

## HUIZENGA PARK ART SCULPTURE AGREEMENT

**THIS AGREEMENT** (the "Agreement"), with an effective date of \_\_\_\_\_ 2026, is entered into by and between:

**CITY OF FORT LAUDERDALE**, a municipal corporation of the State of Florida, hereinafter referred to as "CITY," whose principal address is 101 NE 3rd Ave., Fort Lauderdale, FL 33301,

and

**DOWNTOWN DEVELOPMENT AUTHORITY OF THE CITY OF FORT LAUDERDALE**, a Florida body politic, hereinafter referred to as "DDA," whose principal address is 201 E Las Olas Blvd., Suite 1150 Fort Lauderdale, FL 33301

(CITY and DDA are also referred to herein "PARTIES")

### WITNESSETH:

**WHEREAS**, PARTIES recognize the importance of displaying art in public spaces for the benefit of the community;

**WHEREAS**, CITY has authorized the acquisition of Manolo Valdes' *Head with Butterflies* sculpture (the "Art") as part of the James Winder Laird Donation and has authorized placement of the Art within Huizenga Park at the "Licensed Premises" more particularly described in Exhibit A attached hereto;

**WHEREAS**, CITY will retain ownership of the Art and will work with DDA to place the Art; and

**WHEREAS**, PARTIES are desirous of outlining the roles and responsibilities for design, permitting, construction, installation, and the ongoing maintenance of the Art.

**NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, and other good and valuable consideration, the receipt and adequacy of which are acknowledged, PARTIES covenant and agree to the following terms and conditions:**

1. **RECITALS AND EXHIBITS.** PARTIES agree the foregoing recitals are true and correct and incorporated herein by this reference. This Agreement includes the following Exhibits, each of which is hereby incorporated herein:
  - 1.1.1. Exhibit A - Description of Art
  - 1.1.2. Exhibit B - Licensed Premises
  - 1.1.3. Exhibit C – Construction Plans
  - 1.1.4. Exhibit D - Waiver of 1990 Visual Artists' Rights Act
- 1.2. **TERM AND EFFECTIVE DATE.** The term of Agreement (the "Term") shall commence on the date this Agreement is executed by the last of the Parties ("the Effective Date") and continue until CITY or DDA terminate this Agreement by giving ninety (90) days' written notice of such termination. Upon the expiration or earlier termination of this Agreement, CITY shall, at its sole cost and expense, remove the Art and CITY's other personal property from the Licensed Premises and restore the Licensed Premises to substantially the same condition existing on the Effective Date of this Agreement, except for ordinary wear and tear. Any Art not removed from the Licensed Premises within ten (10) calendar days after the expiration or earlier termination of this Agreement may be removed by DDA at the sole expense of CITY, and CITY shall reimburse DDA all such expense(s) including DDA's administrative fee within thirty (30) days after invoice by DDA.
2. **THE ART.**
  - 2.1. *Description of the Art.* The Art consists of the sculpture "*Head with Butterflies*" sculpted by Manola Valdes (the "Artist") more particularly described in **Exhibit A**. The Art was acquired from Artist by CITY in [month]\_\_\_\_\_, 2026.

- 2.2. *Ownership.* CITY expressly warrants and represents to DDA that (a) CITY is the owner of the Art, free and clear of any liens, encumbrances or restrictions, and (b) CITY possesses full power to enter into this Agreement and to convey the rights herein granted to DDA, including the rights to use, display, and publish the Art, without the consent of any third party, including the Artist.
  - 2.3. *No Infringement.* CITY expressly warrants and represents that CITY has obtained from Artist the following licenses, representations and warranties, each of which CITY hereby affirms, represents and warrants to DDA: (a) the Art is the original product of Artists' own creative efforts, (b) the Art is original and is a single edition, (c) the Art does not infringe upon or violate any license, copyright law, patent law, trade secret law, trademark law, moral rights law, semiconductor chip protection law, unfair competition law, proprietary information, non-disclosure, intellectual property or other right of any third party, or infringe upon or violate any right of privacy, or contain libelous material, (d) the Art complies with all applicable patent, trademark and copyright laws, rules, regulations, and codes, and (e) the Art does not utilize any protected patent, trademark or copyright, and (f) Artist has provided, and CITY has obtained, all permission, authority and documentation necessary or required in connection with this Agreement and the placement and display of the Art.
  - 2.4. *Art License.* CITY expressly grants to DDA either directly or indirectly, a non-exclusive, unlimited, perpetual, and irrevocable right to use, display, publish, or reproduce the Art in any two-dimensional noncommercial manner or media whatsoever, including without limitation to prepare derivative works based upon the Art, and to distribute copies of the Art, and all other uses inherent or necessarily associated with the placement or installation of the Art at the Licensed Premises. Any reproductions of the Art by DDA must contain a credit to the Art, the Artists, CITY and DDA, and the James Winder Laird Donation. CITY represents and warrants that it has the right to convey the rights and licenses granted to DDA in this Agreement and that all other rights in and to the Art, relating to any continuing interest CITY or Artists may otherwise have in the art are hereby waived and, to the extent transferable, assigned and transferred to DDA.
  - 2.5. *Controlling License and Waiver.* The provisions of this Agreement shall control over the provisions of 17 U.S.C. § 106A and, to the extent permitted by applicable law, shall constitute a waiver by CITY, including on behalf of Artist, and Artist of any rights in the Art set out in or otherwise granted by the Visual Artists Rights Act of 1990, 17 U.S.C. § 106A, and any provision contained in any domestic or international law, including without limitation the European Union law. If there is a conflict or inconsistency between any provision contained in this Agreement and any such laws, CITY expressly represents and warrants to DDA that CITY and Artist each understand and agree that the provisions of this Agreement, and the licenses granted to DDA hereunder, shall control and shall constitute a waiver by each of CITY and Artist of any rights in the Art set out in or otherwise granted by any such laws.
  - 2.6. *Taxes.* If any sales or use taxes, fines, or assessments are levied under this Agreement and are related to CITY's use of the Licensed Premises ("Taxes"), CITY shall directly pay such Taxes to the applicable taxing authority.
  - 2.7. *Waiver of 1990 Visual Artists' Rights Act.* CITY represents and warrants that it has obtained from Artist the "Waiver of 1990 Visual Artists' Rights Act" included in **Exhibit D**.
3. **LICENSED PREMISES.**
- 3.1. *License.* DDA hereby grants to CITY the nonexclusive right, license, and privilege of accessing and using the portion of the DDA Property known as "Huizenga Park" that is more particularly described on **Exhibit B** attached hereto (the "Licensed Premises") in accordance with the terms of this Agreement.
  - 3.2. *"As Is" Condition.* CITY has inspected the Licensed Premises and accepts the premises in "as is" condition, with no representation by DDA as to suitability, compliance with any required standards

or conditions, or compliance with any building, life/safety, disability, and other laws, codes, and regulations applicable to CITY's use of the Licensed Premises as contemplated by this Agreement.

- 3.3. *Use and Access.* CITY and its employees, agents, contractors, and subcontractors shall use and access the Licensed Premises only to prepare, install, maintain, inspect, remove, and operate, at CITY's sole option and cost, the Art for the purpose of enhancing the public experience. The Licensed Premises shall not be used by CITY for any other purpose whatsoever without the prior written consent of DDA. DDA shall allow CITY and its employees, agents, contractors, and subcontractors access to the Licensed Premises at times and dates to be agreed upon in advance between the respective designated staff contacts of CITY and DDA. DDA shall provide notice to CITY, and CITY shall comply with any applicable security or access restrictions for Huizenga Park or the Licensed Premises.
- 3.4. *Liens.* CITY or its employees, agents, contractors or subcontractors shall have no power or authority to place any liens or other encumbrances of any kind or character upon the right, title, or interest of DDA in and to the Licensed Premises. CITY shall be responsible for the satisfaction or payment of any liens for any provider of work, labor, material or services claiming by, through, or under CITY. CITY shall also indemnify, hold harmless, and defend DDA against any such liens, including the reasonable attorney's fees of DDA. Such liens shall be discharged by CITY within thirty (30) calendar days after CITY receives notice from DDA of filing thereof, by bonding, payment, or otherwise, provided that CITY may contest, in good faith and by appropriate proceedings, any such liens.
- 3.5. *Hazardous Materials, Waste Materials and Rubbish.* CITY agrees that CITY and its employees, agents, contractors, and subcontractors shall not (a) commit any waste, nuisance, or hazardous trade or occupation on, in, or upon any portion of Huizenga Park, (b) take any action, or keep any anything in or about any portion of Huizenga Park that will increase the risk of any hazard, fire, or catastrophe, or (c) damage any portion of Huizenga Park; or (d) use or occupy any portion of Huizenga Park in any manner that will violate any applicable laws. CITY, at its own cost and expense, shall keep any portion of Huizenga Park utilized by CITY in the installation, placement or maintenance of the ART free from waste materials and rubbish during any such work, and shall remove any waste materials, rubbish, tools, equipment, machinery, and surplus materials from the any portion of Huizenga Park utilized by CITY during and upon completion of such work.

#### 4. **DAMAGE; REMOVAL.**

- 4.1. The Art shall belong to CITY and shall be installed, maintained, and operated on the Licensed Premises at CITY's sole risk and obligation. CITY shall maintain the Art and shall inspect the Art at least bimonthly (every two months) and advise the DDA, in writing by e-mail, when the inspection is complete and the results of each such inspection. CITY shall repair any damage or perform any routine maintenance of the Art within seven (7) calendar days of each such inspection, unless DDA provides written approval of a longer time period. In the event that the Art cannot be repaired, CITY shall remove the Art within seven (7) calendar days of the inspection or such longer period of time as approved in writing by DDA. DDA shall provide CITY and its employees, agents, or subcontractors access to the Licensed Premises as reasonably requested for purposes of inspection, repair, maintenance, or removal.
- 4.2. DDA shall not be liable for any damage to the Art, or any theft, misappropriation, or loss thereof, or any third parties' actions or omissions relating in any way to the Art, except in the event of the negligence or willful misconduct of DDA or its employees, agents, or contractors.
- 4.3. **Sovereign Immunity:** Nothing herein shall be deemed, construed, or asserted as DDA or City waiving its sovereign immunity or waiving any limits established by Section 768.28, Florida Statutes.

- 4.4. CITY shall repair any damage of any kind or nature to the Licensed Premises or any portion of Huizenga Park caused by the use of the Licensed Premises by CITY or its employees, agents, contractors, or subcontractors. CITY shall give DDA prompt written notice, in compliance with the "Notices" section of this Agreement, of any occurrence, incident, or accident occurring on any portion of Huizenga Park relating to this Agreement.
5. **INSURANCE.**
  - 5.1. The City represents that it maintains a program of self-insurance for coverage of the risks and liabilities for which this Agreement requires insurance from the City, and no commercial insurance policy shall be required of the City.
6. **DEFAULT/TERMINATION.**
  - 6.1. Should either Party default in the performance of a material provision of this Agreement and fail to correct same within thirty (30) calendar days after having received notice specifying the nature of such default, unless such default is of a nature that it cannot be completely cured within thirty (30) calendar days, if a cure is not commenced within such time and thereafter diligently pursued to completion, then the non-defaulting Party may terminate this Agreement and may pursue all other remedies available to it at law and/or equity.
  - 6.2. In the event of any violation of any representation or warranty provided by CITY under this Agreement, DDA may terminate this Agreement and CITY shall, upon request by DDA, remove the Art in accordance with Article 6 at DDA's sole cost and expense.
  - 6.3. This Agreement may also be terminated for convenience by either Party upon providing written notice to the other Party of the termination date, which shall be not less than thirty (30) days after the date such written notice is provided.
7. **OTHER.**
  - 7.1. *Assignment Or Subletting.* CITY shall not assign or transfer this Agreement without DDA's prior written consent, which will not be unreasonably withheld or conditioned or unduly delayed.
  - 7.2. *Indemnification.* CITY shall at all times hereafter indemnify, hold harmless and defend DDA and all of DDA's current, former, and future officers, agents, servants, and employees (collectively, "Indemnified Party") from and against any and all causes of action, demands, claims, losses, liabilities, and expenditures of any kind, including reasonable attorneys' fees, court costs, and expenses (collectively, a "Claim"), raised or asserted by any person or entity not a party to this Agreement, which Claim is relating to personal injury, death, or damage to tangible personal property or is alleged to have resulted or alleged to be caused, in whole or in part, by any intentional, reckless, or negligent act or omission of CITY or its current or former officers, employees, agents, or servants, arising from, relating to, or in connection with this Agreement. In the event any Claim is brought against an Indemnified Party, CITY shall, upon written notice from DDA, defend each Indemnified Party against each such Claim by counsel approved in advance by DDA, approval of which shall not be unreasonably withheld. The obligations of this Section shall survive the expiration or earlier termination of this Agreement.
  - 7.3. *Limitation Of Damages.* Neither Party shall be liable to the other Party for any of its lost profits, special, incidental, punitive, exemplary, or consequential damages, including, but not limited to, frustration of economic or business expectations, loss of profits, loss of capital, cost of substitute product(s), facilities or services, down time cost or cost of re-procurement, even if advised of the possibility of such damages.
  - 7.4. *Materiality And Waiver Of Breach.* DDA and CITY each agree that each requirement, duty, and obligation set forth herein was bargained for at arms-length and is agreed to by the Parties in exchange for quid pro quo, that each is substantial and important to the formation of this

Agreement, and that each is, therefore, a material term hereof. Either Party's failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement. A waiver of any breach of a provision of this Agreement shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of the terms of this Agreement.

- 7.5. *Notices.* In order for a notice to a party to be effective under this Agreement, notice must be sent via U.S. first-class mail, hand delivery, or commercial overnight delivery, each with a contemporaneous copy via e-mail, to the addresses listed below and shall be effective upon mailing or hand delivery (provided the contemporaneous email is also sent). The addresses for notice shall remain as set forth in this section unless and until changed by providing notice of such change in accordance with the provisions of this section.

NOTICE TO CITY: City of Fort Lauderdale, Florida  
Attn: City Manager  
401 SE 21<sup>st</sup> Street  
Fort Lauderdale, FL 33301

With a copy to: City of Fort Lauderdale, Florida  
Attn: City Attorney  
1 E. Broward Blvd., Suite 1320  
Fort Lauderdale, FL 33301

NOTICE TO DDA: Fort Lauderdale Downtown Development Authority  
Attn: President & CEO  
201 E Las Olas Blvd., Suite 1150  
Fort Lauderdale, FL 33301  
E-mail: [jenni@ddaftl.org](mailto:jenni@ddaftl.org)

With a copy to: Fort Lauderdale Downtown Development Authority  
Attn: Executive Vice-President  
201 E Las Olas Blvd., Suite 1150  
Fort Lauderdale, FL 33301  
E-mail: [elizabeth@ddaftl.org](mailto:elizabeth@ddaftl.org)

- 7.6. *Independent Contractor.* CITY is an independent contractor under this Agreement. Services provided by CITY pursuant to this Agreement shall be subject to the supervision of CITY. In providing such services, neither CITY nor its agents shall act as officers, employees, or agents of DDA. No partnership, joint venture, or other joint relationship is created hereby. DDA does not extend to CITY or CITY's agents any authority of any kind to bind DDA in any respect whatsoever.
- 7.7. *Third-Party Beneficiaries.* Neither CITY nor DDA intends to directly or substantially benefit a third party by this Agreement. Therefore, the Parties agree that there are no third-party beneficiaries to this Agreement and that no third party shall be entitled to assert a right or claim against either of them based upon this Agreement.
- 7.8. *Severance.* In the event that any part of this Agreement is found to be invalid by a court of competent jurisdiction, that part shall be severed from this Agreement and the balance of this Agreement shall remain in full force and effect unless both CITY and DDA elect to terminate the Agreement. The election to terminate this Agreement pursuant to this Section shall be made within seven (7) calendar days after the court's finding becomes final.
- 7.9. *Public Records.* To the extent CITY is acting on behalf of DDA as stated in Section 119.0701, Florida Statutes, DDA shall:

- 7.9.1. Keep and maintain public records required if DDA were performing the services of CITY under this Agreement;
  - 7.9.2. Upon request from DDA, provide DDA with a copy of the requested records or allow the records to be inspected or copied within a reasonable time and at a cost that does not exceed that provided in Chapter 119, Florida Statutes, or as otherwise provided by law;
  - 7.9.3. Ensure that public records that are exempt or that are confidential and exempt from public record requirements are not disclosed except as authorized by law for the duration of the Agreement and following completion of the Agreement if the records are not transferred to DDA; and
  - 7.9.4. At completion of the Agreement, transfer to DDA, at no cost, all public records in possession of CITY keep and maintain public records required by DDA to perform the service. If CITY transfers all public records to DDA, upon the completion of the Agreement, DDA shall destroy any duplicate public records that are exempt or confidential and exempt. If CITY keeps and maintains public records upon completion of the Agreement, CITY shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to DDA upon request in a format that is compatible with the information technology systems of DDA.
  - 7.9.5. The failure of CITY to comply with the provisions of this Section shall constitute a material breach of this Agreement entitling DDA to exercise any remedy provided in this Agreement or under applicable law. A request for public records regarding this Agreement must be made directly to CITY, who will be responsible for responding to any such public records requests. CITY will provide any requested records to DDA to enable DDA to respond to the public records request.
- 7.10. *Joint Preparation.* The Parties hereto acknowledge that they have had the opportunity to seek and receive whatever competent advice and counsel as each Party deemed necessary for them to form a full and complete understanding of all rights and obligations herein and that the preparation of this Agreement has been a joint effort of the Parties, the language has been agreed to by the Parties to express their mutual intent, and the resulting document shall not, solely as a matter of judicial construction, be construed more severely against one of the Parties than the other.
- 7.11. *Jurisdiction, Venue, Waiver Of Jury Trial.* This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. The Parties agree and accept that jurisdiction of any controversies or legal problems arising out of this Agreement, and any action involving the enforcement or interpretation of any rights hereunder, shall be exclusively in the state courts of the Seventeenth Judicial Circuit in Broward County, Florida, and venue for litigation arising out of this Agreement shall be exclusively in such state courts, forsaking any other jurisdiction which either Party may claim by virtue of its residency or other jurisdictional device.

**BY ENTERING INTO THIS AGREEMENT, CITY AND DDA HEREBY EXPRESSLY WAIVE ANY RIGHTS EITHER PARTY MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT.**

- 7.12. *Force Majeure.* Neither Party will be responsible for any delay, interruption, or other failure to perform under this Agreement due to acts or events beyond the reasonable control of the otherwise responsible Party. Force majeure events include, but are not limited to: natural disasters (e.g. lightning, earthquakes, hurricanes, floods); wars, riots, terrorist activities, and civil commotions; inability to obtain parts or equipment from third party suppliers, and cable cuts by third parties; explosions and fires; embargoes, strikes, and labor disputes; and governmental decrees.

7.13. *Multiple Originals; Counterparts.* This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which, taken together, shall constitute one and the same agreement.

**(THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK)**

**IN WITNESS WHEREOF**, the parties hereto have made and executed this Agreement: CITY OF FORT LAUDERDALE, FLORIDA, through its CITY COMMISSION, signing by and through its Mayor or Vice-Mayor and DDA through its BOARD OF DIRECTORS, signing by and through its President and CEO, authorized to execute same by Board action on October 9, 2025.

