

PROJECT :

# ACQUA ON THE BAY

4098 NE 167TH STREET  
NORTH MIAMI BEACH | FLORIDA 33160

OWNER:  
ICAPITAL PROJECT MANAGEMENT  
951 BRICKELL AVE UNIT 3708  
MIAMI, FL 33131

EXECUTIVE ARCHITECT:

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e miami@itecdesign.net  
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KEY PLAN:

## PERMIT SET

ISSUE DATE: 11-18-2015

PROJECT No.: 1527

DRAWN BY: ME/IP APPROVED BY: AG

ALL DRAWING AND WRITTEN MATERIALS  
HEREIN CONSTITUTE ORIGINAL WORK OF  
THE ARCHITECT AND MAY ONLY BE  
DUPLICATED WITH THEIR WRITTEN  
CONSENT.

SEAL:



SIGNATURE:  
ARTURO G. GRIEGO  
LIC# AR94011

SHEET TITLE:  
COVER SHEET &  
LIST OF DRAWINGS

SCALE:

N.T.S.

SHEET No.:

# G-0

itec design inc. 2015

# ACQUA ON THE BAY

4098 NE 167TH STREET | NORTH MIAMI BEACH | FLORIDA 33160



CONCEPT RENDERING

## LIST OF DRAWINGS:

### GENERAL

- G-0 COVER SHEET & LIST OF DRAWINGS
- G-1 GENERAL NOTES & ABBREVIATIONS
- G-2 ZONING INFORMATION
- G-3 SITE PLAN
- G-4 LOT COVERAGE & OPEN SPACE DIAGRAMS
- G-5 F.L.R. DIAGRAMS
- G-6 SITE PICTURES

### ARCHITECTURAL

- FLOOR PLANS (1/8"=1'-0")
- A1-1.01 GROUND LEVEL FLOOR PLAN
  - A1-1.02 TYP. FLOOR PLAN
  - A1-1.03 ROOF PLAN
- A1-2.01 ENLARGED UNIT FLOOR PLAN
- A1-2.02 ENLARGED UNIT FLOOR PLAN

- BUILDING ELEVATIONS (1/8"=1'-0")
- A2-1.01 SOUTH & NORTH EAST ELEVATION
  - A2-1.02 WEST & EAST ELEVATION

#### BUILDING ELEVATIONS RENDERING

- A2-2.01 FRONT RENDERING
- A2-2.02 REAR RENDERING

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1



**PROPERTY ADDRESS & FOLIO NUMBER:**

4098 NE 167TH STREET | NORTH MIAMI BEACH | FLORIDA 33160  
 Folio #: 07-2210-002-1950  
 Folio #: 07-2210-002-1960

**LEGAL DESCRIPTION:**

SEE SURVEY

**SCOPE OF WORK:**

NEW CONSTRUCTION OF MIXED USE MULTIFAMILY RESIDENTIAL DEVELOPMENT

**GOVERNING CODES:**

FLORIDA BUILDING CODE, 2014 5TH EDITION  
 FAIR HOUSING  
 NFPA 101 - LIFE SAFETY CODE 2012 EDITION  
 FLORIDA FIRE PREVENTION CODE, 2014 5TH EDITION  
 2011 NATIONAL ELECTRICAL CODE  
 2014 FBC - MECHANICAL  
 2014 FBC - PLUMBING  
 2014 FAC

**TYPE OF CONSTRUCTION:**

TYPE I CONSTRUCTION - CONCRETE COLUMNS, CONCRETE SLAB -  
 TYPE I PROTECTED NFPA 13 - CBS EXTERIOR WALLS

**OCCUPANCY CLASSIFICATION:**

RESIDENTIAL GROUP R2  
 AS PER FBC 2014, CHAPTER 3

**AREA BREAKDOWN**

LEVEL 01 = 3,700 S.F.  
 LEVEL 02 = 7,993 S.F.  
 LEVEL 03 = 7,993 S.F.  
 LEVEL 04 = 7,993 S.F.

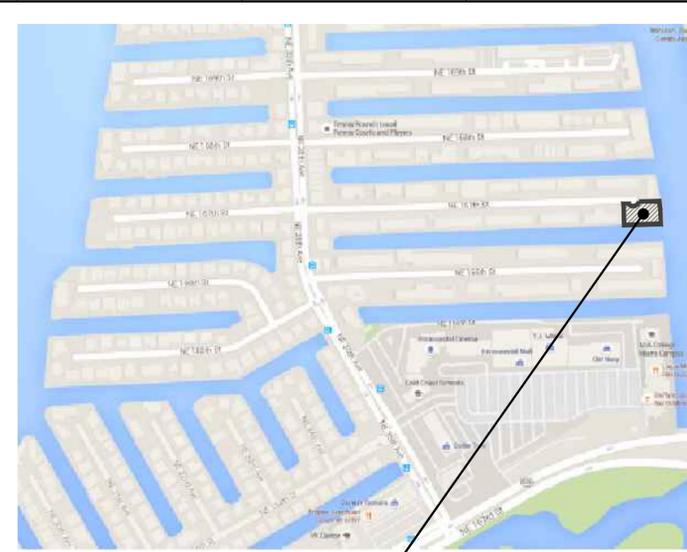
TOTAL AREA = 27,679 S.F.

**BUILDING DATA:**

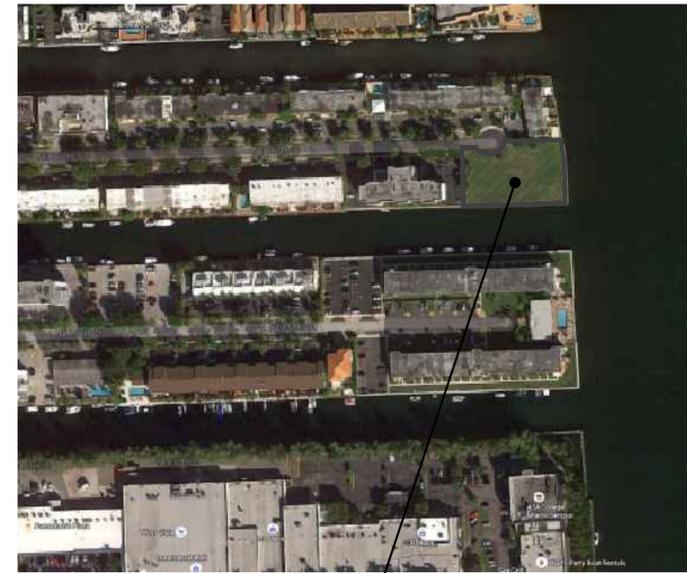
	PROPOSED
<b>BUILDING AREA</b>	LEVEL 01 = 16092.8 SQ. FT. LEVEL 02 = 9,846.5 SQ. FT. LEVEL 03 = 9,846.5 SQ. FT. LEVEL 04 = 9,846.5 SQ. FT. TERRACE/ROOF LVL = 1,000 SQ. FT. TOTAL AREA = 46,633.5 SQ. FT.
<b>UNIT COUNT</b>	LEVEL 02 = 4 UNITS LEVEL 03 = 4 UNITS LEVEL 04 = 4 UNITS TOTAL UNIT COUNT = 12 UNITS
<b>UNIT BREAKDOWN</b>	LEVELS 02 TO 04 (3) 3 BED X 3 LVLS = 9 UNITS (1) 2 BED X 3 LVLS = 3 UNITS TOTAL UNITS = 12 UNITS

**SITE ZONING:**

	REQUIRED/ALLOWED	PROPOSED																												
<b>LOT AREA</b>	9,000 SQ. FT. MIN 27,098 SQ FT (0.62 ACRES)																													
<b>LOT COVERAGE</b>	TOTAL LOT COVERAGE ALLOWED = 25% MAX. 27,098 S.F. X 0.25 = 6, 775 S.F.	10, 942 SQ.FT. VARIANCE REQUEST																												
<b>F.A.R.</b> EASTERN SHORES (MIN. UNITS SIZES)	<table border="1"> <thead> <tr> <th colspan="4">UNIT SIZE</th> </tr> <tr> <th>UNIT TYPE</th> <th>REQUIRED MIN. SIZE</th> <th>PROVIDED UNIT AREA</th> <th># OF UNITS</th> </tr> </thead> <tbody> <tr> <td>A (3 BED)</td> <td>1,200 S.F.</td> <td>1,617S.F.</td> <td>3</td> </tr> <tr> <td>B (2 BED)</td> <td>1,000 S.F.</td> <td>1,434 S.F.</td> <td>3</td> </tr> <tr> <td>C (3 BED)</td> <td>1,200 S.F.</td> <td>1,906 S.F.</td> <td>3</td> </tr> <tr> <td>D (3 BED)</td> <td>1,200 S.F.</td> <td>1,553 S.F.</td> <td>3</td> </tr> <tr> <td colspan="3"></td> <td><b>12</b></td> </tr> </tbody> </table>		UNIT SIZE				UNIT TYPE	REQUIRED MIN. SIZE	PROVIDED UNIT AREA	# OF UNITS	A (3 BED)	1,200 S.F.	1,617S.F.	3	B (2 BED)	1,000 S.F.	1,434 S.F.	3	C (3 BED)	1,200 S.F.	1,906 S.F.	3	D (3 BED)	1,200 S.F.	1,553 S.F.	3				<b>12</b>
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			<b>12</b>																											
<b>DENSITY</b>	19 UNITS /ACRE MAX. (27098/143660) * 19 = 11.8 UNITS MAX.	(3) LEVEL X (4) DWELLING UNITS = 12 DWELLING UNITS TOTAL DENSITY ALLOWED = 11.8 UNITS TOTAL DENSITY PROPOSED = 12 UNITS																												
<b>PERVIOUS AREA</b>	30% MIN. = 8,129.4 SQ.FT. TOTAL REQUIRED = 8,129 SQ.FT.	TOTAL PERVIOUS AREA PROVIDED = 10, 530 SQ.FT.																												
<b>SETBACKS</b>	<table border="1"> <thead> <tr> <th>FRONT (NORTH SIDE)</th> <th>25'-0" MIN.</th> <th>25'-8"</th> </tr> </thead> <tbody> <tr> <td>NORTH SIDE (INTERIOR) (1) STORY</td> <td>15'-0" MIN.</td> <td>15'-0"</td> </tr> <tr> <td>(2) - (3) STORY</td> <td>20'-0" MIN.</td> <td></td> </tr> <tr> <td>ONE SIDE (INTERIOR)</td> <td>20'-0" MIN.</td> <td>20'-10"</td> </tr> <tr> <td>REAR</td> <td>25'-0" MIN</td> <td>9'-5" (VARIANCE REQUEST)</td> </tr> </tbody> </table>	FRONT (NORTH SIDE)	25'-0" MIN.	25'-8"	NORTH SIDE (INTERIOR) (1) STORY	15'-0" MIN.	15'-0"	(2) - (3) STORY	20'-0" MIN.		ONE SIDE (INTERIOR)	20'-0" MIN.	20'-10"	REAR	25'-0" MIN	9'-5" (VARIANCE REQUEST)														
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<b>MAX. BUILDING HEIGHT</b>	MAX 3 STORIES/ OR 35' MAXIMUM HEIGHT	4 STORIES / 49'-9" (VARIANCE REQUEST)																												
<b>PARKING</b>	<u>RESIDENTIAL PARKING</u> 3 / PER (2) OR (3) BEDROOM UNITS (3 X 12 UNITS) = 36 PARKING SPACES PARKING SPACES REQ. FOR RESIDENTIAL = 36 PK. SP. TOTAL PARKING SPACES REQUIRED = 36 PARKING SPACES 1 / PER 25 MIN. HDCP PARKING SPACES REQUIRED (1.5 SPACES)	PARKING SPACES PROVIDED PER LEVEL: GND. LVL. = 36 PK. SP. TOTAL PARKING SPACES PROVIDED = 36 PK. SP. (2 HDCP SPACES 12' x18' INCLUDED IN TOTAL) (4 VISITOR SPACES 9' x18' INCLUDED IN TOTAL)																												
<b>BICYCLE PARKING</b>	36 PK.SP. REQ / 20 = 5 BICYCLE RACKS	9 BIKE RACKS																												



**1 LOCATION MAP**  
 SCALE: N.T.S.



**2 AERIAL VIEW**  
 SCALE: N.T.S.

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 4098 NE 167TH STREET  
 NORTH MIAMI BEACH | FLORIDA 33160

OWNER:  
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 951 BRICKELL AVE UNIT 3708  
 MIAMI, FL 33131

EXECUTIVE ARCHITECT:  
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KEY PLAN:

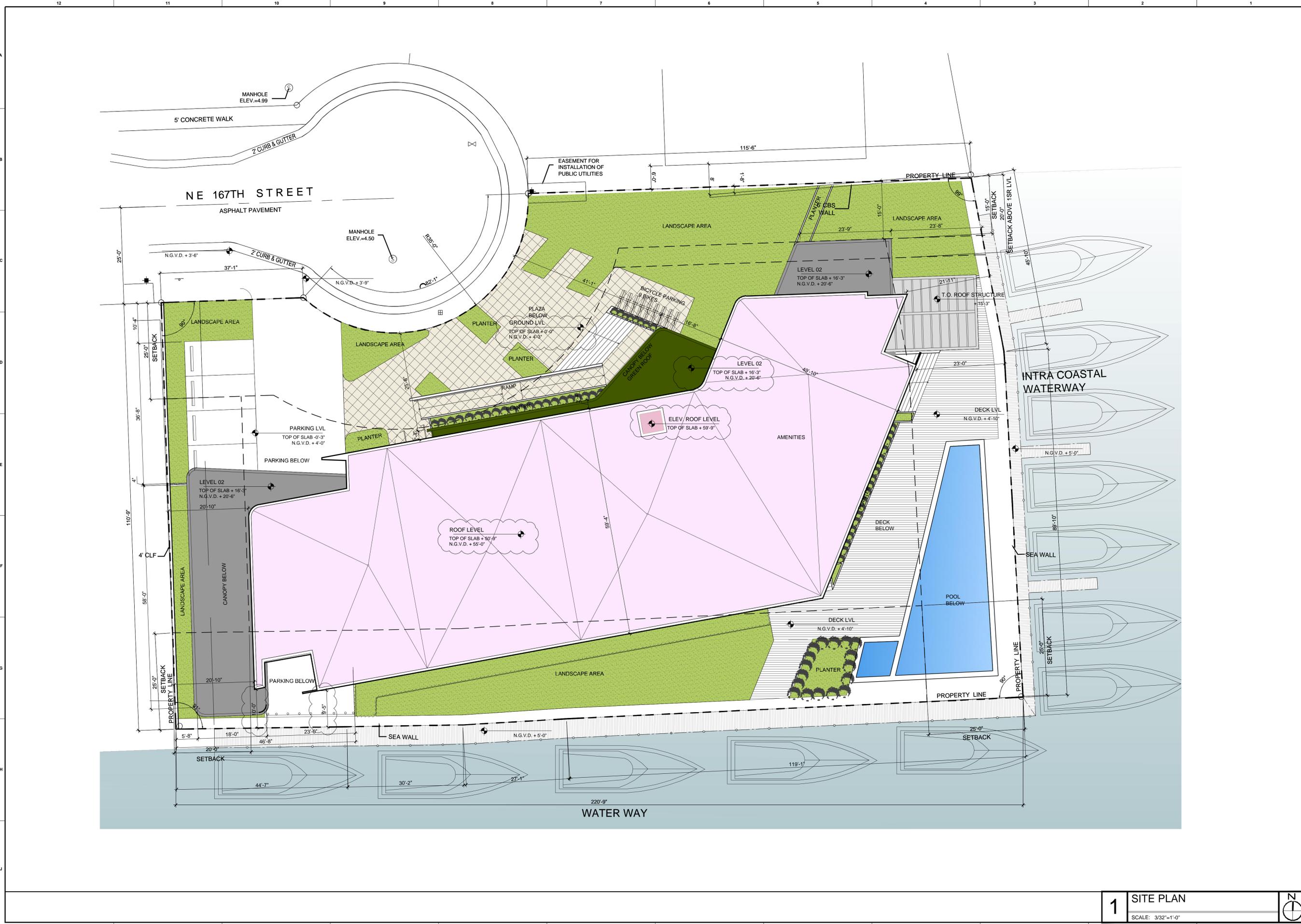
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SEAL:  
  
 SIGNATURE:  
 ARTURO G. GRIEGO  
 LIC# AR94011

SHEET TITLE:  
**ZONING INFORMATION**  
 SCALE:  
**AS NOTED**  
 SHEET No.:  
**G-2**



PROJECT :  
**ACQUA ON THE BAY**  
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KEY PLAN:

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SEAL:  


SIGNATURE:  
**ARTURO G. GRIEGO**  
 LIC# AR94011

SHEET TITLE:  
**SITE PLAN**

SCALE:  
**3/32"=1'0"**

SHEET No.:  
**G-3**

**1 SITE PLAN**  
 SCALE: 3/32"=1'-0"



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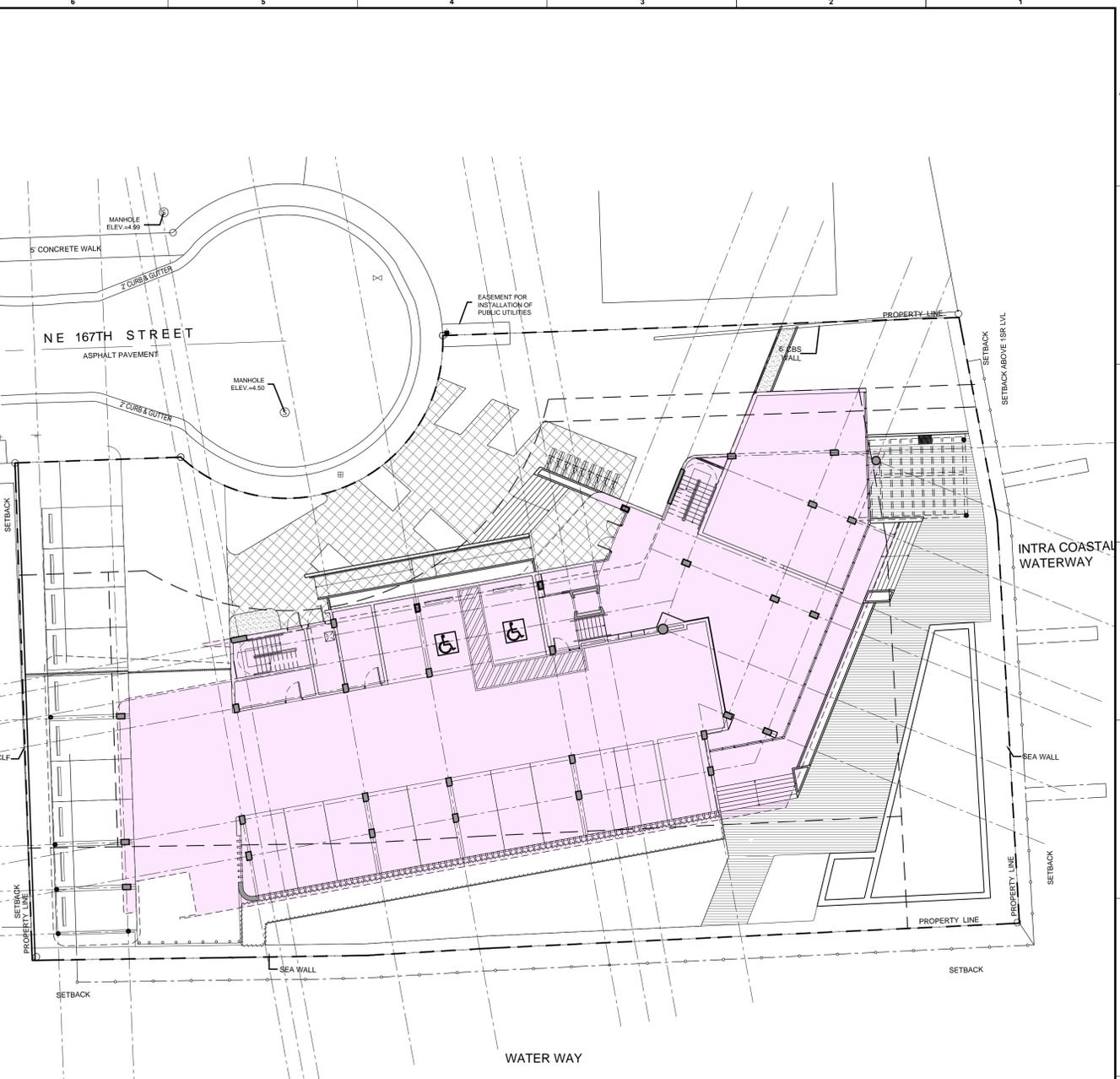
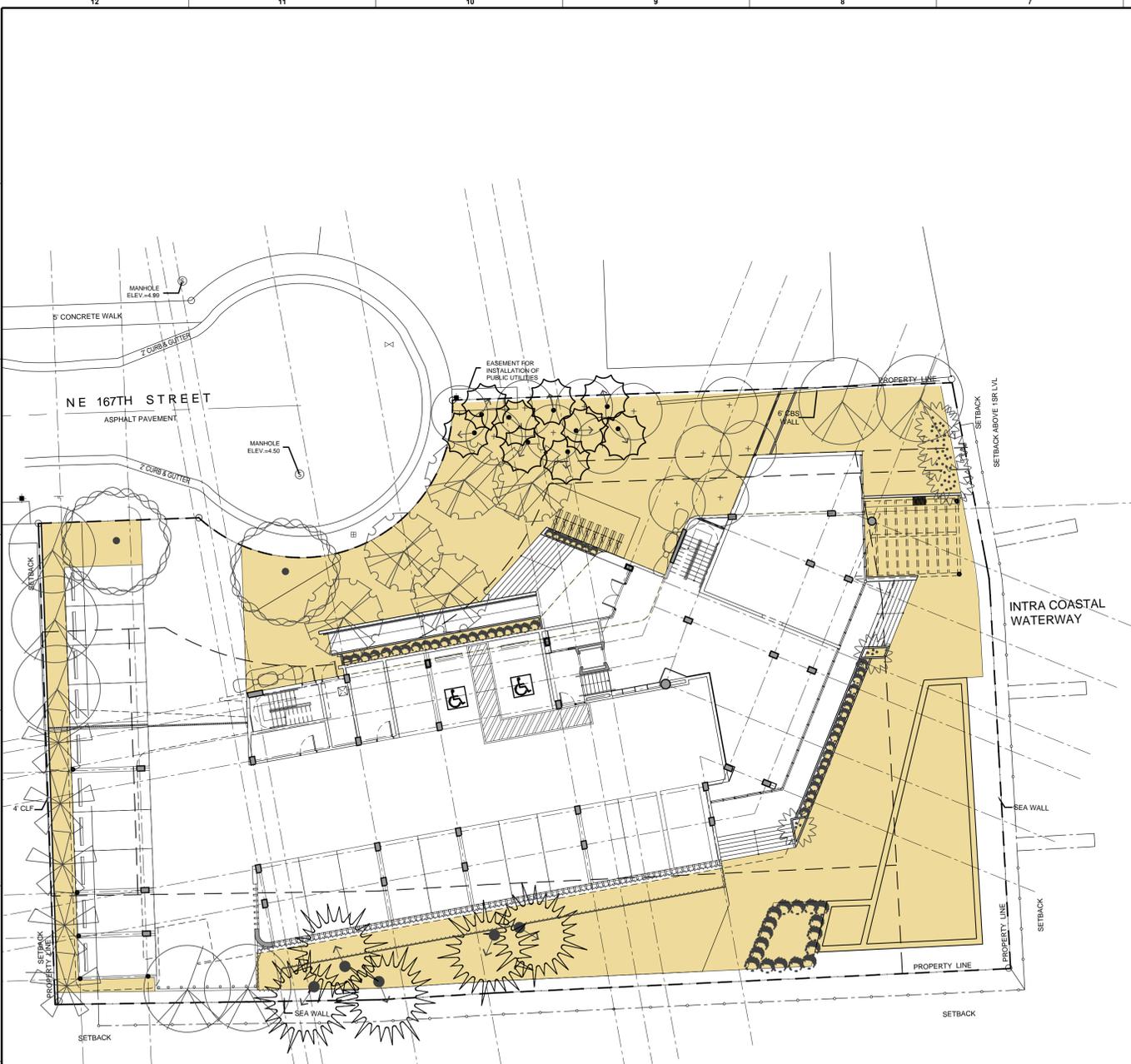
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**OPEN SPACE AREA**  
 PVIOUS AREA = 10,530 SQ.FT.

