MIAMIBEACH

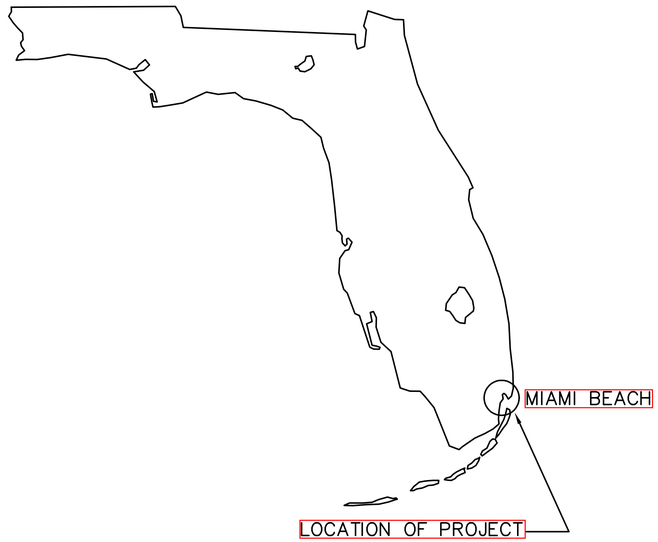
PUBLIC WORKS DEPARTMENT

INDIAN CREEK PARK

SEAWALL REHABILITATION

NOVEMBER 30, 2016

60% SUBMITTAL



Always call 811 two full business days before you dig

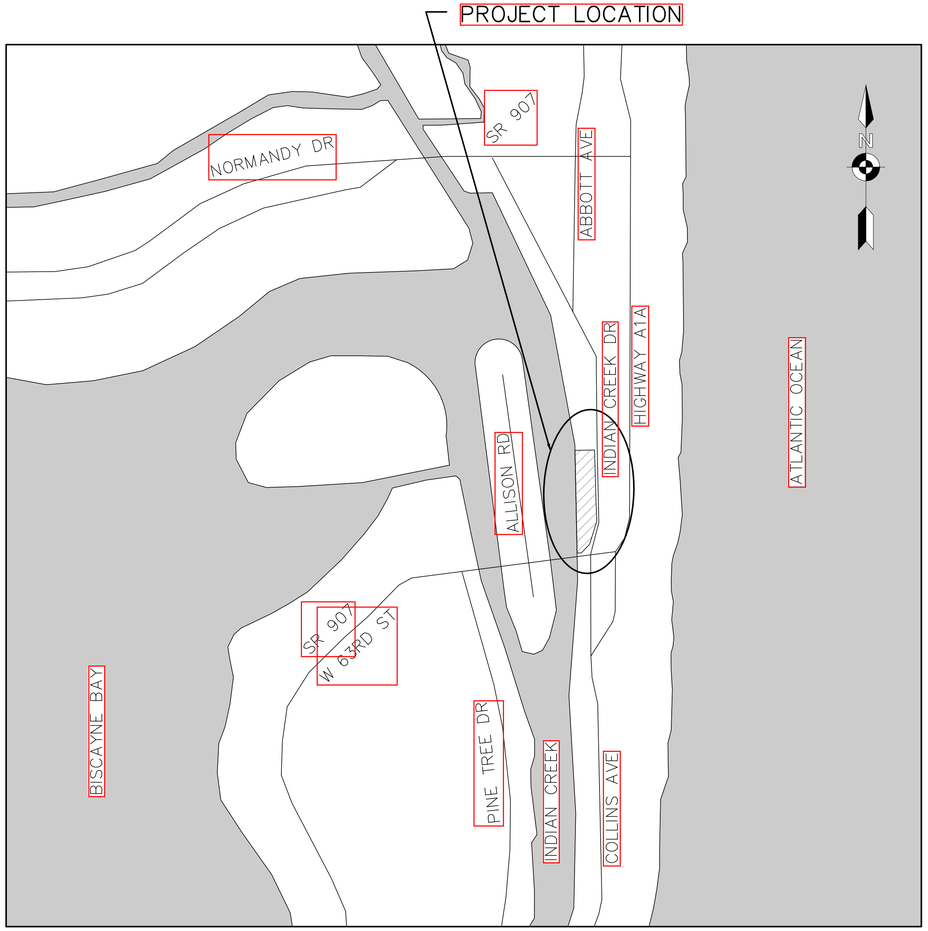
Sunshine811.com

www.sunshine811.com

CITY OF MIAMI BEACH

MAYOR:	PHILIP LEVINE
COMMISSIONERS:	MICHAEL GRIECO JOY MALAKOFF MICKY STEINBERG KRISTEN ROSEN GONZALEZ RICKY ARRIOLA JOHN ELIZABETH ALEMAN
CITY MANAGER:	JIMMY L. MORALES
CITY ATTORNEY:	RAUL J. AGUILA
PUBLIC WORKS DIRECTOR:	ERIC T. CARPENTER, P.E.
CITY ENGINEER:	BRUCE A. MOWRY, Ph.D., P.E.

PROJECT LOCATION



LOCATION MAP

INDEX OF DRAWINGS

SHEET	DRAWING	DESCRIPTION
1	G-01	COVER SHEET & INDEX OF DRAWINGS
2	G-02	NOTES AND PAY ITEMS
3-6	03-06	BOUNDARY & TOPOGRAPHIC SURVEY
7	C-01	DEMOLITION PLAN
8	C-02	PLAN SHEET
9	C-03	LIVING SHORE SECTION
10	C-04	CIVIL DETAILS
11	S-01	WALL SECTION AND DETAILS
12-13	S-03-04	WALL DETAILS
14	L-01	SITE FURNISHING PLAN
15	L-02	SITE FURNISHINGS
16	L-03	TREE DISPOSITION PLAN
17	L-04A	TREE DISPOSITION SCHEDULE
18	L-04B	TREE DISPOSITION SCHEDULE
19	L-04C	TREE DISPOSITION SCHEDULE
20	L-05	TREE REPLACEMENT PLAN
21	L-06	TREE REPLACEMENT PLAN
22	L-07	LANDSCAPE PLAN
23	L-08	LANDSCAPE DETAILS
24	E-1.0	GENERAL NOTES AND SYMBOL LEGEND
25	E-2.0	EXISTING SITE PLAN
26	E-3.0	NEW WORK SITE PLAN
27	E-4.0	DETAILS AND ELECTRICAL RISER
28	E-5.0	DETAILS AND ELECTRICAL RISER

BPA
Brindley Pieters & Associates, Inc.

815 NW 57 th Avenue,
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING TO HIS SATISFACTION, PRIOR TO THE EXECUTION OF THE CONTRACT, THE NATURE AND LOCATION OF THE WORK, THE CONFIRMATION OF THE EXISTING GROUND, THE CHARACTER AND QUALITY OF THE SUBSTRATA, THE TYPES AND QUANTITY OF EXISTING MATERIALS TO BE ENCOUNTERED, THE NATURE OF THE GROUNDWATER CONDITIONS, THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRIOR TO AND DURING THE EXECUTION OF THE WORK, THE GENERAL AND LOCAL CONDITIONS, AND ALL OTHER MATTERS WHICH CAN IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT. THE CONTRACT UNIT PRICES FOR THE ENTIRE CONTRACT WILL REFLECT ALL COSTS PERTAINING TO PROPOSED WORK.

2. THE CONTRACTOR SHALL SUPPLY HIS OWN TEMPORARY ELECTRIC, WATER AND SANITARY FACILITIES AND ACQUIRE ALL NECESSARY CONSTRUCTION PERMITS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT EACH UTILITY COMPANY AND THE CITY OF MIAMI BEACH PARK MAINTENANCE DEPARTMENT TO FIELD–LOCATE EXISTING UTILITIES AT THE PROJECT SITE AND IN THE CONSTRUCTION STAGING AREA.

3. ALL COSTS ASSOCIATED WITH PREPARING THE CONTRACTOR'S STORAGE AND STAGING AREA SITE SHALL BE BORNE BY THE CONTRACTOR. THIS INCLUDES, BUT IS NOT LIMITED TO, CLEARING AND GRADING OF THE SITE, CONSTRUCTION OF ALL TEMPORARY UTILITIES, ACCESS ROADS, ALL SECURITY FENCING, PERMITTING COSTS, RESTORATION OF THE SITE TO ITS ORIGINAL CONDITION AT PROJECT COMPLETION, MEETING FEDERAL, STATE AND LOCAL REQUIREMENTS, ETC.

4. CONTRACTOR SHALL REVIEW ALL PERMITS BEFORE BIDDING ON THE PROJECT AND BECOME FAMILIAR WITH THE CONDITIONS OF THE PERMITS. CONTRACTOR SHALL ENSURE THAT THE CONSTRUCTION ACTIVITIES ARE IN COMPLIANCE WITH ALL REGULATORY AGENCY PERMITS.

5. THE PROJECT PAY ITEMS ARE INTENDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED WITHIN THESE CONTRACT DOCUMENTS AND ALL REFERENCED CONSTRUCTION AND PERMIT REQUIREMENTS. ALL INCIDENTAL WORK REQUIRED TO COMPLETE THE PROJECT AND ADHERE TO THIS PROJECT'S REQUIREMENTS SHALL BE INCLUDED IN THE CONTRACTOR'S BID UNDER THE MOST APPLICABLE BID ITEM.

6. THE CONTRACTOR WILL RESTRICT PERSONNEL, THE USE OF EQUIPMENT, AND THE STORAGE OF MATERIALS TO AREAS WITHIN THE LIMITS OF CONSTRUCTION, OR TO OTHER AREAS AS DIRECTED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

7. ALL CONTRACTOR VEHICLES AND TRAFFIC SHALL REMAIN WITHIN THE DESIGNATED CONSTRUCTION AREAS, STAGING AREAS, OR HAUL ROUTES.

8. THE CONTRACTOR SHALL COMPLY WITH OSHA'S EXCAVATION SAFETY STANDARDS AND THE FLORIDA TRENCH SAFETY ACT.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RESTORATION OF EXISTING PAVEMENT, SIDEWALK, UTILITY PIPES, CONDUITS, SPRINKLER HEADS, CABLES, GRASS, LANDSCAPED AREAS, AND ALL OTHER EXISTING IMPROVEMENTS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS. THE CONTRACTOR SHALL RESTORE ALL EXISTING IMPROVEMENTS TO ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER.

10. WHERE REQUIRED, AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR SHALL USE TEMPORARY SHEETING OR TRENCH BOXES, TO MINIMIZE THE SIZE OF EXCAVATIONS IN ORDER TO PROTECT ADJACENT EXISTING ROADWAYS, UTILITIES AND OTHER FACILITIES.

11. UNLESS OTHERWISE NOTED, EXISTING DRAINAGE STRUCTURES AND DRAINAGE PIPE AT THE PROJECT SHALL REMAIN.

12. THE CONTRACTOR SHALL REPLACE AND RECONNECT ALL IRRIGATION MAINS WHICH ARE DISTURBED BY CONSTRUCTION. ALL EXISTING IRRIGATION TO AREAS NOT WITHIN CONSTRUCTION LIMITS MUST BE MAINTAINED DURING CONSTRUCTION. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL INSPECT IRRIGATION AND LANDSCAPING WITH A REPRESENTATIVE OF THE CITY OF MIAMI BEACH PARK MAINTENANCE. IF IRRIGATION IS INTERRUPTED TO LANDSCAPE AREAS, CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING. AFTER COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH THE OWNER'S STAFF TO TEST ALL IRRIGATION MAINS AND BRANCHES WITHIN, OR CROSSING THE PROJECT.

13. PLAN BENCHMARK DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988.

14. CONTRACTOR SHALL SET TEMPORARY BENCHMARKS AS NEEDED.

15. ANY SURVEY MONUMENT WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A MONUMENT IS IN DANGER OF BEING DAMAGED, THE CONTRACTOR SHALL NOTIFY THE FLORIDA DEPARTMENT OF NATURAL RESOURCES, BUREAU OF SURVEY AND MAPPING, 3900 COMMONWEALTH BOULEVARD, SUITE 309, TALLAHASSEE, FLORIDA 32399, TELEPHONE (904) 488–2427.

16. ALL PUBLIC LAND CORNERS OR COUNTY MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED. IF A CORNER OR MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR'S CONSTRUCTION MANAGER SHOULD NOTIFY THE CITY OF MIAMI BEACH SURVEYOR WITHOUT DELAY.

17. ALL EXISTING ROADS AND DRIVEWAYS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES DURING CONSTRUCTION, UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE OWNER.

18. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL AIR QUALITY AND POLLUTION CONTROL REGULATIONS PERTAINING TO CONSTRUCTION ACTIVITIES.

19. SILT FENCES SHALL BE PLACED IN ACCORDANCE WITH THE FDOT DESIGN STANDARDS. ALL EROSION CONTROL DEVICES SHALL BE REMOVED BY THE CONTRACTOR AFTER INSTALLATION OF PERMANENT GRASSING IS COMPLETE. THE COST OF REMOVING EROSION CONTROL ITEMS IS TO BE INCLUDED IN THE COST OF EROSION CONTROL. ANY AREAS DISTURBED BY THE REMOVAL OF EROSION CONTROL ITEMS SHALL BE REGRASSED OR SODDED AT NO ADDITIONAL COST TO THE OWNER.

20. PRIOR TO AND DURING CONSTRUCTION, THE CONTRACTOR SHALL INSURE AGAINST POLLUTING, SILTING OR DISTURBING ONSITE AND DOWNSTREAM WATER BODIES AND WETLANDS TO SUCH AN EXTENT AS TO CAUSE AN INCREASE IN TURBIDITY ABOVE THAT ALLOWED BY CHAPTER 62–302, FLORIDA ADMINISTRATIVE CODE (FAC) (0 NTU ABOVE BACKGROUND), TO WATERS OF THE STATE. SUCH MEASURES MAY INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION OF TEMPORARY EROSION CONTROL STRUCTURES SUCH AS SEDIMENT BASINS, SEDIMENT CHECKS, OR SILT BARRIERS. THESE TURBIDITY CONTROL DEVICES SHALL BE INSPECTED AND MAINTAINED ON A DAILY BASIS TO ENSURE THAT CONSTRUCTION GENERATED TURBIDITY IS CONTAINED WITHIN THE WORK AREAS. AT NO TIME SHALL THE CONSTRUCTION SITE RUNOFF OR DEWATERING ACTIVITY RESULT IN EXCEEDING THE WATER QUALITY STANDARDS AS SET FORTH IN CHAPTER 62–302, FLORIDA ADMINISTRATIVE CODE (FAC) AS REQUIRED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP).

21. CONTRACTOR SHALL PROVIDE SITE DRAINAGE AND EROSION CONTROL DURING CLEARING AND GRUBBING AND ALL PHASES OF CONSTRUCTION. SITE DRAINAGE AND FLOW THROUGH EXISTING AND TEMPORARY DRAINAGE SYSTEMS SHALL BE MAINTAINED AT ALL TIMES AND SHALL EQUAL THE FLOW THROUGH OF THE EXISTING SYSTEM.

22. CONTRACTOR TO SUBMIT AND RECEIVE APPROVAL OF AN EROSION CONTROL PLAN FROM THE OWNER PRIOR TO BEGINNING ANY CONSTRUCTION. EROSION CONTROL ITEMS ARE REQUIRED FOR PREVENTION, CONTROL AND ABATEMENT OF EROSION, SEDIMENTATION, AND WATER POLLUTION. THESE ITEMS ARE TO BE USED AT THE LOCATIONS DESCRIBED IN THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. CONTRACTOR TO SUBMIT NPDES PERMIT APPLICATION AND PROVIDE OWNER WITH A COPY.

23. THE EROSION CONTROL MEASURES AS SHOWN IN FDOT DESIGN STANDARDS ARE THE MINIMUM REQUIRED. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO FIELD CONDITIONS AS DETERMINED BY THE OWNER AND REGULATORY AGENCIES.

24. IN ADDITION TO THE TURBIDITY AND EROSION CONTROL MEASURES SPECIFIED IN THE FDOT DESIGN STANDARDS, BEST MANAGEMENT PRACTICES FOR EROSION AND TURBIDITY CONTROL SHALL BE UTILIZED AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS INCLUDING, BUT NOT LIMITED TO, SOUTH FLORIDA WATER MANAGEMENT DISTRICT AND FDEP (NPDES). THESE BEST MANAGEMENT PRACTICES SHALL INCLUDE THE USE AND MAINTENANCE OF STAKED FILTER CLOTH, AND OTHER SUITABLE MEANS SURROUNDING ALL CONSTRUCTION AREAS TO PREVENT EROSION AS WELL AS THE USE OF FLOATING OR STAKED TURBIDITY SCREENS, WHERE APPROPRIATE, TO ISOLATE CONSTRUCTION AREAS FROM ADJACENT SURFACE WATERS. THESE TURBIDITY CONTROL DEVICES SHALL BE INSPECTED AND MAINTAINED ON A DAILY BASIS TO ENSURE THAT CONSTRUCTION GENERATED TURBIDITY IS CONTAINED WITHIN THE WORK AREAS AND THAT THE TURBIDITY CONTROL DEVICES REMAIN IN PLACE UNTIL ALL CONSTRUCTION IS COMPLETE.

25. THE CONTRACTOR SHALL APPLY BEST MANAGEMENT PRACTICES TO PREVENT EROSION OF SOILS, TURBIDITY AND POLLUTION IN ADJACENT WATERWAYS, DUST CLOUDS AND AIR POLLUTION.

26. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL FDEP NPDS PERMITS. THE CONTRACTOR SHALL PREPARE AND SUBMIT ALL PERMIT APPLICATIONS, EXHIBITS, STORMWATER POLLUTION PREVENTION PLANS (SWPPP) AND ALL OTHER REQUIRED SUBMITTALS NECESSARY TO OBTAIN THE NPDES PERMIT FOR THE PROJECT. THE CONTRACTOR SHALL SUBMIT TWO (2) COPIES OF ALL SUBMITTAL DOCUMENTS TO THE OWNER AND TWO (2) COPIES TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO SUBMITTING NPDES PERMIT APPLICATION/NOTIFICATION TO FDEP.

27. THE CONTRACTOR SHALL NOT BRING ANY HAZARDOUS MATERIALS ONTO THE PROJECT. SHOULD THE CONTRACTOR REQUIRE SUCH FOR PERFORMING THE CONTRACTED WORK, THE CONTRACTOR SHALL REQUEST, IN WRITING, WRITTEN PERMISSION FROM THE OWNER. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A COPY OF THE MATERIAL SAFETY DATA SHEET (MSDS) FOR EACH HAZARDOUS MATERIAL PROPOSED FOR USE. THE OWNER SHALL ISSUE WRITTEN APPROVAL TO THE CONTRACTOR. BECAUSE STATE LAW DOES NOT TREAT PETROLEUM PRODUCTS THAT ARE PROPERLY CONTAINERIZED AND INTENDED FOR EQUIPMENT USE AS A HAZARDOUS MATERIAL, SUCH PRODUCTS DO NOT NEED A MSDS SUBMITTAL.

28. ANY KNOWN OR SUSPECTED HAZARDOUS MATERIAL FOUND ON THE PROJECT BY THE CONTRACTOR SHALL BE IMMEDIATELY REPORTED TO THE OWNER, WHO SHALL DIRECT THE CONTRACTOR TO PROTECT THE AREA OF KNOWN OR SUSPECTED CONTAMINATION FROM FURTHER ACCESS. THE OWNER WILL ARRANGE FOR INVESTIGATION, IDENTIFICATION, AND REMEDIATION OF THE HAZARDOUS MATERIAL. THE CONTRACTOR SHALL NOT RETURN TO THE AREA OF CONTAMINATION UNTIL APPROVAL IS PROVIDED BY THE OWNER.

29. EXISTING CONDITIONS AND LOCATIONS OF EXISTING UTILITIES AND STORM DRAINAGE PIPE AND STRUCTURES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING CONSTRUCTION DOCUMENTS, SURVEYS AND FIELD INVESTIGATIONS. IT IS TO BE UNDERSTOOD THAT UNFORESEEN CONDITIONS MAY EXIST AND NEW AND EXISTING WORK MAY NOT BE LOCATED EXACTLY AS SHOWN ON THE DRAWINGS. IT IS ALSO TO BE UNDERSTOOD THAT THE PLANS ARE NOT COMPLETELY TO SCALE. THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS TO FIELD VERIFY LOCATIONS AND DIMENSIONS OF ALL EXISTING SITE UTILITIES AND THE CONTRACTOR SHALL FIELD VERIFY ALL OTHER EXISTING IMPROVEMENTS PRIOR TO CONSTRUCTION. THE COSTS FOR DEVIATIONS OR UNKNOWN CONDITIONS SHALL BE INCLUDED IN THE CONTRACT.

30. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTES FOR THE PROTECTION OF UNDERGROUND GAS PIPELINES.

31. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS IS BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINT SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED. ALL UTILITIES SHALL REMAIN UNLESS OTHERWISE NOTED.

32. THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS THROUGH SUNSHINE 811 (DIAL 811) AT LEAST 48 HOURS IN ADVANCE OF BEGINNING CONSTRUCTION ON JOB SITE.

COMPANY	UTILITY	TELEPHONE
AT&T	TELEPHONE	305.222.8745
CITY OF MIAMI BEACH UTILITIES	WATER & SEWER	305.673.7000
FLORIDA POWER & LIGHT	POWER	800.868.9554
TECO PEOPLES GAS	GAS	954.453.0824

33. PRIOR TO ANY SITE WORK, THE CONTRACTOR SHALL SUPPLY TO THE OWNER A COMPREHENSIVE CHECKLIST OF UTILITY FACILITY OWNERS CONTACTED FOR VERIFICATION OF ON–SITE UTILITIES AND THE LOCATION OF FACILITIES. THE CHECK LIST SHALL INCLUDE: CONTACT NAME, TELEPHONE NUMBER, DATE CONTACTED AND DATE UTILITY WAS FLAGGED AT SITE. NO WORK AT SITE SHALL PROCEED WITHOUT OWNER'S WRITTEN REVIEW AND ACCEPTANCE OF THE COMPREHENSIVE UTILITY LOCATE CHECKLIST. ADDITIONALLY, PRIOR TO ANY WORK PROCEEDING AT THE PROJECT SITE. THE CONTRACTOR SHALL FLAG THE LOCATION OF ALL UTILITIES (WATER, SEWER, RECLAIMED WATER, POWER, TELEPHONE, FUEL, GAS, AND ALL OTHERS) IN THE FIELD. THE OWNER SHALL PROVIDE WRITTEN REVIEW AND ACCEPTANCE OF FLAGGED LOCATIONS OF UTILITIES AND SHALL PROVIDE WRITTEN APPROVAL TO THE CONTRACTOR TO PROCEED PRIOR TO ANY EXCAVATION AT THE SITE. AS PART OF THE FLAGGING OF THE UTILITIES, THE CONTRACTOR SHALL HAND EXCAVATE, OR USE OTHER SUBSURFACE UTILITY LOCATING TECHNIQUES, AT EACH UTILITY CROSSING OR AT LOCATIONS ADJACENT TO PROPOSED IMPROVEMENTS, TO EXPOSE, TO A DEPTH OF 2 FEET BELOW THE BOTTOM OF ANY PROPOSED EXCAVATIONS, THE UTILITY FOR VISUAL VERIFICATION BY THE OWNER PRIOR TO CONSTRUCTION.
THE OWNER'S REVIEW OF THE EXISTING UTILITIES, FLAGGING, EXPOSURE AND REVIEW OF THE CHECKLIST IS FOR VERIFICATION OF THE CONTRACTOR'S UTILITY LOCATE EFFORTS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTING AND SUPPORTING ALL EXISTING UTILITIES AND IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES WHETHER ON THE PLANS, CHECKLIST, FLAGGED, EXPOSED OR NOT.

	ITEM NO.	DESCRIPTION	QUANTITY	UNIT
101-1	1	Mobilization	1	LS
102-1	2	Maintenance of Traffic	1	LS
104	4	Erosion Control	1	LS
110-1-1	3	Clearing & Grubbing	1	LS
N/A	4	Demolish and Remove Existing Cap	535	LF
N/A	5	Regular Excavation	70	CY
N/A	6	Embankment	160	CY
522-1	7	Concrete Walkway (4" Thick)	425	SY
N/A	8	Asphalt Walkway	290	SY
N/A	9	Sheet Pile Seawall (20')	535	LF
N/A	10	Sheet Pile Seawall Concrete Cap	535	LF
N/A	11	Retaining Wall	475	LF
N/A	12	Pin Piles for Retaining Wall	104	EA
N/A	13	Concrete Seawall and Cap	48	LF
425-2-61	14	Manholes, P-8, <10'	2	EA
430-174-112	15	12" PIPE	125	LF
430-885-15	16	Manatee Gate - Stainless Steel	1	EA
430- 982-121	17	Mitered End Section, Round, 12"	2	EA
N/A	18	Oolite boulders	106	TN
530-3-5	18	Riprap- Rubble, Coastal Shore- Large Boulders	865	TN
N/A	19	Relocate Exist Light Pole	4	EA
N/A	20	New Light Pole	2	EA
N/A	21	New Light Bollard	16	EA
N/A	22	Relocate Exist Exercise Equipment	3	EA
N/A	23	Overlook (Marine grade, 6061-T6, E channel, welded aluminum frame)	3	EA
N/A	24	Landscape and Hardscape (See Attached)	1	LS

PAY ITEM NOTES

1. CLEARING AND GRUBBING INCLUDES DEMOLITION OF THE EXISTING CONCRETE CAP, REMOVING TREES AND ROOTS, REMOVING AND REPLACING EXISTING SIDEWALKS AND PATHS, RELOCATING EXERCISE EQUIPMENT AND LIGHTS AND RESTORING THEM TO THEIR ORIGINAL POSITION.
2. EROSION CONTROL INCLUDES ALL SILT FENCE, FLOATING AND STAKED TURBIDITY BARRIERS AND OTHER EROSION AND SEDIMENTATION CONTROLS NECESSARY TO INHIBIT DISCHARGE OF SEDIMENT TO THE WATERWAYS.
3. CONCRETE CAP INCLUDES ALL REINFORCING STEEL.
4. SHEET PILE INCLUDES ALL STEEL SHEET PILES, ALL WORK NECESSARY TO PREPARE THE EXISTING SHEET PILES, FOR THE INSTALLATION OF THE NEW PILES INCLUDING REMOVING EXISTING CHANNEL STEEL, MANATEE GUARD (REMOVE AND REPLACE), NUTS, BOLTS, WALERS AND OTHER APPURTENANCES ATTACHED TO THE EXISTING WALL AND CUTTING EXISTING TIE BACKS AND INSTALLING NEW TIE BACKS AND WELDING THE NEW TIE BACKS TO THE EXISTING TIE BACKS.
5. BORROW EXCAVATION INCLUDES FILL, COMPACTION TRUCKING, AND GRADING.
6. OVERLOOK INCLUDES THE COST TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS FOR THE CITY OF MIAMI BEACH APPROVAL AND ALL COST RELATED TO THE CONSTRUCTION AND PERMITTING OF THE OVERLOOKS..
7. ALL ITEMS LISTED BY FDOT NO. SHALL BE CONSTRUCTED AND PAID PER THE FDOT SPECIFICATIONS AND FDOT BASIS OF ESTIMATION UNLESS NOTED DIFFERENTLY IN THE PLANS OR PAY ITEMS.

PARK EQUIPMENT NOTES:

1. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL MEET THE CITY OF MIAMI BEACH PROJECT MANAGER, OR THEIR DESIGNEE, AND THE CITY OF MIAMI BEACH PARKS DEPARTMENT DESIGNEE TO INSPECT THE EXISTING PARK EXERCISE EQUIPMENT. ALL EQUIPMENT SHALL BE PHOTOGRAPHED IN DETAIL AND A LOG SHALL BE GENERATED INDICATING THE CONDITION OF EACH PIECE OF EXERCISE EQUIPMENT.
2. IF THE EXISTING EQUIPMENT IS DAMAGED, THE CITY OF MIAMI BEACH PARKS DEPARTMENT SHALL DETERMINE IF THE CITY OF MIAMI BEACH WILL REPLACE, REMOVE, OR REPAIR THE EQUIPMENT.
3. THE EXISTING EXERCISE EQUIPMENT THAT IS TO REMAIN, SHALL BE PROTECTED BY THE CONTRACTOR. ANY DAMAGE TO THE EXISTING EXERCISE EQUIPMENT THAT OCCURS DURING THE CONSTRUCTION PHASE, SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY OF MIAMI BEACH PARKS DEPARTMENT AT NO ADDITIONAL COST TO THE CITY OF MIAMI BEACH.
4. THE EXISTING EXERCISE EQUIPMENT THAT IS TO BE RELOCATED, SHALL BE REMOVED BY THE CONTRACTOR AND REINSTALLED PER THE ORIGINAL MANUFACTURE'S SPECIFICATIONS.
5. ALL NEW EXERCISE PADS SHALL BE CONSTRUCTED TO HAVE POSITIVE DRAINAGE. PONDING SHALL NOT OCCUR ON THE NEWLY CONSTRUCTED PADS.

