

# Site Plans



MITCHELL PLANNING & DESIGN

INNOVATIVE ENGINEERING  
GROUP INC.

TRAFFIC TECH ENGINEERING

ISLAND SURVEYING INC.



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WILLIAM P. HORN

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01-06-11  
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PROJECT  
NUMBER

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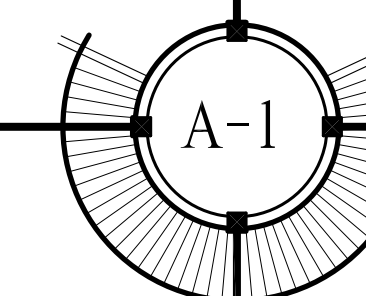
# CLARENCE HIGGS BEACH

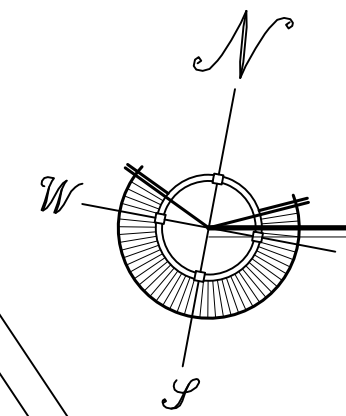
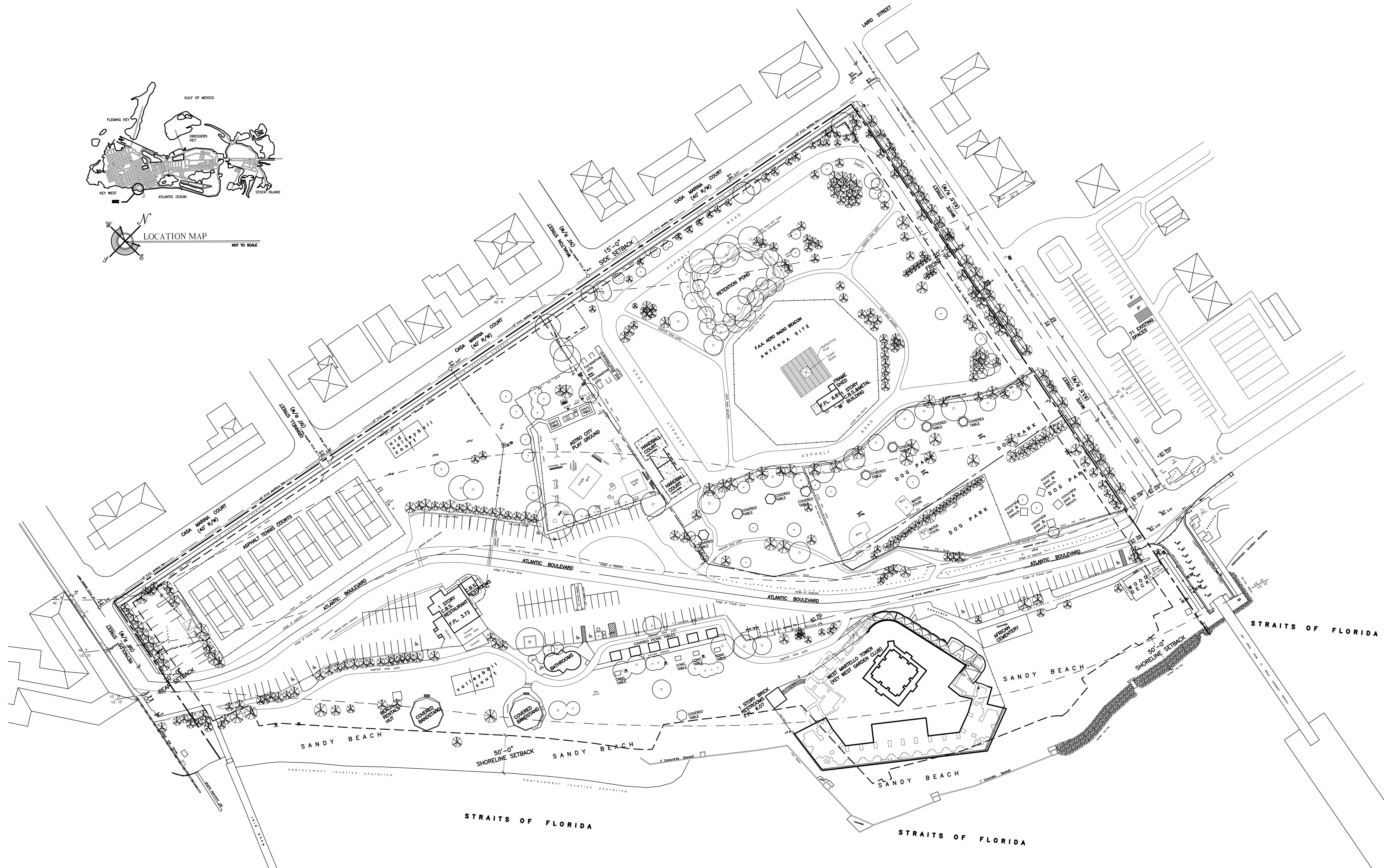
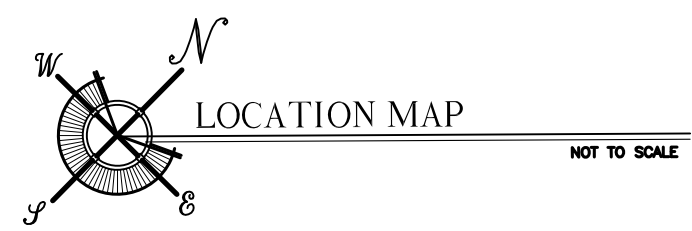
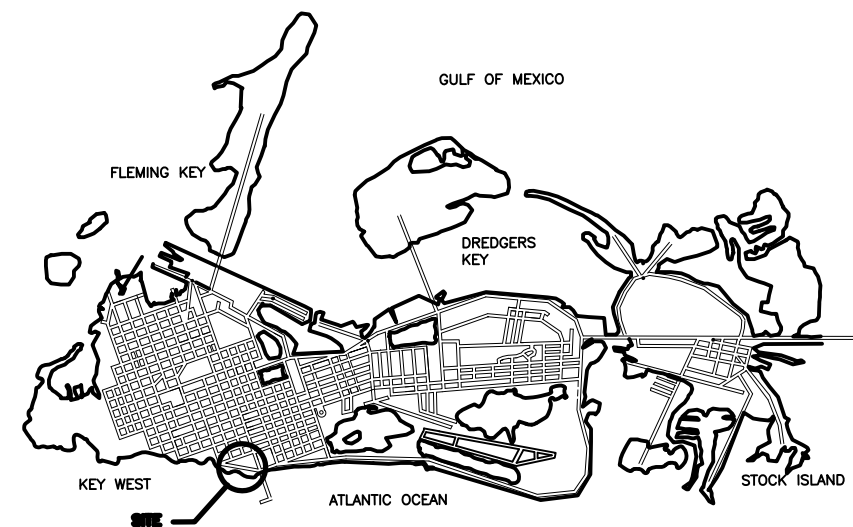
## MASTER PLAN

### KEY WEST, FLORIDA

SITE DATA	
SITE AREA:	762,891 S.F. (17.5 ACRES)
LAND USE:	PS (PUBLIC SERVICES INC. RECREATION & OPEN SPACE)
FLOOD ZONE:	AE +8.0'/AE +9.0'/AE +10.0'/VE 10/VE 12
SETBACKS:	
FRONT SETBACK: (WHITE STREET)	REQUIRED = 20.0' EXISTING = 25'-4" (WOOD DECK) PROPOSED = 25'-4" (WOOD DECK)
SIDE SETBACK: (CASA MARINA COURT)	REQUIRED = 15.0' EXISTING = 123'-9" (COVD. TABLE IN PLAYGROUND) PROPOSED = 24'-0" (EQUIPMENT STORAGE)
REAR SETBACK: (REYNOLDS STREET)	REQUIRED = 20.0' EXISTING = 237'-8" (COVERED BANDSTAND) PROPOSED = 55'-4" (TENNIS PAVILION)
COASTAL CONST. CONTROL LINE:	REQUIRED = 50'-0" EXISTING = 11'-5" (WEST MARTELLO) PROPOSED = 11'-5" (WEST MARTELLO)
FAR: (INTERIOR AND COVERED AREA)	ALLOWABLE: 0.2 MAX. (152,578 S.F.) EXISTING: 0.02 (19,578 S.F.) PROPOSED: 0.02 (22,605 S.F.)
HEIGHT:	ALLOWABLE: 25.0' EXISTING: 25.0' (WEST MARTELLO) PROPOSED: 25.0' (NEW VISITOR CENTER)
LOT COVERAGE AREA:	REQUIRED: 305,156 S.F. (40% MAX.) EXISTING: 29,945 S.F. (3.92%) PROPOSED: 32,972 S.F. (4.32%)
IMPERVIOUS AREA:	REQUIRED: 381,446 S.F. (50% MAX.) EXISTING: 230,499 S.F. (30.2%) PROPOSED: 256,333 S.F. (33.6%)
LANDSCAPE AREA:	REQUIRED: 152,578 S.F. (20%) EXISTING: 532,392 S.F. (69.78%) PROPOSED: 506,558 S.F. (66.31%)
OPEN SPACE (INCLUDES RECREATIONAL OPEN SPACE):	REQUIRED: 152,578 S.F. (20%) EXISTING: 570,362 S.F. (74.7%) PROPOSED: 544,528 S.F. (71.3%)
PARKING:	EXISTING: 145 SPACES PROPOSED: 145 SPACES (INCLUDES 6 HANDICAP SPACES)
BIKE/SCOOTER PARKING:	EXISTING: 60 SPACES (±18 NON CONFORMING) PROPOSED: 45 SPACES

MASTER PLAN TEAM MEMBERS				LIST OF DRAWINGS
<p><u>ARCHITECT:</u></p> <p><b>WILLIAM P. HORN ARCHITECT, P.A.</b></p> <p>WILLIAM P. HORN, RA, LEED AP EVELIA MEDINA, LEED AP</p> <p>915 EATON ST. KEY WEST, FL 33040 TEL. (305) 296-8302</p>	<p><u>PLANNER:</u></p> <p><b>MITCHELL PLANNING &amp; DESIGN</b></p> <p>BARBARA MITCHELL, LEED AP</p> <p>15450 SE 103rd. PLACE RD. OKLAWAHA, FL 32197 (305) 509-0966</p>	<p><u>LANDSCAPE DESIGN:</u></p> <p><b>LANDWISE DESIGN</b></p> <p>LADD ROBERTS, RLA</p> <p>9822 TAPESTRY PARK CIRCLE SUITE 201 JACKSONVILLE, FL 32246 TEL. (904) 343 4194</p>	<p><u>SURVEYOR:</u></p> <p><b>ISLAND SURVEYING INC.</b></p> <p>FREDERICK H. HILDEBRANDT, PE</p> <p>33152 NORTHSIDE DRIVE #201. KEY WEST, FL 33040 TEL. (305) 293-0466</p>	<p>A-1 COVER SHEET, SITE DATA</p> <p>A-2 EXISTING SITE PLAN 1" = 60.0'</p> <p>A-3 PROPOSED SITE PLAN 1" = 60.0'</p> <p>A-4 PARTIAL SITE PLAN 1/16" = 1'-0"</p> <p>A-5 PARTIAL SITE PLAN 1/16" = 1'-0"</p> <p>A-6 PARTIAL SITE PLAN 1/16" = 1'-0"</p> <p>A-7 VISITOR/NATURE CENTER, PLANS, ELEVATIONS &amp; RENDERINGS</p> <p>A-7.1 VISITOR/NATURE CENTER, ELEVATIONS &amp; RENDERINGS</p> <p>A-8 STORAGE BUILDINGS, PLANS, ELEVATIONS, RENDERINGS &amp; SITE DETAILS</p> <p>E-1 LIGHTING SITE PLAN</p>
<p><u>CIVIL ENGINEERING:</u></p> <p><b>PEREZ ENGINEERING AND DEVELOPMENT INC.</b></p> <p>ALLEN E. PEREZ, PE</p> <p>1010 EAST KENNEDY DRIVE SUITE 400 MIAMI FL 33166 TEL. (305) 293-9440</p>	<p><u>LIGHTING DESIGN:</u></p> <p><b>INNOVATIVE ENGINEERING GROUP INC.</b></p> <p>SUDHIR GUPTA, PE, LEED AP</p> <p>5532 N.W. 72ND AV. MIAMI FL 33166 TEL. (305) 888-9626</p>	<p><u>TRAFFIC ENGINEER:</u></p> <p><b>TRAFFIC TECH ENGINEERING</b></p> <p>JOAQUIN VARGUS, PE</p> <p>8400 N. UNIVERSITY DR. FT. LAUDERDALE, FL 33321 TEL. (954) 582 0988</p>		<p>C-1 CONCEPTUAL DRAINAGE PLAN</p> <p>C-2 CONCEPTUAL DRAINAGE PLAN -A</p> <p>C-3 CONCEPTUAL DRAINAGE PLAN -B</p> <p>C-4 CONCEPTUAL DRAINAGE PLAN -C</p> <p>L-1 TREE IMPACT PLAN</p> <p>L-2 CODE PLANTING &amp; TREE RELOCATIONS</p> <p>L-3 PLANTING DETAILS &amp; SUGGESTED PLANT PALETTE</p> <p>SURVEY</p>





**EXISTING SITE PLAN**  
 SCALE: 1" = 60'-0"  
 SITE PLAN BASED ON INFORMATION OBTAINED FROM SURVEY PREPARED BY FREDERICK H. HILDEBRANDT, SURVEYOR DATED ON 04-23-10

**CLARENCE HIGGS BEACH - MASTER PLAN**  
 KEY WEST, FLORIDA

WILLIAM P. HORN  
 ARCHITECT, P.A.

915 EATON ST.  
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 FLORIDA  
 33040

TEL: (305) 296-8302  
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LICENSE NO.  
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HIGGS BEACH  
 KEY WEST, FL.



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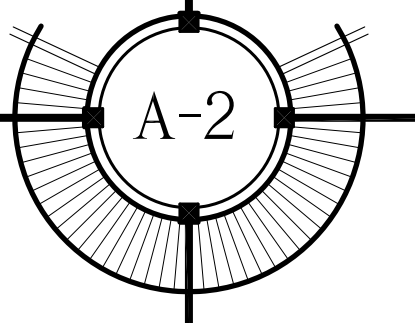
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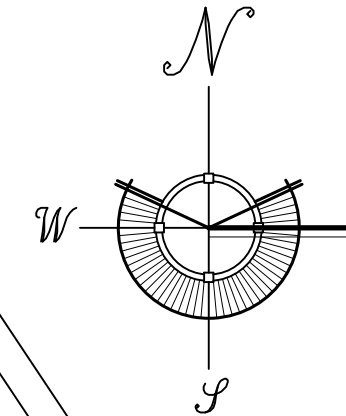
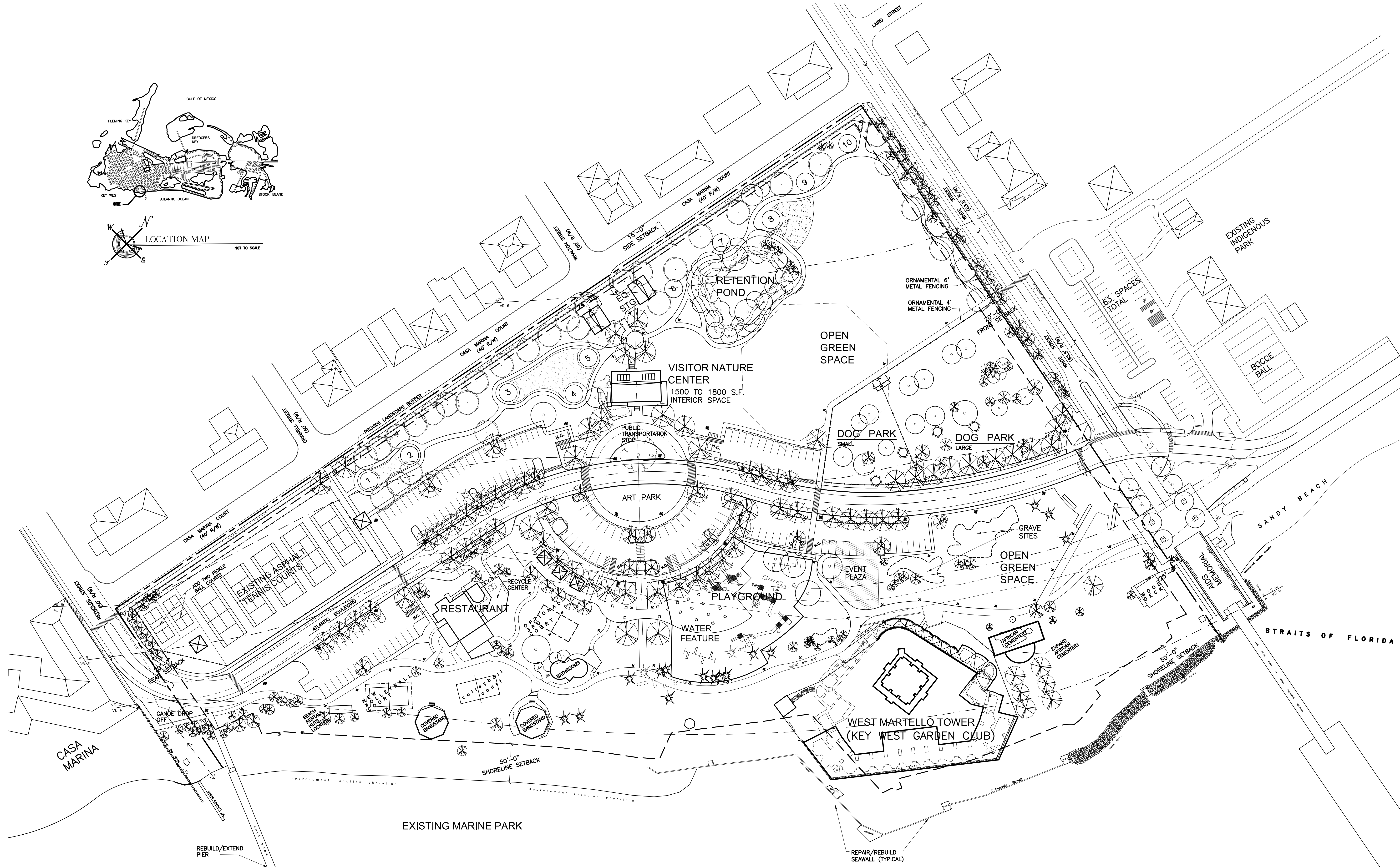
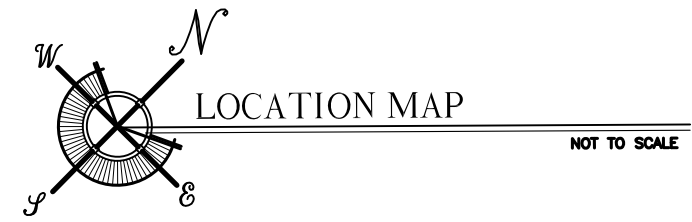
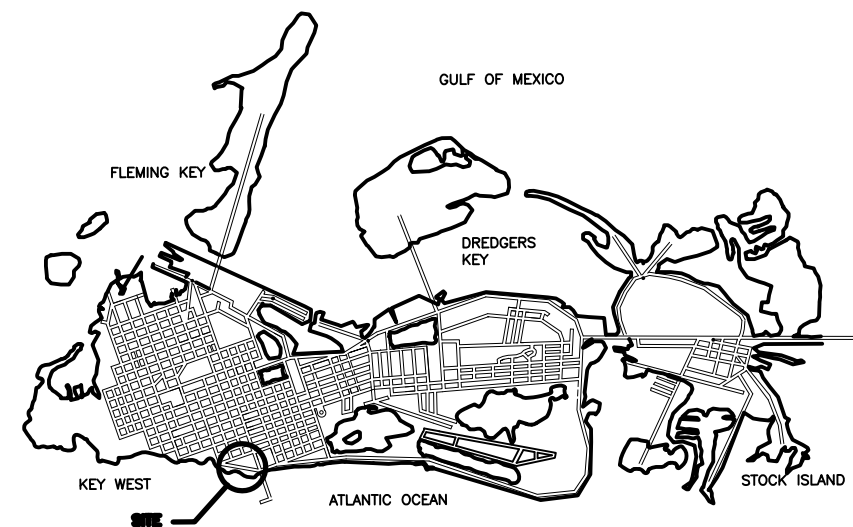


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- ① FITNESS TRAIL STOP
- ⬡ COVERED TABLE
- ⊠ SHADE STRUCTURE



**PROPOSED SITE PLAN - OPTION F'**

SCALE: 1" = 60'-0"

SITE PLAN BASED ON INFORMATION OBTAINED FROM SURVEY PREPARED BY FREDERICK H. HILDEBRANDT, SURVEYOR DATED ON 04-23-10

- ① FITNESS TRAIL STOP
- ⊕ COVERED TABLE
- ☒ SHADE STRUCTURE

**CLARENCE HIGGS BEACH - MASTER PLAN**

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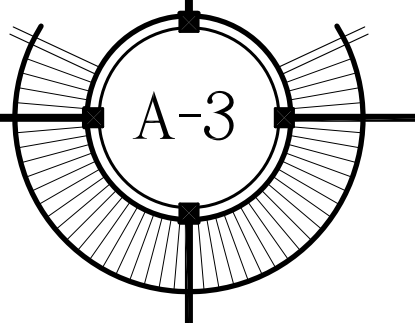
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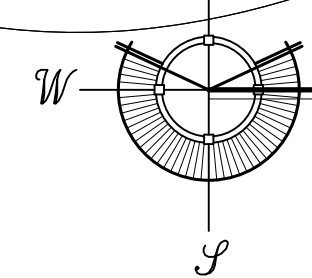




