

JUN 27 2023

ISSUE	DATE
DEVELOP. REV.	07.13.23

[illegible]

GREGORY BONNER, AIA

Digitally signed
by gregory
bonner
Date: 2023.06.26
07:55:04 -0400

AA 26003271

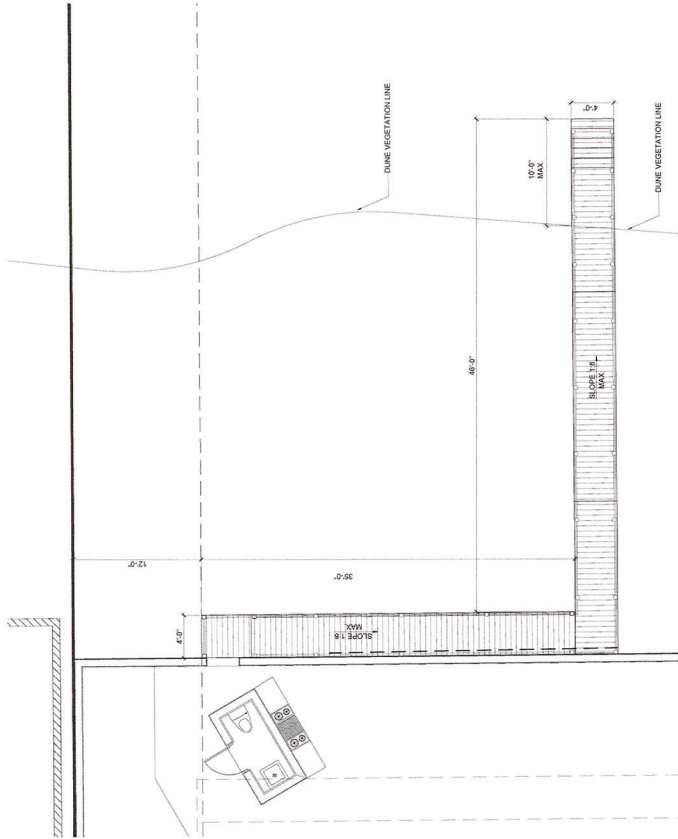
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JOB NO.	30854-HCHL.D
PLOT DATE	07.22.23
SCALE	AS NOTED
DRAWN BY	MMC

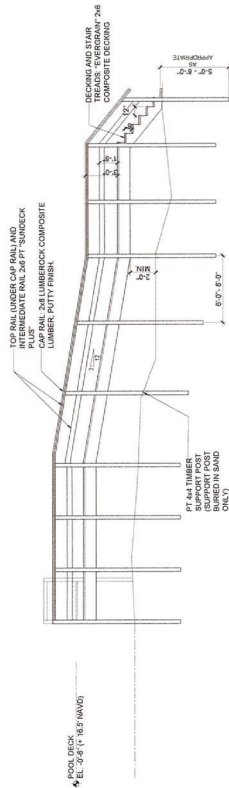
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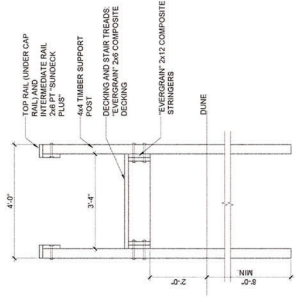




1 ENLARGED DUNE WALKWAY
SCALE 3/16" = 1'-0"



2 ENLARGED DUNE WALKWAY ELEVATION
SCALE 3/16" = 1'-0"



3 ENLARGED DUNE WALKWAY SECTION DETAIL
SCALE 1/2" = 1'-0"

RECEIVED
JUN 27 2023
HIGHLAND BEACH
BUILDING DEPARTMENT

NEW SINGLE FAMILY RESIDENCE:
ZESSIN RESIDENCE
3805 SOUTH OCEAN BLVD.
HIGHLAND BEACH, FL 33487

GREGORY BONNER, AIA

Digitally signed
by Gregory
Bonner
DN: cn=Gregory Bonner,
o=Gregory Bonner Architects,
ou=Gregory Bonner Architects,
email=gbonner@gbarchitect.com,
c=US

AA 26003271

B1 ARCHITECT
139 NORTH COUNTRY ROAD, STE. 18C
PALM BEACH, FLORIDA 33480
(561) 312-3453



JOB NO. 26003271
PLOT DATE 07/22/23
SCALE AS NOTED
DRAWN BY B.M.C.

A0.1B

ISSUE	DATE
DEVELOP REV.	07.13.23

NEW SINGLE FAMILY RESIDENCE:
ZESSIN RESIDENCE
 3805 SOUTH OCEAN BLVD.
 HIGHLAND BEACH, FL 33487

GREGORY BONNER, AIA

Digitally signed
 by Gregory Bonner
 DN: cn=Gregory Bonner, o=AA 26003271, email=gbonner@aa26003271.com, c=US