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: NOTES, AND PAY ITEMS

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD OB
DESIGN ENGINEER: JHB
DRAWN BY: BPA
CHECKER: RA
SCALE: AS INDICATED

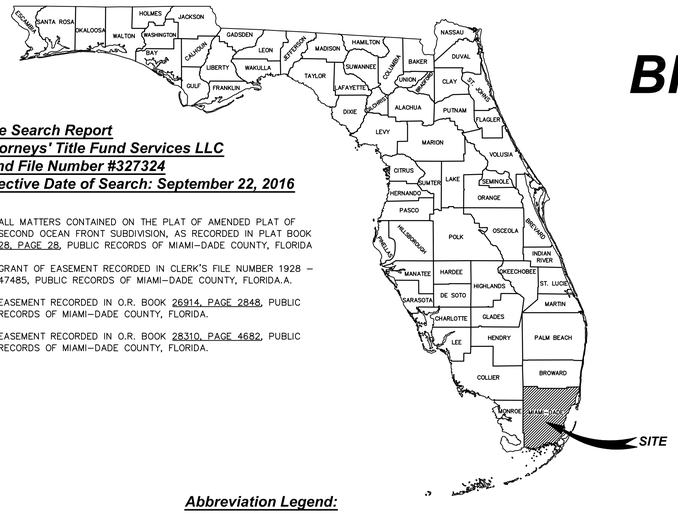
ENGINEER OF RECORD:
OSCAR BERMUDEZ, P.E.
NO. 79011

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name: 471A–G–02.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 2 of 28 Drawing: G–02

N:\471A Indian Creek Park Seawall\Dwg\Design

BOUNDARY & TOPOGRAPHIC SURVEY
FOR
BRINDLEY PIETERS & ASSOCIATES., INC
AT
INDIAN CREEK PARK SEAWALL
MIAMI BEACH
LYING IN
SECTION 11-TOWNSHIP 53 SOUTH-RANGE 42 EAST
MIAMI-DADE COUNTY, FLORIDA

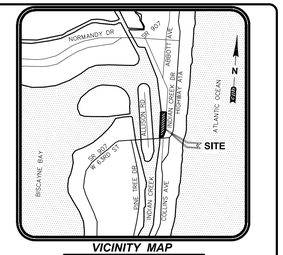


Title Search Report
Attorneys' Title Fund Services LLC
Fund File Number #327324
Effective Date of Search: September 22, 2016

1. ALL MATTERS CONTAINED ON THE PLAT OF AMENDED PLAT OF SECOND OCEAN FRONT SUBDIVISION, AS RECORDED IN PLAT BOOK 28, PAGE 28, PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA
2. GRANT OF EASEMENT RECORDED IN CLERK'S FILE NUMBER 1928 – 47485, PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.A.
3. EASEMENT RECORDED IN O.R. BOOK 26914, PAGE 2848, PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.
4. EASEMENT RECORDED IN O.R. BOOK 28310, PAGE 4682, PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.

Legal Description (PER CLIENT PROVIDED TITLE SEARCH REPORT)

LOTS 1–12, BLOCK 3, AMENDED PLAT OF SECOND OCEAN FRONT SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 28, PAGE 28, PUBLIC RECORDS OF MIAMI–DADE COUNTY, FLORIDA.



VICINITY MAP
NOT TO SCALE

Survey Notes:

1. "SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER."
2. "ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES."
3. THE TWO SITE BENCHMARKS FOR THIS TOPOGRAPHIC SURVEY ARE DISPLAYED ON THE RESPECTIVE SURVEY FILE. THESE BENCHMARKS ARE BASED ON A CLOSED VERTICAL CONTROL LOOP HAVING AN ACTUAL ERROR OF CLOSURE OF 0.024' WHICH MEETS THE ALLOWABLE CLOSURE OF 0.03'. THIS FIELDWORK WAS PERFORMED USING A TOPCON LEVEL MODEL #DL101–C AND REFERENCES THE FOLLOWING PUBLISHED BENCHMARKS AS ESTABLISHED BY THE (NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88)) AND SAID ELEVATIONS ARE BASED ON VERTICAL CONTROL BENCHMARKS SUPPLIED BY MIAMI–DADE COUNTY ENGINEERING.

   a) DESIGNATION # DCO A33, BRASS DISK IN WINGWALL OF BRIDGE OVER INDIAN CREEK, 40.5 FEET NORTH OF THE CENTERLINE OF 63RD STREET, 193.7 FEET EAST OF THE CENTERLINE OF INDIAN RIVER CREEK.
   ELEVATION = 6.68

   b) DESIGNATION # DCO A25, PK NAIL AND ALUMINUM WASHER IN CONCRETE CATCH BASIN, 38 FEET SOUTH OF THE CENTERLINE OF 65TH STREET, 24 FEET WEST OF THE CENTERLINE OF COLLINS AVENUE.
   ELEVATION = 4.98

   SITE BENCHMARKS ARE AS SHOWN ON SHEET 2 OF 4.
4. THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 2 OF 4.
5. THE LAST DAY FIELD WORK WAS PERFORMED WAS 10/5/16; ALL BOUNDARY CORNERS WERE RECOVERED OR SET AS NOTED HEREON.
6. THE "LEGAL DESCRIPTION" HEREON WAS COMPILED BY THE SURVEYOR FROM PUBLICLY AVAILABLE MIAMI–DADE PROPERTY APPRAISER RECORDS FOR THE PARCELS SHOWN HEREON AS OF OCTOBER 5, 2016.
7. BEARINGS SHOWN HEREON ARE RELATIVE TO THE EASTERLY RIGHT–OF–WAY LINE OF INDIAN CREEK DRIVE ACCORDING TO FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT–OF–WAY MAP SECTION 87060–, DATED 03/04, AS BEING N 05°34'37" W.
8. HAVING CONSULTED THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 120651–0326–L EFFECTIVE DATE SEPTEMBER 11, 2009, CITY OF MIAMI BEACH, THE SUBJECT PROPERTY APPEARS TO LIE IN ZONE VE, WHICH ARE AREAS DETERMINED TO BE SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100 YEAR FLOOD, COASTAL FLOODING ZONE WITH VELOCITY HAZARD (WAVE ACTION); WITH BASE FLOOD ELEVATIONS DEPICTED AS 11 FEET (NGVD '29), THIS DETERMINATION WAS BASED ON A GRAPHIC INTERPOLATION OF SAID MAP AND NOT ON ACTUAL FIELD MEASUREMENTS.
9. THE APPARENT USE OF THE LAND, AS CLASSIFIED BY THE STANDARDS OF PRACTICE SET FORTH IN RULE CHAPTER 5J–17 OF THE FLORIDA ADMINISTRATIVE CODE, PURSUANT TO FS 472.027, ESTABLISHES THAT THE MINIMUM RELATIVE ACCURACY FOR THIS TYPE OF BOUNDARY SURVEY MEET THE HORIZONTAL CONTROL ACCURACY OF 1'/10,000 FEET FOR A HIGH RISK SURVEY. THE MEASUREMENTS AND CALCULATIONS OF THE CLOSED GEOMETRIC FIGURES WERE FOUND TO MEET THIS ACCURACY REQUIREMENT. THE EQUIPMENT USED TO VERIFY THE HORIZONTAL CONTROL ON THE SUBJECT SURVEY WAS A TOPCON GPS HIPER PRO.
10. HORIZONTAL WELL–IDENTIFIED FEATURES IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED HORIZONTAL POSITIONAL ACCURACY OF 0.05 (FT). THE EQUIPMENT USED TO LOCATE THE FEATURES WAS A TOPCON GPS HIPER PRO.
11. THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A TITLE SEARCH REPORT (SEE ITEM #3 IN REFERENCE MATERIAL USED). INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS–OF–WAY, AND/OR OWNERSHIP WERE FURNISHED TO THIS SURVEYOR OR RESEARCHED BY THIS SURVEYOR EXCEPT AS NOTED.
12. NO UNDERGROUND UTILITIES, FOUNDATIONS OR IMPROVEMENTS, IF ANY, HAVE BEEN LOCATED EXCEPT AS SHOWN.
13. THIS SURVEY DOES NOT IDENTIFY THE LIMITS OR EXTENT OF POTENTIAL JURISDICTIONAL WETLAND BOUNDARIES.
14. VERTICAL FEATURE ACCURACY: "ELEVATIONS OF WELL–IDENTIFIED FEATURES CONTAINED IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED VERTICAL POSITIONAL ACCURACY OF 0.05 (FT)."
15. STATE PLANE INFORMATION SHOWN HEREON IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (1990) USING CONTROL POINTS FROM THE NGS DATA SHEETS PUBLISHED AT WWW.LABINS.ORG AND MIAMI–DADE COUNTY GPS CONTROL WHICH ARE AS FOLLOWS:

   a) DESIGNATION # EO3, = N 523806.9747 FEET, E 935223.2273 FEET

   b) DESIGNATION # R26, PID #AC4653 = N 571262.32 FEET, E 944582.77 FEET

   THE EQUIPMENT USED TO TRANSFER THE STATE PLANE INFORMATION FROM THE ABOVE REFERENCED CONTROL POINTS TO THE SUBJECT SURVEY WAS A TOPCON GPS HIPER PRO.
16. DIMENSIONS ARE SHOWN RELATIVE TO UNITED STATES STANDARD FEET AND DECIMALS THEREOF, UNLESS THE OBJECT SHOWN IS COMMONLY IDENTIFIED IN INCHES, I.E. TREE DIAMETER, PIPE DIAMETER, ETC. TREES DEPICTED ARE COMMON NAMES AND MEASURED AND LABELED AS DIAMETER AT BREAST HEIGHT IN INCHES.
17. THE UNDERGROUND UTILITIES DEPICTED BY PIPE LINETYPES ARE APPROXIMATE IN NATURE BASED UPON AN INSPECTION OF THE MANHOLE, GRATE, ETC. OF EACH FACILITY. EXISTING PIPES WERE NOT LAMPED OR REMOTELY VIEWED FOR DIRECTION, OBSTRUCTIONS OR CONNECTIVITY.
18. TREE SIZE (DIAMETER AS MEASURED IN INCHES AT BREAST HEIGHT), COMMON NAME, SPECIES, CONDITION, AND NOTATIONS OF THE TREES LISTED ON SHEET 4 OF 4 HEREON WERE FURNISHED TO THE SURVEYOR BY CPH, INC. ENVIRONMENTAL DEPARTMENT. SEE SHEET 3 OF 4 FOR TREE LOCATIONS FOR SPECIFIC NUMBERED TREES. ALL OTHER TREES ARE AS NOTED BY SYMBOL AND SIZE.
19. A FACTOR OF PLUS 1.54 (+1.54) SHOULD BE UTILIZED FOR THIS AREA TO CONVERT ELEVATIONS TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 BASED ON THE 'VERTCON' METHOD FOUND ON THE NATIONAL GEODETIC SURVEY WEB SITE (WWW.NGS.NOAA.GOV).

Abbreviation Legend:

(A)	– ACTUAL	MH	– MANHOLE
A/C	– AIR CONDITIONER	MLP	– METAL LIGHT POLE
ACSM	– AMERICAN CONGRESS ON SURVEYING & MAPPING	MPH	– MILES PER HOUR
ADA	– AMERICANS WITH DISABILITIES ACT	MPP	– METAL POWER POLE
ALTA	– AMERICAN LAND TITLE ASSOCIATION	N/A	– NOT APPLICABLE
APPROX	– APPROXIMATE	NAVD	– NORTH AMERICAN VERTICAL DATUM
ARV	– AIR RELEASE VALVE	NAD	– NORTH AMERICAN DATUM
AVE	– AVENUE	NG	– NATURAL GROUND
AVG	– AVERAGE	NGS	– NATIONAL GEODETIC SURVEY
(BB)	– BEARING BASIS	NGVD	– NATIONAL GEODETIC VERTICAL DATUM
BFP	– BACK FLOW PREVENTER	N & D	– NAIL AND DISK
BLK	– BLOCK	NO.	– NUMBER
BLDG	– BUILDING	NR	– NON–RADIAL
BLVD	– BOULEVARD	NSPS	– NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
BM	– BENCH MARK		
BOC	– BACK OF CURB	NT	– NON–TANGENT
BOW	– BACK OF WALK	NTS	– NOT TO SCALE
BSL	– BUILDING SETBACK LINE	OD	– OUTSIDE DIAMETER
BWF	– BARBED WIRE FENCE	ORB	– OFFICIAL RECORDS BOOK
C–X	– DENOTES SHEET NUMBERING FOR ENGINEERING PLANS	OR	– OFFICIAL RECORDS
(C)	– CALCULATED	OUL	– OVERHEAD UTILITY LINES
C	– CHORD	OTL	– OVERHEAD TRAFFIC LINES
CATV	– CABLE TELEVISION RISER	(P)	– PLAT
CB	– CHORD BEARING	PB	– PLAT BOOK
CBS	– CONCRETE BLOCK STRUCTURE	PC	– POINT OF CURVATURE
C & G	– CURB & GUTTER	PCC	– POINT OF COMPOUND CURVATURE
CI	– CATCH INLET	PCP	– PERMANENT CONTROL POINT
C/L	– CENTERLINE	PFF	– PROPOSED FINISHED FLOOR
CLF	– CHAIN LINK FENCE	PG	– PAGE
CM	– CONCRETE MONUMENT	PGS	– PAGES
CMP	– CORRUGATED METAL PIPE	PI	– POINT OF INTERSECTION
CO	– CLEANOUT	PK	– PARKER KAYLON
CONC	– CONCRETE	POB	– POINT OF BEGINNING
COR	– CORNER	POC	– POINT OF COMMENCEMENT
CPP	– CORRUGATED PLASTIC PIPE	POL	– POINT ON LINE
CUE	– COUNTY UTILITY EASEMENT	PP	– POWER POLE
CWS	– CROSSWALK SIGNAL	PRC	– POINT OF REVERSE CURVATURE
Δ	– DELTA	PRM	– PERMANENT REFERENCE MONUMENT
(D)	– DESCRIPTION	PSM	– PROFESSIONAL SURVEYOR & MAPPER
DB	– DEED BOOK	PT	– POINT OF TANGENCY
DBH	– DIAMETER AT BREAST HEIGHT IN INCHES	PVC	– POLYVINYL CHLORIDE PIPE
DE	– DRAINAGE EASEMENT	PVMT	– PAVEMENT
DEPT	– DEPARTMENT	R42E	– RANGE 42 EAST
DIP	– DUCTILE IRON PIPE	R	– RADIUS
DR	– DRIVE	RAD	– RADIAL
D/U	– DRAINAGE AND UTILITY EASEMENT	RCP	– REINFORCED CONCRETE PIPE
(E)	– ENGINEERING PLAN	REC	– RECOVERED
EJB	– ELECTRIC JUNCTION BOX	REF	– REFERENCE
EL	– UNDERGROUND ELECTRICAL LINES	REV	– REVISION
ELEC	– ELECTRIC	RP	– RADIUS POINT
ELEV	– ELEVATION	R/W	– RIGHT–OF–WAY
ELLIP	– ELLIPTICAL	RLS	– REGISTERED LAND SURVEYOR
EOI	– END OF INFORMATION	RP	– RADIUS POINT
EOP	– EDGE OF PAVEMENT	RWL	– UNDERGROUND RECLAIM WATER LINE
FB	– FIELD BOOK	RWM	– RECLAIMED WATER METER
FDOT	– FLORIDA DEPARTMENT OF TRANSPORTATION	SE	– SPECIAL EASEMENT
FF	– FINISH FLOOR	SEC 11	– SECTION 11
FGI	– FLAT GRATE INLET	SMH	– SANITARY SEWER MANHOLE
FGLP	– FIBERGLASS LIGHT POLE	SQ	– SQUARE
FHYD	– FIRE HYDRANT	SQ FT	– SQUARE FEET
FM	– FORCE MAIN	ST	– STREET
FND	– FOUND	STMH	– STORM DRAINAGE MANHOLE
FP&L	– FLORIDA POWER AND LIGHT	S/W	– SIDEWALK
(G)	– GRID (STATE PLANE)	TB	– TANGENT BEARING
GL	– UNDERGROUND GAS LINES	T53S	– TOWNSHIP 53 SOUTH
GOV'T	– GOVERNMENT	TELE	– TELEPHONE
GPR	– GROUND PENETRATING RADAR	TL	– OVERHEAD TRAFFIC SIGNAL LINES
GTMH	– GREASE TRAP MANHOLE	TOB	– TOP OF BANK
HDPE	– HIGH DENSITY POLYETHYLENE PIPE	TOE	– TOE OF SLOPE
HWF	– HOG WIRE FENCE	TR	– TELEPHONE RISER
ID	– IDENTIFICATION	TRANS	– TRANSFORMER PAD
ICV	– IRRIGATION CONTROL VALVE	TSB	– TRAFFIC SIGNAL BOX
INFO	– INFORMATION	TSSP	– TRAFFIC SIGNAL SUPPORT POLE
INV	– INVERT	TVL	– UNDERGROUND CABLE TV LINES
IP	– IRON PIPE	(TYP)	– TYPICAL
IP&C	– IRON PIPE & CAP	UE	– UTILITY EASEMENT
IR	– IRON ROD	UNK	– UNKNOWN
IR&C	– IRON REBAR & CAP	UTL	– UNDERGROUND TELEPHONE LINES
IRR	– IRRIGATION	W/	– WITH
L	– ARC LENGTH	WL	– UNDERGROUND WATER LINE
LB#	– LICENSED BUSINESS NUMBER	WLP	– WOOD LIGHT POLE
LP	– LIGHT POLE	WM	– WATER METER
(M)	– MEASURED	WP	– WORK PROGRAM
MB	– MAP BOOK	WPF	– WOOD POST FENCE
MBX	– MAILBOX	WPP	– WOOD POWER POLE
MES	– MITERED END SECTION	WV	– WATER VALVE

Line Legend:
NOT TO SCALE

— 1 —	= 1 FOOT CONTOURS
— 5 —	= 5 FOOT CONTOURS
	= ADJOINER PROPERTY LINES
—x—x—	= BARBED WIRE FENCE
	= BROKEN LINE
—UC—	= BURIED CABLE
—UCTV—	= BURIED CABLE TELEVISION
—UE—	= BURIED ELECTRIC
—UFO—	= BURIED FIBER OPTICS
—UG—	= BURIED GAS
—URW—	= BURIED RECLAIMED WATER LINE
—SAN—	= BURIED SANITARY LINES
—FM—	= BURIED SANITARY SEWER FORCE MAIN LINE
—TC—	= BURIED TRAFFIC CONTROL
—UT—	= BURIED TELEPHONE LINE
—UW—	= BURIED WATER LINES
—℄—	= CENTER LINE R/W
	= CHAIN LINK FENCE
	= EASEMENT LINES (EXISTING)
	= EASEMENT LINES (PROPOSED)
—EOW—	= EDGE OF WATER LINES
	= EXISTING DRAINAGE PIPES
	= EXISTING DRAINAGE PIPES (OUTFALL NOT LOCATED)
—HW—	= HOT WATER SUPPLY LINES
—IRR—	= IRRIGATION LINES
—OTL—	= OVERHEAD TRAFFIC LINES
—OHU—	= OVERHEAD UTILITY LINES
	= RAILROAD TRACK LINES
	= RIGHT–OF–WAY LINES
	= SECTION LINES
	= STONE WALL LINES
—TOB—	= TOP OF BANK LINES
—TOE—	= TOE OF SLOPE LINES
	= TREE LINES
—TRAV—	= TRAVERSE LINES
—UNK—	= UNKNOWN BURIED LINES
	= VINYL FENCE
	= WOOD FENCE
	= WETLAND LINE

Symbol Legend:
NOT TO SCALE

ARV – AIR RELEASE VALVE	2 – PARKING SPACES (2)
– BORING HOLE LOCATION	3 – REVISION NUMBER (3)
CTV – CABLE TV RISER	RWM – RECLAIMED WATER METER
– CENTRAL ANGLE	RWV – RECLAIMED WATER VALVE
– CONCRETE	– ROOF DRAIN
– CLEAN OUT	S – SANITARY SEWER MANHOLE
– CONCRETE MITERED END SECTION	SAN – SANITARY SEWER VALVE
– CONCRETE RIP RAP	– SCHEDULE B ITEM NUMBER (8)
– CONCRETE UTILITY POLE	– GROUND LIGHT
– COUNTY ROAD SYMBOL	– SECTION CORNER
– DUAL SUPPORT SIGN	– 4" X 4" CM LB #7143
E – ELECTRICAL MANHOLE	– 5/8" IR&C LB #7143
EJB – ELECTRICAL JUNCTION BOX	– SIGN
– ELECTRIC OUTLET	– SITE BENCH MARK
– ELECTRIC RISER	– STORM SEWER MANHOLE
– FIRE HYDRANT	– STRIPING (DIRECTIONAL)
– FLOOD LIGHT	– TELEPHONE CABLE RISER
– FOUND CONCRETE MONUMENT (AS NOTED)	– TELEPHONE MANHOLE
– FOUND IRON PIPE (AS NOTED)	TJB – TELEPHONE JUNCTION BOX
– FOUND IRON REBAR (AS NOTED)	– TEST HOLE
– GAS VALVE	– TRAFFIC SIGNAL BOX
– GRATE INLET	– TRAFFIC SIGNAL SUPPORT POLE
– GREASE TRAP MANHOLE	– WATER METER
– GUY ANCHOR	WS – WATER SERVICE
– HANDICAP PARKING SPACE	– WATER SPIGOT
– INTERSTATE SYMBOL	WS – WATER SPRINKLER
– IRRIGATION CONTROL VALVE	WV – WATER VALVE
– CONCRETE LIGHT POLE	W – WELL
– LIGHT POLE	– WETLAND FLAG
– LIGHT POLE (DUAL)	– WOOD UTILITY POLE
– LIGHT POLE (TRIPLE)	U – UNKNOWN MANHOLE
– LIGHT POLE (QUAD)	– CONCRETE PAVERS
– MAILBOX	– DETECTABLE WARNING AREA
MW – MONITOR WELLS	– CONCRETE LIGHT POLE (DUAL)
– NAIL & DISC (AS NOTED)	– CONCRETE LIGHT POLE (TRIPLE)
– BRICK PAVERS	– CONCRETE LIGHT POLE (QUAD)
– GARBAGE CAN	UNK – UNKNOWN RISER
PBX – PULL BOX AS NOTED	

Sign Legend:
NOT TO SCALE

(A)	AISLE SIGN
(B)	BUS STOP SIGN
(DNE)	DO NOT ENTER SIGN (R5–1)
(HC)	HANDICAP SIGN
(KR)	KEEP RIGHT SIGN
(ME)	MEDIAN SIGN
(ND)	NO DUMPING SIGN
(NL)	NO LEFT TURN SIGN (R3–2)
(NLI)	NO LITTERING SIGN
(FL)	NO PARKING FIRE LANE SIGN
(NOR)	NO RIGHT TURN SIGN (R3–1)
(NOT)	NO TRUCKS (R5–2)
(NP)	NO PARKING SIGN
(1W)	ONE WAY SIGN (R6–2)
(PE)	PEDESTRIAN CROSSING SIGN
(RTO)	RIGHT TURN ONLY
(SL)	SPEED LIMIT SIGN
(ST)	STOP SIGN (R1–1)
(SS)	STREET SIGN
(TZ)	TOW AWAY ZONE SIGN
(TE)	TRUCK ENTRANCE SIGN
(U)	UNKNOWN SIGN
(WL)	WEIGHT LIMIT SIGN
(WW)	WRONG WAY SIGN
(Y)	YIELD SIGN

Reference Material

1) AMENDED PLAT OF SECOND OCEAN FRONT SUBDIVISION ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 28, PAGE 28 (2 SHEETS) OF THE PUBLIC RECORDS OF MIAMI–DADE COUNTY, FLORIDA.

2) FLORIDA DEPARTMENT OF TRANSPORTATION RIGHT–OF–WAY MAP SECTION 87060– STATE ROAD 41A, DATED 3/04.

3) TITLE SEARCH REPORT FUND FILE NUMBER: 327324, EFFECTIVE DATE OF SEARCH: SEPTEMBER 22, 2016 PREPARED BY ATTORNEY'S TITLE FUND SERVICES, LLC.

Index of Sheets

1	COVER SHEET
2	BOUNDARY SURVEY
3	TOPOGRAPHIC SURVEY AND TREE LOCATION
4	TREE LIST FROM ARBORIST

Surveyor's Certification:

I hereby certify that the attached "Boundary & Topographic Survey" of the hereon described property is true and correct to the best of my knowledge, information and belief as surveyed in the field on October 5, 2016. I further certify that this "Boundary & Topographic Survey" meets the standards of practice set forth in Rule Chapter 5J–17 of the Florida Administrative Code, pursuant to FS 472.027.

For the Firm By: _____
Paul J. Katrek
Professional Surveyor and Mapper
Florida Registration No. 6233

NOTE:
THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 4 OF 4.