**1 OPEN SPACE DIAGRAM**  
 GROUND FLOOR PLAN  
 SCALE: 1/16"=1'-0"

**LOT COVERAGE**  
 LOT COVERAGE = 10,942 SQ.FT.

**1 LOT COVERAGE DIAGRAM**  
 GROUND FLOOR PLAN  
 SCALE: 1/16"=1'-0"

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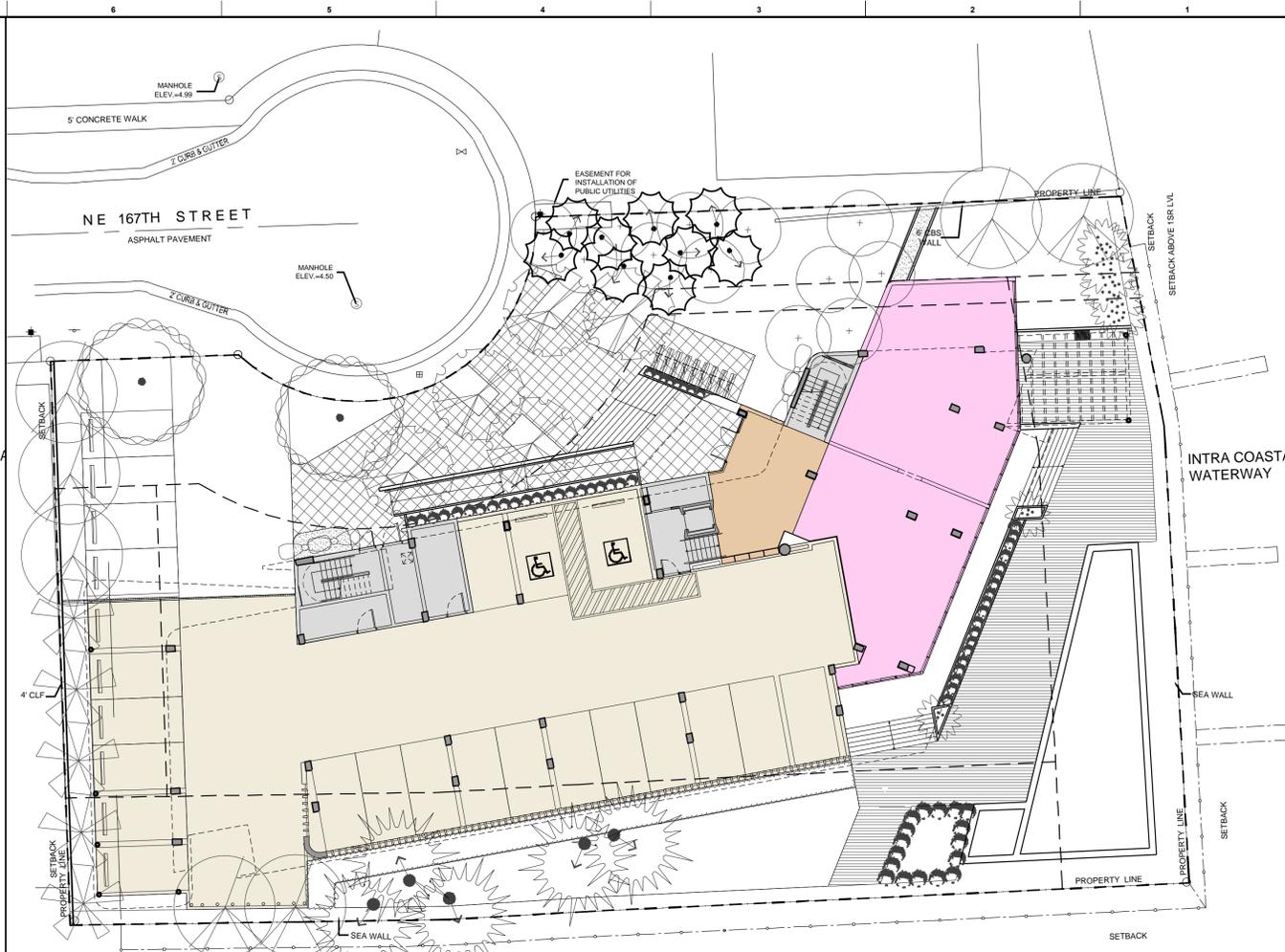
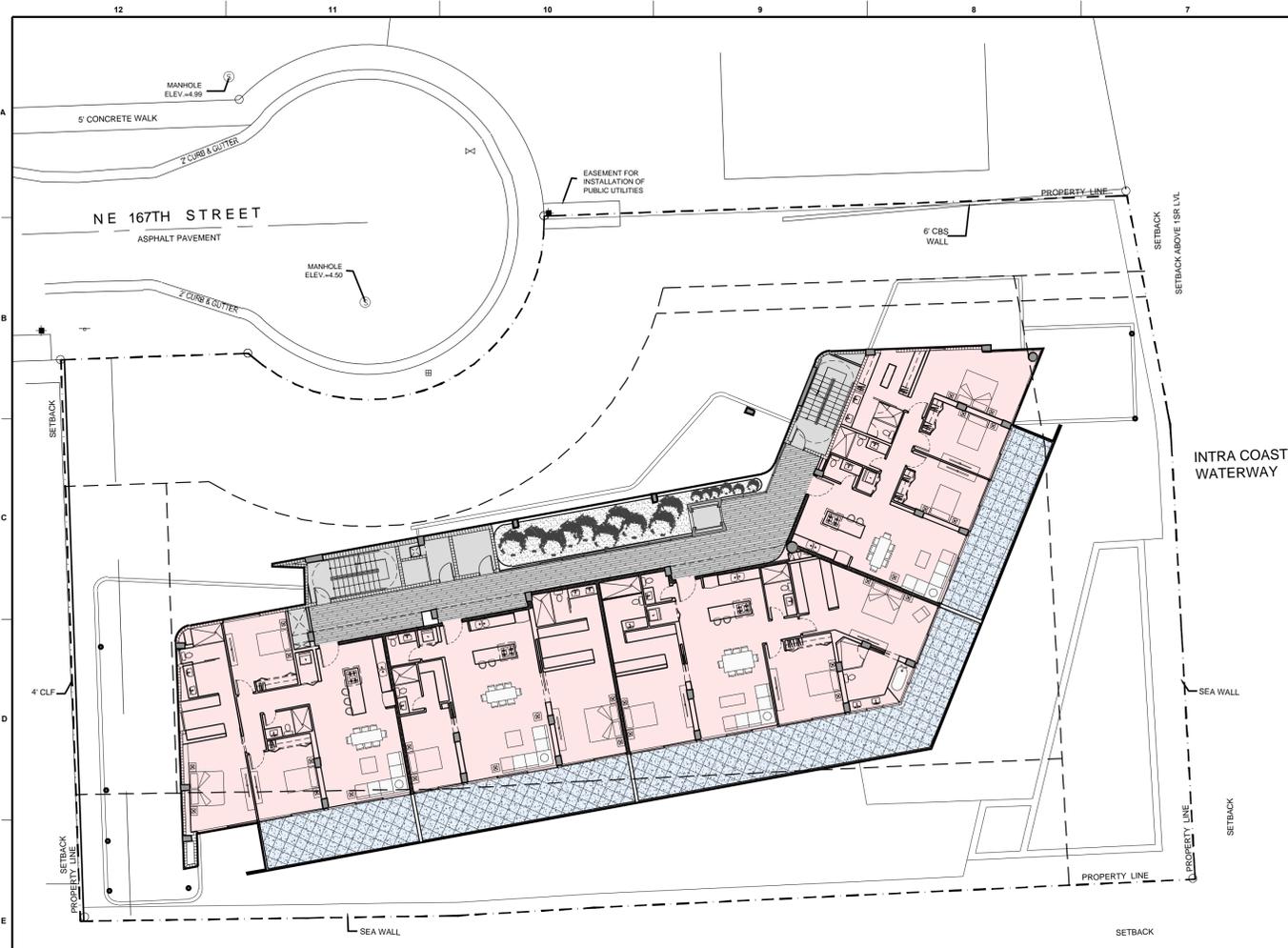
**BUILDING DATA:**

LOT COVERAGE:
TOTAL LOT COVERAGE PROVIDED = 10,942 SQ.FT. = 40.38 %
TOTAL LOT COVERAGE ALLOWED = 25% MAX. = 6,775 SQ.FT.
<b>PERVIOUS AREA:</b>
PERVIOUS AREA PROVIDED = 10,530 SQ.FT. = 38.86 %
PERVIOUS AREA REQUIRED = 30% MIN. = 8,129 SQ.FT.

SHEET TITLE:  
**LOT COVERAGE &  
 OPEN SPACE DIAGRAMS**

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

SHEET No.:  
**G-4**



PROJECT :  
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SHEET TITLE:  
**F.L.R. DIAGRAMS**  
 SCALE:  
**1/16" = 1'-0"**  
 SHEET No.:  
**G-5**

**2 TYPICAL LEVEL**  
 F.L.R. BREAKDOWN  
 SCALE: 1/16" = 1'-0"

**1 GROUND LEVEL FL. PL.**  
 F.L.R. BREAKDOWN  
 SCALE: 1/16" = 1'-0"

UNIT AREA = 6,525 S.F.  
 B.O.H. AREA = 1,468 S.F.  
 TERRACE = 1,760 S.F.  
 TOTAL TYP. LEVEL = 7,993 S.F.

PARKING = 7,780 S.F.  
 AMENITIES AREA = 2,260 S.F.  
 LOBBY AREA = 456 S.F.  
 B.O.H. AREA = 983 S.F.  
 TOTAL GROUND LEVEL = 3,700 S.F.



1



2



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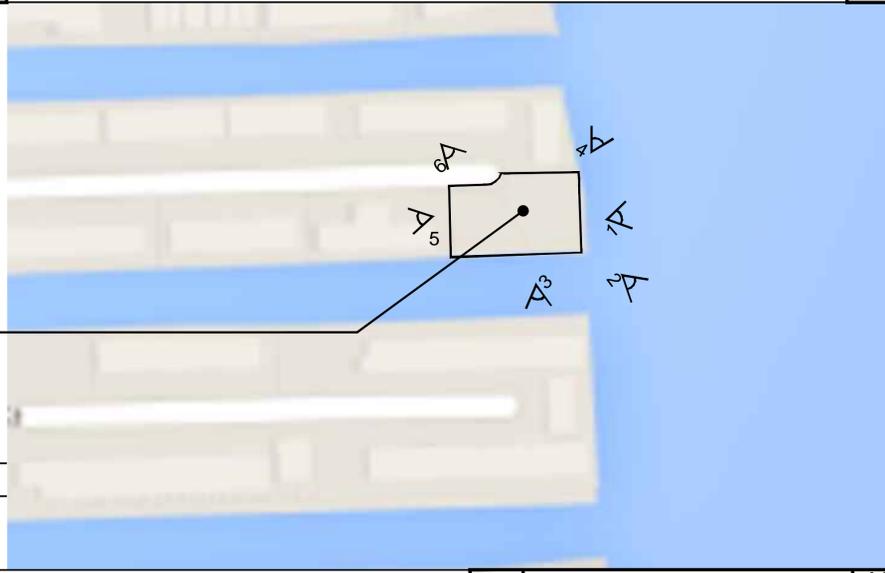
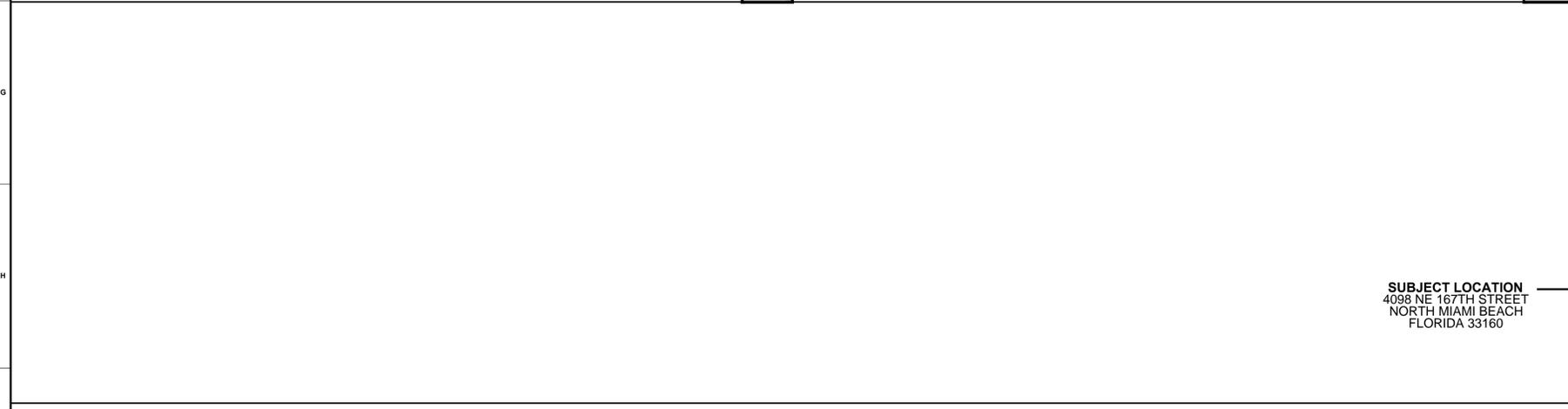
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5



6



**SUBJECT LOCATION**  
4098 NE 167TH STREET  
NORTH MIAMI BEACH  
FLORIDA 33160

**PROPERTY ADDRESS AND FOLIO NUMBER**

4098 NE 167TH STREET | NORTH MIAMI BEACH | FLORIDA 33160  
Folio #: 07-2210-002-1950  
Folio #: 07-2210-002-1960

**7 LOCATION MAP**

SCALE: N.T.S.



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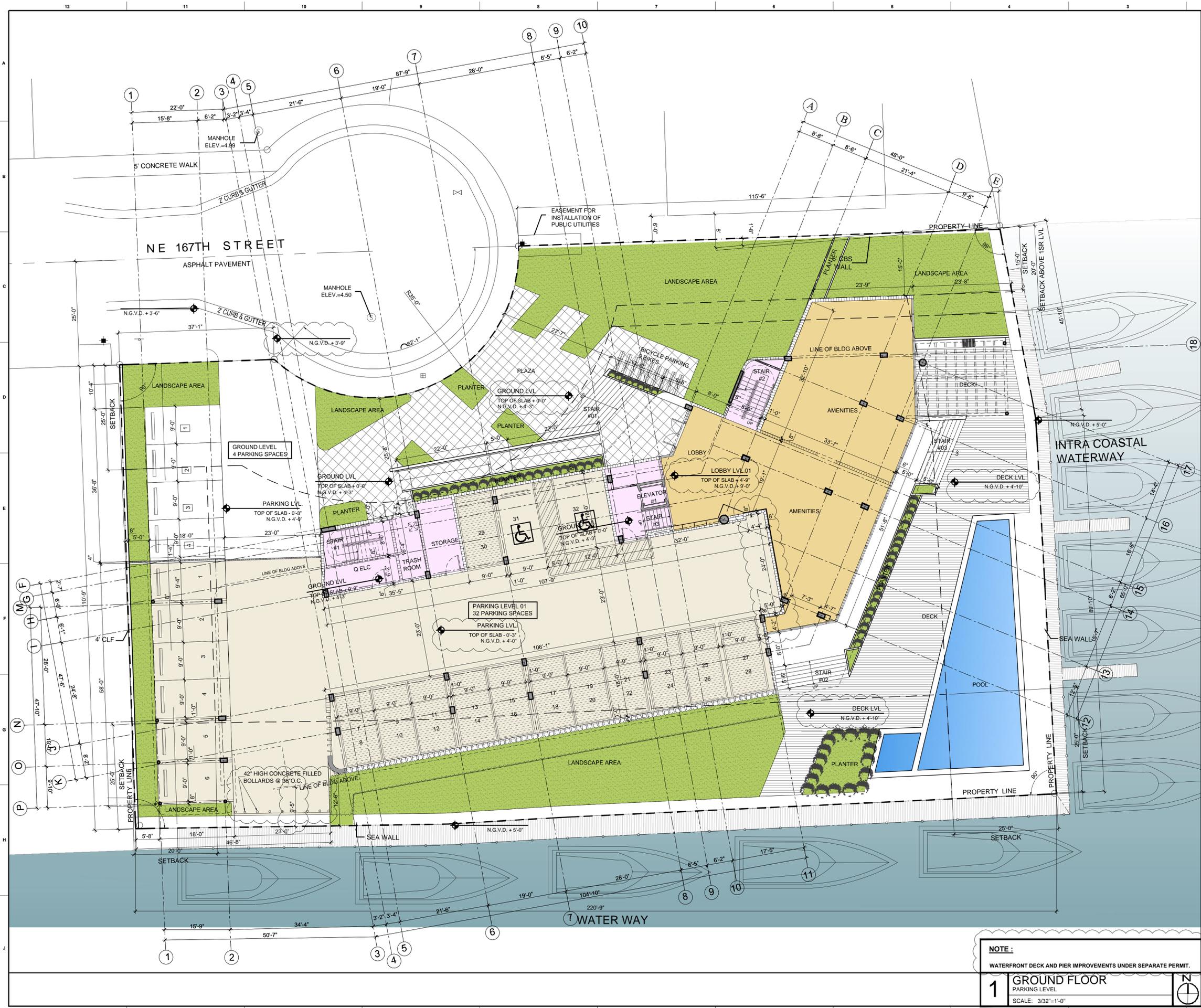
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SHEET TITLE:  
**SITE PICTURES**

SCALE:  
**N.T.S.**

SHEET No.:

**G-6**  
itec design inc. 2015



PROJECT :  
**ACQUA ON THE BAY**  
 4098 NE 167TH STREET  
 NORTH MIAMI BEACH | FLORIDA 33160

OWNER:  
 ICAPITAL PROJECT MANAGEMENT  
 951 BRICKELL AVE UNIT 3708  
 MIAMI, FL 33131

EXECUTIVE ARCHITECT:  
 itecdesign  
 Orion Jet Center  
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 e miami@itecdesign.net |  
 w www.itecdesign.net  
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 e info@deizmuller.com

STRUCTURAL ENGINEERS:  
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MEP ENGINEERS:  
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CIVIL ENGINEERS:  
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 3525 S. University Dr., Ste 111  
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 t 954-318-0624  
 e info@rossengineers.com

LANDSCAPE:  
**ROSENBERG GARDNER DESIGN**  
 17620 NW 78th Avenue, Suite 214  
 Miami, FL 33055  
 t (305) 392-1016  
 e info@rosengardner.com

KEY PLAN:  
 \_\_\_\_\_

PERMIT SET

ISSUE DATE: 11-18-2015  
 PROJECT No.: 1527  
 DRAWN BY: ME/TP APPROVED BY: AG

ALL DRAWING AND WRITTEN MATERIALS  
 HEREIN CONSTITUTE ORIGINAL WORK OF  
 THE ARCHITECT AND MAY ONLY BE  
 DUPLICATED WITH THEIR WRITTEN  
 CONSENT.