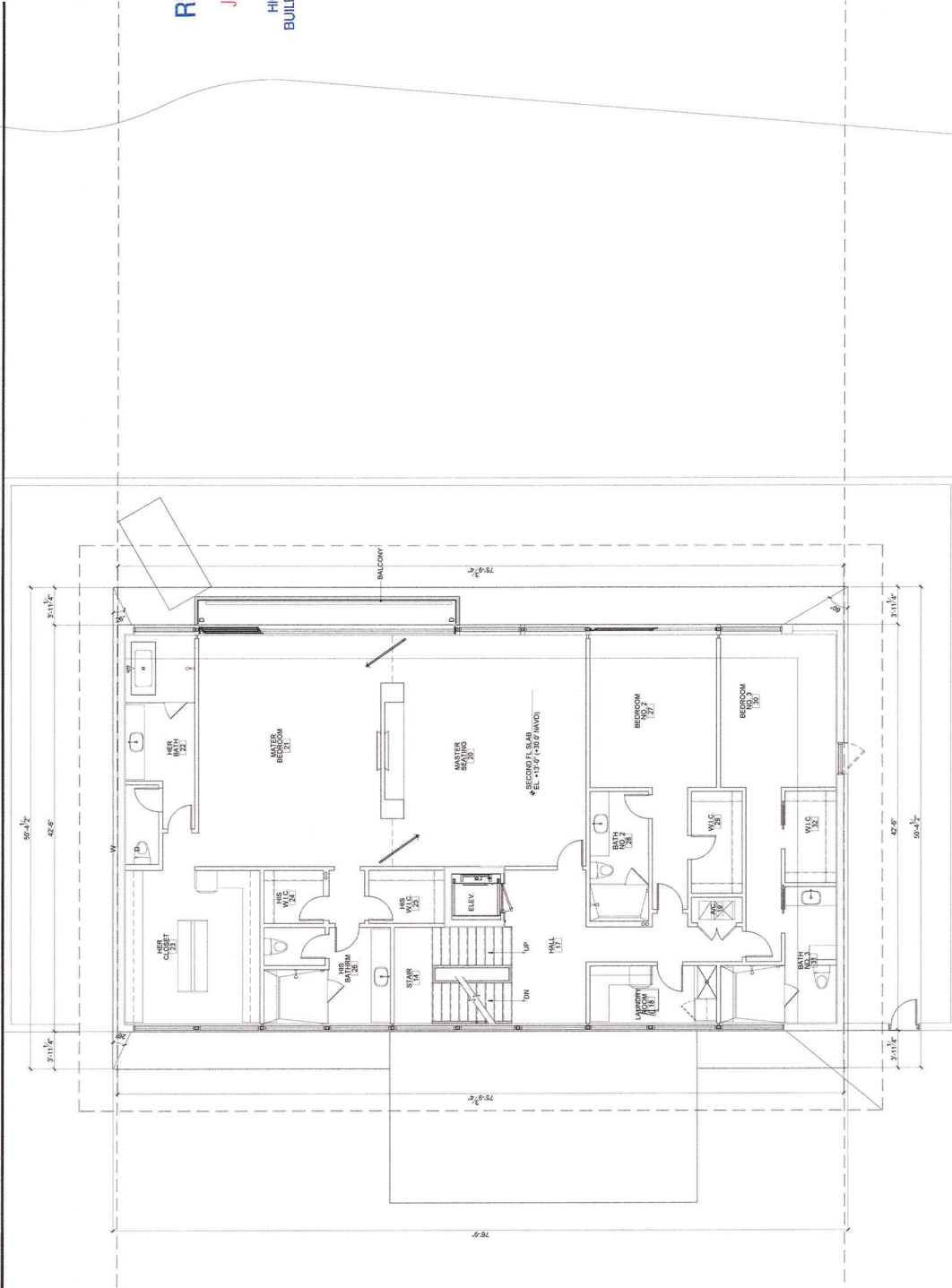
AA 26003271

B1 ARCHITECT
 139 NORTH COUNTY ROAD STE 18C
 PALM BEACH, FLORIDA 33480
 (561) 312-3453

JOB NO.	30859040
PLOT DATE	07.22.23
SCALE	AS NOTED
DRAWN BY	SSS

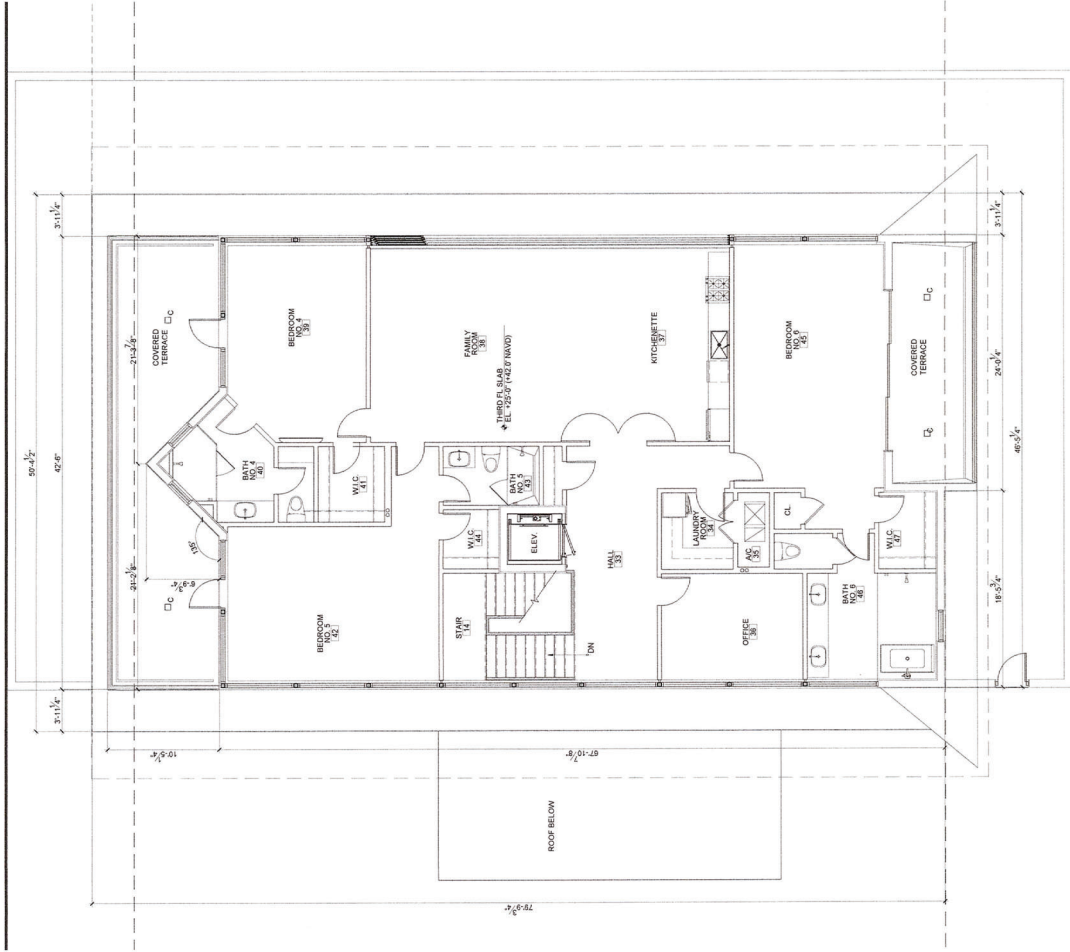
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RECEIVED
JUN 27 2023
 HIGHLAND BEACH
 BUILDING DEPARTMENT



1 SECOND FLOOR PLAN
 SCALE 3/8\"/>

RECEIVED
JUN 27 2023
HIGHLAND BEACH
BUILDING DEPARTMENT



1 THIRD FLOOR PLAN
SCALE: 3/8" = 1'-0"

ISSUE	DATE
DEVELOP REV	07/13/23

NEW SINGLE FAMILY RESIDENCE
ZESSIN RESIDENCE
3805 SOUTH OCEAN BLVD.
HIGHLAND BEACH, FL 33487

GREGORY BONNER, AIA
Digitally signed
by gregory
bonner
Date: 2023.06.26
08:02:19 -0400
AA 28003271

B1 ARCHITECT
139 NORTH COUNTY ROAD, STE. 19C
PALM BEACH, FLORIDA 33480
(561) 312-3453



JOB NO.	305930420
PLOT DATE	07/23/23
SCALE	AS SHOWN
DRAWN BY	E. BNC

A1.3

ISSUE	DATE
DEVELOP	REV
01	12.23

ALL DIMENSIONS ARE IN FEET AND INCHES. DIMENSIONS ARE GIVEN TO THE CENTERLINE UNLESS OTHERWISE NOTED. DIMENSIONS TO THE FACE OF WALLS OR PARTS THEREOF ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF ROADS ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF CURBS ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF CURBS ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF DRIVEWAYS ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF DRIVEWAYS ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF PORCHES ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF PORCHES ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF PATIOS ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF PATIOS ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF TERRACES ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF TERRACES ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF STAIRS ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF STAIRS ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF BALCONIES ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF BALCONIES ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF TERRACES ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF TERRACES ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF PATIOS ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF PATIOS ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF STAIRS ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF STAIRS ARE SHOWN WITH A DOTTED LINE. DIMENSIONS TO THE FACE OF BALCONIES ARE SHOWN WITH A DASHED LINE. DIMENSIONS TO THE CENTERLINE OF BALCONIES ARE SHOWN WITH A DOTTED LINE.

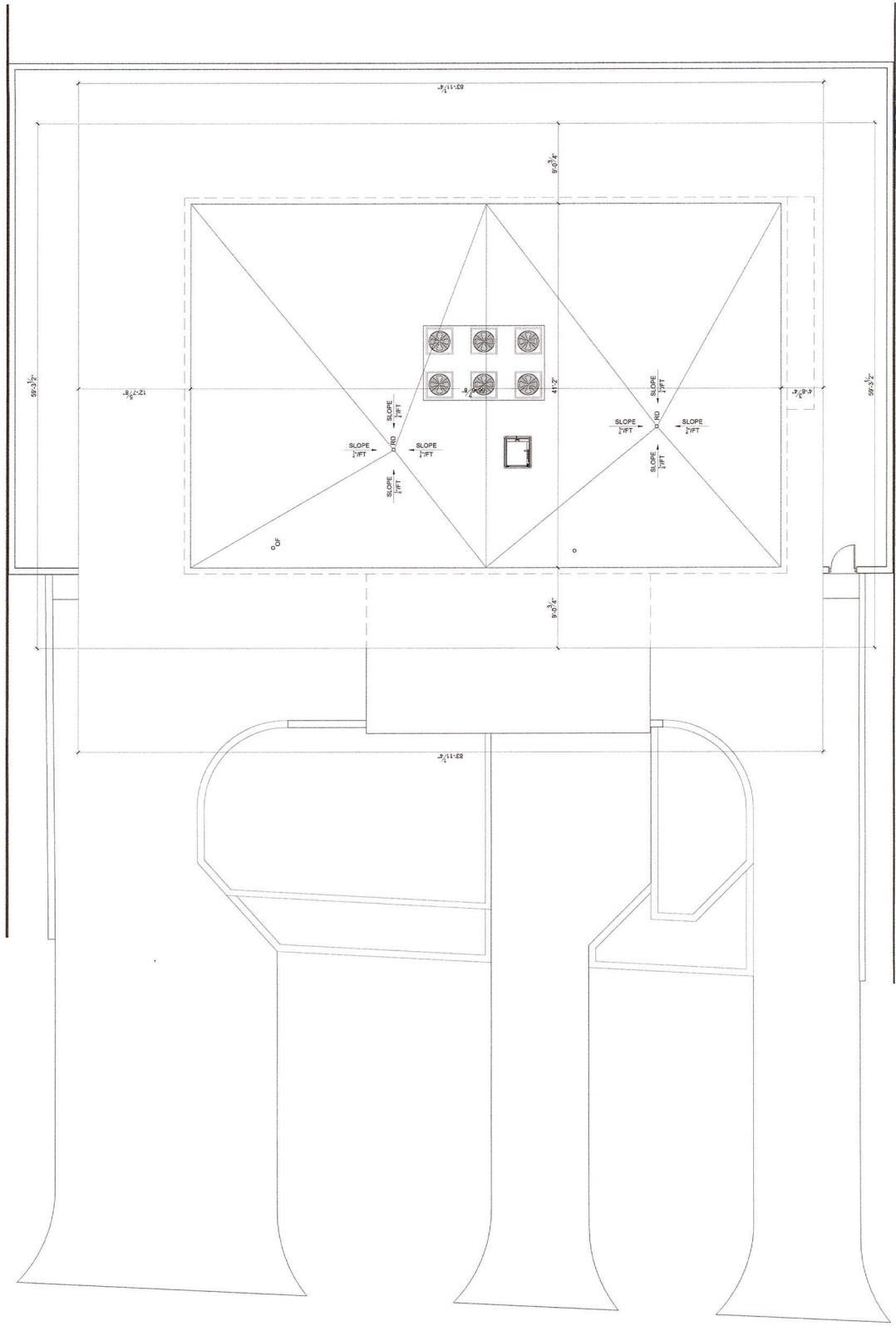
NEW SINGLE FAMILY RESIDENCE:
 ZESSIN RESIDENCE
 3805 SOUTH OCEAN BLVD.
 HIGHLAND BEACH, FL 33487

