

Islands at Doral (SW) Community Development District

Engineer's Report
Infrastructure Improvements

Prepared for
Islands at Doral (SW) Community Development District
Board of Supervisors
Miami-Dade County, Florida

Prepared by
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I. Introduction.

The Islands at Doral (SW) Community Development District (the District) was created for the purpose of financing and managing the acquisition, construction and maintenance of the infrastructure of Islands at Doral (SW), a 108 gross acre residential development located in Northwest Miami-Dade County, Florida. The development offers single family dwellings, as well as townhouse residences.

See Exhibit 1 for a graphical representation of the development.

The infrastructure is a network of roadway, drainage, water and sanitary sewer systems that will give access and service to about 101 single family dwellings and 563 townhouses.

The infrastructure for the portion of the development located east of, and including, NW 114 Avenue, is estimated to be completed at the end of December of 2003. Construction of the infrastructure located west of NW 114 Avenue is estimated to be completed at the end of June of 2004.

II. District Description.

The District was established under Ordinance No. 03-37 of the Miami-Dade County Commission on March 11, 2003.

The District is located in Section 7, Township 53S, Range 40E, in Miami-Dade County. It is bounded by theoretical NW 117 Avenue on the west, theoretical NW 81 and NW 79 Streets on the north, NW 112 Avenue on the east, and NW 74 Street and theoretical NW 75 Lane on the south. The address of the development is 11301 NW 74 Street, Miami, Florida 33178. See Exhibit 1.

III. Description of the Infrastructure.**1. Roadway Improvements.**

A network of interior roads and driveways is proposed to provide circulation to the residents as well as to the general public.

From NW 114 Avenue there are six entrances into the development: at NW 78 Street, at NW 77 Lane, at NW 75 lane, at NW 79 Street, at NW 77 lane and at NW 76 Terrace. From NW 112 Avenue, the development is accessible at NW 79 Lane, NW 78 Lane, NW 78 Street, NW 77 Terrace, NW 75 Lane, NW 75 Street and NW 74 Terrace. From NW 74 Street, the development may be entered through NW 113 Court. From these entrances, a series of streets and driveways originate in order to provide access to the dwelling units. The interior streets consist of crowned sections with valley or curbed gutters and sidewalks on the sides. The typical section for all the interior streets and driveways consists of a 12 inch stabilized subgrade, an 8 inch limerock base and a 1 ½ inch asphalt course placed in two layers, or lifts. NW 114 Avenue consist of a divided 4-lane urban section with a green median, curbs, gutters and sidewalks on both sides. In order to manage the traffic entering the new development, left turn lanes have been provided where the interior streets intersect with the collector. NW 114 Avenue, NW 74 Street and NW 112 Avenue will be constructed with a 12 inch stabilized subgrade, an 8 inch limerock base and a 2 inch asphalt course placed in two layers, or lifts.

The interior streets proposed to be constructed within the development to the west of NW 114 Avenue, are intended to provide restricted traffic circulation. These private streets will be gated at NW 114 Avenue, limiting their use to the residents, guests, safety and security vehicles. Since these streets will not be open to the general public, the cost of construction of the streets within this portion of the development is not included as part of the infrastructure to be financed by the District.

See Exhibit 2 for a graphical representation of the public streets which will be financed by the District.

2. Stormwater Management.

The stormwater management facilities consist of inlets, manholes, storm pipes and approximately 7,343 Linear Feet (LF) of exfiltration trenches, which, in combination with seven lakes, measuring approximately 24.22 acres, have been designed to retain the storm runoff within the development. Since the inlets, pipes and exfiltration trenches located west of NW 114 Avenue are part of the stormwater management system that ensures flood protection to the District, their cost of construction has been incorporated into this report as part of the infrastructure to be financed with bonds proceeds.

Easements will be granted to the District for maintenance of the stormwater management facilities located within private property.

In accordance with the Federal Emergency Management Agency (FEMA, Map Number 120635060 J, Dated March 2, 1994), this development falls within Zone AH, Elevation 6.0 Ft above the National Geodetic Vertical Datum (NGVD). The paving and drainage plans for the development call for the finish floor elevation of the residences to be set at a minimum elevation of 8.0 Ft above NGVD, and the crown of the roads at 7.3 Ft above NGVD.