SEAL:  


SIGNATURE:  
 ARTURO G. GRIEGO  
 LIC# AR94011

SHEET TITLE:  
**GROUND FLOOR -  
 PARKING LEVEL**

SCALE:  
**3/32"=1'0"**

SHEET No.:  
**A1-1.01**

itec design inc. 2015

**WALL TYPE LEGEND**

1	WALL TYPE 1 TYPICAL 8" CMU WALL INVERTICLE REINFORCED. SEE TYPICAL WALL TYPES AND STRUCTURAL DETAILS FOR DETAILS.
2	WALL TYPE 2 REINFORCED CONCRETE WALL. SEE TYPICAL WALL TYPES AND STRUCTURAL DRAWINGS FOR DETAILS.
3	WALL TYPE 3 UNIT DEMING PARTITION 1 HR. FIRE RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
4	WALL TYPE 4 TYPICAL INTERIOR PARTITION NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
5	WALL TYPE 5 TYPICAL 4" INTERIOR PARTITION NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
6	WALL TYPE 6 TYPICAL CHASE WALL. SEE TYPICAL WALL TYPES FOR DETAILS.
7	WALL TYPE 7 TYPICAL SHAFT WALL 2 HR. FIRE RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
8	WALL TYPE 8 TYPICAL VARIABLE INTERIOR PARTITION NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.

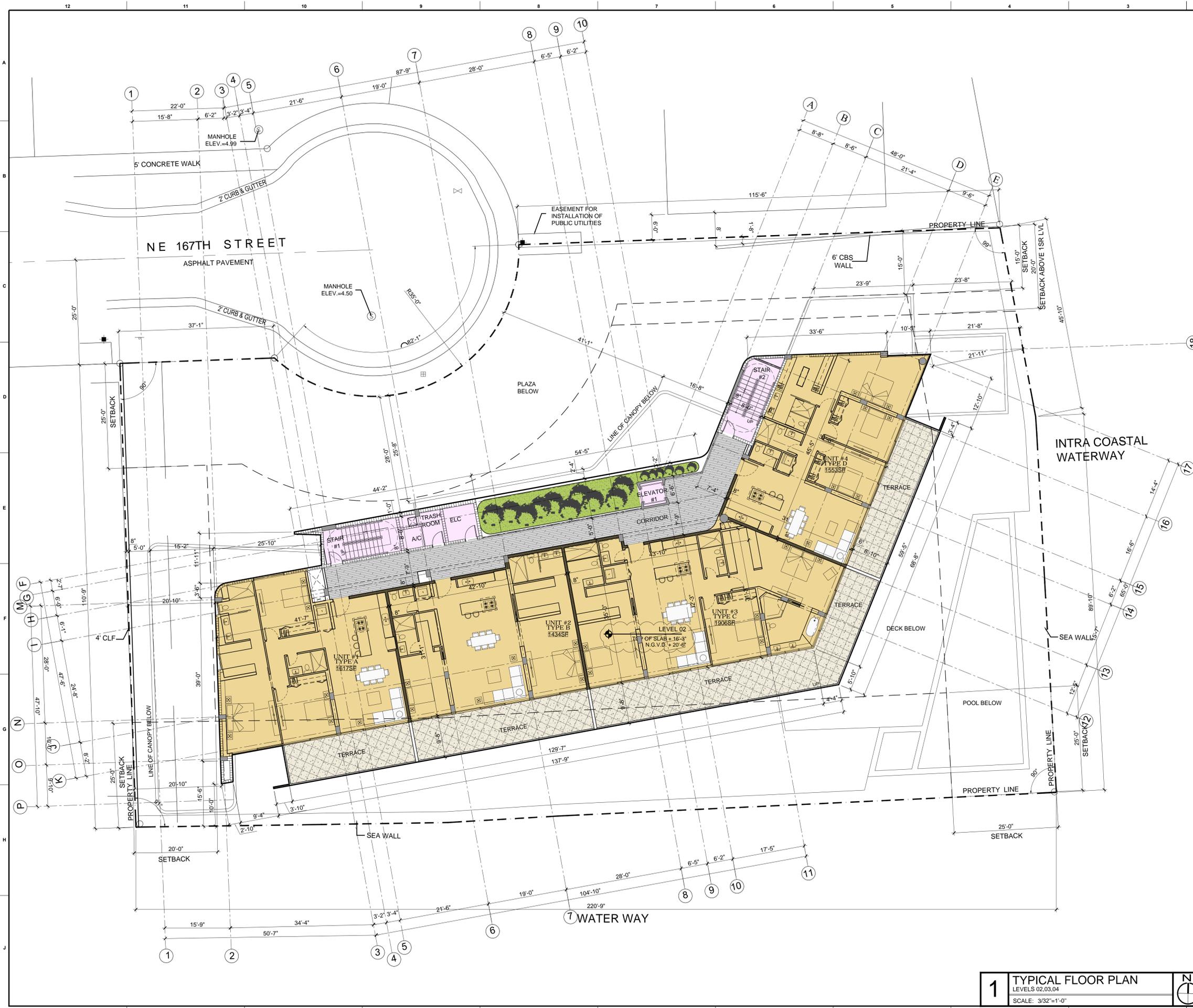
**ELEVATION LEGEND & NOTES**

- 0'-0" = + 4'-3" N.G.V.D.
- ALL SHOP DWGS REQUIRE APPROVAL FROM CITY OF MIAMI.
- PROVIDE "CLASS ABC" FIRE EXTINGUISHER PER 2500S.F. AND NOT TO EXCEED 75' BETWEEN EACH OTHER. SEE PLAN LOCATION SYMBOL. F.E. CONTRACTOR TO SUBMIT FLUSH MOUNT CABINET WITH SHOP DRAWINGS FOR ARCHITECTS APPROVAL.
- FIRE PENETRATIONS: CONTRACTOR SHALL SEAL ALL PENETRATIONS THRU FIRE RATED PARTITIONS OR ASSEMBLIES WITH "HILTI" FIRESTOP SYSTEM-CS-240 FIRESTOP SEALANT OR EQUAL. INSTALL AS PER MANUF. RECOMMENDATION FOR 1, 2, 3 & 4 HOUR RATINGS.
- BUILDING IS FULLY SPRINKLERED.
- SEE ELECTRICAL DWGS FOR LIFE SAFETY / EGRESS LIGHTS.

**NOTE:**  
 WATERFRONT DECK AND PIER IMPROVEMENTS UNDER SEPARATE PERMIT.

**1 GROUND FLOOR  
 PARKING LEVEL**  
 SCALE: 3/32"=1'-0"

**TERMITE PROTECTION:**  
 THE BUILDING HAS TO RECEIVE A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT SHALL BE IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY THE LICENSED PEST CONTROL COMPANY.



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EXECUTIVE ARCHITECT:  
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DESIGN ARCHITECT:  
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 e info@diezmuller.com

STRUCTURAL ENGINEERS:

MEP ENGINEERS:

CIVIL ENGINEERS:  
**ROSS ENGINEERING, INC.**  
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LANDSCAPE:  
**ROSENBERG GARDNER DESIGN**  
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KEY PLAN:

**PERMIT SET**

ISSUE DATE: 11-18-2015

PROJECT No.: 1527

DRAWN BY: ME/IP APPROVED BY: AG

6 ALL DRAWING AND WRITTEN MATERIALS  
 HEREIN CONSTITUTE ORIGINAL WORK OF  
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 CONSENT.

SEAL:  


SIGNATURE:  
 ARTURO G. GRIEGO  
 LIC# AR94011

SHEET TITLE:  
**TYPICAL FLOOR PLAN**

SCALE:  
**3/32"=1'0"**

SHEET No.:  
**A1-1.02**

itec design inc. 2015

**WALL TYPE LEGEND**

- 1 WALL TYPE 1  
TYPICAL 8" CMU WALL WITH VERTICLE REINFORCING. SEE TYPICAL WALL TYPES AND STRUCTURAL DWGS FOR DETAILS.
- 2 WALL TYPE 2  
REINFORCED CONCRETE WALL. SEE TYPICAL WALL TYPES AND STRUCTURAL DWGS FOR DETAILS.
- 3 WALL TYPE 3  
UNIT DEMISING PARTITION 1-HR. FIRE RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
- 4 WALL TYPE 4  
TYPICAL INTERIOR PARTITION NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
- 5 WALL TYPE 5  
TYPICAL 1/2" INTERIOR PARTITION NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
- 6 WALL TYPE 6  
TYPICAL CMSE WALL. SEE TYPICAL WALL TYPES FOR DETAILS.
- 7 WALL TYPE 7  
TYPICAL SHAFI WALL 2-HR. FIRE RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
- 8 WALL TYPE 8  
TYPICAL VARIABLE INTERIOR PARTITION NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.

**ELEVATION LEGEND & NOTES**

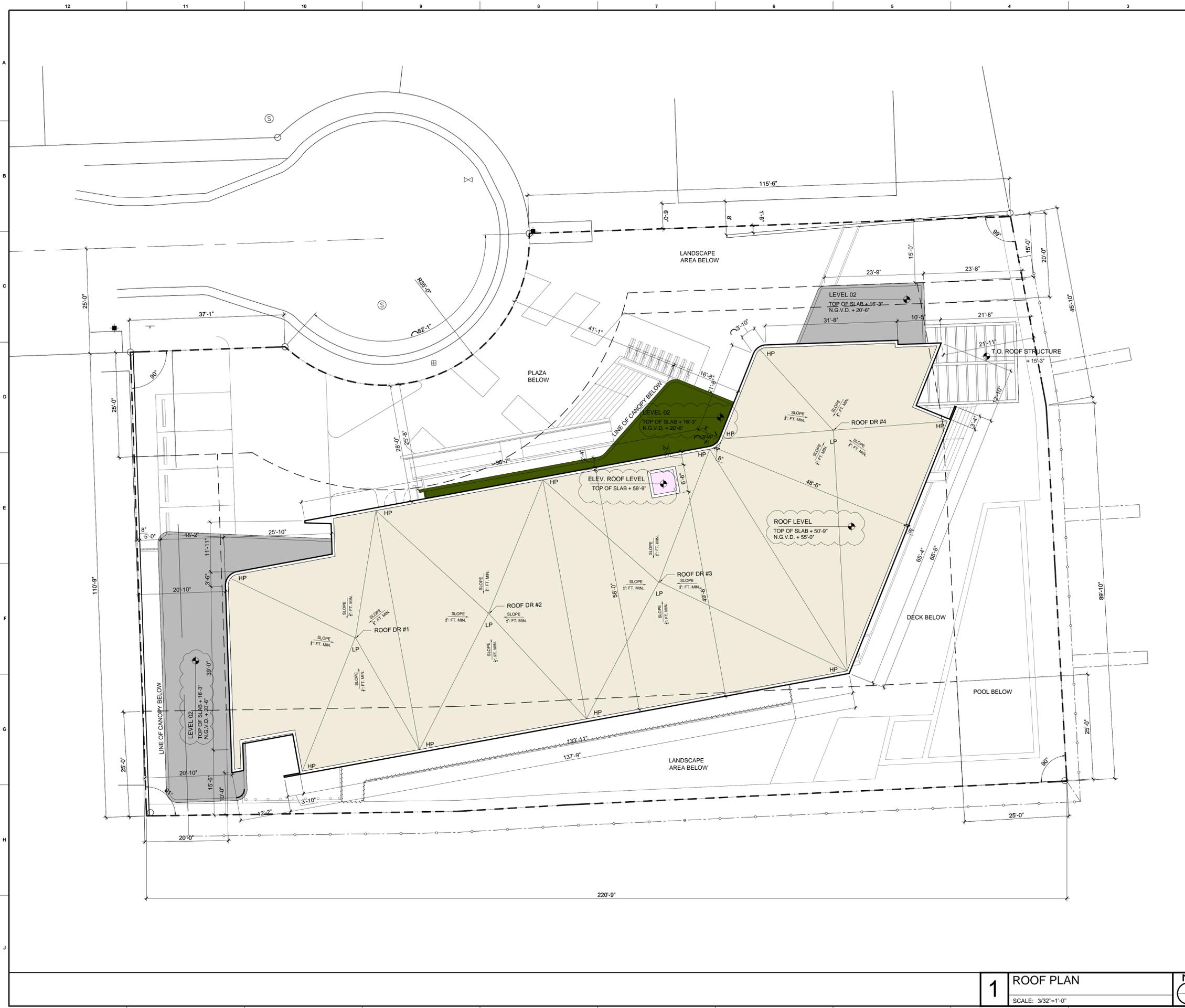
1. 0'-0" = + 4'-3" N.G.V.D.
2. ALL SHOP DWGS REQUIRE APPROVAL FROM CITY OF MIAMI.
3. PROVIDE "CLASS ABC" FIRE EXTINGUISHER PER 2500S.F. AND NOT TO EXCEED 75' BETWEEN EACH OTHER. SEE PLAN LOCATION SYMBOL. F.E. CONTRACTOR TO SUBMIT FLUSH MOUNT CABINET WITH SHOP DRAWINGS FOR ARCHITECTS APPROVAL.
4. FIRE PENETRATIONS: CONTRACTOR SHALL SEAL ALL PENETRATIONS THRU FIRE RATED PARTITIONS OR ASSEMBLIES WITH "HILTI" FIRESTOP SYSTEM-CS-240 FIRESTOP SEALANT OR EQUAL. INSTALL AS PER MANUF. RECOMMENDATION FOR 1,2,3 & 4 HOUR RATINGS.
5. BUILDING IS FULLY SPRINKLERED.
6. SEE ELECTRICAL DWGS FOR LIFE SAFETY / EGRESS LIGHTS.

**TERMITE PROTECTION:**

THE BUILDING HAS TO RECEIVE A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT SHALL BE IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY THE LICENSED PEST CONTROL COMPANY.

**1 TYPICAL FLOOR PLAN**  
 LEVELS 02,03,04  
 SCALE: 3/32"=1'-0"





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 MIAMI, FL 33131

EXECUTIVE ARCHITECT:  
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 w www.itedesign.net  
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CIVIL ENGINEERS:  
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LANDSCAPE:  
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 e ken@rosberggardner.com

KEY PLAN:

**PERMIT SET**

ISSUE DATE: 11-18-2015  
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DRAWN BY: ME/IP APPROVED BY: AG

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 CONSENT.

SEAL:  


SIGNATURE:  
 ARTURO G. GRIEGO  
 LIC# AR94011

SHEET TITLE:  
**ROOF PLAN**

SCALE:  
**3/32"=1'0"**

SHEET No.:  
**A1-1.03**

itec design inc. 2015

**WALL TYPE LEGEND**

- 1 WALL TYPE 1  
TYPICAL 8" CMU WALL WITH VERTICLE REINFORCING. SEE TYPICAL WALL TYPES AND STRUCTURAL DWGS FOR DETAILS.
- 2 WALL TYPE 2  
REINFORCED CONCRETE WALL. SEE TYPICAL WALL TYPES AND STRUCTURAL DWGS FOR DETAILS.
- 3 WALL TYPE 3  
UNIT CEILING PARTITION + HR. FIRE RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
- 4 WALL TYPE 4  
TYPICAL INTERIOR PARTITION NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
- 5 WALL TYPE 5  
TYPICAL INTERIOR PARTITION NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
- 6 WALL TYPE 6  
TYPICAL CHASE WALL. SEE TYPICAL WALL TYPES FOR DETAILS.
- 7 WALL TYPE 7  
TYPICAL SHIRT WALL 2 HR. FIRE RATED. SEE TYPICAL WALL TYPES FOR DETAILS.
- 8 WALL TYPE 8  
TYPICAL VARIABLE INTERIOR PARTITION NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.

**ELEVATION LEGEND & NOTES**

1. 0'-0" + 4'-3" N.G.V.D.
2. ALL SHOP DWGS REQUIRE APPROVAL FROM CITY OF MIAMI.
3. PROVIDE "CLASS ABC" FIRE EXTINGUISHER PER 2500S.F. AND NOT TO EXCEED 75' BETWEEN EACH OTHER. SEE PLAN LOCATION SYMBOL F.E. CONTRACTOR TO SUBMIT FLUSH MOUNT CABINET WITH SHOP DRAWINGS FOR ARCHITECTS APPROVAL.
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5. BUILDING IS FULLY SPRINKLERED.
6. SEE ELECTRICAL DWGS FOR LIFE SAFETY / EGRESS LIGHTS.

**TERMITE PROTECTION:**

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**1 ROOF PLAN**  
 SCALE: 3/32"=1'-0"  


PROJECT :

# ACQUA ON THE BAY

4098 NE 167TH STREET  
NORTH MIAMI BEACH | FLORIDA 33160

OWNER:  
ICAPITAL PROJECT MANAGEMENT  
951 BRICKELL AVE UNIT 3708  
MIAMI, FL 33131

EXECUTIVE ARCHITECT:

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STRUCTURAL ENGINEERS:

M/E/P ENGINEERS:

CIVIL ENGINEERS:

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LANDSCAPE:

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17025 NW 78th Avenue, Suite 214  
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KEY PLAN:

## PERMIT SET

ISSUE DATE: 11-18-2015

PROJECT No.: 1527

DRAWN BY: ME/JP APPROVED BY: AG

6 ALL DRAWING AND WRITTEN MATERIALS  
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SEAL:



SIGNATURE:  
**ARTURO G. GRIEGO**  
LIC# AR94011

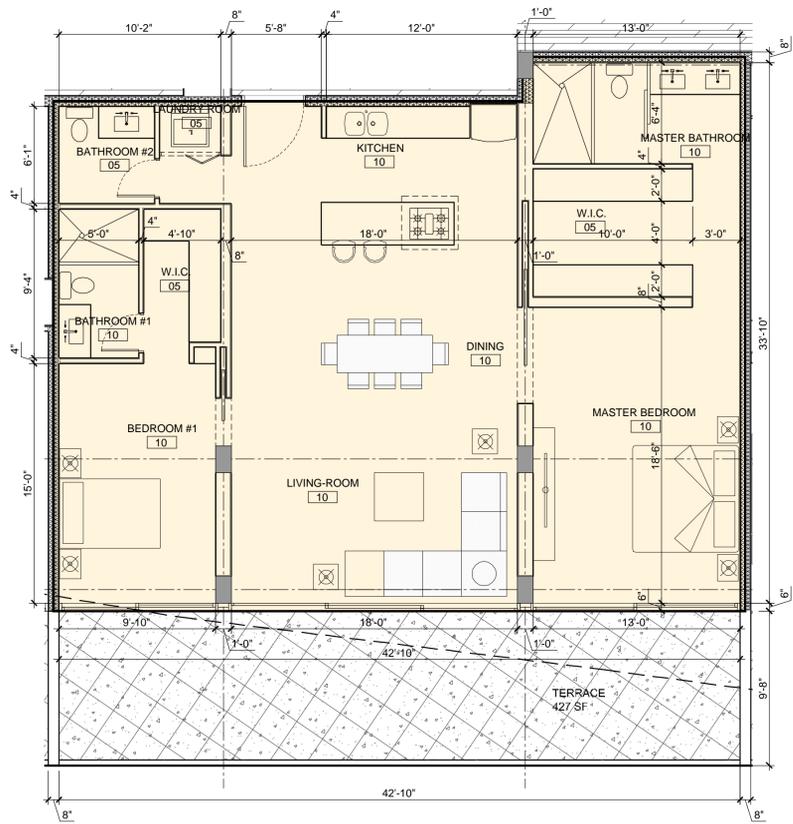
SHEET TITLE:  
**UNIT  
ENLARGED PLAN**

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

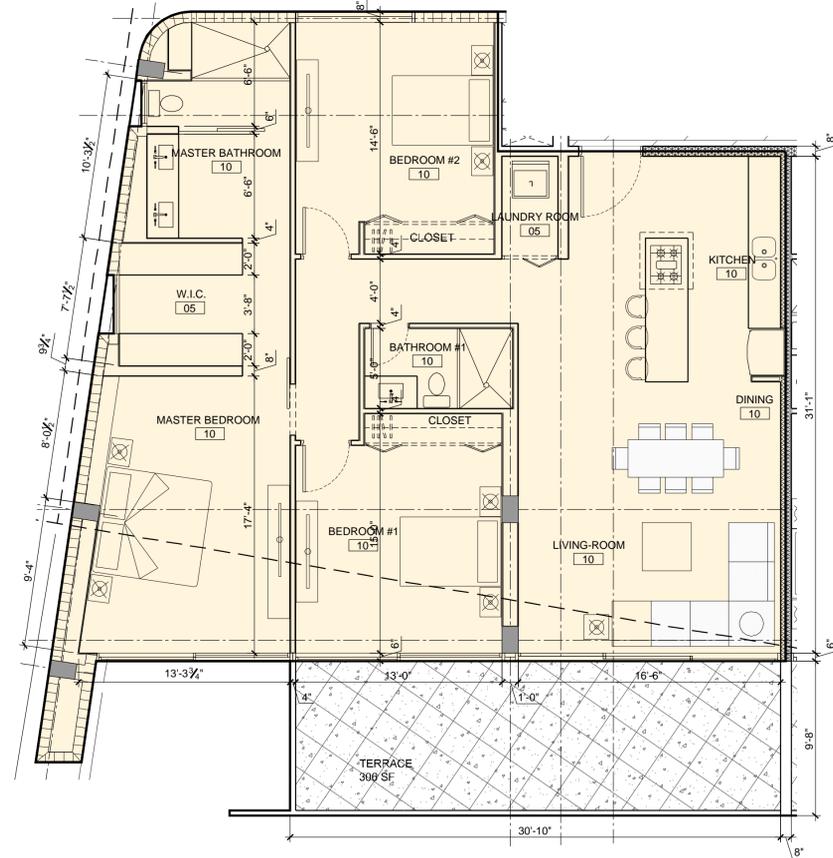
SHEET No.:

# A1-2.01

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**2** UNIT TYPE B ENLARGED PLAN  
TYP. LEVEL FLOOR PLAN  
SCALE: 3/16" = 1'-0"



**1** UNIT TYPE A ENLARGED PLAN  
TYP. LEVEL FLOOR PLAN  
SCALE: 3/16" = 1'-0"

### WALL LEGEND

- |  |   |
|--|---|
| <b>1</b> WALL TYPE 1<br>TYPICAL 4" CMU WALL WITH VERTICAL REINFORCING. SEE TYPICAL WALL TYPES AND STRUCTURAL DWGS FOR DETAILS. | <b>5</b> WALL TYPE 5<br>TYPICAL 1/2" INTERIOR PARTITION. NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.     |
| <b>2</b> WALL TYPE 2<br>REINFORCED CONCRETE WALL. SEE TYPICAL WALL TYPES AND STRUCTURAL DWGS FOR DETAILS.                      | <b>6</b> WALL TYPE 6<br>TYPICAL CHASE WALL. SEE TYPICAL WALL TYPES FOR DETAILS.                             |
| <b>3</b> WALL TYPE 3<br>UNIT DIVISION PARTITION 1 HR. FIRE RATED. SEE TYPICAL WALL TYPES FOR DETAILS.                          | <b>7</b> WALL TYPE 7<br>TYPICAL SHAFT WALL 2 HR. FIRE RATED. SEE TYPICAL WALL TYPES FOR DETAILS.            |
| <b>4</b> WALL TYPE 4<br>TYPICAL INTERIOR PARTITION. NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.                             | <b>8</b> WALL TYPE 8<br>TYPICAL VARIABLE INTERIOR PARTITION. NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS. |

### GENERAL NOTES

- 0'-0" = + 4'-3" N.G.V.D.
- ALL SHOP DWGS REQUIRE APPROVAL FROM CITY OF MIAMI.
- PROVIDE "CLASS ABC" FIRE EXTINGUISHER PER 25005 F. AND NOT TO EXCEED 7% BETWEEN EACH OTHER. SEE PLAN LOCATION SYMBOL. F.E. CONTRACTOR TO SUBMIT FLUSH MOUNT CABINET WITH SHOP DRAWINGS FOR ARCHITECTS APPROVAL.
- FIRE PENETRATIONS: CONTRACTOR SHALL SEAL ALL PENETRATIONS THRU FIRE RATED PARTITIONS OR ASSEMBLIES WITH "HMTI" FIRESTOP SYSTEM-CS-240 FIRESTOP SEALANT OR EQUAL. INSTALL AS PER MANUF. RECOMMENDATION FOR 1,2,3 & 4 HOUR RATINGS.
- BUILDING IS FULLY SPRINKLERED.
- SEE ELECTRICAL DWGS FOR LIFE SAFETY / EGRESS LIGHTS.