TITLE BLOCK ABBREVIATIONS
Eng. = ENGINEERING L.B. = LICENSED BUSINESS
C.O.A. = CERTIFICATE OF AUTHORIZATION Arch.= ARCHITECTURAL
Landscp. = LANDSCAPE N/A = NOT APPLICABLE Lic. = LICENSED
No. = NUMBER P.O. = POST OFFICE © = COPYRIGHT

cph
www.cphcorp.com
A Full Service A & E Firm
Architects Engineers Environmental Landscape Architects
M / E / P Planners Surveyors Traffic/Transportation
Offices In:
• Florida
• Puerto Rico
• Connecticut
• Maryland
• Texas

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: ***BOUNDARY & TOPOGRAPHIC SURVEY***

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

Field Crew:	M.R./P.J.K.	Date: 10/5/16	
Drawn by:	J.T.F.	Job No.: B15901.2	
Checked by:	R.L.R.	File: B15901.2.dwg	
Approved by:	P.J.K.		
Scale:	N/A	©2016	

Sheet No. **3** ***of*** 28

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/23/2016	ADDED TITLE REPORT INFORMATION	

File Path: J: \B15901.2\Survey\B15901.2
File Name: B15901.2_NEW_BORDER.dwg
Survey Reference:
Field Book: MISC. BOOK 15 Pages: 69–73 Work Order: B15901.2
Date: 10/5/16 Drawing: B15901.2.DWG

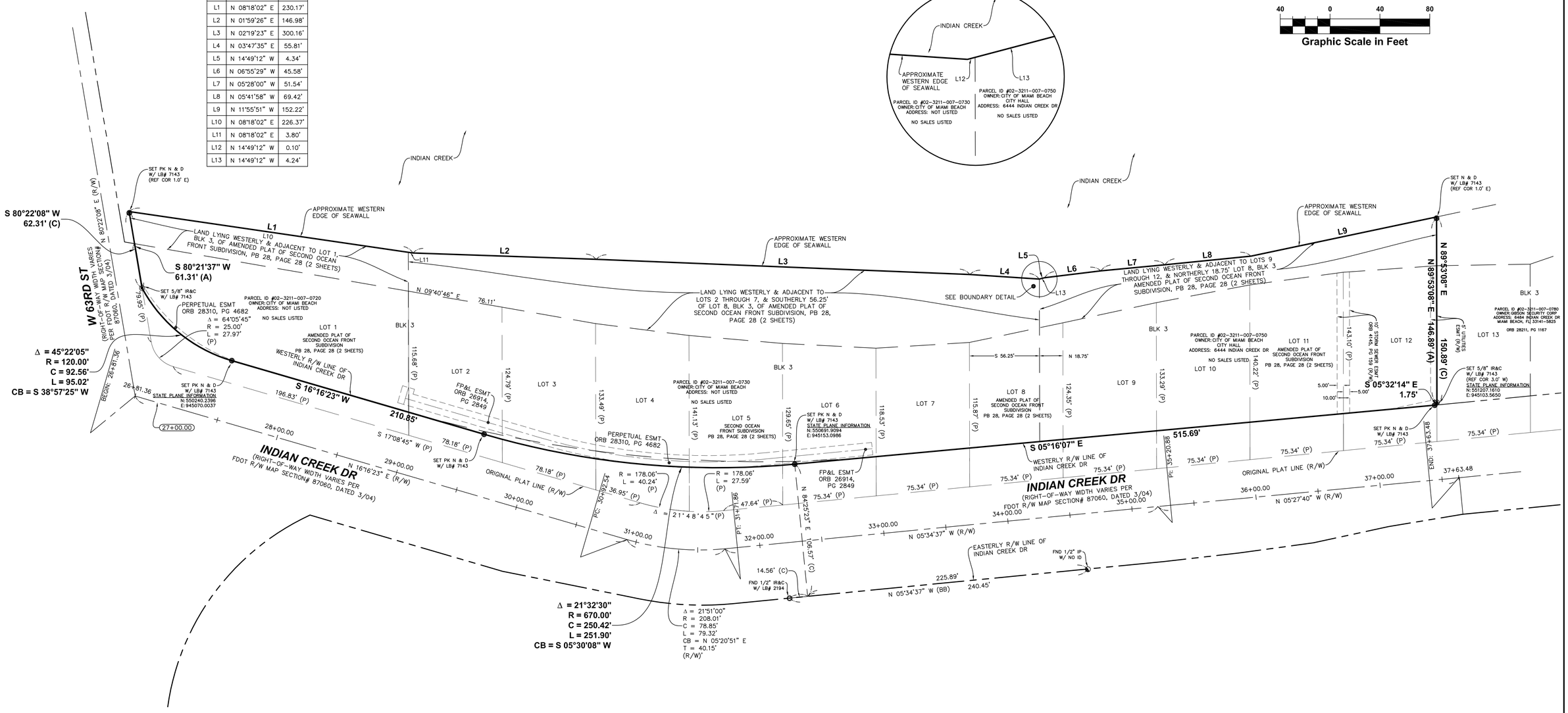
LINE TABLE		
LINE	BEARING	LENGTH
L1	N 08°18'02" E	230.17'
L2	N 01°59'26" E	146.98'
L3	N 02°19'23" E	300.16'
L4	N 03°47'35" E	55.81'
L5	N 14°49'12" W	4.34'
L6	N 06°55'29" W	45.58'
L7	N 05°28'00" W	51.54'
L8	N 05°41'58" W	69.42'
L9	N 11°55'51" W	152.22'
L10	N 08°18'02" E	226.37'
L11	N 08°18'02" E	3.80'
L12	N 14°49'12" W	0.10'
L13	N 14°49'12" W	4.24'

BOUNDARY DETAIL
(NOT TO SCALE)

cph N

40 0 40 80

Graphic Scale in Feet



cph www.cphcorp.com
A Full Service A & E Firm
Architects M / E / P
Engineers Planners
Environmental Surveyors
Landscape Architects Traffic/Transportation
Offices In:
• Florida
• Puerto Rico
• Connecticut
• Maryland
• Texas

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: **BOUNDARY & TOPOGRAPHIC SURVEY**

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

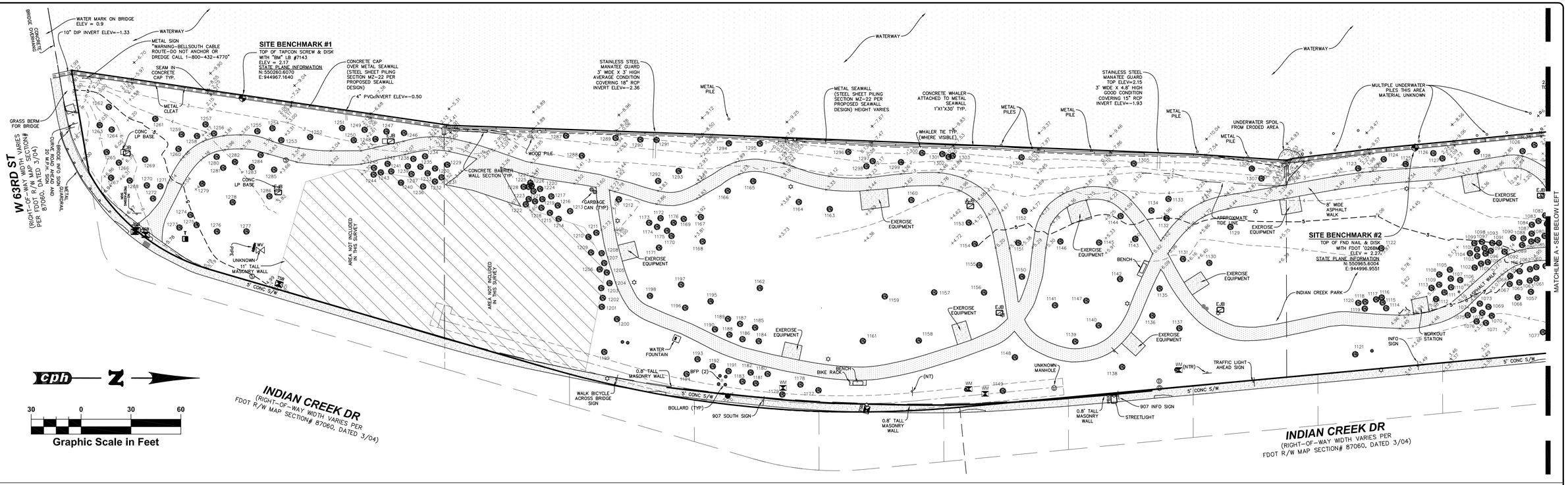
CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

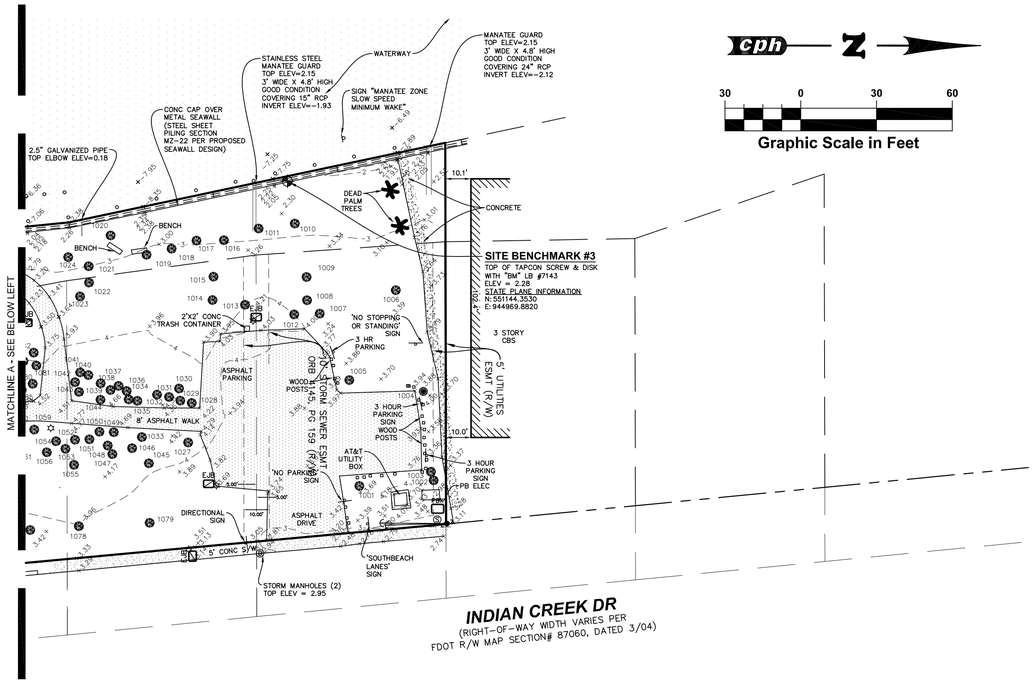
Field Crew:	M.R./P.J.K.	Date: 10/5/16	
Drawn by:	J.T.F.	Job No.: B15901.2	
Checked by:	R.L.R.	File: B15901.2.dwg	
Approved by:	P.J.K.		
Scale:	1"=40'	©2016	

Sheet No. 4 of 28

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/23/2016	ADDED TITLE REPORT INFORMATION	

File Path: J:\B15901.2\Survey\B15901.2
File Name: B15901.2_NEW_BORDER.dwg
Survey Reference:
Field Book: MISC. BOOK 15 Pages: 69-73 Work Order: B15901.2
Date: 10/05/16 Drawing: B15901.2.DWG





cph — A Full Service A & E Firm
Architects, Engineers, Environmental, Landscape Architects; M/E/P, Planners, Surveyors, Traffic/Transportation
www.cphcorp.com
Offices In: • Florida • Puerto Rico • Connecticut • Maryland • Texas

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: ***BOUNDARY & TOPOGRAPHIC SURVEY***

BPA — Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue, Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

Field Crew:	M.R./P.J.K.	Date: 10/5/16	
Drawn by:	J.T.F.	Job No.: B15901.2	
Checked by:	R.L.R.	File: B15901.2.dwg	
Approved by:	P.J.K.		
Scale:	1"=30'	©2016	

Sheet No. 5 of 28

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/23/2016	ADDED TITLE REPORT INFORMATION	

File Path: J:\B15901.2\Survey\B15901.2
File Name: B15901.2_NEW_BORDER.dwg
Survey Reference:
Field Book: MISC. BOOK 15 Pages: 69-73 Work Order: B15901.2
Date: 10/5/16 Drawing: B15901.2.DWG

Tree Data Table

Tree #	DBH (in.)	Common Name	Botanical Name	Height (ft.)	Spread (ft.)	Canopy Area (sq. ft.) (calculated)	Condition	Regulated Tree	Specimen Tree
1001	7.5	Tallow Tree	*Pongamia pinnata*	20	20	314	Fair	**No**	
1002	3.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	7	5	20	**Poor**		
1003	11	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	30	707	Fair		
1004	12.5	Tallow Tree	*Pongamia pinnata*	25	35	962	**Poor**	**No**	
1005	13.5	Tallow Tree	*Pongamia pinnata*	25	30	707	Fair	**No**	
1006	13	Washingtonia Palm	*Washingtonia robusta*	40	-		Fair	**No**	
1007	12.5	Washingtonia Palm	*Washingtonia robusta*	30	-		Fair	**No**	
1008	10	Washingtonia Palm	*Washingtonia robusta*	25	-		Fair	**No**	
1009	7	Cabbage Palm	*Sabal palmetto*	25	-		Fair		
1010	16	Royal Palm	*Roystonea regia*	35	-		Fair		
1011	16	Royal Palm	*Roystonea regia*	40	-		Fair		
1012	11	Cabbage Palm	*Sabal palmetto*	23	-		Fair		
1013	11.5	Cabbage Palm	*Sabal palmetto*	25	-		Fair		
1014	11.5	Cabbage Palm	*Sabal palmetto*	25	-		Fair		
1015	11.5	Cabbage Palm	*Sabal palmetto*	25	-		Fair		
1016	9	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1017	10	Cabbage Palm	*Sabal palmetto*	25	-		Fair		
1018	10	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1019	11	Cabbage Palm	*Sabal palmetto*	25	-		Fair		
1020	12	Cabbage Palm	*Sabal palmetto*	22	-		Fair		
1021	11	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1022	12	Cabbage Palm	*Sabal palmetto*	30	-		Fair		
1023	15	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1024	9	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1025	11	Cabbage Palm	*Sabal palmetto*	25	-		Fair		
1026	12	Cabbage Palm	*Sabal palmetto*	30	-		Fair		
1027	14	Tallow Tree	*Pongamia pinnata*	30	40	1257	Fair	**No**	
1028	10	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1029	5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1030	12.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1031	5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1032	9	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1033	5.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	15	177	Fair		
1034	4	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	8	50	**Poor**		
1035	9	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1036	10	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1037	3.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	10	79	Fair		
1038	3	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	10	79	Fair		
1039	6.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	20	314	Fair		
1040	6.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1041	5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1042	10	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	20	314	Fair		
1043	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	30	707	Fair		
1044	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	35	20	314	Fair		
1045	8	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1046	3	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	10	79	Fair		
1047	10	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	20	314	Fair		
1048	13	Coconut Palm	*Cocos nucifera*	30	-		Fair		
1049	6.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	15	177	Fair		
1050	4.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	20	314	Fair		
1051	4	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1052	4	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1053	5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1054	5.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1055	15	Coconut Palm	*Cocos nucifera*	30	-		Fair		
1056	14	Coconut Palm	*Cocos nucifera*	30	-		Fair		
1057	9.5	Coconut Palm	*Cocos nucifera*	30	-		Fair		
1058	8	Coconut Palm	*Cocos nucifera*	30	-		Fair		
1059	6.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1060	6	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1061	8	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1062	9	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1063	5.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1064	9	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1065	6.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1066	14.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1067	9.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1068	5.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1069	16	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1070	13.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1071	11	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1072	12	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1073	15	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1074	16	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1075	14	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1076	13.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1077	11	Coconut Palm	*Cocos nucifera*	25	-		Fair		
1078	11.5	Coconut Palm	*Cocos nucifera*	30	-		Fair		
1079	12	Coconut Palm	*Cocos nucifera*	35	-		Fair		
1080	3.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1081	15.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	30	707	Fair		
1082	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	35	10	79	Fair		
1083	12	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1084	5	Ligustrum	*Ligustrum japonicum*	30	10	79	Fair		
1085	8.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	20	314	Fair		
1086	5	Ligustrum	*Ligustrum japonicum*	30	10	79	Fair		
1087	4	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1088	5.5	Ligustrum	*Ligustrum japonicum*	25	10	79	Fair		
1089	4.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1090	8.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1091	6.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1092	8	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1093	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	10	79	Fair		
1094	5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	20	314	Fair		
1095	5.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1096	4.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	10	10	79	Fair		
1097	6.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	35	30	707	Fair		
1098	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	15	177	Fair		
1099	12	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1100	15	Coconut Palm	*Cocos nucifera*	35	-		Fair		
1101	8.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1102	11	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	20	314	Fair		
1103	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1104	11.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	30	707	Fair		
1105	14	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1106	13.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1107	14.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1108	14	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1109	8	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1110	12	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1111	17	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1112	18.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1113	21.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1114	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1115	20.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	25	491	Fair		
1116	8.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1117	5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	10	79	Fair		
1118	7.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1119	9.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1120	8	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1121	13	Gold Tree	*Tabebuia Aurea*	20	30	707	Fair		
1122	16.5	Royal Poinciana	*Delonix regia*	30	60	2827	Fair		
1123	13	Cabbage Palm	*Sabal palmetto*	25	-		Fair		
1124	12	Cabbage Palm	*Sabal palmetto*	30	-		Fair		
1125	12.5	Cabbage Palm	*Sabal palmetto*	30	-		Fair		
1126	11	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1127	12	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1128	13	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1129	5.5	Pitch Apple	*Clusea rosea*	10	12	113	Fair		
1130	8.5	Coconut Palm	*Cocos nucifera*	20	-		Fair		
1131	8	Coconut Palm	*Cocos nucifera*	20	-		Fair		
1132	7.5	Coconut Palm	*Cocos nucifera*	25	-		Fair		
1133	9	Coconut Palm	*Cocos nucifera*	20	-		Fair		
1134	9	Coconut Palm	*Cocos nucifera*	20	-		Fair		
1135	9	Coconut Palm	*Cocos nucifera*	20	40	1257	**Poor**		
1136	8	Coconut Palm	*Cocos nucifera*	20	-		Fair		
1137	9	Coconut Palm	*Cocos nucifera*	20	-		Fair		
1138	15.5	Royal Poinciana	*Delonix regia*	40	-		Fair		
1139	8	Coconut Palm	*Cocos nucifera*	15	-		Fair		
1140	11	Coconut Palm	*Cocos nucifera*	20	-		Fair		
1141	8	Coconut Palm	*Cocos nucifera*	20	-		Fair		
1142	14	Coconut Palm	*Cocos nucifera*	25	-		Fair		
1143	8	Coconut Palm	*Cocos nucifera*	15	-		**Poor**		
1144	8	Coconut Palm	*Cocos nucifera*	20	-		Fair		
1145	8	Coconut Palm	*Cocos nucifera*	15	-		Fair		
1146	8	Coconut Palm	*Cocos nucifera*	20	-		Fair		
1147	8	Coconut Palm	*Cocos nucifera*	15	-		Fair		
1148	12	Royal Poinciana	*Delonix regia*	20	30	707	Fair		
1149	9	Gold Tree	*Tabebuia Aurea*	20	20	314	Fair		
1150	8	Coconut Palm	*Cocos nucifera*	15	-		Fair		
1151	11	Coconut Palm	*Cocos nucifera*	35	-		Fair		
1152	7.5	Coconut Palm	*Cocos nucifera*	15	-		Fair		
1153	10	Wild Tamarind	*Lysiloma latisiliquum*	25	35	962	Fair		
1154	9	Wild Tamarind	*Lysiloma latisiliquum*	20	20	314	Fair		
1155	9.5	Wild Tamarind	*Lysiloma latisiliquum*	25	20	314	Fair		
1156	8	Wild Tamarind	*Lysiloma latisiliquum*	20	20	314	Fair		
1157	9	Royal Poinciana	*Delonix regia*	20	25	491	Fair		
1158	8	Royal Poinciana	*Delonix regia*	20	25	491	Fair		
1159	8	Royal Poinciana	*Delonix regia*	15	20	314	Fair		
1160	22	Mast Wood	*Calophyllum antillanum*	40	50	1963	Fair	**No**	
1161	6	Royal Poinciana	*Delonix regia*	20	25	491	Fair		
1162	26	Ficus	Ficus sp.	25	35	962	Fair		
1163	7.5	Mast Wood	*Calophyllum antillanum*	25	20	314	Fair	**No**	
1164	6.5	Mast Wood	*Calophyllum antillanum*	25	15	177	Fair	**No**	
1165	20	Mast Wood	*Calophyllum antillanum*	50	30	707	Fair	**No**	
1166	19	Mast Wood	*Calophyllum antillanum*	40	30	707	Fair	**No**	
1167	6.5	Paradise Tree	*Simarouba glauca*	25	15	177	Fair		
1168	8	Paradise Tree	*Simarouba glauca*	25	20	314	Fair		
1169	8	Christmas Palm	*Adonidia merrillii*	30	-		Fair		
1170	8	Christmas Palm	*Adonidia merrillii*	35	-		Fair		
1171	8	Christmas Palm	*Adonidia merrillii*	30	-		Fair		
1172	7	Christmas Palm	*Adonidia merrillii*	35	-		Fair		
1173	3	Lignum Vitae	*Guaiacum officinale*	10	10	79	Fair		
1174	3	Lignum Vitae	*Guaiacum officinale*	108	10	79	Fair		
1175	2.5	Lignum Vitae	*Guaiacum officinale*	8	8	50	Fair		
1176	2.5	Lignum Vitae	*Guaiacum officinale*	15	6	28	Fair		
1177	15	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1178	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	30	707	Fair		
1179	18.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	30	707	Fair		
1180	2.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	10	79	Fair		
1181	12	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair		
1182	12.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair		
1183	14.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair		
1184	21	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair		
1185	19	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair		
1186	9.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair		
1187	12.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair		
1188	11.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair		
1189	22	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair		
1190	15.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair		
1191	32	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	30	707	Fair		
1192	10.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1193	7	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	20	314	Fair		
1194	26	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	30	707	Fair		
1195	14	Tallow Tree	*Pongamia pinnata*	30	40	1257	Fair	**No**	
1196	9.5	Tallow Tree	*Pongamia pinnata*	25	25	491	Fair	**No**	
1197	9.5	Tallow Tree	*Pongamia pinnata*	25	30	707	Fair	**No**	
1198	14	Tallow Tree	*Pongamia pinnata*	30	30	707	Fair	**No**	
1199	21	Tallow Tree	*Pongamia pinnata*	40	50	1963	Fair	**No**	
1200	11	Tallow Tree	*Pongamia pinnata*	35	30	707	Fair	**No**	
1201	13	Coconut Palm	*Cocos nucifera*	30	-		Fair		
1202	6.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1203	5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	10	79	Fair		
1204	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	10	79	Fair		
1205	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair		
1206	13	Coconut Palm	*Cocos nucifera*	25	-		Fair		
1207	5.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	10	79	Fair		
1208	11	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	10	79	Fair		
1209	5.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	10	10	79	Fair		
1210	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	10	79	Fair		
1211	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair		
1212	16	Mast Wood	*Calophyllum antillanum*	35	25	491	Fair	**No**	
1213	5.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1214	9.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1215	6	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1216	9.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1217	6	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1218	8	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1219	4.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1220	5.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1221	7.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1222	4	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1223	10	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1224	7.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1225	5.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1226	4.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1227	11.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1228	6	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1229	8	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1230	7.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair		
1231	7.5	Pitch Apple	*Clusea rosea*	26	11	95	Fair		
1232	13	Pitch Apple	*Clusea rosea*	27	12	113	Fair		
1233	7.5	Pitch Apple	*Clusea rosea*	28	13	133	Fair		
1234	4	Pitch Apple	*Clusea rosea*	29	14	154	Fair		
1235	15.5	Pitch Apple	*Clusea rosea*	30	15	177	Fair		
1236	8	Pitch Apple	*Clusea rosea*	31	16	201	Fair		
1237	12	Pitch Apple	*Clusea rosea*	32	17	227	Fair		
1238	15.5	Pitch Apple	*Clusea rosea*	33	18	254	Fair		
1239	10	Pitch Apple	*Clusea rosea*	34	19	284	Fair		
1240	6	Pitch Apple	*Clusea rosea*	35	20	314	Fair		
1241	6.5	Pitch Apple	*Clusea rosea*	36	21	346	Fair		
1242	11	Pitch apple	*Clusea rosea*	25	10	79	**Poor**		
1243	8.5	Pitch apple	*Clusea rosea*	25	10	79	Fair		
1244	14	Pitch apple	*Clusea rosea*	25	10	79	Fair		
1245	6.5	Pitch apple	*Clusea rosea*	25	10	79	Fair		
1246	13.5	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1247	13.5	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1248	14	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1249	14	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1250	15	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1251	14	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1252	13.5	Buttonwood	*Conocarpus erectus*	25	35	962	Fair		
1253	19	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1254	12.5	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1255	13	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1256	15	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1257	13.5	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1258	15	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1259	12.5	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1260	11.5	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1261	31.5	Buttonwood	*Conocarpus erectus*	40	30	707	Fair		
1262	19	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1263	19	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1264	16	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1265	15	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1266	13	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1267	19	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1268	18.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair		
1269	11.5	Buttonwood	*Conocarpus erectus*	25	25	491	Fair		
1270	16.5	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1271	15	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1272	16	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1273	15	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1274	13	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1275	13	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1276	9.5	Buttonwood	*Conocarpus erectus*	25	20	314	Fair		
1277	7.5	Black Olive	*Bucida buceras*	25	30	707	Fair		
1278	10	Buttonwood	*Conocarpus erectus*	35	20	314	Fair		
1279	10	Buttonwood	*Conocarpus erectus*	35	20	314	Fair		
1280	9	Buttonwood	*Conocarpus erectus*	30	20	314	Fair		
1281	18	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1282	13	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1283	14	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1284	15	Cabbage Palm	*Sabal palmetto*	15	-		Fair		
1285	14	Cabbage Palm	*Sabal palmetto*	20	-		Fair		
1286	25	Buttonwood	*Conocarpus erectus*	40	50	1963	Fair		
1287	34	Buttonwood	*Conocarpus erectus*	20	30	707	Fair		
1288	16	Mast Wood	*Calophyllum antillanum*	25	30	707	Fair	**No**	
1289	36	Buttonwood	*Conocarpus erectus*	30	25	491	Fair		
1290	27	Buttonwood	*Conocarpus erectus*	30	25	491	Fair		
1291	17	Buttonwood	*Conocarpus erectus*	30	25	491	Fair		
1292	15	Mast Wood	*Calophyllum antillanum*	30	30	707	Fair	**No**	
1293	16.5	Mast Wood	*Calophyllum antillanum*	40	40	1257	Fair	**No**	
1294	34	Buttonwood	*Conocarpus erectus*	25	30	707	Fair		
1295	57.5	Buttonwood	*Conocarpus erectus*	30	40	1257	Fair		
1296	27	Buttonwood	*Conocarpus erectus*	20	20	314	Fair		
1297	44.5	Buttonwood	*Conocarpus erectus*	25	50	1963	Fair		
1298	6	Seagrape	*Coccoloba uvifera*	15	20	314	Fair		
1299	10.5	Seagrape	*Coccoloba uvifera*	25	30	707	Fair		
1300	24.5	Buttonwood	*Conocarpus erectus*	20	20	314	Fair		
1301	18.5	Buttonwood	*Conocarpus erectus*	25	30	707	Fair		**Yes**
1302	27	Buttonwood	*Conocarpus erectus*	35	40	1257	Fair		
1303	20	Buttonwood	*Conocarpus erectus*	25	30	707	Fair		**Yes**
1304	43	Buttonwood	*Conocarpus erectus*	40	50	1963	Fair		**Yes**
1305	24	Buttonwood	*Conocarpus erectus*	20	30	707	Fair		
1306	40	Buttonwood	*Conocarpus erectus*	40	50	1963	Fair		**Yes**
1307	60	Buttonwood	*Conocarpus erectus*	45	50	1963	Fair		

NOTE: Four (4) specimen trees on-site

cph
www.cphcorp.com
A Full Service A & E Firm
Architects, Engineers, Environmental, Landscape Architects, M / E / P, Planners, Surveyors, Traffic/Transportation
Offices In:
• Florida
• Puerto Rico
• Connecticut
• Maryland
• Texas

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: ***BOUNDARY & TOPOGRAPHIC SURVEY***

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue, Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

Field Crew:	M.R./P.,J.K.	Date: 10/5/16	
Drawn by:	J.T.F.	Job No.: B15901.2	
Checked by:	R.L.R.	File: B15901.2.dwg	
Approved by:	P.J.K.	©2016	

EXIST. SEAWALL TO REMAIN. SEE EXIST. CAP/NEW CAP TIE-IN DETAIL-SECTION ON SHEET S-02

BEGIN PROJECT STA. 10+50 BEGIN CONC. CAP REMOVAL

SITE BENCHMARK #1
TOP OF TAPCON SCREW & DISK WITH "BM" LB #7143
ELEV = 2.28
STATE PLANE INFORMATION
N: 550260.6070
E: 944967.1640

FLOATING TURBIDITY BARRIER (SEE NOTES 18-26 ON SHEET G-02)

STA. 12+54 END CONC. CAP REMOVAL

CONCRETE CAP OVER METAL SEAWALL (STEEL SHEET PILING SECTION MZ-22 PER PROPOSED SEAWALL DESIGN)

4" PVC INVERT ELEV=-0.50

EXISTING CONC. BARRIER WALLS TO BE REMOVED

STAINLESS STEEL MANATEE GUARD 3' WIDE X 3' HIGH AVERAGE CONDITION COVERING 18" RCP INVERT ELEV=-2.36

METAL SEAWALL (STEEL SHEET PILING SECTION MZ-22 PER PROPOSED SEAWALL DESIGN) HEIGHT VARIES

CONCRETE WHALER ATTACHED TO METAL SEAWALL 1'X1'X30' TYP.

METAL PILES

WHALER TIE TYP. (WHERE VISIBLE)

WATERWAY

North

0 10 20 40

GRAPHIC SCALE IN FEET

MATCHLINE 'A' - SEE BELOW

STA. 10+00 (STA +0 IN SURVEY)

BEGIN WORK 41 LF FROM CONCRETE BRIDGE OVERHANG

41'

25' (TYP.)

9'-2" (TYP.)

METAL CLEAT

CONC LP BASE

STA. 10+50

STA. 11+00

STA. 11+50

STA. 12+00

STA. 12+50

WOOD PILE

CONCRETE TOP WALL SECTION

GARBAGE CAN

GARBAGE CANS TO BE REMOVED

MANGROVES AND BUTTONWOODS

STA. 13+00

STA. 13+50

STA. 14+00

STA. 14+50

STA. 15+00

STA. 15+50

STA. 16+00

EXIST. LIGHT POLE AND ELECT. JUNCTION BOX TO BE REMOVED

TYPE III SILT FENCE

EXIST. STEEL TIE-BACK RODS (TYP.) (APPROX. LOCATION)

EXIST. DEADMEN (APPROX. LOCATION)

MANGROVES AND BUTTONWOODS

EXIST. ASPHALT WALKWAY TO BE DEMOLISHED

EXIST. EXCERCISE EQUIPMENT TO BE RELOCATED

EXIST. LIGHT POLE TO REMAIN

EXIST. STEEL SHEET PILE BULKHEAD SEAWALL TO REMAIN (TYP.)

EXIST. EXERCISE EQUIPMENT TO BE RELOCATED

EXERCISE EQUIPMENT

AREA NOT INCLUDED IN THIS SURVEY

5' CONC S/W

GATE

UNKNOWN

MASONRY WALL

BRIDGE INFO SIGN

CURVE ROAD AHEAD AND P.A. SIGN

DIRECTIONAL SIGN

MATCHLINE 'A' - SEE ABOVE

STA. 17+54
BEGIN CONC. CAP REMOVAL

REMOVE EXIST. CONC. CAP AND DRIVE NEW STEEL SHEET PILE. CONST. NEW CONC. CAP PER SECTION 2/S-01.

