q_{100yr-3dy} = 14.76$ inches
- B. Calculate the Runoff Volume
- $V = Q \times \text{Project Area (1 ft / 12 in)}$
- $V_{5yr-1hr} = 3.78$ ac-ft
 $V_{5yr-1dy} = 12.39$ ac-ft
 $V_{10yr-1day} = 15.19$ ac-ft
 $V_{25yr-3dy} = 28.96$ ac-ft
 $V_{100yr-3dy} = 34.77$ ac-ft
- C. Using the stage-storage chart and the runoff volumes calculated above, the corresponding stages can be interpolated.
- $\text{Stage}_{5yr-1hr} = 4.43$ ft
 $\text{Stage}_{5yr-1dy} = 8.37$ ft
 $\text{Stage}_{10yr-1day} = 9.17$ ft
 $\text{Stage}_{25yr-3dy} = 11.15$ ft
 $\text{Stage}_{100yr-3dy} = 11.59$ ft

Water Quality Calculations (Note: Excluding the roof/building areas)

Water Quality Required

- A. Compute the first inch of runoff from the entire site.
- = 1 inch x Total Area x (1 ft / 12 in)
 = 2.36 ac-ft
- B. Compute 2.5 inches times the percentage of imperviousness.
- a. Site Area (SA), for water quality pervious/impervious calculations only
 $SA = \text{Total Area} - (\text{roof} + \text{lake})$
 = 21.94 Acres
 - b. Impervious Area (IA), for water quality pervious/impervious calculations only
 $IA = \text{Site Area}(SA) - \text{Pervious Area}$
 = 13.33 Acres
 - c. Percentage of imperviousness for water quality
 $\%imp = (IA / SA) \times 100\%$
 = 60.76 %
 - d. For 2.5 inches times percentage of imperviousness
 = 2.5 inches x %imp
 = 1.52 inches
 - e. Compute volume required for quality detention
 = inches to be treated x (total site - lake) x (1 ft / 12 in)
 = 3.51 ac-ft **(CONTROLS)**
- C. Since 2.5 inches times the percentage of impervious is greater than the first inch of runoff over the entire site, the volume to be treated is:
- Volume to be treated = 3.51 ac-ft
- D. Since this is a commercial project, 0.5 in. dry detention/retention Pre-treatment must be provided.
- = 1/2 inch x (Total Site - Lake) x (1 ft / 12 in)
 = 1.16 ac-ft

Water Quality Provided

A. Dry Retention Area and Exf. Trench stage-storage:

Stage (ft-NAVD)	Volume (ac-ft)		
	Lake	DRA	Total
1.50	0.00	0.00	0.00
2.00	0.26	0.00	0.26
2.50	0.51	0.00	0.51
3.00	0.77	0.49	1.25
3.50	1.02	0.97	1.99
4.00	1.28	1.46	2.73
4.50	1.53	1.94	3.47
5.00	1.79	2.43	4.21

B Interpolating from the Stage-Storage Table, the Volume to be treated is met at a stage of:

Stage (Water Quality) = 4.53 ft

C. Interpolating from the Stage-Storage Table, the Pre-treatment Volume is met at a stage of:

Stage (Pre-Treat) = 2.94 ft