12 11 10 9 8 7 6 5 4 3 2 1

A  
B  
C  
D  
E  
F  
G  
H  
J

12 11 10 9 8 7 6 5 4 3 2 1

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LANDSCAPE:

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KEY PLAN:

## PERMIT SET

ISSUE DATE: 11-18-2015

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DRAWN BY: MEIP APPROVED BY: AG

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LIC# AR94011

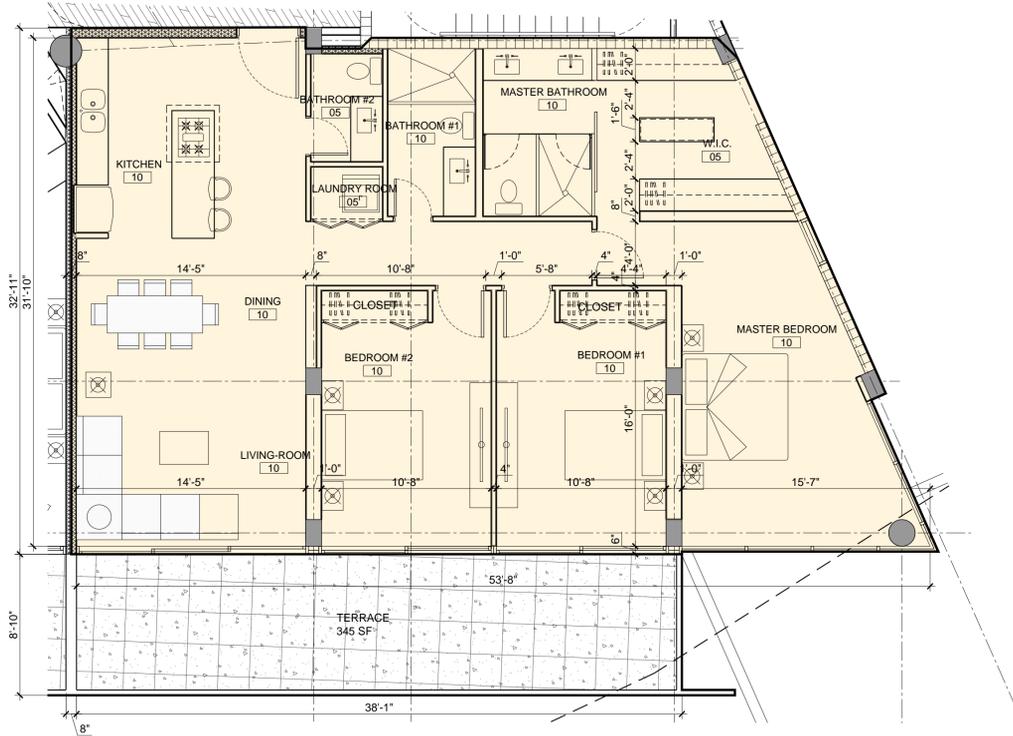
SHEET TITLE:  
UNIT TYPE C&D  
ENLARGED PLAN

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

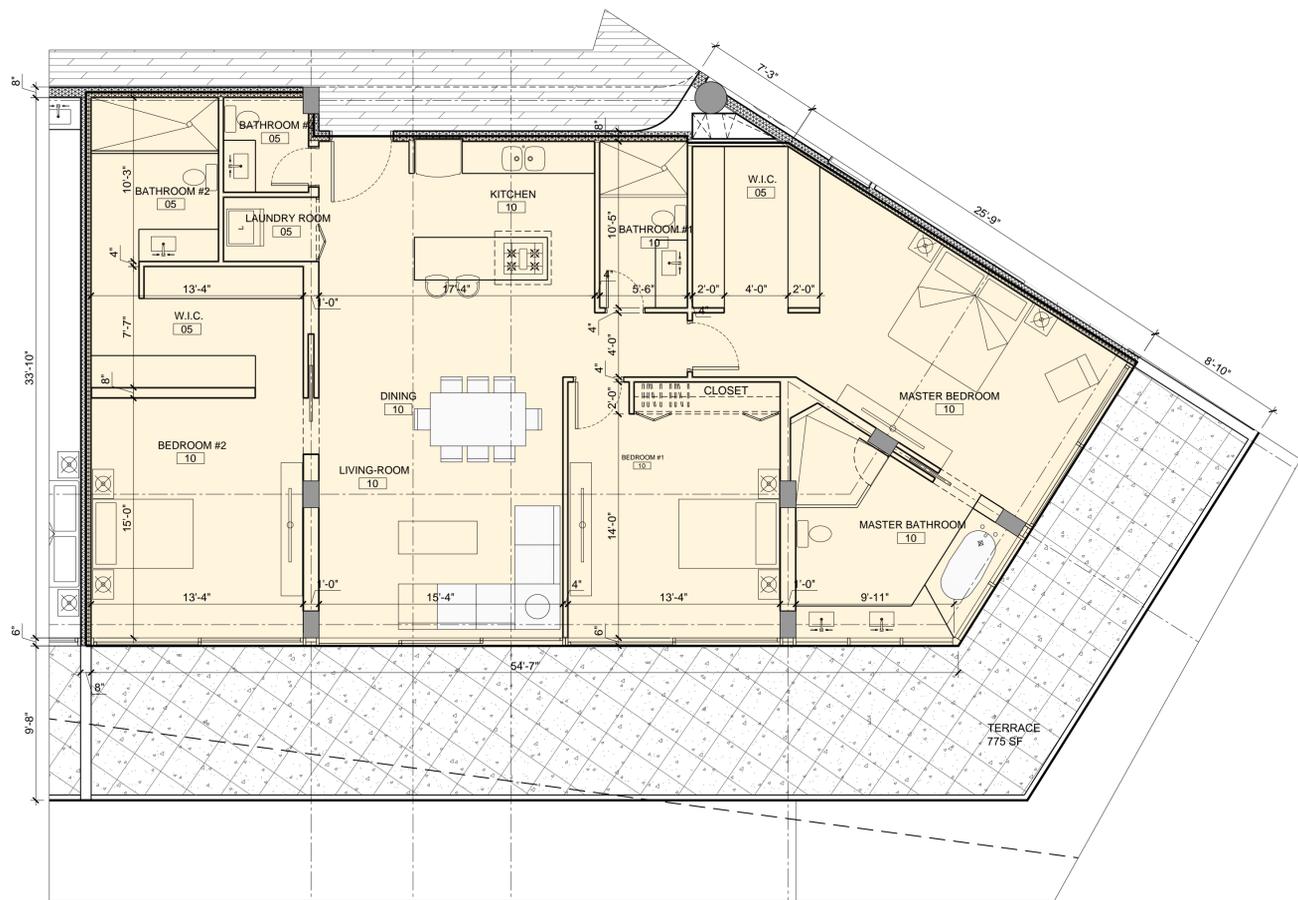
SHEET No.:

# A1-2.02

itec design inc. 2015



**2** UNIT TYPE D ENLARGED PLAN  
TYP. LEVEL FLOOR PLAN  
SCALE: 3/16" = 1'-0"



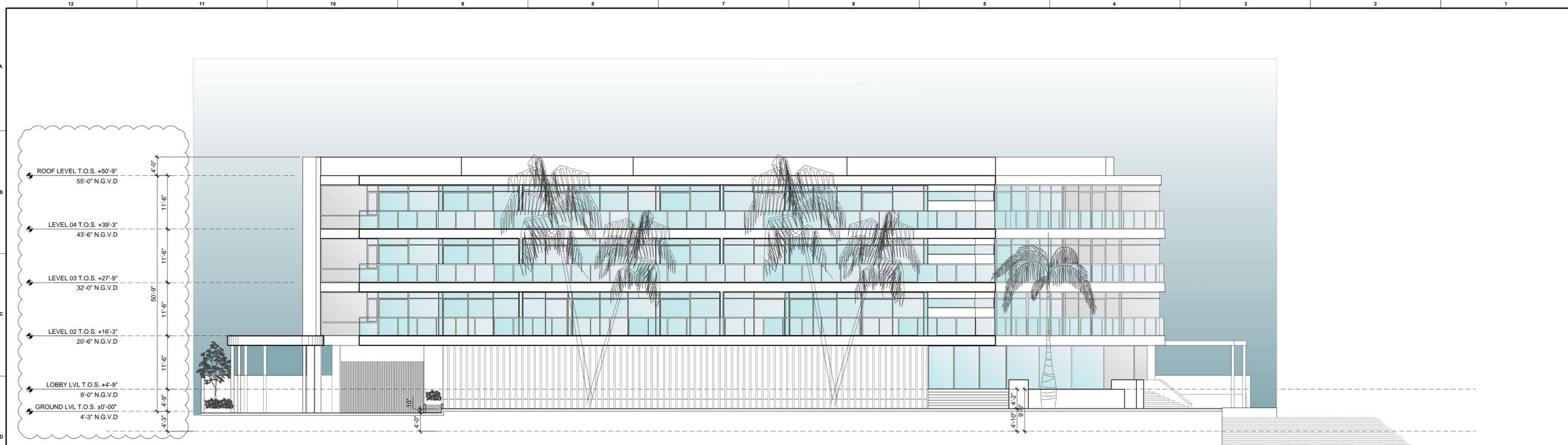
**1** UNIT TYPE C ENLARGED PLAN  
TYP. LEVEL FLOOR PLAN  
SCALE: 3/16" = 1'-0"

### WALL LEGEND

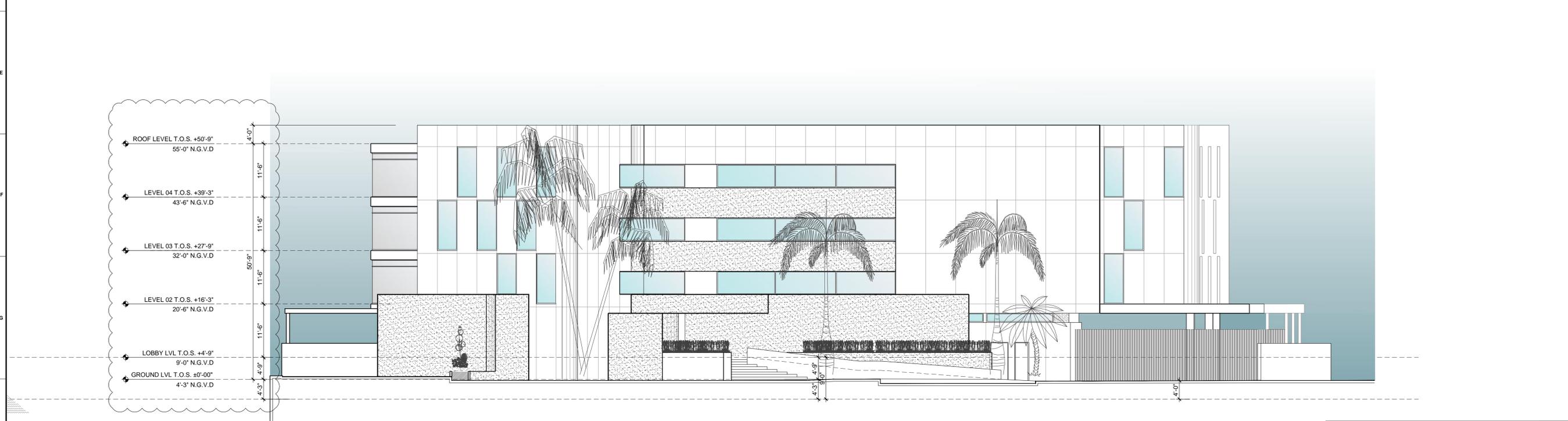
- |          |  |          |   |
|----------|--|----------|---|
| <b>1</b> | <b>WALL TYPE 1</b><br>TYPICAL 1/2" CMU WALL, INVERTIBLE REINFORCING. SEE TYPICAL WALL TYPES AND STRUCTURAL DWGS FOR DETAILS. | <b>5</b> | <b>WALL TYPE 5</b><br>TYPICAL 1/2" EXTERIOR PARTITION, NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.     |
| <b>2</b> | <b>WALL TYPE 2</b><br>REINFORCED CONCRETE WALL. SEE TYPICAL WALL TYPES AND STRUCTURAL DWGS FOR DETAILS.                      | <b>6</b> | <b>WALL TYPE 6</b><br>TYPICAL CMU WALL. SEE TYPICAL WALL TYPES FOR DETAILS.                               |
| <b>3</b> | <b>WALL TYPE 3</b><br>1/2" GIBBSING PARTITION 1 HR. FIRE RATED. SEE TYPICAL WALL TYPES FOR DETAILS.                          | <b>7</b> | <b>WALL TYPE 7</b><br>TYPICAL SHIRT WALL 2 HR. FIRE RATED. SEE TYPICAL WALL TYPES FOR DETAILS.            |
| <b>4</b> | <b>WALL TYPE 4</b><br>TYPICAL INTERIOR PARTITION, NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS.                             | <b>8</b> | <b>WALL TYPE 8</b><br>TYPICAL VARIABLE EXTERIOR PARTITION, NON-RATED. SEE TYPICAL WALL TYPES FOR DETAILS. |

### GENERAL NOTES

- 0'-0" = + 4'-3" N.G.V.D.
- ALL SHOP DWGS REQUIRE APPROVAL FROM CITY OF MIAMI.
- PROVIDE "CLASS ABC" FIRE EXTINGUISHER PER 2500S.F. AND NOT TO EXCEED 75' BETWEEN EACH OTHER. SEE PLAN LOCATION SYMBOL. F.E. CONTRACTOR TO SUBMIT FLUSH MOUNT CABINET WITH SHOP DRAWINGS FOR ARCHITECTS APPROVAL.
- FIRE PENETRATIONS: CONTRACTOR SHALL SEAL ALL PENETRATIONS THRU FIRE RATED PARTITIONS OR ASSEMBLIES WITH "MLT1" FIRESTOP SYSTEM-CS-240 FIRESTOP SEALANT OR EQUAL. INSTALL AS PER MANUF. RECOMMENDATION FOR 1,2,3 & 4 HOUR RATINGS.
- BUILDING IS FULLY SPRINKLERED.
- SEE ELECTRICAL DWGS FOR LIFE SAFETY / EGRESS LIGHTS.



**1 SOUTH ELEVATION**  
SCALE: 3/32"=1'-0"  
N



**1 NORTH ELEVATION**  
SCALE: 3/32"=1'-0"  
N

- ELEVATION LEGEND & NOTES**
- 0'-0" = + 4'-3" N.G.V.D.
  - ALL SHOP DWGS REQUIRE APPROVAL FROM CITY OF MIAMI.
  - PROVIDE "CLASS ABC" FIRE EXTINGUISHER PER 2500S.F. AND NOT TO EXCEED 75' BETWEEN EACH OTHER. SEE PLAN LOCATION SYMBOL. F.E. CONTRACTOR TO SUBMIT FLUSH MOUNT CABINET WITH SHOP DRAWINGS FOR ARCHITECTS APPROVAL.
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  - SEE ELECTRICAL DWGS FOR LIFE SAFETY / EGRESS LIGHTS.

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KEY PLAN:

**PERMIT SET**

ISSUE DATE: 11-18-2015  
PROJECT No.: 1527  
DRAWN BY: ME/TP APPROVED BY: AG

ALL DRAWING AND WRITTEN MATERIALS  
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THE ARCHITECT AND MAY ONLY BE  
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CONSENT.

SEAL:  
  
SIGNATURE:  
ARTURO G. GRIEGO  
LIC# AR94011

SHEET TITLE:  
**SOUTH & NORTH ELEVATIONS**  
SCALE:  
**3/32"=1'0"**  
SHEET No.:  
**A2-1.01**  
itedesign inc. 2015

PROJECT :  
**ACQUA ON THE BAY**  
 4098 NE 167TH STREET  
 NORTH MIAMI BEACH | FLORIDA 33160

OWNER:  
 ICAPITAL PROJECT MANAGEMENT  
 951 BRICKELL AVE UNIT 3708  
 MIAMI, FL 33131

EXECUTIVE ARCHITECT:

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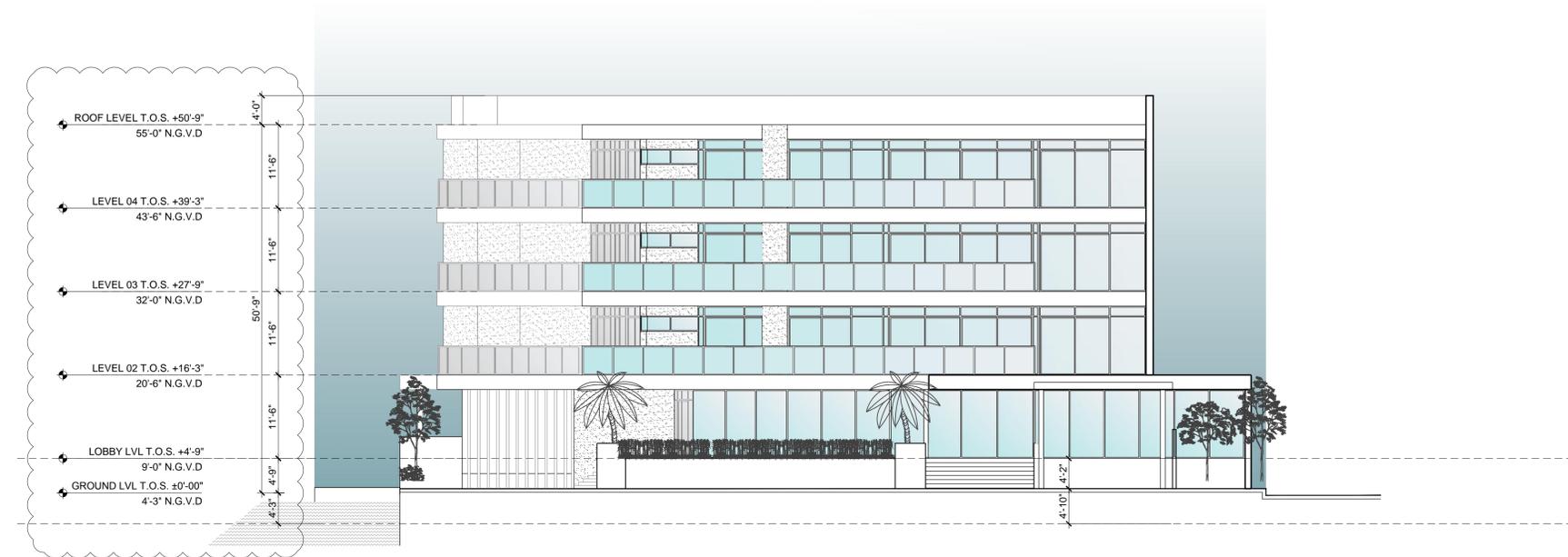
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KEY PLAN:



**1 WEST ELEVATION**  
 SCALE: 3/32"=1'-0"  
 N



**2 EAST ELEVATION**  
 SCALE: 3/32"=1'-0"  
 N

- ELEVATION LEGEND & NOTES**
- 9'-0" ± ± 4'-3" N.G.V.D.
  - ALL SHOP DWGS REQUIRE APPROVAL FROM CITY OF MIAMI.
  - PROVIDE "CLASS ABC" FIRE EXTINGUISHER PER 2500S.F. AND NOT TO EXCEED 75' BETWEEN EACH OTHER. SEE PLAN LOCATION SYMBOL. F.E. CONTRACTOR TO SUBMIT FLUSH MOUNT CABINET WITH SHOP DRAWINGS FOR ARCHITECTS APPROVAL.
  - FIRE PENETRATIONS: CONTRACTOR SHALL SEAL ALL PENETRATIONS THRU FIRE RATED PARTITIONS OR ASSEMBLIES WITH "HILTI" FIRESTOP SYSTEM-CS-240 FIRESTOP SEALANT OR EQUAL. INSTALL AS PER MANUF. RECOMMENDATION FOR 1,2,3 & 4 HOUR RATINGS.
  - BUILDING IS FULLY SPRINKLERED.
  - SEE ELECTRICAL DWGS FOR LIFE SAFETY / EGRESS LIGHTS.