END PROJECT
STA. 20+51
END CONC. CAP REMOVAL AND REPLACEMENT. END WALL CONST. OF SHEET PILE WALL

STAINLESS STEEL MANATEE GUARD TOP ELEV=2.15 3' WIDE X 4.8' HIGH GOOD CONDITION COVERING 15" RCP INVERT ELEV=-1.93

MANATEE GUARD TOP ELEV=2.15 3' WIDE X 4.8' HIGH GOOD CONDITION COVERING 24" RCP INVERT ELEV=-2.12

SIGN "MANATEE ZONE SLOW SPEED MINIMUM WAKE"

REMOVE AND REPLACE MANATEE GUARD. SEE MANATEE GUARD DETAIL

CONC CAP OVER METAL SEAWALL (STEEL SHEET PILING SECTION MZ-22 PER PROPOSED SEAWALL DESIGN)

2.5" GALVANIZED PIPE TOP ELBOW ELEV=0.18

EXIST. PIPE OPENING TO REMAIN

EXIST. SEAWALL TO REMAIN. SEE EXIST. CAP/NEW CAP TIE-IN DETAIL-SECTION ON SHEET S-02

EXIST. SEAWALL TO REMAIN

END WORK AT CONCRETE PAD

CONCRETE

DEAD PALM TREES

MULTIPLE UNDERWATER PILES THIS AREA MATERIAL UNKNOWN

UNDERWATER SPOIL FROM ERODED AREA

REMOVE EXIST. BROKEN CONCRETE

EXIST. LIGHT POLE TO REMAIN

EXIST. BENCHES TO REMAIN

TYPE III SILT FENCE

EXIST. STEEL TIE-BACK RODS (APPROX. LOCATION)

EXIST. LIGHT POLE TO REMAIN

EXIST. EXERCISE EQUIPMENT TO BE RELOCATED

EXIST. LIGHT POLE TO BE REMOVED

SITE BENCHMARK #2
TOP OF END NAIL & DISK
STATE PLANE INFORMATION
N: 550965.6004
E: 944996.9551

SITE BENCHMARK #3
TOP OF TAPCON SCREW & DISK WITH "BM" LB #7143
ELEV = 2.28
STATE PLANE INFORMATION
N: 551144.3530
E: 944969.8820

APPROXIMATE TIDE LINE

MANGROVES AND BUTTONWOODS

EXIST. EXERCISE EQUIPMENT TO BE RELOCATED

8' WIDE ASPHALT WALK

ASPHALT PARKING

'NO STOPPING OR STANDING' SIGN

3 HR PARKING

3 HOUR PARKING SIGN WOOD POSTS

WOOD POSTS

3 STORY CBS

5' UTILITIES ESMT (R/W)

STA. 16+50 STA. 17+00 STA. 17+50 STA. 18+00 STA. 18+50 STA. 19+00 STA. 19+50 STA. 20+00 STA. 20+50

NOTES:

1. CONTRACTOR TO EXCAVATE TIE BACKS AT BULKHEAD WALL. FINAL REMOVAL AND REPLACEMENT LENGTH OF TIE-BACKS WILL BE DETERMINED IN FIELD BY ENGINEER.

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: DEMOLITION PLAN

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue, Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD OB
DESIGN ENGINEER: JHB
DRAWN BY: BPA
CHECKER: RA
SCALE: AS INDICATED

ENGINEER OF RECORD: OSCAR BERMUDEZ, P.E. NO. 79011

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name: 471A-C-01.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 7 of 28 Drawing: C-01

N:\471A Indian Creek Park Seawall\Dwg\Design

RUBBLE-BANK AND SHORE TABLE

BEGIN STA	END STA	LENGHT (FT)	VOLUME (CF)	VOLUME (CY)
11+10	12+50	140	2240	82.96
12+95	19+13	618	9890	366.22

2' DEPTH AND 8' WIDTH USED TO CALCULATE RUBBLE BANK AND SHORE VOLUME

North

0 10 20 40

GRAPHIC SCALE IN FEET

EXIST. SEAWALL TO REMAIN. SEE EXIST. CAP/NEW CAP TIE-IN DETAIL-SECTION 1&2/S-01

BEGIN PROJECT STA. 10+50 BEGIN CONC. CAP REMOVAL AND REPLACEMENT. BEGIN CONST. OF SHEET PILE WALL. TOP ELEV. 5.7

FLOATING TURBIDITY BARRIER

REMOVE EXIST. CONC. CAP AND DRIVE NEW STEEL SHEET PILE. CONST. NEW CONC. CAP PER SECTION 2/S-01 (TYP. ALONG FULL LENGTH OF PROJECT). INSTALL RUBBLE-BANK AND SHORE PROTECTION ALONG NEW SHEET PILE. (SEE TYPICAL SECTION) SEE RUBBLE BANK AND SHORE TABLE FOR LOCATION

STA. 12+92 END CONC. CAP REMOVAL AND REPLACEMENT. END CONST. OF SHEET PILE WALL

SITE BENCHMARK #1
TOP OF TAPCON SCREW & DISK WITH "BM" LB #7143
ELEV = 5.27
STATE PLANE INFORMATION
N: 550260.6070
E: 944967.1640

WATER MARK ON BRIDGE ELEV = 0.9

10" DIP INVERT ELEV=-1.33

WATERWAY

METAL SIGN "WARNING-BLIND CURVE-DO NOT ANCHOR OR DREDGE CALL 1-800-432-4770"

SEAM IN CONCRETE CAP TYP.

CONCRETE CAP OVER METAL SEAWALL (STEEL SHEET PILING SECTION MZ-22 PER PROPOSED SEAWALL DESIGN)

CONST. 26 LF OF CONC. PANEL WALL. 4/S-04

CONST. 12" MES INV.=-0.65

STAINLESS STEEL MANATEE GUARD 3' WIDE X 3' HIGH AVERAGE CONDITION COVERING 18" RCP INVERT ELEV=-2.36

EXIST. STEEL TIE-BACK RODS APPROX. LOCATION)

INV.=-2.50

4" PVC INVERT ELEV=

CONST. 10 LF OF 12" RCP

METAL SEAWALL (STEEL SHEET PILING SECTION MZ-22 PER PROPOSED SEAWALL DESIGN) TIE-IN 4 WALLS

CONCRETE WHALER ATTACHED TO METAL SEAWALL 1'X1'X30' TYP.

METAL PILES

OVERLOOK

41'

80'

25' (TYP.)

METAL CLEAT

STA. 10+00 (STA +0 IN SURVEY)

STA. 10+50

EXPANSION JOINT. SEE DETAIL 3/ S-01

BEGIN WORK 41' LF FROM CONCRETE BRIDGE OVERHANG

PROVIDE EXPANSION JOINT EVERY 100 LF OF CONCRETE SEAWALL CAP

9'-2" (TYP.)

MATCH EXISTING PAVEMENT ELEVATION

STA. 11+00

STA. 11+50

STA. 12+00

STA. 12+50

1:20 MAX.

CONCRETE WALL SECTION

CONST. 45 LF OF 12" RCP

CONST. TYPE 8 MH TOP=5.0 INV.=-1.55

MANGROVES AND BUTTONWOODS

EXIST. DEADMEN (APPROX. LOCATION)

8' CONC. WALKWAY

3" ø SCHD 80 HOT-DIPPED GALV. PIN PILES AT 10'-0" O/C UNDER SEAT WALL (TYP.) FOOTING AS PER SECTION

EXIST. STEEL SHEET PILE BULKHEAD SEAWALL TO REMAIN (TYP.)

TOP OF SEAT WALL ELEV. 5.7 (TYP.)

STA. 13+00

STA. 13+50

STA. 14+00

STA. 14+50

STA. 15+00

STA. 15+50

STA. 16+00

MATCHLINE 'A' - SEE BELOW

EXERCISE EQUIPMENT

CONST. EXERCISE PAD

8' ASPHALT WALKWAY

CONST. EXERCISE PAD SEE DETAIL SHEET C-04 (TYP.)

10'

12'

11'

17'

LEGEND

CONCRETE WALKWAY

ASPHALT PAVEMENT WALKWAY

MATCHLINE 'A' - SEE ABOVE

END PROJECT STA. 20+51 END CONC. CAP REMOVAL AND REPLACEMENT. END CONST. OF SHEET PILE WALL

REMOVE EXIST. CONC. CAP AND DRIVE NEW STEEL SHEET PILE. CONST. NEW CONC. CAP PER SECTION 2/S-01 (TYP. ALONG FULL LENGTH OF PROJECT). INSTALL RUBBLE-BANK AND SHORE PROTECTION ALONG NEW SHEET PILE. (SEE TYPICAL SECTION) SEE RUBBLE BANK AND SHORE TABLE FOR LOCATION

REMOVE AND REPLACE MANATEE GUARD. SEE MANATEE GUARD DETAIL

STAINLESS STEEL MANATEE GUARD TOP ELEV=2.15 3' WIDE X 4.8' HIGH GOOD CONDITION COVERING 15" RCP INVERT ELEV=-1.93

STAINLESS STEEL MANATEE GUARD TOP ELEV=2.15 3' WIDE X 4.8' HIGH GOOD CONDITION COVERING 15" RCP INVERT ELEV=-1.93

MANATEE GUARD TOP ELEV=2.15 3' WIDE X 4.8' HIGH GOOD CONDITION COVERING 24" RCP INVERT ELEV=-2.12

STA. 17+54 BEGIN CONC. CAP REMOVAL AND REPLACEMENT. END CONST. OF SHEET PILE WALL

REMOVE EXIST. BROKEN CONCRETE

MULTIPLE UNDERWATER PILES THIS AREA MATERIAL UNKNOWN

FLOATING TURBIDITY BARRIER

CONST. 22 LF OF CONC. PANEL WALL. 4/S-04

INV.=-2.50

CONST. 60 LF OF 12" RCP.

CONST. 10 LF OF 12" RCP

2.5" GALVANIZED PIPE TOP ELBOW ELEV=0.18

CONC CAP OVER METAL SEAWALL (STEEL SHEET PILING SECTION MZ-22 PER PROPOSED SEAWALL DESIGN)

EXIST. SEAWALL TO REMAIN

END WORK AT CONCRETE PAD

CONCRETE

OVERLOOK

8' CONC. WALKWAY

MATCH EXISTING PAVEMENT ELEVATION

8' ASPHALT WALKWAY

CONST. TYPE 8 MH TOP=5.0 INV.=-1.55

CONST. 12" MES INV.=-0.65

MATCH EXIST. PAVEMENT ELEVATION

EXIST. STEEL TIE-BACK RODS (APPROX. LOCATION)

EXIST. DEADMEN (APPROX. LOCATION)

DEAD PALM TREES

'NO STOPPING OR STANDING' SIGN

3 HR PARKING

3 HOUR PARKING SIGN WOOD POSTS

WOOD POSTS

ASPHALT PARKING

3 STORY CBS

5' UTILITIES ESMT (R/W)

STA. 18+00

STA. 18+50

STA. 19+00

STA. 19+50

STA. 20+00

STA. 20+50

EXERCISE EQUIPMENT

CONST. EXERCISE PAD

SITE BENCHMARK #2
TOP OF FND NAIL & DISK WITH FDOT '026BM' ELEV = 2.27
STATE PLANE INFORMATION
N: 550965.6004
E: 944996.9551

SITE BENCHMARK #3
TOP OF TAPCON SCREW & DISK WITH "BM" LB #7143
ELEV = 2.28
STATE PLANE INFORMATION
N: 551144.3530
E: 944969.8820

MATCHLINE 'B' - CONTINUED

MATCHLINE 'B' - SEE CONTINUATION

NOTES:

1. CONTRACTOR TO EXCAVATE TIE BACKS AT BULKHEAD WALL. FINAL REMOVAL AND REPLACEMENT LENGTH OF TIE-BACKS WILL BE DETERMINED IN FIELD BY ENGINEER.
2. CONTRACTOR TO REMOVE ALL SUBMERGED VESSELS, SUBMERGED PILES, AND OTHER MISCELLANEOUS DEBRIS WITHIN 35 FEET OF THE NEW SEAWALL PRIOR TO BEGINNING CONSTRUCTION.

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: PLAN SHEET

BPA
Brindley Peters & Associates, Inc.
815 NW 57 th Avenue, Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

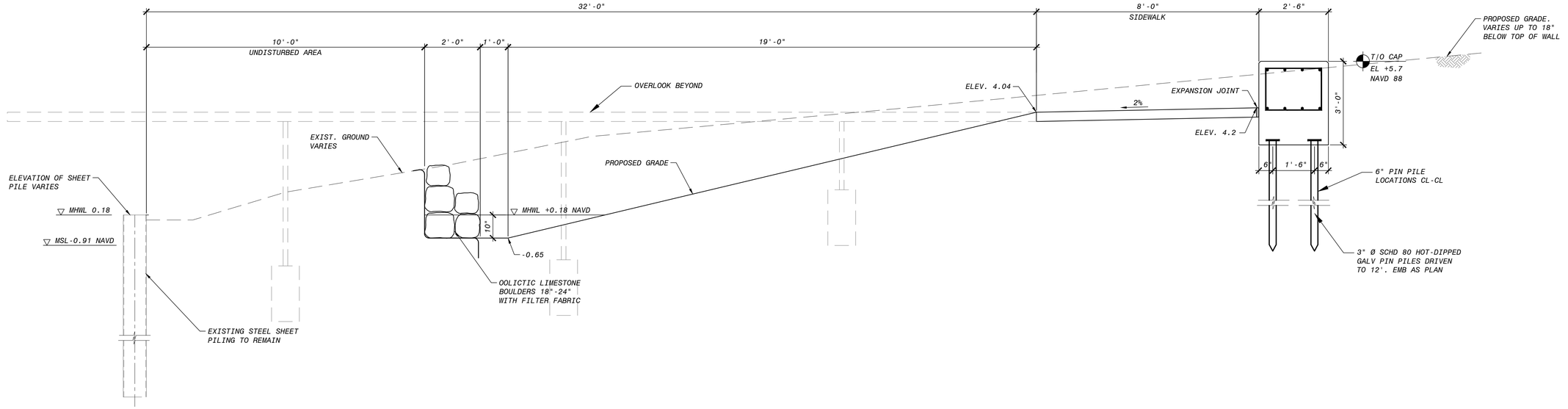
ENGINEER OF RECORD: OB
DESIGN ENGINEER: JHB
DRAWN BY: BPA
CHECKER: RA
SCALE: AS INDICATED

ENGINEER OF RECORD:
OSCAR BERMUDEZ, P.E.
NO. 79011

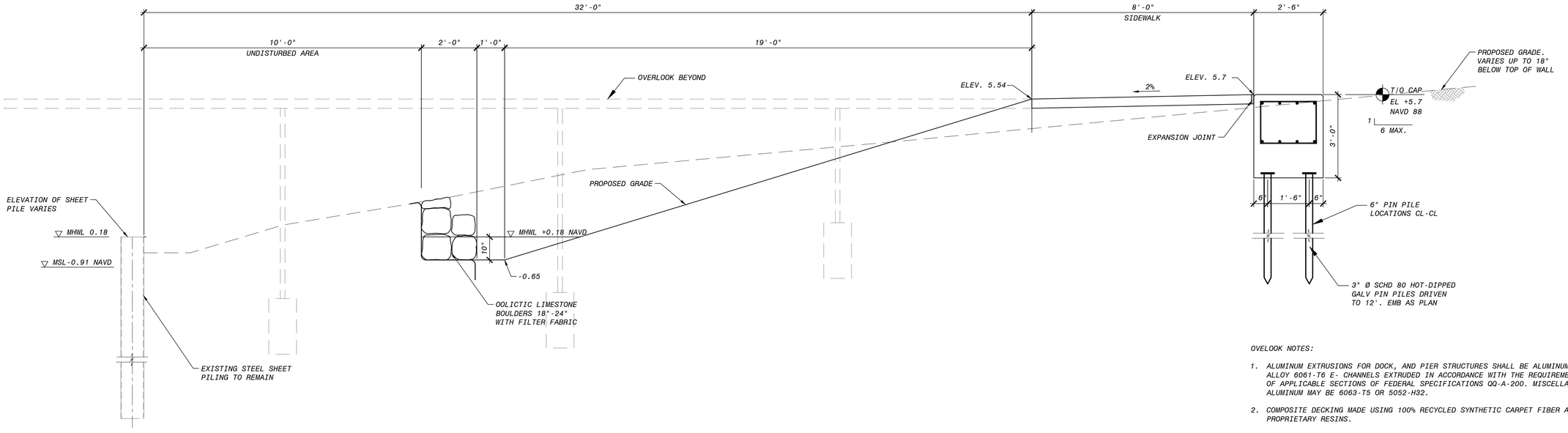
NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name: 471A-C-02.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 8 of 28 Drawing: C-02

N:\471A Indian Creek Park Seawall\Dwg\Design



1 LIVING SHORE SECTION
1/2" = 1'-0"



2 LIVING SHORE SECTION
1/2" = 1'-0"

OVELOOK NOTES:

1. *ALUMINUM EXTRUSIONS FOR DOCK, AND PIER STRUCTURES SHALL BE ALUMINUM ALLOY 6061-T6 E- CHANNELS EXTRUDED IN ACCORDANCE WITH THE REQUIREMENTS OF APPLICABLE SECTIONS OF FEDERAL SPECIFICATIONS QQ-A-200. MISCELLANEOUS ALUMINUM MAY BE 6063-T5 OR 5052-H32.*
2. *COMPOSITE DECKING MADE USING 100% RECYCLED SYNTHETIC CARPET FIBER AND PROPRIETARY RESINS.*
3. *CLEATS SHALL BE CAST ALUMINUM ALLOY MEETING THE REQUIREMENTS OF THE FEDERAL SPECIFICATIONS QQ-A-571F AND QQ-A-601E.*
4. *ALL HARDWARE SHALL BE STAINLESS STEEL TYPE 304*

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: LIVING SHORE SECTION

Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

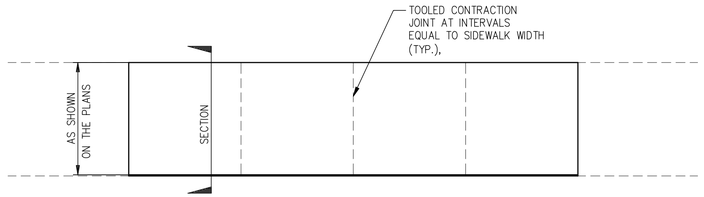
ENGINEER OF RECORD OB
DESIGN ENGINEER: JHB
DRAWN BY: BPA
CHECKER: RA
SCALE: AS INDICATED

ENGINEER OF RECORD:
OSCAR BERMUDEZ, P.E.
NO. 79011

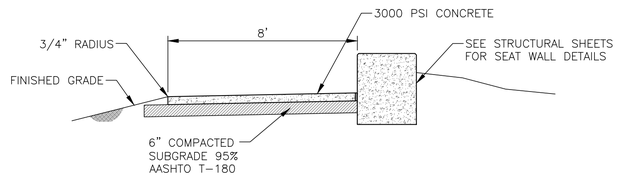
NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name: 471A-C-03.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 9 of 28 Drawing: C-03

N:\471A Indian Creek Park Seawall\Dwg\Design



PLAN

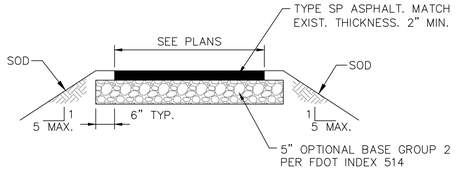


SECTION

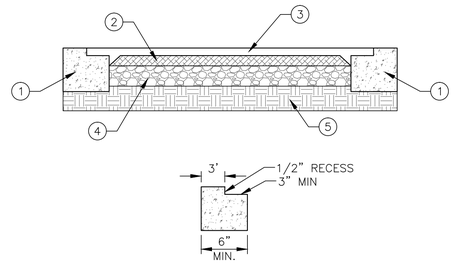
NOTES:

1. WALKWAY W/LIGHT BROOM FINISH & TROWELED EDGE.
2. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
3. ALL CONCRETE WALKWAYS SHALL HAVE A FULL 1/2" EXPANSION JOINT AT A MAXIMUM DISTANCE OF 30 LINEAR FEET AND A SAW CUT OR FORMED DUMMY CONTRACTION JOINT AT EVENLY SPACED INTERVALS NOT TO EXCEED WIDTH OF THE WALK.
4. A ¼" CONSTRUCTION JOINT SHALL BE CONSTRUCTED AT ALL P.C. AND P.T. OF CURVES AND WHERE EXISTING AND NEW SIDEWALK MEET.

TYPICAL CONCRETE WALKWAY DETAIL
N.T.S.

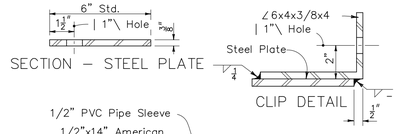


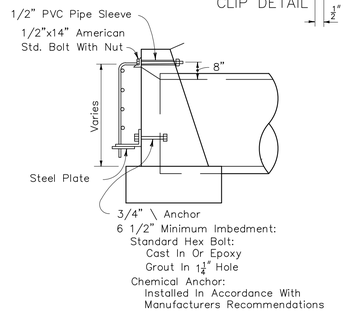
ASPHALT WALKWAY REPLACEMENT DETAIL
N.T.S.

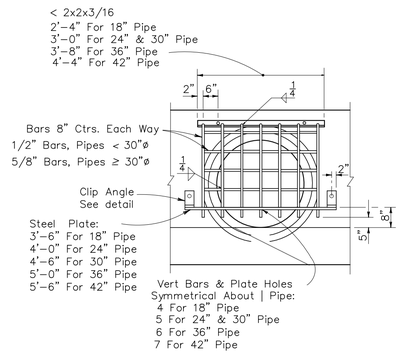


1. CONCRETE.
2. POURED-IN-PLACE SHREDDED SBR CUSHION LAYER
3. POURED-IN-PLACE WEAR COURSE (2% MAX. SLOPE)
4. 4" MIN. SUB-BASE 95% COMPACTED AGGREGATE INSTALLED IN 2-2" LIFTS, SLOPE 2% MAX.
5. EXISTING EARTH, 95% COMPACTED SUB-GRADE, SLOPE 2%
6. 1 ½" BEVEL
7. ½" DEEP x 3" WIDE NOTCH FORMED

EXERCISE PAD DETAIL
N.T.S.







Pipe Dia.	18"	24"	30"	36"	42"
Grate (Lbs.)	48	58	74	90	111

FRONT VIEW

NOTE:
GUARDS TO BE CONSTRUCTED ONLY AT LOCATIONS SPECIFICALLY CALLED FOR IN PLANS. GUARD, PLATE & CLIPS, BOLTS, NUTS AND SLEEVES TO BE INCLUDED IN THE CONTRACT UNIT PRICE FOR MANATEE GUARD

MANATEE GUARD DETAIL
N.T.S.

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: CIVIL DETAILS

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

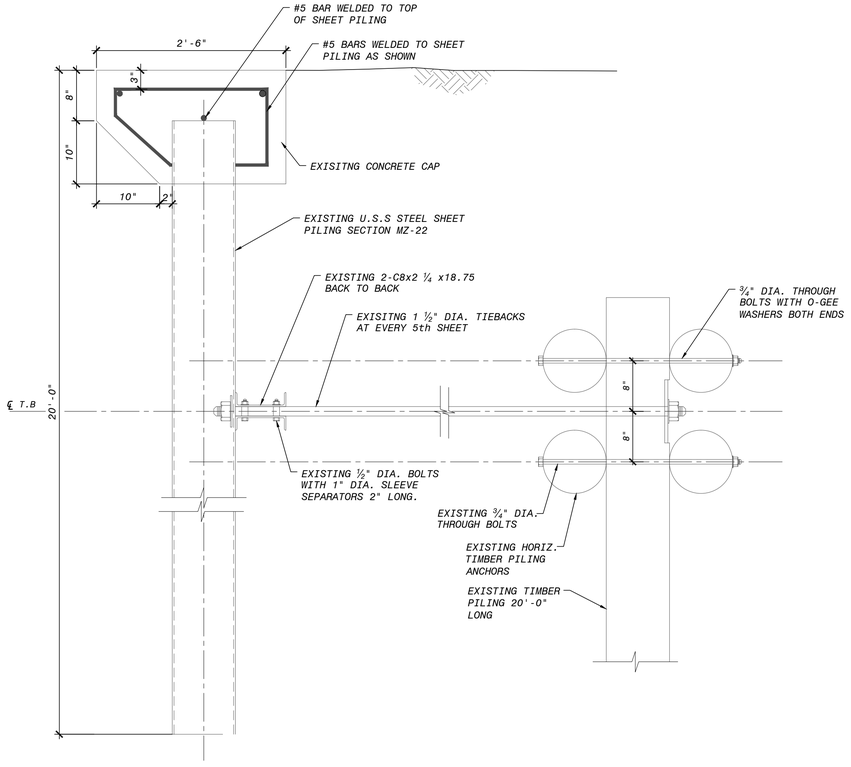
ENGINEER OF RECORD: OB
DESIGN ENGINEER: JHB
DRAWN BY: BPA
CHECKER: RA
SCALE: AS INDICATED

ENGINEER OF RECORD:
OSCAR BERMUDEZ, P.E.
NO. 79011

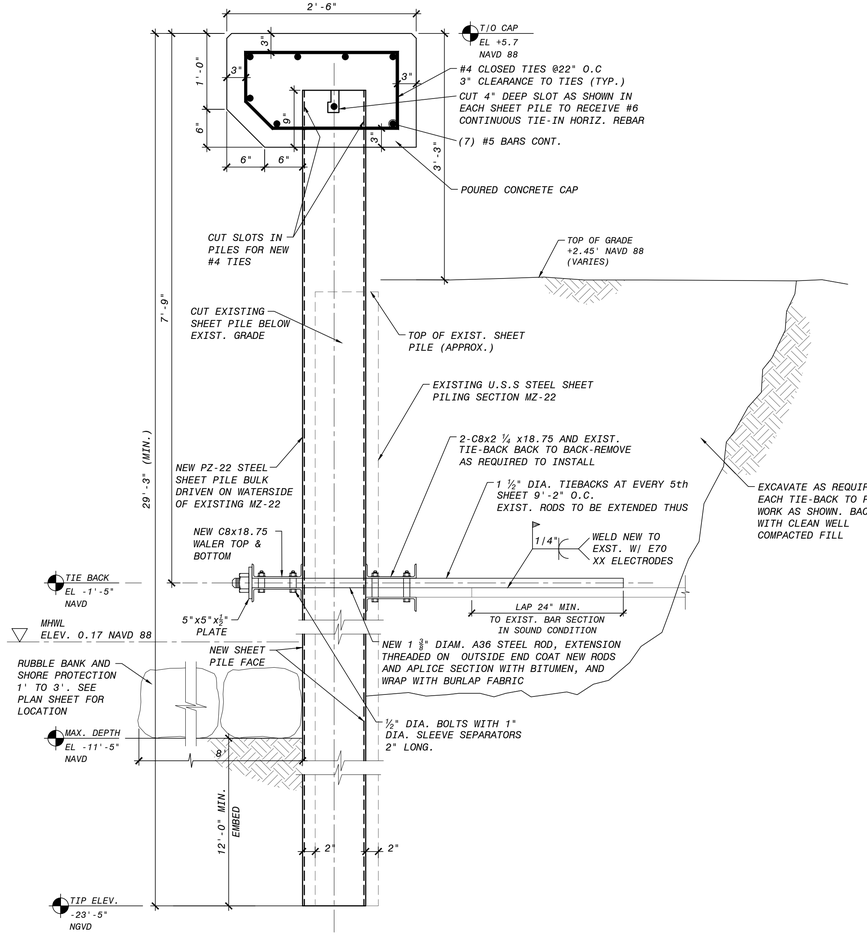
NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name: 471A-C-04.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 10 of 28 Drawing: C-04

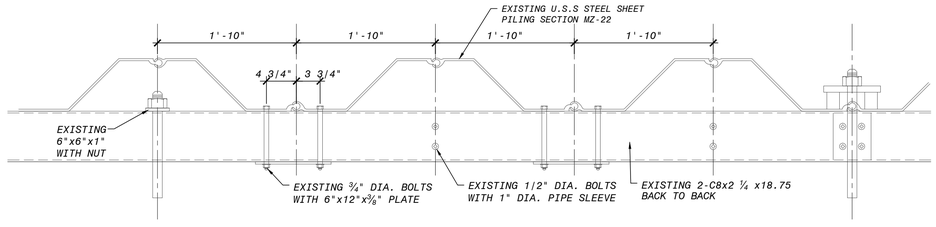
N:\471A Indian Creek Park Seawall\Dwg\Design



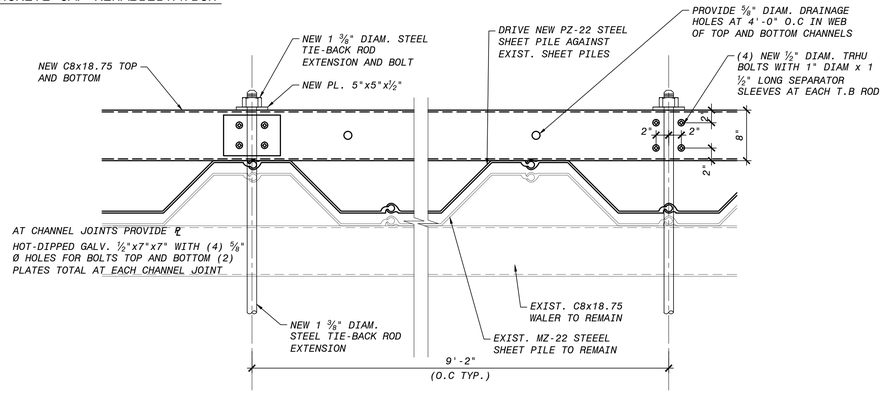
1 *EXISTING SHEET PILE WALL DETAIL*
1" = 1'-0"



2 *SHEET PILE WALL AND CONCRETE CAP REHABILITATION*
1" = 1'-0"



3 *EXISTING PLAN VIEW*
1" = 1'-0"



4 *NEW PLAN VIEW*
1" = 1'-0"

GENERAL NOTES

1. ELEVATIONS SHOWN REFER TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.
2. ALL DIMENSIONS ON PLANS ARE SUBJECT TO VERIFICATION IN THE FIELD.
3. IT IS THE INTENT OF THESE PLANS TO BE IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. ANY DISCREPANCIES BETWEEN THESE PLANS AND APPLICABLE CODES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE PROCEEDING WITH THE WORK.
4. IT IS THE INTENT OF THESE PLANS AND THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH LOCAL, STATE, AND FEDERAL ENVIRONMENTAL PERMITS ISSUED FOR THIS PROJECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE AND GOVERN HIMSELF BY ALL PROVISIONS OF THESE PERMITS.
5. APPLICABLE BUILDING CODE: FLORIDA BUILDING CODE 2010.
6. FACE OF NEW SHEET PILE SHALL NOT EXTEND MORE MORE THAN 10 INCHES WATERWARD OF THE FACE OF THE EXISTING SHEET PILE.