PROPOSED PARTIAL SITE PLAN - PLAYGROUND AREA'

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

SITE PLAN BASED ON INFORMATION OBTAINED FROM SURVEY PREPARED BY FREDERICK H. HILDEBRANDT, SURVEYOR DATED ON 04-23-10



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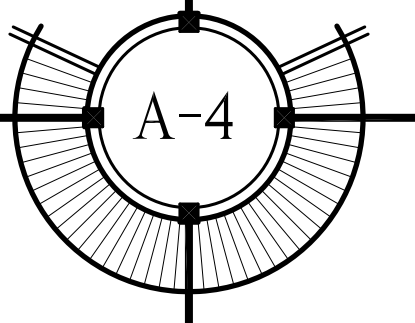
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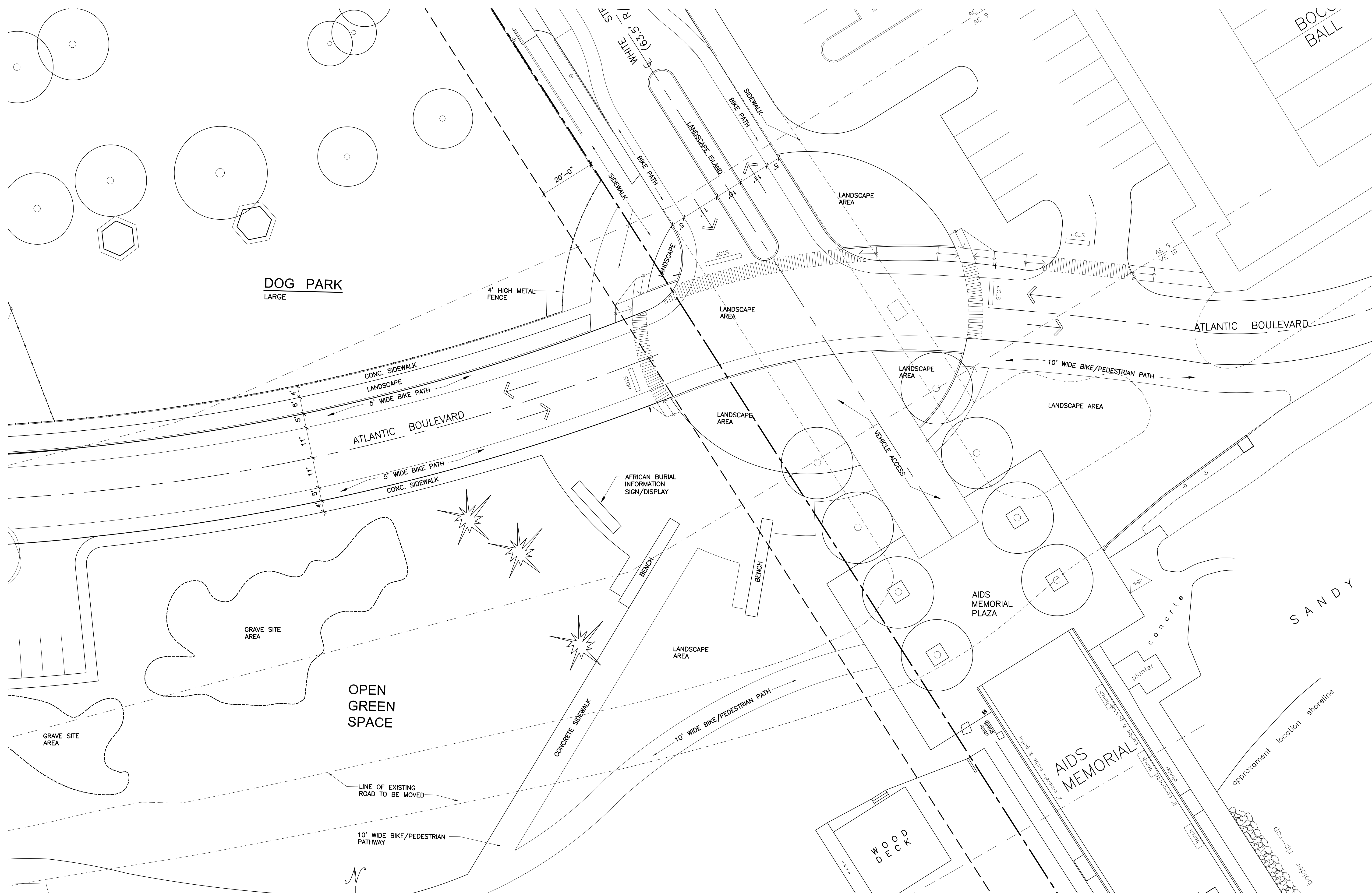
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DOG PARK  
LARGE

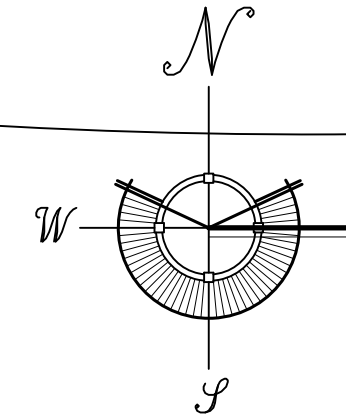
OPEN GREEN SPACE

AIDS MEMORIAL

PROPOSED PARTIAL SITE PLAN - OPTION 'F'

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

SITE PLAN BASED ON INFORMATION OBTAINED FROM SURVEY PREPARED BY FREDERICK H. HILDEBRANDT, SURVEYOR DATED ON 04-23-10



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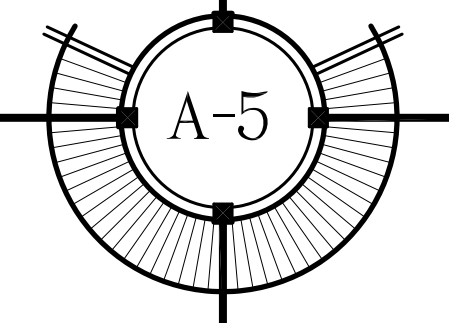
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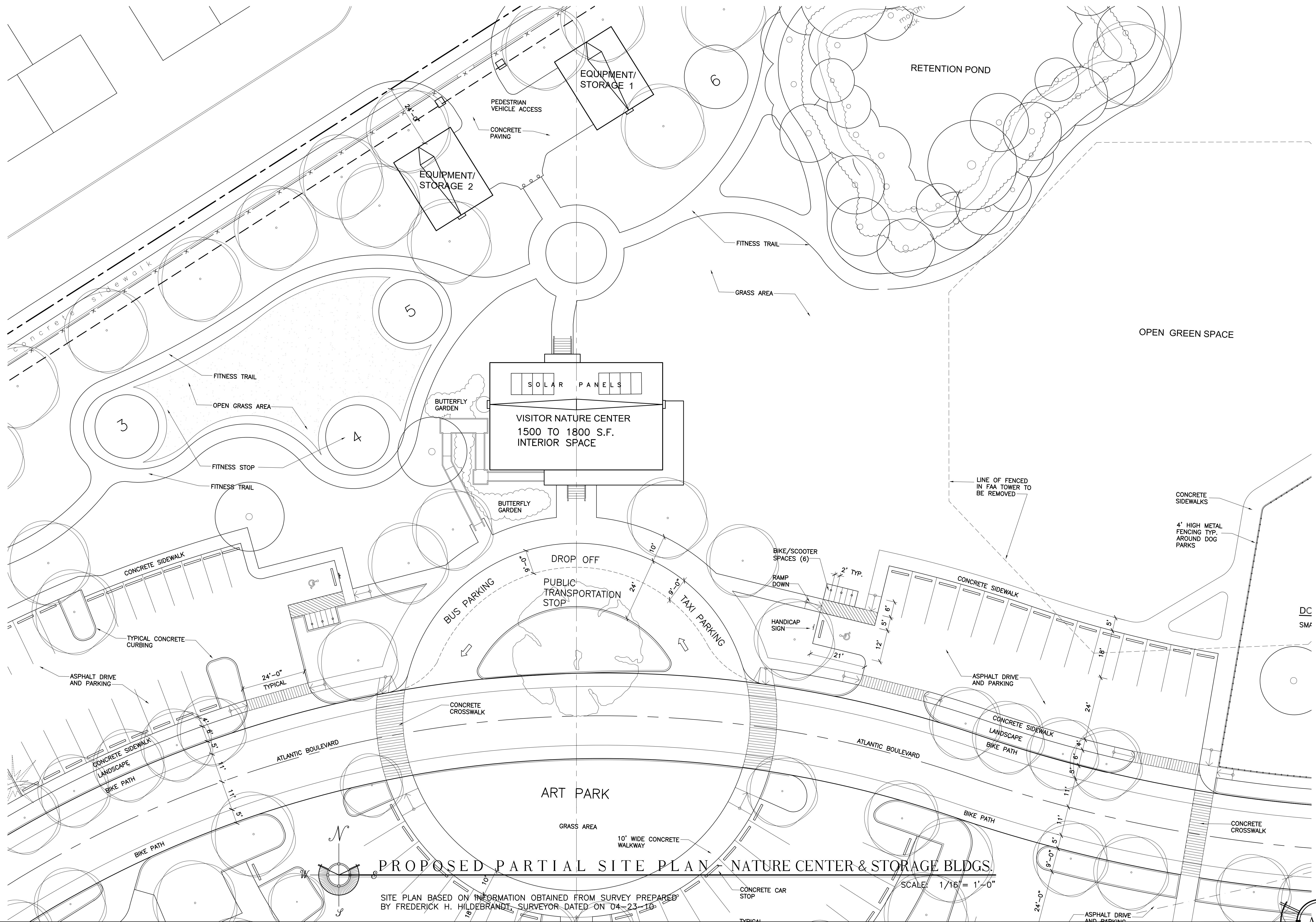
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PROPOSED PARTIAL SITE PLAN - NATURE CENTER & STORAGE BLDGS.

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

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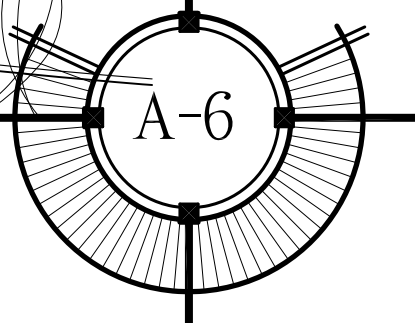
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PERSPECTIVE 3 - NORTHEAST

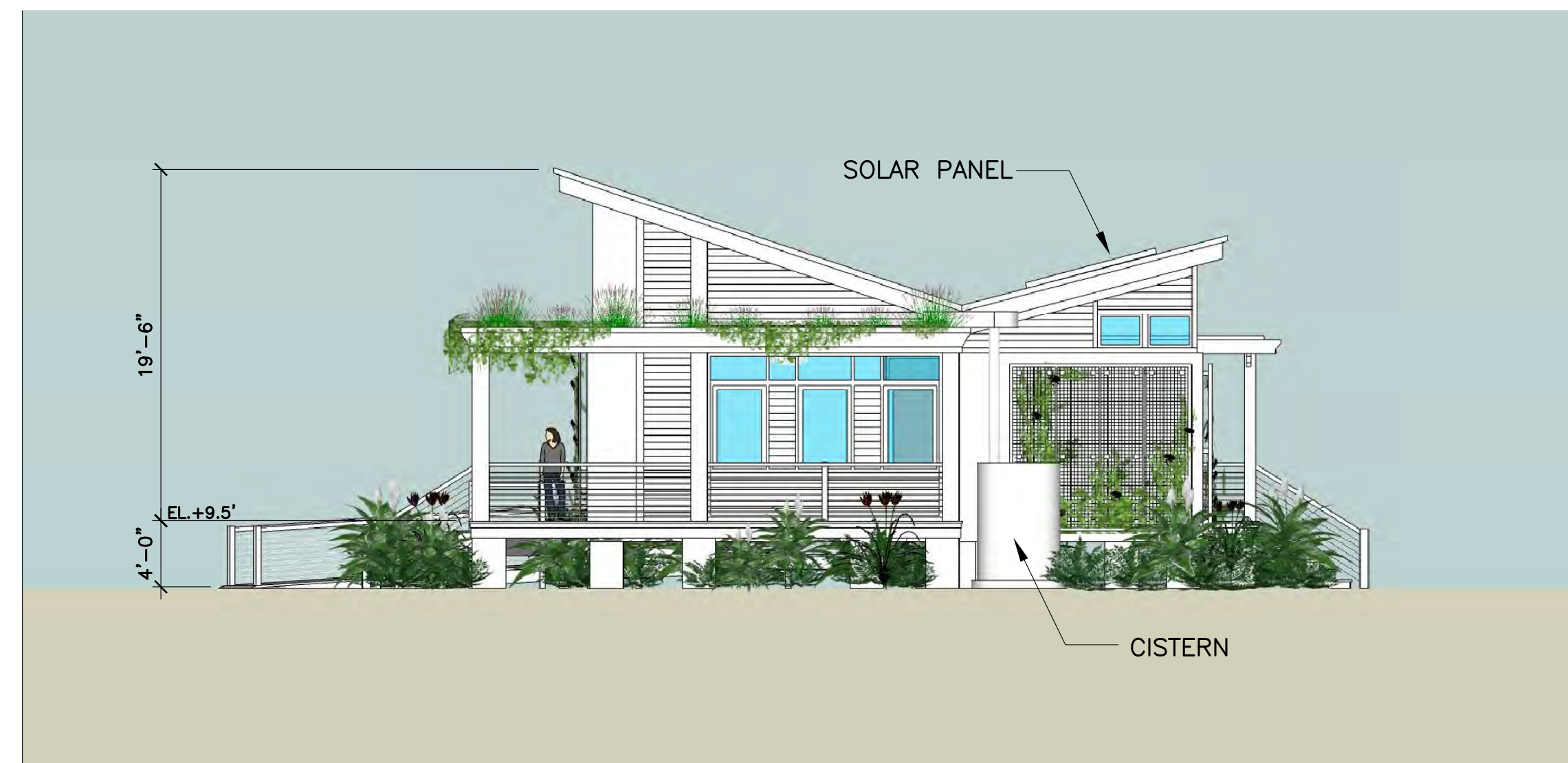


PERSPECTIVE 4 - SOUTHEAST



NORTH ELEVATION - REAR

SCALE: 1/8"=1'-0"



EAST ELEVATION

SCALE: 1/8"=1'-0"

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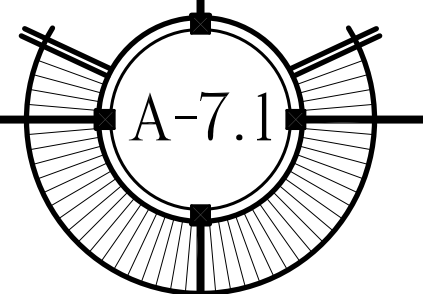
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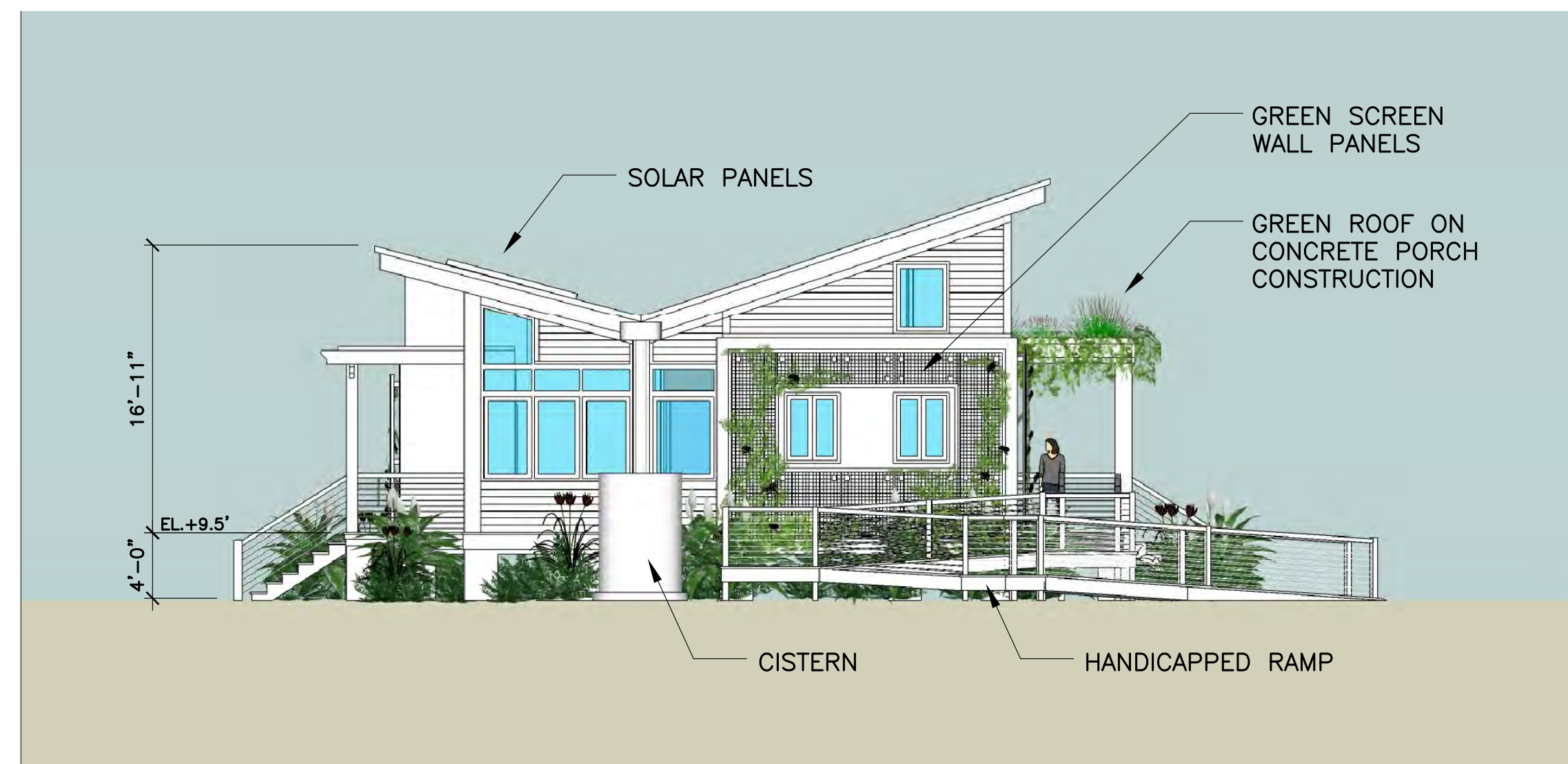




PERSPECTIVE 1 - SOUTHWEST

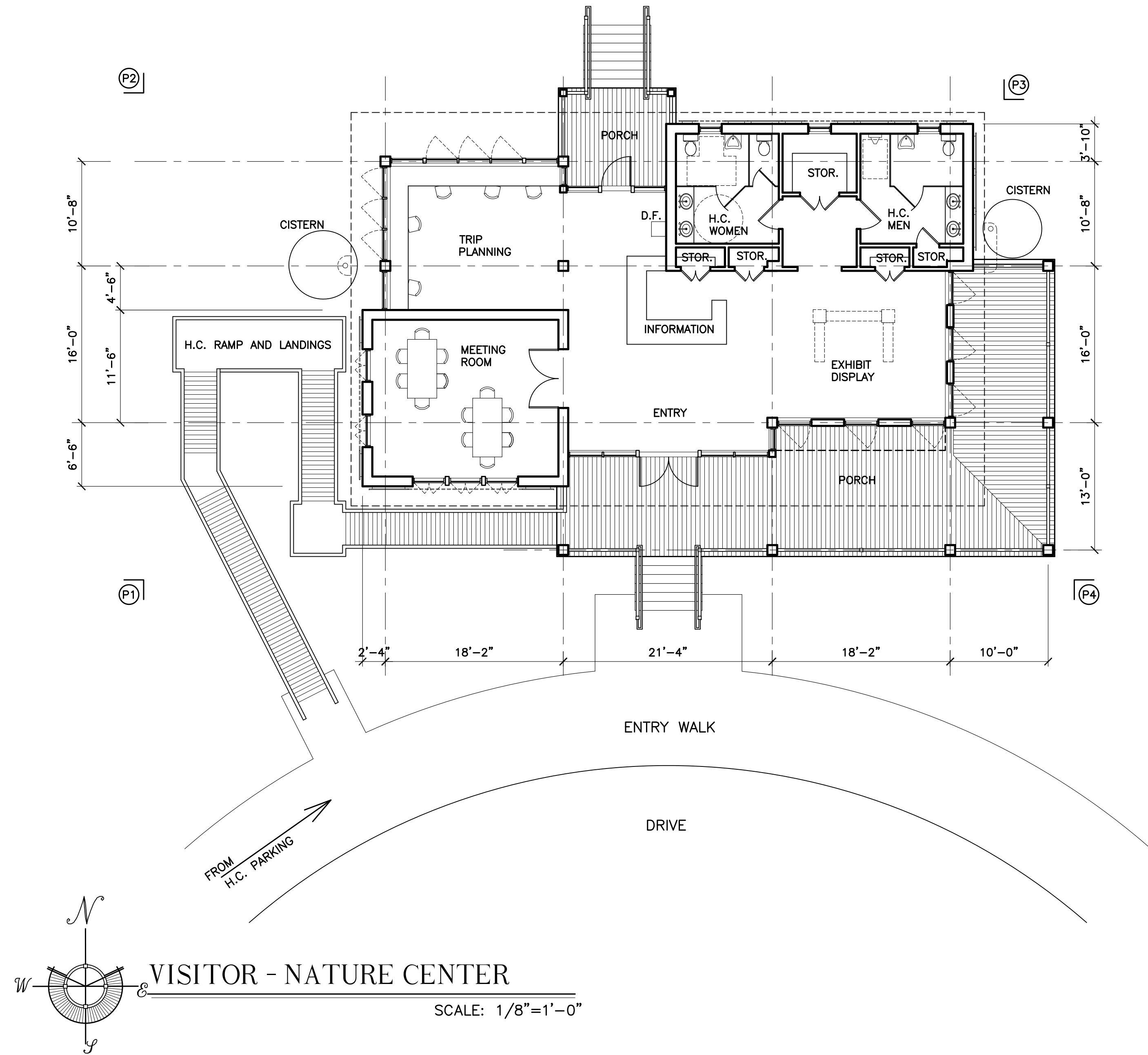


PERSPECTIVE 2 - NORTHWEST



WEST ELEVATION

SCALE: 1/8"=1'-0"