CITY OF FORT LAUDERDALE, FLORIDA

ATTEST:

CITY OF FORT LAUDERDALE, , a municipal corporation of the State of Florida, By and through its City Commission

\_\_\_\_\_  
David Soloman, City Clerk

By: \_\_\_\_\_  
Dean J, Trantalis, Mayor

\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_

By: \_\_\_\_\_  
Rickelle Williams, City Manager

\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_

Approved as to form and correctness:  
Shari L. McCartney, City Attorney

By \_\_\_\_\_  
Shaun Amarnani, Assistant City Attorney

STATE OF FLORIDA  
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me by means of  physical presence or  online notarization, this \_\_\_\_ day of \_\_\_\_\_, 2026, by DEAN J. TRANTALIS, Mayor of the City of Fort Lauderdale, a municipal corporation of Florida on behalf of the City of Fort Lauderdale. He is personally known to me or has produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
Notary Public, State of Florida

\_\_\_\_\_  
Name of Notary Typed, Printed or Stamped

DOWNTOWN DEVELOPMENT AUTHORITY OF THE CITY OF FORT LAUDERDALE

ATTEST:

DDA, through its BOARD OF DIRECTORS

[Signature]

By [Signature]  
Jenni Morejon, President & CEO  
20 day of January 2026

STATE OF FLORIDA:  
COUNTY OF BROWARD:

The foregoing instrument was acknowledged before me by means of  physical presence or  online notarization, this 20<sup>th</sup> day of January, 2026, by JENNI MOREJON, PRESIDENT & CEO of DOWNTOWN DEVELOPMENT AUTHORITY OF FORT LAUDERDALE, FLORIDA, a special taxing district established by State Legislature.

[Signature]  
\_\_\_\_\_  
Signature, Notary Public, State of Florida

(SEAL)



Personally Known or \_\_\_\_\_ Provided Identification

Name of Notary Typed, Printed or Stamped

Alexandra Saiz

**EXHIBIT A**  
**DESCRIPTION OF ART**

**EXHIBIT B**  
**LICENSED PREMISES**

**EXHIBIT C**  
**CONSTRUCTION PLANS**

**EXHIBIT D**  
**WAIVER OF 1990 VISUAL ARTISTS' RIGHTS ACT**

**EXHIBIT A**  
Description of Art



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**TO:** Honorable Mayor & Members of the Fort Lauderdale City Commission

**FROM:** Susan Grant, Acting City Manager *Susan Grant*

**DATE:** May 21, 2024

**TITLE:** **Walk On** - Acquisition of Manolo Valdes Sculpture - **(District 4)**

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**Recommendation**

Staff recommends the City Commission approve the acquisition of Manolo Valdes' *Head with Butterflies* as an integral part of the James Winder Laird Donation and authorize the placement of the sculpture within Huizenga Park. The City will retain ownership of the sculpture and will work with the Downtown Development Authority to place the sculpture.

**Background**

In November of 2022 the City Commission approved the donation of \$5,000,000 from the James Winder Laird estate to fund the acquisition, installation, and maintenance of public art throughout the City. The City has an opportunity to acquire a sculpture by Manolo Valdes titled, *Head with Butterflies* for \$800,000. The sculpture will be displayed within Huizenga Park.

**Resource Impact**

There is no fiscal impact associated with this action. The sculpture will be acquired by the Estate for \$800,000 and installed at their sole expense.

**Strategic Connections**

This item is a *2024 Top Commission Priority*, advancing the Parks and Public Places initiative of City beautification.

This item supports the *Press Play Fort Lauderdale 2029 Strategic Plan*, specifically advancing:

- The Public Places Focus Area
- Goal 5: Build a beautiful and welcoming community.
- Objective: Improve the appearance of public parks, green spaces, and landscapes while attracting visitors and creating a sense of place for neighbors.

This item advances the *Fast Forward Fort Lauderdale 2035 Vision Plan: We Are Here*

This item supports the Advance Fort Lauderdale 2040 Comprehensive Plan specifically advancing:

- The Parks, Recreation, and Open Space Focus Area
- The Public Art in Parks Element
- Goal 2: Be a community with high quality parks and recreational facilities that highlight the character of our City.

**Attachment**

Exhibit 1 – Manolo Valdes *Head with Butterflies*

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Prepared by: Joshua Carden, Cultural Affairs Officer

Department Director: Christopher Cooper, AICP, Development Services  
Department



Manolo Valdes  
Head with Butterflies  
10 feet (h)  
2011  
Purchase Price: \$800,000.

**EXHIBIT B**  
Licensed Premises



**Huizenga Park**  
Fort Lauderdale, Florida  
July 17, 2025

- 1. Las Olas Plaza
- 2. Legacy Terrace
- 3. Spirit of FTL Fountain
- 4. Stiles Pavilion
- 5. The Dog Spot
- 6. Civic Lawn
- 7. Valet Drop-off
- 8. The Nook
- 9. Dining Terrace
- 10. Future Restaurant
- 11. New River Landing
- 12. Poppy's Play Patch
- 13. Andrews Ave Plaza
- 14. Riverwalk
- 15. Riverwalk Terrace
- 16. Liberty Circle
- 17. River View
- 18. Water Taxi Stop

# **EXHIBIT C**

## Construction Plans

**MAYOR & COMMISSION**

Mayor Dean J. Trantalis  
 John C. Herbst  
 Vice Mayor/Commissioner - District 1  
 Steven Glassman  
 Commissioner - District 2  
 Pamela Beasley-Pittman  
 Commissioner - District 3  
 Ben Sorensen  
 Commissioner - District 4

# MANOLO VALDES SCULPTURE

## Huizenga Park

### City of Fort Lauderdale, Florida



**RVL**  
 ARCHITECTURE + DESIGN



13280 SW 131ST STREET, SUITE 107  
 MIAMI, FLORIDA 33186  
 (P) 305.529.1080 - (F) 786.227.6884



Digitally signed by Nestor Vega  
 DN: cn=US, o=Institution, ou=Qualifications, email=nestor.vega@rvl.com, c=US  
 Date: 2023.12.05 11:16:58 -0500

PROJECT NAME AND LOCATION:  
 CITY OF FORT LAUDERDALE



PROPERTY OF RVL ARCHITECTURE  
 - FOR OFFICIAL USE ONLY -  
 - DO NOT REMOVE THIS NOTE -  
 PROPERLY DESTROY DOCUMENTS WHEN NO LONGER NEEDED. GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE PRIOR TO CONSTRUCTION. GENERAL CONTRACTOR SHALL NOTIFY CFLD OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION AND/OR ORDERING MATERIALS.



SUBMITTALS:  
 NO. DATE DESCRIPTION:

REVISIONS:  
 NO. DATE DESCRIPTION:

DRAWING TITLE:

**COVER**

PROJECT PHASE: PERMIT  
 ISSUE DATE: 12-03-2025

DRAWN BY: EC APPROVED BY: BL

WORK ORDER NUMBER: 2514

SHEET NUMBER

**A-001**

INDEX OF DRAWINGS		ISSUE DATE / REVISIONS
SHEET No	DESCRIPTION	
<b>ARCHITECTURAL DRAWINGS</b>		
A-001	COVER	●
A-002	GENERAL NOTES / SCOPE OF WORK	●
A-003	GENERAL NOTES	●
A-004	SCHEMATIC RENDERING AND PHOTOS	●
A-101	SITE SCULPTURE LOCATION PLAN	●
A-102	SCULPTURE BASE PLAN, SECTIONS AND DETAILS	●
<b>STRUCTURAL DRAWINGS</b>		
S-1	SECTIONS AND DETAILS	●



**GENERAL CONTRACTOR**



**TEAM CONTRACTING, INC**  
 13911 SW 42ND STREET, SUITE 209 - MIAMI, FL 33175 - PHONE : (305)207-9799 FAX : (305)207-9790

**ARCHITECTS**  
**RVL ARCHITECTURE + DESIGN . PA**  
 ARCHITECTURE DESIGN PLANNING  
 13280 SW 131ST STREET - SUITE 107 - MIAMI, FLORIDA 33186 PH. (305)529-1080 FAX (786) 227-6884

**STRUCTURAL ENGINEER**  
**JUAN FERNANDEZ - BARQUIN**  
 2520 NW 97TH AVENUE - SUITE 240 - DORAL, FLORIDA 33172 PH. (786)336-0881 CEL (305)281-1181







LEFT VIEW



FRONT VIEW



LEFT VIEW



BACK VIEW

4 SCULPTURE / SCHEMATICS RENDERINGS VIEWS



3 SCULPTURE / EXISTING PLATE DETAIL

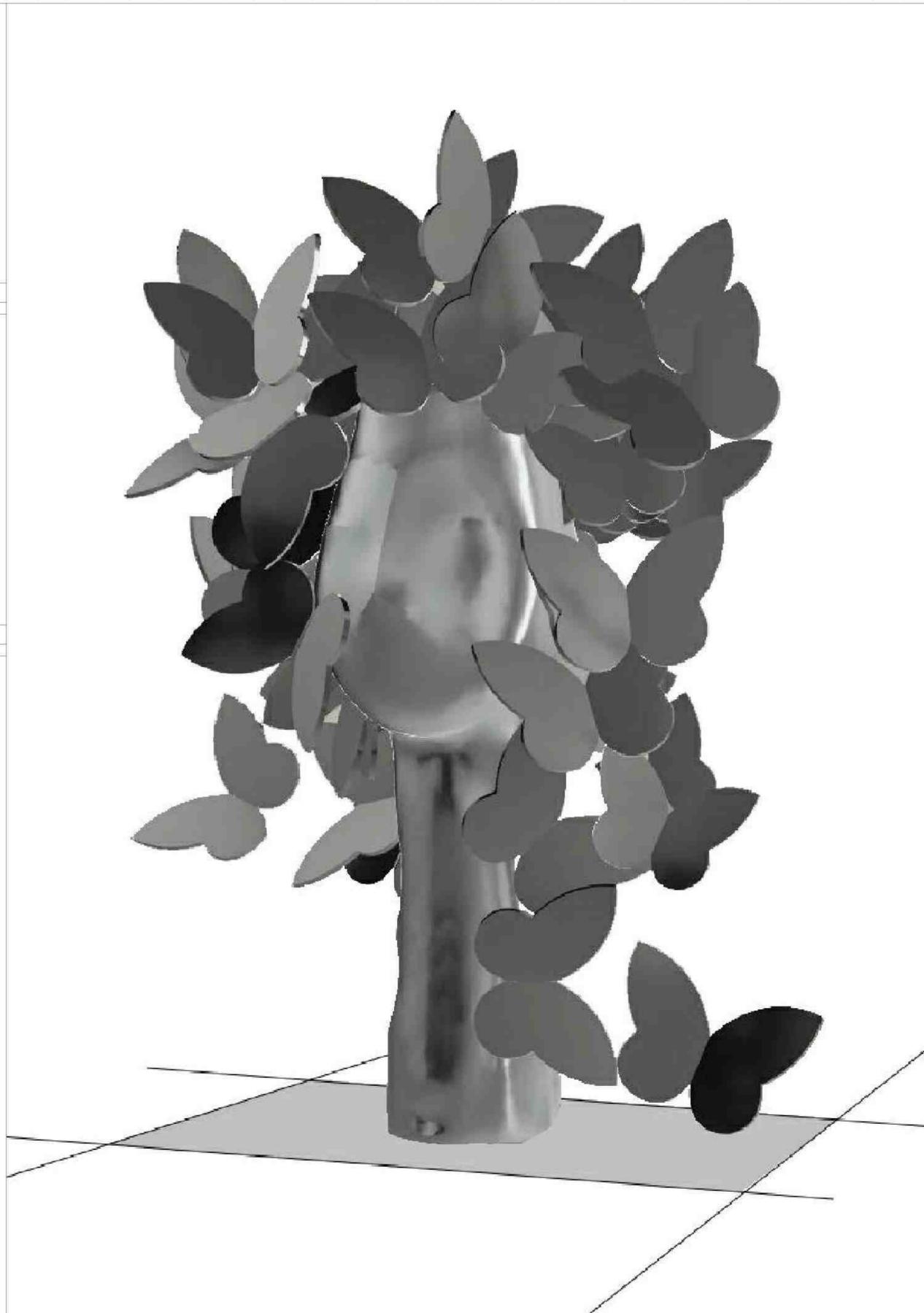


3.1 SCULPTURE / NEW PLATE DETAIL



1 SCULPTURE / STORAGE PHOTOS

2 SCULPTURE / SCHEMATIC RENDERING



RVL ARCHITECTURE + DESIGN  
13280 SW 131ST STREET, SUITE 107  
MIAMI, FLORIDA 33186  
(P) 305.529.1080 - (F) 786.227.6884



PROJECT NAME AND LOCATION:  
CITY OF FORT LAUDERDALE  
MANOLO VALDES SCULPTURE  
HUIZENGA PARK  
SCULPTURE PLACEMENT

PROPERTY OF RVL ARCHITECTURE  
FOR OFFICIAL USE ONLY  
DO NOT REMOVE THIS NOTE  
PROPERLY DESTROY DOCUMENTS WHEN NO LONGER NEEDED. GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE PRIOR TO CONSTRUCTION. GENERAL CONTRACTOR SHALL NOTIFY CPD OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION AND/OR ORDERING MATERIALS.



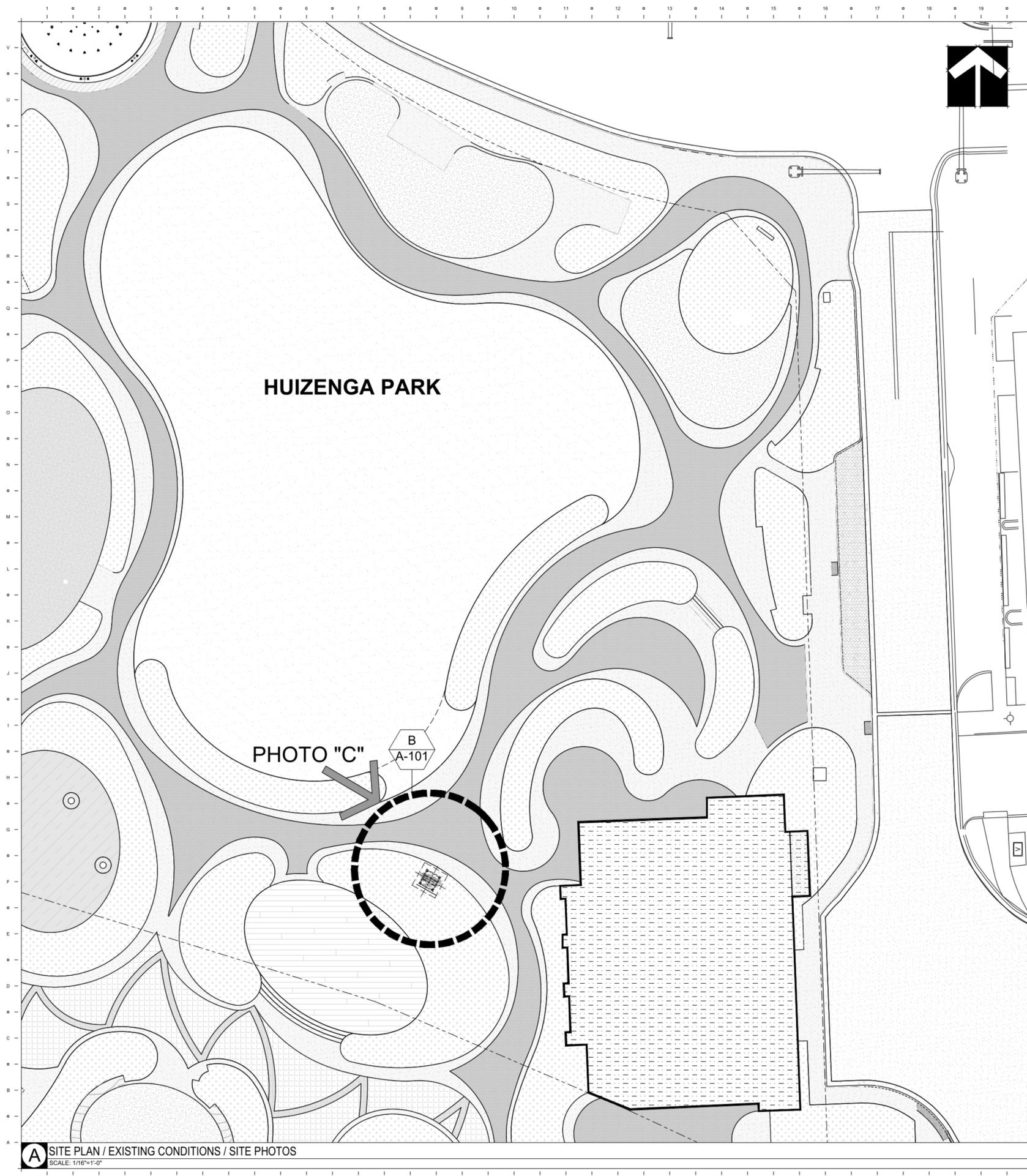
Table with columns for SUBMITTALS (NO., DATE, DESCRIPTION) and REVISIONS (NO., DATE, DESCRIPTION).