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 ARTURO G. GRIEGO  
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SHEET TITLE:  
**WEST & EAST ELEVATIONS**

SCALE:  
**3/32"=1'0"**

SHEET No.:  
**A2-1.02**

12 11 10 9 8 7 6 5 4 3 2 1



PROJECT :  
**ACQUA  
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4098 NE 167TH STREET  
NORTH MIAMI BEACH | FLORIDA 33160

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ISSUE DATE: 11-18-2015  
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LIC# AR94011

SHEET TITLE:  
**FRONT NORTH  
RENDERING**

SCALE:  
**NTS**

SHEET No.:  
**A2-2.01**

**1** FRONT NORTH RENDERING  
SCALE: NTS

12 11 10 9 8 7 6 5 4 3 2 1

12 11 10 9 8 7 6 5 4 3 2 1

PROJECT :

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KEY PLAN:

## PERMIT SET

ISSUE DATE: 11-18-2015

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ARTURO G. GRIEGO  
LIC# AR94011

SHEET TITLE:  
**REAR SOUTH-EAST  
RENDERING**

SCALE:  
**NTS**

SHEET No.:

**A2-2.02**

itedesign inc. 2015



**1** SOUTH-EAST RENDERING  
SCALE: NTS

12 11 10 9 8 7 6 5 4 3 2 1

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KEY PLAN:

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LIC# AR94011

SHEET TITLE:  
**REAR SOUTH  
RENDERING**

SCALE:  
**NTS**

SHEET No.:

# A2-2.03

itec design inc. 2015



**1** SOUTH RENDERING  
SCALE: NTS

12 11 10 9 8 7 6 5 4 3 2 1

**1. APPLICABLE CODES**

- 1.1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARD AND SPECIFICATIONS OF ----- CITY / TOWN ----- AND ALL OTHER LOCAL, STATE AND NATIONAL CODES WHERE APPLICABLE EXCEPT WITHIN DEPARTMENT OF TRANSPORTATION (D.O.T.) R/W WHEREIN FLORIDA DEPARTMENT OF TRANSPORTATION (F.D.O.T.) GOVERNS.
- 1.2. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER AND IN STRICT COMPLIANCE WITH ALL THE REQUIREMENTS OF FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND ALL STATE AND LOCAL SAFETY AND HEALTH REGULATIONS.
- 1.3. ALL ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS ARE BASED ON THE ----- VERTICAL DATUM 19--., (-----) UNLESS OTHERWISE NOTED.
- 1.4. ----- CITY / TOWN ----- WATER AND SEWER DEPARTMENT WATER AND SEWER SPECIFICATIONS SHALL DICATE WHEN IN CONFLICT WITH ANY OF THE FOLLOWING SPECIFICATIONS.
- 1.5. ALL MATERIALS AND CONSTRUCTION WITHIN THE D.O.T. R/W SHALL CONFORM TO THE D.O.T. "DESIGN STANDARDS" (2015) AND "STANDARD SPECIFICATIONS" (2015).
- 1.6. THE CONSULTANT'S ENGINEER RESPONSIBLE FOR CONSTRUCTION INSPECTION SHALL INSURE THAT THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN FOR THE PROJECT CONFORMS WITH STANDARD INDEX SERIES 600, APPLICABLE INDEX FOR WORK BEING PERFORMED. THE CONTRACTOR SHALL INSURE THE M.O.T. PLAN IS IMPLEMENTED EXACTLY AS APPROVED.

**2. PRECONSTRUCTION RESPONSIBILITIES**

- 2.1. UPON THE RECEIPT OF THE "NOTICE TO PROCEED", THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, UTILITY OWNERS, THE OWNER AND THE ENGINEER OF RECORD.
- 2.2. THE CONTRACTOR SHALL OBTAIN A SUNSHINE STATE ONE CALL OF FLORIDA, INC. CERTIFICATION NUMBER AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION, CALL 1-800-432-4770.
- 2.3. ALL UTILITY EASEMENTS TO BE SECURED PRIOR TO CONSTRUCTION (IF REQUIRED).
- 2.4. LOCATION OF EXISTING FACILITIES AS SHOWN ON CONSTRUCTION DRAWINGS ARE DRAWN FROM AVAILABLE RECORDS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE FACILITIES SHOWN OR FOR ANY FACILITY NOT SHOWN. THE CONTRACTOR SHALL VERIFY, IF POSSIBLE, THE ELEVATIONS AND LOCATIONS OF EXISTING FACILITIES PRIOR TO CONSTRUCTION. IF AN EXISTING FACILITY IS FOUND TO CONFLICT WITH THE PROPOSED CONSTRUCTION UPON EXCAVATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD SO THAT APPROPRIATE MEASURES CAN BE TAKEN TO RESOLVE THE PROBLEM.
- 2.5. THE CONTRACTOR MUST CALL ----- CITY / TOWN ----- AT LEAST 48 HOURS BEFORE ANY EXCAVATION WITHIN THE R/W TO DETERMINE THE LOCATION TO OF THE EXISTING TRAFFIC SIGNAL INTERCONNECT CABLE.

**3. INSPECTIONS**

- 3.1. THE CONTRACTOR SHALL NOTIFY ----- CITY / TOWN -----, AND ANY OTHER GOVERNMENTAL AGENCIES HAVING JURISDICTION AT LEAST 24 HOURS PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO THE INSPECTION OF THE FOLLOWING ITEMS, WHERE APPLICABLE:
  - 3.1.1. CLEARING AND FILLING
  - 3.1.2. STORM DRAINAGE SYSTEM
  - 3.1.3. SANITARY SEWER SYSTEM
  - 3.1.4. WATER DISTRIBUTION SYSTEM
  - 3.1.5. SUBGRADE
  - 3.1.6. LIMEROCK BASE
  - 3.1.7. ASPHALTIC CONCRETE
  - 3.1.8. SIDEWALK
  - 3.1.9. FINAL

**4. SHOP DRAWINGS**

- 4.1. PRIOR TO THEIR CONSTRUCTION OR INSTALLATION, SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD AND ----- CITY / TOWN ----- FOR THE FOLLOWING: SANITARY MANHOLES, STORM DRAIN MANHOLES, CATCH BASINS, FIRE HYDRANTS, PIPING, VALVES AND ALL REQUIRED ACCESSORIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL OTHER AGENCY APPROVALS IF REQUIRED.

**5. TEMPORARY FACILITIES**

- 5.1. TEMPORARY FACILITIES:
  - 5.1.1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY.
- 5.2. TRAFFIC REGULATION:
  - 5.2.1. MAINTENANCE OF TRAFFIC IN THE PUBLIC RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH MANUAL TRAFFIC CONTROL DEVICES (M.T.C.D.).
  - 5.2.2. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
  - 5.2.3. NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS ARE TO BE LEFT OPEN DURING NIGHTTIME HOURS WITHOUT EXPRESS PERMISSION OF MIAMI DADE COUNTY PUBLIC SCHOOLS.
  - 5.2.4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR ANY NECESSARY CONSTRUCTION, PAVEMENT MARKING AND SIGNAGE OR ANY PEDESTRIAN SIGNALIZATION AND/OR SIGNAL MODIFICATION TO ACCOMMODATE AN ALTERNATE SAFE WALK ROUTE.

**6. WATER DISTRIBUTION SYSTEM**

- 6.1. SEPARATION OF WATER AND SEWER MAINS:
  - 6.1.1. SANITARY SEWERS, STORM SEWERS, AND FORCE MAINS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS, STORM SEWERS, AND FORCE MAINS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 12" INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.
  - 6.1.2. WHERE SANITARY SEWERS, STORM SEWERS, OR FORCE MAINS MUST CROSS A WATER MAIN WITH LESS THAN 12" INCHES VERTICAL DISTANCE, BOTH THE SEWER AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
  - 6.1.3. ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).

- 6.1.4. WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 12" INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP, AND THE CROSSING SHALL BE ARRANGED TO MEET THE REQUIREMENTS ABOVE.
- 6.1.5. A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- 6.1.6. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
- 6.1.7. WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 12" INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SANITARY SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).
- 6.1.8. CONTRACTOR SHALL MAINTAIN WATER SERVICE TO ALL EXISTING FACILITIES DURING CONSTRUCTION.

- 6.2. MATERIALS:
  - 6.2.1. POLYVINYL CHLORIDE (PVC) PIPE SHALL BE DR 18 ANSI / AWWA C900-97 OR LATEST REVISION.
  - 6.2.2. ALL PIPE LARGER THAN 12" DIAMETER MUST BE DUCTILE IRON (MIN. CLASS 50), 8" AND 10" DIP (MIN. CLASS 50) 4" AND 6" DIP (MIN. CLASS 52). ALL DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C151/A21.51-96 AND CEMENT MORTAR LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-95.
  - 6.2.3. FITTINGS SHALL BE DUCTILE IRON MEETING ANSI/AWWA C-153/A21.53-00 SPECIFICATIONS. FITTINGS MUST BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-95.
  - 6.2.4. VALVES SHALL BE GATE VALVES, IRON BODY, FULLY RESILIENT SEAT BRONZED MOUNTED NON-RISING STEM, RATED AT 200 PSI AND CONFORMING TO ANSI/AWWA C509-94 OR LATEST REVISION, AND SHALL HAVE MECHANICAL JOINTS.
    - 6.2.4.1. GATE VALVES 4" AND LARGER SHALL BE MUELLER A-2380-20, CONFORMING TO ANSI/AWWA C151/A21.51-96 AND CEMENT MORTAR LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-95.
    - 6.2.4.2. TAPPING VALVES SHALL BE MUELLER H667 OR APPROVED EQUAL.
    - 6.2.4.3. GATE VALVES 3" OR LESS SHALL HAVE THE SAME REQUIREMENTS AS LARGER GATE VALVES. THEY SHALL BE 2" RSW VALVE WITH 2" OPERATING NUT.
  - 6.2.5. TAPPING SLEEVES SHALL BE MUELLER H615, CLOW F-2505 OR APPROVED EQUAL.
  - 6.2.6. VALVE BOXES SHALL BE TYLER OR APPROVED EQUAL.
  - 6.2.7. RETAINER GLANDS SHALL BE MEGA-LUG AND CONFORM TO ANSI / AWWA C111/A21.11-00 OR LATEST REVISION. ALL GLANDS SHALL BE MANUFACTURED FROM DUCTILE IRON AS LISTED BY UNDERWRITERS LABORATORIES FOR 250 PSI MINIMUM WATER PRESSURE RATING.
  - 6.2.8. NO DRESSER COUPLINGS SHALL BE ALLOWED ON DISTRIBUTION SYSTEM.
  - 6.2.9. FIRE HYDRANTS SHALL BE MUELLER CENTURION TRAFFIC TYPE A-423 WITH 5 1/4" INTERNAL VALVE OPENING OR APPROVED EQUAL. MAIN VALVE OPENING TO BE DETERMINED BY THE WATER DEPARTMENT. PUMPER NOZZLE TO BE 18" FROM FINISHED GRADE OR CENTERLINE OF ADJACENT ROADWAY WHICHEVER IS GREATER. ALL HYDRANTS TO BE INSTALLED WITH CONTROL VALVE. RETAINER GLANDS ARE PREFERRED FOR RESTRAINING FIRE HYDRANT SHALL COMPLY WITH ANSI/AWWA C502-94.
  - 6.2.10. FIRE HYDRANTS SHALL BE PAINTED YELLOW. (RUSTOLEUM #944 SAFETY YELLOW OR APPROVED EQUAL)

- 6.3. SERVICE CONNECTION:
  - 6.3.1. SERVICE SADDLES SHALL BE STAINLESS STEEL STRAPS, SADDLES SHALL BE DOUBLE STRAP TYPE. ALL SERVICE SADDLES SHALL CONFORM TO ANSI/AWWA C111/A21.11-00 AND ASTM A-588.
  - 6.3.2. SERVICE LINES SHALL BE POLYETHYLENE (3408), 250 PSI RATED, SDR9. PIPE JOINTS SHALL BE OF THE COMPRESSION TYPE TOTALLY CONFINED GRIP SEAL AND COUPLING NUT WITH STAINLESS STEEL INSERTS.
  - 6.3.3. CORPORATION STOPS SHALL BE MANUFACTURED OF BRASS ALLOY IN ACCORDANCE WITH ASTM B-62 WITH THREADED ENDS, AS MANUFACTURED BY MUELLER H10046 OR APPROVED EQUAL.
  - 6.3.4. CURB STOPS SHALL BE MUELLER H10203 OR APPROVED EQUAL.
  - 6.3.5. METER STOPS SHALL BE LOCKING TYPE AND SHALL BE OF BRONZE CONSTRUCTION IN ACCORDANCE WITH ASTM B-62. METER STOPS SHALL BE CLOSED BOTTOM DESIGN AND RESILIENT "O" RING SEALED AGAINST EXTERNAL LEAKAGE AT THE TOP. STOPS SHALL BE EQUIPPED WITH A METER COUPLING NUT ON THE OUTLET SIDES, AS MANUFACTURED BY MUELLER OR APPROVED EQUAL.

- 6.4. INSTALLATION:
  - 6.4.1. ALL PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE UNI-BELL PLASTIC PIPE ASSOCIATIONS "GUIDE FOR INSTALLATION OF PVC PRESSURE PIPE FOR MUNICIPAL WATER DISTRIBUTION SYSTEM."
  - 6.4.2. ALL DIP SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-99 OR LATEST REVISION.
  - 6.4.3. ALL WATER MAINS SHALL BE LAID WITH A MINIMUM 36" COVER FOR PVC AND 30" FOR DIP.
  - 6.4.4. NO CONNECTIONS TO EXISTING LINES SHALL BE MADE UNTIL PRESSURE TESTS & BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED AND THE SYSTEM IS ACCEPTABLE TO MIAMI DADE COUNTY PUBLIC SCHOOLS AND MIAMI DADE COUNTY HEALTH DEPARTMENT.
  - 6.4.5. PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.
  - 6.4.6. A CONTINUOUS AND UNIFORM BEDDING SHALL BE PROVIDED. BACKFILL MATERIAL SHALL BE TAMPED IN LAYERS AROUND THE PIPE AS SHOWN ON THE PLANS. STONES FOUND IN THE TRENCH SHALL BE REMOVED FOR A DEPTH OF AT LEAST 6" BELOW THE BOTTOM OF THE PIPE.
  - 6.4.7. ALL VALVES SHALL BE INSTALLED WITH ADJUSTABLE CAST IRON VALVE BOXES WITH THE WORD "WATER" CAST IN THE COVER. U.S.F. OR APPROVED EQUAL.
  - 6.4.8. ALL FITTINGS TO BE RESTRAINED WITH MEGALUG OR APPROVED EQUAL.

- 6.4.9. LOCATOR TAPE AND WIRE MUST BE INSTALLED 12" ABOVE NEW WATER MAINS. TAPE WILL BE 3" WIDE AND COLOR CODED. LOCATE WIRE WILL SHALL BE NO.14 STRAND AND COLOR CODED.
- 6.4.10. R.P.M.'S TO BE INSTALLED, PRIOR TO C/O, AT CENTER OF NEAREST DRIVE AISLE ADJACENT TO ALL HYDRANTS (BLUE) AND GATE VALVES (WHITE). FOR HYDRANTS AT CORNERS (2) TWO R.P.M.'S SHALL BE INSTALLED, ONE AT EACH ROADWAY.

- 6.5. TESTING:
  - 6.5.1. BEFORE ANY PHYSICAL CONNECTIONS TO THE EXISTING WATER MAINS ARE MADE, THE COMPLETE WATER SYSTEM SHALL BE PRESSURE TESTED AND DISINFECTED. HYDROSTATIC TESTING OF NEW MAINS SHALL BE PERFORMED AT A MINIMUM STARTING PRESSURE OF 150 PSI FOR TWO HOURS IN ACCORDANCE WITH ANSI/AWWA C600-99 OR LATEST REVISION. THE PRESSURE TEST SHALL NOT VARY MORE THAN 5 PSI DURING THE TEST.
  - 6.5.2. THE PRESSURE TEST SHALL BE WITNESSED BY A REPRESENTATIVE OF MIAMI DADE COUNTY PUBLIC SCHOOLS UTILITIES DEPARTMENT AND THE ENGINEER OF RECORD.
  - 6.5.3. ALL NEW WATER MAINS SHALL BE PIGGED AND CANON FLUSHED PRIOR TO DISINFECTION.
  - 6.5.4. BEFORE ACCEPTANCE FOR OPERATION, THE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE ANSI/AWWA C651-99; 150 PSI MINIMUM STARTING TEST PRESSURE. METER RECONNECTIONS MAY BE MADE TO NEW LINES AFTER TWO CONSECUTIVE DAYS OF BACTERIOLOGICAL SAMPLES HAVE PASSED, AND COPIES OF RESULTS HAVE BEEN RECEIVED BY THE ENGINEER, MIAMI DADE COUNTY PUBLIC SCHOOLS, AND HRS.
  - 6.5.5. SAMPLING POINTS SHALL BE PROVIDED AT THE LOCATIONS SHOWN ON THE PLANS. IF NOT SPECIFIED, SAMPLING POINTS SHALL BE PROVIDED AT INTERVALS OF 1200' MAXIMUM FOR LINES GREATER THAN 200' IN LENGTH.
  - 6.5.6. THE ALLOWABLE LEAKAGE SHALL BE LESS THAN THE NUMBER OF GALLONS PER HOUR AS DETERMINED BY THE FORMULA:  $L = \frac{D^2 - 0.25}{1000}$  IN WHICH L EQUALS THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR, S EQUALS LENGTH OF PIPE (LINEAR FEET), D EQUALS NOMINAL DIAMETER OF PIPE (INCHES) AND P EQUALS THE SQUARE ROOT OF THE AVE PRESSURE.
  - 6.5.7. ALL FIRE HYDRANTS ARE TO BE FLOW TESTED BY THE FIRE DEPARTMENT AT A COST OF \$25.00 PER HYDRANT, PAYABLE TO MIAMI DADE COUNTY PUBLIC SCHOOLS, PRIOR TO TESTING, ACCEPTANCE OF SYSTEM, AND ISSUANCE OF BUILDING PERMIT.

**7. GRAVITY SEWER COLLECTION SYSTEM**

- 7.1. GENERAL
  - 7.1.1. DISTANCE AND LENGTHS SHOWN ON PLANS ARE REFERENCED TO THE CENTER OF STRUCTURES.
- 7.2. MATERIALS:
  - 7.2.1. ALL SEWER PIPE AND FITTINGS SHALL BE PVC SDR35 PIPE CONFORMING TO ANSI/AWWA STANDARD C900-89, CLASS 150, WITH PUSH-ON RUBBER GASKET JOINTS OR DUCTILE IRON PIPE WITH EPOXY COATING, PROTECTED 401 (MIN. CLASS 52), AS INDICATED ON THE DRAWINGS.
  - 7.2.2. MANHOLES SHALL BE PRECAST PER ASTM C 478 WITH 4,000 PSI CONCRETE AND GRADE 60 STEEL MONOLITHICALLY POURED BASES ONLY.
  - 7.2.3. MANHOLES ARE TO BE SEALED WITH ANTI-HYDRO CEMENT OR APPROVED EQUAL - NO MOUNDING PLASTER.
- 7.3. INSTALLATION:
  - 7.3.1. PVC SEWER PIPE SHALL BE LAID IN ACCORDANCE WITH ASTM D 2321 AND THE UNI-BELL PLASTIC PIPE ASSOCIATION'S "RECOMMENDED PRACTICE FOR THE INSTALLATION OF PVC SEWER PIPE."
  - 7.3.2. DUCTILE IRON PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-93 OR LATEST REVISION.
  - 7.3.3. SAND COLLAR SHALL BE GROUTED IN PLACE AT EACH PIPE CONNECTION INTO A MANHOLE WALL.
  - 7.3.4. MANHOLES SHALL BE SET PLUMB TO LINE AND GRADE ON FIRM SUBGRADE PROVIDING UNIFORM BEARING UNDER THE BASE.
  - 7.3.5. ALL OPENINGS AND JOINTS SHALL BE SEALED WATER TIGHT.
  - 7.3.6. THE ENTIRE INSIDE AND OUTSIDE OF THE MANHOLES SHALL BE PAINTED WITH TWO COATS: FIRST COAT RED, SECOND COAT BLACK (8 MILS EACH) OF KOPPERS 300-M BITUMASTIC PAINT OR ENGINEER'S APPROVED EQUAL.
  - 7.3.7. EXISTING SEWER SYSTEM MUST REMAIN SEPERATE FROM NEW SEWER SYSTEM WITH A WING-NUT TYPE MECHANICAL PLUG UNTIL CERTIFICATION.
- 7.4. TESTING:
  - 7.4.1. AFTER CONSTRUCTION OF THE SEWER SYSTEM, THE ENGINEER MAY REQUIRE A VISUAL INFILTRATION AND/OR EXFILTRATION TEST TO BE PERFORMED ON THE ENTIRE SYSTEM OR ANY PART THEREOF.
  - 7.4.2. AN AIR TEST MAY BE SUBSTITUTED FOR THE WATER EXFILTRATION TEST, UPON APPROVAL OF THE ENGINEER.
  - 7.4.3. MANHOLE LEAKAGE TEST SHALL NOT EXCEED FOUR GALLONS PER DAY PER UNIT. NO VISIBLE LEAKAGE ALLOWED.
  - 7.4.4. SEWER PIPE LEAKAGE ALLOWABLE SHALL NOT EXCEED 150 GALLONS PER DAY PER INCH DIAMETER PER MILE IN A TWO HOUR TEST PERIOD FOR ANY SECTION TESTED. NO VISIBLE LEAKAGE WILL BE ALLOWED.