VISITOR - NATURE CENTER

SCALE: 1/8"=1'-0"



SOUTH ELEVATION - FRONT

SCALE: 1/8"=1'-0"

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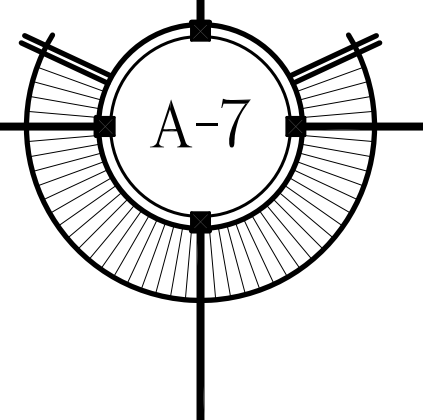
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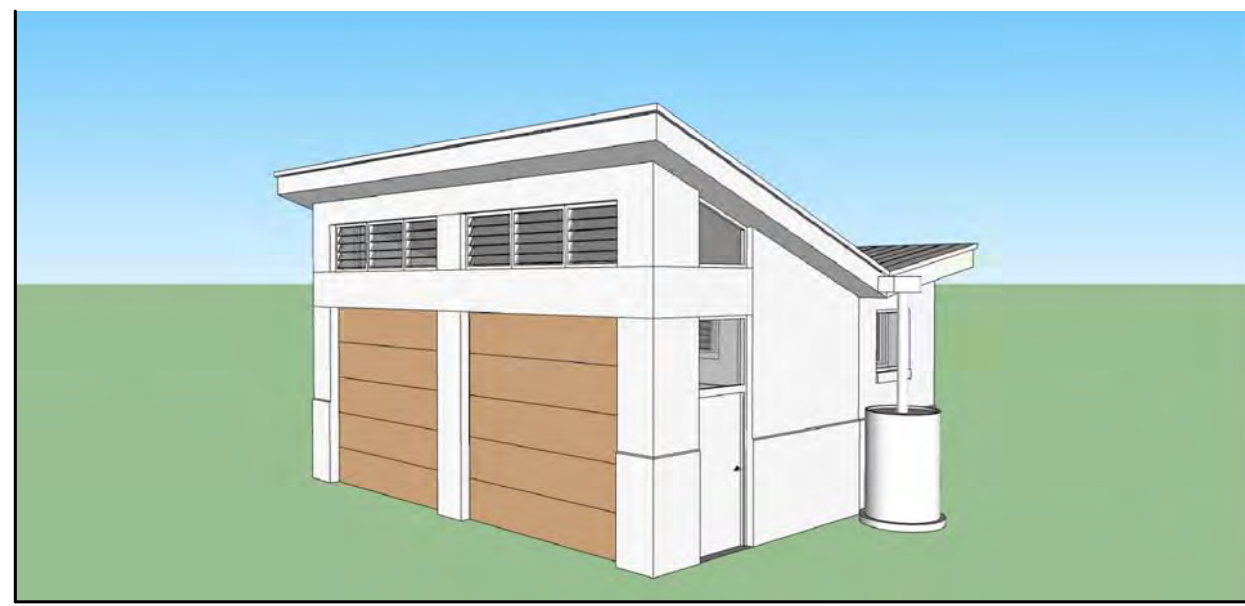


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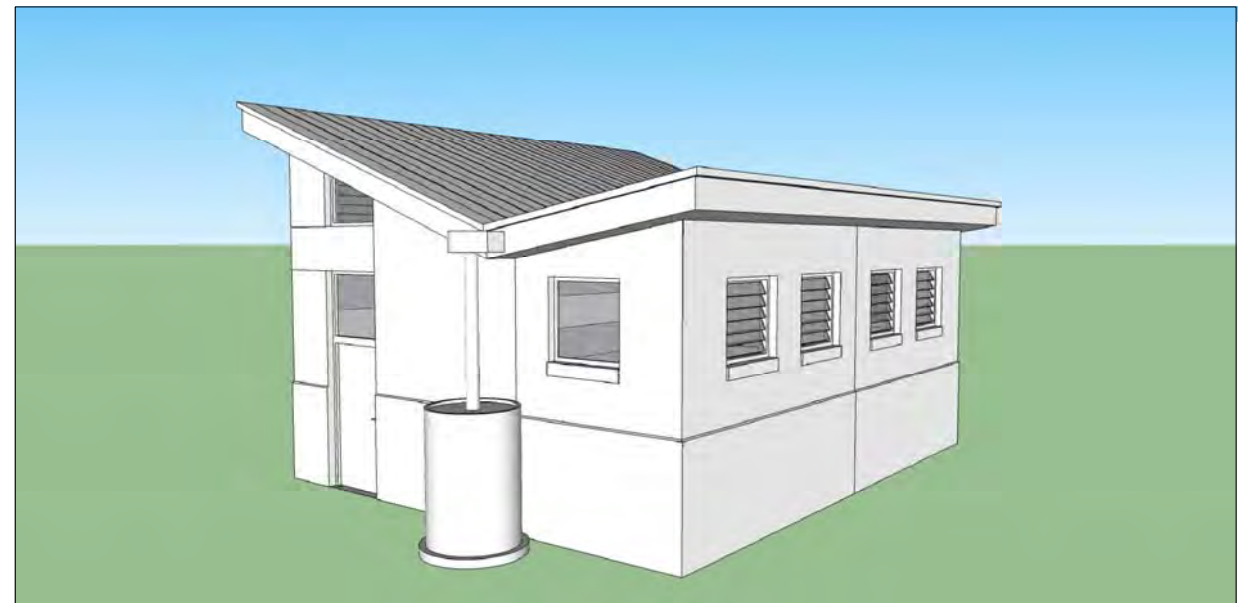
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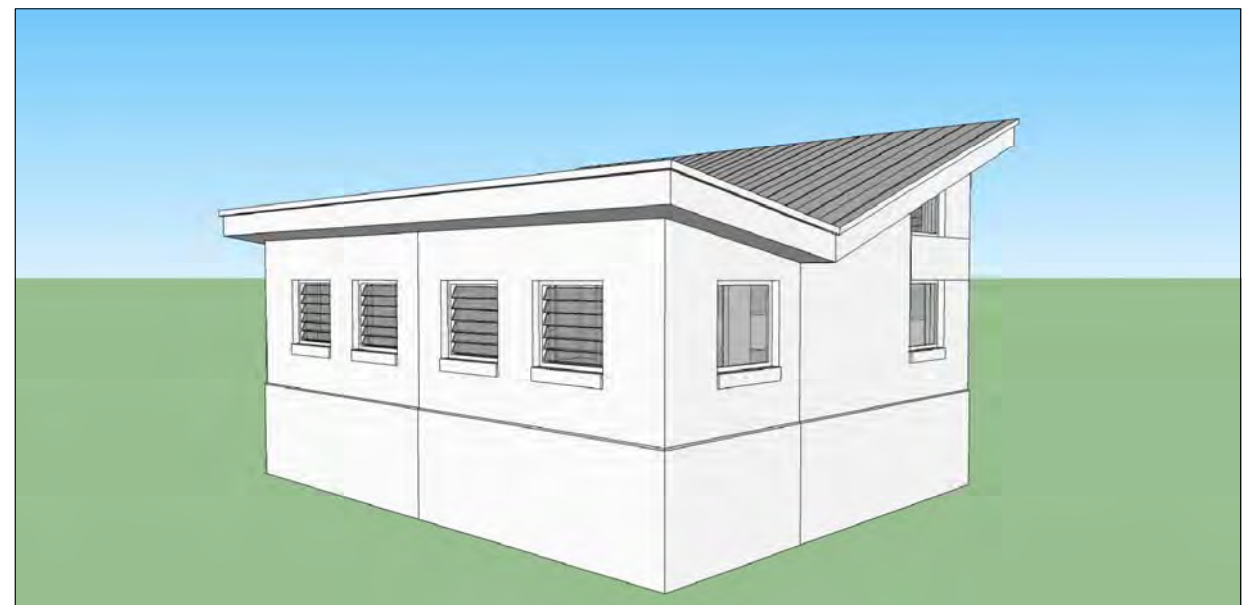




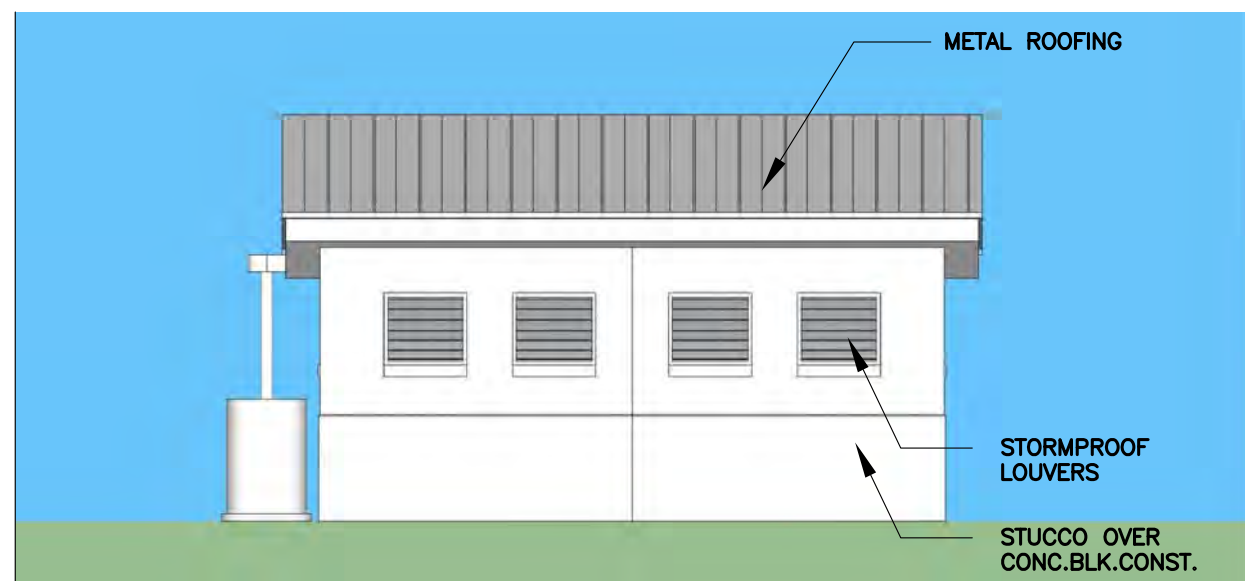
2 PERSPECTIVE - SOUTH  
A-8



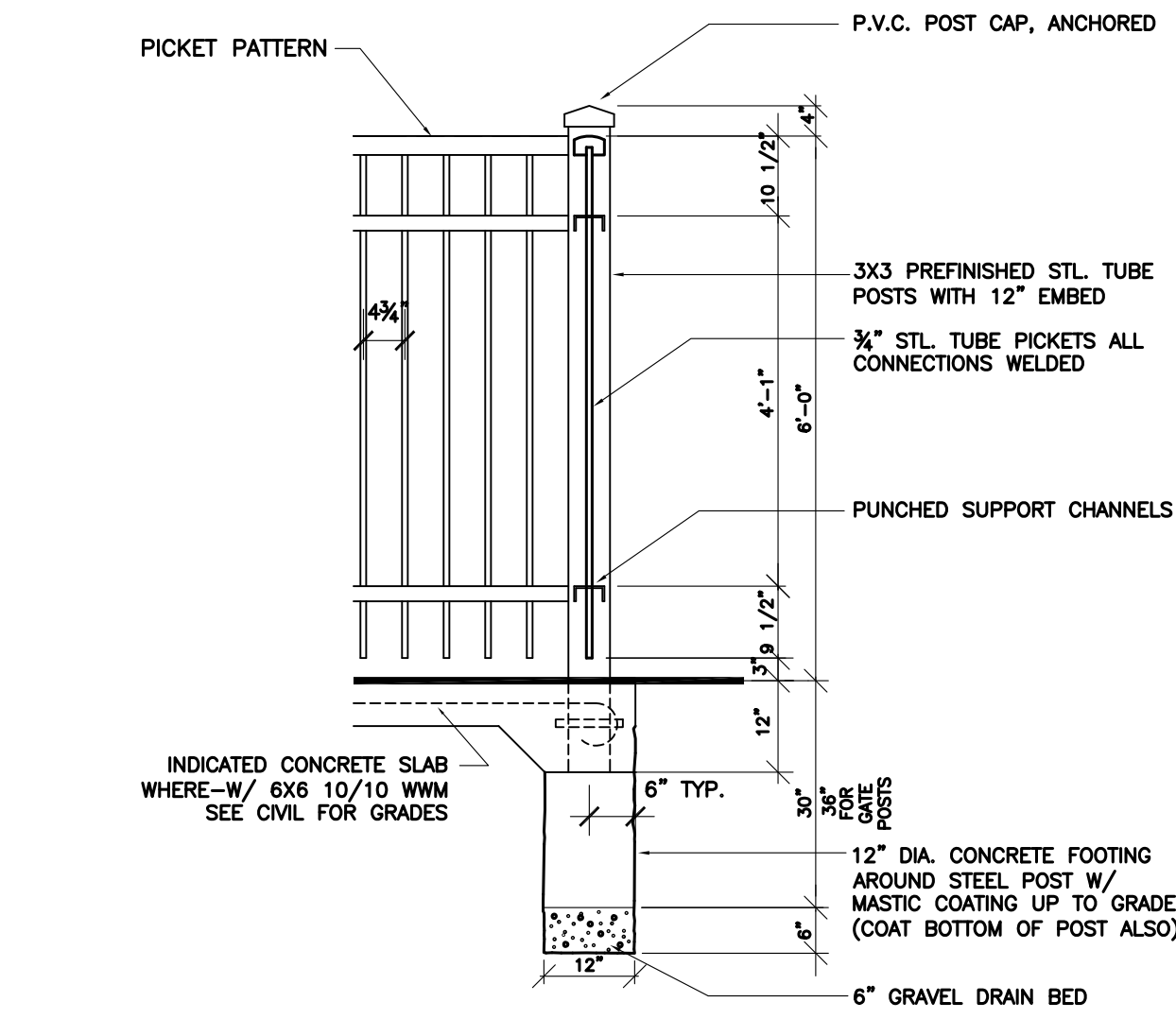
3 PERSPECTIVE - EAST  
A-8



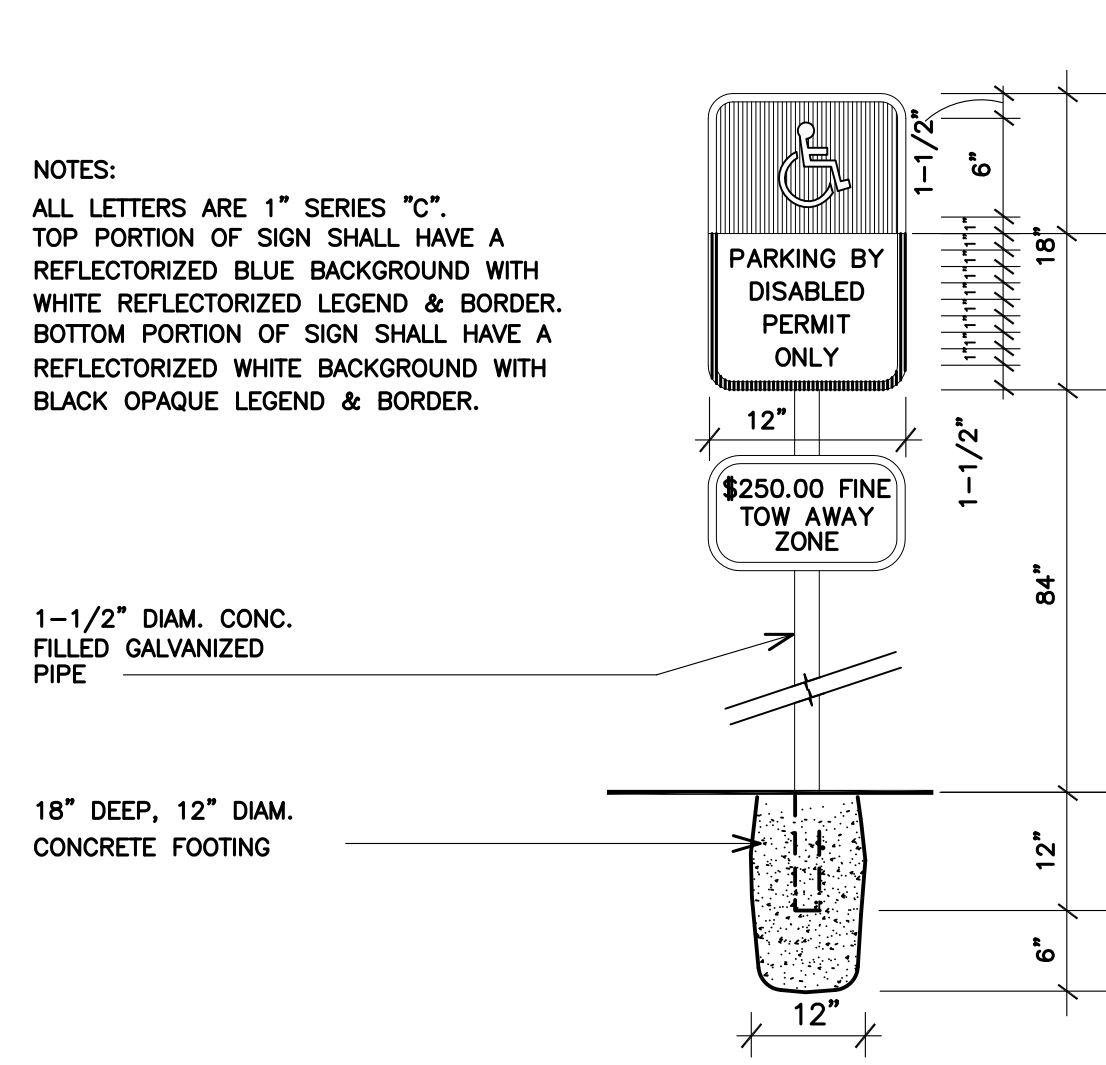
4 PERSPECTIVE - NORTH  
A-8



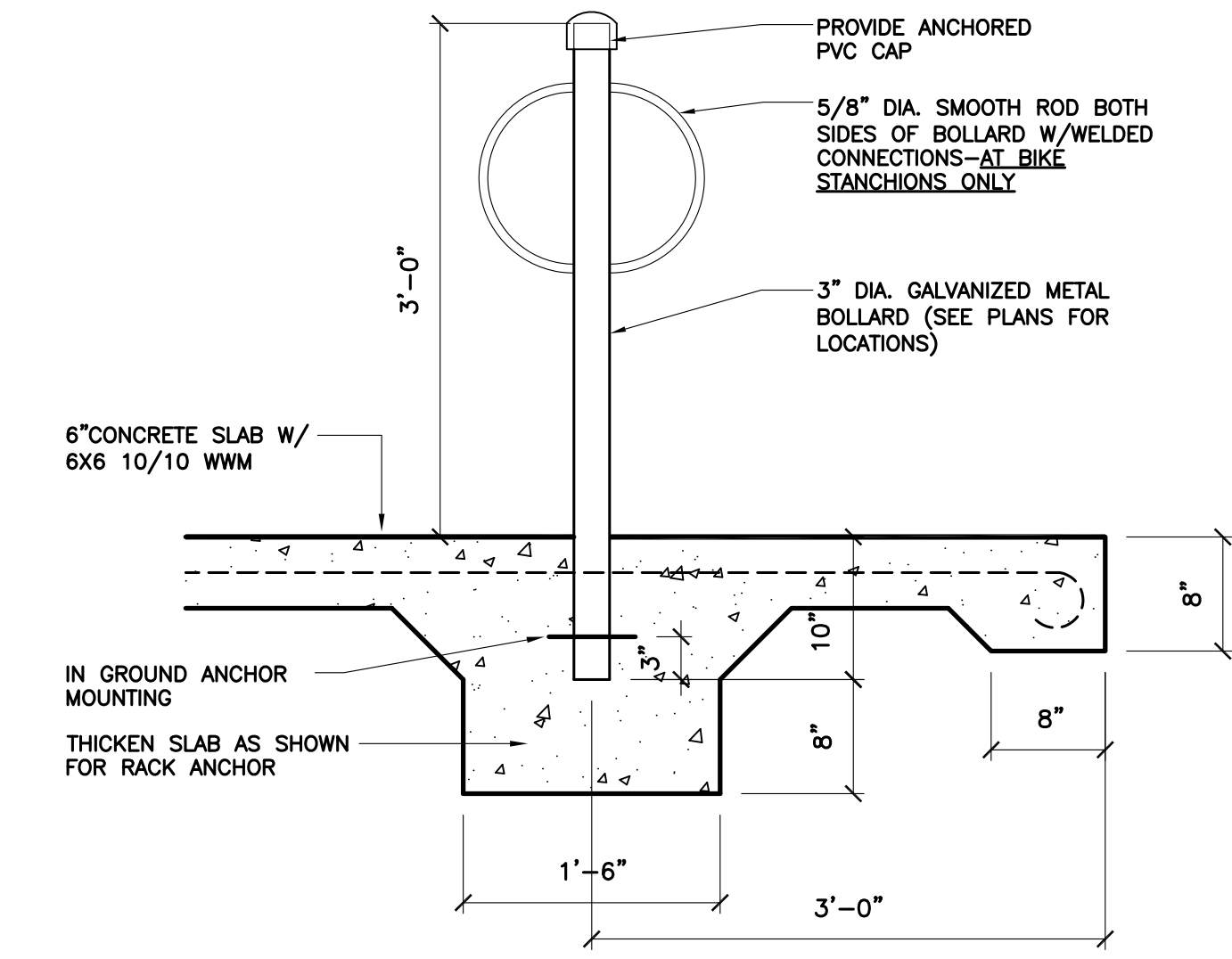
5 REAR  
A-8 SCALE: 1/8"=1'-0"