See Exhibits 3A and 3B for a graphical representation of the Stormwater Management facilities.

3. Water Distribution System.

The water distribution system is composed of variable pipe sizes ranging from 6 to 20 inch diameters for water service and fire protection. The system is connected to an existing 24 inch water main located on NW 74 Street. In general, three major distribution mains are to be constructed: one measuring 20 inches in diameter on NW 114 Avenue, another measuring 12 inches in diameter on NW 112 Avenue, and a third on NW 113 Court measuring 8 inches. The onsite water distribution system connects to the major mains and is composed of 8 inch ductile iron pipes that run under the network of interior streets. The 6" ductile iron pipes branch out of the pipe lines to serve the fire hydrants. The water system encompasses approximately 2,065 linear feet of 20 inch pipe, 2,015 linear feet of 12 inch pipe, 22,157 linear feet of 8 inch pipe, 1,275 linear feet of 6 inch pipe and 51 fire hydrants.

When completed, the water distribution system will be donated to Miami-Dade County Water And Sewer Department (WASD) for operation and maintenance. A 12 foot wide easement, running along the length of the water mains, encompassing the hydrants and water meters, within the private streets will be dedicated to WASD.

See Exhibits 4A and 4b for a graphical representation of the Water Distribution System.

4. Sanitary Sewer System.

A lift station is to be constructed just north and west of the intersection of NW 79 Street and NW 114 Avenue. The lift station will receive sanitary flow from the development via a gravity pipe network. The flow will be pressurized into a 12 inch force main to be constructed running south on NW 114 Avenue for approximately 2,100 feet to the intersection with NW 74 Street. At NW 74 Street the force main will be increased to 16 inches in diameter and will run east for approximately 4,100 feet to the intersection with NW 107 Avenue, where it will connect with a 24 inch force main to run north-south on NW 107 Avenue. The 24 inch force main is to be constructed by Miami-Dade County.

The sanitary sewer collection system consists of approximately 20,300 linear feet of gravity pipe that ranges in size from 8 to 10 inches in diameter. There are 643 service laterals, and 103 manholes. The gravity system discharges into the wet well of the lift station.

When completed, the sanitary sewer collection system, including the lift station and force main, will be donated to WASD for operation and maintenance. A 15 foot wide easement on private streets, running along the length of the pipes, encompassing the manholes, will be dedicated to WASD. The tract of land set aside for the lift station will also be dedicated to WASD.

See Exhibits 5A and 5B for a graphical representation of the Sanitary Sewer System.

IV. Ownership and Maintenance.

The District will finance the acquisition and/or construction of the improvements. It will then transfer the land and improvements to the following agencies for ownership and maintenance:

Description	Future Ownership	Future Maintenance
County Roads	Miami-Dade Co. Public Works	Miami-Dade County Public Works
CDD Roads	Islands at Doral (SW) CDD	Islands at Doral (SW) CDD
Stormwater Management Syst.	Islands at Doral (SW) CDD	Islands at Doral (SW) CDD
Water Distribution System	WASD	WASD
Sanitary Sewer System	WASD	WASD

V. Permitting Status.

1. Platting.

Tentative Plats dated August 2001.

2. Roadway, Paving, Grading and Drainage Permits.

Approval by Miami-Dade County Public Works Department on July 15, 2002. Numbers T-20994 and T-20995.

3. Water Distribution System

Approval by WASD on May 3, 2002. Permit No. DW 2002-092.

Approval by Miami-Dade County Fire Department on May 22, 2002. Permit No. 02340-00124.

Approval by Miami-Dade Department of Health on June 20, 2002. Permit No. 125199-645 DS/C.

4. Sanitary Sewer System.

Approval by WASD on May 9, 2002. Permit No. DS 2002-560.

Approval by DERM Sewerage Facilities on June 12, 2002. Permit Serial No. SE02-100.

Lift Station. Approval by WASD on May 9, 2002. Permit No. DS 2002-560. Approval by DERM Sewerage Facilities on June 12, 2002. Permit Serial No. SE02-100.