**8. SEWAGE FORCEMAIN**

- 8.1. GENERAL:
  - 8.1.1. NO CONNECTIONS TO THE EXISTING LINES SHALL BE MADE UNTIL PRESSURE TESTS HAVE BEEN PERFORMED AND THE SYSTEM IS ACCEPTABLE TO MIAMI DADE COUNTY PUBLIC SCHOOLS.
  - 8.1.2. INITIAL BACK FILL (WITHIN 12" OF PIPE) FOR MAINS SHALL BE SAND WITH NO ROCKS LARGER THAN 3" IN DIAMETER.
- 8.2. MATERIALS:
  - 8.2.1. DUCTILE IRON PIPE (D.I.P.) SHALL BE CLASS 50, CLASS 57 IN PAVED AREAS, EPOXY LINED AND BITUMINOUS COATED OUTSIDE, MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C104/A21.4-95 AND C151/A21.51-96 OR LATEST REVISION. THE PIPE SHALL WITHSTAND A WORKING PRESSURE OF 250 PSI. THE JOINTS SHALL BE BELL AND SPIGOT PUSH-ON TYPE.
  - 8.2.2. FITTING FOR MAINS 4" AND LARGER SHALL BE D.I.P. MECHANICAL JOINT CONFORMING TO ANSI/AWWA C110/A21.10-99 OR LATEST REVISION, COMPLETE WITH GLANDS, GASKETS, BOLTS AND NUTS.

- 8.2.3. VALVES SHALL BE GATE VALVES (FOR WATER) OR PLUG VALVES (FOR SEWER), IRON BODY, FULLY RESILIENT SEAT BRONZED MOUNTED NON-RISING STEM, RATED AT 200 PSI AND CONFORMING TO ANSI/AWWA C509-94 OR LATEST REVISION, AND SHALL HAVE MECHANICAL JOINTS.
- 8.3. INSTALLATION:
  - 8.3.1. VALVES SHALL BE INSTALLED WITH ADJUSTABLE CAST IRON VALVE BOXES WITH THE WORD "SEWER" CAST IN THE COVER.

**9. STORM DRAINAGE**

- 9.1. GENERAL:
  - 9.1.1. DISTANCES AND LENGTHS SHOWN ON PLANS ARE REFERENCED TO THE CENTER OF STRUCTURES.
- 9.2. MATERIALS:
  - 9.2.1. REINFORCED CONCRETE PIPE (R.C.P.) SHALL MEET THE REQUIREMENTS OF ASTM C-76, LATEST REVISION. RUBBER GASKETS OR OTHER MANUFACTURER SUPPLIED JOINT SEALER SHALL BE USED.
  - 9.2.2. CORRUGATED ALUMINUM PIPE (C.A.P.) SHALL BE HELICAL TYPE, CONFORMING TO ASTM B209 AND AASHTO M196. AS MANUFACTURED BY KAISER ALUMINUM, INC., OR APPROVED EQUAL, THE CORRUGATION PATTERN AND GAUGE SHALL BE AS FOLLOWS:
 

DIAMETER	CORRUGATION	GAUGE
12" to 21"	2 2/3" x 1/2"	16
24" to 27"	2 2/3" x 1/2"	16
30"	2 2/3" x 1/2"	16
36" to 54"	3" x 1"	14
60" to 78"	3" x 1"	12
  - 9.2.3. PIPE COUPLINGS FOR C.A.P. SHALL BE 12" WIDE (MINIMUM) 24" FOR 60" DIAMETER OR LARGER. SPLIT BANDS OF THE SAME ALLOY AS THE PIPE MAY BE ONE GAUGE LIGHTER THAN THE PIPE. POLYURETHANE OR OTHER MANUFACTURER SUPPLIED SEALANT SHALL BE USED WITH THE COUPLINGS.
  - 9.2.4. FIELD JOINTS IN THE PIPE SHALL BE MADE WITH ALUMINUM SPIRAL RIB PIPE FORMED FROM COILED ALUMINUM SHEETS AND SHALL CONFORM TO ASTM B2-09 AND AASHTO M196, AS APPROVED BY KAISER ALUMINUM, INC., OR APPROVED EQUAL.
  - 9.2.5. ALL DRAINAGE CATCH BASINS AND STRUCTURES SHALL BE PRECAST CONCRETE AS MANUFACTURED BY U.S. PRECAST CORPORATION, UNLESS OTHERWISE NOTED ON THE PLANS. BLOCK CATCH BASINS WILL BE ALLOWED ONLY WITH APPROVAL OF THE ENGINEER.
- 9.3. INSTALLATION:
  - 9.3.1. PIPE SHALL BE PLACED ON A MINIMUM OF 8" STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION AND OTHER FOREIGN FORMATIONS, AND CONSTRUCTED TO A UNIFORM GRADE AND LINE.
  - 9.3.2. BACKFILL MATERIAL SHALL BE WELL GRADED GRANULAR MATERIAL, WELL TAMPED TO A HEIGHT OF 12 INCHES ABOVE PIPE AS SHOWN ON THE PLANS. TAMPING IS TO BE DONE IN LAYERS NOT EXCEED 12 INCHES.
  - 9.3.3. PROVIDE A MINIMUM PROTECTIVE COVER OF 18 INCHES OVER STORM SEWER AND AVOID UNNECESSARY CROSSING BY HEAVY CONSTRUCTION VEHICLES DURING CONSTRUCTION.
  - 9.3.4. THE CONTRACTOR SHALL NOTIFY MIAMI DADE COUNTY PUBLIC SCHOOLS ENGINEERING DIVISION AT LEAST 7 DAYS PRIOR TO THE START OF THE CONSTRUCTION AND INSPECTION.

**10. PAVING AND SIDEWALKS**

- 10.1. GENERAL:
  - 10.1.1. ALL MUCK AND YIELDING MATERIAL WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH CLEAN FILL MATERIAL WHICH SHALL BE COMPACTED AND SHAPED TO CONFORM TO THE REQUIRED SECTION. COMPACTED AREAS, AS SHOWN ON THE PLANS AND OR AS DETERMINED BY THE ENGINEER, SHALL BE COMPACTED TO NOT LESS THAN 98% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE, AS DETERMINED BY AASHTO T-180, LATEST REVISION. AREAS TO BE STABILIZED, AS DETERMINED BY THE ENGINEER, SHALL HAVE A MINIMUM LBR-40.
  - 10.1.2. ALL UNDERGROUND UTILITIES SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF LIMEROCK BASE.
  - 10.1.3. ALL EXISTING PAVEMENT, CUT OR DAMAGED BY CONSTRUCTION, SHALL BE PROPERLY RESTORED AT THE CONTRACTOR'S EXPENSE.
  - 10.1.4. WHERE ANY PROPOSED PAVEMENT IS TO BE CONNECTED TO EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE SAW CUT.
- 10.2. MATERIALS:
  - 10.2.1. BASE COURSE SHALL BE CRUSHED LIMEROCK WITH A MINIMUM OF 70% CARBONATES OF CALCIUM AND MAGNESIUM.
  - 10.2.2. ASPHALT SURFACES SHALL BE TYPE 5-III ASPHALTIC CONCRETE, UNLESS OTHERWISE SPECIFIED ON THE PLANS, TWO (2) SHALL BE A MINIMUM OF 1-1/2" THICK, A AND SHALL BE APPLIED IN 2) 3/4" LIFTS.
  - 10.2.3. MINIMUM SIDEWALK CONSTRUCTION SHALL BE 4 INCH THICK CONCRETE, MINIMUM 3000psi COMPRESSIVE STRENGTH AT 28 DAYS. SAWCUT CONSTRUCTION JOINTS 5 FOOT O.C. WITHIN 48 HOURS OF PLACING, EXPANSION JOINTS SHALL BE 20 FOOT O.C.
  - 10.2.4. CURBS AND GUTTERS: CONCRETE 3000psi COMPRESSIVE STRENGTH AT 28 DAYS. SAWCUT CONSTRUCTION JOINTS 10 FOOT O.C. WITHIN 48 HOURS OF PLACING.
  - 10.2.5. REINFORCED CONCRETE SLABS SHALL BE CONSTRUCTED OF CLASS I CONCRETE WITH A MINIMUM STRENGTH OF 3,000 PSI AND SHALL BE REINFORCED WITH A 6" x 6" NO. 10 GAUGE WIRE MESH.
- 10.3. INSTALLATION:
  - 10.3.1. SUBGRADE FOR PAVEMENT AREAS SHALL BE COMPACTED TO A MINIMUM OF 98% OF THE MAXIMUM DENSITY (AASHTO T-99(c)), AND SHALL HAVE A MINIMUM LBR 40.
  - 10.3.2. BASE COURSE MATERIAL FOR PAVED AREAS SHALL BE AS SHOWN ON PLANS FOR VARIOUS LOCATIONS.
  - 10.3.3. BASE COURSE MATERIAL FOR CURBS AND GUTTERS SHALL BE A MINIMUM THICKNESS OF 6 INCH.
  - 10.3.4. BASE COURSE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER AASHTO T-180 AND SHALL HAVE A MINIMUM LBR OF 100.
  - 10.3.5. INSTALLATION OF THE WEARING SURFACE SHALL CONFORM WITH THE REQUIREMENTS OF THE D.O.T. STANDARD SPECIFICATIONS FOR TYPE 5-3 ASPHALTIC CONCRETE.
- 10.4. TESTING:
  - 10.4.1. THE FINISHED SURFACE OF THE BASE COURSE AND THAT OF THE WEARING SURFACE SHALL NOT VARY MORE THAN 1/4" FROM THE TEMPLATE. ANY IRREGULARITIES EXCEEDING THIS LIMIT SHALL BE CORRECTED.

- 10.4.2. DENSITY TESTS SHALL BE TAKEN BY AN INDEPENDENT TESTING LABORATORY CERTIFIED BY THE STATE OF FLORIDA, WHERE DIRECTED BY THE ENGINEER.
- 10.4.3. ALL TESTING COSTS (PAVING) SHALL BE PAID FOR BY THE CONTRACTOR.
- 10.4.4. DENSITY TESTS ON THE STABILIZED SUBGRADE SHALL BE SUPPLIED TO THE ENGINEER OF RECORD AND APPROVED BEFORE ANY LIMEROCK BASE IS CONSTRUCTED.
- 10.4.5. DENSITY TESTS AND AS-BUILTS ON THE FINISHED LIMEROCK BASE SHALL BE SUPPLIED TO THE ENGINEER OF RECORD, AND APPROVED BEFORE ANY ASPHALT PAVEMENT IS CONSTRUCTED.

**11. PROJECT CLOSEOUT**

- 11.1. CLEANING UP:
  - 11.1.1. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER, AND UPON FINAL CLEAN-UP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEEP BROOM CLEAN.
  - 11.1.2. THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY HIS WORK, EQUIPMENT, OR EMPLOYEES TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS. TO THAT END, THE CONTRACTOR SHALL DO, AS REQUIRED, ALL NECESSARY HIGHWAY, DRIVEWAY, WALK AND LANDSCAPE MATERIALS AND METHODS SHALL BE USED FOR SUCH RESTORATION.
  - 11.1.3. WHERE MATERIAL OR DEBRIS HAS WASHED OR FLOWED INTO OR HAS BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING THE PROGRESS OF THE WORK, AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION.
  - 11.2. ALL PROPERTY MONUMENTS OR PERMANENT REFERENCES, REMOVED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY A STATE OF FLORIDA REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
  - 11.3. ALL UNPAVED SURFACES DISTURBED AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED BEFORE THE CONSTRUCTION.

**12. ENGINEER'S AS-BUILT REQUIREMENTS**

- 12.1. AS-BUILTS OF WATER LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
  - 12.1.1. TOP OF PIPE ELEVATIONS EVERY 100 LF.
  - 12.1.2. LOCATIONS AND ELEVATIONS OF ALL FITTINGS INCLUDING BENDS, TEES, GATE VALVES, DOUBLE DETECTOR CHECK VALVES, FIRE HYDRANTS, ETC.
  - 12.1.3. ALL TIE INS TO EXISTING LINES SHALL BE AS-BUILT.
  - 12.1.4. THE ENDS OF ALL WATER SERVICES AT THE BUILDINGS OR HOMES SHALL BE AS-BUILT OR WHERE THE WATER SERVICE TERMINATES.
- 12.2. AS-BUILTS OF ALL GRAVITY SANITARY SEWER LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
  - 12.2.1. RIMS, INVERTS AND LENGTH OF PIPING BETWEEN STRUCTURES AS WELL AS SLOPES.
  - 12.2.2. THE STUB ENDS OF ALL SEWER LATERALS SHALL BE LOCATED AND IF THERE ARE ANY CLEANOUTS INSTALLED ON THE SEWER LATERALS THEN THE INVERT ELEVATION OF THESE CLEANOUTS SHALL BE OBTAINED.
  - 12.2.3. LIFT STATION AS-BUILTS SHALL CONSIST OF TOP OF WET WELL ELEVATION, INVERT ELEVATION OF THE INCOMING LINE, BOTTOM OF THE WET WELL AND AS-BUILTS OF THE COMPOUND AREA.
- 12.3. AS-BUILTS OF ALL DRAINAGE LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
  - 12.3.1. RIMS, INVERTS AND LENGTH OF PIPING BETWEEN STRUCTURES AND WEIR ELEVATIONS IF APPLICABLE.
  - 12.3.2. THE SIZE OF THE PIPING SHALL BE VERIFIED BY THE SURVEY CREW AT THE TIME OF AS-BUILT.
  - 12.3.3. DRAINAGE WELL STRUCTURE AS-BUILTS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP OF CASING ELEVATION, TOP AND BOTTOM ELEVATIONS OF THE BAFFLE WALLS, RIM ELEVATIONS AND INVERTS OF PIPING.
- 12.4. ALL ROCK AS-BUILTS FOR PARKING LOT AREAS SHALL CONSIST OF THE FOLLOWING:
  - 12.4.1. ROCK ELEVATIONS AT ALL HIGH AND LOW POINTS, AND AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY.
  - 12.4.2. ROCK AS-BUILTS SHALL BE TAKEN AT ALL LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS.
  - 12.4.3. ALL CATCH BASIN AND MANHOLE RIM ELEVATIONS SHALL BE SHOWN.
  - 12.4.4. ELEVATIONS AROUND ISLAND AREAS WILL ALSO BE REQUIRED.
  - 12.4.5. WHERE CONCRETE IS TO BE USED AS A FINISHED PRODUCT FOR THE ROADWAY OR PARKING LOT ROCK AS-BUILTS WILL BE REQUIRED AS INDICATED ABOVE AS WELL AS AS-BUILTS ON THE FINISHED CONCRETE AT LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS. F AS-BUILTS SHALL BE TAKEN ON ALL PAVED AND UNPAVED SWALES. PRIOR TO PLACEMENT OF ASPHALT OR TOPSOIL/SOD, AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY AND CONFORMANCE TO THE PLAN DETAILS.
  - 12.5. RETENTION AREA AS-BUILT ELEVATIONS SHALL BE TAKEN AT THE BOTTOM OF THE RETENTION AREA AND AT THE TOP OF BANK. IF THERE ARE CONTOURS INDICATED ON THE DESIGN PLANS, THEN THEY SHALL BE AS-BUILT AS WELL.
- 12.6. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PREPARE RECORD DRAWINGS, "AS-BUILTS", ON FULL SIZE, 24" X 36" REPRODUCIBLE MATERIAL WHERE WATER AND SEWER INFORMATION ARE ON THE SAME PAGE THE WATER LINE SHALL BE AS-BUILT BY STATION AND OFFSET UTILIZING THE SANITARY SEWER SYSTEM AS THE BASE LINE. IF IT IS NOT PRACTICAL TO UTILIZE THE SEWER SYSTEM AS A BASE LINE THEN THE SURVEYOR SHALL CONTACT THE ENGINEER OF RECORD SO THAT A SUBSTITUTE BASELINE MAY BE CHOSEN. ALL RECORD DRAWING, "AS-BUILT", INFORMATION SHALL BE PUT ON THE LATEST ENGINEERING DRAWINGS. ONE (1) SET OF REPRODUCIBLE RECORD DRAWINGS, "AS-BUILTS", SHALL BE SUBMITTED ALONG WITH EIGHT (8) SETS OF BLUE OR BLACKLINE DRAWINGS. THESE DRAWINGS SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL LAND SURVEYOR. ADDITIONALLY, AN ELECTRONIC COPY OF THESE RECORD DRAWINGS, "AS-BUILTS", SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN AUTOCAD, VERSION 2004.

MR	11/30/15			
DESIGNED BY	DATE			
MG	11/30/15			
DRAWN BY	DATE			
MR	11/30/15			
CHECKED BY	DATE			
RR	11/30/15			
APPROVED BY	DATE	No.	DATE	REVISIONS

**PROJECT NAME**  
 STREET ADDRESS  
 CITY, STATE, ZIP CODE

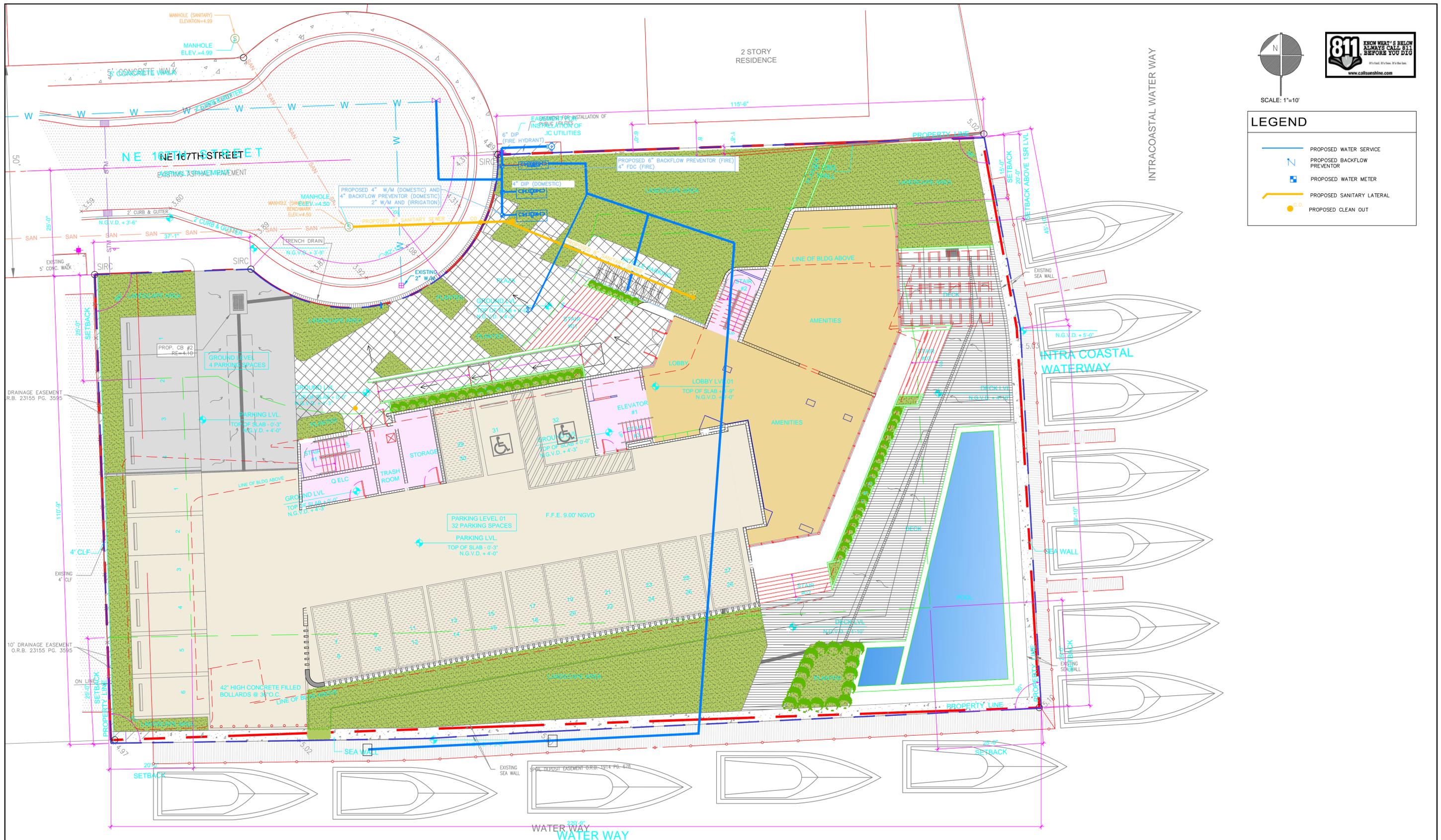
3325 S. UNIVERSITY DRIVE, SUITE 111  
 DAVIE, FLORIDA 33328  
 (954)318-0624 (954)358-0190 FAX  
 CERTIFICATE OF AUTHORIZATION No. 9808

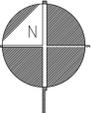
ROBERT J. ROSS, P.E.  
 FLORIDA P.E. No. 59485  
 DATE: 11/30/2015

GENERAL NOTES AND SPECIFICATIONS

SCALE: \_\_\_\_\_ SHEET No. C-1







SCALE: 1"=10'



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**LEGEND**

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- PROPOSED BACKFLOW PREVENTOR
- PROPOSED WATER METER
- PROPOSED SANITARY LATERAL
- PROPOSED CLEAN OUT

MR	11/30/15			
DESIGNED BY	DATE			
MG	11/30/15			
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APPROVED BY	DATE	No.	DATE	REVISIONS