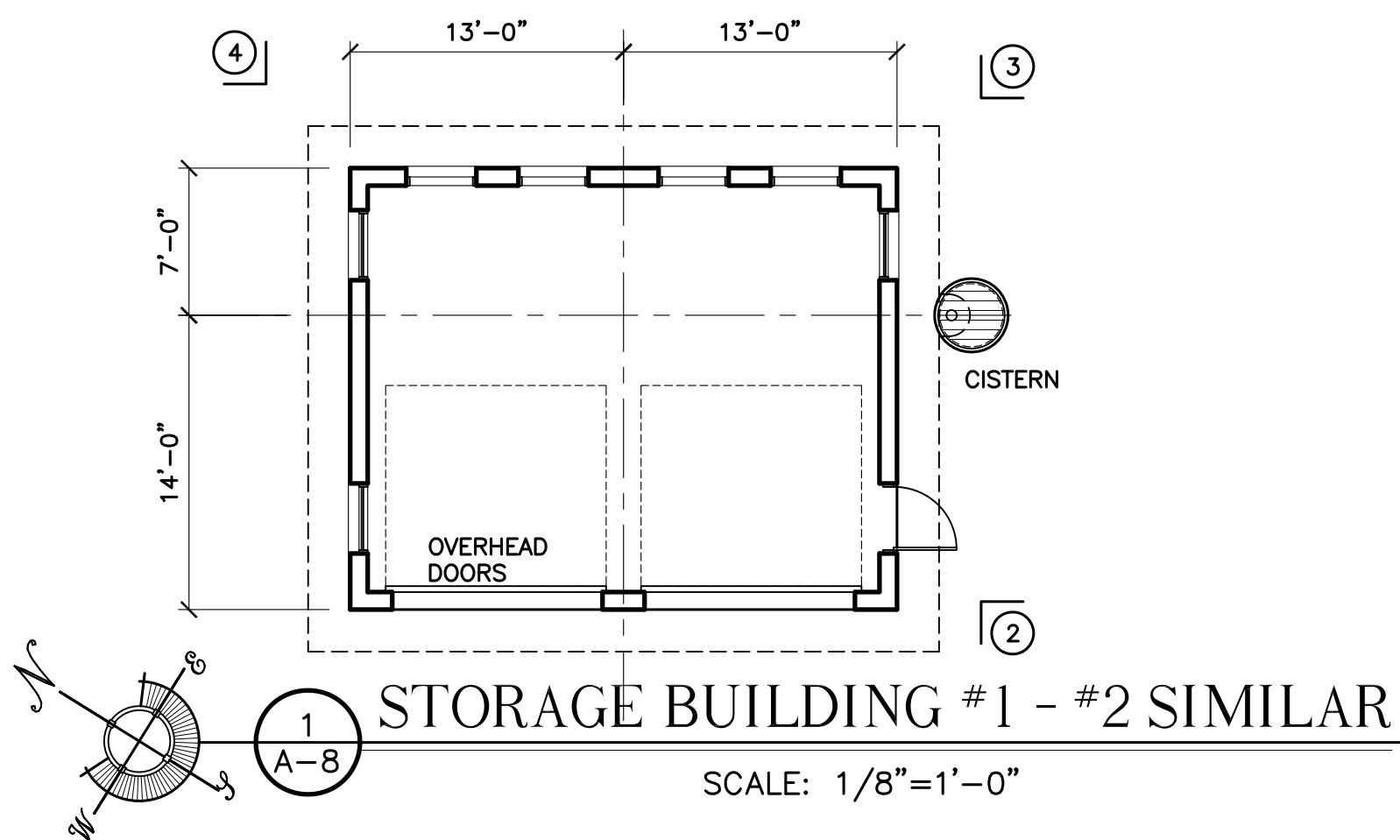
9 FENCE DETAIL  
A-8 SCALE: 1/2"=1'-0"



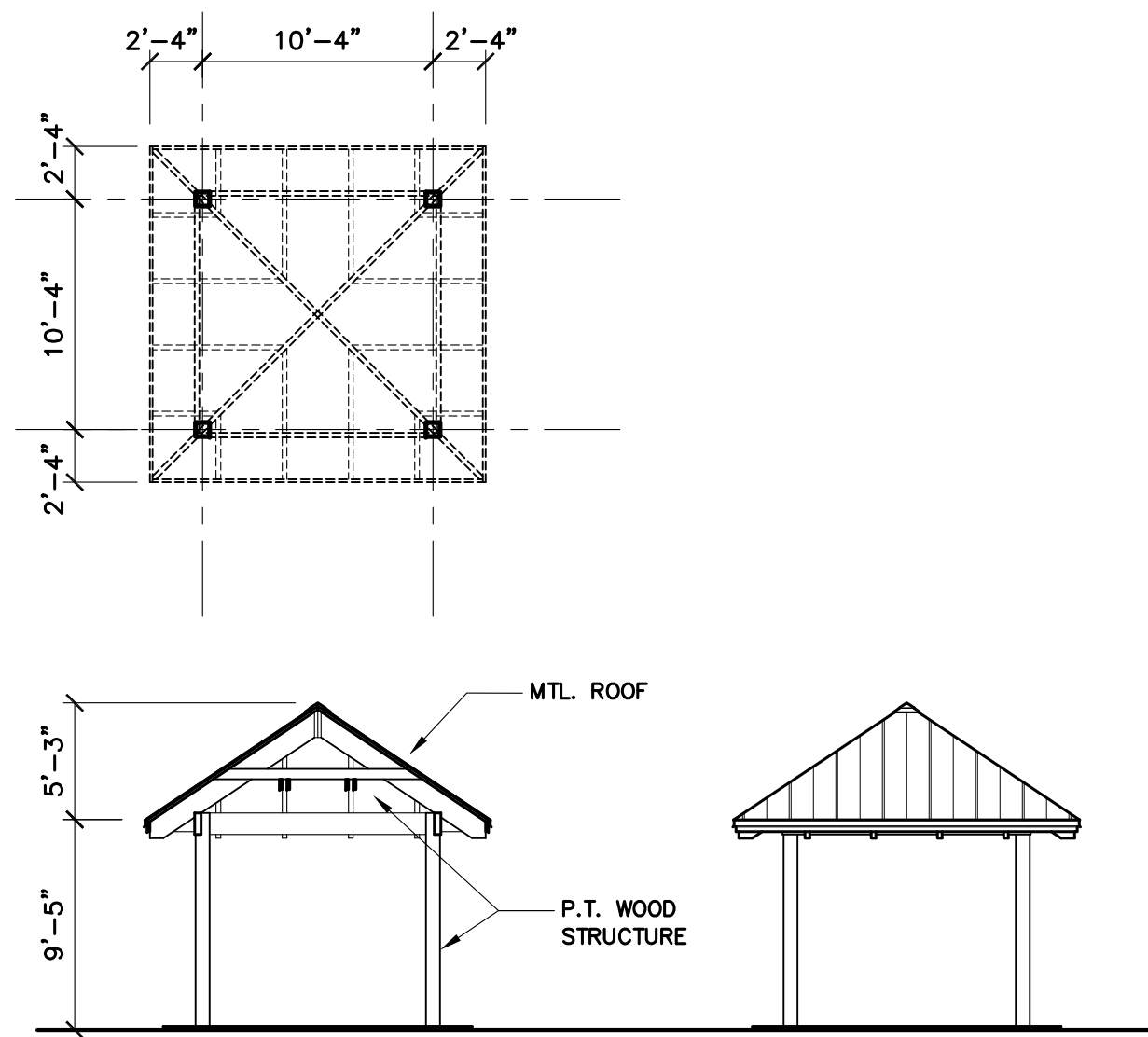
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A-8 SCALE: 1"=1'-0"



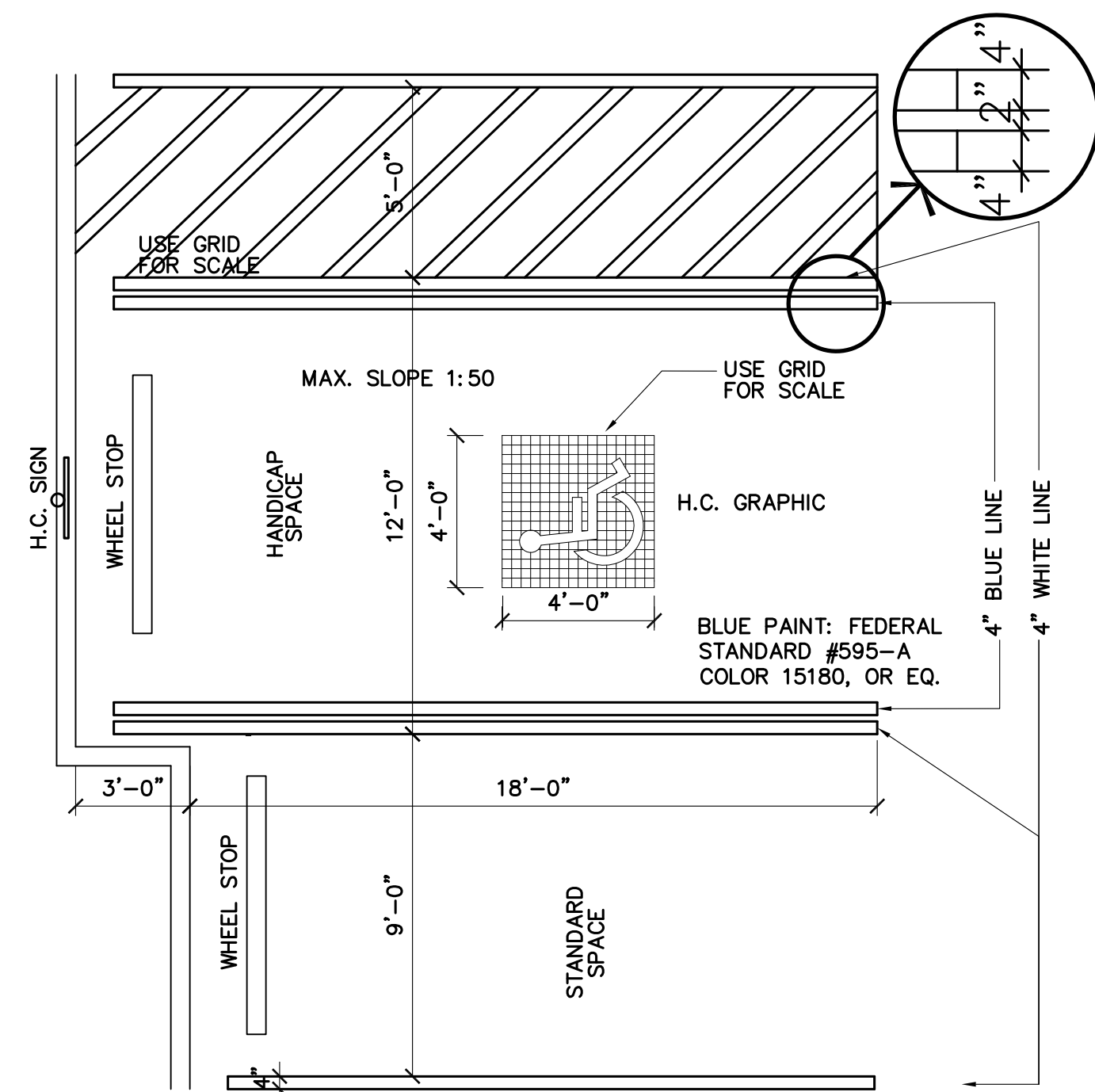
11 BIKE RACK DETAIL AND BOLLARD SIM.  
A-8 SCALE: 1"=1'-0"



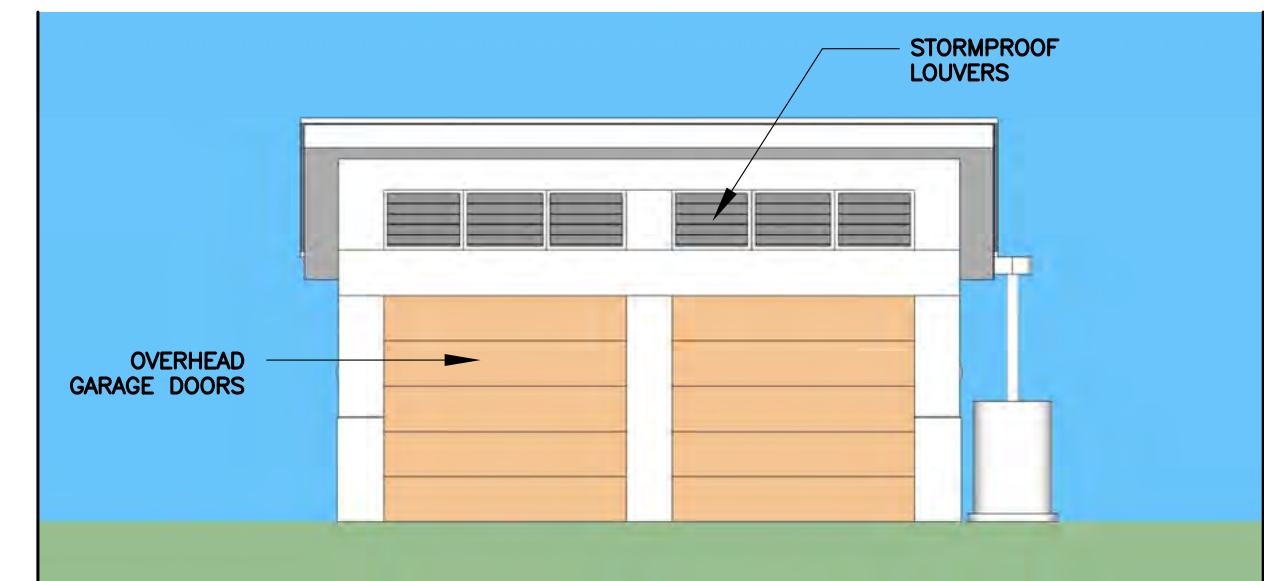
1 STORAGE BUILDING #1 - #2 SIMILAR  
A-8 SCALE: 1/8"=1'-0"



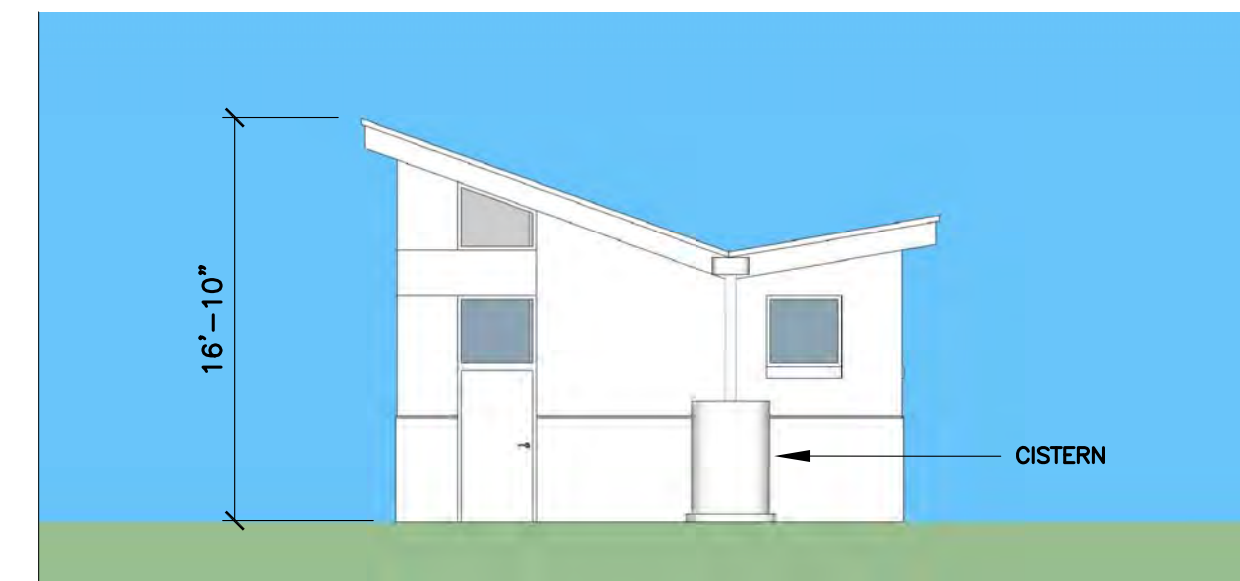
12 SHADE PAVILION  
A-8 SCALE: 1/4"=1'-0"



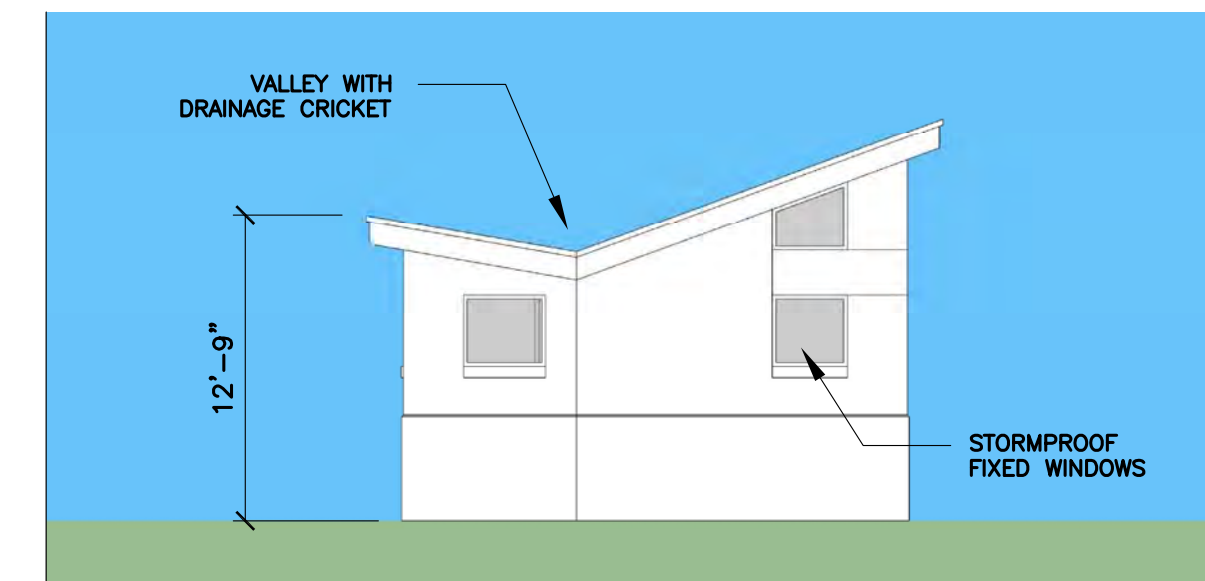
13 H.C. PARKING DETAIL  
A-8 SCALE: 1/4"=1'-0"



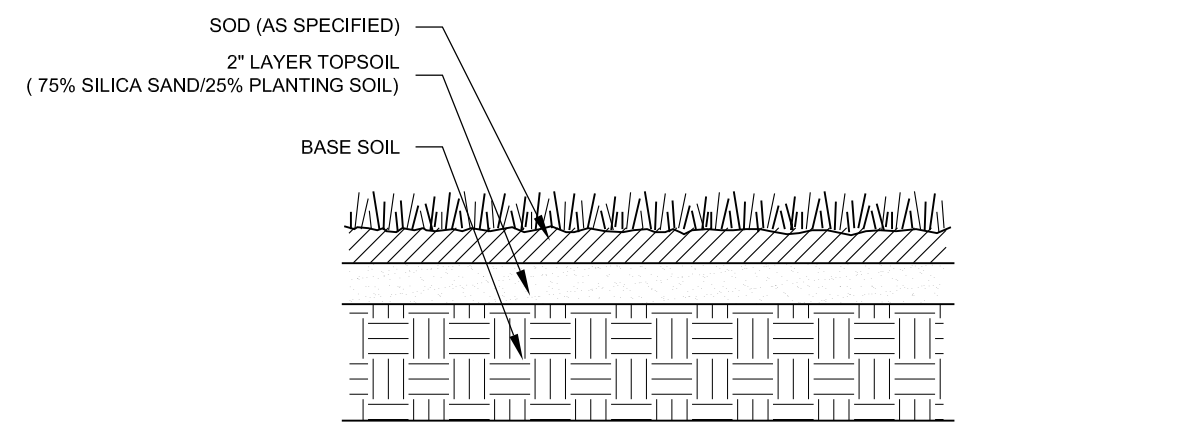
6 FRONT  
A-8 SCALE: 1/8"=1'-0"