DRAWING TITLE:  
SCHEMATIC RENDERING AND PHOTOS

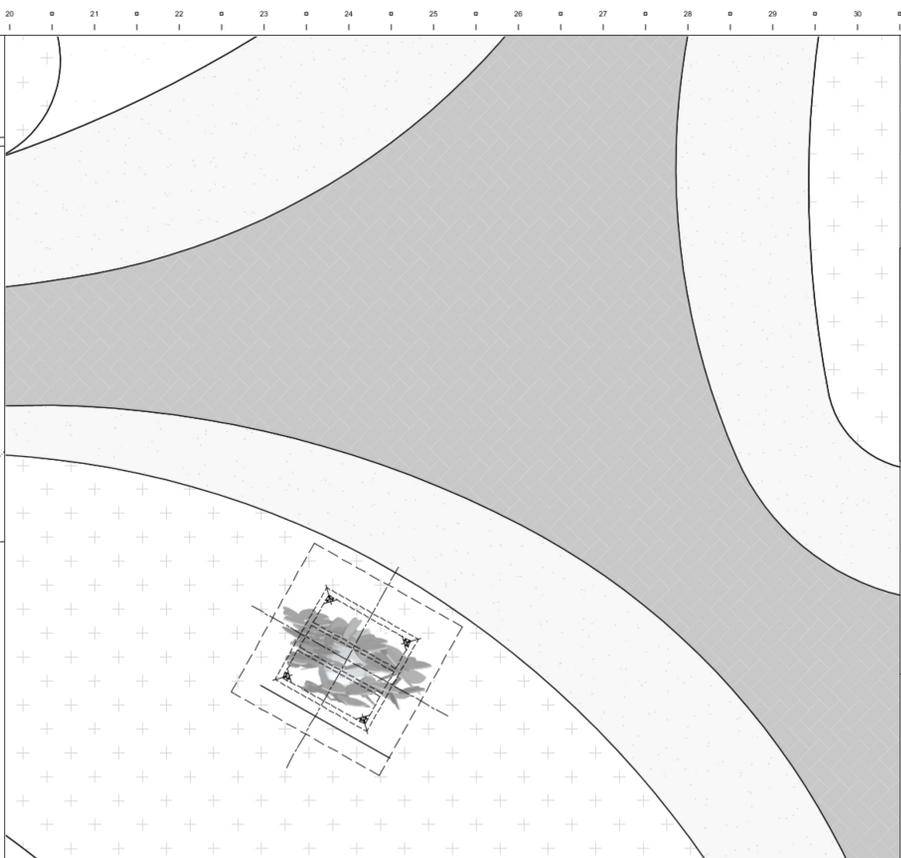
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ISSUE DATE: 12-03-2025  
DRAWN BY: EC APPROVED BY: BL  
WORK ORDER NUMBER: 2514  
SHEET NUMBER

A-004

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**A** SITE PLAN / EXISTING CONDITIONS / SITE PHOTOS  
SCALE: 1/16"=1'-0"



**B** LOCATION  
SCALE: 1/16"=1'-0"



**C** SCULPTURE LOCATION. PHOTO SITE  
SCALE: N/A



**RVL**  
ARCHITECTURE + DESIGN

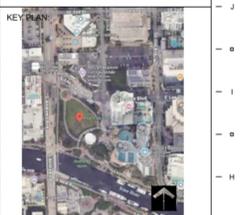
13280 SW 131ST STREET, SUITE 107  
MIAMI, FLORIDA 33186  
(P) 305.529.1080 - (F) 786.227.6884

PROJECT NAME AND LOCATION:  
CITY OF FORT LAUDERDALE

**MANOLO VALDES  
SCULPTURE**

HUIZENGA PARK  
SCULPTURE PLACEMENT

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NO.	DATE	DESCRIPTION:

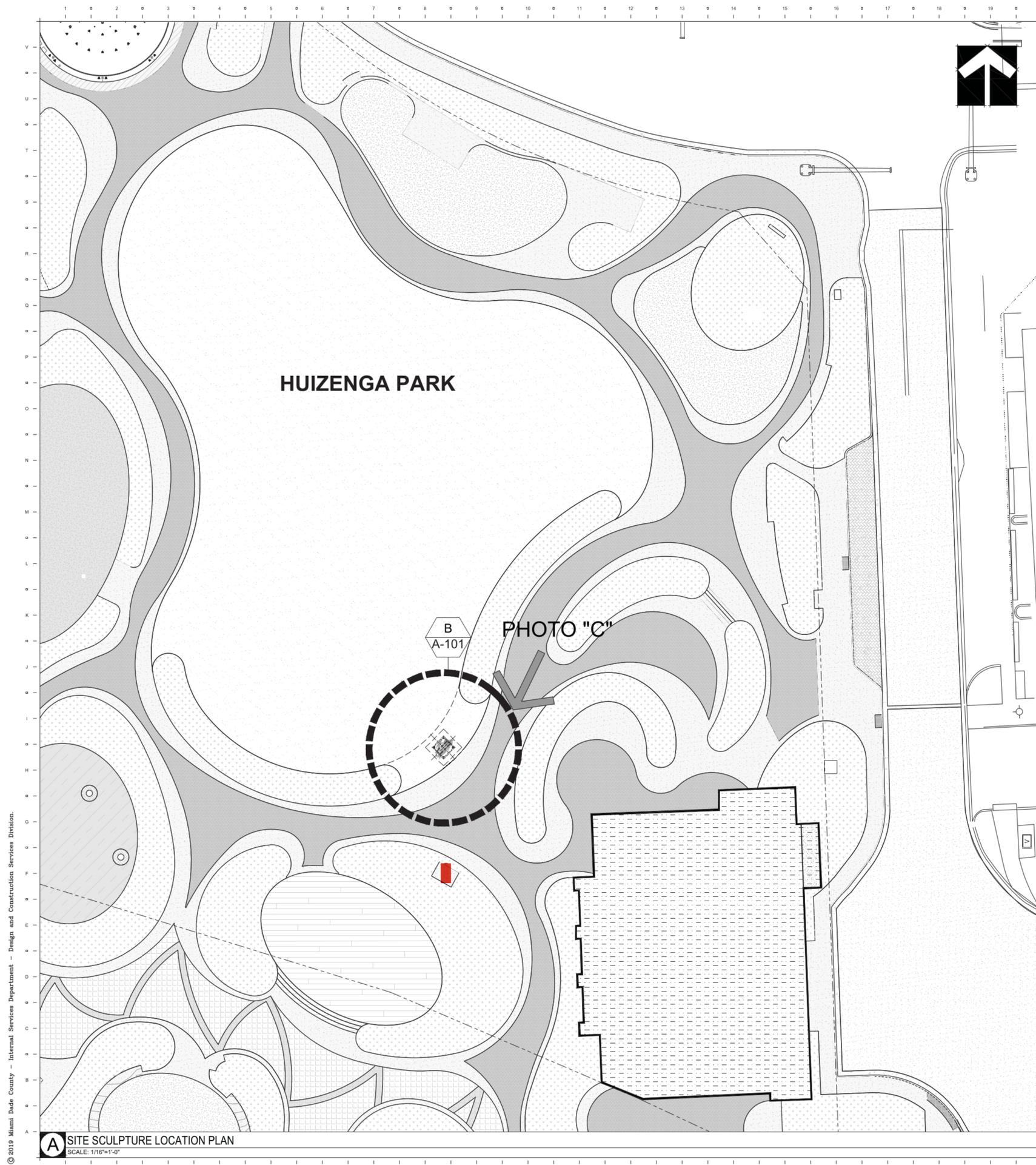
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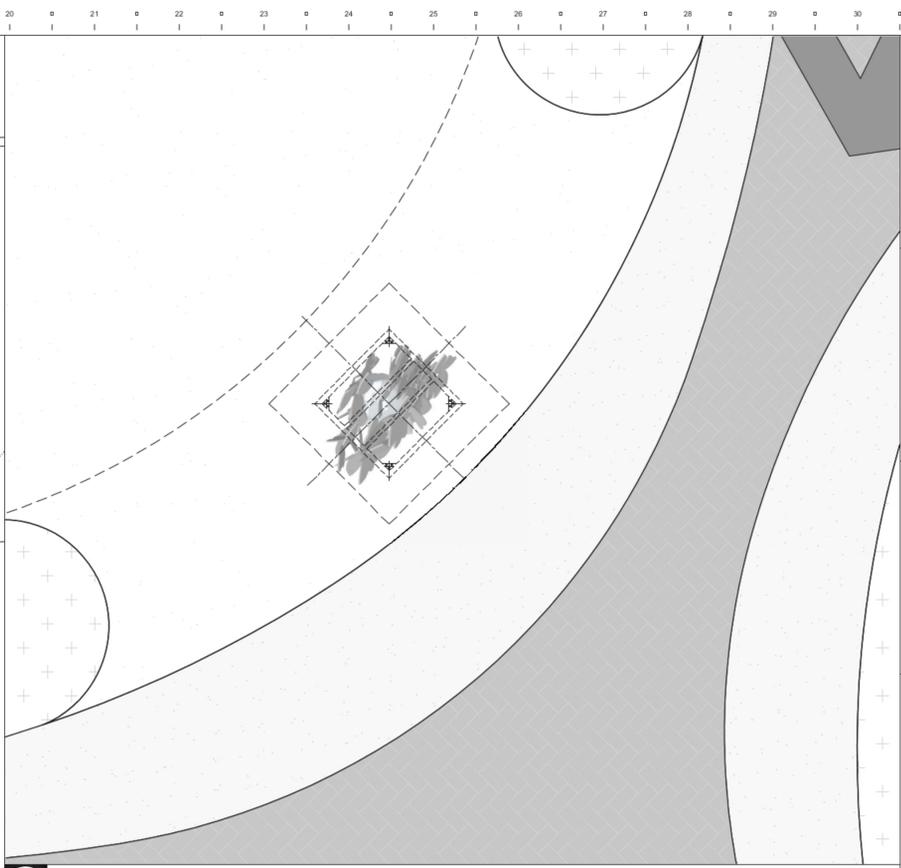
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PROJECT PHASE: PERMIT  
ISSUE DATE: 12-03-2025  
DRAWN BY: **EC** APPROVED BY: **BL**  
WORK ORDER NUMBER: **2514**  
SHEET NUMBER

**A-101**



**A** SITE SCULPTURE LOCATION PLAN  
SCALE: 1/16"=1'-0"



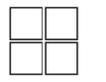
**B** SCULPTURE LOCATION DETAIL  
SCALE: 1/4"=1'-0"



**C** SCULPTURE LOCATION / SITE PHOTO  
SCALE: N/A



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ARCHITECTURE + DESIGN



13280 SW 131ST STREET, SUITE 107  
MIAMI, FLORIDA 33186  
(p) 305.529.1080 - (f) 786.227.6884



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DN: cn=Nestor Vega, email=nestor@rvl.com, ou=RVL Architecture + Design, c=US

PROJECT NAME AND LOCATION:  
CITY OF FORT LAUDERDALE



HUIZENGA PARK  
SCULPTURE PLACEMENT

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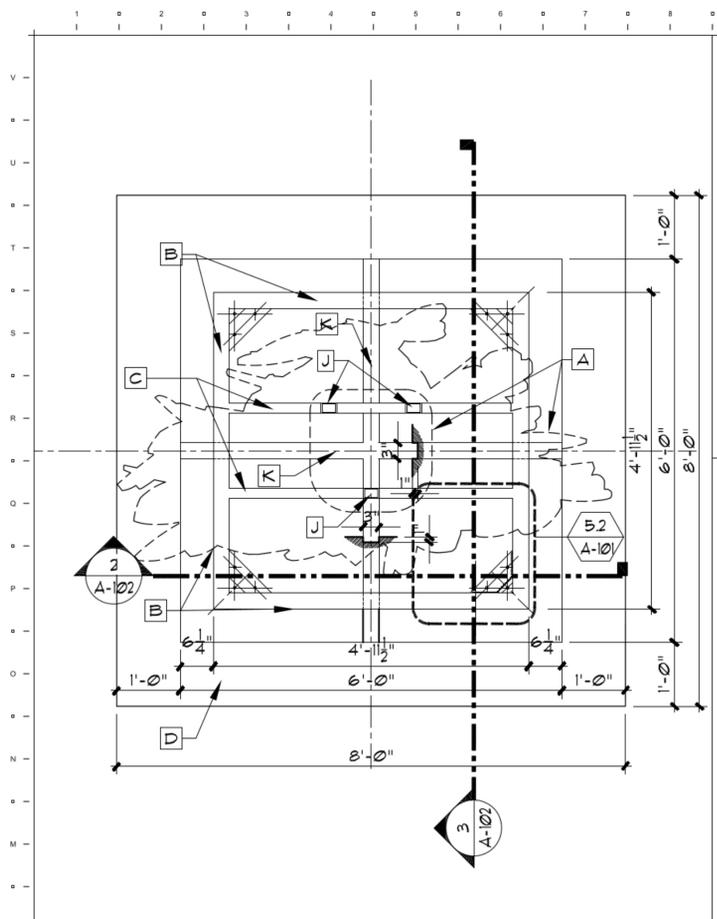
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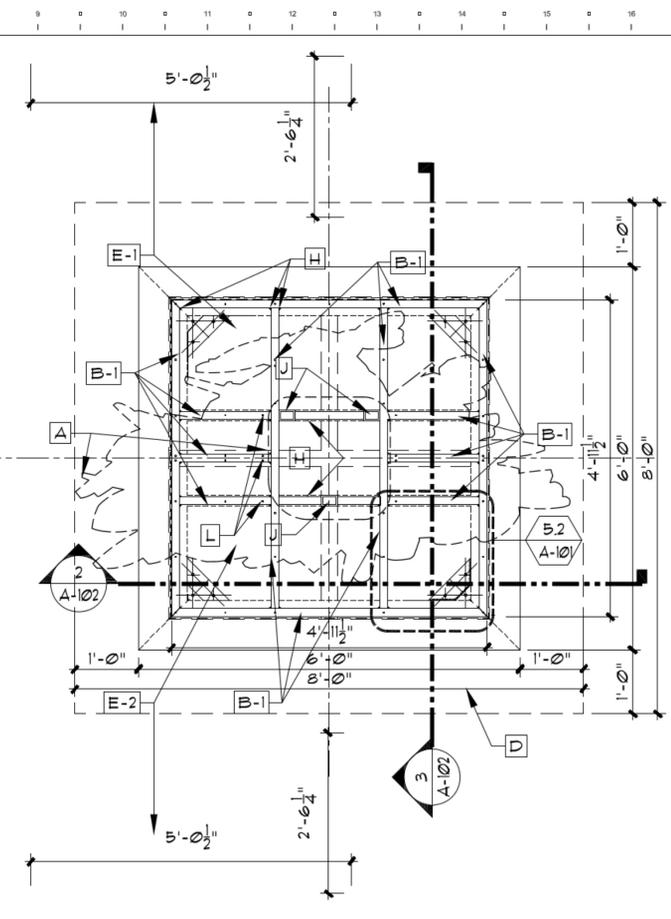
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**SITE SCULPTURE LOCATION PLAN**

PROJECT PHASE: PERMIT  
ISSUE DATE: 12-03-2025  
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WORK ORDER NUMBER: **2514**  
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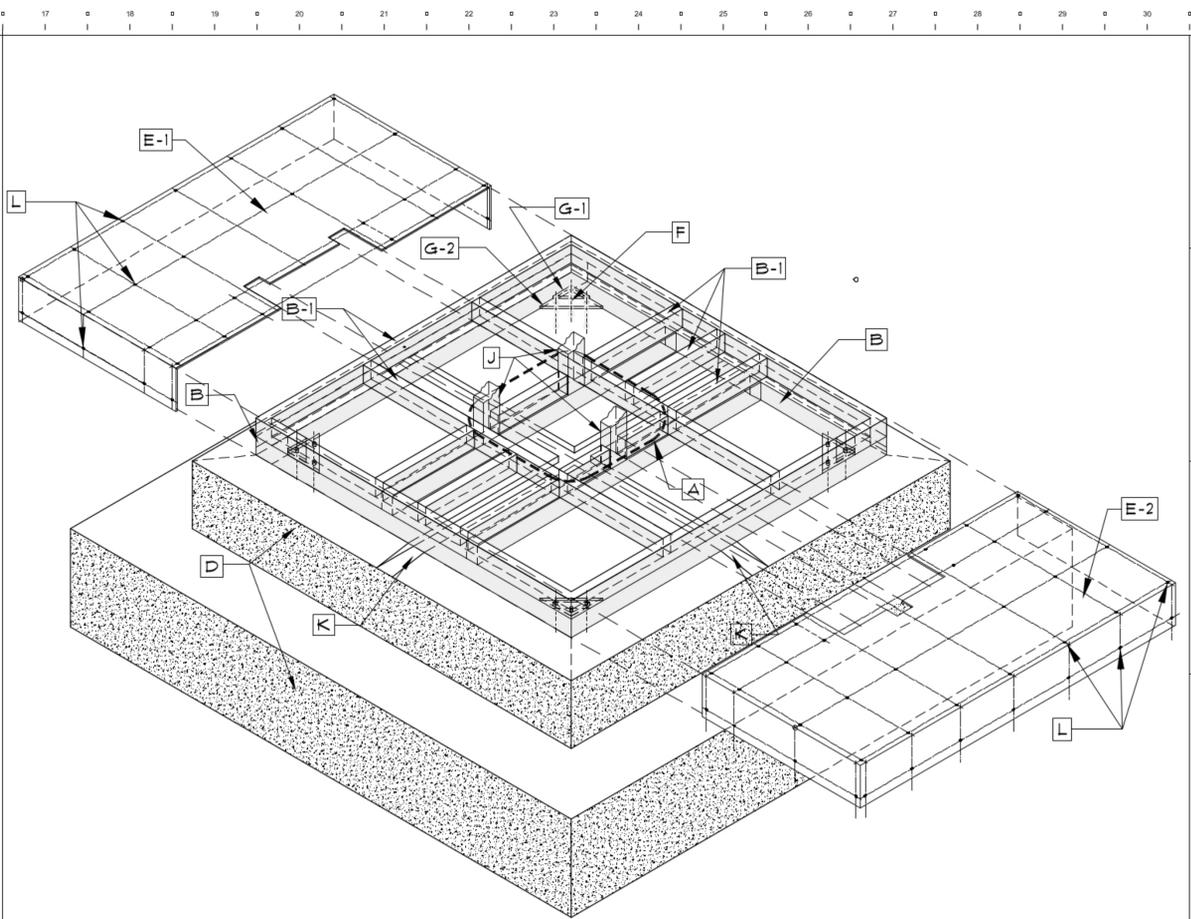
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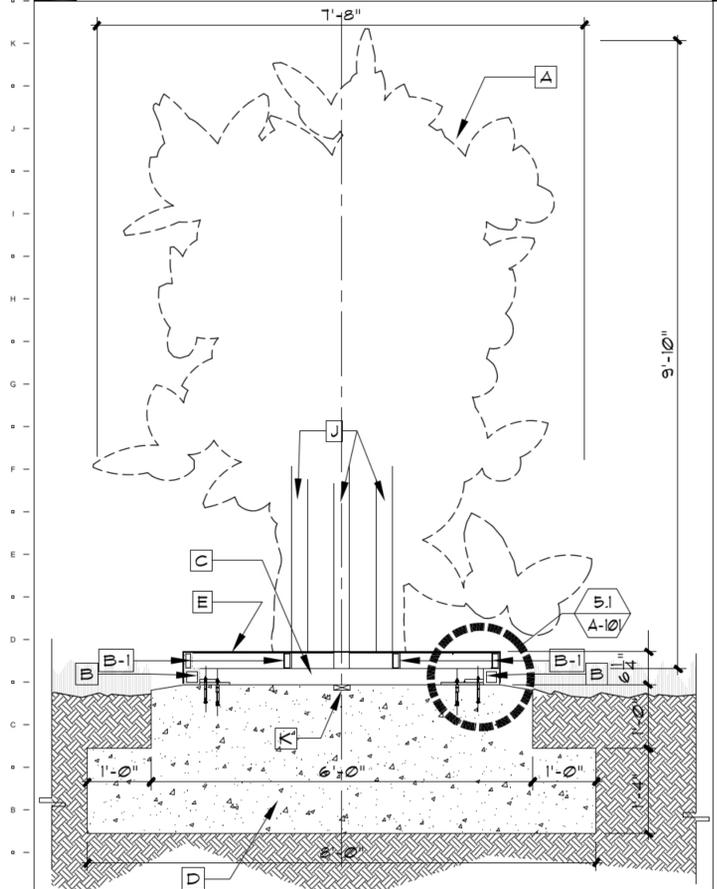
**1.1** MVS - EXISTING SCULPTURE BASE FRAMING PLATFORM  
SCALE: 3/4"=1'-0"



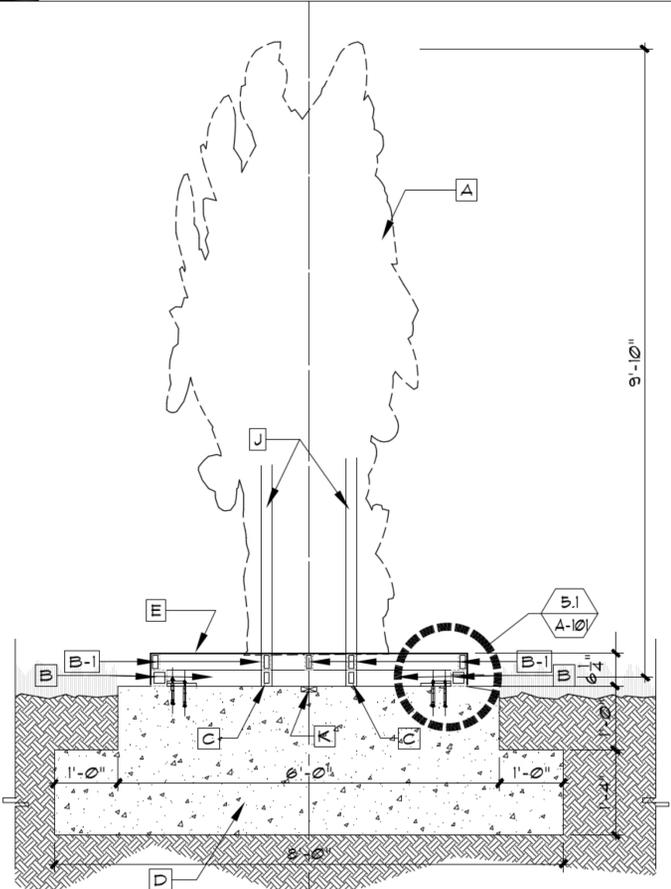
**1.2** MVS - ADDED SCULPTURE BASE COVER PLATE FRAMING MEMBERS  
SCALE: 3/4"=1'-0"