GREGORY BONNER, AIA
 Digitally signed
 by gregory
 bonner
 Date: 2023.06.26
 08:53:53 -04'00'
 AA 26003271

B1 ARCHITECT
 139 NORTH COUNTY ROAD STE. 18C
 PALM BEACH, FLORIDA 33480
 (561) 312-3453

JOB NO.	200004040
PLOT DATE	07/22/23
SCALE	AS NOTED
DRAWN BY	JMS

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RECEIVED

JUN 27 2023
 HIGHLAND BEACH
 BUILDING DEPARTMENT

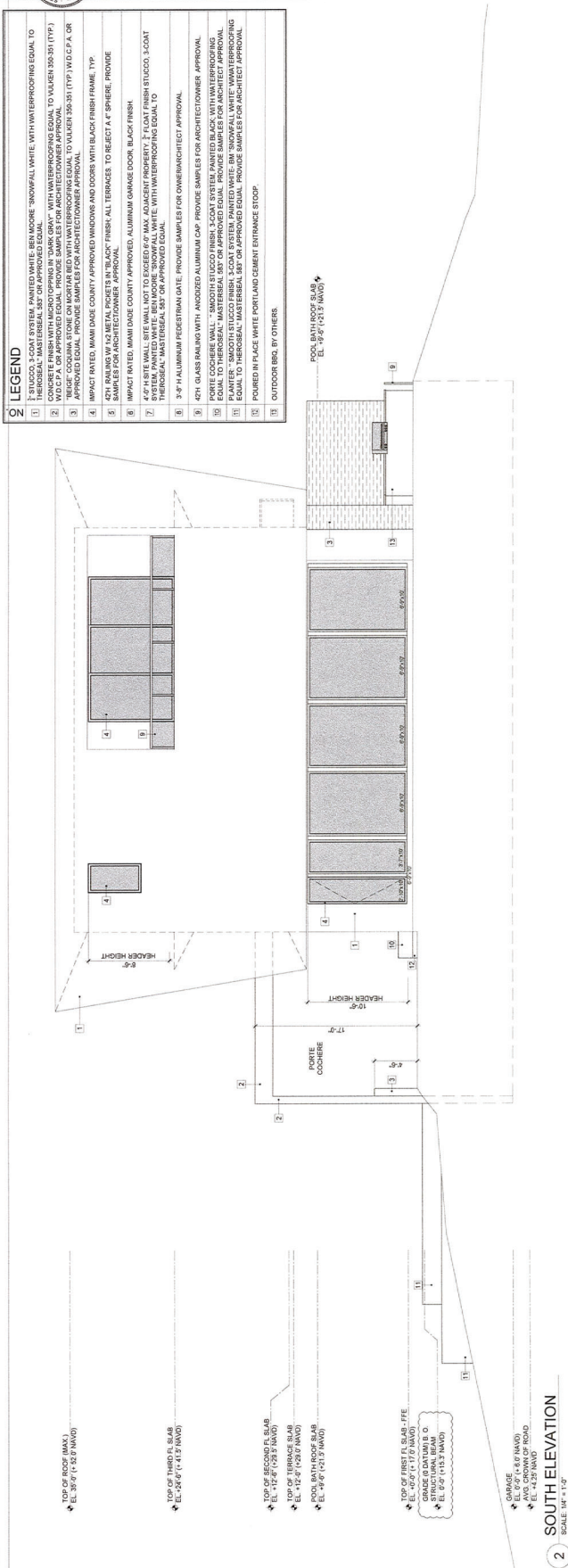
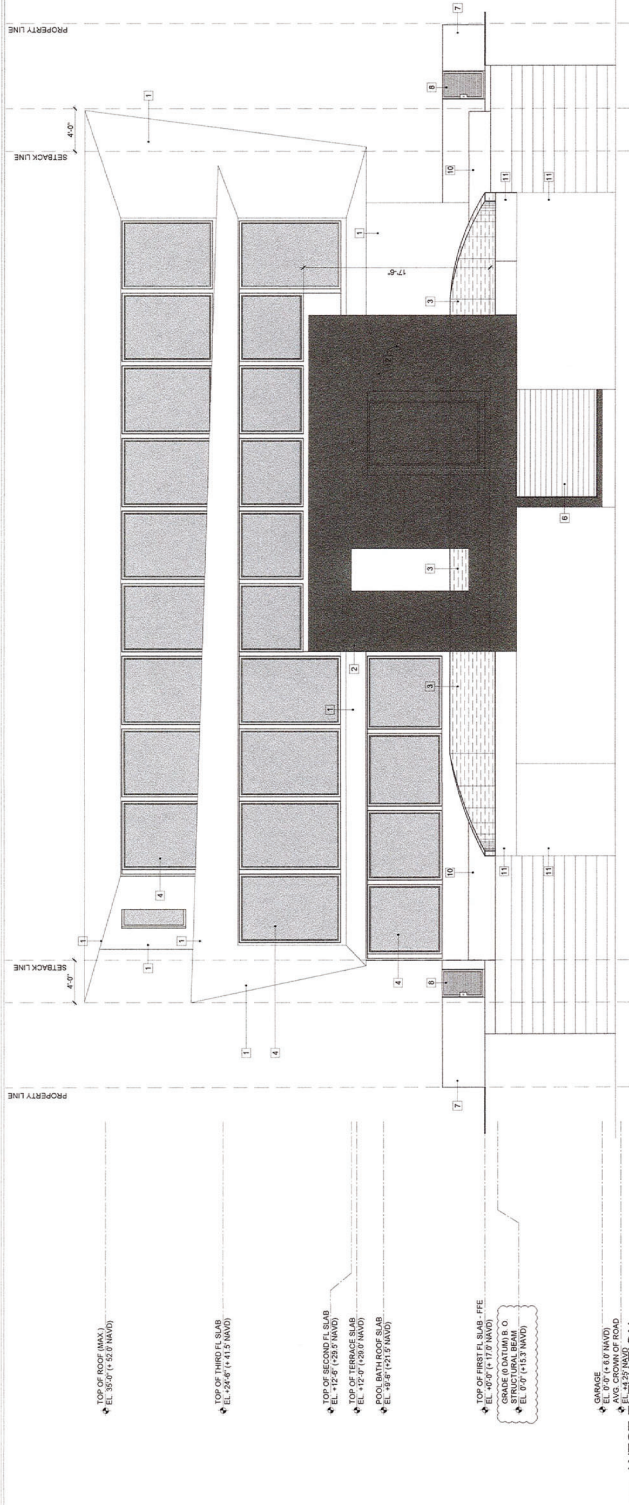


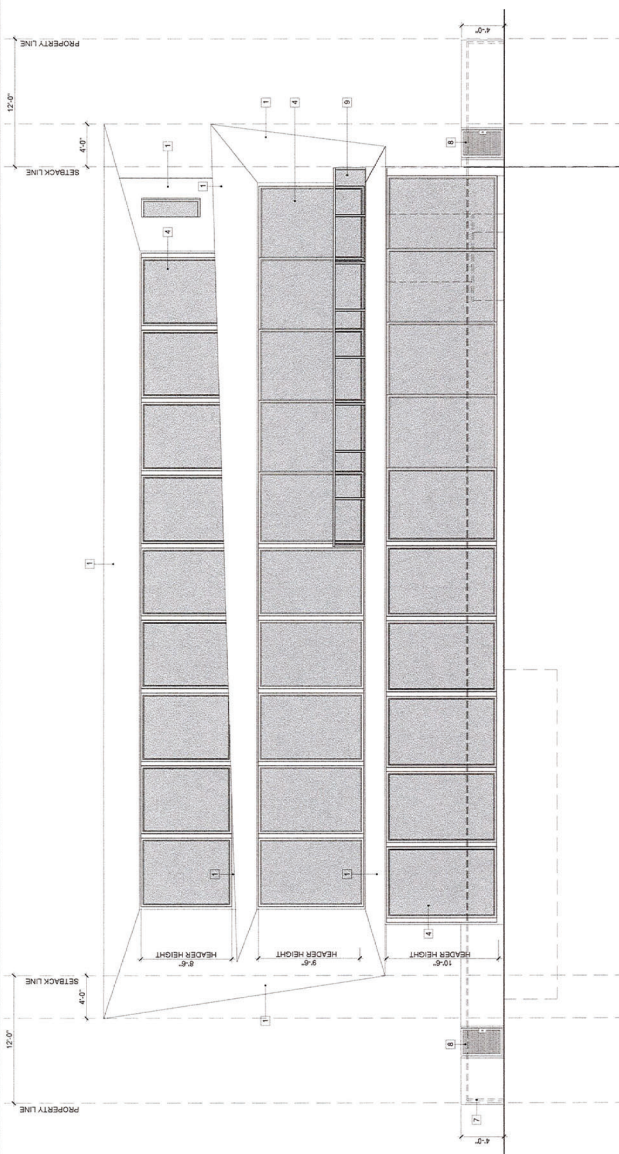
1 ROOF PLAN
 SCALE 3/8" = 1'-0"