VI. Estimate of Capital Improvement Costs.

Roadway Improvements	\$ 1,726,193.39
Stormwater Management	\$ 3,706,043.40
Water Distribution System	\$ 1,424,636.60
Sanitary Sewer System	<u>\$ 2,382,846.48</u>
Total	\$ 9,239,719.87

Tables 1 through 5 show line item estimates for each category.

The costs of the infrastructure will be allocated to each residential unit within the development in the form of special assessments, in accordance with the approved methodology described in the "Special Assessment Methodology Report" prepared for Islands at Doral (SW) Community Development District by Special District Services, Inc.

VII. Engineer's Certification.

It is our opinion that the extent of proposed improvements and their estimated costs are fair and reasonable. We believe that the improvements can be permitted, constructed and installed at the costs described in this report.

I hereby certify that the foregoing is a true and correct copy of the Engineer's Report for the Islands at Doral (SW) Community Development District.

Juan R. Alvarez, PE
Florida Registration No. 38522
Alvarez Engineers, Inc.
May 14, 2003.

TABLES AND EXHIBITS

Islands at Doral (SW) CDD

Construction Cost Estimates

Summary Table

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Islands at Doral (SW) CDD Construction Cost Estimates

Roadway Improvements

[illegible]

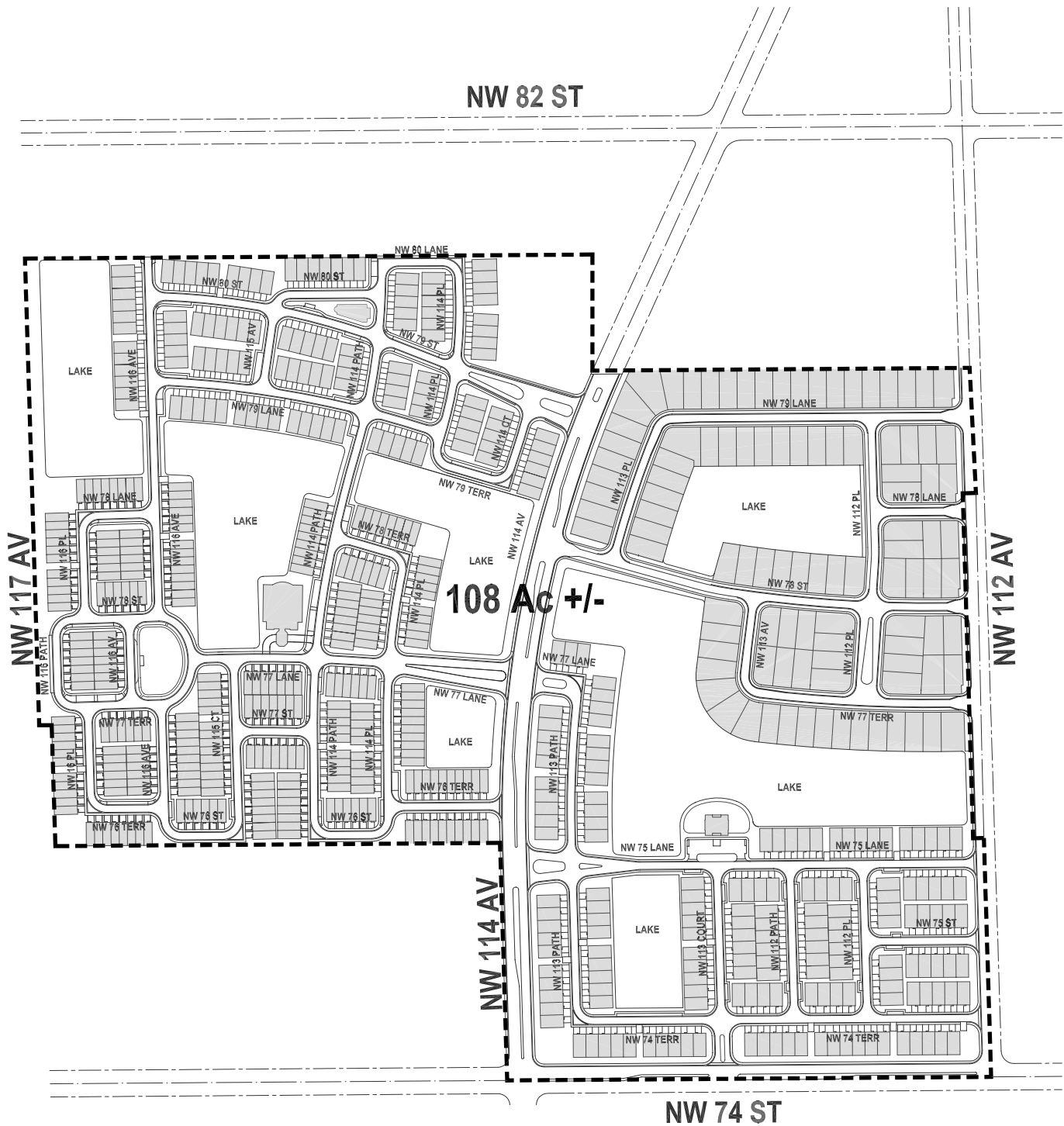
**Islands at Doral (SW) CDD
Construction Cost Estimates
Stormwater Management System**