7 RIGHT SIDE  
A-8 SCALE: 1/8"=1'-0"

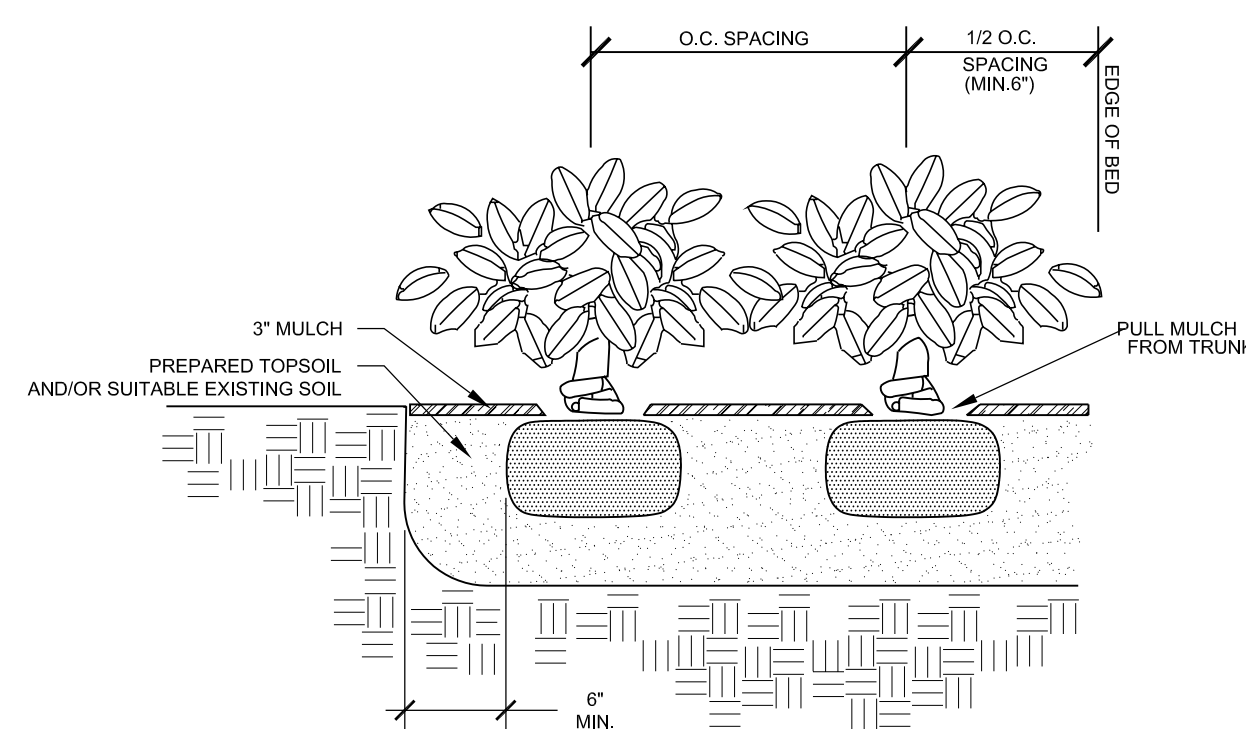


8 LEFT SIDE  
A-8 SCALE: 1/8"=1'-0"



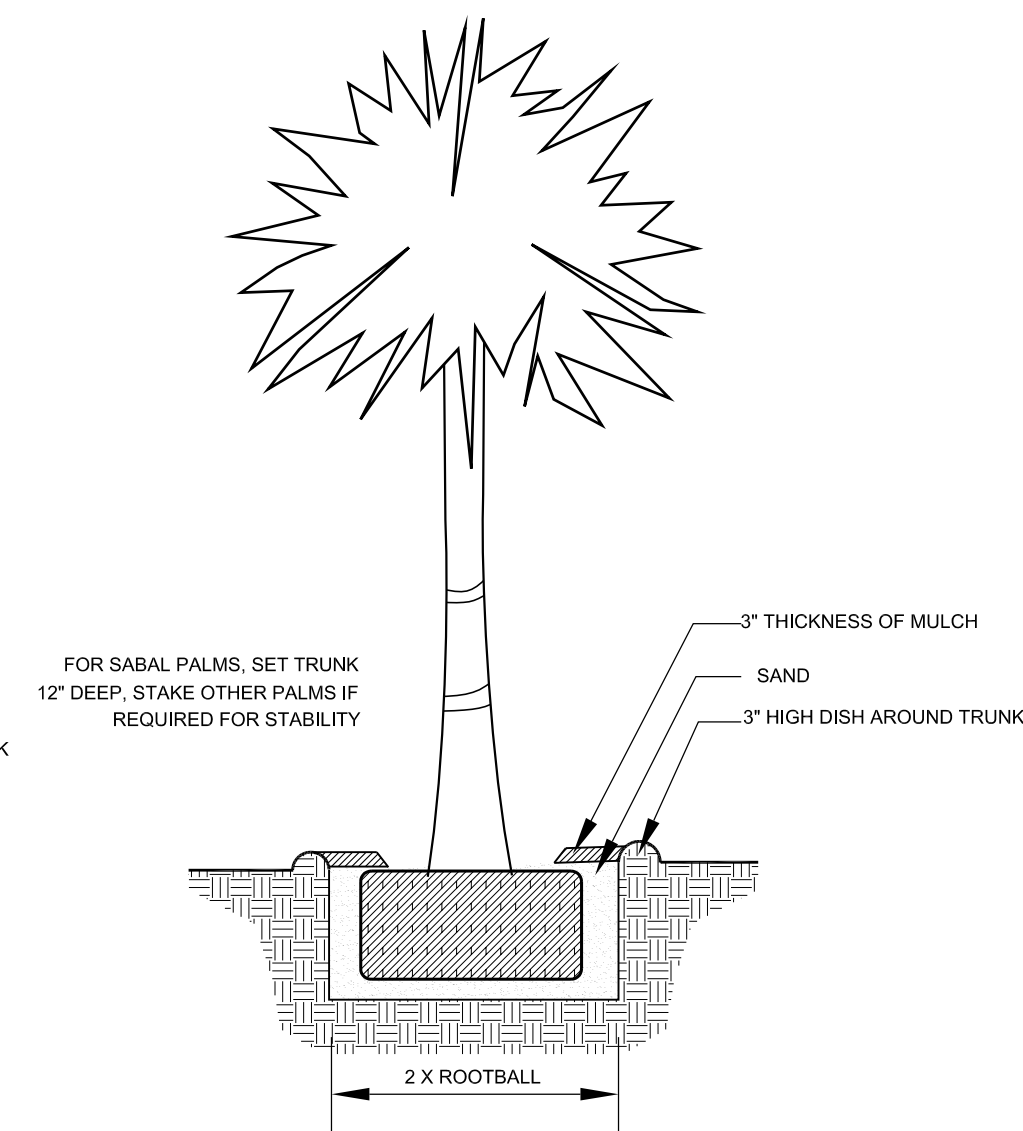
**SODDING DETAIL**

ALL AREAS TO BE SODDED TO RECEIVE 2" TOP LAYER OF SILICA SAND/PLANTING SOIL AS INDICATED.

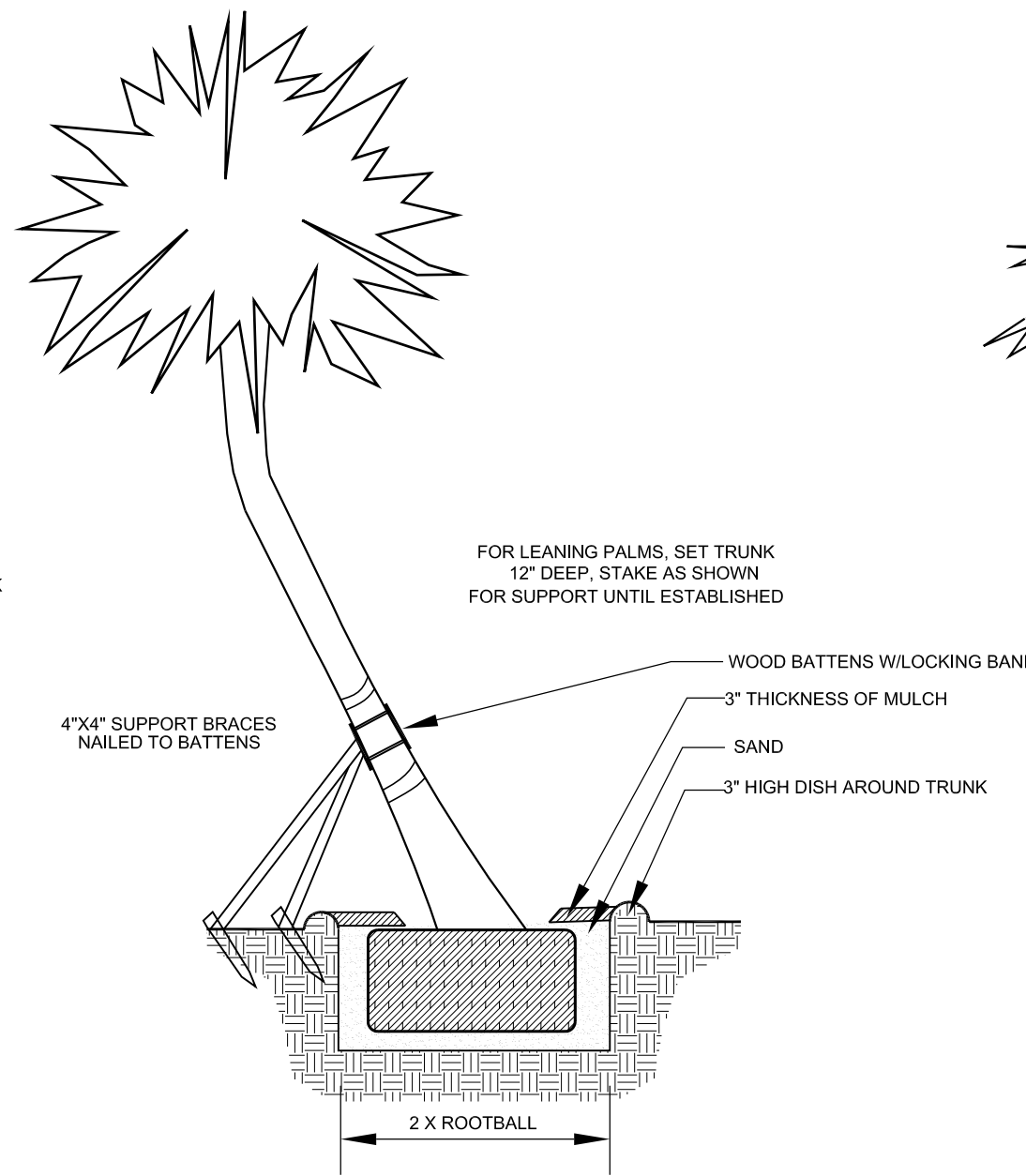


**SHRUB PLANTING DETAIL**

ALL SHRUBS ARE TO BE POSITIONED VERTICALLY REGARDLESS OF THE SLOPE OF THE GROUND IN WHICH THEY ARE PLANTED. WATER RINGS ARE TO BE CONSTRUCTED AT RIGHT ANGLES TO THE TREE OR SHRUB OR IN A MANNER IN WHICH THEY WILL MOST EFFECTIVELY SERVE THE PURPOSE OF RETAINING WATER AT THE BASE OF THE PLANT.

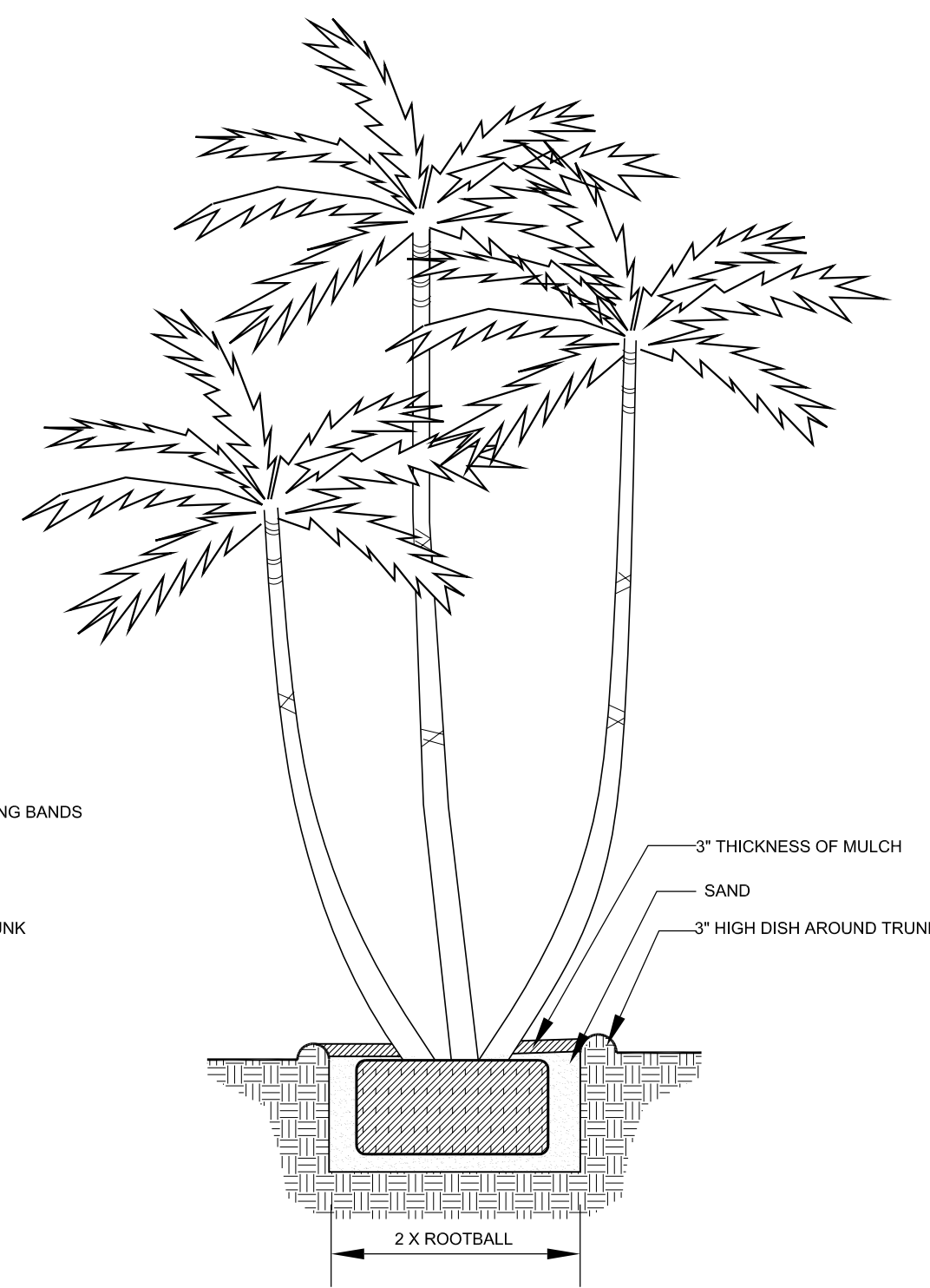


**PALM PLANTING DETAIL**

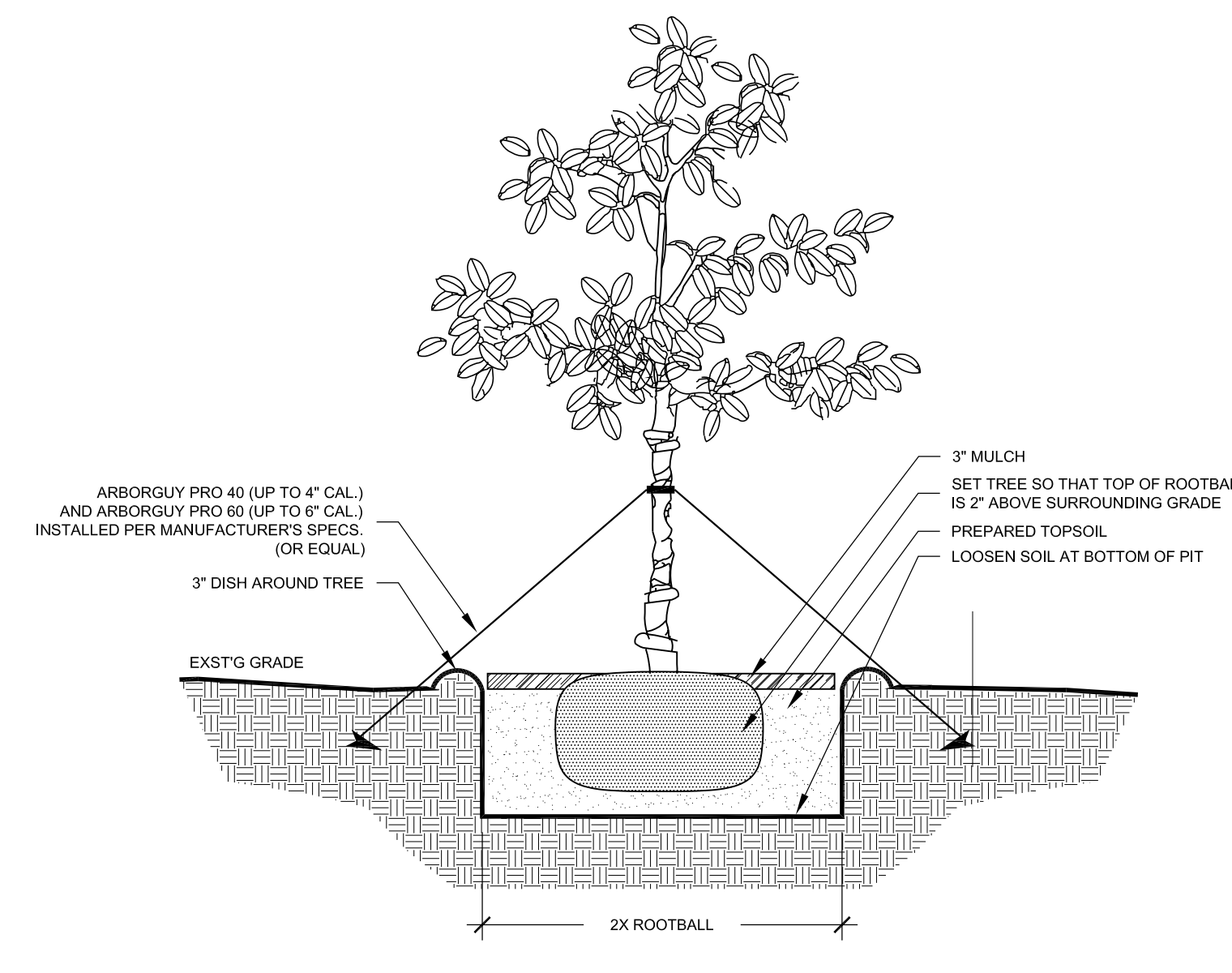


**LEANING PALM PLANTING DETAIL**

DO NOT LEAN MORE THAN 35 DEGREES.



**MULTI-TRUNK PALM PLANTING DETAIL**



**TREE PLANTING DETAIL**

ALL TREES ARE TO BE POSITIONED VERTICALLY REGARDLESS OF THE SLOPE OF THE GROUND IN WHICH THEY ARE PLANTED. WATER RINGS ARE TO BE CONSTRUCTED AT RIGHT ANGLES TO THE TREE OR SHRUB OR IN A MANNER IN WHICH THEY WILL MOST EFFECTIVELY SERVE THE PURPOSE OF RETAINING WATER AT THE BASE OF THE PLANT.

THE ROOTBALL OF THE TREE SHOULD BE POSITIONED IN THE HOLE SO THAT THE FINISHED GRADE OF THE BACKFILL SOIL AND LANDSCAPE SOIL IS 2" LOWER THAN THE TOP OF THE ROOTBALL. MULCH SHOULD COVER THE EDGE OF THE ROOTBALL, DO NOT MULCH ON TOP OF ROOTBALL.

**IRRIGATION NOTES**

100% IRRIGATION COVERAGE SHALL BE PROVIDED TO ALL PROPOSED PLANTING AREAS.

SAID SYSTEM SHALL BE DESIGN / BUILD AND DEvised TO MAXIMIZE WATER CONSERVATION AND SHALL CONFORM TO SUBDIVISION II: SECTION 74 - (295 TO 300) PERMANENT WATER CONSERVATION MEASURES OF THE CITY OF KEY WEST CODE.

CONTRACTOR TO PROVIDE CITY WITH AS-BUILT DRAWINGS OF INSTALLED SYSTEM INCLUDING: VALVE LOCATIONS, HEAD LOCATIONS, PIPE LOCATIONS, CONTROLLER LOCATION, AND BFP LOCATION, ETC...