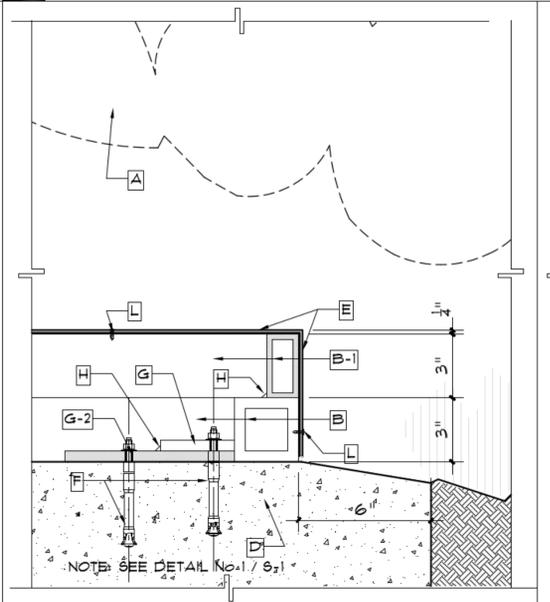
**6** MVS - CONCRETE FOOTING / ISOMETRIC  
SCALE: 3/4"=1'-0"



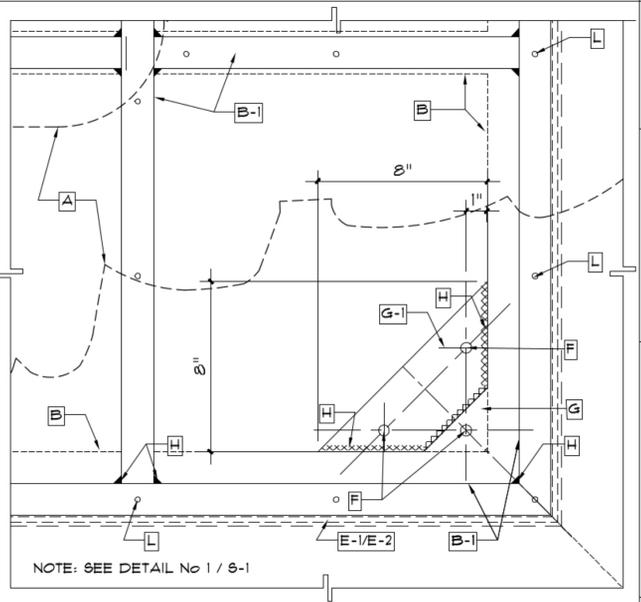
**2** MVS / SECTION  
SCALE: 3/4"=1'-0"



**3** MVS / SECTION  
SCALE: 3/4"=1'-0"



**5.1** MVS / ANCHORING SECTION DETAIL - TYPICAL  
SCALE: 3"=1'-0"



**5.2** MVS / ANCHORING DETAIL - TYPICAL  
SCALE: 3"=1'-0"

- 4** MVS / LEGEND  
SCALE: N/A
- A MANOLO VALDES SCULPTURE (MVS) OUTLINE
  - B 3" X 3" X 3/16" MVS EXISTING PLATFORM FRAME ALUMINUM TUBE
  - B-1 NEW 1-1/2" X 3" X 3/16" ALUMINUM TUBE COVER PLATE SUPPORT FRAMING
  - C 2" X 3" X 3/16" MVS EXISTING PLATFORM FRAME ALUMINUM TUBE
  - D NEW CONCRETE FOOTING MVS FOUNDATION
  - E-1 1/4" THK. ALUMINUM PLATFORM COVER PLATES 6061-T651 A51M B209
  - E-2 1/4" THK. ALUMINUM PLATFORM COVER PLATES 6061-T651 A51M B209
  - F EXPANSION BOLTS (SEE STRUCTURAL DIAG)
  - G MVS EXISTING ALUMINUM ANCHORING PLATE
  - G-1 8" X 8" X 1/2" THK. ALUMINUM ADDED TRIANGULAR BASE SUPPORT PLATE
  - H 3/16" CONTINUOUS WELD
  - J 2" X 3" VERTICAL ALUMINUM FRAMING TUBE
  - K 1" X 3" CONCRETE DRAINAGE CHANNEL @ TOP OF FOOTING
  - L 8 X 1/2" TORX PAN HEAD SELF TAPPING SS SCREW

**CITY OF FORT LAUDERDALE**

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SEAL:

PROJECT NAME AND LOCATION:  
CITY OF FORT LAUDERDALE  
HUIZENGA PARK  
SCULPTURE PLACEMENT

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KEY PLAN:

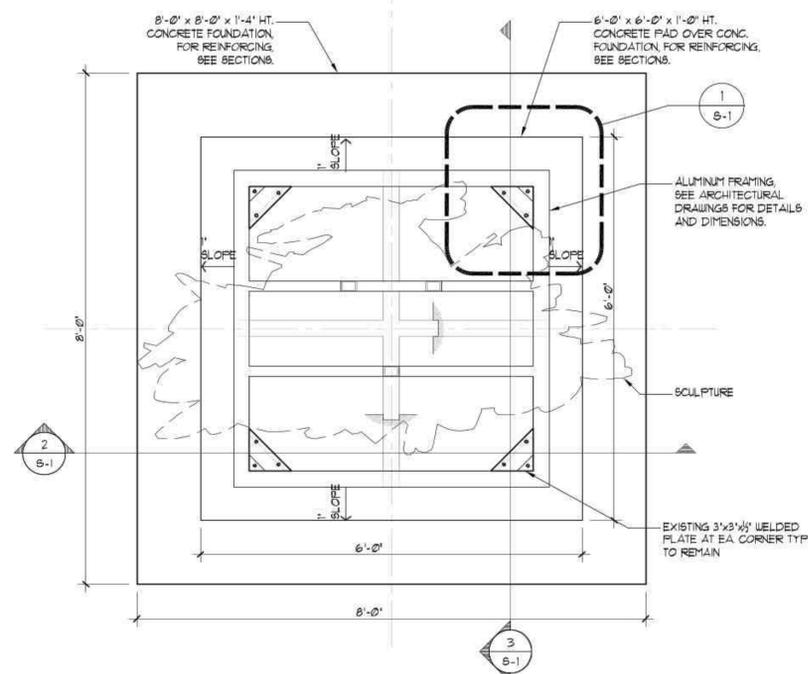
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REVISIONS	NO.	DATE	DESCRIPTION:
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DRAWING TITLE:  
SCULPTURE BASE PLAN  
SECTIONS AND DETAILS

PROJECT PHASE: PERMIT  
ISSUE DATE: 12-03-2025  
DRAWN BY: EC APPROVED BY: BL  
WORK ORDER NUMBER: 2514  
SHEET NUMBER

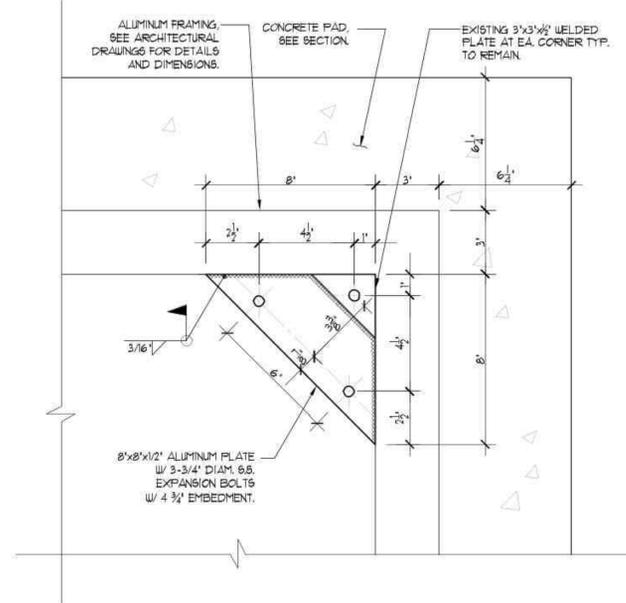
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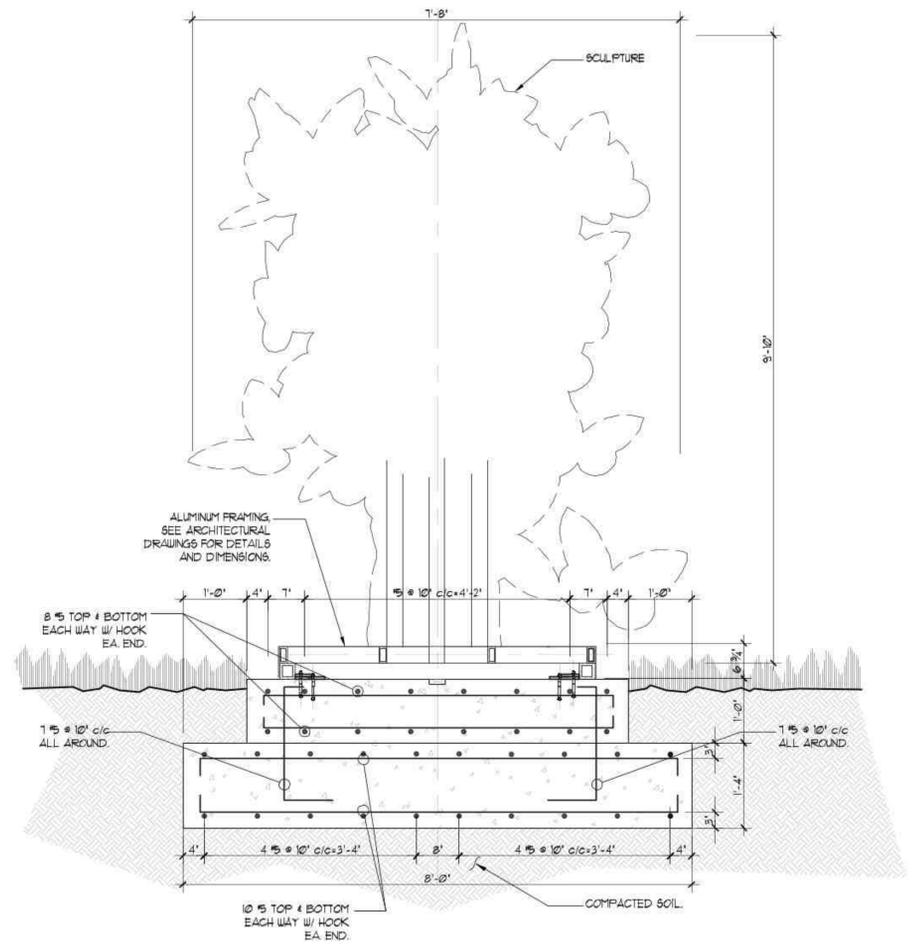
**FOUNDATION MAT PLAN**  
SCALE: 3/4"=1'-0"

**SOIL STATEMENT:**  
FOUNDATION ALLOWABLE SOIL BEARING PRESSURE:  
BASED ON SOIL REPORT BY (LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC.) DATED (JULY 27, 2022). THE FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF (2000) PSF. G.C. TO COMPLETE SOIL PREPARATIONS CONTAINED IN THE SOIL REPORT. SOIL ENGINEER TO WITNESS AND CERTIFY ALL SOIL PREPARATIONS.

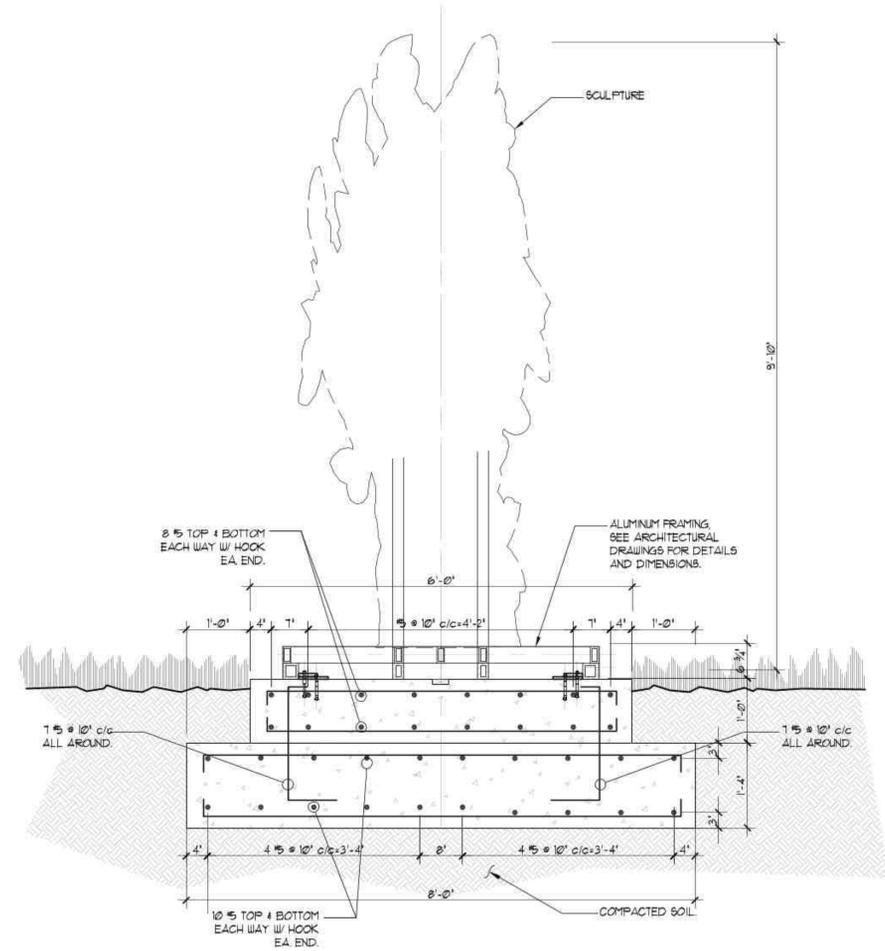
- PLAN NOTES:**
- G.C. TO FIELD VERIFY ALL DIMENSIONS BEFORE COMMENCEMENT.
  - SEE SECTIONS FOR REINFORCING AND THE LOCATION OF THE ALUMINUM PLATES ACCORDING TO THE PLAN AND THE DETAIL.



**ALUMINUM PLATE DETAIL 1**  
SCALE: 3/4"=1'-0"



**MAT SECTION 2**  
SCALE: 3/4"=1'-0"



**MAT SECTION 3**  
SCALE: 3/4"=1'-0"

**GENERAL STRUCTURAL NOTES:**

- FOUNDATION ALLOWABLE SOIL BEARING PRESSURE:**  
BASED ON SOIL REPORT BY (LANGAN ENGINEERING & ENVIRONMENTAL SERVICES, INC.) DATED (JULY 27, 2022). THE FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF (2000) PSF. G.C. TO COMPLETE SOIL PREPARATIONS CONTAINED IN THE SOIL REPORT. SOIL ENGINEER TO WITNESS AND CERTIFY ALL SOIL PREPARATIONS.
- CONCRETE:**  
ALL CONCRETE TO ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 5000 PSI IN 28 DAYS. AGGREGATES TO BE CLEAN AND WELL GRADED. MAXIMUM SIZE 3/4". CONCRETE SLUMP: 4" MIN TO 6" MAX. VERTICAL CONCRETE DROP NOT TO EXCEED 8". USE CURING COMPOUND.
- CONCRETE COVER:**  
TO BE AS FOLLOWS:  
FOOTINGS: BOTTOM 3", TOP 3", SIDES 2"
- REINFORCING STEEL:**  
TO BE NEW HIGH STRENGTH BILLET STEEL DEFORMED AS PER ASTM A-305 AND CONFORMING TO ASTM A-615 GRADE 60. LAP CONTINUOUS TOP AND BOTTOM BARS 48-BAR DIAMETERS, AT MID-SPAN FOR TOP AND AT SUPPORTS FOR BOTTOM. PROVIDE 1" BARS 30" X 30" FOR TOP AND BOTTOM BARS, AT ALL CORNERS OF ALL TIE BEAMS. HOOK DISCONTINUOUS ENDS OF ALL TOP BARS FOR STRUCTURAL BEAMS (NON TIE-BEAMS). REINFORCING STEEL TO BE DETAILED AND FABRICATED IN ACCORDANCE WITH "MANUAL OF STANDARD PRACTICE OF DETAILING REINFORCING CONCRETE STRUCTURES" AND THE ACI BUILDING CODE 318, LATEST EDITION. SUBMIT SHOP DRAWINGS FOR APPROVAL.
- DETAILS AND SECTIONS:**  
ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL, AND SHALL BE CONSTRUCTED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, UNLESS A DIFFERENT DETAIL, OR SECTION, IS SHOWN.
- GENERAL:**  
THE CONTRACTOR SHALL USE THE STRUCTURAL DRAWINGS TOGETHER WITH THE ARCHITECTURAL MECHANICAL AND ELECTRICAL DRAWINGS TO LOCATE DEPRESSIONED SLABS, SLOPES, DRAINS, OUTLETS, RECESSES, OPENINGS, REGLETS, BOLT SETTINGS, SLEEVES, DIMENSIONS, ETC.. POTENTIAL CONFLICTS SHALL BE TRANSMITTED TO THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK. CONTRACTOR TO PROVIDE ADEQUATE TIME FOR RESPONSE FROM ARCHITECT/ENGINEER.
- ANCHORING EPOXY:**  
FOR ANCHORING REINFORCING STEEL IN EXISTING CONCRETE USE HILTI EPOXY OR EQUAL. OTHER AVAILABLE EPOXIES ARE MADE BY ULTRA BOND OR RAUL. DRILL HOLES 1/8" BIGGER THAN THE DIAMETER OF THE REINFORCING STEEL (STEEL ROD). THE DEPTH OF THE HOLES ARE TO BE A MINIMUM OF 6", UNLESS OTHERWISE NOTED IN THESE PLANS, OR UNLESS OTHERWISE INSTRUCTED BY THE MANUFACTURER'S RECOMMENDATIONS.
- ALL ANCHORS:**  
ALL ANCHORS ARE TO BE STAINLESS STEEL THREADED RODS 5/16" DIAM AND NUTS TO BE ALSO STAINLESS STEEL.
- WIND DESIGN CRITERIA:**  
ALL STRUCTURAL ELEMENTS EXPOSED TO WIND, HAVE BEEN DESIGNED PER THE GUIDELINES OF THE ASCE 7-22 BUILDING CODE. FOR WIND UPLIFT ON THE ROOFS, USE ASCE 7-22 COMPONENTS AND CLADDING.  
V = 115 MPH  
I = 1.0  
GCP1 = 0.18 (w-)  
EXP'D1  
TYPE III  
KD = 0.85
- ALL DRAWINGS MUST BE PERFORMED ACCORDING TO FBC 2023.