RECEIVED

JUN 27 2023

HIGHLAND BEACH
BUILDING DEPARTMENT





TOP OF ROOF (MAX.)
EL. 35'-0" (+ 52.0' NAVD)

TOP OF THIRD FL SLAB
EL. +24'-6" (+ 41.5' NAVD)

TOP OF SECOND FL SLAB
EL. +12'-6" (+29.5' NAVD)

TOP OF TERRACE SLAB
EL. +12'-0" (+29.0' NAVD)

POOL BATH ROOF SLAB
EL. +9'-6" (+21.5' NAVD)

TOP OF FIRST FL SLAB - F
EL. +0'-0" (+ 17.0' NAVD)

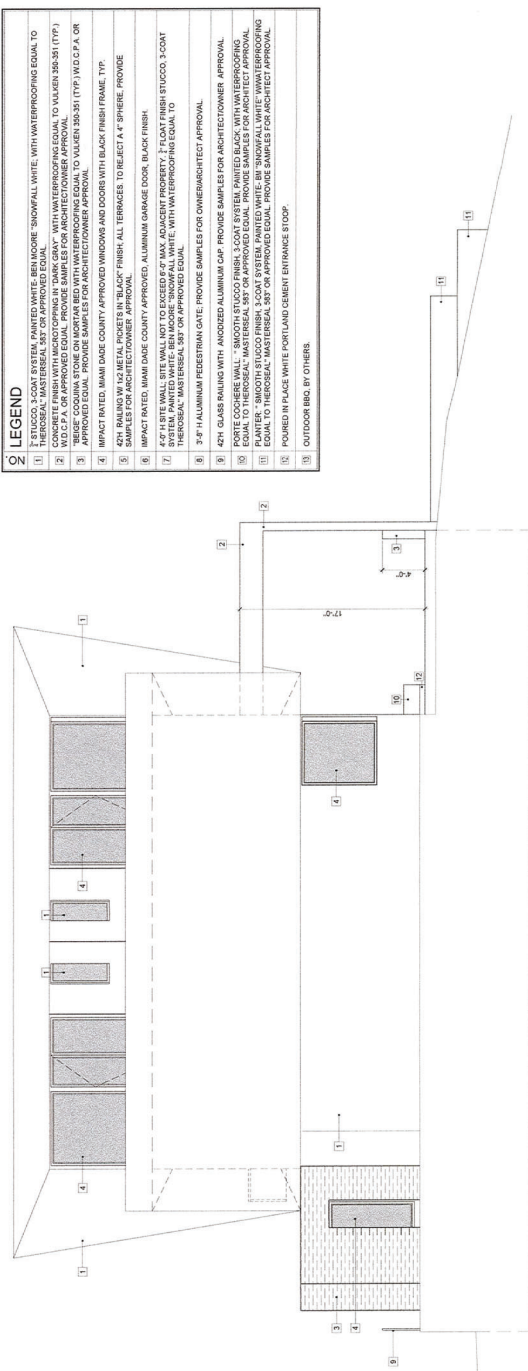
GRADE (0 DATUM) B. O.
STRUCTURAL BEAM
EL. 0'-0" (+15.3' NAVD)

GARAGE
EL. 0'-0" (+ 6.0' NAVD)

EAST ELEVATION

1

SCALE: 3/16" = 1'-0"



TOP OF ROOF (MAX.)
EL. 35'-0" (+ 52.0' NAVD)

TOP OF THIRD FL SLAB
EL. +24'-5" (+ 41.5' NAVD)

TOP OF SECOND FL SLAB
E1 214-8271.256 N. N. 0001

TOP OF TERRACE SLAB
EL. +12'-0" (+29.0' NAVD)

POOL BATH ROOF SLAB
EL. +5'-6" (+21.5' NAVD)

TOP OF FIRST FL SLAB - FFE
FL +0.0' (+17.0' NAVD)

GRADE (0 DATUM) B. O.
STRUCTURAL BEAM

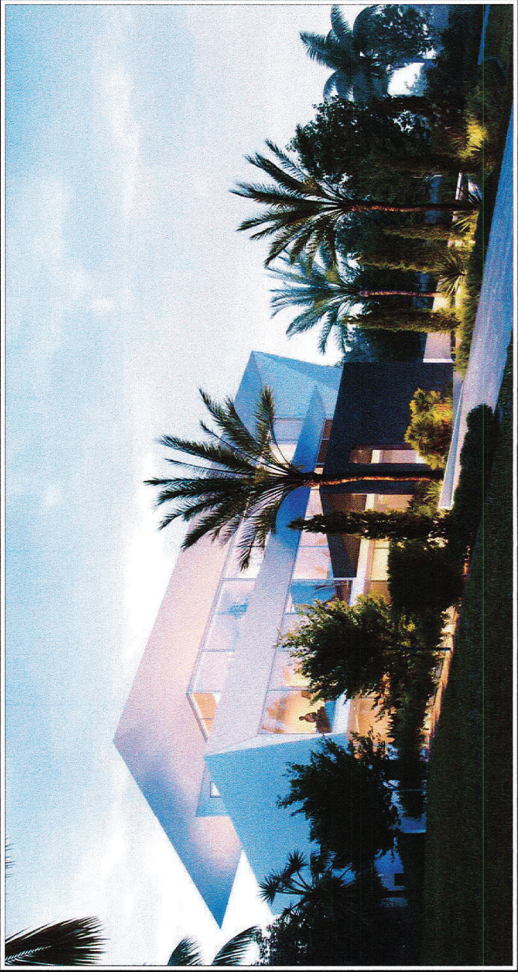
GARAGE
EL. 0'-0" (+ 8.0' NAVD)

EL. +4.25' NAVD

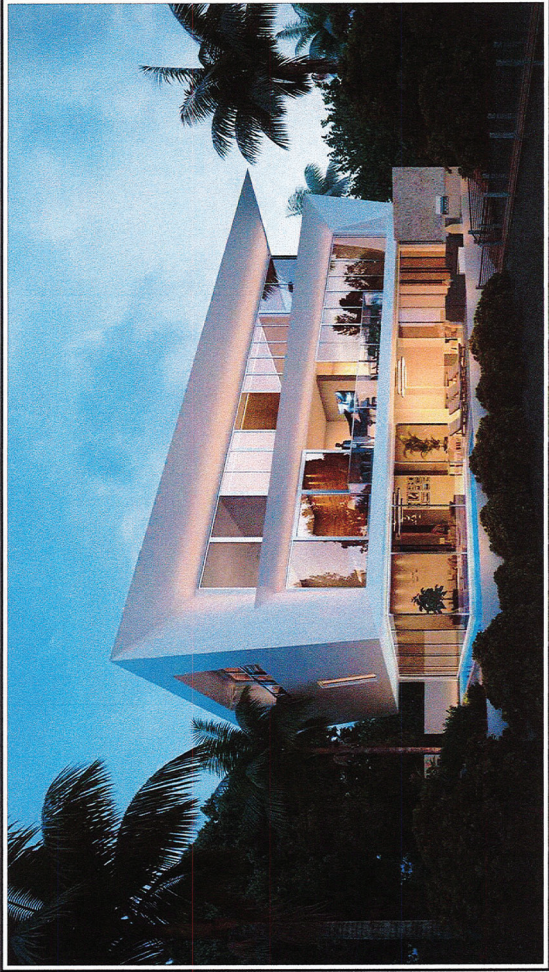
NORTH ELEVATION

2

SCALE: 1/4" = 1'-0"