CONCRETE AND REINFORCING STEEL

1. ALL CONCRETE SHALL ATTAIN A MIN. COMPRESSIVE STRENGTH OF 5000 PSI, 0.40 W/C RATIO AT THE END OF 28 DAYS. 4 CYL. SHALL BE TAKEN FOR EA. 50 CU YDS OR FRACTION THEREOF AND SHALL BE TESTED AT 3, 7, AND 28 DAYS. SLUMP SHALL NOT EXCEED 4" (+/– 1").
2. ALL REINFORCEMENT SHALL BE GRADE 60, ASTM A615 NEW BILLET STEEL. ALL BARS LAPS SHALL BE A MIN OF 36 BAR DIAMETERS. REINFORCEMENT PLACING SHALL CONFORM TO THE LATEST ACI CODE AND MANUAL OF STANDARD PRACTICE.
3. ALL UNIFORMED CONCRETE SURFACES SHALL HAVE A LIGHT BROOM FINISH.

STEEL SHEET PILING

1. ALL SHEET PILLING SHALL BE PZ–22, CAST HOT ROLLED, BALL AND SOCKET INTERLOCK, ASTM A572 GRADE 50 AS MANUFACTURED BY ARCELOR OR APPROVED EQUAL. MINIMUM SECTION MODULUS SHALL BE 18.1 IN. WITH A MOMENT OF INERTIA OF 84.38 IN4. NEW LINE COAT TOP 10 FEET, BOTH SIDES WITH COAL TAR EPOXY, 16 MIL THICKNESS MINIMUM AND COATED AS SHOWN IN SECTION. NEW LINE SUBMIT SHOP DRAWINGS FOR APPROVAL. DRIVE TO 12 FEET MINIMUM BELOW BERM AS PER GEOTECHNICAL REPORT.

STRUCTURAL STEEL

1. ALL WALER STEEL SHALL BE C 8X18.75 CHANNEL AS PER SECTION ASTM A36, Fy = 36 KSI. WALER CHANNELS SHALL BE HOT DIPPED ZINC GALVANIZED. SUBMIT SHOP DRAWINGS FOR APPROVAL.
2. ALL NEW TIE BACK RODS SHALL BE 1 – 1/12" DIAMETER AS PER SECTION ASTM A36, Fy = 36 KSI. WALER CHANNELS SHALL BE HOT DIPPED ZING GALVANIZED. SUBMIT SHOP DRAWINGS FOR APPROVAL.

MISCELLANEOUS STEEL

1. ALL MISC. STEEL COMPONENTS, BOLTS AND HARDWARE SHALL BE ASTM A36 OR A307 AND HOT DIPPED ZINC GALVANIZED.

BACKFILL

1. ALL BACKFILL MATERIAL SHALL BE FREE DRAINING SAND OR GRAVEL WITH A MAXIMUM OF FIVE PERCENT PASSING THE #200 SIEVE. FILL SHALL BE PLACED IN MAXIMUM 12" LIFTS COMPACTED TO 95 PERCENT OF ITS MAXIMUM DRY DENSITY (ASTM–1557). NO ORGANIC MATERIAL OR ASPHALT WILL BE ALLOWED.

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: WALL SECTION AND DETAILS

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

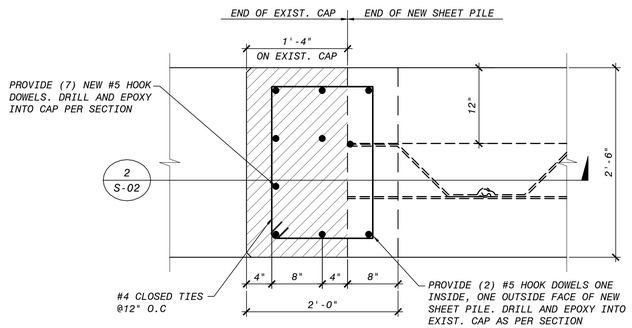
ENGINEER OF RECORD TA
DESIGN ENGINEER: JHB
DRAWN BY: BPA
CHECKER: RA
SCALE: AS INDICATED

ENGINEER OF RECORD:
TREVOR ADAMS, P.E.
NO. 43605

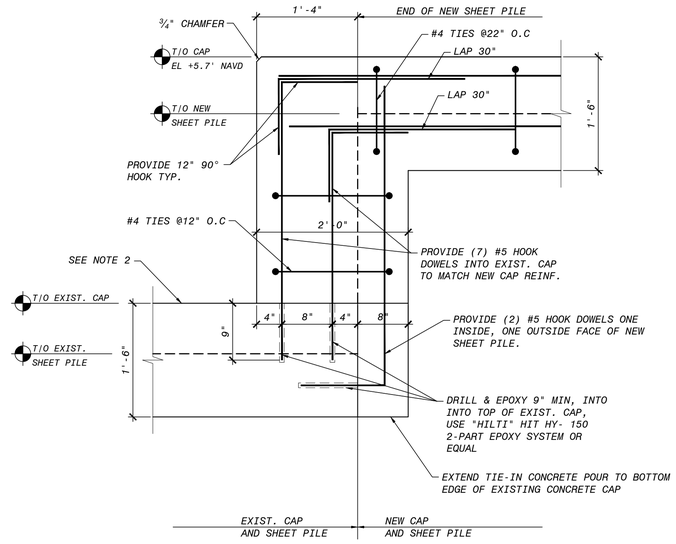
NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name: 471A–S–01.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 11 of 28 Drawing: S–01

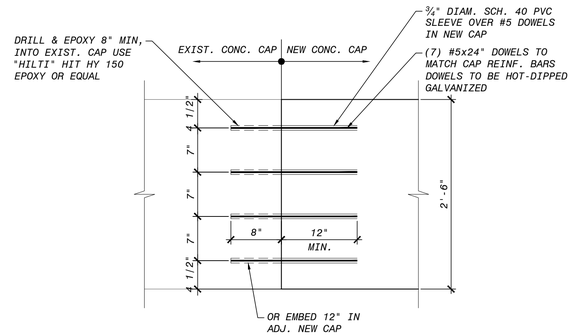
N:\471A Indian Creek Park Seawall\Dwg\Design



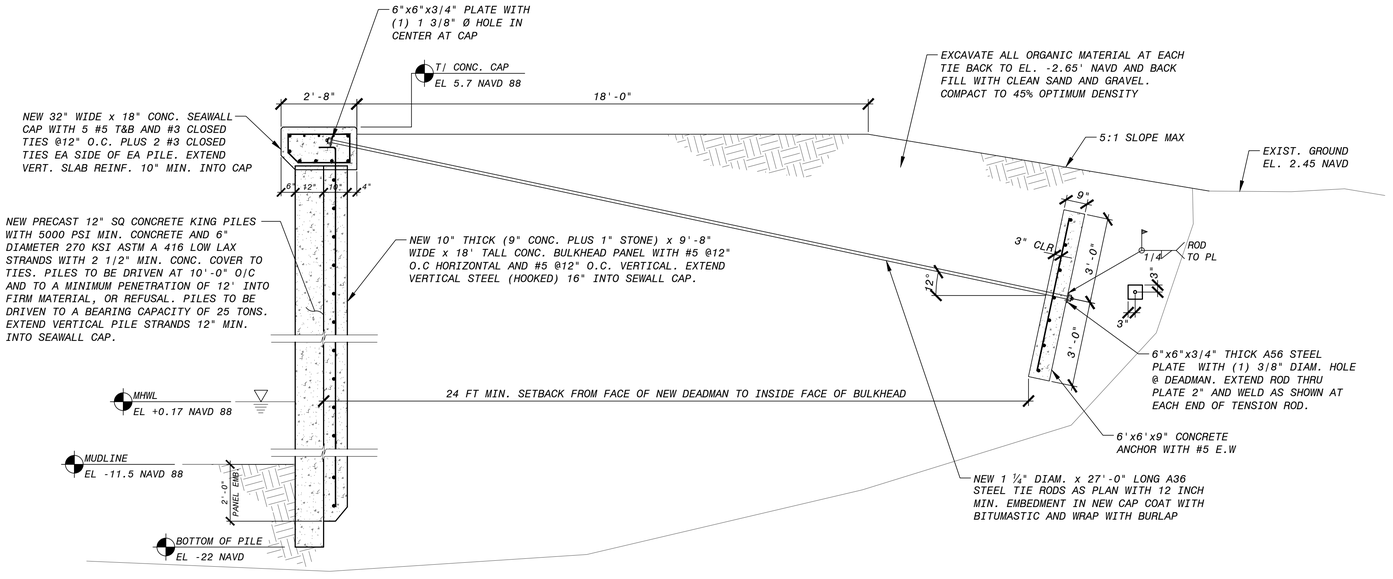
1 EXIST. CAP/NEW CAP TIE-IN DETAIL PLAN
1" = 1'-0"



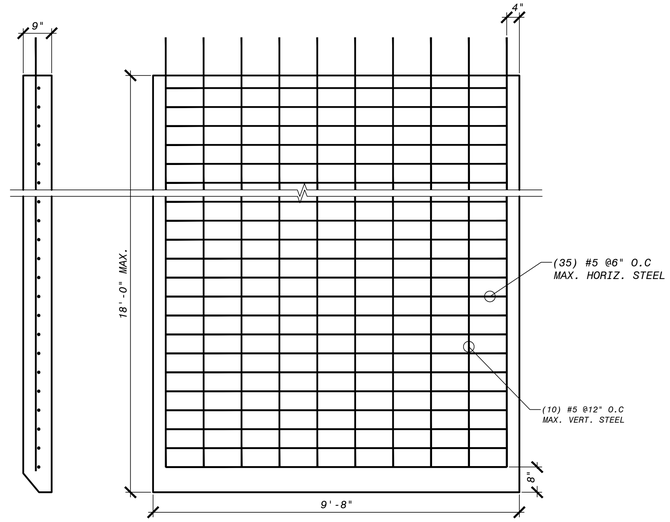
2 EXIST. CAP/NEW CAP TIE-IN DETAIL-SECTION
1" = 1'-0"



3 EXPANSION JOINT DETAIL
1" = 1'-0"



4 CONCRETE PANEL WALL SECTION
SECTION3/8" = 1'-0"



5 CONCRETE PANEL WALL DETAIL
1/2" = 1'-0"

NOTES:

1. **SEE GENERAL NOTES IN SHEET S-01.**
2. **REPAIR ALL OBSERVED CRACKING AND SPALLING IN THE EXISTING CONCRETE CAP BEAM TO REMAIN. REFER TO GENERAL RESTORATION NOTES, REPAIR DETAILS AND MATERIAL SPECIFICATIONS BOOKLET PROVIDED AS PART OF THE PROJECT DOCUMENTS.**

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: WALL DETAILS

Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD TA
DESIGN ENGINEER: JHB
DRAWN BY: BPA
CHECKER: RA
SCALE: AS INDICATED

ENGINEER OF RECORD:
TREVOR ADAMS, P.E.
NO. 43605

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name: 471A-S-02.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 12 of 28 Drawing: S-02

N:\471A Indian Creek Park Seawall\Dwg\Design

GENERAL RESTORATION NOTES

A. CONCRETE SPALLING & STEEL RESTORATION PROCEDURE

1. CORE TEST SHALL BE TAKEN IN LOCATIONS DETERMINED BY ENGINEER AND TESTED FOR PH, CHLORIDE, AND CONC STRENGTH.

2. DISLODGE, CHIP AND REMOVE ALL SPALLED OR LOOSE CONCRETE FROM SPALLED AREAS AS SHOWN ON TYPICAL REPAIR DETAILS TO EXPOSE SOUND MATERIAL. REMOVE SURFACE PAINT BY SAND BLASTING TO EXPOSE CONCRETE SURFACE.

3. THOROUGHLY CLEAN ALL EXPOSED REINFORCING STEEL BY SAND BLASTING, TO EXPOSE STEEL THAT IS FULLY INTACT. PAINT EXISTING REINFORCING STEEL WITH "EMACO P22" COATING BY "DEGUSSA BUILDING SYSTEMS" OR EQUAL.

4. IF THE EXISTING STEEL REBAR DIAMETER IS REDUCED 10% OR MORE BY RUST, REPLACE THE STEEL WITH NEW GRADE 60 REBAR TO MATCH THE EXISTING. PROVIDE 36 BAR DIA. MINIMUM LAP IF LOCATED IN THE LAST 25% OF THE SLAB SPAN OVER ACCEPTABLE REBAR. IF A SPLICE OCCURS IN THE MIDDLE OF THE SLAB SPAN, 48 BAR DIA. ARE REQUIRED. THE ENGINEER SHALL APPROVE ALL SPLICE CONDITIONS.

5. REMOVE EXISTING CONCRETE AS REQUIRED TO ALLOW SUFFICIENT CLEARANCE (AT LEAST 3/4" FOR #6 BAR OR LESS) FOR NEW REPAIR MORTAR TO SURROUND ANY REINFORCING STEEL AND LAPPED SECTIONS. THE REINFORCEMENT SHALL HAVE A MIN. COVER OF 1-1/2" FROM THE EXPOSED EXTERIOR FACES OF CONCRETE.

6. THOROUGHLY CLEAN ALL CONCRETE SURFACES. COAT CONCRETE SURFACE WITH "EMACO P24" BONDING AGENT OR SIKADUR 52 EPOXY BONDING AGENT (OR EQUAL) PER MANUFACTURES SPECIFICATIONS.

7. HAND PACK IN 1/2" LAYERS TO ORIGINAL CROSS SECTION USING "SIKA REPAIR S22" REPAIR MORTAR FOR HORIZONTAL REPAIRS, OR "SIKA REPAIR 223" REPAIR MORTAR FOR VERTICAL OR OVERHEAD REPAIRS, PER MANUFACTURER RECOMMENDATIONS AND ENCLOSED REPAIR SPECIFICATION FOR CONCRETE REHABILITATION USING REPAIR MORTAR .

8. UPON CURING OF CEMENTITIOUS MORTAR, ALL REPAIRED AREAS SHALL BE INSPECTED FOR ANY SHRINKAGE CRACKS OR UNBONDED AREAS PRIOR TO APPLYING FINISHES. IF SHRINKAGE CRACKS OR UNBONDED AREAS HAVE BEEN FOUND, REPEAT THE ABOVE PROCEDURES AFTER THE REMOVAL OF IMPROPER REPAIRS OR INJECT WITH EPOXY PER ENGINEERS DIRECTION.

B. HONEYCOMB REPAIR PROCEDURES

1. ALL LOOSE HONEYCOMBED AREAS SHALL BE REMOVED. REINFORCING SHALL BE CLEANED AS STATED ABOVE AND PATCHED USING THE SPALL REPAIR PROCEDURES.

C. CONCRETE SLAB CRACK REPAIR PROCEDURES

1. REPAIR ALL CRACKS BY HIGH PRESSURE INJECTION CRACK REPAIR METHOD, USING "SIKADUR 35" HI-MOD LV LPL EPOXY RESIN ADHESIVE PER MANUFACTURER RECOMMENDATIONS FOR PRESSURE INJECTION CRACK REPAIR.

NOTE: ALL REPAIR MATERIALS LISTED ARE AVAILABLE FROM SIKA CORPORATION, EXCEPT AS OTHERWISE INDICATED. REFER TO SIKA CORPORATION, AND DEGUSSA BUILDING SYSTEMS.
SUBMIT TECHNICAL SHEETS ON MATERIAL USED (IF OTHER THEN SPECIFIED HEREIN) FOR APPROVAL PRIOR TO USE .

CONTRACTOR NOTE.
CONTRACTOR SHALL VISIT THE SITE AND OBSERVE EXISTING CONDITIONS PRIOR TO BID.

MATERIALS

A. REPAIR MORTAR/PATCHING MATERIAL

1. SIKAREPAIR 222 – 1 COMPONENT PATCHING MATERIAL FOR HORIZONTAL REPAIRS
   ENCLOSED PRODUCT DATA SHEET AND SPECIFICATIONS FOR USE.
2. SIKAREPAIR 223 – 1 COMPONENT PATCHING MATERIAL FOR OVERHEAD OR VERTICAL REPAIRS
   ENCLOSED PRODUCT DATA SHEET AND SPECIFICATIONS FOR USE.

B. CRACK REPAIR ADHESIVE

1. SIKADUR 35 HI-MOD LV LPL – HIGH MODULUS, MOISTURE TOLERANT, LOW VISCOSITY, HIGH STRENGTH 2 COMPONENT EPOXY RESIN ADHESIVE FOR HIGH PRESSURE INJECTION CRACK REPAIR.
   ENCLOSED PRODUCT DATA SHEET AND SPECIFICATIONS FOR USE.

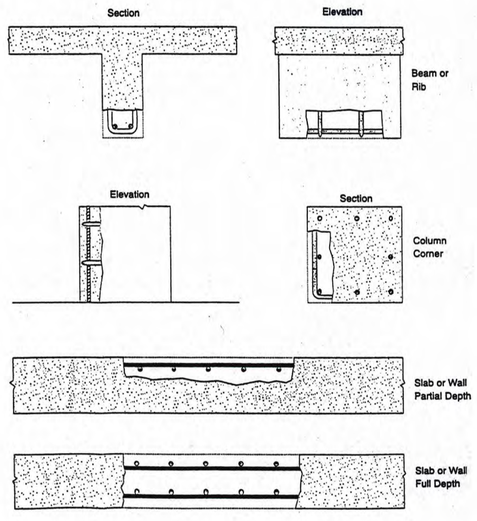
C. REBAR COATING/ CORROSION INHIBITOR and CONCRETE BONDING AGENT

1. EMACO P22 – 2 – COMPONENT POLYMER MODIFIED CEMENTITIOUS REBAR COATING.
   ENCLOSED PRODUCT DATA SHEET.
2. EMACO P24 – WATER BASED EPOXY-CEMENTITIOUS BONDING AGENT AND REBAR COATING.
   ENCLOSED PRODUCT DATA SHEET.

1. SANDBLASTING IS THE ONLY METHOD APPROVED BY DERM FOR CONCRETE CLEANING. ALL OTHER METHODS (HYDRO-DEMOLITION, HYDRO-MILLING, AND ELECTRIC, PNEUMATIC, OR HYDRAULIC IMPACT BREAKERS) LISTED ON THIS SHEET ARE NOT ACCEPTABLE.
2. CONTRACTOR MUST COLLECT AND REMOVE FROM THE SITE ALL PARTICLES GENERATED BY SANDBLASTING. THE CONTRACTOR MUST PROVIDE THE CONTAINMENT PLAN FOR PARTICLE COLLECTION AND REMOVAL AT THE PRE-CONSTRUCTION MEETING.

Removal Geometry

Caution! Before starting removals, review effect of removals on structural integrity. Provide shoring of members as necessary. Particular care shall be exercised at slab/beam connections to columns.



1 CONCRETE RESTORATION TYPICAL REPAIR DETAIL 1
N.T.S

Exposing and Undercutting of Reinforcing Steel

These details are applicable to horizontal, vertical, and overhead locations. They are also applicable to removal by hydro-demolition, hydro-milling, and electric, pneumatic or hydraulic impact breakers.

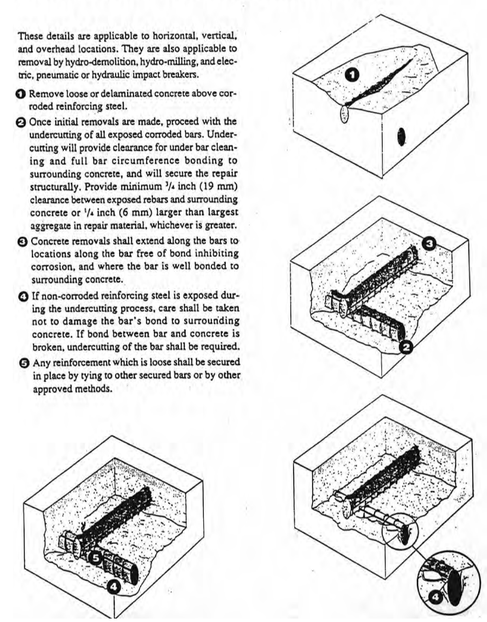
❶ Remove loose or delaminated concrete above corroded reinforcing steel.

❷ Once initial removals are made, proceed with the undercutting of all exposed corroded bars. Undercutting will provide clearance for under bar cleaning and full bar circumference bonding to surrounding concrete, and will secure the repair structurally. Provide minimum ¾ inch (19 mm) clearance between exposed rebars and surrounding concrete or ¼ inch (6 mm) larger than largest aggregate in repair material, whichever is greater.

❸ Concrete removals shall extend along the bars to locations along the bar free of bond inhibiting corrosion, and where the bar is well bonded to surrounding concrete.

❹ If non-corroded reinforcing steel is exposed during the undercutting process, care shall be taken not to damage the bar's bond to surrounding concrete. If bond between bar and concrete is broken, undercutting of the bar shall be required.

❺ Any reinforcement which is loose shall be secured in place by tying to other secured bars or by other approved methods.



2 CONCRETE RESTORATION TYPICAL REPAIR DETAIL 2
N.T.S

Edge and Surface Conditioning of Concrete

These details are applicable to horizontal, vertical, and overhead locations. They are also applicable to removal by hydro-demolition, hydromilling, and electric, pneumatic or hydraulic impact breakers.

Do not use these details for shotcrete applications—for shotcrete repairs refer to ACI 506 Edge Preparation Guidelines.

❼ Remove delaminated concrete, undercut reinforcing steel (refer to "Exposing and Undercutting of Reinforcing Steel" on page 3), remove additional concrete as required to provide minimum required thickness of repair material.

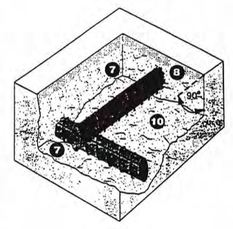
❽ At edge locations, provide right angle cuts to the concrete surface with either of the following methods:

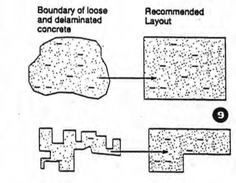
- Sawcut 1/2" (13 mm) or less as required to avoid cutting reinforcing steel.
- Use power equipment such as hydrodemolition or impact breakers. **Avoid feather edges.**

❾ Repair configurations should be kept as simple as possible, preferably with squared corners.

❿ After removals and edge conditioning are complete, remove bond inhibiting materials (dirt, concrete slurry, loosely bonded aggregates) by abrasive blasting or high pressure waterblasting with or without abrasive. Check the concrete surfaces after cleaning to insure that surface is free from additional loose aggregate, or that additional delaminations are not present.

⓫ If hydrodemolition is used, cement and particulate slurry must be removed from the prepared surfaces before slurry hardens.



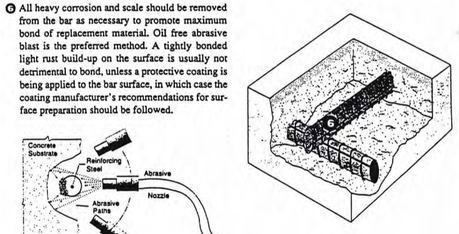


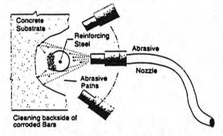
3 CONCRETE RESTORATION TYPICAL REPAIR DETAIL 3
N.T.S

Cleaning and Repair of Reinforcing Steel

Cleaning of Reinforcing Steel

❻ All heavy corrosion and scale should be removed from the bar as necessary to promote maximum bond of replacement material. Oil free abrasive blast is the preferred method. A tightly bonded light rust build-up on the surface is usually not detrimental to bond, unless a protective coating is being applied to the bar surface, in which case the coating manufacturer's recommendations for surface preparation should be followed.



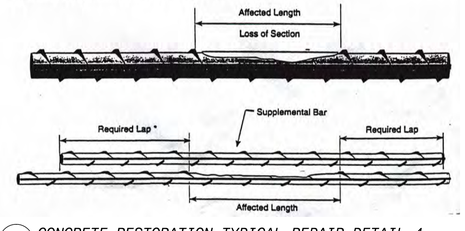


Repair of Reinforcing Steel Due to Loss of Section

If reinforcing steel has lost significant cross section, a structural engineer should be consulted. If repairs are required to the reinforcing steel, one of the following repair methods should be used:

- Complete bar replacement, or
- Addition of supplemental bar over affected section.

New bars may be mechanically spliced to old bars or placed parallel to and approximately ¾ in. (19 mm) from existing bars. Lap lengths shall be determined in accordance with ACI 318; also refer to CRSI and AASHTO manual.