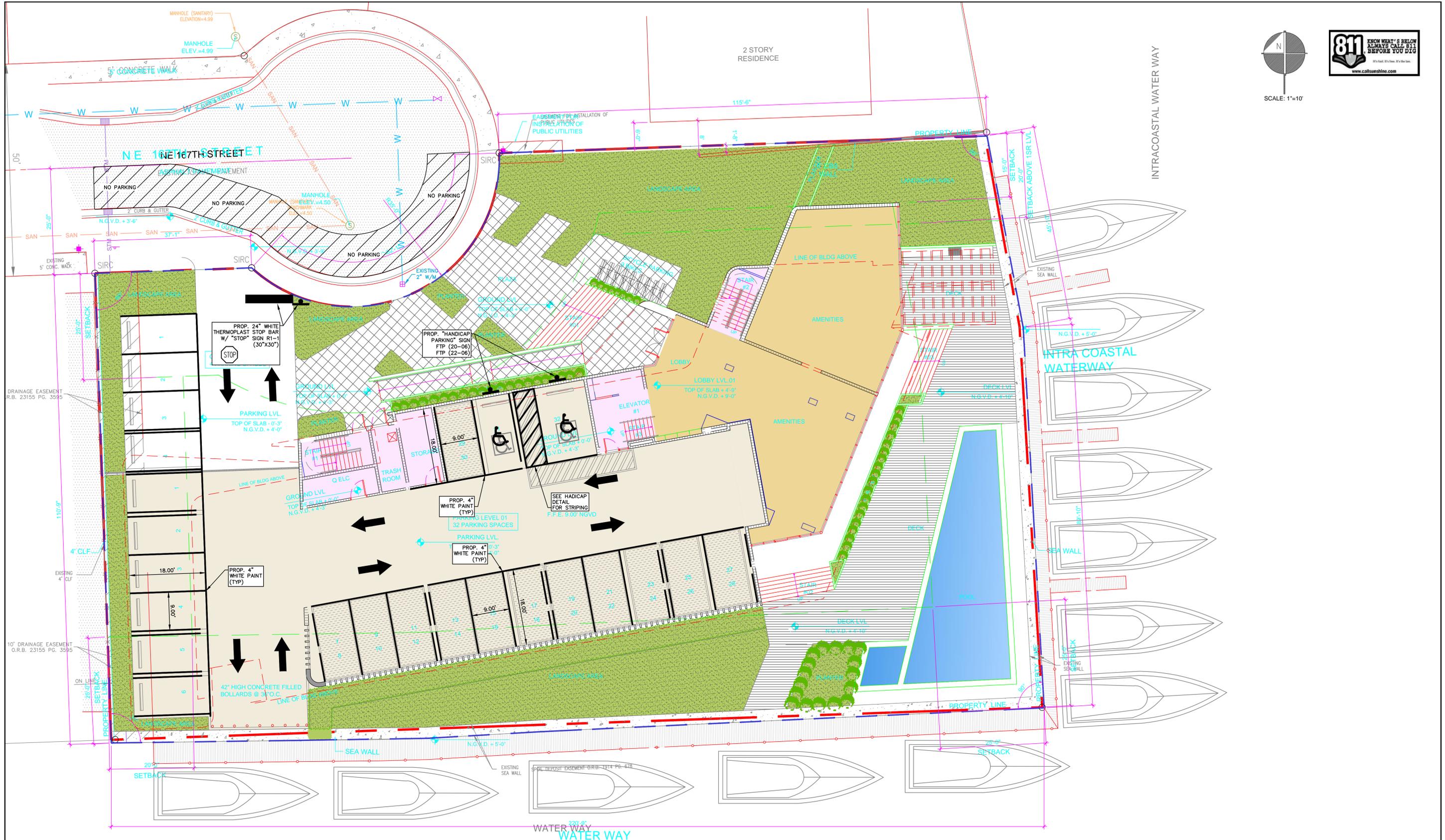
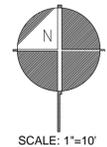
**AQUA - MIAMI**  
4098 NORTHEAST 167TH STREET  
NORTH MIAMI BEACH, FLORIDA 33160



3325 S. UNIVERSITY DRIVE, SUITE 111  
DAVIE, FLORIDA 33328  
(954)318-0624 (954)358-0190 FAX  
CERTIFICATE OF AUTHORIZATION No. 9808

ROBERT J. ROSS, P.E.  
FLORIDA P.E. No. 59485  
DATE: 11/30/2015

## WATER AND SANITARY SEWER PLAN



MR	DESIGNED BY	MG	DRAWN BY	CHECKED BY	RR	APPROVED BY	DATE	No.	DATE	REVISIONS
							11/30/15			
							11/30/15			
							11/30/15			
							11/30/15			
							11/30/15			

**AQUA - MIAMI**  
 4098 NORTHEAST 167TH STREET  
 NORTH MIAMI BEACH, FLORIDA 33160



3325 S. UNIVERSITY DRIVE, SUITE 111  
 DAVIE, FLORIDA 33328  
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ROBERT J. ROSS, P.E.  
 FLORIDA P.E. No. 59485  
 DATE: 11/30/2015

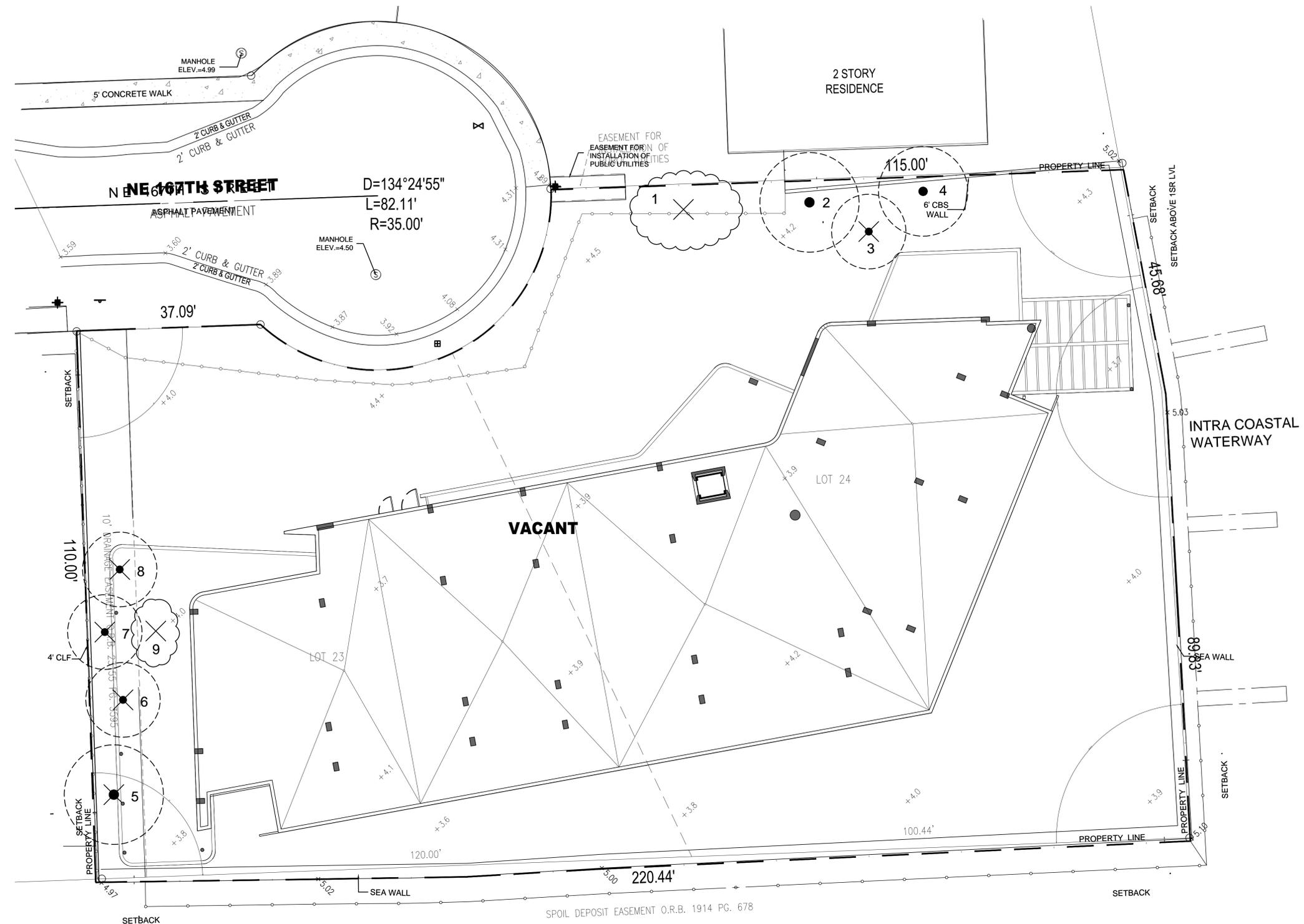
**PAVEMENT MARKING AND SIGNAGE PLAN**

SCALE: 1"=10'

SHEET No. c-4

REVISIONS	TRAD	Comments
11.30.2015		

- LEGEND**
- EXISTING TREE TO REMAIN
  - EXISTING TREE TO BE REMOVED
  - EXISTING TREE TO BE TRANSPLANTED



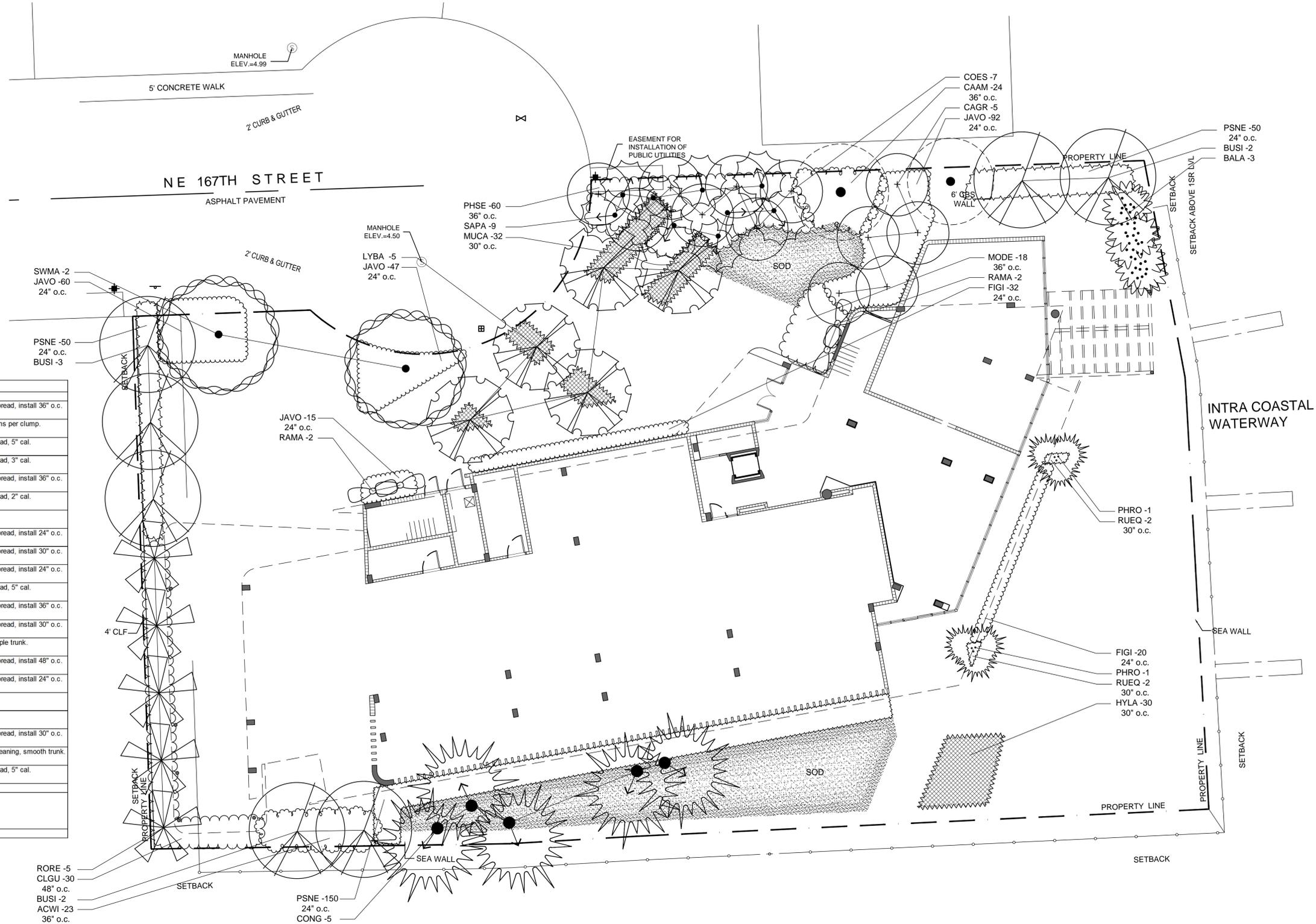
EXISTING TREE DISPOSITION LIST									
KEY	BOTANICAL NAME	COMMON NAME	SIZE			DISPOSITION			MITIGATION
			HT.(ft.)	SPD.(ft.)	DBH.(in.)	REMAIN	REMOVE	TRANSPL.	
1	Schinus terebinthifolius	Brazilian Pepper	12	30	multi		X		no mitigation necessary
2	Coccoloba uvifera	Sea Grape	22	20	20	X			
3	Sabal palmetto	Sabal Palm	18	15	10		X		177
4	Coccoloba uvifera	Sea Grape	18	20	15	X			
5	Ficus aurea	Strangler Fig	18	15	10		X		177
6	Sabal palmetto	Sabal Palm	12	15	10		X		177
7	Sabal palmetto	Sabal Palm	24	15	12		X		177
8	Sabal palmetto	Sabal Palm	16	15	10		X		177
9	Schinus terebinthifolius	Brazilian Pepper	14	16			X		no mitigation necessary
<b>TOTAL S.F. CANOPY TO BE REMOVED</b>									<b>883</b>
<b>TOTAL S.F. CANOPY TO BE PROVIDED</b>									<b>15,650</b>

100'  
 WATER WAY

**EXISTING TREE DISPOSITION PLAN**  
 SCALE: 3/32"=1'-0"



KEY	PLANT NAME	QTY.	UT.	SIZE
ACWI	Acalypha wilkesiana Cooperleaf	23	ea.	24" tall x 24" spread, install 36" o.c.
BALA	Bambusa lako Timor black bamboo	3	ea.	16' tall, 5-6 culms per clump.
*BUSI	Bursera simaruba Gumbo-limbo	7	ea.	18' tall x 8' spread, 5" cal.
CAGR	Caesalpinia granadillo Bridalveil Tree	5	ea.	18' tall x 6' spread, 3" cal.
CLGU	Pitch apple Clusia guttifera	30	ea.	36" tall x 24" spread, install 36" o.c.
*COES	Conocarpus erectus 'sericeus' Silver Buttonwood	7	ea.	10' tall x 4' spread, 2" cal.
CONG	Cocos nucifera Coconut Palm	5	ea.	30' tall overall.
FIGI	Ficus microcarpa 'Green Island' Green Island Ficus	52	ea.	24" tall x 24" spread, install 24" o.c.
HYLA	Hymenocallis latifolia Spider Lily	30	ea.	18" tall x 18" spread, install 30" o.c.
JAVO	Jasminum volubile Wax Jasmine	214	ea.	24" tall x 24" spread, install 24" o.c.
*LYBA	Lysiloma bahamensis Wild Tamarind	5	ea.	18' tall x 8' spread, 5" cal.
MODE	Monstera deliciosa Split-leaf Philodendron	18	ea.	36" tall x 36" spread, install 36" o.c.
*MUCA	Muhlenbergia capillaris Muhly Grass	32	ea.	24" tall x 24" spread, install 30" o.c.
PHRO	Phoenix roebelenii Pygmy Date Palm	2	ea.	6' tall overall, triple trunk.
PHSE	Philodendron selloum Tree philodendron	60	ea.	36" tall x 36" spread, install 48" o.c.
*PSNE	Psychotria nervosa Wild coffee	250	ea.	24" tall x 24" spread, install 24" o.c.
RAMA	Ravenala madagascariensis Traveller's Tree	4	ea.	18' tall overall.
*RORE	Roystonea regia Royal Palm	5	ea.	30' tall overall.
RUEQ	Russelia equisetiformis Firecracker Plant	214	ea.	24" tall x 24" spread, install 30" o.c.
*SAPA	Sabal palmetto Sabal Palm	9	ea.	28' tall overall, leaning, smooth trunk.
*SWMA	Swietenia mahagoni West Indies Mahogany	2	ea.	18' tall x 8' spread, 5" cal.
sod	St. Augustine "Floritam"	as req.	s.f.	solid sod
	Planting Soil			
	80% Silica Sand	as req.	c.y.	
	20% Everglades Muck			
	Shredded Melaluca Mulch	as req.	c.y.	
	*Denotes Native Species			

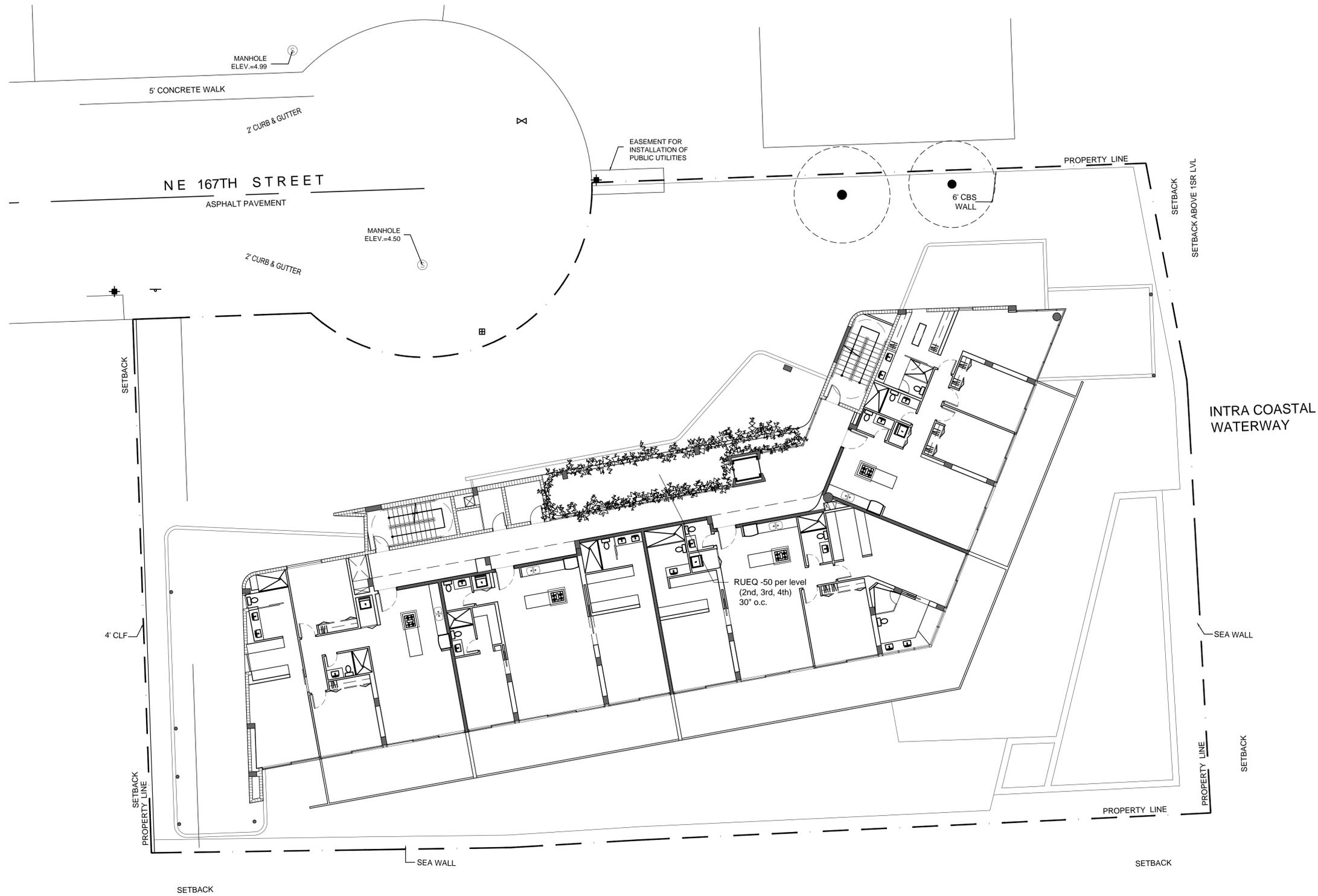


LANDSCAPE LEGEND			
Zoning District:	RM-19	Net Lot Area:	0.62 (acres) 27,098 (square feet)
<b>PERIMETER LANDSCAPE REQUIREMENTS</b>			
Abutting a vehicular use area (Sec. 24-122, A(1)) - 1 tree/30 l.f.	REQUIRED	PROVIDED	
119 l.f. / 30 = 4 trees	4	4	
Abutting a residential district or vehicular use area (Sec. 24-122, A(2)c) - 1 tree/25 l.f.	REQUIRED	PROVIDED	
581 l.f. / 25 = 24 trees	24	28	
<b>INTERIOR LANDSCAPE REQUIREMENTS</b>			
1 tree per terminal island (Sec. 24-122, B(2)A)	REQUIRED	PROVIDED	
1 terminal island = 1 tree	1	1	
Maximum sod area (Sec. 24-122, E)			
50% (max.) of landscape area shall be sod	REQUIRED	PROVIDED	
6787 s.f. landscape area = 1581 s.f. (max.) of sod	1	1	
<b>TOTAL</b>	<b>29</b>	<b>33</b>	