[illegible]

<p style="text-align: center;">Islands at Doral (SW) CDD Construction Cost Estimates Water Distribution System</p>				
Description of Work	Quantity	Unit	Unit Price	Total Estimated Cost
Connect to Existing W.M.	3	LS	\$2,000.00	\$6,000.00
6" D.I.P.(Assumed 25'/FH Branch)	1,275	LF	\$20.14	\$25,678.50
8" D.I.P.	22,157	LF	\$23.00	\$509,611.00
12" D.I.P.	2,015	LF	\$25.44	\$51,261.60
20" DIP	2,065	LF	\$37.10	\$76,611.50
6" Gate Valve & Box	51	EA	\$551.20	\$28,111.20
8" Gate Valve & Box	99	EA	\$689.00	\$68,211.00
12" Gate Valve & Box	7	EA	\$1,314.40	\$9,200.80
16" Gate Valve	1	EA	\$1,752.50	\$1,752.50
16" Butterfly Valve	5	EA	\$1,752.50	\$8,762.50
Fire Hydrants	51	EA	\$1,380.00	\$70,380.00
8" Tee & Cross	40	EA	\$380.00	\$15,200.00
8" x 6" Tee	51	EA	\$380.00	\$19,380.00
24" Tee	3	EA	\$621.90	\$1,865.70
12" x 8" Tee	7	EA	\$447.00	\$3,129.00
20" Tee	5	EA	\$621.90	\$3,109.50
12" x 8" Cross	7	EA	\$447.00	\$3,129.00
12" Cross & Tee	7	EA	\$487.60	\$3,413.20
8" Bend	53	EA	\$380.00	\$20,140.00
20" Bend	2	EA	\$380.00	\$760.00
Plug	6	EA	\$325.00	\$1,950.00
8" x 2" CAP W/ 2" F.V.O.	6	EA	\$400.00	\$2,400.00
1" Single Service	59	EA	\$350.00	\$20,650.00
1" Dual Service	295	EA	\$350.00	\$103,250.00
Miscellaneous	1	LS	\$10,000.00	\$10,000.00
Maintenance of Traffic	1	LS	\$2,000.00	\$2,000.00
Densities	1	LS	\$10,000.00	\$10,000.00
Surveying & As-Builts	1	LS	\$81,300.00	\$81,300.00
Chlorinating & Testing	27,512	LF	\$0.25	\$6,878.00
Permit	1	LS	\$28,000.00	\$28,000.00
Bond	1	LS	\$36,000.00	\$36,000.00
Soft Costs (Eng and Prof fees)	1	LS	6%	\$73,688.10
Contingency	1	LS	10%	\$122,813.50
Total				\$1,424,636.60