4 CONCRETE RESTORATION TYPICAL REPAIR DETAIL 4
N.T.S

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION
TITLE: WALL DETAILS

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD TA
DESIGN ENGINEER: JHB
DRAWN BY: BPA
CHECKER: RA
SCALE: AS INDICATED

ENGINEER OF RECORD:
TREVOR ADAMS, P.E.
NO. 43605

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name: 471A-S-03.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 13 of 28 Drawing: S-03

N:\471A Indian Creek Park Seawall\Dwg\Design

BIKE RACK (1/L-02)
(4/L-02) OVERLOOK
(2/L-02) TRASH RECEPTACLE
BIKE RACK (1/L-02)
(4/L-02) OVERLOOK
(3/L-02) BENCH
(2/L-02) TRASH RECEPTACLE
BIKE RACK (1/L-02)
(4/L-02) OVERLOOK
(2/L-02) TRASH RECEPTACLE

SITE BENCHMARK #2
TOP OF FND NAIL & DISK
WITH FDOT '026B
ELEV = 2.2

STREETLIGHT

INDIAN CREEK D
(RIGHT-OF-WAY WIDTH VARIES
FDOT R/W MAP SECTION# 87060, DA

K DR

TE BENCHMARK #2
TOP OF FND NAIL & DISK
WITH FDOT '026B
ELEV = 2.2

GRAPHIC SCALE 0 5 10 15 20 40 60

Littlejohn
An S&ME Company
1615 Edgewater Drive, Suite 200, ORLANDO, FLORIDA 32804
T 407.975.1273 F 407.975.1278 www.leainc.com
Leonard E. Arnold, Jr. P.E. 55241
Bruce C. Hall PLA LA0001367
Florida Firm Registration No. 28050

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION & KAYAK LAUNCH

TITLE: SITE FURNISHINGS PLAN

BPA
Bindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

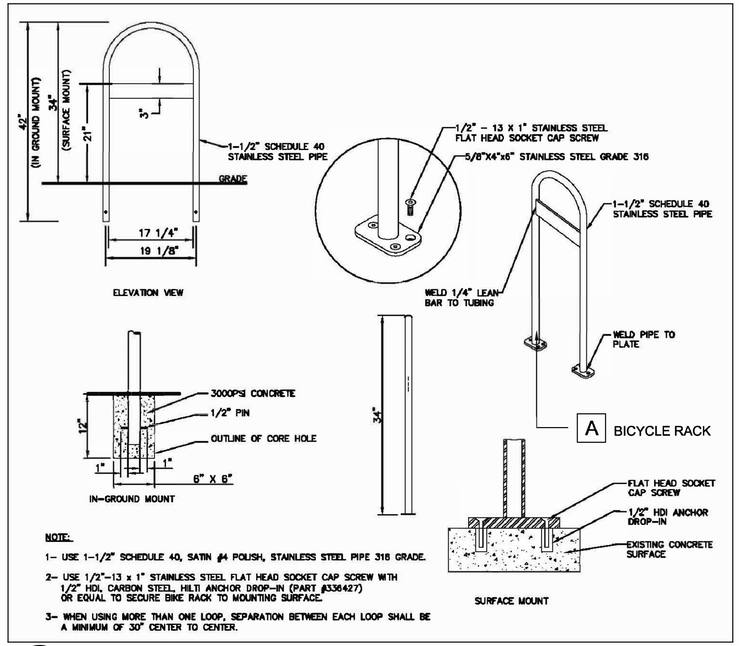
ENGINEER OF RECORD PA
DESIGN ENGINEER: BCH
DRAWN BY: BW
CHECKER: TJM
SCALE: AS INDICATED

L.A. OF RECORD:
BRUCE HALL, R.L.A.
LA 0001367

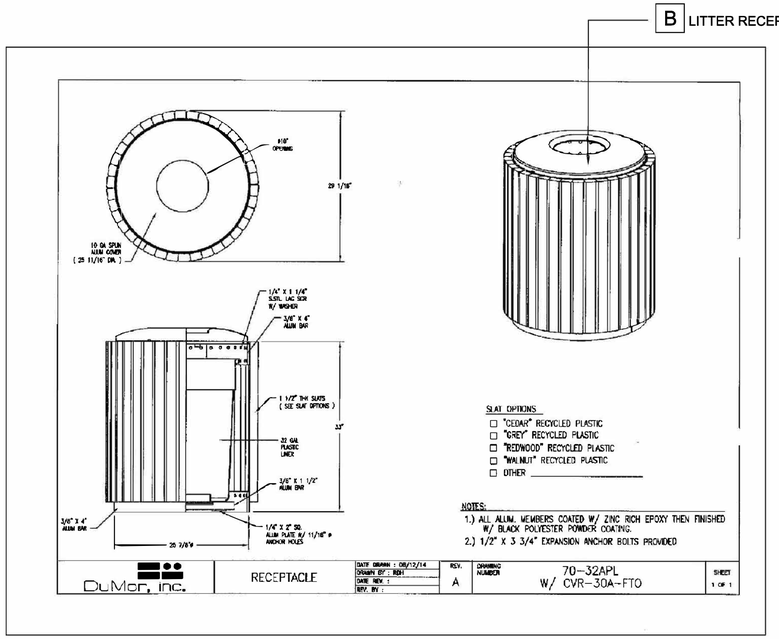
NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/16/16	60% CD	

File Path:
File Name: 20150738_L-01_SITE FURNISHINGS PLAN.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 1/16/17 Sheet: 14 of 28 Drawing: L-01

G:\Projects\2015\20150738\dwg\Construction



1 BIKE RACK
SCALE: NTS



2 TRASH RECEPTACLE
SCALE: NTS



3 BENCH
SCALE: NTS





4 OVERLOOK
SCALE: NTS

FINISH SCHEDULE

SYM	ITEM	SPECIFICATION	
A	BICYCLE RACK	TYPE: COLOR: FINISH: SOURCE:	 STAINLESS STEEL
B	LITTER RECEPTACLE	TYPE: COLOR: FINISH: SOURCE:	70-32APL W/ CVR-30A-FTO CEDAR RECYCLED PLASTIC SLATS N/A DUMOR INC
C	BENCH	TYPE: COLOR: FINISH: SOURCE:	FGP BENCH BACKED 70" ALUMINUM AND WOOD SEATING PRE-FINISHED ANODIZED ALUMINUM AND IPE WOOD LANDSCAPE FORMS, KELLIE MOORE 800.441.1945 X1322

NOTE : CONTRACTOR MUST SUBMIT SAMPLES AND/OR OBTAIN SHOP DRAWING APPROVAL FOR ALL FINISH SCHEDULE ITEMS

NOTE
DETAILS REPRESENT DESIGN INTENT ONLY AND DO NOT IMPLY ANY DEGREE OF STRUCTURAL ENGINEERING. CONTRACTOR TO PROVIDE STRUCTURAL ENGINEERING DRAWINGS SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA

Littlejohn
An S&ME Company
1615 Edgewater Drive, Suite 200, ORLANDO, FLORIDA 32804
T 407.975.1273 F 407.975.1278 www.leainc.com
Leonard E. Arnold, Jr. P.E. 55241
Bruce C. Hall PLA LA0001367 Florida Firm Registration No. 28050

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION & KAYAK LAUNCH
TITLE: SITE FURNISHINGS

BPA
Brindley Peters & Associates, Inc.
815 NW 57 th Avenue,
Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

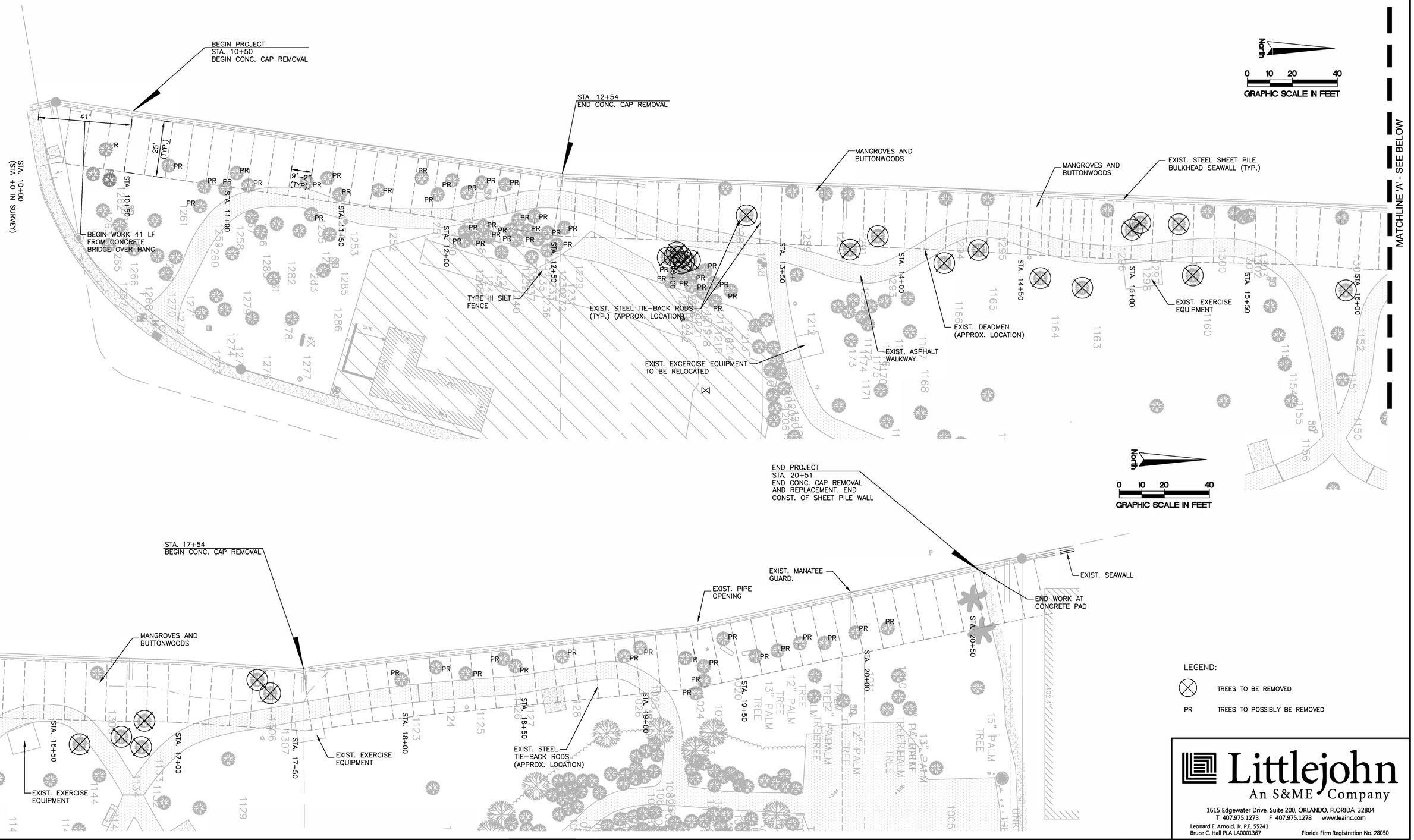
ENGINEER OF RECORD PA
DESIGN ENGINEER: BCH
DRAWN BY: BW
CHECKER: TJM
SCALE: AS INDICATED

L.A. OF RECORD:
BRUCE HALL, R.LA.
LA 0001367

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/16/16	60% CD	

File Path:
File Name: 20150738_L-02_SITE FURNISHINGS.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 1/16/17 Sheet: 15 of 28 Drawing: L-02

G:\Projects\2015\20150738\dwg\Construction



MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION & KAYAK LAUNCH

TITLE: TREE DISPOSITION PLAN

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue, Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD: PA
DESIGN ENGINEER: BCH
DRAWN BY: BW
CHECKER: TJM
SCALE: AS INDICATED

L.A. OF RECORD:
BRUCE HALL, R.L.A.
LA 0001367

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/16/16	60% CD	

Littlejohn
An S&ME Company
1615 Edgewater Drive, Suite 200, ORLANDO, FLORIDA 32804
T 407.975.1273 F 407.975.1278 www.leainc.com
Leonard E. Arnold, Jr. P.E. 55241
Bruce C. Hall PLA LA0001367
Florida Firm Registration No. 28050

File Path:
File Name: 20150738_L_TREE DISPOSITION PLAN.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 1/16/17 Sheet: 16 of 28 Drawing: L-03

G:\Projects\2015\20150738\dwg\Construction

Tree Data Table

Tree #	DBH (in.)	Common Name	Botanical Name	Height (ft.)	Spread (ft.)	Canopy Area (sq. ft.) (calculated)	Condition	Regulated Tree	Specimen Tree	To be Removed	Possibly To be Removed
1001	7.5	Tallow Tree	*Pongamia pinnata*	20	20	314	Fair	**No**			
1002	3.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	7	5	*20*	**Poor**				
1003	11	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	30	707	Fair				
1004	12.5	Tallow Tree	*Pongamia pinnata*	25	35	962	**Poor**	**No**			
1005	13.5	Washingtonia Palm	*Washingtonia robusta*	25	30	707	Fair	**No**			
1006	13	Washingtonia Palm	*Washingtonia robusta*	40	-		Fair	**No**			
1007	12.5	Washingtonia Palm	*Washingtonia robusta*	30	-		Fair	**No**			
1008	10	Washingtonia Palm	*Washingtonia robusta*	25	-		Fair	**No**			
1009	7	Cabbage Palm	*Sabal palmetto*	25	-		Fair				
1010	16	Royal Palm	*Roystonea regia*	35	-		Fair				Yes
1011	16	Royal Palm	*Roystonea regia*	40	-		Fair				Yes
1012	11	Cabbage Palm	*Sabal palmetto*	23	-		Fair				
1013	11.5	Cabbage Palm	*Sabal palmetto*	25	-		Fair				
1014	11.5	Cabbage Palm	*Sabal palmetto*	25	-		Fair				
1015	11.5	Cabbage Palm	*Sabal palmetto*	25	-		Fair				
1016	9	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1017	10	Cabbage Palm	*Sabal palmetto*	25	-		Fair				Yes
1018	10	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1019	11	Cabbage Palm	*Sabal palmetto*	25	-		Fair				Yes
1020	12	Cabbage Palm	*Sabal palmetto*	22	-		Fair				Yes
1021	11	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1022	12	Cabbage Palm	*Sabal palmetto*	30	-		Fair				Yes
1023	15	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1024	9	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1025	11	Cabbage Palm	*Sabal palmetto*	25	-		Fair				Yes
1026	12	Cabbage Palm	*Sabal palmetto*	25	-		Fair				Yes
1027	14	Tallow Tree	*Pongamia pinnata*	30	-		Fair				Yes
1028	10	Ligustrum	*Ligustrum japonicum*	30	40	1257	Fair	**No**			
1029	5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1030	12.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1031	5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1032	9	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1033	5.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	15	177	Fair				
1034	4	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	8	50	**Poor**				
1035	9	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1036	10	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				
1037	3.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	10	79	Fair				
1038	3	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	10	79	Fair				
1039	6.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	20	314	Fair				
1040	6.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				
1041	5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1042	10	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	20	314	Fair				
1043	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	30	707	Fair				
1044	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	35	20	314	Fair				
1045	8	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				
1046	3	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	10	79	Fair				
1047	10	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	20	314	Fair				
1048	13	Coconut Palm	*Cocos nucifera*	30	-		Fair				
1049	6.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	15	177	Fair				
1050	4.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	20	314	Fair				
1051	4	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1052	4	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				
1053	5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1054	5.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				
1055	15	Coconut Palm	*Cocos nucifera*	30	-		Fair				
1056	14	Coconut Palm	*Cocos nucifera*	30	-		Fair				
1057	9.5	Coconut Palm	*Cocos nucifera*	30	-		Fair				
1058	8	Coconut Palm	*Cocos nucifera*	30	-		Fair				
1059	6.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1060	6	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1061	8	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1062	9	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1063	5.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1064	9	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1065	6.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1066	14.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1067	9.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1068	5.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1069	16	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1070	13.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1071	11	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1072	12	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1073	15	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1074	16	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1075	14	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1076	13.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1077	11	Coconut Palm	*Cocos nucifera*	25	-		Fair				
1078	11.5	Coconut Palm	*Cocos nucifera*	30	-		Fair				
1079	12	Coconut Palm	*Cocos nucifera*	35	-		Fair				
1080	3.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1081	15.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	30	707	Fair				
1082	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	35	10	79	Fair				
1083	12	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				
1084	5	Ligustrum	*Ligustrum japonicum*	30	10	79	Fair				
1085	8.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	20	314	Fair				
1086	5	Ligustrum	*Ligustrum japonicum*	30	10	79	Fair				
1087	4	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1088	5.5	Ligustrum	*Ligustrum japonicum*	25	10	79	Fair				
1089	4.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1090	8.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1091	6.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1092	8	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1093	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	10	79	Fair				
1094	5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	20	314	Fair				
1095	5.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1096	4.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	10	10	79	Fair				
1097	6.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	35	30	707	Fair				
1098	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	15	177	Fair				
1099	12	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1100	15	Coconut Palm	*Cocos nucifera*	35	-		Fair				
1101	8.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				
1102	11	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	20	314	Fair				
1103	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				

Littlejohn
An S&ME Company
1615 Edgewater Drive, Suite 200, ORLANDO, FLORIDA 32804
T 407.975.1273 F 407.975.1278 www.leainc.com
Leonard E. Arnold, Jr. P.E. 55241
Bruce C. Hall PLA LA0001367 Florida Firm Registration No. 28050

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION & KAYAK LAUNCH

TITLE: TREE DISPOSITION SCHEDULE

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue, Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD PA
DESIGN ENGINEER: BCH
DRAWN BY: BW
CHECKER: TJM
SCALE: AS INDICATED

L.A. OF RECORD:
BRUCE HALL, R.L.A.
LA 0001367

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/16/16	60% CD	

File Path:
File Name: L04_ABC_TDP.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 1/16/17 Sheet: 17 of 28 Drawing: L-04A

N:\471A Indian Creek Park Seawall\Dwg\Design\Landscaping

Tree #	DBH (in.)	Common Name	Botanical Name	Height (ft.)	Spread (ft.)	Canopy Area (sq. ft.) (calculated)	Condition	Regulated Tree	Specimen Tree	To be Removed	Possibly To be Removed
1104	11.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	30	30	707	Fair				
1105	14	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1106	13.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1107	14.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1108	14	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1109	8	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1110	12	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1111	17	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1112	18.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1113	21.5	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1114	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				
1115	20.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	25	491	Fair				
1116	8.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				
1117	5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	10	79	Fair				
1118	7.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1119	9.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1120	8	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1121	13	Gold Tree	*Tabebuia Aurea*	20	30	707	Fair				
1122	16.5	Royal Poinciana	*Delonix regia*	30	60	2827	Fair				
1123	13	Cabbage Palm	*Sabal palmetto*	25	-		Fair				
1124	12	Cabbage Palm	*Sabal palmetto*	30	-		Fair				Yes
1125	12.5	Cabbage Palm	*Sabal palmetto*	30	-		Fair				Yes
1126	11	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1127	12	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1128	13	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1129	5.5	Pitch Apple	*Clusea rosea*	10	12	113	Fair				Yes
1130	8.5	Coconut Palm	*Cocos nucifera*	20	-		Fair				
1131	8	Coconut Palm	*Cocos nucifera*	20	-		Fair			Yes	
1132	7.5	Coconut Palm	*Cocos nucifera*	25	-		Fair			Yes	
1133	9	Coconut Palm	*Cocos nucifera*	20	-		Fair			Yes	
1134	9	Coconut Palm	*Cocos nucifera*	20	-		Fair				
1135	9	Coconut Palm	*Cocos nucifera*	20	40	1257	**Poor**				
1136	8	Coconut Palm	*Cocos nucifera*	20	-		Fair				
1137	9	Coconut Palm	*Cocos nucifera*	20	-		Fair				
1138	15.5	Royal Poinciana	*Delonix regia*	40	-		Fair				
1139	8	Coconut Palm	*Cocos nucifera*	15	-		Fair				
1140	11	Coconut Palm	*Cocos nucifera*	20	-		Fair				
1141	8	Coconut Palm	*Cocos nucifera*	20	-		Fair				
1142	14	Coconut Palm	*Cocos nucifera*	25	-		Fair				
1143	8	Coconut Palm	*Cocos nucifera*	15	-		**Poor**				Yes
1144	8	Coconut Palm	*Cocos nucifera*	20	-		Fair			Yes	
1145	8	Coconut Palm	*Cocos nucifera*	15	-		Fair				
1146	8	Coconut Palm	*Cocos nucifera*	20	-		Fair				
1147	8	Coconut Palm	*Cocos nucifera*	15	-		Fair				
1148	12	Royal Poinciana	*Delonix regia*	20	30	707	Fair				
1149	9	Gold Tree	*Tabebuia Aurea*	20	20	314	Fair				
1150	8	Coconut Palm	*Cocos nucifera*	15	-		Fair				
1151	11	Coconut Palm	*Cocos nucifera*	35	-		Fair				
1152	7.5	Coconut Palm	*Cocos nucifera*	15	-		Fair			Yes	
1153	10	Wild Tamarind	*Lysiloma latisiliquum*	25	35	962	Fair				Yes
1154	9	Wild Tamarind	*Lysiloma latisiliquum*	20	20	314	Fair				
1155	9.5	Wild Tamarind	*Lysiloma latisiliquum*	25	20	314	Fair				
1156	8	Wild Tamarind	*Lysiloma latisiliquum*	20	20	314	Fair				
1157	9	Royal Poinciana	*Delonix regia*	20	25	491	Fair				
1158	8	Royal Poinciana	*Delonix regia*	25	25	491	Fair				
1159	8	Royal Poinciana	*Delonix regia*	15	20	314	Fair				
1160	22	Mast Wood	*Calophyllum antillanum*	40	50	1963	Fair	**No**		Yes	
1161	6	Royal Poinciana	*Delonix regia*	20	25	491	Fair				
1162	26	Ficus	Ficus sp.	25	35	962	Fair				
1163	7.5	Mast Wood	*Calophyllum antillanum*	25	20	314	Fair	**No**		Yes	
1164	6.5	Mast Wood	*Calophyllum antillanum*	25	15	177	Fair	**No**		Yes	
1165	20	Mast Wood	*Calophyllum antillanum*	50	30	707	Fair	**No**		Yes	
1166	19	Mast Wood	*Calophyllum antillanum*	40	30	707	Fair	**No**		Yes	
1167	6.5	Paradise Tree	*Simarouba glauca*	25	15	177	Fair				Yes
1168	8	Paradise Tree	*Simarouba glauca*	25	20	314	Fair				
1169	8	Christmas Palm	*Adonidia merrellii*	30	-		Fair				Yes
1170	8	Christmas Palm	*Adonidia merrellii*	35	-		Fair				
1171	8	Christmas Palm	*Adonidia merrellii*	30	-		Fair				
1172	7	Christmas Palm	*Adonidia merrellii*	35	-		Fair				Yes
1173	3	Lignum Vitae	*Guaiacum officinale*	10	10	79	Fair				Yes
1174	3	Lignum Vitae	*Guaiacum officinale*	10	10	79	Fair				
1175	2.5	Lignum Vitae	*Guaiacum officinale*	8	8	50	Fair				
1176	2.5	Lignum Vitae	*Guaiacum officinale*	15	6	28	Fair				Yes
1177	15	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				
1178	18	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	30	707	Fair				
1179	18.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	30	707	Fair				
1180	2.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	10	79	Fair				
1181	12	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair				
1182	12.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair				
1183	14.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair				
1184	21	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair				
1185	19	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair				
1186	9.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair				
1187	12.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair				
1188	11.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair				
1189	22	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair				
1190	15.5	Ligustrum	*Ligustrum japonicum*	15	10	79	Fair				
1191	32	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	30	707	Fair				
1192	10.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1193	7	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	20	314	Fair				
1194	26	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	30	707	Fair				
1195	14	Tallow Tree	*Pongamia pinnata*	30	40	1257	Fair	**No**			
1196	9.5	Tallow Tree	*Pongamia pinnata*	25	25	491	Fair	**No**			
1197	9.5	Tallow Tree	*Pongamia pinnata*	25	30	707	Fair	**No**			
1198	14	Tallow Tree	*Pongamia pinnata*	30	30	707	Fair	**No**			
1199	21	Tallow Tree	*Pongamia pinnata*	40	50	1963	Fair	**No**			
1200	11	Tallow Tree	*Pongamia pinnata*	35	30	707	Fair	**No**			
1201	13	Coconut Palm	*Cocos nucifera*	30	-		Fair				
1202	6.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1203	5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	15	10	79	Fair				
1204	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	10	79	Fair				
1205	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	20	314	Fair				

Littlejohn
An S&ME Company
1615 Edgewater Drive, Suite 200, ORLANDO, FLORIDA 32804
T 407.975.1273 F 407.975.1278 www.leainc.com
Leonard E. Arnold, Jr. P.E. 55241
Bruce C. Hall PLA LA0001367 Florida Firm Registration No. 28050

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION & KAYAK LAUNCH

TITLE: TREE DISPOSITION SCHEDULE

Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD PA
DESIGN ENGINEER: BCH
DRAWN BY: BW
CHECKER: TJM
SCALE: AS INDICATED

L.A. OF RECORD:
BRUCE HALL, R.L.A.
LA 0001367

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/16/16	60% CD	

File Path:
File Name: L04_ABC_TDP.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 1/16/17 Sheet: 18 of 28 Drawing: L-04B

N:\471A Indian Creek Park Seawall\Dwg\Design\Landscaping

Tree #	DBH (in.)	Common Name	Botanical Name	Height (ft.)	Spread (ft.)	Canopy Area (sq. ft.) (calculated)	Condition	Regulated Tree	Specimen Tree	To be Removed	Possibly To be Removed
1206	13	Coconut Palm	*Cocos nucifera*	25	-		Fair				
1207	5.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	20	10	79	Fair				
1208	11	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	10	79	Fair				
1209	5.5	Silver Buttonwood	*Conocarpus erectus var. sericeus*	10	10	79	Fair				
1210	9	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	10	79	Fair				
1211	6	Silver Buttonwood	*Conocarpus erectus var. sericeus*	25	15	177	Fair				
1212	16	Mast Wood	*Calophyllum antillanum*	35	25	491	Fair	**No**		Yes	
1213	5.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair				Yes
1214	9.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair				
1215	6	Pitch Apple	*Clusea rosea*	25	10	79	Fair				Yes
1216	9.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair				Yes
1217	6	Pitch Apple	*Clusea rosea*	25	10	79	Fair			Yes	
1218	8	Pitch Apple	*Clusea rosea*	25	10	79	Fair				Yes
1219	4.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair				Yes
1220	5.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair			Yes	
1221	7.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair				Yes
1222	4	Pitch Apple	*Clusea rosea*	25	10	79	Fair				Yes
1223	10	Pitch Apple	*Clusea rosea*	25	10	79	Fair				Yes
1224	7.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair			Yes	
1225	5.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair			Yes	
1226	4.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair			Yes	
1227	11.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair			Yes	
1228	6	Pitch Apple	*Clusea rosea*	25	10	79	Fair			Yes	
1229	8	Pitch Apple	*Clusea rosea*	25	10	79	Fair				Yes
1230	7.5	Pitch Apple	*Clusea rosea*	25	10	79	Fair				Yes
1231	7.5	Pitch Apple	*Clusea rosea*	26	11	95	Fair				Yes
1232	13	Pitch Apple	*Clusea rosea*	27	12	113	Fair				Yes
1233	7.5	Pitch Apple	*Clusea rosea*	28	13	133	Fair				Yes
1234	4	Pitch Apple	*Clusea rosea*	29	14	154	Fair				Yes
1235	15.5	Pitch Apple	*Clusea rosea*	30	15	177	Fair				Yes
1236	8	Pitch Apple	*Clusea rosea*	31	16	201	Fair				
1237	12	Pitch Apple	*Clusea rosea*	32	17	227	Fair				Yes
1238	15.5	Pitch Apple	*Clusea rosea*	33	18	254	Fair				Yes
1239	10	Pitch Apple	*Clusea rosea*	34	19	284	Fair				Yes
1240	6	Pitch Apple	*Clusea rosea*	35	20	314	Fair				
1241	6.5	Pitch Apple	*Clusea rosea*	36	21	346	Fair				Yes
1242	11	Pitch apple	*Clusea rosea*	25	10	79	**Poor**				Yes
1243	8.5	Pitch apple	*Clusea rosea*	25	10	79	Fair				Yes
1244	14	Pitch apple	*Clusea rosea*	25	10	79	Fair				Yes
1245	6.5	Pitch apple	*Clusea rosea*	25	10	79	Fair				Yes
1246	13.5	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1247	13.5	Cabbage Palm	*Sabal palmetto*	20	-		Fair				
1248	14	Cabbage Palm	*Sabal palmetto*	15	-		Fair				Yes
1249	14	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1250	15	Cabbage Palm	*Sabal palmetto*	15	-		Fair				Yes
1251	14	Cabbage Palm	*Sabal palmetto*	25	-		Fair				Yes
1252	13.5	Buttonwood	*Conocarpus erectus*	25	35	962	Fair				Yes
1253	19	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1254	12.5	Cabbage Palm	*Sabal palmetto*	15	-		Fair				Yes
1255	13	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1256	15	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1257	13.5	Cabbage Palm	*Sabal palmetto*	15	-		Fair				Yes
1258	15	Cabbage Palm	*Sabal palmetto*	15	-		Fair				Yes
1259	12.5	Cabbage Palm	*Sabal palmetto*	20	-		Fair				Yes
1260	11.5	Cabbage Palm	*Sabal palmetto*	15	-		Fair				Yes
1261	31.5	Buttonwood	*Conocarpus erectus*	40	30	707	Fair				Yes
1262	19	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				Yes
1263	19	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				Yes
1264	16	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				Yes
1265	15	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1266	13	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1267	19	Ligustrum	*Ligustrum japonicum*	10	10	79	Fair				
1268	18.5	Ligustrum	*Ligustrum japonicum*	25	25	491	Fair				
1269	11.5	Buttonwood	*Conocarpus erectus*	15	-		Fair				
1270	16.5	Cabbage Palm	*Sabal palmetto*	20	-		Fair				
1271	15	Cabbage Palm	*Sabal palmetto*	15	-		Fair				
1272	16	Cabbage Palm	*Sabal palmetto*	15	-		Fair				
1273	15	Cabbage Palm	*Sabal palmetto*	20	-		Fair				
1274	13	Cabbage Palm	*Sabal palmetto*	15	-		Fair				
1275	13	Cabbage Palm	*Sabal palmetto*	25	20	314	Fair				
1276	9.5	Buttonwood	*Conocarpus erectus*	25	30	707	Fair				
1277	7.5	Black Olive	*Bucida buceras*	35	20	314	Fair				
1278	10	Buttonwood	*Conocarpus erectus*	35	20	314	Fair				
1279	10	Buttonwood	*Conocarpus erectus*	30	20	314	Fair				
1280	9	Buttonwood	*Conocarpus erectus*	20	-		Fair				
1281	18	Cabbage Palm	*Sabal palmetto*	20	-		Fair				
1282	13	Cabbage Palm	*Sabal palmetto*	20	-		Fair				
1283	14	Cabbage Palm	*Sabal palmetto*	15	-		Fair				
1284	15	Cabbage Palm	*Sabal palmetto*	20	-		Fair				
1285	14	Cabbage Palm	*Sabal palmetto*	40	50	1963	Fair		**Yes**		
1286	25	Buttonwood	*Conocarpus erectus*	20	30	707	Fair				
1287	34	Buttonwood	*Conocarpus erectus*	25	30	707	Fair	**No**		Yes	
1288	16	Mast Wood	*Calophyllum antillanum*	30	25	491	Fair		**Yes**		
1289	36	Buttonwood	*Conocarpus erectus*	30	25	491	Fair				
1290	27	Buttonwood	*Conocarpus erectus*	30	25	491	Fair				
1291	17	Buttonwood	*Conocarpus erectus*	30	30	707	Fair	**No**		Yes	
1292	15	Mast Wood	*Calophyllum antillanum*	40	40	1257	Fair	**No**		Yes	
1293	16.5	Mast Wood	*Calophyllum antillanum*	25	30	707	Fair				
1294	34	Buttonwood	*Conocarpus erectus*	30	40	1257	Fair				
1295	57.5	Buttonwood	*Conocarpus erectus*	20	20	314	Fair				
1296	27	Buttonwood	*Conocarpus erectus*	25	50	1963	Fair			Yes	
1297	44.5	Buttonwood	*Conocarpus erectus*	15	20	314	Fair			Yes	
1298	6	Seagrape	*Coccoloba uvifera*	25	30	707	Fair			Yes	
1299	10.5	Seagrape	*Coccoloba uvifera*	20	20	314	Fair				
1300	24.5	Buttonwood	*Conocarpus erectus*	25	30	707	Fair		**Yes**		
1301	18.5	Buttonwood	*Conocarpus erectus*	35	40	1257	Fair				
1302	27	Buttonwood	*Conocarpus erectus*	25	30	707	Fair		**Yes**		
1303	20	Buttonwood	*Conocarpus erectus*	40	50	1963	Fair		**Yes**		
1304	43	Buttonwood	*Conocarpus erectus*	20	30	707	Fair				
1305	24	Buttonwood	*Conocarpus erectus*	40	50	1963	Fair		**Yes**	Yes	
1306	40	Buttonwood	*Conocarpus erectus*	45	50	1963	Fair			Yes	
1307	60	Buttonwood	*Conocarpus erectus*								