**GROUNDFLOOR PLANTING PLAN**  
 SCALE: 3/32"=1'-0"



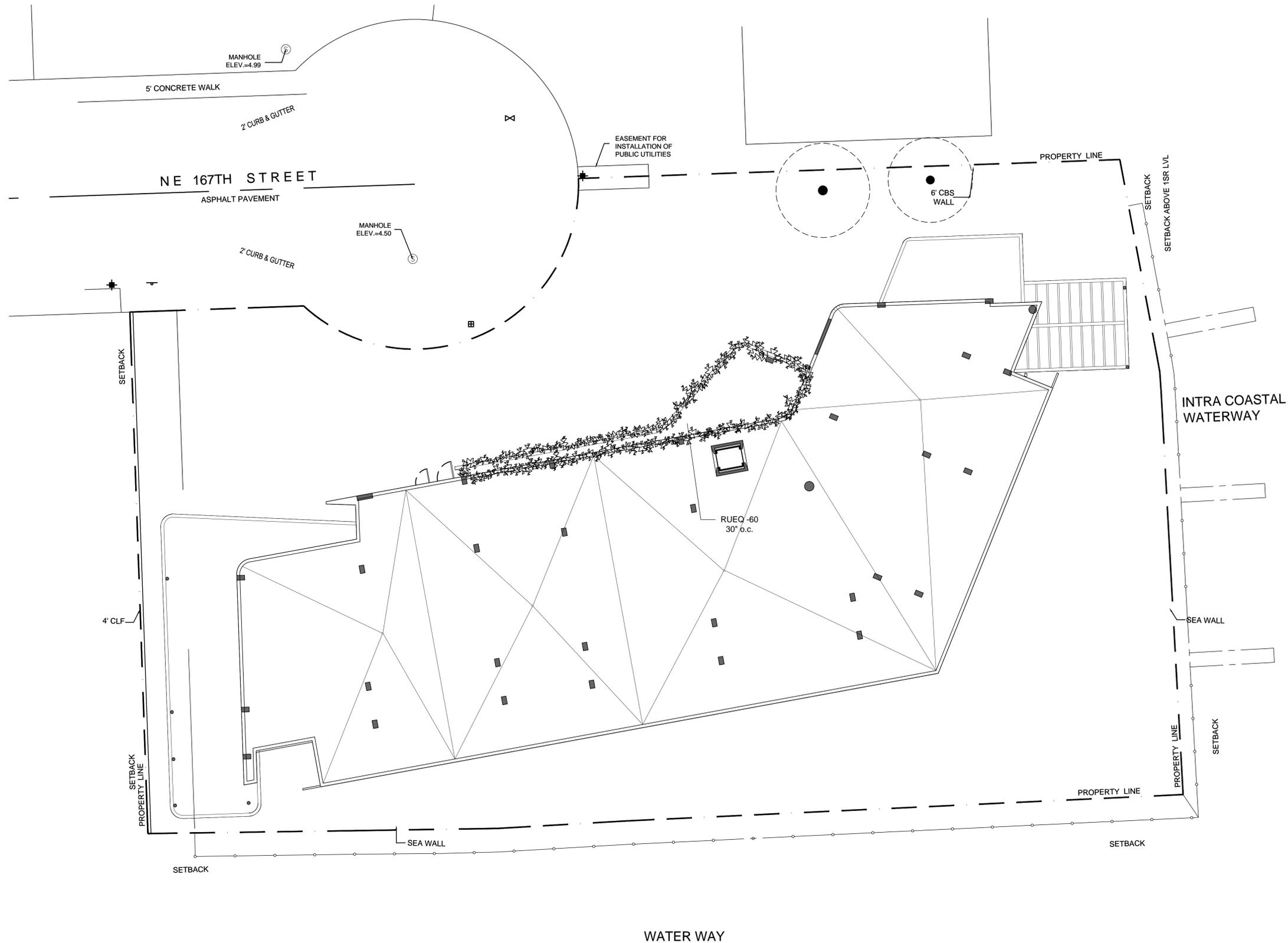
REVISIONS	TRAD COMMENTS
11.30.2015	



2nd, 3rd, & 4th LEVELS PLANTING PLAN  
SCALE: 3/32"=1'-0"



REVISIONS	TRAD	Comments
1	11.30.2015	



**ROOF LEVEL PLANTING PLAN**  
SCALE: 3/32"=1'-0"



REVISIONS	TRAD	Comments
1	11.30.2015	

**LANDSCAPE SPECIFICATIONS**  
**PART 1 - GENERAL**

**1.1 SCOPE**  
A. Contractor shall provide all labor, materials, equipment, supervision, and related work necessary to complete the landscape work in accordance with the intent of the landscape plans, schedules and these specifications. The extent of work is shown on the drawings which are a part of this document.

**1.2 CONTRACTOR QUALIFICATIONS**  
A. Landscape installation work to be performed by a Contractor Certified by the Florida Nurserymen, Growers and Landscape Association (FNGLA) as a Certified Landscape Contractor. Any pruning to be supervised by an Arborist, certified by the International Society of Arboriculture (ISA) and licensed in Miami-Dade County.

**1.3 INVESTIGATION OF UTILITIES**  
A. Prior to beginning work, the Contractor shall be responsible to locate existing underground utilities. Check with all utility companies and Sunshine State, call (811).

**1.4 SUBSTITUTIONS**  
A. Only materials specified will be accepted, unless approved in writing by the Landscape Architect in advance.

**1.5 PLANT SIZES**  
A. All plant sizes shall equal or exceed the minimum sizes as specified in the plant list. When plant sizes are specified as a range of size, installed materials shall average the mean of the range specified. Plants shall be measured following pruning, with branches in normal position. All necessary pruning shall be done at the time of planting.

**1.6 PLANT QUALITY**  
A. All plant material shall be equal to or better than Florida No. 1 as classified by "Grades and Standards for Nursery Plants" by the Division of Plant Industry, Florida Department of Agriculture. They shall have a growth habit that is normal for the species; healthy, vigorous, free from insects, disease and injury.

B. The Owner or Landscape Architect reserves the right to refuse any plant material which does not conform to the intent of the written specifications or design.

C. CIRCLING ROOTS FOUND ON CONTAINER-GROWN MATERIAL WILL NOT BE ACCEPTED UNLESS REMEDIAL ROOT PRUNING, APPROVED BY THE LANDSCAPE ARCHITECT IS DONE BEFORE PLANTING.

**1.7 PLANT QUANTITY**  
A. The plant quantities shown on the plant list are to be used only as an aid to bidders. In the case of discrepancy between the plant list and the plan, the quantity on the plan shall override the plant list.

**1.8 UNIT PRICES**  
A. The successful bidder shall furnish to the Owner and the Landscape Architect, a unit price breakdown for all materials. The Owner may, at his discretion, add to or delete from the materials utilizing the unit price breakdown submitted to and accepted by the Owner.

**1.9 SUBMITTALS**  
A. Fertilizer: The Contractor shall submit to the Owner and Landscape Architect documentation that all the fertilizer used for the project is of the analysis specified and placed at the rates specified in section 2.2 FERTILIZER.

B. Planting soil: The Contractor shall submit a sample of the planting soil (approximately 1 cu. ft.) for approval by the Landscape Architect prior to delivery to the site.

**1.10 CLEAN-UP & MAINTENANCE OF TRAFFIC**  
A. Follow procedures in FDOT Index 600 for maintenance of traffic during construction.

B. At the end of each work day, the Contractor shall remove debris and shall barricade the un-filled holes in a manner appropriate in the path of pedestrians and motorists.

C. Upon completion of the work or any major portion of the work or as directed by the Landscape Architect, all debris and surplus material from his work shall be removed from the job site.

**1.11 MAINTENANCE PRIOR TO ACCEPTANCE**  
A. The Contractor is responsible to maintain the plantings until they are accepted under the provisions of 1.12 "ACCEPTANCE OF INSTALLATION".

1. Plants: Begin maintenance immediately following the final plant installation operation for each plant and continue until all plant installation is complete and accepted. Maintenance shall include watering all plants, weeding, mulching, pest and disease control, lightening and repairing of guys, repair of braces, removal of dead growth, resetting of plants to proper grade or up-right position, restoration of plant saucer, litter pick-up in plant beds and other necessary operations to assure specified minimum grade of Florida No. 1.

2. Turf Areas: Begin maintenance of turf immediately following the placement of sod and continue until sod installation is complete and accepted. Maintenance shall include but not be limited to, watering, leveling, mowing, weed and pest control, fungus and disease control and other necessary operations as determined by the Landscape Architect and good nursery practice.

3. Re-setting or straightening trees and palms:  
The Contractor shall re-set and/or straighten trees and palms as required at no additional cost to the Owner unless caused by sustained winds of 75 mph or more. Then, the costs of the operations may be charged to the owner. Re-set trees within 48 hours.

**1.12 ACCEPTANCE OF INSTALLATION**  
A. Inspection: Inspection of the work, to determine completion of contract work, exclusive of the possible replacement of plants and turf, will be made by the Landscape Architect at the conclusion of the maintenance period. Written notice requesting such an inspection and submitted by the Contractor at least ten (10) days prior to the anticipated date.

**1.13 GUARANTEE**  
A. Guarantee all plants for a period of one year (CCD). Guarantee shall commence from the date of written acceptance. Plant material which is on the site and scheduled to be relocated is not covered by the guarantee except in the case of Contractor's negligence or work that has been done in an unworkman-like manner. The Contractor is not responsible for loss due to acts of god, (i.e.) sustained winds of 75 mph or more, floods, frost, lightning, vandalism or theft.

**1.14 REPLACEMENT**  
A. Replacement shall be made during the guarantee period as directed by the Landscape Architect within ten (10) days from time of notification. For all replacement plant material, the guarantee period shall extend for an additional forty-five (45) days beyond the original guarantee period. The Contractor shall be responsible to provide water to the replacement plants in sufficient quantity to aid in their establishment. At the end of the guarantee period, inspection will be made by the Landscape Architect, upon written notice requesting such inspection and submitted by the Contractor at least five (5) days before the anticipated date. Replacement plants must meet the requirements of Florida No. 1 at time of inspection. Remove from site all plants that are dead or in a state of unsatisfactory growth, as determined by the Landscape Architect. Replace these and any plants missing due to the Contractor's negligence as soon as conditions permit.

1. Materials and Operations: All replacement plants shall be of the same kind and size as indicated on the plant list. The Contractor shall supply and plant the plants as specified under planting operations.

2. Cost of Replacements: A sum sufficient to cover the estimated cost of possible replacements, including material and labor will be retained by the Owner and paid to the Contractor after all replacements have been satisfactorily made and approved by the Landscape Architect.

**PART 2 - MATERIALS**

**2.1 PLANTING SOIL**  
A. Planting soil for trees, shrubs and ground covers shall be of the composition noted on the plans, measured by volume.  
B. Soil for Sodded Areas: shall be coarse lawn sand.

**2.2 FERTILIZER**  
A. Fertilizer for trees, palms, shrubs, and groundcovers shall be as follows: LESCO Palm Special 15-3-13 or equal. Sulfur coated with iron and other minor elements and maximum of 2% chlorine, or brand with equal analysis. The fertilizer shall be uniform in composition, dry and free flowing and shall be delivered to the site in the original unopened containers, bearing the manufacturer's guaranteed analysis. Fertilizer for sod and seeded areas shall be 8-6-8, 50% organically derived nitrogen, or equal.

**2.3 WATER**

A. The Contractor shall provide potable water on site, available from the start of planting. The Contractor is responsible to ascertain the location and accessibility of the water source. The Contractor is responsible to provide the means of distribution (i.e. water truck, hoses, etc.) for distribution of water to the planting areas.

**2.4 MULCH**

A. Mulch shall be shredded Melaleuca mulch (Florimulch) as manufactured by Forestry Resources, Inc., or equal.

**2.5 ROOT BARRIER MATERIAL**

A. When specified in the plans, root barrier material shall be Biobarrier (19.5 inch width) Reemay or approved equal.

B. Install per details in the plans.

**PART 3 - INSTALLATION PROCEDURES**

**3.1 LAYOUT**

A. Verify location of all underground utilities and obstructions prior to excavation.

**3.2 HERBICIDE TREATMENT**

A. In all areas infested with weed and/or grass growth, a systemic herbicide, such as Roundup, shall be applied per manufacturer's rates. When it has been established where work will be done, the systemic herbicide shall be applied in accordance with manufacturer's labeling to kill all noxious growth. Contractor shall schedule his work to allow more than one application to obtain at least 95% kill of undesirable growth. If necessary, Contractor shall conduct a test to establish suitability of product and applicator to be used on this project, prior to execution of the full application.

**3.3 PLANT PIT EXCAVATION AND BACKFILLING**

A. Trees: See the Planting and Bracing Details and notes.  
B. All planting holes shall be hand dug where machine dug holes may adversely affect utilities or improvements.  
C. Shrubs and Groundcover: Shrubs and groundcover shall be planted in a soil bed as described in the notes and details. Space shrubs and provide setback from curb and pavements as shown in the plans.  
D. Watering of field-grown plants: Thoroughly puddle in water to remove any air pockets in the plant hole.

**3.4 WATERING**

A. The Contractor is responsible to provide the water for all new plants and transplants and means of distribution (i.e. hand watering or water truck) during the maintenance period and extending into the period after acceptance until the full schedule as listed below is complete. Water for trees and other large field grown plants shall be supplemented by hand or water truck, in addition to the irrigation system, (if one is provided). Contractor can adjust watering schedule during heavy rain season upon approval of the Landscape Architect.

**AMOUNT OF WATER PER APPLICATION**

For trees up to 5 inch caliper - 5 gallons  
From 5 to 8 inch caliper - 25 gallons  
9 inch and up caliper - 50 gallons

**FREQUENCY OF WATER**

Daily for the first week  
3 times per week for weeks 2 - 5  
2 times per week for weeks 6 - 8  
1 time per week for weeks 9 - 12

B. Water in plants by thoroughly soaking of the entire root ball immediately after planting. For large trees and shrubs, add water while backfilling hole to eliminate any air pockets in the soil around the root ball.

C. Water shrubs, sod and groundcover a minimum of once daily for a week or until an irrigation system is fully operational. If no irrigation system is to be installed, the Contractor shall be responsible for watering the shrub, sod, and groundcover to the time specified above, after installation of each section of the planting installed.

**3.5 FERTILIZING**

A. Add fertilizer on top of the surface of shrubs beds and tree and palms root balls two (2) months after installation. Fertilize sod within two (2) days after installing after planting of each segment of the job. Fertilizer shall be applied after soil has been well moistened. Fertilizer shall be washed off of plant leaves and stems immediately after application. Apply at the following rates:

- Trees and Large Shrubs: One (1) pound per inch of trunk diameter, spread evenly over the root ball area.
- Shrubs: One half (1/2) handful per shrub, spread evenly over the root ball area.
- Groundcover: Twelve (12) pounds per 100 sq. ft. of bed area.
- Sod: Twelve (12) pounds per 1,000 sq. ft. Wash fertilizer off blades immediately after spreading.

**3.6 MULCHING**  
A. Spread mulch two (2) inches thick uniformly over the entire surface of shrubs and groundcover beds, depth measured after settling, unless otherwise specified in the plans. Provide 36" diameter bed of mulch, measured from outer edge of the trunk, for all trees and palms planted in sod areas. Keep mulch away from contact with the trunk. Create a 6" high ring of mulch at the outer edge of tree and palm holes.

**3.7 GUYING AND BRACING**

A. See the details below herewith or made part of the plans.

**3.8 SODDING**

A. Provide a blanket of lawn sand as described in the notes in these plans. Prior to planting, remove stones, sticks, etc. from the sub-soil surface. Excavate existing non-conforming soil as required so that the finish grade of sod is flush with adjacent pavement or top of curb as well as adjacent sod in the case of sod patching.

B. Place sod on moistened soil, with edges tightly butted, in staggered rows at right angles to slopes. The sod shall be rolled with a 500 pound hand roller immediately after placing.

C. Keep edge of sod bed a minimum of 18" away from groundcover beds and 24" away from edge of shrub beds and 36" from trees, measured from the edge of plant or tree trunk.

D. Sod shall be watered immediately after installation to uniformly wet the soil to at least two inches below the bottom of sod strips.

E. Apply fertilizer to the sod as specified in Section 3.5.

F. Excavate and remove excess soil top of sod if soil is flush w/top of curb or adjacent pavement, or adjacent existing sod.

**PLANT BED PREPARATION NOTES**

1. In all areas where new sod and shrub and groundcover masses are to be planted, kill all existing weeds by treating with Round-up prior to beginning soil preparation.

2. In all shrub and groundcover beds, prepare soil as described for either condition, over the entire area to be planted:  
Condition A:  
If any compacted road base or asphalt or rocky soil is encountered, remove compacted material entirely to allow an 18" depth of planting soil. Backfill the entire area of the shrub and groundcover beds with 18" planting soil (as specified in Plans) to within 2 inches of the adjacent pavement or top of curb. Remove all debris and rocks and pebbles larger than 1 inch in size and level the grade before planting.

Condition B:  
Where no compacted soil is encountered, thoroughly mix 6 inches of planting soil into the existing soil to a depth of 18 inches. If required, excavate and remove the existing soil to lower the grade, so that the prepared mix is finished to a minimum of 2 inches below top of curb or adjacent walkway. Remove all debris and rocks and pebbles larger than 1 inch in size and level the grade before planting.

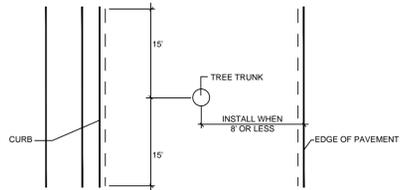
For all sod areas, spread a 2" deep layer of lawn sand prior to sodding. Remove all debris and rocks and pebbles larger than 1 inch in size and level the grade before sodding. Remove, if required, existing soil so that top of sod is flush with and adjacent top of curb or pavement.

**SPACING OF PLANTS (SEE PLANT SPACING DETAIL)**

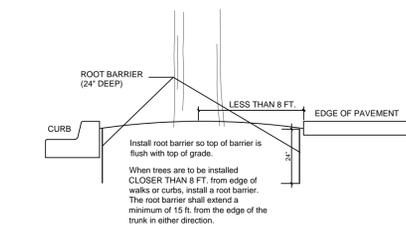
1. Plants shall be planted sufficiently away from edges of pavements or curbs, to allow for growth toward the edges of the bed.

**PROTECTION OF PLANTS**

1. The Contractor shall be responsible to protect existing trees and shrubs in and adjacent to the area of work. Erect barriers as necessary to keep equipment and materials, any toxic material, away from the canopy drip line of trees and shrubs. DO NOT PILE SOIL OR DEBRIS AGAINST TREE TRUNKS OR DEPOSIT NOXIOUS BUILDING SUPPLIES OR CHEMICALS WITHIN THE DRIP LINE.

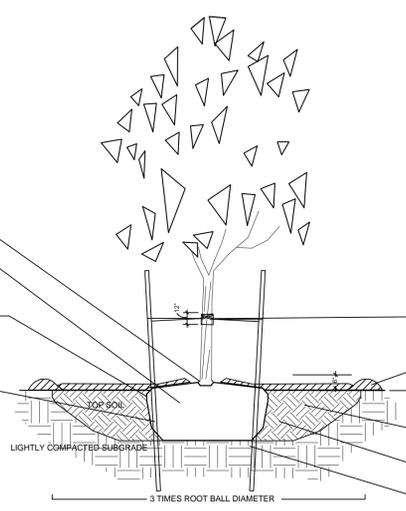


**PLAN VIEW**



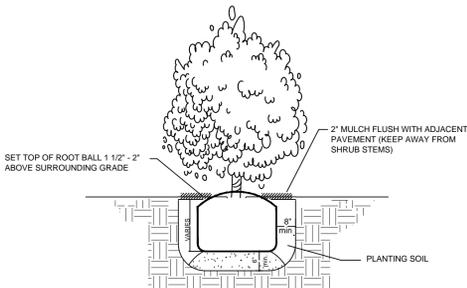
**ROOT BARRIER INSTALLATION DETAIL**

N.T.S.



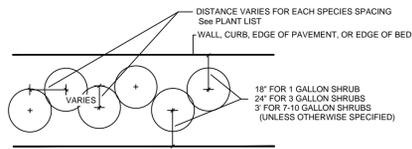
**PLANTING & BRACING DETAIL UNDER 3 1/2" CALIPER**

N.T.S.



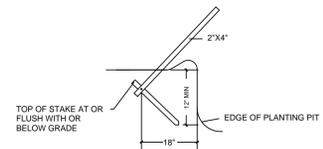
**SHRUB INSTALLATION DETAIL**

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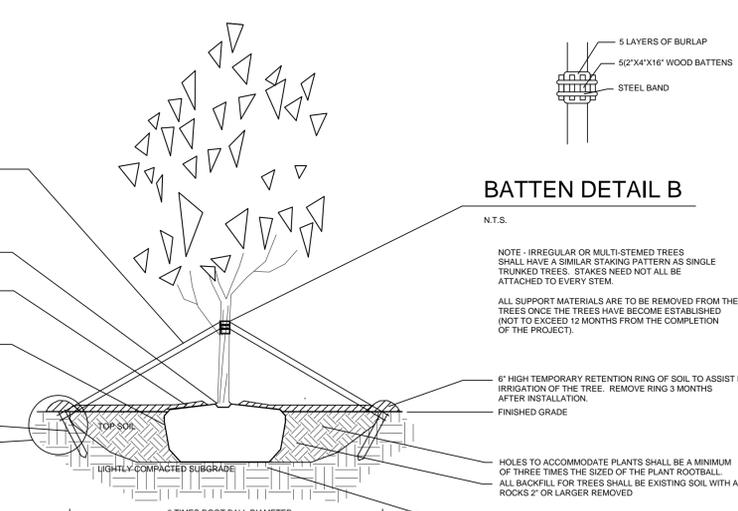
**SHRUB SPACING DIAGRAM**

N.T.S.



**DETAIL A**

N.T.S.



**PLANTING & BRACING DETAIL OVER 3 1/2" CALIPER**

N.T.S.

REVISIONS	TRACD Comments
11.30.2015	