**GENERAL NOTES:**

CONTINGENT UPON THE TREE COMMISSION'S DETERMINATION OF REPLACEMENT VALUES FOR VEGETATION REMOVED, THE FINAL LANDSCAPE PLAN SHALL ACCURATELY REFLECT REPLACEMENT QUANTITIES BOTH GRAPHICALLY AND IN A TABLE FORMAT.

AT LEAST 70% OF THE SPECIFIED VEGETATION WILL BE NATIVE MATERIAL AS STIPULATED IN THE MINIMUM NATIVE PLANT REQUIREMENT.

THE PROVIDED PLANS ARE CONCEPTUAL ONLY, FINAL LANDSCAPE PLANS TO BE SUBMITTED FOR REVIEW PRIOR TO INSTALLATION.

100% IRRIGATION COVERAGE SHALL BE PROVIDED TO ALL PROPOSED PLANTING AREAS. SAID SYSTEM SHALL BE DESIGN TO MAXIMIZE WATER CONSERVATION.

**SUGGEST PLANT PALETTE** (Quantities shall be provided with Final Landscape Plan)

QTY.	COMMON NAME	BOTANICAL NAME	SIZE	NOTE	NATIVE	QTY.	COMMON NAME	BOTANICAL NAME	SIZE	NOTE	NATIVE
<b>PALMS</b>											
<i>CANOPY AND UNDERSTORY</i>											
	ROYAL PALM	Roystonea elata	8' to 12' grey wood, Fat Trunks	FL #1	NATIVE		JAMAICAN CAPER	Capparis cynophallophora	7 gal., 36"-40" hgt./sprd.	FL #1	NATIVE
	SABAL PALM	Sabal palmetto	8'-16' clr. trnk.	FL #1	NATIVE		SPANISH STOPPER	Eugenia foetida	7 gal., 36"-40" hgt./sprd.	FL #1	NATIVE
	COCONUT PALM (Relocated Palms)	Cocos nucifera	8'-24' o.h.	FL #1			RED STOPPER	Eugenia rhombea	7 gal., 36"-40" hgt./sprd.	FL #1	NATIVE
	THATCH PALM	Thrinax radiata	8' o.h.	FL #1	NATIVE		WILD COFFEE	Psychotria nervosa	3 gal., 24-36" o.h.	FL #1	NATIVE
	KEY THATCH PALM	Thrinax morrisii	8' o.h.	FL #1	NATIVE		DWARF WILD COFFEE	Psychotria ligustrifolia	3 gal.,	FL #1	NATIVE
	SILVER PALM	Coccoloba diversifolia	4'-6' o.h.	FL #1	NATIVE		SILVER PALMETTO	Serenoa repens 'Cinerea'	3 gal., full	FL #1	NATIVE
<b>TREES</b>											
<i>CANOPY</i>											
	MAHOGANY	Sweetenia mahogany	3" cal., 14-16' o.h., 10-12' sprd.	FL #1	NATIVE		COCOPLUM	Chrysobalanus icaco 'Green'	7 gal., full	FL #1	NATIVE
	GREEN BUTTONWOOD	Conocarpus erectus	3" cal., 14-16' o.h., 10-12' sprd.	FL #1	NATIVE		FAKAHATCHEE GRASS	Tripsacum dactyloides	3 gal., full	FL #1	NATIVE
	COFFEE COLUBRINA	Colubrina arborescens	10-14' o.h.	FL #1	NATIVE		SAND CORDGRASS	Spartina bakerii	3 gal., full	FL #1	NATIVE
	SATIN LEAF	Chrysophyllum oliviforme	3" cal., 14-16' o.h., 10-12' sprd.	FL #1	NATIVE		MUHLEY GRASS	Muhlenbergia capillaris	1 gal., full	FL #1	NATIVE
	PIDGON PLUM	Coccoloba diversifolia	3" cal., 14-16' o.h., 10-12' sprd.	FL #1	NATIVE		HORIZONTAL COCOPLUM	Chrysobalanus icaco 'Horizontal'	3 gal., full	FL #1	NATIVE
	GUMBO LIMBO	Bursera simaruba	3" cal., 14-16' o.h., 10-12' sprd.	FL #1	NATIVE		LOCUSTBERRY	Byrsonina lucida	3 gal., full	FL #1	NATIVE
<i>UNDERSTORY</i>											
	LIGNUM VITAE	Guaiacum sanctum	6'-8' o.h.	FL #1	NATIVE		<b>SHRUBS</b>				
	SILVER BUTTONWOOD	Sabal palmetto	10-12' o.h.	FL #1	NATIVE		DWARF FIREBUSH	Hamelia patens 'Compacta'	3 gal., full	FL #1	NATIVE
	BLACK IRONWOOD	Krugiodendrum ferreum	8-10' o.h.	FL #1	NATIVE		COONTIE	Zamia floridana	1 gal., full	FL #1	NATIVE
	CINNECORD	Acacia choriophylla	8'-12' o.h.	FL #1	NATIVE		DWARF LANTANA	Lantna camara 'Dwarf'	1 gal., full	FL #1	NATIVE
	SIMPSON STOPPER	Myrcianthes fragrans	6'-8' o.h.	FL #1	NATIVE		<b>GROUND COVER</b>				
	GEIGER TREE	Cordia sesbestena	10' o.h., b&b	FL #1	NATIVE		DWARF BAHIA SOD				
	FIDDLE WOOD	Citharexylum fruticosum	15 gal., 6-8' o.h.	FL #1	NATIVE						
	SUGAR APPLE	Annona squamosa	25 gal., 8-10' o.h.	FL #1	NATIVE						
	SMALL-LEAF CLUSIA	Clusea guttifera	12'-14' o.h.	FL #1	NATIVE						

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HIGGS BEACH KEY WEST, FL.



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TRAFFIC TECH ENGINEERING

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DATE

07-1-10

REVISIONS

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LBR

PROJECT NUMBER

1004

CLARENCE HIGGS BEACH - PLANTING DETAILS & SUGGESTED PLANT PALETTE

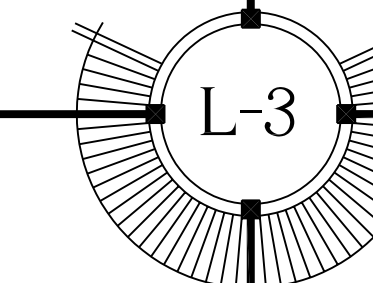
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**EXISTING TREES TO REMAIN**

- = butonwood tree
- = austroian pine trees 6" to 52"
- = coconut trees 4" to 12"
- = palm trees 2" to 10"
- = miscellaneous trees
- = gumbo limbo

**TREE LEGEND**

- TREE ID # - SEE SHEET L-1 FOR TREE IDENTITY
- = RELOCATED TREE (14 TOTAL TREES)
- = RELOCATED COCONUT (115 TOTAL COCONUTS)
- = Canopy Tree - Parking Areas
- = Understory Tree - Parking Areas
- = Native Palm - Parking Areas
- = Canopy Tree - Buffer Areas
- = Understory Tree - Buffer Areas

**GENERAL INFORMATION**

DISTRICT: PS - PUBLIC SERVICES  
 GROSS ACRES: 762,891 S.F. or 17.51 ACRES  
 MAXIMUM IMPERVIOUS AREA: see Civil Plans  
 PROPOSED IMPERVIOUS AREA: see Civil Plans  
 REQUIRED OPEN SPACE: 20% or 152,578 s.f.  
 OPEN SPACE PROVIDED: 20%+ or 152,578+ s.f.

**BLDG. SETBACKS REQ.**

FRONT: 20' (White St.)  
 REAR: 20' (Reynolds St.)  
 SIDEYARD: 15'  
 SHORELINE: 50'

**LANDSCAPE DATA/CALCULATIONS**

**MINIMUM LANDSCAPE AREA**  
 MINIMUM REQUIRED 20% OF BLDG. SITE AREA: 152,578 s.f. or 3.5 acres  
 LANDSCAPE AREA PROVIDED: 152,578+ s.f. or 3.5+ acres

**STREET FRONTAGE REQUIREMENT**

NOTE: 17.51 ACRES REQUIRES 40 L.F. WIDE STRIP BETWEEN VEHICLE USE AREA AND ROW.  
 Per the County approved Site Plan a 40' strip cannot be met. Required Plant Units: 160 / per 100'  
 Below are the provisions provided:

**PARKING AREA 'A': 6' STRIP PROVIDED**

120 L.F. = 192 PLANT UNITS		
48 Shrubs = 48 p.u.	48 Shrubs Provided	
8 Trees = 24 p.u.	6 Trees Provided	
12 Shade Tree = 120 p.u.	6 Shade Trees Provided	
<b>Total = 192 p.u.</b>	<b>126 p.u. provided</b>	

**PARKING AREA 'B': 5.5' STRIP BETWEEN ROAD CURB AND SIDEWALK PROVIDED**

185 L.F. = 296 PLANT UNITS		
0 Shrubs = 0 p.u.	3 Shrubs Provided	
16 Trees = 48 p.u.	5 Trees Provided	
25 Shade Tree = 250 p.u.	6 Shade Trees Provided	
<b>Total = 296 p.u.</b>	<b>78 p.u. provided</b>	

**PARKING AREA 'C': 10'+/- STRIP PROVIDED**

160 L.F. = 256 PLANT UNITS		
60 Shrubs = 60 p.u.	44 Shrubs Provided	
12 Trees = 36 p.u.	4 Trees Provided	
16 Shade Tree = 160 p.u.	8 Shade Trees Provided	
<b>Total = 256 p.u.</b>	<b>136 p.u. provided</b>	

**PARKING AREA 'D': 5.5' STRIP PROVIDED**

100 L.F. = 160 PLANT UNITS		
30 Shrubs = 30 p.u.	7 Shrubs Provided	
10 Trees = 30 p.u.	5 Trees Provided	
10 Shade Tree = 100 p.u.	6 Shade Trees Provided	
<b>Total = 160 p.u.</b>	<b>82 p.u. provided</b>	

**PARKING AREA 'E': 8'+/- STRIP PROVIDED**

180 L.F. = 288 PLANT UNITS		
86 Shrubs = 86 p.u.	55 Shrubs Provided	
14 Trees = 42 p.u.	4 Trees Provided	
16 Shade Tree = 160 p.u.	8 Shade Trees Provided	
<b>Total = 288 p.u.</b>	<b>147 p.u. provided</b>	

**BUFFERYARD/LANDSCAPE SCREENING**

WEST ADJACENCY 'Reynolds Street' (Casa Marina): No Bufferyard Required

240 L.F. = 0 PLANT UNITS		
0 Shrubs = 0 p.u.	0 Shrubs Provided	
0 Trees = 0 p.u.	0 Trees Provided	
0 Shade Tree = 0 p.u.	0 Shade Trees Provided	
<b>Total = 0 p.u.</b>	<b>0 p.u. Provided</b>	

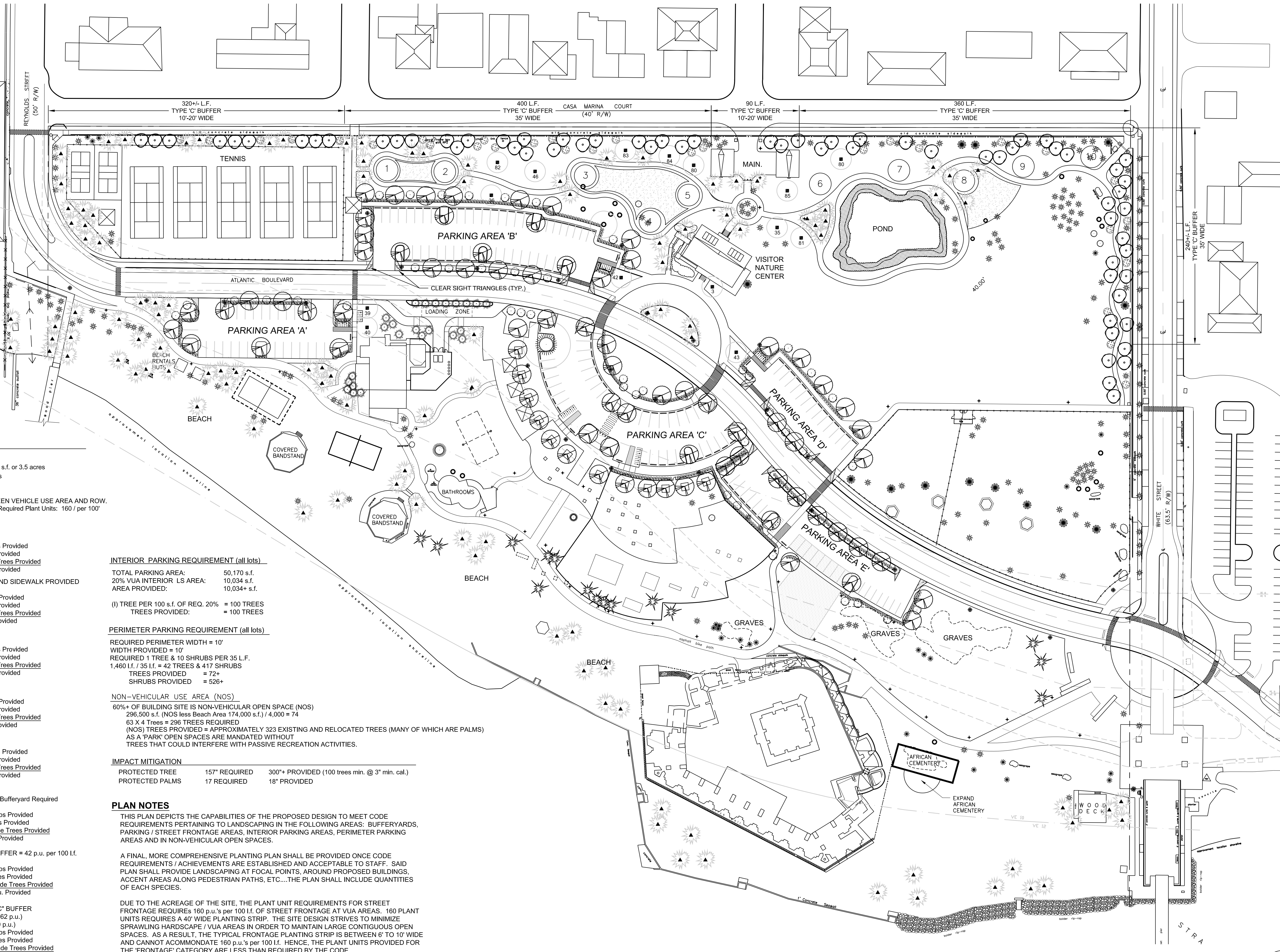
EAST ADJACENCY 'White Street' (residential): 35" "C" BUFFER = 42 p.u. per 100 L.F.

250 L.F. = 105 PLANT UNITS		
0 Shrubs = 0 p.u.	0 Shrubs Provided	
5 Trees = 25 p.u.	10 Trees Provided	
8 Shade Tree = 80 p.u.	18 Shade Trees Provided	
<b>Total = 105 p.u.</b>	<b>230 p.u. Provided</b>	

NORTH ADJACENCY 'Casa Marina Court' (residential): "C" BUFFER

1,170 L.F. = (410 L.F. @ 10'-20" = 84 p.u./100' Total 262 p.u.)		
(760 L.F. @ 35" = 42 p.u./100' Total 320 p.u.)		
0 Shrubs = 0 p.u.	0 Shrubs Provided	
37 Trees = 185 p.u.	57 Trees Provided	
40 Shade Tree = 400 p.u.	46 Shade Trees Provided	
<b>Total = 585 p.u.</b>	<b>745 p.u. Provided</b>	

<b>PLANT UNIT TOTALS:</b>	
TOTAL PLANT UNITS REQUIRED:	1,884
TOTAL PLANT UNITS PROVIDED:	1,541



**INTERIOR PARKING REQUIREMENT (all lots)**

TOTAL PARKING AREA:	50,170 s.f.
20% VUA INTERIOR LS AREA:	10,034 s.f.
AREA PROVIDED:	10,034+ s.f.

(I) TREE PER 100 s.f. OF REQ. 20% = 100 TREES  
 TREES PROVIDED = 100 TREES

**PERIMETER PARKING REQUIREMENT (all lots)**

REQUIRED PERIMETER WIDTH = 10'  
 WIDTH PROVIDED = 10'  
 REQUIRED 1 TREE & 10 SHRUBS PER 35 L.F.  
 1,460 L.F. / 35 L.F. = 42 TREES & 417 SHRUBS  
 TREES PROVIDED = 72+  
 SHRUBS PROVIDED = 526+

**NON-VEHICULAR USE AREA (NOS)**

60%+ OF BUILDING SITE IS NON-VEHICULAR OPEN SPACE (NOS)  
 296,500 s.f. (NOS less Beach Area 174,000 s.f.) / 4,000 = 74  
 63 X 4 Trees = 296 TREES REQUIRED  
 (NOS) TREES PROVIDED = APPROXIMATELY 323 EXISTING AND RELOCATED TREES (MANY OF WHICH ARE PALMS)  
 AS A PARK OPEN SPACES ARE MANDATED WITHOUT TREES THAT COULD INTERFERE WITH PASSIVE RECREATION ACTIVITIES.

**IMPACT MITIGATION**

PROTECTED TREE	157" REQUIRED	300"+ PROVIDED (100 trees min. @ 3" min. cal.)
PROTECTED PALMS	17 REQUIRED	18" PROVIDED

**PLAN NOTES**

THIS PLAN DEPICTS THE CAPABILITIES OF THE PROPOSED DESIGN TO MEET CODE REQUIREMENTS PERTAINING TO LANDSCAPING IN THE FOLLOWING AREAS: BUFFERYARDS, PARKING / STREET FRONTAGE AREAS, INTERIOR PARKING AREAS, PERIMETER PARKING AREAS AND IN NON-VEHICULAR OPEN SPACES.

A FINAL MORE COMPREHENSIVE PLANTING PLAN SHALL BE PROVIDED ONCE CODE REQUIREMENTS / ACHIEVEMENTS ARE ESTABLISHED AND ACCEPTABLE TO STAFF. SAID PLAN SHALL PROVIDE LANDSCAPING AT FOCAL POINTS, AROUND PROPOSED BUILDINGS, ACCENT AREAS ALONG PEDESTRIAN PATHS, ETC....THE PLAN SHALL INCLUDE QUANTITIES OF EACH SPECIES.

DUE TO THE ACREAGE OF THE SITE, THE PLANT UNIT REQUIREMENTS FOR STREET FRONTAGE REQUIRES 160 p.u.'s per 100 L.F. OF STREET FRONTAGE AT VUA AREAS. 160 PLANT UNITS REQUIRES A 40' WIDE PLANTING STRIP. THE SITE DESIGN STRIVES TO MINIMIZE SPRAWLING HARDSCAPE / VUA AREAS IN ORDER TO MAINTAIN LARGE CONTIGUOUS OPEN SPACES. AS A RESULT, THE TYPICAL FRONTAGE PLANTING STRIP IS BETWEEN 6' TO 10' WIDE AND CANNOT ACCOMMODATE 160 p.u.'s per 100 L.F. HENCE, THE PLANT UNITS PROVIDED FOR THE 'FRONTAGE' CATEGORY ARE LESS THAN REQUIRED BY THE CODE.