FRONT RENDERING



REAR RENDERING

RECEIVED
JUN 27 2023
HIGHLAND BEACH
BUILDING DEPARTMENT

ISSUE	DATE
DEVELOP. REV.	07.13.23

1. ALL INFORMATION CONTAINED HEREIN IS THE PROPERTY OF B1 ARCHITECT, P.A. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF B1 ARCHITECT, P.A. 2. THIS DOCUMENT IS THE PROPERTY OF B1 ARCHITECT, P.A. AND IS NOT TO BE LOANED, REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF B1 ARCHITECT, P.A. 3. THE INFORMATION CONTAINED HEREIN IS FOR THE EXCLUSIVE USE OF THE CLIENT AND IS NOT TO BE USED FOR ANY OTHER PROJECT OR PURPOSE. 4. THE CLIENT AGREES TO HOLD B1 ARCHITECT, P.A. HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES, ARISING OUT OF OR RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN. 5. THE CLIENT AGREES TO INDEMNIFY AND HOLD B1 ARCHITECT, P.A. HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES, ARISING OUT OF OR RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN. 6. THE CLIENT AGREES TO INDEMNIFY AND HOLD B1 ARCHITECT, P.A. HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES, ARISING OUT OF OR RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN. 7. THE CLIENT AGREES TO INDEMNIFY AND HOLD B1 ARCHITECT, P.A. HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES, ARISING OUT OF OR RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN. 8. THE CLIENT AGREES TO INDEMNIFY AND HOLD B1 ARCHITECT, P.A. HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES, ARISING OUT OF OR RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN. 9. THE CLIENT AGREES TO INDEMNIFY AND HOLD B1 ARCHITECT, P.A. HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES, ARISING OUT OF OR RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN. 10. THE CLIENT AGREES TO INDEMNIFY AND HOLD B1 ARCHITECT, P.A. HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING ATTORNEY'S FEES, ARISING OUT OF OR RESULTING FROM THE USE OF THIS DOCUMENT OR THE INFORMATION CONTAINED HEREIN.

NEW SINGLE FAMILY RESIDENCE:
ZESSIN RESIDENCE
3805 SOUTH OCEAN BLVD.
HIGHLAND BEACH, FL 33487

GREGORY BONNER, AIA



AA 20003271

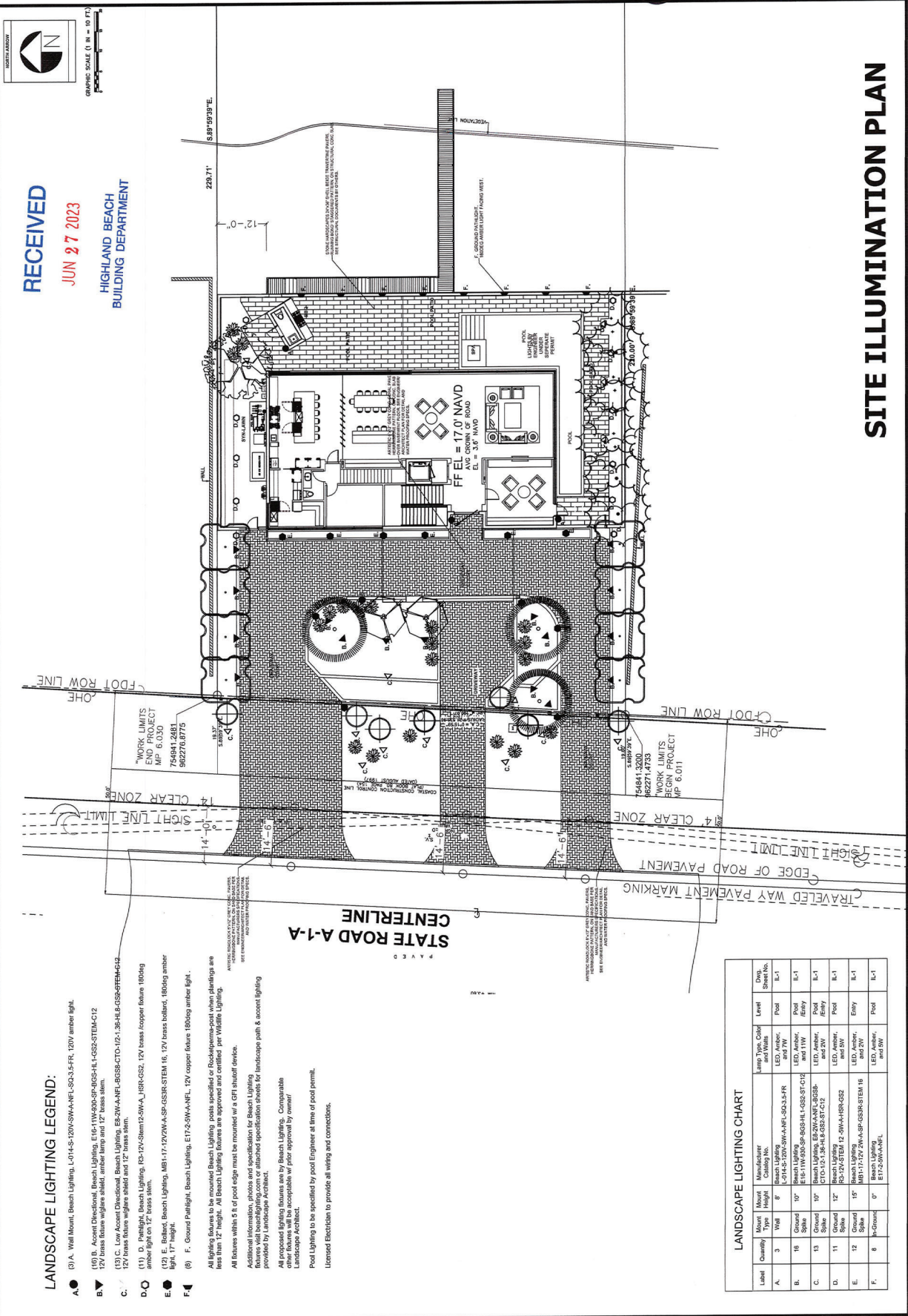
B1 ARCHITECT
139 NORTH COUNTY ROAD STE. 18C
PALM BEACH, FLORIDA 33480
(561) 312-3453



JOB NO.	200509HOLD
PLOT DATE	07.22.23
SCALE	AS NOTED
DRAWN BY	AMC

A2.2

- ## GENERAL
1. All planting notes to nursery plants' parents.
 2. All prohibited species.
 3. All plant material listed with Sec. 28-9 (F-20).
 4. All paint materials.
 5. All planting beds in (no cypress mulch).
 6. All planting areas in irrigation/water so all system components.
 7. Soil and Irrigation.
 8. All mechanical equipment at a height minimum.
 9. All underground utilities. The Landscape as shown on plan sheet 1,800,432,070 95.
 10. The general contract.
 11. In case of discrepancy.
 12. All existing trees to construction base.
 13. A minimum distance.
 15. Within all sites to above parameters.
 16. Any trees and Highland Beach.
 17. No transplants.



- LANDSCAPE LIGHTING LEGEND:**
- (3) A. Wall Mount, Beach Lighting, L-014-S-12V-SWA-NFL-SQ-3.5-FR, 120V amber light.
 - (10) B. Accent Directional, Beach Lighting, E-16-11W-830-SP-8GS-HL-1-QS2-STEM-C12
 - (12) Brass fixture vintage shield, amber lamp and 12" brass stem.
 - (13) C. Low Accent Directional, Beach Lighting, EB-2W-A-NFL-8GS-CTO-1/2-1, 36-HL-8GS-CTEM-452
 - (12) Brass fixture vintage shield and 12" brass stem.
 - (11) D. Pathlight, Beach Lighting, R3-12V-STEM12-SWA-A-JSR-GS2, 12V brass copper fixture, 180deg amber light on 12" brass stem.
 - (12) E. Reelant, Beach Lighting, MB-11-12V-2W-A-SP-GS3R-STEM 16, 12V brass bollard, 180deg amber light, 17" height.
 - (8) F. Ground Pathlight, Beach Lighting, E17-2-SWA-NFL, 12V copper fixture 180deg amber light.
- All lighting fixtures to be mounted Beach Lighting pools specified or Rockledge-pool when plantings are less than 12" height. All Beach Lighting fixtures are approved and certified per Wildlife Lighting. All fixtures within 5 ft of pool edge must be mounted with a GFI shutoff device.
- Additional information, photos and specification for Beach Lighting fixtures visit beachlighting.com or attached specification sheets for landscape path & accent lighting provided by Landscape Architect.
- All proposed lighting fixtures are by Beach Lighting. Comparable fixtures may be used with approval of the Landscape Architect.
- Pool Lighting to be specified by pool Engineer at time of pool permit.
- Licensed Electrician to provide all wiring and connections.