**ALUMINUM NOTES:**

- ALL ALUMINUM SHALL BE TYPE 6061-T6 AND 2014-T6 FOR THE POSTS, UNLESS NOTED OTHERWISE (UNO).
- BOLTS & OTHER FASTENERS DIRECTLY IN CONTACT WITH ALUMINUM MEMBERS SHALL BE ALUMINUM, STAINLESS STEEL OR ELECTRO GALVANIZED STEEL.
- ALUMINUM PARTS SHALL BE WELDED WITH AN INERT-GAS SHIELDED ARC OR RESISTANCE WELDING PROCESS. FLUX WELDING IS NOT ALLOWED. FILLER ALLOYS SHALL BE AS AMERICAN WELDING SOCIETY SPECIFICATIONS AS 60.49. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS.
- DURING ERECTION, ALUMINUM STRUCTURES SHALL BE ADEQUATELY BRACED AND FASTENED TO RESIST DEAD, WIND AND ERECTION LOADS.
- ALUMINUM IN CONTACT WITH NON-COMPATIBLE METALS SUCH AS STEEL SHALL BE PROTECTED AS PER FBC 2023.8.42.
- ALUMINUM IN CONTACT WITH CONCRETE SHALL BE PROTECTED WITH AN ALKALI RESISTANT COATING.
- ALUMINUM IN CONTACT WITH WOOD SHALL BE PROTECTED WITH TWO COATS OF ALUMINUM METAL-AND-MASONRY PAINT.
- G.C. TO FIELD VERIFY ALL DIMENSIONS.

**JUAN A FERNANDEZ-BARQUIN**  
Digitally signed by JUAN A FERNANDEZ-BARQUIN  
DN: c=US, o=Unaffiliated,  
dnQualifier=A01410C0000019A2B848B4800  
043F57, cn=JUAN A FERNANDEZ-BARQUIN  
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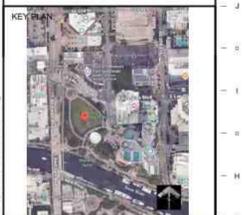


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MIAMI, FLORIDA 33186  
(P) 305.529.1080 - (F) 786.227.6884

STRUCTURAL ENGINEER:  
**JUAN FERNANDEZ-BARQUIN, P.E.**  
STRUCTURAL ENGINEER P.E. # 40114  
THRESHOLD INSPECTOR # 0947  
2520 N.W. 97TH AVENUE, SUITE #240  
DORAL, FLORIDA 33172  
PHONE: 786-336-0861, FAX: 786-336-0864  
E-MAIL: jfbarq@belsouth.net  
www.juanfernandezbarquin.com

PROJECT NAME AND LOCATION:  
**CITY OF FORT LAUDERDALE**  
**MANOLO VALDES SCULPTURE**  
HUIZENGA PARK  
SCULPTURE PLACEMENT

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NO.	DATE	DESCRIPTION

NO.	DATE	DESCRIPTION

DRAWING TITLE:  
**MANOLO VALDES SCULPTURE**  
**FOUNDATION & DETAILS**

PROJECT PHASE: PERMIT  
ISSUE DATE: 12-03-2025  
DRAWN BY: IC APPROVED BY: JFB  
WORK ORDER NUMBER: 2514  
SHEET NUMBER

**S-1**



**JUAN FERNANDEZ-BARQUIN, P.E.**  
STRUCTURAL ENGINEER \* THRESHOLD INSPECTOR \* PLANS EXAMINER

2520 NW 97<sup>th</sup> Ave, Suite 240, Doral, FL 33172  
Ph: 786-336-0881 / E-mail: jfbeng@f-m.fm

**526 NW 34<sup>TH</sup> STREET  
MIAMI, FLORIDA 33127**

**STRUCTURAL CALCULATIONS**

**12/04/2025**

**JUAN A  
FERNANDEZ  
Z-BARQUIN**

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dnQualifier=A01410C0000019A2  
B84884B00043F57, cn=JUAN A  
FERNANDEZ-BARQUIN  
Date: 2025.12.04 16:20:17 -05'00'

**TABLE OF CONTENTS**

**PAGE**

WIND LOAD DESIGN .....	1
FOUNDATION DESIGN .....	6
GEOTECHNICAL REPORT .....	12

# JFB

JUAN FERNANDEZ-BARQUIN, P.E.  
STRUCTURAL ENGINEER \* THRESHOLD INSPECTOR \* PLANS EXAMINER

PROJECT NAME 526 NW 34TH Street  
ENGINEER \_\_\_\_\_ DATE 11-2023 PAGE 1

## \* WIND LOAD Fort Lauderdale

Wind @ 170 MPH EXPOSURE: C  
ASCE 7-22 Risk - II  
INCLUDE ASD

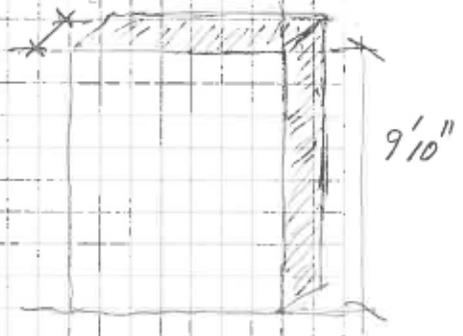
RIGID  $h = 9.84 \text{ ft}$   
 $K_d = 0.85$  width = 7.67 ft

Gust Factor  $G = 0.85$  D. of Return = 3.92 ft

$W = 3'11"$  Vertical Height of sign = 9.84 ft

$L = 7'8"$  Solidity Ratio = 1.0

Solid sign thickness of sign = 3.92 ft



# MecaWind v2422

Developed by Meca Enterprises Inc., [www.mecaenterprises.com](http://www.mecaenterprises.com), Copyright © 2025

Calculations Prepared by:

Date: Nov 20, 2025

File Location: Current Project Not Saved

2

**General:**

Wind Load Standard = ASCE 7-22	Basic Wind Speed = 170.0 mph
Exposure Classification = C	Risk Category = II
Structure Type = Solid Sign	Design Basis for Wind Pressures = ASD
Dynamic Type of Structure = Rigid	MWFRS Analysis Method = Ch 29
C&C Analysis Method = None	Base Elevation Of Structure = 0.000 ft
MWFRS Pressure Elevations = Automatic	Topographic Effects = None
Show Base Reactions in Output = None	Override Directionality Factor $K_d$ = True
Manually Specified Directionality Factor $F_a$ = 0.8500	Override the Gust Factor G = True
ctor $K_d$	
Override the Gust Factor = 0.8500	

**Solid Sign Inputs:**

h	= Height from Grade to Top of Solid Sign	= 9.840 ft
S	= Height of Solid Sign	= 9.840 ft
B	= Width of Solid Sign	= 7.670 ft
T	= Thickness of Solid Sign	= 3.920 ft
$L_r$	= Dimension of return corner $L_r$	= 1.000 ft
e	= Solidity Ratio	= 1.0000
AttachWall	= Attached to Wall	= False
Dbl	= Double Faced & All Sides Enclosed	= False
IsCol	= Supported on Columns	= False

**Exposure Constants [Table 26.11-1]:**

$\alpha$ = 3-s Gust-speed exponent = 9.800 $\hat{\alpha}$ = Recipicol of $\alpha$ = 0.102 ft $\alpha_m$ = Mean hourly Wind-Speed Exponent = 0.156 c = Turbulence Intensity Factor = 0.200	$Z_g$ = Nominal Ht of Boundary Layer = 2460.000 ft b = 3 sec gust speed factor = 1.000 $b_m$ = Mean hourly Windspeed Exponent = 0.660 e = Integral Length Scale Exponent = 0.2000
--	--

**Gust Factor Calculation for Wind:**

*\*Gust Factor Category I Rigid Structures - Simplified Method\**

G <sub>1</sub>	= For Rigid Structures (Natural Frequency > 1 Hz) use 0.85	= 0.85
----------------	--	--------

*\*Gust Factor Category II Rigid Structures - Complete Analysis\**

Z <sub>m</sub>	= Equiv Height of Struc: Max(0.6*Ht, Z <sub>min</sub> )	= 15.000 ft
I <sub>zm</sub>	= Intensity of Turbulence at height Z <sub>m</sub> : $c \cdot (33/Z_m)^{1/6}$ [Eqn 26.11-7]	= 0.228
L <sub>zm</sub>	= Integral Length Scale of Turbulence [Eqn 26.11-9]	= 427.057 ft
B	= Avg Structure Width Normal to Wind Direction	= 7.670 ft
Q	= $1 / (1 + 0.63 \cdot [(B+Ht)/L_{zm}]^{0.63})$ [Eqn 26.11-8]	= 0.960
G <sub>2</sub>	= $0.925 \cdot \{(1 + 1.7 \cdot 3.4 \cdot I_{zm} \cdot Q) / (1 + 1.7 \cdot 3.4 \cdot I_{zm})\}$	= 0.904

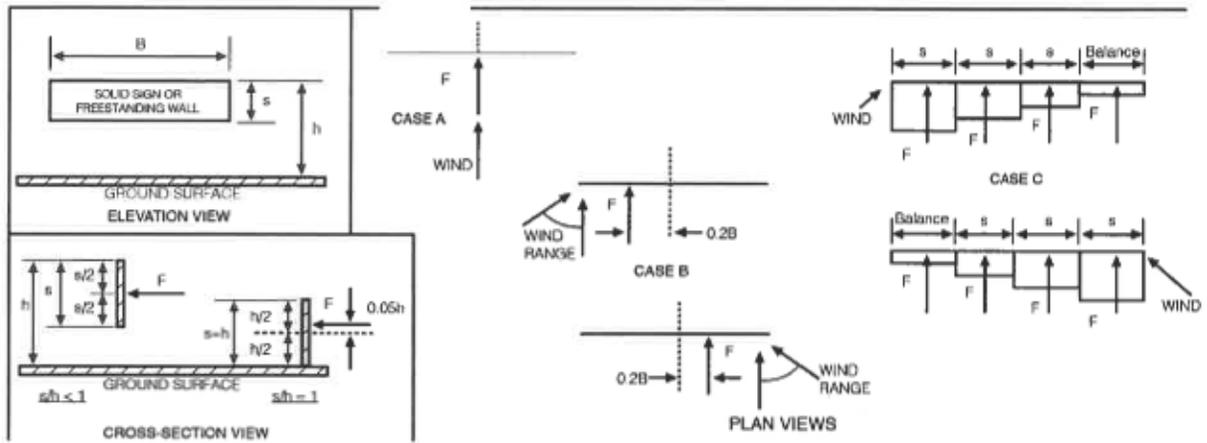
*\*Gust Factor Used in Analysis\**

G	= User has elected to override the calculated G value	= 0.850
G	= Gust Factor: Min(G <sub>1</sub> , G <sub>2</sub> )	= 0.850

**Main Wind Force Resisting System (MWFRS) Wind Calculations for Solid Sign per Sec 29.4**

h	= Mean structure height	= 9.840 ft
K <sub>z</sub>	= $2.41 \cdot (15/Z_g)^{2/\alpha}$ [Table 26.10-1]	= 0.851
K <sub>zt</sub>	= No Topographic feature specified	= 1.000
K <sub>d</sub>	= Wind Directionality Factor Manually Specified by Designer	= 0.85
+GC <sub>pi</sub>	= Positive Internal Pressure for Enclosed [Table 26.13-1]	= +0.18
-GC <sub>pi</sub>	= Negative Internal Pressure for Enclosed [Table 26.13-1]	= -0.18
LF	= Load Factor based upon ASD Design	= 0.60
q <sub>h</sub>	= $0.00256 \cdot K_h \cdot K_{zt} \cdot K_e \cdot V^2 \cdot LF$ [Eqn 26.10-1]	= 37.78 psf
K <sub>e</sub>	= Ground Elevation Factor: $e^{-0.0000362 \cdot 2g}$ [Table 26.10-1]	= 1.000

MWFRS Wind Pressures on Solid Sign per Fig 29.3-1



3

R	= Reduction factor to account for openings: $(1 - (1 - e)^{1.5})$	= 1.000
Rc	= Reduction factor for Case C since $s/h > 0.8$ : $(1.8 - s/h)$	= 0.800
As	= Gross Area of Solid Sign: $B * s$	= 75.47 ft <sup>2</sup>
B/s	= Aspect Ratio: $B / s$	= 0.779
s/h	= Clearance Ratio: $s / h$	= 1.000
Cf	= Net Force Coefficient for Case A and B per Fig 29.3-1	= 1.494
e	= Not Double Faced, Case B eccentricity is 0.2	= 0.2000

Case A: Resultant force acts normal to face through geometric center and since  $s/h = 1$  then consider force acting  $0.05*s$  above the geometric center

$0.05*s$	= Since $s/h = 1$ , load applied at vertical offset from geom center	= 0.492 ft
F	= Wind Force: $q_z * K_d * G * C_f * A_s * Q_{ty}$ [Eqn 29.3-1]	= 3078 lb

Case B: Resultant force acts normal to face at a distance from the geometric center toward the windward edge equal to  $e$  times the average width and since  $s/h = 1$  then consider force acting  $0.05*s$  above the geometric center

$0.05*s$	= Since $s/h = 1$ , load applied at vertical offset from geom center	= 0.492 ft
Dx	= Force Offset from Center toward windward edge: $e * B$	= 1.534 ft
F	= Wind Force: $q_z * K_d * G * C_f * A_s * Q_{ty}$ [Eqn 29.3-1]	= 3078 lb
F1	= Reduced Design Force: $F * R$	= 3078 lb

Case C: Since  $B/s < 2$  then Case C need not be considered

$9.84 \times 7.67 = 75.47 \text{ ft}^2$

Wind pressure:

$\frac{3078}{75.47} = 40.8 \text{ PSF}$

PROJECT NAME 526 NW 34TH Street

ENGINEER \_\_\_\_\_

DATE 11-2025

PAGE \_\_\_\_\_

4

## Foundation Design

$$\text{Wind Pressure} = 41 \text{ psf}$$

$$w = 41 \text{ psf} (7.67) = 314.5 \text{ plf} = 0.32 \text{ kcf}$$

$$M_w = \frac{1}{2} (0.32) (9.84)^2 = M_T = 15.49 \text{ k-ft}$$

$$M_v = (0.32) (9.84) \times 2 = 6.30 \text{ k-ft}$$

$$M_T = 15.49 + 6.30 = M_T = 21.79 \text{ k-ft}$$

$$S = \frac{8 \times 8^2}{6} \Rightarrow S = 85.33$$

$$f_b = \frac{M}{S} = \frac{21.79 \text{ k-ft}}{85.33 \text{ ft}^3} \Rightarrow f_b = \pm 0.26 \text{ ksf}$$

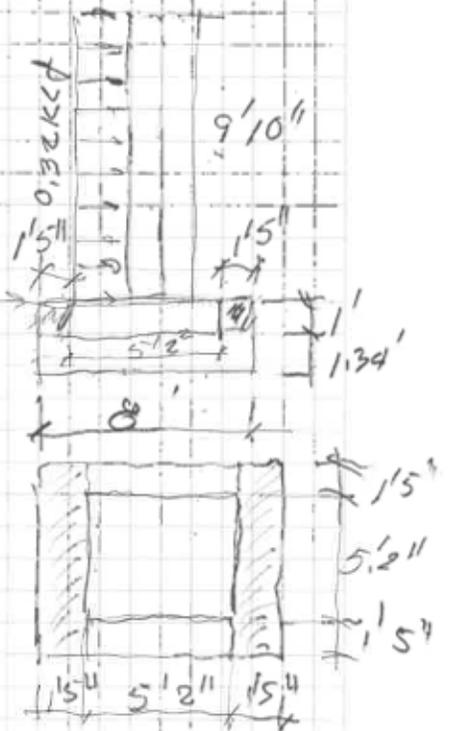
$$D = 1.8 \text{ k} + \frac{144 (8.0 \times 8.0) \times 1.34}{1000} + \frac{144 (5.16 \times 5.16) \times 1}{1000}$$

$$D_{\text{conc}} = 1.8 + 12.39 + 3.83 = 17.97 \text{ k}$$

$$D_{\text{soil}} = \frac{100 (8.0 + 8.0) \times 1.42 \times 1}{1000} + \frac{100 (5.16 + 5.16) \times 1.42 \times 1}{1000}$$

$$D_{\text{soil}} = 2.72 \text{ k} + 1.61 = D_{\text{soil}} = 4.33 \text{ k}$$

$$D = 17.97 + 4.33 \Rightarrow D = 22.3 \text{ k}$$



# JFB

JUAN FERNANDEZ-BARQUIN, P.E.  
STRUCTURAL ENGINEER \* THRESHOLD INSPECTOR \* PLANS EXAMINER

PROJECT NAME \_\_\_\_\_

ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_ PAGE 5

$$f_b = 0.6D + 0.6W$$

$$f_b = \frac{0.6(22.3) + 0.26}{8 \times 8 (0.21)} = \begin{matrix} 0.47 \\ -0.05 \end{matrix}$$

allowable soil bearing = 1.5 ksf

$$e = \frac{21.79 \text{ k} - h}{13.38} = 1.63 \text{ ft}$$

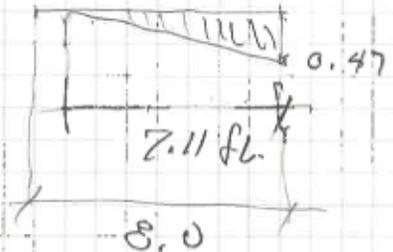
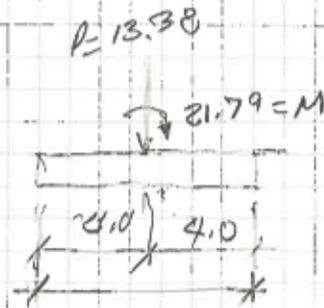
$$q = \left(\frac{8}{2} - 1.63\right) \times 3 = 7.11 \text{ ft}$$

$$P = \frac{1}{2} f_b \times q \times b$$

$$f_b = \frac{2(P)}{q \times b} = \frac{2 \times 13.38}{7.11 \times 8} \Rightarrow f_b = 0.47$$

$$\text{overturning} = \frac{P \times e}{M}$$

$$\text{overf} = \frac{13.38 \times 1.63}{21.79} = 2.45 > 1.67 \text{ OK}$$





JUAN FERNANDEZ-BARQUIN, P.E.  
 STRUCTURAL ENGINEER \* THRESHOLD INSPECTOR \* PLANS EXAMINER

PROJECT NAME 526 NW 34TH STREET Fort Lauderdale  
 ENGINEER \_\_\_\_\_ DATE 11-2025 PAGE 6

\* CONNECTION DESIGN

$5.17 - 0.5 - 0.5 = 4.17$

$T = C = \frac{M}{d} = \frac{21.79}{4.17} = 5.23$

$V = 0.32 \times 9.84 = 3.15$

$T = C \text{ per Bolt} = \frac{5.23 \text{ k}}{4} = 1.31 \text{ k} = 1310 \# \text{ PER EXPANSION Bolt}$

$V \text{ per Bolt} = \frac{3.15}{8} = 0.40 \text{ k PER EXPANSION Bolt}$

try  $\frac{3}{4}$ " Diam stainless steel Expansion Bolt (normal concrete)

$f'_c = 4000 \text{ psi}$  embedment  $4 \frac{3}{4}$ "  
 allowable tension = 3870 #  
 allowable shear = 5645 #

$f_{nv} = 0.62$  (spacing)  
 $f_{rn} = 0.81$  (edge distance)