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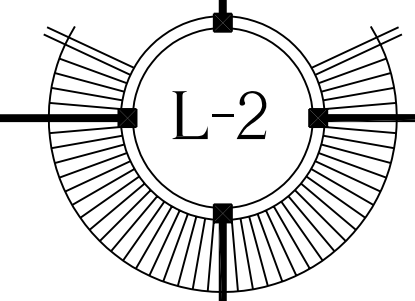
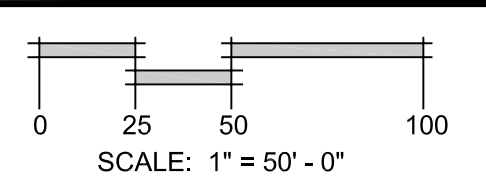
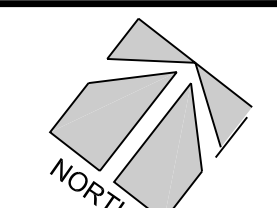
PROJECT NUMBER  
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CLARENCE HIGGS BEACH - CODE PLANTING & TREE RELOCATIONS

KEY WEST, FLORIDA



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 August 30, 2011  
 KW Planning Dpt

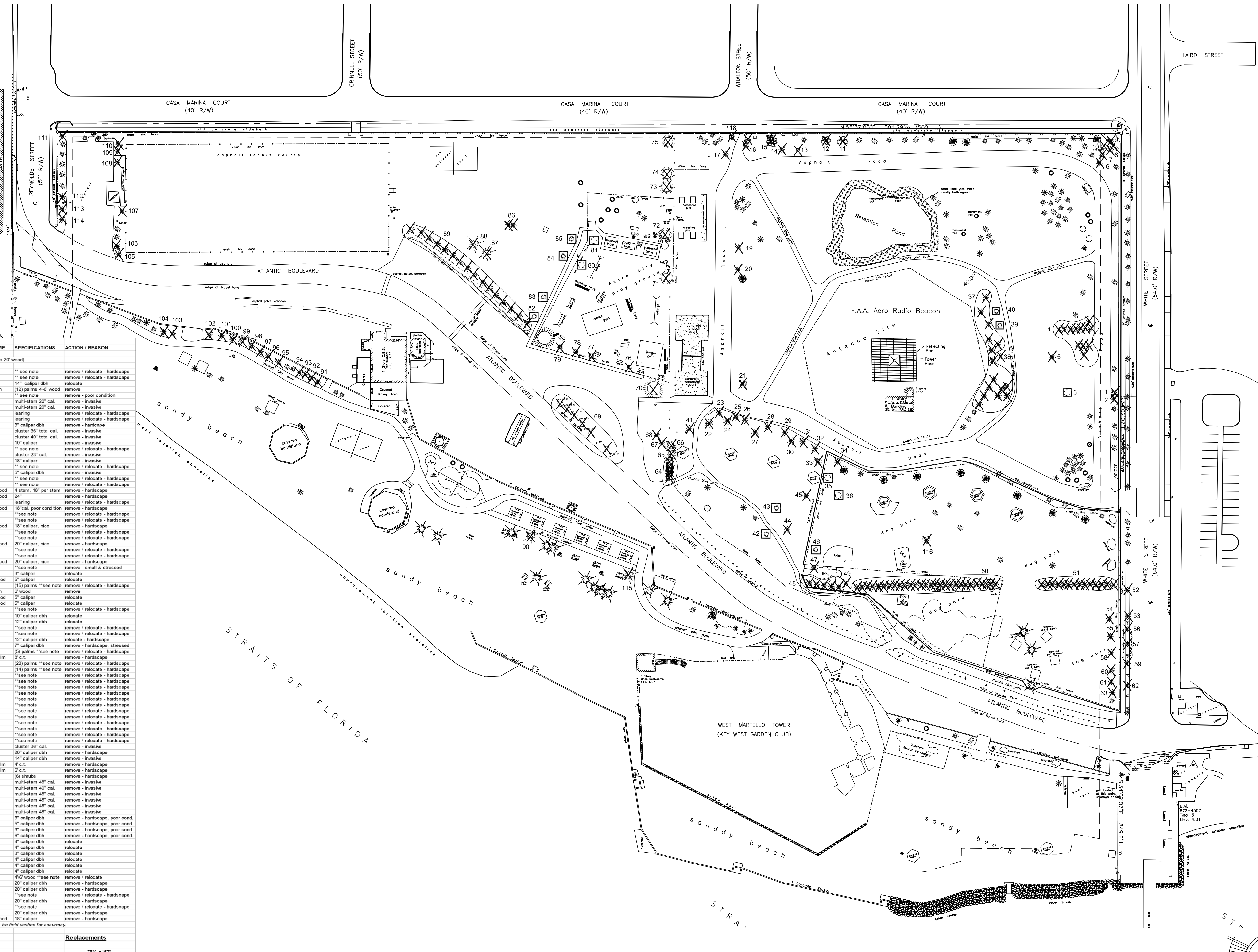


GENERAL TREE LEGEND

- = buttonwood tree
- = australian pine trees 6" to 52"
- = coconut trees 4" to 12"
- = palm trees 2" to 10"
- = miscellaneous trees
- = gumbo limbo
- = TO BE REMOVED
- = TO BE RELOCATED
- = IMPACTED TREE ID # (TYPICAL)

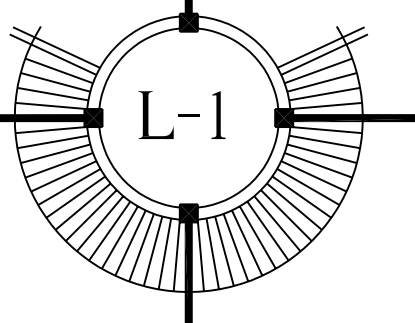
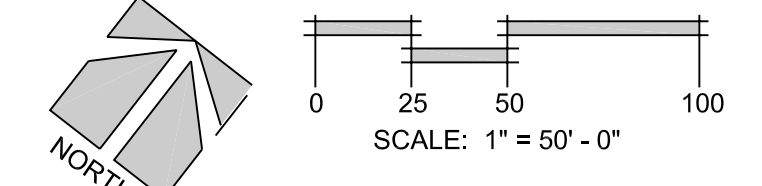
TREE #	BOTANICAL NAME	COMMON NAME	SPECIFICATIONS	ACTION / REASON
<b>Palms and Trees</b> (Coconut Palms range from 6" wood to 20" wood)				
1	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
2	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
3	<i>Bursera simaruba</i>	Gumbo Limbo	14" caliper dbh	relocate
4	<i>Adonia manillii</i>	Christmas Palm	(12) palms 4-6' wood	remove
5	<i>Cocos nucifera</i>	Coconut	** see note	remove - poor condition
6	<i>Hibiscus tiliaceus</i>	Mahoe	multi-stem 20" cal	remove - invasive
7	<i>Hibiscus tiliaceus</i>	Mahoe	multi-stem 20" cal	remove - invasive
8	<i>Cocos nucifera</i>	Coconut	leaning	remove / relocate - hardscape
9	<i>Cocos nucifera</i>	Coconut	leaning	remove / relocate - hardscape
10	<i>Coccoloba uifera</i>	Seagrape	3" caliper dbh	remove - hardscape
11	<i>Hibiscus tiliaceus</i>	Mahoe	cluster 36" total cal.	remove - invasive
12	<i>Hibiscus tiliaceus</i>	Mahoe	cluster 40" total cal.	remove - invasive
13	<i>Hibiscus tiliaceus</i>	Mahoe	10" caliper	remove - invasive
14	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
15	<i>Hibiscus tiliaceus</i>	Mahoe	cluster 23" cal.	remove - invasive
16	<i>Hibiscus tiliaceus</i>	Mahoe	18" caliper	remove - invasive
17	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
18	<i>Calophyllum</i>	Beautyleaf	5" caliper dbh	remove - invasive
19	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
20	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
21	<i>Conocarpus erectus</i>	Green Buttonwood	4 stem, 16" per stem	remove - hardscape
22	<i>Conocarpus erectus</i>	Green Buttonwood	24"	remove - hardscape
23	<i>Cocos nucifera</i>	Coconut	leaning	remove / relocate - hardscape
24	<i>Conocarpus erectus</i>	Green Buttonwood	18" cal. poor condition	remove - hardscape
25	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
26	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
27	<i>Conocarpus erectus</i>	Green Buttonwood	18" caliper, nice	remove - hardscape
28	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
29	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
30	<i>Conocarpus erectus</i>	Green Buttonwood	20" caliper, nice	remove - hardscape
31	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
32	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
33	<i>Conocarpus erectus</i>	Green Buttonwood	20" caliper, nice	remove - hardscape
34	<i>Cocos nucifera</i>	Coconut	** see note	remove - small & stressed
35	<i>Bursera simaruba</i>	Gumbo Limbo	3" caliper	relocate
36	<i>Conocarpus erectus</i>	Green Buttonwood	5" caliper	relocate
37	<i>Cocos nucifera</i>	Coconut	(15) palms **see note	remove / relocate - hardscape
38	<i>Adonia manillii</i>	Christmas Palm	6' wood	remove
39	<i>Conocarpus erectus</i>	Silver Buttonwood	5" caliper	relocate
40	<i>Conocarpus erectus</i>	Silver Buttonwood	5" caliper	relocate
41	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
42	<i>Swetena mahogany</i>	Mahogany	10" caliper dbh	relocate
43	<i>Swetena mahogany</i>	Mahogany	12" caliper dbh	relocate
44	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
45	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
46	<i>Swetena mahogany</i>	Mahogany	12" caliper dbh	relocate - hardscape
47	<i>Swetena mahogany</i>	Mahogany	7" caliper dbh	remove - hardscape, stressed
48	<i>Cocos nucifera</i>	Coconut	(5) palms **see note	remove / relocate - hardscape
49	<i>Washingtonia robusta</i>	Washington Palm	6' c.t.	remove - hardscape
50	<i>Cocos nucifera</i>	Coconut	(28) palms **see note	remove / relocate - hardscape
51	<i>Cocos nucifera</i>	Coconut	(14) palms **see note	remove / relocate - hardscape
52	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
53	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
54	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
55	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
56	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
57	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
58	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
59	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
60	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
61	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
62	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
63	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
64	<i>Hibiscus tiliaceus</i>	Mahoe	cluster 36" cal.	remove - invasive
65	<i>Casuarina equisetifolia</i>	Australian Pine	20" caliper dbh	remove - hardscape
66	<i>Hibiscus tiliaceus</i>	Mahoe	14" caliper dbh	remove - invasive
67	<i>Washingtonia robusta</i>	Washington Palm	4' c.t.	remove - hardscape
68	<i>Washingtonia robusta</i>	Washington Palm	6' c.t.	remove - hardscape
69	<i>Coccoloba uifera</i>	Seagrape	(6) shrubs	remove - hardscape
70	<i>Hibiscus tiliaceus</i>	Mahoe	multi-stem 48" cal.	remove - invasive
71	<i>Hibiscus tiliaceus</i>	Mahoe	multi-stem 40" cal.	remove - invasive
72	<i>Hibiscus tiliaceus</i>	Mahoe	multi-stem 48" cal.	remove - invasive
73	<i>Hibiscus tiliaceus</i>	Mahoe	multi-stem 48" cal.	remove - invasive
74	<i>Hibiscus tiliaceus</i>	Mahoe	multi-stem 48" cal.	remove - invasive
75	<i>Hibiscus tiliaceus</i>	Mahoe	multi-stem 48" cal.	remove - invasive
76	<i>Bursera simaruba</i>	Gumbo Limbo	3" caliper dbh	remove - hardscape, poor cond.
77	<i>Bursera simaruba</i>	Gumbo Limbo	5" caliper dbh	remove - hardscape, poor cond.
78	<i>Bursera simaruba</i>	Gumbo Limbo	3" caliper dbh	remove - hardscape, poor cond.
79	<i>Bursera simaruba</i>	Gumbo Limbo	6" caliper dbh	remove - hardscape, poor cond.
80	<i>Bursera simaruba</i>	Gumbo Limbo	4" caliper dbh	relocate
81	<i>Bursera simaruba</i>	Gumbo Limbo	4" caliper dbh	relocate
82	<i>Swetena mahogany</i>	Mahogany	3" caliper dbh	relocate
83	<i>Swetena mahogany</i>	Mahogany	4" caliper dbh	relocate
84	<i>Swetena mahogany</i>	Mahogany	4" caliper dbh	relocate
85	<i>Swetena mahogany</i>	Mahogany	4" caliper dbh	relocate
86	<i>Cocos nucifera</i>	Coconut	4'6" wood **see note	remove / relocate
87	<i>Casuarina equisetifolia</i>	Australian Pine	20" caliper dbh	remove - hardscape
88	<i>Casuarina equisetifolia</i>	Australian Pine	20" caliper dbh	remove - hardscape
89	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
90	<i>Casuarina equisetifolia</i>	Australian Pine	20" caliper dbh	remove - hardscape
91-114	<i>Cocos nucifera</i>	Coconut	** see note	remove / relocate - hardscape
115	<i>Casuarina equisetifolia</i>	Australian Pine	20" caliper dbh	remove - hardscape
116	<i>Conocarpus erectus</i>	Green Buttonwood	18" caliper	remove - hardscape

Trees	Totals	Replacements
Relocated	14	
Removed (Protected Trees)	209	75% = 157
Removed (Exotic / Invasive)	592	0
<b>Palms</b>	<b>Totals</b>	<b>Replacements</b>
Relocated	115	Coconuts
Removed	17	Including non-native
For each Removed Coconut and NOT relocated, Replace with 4" Thinnor Radiata.		



CLARENCE HIGGS BEACH - TREE IMPACT PLAN  
KEY WEST, FLORIDA

RECEIVED  
August 30, 2011  
KW Planning Dpt



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HIGGS BEACH  
KEY WEST, FL.

LANDWISE  
DESIGN

MITCHELL PLANNING & DESIGN

INNOVATIVE ENGINEERING  
GROUP INC.

TRAFFIC TECH ENGINEERING

ISLAND SURVEYING INC.

PEREZ ENGINEERING  
& DEVELOPMENT, INC.

SEAL

THESE DRAWINGS MAY  
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AUTHORIZATION BY  
WILLIAM P. HORN

DATE  
07-1-10

REVISIONS

DRAWN BY  
LBR

PROJECT NUMBER  
1004



MITCHELL PLANNING & DESIGN

INNOVATIVE ENGINEERING  
GROUP INC.

TRAFFIC TECH ENGINEERING

ISLAND SURVEYING INC.



SEAL

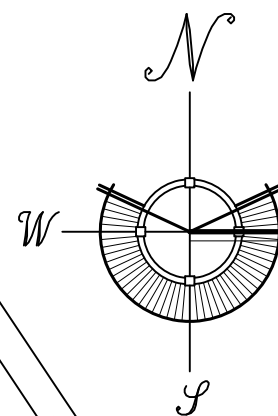
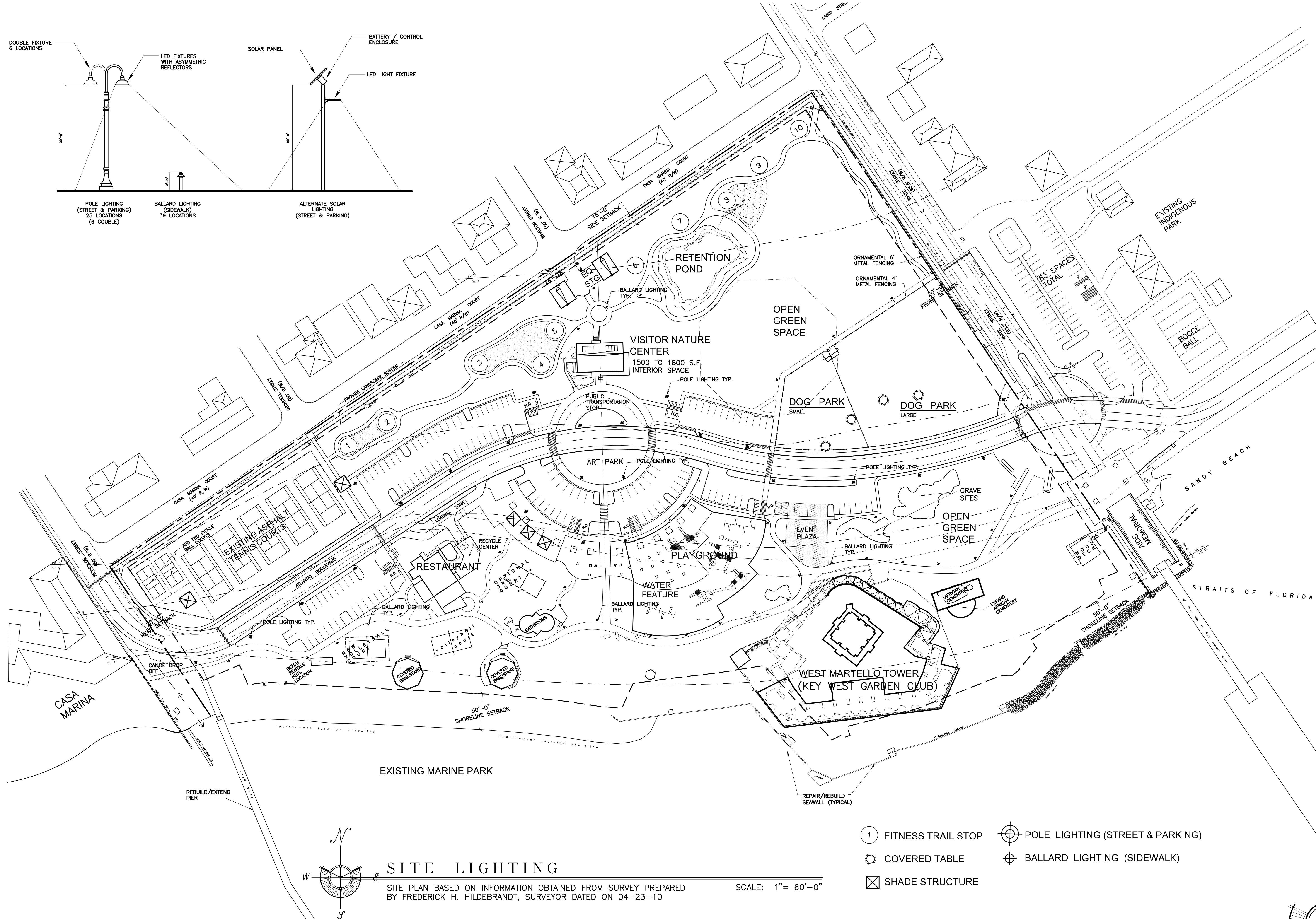
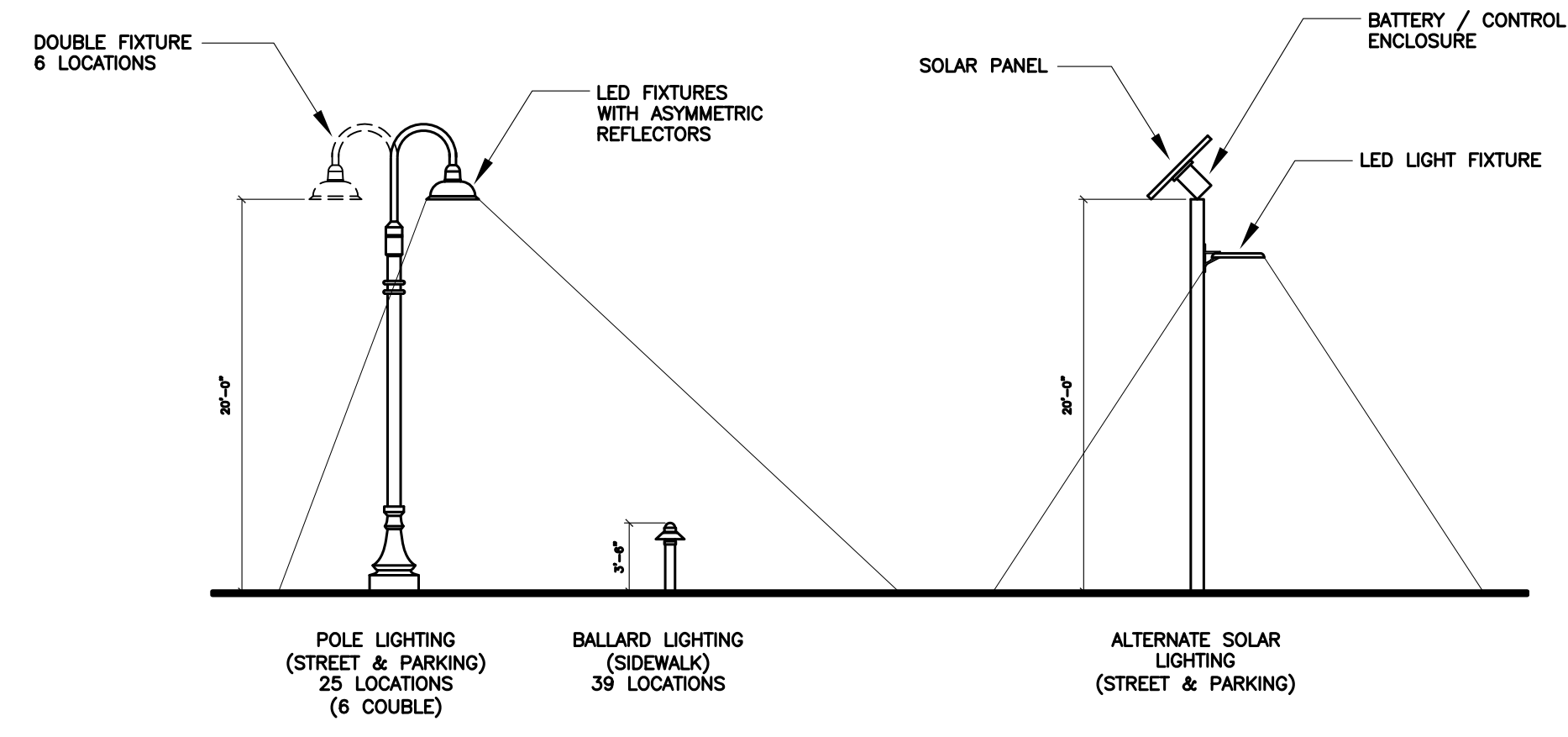
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DATE  
06-22-10  
06-30-11 DRC

REVISIONS  
12-30-10  
01-06-11  
02-25-11

DRAWN BY  
EMA

PROJECT  
NUMBER  
1004



**SITE LIGHTING**

SITE PLAN BASED ON INFORMATION OBTAINED FROM SURVEY PREPARED BY FREDERICK H. HILDEBRANDT, SURVEYOR DATED ON 04-23-10

SCALE: 1" = 60'-0"

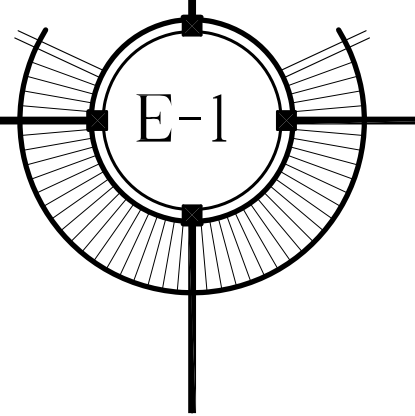
- ① FITNESS TRAIL STOP
- ⊙ COVERED TABLE
- ⊠ SHADE STRUCTURE
- ⊕ POLE LIGHTING (STREET & PARKING)
- ⊕ BALLARD LIGHTING (SIDEWALK)

**CLARENCE HIGGS BEACH - MASTER PLAN**

KEY WEST, FLORIDA



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# SHEET C-2 CONCEPTUAL DRAINAGE PLAN "A"