LANDSCAPE LIGHTING CHART					
Label	Quantity	Mount Type	Height	Lamp Type, Color and Watts	Level
A.	3	Wall	8"	Beach Lighting, L-014-S-12V-SWA-NFL-SQ-3.5-FR, LED, amber, 3.5W	Pool
B.	16	Ground Spike	10"	Beach Lighting, E-16-11W-830-SP-8GS-HL-1-QS2-STEM-C12, LED, amber, 11W	Pool
C.	13	Ground Spike	10"	Beach Lighting, EB-2W-A-NFL-8GS-CTO-1/2-1, 36-HL-8GS-CTEM-452, LED, amber, 11W	Pool
D.	11	Ground Spike	12"	Beach Lighting, R3-12V-STEM12-SWA-A-JSR-GS2, LED, amber, 12W	Pool
E.	12	Ground Spike	17"	Beach Lighting, MB-11-12V-2W-A-SP-GS3R-STEM 16, LED, amber, 16W	Entry
F.	8	In-Ground	0"	Beach Lighting, E17-2-SWA-NFL, LED, amber, 12W	Pool

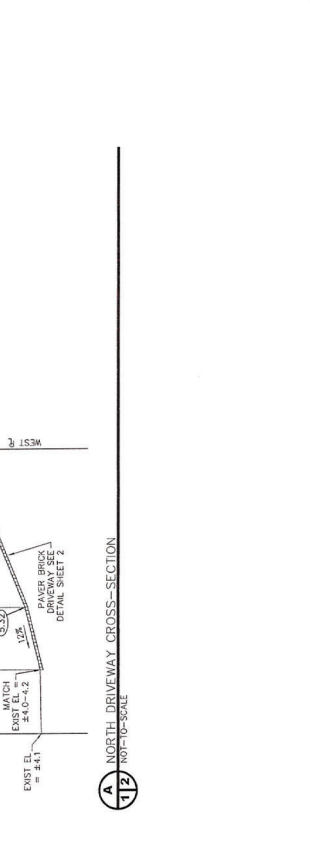
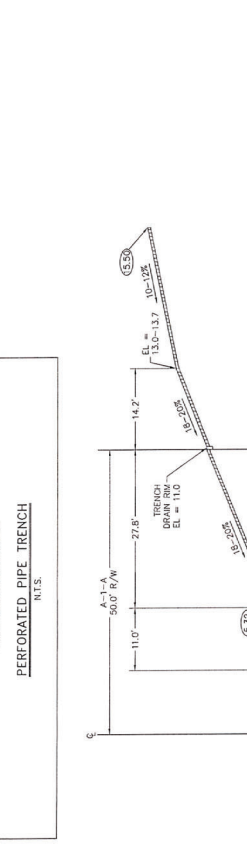
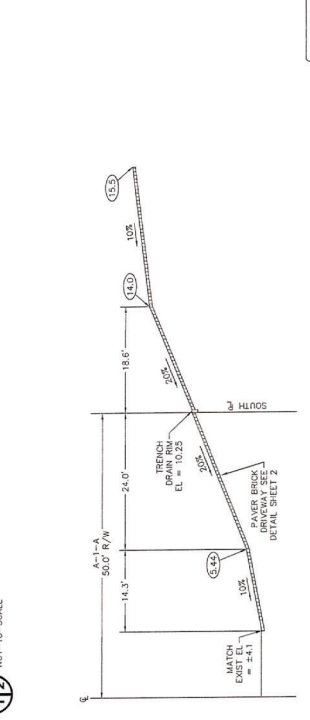
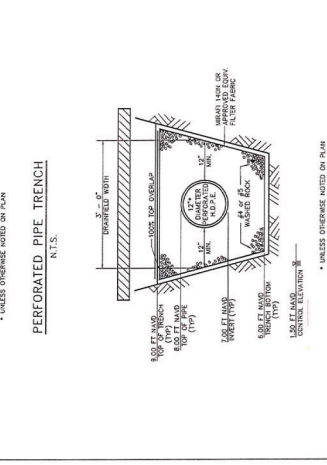
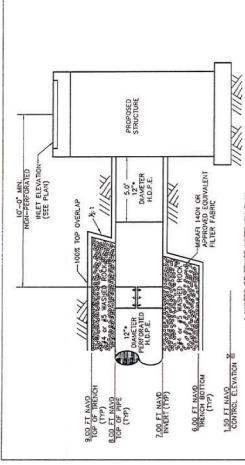
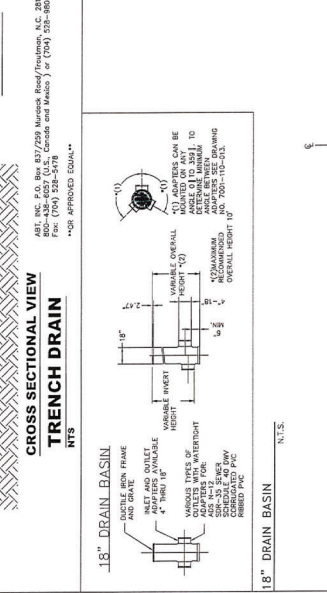
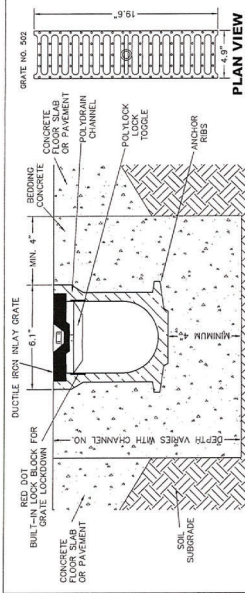
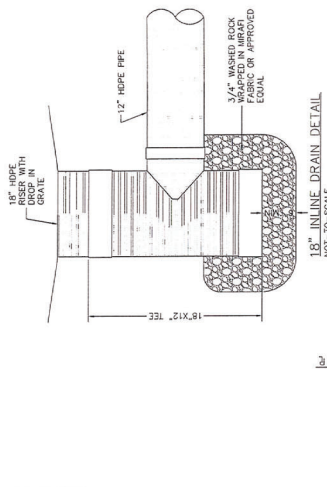
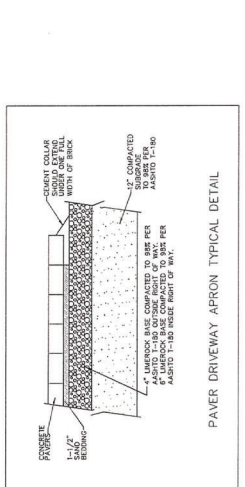
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100	12/08/22		

PAVING & DRAINAGE DETAILS FOR:
SINGLE FAMILY RESIDENCE
3806 S OCEAN BOULEVARD
HIGHLAND BEACH, FLORIDA

ENGINEERS • ENVIRONMENTAL CONSULTANTS
208 Pineapple Grove Way
Pineapple Grove, Florida 33444
Phone: (561) 274-8500
Fax: (561) 274-8508
www.environmentalconsultants.com

DRAWN: B.A.B.
CHECKED: J.A.P.
DATE: 12/08/22
JOB NO: 22-001
SHEET NO: 2 OF 4

CALL 48 HOURS BEFORE YOU DIG.
IT'S THE LAW
1-800-432-4770
SUNSHINE STATE ONE CALL OF FLORIDA, INC.
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ENGINEER REPRESENTATIVE ENVIRONMENTAL ASSOCIATES, INC.