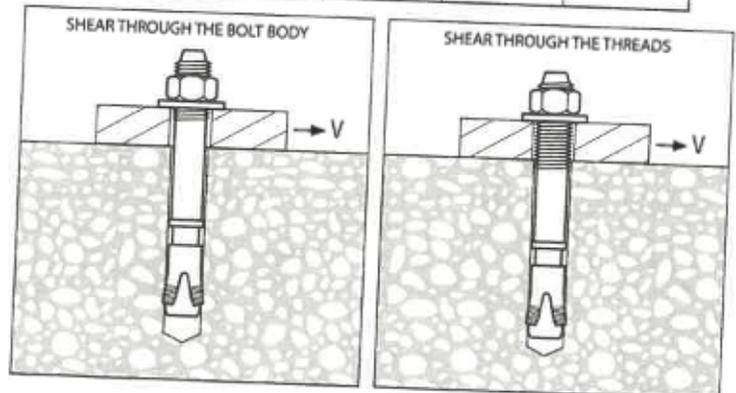
allowable tension =  $3870 \# \times 0.62 \times 0.81 = 1949 \#$   
 $1949 > 1310 \#$

# Kwik Bolt 3 Expansion Anchor 4.3.5

**Table 4 - Stainless Steel Kwik Bolt 3 Allowable Loads in Normal-Weight Concrete<sup>1</sup>**

Anchor Diameter in. (mm)	Embedment Depth in. (mm)	$f'_c = 2000$ psi (13.8 MPa)		$f'_c = 3000$ psi (20.7 MPa)		$f'_c = 4000$ psi (27.6 MPa)		$f'_c = 6000$ psi (41.4 MPa)	
		Tension lb (kN)	Shear <sup>2</sup> lb (kN)						
1/4 (6.4)	1-1/8 (29)	260 (1.2)	595 (2.6)	320 (1.4)	675 (3.0)	380 (1.7)	725 (3.2)	470 (2.1)	805 (3.6)
	2 (51)	540 (2.4)	675 (3.0)	625 (2.8)		705 (3.1)	805 (3.6)	910 (4.0)	
	3 (76)	685 (3)		750 (3.3)		810 (3.6)		910 (4.0)	
3/8 (9.5)	1-5/8 (41)	605 (2.7)	880 (3.9)	670 (3.0)	1110 (4.9)	730 (3.2)	1345 (6.0)	950 (4.2)	1690 (7.5)
	2-1/2 (64)	1285 (5.7)	1655 (7.4)	1430 (6.4)	1655 (7.4)	1575 (7.0)	1870 <sup>3</sup> (8.3)	1940 (8.6)	1870 <sup>3</sup> (8.3)
	3-1/2 (89)	1620 (7.2)		1755 (7.8)		1885 (8.4)		2035 (9.1)	
1/2 (12.7)	2-1/4 (57)	1015 (4.5)	1875 (8.3)	1230 (5.5)	2130 (9.5)	1450 (6.4)	2380 (10.6)	1620 (7.2)	2740 (12.2)
	3-1/2 (89)	1445 (6.4)	3170 <sup>3</sup> (14.1)	1975 (8.8)	3170 <sup>3</sup> (14.1)	2510 (11.2)	3580 <sup>4</sup> (15.9)	2655 (11.8)	3580 <sup>4</sup> (15.9)
	4-3/4 (121)	1990 (8.9)		2250 (10.0)		2510 (11.2)		2985 (13.3)	
5/8 (15.9)	2-3/4 (70)	1650 (7.3)	2875 (12.8)	1755 (7.8)	3485 (15.5)	1860 (8.3)	4095 (18.2)	2335 (10.4)	4870 (21.7)
	4 (102)	2455 (10.9)	4870 (21.7)	2900 (12.9)	4870 (21.7)	3340 (14.9)	4870 (21.7)	4395 (19.5)	
	5-1/2 (140)	3480 (15.5)		3885 (17.3)		4290 (19.1)		6260 (27.8)	
3/4 (19.1)	3-1/4 (83)	1550 (6.9)	3945 (17.5)	1950 (8.7)	4260 (18.9)	2350 (10.5)	5645 (25.1)	2610 (11.6)	5645 (25.1)
	4-3/4 (121)	2510 (11.2)	5535 (24.6)	3250 (14.5)	5535 (24.6)	3870 (17.2)		4670 (20.8)	
	6-1/2 (165)	2930 (13.0)		3870 (17.2)		4530 (20.2)		5120 (22.8)	
1 (25.4)	4-1/2 (114)	3120 (13.9)	6080 (27.0)	3870 (17.2)	6770 (30.1)	4610 (20.5)	7420 (33.2)	4800 (21.4)	7470 (33.2)
	6 (152)	4400 (19.6)	7470 (33.2)	6400 (28.5)	7470 (33.2)	7200 (32.0)		7330 (32.6)	
	9 (229)	5600 (24.9)		8000 (35.6)		9390 (41.8)		9390 (41.8)	

- Intermediate load values for other concrete strengths and embedments can be calculated by linear interpolation.
- Unless otherwise noted, values shown are valid for the shear plane acting through either the anchor body or the anchor threads.
- Values shown are for a shear plane through the anchor body. When the shear plane is acting through the the anchor threads, reduce the shear value by 5%.
- Values shown are for a shear plane through the anchor body. When the shear plane is acting through the the anchor threads, reduce the shear value by 15%.



### 4.3.5 Kwik Bolt 3 Expansion Anchor

#### Influence of Edge Distance and Anchor Spacing on Anchor Performance

Load Adjustment Factors for 5/8 in. Diameter Anchors									
Adjustment Factor 5/8 in.	Spacing Tension $f_{AN}$		Edge Distance Tension, $f_{AN}$		Spacing Shear $f_{AN}$		Edge Distance Shear		
	$c \geq 4$	$c < 4$	$s \geq 4$	$s < 4$	$c \geq 4$	$c < 4$	I. toward edge $f_{RV1}$	II. to edge $f_{RV2}$	I. away from edge $f_{RV3}$
Embedment Depth, in.	2-3/4	$\geq 4$	2-3/4	$\geq 4$	2-3/4	$\geq 4$	$\geq 2-3/4$	$\geq 2-3/4$	$\geq 2-3/4$
Spacing (in.)	2-3/4	0.60	0.80	0.90	0.90	0.90			
	3-1/2	0.69	0.87	0.92	0.92	0.92			
	4	0.75	0.60	0.92	0.80	0.94	0.90		
	4-1/4	0.77	0.62	0.95	0.82	0.94	0.91	0.52	0.61
	4-3/4	0.83	0.66	1.00	0.85	0.96	0.92	0.58	0.66
	5-1/2	0.92	0.72	0.90	0.98	0.93	0.67	0.73	0.89
	6	0.98	0.76	0.93	0.99	0.94	0.73	0.78	0.91
	6-1/4	1.00	0.78	0.95	1.00	0.95	0.76	0.81	0.92
	7		0.84	1.00		0.96	0.85	0.88	0.95
	7-1/2		0.88			0.97	0.91	0.93	0.97
	7-3/4		0.90			0.98	0.94	0.95	0.98
	8-1/2		0.96			0.99	1.00	1.00	1.00
	9		1.00						

Load Adjustment Factors for 3/4 in. Diameter Anchors									
Adjustment Factor 3/4 in.	Spacing Tension $f_{AN}$		Edge Distance Tension, $f_{AN}$		Spacing Shear $f_{AN}$		Edge Distance Shear		
	$c \geq 4-3/4$	$c < 4-3/4$	$s \geq 4-3/4$	$s < 4-3/4$	$c \geq 4-3/4$	$c < 4-3/4$	I. toward edge $f_{RV1}$	II. to edge $f_{RV2}$	I. away from edge $f_{RV3}$
Embedment Depth, in.	3-1/4	$\geq 4-3/4$	3-1/4	$\geq 4-3/4$	3-1/4	$\geq 4-3/4$	$\geq 3-1/4$	$\geq 3-1/4$	$\geq 3-1/4$
Spacing (in.)	3-3/8	0.61	0.81	0.90	0.90	0.90			
	4	0.67	0.86	0.92	0.92	0.92			
	5	0.77	0.62	0.94	0.81	0.94	0.90	0.51	0.61
	5-3/4	0.85	0.67	1.00	0.86	0.96	0.92	0.59	0.67
	6-1/4	0.90	0.70	0.88	0.97	0.93	0.64	0.71	0.88
	6-1/2	0.92	0.72	0.90	0.98	0.93	0.67	0.73	0.89
	7	0.97	0.75	0.93	0.99	0.94	0.72	0.77	0.90
	7-1/2	1.00	0.79	0.95	1.00	0.95	0.77	0.82	0.92
	8-1/4		0.84	1.00		0.96	0.85	0.88	0.95
	9		0.89			0.97	0.92	0.94	0.97
	9-3/4		0.94			0.98	1.00	1.00	1.00
	10-1/4		0.97			0.99			
	10-3/4		1.00			1.00			

Load Adjustment Factors for 1 in. Diameter Anchors									
Adjustment Factor 1 in.	Spacing Tension $f_{AN}$		Edge Distance Tension, $f_{AN}$		Spacing Shear $f_{AN}$		Edge Distance Shear		
	$c \geq 6$	$c < 6$	$s \geq 6$	$s < 6$	$c \geq 6$	$c < 6$	I. toward edge $f_{RV1}$	II. to edge $f_{RV2}$	I. away from edge $f_{RV3}$
Embedment Depth, in.	4-1/2	$\geq 6$	4-1/2	$\geq 6$	4-1/2	$\geq 6$	$\geq 4-1/2$	$\geq 4-1/2$	$\geq 4-1/2$
Spacing (in.)	4-1/2	0.60	0.80	0.90	0.90	0.90			
	6	0.71	0.60	0.89	0.80	0.93	0.90		
	7	0.78	0.65	0.95	0.84	0.94	0.91	0.52	0.61
	8	0.85	0.71	1.00	0.89	0.96	0.93	0.59	0.67
	9	0.92	0.76	0.93	0.98	0.94	0.67	0.73	0.89
	9-3/4	0.97	0.80	0.97	0.99	0.95	0.72	0.78	0.91
	10-1/4	1.00	0.83	0.99	1.00	0.96	0.76	0.81	0.92
	11-1/4		0.88	1.00		0.97	0.83	0.87	0.94
	11-5/8		0.90			0.98	0.86	0.89	0.95
	12-1/2		0.95			0.99	0.93	0.94	0.97
	13		0.97			0.99	0.96	0.97	0.99
	13-1/2		1.00			1.00	1.00	1.00	1.00
	14-3/4								

Standard Anchor Embedments (in.)		
5/8	$h_{min}$	2-3/4
	$h_{nom}$	4
	$h_{deep}$	5-1/2
3/4	$h_{min}$	3-1/4
	$h_{nom}$	4-3/4
	$h_{deep}$	6-1/2 <sup>1</sup>
1	$h_{min}$	4-1/2
	$h_{nom}$	6
	$h_{deep}$	9

<sup>1</sup> Embedment depth shown reflects embedment for carbon steel anchor, deep embedment depth for stainless steel anchor is 8 inch.

Note: Tables apply for listed embedment depths. Reduction factors for other embedment depths must be calculated using equations below.

**Spacing — Tension**

$$f_{AN} = \frac{s/h_{act} + 0.88}{3.13} \quad \text{for } h_{min} \leq h_{act} \leq h_{nom}$$

$$f_{AN} = \frac{s/h_{nom} + 0.88}{3.13} \quad \text{for } h_{act} \geq h_{nom}$$

**Edge Distance — Tension**

$$f_{AN} = \frac{c/h_{act} + 2}{3.75} \quad \text{for } h_{min} \leq h_{act} \leq h_{nom}$$

$$f_{AN} = \frac{c/h_{nom} + 2}{3.75} \quad \text{for } h_{act} \geq h_{nom}$$

**Spacing — Shear**

$$f_{AN} = \frac{s/h_{act} + 10.25}{12.5} \quad \text{for } h_{min} \leq h_{act} \leq h_{nom}$$

$$f_{AN} = \frac{s/h_{nom} + 10.25}{12.5} \quad \text{for } h_{act} \geq h_{nom}$$

**Edge Distance — Shear**

$h_{act} \geq h_{min}$

perpendicular toward edge

$$f_{RV1} = \frac{c}{3h_{min}}$$

parallel to edge

$$f_{RV2} = \frac{c/h_{min} + 0.75}{3.75}$$

perpendicular away from edge

$$f_{RV3} = \frac{c/h_{min} + 5.82}{8.82}$$

Note: Edge distance and anchor spacing for all light-weight and sand-lightweight concrete are obtained by dividing the normal-weight dimensions by 0.75 and 0.85 respectively.

PROJECT NAME 526 NW 34TH Street Port Lauderdale  
 ENGINEER \_\_\_\_\_ DATE 12-2025 PAGE 9

\* CONNECTION DESIGN  
ALUMINUM PLATE DESIGN

tension per plate =  $\frac{M}{d} = \frac{21.79 \text{ k-ft}}{4.17 \text{ ft}} = 5.23 \text{ k per Row}$

there are 2 plates per row

$\frac{5.23}{2} = 2.62 \text{ k}$

$A_{pl} = 35.4 \text{ in}^2$

plate  $\frac{1}{2}$ "

$f_b = \frac{2.62 \text{ k}}{35.4} = 0.074 \text{ k si}$

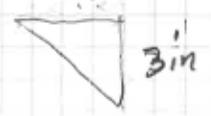
$M = \frac{1}{8} (0.074) 6^2 \Rightarrow M < 0.333 \text{ k-in}$

$S = \frac{1 \times 0.5^2}{6} = 0.041$

$f_b = \frac{M}{S} = \frac{0.333 \text{ k-in}}{0.041 \text{ in}^3} \Rightarrow f_b = 8.12 \text{ k si}$

allowable = 9.1 k si > 8.12 k si OK

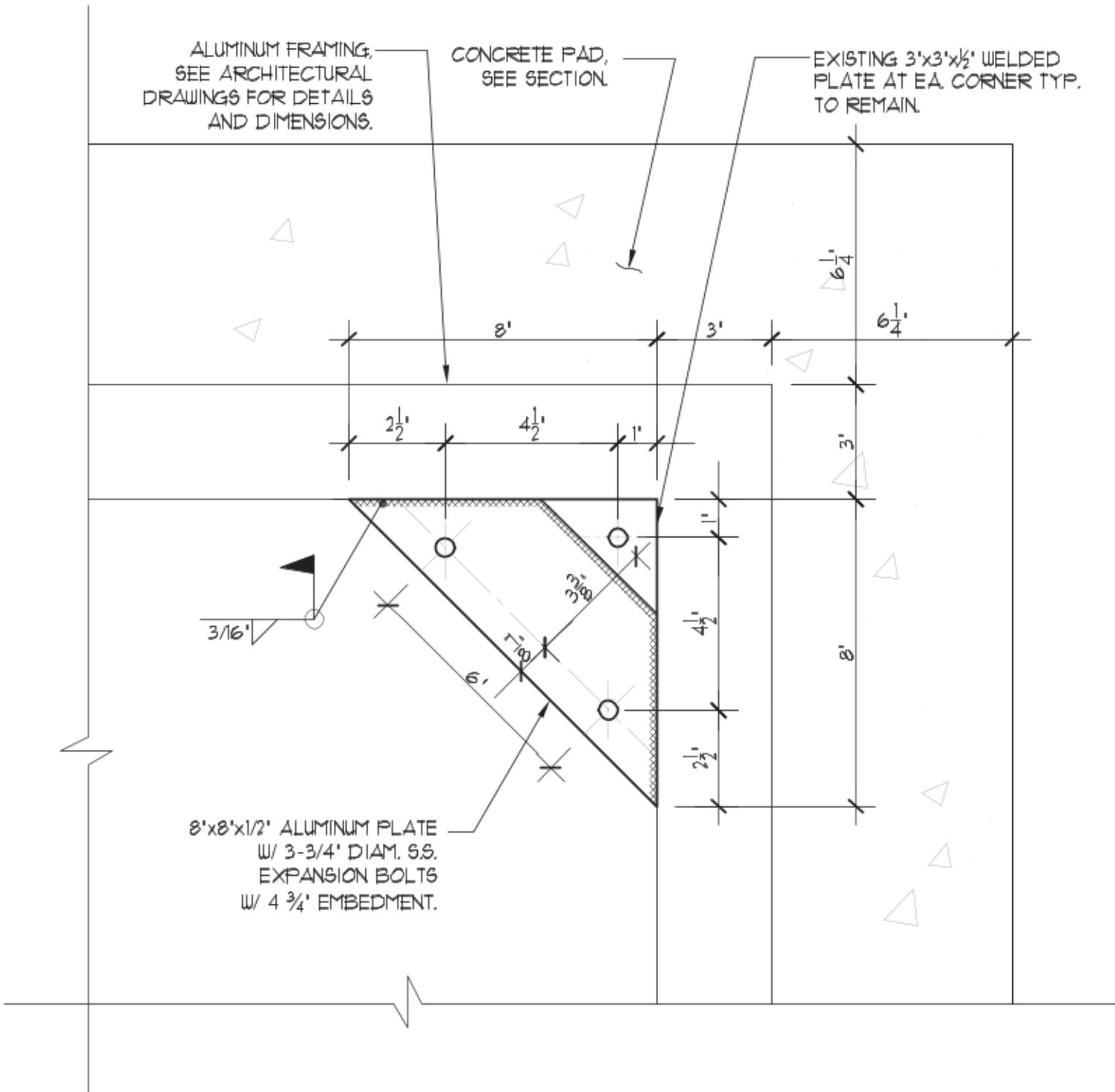
$R = \sqrt{3^2 + 3^2}$   
 $R = 4.24 \text{ in}$



$V_{allow} = \frac{3}{16} \times 9.707 \text{ ksi} = 0.73 \text{ k per in}$

$V_{allow} = 0.73 \text{ k} \times 4.24 \text{ in} = 3.10 \text{ k}$

$\frac{3.15}{4 \text{ plates}} = 0.79 \text{ k per plate}$       $3.10 \text{ k} > 0.79 \text{ k}$



# ALUMINUM PLATE DETAIL

SCALE: 3' = 1'-0'