NOTE: Four (4) specimen trees on-site

Littlejohn
An S&ME Company
1615 Edgewater Drive, Suite 200, ORLANDO, FLORIDA 32804
T 407.975.1273 F 407.975.1278 www.leainc.com
Leonard E. Arnold, Jr. P.E. 55241
Bruce C. Hall PLA LA0001367 Florida Firm Registration No. 28050

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION & KAYAK LAUNCH

TITLE: TREE DISPOSITION SCHEDULE

Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

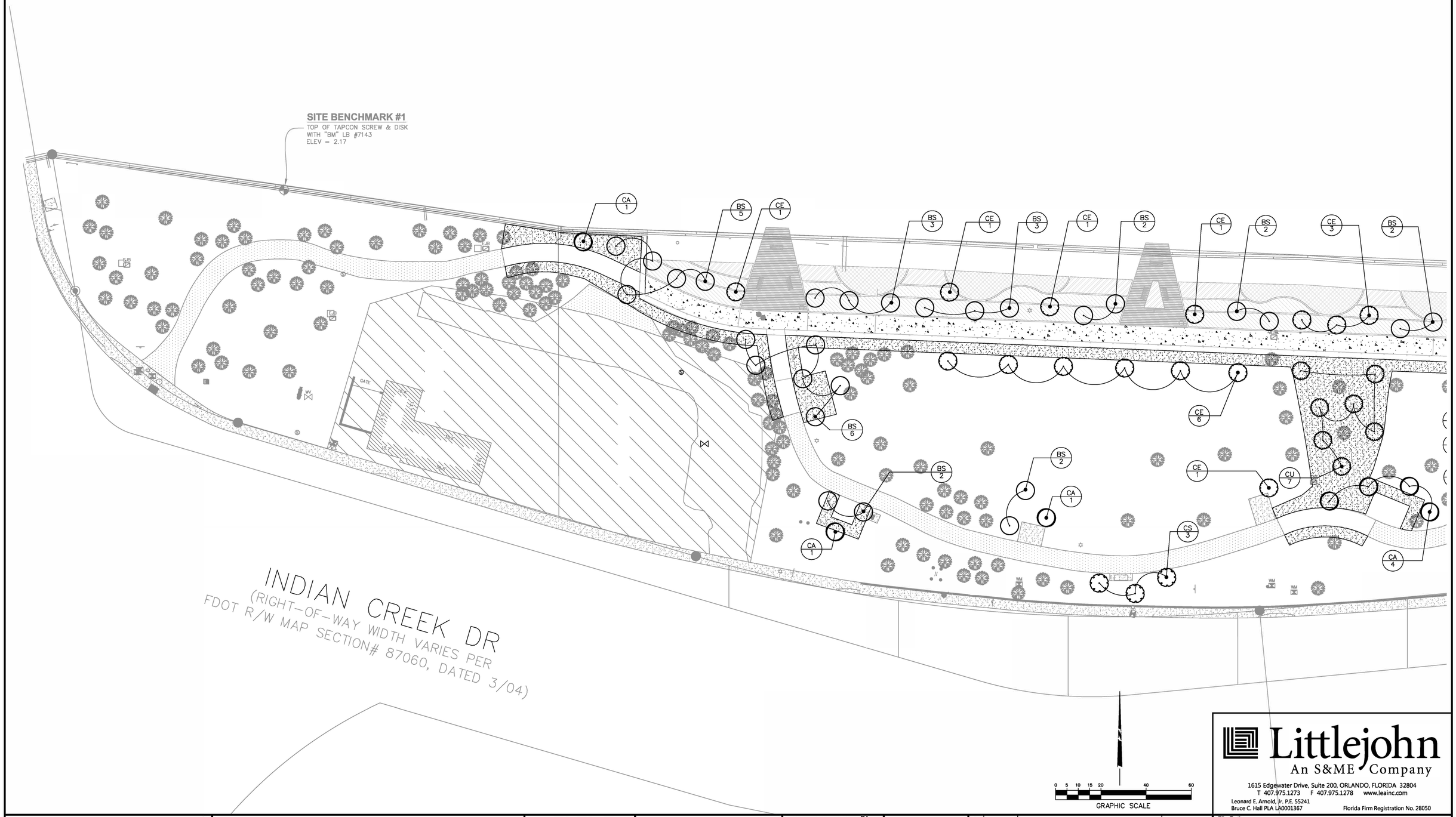
ENGINEER OF RECORD PA
DESIGN ENGINEER: BCH
DRAWN BY: BW
CHECKER: TJM
SCALE: AS INDICATED

L.A. OF RECORD:
BRUCE HALL, R.L.A.
LA 0001367

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/16/16	60% CD	

File Path:
File Name: L04_ABC_TDP.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 1/16/17 Sheet: 19 of 28 Drawing: L-04C

N:\471A Indian Creek Park Seawall\Dwg\Design\Landscaping



Littlejohn
An S&ME Company
1615 Edgewater Drive, Suite 200, ORLANDO, FLORIDA 32804
T 407.975.1273 F 407.975.1278 www.leainc.com
Leonard E. Arnold, Jr. P.E. 55241
Bruce C. Hall PLA LA0001367 Florida Firm Registration No. 28050

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION & KAYAK LAUNCH

TITLE: TREE REPLACEMENT PLAN

BPA
Bindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD PA
DESIGN ENGINEER: BCH
DRAWN BY: BW
CHECKER: TJM
SCALE: AS INDICATED

L.A. OF RECORD:
BRUCE HALL, R.LA.
LA 0001367

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/16/16	60% CD	

File Path:
File Name: 20150738_L-03_TREE PLAN.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 1/16/17 Sheet: 20 of 28 Drawing: L-05

G:\Projects\2015\20150738\dwg\Construction

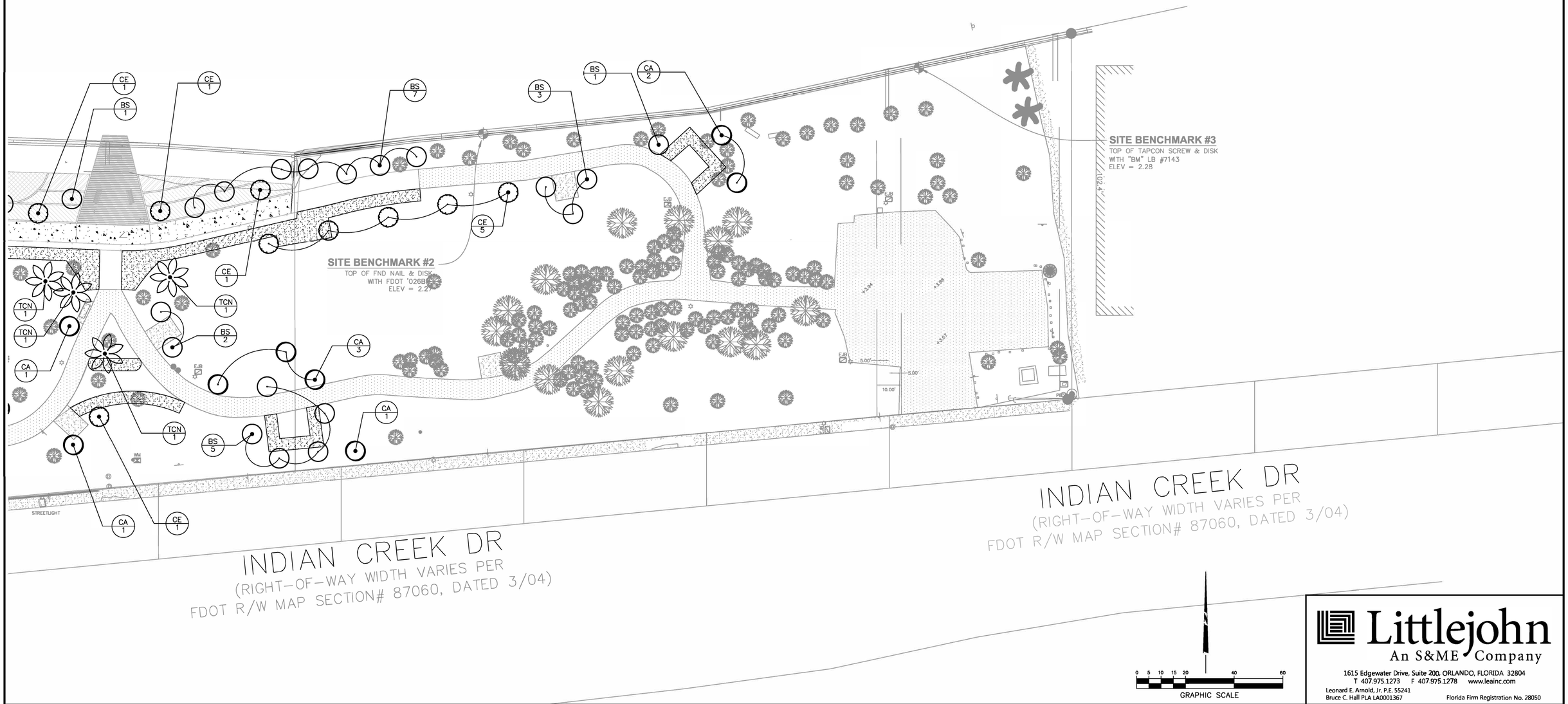
PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CAL	SIZE
	BS	46	BURSERA SIMARUBA	GUMBO LIMBO	3" CAL.	12' HT MIN
	CA	15	CLUSIA ROSEA	PITCH APPLE	2" CAL.	12' HT MIN
	CU	7	COCCOLOBA UVIFERA	SEA GRAPE	2" CAL.	12' HT MIN
	TCN	4	COCOS NUCIFERA	TRANSPLANTED COCONUT PALM		
	CE	23	CONOCARPUS ERECTUS	GREEN BUTTONWOOD	2" CAL.	12' HT MIN
	CS	3	CONOCARPUS ERECTUS 'SERICEUS'	SILVER BUTTONWOOD	2" CAL.	12' HT MIN

TREE MITIGATION CALCULATION	
REQUIRED MITIGATION POINTS	27,903

PROPOSED LANDSCAPE MITIGATION				
BOTANICAL NAME	**COMMON NAME**	**MITIGATION PTS.**	**QTY.**	**PTS.**
Bursera simaruba	Gumbo Limbo	300	46	300
Clusia rosea	Pitch Apple	300	15	300
Coccoloba uvifera	Seagrape	300	7	300
Conocarpus erectus	Green Buttonwood	300	23	300
Conocarpus erectus 'sericeus'	Silver Buttonwood	300	3	300
TOTAL PROPOSED			**94**	**28200**

SUMMARY	
TOTAL REQUIRED	27,903
TOTAL PROPOSED	28,200



Littlejohn
An S&ME Company
1615 Edgewater Drive, Suite 200, ORLANDO, FLORIDA 32804
T 407.975.1273 F 407.975.1278 www.leainc.com
Leonard E. Arnold, Jr. P.E. 55241
Bruce C. Hall PLA LA0001367
Florida Firm Registration No. 28050

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION & KAYAK LAUNCH

TITLE: TREE REPLACEMENT PLAN

Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5953

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD PA
DESIGN ENGINEER: BCH
DRAWN BY: BW
CHECKER: TJM
SCALE: AS INDICATED

L.A. OF RECORD:
BRUCE HALL, R.LA.
LA 0001367

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/16/16	60% CD	

File Path:
File Name: 20150738_L-03_TREE PLAN.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 1/16/17 Sheet: 21 of 28 Drawing: L-06

G:\Projects\2015\20150738\dwg\Construction

Indian Creek Park Living Shoreline Planting Zone+ Schedule

ZONE A: TIDAL – 10" Tidal Area to 1' above MHWL

- Red Mangrove — Rhizophora mangle
- Tutleweek/Pickleweed — Batis maritima

ZONE B: MHWL – MHWL to 1' above MHWL

- Black Mangrove — Avicennia germans
- Tutleweed — Batis maritima
- Salt Meadow Cordgrass — Spartina Patens

ZONE C: SHORE – 1' to 2' Above MHWL

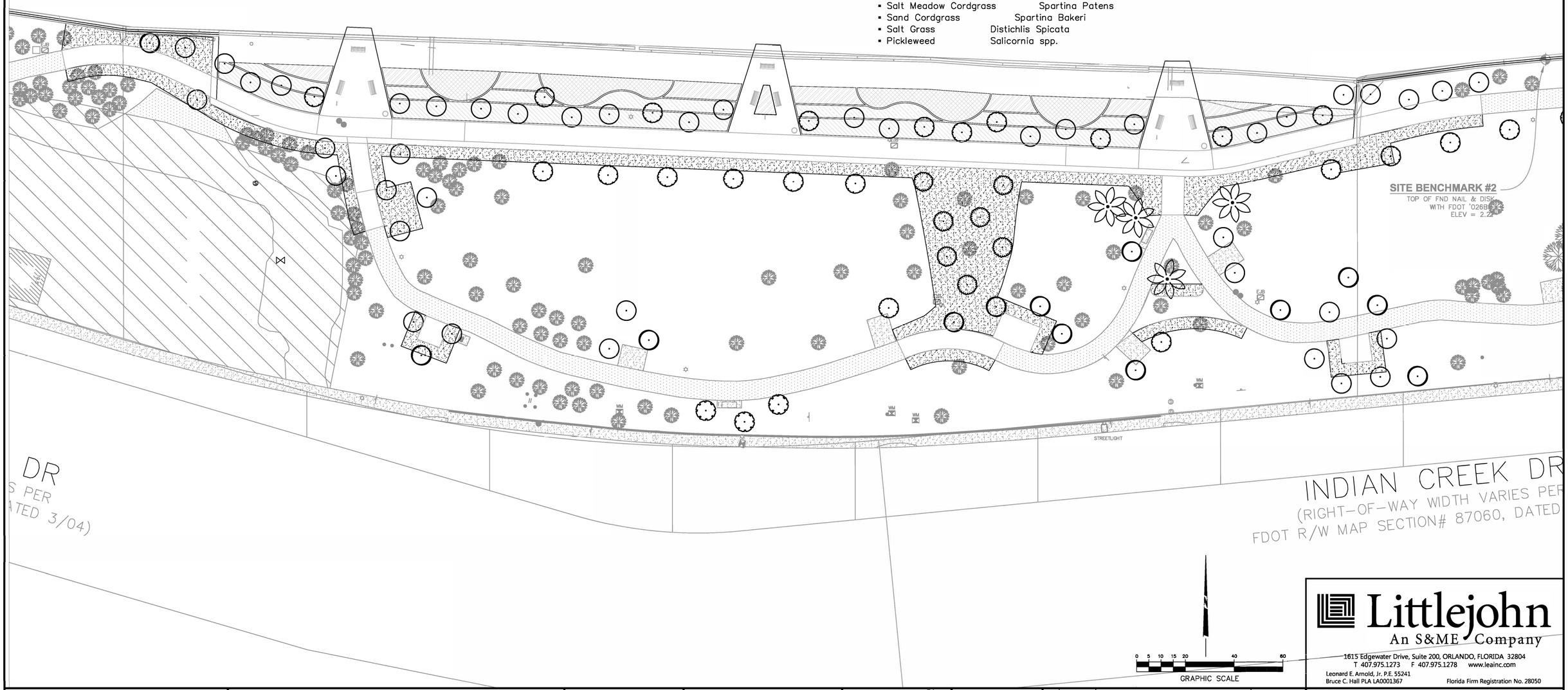
- Black Mangrove — Avicennia germans
- White Mangrove — Lagunularia racemose
- Button Mangrove — Conocarpus erectus
- Salt Meadow Cordgrass — Spartina Patens
- Sand Cordgrass — Spartina Bakeri
- Salt Grass — Distichlis Spicata
- Pickleweed — Salicornia spp.

ZONE D: UPLAND – 2' Above MHWL to Sidewalk

- Green Buttonwood — Conocarpus erectus
- Salt Bush — Baccharris hamifolia
- Bushy Seaside Tansy — Borrichia frutescens
- Railroad Vine — Ipomoea pes–caprae
- Sand Cordgrass — Spartina Bakeri

SOD

Note: MHWL and 1' contour elevations above the MHWL are critical to planting success. The contractor shall field verify all locations of the elevations identified above, beginning at the bottom of the tidal basin.



GRAPHIC SCALE 0 5 10 15 20 40 60

Littlejohn
An S&ME Company
1615 Edgewater Drive, Suite 200, ORLANDO, FLORIDA 32804
T 407.975.1273 F 407.975.1278 www.leainc.com
Leonard E. Arnold, Jr. P.E. 55241
Bruce C. Hall PLA LA0001367 Florida Firm Registration No. 28050

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION & KAYAK LAUNCH

TITLE: LANDSCAPE PLAN

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 335, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

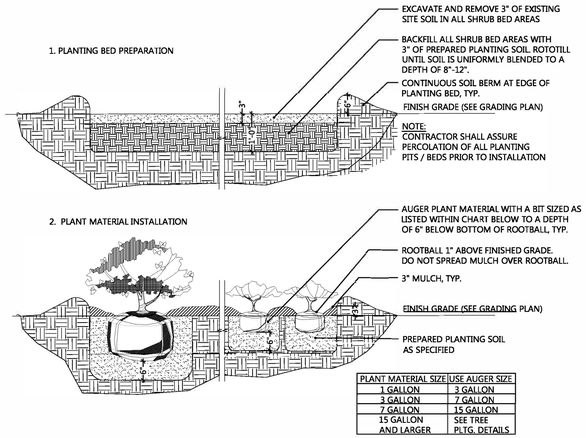
ENGINEER OF RECORD: PA
DESIGN ENGINEER: BCH
DRAWN BY: BW
CHECKER: TJM
SCALE: AS INDICATED

L.A. OF RECORD:
BRUCE HALL, R.L.A.
LA 0001367

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/16/16	60% CD	

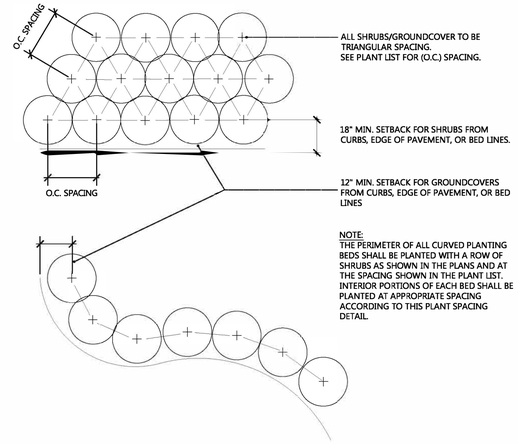
File Path:
File Name: 20150738_L–03_LANDSCAPE PLAN.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 1/16/17 Sheet: 22 of 28 Drawing: L-07

G:\Projects\2015\20150738\dwg\Construction

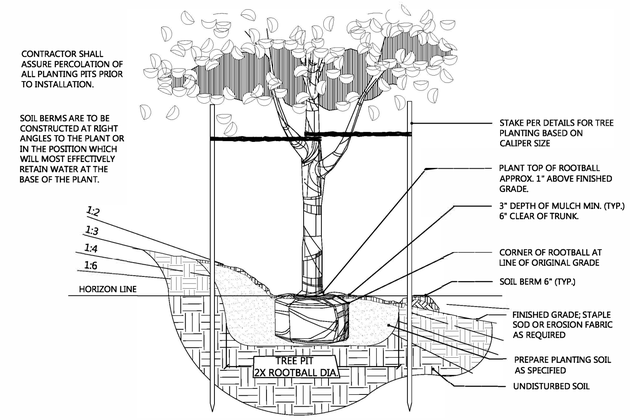


PLANT MATERIAL SIZE	USE AUGER SIZE
1 GALLON	3 GALLON
3 GALLON	7 GALLON
7 GALLON	15 GALLON
15 GALLON AND LARGER	SEE TREE PLTG. DETAILS

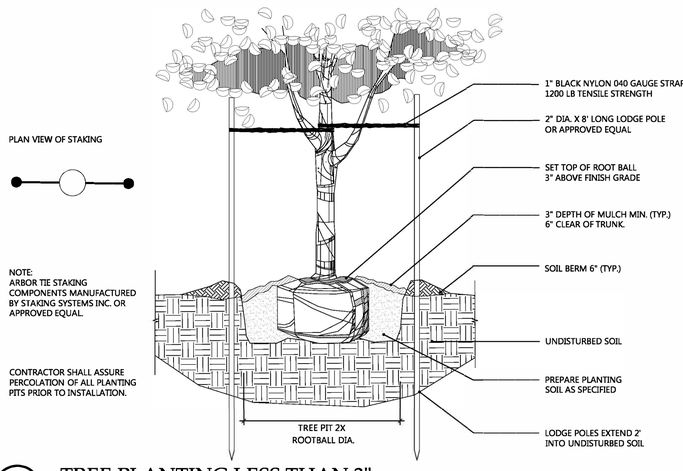
1 SHRUB AND GROUNDCOVER PLANTING
SCALE: NTS



2 SHRUB AND GROUNDCOVER SPACING
SCALE: NTS



3 TREE PLANTING ON SLOPE
SCALE: NTS



4 TREE PLANTING LESS THAN 3"
SCALE: NTS

Note:

1. A final onsite inspection shall be required with Urban Forestry staff prior to any official acceptance of tree or plant material, in order to verify proper planting depth, spacing and quality of the material. Failure to conduct the inspection could result in rejection of the plant material.
2. Mulch shall not be applied within 6" of any tree or palm trunks that are installed or incorporated into the project.
3. All guying and staking shall be removed from all trees and palms within twelve months after planting. Exceptions require written authorization from the City Urban Forester.

Littlejohn
An S&ME Company
1615 Edgewater Drive, Suite 200, ORLANDO, FLORIDA 32804
T 407.975.1273 F 407.975.1278 www.leainc.com
Leonard E. Arnold, Jr. P.E. 55241
Bruce C. Hall PLA LA0001367
Florida Firm Registration No. 28050

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION & KAYAK LAUNCH

TITLE: LANDSCAPE DETAILS

BPA
Brindley Peters & Associates, Inc.
815 NW 57 th Avenue, Suite 335, Miami, Fl 33126
Certificate of Authorization Number 0663

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD PA
DESIGN ENGINEER: BCH
DRAWN BY: BW
CHECKER: TJM
SCALE: AS INDICATED

L.A. OF RECORD:
BRUCE HALL, R.LA. LA 0001367

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1	11/16/16	60% CD	

File Path:
File Name: 20150738_L-04_PLANT LIST AND DETAILS.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 1/16/17 Sheet: 23 of 28 Drawing: L-08

G:\Projects\2015\20150738\dwg\Construction

GENERAL ELECTRICAL NOTES:

1. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AS NOTED IN MDCPS MASTER SPECIFICATIONS AND DESIGN CRITERIA INCLUDING BUT NOT LIMITED TO PATCHING AND RE-PAINTING, LABELING OF ELECTRICAL EQUIPMENT, UPDATING OF PANEL BOARD CIRCUIT DIRECTORIES ETC.

2. CONTRACTOR AT THE COMPLETION OF WORK AND PRIOR TO SUBSTANTIAL COMPLETION SHALL TEST THE FIRE ALARM SYSTEM AS REQUIRED BY NFPA 72 (2010 EDITION). THIS WILL INCLUDE AS A MINIMUM ALL ADDED FIRE ALARM DEVICES, ALL MODIFIED FIRE ALARM DEVICES, ALL DEVICES RELATED TO (INCLUDING DUCT MOUNTED SMOKE DETECTORS) REPLACED AIR CONDITIONING EQUIPMENT AND ASSOCIATED ELECTRICAL MOTOR STARTERS AND OR VARIABLE FREQUENCY DRIVES.

3. FIRE ALARM WORK IS LIMITED TO THAT WHICH IS SHOWN IN THE NOTE ABOVE.

4. SITE INVESTIGATION: PRIOR TO BIDDING THE CONTRACTOR SHALL VISIT THE JOBSITE AND BECOME ACQUAINTED WITH ALL OF THE EXISTING CONDITIONS WHICH WILL AFFECT HIS WORK. FAILURE TO DO SO WILL NOT BE ACCEPTED AS A REASON FOR REQUESTING EXTRA PAY WHERE THE EXISTING CONDITION RESULTS IN EXTRA MATERIAL OR LABOR. THE CONTRACTOR SHALL SUBMIT IN HIS BID AN AMOUNT THAT WOULD BE SET ASIDE FOR UNIDENTIFIED ITEMS.

5. ALL WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR IN A FIRST CLASS MANNER AND SHALL BE A COMPLETED AND FULLY OPERATIVE TO THE ACCEPTANCE OF THE OWNER, GENERAL CONTRACTOR, AND ENGINEER.

6. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEMS, ALL IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE FLORIDA BUILDING CODE 2010 AND NFPA CODES INCLUDING, BUT NOT LIMITED TO NFPA 70 - (2011 NEC), NFPA 72 (2013) - (FIRE ALARM) AND FLORIDA FIRE PREVENTION CODE (5TH EDITION).

7. THIS CONTRACTOR SHALL PAY FOR ALL FEES, INSPECTIONS, TESTS, FINES, ETC., AS REQUIRED.

8. MINIMUM STANDARDS: THE MATERIAL, EQUIPMENT, INSTALLATION, AND WORKMANSHIP FURNISHED UNDER THIS SECTION SHALL CONFORM AT LEAST TO THE REQUIREMENTS OF THE REGULATING AGENCIES AS LISTED ABOVE.

9. RESPONSIBILITIES: CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A COMPLETE OPERATIONAL ELECTRICAL SYSTEM INCLUDING ALL REQUIRED WIRING, RACEWAYS, CONNECTIONS, ETC. INCLUDING COORDINATION WITH OTHER TRADES.

10. ALL EQUIPMENT, SYSTEMS AND SYSTEM COMPONENTS SHALL BE FROM THE SAME MANUFACTURER AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

11. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL PLANS PRIOR TO ANY FABRICATION OR INSTALLATION.

12. OBTAIN FULL INFORMATION REGARDING RESTRICTIONS AND LIMITATIONS OF SPACE AVAILABLE FOR INSTALLATION OF THE EQUIPMENT AND MATERIALS UNDER CONTRACT, AND PROVIDE READY ACCESSIBILITY TO ELECTRICAL EQUIPMENT, INCLUDING ANY PART OF SYSTEM REQUIRED TO BE REACHED FOR MAINTENANCE AND OPERATION.

13. PROVIDE ACCURATE LAYOUT, GRADES AND ELEVATIONS. TAKE PROPER PRECAUTIONS TO PROTECT WORK AND EQUIPMENT FROM DAMAGE.

14. PROVIDE CODE APPROVED FIRE STOPPING AT ALL CONDUIT PENETRATIONS THROUGHOUT BUILDING CONSTRUCTION TO MAINTAIN FIRE, SMOKE AND SOUND RATING. FIRE SEAL ALL PENETRATIONS. SEAL TELECOMMUNICATION SLEEVES AFTER CABLES HAVE BEEN INSTALLED.

15. RACEWAYS AND FITTINGS: CONDUIT RUNS SHALL BE CONCEALED IN CEILING SPACES AND WALL PARTITIONS. NO CONDUIT SHALL BE EXPOSED IN INTERIOR SPACES, CONCEALED CONDUITS ARE TO BE EMT.

16. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH ALL OTHER TRADES AS WELL AS PROVIDING TEMPORARY POWER AS REQUIRED FOR THE PROJECT.

17. VERIFY EQUIPMENT SIZES, VOLTAGE AND CURRENT CHARACTERISTICS, ETC., BEFORE THE ORDERING OF ANY EQUIPMENT AND PRIOR TO ROUGHING-IN FOR EQUIPMENT SUPPLIED BY OTHERS. NOTIFY ENGINEER OF ANY CONFLICT.

18. PROVIDE COMPLETE POWER CIRCUIT WIRING AND CONNECTIONS FOR EACH AND EVERY ITEM OF PERMANENT MECHANICAL EQUIPMENT. PRIOR TO ANY ROUGH-IN, VERIFY HVAC AND PLUMBING EQUIPMENT NAME PLATES TO OBTAIN CORRECT WIRE SIZE AND OVERCURRENT PROTECTION RATINGS. IF THE NAME PLATE REQUIRES THE OVERCURRENT PROTECTION DEVICE TO BE FUSES, PROVIDE A FUSED SWITCH WITH PROPER SIZE FUSES AT THE EQUIPMENT LOCATION.

19. CORRECTION OF ANY DEFECTS, REPAIRS OR DAMAGE DURING CONSTRUCTION AS WELL AS ANY MINOR CHANGES IN OUTLET LOCATIONS SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.

20. GUTTERS, PULL BOXES, ETC., SHALL BE GALVANIZED STEEL SIZED PER NATIONAL ELECTRICAL CODE, ARTICLE 312 AND SUITABLE FOR THE ENVIRONMENTAL CONDITIONS PRESENT.