PAVING, GRADING AND DRAINAGE NOTES

1. ALL PAVING AND DRAINAGE WORK IN THE PALM BEACH COUNTY (PBC) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE PBC DEPARTMENT OF TRANSPORTATION (DOT) RIGHT-OF-WAY SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH THE DOT LATEST STANDARDS.
2. COMPACTED SUBGRADE SHALL BE COMPACTED AND MEET THE DENSITY REQUIREMENTS OF THE DOT LATEST STANDARDS. SUBGRADE SHALL EXTEND 12 INCHES BEYOND THE PROPOSED EDGE OF PAVEMENT AND/OR 6 INCHES BEYOND VALLEY CUTTER, TYPE "C" CURB & GUTTER, OR TYPE "D" CURB. SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 98% DENSITY. ALL MUCK, STAMPS, ROOTS OR OTHER DELETERIOUS MATERIALS ENCOUNTERED IN THE SUBGRADE SHALL BE REMOVED AND THE SUBGRADE SHALL BE REPAIRED TO THE CENTERLINE OF THE ROADWAY TO A WIDTH OF TEN FEET BEYOND THE EDGE OF PAVEMENT. IF SUBGRADE IS REQUIRED TO BE STABILIZED THE REQUIRED BEARING CAPACITY SHALL BE DETERMINED BY THE FOLLOWING BEARING TEST, TEST METHOD "C" OF ASTM 1-180 SPECIFICATIONS.
3. SHELLOCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 250 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD CONSTRUCTION. THE THICKNESS OF THE SHELLOCK BASE SHALL BE AS SHOWN ON THE DETAIL DRAWINGS AND SHALL BE COMPACTED TO A MINIMUM OF 98% DENSITY. THE SHELLOCK SHALL HAVE A MINIMUM OF 40% CARBONATES OF CALCIUM AND MAGNESIUM IN THE MATERIAL.
4. LIMEROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 200 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD CONSTRUCTION. THE THICKNESS OF THE LIMEROCK BASE SHALL BE AS SHOWN ON THE DETAIL DRAWINGS AND SHALL BE COMPACTED TO A MINIMUM OF 98% DENSITY. THE LIMEROCK SHALL HAVE A MINIMUM OF 40% CARBONATES OF CALCIUM AND MAGNESIUM IN THE MATERIAL.
5. MUCK AND PEAT - IF MUCK AND/OR PEAT ARE ENCOUNTERED IN THE ROAD OR PARKING AREA, THEY WILL BE REMOVED COMPLETELY TO A MINIMUM OF TEN FEET BELOW THE EDGE OF PAVEMENT AND SHALL BE BACKFILLED WITH GRANULAR MATERIAL. THE REMOVED MATERIAL SHALL BE PLACED IN A TRUCK AND Hauled AWAY TO A WIDTH OF TWO FEET AT THE SWALE INVERT AND REPLACED WITH GRANULAR MATERIAL.
6. GUMBO - WHERE GUMBO UNDER THE GRADE, 2 INCHES BELOW THE FINISHED GRADE TO ALLOW FOR THE THICKNESS OF THE SOIL, IS ENCOUNTERED, IT SHALL BE REMOVED TO A MINIMUM OF TEN FEET BELOW THE EDGE OF PAVEMENT AND SHALL BE BACKFILLED WITH GRANULAR MATERIAL.
7. CLEARING AND GRUBBING - WITHIN THE LIMITS OF CONSTRUCTION ALL VEGETATION AND ROOT MATERIAL SHALL BE REMOVED.
8. GUMBO - WHERE GUMBO OR OTHER PLASTIC CLAYS ARE ENCOUNTERED, THEY SHALL BE REMOVED WITHIN THE ROADWAY AND PARKING AREAS ARE FOOT BELOW THE FINISHED GRADE EXTENDING HORIZONTALLY TO THE OUTSIDE EDGE OF THE SHOULDER AREA.
9. PRIME COAT SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE DOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. PRIME COAT SHALL BE APPLIED AT A RATE OF APPLICATION NOT LESS THAN 0.15 GALLONS PER SQUARE YARD FOR SHEL LOCK OR COBBLE SHEL BASES.
10. TACK COAT - BITUMINOUS TACK COAT SHALL CONFORM WITH THE REQUIREMENTS OF THE DOT SPECIFICATIONS, LATEST EDITION AND SHALL BE APPLIED AT THE RATE

- OF 0.08 GALLONS PER SQUARE YARD, UNLESS A VARIATION IS APPROVED BY THE ENGINEER.
11. ASPHALTIC CONCRETE SURFACE COURSE SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE DOT STANDARD SPECIFICATIONS, LATEST EDITION. THE THICKNESS OF THE SURFACE COURSE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS.
12. ALL CONCRETE SHALL DEVELOP 2500 P.S.I. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH. THE CONCRETE SHALL BE PLACED AND FINISHED IN ACCORDANCE WITH THE DOT LATEST STANDARDS. THE CONCRETE SHALL BE PLACED AND FINISHED IN ACCORDANCE WITH THE DOT LATEST STANDARDS.
13. PAVEMENT TRAFFIC STRIPES AND MARKINGS SHALL BE IN ACCORDANCE WITH CITY OF PALM BEACH CURRENT STANDARDS AND/OR MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 3RD EDITION, 1988, AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION, WHERE APPLICABLE.
14. SEQUENCE OF CONSTRUCTION - THE SEQUENCE OF CONSTRUCTION SHALL BE SUCH THAT ALL UNDERGROUND INSTALLATIONS OF EVERY KIND THAT ARE BEYOND THE FINISHED GRADE SHALL BE COMPLETED PRIOR TO THE CONSTRUCTION OF THE PAVEMENT. THE SEQUENCE OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DOT LATEST STANDARDS, LATEST EDITION, AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION, WHERE APPLICABLE.
15. INLETS AND MANHOLES - ALL INLETS AND MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DOT SPECIFICATIONS, LATEST EDITION, AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION, WHERE APPLICABLE.
16. GRADE ELEVATIONS REFER TO THE FINISHING OF THE GRADE.
17. GRADES SHOWN ARE FINISHED GRADES.
18. EXISTING AVERAGE ROAD CROWN ELEVATION = 4.1' N.A.D.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING UTILITIES AND STRUCTURES.
20. THE FIRST JOINT OF PIPE ENTERING OR LEAVING A MANHOLE OR INLET SHALL BE WRAPPED WITH FLEEN FABRIC PER DOT SPECIFICATIONS.
21. MEASUREMENT OF THE LENGTH OF PIPE SHALL BE FROM THE CENTER OF THE STRUCTURE TO THE CENTER OF THE STRUCTURE.
22. PIPE BACKFILL - REQUIREMENTS FOR PIPE BACKFILL CROSSING ROADS OR PARKING AREAS SHALL BE IN ACCORDANCE WITH THE DOT SPECIFICATIONS, LATEST EDITION. BACKFILL SHALL BE PLACED IN SIX INCH LIFTS AND COMPACTED TO 100% OF THE STANDARD PROCTOR (ASTM) 1-99 SPECIFICATIONS.
23. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THREE (3) CERTIFIED COPIES OF THE PROPOSED DRAINAGE SYSTEM. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THREE (3) CERTIFIED COPIES OF THE PROPOSED DRAINAGE SYSTEM. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THREE (3) CERTIFIED COPIES OF THE PROPOSED DRAINAGE SYSTEM.
24. PRIOR TO CERTIFICATION OF THE DRAINAGE SYSTEM, THE CONTRACTOR MUST PUMP DOWN AND LAMP THE DRAINAGE SYSTEM FOR INSPECTION BY THE ENGINEER AFTER FINISHED FOOT FOR THE ROADSIDE HAS BEEN INSTALLED.

GENERAL NOTES

1. CONTRACTOR SHALL PROTECT ALL PERMANENT REFERENCE MONUMENTS AND TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THE MONUMENTS DURING CONSTRUCTION, AT NO ADDITIONAL COST TO THE OWNER.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
3. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE DEMERGING OF POWER LINES AND/OR HOLDING POWER POLES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
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6. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION OR INSTALLATION AS REQUIRED BY THE ENGINEER OR BY THE APPROPRIATE GOVERNING AGENCIES.
7. CONTRACTOR SHALL BE RESPONSIBLE TO SECURE AND PAY FOR, AT NO ADDITIONAL COST TO THE OWNER, ALL NECESSARY PERMITS, FEES AND LICENSES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
9. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PAY FOR THE HOLDING OF OTHER UTILITIES POLES DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
10. ALL CONCRETE SHALL DEVELOP 2500 P.S.I. (MINIMUM) 28 DAY COMPRESSIVE STRENGTH. THE CONCRETE SHALL BE PLACED AND FINISHED IN ACCORDANCE WITH THE DOT LATEST STANDARDS. THE CONCRETE SHALL BE PLACED AND FINISHED IN ACCORDANCE WITH THE DOT LATEST STANDARDS.

11. ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL UTILITY.
12. ENVIRONMENTAL ASSOC. INC. SHALL NOT BE RESPONSIBLE FOR THE SAFETY OF THE WORKING SITES. GENERAL PUBLIC CONSTRUCTION WITH OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) REQUIREMENTS AND THE SAFETY OF THE GENERAL PUBLIC.
13. ALL MATERIALS AND WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LOCAL UTILITY.
14. THE CONTRACTOR SHALL CALL SURVING L-800-432-4770 48 HOURS BEFORE DIGGING FOR FIELD LOCATIONS OF UNDERGROUND UTILITIES.
15. CORRUGATED ALUMINUM PIPE USED BENEATH PAVEMENT SHALL BE IN CONFORMANCE WITH SEC. 8.4.E.1.
16. ALL CONSTRUCTION ACTIVITY, INCLUDING REINFORCING, IS TO BE A MINIMUM OF SIX FEET FROM THE BASE OF ANY TREE THAT IS DESIGNATED TO REMAIN.
17. ALL LIMEROCK AND BASE MATERIALS SHALL BE REMOVED FROM THE PLANTER AREAS AND REPLACED WITH APPROPRIATE PLANTING SOIL PRIOR TO THE LANDSCAPING OF THE SITE.
18. THE REMOVAL OF ANY TREE ON THE SITE IS PROHIBITED WITHOUT THE REQUIRED PERMITS.
19. ALL MATERIALS AND CONSTRUCTION WITHIN THE FOOT RIGHT-OF-WAY SHALL CONFORM WITH ALL PERMITS/CONDITIONS OWING THE REQUIRED NOTICES AND MAINTENANCE AND UTILITY OPERATIONS OF THE STATE HIGHWAY SYSTEM (LATEST EDITION).
20. LANE CLOSURES WITHIN THE FOOT RIGHT-OF-WAY SHALL BE LIMITED TO THE HOURS OF OPERATION AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION.