1  
S-1

**Table 2-18W**  
**ALLOWABLE STRESSES  $F/\Omega$  (k/in<sup>2</sup>) FOR BUILDING-TYPE STRUCTURES (WELDED)**

	Section	$F/\Omega$	6061 - T6	B209 0.010 to 4.000 in. thick
<u>Axial Tension</u>			6061 - T651	B209 0.010 to 4.000 in. thick
axial tension stress on net effective area	D.2b	12.3	6061 - T6	B210 0.025 to 0.500 in. thick
axial tension stress on gross area	D.2a	9.1	6061 - T6	B211 0.125 to 8.000 in. thick
<u>Shear or torsion</u>			6061 - T651	B211 0.125 to 8.000 in. thick
Shear or torsion rupture	G, H.2	7.4	6061 - T6	B632 0.010 to 0.625 in. thick
<u>Bearing</u>			$F_{tyw} =$	15 k/in <sup>2</sup>
bolts or rivets on holes	J.3.6a, J.4.6	24.6	$F_{cyw} =$	15 k/in <sup>2</sup>
bolts on slots, pins on holes, flat surfaces	J.3.6b, J.6.5, J.8	16.4	$F_{tuw} =$	24 k/in <sup>2</sup>
screws in holes	J.5.5.1	16.0	$E =$	10,100 k/in <sup>2</sup>
			$k_t =$	1

when welded with 5356 filler

	$\lambda$	$F/\Omega$ for $\lambda \leq \lambda_1$	$\lambda_1$	$F/\Omega$ for $\lambda_1 < \lambda < \lambda_2$	$\lambda_2$	$F/\Omega$ for $\lambda \geq \lambda_2$	
<u>Axial Compression - member buckling</u>	E.2	$kL/r$	9.1	21.8	$0.00007 \lambda^2 - 0.066\lambda + 10.5$	133	$51,352/\lambda^2$
<u>Flexure - lateral-torsional buckling</u>	F.4	see F.4.2		-	see F.4	133	$60,414/\lambda^2$
<u>Elements - Uniform Compression</u>							
flat elements supported on one edge in columns whose buckling axis is not an axis of symmetry	B.5.4.1	$b/t$	9.1	9.0	$12.0 - 0.327\lambda$	25	$2,417/\lambda^2$
flat elements supported on one edge in all other columns and all beams	B.5.4.1	$b/t$	9.1	9.0	$12.0 - 0.327\lambda$	18.4	$111/\lambda$
flat elements supported on both edges	B.5.4.2	$b/t$	9.1	28.2	$12.0 - 0.105\lambda$	58	$346/\lambda$
flat elements supported on both edges and with an intermediate stiffener	B.5.4.4	$\lambda_s$	9.1	21.8	$10.2 - 0.051\lambda$	133	$60,414/\lambda^2$
round hollow elements	B.5.4.5	$R_b/t$	9.1	46.4	$11.8 - 0.396\lambda^{1/2}$	389	$3,776/(\lambda k_n)^\dagger$
flat elements - direct strength method	B.5.4.6	$\lambda_{eq}$	9.1	45.1	$12.0 - 0.065\lambda$	92	$554/\lambda$
<u>Elements - Flexural Compression</u>							
flat elements supported on both edges	B.5.5.1	$b/t$	13.6	36.2	$16.0 - 0.065\lambda$	123	$982/\lambda$
flat elements supported on tension edge, compression edge free	B.5.5.2	$b/t$	13.6	6.7	$16.0 - 0.350\lambda$	30	$4,932/\lambda^2$
flat elements supported on both edges and with a longitudinal stiffener	B.5.5.3	$b/t$	13.6	81.2	$16.0 - 0.029\lambda$	275	$2,201/\lambda$
pipes and round tubes	B.5.5.4	$R_b/t$	$17.7 - 0.933\lambda^{1/2}$	120.8	$11.8 - 0.396\lambda^{1/2}$	389	$3,776/(\lambda k_n)^\dagger$
flat elements - direct strength method	B.5.5.5	$\lambda_{eq}$	$M_{np}/S_{xc}$	45.1	see B.5.5.5	123	$554/\lambda$
<u>Elements - Shear</u>							
flat elements supported on both edges	G.2	$b/t$	5.5	47.5	$7.3 - 0.038\lambda$	126	$38,665/\lambda^2$
flat elements supported on one edge	G.3	$b/t$	5.5	19.8	$7.3 - 0.092\lambda$	53	$6,713/\lambda^2$
pipes and round or oval tubes	G.4	$\lambda_p^*$	5.5	80.0	$9.5 - 0.050\lambda$	126	$50,264/\lambda^2$
<u>Torsion - pipes and round or oval tubes</u>	H.2.1	$\lambda_p^*$	5.5	47.5	$7.3 - 0.038\lambda$	126	$38,665/\lambda^2$

\* $\lambda_p = 2.9(R_b/t)^{5/8}(L/R_b)^{1/4}$   
† $k_n = (1 + \lambda^{1/2}/35)^2$

↑ 0.25  
⊙  $k = 0.747 \times 5.5$

27 July 2022

Elizabeth Van Zandt  
Fort Lauderdale Downtown Development Authority (DDA)  
110 E. Broward Boulevard, Suite 1610  
Fort Lauderdale, FL 33301

**Re: Geotechnical Engineering Study  
Huizenga Park-Riverwalk Expansion ("the Project")  
SE Corner of S. Andrews Ave and E. Las Olas Blvd.  
Fort Lauderdale, Florida  
Langan Project No. 330101302**

Dear Elizabeth,

Langan Engineering & Environmental Services, Inc. (Langan) has completed a geotechnical engineering study for the proposed Huizenga Park-Riverwalk Expansion development in downtown Fort Lauderdale, Florida ("the Project"). The development will consist of expanding a portion of riverwalk over the existing river.

The purpose of the study was to: 1) perform a site-specific subsurface investigation and engineering inspection at landside close to the proposed riverwalk expansion area, 2) perform a foundation analysis and evaluation for driven pile foundation to support the portion of walkway over the river, and 3) provide preliminary foundation options for the new walkway on the landside. This work was performed in general accordance with our 31 May 2022 proposal which was incorporated into a Letter of Engagement (LOE) between Fort Lauderdale DDA and Langan on 2 June 2022.

All elevations given herein are in feet and refer to the North America Vertical Datum of 1988 (NAVD88).

#### **SITE DESCRIPTION AND PROPOSED CONSTRUCTION**

The Huizenga Park is located in the downtown area of Fort Lauderdale, Florida. It is bounded to the west by S. Andrews Ave, to the north by E Las Olas Blvd, to the east by SE 1<sup>st</sup> Ave, and to the south by the New River. A Site Vicinity Map is provided as Figure 1 in the report. The existing riverwalk is at the southern portion of the Park along the river. Based on furnished survey plan and our site visit, the existing riverwalk is relatively flat with ground surface elevation ranging from about +3.5 to +4.0 for most of the area.

Based on the provided information, we understand that a portion of the proposed Riverwalk will be extended over the river area. Therefore, new piles will be designed and installed in the river to support of the proposed Riverwalk system, which will extend over the existing seawall and into the river. Preliminary unfactored axial loading for a new pile will be 65 tons in compression, as provided by the project structural engineer, Mr. Colin Doyle, P.E. of Silman,

## SUBSURFACE INVESTIGATION

Our subsurface investigation was performed on 2 and 3 June 2022. The investigation consisted of drilling two Standard Penetration Test (SPT) test borings (identified as RB1 and RB2) on the land side near the proposed riverwalk expansion areas. The approximate test boring locations are shown on Figure 2. All investigation work was performed by a specialty drilling subcontractor under the direction and supervision of a Langan engineer. Prior to drilling, all of the test locations were verified by a private utility locator.

The two test borings were drilled to depths of 70 and 80 ft below the existing landside grade. The test borings were advanced using mud rotary drilling techniques. Split-spoon sampling was typically performed continuously between 0 and 10 ft depth and at 5 ft intervals thereafter. The soil samples were visually examined and classified by Langan’s geotechnical engineers both in the field and in our office. The soil test boring logs are included in Appendix A.

## SUBSURFACE CONDITIONS

### Generalized Subsurface Conditions

Based on the test borings performed, the generalized subsurface conditions encountered are summarized in the following table. A generalized subsurface profile is shown on Figure 3.

Stratum Number	Material Description	Approx. Top of Stratum Elevation (ft, NAVD88)	Thickness (ft)	Typical Range of SPT N-values (blows/ft)
1	6 inches of concrete pavement over 3 ft of sand and limerock (Fill) followed by fine Sand, trace to some silt and limestone fragments (typically, medium dense to dense in Fill and very loose in Sand)	+4 (Ground Surface at boring locations)	3 (Fill) & 5 to 6 (Sand)	12 to 37 (Fill) & 0 to 3 (Sand)
2	Upper Limestone (typically, soft)	-4.5 to -5.5	7 to 8	5 to 10
3	Middle fine Sand (typically, medium dense with very loose zone at the bottom portion)	-12.5	17.5 to 20	12 to 17 for upper and middle & 0 to 4 for bottom
4	Middle Limestone (typically, moderately hard)	-30 to -32.5	15 to 17.5	8 to 41 (typ. 16 to 25)
5	Lower fine Sand with some cemented sand fragments (typically, medium dense)	-47.5	5	20 to 22
6	Cemented Sand & Shell, with some sandstone and sand (typically, moderately hard to hard)	-52.5	All borings terminated within stratum	9 to 73 (typ. 18 to 42)

### Groundwater

The groundwater level was measured in the test borings during initial drilling. The measured groundwater level was typically around 4.1 to 4.2 ft below the existing grade (approximately el -

0.1 to el -0.2). Based on our knowledge and experience at the project site, the groundwater level should be close to adjacent river water level and should range typically from el +1.5 to el -1.5. The groundwater levels will fluctuate seasonally as a function of rainfall and infiltration into the soil as well as due to the water level fluctuation in the adjacent river, which is eventually connected to Atlantic Ocean.

Based on the Flood Insurance Rate Map (FIRM) number 12011C0557H, effective 18 August 2014, the site is in Zone AH, with a base flood elevation of el +5 (ft, NAVD88).

## GEOTECHNICAL EVALUATION AND RECOMMENDATIONS

### Driven Piles for New Riverwalk Element at River Side

Nearby river bottom elevation information is limited. A provided draft plan of New River Channel Layout, prepared by Taylor Engineering Inc. and dated 2 February 2009, indicates the river bottom area around where the new proposed piles will be installed is around "-20". This "-20" does not indicate whether this is related to depth or elevation. For conservative purposes, we assume it is related to the NAVD88 datum. In addition, considering boating and current influences, we have used a river scour bottom at el -30, ft NAVD88 for our pile analysis. Please note that official scour analysis was not included in Langan service and evaluation. The el -30, assumed in our analysis, should be conservative as this is the depth of the Stratum 4 limestone material which is resistant to scour.

Based on our interaction with Mr. Doyle, subsurface information from the two landside borings, assumed the river scour bottom at el -30, and our evaluations, we preliminarily recommend 14-inch square prestressed driven piles be used to provide the required 65-ton axial compressive load. The piles should be installed to a pile tip around el -56 ft, NAVD88 to achieve the required load. Due to the upper 30+ ft of pile not having any lateral support, lateral capacity of a vertical pile will be limited. In order to achieve lateral capacity, piles installed on batters will likely be required. Details of the preliminary pile design requirements are presented in the table below.

Pre-stressed Driven Pile Design Parameters	14-inch Square Pile
Compressive/Uplift Design Capacity (factor of safety of at least 2)	65 tons/20 tons
Lateral Capacity	Limited (Piles should be installed with appropriate batter to achieve the required lateral capacity)
Minimum Embedment Requirement	Estimated 2 to 3 ft of penetration into the relatively hard zone of the upper Stratum 6 Cemented Sand materials
Approximate Pile Tip Elevation <sup>1</sup>	Approx. el -56 ft, NAVD88
Minimum Pile Spacing	4.5 ft on centers

1. Tip elevation may vary and will be determined at the time of pile driving.
2. Adequate pile reinforcing must be designed by the Structural Engineer to resist all axial, bending, tensile, and shear stresses.

To verify the driven pile design capacity, we recommend dynamic testing using the Pile Driving Analyzer (PDA) technique, during the pile installation. Further recommendations will be provided in our final report.

### **Foundation Options at Land Side**

#### Shallow Foundation Options

The simple approach for pavement slabs or light ground features on the land side of the proposed Riverwalk would be at-grade support or shallow foundations, respectively. This assumes there is no conflict with the existing seawall system, such as tie-backs or deadmen. In addition, slabs or small foundations should bear on properly compacted engineered fill (used to raise grade) or the existing Stratum 1 granular fill and native fine sand after proper site preparation and foundation subgrade preparation are complete. Site and subgrade preparation are discussed in our 21 April 2022 geotechnical report for the proposed nearby 1-story buildings within Huizenga Park. Special attention should be made to improve the density of the weaker Stratum 1 sand, as outlined in the aforementioned 21 April 2022 report. In addition, the integrity of the existing seawall should be confirmed to assure that loss of material is not occurring between the vertical structure joints of the seawall.

Assuming the above procedures are performed, shallow foundations could be designed using an allowable design soil bearing pressure of 2,000 pounds per square foot (psf).

#### Deep Foundation Options

If a shallow foundation option cannot be utilized for the light ground features due to potential conflicts with the existing seawall tie-back system or other utilities, specialty deep foundation options could be considered in design. The following presents several specialty deep foundation options (with limited design criteria) for preliminary consideration.

- 1) 3.5-inch O.D. Schedule 40 driven steel pin piles with a design structural load up to 6 tons in compression and estimated pile tip at around el -32 to el -35;
- 2) Helical pile with a design structural load up to 10 to 20 tons in compression and estimated pile tip at around el -34 to el -38;
- 3) 5.5-inch-diameter Cast-in Drilled Hole (CIDH) micropile for a design structural load up to 10 or 25 tons in compression with estimated pile tip at around el -11 or el -38, respectively; and
- 4) Relatively short 14-inch-diameter augercast pile for a structural load up to 25 tons in compression and estimated pile tip at around el -11.

When the proposed Riverwalk expansion design layout is finalized and structural loads are available, we can work with the design team, including specialty contractors, to narrow down the foundation options for landside support options.

### **Potential Surcharge Loading on the Existing Seawall**

Based on our interaction with Mr. Doyle, we understand that one of the design options was to consider possibly transferring some of load to existing seawall. Currently, there is no design information available for the existing seawall and no engineering firms has not been engaged in that service. We recommend that a specialty seawall designer be engaged to fully investigate

and evaluate the existing seawall structural elements and conditions, including seawall cap, panels, king piles, tie-back system, etc., and to provide recommendations. Until that effort is undertaken, no new loads should be applied and imparted onto the existing seawall.

### **LIMITATIONS**

The evaluations and recommendations given in this report are based on our engineering judgment as to the appropriate foundation support system and required site preparation procedures for the proposed development. They are based on subsurface conditions inferred from the borings, on the available development information, and on the structural loading assumptions described in this report. Recommendations given are contingent upon one another and no recommendation should be followed independent of the others. The report has been prepared to assist the owner, contractor and design team members in their work. It is intended for use with regard to the information provided, and any changes in structures or locations should be brought to our attention so that we may determine how such changes may affect our recommendations.

This report was produced for the proposed riverwalk expansion located at Huizenga Park in downtown Fort Lauderdale, Florida. Langan Engineering and Environmental Services, Inc. cannot assume responsibility for the use of this report to generate foundation design other than for the specific structure addressed in this report.

Information on subsurface strata and groundwater levels shown on the logs represent conditions encountered only at the locations indicated at the time of our investigation. If different conditions are encountered during construction, they should immediately be brought to our attention for evaluation as they may affect our recommendations. Environmental issues, such as potentially contaminated soil and groundwater, are outside the scope of this study and our services.

## CLOSING

We appreciate the opportunity to be of service to you during this phase of the project. If you have any questions regarding the information in this report, please contact us at (786) 264-7200.

Very truly yours,  
**Langan Engineering & Environmental Services, Inc.**



Handwritten signature of Feng Lu in black ink.

Feng Lu, P.E.  
Senior Project Manager  
Florida Registration No. 54626

Handwritten signature of Roger A. Archabal in black ink.

Roger A. Archabal, P.E.  
Principal/Vice President  
Florida Registration No. 48404

FL/RAA:fl

Enclosures: Figure 1 – Site Vicinity Map  
Figure 2 – Geotechnical Exploration Plan  
Figure 3 - Generalized Subsurface Profile  
Appendix A – Logs of Test Borings

# FIGURES



NOT TO SCALE

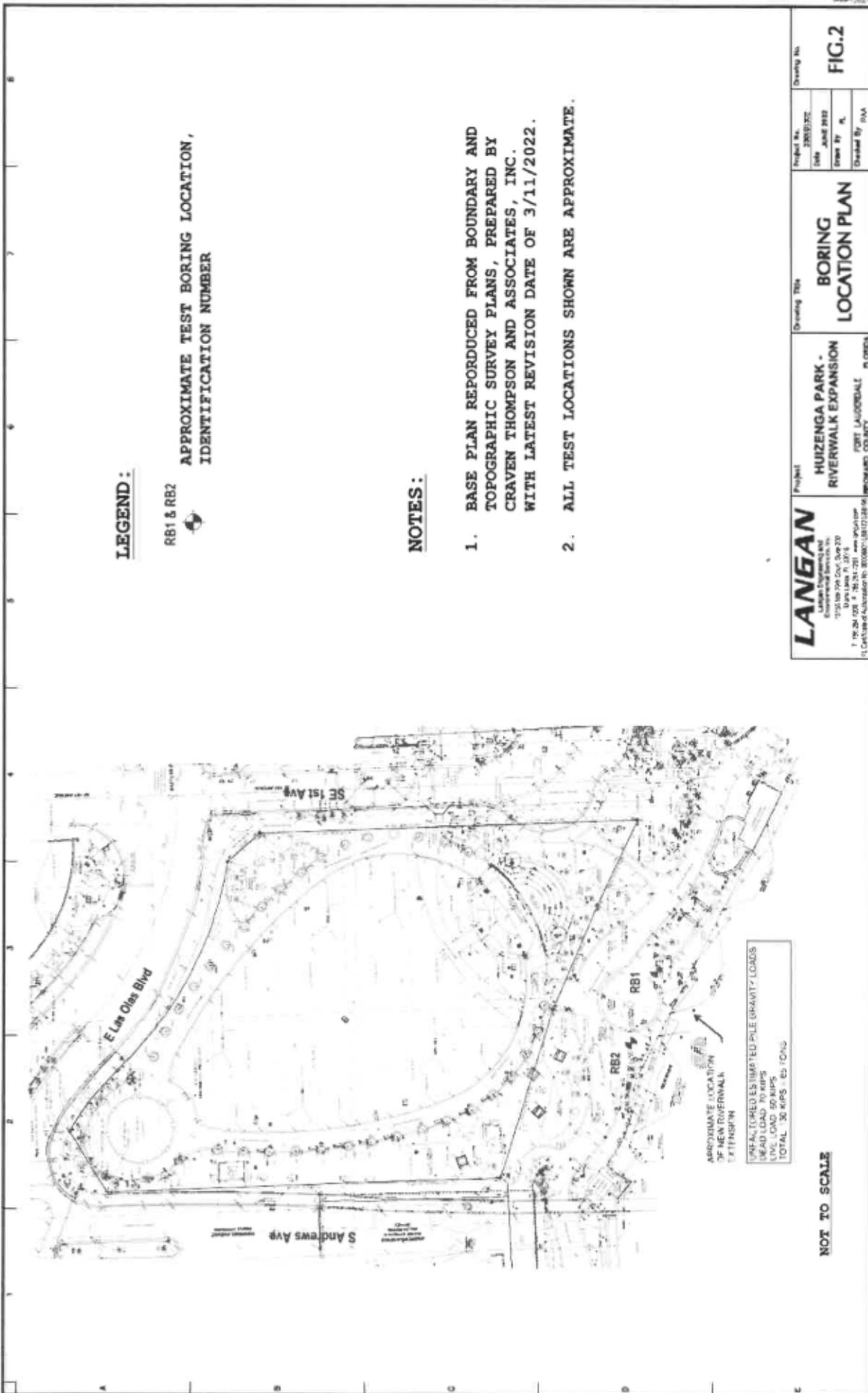
**NOTES:**

1. AERIAL IMAGERY WAS ACQUIRED ON NOVEMBER 2019 VIA GOOGLE EARTH PRO.

<p><b>LANGAN</b> Langan Engineering and Environmental Services, Inc. 15150 NW 79th Court, Suite 200 Miami Lakes, FL 33015 T: 786.264.7200 F: 786.264.7201 www.langan.com FL Certificate of Authorization No. 00006601LBB172L88198</p>	Project	Drawing Title	Project No. 330101302	Drawing No.
	<b>HUIZENGA PARK - RIVERWALK EXPANSION</b>	<b>SITE VICINITY MAP</b>	Date JUNE 2022	<b>FIG.1</b>
	FORT LAUDERDALE BROWARD COUNTY FLORIDA		Drawn By FL	
			Checked By RAA	

Filename: \\langan.com\cdata\MI\kds\5300275506\Project Data\CAD\06\20-Design\Files\300275506\300275508 - Site Vicinity Map and BLP.dwg Date: 7/22/2021 Time: 12:45 User: zboscano Style Table: Langan.stb Layout: 1 - Site Vicinity Map

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**LEGEND:**

RB1 & RB2  
 APPROXIMATE TEST BORING LOCATION,  
 IDENTIFICATION NUMBER

**NOTES:**

1. BASE PLAN REPRODUCED FROM BOUNDARY AND TOPOGRAPHIC SURVEY PLANS, PREPARED BY CRAVEN THOMPSON AND ASSOCIATES, INC. WITH LATEST REVISION DATE OF 3/11/2022.
2. ALL TEST LOCATIONS SHOWN ARE APPROXIMATE.