# SHEET C-3 CONCEPTUAL DRAINAGE PLAN "B"

# SHEET C-4 CONCEPTUAL DRAINAGE PLAN "C"

Water Quantity and Water Quality Calculations			
<b>Water Quantity - Predevelopment</b>			
Basin	A =	12.825	ac
Pervious Area		8.452	ac
Impervious Area		4.373	ac
% Impervious		34.10%	
Rainfall for 25yr/24hr event	P <sub>24</sub> =	9	in
Rainfall for 25yr/3day event	P <sub>72</sub> =	12.23	in
Depth to Water Table		2	ft
Predeveloped Available Storage		1.88	in
Soil Storage	S =	1.24	in
Q <sub>pre</sub> = $\frac{(P_{24} - 0.23)^2}{(P_{24} + 0.85)}$	Q <sub>pre</sub> =	10.86	in
Runoff Volume from 25 year/ 3 day storm	V <sub>25yr/24h</sub> =	139.29	ac-in
<b>Water Quantity - Postdevelopment</b>			
Basin	A =	12.825	ac
Pervious Area		7.519	ac
Impervious Area		5.306	ac
% Impervious		41.4%	
Rainfall for 25yr/24hr event	P <sub>24</sub> =	9	in
Rainfall for 25yr/3day event	P <sub>72</sub> =	12.23	in
Depth to Water Table		2	ft
Developed Available Storage		1.88	in
Soil Storage	S =	1.10	in
Q <sub>post</sub> = $\frac{(P_{24} - 0.23)^2}{(P_{24} + 0.85)}$	Q <sub>post</sub> =	11.00	in
Runoff Volume from 25 year/ 3 day storm	V <sub>25yr/24h</sub> =	141.09	ac-in
<b>Postdevelopment - Predevelopment</b>			
Q <sub>pre/post</sub> = Q <sub>post</sub> - Q <sub>pre</sub>	Q <sub>pre/post</sub> =	0.14	in
Pre/Post Volume = Q <sub>pre/post</sub> x A	V <sub>pre/post</sub> =	1.80	ac-in
<b>Water Quality</b>			
Basin A		12.825	ac
Surface Water		0.154	ac
Roof Area		0.264	ac
Pavement/Walkways		5.042	ac
Pervious area		7.519	ac
Site area for Water Quality (Total area - (water surface + roof area))		12.408	ac
Impervious area for water Quality (Site area for Water Quality - Pervious area)		4.889	ac
% Impervious		39%	
A) One inch of runoff from project area		12.825	ac-in
B) 2.5 inches times percent impervious (2.5 x percent impervious x (site area - surface water))		12.373	ac-in
<b>Comparison of Water Quality Methods</b>			
		12.825	>
		12.373	ac-in
Pretreatment Volume Required(50% Credit)	6.413	ac-in	23,278 of
Pretreatment Volume provided by Dry Retention	6.619	ac-in	24,028 of

**LEGEND**

- PROJECT LIMITS
- DRY RETENTION AREA
- EXISTING GRADE
- STORMWATER PIPE
- STORMWATER INLET (FDOT CURB INLET)
- STORMWATER INLET (FDOT DITCH BOTTOM INLET)
- STORMWATER INLET (NYLOPLAST YARD BASIN)
- STORMWATER FLOW
- ⊙ STORMWATER MANHOLE

NOTE: SYMBOLS IN LEGEND ARE NOT TO SCALE

SCALE 1"=40'

BAR IS TWO INCHES ON ORIGINAL DRAWINGS IF NOT TWO INCHES ON THIS SHEET ADJUST SCALES ACCORDINGLY

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**TAMPA OFFICE**  
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TEL: (813) 573-1616 FAX: (813) 288-0710

**PEREZ ENGINEERING & DEVELOPMENT, INC.**  
CERTIFICATE OF AUTHORIZATION NO. 8579

ALLEN E. PEREZ, P.E.  
Florida P.E. NO. 51468  
June 30, 2011

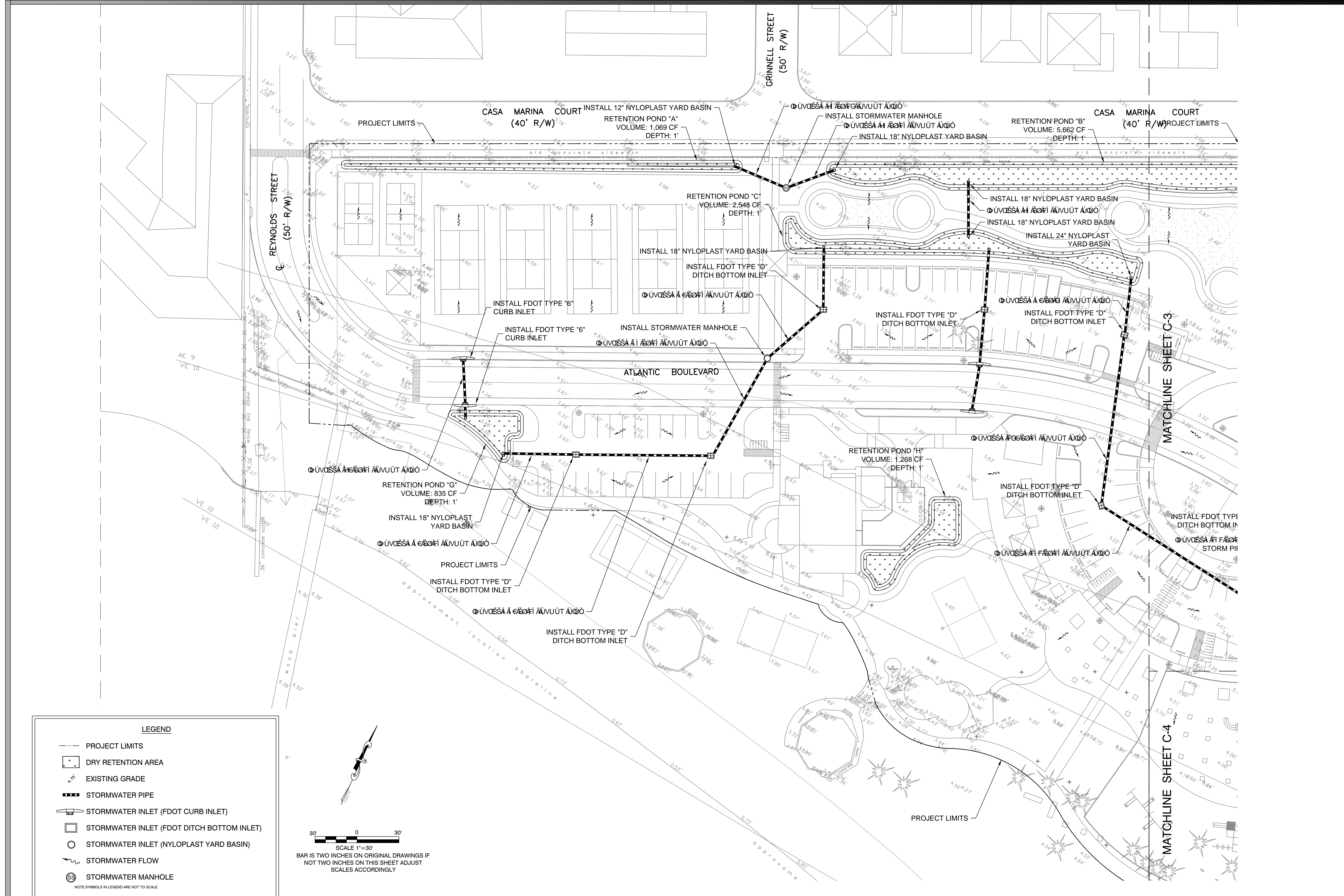
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REVISIONS:	1	2	3	4	5	6
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	1	2	3	4	5	6

CLARENCE HIGGS BEACH  
KEY WEST, FL 33040  
CONCEPTUAL DRAINAGE PLAN

JOB NO. 111009  
DRAWN RTM  
DESIGNED AEP  
CHECKED AEP  
QC SHEET C-1

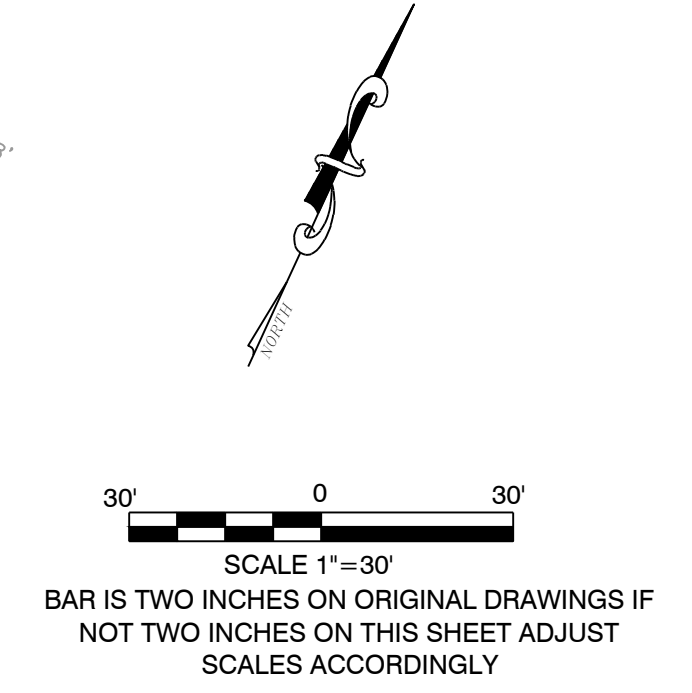




**LEGEND**

- PROJECT LIMITS
- DRY RETENTION AREA
- ~ EXISTING GRADE
- STORMWATER PIPE
- ⊥ STORMWATER INLET (FDOT CURB INLET)
- ⊥ STORMWATER INLET (FDOT DITCH BOTTOM INLET)
- STORMWATER INLET (NYLOPLAST YARD BASIN)
- ~ STORMWATER FLOW
- ⊙ STORMWATER MANHOLE

NOTE: SYMBOLS IN LEGEND ARE NOT TO SCALE



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June 30, 2011

ORIGINAL: JUNE 2011 #120/1

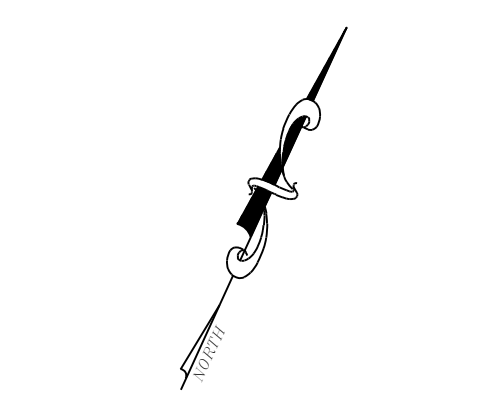
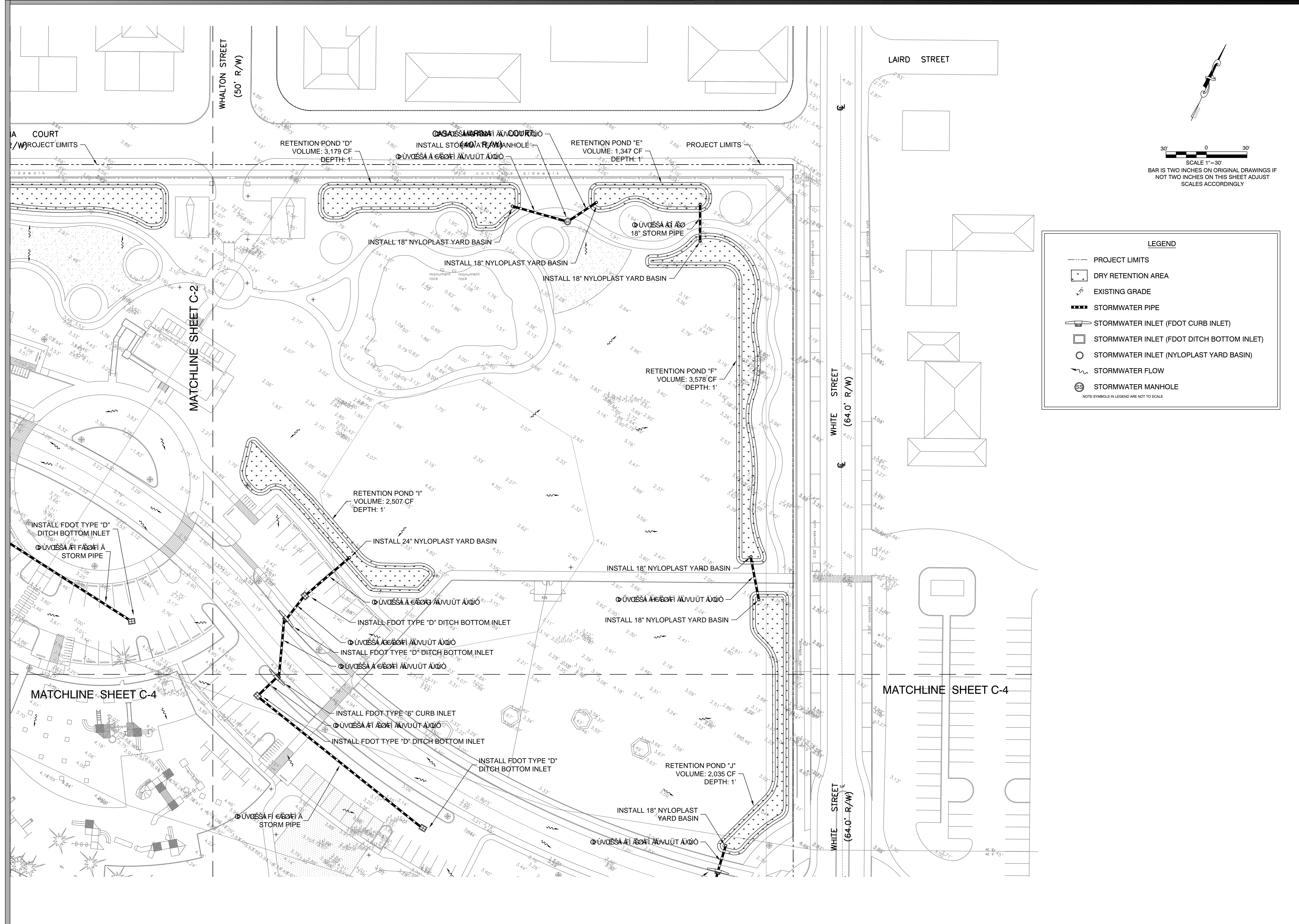
REVISIONS:	DATE	DESCRIPTION
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CLARENCE HIGGS BEACH

KEY WEST, FL 33040

**CONCEPTUAL DRAINAGE PLAN A**

JOB NO.	111009
DRAWN	RTM
DESIGNED	AEP
CHECKED	AEP
QC	
SHEET	C-2



SCALE 1"=30'  
 BAR IS TWO INCHES ON ORIGINAL DRAWINGS IF  
 NOT TWO INCHES ON THIS SHEET ADJUST  
 SCALES ACCORDINGLY

**LEGEND**

- PROJECT LIMITS
- DRY RETENTION AREA
- ~ EXISTING GRADE
- STORMWATER PIPE
- ⊥ STORMWATER INLET (FDOT CURB INLET)
- ⊥ STORMWATER INLET (FDOT DITCH BOTTOM INLET)
- STORMWATER INLET (NYLOPLAST YARD BASIN)
- STORMWATER FLOW
- ⊙ STORMWATER MANHOLE

NOTE: SYMBOLS IN LEGEND ARE NOT TO SCALE

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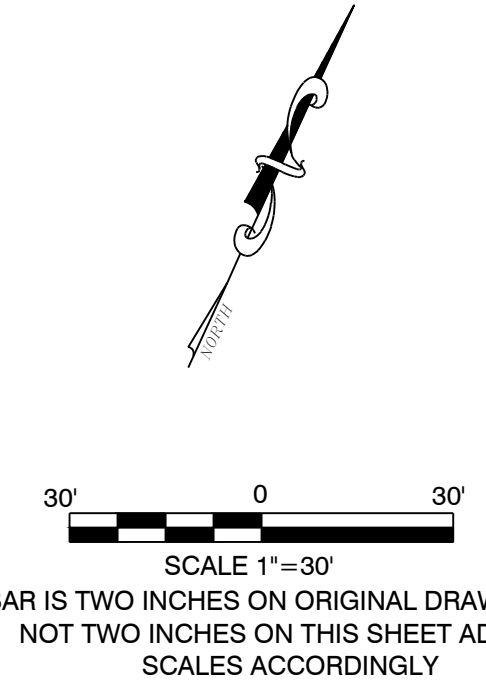
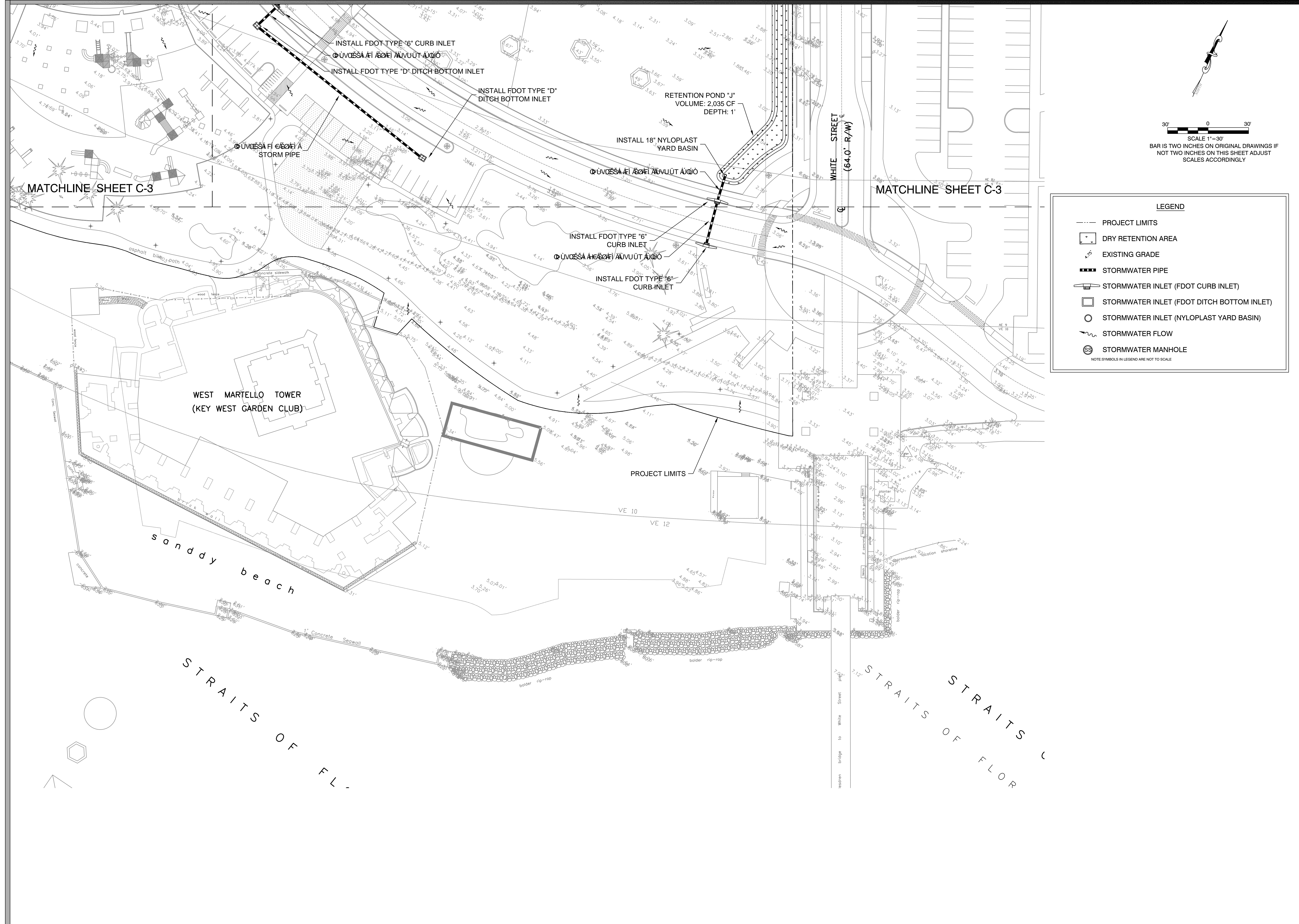
ORIGINAL: JUNE 2011 6/29/11

CLARENCE HIGGS BEACH

KEY WEST, FL 33040

**CONCEPTUAL DRAINAGE PLAN B**

JOB NO.	111009
DRAWN	RTM
DESIGNED	AEP
CHECKED	AEP
QC	
SHEET	C-3



**LEGEND**

- PROJECT LIMITS
- DRY RETENTION AREA
- EXISTING GRADE
- STORMWATER PIPE
- STORMWATER INLET (FDOT CURB INLET)
- STORMWATER INLET (FDOT DITCH BOTTOM INLET)
- STORMWATER INLET (NYLOPLAST YARD BASIN)
- STORMWATER FLOW
- SM STORMWATER MANHOLE

NOTE: SYMBOLS IN LEGEND ARE NOT TO SCALE

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 Florida P.E. NO. 51468  
 June 30, 2011

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3		
4		
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CLARENCE HIGGS BEACH  
 KEY WEST, FL 33040  
**CONCEPTUAL DRAINAGE PLAN C**

JOB NO.	111009
DRAWN	RTM
DESIGNED	AEP
CHECKED	AEP
QC	
SHEET	C-4