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GENERAL NOTES FOR:
SINGLE FAMILY RESIDENCE
3805 S OCEAN BOULEVARD
HIGHLAND BEACH, FLORIDA

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Enviroworks Inc.
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Palm Beach, FL 33484
Phone: (561) 274-8500
Fax: (561) 274-8506

DRAWN: B.A.B.
CHECKED: J.A.P.
DATE: 12/08/22
JOB NO. 21065-2-DTL
SHEET NO. 3 OF 4



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298 Pineapple Grove Way - Delray Beach, FL 33444
Florida Certificate of Authorization #6506

SURFACE WATER MANAGEMENT CALCULATIONS

FOR

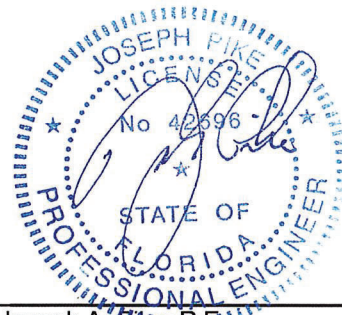
3805 S OCEAN BLVD
HIGHLAND BEACH, FL

DECEMBER 2022

SITE AREA: AREA 0.23Ac

Josep
h Pike

Digitally signed by
Joseph Pike
DN: c=US,
o=EnviroDesign
Associates Inc,
dnQualifier=A01410C90
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Date: 2022.12.08
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Joseph A. Pike, P.E.
FL Registration No. 42696
EnviroDesign Associates, Inc.
Certificate of Authorization #6506



DRAINAGE CALCULATIONS

3805 S OCEAN BLVD - Job #21093-2

WATER QUALITY VOLUME:

BASED ON F.A.C. CHAPTER 62-302 & SFWMD BASIS OF REVIEW

GIVEN:

TOTAL SITE AREA	10154 sf
ROOF AREA	2783 sf
WATER SURFACE AREA	0 sf
PERMEABLE PAVER AREA	0 sf
WATER QUALITY SITE AREA	7371 sf (Total Site - water surface + roofs)
WATER QUALITY IMPERVIOUS AREA	5915 sf (W.Q. Site Area - Pervious)
50% PERMEABLE PAVER CREDIT	0 sf
NET WQ IMPERVIOUS AREA	5915 sf (W.Q. Impervious Area - 50% Permeable Paver Credit)
WATER QUALITY PERVIOUS AREA	1456 sf (W.Q. Site Area - Impervious)
WATER QUALITY % IMPERVIOUS	80.2 % (Impervious / W.Q. Site Area)

REQUIRED STORAGE VOLUME: WET DETENTION VOLUME = 1" OVER TOTAL SITE AREA OR 2.5" OVER IMPERVIOUS AREA (IF SITE IS OVER 40% IMPERVIOUS, USE 2.5" OVER IMPERVIOUS)

→ COMPUTE 1" OVER TOTAL SITE AREA:

$$1\text{in} * 10154 = 846 \text{ cf}$$

→ COMPUTE 2.5" OVER % IMPERVIOUS AREA:

$$2.5\text{in} * 0.8 * 10154 = 1698 \text{ cf} \quad \text{(THIS METHOD CONTROLS)}$$

PER SFWMD SWERP APPLICANT'S HANDBOOK VOLUME II, 4.2.1

PROVIDE 100% FOR EXFILTRATION (exfil calcs includes 50% reduction & safety factor 2)

$$\text{WATER QUALITY VOLUME} = 1698 * 1 = 1698 \text{ cf}$$

PRE- vs. POST-DEVELOPMENT 10-YEAR, 1-DAY RUN-OFF VOLUME:

GIVEN: REQUIRED STORAGE: 3.2" PER SFWMD TECHNICAL PUBLICATION EMA #390 FIGURE 9

	PRE	POST
TOTAL SITE AREA	10154	10154
IMPERVIOUS AREA	4180	8698
PERVIOUS AREA	5974	1456
USDA SCS RUNOFF EQUATION:		
A =	10154 sf	
Q = RUNOFF =	$(P-0.2S)^2 / (P+0.8S)$	
P =	ACCUMULATED RAINFALL	
	= 3.20	
S =	SOIL STORAGE * %PERVIOUS	
AVERAGE PERVIOUS ELEVATION	12 ft	12 ft
WATER TABLE ELEVATION	1.5 ft	1.5 ft
DEPTH TO WATER TABLE	4 ft	4 ft
CUMULATIVE WATER STORAGE WITHIN	10.90 in	10.90 in
SOIL STORAGE PER SFWMD BASIS OF 25% REDUCTION	8.18 in	8.18 in
S =	4.81 in	1.17 in
0.2S =	0.96 in	0.23 in
NOTE: IF 0.2S IS > OR = P, THEN Q = 0		
Q =	0.71 in	2.13 in
V =	601 cf	1798 cf

TOTAL VOLUME REQUIRED:

WATER QUALITY VOLUME:

$$V = 1698 \text{ cf} = 0.47 \quad \text{(THIS METHOD CONTROLS)}$$

10-YR, ONE DAY PRE- VS. POST-DEVELOPMENT RUNOFF VOLUME:

$$V = 1197 \text{ cf} = 0.33$$

REQUIRED VOLUME:

$$V = 1698 \text{ cf} = 0.47 \text{ Ac-In}$$

PROVIDED VOLUME:

$$V = 1851 \text{ cf} = 0.51 \text{ Ac-In}$$

see exfil calcs

EXFILTRATION TRENCH CALCULATIONS

3805 S OCEAN BLVD - Job #21093-2

L =	LENGTH OF TRENCH REQ'D (FT)	
V _{wq} =	WTR QUALITY VOLUME TO BE TREATED (AC-IN)	= 0.47
V _{add} =	ADD'L VOLUME TO BE TREATED (AC-IN)	= 0.00
W =	TRENCH WIDTH (FT)	= 3
H =	DEPTH TO WATER TABLE (FT)	= 6
D _u =	NON-SATURATED TRENCH DEPTH (FT)	= 3
D _s =	SATURATED TRENCH DEPTH (FT)	= 0
FS =	SAFETY FACTOR NOT LESS THAN 2	= 2
%WQ =	PERCENT REDUCTION IN WATER QUALITY	= 50
K =	HYDRAULIC CONDUCTIVITY (CFS/FT ² -FT HEAD)	= 3.5 X 10 ⁻⁴
OR K =		= 0.0004

STANDARD FORMULA:

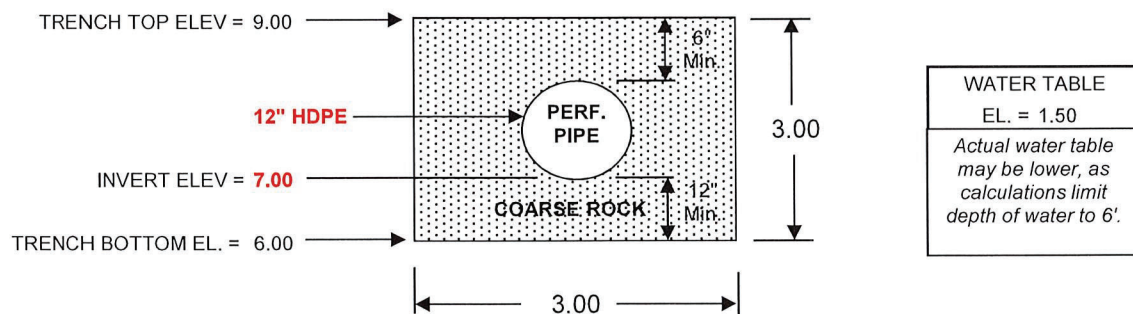
$$L = \frac{FS[(\%WQ)(V_{wq}) + V_{add}]}{K(HW + 2HD_u - D_u^2 + 2HD_s) + (1.39 \times 10^{-4}) w D_u} = 27.51 \text{ FEET}$$

$$[L_{wq} = 27.51 \text{ FT} + L_{add} = 0.00 \text{ FT}]$$

CONSERVATIVE FORMULA: (NOT APPLICABLE - STANDARD FORMULA APPLIES)

$$L = \frac{V}{K(2HD_u - D_u^2 + 2HD_s) + (1.39 \times 10^{-4}) w D_u} = \text{N/A}$$

STANDARD TRENCH DETAIL - REFER TO ENGINEERING PLANS FOR ACTUAL SPECIFICATIONS



THEREFORE, MIN. TRENCH LENGTH REQUIRED	=	28 FEET
ACTUAL TRENCH LENGTH PROVIDED	=	30 FEET
ACTUAL TREATMENT VOLUME PROVIDED	=	0.51 AC-IN OR 0.04 AC-FT
TRENCH DIMENSIONS:		3.00 FT. WIDE BY 3.00 FT. DEEP

*PERCENTAGE OF EXFILTRATION VOLUME CREDITED TOWARD STAGE-STORAGE: **100 %**

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