21. ALL FLOORS, WALLS AND ROOF PENETRATIONS SHALL BE PROPERLY SEALED-OFF, IF FIRE RATED, AN APPROVED FIRE RETARDANT SEALANT SHALL BE USED.

22. ALL WIRING SHALL BE INSTALLED IN RACEWAYS.

    A. INDOORS - USE THE FOLLOWING:

    - EXPOSED: EMT
    - CONCEALED: EMT
    - CONNECTION TO VIBRATION EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR - DRIVEN EQUIPMENT): FMC, EXCEPT IN WET OR DAMP LOCATIONS USE LFMC.
    - DAMP OR WET LOCATIONS: RIGID GALVANIZED STEEL CONDUIT OR INTERMEDIATE METALLIC CONDUIT.

    B. OUTDOORS - USE THE FOLLOWING:

    - EXPOSED: RIGID GALVANIZED STEEL CONDUIT OR INTERMEDIATE METALLIC CONDUIT.
    - UNDERGROUND: SCHEDULE 40 PVC

    C. SEALING FITTINGS SHALL BE INSTALLED AS REQUIRED BY N.E.C.

23. BOXES AND ENCLOSURES

    A. INDOORS - USE THE FOLLOWING:

    - NEMA 1 - STEEL
    - NEMA 3R - STEEL DAMP LOCATION
    - NEMA 4X - STAINLESS STEEL FOR WET OR CORROSIVE ENVIRONMENTS

    B. OUTDOORS - USE THE FOLLOWING:

    - NEMA 3R - MALLEABLE IRON OR STEEL
    - NEMA 4X - STAINLESS STEEL FOR WET OR CORROSIVE ENVIRONMENTS

24. THESE DRAWINGS ARE A GUIDE FOR THE INSTALLATION OF THE RACEWAY SYSTEM AND EQUIPMENT. THEY ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT, DESIGN AND EXTENT OF THE WORK AND ARE PARTLY DIAGRAMMATIC. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A COMPLETE AND OPERATIONAL INSTALLATION.

25. CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS. PROVIDE TYPE WRITTEN PANEL BOARD DIRECTORIES IN EXISTING PANEL BOARDS AFFECTED BY THIS PROJECT ELECTRONICALLY TRACING ALL CIRCUITS.

26. ANY DEVIATION FROM THESE DRAWINGS AND SPECIFICATIONS MUST BE AUTHORIZED IN WRITING BY THE ENGINEER PRIOR TO MAKING ANY CHANGES. THE CONTRACTOR SHALL BE HELD LIABLE FOR ANY DEVIATIONS WITHOUT SUCH AUTHORIZATION.

27. ALL POWER AND LIGHTING CIRCUITS SHALL HAVE A GREEN EQUIPMENT GROUNDING CONDUCTOR SIZED AS PER NEC 250-122.

28. PROVIDE NYLON PULL STRINGS IN ALL EMPTY CONDUITS FOR FUTURE USE.

29. ANY WORK NOT SHOWN OR SPECIFICALLY MENTIONED ON THESE PLANS BUT CONSIDERED NECESSARY FOR COMPLETION OF WORK IN THE PROPER MANNER SHALL BE PROVIDED BY THE CONTRACTOR WITHOUT ADDITIONAL CHARGE TO THE OWNER.

30. CONTRACTOR SHALL VERIFY SPACE CONDITIONS AND DIMENSIONS AT JOB SITE PRIOR TO FABRICATION AND INSTALLATION OF MATERIALS AND EQUIPMENT. CONTRACTOR IS TO COORDINATE HIS WORK WITH THE ARCHITECT BEFORE ROUGH INSTALLATION OF ALL OUTLETS (LIGHTS, RECEPTACLES, SWITCHES, PULL BOXES, ETC.) FOR EXACT LOCATION.

31. ALL ELECTRICAL EQUIPMENT SUCH AS PANELS, PULL AND JUNCTION BOXES, FEEDERS, ETC. SHALL BE PROPERLY IDENTIFIED WITH A PERMANENT LABEL AFFIXED TO THE EQUIPMENT. IDENTIFY CIRCUITS IN PANELS BY MEANS OF A TYPED, PLASTIC COVERED DIRECTORY.

32. ALL SERVICE INTERRUPTIONS AND ALL REMOVAL AND DISPOSAL WORK SHALL BE SCHEDULED AND COORDINATED WITH THE AUTHORIZED OWNER REPRESENTATIVE.

33. CONTRACTOR SHALL MAINTAIN A COMPLETE SET OF PRINTS FOR INDICATING ALL CHANGES AS WORK PROGRESSES. AT THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL DELIVER A SET OF AS-BUILT DRAWINGS TO THE OWNER IN REPRODUCIBLE FORM. CONTRACTOR SHALL STAMP AS-BUILT ON EACH DRAWING AND INCLUDE SIGNATURE AND DATE.

34. CONTRACTOR IS RESPONSIBLE FOR REPLACING SURFACES, WALLS, CEILINGS, FLOORS, PARTITIONS, PAVEMENT, ETC. AFFECTED BY THE IMPLEMENTATION OF WORK SHOWN ON THESE DRAWINGS. UPON COMPLETION OF WORK, RESTORE ALL AFFECTED SURFACES MATCHING SURROUNDING SURFACE.

35. TELECOM RACEWAYS, EMPTY BOXES AND PULL STRINGS TO BE INSTALLED BY CONTRACTOR. WIRING AND WIRING DEVICES AND FINAL CONNECTION IS TO BE BY INSTALLED BY OWNER'S CONTRACTOR UNDER SEPARATE PERMIT.

36. ELECTRICAL EQUIPMENT TO BE PROVIDED WITH A WARNING LABEL FOR ARC FLASH HAZARDS IN COMPLIANCE WITH NEC 110.16.

37. PROJECT TO COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF NFPA 241 "STANDARDS FOR SAFE GUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS."

38. CONTRACTOR SHALL PROVIDE THE REQUIRED MEASURES FOR THE SAFEGUARDING OF THE EXISTING FACILITY AND SYSTEMS THEREIN DURING THE PERFORMANCE OF THE WORK SHOWN ON THESE DRAWINGS PER NFPA 241.

39. CONTRACTOR SHALL MAINTAIN THE FACILITIES FIRE ALARM SYSTEM IN A COMPLETE AND FUNCTIONAL STATUS DURING ALL PHASES OF CONSTRUCTION.

ELECTRICAL SYMBOL LEGEND

LIGHTING

- (A) LIGHTING FIXTURE TYPE. SEE LTG. FIXTURE SCHEDULE THIS SHEET
- (E) EXISTING POLE LIGHT
- (N) NEW POLE LIGHT
- (R) RELOCATED POLE LIGHT
- NEW BOLLARD LIGHT

BOXES & FITTINGS

- (J) JUNCTION BOX
- (PB) PULL BOX, SIZED AS INDICATED OR AS REQUIRED BY NEC
- HAND HOLE

PANELBOARDS

- POWER, LIGHTING OR DISTRIBUTION PANELBOARD. (NEW)

MOTORS & CONTROLS

- (5) MOTOR, 5 = 5 H.P. OR AS OTHERWISE INDICATED.
- MOTOR MAGNETIC STARTER.

WIRING

- A-1,3,5 — HOMERUN TO PANEL "A" 1-3-5 ARE CIRCUIT NO'S. TICKS ARE NO. OF CONDUCTORS (// INDICATES GROUND WIRE SIZED AS PER N.E.C. ART. 250.
- INDICATES A CONDUIT RUN CONCEALED IN FLOOR, EMBEDDED IN CONCRETE OR UNDERGROUND AT 24" BELOW GRADE MINIMUM.
- INDICATES A CAPPED CONDUIT.
- INDICATES A FLEXIBLE METAL CONDUIT CONNECTION. USE LIQUID TIGHT CONDUIT IN WET, DAMP OR OILY LOCATIONS.
- FLEXIBLE EQUIPMENT CONNECTION.

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: GENERAL NOTES AND SYMBOL LEGEND

BPA
Brindley Peters & Associates, Inc.
815 NW 57 th Avenue,
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

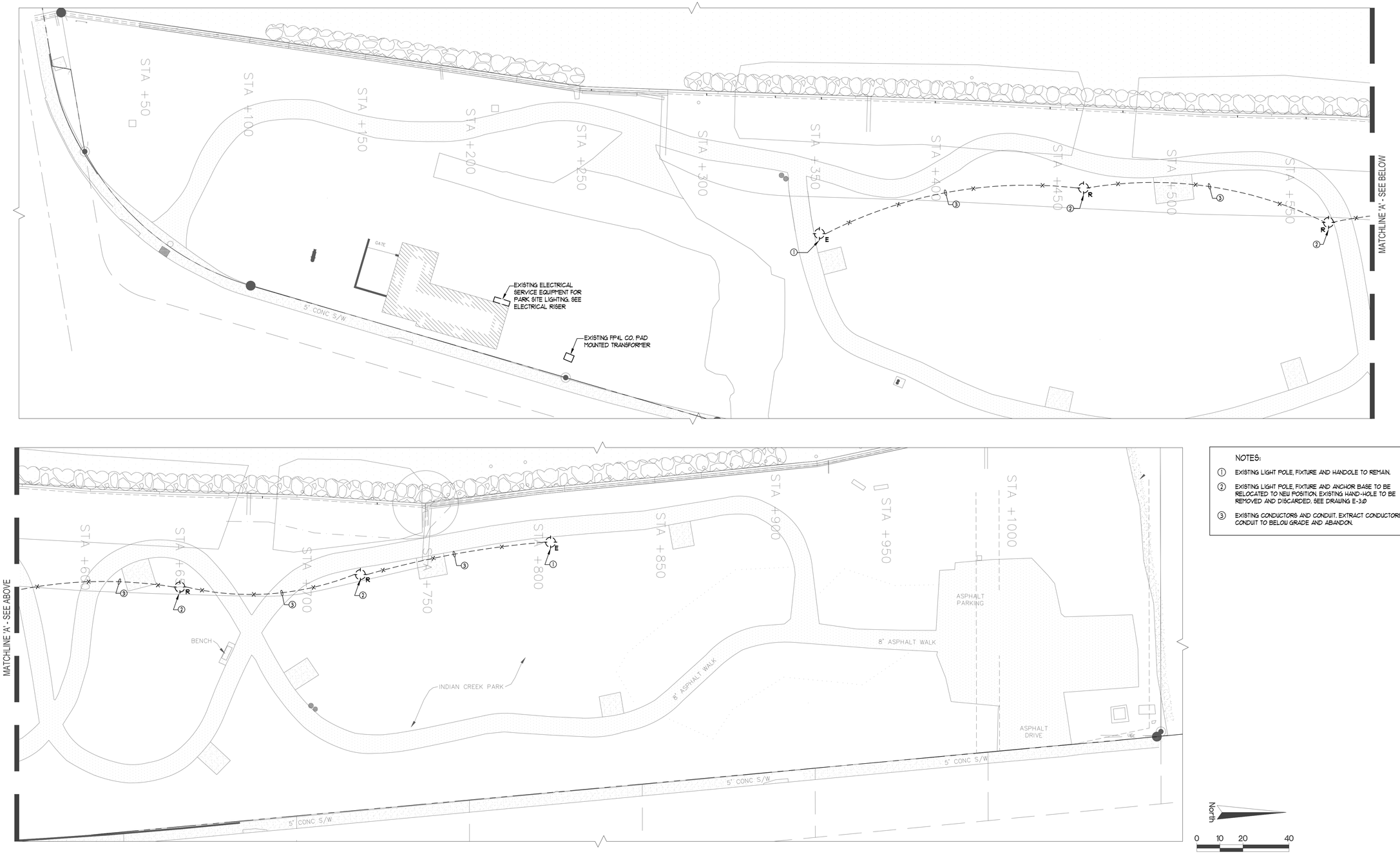
ENGINEER OF RECORD R.I.B.
DESIGN ENGINEER: C.Y.
DRAWN BY: D.T.
CHECKER: C.Y.
SCALE: AS INDICATED

ENGINEER OF RECORD:
RENE I. BASULTO, P.E.
NO. 40869

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name: E-1.0-General Notes.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 24 of 28 Drawing: E-1.0

S:\GM Selby\Indian Creek Park\Electrical



NOTES:

1. EXISTING LIGHT POLE, FIXTURE AND HANDOLE TO REMAIN.
2. EXISTING LIGHT POLE, FIXTURE AND ANCHOR BASE TO BE RELOCATED TO NEW POSITION. EXISTING HAND-HOLE TO BE REMOVED AND DISCARDED. SEE DRAWING E-3.0
3. EXISTING CONDUCTORS AND CONDUIT. EXTRACT CONDUCTORS, CUT CONDUIT TO BELOW GRADE AND ABANDON.

North

0 10 20 40

GRAPHIC SCALE IN FEET

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: EXISTING SITE PLAN

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD R.I.B.
DESIGN ENGINEER: C.Y.
DRAWN BY: D.T.
CHECKER: C.Y.
SCALE: AS INDICATED

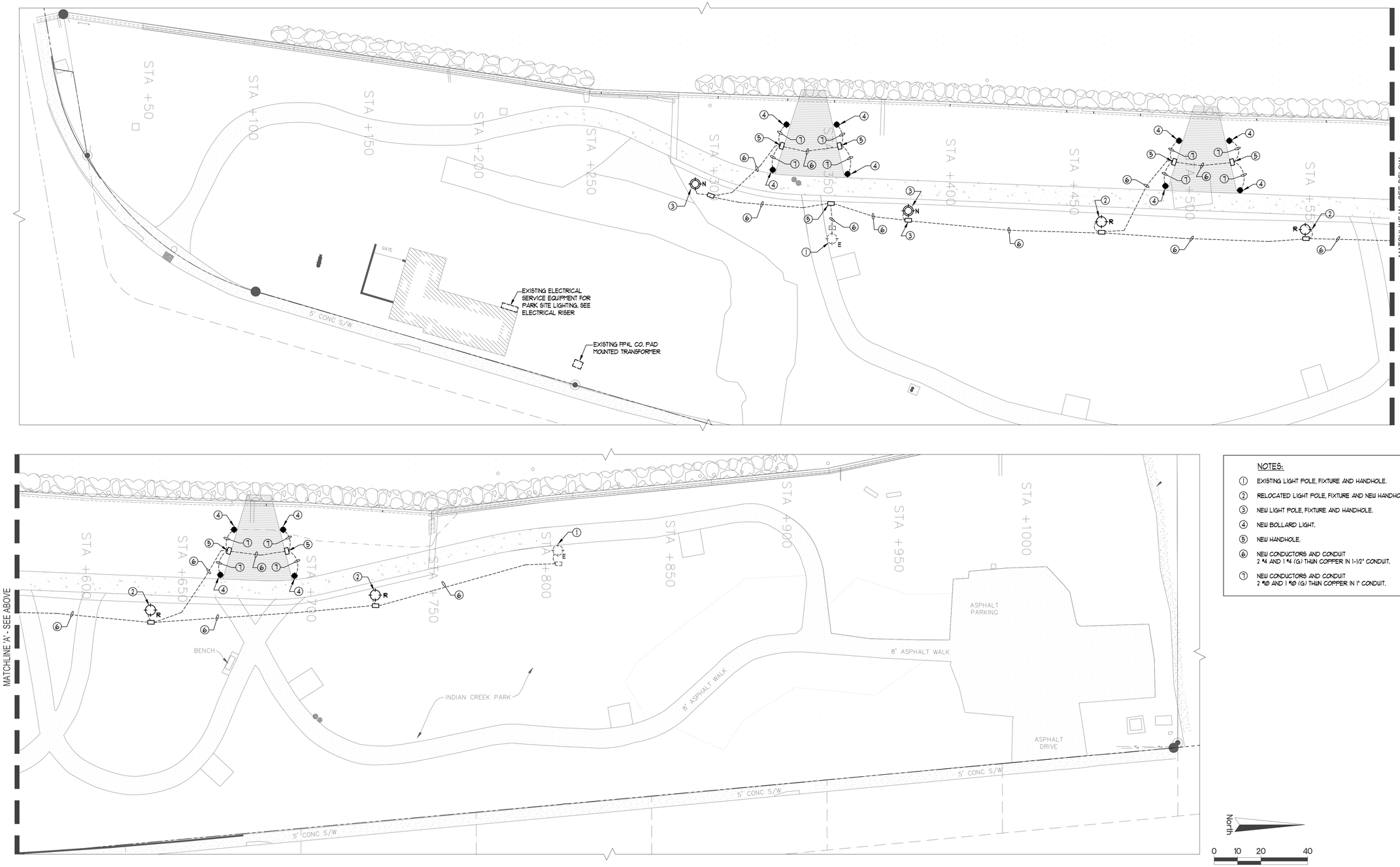
ENGINEER OF RECORD:

RENE I. BASULTO, P.E.
NO. 40869

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name: E-2.0-Demolition Plan.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 25 of 28 Drawing: E-2.0

S:\GM Selby\Indian Creek Park\Electrical



NOTES:

1. EXISTING LIGHT POLE, FIXTURE AND HANDHOLE.
2. RELOCATED LIGHT POLE, FIXTURE AND NEW HANDHOLE.
3. NEW LIGHT POLE, FIXTURE AND HANDHOLE.
4. NEW BOLLARD LIGHT.
5. NEW HANDHOLE.
6. NEW CONDUCTORS AND CONDUIT 2 #4 AND 1 #4 (G) THWN COPPER IN 1-1/2" CONDUIT.
7. NEW CONDUCTORS AND CONDUIT 2 #10 AND 1 #10 (G) THWN COPPER IN 1" CONDUIT.

North

0 10 20 40

GRAPHIC SCALE IN FEET

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL.33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: NEW WORK SITE PLAN

BPA
Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue,
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD R.I.B.
DESIGN ENGINEER: C.Y.
DRAWN BY: D.T.
CHECKER: C.Y.
SCALE: AS INDICATED

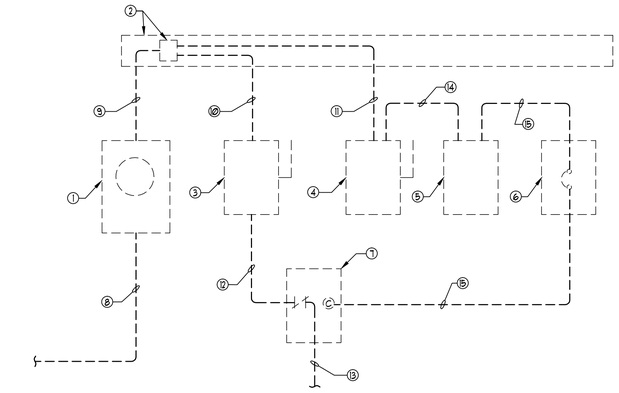
ENGINEER OF RECORD:

RENE I. BASULTO, P.E.
NO. 40869

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path: F:\CAD\E-3.0-New Work Plan.dwg
File Name:
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 26 of 28 Drawing: E-3.0

S:\GM Selby\Indian Creek Park\Electrical



ELECTRICAL RISER

N.T.S.

ELECTRICAL RISER KEY NOTES:

1. EXISTING ELECTRICAL METER - 277/480 VOLTS.
2. EXISTING LINE WIREWAY WITH "TAP" BLOCK.
3. EXISTING TWO POLE, 30 AMP, NEMA 3R DISCONNECT SWITCH FUSED AT 30 AMPS.
4. EXISTING TWO POLE, 30 AMP, NEMA 3R DISCONNECT SWITCH FUSED AT 15 AMPS.
5. EXISTING 480 VOLTS, SINGLE PHASE X 120-240 VOLTS, SINGLE PHASE 15 KVA TRANSFORMER.
6. EXISTING TWO POLE, 20 AMP, CIRCUIT BREAKER IN NEMA 3R ENCLOSURE WITH 120 VOLT COIL AND PHOTOCELL.
7. EXISTING THREE POLE, 30 AMP, LIGHTING CONTACTOR IN NEMA 3R ENCLOSURE.
8. EXISTING SERVICE LATERAL TO FLORIDA POWER AND LIGHT COMPANY PAD MOUNTED TRANSFORMER.
   4 # 8 THHN COPPER IN 1" CONDUIT.
9. EXISTING 4 # 4 THHN COPPER IN 1" CONDUIT.
10. EXISTING 3 # 4 THHN COPPER IN 1" CONDUIT.
    TWO PHASE CONDUCTORS AND ONE NEUTRAL CONDUCTOR.
11. EXISTING 2 # 4 THHN COPPER IN 1" CONDUIT.
    TWO PHASE CONDUCTORS.
12. EXISTING 2 # 4 THHN COPPER IN 1" CONDUIT.
    ONE PHASE CONDUCTOR AND ONE NEUTRAL CONDUCTOR.
13. EXISTING 2 # 4 AND 1 # 4 (G) THHN COPPER IN 1-1/2" CONDUIT TO EXISTING POLE LIGHTS.
    ONE PHASE CONDUCTOR, ONE NEUTRAL CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR.
14. EXISTING 2 # 14 THHN COPPER IN 3/4" CONDUIT.

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: DETAILS AND ELECTRICAL RISER

BPA
Brindley Peters & Associates, Inc.
815 NW 57 th Avenue
Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

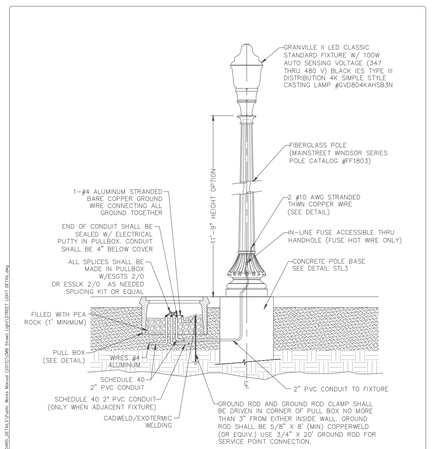
ENGINEER OF RECORD R.I.B.
DESIGN ENGINEER: C.Y.
DRAWN BY: D.T.
CHECKER: C.Y.
SCALE: AS INDICATED

ENGINEER OF RECORD:
RENE I. BASULTO, P.E.
NO. 40869

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

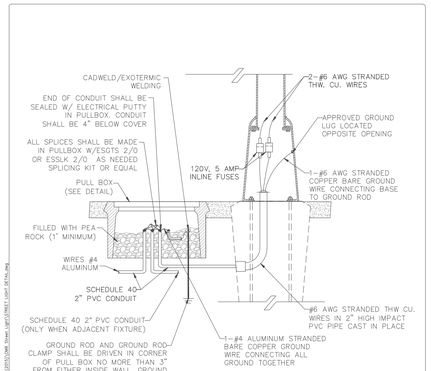
File Path:
File Name: E-4.0-Details & Riser.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 27 of 28 Drawing: E-4.0

S:\GM Selby\Indian Creek Park\Electrical



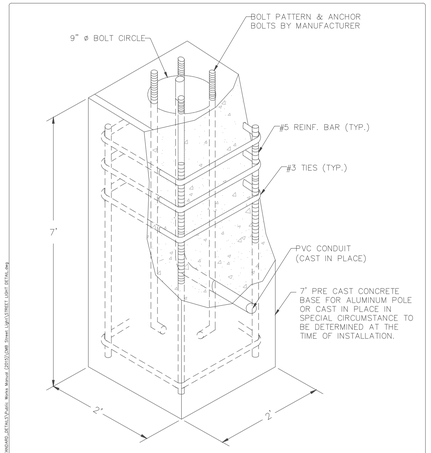
GRANVILLE II LED CLASSIC STANDARD LIGHT FIXTURE DETAIL
N.T.S.

MIAMIBEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139 | APPROVED 10/01/2014 | REVISED 05/22/2015, 07/28/2015, 05/25/2016 | TITLE: STREET LIGHT DETAILS NO. 2 GRANVILLE II LED LIGHT FIXTURE DETAIL | STL7



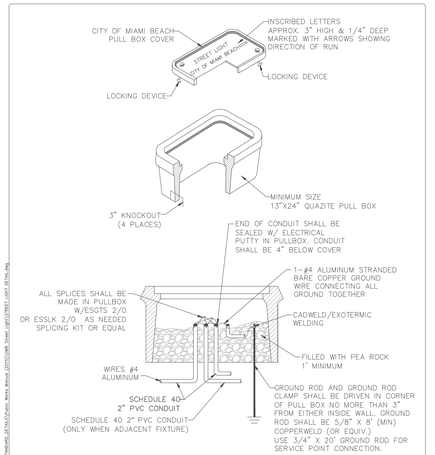
POLE MOUNTING DETAIL
N.T.S.

MIAMIBEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139 | APPROVED 10/1/2003 | REVISED 07/09/2008, 10/05/1314, 04/23/2015, 02/25/2016 | TITLE: STREET LIGHT DETAILS NO. 1 POLE MOUNTING DETAIL | STL4



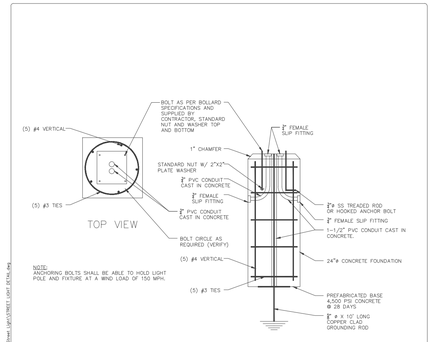
CONCRETE POLE BASE DETAIL
N.T.S.

MIAMIBEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139 | APPROVED 10/1/2003 | REVISED 12/2006, 07/28/2008, 04/23/2015 | TITLE: STREET LIGHT DETAILS NO. 1 CONCRETE POLE BASE DETAIL | STL3



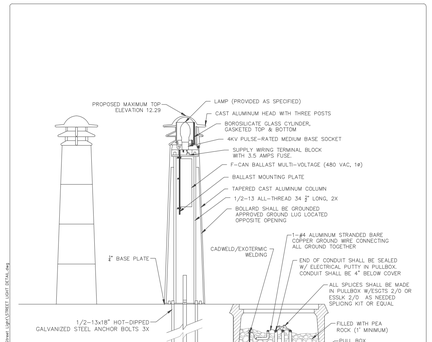
13"x24" QUAZITE PULL BOX
N.T.S.

MIAMIBEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139 | APPROVED 10/1/2003 | REVISED 09/25/2012, 11/09/2014, 04/23/2015, 02/25/2016 | TITLE: STREET LIGHT DETAILS NO. 1 13" X 24" QUAZITE PULL BOX | STL1



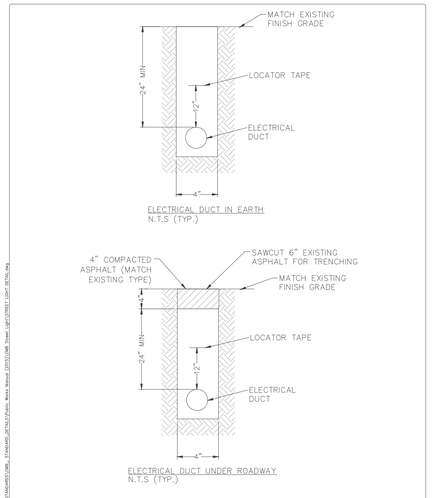
BOLLARD BASE DETAIL
N.T.S.

MIAMIBEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139 | APPROVED | REVISED 04/23/2015, 10/05/2016 | TITLE: STREET LIGHT DETAILS NO. 3 BOLLARD BASE DETAIL | STL15



LIGHTHOUSE BOLLARD
N.T.S.

MIAMIBEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139 | APPROVED | REVISED 04/23/2015, 02/24/2016 | TITLE: STREET LIGHT DETAILS NO. 3 LIGHTHOUSE BOLLARD | STL12



ELECTRICAL DUCT PLACEMENT
N.T.S.

MIAMIBEACH PUBLIC WORKS DEPARTMENT 1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139 | APPROVED 05/29/2012 | REVISED 09/12/2012, 04/23/2015 | TITLE: STREET LIGHT DETAILS NO. 2 ELECTRICAL DUCT PLACEMENT | STL9

MIAMIBEACH
PUBLIC WORKS DEPARTMENT
1700 CONVENTION CENTER DRIVE, MIAMI BEACH, FL 33139

PROJECT: INDIAN CREEK PARK SEAWALL REHABILITATION

TITLE: DETAILS AND ELECTRICAL RISER

BPA Brindley Pieters & Associates, Inc.
815 NW 57 th Avenue, Suite 200-11, Miami, Fl 33126
Certificate of Authorization Number 5993

CITY MANAGER: JIMMY L. MORALES
DIRECTOR: ERIC T. CARPENTER, P.E.
CITY ENGINEER: BRUCE A. MOWRY, Ph.D, P.E.

ENGINEER OF RECORD R.I.B.
DESIGN ENGINEER: C.Y.
DRAWN BY: D.T.
CHECKER: C.Y.
SCALE: AS INDICATED

ENGINEER OF RECORD:
RENE I. BASULTO, P.E.
NO. 40869

NO.	DATE	REVISION	APP'D. BY
5			
4			
3			
2			
1			

File Path:
File Name:16089-E-5.0-Details.dwg
Survey Reference:
Field Book: N/A Page: N/A Work Order: N/A
Date: 01/14/15 Sheet: 28 of 28 Drawing: E-5.0

S:\GM Selby\Indian Creek Park\Electrical