APPROXIMATE LOCATION  
 OF NEW RIVERWALK  
 EXTENSION

UNFACED RIBBED ESTIMATED PILE GRAVITY LOADS  
 AND POINT LOADS  
 UNIFORM LOAD: 50 KIPS  
 TOTAL: 30 KIPS @ 50 TONS

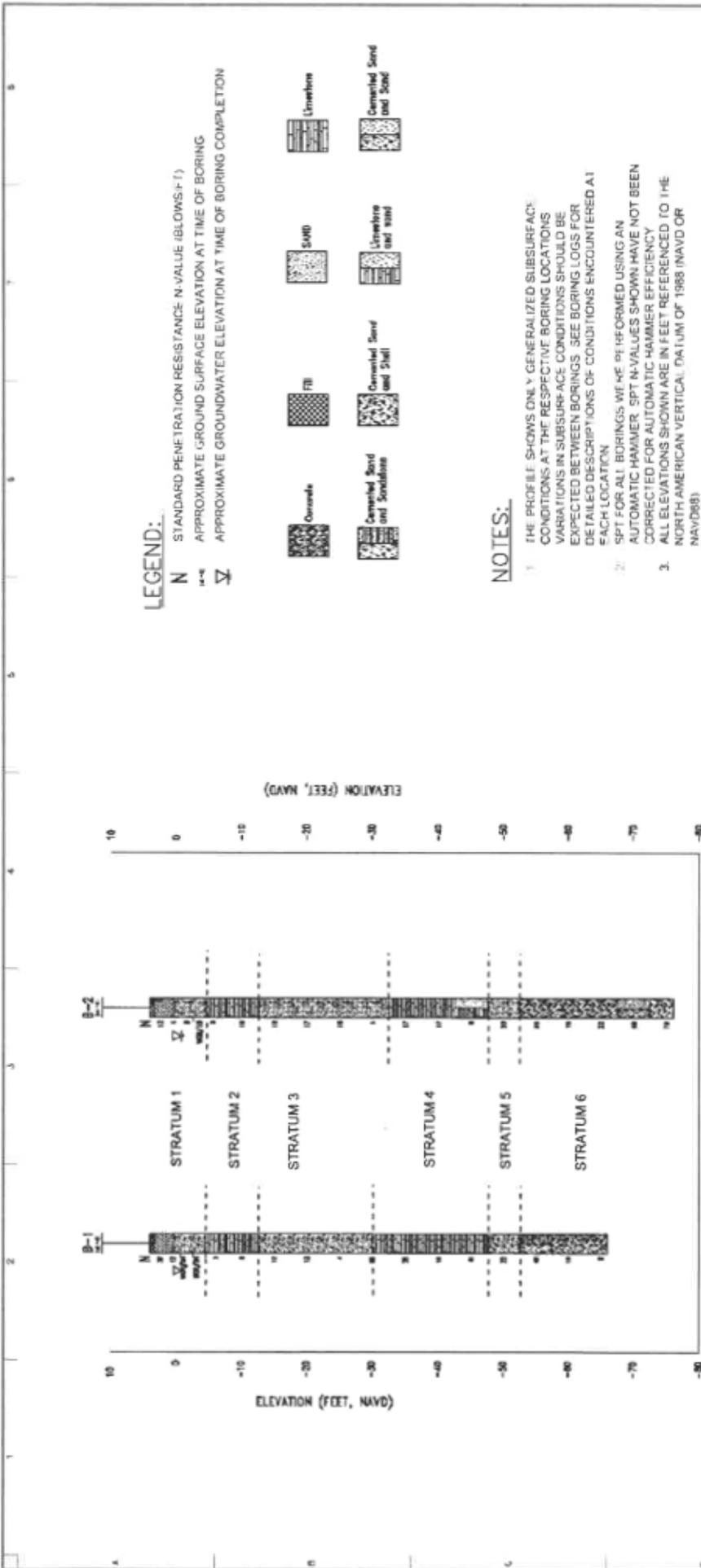
NOT TO SCALE

**LANGAN**  
 ENGINEERING & SURVEYING, INC.  
 1550 NW 79th Ave, Suite 200  
 Fort Lauderdale, FL 33305  
 Phone: (954) 344-1100  
 Fax: (954) 344-1101  
 E-mail: info@langan.com  
 11 Cr. State of Florida No. 303887, 30171287-09

Project  
**HUIZENGA PARK -  
 RIVERWALK EXPANSION**  
 FORT LAUDERDALE, FLORIDA  
 BROWARD COUNTY

Drawing Title  
**BORING  
 LOCATION PLAN**

Drawing No.  
 Project No. 20210137E  
 Date: JUNE 2022  
 Drawn By: RL  
 Checked By: SAA  
**FIG.2**



**LANGAN**  
 Planning, Consulting, Design, Construction Management  
 10000 E. 15th Avenue, Suite 1000, Denver, CO 80231  
 Phone: (303) 751-2200, Fax: (303) 751-2201  
 www.langan.com  
 Langan Engineering & Construction Services, Inc.  
 Langan Consulting and Engineering Services, Inc.  
 Langan Construction Services, Inc.  
 Langan Construction Management, Inc.

**Project**  
**HUIZENGA PARK - RIVERWALK EXPANSION**  
 FORT LAUDERDALE, FLORIDA  
 BROWARD COUNTY

**Drawing Title**  
**GENERALIZED SUBSURFACE PROFILE**

**Drawing No.**  
 Project No. 330101302  
 Date: JUNE 2022  
 Scale: AS SHOWN  
 Drawn By: GM  
 Checked By: FL

**FIG.3**

**GENERALIZED SUBSURFACE PROFILE**

VERTICAL SCALE: 1" = 15'  
 HORIZONTAL SCALE: N.T.S.

# **APPENDIX A**

## **LOGS OF TEST BORINGS**

**LANGAN**

# LANGAN

LOG OF BORING **RB-1**

SHEET **1** OF **2**

PROJECT <b>Huizenga Park - Riverwalk Expansion</b>		PROJECT NO. <b>330101302</b>	
LOCATION <b>Fort Lauderdale, FL</b>		ELEVATION AND DATUM <b>Approx. + 4 [ft. NAVD88]</b>	
DRILLING EQUIPMENT <b>CME-45</b>		DATE STARTED <b>6/2/22</b>	DATE FINISHED <b>6/2/22</b>
SIZE AND TYPE OF BIT <b>2 3/4" Casing Bit</b>		NUMBER OF SAMPLES <b>17</b>	DIST. <b>17</b>
CASING DIAMETER (in) <b>3</b>	CASING DEPTH(ft) <b>68</b>	WATER LEVEL (ft) <b>4.1</b>	UNDIST. <b>70 ft.</b>
SAMPLER <b>2" OD Split Spoon</b>		DRILLING FOREMAN <b>Alexander Milan</b>	
SAMPLER HAMMER <b>Safety</b>	WEIGHT(lbs) <b>140</b>	DROP(in) <b>30</b>	INSPECTING ENGINEER <b>Gabriel Mishaan</b>

I:\LANGAN.COM\DATA\FL\DATA\330101301\PROJECT DATA\DISCIPLINE\GEO\TECHNICAL\GINT\LOGS\6.3.2022-RIVER EXPANSION\330101302 BORINGS 6.3.2022.GPJ ... 6/24/2022 3:32:53 PM ... Report Log - BORING

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BLU/in	N-VALUE BLOWS PER FT.	
+4.0	0.5' Concrete Light tan LIMEROCK, some sand [FILL] Dark brown fine SAND, little silt [FILL]	[Cross-hatch symbol]		S-1	SS	19	26 15 22	37	Boring located 17' from seawall
+0.5	Light brown to light tan fine SAND Light brown to gray fine SAND, some limestone fragments, trace silt No recovery	[Dotted symbol]	5	S-2	SS	15	13 10 7	17	
				S-3	SS	10	WOH/24		Introduce drilling fluid Advance casing to 4.5'
				S-4	SS	0	WOH/24		Advance casing to 6.5'
-5.5	Light tan LIMESTONE, some sand	[Horizontal lines symbol]	10	S-5	SS	15	WOH/12 3 3	3	Advance casing to 8.5'
	Light tan LIMESTONE, little sand	[Horizontal lines symbol]	15	S-6	SS	18	6 5 3	8	Advance casing to 10.5' Advance casing to 13' Easy drilling Poor circulation
-12.5	Light tan fine SAND	[Dotted symbol]	20	S-7	SS	17	6 7 5 7	12	Advance casing to 18' Easy drilling Moderate to good circulation
	Light tan to brown fine SAND	[Dotted symbol]	25	S-8	SS	16	7 7 6 8	13	Advance casing to 23' Easy drilling Good circulation
	Light brown with brown molting fine SAND	[Dotted symbol]	30	S-9	SS	7	3 2 2 WOH/42	4	Advance casing to 28' Easy drilling Good circulation
-30.0	Light tan fine SAND	[Dotted symbol]	35	S-10	SS	21	2 2 21 20	23	Sample went down to 33' with the weight of hammer
	Light gray LIMESTONE	[Horizontal lines symbol]	40	S-11	SS	13	24 10 8	25	Complete circulation loss at 35' Advance casing to 38' Easy drilling Good circulation
	Light gray LIMESTONE	[Horizontal lines symbol]	40						Advance casing to 43' Easy to moderate drilling

# LANGAN

LOG OF BORING **RB-1**

SHEET **2** OF **2**

PROJECT		PROJECT NO.							
Huizenga Park - Riverwalk Expansion		330101302							
LOCATION		ELEVATION AND DATUM							
Fort Lauderdale, FL		Approx. + 4 [ft. NAVD88]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA				REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/ft		N-VALUE BLOWS PER FT
	Light gray to white LIMESTONE		45	S-12	SS	12	12 8 8 10	16	Advance casing to 48' Easy to moderate drilling
	Light gray to tan LIMESTONE		50	S-13	SS	18	30 15 26 15	41	Advance casing to 53' Moderate drilling
-47.5	Light gray fine SAND		55	S-14	SS	14	16 12 10 16	22	Advance casing to 58' Moderate drilling
-52.5	Light gray CEMENTED SAND AND SANDSTONE, some sand		60	S-15	SS	10	14 15 27 50/1	42	Advance casing to 63' Hard drilling
-57.5	Light gray CEMENTED SAND AND SHELL		65	S-16	SS	11	15 9 9 18	18	Advance casing to 68' Moderate drilling
-66.0	Gray CEMENTED SAND AND SHELL Boring terminated at 70'		70	S-17	SS	11	5 5 4 4	9	
			75						
			80						
			85						
			90						

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# LANGAN

LOG OF BORING **RB-2**

SHEET **1** OF **2**

PROJECT <b>Huizenga Park - Riverwalk Expansion</b>			PROJECT NO. <b>330101302</b>		
LOCATION <b>Fort Lauderdale, FL</b>			ELEVATION AND DATUM <b>Approx. + 4 [ft. NAVD88]</b>		
DRILLING EQUIPMENT <b>CME-45</b>		DATE STARTED <b>6/2/22</b>		DATE FINISHED <b>6/3/22</b>	COMPLETION DEPTH <b>80 ft.</b>
SIZE AND TYPE OF BIT <b>2 3/4" Casing Bit</b>			NUMBER OF SAMPLES <b>19</b>	DIST. <b>19</b>	UNDIST. <b></b>
CASING DIAMETER (in) <b>3</b>	CASING DEPTH(ft) <b>78</b>	WATER LEVEL (ft) <b>▽</b>	FIRST <b>4.2</b>	COMPL. <b>▽</b>	24 HR. <b>▽</b>
SAMPLER <b>2" OD Split Spoon</b>			DRILLING FOREMAN <b>Alexander Milan</b>		
SAMPLER HAMMER <b>Safety</b>	WEIGHT(lbs) <b>140</b>	DROP(in) <b>30</b>	INSPECTING ENGINEER <b>Gabriel Mishaan</b>		

I:\LANGAN.COM\DATA\FL\DATA\330101301\PROJECT DATA\DISCIPLINE\GEO\TECHNICAL\GINTLOG\SS1 6.3 2022-RIVER EXPANSION\330101302\_BORINGS\_6.3.2022.GPJ ... 6/24/2022 3:32:56 PM ... Report: Log - BORING

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BLU <sub>in</sub>	N-VALUE BLOWS PER FT.	
+4.0	0.5' Concrete	[Symbol]							Boring located 13' from seawall
	Light tan LIMEROCK [FILL]	[Symbol]		S-1	SS	18	7 5	12	
+0.5	Light tan LIMEROCK and SAND, trace silt [FILL]	[Symbol]		S-2	SS	15	4 2	4	Introduce drilling fluid Advance casing to 6.5'
	Dark brown fine SAND, trace silt	[Symbol]	5	S-3	SS	20	3 2	3	
	Brown to dark brown fine SAND, little silt, trace roots	[Symbol]		S-4	SS	9	1 1	16	Advance casing to 8.5'
-4.5	Brown to dark brown fine SAND, little silt, trace roots	[Symbol]		S-5	SS	22	2 2	5	
	Light tan LIMESTONE, some sand	[Symbol]	10						Advance casing to 10.5' Advance casing to 13' Easy drilling Good circulation
	Light tan LIMESTONE, some sand	[Symbol]	15	S-6	SS	8	6 3	10	
-12.5	Light tan fine SAND	[Symbol]	20	S-7	SS	17	4 8	12	Advance casing to 18' Easy drilling Moderate to poor circulation
	Light brown fine SAND	[Symbol]	25	S-8	SS	19	6 10	17	
	Brown fine SAND	[Symbol]	30	S-9	SS	18	6 9	16	Advance casing to 23' Easy drilling Moderate circulation
	Light tan fine SAND	[Symbol]	35	S-10	SS	17	3 2	4	
	Light brown to light tan fine SAND	[Symbol]							Advance casing to 28' Easy drilling Poor circulation
	Light gray LIMESTONE	[Symbol]	40	S-11	SS	16	7 10	17	
-32.5	Light gray LIMESTONE	[Symbol]							Advance casing to 30' Easy drilling Moderate to poor circulation Complete circulation loss at 38'
		[Symbol]							
		[Symbol]							Advance casing to 33' Easy drilling Moderate to poor circulation
		[Symbol]							
		[Symbol]							Advance casing to 38' Easy drilling Moderate to poor circulation Complete circulation loss at 38'
		[Symbol]							
		[Symbol]							Advance casing to 43' Easy drilling
		[Symbol]							

# LANGAN

LOG OF BORING **RB-2**

SHEET **2** OF **2**

PROJECT		PROJECT NO.							
Huizenga Park - Riverwalk Expansion		330101302							
LOCATION		ELEVATION AND DATUM							
Fort Lauderdale, FL		Approx. + 4 [ft. NAVD88]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA				REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/ft		N-VALUE BLOWS PER FT
-42.5	Light gray LIMESTONE		45	S-12	SS	15	11 7 10 7	17	Advance casing to 48' Easy drilling
-47.5	Light gray LIMESTONE and SAND		50	S-13	SS	17	12 4 4 3	8	Advance casing to 53' Moderate drilling
-52.5	Light gray fine SAND, some cemented sand		55	S-14	SS	15	10 9 11	20	Advance casing to 58' Moderate drilling
-60	Light gray CEMENTED SAND AND SHELL, some sand		60	S-15	SS	9	16 16 20 50/3	36	Advance casing to 63' Moderate to hard drilling
-65	Light gray CEMENTED SAND AND SHELL		65	S-16	SS	13	15 10 9 11	19	Advance casing to 68' Moderate drilling Circulation return at 67'
-67.5	Light gray CEMENTED SAND AND SHELL		70	S-17	SS	15	15 12 10 11	22	Advance casing to 73' Easy to moderate drilling Poor circulation
-72.5	Light gray CEMENTED SAND AND SHELL, some sand		75	S-18	SS	13	4 9 9 10	18	Advance casing to 78' Easy to moderate drilling Poor to moderate circulation
-76.0	Light gray CEMENTED SAND AND SHELL Boring terminated at 80'		80	S-19	SS	16	40 31 42 35	73	
			85						
			90						

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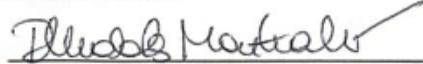
**EXHIBIT D**

**Waiver of 1990 Visual Artists' Rights Act**

## WAIVER AND LICENSE

In connection with the donation of the Artwork "Ariela" ("Work") created by the Artist, the Artist recognizes the existence of moral rights of artists set forth in the Visual Artists' Rights Act of 1990, as amended, and as codified in Title 17 of United States Code (the "Visual Artists' Rights Act"). **TO THE EXTENT THE WORK IS PROTECTED BY THE VISUAL ARTISTS' RIGHTS ACT AND THE ARTIST IS ENTITLED TO PROTECTION THEREUNDER, THE ARTIST EXPRESSLY WAIVES ANY AND ALL RIGHTS ARISING UNDER THE VISUAL ARTISTS' RIGHTS ACT, AND ANY RIGHTS ARISING UNDER FEDERAL OR STATE LAW OR UNDER THE LAWS OF ANY OTHER COUNTRY THAT CONVEYS RIGHTS OF THE SAME NATURE AS THOSE CONVEYED UNDER THE VISUAL ARTISTS' RIGHTS ACT OR ANY OTHER TYPE OF MORAL RIGHT OR DROIT MORAL WITH RESPECT TO THE WORK FOR ANY AND ALL USES IN WHICH EITHER THE ATTRIBUTION OR THE INTEGRITY RIGHT MAY BE IMPLICATED INCLUDING, WITHOUT LIMITATION, THE REMOVAL, RELOCATION, DESTRUCTION, DISTORTION, MUTILATION OR OTHER MODIFICATION OF ALL OR ANY PORTION OF THE WORK AS DEEMED NECESSARY BY THE CITY. THE ARTIST EXPRESSLY RECOGNIZES AND ACKNOWLEDGES THAT THE NATURE OF THE WORK MAY SUBJECT THE WORK TO DESTRUCTION, DISTORTION, MUTILATION OR OTHER MODIFICATION BY REASON OF REMOVAL OR RELOCATION OF ALL OR ANY PORTION OF THE WORK.**

Artist has no outstanding claims and knows of no outstanding <sup>revocable</sup> claims against the Artwork. Artist grants the City of Fort Lauderdale, Florida an ~~irrevocable~~ license to graphically reproduce (through photography, the internet or otherwise) the image of the Artwork for municipal (e.g. education, public information, promotion of the arts, etc.) purposes. Municipal purposes mean reproduction in exhibit catalogues, books, slides, photographs, postcards, the City's web sites, City promotional items, and calendars; in art magazines, art books and art and news sections of newspapers; in general books and magazines not primarily devoted to art but of an educational, historical or critical nature, slides and films not intended for mass audience; and television from stations operated for educational purpose or on programs for educational or informational purposes from all stations.

  
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Artist

Regina Valdes Montalva, Authorized Representative  
Manolo Valdes Studio, LLC