Islands of Doral CDD
Construction Cost Estimates
Sanitary Sewer System

Description of Work	Quantity	Unit	Unit Price	Total Estimated Cost
10" D.I.P. (14'-16')	696	LF	\$80.00	\$55,680.00
10" D.I.P. (16'-18')	190	LF	\$85.00	\$16,150.00
8" D.I.P.(0'-6')	320	LF	\$35.00	\$11,200.00
8" D.I.P. (6'-8')	100	LF	\$39.00	\$3,900.00
8" PVC (0'-6')	7,298	LF	\$20.00	\$145,960.00
8" PVC (6'-8')	5,811	LF	\$26.00	\$151,086.00
8"PVC (8'-10')	3,337	LF	\$30.00	\$100,110.00
8" PVC (10'-12)	1,226	LF	\$38.00	\$46,588.00
8" PVC (12'-14')	737	LF	\$46.00	\$33,902.00
10" PVC (12'-14')	338	LF	\$58.00	\$19,604.00
10" PVC (14'-16')	247	LF	\$70.00	\$17,290.00
12"DIP	2,100	LF	\$25.44	\$53,424.00
16"DIP	4,100	LF	\$60.00	\$246,000.00
16" Bend	27	LF	\$380.00	\$10,260.00
MH (0'-6')	46	EA	\$1,300.00	\$59,800.00
MH (6'-8')	29	EA	\$1,800.00	\$52,200.00
MH (8'-10')	16	EA	\$1,900.00	\$30,400.00
MH (10'-12)	4	EA	\$2,251.00	\$9,004.00
MH (12'-14')	4	EA	\$2,500.00	\$10,000.00
MH (14'-16')	2	EA	\$2,900.00	\$5,800.00
MH (16'-18') w/ Drop Inlet	2	EA	\$3,500.00	\$7,000.00
6" PVC Lateral (SS1.0)	643	EA	\$360.00	\$231,480.00
MH Connection	13	EA	\$85.00	\$1,105.00
MH Inverts & Ring	135	EA	\$235.00	\$31,725.00
Gravel # 57	5,610	TN	\$8.50	\$47,685.00
Miscellaneous	2	LS	\$5,000.00	\$10,000.00
Connect to Existing FM	3	LS	\$3,000.00	\$9,000.00
Maintenance of Traffic	1	LS	\$1,000.00	\$1,000.00
24"x2" CAP W/2" F.V.O.	10	EA	\$400.00	\$4,000.00
Air Release	1	EA	\$100.00	\$100.00
Lift Station	1	EA	\$450,000.00	\$450,000.00
Densities	2	LS	\$3,000.00	\$6,000.00
Cleaning & Testing	26,500	LF	\$0.65	\$17,225.00
Permit	1	LS	\$22,000.00	\$22,000.00
Surveying & As-Builts	1	LS	\$61,500.00	\$61,500.00
Bond	1	LS	\$76,000.00	\$76,000.00
Soft Costs (Eng and Prof fees)	1	LS	6%	\$123,250.68
Contingency	1	LS	10%	\$205,417.80
Total				\$2,382,846.48



LEGEND

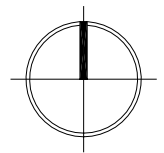
----- DISTRICT BOUNDARY

ALVAREZ ENGINEERS, INC.

MASTER PLAN COPYRIGHT PEDRO E. RODRIGUEZ CONSULTING ENGINEER

ISLANDS AT DORAL (SW) C.D.D.

EXHIBIT 1 - DISTRICT BOUNDARY



1" = 416'





LEGEND



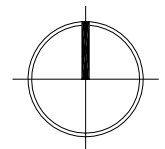
C.M.P. = 18" CORRUGATED METAL PIPE
 E.P. = EQUALIZER PIPE
 --- 18" EXFILTRATION TRENCH
 • DRAINAGE STRUCTURE

ALVAREZ ENGINEERS, INC.

MASTER PLAN COPYRIGHT PEDRO E. RODRIGUEZ CONSULTING ENGINEER

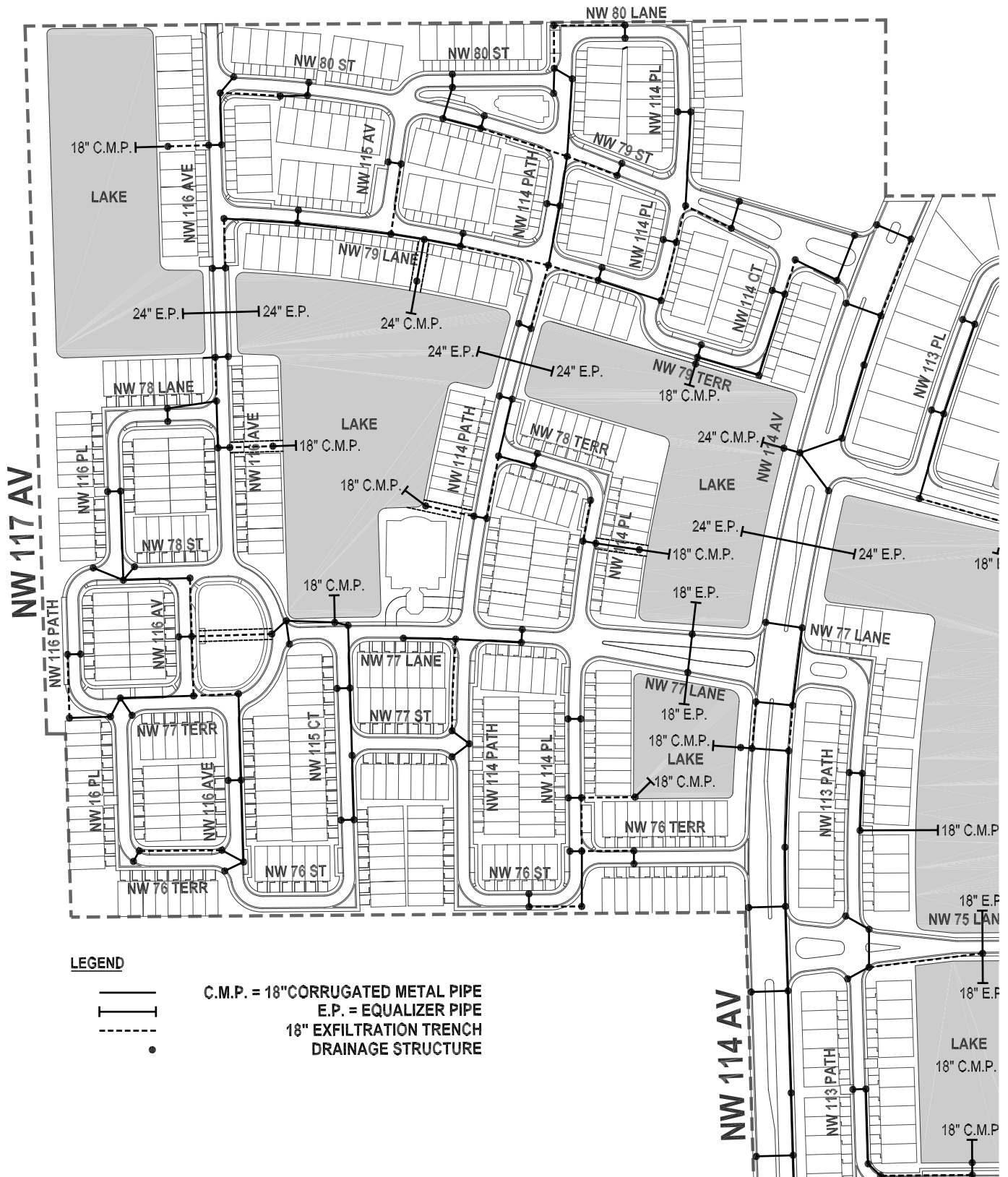
ISLANDS AT DORAL (SW) C.D.D.

EXHIBIT 3A - **STORMWATER MANAGEMENT**



1" = 256'



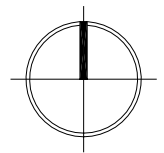


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ISLANDS AT DORAL (SW) C.D.D.

EXHIBIT 3b - **STORMWATER MANAGEMENT**



1" = 256'



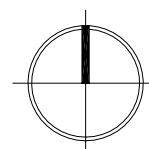


EXHIBIT 4B - **WATER DISTRIBUTION SYSTEM**

